U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

March 3, 1964 Volume 800 Number 1

PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of January 1964

Examiner affirmed	343
Examiner affirmed in part	45
Examiner reversed	112
Total	500

Effect of Public Law 86–362 on Due Date of Responses

Inquiry has been made as to whether the time for taking any action on paying any fee falling due on Friday, February 21, 1964, will be extended to Monday, February 24, 1964, by reason of Public Law 86–362, approved September 22, 1959, and the fact that, under said Act, the Patent Office will be closed on February 21, 1964.

February 21, 1964, is not "a holiday within the District of Columbia" (35 U.S.C. 21; Patent Office Rule 7, 37 C.F.R. 1.7). Accordingly, any action or fee due on that date will be considered timely only if respectively taken or paid on that date.

Manifestly the same rule would apply on May 29 and July 3.

EDWIN L. REYNOLDS,
Feb. 7, 1964. *Acting Commissioner of Patents.*

International Convention for the Protection of Industrial Property

Adherence of the Malagasy Republic to the Lisbon 1958 Revision

The Secretary of State has been notified by the Embassy of Switzerland of the adherence, effective December 21, 1963, of the Malagasy Republic to the Convention of Union of Paris for the Protection of Industrial Property, as last revised at Lisbon on October 31, 1958.

The note also confirms the membership of that State in the International Union of Paris for the Protection of Industrial Property.

EDWIN L. REYNOLDS,
January 27, 1964. *Acting Commissioner of Patents.*

International Convention for the Protection of Industrial Property

Adherence of Senegal to the Lisbon 1958 Revision

The Secretary of State has been notified by the Embassy of Switzerland of the adherence, effective December 21, 1963, of the Republic of Senegal to the Convention of Union of Paris for the Protection of Industrial Property, as last revised at Lisbon on October 31, 1958.

The note also confirms the membership of that State in the International Union of Paris for the Protection of Industrial Property.

EDWIN L. REYNOLDS,
January 27, 1964. *Acting Commissioner of Patents.*

Examination

Pursuant to the provisions of Rule 341(c), an examination for persons seeking registration before the United States Patent Office as patent attorneys or agents will be held on Tuesday, April 28, 1964.

The examination will be given under the supervision of the Civil Service Commission, and may be taken in any of the cities of the country in which the Civil Service Commission regularly conducts examinations. Applications to take the examination must be directed to the Commissioner of Patents and filed in the Patent Office not later than March 27, 1964.

Application blanks may be obtained from the Clerk of the Patent Office Committee on Enrollment, Room 3718, Department of Commerce Building, Washington, D.C. 20231.

EDWIN L. REYNOLDS,
January 20, 1964. *Chairman, Committee on Enrollment.*

Conflict of Interest

On October 15, 1963, there was published in the OFFICIAL GAZETTE (795 O.G. 519) a notice that the preparation by Patent Office draftsmen of drawings to become part of a patent application was considered to fall within the area of activity prohibited by Commissioner's Administrative Order No. 50 of January 29, 1963.

The following opinion of the Criminal Division of the Department of Justice is published for the information of all who may be concerned.

Title 18, Section 203 of the United States Code provides in part:

(a) Whoever, otherwise than as provided by law for the proper discharge of official duties, directly or indirectly receives or agrees to receive, or asks, demands, solicits, or seeks, any compensation for any services rendered or to be rendered either by himself or another—

* * * * * * *

(2) at a time when he is an officer or employee of the United States in the executive, legislative, or judicial branch of the Government, or in any agency of the United States, including the District of Columbia,

New Applications Received During January 1964

Patents	6,858
Plant Patents	10
Reissues	7
Designs	472
Total	7,347

Issue—March 3, 1964

Patents	1081	No. 3,122,749 to No. 3,123,829, incl.
Designs	46	No. 197,590 to No. 197,635, incl.
Plant Pats	5	No. 2,368 to No. 2,372, incl.
Reissues	5	No. 25,526 to No. 25,530, incl.
Total	1137	

in relation to any proceeding, application, request for a ruling or other determination, contract, claim, controversy, charge, accusation, arrest, or other particular matter in which the United States is a party or has a direct or substantial interest, before any department, agency, court-martial, officer, or any civil, military, or naval commission, or

(b) Whoever, knowingly, otherwise than as provided by law for the proper discharge of official duties, directly or indirectly gives, promises, or offers any compensation for any such services rendered or to be rendered at a time when the person to whom the compensation is given, promised, or offered, is or was such a Member, Commissioner, officer, or employee—

Shall be fined not more than $10,000 or imprisoned for not more than two years, or both, and shall be incapable of holding any office of honor, trust, or profit under the United States.

It is the opinion of the Criminal Division of the Department of Justice (1) that the preparation of drawings for patent applications by Patent Office draftsmen for compensation, outside their official duties, is a violation of 18 U.S.C. 203; and (2) that the compensation, directly or indirectly, of Patent Office draftsmen for the preparation of drawings for patent applications by those filing applications of patent for themselves or for others is a violation of 18 U.S.C. 203.

Amendments After Second Action

Amendments filed after the second action on the merits are not entered until approved by the Examiner. It is suggested that, when extensive amendments to the claims are proposed, a copy of the claims as proposed to be amended be included either in the "Remarks" or in a separate paper. Bracketing deleted matter and underlining inserted matter would also be helpful.

EDWIN L. REYNOLDS,
Acting Commissioner of Patents.

February 12, 1964.

Foreign Patents Received in the Scientific Library as of January 31, 1964

Source	Date received	Highest number
Australia:		
(*Abstracts*)	Jan. 29, 1964	36,704/63
(*Patents*)	Jan. 27, 1964	246,452
Austria	Jan. 6, 1964	230,300
Belgium	Oct. 16, 1962	573,100
Canada	Jan. 24, 1964	673,681
Czechoslovakia	Feb. 27, 1963	103,500
Denmark	Dec. 27, 1963	96,504
East Germany	Jan. 30, 1964	27,251
Egypt	Jan. 30, 1964	4,326
Finland	Jan. 27, 1964	33,254
France:		
(*Patents*)	Jan. 20, 1964	1,335,450
(*Additions*)	Jan. 20, 1964	81,300
(*Medicaments*)	Dec. 6, 1963	1,600 M
(*Additions*)	May 13, 1963	15 CAM
Germany:		
(*Auslegeschriften*)	Jan. 13, 1964	1,157,170
(*Patents*)	Jan. 13, 1964	1,148,255
Great Britain	Jan. 28, 1964	946,210
India	Oct. 3, 1963	83,481
Ireland	Sept. 24, 1963	23,700
Italy	Apr. 25, 1963	616,900
Japan	Jan. 30, 1964	26,700/63
Netherlands	Jan. 20, 1964	106,999
Norway	Jan. 27, 1964	103,166
Pakistan	Nov. 26, 1963	112,444
Philippine Republic	Apr. 13, 1962	458
Poland	Dec. 30, 1963	47,780
Rumania	Jan. 22, 1964	42,333
Sweden	Jan. 10, 1964	186,074
Switzerland	Jan. 24, 1964	373,336
U.S.S.R.	Jan. 22, 1964	158,830

Australia: First 2,000 incomplete
Belgium: First printed 493,079/1950
Canada: First printed 445,931/1948
Czechoslovakia: Not received between 81,300/1952 and 91,901/1959
Finland: First printed 19,428/1941
First 500 incomplete
Hungary: First received 5,792/1896
Latest 140,582/1951
Ireland: Missing 1–10,000
Italy: First 243,000 incomplete
Rumania: First received 40,380/1957
U.S.S.R.: Not received between 2,496/1928 and 116,000/1958
Yugoslavia: First received 10,001/1933
Latest 16,461/1941

Disclaimer

2,817,477.—*Samuel B. Williams*, Brooklyn, N.Y. ELECTRONIC COMPUTER. Patent dated Dec. 24, 1957. Disclaimer filed Dec. 18, 1963, by the assignee, *Bell Telephone Laboratories, Incorporated*.

Hereby enters this disclaimer to claims 25, 26, 27, and 28 of said patent.

English Translation of Manual of Patent Classification (1959) of the German Federal Republic Now Available

A complete translation into English of the Manual of Patent Classification of the Patent Office of the German Federal Republic (Deutsches Patentamt) has been published for the U.S. Patent Office, Department of Commerce, and the National Science Foundation. This is a translation of the 7th edition of the manual, 1959, the most recent German patent classification, and consists of 643 printed pages. The only known previous translation was of the edition of 1910 by G. A. Lovett of the U.S. Patent Office. The manual is useful for searching the German patents and may be of interest to anyone interested in the classification of scientific and technical information.

Orders for the manual, referring to order number OTS 63–11190, should be accompanied by check or money order for $6.50 payable to the Office of Technical Services, and should be sent to the following address:

Office of Technical Services
U.S. Department of Commerce
Washington, D.C. 20230

Patents Available for Licensing or Sale

Des. 197,367. Tapering Comb. Lee Marrello, 2328 E. Alma Ave., Stockton, Calif.

3,091,253. Float-Controlled Valves for Poultry-Watering Apparatus and the Like. John H. Anstin, 68 Ave. J, Bradenton Park, Bradenton, Fla.

3,106,762. Electronic Apparatus for Detecting and Eliminating Irregularities in Threads. Juan Solanich Riera, Barcelona, Spain. Correspondence to: Michael S. Striker, 360 Lexington Ave., New York 17, N.Y.

3,115,054. Pipe Beveling Device. Ernest S. Rupe, 2283 Elmanto Drive, Rancho Cardova, Calif.

Eastman Kodak Company announces that, in accordance with its policy, non-exclusive licenses upon reasonable terms are available to responsible domestic applicants (under the circumstances prevailing at the time) under the following U.S. patent:

2,819,649. Reflecting Condenser System for Projectors.

This offer is consistent with the present practice of Eastman Kodak Company to grant such non-exclusive licenses for any of its United States patents on photographic inventions issued prior to 1959 and on inventions made in the course of research or development work for the U.S. Government.

Applications for license may be addressed to the Director, Patent Department, Eastman Kodak Company, 343 State St., Rochester, N.Y. 14650.

General Electric Company is prepared to grant non-exclusive licenses under the following 26 patents upon reasonable terms to domestic manufacturers.

Applications for licenses under the following 12 patents may be addressed to: Patent Counsel, Major Appliance Division, General Electric Company, Appliance Park, Louisville 1, Ky.

2,896,886. Motor Mount.
2,911,709. Method of Assembling Compressor and Motor.
3,111,010. Air Conditioning Control Apparatus.
3,111,814. Refrigerator Defrost Control System.
3,111,817. Multiple Temperature Refrigerator.
3,112,619. Refrigerator Including Defrost Control Means.
3,113,439. Heat Pump Having Outdoor Temperature Compensating Control.
3,115,352. Alignment Compensating Coupling.
3,115,885. Tub for Article Washing Machine.
3,115,987. Welded Container With Thermoplastic Lining and Method of Making Same.
3,116,430. Electric Motor With Built-In Relay.
3,116,910. Parallelogram Lift Mechanism.

Applications for license under the following 12 patents may be addressed to: General Electric Company, Flight Propulsion Division, 1000 Western Ave., West Lynn, Mass. 01905, Attn: Patent Counsel:

2,957,228. Method of Fabricating Stator Vanes.

3,036,201. Resistance Pin Welding Method.

3,056,663. Catalyst Bed and Method of Manufacture Therefor.

3,078,554. Columbium Base Alloy Article and Improved Method for Coating Same.

3,085,917. Chemical Cleaning Method and Material.

3,099,532. A Method of Making High Purity, Substantially Spherical Discrete Particle of Beryllium Hydroxide or Oxide.

3,106,372. Reingestion Control Means.

3,112,611. Rocket Motor Employing a Plug Type Nozzle.

3,112,612. Rocket Motor.

3,116,756. Diverter Valve Means.

3,116,898. VTO Inlet.

3,117,748. Aircraft.

Applications for license under the following 2 patents may be addressed to: Patent Counsel, Power Transmission Division, General Electric Company, 6901 Elmwood Ave., Philadelphia 42, Pa.

3,113,175. Welded Electrical Connection.

3,114,387. Pressure Relief Valve for a Hydraulic System.

Adjudicated Patents

(D.C. Calif.) Anderson Patent No. 2,787,314 (264—115), for apparatus and method for forming a fiber reinforced plastic article. Claim 11 *Held* not infringed. *Condion Ingersoll-Rand Co.* v. *Peterson Products of San Mateo, Inc.*, 223 F. Supp. 803; 139 USPQ 61.

(D.C. Mass.) Boyajian Patent No. 2,804,395 (117—44) for envelopes and the like with remoistenable adhesives comprising polyvinyl alcohol. Claims 5 and 10 *Held* invalid; claims 1 to 4 and 6 to 9 *Held* not infringed. *Old Colony Envelope Co.* v. *Boyajian*, 223 F. Supp. 905; 139 USPQ 265.

(D.C.N.C.) Ledwell Patent No. 2,903,872 (66—187) for method of manufacturing a knit stocking, *Held* invalid and not infringed. *De Long* v. *Lemco Hosiery Mills, Inc.*, 223 F. Supp. 1001; 139 USPQ 201.

(D.C. Mo.) Turner and Wright Patent No. 2,913,331 (99—6) for a dry, free flowing molasses feed product using soybean mill feed as a carrier, *Held* not infringed. *A. E. Staley Mfg. Co.* v. *Old Rock Distilling Co.*, 223 F. Supp. 798; — USPQ —.

(D.C. Mass) Gilbride and Rockwell Patent No. 2,926,367 (12—12.4) for machines for shaping uppers over lasts, *Held* invalid. *United Shoe Machinery Corp.* v. *Industrial Shoe Machinery Corp.*, 223 F. Supp. 826; 140 USPQ 10.

(D.C. Calif.) Anderson Patent No. 2,938,125 (264—115) for method of and portable apparatus for depositing reinforced plastics. Claims 1 to 6 *Held* invalid and not infringed. *Condion Ingersoll-Rand Co.* v. *Peterson Products of San Mateo, Inc.*, 223 F. Supp. 803; 139 USPQ 61.

(D.C.N.C.) Slane Patent No. 2,980,917 (2—239) for circular knit hosiery and method of closing the toe thereof, *Held* invalid and not infringed. *De Long* v. *Lemco Hosiery Mills, Inc.*, 223 F. Supp. 1001; 139 USPQ 201.

(D.C. Mass.) Gilbride Patent No. 2,986,753 (12—8.2) for toe lasting machines. *United Shoe Machinery Corp.* v. *Industrial Shoe Machinery Corp.*, 223 F. Supp. 826; 140 USPQ 10.

(D.C. Mass.) Bray and Johnson Patent No. 3,061,852 (12—7.1) for combined wiper and knife for operating on shoes, *Held* invalid. *Id.*

(D.C.N.C.) Getax Reissue Patent No. 24,314 (66—187) for knitted hosiery and method of closing the toe of same. Claims 7, 8, 11, and 12 *Held* valid and infringed. *De Long* v. *Lemco Hosiery Mills, Inc.*, 223 F. Supp. 1001; 139 USPQ 201.

PATENT EXAMINING CORPS

H. B. WHITMORE, Superintendent

PATENT EXAMINING OPERATIONS AND GROUPS	Oldest Application	
	New	Amended
CHEMICAL EXAMINING OPERATION—P. E. MANGAN, Director.		
GENERAL CHEMISTRY, GROUP 110—R. L. CAMPBELL, Supervisory Examiner... Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries.	3-8-62	2-9-62
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Supervisory Examiner.... Heterocyclic; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids.	5-21-62	7-16-62
PETROLEUM CHEMISTRY, GROUP 130—J. R. LIBERMAN, Supervisory Examiner.... Hydrocarbons; Halogenated Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices; Organic Chemistry (Part) e.g.: Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhydrides; Acid Halides.	7-2-62	6-29-62
HIGH POLYMER CHEMISTRY, GROUP 140—M. STERMAN, Supervisory Examiner.... Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins; Reclaiming; Pore-Forming.	3-16-62	3-9-62
COMPOSITIONS AND MOLDING, GROUP 150—L. H. GASTON, Supervisory Examiner.... Compositions (Part) e.g.: Coating; Molding; Adhesive Compositions; Abrading; Liquid Purification or Separation; Gas Separation; Special Utility; Molding Processes.	4-2-62	3-21-62
COATING AND LAMINATING, GROUP 160—J. REBOLD, Supervisory Examiner.... Coating: Processes, Apparatus and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Ornamentation; Adhesive Bonding; Special Manufactures.	3-1-62	3-8-62
SPECIALIZED CHEMICAL ARTS AND INDUSTRIES, GROUP 170—W. B. KNIGHT, Supervisory Examiner.... Bleaching and Dyeing; Fertilizers; Foods; Fermentation; Photography; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Metallurgical Apparatus; Gas, Heating and Illuminating; Cleaning Processes; Liquid Purification; Thermolytic Distillation; Preserving.	3-30-62	4-10-62
CHEMICAL ENGINEERING, GROUP 180—G. D. MITCHELL, Supervisory Examiner.... Gas, Liquid and Solid Separation; Centrifugal Bowl Separators; Gas and Liquid Contact Apparatus; Distillation; Drying; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	6-4-62	6-4-62
ELECTRICAL EXAMINING OPERATION—N. H. EVANS, Director.		
POWER, GROUP 210—M. L. LEVY, Supervisory Examiner.... Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art.	5-21-62	5-1-62
SECURITY, GROUP 220—S. BOYD, Supervisory Examiner.... Ordnance, Firearms and Ammunition; Radar, Sonar, Directional Radio, Torpedoes, Seismic Exploring, Radio-Active Batteries; Nuclear Reactors, Powder Metallurgy, Rocket Fuels; Radio-Active Material.	5-23-62	4-23-62
INFORMATION TRANSMISSION, GROUP 230—S. W. CAPELLI, Supervisory Examiner.... Communications; Multiplexing Techniques; Facsimile and Related Art.	7-16-62	6-25-62
INFORMATION STORAGE AND RETRIEVAL, GROUP 240—W. W. BURNS, Supervisory Examiner.... Data Processing, Computation and Conversion; Storage Devices and Related Art.	1-29-62	1-9-62
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—B. G. MILLER, Supervisory Examiner.... Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks.	4-18-62	4-4-62
RADIATION AND INSTRUMENTS, GROUP 260—F. M. STRADER, Supervisory Examiner.... Optics; Radiant Energy; Measuring.	5-7-62	4-26-62
ELEMENTS, GROUP 270—E. J. SAX, Supervisory Examiner.... Conductors; Switches; Miscellaneous.	7-9-62	7-6-62

CONDITION OF PATENT APPLICATIONS AS OF DECEMBER 31, 1963

Total number of pending applications (excluding Designs)	204, 258
Total number of Design applications pending	5, 832
Total number of applications awaiting action (excluding Designs)	123, 303
Total number of Design applications awaiting action	2, 238
Date of oldest new application awaiting action	Jan. 29, 1962
Date of oldest amended application awaiting action	Jan. 9, 1962

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during February 1964, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*

Patents ..... Numbers 2,415,068 to 2,416,664, inclusive

PATENT EXAMINING OPERATIONS AND GROUPS (Continued)	Oldest Application	
	New	Amended
MECHANICAL ENGINEERING EXAMINING OPERATION—R. A. WAHL, Director.		
MATERIAL OR ARTICLE HANDLING AND DISPENSING, GROUP 310—A. BERLIN, Supervisory Examiner... Material or Article Handling and Dispensing; Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Fluid Sprinkling and Fire Extinguishers; Coin Handling and Check Controlled Apparatus; Classifying and Assorting Solids.	11-6-62	10-23-62
METAL AND PLASTICS WORKING, GROUP 320—N. BERGER, Supervisory Examiner.... Metal Bending, Drawing, Extruding, Forging, Rolling; Sheet Metal Working; Wireworking; Chain, Staple, Horseshoe Making; Metal Founding; Wire Fabrics; Plastic Working Apparatus; Plastic Block, Earthenware Apparatus.	9-12-62	8-13-62
MANUFACTURING AND ASSEMBLING MISCELLANEOUS ARTICLES, GROUP 330—A. M. HORTON, Supervisory Examiner.... Special Article Making; Assembling, Tool and Implement Making; and Metal Working.	7-2-62	7-2-62
MACHINE TOOLS, MECHANISMS AND ELEMENTS, GROUP 340—F. H. BRONAUGH, Supervisory Examiner.... Machine Tools for Shaping or Dividing Involving Cutting or Breaking; Machine Elements Including Power Transmission Components, Work and Tool Holders.	9-6-62	6-14-62
HARDWARE, TOOLS AND JOINTS, GROUP 350—T. J. HICKEY, Supervisory Examiner.... Miscellaneous Hardware; Tools; Joints; Cutlery; Locks; Fasteners; Rod Pipe and Electrical Connectors; Buckles; Buttons, Clasps, Etc.; Pushing and Pulling.	6-1-62	5-17-62
FLUID HANDLING, GROUP 360—E. PAUL, Supervisory Examiner.... Fluid Handling; Valves; Pipes and Tubular Conduits; Fluent Material Handling; Lubrication; Baths, Closets and Sinks; Joint Packing.	8-17-62	10-15-62
POWER PLANTS, MOTORS AND PUMPS, GROUP 370—C. F. GAREAU, Supervisory Examiner.... Power Plants, Combustion Power Plants, Expansible Chamber Motors, Rotary Motors and Rotary Expansible Chamber Motors, Expansible Chamber Devices and Internal Combustion Engines, Pumps and Pump Regulation.	9-27-62	9-13-62
HEATING, COOLING AND VENTILATING, GROUP 380—P. L. PATRICK, Supervisory Examiner.... Furnaces, Liquid Heaters and Vaporizers, Burners, Heat Exchange, Automatic Temperature and Humidity Regulation; Refrigeration, Ventilation, and Illumination.	7-24-62	8-6-62
GENERAL ENGINEERING AND INDUSTRIAL ARTS EXAMINING OPERATION—J. A. MANIAN, Director.		
AGRICULTURE, GROUP 410—A. RUEGG, Supervisory Examiner.... Animal Husbandry; Butchering; Fishing, Trapping and Vermin Destroying; Plant Husbandry; Tobacco, Earth Working.	12-21-62	1-7-63
CIVIL ENGINEERING, GROUP 420—B. BENDETT, Supervisory Examiner.... Building Structures; Bridges, Closures; Closure Operators; Safes; Earth Engineering; Drilling; Mining.	6-26-62	7-20-62
PHYSICS, GROUP 430—R. L. EVANS, Supervisory Examiner.... Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.	7-9-62	7-11-62
TEXTILES AND APPAREL, GROUP 440—R. C. MADER, Supervisory Examiner.... Textiles; Winding and Reeling; Tying Strands; Apparel; Boot and Shoe Making; Sewing Machines.	3-22-62	3-6-62
TRANSPORTATION, GROUP 450—P. ARNOLD, Supervisory Examiner.... Railways and Rolling Stock; Brakes; Land Vehicles; Aeronautics; Ships.	9-14-62	8-9-62
FURNITURE AND RECEPTACLES, GROUP 460—W. S. COLE, Supervisory Examiner.... Furniture, Supports; Cabinet Structures; Receptacles; Baggage.	10-15-62	10-1-62
PRINTING, STATIONERY AND MATERIAL TREATMENT, GROUP 470—L. W. VARNER, Supervisory Examiner.... Printing; Typewriters; Stationery; Material Treatment.	9-6-62	8-14-62
PERSONAL TREATMENT, ADORNMENT AND AMUSEMENTS, GROUP 480—L. R. PRINCE, Supervisory Examiner.... Surgery; Dentistry; Artificial Body Members; Toiletry; Amusement Devices; Jewelry; Mechanical Guns; Projectors.	10-2-62	10-4-62
DESIGNS, GROUP 490—J. A. MANIAN, Supervisory Examiner.... Industrial Arts; Household, Personal and Fine Arts.	7-5-63	7-8-63

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE ARTHUR L. SCOTT

No. 7018. Decided November 14, 1963

[51 CCPA —; 323 F.2d 1016; 139 USPQ 297]

1. PATENTABILITY—OBVIOUSNESS—FUNCTIONAL AND MECHANICAL EQUIVALENTS NOT NECESSARILY OBVIOUS.

"We disagree with the supposed logic of the Patent Office position. The Examiner and the Board appear to hold that the mere existence of 'functional and mechanical equivalence' establishes 'obviousness.' We think this involves a non-sequitur. Expedients which are functionally equivalent *to* each other are not necessarily obvious *in view of* one another. The statutory mandate of 35 U.S.C. 103 is that the claimed subject matter be unobvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Assuming, arguendo, that the hardened resin core and the light wood core taught by Meyer *are* both 'functionally equivalent' to the paper core of appellant, it does not follow that use of a paper core would be 'obvious' to one of ordinary skill in view of the teachings of the references. On the basis of the record before us, we do not believe that light wood or hardened foam resin cores fairly suggest the use of paper cores or that paper cores *would* necessarily function in an equivalent manner. We therefore do not find obviousness."

2. SAME—SAME—SAME.

"Appellant's invention is admittedly a simple one but we believe it to be an unobvious solution to a specific problem. The rejection, in our opinion, is based upon an improper hindsight view of the art after having full benefit of appellant's disclosure. The concept of using a resilient paper core and a rigid mold, to make a rod unaffected by changing atmospheric conditions, is not fairly suggested in the art. While it may be a fact that appellant's core and a prior art core will function in like manner, there is nothing to show that one of ordinary skill in the art would know that. And certainly the art wholly fails to disclose paper cores."

3. SAME—SAME—DOUBT RESOLVED IN FAVOR OF APPLICANT.

"• • • doubt, if there be any, on the question of patentability must be resolved in favor of the applicant."

4. SAME—PARTICULAR SUBJECT MATTER—"HOLLOW GLASS FIBER SHAFT."

The rejection of certain claims in an application entitled "Hollow Glass Fiber Shaft," as unpatentable over the prior art, is reversed, and the rejection of another claim as indefinite is affirmed.

APPEAL from the Patent Office. Serial No. 440,369.

MODIFIED.

Kenyon & Kenyon, Ralph L. Campbell, for appellant.

Clarence W. Moore (*J. F. Nakamura* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, JR., *Associate Judges*

RICH, *J.*, delivered the opinion of the court.

This appeal is from the Patent Office Board of Appeals affirming the rejection of claims 9, 10, and 12–16 of application Serial No. 440,369, filed June 30, 1954, entitled "Hollow Glass Fiber Shaft."

The invention relates to hollow fiber-glass rods of uniform outside diameter, particularly suitable for use as archery arrow shafts. The claims on appeal are directed to both the rods and the method of making them.

The novelty of appellant's invention resides in using a *paper* tube as the core of the rod. The paper tube is cylindrical and consists of helical windings of paper tape, like an ordinary soda straw. The hollow fiber-glass rod is made by feeding strands of glass fibers coated with thermosetting resin longitudinally into a rigid mold in surrounding relation to the paper tube. The tube remains inside the fibers and serves as a permanent mandrel supporting the fibers. While in the mold the rod is heated to cure the resin, thereby forming a permanently hardened mass. Because the mold is rigid, the finished rod is straight and has a uniform outside diameter. Appellant does not allege novelty in the process except for the use therein of the paper core.[1]

In describing his invention, appellant's specification states:

• • • it is an object of the invention to provide a linear shaft consisting of a hollow core of soft, fibrous material of *low rigidity* and an outer tube fabricated of longitudinally-extending glass fibers held together by a bonding agent, said core having *sufficient stiffness* to constitute a former for the surrounding glass fibers in the assembling of the shaft.

Another object is to provide a core which is *soft* and *resilient* to permit the resin employed to shrink during the curing thereof without the formation of cracks as is the case many times when a hollow shaft is formed on a metal mandrel.

• • • •

The rejection is based on the following references:

Koch, 2,625,498, January 13, 1953.
Meyer, 2,694,661, November 16, 1954.
Scott, 2,749,643, June 12, 1956.

The method claims are rejected as unpatentable over Meyer in view of Koch. The article claims are rejected as unpatentable over Meyer or Scott.[2] The statutory basis of the art rejection is 35 U.S.C. 103. Claim 13 is also rejected as "indefinite," the statutory basis for such rejection being 35 U.S.C. 112.[3] We dispose of the latter rejection, which is manifestly proper, by sustaining it. The sole remaining issue is obviousness in view of the prior art.

The references all deal with making fiber-glass rods. Koch discloses a method for making *solid*, glass fiber reinforced, plastic rods and bars having a high percentage of glass fibers (60% to 76%) in proportion to the volume of resin for use as fishing rod blanks, arrow blanks, electrical insulation and the like. Such rods and bars are made by gathering a plurality of cables of longitudinally extending glass filaments through a bath of resin and into a tubular and *rigid* mold, and heating the mold to cure the resin.

Meyer discloses a method for making rods or tubes by applying a layer of longitudinally extending, resin-coated glass fibers to a core to make a solid rod or on a mandrel to make a tube. As a core, Meyer suggests using "*light wood, hardened foamed resin, or any similar light-weight material* which is strong in compression." [Emphasis ours.] To provide a smooth outer surface suitable for purposes such as archery arrows, for which the prior art rods were said not to be smooth enough, the glass fiber-covered core or mandrel is enclosed in a heat-shrinkable molding tube of "Saran" film. After heating to cure the resin, the molding tube is melted off. In lieu of the tube, a coating of film-forming solution or a hot melt may be applied and dried or cooled to form a heat-shrinkable covering. In lieu of a heat-shrinkable covering, a smooth surface may be formed by passing the glass fiber-covered core or tube of glass fibers through a curing mold having a cavity with a *flexible* wall (mold) forced by steam pressure to tightly embrace the resin and glass fiber layer.

Scott, one of appellant's own patents, discloses a hollow tapered shaft of resin-bonded glass fibers particularly for use in making fishing rods without the disadvantages of a balsa wood core or a solid glass fiber shaft. The shaft comprises an outer layer of longitudinally extending glass fibers and an inner layer of spirally wound glass fibers. The shaft is made by applying the inner and outer layers of resin-coated glass fibers on a tapered core, applying a spiral winding of cellophane to hold the glass fibers in place and heating the assembly to cure the resin. The cellophane wrapping and core are then removed.

The rationale of the rejection is simply this: (1) it is obvious to employ the rigid mold of Koch in the process of Meyer to make a

[2] The Board considered the Scott patent to be "cumulative" and, with respect to the article claims, discussed only the Meyer patent.

[3] The last two lines of the claim are unclear. Appellant recognizes this and proposes to amend the claim subject to the indication of allowable subject matter. Claim 13 reads:

> 13. The method of producing a hollow glass shaft adapted to retain its form without warping regardless of atmospheric conditions comprising forming a layer of glass filaments extending longitudinally and in uniform thickness about a tubular paper core having a stiffness to support the filaments but a strength negligible as compared to the finished shaft and joining said filaments to one another with heat setting plastic [while?] maintaining said filaments in a straightened condition *and*. [Emphasis ours.]

hollow rod of uniform outside diameter; and (2) the core of *light wood or hardened foam resin* taught by Meyer is the "functional equivalent" of appellant's paper core, thus making the use of a paper core a "matter of choice" within the skill of the art. The Solicitor properly crystallized the issue to be decided by this court in stating, "The ultimate issue * * * is whether it would have been obvious to use a paper tube for the core of Meyer's arrow shaft."

We believe it would not have been obvious, within the meaning of 35 U.S.C. 103, for reasons hereinafter stated and, therefore, do not sustain the rejection.

In the final rejection, the Examiner states:

> It would appear, however, that the *foam resin core of Meyer* would *serve the same purpose* as applicant's paper core since neither core would tend to warp. [Emphasis ours.]

In his answer, the Examiner further states:

> The core material of Meyer is considered to be *patentably equivalent* to the paper core of applicant. [Emphasis ours.]

The Board adopts the same rationale in stating:

> Meyer's *foamed* core is the *functional and mechanical equivalent* of a paper tube core in the article claimed and, as indicated above, the selection of the paper core *involves only choice* and is unpatentable. [Emphasis ours.]

Appellant's position is that "functional equivalency" does not exist but that, in any event, different means are employed to produce the result, which means are unobvious.

[1] We disagree with the supposed logic of the Patent Office position. The Examiner and the Board appear to hold that the mere existence of "functional and mechanical equivalence" establishes "obviousness." We think this involves a non-sequitur. Expedients which are functionally equivalent *to* each other are not necessarily obvious *in view of* one another. The statutory mandate of 35 U.S.C. 103 is that the claimed subject matter be unobvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Assuming, arguendo, that the hardened resin core and the light wood core taught by Meyer *are* both "functionally equivalent"[4] to the paper core of appellant, it does not follow that use of a paper core would be "obvious" to one of ordinary skill in view of the teachings of the references. On the basis of the record before us, we do not believe that light wood or hardened foam resin cores fairly suggest the use of paper cores or that paper cores *would* necessarily function in an equivalent manner.[5] We therefore do not find obviousness.

[4] Appellant and the Patent Office present conflicting arguments as to "functional equivalency." The Board stated, "The foamed plastic core would hold the coated glass filaments against a rigid mold when used in Meyer as it already does with the flexible mold; would yield inwardly under pressure from the rigid mold like appellant's paper tube; and concededly cannot warp the finished shaft regardless of weather conditions * * *." Appellant concedes that the plastic core "would probably not be affected by the elements."

However, appellant argues that a foamed plastic core must be absolutely straight and true, *even if used in a rigid mold*. We find it unnecessary to resolve this issue since our opinion would be the same, even assuming "functional equivalence."

[5] We note that Meyer treats "any light wood, hardened foamed resin, or any similar light-weight material which is strong in compression" as functional equivalents and as suitable core material, yet they do not appear to be so. All his examples are shown as having *wood* cores. However, according to appellant, it was a light wood, namely balsa wood, that created the very problem which he sought to remedy by the claimed invention. His brief states:

> When Scott tackled the problem, the obvious solution was to use a *balsa wood* core, but the balsa wood core made it impossible to obtain a true shaft, or one which would stay true. If the core did not warp prior to forming the shaft, it would probably do so after the shaft had been formed. In either case, it would warp the finished shaft regardless of any care taken in making it. [Emphasis ours.]

As we read Meyer, it is a matter of indifference which of his disclosed cores is used. If a foamed resin core *would* solve the problem created by using balsa wood, as the Board assumes, this is certainly a thought which cannot be found in the reference. Rather, it appears from the teaching of appellant's specification.

[2] Appellant's invention is admittedly a simple one but we believe it to be an unobvious solution to a specific problem. The rejection, in our opinion, is based upon an improper hindsight view of the art after having full benefit of appellant's disclosure. The concept of using a resilient paper core and a rigid mold, to make a rod unaffected by changing atmospheric conditions, is not fairly suggested in the art. While it may be a fact that appellant's core and a prior art core will function in like manner, there is nothing to show that one of ordinary skill in the art would know that. And certainly the art wholly fails to disclose paper cores.

As this court stated in *In re Sporck*, 49 CCPA 1039, 301 F.2d 686, 133 USPQ 360:

> The fact that the invention seems simple after it is made is not determinative of the question of obviousness. If this were the rule, many of the most beneficial patents would be stricken down. If those skilled in the mechanical arts are working in a given field and have failed to discover a certain new and useful improvement, the one who first makes the discovery frequently has done more than make an obvious improvement which would have suggested itself to a mechanic skilled in the art, and such an invention is entitled to the grant of a patent thereon.

Also in *In re Tanczyn*, 40 CCPA 886, 202 F.2d 785, 97 USPQ 150, the court stated:

> With appellant's application before us, it may be possible to look back at the references of record and say that they suggested appellant's claimed product, but such hindsight should not defeat his right to the appealed claims.

We think such principles apply in this case. [3] Furthermore, doubt, if there be any, on the question of patentability must be resolved in favor of the applicant. *In re Pappas et al.*, 38 CCPA 746, 185 F.2d 695, 88 USPQ 108.

[4] The rejection of claims 9, 10, 12, 14, 15 and 16 is accordingly reversed and the rejection of claim 13 is affirmed.

MODIFIED.

U.S. Court of Customs and Patent Appeals

IN RE EDWIN H. LAND

No. 7007. Decided November 14, 1963

[51 CCPA —; 324 F.2d 312; 139 USPQ 282]

1. PATENTABILITY—COMPOUNDS—EVIDENCE—EQUIVALENCE DISCLOSED IN PRIOR ART—*In re Ruff et al.* DISTINGUISHED.

In response to appellant's contention that "to hold inorganic pigments, • • • to be equivalents of the art-used soluble dyes is an improper use of appellant's disclosure," citing *In re Ruff and Dukeshire*, 45 CCPA 1037, 256 F.2d 590, 118 USPQ 340, *Held* that the "Land patent shows that dyes and pigments may be used interchangeably in rendering liquids opaque to actinic light," and that "Since the prior art recognized the equivalence of dyes and pigments for the purpose here used, the decision of *In re Ruff et al.*, supra, is not here pertinent."

2. SAME—REFERENCE—SUGGESTION TO THE ART.

"While it may be true that Spiro contemplated organic coloring materials, • • • the patent is specific in reciting that 'all other inorganic coloring-matters' could be used. Even if Spiro was under a misapprehension as to the meaning of 'inorganic' the suggestion to the art is clear and unequivocal."

3. SAME—CRITICALITY—PERCENTAGE OF OPACIFIER.

"The percentage of opacifier recited in the claims has not been shown to be critical, nor has it been shown to differ from that employed in the prior art patent to Spiro. We therefore find no patentable distinction supported by the percentage claimed."

4. SAME—OBVIOUSNESS—SUBSTITUTION OF COLLOIDAL GRAPHITE FOR OTHER OPACIFIERS IN PRIOR ART.

"As to the particular pigment recited in claim 39, we agree that it would be obvious to employ colloidal graphite for the same protective function for which other opacifiers were used in the prior art. Land suggests in one embodiment employing a white pigment on one backing of the sandwich and a black dye for rendering the other backing opaque after exposure so that 'the film unit [is] completely light-impervious, so that it may be removed from the camera immediately after passing through the pressure rollers.' Given this teaching of a white pigment and a black dye to render a film unit light-impervious, it would be obvious to one skilled in the art to use a black pigment, i.e., graphite, for the same purpose. Combined with the clear suggestion in the secondary references to add the coloring material to the developing fluid, we find the improvement in the Land process obvious to one skilled in the art."

5. SAME—PARTICULAR SUBJECT MATTER—"PHOTOGRAPHIC PROCESS AND COMPOSITION."

The refusal of certain process claims in an application, entitled "Photographic Process and composition," as unpatentable over the prior art, is affirmed.

APPEAL from the Patent Office. Serial No. 537,349.

AFFIRMED.

Donald L. Brown, Brown and Mikulka, Stanley H. Mervis, for appellant.

Clarence W. Moore (*Jack E. Armore* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, Jr., *Associate Judges*

ALMOND, Jr., *J.*, delivered the opinion of the court.

This is an appeal from the decision of the Board of Appeals affirming the refusal by the Examiner to allow claims 39 and 40 in a patent application [1] for "Photographic Process and Composition." Both claims are drawn to a process.

The invention relates to a process of developing photographic film in the presence of environmental light. In the prior art process improved upon by appellant, the specification states:

> • • • the processing composition is spread between a pair of sheets, one of which carries a photosensitive stratum, to provide what may be termed a sandwich. Thereafter, the sheets are maintained in superposed relation for a predetermined processing period during which a visible print is produced from a latent image in the photosensitive stratum. At the completion of this processing period, the sheets are stripped apart to uncover the print. Ordinarily, the sandwich, during processing, is kept in a dark chamber in order to prevent further exposure of the photosensitive stratum to environment light before the processing period is completed.

The problem attendant to this process was that the opening in the dark chamber through which the sandwich emerged on completion of the processing permitted penetration of light "into the photosensitive stratum through the edges of the sandwich," resulting in highlight streaks or fogging in the print. If the sandwich was removed from the dark chamber before processing was complete, the photosensitive stratum would be exposed by environmental light.

The specification further states:

> The present invention contemplates incorporaitng, in a processing composition of the foregoing type, a light-absorbing medium, such as a dye or pigment, which renders the layer of processing composition substantially opaque in order to permit processing to be effected in environmental light. Where the sheets are transparent or translucent, the light-absorbing medium in the processing

[1] Serial No. 537,349, filed September 29, 1955.

composition may be so constituted as to shield the photosensitive stratum in a camera dark chamber from further photoexposure by light leakage. Where the sandwich is to be processed in relatively strong light, ordinarily it is desired that the sheet having the photosensitive stratum and, where feasible, the other sheet, be opaque.

The claims on appeal are limited to an inorganic pigment, preferably colloidal graphite, as the light absorbing medium. As stated in appellant's brief, "It is this use of an inorganic pigment, exemplified by colloidal graphite, which is the feature relied upon as patentably distinguishing the appealed claims from the prior art." A representative claim is:

39. A photographic process comprising the steps of advancing a photosensitive stratum from the exposure chamber of a camera into superposition upon another stratum with a thin layer of an opaque fluid therebetween to form a sandwich by means of a pair of pressure-applying members from between which said sandwich extends outwardly from said exposure chamber into a region subjected to actinic light, shielding opposed faces of said sandwich from said actinic light by means of opaque barriers, shielding said inner faces of the strata by means of said layer from said actinic light penetrating said sandwich *through edges* of said layer, said photosensitive stratum containing silver halide, said opaque fluid containing a silver halide developer, a silver halide solvent and a dispersion of *colloidal graphite*, said colloidal graphite being in a proportion that is sufficient *to render said thin layer substnatially opaque to actinic light* penetrating edges of said sandwich and that does not exceed 5% by total weight of said opaque fluid in order not to interfere with reactions involving the remainder of said processing agents, reacting said silver halide developer with said silver halide in order to reduce silver, reacting said silver halide solvent with unreduced silver halide in order to form a complex silver salt, transferring said complex silver salt through said layer of opaque fluid from said silver halide stratum to said other stratum, reducing said complex silver salt on said other stratum to silver in order to form a silver print, and stripping said photosensitive stratum together with said layer of said opaque fluid from said visible print. [Emphasis supplied.]

The Examiner relied on four references in rejecting the claims. These references are:

Spiro, 409,618, August 20, 1889.
Ludwig, 787,103, April 11, 1905.
Land, 2,607,685, August 19, 1952.
Rogers, 2,774,668, December 18, 1956.

The primary reference relied on below was the patent to Land. This patent discloses an image transfer photographic process in which a photosensitive stratum backed by an opaque backing is superimposed on an image bearing layer to form a sandwich. A pod containing processing liquid is ruptured when passed through rollers to release liquid developing agents. Also disclosed in Land is a separate pod containing pigment or dye to render the transparent backing of the image carrying layer impervious to light.

The Rogers patent discloses a color image transfer process in which a sandwich is formed similar to that in Land. Dyes are used to form the color image.

Spiro discloses a process of developing photographic plates or sheets without a dark-room by adding dyes to the developing bath to exclude actinic light. The patent states:

* * * The non-actinic bath will completely exclude the actinic rays from the immersed plate or sheet, and the developing-mixture being perfectly clear the development will proceed in full view of the operator, who may thus easily note the progress of the development.

A "dark-orange-colored solution" is suggested in Spiro, which may contain "aniline coloring-matter, as well as all other inorganic coloring-matters * * *."

The Ludwig patent discloses a "Process of Developing Photographic Plates or the Like in Open Daylight" by coloring the sensitive surface of photographic plates to render them "insensitive to actinic rays of light * * *." As coloring material, the patent suggests "that known as 'scarlet saffron 3B'; but of course any other coloring material capable of producing the desired result may be used."

The Examiner rejected the claims "as being unpatentable over either Land * * * or Rogers, each alone, or taken in view of either of Spiro or Ludwig." The Board reversed the Examiner on the rejection based on Land or Rogers alone, because Land fails to show "the incorporation of the opacifying agent *in the developing fluid*" and Rogers does not show advancing the photosensitive elements into a region of actinic light. The Board affirmed the rejection of the claims based on combined patent teachings, considering the Rogers patent in combination with the Ludwig and Spiro patents "as being cumulative in relation to the Land patent as similarly combined."

The Board reasoned as follows:

Since Spiro and Ludwig provide a clear teaching of the expedient of adding a coloring material to a developer solution to protect a photosensitive stratum from the effects of actinic light, we believe that it would be well within the skill of the art to utilize this teaching in so protecting the photosensitive layer of the Land sandwich when it is brought in contact, to any extent, with actinic light. A person of ordinary skill in the art would be able to select from the now numerous dyes and pigments, inert materials which are suitable for the particular sensitivity of the emulsion being used. * * *

It would be apparent to the technician in the subject art that inorganic pigments may be substituted for the dyes of Spiro and Ludwig, especially since Spiro discloses and claims the use of "non-actinic inorganic coloring matter." It may well be that Spiro attributes to the term "inorganic" a scope in some respects broader than that in which it is employed today, but the Spiro patent would leave the technician in no doubt as to the applicability of "inorganic coloring matter" of today in the described process.

This protective process does not become patentable anew because it was not mentioned in the Land patent or because the photosensitive layer of Land is employed in a diffusion-transfer process. In the Spiro and Ludwig process and in appellant's process the coloring matter serves the same protective function and is not directly involved in the chemical reactions of the photosensitive stratum.

Appellant argues that the claims are limited specifically to inorganic pigments as the opacifying agents, while Spiro and Ludwig are not. These patents are concerned with soluble colorants and the claims on appeal or concerned with insoluble colorants. Moreover, appellant contends, Spiro and Ludwig employ organic coloring materials, whereas the claims are limited to inorganic coloring materials. It is argued that in spite of the statement in Spiro that inorganic materials could be used, it is clear that only organic materials under today's definitions were contemplated in Spiro. Spiro thought of aniline as inorganic, appellant suggests, and the patent was granted in 1889 "at a time when little was known about organic chemistry, and the terms 'organic' and 'inorganic' still were used to indicate that the former had arisen through some kind of 'vital or life' force' and was incapable of laboratory reproduction."

It is appellant's contention that "to hold inorganic pigments, * * * to be equivalents of the art-used soluble dyes is an improper use of

appellant's disclosure. *In re Ruff and Dukeshire*, 45 CCPA 1037, 256 F.2d 590, 118 USPQ 340."

The issue is whether a person of ordinary skill in this art would, from the teachings of Spiro and Ludwig, consider it obvious to use an opaque pigment in a developer solution and, more particularly, to use a dispersion of colloidal graphite which does not exceed 5% by total weight of the opaque fluid.

We fail to discern a patentable distinction predicated on the relative solubility of dyes and pigments. There has been no disclosure that solubility of the opacifier has any bearing on its protective function against actinic light. Indeed, appellant's specification states, with reference to the light absorbing medium, "The medium preferably is an organic dye * * * [or] Alternatively the medium is a pigment * * *." No mention is made of a preference for an insoluble medium.

[1] The Land patent shows that dyes and pigments may be used interchangeably in rendering liquids opaque to actinic light. Since the prior art recognized the equivalence of dyes and pigments for the purpose here used, the decision of *In re Ruff et al.*, supra, is not here pertinent.

[2] While it may be true that Spiro contemplated organic coloring materials, as argued by appellant, the patent is specific in reciting that "all other inorganic coloring-matters" could be used. Even if Spiro was under a misapprehension as to the meaning of "inorganic" the suggestion to the art is clear and unequivocal. Since the ability to block actinic light has not been shown to depend on whether the material used in organic or inorganic, we agree with the Board that it would be obvious to employ inorganic colorants to protect the photosensitive stratum.

[3] The percentage of opacifier recited in the claims has not been shown to be critical, nor has it been shown to differ from that employed in the prior art patent to Spiro. We therefore find no patentable distinction supported by the percentage claimed.

[4] As to the particular pigment recited in claim 39, we agree that it would be obvious to employ colloidal graphite for the same protective function for which other opacifiers were used in the prior art. Land suggests in one embodiment employing a white pigment on one backing of the sandwich and a black dye for rendering the other backing opaque after exposure so that "the film unit [is] completely light-impervious, so that it may be removed from the camera immediately after passing through the pressure rollers." Given this teaching of a white pigment and a black dye to render a film unit light-impervious, it would be obvious to one skilled in the art to use a black pigment, i.e., graphite, for the same purpose. Combined with the clear suggestion in the secondary references to add the coloring material to the developing fluid, we find the improvement in the Land process obvious to one skilled in the art.

[5] For the reasons stated, the rejection of claims 39 and 40 is affirmed.

AFFIRMED.

PATENT SUITS

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2,810,549, W. A. Morrison, Fluid actuated percussive tool; **2,937,619**, E. H. Kurt, Hole cleaning device, filed Oct. 10, 1963, D.C., S.D. Tex. (Houston), Doc. 63–H–533, *Ingersoll-Rand Company v. Mission Manufacturing Company.*

2,817,085, Schwartz and Lo, Broad-band end-fire television antenna; **3,066,296**, H. Greenberg, End fire planar dipole array with line transportation between dipoles and impedance increase towards feed, filed Oct. 14, 1963, D.C., N.D. Ohio (Cleveland), Doc. C63–782, *Channel Master Corp. v. Kay-Townes Antenna Co., Inc. et al.*

2,883,534, E. E. Foster, Reverse wound spring motor, **filed** July 9, 1959, D.C., W.D. Tex. (Austin), Doc. 1106, *Majik-Ironers, Inc.* v. *Sears, Roebuck & Co.* Stipulation of dismissal Dec. 20, 1960. **Same, filed** Feb. 3, 1961, D.C., W.D. Tex. (Austin), Doc. 1190, *Majik-Ironers, Inc.* v. *Montgomery Ward & Co.* Stipulation of dismissal May 24, 1961.

2,888,626, A. R. Kuhn, Electric meter by-pass arrangement, **filed** Jan. 25, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c155, *Murray Manufacturing Corp.* v. *Milbank Mfg. Co., Inc. et al.* Cause dismissed May 16, 1963.

2,849,003. (See 2,445,322.)

2,875,758. (See 2,646,040.)

2,882,506, W. S. Watts, Contact assembly for plugboards, **filed** Sept. 5, 1963, D.C., W.D. Va. (Roanoke), Doc. 1345, *AMP Incorporated* v. *Virginia Panel Corporation.* Action dismissed without prejudice Oct. 12, 1963.

2,902,587. (See 2,777,928.)

2,904,866, A. G. Carter, Safety-belt buckle, **filed** Oct. 21, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63–1289WB, *Andrew G. Carter et al.* v. *Superior Industries, Inc.*

2,919,807. (See 2,395,449.)

2,925,950, M. I. Burg, Hat-box construction, **filed** Oct. 18, 1963, D.C., E.D.N.Y. (Brooklyn), Doc. 63C–1129, *Boas Box Co.* v. *Modern Millinery Box Corp.*

2,926,588, Gabler and Sivelle, Mold and frame assembly, **filed** Oct. 25, 1963, D.C., E.D.N.Y. (Brooklyn), Doc. 63C–1149, *P. M. Sales, Inc.* v. *Edward Lowenstein.*

2,933,344, H. W. Shumaker, Wind deflectors, **filed** Oct. 7, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c1794, *Hugh W. Shumaker et al.* v. *Groboski Industries, Inc.*

2,937,065, L. F. Harza, by Camphausen and Hillier, executors, Water stop, **filed** Jan. 9, 1963, D.C., N.D. Ohio (Cleveland), Doc. C63–26, *Water Seals, Inc. et al.* v. *Structural Specialties Corp. et al.* Consent judgment; patent held valid and infringed; defendants enjoined; counterclaims dismissed with prejudice Oct. 29, 1963.

2,937,619. (See 2,810,549.)

2,943,630, S. K. Tchejeyan, Method of making reticles, **filed** Oct. 11, 1963, D.C., E.D. Mich. (Detroit), Doc. 24454, *Research Supplies* v. *S. J. Tutag & Co.*

2,963,276, E. S. Nelson, Finned heating unit with guide rails, **filed** Oct. 1, 1963, D.C.N.H. (Concord), Doc. 2421, *Embassy Industries, Inc.* v. *Colonial Supply Corporation.*

2,967,119, R. P. Gutterman, Ultrasonic process and apparatus, **filed** Oct. 11, 1963, D.C., E.D.N.Y. (Brooklyn), Doc. 63C–1108, *Lipsner-Smith Corp.* v. *Dynasonic Corp.*

2,967,957, F. Massa, Electroacoustic transducer, **filed** Feb. 6, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c221, *Cohu Electronics, Inc.* v. *Erie Registor Corporation.* Complaint dismissed July 11, 1963.

2,970,266. (See 2,726,670.)

2,972,791. (See 2,716,751.)

2,974,528. (See 2,726,670.)

2,981,401, J. Cumming, Conveyor for dishwashing machines, **filed** Aug. 7, 1962, D.C.N.J. (Newark), Doc. 646–62, *G. S. Blakeslee & Co.* v. *Universal Dishwashing Machinery Company.* Order of dismissal Oct. 31, 1963.

2,985,874, G. I. Williams, Self-contained panel signal and control, **filed** Oct. 10, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63–1225–EC, *Transistor Electronics Corporation* v. *Electronics Engineering Company of California et al.*

2,994,420, A. A. Tobias, Cup guiding and positioning means, **filed** Oct. 16, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c1857, *The Seeburg Corporation* v. *Rock-Ola Ivi Corporation.*

3,007,596, L. C. Matsch, Thermal insulation; **3,009,600**, same, **filed** Oct. 17, 1963, D.C. Colo. (Denver), Doc. 8244, *Union Carbide Corporation* v. *Cryogenic Engineering Company.*

3,009,600. (See 3,007,596.)

3,036,249, J. H. Hall, Capacitor, **filed** Oct. 15, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c1846, *Fansteel Metallurgical Corporation* v. *P. R. Mallory & Co., Inc.*

3,050,239. (See 2,726,670.)

3,051,822. (See 2,777,928.)

3,052,135, Hurst and Campbell, Gear shifting mechanism, **filed** Nov. 29, 1962, D.C., S.D.N.Y., Doc. 62–1559–TC, *Hurst-Campbell, Inc.* v. *Fenton Mfg. Corp.* Final consent judgment; patent held valid and infringed; defendant enjoined Sept. 17, 1963.

3,058,176, E. A. Zegers, Means for and method of detachably mounting sash guiding weatherstrips in window frames, **filed** Oct. 10, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c1822, *Edward A. Zegers* v. *Zegers, Inc.*

3,061,332, L. S. Goulden, Cargo transport assembly, **filed** Oct. 17, 1963, D.C. Iowa (Des Moines), Doc. 5–1450, *Leo S. Goulden* v. *Fruehauf Corporation.*

3,066,651, M. G. Harwood et al., Poultry blinder and fastener, **filed** Oct. 24, 1963, D.C.N.J. (Trenton), Doc. 886–63, *Louis Jay Harwood et al.* v. *Kuhl Poultry Equipment Company.*

3,066,924, T. H. Queer, Auger type mining machines, **filed** Oct. 14, 1963, D.C., W.D. Pa. (Pittsburgh), Doc. 63–889, *Thomas H. Queer* v. *Wilcox Manufacturing Company.* **Same**, Doc. 63–890, *Thomas H. Queer* v. *The Jeffrey Manufacturing Company.*

3,068,617, B. R. Borski, Glazing gasket, **filed** Oct. 23, 1963, D.C., N.D. Ohio (Cleveland), Doc. C63–81, *F. H. Maloney Company* v. *The Standard Products Company.*

3,072,973, S. R. Barnette, Method of making cast plastic laminates; **Reg. No. 712,722** (GLAMOURAMA), Pionart Plastics Corp., Plastic in slab form for general construction and fabricating purposes, **filed** Feb. 8, 1963, D.C.N.J. (Newark), Doc. 114–63, *Dimensional Plastics Corp.* v. *American Casting Corporation, et al.* Action dismissed Oct. 15, 1963.

3,082,006, J. W. Ryan, Phonograph tone arm and speaker, **filed** Oct. 14, 1963, D.C., E.D.N.Y. (Brooklyn), Doc. 63C–1115, *Mattel, Inc.* v. *Unique Doll & Novelty Co.*

3,086,206. (See 2,817,065.)

3,088,734, D. A. Grudoski, Play swing, **filed** Oct. 7, 1963, D.C., M.D. Pa. (Scranton), Doc. 8244, *Blazon, Inc.* v. *Deluxe Game Corp.*

3,098,548, W. Bialo, Luggage construction, **filed** Sept. 25, 1963, D.C., S.D.N.Y., Doc. 63/2804, *Walter Bialo et ano.* v. *R. H. Macy & Co., Inc.* Stipulation and order of discontinuance Oct. 21, 1963.

3,105,477, W. W. Lowther, Crankcase valve ventilating system, **filed** Oct. 9, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c1769, *Novo Industrial Corporation* v. *Standard Screw Company.*

Re. 23,863, F. J. Sowa, Solutions of organic mercury compounds, **filed** Oct. 14, 1963, D.C.N.J. (Newark), Doc. 855–63, *Frank J. Sowa et al.* v. *Metalsalts Corp.*

Re. 24,166, B. Stiller, Self-closing container, **filed** Oct. 10, 1963, D.C., N. Dak. (Fargo), Doc. 4016, *Quickey Manufacturing Company, Inc.* v. *M. T. Steidl, Inc. et al.*

Des. 185,045, L. R. Slaton, Combined straight edge and pen holder, **filed** Feb. 7, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c236, *Swiss Harmony, Inc.* v. *Union Litho-Metal Corp. et al.* Cause dismissed with prejudice Sept. 30, 1963.

Des. 187,695, V. D. Molitor, Shield for food service carts or the like, **filed** Apr. 18, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 457–61–Y, *Victor D. Molitor et al.* v. *National Cornice Works.* Consent judgment; patent held valid and infringed; defendant enjoined Oct. 3, 1963.

Des. 187,974, C. C. Carse, Dispensing head for liquids, **filed** Jan. 29, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63–103–JC, *Bar-Master, Inc.* v. *Master-Mixer.* Patent held invalid and not infringed; complaint dismissed Sept. 30, 1963.

Des. 190,157, H. N. Bowen, Holder for cards prescribing a hospital patient's treatment; **Des. 190,787**, J. D. Schneider, Umbilical cord clamp, **filed** Apr. 11, 1962, D.C., E.D. Tenn. (Knoxville), Doc. 4434, *Hollister, Incorporated* v. *Tran-Sel, Inc. et al.* Patents held invalid; case dismissed Sept. 25, 1963.

Des. 190,787. (See Des. 190,157.)

Des. 191,901. (See 2,586,612.)

Des. 193,577, B. H. Sasnett, Gasoline pump casing, **filed** Oct. 28, 1963, D.C. Md. (Baltimore), Doc. 15081, *Epco, Inc.* v. *Petroleum Engineering Co., Inc. et al.*

REISSUES

MARCH 3, 1964

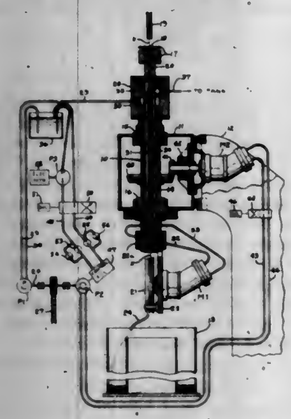
Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,526
WIRE COILING MACHINE

Charles Benjamin Blake, North Woodbury, and Robert S. Cady, Watertown, Conn., assignors to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut

Original No. 2,900,073, dated Aug. 18, 1959, Ser. No. 416,528, Mar. 16, 1954. Application for reissue July 13, 1960, Ser. No. 42,732

6 Claims. (Cl. 205—16)



6. A wire coiling machine including a frame and a flyer assembly mounted on said frame for receiving wire from a source of supply and laying the same in coils in a wire receiving means; said flyer assembly comprising a support member rotatably mounted on said frame, a coil forming capstan rotatably mounted on said support member for rotation therewith in an orbit around an axis of rotation of said support member, means for guiding wire to said capstan, means for rotating said capstan on its axis so that said wire is drawn through said guide means and means for rotating said support member so that wire emanating from said capstan is laid in coils in said wire receiving means.

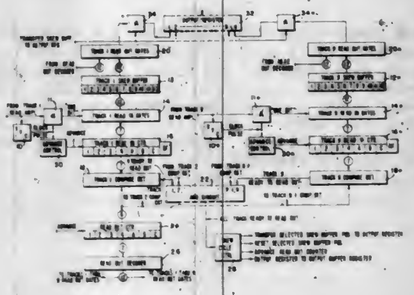
25,527
DESKEWING SYSTEM

Theodore G. Floros, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Original No. 2,921,296, dated Jan. 12, 1960, Ser. No. 745,501, June 30, 1958. Application for reissue May 3, 1961, Ser. No. 107,605

14 Claims. (Cl. 340—172.5)

1. [In a system for reading a magnetic tape having the bits constituting the characters recorded thereon in a multiplicity of parallel tracks, a reading channel for each tape track,] *In a system for reading bits constituting characters from a multiplicity of parallel channels,* a multiposition storage register for [the reading channel for each tape track,] *each channel, a read-in counter operative with each register,* means for entering [tape] *channel* originated pulses into successive positions of said registers under control of [a] *the* read-in counter individual to each register, a read-out counter, [means for comparing the setting of each of said read-in counters with the setting of said read-out counter,] means for determining when the setting of each of said read-in counters is greater



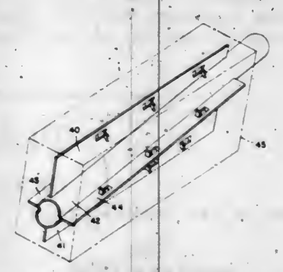
than the setting of said read-out counter, and means under control of said last named means for simultaneously reading from said registers the bits of a single character when said determining means indicates that the setting of each of said read-in counters is greater than the setting of said read-out counter.

25,528
TUYERE BLOCK AND REINFORCING INSERT THEREFOR

Horace N. Hall, Collegeville, Pa., assignor to E. J. Lavino and Company, Philadelphia, Pa., a corporation of Delaware

Original No. 3,088,725, dated May 7, 1963, Ser. No. 39,293, June 28, 1960. Application for reissue June 11, 1963, Ser. No. 288,586

6 Claims. (Cl. 266—41)



1. A molded [fired] tuyere block of a suitable refractory material and for use in a furnace wall, a combined unitary hollow tuyere pipe with a plurality of outwardly extending block reinforcing flanges thereon molded within the block, the block having opposed top and bottom walls, side walls and end walls with all of said walls having exterior surfaces, the said pipe being of considerably less diameter than the over-all cross-sectional dimensions

of the block and of such length so that respective open ends thereof are closely adjacent to, exposed and accessible from the exterior surfaces of each end wall of the block, the pipe having the plurality of outwardly extending block reinforcing fins fixed thereon, the fins having extreme respective end portions thereof that are close to, but terminate adjacent the exterior surfaces of respective adjacent end walls, the fins also having respective side edges that are close to, but terminate adjacent the exterior surfaces of respective adjacent top, bottom and side walls, one accessible end portion of the pipe affording connection therewith of means for supplying gas thereat for passage through the pipe molded in the block, and the material of the block being in contacting sealing relationship with the pipe and fins.

25,529

METHOD FOR DETACHING AN INSOLE ADHESIVELY SECURED TO A SHOE LAST

John B. Reid, Brighton, and Robert A. Spence, South Lincoln, Mass., assignors to Bain Corporation, Cambridge, Mass., a corporation of Massachusetts

Original No. 3,106,730, dated Oct. 15, 1963, Ser. No. 222,709, Sept. 10, 1962. Application for reissue Nov. 7, 1963, Ser. No. 322,263

3 Claims. (Cl. 12—142)



1. A method of manufacturing footwear comprising the steps of (1) detachably securing an insole member to a related last member by an adhesive material [interposed therebetween having opposed pressure-sensitive faces which] *in order to* adhesively bond said members in assembled relation during assembly of footwear on said last (2) detaching said members by directing a charge of air therebetween of sufficient pressure to rupture said adhesive bond and (3) removing said last from said footwear.

25,530

INSULATED CARRYING CASE FOR HEATED FROZEN FOOD DINNERS AND THE LIKE

Edward G. King III, 1004 Wedgewood Road, Baltimore 29, Md., assignor of one-half to Joseph Wyniger, Baltimore, Md.

Original No. 3,016,129, dated Jan. 9, 1962, Ser. No. 696,493, Nov. 14, 1957. Application for reissue Nov. 23, 1962, Ser. No. 240,472

4 Claims. (Cl. 206—4)



4. For use with a heated frozen food dinner of the type having a main course and two side courses separated one from another in respective compartments forming substantially a Y-shaped configuration, the dinner being housed in a packaged container having a tray and a foil over the contents of the tray: an insulated case adapted to be held in a variety of convenient positions, and in particular in a vertical plane, said case comprising a bottom section and a top section joining intimately together to snugly house the dinner directly in its packaged container, insulation means within at least one of said sections, said bottom section having three recesses formed therein separated one from another by a Y-shaped web to receive the packaged container of the dinner, said Y-shaped web having its stem perpendicular to the length of said bottom section, said bottom section further having means along the outer borders of said recesses to support the peripheral portion of the tray, means on said top section, operative when said sections are joined together, to pinch the peripheral portion of the tray between said sections, thereby trapping the tray therebetween and simultaneously preventing the dinner from seeping out of the tray, said top section having a complementary Y-shaped web mating with said web of said bottom section, and means on said respective webs and cooperating therebetween when said sections are joined together to pinch the foil against the tray along its Y-shaped configuration, thereby preventing the individual courses of the dinner from running together when said case is held in a vertical plane.

PLANT PATENTS

GRANTED MARCH 3, 1964

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,368

HEMLOCK TREE

Herman Brandt, Valley Cottage, N.Y.

Filed Apr. 2, 1962, Ser. No. 184,617

1 Claim. (Cl. Plt.—50)

A new and distinct variety of hemlock tree, substantially as herein shown and described, characterized particularly as to novelty by an extremely rapid and vigorous habit of growth, extremely good hardiness, an unusual habit of continuous growth from May to September under normal conditions, a habit of developing numerous branchlets on the sides of current growth, with attendant heavier, denser and very compact growth resembling a clipped hemlock without actual pruning, exceptionally abundant foliage, and a distinctive deep green color of the foliage which persists throughout the entire year with little yellowing or browning by winter exposure, with a consequent truly evergreen habit and a darker than normal color of the foliage as compared with regular hemlocks.

2,369

ROSE PLANT

Walter E. Lammerts, Livermore, Calif., assignor to Amling-Devor Nurseries, Inc., Livermore, Calif., a corporation of California

Filed Feb. 11, 1963, Ser. No. 257,803

1 Claim. (Cl. Plt.—18)

A new and distinct variety of hybrid tea rose plant, substantially as herein shown and described, particularly characterized by its continuous, highly productive and regular blooming habit; by the uniform Porcelain Rose color of its high-centered, many-petaled blooms; by its vigorous habit of growth and its profuse branching, particularly after cutting for flowers; and by the large size and abundance of its foliage.

2,370

ROSE PLANT

Herbert C. Swim, Ontario, and O. L. Weeks, Chino, Calif., assignors, by mesne assignments, to The Conard-Pyle Company, West Grove, Pa., a corporation of Pennsylvania

Filed Feb. 25, 1963, Ser. No. 260,932

1 Claim. (Cl. Plt.—20)

A new and distinct variety of rose plant of the hybrid tea class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of an extraordinarily vigorous and large habit of growth, a habit of usually bearing flowers singly on long stems, with fewer prickles than the average red hybrid tea rose varieties, exceptionally large flower size, good flower petalage, with the individual petals being very large and broad, regular arrangement of the petals in the open flowers, with a high degree of imbrication, a distinctive and attractive dark red general color tonality of the flowers, said flowers having a white or yellow vegetative streak on the midrib of some of the outer petals, and a distinctive and strong flower fragrance characterized by a blend of tea and damask.

2,371

ROSE PLANT

Herbert C. Swim, Ontario, and O. L. Weeks, Chino, Calif., assignors, by mesne assignments, to The Conrad-Pyle Company, West Grove, Pa., a corporation of Pennsylvania

Filed Mar. 6, 1963, Ser. No. 263,365

1 Claim. (Cl. Plt.—17)

A new and distinct variety of rose plant of the grandiflora class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of vigorous, upright and tall habits of growth, distinctive shape, medium to large size and distinctive surface appearance of the foliage, a habit of producing the large majority of its flowers in both simple and compound clusters, medium to large size and attractive shape of the flowers, a distinctive and attractive general color tonality of the flowers corresponding to salmon or shrimp color, and good resistance of the foliage and stems to powdery mildew.

2,372

CHRYSANTHEMUM PLANT

Eugene S. Boerner, Newark, N.Y., assignor to Jackson & Perkins Company, Newark, N.Y., a corporation of New York

Filed Mar. 8, 1963, Ser. No. 264,007

1 Claim. (Cl. Plt.—76)

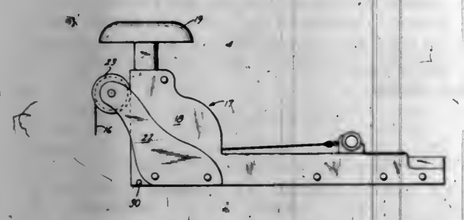
A new and distinct variety of chrysanthemum plant of the reflex class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of large foliage size, large flower size, thick flower form, a distinctive and attractive general color tonality of the flowers corresponding to Pale Rosolane Purple, lightly overcast with Liseran Purple, and good hardiness.

PATENTS

GRANTED MARCH 3, 1964

GENERAL AND MECHANICAL

3,122,749
STAPLING DEVICE
Eugene Abrams, 1 Swale Road, Franklin Square, N.Y.
Filed Nov. 14, 1961, Ser. No. 152,183
2 Claims. (Cl. 1—49)



1. In an apparatus for dispensing staples connected at spaced points to a pull thread so as to facilitate subsequent removal of said staples, a stapling device having a housing within which a driver is mounted for reciprocating movement for dispensing staples one at a time, a staple ejection chute formed in said housing in the path of said driver, a supply of thread carried on said housing, and said housing having an opening into said ejection chute through which said thread may be threaded into said ejection chute and out the bottom opening thereof so that said thread may be located in the path of the staples being dispensed, whereby successive portions of said thread are punctured by a leg of each successively dispensed staple.

3,122,750
APPARATUS FOR ASSEMBLING PLYWOOD UNITS
Charles Q. Jackson, Frederick D. Larmore, and Joseph Y. Edinger, all of Aberdeen, Wash., assignors to Evans Harbor Products Co., Aberdeen, Wash., a corporation of Washington
Filed Dec. 4, 1961, Ser. No. 156,732
5 Claims. (Cl. 1—106)



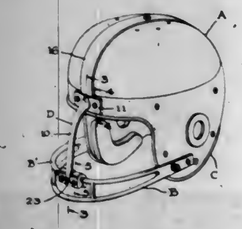
1. An apparatus for assembling and securing together face units for plywood comprising a wood veneer, a resin impregnated face sheet and an adhesive sheet disposed therebetween, said apparatus comprising:
an elongate, continuously moving conveyor having an entrance end and a discharging end,
means at the entrance end of said conveyor for supporting a pair of supply rolls of material for said sheets,
means for continuously withdrawing a continuous length of said material from each of said rolls and feeding the same onto said conveyor at said entrance end with the material for said adhesive sheet superposed the material for said face sheet,
means for severing predetermined lengths of said material as the same is fed onto said conveyor so as to provide a pair of superposed said sheets,
said conveyor having a receiving station at which a veneer may be placed upon each pair of said sheets as they are fed therepast,
a baffle adjacent said receiving station on the upstream side thereof, extending across said conveyor to prevent air displaced as said veneer is placed from disturbing the position of the next advancing pair of said sheets,
a guide member adjacent one edge of said conveyor and parallel thereto,
a crowder comprising an endless belt mounted over said conveyor having a run adapted to engage a veneer as it passes therebeneath, said run being angularly inclined with respect to said guide member and converging toward said guide member in the direction of movement of said conveyor whereby said veneer is urged into engagement with said guide member to align the veneer therewith,
a stapling station comprising,
a pair of staplers positioned one adjacent each edge of said conveyor operable to place a staple through said veneer and sheets therebeneath,
first means for detecting the advancing edge of said veneer,
means responsive to said first detecting means to initiate operation of said staplers to place staples through said veneer and sheets adjacent the advancing corners thereof,
second means for detecting the advancing edge of said veneer,
means responsive to said second detecting means to initiate operation of said staplers to place staples through said veneer and sheets adjacent the trailing corners thereof,
and stacking means adjacent the discharge end of said conveyor to receive and stack the stapled units.

3,122,751
TRIDYNAMIC HELMET SUSPENSION SYSTEM
Robert D. Jordan, Balboa Island, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Oct. 2, 1961, Ser. No. 142,446
8 Claims. (Cl. 2—3)
(Granted under Title 35, U.S. Code (1952), sec. 266)



7. In combination with a ballistic shell-like helmet and a snugly fitting, skullcap-type headpiece having a sweatband adapted to encircle the circumference of the head of a wearer, a mounting band comprising a substantially circular band of material which is resilient to forces acting in the direction of its thickness but rigid to forces acting in the direction of its width, said mounting band concentrically encircling said sweatband with one of its flat sides lying adjacent to the sweatband, the lower ends of said mounting band and said sweatband being secured together, a substantially circular band of shock-absorbing material inserted and retained between said sweatband and said mounting band, and a helmet support framework comprising three bands of material including two crown bands and a base band having the same characteristics as that of said mounting band, said three bands being arranged so that a different one is oriented as a rigid member in each of three dimensions, said framework being secured to said helmet at any cross points of said bands, and said base band being alternately secured to said helmet and said mounting band at a plurality of spaced points.

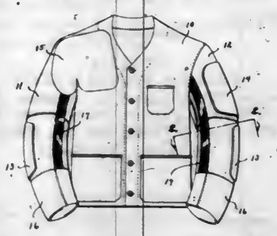
3,122,752
DETACHABLE NOSE GUARD FOR ATHLETIC HELMETS
Michael T. Marietta, 5538 University Blvd., Dallas, Tex.
Filed Mar. 29, 1961, Ser. No. 99,267
3 Claims. (Cl. 2—9)



1. As an article of manufacture, a nose guard for removable and replaceable connection with the forehead portion of an athletic helmet and also with a face guard disposed in fixed space relation to and below said forehead portion, comprising:
a nose protecting bar adapted to be positioned between said forehead portion and said face guard,
a plate at the upper end of the bar having openings,
means receivable in said openings for removably securing said plate to said forehead portion of the helmet,
a bifurcated means at the lower end of the bar adapted to engage said face guard, said bifurcated means being constructed of resilient material for yieldable engagement with the upper portion of said face guard,
and connecting means at the lower end of the bar for detachably securing the lower end of said nose protecting bar to said face guard.

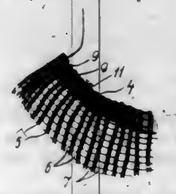
3,122,753
SHOOTING GARMENT
Howard O. Smith, 1535 E. 33rd St., Des Moines, Iowa
Filed Feb. 11, 1963, Ser. No. 261,928
2 Claims. (Cl. 2—94)

1. In a shooting garment,
a body member having a shoulder portion,
a sleeve secured to the shoulder portion of said body member and extending downwardly therefrom,
said sleeve including a cuff on the lower end thereof, and an elongated resilient panel extending along the inner side of said sleeve adjacent said body member from said cuff to the point of connection between said sleeve and said body member,
at least one arcuate pad element secured to said sleeve and extending partially around said sleeve in spaced relation to said panel;



said cuff and said sleeve, except for said panel, being comprised of a substantially stiff non-resilient material.

3,122,754
HEAT INSULATING AND VENTILATING GARMENT
Agne Bertil Wedin, Solvallavagen 39, Sundbyberg 2, Sweden
Filed July 10, 1961, Ser. No. 122,944
Claims priority, application Sweden July 12, 1960
3 Claims. (Cl. 2—113)



1. A heat-insulating and ventilating garment comprising a plurality of longitudinal cords having a predetermined diameter defining a front portion, back portion and sleeve portions, said cords being disposed in spaced relationship with respect to each other to define channels converging into a neck opening, and lateral cords of smaller diameter than said longitudinal cords being spaced from each other and interconnecting said longitudinal cords to maintain same spaced from each other, a single band underlying only and secured to the upper ends of said longitudinal cords whereby said channels provide an unrestricted airflow for the longitudinal extent of the garment, said longitudinal cords having their upper ends underlaid by a band to which they are connected.

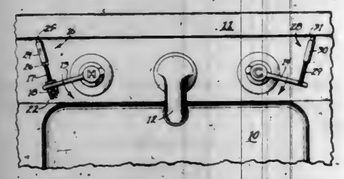
3,122,755
HULA SKIRT BELT
Fred Rosen and Robert Rosen, both of 21 Market St., Paterson, N.J.
Filed May 23, 1962, Ser. No. 197,084
1 Claim. (Cl. 2—221)



In a hula skirt, a sheet of flexible material fabricated of a plurality of weft strands and two groups of warp strands arranged in spaced relation along one edge of the weft strands, said sheet having opposed ends, and a hook on each of said ends of said sheet between said

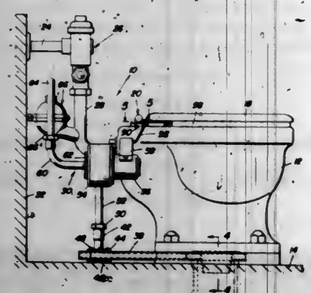
groups of warp strands, each hook being engageable with the portion of an adjacent weft strand between said warp strand groups for securing said sheet in skirt form about a person's waist with said ends of said sheet in overlapping relation.

3,122,756
FAUCET HANDLE STOP
Carl P. Bradley, Blue Ridge, Ga., assignor of fifty percent to Willard R. Palmer, Jr., Smyrna, Tenn.
Filed Dec. 1, 1961, Ser. No. 156,354
3 Claims. (Cl. 4—1)



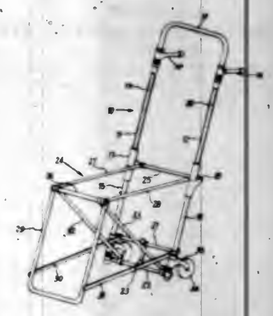
1. A faucet handle stop comprising:
(a) a wash basin having an upstanding back face,
(b) a faucet mounted on said basin for discharging water into said basin,
(c) a lever-type handle on said faucet,
(d) a threaded shaft,
(e) means for attaching one end of said shaft to extend substantially normal to said handle in the direction in which said handle is turned to close said faucet,
(f) an internally threaded tube,
(g) an abutment member mounted to close one end of said tube,
(h) the other end of said tube being open to threadedly receive the other end of said shaft whereby the combined length of said shaft and said tube may be adjusted,
(i) said abutment member being adapted to engage said back face to limit the turning movement of said handle after said faucet is closed.

3,122,757
TOILET VENTILATING SYSTEM
Edward W. Sowards, Campbell, Calif.
(Rte. 1, Box 705, Love Creek Road, Ben Lomond, Calif.)
Filed Apr. 13, 1959, Ser. No. 805,787
4 Claims. (Cl. 4—213)



1. A ventilating system for toilets of the type including a bowl having a flush pipe connected thereto and a waste pipe communicating therewith, said system comprising a vent pipe connected to the flush and waste pipes, a suction fan interposed in the vent pipe for drawing air thereinto from the bowl through the flush pipe, and a check valve interposed in the vent pipe for preventing the passage of water from the flush pipe, said check valve including a hollow sphere comprising complemental upper and lower half-sections, said upper section having an opening in its upper portion communicating with the vent pipe, said lower section having an opening in its lower portion communicating with the flush pipe, said upper section including a valve seat adjacent the opening therein, a circular, generally concavo-convex, foraminous cage mounted horizontally in the sphere, a buoyant ball operable in the cage and engageable with the seat for closing the vent pipe, and means for detachably securing the half-sections together and for securing the cage in position in the sphere.

3,122,758
COMBINED STRETCHER AND STAIR CHAIR
Richard H. Ferneau, Washington Court House, Ohio, assignor to Ferno Manufacturing Company, Greenfield, Ohio, a corporation of Ohio
Filed Nov. 13, 1962, Ser. No. 236,800
10 Claims. (Cl. 5—82)



1. A combination stretcher and stair chair comprising a back supporting frame section having a pair of spaced apart tubular frame members defining the opposite sides of said frame section, an intermediate frame section comprising a pair of sleeve members hingedly connected to the inner ends of said tubular frame members, said sleeve members having an extended position in which they lie in axial prolongation of said tubular frame members, a lower frame section having a pair of side members telescopically received in the opposite ends of said sleeve members, said lower frame section being movable from a retracted position in which the inner end portions of said side members extend through said sleeve member and are received in the tubular frame members of said back supporting frame section to an extended position in which the said side members are withdrawn from said tubular frame members, seat means pivotally connected to said intermediate frame section, and linkage means hingedly connecting said seat means to said lower frame section, said seat means being collapsible against said intermediate frame section when said lower frame section is in the extended position and movable to an erected position when said lower frame section is retracted.

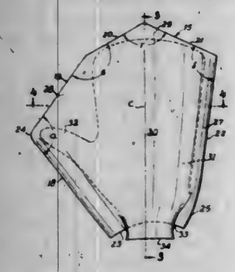
3,122,759
SWIMMER'S PROPULSION DEVICE
Calvin A. Gongwer, Glendora, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
Filed Feb. 10, 1961, Ser. No. 88,554
6 Claims. (Cl. 9—303)

1. A device for providing fin propulsion to utilize a swimmer's power comprising engaging means adapted for engagement with the lower leg portions of a swimmer, power transfer means attached to and operative with said engaging means, fin means pivotally attached to said power transfer means and positioned substantially opposite the center of gravity of the swimmer's body, and



resilient means connecting said fin means to said power transfer means.

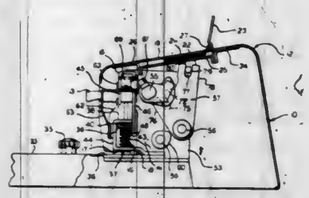
3,122,760
HAND FIN FOR SWIMMING
William A. Glass, Jr., 2462 Hunting Valley Drive, Decatur, Ga.
Filed Sept. 28, 1961, Ser. No. 141,450
2 Claims. (Cl. 9—308)



1. A swimming device comprising an integral glove formed of resilient flexible material, said glove including a flat relatively rigid paddle-like polygonic plate, opposed side members extending from the back surface of said plate, and an end member joining said side members and said plate at the end of said plate, a flexible cover joined by its edge portions to said side members and end member, said plate and said cover defining between said side members, a hand receiving cavity, and a waist portion connected to said cover and said plate and communicating with said cavity, said side members and said end member and said plate and said cover being so dimensioned that said cavity is adapted to receive a hand of a swimmer, the edges of said plate forming an apex on the thumb side of said glove and a second apex outwardly of the end of said cavity, the edge of said plate adjacent said waist portion being concaved so as not to interfere with the flexing of the swimmer's wrist, said side members and said end member being provided with an arcuate surface extending rearwardly from said plate and inwardly toward the central portion of said cover, said surfaces merging with the outer surface of said cover.

3,122,761
BOOK BINDING MACHINE
Ward A. Bouvier, Wauconda, Ill., assignor to General Binding Corporation, Northbrook, Ill., a corporation of Illinois
Filed Nov. 20, 1961, Ser. No. 153,533
10 Claims. (Cl. 11—1)

1. A book binding machine comprising:
a. a frame
b. a comb on said frame engageable with the back of a flexible ring type binding element,
c. an uncurling slide,
d. a plurality of spreading fingers on said uncurling slide registrable with the teeth of said comb,
e. means guiding said uncurling slide for movement transversely of said frame along the teeth of said comb and longitudinally of said frame away from said comb comprising
f. a slide bar guided for movement along said frame toward and from said comb



g. and a camming drive connection between said slide bar and said uncurling slide reacting against said means guiding said slide for movement transversely and longitudinally of said comb to effect transverse movement of said uncurling slide and fingers into the spaces between the teeth of said comb and longitudinal movement of said uncurling slide and fingers away from said comb and wedging said uncurling slide in fixed relation with respect to said comb.

3,122,762
LAST FOR MAKING FOOTWEAR
Theodore Chatjimikes, 14 Rue Theophile Roussel, Paris, France
Filed Sept. 11, 1961, Ser. No. 137,223
3 Claims. (Cl. 12—133)

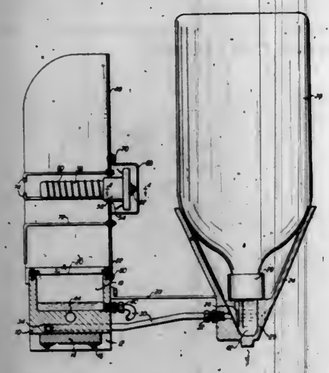


1. A last for making footwear comprising a body having a toe portion integral therewith and extending forwardly therefrom, a hollow toe element fitted about said toe portion and covering the same, and assembly means including a detachable fastening element inserted through one of said toe element and said toe portion and cooperating with a complementary fastening element on the other of said toe element and toe portion to permit removal of and replacement of the toe element by another, interchangeable toe element.

3,122,763
METHOD OF ACTIVATING SHOE STIFFENERS
Jacob S. Kamborian, 133 Forest Ave., West Newton, Mass.
Filed Jan. 10, 1962, Ser. No. 165,365
1 Claim. (Cl. 12—142)

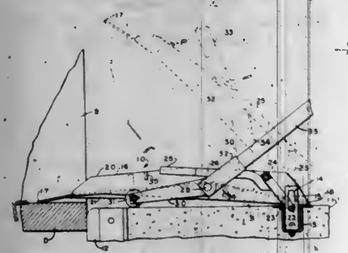
A method of activating a shoe stiffener comprising: providing a shoe upper having a stiffener that is rigid at ambient temperatures and becomes flaccid and moldable when heated above a predetermined temperature positioned at the interior of an end of the upper; providing a source of steam and a source of dry heat; and supporting said upper end and stiffener spacedly from and between said sources whereby the dry heat heats the

stiffener above said predetermined temperature to thereby convert it to its flaccid, moldable state and the steam



concomitantly engulfs said end of the upper to prevent the dry heat from deleteriously affecting the upper.

3,122,764
DOCK PLATFORM
Andrew Ambli, 2376 Hamline Ave. N., St. Paul, Minn.
Filed Nov. 14, 1960, Ser. No. 68,770
3 Claims. (Cl. 14—71)



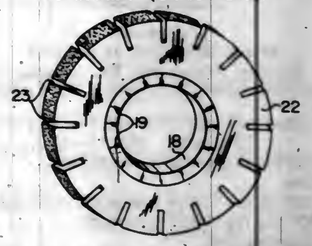
3. A platform for bridging between a loading dock and the deck of a truck, comprising a rigid plate having front and rear edges to respectively rest upon the truck deck and loading dock and also having opposite side edges, a pair of anchor bases respectively disposed adjacent opposite side edges of the plate and forwardly of the rear edge thereof and adapted to be affixed to the loading dock in a predetermined position, a pair of forwardly and upwardly inclined control links respectively disposed adjacent the opposite side edges of the plate, said links having lower ends disposed adjacent the anchor bases and also having upper ends, pivot means connecting the lower ends of said links to the adjacent anchor bases to permit fore-and-aft swinging of said links with respect to said bases, pivot means connecting the upper ends of said links to said plate adjacent the side edges thereof to permit fore-and-aft swinging of said links with respect to the plate, means rigidly affixed to each of said links and rigidly affixing said links in fixed relation with each other to require identical swinging of said links, said plate being movable, adjacent the rear edge thereof, rearwardly and upwardly along the arc of swinging of said links about the pivot adjacent the lower ends of said links, and the rear edge of said plate being engageable with the dock in both rearwardly swung and forwardly swung positions of said links, and means for tilting the same in a forwardly and upwardly inclined direction.

3,122,765
CENTRIFUGAL SPEED REGULATOR FOR A SURFACE WORKING DEVICE
Gerald M. Magarian, Long Beach, Calif., assignor to Preco, Incorporated, Los Angeles, Calif., a corporation of California
Filed May 4, 1962, Ser. No. 192,499
6 Claims. (Cl. 15—49)



1. In a surface working machine, the combination comprising:
- a frame adapted to be supported at substantially fixed distance from a surface to be worked;
- a variable speed motor mounted on the frame;
- a drive member rotatably mounted on the frame on an axis perpendicular to the surface and driven in a forward direction by the motor;
- a surface working member rotatably mounted coaxially of the drive member for limited axial movement relative thereto through a continuous series of working positions between a relieved position not more than lightly engaging the surface and a fully engaged position forcibly engaging the surface;
- means coupling the surface working member rotatively to the drive member, said coupling means permitting limited relative rotation of said two members;
- means including cooperating elements on the drive member and on the surface working member and acting to move the surface working member axially toward said fully engaged position in response to forward rotation of the surface working member relative to the drive member,
- and centrifugally responsive mechanism interconnecting said members and acting to produce a torque between said members in a direction to produce forward rotation of the surface working member relative to the drive member, said torque increasing with increasing rotational speed of said members,
- whereby the surface working member is pressed on the surface to be worked with a force that increases with increasing rotational speed of the members.

3,122,766
BRUSH CONSTRUCTION
Ruben O. Peterson, University Heights, Ohio, assignor to The Osborn Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Original application July 13, 1953, Ser. No. 367,421, now Patent No. 3,076,219, dated Feb. 5, 1963. Divided and this application July 17, 1962, Ser. No. 213,564
3 Claims. (Cl. 15—179)



3. A rotary brushing tool comprising a generally circular body of high damping capacity plastic material

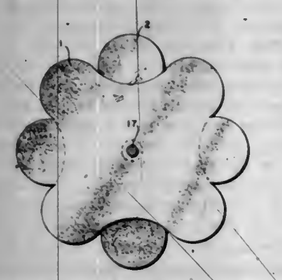
and a quantity of radially extending brush bristles embedded therein, said body having a plurality of generally radially inwardly extending narrow transverse slots in the outer peripheral portion thereof.

3,122,767
SECTIONAL DOCTOR BLADE HOLDER
Richard E. Carvill, Westwood, Mass., assignor to Bird Machine Company, South Walpole, Mass., a corporation of Massachusetts
Filed July 23, 1962, Ser. No. 211,738
4 Claims. (Cl. 15—236)



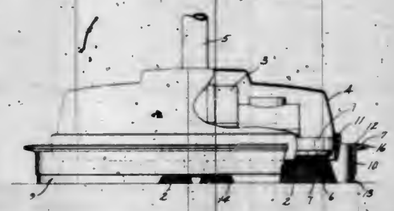
1. A doctor blade holder comprising a plurality of holder sections adapted to be assembled end to end to form the complete holder, said sections being of bar-like form, each having a doctor blade edge receiving recess extending along one side thereof, and at one end thereof a longitudinally extending portion adapted to receive in lapped relation another longitudinally extending portion at the opposed end of the next succeeding section, said portions each having at least one fastening receiving aperture arranged to register with a corresponding aperture in the lapping portion of the next succeeding section for securing said sections together, said portions and said apertures being correspondingly aligned with respect to said sections so that said sections are in longitudinal alignment when said portions and apertures are in registry, each of said sections having at the opposite side from said recess a lateral extension for mounting said sections on a support so that said lapped portions of the sections are spaced outwardly of the support.

3,122,768
DISH MOP
Teunis Beumkes, Arnhem, Netherlands, assignor to Algemene Kunstzijde Unie, N.V., Arnhem, Netherlands, a corporation of the Netherlands
Filed May 10, 1962, Ser. No. 193,736
Claims priority, application Netherlands May 12, 1961
3 Claims. (Cl. 15—244)



1. A dish mop which comprises at one end of a handle a plurality of rosettes of a porous, resilient, sponge material, the basic shape of the rosette being substantially a square with rounded corners, two opposite sides each having a single outwardly curved protuberance projecting beyond said basic square and the other two sides each having an inwardly curved portion, the area bounded by each of said inward curves and a portion of said basic square being greater than the area of each protuberance, said plurality of rosettes being secured to said handle in an offset manner to form a stack with the protuberances of one rosette being opposite the inwardly curved portion of an adjacent rosette.

3,122,769
DUAL PURPOSE SPLASH GUARD FOR FLOOR SURFACE CLEANING APPARATUS
Henry F. Doersam, North Olmsted, Ohio, assignor to General Electric Company, a corporation of New York
Filed Aug. 24, 1962, Ser. No. 219,177
2 Claims. (Cl. 15—246)



1. A dual purpose splash guard for use with a floor care machine including a rotary floor scrubbing means depending from a motor frame having a peripheral edge portion spaced above the floor when the scrubbing means rests on the floor in operative position, said splash guard comprising a generally vertically disposed annular wall member shaped so as to loosely encompass the edge portion of said floor care machine and rest on the floor the height of said wall member being greater than the height of a conventional quarter round strip used in household baseboard construction, said member having first and second segments positioned at opposite ends of said wall member, respectively, said first wall segment having a width less than the average width of said wall, said second wall segment having a width more than twice as large as the average width of said wall and greater than the width of the aforesaid quarter round strip so that when the first wall segment is in contact with the floor the second wall segment will be moved into contact with the baseboard before said first wall segment contacts the quarter round strip as the floor care machine is moved across the floor, said second wall segment having a surface which is arranged generally perpendicular to the vertical axis of said annular wall member, said surface being slightly convex and sloping outwardly more than three-quarters of its width so as to facilitate movement of the splash guard over a rug when said surface is in an inverter position resting on the rug said first wall segment having a pair of oppositely disposed notched portions formed therein so that when the first wall segment is in contact with the floor the entrance and egress of a limited amount of liquid to and from the floor area enclosed by said wall member is permitted.

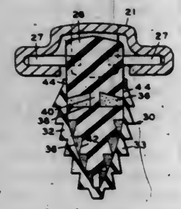
3,122,770
ARM EXTENSION ADJUSTOR
Fred A. Krohm, Hobart, Ind., assignor to The Anderson Company, a corporation of Indiana
Filed Jan. 12, 1961, Ser. No. 82,331
2 Claims. (Cl. 15—250.13)



1. A windshield wiper arm comprising an inner portion adapted to receive an end portion of an oscillatably driven windshield wiper pivot shaft, a channel portion pivotally mounted on said inner portion for movement toward

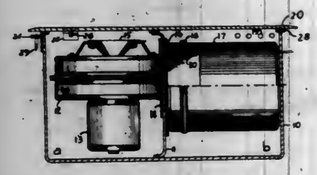
and away from a windshield, said channel portion having tongue-receiving recesses in opposesd sides thereof, an extension member pivotally connected by a rivet to said channel portion for limited lateral-angular movement relative thereto, a helically threaded screw extending through and rotatably mounted in the opposed sides of said channel portion, an actuating nut member mounted on said screw for movement axially thereof between the sides of said channel portion and being operatively connected to said extension member for effecting pivotal movement thereof relative to said channel portion, a tension spring operatively connected between the inner portion and the rest of the arm, and a cover for said channel portion having tongues adjacent one end receivable and retainable in said recesses in the opposed sides of said channel portion and secured at the other end by said rivet forming the pivotal connection between said extension member and said channel portion.

3,122,771
WINDSHIELD WIPER
Thomas L. Dale, 698 Nell Ave., Columbus, Ohio, assignor of forty percent to Palmer Fultz, Columbus, Ohio
Filed July 22, 1959, Ser. No. 828,889
4 Claims. (Cl. 15—250.36)



1. A windshield wiper blade cover for assembly on a windshield wiper blade having a worn wiper surface to provide a new wiping surface therefor, said cover comprising an elongated flexible body strip, a slot extending axially for the entire length of said body strip of a width less than the average width of the worn wiper blade and forming spaced opposed flexible side walls extending the entire length of said body strip, said side walls having inner opposed surfaces for tight surface engagement with the outer free surface of the worn wiper blade, and an adhesive film on substantially the entire area of said inner opposed surfaces of said side walls.

3,122,772
FLOOR MOUNTED DUST MOP CLEANING DEVICE
Sanford W. Lipson, 2615 Bryden Road, Bexley, Ohio
Filed Oct. 2, 1961, Ser. No. 142,163
6 Claims. (Cl. 15—310)



4. A dust mop cleaning device comprising a housing, having side walls, a bottom and a top, and an interior wall dividing the interior of the housing into a suction section and an exhaust section, said wall having an opening through which air may be driven from said suction section to said exhaust section;

a suction unit comprising an impeller, and an electric motor, all positioned within the suction section of the housing and secured to and mounted surrounding said opening in the interior wall in position so that air exhausted from said suction unit is driven through the opening in the interior wall;

a dust collector bag unit positioned within the exhaust section consisting of a dust collector bag adapter surrounding the opening in the interior wall, a dust collector bag made of air pervious material and having its open end embracing said dust collector bag adapter, means cooperating with the dust collector bag adapter to hold the dust collector bag in position to receive dust laden air through said opening from said suction unit;

the portion of the housing top above the exhaust section being provided with a hinged door whereby the door can be opened on its hinges exposing the dust collector bag and permitting the same to be removed for cleaning, disposal and replacement;

the portion of the housing top of the dust mop cleaning device above the suction section being formed with slots which permit dust laden air to travel into the suction unit; and

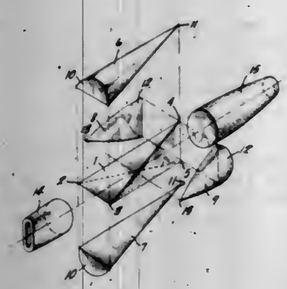
means for mounting the unit on the subfloor of a house in a properly shaped opening in the floor so that the entire mechanism contained in the housing is located below the floor surface and so that the upper surface of the top of said unit is substantially at the same level as the adjoining floor surface.

3,122,773
PAINT STRIPER
Roy B. Little, Box 2341 Abilene, Tex.
Filed Jan. 8, 1963, Ser. No. 250,648
2 Claims. (Cl. 15—503)



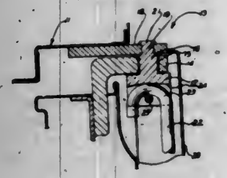
1. In a paint striper, the combination of a frame including portions extending substantially at right angles to each other, a handle means secured to one of said portions, a plate secured to the other of said portions, an axle adjacent the meeting of said portions on said frame, supporting wheels carried by said axle, a U-shaped member having two legs and a bight portion, said bight portion being pivotally secured to said frame adjacent said axle, an inverted U-shaped shield having two side members and a connecting portion and being secured to the ends of said legs of said U-shaped member remote from said bight portion, a paint nozzle extending into said shield, a pressurized tank carried by said frame and said plate, a hose connecting said nozzle to said tank, a valve operatively connected adjacent said nozzle, a valve control arm on said valve, a flexible cable connecting said arm to said handle means, said cable being of a length to close said valve automatically when said handle means is moved to a position substantially perpendicular to a ground surface supporting said frame, a chain means secured between said plate and said connecting portion of said shield, said chain means being of a length which, when said handle means is tilted below normal operating position, will lift said shield from the ground surface, and a paint spreader carried by said shield.

3,122,774
HANDLES
Thomas Lamb, Muricoal Road, New Canaan, Conn.
Filed Aug. 8, 1961, Ser. No. 130,169
7 Claims. (Cl. 16—110)



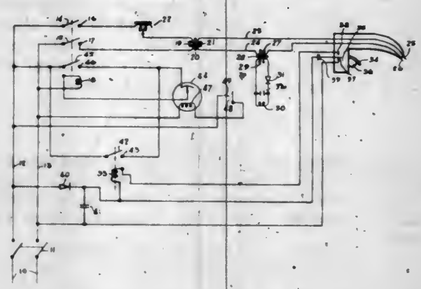
1. A handle having a hand grip portion, said hand grip portion comprising a tetrahedron the faces of which are four isosceles triangles which are bounded by edges joining the apices of the triangles, the legs of the triangles being substantially longer than their bases, said triangles comprising two pairs in which the triangles of each pair have a common base and in which the apices of the triangles of one pair point in the opposite direction from the apices of the triangles of the other pair, the apices of the pairs of triangles being spaced apart a distance equal to the length of the common base of the other pair, each of the triangular surfaces being covered, at least in part, by a conic member having an exposed conic surface forming a gripping surface for a portion of the hand.

3,122,775
COUNTERBALANCE SPRING RETAINER
Thomas A. Pulleyblank, Livonia, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed June 27, 1961, Ser. No. 119,933
2 Claims. (Cl. 16—180)



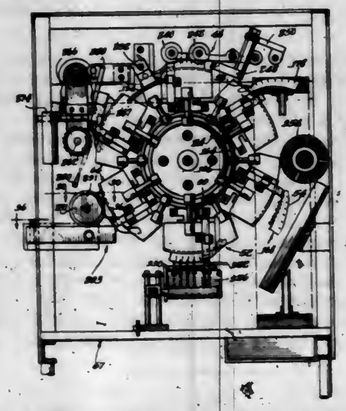
1. A hinge and counterbalance structure for a closure member comprising a support member, a pivot pin having a first end portion secured to said support member, a second end portion spaced from said support member and a bearing portion intermediate said end portions, means supporting said closure member upon the bearing portion of said pivot pin, said second end portion being enlarged relative to said bearing portion to restrain lateral movement of said closure member, socket means formed in said second end portion, torsion bar means having a U-shaped end portion received in said socket portion, a pin secured to said socket portion in the bight of said U-shaped end portion for restraining said torsion bar means from movement relative to said socket portion, and means securing a further portion of said torsion bar means to said closure member whereby said torsion bar means deflects upon pivotal movement of said closure member.

3,122,776
ANIMAL STUNNER
John J. Root, New York, N.Y.
(2475 Palisades Ave., Bronx 63, N.Y.)
Filed June 30, 1960, Ser. No. 39,998
8 Claims. (Cl. 17—1)



1. An animal stunner comprising a pair of electrodes adapted for application to the epithelium of an animal, means for applying a high potential to said electrodes, and means responsive to the passage of current through said pair of electrodes for terminating the passage of current therethrough after a predetermined period.

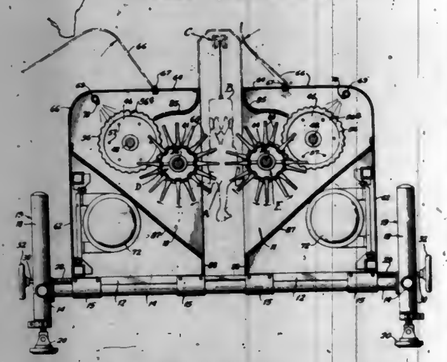
3,122,777
MACHINE FOR CLEANING SHRIMP
Gregor Jonsson, 950 East West Leigh Road, Lake Forest, Ill.
Filed July 7, 1960, Ser. No. 41,304
27 Claims. (Cl. 17—2)



1. A shrimp cleaning machine comprising, in combination, rotor means mounting an annular series of gripping units for movement through a circular path, means for supplying shrimp tail first to a pickup station adjacent said path, each of said gripping units including shrimp gripping elements, means for operating said gripping elements of each unit to pick up and grip a shrimp as an incident to movement of the unit past said pickup station, each gripping unit including means for shattering the shell of a gripped shrimp just ahead of the tail of the shrimp, a shell ripping and deveining element located adjacent said path, means for shifting the position of said ripping and deveining element in timed relation to movement of said units thereby to bypass the tails and engage the dorsal sides of shrimp carried by the successive gripping units, a shrimp slitting element positioned adjacent the path of said gripping units, means for shifting said

slitting element in timed relation to movement of said units thereby to bypass the tails and engage and longitudinally slit the main bodies of the shrimp carried by the successive gripping units, shrimp body impaling means mounted adjacent said path for impaling and stopping rotary movement of the bodies of the shrimp carried by said successive gripping units, and each gripping unit including a shrimp tail deflecting element thereon arranged to deflect the tail of a supported shrimp radially outward as an incident to termination of rotary movement of the body of the shrimp by said impaling means.

3,122,778
DRIVE FOR POULTRY PICKING MACHINE
Edward J. Crane, Ottumwa, and Allen L. Masters, Agency, Iowa, assignors, by mesne assignments, to Equity Financial Corporation, a corporation of Delaware
Filed Feb. 13, 1961, Ser. No. 88,692
3 Claims. (Cl. 17—11.1)



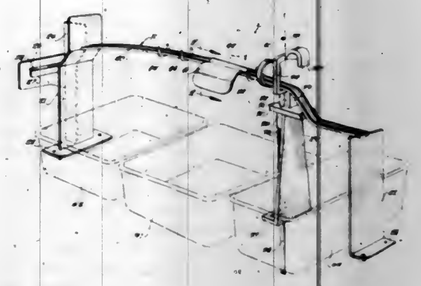
1. A fowl picking machine comprising a pair of horizontally spaced drum shafts, separate drums mounted for free rotation on said shafts, radially extending, flexible picking fingers carried on said drums, a pair of counter shafts positioned adjacent and extending in the same general direction as the respective drum shafts, means for rotating the counter shafts in opposite directions, and separate drive means for said drums, each drive means comprising a pair of intermeshing gears, one fixedly mounted on one counter shaft and the other fixedly connected to the drum on the adjacent drum shaft for causing rotation of the drum, one of said gears having a toothed peripheral portion of metal and the other gear comprising a metal disk and a ring of resilient material secured to the disk and having a toothed peripheral portion.

3,122,779
APPARATUS FOR SUPPORTING SAUSAGE CASINGS
Otto Blechschmidt, Am Walde 10, Dortmund-Kirchhorde, Germany
Filed Mar. 10, 1961, Ser. No. 94,889
Claims priority, application Germany, Mar. 12, 1960
1 Claim. (Cl. 17—41)



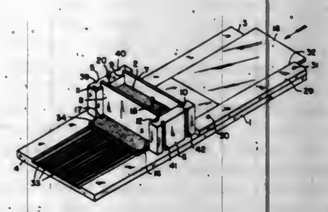
As a novel article of manufacture, a device for the transformation of metallic, plastic and like foils into tubular supports for sausage casings, said device comprising an open-ended tubular shell having an elongated slot adapted to receive an edge portion of a foil whereby the foil may be rolled onto the shell to form a tubular support for the sausage casing, and a substantially conical head for facilitating the application of a sausage casing to the support, said conical head having a stem portion extending into one end of said shell for connecting said conical head thereto and for engaging a part of said edge portion of the foil to retain said edge portion in said tubular shell during the rolling step.

3,122,780
POULTRY MEAT REMOVAL METHOD
Asa B. Segur, 1185 S. Ridgeland Ave., Oak Park, Ill.
Filed Dec. 30, 1960, Ser. No. 79,638
7 Claims. (Cl. 17—45)



1. A method for removing meat from poultry carcass sections comprising the steps of placing a back section of a poultry carcass upon a rigid support, anchoring the neck portion of said carcass section upon said support to hold the entire section stationary thereon, stripping the skin and meat from the body portion of said carcass section while the same is anchored on said support, lifting the body portion to separate the same from the anchored neck portion, and thereafter releasing said neck portion.

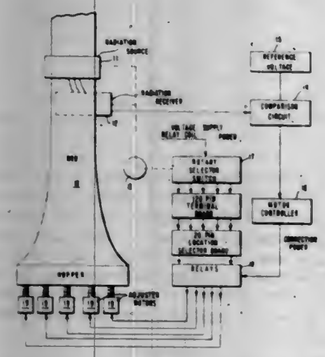
3,122,781
APPLICATOR FOR USE IN CHROMATOGRAPHIC ANALYSIS
Karl Josef Mutter, Birsfelden, Basel-Land, Switzerland, assignor to Camag, Chemie-Erzeugnisse und Adsorptionstechnik AG, a corporation of Switzerland
Filed Feb. 12, 1962, Ser. No. 172,642
Claims priority, application Germany Feb. 20, 1961
6 Claims. (Cl. 18—1)



1. An applicator for use in chromatographic analysis, the said appplicator comprising a reservoir for adsorbent-containing material, the reservoir having two vertically mounted, opposing side walls; anterior and posterior transverse walls loosely supported in upright position and

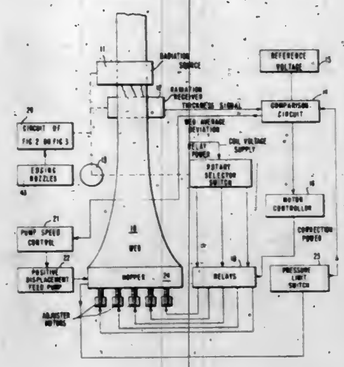
freely movable upwardly and downwardly; and a base on which the said side walls are mounted and on which sheets on which a layer of said material is to be provided are moved successively beneath the bottom edge of the said anterior wall and of the said posterior wall, the said bottom edge of the said anterior wall resting on the surface of a sheet, and the bottom edge of the posterior wall provided with means for supporting it on the surface of the sheet in spaced relation thereto during the aforesaid movement of a sheet to form thereby a layer of said material on said sheet, and means for adjusting the space between the bottom edge of the posterior wall and the surface of the sheet to provide said layer of said material of predetermined thickness.

3,122,782
GAUGE CONTROL APPARATUS FOR MANUFACTURING WEB MATERIAL
Edward J. Moore, Tonawanda, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed June 26, 1961, Ser. No. 119,499
3 Claims. (Cl. 18—2)



1. In an apparatus for extruding a web of material composed of a hopper adapted to contain said material for said web; extrusion means composed of orifice-defining lips disposed in integral relationship with said hopper adapted to extrude said material in the form of a web; a pump adapted to force said material through said lips of said extrusion means; wind-up means disposed distant from said extrusion means adapted to collect said web; and adjustment means disposed at said extrusion position of said hopper adapted to adjust the thickness of said web at a plurality of locations across the width of said web; means for transversely scanning the moving web, the scanning means disposed between said extrusion means and said wind-up means adapted to provide an output that is directly related to the deviation of the web thickness from a reference standard at any particular location across the width of the web, said adjustment means being responsive to said output adapted to adjust the thickness of said web at said plurality of locations across the width of said web; the improvement wherein means are interposed between said scanning means and said adjustment means comprising two interconnected multiple juncture terminal boards, the first terminal board communicating with said scanning means and the second terminal board communicating with said adjustment means, the number of junctures on said first terminal board being substantially greater than the number of junctures on said second terminal board whereby the deviations at several thickness-sensing points can be transmitted to a single adjustment location.

3,122,783
GAUGE CONTROL APPARATUS FOR MANUFACTURING WEB MATERIAL
Charles Nelson Jolliffe, Circleville, Ohio, and John A. Parkins, Newark, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed June 26, 1961, Ser. No. 119,500
5 Claims. (Cl. 18—2)

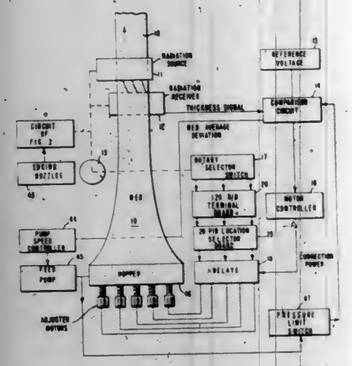


1. In an apparatus for extruding a web of material composed of a hopper adapted to contain said material for said web; extrusion means composed of orifice-defining lips disposed in integral relationship with said hopper adapted to extrude said material in the form of a web; a pump adapted to force said material through said lips of said extrusion means; windup means disposed distant from said extrusion means adapted to collect said web; adjustment means adapted to adjust the thickness of said web, disposed at said extrusion position and at a plurality of locations across the width of said web; means for transversely scanning the moving web, the scanning means disposed between said extrusion means and said windup means adapted to provide an output that is directly related to the deviation of the web thickness from a reference standard at any particular location across the width of the web; the improvement wherein control means responsive to the output of said scanning means adapted to activate the adjustment means at any particular location; and resistor means having a variable resistance across its length are interposed between said scanning means and said control means, adapted to vary the reaction of said control means to the output at any particular location on said scanning means.

3,122,784
GAUGE CONTROL APPARATUS FOR MANUFACTURING WEB MATERIAL
Charles Nelson Jolliffe, Circleville, Ohio, assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed June 26, 1961, Ser. No. 119,693
1 Claim. (Cl. 18—2)

In an apparatus for extruding a web of material composed of a hopper adapted to contain said material for said web; extrusion means, composed of orifice-defining lips disposed in integral relationship with said hopper adapted to extrude said material in the form of a web; a pump adapted to force said material through said lips of said extrusion means; windup means disposed distant from said extrusion means adapted to collect said web; means for transversely scanning the moving web, the scanning means disposed between said extrusion means and said windup means adapted to move in two directions and to provide an output that is directly related to

the deviation of the web thickness from a reference standard at any particular location across the width of the web; adjustment means responsive to said output adapted to adjust the thickness of said web, said adjustment means disposed at said extrusion position and at a plurality of locations across the width of said web; means interposed between said scanning means and said adjustment means, adapted to vary the location on the adjustment means for



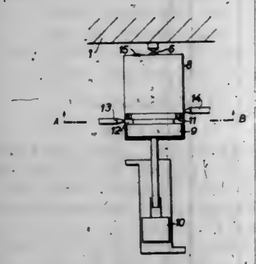
reaction of said adjustment means to the output at any particular location on said scanning means; the improvement wherein two potentiometers are provided, each potentiometer adapted to control the movement of said scanning means in each of the two directions; and width-sensing means, mechanically coupled to said potentiometers, adapted to signal said potentiometers to change direction of movement of said scanning means.

3,122,785

APPARATUS FOR MAKING CELLULAR PLASTICS

Erwin Weinbrenner, Leverkusen, Peter Hoppe, Troisdorf, and Karl Breer, Cologne-Flittard, Germany, assignors, by mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

Filed May 14, 1957, Ser. No. 659,137
Claims priority, application Germany May 18, 1956
2 Claims. (Cl. 18—5)



1. An apparatus comprising a chamber, a piston in said chamber occupying only a portion thereof, means for moving the piston from one end of the chamber towards the opposite end thereof, said piston having a diameter substantially equal to the internal diameter of the chamber and having one end opposite the first-said end of the chamber, an annular groove in said piston, a plurality of bores extending from said annular groove and communicating with the unoccupied space in said chamber, means for introducing liquids into said groove and forcing them through said bores into the unoccupied space in the chamber, a temperature measuring means in said unoccupied space of the chamber, means for actuating said piston actuation of the piston being initiated by said temperature measuring means and means through which said liquid is forced from said chamber as said piston moves from one end towards the opposite end.

3,122,786

APPARATUS FOR INTERNALLY LINING PIPES

Klaas Huisman, Rotterdam, Netherlands, assignor to N. V. Econosto, Bureau voor Economische Stoomproductie, Rotterdam, Netherlands, a corporation of the Netherlands

Filed Oct. 26, 1959, Ser. No. 848,826
Claims priority, application Netherlands Nov. 3, 1958
1 Claim. (Cl. 18—5)



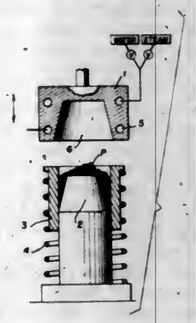
Apparatus for internally lining a pipe comprising an extrusion press having an outlet pipe and an extrusion head on the end of said outlet pipe, and means for slidably supporting a pipe to be lined concentrically about said outlet pipe and said extrusion head, the extrusion head comprising a funnel-shaped member, the wide end of which fits accurately within said pipe to be lined and the narrow end of which is connected to said outlet pipe, and a conical member disposed in spaced relation to said funnel-shaped member, the walls of said conical member and of said funnel-shaped member being substantially parallel, said conical member having a base, the external diameter of which is smaller than the outer diameter of said funnel-shaped member so that said funnel-shaped member and said conical member define between them an axially directed annular outlet opening for extruding therefrom a tube of lining material under extrusion pressure and in viscous condition onto the inner wall of said pipe to be lined.

3,122,787

APPARATUS AND METHOD FOR MOLDING CELLULAR ARTICLES

Elmer L. Adams, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio

Filed Nov. 18, 1960, Ser. No. 70,350
7 Claims. (Cl. 18—5)



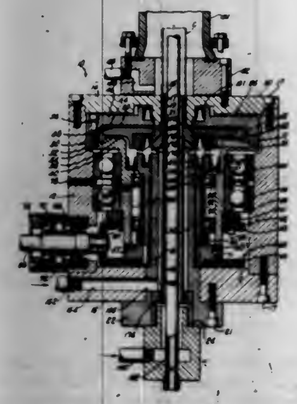
1. Molding apparatus for effecting a uniform distribution of molding material consisting of expandable plastic beads comprising a female mold member, a coacting male mold plug, and a spring mounted loading means located on said plug and cooperating with said plug to form between said plug and loading means a cavity which can be varied in contour and capacity for the retention of said beads.

3,122,788

APPARATUS AND METHOD FOR PRODUCING COLLAGEN TUBING BY CONTINUOUS EXTRUSION

Emanuel Roy Lieberman, Somerville, N.J., assignor to Johnson & Johnson, a corporation of New Jersey

Filed Jan. 16, 1961, Ser. No. 82,933
12 Claims. (Cl. 18—12)



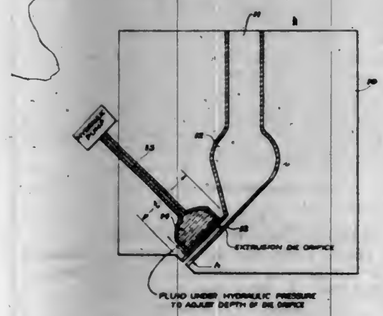
1. The method of extruding a tubular body containing collagen which comprises feeding under pressure a cool fluid mass of swollen collagen fibrils having a collagen solids content between 2.5% and 6% by weight into a passageway between opposed planar surfaces said passageways being substantially greater in length than depth, rotating said surfaces relative to each other to impart shearing forces to said mass and then extruding said mass as a tubular body with the inner and outer walls of said tube being formed from the respective portions of said mass moving contiguous to and manipulated by said surfaces.

3,122,789

EXTRUSION DIE INCORPORATING A HYDRAULICALLY DEFORMABLE ORIFICE

Robert D. Coffee, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Mar. 7, 1962, Ser. No. 178,120
3 Claims. (Cl. 18—12)



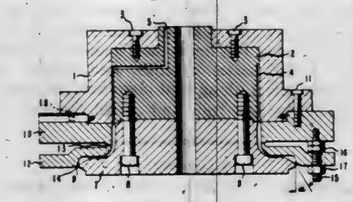
1. An extrusion die comprising an orifice defined by four walls at least one of which walls is deformable in a direction normal to its surface, a cavity defined by containment means disposed adjacent and connected with said deformable wall opposite said orifice, fluid filling said cavity and means for exerting pressure on said fluid whereby the pressure of said fluid can be increased so as to deform said deformable wall and accurately affect minute changes in the size of said orifice.

3,122,790

EXTRUSION DIE

Richard James Albert, Orange, Tex., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Oct. 23, 1961, Ser. No. 146,883
3 Claims. (Cl. 18—14)



1. A circular die for tubular extrusion of plastic material comprising in combination a relatively rigid annular die body, a mandrel coaxial with said die body and fixedly spaced therefrom to provide between the inner boundary of the die body and the periphery of the mandrel a coaxial annular passageway for plastic material in communication with a feed port, a rigid mandrel extension secured coaxially to said mandrel, the curved surface of said mandrel extension defining an inner lip of an annular die orifice in register with said passageway, said lip having a land section in a plane which is at an angle within the range of from about 15° to about 45° with respect to the axis of the die, an annular outer lip member comprising a rigid annular plate secured to and concentric with said die body, and a concentric flexible annular plate substantially parallel to, and spaced from said rigid plate and integrally joined at one edge to the rigid plate through a relatively thin fulcrum section, said flexible plate having a land section substantially spaced from said fulcrum section, said last named land section being proximately opposed to the inner lip land section and in a plane substantially parallel to the plane of the inner lip land section, said land sections together defining said annular die orifice, said flexible plate being engaged through a plurality of individually adjustable means operative to effect positive advance and retraction of preselected discrete portions of said flexible plate relative to the opposed face of said rigid plate.

3,122,791

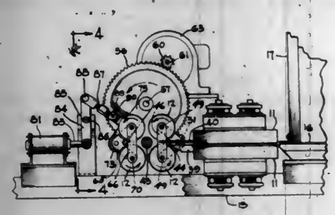
CURLING MACHINE FOR PLASTIC BINDING ELEMENTS

Russell J. Nadherny, Wilmette, Ill., assignor to General Binding Corporation, Northbrook, Ill., a corporation of Illinois

Filed Mar. 27, 1961, Ser. No. 98,678
4 Claims. (Cl. 18—19)

1. In an apparatus for curling plastic binding element blanks having a backbone and parallel spaced fingers extending forwardly therefrom into the form of ring-like binding elements, a frame having a base, a plate spaced above said base the top surface of which defines a line of travel of plastic binding element blanks, said plate having a discharge end, a stationary mandrel spaced in

advance of the discharge end of said plate in general alignment therewith a series of curling rolls radially spaced about said mandrel equal distances from the center thereof, said plate being tangential to the periphery of a lower roll of said series of rolls and extending closely adjacent to said roll, baffle means spaced above said plate and ex-



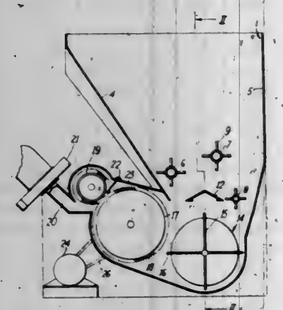
tending into the space between an upper and lower roll of a series of rolls and deflecting the blank to be progressed by said lower roll under said mandrel to be curled thereabout by said series of rolls, and means feeding a heated plastic blank along said plate beneath said baffle to be picked up by said rolls and curled thereby.

3,122,792

MACHINES FOR SPRAYING ASBESTOS OR THE LIKE

Bryan Moody, Clayton-le-Woods, Chorley, England, assignor to J. W. Roberts Limited

Filed May 25, 1959, Ser. No. 815,486
Claims priority, application Great Britain May 30, 1958
9 Claims. (Cl. 19—93)



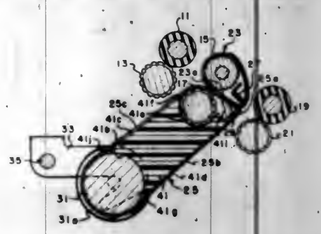
1. In a machine for forming asbestos or other mineral fibre into a suspension in air and spraying it onto a surface, the combination of a hopper for the fibre, means bounding a space below the hopper, at least first and second toothed rollers laterally offset from one another and mounted within the lower part of the hopper above said space to turn about parallel substantially horizontal axes, said rollers being adapted to engage the fibre and draw it downwardly, a third toothed roller mounted within the lower part of the hopper to turn about a substantially horizontal axes parallel to, higher than and vertically between the axes of the said first and second rollers, means to drive said first, second and third rollers, said driving means driving said third roller at a lower peripheral speed than said first and second rollers for loosening asbestos to pass to the first and second rollers, the paths of the tips of the teeth of the first, second and third rollers being spaced apart in directions perpendicular to the axes of the rollers, the three rollers together serving when they are stationary to support the mass of fibres in the hopper, and means for breaking up clots of fibre that have passed the rollers.

3,122,793

DRAFTING ROLL AND APRON CLEARING ARRANGEMENT

Russell B. Newton, Spartanburg, and Walter A. Smith, Inman, S.C., assignors to Deering Milliken Research Corporation, Spartanburg, S.C., a corporation of Delaware

Filed Apr. 12, 1961, Ser. No. 102,557
12 Claims. (Cl. 19—245)



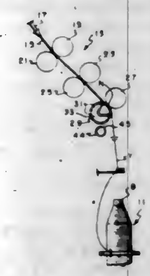
1. In a textile fiber drafting arrangement having a fiber control apron and a pair of spaced apart rolls within the fiber control apron, the improvement comprising an elastic non-rotatably mounted apron-and-roll engaging clearer element disposed within said apron and resiliently engaging the periphery of each of said rolls and the inner surface of said apron.

3,122,794

DRAFTING AND SCAVENGING APPARATUS

Norman E. Klein, Spartanburg, S.C., assignor to Deering Milliken Research Corporation, Spartanburg, S.C., a corporation of Delaware

Filed Feb. 14, 1961, Ser. No. 89,214
3 Claims. (Cl. 19—288)



1. A drafting arrangement comprising roll support bearing means, two coaxial rotatable circumferentially apertured scavenging and drafting rolls carried in oppositely extending cantilever relation on said bearing means, two stationary vacuum conduits extending into the opposite free ends of said cantilever carried rolls, said stationary vacuum conduits having an arcuate mouthed opening of less than approximately 180° in arc opening within said cavity and in registry with a portion of less than approximately 180° in arc of said apertures, and a common drive connection to said rolls adjacent the common connecting center supported portion thereof.

3,122,795

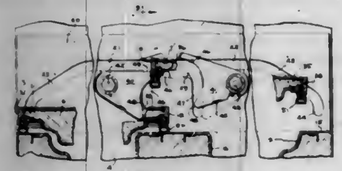
SLIDING DOOR STRUCTURE

Harold P. Harle, Louisville, Ky., assignor to General Electric Company, a corporation of New York

Filed Dec. 28, 1961, Ser. No. 162,733
1 Claim. (Cl. 20—19)

In a cabinet having a magnetic face portion defining an access opening to said cabinet;
a pair of sliding doors for closing said access opening,

means for mounting said doors for horizontal sliding movement of either one of said doors between a closed position in which both of said doors are in the same plane with their inner edges in side-by-side relationship and their upper and lower edges overlapping said cabinet face portion and an open position in which one of said doors overlies the other of said doors in parallel relationship therewith,
said mounting means comprising track plates respectively mounted above and below said access opening and having track grooves therein and inner and outer pins carried by the upper and lower edges of said doors for sliding movement in said grooves,



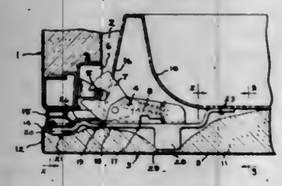
each of said track plates including a main track groove having its major portion parallel to said cabinet face portion and its opposite ends inclined rearwardly toward said face portion and terminating in rearwardly extending end portions and a pair of spaced rearwardly extending grooves on opposite sides of the point at which the inner edges of said doors meet when in the closed position for receiving said inner pins when said doors are closed,
and a magnetic gasket mounted adjacent the upper and lower edges of said doors for engaging said cabinet face portion when said doors are closed, said magnetic gasket progressively attracting said doors to their closed positions when said outer pins enter said rearwardly extending end portions.

3,122,796

REFRIGERATOR DOOR INCLUDING LATCH SUPPORTING MEANS

Samuel J. Woolley, Louisville, Ky., assignor to General Electric Company, a corporation of New York

Filed Nov. 13, 1962, Ser. No. 237,166
3 Claims. (Cl. 20—35)



1. In combination, a door including spaced inner and outer panels fastened together along the edges thereof, a layer of glass fiber insulation in contact with said outer panel, a latch, a support means of plastic material for supporting said latch within said space between said panels, said support means including a base portion overlying said layer of insulation, said latch being mounted on said base portion, means securing one end of said support means to said outer panel adjacent an edge thereof, said support means including a first portion adjacent the other end of said support means contacting said inner panel and at least one leg spaced from said one end and extending into said layer of insulation into supporting relationship with said outer panel.

3,122,797

WINDOW FRAME WITH REMOVABLE WINDOWS

Valfredo Segre, 3005 Picquet Road, Montreal, Quebec, Canada

Filed Feb. 8, 1962, Ser. No. 172,025
2 Claims. (Cl. 20—52.2)



1. In a window frame assembly, a window frame having two or more inwardly facing window guide channels located in planes adjust to and parallel with each other around the inner periphery of the window frame, the said channels being formed by inwardly projecting flange members, the vertically disposed portions of certain of said flange members having a portion of their length cut back to increase the horizontal width of a window opening in the window frame, an upper outer window member and a lower inner window member slidable vertically in adjacent guide channels, the upper window member being removable inwardly of the window frame from its guide channel past the cut back portions of its channel flange members at the lower end of the guide channel, and the lower window member being removable inwardly of the window frame from its guide channel past the cut back portion of its channel flange members at the upper end of the guide channel, the said guide channels having a series of apertures spaced apart along their vertical length, a pair of spring latches on the lower horizontal edge of each of said upper and lower windows, the said spring latches adapted to engage in selected apertures in the said guide channels, the said lower window preventing inward movement of the said upper window past the cut back portion of its guide channel when the said upper window is aligned with the said cut back portion, and a pair of detent latches on the upper horizontal edge of said lower window, the said detent latches maintaining the said lower window in sliding engagement with its guide channel when the said window is aligned with the cut back portion of its guide channel.

3,122,798

CLIP FOR COMBINATION WEATHERSTRIP AND SASH BALANCE UNIT

William H. Zegers, Flossmoor, and William J. Schumacher, Lombard, Ill., assignors to Zegers, Incorporated, a corporation of Illinois

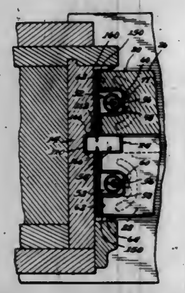
Filed Apr. 11, 1962, Ser. No: 186,803
6 Claims. (Cl. 20—52.4)

1. A device for securing a combination weatherstrip and sash balance unit to a window jamb of a window casing, said device comprising:
an anchor member having a length approximating the width of the unit,

and defining substantially oppositely disposed hook portions with said hook portions being hooked away from the rearward side of said member and the distance between the tips of said hook portions being spaced apart a distance that is less than the distance between the side edges of the unit,

said anchor member further defining a rearwardly projecting portion adapted to fit into a recess in the window jamb,

and including on one side thereof a flexible guide finger extending between said projecting portion and a point on said anchor member spaced to one side of said projecting portion,



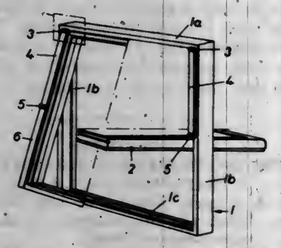
said finger having an end portion thereof engageable with said projecting portion and proportioned to be flexed into alignment with said anchor member when said projecting portion is pressed into said jamb recess,

said projecting portion being notched adjacent said finger end portion,

said anchor member being curved lengthwise thereof to give the rearward side thereof a concavely curving configuration,

with said finger end portion being aligned with said projecting portion notch and being proportioned to engage the outwardly projecting end of said projecting portion, but to be readily snapped into said notch when said curvature is pressed out of said member.

3,122,799
WINDOW
Sigurd Lunde, Huitfeldtgt. 36, Oslo, Norway
Filed Dec. 11, 1961, Ser. No. 158,504
Claims priority, application Norway Dec. 16, 1960
4 Claims. (Cl. 20—53)



1. A window comprising, in combination,

(*a*) a frame having a top member, a bottom member, and two side members interposed between said top and bottom members, said members defining a window opening therebetween;

(*b*) a sash adapted to be engaged in said opening to substantially close the same, said sash having a top member, a bottom member, and two side members interposed between said top and bottom members, the members of said frame and said sash constituting respective pairs of juxtaposed members when said sash is engaged in said frame, opposite adjacent faces of the members of each pair of side members being formed with respective elongated grooves, juxtaposed ones of said grooves jointly constituting two elongated recesses each extending substantially from said top members to said bottom members when said sash is engaged in said opening;

(*c*) two first pivot means on said frame adjacent the top member thereof and adjacent respective side members thereof;

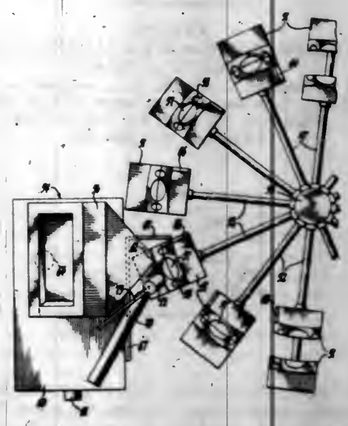
(*d*) two second pivot means on respective side members of said sash and spaced from the top and bottom members of said sash;

(*e*) an elongated arm in each of said recesses, said arm having two end portions respectively secured to a corresponding one of said first and second pivot means, and extending in a longitudinal portion of said recess;

(*f*) a filler member in each of said recesses and substantially extending over the remaining longitudinal portion thereof, said filler member being secured to one of the side members adjacent the respective recess; and

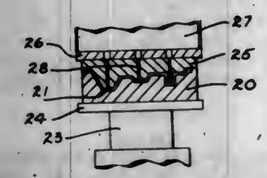
(*g*) cap flange means on each arm and on each filler member projecting outwardly of respective ones of said recesses and overlapping said side members.

3,122,800
AUTOMATIC METAL POURING MACHINE
Dewein H. Naffziger, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 1, 1961, Ser. No. 106,808
13 Claims. (Cl. 22—77)



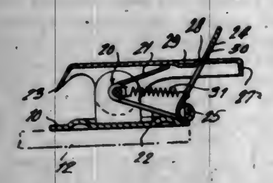
1. An automatic casting machine comprising, in combination, means defining a pouring station, a ladle at the pouring station, means for presenting molds successively at the pouring station, means responsive to the presence of a mold at the pouring station operative to tilt the ladle to pour metal into the mold, first means responsive to heat radiation from the stream of metal flowing from the ladle effective to stop the tilting of the ladle, and second means responsive to heat radiation from metal in the top of the mold due to filling of the mold operative to untilt the ladle to stop pouring metal.

3,122,801
METHOD OF MAKING MOLDS
Glenn W. Merrefield, 212 Prospect St., Spring Lake, Mich.
Filed July 15, 1960, Ser. No. 43,167
13 Claims. (Cl. 22—113)



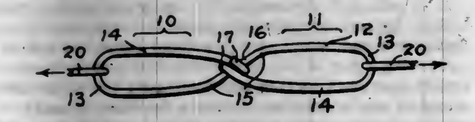
13. A mold for use in making metal castings by a shell mold process, comprising: a pair of fused silica backup plates, each of said backups having a recess therein shaped to the general configuration of the article to be cast, said recesses positioned in face to face relationship; a thin cured sand and resin shell mold formed on said backups within said recesses; and gate means for pouring metal into the mold cavity enveloped by said shell mold within said backup plates.

3,122,802
PAPER CLAMPING DEVICE
Tibor Kaufman, Hotel Park Crescent, 87th St. and Riverside Drive, New York, N.Y.
Filed May 31, 1962, Ser. No. 199,157
1 Claim. (Cl. 24—66)



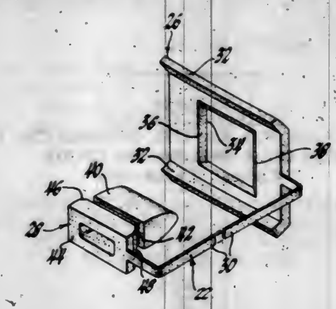
A paper clamping device comprising a base, a shaft carried by the base, a top jaw member, pivotally secured to the base shaft, spring means to urge to the top jaw into clamping contact with the base, an upwardly turned margin at the rear of the base, a locking arm swingably carried at its lower end by the base margin, means carried by the top jaw member toward the rear thereof to engage the locking arm to hold the top jaw member in an open position, and yieldable spring means interconnecting the shaft and the locking arm whereby the top jaw member may be released to close the clamp.

3,122,803
CONNECTOR FOR FISHING TACKLE
Alpheus Guy Boggess, Sitka, Alaska, and Hellen W. Boggess, P.O. Box 306, Sitka, Alaska; said Alpheus Guy Boggess assignor to said Hellen W. Boggess
Filed Dec. 20, 1961, Ser. No. 160,857
2 Claims. (Cl. 24—73)



2. A figure eight type connector formed of a single piece of spring wire comprising two aligned U-shaped loops of similar size and shape each having a longer arm and a shorter arm integrally connected with each other by an arcuate outer end member; a medial diagonal member extending obliquely across the connector between the inner ends of the two U-shaped loops; two resilient integral bend portions connecting the inner ends of the shorter arms of the U-shaped loops with the respective ends of the medial diagonal member; and a hook provided on the inner end of the longer arm of each U-shaped loop, each hook being detachably engageable with said medial diagonal member adjacent the location of one of said resilient bend portions, said medial diagonal member and the bend portions connecting it with the shorter arms of said U-shaped loops being resiliently yieldable to tension exerted on the connector, the medial diagonal member being angularly movable by tension toward a position of longitudinal alignment with the connector and the hooks being movable toward each other on the medial diagonal member when said medial diagonal member is angularly moved by tension.

3,122,804
MOLDING FASTENER
Benjamin S. Stawinski, Southfield, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 18, 1962, Ser. No. 231,463
2 Claims. (Cl. 24—73)



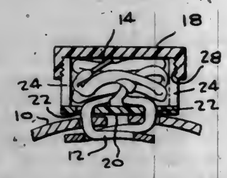
1. A fastening device for securing a molding strip having inturned flanges along the edges thereof to a support having an aperture therein and comprising:

a generally planar body portion adapted to overlie said support, opposite edges of said body portion being angularly outwardly directed for engaging the flanges of said molding strip, said body portion having an opening therein of a size larger than the aperture in said support and the edges of said opening being angularly formed with respect to the remainder of said body portion;

a stud portion adapted to pass through said opening in said body portion and into said aperture in said support for clamping said body portion against said support, said stud portion having a head greater in one dimension and lesser in another dimension than said aperture in said body portion with inclined shoulders on the sides of said stud portion of lesser dimension to engage said inclined edges of said aperture in said body portion and clamp said body portion against said support in any of several positions relative to said support and said stud portion;

and a resilient strap integral with said body portion and integral with said stud portion to connect said portions and form a one-piece fastener.

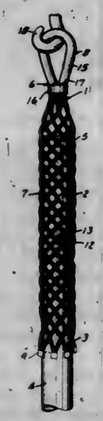
3,122,805
BOW KNOT FASTENER
Albert S. Hakim, 326 De Siard, Monroe, La.
Filed Mar. 27, 1962, Ser. No. 182,734
1 Claim. (Cl. 24—119)



A protective receptacle for use in enclosing the knot of a shoe lace which includes lace ends, the receptacle comprising:

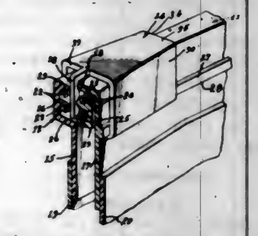
(*a*) a receptacle cup of shallow, generally cylindrical, tubular form;
(*b*) the cup having a bottom wall and a side wall having an outer edge;
(*c*) the side wall being externally threaded adjacent said outer edge;
(*d*) the cup having an internal volume sufficient to completely enclose the knotted ends of the shoe lace;
(*e*) the bottom wall having a pair of spaced openings formed therein to permit the lace ends to be drawn therethrough prior to tying;
(*f*) the side wall having spaced apart slots formed therein opening through the outer edge thereof to permit entrance of the lace ends therethrough during tying; and
(*g*) closure means for the cup.

3,122,806
GRIPPING DEVICE
Charles T. Lewis, P.O. Box 4755, Oklahoma City, Okla.
Filed Oct. 8, 1962, Ser. No. 229,010
7 Claims. (Cl. 24—123)



1. In a gripping device of the character described,
(*a*) a plurality of wire strands spirally interwoven with each other about a common axis to form a tubular open mesh body portion adapted to be placed in surrounding gripping relation with an article, said body portion having a draft end,
(*b*) said strands extending continuously from an article-receiving end of said body portion to the draft end and return to said article-receiving end,
(*c*) means securing ends of the strands together at said article-receiving end,
(*d*) intermediate portions of said strands extending from the draft end of the body portion and brought together in an eye forming loop,
(*e*) a flexible sleeve surrounding the strands forming the eye whereby said eye changes shape to accommodate uneven loading,
(*f*) and a flexible collar embracing all of the strands adjacent the ends of the flexible sleeve to retain the loop in the form of an eye and permit flexing of eye portions to accommodate uneven loading.

3,122,807
SLIDER FOR A POUCH AND THE LIKE
Edgar M. Ausnit, 525 Park Ave., New York 21, N.Y.
Filed July 22, 1960, Ser. No. 44, 668
10 Claims. (Cl. 24—201)



1. A flexible closure comprising a pair of flexible closure strips, each having a web portion and a marginal portion integral therewith, said marginal portions having interlocking channel and ridge elements extending along the marginal portions, the marginal portion for the first strip extending substantially parallel to its web portion and being thicker than its web portion and projecting outwardly to form a retaining shoulder where it joins the web portion, the marginal portion for the second strip turned inwardly alongside its web portion with the channel and ridge elements in confronting relationship, and a slider straddling the strips having opposed tapered sides for engaging the strips and forcing them together to join the channel and ridge elements when moved in a closing direction and having a separator for separating said elements when moved in an opening direction, said slider having a retaining flange positioned beneath said shoulder of the first strip for holding the slider on the strips.

3,122,808
SLIDE FASTENER AND QUICK RELEASE
Angelo P. Maschi, Framingham, and Frank O. Johnson, Leicester, Mass., assignors to the United States of America as represented by the Secretary of the Army
Filed Jan. 9, 1962, Ser. No. 165,262
9 Claims. (Cl. 24—205)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A releasable connection for use in conjunction with a slide fastener to adapt the same for substantially instantaneous end-to-end parting without the aid of a slider, comprising a pair of elongated connecting members, transversely apertured locking cones adjacent the extremities of one of said connecting members, the other of said connecting members having sockets located and dimensioned to receive said cones, and latches projectable into the transverse apertures in said cones to lock said cones and sockets against separation, said connecting members each having a rigid intermediate portion and lateral leaf spring-like extensions bowed to urge the extremities of said extensions toward positions in opposed spaced relation to each other when said connecting members are disposed in operative relationship so that the said extension must be flexed to bring said locking cones into engagement with said sockets sufficiently to cause said bowed extensions to spring a cone and socket apart with a snap-like action when the latch locking the said cone and socket against separation is retracted.

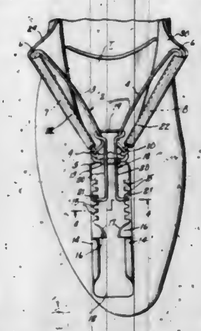
3,122,809
ACTUATOR FOR ZIPPER FASTENER SLIDERS
William S. Shee, Woodbridge, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut
Filed Jan 17, 1963, Ser. No. 252,206
3 Claims. (Cl. 24—205.15)



1. An actuator for zipper fastener sliders of the type having a rigid pull tab hinged thereto which comprises a one-piece member having
(*a*) a relatively wide guard portion adapted to underlie the slider in closing the zipper;
(*b*) a shank extending from the upper end of said guard portion;
(*c*) a hook projecting from the front face of said guard portion and extending towards said shank; and,
(*d*) means forming a pocket on the back side of said being adapted to be fitted over and engage around receive the pull tab from that direction, said pocket being adapted to be fitted over and engage around the pull tab to hold the same in extended position; and a flexible pull member attached to the free end of said shank whereby the said pull can be used for closing the zipper when said hook is engaged in the pull tab, or in opening the zipper when said one-piece member is in inverted position with the pull tab engaging in said pocket.

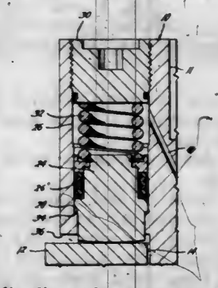
3,122,810
FASTENING DEVICE
Charles T. Lawrence, Saegertown, and Norman W. MacFee, Conneaut Lake, Pa., and David G. Rae, Westmount, Quebec, Canada, assignors to Talon, Inc., a corporation of Pennsylvania
Filed May 17, 1962, Ser. No. 195,586
6 Claims. (Cl. 24—207)

1. In a fastening device of the class described,
a plate-like member,
means arranged with said plate-like member for attaching it to the article with which the device is to be used,
the opposed longitudinal marginal edges of said plate-like member being curled over toward one another,
there being a series of opposed spaced-apart notches arranged in said curled edges,
an interconnecting member having an attaching portion arranged on one end thereof and a pair of laterally extending portions arranged on the opposite end thereof which extend in opposite directions and which cooperate with the notches in said plate-like member so as to permit selective adjustment of said wire member relative to said plate-like member, and



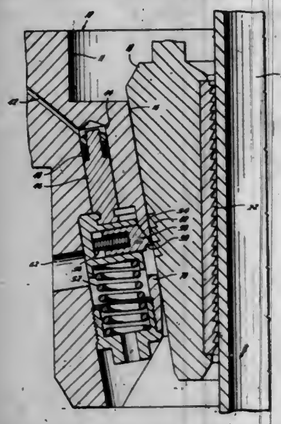
means for locking said interconnecting member relative to said plate-like member in a position substantially parallel thereto so as to prevent unintentional movement relative to the same comprising a pair of opposed lip-like portions with one arranged adjacent the end of each of said series of notches, each of said lip-like portions being a curled over extension of the respective marginal edge portion which is bent inwardly so as to be disposed substantially parallel to the body portion of said plate-like member, the inner edge portion of each of said lip-like portions being constructed and arranged so as to cooperate with outer sides of said interconnecting member in the opening and closing of the device.

3,122,811
HYDRAULIC SLIP SETTING APPARATUS
Lafayette E. Gilreath, 7623 Arnim, Houston, Tex.
Filed June 29, 1962, Ser. No. 206,476
12 Claims. (Cl. 24—263)



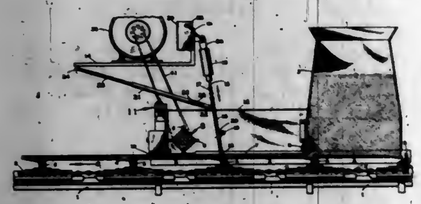
1. A hydraulic slip setting apparatus for gripping well pipe with a pipe slip by a force that increases with an increase in the weight of the drill pipe comprising,
a housing,
said housing having a tapered face for engaging and supporting said pipe slip,
yieldable means engaging and yieldably supporting said housing,
a first piston and coacting cylinder engaging and supporting the housing whereby said piston moves into said cylinder on downward movement of said housing,
slip engaging means slidably carried by the housing adjacent said tapered face and adapted to engage said slip,

a second piston and coacting cylinder connected to said slip engaging means,



a fluid passageway communicating between said first and second cylinders whereby on an increase in the weight of pipe carried by said slip and housing the fluid pressure in said first cylinder is increased and said pressure increase is transmitted to said second cylinder for moving said slip engaging means and said slip into a tighter engagement with the pipe.

3,122,812
TILE MANUFACTURING MACHINE
Frank A. Gory, 5166 E. 11th Ave., Hialeah, Fla.
Filed Apr. 4, 1961, Ser. No. 100,572
1 Claim. (Cl. 25—43)



In a machine for the manufacture of tile having an offset projecting therefrom a means forming a frame,

a plurality of pallets,

each of said pallets including a cavity corresponding to said offset,

a conveyor means in said frame constructed and adapted to transport said pallets thereon in like end to end formation in a substantially horizontal path including power means for driving same at a predetermined linear speed when energized,

a hopper means on said frame positioned above said conveyor means constructed to contain a supply of plastic material for gravitation onto said pallets when the latter are transported under said hopper means,

a roller means journalled for rotation on said frame about an axis transverse and above said path positioned in a close proximity with a lower edge of the outlet side of said hopper means for feeding and primary compacting a layer of said material on said pallets when rotated when the latter are transported from under said hopper means,

an impeller means journalled for rotation on said frame about an axis transverse and above said path and spaced from said roller means forming a tamping zone therebetween,

said impeller adapted to compact and size said material on each of said pallets to a predetermined thickness when the latter are transported from said zone,

power means for rotating said roller and impeller means at predetermined synchronized speeds when energized,

tamping means pivoted to said frame above said zone for angular oscillation in the direction of movement of said pallets between a predetermined idle and a predetermined displaced position,

means for urging said tamping means into said idle position,

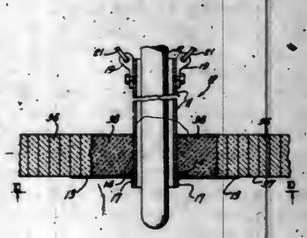
said tamping means constructed and adapted to move to an extended position and sequentially ram said material in each said cavity in each of said pallets while moving in said zone and be moved thereby in said extended position from said idle to said displaced position during each reciprocation thereof when sequentially and momentarily energized,

a source of pressurized energy,

abutment means equi-spaced on said conveyor means for linear movement therewith positioned to correspond with the spacing of each said cavity in each of said pallets on said conveyor means,

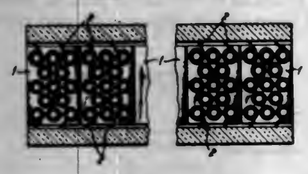
a control means connected to said source of energy and said tamping means positioned in the path of movement of said abutment means and constructed and adapted to be sequentially and momentarily operated thereby to energize said tamping means a single stroke for compacting said material in each said cavity in each said pallet when said power means are energized.

3,122,813
FLEXIBLE FORM FOR REPAIRING THE OXYGEN LANCE HOLES IN OPEN HEARTH FURNACE ROOFS
Raymond J. Demalson, Bronx, N.Y., assignor to Quigley Company, Inc., a corporation of New York
Filed Dec. 9, 1960, Ser. No. 75,034
5 Claims. (Cl. 25—118)



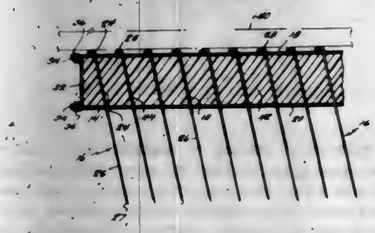
1. A flexible form for repairing with refractory material a damaged hole in an open hearth furnace roof composed of refractory bricks while the furnace is in operation, said form comprising a plurality of separate and distinct flexible resilient metal blades decreasing in width from one end to the other, and a stem upon which the blades are individually mounted at their narrow ends for movement from a nested collapsed position into a fully expanded position, said blades in their collapsed position being insertable by means of the mounting stem through the damaged hole in the furnace roof from the outside and then movable into their fully expanded position after insertion to cover the damaged roof hole on the inside of the furnace from the stem outwardly, said blades in their fully expanded position acting as a temporary support for the refractory material used in filling the cavity created by the stem and the refractory wall of the damaged hole.

3,122,814
TUNNEL KILNS FOR THE CALCINING PARTICULARLY OF SENSITIVE CERAMIC WARE
Heinz Behrens, 19 Am Weidenpesch, Cologne-Junkersdorf, Germany
Filed Nov. 6, 1961, Ser. No. 150,461
Claims priority, application Germany Nov. 9, 1960
2 Claims. (Cl. 25—142)



1. A tunnel kiln, particularly for the calcining of sensitive ceramic ware, having guiding means arranged in the interior of the kiln duct, which block the path of the combustion gases flowing from the calcining zone to the preheating zone and/or the cold air flowing in at the cooling end along the side walls and the roof of the kiln duct, and thus force the gases to flow through the charge, the gaps between the ware to be calcined and the side walls as well as the roof of the tunnel kiln being provided with plate elements resiliently yielding in the direction of conveying of the calcining carriages and scraping over the ware to be calcined itself, and thereby establishing a complete seal, said plate elements being limited in their freedom of movement in relation to the calcining carriages to be prevented from jerking back beyond the direction perpendicular to the direction of conveying.

3,122,815
NEEDLE BOARD FOR NEEDLE LOOM
Alexander M. Smith II, 131 Gwyn Ave., Elkin, N.C.
Filed Oct. 4, 1961, Ser. No. 142,949
4 Claims. (Cl. 28—4)



1. A needle board for use in a needle loom comprising two sheets of relatively stiff material having a thickness in the range of .020 to .062 inch, each of said sheets having an identical pattern of holes therethrough, the pattern of holes of one sheet being offset out of alignment with the pattern of holes of the other sheet, means to support said sheets in spaced apart relationship, and a plurality of needles, said needles extending through corresponding holes in the two sheets of material.

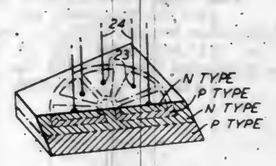
3,122,816
PROCESS FOR MANUFACTURING SLUB YARN
Edgar I. Rhoden, Newark, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed July 11, 1962, Ser. No. 209,813
7 Claims. (Cl. 28—72)

1. In the treatment of multifilament yarn with an aspirating jet utilizing a high velocity flow of compressible fluid to form a zone of turbulence and to provide an aspirating stream through the yarn inlet into the jet, the process for forming slubs in the yarn which comprises feeding and forwarding the yarn along a path leading across the jet inlet without passing through the jet, flowing compressible fluid through the jet at sufficiently high velocity to draw a loop of yarn into said jet at said jet



inlet and form the loop into a slub by fluid action in the turbulent zone, then forwarding the yarn under sufficient tension to withdraw the slub from the jet, repeating the process along the yarn to form a series of slubs, and collecting the slubbed yarn.

3,122,817
FABRICATION OF SEMICONDUCTOR DEVICES
Jules Andrus, Berkeley Heights, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Continuation of abandoned application Ser. No. 678,411, Aug. 15, 1957. This application Feb. 4, 1963, Ser. No. 255,918
3 Claims. (Cl. 29—25.3)



1. The method of making semiconductor devices comprising the steps of

forming an oxide coating on a surface of a semiconductor body,

removing said oxide coating from a first limited area of said semiconductor body thereby exposing said limited surface area,

diffusing into the thus exposed limited surface area a first impurity forming within the semiconductor body a P–N junction extending to the semiconductor surface underneath said coating,

reforming an oxide coating on the semiconductor surface over said exposed limited surface area,

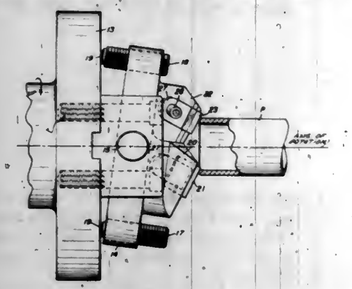
removing from the reformed oxide coating a second limited area less than said first limited area thus exposing a smaller limited surface area of the semiconductor body thereunder, and

diffusing into said smaller limited surface area of said semiconductor body a second impurity forming within the semiconductor body between the previously formed junction and the surface thereof another P–N junction extending to the semiconductor surface underneath the reformed coating.

3,122,818
PIPE-END DEBURRING TOOL
Russell E. Nance, Chesterton, Ind., assignor to United States Steel Corporation, a corporation of New Jersey
Filed May 27, 1960, Ser. No. 32,358
10 Claims. (Cl. 29—105)

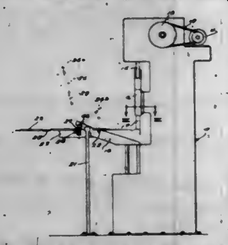
1. A tool head for mounting cutting tools in positions to engage both the inside and outside circumferential edges of a pipe end, said tool head comprising bearing means adapted to be fixed to a rotatable support, a base pivoted to said bearing means on an axis perpendicular to the

axis of rotation and radial with respect thereto, adjustable means engaging said base and the support for pivoting the base about said bearing means and thus varying its angle of cant with respect to the support, and tool mount-



ing means projecting from said base on opposite sides of the axis of rotation and on opposite sides of the axis of pivoting and adapted to carry inside and outside cutting tools, whereby canting said base to different angles changes the position of the tools for different sizes of pipe.

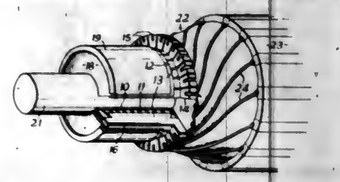
3,122,819
METHOD FOR ASSEMBLING CROSS BRACES ON A MULTI-LEG TOWER
Ivan Dwight Rohn, Peoria, Ill.
(R.F.D., Washburn, Ill.)
Original application July 26, 1955, Ser. No. 524,345, now Patent No. 3,021,885, dated Feb. 20, 1962. Divided and this application June 20, 1961, Ser. No. 118,302
4 Claims. (Cl. 29—155)



1. In a method of forming and assembling a plurality of spaced longitudinal rods with transversely extending metal straps disposed along the length of said rods to form an enclosed tower section, the steps of disposing a rod on a series of spaced generally straight straps, contemporaneously angularly bending and clenching a portion of each strap to said rod by deforming each strap portion transversely around more than one half of the perimeter of each rod, indexing the rod and attached straps to position other portions of the straps to receive another rod, angularly bending and clenching such other portions in like manner to a second rod, again indexing the straps and attached rods, deforming the end portions of each of the straps around another rod and fastening such end portions to said last mentioned rod.

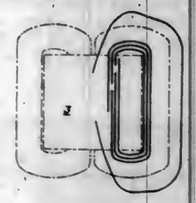
3,122,820
METHOD OF MANUFACTURING A ROTOR FOR A DYNAMO-ELECTRIC MACHINE
William Eli Arnold, Old Beech Cottage, Dene Road, Ashtead, Surrey, England, assignor of one-half to Watliff Company Limited, London, England, a British company
Filed May 18, 1959, Ser. No. 813,892
Claims priority, application Great Britain May 30, 1958
4 Claims. (Cl. 29—155.53)

1. A method of manufacturing a rotor for a dynamo-electric machine including the steps of fitting a masked commutator to the shaft of a rotor having windings provided with terminal wires, said masked commutator comprising a plurality of conducting segments, insulating material between said segments shaped to provide intersegment recesses between the parts of said conducting segments which form the contacting surface of said commutator, and a tightly fitting mask of regenerated hydrate cellulose, produced by the viscose process, completely covering said intersegment recesses and said contacting sur-



face except for exposed portions of said segments at one end, said mask engaging in close contact with those parts of the external surface of the commutator which lie round the periphery of the intersegment recesses and with said contacting surface, positioning the terminal wires adjacent said exposed portions of the conducting segments of the commutator, making electrically conducting connections between the terminal wires and said portions of the segments by dip-soldering, and removing the mask.

3,122,821
METHOD OF MAKING MAGNETIC CORES
Kenneth D. Beardsley, Dalton, and Edmund J. Wilk, Adams, Mass., assignors to General Electric Company, a corporation of New York
Filed Mar. 28, 1958, Ser. No. 724,679
5 Claims. (Cl. 29—155.57)

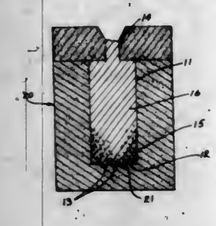


5. A method of making a magnetic core which has a window opening and linking the same with a preformed electrical coil which has a window opening, said method comprising providing a spirally wound core of flat strip magnetic material having a plurality of radially superposed turns, heat treating the wound core, cutting the strip of magnetic material into successive segments by starting at its inner end and progressively cutting it toward its outer end, the successive segments being cut one at a time and without unwinding of the strip by cutting the strip while the successive segments are nested substantially in the same position as they had in the wound core while being heat treated and while its inner end is still located inside the wound core, and lifting each segment from inside the wound core after it is cut and lacing it with the preformed electrical coil while its immediately successive segment is being cut.

3,122,822
METHOD OF MAKING A CASTING
Kenneth E. Kueny, North Muskegon, Mich., assignor to Johnson Products, Inc., Muskegon, Mich., a corporation of Michigan
Filed Mar. 31, 1960, Ser. No. 18,894
1 Claim. (Cl. 29—156.7)

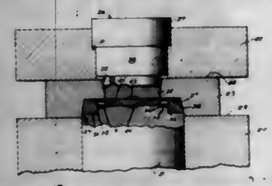
The method of making a valve tappet comprising the steps of: forming a valve tappet mold having a cavity

with one wall thereof comprising a foot forming surface; providing the foot forming surface with pin forming depressions intermediate the outer edge of said foot forming surface; heating hardenable iron to a pouring temperature, pouring and chilling said hardenable iron into said cavity thereby forming a casting with a foot



surface having pins extending therefrom intermediate the outer edge, said pins providing means for dissipating heat from said intermediate section thereby increasing the cooling rate of said intermediate section to form an acicular grain structure; and machining said pins down flush with the foot surface.

3,122,823
TURBINE WHEEL AND METHOD OF MAKING SAME
John L. Lazar, Euclid, and Richard A. Whitaker, Willoughby, Ohio, assignors to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Apr. 22, 1959, Ser. No. 808,128
8 Claims. (Cl. 29—156.8)



1. A method of forming turbine wheels and the like which comprises:
supporting a plurality of blade shaping members against a supporting surface to provide a plurality of circumferentially spaced blade shaping cavities and a female die member cavity with open ends of the blade shaping cavities facing the female die member cavity, inserting a metal blank into the female die cavity spaced from the blade shaping cavities and in contacting relationship with the side walls of the shaping members to cover the open ends of the blade shaping cavities,
applying forging pressure to the end portion of the metal blank to move the peripheral portion of the metal blank radially outwardly into the blade shaping cavities to fill the blade shaping cavities to assume the shape of the cavities and thereby form a plurality of turbine blades integral with a supporting structure therefor.

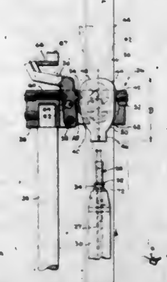
3,122,824
METHOD FOR PRODUCING RADIATORS
Jacob Tobler, 55 Kamorstr., Schaffhausen, Switzerland
Filed Apr. 13, 1959, Ser. No. 805,880
Claims priority, application Germany Jan. 8, 1959
2 Claims. (Cl. 29—157.3)

1. A method for producing radiators having a plurality of radial plates arranged between an externally disposed U-shaped jacket having spaced grooves at the inside thereof and an internal pipe having spaced grooves at the outside thereof, comprising the steps of pressing brazing wire into said grooves, inserting said plates between opposite grooves in said jacket and said pipe, applying bonding heat from the outside of the jacket



and the inside of the pipe so as to braze said plates both to the jacket and to the pipe, and tensionally inserting by flanged connections strap means intermediate the end portions of said U-shaped jacket, thereby adding stability by mechanical forces to the stability attained by brazing.

3,122,825
POSITIONING APPARATUS FOR SEALING LAMPS
Bernard Chauvin, Cedar Grove, and John A. Daubert and Arthur P. Meier, Bloomfield, N.J., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 27, 1960, Ser. No. 58,716
3 Claims. (Cl. 29—203)

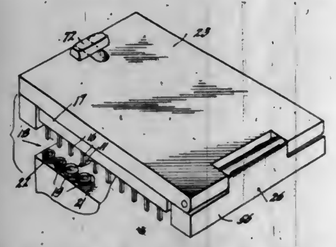


1. Apparatus for positioning the neck of a lamp bulb with respect to the sealing portion of a lamp mount preparatory to mount-to-bulb sealing, said bulb having a substantially straight-sided body portion, an open neck portion, and a connecting portion joining the body portion and the neck portion thereof, said apparatus comprising:
(*a*) a bulb-retaining head having a vertically disposed bulb-receiving cavity provided therein;
(*b*) bulb-engaging means projecting into an intermediate portion of the cavity of said bulb-retaining head, and a portion of said first bulb-engaging means movable and resiliently biased to project into the cavity of said bulb-retaining head;
(*c*) bulb-loading means for loading a bulb into the cavity of said bulb-retaining head;
(*d*) mount-supporting means for retaining in predetermined disposition a mount to be sealed to the bulb as loaded into said bulb-retaining head;
(*e*) reciprocating means for moving said mount-supporting means a predetermined distance first toward and then away from said bulb-retaining head;
(*f*) bulb-neck-engaging means carried on said mount-supporting means for engaging and seating the neck portion of a bulb retained in said bulb-retaining head after said mount-supporting means has been moved by said reciprocating means a predetermined distance toward said bulb-retaining head, and further movement of said mount-supporting means by said reciprocating means toward said bulb-retaining means causing the retained bulb to slide upwardly with respect to said bulb-engaging means;
(*g*) said mount-supporting means thereafter moved by said reciprocating means a predetermined distance

away from said bulb-retaining head to position the sealing portion of said mount in predetermined position with respect to the neck portion of the retained bulb and to leave said bulb supported by said first bulb-engaging means and in proper position for mount-to-bulb sealing; and

(*h*) timing means for controlling the operation of said bulb-loading means and said reciprocating means in the foregoing work sequence.

3,122,826
APPARATUS FOR CONNECTING WIRE CONDUCTORS TO TERMINALS
Robert L. Self, Burlington, N.C., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed May 7, 1962, Ser. No. 193,018
8 Claims. (Cl. 29—203)



1. In an apparatus for wrapping convolutions of wire onto terminals extending from a circuit mounting into concentric recesses provided in a plurality of rotary bits, wherein a back force tending to advance the terminals relative to the bits is applied to the wrapped convolutions by successively wrapped convolutions, a base,

means for clamping the circuit mounting with the terminals extending into the concentric recesses against the action of said back force,

means mounting the clamping means for movement relative to the bits,

means supported on said base for rotating the bits to wrap convolutions of wire onto the terminals, and

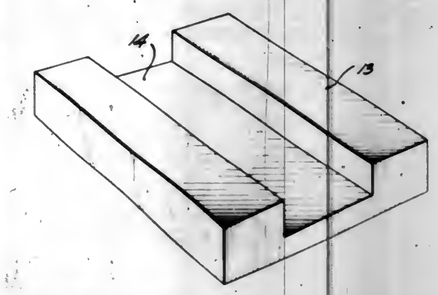
means driven by the rotating means for moving the clamping means relative to the bits to permit the circuit mounting to follow the clamping means under the action of said back force.

3,122,827
POLYCRYSTALLINE ARTICLE AND METHOD FOR MAKING SAME
Robert M. Jepson, Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Aug. 4, 1960, Ser. No. 47,405
5 Claims. (Cl. 29—423)

1. In a method of making wafers of semiconductor material having a width and length much greater than the thickness thereof and metal-coated on opposite ends but not on the faces, and having the crystalline grain structure extending lengthwise thereof, from an elongated flattened rod of semiconductor material having the crystalline grain structure extending lengthwise thereof, and having a width across the flats equal to the desired width of the wafers and a length equal to the desired length of the wafers, said method comprising the steps of:

(*a*) securing said rod of semiconductor material rigidly into a flat groove in an elongated supporting holder with one flat side in the bottom of the groove and the other flat side substantially flush with the top of the holder by surrounding said rod with a soluble potting material which sets up hard;

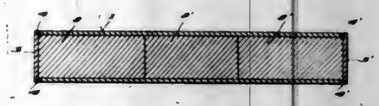
(*b*) reinforcing the crystalline grain structure of said semiconductor material by coating the exposed ends of said semiconductor material with metal;



(*c*) making a series of parallel cuts longitudinally through said semiconductor material to the bottom of said groove, filling each cut with said potting material and allowing it to harden prior to making the next cut, the spacing between said cuts being equal to the desired thickness of the wafers;

(*d*) and dissolving said potting material with a solvent to separate said wafers.

3,122,828
CONVERSION OF HEAT-SENSITIVE ALLOYS WITH AID OF A THERMAL BARRIER
Charles J. Havel, Utica, N.Y., assignor to Special Metals, Inc., New Hartford, N.Y., a corporation of Delaware
Filed Jan. 14, 1963, Ser. No. 251,243
6 Claims. (Cl. 29—423)

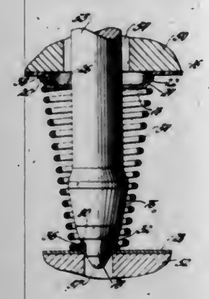


1. In the process of converting an ingot of heat-sensitive alloy composition involving rolling the ingot while at a temperature above the critical temperature of the alloy, the improvement which consists in enveloping the ingot in a metal shell having such wall thickness as materially to retard the setting up of a sharp temperature differential between surface and interior of the ingot, hot-extruding or drawing the so-enveloped ingot through an extrusion or drawing die having such a size of opening as to compress said shell onto said ingot and materially to reduce the cross-sectional area of the enveloped ingot; thereafter hot-rolling the extruded or drawn article to approximately final cross-sectional size without in-process conditioning; and removing the shell from the resulting reduced billet.

3,122,829
METHOD OF ASSEMBLING A COIL SPRING SEAT CUSHION
Theodore A. Schaad, Bloomfield Hills, and Paul Widmer, Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 13, 1960, Ser. No. 55,776
3 Claims. (Cl. 29—436)

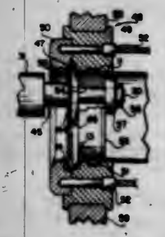
1. A method of manufacturing a unitary coil spring assembly having a unitary separator pan, a unitary support pan, and a plurality of individual coil springs secured therebetween, and comprising the steps of: moving a separator pan into a press, the upper portion of said press having a plurality of crimping pins spaced thereon, aligning through holes in a plurality of fastening

means provided on said separator pan with the crimping pins and securing said separator pan in fixed relation to the upper portion of the press by suitable clamping means, moving a spring-locating fixture into the press and thereby positioning a plurality of individual coil springs carried thereby beneath said separator pan and in alignment with the through holes therein, engaging adjacent surfaces of the separator pan and the fixture and simultaneously forcing each of the individual coil springs into fastened engagement with said plurality of fastening means on said separator pan, disengaging the



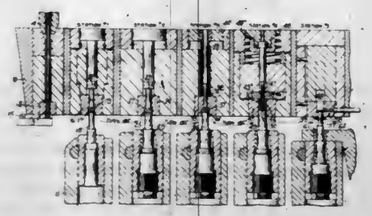
separator pan from the fixture and carrying the individual coil springs therewith from said fixture, removing the empty spring-locating fixture from the press and feeding a support pan into the press and into alignment with said individual coil springs carried by said separator pan, moving said separator pan and engaging each of said individual coil springs with each of a plurality of crimpable fastening means provided on said support pan, and simultaneously crimping each of said fastening means to each of said individual springs carried by said separator pan by means of said spaced crimping pins on the upper portion of the press.

3,122,830
METHOD FOR FORMING AN INTEGRAL FLANGE ON A METAL TUBE
Charles A. Dawson, Sylmar, and Raymond W. Ross, Burbank, Calif., assignors to Lockheed Aircraft Corporation, Burbank, Calif.
Filed June 8, 1959, Ser. No. 818,776
4 Claims. (Cl. 29—542)



1. A method of forming an integral circumferential flange on the end of a stainless steel tube comprising the steps of heat annealing the end of the tube on which the flange is to be formed, forming a continuous circumferential exterior bead near the end, gripping the tube rigidly by means of the bead, applying the heat to the end area, rolling a flange on the end so that there is a face substantially perpendicular to the axis at the end of the tube, and grinding the face smooth.

3,122,831
METHOD OF MANUFACTURE OF METAL ARTICLES
William Dunn Bailey, Cheshire, and Donald Rowe Schurman, Thomaston, Conn., assignors to Textron Inc., Providence, R.I., a corporation of Rhode Island
Original application Feb. 27, 1958, Ser. No. 717,855. Divided and this application Aug. 16, 1960, Ser. No. 49,990
2 Claims. (Cl. 29—556)



1. The method of making a metal blank of oblong rectangular shape from a substantially cylindrical workpiece which comprises:

(*a*) cutting a workpiece from a length of stock,

(*b*) exerting pressure in an axial direction, by means of a cooperating punch and die, on the opposite faces of the workpiece to form an annular peripheral chamfer at the circumferential edge of the workpiece within the die and to cause a flow of the metal along a line in a plane perpendicular to the axis of the workpiece, thereby enlarging the workpiece in opposite directions in said plane while preventing substantial enlargement in transverse directions in said plane,

(*c*) turning the workpiece end for end,

(*d*) exerting pressure in an axial direction, by means of a further cooperating punch and die, on opposite faces of the workpiece to form an annular peripheral chamfer at the circumferential edge of the workpiece within the die and to flatten the workpiece on its opposite faces and expand it laterally into substantially rectangular form in cross-section of greater length than width,

(*e*) turning the workpiece end for end,

(*f*) by the action of a further cooperating punch and die, indenting both faces of the workpiece while squaring the corners thereof, whereby the workpiece is expanded to completely fill the die cavity into the corners thereof, while the formation of flash is eliminated due to the previously formed chamfers,

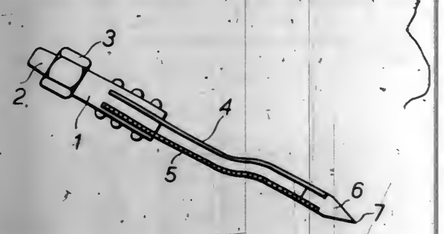
(*g*) transferring the workpiece to the final die station, and

(*h*) piercing an opening through the blank.

3,122,832
BARK PEELING DEVICES
Edvard Dale, Harestua, Norway
Filed Jan. 16, 1962, Ser. No. 166,506
1 Claim. (Cl. 30—121)

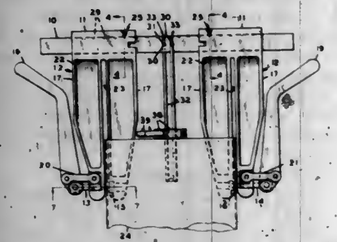
In a bark peeling device having a motor, a reciprocable tool-mounting member driven by the motor, and a chisel-like bark peeling tool mounted on the tool-mounting member and reciprocably driven thereby, the improved bark peeling tool which comprises a shank, means on the shank adapted to secure it to the tool-mounting member for reciprocation with such member in the direction of the length of the shank, two spaced stiff but resilient plates parallel throughout their lengths and rigidly secured at their rear ends to the shank and extending forwardly for a substantial distance substantially in alignment with the axis of the shank, and a chisel-like cutting blade rigidly

secured between the forward ends of the plates, said cutting blade have a forwardly facing cutting edge disposed substantially transversely to the axis of the shank and in a plane substantially parallel to the broad extents of the



plates, whereby the blade may be displaced in a direction generally normal to the broad extents of the plates by resilient bending of the plates during operation of the tool without changing the cutting angle of the blade.

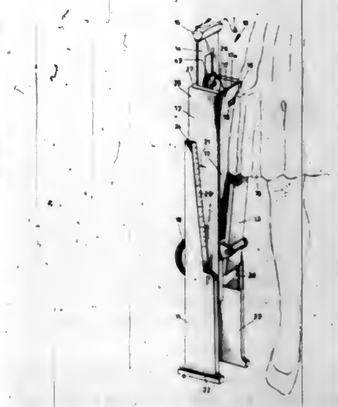
3,122,833
DUCT PERFORATOR FOR A DAMPER
David Houston, 7804 E. 68th St., Kansas City 33, Mo.
Filed June 29, 1962, Ser. No. 206,463
4 Claims. (Cl. 30—361)



1. A jig punch for perforating a duct section for a damper shaft, the jig punch comprising in combination:
(*a*) a pair of perforators,
(*b*) a straight beam,
(*c*) said pair of perforators being selectively spaceable along said straight beam,
(*d*) said perforators being supported and extended transversely from one side of said straight beam and having sufficient respective throats therein for the relative entrance of opposite wall end portions of a duct,
(*e*) latch units,
(*f*) and said latch units latching said perforators to said straight beam,
(*g*) gauge members,
(*h*) said gauge members being mounted on, and having bent portions selectively spaceable transversely from said straight beam, to engage the inner wall of a duct to align said straight beam parallel with the lateral axis of a duct,
(*i*) a second set of latch units,
(*j*) and said second set of latch units latching said gauge members to said straight beam.

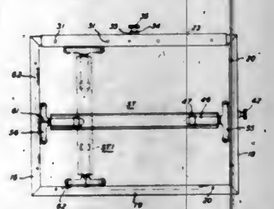
3,122,834
SKIRT MARKER
John Bukovsky, % Canadian Research & Development Foundation, 1437 Van Horne Ave., Montreal, Quebec, Canada
Filed Mar. 29, 1962, Ser. No. 183,527
6 Claims. (Cl. 33—9)

1. A skirt marker including a stand; a body member slidable within said stand; said body member having a first wall; a flap hingedly attached to the lower end of said body member and movable through an arc to lie in close contiguity with said first wall of said body member; resilient means for the operation of said flap; said first wall and said flap being apertured, said apertures being in axial alignment; a sewing machine needle having a shank and an eye end reciprocatable within said body member, said eye end passing axially in and out of said apertures; means for effecting the reciprocation of said needle; spool means and thread, said thread having one end



threaded through said eye end of said needle; means for catching and retaining a loop of said thread within said flap upon withdrawal of said needle from said apertures; means for pulling said thread from said spool means through said eye upon said loop being held by said catching and retaining means; means for severing said thread operable upon said thread being pulled through said eye and said eye approaching a position most remote from said apertures; and means for the sequential operation of said flap, said needle, said thread catcher, said thread puller and said thread severing means.

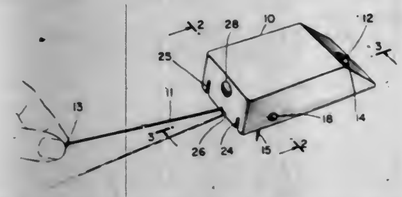
3,122,835
LAYOUT BOARD FOR USE IN THE GRAPHIC ARTS
Richard E. Blodgett and Leo S. Blodgett, both of Holmesbrook Road, Basking Ridge, N.J.
Filed July 12, 1961, Ser. No. 123,539
7 Claims. (Cl. 33—80)



1. A layout board comprising a rectangularly-shaped frame, a base secured to said frame adapted to receive a paper backing sheet, a clamping mechanism for securing the backing sheet onto said base, said mechanism comprising an angle bar disposed parallelly and in superposed relation on one element of said rectangularly-shaped frame, said angle bar having a plurality of V-shaped grooves disposed in spaced relation to each other along said bar, said frame element having a plurality of V-shaped grooves registering with the grooves in said bar, a spindle fitted in the space formed by each pair of registering grooves for pivoting said bar, a plurality

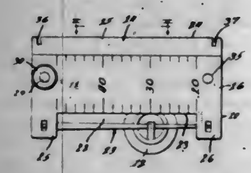
of coiled springs fitted in bores formed in one of the side elements forming said rectangularly-shaped frame, plunger members extending through said frame element and said angle bar acted upon by the tension of said springs for holding the latter in engagement with the paper backing sheet onto said base.

3,122,836
LINE HOLDING DEVICE
Alfonso B. Aclego, 15227 Freeman Ave., Lawndale, Calif.
Filed Mar. 6, 1961, Ser. No. 93,768
4 Claims. (Cl. 33—86)



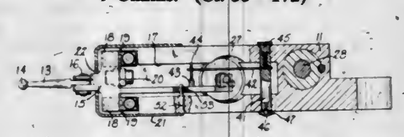
1. A line holding device comprising, in combination: a block; retractable prong means mounted in the front end portion of said block; and manually operable means for moving said prong means from within said block to point downwardly in a position to penetrate a stationary surface for preventing sliding movement of said block, the rear end portion of said block including a recess, one wall portion defining said recess being notched for receiving one end of said line, the bottom of said block having a straight longitudinal groove terminating at its rear end adjacent to said notch and passing out the lower front end portion of said block for receiving and guiding the initial direction of said line.

3,122,837
GAUGE
Theodore S. Wrona, 2140 N. Lamon, Chicago, Ill.
Filed Feb. 20, 1962, Ser. No. 174,612
5 Claims. (Cl. 33—168)



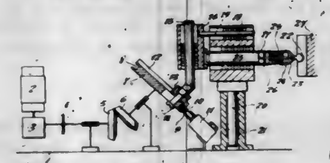
5. A gauge for measuring the gap between the electrode of a spark plug or the like comprising,
a tapering gauge member having a shoulder at an enlarged end thereof, and a reduced extension from the shoulder,
a plate having a pair of opposed ears with a recess extending therebetween,
upset portions on the opposed ears receiving the reduced portion of the gauge member adjacent the shoulder and the end of the gauge member opposite the shoulder, respectively,
and indicia on the plate in substantially parallel relation with the gauge member,
said gauge member being calibrated to provide a reading of the gap between the electrodes of a spark plug when the electrodes are engaged on the gauge member by a reading of the indicia in register with the point of engagement.

3,122,838
INDICATING DEVICE AND ZERO ADJUSTMENT THEREFOR
Bruno Uhlig, West Hartford, Conn., assignor to Pratt & Whitney Company, Incorporated, West Hartford, Conn.
Filed July 6, 1961, Ser. No. 122,229
9 Claims. (Cl. 33—172)



1. An indicating device for checking the dimensions on a workpiece comprising a body, a contact lever, a plurality of reeds attached between said contact lever and said body to deflectably mount said contact lever to said body, a variable transformer having a core and a coil, said core being mounted on said contact lever, said coil being slidable, a flexible arm attached to said body and carrying said coil, and cam-zeroing means mounted in said body and acting on said flexible arm to vary the position of said coil without affecting the position of said core for adjusting said variable transformer to balance the induced voltages in said variable transformer when said contact lever is at a known position.

3,122,839
AUTOMATIC RADIAL RUNOUT TESTER FOR GEARWHEELS
Karl Muller, Zurich, Switzerland, assignor to Maag Gear Wheel & Machine Company Limited, Zurich, Switzerland, a company of Switzerland
Filed Nov. 1, 1961, Ser. No. 149,414
Claims priority, application Germany Nov. 7, 1960
8 Claims. (Cl. 33—179.5)

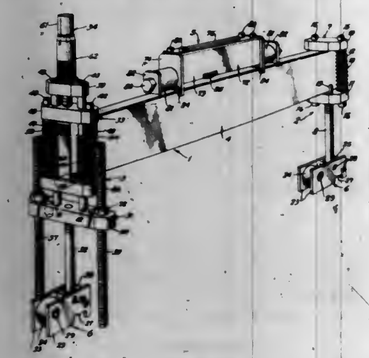


1. A gearwheel runout tester comprising a single detector, drive means coupled to said detector for successively introducing said detector into the gaps between adjacent teeth of a gearwheel to be tested a distance less than the depth of the gaps and for withdrawing the detector from the gaps, means for indicating the position of said detector when engaging the two tooth flanks bounding said gaps at the maximum penetration of the detector into each gap; said drive means including a rotary disc having its axis disposed at an angle to the gearwheel axis, a driving element mounted eccentrically on the rotary disc and movable therewith in a path which is thus elliptical when viewed along an imaginary line passing through the center of the path and parallel to the gear wheel axis and means transmitting a component of said elliptical path to the detector to move it in a similar elliptical path to engage the two flanks bounding a gap and thereby determine the indicating position of the detector.

3,122,840
PRECISION LEVELING DEVICE
Edward Siegfried Karstens, 1228½ Stutevant St., Davenport, Iowa
Filed Aug. 8, 1960, Ser. No. 47,981
2 Claims. (Cl. 33—207)

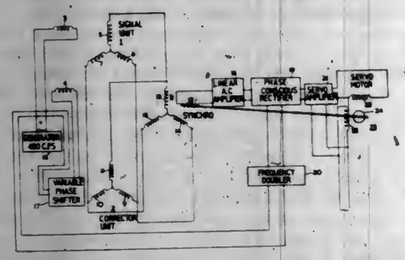
1. Improved pedestal adjustment means for a leveling apparatus comprising an elongated leveling bar, a level

operatively associated with the leveling bar, a pair of legs operatively connected to the leveling bar adjacent the ends thereof for supporting said leveling bar on surfaces to be leveled with respect to one another, and adjustment means for selectively vertically adjusting one end of said leveling bar relative to its support leg; said improved pedestal adjustment means comprising, in combination, a bar member secured to and supported upon one of said support legs, an upright frame extending upwardly from said bar member and defining a pair of up-



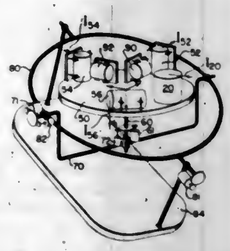
right elongated guides, a clamping frame arranged for sliding movement on said upright guides for vertical movement along said upright frame, said clamping frame being adapted to engage the leveling bar adjacent one end thereof, a micrometer mounted on said upright frame and connected to said clamping frame to both effect selective raising and lowering of the clamping frame and the leveling bar connected thereto relative to said upright frame and to permit reading thereof to accurately and specifically determine the amount of adjustment required to effect leveling.

3,122,841
CORRECTION OF MAGNETIC COMPASSES
Gilbert Nathaniel Harvey, "Barnards," Buckinghamshire, Colnbrook, England, and John Carol Moden, 25 Rosecroft Gardens, Whitton, Middlesex, England
Filed June 5, 1961, Ser. No. 114,819
8 Claims. (Cl. 33—224)



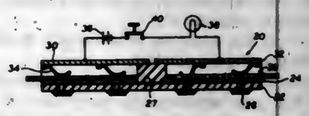
4. A magnetic compass system comprising a pair of magnetic detector units carried by a transporter having deviating fields, which detector units are arranged one at each of two points at which the deviating fields bear a substantially constant ratio and are parallel to each other, an excitation circuit for each detector unit, a single synchro the stator windings of which are connected into the system to be energized by the joint action of the output signals of said detector units, a servo-motor mechanically coupled to the rotor of the synchro to rotate it positively, phase conscious means connected to said synchro rotor for controlling the output torque of the servomotor, and phase-shifting means connected in the excitation circuit of one of said detector units to shift the phase of the excitation current of said one of said detector units with respect to the excitation current of the other of said detector units, said phase-shifting means being adjustable whereby the algebraic sum of the output signals of the said detector units may be adjusted to provide a corrected indication of the heading of the transporter.

3,122,842
GYROCOMPASS
Walter Wrigley, Wollaston, and Charles S. Draper, Newton, Mass., assignors, by mesne assignments, to Massachusetts Institute of Technology, a corporation of Massachusetts
Filed Nov. 27, 1951, Ser. No. 258,416
15 Claims. (Cl. 33—226)



10. A compass apparatus comprising a base subject to rotative movement in space; motor means on said base and including a part adapted to be rotated about a first axis when said motor means is actuated; a single degree of freedom gyroscope having a spin axis, a single output axis, and a single input axis, said gyroscope including a signal generator responsive to gyroscopic precessive movement about said output axis and adapted to produce a signal as a function of movement about said output axis away from a normal position in which said signal is at a null, said gyroscope also including a damping means associated with said output axis; means mounting said gyroscope on said rotatable part so that said input axis lies in a plane perpendicular to said first axis when said signal is at a null, said gyroscope responding to rotative movement of said base structure about any axis wherein a component of said rotative movement is imparted about said input axis; and means including circuit means connecting said signal generator to said motor means so that said motor means is actuated upon precessive movement of said gyroscope about said output axis to cause rotation of said rotatable part and said gyroscope mounted thereon to a position about said first axis whereat said component of rotative movement imparted about said input axis is reduced to zero.

3,122,843
ELECTRICAL QUESTION AND ANSWER MATCHING DEVICE
Sumner N. Levine and Caroline G. Levine, both of 225 Eastern Parkway, Brooklyn, N.Y.
Filed Apr. 7, 1961, Ser. No. 101,528
2 Claims. (Cl. 35—9)



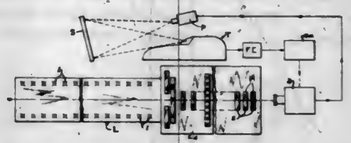
1. A question and answer matching device of the character described, comprising a base plate, a plurality of printed circuits formed on said base plate, fixed contact elements connected to said base plate and printed circuits, a pair of conductor plates mounted in co-planar relation above said base plate, a plurality of spring contact elements connected to said conductor plates in registration with said fixed contact elements, a punched, coded question card adapted to be inserted between the spring contact elements of one of said conductor plates and the corresponding fixed contact elements on the base plate, a punched, coded answer card adapted to be inserted between the spring contact element of the second conductor plate and the fixed contact elements of the base plate in registration therewith, a source of electric current, an electrical signaling device and a manually operated switch connected in series across said conductor plates, said spring contact elements being normally biased into engagement with the fixed contact elements and comprising normally closed switches, the imperforate portions of said cards being adapted to disengage said spring contact elements from said fixed contact elements, thereby opening said switches, only those spring contact elements which register with the punched holes in said cards remaining in engagement with their corresponding fixed contact elements, said answer cards being square-shaped so that they may be inserted into said question and answer matching device in any one of four different positions, the holes being so located in said cards that only when the cards are properly oriented do said holes register with those switch elements which will yield a correct answer.

3,122,844
FLASH CARD TEACHING APPARATUS
Robert N. Kharasch, 7300 Burdet Court, Bethesda, Md., and Richard A. Blanchette, Silver Spring, Md.; said Blanchette assignor to said Kharasch
Filed June 22, 1961, Ser. No. 118,820
11 Claims. (Cl. 35—9)



2. In flash card apparatus comprising a housing having two adjacent, serially disposed sections and including a vertically disposed face plate means, card-channel means on said face plate means and extending along the plane thereof between said sections, one of said sections comprising card magazine means normal to said card-channel means and communicating therewith, the other of said housing sections including a card-viewing portion communicating with said card-channel for exposing indicia on a card and the improvement comprising switch means on said housing below said card-viewing portion including at least one switch element pivotally supported in said housing beneath said card channel means on a pivotal axis parallel to said card-channel, said switch element having a substantially U-shape and including a contact portion behind the face plate, within said housing and spaced from and extendible toward said card channel means and movable therethrough, said switch element including an operating portion extending out of said housing in alignment with said viewing portion, and means normally biasing the switch element contact portion away from said channel means.

3,122,845
AIRCRAFT TRAINING APPARATUS FOR VISUAL LANDING APPROACH
Earl R. Kebbon, Upper Montclair, N.J., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed Oct. 19, 1961, Ser. No. 146,148
14 Claims. (Cl. 35—12)



1. Simulating apparatus for training aircraft personnel in night landing approach comprising:
(*a*) a simulated landing field having an array of approach and landing lights,
(*b*) optical pick-up and projection means for presenting a display of said field, the optical pick-up means and landing field being relatively movable in simulation of aircraft landing approach,
(*c*) means for simulating the aforesaid landing and approach lights including a light source arranged beneath the simulated field,
(*d*) said landing field having apertures corresponding to the landing and approach light positions,
(*e*) and means for directing light transmitted through said apertures respectively along an acute angle corresponding to the simulated flight approach direction toward said optical pick-up means to simulate landing and approach lighting effect.

3,122,846
GOLF STANCE INDICATOR
Frank M. Trent, 3605 N. Abingdon St., Arlington, Va.
Filed Jan. 23, 1963, Ser. No. 253,500
4 Claims. (Cl. 35—29)

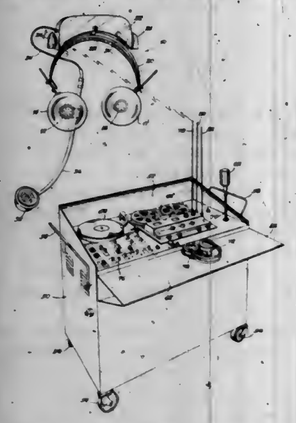


1. A device to indicate a golfer's proper stance for playing any golf shot for any given level or sloping lie of a golf ball comprising a truncated pyramid having an upper surface which simulates a level golf lie, a base, and a plurality of sloping surfaces which simulate the various downhill, sidehill, and uphill positions in which a golf ball may lie and which connect such upper surface and base, a first marking on each of said upper and sloping surfaces to simulate the position of the ball, a second marking on each of said upper and sloping surfaces adapted to be pointed in the direction of the golf hole, and facsimiles of human footprints on each of said upper and sloping surfaces to simulate the proper position of the golfer's feet relative to said first marikng for each of the aforementioned level, downhill, sidehill and uphill positions when said second marking is pointed in the direction of the golf hole.

3,122,847
ELECTRONIC TEACHING DEVICE
Robert H. Redfield, 609 N. Elmwood Ave., Evanston, Ill., and Wayne Maynard Collander, 922 North Blvd., Oak Park, Ill.
Filed June 27, 1961, Ser. No. 119,979
9 Claims. (Cl. 35—35)

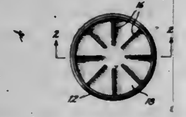
1. An improved electronic teaching aid comprising in combination a radio link between a plurality of student

stations each having a headset of the type including a microphone and earphones, each headset having supportedly mounted thereon and movable therewith means for receiving and transmitting radio signals, means for amplifying audio frequency signals, and electrical connections between the microphone, earphones and means; and an instructor's console having earphones, a microphone, means for transmitting and receiving radio signals, means for recording and reproducing audio frequency sounds,



and electrical connections with switches for alternative connections between the various means and the earphones and microphone; whereby a student equipped with one of said headsets may perform repetitious drill, listen to recorded spoken language and receive comments of the instructor, and the instructor positioned at the console may monitor the repetitious drill of each of a plurality of students, record the student's spoken words, and instruct individual students without interrupting the work of the remaining students in the class.

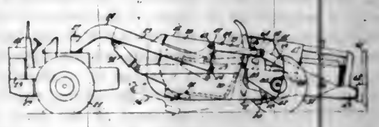
3,122,848
HEEL PROTECTOR
Evelyn Grossman, 8028 Rodney St., Philadelphia, Pa.
Filed Oct. 4, 1962, Ser. No. 228,791
2 Claims. (Cl. 36—7.3)



1. A protector for a "French" type heel which terminates in a very narrow bottom tip, said protector including a bottom wall and a side wall co-acting to define an open-top cup-shaped member adapted to receive the lower end of the heel, and resilient vanes projecting radially inwardly with reference to said side wall for snugly, and detachably, engaging the side wall of the lower end of said heel, said vanes terminating short of the center of said cup-shaped member, said cup-shaped member having one straight edge corresponding to the forward straight edge of a heel.

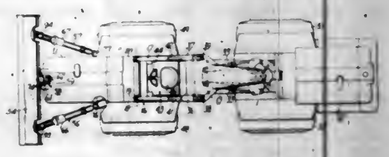
3,122,849
EARTH MOVER
Dale W. Hawk, Marion, Iowa, assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed May 14, 1962, Ser. No. 194,518
7 Claims. (Cl. 37—129)

1. In an earth mover of the type having a bowl pivotally connected on a first transverse axis to a front wheeled unit, the combination comprising: power means for pivoting said bowl and front wheeled unit relative to one another about said first axis, a rear unit having a pair of wheels, means connecting said rear unit to said bowl for relative pivotal movement about a second transverse



axis spaced from the axis of said wheels, a push block secured to said rear unit for pivotal movement therewith about said second transverse axis spaced rearwardly of said wheels, and a link pivotally interconnecting said front unit and rear unit on parallel axes, respectively, spaced from each other and from said first and second axes.

3,122,850
FOUR WHEEL VEHICLE
Harvey W. Rockwell, Cedar Rapids, Iowa, assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Mar. 26, 1962, Ser. No. 182,593
8 Claims. (Cl. 37—144)



8. A vehicle comprising: a first two wheel unit, a second two wheeled unit, one of said units including a propelling engine, a draft frame having one end connected to said second unit for pivotal movement about a vertical axis, means pivoting said second unit relative to said frame about said vertical axis thereby effecting steering of said vehicle, means pivotally connecting the other end of said frame to said first unit for vertical swinging of the latter about a transverse pivot axis, an earthworking implement secured to said first unit on the end thereof remote from said second unit for vertical swinging movement with said first unit including an earth engaging portion brought into contact with the earth upon vertical swinging movement of said first unit, and power means interposed between said frame and first unit for effecting vertical swinging movement of said first unit about said transverse axis between a raised position wherein said earth engaging portion does not contact the earth and a lowered position wherein said earth engaging portion does contact the earth.

3,122,851
SCORING DEVICE
Manlio O. Sepe, 401 Roseville Ave., Newark, N.J.
Filed Oct. 5, 1961, Ser. No. 143,188
1 Claim. (Cl. 40—70)

A scoring device comprising,

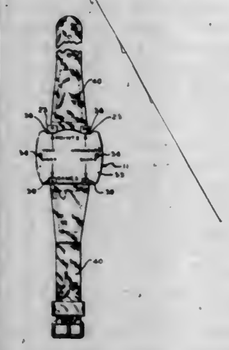
(*a*) a generally flat, hollow case having openings about its periphery,

(*b*) a plurality of independently rotatable, generally flat circular indicators mounted within the case,

(*c*) a plurality of radial projections about the periphery of each indicator, only one projection on each indicator extending beyond the periphery of the hollow case at any time,

(*d*) a retainer mounted against rotation within the case above the plane of the indicators,

(*e*) a plurality of resilient, outwardly and downwardly extending radial legs on the retainer, each leg being engaged to the upper surface of one indicator securing the same against accidental rotation,



(*f*) a plurality of recesses on the upper surface of each indicator spaced equally about a circle concentric with the center of rotation of the indicator and equal in number to the number of projections on the indicator, and

(*g*) a detent on the undersurface of each leg of the retainer adapted to resiliently seat within the recesses on the respective indicators.

3,122,852
DECOY FISH
Roger Paul Alexandre Bocchino, 44 Rue Liancourt, Paris, France
Filed Nov. 13, 1961, Ser. No. 151,798
Claims priority, application France Dec. 23, 1960
2 Claims. (Cl. 43—42.08)



1. A fishing lure comprising, in combination, an elongated floatable body formed with a longitudinal slot along a lower edge portion thereof, said slot having a top face spaced from said lower edge portion of said body and said body being formed at a rear portion thereof with a bore communicating with said slot and extending transversely to the latter;

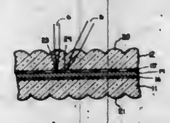
a web integral with said body and extending transversely through a front portion of said slot spaced from said top face thereof;

a rigid bar located in said slot and having opposite edge face portions respectively abutting against said top face of said slot and against said web and having a front portion extending through the space between said top face of said slot and said web and being provided at said front end portion with means for attaching a fishing line, said bar being formed with an aperture therethrough aligned with said bore and with a pair of notches respectively extending from said opposite edge face portions rearwardly into said bar one of said notches being arranged in a rear portion and the other in a central portion of said bar, each of said notches having an open end arranged in such a manner that the open end of said one notch is closed by said top face and that of said other notch by a face of said web;

a removable pin extending through said bore and said aperture aligned therewith for releasably securing said bar in said slot; and

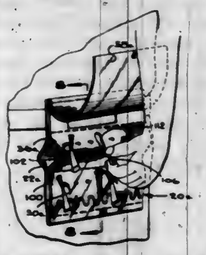
a pair of fish hooks having each an end portion respectively located in said notches to be pivotably connected to said bar and removable therefrom upon removal of said bar from said slot.

3,122,853
FISHING LURE
John C. Koonz, R.R. 3, and George E. Gynn, 1823 Griswold St., both of Fort Wayne, Ind.
Filed Aug. 10, 1961, Ser. No. 130,644
12 Claims. (Cl. 43—42.24)



1. A fishing lure comprising a limp flexible strip of light pervious material, a plurality of individual lens elements on one surface of said strip, and a multicolor pattern on the other surface of said strip divided into color elements optically and individually associated with said lens elements in such a manner that different color elements are visible through a given lens element from different angles of view, whereby when said lure is retrieved through the water, it has a fluttering action resulting in an animated color display.

3,122,854
ARTICLE HOLDERS
Paul L. Boertlein, Sr., Camp Springs, Md. (5001 Dublin Ave., Washington 23, D.C.), and Emmett L. Fowler, Jr., Rte. 3, Box 795, Clinton, Md.
Filed Oct. 14, 1959, Ser. No. 846,281
4 Claims. (Cl. 43—57.5)

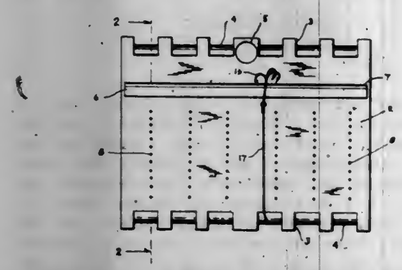


1. An article holder for releasably supporting therein a plurality of objects which include a hook portion, the article holder comprising a back panel; a second panel overlying the back panel throughout substantially the full length and width thereof, the second panel having a plurality of apertures arranged in at least one horizontal row formed therein to receive the hook portions of the objects to be supported; the second panel being fixedly secured to the back panel on opposite sides of the row; and means interposed between said panels along the row for separating the second panel from the back panel.

3,122,855
FISHING TACKLE RACK AND BOX
Paul A. Collier, Com Phib Pac Flag Allowance, U.S. Naval Amphibious Base, Coronado, Calif.
Filed May 11, 1962, Ser. No. 194,039
1 Claim. (Cl. 43—57.5)

A holder as described for single or multiple fishing hooks having leaders attached thereto comprising a body

plate member having a lifting hole at the top center thereof, there being a plurality of aligned cut out portions along the top and bottom edges of said body plate member, said cut out portions having soft rubber inserts placed therein over which leaders may be wound, a channel member affixed to said body plate member, said channel member being disposed longitudinally approximately midway between the horizontal center line and upper edge of said body plate member, said channel member being faced on the upper surface thereof with cork or similar material for receiving hook points, there being a plurality of small holes passing through the aforesaid body plate member, said holes being provided with a slight inward taper from the outer faces of said body plate member and arranged in close proximity to each other, said holes being disposed in rows and vertically on a line to one side of the vertical center line



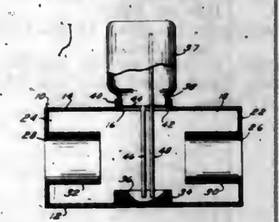
between top and bottom pairs of the aforementioned cut out portions and extending downwardly between the aforesaid channel member and lower cut out portions, a plurality of pins for association with the aforesaid holes, said pins being provided with a head and a stem portion, said stem portion having a slight taper arranged to fit in the aforesaid taper holes, there being a groove behind the head of said pins for association with a loop end of fishing hook leader, and a box of substantially rectangular form having a top closure member, said box having two or more slots disposed vertically on two opposite inner faces thereof, said slots on one inner face being in direct alignment with slots on the opposite inner face, and also being adapted to receive the aforesaid body plate member in sliding relation therein, and the aforesaid box being adapted to receive one or more of said body plate members nested within and covered by the aforesaid closure member.

3,122,856
TRAP
David J. Jones, Box 94Z, Outlet R.D. 1, Harvey's Lake, Pa.
Filed Mar. 6, 1962, Ser. No. 177,774
1 Claim. (Cl. 43—66)



A trap comprising a hollow housing including spaced parallel horizontally disposed top and bottom walls and spaced parallel vertically disposed side walls, a bait holder arranged in the lower portion of the housing and said bait holder comprising a hollow body member having an open bottom, a hook arranged in said body member for supporting bait thereon, said housing further including an end wall having an opening therein, a hollow entrance unit arranged contiguous to said opening and affixed to said end wall, said entrance unit comprising horizontally disposed spaced parallel top and bottom walls and spaced parallel vertically disposed side walls, there being an entrance opening in an end of said entrance unit, a swingable gate mounted for movement into and out of blocking relation with respect to said entrance opening, a closure hingedly connected to the opposite end of the housing from the entrance unit, said housing being made substantially of reticulated material, said gate comprising a horizontally disposed pintle pivotally connected to the upper side portions of the entrance unit, a plurality of spaced parallel rods depending from said pintle and each of said rods being independently pivoted on said pintle; a pair of spaced parallel apertured lugs affixed to the lower corner portion of the housing, a pivot pin journaled in said apertured lugs and connected to the lower portion of the closure, and latch means for said closure comprising a hollow support member affixed to the top wall of the housing, a plunger reciprocally arranged in said support member, a coil spring positioned in said support member and engaging said plunger, said plunger including a transverse portion having an eye, an eye member affixed to an end of the support member, an arm connected to said eye member, a keeper hingedly connected to said arm for selectively engaging the eye portion of the plunger, and a retaining bracket connected to said closure for engagement with the connection between the keeper and arm.

3,122,857
RODENT EXTERMINATING DEVICE
Hershel Yates, Rte. 1, Box 218, Vacaville, Calif.
Filed Oct. 27, 1958, Ser. No. 769,629
2 Claims. (Cl. 43—131)



1. A rodent exterminator comprising a casing having a top wall with an opening therethrough, a bottom wall, side walls fixed to and extending between said top wall and said bottom wall, and end walls closing opposite ends of said joined top wall, bottom wall, and side walls, a tubular conduit carried by each of said end walls and projecting into said casing along the longitudinal axis of the casing to terminate at a location between the end wall by which it is carried and the mid-point between the end walls to define a passageway into the interior of said casing, a cup carried by and extending upwardly from said bottom wall within said casing, means on said top wall about said opening for receiving a container and including an inwardly extending annular shoulder, a container adapted to hold a rodenticide carried by said top wall means and disposed in said opening, and means carried by said top wall disposed within said opening and including a delivery conduit extending from said container to said cup for supplying rodenticide from said container to said cup.

3,122,858
EASEL STAND
Mels E. Kadin, P.O. Box 472, Gates, Oreg.
Filed Mar. 6, 1963, Ser. No. 263,151
4 Claims. (Cl. 45—129)

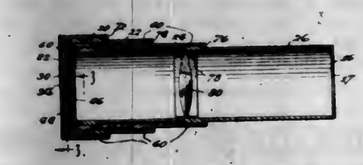
1. An easel stand comprising a main standard means adapted to be positioned at an acute angle with respect

to a vertical plane, a lower picture supporting means slidably mounted on said main standard means, an upper picture supporting means also slidably mounted on said main standard means, each of said picture supporting means including a face member in abutting relationship with the front of said main standard means, a pair of slide members secured to the face member and disposed in abutting relationship with the opposite sides of the main standard means, inwardly extending flanges on each of said slide members disposed in abutting relationship



with said main standard means, picture supporting members on said face members extending transversely of said main standard means, spring pressed hinge members secured to said face members and to said picture supporting members for urging the latter into frictional engagement with said standard means, and a foot member pivotally secured to the main standard means at the bottom of the latter, and an auxiliary standard means pivotally connected at its upper end adjacent the upper end of the main standard means and adapted to rest at its lower end on the foot member.

3,122,859
TOY DEVICE FOR COMPOSING FIGURE PICTURES
Leon La Reaux, Jr., 1301 W. Addison St., Chicago 13, Ill.
Filed Sept. 11, 1961, Ser. No. 137,184
12 Claims. (Cl. 46—37)



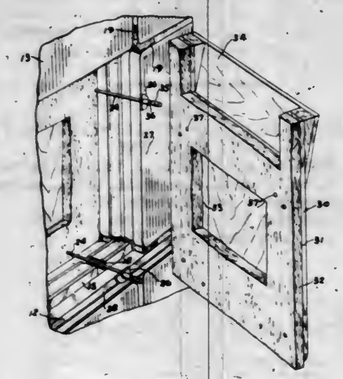
11. A telescopic toy comprising a plurality of telescopically arranged tubular members of different diameter mounted for independent rotation, one of said members comprising an end member having an opaque face but provided with a light-transmitting window, each of the other tubular members having a transverse wall of light-transmitting material and picture elements circumferentially disposed on said walls, said end member and said transverse walls being coaxially arranged in justaposition, whereby to enable selective rotative manipulation of any one of said tubular members on a common axis to align a selected one of the elements of each transverse wall with the window to compose a picture therefrom.

3,122,860
INSULATED PANELS FOR REFRIGERATED VEHICLES
Richard B. Schulze, Towson, Md., assignor to The Englander Company, Inc., Baltimore, Md., a corporation of Maryland
Filed Feb. 20, 1959, Ser. No. 794,559
3 Claims. (Cl. 50—268)



1. An insulated panel comprising a central foam resin core, a layer of woven material on each side of said core, each vertically disposed edge of said core having a urethane foam strip, said strips being substantially thicker than the core to thereby reduce heat loss through the panel at the edges thereof, the edges of said panel being beveled and lying in parallel planes intersecting one side of the panel at an acute angle, whereby adjacent panels may be readily removed and replaced, and substantially channel-shaped plastic members having spaced flanges connected by an integral web engaging the strips.

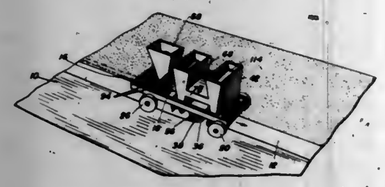
3,122,861
FIELD REPLACEMENT OF BLOCK IN MASONRY WALLS AND PANELS
Charles H. Iden, Muncie, Ind., assignor, by mesne assignments, to Owens-Illinois Glass Company, Toledo, Ohio, a corporation of Ohio
Filed May 25, 1960, Ser. No. 31,722
2 Claims. (Cl. 50—533)



1. In a wall of block comprising a plurality of blocks bonded together by bonding material and having a frame member extending along at least a portion of the periphery of one of said blocks, the method of replacing a broken block which has a portion of its periphery adjacent said frame member which comprises removing all portions of the broken block and the free mortar surrounding said broken block, forming axially extending notches in the portions of said frame adjacent said block, bringing a panel having resilient material on one face thereof into contact with the periphery of said opening, positioning a replacement block in said opening, bringing another panel having resilient material on one face thereof into contact with the periphery of said block on the other side of said wall, connecting said panels by means extending through said notches in said frame member and means extending between the spaces between the

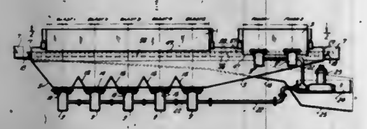
periphery of said block and said sides of said opening, filling the space between the periphery of the replacement block and the sides of said opening with a bonding material, permitting the bonding material to set and thereafter removing the panels.

3,122,862
METHOD OF ROOFING
Carroll C. Figge, 189 W. Madison St., Batavia, Ill.
Original application Dec. 27, 1955, Ser. No. 555,636, now Patent No. 2,949,206, dated Aug. 16, 1960. Divided and this application Oct. 12, 1959, Ser. No. 847,040
9 Claims. (Cl. 50—537)



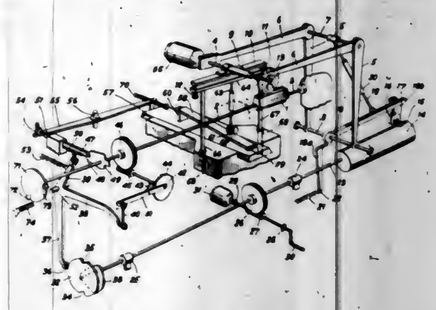
1. A method of completely finishing a portion of a multi-layer roofing by simultaneously applying an overlapping ply of prepared roofing and a surface covering therefor, which comprises cementing successive layers of prepared roofing materials in overlapping relation on a roof deck and previously laid layers, and at the same time applying a layer of surface covering material upon the lap edge of the last layer spreading an adhesive underneath the layer for the full width thereof, spreading a layer of surface covering material overlapping the top edge of said roofing layer of a width equal to that portion of the cover material and laterally displaced therefrom to cover a portion of a previous layer in a width equal approximately to the net overlap of each layer.

3,122,863
SCALLOPED EDGE ON SETTLING TANK FOR GRIT BLASTING
Robert G. Millhiser and Nicholas J. Panzica, Detroit, and Willard Lewis Johnson, Southfield, Mich., assignors to Ajem Laboratories, Inc., Livonia, Mich.
Filed May 23, 1961, Ser. No. 125,609
6 Claims. (Cl. 51—8)



1. An apparatus for hydraulic grit blasting of manufactured parts with liquid suspension of grit for surface re-forming of said parts, which comprises a sump with walls converging downward to a grit-collecting region, whereby suspended grit gravitates to said region, a liquid jet ejector in said region for entraining the settled grit in a liquid blast directed toward said part, means for holding said part with its surface to be re-formed in the area of and transverse to said liquid blast, means for collecting the liquid, grit and removed material from an abrasive blasting operation and returning it to a central area of said sump, said sump having a tortuous top portion on its peripheral wall terminating in a weir edge, adapted to accommodate a smooth skimming overflow, equal to the excess liquid introduced by the ejector jet.

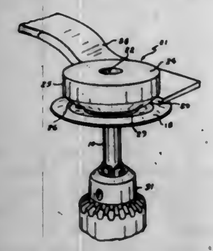
3,122,864
AUTOMATIC PROFILING MACHINE
Gérard Langel, Besancon, France, assignor, by mesne assignments, to A.G. Für Industrielle Elektronik Agie Losone Bei Locarno, Losone-Locarno, Switzerland
Filed Feb. 6, 1962, Ser. No. 171,429
Claims priority, application France Feb. 18, 1961
10 Claims. (Cl. 51—101)



1. In a machine tool for machining a workpiece along a profile under control of a pattern having a corresponding profile enlarged in a ratio greater than 1:1, in combination, rotary support means for supporting the pattern and the workpiece for rotation about an axis; tracer means disposed in the region of said support means so as to engage the profile of the pattern, and adapted to be moved by the pattern toward and away from said axis; means movable in one direction and operatively connected to said tracer means for movement with the same, said means including a sine bar extending at an angle to said direction and moving parallel to said direction in longitudinal direction thereof; a tool; a tool carrier for supporting the tool in the region of the workpiece and being movable in a direction transverse to said one direction for moving the tool toward and away from said axis in a plane passing through said axis; and feeler means operatively connected with said tool carrier for moving the same, said feeler means engaging said sine bar and being displaced by the same during movement of said sine bar a distance proportionally smaller than the distance of movement of said sine bar in said one direction whereby the tool is moved by said tool carrier toward and away from said axis a distance proportionally smaller than the displacement of said tracer means by the profile of the pattern so that the tool machines the workpiece along a profile reduced relative to the profile of the pattern in a ratio determined by the angular position of said sine bar.

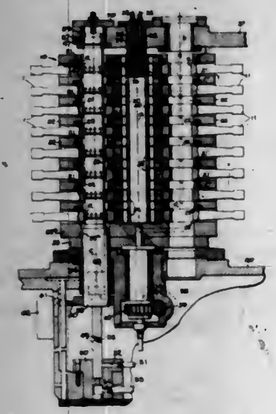
3,122,865
POWER TOOL ATTACHMENT FOR THE SHARPENING OF ROTARY MOWER BLADES
Henry William Kolling, 1744 Catalpa Drive, Dayton, Ohio
Filed Sept. 7, 1961, Ser. No. 136,524
6 Claims. (Cl. 51—173)

2. A power tool attachment for the sharpening of rotary mower blades including, a mandrel, a grinding wheel fixed on one end of said mandrel having a portion of its periphery formed as a frusto-conical surface, a guide plate fixed on said mandrel in transverse relation to the longitudinal axis of said mandrel, said guide plate having an annular surface portion positioned in opposed, axially aligned, relatively spaced relation to said frusto-conical surface and inclined therefrom, the inner periphery of said annular surface portion being substantially in line with the peripheral portion of said frusto-conical surface which defines its minimal cross-sectional dimension, said annular surface portion of said guide plate being angled away from said frusto-conical surface to form a reference plane and serve as a base rest for the



back of a mower blade to dispose the cutting edge thereof in a predetermined position referenced to said frusto-conical surface.

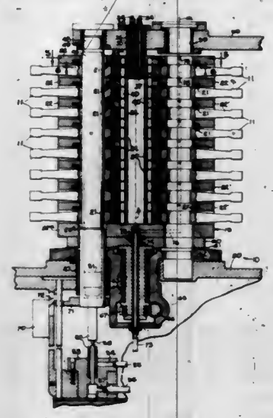
3,122,866
WORKPIECE LOCATOR
Maurice J. Gross, Rockford, Ill., assignor to Barnes Drill Co., Rockford, Ill., a corporation of Illinois
Filed July 18, 1962, Ser. No. 210,627
8 Claims. (Cl. 51—227)



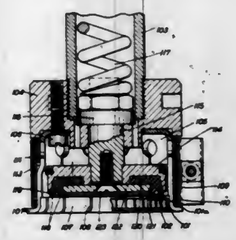
8. In a fixture for holding a plurality of workpieces each having a bore with the bores in alinement and axially spaced apart by a predetermined distance, a locator for positioning the workpieces in precise axial alinement, said locator comprising an elongated member adapted to project simultaneously through the bores of all of the workpieces, a series of annular parts carried by said member and axially spaced along the member by said predetermined distance whereby one part is disposed within each bore, said parts being radially expandible against the wall of the associated bore, and means operable to expand said parts and center said bores about said member in succession beginning with a terminal part and expanding each successive part automatically as an incident to expansion of the preceding part.

3,122,867
FIXTURE FOR HOLDING WORKPIECES
Maurice J. Gross, Rockford, Ill., assignor to Barnes Drill Co., Rockford, Ill., a corporation of Illinois
Filed July 18, 1962, Ser. No. 210,680
8 Claims. (Cl. 51—227)

6. A fixture for holding a plurality of workpieces comprising, a body, a plurality of members rigid with and projecting laterally from said body, said members being spaced apart to define slots for receiving workpieces and one side of each member constituting a clamping surface, the other side of each of said members having a recess opposing the clamping surface of the adjacent member, a plurality of pistons, one slidable in each of said recesses, and means selectively operable to admit a pressure fluid to said recesses thereby to urge said pistons toward the opposed one of said members and clamp the workpieces to said body.

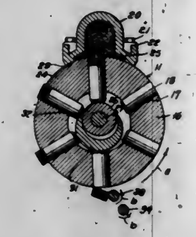


3,122,868
METHODS AND APPARATUS RELATING TO CLOSURES
Paul Nofer and Heinrich Eberhardt, both of Schoofstr. 6, Brunsbuttelkoog, Germany
Filed Aug. 22, 1961, Ser. No. 134,049
Claims priority, application Germany Apr. 20, 1959
10 Claims. (Cl. 53—42)



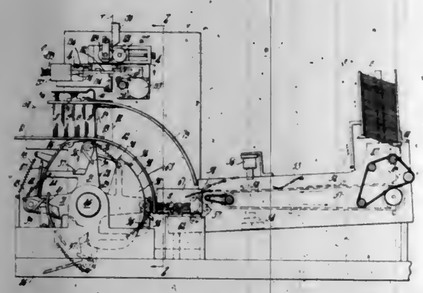
1. For closing the mouth of a vessel having a rim defining said mouth, with a closure having a depending flange, the method comprising: holding the closure against said vessel to close the mouth thereof with said flange encircling the vessel, resiliently urging said closure against said rim to shape said closure to irregularities in said rim to provide substantially air-tight relations between the closure and the rim, encircling said flange with a ring of separately displaceable members, and elastically constricting less than all of said members radially inwardly against said flange to compress the latter against said vessel with the exception of at least one predetermined zone, the thusly constricted flange maintaining the closure against the rim to retain the air-tight relation between the closure and the rim with the exception of the zone whereat excess pressure may be relieved from said vessel.

3,122,869
MACHINE FOR FORMING MEAT BALLS AND AUTOMATICALLY PLACING THE MEAT BALLS IN CANS
Jack M. Miller, Shawnee Mission, Kans., and Raymond L. Scott, William W. Crafton, and Lowell B. Van Dyke, Trenton, Mo., assignors to Marlen Equipment Company, Overland Park, Mich., a corporation of Missouri
Filed Oct. 3, 1961, Ser. No. 142,664
16 Claims. (Cl. 53—122)



1. An apparatus for feeding meat balls ejected from a forming mechanism in timed sequences, including a conveyor for receiving the meat balls thereon from the forming and ejecting mechanism and having a delivery end, means for stripping the meat balls from the ejecting mechanism onto the conveyor, means for directing cans in consecutive order to the delivery end of the conveyor, means for detaining each can at the delivery end of the conveyor, means for releasing the detaining means for advance of the cans, and means connected in driving relation with the conveyor to actuate the release means in time with movement of a given number of meat balls into each can by said conveyor.

3,122,870
ENVELOPE BANDING MACHINE
Kurt Stemmler, Dedham, Mass., assignor to Boston Envelope Company, Dedham, Mass., a corporation of Massachusetts
Filed Sept. 20, 1961, Ser. No. 139,435
13 Claims. (Cl. 53—198)

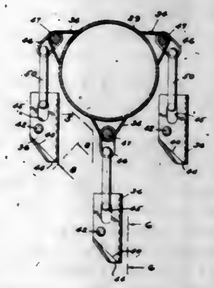


6. In a machine for separating stacks of flat articles by strips of tape inserted therebetween, a collecting station adapted to collect stacks of said articles fed thereto, said articles being inclined substantially away from the vertical at said collecting station; a receiving station adapted to receive stacks from said collecting station, said articles being substantially vertical at said receiving station; means for moving a stack from said collecting station to said receiving station including a set of stack moving blades driven arcuately between said collecting station and said receiving station; guides adapted to confine and align stacks moved by said blades; means holding a length of tape in the path of movement of a stack carried by said blades in advance of said receiving station, the movement of a stack against the tape being accompanied by releasing of the tape from its holding means and the stack carrying the tape in front of it whereby said stack is separated from a previous stack at said receiving station by the length of tape thus inserted.

7. In a machine for wrapping stacks of counted articles of the character described in bands, a means for moving said stacks to a band wrapping means comprising a stack transporting frame rotatably mounted on a horizontal axis, four sets of stack lifting blades spaced equally around said frame and pivotally mounted to move with relation to the frame between one position where said blades extend radially outwardly beyond the frame and another position where said blades are retracted within said frame, means resiliently biasing said blades toward said retracted position, means rotatably indexing said frame in increments of 90° in one direction about its axis, one set of blades being carried by said frame from a first location horizontally alongside the axis of the frame to a second location vertically above said frame axis during each indexed increment of said frame, a stationary cam pivoting said blades to said one radially extending position at said first location and maintaining said blades extended while indexing therefrom to said second location, said cam permitting pivoting of said blades by said biasing means to the other retracted position after reaching said second location, and band wrapping means located adjacent said second location in the path of movement of a stack carried by said blades.

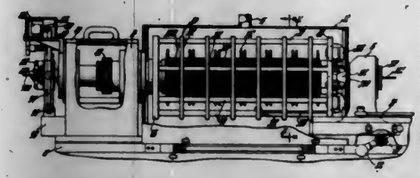
ERRATUM
For Class 56—241 see:
Patent No. 3,123,828

3,122,871
FLAIL TYPE CUTTER
Ralph C. Frevik, Detroit, and Bruno Britts, Royal Oak, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Nov. 29, 1961, Ser. No. 155,568
4 Claims. (Cl. 56—294)



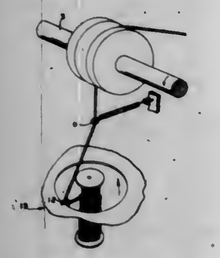
1. A cutting blade for a flail type cutter having a blade carrier rotatable on a horizontal axis, the cutting blade having a flat shank portion and cutting portions extending laterally on both sides of the shank portion, the cutting portions lying in planes intersecting the shank portion along a forwardly, outwardly inclined straight line extending transversely of the shank portion and the forward edges of said cutting portions being sharpened to provide a pair of cutting edges lying in a plane perpendicular to the plane of the shank portion, the planes of the cutting portions being inclined at least 45 degrees to a plane perpendicular to the length of the shank portion.

3,122,872
FLEXIBLE CABLE WINDING MACHINE
Herald W. Mumby, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 24, 1962, Ser. No. 225,558
21 Claims. (Cl. 57—17)



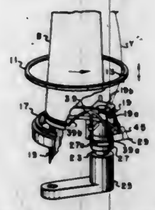
1. A flexible cable winding machine having a cable winding head through which a cable core may be fed longitudinally and under tension, a spindle mounted for rotation coaxially with said head, multiple bobbins for holding strands to be wound on said core, said bobbins being journaled on said spindle for rotation around the axis of the latter, and multiple tension rings mounted on said spindle in spaced relation with said head and in planes intersecting along the axis of said head and spindle, each of said tension rings comprising an annulus of a weight determinative of tension to be placed in one of said strands during winding.

3,122,873
APPARATUS FOR MANUFACTURING PAPER YARN
James N. Lancaster, E. Main St., Stoneville, N.C., and Charles H. Ponder, 2807 Northampton Drive, Greensboro, N.C.
Filed Nov. 1, 1962, Ser. No. 234,677
2 Claims. (Cl. 57—32)



1. In an apparatus for the continuous slitting and twisting of a paper web which comprises means for supporting and unwinding a roll of paper, slitting means for severing said web into narrow strips of paper, means for moistening the strips of paper to facilitate shaping and twisting, and means for twisting said narrow strips; the improvement comprising means for shaping the strips of paper prior to twisting which includes a shaft, means for rotating said shaft and a pair of spaced collars fixed to said shaft for rotation, said collars having opposed axially and radially outwardly tapered faces such that the lateral edges of a strip of paper passing over said roller as it is rotated will be lifted from said roller and curled outwardly from said shaft, said shaping means being positioned to receive the substantially flat strips from said moistening means and adjacent said twisting means so that paper strip leaving said shaping means does not become flat after shaping and before twisting.

3,122,874
YARN HANDLING APPARATUS
Raymond G. Tessmer, John A. Willes, and Kenneth J. Addis, Spartanburg, S.C., assignors to Deering Milliken Research Corporation, Spartanburg, S.C., a corporation of Delaware
Filed May 20, 1960, Ser. No. 30,656
17 Claims. (Cl. 57—34)



8. In combination, a ring for a yarn traveler mounted adjacent and about a textile spindle, a movable yarn release member adjacent said ring for selective release of yarn from a traveler on said ring, said yarn release member being normally disposed out of the path of yarn passing through said traveler and a single unit engageable in movement imparting relation with both said ring and said yarn release member.

3,122,875
SPINDLE BRAKES
Elijah Kent Swift, Jr., and Richard C. Hare, Whitinsville, and William Baron, East Douglas, Mass., assignors to Whitin Machine Works, Whitinsville, Mass., a corporation of Massachusetts
Filed May 9, 1960, Ser. No. 27,596
6 Claims. (Cl. 57—88)

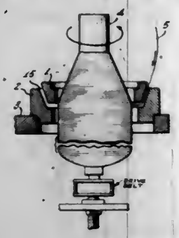


1. In a textile spinning frame having at least one spindle, a brake mechanism for said spindle provided with a braking surface comprising a plurality of elongated resilient laterally flexible brake arms carrying brake shoes at corresponding ends, each said arm pivoted intermediate its ends by an external pivot adjacent a surface thereof facing outwardly, means mounting the arms for movement of said shoes toward and away from each other and into braking contact with the braking surface of said spindle when they move toward one another, and means acting upon the other corresponding ends of said arms for positively actuating the arms into brake applying position and holding them in that position, whereby the resiliency of said arms will compensate for wear of the brake shoes on the spindle.

3,122,876
MAGNETIC SPINNING RING
Yoshihiro Matsui, Nada-ku, Kobe-shi, Japan, assignor to Nippon Keori Kabushiki Kaisha, Kobe-shi, Japan, a company of Japan
Filed Feb. 16, 1961, Ser. No. 89,718
5 Claims. (Cl. 57—124)

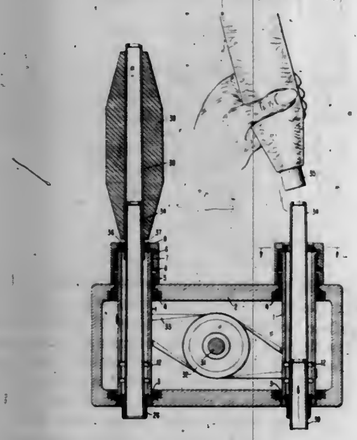
1. Spinning apparatus comprising a rotatably mounted bobbin, means for rotating the bobbin, an annular sup-

porting member encircling the bobbin, a ring holder carried by said annular support, said ring holder having a conically shaped inner surface with the portion of least diameter adjoining said annular support and a ring having a conical outer surface and of smaller diameter than the inclined inner surface of said ring holder, said ring



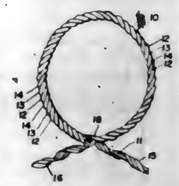
being radially magnetized and repelled by said ring holder to form an annular gap between the inclined surfaces of the ring and ring holder whereby yarn to be spun may be fed through said gap and on to the bobbin to simultaneously twist said yarn and wind it on to the bobbin as the bobbin is rotated.

3,122,877
YARN WINDING DEVICE FOR SPINNING MACHINES
Johann Jacob Keyser, Grabenallee 16, Aarau, Switzerland
Filed Oct. 9, 1961, Ser. No. 143,739
Claims priority, application Germany Oct. 12, 1960
20 Claims. (Cl. 57—129)



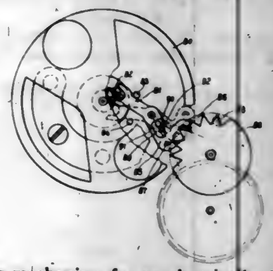
1. In a yarn winding device, especially for spinning and twisting machines, supporting means, a substantially vertical tubular member rotatably journalled in said supporting means and adapted to receive therein at least a portion of a yarn sleeve for receiving a cop, first annular holding means arranged at the upper end portion of said tubular member and adjustable radially for selectively reducing its inner diameter to thereby frictionally engage and hold a yarn sleeve inserted through said holding means into said tubular member, second annular holding means supported by said tubular member in axially spaced relationship to said first holding means for likewise frictionally engaging and holding said yarn sleeve when inserted into said tubular member, and manually adjustable means arranged adjacent said first holding means for selectively adjusting the same.

3,122,878
WIRE ROPE LOOP
William D. Meals, Williamsport, Pa., assignor to Jones & Laughlin Steel Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 13, 1962, Ser. No. 223,401
6 Claims. (Cl. 57—142)



1. A wire rope sling eye comprising a loop formed of a plurality of unspliced contiguous strands twisted helically together, half of those strands being continuous across the throat of the loop from one side thereof to the other and the other half of those strands from each side of the loop being twisted together below the throat.

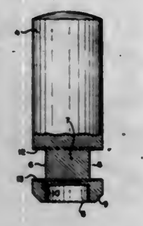
3,122,879
MOTION CONVERTER FOR ELECTRICALLY DRIVEN ROTARY OSCILLATORS
Kuno Trick, Tosstr. 41; Theodor Schulte, Tiersteinstr. 82; and Fritz Herr, Kolpingstr. 18, all of Schramberg, Germany; and Robert Wolber, Lauterbach, Holzle, Germany
Filed Sept. 29, 1960, Ser. No. 59,303
Claims priority, application Germany Oct. 1, 1959
5 Claims. (Cl. 58—28)



1. Driving mechanism for an electrically driven rotary oscillator especially for wrist watches, comprising a stepping wheel rotatably mounted and having a plurality of teeth with tooth gaps between the teeth in the periphery of the wheel, a swing fork pivoted to oscillate between stop elements and pivoted intermediate its ends, an elastic holding means to hold the fork in its end positions against the stop elements, and a pair of spaced pins mounted on one end of the swing fork to cooperate with the teeth in the stepping wheel, one of the pins being an operating pin and the other a safety pin so that when the operating pin has moved the stepping wheel and is retracted out of contact with the teeth of the wheel the safety pin will be situated in a tooth gap free of contact with the stepping wheel when said fork is in one of said end positions.

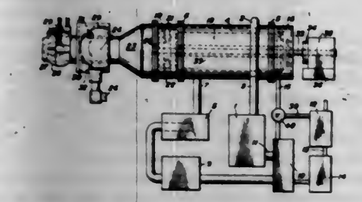
3,122,880
STUD FOR FASTENING THE OUTER END OF A HAIR SPRING FOR A TIMEPIECE
Rudolf Greiner, Langenthal, Switzerland, assignor to Greiner Electronic A.G., Langenthal, Switzerland, a corporation of Switzerland
Filed Sept. 17, 1962, Ser. No. 224,006
Claims priority, application Switzerland Dec. 19, 1961
3 Claims. (Cl. 58—115)

1. A stud for fastening the outer end of a hair spring for a timepiece, said stud having a cylindrical head portion provided with a transverse annular groove which, in the longitudinal direction of the stud, has a base longer than the blade width of the hair spring to be fastened by means of said groove, and said head portion having a cylindrical bore penetrating from the end of said head



portion in the longitudinal direction of the stud up to the region of said transverse groove in such a way that a narrow annular neck remains which connects the peg circumscribed by the base of said transverse groove with the remaining ring-shaped part of the head portion of said stud.

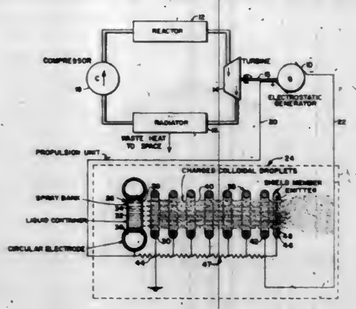
3,122,881
MARINE ENGINE
Franklin E. Walker, Camp Springs, Md. (5893 Greenridge Road, Castro Valley, Calif.)
Filed Nov. 15, 1960, Ser. No. 69,508
2 Claims. (Cl. 60—35.5)



1. A marine engine comprising a nuclear reactor for heating a heat-exchange medium; heat-exchange means for transferring heat from said medium to generate steam at high temperature and pressure, said heat-exchange means including a cylindrical shell, a torus-shaped manifold extending at least partially therearound for introduction thereinto of said heat-exchange medium while hot through ports, a multiplicity of steam chambers positioned in said shell with their axes parallel to the axis of said shell, a multiplicity of independently operable vaporization nozzles for introduction of water into said steam chambers and separation means within said cylindrical shell confining said heat-exchange medium upstream thereof and collecting steam from said steam chambers downstream thereof for use in propulsion; a main nozzle for discharge of said steam therethrough for jet propulsion of a vessel; a turbine that is driven by steam emerging from said steam chambers; and a generator which is driven by power derived from said turbine through a drive shaft and reduction gears.

3,122,882
PROPULSION MEANS
Robert D. Schultz, Whittier, Lane K. Branson, Pasadena, and Robert F. Chalkea, Covina, Calif., assignors to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
Filed Nov. 23, 1960, Ser. No. 71,329
23 Claims. (Cl. 60—35.5)

22. A propulsion system operable in a vacuum atmosphere comprising: means for ejecting in a stream electrically charged atomized liquid droplets of colloidal dimensions, and electric focusing and acceleration means



arranged in contiguity to said colloidal-sized fluid particle ejection means.

3,122,883
HEAT RESISTANT WALL STRUCTURE FOR ROCKET MOTOR NOZZLES AND THE LIKE
Edward Terner, Euclid, Ohio, assignor to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Nov. 20, 1959, Ser. No. 854,425
3 Claims. (Cl. 60—35.6)

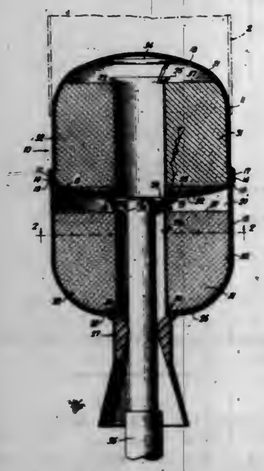


1. A heat resistant wall structure for withstanding the effects of high temperature gas streams which comprises an outer stress resistant imperforate wall, an inner wall in spaced relation to said outer wall, said inner wall comprising a perforate refractory matrix, an insulating layer intermediate said inner wall and said outer wall, and a layer of solid heat vaporizable material disposed on each side of said insulating layer, said heat vaporizable material being capable of a phase change at a temperature less than the melting temperature of said inner wall so that said heat vaporizable material may flow along said inner wall, and said insulating layer having a thermal conductivity substantially lower than that of the heat vaporizable material.

3,122,884
ROCKET MOTOR
John H. Grover, Washington, D.C., and James R. MacPherson, Falls Church, Va., assignors to Atlantic Research Corporation, Fairfax, Va., a corporation of Virginia
Filed May 19, 1961, Ser. No. 111,396
14 Claims. (Cl. 60—35.6)

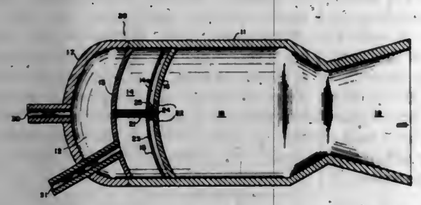
1. A rocket motor for burning a semi-solid monopropellant, comprising a casing having a closure across its forward end, a closure across its rearward end, at least one transverse partitioning member which divides the interior of said casing into a plurality of chambers for receiving semi-solid monopropellant when said motor is in upright position, said partitioning member having at least one forwardly-extending tubular member opening therethrough, said tubular member terminating at its forward end at a point spaced rearwardly of the forward

wall of the chamber in which said tubular member is seated, and opening rearwardly into the forward portion of the next adjacent rearward chamber, and at least one rearwardly-directed nozzle means for venting the com-



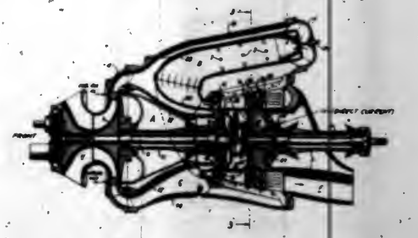
bustion gases produced by burning of said semi-solid monopropellant out of said rocket motor, said nozzle means being in open communication with said tubular member.

3,122,885
INJECTOR FOR BIPROPELLANT ROCKET ENGINES
Marcus F. Heidmann, Rocky River, Ohio, assignor to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration
Filed June 19, 1961, Ser. No. 118,202
2 Claims. (Cl. 60—35.6)
(Granted under Title 35, U.S. Code (1952), sec. 266)



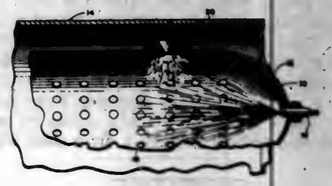
1. A wafer-like, checkerboard, fuel injector assembly for a bipropellant rocket motor in which said injector assembly has an injector face plate, separate manifolds for the fuel and for the oxidant, oxidant injector tubes, said oxidant injector tubes ending in injection orifices at the face of said injector face plate, said tubes being in communication with said oxidant manifold, a distribution plate having distribution orifices therein and spaced from said oxidant manifold by said oxidant injector tubes, said distribution orifices affording passage of the fuel to injector orifices in the face plate, each said distribution orifice being located in the center of a square formed by said oxidant injector orifices, said fuel injector orifices being located between adjacent oxidant injector orifices, so that each distribution orifice partially supplies four injector orifices and each fuel injector orifice is symmetrically supplied from diametrically opposed directions.

3,122,886
GAS TURBINE CYCLE IMPROVEMENT
Vlastimir Davidovitch, 1921 12th Ave. S., Seattle, Wash., now by change of name Vlastimir Davidovic
Filed Sept. 2, 1958, Ser. No. 758,212
2 Claims. (Cl. 60—39.16)



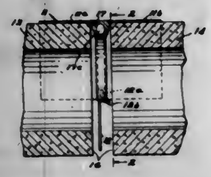
1. A gas turbine engine comprising an air compressor, a first turbine located rearwardly of said air compressor and including hollow stationary blades and a rotor connected to drive said compressor and having rotating blades downstream from said stationary blades, a power turbine rearwardly of said first turbine, a casing enclosing said turbines, a flame tube alongside said casing and having an air inlet located adjacent to said power turbine and its discharge located forwardly of said air inlet and in communication with said first turbine for flow of combustion gas therefrom to said first turbine and then to said power turbine to drive said turbines, conduit means connecting the discharge of said air compressor and said flame tube air inlet, said conduit means communicating with the interior of said hollow stationary blades and including a portion between said flame tube and said casing, said casing having fins projecting therefrom to facilitate heat transfer from combustion gas flowing through said turbines to air flowing through said conduit means, and a container of liquid coolant fuel for the gas turbine engine disposed next to said conduit means between said compressor and said flame tube, for flow of compressed air from said compressor over said coolant container to cool such compressed air, through said hollow stationary blades and past said casing to cool said turbines and reheat such compressed air and into said flame tube air inlet.

3,122,887
FUEL IGNITOR
Bobby J. Farmer, Fort Worth, Tex., assignor, by mesne assignments, to Ling-Temco-Vought, Inc., Dallas, Tex., a corporation of Delaware
Filed Nov. 17, 1960, Ser. No. 69,874
12 Claims. (Cl. 60—39.82)



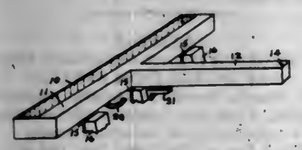
1. In combination with a non-hypergolic fuel combustion chamber, an ignitor comprising: a body of radioactive material, a casing of high temperature resistant metal encapsulating said radioactive material, an insulating material surrounding a major portion of the encapsulating casing, and a housing having an opening therein substantially enclosing said insulating material mounted in the combustion chamber; the portion of the casing not covered by said insulating material being exposed to said combustion chamber through the opening in said housing.

3,122,888
COVER FOR DRAIN TILE JOINTS
Wilfred L. Boening, % Boening Industries Inc., 19424 W. Eight Mile Road, Detroit 19, Mich.
Filed Oct. 24, 1960, Ser. No. 64,489
3 Claims. (Cl. 61—11)



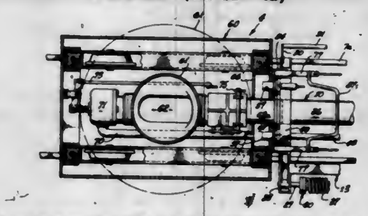
1. An anti-clogging water permeable joint construction for use at the open joints between underground drainage tiles, including in combination, a pair of drainage tiles arranged in end-to-end relation with their adjacent ends spaced apart, a shell made of a composition including polyvinyl chloride, a plasticizer and metallic copper as solubilized copper, said shell being pre-formed with a substantially semi-cylindrical shape conforming closely to the upper half of the outer circumference of the drainage tiles and having an axial length such that said shell overlaps the ends of adjoining tiles as well as spans the gap therebetween to prevent backfill from clogging the joint, said shell having an integral rib portion extending inwardly from the axial center of the inner surface thereof with converging sides for wedging and uniformly spacing the adjoining tiles apart, said rib portion having an inner bore extending longitudinally thereof to permit resilient deformation thereof to accommodate axial expansion of the tiles, and a strand of hard copper wire preformed with a curvature substantially equal to the median diameter of the tiles and having each end thereof doubled back so as to be insertable when squeezed into the respective ends of said bore and frictionally held therein when released, said strand of wire being suspended from said shell by said doubled back ends in said bore ends in the lower half of the open joint between the tiles to provide a source of metallic copper which reacts with soil acids to produce copper sulfate to inhibit root growth therein while permitting passage of liquids therethrough.

3,122,889
TIDE OPERATED WATER LIFTING DEVICE
Robert P. Bonamy, 17421 Springbrook Road, Renton, Wash.
Filed July 20, 1960, Ser. No. 44,064
3 Claims. (Cl. 61—20)



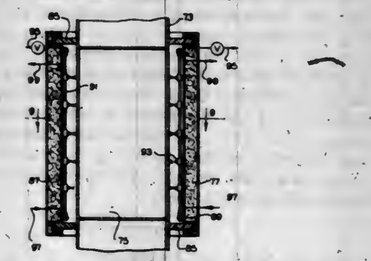
1. In tide operated water lifting devices, a tank assembly comprising a long narrow helper tank having a top opening providing free inflow and outflow of water; a long narrow enclosed counterbalance and buoyancy tank rigid with and positioned alongside of said helper tank; a long narrow water lift tank perpendicular to and extending in one direction from and having one end thereof rigid with and communicating with said counterbalance and buoyancy tank; pivot means mounting the three assembled tanks for swinging movement between a substantially horizontal and a substantially vertical position on a horizontal axis adjacent to and parallel with the lowermost corner of said counterbalance and buoyancy tank and at the side thereof with which said one end of said water lift tank is connected; valve controlled water inlet means provided in the bottom of said water lift tank adjacent the junction of said water lift tank and said counterbalance and buoyancy tank; and valve controlled water outlet means connected with a portion of said counterbalance and buoyancy tank which is lowermost when said tank assembly is in a substantially vertical position.

3,122,890
APPARATUS FOR LINING TUNNELS WITH CONCRETE
Maxwell F. Kemper, 3701 Overland, Los Angeles, Calif.
Filed Oct. 27, 1959, Ser. No. 849,016
15 Claims. (Cl. 61—42)



1. In apparatus for discharging material from a mobile container movable along a given path: discharging means for connection with said container to conduct the material therefrom; means movable in a path spaced laterally from and extending alongside said given path mounting said discharging means for movement between a first position in which said discharging means is disposed in said given path for connection with said container, and a second position in which said discharging means is disposed to one side of said given path; latch means for releasably holding said mounting means in said first position; and means operable incident to release of said latch means to move said mounting means into said second position.

3,122,891
CRYOGENIC METHODS AND APPARATUS
William H. Thomas, Allentown, Pa., assignor, by mesne assignments, to Air Products and Chemicals, Inc., Trexlertown, Pa., a corporation of Delaware
Filed Dec. 11, 1958, Ser. No. 779,779
5 Claims. (Cl. 62—45)



1. A method for maintaining continuously in condition for launching rocket missiles powered by low-boiling propellant contained in a chamber the outer wall of which is the outer wall of the missile, comprising the steps of (1) enclosing at least that portion of the outer wall of the missile which is the outer wall of the chamber to prevent entry of ambient atmosphere from outside the enclosure to within the enclosure,

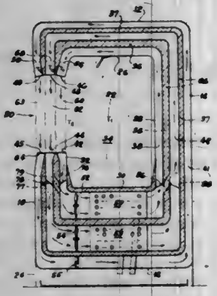
(2) contacting the exterior of the enclosed portion of the outer wall of the missile with a gas at a temperature substantially higher than the temperature of the propellant and free from substances having a solidification temperature above the temperature of the propellant, and

(3) thereafter maintaining a fluid within the enclosure in contact with the exterior of the enclosed portion of the outer wall of the missile and at a temperature below the boiling temperature of the propellant at the existing pressure and free from substances which have a solidification temperature above the temperature of the fluid, for an extended period of time at least until the components of the missile reach thermal equilibrium.

3,122,892
REFRIGERATED DISPLAY CABINET AND METHOD OF OPERATION

Sterling Beckwith, Libertyville Township, Ill., assignor, by mesne assignments, to Dual Jet Refrigeration Company, a corporation of Illinois

Filed Apr. 9, 1962, Ser. No. 186,019
10 Claims. (Cl. 62—81)



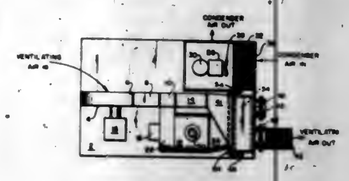
1. In the method of refrigeration of a space which is enclosed except for a side having an access opening directly communicating the interior of the space with the ambient atmosphere, the steps of circulating inner and outer air panels in side-by-side, substantially parallel relationship across the open space from one edge of the open space to the opposite edge substantially completely to span the open space with the formed air curtain, separating the air panels upon reaching the opposite edge, recirculating the separated air panels from the opposite edge back to the one edge, passing the recirculating inner panel of air in heat exchange relationship with refrigeration coils through which a refrigerant is circulated to reduce the temperature of the air making up the inner panel to a cold air stream, periodically between relatively short intervals of time stopping the circulation of the air panels and for a short period of time while the circulation of the air panels is stopped, defrosting the refrigeration coils, and periodically between relatively long intervals of time stopping the circulation of the air panels and for a relatively long period of time defrosting the refrigeration coils.

3,122,893
AIR CONDITIONING CONDENSATE HANDLING APPARATUS AND METHOD

William V. Millman, Moline, Ill., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware

Filed May 19, 1961, Ser. No. 111,365
6 Claims. (Cl. 62—93)

4. The method of forcing condensate from a condensate collecting location underlying a refrigerant evaporator to an elevated discharge location adjacent a refrigerant condenser surface comprising: imposing a static air pressure upon said condensate at said collecting location at least

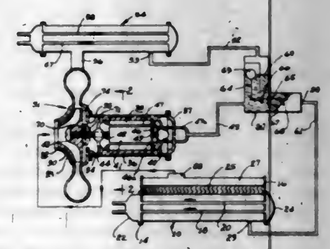


equal, in inches water gauge, to the difference in elevation in inches between said condensate collecting location and said condensate discharge location.

3,122,894
HERMETIC MOTOR COOLING BY DIRECT EXPANSION OF SYSTEM REFRIGERANT INTO MOTOR

Richard L. Bernhard, Birmingham, Mich., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware

Filed July 5, 1962, Ser. No. 208,188
13 Claims. (Cl. 62—117)



13. In a method of cooling an electric machine having a rotor and stator separated by an annular gap having two open ends,

the steps of

feeding vaporizable liquid refrigerant directly into the two ends of the gap,

reducing the pressure within the gap to simultaneously evaporate at least part of the liquid refrigerant within the gap and withdraw the evaporated refrigerant from the gap.

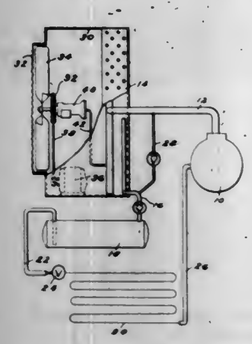
3,122,895
CONDENSER FAN CONTROL FOR REFRIGERATION SYSTEM

Norman W. Woods, Brantford, Ontario, Canada, assignor to Keeprite Products Limited, Brantford, Ontario, Canada, a corporation of Ontario, Canada

Filed Jan. 8, 1962, Ser. No. 164,822
14 Claims. (Cl. 62—184)

1. In a refrigeration system of the type comprising a compressor, an evaporator, a condenser connected between the compressor and evaporator, a fan for directing air over the condenser, and a motor for operating said fan, the combination of a shaft driven by said motor, a separate shaft for propelling said fan, a fluid pressure operated clutch for coupling and uncoupling said shafts, a fluid line connected with said clutch for controlling

the operation of the clutch and means for causing the pressure in said fluid line to vary in accordance with the

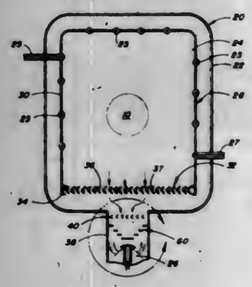


variation of the pressure of the refrigerant in said condenser.

3,122,896
PUMP HEAT RADIATION SHIELD

Thomas N. Hickey, Columbus, Ohio, assignor to Cryovac, Inc., Columbus, Ohio, a corporation of Ohio

Filed Oct. 31, 1962, Ser. No. 216,604
12 Claims. (Cl. 62—259)



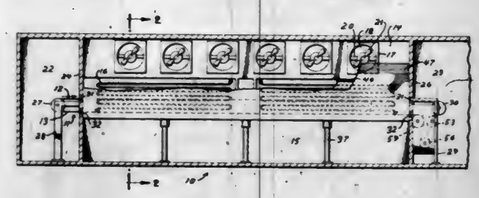
1. An improved space simulation chamber comprising, in combination, an outer sealed chamber; refrigerated wall means forming a thermal shroud within said sealed chamber for enclosing a test specimen and including an open wall portion; a cryogenically cooled shroud wall baffle means for said open wall portion; a diffusion pump including an inlet opening; conduit means connecting said outer chamber with said inlet opening of said diffusion pump; a back-stream prevention baffle means between said shroud wall baffle means and said pump inlet opening; and a third baffle means between said back-stream prevention baffle means and said pump inlet opening.

3,122,897
FREEZING TUNNEL FOR COMESTIBLES

Milan R. Overbye, Seattle, Wash., assignor to Lewis Refrigeration Co., Seattle, Wash., a corporation of Washington

Filed Mar. 5, 1962, Ser. No. 177,337
12 Claims. (Cl. 62—275)

1. In a freezing tunnel for comestibles and the like, an apparatus comprising a conveyor to carry said comestibles through a freezing zone of said tunnel, a roller over which said conveyor trains, a hydraulic motor to effect a travel of said conveyor, a hydraulic power source to drive said motor by means of a fluid medium, and means to

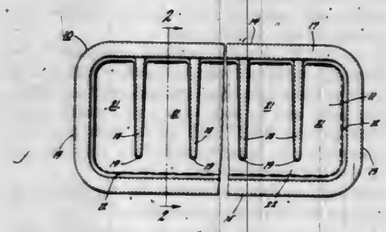


direct at least a portion of said fluid medium from said source through said roller and back to said source thus heating said roller so as to limit the icing of said apparatus.

3,122,898
ICE TRAY

Walter G. Kniffin, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Aug. 20, 1962, Ser. No. 217,980
2 Claims. (Cl. 62—369)



1. A freezing device adapted to receive water to be frozen therein comprising:

(*a*) an elongated tray having ends, long sides, corners and provided with an upper bounding rim having straight parts extending contiguously around corners of said tray substantially at right angles to one another along the ends and long sides thereof, bottom wall portions, walls upstanding from said bottom wall portions to said rim and upright walls spaced apart throughout the length of the tray,

(*b*) said spaced-apart upright walls projecting laterally from one long side only of said tray beyond its longitudinal center and terminated in spaced relation to the opposite long side of the tray,

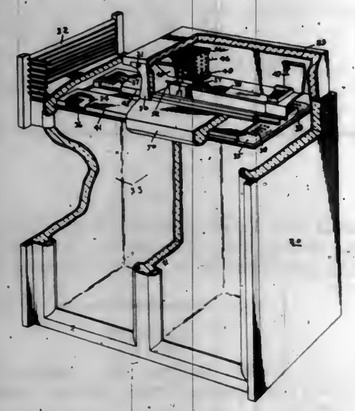
(*c*) the top of said spaced-apart upright walls of said tray disposed below said upper bounding rim,

(*d*) said bottom wall portions, said upstanding walls, said spaced-apart upright walls and said rim being formed integral with one another,

(*e*) said upright laterally projecting walls and bottom wall portions therebetween together with a side and the upstanding walls of said tray defining a row of pockets therein along said one long side thereof, and

(*f*) other bottom wall portions and the upstanding wall at said opposite side of the tray defining a long relatively narrow channel within said tray offset laterally from the longitudinal center thereof and communicating with each of said pockets.

3,122,899
REFRIGERATOR AIR CIRCULATING ARRANGEMENT
Anthony R. Costantini, 860 Thomas Road, Lafayette Hill, Pa., and Anthony Di Angelus, 1735 Westchester Pike, Manoa, Pa.
Filed June 19, 1963, Ser. No. 288,930
10 Claims. (Cl. 62—419)



8. A refrigeator apparatus comprising in combination,
(*a*) a refrigerating storage compartment provided with:
(1) a floor and a plurality of sidewall liners,
(2) a door fitted into one wall of the compartment and openable for gaining access to the compartment interior, and
(3) a topwall liner apertured completely therethrough at spaced apart regions thereof to provide at least one vent located near the front of the liner and at least one vent located near the rear of the liner, said vents both placing the compartment in communication with the region above the topwall liner,
(*b*) an air duct structure above the topwall liner of the storage compartment, including:
(1) a first air duct having an opening communicating with the compartment front vent, and
(2) a second air duct substantially isolated from said first air duct and having an opening communicating with the compartment rear vent,
(*c*) a housing overlying and extending upwardly above at least a portion of said duct structure and having an inlet region communicating with the said first air duct, and an outlet region communicating with said second air duct,
(*d*) a cooling coil structure mounted within said housing, and
(*e*) means effective for moving air from said compartment upward into said housing inlet region through said first air duct and the vent with which it communicates, then passing the air across the cooling coil and downward into said compartment through said housing outlet region into said second air duct and through the vent with which the latter communicates.

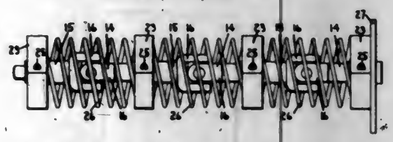
3,122,900
MEANS FOR SECURING A PENDANT TO A CHAIN, INCLUDING MEANS FOR BLOCKING RELEASE THEREOF
Raymond A. Beghetto, Jr., 1008 W. 22nd St., Cheyenne, Wyo.
Filed Oct. 5, 1962, Ser. No. 229,523
3 Claims. (Cl. 63—23)

1. A pendant fastening device comprising a cap member adapted to receive a pendant, said cap member having a top surface, a pair of malleable loop members secured on the top surface of said cap member and projecting exteriorly thereof in spaced side-by-side relation, and an inverted U-shaped clamping member disposed between said loop members, the top of the cap member being formed with respective apertures for receiving the legs of said clamping member, one leg of said clampnig member having a free end received in its respective aperture and secured to said cap, the other leg of said clamping



member having a free end substantially aligned with its respective aperture, the bight of said clamping member overlying said top surface and forming a space therebetween, said space and the openings of said loops being in alignment, said clamping member being adapted upon deformation toward said top surface to exert gripping force on a necklace chain passing through the loop members, said loop members projecting beyond the bight of said clamping member and being deformable towards each other to lock the clamping member in clamping position.

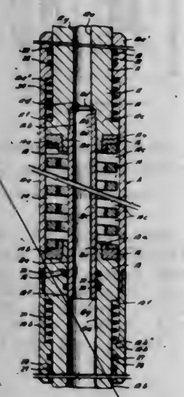
3,122,901
UNIVERSAL JOINT ASSEMBLY
Ralph Thompson, Box 664, Glenns Ferry, Idaho
Filed July 20, 1962, Ser. No. 211,188
2 Claims. (Cl. 64—2)



1. A universal joint assembly for the power take-off connection of an agricultural device comprising;
a plurality of universal joints drivingly connected to the power take-off connection in end to end relation, each joint including a pair of elements pivotally coupled for movement relative to one another about a pair of perpendicular axes;
longitudinally spaced bearings located coaxially along said joints, each having a pair of independently rotatable races spaced by bearing members carried thereon, a first of which is fixed to one of said elements of each joint;
axial spring means surrounding said joints, said spring means being fixed to the remaining race of each bearing, the interior diameter of said spring means being greater than the maximum width of said elements;
and anchor means fixed to said spring adapted to be fixed to the frame of the device.

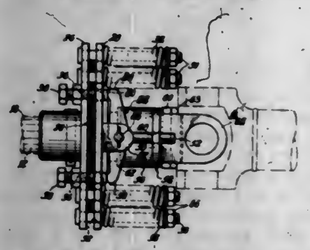
3,122,902
DRILLING SHOCK ABSORBER
Robert A. Blair and Hubert H. Wagnon, Hobbs, N. Mex., assignors to Drilprodco, Inc., a corporation of New Mexico
Filed Aug. 28, 1961, Ser. No. 134,519
10 Claims. (Cl. 64—23)

1. A shock absorbing device adapted to be positioned in a drill string or the like and rotated therewith, comprising a body having a longitudinal opening therethrough, said body having an upper tubular member and a lower tubular member longitudinally spaced from each other, a fluid conductor pipe connected to one of said tubular members and slidably disposed in the other of said tubular members for conducting fluid through said body even though relative longitudinal movements of said tubular members occur, resilient torque means on



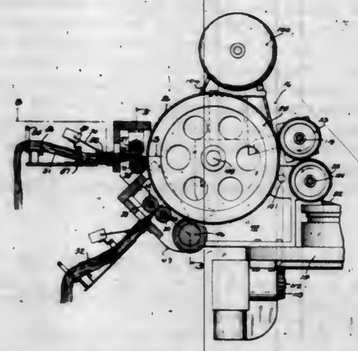
said body connecting said upper tubular and said lower tubular member for enabling said members to be moved longitudinally with respect to each other and for enabling said members to be rotated substantially in unison about a longitudinal axis, and a safety housing on said body connecting said upper tubular member and said lower tubular member for preventing separation of said members upon breaking of said resilient means.

3,122,903
TORQUE LIMITING CLUTCH
Henry C. Ramsden, Home Hill, Queensland, Australia, assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Dec. 15, 1961, Ser. No. 159,579
6 Claims. (Cl. 64—30)



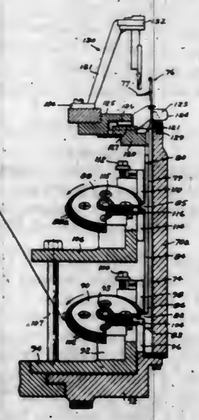
1. A torque limiting clutch comprising a drive plate adapted to be connected to a first shaft, a plurality of pressure plates, first means adapted to exert a first force to urge said pressure plates toward engagement with said drive plate, a second shaft connected to said pressure plates, a transfer lever responsive to torque applied between said first shaft and said second shaft to exert a second force against said pressure plates to urge said pressure plates in a direction away from engagement with said drive plate; said transfer lever having a mechanical advantage; said second force being a function of said torque and said mechanical advantage; and means to change said mechanical advantage of said transfer lever whereby the magnitude of said second force can be changed with respect to said torque.

3,122,904
PILE FABRIC KNITTING MACHINE FOR STRIPED PILE
Robert E. Brandt, Delavan, Wis., assignor to Amphenol-Borg Electronics Corporation, Broadview, Ill., a corporation of Delaware
Filed Oct. 28, 1959, Ser. No. 849,304
9 Claims. (Cl. 66—9)



1. In a frame supported fabric knitting machine; a rotatable cylinder equipped with reciprocable hooked needles; a carding head having a licker-in roll, and a doffer roll, said doffer roll having clothing positioned to be raked by hooks of said needles and to receive fibres from said licker-in roll; a plurality of fibre feed means positioned at spaced stations peripherally of the licker-in roll for feed of fibre thereto; and power connections for constant rotation of the cylinder, licker-in and doffer rolls, said power connections including means for driving the fibre feed means alternatively.

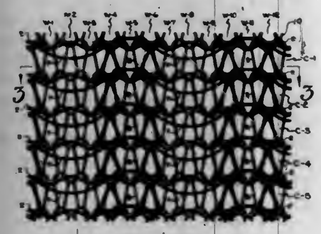
3,122,905
KNITTING MACHINE
Alan Gutschmit, Lumberton, N.C., assignor to Alamac Knitting Mills, Inc., New York, N.Y., a corporation of New York
Filed Mar. 19, 1962, Ser. No. 180,761
6 Claims. (Cl. 66—50)



1. In a circular knitting machine, a rotary cylinder having in its peripheral wall circumferentially spaced axial slots, at least one pair of pattern wheels having axially extending peripheral slots, said pattern wheels being mounted one above the other, freely rotatable adjacent to the pe-

ripheral wall of the cylinder, a plurality of short stemmed knitting needles fitted lengthwise slidable in selects slots of the cylinder, a plurality of long stemmed knitting neeedles fitted lengthwise slidable in other selected slots of the cylinder, each of said short needles having a butt radially protruding from a respective slot of the cylinder and engageable with a slot of the upper pattern wheel for rotating the latter in response to a rotation of the cylinder and each of said long needles having a butt radially protruding from a respective slot of the cylinder and engageable with a slot of the lower pattern wheel for rotating the latter in response to a rotation of the cylinder, a first driving member inserted in each cylinder slot accommodating a short needle and engageable with a slot of the upper pattern wheel for rotating the latter through the same angle as the lower pattern wheel is rotated by the butt of the respective long needle whereby both pattern wheels are rotated in synchronism by the rotation of the cylinder.

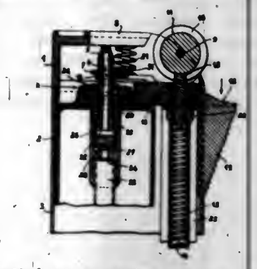
3,122,906
SELF-SUPPORTING HOSIERY TOP
Herman E. Crawford, Kernersville, N.C., assignor, by mesne assignments, to Morpul, Inc., Greensboro, N.C., a corporation of North Carolina
Filed June 13, 1960, Ser. No. 35,790
8 Claims. (Cl. 66—172)



1. A hose having a self-supporting knit top comprising stitch loops knit of a body yarn to form a base fabric having a plurality of courses and wales, a strand of elastic material incorporated in certain wales of said courses and resiliently holding said wales close together, a strand of frictional material having a relatively high coefficient of friction incorporated in certain spaced apart wales of certain of said courses, and said strand of frictional material floating across the wales between said certain wales and forming loops extending from the inner face of the base fabric which are adapted to frictionally engage the leg of a wearer.

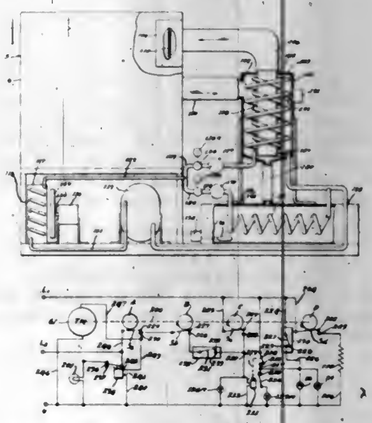
3,122,907
GAS LIGHTER OF THE SUSPENDED CONTAINER TYPE
Emile Gilberton, Paris, France, assignor to Etablissements Genond & Cie, Venissieux (Rhone), France, a company of France
Filed Dec. 7, 1961, Ser. No. 157,772
Claims priority, application France Dec. 23, 1960
5 Claims. (Cl. 67—7.1)

1. A gas lighter comprising a casing, a perforated cover for said casing, a container supported inside the casing and including a body having an upper edge which contacts the cover, a valve on the container, a hollow stem rigid with the valve and adapted for being shifted vertically between an upper position for which the valve on the stem opens the container and a lower position for which said valve closes the container, said stem having an open upper end and including a burner nozzle at said end, a projection rigid with the stem at a location beneath said nozzle, a control lever pivotally secured to the cover and including a forked extension extending inwardly of the casing to support the projection on the stem, for raising the stem upon actuation of the lever and igniting



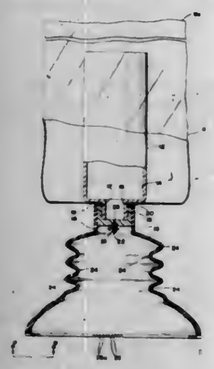
means including an actuating member located adjacent said control lever for simultaneous operation therewith.

3,122,908
AUTOMATIC DRY CLEANING MACHINE WITH REFRIGERATION MEANS
Leonard M. Stanulis, Benton Harbor, and Guy D. Phillips, St. Joseph, Mich., assignors to Whirlpool Corporation, St. Joseph, Mich., a corporation of Delaware
Filed Mar. 23, 1961, Ser. No. 113,571
2 Claims. (Cl. 68—12)



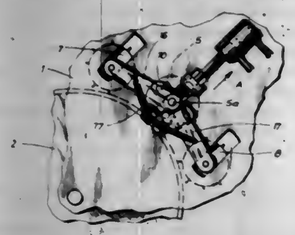
1. In a dry cleaner control system, a sequential controller having a timer motor for driving a plurality of cam-operated switches and automatically regulating a dry cleaner through a sequential program of washing, extracting and drying periods, air circuit means for the dry cleaner including a vapor-condenser and a solvent condenser thermostat in said vapor condenser, refrigeration means including an evaporator in said vapor condenser, first, second and third cam-operated switches in series with said thermostat, a refrigerant control valve and a motor operating said valve in series with said first cam-operated switch and energized thereby to allow refrigerant to flow through said evaporator, said timer motor being energized through said third cam-operated switch during a first interval and through said second cam-operated switch, said thermostat and said first cam operated switch during a second interval, said thermostat closing during normal operation within said first interval, a signal relay having a signal actuated thereby, said signal relay being in parallel with said timer motor, whereupon a malfunction in the refrigeration system sensed by a failure of said thermostat to close during said first interval will deenergize said relay and said timer motor during said second interval, thereby energizing the signal and indicating the malfunction to an attendant.

3,122,909
PORTABLE LAUNDRY DEVICE
John J. McCarthy, 2097 Riverside Drive, Lakewood 7, Ohio
Filed June 22, 1962, Ser. No. 204,318
3 Claims. (Cl. 68—219)



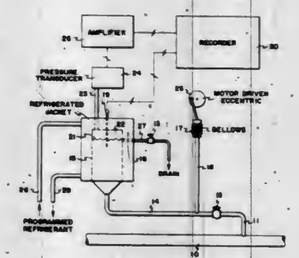
2. A laundry device comprising a hollow operating handle, said hollow operating handle defining a substantially closed chamber for holding liquid detergent, an agitating means fixed to one end of said handle and extending in a first direction from said handle, an impervious sleeve fixed to and surrounding said handle and extending in a second direction from said handle, and means between said chamber and said agitating means for admitting liquid detergent from said chamber to said agitating means.

3,122,910
MACHINE FOR TREATING SKINS
Heinz Heckhoff, Wilhelmstrasse 13, Mulheim (Ruhr), Germany
Filed Nov. 15, 1961, Ser. No. 152,413
Claims priority, application Germany Nov. 16, 1960
7 Claims. (Cl. 69—42)



1. A machine for processing skins, especially removing flesh therefrom and scraping, paring and sammying skins, which includes: a rotatable main roller having a structural length in excess of the length of a plurality of average cattle skins, two rotatable processing rollers rotatable in opposite direction to each other, said processing rollers being arranged in spaced relationship to each other near the periphery of said main roller and being adjustable relative thereto, a rotatable pressing roller arranged between said processing rollers near the periphery of said drum, said processing and pressing rollers being arranged within a 90° sector behind the vertical central plane of said drum when looking in the direction of rotation of said drum, and means operatively interconnecting said pressing roller and said processing rollers for moving the same together selectively toward and away from said drum.

3,122,911
POUR POINT APPARATUS
George E. Conklin, North Plainfield, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed Sept. 25, 1961, Ser. No. 140,456
9 Claims. (Cl. 73—17)



1. A method of determining the pour point of a confined normally liquid body having sides, one of said sides being in contact with an enclosed gaseous medium, which comprises transmitting pulsating pressures having an amplitude of from 0 to 3" of H_2O above atmospheric pressure and a frequency of from 5 to 35 cycles per minute, through said liquid, and measuring the change in pressure amplitude of said gaseous medium with respect to temperature while cooling said liquid body at a rate of from 1 to 3° F. per minute.

3,122,912
METHOD FOR DETERMINING POUR POINT
Michael P. O'Neill, New Providence, and Benjamin W. Kanzler, Linden, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed June 7, 1962, Ser. No. 200,755
6 Claims. (Cl. 73—17)

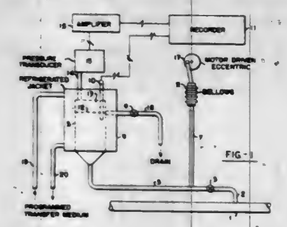


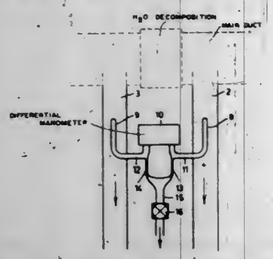
FIG. 1

1. A method for determining the pour point of a normally liquid composition which comprises cooling said liquid composition in a partially filled container containing a gas to a temperature below its pour point, transmitting pressure pulses through said composition, simultaneously increasing the temperature of said composition and determining the pour point from the fluctuations in the pressure of said gas with respect to temperature.

3,122,913
DEVICE FOR MEASURING THE WATER-VAPOUR CONTENT IN A FLOW OF GAS
Georges Le Gargasson, Paris, and Jean Robert Perilhou, Bourg la Reine, France, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Feb. 17, 1960, Ser. No. 9,314
Claims priority, application France Feb. 24, 1959
2 Claims. (Cl. 73—23)

1. A device for measuring the water-vapor content in a flow of gas in a main duct by decomposing the water

vapor into hydrogen and oxygen and measuring the difference in pressure between the hydrogen content of said gas flow after decomposition of said water vapor and the hydrogen content of said gas flow before decomposition of said water vapor comprising a first tap duct connected to the main gas flow duct at a point prior to the area of water-vapor decomposition, a second tap duct connected to the main gas flow duct at a point subsequent to the area of water-vapor decomposition, a single hollow tube positioned within each of said tap ducts, each of said hollow

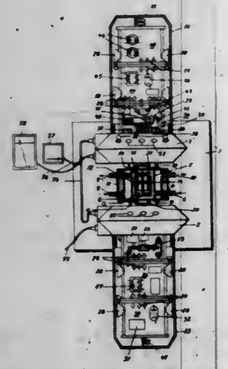


tubes having wall portions semi-permeable to hydrogen and relatively impermeable to other gases and each of said hollow tubes having a closed end adjacent to the main duct and an open end connected by means of a connecting duct to separate chambers of a two chambered manometer and a pumping means attached to said manometer, said pumping means operating at a rate sufficiently high to remove substantially all of the main gases other than hydrogen from the chambers of the manometer but sufficiently low so as not to remove the hydrogen gas from the chambers of the manometer.

3,122,914
VISCOMETERS

Heinrich Stabe and Berthold Hamburger, Frankfurt am Main, Germany, assignors to Hartmann & Braun Aktiengesellschaft, Frankfurt am Main, Germany, a corporation of Germany

Filed Oct. 13, 1958, Ser. No. 766,882
Claims priority, application Germany Apr. 15, 1958
6 Claims. (Cl. 73—59)

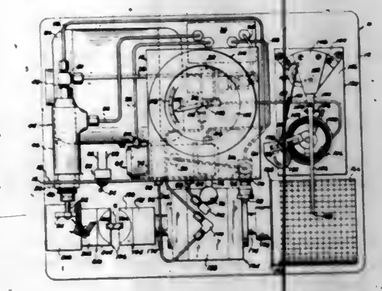


2. In a viscosity meter, a fluid holding chamber having coaxial radially spaced rotary cylindrical members therein for exchange of torque through the medium of the fluid, the chamber having respectively continuous opposed walls of non-magnetic material to which the axis of the members is substantially perpendicular, a drive device mounted on one of said walls and detachable therefrom, a magnetic coupling effective through said continuous wall for driving one of the members and a sensing device for measuring the torque transmitted to the other member and disposed adjacent the other wall, and a second magnetic coupling connecting the sensing device to said other member through the other continuous wall.

3,122,915
TORSION TESTING MACHINE

John Haller, Northville, Mich.

Filed Jan. 16, 1961, Ser. No. 82,832
6 Claims. (Cl. 73—99)



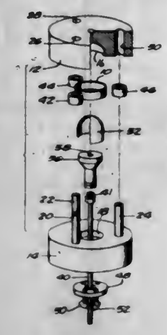
1. A machine for torsionally testing a sample of material comprising a support, a stationary sample gripper mounted on said support, a rotary sample gripper mounted on said support in aligned spaced relationship with said stationary sample gripper, a rotary hydraulic torsion motor mounted on said support, said torsion motor having a rotor therein and a rotary shaft drivingly connected to said rotor and to said rotary sample gripper, a sample angle-of-twist indicator operatively connected to said shaft, a power-driven hydraulic pump, hydraulic pressure measuring means, and a hydraulic circuit operatively connecting said hydraulic pump to said hydraulic torsion motor and to said hydraulic pressure measuring means, said hydraulic pressure measuring means and angle-of-twist indicator including a rotary record holder operatively connected to said shaft, a hydraulic pressure-responsive scriber actuator hydraulically connected to said circuit, and a scriber disposed in scribing relationship to said rotary record holder and operatively connected to said scriber actuator.

3,122,916
BRITTLE-MATERIALS TENSILE-STRENGTH TESTER

Rudolf Sedlacek, Palo Alto, Calif., assignor to Stanford Research Institute, Palo Alto, Calif., a corporation of California

Filed Apr. 27, 1962, Ser. No. 190,735
5 Claims. (Cl. 73—97)

1. Apparatus for testing a substantially cylindrically-shaped specimen of a brittle material having an inside wall defining a central aperture comprising an upper plate, a lower plate, means for aligning said upper and lower plates with said test specimen centrally disposed therebetween including a plurality of dowel pins mounted on the surface of said lower plate which is opposite a surface of said upper plate, and a separate aperture in said upper plate for receiving one end of a different one of said dowel pins, a separate spacer block mounted between said upper and lower plate over each of said dowel pins to maintain said upper and lower plates spaced apart by a predetermined amount without touching said specimen, means for pressing said upper and lower plates toward each other, and means occupying the center region between said upper and lower plate defined by said specimen central aperture for applying a measured amount of

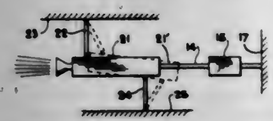


pressure uniformly and normal to the entire inside wall of said specimen.

3,122,917
MOUNTING STRUCTURE FOR MAKING LOAD MEASUREMENTS

Alfred N. Ormond, P.O. Box 238, Inglewood, Calif.

Filed Oct. 13, 1960, Ser. No. 62,380
2 Claims. (Cl. 73—116)



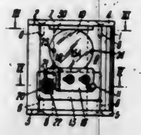
1. A mounting for supporting a mass subject to gravity to a stationary structure comprising: a first supporting means depending downwardly from said stationary structure and coupled to one portion of said mass so that said first means is placed in tension by the weight of said mass, said one portion of said mass being solely supported by said means such that it will be raised upon horizontal movement of said mass to give rise to a gravitational force component in a first direction tending to lower said mass to its original position; and a second supporting means extending upwardly from said stationary structure and coupled to another portion of said mass spaced horizontally from said one portion so that said second means is placed in compression by the weight of said mass, said another portion of said mass being solely supported by said second means so that it is lowered upon horizontal movement of said mass to give rise to a gravitational force component in a horizontal direction opposite to said first direction tending to further lower said another portion, said first mentioned gravitational force component and said second gravitational force component being equal and in opposite directions so that the net horizontal force component acting on said mass when moved in a horizontal direction resulting from gravity is zero.

3,122,918
LOAD GAUGES

Charles L. Emery, 59 Gibson St., Kingston, Ontario, Canada, and Ivor Hawkes, 25 Wyatt Ave., Sheffield, England

Filed May 9, 1961, Ser. No. 108,916
Claims priority, application Great Britain May 17, 1960
7 Claims. (Cl. 73—141)

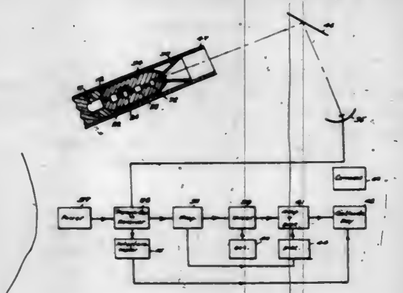
1. A load gauge comprising in combination a body of material with parallel end faces by which compressive load may be applied to the body to cause it to undergo substantially uniform compressive strain, there being located at the side of the body a recess with overhanging ends parallel to the end faces, and a plate of birefringent material in the recess, the plate having oppositely directed convex edge portions to contact the respective overhanging ends, for the conveyance to the plate of a compressive strain in dependence upon the compressive strain undergone by the body.



3,122,919
CAPACITIVE PRESSURE GAGE

Webster M. Kendrick, Baltimore, Md., assignor to the United States of America as represented by the Secretary of the Army

Filed Sept. 14, 1961, Ser. No. 138,205
7 Claims. (Cl. 73—167)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A system for measuring gun barrel pressure comprising: a projectile having a pressure sensitive gage located on the base thereof, the said projectile having a cavity therein, a circuit arrangement comprising an oscillator, modulator and power supply located within the cavity means connecting the gage to the oscillator so that pressure variations will cause the frequency of the oscillator to vary, a first antenna means secured to the nose of the projectile and electrically connected to the modulator, a transmitter-receiver circuit located externally of the projectile having a second antenna connected thereto, a reflector positioned to reflect signals from one antenna to the other, the first and second antennas being so located that a signal transmitted by the second antenna will be modulated and reflected back by the first antenna to the said second antenna.

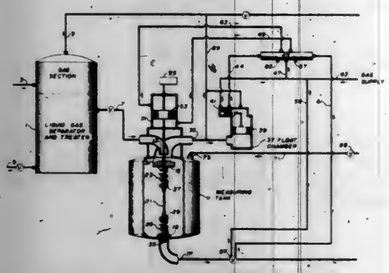
3,122,920
METERING DEVICE

John R. Murphey, Jr., and Jack T. Duree, Fort Worth, Tex., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

Filed Aug. 16, 1957, Ser. No. 678,656
6 Claims. (Cl. 73—224)

1. In a liquid meter comprising a measuring tank with a valve-controlled inlet at the top thereof and a valve-controlled outlet at the bottom thereof, connected to a gas-liquid separator by means of a liquid conduit extending from the bottom of said separator to said tank and a pressure-equalization conduit connecting the upper portion of said separator to the top of a float chamber mounted

above said tank and in fluid communication therewith, a float in said chamber, means actuated by said float for opening the outlet valve and closing the inlet valve when said tank is filled with liquid, and means for closing the outlet valve and opening the inlet valve when said tank

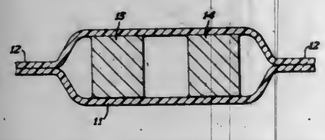


is empty, the improvement comprising a separate gas conduit connected to the top of said tank, a valve controlling said conduit and means for holding said valve in open position during filling of said tank and means for automatically effecting closure of said valve shortly before said tank is completely filled with liquid.

3,122,921
CONDITION RESPONSIVE DEVICES

Robert B. Koch, Hopkins City, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed July 13, 1961, Ser. No. 123,682
7 Claims. (Cl. 73—358)

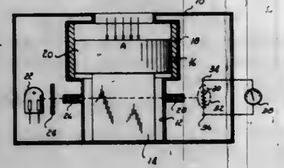


2. A device for indicating that a system has undergone a freezing and subsequent thawing comprising a sealed container having contained therein at least two masses of gel, said gels retaining therein respectively interstitial aqueous solutions of markedly different colors, said gels characterized in that the gel structure thereof is substantially destroyed by freezing so that upon subsequent thawing the interstitial liquids are released to commingle.

3,122,922
OPTICAL PRESSURE TRANSDUCER

Martin R. Kramer, Jackson Heights, N.Y., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Jan. 19, 1961, Ser. No. 83,772
4 Claims. (Cl. 73—398)

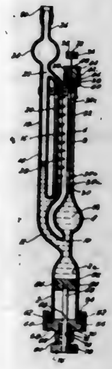


1. An optical transducer including in combination a semiconductor the coefficient of absorption of which varies in response to pressure applied thereto, means for applying pressure to said semiconductor, a source of radiation positioned to direct radiation through said semiconductor and means responsive to radiation from said source passing through said semiconductor for indicating the pressure applied to said semiconductor.

3,122,923
ABSOLUTE PRESSURE MEASURING DEVICE

Roger Gilmont, Douglaston, N.Y., assignor to Roger Gilmont Instruments, Inc., Great Neck, N.Y., a corporation of New York

Filed Mar. 28, 1962, Ser. No. 183,302
14 Claims. (Cl. 73—400)

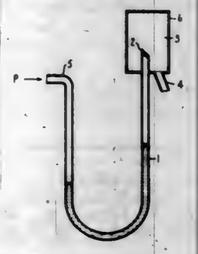


1. In a pressure-measuring gauge comprising a fluid reservoir and, in communication therewith, a fluid passage means comprising a bulb in communication with a narrow passage formed in a member, and means for applying thereto a compressible fluid the pressure of which is to be measured; the improvement which comprises a body slidably received in said narrow passage along a portion of said passage on the other side of said bulb from said fluid reservoir and there sealingly engaging said passage, and means operatively connected to said body for adjusting the position thereof and of its sealing engagement along said narrow passage and thereby varying the effective length of said passage into which said fluid is receivable.

3,122,924
MANOMETER

David B. Pall, Roslyn Estates, N.Y., assignor to Pall Corporation, Glen Cove, N.Y., a corporation of New York

Filed May 23, 1962, Ser. No. 197,163
8 Claims. (Cl. 73—401)

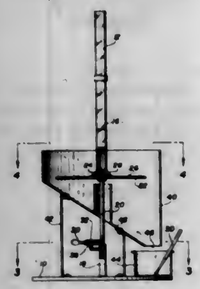


1. A device for preventing loss of fluid from a manometer tube except at pressure differentials above a predetermined minimum, comprising a porous gas-permeable disc of a material not wetted by manometer fluid and resisting passage therethrough of manometer fluid at pressure differentials below a predetermined minimum, and a receiver communicating with said disc for collecting manometer fluid passed through said disc.

3,122,925
APPARATUS AND METHOD FOR THE EXAMINATION OF FREE FLOWING SOLID MATERIALS

Richard F. Kregel, Woodland, Calif., assignor to American Sugar Company, Jersey City, N.J., a corporation of New Jersey

Filed Nov. 10, 1960, Ser. No. 68,539
8 Claims. (Cl. 73—432)

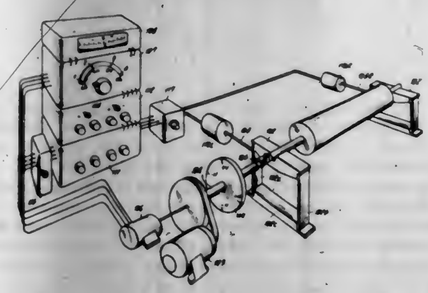


1. In an apparatus for determining the speck content of free-flowing finely divided materials, a hollow open ended substantially vertical column, a disk mounted closely adjacent a lower end of said column but spaced therefrom, said disk being disposed in a horizontal plane, and means mounting said disk for successive rapid rotary acceleration and deceleration about its own axis, whereby predetermined amounts of finely divided material within the column can be caused to flow over the surface of the disk in a thin layer of substantially uniform thickness.

3,122,926
METHOD AND APPARATUS FOR DYNAMIC BALANCE TESTING OF ROTORS

Alfred J. A. Giers, Rossdorf, and Otfrid G. H. Maus, Darmstadt, Germany, assignors to Carl Schenck, Maschinenfabrik G.m.b.H., Darmstadt, Germany, a corporation of Germany

Filed Aug. 10, 1959, Ser. No. 832,714
Claims priority, application Germany Aug. 11, 1958
6 Claims. (Cl. 73—463)

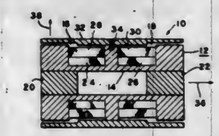


5. Rotor balance testing apparatus, comprising rotor rotating means, vibration-responsive transducer means responsive to the vibration of said rotor for providing variable transducer voltage, a source of phase-reference voltage synchronous with the rotor and at a given phase angle relative thereto and corresponding to two radial directions, measuring instrument means, a compensator connecting said transducer means and said source to said instrument means for rendering said instrument means responsive to transducer voltage and reference voltage, said compensator having means for superimposing upon the transducer voltage a compensating voltage from said source whereby said instrument means can be zeroed during a first run of the rotor, a potentiometer network electrically interposed between said compensator means and said instrument means and being adjustable during a second run of the rotor with added calibrating weights to make the response of said instrument means to said transducer means indicative of the effect of each calibrating weight only in its own radial plane; and selective transducer control means having a first condition wherein the transducer is active and a second condition for stopping the transducer from passing transducer voltage to said compensator and network, said control means connecting said transducer actively with said compensator and network when in said first condition and being switched to said second condition to apply compensating voltage to said instrument means.

3,122,927
ACCELEROMETER

Jacob Chass, Philadelphia, Pa., assignor to International Resistance Company, Philadelphia, Pa.

Filed June 23, 1961, Ser. No. 126,789
4 Claims. (Cl. 73—517)



1. An accelerometer comprising a core of a magnetic material the permeability of which varies when the material is stressed, a longitudinal passage in said core, a pair of longitudinally spaced annular grooves in the outer surface of said core, said grooves being around said passage, a separate primary winding wound around said core in each of said grooves, a separate secondary winding wound around said core in each of said grooves, said primary windings being electrically connected together, said secondary windings being electrically connected together, the connection between said primary windings and between said secondary windings being such that when a current is applied to said primary windings the voltages induced across the secondary windings are of opposite polarity, a weight secured to said core at one end of the passage, and mounting means secured to said core between the grooves, said mounting means being free from the end of the core to which the weight is secured so that said weight is adapted to stress only the portion of the core under one of said grooves when the accelerometer is accelerated.

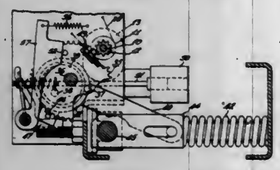
3,122,928
FLEXIBLE TOOTH GEARING ARRANGEMENT

Ira W. Paterson, Milton, Mass., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Filed Jan. 19, 1960, Ser. No. 3,286
9 Claims. (Cl. 74—2)

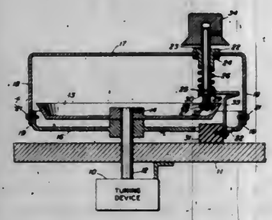
4. A transmission gearing comprising in combination a driving shaft, a bearing shaft, a first gear fastened on said driving shaft, a second gear rotatably mounted on said bearing shaft, said first and second gears being in meshing engagement during at least a part of their rotation, some of said teeth of said second gear being formed of flexible material, an eccentric mounted on said bearing shaft, means for detachably connecting together said second gear and said eccentric for rotation

in a first direction, a spring load, means for connecting said eccentric to said spring load, said second gear upon rotation in said first direction causing said eccentric to bias said spring load, means for restraining said eccentric and said spring load upon predetermined rotation of said second gear, means for triggering said restraining means



to release said spring load causing said eccentric to rotate in a second direction, and means for biasing said flexible teeth of said second gear into meshing engagement with the teeth of said first gear at the beginning of each cycle of cooperative movement of said gears in said first direction.

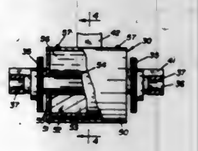
3,122,929
DIRECT AND VERNIER TUNING KNOB ARRANGEMENT
Frank L. Petry, Jr., Brooklyn, N.Y., assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed May 18, 1962, Ser. No. 195,801
5 Claims. (Cl. 74—10.5)



1. A fine and coarse clutching device comprising a reference plate, a controlled shaft rotatably supported by the reference plate, a first member rotatably supported by the controlled shaft, a control shaft attached to the first member, a second means nonrotatably attached to the controlled shaft, and a locking means attached to the control shaft and in engagement with the reference plate in a first position, and said control shaft movable longitudinally relative to the first member to move the locking means out of engagement with the reference plate and into engagement with the second means.

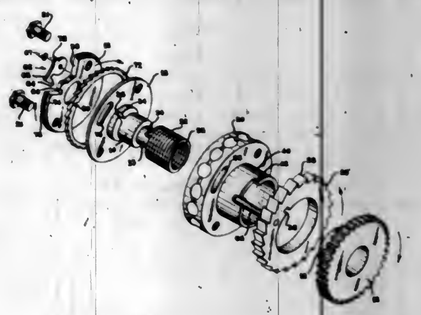
5. A fine and coarse control for a controlled shaft comprising, a reference plate rotatably supporting the controlled shaft, a disc with a lip nonrotatably attached to the controlled shaft, a cylindrical member rotatably supported by the controlled shaft, a control shaft rotatably and slidably supported by the cylindrical member in a plane parallel to the controlled shaft but offset from the center thereof, a knob on one end of the control shaft, a driving means on the other end of the control shaft and in engagement with the lip in a first position, a spring attached to the control shaft and biasing it to the first position, a locking means attached to the control shaft and in engagement with the reference plate in the first position, and the control shaft movable to a second position such that the locking means disengages the reference plate and engages the disc and the driving means disengages the lip.

3,122,930
VIBRATING MECHANISM AND UNBALANCING ROTOR
Kenneth M. Allen and Chester H. Harper, Newberg, Oreg., assignors to Allen-Harper, Inc., Portland, Oreg., a corporation of Oregon
Filed Mar. 23, 1961, Ser. No. 97,818
12 Claims. (Cl. 74—87)



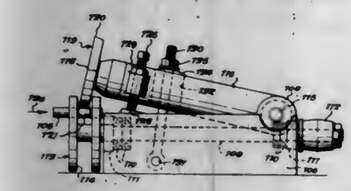
1. A vibrating mechanism comprising an element supported for oscillating motion, a cylindrical drum, journal means mounting said drum for rotation about its longitudinal axis, with said axis extending horizontally and transversely with respect to the direction of said oscillating motion, means connecting said journal means to said element, means for rotating said drum, a weight freely suspended within said drum for revolution about an axis coinciding with the longitudinal axis of said drum, and a liquid filling the remainder of the space within said drum.

3,122,931
PROGRAMMED INDEXING MECHANISM
Stig B. Tibbling, Hollywood, Fla., assignor to Kidder Press Company, Inc., Dover, N.H., a corporation of Delaware
Filed Apr. 6, 1961, Ser. No. 101,288
19 Claims. (Cl. 74—125.5)



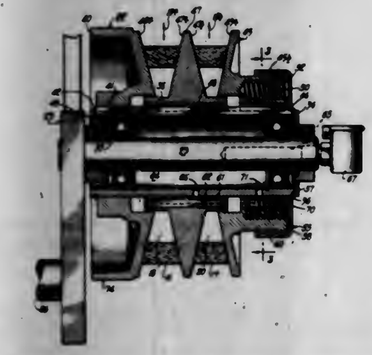
16. In combination with a spring clutch mechanism, said mechanism comprising coaxially aligned driving and driven drums respectively mounted for rotation independently of each other about their common axis, a helical clutch spring operatively disposed about said drums to selectively interconnect them for rotation together, a ratchet toothed control wheel carried by said mechanism for rotation coaxially with and with respect to said drums, the opposite ends of said spring being connected respectively to said driven drum and said control element, a control cam connected to said driven drum for rotation therewith, means defining a radially projecting lobe on said cam, lever means having a fixed fulcrum adjacent the cam, said lever means including a sensing arm having a follower in operative engagement with said cam, a control arm extending adjacent said control wheel, and a pawl carried by said control arm for operative engagement with said ratchet wheel under the control of said cam and control arm to arrest the rotation of said wheel.

3,122,932
MACHINE TOOL
John F. Kopczynski, 1671 Sweeney, North Tonawanda, N.Y.
Filed Aug. 17, 1960, Ser. No. 50,224
11 Claims. (Cl. 74—209)



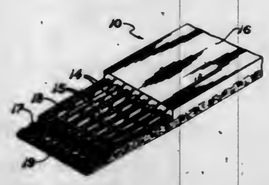
1. A machine tool, comprising a frame, three wheels journalled on said frame in triangular relation to one another with their axes extending in the same general direction, and with their peripheries substantially equidistant from a common axis, a driven member rotatable about said common axis and having its periphery provided with surface means rigidly fixed thereto which converges with reference to its axis, and the periphery of one of said wheels being provided with surface means rigidly fixed thereto which converges with reference to its axis and mates with said peripheral surface means rigidly fixed to said driven member, said mating rigidly fixed surface means forming the sole means holding said driven member against axial and radial displacement with reference to said one of said wheels.

3,122,933
VARIABLE SPEED PULLEY
John S. Rodgers, Racine, Wis., assignor to Devere Company, Racine, Wis., a corporation of Wisconsin
Filed May 2, 1962, Ser. No. 191,837
1 Claim. (Cl. 74—230.17)



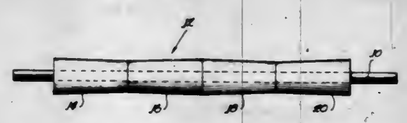
A variable speed pulley for power equipment comprising a selector arm adapted for pivotal mounting about a pivotal axis on said equipment, a stud axle fixed to said arm remote from said pivotal axis, a pulley hub rotatably mounted on said axle, a first fixed end pulley section fixed to said hub for rotation therewith and provided with an inclined side surface forming one side of a V-groove, a center pulley section slidably mounted on said hub adjacent said opposed inclined side surface for rotation therewith and provided with inclined side surfaces one of which confronts the first-mentioned inclined side surface to form said V-groove and the other of which forms one side of another V-groove, a movable end pulley section slidably mounted on said hub adjacent said other inclined side surface of said center pulley section for rotation therewith and provided with a inclined side surface confronting said other inclined side surface of said center pulley section to form said other V-groove, the last-mentioned pulley section including a hub section provided in its outer side surface with a plurality of groups of holes, the holes in each group being equally spaced angularly relative to each other and radially displaced outwardly from said axle, a retaining member fixed to said pulley hub confronting the last-mentioned side surface, and a plurality of compression springs positioned in selected ones of said groups and compressed between said hub portion and said retainer for continuously biasing said movable end pulley section toward said fixed pulley section.

3,122,934
POWER TRANSMISSION BELT
John L. Fihe, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
Filed Dec. 20, 1960, Ser. No. 77,151
7 Claims. (Cl. 74—232)



1. An endless flat power transmission belt comprising a single layer of multiple convolutions of helically wound tension-resisting cord embedded in an elastomer and laterally reinforced on at least its radially inner surface by laterally strong fabric coated with an elastomer containing fibers, the said fabric being disposed with the direction of its lateral strength transversely of the belt.

3,122,935
CONVEYOR BELT PULLEY
Roy W. Morling, Elmhurst, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Sept. 5, 1961, Ser. No. 135,819
6 Claims. (Cl. 74—241)



1. A pulley adapted for use with a conveyor belt, said pulley comprising a unitary rim having a central and two end portions, the surface of said central portion being formed in the shape of at least one crown, the surface of each of said end portions having a slope formed in the shape of a partial crown, whereby to correct for the runoff of an associated conveyor belt.

3,122,936
GEAR SHIFTING MECHANISM
Robert L. Dykes, Rte. 1, Noble, La.
Filed Feb. 1, 1962, Ser. No. 170,389
5 Claims. (Cl. 74—335)

1. A gear shifting mechanism for actuating a plurality of shifting gears comprising:

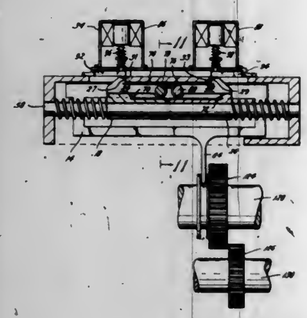
a frame,

a plurality of shafts secured to said frame,

a plurality of gear shifters connected to the shifting gears, each of said gear shifters movably mounted on one of said shafts for longitudinal movement along said shaft in either direction,

neutral engaging elements connected to each of said gear shifters and engageable with said frame, said neutral engaging elements engaged with the frame when the gear shifters are in neutral position,

a gear shifting carriage mounted for longitudinal movement in either direction along at least one of said shafts,



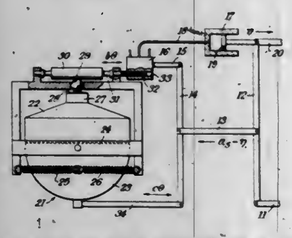
means for moving said carriage in either direction along said one shaft,

gear engaging elements mounted on each gear shifter and engageable with said movable carriage for interlocking the gear shifters with the carriage,

contacting shoulders between each of the gear shifters and said carriage whereby the shifters may be contacted and moved by the movement of said carriage, and

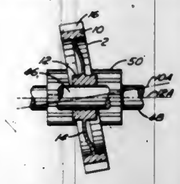
gear selector means adjacent each of said gear engaging elements for selectively actuating one of said gear engaging elements into engagement with the carriage for interlocking one of said gear shifters with the carriage.

3,122,937
GYROSCOPIC APPARATUS
William J. Fillery, Holywood, County Down, Northern Ireland, assignor to Short Brothers & Harland Limited, Belfast, Northern Ireland, a British company
Filed June 9, 1961, Ser. No. 116,095
Claims priority, application Great Britain June 16, 1960
4 Claims. (Cl. 74—388)



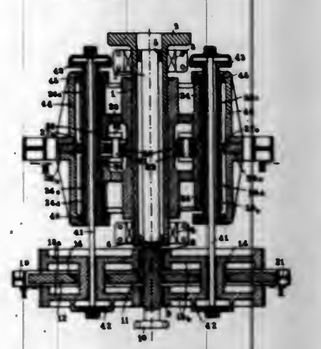
1. Gyroscopic apparatus comprising a rotor adapted to move under precessional force through an angle proportional to the rate of turn of the apparatus about a predetermined axis, a caged ball located on the axis of rotation of the undisturbed rotor in a position fixed in relation to the body of the apparatus, the ball being caged at this position so as to be in rolling contact with a spherical end face of the rotor and said end face being of such a curvature as to maintain contact with the ball as the rotor moves angularly under precessional force, and a roller rotatably mounted in rolling contact with the ball.

3,122,938
ANTI-BACKLASH GEAR AND GEAR COMBINATION
Jacob J. Visser, Grand Rapids, Mich., assignor to Lear Siegler, Inc., Santa Monica, Calif., a corporation of Delaware
Filed May 13, 1960, Ser. No. 30,397
24 Claims. (Cl. 74—409)



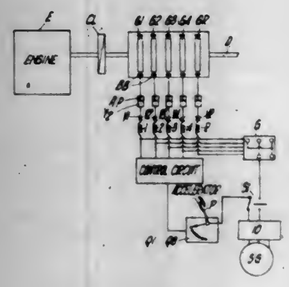
21. A gear of unitary construction having a rigid hub, a rigid rim, rigid teeth and a flexible web adapted to provide angular deflection of said rim relative to said hub whereby a line coaxial with the axis of said hub of said gear forms an angle with an intersecting line taken normal to the plane in which said rim lies upon deflection of said rim relative to said hub.

3,122,939
POWER SPLITTING REDUCTION GEAR
François Durand, 108 Blvd. Carnot, Le Vesinet, France
Filed July 30, 1962, Ser. No. 213,379
Claims priority, application France Aug. 1, 1961
6 Claims. (Cl. 74—411)



1. A power splitting reduction gear, comprising, in combination, a low speed output shaft; a high speed input shaft; two pinions supported by said input shaft, a part shaped somewhat like a beam and disposed in the symmetry plane through said two pinions and mounted on the high speed input shaft; fixed deformable hydraulic capsules against which bear the extremities of said beam said capsules being interconnected through passageways; at least two compound gearwheels meshing with said two pinions, the hub of each compound gearwheel being mounted within said beam and said compound gearwheels being arranged in opposite arms of said beam with a self-aligning bearing inserted between each hub and said beam; a low speed gearwheel supported by said low speed output shaft; at least two pinions disposed about said low speed gearwheel and respectively meshing therewith; coupling means between each of the latter pinions and each of the compound gearwheels; a flange disposed transversely in the symmetry plane through each of said latter pinions; a self-aligning bearing in each of said flanges, one of said latter pinions being mounted thereon; guiding followers supported by each transverse flange; on said low speed gearwheel at least one guiding track for co-operation with said guiding followers; fixed deformable hydraulic capsules against which bears each of said transverse flanges, said capsules being interconnected through passageways.

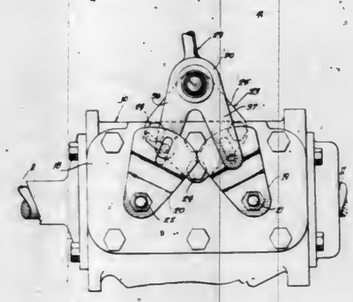
3,122,940
ELECTRICAL SELECTION APPARATUS OR SYSTEMS
Rodney Haydn Shimwell and Edward Leyburn Robinson, London, England, assignors to Simms Motor Units Limited, London, England, a company of Great Britain
Filed Nov. 4, 1959, Ser. No. 850,804
Claims priority, application Great Britain Nov. 5, 1958
13 Claims. (Cl. 74—472)



1. An automatic gear control system for a vehicle having a plurality of alternative gear trains for transmitting torque from the vehicle engine to the propulsion members of the vehicle, which control system comprises a plurality of electrically-operated means associated respectively with the plurality of gear trains for rendering the gear trains alternatively operative for transmitting torque, a plurality of power transistors respectively connected in series with the electrically-operated means, a current source for supplying current to the series circuits comprising said electrically-operated means and said power transistors when said transistors conduct, a plurality of control transistors respectively controlling the supply of base current to the said power transistors, means for producing a potential indicative of the appropriate gear train to be engaged, and means for rendering the control transistors conducting one after another in accordance with variations in the said potential thereby to engage automatically the appropriate gear train.

3,122,941
TRANSMISSION CONTROL MECHANISM
Paul H. Goldsmith, Fort Wayne, Ind., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Jan. 15, 1962, Ser. No. 166,216
11 Claims. (Cl. 74—473)

1. Control means for a power transmission having a housing provided with a vertical wall through which a pair of transversely extending longitudinally spaced and parallel rockshafts project, each of said rockshafts being individually rockable in opposite directions from a neutral position to two other positions to establish two different speed ratios in the transmission, comprising, a pair of platelike arms, each of said arms being rigidly fastened to the outer end of a respective rockshaft and having a transversely offset portion thereof spaced and parallel to the offset portion of the other arm, said portions lying in parallel, vertical planes perpendicular to the longitudinal axes of said rockshafts, each of said offset portions having a radially extending, elongated slot formed therethrough; a mounting plate secured to said vertical wall having a pivot pin affixed thereto, said pivot pin being vertically spaced above and longitudinally spaced between said arms, the longitudinal axis of said pivot pin being inclined with respect to a horizontal plane contaning said longitudinal axes of said rockshafts; a gear shift control lever having a pair of diverging legs at one end thereof, the free end of each of said legs being transversely spaced between said arms and each having a semispherical head secured thereto, each of said heads being in transverse alignment with a respective slot when said



rockshafts are in their neutral positions and said lever is in a neutral setting; and means for mounting said lever on said pin for rocking movement from its neutral setting about an axis perpedicular to the longitudinal axis of the pin whereby each of said heads is selectively insertable in the slot of a respective arm to drivingly connect the gear shift control lever and arm, said control lever being pivotal about the longitudinal axis of said pin to rock the arm having the head disposed in the slot thereof, said means for mounting said lever on said pin including resilient means yieldably urging the head of one of said legs toward one of said arms.

3,122,942
FRICTION REDUCING DEVICE FOR REMOTE CONTROL SYSTEM
Andrew J. Kompanek, Lansdale, and Allen S. Matz, Cornwells Heights, Pa., assignors to Teleflex Incorporated, North Wales, Pa., a corporation of Delaware
Filed Nov. 1, 1961, Ser. No. 149,305
7 Claims. (Cl. 74—501)



1. A friction reducing device for a remote control system including a conduit, a flexible cable member movably supported within said conduit, an input member secured to one end of said cable, an output member secured to the other end of said cable, said conduit and cable being so related that cable actuation urges the cable into high frictional engagement with the conduit along at least a portion of its length, and means for inducing a resonant vibration into said conduit in the vicinity of said high frictional engagement.

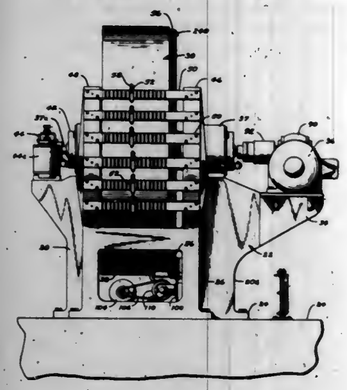
3,122,943

DATA STORAGE APPARATUS CONTROLS

John M. Coombs, Poughkeepsie, N.Y., assignor, by mesne assignments, to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Application Nov. 12, 1954, Ser. No. 468,455, which is a division of application Ser. No. 90,941, May 2, 1949. Divided and this application Aug. 16, 1960, Ser. No. 59,470

6 Claims. (Cl. 74—661)



3. In combination, a base, a cylindrical member journalled on said base and having a gear affixed thereto, a carrier pivoted on said base for movement toward and away from said member, means to move said carrier toward and away from said member, a gear element journalled on said carrier adapted to engage the gear on the cylindrical member when said carrier is moved toward said member, driving means to drive the gear element journalled to said carrier, said driving means including a motor and a clutch connection between said gear element and said motor, an alternatively operable second clutch connected between said gear element and said motor, and means controlled by the relative position of said member with respect to said base to operate one of said clutches.

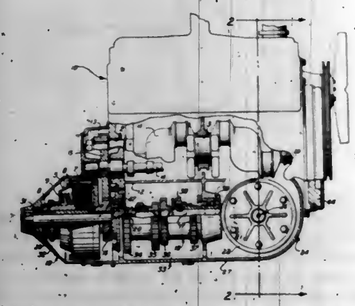
3,122,944

INTEGRATED POWER UNIT

Ludwig G. Boehner, Braunschweig, and Alexander Balbaschewski, Cologne, Germany, assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed Mar. 16, 1961, Ser. No. 96,164

8 Claims. (Cl. 74—700)



1. An integrated power unit for a motor vehicle comprising in combination an engine having a crankshaft;

a clutch, a transmission and a differential operatively interconnected and each having rotatable input members;

said clutch, transmission and differential input members having a common axis of rotation;

said axis of rotation being arranged parallel to the axis of rotation of said crankshaft;

said crankshaft having fore and aft main bearings;

said transmission and differential being serially arranged and located substantially between vertical planes passing through said main bearings;

said crankshaft having a flywheel connected to one of its ends and a power output gear connected to the other of its ends;

a series of gears connecting said power output gear to said clutch input member;

said engine having a rotatable camshaft supporting one of said gears in said series of gears for rotation therewith;

said engine having a plurality of cylinders inclined to a vertical plane passing through said crankshaft;

said common axis being disposed beneath and to one side of said crankshaft.

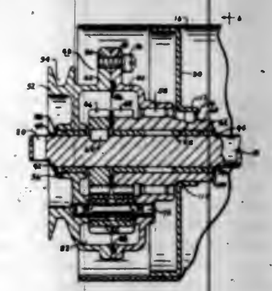
3,122,945

COMBINATION PULLEY AND SPEED REDUCER

Jackson Chung, Mishawaka, Ind., assignor to Dodge Manufacturing Corporation, Mishawaka, Ind., a corporation of Indiana

Filed Apr. 16, 1962, Ser. No. 187,844

5 Claims. (Cl. 74—802)



1. In combination with a pulley having a rim and two end discs with center openings therein and a nonrotatable shaft extending axially through said openings: a gear reduction unit mounted on said shaft, comprising a housing rotatably mounted on said shaft, a non-rotatable gear mounted on said shaft in said housing, a sleeve on said shaft having one end adjacent said gear and extending from said housing, a gear connected to said sleeve in axial alignment therewith and positioned adjacent said first mentioned gear, a pinion having a single set of teeth meshing with said gears and adapted to revolve therearound as said housing is rotated, said sleeve extending through the opening in one of said end discs for rotatably supporting one of said discs and the respective end of said pulley, and means movable with said sleeve and slidable axially relative to said last mentioned disc for operatively locking said disc and sleeve together.

3,122,946

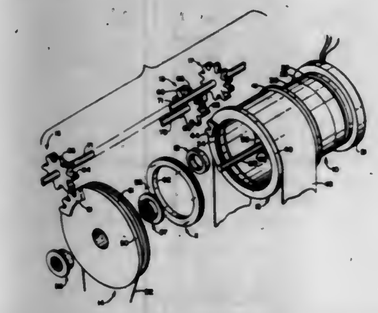
POWER TRANSMISSION

George D. Hedges, Roseville, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Dec. 27, 1960, Ser. No. 78,680

15 Claims. (Cl. 74—805)

1. Power transmitting apparatus comprising: a first rotatable hollow cylindrical output member having an internal gear on the interior surface thereof and having a rim portion concentric with the pitch circle of said internal gear and extending radially outward from the exterior surface of said first output member, said rim portion having gear teeth on a segment of the circumference thereof, and extending axially beyond one end of said rim portion; a second rotatable cylindrical output member having gear teeth on a segment of the periphery thereof which extend axially beyond one end of said member, said first and second output members having coincident axes of rotation; an external ring gear continuously meshing with said internal gear and having a smaller pitch diameter, said ring gear having an internal bore concentric with its pitch circle; means mounting said ring gear on said second output member for movement comprising limited revolution about the center of said second output member without substantial rotation with respect thereto; a cylindrical drive member at the center of said internal gear; a cylindrical resilient member frictionally engaging said drive member and the internal bore of said ring gear to cause said movement of said ring gear in response to rotation of said drive member; first and second pinion members, each comprising first and second pluralities of gear teeth, the teeth of said first plurality being axially longer than those of said second plurality; means



mounting the first pinion member for engagement with the teeth on the periphery of said second output member so that said second plurality of teeth engage only the portions of the gear teeth on said second output member which extend axially beyond the end of said output member; means mounting the second pinion member for engagement with the gear teeth on the rim of said first output member so that the second plurality of teeth thereon engage only the portions of the gear teeth extending beyond the end of said rim; and gear means connecting said first and second pinion members, so that when a tooth of said first pinion member is in engagement with the teeth on said second output member a pair of said first plurality of teeth of said second pinion ride on the blank segment of the rim of said first output member, thereby locking said second output member when said first output member is free to rotate, and so that when a tooth on said second pinion member is in engagement with the teeth of said first output member a pair of said first plurality of teeth on said first pinion ride on the blank segment of the periphery of said second output member, thereby locking said first output member and unlocking said second output member so that it is free to rotate

3,122,947

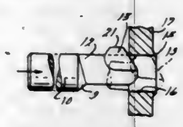
DEBURRING TOOL

Stuart A. Cogsdill, Orchard Lake, Mich., assignor to Cogsdill Tool Products, Inc., Oak Park, Mich., a corporation of Michigan

Filed Dec. 26, 1961, Ser. No. 161,898

9 Claims. (Cl. 77—73.5)

1. A deburring tool comprising, a spindle and a deburring nib on one end thereof, said spindle being formed of material capable of flexing under lateral pressure, and cam means associated with the nib for engagement with



a hole in a workpiece to flex said spindle to deflect the deburring nib laterally within the hole into operative engagement with the edge of the hole.

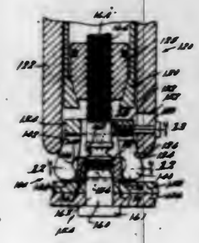
3,122,948

APPARATUS FOR APPLYING RIVETS

Charles W. Baugh and Gerald E. Wehlann, Detroit, Mich., assignors to Huck Manufacturing Company, a corporation of Michigan

Original application Sept. 3, 1957, Ser. No. 681,487, now Patent No. 3,029,665, dated Apr. 17, 1962. Divided and this application Dec. 13, 1961, Ser. No. 167,205

5 Claims. (Cl. 78—46)



1. Apparatus for setting a rivet of the type including a pin having a shank with a locking groove extending thereabout and a collar adapted to be supported on the shank at a position opposite the locking groove, said apparatus comprising jaw means adapted to receive the collar and actuable for movement substantially only radially inwardly of the collar into engagement with the outer surface thereof for swaging the collar into interlocking engagement with the shank at the locking grooves, gripping means for exerting a pulling force on the shank of the pin, and means operable with said jaw means and said gripping means for actuating said jaw means responsively to the pulling force of said gripping means.

3,122,949

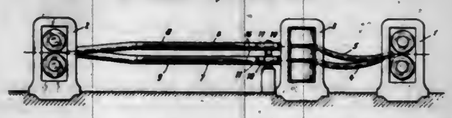
MACHINES FOR THE CONTINUOUS SIMULTANEOUS ROLLING OF SEVERAL WIRES WITH ALTERNATING VERTICAL AND HORIZONTAL STANDS ARRANGED ONE BEHIND THE OTHER

Ewald Brandenburg, Albert Pohle, and Kurt Görlich, all of Oberhausen, Rhineland, Germany, assignors to Huttenwerk Oberhausen Aktiengesellschaft, Oberhausen, Rhineland, Germany, a firm

Filed Feb. 10, 1959, Ser. No. 792,429

Claims priority, application Germany, Feb. 12, 1958

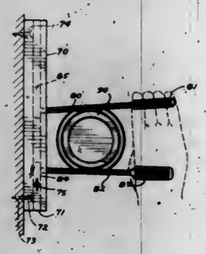
6 Claims. (Cl. 80—35)



1. In a rolling mill for the continuous, uniform rolling of several strands, a first horizontal stand, a second hori-

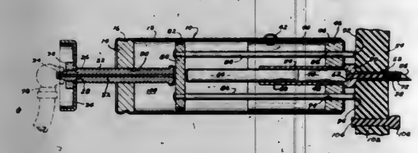
zontal stand, a vertical stand, said vertical stand being positioned between said horizontal stands, a rigid guide channel for each strand positioned between said first horizontal stand and said vertical stand, said guide channels being downwardly curved and open on top, said guide channels guiding each of said strands from the passes of said first horizontal stand to be corresponding passes of said vertical stand, a plurality of loop tables positioned between said vertical stand and said second horizontal stand, each of said loop tables having a horizontal guide groove open on top for guiding a single strand from a pass of said vertical stand to a corresponding pass of said second horizontal stand, each of said loop tables further provided with a lever for pushing the strand out of the guide groove laterally onto the loop table after it has been caught by said second horizontal stand.

3,122,950
BOTTLE CAP OPENER
Leslie B. Fredrickson, 3509 43rd Ave. S., Minneapolis 6, Minn.
Filed Mar. 21, 1961, Ser. No. 97,320
4 Claims. (Cl. 81—3.44)



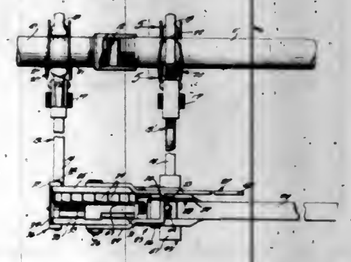
1. In apparatus of the class above described, the combination comprising; a frame member having a recess extending along a longitudinal axis and surface thereof, said recess being substantially greater in lateral dimension at its innermost extremity; a pair of members dimensioned so as to allow slidable movement thereof within said recess and frictionally engaging opposed walls of said recess upon displacement of a corresponding longitudinal axis thereof from substantial coincidence with the longitudinal axis of said recess; and a pair of article engaging members attached to said pair of members respectively and extending outwardly from said recess in a direction substantially normal to the surface of said frame.

3,122,951
TIRE REPAIR PLUG INSERTING APPARATUS
Edgar A. Berg, P.O. Box 895, Grand Forks, N. Dak.
Filed Feb. 6. 1962, Ser. No. 171,379
3 Claims. (Cl. 81—15.7)



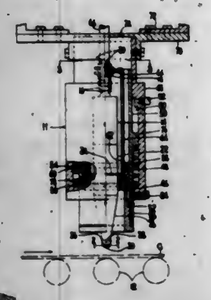
1. A tire repair plug injection apparatus comprising in combination a hollow cylindrical casing of a first diameter, said casing being sealed at one end thereof, a piston slidably mounted within said casing, means for sealing said piston in air-tight relationship with the inside wall of said casing, a tire repair plug injection needle of a second diameter smaller than said first diameter secured to one end of said casing, a plunger operatively associated with said needle to drive a repair plug from within said needle into the casing of the tire, said plunger also being associated with said piston to move toward said needle as said piston is moved toward said needle, said casing having an inlet opening therein between said piston and the sealed end thereof, a nipple communicating with said opening for the introduction of compressed air into said casing, the passage of air into said casing through said inlet being adapted to drive said piston and said plunger toward said needle to thereby force a repair plug out of said needle and to the casing of said tire, at least one retraction member being rigidly connected to said piston and slidably mounted within said apparatus casing laterally of said needle, said retraction member including a portion extending outwardly of said one end of said casing and being adapted to rest against the outward surface of the tire to thereby force said needle away from said tire casing as said piston and said plunger move toward said needle.

3,122,952
WRENCH WINCH
Edward A. Eliason, 4507 64th Ave. N., Minneapolis, Minn.
Filed Mar. 26, 1962, Ser. No. 182,311
2 Claims. (Cl. 81—53)



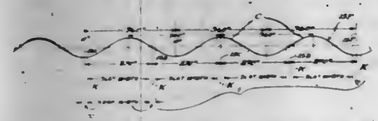
1. In a device of the character described, first and second wrenches each including a handle provided with an opening therein, a stationary jaw on an end of the handle, each wrench further including a movable body member provided with a jaw, spring members having clips engaging said body members, a winch comprising a lever having a pair of arms secured to an end thereof, a pin extending through said arms, an operator including a bar having one end connected to said pin, a side member affixed to said bar and connected to said pin, a wheel positioned between said arms and mounted on said pin, there being an annular groove in the outer periphery of said wheel, a cable engaging said groove and having one end anchored to said wheel, a plurality of spaced apart teeth on said wheel, a U-shaped guide member having side sections connected to said arms, said guide members further including a web portion provided with an aperture for the projection therethrough of said cable, a hook on the end of the cable for engaging an opening in the handle of the first wrench, a bracket engaging the handle of the second wrench and said bracket having a swivel joint thereon, a movable plate in said bracket having a set screw arranged in engagement therewith, a stop member connected to said bar, a stop piece affixed to said arms, a spring pressed pawl pivotally mounted between said arms for selectively engaging the teeth on said wheel, a release member pivotally connected to said bar and side member and said release member comprising first and second angularly arranged sections, and a finger secured to said second section for selectively engaging said pawl.

3,122,953
APPARATUS AND METHOD OF CUTTING GLASS
Florian V. Atkeson, Springdale, Pa., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania
Continuation of abandoned application Ser. No. 611,707, Sept. 24, 1956. This application Apr. 19, 1961, Ser. No. 104,144
11 Claims. (Cl. 83—7)



9. The method which comprises imparting to a rotatable wheel having a V-shaped edge with an included angle between about 135 and 168 degrees ultrasonic vibrations in a direction normal to the axis of rotation of the wheel, imparting rolling contact between the wheel and a glass sheet along a line on a surface of the glass sheet with the rolling contact being in a direction normal to the axis of rotation of the wheel and normal to the direction of the ultrasonic vibrations while continuing the ultrasonic vibration to the wheel.

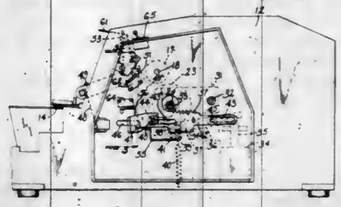
3,122,954
VENETIAN BLIND SLATS
Edward J. Nadosy, 9701 Francisco, Evergreen Park, Ill.
Filed June 14, 1961, Ser. No. 117,043
2 Claims. (Cl. 83—42)



1. The method of producing a plurality of Venetian blind slats of identical cross sectional form and width from a sheet of reinforced plastic that is corrugated to a substantially sine wave curve in cross section which includes the steps of cutting the sheet parallel to the corrugations along a first line of severance centered on a maximum amplitude point of the sine wave curve, feeding the sheet perpendicular to said line of severance through a distance equal substantially to 270° with respect to the sine wave curve of the corrugations, and cutting said sheet along a second line of severance parallel to and spaced from the first line of severance in substantially 270° with respect to the sine wave curve of said corrugations.

3,122,955
TAPE DISPENSER
Herbert C. Eisenman, Trumbull, Conn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Mar. 20, 1962, Ser. No. 181,060
15 Claims. (Cl. 83—233)

1. A feeding and severing mechanism for a machine for dispensing tape from a roll comprising a feed shaft having a tape engaging wheel thereon, said shaft being movable between tape engaging and non-engaging positions, electrically operated means for controlling the position of said shaft dependent on the state of energization thereof, a motor drivably connected to said shaft, severing means, and actuating means connected to said severing means, said shaft being arranged upon movement



from a feeding position to a non-feeding position in response to a change in the state of energization of said electrically operated means to drivably engage said actuating means to allow said motor to drive said actuating means and said severing means connected to said actuating means through the path of the tape.

3,122,956
APPARATUS FOR DETECTING AND REMOVING DEFECTIVE SECTIONS OF ADVANCING TEXTILE MATERIAL
Peter Jucker, Uster, Switzerland, assignor to Zellweger Ltd., Uster Factories for Apparatus and Machines, Uster, Switzerland, a corporation of Switzerland
Filed Aug. 26, 1960, Ser. No. 52,251
Claims priority, application Switzerland Sept. 11, 1959
1 Claim. (Cl. 83—361)



Apparatus for detecting and removing defective sections of advancing textile material comprising a source of high frequency oscillations, a modulator for varying the amplitude of the oscillations in accordance with variations in the cross sectional area of the material, a bi-stable trigger circuit biased to a trigger voltage which is large compared with its inherent instability, a circuit including a demodulator and an amplifier connecting the modulator to the trigger circuit, means for adjusting the output level of the amplifier so that the bi-stable circuit is triggered only by variations representing defective sections of material to be eliminated, a textile-severing device and a mono-stable circuit controlled by the trigger circuit for generating a long pulse of high amplitude for each operation of the trigger circuit and a circuit for applying the long pulses to the severing device.

3,122,957
CUTOFF MECHANISM
Norman J. Rosenburgh, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Dec. 18, 1961, Ser. No. 160,146
4 Claims. (Cl. 83—443)

1. A severing mechanism for use in an apparatus having means for feeding strip material through a predetermined path, comprising:

(*a*) a fixed blade having a cutting edge and mounted on one side of said path,

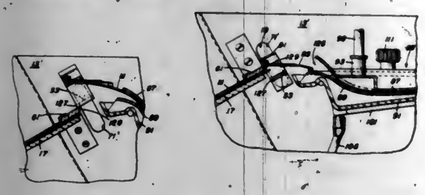
(*b*) a second blade having a cutting edge,

(*c*) means for mounting said second blade for movement between at least two positions while maintaining the cutting edges of the blades in contact with each other,

(1) the blade in one of said positions being disposed on the side of said path opposite said one side, and

(2) in the other of said positions being disposed on said one side whereby movement between said positions severs the material in said path between said blades,

(*d*) means for moving said second blade from said one to said other position,



(*e*) a channel shaped bracket mounted on said second blade and forming therewith a tunnel through which the material passes as it moves through said path; and

(*f*) a guide plate pivotally mounted on said bracket for movement about an axis which is parallel to the plane of the material in said tunnel and perpendicular to the direction of movement of said material therethrough, said plate extending outwardly from said second blade in the direction of said material movement, to engage and direct the material prior to and during severing movement of said blades and to confine the severed material to said path after completion of such severing movement.

3,122,958
SLITTER BAND STRUCTURE WITH HARDENED CUTTING EDGE
Robert S. Washburn, Beloit, Wis., assignor to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin
Filed Aug. 9, 1960, Ser. No. 48,408
6 Claims. (Cl. 83—500)



1. A machine for slitting at high speed a continuously travelling paper web comprising,

a circular slitter blade with a radial planar side surface and a bevelled surface inclined radially inwardly away from said side surface,

a thin hard layer of abrasion resistant material surface bonded to said side surface and extending in a uniform thickness layer to the edge thereof to form a cutting edge where the side surface meets the bevelled surface, means for rotatably supporting the slitter blade,

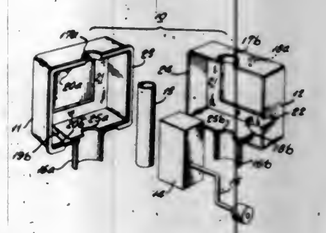
a cylindrical slitter band having a cylindrical outer surface and an axially inwardly bevelled end surface,

a thin hard layer of abrasion resistant material surface bonded to said outer surface and extending in a uniform thickness layer to the edge thereof to form a cutting edge where the cylindrical surface joins the bevelled end surface,

means for rotatably supporting the slitter band on an axis parallel to the slitter blade with the cutting edges overlapping for slitting the travelling web with said cylindrical surface providing a support for a web moving tangent thereto,

said bevelled edges of said slitter blade and said band formed of a relatively soft material for wearing away with rotation of the blade and band and the action of the cut edges of the paper web to maintain a sharp cutting edge at the edge of said hard layers on the blade and band and for ease of grinding away said bevelled edges for maintaining sharp cutting edges.

3,122,959
MUSICAL STRAW MEANS
Arthur Barr, 2942 Shore Drive, Merrick, N.Y.
Filed Jan. 28, 1963, Ser. No. 254,084
13 Claims. (Cl. 84—94)



1. A music-box device comprising, in combination, a pair of casing parts adapted for being matingly interconnected and providing an inner space for lodging a musical mechanism therein, abutment means on at least one of said casing parts for holding said mechanism, one of said casing parts having a cut-out portion through which an operating member of said mechanism may protrude for manual operation from outside, each of said casing parts having a lower neck portion and an upper rim portion, said neck and said rim portions defining substantially aligned openings therein adapted for passing a straw or like member therethrough.

3,122,960
BOW FOR A STRING INSTRUMENT
Ferdinand Stühlen, Bonn, Germany, assignor to Dr. Plate G.m.b.H., Bonn (Rhine), Germany
Filed Aug. 4, 1961, Ser. No. 129,323
Claims priority, application Germany Aug. 17, 1960
13 Claims. (Cl. 84—282)



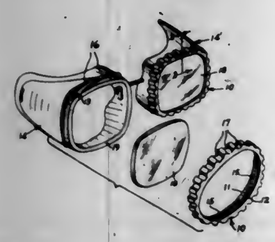
1. A bow for a string instrument, comprising a rod having two ends and stretched between the rod ends a plurality of elongated filaments, each filament being composed of a synthetic resin, having an elliptical transverse cross section and a stretch of about 4 to 5 times its original length, the synthetic resin being a fiber-forming, thermoplastic and hydrophobic polymer containing no more than about 4% of water when saturated, the ratio of the longest axis of the cross section to the shortest axis perpendicular thereto being between 1:1.2 and 1:3, and the filament having a permanent twist along its entire length, the twist consisting of 12 to 18 turns per meter.

3,122,961
DEVICE FOR BEATING TIME TO MUSIC
David Gornston, 8345 Broadway, Elmhurst, N.Y., and Willie Berg, 9223 Clyde Ave., Chicago, Ill.
Filed Mar. 9, 1962, Ser. No. 178,680
10 Claims. (Cl. 84—484)



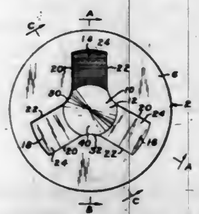
10. A time beating device comprising a housing, with two sides and two ends a striker within said housing and extending from both ends thereof, and means on said housing, supporting said striker at an intermediate portion thereof for swinging movement, and said striker adapted to contact an inner portion of said housing during said swinging movement.

3,122,962
RING-LIKE RETAINING DEVICES
Armand De Angelis, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts
Filed Feb. 18, 1960, Ser. No. 9,640
2 Claims. (Cl. 85—1)



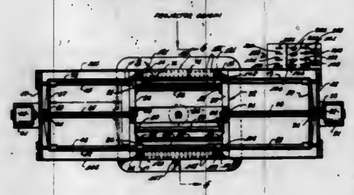
1. In combination, an article having a rigid end portion, external threads on said end portion arranged about an axis thereof, said end portion being of non-circular cross-sectional shape in planes through said threads perpendicular to said axis so as to have maximum and minimum diameters in said planes, and a deformable ring-like retaining member having an internally threaded portion, said member being circular and having a thin walled, highly flexible, circumferentially continuous body portion of dimensionally stable plastic material, said body portion having an inside diameter many times the maximum wall thickness of said body portion, the inner perimeter of said internally threaded portion being substantially equal to the outer perimeter of said externally threaded portion at corresponding locations on said respective threaded portions, the threads on said member normally having a root diameter which is uniform and less than the maximum diametral distance between the roots of the threads on said end portion and greater than the minimum diametral distance between the crests of the threads on said end portion, said threaded portions being constructed and arranged to mate upon deformation of said circular member to assume said non-circular shape upon screwing together of said end portion and said member.

3,122,963
RECESS HEAD SCREW
Rudolph E. Borgeson, Paxton, Mass., assignor to Reed & Prince Manufacturing Company, Worcester, Mass., a corporation of Massachusetts
Filed Aug. 11, 1961, Ser. No. 130,810
1 Claim. (Cl. 85—45)



A screw having a shank and a head and having a driving tool receiving recess extending into the head from the upper surface thereof, the recess being concentric with the longitudinal axis of the screw and comprising a central portion having a concave bottom part shaped as an inverted cone having a substantially circular upper edge, the recess also having three long, shallow grooves disposed symmetrically about the longitudinal axis of the screw and extending outwardly from the substantially circular upper edge of the inverted concave bottom part and terminating adjacent the outer periphery of the head in the upper surface thereof, each of said grooves having side walls which are parallel to the axis of the screw and equidistantly spaced on opposite sides of the radial center line of the groove and parallel thereto, each of said grooves having a bottom wall intersecting the lower edges of the side walls of the groove and extending apwardly and outwardly from the periphery of the substantially circular upper edge of the concave bottom part of the tool receiving recess at an angle to the longitudinal axis of the screw which is less than that of said concave bottom part, the maximum depth of each groove being substantially less than the radial length thereof whereby the grooves are radially elongated and shallow to provide substantial bearing wall surface without requiring deep insertion of the tool into the recess, each side wall of each groove being connected to the adjacent side wall of the adjacent groove by an inwardly curved wall which is parallel to the axis of the screw, said connecting walls bounding in part the central portion of the recess and at their lower edges intersecting and interrupting the substantially circular upper edge of the concave bottom part of the recess.

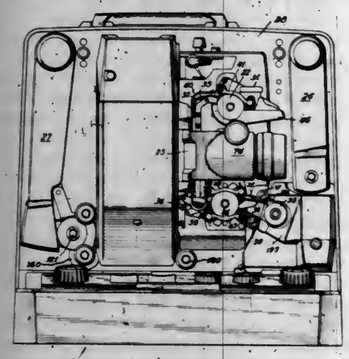
3,122,964
METHOD AND APPARATUS FOR PRODUCING MOTION PICTURES
Leland I. Auslender and John G. Bourne, Los Angeles, Calif., assignors to Dynamic Frame Corporation, Los Angeles, Calif., a corporation of California
Filed Jan. 31, 1961, Ser. No. 86,085
16 Claims. (Cl. 88—16)



1. The method of masking a motion picture image so that only a selected area of the total scene is visible, the

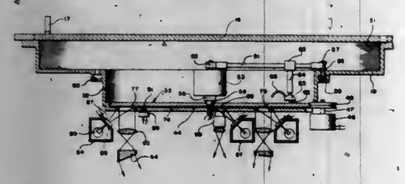
remainder of the area being a dark frame surrounding the selected area, the method including the steps of: projecting the scene upon a viewing screen; masking portions of said screen to leave uncovered only the area of said screen corresponding to the selected area of the total scene; continuously adjusting said masking as projection continues; masking a lighted screen in the same manner as said viewing screen; photographing said lighted screen and thereby providing an image of a plain area corresponding to said selected area; and combining the image of the total scene with the image of said plain area to provide a final image in which said selected area is surrounded by a dark frame that varies to define the movable edges of said selected area.

3,122,965
AUTOMATIC FILM THREADING DEVICE
Bruno Michaels, Chicago, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed Dec. 29, 1958, Ser. No. 783,248
12 Claims. (Cl. 88—17)



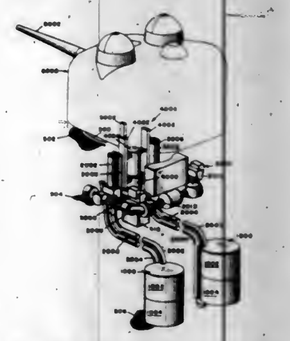
1. In a projector, a sprocket for advancing a film, film guiding means spaced from the sprocket defining a path resistant to free movement of the film therethrough, a pair of film guides mounted between the sprocket and the film guiding means and on opposite sides of the film as the film leaves the sprocket, and means moving both the film guides toward one another from retracted positions to operative positions in which the film guides form a restricted path to the film guiding means to feed the forward end of the film into the film guiding means and restrict the film as the film is pushed into the film guiding means by the sprocket.

3,122,966
APPARATUS FOR PRODUCING FORMS AND COLORS IN MOTION
James F. Butterfield, North Hollywood, Calif., assignor to James F. Butterfield and Edward Levitt, both of North Hollywood, Calif., a co-partnership
Filed Aug. 1, 1960, Ser. No. 46,726
6 Claims. (Cl. 88—27)



1. Optical projection apparatus consisting of base means for supporting and rotating a circular disc, an opaque, circular, interchangeable disc adapted to be mounted on said base means to be supported and rotated thereby, said disc having a plurality of concentric bands, each band carrying a visual representation; drive means for continuously rotating said disc; common viewing screen means; a plurality of optical systems, one for each band, each comprising a light source for illuminating a predetermined portion of its band, an optical system for focusing the band portion thus illuminated on said common viewing screen, and shutter means in each optical system for interrupting the projection of image rays from its respective band; said disc having a plurality of arcuate projections located adjacent to said image bands; and means actuated by said arcuate projections for selectively operating said shutter means to selectively blank out predetermined portions of said image bands.

3,122,967
AMMUNITION HANDLING AND LOADING SYSTEM FOR MAJOR CALIBER GUNS
Carl T. Johnson and Garold A. Kane, Minneapolis, Milton C. Neuman, Champlin, and Kenneth A. Riach, Minneapolis, Minn., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Nov. 28, 1958, Ser. No. 777,161
8 Claims. (Cl. 89—46)

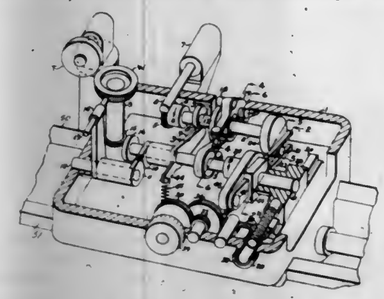


1. An ammunition handling system for an ordnance weapon, comprising in combination, a gun mount supporting the weapon, means for supplying rounds of ammunition to said weapon including a first hoist having a stationary casing with a passage therein through which rounds of ammunition are transported by said hoist, a laterally rotatable carrier above said first hoist having a chamber for receiving a round of ammunition laterally from said first hoist, a second hoist adjacent said carrier having a passage for laterally receiving a round of ammunition, said second hoist being rotatable to different positions, means for selectively moving said carrier to bring said chamber into substantially radial alignment with either of said passages.

3,122,968
INDEXING MECHANISM FOR FINISHING MACHINES FOR GEARS AND THE LIKE
Hans J. Albrecht, Trumbull, Conn., assignor to The Fellows Gear Shaper Company, Springfield, Vt., a corporation of Vermont
Filed Aug. 21, 1961, Ser. No. 132,734
7 Claims. (Cl. 90—1)

1. In a device of the character described, a finishing tool for gears and the like, a frame mounted adjacent to said finishing tool for movement relative thereto, a work spindle rotatable in said frame, means to periodically rotate said work spindle so as to bring different portions

of a work piece mounted on said work spindle into position to be engaged by said tool, said means including a crank head, rotating means for said crank head, an operating lever connected to said crank head, a drive shaft geared to said work spindle, means connecting said op-



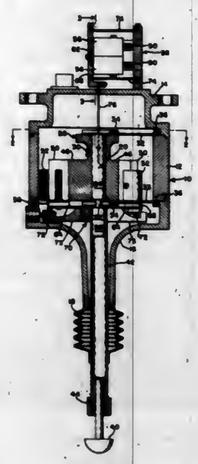
erating lever to said drive shaft, and means to vary and adjust the amount of rotation given to said work spindle, said last named means including a pivotal mounting in said frame for said operating lever and means to change the distance between said pivotal mounting and said crank head.

3,122,969
FAUCET RE-SEATING TOOL
Sidney J. Shames, 19 Agnes Circle, and Harold Shames, 5 Agnes Circle, both of Ardsley, N.Y.
Filed Apr. 10, 1961, Ser. No. 101,901
6 Claims. (Cl. 90—12.5)



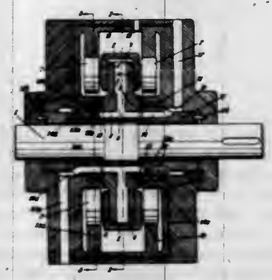
1. A tool for re-seating a faucet valve seat that is located within a faucet body having a bonnet generally concentric with and spaced from said valve seat, said tool comprising, in combination: selectively radially expandable and contractible, elongated, attaching-and-centering means adapted to be entered into and to grippingly engage the interior periphery of a faucet bonnet, elongated sleeve means carried by said attaching-and-centering means coaxially thereof, an elongated shaft axially slidably and rotatably disposed within said sleeve means and extending axially outwardly of both ends of said sleeve means and of said attaching-and-centering means, said shaft cooperating with the sleeve means to be maintained coaxial of said attaching-and-centering means, a faucet-seat cutter carried on said elongated shaft and spaced axially of and adjacent one end of said attaching-and-centering means, said sleeve means being manipulable to effect selective radial expansion and contraction of said attaching-and-centering means, and coupling means spaced axially of and adjacent the other end of said attaching-and-centering means and including registrable elements on said shaft and said sleeve means and a coupling element cooperating with said elements when registered for selectively coupling the said shaft to the sleeve means to selectively manipulate the sleeve means.

3,122,970
TRACING DEVICE
John M. Rhoades, Waynesboro, Va., assignor to General Electric Company, a corporation of New York
Filed Jan. 14, 1960, Ser. No. 2,467
8 Claims. (Cl. 90—62)



1. A contour tracing device comprising a stylus, said stylus having a reduced area portion, a first signal generator circuit coupled to said stylus for producing signals in response to motion of said stylus on one side of said reduced area portion in two mutually perpendicular directions, and a second signal generator circuit coupled to said stylus for producing signals in response to motion of said stylus on both sides of said reduced area portion in a third direction that is mutually perpendicular to said two directions.

3,122,971
MULTI-CYLINDER HYDRAULIC MOTORS
Robert C. Russell, Liberton, Edinburgh, Scotland, assignor to MacTaggart, Scott & Company Limited, Loanhead, Midlothian, Scotland
Filed Mar. 8, 1963, Ser. No. 263,810
1 Claim. (Cl. 91—205)



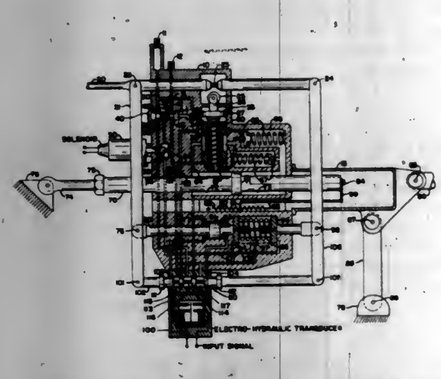
A multi-cylinder hydraulic motor comprising an inner member mounted on a shaft, a plurality of pairs of diametrically opposite piston and cylinder assemblies and rollers carried by said assemblies, said member having a series of axially extending through passages each of which is in communication with the interior of an assembly, a casing enclosing the inner member and assemblies, at least one cam ring carried by the casing and with which the rollers co-operate, two opposed axially slidable valve

members in the form of sleeves encircling the shaft and bearing on the inner member, one of said valve members constituting an inlet valve and the other an exhaust valve, said valve members being non-rotatable with respect to the casing and each having a series of ducts and intermediate balance pockets, the through passages in the inner member registering alternately with the ducts in the inlet and exhaust valve members, an annulus formed by opposed faces of each valve member and casing, one of such annuli being connected to a fluid supply and the other to the fluid exhaust, a further annulus likewise formed by opposed faces of each valve member and casing and connected to the adjacent series of balance pockets, the said faces of the four annuli having the same area, and passages by which the second mentioned annulus of the exhaust valve member is connected to the high pressure side of the motor and the corresponding annulus of the inlet valve member is connected to the exhaust side of the motor, the arrangement and construction being such that the pressure fluid supplied to the motor is admitted to and exhausted from the assemblies under the control of the two valve members and the rollers reciprocated to cause relative rotation of the inner member and casing and the two valve members are equally and oppositely biased by fluid pressure to bear on the outer sides of the inner member, the biasing being proportional to the summation of the fluid inlet and exhaust pressure.

3,122,972
HYDRAULIC SERVOMOTOR

Robert F. Rasmussen, Brooklyn Center, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Dec. 16, 1960, Ser. No. 76,313
6 Claims. (Cl. 91—216)

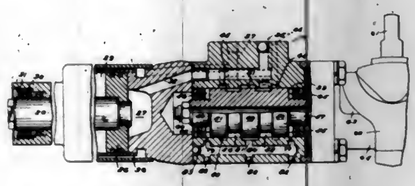


1. In a hydraulic servomotor including a housing: a manual input means; means for positioning and latching said manual input means to said housing; an electro-hydraulic transducer means; an auxiliary actuator; means for positioning and holding said auxiliary actuator relative to said housing; control valve means; and parallelogram linkage means connecting said manual input means, said auxiliary actuator, and said control valve means so that said control valve means is operable as a resultant of the movement of said manual input member and said auxiliary actuator; said auxiliary actuator being operable in response to signals from said electro-hydraulic transducer means; a main actuator; said servomotor housing being positioned relative to said main actuator in response to signals from said control valve means to said main actuator; and feedback means, said feedback means being operable in response to the relative position of one of said actuators.

3,122,973
HYDRAULIC POWER STEERING APPARATUS

Harold A. Lehmann, Oak Park, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed June 4, 1959, Ser. No. 818,123
8 Claims. (Cl. 91—434)



1. In a power steering cylinder assembly of the type having an integral control valve and in which a valve spool is axially movable a short distance in either direction from a central neutral position within a valve body to operate a double acting cylinder, the spool having a series of lands and the valve body having a bore closely receiving the spool and provided with pressure oil and return oil passages and circumferential grooves coacting with the lands of the spool to direct oil under pressure selectively to one end or the other of the cylinder and to return oil from the opposite end of the cylinder, a pair of circumferential pressure-oil grooves being located one adjacent each end of the spool, and in which the valve body has a chamber at each end of the spool, the spool having reaction surfaces forming a portion of the walls of the chambers and there being appreciable leakage of oil from the pressure-oil grooves past the lands of the spool and into the chambers; the improvement which comprises: a restricted fluid passage venting each of the chambers to the return oil passage, the restricted passages being of such capacity as to maintain an equal pressure in said chambers substantially below operating oil pressure during operation of the valve spool and to restrict the passage of oil sufficiently to dampen oscillatory movement and prevent overtravel of the spool upon recentering.

3,122,974
MANUFACTURE OF MOUTHPIECE FOR CIGARETTES

Tom Rowlands, London, England, assignor to Molins Machine Company Limited, London, England, a British company

Original application Oct. 5, 1959, Ser. No. 844,326, now Patent No. 3,052,164, dated Sept. 4, 1962. Divided and this application Aug. 17, 1962, Ser. No. 217,632
Claims priority, application Great Britain Oct. 9, 1958
1 Claim. (Cl. 93—1)



A method of making a double length composite hollow mouthpiece comprising the following steps:

(1) Enclosing a number of double length outer stubs in a tube of paper and spaced apart by twice the distance by which the tube is to extend beyond the outer end of the outer stubs in the finished mouthpiece and cutting the rod thus formed into lengths suitable for machine feeding by bisecting double length stubs to provide single length stubs at each end of such suitable lengths;

(2) Subdividing each said length by bisecting any remaining double length outer stubs to produce double length hollow mouthpieces having a single length stub at each end;

(3) Assembling such double length hollow mouthpieces in regular alternation with double length inner stubs in such manner that each said mouthpiece lies between two of said inner stubs and each said inner stub lies between two of said mouthpieces, to form a composite rod joined by outer wrapping material;

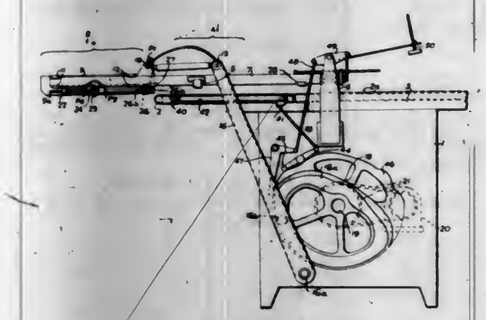
(4) Dividing said composite rod to produce multiple length rods suitable for feeding to a machine, by bisecting only double length inner stubs to provide single length inner stubs at the ends of such multiple length rods, and

(5) Subdividing each multiple length by bisecting any remaining double length inner stubs to produce double length composite hollow mouthpieces.

3,122,975
BOX MAKING APPARATUS

Albert Henry Williams, Sherwood, Nottingham, England, assignor to Caledex Machine Company Limited

Filed May 15, 1962, Ser. No. 194,815
Claims priority, application Great Britain May 19, 1961
5 Claims. (Cl. 93—54)



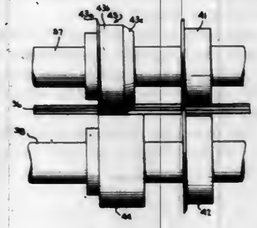
1. Transfer apparatus, as for boxes and wrappers therefor having extended glue-coated flaps, comprising in combination, a conveyor belt having a normal fixed level of travel and carrying a wrapper sheet thereon to be lifted at a transfer position, a transfer device having wrapper pick-up elements travelling at a level above said conveyor such that said pick-up elements are normally not effective to pick up said wrapper, said transfer device being movable to and from said transfer position, and means for raising a portion of said conveyor with said wrapper thereon at said transfer position to raise the wrapper into a position where it is picked up by said pick-up elements when the transfer device is located at the transfer position.

3,122,976
CORRUGATED CARTONS HAVING CRUSH-RELIEVED FLAPS

Herbert R. Anderson, Massapequa, N.Y., assignor to Tri-Wall Containers, Inc., New York, N.Y., a corporation of New York

Filed Apr. 13, 1959, Ser. No. 805,924
2 Claims. (Cl. 93—58.2)

1. A crushing, score and trimming machine for triple-wall corrugated board comprising a pair of motor driven shafts in spaced parallel relation, two sets of trimming rolls mounted on said shafts at spaced positions to trim the edges of board passing through said machine, and two sets of combined score-crush rolls interposed between said trimming rolls on said shafts, each of said sets of score-crush rolls including a first cylindrical roll having a substantially continuous outer surface of substantially constant diameter, said first roll being adapted for supporting board being crushed and scored, and a second cylindrical roll having a substantially continuous outer surface of substantially constant diameter spaced apart from the outer surface of said first roll at a distance less than the thickness of said board and adapted to

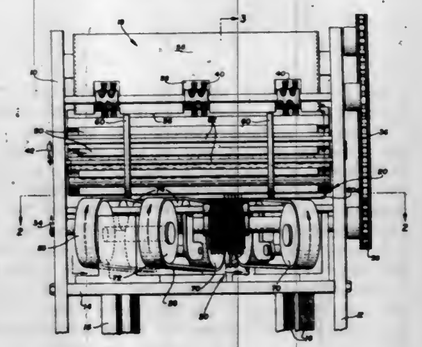


crush board supported by said first roll, said second roll having a substantially circumferential rib portion extending radially from said outer surface and adapted to score said board.

3,122,977
TUBE REINFORCING MACHINE

Arthur Graham, 1548 Edgewood Drive, Palo Alto, Calif.

Filed June 21, 1961, Ser. No. 118,627
17 Claims. (Cl. 93—77)



1. In a tube reinforcing machine adapted for use with drinking straws, a tube feeding station, a tube reinforcing station, a rotatable drum having means for rotatably holding said tubes at its periphery and relatively movable friction means, said friction means being arranged to engage the periphery of and thereby rotate a tube held on the periphery of said drum and to simultaneously urge said tube axially of said drum, said drum including tube end engaging means secured in the path of axial movement of said tubes and adapted on rotation of the tube to deform the engaged end portions of the tube inwardly upon itself to form an inner concentric tube layer, and a discharge station for removing tubes from said drum.

3,122,978
PHOTOGRAPHIC CAMERA WITH AUTOMATIC EXPOSURE SETTING MECHANISM

Herbert Blieske, Frankfurt am Main, Germany, assignor to Alfred Gauthier, G.m.b.H., Calmbach (Enz), Germany, a corporation of Germany

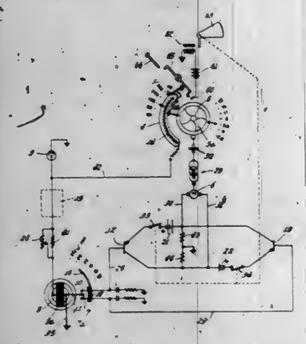
Filed Jan. 23, 1959, Ser. No. 788,594
Claims priority, application Germany Jan. 25, 1958
17 Claims. (Cl. 95—10)

1. An automatically settable photographic camera comprising

(*a*) exposure setting ring,

(*b*) a direct current reversible motor mechanically connected to reversibly drive said ring,

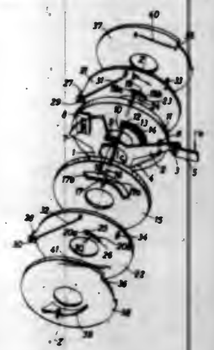
(*c*) a pair of alternately operable electronic amplifiers,
(*d*) each of said amplifiers including a control circuit, an output circuit and a D.C. electrical power supply connected in said output circuit,
(*e*) said amplifiers being connected to said motor so as to apply driving currents thereto in opposition whereby said power supplies are adapted to drive said motor in reverse directions when rendered operative one at a time,
(*f*) means for effecting alternate actuation of said amplifiers to effect driving of said motor either forward or backward,



(*g*) said latter means including a moving coil relay having a moving coil controlling a movable contact,
(*h*) a pair of contacts cooperatively associated with said movable contact, one of said pair of contacts being connected in each of said control circuits of the respective amplifiers whereby engagement of the movable contact with one or the other of the said pair of contacts renders operative the associated control circuit and effects operation of one amplifier or the other to drive the motor forward or backward,
(*i*) and a photoelement connected with said moving coil relay to energize the latter, the circuit of said photoelement and moving coil being independent of the motor circuit for effecting the setting of the ring.

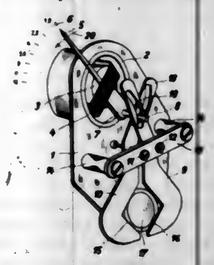
3,122,979
AUTOMATIC CAMERA CONTROLS
Roland Knorr, Munich, Germany, Ulrich W. Auer, Geneva, Switzerland, and Fridolin Hennig, Munich, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany
Filed Dec. 27, 1960, Ser. No. 78,595
Claims priority, application Germany Dec. 30, 1959
15 Claims. (Cl. 95—10)

1. In a camera, in combination, exposure time setting means having a rest position and being movable, while setting the exposure time, from said rest position through a predetermined range of movement; exposure aperture setting means having a rest position and being movable, during setting of the exposure aperture, from said rest position through a predetermined range of movement; drive means adapted to be controlled by the lighting conditions and adapted to be released for operation by the operator; motion transmitting means operatively connected to said drive means to be driven thereby and being movable between two positions, said motion transmitting means in one of its positions cooperating first with said exposure time setting means to move the latter through its range of movement and then with said exposure aperture setting means to move the same through its range of movement and then with said exposure time setting means to move the latter through its range of movement;



and manually operable selecting means cooperating with said motion transmitting means for placing the latter, before release of said drive means, in said one or said other position thereof.

3,122,980
AUTOMATIC DIAPHRAGM ARRANGEMENT FOR CAMERAS
Heinrich Hautmann, Erlangen, Bavaria, Germany, assignor to P. Gossen & Co., G.m.b.H., Erlangen, Bavaria, Germany, a firm
Filed Nov. 13, 1959, Ser. No. 852,646
Claims priority, application Germany Aug. 20, 1959
5 Claims. (Cl. 95—64)

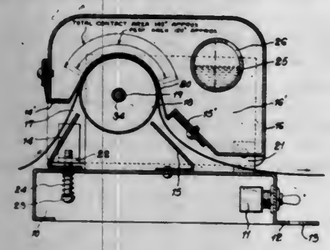


1. In an automatic diaphragm arrangement for photographic cameras wherein two mounted diaphragm vanes are operated by a photoelectrically controlled measuring instrument including a rotary coil, and wherein two adjacent portions of the vanes are shaped to form the exposure aperture proper; the improvement constituted by other portions of the two diaphragm vanes overlying each other and having respective control slots of similar shape which are so arranged that they intersect in every position thereof, two separate laterally spaced pivots for mounting said diaphragm vanes, a lever arm extending from the rotary coil of the measuring instrument, and a single control pin fixed to said lever arm and extending through said slots at the point of intersection of said slots for moving said vanes.

3,122,981
GASEOUS PHOTO-DEVELOPING APPARATUS
Robert M. Ellis, Basking Ridge, and Robert P. Neeb, Franklin Park, N.J., assignors to Rotolite Corporation, Stirling, N.J., a corporation of New Jersey
Filed Oct. 20, 1961, Ser. No. 146,510
1 Claim. (Cl. 95—94)

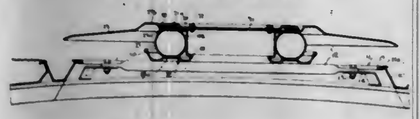
Apparatus for the production of photo-mechanical prints on diazo-type papers, comprising: a base, and a

housing mounted thereon affording an elongated, ammonia-retaining exposure chamber with elongated bottom opening; a resilient strip of non-porous material secured over said opening, inwardly directed into said chamber and having an arcuate section thereof perforated for discharge of ammonia gas directly to the surface of an inserted sheet; a roller externally contacting the said perforated area thereof as well as non-perforated portion beyond the same, said non-perforated portions sealing



the exposure chamber against leakage; and an operative shaft for said roller, extending externally of the housing, to effect its rotation and to advance thereby an exposed print to the contacting area wherein the ammonia exposure chamber contains an externally sealable ammonia supply tray which is mounted therein and provided with a longitudinal opening so arranged as to discharge gas into the exposure chamber when the apparatus is used in either its horizontal or vertical operating position.

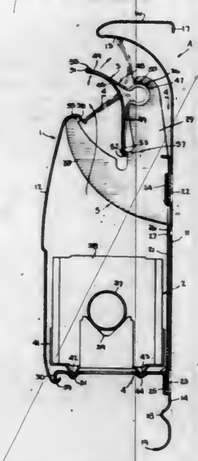
3,122,982
ROOF VENTILATION DAMPER ASSEMBLY
Walter S. Eggert, Jr., Philadelphia, and David L. Buchanan, Whitemarsh, Pa., assignors to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Oct. 20, 1961, Ser. No. 146,606
6 Claims. (Cl. 98—13)



1. In a damper assembly for use with a roof sheet having an opening therein, the combination of: a damper support adapted to be mounted in a roof opening and comprising an annular base plate and a cylindrical core spacer coaxial with said base plate and extending perpendicular to the plane of a roof opening; a cap plate mounted on said core spacer and having a flange opposed to and spaced from said base plate; an annular damper plate disposed concentric to said core spacer and movable along said core spacer between said base plate and said flange; and means for moving said damper plate including an annular pneumatic tube and a return spring connected between said damper plate and said base plate and said flange.

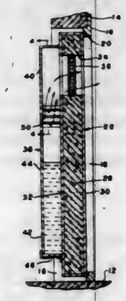
3,122,983
BASEBOARD RADIATOR
Robert B. Duggan and Wilson J. Witten, Jr., Louisville, Ky., assignors to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Apr. 24, 1961, Ser. No. 105,143
2 Claims. (Cl. 98—40)

1. A baseboard radiator comprising a housing having a rear panel and a top wall, a hanger bracket mounted on said rear panel and having a recess opening formed therein, a front panel mounted on said hanger bracket and spaced from said top wall to provide an air discharge opening, a heating unit mounted in said housing, a longitudinally extending damper blade having a curved cross section wherein the concave surface of said damper blade faces said discharge opening, hook means formed on said blade along longitudinal portions thereof, a retaining clip having a pair of arms the ends of which are inserted into said hook means for supporting said curved damper blade on the retaining clip, a bracket secured to said



housing having a substantially horizontally oriented member and a substantially vertically oriented member, an edge portion of said substantially horizontally and vertically oriented members facing the air discharge opening, a non-yieldable open socket bearing positioned in the top front edge portion of said vertically oriented member, and a semi loop formed in said retaining clip and seatable in said non-yieldable open socket bearing for pivotally supporting said retaining clip on said bracket to permit the damper to be opened and closed.

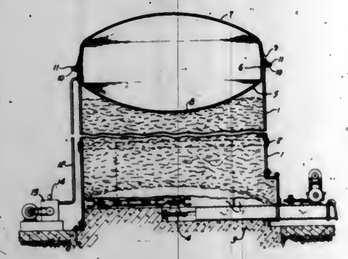
3,122,984
DOOR FOR BOMB SHELTER
Morton M. Rosenfeld, 271 Madison Ave., Mount Vernon, N.Y.
Filed Nov. 24, 1961, Ser. No. 154,543
4 Claims. (Cl. 98—87)

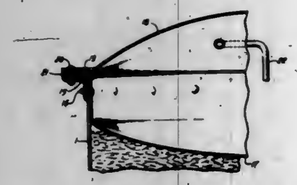


1. Apparatus comprising a wall partially defining an enclosure, said wall having a doorway therein, a door, mounting means mounting said door in said doorway for movement between an open and a closed disposition, said door having an opening therethrough, a filter in said opening, a casing on said door for receiving said filter when

said filter has become contaminated and is replaced by a clean filter, said casing overlying said opening, said casing having a longitudinally extending front wall spaced from said door, said casing having top, bottom and side walls extending from said front wall to said door, vents in the side walls of said casing spaced below said door opening, said vents providing communication between the atmosphere and the interior of said casing, said casing providing a chamber for receiving said filter spaced below said vents.

3,122,985
BREATHER SYSTEM AND ROOF FOR SEALED STORAGE STRUCTURE
Le Roy M. Osborne, Kankakee, Ill., assignor, by mesne assignments, to A. O. Smith Harvestore Products, Inc., Kankakee, Ill., a corporation of Delaware
Filed Jan. 6, 1960, Ser. No. 850
5 Claims. (Cl. 99—235)

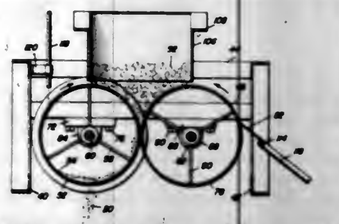




4. A storage structure, comprising a foundation, a generally cylindrical hollow member having an open top vertically mounted on the foundation, said foundation and hollow member acting to provide a storage container impervious to air and moisture, a flexible bag disposed in the open top of the hollow member and providing the sole enclosure for said open top, a first portion of the bag being exposed above said open top of the member and a second portion being disposed within the member, the first portion of the flexible bag being disposed for expansion from the open top of the hollow member to the elastic limit of the first portion of the flexible bag, said bag being disposed in sealing relation with the inner cylindrical wall of said member over a substantial vertical distance, and connecting means for connecting the peripheral portion of the bag to the outer surface of the hollow member to limit the inner and outer axial movement of the bag with respect to said member.

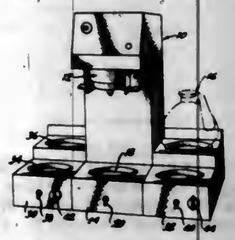
3,122,986
POTATO RICER
Guthrie B. Stone, % Stone Conveyor Co., Inc., Honeoye, N.Y.
Filed Feb. 10, 1960, Ser. No. 7,899
1 Claim. (Cl. 99—246)

A potato ricing device comprising a pair of rigid cylindrical drums arranged in side by side relation and supported for rotation about parallel inclined axes, one of said drums being perforate throughout the peripheral surface thereof and the other of said drums being imperforate, the lower end of said perforate drum being open and forming a discharge for riced potatoes, means drivingly connected to said drums for rotating the drums in opposite directions, supply means disposed above the drums for discharging cooked potatoes between the drums, said drums being disposed in close relationship whereby potatoes passing between the drums will be forced through the perforations in the perforated drum thereby being riced and discharged from the lower end thereof, the space between the drums being completely free of obstructions whereby the drums form the sole means for forcing the potatoes through the perforations in the perforated drum, said perforated drum including a laterally projecting peripheral flange on each end thereof extending in closely adjacent relationship to and inwardly beyond the ends of the imperforate drum at the point of adjacency between the drums thereby retaining the potatoes from moving longitudinally of the drums, the external surface of the imperforate drum being smooth



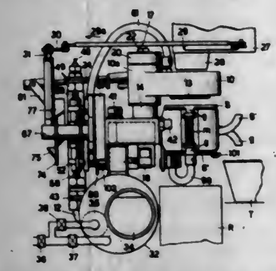
whereby foreign material such as potato eyes, fragments of skin and the like will be picked up by the imperforate drum, and a movable scraper blade disposed closely adjacent the peripheral surface of the imperforate drum only for removing the foreign material therefrom, the perforations in the perforated drum each having a rounded inner and outer edge for reducing breakdown of the cellular structure of the potatoes as they are forced therethrough, support means for said drums including an inclined supporting frame, said drums being mounted on said frame, a stand for said frame, said frame being pivotally mounted on the stand for swinging movement thereof generally in a horizontal plane for enabling the frame and the drums thereon to move from a position in overlying relation to a drum drier to a position spaced away from the drum drier for ease of cleaning of the drums, and means mounting at least one of the drums on the frame for lateral adjustment for enabling adjustment of the spatial relation between the drums.

3,122,987
MODULAR CONSTRUCTION OF BREWING APPARATUS AND HEATING STANDS
Edward J. Ruhnke, Chicago, Ill., assignor to Hill-Shaw Co., Chicago, Ill., a corporation of Illinois
Filed Apr. 5, 1961, Ser. No. 100,968
3 Claims. (Cl. 99—290)



1. A modular construction of brewing apparatus and a heating stand which comprises a portable brewing and dispensing unit, an electrical conductor thereon for connection to a power source, an electrical outlet receptacle on said unit, a portable heating stand disposed in side-by-side abutting relation to said unit, an electrical conductor on said stand detachably connected to said receptacle, base flanges on said unit and said stand disposed in side-by-side relation to each other, means forming adjacent slots in said flanges on the respective unit and stand, and a spring clip means inserted into said adjacent slots connecting said unit and said stand together in side-by-side abutting relation.

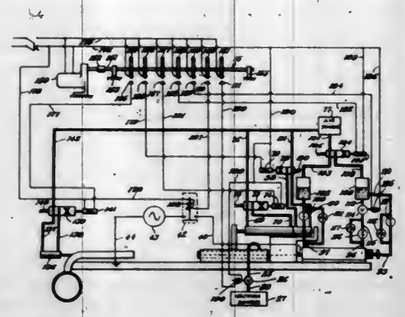
3,122,988
AUTOMATIC MACHINE FOR THE PREPARATION OF COFFEE INFUSION IN DOSES SUFFICIENT FOR ONE OR TWO CUPS
Beniamino Rota, Brandizzo, Turin, Italy
Filed Nov. 21, 1961, Ser. No. 153,933
Claims priority, application Italy Nov. 23, 1960
5 Claims. (Cl. 99—302)



1. Coffee making apparatus comprising a hot water boiler, a cover adapted for being connected to the hot water boiler and to a compressed air source, a body located adjacent said cover and adapted for supporting a coffee filter, means supporting said cover and body for relative movement to permit said cover to be brought into sealing contact with the coffee filter, a main control shaft supported for rotation, a plurality of cam discs supported on said shaft and adapted for controlling the coffee making operation of the apparatus, a distributor operatively controlled by one of said cam discs for selectively feeding to the cover compressed air and hot water from the boiler, connections for said hot water boiler and said compressed air source fixedly arranged in coaxial relation, said distributor including a distributor body having open ends and slidable between said connections to establish communication between the distributor body and respective of said connections, means establishing communication between said distributor body and said cover, a valve body having opposite ends and slidably supported within said distributor body, and gasket means on the ends of the valve body for respectively sealingly closing the open ends of the distributor body, said valve body in a normal position blocking the open end of the distributor body associated with the hot water connection, said valve body being displaced to close the other of the open ends of the distributor body under the action of water pressure with said distributor body displaced by said one cam disc to a position in communication with said connection for said hot water boiler.

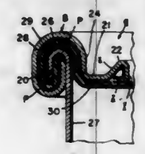
3,122,989
CONTINUOUS MANUFACTURE OF SAUSAGE
Ogden A. Clemens and Howard P. Bonhelmer, Chicago, and Harvey H. Trombly, Park Forest, Ill., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois
Original application Mar. 11, 1957, Ser. No. 645,221, now Patent No. 2,965,491. Divided and this application May 20, 1960, Ser. No. 41,463
6 Claims. (Cl. 99—358)

6. A device for molding a comminuted meat-containing product into the form of sausage or the like, said device comprising a tubular mold member, a vacuum passageway located in the wall of said mold member adjacent one end thereof, a pair of end members positioned in line with said tubular mold member at opposite ends thereof, said mold member being of a size to telescopically slide upon both of said end members, first power means to sequentially move one end member in the direction of the other end member into a closely spaced relation and in the reverse direction apart from said other



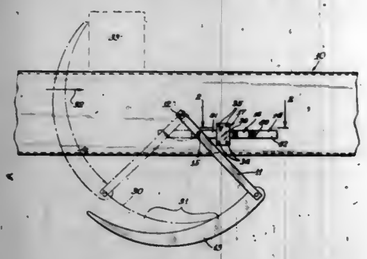
end member, second power means to move said mold member with respect to said one end member to slide upon both end members and to first position said vacuum passageway between said end members and thereafter to slide the passageway upon one of said end members while said members are in said closely spaced relation, and means to inject sausage emulsion into said mold member between said end members as said members are moved apart.

3,122,990
WINDOW TOP CONTAINERS
Louis Fried, 67 S. Munn Ave., East Orange, N.J.
Continuation of application Ser. No. 467,601, Nov. 8, 1954. This application Aug. 23, 1960, Ser. No. 54,561
4 Claims. (Cl. 99—369)



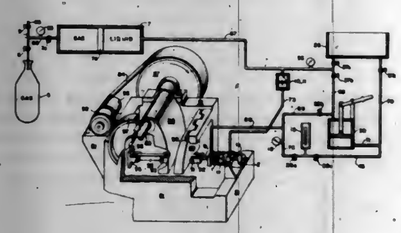
4. A receptacle comprising a body having a side wall, and a closure wall upon one end of the side wall, said closure wall embodying a substantially rigid perimetrical portion hermetically sealed to the end of the body and permanently seamed thereto, a portion integral with said first mentioned portion carried by and disposed over and within the area circumscribed by said perimetical portion and inwardly of the end of the side wall to which said one of said closures is attached, and the said portion within the perimetrical portion being characterized in that it may be readily totally or partially removed by a cutting means from the said perimetrical portion to thereby permit contents of the receptacle to be removed therefrom, said perimetrical portion having an inside rigidifying bead formed in part by a downwardly and outwardly directed part thereof and said outwardly directed part having an inwardly facing flat surface over and against which the second mentioned portion lies.

3,122,991
DIFFERENTIAL NEEDLE BRAKE FOR BALERS
Homer N. Grillot, Naperville, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Dec. 14, 1961, Ser. No. 159,238
4 Claims. (Cl. 100—19)



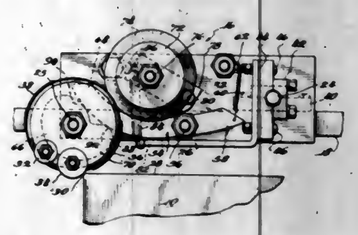
1. A needle brake for a baler, comprising: a bale forming chamber, a needle tie pipe pivotally mounted at one end thereof on said bale forming chamber, a needle mounted on the end of said needle tie pipe away from said pivotal mounting, a brake arm connected adjacent one end thereof to said needle tie pipe, said needle tie pipe being adapted to oscillate and thus impart a generally reciprocal movement to said needle and said brake arm, said brake arm including means for causing during each stroke thereof a variable braking force comprising, in seriatim, a minimum braking force, a maximum braking force, and a minimum braking force, a braking member mounted on said bale forming chamber, said braking member cooperating with said means for causing a variable braking force to produce a braking effect on said brake arm, whereby said variable braking effect is varied during each stroke of the brake arm with the greatest braking effect occurring during the mid-travel of said brake arm and a minimum braking effect occurring during the extremities of its travel.

3,122,992
OVERLOAD RELEASE MECHANISM
Harry Paul Kautz, Broomfield, Colo., assignor to Mine and Smelter Supply Co., Denver, Colo., a corporation of Colorado
Filed May 4, 1961, Ser. No. 107,730
3 Claims. (Cl. 100—50)



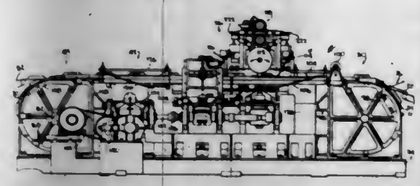
1. An overload release mechanism comprising: an accumulator having a floating piston therein dividing the same into two compartments, the said accumulator being adapted to contain liquid in one compartment thereof and gas in the other; a cylinder having a double acting piston therein, the said piston dividing said cylinder into a forward compartment and a rear compartment, the latter of which is adapted to contain liquid and the said piston being mounted on a piston rod adapted to be connected to a movable force applying part of a force applying machine; a main hydraulic reservoir, the said reservoir being connected by a valved pipe to the forward compartment of said cylinder, and a unitary combined check and resistor valve adapted to automatically and freely pass liquid therethrough in one direction and to automatically restrict the passage of liquid therethrough in the opposite direction, one end of said valve being connected to the rear liquid compartment of said cylinder and the opposite end of said valve being adapted to be connected to the liquid compartment of said accumulator, the arrangement being such that the position of the piston in said cylinder and correspondingly the adjustment of the force applying part of the force applying machine may be adjusted to predetermined positions by admitting liquid from the reservoir to the forward compartment only of said cylinder and such that upon overload release when the piston is forced backwardly by the movable part of the force applying machine, only the liquid in the rear compartment of the cylinder will be forced and pass freely through the said check and resistor valve into the liquid compartment of the accumulator where it will force the floating piston in the accumulator backwardly and compress the gas therein and, upon overload relief of pressure in the cylinder, the compressed gas in the accumulator will slowly return liquid from the liquid compartment of the accumulator back through said valve only to the rear liquid compartment of the cylinder.

3,122,993
SYNCHRONIZING DEVICE FOR CARTON PRINTING APPARATUS AND THE LIKE
James G. McKay, 5138 Mobile Ave., Chicago, Ill.
Filed May 19, 1959, Ser. No. 814,239
18 Claims. (Cl. 101—35)



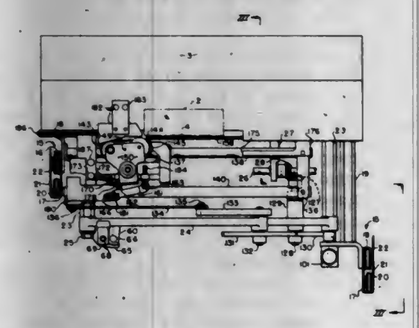
1. A synchronizing device for a printing mechanism for printing indicia upon packages moving along a conveyor past said mechanism whereby said indicia is applied to a common surface of each package at an identical location spaced from the leading edge thereof regardless of the length of said packages and said mechanism has a printing wheel, indicia printing means on the peripheral edge of said wheel and means for urging the printing wheel periphery into engagement with said surfaces as said packages pass said mechanism; said synchronizing device comprising roller means rotatable in unison with said printing wheel, detent means cooperating with said wheel and defining therewith an initial rotative disposition relative to said conveyor whereby the said surface of each of said packages will commence rolling engagement with said wheel from said initial position as its said leading edge engages with said wheel, said roller means comprising a pair of rollers disposed adjacent of and extending beyond the peripheral edge of said wheel into the path of said moving packages and adapted when said wheel is so initially disposed to be rotated with said wheel to a second rotative disposition in which said roller means engage said surface and roll relative thereto without rotative movement of said wheel until said surface has passed, said detent means thereafter acting to move said wheel to said initial disposition.

3,122,994
SPECIAL CARTON PRINTING PRESS
Kenneth L. Crabtree, Fairfield, Maine, and Charles R. Thomas, Jr., Cochituate, Mass., assignors to Keyes Fibre Company, Inc., Waterville, Maine, a corporation of Maine
Filed Sept. 6, 1961, Ser. No. 136,275
13 Claims. (Cl. 101—35)



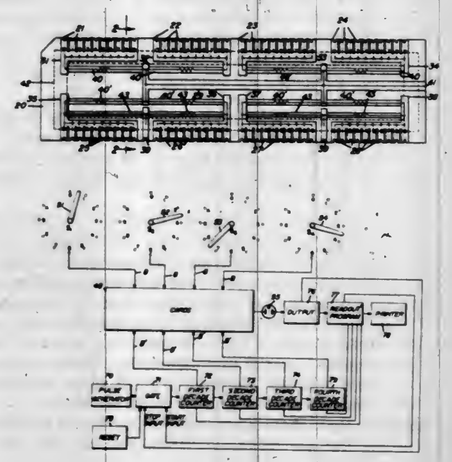
1. A carton printing press having printing means for printing on a continuously moving carton, and endless platen means for transporting cartons through a printing zone where said printing means is located, said platen means comprising a plurality of separate work supports carried on one side of platen links, a connecting pin pivotally linking together successive ones of said platen links, gear teeth formed on the side of said platen links opposite said work supports, said gear teeth on said platen links forming what is in effect a continuous and endless rack, driving means in mesh with said rack for continuously moving said platen links in one direction through said printing zone and for continuously returning said platen links in a reverse direction for subsequent movement in said first direction through said printing zone, two sets of roller bearings on each of said connecting pins to vertically position said platen links during their movement in each of said directions, each set of said roller bearings running on a separate guide rail, one of said guide rails being so disposed that one set of said roller bearings always rotates clockwise and the other of said guide rails being so disposed that the other set of said roller bearings always rotates counterclockwise during said continuous movement in each of said directions.

3,122,995
TICKET PRINTER AND CUTTER
Clarence E. Adler and Frederick C. Carroll, Toledo, Ohio, assignors to Toledo Scale Corporation, Toledo, Ohio, a corporation of Ohio
Filed Feb. 6, 1959, Ser. No. 791,728
18 Claims. (Cl. 101—66)



1. In a printer, in combination, a printing station, a stationary track adjacent the printing station, a carriage mounted to reciprocate along the track, means for reciprocating the carriage, a pivotally mounted member carried by the carriage, an ink roller carried by the member, a platen roller carried by the member, the member having an inking position wherein the ink roller contacts and inks type in the printing station and the platen roller is in an inoperative position and a printing position wherein the platen roller presses an element to be printed in the printing station against the inked type and the ink roller is in an inoperative position, means for holding the member in the inking position during a forward stroke of the carriage, means for pivoting the member into the printing position at the end of the forward stroke, means for holding the member in its printing position during the return stroke of the carriage, support means for supporting the element in the printing station after the type have been inked, the support means releasing the element just before the platen roller presses the element against the inked type, and means for returning the member to the inking position at the end of the return stroke of the carriage.

3,122,996
INFORMATION STORAGE SYSTEM
Henry T. Heatwole, Silver Spring, Md., assignor to Heatwole Associates Incorporated, Washington, D.C., a corporation of the District of Columbia
Filed Dec. 9, 1959, Ser. No. 858,522
22 Claims. (Cl. 101—93)

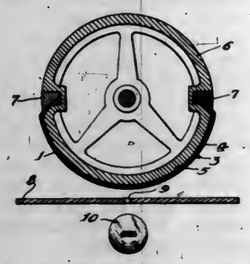


2. An information storage system comprising a stack of a plurality of insulating sheets, means for electrically insulating said sheets from each other, each said sheet having a first conductive contact at a predetermined position corresponding to first coded information, a second conductive contact at a predetermined position corresponding to second coded information, a third conductive contact, electrically conducting means connecting said first contact to said third contact, electrically conducting means connecting said second contact to said third contact, said electrically conducting means constituting an additive resistive circuit, a first set of busses contacting corresponding first contacts on said sheets, a second set of busses contacting corresponding second contacts on said sheets, and means contacting each said third contacts for detecting a potential occurring simultaneously at said first contact and second contact.

3,122,997
METHOD OF PREPARING COPIES INCLUDING MASTERS

Walter A. Raczynski, Park Ridge, and Robert N. Quoss, Hinsdale, Ill., assignors, by mesne assignments, to Ditto, Incorporated, Chicago, Ill., a corporation of Illinois

Continuation of application Ser. No. 726,378, Apr. 4, 1958. This application Feb. 8, 1960, Ser. No. 7,482
21 Claims. (Cl. 101—149.2)



7. In a method of making reproductions from an original sheet

(A) which employs an assemblage of sheets including,

(1) an original sheet having image portions which are infrared absorbing-heat generating and non-image portions which are substantially non-infrared absorbing-heat generating,

(2) a copy sheet, and

(3) a transfer sheet made up of a base sheet carrying on one surface thereof a layer of transfer material which is solid at room temperature and softenable at temperatures above normal room temperature; and

(B) which comprises the steps of,

(1) forming an assembly of sheets wherein,

(*a*) the layer of transfer material is in surface contact with said copy sheet, and

(*b*) the original sheet is in surface contact with the base sheet of said transfer sheet; and

(2) directing the sufficient quantity of radiations rich in infrared directly onto said original sheet prior to said radiations striking the other sheets the assemblage to generate substantially instantaneously a temperature rise in the image portions of the original sheet, thereby to reduce the material in the corresponding areas of the transfer material to a softened condition, so that said softened material in said areas transfers to said copy sheet to produce an image;

the improvement wherein the original sheet and the base sheet of the transfer sheet have the following characteristics:

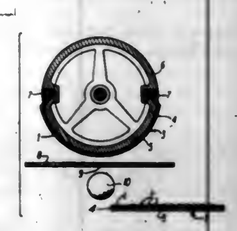
Original sheet:	
Caliper ——— mils	1.1–2.6
Smoothness (Sheffield)	3.0–320
Infrared Densichron range	0.00–0.10
Infrared homogeneity	0.00–0.10
Ash content ——— percent	0.8–10
Opacity (Bausch & Lomb Opacimeter), maximum	80
Base sheet of the transfer sheet:	
Caliper ——— mils	0.9–2.9
Smoothness (Sheffield)	17–260
Densichron range	0.00–0.30
Infrared homogeneity	0.00–0.05

8. The process as set forth in claim 7 being further characterized in that said transfer material is an olephilic lithographic composition and the copy sheet is a lithographic mat having a hydrophillic surface in contact with the surface of the transfer sheet.

3,122,998
INFRARED TRANSFER PROCESS

Walter A. Raczynski, Park Ridge, and Robert N. Quoss, Hinsdale, Ill., assignors, by mesne assignments, to Ditto, Incorporated, Chicago, Ill., a corporation of Illinois

Filed June 2, 1960, Ser. No. 33,507
12 Claims. (Cl. 101—149.2)



5. A process of producing a copy of graphic material which employs an assemblage, including;

(A) a surface of a sheet bearing thereon graphic material defined by radiant-energy-absorbing-heat-generating image areas and non-image areas which are substantially non-radiant-energy-absorbing-heat-generating,

(B) a surface of a sheet upon which copy is to be made, and

(C) a supply sheet carrying on one surface thereof a coating of transfer material adhered to said one surface which transfer material is plastic at temperatures above those normally encountered in storage and shipment, said process comprising the steps of:

(1) arranging the assemblage so that,

(*a*) the coating of transfer material on said supply sheet is in contact with the surface of the sheet upon which copy is to be made, and

(*b*) the surface of the sheet bearing thereon graphic material is in heat transfer association with said coating,

(2) urging the assemblage into close association by the application of an evenly distributed minimum pressure to opposite exterior surfaces thereof;

(3) impingnig said assemblage with radiant energy from said source in quantities sufficient to generate on said graphic material bearing surface a heat pattern corresponding to the image areas thereon,

(4) transferring said heat image substantially instantaneously from said graphic material bearing surface to the interface between said surface upon which copy is to be made and said supply sheet,

(5) maintaining said impingement for an interval sufficient to develop on the surface of said coating adjacent to said surface upon which copy is to be made and in the areas thereof corresponding to the image areas of said graphic material bearing surface, a temperature adequate, under conditions of prevailing pressure, to render said transfer material plastic and to effect:

(*a*) an integration between said areas of said coating and said surface upon which copy is to be made, without

(*b*) effecting an integration in the areas of said coating corresponding to the non-image areas of the graphic material bearing surface,

(6) relieving said assemblage of said impingement,

(7) cooling said assemblage for an interval sufficient to reduce the temperature thereof below that at which said transfer material is plastic and to effect an adhesion between said coating and the surface upon which copy is to be made at said areas of integration which adhesion is greater than that between said coating and said supply sheet, and

(8) mechanically separating said sheet upon which copy is to be made and said supply sheet, and thereby disrupting said coating of material at the adhered areas, by

(*a*) shearing said coating of transfer material through its thickness at the peripheries of said adhered areas, and

(*b*) separating said coating from said supply sheet in the adhered areas substantially at said one surface of said supply sheet,

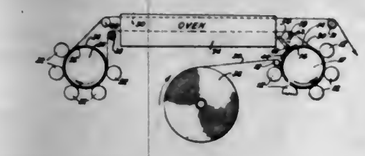
whereby coating material is mechanically pulled from and released by said supply sheet and transferred to the surface of the sheet upon which copy is to be made at areas corresponding to said image areas of said graphic material bearing surface, and is retained by said supply sheet throughout all other areas thereof.

6. The process of producing a copy as set forth in claim 5 further characterized in that the surface of a sheet bearing thereon image areas and the surface of a sheet upon which copy is to be made are on the same sheet.

3,122,999
CYLINDER HEATING MEANS FOR ROTARY PRINTING PRESS

Martin K. Visser, Des Moines, Iowa, assignor to Meredith Publishing Company, Des Moines, Iowa, a corporation of Iowa

Filed May 15, 1961, Ser. No. 110,185
3 Claims. (Cl. 101—180)

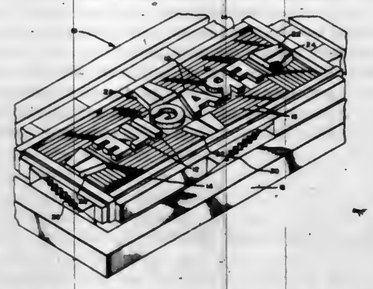


1. In a rotary printing press construction, the combination with a first-pass impression cylinder and printing cylinders associated therewith, a second-pass impression cylinder and printing cylinders associated therewith and drying means for a web from said first-pass impression cylinder to said second-pass impression cylinder, said first-pass impression cylinder having packing thereon adapted to coact with the in-going portion of the web at one point on the circumference of said cylinder, with the out-going portion of said web at another point on said circumference and with said web on a circumferential portion of said packing between said points, heating means for the remaining portion of said packing not traversed by said web, said heating means being arranged parallel to and spaced from a corresponding portion of said first-pass impression cylinder, means to direct heat from said heating means directly toward said corresponding portion, thereby to stabilize temperature, web shrinkage and resiliency at said first-pass impression cylinder with respect to the same at said second-pass impression cylinder, and means for mounting said heating means on the frame of the printing press.

3,123,000
METHOD AND DEVICE FOR PRODUCING REFERENCE LINES ON PRINTING DIES

Philip G. Saunders, 5315 Norton Place, Toledo 14, Ohio

Filed Sept. 29, 1961, Ser. No. 141,865
9 Claims. (Cl. 101—401.1)



8. In a method for making a printing die which includes the steps of preparing a form, making a mold from said form, grinding a raised surface of said mold, and making a printing die from said mold, the improvement which comprises placing a body on said form, with a surface thereof at approximately the same height as printing type used therein, and placing a body in a recess in the ground mold, which recess was made by the body on said form, said body being placed in said recess before said die is made from said mold.

3,123,001
SHEET CLAMPING MEANS FOR PRINTING DEVICE

Wilson W. Perry, Box 625, Falls Church, Va.

Filed Aug. 15, 1961, Ser. No. 131,528
6 Claims. (Cl. 101—415.1)



1. In a printing device including a roll having a groove extending longitudinally across the cylindrical surface thereof and means cooperating with a wall of said groove for clamping a sheet to the cylindrical surface of the roll comprising a bar, said bar having at least one rectangular face and a cooperating clamping edge, said clamping edge being continuous and substanially coextensive with the wall of the groove, cylindrical end portions for said bar, a pair of bearing blocks adapted to receive the cylindrical end portions of said bar, means mounting one of said pair of bearing blocks in the groove of the roll adjacent each end of the groove to position said one face of said bar in parallel spaced relation to the trailing edge of the groove, and handle means secured to said bar for pivoting said bar about the bearing blocks to a sheet receiving and removing position and a position wherein a clamping edge of the said one face of the bar secures an end of the sheet in clamping engagement with said trailing edge of the roll groove, and a stop member adjustably carried by each of said bearing blocks.

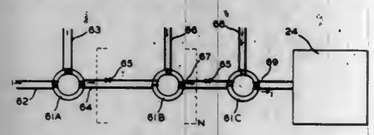
3,123,002
FUSING DEVICE

James Spool, Washington, D.C., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts

Filed Jan. 20, 1956, Ser. No. 560,407
2 Claims. (Cl. 102—70.2)

1. A fusing or arming mechanism for explosive containing projectiles comprising a first, second, and third

core of a ferro magnetic material, said material having the property of a generally rectangular hysteresis curve, a first control winding on said first core and a second control winding on said second core, said first and second control windings being connected in series, an additional control winding on said second core, a first output winding on said first core, a second output winding on said second core, a third control winding on said third core, first conducting means connecting said first output winding with said third control winding, a fourth control winding on said third core, second conducting means connecting the second output winding with the fourth control winding, a separate input winding on said third core and a separate



reverse output winding on said third core, two responsive circuits connected to said output winding, a diode in each of said responsive circuits, the first of said circuits including a switching motor and an explosive motor, the second of said circuits including a switch and a detonator, said switch being closed by said switching motor, said detonator being moved by said explosive motor, so constructed and arranged that a current flow in said first control winding causes a change in the polarization in said third core, and producing a current in the output winding actuating said motors in said first circuit and current producing means connected to said separate input winding to produce a polarization change effected by said first control winding to fire said detonator.

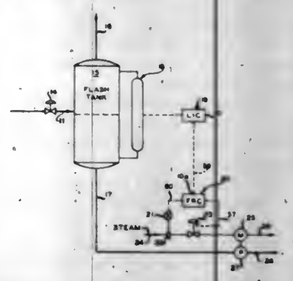
3,123,003
GALLERY BULLET
Paul H. Lange, Jr., New Haven, Conn., and Omer W. De Jarnett, Alton, Ill., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed Jan. 3, 1962, Ser. No. 164,157
9 Claims. (Cl. 102—91)



1. A formulation suitable for preparing a disintegrating gallery bullet by powder metallurgy techniques comprising a mixture of 70–83 parts by weight of lead powder the surface of which is substantially free of corrosion and oxidation products, 30–17 parts by weight of iron powder and 0.1–1.0 part by weight of a thermosetting resin.

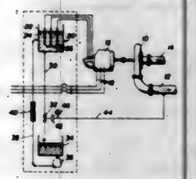
3,123,004
LEVEL CONTROL WITH FLUID ACTUATED PUMP
Howard B. Irvin and Joseph W. Davison, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 5, 1962, Ser. No. 228,616
5 Claims. (Cl. 103—16)

1. A method for regulating the operation of a pressure fluid driven motor driving a pump which pumps liquid from one zone to another zone comprising sensing the level of liquid in said one zone, manipulating the set point of a flow controller in response to the sensed liquid level, passing a signal in response to the resetting of said set point to a pressure fluid flow regulator, the flow of said fluid actuating said motor, sensing the rate of flow of said pressure fluid to said motor, and overriding the resetting operation upon sensing a rate of flow of said pressure fluid greater than the rate of flow of said pressure



fluid corresponding to the setting of said set point thereby throttling the flow of said pressure fluid upon too great an increase in rate of flow of said pressure fluid and vice versa.

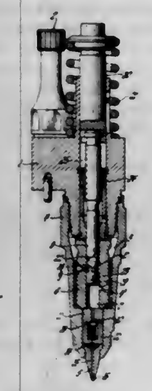
3,123,005
MOTOR SPEED CONTROL
Victor N. Bredehoeft, Corvallis, and Frank J. Miehe, Portland, Oreg., assignors to General Services Company, Corvallis, Oreg., a corporation of Oregon
Filed Apr. 2, 1962, Ser. No. 184,163
1 Claim. (Cl. 103—35)



In a fluid system,
a pump for supplying fluid to said system,
a slip ring motor connected to said pump to drive the same,
a control unit for controlling the speed of said motor so as to maintain a relatively constant pressure of fluid in said system,
said unit comprising a cabinet,
a liquid rheostat including an electrolyte chamber mounted in said cabinet adjacent the top portion thereof, and a plurality of electrodes mounted in said chamber,
a reservoir mounted in said cabinet beneath said chamber,
a drain line in the bottom of said chamber discharging into said reservoir,
a valve in said drain line for regulating the rate of flow therethrough,
a pressure responsive valve operating means connected to said pump to detect the discharge pressure thereof and connected to said valve for operating the same,
constant flow pump means for returning electrolyte from said reservoir to said chamber,
and means connecting said electrodes to said slip ring motor.

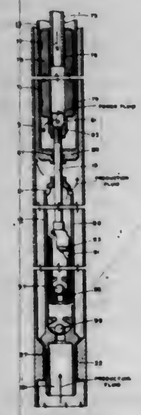
3,123,006
INJECTOR PLUNGER
Dale M. Partridge, Grand Rapids, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 13, 1961, Ser. No. 116,810
1 Claim. (Cl. 103—41)

In a plunger for a fuel injector pump of the reciprocating plunger type having a pumping chamber with a plunger controlled side port, said plunger having an external groove registerable with said port during its pumping stroke, said groove comprising a first portion extending generally circumferentially of the plunger and an adjoining second portion extending generally longitudinally of the plunger, said groove first portion having a lateral extremity disposed generally helically of the plunger axis and terminating with a generally longitudinally extend-



ing lateral extremity of said groove second portion, said last named extremity being a surface substantially coplanar with the longitudinal axis of the plunger, said groove second portion having its bottom flat surface extending generally perpendicular to said surface substantially coplanar with the longitudinal axis of the plunger and intersecting the ungrooved periphery of the plunger adjacent said groove.

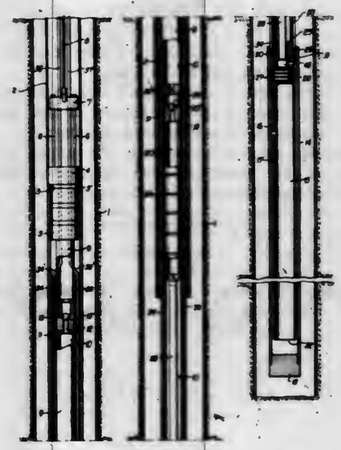
3,123,007
WELL PUMP
Willis P. Orr, Tyler, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Oct. 23, 1961, Ser. No. 146,745
7 Claims. (Cl. 103—45)



1. For use with a well pumping system including a flow pipe string and a standing valve means and reciprocable traveling valve means therein, and a tubular power fluid pipe string of smaller diameter than the flow pipe string for insertion in the flow pipe string, apparatus for reciprocating said traveling valve, comprising:

a terminating member for said power fluid pipe string comprising an outer tubular member and a shorter inner tubular member coaxially disposed and connected together at the upper ends thereof to form an annular piston chamber therebetween whereby power fluid from the power fluid pipe string may be conducted through the inner tubular member, said inner tubular member being open at the lower end thereof;
annular piston means in said piston chamber and around said inner tubular member for reciprocating movement on said inner tubular member, the lower end of said piston means extending to at least the lower end of said inner tubular member when said piston means is at its uppermost position in said chamber;
at least one port in said piston means at the lower end thereof for fluid passage between the bore of said inner tubular member and the bore of said outer tubular member under said piston means;
a connecting rod for connecting said piston means to said traveling valve, and
sealing means in said outer tubular member for sealing between said outer tubular member and said connecting rod.

3,123,008
DOWN WELL PUMP
Herman Dale Lowry, Costa Mesa, Calif., assignor to Lowry Hydraulic Co., Long Beach, Calif., a corporation of Nevada
Filed Mar. 5, 1962, Ser. No. 177,323
8 Claims. (Cl. 103—46)



1. In an economical, dependable well pump adapted to be located within the production tube in a well, the combination of:
(*a*) a vertically-oriented first elongated cylindrical housing having a first axial cylindrical chamber therein and containing a first check valve means in the upper portion of said chamber, said check valve means being adapted to permit well fluid to flow only upwardly through said chamber;
(*b*) a vertically-oriented second elongated cylindrical housing attached to the bottom of said first housing and having a second axial cylindrical chamber therein, said second chamber being formed by a third elongated cylindrical housing with said third housing being coaxial and having a smaller diameter than said second housing and forming an annular space between said housings and said second cylindrical chamber having a substantially larger cross-sectional area than said first chamber;

(c) a sealing sleeve means attached to the top of said first housing, said sleeve means

(I) having a conduit therethrough for conducting well fluid from the upper portion of said first chamber into the portion of the production tube above said sleeve; and

(II) being adapted to form a sealing fit with support means on said production tube to prevent well fluid from flowing downwardly within said production tube;

(d) a first piston slidably mounted in said first chamber having a conduit therethrough and containing a second check valve means, said second check valve means being adapted to permit well fluid to flow only upwardly through said piston;

(e) at least one port in lower portion of said first housing for conducting well fluid from the outside of said first housing into the lower portion of said first chamber;

(f) a second piston slidably mounted in said second chamber;

(g) a piston rod means connecting said pistons;

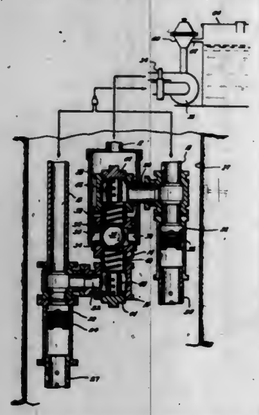
(h) at least two openings into said second chamber, the first of said openings communicating hydraulic fluid pressure to the upper end of said second chamber and the second of said openings communicating hydraulic fluid pressure to the lower end of said chamber through the annular space between said second and third housings;

(i) at least two pipes attached to said second housing and extending upwardly outside of said first housing above the highest position of said first piston, entering into said first housing at an acute angle with the axis of said first housing, and then extending upwardly within said first housing into the production tube above said first housing;

(I) the first of said pipes being connected to said first opening and the second of said pipes being connected to said second opening;

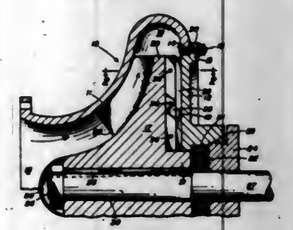
(j) bleeder means connecting the upper portion of said second chamber below the highest position of said second piston to said first pipe.

3,123,009
PUMP
John P. Watson, P.O. Box 711, Luling, Tex.
Filed Aug. 28, 1961, Ser. No. 134,305
4 Claims. (Cl. 103—75)



1. A fluid pump for pumping fluid out of a well bore to the surface comprising, a circulation system including an input and two return lines positioned in said well, said input and return lines having first and second ends, the first ends of said input and return lines joined together in said well bore, means for circulating liquid in the circulation system connected between the second ends of said lines and positioned adjacent the surface, a double acting valve positioned in the juncture of the first ends of the said lines, said double acting valve including a valve seat between each of said return lines and said input line, a ball axially aligned between said valve seats for alternate seating on each of said valve seats, and means on opposite ends of said ball yieldably acting against it in a direction to seat said ball on said valve seats, a check valve positioned in each of said return lines, said check valves positioned adjacent the fluid to be pumped and permitting inflow of said fluid into said return lines through the check valves but preventing outflow therefrom, and a liquid discharge line in fluid communication with said circulation system.

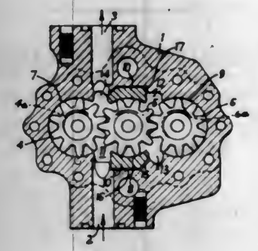
3,123,010
CENTRIFUGAL PUMP WITH THRUST BALANCING MEANS
Donald L. Witt, North Palm Beach, and Richard Vaughn, Lake Park, Fla., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Dec. 15, 1961, Ser. No. 159,800
1 Claim. (Cl. 103—103)



In a centrifugal pump having a casing formed by a first and second section, an inlet opening centrally located in said first section, an outlet opening formed in the periphery of said first section, flange means on said second section for removably securing said first and second sections of said casing together, an aperture centrally located in said second section of said casing, a rotatable shaft extending into said casing through said aperture, an impeller having a hub for engagement with said shaft, securing means comprising a taper on said shaft which mates with a taper on said impeller hub and a locking nut urging said impeller onto said shaft to prevent its separation therefrom, said impeller having a front face and a rear wall, a plurality of vanes integrally mounted on said front face, a plurality of spaced back vanes arranged in pairs and extending from the hub to the circumference of said impeller, said vanes projecting from said rear wall, a plurality of radial channels formed in said back vanes, an insert replaceably secured in each of said channels, said insert being rectangular in cross-section and conforming to the configuration of the channel which retains it, said insert having a flat outer face which may be lap fitted into a close fit with said inner rearward wall of said casing for its full length.

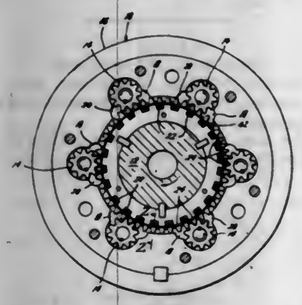
3,123,011
PUMPS AND MOTORS HAVING INTER-MESHING ROTORS
Robert Spurgeon Wood, Alverstoke, Gosport, England, assignor to The Plessey Company Limited, Ilford, England, a British company
Filed Jan. 14, 1963, Ser. No. 251,279
2 Claims. (Cl. 103—126)

1. A rotary-displacement machine comprising a housing having a displacement chamber, two outer lobed displacement rotors mounted in the housing for rotation and limited radial movement in said chamber and a central rotor mounted in the housing for rotation in intermeshing engagement with each of the outer rotors, and the periphery of each rotor in substantially sealing engagement with the housing along part of the circumference of the chamber between all consecutive zones of intermesh so as to mutually isolate four parts of said chamber each confined between the zone of intermesh of two adjacent rotors and two mutually adjacent points of sealing contact of the housing with the peripheries of said



rotors, the housing including a main housing body and two wall portions, respectively containing the areas of sealing contact with the central rotor and each mounted in said housing body for movement towards and away from the periphery of the central rotor, the housing including a pressure chamber at the outer side of each said movable wall portion, said movable wall portion forming part of the wall of the pressure chamber, and passage means establishing communication between each said pressure chamber and at least one of said four parts of the chamber.

3,123,012
HYDRAULIC GEAR APPARATUS
Lafayette E. Gilreath, 7623 Arnim, Houston, Tex.
Filed Feb. 18, 1963, Ser. No. 259,215
2 Claims. (Cl. 103—126)



1. In a hydraulic gear apparatus having a housing, a sun gear in said housing, a plurality of planet gears in said housing around the periphery and meshing with the sun gear, a hydraulic inlet port on one side of each planet gear and a hydraulic outlet port on the opposite side of each planet gear, the housing positioned adjacent the outer periphery of said sun gear and extending between adjacent planet gears a distance greater than the circumferential distance between alternate teeth on said sun gear, the improvement comprising,

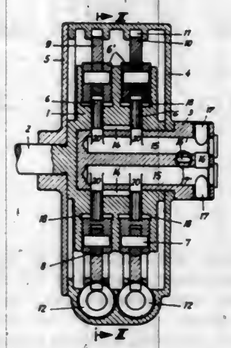
alternate teeth of said sun gear being mounted in the sun gear for radial movement inwardly and outwardly while the remainder of the teeth of the sun gear are secured to said sun gear,

said sun gear having radially extending slots for supporting each individual radially movable tooth,

means limiting the outward radial movement of said alternate movable teeth,

two fluid passageways, one of which communicates between the face of each movable tooth on one side of the tooth crest to the slot containing the tooth at a point radially behind the tooth, and the second of said passageways communicating between the tooth face of each movable tooth on the second side of the tooth crest to said slot at a point radially behind said movable tooth.

3,123,013
HYDRAULIC PISTON MACHINES
Alfred Ganahl, Kloten, Zurich, Switzerland, assignor to Aktiengesellschaft Ernest H. Fischer's Söhne, Dottikon, Aargau, Switzerland
Filed Sept. 24, 1962, Ser. No. 225,807
5 Claims. (Cl. 103—161)

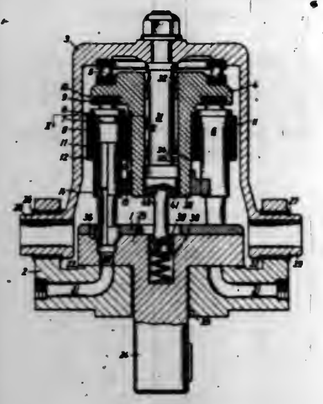


1. A fluid power device comprising, in combination, a housing; a rotor rotatably mounted in said housing and formed with a pair of axially spaced radial bores; a piston reciprocable longitudinally of each bore in operative association with pressure fluid in the respective bore; a stationary control member having angularly displaced fluid inlet and outlet passages; duct means connecting each bore to passage means in said control member connected to one of said passages; a pair of angular control cams in said housing substantially concentric with said rotor and each having a substantially circular outer periphery and a sinusoidal inner periphery, each cam being radially aligned with a respective piston; a cam follower connected to the outer end of each piston and engaged with the inner periphery of the associated cam, for reciprocation of the pistons during relative rotation of said rotor and said cam; and a pair of independently actuable adjusting means each operative to effect angular adjustment of a respective cam independently of the other cam to select the absolute phase relation of the associated respective cam to said control member and the relative phase relation of said cams to each other.

3,123,014
FLUID-MACHINE WITH AXIAL PISTON-CYLINDER ARRANGEMENT
Wilhelm Gregor, Hamburg-Hausbruch, Germany, assignor to Licentia Patent-Verwaltungs-G.m.b.H., Frankfurt am Main, Germany
Filed Apr. 20, 1962, Ser. No. 189,047
4 Claims. (Cl. 103—162)

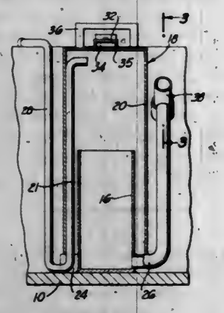
1. Fluid machine comprising: a stationary base member having a bore and a flat control surface with fluid inlet and outlet apertures; a shaft received in and cleared

by said bore of said base member and having a flange, a flat surface of which engaging said control surface, said flange having annularly disposed bores; a plurality of hollow pistons tiltably mounted on said flange respectively in communication with said bores thereof, said bores being capable of registering and communicating successively with said inlet and outlet upon rotation of said shaft; a plurality of cylinders, respectively receiving said pistons, each cylinder having a bottom portion provided with a collar having a calotte shaped bearing surface; a barrel tiltably mounted on said base member having its axis



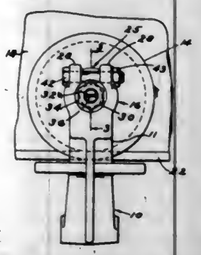
of tilting extending perpendicularly to the axis of said shaft; a cylinder-supporting member drivingly supported in said barrel and having a swash-plate type flange; means defining calotte shaped recesses on said swash plate type flange, each recess recieving a calotte shaped bearing surface of said cylinders; means on said cylinder supporting member defining an axial supporting surface; and a pretensioned, resilient member interposed between said last mentioned supporting means and each of said collars for urging the calotte shaped surface portion of each cylinder against the respectively calotte shaped recesses in said swash plate.

3,123,015
PUMP
Samuel E. Linklater, 309 Poppy Ave., Corona Del Mar, Calif.
Filed Dec. 20, 1962, Ser. No. 246,278
8 Claims. (Cl. 103—234)



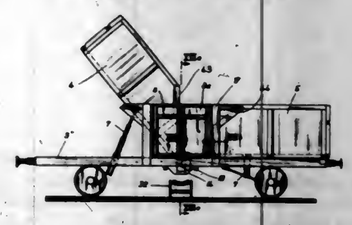
1. A liquid pump comprising:
a reservoir;
a standpipe having an open upper end disposed within the reservoir with the open upper end being located below the normal liquid level of said reservoir;
a standpipe enclosure means open at its lower end and placed about said standpipe with said opening located below the upper end of the standpipe, said opening providing liquid communication between the interior of the enclosure means and the reservoir;
means for introducing a pressurized fluid to the interior of the standpipe enclosure means above the normal liquid level therein; and
a liquid withdrawal means connecting to the standpipe for removing liquid therefrom in response to introduction of pressurized fluid to the interior of said standpipe enclosure means.

3,123,016
TROLLEY CONSTRUCTION
Franklin L. Bateman, West Olmstead, Ohio, assignor to Jervis B. Webb Company, Detroit, Mich., a corporation of Michigan
Filed Oct. 10, 1961, Ser. No. 144,129
6 Claims. (Cl. 105—154)



1. A trolley having a trolley wheel mounting portion, a bore formed in said portion, a bushing removably mounted in said bore, a wheel axle extending through said bushing, said wheel mounting portion having a slot cut therethrough from the outer edge thereof to said bore along the length of said bore, said slot having a width less than the width of said bushing but in excess of the width of said axle, means for removably securing said wheel axle to said bushing, and means for retaining said bushing in said bore.

3,123,017
OPEN RAILROAD CAR
Helmut F. König, Minden, Westphalia, and Christian J. Stiefel, Aachen, Germany, assignors to Waggonfabrik Talbot, Aachen, Germany
Filed Nov. 27, 1959, Ser. No. 855,588
Claims priority, application Germany Dec. 4, 1958
12 Claims. (Cl. 105—362)



1. In an open railroad freight car: a car box having a flat bottom and comprising two box sections tiltable toward the central portion of said car and about an axis transverse to the longitudial axis thereof for receiving goods to be transported, an understructure supporting said car box and having an opening at least approximately in the middle portion of the bottom of said understructure, shaft means supported by said car and tiltably supporting said box sections for selective tilting movement of said box sections about said shaft means from a substantially horizontal loading position into a tilted position for releasing goods from said box sections through said opening, a central wall section fixed to said understructure on at least one side and slidably engaging the sides of said box sections at the inner ends of the box sections, and door means pivotally mounted in said wall section, the inner ends of said box sections being spaced so opening of the door means will give access to the space between the inner ends of the box sections.

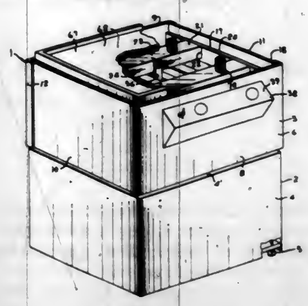
3,123,018
WALL CONSTRUCTION FOR FREIGHT VEHICLES AND METHOD OF MAKING THE SAME
Charles R. Radey, Michigan City, Ind., assignor to Pullman Incorporated, Chicago, Ill., a corporation of Delaware
Filed July 7, 1959, Ser. No. 825,576
9 Claims. (Cl. 105—423)



1. An integral end wall unit of a freight vehicle having an underframe and roof comprising a corrugated outer plate member having horizontally disposed corrugations at vertically spaced intervals extending substantially from the underframe to the roof of the vehicle and across the major portion of the width of the vehicle, certain of said corrugations having inner surface areas disposed in substantially co-planer relation defining the inner plane of the member and certain of said corrugations having outer surface areas disposed in substantially co-planar relation defining the outer plane of the member, and a nailable metal end wall lining panel substantially coextensive in area with said outer plate member, said end wall lining panel including a plurality of vertical planks of substantially channel section and fixed in side-by-side relationship, said planks each having fixed thereto a vertically extending angle member to provide said panel with a plurality of horizontally spaced apart vertically extending angle members, a plurality of vertically spaced apart horizontally extending angle members welded to and outwardly extending from said vertically extending angle members and disposed within at least some of the corrugations of said outer plate member, a plurality of fasteners welded to and outwardly extending from said horizontally extending members, said panel being engaged with said outer plate member with said vertically extending support members contacting at least some of the inner surface areas of the outer plate member, and with said fasteners projecting through holes in the outer plate member, the outer ends of said fasteners being substantially flush with the outer plane of the outer plate member and being secured to said member by welding.

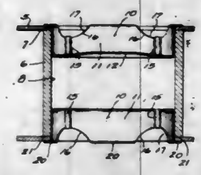
3,123,019
ARTICLE VIBRATING MACHINE
Boyd C. Blair, Topeka, Kans., assignor to Brackett Stripping Machine Company, Topeka, Kans., a partnership
Filed Apr. 23, 1962, Ser. No. 189,612
6 Claims. (Cl. 108—21)

1. An article vibrating machine including,
(*a*) a support,
(*b*) a table having a flat top surface adapted to support articles for vertical vibratory movement,
(*c*) a shaft rotatable on the support and spaced below the table,
(*d*) means on the shaft and operative in response thereto to impart an oscillatory movement,
(*e*) a resilient connector between the means on the shaft and the table center for transmitting the oscillatory movement thereto,
(*f*) a plurality of resilient means disposed in spaced relation and equally spaced from the table center and having upper end portions in supporting engagement with said table, and



(*g*) a vertically adjustable means on the support for each of said resilient means and engaged with lower end portions thereof and operative to bodily move the respective resilient means to level the table and support said resilient means for cooperation with the resilient connector transmitting the oscillatory movement to the table to provide uniformity in the vibratory motion in amplitude and frequency over the surface of the table.

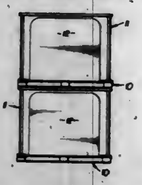
3,123,020
DISPOSABLE PALLET STRUCTURE
Marvin C. Volssem, Menasha, Wis., assignor to Badger Plug Company, Appleton, Wis., a corporation of Wisconsin
Filed Jan. 14, 1960, Ser. No. 2,422
3 Claims. (Cl. 108—51)



1. In a pallet the combination with a deck, of a plurality of mutually spaced supporting legs each comprising a tube, the deck having openings registering with the interior of each tubular leg and having margins overlying the ends of each such leg, and means for firmly clamping the deck to each of said tubular legs and comprising metal anchorage fittings having flanged portions marginally engaging the deck about said openings and having side wall portions integrally connected with the flanged portions and extending through the respective openings and telescopically engaged within upper end portions of the respective sides, means connecting said side wall portions with the legs against withdrawal, the said last mentioned means comprising axially extending outwardly projecting ribs with which the side wall portions of the respective fittings are provided, each of said side wall portions having notches exposing the upper ends of said ribs and the said upper ends of the ribs having the margins exposed by said notches flaring outwardly and embedded in the material of the tubular leg, the flanged portions of said fittings

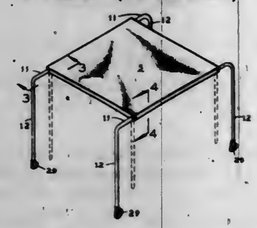
being in pressure engagement with marginal portions of the deck in opposition to the ends of the respective legs whereby the deck is clamped to the respective legs.

3,123,021
STACKING FRAME ASSEMBLY FOR A PALLET
George Q. Evans, 917 S. Santa Fe Ave., Compton, Calif.
Filed May 28, 1962, Ser. No. 198,362
5 Claims. (Cl. 108—53)



1. A stacking frame construction and pallet combination comprising, a pallet having a substantially flat platform, a plurality of independent legs mounted on said platform and extending from said pallet on a plane generally normal to the plane of said platform, said legs each possessing endwise rigidity and being resilient laterally of its own plane, each of said legs terminating in socket portions remote from said pallet, a crossframe of permanently integrated construction comprising intersecting arm members extending radially outward from said intersection, said arm members corresponding in number to said legs and each of said arm members disposed in overlying juxtaposition to one of said socket portions, said arm members each provided with plug elements projecting toward said pallet and slightly angled from the plane of said legs, said plugs interfitted within said socket portions in relatively tight frictional engagement therewith and said legs being sprung laterally to increase frictional engagement of said plugs in said sockets and whereby said frame construction is rigidified by tensioning of said legs.

3,123,022
COLLAPSIBLE OR EXTENSIBLE TABLE
William P. Huddleston, 2201 NE. 33rd Ave., Fort Lauderdale, Fla.
Filed Aug. 23, 1962, Ser. No. 218,994
1 Claim. (Cl. 108—129)

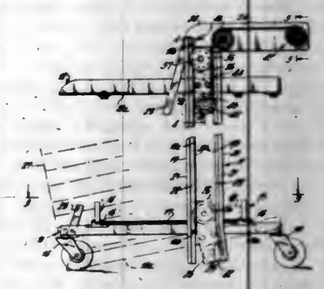


A table structure of the character described having a rigid square top, peripheral frame members for the top, the frame members upon two opposite sides of the table being arcuately grooved, cylindrical housings fixed into the grooves, the housings being open at their opposite ends, supporting leg devices for each corner of the table, the leg devices being L-shaped to constitute a supporting leg and a control arm, two leg devices at the two opposite sides of the table having their arms telescoping into the opposite ends of the housings in axial alignment and whereby each housing supports a pair of leg devices, each of the leg devices being rotatable in the housings whereby the leg devices may be swung from a nested position beneath the table to an upright table supporting position, the leg devices when in the table supporting position adapted to be shifted outwardly from the opposite two sides of the table and whereby the table may be supported over a bed, each of the legs having telescopic extensions and whereby the table may be elevated above the bed, latch means to hold the legs in the nested position against swinging, the said latch means also holding the legs in the table supporting position against swinging and means for guiding the legs to and from the position of extension and to limit the extension of the leg devices, each of the arms of the several leg devices being provided with elongated slots, a screw that engages through the housings and that enters the slots to constitute a guide for the arms when the legs are extended and to also limit the telescopic movement of the arms, the slot at one end terminating in a right angle slot and whereby to permit the leg devices to be swung to the collapsed or nested position when the arms have been fully telescoped, the said arms also being provided with apertures ninety-degrees apart and outwardly from the said slot for reception of the latch when the leg devices are in the nested position or in the table supporting position and whereby to prevent rotative movement of the arms, the said latches also engaging the slots when the leg devices are in the extended position, each leg device being controlled by a guide and limiting screw and a latch and so that each leg device is separately movable from the nested position to the table supporting position or extended to constitute a bed table, the said leg devices being latched in all positions of adjustment.

ERRATUM

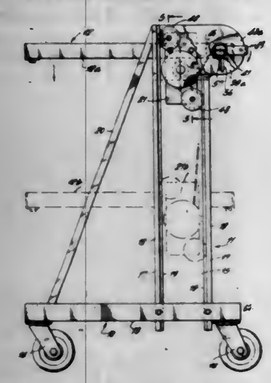
For Class 108—136 see:
Patent No. 3,123,829

3,123,023
SELF-LEVELING DEVICE
Irving Bronson, Brooklyn, N.Y., assignor, by mesne assignments, to American Machine & Foundry Company, New York, N.Y., a corporation of New Jersey
Filed Aug. 16, 1960, Ser. No. 49,912
8 Claims. (Cl. 108—136)



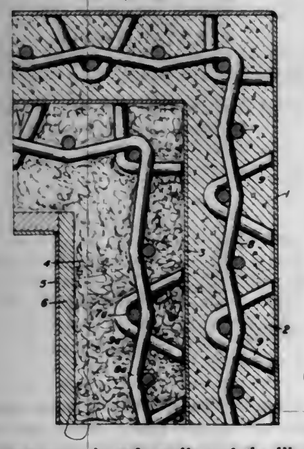
1. An improved self-leveling device comprising in combination a base member supporting an upright frame communicating with a housing means, a vertically movable carriage associated with said frame, said carriage supporting carrier means, said carriage being supported by a flexible member communicating between adjustable means secured within the housing means and a torsion spring means associated with said carriage, means for imparting an initial set to said spring means, said spring means including a spring biased shaft, and said adjustable means being operable to adjust the initial moment of said flexible member relative to said shaft, whereby the topmost portions of articles disposed on said carrier means are maintained at a constant level independently of the number of such articles.

3,123,024
SELF-LEVELING DEVICES
Irving Bronson, Brooklyn, N.Y., assignor, by mesne assignments, to American Machine & Foundry Company, New York, N.Y., a corporation of New Jersey
Filed Oct. 26, 1960, Ser. No. 65,137
6 Claims. (Cl. 108—136)



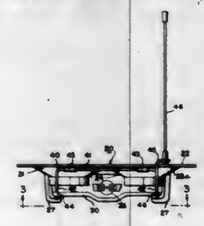
1. In a self-leveling device comprising a base member, an upright frame supported by said base member, vertically movable carriage means retained within said frame, a platform supported by said carriage means for the receipt of articles thereon, spring-biased pulley means provided on said carriage means, reel means mounted for rotation on said frame, and flexible member means extending between said pulley means and said reel means for supporting said carriage means, said reel means being rotatable to a predetermined position to determine the moment arm between said flexible member means and said spring-biased pulley means; that improvement which comprises handle means for said device, said handle means being operable both to propel said device and to rotate said reel means to wind said flexible member means upon said reel means and to unwind said flexible member means from said spring-biased pulley means.

3,123,025
ARRANGEMENT IN SAFE WALLS OR THE LIKE
Johan Oscar Fugelstad, Stockholm, Sweden, assignor to Aktiebolaget Platforadling, Halsingborg, Sweden, a corporation of Sweden
Filed Dec. 19, 1960, Ser. No. 76,931
6 Claims. (Cl. 109—83)



1. An arrangement in safe walls and the like comprising an outer plate, a plurality of reinforcement irons spaced from the plate and substantially parallel thereto, the irons forming a network wherein said irons cross each other, a plurality of cramp irons, each having two edges and being bent around at least one reinforcement iron, said cramp irons welded to the outer plate by both ends thereof, and a layer of concrete adjacent the outer plate and surrounding the reinforcement irons and the cramp irons.

3,123,026
INCINERATOR ASH SHAKER
Bernard E. Mustee, Cleveland, Ohio, assignor to E. L. Mustee & Sons, Inc.
Filed May 19, 1961, Ser. No. 111,234
6 Claims. (Cl. 110—18)

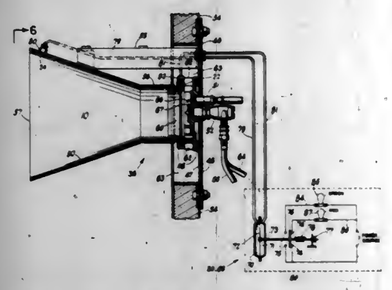


1. In an incinerator including a removable burner for burning solid combustibles, an ash shaker comprising, a stationary base plate, said base plate having burner support means supporting said removable burner, a burner cover carried by the base plate and positioned to cover a majority of said burner, grate support means carried by and extending below said base plate positioned to slidably support a movable grate on a plane parallel to said base plate, a grate slidably supported on said grate support means and movable reciprocally thereon, a link assembly rotatively connected to said base plate, said link assembly including means drivingly connected to said grate for translating rotative movement of said link assembly to longitudinal reciprocal movement in said grate, a handle rod connected to said link assembly and extending to a position external of the incinerator accessible to an operator standing erect, said handle rod being mounted for axial reciprocation to cause rotative movement of said link assembly and longitudinal reciprocal movement of said grate.

3,123,027
APPARATUS AND METHOD OF FLAME OR COMBUSTION RATE DETECTION IN A COMBUSTION CHAMBER
William L. Livingston, Bloomfield, Conn., assignor to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware
Continuation of application Ser. No. 771,375, Nov. 3, 1958. This application June 19, 1962, Ser. No. 205,483
10 Claims. (Cl. 110—28)

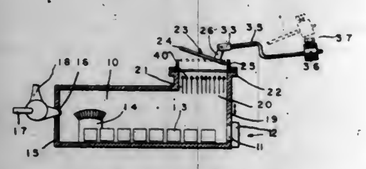
1. In a steam generating furnace having means for detecting the loss of flame in a burner apparatus appended thereto and being provided with a chamber comprising a fuel receiving and ignition zone and a fuel burning zone downstream therefrom, and having means to provide a gaseous mixture of fuel and air to said fuel receiving and ignition zone, said chamber located to discharge into said furnace; the combination of the means subject to a first static pressure existing inside said chamber within said fuel receiving and ignition zone for indicating said first pressure exteriorly of said chamber; means subject to a second static pressure prevailing in said fuel burning zone and for indicating said second static pressure exteriorly of said chamber; means for determining variations in the differential between said first static pressure and said second

static pressure; a control device for responding to operating conditions of said burner apparatus; means for operating said device; and means governed by said pressure differential variations for causing said control device to respond when said pressure differential drops to a predetermined



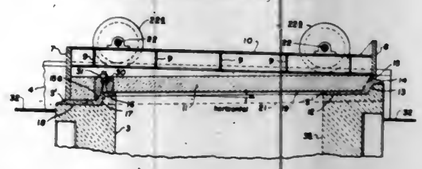
value, whereby loss of flame within said chamber is readily detected, such detection being independent of and unaffected by ambient static pressure conditions existing exteriorly of the fuel and air inlet end as well as exteriorly of the flame discharge end of said chamber.

3,123,028
DEVICE FOR CONTROLLING THE PRESSURE IN A FURNACE CHAMBER
Günter Bödeker, Warstein, Sauerland, Germany, assignor to Industrie-Companie Kleinewefers Konstruktions- und Handelsgesellschaft m.b.H., Krefeld, Germany
Filed June 12, 1961, Ser. No. 116,504
Claims priority, application Germany June 11, 1960
3 Claims. (Cl. 110—163)



1. In combination; a forging furnace having a flue gas passage terminating in means forming an opening disposed in a horizontal plane, and a device for effecting precise cotrol of the pressure in the furnace, said device comprising a flat horizontal lid means tiltably supported on the furnace in said opening for controlling gas flow through said fluid gas passage, the tilting axis of said lid means being fixed relative to the lid means and being located in substantially the central plane of said lid means, said central plane extending in the direction of the top surface of said lid means, the tilting axis of said lid means being located between the middle of the lid means and one side edge thereof so the gas pressure in the furnace will exert a tilting effort on said lid means, support means on said axis for supporting said lid means, a counterbalance means connected to the lid means to counterbalance the off center weight thereof whereby the lid means will hold a selected pressure of the combustion gases in said furnace substantially constant within close predetermined limits, said counterbalance means comprising an arm connected to the lid means and angularly adjustable thereon in a vertical direction and weight means on the arm adjustable thereon toward and away from said lid means, said supporting means comprising stationary upwardly opening V-shaped supporting surface means on said furnace and downwardly facing knife edge means on the lid means journalled in said V-shaped surface means, the engagement of the knife edge means with the supporting surface means being precisely on said tilting axis.

3,123,029
COVER FOR SOAKING PITS
William A. Morton, Mount Lebanon Township, Allegheny County, Pa., assignor to Loftus Engineering Corporation, Pittsburgh, Pa., a corporation of Maryland
Filed Sept. 6, 1960, Ser. No. 54,310
1 Claim. (Cl. 110—173)



In a furnace having two upwardly extending end walls and two side walls whose tops define a substantially rectangular furnace opening,

(*a*) the top of each said end walls comprising a shelf-like surface, with the shelf-like surface of one end wall disposed at a higher elevation than that of the other,

(*b*) a layer of granular refractory sealing material on each said end wall shelf-like surface,

(*c*) the top of each said side walls having an inclined groove therein extending between the shelf-like surfaces of said end walls,

(*d*) a granular refractory sealing material in said grooves,

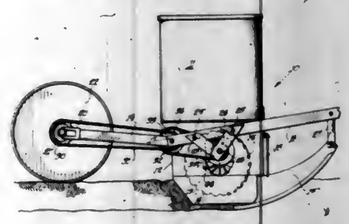
(*e*) substantially horizontal track means extending longitudinally of the opposite sides of said opening,

(*f*) a substantially rectangular cover mounted on wheels for reciprocal linear movement on said track means to cover and uncover said furnace opening,

(*g*) said cover having surfaces at its opposite ends for severally mating with said shelf-like end wall surfaces and the sealing material thereon, and

(*h*) the opposite sides of said cover having longitudinally extending depending members from one end to the other longitudinally of the door for severally engaging the sealing material in said inclined grooves, said depending members being inclined relative to the track and parallel to said inclined grooves.

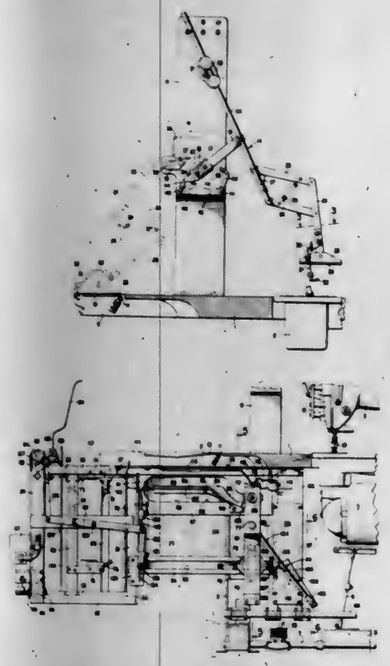
3,123,030
PLANTER DRIVES
Roland J. Frase, Chicago, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Dec. 18, 1961, Ser. No. 159,872
5 Claims. (Cl. 111—34)



1. In a planter or the like having frame means, a seed hopper mounted on said frame means, and a seed dispensing wheel rotatably mounted on the frame means adjacent said hopper, an intermittent drive for said seed

wheel comprising an actuating wheel mounted for continuous rotation on said frame means, means on the frame means operatively connected to said actuating wheel for driving the latter, an actuating pin projecting outwardly from said actuating wheel, a follower member rotatably mounted on the frame means and drivingly associated with said seed wheel, said follower member having a face portion thereon provided with a plurality of radially extending surface grooves, said actuating pin being positioned to be slidingly intermittently engageable with said grooves and to slide from a position near the center of the follower member radially outwardly along said grooves to accelerate said follower member from an initial at rest position to the desired velocity, and means mounted on the frame means and operatively engageable with the follower member for locking said follower member against rotation during periods of non-engagement with said actuating pin.

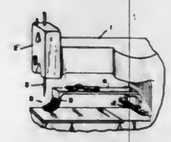
3,123,031
WORK STACKING MECHANISM FOR SEWING MACHINES
Charles G. Pickett, Rockaway Township, N.J., assignor to The Singer Company, a corporation of New Jersey
Filed Aug. 24, 1961, Ser. No. 133,602
17 Claims. (Cl. 112—2)



1. In combination, a table, a sewing machine mounted upon said table, a work support on said table for receiving work pieces from said sewing machine and having a plurality of spaced parallel slots, and means for moving work pieces from said work support and onto a stack comprising a frame having a plurality of parallel fingers disposed in a plane and spaced for movement through the slots in said work support, means for mounting said frame on said table for movement of said fingers in parallel planes extending through the slots in said work support and including an ascending movement wherein said fingers move from a rest position upwardly through the slots in said work support, an advance movement wherein said fingers move to a stacking position, and a return movement wherein said fingers move to said rest position, means for imparting said movements to said frame, and means for engaging a work piece and holding the same against movement with said fingers during the return movement of said frame.

15. In combination, a table, a sewing machine mounted upon said table, a support on said table and behind said sewing machine, a rod, a rotary crank connected to said rod at an intermediate point for imparting circular movement to said rod at said point, means for anchoring said rod to said support at a second point, an arm, a pair of substantially parallel links pivotally mounting said arm on said rod on the opposite side of said first mentioned point from said second point, spring means biasing said links together, and a work engaging foot carried by said arm.

3,123,032
SEWING MACHINE ATTACHMENT
Mervin L. Gehringer, 86 Nobel St., Kutztown, Pa.
Filed Apr. 23, 1963, Ser. No. 275,019
2 Claims. (Cl. 112—107)

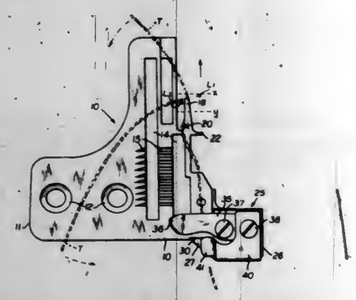


1. In combination with a four button sewing machine including a shank button clamp which is longitudinally movable to two different positions and including means for sewing in two different positions laterally of said clamp for four hole button sewing operation, an attachment secured to one end of said clamp and having a base portion which is cut-out to form a seat for snugly receiving the eyes of a hook with the hooked end portion innermost and extending upwardly, said base portion having an integral tongue centrally of supporting the longitudinal shank portion of the hook and having needle receiving openings on both sides of said tongue and of the hooked portion of said hook, said attachment having an integral flange extending vertically upwardly from and at right angles to said base portion which is detachably connected to said clamp, a slip-stitch-finger pivotally mounted for vertical movement on said attachment and overlying the hooked end portion of the hook only, a spring having one end engaging said vertically upwardly extending flange and the other end engaging said finger for normally and yieldingly urging a nose shaped end portion of said finger onto the hooked end portion of said hook so as to yieldingly hold the hook in place on said base portion, whereby the needle is adapted to project alternately through said openings and in so doing cause the thread to slip over said finger and nose portion and underneath the hooked portion so as to sew the end part of the shank portion underlying said hooked portion onto the cloth and thereby prevent upward pivoting of the hooked portion from the cloth onto which it is sewn.

3,123,033
BACKTACKING ATTACHMENT
Karl Weigert, Rego Park, Queens, N.Y., assignor to Reliable Attachment Co., New York, N.Y.
Filed Oct. 16, 1961, Ser. No. 145,278
13 Claims. (Cl. 112—197)

1. Means for backtacking the chain of stitches formed on a sewing machine in which thread loopers interact in a stitch forming area to form a chain and movement of the thread can only be obtained by energizing the ma-

chine, said means comprising: a throat plate, cut out means in said throat plate forming a chain finger having a free end projecting from said throat plate, an area of stitch formation on said chain finger, said cut out means being spaced inwardly from the free end of said chain finger with a portion thereof out of the area of stitch formation within which portion the threads forming the chain in the stitch forming area may be pulled so as to prevent chain formation during operation of the machine; feed means upon which the material to be sewn may be positioned for feeding to the area of stitch formation; and aligning means guiding the previously formed free chain of stitches along the desired line of stitching of the material.

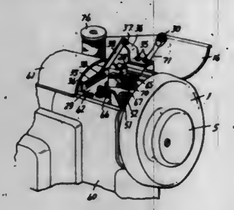


4. A method for backtacking the chain of stitches formed on a sewing machine in which thread loopers interact in a stitch forming area to form a chain, and movement of the thread can only be obtained by energizing the machine, said method comprising the steps of: pulling a previously formed chain away from the stitch forming area so that looper interaction and chain formation will be prevented during operation of the machine; positioning the material over the feed dogs of the machine so that the material will be fed to the area of stitch formation; aligning the previously formed chain with the desired line of stitching of the material; and permitting the pulled chain to be moved by the fed material into the stitch forming area at the commencement of stitching of the material.

3,123,034
BOBBIN WINDING CHANGE-OVER MECHANISM IN SEWING MACHINE

Yasukichi Okazaki, Kita-ku, Japan, assignor to Janome Sewing Machine Co., Ltd., Tokyo, Japan

Filed Sept. 30, 1959, Ser. No. 843,423
Claims priority, application Japan Sept. 11, 1959
1 Claim. (Cl. 112—220)



In a sewing machine, in combination, a drive wheel; a main shaft adapted to cause sewing operations and turnably supporting said drive wheel; coupling means including a shiftable means movable between a disconnecting position, and a coupling position for coupling said shaft with said wheel; a bobbin-winding mechanism including a support plate, a bobbin holder having a vertical axis and projecting from said support plate and adapted to support a bobbin, and control means operable to establish a drive connection between said bobbin-winding mechanism and said drive wheel; a cover member movable between a closed position covering said bobbin-winding mechanism, and an open position permitting access to the same, said cover member being operatively connected to said shiftable means so that the latter assumes said disconnecting position when said cover member is in said open position and assumes said coupling position when said cover member is in said closed position whereby said control means of said bobbin-winding mechanism can only be operated when said cover member is in said open position and said shaft is disconnected from said drive wheel, said cover member having an inner surface exposed only in said open position and located substantially at the horizontal level of said bobbin holder; a vertical spool supporting member located at said level outside of said cover member and adapted to supply a thread; and a guide means mounted on said inner surface for guiding a thread from said spool supporting member to the bobbin in said open position of said cover member, said guide means projecting upwards at said level from said inner surface of said cover member in said open position.

3,123,035
SELF-STABILIZING, NON-RAVELING SEAMS

Samuel J. Jamison, East Brunswick, N.J., assignor, by mesne assignments, to Johnson & Johnson, New Brunswick, N.J., a corporation of New Jersey

Filed Oct. 17, 1961, Ser. No. 145,578
11 Claims. (Cl. 112—262)

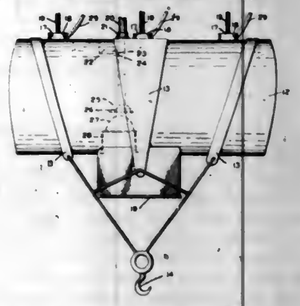


1. An article of manufacture comprising a fabric layer with continuous stitching therealong in the form of a seam, said stitching comprising a synthetic polymer, continuous filament, low-twist, multi-strand thread which, in its normal relaxed condition, is fluffy and highly crimped, and said thread in the portion thereof presented by the stitching in the seam, being extended substantially beyond its length in normal relaxed condition and, in the portion thereof at the end of the seam beyond the stitching therein, being in its fluffy, highly crimped, relaxed condition, whereby the seam is stabilized against raveling during normal use.

3,123,036
SHIP SALVAGE EQUIPMENT

Leif E. Lih, 427 15th St., Brooklyn, N.Y.

Filed Aug. 13, 1958, Ser. No. 754,818
3 Claims. (Cl. 114—49)

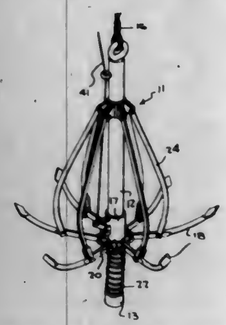


1. In a ship salvage equipment the combination of a plurality of pontoons, each pontoon having a large opening in its bottom, said opening having a collar extending downward from the bottom of said pontoon; a heavy hook and sling connecting said pontoon to the ship to be salvaged; a plurality of electric cables connecting each pontoon to winches on board a surface vessel; a plurality of air hoses extending from each pontoon to said surface vessel; a plurality of compressors on board said surface vessel being connected to said air hoses, and a plurality of air-outlet valves being connected to and remotely controlled by said electric cables.

3,123,037
BOAT ANCHOR

Irving J. Jensen, 910 Highland Ave., Iowa City, Iowa

Filed May 24, 1963, Ser. No. 283,064
5 Claims. (Cl. 114—208)

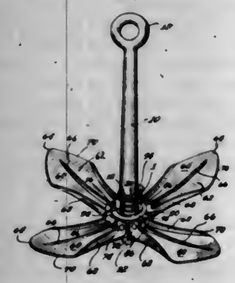


1. A boat anchor comprising an elongated main shank portion, a sleeve member slidably mounted on said shank portion, a plurality of anchor blades pivoted to said sleeve member, attachment means on the forward end of said shank portion, respective link arms connecting said anchor blades to the shank portion at a location spaced forwardly from the sleeve member, spring means biasing the sleeve member forwardly to a position wherein said anchor blades extend rearwardly and are adjacent the rear end of the shank portion, a movable locking member on the sleeve member engageable with the shank portion to hold the anchor blades in outwardly extended positions against the biasing force of said spring means, and a forwardly extending flexible release line connected to said locking member, said locking member disengaging from said shank portion responsive to a forward pull on said release line.

3,123,038
COLLAPSIBLE BOAT ANCHOR

Richard T. Tytz, 6033 N. Keeler Ave., Chicago 46, Ill.

Filed June 25, 1963, Ser. No. 290,481
7 Claims. (Cl. 114—208)

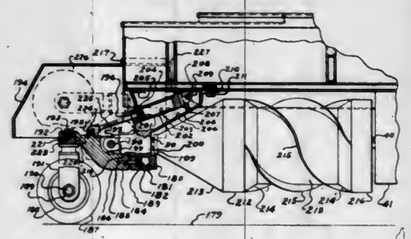


1. A boat anchor comprising an elongated shank, means adjacent to the upper end of the shank for attachment to an anchor line, means adjacent to the lower end of said shank defining a pair of oppositely facing opposed axially spaced shoulders, a spider rotatably mounted on said shank and confined between said shoulders against appreciable axial shifting movement in either direction, said spider including a central hub portion from which there project radially outwards a plurality of radial, spaced apart spider arms, an anchor fluke pivoted at its proximate end to each spider arm and movable between an extended position wherein it is substantially normal to the axis of the shank and a folded position wherein it lies in close proximity to the shank and in substantial parallelism therewith, a latch projection formed on each fluke and presenting first and second latch shoulders, a latch collar slidable axially on the shank above said oppositely facing shoulders, spring means yieldingly biasing said latch collar downwardly on the shank, said collar overlying and engaging the first latch shoulders on the flukes when the latter are in their folded position and serving yieldingly to maintain the flukes in said folded position, said collar being in radial alignment with the second latch shoulders on the flukes when the latter are in their extended position and serving to interpose between such shoulders and the anchor shank a solid column of metal in order positively to prevent movement of the flukes away from their extended position, and a manual actuator for facilitating movement of the latch collar against the action of said spring biasing means.

3,123,039
ROTARY BOAT

Chalon E. Bridwell, 310 S. Harvard, Tulsa 4, Okla.

Filed June 15, 1960, Ser. No. 36,452
5 Claims. (Cl. 115—1)



3. In a boat of the class described, a propelling mechanism comprising a plurality of longitudinally disposed, laterally spaced apart, rotatable buoyant drums; a plurality of propelling fins mounted lengthwise on and projecting outwardly from each of said drums; a plurality of supporting discs in each of said drums in spaced apart relationship and connected to said drums; means for supporting said drums; means for operatively driving said drums; an enlarged portion formed on each end of each of said drums and serving as wheels on each of the drums for parking the boat on land; and, a shaft extended longitudinally through each of said drums and in sealed relationship therewith and forming the supporting shaft about which each of the drums is rotated.

3,123,040
BACK-UP ALARM MOUNT

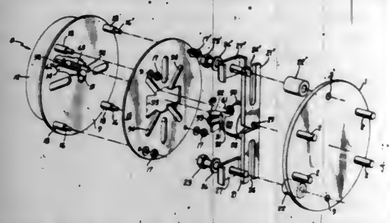
Robert M. Geraghty, Novato, Calif., assignor to E. D. Bullard Company, Sausalito, Calif., a corporation of California

Filed Jan. 24, 1962, Ser. No. 168,490
12 Claims. (Cl. 116—60)

1. Means for securing a back-up alarm to a wheel, comprising:

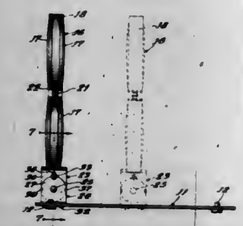
a member fixed for rotation with the wheel,

a base block having a pair of radial arms extending therefrom,
cooperating securement means fixing the radial arms on the wheel member with the central axis of the base block coincident with the rotational axis of the wheel,
a radially extending arm disposed on the base block,



a mounting plate having an opening therein to pass the arm and seated against the base block with the arm engaged against the far side of the mounting plate,
means connecting the back-up alarm to the mounting plate,
a supporting back plate rigidly connecting to the mounting plate, and
a stop pin rotatably mounted in the back plate passing through an opening in the mounting plate and seating in the base block.

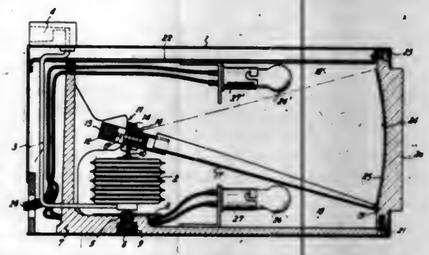
3,123,041
FOLDABLE WARNING SIGNAL
Ralph R. Gunderson, 5520 South Shore Drive, Chicago, Ill.
Filed Sept. 13, 1961, Ser. No. 137,812
9 Claims. (Cl. 116—63)



1. A foldable warning signal, comprising: a supporting base provided with a mounting portion slidable thereon; a signal device swingably secured to said mounting portion for movement from an inoperative position adjacent the base to a signaling position, said signal device being slidable with the mounting portion on the base to any one of a plurality of signaling positions disposed longitudinally of said base; and cooperating latching members on the mounting portion and the signal device for latching said signal device in each of said signaling positions.

3,123,042
INDICATING OR MEASURING INSTRUMENT
André Emile Charles Merlin, Paris, France, assignor to Auxitrol, Paris, France, a company of France
Filed Apr. 24, 1962, Ser. No. 189,826
Claims priority, application France Apr. 28, 1961
11 Claims. (Cl. 116—129)

1. An indicating or measuring instrument comprising a casing having a translucid wall; an opaque partition movably mounted in said casing and having an edge substantially contiguous to, and movable along, the inner surface of said wall, said partition dividing said casing into two compartments which are complementary and variable in relative size in accordance with the position of said partition, and said partition edge dividing said wall into two complementary areas which are variable in relative size in accordance with the position of the said partition; a transducer connected to said partition to convert variations in a measured quantity into corresponding displacements of said partition; and a light source in one of said



compartments effective to illuminate the corresponding area of said wall; whereby a boundary line between two areas of contrasting illumination of said wall is provided as an indication of the position of said partition; the distance between said edge and the inner surface of said wall, and the thickness of said edge, being such that said boundary line between said areas appears as a thin and accurate index line characterized by the absence of parallax.

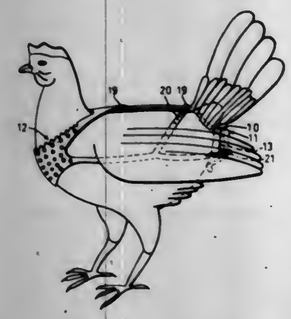
3,123,043
METHOD AND APPARATUS FOR TRANSMITTING SONIC VIBRATIONS INTO LIQUID BODIES
Albert G. Bodine, Jr., 13120 Moorpark St., Sherman Oaks, Calif.
Filed Nov. 14, 1960, Ser. No. 68,804
25 Claims. (Cl. 116—137)



1. Acoustic apparatus for radiating sound waves into a liquid body, comprising: a sound wave radiator immersible in liquid and comprising a radiation surface which has a dimension across substantially as great as a major fraction of a wavelength for the speed of sound in the liquid and at a predetermined operating frequency, an elongated elastic structure longitudinally vibratory at said predetermined operating frequency in a longitudinal standing wave pattern, said structure being drivingly coupled at one end to said radiator, so as to be loaded thereby and by the liquid in which the radiator is immersed, cyclic mechanical force generator means drivingly coupled to the opposite end of said elongated elastic structure for applying to said structure a cyclic force oriented longitudinally thereof and at substantially said predetermined operating frequency, the vibratory system comprised of said generator means, elastic longitudinally vibratory structure and liquid-immersed radiator being resonant at said predetermined operating frequency, said elongated elastic structure when vibrating at said operating frequency in said standing wave pattern having a velocity

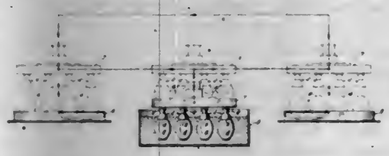
node located substantially nearer its end coupled to said radiator than to its opposite end, and having a velocity antinode at its said opposite end, motor means in combination with said cyclic force generator for driving said cyclic force generator, and supporting structure for said motor means connected to but acoustically isolated from said elongated elastic vibratory structure.

3,123,044
APPARATUSES FOR RECORDING POULTRY EGG PRODUCTION
Hans Eugen Birch-Iensen, Hallstorps Gard, Billeberga, Sweden
Filed Jan 8, 1962, Ser. No. 164,819
Claims priority, application Great Britain Oct. 25, 1961
5 Claims. (Cl. 119—1)



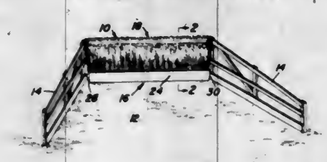
1. A holder to be fastened to a hen by means of a harness and adapted to carry a counter with a movable input element therefor located beneath the hen's tail for recording the hen's egg production, comprising a back portion to be fastened along the hen's spine, a pair of limbs extending from the rear end of said back portion and conformed to embrace the hen's tail root, the rear ends of said limbs being fixedly interconnected, and a pair of arms fixedly connected at one end to said rear ends of said limbs and conformed to be directed, on application of the holder on the hen, downwardly behind the hen's rump and behind and laterally outwardly of the area of said input element in the normal position thereof to form guard means thereabout and to bear against the hen's body with their lower parts to form positioning means for the holder and the input element.

3,123,045
VACUUM PROCESS OF TREATING HATCHING EGGS
Albert S. Cosgrove, Millsboro, Del., and Robert C. Morris, Trappe, Md., assignors to Multifax Company, Easton, Md., a corporation of Maryland
Filed Mar. 13, 1962, Ser. No. 179,393
9 Claims. (Cl. 119—1)



4. The method of introducing selected materials into eggs, which comprises simultaneously applying a vacuum of predetermined degree to the shells of a plurality of eggs in a limited surface area of each shell, maintaining said vacuum of predetermined degree on said limited surface area of each egg and submerging the plurality of eggs simultaneously into a solution of the selected material for a predetermined period of time to cause the applied vacuum to draw a predetermined minimum quantity of said material through the shell and the shell and egg membranes of each egg into the interior of each egg, withdrawing the eggs simultaneously from the solution at the expiration of said predetermined period of time while maintaining the applied vacuum thereon, depositing the eggs in a tray, and then simultaneously discontinuing application of vacuum to the shell surfaces of the eggs to thereby release the treated eggs which remain in the tray.

3,123,046
HORSE JUMP WITH SIMULATED BRUSH
Philip Bieber, Coral Gables, Fla.
Filed Feb. 27, 1962, Ser. No. 175,968
13 Claims. (Cl. 119—29)



1. An elongated horse jump comprising a plurality of vertically orientated individual flexible, resilient rod-like members, means engaged with the lower ends of said members retaining said members upright and in close proximity to each other, the upper portions of said members being free to flex upon being contacted by a horse jumping thereover, selected ones of said rod-like members being shorter than the majority of the rod-like members whereby a greater density is achieved in the lower portion of the jump than in the upper portion of the jump, said shorter members slowing the return movement of the longer members after a deflection of these longer members.

3,123,047
MOLDED RAWHIDE
Stanton E. Fisher, 706 Lantern, St. Louis 3, Mo.
Filed July 28, 1961, Ser. No. 127,513
5 Claims. (Cl. 119—29.5)

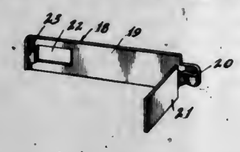


1. A simulated dog pacifier comprising a substantially homogeneous body portion consisting essentially of small rawhide particles closely compacted and reconstituted to simulate an animal chewing device.

3,123,048
DEMOUNTABLE PADDLE-LINK CONVEYOR ASSEMBLY FOR STOCK FEEDERS OF THE CONTINUOUS TROUGH TYPE
Nat Cordis, Crown Farms, Silver Lake, Wis.
Filed Apr. 6, 1960, Ser. No. 20,290
6 Claims. (Cl. 119—52)

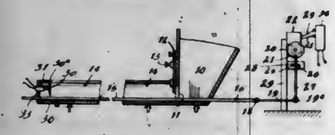
1. A demountable conveyor assembly for use in poultry feeders comprising a plurality of interlocked plate links adapted to travel edge-wise within a poultry feeder trough, each link formed of a single body of flat material, a shank at one end of the body, a longitudinal slot in said body adjacent an end thereof said slot being adapted to receive

means for driving said assembly in its edge-wise travel within such trough, a hook adjacent the end of said body, and a paddle carried by and extending transverse to the



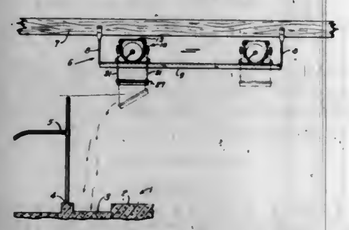
said body, said paddle having a length corresponding to the height of said edge-wise link and said slot having a length and width adapted to receive the paddle of an adjacent link.

3,123,049
TROUGH FEEDER WITH RECIPROCATING IMPELLER
Nat Cordis, Crown Stock Farm, Silver Lake, Wis.
Filed May 31, 1961, Ser. No. 113,774
10 Claims. (Cl. 119—52)



8. A stock feeder comprising an elongated distribution trough means comprising a portion to which stock have access, hopper means astride and discharging into said trough means, feed level control means between said hopper and said portion, a rigid conveyor member in said trough means, said conveyor member extending within the access portion of said trough and being greater in length than said access portion, feed transfer ports in said member permitting lateral flow of feed as well as longitudinal flow of feed in said trough means, and feed-responsive switch means in said trough means remote from said hopper means, said feed-responsive means controlling operation of said conveyor member.

3,123,050
LIVESTOCK FEEDING APPARATUS
Eugene P. Haen, Kaukauna, Wis., assignor to Badger Northland, Inc., Kaukauna, Wis., a corporation of Wisconsin
Filed Apr. 18, 1962, Ser. No. 188,344
7 Claims. (Cl. 119—52)



1. A livestock feeding apparatus for distributing feed to a feed area comprising,

(*a*) a frame including a series of guide members located substantially above the feed area and extending transversely of said feed area,

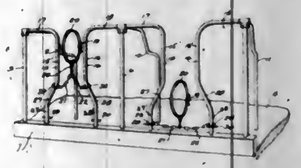
(*b*) feed conveyor means mounted for movement on the guide members and having a feed discharge opening in the bottom thereof and extending a substantial length of said feed conveying means,

(*c*) means for moving said feed conveyor means on the guide members transversely of the length of said feed conveyor means,

(*d*) a closure member removably attached to said feed conveyor means and disposed across said feed discharge opening to selectively restrict the flow of feed from said discharge opening, and

(*e*) feed deflecting means located beneath the feed conveyor means and separate from said closure member for deflecting the feed to a given location in the feed area.

3,123,051
TIE-STALL FOR CATTLE
Vernon R. Berg, 413 Park St., Marshfield, Wis.
Filed Feb. 28, 1961, Ser. No. 92,288
4 Claims. (Cl. 119—119)

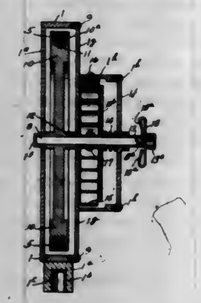


1. In a stall of the type in which an animal collar has normally slack flexible connectors extending from the collar to bars at each side of the collar, said connectors having terminal portions slidable vertically on such bars, the improvement which comprises the combination with the said collar and connectors, of laterally spaced bars having substantially parallel upper portions and lower portions, the upper portions being less widely spaced than the lower portions and having intermediate portions downwardly divergent from the upper portions to the lower portions of the bars. the upper portions of the bars being defined as those portions with which the terminal portions of the connectors are engaged when an animal wearing the collar is standing and such upper portions being spaced at a distance materially less than the combined length of said connectors, whereby the connectors are slack when an animal wearing the collar stands in the stall, the lower portions of the bars being defined as those portions of the bars with which the terminal portions of the connectors register when an animal wearing the collar lies in the stall, the greater spacing of such lower portions resulting in substantial reduction in the slack of the flexible connectors when an animal wearing the collar lies down in the stall.

3,123,052
DOG LEASH WITH AUTOMATIC TENSION AND REWIND
Harold E. Marshall, Rte. 1, Box 24, Kimball, Nebr.
Filed Oct. 15, 1962, Ser. No. 230,619
6 Claims. (Cl. 119—124)

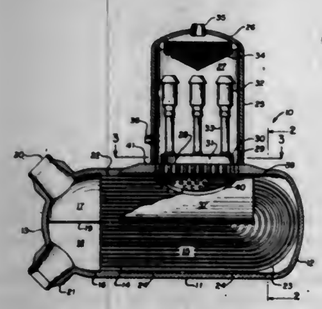
1. A dog leash or the like, comprising a fixed support having a head; a casing mounted on said support for swivelling movement therearound and having a lateral opening therein; a spring-biased reel in said casing; a leash passing through said opening and normally encircling said reel and having its inner end secured thereto; the outer end of the leash being adapted to be secured to an animal or the like; said reel normally rewinding said leash; means in the casing for manually adjusting the tension of the reel biasing spring to regulate the strength thereof in accordance with the strength of the leashed animal; said casing having a substantially circular casing and being provided with side walls; an axially disposed shaft carrying said reel and being freely rotatable in a bearing in one side wall; a second bearing through which said shaft extends; a sleeve around said shaft passing through said

second bearing and extending beyond the end of said shaft; a relatively strong coiled rewind spring having one end secured to said casing and its other end secured to said sleeve; and said adjusting means comprising a nor-



mally engaged clutch connecting said sleeve and shaft, said clutch being manually operable to release the sleeve from the shaft for independent rotation of the sleeve to vary the tension of the rewind spring.

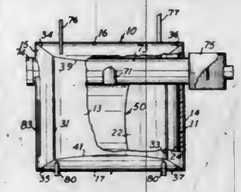
3,123,053
HORIZONTAL STEAM GENERATOR WITH A RISER MANIFOLD
Kenneth E. Webster and David B. Smith, Chattanooga, Tenn., assignors to Combustion Engineering, Inc., Windsor, Conn., a corporation of Delaware
Filed May 31, 1962, Ser. No. 199,048
12 Claims. (Cl. 123—73)



1. A vapor generator comprising an evaporation chamber defined by an elongated shell and a vapor collector borne by said shell, said vapor collector having a wall common to said shell; a tube bundle substantially filling said chamber; means for passing a heating fluid through said tube bundle; means for admitting vaporizable fluid to said generator; means forming apertures in said common wall effecting communication between said evaporation chamber and said vapor collector; means segregating said apertures into downcomer and riser passages; baffle means directing said vaporizable fluid from said downcomer passages to the bottom of said chamber and for directing said vaporizable fluid in a heated condition to said riser apertures; and vapor outlet means in said vapor collector for removing vapor from said generator.

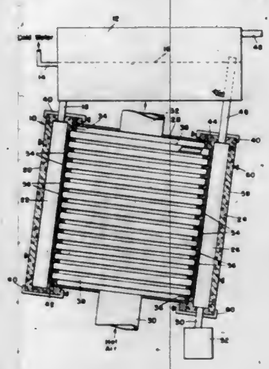
3,123,054
WATER HEATER
Melvin A. Smith, Jr., 683 Blake Ave. SE., Atlanta 16, Ga.
Filed Aug. 7, 1961, Ser. No. 129,855
4 Claims. (Cl. 122—135)

1. A water heater comprising an outer casing having opposed walls, an inner casing having opposed walls within said outer casing, said inner and outer casings defining therebetween a water chamber, water pipes passing through said outer casing and communicating with said water chamber for creating a circulation of water through said water chamber, said outer casing having an opening through one wall thereof, said inner casing being provided with an open end communicating with said opening through said one wall, said inner casing being connected to said one wall by its edge portions which are adjacent said open end, said wall of said outer casing supporting



said inner casing in cantilever fashion with the bottom of said inner casing spaced from an overlying the bottom of said outer casing, said inner casing defining a combustion chamber, a flue passing through said outer casing and said water chamber communicating with said combustion chamber and a burner within said combustion chamber for burning fuel and heating said inner casing and said flue, the opposed walls of said outer casing being convex, the opposed walls of said inner casing being concaved and facing the opposed walls of said outer casing.

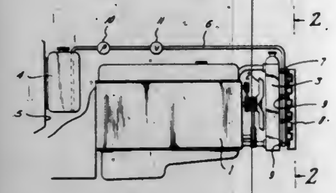
3,123,055
BOILER HAVING REFRACTORY HEADERS
Morton M. Rosenfeld, 271 Madison Ave., Mount Vernon, N.Y.
Filed Sept. 22, 1961, Ser. No. 140,099
2 Claims. (Cl. 122—235)



1. A boiler comprising a pair of heat resistant, non-corrosive, non-metallic refractory headers having manifold passages therethrough, a plurality of metal water tubes extending between said headers, said metal tubes providing communication between manifold passages in said headers, means connecting said tubes to said headers so as to accommodate thermal expansion of said tubes with respect to said header, means for supplying a liquid to the manifold passage in one of said headers and causing the liquid to flow from said one header through said tubes to the manifold passage in said other header, means for heating said tubes to an elevated temperature so that the liquid passing through said tubes changes to a vapor means for removably securing said headers to said tubes,

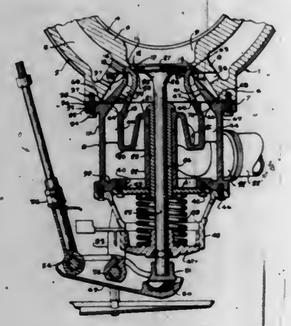
and means for removing said vapor from the manifold passage in said other header.

3,123,056
COOLING SYSTEM FOR THE PRIME MOVER OF AN AUTOMOTIVE VEHICLE HAVING AN AIR CONDITIONER
Clarence E. Kneblik, 1845 W. Main St., Apt. 1, Houston 6, Tex.
Filed Oct. 8, 1962, Ser. No. 228,977
5 Claims. (Cl. 123—41.01)



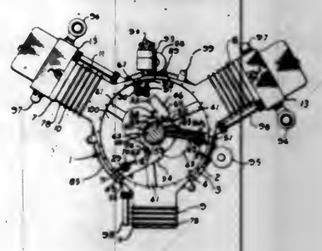
1. In a cooling system for automotive vehicles having a radiator for cooling the motor and having air conditioners equipped with a refrigerant condenser therein, a storage compartment for cooling fluid, a spray manifold mounted between the radiator of the vehicle and the condenser of the air conditioner, a conduit leading from the storage compartment to the manifold, discharge openings in the manifold for directing cooling fluid onto the surface of the radiator and means for controlling the flow of cooling fluid under pressure to the manifold.

3,123,057
VALVE CHAMBER STRUCTURE
Douglas W. Exline, Salina, Kans., assignor to Exline, Inc., Salina, Kans., a corporation of Kansas
Filed Aug. 12, 1963, Ser. No. 301,522
9 Claims. (Cl. 123—41.77)



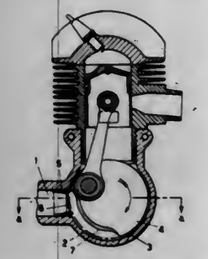
1. A valve chamber structure for internal combustion engines having a cylinder with a water jacket and a piston-receiving bore and a boss having a wall extending across said water jacket and defining a flow passage from said piston-receiving bore, comprising, a valve chamber housing having spaced inner and outer walls forming a water chamber therebetween, means securing said housing to said boss in water-tight relation, said inner and outer walls of said housing extending inwardly of said flow passage toward said cylinder and terminating in a closed end of the space therebetween, said closed end engaging the boss wall in a fluid-pressure-tight relation, said inner wall defining a flow passage having an inlet at said end of the housing, valve seat means at said inlet, a valve having a head and a stem, means on said housing supporting said valve for reciprocatory movement to permit the head to engage the valve seat, means actuating said valve between passage-opening and closing positions, passages in said boss wall and said outer wall adjacent the inner end thereof communicating said water jacket of the cylinder with the water chamber in the valve chamber housing, said valve chamber housing having an inner section and an outer section with substantially complementary engaging surfaces adjacent said boss whereby the inner section extends into said flow passage in the boss, and seal means between said complementary edges of the inner and outer walls of said inner and outer sections forming fluid-tight relation therebetween, the spacing between the inner and outer wall at said complementary edges being such that when the sections are separated access is provided through said space to the portion of the valve chamber water jacket in said inner section.

3,123,058
INTERNAL COMBUSTION ENGINE
Norman L. Wooge, 934 N. 82nd Terrace, Apt. A, Kansas City, Mo.
Filed Mar. 19, 1962, Ser. No. 180,481
4 Claims. (Cl. 123—55)



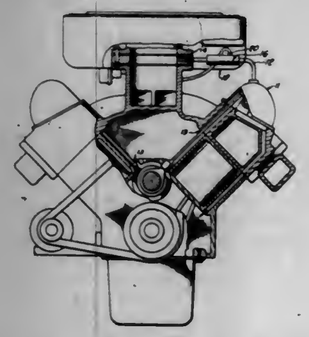
1. In an internal combustion engine:
(*a*) an engine block shaped to form a crankcase having an inner surface and an open end,
(*b*) said block having a plurality of compression and combustion cylinders circumferentially disposed in radially extending relation about said crankcase,
(*c*) a crankshaft having a plurality of cranks located within said crankcase, said crankcase being non-splitting longitudinally of said crankshaft,
(*d*) pistons slidably contained in each of said cylinders, a connecting rod operatively connected to each piston, a plurality of said connecting rods rotatably connected to each of said cranks,
(*e*) a plurality of spiders for supporting said crankshaft within said crankcase, said spiders being located at spaced points along said crankshaft,
(*f*) said spiders each including a base leg extending radially of said crankshaft and having an inner end terminating adjacent the axial center of said crankcase and an outer end secured to said surface,
(*g*) said spiders each including a pair of side legs each having an inner end joining said base leg inner end, said side legs respectively extending radially outwardly from said base leg inner end and having outer ends secured to said surface and spaced from each other defining a space therebetween,
(*h*) the juncture of said legs forming spaced platforms adjacent the axial center of said crank case
(*i*) removable bearing means secured to said platforms for rotatably mounting said crankshaft, and
(*j*) a removable closure member for selectively opening and closing said end of said crankcase, whereby access is provided through said end of said crankcase for removing said pistons, connecting rods and crankshaft from said crankcase through the spaces between said spider side legs without splitting said crankcase.

3,123,059
TWO-STROKE-CYCLE ENGINE WITH AN ADMISSION PORT IN THE CRANKCASE AT THE PERIPHERY OF THE CRANKS OF THE DRIVE SHAFT
Vittorio Casini, Pisa, Italy, assignor to Piaggio & C., S.p.A., Genoa, Italy, a company of Italy
Filed May 1, 1961, Ser. No. 107,622
Claims priority, application Italy May 1, 1960
2 Claims. (Cl. 123—73)



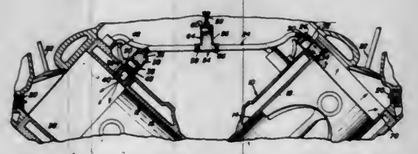
1. In a two-stroke-cycle engine of the type having a conduit connecting a source of fuel and lubricant with a crankcase and wherein the latter is provided a rotatably supported crank disc having a periphery cooperating with the crankcase to define an annular chamber which is adapted to accommodate lubricant to form a seal between the disc and the crankcase, the disc having a recess in said periphery for conveying fuel and lubricant towards a cylinder, the improvement comprising a bush removably supported in said conduit and in part projecting from said conduit into the crankcase a distance to leave the bush spaced from the periphery of the disc outside of said recess, said bush having an opening constituting a port for admission of fuel and lubricant into said crankcase when said recess is in registry with said opening, said bush being cooperatively associated with the periphery of the disc to maintain the seal between the disc and the crankcase.

3,123,060
CONTROL DEVICE FOR A CRANKCASE VENTILATING SYSTEM
Harold D. Daigh, Rolling Hills Estates, Calif., assignor to Richfield Oil Corporation, Los Angeles, Calif., a corporation of Delaware
Filed Mar. 4, 1963, Ser. No. 262,528
6 Claims. (Cl. 123—119)



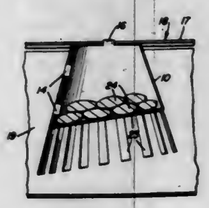
1. In a crankcase ventilating system for an internal combustion engine having an opening in the engine above the oil level through which blowby fumes can escape the engine and conduit means providing fluid communication between said opening and the induction system of said engine, said opening being subject to the crankcase pressure, and wherein a valve means is positioned in said conduit means, said valve means being normally closed in response to manifold vacuum and adapted to open in response to pressure buildup in said crankcase to pass blowby fluids through said conduit means into said induction system, the improvement comprising:
a chamber adapted to receive said valve means, and
means for maintaining a vacuum within said chamber to assist in opening said valve means.

3,123,061
FUEL INJECTION APPARATUS
Frank J. Budroni, 4853 Umbria St., Philadelphia 27, Pa.
Filed Jan. 19, 1962, Ser. No. 167,247
4 Claims. (Cl. 123—139)



1. In combination with an internal combustion engine including a pair of combustion chambers, a fuel injection apparatus comprising conduit means, a pair of pressure chamber means communicated with the opposite end portions of said conduit means, movable pressure responsive driving partition means disposed in one of said chamber means and movable pressure responsive driven pumping partition means disposed in the other of said chamber means defining a pumping chamber therein on the side of the pumping partition means remote from said conduit means, a column of relatively incompressible fluid disposed in said conduit means establishing a motion transmitting connection between said driving and driven partition means, means communicating said pumping chamber with one of said combustion chambers and a fuel inlet, means communicating the other pressure chamber means, on the side of the corresponding partition means remote from said fluid column, with the other of said combustion chambers.

3,123,062
BRAZIER ATTACHMENT
Alice Psarris, 25 Groton St., Lowell, Mass.
Filed Apr. 25, 1962, Ser. No. 190,048
5 Claims. (Cl. 126—25)



1. A heat concentrator comprising a one-piece unitary tube formed of rolled sheet material open at its ends, and means formed from part of said tube for suspending said tube from a grid of a fire-bowl and spaced from a bottom wall thereof, said tube including fingers on its lower end portion formed by longitudinally slitting said sheet

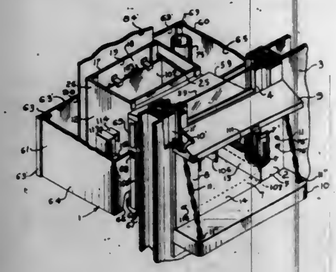
material and bendable inwardly and upwardly for supporting fuel in said tube.

3,123,063

PREFABRICATED FIREPLACE CONSTRUCTION

John V. Northwood, Lee's Summit, Mo., and John W. Rosher, Box H-46, Lake Lotawana, Lee's Summit, Mo.; said Northwood assignor to Sadie Miriam Northwood, Lee's Summit, Mo.

Filed May 1, 1961, Ser. No. 106,603
1 Claim. (Cl. 126—120)



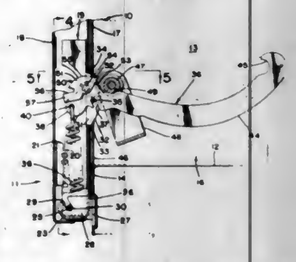
In combination, a building and a prefabricated fireplace construction, means providing an opening into said building, said fireplace construction being mounted on said building and extending through said opening, said fireplace construction having inwardly exposed sheet metal side walls and an inwardly exposed sheet metal bottom wall and an inwardly exposed sheet metal back wall and an inwardly exposed sheet metal top wall forming a solid fuel-burning firebox having a metallic inside surface, said firebox opening into said building and having a front portion extending into said building and a rear portion extending externally of said building, said top firebox wall being spaced from said back firebox wall and forming therewith a firebox draft opening in said rear portion of said firebox, a chimney located externally of said building, said chimney extending upwardly from and communicating with said firebox draft opening, side, bottom and top secondary walls adjacent said front portion of said firebox, spacers supporting said secondary walls in outwardly spaced relation respectively to said side, bottom and top firebox walls at said front portion of said firebox and substantially out of conductive contact therewith to minimize conductive heat transfer outwardly from said firebox front portion, front closure members extending between said secondary walls and said firebox walls, said secondary walls and firebox walls and closure members forming freely intercommunicating firebox front portion air current passageways surrounding said firebox front portion, false chimney side walls and a false chimney rear wall respectively having lower edges and being spaced outwardly from said firebox rear portion and forming therewith firebox rear portion air current passageways, outer walls spaced outwardly of said secondary walls, means supporting said outer walls in fixed relation with respect to said secondary walls, said outer walls contacting said building for supporting said fireplace construction on said building opening providing means, said false chimney side walls and false chimney rear wall forming adjacent said lower edges thereof intake draft openings located externally of said building and spaced above the ground and directly communicating between the atmosphere outside said building and said firebox rear portion air current passageways, draft opening forming means at the rear of said side and bottom secondary walls providing communication between said front portion air current passageways and said intake draft openings, vent opening forming means at the rear of said top secondary wall for venting air currents in said front portion air current passageways, and a false chimney front wall, said false chimney side and rear and front walls extending upwardly spaced from said chimney and forming exhaust passageways communicating with said rear portion passageways and said vent opening forming means, whereby cooling air enters said intake draft openings and circulates over the outer surface of said front and rear portions of said firebox and exits through said exhaust passageways.

3,123,064

REMOVABLE OVEN DOOR ASSEMBLY

Oliver E. Hartson, Mansfield, Ohio, assignor to The Tappan Company, Mansfield, Ohio, a corporation of Ohio

Filed Apr. 27, 1961, Ser. No. 106,130
10 Claims. (Cl. 126—191)



1. In combination with an oven door, counterbalance mechanism comprising an elongated cam, means for pivotally mounting said cam at a side of the door for relative swinging movement in a plane normal to the plane of the door, spring means for biasing the thus mounted cam in one direction, latch means carried by the cam at a portion thereof exposed at said side of the door and being adjustable thereon between first and second positions, the latch means in said first position being relatively retracted and in the second position bearing against a stop surface on the cam and extending relatively therefrom beyond the leading edge of the cam in the movement of the latter in said one direction, and stationary stop means carried by the door adjacent the path of movement of the cam for engagement with the latch means when in said second position thereof, the stop means and the stop surface of the cam acting oppositely on the latch means to lock the cam against movement thereof by the spring means in said direction beyond a predetermined point, thereby to lock the counterbalance mechanism in an inoperative condition, the latch means in its relatively retracted first position of adjusment being freely movable with the cam past the stationary stop means.

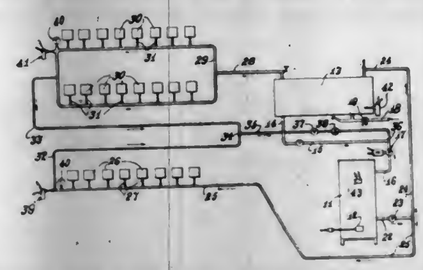
3,123,065

WATER TEMPERATURE CONTROL SYSTEM

Charles Paul Conley, Palatine, Ill., assignor to Ald Inc., Chicago, Ill., a corporation of Delaware

Filed Apr. 18, 1960, Ser. No. 23,091
5 Claims. (Cl. 126—362)

1. A water heating system adapted to deliver heated water at predetermined temperatures which comprises a hot water storage tank adapted to contain heated water at a predetermined temperature, a heater to heat the said water, conduit means connecting the heater and tank to deliver heated water to the said tank, separate conduit means to deliver heated water from the said tank and from the said heater to separate points of use located remote from the said tank and heater, a return flow conduit in flow communication with the remote ends of the said last named conduit means and with the heater, a motor driven pump in the said return flow conduit, normally open thermostat control switch unit at the remote end of each of said last named conduit means, said units being responsive to different water temperatures, and a



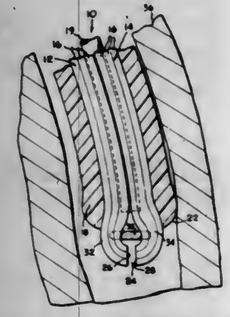
normally open electric circuit connecting the said switch units and pump motor adapted to be closed by the closing of either of said switch units when the temperature of the water at either of said remote ends reaches a predetermined low to start the said pump.

3,123,066

OPTICAL CATHETER

Corwin H. Brumley, Penfield, N.Y., assignor to Bausch & Lomb Incorporated, a corporation of New York

Filed Jan. 18, 1960, Ser. No. 3,074
7 Claims. (Cl. 128—2)



2. An optical catheter comprising a pair of elongated flexible light conductors, a protective tube disposed around said conductors, adjacent end portions of said conductors being curved so that their end faces are disposed in relatively closely spaced confronting relationship to define a light gap, said tube being so arranged and constructed as to operably expose said gap to a fluid in which said conductors are inserted whereby when said catheter is inserted into a blood vessel and light is directed into one of said conductors it is conducted therethrough and across said light gap and the attenuation of the light by blood disposed in said light gap is indicated by the relative intensity of light emergent from the other one of said conductors.

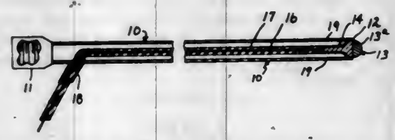
3,123,067

PROCESS AND APPARATUS FOR DETERMINING THE PRESENCE OF FOREIGN SUBSTANCES IN THE BLOOD STREAMS OF LIVING ANIMALS

Leland C. Clark, Jr., 2604 Kingswood Road, Birmingham 9, Ala.

Filed Aug. 1, 1960, Ser. No. 46,501
12 Claims. (Cl. 128—2.05)

1. The process of determining the presence in the blood stream of a living human body of hydrogen in the blood comprising inserting directly into the blood stream a catheter borne electrode capable of generating an electric signal in the presence of hydrogen, and utilizing the



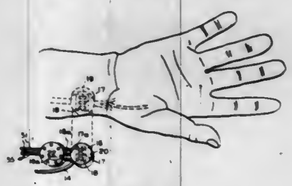
signal thus produced to obtain an intelligible indication of the presence of such material in the blood stream adjacent the electrode.

3,123,068

SPHYGMOMANOMETER

Robert P. Bigliano, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Oct. 5, 1961, Ser. No. 143,124
8 Claims. (Cl. 128—2.05)



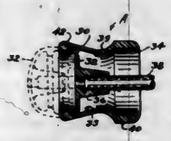
1. A method for the measurement of blood pressure comprising imposing a first pressure localized in application to an area overlying a test artery having the width dimension less than that of the artery as depressed in test and of a magnitude sufficient to flatten the wall of said artery without interrupting the flow of blood through said artery, simultaneously imposing at least one additional pressure on the body tissue adjacent the region of application of said first pressure, each said additional pressure being applied over an area substantially equal in extent to the area to which said first pressure is applied in an amount depressing said body tissue to substantially the same extent as said first pressure deflected said wall of said artery, and obtaining as the measure of said blood pressure the difference between said first pressure and the average value of said additional pressures.

3,123,069

EAR INSERT

Eugene W. Laisne, 842 W. Pine, and Frank Waterfield, 3440 E. Alta, both of Fresno, Calif.

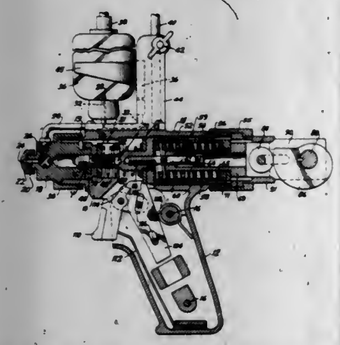
Filed June 25, 1962, Ser. No. 204,800
3 Claims. (Cl. 128—152)



1. An ear insert including a hollow tubular body portion formed of thin membranous material, a wall having an opening therethrough being provided at one end of said body portion and the end of said body portion opposite said wall being opened, a transmission tube connected at one end thereof to said wall in juxtaposition for communication with the opening thereof said transmission tube extending through said hollow tubular body portion, said

hollow tubular body portion having a circumferentially extending portion thereof of a greater thickness than the remainder thereof, said circumferentially extending portion extending internally of said hollow tubular body portion and adjacent said wall in juxtaposition whereby pull of said transmission tube upon said wall will cause said wall to fold inwardly of said hollow tubular body portion and collapse upon the circumferentially extending portion thereof.

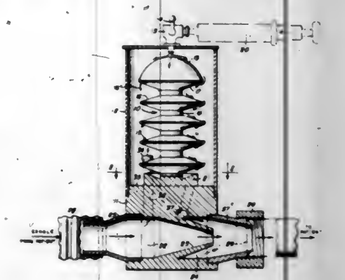
3,123,070
MULTIDOSE JET INJECTOR
Alfred W. Kath, Grosse Pointe, Mich., assignor to R. P. Scherer Corporation, Detroit, Mich., a corporation of Michigan
Filed Oct. 2, 1961, Ser. No. 142,083
10 Claims. (Cl. 128—173)



6. An injector instrument comprising a body defining at one end a medicament chamber having a discharge orifice, a plunger carried within said body and entering said medicament chamber, a spring assembly for moving said plunger and thereby expelling medicament through said orifice, said spring assembly comprising a pair of cup-like sleeves telescopically related to each other and slidable in said body, a compression spring contained in said sleeves and connecting means between the cup bottoms to retain said spring preloaded, a latch for said spring assembly and carried by said body to lock said assembly in a position slightly spaced from said plunger when the latter is in retracted position, a roller carried by said spring assembly, a cam shaft rotatably carried by said body and having a cam coacting with said roller, and a lever for rotating said cam shaft and cam for compressing said spring assembly whereby upon release of said latch said spring assembly expands to impart an initial advancing force to said plunger and thereafter continues to apply advancing force for ejecting the medicament.

3,123,071
ANESTHETIC VAPORIZER
James A. Felts, 517 Bainbridge Road, Marion, Ill.
Filed Jan. 11, 1961, Ser. No. 82,043
12 Claims. (Cl. 128—188)

1. An anesthetic vaporizer for use in an anesthesia system comprising a main-body having a base portion and an evaporation tower extending vertically upward from said base portion, a housing in spaced relation enclosing said tower and connected to said base portion, a means for introducing liquid anesthetic to the top of said tower, a passage extending through said base portion and having input and exhaust ends, first and second conduit means each connecting the interior of said housing with said passage, said first conduit means opening into said passage at a point closer to said input end than said second conduit means, means for creating a pressure differential such that the pressure at the opening of said first conduit means into said passage is higher than the pressure at the opening of said second conduit means into said passage, whereby liquid anesthetic is vaporized within said housing and a portion of the circulating gaseous mixture of the closed system, which passes through said passage,



is caused by said pressure differential to be diverted from said passage through said first conduit means, into the interior of said housing where it mixes with the vaporized anesthetic, and back through said second conduit means into said passage, thus entraining the vaporized anesthetic in the circulating gaseous mixture of the system.

3,123,072
FLEXIBLE TUBE COUPLING AND CLOSING APPARATUS
David Bellamy, Jr., Ashland, Mass., assignor, by mesne assignments, to Baxter Laboratories Inc., Morton Grove, Ill., a corporation of Delaware
Filed Mar. 9, 1959, Ser. No. 798,206
6 Claims. (Cl. 128—221)



3. A hypodermic needle coupling for the port tubes of medical and surgical fluid handling equipment comprising:

(*a*) a plastic fluid collecting and administering tube of flexible resilient composition and thin-walled, integral construction and which is sealable, sterilizable and non-wettable to blood, said thin flexible plastic tube having an end;

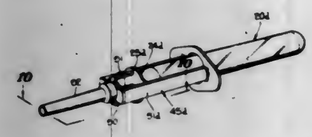
(*b*) a hypodermic needle comprising a substantially smaller rigid tubular cannula having at one end a point for piercing puncturable closures and for making subcutaneous injections, the other rigid cannula end inserted in said flexible tube end and with the flexible tube end substantially reduced and contracted about the rigid tube end;

said flexible plastic tube and rigid needle cannula forming unmatched tubular parts with the outside diameter of the rigid cannula being substantially smaller than the normal inside diameter of the flexible tube, the cannula-tube relation being exemplified by the coupling of a 15 gauge cannula having an outside diameter of about 0.072 in. to a 3 mm. tube having a full-open inside diameter of about 0.118 in.;

(*c*) means comprising an extending length of said flexible tube shaped beyond said rigid cannula end for defining a gradual, smooth, laminar-flow-promoting enlargement of the bore of the coupling to the normal full-open diameter of said flexible tube; and

(*d*) means for firmly and directly adhering said substantially reduced and contracted flexible tube end to said rigid cannula end, said adhering means providing sealed interfitting and integral coupling of said substantially smaller rigid cannula directly to said normally substantially larger flexible tube.

3,123,073
BLOOD SAMPLING ASSEMBLY
Courtland H. Barr, Sr., Courtland H. Barr, Jr., and John W. Barr, all % Courtland Laboratories, 5555 Valley Blvd., Los Angeles 32, Calif.
Filed Aug. 26, 1958, Ser. No. 757,308
11 Claims. (Cl. 128—276)



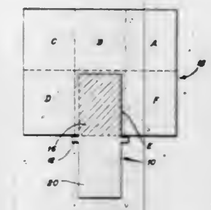
1. A cannula and vial assembly comprising the combination of a vial rigidly closed at one end by an integrally united member and closed at the other end with a stopper of resilient material, a cannula, and means operably connecting said cannula to said vial with one end of said cannula inserted in said stopper, said means including a cannula holder to which said cannula is secured, said holder including a pair of leg portions contacting portions of said stopper in friction fit relationship therewith, the end of the vial remote from said stopper extending beyond the ends of said leg portions, said assembly including rigid means for preventing piercing of said stopper by said cannula by forces tending to move said cannula toward said stopper.

3,123,074
COLOSTOMY AID
Mable Alice Turner, 204 Sandra Drive, Azle, Tex.
Filed Mar. 6, 1961, Ser. No. 93,743
1 Claim. (Cl. 128—283)



An accessory adapted to be worn by a colostomy patient, and providing a closure for the body opening, comprising the combination of a relatively short, flexible, extensible bellows-like tubular conduit, compact in its retracted position, having end portions of relatively greater and lesser diameter and tapered progressively intermediate its ends, said conduit having a cushioning ring on its larger end and having a flexible belt removably connected to opposite sides thereof adjacent its larger end whereby the conduit is removably secured to the body about the opening therein, with the larger end of the conduit in opposing relation to the body, the conduit having an outwardly turned, flexible peripheral bead on its smaller end, and a substantially flat, flexible cap closing the smaller end of the conduit, the cap having a peripheral flange engageable over said bead and terminating in an inwardly turned, flexible peripheral bead extending radially inwardly behind the first mentioned bead, in yieldable, frictional engagement therewith, whereby the cap is removably secured to the conduit.

3,123,075
DIAPER INSERTS
Paul Stamberger, 1010 St. Paul St., Baltimore, Md.
Filed July 25, 1956, Ser. No. 600,061
1 Claim. (Cl. 128—287)



A protective insert for a diaper, which is conventionally folded into multiple plies, comprising a thin sheet of paper foldable into two halves each the size of the folded diaper, one half of which is capable of holding feces on its surface and freely passing urine when placed on the inside of a folded diaper, and which becomes limp rapidly on being laid in water as in a toilet bowl, but is sufficiently resistant to urine to be strippable wet from a wet diaper in substantially intact form, and a second half which is urine resistant by reason of a film of coating material which is insoluble in cold water but is swollen thereby, so as to be capable of preventing passage of urine through the insert to the outside of the diaper when the insert is disposed in the diaper toward its outside, but which coating film passes water vapor freely, but does not prevent the paper from absorbing water and becoming limp rapidly when the insert is laid in a body of liquid water as in a toilet bowl, whereby the insert will prevent leakage of urine through the diaper, but will be strippable wet from the diaper and be flushable down a toilet drain by reason of the limpness it acquires on being laid in water.

3,123,076
ABSORBENT DRESSING
Hector W. Griswold, Princeton, N.J., assignor, by mesne assignments, to Johnson & Johnson, New Brunswick, N.J., a corporation of New Jersey
Continuation of application Ser. No. 598,192, July 16, 1956. This application May 21, 1962, Ser. No. 196,257
10 Claims. (Cl. 128—290)



1. A sanitary napkin comprising an absorbent core and a highly permeable, soft and stable nonwoven fabric cover wrapped around the core, the cover being flat on both sides and possessing moisture conducting power and offering substantially no resistance to the flow of fluid into the core throughout the flat sides of said cover, said cover comprising fibers oriented to define a multiplicity of substantially uniformly regular and uniformly spaced holes arranged in a predetermined pattern and groups of closely associated fiber segments between said holes, said groups being of yarn-like thickness and generally oval in cross section and having a capillary effect with respect to the core in the direction of extension of the fiber segments, said cover

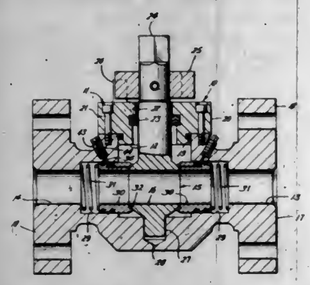
having appreciable depth and said holes extending through the depth of the cover, the fiber segments bordering the holes being in substantial parallelism with corresponding portions of the perimeters of the holes, said groups being interconnected by fibers common to a plurality of groups at junctures wherein the fibers extend in a plurality of diverse directions substantially in the plane of the fabric, said groups and said junctures each lying in the same general plane.

3,123,077
SURGICAL SUTURE
John H. Alcamo, 321 S. 9th St., Newark, N.J.
Original application Aug. 13, 1956, Ser. No. 603,546, now Patent No. 2,988,028, dated June 13, 1961. Divided and this application Apr. 20, 1961, Ser. No. 105,256
4 Claims. (Cl. 128—335.5)



1. An elongate cord of a diameter and tensile strength adapted for sewing and holding human flesh, and comprising a body portion and sharp-edged, resilient barbs projecting therefrom, at acute angles relative to, and directed toward, the trailing portions of the body, and adapted to yield toward the body when pulled through the flesh and of a size adequate to penetrate the flesh when the cord is pulled against the barbs.

3,123,078
LUBRICATED VALVE WITH MEANS TO RELIEVE SEALANT PRESSURE
Robert C. Brooks, Houston, Tex., assignor to Cameron Iron Works, Inc., Houston, Tex., a corporation of Texas
Filed May 12, 1961, Ser. No. 109,777
2 Claims. (Cl. 137—246.22)



1. A valve, comprising a valve body having a flowway therethrough and a chamber therein intersecting the flowway, a valve member in the chamber, means for moving the valve member between opened and closed positions, an annular seat slidably mounted in the flowway for engagement at its inner end with the valve member, a first seal ring carried by one of the body and seat to seal therebetween, a second seal ring carried by one of the body and seat to seal therebetween at a location more distant from the inner end of the seat than said first seal ring, a sealant injection port in the valve body connecting with the flowway intermediate the seal rings, a passageway through the seat connecting the outer side thereof intermediate said seal rings and the inner end thereof, said seal rings providing a seal between the seat and body along substantially equal diameter portions of the seat so that, upon injection of sealant, the force on the seat due to sealant pressure intermediate said seal rings is balanced in an axial direction, and an annular groove connecting with said passageway between said inner end of the seat and valve member to receive sealant for sealing between said seat and valve member and to relieve said sealant when the said sealant pressure exceeds the line fluid pressure within said flowway on the same side of the valve member as said seat a predetermined value.

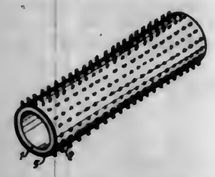
3,123,079
PERMANENT WAVE ROD
William G. Buesgen, 844 Haverford Ave., Pacific Palisades, Calif.
Filed Mar. 7, 1961, Ser. No. 94,062
1 Claim. (Cl. 132—40)



A permanent wave rod including: a hollow core having a plurality of elongated lateral slots distributed circumferentially in a uniform manner about its exterior for distributing permanent waving fluid received within the hollow interior of said core; small projections uniformly disposed about the exterior of said core between said elongated slots for providing a holding surface for hair wrapped about said core; end pieces adapted to be received in the opposite ends of said core, one of said end pieces including an opening for receiving said permanent waving fluid, each of said end pieces including a plurality of hook elements secured to its exterior surface in uniformly circumferentially spaced positions, said hook elements extending adjacent to the exterior cylindrical end surface portions of said core in helical directions, the direction of the helix for the respective hook elements on each end piece being opposite so that the hook elements define mirror images of each other with respect to a transverse plane passing normally through the center of said core, each end piece also including a hollow stem portion arranged to be received within the end opening of the core, said stem opening including diametrically opposite projections biased generally radially outwardly, the stem itself including lateral slots on either side of each projection; and the interior end opening at each end of said core including helically directed diametrically opposite grooves for receiving said projections on said stem whereby insertion of said end pieces by inserting said stem in said end openings with said projections registering in said helical grooves results in a partial rotation of said end pieces as they are urged axially towards each other so that said helical hook elements will lock into hair wrapped about said core to hold said hair on said core, the turning direction of said helical hook elements being opposite to the direction that said hair is wrapped about said core.

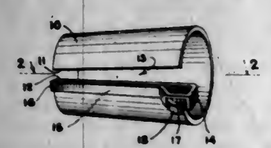
3,123,080
HAIR CURLERS
Gemma Brenn-Albertoni, Saleggi, Bellinzone, Tessin, Switzerland
Filed Mar. 13, 1961, Ser. No. 95,319
Claims priority, application Switzerland Mar. 14, 1960
5 Claims. (Cl. 132—40)

1. A hair curler comprising a cylindrical body and a plurality of pairs of juxtaposed symmetrical hair-engaging self-supporting bristles secured at one of their ends to said body, the bristles of each pair being medially bowed outwardly with respect to each other releasably to embrace and temporarily retain a lock of hair and having opposed plain free ends spaced from each other a distance less than the distance between the opposed medial portions each of said pair of bristles describing a



partial elliptical shape with the major axis thereof passing through said body between the secured ends of said pair of bristles on the one hand and passing between the opposed free ends on the other hand, whereby, unobstructed ingress and egress of a lock of hair is permitted between said pairs of bristles with minimal deflection of said bristles.

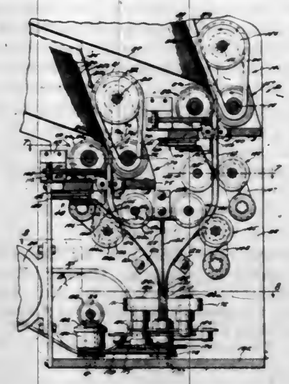
3,123,081
HAIR CURLING DEVICE
Rudolph M. Vaughn, 611 Lido Park Drive, Newport Beach, Calif.
Filed Sept. 28, 1962, Ser. No. 226,977
2 Claims. (Cl. 132—41)



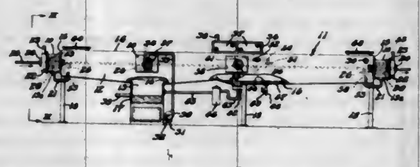
1. A hair curling device comprising, in combination: a rolled tubular member having a longitudinal slot defined by opposed longitudinal edge portions, one of said edge portions being extended in an axial direction and including a bent portion curved radially outwardly and then back on itself to extend along an exterior side of said tubular member in the form of an arm to define a clip with the initial portion of said one longitudinal edge, a part of the bent portion having a cut-out defining a tab extending radially outwardly further than the remaining bent portion whereby depression of said tab separates said arm from the initial portion of said one longitudinal edge sufficiently to temporarily receive and hold upon release of said tab a portion of hair preparatory to curling said hair about said tubular member as a form, said tubular member being tapered in an axial direction to facilitate removal of said member after hair has been curled thereabout.

3,123,082
CURRENCY DISPENSER
Daniel D. Call, Elk Grove Village, and Joseph I. Quateman, Evanston, Ill., assignors to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed July 2, 1959, Ser. No. 824,567
9 Claims. (Cl. 133—4)

5. In a currency dispenser, means for supporting a plurality of separate stacks of bills with each stack having all bills of a selected denomination, separate means associated with each stack providing a downwardly directed bill guide means and means for selectively feeding individual bills from the respective stack downwardly through the guide means, said guide means being convergently related by respective groups to combine the bills fed downwardly therethrough, a respective collector disposed at the lower end of each of the groups of guide means to receive the combined stack of bills therefrom on edge, a dispensing collector, each of said group collectors leading to said dispensing collector, and means selectively operable to eject the stacks of on-edge bills from said group collectors into said dispensing collector into a combined stack in the dispensing collector.



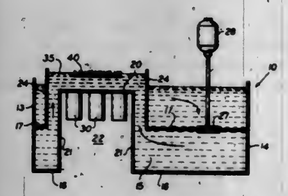
3,123,083
METAL DEGREASING APPARATUS
Thomas J. Kearney, Detroit, and Bruce A. Young, Lathrup Village, Mich., assignors to Detrex Chemical Industries, Inc., Detroit, Mich., a corporation of Michigan
Filed Mar. 1, 1963, Ser. No. 262,126
3 Claims. (Cl. 134—60)



1. In an apparatus for degreasing elongated solid work objects, the combination of
(1) an enclosed vessel having (*a*) a lower liquid sump portion formed therein and (*b*) an upper elongated portion formed therein, said sump portion being open at the upper portion thereof in communication with the interior of said elongated portion;
(2) means for conveying a continuous length of a solid work object into, through and out of said elongated portion along a substantially rectilinear path;
(3) liquid spray means within said elongated portion and position to spray liquid onto said work object, whereby the sprayed liquid returns by gravity into said lower liquid sump portion;
(4) liquid overflow means communicating out of said sump portion;
(5) vapor inlet means communicating into said vessel;
(6) vapor condensing means in communication with the interior of said vessel, said condensing means having a condensing surface thereof exposed to the interior of said vessel;
(7) means formed within said vessel and adapted to receive the condensate from said condensing means, and to direct said condensate into the path of said solid work object as determined by said conveying means at a point spaced apart from said liquid spray means in the direction of exit from said vessel;

(8) a second sump portion formed in said elongated portion and adapted to receive said condensate as it falls from the path of said work object;
(9) means for conducting liquid from said second sump portion into said lower liquid sump portion;
(10) means external to said vessel for recovering spent liquid solvent in vapor and liquid form and for supplying said recovered solvent in vapor form; and
(11) (*a*) means for conducting liquid from said overflow means into said solvent recovery means, (*b*) means for conducting vapor from the interior of said vessel into said solvent recovery means, and (*c*) means for conducting vapor from said solvent recovery means into the vapor inlet means of said vessel.

3,123,084
ULTRASONIC PROCESSING APPARATUS
Louis V. Tardoskegyi, Montreal, Quebec, Canada, assignor to Electrovert Manufacturing Co., Ltd., Montreal, Quebec, Canada, a corporation of Canada
Filed Mar. 27, 1963, Ser. No. 268,220
9 Claims. (Cl. 134—182)



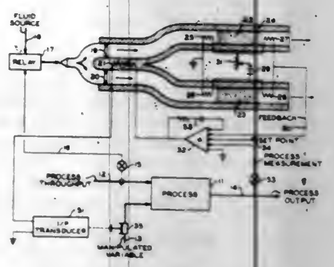
1. Ultrasonic processing apparatus comprising, in combination, means providing a substantially flat and substantially horizontal platform of relatively large area disposed in a path along which workpieces with a surface to be processed are moved; means defining an upwardly opening channel around the periphery of said platform; ultrasonic transducer means connected to said platform to transmit ultrasonic vibrations thereto; and means for supplying a processing liquid under pressure to said channel for pressure flow upwardly therein to cover the upper surface of said platform to provide an ultrasonically energized free standing wave elevated above said platform for contact with the workpiece surfaces to be processed.

3,123,085
AIR INFLATED SHELTER
Paul Desmarteau, 711 Le Laboureur Ave., Boucherville, Ontario, Canada
Filed July 13, 1961, Ser. No. 123,858
8 Claims. (Cl. 135—1)



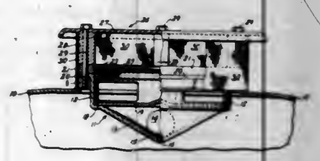
1. An air inflated shelter comprising a flexible airproof envelope, a retaining net covering said envelope, retaining cables attached to said net at their upper ends and passing through said envelope, a first series of tensioning cables connected to the lower ends of said retaining cables and each common to a row of such retaining cables, means for anchoring in the ground spaced points of said tensioning cables, said anchoring means, retaining cables and tensioning cables being disposed within the space enclosed by said envelope, and means for feeding air under pressure within said envelope and to maintain air pressure within the envelope greater than atmospheric pressure.

3,123,086
ANALOG PROCESS CONTROL
Louis D. Kleiss, Borger, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Apr. 9, 1962, Ser. No. 186,239
15 Claims. (Cl. 137—4)



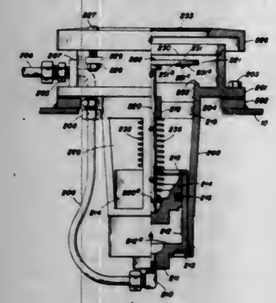
1. A method for controlling a process having a manipulated process variable, a controlled process variable, and a process input variable comprising passing a stream of fluid through a heat exchange zone and then through a heat sink zone, controlling the heat transfer to said fluid in said heat exchange zone responsive to said manipulated process variable, controlling the rate of flow of said fluid responsive to said process input variable, establishing a first signal representative of the temperature of said fluid upstream of said heat sink zone and downstream of said heat exchange zone, establishing a second signal representative of the temperature of said fluid downstream of said heat sink zone, and controlling said manipulated variable responsive to said controlled process variable and said first and second signals.

3,123,087
VACUUM OR PRESSURE RELIEF SAFETY VALVE FOR TANKS
Robert D. Marx, 952 Meeker Ave., Valley Stream, N.Y.
Filed June 16, 1961, Ser. No. 117,650
16 Claims. (Cl. 137—43)



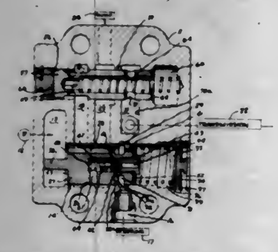
1. A safety valve for truck tanks and the like, said valve providing automatic differential pressure relief as well as roll over and fire protection, comprising port means, non-frangible and distortable port closure means, said closure means being normally secured in closing relationship with respect to said port means and distortable in the presence of excessive differential pressure to thereby open said port means and provide relief, angle responsive closure means including means responsive to the orientation of said valve relative to the gravity vector, said angle responsive closure means being operable to close said port means when said value is angularly displaced from said gravity vector.

3,123,088
TRUCK TANK BI-DIRECTIONAL VENTING VALVE MEANS
Robert D. Marx, 63 Jasper St., Valley Stream, N.Y.
Original application Feb. 12, 1960, Ser. No. 8,420. Divided and this application June 16, 1961, Ser. No. 117,648
4 Claims. (Cl. 137—73)



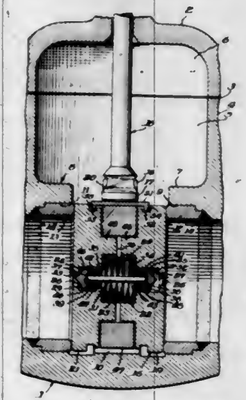
1. A truck tank including venting means adapted to cooperate with an aperture in said tank to controllably and automatically vent the same and to be removable from the exterior of said tank comprising a casing mounted in said aperture, said casing having a first section adapted to clear said aperture in the vent of removal and comprising cylinder means, said cylinder means including a port for the admission of control fluid pressure, a pressure line connected to said port and routed out through said aperture, piston means slidably disposed in said cylinder means and adapted in response to said control pressure to undergo substantially rectilinear movement, valve means in said casing adapted to open and close said first section of said casing with respect to another section of said casing, said valve means including a vacuum relief vent having a valve responsive to vacuum conditions within said tank, an aperture in said first section communicating with the interior of said tank, discontinuous coupling means for coupling said valve means to said piston means whereby said valve means respond to said control pressure and to tank pressure, and cover means to provide protection, said cover means including a passageway communicating with said other section of said casing and the exterior of said tank.

3,123,089
FLOW DIVIDER AND CONTROL VALVE
John E. Thrap, Garfield Heights, and Homer D. Farr, Brecksville, Ohio, assignors to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Original application July 17, 1959, Ser. No. 827,947. Divided and this application Jan. 2, 1962, Ser. No. 171,546
4 Claims. (Cl. 137—101)



3. A control valve comprising a valve housing having a flow passage with an inlet and an outlet, a valve plunger slidable in a chamber in the housing between said inlet and outlet, said plunger having a first end surface exposed to inlet pressure and an opposite second end surface exposed to pressure in a control chamber formed in the housing at the end of the plunger, a valve chamber formed by an annular groove around the valve plunger, a pressure drop orifice in said plunger communicating said inlet with said valve chamber, a passage in said plunger communicating said valve chamber with said control chamber, a variable orifice formed between a surface on the valve plunger at the edge of the valve chamber and said outlet controlled by movement of said valve plunger and communicating with said valve chamber and tending to decrease in size with increase in inlet pressure and tending to increase with decrease in inlet pressure, spring means in said control chamber biasing said plunger against said inlet pressure, and a relief valve communicating with said control chamber and opening at excess pressures.

3,123,090
PRESSURE RELIEF GATE VALVE
Kurt B. Bredtschneider, Chicago, Ill., assignor to Crane Co., Chicago, Ill., a corporation of Illinois
Filed Aug. 3, 1961, Ser. No. 129,178
1 Claim. (Cl. 137—112)



In an automatic relief type of double disc gate valve, a gate closure member therefor, the combination of a casing for said closure member, the casing having a central valve chamber with parallel valve seats for receiving said closure member and having an inlet passage and an outlet passage communicating with said valve chamber, the said gate closure member being reciprocally movable across the said inlet and outlet passages, the said gate closure member comprising a pair of spaced apart circular disc halves with parallel seat contact surfaces and with relieved portions oppositely disposed in juxtaposition, said gate closure member carrying pressure relief means therewithin in a chamber formed by said disc relieved portions, said relief means comprising a freely movable closure member guided for reciprocal movement in said relieved portion chamber and responsive to fluid flow through the said relieved portion chamber, the latter chamber having annular stepped portions formed between said disc halves and having substantially axially aligned ports leading therefrom defined at inner portions thereof by annular valve seats, the said freely movable closure member being reciprocally movable between said latter seats, the said freely movable closure being closely guided within said stepped annular portion of the said relieved portion chamber immediately adjacent said annular valve seats, the said guide means comprising op-

positely disposed spaced apart ribs slidably engaging said stepped annular portion of said relieved portion chamber immediately adjacent said annular valve seats, the said gate closure member having a centrally disposed renewable shaft of substantially reduced diameter connecting spaced apart portions of the said freely movable closure member adjacent said seats, said freely movable closure member alternatively connecting said annular valve seats whereby relief means is established optionally to provide an equalizing duct between the valve chamber and either the casing inlet passage or the casing outlet passage depending on which passage contains the higher fluid pressure.

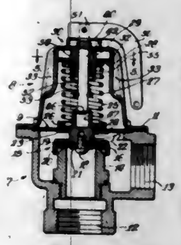
3,123,091
CONVERTIBLE MOTOR VALVE
Cleo A. Elsey, P.O. Box 427, A4, R.R. 1, Bartlesville, Okla.
Filed Aug. 19, 1955, Ser. No. 529,543
11 Claims. (Cl. 137—270)



1. A motor valve comprising a casing having a bore of substantially uniform cross-section and a plurality of exterior ports, a multiplicity of spaced openings interrupting said bore and each connected to one of said ports, and inner valve mechanism insertible in said bore through an end thereof, said inner valve mechanism including a plurality of selectively assemblable sleeves each adapted to axially overlap certain of said openings, certain of said sleeves having apertures registerable with openings overlapped thereby and other of said sleeves having solid walls registerable with said overlapped openings and being selectively interchangeable with said certain sleeves for sealing off any of said openings, valve seat means separate from said sleeves and disposed transversely of said bore, said valve seat means being positioned in said bore by said sleeves, and valve means shiftable axially of said bore relative to said seat means for regulating flow of fluid therethrough, said casing by selective assembly of said sleeves being adapted to any of a plurality of applications for motor valves.

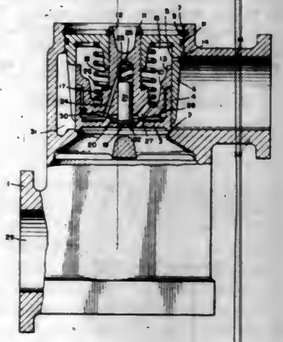
3,123,092
PRESSURE RELIEF VALVE
Leopold J. Kmiecik, Lincolnwood, and Leo W. Kaczmarek, Chicago, Ill., assignors to McDonnell & Miller, Inc., Chicago, Ill., a corporation of Delaware
Filed May 5, 1960, Ser. No. 27,130
4 Claims. (Cl. 137—469)

1. A pressure relief valve for boilers or the like comprising a valve housing having a liquid inlet, an outlet, and a main valve seat between said liquid inlet and said outlet, a spring housing mounted on said valve housing, rigid plate means extending between and separating said valve and spring housings from each other, an opening in said plate means, a plate valve seat surrounding said opening, a main valve assembly in said housing comprising a stem member, a huddling member mounted on said stem member and having a closed end and an open end surrounded by an annular flange depending from said closed end, a main valve within said huddling member for seating on said main valve seat, and a plate valve at said closed end of said huddling member for seating on said plate valve seat, said plate valve and said plate valve seat being substantially of the same diameter as the closed end of said huddling member, said valve housing upon connection of said inlet and said outlet through said main valve seat at predetermined pressure and temperature conditions of liquid at said inlet for converting the liquid to a gaseous medium providing for expansion of the gaseous medium to effect a back pressure condition in said valve



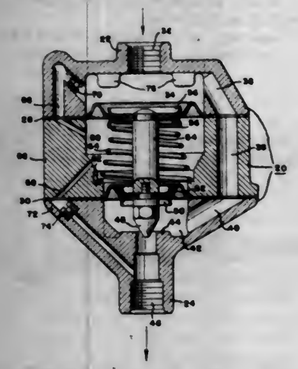
housing, valve biasing spring means engaging said valve assembly for seating said main valve on said main valve seat against liquid below a predetermined pressure at said inlet, said huddling member under said predetermined temperature and pressure conditions converting liquid in said valve housing to a gaseous medium effecting snap movement of said valve assembly to seat said plate valve on said plate valve seat and close said opening in said plate means, and said plate valve in its seated position on said plate valve seat preventing back pressure of the gaseous medium in said valve housing from acting on said closed end of said huddling member of said valve assembly tending to move said valve assembly in a direction to seat said main valve on said main valve seat.

3,123,093
MINIMUM PRESSURE DELIVERY VALVE ASSEMBLY FOR MOTOR COMPRESSOR UNITS
Iwan Ernst Roland Åkerman, Antwerp, and Jozef Ribbens, Borgerhout, Antwerp, Belgium, assignors to Atlas Copco Aktiebolag, Nacka, Sweden, a corporation of Sweden
Filed May 23, 1960, Ser. No. 30,807
6 Claims. (Cl. 137—494)



2. A minimum pressure delivery valve assembly for motor compressor units having a discharge conduit leading to said valve assembly and a delivery conduit leading from said valve assembly for transmission of fluid pressure therethrough from said compressor unit, comprising in combination a valve casing for said valve assembly and interconnecting said discharge and delivery conduits, a valve opening in said casing communicating between said casing and said discharge conduit and forming a valve seat, a main check valve member seatable on said seat for controlling flow from said discharge conduit to said delivery conduit and for interrupting flow in the reverse direction, a first chamber in said valve casing intermediate said valve opening and said delivery conduit, an auxiliary valve member slidable in said first chamber and having an outer face disposed toward said discharge conduit and an inner face oppositely disposed with said outer face having a greater effective pressure-responsive area than said inner face, means forming an abutting projection between said auxiliary valve member and said main check valve member defining therebetween a second chamber when said members are in abutting relation, first spring means in said first chamber and effective upon said auxiliary valve member for normally biasing said member into abutting relation with said main check valve member in the absence of an oppositely directed minimum fluid pressure effective upon said outer face of said auxiliary valve member, means forming flow communication from said delivery conduit into said second chamber between said auxiliary and main check valve members, means forming flow communication from said discharge conduit into said second chamber through said main check valve member, and a second spring relatively weaker than said first spring and effective between said auxiliary and main check valve members for normally biasing said main check valve member away from said auxiliary valve member and out of said abutting relation therewith, said first spring providing substantially the only force acting on said auxiliary valve member in opposition to fluid pressure in said second chamber and effective on said outer face of said auxiliary valve member.

3,123,094
DUAL DIAPHRAGM PRESSURE RESPONSIVE FLOW CONTROL VALVE
Dimitar Toschkoff, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 5, 1962, Ser. No. 171,224
6 Claims. (Cl. 137—505.13)



1. A fluid control including a valve body provided with a fluid inlet and a fluid outlet and a first passage extending from said inlet to said outlet, a first diaphragm means within said valve body having one face exposed to the pressure at said inlet, a second diaphragm means in said valve body having one face exposed to the pressure at said inlet, valve means within said valve body for controlling the flow of fluid through said outlet, operating means for said valve means operably connected to said first and second diaphragm means, restricted second passage means extending in parallel circuit relative to said first passage through the valve body from said inlet to said outlet, said first and second diaphragm means having different effective areas and each having their second faces exposed to the fluid pressure in an intermediate portion of said second passage means.

3,123,095
MULTIPLE RING VALVE
Robert Kohler, Schongau (Lech), Upper Bavaria, Germany, assignor to Hoerbiger Ventilwerke Aktiengesellschaft, Vienna, Austria
Filed Dec. 20, 1962, Ser. No. 246,125
Claims priority, application Austria Jan. 4, 1962
14 Claims. (Cl. 137—516.23)



1. A multiple ring valve, in particular for piston-type compressors, comprising a valve seat, a valve guard arranged in spaced relation to said valve seat, closing means located between the said valve seat and the valve guard and comprising an one-piece elastic valve plate composed of concentric rings interconnected by means of linking webs, the linking webs of all concentric rings being located on the same diameter of the valve plate.

3,123,096
OXYGEN COMPRESSOR FEATHER VALVE
John Notaro, West Seneca, Christian F. Gottzmann, Clarence, and Carlos M. Heath, Kenmore, N.Y., assignors to Union Carbide Corporation, a corporation of New York
Filed Dec. 15, 1961, Ser. No. 159,615
9 Claims. (Cl. 137—525)

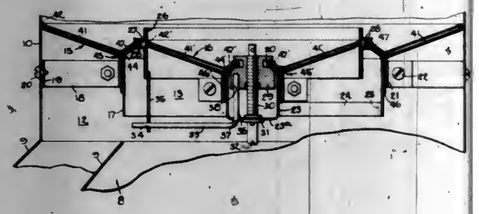


1. Feather valve comprising a valve seat having an elongated central orifice therein, a valve guard mating with said seat, a feather between said guard and seat, mating grooves in said guard and seat spaced beyond the ends of said orifice forming bearing cavities, and rollers at the ends of said feather journaled in said cavities, said cavities being oversized to position the rollers off center to make only tangential contact with the cavity surfaces.

3,123,097
DAMPER ASSEMBLY FOR AIR MIXERS
Walter W. Kennedy, Rockford, Ill., assignor to Barber-Colman Company, Rockford, Ill., a corporation of Illinois
Filed Mar. 16, 1961, Ser. No. 96,208
10 Claims. (Cl. 137—601)

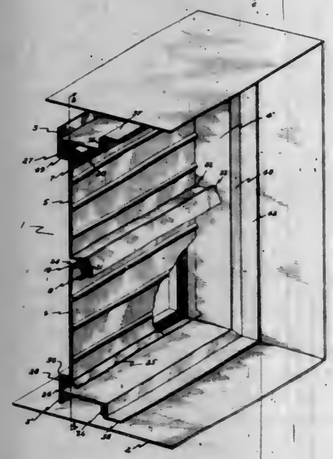
1. The combination of, an elongated outer wall, a ring smaller than said wall and fixedly mounted within said wall concentric with the latter and cooperating therewith to define an outer annular air passage, an annulus shorter than said wall and smaller than said ring and mounted concentric with the latter for axial shifting, a second

smaller ring rigid with said wall and said first ring and cooperating with said annulus to form an inner annular air passage concentric with said outer passage, a member rigid with said annulus and mounted within said second ring for movement back and forth along the axis of said rings, a frusto-conical umbrella disposed in said outer air passage and radially expansible and contractible to vary the width of said outer passage and thereby control the



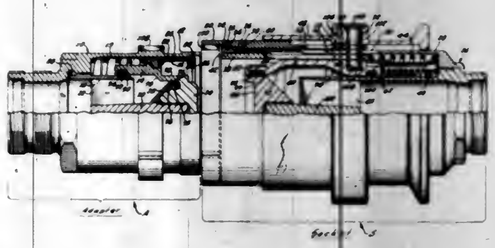
flow of air therethrough, a similar smaller umbrella disposed in said inner passage and radially expansible and contractible to control the flow of air therethrough, the peripheral shapes of said umbrellas corresponding to said wall and annulus so as to close the passages when the umbrellas are expanded against the wall and annulus, and actuating means for moving said member and said annulus back and forth axially relative to said rings to open and close both of said umbrellas in unison.

3,123,098
MULTIPLE LOUVER DAMPER
Robert H. Bishop, 808 W. Park St., Champaign, Ill.
Filed Aug. 17, 1961, Ser. No. 132,123
3 Claims. (Cl. 137—601)



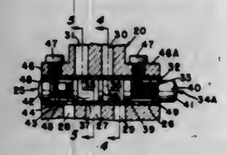
1. A multiple louver damper comprising a frame and a plurality of louver blades disposed therein, said blades including a lower blade and at least one upper blade, each of said blades being provided with a hinge portion extending along the upper marginal edge thereof for pivotally mounting said blade for vertical swinging motion with respect to said frame, an outwardly projecting pointed contact bearing surface formed integrally with and extending longitudinally of said hinge portion of each of said blades, a laterally projecting ridge formed adjacent to the free swinging marginal edge of said lower blade, the free swinging marginal edge of said upper blade being provided with a laterally offset channel recess adapted to receive a resilient sealing means, said sealing means of said blade channel recess, while in blade closed position, being adapted to overlap the hinge portion of an adjacent lower blade and seal against the pointed contact bearing surface thereof, said frame comprising top and bottom members and side members, each of said frame members having a laterally opening channel recess, a first sealing means received within and projecting from each of said laterally opening frame channel recesses, such that when said blades are in closed position, said first sealing means carried by said frame members is adapted to seal against the plane vertically extending marginal edges of said blades, said first sealing means carried by said top frame member being adapted to seal against the hinge portion of the uppermost blade of said blades, and said first sealing means carried by said bottom frame member being adapted to seal against said ridge formed on said lower blade, and each of said frame members being formed with an outwardly opening recess adapted to receive a second sealing means adapted to effect sealing engagement between said frame members and the walls of an opening in a structure within which said frame is mounted, said hinge portion of each of said blades being formed by rolling over the upper marginal edge thereof to form a generally cylindrical cavity, laterally offset from a generally plane portion of said blade, and said blades being provided with supporting shafts which are disposed within said cylindrical cavities and adapted to extend axially outwardly on either end thereof to be received within bearing sleeve seal members disposed in openings provided in said side frame members, said hinge portions of said blades being reduced in thickness between said outwardly projecting pointed contact bearing surface and said generally plane portion of said blades, thereby permitting said uppermost blade to swing away from said sealing means carried by said top frame member, and said lower blades to swing away from said sealing means carried by said side frame members as said blades open to thus prevent binding.

3,123,099
HIGH PRESSURE FLUID COUPLING
Erich E. Breuning, Hollywood, and Jorge Torres, Los Angeles, Calif., assignors to Purolator Products, Inc., a corporation of Delaware
Filed Apr. 26, 1960, Ser. No. 24,831
6 Claims. (Cl. 137—614.06)



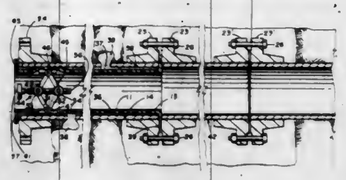
1. The combination of: a first passage means and a second passage means; a first coupling means and a second coupling means mounted on the ends of said first and second passage means respectively for movement relative to each other toward each other into abutment with each other; releasable means to lock said two coupling means together; a first normally closed valve in said first coupling means to close off said first passage means; a second normally closed valve in said second coupling means to close off said second passage means, said first valve being responsive to said second valve when the two coupling means are interlocked to open when the second valve opens and to close when the second valve closes; an actuating means on said second coupling means movable axially thereof from a normal starting position through a given range relative thereto, said locking means being responsive to the movement of the actuator as it moves through a first portion of said range to lock the two coupling means together and said second valve being responsive to the movement of the actuator as it moves through a second portion of the range, with the second valve closing in response to said movement of the actuating means towards said first portion of the range and vice versa, and with said locking means remaining locked during movement of the actuating means towards said second portion of the range and vice versa, whereby said two valves are always closed when said locking means is released for separation of the two coupling means; means to urge said actuating means from its normal starting position through said range; and means to latch the actuating means at its starting position in opposition to said urging means, said latching means being releasable in response to said movement between the two coupling means.

3,123,100
DIRECTIONAL AND FLOW RATE CONTROL VALVE
Elmer B. Burnett, Monroeton, Pa., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey
Filed Oct. 9, 1959, Ser. No. 845,431
2 Claims. (Cl. 137—625.17)



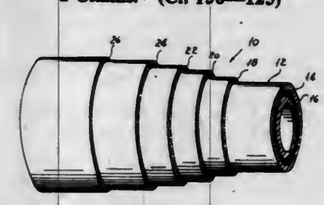
1. A valve device for controlling the path and rate of flow of fluid therethrough; comprising a housing having an inlet passage, at least one exhaust passage, two delivery passages, and a bore communicating with such passages; a sleeve disposed in said bore having openings through the wall of said sleeve positioned to provide for communication between said passages and the interior of said sleeve; a valve movable axially in the bore between one set of terminal positions and movable rotationally between a second set of terminal positions; two passages formed through said valve for communicating one delivery passage with the inlet passage by means of one passage and simultaneously communicating the other delivery passage with the exhaust passage by means of the other passage when such valve is in a terminal position of said first set, and communicating the two delivery passages in a reverse manner with the inlet and exhaust passages when such valve is in the other terminal position of said first set; said valve movable between terminal positions of the other set to vary the extent of communication between one of the valve passages and the inlet; said valve having a neck portion including a pair of spaced annular grooves, at least one wall of each groove having a plurality of axial grooves, a threaded fastener received in said housing and extending through the wall of said sleeve to prevent movement of said sleeve relative to said housing, the inner end of said fastener including means adapted to engage said annular grooves to maintain said valve in said terminal positions and simultaneously engage the axial grooves of the associated annular groove to hold said valve against rotation.

3,123,101
METHOD AND STRUCTURE FOR REPAIRING PIPELINES
Floyd E. Blount, Dallas, and Charles J. Fritts, Houston, Tex., assignors to Socony Mobil Oil Company, Inc., a corporation of New York
Filed July 9, 1962, Ser. No. 208,358
13 Claims. (Cl. 138—97)



13. A method of repairing a pipeline comprising the steps of isolating a section of said pipeline to be repaired, providing a limp thin-walled casing of a length in excess of the length of the isolated pipeline section, providing a substantially fluid-tight seal at one end of the casing, inflating said casing by introducing pressurized fluid through the other end of said casing in a sufficient amount so that the casing is cylindrical and sealing such end against fluid loss, then passing the inflated casing through the isolated pipeline section until the casing protrudes from both ends of the isolated pipeline section, removing the seals from both ends of the casing, and leaving said casing in said pipe.

3,123,102
HIGH TEMPERATURE RESISTANT TUBING
Leonard P. Frieder, Great Neck, N.Y., and Jan V. Weinberger, Ottawa, Ontario, Canada, assignors to Gentex Corporation, New York, N.Y., a corporation of Delaware
Filed July 6, 1959, Ser. No. 825,063
2 Claims. (Cl. 138—125)

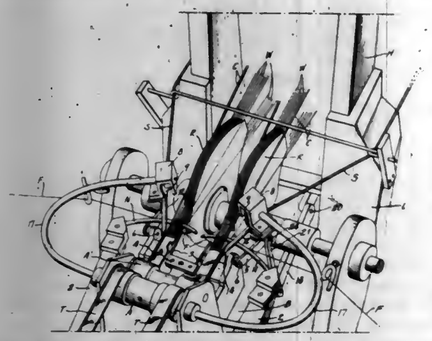


1. In a high temperature resistant tubing a protective covering including a sleeve formed from yarns comprising from 55 percent to 70 percent by weight of fibers of a polymer of acrylonitrile adapted under exposure to extreme heat to decompose by passing substantially directly from a solid to a gas from 14 percent to 26 percent by weight of wool fibers, and from 15 percent to 25 percent by weight of acetate rayon fibers to inhibit shrinkage of said sleeve.

3,123,103
MEANS FOR WEAVING A PRE-FORMED SLIDE FASTENER FILAMENT TO A TAPE
James A. Hendley, Box 177, Stanley, N.C.
Filed Aug. 28, 1962, Ser. No. 220,091
24 Claims. (Cl. 139—11)

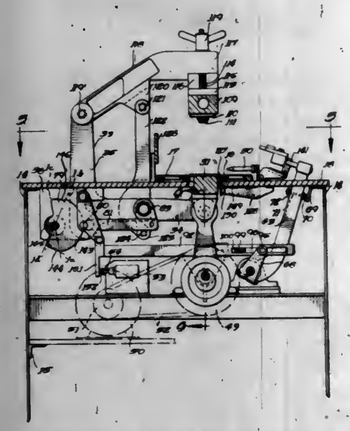
21. In a loom of the class described for weaving tape having means for feeding warp threads thereto, means for forming a shed between the warp threads, means for laying a weft thread in the shed, and beat-up means for moving the weft thread into the fell of the tape, the combination of means for feeding a pre-formed fastener filament coextensively with the warp threads along the side of the

shed, a movable member arranged to one side of the path of the warp threads around which the weft thread is adapted to be initially disposed in each lay of the weft thread, said member having a passageway arranged therethrough with the forward end thereof terminating adjacent the fell of the tape through which passageway the filament is guided to a point adjacent the fell, and means for oscillating the rearward end of said member relative to said weft laying means and relative to the forward end thereof



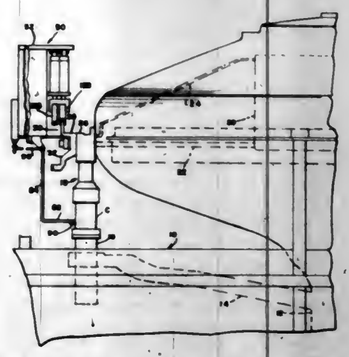
which acts as a pivotal point and remain substantially stationary as the shed changes whereby the weft thread is adapted to be initially disposed around the forward end of said movable member in the movement of the weft laying means into the shed and sliding therefrom to position around the filament immediately after the filament is delivered from the inner end of said passageway as the weft thread is moved into and through the shed by the weft laying means so as to weave the filament into the edge of the tape.

3,123,104
APPARATUS FOR CHARGING LIQUID-FILLED CONTAINERS WITH GAS UNDER PRESSURE
Lawrence G. Weston, Western Springs, Robert F. Lense, Oaklawn, and Ralph L. Mucci, Elmhurst, Ill., assignors to John R. Nalbach Engineering Co., Chicago, Ill., a corporation of Illinois
Filed Dec. 9, 1959, Ser. No. 858,490
15 Claims. (Cl. 141—64)



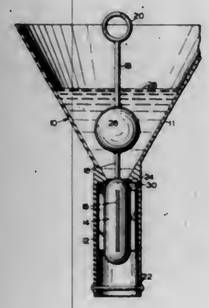
1. An apparatus for agitating the liquid contents of a plurality of containers simultaneously with the injection thereinto of a gas under pressure, comprising, a gas injection assembly including an elongated manifold; means for supporting said manifold for swinging movement between a lowered position wherein a plurality of containers are operatively engaged and a raised position wherein the plurality of containers are not operatively engaged including a supporting arm having said manifold secured to one end thereof and its opposite end pivotally supported; and means for swinging said manifold between its raised and lowered positions including a control shaft supported for rocking movement about its own longitudinal axis, connecting means operatively interconnecting said supporting arm and control shaft whereby rocking of said control shaft in one direction effects pivoting of said support arm to move said manifold to its raised position and in the opposite direction effects pivoting of said support arm to move said manifold to its lowered position, biasing means operatively connected to said control shaft for applying a force thereto tending to rotate said control shaft in said one direction, and camming means limiting rotation of said control shaft in said one direction including a cam and follower means operatively connected to said control shaft, said cam and follower means being biased into engagement with each other by said biasing means, said cam having a profile for displacing said follower means against the biasing action of said biasing means and being operable through said follower means upon rotation thereof to rotate said control shaft in said opposite direction against the biasing action of said biasing means a distance correlated with the contour of such cam profile.

3,123,105
ROTARY FILLING MACHINE WITH VALVE TRIP CONTROLLING MECHANISM
Rudolph Henry Breeback, Baltimore, Md., assignor to Crown Cork & Seal Company, Inc., Philadelphia, Pa., a corporation of New York
Filed May 10, 1961, Ser. No. 109,199
16 Claims. (Cl. 141—147)



1. In a rotary filling machine for filling containers with a carbonated liquid: a base structure; a rotary table carried by said base structure, said table including a reservoir for carbonated liquid and superposed body of gas, a plurality of filling heads circumferentially spaced about and movable with said table and operatively connected to said reservoir and container supporting platforms therebeneath for supporting containers beneath said filling heads; each filling head including a valve body and a valve element rotatable with respect to said valve body about an axis radial of said table; each valve element including a pair of operating arms extending substantially radially of said valve element axis; trip means carried by said base structure and spaced about the path of movement of said valve element with said table to engage said arms to move the valve element between shut-off, counterpressure and liquid flow positions; and trip means positioned between the trip means for moving said valve element to counterpressure position and the trip means for moving said valve element to liquid flow position, said last mentioned trip means being normally out of the path of said operating arms and movable into the path of one of said operating arms when no container is beneath the corresponding filling head, said last mentioned trip means being adapted to rotate said valve element to shut-off position.

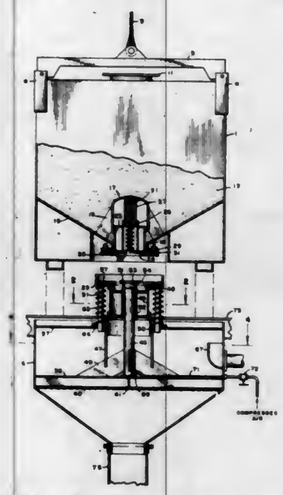
3,123,106
NON-SPILL FUNNEL
Osmo E. Parhaniemi, Rte. 1, Box 855, Astoria, Oreg.
Filed Aug. 6, 1962, Ser. No. 214,962
3 Claims. (Cl. 141—204)



1. A non-spill funnel comprising an inverted frusto-conical funnel portion and a substantially cylindrical down-spout communicating with said funnel portion and adapted to be inserted in a container to be filled, an elongated float slidably received interiorly of said down-spout, an annular sealing ring integrally formed by the juncture of said down-spout and said funnel portion interiorly of said down-spout against which the top of said float seats when raised by fluid level in said down-spout, means in the lower end of said down-spout retaining said float therein, a lifting ring for said float adjacent the top of said funnel portion, and means connecting said ring to said float.

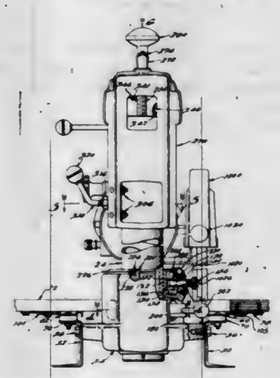
3,123,107
PARTICULATE MATERIAL TRANSFER MECHANISM
Rubin E. Kappler, Baytown, Tex., assignor, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware
Filed May 31, 1962, Ser. No. 199,174
3 Claims. (Cl. 141—352)

1. Apparatus for transferring a fluidized particulate solid material between levels, comprising:
- a bin having a downwardly coning bottom with a central opening therein;
- a hopper having a cover plate with a central opening therein;
- an annular, upwardly facing valve seat at said bin central opening;
- a valve affixed to said bin above said bin central opening including a vertically movable closure plate for seating on said valve seat and means for urging said plate against said seat to close said bin central opening;
- a vertically positioned ram affixed to said hopper within said hopper, extending through said hopper cover plate central opening to above said cover plate to a level sufficiently high to engage said closure plate and lift said closure plate off of said valve seat;
- first, second, and third elongated, annular sleeves, said first sleeve being affixed to said cover plate at the edge of said cover plate central opening and extending vertically above and below said edge substantially concentrically around said ram, said second sleeve being in sliding fit around said ram, said third sleeve being in sliding fit within said first sleeve and affixed to said second sleeve;



- an annular plate affixed to said third sleeve normal thereto;
- annular sealing means on the upper surface of said annular plate disposed beneath said bin for sealing engagement therewith around said bin central opening; and
- means including a plurality of coil springs disposed beneath said annular plate and said cover plate, the upper end of said ram being positioned relative to said cover plate such that said cover plate engages said bin before said ram engages said closure plate.

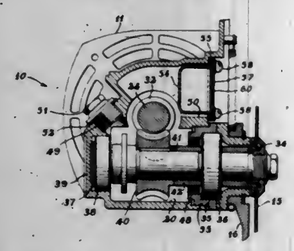
3,123,108
RADIAL ARM SAW
Walter L. Gaskell, Ypsilanti, and Charles L. Seltz, Ann Arbor, Mich., assignors to King-Seeley Thermos Co., a corporation of Michigan
Filed Feb. 1, 1961, Ser. No. 86,454
2 Claims. (Cl. 143—6)



2. In a radial arm saw comprising a base, a generally planar table on said base for the support of a workpiece,

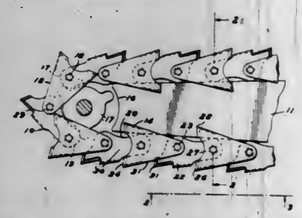
a vertical column supported by said base, a radial arm supported by said column, and a carriage supported by said radial arm and movable longitudinally thereof, the improvement comprising a power unit having a generally cylindrical housing, an arm depending downwardly from said carriage having a contractible ring engageable about the housing of said power unit, said power unit having an armature at one end rotatable about the central axis thereof and a tool holding arbor at the other end thereof rotatable about an axis generally normal to the axis of the armature, said power unit being rotatable about its central axis within the contractible ring on said arm to vary the angular relationship between the central axis of said tool holding arbor and the plane of said table, the ring on said carriage arm encircling said housing between the armature and the arbor of said power unit.

3,123,109
MEANS FOR PREVENTING LOSS OF LUBRICANT IN GEAR CHAMBERS
Hugo W. Bork, Chicago, Ill., assignor to Skil Corporation, Chicago, Ill., a corporation of Delaware
Filed Jan. 17, 1962, Ser. No. 166,874
5 Claims. (Cl. 143—33)



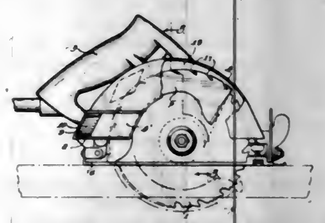
2. In a closed gear chamber of a power tool or the like wherein sealing gaskets, plugs and the like are provided to seal openings in the walls of the gear chamber to prevent leakage of lubricant from the latter, the improvement which comprises, a wall portion of said gear chamber being provided with a small opening to atmosphere, a collapsible diaphragm within said gear chamber, which diaphragm is generally concave shaped on the atmosphere side having a continuous marginal portion in sealing engagement with said wall portion around the opening formed therein for defining a collapsible chamber within said gear chamber, said diaphragm being collapsible in response to an increase in pressure developed in said gear chamber.

3,123,110
SAW CHAIN FOR POWER DRIVEN CHAIN SAWS
Charles F. Keway, Sr., Grayling, Mich., assignor to Keway Enterprises, Inc., Grayling, Mich., a corporation of Michigan
Filed Oct. 27, 1960, Ser. No. 65,332
1 Claim. (Cl. 143—135)



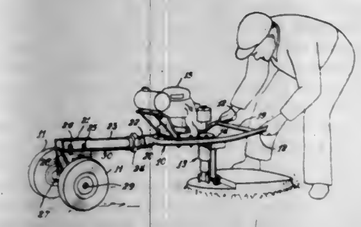
Saw chain linkage comprising spaced single center links having front and rear end pin receiving apertures, spaced double side links on either side of said center links spanning the space between said center links and having front and rear end pin receiving apertures aligned with said center link rear and front apertures respectively, connecting pins disposed in said aligned apertures interconnecting said links; said center links having a top side; said side links having a top portion extending above said center links top side; said side links top portions together with said center links top side forming a track blade receiving channel for positioning and holding said chain on a track blade; said links spacing and location creating a pocket endwise between said center links and sidewise between said side links in their center link spanning area for positioning and holding said chain on the teeth of a driving sprocket gear with the rear end of said center link providing a driving boss and said side links providing slide guides, all said links having saw teeth for removing material from a workpiece; both said side links and said center links having a portion projecting forwardly of the other links rear pin receiving aperture; said saw teeth on said links being carried by all said links forwardly projecting portion said side links having a relatively large concave front end, a relatively small convex rear end, and paired top and bottom sides leading from said large front end to said small rear; said side links thereby being lengthwise substantially triangular; said relatively large concave front end constituting means for conveying chips and dust and said relatively small rear end avoiding interference with said teeth of said center link and exposing them sidewise for travel of chips and dust therefrom into the path of said large front end on said next side teeth.

3,123,111
SAWDUST DISCHARGE FOR CIRCULAR SAW
Charles A. Mattson, Oak Park, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed Mar. 2, 1962, Ser. No. 177,001
1 Claim. (Cl. 143—157)



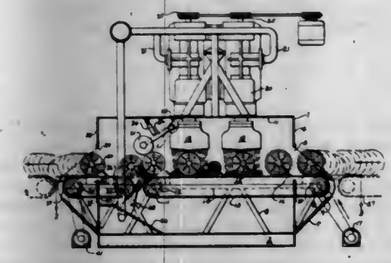
In a portable electric saw, a rotary circular saw blade, two generally semi-annular saw blade guards having generally U-shaped cross sections, said guards being disposed along the periphery of said blade and shielding substantially the whole periphery thereof, one of said guards being movable and the other guard being fixed, the inside of said fixed guard being spaced from the blade for movement in a circumferential direction of the movable guard within the fixed guard, a circumferentially extending space between the guards when disposed one within the other, a discharge opening formed in the fixed guard, said discharge opening being in communication with said space through a sawdust discharge chute, said chute comprising a wall formed across said space, said wall being curved for the discharge of sawdust through said opening in a direction laterally away from the plane of said blade, and vent opening means formed along the periphery of said movable guard whereby solely the fan effect of said blade is effective to move sawdust rearwardly along said space into said chute.

3,123,112
STUMP CUTTER
Hubert Earl Hodges and Burton Garvin Frame, Cedar Lake, Ind., assignors to Cedar Lake Engineering Co., Cedar Lake, Ind., a copartnership
Filed Dec. 22, 1958, Ser. No. 782,119
4 Claims. (Cl. 144—2)



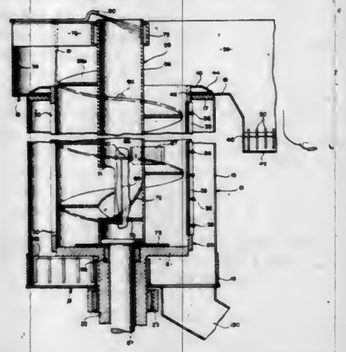
1. A stump router including a frame having one end thereof wheel supported and having an operator guiding handle at the other end thereof, said frame having a depending routing tool and power means for driving said routing tool, a depending support carried by said frame, an outwardly facing cut width controlling shoe having a stem in adjustable threaded engagement with said support, and a downwardly facing cut depth controlling shoe, said depth controlling shoe having a stem in adjustable threaded engagement with said support, whereby the frame and tool may pivot generally about said wheel supported end while maintained in substantially the same plane by said depth controlling shoe and the width of the cut is controlled by engagement of said outwardly facing shoe with a generally vertically extending surface of the stump.

3,123,113
HYDRAULIC BARKER
Anton J. Horstman, Springfield, Ohio, assignor to The Bauer Bros. Co., Springfield, Ohio, a corporation of Ohio
Filed Apr. 2, 1959, Ser. No. 803,784
1 Claim. (Cl. 144—208)



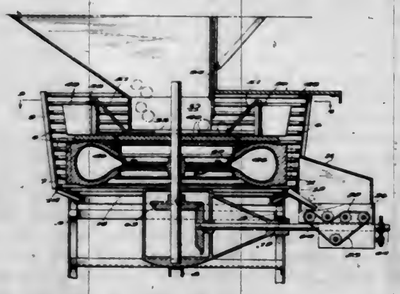
Barking apparatus including conveyor means having means to move logs therewith in transversely disposed relation thereon and maintain a relatively fixed exposure thereof, a plurality of rotary jet heads operatively related to said conveyor means and having convergent jet nozzles positioned over said conveyor means and respectively directed at different selected portions of the exposed surface of each of the logs as they move thereby, said heads being arranged in a generally triangular pattern for successively sectionally stripping each log and simultaneously operating on a plurality of logs to strip selected portions of the bark therefrom, and means beyond said jet heads for automatically inducing exposure of previously unexposed portions of said logs for completion of the bark stripping operation as they are discharged from said conveyor means.

3,123,114
FRUIT AND VEGETABLE PEEL-CHIPPING APPARATUS
Richard A. Andrews, Whittier, Donn J. Rickard, Glendora, and Meredith J. Stansbary, La Habra, Calif., assignors to Citrus Equipment Corporation, Whittier, Calif., a corporation of California
Filed Oct. 8, 1962, Ser. No. 229,147
10 Claims. (Cl. 146—3)



1. Apparatus for removal of chips from articles, comprising the combination of a housing, a cylinder mounted for rotation in said housing, said cylinder being provided with a longitudinal knife blade having a cutting edge extending inwardly of said cylinder and pointing generally in the direction of rotation of said cylinder, said cylinder being closed at the bottom and open at the top, a tube mounted coaxially within said cylinder for rotation with respect to said housing, said tube being open at the top and having a lateral opening adjacent the lower portion thereof, a helix element surrounding and carried by said tube, means for rotating said cylinder, the direction of rotation of said helix being such as to convey articles upwardly through said cylinder whereby the articles contact said knife blade for removal of chips from the articles, means for collection and recovery of said chips, and means for discharging the articles from the upper portion of said housing.

3,123,115
APPARATUS FOR HULLING NUTS
Kenneth H. Howard, Stockton, Mo., assignor to Hammons Products Company, Stockton, Mo.
Filed Sept. 24, 1959, Ser. No. 841,981
4 Claims. (Cl. 146—11)



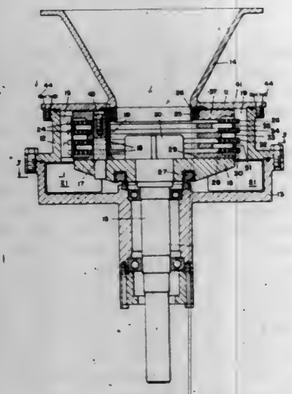
1. Apparatus for removing hulls from nuts comprising a generally cylindrical container formed with a side wall, said cylindrical container having a substantially vertical axis, said container being tapered inwardly toward the bottom of said side wall, and having an opening formed in said side wall, a member of yieldable material mounted

within said container forming a circular wall substantially concentric with said tapered cylindrical container providing therewith a tapered annular space so that by rotating said member having the yieldable wall, unhulled nuts in said tapered annular space are subjected to tangential forces by the yieldable material squeezing and rotating the unhulled nuts against said side wall of said container, the side wall of said container formed at least in part adjacent said opening of a plurality of concentric rodlike members spaced vertically an amount less than the diameter of the unhulled nuts so that as the unhulled nuts are moved between said substantially concentric walls, a rotary motion about the axis of the nut is generated which throws portions of the hull of the nut between said rodlike members by centrifugal force as the hull is squeezed and crushed between said side wall and said circular wall.

3,123,116
EMULSIFIER

Alvin W. Hughes, 194 Church Road, Bensenville, Ill.

Filed Apr. 16, 1962, Ser. No. 187,550
3 Claims. (Cl. 146—192)



3. An emulsifier comprising a hopper into which sausage to be comminuted is supplied, a casing supporting said hopper, a drive shaft within said casing, at least a pair of spaced rotatable recessed plates driven by said shaft, a non-rotatable perforate plate between the rotatable plates of said pair, an impeller on said shaft within some of said plates and within said casing for moving material radially outward, said rotatable plates extending radially inwardly more than said non-rotatable plate whereby material thrown out by said impeller is subjected to centrifugal force from at least one of said rotatable plates, said non-rotatable plate being shaped to direct material into recesses of at least one rotatable plate, each rotatable plate being provided with radially elongated recesses therein whereby material is centrifugally fed radially outward; the radially outer ends of said elongated recesses in at least one of said rotatable plates being blocked against egress of material to force the fed material through perforations in said non-rotatable plate when the edges of the perforations in the non-rotatable plate and edges of the elongated recesses in the rotatable plates engage the fed material to cut such material into finer pieces, at least one of said rotatable plates being provided with said elongated channels open at their outer ends for discharge of the material radially outward under centrifugal force, a discharge impeller to engage material discharged by said last mentioned rotatable plate, and a discharge pipe for material forced out by said impeller, the rotating plates being each spaced axially from said non-rotatable plate at least about .0005 of an inch and not more than a few thousandths of an inch during operation; there being at least four non-rotatable plates and five rotatable plates, the endmost plate in each direction being rotatable, the next and second plate from each end being non-rotatable and having its inner edge shaped to direct material into an elongated recess of said rotatable third plate from each end, the outer edge of said elongated recess in said third plate from each end being closed whereby material is directed into perforations of said non-rotatable second plate and through that into an elongated recess in an end rotatable plate open at its outer end, an inner edge of said third plate being oppositely tapered to direct material into a non-rotatable second plate, the fourth plate from each end being non-rotatable and having an inner edge bevelled to direct material into said third and rotatable plate from each end from which material is directed in opposite longitudinal directions through perforations in an adjacent non-rotatable plate on each side of it, the rotatable fifth plate from either end having elongated recesses with an open outer end, and elongated recesses receiving material from a non-rotatable on each side of it into its elongated recesses, and the endmost or ninth plate from each end being rotatable with its elongated recesses having an open peripheral end and receiving material from the eighth plate from either end, and packing carried by an inner edge of said rotatable ninth plate nearest to the hopper input into said plates engaging a downward projection from said hopper.

3,123,117
MODIFIED CYLINDRICAL FREE DROP CONTAINER

Jess H. Nourse, Ypsilanti, Mich., and William B. Crawford, Mishawaka, Ind., assignors to the United States of America as represented by the Secretary of the Army

Filed June 18, 1962, Ser. No. 203,415
10 Claims. (Cl. 150—1)



1. In a free drop fluid container, the combination with a container body of flat cylindrical form and a flexible annular fin surrounding said body, said body having an impervious side wall of flexible material; of an impervious annular chamber surrounding said body and forming a base for said fin, and said chamber being filled with compressible material to retard expansion of said side wall of said container upon impact of said container with the ground.

3,123,118
DISPENSING UNIT

Aart K. Kuyk, Linden, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

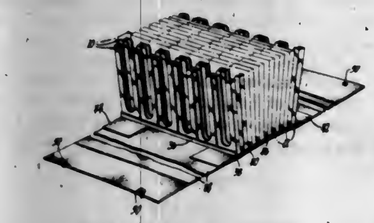
Continuation of application Ser. No. 3,010, Jan. 18, 1960. This application Oct. 8, 1962, Ser. No. 229,780
4 Claims. (Cl. 150—34)

1. An article dispenser comprising;

a flexible support strip having a naturally bowed mid-section capable of being stressed and temporarily flattened;

article holding means supported on the convex side of the bowed mid-section in spaced radially projecting fanned relationship when the mid-section is in the unstressed condition; and

means associated with the flexible support strip for stressing and temporarily flattening the bowed mid-

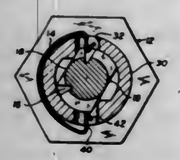


section thereof whereby the article holding means are brought into closely spaced parallel relationship due to the flexed condition of the mid-section.

3,123,119
SPRING-LOCK NUT AND BOLT ASSEMBLY

Emile A. Maloof, 420 Central Park W., Apt. 5-B, New York, N.Y.

Filed May 7, 1959, Ser. No. 811,679
2 Claims. (Cl. 151—11)



1. Nut and bolt assembly comprising: a bolt threaded along at least a portion of its length and having at least one longitudinal groove therealong, said groove being defined at least in part by two angular walls, the planes of which intersect, one of said walls defining a plane which is generally diametrical with respect to the bolt axis, while the other wall defines a plane which is angularly offset from said bolt axis a substantial distance, said groove being of a depth sufficient to extend radially inwardly of the root diameter of said threads, a nut having a cooperatively threaded opening therein for threaded engagement with said bolt threads; said nut having a peripheral groove and radial passages between said threaded opening and said peripheral groove; a generally arcuate spring carried in said peripheral groove and having inwardly extending locking fingers received within said passages and projecting within said threaded opening for biased engagement with said bolt, said radial passages being of a size substantially greater than the size of said arcuate spring to provide for transverse movement of the portions of said spring adjacent said locking fingers with respect to the axis of said bolt, said locking fingers being spaced in position to alternately engage said longitudinal groove, one finger at a time, each of the locking fingers of said arcuate spring being formed with a generally flat wall portion which is generally parallel to said diametrical groove wall which the locking finger engages, said locking finger also having a second wall portion angularly intersecting said first wall portion to form a resilient tapered cam portion positioned to angularly intersect said second wall of said groove, said first and second locking finger walls being defined by a generally V-shaped bend with the apex thereof being innermost, to thereby permit the nut to rotate in one rotary direction relative to the bolt while resisting but not completely preventing rotation in the opposite rotary direction relative to said bolt.

3,123,120
FLOATING ANCHOR NUT

David W. Grimm and Jack Rath, Pico Rivera, Calif., assignors to Kaynar Mfg. Co., Inc., Pico Rivera, Calif., a corporation of California

Filed Oct. 12, 1960, Ser. No. 62,152
3 Claims. (Cl. 151—41.7)

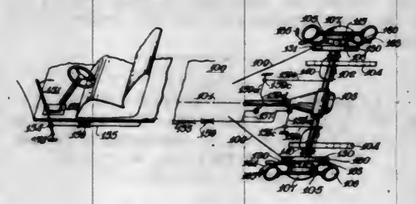


1. An anchor nut assembly comprising a basket and a nut element floatingly retained in the basket, the nut element comprising a threaded nut barrel and a pair of laterally outwardly extending lugs integral with said nut barrel, said basket comprising a single piece of resilient material having a base web, a bolt accommodating aperture in the base web, side flanges integral with the base web and extending upwardly therefrom and substantially perpendicular thereto and having free upper edges, slots provided in the side flanges to accommodate said lugs, said slots being spaced apart a distance less than the distance between the outer edges of the lugs on the nut, the length and width of said slots being greater than the corresponding dimensions of said lugs, whereby the nut element is floatingly retained in the basket, the portion of said side flanges overlying the slots being outwardly displaced from the plane of said flanges such that the lower edge of said portion is outwardly displaced from the joining fold line between the flanges and base web, whereby forces exerted against the nut element by a bolt or stud threaded into said nut element tend to push the said portion of the side flanges which overlie the said slots upwardly and inwardly to increase the overhang of the side flanges relative to the said nut base to more securely retain the nut element in the basket.

3,123,121
ANTI-SKID MEANS FOR AUTOMOTIVE VEHICLES

David Katz, 506 W. 35th St., Wilmington, Del.

Filed Aug. 7, 1962, Ser. No. 215,416
11 Claims. (Cl. 152—214)



3. In combination with a power driven rubber-tired wheel of an automotive land vehicle, said wheel being mounted on a rotating axle which is encased in a non-rotating housing,

(1) a plate disposed in a vertical plane and being mounted for rotation on a track surrounding said axle housing, said plate bearing

(*a*) a clutch pad near an edge thereof on the side facing said wheel and in a position to contact the sidewall of the tire of said wheel when pressed against the latter, and

(*b*) traction elements supported near an edge of said plate and having each an elastic portion extending partly over the tread of said tire,

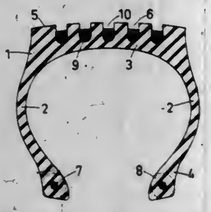
(2) means operable by the driver for pressing said clutch pad against the sidewall of said tire whereby to cause said plate to rotate with said wheel and tire,

(3) means for returning said plate to normal inactive position, and
(4) means for bending said traction element into essential contact with said tread when said clutch pad is pressing against said tire.

3,123,122
PNEUMATIC TIRE WITH REINFORCEMENT IN ZENITH PORTION THEREOF

Richard Beckadolph, Hannover, Germany, assignor to Continental Gummi-Werke Aktiengesellschaft, Hannover, Germany

Filed Dec. 19, 1960, Ser. No. 76,768
Claims priority, application Germany Dec. 21, 1959
2 Claims. (Cl. 152—330)

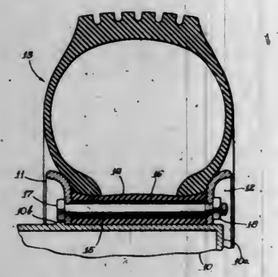


1. A pneumatic street vehicle tire of rubber material having a carcass-free tire body with pull resistant cores, which includes a tread section integral with said tire body and having its outer periphery provided with annular grooves located in planes substantially perpendicular to the axis of rotation of said tire and distributed over the major portion of the width of said tread section, a plurality of endless belt means with an outer surface of rubber material and with pull resistant inserts therein, said belt means being formed by individual belts separate from the tire body and respectively located in said grooves, said belts having substantially plane side surfaces in engagement with the sides of said grooves along substantially the entire side surfaces of said belts, each of said belts having substantially the width of the respective annular groove in which it is located, the outer periphery of said belt means being set back radially inwardly with regard to the outer periphery of said tread section so that the side walls of said grooves together with the outer periphery of said belt means confine free annular grooves.

3,123,123
ELASTOMER TIRE DRIVE AND SEAL

Keith W. Kampert, Libertyville, Ill., assignor to The Frank G. Hough Co., a corporation of Illinois

Filed Sept. 12, 1961, Ser. No. 137,547
8 Claims. (Cl. 152—397)

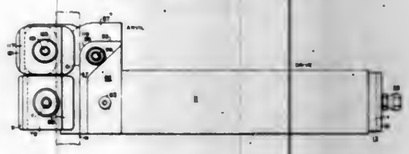


1. A vehicle wheel construction comprising a wheel hub having a cylindrical peripheral portion, a pneumatic tire, an elastomer ring, said elastomer ring mounted on said cylindrical peripheral portion of said hub, said tire mounted on said elastomer ring, a pair of annular flanges loosely fitted one on each side of said elastomer ring and the beads of said tire, a plurality of tubular spacer members positioned axially through said elastomer ring in a spaced apart relationship to each other about said ring, a plurality of fasteners, said fasteners carried through said tubular spacer member and said pair of flanges for securing said pair of annular flanges against said tubular spacer members, and said elastomer ring having a natural axial width greater than the length of said tubular spacer members.

3,123,124
BENDING APPARATUS

Harry J. Armitage, Monroeville, Pa.
(Box 278, Murrysville, Pa.)

Filed Jan. 9, 1961, Ser. No. 81,392
13 Claims. (Cl. 153—16)

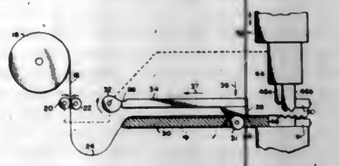


1. Bending apparatus for bending work comprising work holding means, work bending means, a cylinder, a piston slidable within said cylinder, means mounting said cylinder floating mechanically, a connection between said piston and one of said work means, a connection between said cylinder and the other said work means, and means connected to said cylinder for supplying fluid to said cylinder in actuating relationship to said piston thereby to urge both said work holding means into holding engagement with said work and said work bending means in bending engagement with said work.

3,123,125
METHOD AND APPARATUS FOR FEEDING METAL STRIPS

Elbert M. Lacey, Jr., Chula Vista, Calif., assignor to Rohr Corporation, a corporation of California

Filed Dec. 27, 1960, Ser. No. 78,720
7 Claims. (Cl. 153—76)

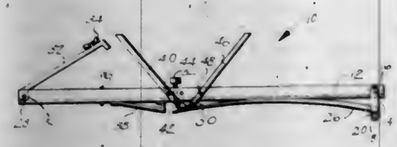


1. The method of forming a flat strip of metal into a corrugated ribbon, comprising the steps of placing said strip of flat metal on a roller adapted to permit said strip to move in its longitudinal direction, placing a frictional engaging element on the upper surface of said strip above said roller, advancing said frictional engaging element to cause said strip, said element, and the surface of said roller to advance together without any slippage between their surfaces, holding said advanced strip so that it is stationary, forming a corrugation in said stationary strip, the extra length of strip necessary for said corrugation sliding under said stationary frictional element and rotating said roller in its forward direction, and retracting said frictional element slidably along said stationary strip so that said element may again advance said strip, whereby said strip moves forward intermittently in its longitudinal direction.

3,123,126
AUTO TIRE BEAD BREAKER

Thomas A. Austin, Mill Valley Road, Belchertown, Mass.

Filed Nov. 15, 1962, Ser. No. 237,944
8 Claims. (Cl. 157—1.17)

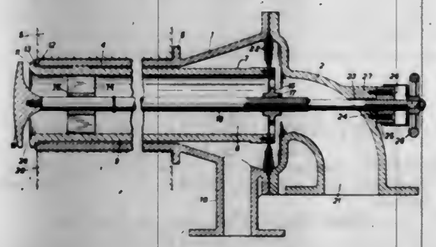


1. An automobile tire bead breaker tool comprising, in combination, a substantially elongated frame, a pair of parallel bars carried by said frame, a substantially arcuate and elongated tongue carried by said frame providing a means for insertion between the bead and the rim of an automobile tire, a substantially angular bracket, a substantially U-shaped suppression lever, a cam bar carried by said frame providing a means for urging against said tongue, a substantially U-shaped locking lever carried by said frame providing a means for gripping said frame, a threaded bolt carried by said frame providing a means for urging against said tongue for breaking difficult beads from the rim, a pivotable and substantially L-shaped cover with wing nut means and pin means providing a means for storage of tools within said frame of said tool.

3,123,127
FLAT RADIANT-WALL FURNACE AND GAS BURNER

Roland Lancaster Willott, Cefn-y-Bedd, near Wrexham, Wales, assignor, by direct and mesne assignments, to Salem-Brosius (England) Limited, Milford, near Derby, England, a company of Great Britain

Filed Mar. 26, 1956, Ser. No. 573,715
Claims priority, application Great Britain Mar. 29, 1955
2 Claims. (Cl. 158—7)

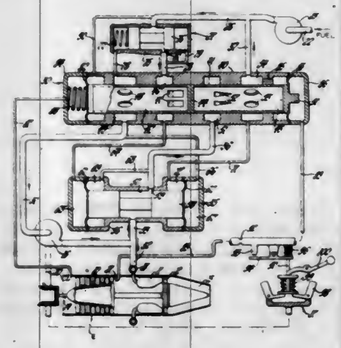


1. A furnace comprising a furnace wall having a substantially flat interior surface, a raw fuel duct extending through said wall and terminating in a fuel nozzle located within said furnace closely adjacent said surface, said fuel nozzle including spaced apart wall members defining an annular fuel discharge orifice extending throughout an arc up to 360°, said orifice being substantially flush with said surface and facing in a direction substantially parallel to said surface so that fuel discharged from said orifice travels as a thin layer in a direction substantially parallel to said surface, at least one of the wall members defining said fuel discharge orifice being movably supported for varying the size of said fuel discharge orifice, an air duct extending through said wall and terminating in an air nozzle located within said furnace closely adjacent and beyond said fuel nozzle, said air nozzle including spaced apart wall members defining an annular air flow passage extending throughout an arc up to 360°, said passage first gradually decreasing in cross-sectional area, and then gradually increasing in cross-sectional area from said decreased area to the outlet of said passage whereby said air nozzle functions to increase the velocity of air passing through said air nozzle, said air outlet facing in a direction substantially parallel to said surface so that air discharge from said air nozzle outlet travels as a thin layer in a direction substantially parallel to said surface and mixes progressively with fuel discharged from said fuel discharge orifice as said fuel travels along said surface to produce a combustible mixture located in close proximity to said surface substantially throughout the extent of the combustible mixture whereby burning of said mixture produces a thin sheet-like flame of substantial area spread over said surface and in close proximity thereto, at least one of the wall members defining said air flow passage being movably supported for varying the size of said air passage outlet, adjusting means connected to said movably supported fuel discharge orifice wall member for varying the size of said fuel discharge orifice, and adjusting means connected to said movably supported air flow passage wall member for varying the size of said air passage outlet.

3,123,128
FUEL METERING SYSTEM

Harry C. Zeisloft, Brookfield, Wis., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Apr. 20, 1961, Ser. No. 104,386
12 Claims. (Cl. 158—36.4)



1. A system for supplying fuel comprising, in combination, a source of fuel under relatively low pressure, metering valve having two correlated sets of metering ports and means for simultaneously varying the areas of both said sets, a relatively high pressure pump with an inlet connected to the source through one set of said ports and an outlet connected to a delivery line and connected to the source through the other set of said ports, and head regulating means maintaining controlled constant pressure drops across both sets of said ports.

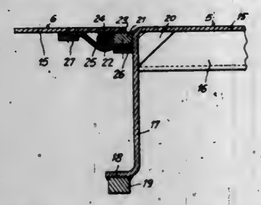
3,123,129
RIGID ROLL-UP SCREEN, PARTICULARLY FOR USE AS A HATCH-COVER

René Caillet, 26 Rue de la Republique, Saint-Germain-en-Laye, France

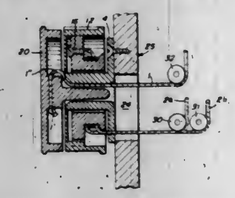
Filed Oct. 31, 1960, Ser. No. 66,290
Claims priority, application France Nov. 6, 1959
4 Claims. (Cl. 160—41)

1. A rollable screen comprising a plurality of successive rigid elements hingedly connected to one another, each element consisting of a strip of sheet metal having a flat main section forming a part of the total area of the screen when closed and a member rigidly connected to and extending along the length of one edge of said

main section having a flat portion extending normal to said main section and a pair of projections extending normal to said flat portion and on an opposite side of said flat portion to said main section with one projection forming a support for an adjacent section when said screen is rolled up and means pivotally connecting each two successive elements consisting of at least two hinges the common axis of which is oriented crosswise to the length of the screen and having a portion fixedly connected to the other of said projections of one of said successive elements, the other of said successive elements having an inner face connected to another portion of said hinge.



3,123,130
OPERATING DEVICE FOR VENETIAN BLINDS
Olof Fridlund, Mogarden, Askim, Sweden
Filed July 13, 1959, Ser. No. 826,622
9 Claims. (Cl. 160—168)



1. In combination, a Venetian blind having two cords to adjust the angle of the slats, and having a single hoisting cord to hoist and lower the blind, a window frame on which the blind is hung, and a device comprising a plate mounted on the window frame, a sleeve extending from said plate away from said frame and providing an axial passage through which said single cord to hoist the blind passes, means for selectively locking the single cord in a selected position in said passage, the outer surface of said sleeve being cylindrical, a winding drum having a cylindrical bore rotatably engaging said outer surface of said sleeve, said winding drum having a flange of limited radial extent adjacent said plate, and a flange of greater radial extent remote from said plate, a hole in said window frame adjacent said plate, said two cords extending through said hole and wrapped about said drum, one in each direction, means on said drum to secure the ends of said two cords to said drum, a cup-shaped handwheel element covering and frictionally gripping said flange of greater radial extent, said cup-shaped handwheel being axially apertured in alignment with said passage, and having a peripheral skirt extending toward said plate, and window frame, said skirt providing a grip by which said drum may be manually rotated.

3,123,131
ROLLER-SHUTTER
Fritz Griesser, Aadorf, Switzerland, assignor to Griesser A.G., Aadorf, Switzerland
Filed Oct. 23, 1958, Ser. No. 769,162
1 Claim. (Cl. 160—232)

In a roller shutter, the combination of a plurality of hollow slats of sheet material, flexible carrier tapes on which said slats are suspended, said slats each having a top portion which in cross section has an upwardly convex wedge shaped cross section wtih two oppositely inclined wall portions, and an upwardly concave bottom portion having in cross section a substantially horizontal middle surface portion and sharply downwardly inclined end portions connecting the bottom portion to the side walls of the hollow slat, the top portion of the next lower slat projecting toward the space within the concave bottom portion of each slat, the slats each being formed by a strip of sheet material bent to a tube, the longitudinal edges of said strip being united at said bottom portion of the slat, the apex of said top portion and the horizontal middle surface of the bottom portion having slits formed therein, and the flexible carrier tapes passing through said



slits, said carrier tapes having longitudinally spaced projections thereon between each pair of slats and projecting to both sides of said tape for engagement at least with said top portion of the slats and retaining said slats in substantially vertical positions on said tapes, each of said projections on said carrier tapes being strips of rigid material bent into semicircular form, there being two semicircular projections extending in one direction from the tape and one semicircular projection extending in the other direction from the tape, said semicircular projections engaging the substantially horizontal middle portion and one of the sharply downwardly inclined end portions of the bottom portion of the upper slat in a pair of slats, and engaging the top portion of the lower slat in a pair of slats at the apex of the oppositely inclined walls.

3,123,132
DEVICE FOR FLUID CLEANING OF HEAT EXCHANGER TUBES
Charles W. Hedgecock, El Dorado, Ark., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Filed June 9, 1961, Ser. No. 116,073
3 Claims. (Cl. 165—95)

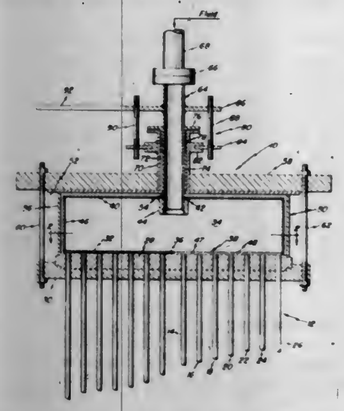
1. A device for the selective cleaning of heat exchanger tubes by directing pressurized fluid therethrough, which device comprises:

a drum having a diameter adapted to be substantially that of the tube sheet and having a first flat surface adapted to be positioned in immediate spaced relation to said tube sheet, said flat surface having a radial slot and said slot being sized and adapted to expose a minor number of the tubes on said tube sheet and said drum having a second flat surface provided with a centrally located opening;

a resilient member positioned around the edges of said slot and adapted to be in a sealing relation with said tube sheet;

a cap-like member, enclosing and in spaced relation with said drum, having a flat plate provided with an opening, co-axial with said opening in said drum, and having a cylindrical wall adapted to be abutting against and in fluid sealing relation with said tube sheet;

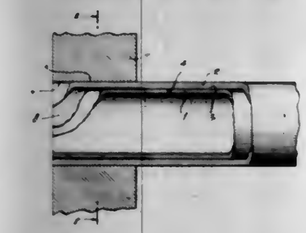
a conduit means for introducing fluid into the interior of said drum, said conduit means passing through said co-axial opening in said flat plate and being affixed around said co-axial opening in said second flat surface of said drum;



a stuffing box member to retard the flow of fluid from within said cap-like member by way of the outer surface of said conduit means; and

means for rotating said drum to expose other numbers of said tubes.

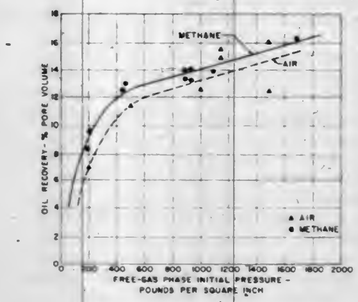
3,123,133
DUPLEX TUBES
Alan R. Pels, Stamford, and Francis R. Carroll, Southport, Conn., assignors to National Distillers and Chemical Corporation, a corporation of Virginia
Filed Dec. 30, 1958, Ser. No. 783,933
4 Claims. (Cl. 165—178)



1. A duplex tube including two tubes respectively of differing gas permeabilities and telescoped together with their opposed surfaces separably pressed together and having end portions for radial expansion in tube sheet holes, and a gas-permeable layer located between said surfaces for the extent of at least one of said portions, said layer comprising a substantially uniform distribution of hard particles.

3,123,134
RECOVERY OF OIL FROM WATERED-OUT RESERVOIRS
John R. Kyte and Virgil O. Naumann, Tulsa, Okla., assignors to Jersey Production Research Company, a corporation of Delaware
Filed Apr. 1, 1960, Ser. No. 19,310
14 Claims. (Cl. 166—2)

1. An improved process for recovering oil from a watered-out oil bearing reservoir underlying the earth's surface which comprises injecting a noncondensing gas into said reservoir through at least one well penetrating said reservoir, said gas being injected at a pressure within the range between about 100 and about 3,000 lbs. per square inch and in a quantity sufficient to establish a free-gas phase therein; discontinuing the injection of said gas; re-

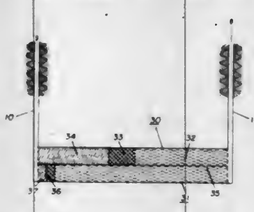


ducing the pressure on said reservoir; and producing reservoir fluids through at least one well penetrating said reservoir.

3,123,135
WATER FLOODING OF CLAY CONTAINING RESERVOIRS
George G. Bernard and Orrin C. Holbrook, Crystal Lake, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
No Drawing. Filed Sept. 12, 1960, Ser. No. 55,116
3 Claims. (Cl. 166—9)

1. In the recovery of oil from underground reservoirs containing oil and water-sensitive clay by the injection of floodwater through an injection well into the formation and the production of oil from a producing well, the improvement comprising adjusting the concentration of a clay-stabilizing constituent in said floodwater to maintain the permeability of the formation thereby contacted within the range of 0.1 to 0.5 of the initial permeability thereof.

3,123,136
METHOD OF SECONDARY RECOVERY OF OIL FROM RESERVOIRS
Lorld G. Sharp, Irving, Tex., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
Filed Sept. 29, 1960, Ser. No. 59,208
16 Claims. (Cl. 166—9)



1. In the secondary recovery of oil from a subterranean formation penetrated by at least one injection well and one production well wherein a hydrocarbon fluid is injected into said formation through said injection well to displace said oil from said formation through said production well, a method of improving the sweep pattern of said fluid which comprises injecting liquid ammonia into said formation through said injection well, the quantity of said ammonia being no more than one percent of the pore volume of said formation, driving said ammonia through said formation into contact with the interstitial water of said formation to form a water bank of said water, and driving said water bank through said formation toward said production well by means of said fluid.

3,123,137
COATING SURFACES WITH RESIN
Bill M. Young, John A. Knox, and Roger F. Renswold, all of Duncan, Okla., assignors to Halliburton Company, a corporation of Delaware
No Drawing. Filed Nov. 3, 1959, Ser. No. 850,521
10 Claims. (Cl. 166—33)

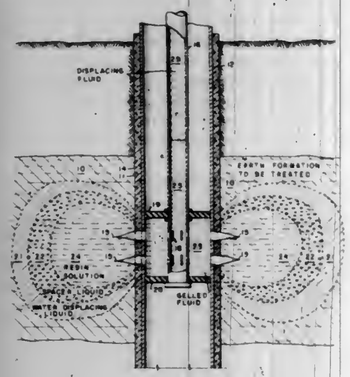
1. A method of treating loose sands with a resin for the consolidation thereof, comprising the steps of:

(*a*) coating the surfaces of the loose sands with a surface conditioning agent which enhances the affinity of the surfaces of said loose sands for the resin and after catalyzation polymerizes with said resin, and thereby improve the bonding of said resin with said loose sands;

(*b*) coating the surfaces of said loose sands with said resin; and

(*c*) causing said resin and said surface conditioning agent to polymerize into a hardened permeable mass with said loose sands, thereby forming a consolidated formation having a compressive strength substantially greater than that which could be obtained using said resin alone.

3,123,138
METHOD OF TREATING EARTH FORMATIONS
Thomas J. Robichaux, Houston, Tex., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed Aug. 23, 1962, Ser. No. 219,065
9 Claims. (Cl. 166—33)



1. In the method of treating a porous earth formation penetrated by a borehole, which comprises the steps of pumping into said formation a solution comprising a polyepoxide which is capable of being cured to a hard, cross-linked, hydrocarbon-insoluble cured resin, and a curing agent therefor, and maintaining said solution in said formation until epoxy resin has precipitated and hardened in said formation, the improvement which comprises

(1) pumping into said borehole, immediately following said resin solution, a gelled displacing fluid,

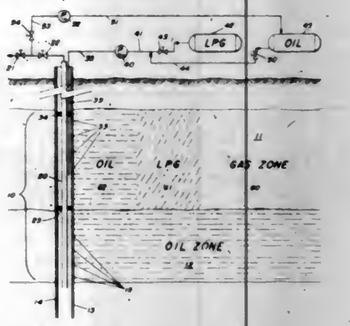
(2) continuing to pump fluid into said borehole only until all of said resin solution has entered said formation and said gelled fluid has just come in contact with the earth formation surrounding said borehole, as indicated at the surface by an increase in the pressure required to pump further fluid into said formation, and

(3) discontinuing further pumping after said pressure rise is observed.

3,123,139
OIL WELL WATERFLOODING
Francis R. Conley, Martin Felsenthal, George J. Heuer, Jr., and Carroll F. Knutson, Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware
No Drawing. Filed Feb. 16, 1961, Ser. No. 89,656
7 Claims. (Cl. 166—42)

1. An improved water flooding process providing for an increase in and prolongation of high water injection rates comprising, injecting a dehydrating agent into a formation to be waterflooded and which contains a water level substantially above the irreducible water level, injecting a slug of an oil-miscible water sweeping agent, injecting a solution of a hydrolyzable silane in an inert silane-miscible liquid carrier, injecting a sweeping agent for said silane comprising an inert fluid miscible with said silane carrier, injecting a mutually oil and water-miscible sweeping agent, and finally injecting water under waterflooding conditions.

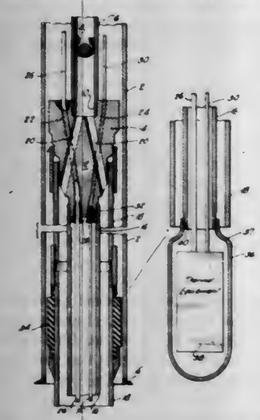
3,123,140
METHOD OF REDUCING GAS CONING AROUND A PRODUCING WELL
Carl Connally, Jr., Dallas, Tex., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
Filed Mar. 27, 1961, Ser. No. 98,671
12 Claims. (Cl. 166—42)



1. In a method of producing oil from a well penetrating a subterranean reservoir comprising an upper gas-saturated formation and a lower oil-saturated formation wherein gas coning is prevented around said well the steps which comprise injecting into said upper formation a first fluid miscible with the gas and oil in said reservoir in an amount and for a time sufficient to displace gas within said upper formation a predetermined distance radially outwardly from said well, injecting into said upper formation behind said first fluid a second fluid miscible with said first fluid in an amount and for a time sufficient to displace said first fluid radially outwardly from said well into said upper formation a predetermined distance, and producing oil from said lower formation through said well.

3,123,141
WELL EQUIPMENT FOR RECOVERY OF HYDROCARBONS
Billy H. Towell, Charles D. Woodward, and William V. Dean, Jr., Houston, Tex., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 30, 1959, Ser. No. 862,877
6 Claims. (Cl. 166—60)

1. Improved equipment for recovery of hydrocarbons contained in an underground formation for use in a well bore traversing said formation comprising, in combination, a fluid-tight sealing assembly for said equipment capable of isolating the upper from the lower portion of said well bore and a housing with thermal equipment therein adapted to be inserted in said well bore below said sealing assembly, said assembly including a body member having a first passage for power supply conducting means, means to shield power supply conducting means from excessive heat surrounding the same joined



to said body member and interconnecting said housing therewith, means joined to said body member to conduct a fluid flow down the said well bore surrounding said means to shield power supply conducting means thereby defining an annulus therewith, said body member having a second passage to direct fluid flow into said annulus surrounding the shielding means.

3,123,142
SAMPLING DEVICE
Tom W. Quinn and Paul P. Wittmer, Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware
Filed Mar. 3, 1961, Ser. No. 93,137
1 Claim. (Cl. 166—169)



An apparatus for sampling fluids in a subterranean well containing a tubular string with recesses therein comprising:

(*a*) an enclosed tubular housing member having an upper and lower end with first and second plug means therein respectively,

(1) said first plug having an interior bore axially extending partially therethrough in communication with a passage axially extending through the upper end above said bore and a plurality of lateral ports communicating with the bore therein,

(2) said second plug having an interior bore axially extending therethrough adapted to receive a spring and retaining means therefor,

(3) said tubular housing member having a plurality of longitudinal grooves internally disposed intermediate of said upper and lower ends and a plurality of lateral ports disposed intermediate of said grooves and lower end;

(*b*) a flanged collar member sealably mounted within said tubular housing member adjacent the lower end thereof,

(1) said flanged collar member having a plurality of lateral ports communicating with an aperture centrally disposed therein and the lateral ports of said tubular housing member,

(2) said flanged collar having a valve seat about the upper portion of said aperture;

(*c*) a piston slidably and sealably mounted in said tubular housing member intermediate of the upper end thereof and said flanged collar member,

(1) said piston having a flange about the end with a plurality of apertures extending vertically through the flange communicating with the upper end of said tubular housing member,

(2) said piston having a connecting means adapted to receive a wire line extending from the upper end of said tubular housing member,

(3) said piston having a head with a finger depending therefrom and an upwardly tapered recess inwardly of said finger with an aperture at the upper end of the recess communicating with the longitudinal grooves of said tubular housing member;

(*d*) a ball valve disposed above the aperture of said flanged collar member engageable with the finger of said piston and mounted on a rod,

(1) said rod being biased by a spring disposed between said flanged collar member and a spring retaining means uring said ball valve into sealing engagement with the valve seat of said flanged collar member;

(*e*) a plurality of fingers mounted on said flanged collar member adapted to releasably engage said piston adjacent said flanged collar member;

(*f*) a wire line extending from the connecting means of said piston and extending through the bore and passage in said first plug means of the upper end of said tubular housing member; and

(*g*) a plurality of spring means mounted on said second plug means of the lower end of said tubular housing member adapted to engage the tubular string within the well,

whereby the apparatus is lowered into the well to the desired depth with passage of the well fluids through said apparatus and raised by the wire line until the spring means of the lower end of said tubular housing member engage the interior of said well whereafter tension on the wire line is increased to withdraw said piston and concurrently fluids from the well into the upper end of said tubular housing member and thereafter removing said apparatus from the well.

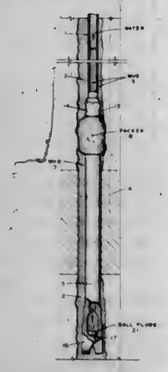
3,123,143
FREEING PIPE STUCK IN A BOREHOLE
Max R. Annis, Leon H. Robinson, Jr., and Robert H. Friedman, Houston, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Mar. 1, 1962, Ser. No. 176,591
4 Claims. (Cl. 166—187)

1. For use with a tubular drill string having a fluid expansible annular packer affixed to the outer surface thereof, constructed and arranged so that fluid pressure exerted on the inner surface thereof will expand the packer to the walls of a borehole within which the drill string is

disposed, apparatus for controlling application of fluid pressure from the bore of the drill string to the inner surface of the packer, comprising:

a drill string section for supporting the packer;

first and second passageways in the drill string section between the bore of the drill string section and the inner surface of the packer supported thereby;



first, normally-closed valve means in said first passageway for controlling fluid pressure therethrough, constructed and arranged to close said fluid passageway while the pressure within the drill string section bore is greater than the pressure in the borehole annulus and while the differential pressure between the drill string bore pressure and the borehole annulus pressure is less than a first given differential pressure, and to open when the pressure within the drill string section bore is greater than the pressure in the borehole annulus therearound and said differential pressure between the drill string bore and the borehole annulus reaches said first given differential pressure;

second normally-closed valve means in said second passageway for controlling fluid flow therethrough, constructed and arranged to close said fluid passageway while the pressure within the drill string bore is greater than the pressure in the borehole annulus and the differential pressure between the pressures in the drill string bore and the annulus around the drill string section above the packer is less than a second given differential pressure greater than said first given differential pressure, and to open when said differential pressure between the drill string bore pressure and the borehole annulus pressure reaches said second differential pressure; and

means connected to said second valve means for holding open said second valve means for at least a predetermined time interval after the differential pressure between the drill string section bore and the borehole annulus above the packer falls to less than said second differential pressure.

ERRATUM

For Class 166—224 see:
Patent No. 3,123,517

3,123,144
COMPOSITE CONSTRUCTION FOR HELICOPTER ROTOR BLADES AND THE LIKE
Frank L. Stulen, Traverse City, and Alb C. Ballauer, Menominee, Mich., assignors to Parsons Corporation, Detroit, Mich., a corporation of Michigan
Filed Aug. 29, 1962, Ser. No. 220,190
5 Claims. (Cl. 170—159)

1. A composite construction for airfoils and the like comprising

a spar including upper and lower plate portions at the airfoil mold line and there having aft-extending margins,

aft structure including outer swins and filler material between and supporting said skins,

said filled material being characterized by shear rigidity and

said filler material having a forward part contained between the upper and lower margins of the spar plate portions,



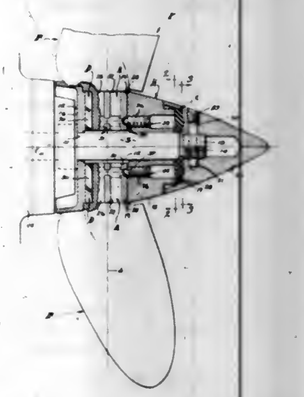
together with an adhesive bond between the spar margins and the aft structure, characterized in that

the filler material has a throat-like opening in its forward part midway between the spar plate margins,

said throat-like opening extending full spanwise length of said aft structure and dividing the forward part thereof into upper and lower deflectable portions

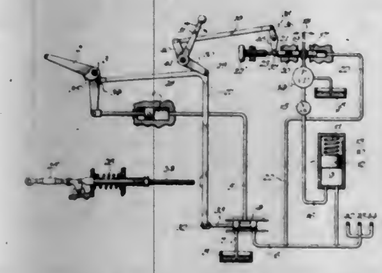
whereby pressure exerted within said throat-like opening toward the upper and lower spar margins deflects said upper and lower deflectable portions to apply pressure between them and the spar margins for setting the adhesive bond.

3,123,145
PROPELLER WITH SELECTIVELY VARIABLE PITCH
James T. Byrd, Costa Mesa, Calif.
(2686 55th Way, Apt. 6, Long Beach, Calif.)
Filed May 1, 1961, Ser. No. 106,779
5 Claims. (Cl. 170—160.6)



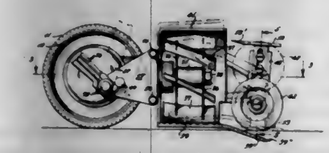
1. A propeller carried by a shaft and including a hub part drivingly engaged with the shaft and having a laterally disposed socket therein, a radially extending blade part with an inwardly projecting pivot rotatable in said socket, and means incrementally positioning the pivot rotatively in said socket and comprising a key occupying a pair of opposed keyways in the socket and pivot respectively, there being a plurality of circumferentially spaced keyways in both the socket and the pivot, the said circumferential spacing being greater in one part than the other, whereby the blade is selectively positionable.

3,123,146
HYDRAULIC CONTROL SYSTEMS
Robert Marindin, Doncaster, England, assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Mar. 22, 1961, Ser. No. 97,592
Claims priority, application Great Britain Apr. 1, 1960
12 Claims. (Cl. 172—8)



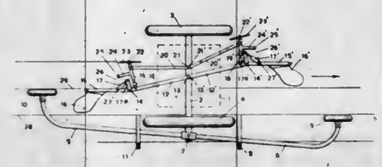
1. For use in connection with an earth working machine and an associated implement; a power system adapted to be mounted on said machine and comprising a fluid motor adapted to be operatively connected with said implement; a fluid reservoir; an accumulator; pump means including means for varying the delivery thereof and having a fluid inlet communicating with said reservoir and a fluid outlet communicating with said accumulator; flow control means associated with said motor, reservoir, and accumulator for selectively communicating said accumulator with said motor and said motor with said reservoir; means for actuating said flow control means; means controlled by said accumulator for operating said varying means; means biasing said varying means in opposition to said operating means; and means responsive to actuation of said flow control means by said actuating means for modulating said opposition of said biasing means.

3,123,147
LAWN EDGER
Claude H. Nickell, 17809 Oakwood Blvd., Dearborn, Mich.
Filed Dec. 26, 1961, Ser. No. 162,081
8 Claims. (Cl. 172—16)



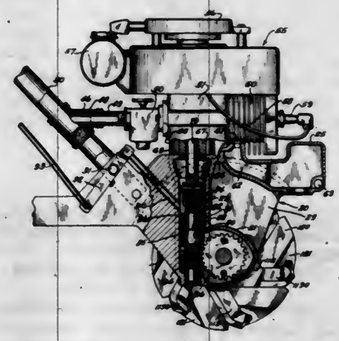
5. A lawn edger comprising a frame, a drive wheel supporting one end of said frame, a stabilizing member supporting the opposite end of said frame, a rotary cutting element mounted on said frame with the axis of rotation disposed generally parallel to the path of travel of said edger, means drivingly connecting said drive wheel and said cutting element, said stabilizing member including a rotatable bracket, means for securing said bracket in rotated position, a ground engaging member mounted on each end of said bracket for selective engagement with the ground, an operating handle pivotally connected to said frame intermediate the axes of rotation of said driving wheel and said bracket and below a line drawn therebetween.

3,123,148
BASCULE OR TILTING BEAM PLOW
Cornelis Sieling, Melissant, Netherlands
Filed May 2, 1961, Ser. No. 107,164
Claims priority, application Netherlands May 3, 1960
11 Claims. (Cl. 172—26)



1. In an automatic bascule plow so constructed that it has the tendency of deviating from the furrow previously plowed and this deviation is counteracted by a wheel guided in the furrow finished last, and including a mobile chassis which at each of its forward and rear ends has one or more plow shares alternately in operation, a plow driving mechanism, and means for reversing the direction of driving the plow when reaching the end of a furrow, the improvements comprising a guide wheel lying in the direction of movement of the plow and freely movable in the vertical direction relative to the plow chassis for preventing displacement of the plow under said deviation tendency, each plow share at the forward and at the rear end of the plow being carried by an arm articulated to a plow beam pivotally mounted on the plow chassis, a servo-motor for adjusting the position of said arm relative to the beam, said servo-motor being actuated by a control device through a rod connected thereto, said rod at its free end being adjustably attached to a second beam extending in the longitudinal direction of the plow at a specific distance from said plow beam and pivotally mounted on the plow chassis, and said second beam at its free end being provided with a rotatably journalled vertical disc, whereby the plow share follows the lateral deflections of said disc.

3,123,149
GARDEN TILLER
Charles E. White, Sturtevant, Wis., assignor to Outboard Marine Corporation, Waukegan, Ill., a corporation of Delaware
Original application Aug. 26, 1960, Ser. No. 52,139. Divided and this application Sept. 11, 1961, Ser. No. 137,151
5 Claims. (Cl. 172—42)



1. In a cultivator implement, a base casting integrally providing a gear housing, a shaft housing tangential thereto, a transverse implement shaft having bearings in the gear housing, implement means thereon, an upright drive

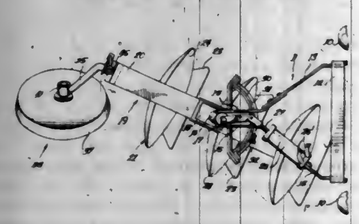
shaft having bearings in the shaft housing, gearing connecting said shafts, an engine having a crank shaft and having a cylinder provided with an exhaust port, means for drivingly connecting the crank shaft with the said drive shaft, means for providing a power head seat on the base casting and on which the engine is mounted, the base casting having a passageway opening through said seat and with which the cylinder exhaust port registers, and a muffler mounted on the base housing and with which the said passage communicates.

3,123,150

REAR WHEEL MOUNTING FOR TWO-WAY PLOW

Marvin D. Jennings, Naperville, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey

Filed Apr. 9, 1962, Ser. No. 186,024
5 Claims. (Cl. 172—219)



1. A two-way plow comprising a traveling supporting frame adapted to be vertically moved between operating and transport positions of the plow, a generally vertically extending pivot member carried by the supporting frame adjacent its rear end, a generally horizontally extending diagonally disposable tool-carrying frame having a plow unit thereon arranged to form a furrow in the ground, means pivotally connecting said tool-carrying frame to said pivot member medially of the ends of the tool-carrying frame, whereby a substantial portion of the latter projects rearwardly beyond said pivot member, said tool-carrying frame being laterally swingable about the axis of said pivot member between opposite diagonals for alternate right and left-hand plowing, an arm pivotally mounted on the rear end of the tool-carrying frame for lateral movement therewith and free swinging relative thereto in an arcuate path in a generally vertical plane, and a furrow wheel carried by the arm and swingable therewith in a direction opposite to the direction of movement of the tool-carrying frame to dispose the wheel in the furrow formed by the plow unit in either of its operating positions, the pivot axis of said arm being tilted forwardly and downwardly in a vertical plane through said tool-carrying frame so that, upon engagement of the wheel with the ground when the plow is lowered, the wheel is automatically moved by the pressure of the ground into operating position behind the plow unit in either of the alternate operating positions of said unit.

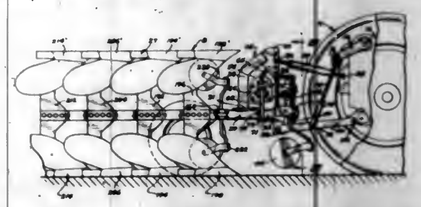
3,123,151

TWO-WAY PLOW

La Ron O. Quickstad, Minneapolis, Minn., assignor, by mesne assignments, to Minneapolis-Moline, Inc., Hopkins, Minn., a corporation of Delaware

Filed June 18, 1962, Ser. No. 203,331
5 Claims. (Cl. 172—227)

1. A two-way plow comprising in combination; a main supporting framework adapted to be connected for support from a vehicle, a plow carrying framework positioned rearwardly of said supporting framework and pivotally mounted thereon for rotation about a longitudinally extending axis, left and right hand plow assemblies mounted on opposite sides of said plow carrying framework, an operating means operatively connected to said plow carrying framework for rotating said framework about said axis with respect to said supporting framework between two positions substantially 180 degrees apart about said axis, a latch means operatively connected between said plow carrying framework and said supporting framework for releasably locking said plow carrying framework in each of said two positions and said latch means including a pair of latch members pivotally mounted upon said main support framework, a latch engaging member rigidly connected to the forward end of said elongate member,



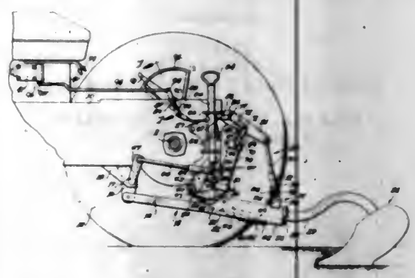
each of said latch members including portions adapted to engage latch engaging member, a resilient member operatively connected between said latch members to yieldably bias said portions into engagement with said latch engaging member, and a latch operating assembly operatively connected between said operating means and each of said latch members for moving the latch member which is then engaged toward the disengaged position against the compression of said resilient means as a torque is exerted by said operating means upon said elongate member.

3,123,152

HITCH LINKAGE CONTROL MECHANISM

Kestutis Biskis, Downers Grove, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey

Filed Sept. 16, 1960, Ser. No. 56,475
5 Claims. (Cl. 172—239)



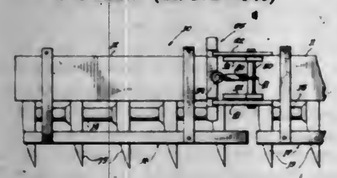
1. In a tractor having implement-attaching mechanism for supportably attaching an implement thereto, a lift means mounted on the tractor and operable for raising and lowering said implement, a position-responsive member affixed to and constrained for rotative movement with said lift means and operable by said lift means attendant the raising and lowering movements of the implement, draft-responsive mechanism constituting a portion of said implement-attaching mechanism and which is susceptible to movement upon being subjected to variations in draft loads on the implement and including a lever arm rotatable attendant such movement, a power unit having portions expandable and contractible relative to one another with one such portion pivotally connected to said lever arm and another such portion pivotally connected to said lift arm and in which said unit is selectively expandable and contractible for raising and lowering said lift means and alternatively operable as a rigid member for constraining the movements of said lever arm and lift means with one another when such movements are the result of variations in draft loads, and control valve means actuable for controlling the operation of said power unit, the improvement comprising: followup mechanism interconnecting said control valve means, said position-responsive member and said power unit for effecting actuation of said control valve means responsive to certain movements of said position-responsive member and for preventing actuation of the control valve means responsive to certain other movements of said position-responsive member; said followup mechanism including a first force-transmitting means interconnecting said control valve means and said position responsive member and operative for actuating said control valve means in accordance with movements of said position-responsive member that result from expansion and contraction of the respective portions of said power unit, and a second force-transmitting means interconnecting said one such portion of said power unit and said first force transmitting means and cooperative therewith in such manner as to cause said first force-transmitting means to be inoperative for effecting the actuation of said control valve means in response to movements of said position-responsive member when such movement is produced by a movement of said draft-responsive mechanism resulting from variations in draft loads on the implement.

3,123,153

DISK HARROW WING LOCKING DEVICE

James Morkoski, Clarendon Hills, and Arthur G. Evans, Wheaton, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey

Filed Jan. 29, 1962, Ser. No. 169,220
5 Claims. (Cl. 172—640)



1. A locking device for a folding gang implement having at least one main gang section and an extension gang section pivotally mounted on said main gang section for swinging movement from an extended to a folded position comprising, a bracket secured to said main gang section, said bracket having side portions projecting above said main gang section and a base portion extending outwardly from said main gang section, said base portion being adapted to support said extension gang section when said extension gang section is in an extended position, slots in said bracket side portions adjacent the upper surface of said extension gang section when said extension gang section is in the extended position, and a wedge member selectively engageable with said slots and slidingly engageable with said extension gang section upper surface to lock said extension gang section in the extended position.

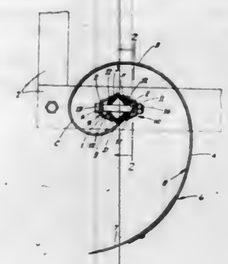
3,123,154

TOOL BAR AND CLAMP UNIT FOR SPRING-TOOTH HARROW SHANKS

Howard R. Boyle, Mariposa, Calif., assignor, by mesne assignments, to The H. C. Shaw Company, Stockton, Calif., a corporation of California

Filed Jan. 3, 1963, Ser. No. 249,243
2 Claims. (Cl. 172—691)

1. In a spring-tooth harrow, a transversely extending tool bar comprising a pair of 90 degree angle members disposed in spaced relation and with their apices facing away from each other so as to leave relatively widely spaced longitudinally extending slots therebetween, means connecting the members together at spaced points in their length to provide a unitary tool bar, a spring tooth having a shank formed at its upper end with portions to engage the rear sides of the angle members in located relation, and means to clamp said shank portions to the tool bar and including a bolt projecting through and initially slidable along the slots and also projecting



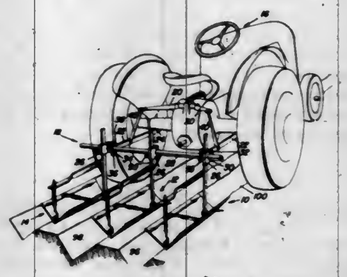
through the shank between said portions; said clamping means additionally including clamping members through which the bolt projects, said clamping members being of channel shaped form disposed on opposite sides of the tool bar and including legs projecting toward said tool bar; the legs of the front channel shaped clamping member engaging the front faces of the tool bar members at an angle thereto, and the legs of the rear channel shaped clamping member engaging said shank portions at an angle thereto.

3,123,155

DEPTH GAGING MEANS FOR A V-SHAPED ROW CROP DITCHER

William N. Okawaki, R.F.D. 2, and Harry Schmunk, R.F.D. 1, both of Mitchell, Nebr.

Filed June 30, 1961, Ser. No. 121,155
2 Claims. (Cl. 172—722)



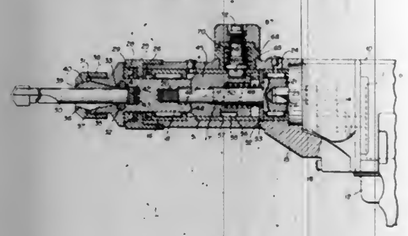
1. In combination with a vehicle propelled in a forward direction, an implement for forming a ditch in the loosened soil between parallel rows of growing crops comprising, a pair of flat rectangular soil compacting panels disposed parallel to said forward direction and interconnected to form a substantially sharp edged bottom defining a constant V-shape in cross-section when viewed in said forward direction and operative to restrictively displace soil beneath said panels for compaction thereof, mounting means rigidly secured to said vehicle and operatively connected to the panels for yieldable displacement thereof

about axes spaced from open ends of said panels to control the compaction pressure exerted by said panels on the loosened soil substantially independent of any propelling force exerted by the vehicle, a pair of parallel extensions hingedly mounted on upper edges of said panels remote from the bottom, and adjusting means interconnecting said extensions for adjustable positioning thereof inwardly toward each other from positions coplanar with the panels.

3,123,156
ROTARY AND PERCUSSIVE TOOL

John J. Gapstur, Cleveland, Ohio, assignor, by mesne assignments, to Rubbermaid Incorporated, Wooster, Ohio, a corporation of Ohio

Filed Apr. 16, 1959, Ser. No. 806,917
2 Claims. (Cl. 173—48)



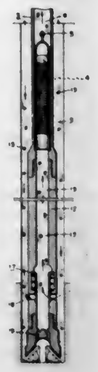
1. A percussive tool assembly, comprising a housing, a shaft constructed to be rotatably driven about its longitudinal axis by a driving motor for rotatably driving a tool in said assembly, a hammer telescopically surrounding said shaft and movably mounted in said housing and having a non-rotational connection with said shaft permitting movement of said hammer axially of said shaft and adapted to be rotatably driven by said shaft, and means responsive to rotation of said hammer reciprocating said hammer axially relative to said shaft to transmit impact blows to said tool; said means including a cam recess on the periphery of said hammer formed to coact with an axially fixed member to move said hammer away from said tool and then release it, spring means urging said hammer toward said tool, an axially fixed member carried by said housing and radially movable relative to said housing into and out of said recess between hammer reciprocating position and hammer non-reciprocating position, a coil spring urging said member radially inwardly during rotation of said hammer by said shaft into engagement with said recess in said hammer reciprocating position, and means for holding said member out of said recess.

3,123,157
RECOVERY OF DRILL CUTTINGS FROM SUBSURFACE EARTH FORMATIONS

John W. Graham, Bellaire, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware

Filed June 15, 1960, Ser. No. 36,377
7 Claims. (Cl. 175—58)

6. In rotary drilling of boreholes in the earth with an elongated drill pipe having a drill bit at the lower end thereof and an openable and closable port above the drill bit wherein drilling fluids, including air and liquids of specific gravity less than 3, normally are circulated down the bore of the drill pipe and up the annulus thereabout for the purpose of removing earth cuttings produced during drilling operations, the method of recovering earth cuttings comprising: lowering an open weave basket into the drill pipe bore, opening the port, reversing the direction of drilling fluid circulation to circulate at least a portion of the drilling fluid and earth cuttings entrained therein up the bore of the drill pipe, and pulling the basket up the



drill pipe to capture cuttings entrained in the fluid in the drill pipe bore.

3,123,158
METHOD FOR SEALING POROUS SURFACES

Julius P. Gallus, Tulsa, Okla., assignor to Jersey Production Research Company, a corporation of Delaware

No Drawing. Filed Dec. 10, 1959, Ser. No. 858,574
5 Claims. (Cl. 175—59)

1. A process for recovering a core from subterranean strata on which polyvalent cations are present which comprises cutting the core from said strata with an annular drill bit connected to the lower end of a drill string in a borehole, injecting an ion-sensitive latex into said drill string at the earth's surface, continuously depositing a polymeric film on the surfaces of said core as said surfaces are exposed by said bit by discharging said latex beneath said bit in contact with said strata, and thereafter recovering said core from said borehole with the connate fluids retained therein by said polymeric film.

3,123,159
JET UNDERREAMING

William B. Buck, Oklahoma City, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Oct. 2, 1961, Ser. No. 142,161
16 Claims. (Cl. 175—67)

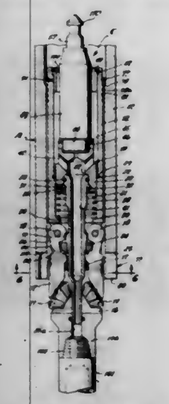


1. A method for concurrent drilling and underreaming comprising the steps of producing a pilot hole by physical contact of mechanical drilling means with a formation to be penetrated, and simultaneously underreaming by entraining in a stream of drilling fluid cuttings produced by said physical contact and directing said stream containing said cuttings in a high velocity jet directly against the wall of the borehole.

3,123,160
RETRIEVABLE SUBSURFACE WELL BORE APPARATUS

Archer W. Kammerer, 800 N. Raymond Ave., Fullerton, Calif., assignor, by mesne assignments, of three-fifths to said Archer W. Kammerer, one-fifth to Jean K. Lamphere, and one-fifth to Archer W. Kammerer, Jr., all of Fullerton, Calif.

Filed Sept. 21, 1959, Ser. No. 841,370
9 Claims. (Cl. 175—82)



1. In combination: a string of pipe adapted to be lowered within a well bore; a coupling device movable longitudinally through said pipe and including an initially retracted coupling member; a well tool secured to said coupling device and depending therefrom and movable longitudinally through said pipe; said pipe having stop means therein at its lower portion; said coupling device having stop means above said coupling member engageable with said other stop means to locate said well tool substantially below the lower end of said pipe and to prevent further downward movement of said coupling member relative to said pipe; fluid actuated means including a tubular mandrel engageable with said coupling member for expanding said coupling member outwardly into coupling engagement with said pipe after engagement of said stop means with each other; said fluid actuated means being responsive to the pressure of the fluid in said pipe to expand said coupling member; said tubular mandrel communicating with said well tool and with the pipe above said mandrel to conduct fluid from said pipe through said mandrel to the interior of said well tool; seal means between said coupling device and pipe preventing fluid flow therebetween when said stop means are engaged with each other to cause all of the fluid pumped down the pipe to flow through the tubular mandrel into said well tool; means for transmitting downwardly directed thrust from said pipe to said coupling device and to said tool; and means for retracting said coupling member from coupling engagement with said pipe to enable said coupling device and tool to be withdrawn through said pipe to the top of the well bore.

3,123,161
EARTH BORING MACHINE

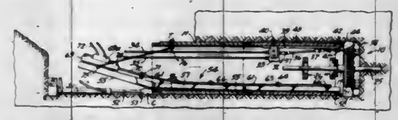
Bertrand N. Weber, Green Isle, Minn.

Filed Nov. 9, 1959, Ser. No. 851,681
2 Claims. (Cl. 175—106)

1. Apparatus applicable to the leading front end of a pipe tile and for producing a hole in the earth into which the tile is to be moved,

said apparatus including a forwardly facing rotary cutter having a cutting diameter substantially equalling the diameter of the tile to be placed into the bored hole,

mechanism mounting and driving the cutter adjacent the front end of the tile and including an elongate rotary member drivably connected to the cutter and extending rearwardly therefrom within the outer periphery of the cutter and applying driving torque to said cutter to revolve the cutter against the earth at a location immediately adjacent the front end of the tile, said mechanism also including a motor having a frame and also having an output shaft connected with and driving said rotary member,



said mechanism also including a tile engaging mount adapted to be applied in fixed position upon the tile, said mount having an earth and tile-engaging element spaced rearwardly from the cutter and disposed substantially at the outer periphery thereof, said element extending rearwardly to lie along and flush against the outer periphery of the tile in clamping relation therewith to thereby be restrained by the tile and by the earth at the periphery of the bored hole from moving around the rotation axis of the cutter, said mount having means retaining said element in fixed position on the outer periphery of the tile,

said mechanism also including rigid means secured on said mount and rotatably mounting said rotary member and retaining said motor frame in fixed relation on said mount to prevent rotation of the motor frame with respect to the tile and earth as the cutter is revolved,

whereby to produce a hole in the earth immediately in front of the tile to permit the tile to be moved thereinto.

3,123,162
DRILL STRING STABILIZER

David S. Rowley, Tulsa, Okla., assignor to Jersey Production Research Company, a corporation of Delaware

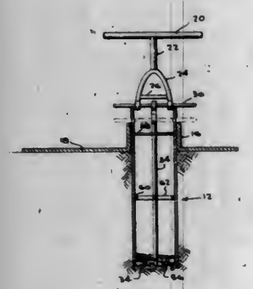
Filed Aug. 4, 1961, Ser. No. 129,281
3 Claims. (Cl. 175—325)



1. A drill string stabilizer which comprises an elongated tubular housing containing a plurality of lateral openings and including means for connecting said housing in a drill string; a tubular mandrel positioned within said housing and axially slidable therein; sealing means between said mandrel and housing above and below said lateral

openings; a plurality of slotted cam members mounted in fixed position on the outer surface of said mandrel and extending outwardly within said lateral openings; a plurality of rib members positioned in said lateral openings over said cam members; cam pins attached to said rib members and extending through said slotted cam members, said pins and the slots in said cam members being positioned so that said rib members are forced outwardly as said cam members and mandrel slide downwardly with respect to said housing and said pins bearing against vertical surfaces on said cam members when said rib members are in the expanded position; and a spring in said housing biasing said mandrel in a normally upward position with respect to said housing.

3,123,163
DEVICE FOR SOIL SAMPLES
Benjamin M. Overby, 100 Mary St., Homerville, Ga.
Filed July 27, 1962, Ser. No. 212,897
9 Claims. (Cl. 175—404)



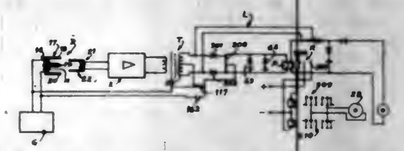
9. A device for taking soil samples, comprising a first tube, with cutting teeth on its lower edge, a planiform ground plate, a second tube extending from one side of said plate, with axis perpendicular thereto, and sized to receive said first tube for rotating and sliding motion, said plate having a through opening coextensive with the passage in said second tube, said first tube having a pair of diametrically opposite bores near its upper edge, a pin receivable in said bores and adapted to overlie the top edge of said second tube, a handle having a depending portion adapted for movement along the passage of said first tube, and having a bore adapted to receive said pin; and an auger comprising a rod having a bore near one end, also adapted to receive said pin, said rod carrying an auger blade of at least one convolution at its other end, and guide means for maintaining said rod axially of said first tube.

3,123,164
ELECTRONIC-MEASURING AND RECORDING SYSTEM
Jesus Lasa Echenique, Villafranca-de-Oria, Spain, and Hubert Voegeli, Fargues-Saint-Hilaire, France, assignors, by mesne assignments, to Inventions Finance Corporation, a corporation of Delaware
Filed May 24, 1960, Ser. No. 31,465
32 Claims. (Cl. 177—1)

1. A method of moving a motor-driven movable poise on a weighing instrument to a balance position, which method comprises the steps of:

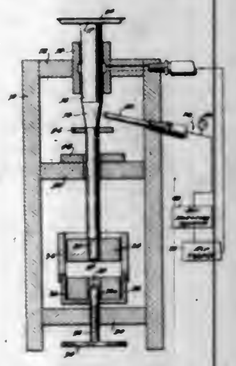
(*a*) operating the motor drive at a first speed to move said poise to a point which is a first predetermined amount short of the balance position.

(*b*) then operating said motor drive at a second speed, slower than said first speed, to move said poise to a point which is a smaller predetermined amount short of the balance position, and



(*c*) thereafter operating said motor drive intermittently in the same direction at said second speed to move said poise to the precise balance position.

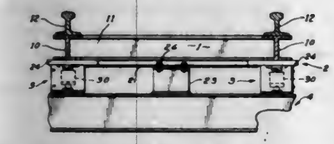
3,123,165
FRICTION-FREE BALANCE
Neill J. Carson, Jr., Lockport, Herbert W. Ostrander, Westmont, and Carl N. Munter, Harvey, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed June 23, 1961, Ser. No. 119,248
3 Claims. (Cl. 177—208)



1. A balance for determining the weight of an object, comprising a frame having a top plate and a bottom plate; an air bearing attached to the top plate of the frame and having a vertical axis; a vertical shaft extending through the air bearing so as to be radially supported thereby, said shaft having an axially tapered portion; a first washer-shaped magnet attached to the bottom end of the shaft; a second washer-shaped magnet carried by the bottom plate of the frame below the first magnet, said magnets being arranged in spaced-apart, mutually repelling relationship and having magnetic fields radially symmetrical with respect to the axis of the shaft; and a weight-calibrated air gauge attached to the frame adjacent the tapered portion of the shaft, said air gauge being responsive to back pressure, said back pressure being related to the proximity of the tapered portion to the air gauge, which proximity is dependent on the weight of the object placed on the top end of the shaft.

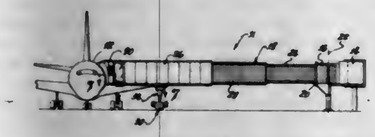
3,123,166
LOAD CELL MOUNTING AND ALIGNMENT FOR WEIGHING MEANS
Eugene W. Schellentrager, Shaker Heights, Ohio, assignor to The Atlas Bolt & Screw Company, Cleveland, Ohio, a corporation of Ohio
Filed Feb. 23, 1962, Ser. No. 175,017
15 Claims. (Cl. 177—211)

1. A weighing apparatus comprising a weighbridge; a rectangular stabilizing frame disposed below said weighbridge; a plurality of load responsive instrumentalities disposed beneath the corners of said frame; said frame and said instrumentalities being separatedly mounted upon a



common support means in use of the apparatus; the corners of said frame movable in a vertical direction only; said weighbridge bearing upon said corners only of said frame.

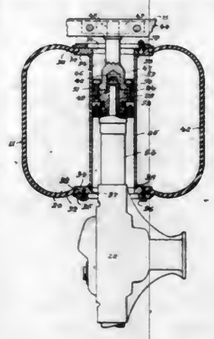
3,123,167
STEERING SYSTEM FOR STEERABLE, TELESCOPING LOADING RAMP
Robert D. Lichti, Long Beach, Calif., assignor, by mesne assignments, to Stanray Corporation, Chicago, Ill., a corporation of Delaware
Filed Aug. 12, 1960, Ser. No. 49,219
7 Claims. (Cl. 180—6.5)



1. In a speed control and steering system for a self-propelled steerable vehicle which includes a frame pivotable about a vertical axis, two wheels rotatably mounted on said frame on opposite sides of said vertical axis, and two reversible motors mounted on said frame and respectively connected to said wheels in driving relations therewith, the combination of: two bridge circuits respectively operatively connected to said motors for controlling the respective speeds thereof; speed control means common to and forming parts of said bridge circuits for simultaneously and equally unbalancing said bridge circuits in the same directions to simultaneously and equally vary the speeds of said motors in the same directions; and steering means for relatively unbalancing said bridge circuits in opposite directions so as to vary the relative speeds of said motors.

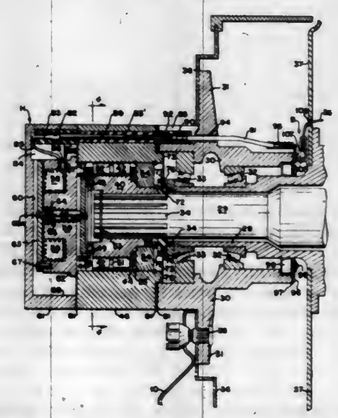
3,123,168
DRIVE ARRANGEMENT FOR GOLF CAR HAVING LOW PRESSURE TIRES
Seth G. Atwood, 2121 Harlem Blvd., Rockford, Ill.
Filed Apr. 11, 1960, Ser. No. 21,356
9 Claims. (Cl. 180—27)

1. In a golf car or the like, a frame carrying a prime mover, ground-engaging wheels mounted on the frame for its support, drive, and steering, each wheel having a low pressure pillow-type tire with thin readily flexible side and peripheral walls, the tire being elongated axially to a length that is greater than the diameter, whereby, in view of the low pressure and the thin readily flexible side and peripheral walls, to run semi-flat, for increased area of tread contact and proportionately lower unit pressure on the turf and also for good traction, each tire having a circular drive bead concentric with each end connected to the peripheral portion of a central circular end plate, the ratio of radius of drive bead to outside radius of tire in the pillow type tires being such that the car is adapted to depend upon the tires exclusively to absorb road shock, a coaxially arranged pair of said wheels being drive wheels and having tubular hubs connected to the central portions of said end plates, drive connections for the prime mover with said wheels including a differential between said wheels and drive shaft sections extending therefrom to and drivingly connected in the hubs of said wheels, the structure also including stub shafts coaxially



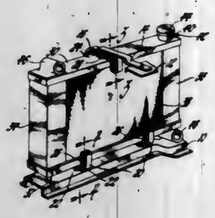
arranged with said drive shaft sections and rigidly connected therewith to form extensions thereof for bearing support on the frame, and bearings on said frame in which the outer ends of said stub shafts are rotatably mounted for mounting of said wheels directly on said frame.

3,123,169
FOUR WHEEL DRIVE VEHICLE WITH AUTOMATIC WHEEL DRIVE DISCONNECT MEANS
Ralph C. Young and Richard T. Bingman, Colorado Springs, Colo., assignors to White Manufacturing Company, Colorado Springs, Colo., a corporation of Illinois
Filed Oct. 24, 1960, Ser. No. 64,567
23 Claims. (Cl. 180—44)



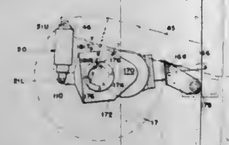
1. A hub for connecting an optionally driven wheel of a vehicle to a shaft, comprising an outer drive ring attached to said wheel; an inner drive gear mounted on said shaft for rotation therewith; a series of rollers disposed in circumferentially spaced relation between said drive gear and said drive ring, said drive gear having grooves in which said rollers are normally disposed and inclined surfaces for forcing said rollers against said drive ring; a cage for maintaining said rollers in spaced positions and provided with an annular, generally flat ring; and a generally circular friction plate movable axially into engagement with said flat ring for resisting rotation of said cage and causing each roller to engage an inclined surface and said drive ring.

3,123,170
RADIATOR WITH RESILIENT MOUNTING
Marvin H. Bryant, Fort Wayne, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 16, 1960, Ser. No. 69,676
3 Claims. (Cl. 180—68)



1. A cross flow radiator having vertically extending elongated side tanks and horizontal top and bottom side members connecting said tanks, a radiator core encompassed by said tanks and side members, rigid support means, resilient and distortionable material located only on the top and bottom sides of said radiator and interposed between each of said side members and said rigid support means and spaced from said tanks, and the arrangement being such that said material is the sole material connecting said radiator to said rigid support means.

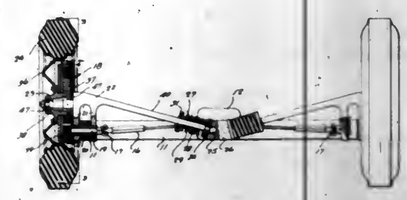
3,123,171
VEHICLE
Ralph H. Kress, Peoria, Ill., assignor to Kress Automotive Engineering, Peoria, Ill., a partnership
Original application Nov. 28, 1958, Ser. No. 777,070, now Patent No. 3,014,739, dated Dec. 26, 1961. Divided and this application Apr. 12, 1961, Ser. No. 102,535
1 Claim. (Cl. 180—73)



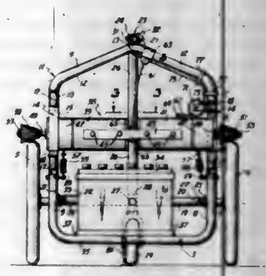
Drive mechanism for an automotive vehicle having a frame, a final drive housing, a universal joint securing the housing to the frame at one point, a pair of drive wheels rotatably carried by the housing in a laterally spaced relationship, a pair of laterally spaced piston-and-cylinder suspension means, each suspension means having integral rebound control means comprising a load supporting chamber charged with a compressible fluid, an opposing chamber charged with an incompressible fluid, a third chamber associated with the piston, and passage means permitting fluid flow between the second and third chambers, universal joints securing the suspension means to the frame and to the housing, and means on said housing and frame to maintain longitudinal alignment of the housing independently of the suspension means and including a roller element and a track element, one element being on said housing.

3,123,172
SHOCK ABSORBING SUSPENSION LINKAGE FOR A VEHICLE WHEEL
Hans A. Rass, 303 St. Lawrence, Beloit, Wis.
Filed July 27, 1962, Ser. No. 212,895
3 Claims. (Cl. 180—73)

1. In a vehicle, a frame, a rotating drive shaft extending from said frame, a supporting wheel, an internal ring gear concentrically mounted on said wheel, a pinion gear on said shaft, means on the frame rotatably supporting said shaft with said pinion gear in meshing engagement with said ring gear, link means journaled axially to and depending from said wheel and pivotally connected to said shaft and to said frame, whereby the frame is supported from the wheel through said link means, and whereby the link means may swing while the wheel is being driven by said drive shaft, and resilient means limiting swinging movement of said link means, said resilient means comprising a pair of concentrically mounted torsion springs, said torsion springs being each connected at one end to the frame, said link means being formed with arcuate recesses located to slidably receive the opposite ends of said torsion springs, at least one of said opposite ends of the springs being at times engageable with an end of one of said arcuate recesses, whereby to stress at least one of said springs when the link means swings in either direction from a vertical position.

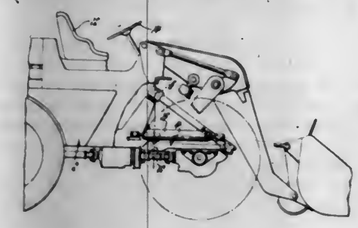


3,123,173
VARIABLE SPEED DRIVE MECHANISM FOR GOLF CARTS
Charles D. Jacobs, 1100 S. Lake Side Drive, Lake Worth, Fla.
Filed Nov. 30, 1961, Ser. No. 155,978
3 Claims. (Cl. 180—76)



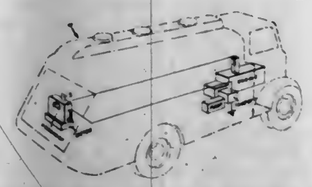
1. A wheeled vehicle with variable speed drive mechanism comprising:
(*a*) a vertically disposed frame supported at opposite sides thereof by a pair of wheels;
(*b*) yoke means having vertically extending, elongated openings therein fixed on opposite sides of said frame and disposed with said openings in alignment;
(*c*) motor means floatingly mounted in said elongated openings in said yoke means for limited lateral and vertical movement therein;
(*d*) means for limiting said lateral movement of said motor means in said yoke means in each direction;
(*e*) resilient means moving said motor means laterally of said yoke means to the limit of movement thereof in one direction,
(*f*) said motor means being disposed in lowermost position with respect to said yoke means when moved to the limit of movement in said one direction;
(*g*) cone pulley means connected for movement with and driven by said motor means and disposed above and contiguous to said pair of wheels,
(*h*) the small end of said cone pulley means being disposed adjacent the periphery of said pair of wheels when said motor means is moved to the limit of movement in said one direction; and
(*i*) means for moving said motor means in the other direction in said yoke means to bring said cone pulley means adjacent said small end thereof into driving contact with said pair of wheels for driving said pair of wheels in the same direction.

3,123,174
POWER STEERING SYSTEM FOR ARTICULATED VEHICLES
Joseph A. Bednar, North Olmsted, and Raymond T. Warner, Novelty, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 6, 1962, Ser. No. 200,391
7 Claims. (Cl. 180—79.2)



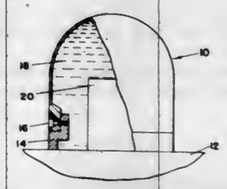
1. In a hydraulic system having a first source of pressurized fluid, a fluid motor to be actuated from the first source, an accumulator, a fluid circuit for connecting the first source and accumulator to the fluid motor, a second source of pressurized fluid, a pressure responsive valve interposed in the circuit between the accumulator and the second source, a sump in said circuit selectively connectable with the accumulator by said valve, said valve adapted to maintain the accumulator energized whenever the pressure in the second source is above a predetermined value and to connect the sump with the accumulator so as to deenergize the latter whenever the pressure in the second source falls below a predetermined value.

3,123,175
ANTI-THEFT MEANS FOR FUEL DELIVERY TRUCK
John Walter Rentschler, 6221 Monmouth Ave., Ventnor, N.Y.
Original application Aug. 12, 1960, Ser. No. 49,214. Divided and this application Sept. 19, 1962, Ser. No. 230,780
5 Claims. (Cl. 180—82)



1. Apparatus for preventing delivery of fluid in a fluid dispensing vehicle having a motor propulsion mechanism including a fuel supply system with an electrically operated fuel cut-off means therein, a before and after delivery slip printing and recording meter and a power take-off device from said propulsion mechanism for driving a fluid dispensing pump, comprising in combination, an electrical normally open switch attached to said meter for actuation thereby to closed position during the time between before and after deliver slip printing, an electrical normally open switch attached adjacent the power take-off device for actuation to open position when said power take-off device is operative, a source of electrical power, an electrical common conductor connecting one terminal of each of said switches, an electrical conductor connecting the other terminal of one of said switches with said source of electrical power and an electrical conductor connecting the other terminal of the other of said switches and said electrically operated fuel cut-off means whereby to provide a series circuit to the fuel cut-off means to cut off the fuel supply to the motor propulsion mechanism should closure take place of said switch operated by the power take-off while said switch operated by the meter is closed.

3,123,176
SONAR DOME
Walter H. Greenberg, Syosset, N.Y., assignor to Riverside Plastics Corporation, Hicksville, N.Y., a corporation of New York
Filed Sept. 15, 1959, Ser. No. 840,079
5 Claims. (Cl. 181—.5)

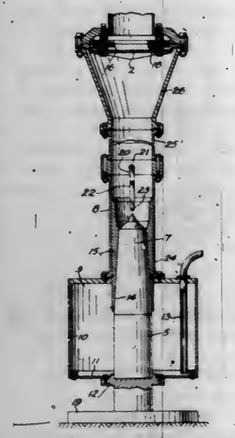


1. A sonar dome including an acoustic window through which sound waves may be transmitted, said dome consisting of three layers of laminated reinforced plastic material, with each of the outer layers of said reinforced plastic material being acoustically identical in section, the center layer of said reinforced plastic material consisting of a relatively visco-elastic damping material compared to the outer layers, and the stiffness of said middle layer being sufficient so that the entire structure of the dome partakes of the same flexural vibration, and with the combined thickness of the three layers being appreciably less than the shortest wavelengths of the sound waves transmitted through the dome.

3,123,177
VIBRATING SYSTEMS AND MEANS FOR VARYING THE FREQUENCY OF VIBRATION
Ivor S. Sacks, University of the Witwatersrand, Milner Park, Johannesburg, Transvaal, Republic of South Africa
Filed Oct. 12, 1959, Ser. No. 845,915
Claims priority, application Republic of South Africa Oct. 15, 1958
7 Claims. (Cl. 181—.5)

1. Apparatus for creating vibrations, as is used for imparting sound waves to the earth in geophysical exploration consisting in an enclosed vessel, means adapted to couple the vessel to the earth, an inlet pipe to the vessel, a tube having an inlet end connected to the vessel and having an outlet end in which there is a valve that is resiliently biased to open against flow from the inlet end of the tube to the outlet end of the tube, and means at the inlet

end of the tube that is continuously operable to displace continuously the effective end of the tube with respect to



sound waves emanating at the valve through a desired range of positions.

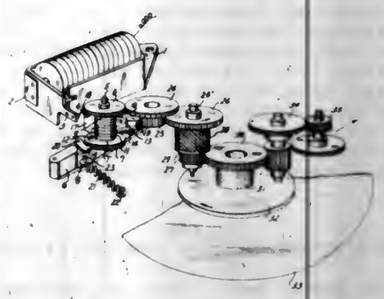
3,123,178
EASY-UP LADDER SUPPORT
Cecil Z. Monaghan, 10619 136th St., and Nicholas J. Christophers, 12445 80th St., both of Edmonton, Alberta, Canada
Filed May 14, 1962, Ser. No. 194,478
2 Claims. (Cl. 182—97)



1. A ladder support for mounting on a vehicle comprising a ladder-carriage frame for supporting a ladder therefrom, a swivel-joint for mounting on said vehicle for rotation about a vertical axis, said swivel-joint having a hinge means connected near the midpoint of said ladder carriage frame, support braces pivotally mounted on said ladder carriage frame and having locking pin holes therein, and brace locks for mounting on said vehicle including a universal joint for receiving said support braces to fix the position of the ladder carriage frame in any of various positions.

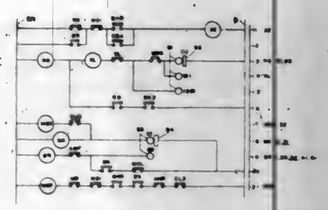
3,123,179
WIND-UP ARRANGEMENT FOR SPRING MOTORS
Hermann Bertrang and Wilhelm Haupt, Villingen, Black Forest, Germany, assignors to Kienzle Apparate G.m.b.H., Villingen, Black Forest, Germany
Filed Mar. 29, 1961, Ser. No. 99,204
Claims priority, application Germany Mar. 30, 1960
11 Claims. (Cl. 185—40)

6. A driving arrangement, comprising, in combination, a motor producing a variable torque including a peak torque; a reduction transmission means including a first transmission member driven from said motor at a first speed, a second transmission member driven from said first transmission member at a lower speed, a third transmission member, and an elastic dampening motion transmitting member made of an elastomer connecting said second and third transmission members; and record carrier means operatively connected to and driven from said third transmission member so that said elastic



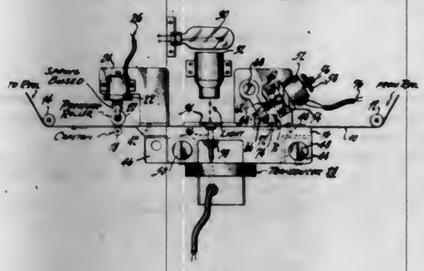
motion transmission member dampens a peak torque produced by said motor whereby said record carrier means moves at constant speed.

3,123,180
ELEVATOR CONTROLS
Paul F. De Lamater, Toledo, Ohio, assignor to Toledo Scale Corporation, Toledo, Ohio, a corporation of Ohio
Filed Oct. 31, 1960, Ser. No. 65,096
14 Claims. (Cl. 187—29)



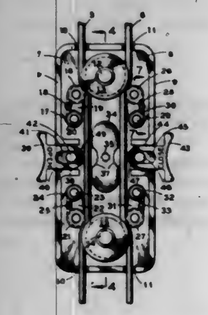
1. An elevator system having a plurality of cars serving a dispatching landing, a plurality of landings displaced from said dispatching landing in a dispatching direction and at least two landings beyond said dispatching landing and displaced therefrom in a direction opposite said dispatching direction, comprising means to condition cars at said dispatching landing for dispatching, dispatch interval defining means, means individual to the cars to prevent start of said cars from any landing beyond said dispatching landing upon completion of their service to said landing, means to sense the presence of a car available at said dispatching landing and available to be conditioned for dispatching, means for registering calls in said cars for the landings served thereby, means to release a car held by said start preventing means at a landing beyond said dispatching landing in response to a call registered therein, means for registering landing calls at said landings beyond said dispatching landing, means for individually selecting cars held at any landing beyond said dispatching landing in response to a landing call at a landing beyond said dispatching landing or in response to the absence of an available car at said dispatching landing during a terminal portion of a dispatching interval, and means responsive on selection of a car for releasing that car from said landing beyond the dispatching landing.

3,123,181
BRAKING MECHANISM FOR TAPE FEEDING APPARATUS
Solomon Baybick, Riverton, and Steven M. Shelley, Oaklyn, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed May 5, 1961, Ser. No. 108,033
5 Claims. (Cl. 188—65.1)



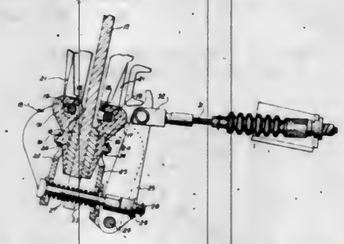
1. In apparatus for feeding a record tape in one direction along a path, a braking mechanism which comprises a fixed block past which said tape passes and a brake shoe, said block and shoe being disposed on opposite sides of said tape, means pivotally mounting said brake shoe on an axis spaced from said block in the direction of feeding of said tape for movement toward said block and in the direction of feeding of said tape to pinch said tape between said shoe and said block, means for continuously biasing said shoe into sliding relationship with said tape, and other means coupled to said shoe for applying a force to said shoe aiding the bias of said biasing means for bringing said shoe into gripping relationship with said tape.

3,123,182
PUSH BUTTON DRAPE CORD OPERATOR
Carl E. Malone, 2281 SW. 33rd Way, and Sidney L. Polack, 3600 NE. 24th St., both of Fort Lauderdale, Fla.
Filed May 16, 1962, Ser. No. 195,274
4 Claims. (Cl. 188—65.1)



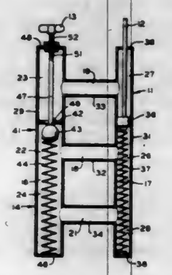
1. An operator for the cords of curtains, drapes and the like comprising, a casing containing a pair of spaced-apart pulleys, tension rollers contained in the casing and spring-biased to maintain a pair of parallel cord lengths in engagement with the pulleys, the casing being slidable on the cord lengths, a stationary element within the casing between the cord lengths, and inwardly-movable push button gripping members respectively located on opposite sides of the stationary element for selective inward depression to grip one or the other of the cord lengths between the depressed gripping member and the stationary element so that a pull exerted on the casing while one of the cord lengths is so gripped will cause said gripped cord length to be longitudinally shifted.

3,123,183
LEVER ACTUATED DISC BRAKES HAVING PIVOTALLY AND AXIALLY MOVABLE FRICTION PAD SUPPORTS
Ernest Page, Upminster, England, assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed May 26, 1961, Ser. No. 112,850
Claims priority, application Great Britain Sept. 6, 1960
9 Claims. (Cl. 188—73)



1. In a brake assembly having a rotatable brake disc and a nonrotating primary brake unit, a parking brake assembly comprising friction pads disposed on opposite sides of said brake disc, lever means supported on said primary brake unit and tangentially disposed relative to the effective circumference of said brake disc supporting said pads for pivotal movement with respect to said primary brake unit and axial movement with respect to said brake disc, and means operable to urge said friction pads into direct axial contact with said brake disc, said friction pads being asymmetrically disposed with respect to said last named means.

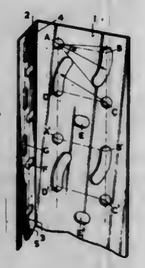
3,123,184
HYDRAULIC TIMING APPARATUS
Maurice S. Hayes, 22142 Thelma St., Hayward, Calif.
Filed Aug. 2, 1961, Ser. No. 128,840
10 Claims. (Cl. 188—97)



1. Timing apparatus of the character described including means defining spaced longitudinally extending first and second chambers, a first conduit interconnecting said chambers medially of the respective ends thereof, second and third conduits interconnecting said chambers at positions spaced from said first conduit on either side thereof and toward the corresponding ends of said chambers, said chambers and conduits being substantially filled with liquid, a piston mounted for longitudinal movement in said first chamber means for resiliently biasing said piston toward a first end of said chamber, means for moving said piston towards the second end of said chamber against said biasing means, and valve means mounted in said second chamber between said first conduit and one of said other conduits to control any fluid flow therethrough

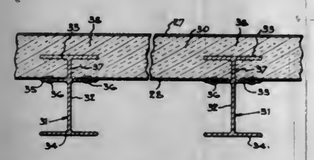
and being biased toward a closed position and operable to full open position by fluid pressure acting in opposition to said bias, the volume of the second chamber beyond the valve means being less than the volume of fluid displaced by the piston, said conduits, second chamber and valve means when open having a cross-sectional flow path for liquid movement between said chambers at least as large as the cross section of said first chamber and means for limiting movement of said valve in a closing direction.

3,123,185
SECTION BAR
Matthijs Adrianus van der Rijst, Zwanenburg, Netherlands, assignor to De Cirkel N.V., Zwanenburg, Netherlands
Filed Dec. 1, 1959, Ser. No. 856,447
3 Claims. (Cl. 189—34)



1. A section bar comprising an elongated web and flange connected along a line, said web having a pattern of perforations consisting of repeated units each having perforations arranged at the corners of a square, the perforations of each square being constituted by at least one arcuate slot arranged at one of said corners and having another of said corners as its center, the flange being provided with a first row of perforations spaced from said line by a distance equal to about one half a side of said square, said flange perforations being staggered with respect to the perforations of said web.

3,123,186
WALL CONSTRUCTION FOR SHELTER
Charles A. Adkinson, Jr., Dayton, Ohio, John S. Brooks, Redondo, Wash., and Alfred L. Marcum, Jr., Centerville, Ohio, assignors to Aeronca Manufacturing Corporation, Middletown, Ohio, a corporation of Ohio
Filed Apr. 19, 1960, Ser. No. 23,252
5 Claims. (Cl. 189—34)



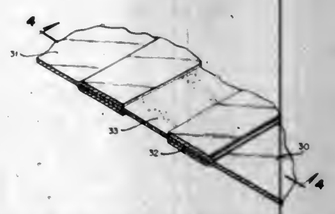
1. In a lightweight portable shelter comprising four side walls, a top wall and a bottom wall, the novel feature which comprises a side wall construction, said wall construction comprising an outer facing, an inner facing, said inner facing being constituted by a plurality of panels, and a lightweight cellular core disposed between said facings, said core being adhered to said facings to form a rigid wall, a plurality of vertically extending modified I-beams, each of said I-beams comprising a web, an inner transverse flange and an outer transverse flange disposed at opposite edges of said web, and an intermediate transverse flange disposed intermediate said inner and outer flanges, said intermediate flange of each of said I-beams being secured to an edge of one of said inner facing panels, said outer flange and a portion of said web intermediate said outer flange and said intermediate flange being embedded in said core, said inner flange and a portion of the web intermediate said inner flange and the intermediate flange projecting inwardly from said wall, whereby the inner flanges of said I-beams are adapted for mounting equipment.

3,123,187
ATTACHING DEVICES
Harvey W. Welsh, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application July 19, 1957, Ser. No. 673,055, now Patent No. 2,963,272. Divided and this application Feb. 19, 1960, Ser. No. 9,995
3 Claims. (Cl. 189—36)



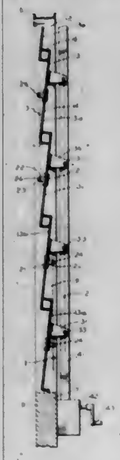
1. An assembly comprising a first member having a shoulder adjacent an end thereof, a tang on the member extending from the shoulder, and an elongated generally rectangular head on the tang; a second member abutting the shoulder and having an opening for the tang configured for insertion of the head therethrough, the tang extending through the opening; and a locking clip having a base with an elongated generally rectangular bayonet slot hole dimensioned for assembly over the head and rotation about the tang and to provide a bayonet lock joint between the clip and the head upon rotation of the clip, portions of the base of the clip abreast the longer sides of the bayonet slot hole being disposed between the head and the second member upon such rotation, the locking clip including a circumferential flange extending transversely to the plane of the base and away from the said shoulder generally encircling the head, and a plurality of deformable tab means on the clip deformable so as to extend from the clip generally parallel to the base of the clip into engagement with opposite longer sides of the head to lock the clip against rotation relative to the first member.

3,123,188
EXPANSION JOINTS FOR METAL PANELS
Harvey L. Patry, Francis J. Patry, and Ernest Patry, Lewiston, and H. Blair Lamont, Lincolnville, Maine, assignors, by mesne assignments, to Lamont & Riley, Inc., Worcester, Mass., a corporation of Massachusetts
Filed Nov. 28, 1960, Ser. No. 72,179
9 Claims. (Cl. 189—36)



1. An expansion joint comprising a length of substantially parallel relatively inextensible panels, a strip of elastomeric material, the inner edges of said elongate panels and the corresponding edges of said strip of elastomeric material being joined together by adhesive bonds, extending along the edges of said strip and along the inner edges of said panels and joining said strip and said panels into an integral structure, said bonds each comprising a bifurcation along the joined edges of said strip and the said inner edges of said panels such that the lateral margin of at least one of said joined edges in each bond lies between the forks of said bifurcations in the other edge and adhesive material firmly anchoring said lateral margin within said bifurcations and completing said bond, said strip extending along the length of said panels and having a tensile strength greater than one thousand pounds per square inch and an elongation of at least one hundred percent, said bond having a peel-pull strength value at least equal to thirty-five pounds per inch per minute.

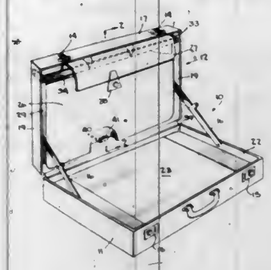
3,123,189
JALOUSIE
Esmond F. Wiley, 1132 Mandana Blvd., Oakland, Calif.
Filed Dec. 6, 1961, Ser. No. 157,369
3 Claims. (Cl. 189—62)



2. A jalousie having variably movable louvers comprising a frame, a plurality of similar louvers arranged in first and second rectilinear groups, means for pivotally mounting said louvers of said first group and said second group on said frame for rotation about individual parallel axes, first pivot connections on said louvers of said first group, each of said first pivot connections being at a radius of one predetermined length from the respective one of said axes, second pivot connections on said louvers of said second group, each of said second pivot connections being at a radius of a different predetermined length from the respective one of said axes, and a single control bar engaging said first and said second pivot connections, said louvers being flexible between said pivotally mounting means and said pivot connections to accommodate the different paths of said first pivot connections and said second pivot connections.

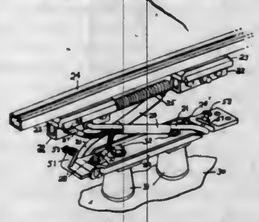
3,123,190
ATTACHÉ CASE AND FILE RETAINING MEANS THEREFOR
Lewis Lifton, 35 E. 75th St., New York 21, N.Y.
Filed July 19, 1962, Ser. No. 213,840
7 Claims. (Cl. 190—51)

5. A combination carrying case and inner case retained therein, the combination comprising a box-type case having a box-like body housing with an inverted box-like lid hinged thereon to provide interior body and lid compartments, said lid having a top wall and a pair of end walls extending therefrom, an inner case received in said lid compartment and having a relatively stiff wall movable with respect to the top wall of said lid, a retainer to maintain said movable wall of said inner case within said lid, said retainer including a forward wall extending substantially between the end walls of said lid and side walls extending substantially perpendicularly from the ends thereof, said side walls being pivotally attached to said end walls of said lid whereby said forward wall is pivotable with respect to said top wall, said side walls of said retainer being pivotable with respect to said end walls of said lid about an axis removed from said top wall of



said lid a distance substantially equal to the spacing between the ends of said side walls removed from said forward wall and said axis whereby when said forward wall of said retainer is parallel to said top wall the ends of the side walls abut said top wall to prevent rotation of said retainer, and flange means extending from one of said side walls opposite said forward wall whereby when pressure is exerted on said flange in one direction, said forward wall pivots in the opposite direction to move respectively into and out of engagement with said movable wall of said inner case, said retainer being adapted to be pivoted about said axis to an inoperative position wherein said forward wall is pivoted to a position proximate to said top wall of said case.

3,123,191
CURRENT COLLECTOR MECHANISM
Donald G. Sprigings, Lynchburg, Va., assignor to H. K. Porter Company, Inc., Philadelphia, Pa., a corporation of Delaware
Filed Apr. 20, 1961, Ser. No. 104,289
15 Claims. (Cl. 191—58)



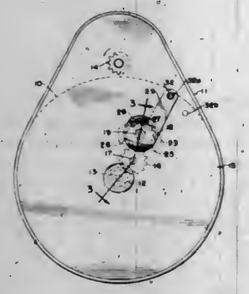
1. A current collector device for transferring electrical current from a conductor rail system to an electrically energizable work utility, comprising in combination, a mounting base adapted for physical securement to the work utility for travelling motion therewith, a pair of spaced apart current collector shoes each carrying a separate contact block and oriented for disposition lengthwise of the conductor rail system from which the work utility is energized with the contact blocks adapted for simultaneous sliding surface contact with the same rail of the conductor rail system, a pair of independent arms pivotally coupled to spaced apart points of said mount-

ing base for rotation about parallel axes and extending away from the base in crosswise orientation to one another, each of said arms being pivotally coupled at its outer end to a different one of said pair of collector shoes so that said shoes are pivotable on parallel axes oriented transversely to the lengthwise extent of the conductor rail with which they are associated and which parallel axes are parallel to the pivotal axes of said arms relative to said mounting base, and resilient biasing means extending between and coupled to the proximate ends of said pair of shoes, whereby said shoes are biased toward one another and the outer ends of said arms tend to pivot outward away from said mounting base.

3,123,192
DIRECTION CONTROL MEANS FOR BI-DIRECTIONAL MOTORS

Karl T. Wagner, Thomaston, Conn., assignor to The Sessions Clock Company, Forestville, Conn., a corporation of Connecticut

Filed Apr. 24, 1961, Ser. No. 105,173
4 Claims. (Cl. 192—4)



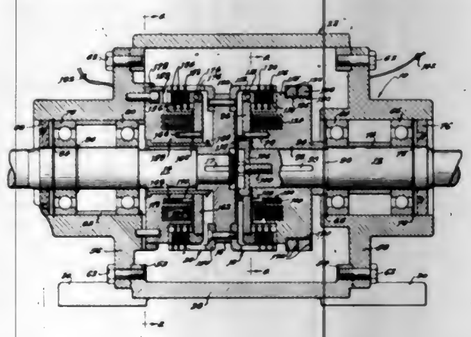
1. Direction control means for insuring the starting in a desired predetermined direction of a bidirectional motor, which comprises a first rotatable member driven by said motor, an anti-reverse element mounted in slip friction drive relation to said first rotatable member and rotatable therewith in both directions, a control member mounted for cooperation with said anti-reverse element to limit the extent of its rotation in either direction, said control member being movably mounted and having two predetermined operating positions, said anti-reverse element having a tab-like element integral therewith, said control member having a pair of spaced abutment surfaces engageable with said tab-like element to limit rotation of said anti-reverse element with respect to said control member, and rotatable means driven by said motor and cooperatively related to said anti-reverse element for motor-stopping engagement therewith upon rotation of the anti-reverse element in one direction, when said control member is in a first predetermined position, and upon rotation of the anti-reverse element in the other direction, when said control member is in a second predetermined position, said anti-reverse element including a pair of alternatively operable arm portions arranged for alternative motion stopping engagement with said rotatable means.

3,123,193
TORQUE CONTROL DEVICE

Joseph A. Marland, 210 Blackstone, La Grange, Ill.

Filed Apr. 21, 1960, Ser. No. 23,683
2 Claims. (Cl. 192—18)

1. A torque control device comprising, in combination: a shaft; an electromagnetic clutch having a generally cylindrical exterior surface coaxially mounted on said shaft, said clutch including a clutch magnet body mounted on said shaft, a clutch coil mounted in said magnet body, a clutch armature plate disposed adjacent to said clutch coil and mounted axially movable relative to said shaft, a plurality of clutch inner disks splined to said magnet body, a plurality of clutch outer disks alternately positioned relative to the clutch inner disks and rotatable relative to said magnet body, said clutch outer disks extending to the cylindrical surface of the clutch, a clutch lock nut mounted on said armature plate and cooperative with said inner clutch disks to decrease the space between said inner clutch disks for placing the inner clutch disks in a driving relation relative to the adjacent outer clutch disks, means constantly urging said clutch armature plate away from the clutch magnet body, and a clutch spider nonrotatably connected to the outer clutch disks; a ring connector drivingly connected to the clutch spider; a second shaft having its axis of rotation colinear with the axis of rotation of the first mentioned shaft connected to said ring connector in a driving relation; an electromagnetic brake having a generally cylindrical surface coaxially connected to said ring connector, said brake including a brake spider drivingly connected to said connector, a plurality of brake outer disks drivingly connected to said spider, said brake outer disks extending to the cylindrical surface of the brake, a plurality of brake inner disks alternately positioned relative to the brake outer disks and rotatable relative to said brake spider, a brake magnet body supporting said brake inner disks in a driving relation



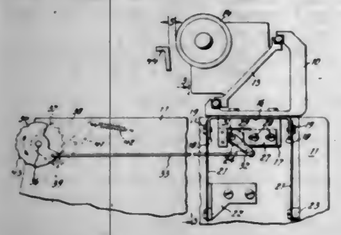
therewith, a brake coil mounted in said brake magnet body, a brake armature plate adjacent to said brake coil and axailly movable relative to said second shaft, a brake lock nut mounted on said brake armature plate and cooperative with said brake disks to decrease the space between said disks to place the disks in a driving relation with adjacent disks, and means constantly urging said brake armature plate away from the brake coil; a housing sealingly enclosing said electromagnetic clutch and said electromagnetic brake and supporting the brake magnet body, said housing including a bearing wall having the brake magnet body fixed thereto and rotatably supporting the second mentioned shaft, a second bearing wall opposed to the first bearing wall rotatably supporting the first mentioned shaft, a pair of opposed reservoir walls extending between said bearing walls, each of said reservoir walls having a lubricant reservoir formed integral therewith, each of said reservoirs including a portion of its respective reservoir wall having a heat transfer relationship between the reservoir and the outer portion of the housing, each of said reservoirs being open at its top to receive a lubricant thrown by the brake or clutch and having restricted orifice at its lower portion for controlled returning of lubricant to the lower portion of the housing, a base attached to the bearing walls and the reservoir walls, said base having a sloped surface defining a sloped lower portion of the interior of the housing, and a cover sealingly mounted on the bearing walls and the reservoir walls; and

a breather mounted on the cover providing restricted communication between the interior and exterior of the housing.

3,123,194
MANIFOLD CONTROL FOR TYPEWRITERS

Arnold F. Facius, East Norwalk, and Evert G. Israelson, Rowayton, Conn., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed Dec. 27, 1960, Ser. No. 78,583
12 Claims. (Cl. 197—60)

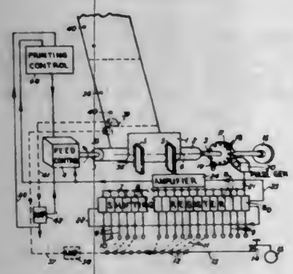


1. In a manifold typing impact control for typewriters having a type guide and a platen; tension means mounting the platen for movement horizontally toward and away from said type guide, and means for flexing said tension means to position the platen a predetermined distance from said type guide, and to secure said tension means against inadvertent movement either towards or away from said type guide.

3,123,195
WEB FEEDING CONTROL MEANS IN BUSINESS MACHINES

Alan Robert Hewitt and Roger Arthur Davis, Letchworth, England, assignors to International Computers and Tabulators Limited, London, England

Filed Sept. 13, 1960, Ser. No. 55,658
Claims priority, application Great Britain Sept. 17, 1959
14 Claims. (Cl. 197—133)

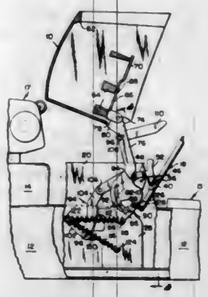


1. Apparatus for printing lines of characters in predetermined positions on documents, including means for feeding a plurality of documents in succession past a datum position; means operable to print a line of characters at the datum position; a shifting register having a plurality of stages; means for determining at least two different patterns of arresting signals to be entered into predetermined stages of the shifting register, the signal patterns respectively corresponding to patterns of positions in different parts of the document which are required to be brought to rest at the datum position by arresting of the feeding means; means for indicating the part of the document approaching the datum position; means responsive to a document part indication to enter a selected one of said arresting signal patterns into the register; means for shifting out the contents of the shifting register in synchronism with the passage of the associated part of the document past the datum position; means responsive to the shifting out of an arresting signal to arrest the feeding means; means for operating the printing means after the arrest of the feeding means; and means for restarting the feeding means after a line of characters has been printed.

3,123,196
RIBBON SPOOL COVER SUSPENSION MECHANISM

Anthony N. Paone, Syracuse, N.Y., assignor to SCM Corporation, a corporation of New York

Filed Dec. 28, 1960, Ser. No. 78,980
10 Claims. (Cl. 197—186)



1. In a typewriter, a casing enclosing the type bar actuating and ribbon feed mechanism thereof and including a ribbon feed mechanism cover comprising: a first cover member having spaced side walls interconnected by a top wall forming a front opening in said first cover member and a second cover member adapted to cooperate with said first cover member when said first and second cover members are in their closed positions to close said opening and form the front wall of said first cover member, means mounting said first cover member for pivotal movement from its closed position to an open position, means mounting said second cover member for forward pivotal movement from its closed position to an open position, and means for imparting opening and closing movements to one of said members incident to manually imparted opening and closing movements of the other of said cover members including means biasing said second cover member toward the open position and a resilient element fixed to the means mounting said first cover member in a position to engage and move said second cover member to the closed position against the bias of said biasing means incident to the forward pivotal movement of said mounting means as said first cover member is moved from the open to the closed position.

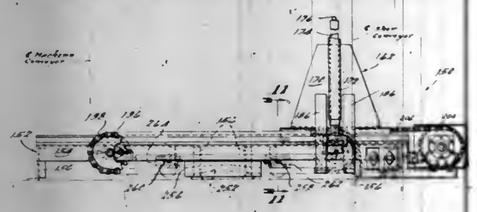
3,123,197
TRANSFER MECHANISM

Leon J. Pianowski, Detroit, Mich., assignor to The Udylite Corporation, Detroit, Mich., a corporation of Delaware

Filed Jan. 7, 1959, Ser. No. 785,479
7 Claims. (Cl. 198—19)

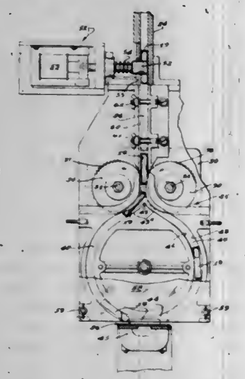
1. A transfer mechanism for transferring work racks between two spaced stations comprising a frame, track means on said frame extending between the stations, a carriage movably mounted on said track means, guide means on said carriage, a column including rack-engaging means thereon mounted in said guide means for up and down movement relative to said carriage, roller means rotatably mounted adjacent to each end of said track means, a flexible drive element extending longitudinally of said track means and trained around said roller means, drive means for moving said drive element along said

track means, and engaging means on and movable with said drive element disposed in driving engagement with said carriage for movement thereof between the stations



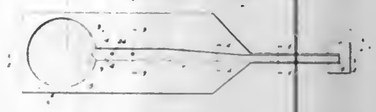
in response to movement of said drive element and for engaging coacting means on said column for raising and lowering said column in response to the arcuate travel of said engaging means around said roller means.

3,123,198
CLOSURE CAP ORIENTING APPARATUS
John Hohl and George L. Webster, Toledo, Ohio, assignors to Owens-Illinois Glass Company, a corporation of Ohio
Filed Aug. 7, 1959, Ser. No. 832,218
4 Claims. (Cl. 198—33)



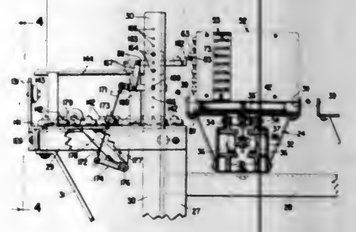
1. In combination a continuously moving horizontal conveyor, closure cap delivery and orienting means overlying the conveyor and comprising a pair of resilient rolls mounted for rotation about parallel horizontal axes with peripheral portions substantially in rolling contact with each other, means for so rotating the rolls that an article placed between them from above is moved downwardly, a vertical cap delivery chute utilizing gravity to position closure caps seriatim and on edge between the rolls, cap guide means positioned between the conveyor and rolls including a pair of generally arcuate guides formed substantially on a common horizontal axis which extends longitudinally of and above the conveyor, said guides having inner guiding surfaces joined together at their upper ends and having outer guiding surfaces formed with horizontally spaced apart lower ends immediately above the conveyor and through which closure caps are discharged from the guides for placement open side down upon the conveyor, cap deflector means at the juncture of the upper end of said inner guiding surfaces projecting upwardly medially between the lower halves of the rolls whereby it positively engages and at least in part guides closure caps prior to their losing contact with the orienting rolls, means for delivering closure caps on edge and in random fashion to the upper end of said chute, and a magnet positioned beneath the conveyor forwardly of the opposed open lower ends of the arcuate guides to thereby advance the closure caps generally in the direction of travel of the conveyor prior to actual contact of discharged caps with the conveyor whereby to rapidly remove closure caps from beneath the guides and out of the path of travel of succeeding caps.

3,123,199
ARTICLE FEEDING DEVICE
Kenneth P. Easterday, Bethlehem, and Donald S. Magargee, Center Valley, Pa., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed May 17, 1960, Ser. No. 29,741
4 Claims. (Cl. 198—33)



1. A feed device for feeding and separating small thin, flat wafers from their normally resting horizontal position to a substantially vertical position into a machine, which comprises, a feed track having at the entrance end thereof a reservoir for receiving wafers to be fed along the track, the track having a substantially U-shaped groove communicating with the reservoir and progressively changing to a substantially V-shaped groove at the exit end of the track causing the wafers to be lifted from a horizontal to a predominately vertical position, at least one elevated step disposed along the bottom portion of the groove for separating doubled-up wafers, and vibratory means connected to the track for emitting normally uniform low amplitude vibrations for vibrating the track to feed the wafers from the reservoir and advance the wafers along the groove in the track and relatively high amplitude vibrations superimposed periodically on the low vibrations for spacing the wafers being fed along the groove into the track.

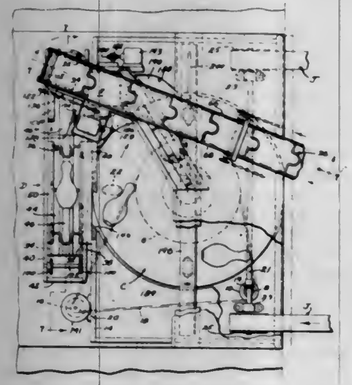
3,123,200
WORK TRANSPORTER SYSTEM
Charles V. Donaldson, Bedminster, N.J., assignor to The Singer Company, a corporation of New Jersey
Filed Apr. 7, 1961, Ser. No. 101,500
1 Claim. (Cl. 198—38)



A work transporter system comprising in combination a support; an endless trough; an endless conveyor belt coextensive with said trough; a plurality of pushers carried by said conveyor belt; a plurality of tote boxes placed in said trough and pushed along by said pushers; a station selector assembly mounted on the leading end of each of said tote boxes; and a plurality of work stations located adjacent to said trough; said support comprising a plurality of vertical legs, a plurality of horizontal bars extending to one side of each of said legs for supporting said endless trough, a plurality of horizontal arms extending on the other side of certain of said legs for

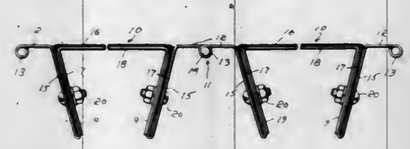
supporting said work stations, and a post extending above certain of said horizontal bars and arms; said endless trough comprising a pair of Z-shaped plates each having an upstanding side, portions of said side being cut away at each work station to permit exit of said tote boxes from said trough to said work station; said conveyor belt comprising a plurality of trolley plates, a plurality of linkage bars connecting adjacent trolley plates, and means for supporting said trolley plates by said horizontal bars; said pushers comprising a horizontally disposed bar having a curved front face, and means for attaching said bars to the upper end of certain of said trolley plates; said tote boxes each comprising a bottom wall, an upstanding leading wall and a trailing wall; each station selector comprising a support board adapted to be secured to the trailing wall of a tote box; an apertured cover carried by said support board, an apertured locking plate vertically slidable on said cover, a plurality of spring biased slide rods located on the reverse side of said cover, an indexing pin carried by each slide rod and extending through said cover and engageable by said locking plate, a depending catch finger carried on one end of each of said slide rods; and each work station comprising an inclined plate, a plurality of ball type rollers carried by said plate, a trip element carried by said post and said trip element and having a hooked end adapted for engagement with a selected one of the catch fingers on said slide rods of said tote boxes, and means for preventing engagement of said station hooks with any of said catch fingers when a tote box occupies said work station.

3,123,201
APPARATUS FOR CONVEYING BOWLING PINS
Howard M. Dowd, Littleton, Mass. (31 Milk St., Boston, Mass.) and Royal L. Barrows, Middleton, Mass. (10 Woodland St., Everett 49, Mass.)
Original application Dec. 3, 1956, Ser. No. 625,739, now Patent No. 3,063,716, dated Nov. 13, 1962. Divided and this application May 27, 1959, Ser. No. 816,273
4 Claims. (Cl. 198—131)



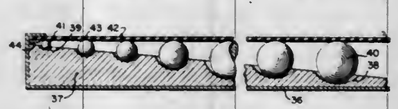
1. Apparatus for conveying bowling pins in a bowling pinsetting machine comprising a pair of endless chains having a vertical and horizontal run, sprocket means mounting said chains in parallel spaced relation and like paths of travel, means for driving said chains in the same direction at the same speed, and a plurality of pin-carrying elements carried by said chains, said pin-carrying elements each consisting of a U-shaped yoke portion and two straight portions in line with each other, said straight portions being integrally joined at their inner ends to the ends of said U-shaped portion and extending laterally away from said U-shaped portions, the outer ends of said straight portions being rotatably secured directly to said pair of chains, said yoke being large enough to accommodate the neck of a duck pin but smaller than the head of a duck pin.

3,123,202
SLATTED-TYPE CONVEYOR
Samuel Weldon Stevens, Lowell, Mass., assignor to C. G. Sargent's Sons Corp., Graniteville, Mass., a corporation of Massachusetts
Filed July 2, 1959, Ser. No. 824,538
8 Claims. (Cl. 198—196)



1. A conveyor comprising a plurality of hinges extending from side-to-side of the conveyor, each hinge including transverse stiffening members and transverse pivot means interconnecting said members, each stiffening member being provided with a transverse, inwardly disposed portion, and a plurality of conveyor sections, each between a pair of hinges and including ends disposed as flanges, a series of longitudinally disposed and laterally spaced reinforcements, each including a flange at its end, said section and reinforcement flanges being clamped to the proximate transverse, inwardly disposed portion.

3,123,203
VIBRATORY CONVEYOR
Jacob G. Baker, Box 28248, Dallas, Tex.
Filed Jan. 31, 1961, Ser. No. 86,044
3 Claims. (Cl. 198—220)

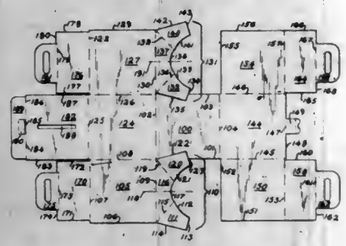


1. A vibratory conveyor comprising a stationary base member, a vibratory work member spaced above said base member including a generally rectangular web arranged in a selected plane generally parallel to the desired path of movement of objects to be conveyed for supporting the objects on an upwardly facing surface thereof and formed of sheet material which is resiliently deformable along said selected plane and rigid frame members joined to said web for transmitting vibrations to said web in said selected plane responsive to vibratory motion imparted to said frame members, a plurality of hard roller bodies disposed between said work member and base member having opposed, generally spherical working surface portions in engagement with confronting surfaces of said base member and the web of said work member for supporting said web member above said base member, said web member imparting rotation to said roller bodies responsive to vibration of the work member, and said working surface portions of said roller bodies and said confronting surfaces of said web and base member being relatively shaped to cause said roller bodies to exert horizontal and vertical thrust components on said web upon rotation of said roller bodies, which horizontal and vertical thrust components are of different values in different regions of the web to propel objects placed on said web at different rates in different portions of the web.

3,123,204
CONTAINER

James Kyle Baker and Joseph Voytko, Cleveland, Ohio, assignors to West Virginia Pulp and Paper Company, New York, N.Y., a corporation of Delaware

Filed Aug. 17, 1962, Ser. No. 217,623
2 Claims. (Cl. 206—1)

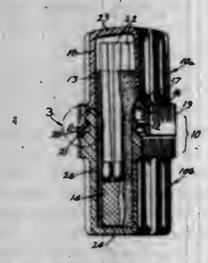


1. A blank for a container for packaging bowling balls comprising:
(*a*) a bottom panel,
(*b*) a first side wall panel foldably connected along one edge of the bottom panel,
(*c*) two other side wall panels foldably attached to the first side wall panel along opposite edges thereof,
(*d*) a locking tab foldably attached to another free edge of said first side wall panel,
(*e*) a half top panel foldably attached to at least two side wall panels along a free edge thereof,
(*f*) a second side panel foldably connected to the bottom panel along another free edge thereof,
(*g*) two other side wall panels foldably connected to the second side wall panel along opposite edges thereof,
(*h*) a top half panel foldably attached to at least two side wall panels along a free edge of each side wall panel,
(*i*) a handle foldably attached to each of the top half panels,
(*j*) an outer full top panel foldably attached to the said second side wall panel,
(*k*) fastening means attached to the said outer full top panel whereby the top is secured when in a closed position,
(*l*) two inner cushion flaps foldably attached to at least two side wall panels each inner cushion panel being folded about at least two fold lines forming a plurality of inner cushion panels, said inner cushion flaps having a pair of oppositely opposed non-parallel edges and having one arcuate edge.

3,123,205
WATERPROOF MATCH PACKAGE

Frederick Ehrsam, Rte. 662, Oley, Pa.

Filed July 17, 1962, Ser. No. 210,412
4 Claims. (Cl. 206—33)

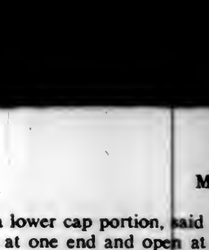


1. A waterproof match package comprising in combination a tubular waterproof container having an upper cap portion and a lower cap portion, said upper cap portion being closed at one end and open at the other, said lower cap portion being closed at one end and open at the other, said open ends of said upper and lower cap portions being adapted to telescopically engage, each of said upper and lower cap portions having an axial cylindrical engaging surface and a substantially radial annular engaging surface at opposite terminal ends respectively of said telescopically engaging portions so that upon telescopic engagement of said upper cap portion with said lower cap portion an axial seal is formed between said axial cylindrical engaging surfaces and a radial seal is formed between said substantially radial annular engaging surfaces, said radial and axial seals being at opposite terminal ends of said telescopically engaging portions, at least one of said telescopically engaging portions being composed of a resilient material, an open ended replaceable hollow tube telescopically fitted in said container and having an outer striking surface, said tube being of sufficient length to project from said lower cap portion when one end of said tube rests on the closed end of said lower cap portion when said upper cap portion is removed so that a portion of said striking surface is exposed for use without removal from said lower cap portion.

3,123,206
CIGARETTE PACKAGE OR THE LIKE

Gary A. Gerber, Silver Spring, Md.
(726 Huntington Road, Bridgeport 10, Conn.)

Filed Aug. 22, 1961, Ser. No. 133,183
2 Claims. (Cl. 206—41)

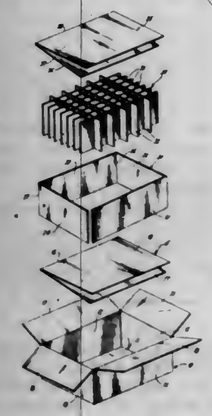


2. As a new article of manufacture, a package containing cigarettes wherein the cigarettes are initially arranged in three parallel aligned rows within the package, said package being fabricated solely of a single piece of thin flexible plastic material and shaped to include a horizontally disposed flat bottom portion, spaced parallel front and back portions, spaced parallel vertically disposed side portions, and a top portion that includes inclined sections having a normally closed spreadable opening therebetween, horizontally disposed spaced parallel inwardly projecting diametrically opposed beads providing shoulders that are arranged on the inner surface of the front and back portions, and said shoulders being arranged adjacent the upper ends of the front and back portions, and said shoulders initially engaging upper end portions of the cigarettes in the outermost rows, said shoulders being straight and said shoulders extending completely across the front and back portions from one side portion to the other side portion, and said inclined sections terminating in upstanding flanges which are mounted for movement toward and away from each other, the distance from the bottom portion to the shoulders being approximately equal to the length of the cigarettes in the package.

3,123,207
COMBINATION SHIPPING CONTAINER AND DISPLAY DEVICE

Daniel Goldstein, New York, N.Y., assignor to Schenley Industries, Inc., New York, N.Y., a corporation of Delaware

Filed Nov. 12, 1959, Ser. No. 852,495
9 Claims. (Cl. 206—44)



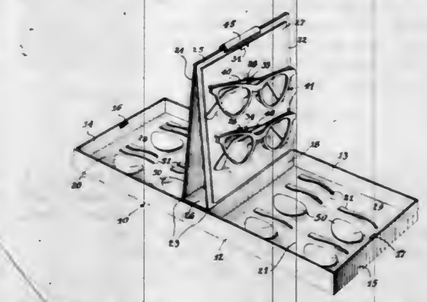
8. A combination device for marketing and shipping bottled goods, said device being fabricated of stiff bendable sheet material and comprising a container for containing bottled goods in transit and on display, an elongate protecting liner extending interiorly about the side walls of said container and removable therefrom to form a vertically elongate upstanding display standard, said liner comprising a plurality of panels interconnected in end-to-end relation by transverse hinge lines, said liner being formed with at least one longitudinally extending fold line disposed substantially at right angles to said hinge lines serving as a rigidifying fold when said liner is in its display standard condition, said liner in said condition beng cut adjacent to its opposite ends to define at each end a pair of laterally spaced longitudinally extending slots opening through the adjacent end and extending in the same direction as said rigidifying fold, one of said pair of slots being in supporting interengagement with the upper edge region of said container when said liner is in its display standard condition, and at least one protecting pad disposed horizontally within said container, said pad being cut to form a pair of generally parallel spaced slots each opening at one end and in interengagement with the other pair of slots of said liner when the latter is in its display standard condition for supporting said pad in an elevated display condition, said rigidifying fold extending for the length of said liner in said display standard condition thereof, said one pair of slots of said liner being of a length less than the side wall of said container, whereby said liner is supported in elevated relation in its display standard condition.

3,123,208
PACKAGING AND DISPLAY DEVICE AND METHOD FOR PACKAGING AND DISPLAYING SPECTACLE FRAMES

Donald L. Barnum, Port Chester, N.Y., and Howard Dickstein, Westport, Conn., assignors to Liberty Optical Manufacturing Co. Inc., Newark, N.J., a corporation of New Jersey

Filed Oct. 31, 1962, Ser. No. 234,335
3 Claims. (Cl. 206—45.14)

1. A spectacle frame display device comprising a single, unitary, shallow tray, means located in said tray thereby dividing said tray into a plurality of like compartments, a pair of cover elements for said tray, said elements supported by said means and being swingable away from each other to cover said compartments and towards each other to uncover said compartments and dispose the free ends thereof near each other, means for maintaining the

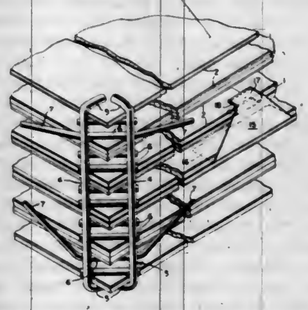


free ends of said cover elements near each other whereby said cover elements are maintained in inclined positions, means carried by each of said cover elements for accommodating temples of spectacle frames whereby spectacle frames may be securely held by said cover elements in open and collapsed condition.

3,123,209
PACKAGES

Richard Samuel Burket, Old Bridge, N.J., and Robert Edward Clough, Newark, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Oct. 26, 1961, Ser. No. 147,924
13 Claims. (Cl. 206—62)



7. A package of sensitive plates comprising
(1) four corner ladder supports, each ladder support comprising
(*a*) two parallel spaced sides terminating in integral lateral arms at its top and bottom,
(*b*) a plurality of parallel spaced rungs extending between said sides and perpendicular to the axes of the sides, the lateral arms being at right angles to the axes of the respective sides, at least two of said rungs having
(*c*) lateral extensions disposed at an angle to the rung, the extensions from each rung forming an included right angle with respect to each other and an oblique angle with respect to the sides of the ladder support,
(2) a plurality of sensitive plates supported by said ladder supports said plates having their respective corners disposed between said sides and rungs,
(3) end caps surrounding the supported plates and ladder supports and extending along the top, bottom and sides of the assembly of plates and ladder supports,

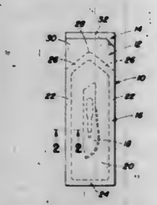
(4) a fastening member extending around all of the ladder supports, and

(5) a protective casing enclosing the assembled unit of plates, ladder supports and caps; said package containing half-size plates in back-to-back relationship with a full size plate, a clip extending around the half-size plates at their adjoining corners, the clip being at one end of a bracket the other lateral end of which bracket extends between the back surfaces of two adjacent plates.

3,123,210
PACKAGE AND SEAL

William A. Hermanson, Brookline, Mass., and Edward J. Cosgrove, Brookfield, Conn., assignors, by direct and mesne assignments, to Bard-Parker Company, Inc., Danbury, Conn., a corporation of New York

Filed Aug. 10, 1961, Ser. No. 130,573
4 Claims. (Cl. 206—63.2)



1. A package resistant to tearing and puncture and to the passage of microorganisms and sterilizable by steam autoclaving or gas permeation which comprises: a surgical blade; an envelope encasing said surgical blade and formed of two layers of sheet material disposed on opposite sides of said surgical blade with marginal portions extending beyond said surgical blade and disposed in contacting relationship, each of said layers being a web of between approximately 0.003" and 0.017" in thickness and resistant to tear and puncture and formed of fibers of between approximately 16 and 32 microns in diameter with interfiber interstices of between 5 and 150 microns so that steam and gas may permeate therethrough but so as to resist the passage of microorganisms; and bicomponent adhesive coatings on the confronting faces of said layers arranged in a discontinuous pattern with the major portions being located on the fiber crests and with a substantial number of said interfiber interstices free from said adhesive coating and unblocked and said bicomponent coating being formed of a major portion of a thermoplastic material having a softening point below 250° F. and a minor portion of a nonvulcanized synthetic rubber latex having elastomeric and heat curing properties, said contacting marginal portions being bonded together along at least one continuous line extending around said surgical blade by heat reversible bonds of said thermoplastic material and when subjected to autoclaving, heat irreversible bonds are formed in said synthetic rubber latex component of the coatings along said continuous line, all of said bonds being ruptur-able without tearing said webs.

3,123,211
MULTIPLE STERILE ZONE PACKAGE STRUCTURE

James L. Sorenson, 2341 Logan Circle, Salt Lake City 5, Utah

Filed Oct. 25, 1961, Ser. No. 147,661
1 Claim. (Cl. 206—63.2)

In a sterile surgical package, a hollow needle, a hollow hub on said needle, a catheter extending into said hub for ultimate advancement through said needle, a flexible envelope enclosing said catheter and having one end closed and the other end sealed around said hub to maintain the catheter sterile, a second flexible envelope enclosing said needle and having one end in sealing engagement with said hub and the other end closed to maintain said needle sterile, a tear strip associated with said envelopes around said hub to effect complete removal of the envelopes one at a time when desired, a third en-

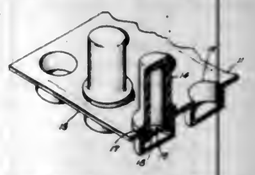


velope enclosing the other two envelopes and having both ends closed to provide a sterile zone outside the other two envelopes, and a tear strip at one end of said third envelope, whereby upon removal of the third envelope the needle may be advanced through the second envelope into the body of a patient and the catheter advanced while in the first said envelope before complete removal of the first and second envelopes.

3,123,212
MULTIPLE DISPOSABLE INTRACUTANEOUS INJECTOR PACKAGE

Arthur Sinclair Taylor, Spring Valley, and Irvin Sigwald Danielson, Pearl River, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

Filed June 14, 1960, Ser. No. 36,038
3 Claims. (Cl. 206—63.4)



1. A multiple disposable intracutaneous package comprising: a retaining sheet, a plurality of circular cylindrical cups formed therein, and in each of such cups, a plastic holder of rounded configuration and substantially circular cross section adapted to fit in and be retained by friction in said cup, having a single handle section and a shoulder on said holder adapted to press against and be in contact with said retaining sheet, each said holder having a groove therein forming a gas vent between said sheet and said holder, and a circumferential ridge to bear against the cylindrical wall of the cup, and reduce insertion and removal friction, plate supporting arms on the end of said holder away from the handle section, a thin metal injection plate between and held by said arms, and supported against flexure by the end of said plastic holder, and integral prongs on said plate extending away from the handle section, forming injection points, and a biologic on said prongs, adjacent said points.

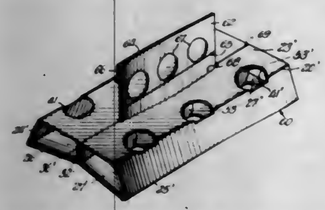
3,123,213
ARTICLE CARRIER

Francis V. Kulig, Morris, Ill., assignor to Federal Paper Board Company, Inc., Bogota, N.J., a corporation of New York

Filed May 22, 1961, Ser. No. 111,567
3 Claims. (Cl. 206—65)

3. A package comprising a tubular carrier and a plurality of cylindrical articles which are arranged in double row forming relation and which are each characterized by a generally cone-shaped top terminating in a neck portion closed by a crown-type cap, said carrier having gripping means for carrying the same which is positioned on the top portions of the articles and which is formed

from a paperboard blank cut, creased and folded to provide rectangular top and bottom wall forming panels having two rows of registering apertures receiving the neck portions of the articles, the top wall being narrower than the bottom wall and the side edges of the top and bottom wall panels being hingedly connected to the top and bottom edges of side wall forming panels which are inclined upwardly and inwardly toward each other, the apertures in the top wall panel each having a dimension transversely of the carrier which is less than the maximum diameter of the cap and each said aperture extending into a side wall panel and providing an upwardly facing abutment edge which is below the plane of the

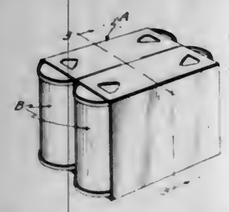


top wall panel and engages beneath an outer portion of the skirt of the cap, locking tabs cut from the apertures in the bottom wall and hinged upwardly from the edges of the apertures to an upstanding position and having upwardly facing abutment edges which engage beneath the marginal portions of the top wall panel adjacent the inner edges of the caps whereby to connect the carrier to the articles in locked relation, and a longitudinal partition integral with the bottom wall and extending longitudinally of the center of the carrier between the rows of apertures which longitudinal partition is connected to the top wall panel to form a rigid center reinforcing partition.

3,123,214
CAN CARRIERS

Horace J. McReynolds, Jr., Park Ridge, Ill., assignor to Waldorf Paper Products Company, a corporation of Minnesota

Filed July 3, 1961, Ser. No. 123,363
3 Claims. (Cl. 206—65)



1. A package comprising a group of two juxtaposed parallel rows of chimed cans enclosed within a rectangular open ended carton, the carton including top and bottom end walls overlying the ends of the cans of said rows, and side walls connected to opposite edges of said side walls and overlying the sides of the can group, one of said end walls comprising a pair of wall portions overlying the chimed ends of one row and terminating in free edges at the plane between said rows, a flange hinged to each said free edge and extending toward the opposite end wall between said can rows, said flanges being foldably connected together and secured in face contact, said flanges having apertures therethrough at the junctures between said flanges and said free edges and into which the chimes of the cans may extend, and flaps hinged to the two said flanges along the edges of said apertures most remote from said free edges, said flaps being folded into substantial face contact with the portions of said flanges adjacent to said apertures.

3,123,215
TUBE-EXTRUSION PRESSES

Franz-Josef Zilges, Rheydt, Germany, and Gerhard Paul Krause, Pittsburgh, Pa., assignors to Schloemann Aktiengesellschaft, Dusseldorf, Germany

Filed Jan. 9, 1961, Ser. No. 81,527
Claims priority, application Germany Feb. 22, 1960
1 Claim. (Cl. 207—19)



A tube extrusion press comprising a press ram, a platen fixed on said ram, a mandrel slidable in said platen, a mandrel holder slidable in said platen, a mandrel holder carrier slidable in said platen, means releasably connecting said mandrel and said mandrel holder, an axial recess in said mandrel holder carrier, said recess having an internally threaded side wall and an end wall, a muff threadedly received in said recess, a sleeve rotatably received in said muff, cooperating shoulders on said muff and sle. e to prevent relative axial movement of said sleeve in said muff outwardly of said recess, an internal annular recess in the inner end of said sleeve providing an abutment, a plurality of circumferentially spaced internal longitudinal grooves in said sleeve communicating with said annular recess, a collar on said mandrel holder, circumferentially spaced radially projecting teeth on said collar, said teeth being slidable through said grooves to dispose said collar in said annular recess, rotation of said sleeve with respect to said collar serving to engage said teeth with said abutment to provide a bayonet joint between said mandrel holder and said mandrel holder carrier, rotation of said muff serving to clamp said collar in engagement with the end wall of said first-mentioned recess thereby providing releasable means connecting said mandrel holder and said mandrel holder carrier, and said platen having a window aperture therein to facilitate manipulation of the means connecting said mandrel and said mandrel holder and the means connecting said mandrel holder and said mandrel holder carrier, the length of said window aperture being substantially equal to the length of said mandrel holder plus the length of the means connecting said mandrel holder and said mandrel holder carrier and said window aperture being so located as to permit insertion and removal of said mandrel and said mandrel holder when separated.

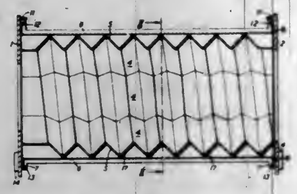
3,123,216
DRUM-TYPE SEGREGATING APPARATUS

Eric George Hills, London, England, assignor to Her Majesty's Postmaster General, London, England

Filed June 19, 1962, Ser. No. 203,570
Claims priority, application Great Britain June 20, 1961
6 Claims. (Cl. 209—86)

1. Apparatus for segregating from a quantity of letters or similar flat articles those letters or similar flat articles of less than a predetermined thickness and having at least one linear dimension less than a predetermined dimension, comprising a drum shaped receptacle for containing said quantity of letters or similar flat articles, and supported for rotation about its axis and means for rotating the drum, the said drum having a peripheral wall formed by a plurality of elongated panels extending lengthwise of the drum and overlapping each other along their longitudinal edges, each panel being formed with V-shaped corruga-

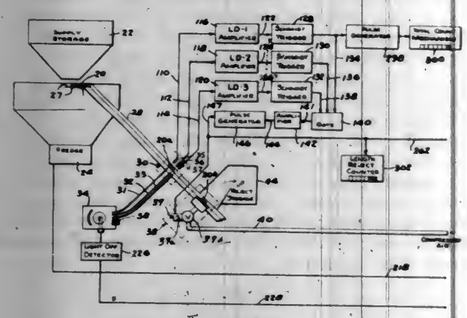
tions extending transversely thereof at an angle inclined with respect to the longitudinal axis of the panel and having side walls of a width corresponding to the said predetermined linear dimension, and mating with corrugations of adjacent panels to form a substantially continuous helical V-shaped groove extending lengthwise of the peripheral wall, at least one side wall of each V-shaped corrugation of one panel being spaced from the corresponding side wall of the mating corrugation of the immediately adjacent panel to form therewith a slot having a width equal to said predetermined thickness and a length equal to the width of the side wall and corresponding to the said predetermined linear dimension, whereby only those letters or similar flat articles having a thickness less than the width of a slot and at least one linear dimension less than the length of the slot are discharged through the slots.



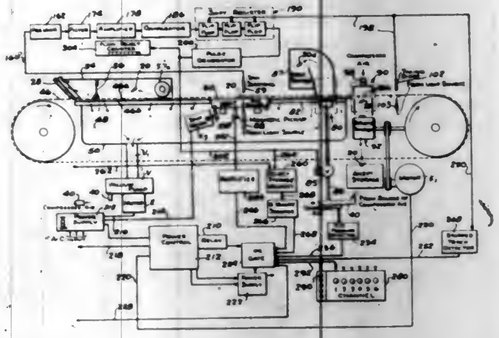
3,123,217
CAPSULE INSPECTION METHOD AND SORTING MACHINE

Stewart H. McMillan, Ann Arbor, and Ralph E. Mottin, Taylor, Mich., Wilfred A. Sutton, Sunnyvale, Calif., and Robert D. MacDonald, Tecumseh, and Edward Linck, Ann Arbor, Mich., assignors to Parke, Davis & Company, Detroit, Mich., a corporation of Michigan

Filed Jan. 19, 1961, Ser. No. 83,833
21 Claims. (Cl. 209—111.5)



11. A mechanism for loading articles into the upper run of an endless conveyor belt which travels in a generally horizontal plane and which has a row of longitudinally spaced openings therein shaped to individually receive the articles, said mechanism comprising a delivery chute inclined relative to the plane of the upper run of said belt and having the lower end thereof positioned closely above but out of contact with the upper run of said belt, said inclined chute having a longitudinally extending groove therein to receive and guide the articles with their longitudinal axes aligned in the direction of descent thereof in the groove, said groove in turn being aligned with the longitudinal axis of said openings in said belt so that articles descending in said groove are properly oriented for acceptance in said openings of said belt, a vacuum chamber positioned beneath said upper run of said belt for maintaining an air stream downwardly through said belt openings, and a housing overlying the lower end of said chute and the upper run of said belt for a given distance in the direction of movement thereof away from the bottom end of said chute for confining articles descending

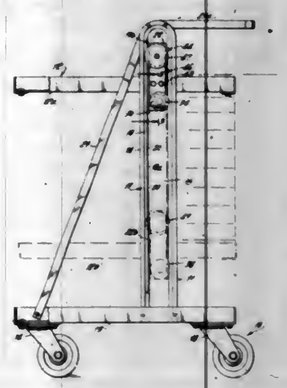


therefrom on the upper run of said belt, said housing also providing an extension of said vacuum chamber whereby an air stream is formed in said groove of said chute at the point where said groove enters said housing so that an object descending in said groove as it enters said housing is swept by said air stream into an opening in said belt.

3,123,218
SELF-LEVELING DEVICE

Irving Bronson, Brooklyn, N.Y., assignor, by mesne assignments, to American Machine & Foundry Company, New York, N.Y., a corporation of New Jersey

Filed Aug. 16, 1960, Ser. No. 49,856
9 Claims. (Cl. 211—49)

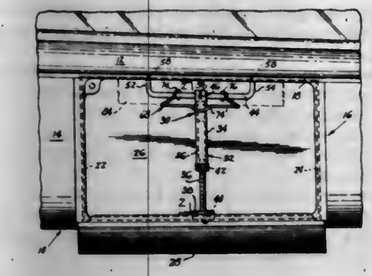


1. An improved self-leveling device comprising in combination a base member supporting an upright frame, a vertically movable carriage associated with said frame, said carriage supporting carrier means, torsion spring means, said carriage being supported by a flexible member communicating between said upright frame and said torsion spring means, and means for imparting an initial set to said spring means, whereby the topmost portions of articles provided on said carrier means are maintained at a constant level independently of the number of such articles, said torsion spring means being non-linear, and non-resilient means operable in response to carriage movement to compensate for said non-linearity.

3,123,219
AUTO GLOVE COMPARTMENT RACK

Morris L. Jones, Rte. 4, Box 17, Harrisburg, Nebr.

Filed Oct. 4, 1962, Ser. No. 228,382
8 Claims. (Cl. 211—51)

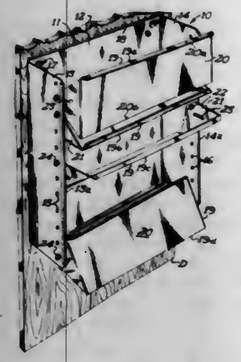


1. An adjustable rack for use in a compartment having a top and bottom wall comprising a vertically extending adjustable supporting member having a top and a bottom end, a substantially horizontally extending crossbar having two ends, said cross bar being mounted intermediate its ends of the top end of said supporting member, means on said cross bar securing the same to the top wall of said compartment, means on the bottom of said supporting member securing the same to the bottom wall of said compartment and an upwardly biased clip secured to said cross bar.

3,123,220
MULTI-PURPOSE STORAGE UNIT

Edward W. Hanson, 862 Summit Ave., St. Paul, Minn.

Filed Aug. 25, 1961, Ser. No. 133,990
2 Claims. (Cl. 211—88)

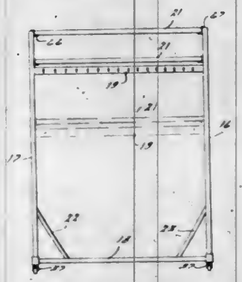


1. A multiple purpose storage unit, comprising a pair of spaced and opposed elongate side panels normally oriented in upright positions and having rear edge portions, a rear panel extending between and rigidly secured to said side panels adjacent said rear edge portions, a first article-engaging and substantially horizontally oriented plate having a front edge, a second article, engaging plate spaced above said first plate and oriented in a substantially vertical plane adjacent the front edge of said first plate, each of said plates extending between said side panels and each having substantially parallel and opposed end portions bent transversely thereof and lying against said side panels, each of said end portions being generally triangular in shape with side edges converging away from said plate, said end portions of adjacent plates lying in spaced edge-to-edge relation with each other without interferring with each other as the plates are oriented in various horizontal and vertical positions means on said end portions releasably securing said end portions to the side panels in stationary position and including a pair of pivots each supporting a respective end portion for swinging adjustment on the corresponding side panels, said plates cooperating with each other and with said rear panel in defining an open-topped article-receiving hamper, whereby said plates may be reoriented for cooperating with said side panels and rear panel for supporting other articles in various manners.

3,123,221
CLOTHES RACK

Theodore T. Haag, Kalamazoo, Mich., assignor to Borroughs Manufacturing Co., Kalamazoo, Mich., a corporation of Michigan

Filed Apr. 20, 1960, Ser. No. 23,556
4 Claims. (Cl. 211—177)



2. In a rack, a pair of side members made up of vertically disposed facing channel elements interconnected by a downwardly open channel member at the top the web of which contains parallel spaced slots intermediate its ends, a pair of downwardly open channel members spaced from the top and each other, said members being welded to the flanges of said channel elements, said pair of channel members having apertures extending through the sides thereof, downwardly open channel elements extending into the open side of said pair of channel members for reinforcing the same and extending into the area of said apertures with sections cut out leaving a central web for limiting the extent to which a crossbar may enter the aperture, a crossbar of downwardly open channel section having a plurality of slots therein for hangers and its ends extending into the apertures in the side members, downwardly open bottom cross members on each side member having aligned central apertures reinforced by downwardly open channel-shaped elements, a bottom crossbar having its ends extending into the apertures in the bottom cross members and having slots in the web thereof, a channel member pivotally supported on each side element and having notches in the ends of the sides thereof which engage the ends of slots in the web of the bottom crossbar, and a top shelf retaining said side elements in locked rigid relation when the top ends are spread apart sufficiently to have the shelf disposed therebetween.

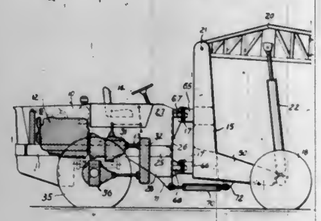
3,123,222
MOBILE CRANES, HOISTS AND THE LIKE

Frank Stephen Livingston, Rosanna, Victoria, Ronald Joseph Earney, Belmont, Geelong, Victoria, and Kenneth Evans, North Croydon, Victoria, all of Australia, assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey

Filed Sept. 22, 1961, Ser. No. 140,123
Claims priority, application Australia Sept. 26, 1960
1 Claim. (Cl. 212—38)

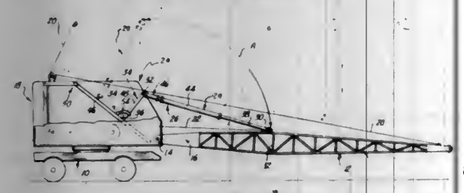
A power operated load lifting and transporting vehicle comprising;

(*a*) a prime mover including a first frame,
(*b*) a power unit supported on said first frame,
(*c*) a sub frame,
(*d*) means pivotally connecting said sub frame to said first frame for pivotal movement about a longitudinal axis,
(*e*) power transmission means on said sub frame,
(*f*) driven ground wheel connected to said power transmission means to be driven thereby,
(*g*) means operatively connecting said power unit and said power transmission means.
(*h*) an operator's station on said first frame positioned forwardly of said power unit,
(*i*) a second frame, said second frame having an L-shaped configuration including,



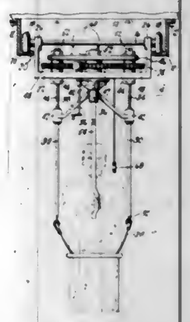
(*j*) an upright support and a horizontal support extending forwardly with respect to said first frame,
(*k*) a pair of ground wheels connected to said second frame for supporting the same, said ground wheels of said second frame having a wider over-all spacing dimension than said driven wheels of said first frame,
(*l*) vertical pivot means connecting said upright support providing for relative angular movement of said frame about a vertical pivot axis,
(*m*) fluid acuated steering means connected between said frames for moving the same angularly,
(*n*) a jib pivotally connected to said upright support, and
(*o*) means on said second frame connected to said jib for raising and lowering the same.

3,123,223
BOOM STOP APPARATUS
Donald C. Markwardt, Manitowoc, and Roche J. Van De Hey, Whitelaw, Wis., assignors to The Manitowoc Co., Inc., Manitowoc, Wis., a corporation of Wisconsin
Filed Aug. 13, 1962, Ser. No. 216,404
12 Claims. (Cl. 212—59)



1. In combination with a crane assembly having an elongate boom structure pivotally supported by an upper works,
apparatus for restraining movement of the boom structure toward a vertical, said apparatus comprising
an elongate longitudinally extendible and retractable first member having one part thereof pivotally connected to the boom structure at a location thereon which is intermediate the end portions thereof and another part telescopically supporting the one part for generally longitudinal movement relative thereto,
a source of air under pressure carried by the another part of said first member,
a stop-guide-abutment arrangement for enabling the one part of said first member to further compress such air in response of the first member on movement of the boom structure toward a vertical,
a second elongate member pivotally connected to the another part of the first member and to the upper works of the crane assembly,
said second member being movable between a first position whereat the first member is extended and a second position whereat the first member is retracted with the second member being in engagement with an inclined part of the upper works of the crane assembly, and
structure for retarding the retraction of the first member on movement of the boom structure toward a vertical until after the second member has been urged to the second position thereof.

3,123,224
APPARATUS FOR LIFTING AND TRANSPORTING INVALIDS
William J. Kral, 1301 Waverly Place, Schenectady, N.Y.
Filed Nov. 13, 1962, Ser. No. 237,131
8 Claims. (Cl. 212—128)

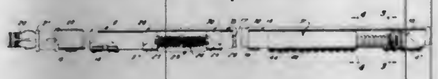


1. An invalid carrier for lifting and transporting a patient from one area to another comprising a pair of beams adapted for mounting on a ceiling, a carriage supported by the beams comprising a framework holding a pair of shafts having rollers on the ends thereof in engagement with said beams for allowing carriage movement horizontally thereon, a power transmission device mounted on the carriage comprising a series of meshing gears, vertically extending bars movable axially through said gears, a sling for holding a patient mounted on the lower end of said bars, and a device adapted for actuation by the patient and connected to at least one of said gears for imparting rotary movement thereto and causing the bars to move vertically, thereby moving the patient in a direction according to bar movement.

3,123,225
SLIDING CENTER SILL RAILWAY CAR EQUIPMENT
William T. Blake, 4424 Morris Court, Fort Worth, Tex.
Filed Sept. 9, 1960, Ser. No. 55,027
7 Claims. (Cl. 213—8)

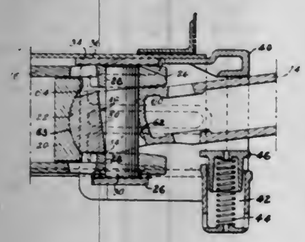
1. In a railway car: a longitudinally extending hollow center sill fixed to the car; a hollow sliding center sill member longitudinally slidably mounted within said fixed center sill and extending substantially to the ends of the car; a coupler attached to each end of said sliding center sill member and extending forward of each end of said fixed center sill; cooperating stop means carried by said

fixed center sill and by said sliding sill member permitting limited longitudinal movement of said sliding sill member within said fixed center sill; resilient means biasing said sliding sill member to a neutral position between the limits of movement of said member; a double-acting hydraulic buffer mechanism including a housing longitudinally disposed within said sliding center sill member, means in said housing providing a cylinder extending longitudinally of said sliding center sill member, a piston longitudinally movable within said cylinder, and a piston rod fixedly connected at one end to said piston and having a free end projecting through one end of said housing; a first carrier member; means fixedly attaching said first carrier member to said housing; first conveniently removable means rigidly attaching said first carrier member to



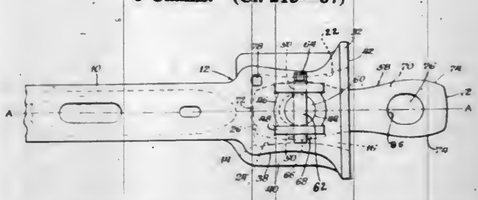
one of said sills; a second carrier member extending across a section of the bottom of the other of said sills adjacent the free end of said piston rod; second conveniently removable means rigidly attaching said second carrier member to the other of said sills; a first coupling element attached to the free end of said piston rod; a second coupling element fixedly attached to said second carrier member, said coupling elements interfitting to couple said piston rod to the other of said sills solely through said second carrier member and through said means attaching said carrier member to said other sill; and said center sill members having aligned bottom openings through which said buffer mechanism is adapted to be inserted into and removed from said sliding center sill members when said carrier members are detached from their respective sills.

3,123,226
RAILWAY CAR COUPLER
Frederick C. Kulieke, Alliance, Ohio, assignor to Amsted Industries Incorporated, Chicago, Ill., a corporation of New Jersey
Filed June 7, 1961, Ser. No. 115,350
4 Claims. (Cl. 213—19)



3. In a coupler arrangement, a yoke having vertically spaced front end portions provided with coaxial apertures, a coupler shank mounted between said end portions and provided with a pin hole, a cylindrical pin extending through said pin hole and apertures, said pin hole being defined by a rear surface for vertical line contact engagement with said pin, a draft gear mounted within said yoke and comprising resilient means and comprising a front follower engaging the end of said shank to yieldably resist vertical angling movement of the shank relative to the yoke, said shank having a convex spherical end surface engaging a concave spherical surface on the follower, said spherical surfaces having a common center disposed approximately one-eighth inch above the longitudinal axis of the shank.

3,123,227
RAILWAY CAR COUPLER
Frederick C. Kulieke, Alliance, Ohio, assignor to Amsted Industries Incorporated, Chicago, Ill., a corporation of New Jersey
Filed Nov. 9, 1961, Ser. No. 151,309
6 Claims. (Cl. 213—87)

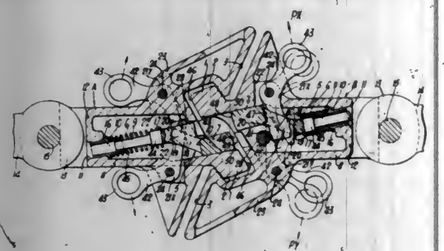


1. A railway car coupler comprising: a shank having a head formed at its forward end, said head having a cavity therein open at the forward end thereof, said head having an abutment surface at its forward end, said head having a connection pin horizontally disposed within said cavity and extending perpendicular to the longitudinal axis of said shank, said connection pin passing centrally between said abutment surface and rearward surface of said cavity and between the upper and lower walls of said cavity, and a connector bar having two similar portions outwardly from the center thereof adapted to have one portion thereof retained within said cavity by said connection pin and the other portion extending from said cavity and receivable by an adjacent coupler head, each of said portions of said connector bar having a horizontally disposed slotted opening centrally therein forming a bearing surface, said connector bar allowing horizontal movement with respect to said connection pin, said connector bar being shorter than the combined depth of the adjacent coupler cavities so that the abutment surfaces of adjacent coupler heads will engage before the ends of said connector bar abut with the rearward surfaces of said cavities during buff conditions, said head being rotatable in a horizontal plane with respect to an adjacent coupler, rotation being limited by engagement of adjacent portions of said abutment surfaces and adjacent heads together with engagement of a portion of the rearward surfaces of said connection pin against the rearward surface of said bearing surface, said head being rotatable in a vertical direction, rotation being limited by engagement of corresponding portions of said abutment surfaces of adjacent heads along with engagement of the rearward surface of said connection pin against the rearward portion of said elongated bearing surface, said head providing compensation for vertical offset between coupler heads, offset being limited by engagement of the bottom of said connector bar with said bottom wall of said cavity rearwardly of said connection pin and engagement of the top of said connector bar with the top wall of said cavity forwardly of said connection pin in the lower coupler, and by engagement of the opposite end of said connector bar within the adjacent coupler head wherein the top of said connector bar is in engagement with the top wall of said cavity rearwardly of said connection pin and by engagement of the bottom of said connector bar with the bottom wall of said cavity forwardly of said connection pin in the upper coupler.

3,123,228
AUTOMATIC COUPLERS FOR RAIL VEHICLES
Cyril J. Dadswell and Glenroy D. Whitehouse, Sheffield, England, assignors to English Steel Corporation Limited, Sheffield, England
Filed Dec. 1, 1961, Ser. No. 156,394
Claims priority, application Great Britain Dec. 3, 1960
5 Claims. (Cl. 213—100)

3. An automatic coupler for rail vehicles of the "Willison" type in which a locking member is spring-urged

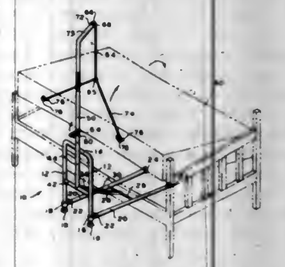
outwardly from the hollow body of the coupler to a position in which it is adapted to lie alongside the locking member of a similar mating coupler, in order to prevent withdrawal of a fixed nose on each coupler body from a recess in the body of the other coupler, provided with mechanism for withdrawing the locking member comprising a tail on the locking member extending rearwardly within the hollow body of the coupler, a forwardly-facing abutment on the tail, a pair of vertical pivots, one at each side of the coupler, a pair of bell-crank levers mounted one on each pivot, with one arm of each lever extending into the hollow body of the coupler for engagement with the forwardly-facing abutment on the tail of the locking member, and with the other arm of each lever extending rearwardly from the pivot outside the coupler body, an eye on each of the outer arms of the levers enabling either lever to be rocked by a pull manually applied from the corresponding side of the vehicle to pull the locking member, against the spring-



urge of the locking member towards locking position, to withdraw the head of the locking member from the recess into the coupler body, a boss carried by the coupler, a vertical bore in the boss, a plunger slidable in the bore, a dog carried by the plunger and rideable on the locking member until the head of the locking member has been fully withdrawn, a forwardly-facing abutment on the locking member, a spring for urging the plunger towards the locking member for the dog to engage the forwardly-facing abutment on the locking member automatically to hold the head of the locking member fully withdrawn when the manual pull on the bell-crank lever ceases, a cross-pin on the plunger, an annular end face on the boss formed as a cam surface co-operating with the cross-pin on the plunger, at least one lift portion in the cam surface whereby rotation of the plunger causes it to be withdrawn against the urge of the spring, and a groove at the highest level of the lift portion of the cam surface for retaining the cross-pin when it is required to render the dog inoperative.

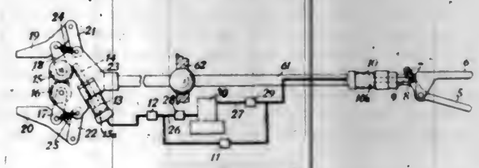
3,123,229
MATERIAL HANDLING APPARATUS
Abraham Kleiman, 76 Spruce Lane, Valley Stream, N.Y.
Filed Oct. 9, 1959, Ser. No. 845,561
1 Claim. (Cl. 214—1)

Material handling apparatus comprising, in combination, a self supporting frame, a base foldably carried by one lower end of said frame for movement between a laterally outwardly extending open position and a side by side parallel folded position, a flexible cable, cable winding means carried by said frame, said cable having one end connected to said winding means, and guide means at the opposite upper end of said frame directing said flexible cable from said winding means, said frame being substantially inverted U-shaped having a pair of spaced apart parallel legs connected together at one upper end by a transversely extending bight portion, and a vertical mounting post carried by said inverted U-shaped frame intermediate said spaced apart parallel sides thereof, said base comprising a pair of spaced apart parallel legs each pivotally carried upon the lowermost end of one of said



sides of said frame, and collapsible brace means releasably securing said legs in an open laterally outwardly extended position with respect to said frame.

3,123,230
MANIPULATORS
Paul Oppenheimer, Edgbaston, Birmingham, and Michael Martin, Sparkbrook, Birmingham, England, assignors to Joseph Lucas (Industries) Limited, Birmingham, England
Filed Mar. 20, 1961, Ser. No. 97,041
1 Claim. (Cl. 214—1)



A manipulator of the kind specified comprising in combination a master cylinder, a first piston slidably accommodated within said master cylinder, a pair of arms which are pivotally interconnected on an axis in fixed relationship to said master cylinder, and one of which is manually movable relative to the other, means operatively interconnecting said first piston and the manually movable arm so that pivotal movement of the latter is accompanied by movement of said first piston, a slave cylinder spaced from said master cylinder, a second piston slidably accommodated within said slave cylinder, a pair of relatively movable grippers, means operatively connecting said grippers to said second piston so that movement of the latter is accompanied by relative movement of said grippers, hydraulic circuit means interconnecting said master cylinder and said slave cylinder so that movement of said first piston by said manually movable arm causes movement to be imparted hydraulically to said second piston, and servo-mechanism which is connected to, and controllable by the hydraulic pressure in, said hydraulic circuit means, and through the medium of which the hydraulic pressure exerted on said second piston by movement of said first piston is amplifiable relative to the pressure exerted on said first piston by said manually movable arm.

3,123,231
OIL WELL MAST WITH DRILL PIPE TRANSFERRING BOOM
Cecil Jenkins and Joseph R. Woolslayer, both of Tulsa, Okla., assignors to Lee C. Moore Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 13, 1961, Ser. No. 151,914
5 Claims. (Cl. 213—2.5)

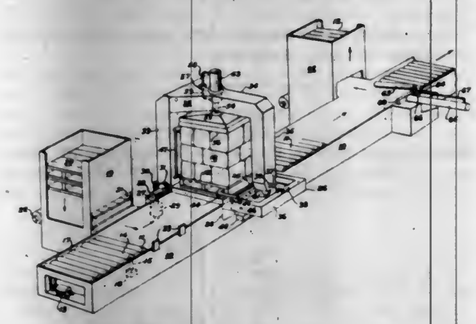
1. In an oil well drilling mast over a well, the mast having a front and a back, apparatus for transferring

drill pipe in both directions between the mast and a storage point in front of it, said apparatus comprising a boom near one side of the mast, means near said side of the mast pivoting one end of the boom thereto on an axis substantially parallel to the front of the mast, the boom in its lower position extending from said means forward and laterally in front of the mast to substantially the central vertical plane of the mast transverse to said axis, the front end of the boom having an upwardly extending portion forming an arm, a sheave mounted on the upper end of said arm, a sheave supported by the mast near



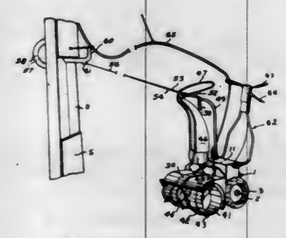
said pivoting means, a hoist at the lower end of the mast, a line extending from said hoist up around said mast sheave and forward beneath the boom sheave and then up and back over it and down behind it, gripping means below the boom secured to said line for supporting a drill pipe, and means connected with the boom and mast for swinging the front end of the boom upward and backward to a predetermined upper position at the mast to carry said boom sheave into the mast, said arm being long enough to locate said gripping means substantially over the well while the boom is in said upper position.

3,123,232
PALLET LOAD TRANSFER MECHANISM
William R. Postlewaite, Menlo Park, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Filed Jan. 2, 1963, Ser. No. 249,032
9 Claims. (Cl. 214—6)



2. An automatic material handling system for a conveyor on which rests a loaded first pallet to transfer said load to a second pallet, comprising a conveyor, a first and a second means hinged at one side of said conveyor, said first means extending under a first pallet, said second means extending over a load on said first pallet and adjustably engaging said load, means actuated by said first pallet for tilting as a unit in a vertical plane said first and said second means and said load and said first pallet away from said conveyor at an angle to relieve said first pallet of the weight of said load, means responsive to the tilt of said unit at said angle for returning said first means and said first pallet to said conveyor separately from said second means and said load, means for replacing the returned said first pallet on said first means with a second pallet, means actuated by said second pallet for tilting said first means and said second pallet to engage said second pallet with the tilted said load, and means responsive to the tilted position of said first means and said second pallet for returning as a unit said second pallet and said load to said conveyor.

3,123,233
PORTABLE SILO UNLOADER
Donald E. Lippke, Vandalia, Ohio, assignor to Master Consolidated Inc., a corporation of Ohio
Filed Nov. 28, 1960, Ser. No. 71,979
20 Claims. (Cl. 214—17)



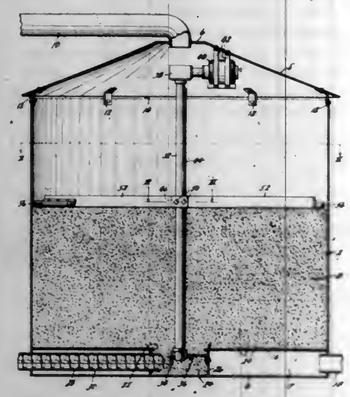
1. Apparatus for unloading silage and the like including a motor unit having a projected drive shaft, an impeller on said drive shaft, a worm gear coupled to said drive shaft, a shaft at right angles to said drive shaft driven by said worm gear and having propulsion means in spaced relation thereon, said propulsion means including elements which in the movement thereof over silage and the like will dig and throw the silage material to said impeller, agitator and throwing elements radially spaced on said impeller to define an impeller entry area therebetween oriented for impact thereon of the silage thrown from said propulsion means whereupon said agitator elements are operative to break up and radially disperse the silage for centrifugal discharge by said impeller throwing elements, means defining a chute operatively associated with said impeller for channeling the silage discharged therefrom, and means for orienting said chute to discharge in a fixed direction irrespective of the orientation or direction of movement of said propulsion means.

3,123,234
GRAIN DRYER
Theodore J. Bjerkan, 7304 Cherokee Drive, Prairie Village, Kans.
Filed June 26, 1962, Ser. No. 205,396
3 Claims. (Cl. 214—17)

1. In a grain drying machine comprising a bin having a top grain inlet opening of restricted area and including means for forcing air upwardly through grain deposited therein, a grain levelling device comprising:

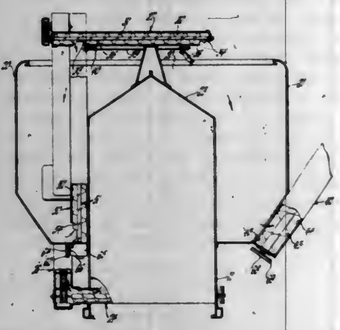
(*a*) a vertical shaft mounted coaxially and rotatably within said bin,
(*b*) means for rotating said shaft in one direction,
(*c*) a hub carried on said shaft for free axial sliding movement but secured against relative rotation thereon,
(*d*) one or more arms affixed to said hub and extending horizontally therefrom to points adjacent the periphery of said bin, and
(*e*) a planar horizontal pan member affixed to each of said arms in generally coplanar relation with the

lower edge thereof and extending therefrom in the direction of rotation thereof, the leading edge of said pan member being formed to present an upwardly



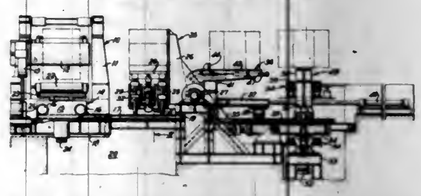
inclined lip, whereby as said shaft is rotated said pan members will seek and be supported on the surface of the grain contained in said bin.

3,123,235
GRAIN TANK AND CONVEYOR MECHANISM FOR COMBINES
Ralph L. Tweedale, Southfield, Mich., assignor to Massey-Ferguson Inc., Detroit, Mich., a corporation of Maryland
Filed Nov. 29, 1962, Ser. No. 240,949
5 Claims. (Cl. 214—17)



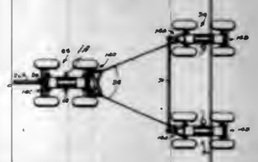
1. An agricultural harvesting machine including a body portion enclosing grain cleaning and separating mechanisms with a pair of side tanks extending down along opposite sides of the body for temporarily storing harvested grain received from the cleaning and separating mechanisms, characterized by, a grain elevator for lifting the harvested grain from the cleaning and separating mechanisms, a filling conveyor for receiving grain from said grain elevator and selectively depositing the grain into said pair of side tanks, a vertical transfer conveyor having an opening in the bottom thereof for receiving grain from one of said side tanks, and means interconnecting the upper end of said vertical transfer conveyor and said filling conveyor so that grain may be moved from said one side tank through said filling conveyor into said other side tank.

3,123,236
APPARATUS FOR TRANSFERRING COILS OF METALLIC STRIP
Joseph V. Contaldo, Sewickley, Pa., assignor to United Engineering and Foundry Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 15, 1960, Ser. No. 75,984
6 Claims. (Cl. 214—130)



1. A coil handling mechanism for carrying varying diameter coils of strip steel and the like from a coiling mandrel to a coil conveyor comprising:
a first coil transfer for receiving and supporting a coil formed on the mandrel in a manner that the axis of the coil is maintained in substantially the same horizontal plane containing the axis of the mandrel,
means for moving said first coil transfer away from the mandrel,
a second coil transfer for receiving a coil from said first coil transfer and rotating it to position its axis in a vertical plane,
said second coil transfer including a coil engaging member movable into a supporting position with a coil while the coil is still supported by said first transfer,
means for rotating said second coil transfer about a pivot,
means connected to and for moving said coil engaging member relative to said pivot,
a third coil transfer for receiving and supporting a coil rotated by said second coil transfer, and
a control means connected to said means for moving said coil engaging member, including means operative upon the coil engaging member engaging the varying diameter coils to interrupt the movement of said means for moving said coil engaging member to effect automatic positioning of said coil engaging member relative to the varying diameter coils so that when the varying diameter coils are supported by said coil engaging member, their axes will be maintained substantially in a first plane and when transferred to said third coil transfer, their axes will be located substantially in a second plane.

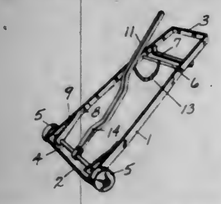
3,123,237
AIRPLANE TRANSPORTING
Elmer Hughes Talbert, P.O. Box 482, Georgetown, Del.
Filed Jan. 12, 1962, Ser. No. 165,749
4 Claims. (Cl. 214—331)



1. A transporter system for elevating, supporting and transporting airplanes on the ground, comprising at least one front transporter unit and at least two rear transporter units, each of said transporter units comprising a carrier frame, a first pair of spaced apart struts pivotally connected at their upper ends to one end portion of said frame, a first pair of wheels operatively connected with

the lower ends of said struts, a second pair of spaced apart struts pivotally connected at their upper ends to the other end portion of said frame, a second pair of wheels operatively connected with the lower ends of the last named struts, a pair of extensible jacks having the upper ends thereof pivotally connected with said frame, the lower ends of said jacks adapted to be supported by the ground, said jacks being spaced apart a distance sufficient to accommodate an airplane wheel therebetween, means connected with said jacks and having a portion for engaging said airplane wheel to elevate the latter from the ground and for supporting the latter when the jacks are extended, cable means for moving said pairs of wheels toward each other to elevate the frame and jacks and further elevate the supported airplane wheel, and means interconnecting said transporter units for transporting the elevated and supported airplane.

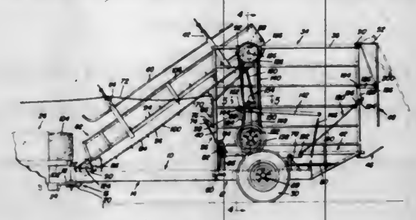
3,123,238
TIRE MOUNTING DEVICE
George L. McKelvey, Meadville, Pa., assignor to Stern Tool and Manufacturing Company, Meadville, Pa., a partnership of Pennsylvania
Filed Oct. 31, 1960, Ser. No. 66,291
5 Claims. (Cl. 214—332)



1. A hand truck for moving tires into mounting position and aligning the same with mounting lugs comprising, a frame having wheels at the front and a handle at the back by which the frame may be lifted to an inclined trucking position, a leg on the frame cooperating with the wheels to support the frame in a lowered generally horizontal position, laterally spaced members at the front of the frame having upper serrated edges extending generally lengthwise of the frame and positioned so that when the frame is in its lowered position a tire may be rolled crosswise onto the serrated edges which grip the tread of the tire and provide a cradle support on which the tire may be steadied with one hand in a generally upright position while the frame is lifted by the other hand to an inclined trucking position and wheeled to mounting position at which time the frame is returned to the lowered position, and a lever having a universal pivot on the frame with a portion of the lever beneath the tread of the tire for engaging the tread of the tire and lifting it off the serrations and for moving the tread of the tire laterally to rotate the tire to bring it into alignment with the mounting lugs.

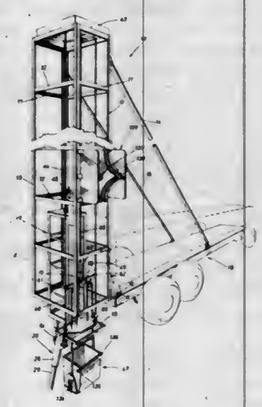
3,123,239
DUMP TRAILER FOR AUTOMATIC HAY BALER
Estel S. Shoemake, Rte. 2, Hubert T. Miser, Rte. 3, and Robert W. Shoemake, Rte. 2, all of Chickasha, Okla.
Filed Sept. 6, 1961, Ser. No. 136,260
4 Claims. (Cl. 214—355)

1. A dump trailer for an automatic hay baler, said dump trailer comprising an elongated main frame having a drawbar projecting forwardly from its forward end with securing means on its forward terminal end portion adapted for pivotal securement to the rear end of a hay baler adjacent the delivery end of the discharge chute thereof, said main frame including ground-engaging support wheels journalled for rotation about axes extending transversely of said main frame, a storage and dump bin open at the top and rear fixed on said frame substantially directly over said axis and including a bottom pivotally mounted from said main frame for movement about an axis extending transversely of said main frame and lying in a transverse vertical plane passing through the forward half of said bin for movement between a first substantially horizontal position and a second rearwardly and downwardly inclined dump position, coacting releasable latch means carried by said main frame and bottom for retaining the latter in said first position, rearwardly and upwardly inclined elongated conveyor means extending from its inlet end at a point adjacent said securing means to its outlet end at a point spaced rearwardly of the forward end of said bin and adapted to receive bales from said



chute and convey said bales upwardly and rearwardly to a point disposed above said bottom, said conveyor means including a transversely extending outwardly projecting and horizontally disposed input shaft having a sprocket wheel mounted on its outer end portion, a friction sprocket wheel, means mounting said friction sprocket wheel on said trailer in alignment with and for vertical movement into and out of driven frictional engagement with one of said support wheels, an endless flexible chain entrained about and drivingly connecting said friction wheel to said sprocket wheel, chain tensioning means supported from said bin and engaged with said chain for tensioning the latter and actuator means operatively connected between said bin and said friction wheel for selectively engaging the latter with said one support wheel.

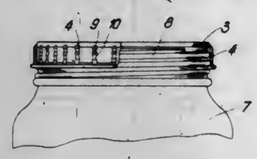
3,123,240
PORTABLE SHAFT SINKING ASSEMBLY
Roderick Thompson MacAlpine, R.R. 3, Fenelon Falls, Ontario, Canada
Filed Feb. 4, 1963, Ser. No. 255,934
8 Claims. (Cl. 214—709)



1. A portable excavating machine comprising an elongated frame having side members and cross members, a second frame mounted for longitudinal movement within

said elongated frame of a width less than that of said elongated frame defining a space between said second frame and a side of said elongated frame, a mucking machine mounted on said second frame and adapted for universal movement in relation thereto, means for moving said second frame longitudinally with respect to said elongated frame, skip hoisting means extending longitudinally through said space between said second frame and said side of said elongated frame, a crosshead releasably securable to a cross member of said elongated frame, a skip carried by said skip hoisting means below said crosshead, means for releasably securing said skip to said crosshead, means in the upper part of said elongated frame for upsetting said skip, and means for pivotally connecting said elongated frame to a transportable carrier.

3,123,241
CLOSURE COVER FOR CONTAINERS MADE OF RIGID MATERIAL
Paul Nofer and Heinrich Eberhardt, both of Schoofstr. 6, Brunsbuttelkoog, Germany
Filed Apr. 18, 1960, Ser. No. 23,050
Claims priority, application Germany Apr. 20, 1959
3 Claims. (Cl. 215—39)



1. A structure comprising a vessel having a mouth portion and a bead on and encircling said mouth portion and defining an outer diameter for the vessel, a cover adapted for closing the mouth portion of the vessel, said cover including a substantially cylindrical depending flange of determinable height and a plurality of spaced inwardly extending parallel ribs on said flange defining grooves therebetween, said flange between said ribs being smooth and unobstructed, each rib axially traversing said flange and extending uniformly thereacross for substantially the entire height of the flange, said flange having a free end in the shape of a bead, said inwardly extending ribs on said flange cooperatively defining an opening for the cover of circular extent which is initially larger than the outer diameter of the vessel, said ribs on said flange being in locally deformed engagement with the bead on the mouth portion at distinct points distributed around the periphery of the vessel mouth portion while said flange between said ribs remains smooth when the flange is onwardly deformed towards said mouth portion of the vessel to secure thereby the cover onto the vessel.

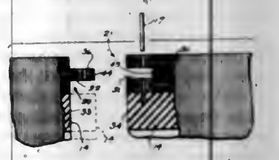
3,123,242
INTERLOCKED TAPE PRESSURE VESSEL
Henry Hahn, Fairlawn, and Herman H. Hanink, Ridgewood, N.J., Roger D. Lloyd, Cambria Heights, N.Y., and Joseph Loprete, Lyndhurst, and Harold Lorsch, Dumont, N.J., assignors to Curtiss-Wright Corporation, a corporation of Delaware
Filed Dec. 12, 1960, Ser. No. 75,410
3 Claims. (Cl. 220—3)

1. A hollow pressure vessel comprising a pair of spaced end members and an intermediate cylindrical wall interconnecting said end members; said intermediate wall consisting of at least three superimposed layers of tape wound in helical fashion from one end member to the other, the tape of the intermediate layer having a pair of internal ribs and a pair of external ribs running longitudinally along the edges of the tape to form respectively an internal longitudinal groove and an external longitudinal groove between the ribs, the tape of the inner of said layers having a pair of external ribs running longitudinally along the edges of the tape to form a longitudinal external groove therebetween and the outer of said layers having a pair of internal ribs running longitudinally along the edges of the tape to form a longitudinal internal groove therebetween, said layers being wound so that a pair of adjacent ribs on adjacent turns of each layer are received within a facing groove of a turn of an adjacent layer and the relative widths of the ribs and grooves



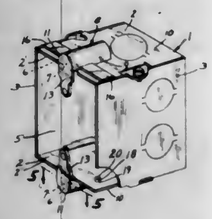
being such that adjacent turns of both the inner and outer layers abut each other with each pair of abutting ribs of the inner layer being tightly received within the facing internal groove of the intermediate layer and with each pair of abutting ribs of the outer layer being tightly received within the facing external groove of the intermediate layer, the longitudinal groove of each of said inner and outer layers being substantially wider than the combined widths of the ribs of the intermediate layer received therein so that adjacent turns of the intermediate layer are spaced a substantial axial distance apart.

3,123,243
SECTIONALIZED MOTOR CASE CONSTRUCTION
Franklyn W. Roesch, Warrensville Heights, and Raymond M. Bluck, Willowick, Ohio, assignors to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed July 6, 1961, Ser. No. 122,313
4 Claims. (Cl. 220—3)



4. A cylindrical module for a modular motor casing of optional size and having separately fabricated head members forming end caps for the motor casing, said cylindrical module comprising a cylindrical mandrel member having an annular row of circumferentially spaced thimbles at opposite axial ends thereof, said module including layers of hoop windings and longitudinal windings on said mandrel, each layer of longitudinal windings comprising a continuously wound filament starting from a thimble at one end of said mandrel and extending helically to a thimble at the opposite end of said mandrel, whereupon the filament is redirected back and forth between opposite ends between respective pairs of thimbles, and coupling means at the respective ends of said module to fasten said module to one of said head members or to another module, one of said coupling means comprising an axial tongue formed by a row of said thimbles together with the windings associated therewith and comprising a male part insertable into a corresponding female part of an adjoining motor casing component, the other of said coupling means comprising a double row of circumferentially spaced thimbles spaced apart from one another radially to form together with the windings associated therewith a recess for receiving a corresponding male part on an adjoining motor casing component.

3,123,244
PROTECTOR FOR ELECTRICAL SWITCH AND OUTLET BOXES
Raymond C. Amundson, 2650 Nathan Lane, Minneapolis 27, Minn.
Filed Apr. 13, 1962, Ser. No. 187,354
3 Claims. (Cl. 220—3.4)



1. A protective device for electrical outlet boxes of the type which include opposed end and side walls, a rear wall and an open front, said end walls adjacent said open front and intermediate said side walls defining laterally outwardly projecting apertured mounting lugs which lie in substantially the plane of said open front for anchoring the opposite ends of a plug-assembly strap, said device comprising,

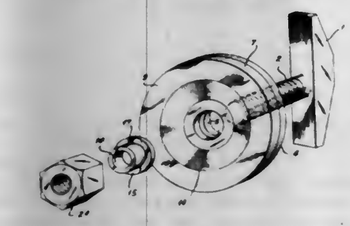
(*a*) a hood having an open bottom and adapted to totally receive therein one of said anchoring lugs,

(*b*) said hood defining a temporary closure flap having a grasping portion which extends beyond the plane of said open bottom,

(*c*) means weakening said flap to permit severance thereof from said hood, and

(*d*) means for securing said hood to the exterior surface of one of the end walls of said outlet box in covering relation to the anchoring lug associated therewith, whereby said temporary closure flap immediately overlies said anchoring lug with said grasping portion thereof extending into said open front.

3,123,245
CORE PLUG REPLACEMENT
Janis Dumpis, St. Ann, Mo., assignor to Champ-Items, Inc., St. Louis, Mo., a corporation of Missouri
Filed Sept. 4, 1962, Ser. No. 221,137
4 Claims. (Cl. 220—24.5)



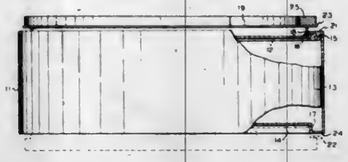
1. In a replacement type of core plug for a core hole in a water jacket having (*a*) threaded stem, (*b*) an anchor on said stem adapted to hold the stem in said core hole, (*c*) a circular disk on said stem, and (*d*) nut means on said threaded stem to clamp said disk in place over said core hole in the water jacket, the improvement comprising,

(1) a gasket adapted to seal the joint between said disk and water jacket when clamped therebetween,

(2) a bushing-like member of ductile material having a flange portion seated on the outer surface of said disk around said stem and a cylindrical portion of smaller diameter extending along said stem, and

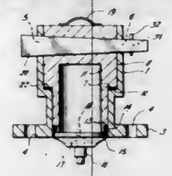
(3) a conical seat in said nut means surrounding the cylindrical portion of said bushing-like member adapted to wedge said portion of said member into the threads on said stem and form a seating surface on said member complementary to said conical seat when said nut means is tightened.

3,123,246
CONTAINER AND LID ARRANGEMENT
Rudolph P. Spinoza, 2121 Shore Parkway, Brooklyn, N.Y.
Filed Apr. 27, 1962, Ser. No. 190,591
2 Claims. (Cl. 220—42)



2. An improved container and lid arrangement comprising a container having an open top and a closed bottom, and a lid having a single, attaching surface adapted to be selectively attached to either the top or the bottom of the container and having a soft rubber-like means secured thereto so that when the lid is attached, the means is exposed and serves as a supporting base for the container.

3,123,247
VALVE POT COVER
Ralph L. Kerr, 6120 Lake, Houston, Tex.
Filed Dec. 13, 1961, Ser. No. 159,486
5 Claims. (Cl. 220—46)



1. In a valve pot cover, a cylindrical inside member having a solid portion and a horizontal tapered port extending therethrough and a longitudinal bore in one end, the outer surface of said member being reduced in diameter adjacent one end forming therein an external shoulder, an external groove adjacent one end of said member and flexible packing in said groove, an outside member into which the inside member is mounted and ports in said outside member in alignment with said port in said inside member and a tapered pin mounted in said ports.

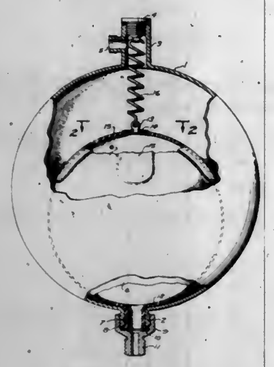
3,123,248
EXPULSION BLADDER-EQUIPPED STORAGE TANK STRUCTURE
James E. Webb, Administrator of the National Aeronautics and Space Administration, with respect to an invention of Edgar F. Koch
Filed Oct. 4, 1962, Ser. No. 228,507
6 Claims. (Cl. 220—63)

1. A storage tank structure, comprising:

(*a*) a rigid storage tank shell having an outlet opening and an inlet opening;

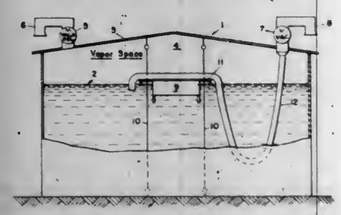
(*b*) a flexible storage bladder adapted to be filled with a fluid and having an outlet means secured in the outlet opening of said shell;

(*c*) tension means attached to said bladder and to said shell at locations diametrically opposite from said outlet means and exerting a force in a direction to elongate said bladder;



(*d*) and reinforcing for said bladder radiating from the attachment location of said tension means thereto, for causing said bladder to corrugate in planes transverse to the axis between said outlet means and said attachment locations as the contents of said bladder are depleted.

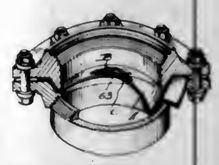
3,123,249
VENTING ARRANGEMENTS FOR STORAGE TANKS
Alfred J. Gorand, Ridley Park, and Charles H. Brooks, Swarthmore, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed Dec. 12, 1961, Ser. No. 159,207
5 Claims. (Cl. 220—85)



5. In combination, a cone-roof tank for storing a volatile liquid, a vent valve of the vacuum-pressure type mounted in the cone-roof, a conduit having one end secured to said valve and having its other end extending below the surface of the stored liquid, and means operating in response to an increase of pressure in the vapor space above the stored liquid to lift said other end of said conduit above the surface of the stored liquid.

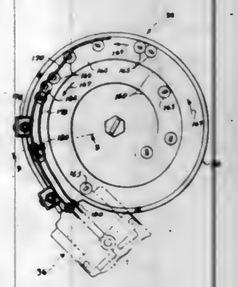
3,123,250
DUAL SECTION RUPTURING DISC
Horace Lemmer, 13 Decarie Place, Dorval, Quebec, Canada
Filed June 18, 1962, Ser. No. 203,329
Claims priority, application Canada June 29, 1961
5 Claims. (Cl. 220—89)

1. A rupturing disc assembly, comprising, a domed rupturing disc having an integral unweakened domed portion, and a support member having a dome-shaped rupturing disc support, comprising, an integral thin body having a dome-shaped wall finished to conform to the convex side of the dome-shaped surface of the rupturing disc, a plurality of fissures through the wall converging inward from an unbroken outer marginally connecting portion to a narrow central terminal portion, said fissures dividing said wall into a plurality of sections extending between said connecting and terminal portions, each fissure extending completely through the wall with the sides of the adjacent fissures touching whereby the wall provides a substantially continuous supporting surface weakened at the fissures to allow the sections to part under pressure, said terminal portion including a circular button concentric with said wall and touching the ends of



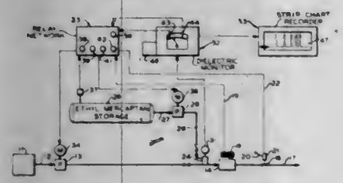
the sections across an intervening circular fissure, a concavo-convex strengthening cap of minor area resting on the convex side of said wall to overlie said terminal portion, and means extending from said sections for retaining said cap in place, and means for holding said disc and support in juxtaposed relationship, the rupturing disc being calibrated to withstand the major proportion of the normally required rupturing pressure, the support being calibrated to withstand a minor proportion of said pressure.

3,123,251
APPARATUS FOR FEEDING SHANK BUTTONS TO AN ATTACHING STATION
John F. Schneider, Jr., 78—34 64th St., Glendale, N.Y.
Filed May 3, 1960, Ser. No. 26,652
8 Claims. (Cl. 221—156)



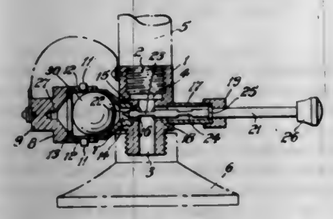
1. Apparatus for supplying shank buttons to an attaching station of a sewing machine, including
(A) a bowl for holding a plurality of shank buttons,
(B) a generally spiral shoulder leading upwardly from the bottom of the bowl along the inside wall of the bowl and to a location near the top of the bowl,
(C) the shoulder having a transverse downward inclination toward the wall so that buttons that travel along the shoulder tend to slide into contact with the wall,
(D) a fence extending progressively outward from the wall along a substantial length of the shoulder and at an elevation above the shoulder that clears the main body of each button but that contacts with the shank of each button,
(E) said fence extending from the wall by progressively greater distances that eventually move the entire button away from the wall with the button shank held in contact with the fence by the traverse slope of the shoulder,
(F) supporting means for the bowl and on which the bowl is movable about a generally central axis,
(G) mechanism for imparting differential vibration to the bowl to cause the buttons to move upwardly along the spiral shoulder,
(H) a button chute near the top of the bowl and into which the buttons enter at the end of the chute,
(I) the button chute having a guideway therein with a slot that receives the shanks of the buttons and that maintains them in the orientation imparted to them by said fence, and
(J) a second fence on that side of the buttons opposite the first fence and extending along only the portion of the first fence which is nearer to the guideway and constituting with the first fence a confinement for steering buttons into the entrance to the chute guideway.

3,123,252
METHOD AND APPARATUS FOR SUPPLYING AN ADDITIVE TO A FLUID BEING DISPENSED
Louis E. Kuntz, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Nov. 30, 1961, Ser. No. 155,943
16 Claims. (Cl. 222—1)



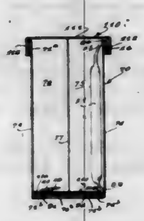
1. A method for supplying an additive to a fluid comprising the steps of metering a stream of said fluid, producing a signal representing a predetermined volume of said fluid and actuating an injection of at least a predetermined amount of said additive through an analysis zone into said stream in response thereto, producing an analysis signal indicative of the presence of said additive while passing said additive through said analysis zone, recording said analysis signal and stopping the flow of said fluid responsive to said analysis signal when said analysis signal corresponds to an injection of said additive less than said predetermined amount.

3,123,253
MIXING DEVICE FOR DELIVERING LIQUID MIXTURES OR SOLUTIONS
Charles William Lambton, Mortimer Hill, Mortimer, Berkshire, England
Filed Sept. 19, 1961, Ser. No. 139,229
8 Claims. (Cl. 222—82)



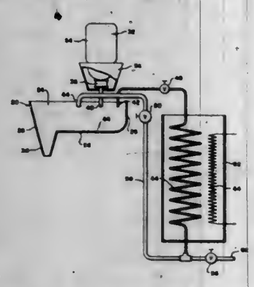
1. A mixing device for delivering liquid mixtures comprising, in combination,
a body member having inlet and outlet openings for a liquid;
passage means in said body member for the flow of liquid between said inlet and outlet openings;
housing means supported adjacent said body member;
a mixing chamber in said housing means, said body member having an aperture formed therein communicating with said passage means and with the mixing chamber of said housing means and adapted to deliver liquid to the mixing chamber of said housing means and said body member having a bore formed therein spaced from said aperture communicating with the mixing chamber of said housing means and with said passage means and adapted to deliver a liquid mixture to said passage means;
holding means in said housing means for holding a capsule in the mixing chamber adjacent said bore so that upon piercing of said capsule the contents thereof will mix with liquid in the mixing chamber of said housing means and the liquid mixture thus formed will enter said passage means through said bore;
piercing means supported in operative proximity with the mixing chamber of said housing means for piercing said capsule while the same is held by said holding means; and
guiding means guiding said piercing means into the mixing chamber of said housing into piercing engagement with said capsule to discharge the contents of said capsule into the mixing chamber of said housing means to mix with liquid in the mixing chamber of said housing means.

3,123,254
LIQUID DISPENSING CONTAINER
Joseph Glenn Rabby and James C. Wilson, Jacksonville, Fla., assignors to Owens-Illinois Glass Company, a corporation of Ohio
Filed May 20, 1959, Ser. No. 814,570
11 Claims. (Cl. 222—105)



1. A shipping and dispensing package for fluent material, said package including an inflatable bag-like member formed of elastic material, and having bellow-like folds formed in side walls to aid the extensible character of the bag, said bag-like member being provided with elongated, tubular ends at opposite ends of said member, each of said tubes having an aperture formed in the ends for filling and draining of said bag-like member, means for selectively closing said apertures, and a supporting and protective container formed of expendable material for receiving said bag-like member in snug, telescoping relationship when said bag-like member is inflated and filled with fluent material, said container having filling and dispensing access means proximate to its corresponding counterpart on said bag-like member, and means for securing one of said tubular ends to the upper end of said container adjacent its associated access means, said bag-like member being proportioned to remain substantially erect when empty so as to prevent the side walls of said bag from coming into sealing engagement with the aperture of said lowermost tube as fluent material is drained from said bag.

3,123,255
DRINK MIXING DEVICE
Ernest N. Martin, 1141 High St., Escondido, Calif.
Filed Oct. 3, 1960, Ser. No. 59,981
2 Claims. (Cl. 222—145)



1. A mixing device for a drink, comprising in combination:

(A) A mixing chamber having:

(1) a mixing outlet,

(2) a section forming a mixing and dissolving area,

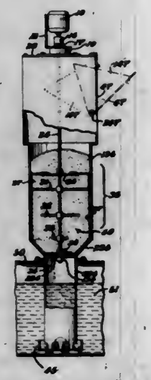
(3) and a section interposed between the first mentioned section and the outlet, forming a diluting area;

(B) a dispenser for comminuted substance having a discharge outlet disposed for discharging said substance above the first mentioned section;

(C) means for delivering heated liquid directly to the first mentioned section to mix with and dissolve said substance;

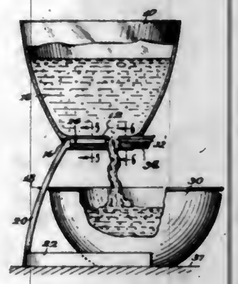
(D) and means for delivering cold liquid to directly above the second mentioned section for cooling and diluting the substance and liquid which was mixed and dissolved in the first mentioned section.

3,123,256
AUTOMATIC FILTER POWDER DISPENSER
Jack C. Smith, Edwin E. Etterman, and Roy T. Romine, Bowling Green, Ky., assignors to Detrex Chemical Industries, Inc., Detroit, Mich., a corporation of Michigan
Filed Apr. 6, 1961, Ser. No. 101,259
3 Claims. (Cl. 222—146)



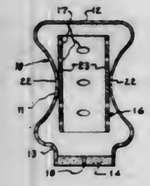
1. Apparatus for dispensing automatically diatomaceous earth filter powder into a cleaning solution contained in a supply tank, said cleaning solution employing as a basis a non-aqueous synthetic solvent, said dispensing apparatus comprising; an elongated cylindrical vertically-disposed walled housing mounted on said tank, said housing including an upper section and a lower section, said lower section extending downward into said tank, said upper section having an access opening for receiving a supply of diatomaceous earth filter powder the particles of which tend to cling together to form a cobesive mass in said housing; a shaft extending axially through said upper section and adapted to be driven rotationally; an agitator plate secured to the lower end of said shaft and adapted to be driven rotationally when said shaft is rotated, said agitator plate forming the floor of said upper section of said housing and supporting said diatomaceous earth filter powder, said agitator plate having therein radially-disposed slots forming sectors the corresponding edges of which are raised upwards to form a cutting or agitating blade; a pair of opposed upwardly-extending wiper arms secured to said agitator plate and adapted to sweep along the wall of a lower portion of said upper section when said shaft is rotated; a plurality of pairs of opposed break-up arms of substantial vertical thickness fixed to and extending radially from said shaft at a plurality of different angular orientations at spaced-apart locations above said agitator plate and adapted to move rotationally through said filter powder on a corresponding plurality of horizontal planes when said shaft is rotated, the rotation of said agitator plate, wiper arms and spaced radial break-up arms causing said mass of diatomaceous earth filter powder to break up and the particles thereof to drop through the radial slots of said agitator plate and into said lower section of said housing, and a cooling coil surrounding the upper portion of the lower section of said housing for condensing on the wall of said lower section any vapors which may arise from the solvent in said tank.

3,123,257
NESTABLE SUPPORT FOR CONTAINER
Donald L. Miller, 330 6th St., Neenah, Wis., assignor of one-third to Ralph G. Miller, Neenah, Wis.
Filed Sept. 8, 1960, Ser. No. 54,757
7 Claims. (Cl. 222—185)



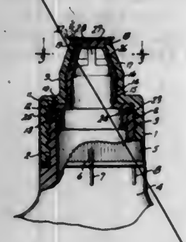
1. In combination, an article having walls and a base portion provided with a keyway, a stand for the support of said article including a key portion adapted to be slidably received in said keyway and a bifurcated supporting base portion spaced from said key portion and adapted to serve the dual function of positioning said article above a supporting surface when said bifurcated portion is locked by said key when in one position spaced below said article base portion, said key portion being adapted alternately to be locked in said keyway in a diametrically opposed position with said bifurcated portion nested against said article wall portions and spaced from said keyway in a position of non-use.

3,123,258
DISPENSING CONTAINER
Lee R. Schiltz, Harvey, Ill., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois
Filed Nov. 28, 1960, Ser. No. 71,971
1 Claim. (Cl. 222—215)



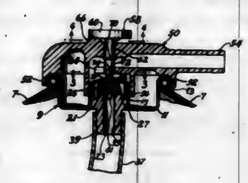
An improved dispenser comprising: a flexible-walled, cylindrical storage bottle having an open neck and a given cross section for containing a charge of fluid material; a closure plug fitted within the neck of said bottle, said plug having a discharge orifice of a dimension that will permit the discharge of said material only when under pressure; and a rigid perforate-wall inner tube fully enclosed within said bottle and plug, said rigid tube being disposed longitudinally of said bottle and completely unconnected to said bottle and plug, said rigid tube further being of substantial cross-sectional dimension relative to said bottle, the dimension of the tube limiting the inward deflection of the bottle walls to substantially less than full collapse whereby uniform and known quantities of fluid will be dispensed when said bottle is inverted and the flexible outer wall is pressed inwardly into contact with said inner rigid tube.

3,123,259
DISPENSING CLOSURE FOR A CONTAINER
Robert J. Musel, Linwood, N.J., and Chester A. Harlow, Easton, Pa., assignors, by mesne assignments, to The J. T. Baker Chemical Company, Phillipsburg, N.J., a corporation of Delaware
Filed Aug. 28, 1961, Ser. No. 134,210
4 Claims. (Cl. 222—521)



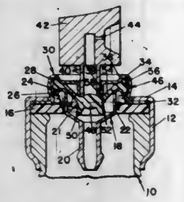
1. A dispensing closure for a container having a cylindrical neck which comprises in combination an inner member having a lower cylindrical section adapted to be inserted into a round opening in the neck of the container, a substantially planar circular flange extending outwardly from the uppermost end of said cylindrical section and adapted to cover the endwall of the neck of the container into which it may be inserted an intermediate cylindrical section of smaller diameter than the lower cylindrical section above said flange, a frusto-conical section extending from the upper end of said intermediate cylindrical section with openings therein to permit flow of liquid through said frusto-conical section terminating in a circular disc-like structure with a side wall parallel to the axis of said inner member, an outer member having at the lower end a cylindrical section with screw threads in the internal wall thereof adapted to fit screw threads on the outer neck of the container, a substantially planar shoulder extending inwardly from the upper end of the lower cylindrical section to an intermediate cylindrical section, the internal diameter of said intermediate cylindrical section being substantially the same as the external diameter of the intermediate cylindrical section of said inner member, a frusto-conical section having a circular opening at the top, the walls of said opening being substantially parallel to the axis and of substantially the same internal diameter as the disc-like planar end section of the inner member so that the solid end section of the inner member may fit into said circular opening at the upper end of the frusto-conical section of the outer member and effectively close said opening, the upper most interior face of said outer frusto-conical sleeve extending upwardly and outwardly from the upper part of said circular opening at an angle to the axis of said member, the upper most exterior face of the said sleeve member extending outwardly and upwardly at a lesser angle to the axis of the said member than said interior face and forming a sharp pouring edge, and said outer frusto-conical sleeve has small sealing beads extending inwardly from the intermediate cylindrical section and sealing beads extending inwardly from the uppermost cylindrical section.

3,123,260
VALVES AND METHOD FOR MASS PRODUCING THEM
Gilbert De Wayne Miles, Ossining, N.Y., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware
Filed Nov. 14, 1958, Ser. No. 773,994
6 Claims. (Cl. 222—394)



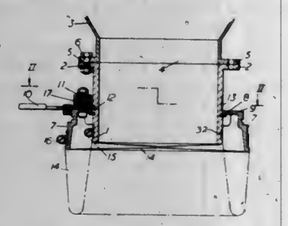
1. A valve for affixation to a pressurized container for dispensing fluid contents when desired comprising an upwardly extending tubular member having an open bottom and a top with a wall provided with a dispensing opening, support means inserted into said tubular member through said open bottom and having an upper supporting surface, stop means to limit the inward movement of said support means to space the supporting surface thereof a desired fixed distance from said top wall during assembly of the valve independent of permanently sealing ths support means in place in the tube at said fixed distance from the interior of the top wall, means separate from said stop means permanently holding said support means fixed in said tube with said supporting surface spaced said fixed distance from said top wall to provide a chamber of predetermined fixed height, a passageway for connecting said chamber to the interior of the container, and a deformable resilient rubber-like body having a normal height greater than the height of said chamber, positioned in the chamber under compressive stress between the supporting surface of said support means and the top wall of the tubular member, so that it resiliently closes said dispensing opening, and controllably opens it in response to an external force directed through the dispensing opening and against the resilient rubber-like body.

3,123,261
METERED AEROSOL VALVE
William G. Gorman, Albany, N.Y., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware
Filed Mar. 29, 1961, Ser. No. 99,195
6 Claims. (Cl. 222—394)



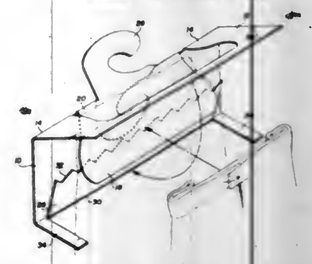
1. A metering valve construction for controlling the discharge of fluid material under pressure from a container, said valve construction comprising a ferrule, a hollow actuator stem, means to movably support said actuator stem, a tank, said tank including a wall having a passage therethrough for communication between the tank and the container, an external body gasket for said tank, a sealing gasket in the tank, said ferrule including means holding the tank and body gasket in position, means holding the sealing gasket in position to be impinged upon by said actuator stem, said sealing gasket being resilient and stretchable and located between the inner end of the actuator stem and the said tank wall, said tank wall and sealing gasket providing a metering chamber therebetween, said metering chamber being normally open to the tank passage, means on said sealing gasket for contact with the said tank wall sealing off the tank passage to the container and thereby closing the metering chamber with respect to said container upon inward motion of said actuator stem, said actuator stem having a port normally closed by the actuator stem supporting means but having a position wherein it is open to said metering chamber for discharge of the material in said metering chamber upon stretching action of the sealing gasket under influence of the actuator stem, the resiliency of the sealing gasket normally holding the actuator stem in outward position with its inlet closed.

3,123,262
FLOW CONTROL DEVICES
Walter Douglass, Chorleywood, England, assignor to Mucon Engineering Company Limited, South Ruislip, England, a British company
Filed Sept. 19, 1960, Ser. No. 56,910
Claims priority, application Great Britain Sept. 26, 1959
8 Claims. (Cl. 222—507)



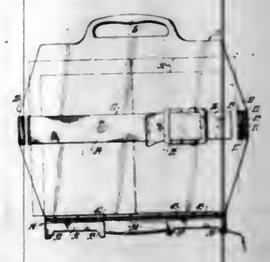
1. A flow control device comprising a normally stationary, inner annular member, an outer annular member rotatably mounted externally of the inner member and being radially spaced therefrom and slidable axially thereof from an operative position to a retracted position, a folded-back flexible tapered sleeve, means securing the smaller end of the tapered sleeve to the inner annular member, and means securing the larger, folded-back end of the tapered sleeve to the outer annular member, and means for rotating said outer annular member in said operative position relative to the inner annular member to effect twisting of the tapered sleeve between an open position and a closed position in which the sleeve extends across the inner annular member.

3,123,263
CLOTHES HANGER
Monroe Jang, 1750 L St., Merced, Calif.
Filed Nov. 18, 1960, Ser. No. 70,183
7 Claims. (Cl. 223—87)



1. In a garment hanger, a pair of panel members joined together about spaced portions of a straight but discontinuous fold line, said pair of panel members thereby being foldable into a position of parallel adjacency, and a central panel portion secured to one of said panels and provided with support means to engage upon a hanging rod, said central panel portion being cut from one of said pair of panel members, a fold line connecting said central panel portion to the other of said pair of panel members, said central panel portion being adapted to receive a garment thereabout, said central panel portion and the garment positioned thereabout further being adapted to lie between said pair of panel members when the pair of panel members is folded above said straight but discontinuous fold line, whereby said pair of panel members assist in retaining the garment on said central panel portion.

3,123,264
BOOK CARRIER
Robert E. Proctor, 3163 Sawtelle Blvd., Los Angeles, Calif.
Filed Dec. 5, 1961, Ser. No. 157,083
7 Claims. (Cl. 224—45)



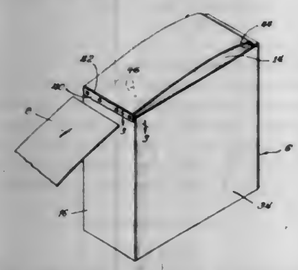
1. In a book carrier, in combination: a thin flat back panel, a carrying handle attached to the top thereof, a base secured to the lower margin of said panel and having supporting ledges projecting from respective sides of the panel at right angles thereto, retainer straps linked to said back panel and adapted to retain a plurality of books in engagement with the respective sides of the panel with the books resting upon said supporting ledges, and extension shelves hinged to the lateral margins of said supporting ledges, for movement between folded positions resting in flat face-to-face contact with said ledges and extended positions coplanar with said ledges and extending laterally therefrom.

3,123,265
TAPE DISPENSER
Dan B. Houser, Deerfield, Ill., assignor to Fedco Corporation, Chicago, Ill., a corporation of Illinois
Filed Sept. 11, 1961, Ser. No. 137,377
6 Claims. (Cl. 225—19)



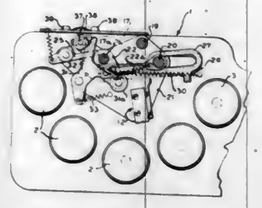
1. In a tape dispenser including a tape holder, the combination of means providing a tape dispensing opening in said holder, a cutter on the outer surface of said holder extending outwardly therefrom and disposed in spaced relation to one side of said opening, means providing a tape supporting surface between said opening and said cutter, said dispenser thereby being adapted for dispensing tape by extending a strip of tape through said opening, and causing the tape to bear on said supporting surface for frictionally restraining the tape while moving it against said cutter, and guard rails means on said holder adjacent opposite borders of said cutter and extending outwardly beyond the cutter, said guard rail means being adapted for relative movement thereon of an article being taped, from one side of said cutter to the other and over the cutter for severing the tape, while holding the article away from the cutter.

3,123,266
TAPE DISPENSER
Holley S. Jernigan, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Mar. 5, 1962, Ser. No. 177,287
2 Claims. (Cl. 225—48)



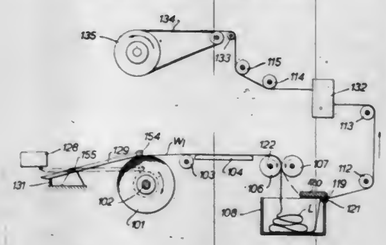
1. A tape dispenser comprising a box-like structure formed of a folded blank having a plurality of end-joined, centrally aligned rectangular sections, one of said sections being removable, and flap sections affixed to the sides of said rectangular sections, said structure having a slot at a first corner, a cutting element affixed to the structure at a second corner, said cutting element projecting a short distance beyond and normal to the surface of said box-like structure which extends between said first and said second corner, interlocking means integral with the structure to maintain it in assembled condition, said removable rectangular section being arranged to extend over said cutting element prior to removal, and its adjoining section being adapted to fit into said slot and into said structure to serve as a tape guide.

3,123,267
TAPE FEED APPARATUS
James W. Dodsworth, Mount Tabor, N.J., assignor to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware
Filed Nov. 22, 1961, Ser. No. 154,207
11 Claims. (Cl. 226—11)



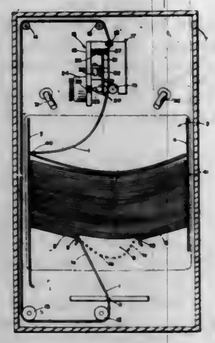
1. In a tape feed apparatus including feed means for a tape:
(*a*) adjustable means adapted to be adjusted from a normal position,
(*b*) drive means operable in time with said feed means for adjusting said adjustable means,
(*c*) means periodically operable in response to feed movement of said tape to disconnect said drive means from said adjustable means,
(*d*) means operable upon said disconnection of said drive means to restore said adjustable means toward normal position, and
(*e*) means operable upon a given adjustment of said adjustable means to indicate tape feed failure.

3,123,268
MECHANISM FOR JOINING WEBS OF MATERIAL
James Gagg, London, England, assignor to Molins Machine Company Limited, London, England, a British company
Filed Dec. 11, 1961, Ser. No. 158,193
Claims priority, application Great Britain Dec. 15, 1960
2 Claims. (Cl. 226—111)



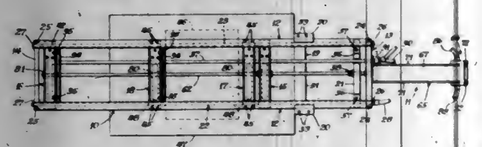
1. In a continuous rod cigarette-making machine, a pair of draw rolls for a drawing web from a reel of cigarette paper and feeding it into a stationary container in which a reserve of said web is accumulated, stored and used while its trailing end is joined to the free end of a new web, web feeding means driven at a fixed speed for feeding said web continuously from said container to the cigarette-forming portion of said machine, means to drive said pair both faster and slower than said web feeding means and means to cause said pair of draw rolls to freewheel when the linear speed of said web is greater than their peripheral speed.

3,123,269
HANDLER FOR FOLDING TAPE
Robert I. Morley, Norwalk, and William A. Farrand, Downey, Calif., assignors to North American Aviation, Inc.
Filed May 25, 1959, Ser. No. 815,459
5 Claims. (Cl. 226—118)



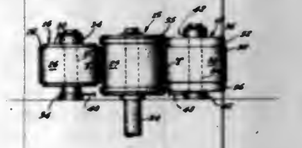
1. In a gravity assisted tape reproducer system adapted for use with a creased endless tape in which a portion of said tape is stored in accordion-pleated layers fashion while the remainder is driven past a read head, retaining means for supporting said tape, said retaining means comprising a pair of identical platform supports, each said platform support being depressed having an upper and a lower end, a pair of vertical walls attached to said upper ends against which the left and right ends respectively of said tape can abut as said tape is folded upon said supports, each of said lower ends having a downwardly extended curved lip, said retaining means having an opening larger than the length of either of said platform supports between said curved lips whereby tape may be withdrawn downwardly through said opening two layers at a time.

3,123,270
PRESS FEED MECHANISM
Raymond G. Olson, Niles, Ill., assignor to Power Control Products, Inc., a corporation of Illinois
Filed Apr. 19, 1962, Ser. No. 188,699
14 Claims. (Cl. 226—141)



1. A feed mechanism for incrementally delivering stock to a press comprising, a pair of channel members, a pair of stationary jaws, said pair of stationary jaws being secured in a parallel spaced apart relationship to each other between said channel members intermediate the ends thereof with the longitudinal axes of said stationary jaws being positioned transversely of said channel members and with the underside of said stationary jaws substantially coplanar with the underside of said channel members, a pair of movable jaws, one of said movable jaws slidably carried in said channel members on one side of said pair of stationary jaws, the other of said movable jaws slidably carried in said channel members on the other side of said pair of stationary jaws, said movable jaws further being positioned with the longitudinal axes thereof transversely of said channel members and with the underside of said movable jaws substantially coplanar with the underside of said channel members, reciprocating air cylinder and piston means secured to one end of said pair of channel members to extend substantially parallel to the longitudinal axes of said channel members, said reciprocating air cylinder and piston means being connected to said pair of movable jaws between the upper and lower surfaces of said channel members for reciprocating movement of said movable jaws responsive to reciprocating operations of said air cylinder and piston means, bracket means connectable to a press, said bracket means releasably clamping said channel members therein to substantially horizontally align said feed mechanism immediately over the bed of a press with said pair of stationary jaws positioned on each side of the die area of said press.

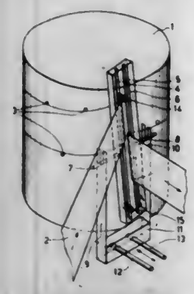
3,123,271
TAPE DRIVE MECHANISM
George N. Johnson, Tujunga, Calif., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Continuation of application Ser. No. 831,106, Aug. 3, 1959. This application Nov. 26, 1962, Ser. No. 241,102
11 Claims. (Cl. 226—186)



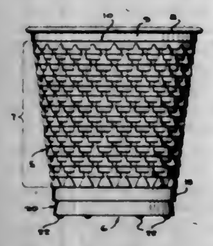
3. In a transporting mechanism for a tape having a particular width, the combination of:
a drive capstan having first and second cylindrical portions, the second cylindrical portion having an axial dimension greater than the particular width of the tape, and
a nip-roller having first and second cylindrical portions, the second cylindrical portion on the nip-roller having an axial dimension greater than the particular width of the tape,
the first cylindrical portion on the drive capstan engaging the first cylindrical portion on the nip-roller to obtain a driving of the nip-roller by the drive capstan and the second cylindrical portion on the nip-roller being disposed relative to the second cylindrical portion on the drive capstan to provide a disposition of the tape between the second cylindrical portions on the drive capstan and the nip-roller,
the product of the ratio of the diameters of the first and second cylindrical portions on the drive capstan and the ratio of the diameters of the first cylindrical portions on the drive capstan and the nip-roller and the ratio of the diameters of the second and first cylindrical portions on the nip-roller being greater than one to obtain a tensioning of the tape and a slippage of the tape in its drive by the capstan and the nip-roller.

3,123,272
ADJUSTABLE TAPE GUIDE ELEMENTS
Viktor Pollaschek, Vienna, Austria, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Oct. 12, 1962, Ser. No. 230,061
Claims priority, application Austria Oct. 26, 1961
12 Claims. (Cl. 226—197)

1. Apparatus for recording and/or reproducing information on a record carrier comprising: a stationary drum over the periphery of which a tape-shaped record carrier is adapted to be led, a supporting member mounted adjacent to the drum, two mutually parallel feeding guides fitted on said supporting member, the record carrier being led to and from the periphery of the drum around said feeding guides, said supporting member being movable transversely to the axes of said feeding guides and being tiltable towards the axis of the drum, the feeding guides in the position of the supporting member closest to the drum being substantially at the same distance from the drum and lying substantially parallel to the periphery thereof, and means coacting with said supporting member and said feeding guides for limiting and directing the placement of said supporting member and feeding guides close to the surface of the drum.

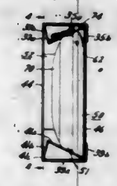


3,123,273
CUP FOR HOT BEVERAGES
William L. Miller, Skokie, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed Jan. 9, 1961, Ser. No. 81,390
17 Claims. (Cl. 229—1.5)



12. A cup structure of the character described comprising a thin walled generally frusto-conical body, a bottom, an open mouth and a finger grpiping band extending about the body beneath the mouth, said band being composed of a plurality of rows of thin walled outward protuberances closely spaced in the direction of the length of the band and each row made up of protuberances symmetrically and closely spaced about the cup circumferentially, the spacing of said rows and the protuberances therein being so close that a finger or thumb of a person gripping the cup body at the band will engage only small area peak portions of the thin walled protuberances and not main body portions between the protuberances and rows and air circulating spacing will be provided between the protuberances of the rows and between the rows of the band and also between the thumb or finger portions engaging protuberances and rows thereof and body wall portions underlying and not contacted by said protuberance engaging thumb or finger portions, the protuberances are generally triangular in shape and arched outwardly with the bases of such protuberance triangles arranged in circumferential alignment in the respective rows and each presenting a generally horizontal shoulder forming with the connected arched wall portion an acute angle effective to hold liquid fillets in heat dissipating contact with said protuberances and against free circulation in hot liquid which may be contained in the cup, and wherein the walled finger gripping band also includes outward grooving extending circumferentially thereabout and intersecting rows of the protuberances, and there also being stop means adjacent the bottom of the cup and engageable by a bottom portion of a like nested cup to determine the positioning of a cup within which it is nested, said stop means being cooperatively spaced with relation to said grooving and the protuberance rows so that the protuberances on a nested cup always will be lined up with the grooving in the cup in which it is nested and thus be cleared of any wall nesting contact of protuberances with said grooved band wall portions.

3,123,274
PACKAGING CARTON FOR CLOCKS OR THE LIKE
Norman E. Burke, Framingham, Mass., assignor to General Electric Company, a corporation of New York
Filed Mar. 21, 1962, Ser. No. 181,359
6 Claims. (Cl. 229—14)

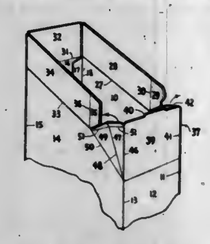


2. A carton for packaging a clock or a similar item comprising four side walls which when assembled form a tubular portion of the carton having a rectangular cross-section, two end walls perpendicular to said side walls, two flap sections each having an integral cushion segment and a cushion segment flap, one of said cushion segments being formed integral with and hinged to one end of one of said side walls, and the other cushion segment being formed integral with the opposite end of said wall, both of said flap sections being positioned within said carton to form angled cross-sections with each of the cushion segment flaps supported by the corner formed by a respective one of said end walls and the side wall opposing said one side wall and with the joint between each cushion segment flap and its adjoining cushion segment being spaced from said opposing side wall so that the cushion segments are adapted to resiliently support opposing portions of the item to be packaged within the carton.

3,123,275
POUR SPOUT CARTON
Hilary D. Bunger, Battle Creek, Mich. (Little Fox Lane, Weston, Conn.)
Filed Feb. 9, 1962, Ser. No. 172,234
20 Claims. (Cl. 229—17)

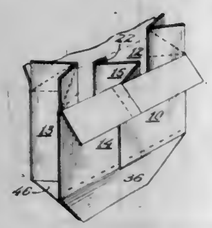
1. A carton, comprising front and back panels joined at their respective side edges by side panels to form a tubular structure, an inwardly foldable spout flap joined to one of said side panels along one edge thereof at one end of said structure, bellows means on each side of said spout flap connecting said spout flap by means of fold lines to said front and back panels so that said bellows means close and open as said spout flap is pivoted toward said front and back panels to closed position and away from said front and back panels in open position, a top flap connected to the free edge of one of said front and back panels at said one end of said structure, and

means on said top flap overlying the free edge of said spout flap when the latter is in closed position and retaining said spout flap in closed position, said last-named means having a predetermined fold line about which said



means is moved when said spout flap is moved away from closed position so that said spout flap is movable from closed position without substantial deformation thereof.

3,123,276
COLLAPSIBLE EGG CASES
Thomas G. Mairs, St. Paul, Minn., assignor to Waldorf Paper Products Company, Ramsey, Minn., a corporation of Minnesota
Filed Aug. 9, 1962, Ser. No. 215,869
1 Claim. (Cl. 229—41)



A collapsible egg case including a one piece body shell including, in series,

a first side wall, an end wall, a second side wall, a second end wall, a third side wall, a partition panel, and an anchoring flap,

said third side wall being approximately one-half the width of said second side wall and secured in overlapping relation to said first side wall to form a rectangular body,

said partition wall extending parallel to said end walls and said anchoring flap being secured to said second side wall to form two compartments within said rectangular body,

closure flaps hingedly secured to the upper edges of said side and end walls,

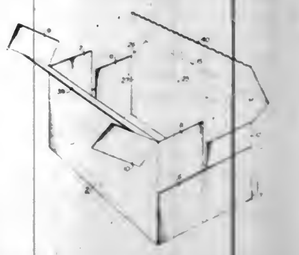
a one piece bottom structure including a bottom panel, end wall liner panels secured to the end edges thereof and pairs of flanges secured to the side edges thereof,

means securing said end wall liner panels in face contact with said end walls,

means securing said flanges in face contact with said side walls, one flange of each pair extending on one side of said partition wall, and the other flanges extending on the other side thereof,

said end walls, end wall liner panels, and wall closure flaps, bottom panel and partition panel having central lines of fold therein parallel to said side walls, and the ends of said bottom panel being diagonally creased along fold lines converging from the corners of said bottom panel to said central line of fold therein.

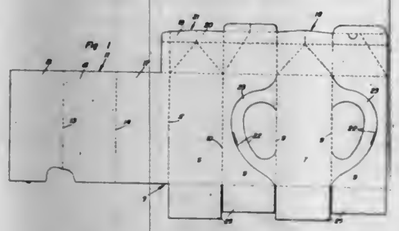
3,123,277
CARTONS
Alastair R. Menzies, West Vancouver, British Columbia, Canada, assignor to The Canada Rice Mills Limited, Vancouver, British Columbia, Canada
Filed Aug. 28, 1961, Ser. No. 134,470
Claims priority, application Canada June 14, 1961
1 Claim. (Cl. 229—51)



A pre-formed carton constituted by a plurality of panels articulated together along first common score lines, said plurality of panels comprising a main panel, a pair of secondary panels, and a tertiary panel respectively forming a top, a pair of side walls and a bottom; end flaps each articulated to an associated end of each of said secondary and tertiary panels along a second common score line; end flaps each articulated to an associated end of each of said secondary and tertiary panels along a second common score line; end flaps each articulated to an associated end of said main panel along a third common score line coextensive with said second common score lines, all of said flap forming inner and outer end walls; said top having a double row of continuous slits on the inner face thereof extending normal to said third common score lines and from end to end of said top and defining opposed sides of a tear-strip, said double row of continuous slits terminating, at each end thereof, in slits formed in, and coextensive with, said third common score lines; one end of said tear-strip terminating in an enlarged portion adapted to form a pull-tab for tearing said tear-strip from said top, all portions of said tear-strip being located within the confines of said top and being bounded thereby; and a fourth score line, on the inner face of a selected one of said side walls, extending from end to end of the latter so as to divide said selected wall into first and second portions, the width of the end flaps of said selected side wall corresponding to the width of said first portion; whereby, when said pull-tab has been torn from said top, the remaining portions of said top are capable of being grasped and torn, through the intermediary of said slits in said third common score lines, along said third common score lines away from the end flaps and articulated about the first common score lines forming the marginal side edges of said top to gain unobstructed access to the interior, and hence to the contents, of the carton, and said second portion of said selected side wall is capable of articulation along said fourth score line to gain further unobstructed access to said interior of the carton.

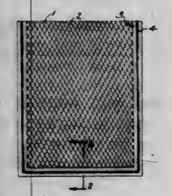
3,123,278
MILK CARTON
Jake E. Morgan, 127 S. 7th St., Blythe, Calif., and Orville D. Schoolcroft, 314 S. Kendrick, Flagstaff, Ariz.
Filed Mar. 1, 1962, Ser. No. 176,565
4 Claims. (Cl. 229—52)

1. A carton of paperboard or the like comprising a back wall and side walls joined to said back wall by fold lines, said side walls having spaced slits extending thereinto from the fold lines and defining foldable handles swingable laterally and rearwardly on said fold lines to a convergent operative position centrally behind said back wall, said carton further comprising a front wall integral with one of the side walls, and a reinforcing and insulating liner integral with said front wall and comprising a plurality



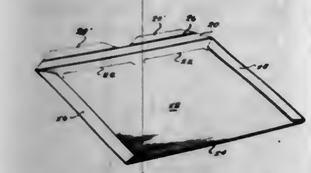
of sections joined by fold lines and extending in opposed relation to the back and side walls and adhered to the inner faces thereof.

3,123,279
PLASTIC BAG
Thomas Arnold Day, Westmount, Quebec, Canada, assignor to Du Pont of Canada Limited, Montreal, Quebec, Canada, a corporation of Canada
Filed May 21, 1962, Ser. No. 196,276
Claims priority, application Canada May 25, 1961
1 Claim. (Cl. 229—53)



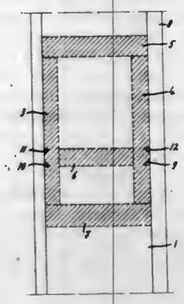
In a plastic bag, the combination of printable thermoplastic film on one side and extruded thermoplastic net on the other, three margins of said film and net being joined together by folding the film over the net and sealing the film through the net to itself.

3,123,280
ENVELOPE TYPE PACKAGING FOLDER
Grover C. Currie, 2518 Inverness Road, Charlotte, N.C.
Filed Mar. 12, 1962, Ser. No. 178,836
12 Claims. (Cl. 229—76)



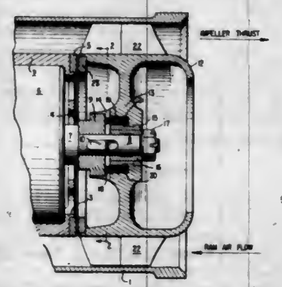
1. An envelope type packaging folder comprising an envelope body structure incorporating first and second side wall panels, a closure flap on one of said side wall panels, and at least one slit tab in the other of said side wall panels openable upon flexing of said other of said side wall panels for interlocking insertion of said closure flap thereat, said closure flap being intermediately foldable for flexing to facilitate insertion at said slit tab, and said slit tab overlying said closure flap upon insertion to hold said flap at a properly closed disposition despite the previous flexing thereof during insertion.

3,123,281
PACKAGING MATERIAL
Marcus de Vries, Leeuwarden, Netherlands, assignor to N. V. Leeuwarder Papierwarenfabriek, Leeuwarden, Netherlands
Filed Jan. 25, 1961, Ser. No. 84,813
Claims priority, application Netherlands Jan. 29, 1960
2 Claims. (Cl. 229—87)



1. A packaging material for packaging finely divided materials, particularly tobacco, comprising a paper layer having one side thereof printed and adapted to face the outside of a package, a metal foil protecting coating on the unprinted side of said paper layer, said metal foil protecting coating covered side of said paper layer being adapted to form the inside of a package, restricted areas of adhesive on the printed side of said paper, and a plastic film having an area greater than the area of said layer of paper on said adhesive and adhered to said paper layer by said adhesive such that the over-all area of the paper and plastic film are fixed relative to each other and unadhered areas can move relative to each other for giving the material good suppleness and feel, the edges of said plastic film projecting beyond the paper layer and being adapted to be sealed to each other for forming a package with the metal foil protecting coating covered side of said paper layer on the inside of the package and said plastic film on the outside of the package.

3,123,282
IMPELLER BRAKE
Gerard T. Pothier, Pawcatuck, and Daniel P. McGrath, Stonington, Conn., assignors to General Dynamics Corporation, New York, N.Y., a corporation of Delaware
Filed Feb. 15, 1962, Ser. No. 173,507
7 Claims. (Cl. 230—114)



1. A fluid medium impeller system comprising;

(*a*) a fluid flow conduit

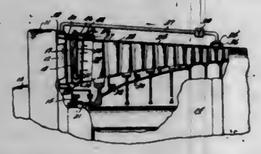
(*b*) a selectively operable motor mounted in said conduit,

(*c*) said motor including a rotatable power shaft,

(*d*) a driving ring keyed to said shaft,

(*e*) stop means carried by said shaft and spaced from said ring,
(*f*) an impeller slidably mounted on said shaft for axial movement between a first position against said stop means and a second position against said ring,
(*g*) means carried by said impeller to continuously engage said ring to be driven thereby,
(*h*) spring means acting between said ring and said impeller to maintain said impeller against said stop,
(*i*) a first friction ring carried by said motor,
(*j*) and a second friction ring carried by said impeller and adapted to engage said first friction ring when said impeller is shifted to said second position in response to a predetermined fluid flow pressure acting on the upstream side of said impeller.

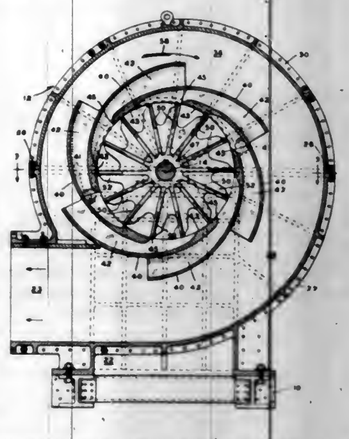
3,123,283
ANTI-ICING VALVE MEANS
Robert Francis Leis, Wakefield, Mass., assignor to General Electric Company, a corporation of New York
Filed Dec. 7, 1962, Ser. No. 243,153
10 Claims. (Cl. 230—114)



1. In a compressor for a gas turbine engine, a vane assembly comprising,
a compressor casing,
a plurality of hollow vanes extending radially inward from said casing,
a hollow spindle on an end of each of said vanes,
the interior of each of said spindles communicating with the interior of the respective vane,
a plurality of radially extending cylindrical passages in said compressor each receiving one of said spindles for rotation therein,
each of said vanes and its associated spindle being rotatable between a first position and a second position,
a first port in the wall of each of said radially extending passages,
means supplying high temperature fluid to each of said first ports,
a second port in the wall of each of said spindles communicating with interior of said spindle,
each pair of first and second ports aligned to form a maximum area opening when said vanes are in said first position and misaligned to form a minimum area opening when said vanes are in said second position,
whereby the high temperature fluid is directed to the interior of each of said vanes through different area openings when said vanes are in said first position and in said second position.

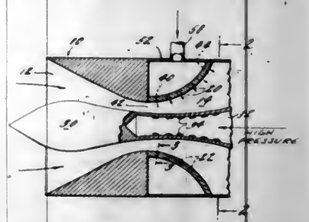
3,123,284
SUCTION FAN
John Eckert Greenawalt, Bronxville, N.Y., assignor to Greenawalt Sintering Co., Inc., New York, N.Y., a corporation of New York
Filed Sept. 5, 1961, Ser. No. 135,807
5 Claims. (Cl. 230—128)

1. In a blower for moving gases to provide a suction on the intake side, a housing, an impeller journaled for rotation in said housing, said impeller having radially disposed blades, said impeller blades having entrance ends and discharge ends, a diffuser comprising a plurality of spiral blades forming spiral, outwardly flared discharge nozzles therebetween, said diffuser blades having inner entrance ends and discharge outer ends, said diffuser blades entrance ends being disposed adjacent said impeller blades discharge ends and each having a land extending a substantial distance circumferentially from its innermost cutoff edge, said lands having a fixed radius throughout their lengths measured from the axis of rotation of said impeller and the circumferential length of each of said lands not exceeding one half the circumferential distance between the cutoff edges of successive diffuser blades, said housing being involute in shape and having an entrance chamber adjacent said impeller



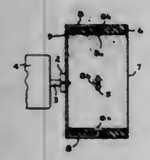
blade entrance ends, said housing having a discharge chamber adjacent the discharge ends of said diffuser nozzles, said diffuser being further characterized by its fixed radius lands having constant clearance gaps between the discharge ends of the impeller blades throughout the lengths of said lands and said lands being of sufficient length in relation to the distance between tip ends of successive impeller blades and said clearance gaps being sufficiently small to briefly halt outward flow of gases moved by said impeller so that the gases moving adjacent the impeller blades receive the full angular velocity of the tip ends of the impeller blades prior to entering said spiral discharge nozzles.

3,123,285
DIFFUSER WITH BOUNDARY LAYER CONTROL
John G. Lee, Farmington, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Jan. 21, 1963, Ser. No. 252,821
5 Claims. (Cl. 230—133)



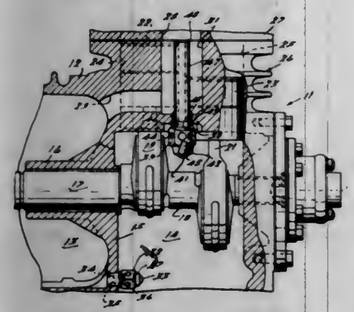
1. In an intake duct for an air consuming mechanism such as an axial flow device, means for moving the air through the duct including a diffuser adjacent the downstream end thereof, said diffuser including a longitudinal axis and comprising at least an outer wall portion substantially arcuate in cross section and diverging in a downstream direction and forming an abruptly continuously increasing cross-sectional area whereby adverse pressure gradients are introduced in the flow stream through the duct as a result of the decreasing velocity and increasing pressure, means for energizing substantially only the boundary layer moving adjacent along said wall portion comprising a plurality of relatively small ejecting passage means in said wall portion for injecting secondary fluid into said boundary layer in a multiplicity of relatively high energy streams and in a direction tangentially of said arcuate wall section and substantially about said axis to induce centrifugal forces in said boundary layer and reduce the onset of separation in said abruptly increasing cross section.

3,123,286
FIBROUS CENTRIFUGAL BLOWER
Roy W. Abbott, Jeffersontown, Ky., assignor to General Electric Company, a corporation of New York
Filed Oct. 12, 1962, Ser. No. 230,067
4 Claims. (Cl. 230—134)



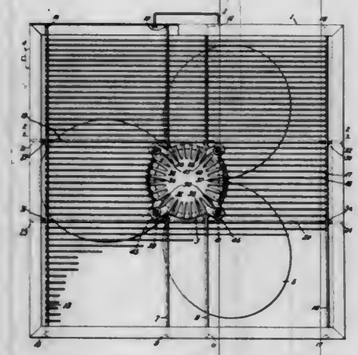
1. A centrifugal blower assembly comprising a support and a flexible annular blower member of porous material supported thereon, said support comprising a hub adapted to be mounted on a drive shaft and a plurality of spaced arms connected to said hub and parallel to and spaced equal distances from said shaft, said arms having radially extending end portions terminating in disc-shaped tips, said blower member having a plurality of slots therein adapted to pass over and to be removably received on said end portions of said arms in button-like fashion whereby said tips anchor said blower member on said arms, said arms including the radially extending end portions and tips providing the sole means for supporting and rotating said blower member in coaxial alignment with said shaft.

3,123,287
CRANKCASE VENTING ARRANGEMENT FOR REFRIGERATING SYSTEM
Emil T. Neubauer, Sidney, Ohio, assignor to Copeland Refrigeration Corporation, Sidney, Ohio, a corporation of Michigan
Filed Dec. 16, 1959, Ser. No. 859,993
6 Claims. (Cl. 230—206)



1. In a refrigerant motor-compressor unit of the type having an oil return check valve passage leading from the motor compartment to the compressor crankcase, a check valve disposed in said oil return check valve passage, a gas equalizing check valve passage leading from said crankcase to the compressor inlet and separated from said motor compartment, a check valve disposed in said gas equalizing check valve passage, a tube forming the exit portion of said gas equalizing check valve passage, and an unrestricted refrigerant passage leading from said motor compartment to said compressor inlet, a portion of said refrigerant passage surrounding the mouth of said tube in eductive relation therewith.

3,123,288
FAN GUARD AND MOTOR SUPPORT
Burton P. Franklin, Danville, Va., assignor to General Electric Company, a corporation of New York
Filed Sept. 15, 1961, Ser. No. 138,308
3 Claims. (Cl. 230—273)

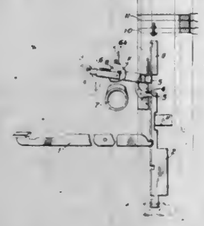


1. An electric fan assembly having a combined fan guard and motor support comprising, a casing, four elongated rod-like members vertically arranged in parallel relation to each other to form the only vertical members of the support, said four parallel members having their extremities rigidly fixed directly to said casing, two elongated rod-like members arranged parallel to each other and lateral to said four parallel members, said two parallel members having their extremities rigidly fixed directly to said casing to form the only lateral members of the support attached to the casing, said four parallel members and said two parallel members being arranged in approximately the same plane and being rigidly fixed to each other at respective crossing points, the inner pair of said four parallel members having a central region positioned between said two parallel members, a motor driven fan, means for resiliently mounting the motor driven fan to said central region to provide the sole connecting means between the motor driven fan and the support, and fan guard means rigidly secured to said four parallel members.

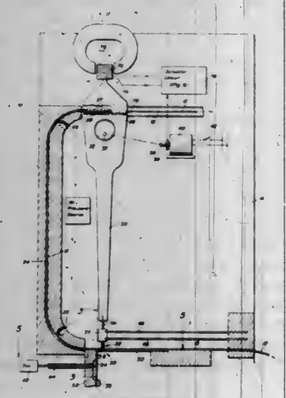
3,123,289
TAPE PUNCHING DEVICE
Pierre Jean-Baptiste Astier, 4 Rue Eugene Jumin, Paris 19, France
Filed Nov. 14, 1960, Ser. No. 69,116
Claims priority, application France Nov. 14, 1959
3 Claims. (Cl. 234—103)

3. A device for perforating a paper tape comprising a plurality of perforating means for punching holes in the paper tape, individual electromagnetic means to move each of said perforating means as required, additional electromagnetic means for advancing the paper tape in timed relationship with said perforating means, a keyboard, and key controlled means for operating said individual

electromagnetic means, said key controlled means including a counter-weight mounted at one extremity of said key controlled means, a bank at the upper extremity of said counter-weight, a trigger adapted to engage with said bank, a yoke adapted to be supported by said trigger, a rotating cam of peripheral portion projecting over an angular distance within the range of 5.4° to 60° in said yoke, articulation means adapted to enable said yoke to swing in one plane, a roller mounted and driven to rotate continuously and regularly and located adjacent to said cam, said cam being adapted to come into contact with said roller upon articulation of said yoke, and a linkage adapted to cooperate with said yoke for displacement in said plane and further including an electrical switching means controlled by said linkage whereby said electrical switching means operates one of said individual electromagnetic means which in turn operates a corresponding one of said perforating means.



3,123,290
HIGH SPEED PUNCH
Jacob Rabinow, Bethesda, Md., and John G. Macdonald, Washington, D.C., assignors to Rabinow Engineering Co., Inc., Rockville, Md.
Filed Oct. 31, 1962, Ser. No. 234,436
15 Claims. (Cl. 234—115)

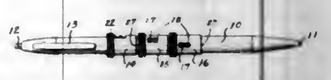


1. In a high speed tape perforating apparatus; a claw; perforating means. and means attached to said claw and said perforating means for

(*a*) moving said claw in an orbital path to engage one portion of the tape and displace the tape portion and for withdrawing from the tape while maintaining the tape engaging part of the claw substantially parallel to the engaged portion of the tape, and

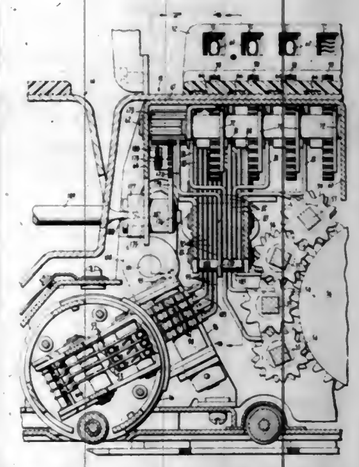
(*b*) concurrently moving said perforating means in a direction substantially normal to another portion of the tape in time with said claw so that the tape is perforated when said claw is in a non-tape-displacing portion of its cycle.

3,123,291
RESISTOR COLOR DECODER
Ronald L. Madry, Corpus Christi, Tex.
(1601 Alta Vista, Rte. 2, Box 640–D, Alvin, Tex.)
Filed May 18, 1962, Ser. No. 195,722
2 Claims. (Cl. 235—57)



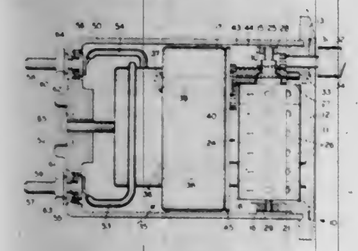
1. A color decoding device for determining the resistance of resistors which are coded by a number of colored bands or the like thereon, comprising an elongated cylindrical body, a plurality of turnable sleeves turnably mounted on said body in end-to-end relation, said body having a plurality of pairs of circumferential rings fixed thereon, there being a pair of rings beneath each sleeve, one ring of each pair comprising a circumferential series of different color denominations corresponding to band colors of coded resistors, the other ring of each pair comprising a circumferential series of digits in axial alignment with said color denominations, each sleeve being formed with a pair of axially aligned windows for respectively viewing a single color denomination and a single digit, means for separately turning each sleeve so that the color of the bands of a coded resistor are displayed through the associated windows of said sleeves, and said simultaneously displayed digits forming a number corresponding to the resistance of the resistor in question, and each of said sleeves having at one end thereof a plurality of notches, a pin on the cylindrical body adapted to be received by the notches, spring biasing means reacting between the cylindrical body and each of the sleeves to maintain the notches normally in engagement with the pins and the sleeve in its adjusted position.

3,123,292
ZERO RESTORE MECHANISM
Ingemar H. Lundquist, Oakland, Calif., assignor, by mesne assignments, to International Postal Supply Corporation, a corporation of Massachusetts
Filed Sept. 12, 1960, Ser. No. 55,402
16 Claims. (Cl. 235—191)



1. In a postage metering device having a rotary printing drum, a series of numeral type wheels mounted for adjustment in said printing drum, a plurality of manually differentially settable members, one for each of said type wheels operable upon the differential setting thereof to adjust the corresponding one of said type wheels, and a zero resetting mechanism, the combination comprising a power-driven means for resetting said settable members through said zero resetting mechanism to adjust the corresponding type wheels to a zero representative position, and a manipulative means selectively operable to effect operation of said power-driven means.

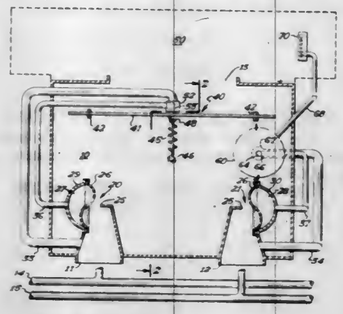
3,123,293
TIME METER ASSEMBLY
Warren N. Kernander, Lynchburg, Va., and Carl F. Van Bennekom, Lynnfield, and Clarence W. Camp, Lynn, Mass., assignors to General Electric Company, a corporation of New York
Filed Nov. 22, 1957, Ser. No. 698,091
8 Claims. (Cl. 235—103)



1. An electric panel time meter assembly comprising a unitary panel mounting member having a front wall portion and a bezel portion integral therewith, said front wall portion having a viewing aperture therethrough and a plurality of integral support projections extending rearwardly from the front wall portion, indicating means comprising an odometer including a plurality of indicating wheels rotatably mounted on a shaft, the ends of said shaft being independently supported by bearing means on certain of said projections to position said indicating wheels immediately adjacent said aperture, substantially constant speed electrically operated driving means independently mounted on certain other of said projections in spaced separation from said indicating means, means forming a driving connection between said driving means and said indicating means including a separately mountable intermediate drive connection, and a plate member fixedly mounted on said certain other of said projections intermediate said driving and said indicating means and cooperating with said wall portion for supporting said intermediate drive connection in fixed operative engagement therebetween.

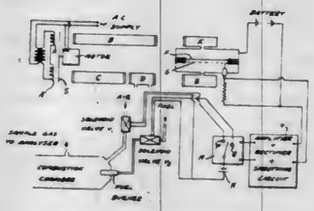
3,123,294
AIR CONDITIONING MIXING BOX CONTROL
Lawrence E. Donahue, Mount Prospect, Ill., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Apr. 19, 1962, Ser. No. 188,734
4 Claims. (Cl. 236—13)

1. In air conditioning control apparatus, a mixing box, a pair of inlet conduits positioned in said box and adapted to be connected to supply conduits carrying air of different temperatures, self-contained valve means positioned in said inlet conduits and controlling the flow of temperate air from the supply conduits to said mixing box said mixing box having a discharge opening in said mixing box adapted to discharge temperate air to a space to be air conditioned, a mixing baffle positioned in said mixing box and extending substantially across the interior of the same to be affected by an average pressure within the box, said baffle being pivotally mounted within said box and including a spring bias means connected thereto, said mixing box with said biased baffle providing a pressure regulator within the mixing box, orifice means positioned within said mixing box adjacent said pivoted baffle and controlled by movement thereof, said orifice means including a pair of concentric orifices, one leading to the inlet conduit and the other to the motive chamber of one of said self-contained valves, said just-named orifice



means controlling with said pivoted baffle the pressure in the motive means of said one of said self-contained valves in one of said inlet conduits, and temperature responsive means adapted to be responsive to the temperature of a space to be air conditioned and connected in controlling relation to the second self-contained valve positioned in said second inlet conduit.

3,123,295
MEANS FOR ANALYSING COMBUSTION PRODUCTS AND VARYING AIR-FUEL RATIO
Albert E. Martin, Newcastle-upon-Tyne, England, assignor to Sir Howard Grubb Parsons & Company Limited, Newcastle-upon-Tyne, England
Filed Dec. 13, 1957, Ser. No. 702,701
Claims priority, application Great Britain Jan. 2, 1957
1 Claim. (Cl. 236—15)

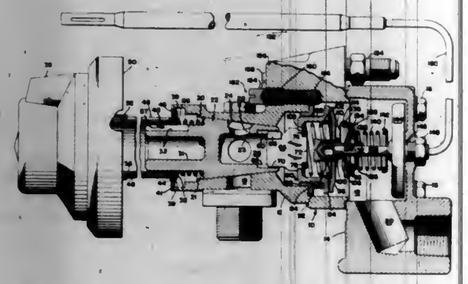


In combustion control means for the analysis of combustion products and varying the air/fuel ratio in response to variation of the carbon monoxide and carbon dioxide content thereof, an infra-red gas analyser for the measurement of the carbon monoxide and carbon dioxide content, the output signal of said analyser being proportional to a value $(CO_2)+k(CO)$ where (CO_2) and (CO) represent concentration of those gases in the combustion products and k is a constant appropriate to the combustion equipment in use, the value of k being chosen so that $(CO_2)+k(CO)$ increases the air/fuel ratio decreases, the arrangement being that variation of the value $(CO_2)+k(CO)$ from a predetermined value is used to vary the air/fuel ratio until such time as the original value is restored, in which the gas analyser comprises an infra-red gas analyser having two beam paths one containing the sample to be analysed and the other a comparison substance the beams of radiation leaving each path falling on a detecting unit having a detection chamber in each path containing a mixture of carbon monoxide and carbon dioxide, the two

detecting chambers being separated by a thin metal diaphragm adjacent an electrode such that any difference in pressure between the chambers produces an electric signal, a sealed tube being introduced into the sample path containing a predetermined quantity of carbon dioxide to reduce the absorption of carbon dioxide in the sample path to a level such that the output signal from the detecting unit is proportional to a value

$$(CO_2)+k(CO)$$

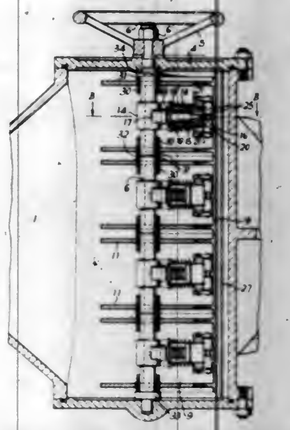
3,123,296
THERMOSTATIC VALVE CONTROL
Clarence Wantz and Roy C. Demi, Greensburg, Pa., assignors to Robertshaw Controls Company, a corporation of Delaware
Filed Feb. 28, 1958, Ser. No. 718,274
3 Claims. (Cl. 236—99)



1. In a thermostatic control device, the combination comprising a housing having an inlet and an outlet, a valve seat in said housing, a valve member cooperable with said seat to regulate a flow of fluid to said outlet, means operatively connected to said valve seat for moving said valve seat into engagement with and away from said valve member, thermally responsive means operative for imparting regulatory movement to said valve member in response to temperature variations, said thermally responsive means including a shaft which moves in response to variations in the temperature sensed by said thermally responsive means, biasing means, a stop member movable on said shaft only in the direction away from said valve member, means coupling said stop member with said biasing means and said valve member whereby lost motion coupling is provided in response to normal operative movement of said valve member by said valve seat in a direction away from said valve seat so that the position of said stop member on said shaft remains unchanged while direct coupling is provided for movement of said valve member in response to the movement of said shaft.

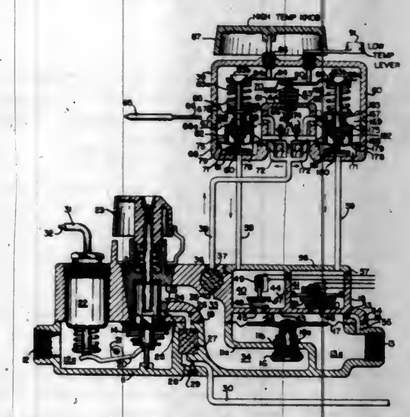
3,123,297
THERMOSTATICALLY CONTROLLED VALVES
John Alfred Lipscombe, Ashford, near Staines, Middlesex, England, assignor to Walton Engineering Co. Limited, London, England, a British company
Filed May 1, 1962, Ser. No. 192,041
Claims priority, application Great Britain May 10, 1961
2 Claims. (Cl. 236—34.5)

1. A rotary valve, comprising a cylindrical casing having at least three ports spaced around the periphery of said casing, a single fixed shaft extending axially of said cylindrical casing, a plurality of rotors rotatably mounted on said shaft and each having at least two curved shutter members thereon spaced from each other around the cylindrical casing and being substantially aligned with the corresponding shutter members on the other rotors, said shutter members on each rotor being spaced around the casing so as to leave at least one port covered and at least one port open in an end position of rotation of said rotor, the corresponding shutter members on all of the rotors completely closing a port when they cover it in one end position of rotation of the rotor, said curved shutter members being sections of a cylinder wall having a curvature substantially the same as the curvature of the interior of said cylindrical casing and being movable along the interior of said cylindrical casing closely adjacent thereto and each extending in the peripheral direction of said casing a distance slightly greater than the dimension



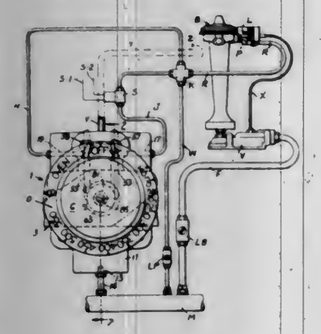
of a port in the peripheral direction, and a plurality of thermostat driving elements of the wax filled type, one for each rotor, said thermostat driving elements being fixed to said shaft within a respective rotor section and articulated to the rotor sections for simultaneously rotating the rotor sections by the expansion of the wax in response to a change in temperature within said casing to move at least one of the shutter members on each rotor away from one port and at least one of the other shutter members on each rotor over another port.

3,123,298
RANGE OVEN CONTROL SYSTEM AND APPARATUS
Leonard I. Wolffe, Los Angeles, Calif., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Sept. 6, 1961, Ser. No. 136,357
5 Claims. (Cl. 236—46)



3. In control apparatus for heat transfer means, the combination comprising fuel flow control means, single temperature responsive means for regulating said fuel flow control means, said temperature responsive means having first means adapted to regulate fuel flow at one rate to maintain a first preselected temperature and second means adapted to regulate fuel flow at another rate to maintain a second preselected different degree of said temperature, and clock controlled means including switches and valves for selectively rendering said first means or said second means operative or inoperative to provide operation of the heat transfer means so as to sequentially maintain said different temperatures for preselected periods of time.

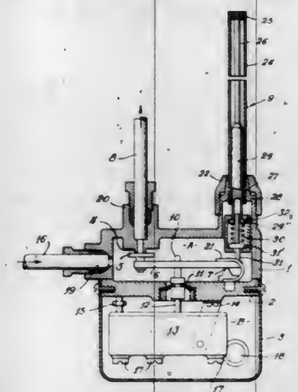
3,123,299
GAS REGULATOR SYSTEM
Bradley C. Douglas, Kirkwood, Mo., assignor, by mesne assignments, to Micro Controls, Inc., St. Louis, Mo., a corporation of Missouri
Filed Mar. 5, 1962, Ser. No. 177,512
20 Claims. (Cl. 236—68)



1. A gas regulator system comprising a main burner, pilot burner means associated therewith, a main burner valve, thermostatic means adapted in response to the temperature produced by an ignited low flow of gas from the pilot burner means to close said valve and in response to the temperature produced by an ignited higher flow of gas from the pilot burner means to open said valve, a low-flow gas connection between the pilot burner means and a source of gas, auxiliary piping means connecting the pilot burner means with a source of gas, a first auxiliary thermostatic valve and a cut-off valve therefor controlling flow in a part of said auxiliary piping means, a second auxiliary thermostatic valve controlling flow in another part of the auxiliary piping means connected in parallel with said cut-off valve, means responsive to heat from the main burner adapted thermostatically to actuate said auxiliary valves, said first auxiliary valve when the cut-off valve is open being adapted to control auxiliary flow of gas to the pilot burner means throughout a comparatively wide range of temperatures, said second auxiliary valve when said cut-off valve closes being adapted to control auxiliary flow of gas to said pilot burner means throughout a smaller range of temperatures.

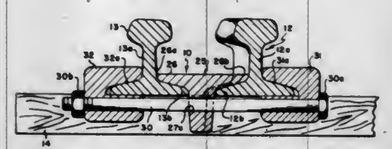
3,123,300
TEMPERATURE RESPONSIVE CONTROLLER FOR GAS BURNERS
Heinz Goch, Dortmund-Wellinghofen, and Otto Suter, Osnabruck, Germany, assignors to G. Kromschroder, Aktiengesellschaft, Osnabruck, Germany
Filed Sept. 2, 1960, Ser. No. 53,796
Claims priority, application Germany Sept. 5, 1959
3 Claims. (Cl. 236—102)

1. A temperature responsive safety cut-off valve and switch arrangement comprising a housing having gas inlet and outlet and a channel connecting said inlet and outlet, a tubular temperature-sensing element affixed to said housing at one end, an actuating rod arranged within said temperature-sensing element and affixed at one end to the free end of said temperature sensing element, lever means mounted in said housing, fulcrum means dividing said lever means into a first lever arm and a second lever arm, means for transmitting motion between said actuating rod and said first lever arm, a valve mounted in said channel between said inlet and said outlet comprised of a valve seat and a valve head cooperating therewith, said valve head being affixed to said second lever arm and so



arranged that said valve is closed when said temperature-sensing element is in the contracted condition and said valve is open when said temperature sensing element is in the expanded condition, an electrical switch adjustably arranged and adapted to be connected in a circuit with an ignition element, means for transmitting movement of said second lever arm to actuate said switch, the arrangement being such that said switch is opened when said temperature-sensing element is caused to expand to the degree corresponding to a predetermined temperature, and means for adjusting the relative positions of said switch and said switch actuating means so that said switch is opened at the proper predetermined temperature.

3,123,301
RAILROAD TRACK GUARD RAIL CLAMP
Leon S. Barksdale, 4000 74th St. N., St. Petersburg, Fla.
Filed June 19, 1961, Ser. No. 117,897
2 Claims. (Cl. 238—23)



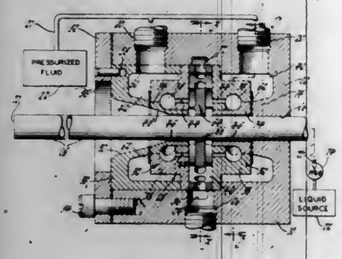
1. In a guard rail and main rail combination of the character described wherein said rails have webs and flanges and the guard rail has an end section angularly disposed with respect to the main rail, guard rail clamping means comprising a wedge member disposed between said main rail and said end portion, said wedge member including a tapered plate portion and a depending tapered stem portion, said plate portion overlying the flanges of said rails and having one edge in engagement with the web of said main rail and a second edge in complementary engagement with the web of said guard rail, said

stem portion having an aperture and extending between said flanges and in engagement therewith, and draw bolt and bracket means for drawing said rails toward one another into said engagement with said edges, said draw bolt extending below said rails and through said aperture.

3,123,302
METHOD AND APPARATUS FOR ATOMIZING LIQUID

William L. Drayer, Warren, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Mar. 5, 1962, Ser. No. 177,601
10 Claims. (Cl. 239—4)



9. A method for atomizing liquid from the free end of an elongated member comprising the steps of advancing liquid towards said free end, maintaining a portion of said member in a fixed position, and bodily orbiting another portion of said member at a frequency at least equal to the resonant frequency of the member so as to create sufficient centrifugal force to atomize the liquid from said free end.

3,123,303
BATH OIL DISPENSER

Harry S. Dearling, New York, N.Y., assignor to Duval Sales Inc., New York, N.Y., a corporation of New York

Filed Aug. 28, 1962, Ser. No. 219,845
7 Claims. (Cl. 239—44)

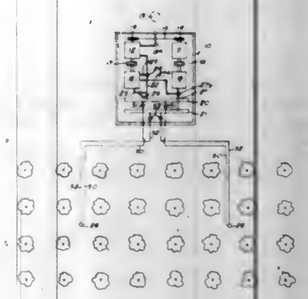


1. A bath oil dispenser comprising a container including a threaded neck bounding a neck opening and a body wall of a penetrable plastic, a wick extending through said body wall and including an inner portion extending internally of said container and an outer portion extending externally of said container, said wick being saturable with a bath oil when poured into said container through said neck opening, a housing, means mounting said container within said housing with said threaded neck projecting therefrom, said housing forming an enclosure about said container and said outer portion of said wick, there being apertures in said housing enabling the flow through said enclosure of bath water such that said bath oil is miscible therewith, and a threaded cap engaging said threaded neck and serving as a removable closure for said container.

3,123,304
ORCHARD TREATING SYSTEM

Robert W. Sutton, Alexandria, Va., assignor, by direct and mesne assignments, to The Hydrand Corporation, a corporation of Delaware

Filed Feb. 2, 1962, Ser. No. 170,722
3 Claims. (Cl. 239—77)



3. In a centrally controlled system for treating orchards, a fixed liquid header, means supplying liquids under pressure to said liquid header, an air header fixed adajcent said liquid header, means supplying air under pressure to said air header, separate air and liquid conducting conduits leading from respective headers to a series of fixed joint delivery points distributed throughout an orchard, ground supported risers located at respective delivery points, each riser having a spray head comprising separate liquid distributing means and air distributing means respectively connected to said liquid and air conducting conduits, valve means adjacent respective fixed headers for remotely and selectively controlling the delivery of liquids and/or air to said spray heads, and means actuated by the discharged liquids and/or air, for diffusing the same.

3,123,305
HYDRODYNAMIC VIBRATIVE ATOMIZER

Bernard J. Eisenkraft, 10564 Flatlands 10th St., Brooklyn, N.Y.

Filed Nov. 1, 1961, Ser. No. 149,438
4 Claims. (Cl. 239—102)

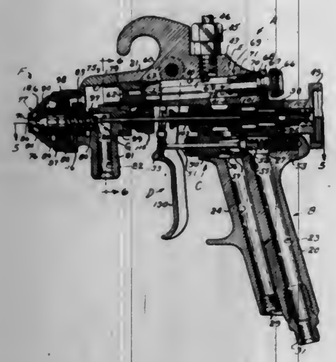


1. A hydrodynamically vibrative atomizer for dispersing a first liquid into fine particles comprising a nozzle, a rectangular orifice in said nozzle, means to introduce second fluid into said nozzle, a stream of second fluid issuing from said rectangular orifice, a thin circular disc, means supporting said circular disc at the center thereof, a bevel-edge at the periphery of said circular disc and closely adjacent to said rectangular orifice, said bevel-edge splitting said stream of second fluid, and means to introduce first liquid to be atomized to a face of said circular disc.

3,123,306
APPLICATOR GUN FOR SYNTHETIC RESINS

Richard C. Bradley, 3501 NW. 9th Ave., Fort Lauderdale, Fla.

Filed Nov. 6, 1961, Ser. No. 150,501
8 Claims. (Cl. 239—142)



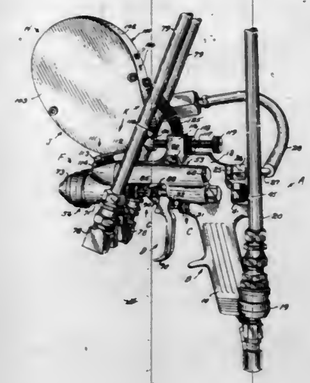
5. An applicator gun for liquids including a main body portion, nozzle means mounted upon said body portion, said nozzle means including a liquid receiving chamber having an outlet aperture, liquid supply means interconnected with the liquid receiving chamber of said nozzle means for supplying liquid adjacent one end of the liquid receiving chamber thereof, mixing means, said mixing means including a shaft and agitator means mounted upon said shaft, said agitator means including a longitudinal body portion extendant within the chamber of said nozzle means, said longitudinal body portion having protuberances therealong and extending from adjacent the point of interconnection of said liquid supply means with the liquid receiving chamber of said nozzle means to adjacent the outlet aperture of the liquid receiving chamber of said nozzle means, said main body portion of said gun including a first chamber having housing means for rotatably supporting the end of said shaft adjacent said agitator means and a second chamber having housing means for rotatably supporting the end of said shaft remote from said agitator means, said first and second chambers of said main body portion being spaced apart from each other in a juxtaposed separated relationship to prevent egress of liquid from the liquid receiving chamber of said nozzle means to the second chamber of said main body portion, an air motor mounted upon said main body portion adjacent said second chamber of said main body portion and remote from said first chamber of said main body portion, said air motor being operatively interconnected with said shaft for imparting rotation thereto, and means for supplying air under pressure to said air motor.

3,123,307
APPARATUS FOR SPRAY DEPOSITING REINFORCED SYNTHETIC RESINS

Richard C. Bradley, 3501 NW. 9th Ave., Fort Lauderdale 9, Fla.

Filed Aug. 29, 1961, Ser. No. 134,650
6 Claims. (Cl. 239—336)

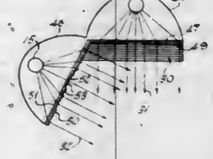
1. In apparatus for spray depositing fiber reinforced synthetic resins, a spray gun for delivering an atomized spray along a predetermined path, cutter means for delivering cut roving to within the path of the atomized spray issuing from said spray gun, said cutter means having a mouth for discharge of cut roving therefrom, and attaching means for mounting said cutter means upon said spray gun, said attaching means including pivot means and means for pivotally varying the position of said mouth of said cutter means with respect to said spray gun and regulating the angle and distance from said spray gun at which cut roving may be delivered to within the path of the spray issuing from said spray gun.



3,123,308
FLUORESCENT STREET LIGHTING SYSTEM

Kurt Franck, Newark, Ohio, assignor to Holophane Company, Inc., New York, N.Y., a corporation of Delaware

Filed June 10, 1957, Ser. No. 664,625
25 Claims. (Cl. 240—25)

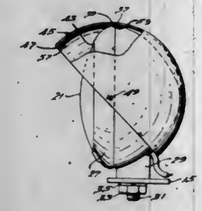


1. A lighting system for longitudinally extended areas comprising a plurality of luminaires supported above the area and spaced laterally from the longitudinal center line through said area, said luminaires each including linear, horizontal, longitudinally extending parallel light sources and cylindrical reflectors having axes parallel to the light sources and extending round the light sources, means including one of said reflectors and a horizontal prismatic refracting plate for controlling the longitudinal distribution of the light and directing substantially all the light traversing said plate in substantially vertical planes through a wide distribution angle into a region along the near side of said area and substantially confining the light through said plate to said region, and second means including another of said reflectors and a second inclined prismatic refracting plate for directing substantially all light traversing said second plate in planes substantially perpendicular to said second plate and through a narrow distribution angle into a second region along the far side of said area and adjacent said first region and substantially confining the light passing through the second refracting plate to said second region, the refracting plates extending across and closing the mouths of the reflectors.

3,123,309
REAR IMPLEMENT FLOOD AND WARNING LAMP

Norbert P. Worden, Detroit, Mich., assignor to C. M. Hall Lamp Company, Detroit, Mich., a corporation of Michigan

Filed Mar. 9, 1959, Ser. No. 798,252
3 Claims. (Cl. 240—46.23)

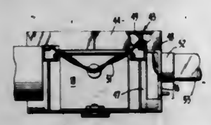


3. A combination flood and warning lamp including a sealed beam lamp unit provided with a lens, a housing for supporting said lamp unit having a body portion pivotally surrounding the rear of said lamp unit, and an annular bezel surrounding the lens of said lamp unit, the juncture of said bezel and said body defining a peripheral groove, a generally bowl-shaped flexible light filter pivotally mounted on said housing for adjustment between a first position covering said lens and a second position surrounding said body and substantially out of alignment with said lens, and integral inwardly projecting detent means on said filter selectively engageable in said peripheral groove by flexure of said filter for maintaining said filter in one of said adjusted positions.

3,123,310
BALLAST HOUSING FOR FLUORESCENT LIGHTING FIXTURES

Ray C. Dameral, Pleasant Hill, Calif., assignor to Herst Lighting Corporation, doing business as Peerless Electric Company, San Francisco, Calif., a corporation of California

Filed Sept. 15, 1961, Ser. No. 138,366
6 Claims. (Cl. 240—51.11)

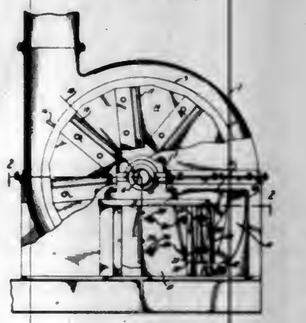


2. In a lighting fixture system, the combination comprising an elongated continuous ballast housing of generally channel configuration including a base and upwardly projecting parallel side walls, said side walls having flanges along their upper edges of substantially J-shaped configuration in transverse cross section each including a base portion in right angular relation to the side wall with an outer side portion projecting upwardly from the outer edge of the base portion and an inner side portion of lesser height projecting upwardly from the inner edge of the base portion and having an outwardly turned rounded upper lip, each said flanges further including a shelf portion projecting inwardly from said outer side portion at a position upwardly displaced from said lip, a plurality of joiner members adapted for attachment to lamp housing units each including an upper section with a depending outer end section at one edge thereof and an inner end section inwardly and upwardly turned from said outer end section in inwardly spaced parallel relation thereto, the upper sections of said joiner members transversely engaging the upper edges of the outer side portions of said flanges at longitudinally spaced positions therealong with the inner end sections of the joiner members abutting the side walls of the ballast housing and engaging the undersurfaces of the base portions of said flanges, threaded fasteners extending through the upper sections of the respective joiner members in threaded engagement therewith and engaging said shelf portions of said flanges, and means for supporting said ballast housing adjacent a ceiling.

3,123,311
WOOD CHIPPER

Paul J. Fontaine, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois

Filed Aug. 29, 1960, Ser. No. 52,451
6 Claims. (Cl. 241—28)



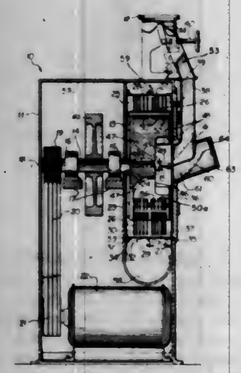
1. A method of reducing an elongated slab of wood into wood chips in a wood chipper having a chipper disc rotating about a horizontal axis with a plurality of chipper knives on one face moving past a fixed vertical anvil positioned generally parallel to the vertical radius of the disc, including the steps of positioning a slab below the axis of rotation of the disc, feeding the slab horizontally at an acute angle to the face of the disc, contacting the slab in an on-edge relationship with the chipper knives, keeping the width of the slab against the anvil, and maintaining the slab in on-edge relationship with the disc so that the knives cut across the slab.

3,123,312
HAMMER MILL HAVING COAXIAL IMPELLER

Leslie Palyi, Toronto, Ontario, Canada, assignor to Universal Milling and Machinery Limited, Ottawa, Ontario, Canada, a corporation of Ontario, Canada

Filed July 28, 1961, Ser. No. 127,627
Claims priority, application Canada May 6, 1961
1 Claim. (Cl. 241—55)

A hammer mill of the type wherein a cylindrical screen defines a comminution chamber having a generally axial inlet for an airstream in which is suspended the material to be comminuted within which there is rotated a rotor having radial blades adapted for air motivation and a plurality of peripherally mounted hammer elements adapted to sweep close to said screen and create a comminuting action in the space adjacent thereto, and a casing spaced from and surrounding said screen forming a collection chamber for comminuted product, said hammer mill comprising: a rotor mounted for rotation within said comminution chamber upon a drive shaft extending thereinto coaxially of said cylindrical screen from the end thereof opposite said airstream inlet, said rotor having a hub portion which fits around and is secured to the portion of said drive shaft which extends into said comminution chamber, said hub portion flaring radially outwardly in a smooth curved surface extending to the periphery of said rotor adjacent the end thereof remote from said airstream inlet, a plurality of symmetrically disposed radially extending vanes rooted in said curved surface, each said vane having an axial extent, which at the periphery of the rotor corresponds substantially to the interior length of said comminuting chamber, and a cross section which when taken on a plane at right angles to the axis of the rotor is essentially bi-convex, and means adjacent the peripheral end thereof for mounting a plurality of hammer elements; a plurality of axially spaced apart hammer elements mounted adjacent the peripherial ends of said vanes and extending radially outwardly therefrom in close proximity to the interior surface of said screen to form a comminution zone in the space between the periphery of said rotor and said screen; the spaces bounded by said smooth curved surface of said hub portion and the sides



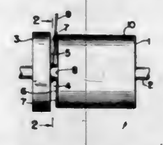
of adjacent vanes rooted therein forming radially and axially unobstructed passageways adapted to conduct air and feed material entering said comminuation chamber through said airstream inlet to said comminuation zone; conduit means leading from said collection chamber to a product collection system; suction means associated with said conduit means adapted to maintain, during operation of said hammer mill a reduced pressure of down to about one inch of water within said collection chamber, the total pressure drop across said screen during operation resulting from said suction means on the one hand and said rotor on the other serving to maintain a high velocity of airflow within said passageways whereby feed material passing therethrough arrives at said comminuation zone without having acquired any substantial peripheral velocity in the direction of rotation of said rotor, providing for a maximum relative velocity between said material and said striking blades on initial impact therebetween.

3,123,313
APPARATUS FOR FABRICATING A REINFORCED PLASTIC ARTICLE

Daniel J. Reed, Milwaukee, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York

Original application May 8, 1959, Ser. No. 811,834, now Patent No. 2,987,217, dated June 6, 1961. Divided and this application Oct. 25, 1960, Ser. No. 64,905
4 Claims. (Cl. 242—7)

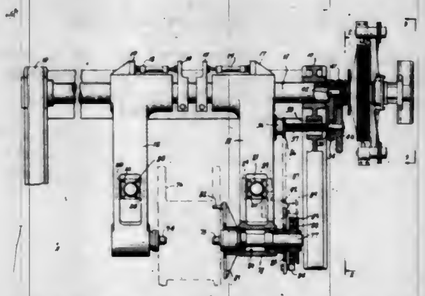
1. In an apparatus for fabricating a reinforced plastic vessel article from a substantially continuous strand, a mandrel having a generally non-circular cross section and having a circumferential slot therein with the dimension of any radius of said slot being different than the dimension of any other circumferentially displaced radius through at least a portion of the circumferential extent of said slot, and the area of all longitudinally extending radial planes extending within the slot being substantially equal when measured from the bottom of the slot to the periphery of the mandrel and between the opposed walls of the slot.



3,123,314
REELING DEVICE FOR LARGE CABLES

Carl O. Bruestle, Metuchen, N.J., assignor to Syncro Machine Company, Perth Amboy, N.J., a corporation of New Jersey

Filed Mar. 28, 1960, Ser. No. 18,166
7 Claims. (Cl. 242—54)



1. In a machine for winding cable and the like upon a flanged reel having central spindle receiving openings and an aperture in one flange for receiving a driving dog, in combination, a pair of reel supporting spindles adapted to engage the central reel openings, a driving dog adapted to enter the reel flange aperture, means to move said spindles toward and away from each other to enter into and be withdrawn from the central reel openings, said moving means also causing said driving dog to enter and withdraw from the reel flange aperture, means for moving said spindles in a substantially vertical direction to raise a reel supported on said spindles from and deposit it on a supporting surface, power means for rotating said driving dog about said spindle axis to thereby rotate said reel to wind cable thereupon, a fluid pressure motor and means coupling said fluid pressure motor to said driving dog during a short interval when rotation of said driving dog and reel is initiated to thereby overcome the initial frictional resistance while utilizing a power means of limited output.

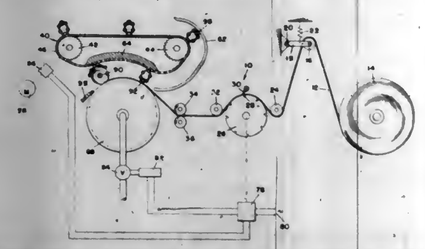
3,123,315
APPARATUS AND METHOD FOR WINDING AND CUTTING SHEETS OF WEB MATERIAL

Reginald Couzens, Wallingford, Pa., assignor to Dietz Machine Works, Inc., Philadelphia, Pa., a corporation of Pennsylvania

Filed Feb. 6, 1961, Ser. No. 87,399
6 Claims. (Cl. 242—56)

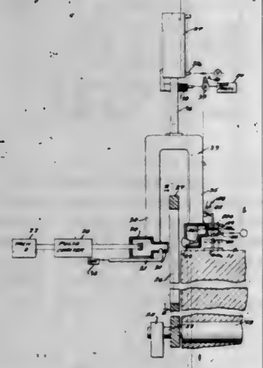
1. In an apparatus comprising a rotary drum, an intermittent conveyor means for intermittently positioning spaced first and second cores adjacent a sheet of web material supported by said drum, means for supporting said first core and winding the web material therearound, a selectively operable cutting means supported by said drum and rotatable therewith for cutting the web material

between said cores and adjacent said second core after a predetermined length of said material has been wound on said first core, said cutting means including a nozzle means for directing a moisture laden fluid stream at the



entire width of said material so that the ends of said web material are wet, with said stream having sufficient pressure to apply one of said wet ends against said second core.

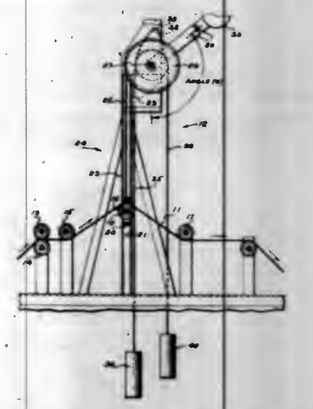
3,123,316
SPEED MATCHING DEVICE FOR FLYING SPLICER
Lloyd Hornbostel, Jr., Beloit, Wis., assignor to Beloit Corporation, Beloit, Wis., a corporation of Wisconsin
Filed Apr. 16, 1962, Ser. No. 187,571
5 Claims. (Cl. 242—58.4)



1. A mechanism for determining the surface speed of rotating rolls of different diameters in a paper machine having means for rotating the rolls comprising,
a support mounting a roll for rotation about its axis,
a rotatable member rotating with the roll,
and means for measuring the time duration for a circumferential length of a radial sector of the member to pass a speed measuring location having a predetermined radial position located radially as a function of the diameter of the roll.

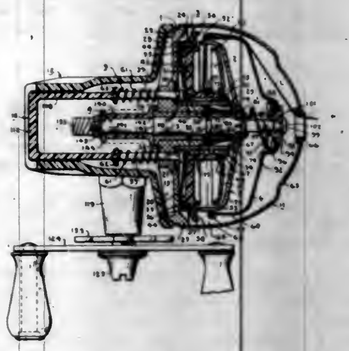
3,123,317
TENSION CONTROL DEVICE
Richard E. Clark, Rushville, Jerry V. Simek, Berwyn, and Charles C. Veale, West Chicago, Ill., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 23, 1962, Ser. No. 189,386
5 Claims. (Cl. 242—75.3)

1. A tension control device for applying controlled tension to continuously moving material, the device comprising:
a roller mounted for reciprocable movement over which the material is looped, said roller being movable in response to variations in the length of the loop resulting from variations in the tension applied to the material;
a member having said roller connected thereto and mounted for rotative movement;
means connected to said member for applying a torque thereto upon rotation of said member caused by increases in the force applied to said roller by increases in the tension applied to the strip;
a cam connected to said member;



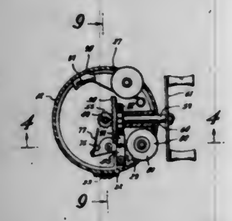
a weighted element connected to said cam for applying a countertorque to said member, said cam having a surface configuration for providing a constant and a variable moment arm for said weighted element, the moment arm varying with respect to said member upon rotation of said cam through a predetermined angle, the length of the moment arm varying in accordance with the countertorque required for said weighted element to dampen out the effect of oscillations of said roller as the loop length decreases; and
means connected to said member for dynamically counterbalancing said cam and said weighted element until said cam rotates through said predetermined angle.

3,123,318
SPINNING REELS
Morris E. Wood, Bronson, Mich., assignor, by mesne assignments, to Bronson Specialties, Inc., Bronson, Mich., a corporation of Michigan
Continuation of application Ser. No. 529,855, Aug. 22, 1955. This application Nov. 28, 1961, Ser. No. 157,039
14 Claims. (Cl. 242—84.2)



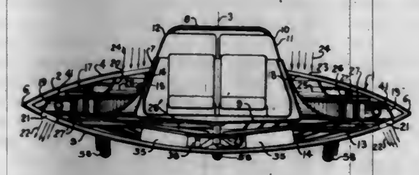
6. A spinning reel comprising a line support, a first drumlike element mounted forwardly of the support, a line pickup separate from the element mounted between the element and support, means for imparting relative rotational movement between the support and pickup to direct a line onto the support, a second element spaced rearwardly of the first element, means for imparting relative axial movement between said support and second element as a unit and the first element to locate the pickup in the drum element so that a line can be clamped between the elements.

3,123,319
CONTROL MEANS FOR SPINNING REEL
R. Dell Hull, 1131 E. Easton St., Tulsa, Okla.
Original application June 10, 1960, Ser. No. 35,353, now Patent No. 3,020,665, dated Feb. 13, 1962. Divided and this application May 22, 1961, Ser. No. 111,527
5 Claims. (Cl. 242—84.51)



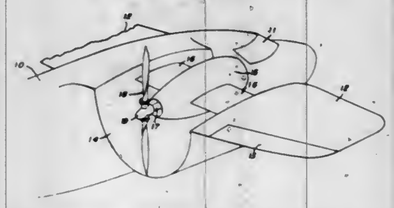
3. A spinning reel assembly comprising a reel frame, a reel casing surrounding said frame, a disk-like rotatable control member mounted on said frame and having a portion projecting through said casing and exposed for manual manipulation, said control member being mounted for rotation on an axis parallel to the principal axis of said reel, a winding shaft mounted on said reel for rotation about an axis at right angles to said principal axis, a ratchet wheel mounted on said winding shaft, anti-reverse pawl means operable by rotation of said control member for movement in directions generally toward and away from the axis of said shaft into and out of operative engagement with said ratchet wheel, a lever pivoted on said reel frame and operatively connected to said rotatable control member for pivoting movement in response to rotation of the control member, and coacting cam means on said lever and said pawl means whereby movement of said pawl means toward and away from said shaft is effected by pivotal movement of said lever.

3,123,320
VERTICAL RISE AIRCRAFT
Eldon E. Slaughter, 1100 Lindberg, Kansas City, Mo.
Filed Oct. 22, 1962, Ser. No. 231,896
6 Claims. (Cl. 244—12)



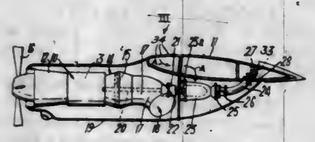
1. A heavier-than-air aircraft comprising:
(*a*) a disk-like structure substantially symmetrical about a vertical axis and having an upper surface and lower surface and an outer peripheral edge,
(*b*) said upper and lower surface being of airfoil shape and adapted to provide a lifting component in lateral flight,
(*c*) a lower stator construction and an upper stator construction fixed to said lower stator construction and spaced generally upwardly therefrom forming an annular discharge slot therebetween near said outer peripheral edge, said discharge slot interrupting said lower surface for ejecting gases downwardly and conically outwardly from said structure at high velocity, said upper stator construction forming an annular intake slot at said upper surface,
(*d*) a radial passageway formed between said upper and lower stator constructions and communicating between said intake and exhaust slots, a centrifugal blower rotor rotatably mounted in said structure and having circumferentially spaced blades operatively contained and rotatable in said radial passageway for directing air from said intake slot toward said discharge slot, a pressure ring duct formed in said radial passageway between said blades and said discharge slot, a plurality of jet engines mounted on said blower rotor and within said pressure ring duct for rotating said blower rotor, means for fueling said jet engines, and
(*e*) control means in said discharge slot for selectively controlling flow therethrough.

3,123,321
AIRCRAFT CHANNEL WING PROPELLER COMBINATION
Willard R. Custer, Hagerstown, Md., assignor to Custer Channel Wing Corporation, Hagerstown, Md., a corporation of Maryland
Filed Dec. 31, 1962, Ser. No. 248,746
8 Claims. (Cl. 244—12)



1. In an airplane wing; an upwardly-opening fore-and-aft-running channel portion and a propeller concentrically mounted to rotate adjacent the aft end of said channel; and means for varying the fore and aft spacing of at least the tip of said propeller from the trailing edge of said channel portion to compensate for varying channel airflow conditions resulting from varying propeller r.p.m.'s.

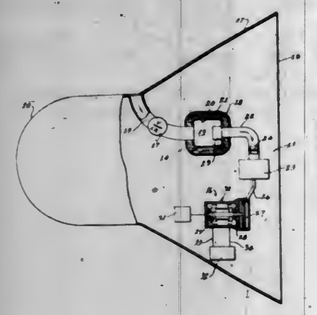
3,123,322
AIRCRAFT POWER PLANT
Alfred Dennis Jackson, Derby, Rowan Herbert Colley, Sunnyhill, and James Alexander Petrie, Littleover, England, assignors to Rolls-Royce Limited, Derby, England
Filed Jan. 2, 1962, Ser. No. 163,684
Claims priority, application Great Britain Jan. 14, 1961
6 Claims. (Cl. 244—42)



1. An aircraft comprising: a wing having movable control surfaces on opposite sides of the longitudinal axis of the aircraft, a plurality of forward propulsion engines, a compressor driven by each of said engines, means for

supplying air to the intake of each compressor, an outlet conduit connected to the discharge end of each of said compressors for delivering compressed air therefrom, valve means in each outlet conduit adjacent to the respective compressor and selectively operable to open and close the outlet conduit, a main manifold conduit extending through said wing adjacent control surfaces on opposite sides of the longitudinal axis of the aircraft, said main manifold being connected to each outlet conduit, and a plurality of discharge conduits connected with said main conduit for discharging compressod air over similar control surfaces on opposite sides of the longitudinal axis in order to prevent breakaway of normal atmospheric air flow over said control surfaces, at least one of said discharge conduits discharging air to each control surface and having its discharge end open to a gap between the trailing edge of the wing and the leading edge of the control surface.

3,123,323
AUXILIARY POWER UNIT
James C. Wise, Pepper Pike Village, Ohio, assignor to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Oct. 10, 1960, Ser. No. 61,552
4 Claims. (Cl. 244—58)



2. An auxiliary power unit for a re-entry vehicle comprising:

a bleed opening defined by said re-entry vehicle to bleed hot exterior boundary layer air,

said bleed opening being positioned at a point along the exterior of the re-entry vehicle where the stagnation air pressure is high,

means defining a chamber mounted within the re-entry vehicle,

a duct connecting the chamber with the bleed opening to conduct hot boundary layer air into said chamber,

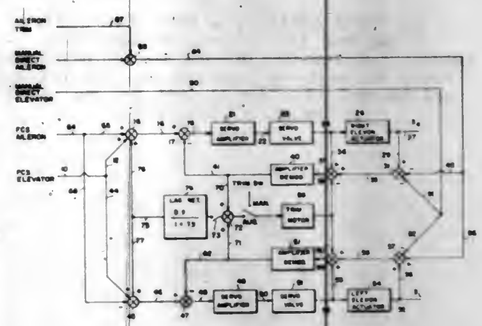
a fluid stored in said chamber and mixing with the hot boundary air, and

an outlet opening connected to said chamber leading to an energy utilizing load.

3,123,324
CONTROL APPARATUS
Allan K. Hammell, Golden Valley, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Dec. 26, 1962, Ser. No. 247,086
19 Claims. (Cl. 244—77)

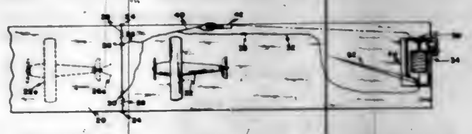
4. In a follow-up type of motor control system, in combination: automatic means supplying a first command signal; a servomotor, means providing a signal proportional to servo displacement and driven by said servomotor; a lag device responsive to said servomotor signal having an output signal of opposite phase; and means controlling said servomotor from said command signal, said servomotor signal, and the signal from the lag device to provide time integral control of the motor control system from the first command signal; and manual means supplying a second command signal to the motor control system to obtain a displacement thereof proportional to the magnitude of the manual command signal.

14. In control apparatus for an aircraft having two attitude changing means operable to alter attitude of the



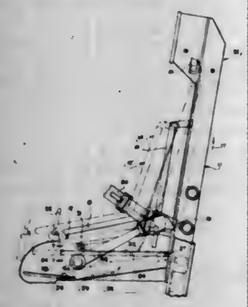
craft about an axis thereof and means for operating said attitude changing means; command signal providing means; followup means controlled by the operating means and providing two followup signals in accordance with the displacement of both attitude changing means; two signal combining means each responsive to one followup signal and the command signal; and time element means connected to each combining means and jointly controlled by both followup signals cancelling the effect of said two followup signals on said two signal combining means.

3,123,325
AIRCRAFT ARRESTER
George B. Stephens, 7510 E. Gilbert, Wichita 7, Kans.
Filed Aug. 8, 1962, Ser. No. 215,581
10 Claims. (Cl. 244—110)



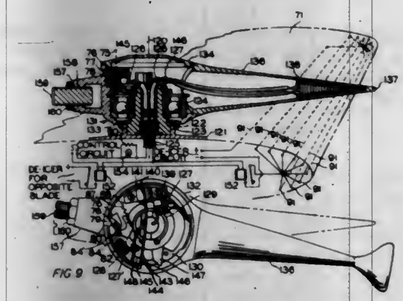
1. In an aircraft arresting system of the cable-braking type, said system having a hook-on loop disposed in a slightly elevated position in the landing path of the craft and adapted to be hooked by the craft as it moves past the loop, the combination of: a drum of braking cable and having braking means which, when applied, slows the unfeeding rate of cable from the drum; a slack cable section for securement of the drum braking cable to the hook-on loop, and having one end confronting the end of a retained free end of the cable of said drum; interposed means in the cable substantially aligned with the drum axis and constructed and arranged to couple said ends so as to afford coaxial relative rotation, enabling the drum and cable to rotate and said adjacent end of the slack cable section to remain stationary; and means for rotating said drum at a peripheral speed approximating the anticipated landing speed, so that braking cable initially unfeeding from the drum is already moving at approximately the speed of the craft to be arrested.

3,123,326
VARIABLE ATTITUDE EJECTION SEAT WITH QUICK RETURN DEVICE
Wilfred Kenyon, Santa Monica, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed July 3, 1961, Ser. No. 121,767
11 Claims. (Cl. 244—122)



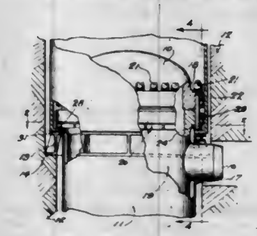
1. In an ejection apparatus having a seat means including a seat pan and a back supported on an ejection frame adapted to be selectively ejected relative to its foundation in response to actuation of a gas initiator means, the combination with: means pivotally connecting said seat pan and said back; means movably supporting said seat pan and back on said ejection frame for movement relative thereto into a first ejection attitude wherein said back is substantially parallel to said ejection frame and into reclining attitudes wherein said back is progressively angular relative to said ejection frame and said seat pan; actuator means connecting said seat pan and back and said ejector frame and being selectively operable for moving said seat pan and back relative to said ejection frame into said reclining attitudes; and means responsive to actuation of said initiator means for overriding said actuator means so as to automatically position said seat pan and back into said first ejection attitude prior to ejection of said seat means.

3,123,327
HELICOPTER ROTOR ICE DETECTOR
Joseph Edward Padgett, Jr., Springfield, Va., assignor to Parsons Corporation, Traverse City, Mich., a corporation of Michigan
Filed May 10, 1961, Ser. No. 109,138
7 Claims. (Cl. 244—134)



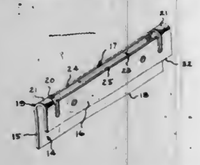
1. For aircraft of the type including a sustaining blade rotating about a hub, a device responsive to the accretion of ice, comprising a vertical support pivot having a mounting whereby it may be secured to such blade, a pivoted housing mounted for angular movement about the vertical pivot, stops limiting such angular movement to less than 90° and establishing at the one limit a normal position and at the other an ice-accreted position, a tapering ice-accreting member projecting from the housing and normally presented forward of the hub, masses subject to centrifugal forces attending rotation about the hub, said masses including the housing and its ice-accreting member and being positioned and weighted for centrifugal balance about the pivot in the normal position in the absence of accreted ice, a switch having a fixed contact adjacent to the limit stop for the ice-accreted position and having a movable contact borne by angular movement of the housing from the normal position to the ice-accreted position, a source of electricity, and an electrical system operatively connected to said source of electricity and controlled by the switch, together further with a pre-loading mass pivoted on an axis parallel to the vertical support pivot, the pre-loading mass having a free end bearing against the housing aft of the support pivot, whereby to apply to it a twisting moment to offset the centrifugal force imposed by the presence of ice on the ice-accreting member.

3,123,328
SUPPORT STRUCTURES
Kenneth A. Trickett, San Diego (La Jolla), and Merle R. Grassmann, Solana Beach, Calif., assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed Oct. 30, 1961, Ser. No. 148,771
4 Claims. (Cl. 248—1)



1. Apparatus for supporting a flanged pressure or similar containment vessel within a main supporting housing so that radial and bi-directional movement of the vessel is permitted to relieve forces imparted thereby to fixed components associated therewith as a result of thermal expansion and contraction of the vessel, which apparatus comprises an annular support ring secured in fixed relation to the flange of the vessel, said annular support ring including a plurality of arcuate shaped members that are secured to the flange in mating relation with each other, each of said members being provided with at least one projecting mating key extending downwardly therefrom, a secondary support means secured below and in mating contact with said annular support ring and having a plurality of uniformly spaced slots provided therein that are proportioned to accommodate the mating keys of each of the support members that form said annular support ring, said secondary support means having a pair of diametrically opposed mating keys extending downwardly therefrom and longitudinally aligned parallel to said bi-directional movement of said vessel, and an annular support member mounted in fixed relation within the main supporting housing, said annular support member having two diametrically opposed slots provided therein to receive the mating keys of said secondary support means which is mounted thereon so that upon expansion or contraction of said pressure vessel movement of said annular support ring will be imparted to said secondary support means to effect movement of the vessel relative to said main supporting housing.

3,123,329
CONTROL BULB CLAMP
Leslie L. Pruehs, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Nov. 27, 1962, Ser. No. 240,221
2 Claims. (Cl. 248—74)



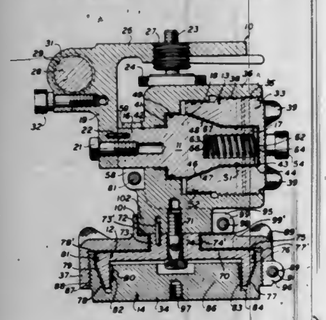
1. A clamp for clamping a tube in heat exchange relation with a surface and adapted to be preassembled on said tube,

said clamp being formed of a single sheet material member transversely bent to a substantially U-shape cross section to provide a transversely concave face portion and a rear portion, and a return bend portion between said face and rear portions adapted to receive said tube, said member including means defining a loop at each end of said member adapted to be bent into clamping engagement with said tube for holding said clamp on said tube,

fastening means for securing said clamp to said surface extending loosely through said face portion and threadably engaging said rear portion,

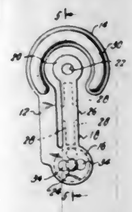
said member including a longitudinal slit in the return bend portion thereof separating said rear and front portions and defining a curved retaining lip on said face portion and a substantially flat straight edge on said rear portion for engaging and clamping said tube into engagement with said face portion and said lip upon tightening of said fastening means.

3,123,330
TRIPOD HEAD
Elliott Forbes-Robinson, Glendale, Calif., assignor to TA Mfg. Corp., a corporation of California
Filed Nov. 27, 1959, Ser. No. 855,661
8 Claims. (Cl. 248—183)



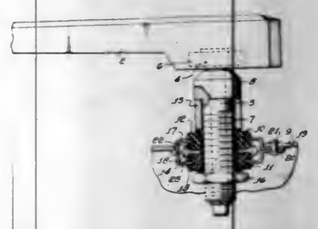
1. In a camera tripod head, a base provided with means for attachment to a tripod, a camera supporting member disposed above said base and provided with means for attaching a camera thereon, and separate devices interposed between said base and said member and mounting said member on said base with capacity for movements of said member relative to said base about a horizontal axis and a vertical axis respectively; each of said devices including fluid damping means imposing damping resistance to movement of said member relative to said base about at least one of said axes; said fluid damping means comprising an enclosed cavity bounded in part by closely spaced, parallel wall surfaces movable relatively to each other incident to movement of said member about the axis with which the cavity is associated, a viscous fluid in said cavity contacting said wall surfaces and by reason of its cohesive affinity for said surfaces and its resistance to shear, imposing yielding resistance to said relative movement, a pair of contacting and correspondingly relatively moving bearing surfaces disposed adjacent to and supporting one each of said wall surfaces in parallel relation to the other wall surface and having a frictional resistance to the said relative movement thereof which is substantially less than the resistance offered by said fluid, a sealing means associated with said bearing surfaces effective to retain said fluid in said cavity, and manually operable means disposed wholly exteriorly of the one of said cavities associated with one of said axes operable to releasably lock said member against movement about said one of said axes.

3,123,331
MERCHANDISE DISPLAY HOOK
Allen I. Field, 147 Valley Stream Road, Larchmont, N.Y., and Sidney P. Field, 226 Beach 134th St., Belle Harbor, N.Y.,
Filed June 26, 1962, Ser. No. 205,397
9 Claims. (Cl. 248—317)



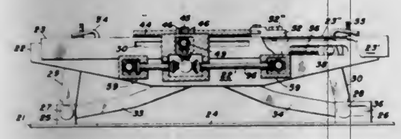
1. A merchandise display hook comprising an integral body of a moldable plastics material, said hook comprising a shank having a curved open hook head at its upper end and one half of a fastener at its lower end, an additional normally straight but flexible strap extending from said fastener and carrying the other half of the fastener at its free end, the said strap being readily bendable in a plane transverse to the plane of the hook head to bring the halves of the fastener together, one half having a stud and the other half having a socket dimensioned to be received over said stud, the axis of the stud being substantially perpendicular to the plane of the hook head.

3,123,332
MOUNTING FOR PHONOGRAPH TONE ARMS
William R. Hawkins, Panorama City, Calif., assignor to Newcomb Electronics Corp., Los Angeles, Calif., a corporation of California
Filed Nov. 14, 1960, Ser. No. 69,198
5 Claims. (Cl. 248—358)



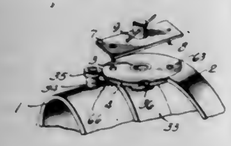
1. In a resilient mounting: a two-part sleeve; a pair of spaced resilient collars respectively mounted on the two parts of the sleeve; a damping member interposed between the collars; means for drawing the sleeve parts together to compress the damping member between the collars; said sleeve parts having end flanges for causing the collars to be also compressed; and a support passing through the sleeve parts.

3,123,333
ADJUSTABLE SEAT SUPPORT
John P. De Rose, 1708 Janero Drive, Santa Rosa, Calif.
Filed Apr. 10, 1961, Ser. No. 101,992
8 Claims. (Cl. 248—394)



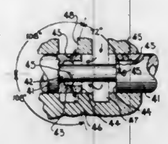
7. In an adjustable seat support assembly including a lower base element disposed in fore-and-aft relation to the seat and an upper seat-mounting element overlying the base element in spaced relation thereto and depending from the seat in fixed fore-and-aft relation thereto, means unitarily interconnecting the elements for independent adjustments of the relative spacing of the forward end portions of the lower and upper elements or the relative spacing of the rearward end portions of the lower and upper elements or the fore-and-aft relation of said lower and upper elements, a common means for adjusting the relation of the elements as aforesaid and comprising a drive shaft rotatably carried by the assembly, means cooperative between the shaft and the different said elements for selectively and operatively connecting said shaft with either said element, and a rockably adjustable spindle member journaled in the support assembly and extending laterally therefrom in a line parallel to that of the shaft axis and actuatable by a handle member directed radially from the extending spindle portion for establishing a said operative connection between the shaft and the seat-support assembly.

3,123,334
ROTARY GATE VALVE
Gifford L. Hitz, 1661 Bel Air Road, Los Angeles, Calif.
Filed Oct. 9, 1959, Ser. No. 845,545
4 Claims. (Cl. 251—147)



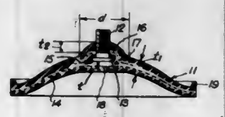
4. An apparatus for alternately closing and providing a full diameter opening in the end of a pipe, comprising a carrier mounted to move along the pipe, a pair of trunnion stubs attached to the carrier at opposite sides of the pipe, a hemispherical shell segment gate of radius approximately fifty percent or more greater than that of the pipe rotatably attached to the trunnion stubs, the central point of the common center line of the trunnions being located at a distance from the end surface of the pipe approximately equal to the inside radius of the hemispherical segment, and means to move the carrier along the pipe to seat the gate at the pipe end when the gate is rotated to close said end, and to unseat the gate at said pipe end when the gate is rotated to open said end.

3,123,335
STABILIZED PISTON VALVE
Marvin C. Darling, Burrton, Kans., assignor to The Cessna Aircraft Company, Wichita, Kans., a corporation of Kansas
Filed Mar. 13, 1961, Ser. No. 95,326
5 Claims. (Cl. 251—282)



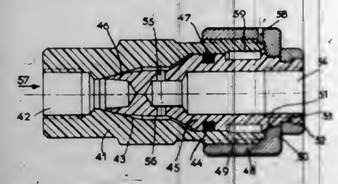
1. In a spool type control valve, a flow control spool having two axially spaced generally cylindrical lands connected by an integral concentric shank and separated by an annular groove the bottom of which is defined by the shank, the adjacent ends of the respective lands constituting flow control faces which lie in planes parallel to each other and perpendicular to the longitudinal axis of the spool; at least two internal flow passages defined within at least one of said lands, each said flow passage comprising a first portion communicating with said groove and extending away from the land control face alongside and parallel to the spool axis, and a second communicating linear portion extending from the cylindrical surface of the land inward toward the spool axis and away from the land control face at an acute included angle with respect thereto.

3,123,336
DIAPHRAGM VALVES
Richard Hector Price, Cwmbran, England, assignor to Saunders Valve Company Limited, Cwmbran, England, a British company
Filed Oct. 28, 1958, Ser. No. 770,026
Claims priority, application Great Britain Nov. 8, 1957
1 Claim. (Cl. 251—331)



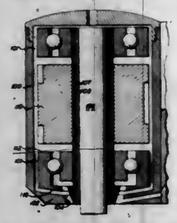
A diaphragm for a diaphragm valve comprising a moulding of elastomer in the form of a diaphragm having a convex side, a central integral boss of wholly rounded contour on the convex side of the diaphragm as viewed with the latter in the free and open position of a valve surface against which the diaphragm is adapted to seat, said boss being of spherical contour substantially less than a hemisphere and with a fillet at the junction with the remaining surface of the diaphragm, a headed stud embedded in the diaphragm with its shank projecting centrally entirely through the boss and its head at a distance from the other face of the diaphragm such as to leave at least nearly the same thickness of elastomer as the thickness of the diaphragm outside the boss, and fabric reinforcement embedded in the diaphragm sweeping up into the boss and engaging the shank of the stud to leave a substantial thickness of elastomer between itself and the head of the stud, the height of the boss above the rest of the diaphragm being approximately equal to the thickness of the diaphragm outside the boss in this region.

2,123,337
PLASTIC FITTINGS AND VALVES
Lucien Péras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France, a French works
Filed May 5, 1958, Ser. No. 733,065
Claims priority, application France June 26, 1957
4 Claims. (Cl. 251—333)



1. A fitting comprising a first coupling member having a tubular end formed from plastic material and having a widened cup-shaped inner portion forming a frusto-conical seat surface, a second coupling member having a plastic annular end portion fitting in the tubular end of the first coupling member and terminating in a bevelled annular lip freely engageable inside the seat surface, said lip having a free end axially abutting against an intermediate portion of the seat surface, tightening means for coupling said members and simultaneously subjecting the lip to an elastic flexion with the end of said lip being constricted in a sealing relationship against the seat surface, wherein a valve body having an inlet orifice constitutes the first member and is provided with the cup-shaped seat-forming frusto-conical surface, the second member constituting a plug fitting in a fluid-tight manner and slidably in a bore constituting the central chamber of the valve body, said tightening means including a knob screwed on the valve body so as to actuate said plug, and means rendering said knob and plug axially solid with each other.

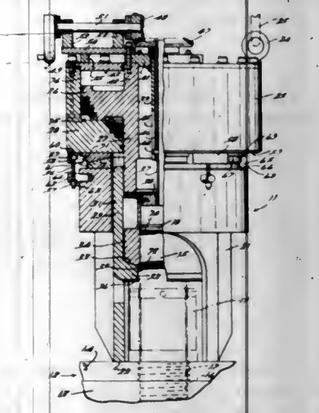
3,123,338
FLOATING CAPSULE FOR DENTAL HANDPIECE
John V. Borden, Ranson, W. Va.
Filed May 26, 1959, Ser. No. 815,884
4 Claims. (Cl. 253—2)



1. In a dental drilling machine, the combination including a generally cylindrical housing, air-operated rotor means within said housing provided with a shaft, anti-friction bearing means having inner and outer cylindrical races to support the shaft, said inner races being of slightly greater radial dimension than said shaft to provide clearance for lubricating air, means to supply air under pressure to operate said rotor means, and means to distribute a portion of said air to said clearance space.

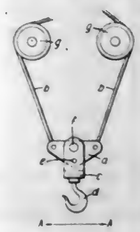
3,123,339
STUD TENSIONER
Le Roy S. De Mart, Lancaster, Ohio, assignor to Diamond Power Specialty Corporation, Lancaster, Ohio, a corporation of Ohio
Filed June 9, 1961, Ser. No. 116,031
10 Claims. (Cl. 254—29)

1. In a stud tensioner, a pedestal, a piston and cylinder motor mounted above the pedestal and connectible to a stud, a flexible connection between the motor and pedestal permitting relative shifting movement therebetween, a spherical bearing having upper and lower elements disposed between said motor and said pedestal, and means



retaining said bearing elements between said motor and said pedestal, said means permitting relative lateral shifting movement between each of said upper and lower spherical bearing elements and said motor and pedestal respectively.

3,123,340
CRANE HOOK SUSPENSIONS
Adam J. R. Belford, Corby, Northants, England, assignor to Stewarts and Lloyds Limited, Glasgow, Scotland
Filed May 3, 1961, Ser. No. 107,431
Claims priority, application Great Britain July 29, 1960
2 Claims. (Cl. 254—139)

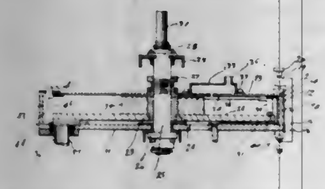


1. In combination, a crane with a rope winding gear, a hook suspension member, a load lifting hook secured to said suspension member, a first hinge pin pivotally mounting a first yoke member on said suspension member, said first yoke adapted to pivotally swing in one vertical plane, a removable first pin member extending through said suspension member and said first yoke member to prevent said first yoke member from pivotally swinging in said one vertical plane, a first pulley guided rope suspension connected to said first yoke member on opposite sides of said hinge pin and to said winding gear.

3,123,341
PLASTER MIXING DEVICE
Robert C. Blair, Winnipeg, Manitoba, Canada, assignor to Western Gypsum Products Limited, Winnipeg, Manitoba, Canada
Filed Dec. 11, 1961, Ser. No. 158,293
3 Claims. (Cl. 259—8)

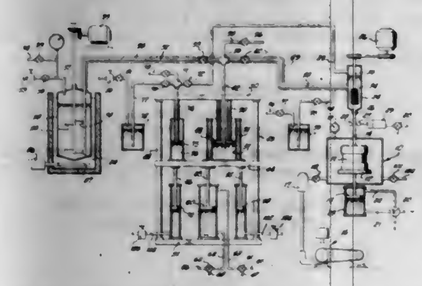
1. A device for mixing plaster and water comprising in combination a cylindrical base component including a circular base plate, a surrounding wall secured thereto,

and a detachable, apertured cover plate spanning the upper edge of said wall, said base plate, said surrounding wall, and said cover plate defining a mixing chamber, a spindle journalled for rotation centrally in said base plate and extending upwardly therefrom and passing through said cover plate, said spindle being connected to an associated source of power, a centrifugal mixing disc secured to said spindle below said cover plate, said disc spanning the majority of said base plate, water and plaster intakes formed through said cover plate inboard of the periphery thereof, said intakes being connected to a source of water and plaster respectively, a plurality of vertically situated discharge apertures in said base plate



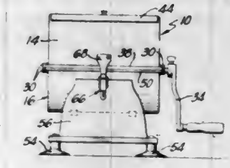
adjacent the periphery thereof, and adjustable means extending through said cover plate and into said mixing chamber adjacent the said surrounding wall and adjacent said discharge apertures, adapted to control the discharge of said mixed plaster through said discharge apertures, said means comprising a vertically situated flow adjusting spindle bearably supported by the upper end thereof in said cover plate and by the lower end thereof in said base plate, the portion of said flow adjusting spindle within said mixing chamber being cut away along the length thereof thereby presenting a planar surface to the interior of said mixing chamber, said planar surface acting as a material deflector to said discharge aperture.

3,123,342
PLASTIC MIXING APPARATUS
Albert G. Little, Milford, Conn., assignor, by mesne assignments, to The Emerson Electric Manufacturing Company, St. Louis, Mo., a corporation of Missouri
Filed Feb. 8, 1960, Ser. No. 7,317
3 Claims. (Cl. 259—23)



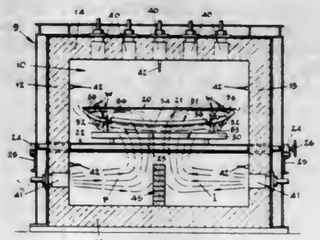
1. In an intermediate storage device cooperable with a mixing chamber and a storage tank for use in the molding of plastic material or the like: a horizontal platform; means supporting the platform for vertical movement; a pair of cylinders of different cross-sectional areas supported on the platform and having openings at their upper ends; pistons for the cylinders and supported independently of and above the platform; conduit means connected to the respective pistons for communication with the cylinders via the pistons; means forming a mixing chamber forming terminal connections for said conduit means; and means for vertically moving the platform to cause relatively metered flow of material from the cylinders in accordance with their respective sizes.

3,123,343
FOOD MIXER
Harry H. Wilson, Riverside, and Earle V. Carey, Lucerne Valley, Calif.; said Carey assignor to said Wilson
Filed Nov. 27, 1961, Ser. No. 154,976
5 Claims. (Cl. 259—109)



1. In a food mixer having a two-piece, generally cylindrical compartment and a rotatable mixing member journaled therein, said compartment consisting of separable top and bottom sections having abutting edges disposed in a horizontal plane passing through the axis of rotation of said mixing member, the improvement comprising a base member having a seat in the top side thereof shaped to receive and conform to the underside of said bottom compartment section, said seat and said bottom compartment section having companionate means that interfit to locate said base and said bottom section with respect to one another and prevent relative shifting, and cooperating means on said base member and on said top compartment section for releasably clamping said top section down against said bottom section and thereby securing said compartment to said base member, whereby said bottom compartment section and said mixing member can be removed from said base member and from said top section for cleaning purposes.

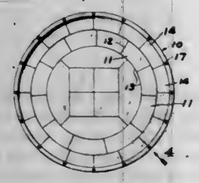
3,123,344
GLASS BENDING FURNACES
Robert E. Ross, Toledo, Ohio, assignor to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
Filed Mar. 30, 1960, Ser. No. 18,633
2 Claims. (Cl. 263—6)



1. In a furnace for bending glass sheets, a horizontally elongated heating chamber comprising a bottom wall, side walls, and a top wall, conveyor means in said chamber for conveying a bending apparatus and glass sheets supported thereon along a substantially horizontal path therethrough, first heat sources arranged in the top wall of said chamber, second heat sources arranged at the opposite sides of the heating chamber beneath said conveyor for directing heat currents transversely of the path of travel

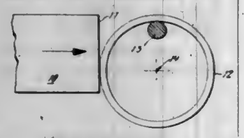
of the bending apparatus and glass sheets, and a refractory partition wall positioned longitudinally of the heating chamber between said second heat sources and extending upwardly from said bottom wall to a point adjacent to but spaced beneath said conveyor means for substantially preventing the heat currents from the heat sources at one side of the heating chamber from intermingling with the heat currents from the heat sources at the opposite side of the heating chamber.

3,123,345
REFRACTORY STRUCTURE FOR MOLTEN GLASS
Basil D. Beck, Bridgeton, N.J., assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Mar. 25, 1959, Ser. No. 801,859
4 Claims. (Cl. 263—46)



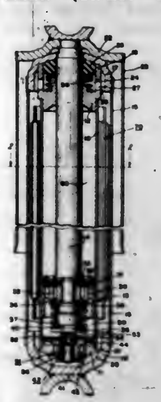
1. In a refractory structure for containing molten glass, the combination comprising a plurality of blocks of refractory material defining a container for containing a body of molten glass, each said block having a glass contacting surface, top and bottom faces and generally vertical end faces at an angle to said glass contacting surface, said blocks being positioned in side by side relationship with said vertical faces abutting and said glass contacting surfaces defining a wall adapted to be contacted by a body of molten glass, the abutting vertical faces of said blocks being provided with opposed grooves extending generally vertically above and below the glass level, each said groove extending downwardly from the top face of each block and terminating in spaced relation to the bottom face, and a sealing member positioned in said opposed grooves and substantially filling said grooves above and below said glass level, said sealing member being made of a material which is highly resistant to oxidation and corrosion by molten glass.

3,123,346
HARMONIC INERTIA SNUBBER
Walter B. Whippo, Cayuta, N.Y., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Nov. 30, 1960, Ser. No. 72,631
13 Claims. (Cl. 267—1)



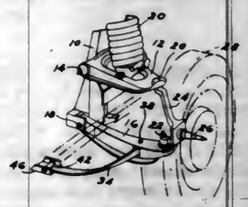
1. A device for arresting the motion of a moving member, comprising annular means, and a member stationary with respect to said moving member contacting said annular means along a portion of its inner annular surface to support said annular means for swinging movement under influence of said moving member to harmonically decelerate the movement of said moving member.

3,123,347
SHOCK ABSORBER WITH PREFORMED PLASTIC GAS CELL
Joseph R. Stormer, Trotwood, and John C. Jacobs, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application Aug. 5, 1960, Ser. No. 47,641, now Patent No. 3,027,600, dated Apr. 3, 1962. Divided and this application Aug. 28, 1961, Ser. No. 134,488
5 Claims. (Cl. 267—1)



1. A generally circularly arranged dual walled gas containing cell formed of a flexible gas retaining plastic film, comprising, a first wall member of a flexible gas retaining plastic film, a second wall member of a flexible gas retaining plastic film in juxtaposition on said first wall member, said wall members having coextensively extending peripheral edges sealed together to form thereby between the wall members a sealed gas containing chamber, a gas of predetermined volume in said chamber in a quantity sufficient to prevent complete collapse of the walls ino full surface engagement, said first wall member forming an outer wall of said circularly arranged cell and disposed in cylindrical form, said second wall member forming an inner wall of said cell and having peripherally spaced longitudinally outwardly extending creased portions extending axially of the cylindrical form of the outer wall disposed in closer proximity to the said outer wall than the remaining portions of the inner wall for forming thereby a plurality of peripherally spaced flexible gas pockets within said cell.

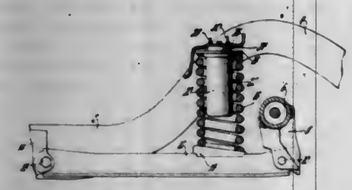
3,123,348
SUSPENSION SYSTEM
Eugene E. Hildebrandt, Northville, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Aug. 22, 1961, Ser. No. 133,146
7 Claims. (Cl. 267—16)



5. A vehicle suspension system having a chassis frame, wheel support structure and a laterally extending suspension arm interconnecting said frame and said structure, said arm having a pivotal connection with said frame for

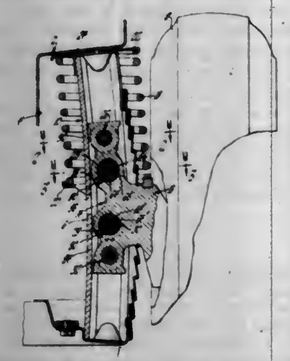
jounce and rebound vertical movement, said connection being adapted to permit limited horizontal arm movement, a main suspension spring resiliently supporting said frame upon said structure, a leaf spring connected at its ends to said lateral arm and said frame at an oblique angle to said arm, said spring being adapted to resiliently restrict horizontal arm movement, said spring being normally bowed so that horizontal arm movement in one direction tends to straighten said spring.

3,123,349
HYDRAULIC LEVELING DEVICE WITH INTEGRATED AUTOMATIC CONTROL
Casimer J. Cislo, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 30, 1961, Ser. No. 99,537
9 Claims. (Cl. 267—60)



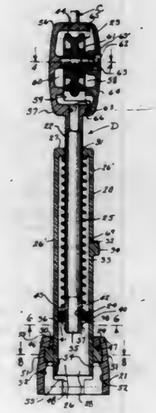
1. In combination, a sprung mass, an unsprung mass, a fixed spring seat on the unsprung mass, a fluid operated extensible spring seat on the sprung mass, a coil spring disposed between said seats, and reaction operated control means disposed entirely between said extensible spring seat and said sprung mass responding directly to load increase on said sprung mass to control flow of fluid into and out of said extensible spring seat so that the displaced relation thereof equals the amount of coil spring compression resulting from increased load.

3,123,350
ARCUATE SLIDING PILLAR INDEPENDENT WHEEL SUSPENSION
Philip B. Zeigler and Robert L. White, Saginaw, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 19, 1962, Ser. No. 174,075
11 Claims. (Cl. 267—60)



1. A sliding spindle wheel suspension assembly comprising, an elongated guide member of generally C-shaped cross section, a pillar element reciprocably disposed in said guide member, a wheel rotatably mounted on said pillar element, at least three roller assemblies mounted in said pillar and engageable with said guide member for rotation on vertically spaced axes parallel to the plane of rotation of said wheel, means carried by said pillar for eccentrically adjusting the axis of at least one of said assemblies to provide precise tracking between said pillar and said guide, and spring means yieldably biasing said pillar toward one end of said guide.

3,123,351
PULLEY HOLD-DOWN FOR TRAVERSE RODS
John N. Graber, Middleton, Wis., assignor to Graber Manufacturing Company, Inc., Middleton, Wis., a corporation
Filed May 4, 1959, Ser. No. 810,627
2 Claims. (Cl. 267—71)



1. A pulley hold-down for traverse rod installations comprising, an elongated hollow housing, a pivoted base secured to one end of said housing for fastening said housing to a support, a pulley rod slidably received in said housing having a portion extending outwardly therefrom at the opposite end from said base portion, an adjusting and lock nut slidably received in said housing means securing said adjusting and lock nut to said rod adjacent the end opposite its outwardly extending portion, said rod adapted to rotate with relation to said nut, means holding said nut against rotation in said housing, resilient means for continually urging said rod toward said base, and a pulley mounted on the outwardly extending end of said rod for receiving a drapery operating cord, said means for securing said adjusting and lock nut to said rod including an annular groove about the lower end of said rod having a series of cam like projections about its lower periphery, depending fingers on said nut extending downwardly and angularly toward said rod, the inner distance between said fingers being the same as the inner circumference of said groove, said fingers being received in said groove and riding on said cam surfaces, whereby said rod may be rotated relative to said nut and held in a given position.

3,123,352
PLUMB STICK AND GUIDE FOR CORNER BEADING
Salvatore A. Mendola, 813 Chestnut St., Bronx 67, N.Y.
Filed Sept. 10, 1962, Ser. No. 222,425
5 Claims. (Cl. 269—19)

1. A plumb stick and guide for installing corner beading, comprising:

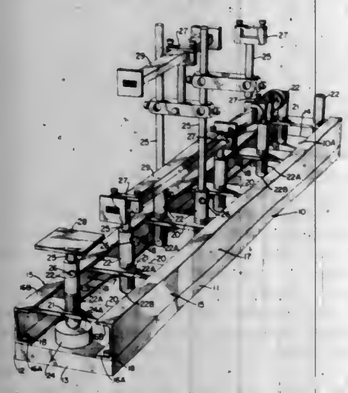
(a) an elongated member adapted to extend lengthwise of the corner beading for substantially the length of said corner beading,

(*b*) a plurality of gripping means spaced along the length of said member and secured thereto, each of said gripping means being releasably engageable with said corner beading, and



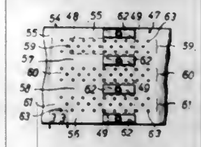
(*c*) string means secured at both ends to said member to extend taut between the ends of said member in spaced parallel relation thereto.

3,123,353
ADJUSTABLE INSTRUMENT BENCH
Douglas W. Schulze, Salina Star Rte., and William J. Foote, 345 S. 38th St., both of Boulder, Colo.
Filed Nov. 5, 1962, Ser. No. 235,180
4 Claims. (Cl. 269—82)



1. An apparatus stand of the type described which comprises a base plate means, spaced parallel channel means attached to the base plate means with the insides of the channels facing each other, locking plate means disposed transversely in the channel means, said locking plate means being provided with threaded hole means, locking post means provided with external threads and threaded into threaded holes of the locking plate means for urging the locking plate means against inside walls of the channel means, said locking post means being tubulated throughout a portion of their length, supporting column means slidably inserted in tubulated portions of the locking post means, positioning means on the locking post means for vertically positioning the supporting column means in the locking post means, and apparatus engagement means attached to the supporting column means for engaging apparatus elements to support and mount the same.

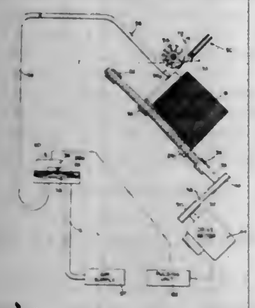
3,123,354
TRANSPORTING AND STACKING SHEET-LIKE ARTICLES
Fritz Ungerer, Arlingerstrasse 6, Pforzheim-Brotzingen, Germany
Filed May 17, 1960, Ser. No. 29,610
Claims priority, application Switzerland Jan. 11, 1960
3 Claims. (Cl. 271—74)



1. A device for stacking sheets comprising, in combination, pervious conveyor means, having an upper face and a lower face and moving in one direction from a first location to a second location; feeding means adjacent said first location for supplying sheets to said lower face of said conveyor means; a plurality of orifice units operatively associated with said upper face and arranged therealong between said first and second locations; a source of vacuum; a source of pressure fluid; connecting means connecting said units to said source of vacuum, the connecting means of at least those units adjacent said second location including valve means connected to said source of pressure and selectively operable to connect the associated connecting means either only to said source of vacuum or only to said source of pressure; said units, when connected to said source of vacuum, being adapted to retain the sheets in engagement with said lower face and, when connected to said source of pressure, being adapted to force the sheets away from said lower face; control means operatively associated with said valve means, and operable, responsive to a sheet supplied to said lower face of said conveyor means reaching a selected position between said first and second locations, to operate said valve means to connect the associated units to said source of pressure whereby the sheet will then be forced from said lower face for stacking in superposed relation below and adjacent said selected position; said conveyor means comprising an endless belt, said endless belt having a plurality of perforated portions therein arranged longitudinally along said belt and a plurality of non-perforated portions extending longitudinally along said belt, said longitudinally arranged perforated portions being separated from each other by said longitudinally non-perforated portions, each said orifice unit being arranged on the upper face of the conveyor means belt so as to be adjacent a longitudinally extending perforated portion of said belt, and a plurality of additional orifice units permanently connected with said source of vacuum, each said additional orifice unit being arranged on the upper face of said endless belt adjacent a non-perforated longitudinally extending portion thereof for maintaining suction on said belt to prevent said endless belt of said conveyor means for moving laterally during the motion from said first location to said second location.

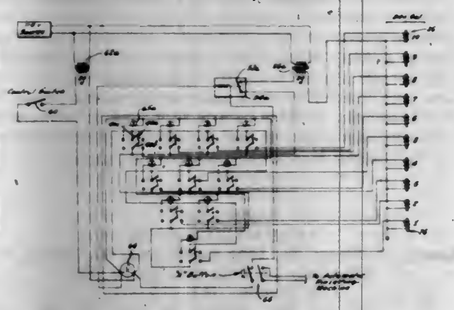
3,123,355
SHEET FEEDING APPARATUS
Roland Lessig, Philadelphia, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Jan. 30, 1961, Ser. No. 85,649
6 Claims. (Cl. 271—62)

1. A sheet feeding apparatus comprising, a support for a stack of sheets, an electric drive motor coupled to said support, electrical circuit means operable for rotating said motor at substantially full speed for advancing said support at high speed from a sheet stack loading station toward a sheet separation station, a pulsing unit for opening and closing said circuit at intervals to effect intermittent rotation of said motor in stepwise movements each a part of a revolution and normally ineffective when said support is at the loading station, switching means actuated by movement of said support for stopping full-speed rotation of said motor when the support is a short distance from the sheet separation station and for rendering effective said pulsing unit for continuing the advancement of the support in stepwise movements to the sheet separation station, a sensing tube having an orifice adjacent to said sheet separation station for discharging air toward the advancing sheet stack, the advancing sheet



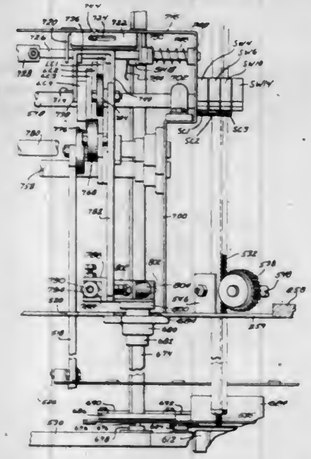
stack effecting a restriction of the flow of air from said orifice as the sheet stack arrives at said separation station, means for forcing air through said sensing tube and orifice, a switch in said circuit, and diaphragm means responsive to said restriction of air flow for actuating said switch to render said drive motor inoperative, said pulsing unit being responsive to the subsequent actuation of said switch effected by the separation of a predetermined number of sheets from the end of said stack for effecting rotation of said motor in stepwise movements each a part of a revolution to advance the depleted sheet stack to said separation station.

3,123,356
SPARE SELECTOR APPARATUS AND METHOD FOR SETTING LESS THAN TEN PINS FOR PRACTICE BOWLING
Robert S. Moreland, 2626 Poplar Place, South Gate, Calif.
Filed Mar. 8, 1961, Ser. No. 94,294
18 Claims. (Cl. 273—43)



13. The method of setting up any pin or combination of pins less than ten in a bowling alley having an automatic pinsetting machine which, upon cycling actuation, after having first deposited a full frame of ten pins, senses the presence of, and picks up, pins left standing, clears from the alley all fallen pins, and then redeposits the pins to the respective positions from which such pins were so picked up, said method comprising the steps of causing the said machine to be cycled first to set up a full frame of ten pins; selectively toppling, prior to bowling, all pins not to be included among those in the pin or combination of pins to be set up; causing the said machine to be cycled to pick up the pins remaining standing, sweeping the toppled pins from the alley, and redepositing the pins picked up to their respective positions from which they were picked up.

3,123,357
BOWLING MACHINE RACK HAVING DUAL FUNCTION SETTING-RESETTING CUPS AND CONTROL THEREFOR
Howard M. Dowd, Littleton, and Royal L. Barrows, Middleton, Mass. (both of Newtown Road, Littleton, Mass.)
Original application Nov. 3, 1956, Ser. No. 625,739, now Patent No. 3,063,716, dated Nov. 13, 1962. Divided and this application Dec. 15, 1961, Ser. No. 159,586
8 Claims. (Cl. 273—43)



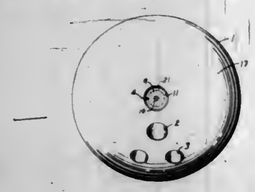
1. In a bowling pinsetting machine of the type having pin storage means mounted on a frame which frame is adapted to be mounted above a bowling alley, a pin positioning rack provided with pin holding cups dependingly mounted for vertical reciprocating travel on said frame, and adapted in one operating sequence (the pinsetting cycle) to receive pins from said storage means and to deliver such pins to the floor of such alley, and in a second operating sequence (the deadwood cycle) to lift standing pins from said floor and to respot said pins on said floor;

rotatable means vertically mounted on said rack and extending through said frame for opening and closing said pin holding cups; drive means including a rotatable shaft mounted on said frame for raising and lowering said rack during a single rotation of said shaft; means for actuating said drive means; and cam means associated with said shaft for controlling the length of the stroke which said rack travels toward said floor and for actuating the rotatable means opening and closing said holding cups.

3,123,358
BOWLING BALL POSITION INDICATOR
John J. Czarev, 688 Allen Road, Independence, Mo.
Filed Oct. 12, 1962, Ser. No. 230,075
7 Claims. (Cl. 273—63)

1. In a bowling ball having finger holes and a recess extending radially into the ball in spaced relation to the

finger holes whereby the recess is upwardly when the ball is held in starting position for bowling,



(*a*) a liquid-containing vial secured in said recess and having a bubble therein and a window through which said bubble is visible with said window outwardly exposed and below the ball surface,

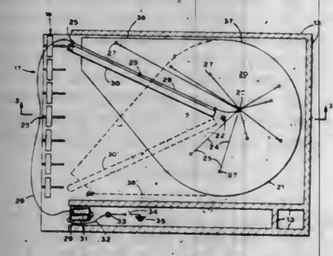
(*b*) and indicia lines associated with said vial window and forming divisions of area facilitating orientation of the bubble relative thereto.

3,123,359
BIFURCATED GOLF CLUB HANDLE
Frank T. Lindgren, 2708 Rose St., Berkeley 8, Calif.
Filed Apr. 17, 1961, Ser. No. 103,409
3 Claims. (Cl. 273—81.3)



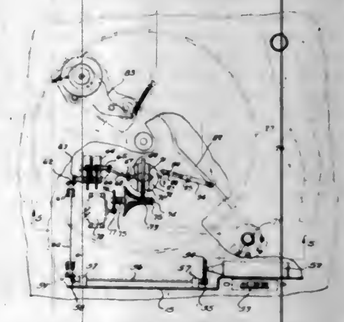
3. A handle assembly for a golf club shaft comprising bifurcated handles projecting from said shaft with the axes of said handles being in vertical planes passing through the axis of said shaft, said handle axes forming angles of greater than 90° with said shaft axis and being angularly disposed relative to one another about the shaft axis at an angle of substantially 90°.

3,123,360
ELECTRICALLY OPERATED FOOTBALL GAME
Nell Peckham, 5227 Pensdale, Houston 33, Tex.
Filed June 7, 1962, Ser. No. 200,712
5 Claims. (Cl. 273—94)



1. A football game including a non-magnetic opaque top panel, a rotatable member mounted therebelow to define therewith a vertical gap, a multiplicity of connector members disposed in said gap for rotation in common with said rotatable member and in spaced relationship from the nether surface of said top panel, each said connector being both electrically and magnetically conductive and being electrically connected to one end of a normally open series circuit including a battery and indicating means, and a player piece movable across the upper surface of said top panel and providing a magnetic field extending normally therethrough and therebelow, each of said connectors being mounted for vertical movement and being actuable for such movement by said player piece when approximately vertically aligned therebelow to bring said connector into contact with said nether surface, at least the nether surface of said top panel being electrically conductive and connected to the other end of each said series circuit to close the same through the actuated connector, said battery and said indicating means, and said rotatable member including a portion accessible to one of the human participants for rotating said member and thereby repositioning said connectors with respect to said top panel.

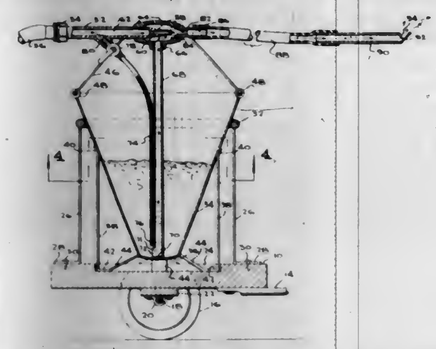
3,123,361
PHONOGRAPH NEEDLE PLAY TIMING APPARATUS
Mervyn L. Trott, Ree Cottage, Ord Road, Warwick, East Bermuda, British West Indies
Filed June 2, 1961, Ser. No. 114,407
7 Claims. (Cl. 274—1)



1. In a phonograph, a stylus trackage indicator comprising a counter, a motor drivingly connected to said counter, a tone arm provided with a transducing cartridge having a stylus adapted to engage in the grooves of a phonograph record, normally open switch means in the tone arm, means to close said switch means responsive to the lowering of the tone arm to a position wherein the stylus engages a record, and an energizing circuit including said switch means connected to said motor.

3,123,362
FERTILIZER GUN
George C. Elvers, Sr., 5002 Euclid Ave. W., Tampa, Fla.
Filed May 24, 1963, Ser. No. 283,062
10 Claims. (Cl. 275—1)

10. A delivery gun, adapted to mix fluid and solid matter, comprising a fitting having aligned openings and a lateral opening, an entrance tube received in one of said aligned openings and having an end nozzle within said fitting and substantially spaced from the inner wall thereof, said entrance tube having a lateral port, outwardly of said fitting, a pipe secured in the lateral opening in said fitting and having a lateral opening adjacent its outer end, a conduit including a valve, leading from said lateral port, secured to said pipe, and having a terminal, open, flattened and flared end adjacent the lateral opening in said pipe, a flexible tube secured in the other of said aligned openings in said fitting, and a delivery nozzle carried by the outer end of said tube.



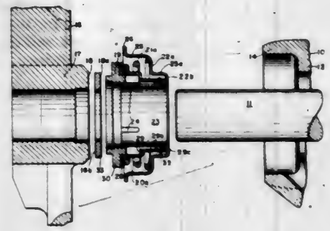
3,123,363
MANURE SPREADER
Robert G. Hedtke, Excelsior, Minn., assignor, by mesne assignments, to Minneapolis-Moline, Inc., Hopkins, Minn., a corporation of Delaware
Filed June 22, 1962, Ser. No. 204,428
1 Claim. (Cl. 275—6)



A manure spreading apparatus comprising in combination, a wagon box adapted to support a load of manure, beater blades mounted for rotation about a transverse axis at the rearward end of said box, a means for imparting rotary movement to said blades, a means for conveying the load from said wagon rearwardly toward the beater blades and a shield member including a transversely positioned shield member mounted at the rearward end of said wagon box for selective movement between a first position wherein said shield member is interposed between said beater blades and said load, and a second position wherein said shield member is spaced downwardly from the lower portion of said beater blades, a latch assembly pivotally secured at its rearward end to said shield member and extending forwardly therefrom, said latch assembly including means thereon adapted to releasably engage said wagon box for selectively retaining said shield in either of said positions, said latching assembly comprising a pair of longitudinally extending laterally spaced apart latching bars pivotally connected at their rearward ends to said shield member, and a resilient member being connected between each of said latching bars and said wagon box for yieldably retaining each of said latching bars in a latched position when said bars and said shield member are moved to said second position.

3,123,364
SHAFT FLUID SEAL AND PROCESS OF REBUILDING THE SAME
Olin N. Ennis, Box 68, Clio, Mich.
Filed Apr. 25, 1962, Ser. No. 190,072
9 Claims. (Cl. 277—1)

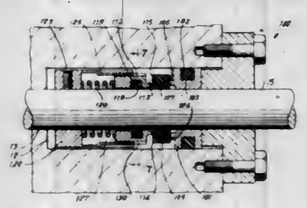
1. The process of rebuilding shaft fluid seals in which a free end sealing face of the hub of a rotor on the shaft becomes worn and leaky by contact of a pressure member comprising



(*a*) inserting between the worn sealing face and the pressure member a fillet having a fresh sealing face, and

(*b*) readjusting the pressure member to compensate for the added thickness of the fillet.

3,123,365
SEALS
Gerald W. Gorman, Midlothian, Tex.
(Box 4236, Dallas, Tex.)
Filed Apr. 8, 1959, Ser. No. 805,028
5 Claims. (Cl. 277—83)

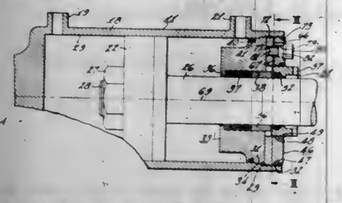


5. A seal assembly for a rotary shaft extending through a bore of a housing having an enlarged recess at one end thereof providing a stop surface at one end and having a retainer means closing the opposite end of said enlarged recess including: a member disposed in said recess and stationary with the housing, said stationary member being disposed adjacent and abutting said retainer means and having means sealing between the housing and the external periphery of said stationary member, said stationary member having a central aperture through which said shaft extends; an annular member on said shaft disposed in said recess between said stationary member and said stop surface and having sealing means for preventing flow of fluids therebetween; a floating ring in said recess disposed between said stationary member and said annular member providing sealing contact at its opposite ends with said stationary member and said annular member; and means disposed on said shaft biasing said annular member toward said stationary member.

3,123,366
LOCKING DEVICE FOR RETAINER OF A HYDRAULIC ACTUATOR
Samuel T. Comfort, Homewood, Ill., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Oct. 27, 1960, Ser. No. 65,377
6 Claims. (Cl. 277—111)

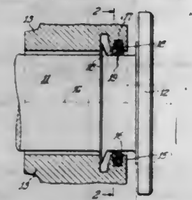
1. A sealing arrangement for radially inner and outer members which are relatively movable on an axis, said sealing arrangement comprising: a packing, means for maintaining said packing in radial sealing relation with said inner member including a retainer having internal and external threads coaxial with said axis, a packing nut having external threads complementary to and in

threaded engagement with the internal threads of the retainer, internal threads in said outer member complementary to and in threaded engagement with said external threads of said retainer, axially spaced portions on said retainer separated by a radial slot intersecting said interial and external threads of said retainer, releasable



locking means coacting with said portions to axially move one of said portions relative to the other of said portions to jam the internal and external threads of said retainer on said threads of said packing nut and said outer member, respectively, thereby selectively preventing loosening of said packing nut and retainer.

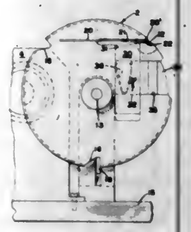
3,123,367
WEDGE SHAPED OIL SEAL MEANS FOR SHAFTS
Olin Brummer and John Talamonti, Chicago Heights, Ill., assignors, by direct and mesne assignments, to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Dec. 4, 1959, Ser. No. 857,323
6 Claims. (Cl. 277—171)



1. In oil seal means for shafts comprising two semi-circular bodies mainly of elastomer material each having a first outwardly peripheral portion wedge shape in cross section and a second radially inward portion, the first portion carrying embedded therein a rigid half-ring of greater dimension radially than axially, said rigid half-ring being of a dimension such that when said semi-circular bodies are placed in end-to-end relationship said rigid half-ring provides controlled resilience and stability to said body and is suitable to force said wedge shaped peripheral portion into and against a corresponding wedge shaped groove in the housing supporting said oil seal means, said second portion having a juncture with the first portion offset from the center of the half-ring and having an obliquely extending sealing lip terminating in a plane spaced axially from the plane of the rigid half-ring in one axial direction, the elastomer material being continuous and of substantial thickness through the juncture on the side in the opposite axial direction whereby said sealing lip is accurately and firmly positioned at the juncture and may ply radially in a radial plane offset axially from said half-ring.

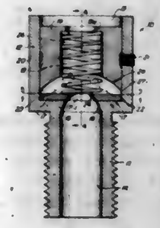
3,123,368
CHUCK
Robert A. Daly, Greece, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
Filed May 16, 1961, Ser. No. 110,492
5 Claims. (Cl. 279—1)

1. A chuck comprising a slender resilient rod and a receptacle, said receptacle defining a generally V-shaped concave surface and including a generally perpendicular base which is perpendicular to said concave surface, said receptacle adapted to receive a generally cylindrical test object therein, said base defining an aperture therein to allow light to pass through the aperture to fluoresce the



sample, means biasing said rod in a direction toward said concave surface to thereby force the test object against said concave surface, and cam means for biasing said rod in a direction away from said concave surface to thereby open said chuck for receiving or releasing the test object.

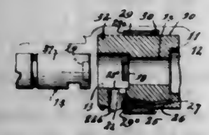
3,123,369
BULLET PULLER
Calvin R. Jacobsen, Murray, Utah
(P.O. Box 15523, Salt Lake City, Utah)
Filed Dec. 27, 1962, Ser. No. 247,665
5 Claims. (Cl. 279—35)



1. A bullet puller, comprising: a unitary body having a cylindrical, exteriorly threaded base and a cylindrical upper housing, the bore of said housing being larger than the bore of the base, and an annular shoulder between the bores; a plurality of flat, bullet-engaging jaws, said jaws each having a rear edge contacting the wall of the bore of said housing, one flat side normally resting on the shoulder, and a front edge overlying the bore of said base, the front edges surrounding a hole formed therebetween when the jaws are resting on said shoulder and into which the tip of a bullet can be inserted; a coil spring surrounding and overlying the hole formed by said front edges and biasing said jaws to their normal positions resting on the shoulder; and retainer means for holding said spring in position in said bore and for limiting upward movement of the rear edges of the jaws.

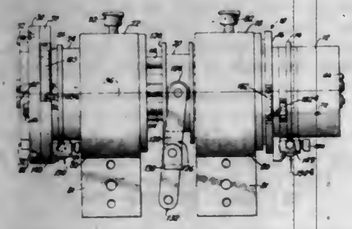
3,123,370
ANCHOR CHUCK AND ANCHOR
Clarence J. Unander, 824 N. Vail Ave., Arlington Heights, Ill.
Filed Mar. 29, 1961, Ser. No. 99,234
2 Claims. (Cl. 279—82)

2. A cement anchor and chuck combination comprising: a body provided with an axial right cylindrical socket with a base wall and a central passage, an opening connecting said passage with the exterior of the body, a hollow anchor having a cylindrical shank fitting said socket with an annular impact receiving end engaging said base wall, a lug in said socket and a groove on said tool shank interengageable to prevent relative rotational movement between the tool and the socket, a locking lug movably mounted in the body radially of the socket, the locking lug having a first position whereby an outer end projects beyond the outer surface of the body and an inner end is substantially fully within the body, an outer sleeve slidable longitudinally on the body and adapted to engage the projecting outer end of the locking lug and force said lug to a second position by virtue of movement of the sleeve toward an end of the body, whereby the outer end of the locking lug is substantially fully within the body and the



inner end projects into the socket, said anchor shank having a chordal groove for selectively receiving the inner end of said locking lug when the locking lug is in its second position to preclude relative axial movement between the anchor and the socket, and means to lock the outer sleeve to retain the locking lug in its second position, the cuttings formed by the anchor passing through the hollow anchor, central passage and opening to the exterior of the body, said means to retain the locking lug in second position including a button mounted in the side of the body and biased radially outward to overlap and retain the outer sleeve in a position toward the end of the body and over the outer end of the locking lug, said button being manually depressible to allow movement of the outer sleeve away from the end of the body and over the button whereby said locking sleeve assumes its first position.

3,123,371
CHUCK ARRANGEMENT
George B. Marsden, 208 S. Brand Blvd., San Fernando, Calif.
Filed Aug. 28, 1961, Ser. No. 134,468
12 Claims. (Cl. 279—110)



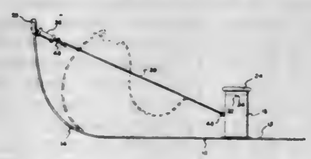
1. A chuck comprising a face plate having a central opening therein through which a work piece may extend, a plurality of chuck jaws movably mounted on the face plate for radial movement toward and away from a work piece extending through the opening, a cam member movable relative to the face plate and operatively connected to the jaws to move them, an operating member movable within fixed limits, and adjustable setting means connecting the operating member to the cam and adjustable to vary the position of the jaws when the operating member is at its limiting position in one direction to adjust the chuck for different sized work pieces.

3,123,372
SKATE TOOTH GUARD
Stanley K. Johns, Quebec, Quebec, Canada, assignor to St. Lawrence Manufacturing Company, Inc., Giffard, Quebec, Canada, a corporation of Quebec
Filed Jan. 17, 1962, Ser. No. 166,828
11 Claims. (Cl. 280—11.38)



1. A unitary guard for the tooth section of a skate blade which comprises a resilient moderately elastic saddle-shaped body having a bearing section for contact with the edge of the tooth section of the blade and side flanges terminating in free ends, said free ends being provided with means for attachment to each other, said side flanges being sufficiently long to provide attachment of the free ends above the edge of the skate blade opposite the tooth section thereof, said bearing section having integrally formed on its inner surface a projecting means adapted for interlocking registry with the tooth section of the skate blade, the outer surface of said bearing section serving to prevent the tooth section of the skate blade from causing damage, said bearing section being sufficiently long to cover the tooth section of the skate blade.

3,123,373
FLEXIBLE SKI-SLED
Wesley T. Antcliff, Jonesville, Mich.
(P.O. Box 102, Hillside, Mich.)
Filed Sept. 27, 1961, Ser. No. 141,049
7 Claims. (Cl. 280—12)



2. A steerable ski-sled capable of a high degree of maneuverability comprising, in combination, a thin, flexible broad blade runner having a rear portion and a forward portion capable of lateral flexing relative to said rear portion terminating in a tip, an upwardly extending seat mounted upon said rear portion, and a handle associated with said tip whereby said tip and forward runner portion may be raised relative to said rear portion, and lateral flexing of said tip and forward portion twists said forward portion relative to said rear portion.

3,123,374
SNOW COASTER RUDDER
John N. MacLeod, 287 Babcock Blvd., Gibsonia, Pa.
Filed Oct. 4, 1962, Ser. No. 228,342
3 Claims. (Cl. 280—12)

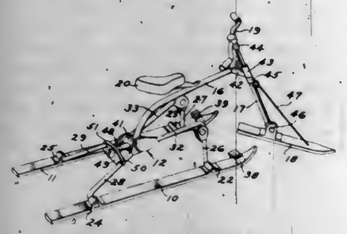
1. A snow coaster of the character as set forth, the combination of a main body and a rudder mechanism, said rudder mechanism being attached to the underside of said main body, said main body comprising a circular element having an upper and a lower side, said upper side being downwardly dished, said lower side being of a downwardly convex configuration and said element having an edge forming the outer periphery which is of a circular configuration, said rudder mechanism comprising a pair of blade elements, one of said blade elements being

permanently affixed in rigid position to the underside of said main body and the other of said blade elements



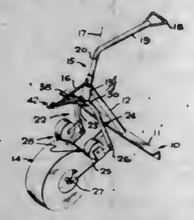
being pivotably adjustable relative to said first blade element.

3,123,375
ARTICULATED SKI SLED DEVICE
Orley Ray Courtney, 1353 Highwood Blvd., Pontiac, Mich.
Filed June 15, 1962, Ser. No. 202,822
9 Claims. (Cl. 280—16)



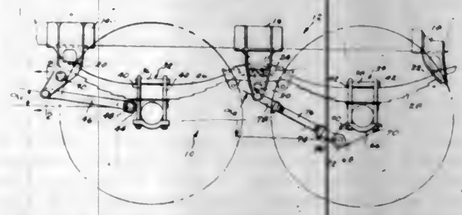
6. A controlled ski device comprising,
paired skis having front and rear ends,
a frame pivotally mounted on the front and rear ends of each said ski for front to rear pivotal relative movement between said frame and skis;
said frame including articulated linkage having pivoted scissoring beam portions cross-connected between the front and rear ends of opposite skis allowing said skis to rise and lower relative to one another while lying substantially parallel to one another in conjunction with frame and ski pivotal movement,
said frame and skis selectively inclining sidewise together in conjunction with beam scissoring action and up and down ski movement to provide control relative to weight distribution in conjunction with gravitational and acceleration forces;
and hand control means on said frame for controlling said linkage.

3,123,376
VEHICLE STEERING LINKAGE
William Denis Kendall, Los Angeles, and Kristof C. Somhegyi, Santa Monica, Calif., assignors, by mesne assignments, to Ray L. Boeger, Seal Beach, Calif.
Filed Aug. 20, 1962, Ser. No. 217,985
11 Claims. (Cl. 280—92)



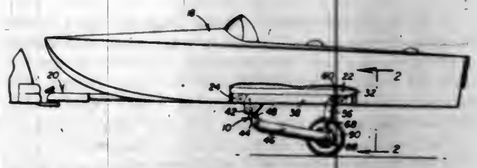
1. In combination with a cart including a frame and a ground wheel, an improved steering assembly comprising bearing structure carried by the frame to have a generally upright bearing axis, first rotary means including a first cranking member turnable about said axis and projecting outwardly therefrom near said bearing structure, said first rotary means including an operator control, second rotary means including a second cranking member turnable about said axis to steer the wheel and projecting outwardly from said axis near said bearing structure, said bearing structure supporting at least one of said first and second rotary means, and thrust transmitting auxiliary structure including lost motion connections for effecting turning of said second member in response to turning of said first member and at a rate slower than the rate of turning of said first member, whereby a mechanical advantage is developed for turning said wheel in response to operator controlled turning of said first rotary means.

3,123,377
TANDEM SUSPENSION FOR ELIMINATING BRAKE-HOPPING
Charles T. Hutchens, Box 1355, Springfield, Mo.
Filed Oct. 12, 1961, Ser. No. 144,773
13 Claims. (Cl. 280—104.5)



1. Tandem assembly comprising: opposed longitudinally spaced apart front and rear leaf spring assemblies; opposed forward, intermediate and rearward spring hanger brackets receiving the respective ends of each spring assembly; opposed front and rear axle housing means joined to each of said spring assemblies for receiving transverse trailer axles; opposed front torque rods pivotally joined at their forward ends to each front spring hanger bracket and pivotally joined at their rearward ends to each front axle housing above the respective axis of wheel rotation, and opposed rear torque rods, each pivotally joined at the forward end to said intermediate spring hanger brackets and pivotally joined at its rearward end to each rear axle housing means below the respective wheel axis of rotation, the axis of said rear torque arms being inclined to the horizontal a greater degree than that angle of said front torque arms.

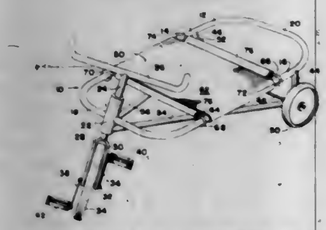
3,123,378
WHEEL SUSPENSION ASSEMBLY
Everette V. Caldwell, 4145 S. Norfolk, Tulsa, Okla.
Filed Dec. 7, 1961, Ser. No. 157,699
12 Claims. (Cl. 280—104.5)



1. A wheel suspension assembly for use in combination with boats, trailers or other mobile vehicular structures comprising a longitudinally extending frame member rigidly affixed in relation to the vehicle to be transported,

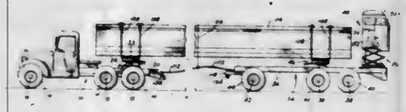
a longitudinally extending lower stationary frame disposed in underlying relation to the rigidly affixed frame member, means detachably connecting the lower stationary frame to the rigidly affixed frame member, a trailing support arm underlying said lower stationary frame, means pivotally connecting the forward end of the trailing support arm to the lower stationary frame, wheel means rotatably supported by the rear end portion of the trailing arm for engaging the ground surface, and spring assembly means extending between the lower stationary frame and the rear end portion of the trailing arm whereby to support the lower stationary frame resiliently from the wheel means for supporting the rigidly affixed frame member resiliently thereby enabling the lower stationary frame, the trailing arm, the wheel means and spring assembly means to be removed from the structure being transported when a desired destination has been reached, said lower stationary frame being in the form of a longitudinally elongated member having a projection on each end, said means connecting the lower stationary frame to the rigidly affixed frame member including a depending bracket on said frame member adjacent each end of said lower stationary frame and including sockets receiving the projections on the lower stationary frame, and retaining members interconnecting the sockets and projections thereby removably securing the lower stationary frame to the rigidly affixed frame member.

3,123,379
ADJUSTABLE SEAT FOR CHILD'S VEHICLE
Max V. Stocking, 1424 E. 4th, Winfield, Kans.
Filed Feb. 5, 1962, Ser. No. 171,141
4 Claims. (Cl. 280—282)



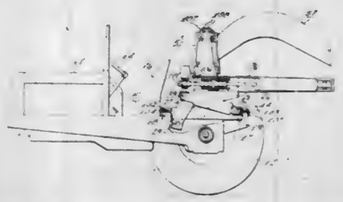
1. A scooter-like vehicle comprising, in combination, a generally rectangular tubular frame having side portions and end portions, a collar secured vertically and centrally to one of said end portions of said frame, a steering post rotatably mounted in said collar and projecting from both ends thereof, a handle bar secured to the upper end of said post, the lower end portion of said post being bifurcated, an axle carried by said bifurcated end portion of said post, a front wheel rotatably mounted on said axle, two crank arms secured in one end portion to opposite ends of said axle, two pedals, the other end portion of each of said crank arms having one of said pedals secured thereto, two supports rigidly secured in one end portion and in mirror image relation on opposite ones of said side portions of said frame near the other of said end portions thereof and projecting downwardly therefrom in spaced and generally parallel relation, an axle extending between and mounted in the other end portions of said supports, two rear wheels rotatably mounted on opposite end portions of said last-named axle, two braces, each of said braces being secured in one portion to said collar below said tubular frame and extending rearwardly therefrom in diverging relation and secured in the other end portion to said supports, a relatively wide and continuous plastic sheet transversely extending between and surrounding said side portions of said frame and positioned between said supports and said one of said end portions of said frame, two elongated rods, each end portion of each of said rods having an integral hook formed thereon, said rods being positioned on said frame with said hooks thereof slidably engaging said side portions of said frame on opposite sides of said sheet, a continuous plastic sheet surrounding and positioned between said rods and passing between the layers of said first-named sheet longitudinal of said tubular frame, said vehicle being constructed and adapted to be ridden by a child with said sheets forming an adjustable seat and said vehicle being propelled by said pedals or in scooter fashion and steered by said handle bars.

3,123,380
VEHICLE MEANS FOR ELONGATED AND/OR HEAVY OBJECTS
John V. Grim, York, and Richard R. Grim, Windsor, Pa., assignors to Grim Mfg., Inc., York, Pa., a corporation of Pennsylvania
Filed Jan. 23, 1961, Ser. No. 84,122
9 Claims. (Cl. 280—404)



1. Vehicle means for hauling relatively rigid elongated objects and comprising a powered tractor unit having steering means and load supporting means swivelly connected thereto to receive the forward end of one or more elongated objects; in combination with a trailer unit having at least two axles spaced longitudinally of said trailer unit and wheels rotatably supported thereon, manually operable, steering means and operator positioning means carried by said trailer and adjustably positionable simultaneously and vertically thereon to a level to permit ready viewing above the load by an operator on said positioning means to steer the wheels on at least one of said axles of said trailer, load supporting means swivelly connected to said trailer unit in a position intermediately of said axles in a direction longitudinally of said trailer unit to receive the rearward end of one or more elongated objects, and means to effect such adjustment to vary the vertical position of said steering mechanism and operator positioning means and thereby render the same suitable for use with loads of various heights; the tractor and trailer units being connected for pulling of the trailer only by the elongated load objects extending between the load supporting means respectively thereon.

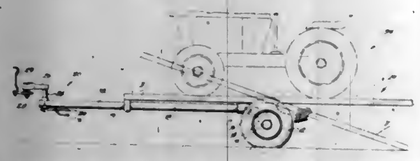
3,123,381
HITCH
Wesley A. Poore, Cedar Rapids, Iowa, assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed May 17, 1963, Ser. No. 282,197
6 Claims. (Cl. 280—405)



5. In an articulated self-propelled earth moving vehicle of the type including a single axle tractor unit and a single axle scraper unit, a hitch apparatus comprising a first hitch member; means for connecting said member on the

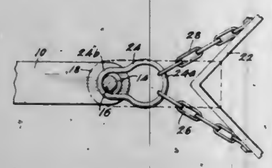
main frame of said tractor unit for pivotal movement on a horizontal pivot axis extending longitudinally of the tractor unit; a second hitch member; means for pivotally connecting said second hitch member on said first hitch member for relative pivotal movement on a horizontal axis extending transversely of said tractor unit; means for connecting said second hitch member to said trailing unit for relative pivotal movement on a vertical pivot axis; and a pair of expansible and contractible fluid motors disposed at opposite lateral sides, respectively, of said first hitch member and each including a pair of relatively movable elements pivotally connected, respectively, to said first and second hitch members; and fluid pressure means including control means for operating said fluid motors to control the angle of adjustment between said tractor unit and scraper unit about said transverse horizontal axis.

3,123,382
SELECTIVELY REVERSIBLE AND VERTICALLY ADJUSTABLE HITCH STRUCTURE
Wayne G. Toland, Stockton, Calif., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed June 7, 1962, Ser. No. 200,868
3 Claims. (Cl. 280—417)



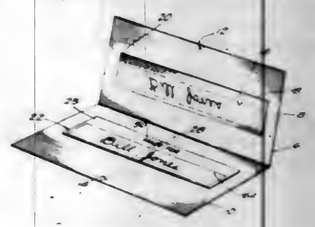
1. Adjustable hitch means adapted to connect the draft member of a towed vehicle to the corresponding draft members of selected propelling vehicles having draft members of different height comprising: generally vertical sleeve means carried by one of said draft members, an upright vertically adjustable in said sleeve means and rotatable about its axis therein, a first hitch member affixed to one end of said upright and projecting radially therefrom in one direction to an operative position in connecting relation to the other of said draft members, a second hitch member affixed to the other end of said upright at a location vertically spaced from said first hitch member and projecting radially from the upright to an inoperative position in the opposite direction, said upright being rotatable in said sleeve means to optionally dispose said second hitch member in connecting relation to said other of said draft members, and cooperating locking means carried by said sleeve means and said upright effective to hold the upright in selected vertical positions relative to the sleeve means.

3,123,383
SAFETY DEVICE
Willard J. Humpal, 815 13th St., Boulder, Colo.
Filed Sept. 25, 1961, Ser. No. 140,539
6 Claims. (Cl. 280—457)



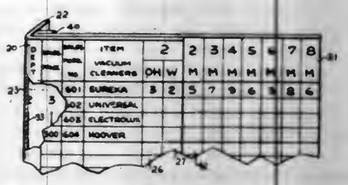
5. A safety coupling for maintaining two relatively movable members at a predetermined limit of separating movement, wherein at least one of said members has a circular terminal portion of predetermined diameter and a portion of smaller diameter, and said coupling consists of a chain and a key-hole link, attached to an end link thereof, the said key-hole link having a large circular portion of an inside diameter only slightly greater than the diameter of said terminal portion of said one member and a smaller portion of a size sufficient to receive said smaller diameter portion of said one member but insufficient to pass said terminal portion, said chain end link being freely movable from one portion of the key-hole link to the other and said chain end link when engaged in said large portion of the key-hole link reducing the effective inside diameter of said large portion whereby to prevent passage of said terminal portion therethrough, and means forming an element of the chain at the other end thereof for attachment to the other one of said members.

3,123,384
PERSONALIZED LABEL KIT
Reese Baker, 419 E. La Palma, Anaheim, Calif.
Filed May 28, 1962, Ser. No. 198,173
3 Claims. (Cl. 282—1)



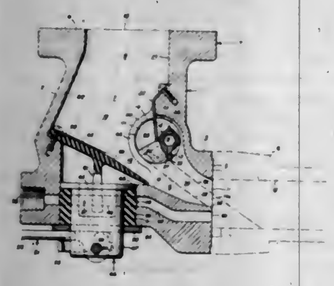
1. A personalized label kit including a panel body having an aperture therein, a thin flexible sheet secured to a portion of said panel and spanning said aperture, said thin flexible sheet having an impression transfer substance on its bottom face, an impression receiving element positioned beneath said aperture and said thin flexible sheet, said impression receiving element having an impression receiving face, the opposite side of said impression receiving element having an adhesive coating on an area thereof with a non-adhesive protective sheet removably adhered thereto, said protective sheet being of less extent than said adhesive coating to expose a portion of the adhesive coating, and the exposed portion of said coating being removably adhered to a portion of said panel body to hold the impression receiving element in position beneath said aperture and said thin flexible sheet.

3,123,385
MERCHANDISE INVENTORY CONTROL MEANS
Theodore R. Bromwell, Philadelphia, Pa.
(464 Hoodridge Drive, Pittsburgh 34, Pa.)
Filed June 21, 1961, Ser. No. 118,560
3 Claims. (Cl. 283—55)



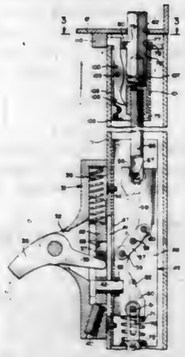
1. A merchandise inventory control device comprising a stock list part and a separate control sheet part each of which includes indexing means conjointly operative to index the parts to one another so that a specific data bearing portion of said control sheet is visibly disposed immediately adjacent to a specific terminating edge portion of said stock list, said stock list indexing means consisting of a pocket formed by folding a portion of said stock list part back upon itself along a defined fold line, said control sheet indexing means consisting of one edge of said control sheet which is disposable within said stock list indexing pocket with the said one edge in abutment with the pocket bottom and a plurality of parallel equi-spaced fold lines defined on said control sheet, said fold lines being also parallel to the said one edge of said control sheet disposable within the pocket of said stock list, said control sheet being selectively foldable along a desired one of said fold lines to thereby define a new edge of said control sheet for abutting disposition within the aforesaid pocket of a stock list whereby said control sheet may be indexed to a plurality of different stock lists of the same physical form as the aforesaid stock list, said control sheet being wider than said stock list in a direction measured laterally from the stock list pocket bottom so that said stock list overlies a portion of said control sheet and said control sheet extends laterally outward beyond said stock list, and when so indexed the pertinent control sheet data appears visibly thereon immediately laterally adjacent to the stock list terminating edge, and indicating means associated with each of said control sheet plurality of fold lines and said one edge and with each stock list for denoting which specific fold line of said one edge of said control sheet is to be used when it is desired to index the control sheet to a specific stock list.

3,123,386
SANDER
Virgil L. Frantz, Salem, Va., assignor to Graham-White Sales Corporation, Salem, Va., a corporation of Virginia
Filed Dec. 29, 1961, Ser. No. 163,312
21 Claims. (Cl. 291—11)



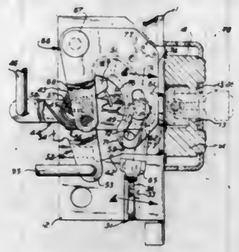
19. A sander comprising a body, a sand chamber in said body and having connected inlet and outlet legs, a sand outlet from said chamber into a mixing chamber, a smooth-bored clean-out port in a bottom wall of said body and opening upwardly toward said inlet leg, an air passage in said body and having an outlet onto said mixing chamber below said sand outlet, said passage having portions opening at sides onto and interrupting a side of said port, and a clean-out plug slidable axially into said port, said plug including a compressible sleeve slidable in uncompressed condition freely into said port and over said sides of said passage portions, and means for axially compressing said sleeve within said port and thereby sealing said port and said sides of said passage portions and locking said plug in said port.

3,123,387
PANIC EXIT LOCK
Andrew Jackson, Los Angeles, Basil M. Petroff, Montebello, and Carl B. Sparkman, Long Beach, Calif., assignors to Jackson Exit Device Corporation, Los Angeles, Calif., a corporation of California
Filed July 19, 1960, Ser. No. 43,960
8 Claims. (Cl. 292—21)



1. In a panic exit lock for a door having a hollow lock stile, the combination of a bolt rod mounted in said lock stile for vertical movement therein with one end portion of said bolt rod extending adjacent an extremity of said lock stile, said end portion being provided with threads, a bolt threadedly connected to said end portion, said bolt having a non-circular cross section extending outwardly of said lock stile, a wrench plate operably connected to said lock stile, said plate having a non-circular opening therein, the said bolt extending through said opening in mating relationship therewith with a substantial portion of the non-circular cross-section of said bolt extending beyond said wrench plate in both directions, said wrench plate being releaseable from said lock stile for turning said bolt relative to said bolt rod for adjusting the distance said bolt protrudes from said lock stile.

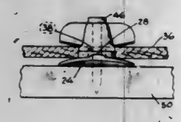
3,123,388
DOOR LATCH MECHANISM
Anthony J. Di Salvo, Allen Park, and Maurice M. Westerdale, Inkster, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed June 27, 1961, Ser. No. 119,991
6 Claims. (Cl. 292—48)



1. In a latch mechanism for a swinging door, a support having two angularly related plate portions, pivotal latch device means mounted on one of said plate portions, detent means pivotally mounted on said one plate portion and engageable with said latch device means for holding the same in door latching position, a detent actuating member pivotally mounted on the other plate

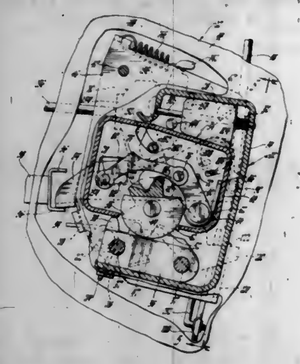
portion, and a link means shiftable in a plane parallel to said other plate portion to transmit movement of said detent actuating member to said detent means to disengage the latter from said latch device means, said link means being movably coupled at one end thereof to said detent actuating member and at the other end having a part thereof in abutting relation to a part of said detent means, said one end of said link means being movable on said detent actuating member from a detent actuating to a detent nonactuating position, and means on said other plate portion operable to shift said one end of said link means on said detent actuating member.

3,123,389
QUARTER TURN FASTENER
Donald L. Blesecker, Arlington Heights, Ill., assignor to Illinois Tool Works, Inc., Chicago, Ill., a corporation of Delaware
Filed July 25, 1960, Ser. No. 45,046
9 Claims. (Cl. 292—218)



1. A one-piece dielectric plastic fastener for fastening an apertured panel to a workpiece including a base, a columnar body integral with and extending from said base, wings extending outwardly in fixed relationship from opposite sides of said body and spaced from said base, said wings being telescopically acceptable through said apertured panel, spring means extending laterally from said base in spaced opposition to said wings, stud means extending from said base in a direction opposite from the body, said stud means acting in cooperation with said body and wings to fasten said panel to said workpiece and said spring means acting as a resilient spacer between said panel and workpiece.

3,123,390
DOOR LATCH
Bela Sandor and Edmund F. Sarosy, Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 17, 1962, Ser. No. 166,804
13 Claims. (Cl. 292—280)



11. A door latch, comprising, latching means movable between latched and unlatched positions, detent means movable in one direction into engagement with said latching means to block movement thereof toward unlatched position, movement of said latching means toward latched position moving said detent means in the other direction, an intermittent member coupled to said detent means and being movable between first and second positions, fulcrum means, said intermittent member being positioned out of engagement with said fulcrum means when said intermittent member is in said first position and being engageable therewith when said intermittent member is in said second position, movement of said detent means in said other direction moving said intermittent member about said fulcrum means from said second position thereof to said first position thereof.

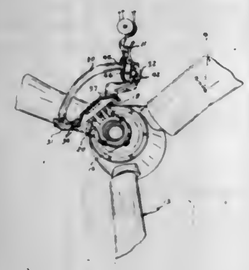
3,123,391
LAWN AERATOR
Joseph J. Novak, 3603 Stanfield Drive, Parma, Ohio
Filed Oct. 23, 1962, Ser. No. 232,385
5 Claims. (Cl. 294—50.7)



1. A device for aerating the soil comprising an elongated pump cylinder, a piston in said cylinder, a piston rod connected to said piston and extending through the top end of the cylinder, an operating handle on said piston rod, a ground-penetrating tube secured axially to the other end of the cylinder in communication therewith, said tube being adapted to be forced into the soil and to form a plug of soil therein which is extracted when the tube is withdrawn from the soil, and an air-admitting check valve on the lower portion of the cylinder below the piston adapted to admit air responsive to an upward suction stroke of the piston after the plug is formed in the tube and the tube is withdrawn from the soil and to close when the piston is moved downwardly to compress the admitted air, the piston being movable downwardly to increase the pressure of the admitted air, whereby the plug may be expelled from the tube.

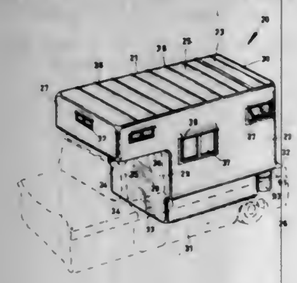
3,123,392
PROPELLER LIFT ASSEMBLY
Harvey J. Jacobson, deceased, late of Travis Air Force Base, Calif., by Vinnie M. Jacobson, legal representative, 1123 E. Princeton, Spokane, Wash.
Filed Nov. 28, 1962, Ser. No. 240,764
2 Claims. (Cl. 294—81)
(Granted under Title 35, U.S. Code (1952), sec. 266)

2. A propeller lift assembly comprising: a ring support member adapted to fit on a standard propeller base plate, an arcuate rail member, trolley lifting means for supporting said rail and having roller means for engaging the lower surface of said rail, bearing means secured to each end of said rail for permitting rotation of said rail at right angle to the direction of motion of said trolley, a plate member secured to said ring support member, one of said bearing means being directly connected to said plate member, an extension member connected between the other bearing member and said plate member adapted to support said rail wtih its center of curva-



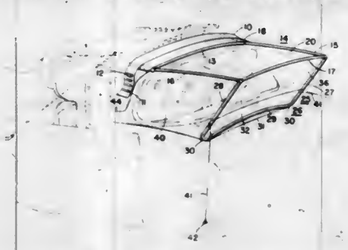
ture at the center of gravity of the rail to which it is attached.

3,123,393
CAMPER COACH AND METHOD OF CONSTRUCTION
Verdun E. Markwick, Stoney Creek, Ontario, Canada (% Canadian Research & Development Foundation, 1434 Queen St. W., Toronto 3, Ontario, Canada)
Filed July 17, 1961, Ser. No. 124,613
4 Claims. (Cl. 296—23)



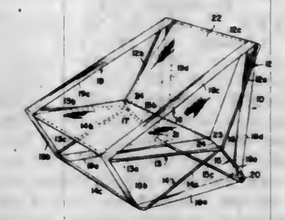
1. A camper coach comprising an inner shell and an outer shell; said outer shell comprising two half shells; said inner shell comprising two half shells, the outer surface of each of said half shells of said inner shell substantially cooperable and adhesively secured to the inner surface of each corresponding half shell of said outer shell; each said half shell of said inner shell having integrally moulded members projecting inwardly and spaced apart from said outer shell; one said half shell of said inner shell having said members to define seat means, table means, sink means, upper storage means, and closet means, said table means having water storage means integral therewith, and said closet means having toilet means therein, said toilet means comprising a seat means integrally moulded in the mating outer half shell having an opening therein, said opening cooperably located with an externally removable container means; the second said half shell of said inner shell having said members to define seat means; upper storage means, lower storage means having shelf means therein, and closet storage means, said closet storage means having means cooperable with an externally removable fuel storage means; said shelf means integrally moulded in the mating outer half shell; said outer shell and said inner shell defining congruent openings thereby providing window means and door means.

3,123,394
AUTOMOBILE WINDSHIELD RAIN VISOR
John A. Corsetti, Greece, N.Y., assignor to Kover-Kar Incorporated, Rochester, N.Y., a corporation of New York
Filed Oct. 9, 1961, Ser. No. 143,649
6 Claims. (Cl. 296—95)



1. Apparatus attachable to an automobile comprising the combination of a visor section adapted to be supported generally over the horizontal projection of an automobile windshield, said visor section comprising a frame on which is secured a substantially water-impermeable material, means to mount one end of said visor section in substantially water-tight engagement with the roof of an automobile, said last recited means including strap-like means connected to said visor section and arranged when on an automobile to extend in the proximity of the side perimeters of the automobile roof, means for securing said strap-like means to a convenient location on the automobile body, said means for securing said strap-like means being adaptable for the securement thereof onto automobile bodies of different width, and a splash guard section adapted to be supported in a substantially upright position extending upward from a position on the automobile hood for a distance less than the windshield height and width-wise of the hood of said automobile below and approximately coextensive with said visor section, whereby the top of said splash guard section together with said visor section define an opening which lies generally in a line of vision extending out from behind the windshield to beyond the front extremities of the automobile, said splash guard section being substantially effective to intercept falling precipitation being deflected from the hood toward the windshield of the automobile on which said apparatus is attached.

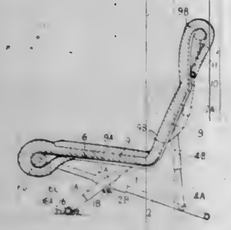
3,123,395
BODY SUPPORTING FURNITURE OF THE POLYGONAL TENSION TYPE
Henry P. Glass, 666 Lake Shore Drive, Chicago 1, Ill.
Filed Sept. 26, 1961, Ser. No. 140,939
8 Claims. (Cl. 297—16)



1. Furniture of the polygonal type comprising a collapsible supporting frame, said frame comprising a plurality of pivotally mounted frame members movable to extended position to form the corners of a polygon, two of said frame members when in their extended position defining a seat and back rest within the outline of said

polygon, and flexible means extending along the periphery of said polygon for detachably connecting to said frame at one of the corners of said polygon for forming a polygonal tension type structure, said flexible means being securely fastened to each of said frame members and said means when released from said one of said corners causing said frame to collapse.

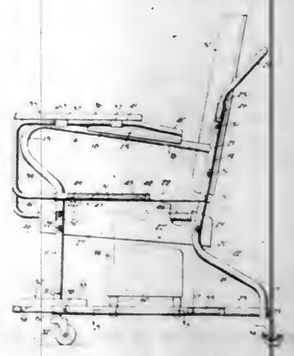
3,123,396
HAMMOCK SEAT
Lindley Searle, Green Gates, Cross Oak Road, Berkhamsted, England
Filed Feb. 27, 1961, Ser. No. 92,000
6 Claims. (Cl. 297—114)



1. A hammock seat comprising in combination a seat frame and a back frame pivoted together, said back frame including a top transverse member at the distal end thereof and said seat frame including a front transverse member at the distal end thereof, means whereby the frames may be retained in adjusted angular relationship, a squab slung between the top transverse member of the back frame and the front transverse member of the seat frame, a seat base for the squab comprising a rigid metal panel attached to the said front transverse member, a textile squab base bonded to said panel, an upwardly and downwardly adjustable member carried by the back frame to which member the upper end of said squab base and also that of the squab are secured, a further transverse member adjustably mounted upon said back frame and adjustable toward and away from said top transverse member, said squab extending over said top transverse member and connected to said further transverse member whereby the attitude of said panel can be adjusted, said squab and squab base hanging free except where connected to said further transverse member and slung between said front transverse member and said top transverse member.

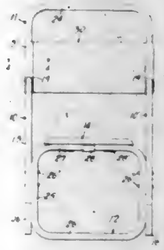
3,123,397
COMBINED CHAIR, TABLE AND FOOT REST STRUCTURE
Charles E. Murcott, Valley Drive, Bay Crest, Huntington, N.Y.
Filed Feb. 20, 1963, Ser. No. 259,971
9 Claims. (Cl. 297—150)

1. A chair structure of the character defined comprising a chair consisting of two generally similar tubular side frames joined by seat and backrest members, each frame including front and rear legs and an armrest portion, lower brace tubes fixed to and joining the leg members of said frames, upper brace tubes fixed to and joining front and rear portions of said frames adjacent the seat member, the last named brace tube of one of said frames being arranged in lower position than the similar tube on the other of said frames, said structure including a table element slidable in the upper brace tubes, another element slidably engaging the lower brace tubes, said table element being swingable in the upper brace tube in said lower position in movement of the table element from an operative position to a stored position outwardly of one of the side frames of the chair, said table element comprising a table and two U-shaped table supporting members swingably mounted upon the lower surface of



the table, one said of said members comprising pivot sides, and the other free sides of said members slidably engaging the second named brace tubes of the chair.

3,123,398
SHOWER CHAIR
Charles E. Murcott, Valley Drive, Bay Crest, Huntington, N.Y.
Filed Oct. 10, 1962, Ser. No. 229,665
9 Claims. (Cl. 297—183)



1. A chair of the character defined comprising two similar substantially U-shaped side frames having front and rear legs, a U-shaped backrest frame having side backrest portions including offset lower ends fixed to the rear leg members of the side frames, a brace member extending between and fixed to the rear legs of the side frames, means fixed to the front legs of the side frames forming, in a combination with said member, a support for a toilet seat, means for fixing the seat to said member and first named means, a flexible backrest movably supported on the side backrest portions of said frame, said first named means comprising an O-shaped frame, and said O-shaped frame including at its lower end a footrest offset forwardly on the side frames to a slight extent.

3,123,399
FURNITURE STRUCTURE
James H. Wilson, Sturgis, Mich., assignor, by mesne assignments, to The General Fireproofing Company, Youngstown, Ohio, a corporation of Ohio
Filed Oct. 23, 1959, Ser. No. 848,299
4 Claims. (Cl. 297—239)

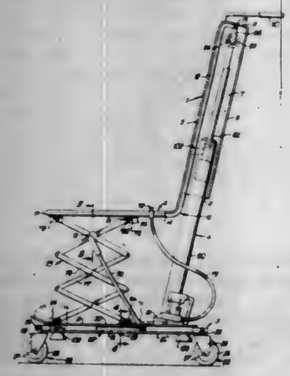
1. In a furniture base for pieces of furniture adapted to be stacked telescopically with identical pieces one upon another in columns, said base comprising two pairs of legs, one pair on each lateral side of said base, the legs

of each pair being inclined from each other so as to converge upwardly, the improvement which comprises two combined bracing and spacing means one on each lateral side of said base, each one of said means comprising a cross-tie web disposed on the outer sides of the pair of legs on the respective lateral side of said base, and a pair



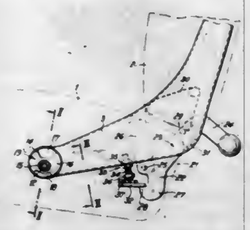
of spacers extending inwardly from said web between said last-named pair of legs, one spacer adjacent each leg of said last-named pair of legs, said last named means being attached to each leg of said last-named pair of legs, said spacers being adapted to rest on the respective legs of the base of an identical piece of furniture upon which said first-named base is stacked, to space said pieces apart.

3,123,400
INVALID'S CHAIR
Kenneth H. Paulson, 14272 S. Hoover St., Westminster, Calif.
Filed Aug. 21, 1961, Ser. No. 132,608
3 Claims. (Cl. 297—314)



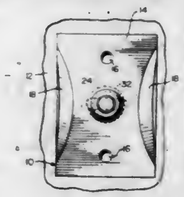
1. An invalid's chair including a wheeled chassis, a turntable mounted for rotation on said wheeled chassis, a chair comprising a seat and a back, a hydraulic jack between the back and the turntable, said hydraulic jack including a cylinder fixedly secured at its lower end to the turntable, a piston in said cylinder, a pump for pumping fluid within the cylinder to raise the piston, a piston rod secured to the piston, means between the piston rod and the chair back to permit limited sidewise tipping of the chair, said chair back being provided with spaced apart front and rear panels and narrow side panels joining the front and rear panels and terminating short of the lower end of the cylinder, stabilizing mechanism between the chair seat and the turntable to resist said tipping of the chair, and means conveniently located with respect to a person seated in the chair for controlling the up and down movement of the piston and the chair.

3,123,401
BACKREST CONSTRUCTION
Erwin Komenda, Stuttgart, Germany, assignor to Firma Dr. Ing. h. c. F. Porsche KG, Stuttgart-Zuffenhausen, Germany
Filed Feb. 1, 1962, Ser. No. 170,358
Claims priority, application Germany Mar. 30, 1961
8 Claims. (Cl. 297—379)



1. A vehicle seat comprising seat frame means, tiltable backrest means, disengageable locking means tiltably supporting said brackrest means at said seat frame means in the normal position thereof to prevent unintentional forward tilting of said backrest means, and resilient means for providing a spring resistance to shocks acting against said backrest means and supporting said backrest means at said seat frame means and effective essentially exclusively with said backrest means in the normal position of use thereof.

3,123,402
AUTOMOBILE SAFETY BELT ANCHOR CONSTRUCTION
Thomas J. Elston, 3084 Southwind Drive, Walled Lake, Mich.
Filed June 14, 1962, Ser. No. 202,449
3 Claims. (Cl. 297—385)



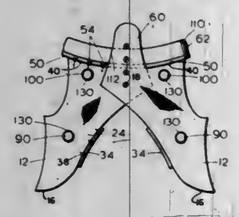
1. In an anchor construction for securement of a safety belt at the bottom floor pan of an automobile.
an anchor plate for said belt adapted to be secured to said floor pan and having
a body of substantially rectilinear configuration,
arcuate flanges extending longitudinally at the sides and at an angle to the plane of said body,
said flanges being arced medially of said body and curving toward the side edges of said body so that the transverse distance between said arcs increases from the middle of said body, where said flanges are widest, until said arcs terminate at the side edges of said body, where said flanges terminate,
and an extrusion integrally formed central of and normal to the plane of said body,
said extrusion having a threaded bore axially thereof to threadedly engage an anchor bolt for securement of said safety belt.

3,123,403
AUTOMOBILE ARM REST
Bruce G. Hood, Marblehead, Mass., assignor to Davidson Rubber Company, Dover, N.H., a corporation of New Hampshire
Filed Dec. 21, 1962, Ser. No. 246,626
7 Claims. (Cl. 297—412)



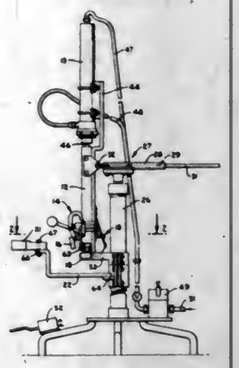
1. An integral one-piece padded automobile arm rest comprising: a flexible substantially seamless plastic shell with a grained outer surface, an upper horizontal wear and pressure receiving surface with longitudinally extending corners, and a vertical side wall substantially at right angles to said wear and pressure receiving surface, the thickness of the plastic in said corners being substantially thicker than in other portions of the shell; a reinforcing and attaching member within said shell having a horizontal upper surface parallelly spaced from, substantially coextensive with and in supporting relation to said wear and pressure receiving surface forming a narrow cavity therebetween, and having a mounting bracket positioned relative to said vertical side wall and adapted to permit mounting of said vertical side wall against a side panel of an automobile; and a cured thermosetting resin foam completely and firmly filling said shell including said cavity, and intimately bonded to said shell and said reinforcing and attaching member.

3,123,404
SEAT
William G. Dunn, 309 W. Garfield St., Clarinda, Iowa
Filed Apr. 13, 1961, Ser. No. 102,721
1 Claim. (Cl. 297—461)



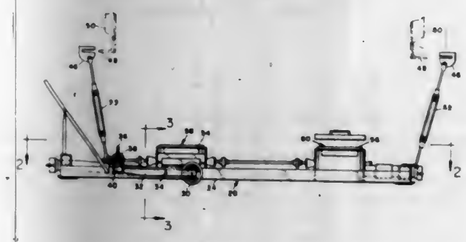
A seat of a total size for use as a camel saddle, said seat comprising in combination longitudinally spaced forward and rearward pairs of legs positioned in transversely disposed planes and said planes being in parallel relation whereby the legs of a pair are overlapped at their upper ends, the upper portions of said legs being provided with generally horizontally positioned shoulders, overlapping horn portions projecting upwardly from inner ends of said shoulders, means rigidly fastening the legs of each pair together at a plurality of spaced points in the area of said overlapped upper portions of said legs to prevent them from twisting with respect to each other, the lower ends of the legs of each pair being spaced apart from each other and forming an inverted V, longitudinally positioned generally horizontally disposed seat supporting panel means rigidly secured to upper surfaces of the shoulders of the legs and connecting said pairs of legs, said seat supporting panel means having two open areas therein receiving therethrough said horn portions, horizontally elongated back engaging panels extended between and secured to lower portions of said legs and having undersurfaces lying approximately in planes forming acute angles with the vertical and said panels being more closely spaced together at their upper ends than at their lower ends so as to be inclined inwardly toward each other at their upper ends, and said seat having an open space between said back engaging panels and between lower portions of said legs so as to be adapted to receive therein the back of a camel, and longitudinal members positioned below said seat supporting panels and extended between said forward and rearward legs on each side of said open space, and means connecting said longitudinal members to said legs for retaining said forward and rearward legs in constant spaced relation, said back engaging panels extending inwardly from said legs at least as far as any other portion of said legs.

3,123,405
BRISTLE INSERTING APPARATUS
Almer C. Wright, 162 Norman, Clyde, Calif., assignor of one-half to William B. Thomas, Concord, Calif.
Filed July 31, 1961, Ser. No. 128,120
8 Claims. (Cl. 300—8)



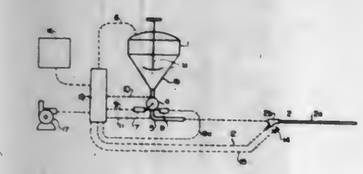
1. Bristle bending and inserting apparatus comprising an elongated guide having a channel longitudinally therethrough and a longitudinal slot extending exteriorly from said channel, said channel having longitudinally extending spaced guide walls, a head slidably mounted for reciprocation within said channel, means coupled to said head for controllably effecting said reciprocation, a locking device carried by said head for movement therewith including a claw pivotally mounted for movement through said slot for selective positioning within the channel for longitudinal movement therein, an elongated open topped bristle holder disposed subjacent said guide and formed to support unbent bristles of greater length than the distance between said walls in transverse relation to the axis of the guide, said holder having a central opening coextensive with said slot and channel and located in the path of movement of said claw whereby said claw is movable through said opening to engage the underside of the bristles so that upon longitudinal movement in one direction of the head the claw will draw the bristles between the walls of the channel, in longitudinal alignment therewith thereby folding said bristles into opposed folded portions, said head being movable in the opposite direction and adapted to engage the folded bristles and move them longitudinally out of said channel.

3,123,406
APPARATUS FOR UNLOADING FINELY DIVIDED PARTICLES
Frederic D. Pfening, Columbus, Ohio, assignor to The Fred D. Pfening Co., Columbus, Ohio, a corporation of Ohio
Filed Dec. 16, 1960, Ser. No. 76,295
4 Claims. (Cl. 302—27)



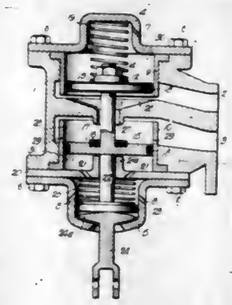
1. An apparatus for unloading finely divided particles from a plurality of bin outlets comprising, in combination, frame means; a first pneumatic conveyor carried by said frame means and including a particle intake opening, an air intake opening, and a discharge opening for a flow of particles and air; a second pneumatic conveyor carried by said frame means and including a particle intake opening, an air intake opening, and a discharge opening; a first air conduit including a first end and a second end communicating with said air inlet of said first conveyor; a second air conduit including a first end and a second end communicating with said air inlet of said second conveyor; a main air supply conduit communicating with said first ends of said air conduits; valve means including a centered position wherein air from said main air supply conduit is delivered to both of said first and second air conduits, a second position wherein air is delivered to only one of said first and second air conduits, and a third position wherein air is delivered to only the other of said first and second air conduits; a main particle and air discharge duct; a first particle and air discharge conduit connecting the outlet of said first conveyor with said duct; and a second particle and air discharge conduit connecting the outlet of said second conveyor with said main duct.

3,123,407
METHOD OF AND APPARATUS FOR FEEDING GROUND MATERIALS
Robert F. Shurtz, Pepper Pike, Ohio, assignor to Basic Incorporated, Cleveland, Ohio, a corporation of Ohio
Filed June 1, 1961, Ser. No. 114,223
8 Claims. (Cl. 302—53)



1. In apparatus for pressure-projecting bulk material including a pressurized container for such material, a nozzle for discharging the material, and a duct connecting the container and nozzle and containing a fluid-actuated valve, the improvements comprising: a multi-valve control unit, fluid-conducting lines connecting said unit to said duct both upstream and downstream of the valve, a fluid-conducting line connecting the unit to the fluid-actuated valve to operate the latter, and a further fluid-conducting line connecting said unit to the nozzle, and responsive means effective to operate the multi-valve control unit to pass fluid under pressure in said lines and selectively sweep clear the valve, duct, and nozzle at predetermined intervals.

3,123,408
BRAKE CYLINDER RELEASE VALVE
Daniel McIntyre, Affton, Mo., assignor to Gustin-Bacon Manufacturing Company, a corporation of Delaware
Filed Mar. 8, 1961, Ser. No. 94,359
2 Claims. (Cl. 303—68)



1. In a brake cylinder release valve, the combination of a hollow housing having end closures,
a first piston receiving chamber in the hollow housing,
a connection for a brake controlling device communicating into said first housing chamber,
a second piston receiving chamber in the hollow housing of like cross-sectional area to that of the first housing chamber;
a connection for a brake cylinder communicating into said second housing chamber;
means in said hollow housing dividing the first and second piston housing chambers from one another and having a restricted opening therethrough;
first and second pistons of equal cross-sectional area in said first and second housing chambers reciprocable in wall sealing fashion within said chambers.
a piston rod connecting said pistons to form a piston assembly and extending through said restricted opening and of insufficient diameter to seal same whereby to form a sealed passageway through said hollow housing communicating between said connections and between the opposed faces of said pistons when the piston assembly is in a normal or open position;
means on said second piston for sealing said restricted opening when the piston assembly is moved to an abnormal or closed position;
means for venting the brake cylinder connection into the second housing chamber on the side of the second piston away from the restricted opening when the piston assembly approaches closed position;
spring means in the hollow housing normally urging the piston assembly away from said closed position to said open position;
the second chamber continuously vented to atmosphere on the side of the second piston away from said restricted opening;
the first chamber continuously vented to atmosphere on the side of the first piston away from the restricted opening;
and pull means engageable with the piston assembly for overcoming the force of the spring means and moving the piston assembly to closed position.

3,123,409
BRAKE RELEASE FOR TRAIN AUTOMATIC AIR BRAKE SYSTEM
Henry Parsons, % John Howard, 610 Williams St., Bakersfield, Calif., assignor of forty-nine percent to John Howard and two percent to John M. Nairn, both of Bakersfield, Calif.
Filed Mar. 22, 1962, Ser. No. 181,655
8 Claims. (Cl. 303—70)



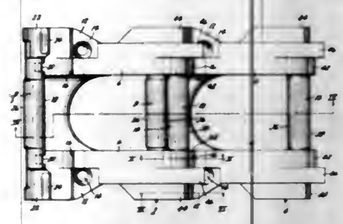
1. A brake reservoir bleeder for a railway automatic air brake system of the type including a train line having maintained therein a normal range of brake operating pressure and a brake reservoir for each car for operating the brakes thereof and connected to said train line; said bleeder comprising a pressure release means for each reservoir operable for connecting the latter to the atmosphere and actuator means for each release means including a pressure operated member and a connecting means operable for connecting said member to said release means, said pressure operated member being responsive to a rise in pressure above said normal pressure range for operably connecting said pressure operated member to said release means by said connecting means and being then responsive to a pressure decrease below said pressure rise for effecting by said connecting means venting of said reservoir by said release means.

3,123,410
ENDLESS FLEXIBLE TRACK FOR VEHICLES
Harry Charles Paul, 153 Oxford St., Winnipeg 9,, Manitoba, Canada
Filed May 11, 1961, Ser. No. 109,419
2 Claims. (Cl. 305—35)



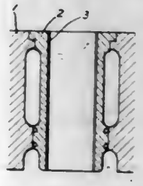
1. In an endless track structure, the combination of a pair of transversely spaced parallel chains adapted to travel around sprockets and having radially inward and radially outward edges relative to such sprockets, a set of transversely extending reinforcing strips secured at longitudinally spaced points to the outward edges of said chains, a band of resiliently flexible rubber-like material superposed on said strips longitudinally of the track and having a width at least as great as the transverse spacing of said chains, and means provided at longitudinally spaced points on said band and securing the same to said strips, portions of said band between said securing means having a greater longitudinal dimension than the longitudinal spacing of said strips on said chains and said portions of said band being bowed outwardly from said chains to provide resiliently yieldable ground engaging elements.

3,123,411
LINK FOR CRAWLER TYPE TRACTOR TREAD
Luther A. Ellison, 2627 Buchanan St., Topeka, Kans.
Filed Apr. 2, 1962, Ser. No. 184,047
4 Claims. (Cl. 305—50)



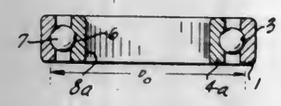
1. A crawler type tractor tread comprising a series of identical unitary links interconnected pivotally to form an endless chain trained about a drive sprocket, each said link being substantially rectangular in the plane of the tread and comprising:
(*a*) a pair of spaced apart load-supporting side rails extending in the direction of the tread and adapted to engage a tread flange of said drive sprocket, and
(*b*) a pair of cross bars extending at right angles to said side rails respectively at opposite ends thereof, said cross bars constituting hooks extending respectively upwardly from the lower face of the link and downwardly from the upper face of said link, adjacent cross bars of successive links being interengaged to relate said links pivotally, the mating faces of said cross bars being convexly curved about axes longitudinal thereto whereby pivotal movement of said links is accomplished by rolling contact of said convex faces, each mating pair of said cross bars constituting, in conjunction, a sprocket pin adapted to extend between a successive pair of teeth of said drive sprocket, whereby said tread is driven.

3,123,412
PLATED WEARING MEMBER
Tsutomu Takao, Kawaguchi City, Japan, assignor to Nippon Piston Ring Kabushiki Kaisha, Tokyo, Japan
Filed Sept. 26, 1961, Ser. No. 140,933
Claims priority, application Japan Dec. 29, 1960
5 Claims. (Cl. 308—4)



1. In a cylinder-piston arrangement for a water cooled internal combustion engine, wherein the piston reciprocates relative to and along the interior cylinder surface, the improvement which comprises that said surface is plated with a porous chromium layer, the pores of the layer having a width of about 0.001 to 0.01 mm. and a depth of about 0.001 to 0.03 mm.

3,123,413
ANTIFRICTION BEARING
Lewis R. Heim, Fairfield, Conn., assignor, by mesne assignments, to Channing Corporation, New York, N.Y., a corporation of Delaware
Filed Sept. 28, 1959, Ser. No. 842,981
2 Claims. (Cl. 308—193)

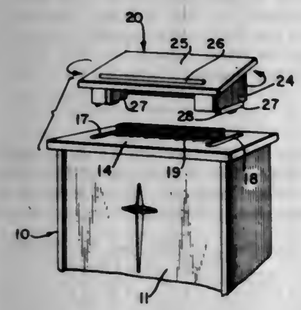


1. An anti-friction bearing comprising two unbroken hardened right circular cylindrical members in telescoped relation, each member being composed of metallic material capable of being hardened by heat treatment and having a circular wall facing the other member with a raceway groove in the wall extending around the periphery of the wall, and a full complement of rolling elements extending into the raceway grooves and securely interlocking the members by impinging against the raceway walls, the character of this interlocking being such that the bearing cannot be disassembled without permanent deformation of at least one of its parts, each member being free from mechanical working stresses, each raceway groove having a depth greater than the quantity

$$\tfrac{1}{2}(D_I\alpha_I\Delta T_I+D_o\alpha_o\Delta T_o)$$

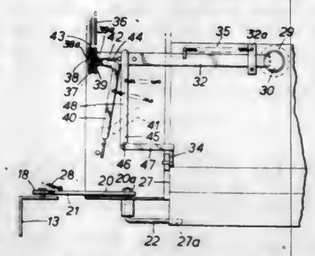
where
D_I=the maximum diameter of the groove in the inner member;
D_o=the maximum diameter of the groove in the outer member;
α_I=the mean coefficient of thermal expansion of the material of the inner member;
α_o=the mean coefficient of thermal expansion of the material of the outer member;
ΔT_I=the difference between room temperature and the minimum temperature to which the inner member can be cooled during assembly of the bearing; and
ΔT_o=the difference between room temperature and the maximum temperature to which the outer member can be heated without affecting the temper of the walls of its groove.

3,123,414
COMBINATION PULPIT AND REGISTER DESK
Richard L. Rupp, 700 Jefferson Ave., Defiance, Ohio
Filed Aug. 29, 1962, Ser. No. 220,317
11 Claims. (Cl. 312—33)



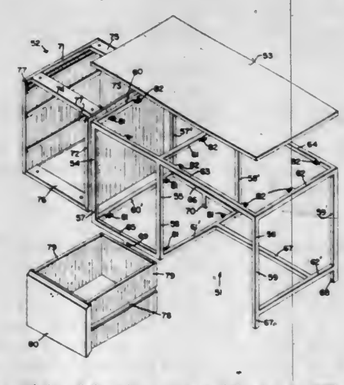
1. A combination pulpit and register desk comprising
(*a*) a cabinet member,
(*b*) a ministerial and register desk member, and
(*c*) convertible means between said desk and cabinet members for convertibly combining said members in relatively reverse positions to act either as a pulpit or a register desk.

3,123,415
VENDING MACHINES
Reginald Hugh Fred Carter, Littlehampton, England, assignor to X-O-Matics (Sales) Limited, London, England
Filed Apr. 25, 1961, Ser. No. 105,452
Claims priority, application Great Britain Apr. 27, 1960
12 Claims. (Cl. 312—97.1)



1. A vending machine comprising a holder for the goods to be vended having a number of compartments to contain the goods, a casing for said holder having an access opening and a closure member therefor, the holder being supported to move downward in a helical path by gravity in said casing to bring each compartment in turn into register with said opening, said closure member being a member pivoted to the casing and providing when closed a stop for the said holder, means operative when a coin is in a position to serve as a link or coupling to unlock or unlock and open the said closure member, indexing means operative when the closure member opens to intrude into the path of the holder and to retain the holder when the said stop on the closure member has been withdrawn, said last-mentioned means being operative by closing the closure member to release the holder to turn by gravity up to the said stop on the closure member and bring another compartment to the said opening.

3,123,416
ARTICLES OF FURNITURE
Edward A. Sövik, Jr., Northfield, Minn., assignor to Sovik, Mathre & Madson, Inc., Northfield, Minn., a corporation of Minnesota
Filed July 7, 1961, Ser. No. 122,522
6 Claims. (Cl. 312—195)



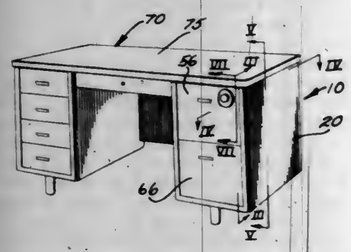
1. An article of furniture comprising a metallic skeletal structure having two substantially similar frame mem-

bers vertically positioned and spaced apart, each frame member having two spaced vertical sides and a horizontal portion connecting the upper portions of the sides, girder means connecting the aligned upper corner portions of the frame members and horizontally positioned lower parts connecting the lower portions of the sides to thereby provide a rigid skeletal structure, a boxlike unit, a plurality of drawers slidably mounted within said unit, at least two of the opposite sides of the unit having vertical dimensions which are slightly less than the vertical distance between said horizontal portion and said part and horizontal dimensions which are slightly less than the distance between adjacent vertical sides of a frame member, said unit being positioned snugly within the skeletal structure and carried by said lower parts, a top member covering the unit and coacting means carried by the unit and structure for detachably securing the unit and top member to the skeletal structure.

3,123,417
PEDESTAL WITH LOCKING MEANS

Earle C. Bullock, Grand Rapids, Mich., assignor to Steelcase, Inc., Grand Rapids, Mich., a corporation of Michigan

Filed Apr. 17, 1961, Ser. No. 103,445
5 Claims. (Cl. 312—221)



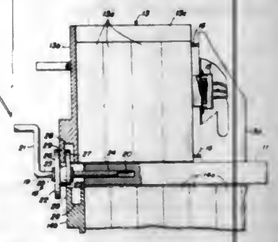
1. A tamperproof desk pedestal comprising: frame means, casing means enclosing said frame means, said casing means having an opening receiving an upper and lower drawer, latch means operative by closing said upper drawer to lock said lower drawer, and means for locking said upper drawer, said locking means including a locking bolt movable to a position behind a locking bar fixed to said frame and casing means to lock said upper drawer, said locking bar extending across the full width, of said casing and having a horizontal portion fixed to said frame means, and a generally vertical flange extending downwardly from said horizontal portion into a position between the front of said upper drawer and said locking bolt to provide an unbroken barrier between said locking bolt and the outside of said upper drawer when said upper drawer is closed.

3,123,418
CHASSIS UNIT INSERT TIGHTENING-EXTRACT DEVICE

Lester W. Haerther, Cedar Rapids, and Paul A. Zimmerman, Amana, Iowa, assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

Filed Oct. 3, 1962, Ser. No. 228,049
11 Claims. (Cl. 312—319)

1. Apparatus for insert tightening, position hold, and extracting of a chassis unit from a self of a mounting rack, comprising: a screw member operatively received in a threaded opening in the rack shelf; said screw member having a shank; a flanged collar rotatably mounted on the shank of said screw member; means axially restrained on the shank of said screw member restraining said collar from movement in either direction axially along the screw member; a chassis unit front plate with a recess having an outer lip with an inner surface at an edge thereof for selectively receiving a flange of said flanged collar; said flanged collar having an outer flange for selectively engaging the outer face of said front plate with the collar selectively positioned for insert tightening and position hold

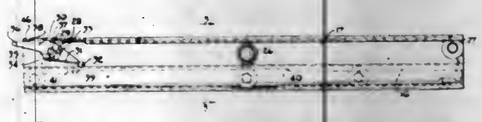


of the chassis unit; and said collar being provided with an inner flange for selective insertion in the recess of the front plate and for engagement with the inner surface of the outer lip of the recess during extract of the chassis unit.

3,123,419
LOCK FOR DRAWER ASSEMBLIES

Stewart Alfred Maxwell, Walsall, England, assignor to Fisher & Ludlow Limited, Birmingham, England, a British company

Filed Aug. 20, 1962, Ser. No. 217,819
Claims priority, application Great Britain Aug. 23, 1961
7 Claims. (Cl. 312—333)



1. In or for a drawer assembly of the kind specified, a locking member adapted to be secured to a frame and operable from an operative position in which mutual engagement means carried by the locking member and the drawer are engaged to lock the drawer in the fully closed position to an inoperative position in which the said mutual engagement means are disengaged to permit the opening of the drawer, the drawer and frame having mutual abutment means which, when engaged, prevent removal of the drawer from the frame when the drawer is in the fully open position and, when disengaged, permit of such removal, and release means associated with the locking member and serving in the operative position of the locking member to prevent disengagement of the abutment means and which in the inoperative position of the locking member when the drawer is in the fully open position, permit disengagement of the abutment means to allow removal of the drawer from the frame.

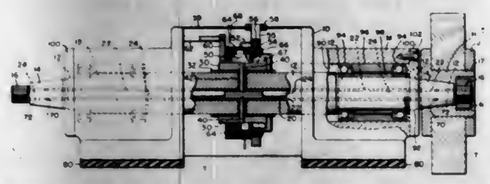
3,123,420
APPARATUS FOR CONDUCTING CURRENT TO A ROTATING ELECTROLYTIC TOOL

John J. Falls, Cincinnati, Ohio, assignor to Setco Industries, Inc., Cincinnati, Ohio, a corporation of Ohio

Filed Sept. 1, 1960, Ser. No. 53,391
2 Claims. (Cl. 339—5)

1. An electrical device for conducting a high amperage of electricity from a source of electricity to a pair of rotating wheels comprising a housing having spaced end portions and a chamber between said end portions, journal means in each of said end portions, an elongated spindle of high strength and high electrical resistance metal

rotatably mounted in said journal means, a central portion of said spindle extending through said chamber and the ends of said spindle projecting beyond said end portions, said spindle having an axial bore in the center thereof and extending completely therethrough, an elongated conductor extending through the center of said bore from one end of said spindle to the other end thereof, a short sleeve of highly conductive material surrounding each end of said elongated conductor and tightly fitting within the ends of said bore, an elongated sleeve of insulating material within said bore between said short sleeves and surrounding said elongated conductor, a di-

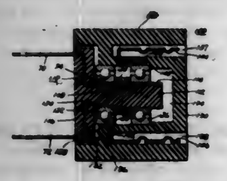


ametral bore in the central portion of said spindle intersecting said axial bore, a collector ring in said chamber and surrounding the central portion of said spindle, radial conductors in said diametrical bore connecting said collector ring to said elongated conductor, means insulating said radial conductors and collector ring from said spindle, said pair of rotating wheels being electrically conductive and secured to the ends of said spindle, brush means in said chamber, insulating means movably mounting said brush means on said housing, resilient means urging said brush means into rubbing contact with said collector ring, conducitve means connecting said brush means to said source of electricity.

3,123,421
ROTATABLE ELECTRICAL CONNECTION

Hermon Edgar Phillips, Lake James R.R. 2, Angola, Ind.

Filed July 10, 1961, Ser. No. 122,838
6 Claims. (Cl. 339—8)

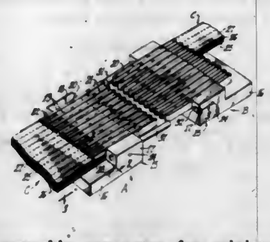


1. A rotatable electrical connection comprising: a first elongated member formed of molded insulating material and having first and second ends and a solid cross-section, said first member having a cylindrical surface; first and second metallic anti-friction bearings respectively having inner and outer races, said inner races being respectively seated on said cylindrical surface of said first member; said first member having electrical leads molded therein and extending out of said first end thereof; said first leads having portions respectively exposed on said cylindrical surface and removably engaging said inner races; and a second member formed of molded insulating material and having a cavity therein defining a cylindrical wall; said first member having said second end thereof extending into said cavity with said outer races respectively engaging said wall whereby said first and second members are relatively rotatable, said second member having electrical leads molded therein, said second leads having portions respectively exposed on said wall and removably engaging said outer races.

3,123,422
CONNECTOR FOR MINIATURE MULTIPLE CONDUCTOR TAPE OR WIRES

Harold J. Mock, 219 Glenroy Place, Los Angeles 49, Calif., and Richard V. Keys, 10245 Parise Drive, Whittier, Calif.

Filed Jan. 22, 1962, Ser. No. 167,590
12 Claims. (Cl. 339—75)

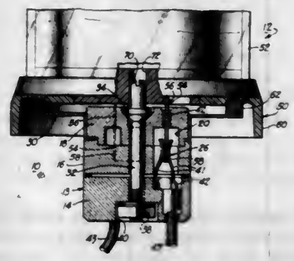


12. In a separable connector for miniature multiple conductor tape, in combination: a pair of connector sections comprising respective mounting clevises of insulating material, each having a transverse head provided with a plurality of closely spaced, narrow slots disposed in parallel planes extending longitudinally and at right angles to the transverse axis of said heads; a plurality of connectors bars mounted in said slots, said bars being of laminated structure, each comprising a backing of insulating material and a thin metal facing supported against said backing, said bars having end portions projecting from the forward side of said head in laterally-spaced array to constitute a plurality of connector prongs separated by intervening sockets in which the prongs of a mating connector are receivable with said faces arranged in overlapping, contacting pairs of facings separated by intervening backings; and respective multiple-conductor tapes each embodying a plurality of laterally spaced conductors terminating in bared ends attached to respective facings at the rear ends of said bars.

3,123,423
RECEPTACLE AND PLUG ASSEMBLIES

Louis P. Schmitt, Bronxville, N.Y., assignor to Joslyn Mfg. and Supply Co., Chicago, Ill., a corporation of Illinois

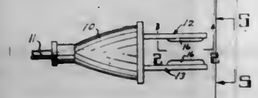
Filed Dec. 22, 1961, Ser. No. 161,619
1 Claim. (Cl. 339—184)



An electrical receptacle comprising three insulating cylinders assembled one upon the other and interlocked against relative rotation to form a cylinder assembly and provided with three sets of openings through said assembly, each set having an enlarged central opening defining a contact housing chamber, each set additionally including a lead wire receiving opening extending from its contact housing chamber through one end of said assembly and an arcuately shaped contact entrance slot extending from said contact receiving chamber through the

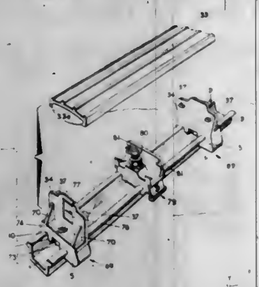
other end of said assembly; a plurality of contact members, each including a pair of resilient contacts and a terminal portion adapted to receive a lead wire; a mounting flange secured between a pair of said cylinders; said cylinders being held together by an axially extending bolt member concentric with said cylinders and having a head countersunk into said other end of said assembly and threadedly receiving a nut through said one end of said assembly, said bolt having a stud projecting axially therefrom integral therewith from said head.

3,123,424
ELECTRICAL PLUG WITH ANTI-SHOCK PRONGS
Arthur J. Williams, 942 University Place, Grosse Pointe 30, Mich.
Filed Feb. 29, 1960, Ser. No. 11,756
2 Claims. (Cl. 339—195)



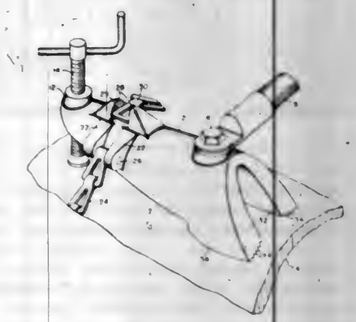
1. In an electrical male plug, the combination of: a base element having at least a pair of contact prongs extended outwardly from one end thereof; each of said prongs including an elongated central conductive member, said central conductive member being completely covered on its top and bottom sides, and outer end, and completely covered on the inner and outer sides except for contact areas, with an insulating material; and, an exposed contact means extended sidewardly inwardly from said central conductive member and through said insulating material at said contact areas for making electrical contact with a contact means in a mating electrical female receptacle.

3,123,425
REMOVABLE TERMINAL CARRIER BAR
Lucien Blanchet, 35 Rue du Cinq Mars, Colombes, France
Filed Oct. 3, 1960, Ser. No. 59,967
Claims priority, application France Oct. 7, 1959
7 Claims. (Cl. 339—198)



1. A terminal-carrier bar for the connection of electrical cables comprising in combination an elongated support member made of rigid material and comprising a pair of parallel rails a plurality of terminal supports extending transversely thereacross, an electrical terminal on each terminal support, end clamps also extending transversely across said elongated support member on opposite sides of said at least one terminal support, said rails constituting snap attaching means on said elongated support member, and snap attaching means on said terminal supports and said end clamps which interfit with those on said elongated support member, said terminal supports and end clamps being formed of a resilient insulating material and provided with integral insulating plates which extend transversely away from said elongated support member, and cover means of resilient insulating material extending over said terminals, said plates and cover means being provided with interfitting snap attaching means for attaching them to each other, to form an individual compartment for each terminal shielding it from the other terminals.

3,123,426
CLAMP
Alfonso Leto, Woodland Hills, and Frank Leto, Panorama City, Calif., assignors to The Pipetron Company, a partnership
Filed Apr. 20, 1961, Ser. No. 104,401
6 Claims. (Cl. 339—251)



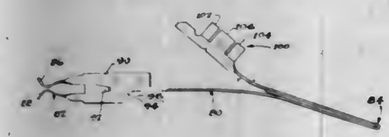
3. An electrical connector clamp for attachment to a conduit comprising an elongated body, a pair of spaced apart feet on one end of said body, the surface of said feet being arcuate in both a longitudinal and a transverse direction to the center axis of said elongated body and with the centers of said curves of said arcs both lying in a plane outside the surface of the conduit to which the clamp is to be attached, a chain having one end thereof attached to said body intermediate the ends thereof, locking means on said body adapted to removably receive a link on said chain and adjusting means on the end of said body opposite said pair of feet adapted to lift one end of said body away from said conduit and to pivot said body on said feet and against said chain.

3,123,427
ELECTRICAL CONNECTORS
Robert S. Yopp, Riverside, Ill., assignor to Amphenol-Borg Electronics Corporation, Broadview, Ill., a corporation of Delaware
Filed Apr. 18, 1961, Ser. No. 103,866
1 Claim. (Cl. 339—252)



A pin contact for electrical connectors consisting of a pair of resilient spring wires of substantially equal circular cross-sectional area, each wire being doubled back upon itself to provide a generally U-shaped loop having a pair of relatively long legs including slide portions of generally outwardly bowed configuration interconnected by a sharp return bend portion, each wire at the return bend portion being doubled back upon itself 180 degrees or more, the return bend portions of the two wires overlying each other in perpendicular relationship, with one outside the other at the end thereof, the inside of the outside return bend portion being in direct contact with the outside end of the inside return bend portion along the periphery thereof, whereby the wires are restrained against lateral shifting with respect to each other and the return bend portions thereof extend longitudinally to a point where the slide portions begin to coact to form a compact smoothly rounded tip of lateral dimension adapted to be received within a cylindrical sleeve before engagement of the slide portions with said sleeve.

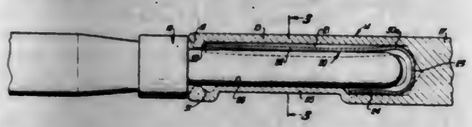
3,123,428
ELECTRICAL CONNECTOR
William H. McKee, West Covina, Calif., assignor to United-Carr Fastener Corporation, Boston, Mass., a corporation of Delaware
Filed Dec. 26, 1961, Ser. No. 162,057
2 Claims. (Cl. 339—256)



2. An improved contact element for an electrical connector of the type having an insulated body with a plurality of contact element receiving shafts therein, comprising:

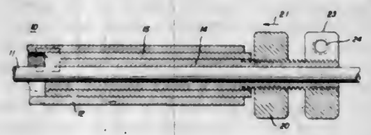
a continuously formed spring-like member folded along a portion of its length to define a prong portion with two free ends, one of said free ends being formed to define a female receptacle having spaced spring biased prongs, the other of said free ends being formed to define a conductor receiving portion and terminating at a point intermediate said female receptacle and said prong portion, said conductor receiving portion having attaching elements engageable over a conductor which is inserted therein to confine said conductor within the conductor receiving portion, said conductor receiving portion providing means of electrical connection of said contact element to a conductor.

3,123,429
ELECTRICAL CONTACT SOCKET, AND APPARATUS AND METHOD FOR MAKING THE SAME
Charles C. Anderson, Costa Mesa, and Roy B. Rinehart, Santa Ana, Calif., assignors to Cannon Electric Company, Los Angeles, Calif., a corporation of California
Filed Apr. 27, 1961, Ser. No. 106,044
11 Claims. (Cl. 339—258)



1. An electrical contact socket adapted for mating with a contact pin and comprising a tubular member of conductive material, said tubular member having a bore therein with front and rear ends, the front end of the bore being open, and stop means at the rear end of the bore, the wall of the bore along one side thereof having an elongated raised portion spaced forwardly of said stop means so as to provide an elevated surface which the contact pin may engage, the wall of the bore on said one side thereof between said raised portion and said stop means being radially outwardly offset with respect to said raised portion and forming a side pocket, with the wall of the bore between said raised and offset portions presenting a rearwardly facing shoulder, and an elongated, unitary leaf spring member lodged in said bore and comprising a relatively long section and a relatively short section joined together by an end section, said end section being disposed adjacent to said stop means and being engageable therewith to resist rearward axial displacement of the spring member in the bore, said relatively short section extending forwardly from said end section in said side pocket with the forward end of said relatively short section disposed rearwardly of said shoulder in the bore whereby said relatively short section will not obstruct insertion of the contact pin into the bore beyond the raised portion of the bore, and said relatively long section extending forwardly from said end section along the opposite side of the wall of the bore from said raised portion, said long section being formed with a bow projecting convexly toward the axis of the bore, whereby a contact pin inserted through the open front end into the bore of the tube will encounter the bow of the leaf spring member and be urged by the latter diametrically of the tubular bore into contact with said raised portion of the wall of the bore.

3,123,430
COAXIAL CABLE TERMINATION
Joseph P. Laico, Springfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 29, 1961, Ser. No. 155,661
1 Claim. (Cl. 339—268)



A device for selectively short circuiting the inner and outer conductors of a coaxial cable at any desired longitudinal position therealong consisting solely of:

an inner conductive sleeve located between the inner and outer conductors of the coaxial cable;

an outer conductive sleeve located between the inner conductive sleeve and the outer conductor of the coaxial cable;

the outer conductive sleeve extending out one end of the coaxial cable;

the inner conductive sleeve extending out the said one end of the coaxial cable beyond the outer conductive sleeve;

the portion of the inner conductive sleeve that extends beyond the outer sleeve being threaded;

the end of the inner sleeve opposite the threaded portion being flared to form a wedge around the outer circumference thereof;

the surfaces of the inner sleeve between the flared end and the threaded end being smooth and substantially cylindrical;

one end of the outer sleeve being adjacent the flared end of the inner sleeve and having an inner surface that is tapered to bear flush against the circumferential wedge of the inner sleeve;

all of the remaining surfaces of the outer sleeve between its two ends being smooth and substantially cylindrical;

a first nut being located on the threaded portion of the inner sleeve and being adapted to abut against one end of the outer sleeve;

a second nut being located on the end of the threaded portion of the inner sleeve;

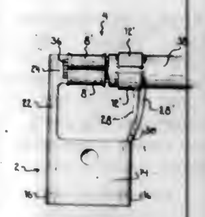
and a set screw in the second nut for restraining its rotation with respect to the threaded portion.

3,123,431
ELECTRICAL CONNECTOR

Joseph R. Keller, Harrisburg, Pa., assignor to AMP Incorporated, Harrisburg, Pa.

Filed July 18, 1961, Ser. No. 124,854
10 Claims. (Cl. 339—276)

5. A flag type electrical connector comprising a contact portion and a crimp portion, the axis of said crimp portion extending transversely of the axis of said contact portion, said portions being connected together by a pair of spaced apart struts, one of said struts having a relatively weakened zone at a location adjacent to said contact portion whereby, upon crimping said crimp portion to a conductor, said crimp portion is longitudinally extruded



and said one strut is bent with said weakened zone serving as a pivot thereby to compensate for said extrusion without transmission of stress to other parts of said connector.

CHEMICAL

3,123,432
DYE LEVELING WITH $ZnSO_4$ ON TEXTILES OF POLYACRYLONITRILE COPOLYMERS AND BLENDS

Myron Q. Webb, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Sept. 22, 1961, Ser. No. 139,869
4 Claims. (Cl. 8—21)

1. A process for level dyeing of a fabric of a copolymer of acrylonitrile which comprises immersing a fabric of copolymer of acrylonitrile and an ethylenically unsaturated compound having a member of the group consisting of a sulfate and sulfonate radical, said radicals being present in the polymer to the extent of 60 milliequivalents to about 600 milliequivalents per kilogram to an aqueous bath containing a basic dyestuff and zinc sulfate, said zinc sulfate being present in an amount from about 0.5% to about 20% by weight based on the weight of the fibers to be dyed.

3,123,433
PROCESS FOR THE COLOURATION OF FIBRES BASED ON POLYETHYLENE TEREPHTHALATE

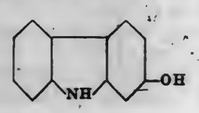
Guy Charles Maurice du Peloux, Boisguillaume, and Jean Marie Louis Leroy, Rouen, France, assignors to Compagnie Francaise des Matieres Colorantes, Paris, France, a French company

No Drawing. Filed Feb. 28, 1961, Ser. No. 92,184
Claims priority, application France Mar. 1, 1960
4 Claims. (Cl. 8—41)

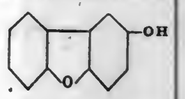
1. Process for the colouration of fibres based on polyethylene terephthalate which comprises applying thereto a dyestuff of the general formula:

$$A—N=N—R$$

in which A represents a member selected from the group consisting of the phenyl radical, the 4-benzene-azophenyl radical, the methyl substituted phenyl radicals, the methoxy substittued phenyl radicals, the ethoxy substituted phenyl radicals, the nitro substituted phenyl radicals, the N-dimethylsulphonamido substituted phenyl radicals, the N-diethylsulphonamido substituted phenyl radicals, the methyl substituted 4-benzene-azo-phenyl radicals, the methoxy substituted 4-benzene-azo-phenyl radicals, the ethoxy substituted 4-benzene-azo-phenyl radicals, the nitro substituted 4-benzene-azo-phenyl radicals and R represents the residue of a member selected from the group consisting of 2-hydroxy-carbazole of the formula:



and 2-hydroxy-diphenyleneoxide of the formula:



3,123,434
TEXTILE FILAMENT ANTI-STATIC GRAFT COPOLYMERS OF ACRYLONITRILE POLYMERS AND SPECIFIC VINYL SULFONIC ACIDS OR WATER-SOLUBLE SALTS THEREOF

Richard Nelson Blomberg, Ward, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 12, 1955, Ser. No. 552,659
5 Claims. (Cl. 8—115.5)

1. A textile comprising a filament of a material from the class consisting of homopolymeric acrylonitrile and a copolymer formed from at least 70% acrylonitrile and at least one other copolymerizable unsaturated monomer, the said filament having thermally graft copolymerized to its gel form, substantially at its surface, a static resistant polymer of a monomer of the class consisting of sulfoarylethylene acids, allylsulfonic acid, ethenesulfonic acid, methallylsulfonic acid, and water-soluble salts thereof.

3,123,435
PROCESS OF PREPARING URANIUM CARBIDE

William E. Miller and Howard L. Stethers, Naperville, and Terry R. Johnson, Glen Ellyn, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed July 18, 1962, Ser. No. 210,862
12 Claims. (Cl. 23—14.5)

1. A process of preparing uranium monocarbide, comprising dissolving uranium metal in a molten solvent metal selected from the group consisting of cadmium, zinc, cadmium-zinc alloy and magnesium-zinc alloy; adding a small quantity of alkali metal to the uranium solution formed; adding an about stoichiometric amount of carbon while maintaining the mass at between 500 and 820° C. and under agitation whereby uranium monocarbide forms and precipitates; and separating the uranium monocarbide from the molten metal.

3,123,436
PREPARATION OF PuF_3

Robert Benz, Los Alamos, N. Mex., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed Sept. 25, 1962, Ser. No. 226,780
4 Claims. (Cl. 23—14.5)

1. A process of preparing pure plutonium trifluoride comprising contacting at least one refractory plutonium compound selected from the class consisting of oxides, sulfides, carbides, silicides, and nitrides of plutonium with ammonium fluoride in a closed container at a pressure of at least 10 atmospheres and a temperature of from about 500° to 600° C.

3,123,437
PURIFICATION OF A SPENT THIOCYANATE SOLVENT SOLUTION CONTAINING SULFATE IONS AS IMPURITIES

Wilhelm Georg Schmidt, Walsgrave, Coventry, and Alan Thomas Bucknall, Wyken, Coventry, England, assignors to Courtaulds Limited, London, England, a British company

No Drawing. Filed Jan. 31, 1961, Ser. No. 85,989
Claims priority, application Great Britain Feb. 3, 1960
3 Claims. (Cl. 23—75)

1. A method of purifying liquids which have been used as a solvent in the spinning of filaments of homopolymers of acrylonitrile and of copolymers containing at least 80% by weight acrylonitrile residues which liquids contain sulfate ions as impurities comprising contacting the liquid with solid, pulverulent barium carbonate and then separating solids from the liquid.

3,123,438
PROCESS FOR THE PRODUCTION OF AMMONIUM BERYLLIUM COMPOUNDS

Wallace W. Beaver, South Euclid, and Byron B. Lympany, Willowick, Ohio, assignors to The Brush Beryllium Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed June 9, 1960, Ser. No. 34,888
4 Claims. (Cl. 23—88)

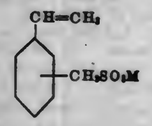
1. In a process for selectively fluorinating substantially completely the beryllium content of beryllium containing ores, the steps comprising intimately mixing finely divided beryllium containing ores with a quantity of ammonium silicofluoride at least sufficient for the reaction of substantially the entire beryllium content of the ore therewith, reacting the mixture at a minimum pressure of from about 200 p.s.i.g. to about 1700 p.s.i.g. and at a temperature ranging from about 200° C. upwardly to about 750° C. so that substantially the entire amount of the beryllium can occur for a time sufficient to effect reaction of the ammonium silicofluoride with substantially the entire beryllium content of the ore, so that substantially all of the beryllium contained in the reaction product is a complex salt of mono-ammonium beryllium fluoride, the formula for which is $NH_4F \cdot BeF_2$.

3,123,439
AMMONIUM BROMIDE COMPOSITION

Elmer L. McMaster and Floyd B. Nagle, both of Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Nov. 17, 1961, Ser. No. 153,188
8 Claims. (Cl. 23—100)

1. A free-flowing composition of matter which comprises ammonium bromide intimately intermixed with from 0.5 to 15 weight percent, based on said ammonium bromide, of a vinylbenzyl sulfonate having a general formula:



where M represents an element selected from the group consisting of alkali metals, alkaline earth metals and hydrogen.

3,123,440
AMMONIUM BROMIDE COMPOSITION

Elmer L. McMaster and Floyd B. Nagle, both of Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Nov. 17, 1961, Ser. No. 153,189
6 Claims. (Cl. 23—100)

1. A free-flowing composition of matter which comprises ammonium bromide intimately intermixed with from 0.5 to 15 weight percent, based on said ammonium bromide, of a compound selected from the group consisting of the dimethylamine salts, the diethylamine salts and the dipropylamine salts of mono- and di-alkylphenyl esters of phosphoric acid, said alkyl groups having from 6 to 12 carbon atoms.

3,123,441
SYNTHETIC CRYSTALLINE LITHIUM ALUMINUM SILICATE ZEOLITE AND METHOD FOR MAKING SAME

Walter L. Haden, Jr., Metuchen, and Frank J. Dzierzanowski, Somerset, N.J., assignors to Minerals & Chemicals Philipp Corporation, Menlo Park, N.J., a corporation of Maryland

No Drawing. Filed Oct. 4, 1961, Ser. No. 142,762
4 Claims. (Cl. 23—113)

1. A synthetic crystalline hydrated lithium aluminum silicate having Li_2O to Al_2O_3 mol ratio of about 1:1 and a SiO_2 to Al_2O_3 mol ratio of about 2:1, said silicate being further identified by possessing the following X-ray diffraction pattern:

"d" Spacing, A.	Relative Line Intensity, I/I_0
7.02	100
4.79	30
3.93	14
3.67	11
3.28	19
3.09	97
2.97	42
2.82	61
2.47	19

3,123,442
PROCESS FOR DECOMPOSITION OF SULFURIC ACID WASTE MATERIALS

Bela I. Karsay, East Orange, and Aubrey W. Michener, Jr., Rockaway, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

Filed Feb. 7, 1962, Ser. No. 171,692
4 Claims. (Cl. 23—177)

1. A process for the decomposition of sulfuric acid waste material which comprises, (*a*) feeding sulfuric acid waste material into an enlarged reaction zone, the acid waste material having a mole ratio of available hydrogen to sulfuric acid equivalent within the range of at least 1:1 to about 6:1, (*b*) simultaneously introducing into said zone a recycled stream of heat transfer oil nonreactive to the acid waste including the sulfuric acid content, (*c*) regulating the heat transfer oil to acid waste in said zone in the ratio of at least 3:1 by weight, (*d*) introducing into the reaction zone recycled suspended carbonaceous particles sufficient to maintain the concentration of carbonaceous particles in the reaction zone within the range of at least about 6% but less than about 35% by weight of the heat transfer oil, (*e*) said transfer oil being introduced into the reaction zone at a temperature sufficient to maintain the body of acid waste and transfer oil within said zone at a decomposition temperature within the range of about 300–550° F., (*f*) maintaining said body of acid waste and transfer oil in the reaction zone for a period of about 3–60 minutes to decom-

pose substantially the entire sulfuric and sulfonic acid content of the acid waste by reduction with the hydrogen content of the organic constituents of the waste while converting said organic constituents to solid carbonaceous particles and agglomerating particles in the reaction zone to form larger particles, (*g*) releasing from the reaction zone a gaseous stream of sulfur dioxide and water vapor produced by the decomposition, (*h*) withdrawing from the reaction zone a liquid product stream composed of non-reactive transfer oil and suspended carbonaceous particles, (*i*) separating a portion of larger carbonaceous particles above 150 mesh from said liquid product stream, (*j*) reheating the stream of transfer oil containing unseparated particles of smaller size, and (*k*) returning said reheated stream of non-reactive heat transfer oil containing carbonaceous particles to the reaction zone.

3,123,443

COMPOSITION FOR DIAGNOSING GLUCOSE

Robert R. Smeby, Cleveland, Ohio, assignor to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana

No Drawing. Filed Apr. 18, 1960, Ser. No. 22,682
9 Claims. (Cl. 23—253)

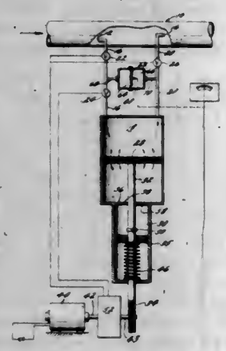
1. A diagnostic composition for detecting glucose which which comprises glucose oxidase, an oxidation catalyst selected from the group consisting of horseradish peroxidase, metalloporphyrin, urohemin, an iodide-molybdate mixed salt, a molybdate salt, blood, red blood cells, lyophilized whole blood, lyophilized blood cells, mixtures of lyophilized blood and lyophilized plasma, a color-forming substance oxidizable in the presence of peroxide and said substance for effecting the oxidation reaction selected from the group consisting of 2,7-diaminofluorene, o-tolidine, o-dianisidine and leucoindophenol, and an algin material selected from the group consisting of sodium alginate, carrageenin and gum guar.

3,123,444

ZERO GRAVITY GAS ANALYZER

Leo G. Foxwell, Thompsonville, Conn., and Gerald F. Humiston, Springfield, Mass., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Feb. 16, 1961, Ser. No. 89,771
11 Claims. (Cl. 23—254)



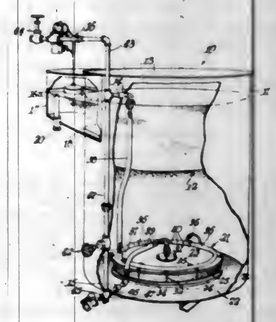
1. A gas analyzer for measuring the quantity of a gas constituent in a moving airstream comprising a gas sampling chamber, a container having a supply of gas absorption material, means for placing said material in intimate contact with the gas sample in the gas sampling chamber, means for establishing a reference pressure equal to the value of the pressure of the gas sample within the gas sampling chamber prior to absorption, means for comparing the reduction of gas pressure resulting from absorption of the gas within the gas sampling chamber with said reference pressure, means for inducing flow of the airstream into the gas sampling chamber including a first and second passage, said first passage extending into the airstream and having its opening opposing the direction of flow of the airstream, said second passage extending into the airstream and having its opening facing the direction of flow of the airstream.

3,123,445

SOLUTION-MAKING APPARATUS

Donald M. Heath, La Grange, Ill., assignor, by mesne assignments, to Morton Salt Company, Chicago, Ill., a corporation of Delaware

Filed Dec. 5, 1960, Ser. No. 73,722
7 Claims. (Cl. 23—271)



1. An apparatus for making a solution, comprising a solute storage tank having a liquid solvent inlet and a solution outlet, an assembly unit disposed within said tank adjacent the bottom thereof and over which the solute is deposited, said unit being removable from said tank in an assembled condition, first conduit means extending from said solvent inlet to said unit, a second conduit means extending from said unit to said solution outlet, and valve means communicating with said first conduit means for controlling the level of solvent accumulated in said tank; said unit including a housing having an impervious top element, an impervious bottom element, and a filter-like intermediate element sandwiched between said top and bottom elements; said top, bottom and intermediate elements being interconnected to one another and cooperating to form a solution-collecting cavity formed within said housing, the flow of solution into said cavity being only through said intermediate element, said second conduit means being in direct communication with said cavity, and a solvent discharge element mounted on the exterior of said housing and releasably connected to said first conduit means.

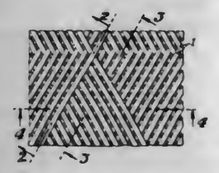
3,123,446

POROUS WALL CONSTRUCTION

Harry L. Wheeler, Jr., La Canada, Calif., assignor to California Institute Research Foundation, Pasadena, Calif., a corporation of California

Filed Aug. 25, 1958, Ser. No. 756,912
9 Claims. (Cl. 29—183)

1. A porous wall structure having opposed faces and comprising: a multiplicity of similar pairs of laminations of parallel spaced flattened wires, each lamination being the thickness of a single wire and wires of adjacent laminations being in angular relation and extending across the common sides of a plurality of wires of adjacent laminations, the flat surfaces of adjacent laminations being bonded together at said cross points, the spaces between wires in each of the internal laminations forming channels parallel to but between the opposed faces of



said wall structure and the intersections of said channels forming ports extending between and through the said faces of said wall structure.

3,123,447

ZIRCONIUM TO STAINLESS STEEL CONNECTION

Frantisek Zimmer, Brussels, Belgium, assignor to Bureau d'Etudes Industrielles Fernand Courtoy, Brussels, Belgium, a Belgian limited company

Filed June 10, 1959, Ser. No. 819,290
Claims priority, application France June 30, 1958
1 Claim. (Cl. 29—196)



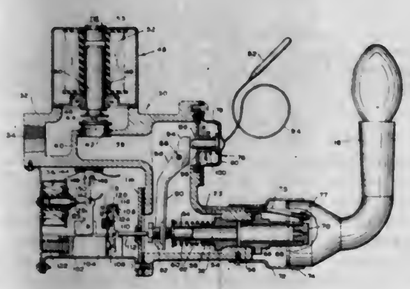
A zirconium member connected to an 18–8 chrome-nickel steel member by means of a transition piece which is an alloy which varies continuously and progressively so that the iron varies from 53% at the first end to 74% at a point substantially two-thirds the length of the piece, the nickel varies from 30% at the first end to 8% at said point, the chromium varies from 0% at said first end to 18% at said point and the cobalt varies from 17% at said first end to 0% at said point and the remaining one-third of said piece consisting of an alloy consisting of 74% iron, 8% nickel and 18% chromium which extends from said point to the second end of said piece, said first end being fused to the zirconium member and the second end being fused to said steel member.

3,123,448

CONTROL SYSTEM FOR CLOTHES DRYERS

Thomas P. Fleer, Affton, Mo., assignor, by mesne assignments, to White-Rodgers Company, a corporation of Missouri

Filed Oct. 7, 1960, Ser. No. 61,232
9 Claims. (Cl. 34—45)



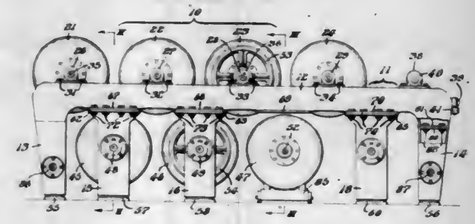
1. In a control system of the kind described, a temperature responsive device, a movably mounted control device having two opposed controlling positions and being operatively connected to said temperature responsive device, said control device being arranged to move in its entirety with said temperature responsive device as it moves in response to temperature change and thereby to remain in one controlling position irrespective of the responsive movement of said temperature responsive device, normally inoperative detent means which when operative detains said control device, thereby to effect the relative movement therewith of said temperature responsive device upon a subsequent temperature change and the consequent actuation of said control device from one controlling position to the other, and means under the control of a timing device for rendering said detent means operative at a predetermined time.

3,123,449

DRYING SECTION FOR A TEXTILE APPARATUS

John Cocker III, Gastonia, N.C., assignor to Cocker Machine & Foundry Company, Gastonia, N.C., a corporation of North Carolina

Filed Jan. 13, 1961, Ser. No. 82,500
2 Claims. (Cl. 34—121)



1. In a textile drying apparatus having a base and a frame supporting a plurality of drying cylinders above said base so that any cylinder can be removed without disrupting the remaining structure, the combination comprising a pair of substantially parallel bridge supports extending the entire length of the apparatus, opposing pairs of supporting end legs holding the bridge supports at a selected distance above the base of the apparatus, a plurality of upper drying cylinders carried by said bridge supports and arranged in spaced relation with the axes thereof being substantially parallel, a plurality of opposing pairs of intermediate standards disposed between said end supporting legs and each detachably secured at the upper end thereof to one of said pair of bridge supports, said standards each extending to the base of said apparatus and arranged for individual separation and removal from the bridge supports without removal of the upper drying cylinders, and a plurality of lower drying cylinders supported by said opposing pairs of intermediate standards and arranged in spaced relation with the axes thereof being substantially parallel, each of said lower drying cylinders being arranged for removal from said apparatus in a direction along its own axis when its corresponding intermediate standard is removed.

3,123,450

MOTOR FUEL

John P. Buckmann, Yorba Linda, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California

No Drawing. Filed Feb. 13, 1959, Ser. No. 792,957
9 Claims. (Cl. 44—69)

1. A motor fuel consisting essentially of hydrocarbons boiling in the gasoline range and containing an antiknock quantity of a tetra-alkyl lead and a small amount, suf-

ficient to reduce the preignition tendency of said hydrocarbons, of a compound having the general formula:

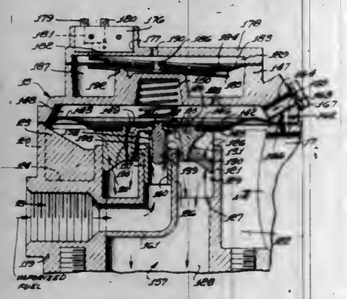
$$[R_{3-n}PBR'_{3-n}]_{4-m}$$

wherein n is a value selected from the group consisting of 0 and 1 and m is a value selected from the group consisting of 3, 1 and 0, m being selected from the class consisting of 0 and 1 when n is 1, and m being 3 when n is 0; wherein each R′ represents a substituent selected from the class consisting of hydrogen, halogen, and alkyl radicals containing from 1 to 8 carbon atoms, at least one of said R′ substituents being halogen; and wherein each R represents a substituent selected from the class consisting of hydrogen, alkyl radicals and aryl radicals, at least one of said R groups being selected from the class consisting of alkyl radicals and aryl radicals, and, when n is 0 and m is 3, one of said R groups may be a bis group having the formula:

$$—R'''R''_3PBR'_3$$

wherein R‴ represents an alkylene group, each R″ represents a substituents selected from the class consisting of hydrogen, alkyl radicals and aryl radicals, and each R′ represents a substituent as hereinbefore defined.

3,123,451
LPG FUEL SYSTEM FOR INTERNAL COMBUSTION ENGINES
Richard Baverstock, North Long Beach, Calif., assignor to Imperial Machine Products Co., South Gate, Calif., a corporation of California
Filed Oct. 16, 1959, Ser. No. 846,852
9 Claims. (Cl. 48—184)

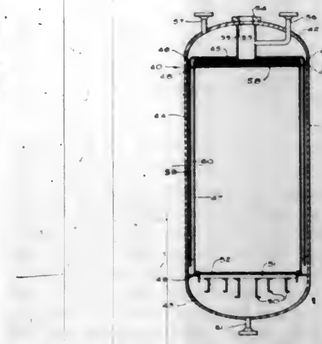


1. In an air-fuel mixer device, the combination of: a housing having an air inlet and having an annular wall defining a discharge passage centrally therein, said annular wall having a seat at one end thereof, an air valve member mounted for axial movement in the housing toward and away from the seat, a fuel valve element fixed concentrically within the air valve member and movable as a unit therewith, a fuel supply conduit terminating in a central stationary tubular part having an axial opening, said axial opening co-operating with said fuel valve element to control flow of fuel into said discharge passage, an annular ring mounted concentrically on said air valve member for limited axial movement with respect thereto and engageable with said annular seat, a backing plate fixed on said air valve member and spaced axially with respect to said ring, a flexible diaphragm secured to the housing on its periphery and having a central portion loosely received in the space between said ring and said backing plate for radial self-aligning movement, and means subjecting said diaphragm on one face to air pressure in said inlet and on the other face to pressure in the discharge passage.

3,123,452
GLASS POLISH AND PROCESS OF POLISHING GLASS
William M. Harris, Flemington, and Donald Mackie and William F. Meredith, Princeton, N.J., assignors to Titanium Zirconium Company, Inc.
No Drawing. Filed Jan. 19, 1959, Ser. No. 787,324
17 Claims. (Cl. 51—307)

1. A glass polishing composition consisting essentially of at least one polishing compound selected from the group consisting of zirconium oxide, cerium oxide, silicon dioxide and zirconium silicate, and an additive in an amount to increase the polishing effectiveness of the polishing compound, consisting essentially of at least one chemically active zirconium compound selected from the group consisting of zirconium hydroxide and zirconium carbonate.

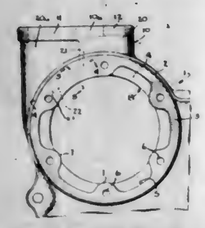
3,123,453
METHOD AND APPARATUS FOR PROCESSING A NATURAL GAS STREAM
James A. Loomer, John W. Welch, Edwin M. Arenson, and William L. Scheirman, all of Oklahoma City, Okla., assignors to Black, Sivalls & Bryson, Inc., Kansas City, Mo., a corporation of Delaware
Filed May 16, 1960, Ser. No. 29,202
6 Claims. (Cl. 55—33)



4. The process of adsorbing components from a natural gas stream comprising, initially flowing the natural gas stream through an adsorbent bed to adsorb components from said natural gas stream and bypassing the area surrounding said adsorbent bed, flowing hot natural gas through said adsorbent bed to regenerate said adsorbent bed and bypassing the area surrounding said adsorbent bed, flowing a cooling stream first in surrounding relation to said bed and then through said adsorbent bed and subsequently flowing said natural gas stream into said adsorbent bed to adsorb components from said natural gas stream.

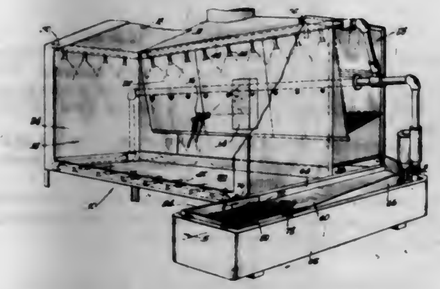
3,123,454
AIR SEPARATING MEANS
Robert B. Duggan and John B. Uhl, Louisville, Ky., assignors to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Mar. 6, 1961, Ser. No. 93,412
10 Claims. (Cl. 55—200)

1. In a hot water boiler of the type having adjacently arranged hollow boiler sections, comprising a hollow boiler section having an upper wall, said upper wall having an outlet opening for hot water and an outlet opening for air, and air separating means extending from said upper wall for separating the air from the hot water, said air separating means comprising an air separating baffle extending downwardly into said boiler section and terminating at a position underlying said hot water outlet opening and dividing a portion of the boiler section below said upper wall into an air relief passage and a water flow passage, said air relief passage communicating with said air outlet opening and said water flow passage communicating with said hot water outlet opening, said boiler section having an inwardly extending portion thereof underlying said hot water outlet and said air separating baffle and closely spaced therefrom in said water flow passage



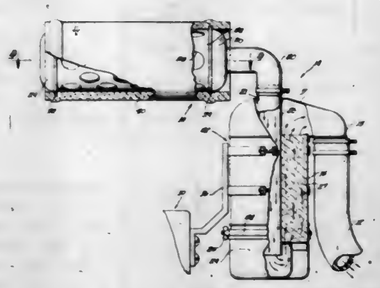
whereby the baffle tends to deflect rising hot water and air bubbles in said boiler section away from said overlying hot water outlet opening and past one side of said baffle towards the adjacent air outlet opening to thereby effect air separation from the hot water leaving the hot water outlet opening.

3,123,455
SPRAY BOOTH (SELF CLEANING)
Jens A. Paasche, 310 Greenleaf, Wilmette, Ill.
Filed Aug. 5, 1960, Ser. No. 47,840
5 Claims. (Cl. 55—228)



1. Apparatus for use in the spray coating of objects, comprising, in combination; means defining an at least partially enclosed spray coating space and including a rearwardly inclined floor panel, a rear panel, and two end panels; means defining an air washer separated from said spray space by said rear panel, said rear panel being inclined downwardly and rearwardly and terminating above the level of said floor panel to provide communication between the lower rear portion of said space and said air washer, means for moving air from said space through said washer to exhaust, said washer including washing liquid spray means, a diffuser located upstream of said spray means with respect to the flow of air through said washer and air drying means located downstream of said spray means with respect to the air flow through the washer, flushing nozzle means arranged to direct curtains of washing liquid across said space defining panels, a runway in the bottom of said washer arranged to collect liquid discharged from said air washer spray means and from said flushing nozzle means, means defining a flow channel arranged to receive a continuous stream of washing liquid from said runway, said channel being designed to provide a generally laminar flow of liquid therethrough, means forming a generally horizontal separator edge extending transversely across said channel in spaced relation to the bottom thereof to effect a division of the liquid stream flowing through said channel, means for adjusting said separator edge vertically to adjust the vertical position at which the channel flow stream is divided, reservoir means arranged to collect liquid flowing from said channel from below said separator edge, filtering means arranged to receive liquid flowing across said separator edge and filter entrained coating material therefrom and return the filter liquid to said reservoir, and pumping means for supplying liquid from said reservoir to said spray means and said flushing nozzle means.

3,123,456
AIR PRE-CLEANING APPARATUS
George F. Boltz, Downers Grove, and James H. Bornzin, La Grange, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed May 11, 1960, Ser. No. 28,381
3 Claims. (Cl. 55—492)

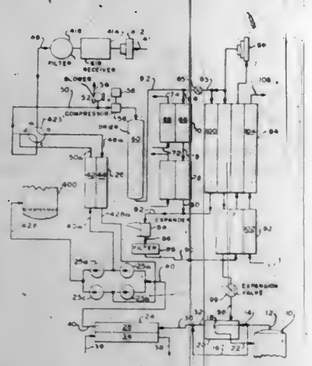


1. In an air pre-cleaner the combination of a skeletal support comprising an elongated hollow body with a plurality of apertures therethrough, an end wall closing each end of the body and having an annular beaded edge portion projecting radially outwardly of the body, an outlet means extending through one of said end walls and communicating with the interior of the body, and an elongated hollow filter element made of a bed of polyurethane foam material of the type providing a three dimensional skeletal stranded structure that is completely permeable sleeved over said body and said beaded edge portions and having a length extending beyond the said beaded edge portions and disposed in snug embracing relationship to said body and beaded edge portions, said material being resilient and solely secured to said body and beaded edge portions by hoop tension and adapted to be removed from the body by being grasped at an end edge thereof beyond the respective beaded portion and forced axially off said body and having said beaded edge portions formed at the juncture of said body and each end portion and extending beyond the outer peripheral surface of the body sufficiently to provide in cooperation with said sleeve an air seal at each end thereof for preventing unfiltered air from passing through said apertures and into the interior of said body without first passing through said filtering material.

3,123,457
SEPARATION OF AIR INTO NITROGEN, OXYGEN, ARGON, ETC.
Donald E. Smith, Summit, N.J., assignor to Air Reduction Company, Incorporated, a corporation of New York
Filed Dec. 22, 1960, Ser. No. 77,577
6 Claims. (Cl. 62—13)

1. In apparatus for a system for separation of the elements of air, in combination, an oxygen column, heat transferring and purifying means for cooling and purify-

ing an incoming process stream to the system having at least two passages, one of which at a given time is being cooled and cleaned of deposited impurities by a first gas stream passing therethrough, the other passage serving to cool and collect deposited impurities from a second gas stream passing therethrough, means for interchanging said gas streams relatively to said passages, said first gas stream comprising waste nitrogen gas from the

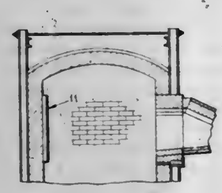


top of said oxygen column and said second stream comprising said process stream to be cooled, non-fouling means connected to said heat transferring means for purifying said first gas stream upon leaving said heat transferring means, means for refrigerating said purified stream, whereby said first stream is at least partially liquefied, and means to conduct said waste nitrogen so liquefied to said oxygen column as reflux.

3,123,458
PROCESS AND APPARATUS FOR COLLECTING DUST IN A HEATED ENVIRONMENT

Howard R. Swift and Thomas B. O'Connell, Toledo, Ohio, assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio

Filed May 29, 1959, Ser. No. 816,722
12 Claims. (Cl. 65—27)



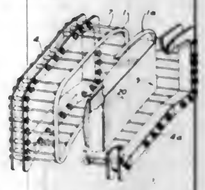
1. The method of reducing the amount of air-borne dust in an environment of an apparatus for processing material at high operating temperatures comprising maintaining within said environment an exposed coating of vitreous material heat softened to an adhesive state and which remains in said adhesive state at the said operating temperatures in said environment on a base of material which is stable at said operating temperatures.

10. In an apparatus for melting glass which includes a glass melting furnace and a flue structure in open communication therewith, means for reducing the amount of air-borne dust within the furnace comprising checker bricks in said flue structure coated with exposed glass which is maintained in an adhesive state at the operating temperature of said flue structure.

3,123,459
PROCESS AND APPARATUS FOR BENDING GLASS

Carl Hens, Herzogenrath, Germany, assignor to Compagnie de Saint-Gobain, Paris, France

Filed June 11, 1954, Ser. No. 436,176
Claims priority, application France June 17, 1963
6 Claims. (Cl. 65—106)



1. A method of bending a vertically suspended hot sheet of glass which has been heated to bending temperature, to effect a double curvature in the sheet, which comprises applying the pressures of bending over substantially annular marginal areas only of the glass, and substantially simultaneously applying to one face only of the inner area of the sheet a resilient former having the desired curvature.

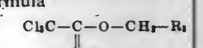
6. Glass bending apparatus consisting essentially, in its glass engaging parts, of annular frames having the curvature desired and conforming shapes approximating the outline of the bent object, and resilient pad means to engage one side of the glass within the frames during the shaping of the glass by the frames, and means to bring the frames together on a suspended glass object.

3,123,460
METHOD FOR COMBATING WEEDS

Werner Schäfer, Cologne-Stammheim, Richard Wegler, Leverkusen, and Ludwig Eue, Cologne-Mulheim, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Jan. 26, 1960, Ser. No. 4,624
Claims priority, application Germany Feb. 3, 1959
5 Claims. (Cl. 71—2.3)

1. A method of combating weeds which comprises applying a phytotoxic concentration of a compound of the following formula



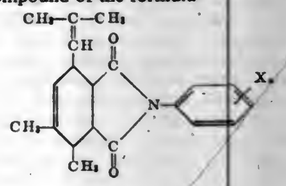
in which R_3 stands for a member selected from the group consisting of hydrogen, lower alkyl radical up to 4 carbon atoms, halogen-substituted lower alkyl radical, hydroxyl-substituted lower alkyl radical, lower alkoxy-substituted lower alkyl radical, phenoxy-substituted lower alkyl radical, carboxy-substituted lower alkyl radical, lower alkenyl-substituted lower alkyl radical, and lower alkinyl-substituted lower alkyl radical.

3,123,461
HERBICIDAL COMPOSITIONS

Roy T. Gottesman, Glen Rock, N.J., assignor to Heyden Newport Chemical Corporation, New York, N.Y., a corporation of Delaware

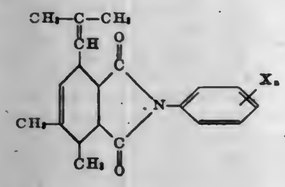
No Drawing. Filed Jan. 17, 1961, Ser. No. 83,157
12 Claims. (Cl. 71—2.5)

1. The compound of the formula



wherein X is a halogen atom and n is a number in the range of 1 to 5 inclusive.

9. A process for the control of plant growth which comprises applying to the plants a phytotoxic amount of a compound having the structure



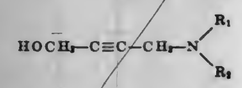
wherein X is a halogen atom and n is a number in the range of 1 to 5 inclusive.

3,123,462
METHOD OF DEFOLIATING PLANTS

William E. Duggins, Berkeley Heights, and Frederick A. Hessel, Upper Montclair, N.J., and Jesse Werner, Hollswood, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 27, 1961, Ser. No. 85,221
12 Claims. (Cl. 71—2.5)

1. A method of defoliating living plants having an annual leaf-drop, which comprises the step of applying to the leaves of the plant, in an amount sufficient to effect defoliation, an acetylenic alcohol corresponding to the formula



wherein R_1 is selected from the group consisting of lower alkyl and aryl having no more than two benzene nuclei, and R_2 is hydrogen when R_1 is aryl and lower alkyl when R_1 is lower alkyl and wherein R_1 and R_2 taken together form with the nitrogen atom a heterocyclic substituent selected from a group consisting of morpholinyl and piperidyl.

3,123,463
HERBICIDAL COMPOSITION AND METHOD

Thomas R. Hopkins, Overland Park, James H. Rea, Baxter Springs, and Jean R. Epperly, Overland Park, Kans., assignors to Spencer Chemical Company, Kansas City, Mo., a corporation of Missouri

No Drawing. Filed June 5, 1961, Ser. No. 114,630
6 Claims. (Cl. 71—2.6)

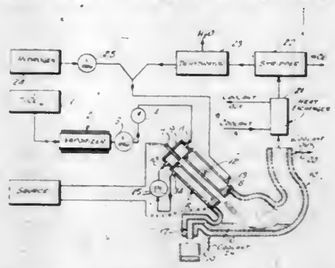
1. The method for the control of undesirable vegetation, which comprises applying to the locus of said vegetation a plant growth inhibiting amount of 4-[N-(3-chlorophenyl)carbamoyloxy]-2-butynyl tributyl ammonium chloride.

3,123,464
METHOD OF PRODUCING TITANIUM

Joseph J. Casey, Shelbyville, Tenn., and John W. Berhman, Pompton Plains, N.J., assignors to Amalgamated Growth Industries, Inc., New York, N.Y., a corporation of Delaware

Filed Dec. 15, 1954, Ser. No. 475,532
9 Claims. (Cl. 75—10)

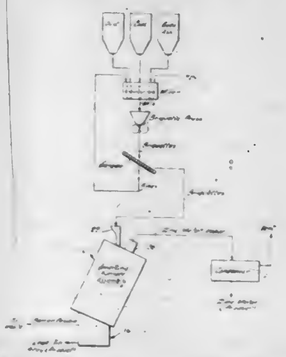
1. The method of producing titanium, which comprises vaporizing titanium chloride, mixing said vapor with a flow of hydrogen in a proportion exceeding that required to react with all the available chlorine in the titanium chloride, subjecting the mixed flow to a temperature above the boiling point of titanium, in an elongated electric-arc discharging generally along the direction of said flow whereby the excess hydrogen may scavenge the available chlorine, and rapidly cooling the flow products substantially immediately on leaving said arc to recover metallic titanium whereby reversal of the reaction is prevented.



3,123,465
PROCESS FOR SMELTING METALLURGICAL DUSTS

Elmer G. Sunday, Red Bank, N.J., and Pierre P. Taubenblat, Brooklyn, N.Y., assignors to American Metal Climax, Inc., New York, N.Y., a corporation of New York

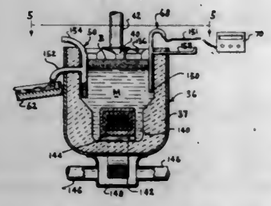
Filed Sept. 8, 1958, Ser. No. 759,704
4 Claims. (Cl. 75—24)



1. The process of treating metallurgical dusts containing oxides of zinc, lead and tin for the production of zinc as a product, lead-tin alloy as a separate product and the formation of a discardable residue that is practically devoid of zinc, lead and tin metal values, comprising the steps of agglomerating said dusts in admixture with a carbonaceous substance, soda ash and needed moisture, continuously passing the agglomerates thus obtained as a columnar charge downwardly through an inclined smelting chamber such that the longitudinal axis of said columnar charge is at an angle of at least 15 but not exceeding 45° from the vertical, subjecting said charge throughout its entire downward travel in the inclined smelting chamber to a temperature sufficient to effect substantially complete reduction and elimination from said agglomerates of the volatile zinc and non-volatile lead and tin values contained therein, maintaining the downward passage of said agglomerates at a rate such that essentially complete draining of the eliminated non-volatile lead and tin from the resulting residual agglomerate material is effected by collecting and channeling of said eliminated lead and tin along the inferior wall of said inclined smelting chamber before the agglomerates in said columnar charge reach the bottom of said inclined chamber, withdrawing the eliminated volatile zinc as vapors

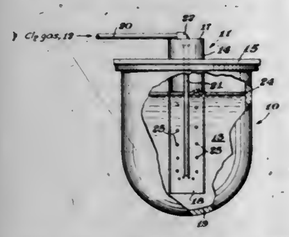
from overhead, continuously discharging the residual agglomerate material practically devoid of zinc, lead and tin values as a discardable residue from the bottom of said inclined smelting chamber and separately but simultaneously collecting the eliminated lead and tin from the bottom of said inclined smelting chamber as molten lead-tin alloy product.

3,123,466
CONVERSION OF BRASS CHIPS
Donald K. Crampton, Marion, Conn., assignor to Chase Brass & Copper Co., Incorporated, Waterbury, Conn., a corporation of Connecticut
Filed Sept. 23, 1960, Ser. No. 58,056.
11 Claims. (Cl. 75—65)



1. The method of melting fine brass chip scrap which comprises the steps of maintaining a melt of brass in the crucible of a furnace, providing across the surface of said melt a carbonaceous blanket constituting a zone of highly reducing character, said blanket comprising carbonaceous particles sufficiently finely divided to impart at the operating temperature of the furnace a fluid-like consistency to said blanket, said blanket having a thickness of at least about 4 inches above the surface of said melt, introducing the brass chips into the furnace by distributing them substantially uniformly across the surface of said blanket while the chips are at a temperature below that at which substantial surface oxidation can occur, passing the chips so introduced through said blanket to promote intimate contact therewith, and withdrawing metal from said crucible at a rate sufficient to maintain the surface level of said melt substantially constant.

3,123,467
DEGASSING MAGNESIUM-BASE ALLOY
Adolph T. Peters, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed May 3, 1961, Ser. No. 107,389
3 Claims. (Cl. 75—93)



1. The improvement in the method of degassing a melt of magnesium-base alloy with chlorine following a grain refining treatment with a carbon-containing grain refining agent which comprises: maintaining said melt at a temperature between about 1250 and about 1400° F., inserting baffle means into the melt, said baffle means extending from the surface of the melt to about the bottom of the melt, and said baffle means shielding from about ⅕ to ⅒ of the melt while maintaining communication with the remainder thereof; and injecting chlorine gas into the so-shielded part of the melt until the entire melt is degassed.

3,123,468
ALLOY STEEL AND METHOD
Harry Tanczyn, Baltimore, Md., assignor to Armco Steel Corporation, a corporation of Ohio
No Drawing. Filed June 28, 1960, Ser. No. 39,221
15 Claims. (Cl. 75—128)

1. Precipitation-hardenable chromium-nickel-molybdenum alloy steel essentially consisting of about 5% to 14% chromium, 4% to 12% nickel, 4% to 12% molybdenum, with the ratio between the sum of the chromium and molybdenum contents and the nickel content ranging from about 1.7 to 4.7 and the remainder essentially iron.

3,123,469
ALLOY STEEL AND METHOD
Harry Tanczyn, Baltimore, Md., assignor to Armco Steel Corporation, a corporation of Ohio
No Drawing. Filed Dec. 28, 1960, Ser. No. 78,846
7 Claims. (Cl. 75—128)

1. Non-magnetic alloy steel which is fully austenitic, ductile and readily workable after solution-annealing at a temperature of about 1600° to 2000° F. and which is precipitation-hardenable to achieve hardness and strength by thereafter merely ageing at a temperature of about 1100° to 1500° F. without loss of non-magnetic characteristics, said alloy steel essentially consisting of chromium 9% to 11%, nickel 13% to 15%, molybdenum 11% to 13%, carbon up to .12%, nitrogen up to .150%, and remainder substantially all iron.

3,123,470
BONDING MEANS AND METHOD
James W. Denison, Jr., Largo, Fla., assignor to General Electric Company, a corporation of New York
Original application Jan. 28, 1955, Ser. No. 484,780, now Patent No. 3,045,332, dated July 24, 1962. Divided and this application Aug. 21, 1961, Ser. No. 132,705
2 Claims. (Cl. 75—201)

1. The method comprising the steps of providing a plurality of bonding members, each said member comprising an admixture of vitreous bonding material selected from the group consisting of glass frit and powdered glass and metal powders selected from the group consisting of molybdenum, copper and iron and mixtures thereof, said vitreous bonding material and said metal powders having unequal coefficients of thermal expansion, arranging said bonding members in a mold in order of the respective coefficients of expansion, compressing the bonding members, and thereafter sintering the compressed members to form an integral bonding member.

3,123,471
NICKEL BONDING METHOD
Robert W. Marshall, Roseville, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
No Drawing. Filed Apr. 7, 1960, Ser. No. 20,519
6 Claims. (Cl. 75—208)

1. The method of manufacturing a metallurgically bonded together assembly comprising a first powdered metal part having a portion surrounded by a portion of a second powdered metal part, which consists in compressing first to a briquette of a desired shape a first charge of metal powder of the type which grows upon sintering, compressing a second charge of a metal powder of the type which shrinks upon sintering to a second briquette of a desired shape having a passage for receiving a portion of said first briquette in close fitting relationship, immersing said briquettes in a nickel immersion plating bath to form thereon layers of nickel, assembling said briquettes with a portion of said first briquette fitted in the passage of said second briquette and simultaneously sintering said first and second briquettes and bonding them together under the pressure resulting from growth and shrinkage respectively of said first and second briquettes by heating said assembly in a reducing atmosphere and at a sintering temperature not in excess of the melting point of said nickel layers.

3,123,472
ONE-COMPONENT DIAZOTYPE PROCESS AND MATERIAL COMPRISING A DIAZONIUM COMPOUND AND AN ORTHOPHOSPHATE
Johannes Henricus Andreas Wilders and Peter Johannes Nicolaas van den Kroonenberg, Venlo, Netherlands, assignors to Chemische Fabriek L. van der Grinten N.V., Venlo, Netherlands, a corporation of the Netherlands
No Drawing. Filed Nov. 10, 1959, Ser. No. 851,948
Claims priority, application Netherlands Nov. 10, 1958
6 Claims. (Cl. 96—49)

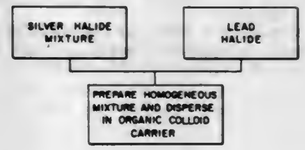
1. One-component diazotype material comprising a support carrying a light-sentive layer containing a light-sensitive diazo compound in the absence of an azo coupling component, said light-sensitive layer having an acid reaction and said diazo compound being a p-amino benzene diazonium salt which has a greater coupling activity than p-diazo ethyl benzylaniline, which is derived from a tertiary amine with only one aryl radical attached directly to the tertiary nitrogen atom, and which carries in the 4-position the diazo group, in the 2-position a member selected from the class consisting of alkoxy, aryloxy and aralkoxy groups, and in the 5-position a member selected from the class consisting of a hydrogen atom, a halogen atom, a methyl group and an alkoxy group, the said light-sensitive layer containing a quantity of orthophosphate selected from the class consisting of alkali metal and ammonium orthophosphates in the amount of the stoichiometric equivalent of at least 0.15 g. and at most 0.9 g. of P_2O_5 per square meter of said material.

3,123,473
PHOTOSENSITIVE TRIPHENYL METHANE CARBINOL COMPOSITIONS
Meyer S. Agruss, Chicago, Ill., assignor to Miehle-Goss-Dexter, Incorporated, Chicago, Ill., a corporation of Delaware
No Drawing. Filed July 14, 1960, Ser. No. 42,747
13 Claims. (Cl. 96—90)

12. A photosensitive composition which comprises a substantially colorless quaternary ammonium triphenylmethane carbinol and, as an activator for said carbinol, a chemical compound which is ineffective to bring about coloration of said carbinol but which, under the influence of electromagnetic radiation in the wave length range up to 4000 angstrom units, is converted to a different chemical compound having a greater acidity and sufficient to enhance coloration of said carbinol, said carbinol being convertible, under the influence of such electromagnetic radiation, to a colored dye, said activator being used in amount sufficient to enhance the color of said carbinol under the influence of said radiation.

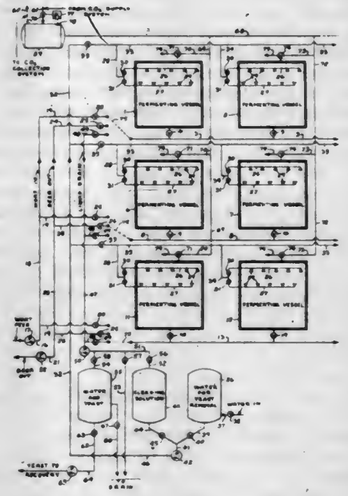
3,123,474
PHOTOGRAPHIC COMPOSITION
John F. Byrne, Columbus, Ohio, assignor, by mesne assignments, to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Oct. 21, 1960, Ser. No. 64,192
10 Claims. (Cl. 96—108)

1. A photosensitive print-out composition comprising a photosensitive substance, said substance consisting essentially of from about 0.1% to 20% by weight lead halide, the balance of said substance being a precipitated washed silver halide, said lead halide selected from the



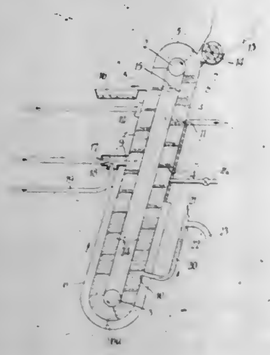
group consisting of lead bromide and lead iodide, said silver halide containing up to 10 mol percent of silver iodide, the balance being silver bromide.

3,123,475
SEQUENTIAL FERMENTATION PROCESS FOR THE PRODUCTION OF ALCOHOLIC CEREAL BEVERAGES
Kenneth W. Wendt, Brookfield, and Erik Krabbe, Whitefish Bay, Wis., assignors to Miller Brewing Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Jan. 16, 1963, Ser. No. 251,918
7 Claims. (Cl. 99—31)



1. The method of fermenting wort with yeast to produce an alcoholic cereal beverage such as beer, said wort containing fermentable sugars, comprising the steps of:
(I) establishing a carbon dioxide atmosphere in an enclosed fermentation vessel,
(II) maintaining said carbon dioxide atmosphere in said vessel while (*a*) introducing a batch of wort into the vessel, (*b*) fermenting the fermentable sugars in the wort to produce alcoholic beverage, (*c*) withdrawing the alcoholic beverage from the vessel, (*d*) cleaning the vessel to prepare it for the reception of another batch of wort, and
(III) thereafter repeating the sequence of processing steps under (II) on at least one other batch of wort.

3,123,476
PRODUCTION OF HOPPED WORT
Michael Edward Ash, Ealing, London, George Cordery Phillpotts, Putney, London, and Gunter Wittenberg, London, England, assignors to Arthur Guinness Son and Company (Park Royal) Limited, London, England, a British company
Filed Jan. 3, 1962, Ser. No. 164,022
Claims priority, application Great Britain Jan. 12, 1961
8 Claims. (Cl. 99—50.5)



1. A continuous process for hopping wort, in which hops and wort are each caused to pass continuously at predetermined rates in counterflow, through a system having a boiling zone wherein flavoring substances are continuously extracted from said hops by contact with boiling wort; and a wort outlet zone and a hop entry zone at one end of said boiling zone and a wort entry zone and a hop outlet at the opposite end of said boiling zone; the sequence in one direction being that fresh hops are continuously introduced at a controlled rate into said hop entry zone, are thereafter brought into contact with hopped wort near that end of said boiling zone adjacent said wort outlet zone; said hops are then boiled with said wort during their passage through said boiling zone and at the other end of said boiling zone, the almost spent hops are brought into contact with incoming sweet wort and finally removed continuously from said system at said hop outlet zone; the sequence in the other direction being that said hot sweet wort is continuously introduced at a controlled rate into said wort entry zone between said hop outlet zone and one end of said boiling zone said wort thus coming into contact initially with almost spent hops, said wort is then boiled with said hops in said boiling zone, and is finally drawn off continuously in hopped condition the said wort outlet zone located at the other end of said boiling zone adjacent said hop entry zone, the counterflow being so arranged that a substantial degree of the break tends to occur in the general region near said wort entry zone, whereby a large proportion of the trub tends to be carried out of the system with the spent hops and to be carried away continuously from said boiling zone.

3,123,477
SYSTEM FOR ANTE-MORTEM INJECTION
William O. Reece, Oak Lawn, Ill., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois
No Drawing. Filed July 19, 1960, Ser. No. 43,744
11 Claims. (Cl. 99—107)

1. The method of handling an animal in slaughtering operation comprising: rendering said animal unconscious by stunning in a manner which insures steady heart action in said animal for about 20 seconds to about 5 minutes, parenterally injecting a tenderizing amount of a proteolytic enzyme solution into the vascular system of said animal while said animal is unconscious and while said animal has steady heart action and subsequently while said animal is unconscious removing blood from said animal.

3,123,478
METHOD OF PRODUCING A SNOW CONE MIX AND PRODUCT THEREOF
Clarence Cash Powell, West Sacramento, Calif., assignor to Crystal Ice & Cold Storage Co.
No Drawing. Filed July 21, 1961, Ser. No. 125,658
4 Claims. (Cl. 99—137)

1. An improved snow cone mix comprising:
a. a plurality of finely comminuted ice particles; and
b. a film of highly stabilized flavoring syrup having a freezing point below 0° F. substantially uniformly coating each one of said plurality of ice particles with a thin film, said film having a thickness such that adjacent touching film portions define hollow interstices devoid of free syrup.

3,123,479
GRANULATED FOOD PACKAGE
William Drutt, Elkins Park, Pa., assignor to Sol E. Zubrow, doing business as S. E. Zubrow Co., Philadelphia, Pa.
Filed Feb. 9, 1961, Ser. No. 88,145
2 Claims. (Cl. 99—171)

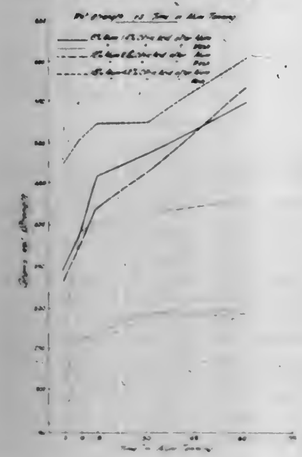


1. A package comprising an imperforate bag having a closed end and an open end, said bag being folded so as to have first, second and third overlapping sections, said first and second sections being substantially the same size, said first section containing the closed end of said bag, a granulated food product in said first section, said third section containing the open end of said bag and being disposed between said first and second sections, said first, second and third overlapping sections of said bag being defined by a first fold line between said first and second sections and a second fold line between said second and third sections, a rigid insert member disposed between said first and second sections, a cover sheet of readily tearable material secured to a portion of said first and second sections, said insert member extending between said first fold line and said cover sheet, said cover sheet extending over said closed end and being in abutting contact with an edge of said insert member, whereby said insert member will apply pressure at said first fold line to retain the food product in said first section.

3,123,480
EDIBLE COLLAGEN CASING AND METHOD OF PREPARING SAME
Emanuel R. Lieberman, Somerville, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
No Drawing. Filed Oct. 24, 1960, Ser. No. 64,291
8 Claims. (Cl. 99—176)

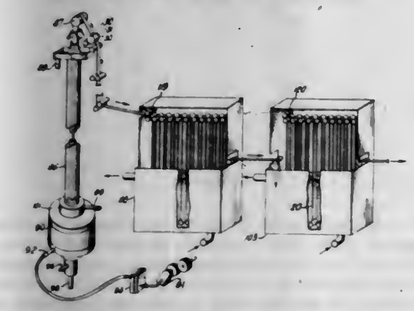
1. An edible extruded collagen casing comprising collagen fibrils, said casing having a surface coating of an albuminous material.

3,123,481
TANNED EDIBLE COLLAGEN CASING AND METHOD OF PRODUCING SAME
John A. Seiler, Jr., Franklin Township, Somerset County, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
Filed Oct. 24, 1960, Ser. No. 64,664
12 Claims. (Cl. 99—176)



1. A tanned edible extruded collagen casing of uniform diameter for sausages, said casing comprising a seamless tube of collagen fibrils and being characterized by the presence of no less than 0.3% and no more than 1.1% by weight aluminum.

3,123,482
EDIBLE COLLAGEN CASINGS AND PROCESS OF MANUFACTURING THE SAME
Emanuel Roy Lieberman, Somerville, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
Filed Jan. 16, 1961, Ser. No. 82,935
11 Claims. (Cl. 99—176)



1. An edible translucent sausage casing free of collagen fibrous membrane comprising cobered unlimed hide collagen fibrils.

3,123,483
EDIBLE COLLAGEN CASING AND METHOD OF PREPARING SAME
James T. McKnight, Somerville, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
No Drawing. Filed Oct. 9, 1961, Ser. No. 143,564
7 Claims. (Cl. 99—176)

1. An edible extruded collagen casing comprising collagen fibrils, said casing containing carboxymethyl cellulose.

3,123,484
ELECTROLESS GOLD PLATING SOLUTION
Donald S. Pokras, Thomas L. Sullens, and Robert F. Walton, Dallas, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Dec. 15, 1960, Ser. No. 76,036
4 Claims. (Cl. 106—1)

1. An electroless gold plating solution comprising an admixture 7 to 28 grams per liter of potassium gold cyanide, 5 to 60 grams per liter of an organic acid selected from the group consisting of citric acid and tartaric acid, 5 to 90 grams per liter of tungstic acid, and a ratio of 5.10:1 by weight in solution of potassium acid phthalate to sodium hydroxide, and ½ to 15 grams per liter of N,N-diethylglycine sodium salt.

3,123,485
COLORED OPTICAL ELEMENTS
Harold A. Miller, White Plains, Bernard Schapiro, Croton-on-Hudson, and Leon M. Greenstein, Brooklyn, N.Y., assignors to Francis Earle Laboratories, Inc., Peekskill, N.Y., a corporation of New York
No Drawing. Filed Oct. 6, 1960, Ser. No. 60,793
9 Claims. (Cl. 106—148)

5. A nacreous composition for producing color by light-interference phenomena comprising a light-transmitting supporting medium, said medium having, as a color-producing substance therein, light-transmitting crystalline, nacre-producing platelets selected from the group consisting of basic lead carbonate, bismuth oxychloride, lead hydrogen arsenate, lead hydrogen phosphate and mercurous formate having uniform thicknesses and an index of refraction of at least 1.70, the multiplication product of thickness expressed in millimicrons, and index of refraction being in the range of from about 200 to 2000, the uniformity of thickness of said platelets being such that at least about 80% of the total plate area does not differ in thickness by more than ±10% of the average platelet thickness so that colors are produced by optical interference phenomena upon reflection and transmission of light by said platelets.

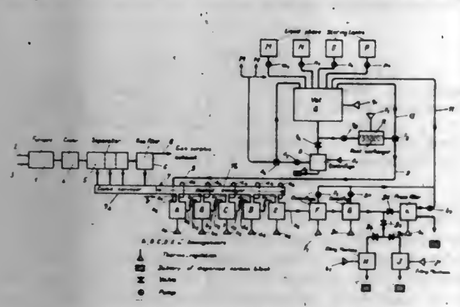
3,123,486
ALKALI METAL METALATES
Carl E. Johnson, Glen Ellyn, Ill., assignor to Nalco Chemical Company, Chicago, Ill., a corporation of Delaware
No Drawing. Filed Sept. 6, 1960, Ser. No. 53,875
20 Claims. (Cl. 106—162)

1. A method of producing a water soluble alkali metal metalate compound of the general formula $A_{2x-y}MO_x$, which comprises adding a hydrated metal oxide of the formula $MO_{y/2}$ to an aqueous solution containing dissolved therein 40–75% by weight of an alkali metal hydroxide and 1–30% by weight, based on the weight of the alkali metal metalate to be produced, of a sugar compound from the group consisting of hexoses, hydrogenated aldohexoses, and sugar acids and salts thereof, with the molar ratio of alkali metal oxide, $A_2O:MO_{y/2}$ being within the range of from 1.1:1 to 2:1 and heating the reactants to elevated temperature for a time sufficient to produce a clear solution of said metalate, where A in the above formulas represents an alkali metal, M is a member of the class consisting of chromium, iron and titanium, x is an integer of from 1 to 4 and y is the valence of the metal M.

3,123,487
PROCESS FOR DISPERSING CARBON BLACK PARTICLES INTO A CONTINUOUS MEDIUM
André Louis Verdier, 6 Ave. Daniel Lesueur, Paris, France
Filed Oct. 8, 1959, Ser. No. 845,231
Claims priority, application France Nov. 7, 1955
5 Claims. (Cl. 106—253)

1. A process for the manufacture of binary mixtures of a predetermined composition consisting of carbon black

particles selected from the group consisting of furnace black particles and channel black particles, dispersed in a continuous medium, said particles being formed by incomplete combustion of hydrocarbons in a vessel fed with air, said carbon black particles being surrounded by combustion gases after they have been formed, said continuous medium being selected from the group consisting of stearic acid, pine tar, esters, petroleum oils, synthetic oils, siccative oils, and oil varnishes, said continuous medium being liquid at the operating temperatures of the process and capable of coating the individual particles of said carbon black, said process comprising continuously circulating said continuous medium in a liquid condition within



a closed circuit through several stages of dispersion arranged in series with each other and in sealed communication with said vessel, each stage comprising mechanical dispersing means, supplying said stages in parallel with said carbon black particles which are continuously conveyed from said vessel in the presence of said combustion gases, the ratio of the liquid to black rates of supply being, at each stage, substantially larger than that corresponding to said predetermined composition, and mechanically removing the excess amount of continuous medium in the binary mixture delivered by the last one of said dispersing stages, without drying, until the concentration of the black particles in the remaining binary mixture reaches said predetermined composition.

3,123,488

SUSPENSIONS OF PIGMENTS AND OTHER PARTICLES

William Lindlaw, 165 Landsdowne Ave., Westfield, N.J.

Filed June 11, 1959, Ser. No. 820,073
12 Claims. (Cl. 106—268)

5. A paint composition comprising an organic liquid film-forming vehicle, finely divided pigment dispersed in said vehicle, and finely divided water-emulsifying polyethylene wax dispersed in said vehicle, said wax having melting point between about 208° F. and about 221° F., penetration hardness between about 1 and about 6, acid number between about 2 and about 50 and saponification number between about 9 and about 25, said composition being substantially water-free and containing from about 1 to about 30 lbs. of said wax per 100 gallons of total composition.

3,123,489

METHOD FOR PREPARING NACREOUS PIGMENTS

René A. Bolomey, Peekskill, Harold A. Miller, White Plains, and Leon M. Greenstein, Brooklyn, N.Y., assignors to Francis Earle Laboratories, Inc., Peekskill, N.Y., a corporation of New York

Filed Feb. 6, 1961, Ser. No. 87,062
12 Claims. (Cl. 106—291)

1. A method for the preparation of a nacreous composition comprising enclosing a vaporizable nacre-producing pigment in an evacuated space, simultaneously heating said pigment and a vaporizable inorganic metal salt substrate therefore to temperatures at which said pigment and said substrate evaporate, depositing a thin film of said nacre-producing pigment and said substrate alternately on a moving surface sufficiently cool to condense alternate thin films of both said nacre-producing pigment and said substrate, dissolving said substrate in a liquid which is a solvent for said substrate and a non-solvent for said nacre-producing pigment, and then removing said nacre-producing pigment from said surface and fragmenting same to form nacreous pigment particles.

3,123,490

NACREOUS PIGMENT AND METHOD FOR PREPARING SAME

René A. Bolomey, Peekskill, Harold A. Miller, White Plains, and Leon M. Greenstein, Brooklyn, N.Y., assignors to Francis Earle Laboratories, Inc., Peekskill, N.Y., a corporation of New York

Filed May 4, 1961, Ser. No. 107,850
8 Claims. (Cl. 106—291)

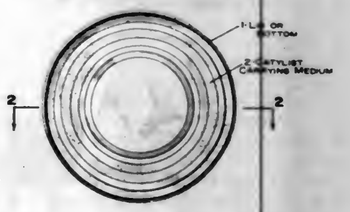
1. A nacreous pigment having, as a nacre-producing substance therein, platelike particles comprising a plurality of thin, adherent, light-transmitting layers, the multiplication product (Nd) of the thickness (d) of the nacre-producing layers in such particles expressed in millimicrons and the index of refraction (N) of each of said layers being between about 10 and 200.

3,123,491

METHOD OF COATING THE INSIDE SURFACE OF A CONTAINER WITH PALLADIUM AND ADHESIVE FOR VACUUM-PACKING OF EDIBLE AND LIKE PRODUCTS

Lewis Beaumont, Johannesburg, Transvaal, Republic of South Africa, assignor to The Metal Box Company of South Africa Limited, Johannesburg, Transvaal, Republic of South Africa

Filed June 15, 1960, Ser. No. 36,227
Claims priority, application Republic of South Africa June 15, 1959
5 Claims. (Cl. 117—8)



1. A method of disposing of the residual amount of oxygen in a hermetically sealed container filled with foodstuff comprising homogeneously dispersing palladium in finely divided form in an adhesive liquid having no deleterious effect on the contents of said container and then applying to a predetermined area of the inside surface of said container prior to its being filled with foodstuff a thin film of said adhesive liquid with dispersed palladium therein.

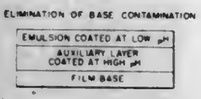
3,123,492

PROCESS FOR MINIMIZING CONTAMINANTS ON A PHOTOGRAPHIC ELEMENT

Vere Maffet, East Brunswick, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Feb. 28, 1962, Ser. No. 176,427
8 Claims. (Cl. 117—34)

1. A process for preparing a photographic element wherein the deleterious effects of contaminants in the photographic emulsion or on the base support are minimized which comprises coating over at least one side of a base support a first layer buffered to a pH within the range of 6.0 to 8.0 and coating over said first layer a



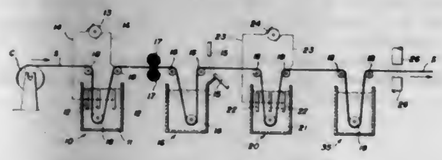
second layer having a pH below 4.5 such that the pH of the final element is within the range of 4.0 to 7.0, one of said layers being a layer of a water-soluble colloid silver halide emulsion and the other being an auxiliary layer.

3,123,493

ART OF BONDING OF VACUUM METALLIZED COATINGS TO METAL SUBSTRATES

Robert M. Brick, Hinsdale, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed Aug. 26, 1959, Ser. No. 836,145
5 Claims. (Cl. 117—50)



1. The method of preparing a metallic coated article from a body having a surface presented by a ferrous metal having a major matrix component of ferritic crystalline molecular structure and having a reducible oxygen-containing film on said surface, which comprises cleaning the surface of the body by an alkaline solution and thereafter as cathode in an acid solution whereby hydrogen atoms are stored within the atomic lattice structure of the said surface metal in quantity in excess of that required for reducing the surface oxygen thereon, rinsing the surface and drying the same, then subjecting the body to evacuation while heating to a temperature of 300 to 1000 degrees F. for effecting withdrawal of hydrogen therefrom in atomic form and reduction of the said oxygen-containing film by the evolved hydrogen, cooling the body to a temperature below that of the hydrogen withdrawal and below 600 degrees F. whereby further withdrawal of hydrogen is restricted, preventing access of oxidizing agents to said body, and thereafter with maintained exclusion of ozidizing agents exposing the said surface during evacuation at the lower temperature to the vapor of a metal selected from the group consisting of aluminum, titanium, chromium and cadmium and effecting deposition of the metal vapor as an adherent coating on said body.

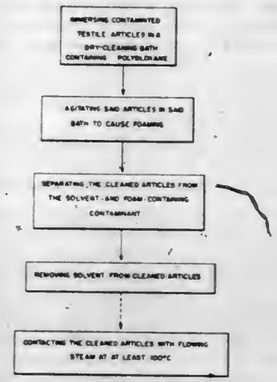
3,123,494

PROCESS FOR THE DRY CLEANING AND WATERPROOFING OF FABRICS

Paul Auguste Joseph Charreau, 23 Rue des Chapliers, Lannion (Cotes du Nord), France

Filed Nov. 9, 1959, Ser. No. 851,512
Claims priority, application France Oct. 3, 1958
5 Claims. (Cl. 117—62)

1. A process for dry-cleaning contaminated textile articles which comprises immersing said articles in a dry-cleaning bath comprising (1) an anhydrous liquid selected from the group consisting of hydrocarbon dry-cleaning solvents, chlorinated dry-cleaning solvents, and mixtures thereof, and (2) a methylpolysiloxane, agitating said articles in said bath sufficiently to cause the production of a body of foam on the surface of said bath, whereby solu-



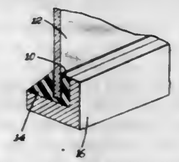
ble contaminants in said articles are dissolved by said solvent and insoluble contaminants are collected in said foam, separating the thus-cleaned articles from the contaminant containing solvent and foam, removing adherent solvent from said cleaned articles so as to leave from 2 to 3 percent by weight of said organopolysiloxane therein and drying said garments.

3,123,495

SEALANTS COMPOSITIONS AND ARTICLE OF ORGANO-SILICON COMPOUNDS WITH POLYSULFIDE POLYMER

Austin Thomas Carpenter and Colin Ernest Shilton, Leicester, England, assignors, by mesne assignments, to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey

Filed July 17, 1961, Ser. No. 124,334
Claims priority, application Great Britain July 27, 1960
6 Claims. (Cl. 117—72)



6. As an article of manufacture a structure having a glass surface, a body of rubbery polysulfide polymer cured in situ against and bonded to said surface and a silicon-containing organic compound at least at the interface between the surface of said structure and said body of polysulfide polymer, the bond between said surface and said cured polymer body being strong and resistant to deterioration by ultra-violet light, said silicon-containing organic compound comprising at least one member of the class consisting of organic-silanes and organic-siliconates, said organic silanes having at least one substituent from the group consisting of alkoxy groups having from 1 to 4 carbon atoms, acyloxy groups having from 1 to 4 carbon atoms, vinyl groups and amino groups, and said organic siliconate being an alkali metal vinyl siliconate.

3,123,496
PROCESS FOR THE FINISHING OF TEXTILE MATERIALS

Paül Schlack, Leitershofen, near Augsburg, Gerhard Lohaüs, Bad Soden, Taunus, Hans Sommer, Hofheim, Taunus, and Gerold Koch, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Oct. 5, 1960, Ser. No. 60,584
Claims priority, application Germany Oct. 9, 1959
5 Claims. (Cl. 117—161)

1. A process for the finishing of textile material, which comprises treating the textile material with a liquid medium comprising copolymers of

(A) 0.5 up to 90 parts by weight of unsaturated acyl urethanes of the general formula

R—CO—NH—CO—XR'

wherein R' represents a member selected from the group consisting of an alkyl radical containing 1 to 6 carbon atoms, an alkyl radical with up to 6 carbon atoms being substituted by an alkoxy radical with up to 2 carbon atoms, the cyclohexyl radical, an aryl radical of low molecular weight and an aralkyl radical of low molecular weight, X represents a member selected from the group consisting of oxygen and sulfur, and R—CO— represents a member selected from the group consisting of a radical of a carboxylic acid containing up to 2 carboxyl groups, up to 2 ethylene linkages and up to 6 carbon atoms, a radical of a monoester of a dibasic carboxylic acid, said acid containing up to 2 ethylene linkages and up to 6 carbon atoms and said ester containing up to 6 carbon atoms in the alcohol portion thereof, and a radical of a monoacylurethane of a dibasic carboxylic acid, said acid containing up to 2 ethylene linkages and up to 6 carbon atoms, the urethane group having the formula —NH—CO—XR', wherein R' and X have the meanings given above, and

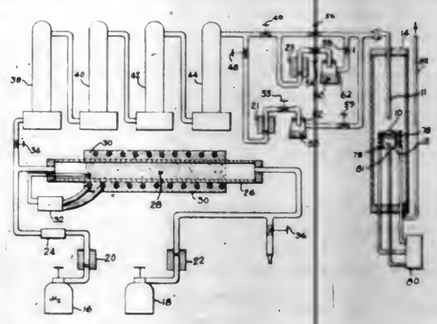
(B) from 99.5 to 10 parts by weight of monomers which contain vinyl groups and which are selected from the group consisting of styrene, a vinyl ester of carboxylic acids with up to 6 carbon atoms, a vinyl ether of alkanols with up to 6 carbon atoms, an unsaturated carboxylic acid containing up to 2 carboxyl groups up to 6 carbon atoms, an amide of said unsaturated carboxylic acid, and an ester of said unsaturated carboxylic acid containing up to 4 carbon atoms in the alcohol portion thereof, and drying the textile material so treated at elevated temperatures.

3,123,497
PROCESS FOR DEPOSITING SILICON DIOXIDE DIELECTRIC COATINGS

Charles R. Barnes, Medway, and Charles R. Geesner, New Carlisle, Ohio, assignors to the United States of America as represented by the Secretary of the Air Force

Filed June 18, 1962, Ser. No. 203,410
7 Claims. (Cl. 117—230)
(Granted under Title 35, U.S. Code (1952), sec. 266)

7. A method for coating a molybdenum surface with silicon dioxide by pyrolytic deposition comprising the steps of passing a first carrier gas consisting essentially of a mixture of hydrogen and argon over silicon tetrabromide at the rate of 100 milliliters per minute in order to pickup a predetermined amount of silicon tetrabromide vapors, passing a second carrier gas consisting essentially of a mixture of hydrogen and argon over a 55 percent solution of sulfuric acid in order to pickup a predetermined amount of water vapor, combining said first and second vapor containing carrier gases such that the dew point of said combined carrier gases ranges from about −62° C. to −68° C. and blowing said combined vapor containing carrier gases onto a hot molybdenum surface

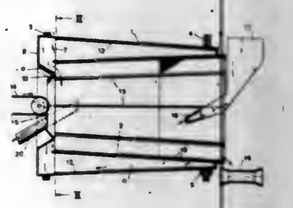


maintained at a temperature of from about 940° C. to 1040° C. in order to deposit a thin film of silicon dioxide on said surface.

3,123,498
DEVICE FOR BRINGING ARTICLES INTO CONTACT WITH A SOLID OR LIQUID MATERIAL

Bernardus ter Braak and Johannes G. ter Braak, both of 215–215b Burgemeester Knappertlaan, Schiedam, Netherlands

Filed Oct. 20, 1960, Ser. No. 63,909
Claims priority, application Great Britain Feb. 10, 1960
3 Claims. (Cl. 118—19)

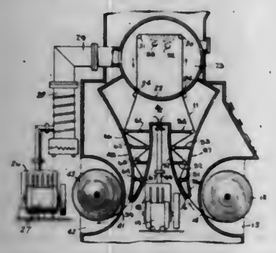


3. A device for bringing articles into contact with a coating material comprising an outer tapered conical drum and an inner tapered conical drum mounted for rotation and coaxially disposed and secured to each other about a common horizontal axis with their larger ends disposed in opposite directions, means for supplying a coating material to the inside of said inner drum at its larger end, means for introducing articles into said inner drum at its small end and means for discharging said articles at said larger end, the wall of said inner drum at its larger end being provided with perforations retaining said articles but permitting said coating material to pass into the annular space formed between said drums, said outer drum having an end wall at its larger end spaced from the adjacent end of said inner drum, a first part of said end wall being annular and extending obliquely towards the axis into said inner drum and a second part being also annular and extending from said first part outwards and obliquely towards the axis, said second part defining an axial inlet opening for introducing said articles, and substantially radially disposed plate members in contact with said first annular part of the end wall and extending radially to the periphery of said outer drum to cause coating material which has been transported through said annular space toward said end wall to be carried along upwards and to be directed by said first annular part into said inner drum.

3,123,499
APPARATUS FOR VACUUM METALLIZING HOLLOW CERAMIC RODS

Luigi Tassara, Via Olemetto 3, Milan, Italy

Filed Jan. 12, 1961, Ser. No. 82,258
1 Claim. (Cl. 118—49)

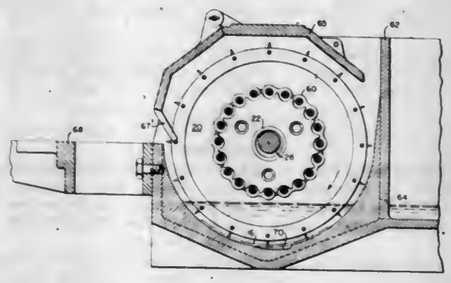


Apparatus for coating a continuously moving base structure in the form of a series of hollow ceramic rods, said apparatus comprising: a plurality of support shafts, each of said shafts extending through a plurality of said rods; chain means for supporting both ends of said shafts with adjacent shafts parallel to each other; an airlock chamber having a first tapered section with a large end and a constricted end, said constricted end having a slit-like opening through which said chain means and said rod-bearing shafts enter said chamber; a plurality of baffles in said chamber to restrict the passage of air therethrough, adjacent ones of said baffles extending from opposite walls of said airlock chamber to form a zigzag path along which said chain means and said rod-bearing shafts pass through said airlock chamber and to divide said airlock chamber into a plurality of sub-chambers; a first vacuum pump connected only to the sub-chamber at the large end of said airlock chamber, the remainder of said sub-chambers communicating only with each other; roller-like members attached to the edges of each of said baffles to permit said rod-bearing shafts to move smoothly over said baffles; chain supporting means attached to each of said baffles, said chain supporting means being substantially concentric with said roller-like members; a coating chamber adjoining the large end of said airlock chamber and sealed thereto by a gas-tight seal and having a constricted, slit-like passageway communicating with the interior of said large end of said airlock chamber to permit said chain means and said rod-bearing shafts to pass from said airlock chamber into said coating chamber; a plurality of rollers in said coating chamber to support said chain means and to define a path along which said chain means and said rod-bearing shafts pass through said coating chamber; metal evaporating means located adjacent said rollers to form a metal vapor through which said rods move; a high vacuum system connected to said coating chamber to reduce the residual atmospheric pressure in said coating chamber to a fraction of that in said airlock chamber; a second tapered airlock chamber having a large end and a constricted end, the large end of said second airlock chamber being sealed by a gas-tight seal to the wall of said coating chamber, whereby a portion of the wall of said coating chamber also forms a part of the wall of said second airlock chambers, and to the sub-chambers at the large end of said first airlock chamber; a second constricted, slit-like passageway in said portion of said wall of said coating chamber to permit said chain means and said rod-bearing shafts to pass out of said coating chamber into said second airlock chamber; a plurality of baffles in said second airlock chamber, adjacent ends of said latter baffles extending from opposite sides of said second tapered airlock chamber to form a second zigzag path along which said chain means and said rod-bearing shafts pass; roller-like members at the edges of each of said latter baffles to restrict the opening between the said edges of said baffles and the opposite side of said second tapered airlock chamber to impede the flow of air through said second airlock chamber and to divide said second airlock chamber into a plurality of sub-chambers of which only the sub-chamber at the large end of said second airlock chamber is directly connected to a vacuum pump and the remaining sub-chambers communicating only with each other; chain supporting means attached to each of said edges of said latter baffles, said chain supporting means being substantially concentric with said roller-like members; and edges at the constricted end of said second airlock chamber forming a constricted exit through which said chain means and said rod-bearing shafts pass out of said apparatus.

3,123,500
SELF-ADJUSTING BOX TOE BLANK CONDITIONING MACHINE

George H. Bushway, Hampton, N.H.; Stanley M. Buras, executor of said George H. Bushway, deceased, assignor to Shu-Conditioner Inc., Hampton, N.H., a corporation of New Hampshire

Filed Feb. 3, 1961, Ser. No. 86,929
4 Claims. (Cl. 118—426)



1. In a machine for conditioning impregnated blanks, a housing for holding a quantity of solvent, a first shaft spanning said housing, at least one disk mounted on said first shaft, a plurality of projections extending radially outward from the periphery of said disk toward the inner surface of said housing for impaling blanks and carrying them through said solvent, a drive shaft normally concentric with said first shaft, and flexible means connecting said drive shaft to said first shaft whereby insertion of one of said blanks between said inner surface and said projections causes movement of said first shaft out of alignment with said drive shaft by an amount determined by the thickness of said blank.

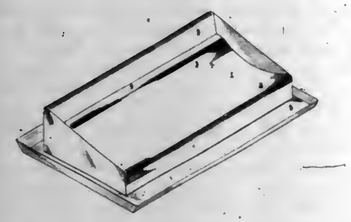
3,123,501
ELECTROPHOTOGRAPHIC DEVELOPING APPARATUS

Kurt Jons, Wiesbaden-Biebrich, Germany, assignor, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J., a corporation of New Jersey

Filed Apr. 21, 1961, Ser. No. 104,709
Claims priority, application Germany Apr. 26, 1960
3 Claims. (Cl. 118—429)

1. A device for developing latent electrophotographic images comprising a trough having a downward inlet slope of an angle of about 30°, an adjoining curved portion having a radius of at least about 500 times the thick-

ness of electrophotographic material to be developed, an adjoining upward discharge slope having an angle of



about 45°, and an upward outlet slope having an angle of about 60°.

3,123,502
PROCESS FOR STARCH MODIFICATION WITH CHLORINE
William F. Henry and Sheldon I. Greenberg, Minneapolis, Minn., assignors to The Pillsbury Company, Minneapolis, Minn., a corporation of Delaware
No Drawing. Filed Dec. 30, 1960, Ser. No. 79,502
4 Claims. (Cl. 127—71)

1. A dry method of treating a cereal flour to produce a modified starch product comprising the steps of:

(*a*) providing a cereal flour having a moisture content within the range of 5 to 25%;

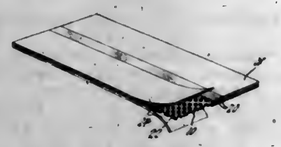
(*b*) agitating said flour under conditions of normal atmospheric pressure and a temperature within the range of 60° to 150° F.; and

(*c*) contacting the flour during said agitation with anhydrous chlorine gas at a concentration within the range of 0.2 to 4.0% by weight of the flour.

3,123,503
TREATMENT OF DYED ANODIZED ALUMINUM
Victor T. Humphreys, Jersey Shore, Pa., assignor to Koppers Company, Inc., a corporation of Delaware
No Drawing. Filed Oct. 4, 1961, Ser. No. 142,768
3 Claims. (Cl. 134—41)

1. A method of cleaning dyed anodized aluminum surfaces, which, as a result of a sealing operation using a bath containing a hydrolyzable metal salt, are coated with smut, comprising contacting said anodized aluminum surface with an aqueous sulfuric acid solution of 0.5–14% by weight concentration at ambient temperatures for a period of time at least 15 seconds and less than that which causes degrading of the sealed anodic pores resulting in observable bleeding of the dyestuff into said solution.

3,123,504
PROCESS AND APPARATUS FOR MAKING BATTERY ELECTRODES
Warren R. Schilke, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 1, 1961, Ser. No. 114,139
6 Claims. (Cl. 136—34)



1. A device for forming bipolar battery plates which are bipolar with respect to at least one major surface thereof, said device comprising a container, means in said container for supporting at least two of said bipolar plates in spaced arrangement with said bipolar major surfaces in a generally parallel, facing relationship whereby corresponding portions thereof are generally aligned, a forming electrode for noncontiguous disposition between the negative portions of said facing bipolar plates, a forming electrode for noncontiguous disposition between the positive portions of said facing bipolar plates, and means for applying negative and positive potentials, respectively, to said electrodes.

2. A method of making a bipolar electrode which has positive and negative electrode materials on the same surface thereof, said method comprising the steps of applying a precursor of a positive electrode material to a first portion of a surface of a conductive support, applying a precursor of a negative electrode material to a second portion of said surface, said materials being laterally spaced from one another on said surface so as to be noncontiguous to one another, immersing said support in a forming electrolyte, immersing a first electrode in said electrolyte adjacent the positive electrode material on said support, immersing a second electrode in said electrolyte adjacent the negative electrode material on said support, and thereafter applying positive and negative potentials, respectively, to said first and second electrodes to simultaneously electrolyze both materials on said support, wherein said support provides electron communication between said materials for the electrolysis.

3,123,505
PROTECTIVE COATING
Walter E. Pocock, Baltimore, Md., assignor to Allied Research Products, Inc., Baltimore, Md., a corporation of Maryland
Filed Oct. 23, 1961, Ser. No. 147,081
8 Claims. (Cl. 148—6.2)

7. A method of imparting a corrosion-resistant coating a metal which comprises subjecting the metal to an aqueous solution containing a polymeric compound selected from the group consisting of alkali soluble vinyl acetate resins and alkali soluble alkyd resin, sufficient alkali to dissolve the polymeric compound, and from 0.1 to substantially less than 2 grams per liter of solution of hexavalent chromium calculated as CrO_3.

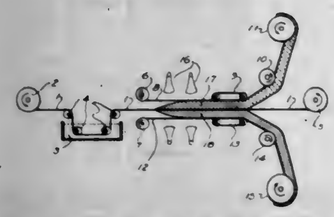
3,123,506
ALLOY STEEL AND METHOD
Harry Tanczyn, Baltimore, Md., assignor to Armco Steel Corporation, a corporation of Ohio
No Drawing. Filed Oct. 6, 1960, Ser. No. 60,803
11 Claims. (Cl. 148—31)

1. Nickel-molybdenum alloy steel plate, sheet, strip, bars, wire and like products solution-treated at 1500° to 2100° F. to a hardness well under Rockwell B100, said products essentially consisting of about 10% to 30% nickel, 6% to 20% molybdenum, and remainder essentially iron, said products being characterized by a molybdenum-soluble and nickel-soluble condition, as well as ductility and workability, and by being precipitation-hardenable to Rockwell C38–55 together with strength and durability both at room temperatures and elevated temperatures, when transformed by heating at 1250° to 1450° F. and cooling to about 125° to —320° F. and then reheated at 800° to 1200° F.

3,123,507
GAS-GENERATING COMPOSITIONS
Philip G. Butts, East Alton, Ill., and Carl R. Fingerhood, University City, Mo., assignors to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
No Drawing. Filed Nov. 22, 1957, Ser. No. 698,057
8 Claims. (Cl. 149—19)

1. A consolidated gas-generating composition consisting essentially of between about 70% and about 80% ammonium nitrate in intimate mixture with a rubber binder, between about 2 percent and about 10 percent of a ballistic modifier selected from the group consisting of guanidine nitrate, nitroguanidine, cyclotrimethylenetrinitramine and 2,4-dinitrophenoxyethanol, and between about 1 percent and about 3 percent of sodium barbiturate.

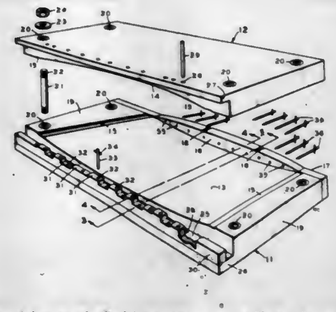
3,123,508
METHOD OF BONDING FOAM TO FABRIC
Robert E. Waugh, Camp Hill, Pa., assignor to The Englander Company, Inc., Baltimore, Md., a corporation of Delaware
Filed Apr. 7, 1958, Ser. No. 726,670
8 Claims. (Cl. 156—78)



1. A method of bonding a foam to a fabric, comprising, forming a substantially unrestricted freely rising uncured foam of polyurethane on a moving web for which such foam has low adhesion, heating, foaming and partially curing the polyurethane foam to develop a surface skin thereon, thereafter bringing a moving length of fabric for which the foam has high adhesion into direct surface contact with the foam, curing the foam and directing the web and the length of foam coated fabric along divergent paths to strip the foam coated fabric from the web.

3,123,509
MATCHED MOLD CONSTRUCTION OF HOLLOW REINFORCED LAMINATED PLASTIC AIRFOILS
Adolph Toegel, Traverse City, Mich., assignor to Parsons Corporation, Detroit, Mich., a corporation of Michigan
Filed Apr. 7, 1958, Ser. No. 726,818
9 Claims. (Cl. 156—191)

7. The method of using matched mold apparatus of the type including an upper mold half of fixed predetermined cavity contour, a lower mold half of fixed predetermined cavity contour mating with the cavity contour of the upper mold half, and a plurality of rigid interior spanwise mandrels, for forming internally-webbed, laminated-reinforced plastic airfoils, comprising the steps of arranging a predetermined number of layers of pervious reinforcing material on the lower mold half, separately wrapping the mandrels with a predetermined number of layers of pervious reinforcing material, arranging the wrapped mandrels in chordwise alignment on the material upon the lower mold half, adding a quantity of fluid plastic over the wrapped mandrels, arranging a predetermined number of layers of pervious reinforcing material thereover, assembling the upper mold half into a position predetermined with reference to the lower mold half, and tightening it against the resistance of the fluid plastic, whereby to distribute the plastic under fluid pressure through, between, and around the layers of reinforcing



material and by such fluid pressure to adjust the positions of the rigid interior mandrels, with reference to the upper and lower mold halves and to each other, then hardening to form a molded article, and then removing from the mold apparatus.

3,123,510
METHOD AND APPARATUS FOR FORMING HEAT SEALABLE AND REMOVABLE LABEL TABS FOR ATTACHMENT TO TEXTILE ARTICLES
Henry James Dolman, Pennywell Road, Bristol 5, England, and Hans Meyer, 63 Jeddo Road, London W. 12, England
Filed June 18, 1959, Ser. No. 821,298
Claims priority, application Great Britain June 23, 1958
10 Claims. (Cl. 156—204)

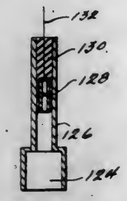


1. The method of producing a tab for temporary marking of textile articles comprising the steps of feeding a portion of a strip of fibrous tab material, having a heat-sealable thermoplastic component exposed predominantly on one face of the material, through severing means adapted to sever said tab from said strip of fibrous tab material; partially severing a portion of said strip transversely from one edge; folding under on itself the partially severed portion of the strip of tab material with portions of said one face in mutually facing positions and thereafter completing the severing of said portion of the strip.

3,123,511
RADIOACTIVE TREATMENT OF INSULATING MATERIALS AND PROCESS AND APPARATUS FOR MEASURING RADIOACTIVITY
John H. Coleman, Palm Beach, Fla., assignor to Radiation Research Corporation, West Palm Beach, Fla., a corporation of Florida
Filed July 21, 1952, Ser. No. 300,022
1 Claim. (Cl. 156—272)

In the method of manufacturing an electrical device for use in a field of ionizing radiation wherein said device includes a dielectric material which when exposed to

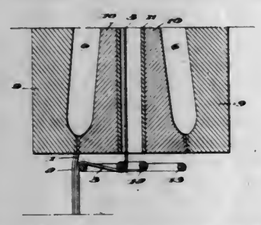
ionizing radiation at a constant rate has a characteristic decrease in volume resistivity, the steps of irradiating said dielectric material with ionizing radiation selected from the group consisting of beta, gamma, X and cathode rays having sufficient energy to permeate said dielectric material and at a predetermined rate for a time such that the volume resistivity of said dielectric material is decreased to a minimum and is then increased to a value greater than said minimum whereby the operating volume resistivity of said dielectric material when exposed to ionizing radiation at said predetermined rate is at least equal to said value so as to improve the operating resistivity characteristic of said device when utilized in an environment of ionizing radiation, and assembling said electrical device with said dielectric material as an element thereof.



3,123,512
APPARATUS FOR MAKING A REINFORCED PLASTIC NET

Frank Brian Mercer, Kenolbri, England, assignor to Plastic Textile Accessories Limited, Blackburn, England

Filed Nov. 25, 1960, Ser. No. 71,592
3 Claims. (Cl. 156—441)



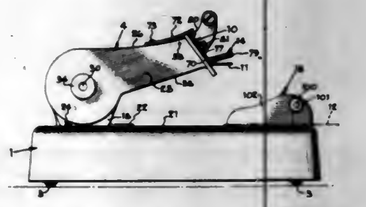
1. A tubular plastic net extrusion apparatus comprising a pair of rotating concentric annular die-carrying members, each having a contacting surface, the outer curved surface of said inner die-carrying member contacting the inner curved surface of said outer die-carrying member, each die-carrying member having formed therein a set of strand extrusion dies having cooperating complementary die-forming orifices which open on said surfaces at the extrusion end of said members, and means for rotating said members; in combination with means for introducing a third layer of parallel strands parallel to the direction of extrusion, and means for contacting said third layer of strands with only one of the layers of strands produced by said strand extrusion dies as the latter strands emerge from their extrusion orifices.

3,123,513
STAMP FEEDING AND AFFIXING DEVICE

Lee S. Snyder, Cincinnati, Ohio, assignor to Stamplicator, Inc., Cincinnati, Ohio, a corporation of Ohio

Filed Oct. 9, 1961, Ser. No. 143,970
12 Claims. (Cl. 156—522)

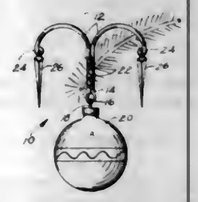
1. In a device adapted to feed and sever stamps from a continuous stamp strip and to affix the severed stamps to pieces of mail, said stamps delineated by lines of perforations extending transversely of said strip, the combination of: a base, a single actuating arm having a rearward portion pivotally connected relative to the base, means for normally biasing said arm into an elevated position, said arm adapted to slidably guide the stamp strip along a substantially unidirectional path therethrough, a stamp feeding device reciprocally mounted on said arm and adapted to engage the transverse rows of perforations of said stamp strip said stamp feeding device being mounted in its entirety for longitudinal displacement along said arm, rearwardly extending actuating means connected between the feeding device and a point fixed relative to the base and adapting the feeding device to shift the stamp strip forwardly relative to the arm during pivotal motion of the arm relative to the base toward the said elevated position, a cut-off device mounted on the arm, said cut-off device adapted to sever the leading stamp of said strip along the line of perforations during pivotal motion of the arm downwardly toward the base, and means adapted to press the severed stamp against the surface of a piece of mail resting on the base, thereby to affix the stamp thereto.



3,123,514
CHRISTMAS TREE ORNAMENT HANGER

Bernard J. Molinaro, 239 Trumbull Ave., Bridgeport, Conn.

Filed Apr. 4, 1961, Ser. No. 100,645
3 Claims. (Cl. 161—16)



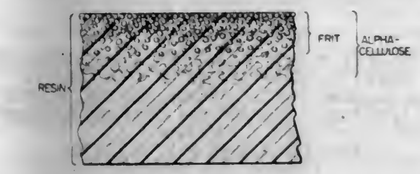
1. A Christmas tree ornament hanger comprising in combination a pair of elongated legs connected at the lower end by a bight to form an ornament securing loop, said legs having opposed serrated faces and being urged together to form a branch engaging clip adapted to support an ornament suspended from said loop, the legs having at their upper ends laterally extending portions in which at least one of said laterally extending portions is adapted to support an additional ornament.

3,123,515
SCRATCH-RESISTANT MOLDED PRODUCT AND METHOD OF MANUFACTURE

Sándor Barna, now by judicial change of name to Alexander Barna, 23910 Wimbledon Road, Shaker Heights, Ohio

Filed Mar. 18, 1958, Ser. No. 722,224
11 Claims. (Cl. 161—162)

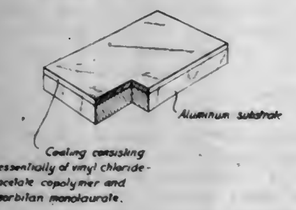
1. A scratch-resistant, molded product comprising a resin body having an outer layer of a fibrous material impregnated with finely divided frit to produce a hard surface on said molded product.



3,123,516
COATED ALUMINUM AND PROCESS

Ehrlich M. Eiland, Lower Burrell, Pa., assignor to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Feb. 19, 1962, Ser. No. 174,268
6 Claims. (Cl. 161—218)



3. An aluminum foil product adapted to receive lithographic printing comprising an aluminum foil-paper laminate, the aluminum foil of said laminate having a coat consisting essentially of

(*a*) a copolymer having a vinyl chloride content of about 87% by weight and a vinyl acetate content of about 13% by weight,

(*b*) a second copolymer having a vinyl chloride content of about 86% by weight, a vinyl acetate content of about 13% by weight, and an interpolymerized dibasic acid content of about 1% by weight, and

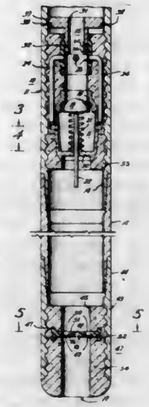
(*c*) 10 to 25% by weight of sorbitan monolaurate, said coating having a unit weight of at least 0.5 pound per 3000 square feet of surface.

3,123,517
CONDUIT STRING FILL-UP DEVICE

William A. Davis, Houston, Tex., assignor to Davis-Lynch, Inc., Houston, Tex., a corporation of Texas

Filed Nov. 14, 1960, Ser. No. 69,136
7 Claims. (Cl. 166—224)

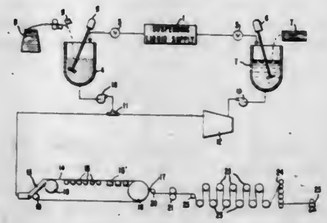
1. A fill-up device for a conduit string which is adapted to be lowered within a well bore having fluid therein comprising a tubular member adapted to form part of the conduit string, said member provided with a fluid port whereby said conduit string and the well bore are in fluid communication; said tubular member having a valve seat therein fixed with respect thereto and interposed between the fluid port and the conduit string, a valve member movable longitudinally into and out of engagement with said seat to restrict upward flow of fluid into said conduit string, said tubular member provided with a restricted passageway communicating between the conduit string and the interior of the device below the valve member through which fluid can flow and thereby bypassing said valve member, and pressure differential actuated flow control means positioned across said restricted passageway having a minimum constant opening for fluid flow therethrough, and said control means being responsive to increases in pressure differential to increase said opening and to decreases in pressure differential to decrease said opening toward said minimum opening as a limit.



3,123,518
PROCESS FOR FORMING A NON-WOVEN SHEET OF FIBERS AND FIBRIDS

Robert Wendel Bundy, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Dec. 5, 1960, Ser. No. 73,936
1 Claim. (Cl. 162—216)



In a continuous process for forming a continuous nonwoven sheet-like structure, said sheet-like structure having uniform thickness and uniformity of physical properties throughout its length and width, said process comprising, in combination, the following steps; forming a first slurry of fibers having a length of from about ⅛ to about 1 inch, and a wetting agent in water, forming a second slurry of fibrid elements in water, continuously blending the first and second slurries in a first zone to form a resulting slurry containing between about 0.03% and about 0.10% solids by weight, the solids comprising at least about 5% by weight of fibrids, moving the resulting slurry rapidly and continuously to a second zone adjacent to a screen conveyor moving in a path inclined at an angle of from about 20° to about 45° to the horizontal plane, maintaining the resulting slurry in continuous condition of high turbulence during its movement from said first zone to said second zone to evenly distribute the solids in the slurry and cause entwinement and interlacing of the fibers and fibrid elements, applying a pressure differential tending to move the resulting slurry through the moving screen conveyor at a given position in said second zone to cause said solids to collect on one side of the screen conveyor to form a continuous sheet-like non-woven structure, while simultaneously in a limited portion of said second zone which

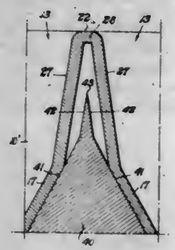
portion includes said given position in said zone, significantly reducing the turbulence of said resulting slurry, the location of said given position in the limited portion of said second zone, the speed of movement of the screen conveyor, the magnitude of the pressure differential all selected so that the resulting slurry is evenly smoothly applied to said one side of said screen conveyor with said fibrid elements and fibers evenly distributed and entwined and interlaced, before said elements and fibers can settle out or form clumps due to the reduced turbulence in the said limited portion of said second zone, the movement of the resulting slurry after blending being such that the resulting slurry is collected on said screen in a time period of no more than about 15 seconds after the resulting slurry is formed, the improvement comprising controlling the upper surface of the resulting slurry to prevent free surface action during formation of the sheet-like structure on the moving screen conveyor.

3,123,519
MOLDED PULP EGG CARTON METHOD

Richard F. Reifers, Stamford, Conn., and Henry A. Lord, Palmer, Mass., assignors to Diamond National Corporation, a corporation of Delaware

Original application Aug. 26, 1958, Ser. No. 757,309. Divided and this application June 6, 1960, Ser. No. 38,090

3 Claims. (Cl. 162—223)



1. The method of producing nestable, molded pulp egg cartons having a cellular bottom section with an upwardly converging hollow separator portion between adjacent cells, comprising the following steps:

(*a*) forming a molded pulp carton preform with a hollow separator having upwardly converging side walls and transverse connector at the upper end thereof, and in which both the interior and exterior margins and cross section through said separator walls and the shape of said separator differ distinctly from the corresponding shape and cross section of the finished egg carton ultimately produced;

(*b*) mounting said egg carton preform on a female pressing die including an upper separator-forming portion extending below said preform connector and having a cross sectional dimension substantially less than the corresponding cross section of the carton preform mounted thereon and offering no direct support thereat; and

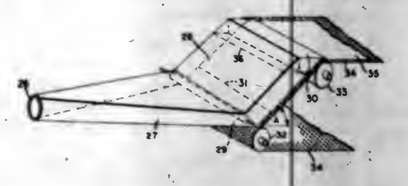
(*c*) applying a male pressing die onto said carton preform and said female pressing die and simultaneously bodily horizontally displacing and compacting the converging side walls and reducing the cross section dimension between the interior and exterior margins of said separator walls and the transverse connector at the upper end thereof while eliminating no material therefrom, while maintaining the original height of the carton preform separator-forming portions, changing the orientation of the fibers in said separator to provide a modified cushioning surface on said separator, and maintaining portions of said separator walls of the finished carton at substantially the same thickness as corresponding portions of the carton preform.

3,123,520
APPARATUS FOR FORMING A WATERLAID SHEET OF STAPLE FIBERS AND FIBRIDS

Floyd Hamilton Fish, Jr., Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Dec. 5, 1960, Ser. No. 73,955

6 Claims. (Cl. 162—342)



2. An improved headbox unit for receiving, controlling, and conveying a moving stream of a liquid slurry into contact with a moving screen conveyor to form a non-woven sheet-like structure on said conveyor, said unit comprising in combination; a first conduit portion having an outlet end, and an inlet end with an opening for receiving a moving stream of a liquid slurry containing fibrous elements from a supply source, said first conduit portion constructed and arranged to control the stream of slurry received and distribute said slurry so that it achieves a predetermined increased width and a predetermined reduced thickness at the outlet end of said first conduit portion, said headbox unit further comprising a second conduit portion operatively joined to said outlet end of said first conduit portion and extending along a portion of a moving screen conveyor, said second conduit portion provided with a discharge opening aligned with a transverse section of the said portion of said moving screen conveyor so that moving slurry received from said first conduit portion is conducted into engagement with one side of said portion of said screen conveyor a movable uniform polygonal bar agitator means mounted for engagement with the stream of slurry in said unit and positioned transversely to the direction of slurry movement at a point spaced a given distance away from said discharge opening to maintain the stream of slurry in a condition of turbulence so that the fibrous elements are thoroughly intermixed and evenly distributed throughout the slurry, the spacing of said point from said discharge opening determined such that, for the speed of movement of said slurry stream, and the speed of movement of the screen conveyor, the spacing is sufficiently large so that the turbulence of the slurry is substantially eliminated by the time the slurry reaches the discharge opening and screen conveyor, yet at the same time sufficiently small so that the slurry is evenly conducted into engagement with the screen conveyor before the fibrous elements can settle out, form clumps, or become unevenly distributed due to the reduced turbulence near the discharge opening.

3,123,521
STABILIZED CHLORINE DIOXIDE

John F. Wentworth, Cranston, and John R. F. Heller, Jamestown, R.I., assignors to Chemical Research Laboratories of America, Inc., Lafayette, R.I., a corporation of Rhode Island

No Drawing. Filed Aug. 1, 1961, Ser. No. 128,365

5 Claims. (Cl. 167—17)

1. A composition of matter consisting essentially of an aqueous solution of sodium carbonate peroxide having chlorine dioxide gas dissolved therein.

3,123,522
CARBOXYLIC ESTER PESTICIDES

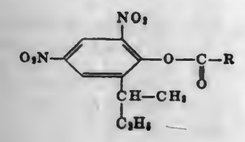
Otto Scherer and Karl Reichner, Frankfurt am Main, and Ludwig Friedrich Emmel, Bergen-Enkheim, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Feb. 16, 1960, Ser. No. 8,913

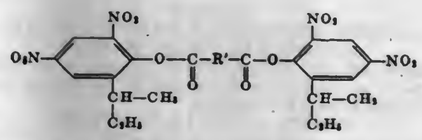
Claims priority, application Germany July 13, 1957

19 Claims. (Cl. 167—30)

1. A compound selected from the group consisting of



and



in which R stands for a monovalent radical selected from the group consisting of saturated, unsaturated and halogen-substituted aliphatic hydrocarbon radicals, saturated, unsaturated and halogensubstituted cycloaliphatic hydrocarbon radicals, alkoxy radicals containing 1 to 4 carbon atoms, and the phenyl radical, and R′ stands for a bivalent radical selected from the group consisting of aliphatic hydrocarbon radicals and the phenylene radical.

19. Process for combating pests, wherein a 4,6-dinitro-2-sec.-butylphenol ester according to claim 1 is applied in an amount which is sufficient to kill the pests.

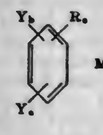
3,123,523
FUNGICIDAL COMPOSITIONS

William E. Burt, Royal Oak, Mich., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Dec. 22, 1961, Ser. No. 161,367

22 Claims. (Cl. 167—30)

2. A fungicidal composition comprising (1) as a principal active ingredient, a fungitoxic amount of a compound having the formula



wherein M is chromium, X is halogen; *a* is an integer having the value 0 to 1; Y is selected from the class consisting of NR_1R_2, $—OR_1$,



and



wherein R_1 and R_2 are independently selected from the class consisting of hydrogen and alkyl groups having one to 4 carbon atoms; *b* is an integer having the value 0 to 1; R is selected from the class consisting of hydrogen and alkyl groups having one to 4 carbon atoms, and *c* is an integer having the value 0 to 3, such that when *c*=3, *a*=0 and *b*=0 and (2) a surface active agent as a dispersant therefor.

3,123,524
CYCLOHEPTATRIENE IRON TRICARBONYLS FUNGICIDAL COMPOSITIONS

William E. Burt, Royal Oak, Mich., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Dec. 22, 1961, Ser. No. 162,265

4 Claims. (Cl. 167—30)

1. Method of combating fungi comprising treating the locus of the fungi with a fungitoxic amount cycloheptatriene iron tricarbonyl.

3,123,525
CYCLIC TERPENE N-METHYL CARBAMATES AND PESTICIDAL COMPOSITIONS CONTAINING SAME

Robert J. Geary, Vero Beach, Fla., assignor to Plant Products Corporation, Vero Beach, Fla., a corporation of Florida

No Drawing. Filed Dec. 28, 1961, Ser. No. 162,982

10 Claims. (Cl. 167—30)

1. An N-methyl carbamate compound having the formula RO—CONH—CH_3, wherein RO is the residue of a cyclic terpene alcohol having the empirical formula $C_{10}H_{18-20}O_{1-2}$.

3,123,526
FUNGICIDAL COMPOSITIONS AND METHODS EMPLOYING 2,3,5,10-TETRAHYDRO-3,5,10-TRIOXO-NAPHTHALINO - [2,3-b] - OXAZINES, THIAZINES AND PIPERAZINES

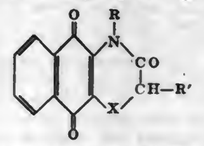
Anton Wagner, Walther Beck, and Alfred Diskus, Linz, Austria, assignors to Osterreichische Stickstoffwerke Aktiengesellschaft, Linz, Austria

No Drawing. Filed Mar. 24, 1961, Ser. No. 97,990

Claims priority, application Austria Mar. 26, 1960

9 Claims. (Cl. 167—33)

6. A method of inhibiting the growth of fungi which comprises treating the fungi with an anti-fungal composition comprising as an essential active ingredient a compound selected from the group having the formula:



wherein X is selected from the group consisting of oxygen, sulfur and N—R″, R, R′ and R″ are independently selected from the group consisting of hydrogen, lower alkyl and cyclohexyl and mixtures of compounds of said formula, and an inert carrier.

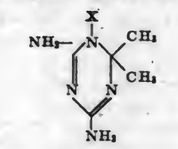
3,123,527
ANTIBACTERIAL COMPOSITIONS

Myron W. Fisher, Birmingham, Mich., assignor to Parke, Davis & Company, Detroit, Mich., a corporation of Michigan

No Drawing. Filed May 2, 1958, Ser. No. 732,467

10 Claims. (Cl. 167—51.5)

8. The method of combatting pathogenic bacterial infection which comprises administering orally a composition in dosage unit form containing 1000 parts by weight of a sulfonamide having antibacterial activity and from about 1 to 200 parts by weight of a member of the class consisting of a dihydrotriazine and acid salts thereof, said dihydrotriazine having in free base form the formula,



where X is a member of the group consisting of 3-chloro-

phenyl, 3,5-dichlorophenyl, 3,5-dibromophenyl and 3-trifluoromethylphenyl.

3,123,528
NEW THERAPEUTIC COMPOSITIONS

Albert Henry Fenton, Nottingham, England, assignor to Boots Pure Drug Company Limited, Nottingham, England, a British company

No Drawing. Filed June 29, 1959, Ser. No. 823,325
5 Claims. (Cl. 167—55)

1. A method of combatting bacterial, fungal and yeast infections of the mouth and throat which comprises applying to the infected parts a composition comprising 2:4 dichlorobenzyl alcohol and amyl-m-cresol as active ingredients and a pharmaceutically acceptable diluent.

3,123,529
PARENTERAL COMPOSITIONS CONTAINING BENZODIAZEPINES

John Kariss, Clifton, and Harold Leon Newmark, Maplewood, N.J., assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Mar. 9, 1962, Ser. No. 178,559
11 Claims. (Cl. 167—58)

1. A parenterally acceptable aqueous diluent solution comprising about 40% propylene glycol, about 10% ethyl alcohol, about 1.5% benzyl alcohol, about 5% sodium benzoate, about 43.5% water, and from about 2 mg. to about 8 mg. of 7-chloro-5-phenyl-1-methyl-3H-1,4-benzodiazepin-2(1H)-one per ml. of the above solution.

3,123,530
ANTIBIOTIC AA368 AND METHOD OF PRODUCTION

Alan Rhodes, Bracknell, Brian Boothroyd, Beaconsfield, Karl Heinz Fantes, Bushey, Moira Patricia McGonagle, Slough, and Rodger Crome, Stoke Poges, near Slough, England, assignors to Glaxo Group Limited, Greenford, England, a British company

Filed Sept. 25, 1961, Ser. No. 140,351
Claims priority, application Great Britain Sept. 23, 1960
30 Claims. (Cl. 167—65)

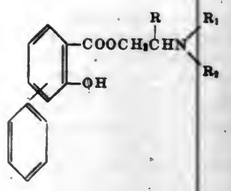
1. The antibiotic AA368 which has the molecular formula $C_{43}H_{71}O_{12}N$, has a specific rotation of $[\alpha]_D^{20} +114°$ (c., 1% in chloroform) and which is soluble in each of the solvents selected from the group consisting of butanol, ethyl acetate and chloroform, has an ultra-violet spectrum showing peaks at 280 mμ and 200 mμ, in infrared absorption spectrum with principal bands at 3450 (2.90μ), 3220 (3.11μ), 1712 (5.84μ), 1624 (6.16μ), 1466 (6.82μ), 1410 (7.09μ), 1384 (7.22μ), 1328 (7.53μ), 1274 (7.85μ), 1258 (7.95μ), 1230 (8.13μ), 1208 (8.28μ), 1174 (8.52μ), 1150 (8.70μ), 1082 (9.24μ), 1046 (9.56μ), 990 (10.10μ), 972 (10.29μ), 960 (10.42μ), 920 (10.87μ), 904 (11.06μ), 876 (11.42μ), 860 (11.63μ), 828 (12.08μ), 800 (12.50μ) and 778 $cm.^{-1}$ (12.85μ) and a melting point (uncorrected) of 140–142° C. following recrystallisation from ethyl acetate/petroleum ether (1:3 by volume).

3,123,531
SHAMPOO COMPOSITION COMPRISING BETA-DIALKYLAMINOETHYL-3-PHENYLSALICYLATE

Melville Sahyun, 316 Castillo St., Santa Barbara, Calif.

No Drawing. Filed Mar. 8, 1960, Ser. No. 13,425
5 Claims. (Cl. 167—87)

1. A shampoo composition useful in the management of seborrhea of the scalp which comprises a foaming-type shampoo containing a detergent selected from the group consisting of soap and anionic synthetic detergents having incorporated therein as the active ingredient an effective amount of a non-toxic, water-soluble salt of a compound having the formula



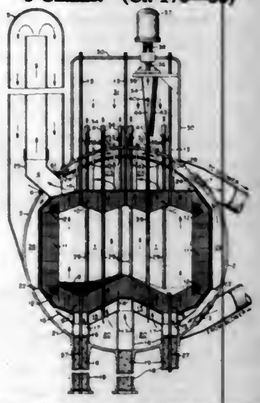
wherein

R is selected from the group consisting of hydrogen and methyl; R_1 and R_2 are each selected from the group consisting of methyl, ethyl and isopropyl; and, wherein the phenyl group is attached to the salicylate ring at a position selected from the 3, 4 and 5 positions of the salicylate ring.

3,123,532
CONTROL ROD POSITIONED BY FLUID FLOW THROUGH THE ROD CHANNEL

John W. Michel, Oak Ridge, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed May 6, 1963, Ser. No. 278,500
5 Claims. (Cl. 176—36)



1. In a neutronic reactor having a vertically movable neutron absorbing control rod, the improved control rod drive comprising in combination a hollow tube member mounted above said control rod in coaxial alignment therewith, the internal diameter of said tube member increasing at increasing distances from said control rod, means for providing a variable fluid flow upward through said hollow tube, a float member disposed within said hollow tube member, said float member adapted to vary its vertical position in response to variations in the fluid flow rate through said hollow tube, and means coupling said float member to said control rod, whereby changes in the vertical position of said float member cause corresponding changes in the vertical position of said control rod.

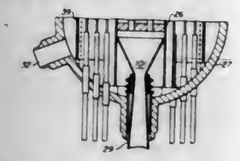
3,123,533
PRESSURE RELIEF DEVICE FOR NEUTRONIC REACTORS

Allen E. Galson, De Witt, N.Y., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed Dec. 28, 1962, Ser. No. 248,169
5 Claims. (Cl. 176—38)

1. A pressure relief device for use in a gas-cooled neutronic reactor comprising coolant outlet means for removing coolant gas from said reactor, and venturi means disposed in said coolant outlet means for restricting gas

flow, said venturi means so constructed and arranged that the coolant gas reaches sonic velocity in the venturi means



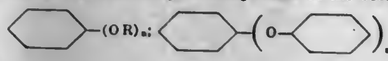
upon rupture of said coolant outlet means downstream from said venturi means.

3,123,534
IRRADIATION METHOD INCLUDING THE PRODUCTION OF POLYAROMATIC ETHERS

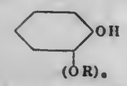
Robert O. Bolt, San Rafael, and Walter W. Hanneman, El Cerrito, Calif., assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed Aug. 22, 1960, Ser. No. 51,240
9 Claims. (Cl. 176—39)

1. In a method of operating a nuclear reactor, the steps comprising introducing a mixture of a non-fused ring phenyl hydrocarbon compound having from 1 to 4 phenyl groups therein with at least one compound selected from the group consisting of compounds of the formulae,



and

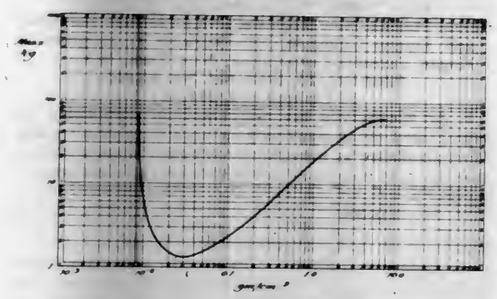


in which R may be hydrogen or an alkyl radical and *n* may be an integer in the range of 1 through 4, into a nuclear reactor to serve as a functional component thereof and to undergo radiolytic reaction by exposure to nuclear radiation therein in excess of about 10^8 rads to produce at least one product of the group consisting of non-fused ring polynuclear hydrocarbons, polyphenyl ethers and phenolic compounds in the mixture, and recovering said products from the reaction mixture.

3,123,535
DEVICE FOR PRODUCTION OF NUCLEAR ENERGY FROM U^{233}

Glenn T. Seaborg, Chicago, Ill., John W. Gofman, Berkeley, Calif., and Raymond W. Stoughton, Oak Ridge, Tenn., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed Nov. 30, 1944, Ser. No. 565,990
9 Claims. (Cl. 176—41)



1. In a device for the production of nuclear energy, a body consisting essentially of atoms of uranium having a mass number of 233 distributed in a neutron slowing substance having a capture cross section for neutrons of less than about 10^{-24} square centimeters and a mass of less than about 30 mass units, the amount of said uranium being such that the radius of the mass is of the order of the distance required for slowing neutrons from fission energies to thermal energies, and the concentration being such that the probability of capture of neutrons by said atoms of uranium is greater than the probability of capture of neutrons by the slowing down substance to produce a self-sustaining chain-reaction through the action of neutrons emitted during fission.

3,123,536
PREPARATION OF L-GLUTAMIC ACID BY FERMENTATION

Shinji Okumura, Yokohama City, Ryuichiro Tsugawa, Tokyo, Toshinao Tsunoda, Zushi City, Shinichi Motozaki, Tokyo, Tadashi Suyama, Kawasaki City, and Seizo Kanao, Tokyo, Japan, assignors to Ajinomoto Co., Inc., and Sanraku Distillers Co., Inc., Tokyo, Japan

No Drawing. Filed Oct. 22, 1962, Ser. No. 232,276
Claims priority, application Japan July 12, 1960
7 Claims. (Cl. 195—29)

1. A process for preparing L-glutamic acid which comprises fermenting an aqueous medium containing a carbon source and a nitrogen source by means of glutamic acid producing bacteria selected from the group which consists of the genera Brevibacterium, Corynebacterium, Microbacterium, and Micrococcus, under aerobic conditions in the presence of a derivative of pelargonic acid selected from the group consisting of 7,8-diaminopelargonic acid, 8-keto-7-aminopelargonic acid, 8-amino-7-ketopelargonic acid, 7,8-diketopelargonic acid, and 7-amino-8-hydroxypelargonic acid.

3,123,537
PROCESS FOR PRODUCING GLUTAMIC ACID BY FERMENTATION

Guido M. Miescher, Terre Haute, Ind., assignor to Commercial Solvents Corporation, New York, N.Y., a corporation of Maryland

No Drawing. Filed Jan. 25, 1963, Ser. No. 254,009
3 Claims. (Cl. 195—47)

1. In the process for the production of L-glutamic acid by cultivating a L-glutamic acid producing strain of the organism *Brevibacterium divaricatum* in an aqueous nutrient medium containing a carbohydrate source, a phosphate source, a potassium source, a nitrogen source and a growth promoter, said medium being maintained at pH of about 6 to 8, the improvement which comprises conducting the fermentation at a temperature of about 28° to 33° C. until essentially maximum growth of the organism is obtained and then conducting the remainder of the fermentation at a temperature of about 36 to 40° C.

3,123,538
METHOD FOR CULTIVATING LACTOBACILLI

Minoru Shirota, 49 Yoshida-Shimooji, Sakyo-ku, Kyoto, Japan; Noboru Nagamatsu, 11 Kuji, Kawasaki, Japan; and Yoshiro Takechi, 436–1 Fujiookumachi, Otsu, Japan

No Drawing. Filed Apr. 17, 1961, Ser. No. 103,195
18 Claims. (Cl. 195—48)

1. A method of cultivating Lactobacilli which consists essentially of incorporated powdered single cell agla selected from the group consisting of Chlorella and Scenedesmus into a cultivated medium containing skim milk powder and dextrose, sterilizing the mixture by heating, inoculating Lactobacillus into the sterilized medium, and cultivating at 37° C. until the desired concentration of lactic acid has accumulated.

3,123,539
PROCESS FOR RECOVERING CATALASE FROM THE CELLS OF *MICROCOCCUS LYSODEIKTICUS*

Roland F. Beers, Jr., 1406 Carrolton Ave., Ruxton 4, Md.

No Drawing. Filed Nov. 20, 1962, Ser. No. 239,083
5 Claims. (Cl. 195—66)

5. A process for recovering catalase from the cells of *Micrococcus lysodeikticus* which comprises:

(1) lysing a suspension of the cells in a sodium chloride solution containing a lysing enzyme,

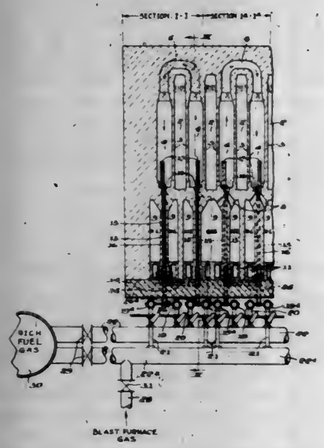
(2) precipitating the lysed cells and proteinaceous material by adding alcohol to a concentration of about from 40% to 50% by volume and adjusting sodium chloride concentration to about from 1% to 2% by weight, and,

(3) precipitating the catalase from the supernatant liquid by adding alcohol to a concentration of about from 70% to 85% by volume.

3,123,540
HIGH CHAMBERED HORIZONTAL COKE OVENS

Joseph van Ackeren, Pittsburgh, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

Filed Apr. 13, 1961, Ser. No. 102,791
9 Claims. (Cl. 202—141)

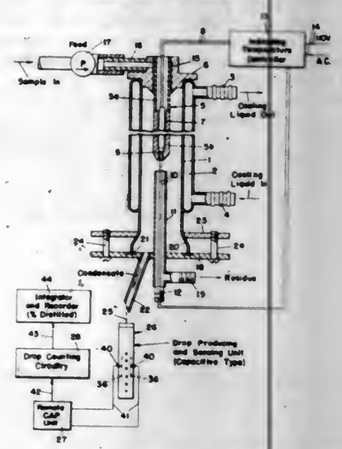


1. In a regenerative masonry underjet coking retort oven, the combination comprising: a row of coking chambers with two sets of vertical heating flues therefor operable in alternation as "on" and "off" burning combustion flues; a fuel gas low burner at the bottom of each flue and a fuel gas high burner at a level above the bottom of each flue; air regenerators below said row of coking chambers and heating flues and communicably connected with the bottoms of the heating flues, said regenerators being mounted above an accessible basement space; separate fuel gas riser channels in the regenerator masonry extending from the basement space individually upwardly to the separate high and low burners in each of the heating flues; waste gas recirculating ducts communicably connecting the high burner riser channels of the two sets of heating flues with each other in the region of the bottoms of the regenerators; fuel gas introduction means comprising individual fuel gas underjet ducts for each of the high and low riser channels with regulable orifice means for individually admitting fuel gas into the separate risers in the form of a jet, the regulable orifice means of the underjets for the high burner riser channels being so disposed with respect to recirculating ducts in communication therewith as to aspirate a flow of waste gaseous combustion products individually into the high burner riser channels when operable for onflow from heating flues of the set then operable as "off" burning flues, through their idle high burner rich gas risers and through the interconnecting waste gas recirculating ducts, at a velocity independent of the velocity of flow of the jets into the lower burner riser channels, to dilute the rich gas for the high burner riser channels to a composition which remains substantially undecomposed and free of carbon deposition while rising to the high burners.

3,123,541
CONTINUOUS DISTILLATION ANALYZER

Conard K. Donnell, Springfield, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Filed Nov. 1, 1960, Ser. No. 66,593
4 Claims. (Cl. 202—160)



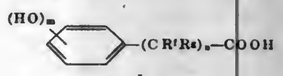
1. A continuous distillation analyzer comprising a hollow outer tube provided with a jacket; means for circulating a cooling liquid through said jacket, an inner tube mounted concentrically within said outer tube, controllable means for heating said inner tube, means responsive to the temperature of said inner tube for controlling said controllable means to maintain said inner tube at a substantially constant elevated temperature, means for continuously flowing, at a known rate, a liquid to be analyzed onto the outer surface of said inner tube, and means for determining the rate of production of all of the liquid which is boiled off from said inner tube and collects as condensate on said outer tube.

3,123,542
ELECTROLYTIC MARKING MEDIUM

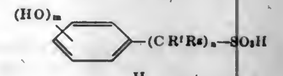
Gerald Mandel, New Rochelle, Irving Lieblich, Elmhurst, and Amnon Goldstein, New York, N.Y., assignors to Hogan Faximile Corporation, New York, N.Y.

Filed Oct. 13, 1960, Ser. No. 62,423
15 Claims. (Cl. 204—2)

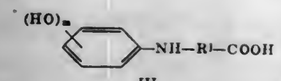
1. An electrolytic recording medium comprising an impregnated sheet containing in an electrolytically conducting solution as a marking compound a polyhydroxyphenolic acid compound selected from the class consisting of



I

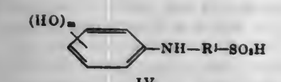


II



III

and



IV

where *m* indicates the number of phenolic hydroxyl groups attached to the ring at least two of which are ortho to each other and *m* is an integer from 2 to 4, wherein R^f and R^g are selected from the group consisting of H, NH_2, OH and lower alkyl radicals and R^j is selected from the group consisting of lower alkyl radicals, and where *n* is an integer from 1 to 6.

3,123,543
METHOD AND APPARATUS FOR FEEDING ARTICLES

John L. Chapman, Jr., Catonsville, Md., and Robert P. Loeper, Reading, Pa., assignors to Western Electric Company, Incorporated, a corporation of New York

Filed Nov. 24, 1961, Ser. No. 154,744
5 Claims. (Cl. 204—28)

1. In an automatic process for cleaning and plating articles attached to and carried by a flexible conductive tape to a succession of various types of confined cleaning and plating solutions, the steps of:

applyng a first reference potential to said articles through said tape,

polarizing said articles as anodes while immersed in a first cleaning solution of said succession of solutions, said polarization being established by the provision of a first electrode submerged in said first solution and biased at a potential which is negative relative to the reference potential applied to said tape,

polarizing said articles alternating as anodes and cathodes while immersed in a second cleaning solution of said succession of solutions, said polarization being established by the provision of a second electrode submerged in said second solution and having an alternating potential applied across said tape and said second electrode,

polarizing said articles as cathodes while immersed in an *n*th plating solution of said succession of solutions, said polarization being established by the provision of at least a third electrode submerged in said *n*th solution and biased at a potential which is positive relative to the reference potential applied to said tape, and

orienting said tape at a predetermined angular position while said articles are biased as cathodes in the region of at least one of said solutions such that only said articles are immersed therein.

3,123,544
ELECTRODEPOSITION OF RUTHENIUM

Joyce Cresswell Blake, London, England, assignor to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware

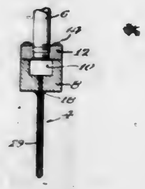
No Drawing. Filed Apr. 10, 1962, Ser. No. 186,318
Claims priority, application Great Britain Apr. 18, 1961
7 Claims. (Cl. 204—47)

1. A process for the electrodeposition of ruthenium which comprises cathodically depositing ruthenium from an aqueous acidic bath containing at least about 2.5 grams per liter of ruthenium dissolved therein as a tetrasulphamato nitrosyl ruthenate at a cathode current density of about 2 to about 8 amperes per square decimeter.

3,123,545
ELECTRODE FOR ELECTROLYTIC SHAPING

Lynn A. Williams, Winnetka, Ill., assignor to Anocut Engineering Company, Chicago, Ill., a corporation of Illinois

Filed June 13, 1960, Ser. No. 35,646
3 Claims. (Cl. 204—224)

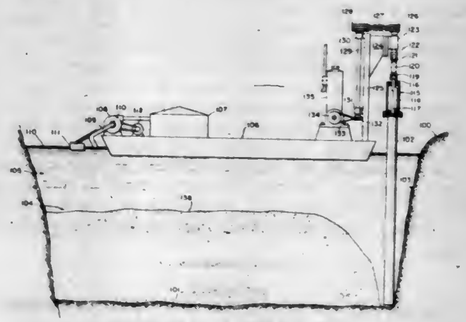


1. An electrode for electrolytic cavity forming having an electrolyte inlet and an outlet comprising a pair of opposed metallic plates, dimples formed in close proximity to each other in at least one of the plates and projecting into engagement with and secured to the other plate to prevent bulging of the plates under high internal hydraulic pressures, the side edges of the plates being joined to form a passage around the dimples for electrolyte extending from the inlet to the outlet, outwardly extending dimples on the plates adapted to permit light engagement of the electrode with the cavity sides to inhibit electrode vibration and provide an outlet passage for spent electrolyte, an insulating material intimately covering the sides and side edges of the plates, and means supporting the plates at the inlet and adapted to supply electrolyte under pressure thereto, the plates being exposed at the outlet to define an electrode working edge.

3,123,546
ACOUSTIC METHOD FOR EXTRACTING HYDROCARBON CONSTITUENTS FROM OIL-SANDS

Albert G. Bodine, 13120 Moorpark St., Sherman Oaks, Calif.

Filed June 2, 1958, Ser. No. 739,291
6 Claims. (Cl. 208—11)

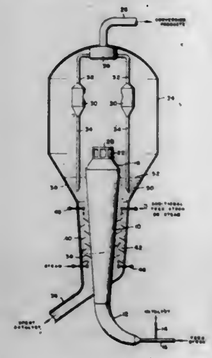


1. The method of recovering hydrocarbon liquid from a tar-sand raw material in lump form, that includes: disintegrating the lumps of raw material by subjecting said material to sonic waves, whereby the petroleum tar is released from the sand in the physical form of a hydrocarbon liquid, and separating the released hydrocarbon liquid from the sand residue.

3,123,547
FLUIDIZED CATALYTIC CRACKING PROCESS

Jewell S. Palmer and William K. Roquemore, Baytown, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

Filed Apr. 21, 1958, Ser. No. 729,645
8 Claims. (Cl. 208—78)



1. A method for catalytically cracking a petroleum hydrocarbon feed stock which comprises the steps of forming a disperse phase suspension of a finely divided cracking catalyst in a vaporized hydrocarbon feed stock at a temperature within the range of about 800° and 1100° F., flowing said suspension at a pressure within the range of about 0 to 50 p.s.i.g. upwardly through a conically diverging reaction zone having a length-to-average diameter ratio within the range of about 4:1 to about 8:1 and an angle of divergence of about 2° to 5° at an inlet superficial velocity within the range of about 20 to 50 feet per second and an outlet superficial gas velocity within the range of about 8 and 20 feet per second, maintaining a sufficient amount of catalyst in said suspension to provide in said reaction zone a weight ratio of feed per hour to catalyst within the range of about 20:1 to about 300:1 and a catalyst to oil ratio within the range of about 2:1 to 15:1 to catalytically crack said hydrocarbon feed stock to form desired hydrocarbon products, separating said hydrocarbon products from said catalyst by momentarily accelerating said suspension and then discharging said suspension only laterally and downwardly from the upper end of said conical reaction zone whereby said outlet superficial gas velocity is rapidly decelerated and the accelerated velocity of the catalyst is reduced by about 30 to 60 percent, collecting said separated catalyst exteriorly of said conical reaction zone, and thereafter injecting an additional quantity of vaporized hydrocarbon feed stock into said collected catalyst in an amount sufficient to form a dense phase suspension of said collected catalyst in said additionally injected feed stock to catalytically crack at least a portion of said additionally injected hydrocarbon feed stock.

3,123,548
REMOVAL OF METALLIC IMPURITIES FROM CRACKING CATALYSTS

James E. Connor, Jr., Wynnewood, and Clifford S. Shipley, Aldan, Pa., assignors to The Atlantic Refining Company, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Dec. 21, 1961, Ser. No. 161,257
8 Claims. (Cl. 208—120)

1. A method for improving the product distribution resulting from a hydrocarbon catalytic cracking process in which is employed a silica-alumina cracking catalyst which comprises

(*a*) separating at least a portion of the total catalyst from the process,
(*b*) contacting the separated catalyst at a temperature ranging from 900° F. to 1100° F. with a hydrogen sulfide-containing gas,
(*c*) contacting the hydrogen sulfide treated catalyst with molecular oxygen at a partial pressure of at least one atmosphere and at a temperature ranging from 350° F. to 1100° F. for at least 30 minutes,
(*d*) contacting the oxygen-treated catalyst with a cation exchange resin in the hydrogen cycle in an aqueous medium at a pH such that the coke-forming and gas-forming metal contaminants are removed from the catalyst while the stability of the catalyst is substantially maintained,
(*e*) separating the contacted catalyst from the resin, and
(*f*) returning the contacted catalyst to the hydrocarbon cracking process.

3,123,549
METHOD OF NEUTRALIZING OIL WITH DIAZOMETHANE

George W. Ayers, Chicago, and William A. Krewer, Arlington Heights, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

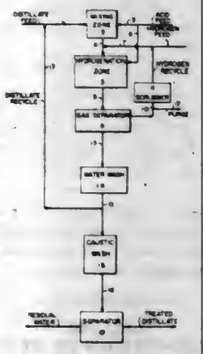
No Drawing. Filed Sept. 21, 1960, Ser. No. 57,407
15 Claims. (Cl. 208—180)

1. A method of preparing a color-stable lubricating oil, having substantially zero acid neutralization number, which comprises treating a petroleum lubricating oil having substantial acidity with a solution of diazomethane in an inert solvent to convert acidic materials in the oil into neutral, stable products.

3,123,550
HYDROTREATING OF MINERAL OIL DISTILLATES

Robert M. Skomoroski, Elizabeth, and Alan Schriesheim, Berkeley Heights, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed June 20, 1960, Ser. No. 37,489
6 Claims. (Cl. 208—254)

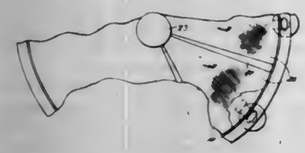


1. A process for removing oil soluble nitrogen-containing compounds from a mineral oil distillate which comprises admixing said distillate with mineral acid and hydrotreating the resulting acid-containing admixture over a supported metal containing hydrogenation catalyst at a pressure of from 300 to 1,000 p.s.i.g. and wherein the gram equivalent ratio of acid hydrogen to basic center in said admixture is from 2:1 to 5:1.

3,123,551
METHOD AND APPARATUS FOR SEPARATING ORE PARTICLES

George W. Walker, Platteville, Wis.; Jean Marion Theller and Harriet Elizabeth McGill, executrices of said George W. Walker, deceased, assignors to Andrew F. Wintercorn, Rockford, Ill.

Filed Oct. 17, 1960, Ser. No. 63,167
8 Claims. (Cl. 209—29)

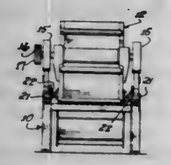


7. An ore separator comprising in combination an upright generally conical screen of appreciable diameter mounted for rotation on a central vertical axis, means connected with the rim portion of said conical screen for increasing or decreasing the angle thereof with respect to its vertical axis, an upright substantially cylindrical downspout of small diameter in relation to said screen disposed over the center of said screen and adapted to deliver a substantially cylindrical stream of finely crushed ore containing free metal particles centrally on top of said screen at a predetermined rate, drive means for turning said screen at a speed bearing a predetermined relation to the rate of delivery of the crushed ore so that this material flows outwardly and downwardly partly by gravity and partly by centrifugal force and is spread out uniformly thin and to gradually diminishing depth toward the rim of said screen, said screen having holes therein large enough to allow dropping therethrough of metal particles in the ore, means for continuously delivering air under pressure upwardly through the holes in the screen so as to blow upwardly the smaller ore particles as dust while floating the larger ore particles relative to the screen on the air streams to prevent their dropping through the holes while allowing the metal particles by virtue of their greater weight to drop through said holes, means under the screen for collecting the metal particles that drop through the screen, other means over the screen for conducting away the smaller ore particles that are blown upwardly as dust from the screen, and means extending annularly with respect to the rim of said screen for collecting the larger ore particles which after floating outwardly over the screen drop by gravity from the rim thereof.

3,123,552
SNUBBER FOR VIBRATING SCREENS

George W. Lowry, Pasadena, Calif., assignor to Overstrom & Sons, Inc., Alhambra, Calif., a corporation of California

Filed Mar. 20, 1961, Ser. No. 96,929
5 Claims. (Cl. 209—326)

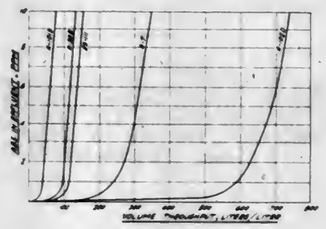


1. In a vibrating screen, the combination comprising:
a stationary frame including a frame member;
a screen box including a screen box member;
resilient means mounting the screen box on the frame for limited relative movement in a first plane and also transversely thereto;
drive means vibrating the screen box relative to the frame in said first plane;
and snubber means at each of two opposed positions spaced apart transversely of the first plane, each snubber means including
a resilient energy absorber on one of said members and rigid bumper means on the other of said members;
said absorber and said bumper means comprising a pair of elements mounted on one of said members and a single element mounted on the other of said members at a position between and aligned with the pair of elements in the direction of said relative movement in said plane;
the spacing between successive ones of said elements in the direction of the relative movement in said plane being greater than the normal relative movement between said absorber and said bumper means at ordinary operating speeds of the screen box but less than the relative movement between said absorber and said bumper means at a resonant speed of the screen box;
each absorber and bumper means having mutually engaging surfaces inclined to the direction of relative movement of the absorber and bumper means whereby engagement of the absorber with the associated bumper means produces a thrust transversely of the plane and the thrusts produced at said two positions are oppositely directed and substantially neutralize one another.

3,123,553
REMOVAL OF ALKYL BENZENE SULFONATE FROM LIQUIDS

Irving M. Abrams, Redwood City, Calif., assignor, by mesne assignments, to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

Filed Sept. 8, 1961, Ser. No. 136,770
8 Claims. (Cl. 210—30)



1. The method of removing alkyl benzene sulfonate dissolved in a body of water, which comprises effecting intimate contact between the water body and an anion exchange resin without prior removal of cations which may be present in said water to extract said sulfonate from the water by said resin and thereby substantially prevent foaming of the water caused by said sulfonate.

3,123,554
METHOD OF DISINFECTING AND AUTOMATICALLY MAINTAINING THE pH OF WATER IN A SWIMMING POOL

William Bruce Murray, 929 Terraine Ave., Long Beach 4, Calif.

No Drawing. Filed Sept. 25, 1962, Ser. No. 226,167
5 Claims. (Cl. 210—60)

1. The method of disinfecting water in a swimming pool and automatically maintaining it at a pH of between 7.4 and 7.8 when said swimming pool includes a power-driven pump, a filter, a suction line connected to said pump and pool, a first discharge line connected to said

pump and filter, and a second discharge line connecting said filter to said pool, comprising the steps of:

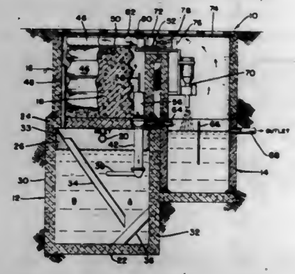
(*a*) energizing said pump to draw water from said swimming pool through said suction line and discharge the same back into said swimming pool through said first discharge line, filter and second discharge line;

(*b*) exposing said water as it discharges through said first discharge line to a mixture of calcium hypochlorite and a carbonate salt of sodium to permit said mixture to thereafter react in said first and second discharge lines, said filter, and in said swimming pool to form finely precipitated calcium carbonate, sodium hypochlorite, carbon dioxide and water, which sodium hypochlorite in said exposed water is in the form of hypochlorous acid and sodium hydroxide, with said sodium hydroxide in said exposed water combining with said carbon dioxide therein to form soluble sodium bicarbonate to lower the pH of said exposed water, and with said hypochlorous acid in said exposed water decomposing due to its disinfecting, oxidizing or bleaching action into oxygen and hydrochloric acid, with said hydrochloric acid in said exposed water neutralizing any sodium hydroxide remaining therein to form sodium chloride and water;

(*c*) recirculating said exposed water through said suction line, pump, first discharge line, filter and second discharge line to deposit said calcium carbonate precipitated in said exposed water as a layer on said filter; and

(*d*) continuing to recirculate said exposed water to permit hydrochloric acid therein to react with said calcium carbonate on said filter to form calcium chloride, carbon dioxide and water to raise the pH of said exposed water, with said carbon dioxide reacting with said calcium carbonate and water to provide residual calcium bicarbonate in said exposed water that buffers the same against any corrosive tendency it may have on said swimming pool, pump, suction line, filter, and first and second discharge lines.

3,123,555
AUTOMATIC SEWAGE DISPOSAL FOR INDIVIDUAL HOMES AND BUILDINGS
John R. Moore, 82 Casterton Ave., Akron 3, Ohio
Filed May 3, 1961, Ser. No. 107,347
3 Claims. (Cl. 210—124)



1. An automatic sewage disposal unit comprising:

a primary settlement tank for receiving liquid raw sewage;

a filter compartment disposed above said primary settlement tank and containing a biologically active filter bed;

a final settlement tank disposed adjacent one of said primary settlement tank and filter compartment;

means for conveying the liquid from said primary settlement tank to said filter compartment and distributing it over said filter bed;

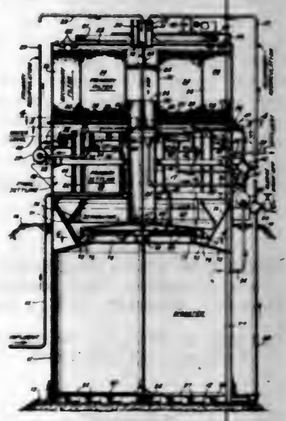
and means for conducting the liquid from said filter bed either in return to said primary settlement tank for recirculation from the latter to said filter bed or to said final settlement tank, said conducting means comprising:

a first conduit having an inlet in the filter compartment and an outlet in the primary settlement tank and forming a first interconnecting passageway between said filter compartment and said primary settlement tank;

a second conduit having an inlet in said first conduit and an outlet in the final settlement tank and forming a second interconnecting passageway between said filter compartment and said final settlement tank;

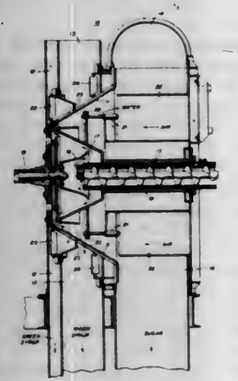
and valve means (*a*) adapted to close the outlet of said first conduit when the liquid in said primary settlement tank rises to a predetermined level, as a consequence of which liquid passes from said filter compartment through said second interconnecting passageway into said final settlement tank, (*b*) and further adapted to open the outlet of said first conduit when the liquid in said primary settlement tank falls below said predetermined level, as a consequence of which liquid passes from said filter compartment through said first interconnecting passageway bypassing the inlet to said second conduit and into said primary settlement tank.

3,123,556
SEWAGE TREATMENT PLANTS
Joseph J. Gilbert, Abington, Pa., assignor to Link-Belt Company, a corporation of Illinois
Filed Feb. 8, 1961, Ser. No. 87,957
8 Claims. (Cl. 210—151)



1. Bio-filtration apparatus comprising an annular primary settling chamber, means for introducing liquid sewage influent into said primary settling chamber, an annular final settling chamber concentric to said primary settling chamber, a digester chamber below and in communication with said settling chambers for receiving sludge settling from the liquid sewage in said settling chambers, an annular primary filter bed above said primary settling chamber, an annular secondary filter bed concentric to said primary filter bed, rotatable means for conducting liquid sewage from said primary settling chamber and for uniformly distributing the same onto the upper surface of said primary filter bed, means for dividing the filtrate from said primary filter bed into two components and for returning one such component to said primary settling chamber, means for combining the entire quantity of the other such component with liquid drawn from said final settling chamber, rotatable means for conducting the thus combined liquids and for uniformly distributing the same onto the upper surface of said secondary filter bed, means for conveying the filtrate from said secondary filter bed to said final settling chamber, an effluent discharge from the upper surface of the liquid in said final settling chamber, and means for removing digested sludge from said digester chamber.

3,123,557
CENTRIFUGAL MACHINE BASKET
Alexander H. McPhee, Plandome Heights, and Thomas H. Reid, Brooklyn, N.Y., assignors to Hepworth Machine Company, Inc., Long Island City, N.Y., a corporation of New York
Filed Sept. 8, 1959, Ser. No. 839,046
2 Claims. (Cl. 210—382)



1. A composite basket structure for a continuous sugar centrifugal machine comprising an open-work basket comprising a hub member, an end ring member of greater diameter than the hub member, a multiplicity of spaced rib members between the hub member and the end ring member, each of said rib members having a rectangular cross-section in which the short dimension thereof is no larger than a fourth of its long dimension, said rib members extending longitudinally of said container and being spaced in such a manner that they form an outer basket of frusto-conical shape, and a plurality of spaced ring members surrounding the rib members in the space between said hub member and said end ring member, and a thin metallic container of frusto-conical shape having a multiplicity of perforations therein of a size to prevent the passage of sugar grain therethrough and being much smaller than the space between rib members and the space between ring members, said container being within said open-work basket in intimate contact with the short dimension of each of said ribs, some of said rib members extending only a portion of the overall distance between the larger end of said frusto-conical container and the smaller end thereof.

3,123,558
TENSIONED RIBBON SCREEN
James F. Sullivan, Dallas, Tex., assignor to Overstrom & Sons, Inc., Alhambra, Calif., a corporation of California
Filed Apr. 3, 1961, Ser. No. 100,327
1 Claim. (Cl. 210—389)

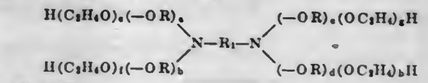
In a dewatering screen, the combination of: a frame of generally rectangular outline and having at opposite sides parallel compression members; a plurality of thin, flat ribbons placed on edge and extending parallel to each other and to said compression members to provide a plurality of thin, closely spaced screen elements on which solids are retained, said ribbons having smooth surfaces free of lateral projections able to impede movement of retained solids lengthwise of the ribbons; means effecting a pin connection between the frame and all the ribbons at one end of the ribbons; means at the other end of the ribbons for connecting the ribbons to the frame including a plurality of blocks side by side in a transverse row across the plurality of ribbons, pin means in each block connecting to each block a plurality of



ribbons, a plurality of screws adjustably connecting each block to the frame in order to independently adjust each block relative to the frame and to tension simultaneously and substantially equally all the ribbons connected to a given block, the tension in each ribbon being sufficient to maintain the entire cross-section of each ribbon under tension under a normal vertical load of retained solids and the inertia forces imposed by their motion in a vertical plane, and drive means connected to the frame imparting to the frame and ribbons thereon a vibratory motion of low frequency and high magnitude having a component in a vertical plane normal to the length of the ribbons.

3,123,559
INHIBITED DRILLING FLUID
Paul W. Fischer, Whittier, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California
No Drawing. Filed Jan. 17, 1961, Ser. No. 83,169
11 Claims. (Cl. 252—8.5)

1. A drilling fluid comprising an aqueous suspension of a clay and between about 2 and about 10 pounds per barrel of a clay hydration inhibiting agent, said agent having the general formula:



wherein

R_1 is an alkylene radical having 2 to 5 carbon atoms;

R is an alkylene radical having 3 to 5 carbon atoms;

a, *b*, *c*, *d*, *e*, *f*, *g* and *h* are whole numbers;

the total weight of the hydrophobic base comprising said R_1 and said —OR— groups is between about 2000 and about 3600 units; and

the weight content of the polyoxyethylene groups is 30 to 69 percent of the weight of said hydrophobic base.

3,123,560
GREASE COMPOSITION
Dennis F. Hallowell, Jr., Fullerton, Calif., assignor to Richfield Oil Corporation, Los Angeles, Calif., a corporation of Delaware
No Drawing. Filed Apr. 29, 1959, Ser. No. 809,599
2 Claims. (Cl. 252—28)

1. A synthetic grease composition consisting essentially of a halogenated diphenyl of lubricating viscosity as the

base oil, about 2 to 10 weight percent pyrogenic silica, and from about 0.5 to 10 weight percent of monostearoyl tetraethylene pentamine silicate.

ERRATUM

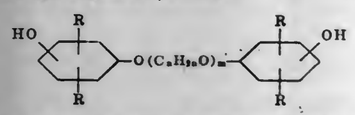
For Class 252—32.7 see:
Patent No. 3,123,570

3,123,561
BIS(HYDROXYPHENYL) ETHERS OF POLYALKYLENE GLYCOLS

Howard M. Rue, Media, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Jan. 4, 1961, Ser. No. 80,557
4 Claims. (Cl. 252—33.3)

1. As a composition of matter, an emulsifiable mixture of petroleum lubricating oil, soap and a compound selected from the group consisting of alkali metal and aliphatic amine salts of a bis(hydroxyphenyl) ether of polyalkylene glycol having the general formula



wherein R is selected from the group consisting of hydrogen, halogen, and alkyl radicals having from 1 to 8 carbon atoms, *m* is an integer from 2 to 30, and *n* is an integer from 2 to 3, said compound being present in a bacteria-controlling amount.

3,123,562
DUAL PURPOSE CUTTING OIL

Dennis F. Hallowell, Jr., Ogden, Utah, assignor to Richfield Oil Corporation, Los Angeles, Calif., a corporation of Delaware

No Drawing. Filed Dec. 7, 1959, Ser. No. 857,548
3 Claims. (Cl. 252—33.6)

1. A lubricant additive consisting essentially of a reaction product obtained from the following reactants in substantially stoichiometric amounts:

A. organic fatty acid containing material selected from the group consisting of sulfurized refined tall oil, sulfurized tall oil fatty acids and chlorohydroxystearic acid,

B. naphthenic acid mixed with reactant A in an amount sufficient to yield a mixture having an acid number of at least 170, and

C. a mixture of mono-, di-, and triisopropanolamines.

3,123,563
LUBRICATING OIL COMPOSITION

Guy M. Verley, Harvey, Ill., assignor, by mesne assignments, to Sinclair Research Inc., New York, N.Y., a corporation of Delaware

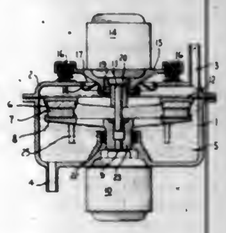
No Drawing. Filed Sept. 28, 1960, Ser. No. 58,893
4 Claims. (Cl. 252—35)

1. A lubricating oil composition of improved detergent characteristics which consists essentially of an oil of lubricating viscosity and a minor amount sufficient to provide the oil with improved detergent characteristics, of an oil-soluble partial salt of an oil-soluble polymer of terminally unsaturated alkene monocarboxylic acid ester, the acid group of said acid ester having about 3 to 8 carbon atoms, the ester group of said acid ester having about 6 to 20 carbon atoms, said partial salt containing a ratio the metal forming said partial salt being selected from the group consisting of the divalent states of nickel, cobalt, and beryllium; the trivalent states of arsenic, antimony and bismuth; and the tetravalent states of titanium, zirconium and tin.

3,123,564
APPARATUS AND METHOD FOR PRODUCTION OF METALLIC DEVELOPERS FOR ELECTROPHOTOGRAPHY AND METALLIC INKS AND PAINTS

Keith Meredith Oliphant, Westbourne Park, South Australia, Australia, assignor to Research Laboratories of Australia Limited, Adelaide, South Australia, Australia

Filed Mar. 16, 1961, Ser. No. 96,212
Claims priority, application Australia Mar. 17, 1960
11 Claims. (Cl. 252—62.1)



1. For producing powdered metallic developers for electrophotography and metallic inks and paints, characterized by the presence of micron-sized metal powders, the method comprising: subjecting a substantially smooth planar surface of a solid plate of the metal, which is to produce the powder for said developers, to the cutting action of an abrasive surface rubbed continuously thereagainst beneath an inert liquid to produce said powder of the desired ultimate micron size in a single operation, said liquid containing a fixing agent for adhering the powders to an electrophotograpically sensitive surface, said fixing agent being present in said liquid during cutting and being soluble in said liquid.

8. For producing metallic developers for electrophotography and metallic inks and paints, apparatus comprising a vessel to contain liquid, a first carrier disposed in said vessel below the liquid level therein, said carrier being adapted to support a plate composed of the metal from which powder is to be produced, a second carrier adjacent said first carrier also carried by said vessel to be disposed beneath the level of the liquid therein, an abrasive member on said second carrier, the abrasive member being of such form as to produce micron-sized powders when rubbed against the surface of said metal plate, means to urge a surface of said plate on to the said abrasive member, and means to move continuously at least one said carrier whereby the said abrasive member has relative motion to the surface of said plate presented thereto to cut the face of the metal beneath the said liquid.

3,123,565
PROCESS FOR TINTING LAUNDRY CHEMICALS IN THE DRY STATE

William A. Millsaps, Philadelphia, and Julian L. Staubly, Oreland, Pa., assignors to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed May 10, 1960, Ser. No. 27,987
4 Claims. (Cl. 252—135)

1. The process of tinting a laundry chemical in the dry state, said laundry chemical selected from the group consisting of ammonium fluosilicate, zinc fluosilicate, magnesium fluosilicate, sodium fluosilicate, ammonium chloride, sodium bifluoride, sodium tripolyphosphate, sodium carbonate, sodium orthosilicate and sodium hydroxide, comprising first mixing a water insoluble dye in paste form with a liquid wetting agent selected from the group consisting of anionic, nonionic and cationic wetting agents, the ratio of dye paste to liquid wetting agent being within the range of from about 1:1 to about 1:15 by weight, and thereafter blending at least 0.005 parts by weight of the mixture of dye paste and liquid wetting agent with 100 parts by weight of said laundry chemical until the tint of said dye develops on the laundry chemical.

3,123,566
DEGREASING COMPOSITIONS

Walter E. Kramer, Niles, and Louis A. Joo, Crystal Lake, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

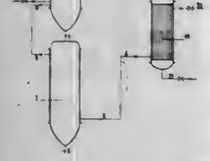
No Drawing. Filed Dec. 30, 1960, Ser. No. 79,543
23 Claims. (Cl. 252—139)

1. A degreasing composition consisting essentially of an aqueous solution of about 10% to about 70% by weight of alkali metal salts of complex polynuclear aromatic heterocyclic di- and polycarboxylic acids derived from solvent extracts, obtained in the solvent extraction of mineral lubricating oils with a solvent selective for aromatic compounds, by metalation of said solvent extracts to form the alkali metal adduct, carbonation of said adduct to form the alkali metal salt of the corresponding carboxylic acid, acidification of said salt to form the free acid and reaction of said acid with a basic compound having a cation corresponding to the finished product, characterized by having an average molecular weight of about 320 to 750, containing about 1.9 to about 4.5% by weight of combined sulfur and having about 1.7 to 3.5 average number of aromatic rings per mean aromatic molecule.

3,123,567
PREPARATION OF CARBON AND METAL OXIDE MATERIALS

Louis Ruelle and Maurice Noble, Grenoble, Isere, France, assignors to Pechiney, Compagnie de Produits Chimiques et Electrometallurgiques, Paris, France

Filed Jan. 23, 1961, Ser. No. 84,098
Claims priority, application France Jan. 22, 1960
8 Claims. (Cl. 252—188)



7. In a process for the continuous production of metal oxide-carbon composites in which the metal of the oxide is selected from a group consisting of aluminum, magnesium, beryllium, calcium, titanium and zirconium while employing a chamber having in series a decomposition zone and a combustion zone, means for continuously introducing metal oxide particles into said combustion zone, and means for continuously introducing hydrocarbon gases having from 1–4 carbon atoms into said decomposition zone, the steps comprising heating said metal oxide particles during passage through said combustion zone to a temperature in excess of 900° C., continuously passing said heated particles of metal oxide into said decomposition zone into contact with the hydrocarbon whereby the hydrocarbon disassociates into hydrogen, which is released as a gas, and carbon, which is retained by the metal oxide as a solid, continuously separating the released hydrogen, mixing the hydrocarbon with an oxygen-containing gas, and continuously burning the mixture in said combustion zone in the presence of metal oxide to preheat the metal oxide passing through said zone.

3,123,568
METHOD OF MAKING OPTICAL FILTERS

Joseph Mahler, Fiskdale, Mass., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts

Filed Mar. 20, 1961, Ser. No. 96,894
4 Claims. (Cl. 252—300)

1. A method for forming a plastic filter material comprising the steps of providing a solid plastic material having a dichromate salt dispersed therein, exposing the material to light for fixing the dichromate salt within the material, providing a solution embodying an organic substance selected from the group consisting of 2,5-diethoxyaniline, 2,5-dimethoxyaniline, aniline, o-toluidine, m-toluidine, and N-phenyl-p-phenylenediamine in a solvent adapted to permeate said plastic material, and immersing the plastic material in said solution for reacting the dichromate salt with said selected organic substance to form infra-red and ultra-violet-absorbing organic dye compounds in dispersed relation within the material.

3,123,569
ANIONIC BITUMINOUS EMULSIONS

Merton J. Borgfeldt, San Francisco, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed Mar. 1, 1961, Ser. No. 92,477
2 Claims. (Cl. 252—311.5)

1. An oil-in-water type anionic bituminous emulsion with improved adhesion property, comprising from about 30 to about 75% by weight of bitumen, as the dispersed phase, from about 0.2 to about 2.0% by weight of a water-soluble alkali metal salt of lignin amine product of reaction of lignin with an amine selected from the group of primary and secondary amines and with a carbonylic compound selected from the group of aldehydes and ketones, as the anion-active emulsifier, and water in an amount to make up 100% by weight, as the continuous phase, the pH of the emulsion being adjusted to a value from about 9.5 to about 10.5.

3,123,570
LUBRICATING OIL COMPOSITION OF IMPROVED LOW-TEMPERATURE DETERGENCY

Francis J. Bonner, Wilmington, Del., and Donald A. Reed, Gloucester, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York

No Drawing. Filed Dec. 22, 1960, Ser. No. 77,500
3 Claims. (Cl. 252—32.7)

1. A motor oil of improved low-temperature detergency characteristics comprising a major proportion of lubricating oil and (*a*) from about 0.5% to about 10.0%, by weight, of a barium salt of an oil-soluble sulfonic acid, (*b*) from about 0.5% to about 10% of a complex carbonated barium phenate salt of an alkylphenol sulfide, (*c*) from about 0.1% to about 5.0% of a zinc dialkyl dithiophosphate, and (*d*) from about 0.01% to about 1.0% of a compound of the formula:

$$\text{R-phenyl-O—}(CH_2CH_2O)_xCH_2CH_2OH$$

where R is an alkyl radical of from 4 to 12 carbon atoms and *x* is an integer of from 7 to 9, inclusive.

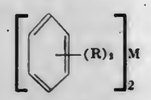
3,123,571
DI-ARENE METAL CATALYSTS

Darrell W. Walker and Edward L. Czenkusch, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Dec. 14, 1959, Ser. No. 859,159
7 Claims. (Cl. 252—430)

1. A moisture-free catalyst consisting essentially of a solid porous support selected from the group silica, alum-

ina, and silica-alumina having impregnated therein a compound having the structure



where M is a metal selected from the group consisting of chromium, vanadium, and molybdenum, and R is selected from the group consisting of hydrogen and alkyl radicals having 1 to 6 carbon atoms.

3,123,572

POLYMERIZATION CATALYST

Daniel F. Herman, Orange, N.J., and Robert C. Kollman, Rockville Centre, N.Y., assignors to National Lead Company, New York, N.Y., a corporation of New Jersey

No Drawing. Original application Dec. 16, 1957, Ser. No. 702,818, now Patent No. 3,078,262, dated Feb. 19, 1963. Divided and this application Mar. 1, 1960, Ser. No. 11,954

6 Claims. (Cl. 252—431)

1. A catalytically-active composition of matter comprising an amine, said amine being selected from the group consisting of pyridine and secondary aliphatic, aromatic and cycloaliphatic amines, and the reaction product prepared by admixing a transition metal salt and a Grignard reagent, said transition metal of said transition metal salt being selected from the group consisting of titanium and zirconium, said reaction product containing an organic moiety linked to said transition metal by a direct metal-to-carbon bond, and where said amine is present in amount between 0.05 and 2 gram-mols of amine for each gram-atom of said transition metal.

3,123,573

ISOMERIZATION CATALYST AND PROCESS

Norman L. Carr, Allison Park, Pa., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

No Drawing. Filed Dec. 3, 1959, Ser. No. 856,897

7 Claims. (Cl. 252—442)

1. A method of preparing a sulfur-resistant isomerization catalyst which comprises heating a silica-alumina hydrocarbon cracking catalyst, containing 70–90% silica, at a temperature of about 950°–1100° F. for about 1 to 20 hours in a stream of inert gas, impregnating the catalyst with a solution of a palladium compound in an amount sufficient to produce a palladium concentration of about 0.3–0.8% wt. and with a fluorine-containing compound reactable with the support in an amount sufficient to provide a 1–5% combined fluorine in the catalyst, and reducing the palladium-impregnated catalyst with hydrogen at 750°–975° F.

5. A sulfur-resistant hydroisomerization catalyst prepared in accordance with claim 1.

3,123,574

PALLADIUM SUPPORTED CATALYST MODIFIED BY VARIOUS METALS

Mykola Zajcew, Newark, N.J., assignor, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware

No Drawing. Filed Mar. 31, 1958, Ser. No. 724,823

5 Claims. (Cl. 252—447)

1. A catalyst, effective for the selective hydrogenation of the olefinic linkages of unsaturated fatty oils, consisting essentially of a solid support and deposited thereon palladium metal and a modifying material selected from the group consisting of mercuric chloride, bismuth subacetate and a mixture of bismuth subacetate and silver acetate, the palladium metal being present in the range of .001 to 10 percent by weight and the modifying material being present in the range of .0005 to 10 percent by weight, the percentages being of total catalyst weight.

3,123,575

PROCESS FOR THE PREPARATION OF A CLAY CRACKING CATALYST

William A. Stover, Ellicott City, and Warren S. Briggs, Silver Spring, Md., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed Aug. 29, 1961, Ser. No. 134,577

4 Claims. (Cl. 252—450)

What is claimed is:

1. A process for preparing cracking catalysts from clay which comprises:

(*a*) mixing a clay selected from the group consisting of a kaolin and halloysite with from 30 to 80 percent, by weight of the clay, of a sodium compound, capable of decomposing on heating to release sodium ions for reaction with the clay to form a sodium-alumina-silica complex, selected from the group consisting of sodium carbonate, sodium hydroxide, sodium sulfite, and sodium acid sulfite,

(*b*) calcining the sodium-alumina-silica complex at a temperature of about 800 to 1400° F. for about 1 to 4 hours,

(*c*) adding from 45 to 130 weight percent, based on the dry clay, of a strong mineral acid to the complex to give an acid concentration of from 3 to 15 weight percent, thereby dissolving a portion of the alumina present in the clay,

(*d*) adding sodium silicate to said complex in a quantity sufficient to provide about 10 to 50 percent by weight of silica in the complex,

(*e*) reprecipitating the solubilized alumina with ammonia,

(*f*) filtering and drying the resulting slurry,

(*g*) removing sodium from the dried complex by base exchange with a 3% by weight solution of ammonium sulfate containing 1% by weight of ammonium hydroxide, and

(*h*) subsequently washing, redrying, and recovering the catalyst product.

3,123,576

RARE EARTH SHIELD

Nathan Klein, Baltimore, Md., assignor to the United States of America as represented by the Secretary of the Army

No Drawing. Filed Oct. 5, 1962, Ser. No. 228,770

4 Claims. (Cl. 252—478)

(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A paint composition having a relatively high capacity for absorbing thermal neutron radiation consisting of:

(*a*) a drying oil;

(*b*) a mixture of pigment materials in which a minor proportion consists of a member of the group comprising gadolinium oxide, samarium oxide and europium oxide.

3,123,577

METHOD OF LIQUEFYING CELLULAR POLYURETHANE PLASTICS

Herbert L. Heiss, Cider Run, New Martinsville, W. Va., assignor to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Nov. 14, 1960, Ser. No. 68,644

3 Claims. (Cl. 260—2.3)

1. The method of mechanically reducing a flexible cellular polyether polyurethane plastic which comprises passing said cellular polyether polyurethane through a roller mill having only two rolls rotating together at different speeds, the space between the rollers being between about 0.005 and about 0.025 inch.

3,123,578

ALDEHYDE-MODIFIED ALKYD RESINS AND THEIR PRODUCTION

William M. Kraft, Verona, N.J., assignor to Heyden Newport Chemical Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 3, 1959, Ser. No. 856,933

26 Claims. (Cl. 260—22)

1. An alkyd resin which is the polymeric product of the reaction of a polyhydric alcohol selected from the group consisting of pentaerythritol, dipentaerythritol, tripentaerythritol, trimethylolethane, trimethylolpropane, and mixtures thereof; an aldehyde selected from the group consisting of saturated aliphatic aldehydes containing from 1 to 12 carbon atoms, ethylenically unsaturated aliphatic aldehydes containing from 1 to 12 carbon atoms, aromatic aldehydes, aralkyl aldehydes, and alkaryl aldehydes; a polycarboxylic compound selected from the group consisting of saturated aliphatic polycarboxylic acids and saturated aliphatic polycarboxylic acid anhydrides, ethylenically unsaturated aliphatic polycarboxylic acids and ethylenically unsaturated aliphatic polycarboxylic acid anhydrides, aromatic polycarboxylic acids and aromatic polycarboxylic acid anhydrides, and mixtures thereof; and a monocarboxylic acid selected from the group consisting of fatty acids containing from 4 to 22 carbon atoms, benzoic acid, chlorobenzoic acid, salicylic acid, alkylbenzoic acids wherein the alkyl group contains from 1 to 4 carbon atoms, and mixtures thereof in the amounts of 0.3 mole of 0.8 mole of aldehyde, 0.6 mole to 1.3 moles of said polycarboxylic compound, 0.2 mole to 1.5 moles of said monocarboxylic acid per mole of polyhydric alcohol, and 1% to 50% more polyhydric alcohol than the amount required to react with the acids and the aldehyde.

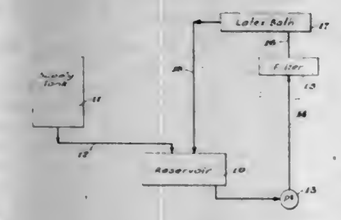
3,123,579

LATEX RECYCLING PROCESS

Lloyd E. Lefevre, Bay City, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed May 5, 1960, Ser. No. 27,200

5 Claims. (Cl. 260—29.6)



1. A process for providing a liquid bath of an aqueous latex-like dispersion of an organic, polymeric material so that the surface of said bath is continuously renewed, said process comprising the continuous metering of said aqueous latex-like dispersion from an inventory of said dispersion through a surge and settling chamber then in continuous non-turbulent planar flow into the bottommost portion of a bath of said dispersion at a rate in excess of that at which said dispersion is removed from said bath by the fabricating technique employed, causing the unused excess of said dispersion to be removed from the surface of said bath in essentially planar flow, the rate at which the introduced latex is fed into said bath being essentially constant and also being equal to the total amount of latex removed therefrom.

3,123,580

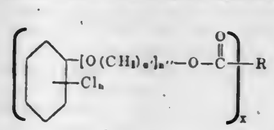
AROMATIC ESTERS OF CHLOROBENZENE-GLYCOL CONDENSATION PRODUCT AND POLYMER PLASTICIZED THEREWITH

James H. Dunn and Paul E. Weimer, Baton Rouge, La., assignors to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed June 14, 1960, Ser. No. 35,908

5 Claims. (Cl. 260—31.4)

2. A polymeric composition comprising a polymer selected from the group consisting of polyvinyl chloride, polyvinylidene chloride and polystyrene and a chlorophenoxyalkoxy compound having the general formula:



wherein n is an integer from about 1 through 5; n' is an integer from 2–3; n'' is an integer from 3 through about 10; x is 1–2; and R is an aromatic hydrocarbon radical containing about 12 carbon atoms, said chlorophenoxyalkoxy compound being present in a concentration of from about 1 through 100 parts per 100 parts of said polymer.

3,123,581

PROCESSING ISOOLEFIN-DIOLEFIN RUBBERY COPOLYMERS WITH KAOLIN CLAYS

Stanley R. Shuart, Colonia, and Albert M. Gessler and Roger S. Hawley, Cranford, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed May 31, 1957, Ser. No. 662,588

5 Claims. (Cl. 260—41.5)

1. A process for improving the properties of compounded isoolefin-multiolefin butyl rubber copolymer-containing compositions which comprises compounding about 100 parts by weight of said copolymer with about 15 to 150 parts by weight of a carbon black and about 1 to 200 parts by weight of hard, uncalcined, kaolin clay and heating the mixture formed at a temperature level of between about 250° and 400° F. for a time sufficient to decrease the Mooney viscosity at 212° F. by about 5 to 50 units.

3,123,582

LIQUID COATING COMPOSITION AND METAL SUBSTRATE COATED THEREWITH

Joseph J. Tryzna, Chicago, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

No Drawing. Filed Oct. 24, 1960, Ser. No. 64,284

7 Claims. (Cl. 260—43)

1. A liquid coating composition comprising a solution in a volatile organic solvent of a glycidyl ether of a polyhydric phenol, a hydroxy-polycarboxylic acid compound selected from the group consisting of citric, tartaric and malic acids and anhydrides thereof in equivalent weight in the amount of 0.1 to 12.5 percent by weight of the glycidyl ether, an alkyl titanate selected from the group consisting of tetrabutyl and 2-ethylhexyl titanates in the amount of 0.01 to 7.5 percent by weight of the glycidyl ether, a hydroxyl-containing resin selected from the group consisting of phenol-aldehyde and urea-aldehyde resins in the amount of 11 to 25 percent by weight of the glycidyl ether, and a phosphoric acid compound in the amount (computed as ortho-phosphoric acid) of 0.1 to 5 percent by weight of the glycidyl ether.

3,123,583

MIXING PROCEDURE FOR COMPOSITIONS OF POLYMERS OF 1-OLEFINS AND NATURAL OR SYNTHETIC RUBBER

William S. Howard, Borger, and William T. Cooper, Phillips, Tex., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed July 2, 1956, Ser. No. 595,114
6 Claims. (Cl. 260—45.5)

1. A method of preparing a vulcanized blend of (1) polyethylene having a density in the range of 0.94 to 0.96 and (2) a rubbery polymer selected from the group consisting of homopolymers of conjugated dienes containing 4 to 8 carbon atoms and copolymers of conjugated dienes containing 4 to 8 carbon atoms with a monomer selected from the group consisting of styrene, alpha-methylstyrene, methyl acrylate, methyl methacrylate, ethyl acrylate, ethyl methacrylate and 2-vinylpyridine comprising blending said polyethylene with said rubbery polymer at a temperature above the softening point of said polyethylene and, subsequently and as the final milling operation, milling said blend at a temperature substantially below the softening point of said polyethylene until a homogeneous compoistion results, compounding ingredients being added during at least one of said blending and milling operations and vulcanizing said blend.

3,123,584

BLEND OF A COPOLYMER OF ALPHA-METHYLSTYRENE AND ACRYLONITRILE AND A COPOLYMER OF BUTADIENE, ACRYLONITRILE, AND STYRENE OR ALPHA-METHYLSTYRENE AND INJECTION MOULDED ARTICLES THEREOF

André Fournet and André Rio, Lyons, France, assignors to Societe des Usines Chimiques Rhone-Poulenc, Paris, France, a body corporate of France

No Drawing. Filed Feb. 4, 1960, Ser. No. 6,610
Claims priority, application France Feb. 19, 1959
2 Claims. (Cl. 260—45.5)

1. A shock-resistant thermoplastic composition consisting of a mixture of (I) 85 to 70 parts by weight of a rigid copolymer of 90–70 parts by weight of alpha-methylstyrene and 10 to 30 parts by weight of acrylonitrile, and (II) 15 to 30 parts by weight of a ternary elastic copolymer of 50–80 parts by weight of butadiene, 4 to 30 parts by weight of acrylonitrile and 8 to 40 parts by weight of a substance selected from the class consisting of styrene and α-methylstyrene.

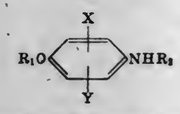
3,123,585

N-CYCLOALKYL OXYANILINES

Bertrand Ernest Wilde, deceased, late of Pentre, Wrexham, Wales, by Marion Ilse Hedwig Bethell, administratrix, Bromborough, England, assignor to Monsanto Chemicals Limited, London, England, a British company

No Drawing. Filed May 23, 1962, Ser. No. 197,201
Claims priority, application Great Britain Feb. 17, 1958
17 Claims. (Cl. 260—45.9)

1. Sulfur vulcanizable diene rubber in which there is incorporated a small amount within the range of 0.1 to 5 parts by weight per 100 parts by weight of rubber, sufficient to inhibit degradation, of an antidegradant of the structure



where R_1 is a member of a group consisting of benzyl and an alkyl group containing at least 8 carbon atoms but not more than 26, R_2 is selected from the group consisting of cyclohexyl and cyclopentyl and X and Y are members of a group consisting of hydrogen and lower alkyl of 1 to 3 carbon atoms.

3,123,586

GLYCIDYL ETHERS OF MONONUCLEAR POLYHYDRIC PHENOL-KETONE CONDENSATION PRODUCTS AND PROCESS OF MAKING SAME

John B. Rust and Charles L. Segal, Los Angeles, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

No Drawing. Filed May 3, 1960, Ser. No. 26,434
17 Claims. (Cl. 260—50)

1. A glycidyl ether prepared by reacting a mononuclear polyhydric phenol selected from the group consisting of dihydric phenols and trihydric phenols and a ketone selected from the group consisting of aliphatic ketones and alicyclic ketones by heating the phenolketone reaction mixture substantially free of water and consisting essentially of about 1 mole of the phenol and about 1 to about 8 moles of the ketone at about 100° C. under reflux to produce a resinous copolymerization product having a molecular weight of at least about 1200, and heating the resulting resinous copolymerization product in admixture with epichlorohydrin to produce the glycidyl ether.

3,123,587

POLYESTER WASH-WEAR FABRIC

Milton J. Hogsed, Kinston, N.C., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Feb. 7, 1961, Ser. No. 87,523
5 Claims. (Cl. 260—75)

1. A fabric comprised of fibers of a polymeric synthetic linear fiber-forming condensation copolyester of (1) a naphthalenedicarboxylic acid; (2) a glycol selected from the class consisting of ethylene glycol, p-hexahydroxylylene glycol, and their ester-forming derivatives; and (3) from 1% to 5% thereof of a compound having the formula X_nRSO_3M in which X is a group selected from the class consisting of carboxyl, hydroxyl and ester-forming derivatives thereof; n is an integer from 1 to 2; R is a group selected from the class consisting of hydrocarbons, halogen substituted hydrocarbons and chalkogen substituted hydrocarbons; said hydrocarbon group being free from aliphatic unsaturation; and M is a metal.

3,123,588

COLOR STABLE ACRYLONITRILE POLYMERS

Thomas W. Lunney, Camden, S.C., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Aug. 29, 1958, Ser. No. 757,915
4 Claims. (Cl. 260—79.3)

1. A white linear polymer of monomeric material containing at least 85% acrylonitrile having attached to the polymer ionizable groups consisting of $—SO_3M$ and $—OSO_3M$ in which M represents elements from the group consisting of H and the alkali metals; said ionizable groups being present on said polymer in an amount equal to at least about 30 milliequivalents per kilogram of polymer and from .01 to 3 milliequivalents per kilogram of polymer of the said ionizable groups being $—OSO_3H$ and $—SO_3H$.

3,123,589

POLYMERIZATION OF STYRENE SULFONIC ACID AND SALTS THEREOF

William N. Vanderkooi and Richard A. Mock, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Sept. 9, 1960, Ser. No. 54,834
5 Claims. (Cl. 260—79.3)

1. A polymerization process which consists essentially of the steps of contacting a dry, ar-sulfonated styrene monomer selected from the group of styrene sulfonic acids and the alkali metal salts thereof with gaseous oxygen for a period of time sufficient to provide a partially oxygenated composition of which an average sample, in the absence of free oxygen, exhibits a polarogram having a wave amplitude of at least 0.01 microampere at a half-wave potential of —0.2 volt per gram of the partially oxygenated ar-sulfonated styrene in 50 milliliters of supporting electrolyte, dissolving a sufficient quantity of the partially oxygenated ar-sulfonated styrene in water to produce a solution containing from about 5 to about 35 percent by weight of said sulfonated styrene, removing free oxygen from the aqueous solution thus prepared and maintaining the aqueous solution at a pH less than about 10 in an oxygen-free environment for a period of time sufficient to achieve a desired conversion of the ar-sulfonated styrene monomer into a polymeric material.

3,123,590

TITANOUS ION AS A REDUCTANT IN EMULSION POLYMERIZATION SYSTEMS

Carl A. Uraneck and Ollie G. Buck, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed June 27, 1957, Ser. No. 668,331
17 Claims. (Cl. 260—84.1)

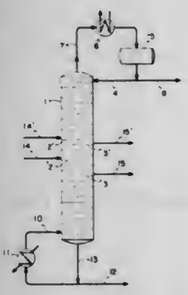
1. A process for producing a synthetic rubber, which comprises polymerizing a monomeric material comprising a major amount of a conjugated diene having not more than eight carbon atoms per molecule in an aqueous medium in the presence of a catalyst composition consisting essentially of an organic hydroperoxide having from six to thirty, inclusive, carbon atoms per molecule and an activator consisting essentially of an inorganic trivalent salt of titanium, said salt being at least partially water soluble, and a complexing agent selected from the group consisting of sodium pyrophosphate, potassium pyrophosphate, ethylenediamine tetraacetic acid, and alkali metal and ammonia salts thereof, N-hydroxyethylethylenediamine triacetic acid, tartaric acid, citric acid, trisodium phosphate, potassium fluoride, potassium oxalate, and polyoxyethylene sorbitan monooleate.

3,123,591

FRACTIONATION OF POLYMERIZATION DILUENT CONTAINING ACETYLACETONE

James F. Ross, Baton Rouge, La., assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed June 15, 1959, Ser. No. 820,485
5 Claims. (Cl. 260—93.7)



1. In a process for polymerizing a C_2–C_6 alpha olefin in the presence of a catalyst containing a partially reduced, heavy, transition metal halide and an aluminum alkyl compound in a xylene diluent, wherein a C_1 to C_3 alkanol is added to the reaction system to precipitate polymer product, and acetylacetone is also added to remove catalyst residues from the polymer followed by the separation of the resultant alkanolxylene-acetylacetone mixture therefrom the improved method of purifying this mixture, in which the alkanol, xylene and acetylacetone are present respectively in amounts of from 30 to 70 wt. percent, 70 to 30 wt. percent, and 50 to 500 p.p.m. by weight which comprises feeding the mixture in the vapor form into a fractionation tower at a point intermediate the ends, fractionating the mixture to withdraw a liquid acetylacetone-rich xylene sidestream from the tower at the point of substantially greatest acetylacetone concentration and below the entry of the vapor feed, taking overhead a substantially acetylacetone-free alkanol, removing a substantially acetylacetone-free xylene bottoms and utilizing the acetylacetone rich sidestream to further remove catalyst residues from the polymer.

3,123,592

PROCESS FOR POLYMERIZING ISOBUTYLENE TO POLYISOBUTYLENE

Francesco Gasparoni and Carlo Longiave, Novara, Italy, assignors to Montecatini, Societa Generale per l'Industria Mineraria e Chimica, Milan, Italy, a corporation of Italy

No Drawing. Filed June 22, 1961, Ser. No. 118,785
Claims priority, application Italy June 24, 1960
3 Claims. (Cl. 260—94.8)

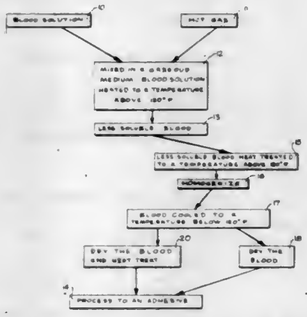
1. The process of polymerizing isobutylene in the liquid phase which comprises using a catalyst consisting of diethylaluminum monochloride and using, as a reaction medium, a solvent selected from the group consisting of ethylchloride, ethyliodide, ethylbromide, chlorobenzene, bromobenzene and iodobenzene, said solvent being a liquid under polymerization conditions and being inert to said diethylaluminum monochloride catalyst.

3,123,593

METHOD OF REDUCING THE WATER SOLUBILITY OF BLOOD SOLIDS FOR ADHESIVE USE BY STEAM TREATMENT

John H. Allan, Hillsborough, Calif., and Gerald W. Lee, Seattle, Wash., assignors, by mesne assignments, to Pacific Resins & Chemicals, Inc., Seattle, Wash., a corporation of Washington

Filed Sept. 25, 1959, Ser. No. 842,399
3 Claims. (Cl. 260—112)



1. A method of reducing the water solubility of water soluble blood solids so that 50–95% of the total blood solids are insoluble in water to adapt said blood solids of reduced water solubility for adhesive use, comprising the step of atomizing a stream of an aqueous solution of water soluble blood solids with a blast of steam to thereby instantly elevate the temperature of said solution into the range of from 120–220° F. and maintaining said elevated temperature for a period of at least about 10 seconds, said atomization and elevated temperature treatment reducing the water solubility of said blood solids.

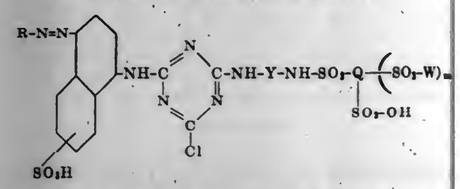
3,123,594

AZOPHTHALOCYANINE DYESTUFFS CONTAINING A TRIAZINE RADICAL

Eugen Johann Koller and Raymond Gunst, Binningen, Switzerland, assignors to Ciba Corporation, a corporation of Delaware

No Drawing. Filed July 14, 1960, Ser. No. 42,762
Claims priority, application Switzerland July 16, 1959
5 Claims. (Cl. 260—146)

1. A water-soluble dyestuff of the formula



wherein R is a radical selected from the group consisting of the radicals of benzene monosulfonic acid, benzene disulfonic acid, naphthalene monosulfonic acid, naphthalene disulfonic acid and naphthalene trisulfonic acid, *m* is a whole number up to 2, Y is a member selected from the group consisting of lower alkylene, the phenylene and the sulfophenylene radicals, W is a member of the group consisting of the hydroxy and amino groups, and Q is the copper phthalocyanine radical bearing the $-SO_2-$ groupings each in one of the 3, 3', 3'', 3''', 4, 4', 4'', and 4''' positions.

3,123,595

REACTIVE DYESTUFFS

Hugo Brugger and Hermann Burkhard, Basel, Switzerland, assignors to Sandoz Ltd. (also known as Sandoz A.G.), Basel, Switzerland

No Drawing. Filed Apr. 12, 1960, Ser. No. 21,620
Claims priority, application Switzerland Apr. 17, 1959
11 Claims. (Cl. 260—151)

1. Water-soluble reactive dyestuff consisting essentially of

(1) a dyestuff grouping selected from the class consisting of

(*a*) unmetallized monoazo dyestuff grouping selected from the class consisting of

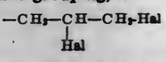
(i) benzene-azo-benzene groupings,
(ii) benzene-azo-naphthalene groupings,
(i.i) benzene-azo-5-pyrazolone groupings, and
(iv) naphthalene-azo-naphthalene groupings;

(*b*) chromium, copper, cobalt and nickel complexes of (a);

(*c*) 1-amino-2-sulfo-4-phenylamino-anthraquinone groupings; and

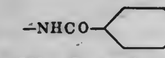
(*d*) copper phthalocyanine sulfonic acid groupings;

(2) as sole reactive grouping, a



grouping, wherein Hal has an atomic number from 17 to 35 inclusive; and

(3) a divalent bridge grouping connected by one of its valences to a nuclear carbon atom of the dyestuff grouping (1) and by its other valence to the terminal $-CH_2$ of the reactive grouping (2), said bridge grouping being selected from the class consisting of $-SO_2NH-$, $-CONH-$, $-CON(CH_3)-$, $-SO_2N(CH_3)$,



—NHCO—CH_2—S— and —NHCO—CH_2—O—

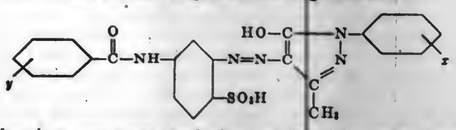
3,123,596

AZO-PYRAZOLONE DYES

Robert W. Eltonhead, Reading, Pa., assignor to Crompton & Knowles Corporation, Worcester, Mass., a corporation of Massachusetts

No Drawing. Filed Feb. 5, 1963, Ser. No. 256,266
7 Claims. (Cl. 260—162)

1. A compound having the following structure:



wherein *y* represents a substituent selected from the group consisting of —H and $—NO_2$ and where *x* represents a substituent selected from the group consisting of —H and —Cl.

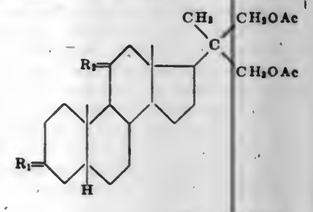
3,123,597

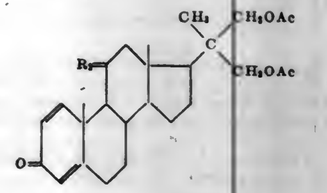
20-BIS-(HYDROXYMETHYL)-11-OXYGENATED-PREGNANES AND DERIVATIVES THEREOF

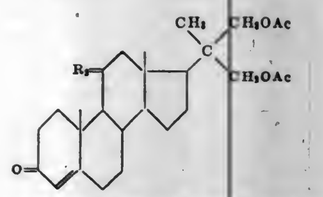
Daniel Bertin, Montrouge, Seine, Hubert Fritel, Paris, Georges Muller, Nogent-sur-Marne, Jean Mathieu, Montfermeil, Robert Joly, Montmorency, and Jean Jolly, Fontenay-sous-Bois, France, assignors to Roussel-UCLAF, Paris, France, a corporation of France

No Drawing. Filed Mar. 26, 1962, Ser. No. 182,679
Claims priority, application France July 8, 1959
32 Claims. (Cl. 260—239.5)

1. A compound selected from the group consisting of

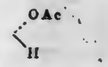






and

wherein R_1 is selected from the group consisting of =O and



R_2 is selected from the group consisting of =O and



and AC is selected from the group consisting of hydrogen, acyl radical of an organic carboxylic acid having 1 to 18 carbon atoms and an anion of a mineral acid.

18. The pyridine salt of 3α-sulfato-20-bis-(nitratomethyl)-5β-pregnane-11-one.

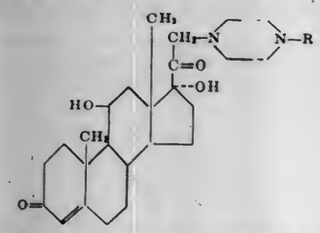
3,123,598

21-PIPERAZINE DERIVATIVES OF HYDROCORTISONE AND PREDNISOLONE

Zoltán Tuba and László Szporny, Budapest, and József Tóth, Szeged, Hungary, assignors to Richter Gedeon Vegyészeti Gyár RT., Budapest, Hungary, a firm

No Drawing. Filed July 31, 1962, Ser. No. 213,620
Claims priority, application Hungary Aug. 23, 1961
3 Claims. (Cl. 260—239.5)

1. A steroid compound selected from the class consisting of



and their Δ^1-dehydro derivatives wherein R is a member selected from the group consisting of lower alkyl and lower hydroxy alkyl, and the nontoxic addition salts thereof.

3,123,599

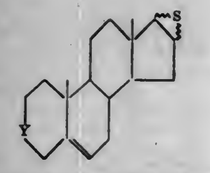
16,17-EPITHIOSTEROID

Taichiro Komeno, Sumiyoshi-ku, Osaka-shi, Japan, assignor to Shionogi & Co., Ltd., Osaka, Japan

No Drawing. Filed Aug. 10, 1962, Ser. No. 216,057
Claims priority, application Japan Aug. 30, 1961
19 Claims. (Cl. 260—239.5)

1. A member selected from the group consisting of compounds of the formulae

and



wherein X is a member selected from the group consisting of α-hydroxymethylene, β-hydroxymethylene, α-lower alkanoyloxy-methylene, β-lower alkanoyloxymethylene, carbonyl and lower alkylenedioxymethylene, X being lower alkylenedioxymethylene only when ring A is saturated, and Y is a member selected from the group consisting of α-hydroxymethylene, β-hydroxymethylene, α-lower alkanoyloxymethylene, β-lower alkanoyloxymethylene, and lower alkylenedioxymethylene.

3,123,600

PREPARATION OF 6α,16α-DIMETHYL-17α-HYDROXYPROGESTERONE

Robert P. Graber, Minneapolis, Minn., and Martin B. Meyers, Belfast, Northern Ireland, assignors to General Mills, Inc., a corporation of Delaware

No Drawing. Filed July 6, 1961, Ser. No. 122,092
13 Claims. (Cl. 260—239.55)

1. In a process of preparing 6,16α-dialkyl-17-oxygenated progesterone compounds in which each alkyl group has from 1 to 8 carbon atoms, the sequence of steps comprising

(A) reducing a 5α,6α-oxido-16α-alkypregnan-3β,17α-diol-20-one in which the alkyl group has from 1 to 8 carbon atoms with an alkali metal borohydride to provide a mixture of the 20α and 20β-epimers of 5α,6α-oxido-16α-alkylpregnan-3β,17α,20-triol,

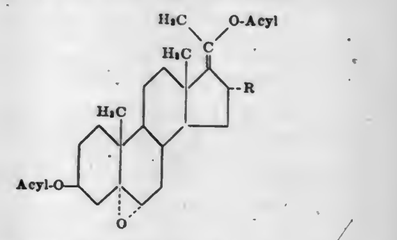
(B) separating said 20β-epimer from said 20α-epimer,

(C) alkylating said 20β-epimer with an alkyl magnesium halide in which the alkyl group has from 1 to 8 carbon atoms,

(D) microbiologically oxidizing the product of (C) by fermentation with the microorganism *Flavobacterium dehydrogenans* var. *hydrolyticum*, and

(E) dehydrating the product of (D) to provide 6α,16α-dialkyl-17α-hydroxyprogesterone.

6. A steroid compound selected from the group consisting of the cis and trans forms of



where R is an alkyl group having from 1 to 8 carbon atoms.

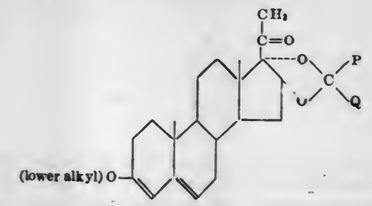
3,123,601

ACETAL AND KETAL DERIVATIVES OF 3-(LOWER ALKOXY)-$\Delta^{3,5}$-PREGNADIENE - 16α,17α - DIOL-20-ONE

Patrick Diassi, Westfield, N.J., assignor to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Nov. 17, 1961, Ser. No. 153,204
3 Claims. (Cl. 260—239.55)

1. Compounds of the formula:



wherein P and Q are individually selected from the group consisting of hydrogen, lower alkyl, halogenated lower

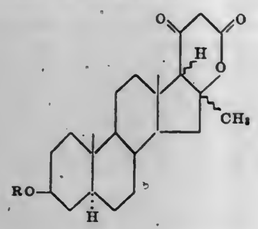
alkyl, monocyclic cycloalkyl, monocyclic aryl, monocyclic aryl lower alkyl, monocyclic heterocyclic, and together with the carbon atom to which P and Q are joined cycloalkyl and monocyclic heterocyclic.

3,123,602
PROCESS FOR THE PREPARATION OF 3β-OXY-20-OXO-16β-METHYLPREGNANES AND INTERMEDIATES PRODUCED THEREIN

Kikuo Igarashi, Osaka, Japan, assignor to Shionogi & Co., Ltd., Osaka, Japan

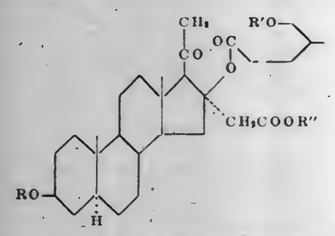
No Drawing. Filed Nov. 21, 1962, Ser. No. 239,359
Claims priority, application Great Britain Oct. 15, 1962
5 Claims. (Cl. 260—239.57)

1. A compound of the formula:

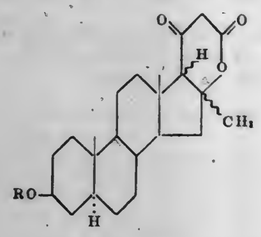


wherein R is a member selected from the group consisting of hydrogen and lower alkanoyl and the ripple mark (≀) represents an undetermined configuration.

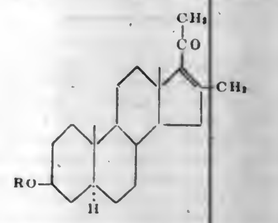
3. Process for preparing steroid which comprises heating a compound of the formula:



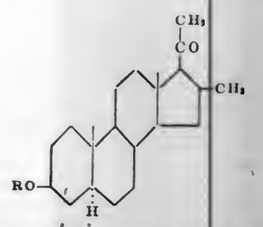
wherein each of R and R' is a member selected from the group consisting of hydrogen and lower alkanoyl and R'' is a member selected from the group consisting of hydrogen and lower alkyl in an anhydrous medium containing an alkaline substance selected from the group consisting of alkali metal hydroxide, alkali metal alkoxide, alkali metal bicarbonate and alkali metal acetate, isolating from the acid fraction of the reaction mixture a compound of the formula:



wherein R is a member selected from the group consisting of hydrogen and lower alkanoyl and the ripple mark (≀) represents an undetermined configuration, heating the isolated compound with a member selected from the group consisting of sulfuric acid, hydrochloric acid and acetic acid in a water-miscible organic solvent, and reducing with catalytic hydrogen the resulting compound of the formula:



wherein R is a member selected from the group consisting of hydrogen and lower alkanoyl, to the compound of the formula:



wherein R is a member selected from the group consisting of hydrogen and lower alkanoyl, and recovering the latter compound.

3,123,603
PRODUCT OF DIURETIC ACTIVITY AND PROCESS TO PREPARE SAME

Zoltán Földi, Dorottya Heidt, nee Lányi, and Rezsö König, all of Budapest, Hungary, assignors to Chinoin Gyogyszer-es Vegyeszeti Termekek Gyara RT., Budapest, Hungary, a firm

No Drawing. Filed June 28, 1960, Ser. No. 39,405
Claims priority, application Hungary Oct. 1, 1959
3 Claims. (Cl. 260—243)

2. A compound of diuretic activity corresponding to the formula $C_{10}H_{14}N_5ClS_2O_4$ melting at about 227–230° C. with decomposition into a yellowish foam, exhibiting an intense red coloration with resorcinol wetted with concentrated sulphuric acid, obtained by refluxing one molecule of 5-chloro-2,4-disulphamyl-aniline with an amount of 0.5-2 molecules of hexamethylenetetramine in water as diluent.

3,123,604
HYDROXY POLYAMINES

Edgar R. Rogier, Hopkins, Minn., assignor to General Mills, Inc., a corporation of Delaware

No Drawing. Filed Nov. 16, 1959, Ser. No. 852,937
19 Claims. (Cl. 260—247.5)

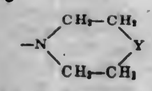
1. A hydroxy polyamine having the formula RCH_2NH_2 in which R is an aliphatic hydrocarbon group containing from 16–22 carbon atoms and has attached to at least one of said carbon atoms an OH group and having adjacent to the OH substituted carbon atom, a carbon atom having attached thereto a



group where R_1 and R_2 are members selected from the class consisting of (1) hydrogen, (2) alkyl, (3) aryl, (4) hydroxy alkyl, and (5) where



is a heterocyclic ring



where Y is selected from the group consisting of oxygen, nitrogen, and sulfur.

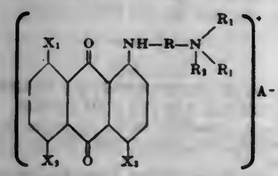
10. 9-morpholino-10-hydroxystearylamine.

3,123,605
BASIC ANTHRAQUINONE DYESTUFFS

Melvin N. Turetzky, East Brunswick, and Leon Katz, Springfield, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 8, 1960, Ser. No. 1,181
6 Claims. (Cl. 260—247.5)

1. Anthraquinone quaternary amines of the formula



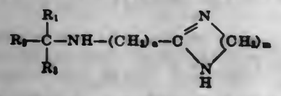
wherein X_1 is selected from the group consisting of hydrogen, hydroxyl, chloro, and nitro; X_2 is selected from the group consisting of hydrogen, hydroxyl, chloro, nitro, amino, and benzamido; X_3 is selected from the group consisting of hydrogen, hydroxyl, chloro, amino, and methylamino; R is alkylene having from 2 to 6 carbon atoms; each R_1 is alkyl having from 1 to 2 carbon atoms, and wherein both R_1 substituents, when taken together with the nitrogen atom to which they are attached, form the morpholinyl radical; R_2 is lower alkyl; and A^- is an anion.

3,123,606
2-(t-ALKYLAMINOALKYL)-IMIDAZOLINES AND TETRAHYDROPYRIMIDINES

Robert W. Fleming, Ann Arbor, Mich., assignor to Parke, Davis & Company, Detroit, Mich., a corporation of Michigan

No Drawing. Filed Oct. 9, 1961, Ser. No. 143,595
8 Claims. (Cl. 260—256.4)

1. A compound of the class consisting of a free base and its acid addition salts, said free base of the formula



where R_1, R_2 and R_3 individually represent a member of the class consisting of methyl and ethyl, *m* is a whole number of 2 to 3 and *n* is a whole number of 3 to 6.

3,123,607
RECOVERY OF DIAZABICYCLO-OCTANE

Adalbert Farkas, Media, and Merwin D. Oakes, Green Ridge, Pa., assignors to Air Products and Chemicals, Inc., a corporation of Delaware

No Drawing. Filed May 9, 1958, Ser. No. 734,094
2 Claims. (Cl. 260—268)

1. The method for the separation and purification of 1,4-diazabicyclo-(2.2.2)-octane, prepared by passing alkylene-polyamine having 2 to 10 carbon atoms in vapor phase over a solid acidic cracking catalyst at a temperature in the range of about 300 to 500° C., from nitrogenous by-products of the same reaction which consists essentially of: distilling the mixture obtained from said reaction; recovering the overhead fraction boiling up to about 130° C.; adding 30 to 100% by weight of an alkyl aromatic hydrocarbon boiling in the range from about 135° C. to about 180° C.; continuing the distillation; separating and recovering the fraction boiling in the range of 165 to 195° C.; cooling said fraction boiling in the range of 165 to 195° C. to between 0 to 40° C. to thereby selectively crystallize 1,4-diazabicyclo-(2.2.2)-octane present in said fraction; washing the crystals of 1,4-diazabicyclo-(2.2.2)-octane with pentane and thereafter recovering purified 1,4-diazabicyclo-(2.2.2)-octane.

3,123,608
PROCESS FOR CHLORINATION OF SIDE CHAINS OF 2-METHYL PYRIDINES AND 2-METHYL QUINOLINES

Wilhelm Mathes and Hans Schüly, Ludwigshafen (Rhine), Germany, assignors to Dr. F. Raschig G.m.b.H., Chemische Fabrik, Ludwigshafen (Rhine), Germany

No Drawing. Filed Nov. 8, 1961, Ser. No. 150,885
Claims priority, application Germany Nov. 12, 1960
5 Claims. (Cl. 260—283)

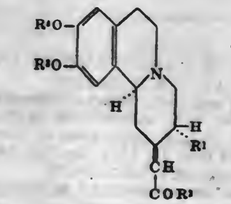
1. A process for the chlorination of a methyl group in 2-position in a compound selected from the group consisting of methyl homologues of pyridine and methyl homologues of quinoline carrying a methyl group in 2 position which comprises reacting such compound with elemental chlorine in an inert solvent in contact with an inorganic hydrogen chloride binding agent at a temperature between 40 and 80° C. until all of such starting compound is chlorinated.

3,123,609
BENZO(a)QUINOLIZINE DERIVATIVES AND METHOD FOR MAKING THEM

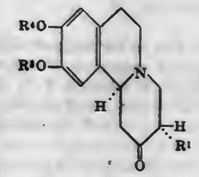
Harry Tacon Openshaw and Norman Whittaker, London, England, assignors to Burroughs Wellcome & Co. (U.S.A.), Inc., Tuckahoe, N.Y., a corporation of New York

Filed Nov. 22, 1960, Ser. No. 71,046
Claims priority, application Great Britain Nov. 24, 1959
8 Claims. (Cl. 260—287)

1. A method for the preparation of compounds of the formula

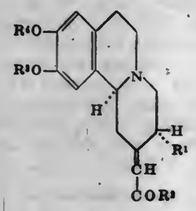


wherein R^1 is an alkyl group having from 1 to 4 carbon atoms, R^2 is selected from the class consisting of hydroxy and lower alkoxy groups and R^3 and R^4 are selected from the class consisting of the methyl and ethyl groups and together form a methylene group which comprises reacting at an elevated temperature a compound of the formula



with a lower alkoxycarbonylmethylene triarylphosphorane and recovering the product.

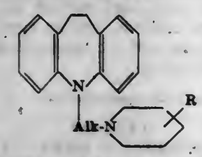
3. A compound of the formula



wherein R^1 is an alkyl group having from 1 to 4 carbon atoms, R^2 is selected from the class consisting of hydroxy and lower alkoxy groups and R^3 and R^4 are selected from the class consisting of the methyl and ethyl groups and together form a methylene group.

3,123,610
N-(ALKANOYLPIPERIDINOALKYL)-10,11-DIHYDRO-5H-DIBENZ[b,f]AZEPINES
John W. Cusic, Skokie, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed Dec. 14, 1959, Ser. No. 859,123
2 Claims. (Cl. 260—294.7)

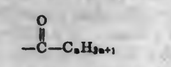
1. A compound of the formula



wherein Alk represents an alkylene radical of the formula

$$-C_mH_{2m}-$$

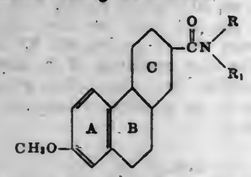
in which *m* represents a positive integer less than 8 and R represents an alkanoyl radical of the formula



wherein *n* represents a positive integer less than 9.

3,123,611
PHENANTHRENE CARBOXAMIDES AND DERIVATIVES THEREOF
Moses Wolf Goldberg and Lester Mischa Jampolsky, both of Upper Montclair, N.J., assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey
No Drawing. Filed Dec. 18, 1961, Ser. No. 160,289
11 Claims. (Cl. 260—294.7)

1. A 2-substituted-7-methoxy-1,2,3,4,4a,9,10,10a-octahydrophenanthrene having the formula

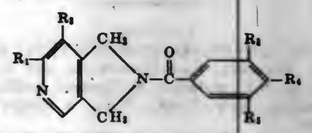


wherein R and R_1 can be the same or different and are selected from the group consisting of hydrogen, lower alkyl; the group $—CH_2CH_2Y$ wherein Y is selected from the group consisting of hydroxy and dilower alkylamino, and when taken together form with the nitrogen atom, a saturated 5 to 8 membered heterocyclic ring having the nitrogen atom as the only hetero atom present.

9. A compound according to claim 1 wherein R and R_1, taken together with the nitrogen atom, are piperidino.

3,123,612
2-ACYLATED 2,3-DIHYDRO-1H-PYRROLO-[3,4-c]PYRIDINES
Shreekrishna M. Gadekar, Valley Cottage, and James R. Vaughan, Jr., New City, N.Y., and Selby B. Davis, Greenwich, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Mar. 14, 1961, Ser. No. 95,510
8 Claims. (Cl. 260—295)

1. A compound:



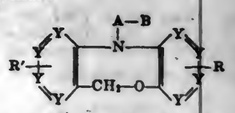
wherein R_1 is selected from the group consisting of hydrogen and methyl, R_2 is selected from the group consisting of hydrogen, halogen, hydroxy, lower alkoxy, and amino, and R_3, R_4, and R_5 are lower alkoxy.

3,123,613
METHOD FOR PRODUCING 2-PYRIDINEALDOXIME METHOCHLORIDE
Lillian P. Bloch, Jamaica, N.Y., assignor to Campbell Pharmaceuticals, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed May 5, 1961, Ser. No. 107,894
8 Claims. (Cl. 260—296)

1. Method for the preparation of 2-pyridinealdoxime methochloride which comprises reacting 2-pyridinealdoxime metho-methylsulfate with hydrogen chloride in the presence of water and a water-miscible organic solvent.

3,123,614
DIHYDROPYRIDOBENZOXAZEPINE DERIVATIVES
Harry L. Yale, New Brunswick, Francis A. Sowinski, Edison, and Jack Bernstein, New Brunswick, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed Aug. 8, 1962, Ser. No. 215,549
11 Claims. (Cl. 260—296)

1. A compound selected from the group consisting of bases of the formula

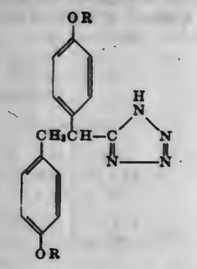


wherein A is lower alkylene of at least two carbon atoms, B is selected from the group consisting of amino, (lower alkyl)amino, di(lower alkyl)amino, (hydroxy-lower alkyl)amino, di(hydroxy-lower alkyl)amino, piperidyl, (lower alkyl)piperidyl, di(lower alkyl)piperidyl, (lower alkoxy)piperidyl, homopiperidino, pyrrolidyl, (lower alkyl)pyrrolidyl, di(lower alkyl)pyrrolidyl, (lower alkoxy)pyrrolidyl, morpholinyl, (lower alkyl)morpholinyl, di(lower alkyl)morpholinyl, (lower alkoxy)morpholinyl, thiamorpholinyl, (lower alkyl)thiamorpholinyl, di(lower alkyl)thiamorpholinyl, (lower alkoxy)thiamorpholinyl, piperazyl, (lower alkyl)piperazyl, di(lower alkyl)piperazyl, (lower alkoxy)piperazyl, (hydroxy-lower alkyl)-piperazyl, (lower alkanolyoxy-lower alkyl)piperazyl, (hydroxy-lower alkoxy-lower alkyl)piperazyl, (carbo-lower alkoxy)piperazyl and homopiperazino, one Y is aza and the remaining Y's are carbon, and R and R′ are each selected from the group consisting of hydrogen, halogen, lower alkyl, lower alkoxy, trifluoromethyl, trifluoromethylmercapto, trifluoromethoxy, and N,N-dimethylaminosulfonyl; and non-toxic acid-addition salts thereof.

2. 5-[(dilower alkyl)amino(lower alkyl)]-5,10-dihydropyrido[3,2-b][4,1]benzoxazepine.

3,123,615
5-[α,β-BIS(OXYPHENYL)ETHYL]1H-TETRAZOLES
Kurt J. Rorig, Glenview, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed Sept. 25, 1962, Ser. No. 226,160
4 Claims. (Cl. 260—308)

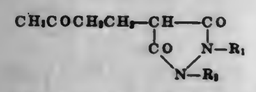
1. A compound of the formula



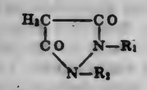
wherein R represents a member of the group consisting of hydrogen and lower alkyl radicals.

3,123,616
PROCESS FOR PRODUCING 1,2-DIPHENYL-3,5-DIOXO-4-(GAMMA-OXYBUTYL)-PYRAZOLIDINE
Jiří Mayer and Josef Čtvrtník, Olomouc, and Oldřich Němeček, Prague, Czechoslovakia, assignors to Spofa, Sdruzeni podniku pro zdravotnickou vyrobu, Prague-Zizkov, Czechoslovakia
No Drawing. Filed May 24, 1961, Ser. No. 136,684
Claims priority, application Czechoslovakia May 27, 1960
15 Claims. (Cl. 260—310)

1. The method of producing a compound of the formula:



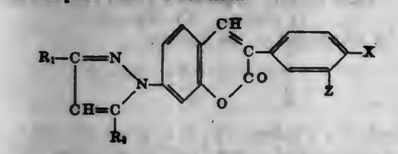
wherein R_1 and R_2 are each selected from the group consisting of alkyl of up to 10 carbon atoms, cycloalkyl, phenyl, alkylphenyl wherein alkyl is up to 4 carbon atoms, alkoxyphenyl wherein alkoxy is up to 4 carbon atoms and halophenyl, which comprises condensing a compound selected from the group consisting of compounds of the formula:



wherein R_1 and R_2 have the same definitions as above, and alkali metal salts thereof with methyl vinyl ketone.

3,123,617
3-PHENYL-7-PYRAZOLYL COUMARINS
Heinrich Hinsberg, Riehen, near Basel, Switzerland, assignor to J. R. Geigy A.-G., Basel, Switzerland
No Drawing. Filed Apr. 26, 1962, Ser. No. 190,241
Claims priority, application Switzerland Apr. 27, 1961
6 Claims. (Cl. 260—310)

1. A compound of the formula



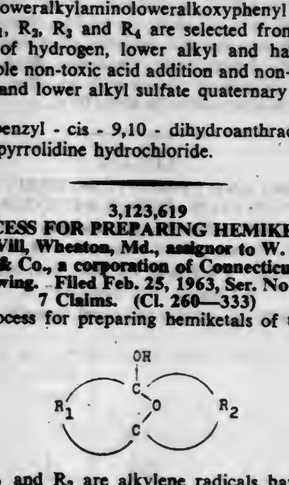
wherein

R_1 is a member selected from the group consisting of hydrogen, methyl, ethyl, phenyl and benzyl,

R_3 is a member selected from the group consisting of hydrogen, methyl and phenyl and

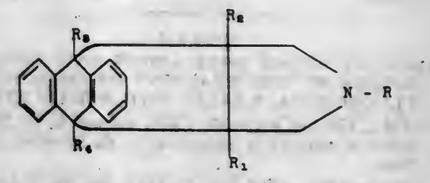
X is a member selected from the group consisting of hydrogen, chlorine and methyl and

Z is a member selected from the group consisting of hydrogen, $—SO_3H$, $—SO_2H_2$, $—SO_2NH—CH_3$, $—SO_2—NH—CH_2CH_3$, $—SO_2—NH—CH_2CH_2OH$, $—SO_2—NH—CH_2CH_2OCH_3$, $—SO_2—NH—CH_2CH_2—OCH_2CH_3$



3,123,618
9,10-DIHYDROANTHRACENE-9,10-ENDO-3′,4′-PYRROLIDINES
Edward Lewis Schumann, 3021 Fleetwood Drive, Kalamazoo, Mich., and Edward McCreery Roberts, 6318 Mayflower Ave., and George Philip Claxton, 6705 Highland Ave., both of Cincinnati, Ohio
No Drawing. Filed Apr. 20, 1959, Ser. No. 807,334
7 Claims. (Cl. 260—313)

1. The compounds of the group consisting of those having the formula:



where R is selected from the group consisting of hydrogen, lower alkyl, hydroxy lower alkyl, halo lower alkyl, diloweralkylamino lower alkyl, 3,4,5-triloweralkoxybenzoxy lower alkyl, cyclohexyl, benzyl, phenyl, hydroxyphenyl, diloweralkylaminoloweralkoxyphenyl and 4-pyridyl and R_1, R_2, R_3 and R_4 are selected from the group consisting of hydrogen, lower alkyl and halogen, their water-soluble non-toxic acid addition and non-toxic, lower alkyl halo and lower alkyl sulfate quaternary ammonium salts.

5. N - benzyl - cis - 9,10 - dihydroanthracene - 9,10-endo-3′,4′-pyrrolidine hydrochloride.

3,123,619
PROCESS FOR PREPARING HEMIKETALS
John J. Vill, Wheaton, Md., assignor to W. R. Grace & Co., a corporation of Connecticut
No Drawing. Filed Feb. 25, 1963, Ser. No. 260,834
7 Claims. (Cl. 260—333)

1. A process for preparing hemiketals of the formula

wherein R_1 and R_2 are alkylene radicals having 2 to 9 carbon atoms, which comprises reacting an unsaturated compound having the formula



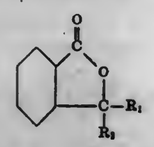
wherein R_1 and R_2 have the same meaning given above, with hydrogen peroxide in the presence of a strong mineral acid at a temperature of from about −20 to about +45° C., and recovering the hemiketal formed.

3,123,620
FLUOROALKOXY PHTHALIDES

Werner Victor Cohen, Glen Farms, Md., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Jan. 31, 1963, Ser. No. 255,178
4 Claims. (Cl. 260—343.3)

1. A compound represented by the formula



wherein R_1 is a polyfluoroalkoxy group having the formula $—OCH_2(CH_2)_nY$ in which alkoxy group Y is selected from the group consisting of hydrogen and fluorine, and n is an integer within the range of 1 to 5 and R_2 is a member of the group consisting of methyl, ethyl, phenyl and tolyl.

3,123,621
PREPARATION OF ARYL AZIDES AND ARYL DIAZIDES BY THE REACTION OF DIAZONIUM-FLUOROBORATE SALTS WITH ALKALI AZIDES

David L. Herring, Riverside, Calif., assignor to the United States of America as represented by the Secretary of the Navy

No Drawing. Filed Apr. 19, 1962, Ser. No. 188,905
2 Claims. (Cl. 260—349)
(Granted under Title 35, U.S. Code (1952), sec. 266)

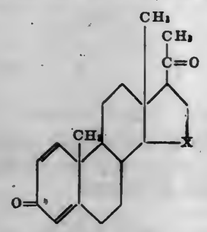
1. The method for synthesizing aryl azides and aryl diazides by reacting an aromatic amine with an alkali, metal nitrite and an alkali metal fluoroborate at about −20° C. in an aqueous solution of hydrochloric acid to form the intermediate diazonium fluoroborate salt which subsequently is reacted with an alkali metal azide in aqueous solution cooled to about 0° C.

3,123,622
1-DEHYDRO AND 1,6-DEHYDRO DERIVATIVES OF 15-OXYGENATED PREGN-4-ENE-3,20-DIONES

Robert C. Tweit, Wilmette, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed June 16, 1961, Ser. No. 117,533
6 Claims. (Cl. 260—397.3)

1. A compound of the structural formula



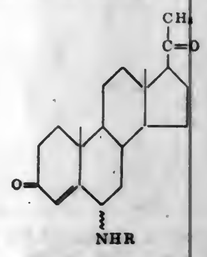
wherein X is selected from the group consisting of carbonyl, β-hydroxymethylene, and β-(loweralkanoyl)oxymethylene radicals.

3,123,623
6-AMINO-4-PREGNENE-3,20-DIONE AND N-ACYL DERIVATIVES THEREOF

Kanzo Sasaki, Osaka, Japan, assignor to Shionogi & Co., Ltd., Osaka, Japan

No Drawing. Filed July 11, 1963, Ser. No. 294,446
Claims priority, application Japan July 17, 1962
7 Claims. (Cl. 260—397.3)

1. A compound of the formula:



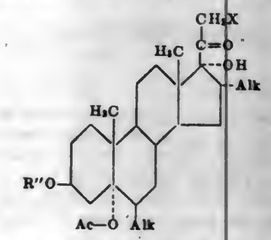
wherein R is a member selected from the group consisting of hydrogen and lower alkanoyl.

3,123,624
PREPARATION OF 6α,16α-DIALKYL SUBSTANCE S AND ACYLATES THEREOF

Robert P. Graber, Minneapolis, Minn., and Martin B. Meyers, Glasgow, Scotland, assignors to General Mills, Inc., a corporation of Delaware

No Drawing. Filed Sept. 29, 1961, Ser. No. 141,576
20 Claims. (Cl. 260—397.47)

1. A 6,16-dialkyl steroid compound having the formula



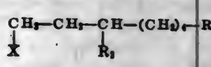
where Alk is an alkyl group having from 1 to 8 carbon atoms, X is selected from the group consisting of iodine and bromide atoms, Ac is an acyl group of a hydrocarbon carboxylic acid having from 1 to 12 carbon atoms and R″ is selected from the group consisting of hydrogen and acyl groups having from 1 to 12 carbon atoms.

3,123,625
ACYLTHIO HALOGENO OCTANOIC ACID DERIVATIVES

Masao Ohara, Ibaraki, Raitaro Haraoka, Osaka, Yoshio Deguchi, Suita, and Kazuko Miura and Masumi Ito, Osaka, Japan, assignors to Fujisawa Pharmaceutical Co., Ltd., Osaka, Japan, a company of Japan

No Drawing. Filed Jan. 29, 1962, Ser. No. 169,596
Claims priority, application Japan Feb. 2, 1961
11 Claims. (Cl. 260—399)

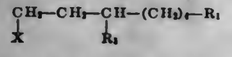
1. A compound of the formula



wherein X is a halogen, R_1 is a radical selected from the group consisting of carboxy radicals and esters and amides of carboxylic acids capable of producing carboxyl radicals on hydrolysis and R_2 is a carboxylic acylthio radical.

6. A process for the production of a 6-carboxylic acyl-

thio-8-halogeno octanoic acid derivative comprising reacting a compound of the formula



with a mono thiocarboxylic acid in the presence of an alkaline agent, wherein X is a halogen, R_1 is a radical selected from the group consisting of carboxyl radicals and esters and amides of carboxylic acids capable of producing carboxyl radicals on hydrolysis, and R_2 is an organic sulfonyloxy radical.

3,123,626
SELECTIVE HYDROGENATION OF FATS AND FATTY OILS

Francis William Kirsch, Wilmington, Del., assignor to Air Products and Chemicals, Inc., a corporation of Delaware

Filed Sept. 30, 1960, Ser. No. 59,613
9 Claims. (Cl. 260—409)

1. The method of selectively hydrogenating glyceride edible fats and oils in continuous operation, which comprises passing such glyceride through a fixed bed of solid hydrogenation catalyst at conditions of severity corresponding to a temperature in the range of 100 to 400° F., at a hydrogen pressure of 10 to 150 pounds per square inch gauge and at a liquid hourly space velocity of 0.1 to 4, said solid hydrogenation catalyst comprising a macroporous silica support associated with nickel and sulfur derived from nickel sulfate by hydrogen reduction, said nickel and sulfur being present in the range of 0.13 to 4.99% by weight of sulfur and 4 to 25% by weight of nickel based on the final catalyst.

3,123,627
FAT HYDROGENATION

William H. Flank, Chester, James E. McEvoy, Morton, and Harold Shalit, Drexel Hill, Pa., assignors to Air Products and Chemicals, Inc., Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed July 20, 1962, Ser. No. 211,426
2 Claims. (Cl. 260—409)

1. The method of hydrogenating fatty acid material containing significant amounts of material selected from the group consisting of unsaturated fatty acids and esters thereof; which method consists essentially of the steps of: heating said fatty acid material at a reduced pressure to remove water therefrom; subjecting vacuum dried fatty acid material to a catalytic hydrogenation zone maintained at a temperature in the range of 50–240° C.; which zone contains particles of nickel on powder-containing silica gel of large pore size prepared by decomposing nickel formate dihydrate impregnated on powder-containing silica gel particles at a temperature within the range from 280 to about 538° C. in a gas stream having a superficial velocity of at least 20 cm./min., said powder-containing silica gel particles having been prepared by the dehydration of a wet gelatinous mass resulting from the admixture of an aqueous siliceous solution with silica particles having an average particle size from 5 to 15 microns, whereby most of the pore volume involves pores having a diameter greater than 40 Angstroms; said hydrogenation zone containing hydrogen at a pressure from atmospheric to 4000 pounds per square inch, the molar ratio of hydrogen to fatty acid material being from 0.3:1 to 30:1 and the catalyst to fatty acid material to time relationships corresponding to a space rate of from 0.1 to 30 volumes of fatty acid material per volume of catalyst per hour; and withdrawing as product of the method a more saturated fatty acid material.

3,123,628
MANUFACTURE OF ORGANIC ESTERS BY REACTING ALPHA-METALLO-ACETATE SALTS WITH HYDROCARBON HALIDES

Rex D. Closson, Northville, Mich., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Oct. 30, 1956, Ser. No. 619,134
1 Claim. (Cl. 260—410.9)

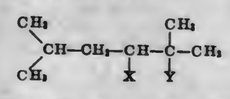
A direct process for preparing esters of carboxylic acids in which esters the alcohol moiety radical linked to the carboxyl group is a hydrocarbon radical selected from the class consisting of aliphatic and araliphatic radicals having up to 18 carbon atoms, the hydrocarbon radical has at least one hydrogen atom on its linking carbon atom, and the acid portion of the ester has a terminal radical identical with said hydrocarbon radical and connected to the carboxyl group by a methylene bridge, said process consisting essentially of reacting an alpha-metallometallic acetate in which both metal moieties are alkali metals, with the halide of the hydrocarbon radical at a temperature of at least 60° C., under anhydrous conditions and in the proportion of about 1.75 to 3.3 moles of the halide for every mole of the acetate to cause both alkali metal moieties to be replaced by the above hydrocarbon radicals in one operation, and the reaction temperature being below the decomposition temperature of the reactants.

3,123,629
DIHYDROCHRYSANTHEMIC ACID INTERMEDIATES

Marc Julia, Paris, France, assignor to Societe des Usines Chimiques Rhone-Poulenc, Paris, France, a body corporate of France

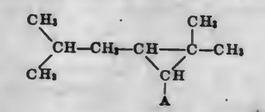
No Drawing. Filed Dec. 7, 1959, Ser. No. 857,549
Claims priority, application France Dec. 6, 1958
15 Claims. (Cl. 260—456)

1. A compound of the formula:

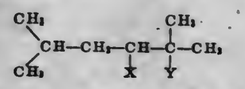


where one of X and Y is selected from the class consisting of chlorine, bromine, methanesulphonyloxy and toluene-p-sulphonyloxy groups and the other is selected from the class consisting of cyanomethyl and carbalkoxymethyl group of formula $—CH_2COOR$, where R is a lower alkyl group.

6. Process for the preparation of a (dl)trans-dihydrochrysanthemic acid derivative of the formula:



where A is selected from the group consisting of cyano groups and groups of formula —COOR, in which R is a lower alkyl group, which comprises subjecting a compound of the formula:



where one of X and Y is selected from the class consisting of chlorine, bromine, methanesulphonyloxy and toluene-p-sulphonyloxy groups and the other is selected from the class consisting of cyanomethyl and carbalkoxymethyl group of formula $—CH_2COOR$, where R is a lower alkyl group, to the action of an alkali metal derivative selected from the group consisting of alkali metal hydrides, amides

and alkoxides in the presence of an organic diluent selected from the group consisting of aromatic hydrocarbons and amides of lower alkanoic acids.

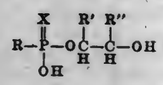
3,123,630

PROCESS FOR PREPARING HYDROXYALKYL MONOESTERS OF POLYOLEFIN THIONOPHOSPHONIC ACIDS

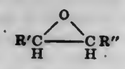
Frederick G. Oberender, Fishkill, and David D. Reed, Glenham, N.Y., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 21, 1960, Ser. No. 63,973
7 Claims. (Cl. 260—461)

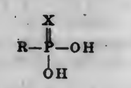
1. A process for preparing a mono-hydroxyalkyl hydrocarbyl thiophosphonate having the formula:



by reacting an alkylene oxide having the formula:



with a hydrocarbyl thiophosphonic acid having the formula:



in the absence of a catalyst at a temperature between 60 and 150° C. and at a pressure between atmospheric and 500 p.s.i.g., in the above formulas R being a hydrocarbyl radical derived from polyolefin having an average molecular weight between 250 and 50,000, X being selected from the group consisting of sulfur and a mixture consisting of a major portion of sulfur and a minor portion of oxygen and R′ and R″ being selected from the group consisting of hydrogen and an aliphatic hydrocarbyl radical containing 1–6 carbon atoms said alkylene oxide being employed in the reaction in an excess over the stoichiometric required for the formation of said monohydroxyalkyl hydrocarbyl thiophosphonate.

3,123,631

PROCESS FOR PREPARING ESTERS OF ANTHRANILIC ACID

Roger P. Staiger, Collegeville, Pa., and George F. Schlaudecker and Emery B. Miller, Toledo, Ohio, assignors to Maumee Chemical Company, Toledo, Ohio, a corporation of Ohio

No Drawing. Filed Sept. 9, 1957, Ser. No. 682,630
6 Claims. (Cl. 260—471)

1. A method for producing an anthranilic acid ester selected from the group consisting of phenyl anthranilate, n-alkyl anthranilates, methallyl anthranilate, beta phenethyl anthranilate, and 2-butyne-1,4-diol monoanthranilate, which method comprises effecting contact between sodium hydroxide and a solution comprising approximately equimolecular proportions of isatoic anhydride and an alcohol selected from the group consisting of phenol, a primary *n* alkyl alcohol having from 1 to 4 carbon atoms, methallyl alcohol, beta phenethyl alcohol, and 2-butyne-1, 4-diol, respectively; warming the resulting mixture to a temperature of at least about 45° C., but not higher than about 100° C.; and thereafter separating the anthranilic acid ester from the reaction mixture.

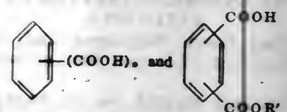
3,123,632

PROCESS FOR THE PRODUCTION OF THE AMMONIUM SALTS OF CARBOXYLIC ACIDS

Ewald Katzschmann, Dortmund-Kruckel, Germany, assignor to Chemische Werke Witten, Witten (Ruhr), Germany

No Drawing. Filed June 23, 1960, Ser. No. 38,094
Claims priority, application Germany June 27, 1959
6 Claims. (Cl. 260—475)

1. A process for the production of pure ammonium salts of carboxylic acids in a substantially quantitative yield comprising forming a solution in dimethyl formamide of an acid compound selected from the group consisting of the carboxylic acids and acid esters represented by RCOOH, $R(COOH)_2$,



wherein R is an unsubstituted aliphatic radical, R′ is a lower alkyl radical and *n* is an integer from 1 to 3, introducing ammonia into said solution until the solution has a distinct odor of ammonia, and thereafter separating from said solution the crystalline ammonium salts of said compound formed in said solution by the introduction of the ammonia.

3,123,633

PRODUCTION OF DIMETHYLTEREPHTHALATE

James K. Nickerson and Robert E. Pennington, Baytown, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

Filed Oct. 16, 1961, Ser. No. 145,399
4 Claims. (Cl. 260—475)

1. In the liquid phase concurrent oxidation-esterification of p-xylene in a reaction zone in contact with an oxygen-containing gas and a soluble cobalt catalyst at a temperature from 140° C. to 290° C., the improvement of continuously introducing oxygen, methylal, and a p-xylene into said reaction zone as the only externally added components of the reaction mixture, whereby net water formation is minimized.

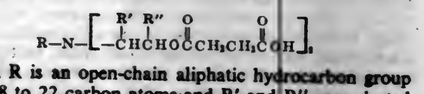
3,123,634

N-ALIPHATIC-N,N-DI(ALKYL MONOSUCCINATE) AMINE

John H. Udelhofen, Calumet City, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Apr. 28, 1961, Ser. No. 106,196
3 Claims. (Cl. 260—485)

1. As a composition of matter, the compound having the structural formula:



wherein R is an open-chain aliphatic hydrocarbon group having 8 to 22 carbon atoms and R′ and R″ are selected from the class consisting of hydrogen, methyl and ethyl.

3,123,635

AGITATION OF ADIPIC ACID CRYSTALS TO STABILIZE THE SIZE THEREOF

Nicholas D. Pintauro, New City, and Oscar R. Friedemann, Yonkers, N.Y., assignors to General Foods Corporation, White Plains, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 14, 1960, Ser. No. 68,588
2 Claims. (Cl. 260—537)

1. A method of preparing stable adipic acid crystals which comprises forming a body of adipic acid crystals, said crystals having a particle size wherein about 17–34% of fines pass through a 100 mesh screen; shaking said crystals by means of mechanical vibrations to cause said crystals to strike each other thereby reducing the average crystal particle size to a degree wherein 63–66% of the crystals pass a 100 mesh screen, said agitated adipic acid crystals undergoing substantially no further change in particle size; and classifying said stabilized adipic acid crystals according to particle size.

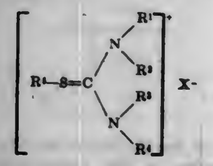
3,123,636

THIURONIUM HALIDES

Bernard Loev, Broomall, and John T. Massengale, West Chester, Pa., assignors to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Feb. 8, 1960, Ser. No. 7,140
7 Claims. (Cl. 260—552)

1. A compound of the formula



where R^1, R^2, R^3 and R^4 are lower alkyl radicals, R^5 is a substituted benzyl radical wherein said substituent is an alkyl radical having from eight to eighteen carbon atoms, and X^- is a halide ion.

5. Dodecylbenzyl - N,N,N′,N′ - tetraethylthiuronium chloride.

3,123,637

PROCESS FOR REDUCING THE TENDENCY OF CRYSTALLINE UREA TO CAKE

Edwin W. Lard, Richard C. Horn, and Howard Donovan Green, all of Memphis, Tenn., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed Nov. 24, 1961, Ser. No. 154,829
7 Claims. (Cl. 260—555)

1. Process for the treatment of pure dry crystalline urea which comprises passing said crystals through a high temperature zone heated to a temperature greater than the melting point of urea, until the crystal surfaces are incipiently fused as indicated by their sticky condition, withdrawing the crystals from said zone before they are completely fused, and recovering the heat-treated crystals after they have cooled to a temperature below about 210° Fahrenheit.

3,123,638

AMIDOMETHYLATION OF AROMATIC HYDROCARBONS

William D. Schaeffer, Pomona, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California

No Drawing. Filed June 16, 1961, Ser. No. 117,514
14 Claims. (Cl. 260—562)

1. A method for the amidomethylation of aromatic hydrocarbons which comprises contacting an aromatic compound containing an active ring hydrogen atom with an N-methylolamide at a reaction temperature between about 0° and about 200° C. in the presence of an acidic condensation catalyst selected from the class consisting of anhydrous hydrogen fluoride, trifluoroacetic acid, and aliphatic and alicyclic sulfonic acids having 1 to 8 carbon atoms, and thereafter recovering a ring-amidomethylated product.

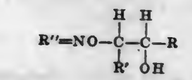
3,123,639

PRODUCTION OF BETA-HYDROXYALKYL ETHERS OF OXIMES

Gustave B. Bachman, Lafayette, Ind., and Takeo Hokama, Pittsburgh, Pa., assignors to Purdue Research Foundation, Lafayette, Ind., a corporation of Indiana

No Drawing. Filed Apr. 16, 1959, Ser. No. 806,748
13 Claims. (Cl. 260—566)

1. In a process for the production of beta-hydroxyalkyl ethers of oximes having the structure



where R is selected from the group consisting of hydrogen, alkyl and aryl; R′ is selected from the group consisting of hydrogen and alkyl; and R″ is lower alkyl, the steps which consist essentially of reacting an olefin oxide selected from the group consisting of ethylene oxide, propylene oxide, butylene oxide and styrene oxide, with an alkali metal salt of a nitro lower alkane selected from the group consisting of primary nitrolowerakane and secondary nitroloweralkane at temperatures ranging from 0 to 100° C. and recovering the beta-hydroxyalkyl ethers of oximes thereby produced.

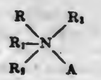
3,123,640

CATION-ACTIVE SURFACE ACTIVE ARYLDIALKYL-POLYPROPYLENEOXY QUATERNARY AMMONIUM COMPOUNDS

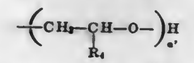
Kermit Longley, Park Forest, Ill., assignor to Witco Chemical Company, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 14, 1960, Ser. No. 22,099
10 Claims. (Cl. 260—567.6)

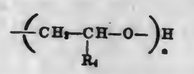
1. A quaternary ammonium compound having the formula



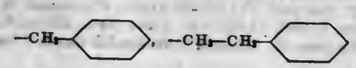
wherein R is an alkyl radical containing from 1 to 3 carbon atoms, R_1 is a member selected from the group consisting of an alkyl radical containing from 1 to 3 carbon atoms and



and compounds wherein R and R_1 are joined together to form with the N atom a member of the group consisting of piperidine, methyl piperidine and pyrrolidine; R_2 is



where R_4 is an alkyl radical containing from 1 to 4 carbon atoms, *n* and *n′* are numbers the sum of which does not exceed 60, the total number of carbon atoms in R_2 being at least 18; R_2 is a member selected from the group consisting of benzene; methyl benzenes; ethyl benzenes;



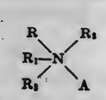
and their methyl and ethyl nuclearly substituted derivatives; and the mono-halo and mono-nitro nuclearly substituted derivatives of the foregoing; and A is an anion.

3,123,641
CATION-ACTIVE SURFACE ACTIVE TRILOWER-ALKYLPOLYPROPYLENEOXY QUATERNARY AMMONIUM COMPOUNDS

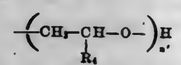
Kermit Longley, Park Forest, Ill., assignor to Witco Chemical Company, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 14, 1960, Ser. No. 22,115
9 Claims. (Cl. 260—567.6)

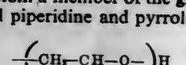
1. A quaternary ammonium compound having the formula



wherein R is an alkyl radical containing from 1 to 3 carbon atoms, R_1 is a member selected from the group consisting of an alkyl radical containing from 1 to 3 carbon atoms and



and components wherein R and R_1 are joined together to form with the N atom a member of the group consisting of piperidine, methyl piperidine and pyrrolidine; R_2 is



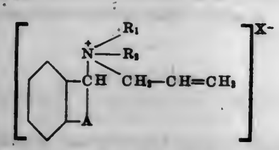
where R_4 is an alkyl radical containing from 1 to 4 carbon atoms, n and n' are numbers the sum of which does not exceed 60, the total number of carbon atoms in R_2 being at least 18; R_3 is a hydrocarbon radical selected from the group consisting of alkyl and alkenyl radicals containing from 1 to 4 carbon atoms; and A is an anion.

3,123,642
INDANYL AND TETRAHYDRONAPHTHYL QUATERNARY AMMONIUM COMPOUNDS

Richard William Temple, Marlow, and Leslie Frederick Wiggins, Wargrave, England, assignors to Aspro-Nicholas Limited, Slough, England, a British company

No Drawing. Filed Nov. 21, 1960, Ser. No. 70,392
Claims priority, application Great Britain Nov. 20, 1959
9 Claims. (Cl. 260—567.6)

1. Quaternary ammonium compounds having the structural formula:



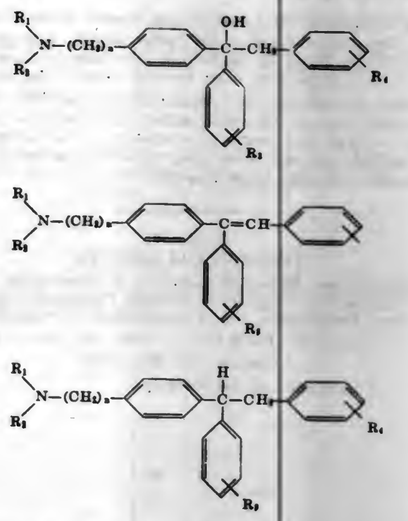
wherein R_1 is selected from the group consisting of allyl and alkyl groups having from one to about three carbon atoms, R_2 is selected from the group consisting of alkyl and hydroxyalkyl groups having from one to about three carbon atoms, A is an alkylene chain having from two to three carbon atoms, and X is a non-toxic anion.

3,123,643
BASIC - SUBSTITUTED - ALKYL TRIPHENYLETHANOLS, TRIPHENYLETHYLENES AND TRIPHENYLETHANES

Frank P. Palopoli, 4113 Judd Drive, Cincinnati 36, Ohio; Vernon J. Fell, 11667 Van Cleve Ave., Glendale, Ohio; and Thomas R. Blohm, 7100 Euclid Road, Cincinnati, O..io

No Drawing. Filed July 15, 1960, Ser. No. 42,994
6 Claims. (Cl. 260—570)

1. Compounds of the group consisting of those having the formulas:



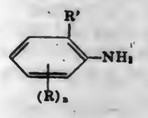
in Which R_1 and R_2 are hydrogen, lower alkyl radicals containing from one to four carbon atoms, and R_1 and R_2 together with the nitrogen to which they are attached form a heterocyclic radical of the group consisting of piperidino and morpholino, n is a small whole number from two to four inclusive, and R_3 and R_4 represent radicals of the group consisting of hydrogen, chloro, fluoro, lower alkyl, lower alkoxy and trifluoromethyl.

3,123,644
DEALKYLATION OF NUCLEAR POLYALKYL PRIMARY AROMATIC AMINES

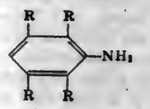
John F. Olin, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed July 2, 1959, Ser. No. 824,457
9 Claims. (Cl. 260—578)

1. A process for removing tertiary alkyl groups from nuclear polyalkylated primary aromatic amines of the formula



wherein R is an alkyl radical having from 1 to 8 carbon atoms, n is an integer from 1 to 4, and R' is selected from the group consisting of tert-butyl and tert-amyl, said process comprising heating said nuclear polyalkyl primary aromatic amine with an acceptor aromatic amine of the formula



wherein R is selected from the class consisting of the hydrogen atom and alkyl radical having from 1 to 8 carbon atoms in a straight chain at a temperature in the range of 150–350° C. under superatmospheric pressure in the presence of a silica-alumina catalyst.

3,123,645
PROCESS FOR THE REDUCTION OF AROMATIC COMPOUNDS

Alfred Hagenboecker, Basel, Switzerland, assignor to Ciba Limited, Basel, Switzerland

No Drawing. Filed June 20, 1960, Ser. No. 37,102
Claims priority, application Switzerland July 3, 1959
3 Claims. (Cl. 260—580)

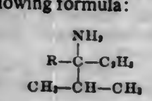
1. A process for the reduction of a member selected from the group consisting of chloro-nitro-benzene-sulfonic acid, dinitro-benzene-sulfonic acid, nitro-para-cresol, nitro-dichloro-naphthalene, dinitro-naphthalene and nitroso-naphthol to the corresponding amine, which comprises heating the member to a temperature within the range from 70° C. to boiling in an aqueous medium containing, as reducing agent, a water-soluble ferrous pyridine salt of an acid selected from the group consisting of formic acid, acetic acid, hydrochloric acid and sulfuric acid, the pyridine of said salt being a member selected from the group consisting of pyridine and a pyridine base having a boiling point of at most 180° C.

3,123,646
PRIMARY ACYCLIC AMINES

Nelson R. Easton, Indianapolis, Ind., assignor to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana

No Drawing. Filed June 2, 1960, Ser. No. 33,392
5 Claims. (Cl. 260—583)

1. A compound selected from the class consisting of a primary amine and its salts formed with nontoxic, pharmaceutically-acceptable acids, said primary amine being represented by the following formula:



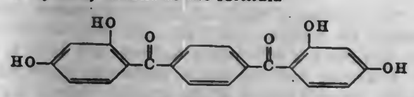
wherein R is a radical of the group consisting of ethyl, isopropyl, sec. butyl and t-butyl.

3,123,647
BIS-p,p-DI(1,3-DIHYDROXY BENZOYL) BENZENE

Max Dueanenberger, Birsfelden, Adolf Emil Siegrist, Basel, and Erwin Maeder, Muenchenstein, Switzerland, assignors to Ciba Limited, Basel, Switzerland

No Drawing. Filed Dec. 4, 1958, Ser. No. 778,072
Claims priority, application Switzerland Dec. 6, 1957
1 Claim. (Cl. 260—591)

The hydroxy-ketone of the formula

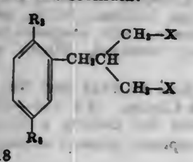


3,123,648
2-(SUBSTITUTED-BENZYL)-1,3-PROPANE-DIHALIDES

Raymond G. Wilkinson, Montvale, N.J., and Thomas L. Fields, Pearl River, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Original application July 15, 1958, Ser. No. 748,589, now Patent No. 3,013,069, dated Dec. 12, 1961. Divided and this application Apr. 25, 1961, Ser. No. 105,280
4 Claims. (Cl. 260—612)

1. A compound of the formula:



wherein X and R_2 are each selected from the group consisting of chlorine, bromine and iodine, and R_2 is lower alkoxy.

3,123,649
PREPARATION OF 1,2,4-TRIPHENYLNAPHTHALENE

Edward J. McNelis, Wallingford, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Sept. 24, 1962, Ser. No. 225,842
4 Claims. (Cl. 260—668)

1. Method of preparing 1,2,4-triphenylnaphthalene which comprises heating tetraphenylcyclopentadienone at a temperature ranging between 350° C. and 450° C. for at least 5 minutes and thereafter separating and recovering said triphenylnaphthalene.

3,123,650
PROCESS AND CATALYST FOR THE ALKYLATION OF AROMATIC HYDROCARBONS

Thomas Hutson, Jr., and Roy V. Denton, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

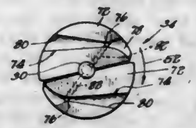
No Drawing. Filed Apr. 20, 1961, Ser. No. 104,264
7 Claims. (Cl. 260—671)

1. A process for producing alkylated aromatic hydrocarbon which comprises mixing in an alkylating zone an olefin of 2 to 14 carbon atoms, an alkylatable normally liquid aromatic hydrocarbon in addition to the hereinafter named promoter, and a catalyst system consisting essentially of $AlCl_3$-hydrocarbon complex and a promoter selected from the group consisting of monochlorobenzene and dichlorobenzene; and maintaining alkylating conditions in said zone so as to alkylate said aromatic hydrocarbon.

3,123,551
IMPELLER DEVICE

George E. Gross, 836 S. Maple St., and William F. Cramer, Jr., 428 S. Harvey, both of Oak Park, Ill.

Filed Jan. 21, 1960, Ser. No. 3,812
1 Claim. (Cl. 261—24)

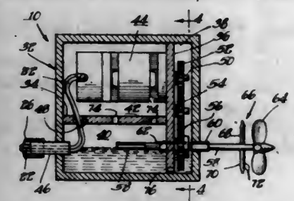


An impeller device for disposition in a first fluid to disperse a second fluid therein comprising: rotatable shaft means, radially extending means on said shaft means including a plurality of hemi-disk-shaped impeller blades having outer ends, leading edges and trailing edges, said blades each having a pitch thereto providing an upstream side and a downstream side for a predetermined direction of rotation of said shaft means; open-face channel means on each of said blades inwardly of said blade ends opening on the downstream side of said blades and each having an inlet end adjacent the leading edge and an outlet end adjacent the trailing edge of the respective blade for receiving a flow of said first fluid upon rotation of said shaft means and said radially extending means in a first fluid, each channel defining a Venturi having a restriction therein; and conduit means opening into said channel means Venturi at the restriction therein and leading to a source of a second fluid for aspirating said second fluid into said first fluid.

3,123,652
SUBMERSIBLE DEVICE

George E. Gross, 8333 Niles Center Road, Skokie, Ill.

Filed Nov. 15, 1960, Ser. No. 69,406
4 Claims. (Cl. 261—28)



1. In combination with a body of liquid, a submersible device for introducing gas into said liquid comprising a closed housing, means for supporting said housing completely submerged in said liquid, said housing including an upper portion and a lower portion, said upper portion having a top and wall means depending therefrom providing an air bell in said upper portion, said lower portion having opening means therein below said air bell, an electric motor mounted in the upper portion of said housing entirely within said air bell, a hollow shaft extending through said opening means and having one end inside the lower portion of said housing below said air bell and the other end outside of said housing, the inner end of said hollow shaft opening into the interior of the lower portion of said housing, said shaft being spaced below said motor, drive means within said housing drivingly interconnecting said electric motor and said hollow shaft for rotationally driving said shaft from said motor, means imperfectly sealing said shaft to said housing at said opening means whereby liquid can leak into said housing through said opening means, hollow radially extending means on said shaft outside said housing opening into the hollow shaft and having small apertures therein for aspirating fluid from inside said housing through said hollow shaft upon rotation of said shaft and said radially extending means in said liquid, and conduit means extending through said opening means and communicating with a source of gaseous fluid for supplying such gaseous fluid to the interior of said housing for aspiration through said shaft and said radially extending means along with liquid leaking into said housing.

3,123,653
METHOD OF PRODUCING A TUBULAR COLLAGEN CASING

Emanuel Roy Lieberman, Somerville, N.J., assignor to Johnson & Johnson, a corporation of New Jersey

Filed Jan. 16, 1961, Ser. No. 82,934
8 Claims. (Cl. 264—99)

1. In the method of producing a tubular collagen casing the steps of:

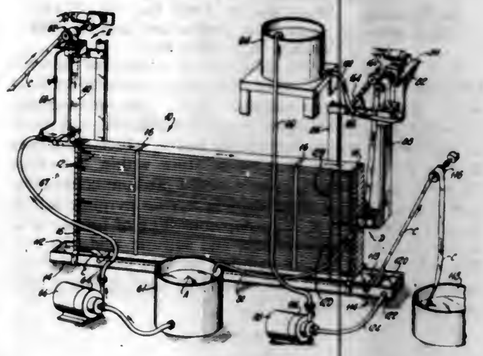
extruding a continuous, fragile tubular body from a fluid mass of swollen collagen fibrils made by acid swelling of unlimed, dehaired animal hide having a collagen solids content in the range of more than 2.5% and less than 6% by weight;

applying a coagulant to said tubular body;

hardening the coagulated body;

washing coagulant from the hardened body;

maintaining substantially the same wall thickness in said tubular body throughout the aforesaid steps of

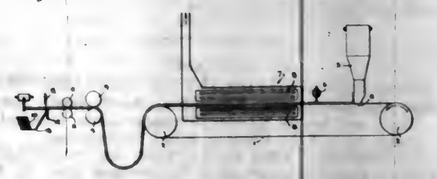


coagulating, hardening and washing said body; and drying said body.

3,123,654
MANUFACTURE OF MICROPOROUS PLASTIC SEPARATORS FOR STORAGE BATTERIES

Bernard Malischewski, Hannover, Germany, assignor to Varta Aktiengesellschaft, Hagen, Westphalia, Germany, a company of Germany

Filed Oct. 12, 1959, Ser. No. 845,905
11 Claims. (Cl. 264—126)



1. In a process of manufacturing a microporous plastic separator for storage battery cells, the steps which comprise classifying a pulverulent thermoplastic resin to obtain a starting material whose uniformity coefficient is between about 2 and 4, whose granules have a size between about 0.05 mm. and 0.15 mm. with differences in the dimensions of the granules in any direction not exceeding a ratio of 1:3, depositing the pulverulent classified starting material loosely in a layer, and subjecting the layer of pulverulent starting material to a short heat treatment sufficient to coalesce the granules and to form a microporous sheet.

3,123,655
PROCESS FOR EXTRUDING HIGH IMPACT THERMOPLASTIC ALKENYL AROMATIC RESINS

Robert G. Otting, James K. Rieke, Floyd B. Nagle, and Henry J. Karam, Midland, Mich., and Floyd M. Zimmerman, Torrance, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed June 26, 1961, Ser. No. 119,327
6 Claims. (Cl. 264—176)

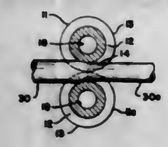
1. In a process for making a shaped plastic article wherein a thermoplastic alkenyl aromatic resin consisting

essentially of a normally solid resinous graft copolymer of from 90 to 98 percent by weight of a monoalkenyl aromatic hydrocarbon of the benzene series and from 10 to 2 percent of a rubbery copolymer containing in chemically combined form from 70 to 80 percent by weight of butadiene and from 30 to 20 percent by weight of styrene is fed to a plastics extruder in the form of discrete particles of sizes not greater than about 8 mesh per inch as determined by U.S. standard screens wherein it is heat-plastified at temperatures between 135° and 260° C. under pressure and is extruded in the form of a body having a predetermined shape at temperatures between 180° and 260° C., the improvement which consists in blending with the feed of said thermoplastic alkenyl aromatic resin particles so as to coat the surfaces thereof, from 0.05 to 1 percent by weight of a normally solid polymerized monoalkenyl aromatic hydrocarbon of the benzene series having a single polymerizable group selected from the group consisting of the vinyl and the isopropenyl radicals directly attached to a carbon atom of the benzene nucleus, having a molecular weight between 10,000 and 50,000 and in the form of finely divided particles of sizes not greater than 20 mesh per inch as determined by U.S. standard screens.

3,123,656
METHOD FOR FINISH SHAPING FOAMED PLASTIC

Morris Rochlin, Oak Park, Mich., assignor to Foamade Industries, Oak Park, Mich.

Filed Feb. 9, 1962, Ser. No. 172,263
1 Claim. (Cl. 264—321)

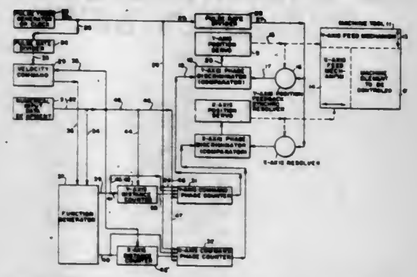


A method for finish shaping an elongated raw stock strip formed of a foamed thermoplastic of a type characterized by having a low melting point and a closed cellular structure into a very slightly smaller but finished shaped strip, in a die formed of two axially parallel rollers which are mounted for rotation about their axis and are arranged so that their circumferences are closely adjacent, and each having a peripheral groove, the two grooves being radially aligned to form a die throat of an annular formation to substantially completely surround the material passing through the die throat and with the axis of the die throat being perpendicular to the axes of the rollers comprising the steps of heating the rollers to a point slightly above the melting point of the plastic material, then rapidly passing an original shape strip, while cold, and of only slightly greater cross sectional area than the die throat, and in the absence of pressure, through the die throat at a uniform rate of speed at which the heat of the rollers momentarily and superficially heat the portion of the strip located in the die throat and shrinks it slightly into the finished cross-section of the die throat, while simultaneously rotating both rollers in the direction of travel of the strip through the die throat and at substantially the same peripheral speed as the speed of the strip.

3,123,657
AUTOMATIC CONTROL APPARATUS

Stephen C. Clark, Jr., Rockford, Ill., and John E. Jones, Lexington, Ky., assignors to General Electric Company, a corporation of New York

Filed Mar. 7, 1962, Ser. No. 178,144
16 Claims. (Cl. 266—23)

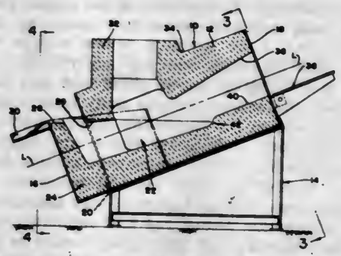


1. Apparatus for automatically compensating for the effect on a work piece of the thickness of a cutting element, or for changes in said thickness, used in a numerical contouring control system capable of executing both linear and circular interpolation, comprising: means for generating a pulse train whose pulse rate is directly proportional to the desired resultant translational velocity of said cutting element relative to said work piece for the cut then being executed; a rotatable utilization device; and control circuit means responsive to said pulse train and coupled to said rotatable utilization device for rotating said utilization device at an angular rate directly proportional to said pulse train's pulse rate.

3,123,658
INCLINED FURNACE

John H. Keating, Cleveland, Ohio, assignor to Monarch Aluminum Mfg. Co., Cleveland, Ohio, a corporation of Ohio

Filed Mar. 24, 1961, Ser. No. 98,088
5 Claims. (Cl. 266—33)



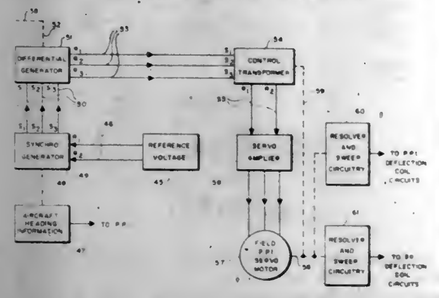
1. In an elongated substantially rectangular furnace for melting non-ferrous metals having a tunnel extending from end to end, one end adapted to receive charges of metal and the opposite end adapted to collect the melt, the improvement comprising: supports connected with said furnace and supporting said furnace in a stationary position to provide inclination from its charging end downwardly, and inclination from side to side, whereby one corner of said furnace is pitched lower than the rest of said furnace to provide a melting reservoir within said furnace.

3,123,659

SERVO SYSTEM FOR CONTROLLING THE OSCILLATION OF A SHAFT THROUGH VARIABLE SECTORS OF ROTATION

Robert R. Fontaine, Riverdale, and Jerome M. Raffel, Hyattsville, Md., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey

Filed Oct. 26, 1961, Ser. No. 147,811
1 Claim. (Cl. 35—10.4)



A student trainer for simulating a controlled antenna sector scan system in a mobile craft comprising: a source of reference voltage; a synchro generator and control transformer each having a rotor, rotor windings, and stator windings, said synchro generator and control transformer stator windings being connected together, said generator rotor windings being connected to said voltage source; means for displacing said generator rotor in accordance with a desired sector center line; a constant speed motor; a second generator which rotates in synchronism with said motor, said rotation actuating the simulated antenna sector scanning and causing the control transformer rotor to be displaced in synchronism with said simulated antenna scanning motion; voltage varying means; means for varying the voltage output of said varying means in accordance with a desired sector width; amplifier means connected between said voltage output of said varying means and the motor; feedback means for feeding back a portion of the second generator output to said amplifier; means for connecting the control transformer rotor windings to the voltage varying means so that said rotor windings output applied to the amplifier is 180 degrees out of phase with said feedback output when the antenna rotates away from said sector center lines; means for simulating mobile craft navigational information; indicating means for displaying a trace corresponding to the simulated antenna direction; means for positioning traces on said indicating means; servo mechanism means coupled to said simulated navigational information means and said simulated scanning motion for actuating said positioning means to position a trace on said indicating means corresponding to the simulated antenna orientation responsive to said simulated navigational information and simulated scanning motion.

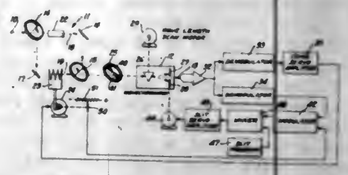
3,123,660

PROGRAMMED SLIT CONTROL FOR ANALYZERS

Kenneth V. Matthews, Garden Grove, Calif., assignor to Beckman Instruments, Inc., a corporation of California

Filed Nov. 21, 1960, Ser. No. 70,734
8 Claims. (Cl. 88—14)

1. A double beam, optical null analyzer having a reference beam path attenuator control loop for varying the attenuator position as a function of transmittance through the sample, and a slit control loop for varying the slit jaw position as a function of total energy in the combined beam path, with the slit control loop including in combination: means for generating a total energy signal as a function of total energy in the combined beam path; slit jaw drive means for varying the slit width; a source



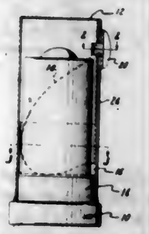
for producing a slit program signal which varies in a predetermined manner; and means coupled to said generating means and said source for combining a portion of said slit program signal with said total energy signal as an input to said drive means, with said portion being of a magnitude to control the slit width for low values of transmittance through the sample.

3,123,661

RETRACTABLE MIRROR FOR A LIPSTICK TUBE

Stanley S. Roman, 617 W. Norman Ave., Arcadia, Calif.

Original application Nov. 28, 1958, Ser. No. 776,787. Divided and this application Jan. 23, 1961, Ser. No. 84,459
4 Claims. (Cl. 88—96)



1. A retractable flat, image forming mirror device including a hollow container, a mirror member, and a retracting mechanism for protruding the mirror member from and retracting it to within the container, the mirror member being in the form of a thin mirrorer spring member that normally assumes a substantially flat condition when protruded from the container and which is of sufficient size relative to the interior of the container to be curved by the confining action of the container when retracted to within the container, the container being substantially cylindrical and having a slot extending longitudinally along one side thereof and an open end, the mirror member being adapted to protrude from the open end of the container and having a wedge-shaped outline with a wide end region and a narrow end region to provide two converging edges for engaging the open end of the container so as to facilitate curving of the mirror member when retracted to within the container, and the retracting mechanism including an external button and a tab element secured to the button, the tab element extending through the slot in the container and being secured to the narrow end region

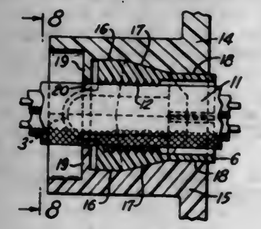
of the mirror member, whereby movement of the external button along said slot moves the mirror member into and out of the container through said open end thereof, the edges of the mirror member at the narrow end region being parallel and spaced less than the internal diameter of the container, and these parallel edges being held against the cylindrical interior surface of the container by the tab element with the narrow end of the member extending straight across the interior of the container as a chord to the cylindrical internal surface of the container with the mirror in its protruded position, whereby there is provided a stable support for the mirror member when it is fully extended from the container in its flattened condition.

3,123,662

STRAIN RELIEF COLLET

Richard R. Fink, Waukesha, Wis., assignor to Heyman Manufacturing Company, Kenilworth, N.J.

Filed July 26, 1962, Ser. No. 212,566
11 Claims. (Cl. 174—65)



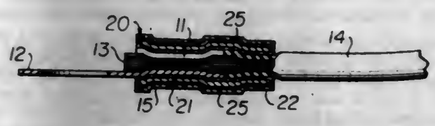
1. A strain relief collet comprising, a pair of longitudinally split halves adapted to receive and hold an electrical cord therebetween, each half including a first outer surface with said first surface being a portion of a cylinder and each half including a second outer surface with said second outer surface being a portion of a cylinder of the same diameter as said first surface and joining said first surface along a circumferentially extending line, said second surface being disposed inwardly toward the axis of the collet at an angle of less than 20° with respect to said first surface, and means disposed on the inner surface of at least one of said collet halves for engaging the outer surface of the cord when the halves are forced together.

3,123,663

INSULATED ELECTRICAL CONNECTORS

Edward M. Muldoon, University Heights, Ohio, assignor to ETC Incorporated, Cleveland, Ohio, a corporation of Ohio

Filed Apr. 17, 1961, Ser. No. 103,294
4 Claims. (Cl. 174—84)



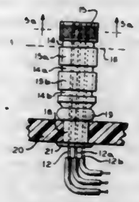
1. In an insulated electrical connector of the type having a malleable metal ferrule portion adapted to be crimped on a conductor and an outer electrical insulating sleeve surrounding said ferrule portion, said outer sleeve being held on said connector with a gripping, mechanical fit, but being otherwise free of connection therewith, the improvement comprising an intermediate insulating coating bonded to the outer metal surface of said connector beneath said outer sleeve, said coating consisting essentially of an epoxy resin.

3,123,664

MULTIPLE BARREL ELECTRICAL CONNECTOR

Maurus C. Logan, Elizabeth, N.J., assignor, by mesne assignments, to The Kent Manufacturing Co., Elizabeth, N.J., a corporation of New Jersey

Filed June 13, 1961, Ser. No. 116,822
9 Claims. (Cl. 174—88)



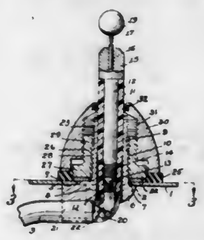
9. A connector for connecting a plurality of wire terminals in electrically connected relation while enabling any of the so-connected terminals to be serially and readily separated from the others for reuse of the connector, comprising an elongated body formed of readily compressible material and having upper and lower flat faces disposed in spaced parallel relation and connected at their marginal ends, said body having a plurality of transverse slots formed in one face thereof dividing said body into a plurality of barrels connected at the margins and at the opposite face of the body, said wire terminals passing from one end of said body through each of said barrels, said barrel farthest removed from said one end being compressed tightly against said terminals, said barrels being severable along the slotted portion of the body, whereby said compressed barrel can be severed, selected terminals removed, and the next barrel compressed to hold the remaining wire terminals in the body.

3,123,665

ANTENNA MOUNT AND COAXIAL CONDUCTOR CONNECTION THERETO

James F. Ulrich, Brecksville, Ohio, assignor to The Tenna Mfg. Co., Inc., Warrensville Heights, Ohio, a corporation of Puerto Rico

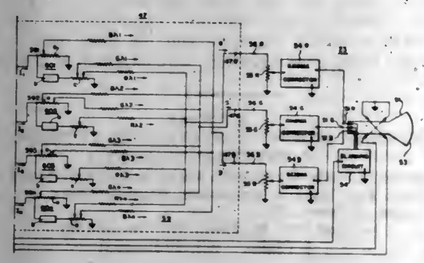
Filed Oct. 30, 1962, Ser. No. 234,087
1 Claim. (Cl. 174—153)

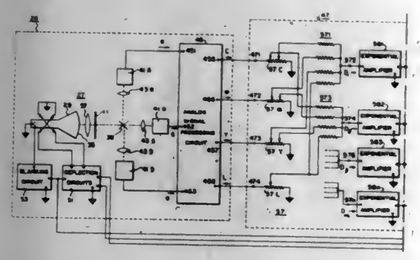


An antenna structure adapted to be inserted from above and to be secured in a minimal opening in a panel and which comprises a base having integral oppositely disposed mounting lugs formed on the base and having flat surfaces disposed to engage the under surface of the panel, a hollow externally threaded stem integral with the base to extend above the panel, an insulating sleeve telescoped within the stem and extending beyond the upper end of the stem, said sleeve having a radially extending portion engageable with the upper end of the stem to limit its lowermost position in the stem, an in-

sulated coaxial conductor comprising an outer shield conductor and an inner conductor insulated from the shield and projecting into the base, said conductors coextending upwardly into the stem and terminating within the confines of the sleeve, conductor clamping means integral with one of said lugs and disposed below the base for clamping an end portion of the coaxial conductor to one of said lugs, the terminal ends of the inner and outer conductors respectively extending upwardly and within the insulating sleeve and between the sleeve and the inner wall of the hollow stem and base, an antenna post mounted in the sleeve and having wedging means projecting into binding engagement with the terminal end of the inner conductor to expand the same and the adjacent end of the sleeve to exert a binding pressure on the said end of the inner conductor, the sleeve, and the said end of the outer conductor and against the inner wall of the stem whereby to establish electrical contact between the inner conductor and the antenna post and to establish a ground contact between the outer conductor and the stem and base, and a mounting nut threaded on the stem to draw the base and integral mounting lugs into clamping engagement with the panel area adjacent the minimal mounting opening therein.

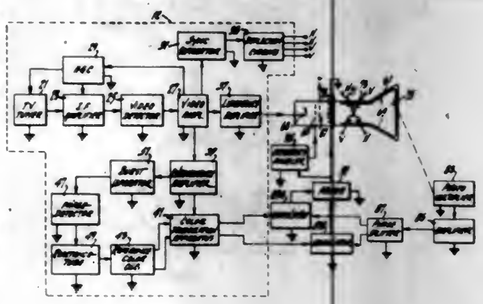
3,123,666
ELECTRONIC PREVIEWER FOR COLOR REPRODUCTION PROCESSES
William F. Bailey, Valley Stream, N.Y., assignor to Hazeltine Research, Inc., a corporation of Illinois
Filed Nov. 23, 1959, Ser. No. 854,742
11 Claims. (Cl. 178—5.2)





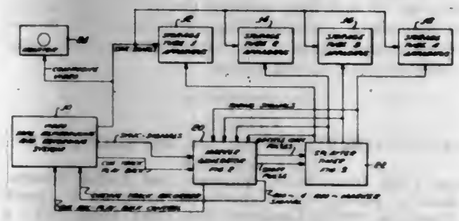
1. An electronic previewer including electronic image-reproducing means for displaying an electronic image of the color reproduction which will be obtained from an original color picture by a color reproduction process wherein the reproduction is formed by overlaying impressions of respective primary color-separation images of the original picture in pigments of the corresponding colors, said previewer comprising: electro-optical input means including an electronic scanner for deriving from said original picture electrical signals respectively representative of the reflection densities of said pigmented color-separation impressions thereof; and matrixing circuit means connected to said input means for translating said reflection-density representative signals to said image-reproducing means and modifying them in accordance with the relative spectral absorptions of said pigments as well as the relative spectral taking responses of said image-reproducing means in each of a plurality of spectral regions; whereby said image-reproducing means is caused to display said electronic color image.

3,123,667
COLOR KINESCOPE DISPLAY SYSTEM
Loren B. Johnston, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Dec. 15, 1961, Ser. No. 159,538
5 Claims. (Cl. 178—5.4)



1. In a system for displaying color images in response to correlated luminance and chrominance information comprising a color image reproducing device having means for generating a beam of electrons, means for controlling the intensity of said beam of electrons, and a target for said beam of electrons, said beam target comprising an array of phosphor strips of different color emission characteristics arranged in a repeating sequence and including a plurality of indexing elements in association with said phosphor strips; apparatus comprising the combination of beam deflection means for causing said beam of electrons to trace a succession of substantially parallel scanning lines on said target transversely with respect to the phosphor strips of said array, the tracing of said scanning lines causing successive beam traversals of said indexing elements; means responsive to the beam traversals of said indexing elements for developing an indexing wave of a fundamental frequency nominally equal to the frequency at which successive phosphor strips of a given one of said different color emission characteristics are traversed by said beam; means coupled to said fundamental frequency indexing wave developing means for developing a second indexing wave of a frequency substantially equal to the second harmonic of said fundamental frequency; means for varying the velocity at which said beam traces said scanning lines; means coupled to said beam intensity controlling means for utilizing the second harmonic indexing wave developed by said second-named developing means to modulate the intensity of said electron beam; and means coupled to said line scanning velocity varying means for utilizing the fundamental frequency indexing wave developed by said first-named developing means to modulate the line scanning velocity of said electron beam; said apparatus also including means rendering both of said indexing wave utilizing means response to said chrominance information in such manner that each of the respective indexing waves utilized for beam modulation therein is modulated in accordance with chrominance information.

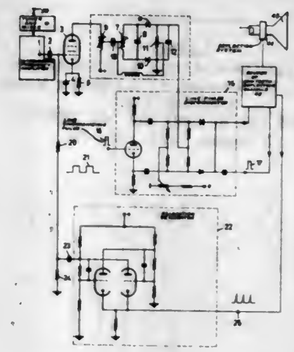
3,123,668
VIDEO TAPE EDITING SYSTEM
John D. Silva, Alhambra, Calif., assignor to Paramount Television Productions, Inc., Hollywood, Calif., a corporation of California
Filed Dec. 6, 1960, Ser. No. 74,164
10 Claims. (Cl. 178—6.8)



1. A system for inspecting for editing Videotape of the type having recorded thereon composite video signals including vertical-synchronizing signals and having a cueing track for recording marking signals associated with said composite video signals, said system comprising means for reading said video signals from said tape, means for generating a first marking signal, means for recording signals on said cueing track, means for applying said first marking signal to said means for recording at a location on said cueing track identifying the beginning of Videotape having video signals desired to be inspected for editing means, for reading signals recorded on said cueing track, means responsive to said first marking signal being read for generating successive timing signals each having a predetermined duration at selective time intervals occurring thereafter, means rendered operative in response to a timing signal for affording a continuous display of a picture represented by video signals applied to said means at the time of the application of one of said timing signals thereto, means for applying the video signals read from said Videotape to said means for affording the continuous display of a picture, means for selectively applying said successive timing signals to said means for affording a continuous display of a picture to render it operative to respond to said means for applying video signals, means for generating a second marking signal, means for selecting the next timing signal which will be generated at the same interval after the reading of said first marking signal as the timing signal responsive to which a desired picture is obtained from said means for affording a continuous display of pictures, and means for applying said second marking signal to said means for recording signals on said cueing track responsive to the occurrence of said selected next timing signal for marking the location on said Videotape for editing.

3,123,669
TELEVISION RECEIVER TUNING INDICATOR
Helmut Mehlborn, Krefeld-Oppum, Germany, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Oct. 12, 1960, Ser. No. 62,223
Claims priority, application Germany Nov. 6, 1959
6 Claims. (Cl. 178—7.5)

1. Means for indicating the tuning of a television receiver having an image reproducing device, a source of modulated carrier signals, and a source of sawtooth deflection oscillations for said image reproducing device, said means comprising frequency discriminator means, gate means, means for applying said modulated carrier signals to said discriminator means by way of said gate means to provide a control voltage in said discriminator means dependent upon the tuning of said receiver, means applying said control voltage to said source of oscillations to displace the image on said image reproducing

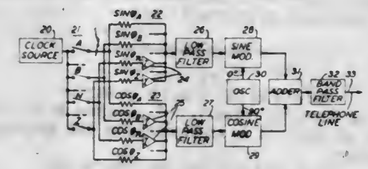


device, a source of a pulsatory signal having a frequency equal to

$$\frac{n}{2}$$

times the field frequency of images on said image reproducing device, wherein n is an integer, and means for applying said pulsatory signal to said discriminator means for periodically blocking the application of said modulated carrier signals to said discriminator means, whereby a portion of the image on said reproducing device is physically displaced with respect to another portion of said image when said receiver is incorrectly tuned.

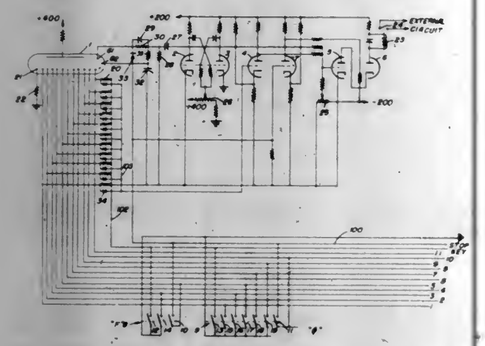
3,123,670
MULTIPHASE DATA SYSTEM
Reginald A. Kaenel, Murray Hill, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed June 18, 1962, Ser. No. 203,196
14 Claims. (Cl. 178—66)



1. A system for translating phase information into an amplitude-modulated carrier wave signal comprising
first resistive means for deriving from a given phase vector components proportional to the sine and cosine of the vector angle,
a carrier wave source producing two orthogonal components of the same frequency,
means for amplitude modulating the respective orthogonal components in the output of said wave source with the sine and cosine components from said deriving means,
means for combining the modulated orthogonal components into a single output wave at said carrier frequency for transmission to a remote point,
means at said remote point for separating said sine and cosine components from said output wave,
further resistive means for combining said separated components into resultant signals representative of possible transmitted phase vectors,

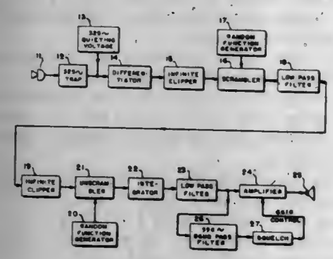
and means for selecting the signal from said further resistive means of maximum amplitude as the most probable transmitted phase.

3,123,671
ELECTRONIC CODE TYPEWRITER
Rodney W. Johnson, 9372 Hillview Road, Anaheim, Calif.
Filed Apr. 8, 1960, Ser. No. 20,937
12 Claims. (Cl. 178—79)



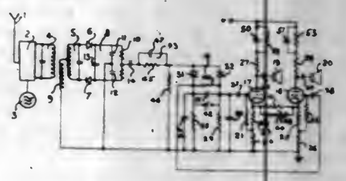
1. A system for producing code intelligence comprising, code marking means, space generating means operatively connected to said code marking means supplying space generating signals to render said marking means inoperative during spacing intervals between marking intervals of equal duration, code input means operatively connected to said space generating means to render said space generating means operative to produce a sequence of space generating signals during a limited duration of marking and spacing intervals, and signal storing control means operatively connected to the code input means and space generating means for interrupting space generating signals of said sequence to produce equally spaced marking periods extending over different numbers of spacing and marking intervals.

3,123,672
SPEECH SECURITY SYSTEM
Arthur H. Ross, Shrewsbury, N.J., assignor to the United States of America as represented by the Secretary of the Army
Filed May 2, 1960, Ser. No. 26,386
4 Claims. (Cl. 179—1.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A security communications system comprising: first means for supplying an input signal, second means for adding a quieting voltage signal to said input signal, said quieting voltage signal having a frequency inside the pass-band of said system, signal scrambling means connected to the outputs of said first and second means for rendering said input signal unintelligible, transmission means for supplying said unintelligible signal to unscrambling means for rendering said input signal intelligible, output means connected to said unscrambling means for reproducing said input signal, and squelching means responsive to said quieting voltage signal in the absence of said input signal for disabling said output means.

3,123,673
DEVICE FOR STEREOPHONIC REPRODUCTION OF SIGNALS
Frans Louis Henri Marie Stumpers and Rudolf Schutte, both of Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Feb. 24, 1961, Ser. No. 91,412
Claims priority, application Netherlands Mar. 2, 1960
9 Claims. (Cl. 179—15)

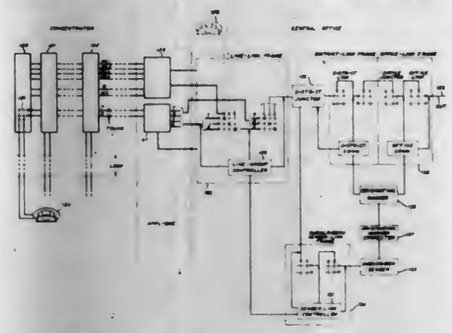


1. A circuit for the stereophonic reproduction of signals of the type having a sum signal of first and second coherent stereophonic signals, and a difference signal of said first and second signals, said difference signal being in the form of amplitude modulation of a subcarrier, said circuit comprising a source of said sum and difference signals, first and second amplitude detector circuits comprising first and second unidirectional current devices respectively, frequency dependent attenuator means connected to apply said sum and difference signals in common to said first and second amplitude detector circuits, said first and second unidirectional current devices being connected with opposite polarities with respect to said sum signal, and means connected to said first and second detector circuits to derive first and second stereophonic output signals respectively, said attenuator means having substantially uniform damping factors in the frequency ranges of each of said sum and difference signals, the damping factor for the frequency band of said sum signal being greater than the damping factor for the frequency band of said difference signal.

3,123,674
DISTRIBUTED TELEPHONE LINE CONCENTRATOR
Chester E. Brooks, Montvale, George B. Crofutt, Jr., Verona, James L. Henry, Madison, and William C. Sand, Chatham, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 29, 1960, Ser. No. 79,415
23 Claims. (Cl. 179—18)

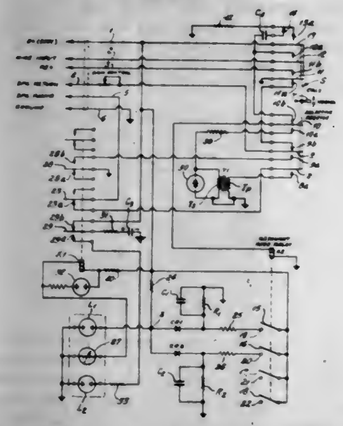
1. A distributed telephone line concentrator including a central office, a plurality of trunks extending from said office, a greater plurality of substations remotely located from said office, a plurality of concentrator units individual to said substations and physically disposed contiguous to said substations, said units including means for connecting said substations to said trunks under control of said central office, means at said units responsive to

a service request condition at said substations for transmitting a distinctive group of identifying pulses to said



central office, and means at said central office for controlling said units to regenerate said identifying pulses.

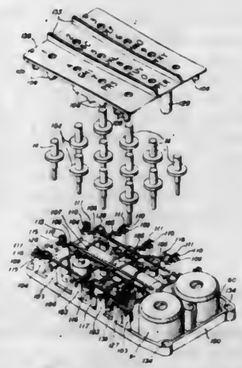
3,123,675
FREQUENCY SELECTIVE SIGNALLING SYSTEM
Joseph E. Boone, Ferndale, Md., and John S. Hill II, Raleigh, N.C., assignors to Metrotek Electronics, Inc., a corporation of North Carolina
Filed Nov. 1, 1962, Ser. No. 234,674
11 Claims. (Cl. 179—87)



11. A signalling system for cooperation with a transmitter, a receiver and a power supply, comprising a resonant reed relay having winding means and a resonant reed magnetically coupled to said winding means; a control circuit having contact means adapted to be engaged by said reed, an input circuit connected to said contact means and an output circuit connected to a signal circuit; and switching means for selectively connecting said winding means with an output of said receiver for a first condition of operation and with said power supply and an input of said transmitter for a second condition of operation.

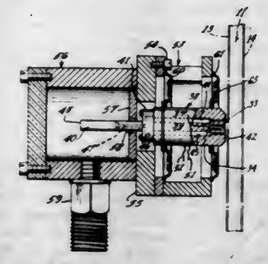
3,123,676
TELEPHONE CALL TRANSMITTER
Robert E. Prescott, Rumson, and Edwin Watkinson, Colts Neck, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed May 23, 1962, Ser. No. 197,010
5 Claims. (Cl. 179—90)

1. A telephone call transmitter comprising a frame member and a cover member, spacing means for securing said cover member to said frame member and defining a mounting space therebetween, a plurality of oppositely disposed pairs of mounting pillars extending between said frame and cover members, an array of offset transverse rotating rods and offset longitudinal rotating rods mounted in said pillars between said frame and cover members, said longitudinal and transverse rods being mounted in the same plane, said transverse rods including U-shaped clearances at each intersection with a longitu-



dinal rod, a plurality of cylindrical pushbuttons with cylindrical flanges supported by said frame and cover members, each pushbutton positioned to engage one transverse rod and one longitudinal rod at the intersection of the two, an elastic switching element for each rotating rod, said switching elements being perpendicular to the plane of said rotating rods and each engaging one of said rotating rods above their centers of rotation, and said cover member including columns of indicia registered with said pushbuttons and separated by vertical ridges.

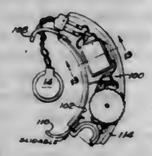
3,123,677
MAGNETIC RECORDING SYSTEM
Carl Lauxen, Haddonfield, N.J., Martin Lewis Levene, Philadelphia, Pa., and David L. Nettleton, Haddonfield, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed July 8, 1957, Ser. No. 670,525
7 Claims. (Cl. 179—100.2)



1. In a recording system utilizing a recording medium on which signals are adapted to be magnetically recorded, a transducer for scanning said medium to record and reproduce signals thereon, said transducer having a front portion disposed opposite from said medium and a rear portion, a housing for said transducer, said front portion of said transducer being exposed to said record from one end of said housing, said housing having an orifice extending therethrough from said one end to said opposite end thereof, means for exhausting a pressurized compressible fluid through said orifice for establishing oppositely

directed forces between said front portion of said transducer and said recording medium varying in magnitude in accordance with the distance between said front portion and said recording medium, said last named means also including means for admitting said fluid into the opening of said orifice on said opposite end of said transducer housing for establishing a constant force upon said rear portion of said transducer in a direction opposite to said force upon said front portion of said transducer, and means for supporting said transducer for displacement toward and away from said recording medium, said supporting means comprising a sheet of flexible material having corrugations and a central opening therein, means for mounting said transducer in said opening, a stationary support structure surrounding said transducer, and means for securing said sheet to said support structure at the outer periphery thereof, said force applied to said rear portion of said transducer having a certain value to provide for equilibrium thereof with said force on said front portion of said transducer when said distance between said recording medium and said front portion is equal to a predetermined distance.

3,123,678
HEARING AID APPARATUS
John G. Prentiss, Berwyn, and John T. Valaskovic, Chicago, Ill., assignors to Zenith Radio Corporation, a corporation of Delaware
Filed Dec. 13, 1955, Ser. No. 552,744
17 Claims. (Cl. 179—107)



1. A hearing aid comprising: a casing having an acoustic aperature and of a size enabling its disposal in a position substantially entirely behind the external ear and adjacent the rearward junction between the pinna and the head; an input transducer supported in said casing and responsive to received acoustical signals for developing electrical signals representative thereof; an amplifier supported in said casing and coupled to said input transducer for amplifying said electrical signals; means in addition to said casing for positively supporting said casing grippingly in said position; and means, including an output transducer coupled to said amplifier, responsive to the amplified electrical signals for disseminating amplified acoustical energy into the auditory canal on the side of said external ear opposite said casing.

3,123,679
TELEPHONE TEST SET
David L. Donville, Wayne, N.J., Walter B. Lueft, North Merrick, N.Y., and Peter S. Philippi, Freehold, N.J., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 1, 1961, Ser. No. 92,541
6 Claims. (Cl. 179—175.2)

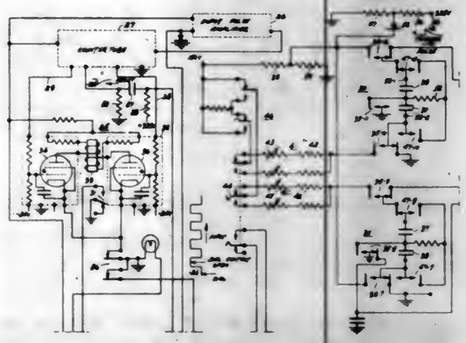
1. A testing circuit for testing the time duration of a series of generated pulses comprising:

a pair of capacitance circuits connected in series opposition,

a charging circuit means including a pair of resistance circuits,

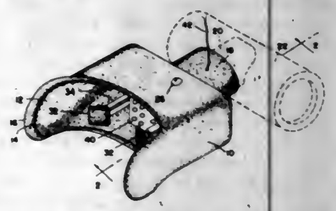
means responsive to a first pulse for connecting the charging circuit means to the capacitance circuits to charge the capacitance circuits at rates dependent upon the values of the resistance circuits,

normally unoperated means for indicating a predetermined difference in charge on the capacitance circuits, and



means responsive to a predetermined succeeding pulse for disconnecting the charging circuit means from the capacitance circuits and for operating the indicating means when the predetermined difference in charge exists in the capacitance circuits.

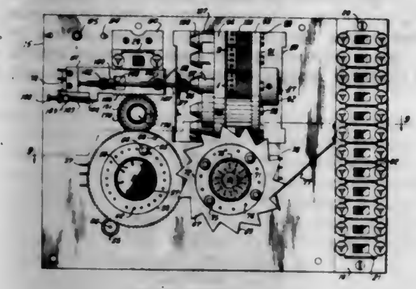
3,123,680
MOUTHPIECE FOR SUBMARINE USE
Jack A. Minton, Jr., Rte. 2, Box 466-AD, Dallas, Tex., and Don B. Wilson, 3517 Cole Ave., Dallas 4, Tex.
Filed Mar. 4, 1960, Ser. No. 12,781
5 Claims. (Cl. 179—187)



1. A mouthpiece for submarine use comprising a cupped flexible fluid tight housing defining a chamber terminating in a port having a curvilinear edge complementing that portion of a human face surrounding the mouth and spaced therefrom and a bit member secured in said chamber adjacent but within the area defined by said edge and disposed eccentrically with respect to said port for engagement between the teeth of a wearer, said mouthpiece containing a fluid supply port communicating therewith in spaced relationship with respect to said bit member and a sound transducer supported in said chamber.

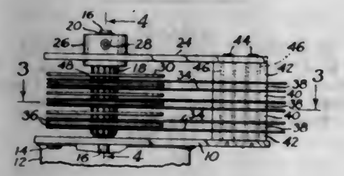
3,123,681
AUTOMATIC VARIABLE TIME CONTROLS
Leo A. Martini, Dallas, Tex., assignor to Telsco Industries, Dallas, Tex., a corporation of Texas
Filed Nov. 15, 1961, Ser. No. 152,683
22 Claims. (Cl. 200—33)

1. An automatic time control for successively supplying electrical current to a plurality of electrically operated mechanisms including a selector switch having a plurality of contacts for directing the supply of electrical current to the mechanisms, a magazine assembly, means supporting the magazine assembly and selector switch for rotation in unison, means for imparting intermittent rotation to the supporting means to advance the switch and assembly step by step, a plurality of elements corresponding to the contacts of said switch adjustably mounted on said assembly, a member reciprocally mounted for movement toward and away from said assembly, means carried by the member for engaging the elements in sequence upon rotation of said assembly, means for reciprocating



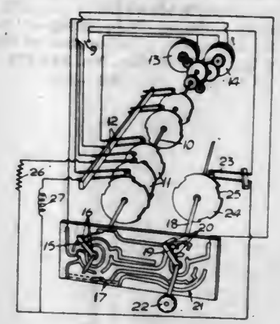
said member toward said assembly to engage its means with said elements, and means responsive to such engagement for actuating the rotation imparting means, the adjustment of said elements determining the intervals between actuations of said rotation imparting means.

3,123,682
ROTARY PROGRAMMING SWITCH
Theodore R. Byl, Oswego, Oreg., assignor to Code-A-Phone Electronics, Inc., Portland, Oreg., a corporation of Oregon
Filed Feb. 15, 1961, Ser. No. 89,396
1 Claim. (Cl. 200—38)



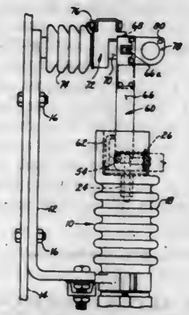
A rotary programming switch, comprising an elongated driven shaft having a non-circular cross section, a plurality of flat, circular, electrically non-conductive cam members each having a central opening matching the non-circular cross section of the driven shaft, the cam members being mounted on the shaft for rotation therewith and for longitudinal sliding movement thereon, a plurality of pairs of elongated, resilient electrical contact arms arranged in a stack with electrically non-conductive spacers separating the arms from each other adjacent one end of said arms, means mounting the stack adjacent the cam members with each pair of said arms disposed parallel to and extending across and beyond a different one of said cam members on opposite sides of the latter and intersecting the circumferential plane thereof as a chord, whereby each cam member is retained in position on the shaft by confinement between intermediate portions of each associated pair of contact arms, an electrical contact on each arm on the side of the cam member remote from the spacers, each cam member having an arcuate cam slot disposed within its circumference, and cam follower means projecting from at least one arm of each pair of contact arms for registry with the associated cam slot for opening and closing the electrical contacts on the associated pair of arms as the cam member is rotated with the driven shaft.

3,123,683
CYCLICALLY OPERATED SWITCH CONTROL APPARATUS
Harry Stanley Lewis and Francis McGuirk, Birmingham, England, assignors to Chamberlain & Hookham Limited, Birmingham, England
Filed May 12, 1961, Ser. No. 109,632
2 Claims. (Cl. 200—38)



1. Switch control apparatus of the kind specified comprising in combination a rotatable shaft, a plurality of members mounted on said shaft so as to be rotatable therewith, a plurality of switches operable by said members, power-operable means connected to said shaft for imparting rotation thereto at a normal speed, speed-varying means under the control of which said shaft is rotatable at a speed different from said normal speed, a movable control member for actuating said speed-varying means, a cam rotatable by said movable control member and an additional switch actuable by said cam to control the effect of at least one of said first-mentioned switches when said speed-varying means is brought into action.

3,123,684
CABLE TERMINAL AND SWITCHING DEVICE
Edward H. Yonkers, 757 Bluff St., Glencoe, Ill.
Filed Nov. 28, 1961, Ser. No. 155,391
11 Claims. (Cl. 200—48)



11. An electrical switching device comprising first and second spaced apart terminals, a switching element for electrically interconnecting said terminals, said element having a pivot pin adjacent one end for engagement with said first terminal and contact means adjacent the other end for engagement with said second terminal when said element is in a closed position, slot means defined in said first terminal having an end wall and removably receiving said pivot pin of said switching element and retaining means on said first terminal having a pivot pin engaging surface thereon for normally biasing said pivot pin against said end wall of said slot means said retaining

means including a resilient member having a deflectable free end portion defining said pivot pin engaging surface, said pivot pin engaging surface extending along the length of said pivot pin and positioned to normally extend into said slot means.

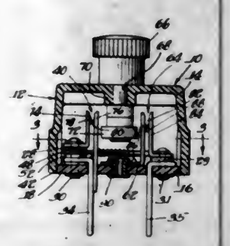
3,123,685
FRONT OPERATED ENCLOSED SWITCHING APPARATUS
Alfred E. Maier, Colonia, N.J., assignor to Federal Pacific Electric Company, a corporation of Delaware
Filed Oct. 5, 1959, Ser. No. 844,578
5 Claims. (Cl. 200—50)



2. An enclosed switching device having a switching mechanism, a front-operated twist handle mounted thereon and turnable to a plurality of different positions for correspondingly actuating the switching mechanism, said device having means defining an internal passage that opens to the exterior of the switching device for admitting part of a cover latch that may be inserted while providing for external extension of a projecting part of such latch, an internal actuating mechanism in said device coupled to said handle and operable under control of said handle between "latch" and "release" configurations in co-ordination with said switching mechanism, said actuating mechanism having a movable element adjacent said passage for driving a latch, when inserted, from one of said configurations to the other, said switching device also having resilient latch-retention means mounted adjacent and extending into said passage and concealed within the switching device, said latch-retention means acting laterally in the direction toward the space in the passage provided for a latch.

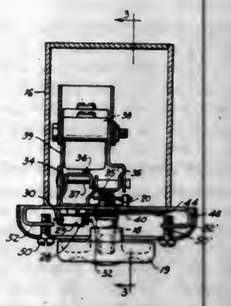
3,123,686
THERMALLY ACTUATED CIRCUIT DELAY SWITCH CONNECTOR
Max Leichsenring, 4525 N. Francisco St., Chicago, Ill.
Filed May 2, 1962, Ser. No. 191,797
8 Claims. (Cl. 200—51)

7. A delayed action switch comprising, in combination, a first input conductor, a first output conductor, a first switch contact connected to one of said conductors, a second switch contact connected to the other of said conductors, thermal actuating means connecting to said second contact to move said second contact into and out of engagement with said first contact, said thermal actuating means being responsive to heating and cooling of the thermal actuating means to move in opposite directions having a predetermined thermal polarity, said thermal actuating means being physically positioned in relation to said first and second contacts and in relation to said thermal polarity of the actuating means to move said second contact into engagement with said first contact upon heating of the actuating means and to move said second contact out of engagement with said first contact upon cooling of the actuating means, electrical heating means disposed in proximate heat transferring relation to said thermal actuating means to heat the latter, a second input conductor, a second output conductor connected to said second input conductor, a manual control switch; and means connecting said manual control switch and said electrical heating means in series between said first



and second input conductors to effect, when said manual control switch is closed, energization of said heating means and heating of said thermal actuating means which moves said second contact into engagement with said first contact thereby connecting said first output conductor with said first input conductor and to effect, in response to opening of said manual control switch, deenergization of said heating means causing said thermal actuating means to cool and subsequently move said second contact out of engagement with said first contact thereby disconnecting said first output conductor from said first input conductor.

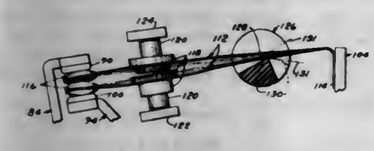
3,123,687
HUMIDITY RESPONSIVE DEVICE
Thomas K. Kjellman, Timonium, and Frank O. Watson, Baltimore, Md., assignors to The Bendix Corporation, Baltimore, Md., a corporation of Delaware
Filed Apr. 13, 1962, Ser. No. 187,273
2 Claims. (Cl. 200—61.06)



1. In a humidity control device adapted for wall mounting,
- a substantially flat base member adapted to be mounted substantially parallel with said wall,
- a roller secured to the outside surface of said base member,
- a humidity responsive element mounted on the outside surface of said base member and doubled over said roller in a plane substantially parallel to the plane of said base member, said element changing in length as the moisture content of the surrounding air changes,

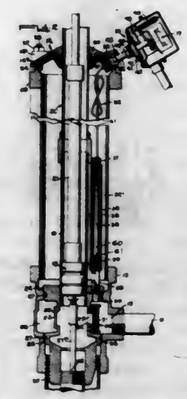
- a control shaft rotatably mounted on said base and extending perpendicularly therefrom and a cam on said shaft behind said base member,
- actuator means mounted at the back of said base member including spring biased electrical switch means, a first lever operating said switch means against its spring bias and connected to one end of said humidity element, a second lever movable in response to rotation of said shaft and connected to the opposite end of said humidity element whereby the position of said second lever determines the operating point of said electrical switch means relative to the length of said humidity element,
- and an elongated arcuate strain release spring connected between an anchor point on said base and said second lever, whereby upon the tension of said element exceeding a predetermined value, said second lever is permitted to move in a direction to reduce the tension on said humidity responsive element, said spring having a substantially constant spring force over the extent of its deflection.

3,123,688
SWITCHES FOR COIN SEPARATORS
Gustav F. Erickson, Kirkwood, Mo., assignor to National Rejectors, Inc., St. Louis, Mo., a corporation of Missouri
Filed Apr. 24, 1959, Ser. No. 808,669
5 Claims. (Cl. 200—67)



3. An electric switch that has a fixed contact, a second fixed contact, an elongated flexible leaf spring, a movable contact that is secured to and carried by said spring, said spring holding said movable contact in register with said fixed contacts and biasing said movable contact toward said first said fixed contact, an actuator that can engage said spring and apply forces to said spring, a magnet that is mounted on and carried by said spring, spaced poles that coact with said magnet to bias said magnet and said spring toward two spaced positions, said poles being spaced apart a distance proportionately greater than the distance between said fixed contacts, whereby said spring can bend and permit said magnet to continue to move toward, but to stop short of, said poles after said movable contact has engaged said fixed contacts, said movable contact being in engagement with said first said fixed contact and said magnet being adjacent one of said poles whenever said magnet and said spring are in one of said spaced positions, said movable contact being in engagement with said second fixed contact and said magnet being adjacent the other of said poles whenever said magnet and said spring are in the other of said spaced positions, said magnet being intermediate said movable contact and said actuator, said actuator moving said spring toward said other spaced position, said magnet causing said movable contact to strike said second fixed contact a sharp blow and then bending said spring to closely approach but stop short of said other pole, said spring shifting said movable contact across the surface of said second fixed contact as it bends, said actuator enabling said spring to move back to the first said spaced position, said magnet causing said movable contact to strike said first said fixed contact a sharp blow and then bending said spring in the opposite direction to closely approach but stop short of the first said pole, said spring shifting said movable contact across the surface of said first said fixed contact as it bends in said opposite direction.

3,123,689
PRESSURE SENSING DEVICE
John Gordon Baker, Evansville, Wis., assignor to Baker Manufacturing Company, Evansville, Wis., a corporation of Wisconsin
Filed Aug. 15, 1960, Ser. No. 49,574
5 Claims. (Cl. 200—81)



2. In a device for sensing changes in water pressure in a pitless water pump installation of the deep well type and actuating the pump control switch of said installation, the combination of a well enclosure having a water passage therein, said water passage being located below the frost line, a pressure actuated switch located above said water passage and outside said well enclosure where it is subjected to freezing temperatures, said switch including an actuator chamber, a fluid tight conduit for transmitting pressure changes from said water passage to the actuator chamber of said pressure actuated switch, said conduit comprising a rigid walled tube connected at one end in fluid tight communication with said water passage, a capillary tube permanently sealed to the other end of said tube and communicating therewith, a tubular fitting extending from the inside to the outside of said enclosure and mounted in the wall of said well enclosure, said fitting having a passage therethrough and the other end of said capillary tube being permanently sealed to the inner end of said fitting in communication with said fitting passage, means providing a fluid tight connection between the outer end of the fitting and said actuator chamber of said pressure actuated switch, a flexible wall within said tube permanently sealed to the wall of said conduit to form a pressure transmitting fluid tight partition in said conduit, and a non-freezing liquid substantially filling said conduit above said partition.

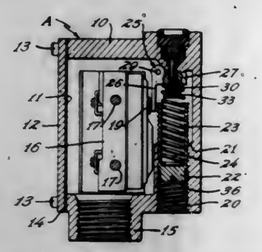
3,123,690
FLUID PRESSURE SWITCH
John T. Gondek, 2206 Roosevelt St. NE., Minneapolis, Minn.
Filed Feb. 19, 1962, Ser. No. 174,097
6 Claims. (Cl. 200—82)

1. A pressure switch including
- a housing including a cylinder providing communication between the interior and the exterior of said housing,
- a piston slidably supported in said cylinder and subject to pressure entering from the exterior of said housing,

a spring supported within said housing in axial alignment with said piston,

a bell crank lever having a pair of angularly related arms, one arm of which extends between said spring and said piston,

a connector positioned between said piston and said one arm to transmit movement of said piston to said arm in axial alignment to said spring, whereby movement of said piston is transmitted through said arm to said spring,



means pivotally connecting said housing to said bell crank lever at the juncture between said arms,

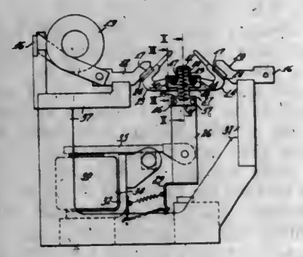
a switch mounted within said housing, and switch actuating means on said switch and in engagement with the other of said arms for actuating said switch when said piston is forced toward said spring, said one arm and piston including opposed sockets, said connector comprising a pin having tapered ends bearing against the bases of said sockets, said pin being free of engagement with the walls of said sockets.

3,123,691

MOVABLE CONTACT ASSEMBLY WITH A MAGNETIC SHIELD

Lawrence A. Burton, Oconomowoc, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Filed May 31, 1961, Ser. No. 113,764
5 Claims. (Cl. 200—87)



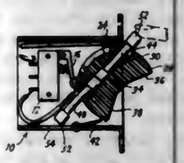
1. In a circuit interrupter in which the force on a movable contact during a short circuit opposes in one direction the force applied to the contact by a movable contact operating mechanism, a movable contact holding device comprising a U-shaped shield of magnetic material defining a magnetic circuit that includes an air gap between spaced apart ends of said shield, and means supporting said shield independently of the movable contact and positioning said shield to encircle the movable contact partially in the direction from the movable contact of the force applied to the movable contact by the contact operating mechanism and to include a portion of the movable contact outside said ends in said air gap when the contactor is closed.

3,123,692

FUSED SWITCH

George J. Weber, Des Peres, Mo., assignor to McDonnell Aircraft Corporation, St. Louis, Mo., a corporation of Maryland

Filed Apr. 6, 1960, Ser. No. 20,370
3 Claims. (Cl. 200—114)



1. An electrical switch device comprising a pair of switch units each having an operator arm movable between positions opening and closing the switch units, a rotatable operator member mounted adjacent to said switches and having a contoured surface associated with and engageable by each of said arms, means for rotating the operator member in a selected direction to change the positional engagement of said arms on the associated contour surfaces and thereby operate the switch units, a pair of spaced open-ended passages extending through said operator member, said switch units and said operator member are mounted on a housing having means blocking at least one end of each of said open-ended fuse passages in certain selected positions of the operator member, said housing having other means unobstructing said passage ends in another position thereof, said last named position occurring when the switch units are open, sealed fuses slidably positioned in said passages, and means for electrically connecting said fuses in circuit with the switches.

3,123,693

TIME-LAG FUSES OF THE BLADE CONTACT TYPE

Frederick J. Kozacka, Southampton, Mass., assignor to The Chase-Shawmut Company, Newburyport, Mass.

Filed June 12, 1961, Ser. No. 116,365
17 Claims. (Cl. 200—120)



1. A time-lag fuse comprising a tubular casing of insulating material, a pair of terminal elements closing the ends of said casing, a pair of blade contacts having a predetermined width projecting from the outside of said casing transversely through said pair of terminal elements into the inside of said casing, a pair of multiperforated composite fuse link structures of a metal having a relatively high conductivity and a relatively high fusing point, said pair of fuse link structures having axially outer ends sandwiching the axially inner ends of said pair of blade contacts, each constituent fuse link structure of said pair

of fuse link structures comprising a first portion having about the same width as said pair of blade contacts and being arranged relatively close to the longitudinal axis of said casing and each of said pair of fuse link structures further comprising a second portion arranged generally more remote from said longitudinal axis and overlapping and shunting said first portion, overlays of a low-fusing-point-link-severing metal extending transversely across said first portion and extending transversely across said second portion of each of said pair of fuse link structures, and a pulverulent arc-quenching filler inside said casing for submersing said pair of fuse link structures, said filler having a smaller thermal conductivity than quartz sand.

3,123,694

HIGH CURRENT-CARRYING-CAPACITY CARTRIDGE FUSES WITH MINIMIZED LOSSES

Frederick J. Kozacka, South Hampton, N.H., assignor to The Chase-Shawmut Company, Newburyport, Mass.

Filed Nov. 2, 1961, Ser. No. 149,554
7 Claims. (Cl. 200—120)



1. An Underwriters' Laboratories standard size low-voltage fuse comprising:

a tubular casing of a homogeneous organic insulating material;

a pulverulent non-fulgurite-forming gas-evolving arc-quenching filler inside said casing;

a pair of blade contacts extending in a direction longitudinally of said casing each projection from the outside of said casing into the inside thereof;

ribbon fuse link means of copper submersed in said filler conductively interconnecting the axially inner ends of said pair of blade contacts, said fuse link means having a plurality of transverse lines of perforations forming serially related zones of reduced cross-section sufficiently small to result in a current-limiting ratio of less than 30, and said fuse link means having dimensions adapted to impart to said fuse a current rating of at least 400 amperes;

a low-fusing-point link-severing metal overlay on said fuse link means;

a pair of terminal caps each defining a passage for one of said pair of blade contacts and each closing one end of said casing sufficiently tight to substantially preclude the emission of hot products of arcing therefrom, and said pair of caps consisting of a non-ferrous metal.

3,123,695

THERMAL TIME DELAY RELAY WITH LARGE TIME CONSTANT

Ronald J. Strubberg, Bergenfield, N.J., assignor to Curtiss-Wright Corporation, a corporation of Delaware

Filed Nov. 3, 1960, Ser. No. 67,137
10 Claims. (Cl. 200—122)

1. A thermal time delay relay having a large time-constant comprising coacting switch contacts and means for controlling the opening and closing of said contacts including a heater, an elongated thermal element fixed at one end and in heat transfer relation to said heater, said element varying in length according to heating thereof, a force-transmitting member comparable in length to said thermal element connected to the other end of said thermal element and extending approximately parallel thereto in reverse direction to a point adjacent to said fixed end, and an ambient temperature compensator member having a thermal coefficient of expansion comparable to that of said thermal element and fixed at one end thereof so as to extend approximately parallel along the thermal element, said force-transmitting member and said compensator member having a connection under stress between their free ends respectively so as to be under initial tension and to subject the compensating member to bending moment whereby linear expansion and contraction



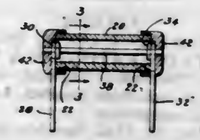
of said thermal element in response to heater influence varies the stressed condition of said connection and the bending moment applied to said compensator member for causing warping of the free end thereof in one direction or the other, said compensator operating said switch contacts, opening and closing of said coacting switch contacts being controlled by the aforesaid free end of the compensator according to the aforesaid warping movement thereof.

3,123,696

PROTECTORS FOR ELECTRIC CIRCUITS WITH COILS FORMED ON THE ENDS OF THE TERMINALS

Craig L. McAlister, Overland, Mo., assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware

Filed July 22, 1960, Ser. No. 44,811
7 Claims. (Cl. 200—132)



7. An electric fuse that comprises a casing, terminals that have coils formed in the ends thereof, said coils extending into said casing, and a fusible conductor that extends between and is secured to said terminals, said coils constituting generally spherical arc gaps that minimize the danger of flashover between said terminals.

3,123,697

THERMALLY RESPONSIVE SWITCH

Charles Grimshaw, Fulton, Ill., assignor to General Electric Company, a corporation of New York

Filed Dec. 28, 1960, Ser. No. 78,923
12 Claims. (Cl. 200—137)

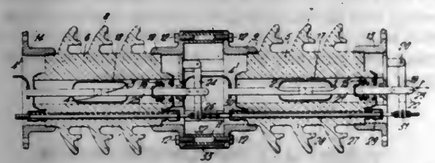
1. A thermally responsive switch comprising an elongated housing, an elongated support disposed longitudinally within and substantially contained by said housing, said housing and said support each being expansible and contractible longitudinally in response to temperature variations and at respectively different rates with the rate of response of the support lagging that of the housing, lever means disposed within said housing and operable between first and second positions, switch contact means disposed within said housing and operable by said lever means, fixed contact means engaged by said switch contact means when said lever means is in said second position, and resilient means continuously biasing said lever means toward the first position, said lever means including a force receiving section disposed transversely within

said housing, one side of said section engaging said housing at a first pivot, the other side of said section engaging said support at a second pivot spaced from said first pivot, said housing and support being arranged to exert offset and oppositely directed thermally responsive forces upon said lever means at said first and second pivots respectively to normally urge said lever means into the second position against the biasing force of said resilient



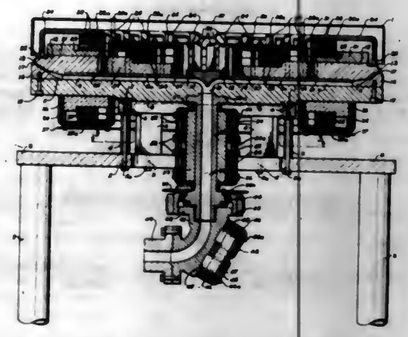
means, the movement of said pivot points upon predetermined temperature conditions being arranged to allow said resilient means to move said lever to said first position, and said resilient means applying an increasing force as said lever means moves from said second position to said first position, thereby to produce a positive temperature differential between said positions of said lever.

3,123,698
CIRCUIT BREAKERS HAVING INTERRUPTING CONTACTS OPERATING IN A VACUUM
Frank Waterton, Middlesex, England, assignor to Associated Electrical Industries Limited, London, England, a company of Great Britain
Filed Jan. 22, 1962, Ser. No. 167,701
Claims priority, application Great Britain Feb. 10, 1961
2 Claims. (Cl. 200—144)



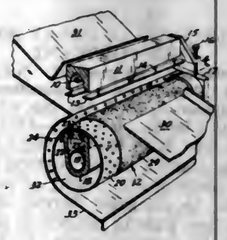
1. A circuit breaker comprising interrupting contacts for operating in an envelope forming a vacuum, at least two sets of such contacts being electrically series connected and enclosed in an insulator forming separate envelopes which are evacuated, sealed and aligned in the direction of contact opening, an intermediate enclosure connecting said separate envelopes by being sealed to the neighboring ends of adjacent separate envelopes, a mechanism for causing operation of the interrupting contacts comprising an insulating rod for each said envelope, each of said rods being situated parallel to said direction of contact opening and enclosed and sealed in a separate sealed channel, said separate sealed channels being filled with a medium of an insulating quality substantially higher than that of air and thus sealed to prevent pollution and ingress of humidity from the outer atmosphere, each of said separate envelopes of said insulator including a cylindrical hollow the opposite ends of which are closed by separate covers, and each of said separate sealed channels being positioned in a wall of each one of the said insulators and parallel to said cylindrical hollow.

3,123,699
INDUCTION HEATED CIRCULAR FILM DIE
Daniel W. Stephenson and Robert J. Schroyer, Cuyahoga Falls, Ohio, assignors to Blaw-Knox Company, Pittsburgh, Pa., a corporation of Delaware
Filed May 24, 1960, Ser. No. 31,391
7 Claims. (Cl. 219—10.49)



2. A circumferential film die comprising a die body, means in said body forming an annular extrusion orifice, said body having an upper generally circular surface adapted for the application of heating flux thereto, a circumferential electric induction heating coil having a diameter less than that of said surface, means supporting said coil wholly on one side of said body in spaced relation to and generally centered over said surface, and a plurality of generally U-shaped flux guides angularly distributed about said die body surface having longitudinally extending bodies positioned over said coil and inwardly turned legs on opposite sides of said coil in intimate contact with said surface, and insulating shims between said guide bodies and said coil to isolate said coil from direct contact with said flux guides.

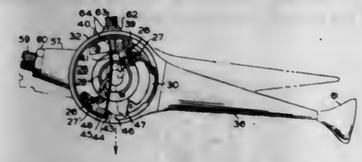
3,123,700
RADIATION EXPOSURE UNIT
Donald L. Snyder, St. Paul, and Richard G. Teske, St. Paul Park, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Mar. 28, 1960, Ser. No. 17,873
7 Claims. (Cl. 219—19)



1. In a machine for exposing a sheet material to intense radiation, the combination comprising a source

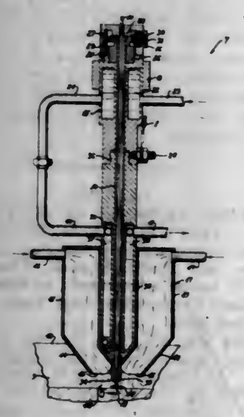
energizable to provide intense radiation, a padded porous support member in fixed spaced relationship from said source, and means to hold a sheet material on said support member while exposing said sheet material to intense radiation, said holding means consisting of vacuum suction of said sheet material into holding contact with said support member.

3,123,701
CONTROL DEVICE RESPONSIVE TO ICE-FORMING CONDITIONS
Joseph Edward Padgett, Jr., Traverse City, Mich., assignor to Parsons Corporation, Traverse City, Mich., a corporation of Michigan
Filed Jan. 3, 1961, Ser. No. 80,100
6 Claims. (Cl. 219—19)



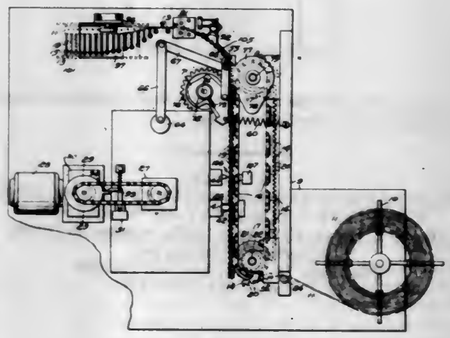
5. A control device responsive to the presence of atmospheric icing conditions, comprising a member drawn through the atmosphere along a substantially circular path in a plane and supported on a pivot axis remote from the center of the path and transverse to the plane, means to balance the member on the pivot axis under centrifugal forces accompanying rotation in a first angular position, means to accrete a centrifugally-unbalanced deposit of ice on the member under icing conditions of the atmosphere and by such deposit to deflect such ice-accreting means angularly about said pivot to a second angular position, and a systems control operated by such angular deflection.

3,123,702
DEEP GROOVE ARC WELDING APPARATUS
Ralph A. Keidel, Milwaukee, and George Metropulos, Menomonee Falls, Wis., assignors to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Jan. 11, 1962, Ser. No. 165,602
8 Claims. (Cl. 219—74)



1. The process of welding within a deep groove, comprising depositing the initial base weld beads by gas-shielded arc welding apparatus having a nozzle of rectangular cross section projecting within the groove, the lower end of said nozzle including shielding gas openings to envelop the arc in a shielding gas, and depositing the outer weld beads by gas-shielded arc welding apparatus having a bell-shaped gas-shield nozzle completely overlying the top of the weld groove.

3,123,703
METHOD AND APPARATUS FOR ATTACHING ARTICLES TO A STRIP
Robert P. Loeper, Reading, Pa., assignor to Western Electric Company, Incorporated, a corporation of New York
Filed Nov. 24, 1961, Ser. No. 154,733
6 Claims. (Cl. 219—103)

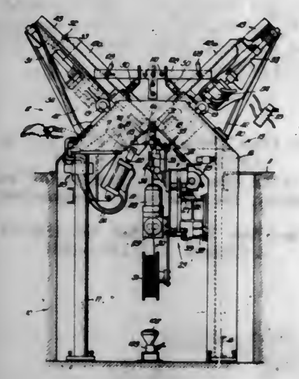


1. Apparatus for attaching articles to a carrier comprising:
two successive work stations,
means for feeding a flexible tape intermittently with rest periods to the two successive work stations,
a drive means for the tape feeding means,
means for feeding articles intermittently with rest periods to the two stations including an endless carrier with a series of slotted blocks carried thereby for receiving the articles,
a drive means for the article feeding means,
means for retaining the articles within the slotted blocks,
means at the first work station operable during the rest periods of both feeding means to perforate successively holes in the tape, and
means at the second work station operable during the rest periods of both feeding means to attach successively said articles directly to the major face of the tape in spaced relationship, with the articles extending from and being parallel to the major face of the tape and perpendicular to the major axis thereof.

3,123,704
ARC WELDING APPARATUS
Emmett R. Beebe, Glenview, Ill., assignor to S & C Electric Company, Chicago, Ill., a corporation of Delaware
Filed Aug. 10, 1961, Ser. No. 130,582
7 Claims. (Cl. 219—125)

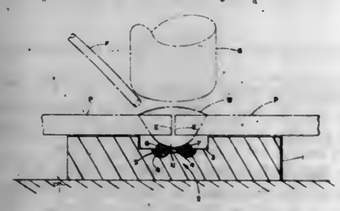
1. Apparatus for arc welding together the juxtaposed edges of a pair of metallic sheets comprising, in combination, means for supporting the sheets in angular relation with their juxtaposed edges facing downwardly, track means extending along said juxtaposed edges of said sheets, and an automatic arc welding head movably

mounted on said track means underneath said supporting means and arranged and adapted to feed a consumable



welding electrode upwardly toward said juxtaposed edges to deposit weld metal therealong.

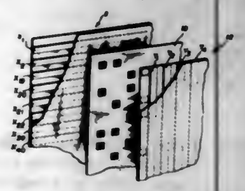
3,123,705
WELD BACKUP BAR AND MEANS FOR ASSURING COMPLETE WELD JOINT PENETRATION
Dexter J. Logan, El Monte, Calif., assignor to North American Aviation, Inc.
Filed July 10, 1961, Ser. No. 122,689
12 Claims. (Cl. 219—131)



1. A weld backup bar assembly adapted to aid in the formation of a weld joint penetration comprising a weld backup bar arranged to form a surface thereon onto which one or more welded workpieces are adapted to be supported and means formed on said weld backup bar at a predetermined distance from said surface and cooperating with the weld bead for thermoelectrically sensing and signaling said weld joint penetration.

3,123,706
ASSOCIATIVE MEMORY
Walter K. French, Montrose, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Aug. 10, 1960, Ser. No. 48,696
4 Claims. (Cl. 235—61.11)

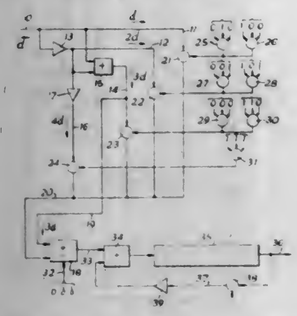
1. An associative memory system comprising:
(*a*) a planar record member divided into a plurality of coordinate rows and columns and having holes therein at selected row and column coordinate position, the holes in each column representing words comprised of identifying tag digits and data digits,
(*b*) a plurality of spaced digit electrodes permanently mounted in parallel fashion adjacent one face of the record member, each digit electrode being associated with one of the rows of the record member,
(*c*) a plurality of spaced word electrodes permanently mounted in parallel fashion adjacent the other face of the record member, each word electrode being associated with one of the columns of the record member, thus forming a sandwich construction with the record member serving as the central layer and the digit and word electrodes serving as flanking layers,
(*d*) means including the holes forming electrical connections between the digit and word electrodes at the selected row and column coordinate positions,
(*e*) a source of high frequency signals,
(*f*) a source of D.C. biasing potential connected to the source of high frequency signals,
(*g*) a plurality of diodes individually connected between the source of D.C. biasing potential and each of the word electrodes, said diodes being normally forward biased into a conductive state by the source of D.C. biasing potential to furnish a low impedance path for the high frequency signals,



(*h*) means for applying positive signals to the digit electrodes complementary to the identifying tag digits of a selected word to be read-out, to thereby simultaneously compare the complementary tag digits with the identifying tag digits of each of the words represented by the column holes in the record member,
(*i*) means responsive to a match between the complementary tag digits and the identifying tag digits of the selected word to be read-out for back-biasing the diodes connected to the remainder of the word electrodes into a non-conductive state, to thereby establish a read-out path for the high frequency signals only through the word electrode associated with the selected word,
(*j*) a plurality of output resistances individually connected to each digit electrode and offering high resistance paths to the positive signals applied to the complementary digit electrodes and low resistance paths to the high frequency signals, and
(*k*) a plurality of high frequency detectors, each detector being connected to one of the output resistances, whereby the detectors are responsive to the high frequency signals conducted over the tag and data digit electrodes of the selected word to effect read-out of same.

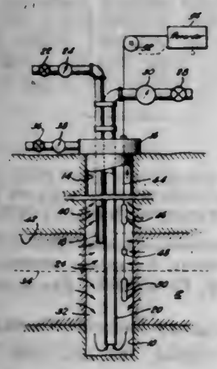
3,123,707
MULTIPLYING ARRANGEMENTS FOR DIGITAL COMPUTING MACHINES
Tom Kilburn, Urmston, David Beverley George Edwards, Manchester, and David Aspinall, Cheadle, England, assignors, by mesne assignments, to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Mar. 13, 1961, Ser. No. 95,380
Claims priority, application Great Britain Mar. 18, 1960
10 Claims. (Cl. 235—164)

1. A multiplying arrangement of the kind described for numbers represented by electric signals which comprises a signal-controlled arithmetic device which can be caused to effect either addition or subtraction of two number signals applied thereto in dependence upon a controlling signal, means for providing a number of separate signals representing respectively different successive multiples of the multiplicand number from the first multiple up to at least half the total number of multiples capable of being signalled by the chosen number of digits forming each separately examined digit group in the multiplier number and means for effecting the selection, in accordance with the examined values of each of said multiplier digit signal groups in turn, of an appropriate



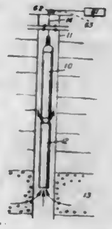
one of said multiplicand-multiple representing signals for application as one signal input to said arithmetic device and the simultaneous signal control of such device by the same group of multiplier digit signals whereby such arithmetic device causes either addition or substraction of the selected multiplicand-multiple representing signal to or from a chosen one of said multiplicand representing signals applied to the other input of said arithmetic device.

3,123,708
WELL PRODUCTION METHOD USING RADIOACTIVE TRACERS TO ESTABLISH TWO NULL POSITION
Stephen J. Limanek, Pleasantville, N.Y., assignor to Texaco Development Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 31, 1959, Ser. No. 863,249
5 Claims. (Cl. 250—43.5)



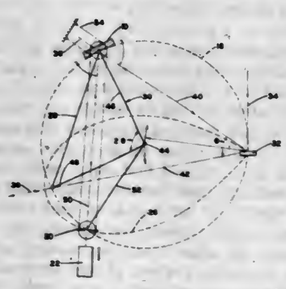
1. A productivity profile logging method of discharging out of the top of a borehole fluid flowing from a vertical interval of subsurface strata into said borehole which comprises dividing fluid flowing into the borehole from subsurface strata into first, second and third streams so as to establish in the borehole a first null point of flow between the first and second streams and a second null point of flow between the second and third streams, determining the depths in the borehole of said first and second null points of flow, and adjusting the rates of flow of each of the streams while maintaining constant the sum of the flow rates of the three streams so that the first null point of flow is positioned at one of the limits of the vertical interval of subsurface strata and the second null point of flow is positioned at the other limit of said vertical interval.

3,123,709
DENSITY MEASUREMENTS OF BOREHOLE FLUIDS USING AXIALLY SPACED RADIOACTIVE SOURCE AND DETECTOR MEANS
Richard L. Caldwell and Robert F. Sippel, Dallas, Tex., assignors to Socony Mobil Oil Company, Inc., a corporation of New York
Filed Mar. 10, 1960, Ser. No. 15,026
7 Claims. (Cl. 250—43.5)



1. Apparatus for determining the density of fluid including an elongated hollow flow channel adapted to be supported for movement through a conduit carrying such fluid and adapted to direct said fluid therethrough upon movement through said conduit, a source of gamma radiation, mounting means for supporting said source within and adjacent to one end of said flow channel and adapted highly to attenuate gamma radiation in all directions except along a path parallel to the axis of the flow channel to prevent reaction with substances in and adjacent the walls of said conduit, means including an energy sensitive gamma-ray detector supported in said path at a point spaced lengthwise along said channel from said source to detect gamma radiation passing through said fluid intermediate said source and said detector, and means for measuring the detected gamma radiation.

3,123,710
MECHANICAL MOTION AND X-RAY SPECTROGRAPHIC APPARATUS INCORPORATING IT
Hermann Neuhaus, La Crescenta, Calif., assignor to Applied Research Laboratories, Inc., Glendale, Calif., a corporation of Delaware
Filed Dec. 8, 1960, Ser. No. 74,704
11 Claims. (Cl. 250—51.5)



10. A scanning X-ray spectrometer, monochromator, or the like of the type having a curved diffraction element

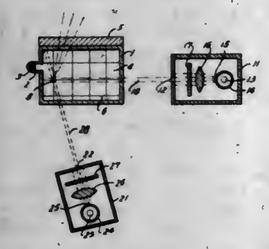
for forming a focused image of a source of X-radiation at a selected point along a focal circle comprising a supporting plate, means on said plate defining two straight guideways angularly offset from each other at an acute angle, an isosceles triangle link having an apex angle equal to twice said acute angle, means for mounting the opposite ends of the base of said link for smoothly guided travel along respective ones of said guideways with the apex of said link extending in the direction of convergence of said guideways, a first pivot fixed to said link at one end of the base thereof, an X-ray diffraction element fixed to said pivot, said diffraction element being of the focusing type and having a curved surface lying along a circle centered at the apex of said link, an auxiliary guideway pivoted on said first pivot, means defining a slit movable along said auxiliary guideway, a radius link pivotally connected between said slit means and the apex of said isoceles triangle link for spacing said slit means from the apex of said triangle link a distance equal to the spacing of said diffraction element therefrom, means for driving said slit means along said auxiliary guideway synchronously and equally with the travel of said first pivot, said driving means being arranged to drive said slit means toward said first pivot during travel of said pivot in the direction of convergence of said two straight guideways and to drive said slit means away from said first pivot during travel of said first pivot in the direction of divergence of said two straight guideways, and means for driving one end of the base of said triangle link along its guideway.

3,123,711

LUMINOUS SPOT DISPLAY DEVICE

Jack Fajans, Douglaston, N.Y., assignor to Electrokinetics Corporation, Florham Park, N.J., a corporation of New York

Filed July 21, 1961, Ser. No. 125,703
16 Claims. (Cl. 250—71)



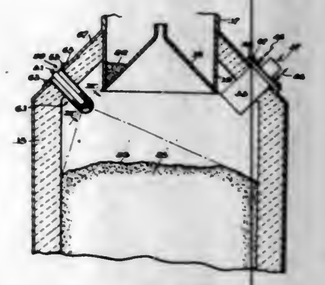
1. A display device comprising a body of material capable of existing in a ground state and in a plurality of excited states; a source of a first radiation having an energy corresponding to the transition of said material from said ground state to a first excited state thereof; a source of a second radiation having an energy corresponding to the transition of said material from said first state thereof to a second excited state of an energy level higher than the energy level of said first state; collecting means for collecting said first radiation and said second radiation in respective beams, at least one of said beams being elongated; and moving means for moving one of said beams relative to the other beam for causing said beams to intersect in a selected portion of said material, whereby said material in said portion is selectively excited to said second state, and emits electromagnetic radiation while undergoing spontaneous transition from said second state to a state having a lower energy level.

3,123,712

APPARATUS FOR MEASURING THE HEIGHT AND CONTOUR OF MATERIAL

Robert B. Spooner, Pittsburgh, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

Filed Nov. 14, 1961, Ser. No. 152,201
2 Claims. (Cl. 250—71.5)



1. Means for determining the height and contour of a surface of dense material in a blast furnace comprising a stationary radiation source, means for directing radiation from said source against a surface portion of said material, a stationary radiation detector comprising an array of fanned out light pipe scintillator filaments responsive to the scattered radiation whereby, when individual light pipe scintillator filaments are struck by said scattered radiation, light is emitted which traverses the length of said filaments and thereby visually indicates the height and contour of said surface, each light pipe scintillator filament being directed toward a different portion of said blast furnace whereby each light pipe scintillation filament is responsive to scattered radiation from a different portion of said blast furnace to convert said radiation to light, means to transfer said light from said light pipe scintillator filaments to a means for visually observing the height and contour of said surface of dense material, and heavy metal shielding positioned between said light pipe scintillators to substantially prevent radiation from one portion of said blast furnace from striking scintillator filaments other than the scintillator filament directed at said one portion of said blast furnace.

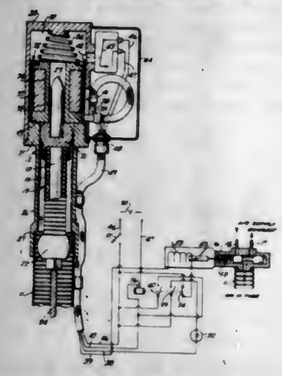
3,123,713

RADIOACTIVE SOURCE HANDLING APPARATUS WITH SHOCK ABSORBING MEANS FOR HOLDING AND RELEASING RADIOACTIVE PELLETS

Fred Maud, Philadelphia, Pa., and Thomas Horne, Princeton, N.J., assignors, by mesne assignments, to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed Sept. 23, 1960, Ser. No. 58,125
7 Claims. (Cl. 250—106)

1. A capturing and shock absorbing device for catching a projectile including a radioactive source that is projected through a tube into a receiving casing which comprises shock absorbing means positioned in the receiving casing in the path of said projectile for receiving and stopping said projectile at a position depending on the characteristics of the shock absorbing means and the kinetic energy of the projectile, electromagnetic capturing means responsive to deflection of said shock absorbing means for catching and holding said projectile when said projectile strikes and deflects said shock absorbing



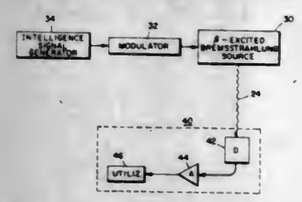
means, and electrical means for deenergizing said electromagnetic means to release said projectile.

3,123,714

SPACE COMMUNICATION SYSTEM

Henry R. Chope, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio

Filed July 21, 1961, Ser. No. 125,797
6 Claims. (Cl. 250—199)



1. A system for conveying an intelligence signal from one point to another in a space region comprising a transmitter at one of said points including a nuclear source providing a beam of beta radiation, a target mounted in the path of said beam and adapted to generate bremsstrahlung upon bombardment of the atomic nuclei in said target by the beta particles in said beam, means for modulating the intensity of said beta radiation beam incident on said target in accordance with said intelligence signal whereby in turn the intensity of said bremsstrahlung is modulated in accordance with said signal, and a receiver at the other of said points including a detector for said bremsstrahlung radiation for demodulating the same to obtain said intelligence signal.

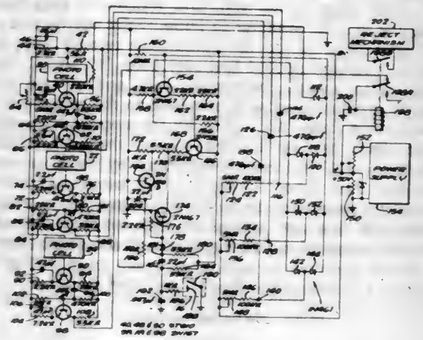
3,123,715

PHOTORESPONSIVE CIRCUIT FOR BOTTLE INSPECTION

Robert G. Husome, Manhattan Beach, Calif., assignor, by mesne assignments, to Barry-Wehmiller Machinery Co.

Filed Apr. 18, 1961, Ser. No. 103,757
9 Claims. (Cl. 250—214)

1. An improved circuit for a system for inspecting an empty bottle for cleanliness of the type wherein a bottle passes through an inspection zone including a source of illumination on one side and photocell means on the other side, said photocell means producing an output signal representative of the illumination reaching said photocell means, said circuit comprising a capacitor, a first diode, a second diode, means connecting said first and second diode to afford a unilateral current flow through both in series, means connecting one side of said capacitor between said first and second diodes, means for establishing a direct-current flow through said first diode, a bottle-reject relay means connected to said second diode,



means for applying output signals from said photocell means to the other side of said capacitor, whereby only abrupt changes in said output signal of said photocell means having a sufficient amplitude to block conduction in said first diode can pass through said second diode to actuate said bottle reject relay means.

ERRATUM

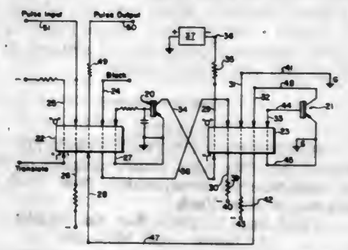
For Class 250—217 see:
Patent No. 3,123,724

3,123,716

PULSE TRANSLATING APPARATUS

Sigmund N. Porter, Beverly Hills, Calif., assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland

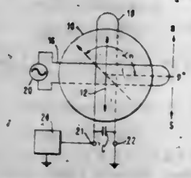
Filed Mar. 14, 1958, Ser. No. 721,505
12 Claims. (Cl. 307—88)



12. A solid state electric pulse translating apparatus adapted to selectively produce an output pulse representing a translation of a translatable input pulse and alternatively inhibit production of an output pulse, in response to application of a translate control pulse, and an inhibit control pulse, respectively, comprising: first and second bistable magnetic cores each susceptible of coercion to either from the other of first and second remanent magnetic states represented by "0" and "1," respectively; windings, each inductively linked with a respective one of said cores; first and second transistor means each connected with a respective one of said windings so as to be caused to conduct in response to coercion of the respective core from "0" to "1"; means cooperating with one of said windings to normally bias said second core to "1"; means responsive to a translate control pulse and

cooperating with one of said windings to selectively initially coerce said first core to "0" preparatory to translation of a group of at least one translatable input pulse; a pulse input line connected to one of said windings for return coercion of said first core from "0" to "1" incident to application to the line of an input pulse; means including connections from said first transistor, cooperating with one of said windings to temporarily coerce said second core from "1" to "0" against the normal bias, incident to coercion of said first core from "0" to "1" by an input pulse; means cooperating with one of said windings to produce a pulse in response to the return of said second core from "0" to "1" by the normal bias, which pulse upon passing through one of the said windings linked to said first core is sufficient by itself to coerce said first core from "1" to "0"; and translation inhibiting means responsive to an inhibit control pulse, cooperating with first and second of said windings linked to respective ones of said first and second cores and effective to inhibit coercion of said second core from "1" to "0" incident to conduction through said first transistor.

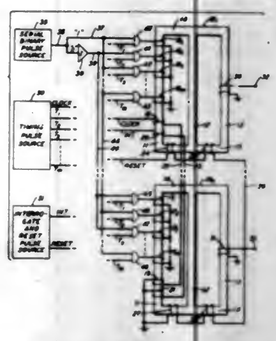
3,123,717
DYNAMIC MAGNETIC DEVICE
Jack G. Hewitt, Jr., Pittsburgh, Pa., and James C. Sagnis, Jr., Ossining, and Paul E. Stuckert, Katonah, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed July 28, 1959, Ser. No. 830,114
13 Claims. (Cl. 307—88)



1. A circuit comprising a magnetic film element defining a portion of a flux path only and exhibiting an easy axis of magnetization defining different stable states, of remanent flux orientation means for applying a varying field of a given frequency to the easy axis of said element, and input-output resonant circuit means tuned to resonate at said given frequency coupling said element in quadrature with the easy axis of said element.

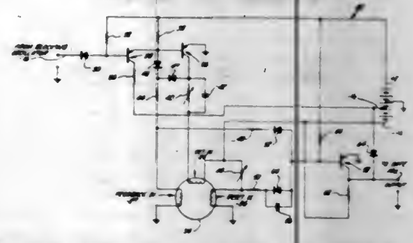
3,123,718
MAGNETIC CONTROL CIRCUITS
John Knox-Seith, Palo Alto, Calif., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 15, 1960, Ser. No. 49,630
15 Claims. (Cl. 307—88)

1. An electrical circuit comprising a magnetic element having substantially rectangular hysteresis characteristics, said element being apertured to have an input, an output, and a bypass leg, thereby presenting a first and a second closed flux path including said input and output legs and said input and bypass legs, respectively, means for inducing a reset remanent flux condition in said input and output legs of said first flux path, a clock winding and a plurality of input windings coupled to said input leg of said first and second flux paths, means for applying periodic clock pulses to said clock winding of a polarity and magnitude such as to induce a switching flux in said input and bypass legs of said second flux path, means for individually applying input pulses to said input winding simultaneously with said periodic clock pulses, said input pulses being of a polarity and magnitude to maintain said input and output legs of said first flux path in said reset flux condition, and an output winding coupled only to said output leg of said first flux path



energized responsive to flux changes in said first flux path for generating output signals.

3,123,719
TIMED INHIBIT CIRCUIT
Edwin S. Lee III, San Gabriel, Calif., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Sept. 5, 1961, Ser. No. 136,052
11 Claims. (Cl. 307—88)

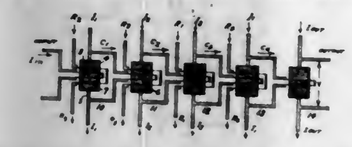


1. A time delay circuit adapted for forming a delay pulse of predetermined pulse width substantially immediately upon termination of a preceding delay pulse comprising a magnetic core having at least two stable states characterized as reset and set magnetic states, a plurality of windings magnetically coupled to said core and including at least reset, set and feedback windings, means connected for normally providing a signal to said reset winding tending to reset said core, switching means coupled to be responsive to an applied input signal to provide a signal to said set winding tending to set said core, a feedback circuit connected to be responsive to signals induced in said feedback winding during the time said core is being set for applying an input signal to said switching means and thereby maintaining the signal to said set winding, and means comprising asymmetrical conductive means coupled to be responsive to the signals tending to set and to reset said core for providing a predetermined output signal.

3,123,720
CRYOGENIC SHIFT REGISTER
Vernon L. Newhouse, Scotia, N.Y., John W. Bremer, Sunnyvale, Calif., and Harold H. Edwards, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
Filed Aug. 4, 1960, Ser. No. 47,538
6 Claims. (Cl. 307—88.5)

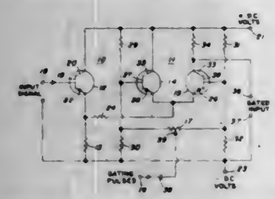
5. A method of operating a shift register composed of consecutively arranged cryogenic electronic loop circuits

each including a grid and a gate in parallel therewith with the grid of each circuit disposed proximate the gate of the succeeding circuit, each said gate being formed of substantially similar superconducting material for becoming resistive under the influence of substantially the same value of magnetic field, and a reset grid associated with each gate, said method comprising the steps of: first presenting a current pulse across one of said gates, while



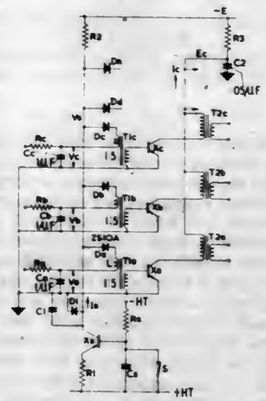
receiving an input pulse on the grid proximate said gate; then presenting a current pulse across a second and next consecutive gate and before termination of the latter pulse energizing the reset grid associated with the first of said gates; then presenting a current pulse across a third consecutive gate and before the termination of the latter pulse energizing the reset grid associated with the second of said gates; and then receiving another input pulse.

3,123,721
GATE WITH ADJUSTABLE VOLTAGE REFERENCE LEVEL
Theodore P. Kaufman, Plano, Tex., assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Oct. 28, 1960, Ser. No. 65,715
3 Claims. (Cl. 307—88.5)



1. An electronic gate with adjustable output-voltage level having first, second, and third electron discharge devices, each of said electron discharge devices having an input circuit and an output circuit, said second and third electron discharge devices being connected as a differential amplifier in cascade with said first discharge device, first and second resistors connected in common with said first electron device and said first and second electron devices of said differential amplifier, the input circuit of said first discharge device having a biasing circuit including said first resistor in common with the output circuit of said first discharge device, the input circuits of said second and third discharge devices each having a biasing circuit which includes a portion in common including said first and second resistors connected in series, said first and second resistors also being in series in the combined output circuits of said second and third discharge devices, the average current flow in said output circuits of each electron discharge device being controlled by the bias applied to respective input circuits, means for applying a signal that is to be gated to the signal input circuit of said first electron discharge device, an external output load circuit being connected to the output circuit of one of said electron discharge devices in said differential amplifier circuit, the input signal normally being conducted to the output circuit of said first electron discharge device and coupled through said first and second resistors to said differential amplifier for application to said external output load circuit, adjustable voltage divider means for applying gating pulses of voltage simultaneously to separate portions of said biasing circuits of said second and third electron discharge devices, said means being adjustable for varying the ratio of the gating voltages that are applied to said biasing circuits of said second and third electron discharge devices, said first electron discharge device being cut off by the voltage change across said first resistor caused by the total change in current of said first and second electron discharge devices responsive to the application of gating pulses to said differential amplifier, and said voltage divider means being adjustable for maintaining a predetermined level of direct-current voltage across said external output load circuit during the application of said gating pulses.

3,123,722
MULTI-CHANNEL VOLTAGE COMPARATORS
John Dennis Ralphs, Crowborough, England, assignor to National Research Development Corporation, London, England
Filed Feb. 13, 1961, Ser. No. 88,917
Claims priority, application Great Britain Feb. 26, 1960
19 Claims. (Cl. 307—88.5)



1. A multi-channel voltage comparator including a ramp voltage generator for providing a voltage sweep at its output, at least three voltage inputs, a separate one of at least three unilaterally conducting means connected with its conduction path between a separate one of the said voltage inputs and the output of the said ramp generator so as to conduct after the output of the ramp generator has become equal to the voltage at the said separate one of the voltage inputs, a capacitor, means for charging the capacitor prior to each voltage sweep, a separate current-sensitive means connected to each said conduction path and to the said capacitor to cause substantially the complete discharge of the said capacitor substantially immediateely upon the passage of current through the conduction path and means for detecting which of the current-sensitive means causes the said discharge.

3,123,723
STAIRCASE WAVE GENERATOR EMPLOYING TWO FOUR-LAYER DIODES
Harry H. Wieder, Riverside, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Aug. 23, 1962, Ser. No. 219,084
7 Claims. (Cl. 307—88.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. An improved staircase wave generator circuit comprising:

(*a*) a voltage supply having one side thereof connected to a point of ground potential,

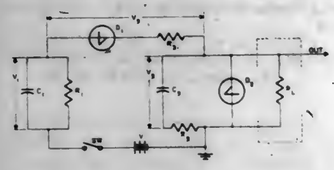
(*b*) a first capacitor and a first resistor in parallel and connected between the other side of said voltage supply and one terminal of a first P-N-P-N type semiconductor device,

(*c*) a second P-N-P-N type semiconductor device having one terminal connected to said point of ground potential,

(*d*) a current limiting second resistor being connected between the other terminal of said first semiconductor device and the other terminal of said second semiconductor device,

(*e*) a second capacitor and a current limiting third resistor in series connected across said second semiconductor device,

(*f*) the output from the circuit taken from across said second semiconductor device,



(*g*) the supply voltage from said voltage supply being greater than the sum of the breakover voltages of said first and second semiconductor devices, wherein with said voltage supply applied to the circuit the voltage across said first P-N-P-N diode will be higher than its breakover voltage causing said first diode to switch to its low impedance state and said second P-N-P-N diode which is shunted by said second capacitor will remain open, said first capacitor will charge in series with said second capacitor until the voltage across said first diode drops below its sustaining voltage to conduct at which time said first diode will switch back to its high impedance condition thus trapping a charge on said second capacitor, the charge on said first capacitor discharging through said first resistor, the voltage across said first diode increasing as said first capacitor discharges until its breakover voltage is reached at which time said first diode will switch on and the cycle repeats itself, an increment of charge being added to said second capacitor in a discrete step during each charging cycle giving rise to a voltage rise in the form of a staircase, the ratio of the capacitances of said first and second capacitors controlling the number of steps in the staircase waveform when other circuit parameters are held constant, said second diode switching to its lower impedance state when its reverse breakdown voltage is reached by the voltage charge across said second capacitor and said second capacitor is discharged thus returning the circuit to its original condition.

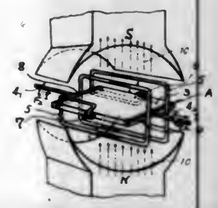
3,123,724
PHOTOSENSITIVE LIGHT CONTROL SYSTEM
Gotthilf Schrenk and Herbert Krappatsch, Erlangen, Germany, assignors to P. Gossen & Co. G.m.b.H., Erlangen, Germany
Filed Sept. 14, 1960, Ser. No. 56,007
Claims priority, application Germany June 18, 1960
6 Claims. (Cl. 250—217)

1. Apparatus for controlling the illuminance produced by a light source comprising a light-responsive element connected across a first resistor, a source of reference voltage connected across a second resistor, both of said resistors connected in series to the input of an amplifier in such a way that the voltage drop caused by the light-responsive element across the first resistor opposes the voltage drop caused by the source of reference voltage across the second resistor, the output of said amplifier being connected to an electric motor, two light control



means both jointly operated by said motor, the first of said light control means arranged so as to vary only the illuminance to be controlled but not the light impinging upon the light-responsive element, the second light control means arranged so as to change the amount of light impinging upon the light-responsive element.

3,123,725
HALL EFFECT DYNAMOELECTRIC MACHINE
Yoriyuki Nieda, 2 Matsugaoka, Kanagawa-ward, Zushi City, Japan
Filed Mar. 2, 1960, Ser. No. 12,445
Claims priority, application Japan Mar. 30, 1959
8 Claims. (Cl. 310—2)

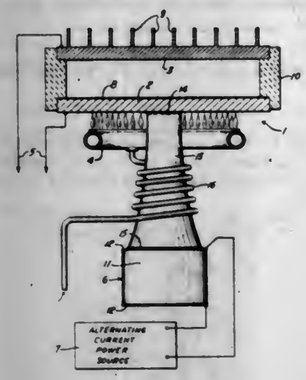


1. A dynamoelectric device comprising means for establishing a magnetic field; a rotor including a rotatable Hall effect plate disposed within said magnetic field; a conductive coil formed around said Hall effect plate, portions of said coil extending along a first axis of said Hall effect plate, the ends of said coil being secured to opposite edges of said Hall effect plate and disposed along a second axis of said Hall effect plate, said first and second axes being perpendicular; and rotary electroconductive supporting means secured to opposite edges of said Hall effect plate displaced along said first axis for supporting said Hall effect plate in said magnetic field.

3,123,726
ULTRASONIC VIBRATION CONTROL OF THERMIONIC DEVICES
John T. Maynard, West Allis, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Sept. 28, 1960, Ser. No. 58,991
3 Claims. (Cl. 310—4)

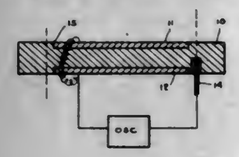
3. In a thermionic current generator, a cathode, an ultrasonic vibration source, a coupling horn connecting the output of the vibration source to the cathode to transmit ultrasonic vibrations to said cathode, a fuel burner mounted adjacent the cathode for heating the cathode,

and means connected to the burner and adapted to be connected to a fuel source, said means serially including heat



exchange means coupled to said horn to transmit the heat from the horn to the fuel in the heat exchange means.

3,123,727
HIGH POWER SONIC TRANSDUCERS
Jack Kritz, Westbury, N.Y., assignor to American Bosch Arma Corporation, a corporation of New York
Filed June 15, 1960, Ser. No. 36,434
7 Claims. (Cl. 310—8.2)



1. A piezoelectric transducer comprising:

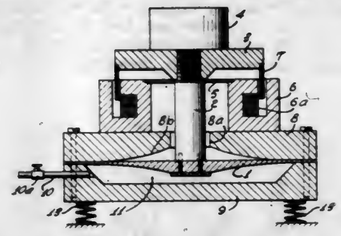
a metallic body and a piezoelectric material secured to at least one side of said metallic body to form an integral composite structure responsive to voltage applied between said metallic body and said piezoelectric material to vary the degree of flexural cupping of said composite structure about a nodal circle in said structure;

said structure being supported substantially at said nodal circle with its periphery and center free to vibrate in flexure without restraint;

the thickness of said piezoelectric material being less than that of said metallic body.

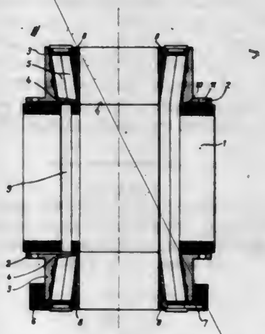
3,123,728
VIBRATORY APPARATUS WITH VARIABLE FREQUENCY AND AMPLITUDE
Heinz Kreiskorte, Darmstadt, Germany, assignor to Carl Schenck Maschinenfabrik G.m.b.H., Darmstadt, Germany, a corporation of Germany
Filed Jan. 18, 1961, Ser. No. 83,513
Claims priority, application Germany Jan. 22, 1960
14 Claims. (Cl. 310—19)

4. An oscillatory mechanical device of continuously changeable oscillation frequency and amplitude for shake tables, material testing apparatus and other oscillatory machinery, comprising a support, a circular spring disc peripherally clamped to said support, a mass structure connected with said spring disc at the center thereof and forming together with said disc an oscillatory system whose oscillation axis is coincident with the center axis of said disc, excitation means connected with said mass for exciting said system to oscillations, said support having a rigid member adjacent to said spring disc, said member and said disc having respective coaxial areas curved away from each other so as to have their greatest



mutual spacing near said axis, and controllable pressure means elastically joined with said spring disc for forcing it toward said member area to thereby continuously vary the active diameter of said spring disc.

3,123,729
STATORS FOR ELECTRIC MOTORS AND GENERATORS
Roger Fagel, Marcinelle, Belgium, assignor to Ateliers de Constructions Electriques de Charlerol, Brussels, Belgium
Filed Dec. 1, 1960, Ser. No. 73,125
3 Claims. (Cl. 310—43)

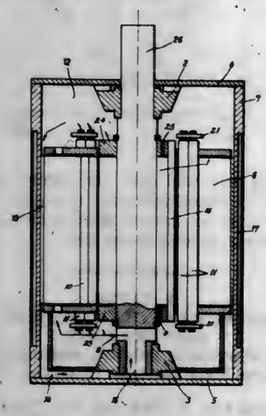


1. An end structure for a rotary electric machine having stator laminations, said structure comprising: an end-plate for clamping the stator laminations of said machine; said end plate being formed of conductive material and including a substantially cylindrical part and radial teeth extending inwardly of said cylindrical part at one end thereof and adapted to lie over said stator laminations; stator conductors having extremities extending between said teeth and distributed around the inner surface of said cylindrical part; anchoring means on the inner surface of said part; insulating plastic material cast around said inner surface, so as to completely embed the extremities of said conductors, and integrated to said inner surface through said anchoring means whereby said end plate, stator conductor and plastic material form an integrated end structure.

3,123,730
TOTALLY ENCLOSED ELECTRIC MOTOR
Roger Fagel, Marcinelle, Belgium, assignor to Ateliers de Constructions Electriques de Charleroi, Brussels, Belgium
Filed Dec. 1, 1960, Ser. No. 73,126
5 Claims. (Cl. 310—54)

1. An electric motor adapted to be totally immersed in an insulating liquid comprising, in combination: an outer

closed body; a shaft mounted for rotation centrally inside said body; a stator secured inside said outer body and defining therewith, on either ends of said stator, a collector chamber and a pump chamber; channels between said stator and said body joining said collector and said pump chambers; a rotor supported on said shaft, coaxial with said stator; said stator and rotor forming a clearance gap therebetween; said stator including a winding con-



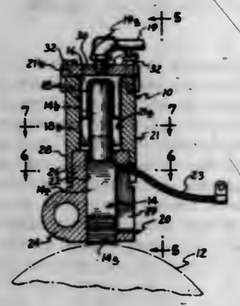
stituted by tubes, made of electrically conductive material, electrically interconnected exteriorly of said stator; cooling channels running through and axially of said rotor; a pressure chamber formed within said pump chamber; said stator tubes, rotor cooling channels and clearance gap opening into said pressure chamber and into said collector chamber; pumping means between said pump chamber and pressure chamber for the circulation of the insulating liquid.

3,123,731

HYDRAULIC ACTUATED BRUSH AND HOLDER

James Gordon, 3625 N. Halsted St., Chicago, Ill.

Filed Apr. 20, 1961, Ser. No. 104,347
4 Claims. (Cl. 310—243)



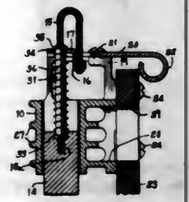
3. In combination: a brush holder for a dynamo-electric machine having means for urging a brush into electrical contact with the machine's commutator, said means being responsive to a hydraulic reservoir, and a master cylinder connected to said hydraulic reservoir, said master cylinder having a ring and a base with a diaphragm held therebetween at its periphery to form a subassembly, said diaphragm forming a master cylinder hydraulic reservoir with said base, said diaphragm having a circular arcuate groove near to points immediately adjacent to where said diaphragm is held, a cover assembly attached to said subassembly, said cover assembly being a cover assembled with a diaphragm loader plate by a guide stud protruding through said cover, a compression spring interposed between said loader plate and said cover, said guide stud having means for keeping said compression spring compressed until it is desired to release said spring to exert force on said diaphragm.

3,123,732

ELECTRICAL BRUSH ASSEMBLY

Curtis E. Jackson, Essex Fells, N.J., assignor to The Daven Company, Livingston, N.J., a corporation of Delaware

Filed Mar. 6, 1962, Ser. No. 177,777
10 Claims. (Cl. 310—247)



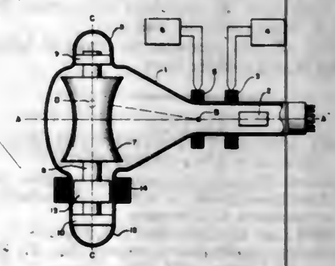
1. An electrical brush assembly comprising, an electrical brush having an elongated flexible wire conductor mechanically and electrically secured at one end to an end of said brush, a hollow elongated tube enclosing a length of said conductor and secured thereto at a position thereon such that one end of said tube is at least closely adjacent said one end of said brush to restrain said tube against significant radially inward movement with relation to said brush but to enable a swivel motion of said tube relative thereto, a guide member having an aperture through which said tube slidably extends upon assembly of said guide member and tube, means for maintaining said guide member and tube in assembled relation by limiting the withdrawal of said tube from said aperture, and means for biasing said brush away from said guide member.

3,123,733

ROTARY ANODE CATHODE RAY TUBE

George Stanley Percival Freeman, Chiswick, London, England, assignor to Bush and Rank Cintel Limited, London, England, a British company

Filed Feb. 27, 1961, Ser. No. 91,825
Claims priority, application Great Britain Mar. 22, 1960
6 Claims. (Cl. 313—146)



1. A rotary screen cathode-ray tube comprising: an electron gun for projecting a beam of electrons along a predetermined axis; means for focusing said beam; means for deflecting said beam in a plane containing said axis; an anode member revolvable about an axis of revolution substantially perpendicular to and coplanar with said predetermined axis; a surface of said anode member having a configuration corresponding to that formed by revolving about said axis of revolution an

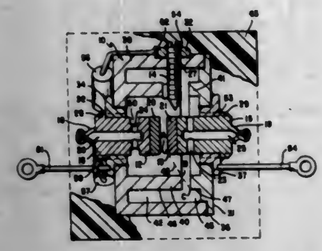
arcuate line at least approximately geometrically similar to the locus of the focal point of said electron beam in said plane; and a phosphor coating on said surface.

3,123,734

HERMETICALLY SEALED HIGH ENERGY SPARK GAP

Carroll J. Dunne, Toledo, Ohio, assignor to The Electric Auto-Lite Company, Toledo, Ohio, a corporation of Ohio

Filed Nov. 2, 1961, Ser. No. 149,637
7 Claims. (Cl. 313—198)



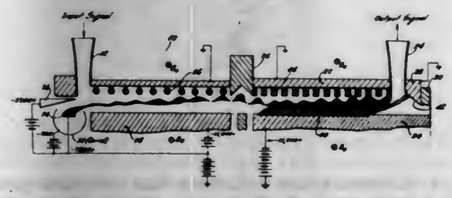
4. A hermetically sealed high energy spark gap including two main electrodes, said electrodes having substantially flat imperforated discharge faces arranged in spaced relation and parallel with each other to provide a main spark gap, a third electrode having a discharge face orthogonally disposed with respect to the axis of the main electrodes, the discharge face of the third electrode located to the rear of the discharge face of one of the electrodes and spaced apart to provide an auxiliary spark gap, and a sealed enclosure of insulating material supporting the three electrodes and containing an ionizable gas, said enclosure having baffle means to control material escaping from the discharge region of the spark gaps from collecting on portions of the walls of said baffle means to prevent impairment of the spark gaps.

3,123,735

BROADBAND CROSSED-FIELD AMPLIFIER WITH SLOW WAVE STRUCTURE INTERACTION MEANS FOR PHASE-FOCUSING THE ELECTROMAGNETIC ENERGY WITH THE ELECTRON STREAM

Joseph F. Hull, Redwood City, Calif., assignor, by mesne assignments, to Litton Precision Products, Inc., a corporation of Delaware

Filed Dec. 14, 1959, Ser. No. 859,221
21 Claims. (Cl. 315—3.6)



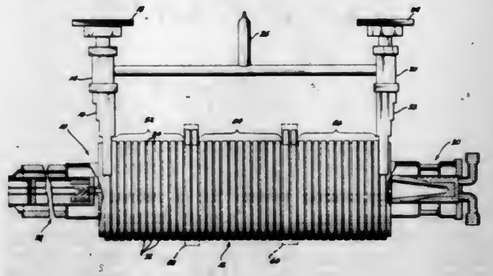
18. A travelling wave type tube comprising means for forming an electron beam, a first slow wave transmission circuit of high impedance and of relatively light construction in coupling proximity with said beam, and a second slow wave transmission circuit of significantly lower impedance and of heavier construction with correspondingly better heat dissipation characteristics than said first slow wave transmission circuit in coupling proximity with said beam downstream from said first slow wave transmission circuit.

3,123,736

SEVERED TRAVELING-WAVE TUBE WITH EXTERNAL TERMINATIONS

William H. Christoffers, Torrance, and John E. Nevins, Jr., Los Angeles, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Filed Mar. 22, 1962, Ser. No. 181,533
12 Claims. (Cl. 315—3.6)



1. A traveling-wave tube of the type which is severed into a plurality of amplifying sections comprising in combination:

(*a*) means for launching an electron stream along a predetermined path of fixed length;

(*b*) slow-wave structure means in each of said amplifying sections and disposed along said path for propagating circuit wave energy and providing energy exchange between said stream of electrons and said circuit wave energy;

(*c*) means disposed between at least one pair of adjacent amplifying sections for precluding the passage of circuit wave energy between said adjacent amplifying sections while permitting the passage of said electron stream therebetween and

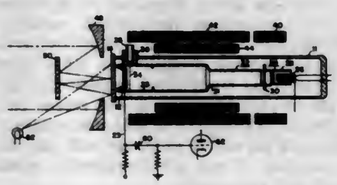
(*d*) means disposed externally of said slow-wave structure means adjacent at least one end of at least one of said adjacent amplifying sections for absorbing circuit wave energy.

3,123,737

ELECTRONIC DISCHARGE DEVICE

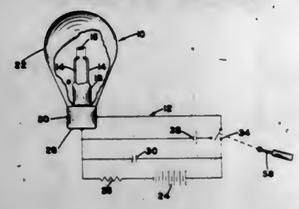
Robert J. Schneeberger, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed June 28, 1956, Ser. No. 594,649
8 Claims. (Cl. 315—10)



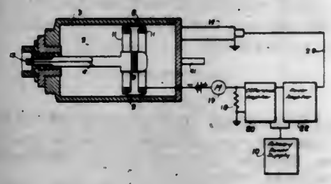
1. A pickup tube comprising an evacuated envelope, an electron source to generate an electron beam and a target electrode positioned so as to be scanned by said electron beam, said target comprising a material in sooty form exhibiting the property of increased electrical conductivity on thermal excitation, said material in sooty form having a heat capacity of less than 10^{-4} watt seconds per degree Kelvin per square centimeter.

3,123,738
ILLUMINATION SYSTEM FOR RETINAL CAMERAS OR THE LIKE
Oluf G. Oswold, Canadice, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
Filed Sept. 6, 1961, Ser. No. 136,288
2 Claims. (Cl. 315—46)



1. An illumination system for a retinal camera or the like, comprising a light source including a pair of spaced electrodes and a filament shunting said electrodes, electrical means including a circuit and a source of low energy, means connecting said electrical means to said light source whereby said electrical means energizes said filament to produce illumination of relatively low intensity, and circuit means including a capacitor and a switch producing an electric discharge across said pair of spaced electrodes to thereby provide sufficient illumination for photographing the fundus of an eye, said last named means heating said filament to thereby enhance the spectral quality of the illumination by increasing the out-put of light in the red region of the spectrum.

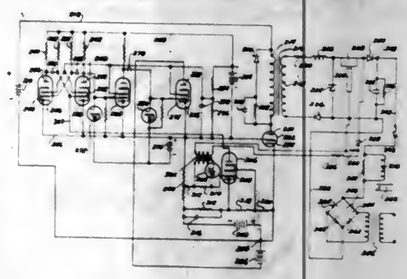
3,123,739
METHOD AND APPARATUS FOR CONTROLLING A SEALED ATMOSPHERE
Reuben A. Bergan, Tulsa, Okla., assignor to Well Surveys, Inc., a corporation of Delaware
Filed Aug. 16, 1960, Ser. No. 49,997
8 Claims. (Cl. 315—108)



1. In an electric discharge tube having an internal atmosphere composed substantially of a pre-selected gas selected from the group composed of hydrogen and its isotopes, in combination therewith a metallic sorption means disposed in contact with said atmosphere and containing to the relative exclusion of other subsances an amount of said gas many times greater than the amount of said gas in said atmosphere, and means causing said sorption means to absorb from said atmosphere substances other than said gas and to exchange with said atmosphere relative amounts of said gas functionally related to the pressure of said atmosphere.

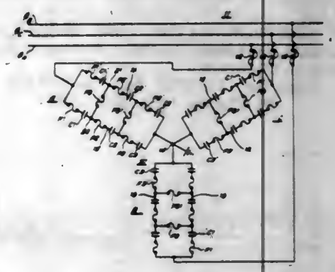
3,123,740
FAIL SAFE SPILLOVER CIRCUIT
Walter Lobur, Clawson, Mich., assignor to Elox Corporation of Michigan, Troy, Mich., a corporation of Michigan
Filed July 11, 1960, Ser. No. 41,875
15 Claims. (Cl. 315—127)

1. In an apparatus for eroding a conductive workpiece by means of intermittent electrical discharge across a gap between an electrode and the workpiece in the presence of dielectric fluid in the gap, a power supply of selected voltage, means for delivering power pulses derived from said power supply across said gap, means for rendering said power supply continuously effective in the gap circuit of said apparatus for furnishing said power pulses, and means for limiting the instantaneous voltage across said gap to a predetermined magnitude lower than that of said power supply comprising, a condenser and a diode connected across the machining gap, said diode being



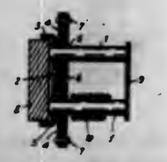
phased to block power of said source from the gap a voltage source connected across said condenser for charging said condenser to a predetermined voltage magnitude lower than the voltage magnitude of said power supply, an electromagnetic circuit controlling means connected in series with said condenser and voltage source, and means operatively associated with said circuit controlling means for cutting-off said power supply in response to rise in voltage source is supplied by means including a bridge peak voltage across said gap by a selected amount in excess of the magnitude of said voltage source.

3,123,741
PROTECTIVE MEANS FOR SHUNT CAPACITOR BANK
Donald J. Lemens, South Milwaukee, Wis., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed July 21, 1961, Ser. No. 125,720
5 Claims. (Cl. 317—12)



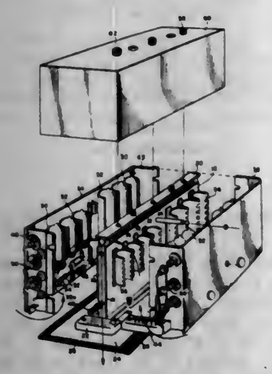
1. A capacitor bank including at least two similar parallel branches each of which has a plurality of capacitor units in series, individual fuses for said capacitor units, a group fuse for connecting said parallel branches in shunt to an alternating current line, and tie fuses between normally equipotential points in said branches at the junctures between adjacent series connected units connecting corresponding capacitor units in the two branches in parallel, said tie fuses being adapted to operate in response to unbalance current flow therethrough incident to operation of an individual fuse in one branch before the individual fuses in the other branch operate.

3,123,742
HIGHLY SENSITIVE ELECTRIC RELAY
Robert Moser, 9 Rue du Lycée Lakanal, Bourg-la-Reine, France, and Jacques Morel, 12 Rue Rennequin, Paris, France
Filed June 2, 1960, Ser. No. 33,461
Claims priority, application France June 8, 1959
7 Claims. (Cl. 317—58)



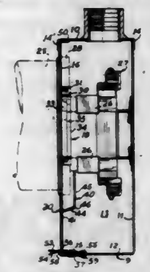
1. A highly sensitive electric relay, comprising a permanent magnet, two pole-pieces, the inner ends of which operatively face said magnet, an armature cooperating with the outer ends of the pole-pieces, a magnetic shunt including two masses of a magnetic material each carried by a separate one of said pole-pieces at a point along its length, said masses having surfaces facing each other and defining between them an extremely narrow gap having an area which is a multiple of the cross-sectional area of each pole-piece, a winding surrounding at least one pole-piece between the shunt and the outer end of said pole-piece, and means for energizing said winding to produce a flux in the armature cooperating with that produced therein by the permanent magnet.

3,123,743
FLUID COOLED ELECTRONIC CHASSIS
Albert Perlmutter, Sharon, Mass., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed Apr. 14, 1960, Ser. No. 22,287
8 Claims. (Cl. 317—100)



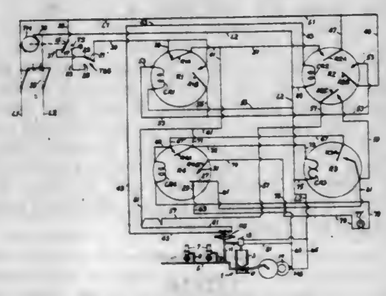
1. An electronic equipment package comprising, in combination, a generally rectangular enclosure having top and bottom walls and including as a first side wall thereof a relatively thick, substantially flat plate having length and width dimensions and having fluid passages therein extending in the direction of the width dimension, said passages communicating at one end thereof with the interior of the enclosure near the top thereof and at the other end with a plenum chamber, a circuit board supporting electronic components arranged opposite said plate and constituting a second side wall of said enclosure, said enclosure having openings therein along at least a portion of the junction of said second side wall with said bottom wall through which cooling fluid is introduced, whereby said cooling fluid first passes directly over said electronic components and then enters said one end of said passages and is discharged into said plenum chamber.

3,123,744
METER BOX WITH A MOISTURE BARRIER ASSEMBLY
James T. Fisher, Decatur, Ga., assignor to B & C Metal Stamping Company, Atlanta, Ga., a corporation of Georgia
Filed Apr. 4, 1962, Ser. No. 185,094
9 Claims. (Cl. 317—104)



1. In a meter box of the class having a housing and a removable cover for said housing and wherein a meter is received in terminals carried within said housing, the meter having a sealing ring around it against which a peripheral portion of said cover abuts when said cover is close to said housing, the combination therewith of a gutter secured to the inner surface of said cover and spaced from and below said ring of said meter for receiving moisture which may drip from said ring and for deflecting said moisture away from said terminals.

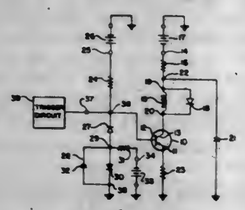
3,123,745
CONTROL CIRCUIT FOR LUBRICATING APPARATUS
John F. Cook, St. Ann, Mo., assignor to The McNeil Machine & Engineering Company, Akron, Ohio, a corporation of Ohio
Filed Aug. 31, 1960, Ser. No. 53,148
16 Claims. (Cl. 317—139)



1. A control for periodically initiating operation of an electrically actuated apparatus and stopping it in response to completion of a cycle thereof comprising an initiating switch, timer means for periodically actuating said initiating switch, a normally closed switch adapted to open in response to completion of a cycle of the apparatus and then to close, a first relay having a set of normally closed contacts, a second relay, and interconnections between said relays, said switches and said apparatus providing an operating circuit for the second relay including said initiating switch and said normally closed contacts of said

first relay adapted to be energized via said normally closed contacts in response to closure of the initiating switch, a holding circuit for the second relay including said cycle-responsive switch adapted to be energized in response to operation of the second relay and deenergized in response to opening of the cycle-responsive switch, a power circuit for said apparatus adapted to be energized in response to operation of the second relay and deenergized when said second relay is deenergized, an operating circuit for the first relay adapted to be energized in response to operation of the second relay, and a holding circuit for the first relay adapted to be energized in response to closure of the initiating switch and operation of the first relay, whereby said apparatus is started in response to closure of the initiating switch and stopped in response to opening of the cycle-responsive switch, and prevented from starting again despite closing of the cycle-responsive switch until the initiating switch opens to deenergize the first relay and again closes.

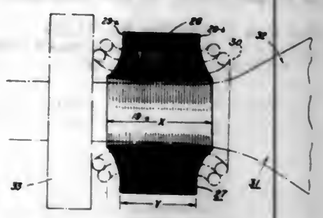
3,123,746
SOLENOID-DRIVING TRANSISTOR CIRCUIT WITH MEANS FOR LIMITING THE CURRENT IN THE SOLENOID TO A PREDETERMINED VALUE
David A. Wachowiak, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed Jan. 10, 1961, Ser. No. 81,859
12 Claims. (Cl. 317—148.5)



1. A solenoid-driving transistor circuit comprising a transistor having an emitter electrode, a base electrode, and a collector electrode; means providing a source of direct current energizing potential for said transistor; a solenoid connected between said energizing potential providing means and said collector electrode; an impedance connected between said emitter electrode and a source of first reference potential; a capacitor connected between said energizing potential providing means and said source of first reference potential; means for applying an input signal potential to said base electrode to render said transistor conductive; and clamping means connected between said input signal potential applying means and a source of second reference potential; said emitter electrode impedance and said clamping means being effective in combination to limit the current through said solenoid to a predetermined value.

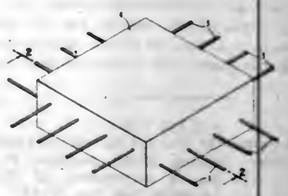
3,123,747
MAGNETIZABLE CORE
John P. Glass, Haverford Township, Delaware County, Pa., assignor to Litton Industries, Inc., Beverly Hills, Calif., a corporation of Delaware
Continuation of application Ser. No. 225,515, May 10, 1951. This application Apr. 22, 1960, Ser. No. 24,121
12 Claims. (Cl. 317—158)

1. A generally annular laminated magnetizable core structure having ferromagnetic laminations which define a working space separate and distinct from the core, portions of adjacent laminations adjacent said working space being substantially spaced from each other, and portions of said laminations not adjacent said working space being generally contiguous to each other, whereby said core structure adjacent said working space is substan-



tially longer than the portion of said core structure not adjacent said working space.

3,123,748
FERRITE COMPOSITION
James M. Brownlow, Crompond, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 1, 1961, Ser. No. 156,232
10 Claims. (Cl. 317—158)



1. A ferrite ceramic composition having the formula

$$Fe_xCu_yNi_zTi_aCr_bZn_cO_4$$

wherein

$$x+y+z+a+b+c=3$$
$$2.2\leq x+y+z\leq 3.0$$
$$0\leq a+b+c\leq 0.8$$

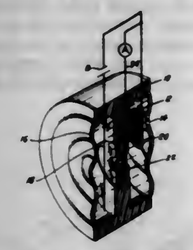
and

$$x=1.5\text{–}2.1$$
$$y=0.5\text{–}0.75$$
$$z=0.1\text{–}0.3$$
$$a=0\text{–}0.2$$
$$b=0\text{–}0.15$$
$$c=0\text{–}0.55$$

prepared by mixing in finely divided form oxides of Fe, Cu, Ni, Ti, Cr, and Zn in proportions such that the ferrite ceramic composition produced by firing has the above formula; heating the thus formed mixture to a low firing temperature in the range from 800–1050° C. for a period of time from 6 minutes to 16 hours in an oxygen containing atmosphere and thereafter cooling.

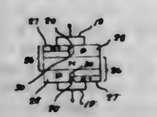
3,123,749
ELECTRODE ASSEMBLY FOR ELECTROCHEMICAL LINEAR DETECTOR UNITS
Demetrios V. Louzos, Rocky River, Robert A. Minnery, Cleveland, and Terrence J. Kurtzweil, Avon, Ohio, assignors to Union Carbide Corporation, a corporation of New York
Filed Aug. 26, 1960, Ser. No. 52,248
10 Claims. (Cl. 317—231)

1. An electrode assembly for a linear detector unit, which comprises at least one of a metal sheet composed of an inert metal and having an orifice therein and a platinum screen in juxtaposition to said metal sheet and overlying said orifice in fixed relation thereto, and a layer of an oxide of the metal of which said metal sheet is composed on the exposed surfaces of said metal sheet,



at least said metal sheet being mounted within a body composed of an insulating material.

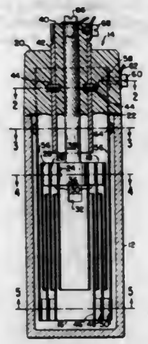
3,123,750
MULTIPLE JUNCTION SEMICONDUCTOR DEVICE
Jearld L. Hutson and Frederick B. Hoff, Jr., both of Richardson, Tex., assignors to Hunt Electronics Company, Dallas, Tex., a corporation of Texas
Filed Oct. 31, 1961, Ser. No. 148,924
12 Claims. (Cl. 317—235)



1. A symmetrical switching device comprising a semiconductor body having a plurality of alternating regions of opposite conductivity separated by rectifying barrier zones, said regions being arranged in a composite configuration equivalent to a pair of oppositely poled diodes, respective terminal conductors connecting adjacent oppositely conductive regions of the body to effectively connect said diodes in parallel, whereby to provide symmetrical switching action for both halves of an alternating current voltage wave applied to the device, and means providing relatively high internal resistivity in the body between the connections of said terminal conductors thereto, whereby the device is relatively sensitive to the rate of change of the voltage applied thereto.

3,123,751
LIQUID TEST CELL
Sydney Baisbaugh, 10 Cove St., Duxbury, Mass.
Filed Mar. 23, 1960, Ser. No. 17,148
3 Claims. (Cl. 317—246)

1. A test cell for measuring electrical properties of liquids having in combination, a holder having an opening to receive a sample of liquid and an electrode assembly to fit within and close said opening, said assembly including a molded insulating head member forming a closure for said opening, a rod imbedded centrally in the head member and extending therefrom into the space within the holder and being provided with electrical terminal means external to the head member, a tubular guard element and a tubular outer electrode element both provided with electrical terminal means external to the head member and being imbedded coaxially with the rod in the head member and extending therefrom into the space within the holder, said outer eletrode element exceeding the guard element in diameter, first and second pluralities of tubular elements within the holder, the elements of each plurality being mutually and concentrically conjoined mechanically and electrically at a single common end, the conjoined end of one of said pluralities being joined mechanically and electrically concentrically with and to said rod and the conjoined end of the other of said pluralities being joined mechanically and electrically concentrically with and to said outer electrode element, the tubular elements of said pluralities being telescoped in regularly spaced, alternating sequence

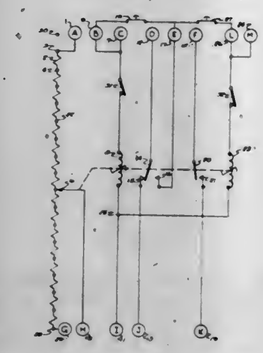


with the conjoined end of the first plurality nearer the head member and the conjoined end of the second plurality further from the head member, the head member forming the sole support for both said pluralities of elements.

3,123,752
SERVO SYSTEMS
John Semon Frankel and Harry Hirst, Basingstoke, England, assignors to S. Smith & Sons (England) Limited, London, England, a British company
Filed Apr. 20, 1962, Ser. No. 189,149
Claims priority, application Great Britain Apr. 21, 1961
14 Claims. (Cl. 318—18)

1. A servo system comprising a servo loop including a servo motor, a servo amplifier for controlling the operation of the motor and having a signal input and a signal output a differential gear having first and second input members and an output member, means for transmitting a drive from the motor to the first input member, an output shaft, means for transmitting a drive from the output member of the differential gear to the output shaft, a signal input for the system, a differential device for generating a difference signal representing the difference between two applied signals, means coupling the system signal input to the differential device to apply to it a signal representative of any signal applied to said input, means coupling the output shaft to the differential device to apply to it a signal representing the position of the output shaft, means for applying the difference signal to the amplifier input, switching means having switching contacts incorporated in the loop and having a first condition of operation in which said contacts close the loop and a second condition of operation in which said contacts effectively break the loop, a signal output, means operative under the control of said switching means in its second condition for applying a signal derived from said difference signal to the signal output, a manually operable adjusting member and means coupling said adjusting member to position the second input member of the differential gear.

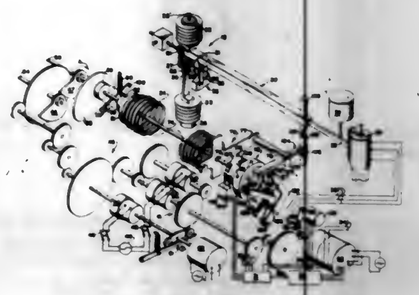
3,123,753
BI-DIRECTIONAL STEP MOTOR DRIVE VOLTAGE DIVIDER SWITCHING APPARATUS
Robert W. Kearns, Detroit, and Kenneth J. Law, Redford Township, Wayne County, Mich., assignors to K. J. Law, Engineers, Detroit, Mich., a partnership
Filed May 16, 1960, Ser. No. 29,289
3 Claims. (Cl. 318—29)



1. A bi-directional voltage divider stepper switching apparatus, comprising; a base; a voltage increase solenoid drive motor mounted on said base for rotation in one direction; a voltage decrease solenoid drive motor mounted on said base in a position spaced from said voltage increase motor for rotation in the opposite direction; each of said motors having a drive shaft extending outwardly therefrom; said drive shafts being connected for simultaneous indexing rotation thereof; means for retaining said shafts in their indexed positions; a plurality of fixed switch wafers disposed about said shafts; an integral wafer rotor mounted on said shafts within and adjacent to each of said fixed switch wafers; a voltage divider circuit having a plurality of switch points mounted on one of said fixed switch wafers; said voltage divider circuit including a fixed resistance of a predetermined selected value interposed between each adjacent switch point to provide at each switch point selected portions of the voltage being divided; a wiper arm on the wafer rotor adjacent the voltage divider circuit switch wafer for operative engagement with said voltage divider circuit; a motor control circuit for selective energization of said motors including interrupter switch means for automatically operating a selected one of said motors at any predetermined switch point wherein a single external signal will cause a multiple index movement of the wiper arm past any selected switch points; and, connecting circuits including switching means for completing connection of external circuits comprising contact elements mounted on said fixed switch wafers and wherein the adjacent wafer rotors will interconnect these contact elements at predetermined switch points in selected relation to the operation of the voltage divider circuit to provide predetermined connections of any number of external or internal circuits as selected.

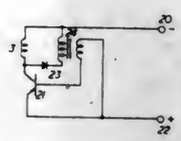
3,123,754
FLUID PRESSURE TRANSDUCER SYSTEM
Dain Beverly Lones, Palos Verdes Estates, and James W. Padgett, Rolling Hills Estates, Calif., assignors to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Filed Aug. 1, 1958, Ser. No. 752,633
7 Claims. (Cl. 318—32)

1. A fluid pressure transducer which comprises: a balance beam supported for a movement about a fulcrum; pressure responsive bellows means operatively connected to said balance beam for movement thereof; electrical means adapted to produce a signal indicative of the movement of said balance beam; motor means rotating an output shaft and a feedback shaft in response to said signal, the rotation of both of said shafts being related in magnitude and direction to the movement of said balance beam;



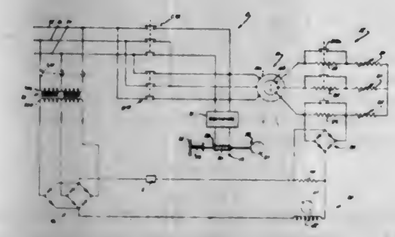
spring means operable to apply a force to said balance beam in proportion to the rotation of said feedback shaft, the direction of said force being such as to oppose the movement imparted to said balance beam by said bellows means; and means operable in accordance with the position of said feedback shaft to modulate the signal produced by said electrical means.

3,123,755
ELECTRICAL SYSTEM FOR MAINTENANCE OF MECHANICAL OSCILLATIONS
Robert Cecil Braithwaite and Frank Norris Moore Sergeant, Bishop's Cleeve, near Cheltenham, England, assignors to Smiths America Corporation, Washington, D.C.
Filed Jan. 8, 1959, Ser. No. 785,671
Claims priority, application Great Britain Jan. 8, 1958
6 Claims. (Cl. 318—132)



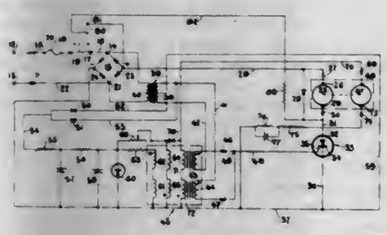
1. A timing device comprising in combination a spring-restrained balance means mounted for rotation about an axis and constructed to oscillate about a datum position, a single coil operative as both a pickup coil and as a drive coil, said coil having a plurality of turns carried by said balance means at one side only of the axis thereof and movable therewith, a magnetized member positioned to cooperate with said coil when said balance means is in the vicinity of its datum position to induce voltage pulses in said coil, pulse-generating means, and electric connections for connecting said pulse-generating means and said coil, said pulse-generating means acting to pass current pulses through the same said coil in response to said induced voltage pulses and in a sense opposite to said voltage pulses, said current pulses and said magnetized member interacting to produce impulses on said balance means to maintain the oscillations thereof.

3,123,756
HOIST MOTOR CONTROL WITH EDDY CURRENT BRAKING SYSTEM
Edward Alexander Horsley, Niagara Falls, Ontario, Canada, assignor to Provincial Engineering Ltd., Niagara Falls, Ontario, Canada, a corporation of Canada
Filed May 3, 1961, Ser. No. 107,373
7 Claims. (Cl. 318—209)



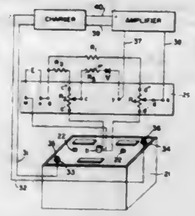
1. A braking system for a wound rotor motor that has a primary winding and a rotor winding, comprising a brake adapted to be coupled to the motor that has its exciting member electrically connected in a loop that also includes a resistive impedance, means for producing a relatively constant voltage which causes a current to flow around said loop, and regulating circuit means in series with one phase of the rotor circuit for causing a voltage to appear across said resistive impedance that is proportional to the load on the motor, the polarity of said voltage drop being such that it opposes said relatively constant voltage and reduces the resulting current flow around said loop.

3,123,757
MOTOR SPEED CONTROL SYSTEM
James Anthony Gaudet, Lexington, Mass., assignor to Alexander Kusko, Inc., Cambridge, Mass., a corporation of Massachusetts
Filed Sept. 8, 1960, Ser. No. 54,707
12 Claims. (Cl. 318—327)



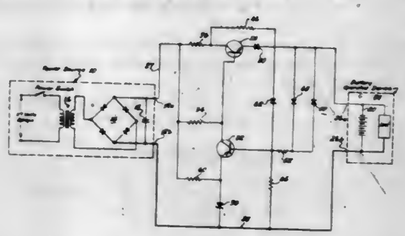
1. In a direct current motor control circuit, the combination including means for converting alternating current from a source connected thereto into direct current having a pulsation for each half cycle of said alternating current, single solid state switching device for connecting a direct current motor to the direct current output of said converting means, and means for controlling said device, said controlling means being responsive to said pulsations of said direct current connected thereto to actuate said device into conduction for a predetermined portion of each half cycle of said alternating current, whereby said direct current motor is energized during said predetermined portions.

3,123,758
BATTERY CHARGING
Dino B. Giacalone, Philadelphia, Pa., assignor to John R. Hollingsworth Co., Phoenixville, Pa., a corporation of Pennsylvania
Filed Mar. 2, 1962, Ser. No. 177,027
9 Claims. (Cl. 320—36)



1. In an electrical system including a battery and a battery charger, means responsive to evolution of gas from the battery during charging and adapted to control the charging rate and thereby appropriately limit the evolution of gas from the battery, comprising a device having an electrical characteristic subject to change in accordance with change in temperature of the device, means for maintaining the device normally at a temperature different from the temperature of gas evolved from the battery, whereupon exposure of the device to flow of the evolved gas is accompanied by an exchange of heat therewith and an accompanying change in the temperature of the device, and means responsive to the accompanying change in the electrical characteristic of the device when so exposed.

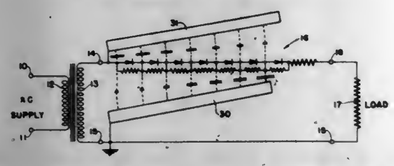
3,123,759
AUTOMATIC BATTERY CHARGER
Geoffrey H. Grey, Alhambra, Calif., assignor to Dynamics Instrumentation Company, Monterey Park, Calif., a corporation of California
Filed May 15, 1961, Ser. No. 110,233
3 Claims. (Cl. 320—40)



2. An automatic battery charger comprising: a source of charging current; a bi-stable coupling network having two states of conduction for selectively coupling in one of said states said source to the battery when it obtains a first predetermined state of discharge and terminal potential for a period of time until it obtains a second predetermined state and potential; a control circuit coupled to said battery and to said coupling network for reversing the state of conduction of said bi-stable network to a second one of said states when said battery obtains either of said terminal potentials; a first transistor coupled between said input and output terminals and having a first control electrode, an isolating diode interposed between said transistor and said output terminal, a second transistor coupled to said control electrode and having a second control electrode, and a sensing means coupled between said output terminal and said second control electrode for controlling the conduction state of said second

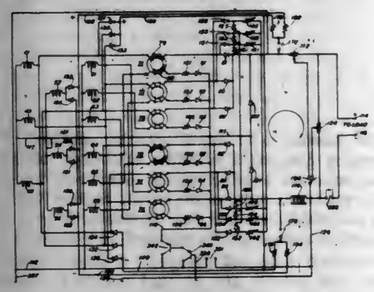
transistor responsive to predetermined upper and lower limits of potential at said output terminal.

3,123,760
RECTIFIER SHIELD
Victor Wouk, New York, Jesse Stitzer, Briarcliff Manor, and Julian Wasserman, Jamaica, N.Y., assignors, by mesne assignments, to Raytheon Company, a corporation of Delaware
Filed Mar. 15, 1960, Ser. No. 15,163
6 Claims. (Cl. 321—11)



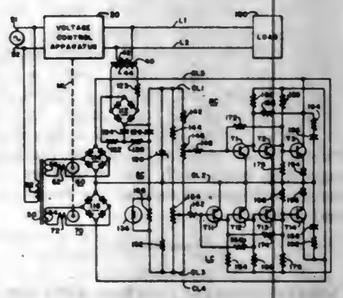
3. Shielding means for a plurality of rectifier units connected in series between an A.C. source of potential and a load comprising, a high voltage first conductive shield connected to the anode end of said rectifier units and positioned adjacent to one side of a mounting plane on which said units are assembled, said first conductive shield including a conducting surface positioned at an angle to said plane and spaced closer to the anode end of said units than to the cathode end for altering the distributed capacities across said units, and a grounded second conductive shield connected to one side of said A.C. source and positioned adjacent to the other side of said unit mounting plane, said grounded second shield including a conducting surface positioned at an acute angle to said plane and spaced closer to the cathode end of the units than to the anode end for altering the distributed capacities between the units and ground.

3,123,761
REGULATED POWER SUPPLIES UTILIZING NEGATIVE FEEDBACK CONTROL EMPLOYING SATURABLE REACTORS
William J. Greene, Scotch Plains, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 22, 1960, Ser. No. 51,107
19 Claims. (Cl. 321—25)



5. In a polyphase magnetic amplifier-rectifier, in combination, a plurality of saturable reactors each individual to one phase, individual power windings for said reactors, a circuit path through each said winding, each said path including a unidirectional conductor individual to the path, a common load circuit connected to said power windings, a first plurality of by-pass circuits each individual to a single phase and each shunting the combination of the common load circuit and the individual unidirectional conductor for that phase, each said by-pass circuit including a unidirectional conductor individual thereto and a loading impedance individual thereto, each said last mentioned unidirectional conductor determining the direction of current flow in the individual by-pass circuit to be the same as the direction of current flow through the power winding to which the by-pass circuit is connected, and a second plurality of by-pass circuits each individual to a single phase and each shunting the power winding of that phase and the unidirectional conductor in the first by-pass circuit for that phase, each said second by-pass circuit including a unidirectional conductor determining the direction of current flow in said second by-pass circuit to be the same as the direction of current flow through said loading impedance in the said first by-pass circuit for the same phase.

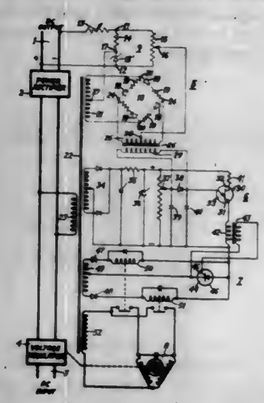
3,123,762
TRANSISTOR VOLTAGE CONTROL APPARATUS
Gilbert D. Throop, Shenango Township, Mercer County, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 7, 1960, Ser. No. 74,394
7 Claims. (Cl. 323—22)



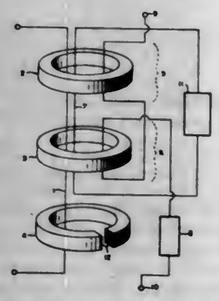
1. An electrical control system for controlling the application of electric power from at least first and second sources to their respective loads in response to a single input signal applied at the input terminals of said system comprising first and second pluralities of switching transistors connected in circuit relation with said input terminals, the final switching transistors of said first and second pluralities being connected in circuit relation between said first and second sources, respectively, and their respective loads, the balance of the switching transistors of said first and second pluralities being connected in circuit relation with said second and first sources, respectively, the final switching transistors of said first and second pluralities being actuated by input signals of lower and upper predetermined values to operatively connect one or the other of said first and second sources to its respective load for the application of electric power thereto, neither of said sources being operatively connected to their respective loads by said final switching transistors when the value of said signal is between said lower and upper predetermined values.

3,123,763
CONTROL CIRCUIT FOR VOLTAGE REGULATOR
Clarence J. Kettler, Stockbridge, Mass., assignor to General Electric Company, a corporation of New York
Filed Apr. 3, 1962, Ser. No. 184,715
4 Claims. (Cl. 323—22)

4. In combination, a direct current circuit whose voltage is to be regulated, a nonlinear bridge circuit having input terminals connected to be responsive to the voltage of said circuit and having output terminals, said bridge being balanced at a desired normal value of said voltage whereby deviations of said voltage from said normal value will produce a unidirectional voltage across said output terminals whose magnitude is proportional to said deviations and whose polarity depends on the direction of said deviations, means for inverting and amplifying the unidirectional voltage across said output terminals comprising a ring circuit of four diode rectifiers connected anode to cathode around said ring, said ring having two pairs of diagonally opposite terminals, an alternating current supply transformer having a secondary winding connected between one pair of said diagonally opposite terminals, said secondary winding having a midtap, an output transformer having a primary winding connected between the other pair of diagonally opposite terminals, said primary winding having a midtap, the output terminals of said nonlinear bridge circuit being connected respectively to said midtaps whereby said output transformer produces an alternating voltage signal whose magnitude is proportional to said deviations in voltage of said direct current circuit and whose phase depends on the direction of said deviations, means including a unijunction transistor fired by said alternating voltage signal, and means including a silicon controlled rectifier fired by said unijunction transistor for regulating the voltage of said direct current circuit so as to cancel said deviations.

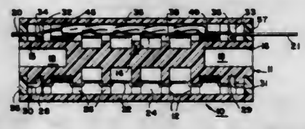


3,123,764
MAGNETIC AMPLIFIER AND CONTROLLING DEVICE
Henry W. Patton, Novi, Mich., assignor to Acromag, Incorporated, Detroit, Mich., a corporation of Michigan
Filed Jan. 15, 1960, Ser. No. 2,778
4 Claims. (Cl. 323—56)



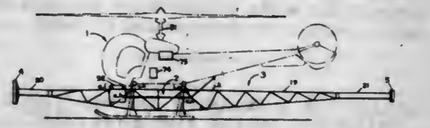
4. A magnetic amplifier circuit comprising saturable magnetic core means, power input winding means wound upon said saturable magnetic core means, signal output winding means wound upon said saturable magnetic core means, additional core means, and signal input winding means wound upon said saturable magnetic core means and said additional core means, said signal input winding means being electro-magnetically linked to said additional core means whereby flux change in said additional core means generates a counter electromotive force in said signal input winding means to modify the effects of distributed capacitive currents induced in said signal input winding means.

3,123,765
COMPACT RESISTOR-CAPACITOR UNIT
Loebe Julie, New York, N.Y., assignor to Julie Research Laboratories, Inc., New York, N.Y.
Filed Feb. 25, 1960, Ser. No. 10,900
13 Claims. (Cl. 323—74)



1. An R-C component for use in electrical and electronic systems and equipment comprising a resistor shunted by a capacitance unit, said resistor including a pair of terminals and resistance material connected between said terminals, said capacitance unit comprising a first wire connected to one of said terminals and having a thin sheath of insulation therearound, a second wire connected to the other of said terminals and having a second thin sheath of insulation therearound, said first and second wires having portions thereof extending in side-by-side relationship, a thin layer of fluid-applied electrically-conductive material surrounding and adhering to the exterior surfaces of both of said insulation sheaths, said thin layer forming a figure-eight pattern as seen in cross section, and an outer cover of insulation surrounding said conductive layer and also having a figure-eight configuration as seen in cross section.

3,123,766
AIRBORNE ELECTROMAGNETIC PROSPECTING APPARATUS HAVING A LIGHTWEIGHT TRUSS STRUCTURE TO SUPPORT TRANSMITTER AND RECEIVER COILS
Kenneth A. Ruddock, Palo Alto, Roland R. Ilsen, Mountain View, and Alberto L. Laich, San Carlos, Calif., assignors, by direct and mesne assignments, to Varian Associates, Palo Alto, Calif., a corporation of California
Filed Nov. 5, 1959, Ser. No. 851,139
17 Claims. (Cl. 324—4)



1. Airborne electromagnetic prospecting apparatus comprising an aircraft body, a platform member rigidly secured to said aircraft body, a rigid, lightweight boom mounted on said platform member below said aircraft body in vibration isolated relationship from the body, said boom being mounted on the platform by a spring-cable suspension system, said suspension system comprising a plurality of spring-cable assemblies interconnecting said boom and said platform, said boom having a transmitter coil system and a receiver coil system mounted thereon in spaced apart relation, means for generating an alternating current in said transmitter coil system to

thereby establish an alternating primary magnetic field, and means for detecting the secondary alternating magnetic field linking the receiver coil system which is generated by conducting bodies located in said primary field.

3,123,767

APPARATUS FOR DETERMINING THE CONDUCTIVITY AND DIELECTRIC CONSTANT OF THE EARTH ALONG ITS SURFACE

Rabindra N. Ghose, Los Angeles, Calif., assignor, by mesne assignments, to Space-General Corporation, Glendale, Calif., a corporation of California

Filed Jan. 5, 1960, Ser. No. 600
1 Claim. (Cl. 324—6)



Apparatus for determining the conductivity and the dielectric constant of the earth, at a predetermined frequency, between two points on the surface thereof, said apparatus comprising: transmitter equipment including a first dipole antenna positioned substantially parallel to the earth at one of the two points and grounded to the earth at the ends thereof, an oscillator adapted to generate in succession a first signal at a frequency slightly above the predetermined frequency and a second signal at a frequency slightly below the predetermined frequency, a power amplifier receptive of the signals generated by said oscillator and coupled to said first antenna for producing currents therein at each of the two frequencies; a gain control unit coupled between said oscillator and said amplifier, said gain control unit being adapted to adjust the amplitude of the signals received by said amplifier to produce equal currents in said first antenna, electromagnetic waves at each frequency being radiated from said first antenna; and receiver equipment spaced apart from said transmitter equipment, said receiver equipment including a second dipole antenna positioned substantially parallel to the earth at the other of the two points and grounded to the earth at the ends thereof, said second antenna intercepting the successive electromagnetic waves to produce voltages at each of said two frequencies; a voltage measuring device; and attenuator means coupled between said second antenna and said measuring device and adapted to attenuate the greater of said induced voltages so that equal voltages are measured by said device, said attenuator means including additional means for indicating the ratio of said induced voltages when said greater induced voltage is attenuated, said ratio corresponding to the conductivity of the earth between the two points at the predetermined frequency.

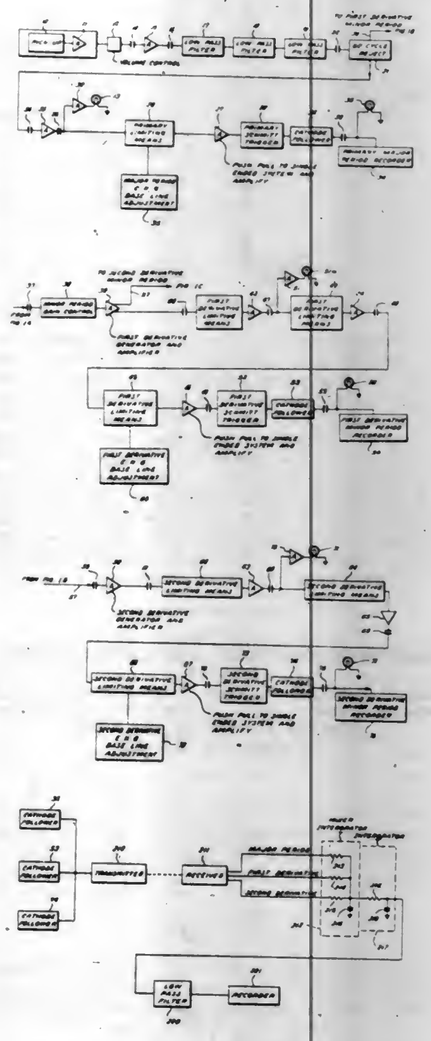
3,123,768

APPARATUS INCLUDING TRANSMITTING AND RECEIVING MEANS FOR ANALYZING APERIODIC WAVEFORMS

Neil R. Burch, 4619 Richmond Ave., and Harold E. Childers, 3718 Seminole, both of Houston, Tex.

Filed Apr. 5, 1961, Ser. No. 100,836
22 Claims. (Cl. 324—77)

1. Apparatus for analyzing wave shapes comprising, means for receiving waves and generating primary electrical signals having substantially the same wave form as the received wave, primary signal amplifying means receiving primary signals from said generator means and amplifying the primary signals, primary signal limiting means receiving primary signals from said primary signal amplifying means and clipping said received signals, another primary signal amplifying means amplifying said clipped primary signal, primary signal Schmitt trigger means receiving signals from said another amplifying means and squaring said signals, recording means receiving and recording said squared primary signal, means receiving primary signals from said primary signal generator and generating a first derivative signal from said primary signal, a plurality of alternately arranged series connected first derivative amplifying means and first derivative limiting means receiving first derivative signals from said first derivative generator and alternately amplifying and clipping received first derivative signals, first derivative Schmitt trigger means receiving said amplified and clipped first derivative signals and squaring said first derivative signals, and recording means receiving and recording said squared first-derivative signals.



22. Apparatus comprising, means generating an original signal, means generating a first and second derivative signal from said original signal, means squaring said original and said first and second derivative signals, means

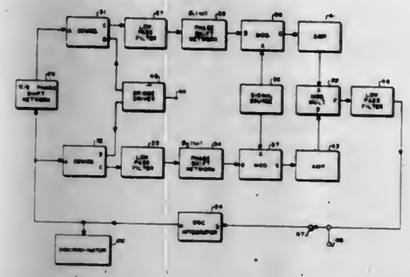
transmitting said three signals to a remote location, and means mixing and integrating said three signals at said remote location to reconstruct said original signal.

3,123,769

FREQUENCY DETECTION SYSTEM INCLUDING PARALLELED INVERSE CHARACTERISTIC PHASE SHIFTERS

Maurice A. Meyer, Natick, Mass., assignor to Laboratory for Electronics, Inc., Boston, Mass., a corporation of Delaware

Filed Oct. 26, 1954, Ser. No. 464,697
1 Claim. (Cl. 324—82)



Apparatus for detecting the frequency of an input signal comprising, a variable frequency signal source, means for shifting the phase of said variable frequency signal by substantially

$$\frac{\pi}{2}$$

radians, means for multiplying said input signal by said phase-shifted variable frequency signal to provide a first product signal, means for multiplying said input signal by said variable frequency signal to form a second product signal, first and second phase shift means having inverse phase-shift characteristics as a function of frequency for shifting the phase of said first and second product signals respectively, a source of a fixed frequency signal, means for modulating said fixed frequency signal by the first and second phase-shifted product signals to form first and second modulation product signals respectively, means for multiplying together said first and second modulation product signals to provide a final product signal, means for controlling the frequency of said source of a variable frequency signal by said final product signal such that the difference between the frequency of said input signal and said variable frequency signal is minimized, and means for indicating the frequency of said variable frequency signal.

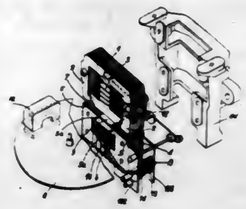
3,123,770

ELECTRIC INDUCTION WATT-HOUR METER WITH SEPARATE VOLTAGE AND CURRENT MAGNETIC STRUCTURES AND CURRENT FLUX ADJUSTING MEANS

Louis Baudoin, Neuilly-sur-Seine, France, assignor to Compagnie de Construction Electrique, Issy-les-Moulineaux, France, a French company

Filed Nov. 28, 1960, Ser. No. 72,098
Claims priority, application France Dec. 4, 1959
6 Claims. (Cl. 324—137)

1. In an induction watt-hour meter having a rotary disc armature and including two electromagnets defining first a substantially M-shaped voltage magnetic circuit provided with the magnetically connected pole members extending substantially in parallel relationship and having pole surfaces situated in a common plane and defining secondarily a current magnetic circuit substantially U-shaped and having pole surfaces in alignment and the pole surfaces of the current magnetic circuit being respectively in part in front of two pole surfaces of said voltage magnetic circuit, said electromagnets further being respectively provided with a voltage coil winding and with a current coil winding, the improved arrangement comprising a non-magnetic material frame support body to which said voltage magnetic circuit and said current magnetic circuit are rigidly connected to define between their pole surfaces an airgap in which said disc armature moves, said improved arrangement further including the feature of constituting



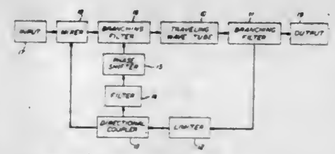
said current magnetic circuit with two independent cooperating magnetic elements separated by an air gap of uniform thickness, the position of which is such that the magnetic reluctance of each element is substantially equal and at least a flat selectively manually adjustable electrically conductive member inserted at least in part in said air gap, the arrangement furthermore including a non-magnetic support and driving means carried by said support to operate said adjustable member.

3,123,771

COMMUNICATION REPEATER TRAVELING WAVE TUBE AMPLIFIER AND OSCILLATOR SYSTEM

Kenneth M. Poole, Bernardsville, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 29, 1961, Ser. No. 163,269
4 Claims. (Cl. 325—9)



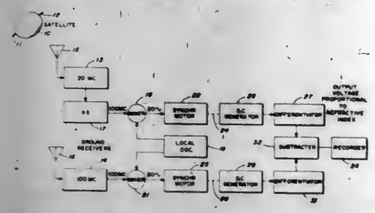
1. A communications system comprising a source of intelligence signals having characteristic frequencies, a modulator having a first input connected to said source and having a second input for a local oscillator signal, said modulator further having an output for passing intelligence signals shifted in frequencies from said characteristics frequencies, traveling wave amplifying apparatus having a first combining filter input connected to said modulator output for receiving said shifted intelligence signals and having a second combining filter input for receiving said local oscillator signal, said amplifying apparatus having a first branching filter output adapted for passing said shifted intelligence signals as amplified and blocking said local oscillator signal, said amplifying apparatus further having a second branching filter output adapted for passing said local oscillator signal and blocking said characteristic frequencies and frequencies of said shifted intelligence signals, and a regenerative feedback circuit connected from said second branching filter output to said second combining filter input for producing said local oscillator signal, characterized in that said feedback circuit comprises a limiter for limiting said local oscillator signal and a junction having an input and a first output connected serially with said limiter in said feedback cir-

cuit and having a second output coupled to said second modulator input for supplying said local oscillator signal to said modulator.

3,123,772
SYSTEM FOR MEASURING REFRACTIVE INDEX OF IONOSPHERE

Irvin H. Gerks, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

Filed Jan. 27, 1961, Ser. No. 85,321
4 Claims. (Cl. 325—67)

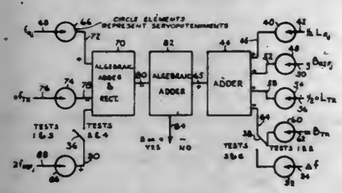


1. A method for measuring refractive index comprising an earth satellite transmitting energy at two frequencies, a pair of receivers situated on the earth and tuned respectively to the frequencies of the energy from the satellite, a multiplier receiving the output of one of the receivers to multiply it by a factor equal to the ratio of the transmitted frequencies, a local oscillator, a pair of mixers receiving inputs from the local oscillator, the first of said pair of mixers receiving the output of the multiplier, the second mixer receiving an input from the second receiver and means for converting the outputs of said first and second mixers into an indication of the refractive index of the ionosphere.

3,123,773
METHOD AND APPARATUS FOR PREDICTING RADIO FREQUENCY INTERFERENCE

Joseph H. Vogelman, 48 Green Drive, Roslyn, N.Y.

Filed Jan. 30, 1962, Ser. No. 169,808
28 Claims. (Cl. 325—67)



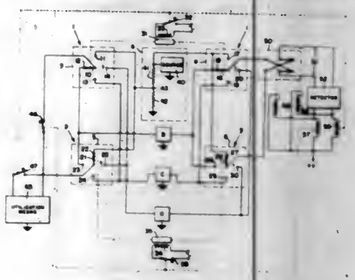
1. Method of predicting radio frequency interference in a plurality of receivers by a plurality of transmitters which comprises the steps of eliminating transmitter-receiver pairs which do not have a corresponding frequency, within a predetermined tolerance, between one harmonic of the transmitter and one harmonic of the receiver of each of said pairs and determining the severity of the interference between the transmitter-receiver pairs which are not eliminated.

3,123,774
SIGNAL AMPLITUDE DISCRIMINATOR

Henry F. Davis, Worcester, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Nov. 9, 1960, Ser. No. 68,287
5 Claims. (Cl. 328—1)

1. A signal amplitude discriminator comprising detector means for sensing the change in polarity of an input signal to produce a first and a second energizing signal corresponding to a first and a second polarity of said input signal, respectively, a plurality of signal means, each of said signal means producing a first and a second simultaneous signal each being representative of a monitored variable, a first signal selecting means, a second signal selecting means, means connecting each of said first signals to said first selecting means and to said second selecting means, said first and said second selecting means each being operative to select one of said first signals and to apply the difference of the selected first signals to said detector means, a first driving means for sequentially operating said first selecting means, said first driving means being responsive to said first energizing signal from said detector means, a second driving means for sequentially operating said second selecting means, said second driving means being responsive to said second energizing signal from said detector means, and means responsive to said first and to said second energizing signals for distributing said second variable signals, said last mentioned means being operative to distribute a second signal from a signal means having a first signal selected by an unenergized one of said first and second selecting means.



3,123,775
TELEVISION CAMERA VERTICAL SWEEP CIRCUIT

Laurance M. Leeds, Syracuse, N.Y., assignor to General Electric Company, a corporation of New York

Filed July 22, 1960, Ser. No. 44,676
1 Claim. (Cl. 328—32)

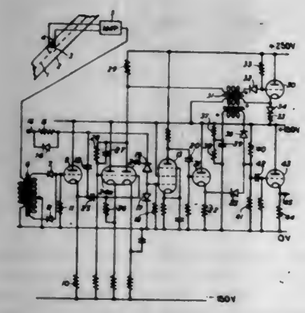


A vertical deflection sweep signal generator comprising a saw tooth voltage generator including a capacitor for gradually building up and rapidly discharging electrical charge for generating said saw tooth voltage, and a space discharge device coupled to said capacitor for inducing said rapid discharge said space discharge device having a control electrode; means for generating a periodic train of sharp positively polarized pulses to be applied to said control electrode comprising a 60 cycle sine voltage source coupled to the primary of a power transformer, said transformer having a center-tapped and grounded secondary winding, a diode connected to each of the two end terminals of said secondary winding with like electrodes of said diodes connected to provide full wave rectification of said 60 cycle voltage, a series resistor and capacitor connected between one end terminal and the grounded center terminal of said secondary winding to shift the phase of said 60 cycle voltage by approximately 90 degrees, a resistor coupled from a junction point of said connected diodes and the junction of said series capacitor and resistor to combine said full-wave rectified voltage and said phase shifted voltage; and a coupling capacitor connected between said junction point of said diodes and said control electrode of said space discharge device for applying said combined voltage to said electrode.

3,123,776
VOLTAGE AMPLITUDE DETECTION APPARATUS

John Joshua Sharp, Woodley, near Romsey, England, assignor to International Computers and Tabulators Limited, London, England

Filed Apr. 13, 1960, Ser. No. 21,994
Claims priority, application Great Britain Apr. 24, 1959
6 Claims. (Cl. 328—116)



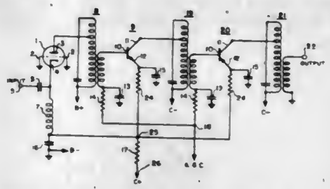
1. Apparatus for producing a final output signal in response to the application of an input signal only if the input signal contains a voltage peak greater than a predetermined level, said apparatus including a source of input signals; means responsive to an input signal initially converting input signals to signals of only one predetermined polarity; means for applying a resultant signal to two paths; a source of reference voltage of said predetermined polarity; means connected in one of said paths and responsive jointly to said reference voltage and to said resultant signal to produce an amplitude-indicating signal only if the amplitude of the resultant signal exceeds the reference voltage; a circuit connected in the other of said paths responsive only to the change in slope of the wave form of the resultant signal from one polarity to the opposite polarity to produce a peak-indicating signal; signal-combining means; and means for applying both said indicating signals to the signal-combining means.

3,123,777
APPLICATION OF A.G.C. TO GROUNDED GRID AMPLIFIER

Leslie D. Thomas, Baltimore, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army

Filed Jan. 24, 1962, Ser. No. 168,564
6 Claims. (Cl. 330—3)

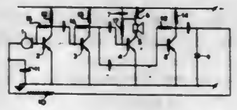
1. A gain-control circuit for a high-frequency amplifier; said amplifier comprising: a first amplifying device having a cathode, a grid, and an anode, said grid being grounded; a second amplifying device having an input electrode, an output electrode, and a third electrode; means to apply an input signal to said cathode; a source of gain-control voltage; means to couple said gain-control source to said input electrode; means to couple said anode to said input electrode; a source of D.C. potential; means to couple said third electrode and said cathode to said D.C. potential source; and means for obtaining an output signal from said output electrode.



3,123,778
SIMULTANEOUS VARIATION OF OUTPUT AND INPUT CURRENTS OF A TRANSISTOR AMPLIFIER BY MEANS OF INPUT IMPEDANCE ADJUSTMENT

Gerard Corneille Wolters, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Oct. 16, 1958, Ser. No. 767,645
Claims priority, application Netherlands Nov. 4, 1957
4 Claims. (Cl. 330—29)



1. An amplifier circuit comprising first and second transistors each having emitter, base and collector electrodes forming an input electrode system and an output electrode system, a source of signals to be amplified, means coupling said source to the parallel combination of the input electrode systems of both transistors, first control means varying the emitter bias current of said second transistor thereby varying the input impedance of said second transistor, said input impedance variation operating to vary the amount of signal current flowing from said source to both of said transistors such that a decrease in the signal current to the second transistor due to an increase of its input impedance results in an increase in the signal current to the first transistor, and a feedback network coupled from the output electrode system of said first transistor to second control means in the source coupling path.

3,123,779
CIRCUIT ARRANGEMENT FOR PRODUCING THE SUM AND DIFFERENCE OF TWO LOW-FREQUENCY SIGNALS

Frans Louis Henri Marie Stumpers and Rudolf Schutte, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Nov. 14, 1960, Ser. No. 68,851
Claims priority, application Netherlands Dec. 21, 1959
7 Claims. (Cl. 330—69)

2. A sum and difference producer for two low-frequency signals A and B, comprising:

a first follower amplifier,

a second follower amplifier,

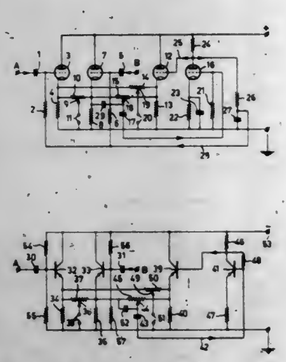
the signals A and B being fed to the inputs of said first and second followers repectively,

a first voltage divider having a center tap and being connected between the output circuits of said first and second followers,

the sum signal A+B being taken from said center tap,

a third follower amplifier,

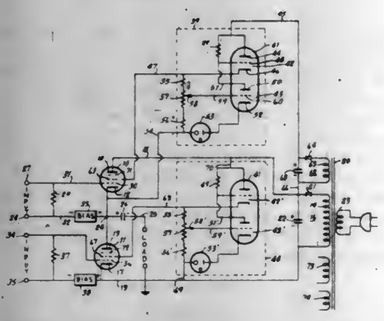
second and third voltage dividers each having a center tap and being connected from the output circuits of said third to said first and second followers respectively,



a signal amplifier having its input connected to the center tap of one of said second and third dividers, and its output connected to the input circuit of said third follower,

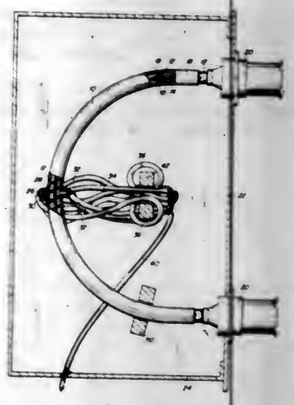
the difference signal $A-B$ being taken from the center tap of the other of said second and third dividers.

3,123,780
HIGH FIDELITY AMPLIFIER
Julius Futterman, 523 W. 112th St., New York, N.Y.
Filed Sept. 15, 1960, Ser. No. 56,157
13 Claims. (Cl. 330—74)



1. A series-connected, push-pull amplifier circuit comprising a pair of electron space-discharge devices, each having at least an anode, a cathode and a screen-grid; means for connecting the cathode of one of said devices to the anode of the other of said devices; means for connecting a source of supply voltage between the anode of said one device and the cathode of said other device; means for coupling a load between the anode and the cathode of said other device, so that said devices are adapted to alternately conduct to energize said load upon the application of a push-pull input signal to the devices; series type electronic voltage regulator means connected between the cathode and screen-grid of said one device and having the regulated output means thereof connected in series between said source of supply voltage and the screen-grid of said one device for maintaining the screen-grid to cathode voltage of said one device substantially constant in magnitude, whereby the anode circuit efficiency of said one device is substantially unaffected by changes in frequency of said push-pull input signal and impedance of said load and the power output of said one device is thereby increased.

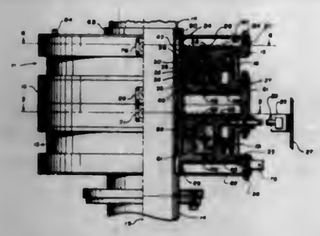
3,123,781
SIGNAL ENERGY TAKE OFF DEVICE
Chester N. Winningstad, Portland, Oreg., assignor to Tektronix, Inc., Beaverton, Oreg., a corporation of Oregon
Filed Nov. 7, 1960, Ser. No. 67,679
2 Claims. (Cl. 333—9)



1. A signal voltage take off device comprising a coaxial cable including an outer tubular conductor and a central conductor, said outer conductor having an annular gap therein providing an impedance across said gap which is small relative to the characteristic impedance of said cable, a plurality of connecting coaxial cables connected in parallel across said gap at one of their ends, said connecting cables having characteristic impedances providing a resulting parallel characteristic impedance across said gap which is small relative to the characteristic impedance of said feed through cable, an output coaxial cable, the other ends of said connecting cables being connected at least partly in series across one end of said output cable to provide a resultant characteristic impedance approximating the characteristic impedance of said output cable, and means for electrically isolating the opposite ends of at least certain of said connecting cables to provide for connecting said one ends in parallel and said other ends at least partly in series, said means including an annular core of magnetic material through which said certain connecting cables are passed, said connecting cables all having the same effective length and different ones of said certain connecting cables being passed through said core a different number of times.

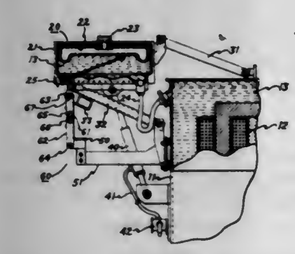
3,123,782
AROUND THE MAST ROTARY COUPLING HAVING SHIELDED STATOR AND ROTOR RINGS IN NEAR CONTACT TO FORM TROUGH WAVEGUIDES
Frank E. Parisi, Waban, Mass., assignor to General Electronic Laboratories, Inc., Cambridge, Mass., a corporation of Massachusetts
Filed Aug. 17, 1959, Ser. No. 835,163
13 Claims. (Cl. 333—98)

12. In a rotary joint for the transmission of electrical energy, a hollow mast, a pair of circular disk members circumscribed about said mast and having adjoining faces in proximate relation to each other, one of the members in fixed relation to the mast, means mounting the other member in rotative relation to the mast, oppositely disposed grooves circumscribing the mast in the adjoining faces of the disk members, a circular ring shaped conductor in each of the grooves in fixed relation to the respective groove and in proximate relation to each other,



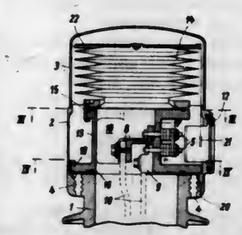
and feed lines coupled to the circular conductors at a plurality of positions on each conductor wherein the spacing between positions in the respective conductor is smaller than one quarter of the wave length of the electric signals to be carried thereby.

3,123,783
MOBILE TRANSFORMER APPARATUS
Stanley H. Wilk and John A. Addy, Pittsfield, Mass., assignors to General Electric Company, a corporation of New York
Filed Dec. 7, 1959, Ser. No. 857,758
1 Claim. (Cl. 336—55)



A mobile transformer comprising a winding and core assembly supported by a vehicular frame, said assembly being enclosed in a fluid filled tank, a fluid reservoir movably mounted on said tank, said reservoir comprising an expansion chamber having a flexible bag therein, said bag having its inside vented to the atmosphere through an aperture in said chamber, a fluid conduit hydraulically connecting fluid in said reservoir in contact with the outside of said bag to the inside of said tank adjacent the upper surface of said tank, at least one pivotable support connecting one side of said reservoir to the upper surface of said tank, at least one other pivotable support connecting the under side of said reservoir to a side of said tank, stop means on said tank for supporting said reservoir in its lowered position, hydraulic means for raising said reservoir, and a strut assembly on said tank for supporting said reservoir in its raised position, said strut assembly comprising an upper link and a lower link, said upper link being pivotally attached to said chamber by means of a locking pin, and said lower link being pivotally attached to said stop means, there being an elongated slot in one of said links, a pin in the other of said links movable in said slot, said lower link having a notch in the upper end thereof, and said locking pin being received by said notch when said reservoir is in its raised position.

3,123,784
HIGH-VOLTAGE INSTRUMENT TRANSFORMERS
Hans Ritz, 72 Alsterkrugchaussee, Hamburg, Germany
Filed Feb. 13, 1962, Ser. No. 173,049
4 Claims. (Cl. 336—58)



1. Improvements in a high-voltage transformer which includes a tubular insulator containing the transformer windings and a fluid insulating medium and wherein said tubular insulator has at least one open end, said improvements comprising a hollow head chamber connected to said tubular insulator about said open end, a hinged window in the wall of said head chamber, a tubular body disposed in said head chamber, said tubular body including first and second flanged ends and a plane wall portion intermediate said flanged ends and disposed opposite said window, an expansion vessel in said head chamber, means for sealably connecting said expansion vessel to the first flanged end of said tubular body, means for sealably connecting the open end of said tubular insulator to the second flanged end of said tubular body, the cross-sectional area of said tubular body being sufficiently large whereby an unconstrained fluid path is established between said expansion vessels and said tubular insulator to provide momentary pressure equalization therebetween in the event of sudden rises in pressure, a plurality of threaded feedthroughs disposed in and passing through the plane portion of said tubular body, whereby a first portion of each feedthrough is within said tubular body and a second portion is external to said tubular body and opposite said window, means for connecting said first portions to said transformer windings and means for selectively connecting said second portions in accordance with given transformer ratios.

3,123,785
ANGULAR POSITION TRANSDUCER
Waldemar Möller, Uberlingen (Bodensee), Germany, assignor to Bodenseewerk Perkin-Elmer u. Co. G.m.b.H., Uberlingen (Bodensee), Germany
Filed Sept. 21, 1959, Ser. No. 841,327
Claims priority, application Germany Sept. 24, 1958
5 Claims. (Cl. 336—135)



1. Apparatus for producing a signal in accordance with rotational displacement, comprising in combination:

a stator having a multiplicity of inwardly projecting salient poles symmetrically arranged about an axis of rotation;

a plurality of windings, each winding surrounding a pole of said stator, said windings being energized by alternating current and being alternately oppositely wound to magnetize adjacent stator poles oppositely;

a rotor mounted for partial rotation within said stator, and being formed to provide an air gap between said rotor and stator; and

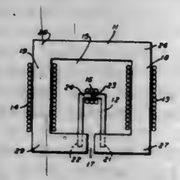
a rotor winding formed from a multiplicity of coils carried by said rotor and lying within the air gap between said rotor and stator.

3,123,786

LOAD PROTECTOR COMPRISING AN AIR GAP SHUNTED BY A CORE HAVING A SECONDARY WINDING

Elmer C. Evans, 7976 Lemon Circle, La Mesa, Calif.

Filed Nov. 6, 1961, Ser. No. 150,602
2 Claims. (Cl. 336—155)
(Granted under Title 35, U.S. Code (1952), sec. 266)



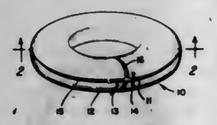
1. An electrical load protector comprising a first core having a substantially closed loop of ferromagnetic material defining a window, a primary coil comprising first and second windings, said first and second primary windings being connected in series and so spaced apart on said first core as to produce within said window a region of substantially zero magnetic field, said core having an air gap, a second core of ferromagnetic material, said second core being C-shaped and having first and second ends, the ends of said second core being, respectively, in good magnetic contact with said first core on opposite sides of said air gap, a secondary winding disposed on said second core, said secondary winding being positioned substantially in said region of zero field, and said first core having a saturation induction higher than the saturation induction of said second core.

3,123,787

TOROIDAL TRANSFORMER HAVING A HIGH TURNS RATIO

Gordon A. Shifrin, Malibu, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Filed June 30, 1960, Ser. No. 40,052
2 Claims. (Cl. 336—229)



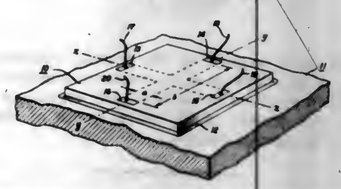
1. In a toroidal transformer adapted to have a high turns ratio with optimum coupling between windings, the combination comprising: a toroidal core of ferrite material and having an axis, a single turn electrical winding disposed on said core, said winding being a uniform electrically conductive coating enclosing substantially all surfaces of said toroidal core, said coating having a first slit extending circumferentially and coaxially around said toroidal core, said coating having a second slit extending transversely to said first slit and annularly around said toroidal core in a plane which extends longitudinally through said axis and intersecting said first slit, the intersection of said slits defining four corners of said coating, and a pair of electrical terminal connections made to diagonally opposite corners of said coating to provide a substantially uniform electrical current distribution in said winding and around said core when said winding is energized.

3,123,788

PIEZORESISTIVE GAGE

William G. Pfann, Far Hills, and Robert N. Thurston, Whippany, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Apr. 25, 1961, Ser. No. 105,355
9 Claims. (Cl. 338—4)



1. A piezoresistive semiconductor strain gage comprising an essentially flat wafer of a piezoresistive semiconductor material having a thickness of less than one-tenth of the minimum planar dimension, said wafer additionally having two pairs of electrical contacts spaced over a flat surface thereof, said contacts disposed such that imaginary lines connecting the centers of each pair of contacts intersect within 10 degrees of normal, said imaginary lines representing directions in the material which have piezoresistive coefficients associated therewith which in the determinant:

$$\begin{vmatrix} \pi'_{11} & \pi'_{12} & \pi'_{16} \\ \pi'_{21} & \pi'_{22} & \pi'_{26} \\ \pi'_{61} & \pi'_{62} & \pi'_{66} \end{vmatrix}$$

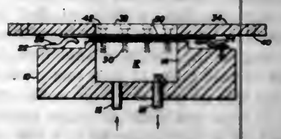
have a nonzero value, the 1 and 2 crystallographic directions interrelating said coefficients corresponding with the directions of said imaginary lines.

3,123,789

CORROSION TEST APPARATUS

Edward Schaschl and Glenn A. Marsh, Crystal Lake, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

Filed Dec. 30, 1960, Ser. No. 79,888
9 Claims. (Cl. 338—13)



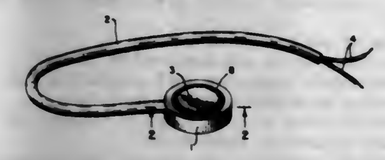
1. A corrosion-test device comprising a hollow housing having an opening in one side thereof, fluid inlet and outlet means communicating with the interior of said housing, and a test panel attached across said opening to define a chamber within said housing, said test panel comprising a sheet-like, elongated, electrically conductive, corrodible test element, a sheet-like, elongated, compensating element having a temperature-resistance characteristic substantially the same as that of said test element, a thin layer of electrically insulating material disposed between the flat surfaces of said test element and compensating element to separate the same, and a second layer of electrically insulating, corrosion-resistant material disposed on the surface of said compensating element opposite from said test element, said test element, compensating element, and layers being arranged in sandwich-like configuration to form said panel, and being attached to said housing with said test element external thereto.

3,123,790

ELECTRICAL APPARATUS

Tommy N. Tyler, Littleton, Colo., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed July 10, 1961, Ser. No. 122,871
2 Claims. (Cl. 338—28)



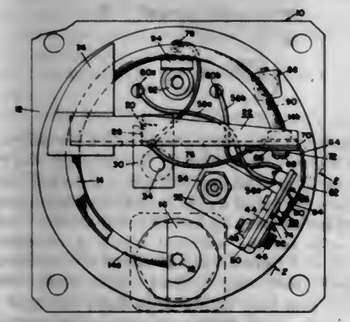
1. A transducer comprising a temperature sensitive resistor, an anodized aluminum cup, means for attaching said resistor to an inside surface of said cup in a thermally conductive relationship with an anodized outside surface of said cup, a cup housing, means for supporting said cup in said housing with electrical and thermal isolation from said cup housing and with said outside surface of said cup projecting outside of said housing, clip-type hollow support means attached to said housing for clipping said cup housing on a heat source having a temperature to be measured with said projecting surface of said cup in intimate contact with an external surface of said heat source, and a pair of wires connected to said resistor and passing through said support means for connecting said resistor to related apparatus.

3,123,791

PRESSURE TRANSDUCER

Norlin J. Roche, Norristown, and William B. Pegram, Swarthmore, Pa., assignors to International Resistance Company, Philadelphia, Pa.

Filed Mar. 29, 1961, Ser. No. 99,117
9 Claims. (Cl. 338—40)



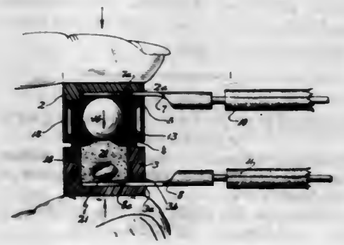
1. A pressure transducer comprising a base plate, an arcuate Bourdon tube supported at one end on said base plate, the free end of said Bourdon tube being sealed closed and being movable along an arc upon a change in pressure applied within said Bourdon tube, a rigid arm secured at one end to the free end of said Bourdon tube, said arm being substantially parallel to said base plate and extending across the center of the arc of movement of the free end of the Bourdon tube, means supporting said arm on said base plate for rotation about the center of the arc of movement of the free end of the Bourdon tube but preventing movement of said arm radially of the center of the arc, an electrical resistance element mounted on said base plate, a contact secured to the free end of said Bourdon tube and having substantially point contact with said resistance element, said contact being slidable along said resistance element upon movement of the free end of the Bourdon tube, and a counterweight on the other end of the arm, said counterweight being of a size to balance the weight on the free end of the Bourdon tube.

3,123,792

SWITCH-RHEOSTAT

Julius R. Klemm, Wilmette, Ill., assignor to Dowst Manufacturing Company, a corporation of Illinois

Filed Mar. 18, 1963, Ser. No. 265,973
6 Claims. (Cl. 338—100)



1. A switch-rheostat comprising a pair of telescopically and slidably arranged housing sections, means on each of said sections cooperating to prevent inadvertent separation thereof, the first of said sections defining a recess, particulate electrically conductive material in said recess, a first contact member in said first section in electrical contact with said material, a conductor member in said first section adjacent said material, a second contact member in the second housing section, and a resilient sleeve in said first housing section and supporting said conductor member relative to said material and said second contact member in spaced relationship with said conductor member, said second housing section being slidable axially whereby said second contact member first will engage said conductor member to close the circuit between the contact members and further movement thereof will compress said material to decrease the resistance thereof.

3,123,793

VARIABLE IMPEDANCE

Dean W. Flygstad, Roseville, and David A. Meyer, Robbinsdale, Minn., assignors, by mesne assignments, to The Telex Corporation, Tulsa, Okla., a corporation of Delaware

Filed Oct. 8, 1962, Ser. No. 228,901
3 Claims. (Cl. 338—154)

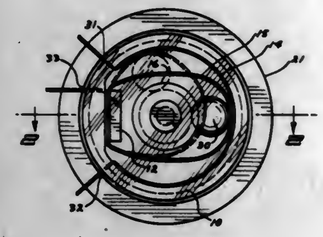
1. A variable impedance device comprising, in combination:

(*a*) a hollow cylindrical housing having axially positioned apertures at each end;

(*b*) a spool shaped drive means rotatably journaled in said apertures;

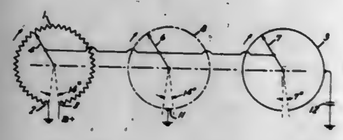
(*c*) impedance means concentrically non-rotatably mounted on the inside of said housing and including at least one terminal for connection to an electrical device;

(*d*) a conductive band concentrically, stationarily mounted on the inside of said housing, said band being dimensioned so that upon extension thereof toward said impedance means will result in contact therewith at only one limited area along its length, said conductive band having a terminal for connection to an electrical device; and



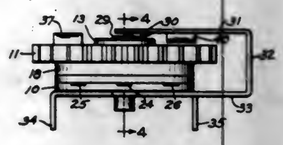
(*e*) a solid, spherical member comprised of resilient material exhibiting dielectric characteristics compressed intermediate said spool shaped drive means and said conductive band.

3,123,794
VARIABLE ELECTRICAL RESISTANCE MECHANISM
Ira H. Wahlbeck, Whitesboro, and Stuart G. Miller, Utica, N.Y., assignors to General Electric Company, a corporation of New York
Filed Apr. 25, 1958, Ser. No. 730,917
4 Claims. (Cl. 338—172)



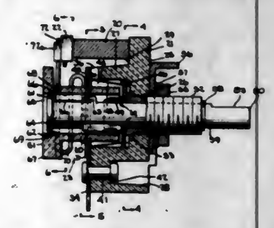
1. A variable arcuate electrical resistance mechanism comprising an arcuate discontinuous resistive element, a first movable and conductive brush contacting said resistive element, a first arcuate discontinuous conductive element, a second movable and conductive brush contacting said conductive element, a stationary discontinuous arcuate conductive element, a third movable and conductive brush contacting said discontinuous conductive element, means for electrically connecting said brushes and mechanical means for maintaining said brushes mechanically positioned with respect to one another such that upon movement of said brushes over their respective elements, said conductive element and said stationary discontinuous conductive element are electrically connected substantially only when said first brush is out of contact with said resistive element and said first conductive element is electrically connected to said resistive element substantially whenever said first brush is contacting said resistive element, the arcuate lengths of the discontinuity of said resistive element and said stationary conductive element being approximately twice that of said first conductive element, the arcuate length of the discontinuity of said first conductive element being in excess of five degrees, and means to selectively connect the stationary conductive element in circuit with the adjacent ends of said discontinuous resistive element, whereby the relative phasing of signals which can be provided by said mechanism can be selectively controlled.

3,123,795
COMBINATION SWITCH AND VARIABLE RESISTOR
Stanley O. Bender, Asheville, N.C., assignor to CTS Corporation, Elkhart, Ind., a corporation of Indiana
Filed Nov. 29, 1961, Ser. No. 155,555
7 Claims. (Cl. 338—172)



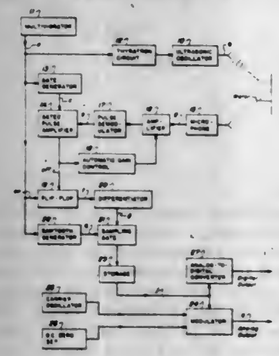
1. A combination variable resistor and switch comprising:
a base of non-conductive material;
an arcuate resistive path supported by the base;
an electrically conductive shaft attached to and extending perpendicularly through the base;
a nonconductive member rotatably mounted on the shaft adjacent the resistive path;
a contactor carried by the member and arranged to move along the resistive path as the member is rotated on the shaft;
a "U-shaped" resilient member having a first arm and a second arm embracing the control;
the first arm being attached to the base and the second arm being resiliently urged toward the end of the shaft adjacent the rotating member; and
cam means carried by the member for engaging the second arm and forcing the second arm away from and out of electrical contact with the shaft during a portion of the rotation of the member.

3,123,796
RHEOSTAT
Robert Vradenburgh, Yonkers, N.Y., assignor to Ward Leonard Electric Co., Mount Vernon, N.Y., a corporation of New York
Filed Nov. 24, 1961, Ser. No. 154,584
12 Claims. (Cl. 338—174)



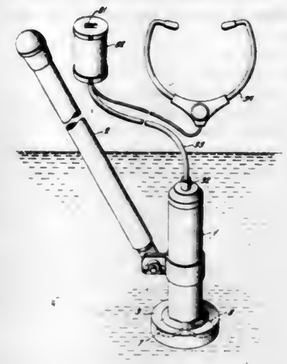
1. A rheostat comprising a base with a peripheral edge, a circular flange spaced radially inward from the peripheral edge to form a seating surface, a terminal block extending from the flange to the peripheral edge; a ring type resistor extending over an arc of less than 360° and having ends adjacent the terminal block; a collector ring mounted on and fastened to said flange for receiving voltages tapped from said resistor; drive shaft rotatably mounted on said base with a drive head having a lateral flange; a single piece resilient member mounted on said drive head between said lateral flange and said collector ring to snugly press said shaft on said base and support a sliding contact for rotation through the arc of the resistor; said drive shaft having two keys on opposite sides thereof with one key longer than the other; said drive head having longitudinally and radially extending slots for receiving said keys; a metal stop member concentric with the shaft and having a longitudinally extending stop projection and lateral peripheral projections; said flange having notches facing said shaft and said projections fitting in said notches to prevent rotation of said metal stop member; said longitudinally extending projection overlapping with said long key to form a stop means limiting the arc of travel of the sliding contact to the arc of the resistor.

3,123,797
DISTANCE MEASURING DEVICE
Leonard Ehrman, Albuquerque, N. Mex. (83 Bertwell Road, Lexington 73, Mass.)
Filed Dec. 6, 1960, Ser. No. 75,069
3 Claims. (Cl. 340—1)



3. For use in determining the altitude of the hull of a hydrofoil craft above the water surface, an ultrasonic altimeter mounted on the craft and comprising:
a magnetostrictive oscillator oriented to transmit ultrasonic energy from the craft toward the water;
a free-runing multivibrator having a pulse output whose pulse width is brief compared to the period and whose pulse repetition rate is slow relative to the oscillator frequency;
thyratron circuitry triggered by the multivibrator and coupled to the magnetostrictive oscillator thereby producing pulses of alternating ultrasonic energy in response to the multivibrator pulses;
a microphone having an ultrasonic frequency response, oriented to receive pulses of ultrasonic energy reflected from the water;
an amplifier with automatic gain control for amplifying the microphone output and for maintaining a constant output signal level regardless of the strength of the reflected pulses;
a pulse demodulator for demodulating the amplifier output;
a gated pulse amplifier controlled by a gate generator to be responsive to demodulated pulses only during the time period between successive multivibrator pulses;
a flip-flop which is connected to be turned on by a pulse from the multivibrator and to be turned off by a gated demodulated pulse passed by the gated pulse amplifier;
means for differentiating the off output of the flip-flop;
a sawtooth waveform generator whose waveform period is equal to that of the multivibrator and whose waveform amplitude is linear with time;
means for storing a voltage level;
a sampling gate controlled by the differentiation off output of the flip-flop and connected to transfer a sample of the sawtooth waveform to the storage means;
and an analog-to-digital converter responsive to the stored voltage level and yielding a digital signal indicative of the altitude.

3,123,798
FISH FINDER
Rollind O. Holloway, 2019 Mayo St., and John R. Holloway, 1910 Wiley St., both of Hollywood, Fla.
Filed Apr. 29, 1960, Ser. No. 25,712
10 Claims. (Cl. 340—3)



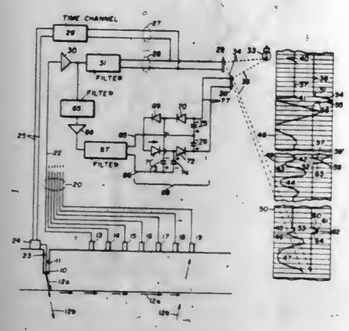
2. An apparatus for locating objects moving beneath the surface of the water, a portable instrument for immersion beneath the surface of the water to transmit pressure waves to the water and receive pressure waves reflected from objects in the water comprising a body of insulating material and a pair of recesses formed in said body and extending from an outer surface thereof, a pair of directional transducers disposed within said recesses so that the directional axes of said pair of directional transducers are substantially parallel to each other and normal to said outer surface, sealing means covering the openings of said recesses at said outer surface and sufficiently pliable to transmit pressure waves between the water in which said instrument is immersed and said transducers, electrodes engaging the opposite surfaces of said transducers and connected to conductors extending through the bottom walls of said recesses respectively connected to transmitter and receiving devices and said pair of transducers being so arranged and connected to said conductors that one of said transducers is electrically excited to vibrate mechanically and the other transducer is mechanically excited by reflected pressure waves to generate an electrical potential independent of the electrical excitation of said one transducer.

6. A method for detecting the presence of fish and other moving objects submerged in water which comprises transmitting continuous constant frequency pressure waves in a directional pattern from a source beneath the surface of the water, scanning the directional pattern in azimuth, receiving at a point adjacent said source the pressure waves reflected from the interaction between the transmitted constant frequency pressure waves and radiated pressure waves induced by the moving object, and providing an indication of any difference between the frequencies of the received reflections and the transmitted pressure waves to reveal the presence of a moving object in the direction of the pattern at the time of the indication of the difference in said frequencies.

3,123,799
IDENTIFICATION OF THE TIME OF ARRIVAL OF SEISMIC EVENTS
Earley M. Shook, Dallas, Tex., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
Filed Nov. 25, 1959, Ser. No. 855,389
10 Claims. (Cl. 340—15.5)

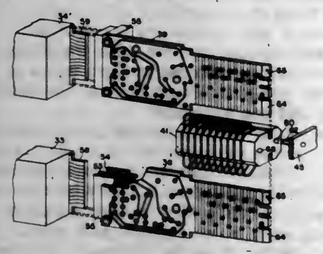
1. In seismic exploration where a first electrical signal is generated which is representative of earth movement at

a detecting station resulting from the initiation of a seismic wave at a sending station, the system which comprises means for selecting a band of frequency components from said first electrical signal to produce a second signal, means for amplifying and recording said second signal as a function of time relative to the initiation of said seismic wave at said sending station to produce a variable amplitude record, means for deriving from said



second electrical signal unidirectional markers proportional in magnitude to components of said electrical signal having a frequency uniquely representative of the onset of seismic reflections, and means connected to the output of said amplifying means for recording said markers on the same time scale and adjacent to said variable amplitude record for indicating the time occurrence of said components in said electrical signal.

3,123,800
AIR TRAFFIC CONTROL MACHINE
Stuart M. Phelps and Frank A. Daly, Rochester, N.Y., assignors to General Signal Corporation
Filed Sept. 15, 1960, Ser. No. 56,231
6 Claims. (Cl. 340—23)



4. An air traffic control machine for posting flight data for several flight altitudes comprising:

(*a*) several laterally disposed posting indicators arranged in rows and columns for posting flight information, one row of indicators being provided for each of the flight altitudes,

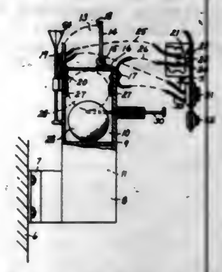
(*b*) printed circuit control boards for the respective posting indicators disposed elevationally in columns and extending longitudinally from one end of their associated posting indicators,

(*c*) quickly detachable connectors disposed longitudinally between the circuit boards in each column,

(*d*) each of the connectors having oppositely disposed longitudinal slots formed therein for receiving edges of the circuit boards for adjoining flight altitudes, and

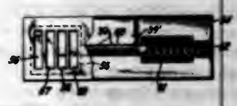
(*e*) the longitudinal slots of each connector containing the ends respectively of several elevationally disposed conductors for closing several circuit connections between the circuit boards having their edges inserted in said slots.

3,123,801
EMERGENCY SIGNAL DEVICE
Warren W. Bosler, 1623 SE. Insley, Portland, Oreg.
Filed Apr. 16, 1962, Ser. No. 187,856
2 Claims. (Cl. 340—52)



1. An emergency signal device for vehicles comprising, in combination, a battery connected series with a relay switch and a transmitter, an automatic switch device operating the relay switch, said switch device comprising a compartment mounting an impact switch, an inversion switch and a manual switch, said switches being connected in parallel with each other for individual actuation of said relay switch, said inversion switch comprising a ball bearing disposed freely upon the floor of said compartment, leaf contacts disposed in an upper part of said compartment and adapted to be closed by said ball bearing upon inversion of said compartment, means for retaining said ball bearing in a closed position with said leaf contacts comprising a plunger slidably carried by a central portion of said compartment for movement transversely thereof into the path of movement of said ball bearnig, a spring yieldably urging said plunger inwardly of said compartment, said plunger abutting said ball bearing normally supported upon the floor of said compartment, and retractable outwardly upon inversion of said compartment and movement of said ball bearing into engagement with said leaf contacts, said plunger being spaced from said leaf contacts a distance corresponding to the diameter of said ball bearing whereby said plunger extends into said compartment to retain said ball bearing in engagement with said leaf contacts following movement of said ball bearing past said plunger during movement of said floor of said compartment into contact with said leaf contacts.

3,123,802
MONITOR FOR LIGHTS IN A FLASHING CIRCUIT
Wolfgang Priesemuth, Dorfstr. 22, Itzehoe, Holstein, Germany
Filed Mar. 9, 1962, Ser. No. 178,715
Claims priority, application Germany Mar. 13, 1961
1 Claim. (Cl. 340—79)



A monitoring device for indicating the operativeness of a plurality of electric lights that are connectable in an energizing circuit in parallel with one another so that they light in unison whenever the energizing circuit is energized, said monitoring device comprising:

A. a wall having a plurality of apertures therein equal to the number of lights;

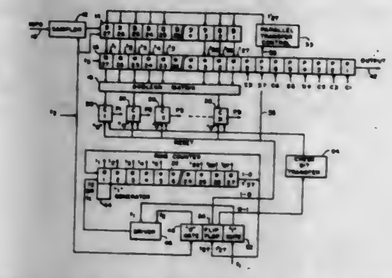
B. an electromagnet fixed with respect to said wall and having a single winding connectable in said energizing circuit, in series with all of the lights, to be energized by the current through the lights so that the current through said winding is proportional to the number of lights that are in operation;

C. a plurality of magnetic actuator means, one for each aperture, each movable in one direction in response to the attractive force of the electromagnet;

D. means biasing each of the magnetic actuator means in the opposite direction with a different force, so that each of the magnetic actuator means is moved in its first designated direction by a different value of current in the winding; and

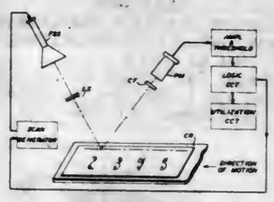
E. a plurality of shutters in the housing, each connected with one of the actuator means to be moved thereby toward and from a position covering one of the apertures.

3,123,803
DATA TRANSMISSION SYSTEM WITH ERROR CORRECTION CAPABILITIES UTILIZING MAXIMUM AND NONMAXIMUM LENGTH SEQUENCE REGISTERS FOR ENCODING AND DECODING
William E. De Lisle, Buffalo, and Raymond G. Fryer, Williamsville, N.Y., assignors to Sylvania Electric Products Inc., a corporation of Delaware
Filed Apr. 14, 1960, Ser. No. 22,280
13 Claims. (Cl. 340—146.1)



1. For an electronic digital data processing system error correcting apparatus comprising: a source of message digits; a multi-stage buffer register connected to said source; a first multi-stage pulse shifting register connected to said buffer register; a first multi-digit parity word generator; a first pulse translating matrix connecting said shifting register to said parity word generator; a first multi-stage ring counter; means independently connecting individual stages of said ring counter to individual stages of said shifting register; an output channel; means for applying a sequence of said message and said parity digits to said output channel; an input channel; input means for deriving a sequence of digits from said input channel; a second multi-stage pulse shifting register; a multi-stage error pattern subword storage register having given ones of its stages connected to given stages of said second shifting register; a second multi-digit parity word generator; a second pulse translating matrix connected between said second shifting register and said second parity word generator; a second parity word buffer register conneced to said second parity word generator; a non-maximum sequence pulse shifting register having a plurality of data stages; means connecting data stages of said non-maximum sequence register to data stages of said second parity word generator; means connecting data stages of said non-maximum sequence register to given stages of said error pattern storage register; a multi-stage maximum sequence pulse shifting register having a periodic cycle disjoint with the periodic cycle of said non-maximum sequence generator; a second multi-stage ring counter; means connecting individual stages of said second ring counter to individual stages of said second pulse shifting register; means for duplicating the data content of selected stages of said non-maximum sequence generator in selected stages of said maximum sequence generator; means for simultaneously shifting data through said second shifting register, said non-maximum sequence register and said maximum sequence register, respectively; means responsive to a given relationship of data in said non-maximum and maximum sequence registers with data in said second parity word buffer register for stopping said simultaneous shifting and causing said error pattern buffer register to add the contents of its respective stages sum-modulo-two to the con ents of the stages to which they are respectively connected in said second shifting register; and, means for deriving its digital content from said second shifting register after said addition has been performed.

3,123,804
CHARACTER RECOGNITION SYSTEM
Louis A. Kamentsky, Plainfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 23, 1960, Ser. No. 51,444
13 Claims. (Cl. 340—146.3)

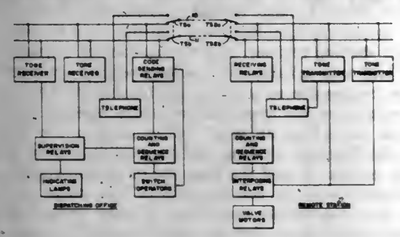


1. A character recognition system comprising scaning means for scanning a field which includes a horizontal registration bar having at least a first discontinuity therein and a character to be read vertically offset with respect to said discontinuity, means controlling said scanning means to successively generate a non-raster scan pattern having a configuration complementary to and registrable with said registration bar in the vicinity of said discontinuity, means for moving said scan pattern sequentially in each of a plurality of predetermined positions on said field, sensisng means operative to provide an output signal when said scan pattern is positioned to achieve the aforementioned registration, and means responsive to said output signal to control said scanning means to generate a character recognition scan pattern, said recognition scan pattern being positioned a predetermined distance from the last of the successively generated non-raster scan patterns.

3,123,805
REMOTE CONTROL SYSTEM
Willard A. Derr, Wilkinsburg, and William F. Cruess, Penn Township, Allegheny County, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Continuation of application Ser. No. 462,355, Oct. 14, 1954. This application Apr. 3, 1959, Ser. No. 803,896
9 Claims. (Cl. 340—147)

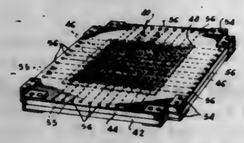
1. In a control system for apparatus units at a remote station, a plurality of operating relays one for each operation of each one of said apparatus units, a plurality of pairs of counting relays, a pair of receiving relays each operable in response to a distinctively different signal, said receiving relays being connected to operate a

different relay of each pair of counting relays in a predetermined sequence determined by the sequence of receipt of said different signals in a code, circuit means including contacts of said pairs of counting relays connecting the operating relays to operate a particular one dependent on the sequence of operation of the counting relays, a pair of sending relays at a dispatching office for



producing said distinctively different signals, and means including a plurality of counting relays and only a single operating switch at the dispatching office for each operation of each apparatus unit to be performed connecting the sending relays to effect operation thereof in a different sequence for each such switch to directly transmit an operating code by the operation of said switch.

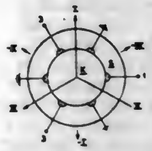
3,123,806
COMPOSITION OF MATTER, PROCESS AND APPARATUS FOR VISUALLY INDICATING AND STORING ELECTRICAL DATA
James R. Alburger, 5007 Hillard Ave., La Canada, Calif.
Filed Apr. 1, 1957, Ser. No. 650,025
25 Claims. (Cl. 340—173)



22. A two-dimensional matrix of electroflor cells which comprises: a first plate having a series of spaced grooves within a first face thereof; a plurality of first electrodes affixed within said grooves and adapted to be connected to external activation and control electrical circuits; a cover plate affixed to the grooved face of said first plate; a plurality of spaced second electrodes mounted between said first and cover plates and adapted to be connected to external electrical activation and control circuits, said second electrodes being mounted approximately normal to, and spaced from said first electrodes to form a series of grid-like spaced crossover zones; an electrolytic electroflor composition having about 0.05 percent ionizable content provided within the grooves to contact intermittent sections of the second electrodes and continuous sections of the first electrodes to thereby form a series of grid-like electroflor cells.

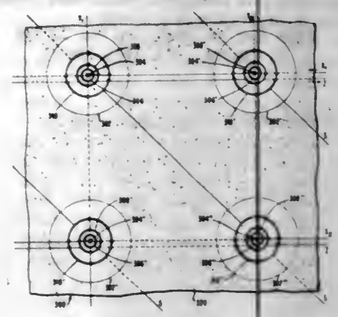
3,123,807
MULTISTABLE MAGNETIC ELEMENT
Ulrich Ernst Enz, Simon Duinker, and Henricus Petrus Johannes Wijn, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed May 28, 1958, Ser. No. 738,415
Claims priority, application Belgium June 24, 1957
9 Claims. (Cl. 340—174)

1. A magnetic memory device comprising a magnetic storage element composed of hexagonal-crystal-structure ferrite material and having a preferred plane of magnetization and at least three non-parallel preferred directions of magnetization in said plane and at least three



non-parallel stable states of remanent magnetization, and at least two windings coupled to said element for selectively magnetizing said element in any one of said three preferred directions.

3,123,808
MAGNETIC STORAGE DEVICE
Robert L. Ward, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed July 16, 1958, Ser. No. 748,919
12 Claims. (Cl. 340—174)

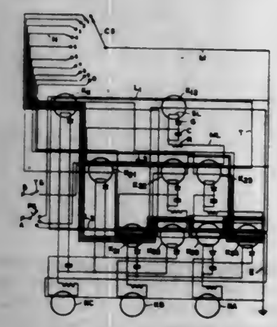


1. In combination with a magnetic device comprising a member made of low resistivity metallic magnetic material of given conductivity capable of attaining bistable states of residual flux density, means inductively associated with said member for inducing a flux change therein, and a pair of electrode probe means in ohmic contact with said member exhibiting a high conductivity relative to the given conductivity of said member for sensing flux changes in said member.

3,123,809
NUMBER TESTING ARRANGEMENT
Johannes Martinus Brouwer, Hilversum, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed May 13, 1959, Ser. No. 812,987
Claims priority, application Netherlands June 4, 1958
9 Claims. (Cl. 340—174)

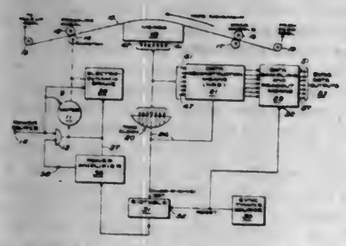
1. An electric pulse data processing circuit for determining the occurrence of a predetermined signal, comprising a source of said signals, a plurality of rows of memory elements, each said row having a plurality of said elements, said elements each having first and second states, means connected to said elements to initially bring the elements of one row to said first state and the elements of another row to said second state, means connected to said source for bringing selected elements

of said one row to said second state and subsequently bringing selected elements of said other row to said second state, and means coupling predetermined elements of said one row to predetermined elements of said other row to bring said predetermined ele-



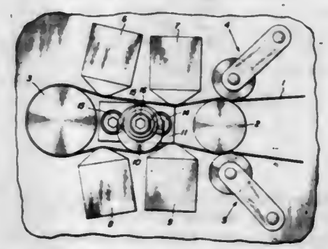
ments of said other row into said first state when the elements of said first row coupled thereto are brought into said second state, whereby the states of said elements of said other row indicate the presence or absence of said predetermined signal.

3,123,810
SYNCHRONIZED READOUT SYSTEM FOR DATA TAPE
Frederic P. Strauch, Jr., Glendale, and Dennis A. Walz, Van Nuys, Calif., assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Mar. 31, 1960, Ser. No. 19,012
16 Claims. (Cl. 340—174.1)



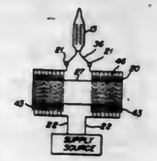
1. A synchronized readout system for data tape, comprising a tape transport mechanism, including motor driving means, and a readout head, a tape clock generator connected to said head for providing tape clock pulses, a synchronous timing source for providing synchronous timing pulses, a time comparator having inputs connected to said tape clock generator and said synchronous timing source, said time comparator providing inverted and noninverted outputs, an acceleration power amplifier, and a deceleration power amplifier, acceleration control gate means connecting the inverted output of said time comparator to said acceleration power amplifier, deceleration control gate means connecting the noninverted output of said time comparator to said deceleration power amplifier, means connecting said deceleration power amplifier output to said motor driving means, means connecting an output of said acceleration power amplifier to said motor driving means, and means for free-running said tape transport mechanism to read out said tape at approximately the synchronous timing rate.

3,123,811
CAM OPERATED SPACER FOR TRANSDUCERS
John S. Mutziger, Littleton, Colo., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Feb. 14, 1963, Ser. No. 258,583
2 Claims. (Cl. 340—174.1)



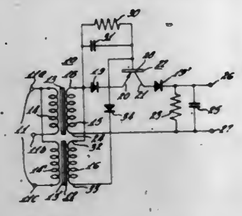
1. A record reading and recording head apparatus comprising, in combination, a plurality of tape recording heads including at least two recording heads, a plurality of tape reading heads including at least two reading heads, said recording heads and said reading heads being longitudinally spaced along a recording tape and cooperating therewith, and a tape guide means positioned between said reading heads and arranged to form a recording tape into an arcuate curve between said reading heads, said tape guide means including eccentric mounting means operative to selectively vary the curvature of said arcuate curve whereby the length of recording tape between said reading heads may be made equal to a spatial separation of said recording heads.

3,123,812
MOISTURE RESPONSIVE DEVICE
George V. Woodling, 1386 Union Commerce Bldg., Cleveland 14, Ohio
Filed Apr. 9, 1958, Ser. No. 727,490
1 Claim. (Cl. 340—235)



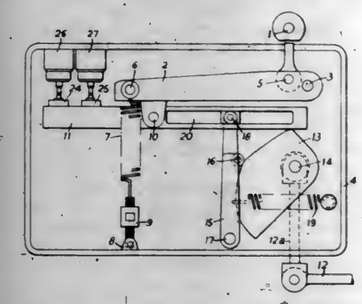
In a hygrometer indicator device for connection to an alternating current energizing source, a gaseous indicator bulb having at least first and second electrodes, first grid work of conductors comprising first and second spaced interlaced open circuit conductor paths, second grid work of conductors comprising third and fourth spaced interlaced open circuit conductor paths, said first and third conductor paths being energized by said alternating current energizing source, a humidity-sensitive material formed as an adherent film in said grid work of conductors and comprising a granular, solid detergent, said film being porous and readily soluble in water and having an instantaneous current-time response to changes of moisture in atmosphere, and means connecting said first and second electrodes of said gaseous indicator bulb respectively to said second and fourth conductor paths to give an indication of humidity.

3,123,813
PHASE SEQUENCE SENSING CIRCUIT
John Baude, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Jan. 2, 1962, Ser. No. 163,672
6 Claims. (Cl. 340—248)



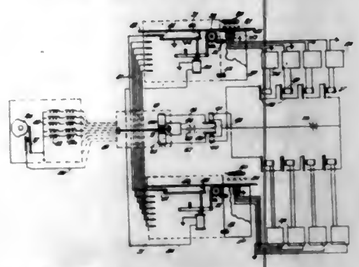
1. A phase sequence sensing circuit for an electrical source having first, second and third voltage terminals forming three different pairs of terminals, means for sensing the voltage difference between at least two pairs of said voltage terminals comprising a load connected between at least one pair of said two pairs of said terminals, a controllable semiconductor comprising at least three elements, means for connecting two of said elements in series with said load, means for connecting one terminal of said third pair of terminals to said third element, and time delay means connected between said third element and the other terminal of said third pair of terminals for controlling said load in accordance with circuit conditions.

3,123,814
SAFE LOAD INDICATING DEVICES FOR CRANES
Robert Loudon Aitken, 50 Pall Mall, London SW. 1, England
Filed Feb. 4, 1963, Ser. No. 256,029
Claims priority, application Great Britain Feb. 9, 1962
10 Claims. (Cl. 340—267)



1. A safe-load indicator comprising an operating member, adapted to actuate at least one warning device when an actuating portion of said member is brought to a predetermined spacial position, said operating member being mounted on two pivots, said pivots being angularly movable relative to each other and likewise being movable relative to each other lengthwise of the operating member, means causing relative movement between said pivots lengthwise of the operating member so that their relative distance from one another is a function of the inclination of a crane jib, means causing relative angular movement of said pivots so that such relative angular movement is a function of the crane load, said means being arranged to move one of said pivot points through a distance which is substantially proportional to a force derived from the crane load.

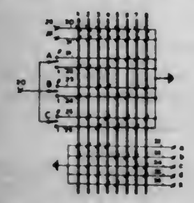
3,123,815
MULTIPLE TAPE TRANSMITTERS CONTROLLING A TRAVELING MESSAGE SIGN
Irving Naxon, 3600 W. Touhy Ave., Chicago 45, Ill.
Filed Mar. 27, 1962, Ser. No. 182,785
5 Claims. (Cl. 340—339)



1. In a changing message sign having a field of longitudinal rows of lamps arranged to display messages moving thereacross and operated with keyboard-controlled tape apparatus for preparing tapes bearing different message subjects to be displayed across said sign; the combination with electric selective apparatus local to said sign having a plurality of groups—one for each longitudinal row of lamps—of switches for said lamps and a similar plurality of signal-responsive electromagnets each of which is adapted to control the selective operation of its corresponding group of switches, a plurality of signalling channels each one of which is connected to respectively control a corresponding one of said electromagnets, a plurality of tape-readers each having a group of tape-reading elements for individually controlling the transmission of signals into the respective signalling channels, tape-controlled switching means local and common to said plurality of tape-readers and connected to permit the operation of but one of said tape-readers at a time by transferring the group of tape-reading elements of the tape-reader to be operated into signalling control of said signalling channels, indexical means associated with said message tapes and bearing a predetermined relation to the message subjects thereon, and additional photo-responsive tape-reading means associated with each of said plurality of tape-readers operable by said indexical means for controlling the operation of said switching means whereby when one of said tape-readers with a tape bearing a given message subject has its group of tape-reading elements transferred into signalling control of said signalling channels, the remaining of said tape-readers with tape bearing a different message subject remain out of control of said signalling channels and said switching means being operable in response to signals received locally in response to the photo-responsive means operable by said indexical means.

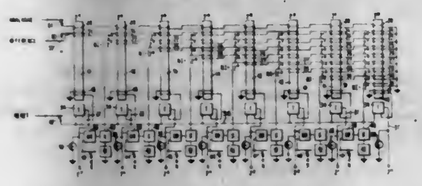
3,123,816
BINARY CODE CONVERSION
Franz Josef Schramel, Hilversum, and Wilhelm Fredrik Brok, Voorburg, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 27, 1959, Ser. No. 855,859
Claims priority, application Netherlands Dec. 2, 1958
6 Claims. (Cl. 340—347)

1. A code converter for converting an *m*-out-of-*n* code consisting of a first plurality of code groups each containing binary code elements into a *p*-out-of-*q* code consisting of a second plurality of code groups each containing binary code elements, neither *m* nor *p* being 1, comprising: a plurality of two-position contacts equal in number to the code elements in each of the first plurality of code groups, each position of said contacts corresponding to one value of a binary code element, each contact having two outputs, a plurality of binary memory elements, each memory element being associated with a code group of said first plurality and a corresponding code group of said second plurality, means for selectively coupling the outputs of said contacts to said memory elements, said outputs for a selected code group being coupled to inputs of said memory elements in a manner such that the memory element corresponding to said selected code group is not coupled to any of said outputs and at least one input of each of the other



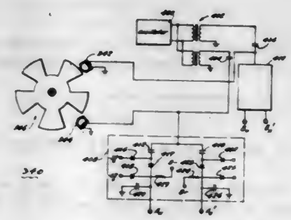
memory elements is coupled to one or more of said outputs, reset means coupled to all of said memory elements for resetting them to one stable position, read-out means coupled to all of said memory elements for setting them to a seconnd stable position, each code element place of each of said second plurality of code groups corresponding to an output coupling which is coupled to at least one memory element having as an output a given binary state, and not being coupled to any of the further memory elements, whereby each memory element is coupled only to output coupling which must supply an output representative of said given binary state.

3,123,817
MAGNETIC CORE ANALOG TO DIGITAL CONVERTER
Robert K. Golden, Peekskill, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Oct. 11, 1960, Ser. No. 62,038
7 Claims. (Cl. 340—347)



1. In a converter for determining a digital binary number equivalent to an analog value, a plurality of cores, each core switchable from one magnetic state to another and each representing one denominational order of a binary number, means to generate in each core a flux substantially proportional to the sum of the values of the denominational orders represented by said core and all cores of higher denominational order whereby said plurality of cores will be set to said one magnetic state, means to apply to each core an opposing flux proportional to said analog value and tending to switch said cores to said other state, flux control means to stepwise reduce the generated flux in each of said cores to a flux not substantially less than the flux proportional to the value of the denominational order represented by said core, the first step of flux reduction being proportional to the value of the highest denominational order represented and effective in all lower order cores, each succeeding step being equal to one-half of the amount of the immediately prior step and effective in successively fewer lower order cores, and means controlled by any core when switched to said other state by said opposing flux to control said flux control means to prevent, in all lower order cores, the flux reduction step proportional to the denominational value of the core switched.

3,123,818
BIDIRECTIONAL QUANTIZER
Floyd G. Steele, San Diego, Calif., assignor to Digital Control Systems, Inc., La Jolla, Calif.
Original application Jan. 23, 1957, Ser. No. 635,916, now Patent No. 3,063,047. Divided and this application July 19, 1961, Ser. No. 125,257
11 Claims. (Cl. 340—347)



11. In a digital computer which includes a bidirectional digital quantizer for producing electrical output signals representative of incremental changes in the position of a shaft and the sense of the changes, the combination comprising: a patterned disk of ferromagnetic material coupled to the shaft and rotatable therewith, said pattern including areas of alternate states of magnetization; an electronic oscillator for generating an alternating current signal at a predetermined frequency; a tuned circuit connected to said oscillator for receiving said alternating current signal, said circuit including a capacitor and an inductor having a ferromagnetic core, said inductor being positioned adjacent said disk, said inductor exhibiting a first reactive impedance to said alternating current signal when a pattern area of said disk in a first state of magnetization is adjacent the inductor and a second reactive impedance to said alternating current signal when a pattern area of said disk in a second state of magnetization is adjacent said inductor; means for varying the reactance of said tuned circuit; and means responsive to the voltage across said inductor for generating output signals representative of the position of said disk relative to said inductor.

3,123,819
CODE TRANSLATOR
Lloyd J. Lapointe, West Hartford, Conn., assignor to Royal McBee Corporation, New York, N.Y., a corporation of New York
Filed June 5, 1963, Ser. No. 285,758
4 Claims. (Cl. 340—347)



1. A code translator for decoding *n* bit codes into *y* discrete mechanical outputs where $y=2^n$ comprising a

single hinged element corresponding to the lowest channel bit and twice as many hinged elements corresponding to successively higher channel bits,

a drive link adapted to be coupled to power and connected to said single hinged element,

a pair of output links associated with each hinged element, one or the other of which is adapted to be coupled thereto depending on whether the hinged element is in a normal position or in an axially displaced actuated position, each of said pairs of links being coupled to and constituting an input link of a higher channel hinged element, the output links associated with the highest channel hinged elements constituting the *y* outputs of the translator,

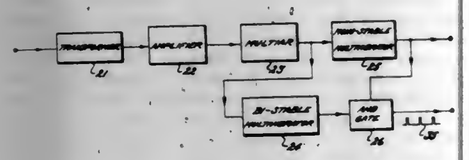
and means responsive to bit signals for selectively axially displacing said hinged elements thereby to set up a discrete mechanical path between said drive link and a discrete *y* output link whereby when said drive link is power actuated a discrete output link will be actuated through the mechanical path setup.

3,123,820

ANTENNA ROTATION ANGLE MEASURING APPARATUS

George F. Harpell, Concord, Mass., assignor to the United States of America as represented by the Secretary of the Air Force

Filed Feb. 14, 1962, Ser. No. 173,621
2 Claims. (Cl. 340—350)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a height-finding system having a rotatable antenna, apparatus adapted to provide a digital signal responsive to antenna azimuth rotation comprising a steel wheel having a plurality of uniformly disposed serrations on the outer periphery thereof, means for rotating said wheel on the major axis thereof in response to the rotation of said antenna, a magnetic pick-up, said magnetic pick-up being proximate to the outer periphery of said steel wheel and adapted to generate an alternating signal voltage in response to any rotation thereof, a multiar, said multiar being actuated by the output of said magnetic pick-up, and a pair of multivibrators, one being of the mono-stable type, the other being of the bi-stable type, said mono-stable multivibrator being adapted to generate a digital output signal responsive to the output of said multiar.

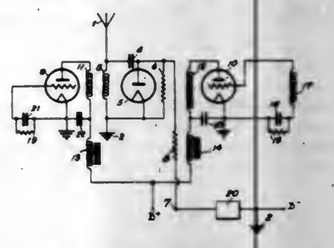
3,123,821

PROXIMITY FUSE WITH TWO OSCILLATORS

Robert D. Huntoon, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Army

Filed Mar. 11, 1946, Ser. No. 653,697
3 Claims. (Cl. 343—7)
(Granted under Title 35, U.S. Code (1952), sec. 266)

3. In a radio fuse, an antenna, a diode rectifier means having a tuned input circuit, a first radio frequency oscillator inductively coupled to said tuned input circuit, a second radio frequency oscillator inductively coupled to said tuned input circuit, said radio frequency oscillators generating radio frequency energy at frequencies adjacent to each other and thereby providing the diode rectifier means with a constant voltage over a predetermined range of antenna capacitance variations.

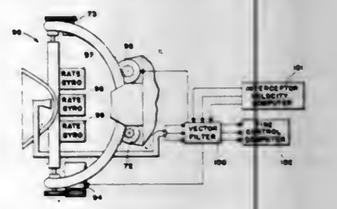


3,123,822

FILTER FOR INFORMATION EXPRESSED IN ROTATING COORDINATES

Rulon G. Shelley and John L. Bower, Downey, Calif., assignors to North American Aviation, Inc.

Filed Mar. 19, 1954, Ser. No. 417,477
13 Claims. (Cl. 343—7.4)



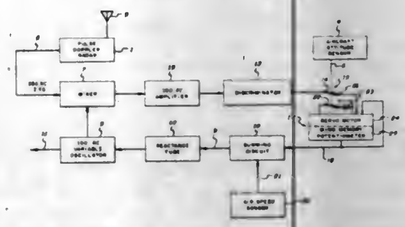
1. A radar antenna positioning system comprising means for generating signals according to the absolute angular velocity of the antenna of said radar about one or more of its axes, means for filtering the signals of said radar in accordance with said signals as to angular velocity, and means for positioning the antenna of said radar according to the output of said filtering means.

3,123,823

DOPPLER RADAR SIGNAL TRACKER

Rudolph F. Schreitmueller, New Hyde Park, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware

Filed Sept. 23, 1960, Ser. No. 58,111
8 Claims. (Cl. 343—8)



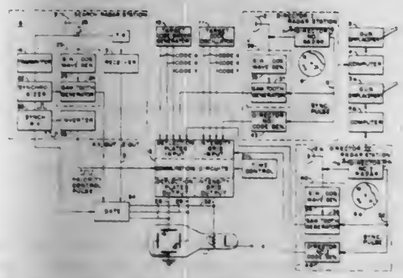
4. A doppler signal tracker for use in an airborne doppler radar, said radar producing first signals having a frequency component representing the ground speed of the aircraft carrying said radar, a variable frequency source of second signals, a signal mixer, said first and second signals being applied to said mixer, a signal frequency discriminator connected to the output of said mixer, low pass filtering means connected to the output of said discriminator, a signal summing circuit having two inputs, one of said inputs being connected to the output of said filtering means, a source of third signal having a value representing the airspeed of said aircraft, said third signals being applied to the other of said inputs of said summing circuit, and means for connecting the output of said summing circuit to said variable frequency source, the output signal of said summing circuit determining the frequency of said second signals produced by said variable frequency source.

3,123,824

TARGET DESIGNATION SYSTEM

Paul C. Sherertz, % Naval Research Laboratory, Anacostia Station, Washington 25, D.C.

Filed Feb. 19, 1952, Ser. No. 272,463
15 Claims. (Cl. 343—11)
(Granted under Title 35, U.S. Code (1952), sec. 266)



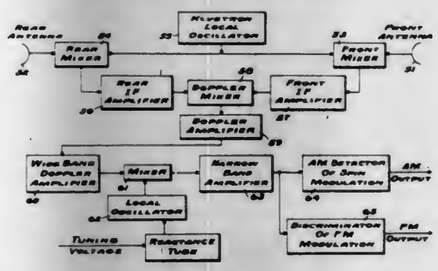
1. In combination, a cathode ray tube indicator, a space scanning radar system including deflection voltage generating apparatus operable synchronously with the space scanning of said radar, auxiliary director radar apparatus for determining target elevation range and azimuth, said auxiliary radar including voltage generating apparatus for generating signals indicative of the train direction thereof, and switching means for alternatively impressing the outputs from said space scanning and auxiliary radar on said indicator to correlate the detection of objects by said space scanning radar with the train position of said auxiliary radar.

3,123,825

SYSTEM FOR IMPROVING F.M.-DOPPLER RADAR

Victor W. Bolie, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

Filed Oct. 26, 1956, Ser. No. 618,634
2 Claims. (Cl. 343—14)



1. A guided missile control system including a source of radiant energy, target means for reflecting said radiant energy, a missile, a frequency-modulated Doppler radar system mounted in said missile including a pair of antennas pointing forwardly and rearwardly on said missile, the rearwardly-pointing antenna receiving signals from the source of radiant energy, the forwardly-pointing antenna comprising a nutating antenna which receives signals reflected from the target, a first pair of mixers receiving inputs from said antennas, a local oscillator supplying inputs to said first pair of mixers, a Doppler mixer receiving inputs from the first pair of mixers and producing a Doppler signal, means for removing interference from said Doppler signal comprising a fourth mixer receiving the output of the Doppler mixer, a second local oscillator supplying an input to the fourth mixer, an amplitude-modulation detector connected to the output of the fourth mixer, and a discriminator connected to the output of the fourth mixer.

3,123,826

ULTRA HIGH FREQUENCY TELEVISION ANTENNA

Joseph D. Durham, Lakeview, Tex., assignor to Lakewood Manufacturing Corporation, Dallas, Tex., a corporation of Texas

Filed Aug. 17, 1960, Ser. No. 50,163
6 Claims. (Cl. 343—742)



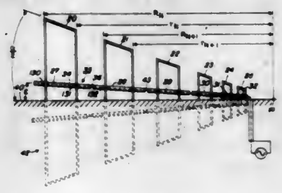
5. An antenna for the reception of circularly polarized, ultra high frequency television signals comprising two circular dipole loops each formed of rigid conductor material all lying in a single plane and, each having a small gap spaced from and facing the gap in the other loop, the circumference of each loop substantially matching the wave length of the wanted signal, a pair of rigid parallel conductors lying in said plane spaced the width of said gaps and joining the loops into a continuous closed dumbbell shaped figure, each of said parallel conductors being of the order of half a wave-length long to properly phase the circular dipoles, insulator means secured to said conductors for mounting the antenna with the dipoles in a substantially vertical plane one above the other, and means intermediate the length of said conductors to connect them to the conductors of a transmission line.

3,123,827

LOG PERIODIC STRUCTURE FEED SYSTEM

Forrest G. Arnold, Cedar Rapids, Iowa, and Fred R. Ore, Champaign, Ill., assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

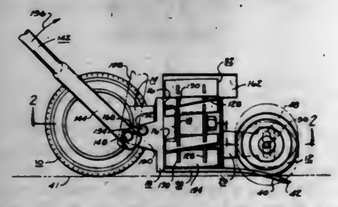
Filed Feb. 23, 1962, Ser. No. 174,969
8 Claims. (Cl. 343—792.5)



1. In a log periodic antenna structure comprising at least a first radial section having a vertex and two sides

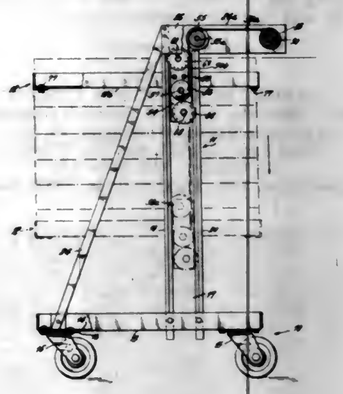
forming an angle $\alpha/2$ extending from said vertex to form a generally triangular shape, said radial section further comprising a supporting means positioned along one of said sides, a plurality of teeth secured to said supporting means and extending outwardly and generally transversally from said supporting means, the outer ends of said teeth being defined by the other side of said angle $\alpha/2$, the radial distance from the vertex to a given point of any tooth bearing a relationship τ to the radial distance to the corresponding point on the next adjacent tooth farther removed from said vertex, a coaxial type signal feeding means comprising a segmented outer conductor extending along a line forming an angle ξ with said vertex and being rigidly and conductively secured to said teeth, the segmented outer conductor of said feeding means being separated near the mid-point of the distance between each pair of adjacent teeth, continuous inner conductor means positioned within said segmented outer conductor, other structure means against which said first radial section can feed, and transmission line means comprising first and second conductor means, said first conductor means being connected to said inner conductor means of said feeding means and said second conductor means being connected to said other structure means.

3,123,828
LAWN EDGING DEVICE
Claude H. Nickell, 17809 Oakwood Blvd., Dearborn, Mich.
Filed Aug. 3, 1961, Ser. No. 128,989
6 Claims. (Cl. 56—241)



1. A lawn edger comprising a housing, a drive wheel supporting one end of said housing, a stabilizing wheel supporting the opposite end of said housing, a rotary cutting element mounted on said housing and drivingly connected to said drive wheel, an operating handle connected to said housing intermediate the axes of rotation of said drive wheel and said stabilizing wheel and below a plane extending through said axes, whereby downward thrust on said handle will be distributed between the drive and stabilizing wheels and forward thrust will cause rotation of the drive wheel to drive said cutting element.

3,123,829
SELF-LEVELING DEVICE
Irving Bronson, Brooklyn, N.Y., assignor, by mesne assignments, to American Machine & Foundry Company, New York, N.Y., a corporation of New Jersey
Filed Aug. 16, 1960, Ser. No. 49,857
5 Claims. (Cl. 108—136)



1. An improved self-leveling device comprising in combination a base member supporting an upright frame, a vertically movable carriage retained within said frame, said carriage supporting a platform adapted for receipt of a plurality of articles, said carriage being supported by at least one flexible cable communicating with reel means affixed to a rotatable shaft which is retained against axial movement, said shaft being biased by a coiled torsion spring disposed thereon, said shaft being provided with means for imparting an initial deflection to said coiled torsion spring, said reel means having means to vary the leverage exerted upon said spring, said reel means comprising a conical member, the external periphery of said conical member being formed with a helical groove, the said flexible cable being received within said groove, the said carriage including biasing means communicating with the flexible cable, the said biasing means being adjustable to vary the position of the flexible cable within said groove, whereby the topmost portions of said articles are maintained at a constant level independently of the number of such articles.

DESIGNS

MARCH 3, 1964

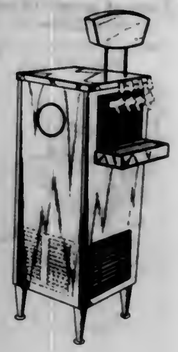
197,590
ADVERTISING SIGN OR SIMILAR ARTICLE
Edwin G. Cole, Chicago, Ill., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois
Filed Oct. 24, 1962, Ser. No. 72,247
Term of patent 14 years
(Cl. D1—12)



197,591
ADVERTISING SIGN
Jack L. Steppe, 975 N. Center, Orange, Calif.
Filed June 20, 1963, Ser. No. 75,439
Term of patent 14 years
(Cl. D1—12)



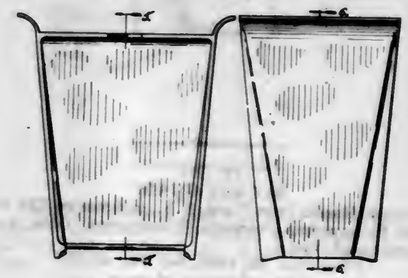
197,592
BEVERAGE DISPENSER OR SIMILAR ARTICLE
Richard T. Cornelius, Minneapolis, and James Robert Reichow, Edina, Minn., assignors to The Cornelius Company, Anoka, Minn., a corporation of Minnesota
Filed June 15, 1962, Ser. No. 70,566
Term of patent 14 years
(Cl. D2—3)



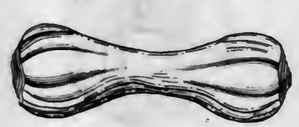
197,593
COMBINED DENTIFRICE DISPENSER AND TOOTH BRUSH HOLDER
Robert S. Hamilton, 5639 N. Millbrook, Fresno, Calif.
Filed June 10, 1963, Ser. No. 75,296
Term of patent 14 years
(Cl. D4—3)



197,594
BRUSH HOLDER
Bertrand N. Trombley, Bloomfield Hills, Mich., assignor to Harper J. Ransburg Company, Inc., a corporation of Indiana
Filed July 2, 1963, Ser. No. 75,630
Term of patent 14 years
(Cl. D9—2)



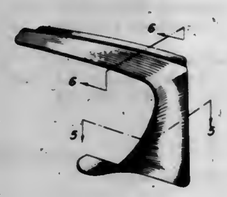
197,595
PET ANIMAL MASTICATION AID
Mervin A. Savitt, Kings Point, N.Y., assignor to Reliance International Mfg., Ltd., Hempstead, N.Y., a corporation of New York
Filed Sept. 10, 1962, Ser. No. 71,614
Term of patent 14 years
(Cl. D12—2)



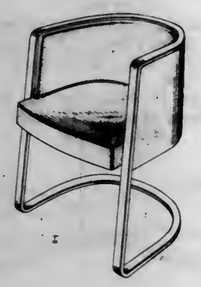
197,596
DRIVE-IN RESTAURANT
Lauris L. Beigh, 3616 SW. Roxbury, Seattle, Wash.
Filed Feb. 25, 1963, Ser. No. 73,703
Term of patent 3½ years
(Cl. D13—1)



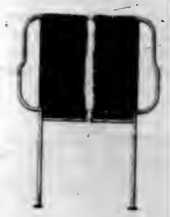
197,597
WEATHER SHIELD FOR A VEHICLE WINDOW
Laurence B. Tipper, Toronto, Ontario, Canada (1216 York Mills Road, Don Mills, Ontario, Canada)
Filed Aug. 3, 1962, Ser. No. 71,174
Term of patent 7 years
(Cl. D14—6)



197,598
BUCKET CHAIR
William J. Harris, New York, N.Y., assignor to The General Fireproofing Company, Youngstown, Ohio, a corporation of Ohio
Filed Mar. 30, 1962, Ser. No. 69,510
Term of patent 14 years
(Cl. D15—1)



197,599
CHAIR OR SIMILAR ARTICLE
John E. Moore, Gloucester, and Aubrey A. Ramsey, Dutton, Va.
Filed June 14, 1962, Ser. No. 70,552
Term of patent 14 years
(Cl. D15—1)



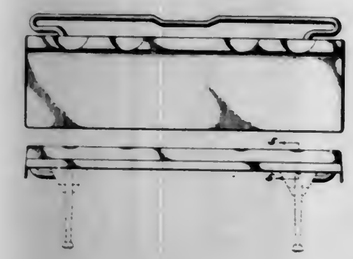
197,600
CHAIR
Stuart John Gilbert, 6723 S. Clyde Ave., Chicago, Ill.
Filed Dec. 17, 1962, Ser. No. 72,873
Term of patent 14 years
(Cl. D15—1)



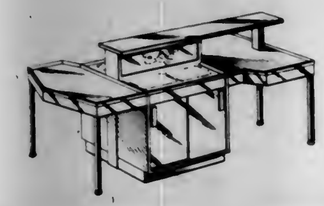
197,601
DENTAL CHAIR OR SIMILAR ARTICLE
Fred J. Piotraschke, 2 N. Tealbrook Drive, Creve Coeur, St. Louis, Mo.
Filed May 17, 1963, Ser. No. 74,935
Term of patent 14 years
(Cl. D15—3)



197,602
LOCKER ROOM BENCH OR THE LIKE
Richard G. Wagner, Muskegon Heights, Mich., assignor to Brunswick Corporation, Chicago, Ill., a corporation of Delaware
Filed Oct. 4, 1962, Ser. No. 71,989
Term of patent 14 years
(Cl. D15—11)



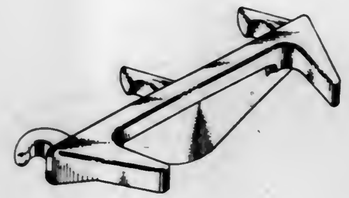
197,603
COMBINED CABINET, SINK AND TABLE UNIT FOR USE IN A HOSPITAL
William J. Hannon, Jr., Dorchester, Mass., assignor to The MacBick Company, Cambridge, Mass., a corporation of Massachusetts
Filed Mar. 6, 1962, Ser. No. 69,110
Term of patent 14 years
(Cl. D16—2)



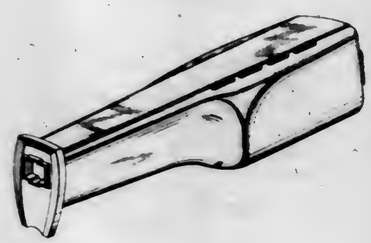
197,604
GRIP FOR SANITARY NAPKINS OR THE LIKE
Irvin S. De Woskin, St. Louis, Mo., assignor to Beltx Corporation, St. Louis, Mo., a corporation of Missouri
Filed Oct. 18, 1963, Ser. No. 77,032
Term of patent 14 years
(Cl. D17—9)



197,605
ARTICLE HOLDER FOR A PERFORATED SUPPORT BOARD
John F. Nelson, 1688 Locust St., Cook County, Ill.
Filed Jan. 3, 1963, Ser. No. 73,045
Term of patent 14 years
(Cl. D17—12)



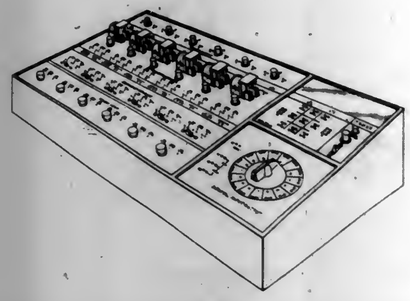
197,606
ELECTRIC KNIFE HANDLE OR SIMILAR ARTICLE
Theodore G. Daher, Stratford, Conn., assignor to General Electric Company, a corporation of New York
Filed Aug. 21, 1963, Ser. No. 76,298
Term of patent 14 years
(Cl. D22—3)



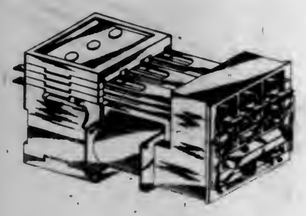
197,607
CABINET FOR A HIGH SPEED PRINTER
Carmine J. Antonucci, 537 Sterling St., Uniondale, N.Y., and Michael Cridland, 457 Richfield Road, Wilton, Conn.
Filed Nov. 16, 1961, Ser. No. 67,553
Term of patent 14 years
(Cl. D26—5)



197,608
TRAINING DIGITAL COMPUTER
William H. Seaver, Natick, Mass., assignor, by mesne assignments, to Scientific Educational Products Corporation, New York, N.Y., a corporation of New York
Filed Nov. 24, 1961, Ser. No. 67,673
Term of patent 14 years
(Cl. D26—5)



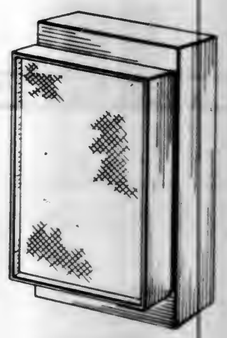
197,609
RELAY
Wheeler D. Maynard, 1285 Pittsford-Mendon Road, Mendon, N.Y.
Filed Oct. 21, 1963, Ser. No. 77,053
Term of patent 14 years
(Cl. D26—13)



197,610
COMBINED MICROPHONE AND STAND THEREFOR
Joseph B. Miller, Shibuya-ku, Tokyo-to, Japan, assignor to Kyodo Denshi Kogyo Kabushiki Kaisha (also known as United Royal Radio and Electronics Manufacturing Corporation), Tokyo-to, Japan
Filed Mar. 25, 1963, Ser. No. 74,110
Claims priority, application Japan Sept. 26, 1962
Term of patent 14 years
(Cl. D26—14)



197,611
HIGH FIDELITY LOUD-SPEAKER CABINET
Peter Quay Yang, New York, N.Y., assignor to Audio Dynamic Corporation, New Milford, Conn.
Continuation of design applications Ser. Nos. 71,815, 71,816, and 71,817, Sept. 24, 1962. This application May 31, 1963, Ser. No. 75,261
Term of patent 14 years
(Cl. D26—14)



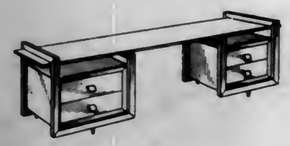
197,612
DESK
Albert E. Rice and Ford A. Rice, both of 945 Leader Bldg., Cleveland, Ohio
Filed Mar. 12, 1962, Ser. No. 69,230
Term of patent 14 years
(Cl. D33—7)



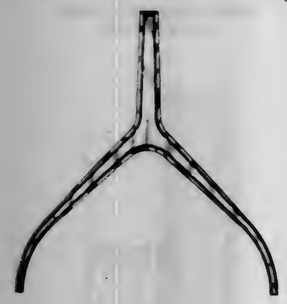
197,613
AUDIO-VISUAL TEACHING DESK
Kurt H. Hoppmann, Falls Church, and Victor L. Reddle, McLean, Va., assignors to Staples-Hoppmann, Inc., Alexandria, Va., a corporation of Virginia
Filed Sept. 24, 1962, Ser. No. 71,825
Term of patent 14 years
(Cl. D33—7)



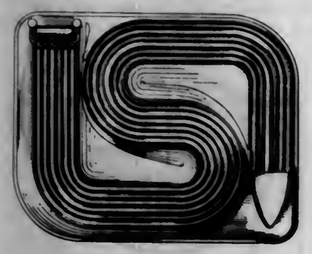
197,614
DESK
David C. Still, 1107 California Ave., Santa Monica, Calif.
Filed Aug. 1, 1963, Ser. No. 76,074
Term of patent 14 years
(Cl. D33—7)



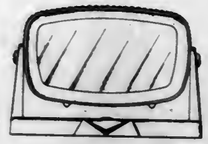
197,615
FURNITURE LEG
Leon Gordon Miller, 610 Carnagie Hall Bldg., 1220 Huron Road, Cleveland, Ohio
Filed Mar. 12, 1962, Ser. No. 69,212
Term of patent 14 years
(Cl. D33—14)



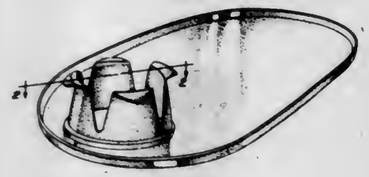
197,616
GAME RACEWAY
George W. Dunbar, Nashville, Tenn., assignor to Kusan, Inc., Nashville, Tenn.
Filed Oct. 4, 1963, Ser. No. 76,872
Term of patent 7 years
(Cl. D34—15)



197,617
CASE FOR A CLOCK OR THE LIKE
Victor Shanok and Jesse P. Shanok, both of 863 65th St., Brooklyn, N.Y.
Filed Jan. 8, 1962, Ser. No. 68,220
Term of patent 14 years
(Cl. D42—7)



197,618
COMBINED SERVING TRAY AND GLASS HOLDER
Benjamin K. Milbourne, 319 Winchester Road, San Jose, Calif., and Theodore C. Bayless, 20160 Cherry Lane, Saratoga, Calif.
Filed July 3, 1963, Ser. No. 75,647
Term of patent 14 years
(Cl. D44—10)



197,619
COFFEE MAKER
Alfred E. Grazen and David G. Lord, Hartford, Conn., assignors to Landers, Frary & Clark, New Britain, Conn., a corporation of Connecticut
Filed July 30, 1963, Ser. No. 76,039
Term of patent 3½ years
(Cl. D44—26)



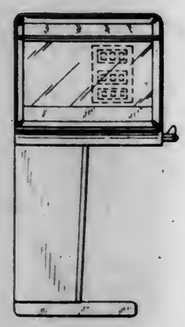
197,620
CHEESE SERVER
Clayton A. Laughlin, Minneapolis, Minn., assignor to Arthur Salm Inc., Chicago, Ill., a corporation of Illinois
Filed Mar. 21, 1963, Ser. No. 74,078
Term of patent 14 years
(Cl. D44—29)



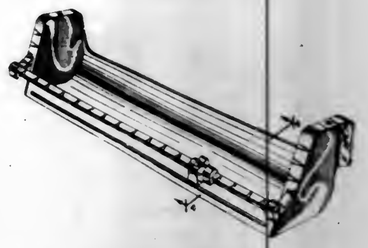
197,621
FINGER RING
Adolph Katz, Providence, R.I., assignor to Coro, Inc. of Rhode Island, Providence, R.I., a corporation of Rhode Island
Filed Sept. 3, 1963, Ser. No. 76,443
Term of patent 7 years
(Cl. D45—10)



197,622
GASOLINE PUMP
Walter C. Chaffee, Spring Lake, Mich., assignor to John Wood Company, New York, N.Y., a corporation of Delaware
Filed Jan. 21, 1963, Ser. No. 73,247
Term of patent 14 years
(Cl. D52—2)



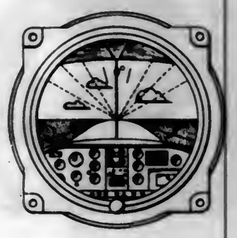
197,623
DISPENSER FOR COILED SHEET MATERIAL OR THE LIKE
James F. Fulton, Mamaroneck, N.Y., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Virginia
Filed Apr. 8, 1963, Ser. No. 74,342
Term of patent 14 years
(Cl. D52—2)



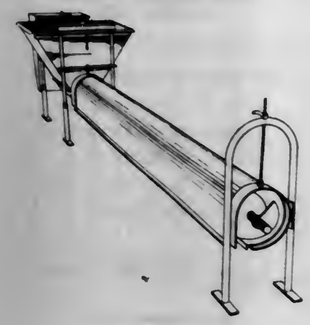
197,624
BOTTLE VENDING MACHINE OR SIMILAR ARTICLE
Peter B. Allard, Excelsior, Richard T. Cornelius, Minneapolis, and James Robert Reichow, Edina, Minn., assignors to The Cornelius Company, Anoka, Minn., a corporation of Minnesota
Filed July 5, 1963, Ser. No. 75,677
Term of patent 14 years
(Cl. D52—3)



197,625
TWO-PART ATTITUDE INDICATING AIRCRAFT INSTRUMENT DIAL
Paul E. Sanderson, 3108 Wilma, Wichita, Kans.
Filed July 27, 1962, Ser. No. 71,069
Term of patent 14 years
(Cl. D52—6)



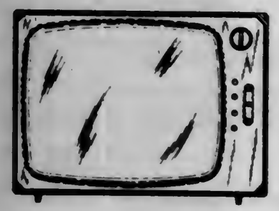
197,626
COMBINED HOPPER AND BUNK FEEDER
Floyd E. Buschbom, Rte. 1, Long Lake, Minn.
Filed June 8, 1962, Ser. No. 70,484
Term of patent 14 years
(Cl. D55—1)



197,627
GUITAR BODY
James Ormston Burns, Buckhurst Hill, England, assignor to Ormston Burns Limited, London, England
Filed Feb. 20, 1962, Ser. No. 69,031
Claims priority, application Great Britain Aug. 24, 1961
Term of patent 14 years
(Cl. D56—1)



197,628
TELEVISION RECEIVER
Marco Zanuso, Milan, Italy, assignor to Brion Vega Radio Televisione S.A.S., Milan, Italy
Filed Feb. 28, 1961, Ser. No. 64,102
Claims priority, application Italy Oct. 6, 1960
Term of patent 14 years
(Cl. D56—4)



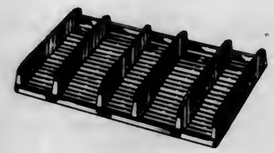
197,629
DOLL PACKAGE
Amram Haddad, 43—12 50th St., New York, N.Y.
Filed Sept. 20, 1963, Ser. No. 76,654
Term of patent 14 years
(Cl. D58—2)



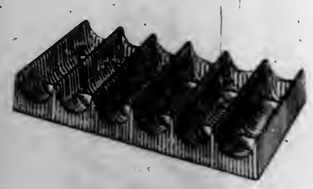
197,630
BOTTLE
Donald A. Hill, Arcadia, Calif., assignor to Hill Brothers Chemical Company, City of Industry, Calif., a corporation of California
Filed June 28, 1963, Ser. No. 75,573
Term of patent 14 years
(Cl. D58—6)



197,631
COMPARTMENTED PACKAGING TRAY
Carlo Caprioli, Montreal, Quebec, Canada, assignor to Plastic Packaging Products Limited, Montreal, Quebec, Canada
Filed Mar. 29, 1962, Ser. No. 69,480
Claims priority, application Canada Mar. 3, 1962
Term of patent 14 years
(Cl. D58—13)



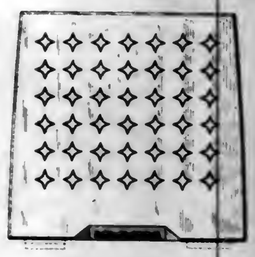
197,632
COMPARTMENTED PACKAGING TRAY
Carlo Caprioli, Montreal, Quebec, Canada, assignor to Plastic Packaging Products Limited, Montreal, Quebec, Canada
Filed Mar. 29, 1962, Ser. No. 69,481
Claims priority, application Canada Mar. 3, 1962
Term of patent 14 years
(Cl. D58—13)



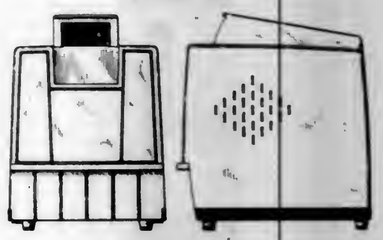
197,633
COMPARTMENTED PACKAGING TRAY
Carlo Caprioli, Montreal, Quebec, Canada, assignor to Plastic Packaging Products Limited, Montreal, Quebec, Canada
Filed Mar. 29, 1962, Ser. No. 69,482
Claims priority, application Canada Mar. 3, 1962
Term of patent 14 years
(Cl. D58—13)



197,634
HAIR DRYER BLOWER
Dominic J. De Fano, River Grove, Ill., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed July 22, 1963, Ser. No. 75,914
Term of patent 14 years
(Cl. D86—10)



197,635
ELECTRIC ICE CRUSHER
Downer P. Dykes, Lawrence, Kans., assignor, by mesne assignments, to Rimco, Inc., Kansas City, Mo., a corporation of Missouri
Filed June 10, 1963, Ser. No. 75,287
Term of patent 14 years
(Cl. D89—1)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 3RD DAY OF MARCH, 1964

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Bain Corp. : *See*—
Reid, John B., and Spence. Re. 25,529.
Blake, Charles B., and R. S. Cady, to Scovill Mfg. Co. Wire coiling machine. Re. 25,526, 3–3–64, Cl. 205—16.
Cady, Robert S. : *See*—
Blake, Charles B., and Cady. Re. 25,526.
Floros, Theodore G., to International Business Machines Corp. Deskewing system. Re. 25,527, 3–3–64, Cl. 340—172.5.
Hall, Horace N., to E. J. Lavino and Co. Tuyere block and reinforcing insert therefor. Re. 25,528, 3–3–64, Cl. 266—41.
International Business Machines Corp. : *See*—
Floros, Theodore G. Re. 25,527.
King, Edward G., ½ to J. Wyniger. Insulated carrying case for heated frozen food dinners and the like. Re. 25,530, 3–3–64, Cl. 206—4.
Lavino, E. J., and Co. : *See*—
Hall, Horace N. Re. 25,528.
Reid, John B., and R. A. Spence, to Bain Corp. Method for detaching an insole adhesively secured to a shoe last. Re. 25,529, 3–3–64, Cl. 12—142.
Scovill Mfg. Co. : *See*—
Blake, Charles B., and Cady. Re. 25,526.
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Amling-Devar Nurseries, Inc. : *See*—
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Camprubi, Carlos, to The Conard-Pyle Co. Rose plant. 2,376, 3–3–64, Cl. 23.
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Meilland, Alain. 2,378.
Swim, Herbert C., and Weeks. 2,370.
Swim, Herbert C., and Weeks. 2,371.
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McIntyre, John. 2,377.
McIntyre, John, to W. E. McGill. Maple tree. 2,377, 3–3–64, Cl. 51.
Meilland, Alain, to The Conard-Pyle Co. Rose plant. 2,378, 3–3–64, Cl. 11.
Swim, Herbert C., and O. L. Weeks, to The Conard-Pyle Co. Rose plant. 2,370, 3–3–64, Cl. 20.
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Allard, Peter B., R. T. Cornelius, and J. R. Reichow, to The Cornelius Co. Bottle vending machine or similar article. 197,624, 3–3–64, Cl. D52—3.
Antonucci, Carmine J., and M. Cridland. Cabinet for a high speed printer. 197,607, 3–3–64, Cl. D.26—5.
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Yang, Peter Q. 197,611.
Bayless, Theodore C. : *See*—
Milbourne, Benjamin K., and Bayless. 197,618.
Beigh, Lauris L. Drive in restaurant. 197,596, 3–3–64, Cl. D13—1.
Beltx Corp. : *See*—
De Woskin, Irvin S. 197,604.
Brion Vega Radio Televisione S.A.S. : *See*—
Zanuso, Marco. 197,628.
Brunswick Corp. : *See*—
Wagner, Richard G. 197,602.
Burns, James O., to Ormston Burns Ltd. Guitar body. 197,627, 3–3–64, Cl. D56—1.
Burns, Ormston, Ltd. : *See*—
Burns, James O. 197,627.
Buschbom, Floyd E. Combined hopper and bunk feeder. 197,626, 3–3–64, Cl. D55—1.
Caprioli, Carlo, to Plastic Packaging Products Ltd. Compartmented packaging tray. 197,631, 3–3–64, Cl. D58—13.
Caprioli, Carlo, to Plastic Packaging Products Ltd. Compartmented packaging tray. 197,632, 3–3–64, Cl. D58—13.
Caprioli, Carlo, to Plastic Packaging Products Ltd. Compartmented packaging tray. 197,633, 3–3–64, Cl. D58—13.
Chaffee, Walter C., to John Wood Co. Gasoline pump. 197,622, 3–3–64, Cl. D52—2.
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Allard, Peter B., Cornelius, and Reichow. 197,624.
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Cridland, Michael : *See*—
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De Fano, Dominic J., to McGraw-Edison Co. Hair dryer blower. 197,634, 3–3–64, Cl. D86—10.
De Woskin, Irvin S., to Beltx Corp. Grip for sanitary napkins or the like. 197,604, 3–3–64, Cl. D17—9.
Dunbar, George W., to Kusan, Inc. Game raceway. 197,616, 3–3–64, Cl. D34—15.
Dykes, Downer P., to Rimco, Inc. Electric ice crusher. 197,635, 3–3–64, Cl. D89—1.
Fulton, James F., to Reynolds Metals Co. Dispenser for coiled sheet material or the like. 197,623, 3–3–64, Cl. D52—2.
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General Fireproofing Co., The : *See*—
Harris, William J. 197,598.
Gilbert, Stuart J. Chair. 197,600, 3–3–64, Cl. D15—1.
Grasen, Alfred E., and D. G. Lord, to Landers, Frary & Clark. Coffee maker. 197,619, 3–3–64, Cl. D44—26.
Haddad, Amram. Doll package. 197,629, 3–3–64, Cl. D58—2.
Hamilton, Robert S. Combined dentrifice dispenser and tooth brush holder. 197,593, 3–3–64, Cl. D4—3.
Hannon, William J., Jr., to The Macbick Co. Combined cabinet, sink and table unit for use in a hospital. 197,603, 3–3–64, Cl. D16—2.
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Hill, Donald A. 197,630.
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Hoppmann, Kurt H., and V. L. Reddle, to Staples-Hoppmann, Inc. Audio-visual teaching desk. 197,613, 3–3–64, Cl. D33—7.
Katz, Adolph, to Coro, Inc. of Rhode Island. Finger ring. 197,621, 3–3–64, Cl. D45—10.
Kusan, Inc. : *See*—
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Kyodo Denshi Kogyo Kabushiki Kaisha (also known as United Royal Radio and Electronics Mfg. Corp.) : *See*—
Miller, Joseph B. 197,610.
Landers, Frary & Clark : *See*—
Grasen, Alfred E., and Lord. 197,619.
Laughlin, Clayton A., to Arthur Salm, Inc. Cheese server. 197,620, 3–3–64, Cl. D44—29.

Lord, David G.: *See*—
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Macbick Co., The: *See*—
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Maynard, Wheeler D. Relay. 197,609, 3–3–64, Cl. D26—13.
McGraw-Edison Co.: *See*—
De Fano, Dominic J. 197,634.
Milbourne, Benjamin K., and T. C. Bayless. Combined serving tray and glass holder. 197,618, 3–3–64, Cl. D44—10.
Miller, Joseph B., to Kyodo Denshi Kogyo Kabushiki Kaisha (also known as United Royal Radio and Electronics Mfg. Corp.). Combined microphone and stand therefor. 197,610, 3–3–64, Cl. D26—14.
Miller, Leon G. Furniture leg. 197,615, 3–3–64, Cl. D33—14.
Moore, John E., and A. A. Ramsey. Chair or similar article. 197,599, 3–3–64, Cl. D15—1.
Nelson, John F. Article holder for a perforated support board. 197,605, 3–3–64, Cl. D17—12.
Piotraschke, Fred J. Dental chair or similar article. 197,601, 3–3–64, Cl. D15—3.
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Caprioli, Carlo. 197,632.
Caprioli, Carlo. 197,633.
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Rice, Ford A.: *See*—
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Rimco, Inc.: *See*—
Dykes, Downer P. 197,635.
Salm, Arthur, Inc.: *See*—
Laughlin, Clayton A. 197,620.
Sanderson, Paul E. Two-part attitude indicating aircraft instrument dial. 197,625, 3–3–64, Cl. D52—6.
Savitt, Mervin A., to Reliance International Mfg., Ltd. Pet animal mastication aid. 197,595, 3–3–64, Cl. D12—2.
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Seaver, William H. 197,608.
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Shanok, Jesse P.: *See*—
Shanok, Victor and J. P. 197,617.
Shanok, Victor and J. P. Case for a clock or the like. 197,617, 3–3–64, Cl. D42—7.
Staples-Hoppmann, Inc.: *See*—
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Steepe, Jack L. Advertising sign 197,591, 3–3–64, Cl. D1—12.
Still, David C. Desk. 197,614, 3–3–64, Cl. D33—7.
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Trombley, Bertrand N., to Harper J. Ransburg Co., Inc. Brush holder. 197,594, 3–3–64, Cl. D9—2.
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Wagner, Richard G., to Brunswick Corp. Locker room bench or the like. 197,602, 3–3–64, Cl. D15—11.
Wood, John, Co.: *See*—
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Yang, Peter Q., to Audio Dynamic Corp. High fidelity loudspeaker cabinet. 197,611, 3–3–64, Cl. D26—14.
Zanuso, Marco, to Brion Vega Radio Televisione S.A.S. Television receiver. 197,626, 3–3–64, Cl. D26—4.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 3RD DAY OF MARCH, 1964

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ACF Industries, Inc.: *See*—
Fontaine, Robert R., and Raffel. 3,123,659.
AMP Inc.: *See*—
Keller, Joseph R. 3,123,431.
Abbott, Roy W., to General Electric Co. Fibrous centrifugal blower. 3,123,286, 3–3–64, Cl. 230—134.
Abrams, Eugene. Stapling device. 3,122,749, 3–3–64, Cl. 1—49.
Abrams, Irving M., to Diamond Alkali Co. Removal of alkyl benzene sulfonate from liquids. 3,123,553, 2–3–64, Cl. 210—30.
Aciego, Alfonso B. Line holding device. 3,122,886, 3–3–64, Cl. 33—86.
Acromag, Inc.: *See*—
Patton, Henry W. 3,123,764.
Adams, Elmer L., to Owens-Illinois Glass Co. Apparatus and method for molding cellular articles. 3,122,787, 3–3–64, Cl. 18—6.
Addis, Kenneth J.: *See*—
Tessmer, Raymond G., Wilkes, and Addis. 3,122,874.
Addy, John A.: *See*—
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Adkinson, Charles A., Jr., J. S. Brooks, and A. L. Marcum, Jr., to Aeronca Mfg. Corp. Wall construction for shelter. 3,123,186, 3–3–64, Cl. 189—34.
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Gongwer, Calvin A. 3,122,759.
Schultz, Robert D., Branson, and Chalken. 3,122,882.
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Adkinson, Charles A., Jr., Brooks, and Marcum. 3,123,186.
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Knorr, Roland, Auer, and Hennig. 3,122,979.
Agruss, Meyer S., to Miehle-Goss-Dexter, Inc. Photosensitive triphenyl methane carbinol compositions. 3,123,473, 3–3–64, Cl. 96—90.
Air Products and Chemicals, Inc.: *See*—
Farkas, Adalbert, and Oakes. 3,123,607.
Flank, William H., McEvoy, and Shalit. 3,123,627.
Kirsch, Francis W. 3,123,626.
Thomas, William H. 3,122,891.
Air Reduction Co., Inc.: *See*—
Greene, William J. 3,123,761.
Smith, Donald E. 3,123,457.
Aitken, Robert L. Safe load indicating devices for cranes. 3,123,814, 3–3–64, Cl. 340—267.
Ajem Laboratories, Inc.: *See*—
Millhiser, Robert G., Pansica, and Johnson. 3,122,863.
Ajinomoto Co., Inc.: *See*—
Okumura, Shinji, Tsugawa, Tsunoda, Motozaki, Suyama, and Kanao. 3,123,536.
Åkerman, Iwan E. R., and J. Ribbens, to Atlas Copco Aktiebolag. Minimum pressure delivery valve assembly for motor compressor units. 3,123,093, 3–3–64, Cl. 137—494.
Alamac Knitting Mills, Inc.: *See*—
Gutschmit, Alan. 3,122,905.
Albert, Richard J., to E. I. du Pont de Nemours and Co. Extrusion die. 3,122,790, 3–3–64, Cl. 18—14.
Albrecht, Hans J., to The Fellows Gear Shaper Co. Indexing mechanism for finishing machines for gears and the like. 3,122,968, 3–3–64, Cl. 90—1.
Alburger, James R. Composition of matter, process and apparatus for visually indicating and storing electrical data. 3,123,806, 3–3–64, Cl. 340—173.
Alcamo, John H. Surgical suture. 3,123,077, 3–3–64, Cl. 128—335.5.
Ald, Inc.: *See*—
Conley, Charles P. 3,123,065.
Algemene Kunstzijde Unie, N.V.: *See*—
Beumkes, Teunis. 3,122,768.
Allan, John H., and G. W. Lee, to Pacific Resins & Chemicals, Inc. Method of reducing the water solubility of blood solids for adhesive use by steam treatment. 3,123,593, 3–3–64, Cl. 260—112.
Allen-Harper, Inc.: *See*—
Allen, Kenneth M., and Harper. 3,122,930.
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Pocock, Walter E. 3,123,505.
Allis-Chalmers Mfg. Co.: *See*—
Bande, John. 3,123,813.
Burton, Lawrence A. 3,123,691.
Comfort, Samuel T. 3,123,366.
Hawk, Dale W. 3,122,849.
Paterson, Ira W. 3,122,928.
Poore, Wesley A. 3,123,881.
Rockwell, Harvey W. 3,122,850.
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Casey, Joseph J., and Berkman. 3,123,464.
Ambli, Andrew. Dock platform. 3,122,764, 3–3–64, Cl. 14—71.
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Bronson, Irving. 3,123,024.
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Bronson, Irving. 3,123,829.
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Duggan, Robert B., and Witten. 3,122,983.
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Yopp, Robert S. 3,123,427.
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Kulieke, Frederick C. 3,123,227.
Amundson, Raymond C. Protector for electrical switch and outlet boxes. 3,123,244, 3–3–64, Cl. 220—3.4.
Anderson, Charles C., and R. B. Rinehart, to Cannon Electric Co. Electrical contact socket and apparatus and method for making the same. 3,123,420, 3–3–64, Cl. 339—258.
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Krohm, Fred A. 3,122,770.
Anderson, Herbert R., to Tri-Wall Containers, Inc. Corrugated cartons having crush-relieved flaps. 3,122,976, 3–3–64, Cl. 93—56.2.
Andrews, Richard A., D. J. Rickard, and M. J. Stansbary, to Citrus Equipment Corp. Fruit and vegetable peel-chipping apparatus. 3,123,114, 3–3–64, Cl. 146—3.
Andrus, Jules, to Bell Telephone Laboratories, Inc. Fabrication of semiconductor devices. 3,122,817, 3–3–64, Cl. 29—25.3.
Annis, Max R., L. H. Robinson, Jr., and R. H. Friedman, to Jersey Production Research Co. Freeing pipe stuck in a borehole. 3,123,143, 3–3–64, Cl. 166—187.
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Armitage, Harry J. Bending apparatus. 3,123,124, 3–3–64, Cl. 153—16.
Arnold, Forrest G., and F. R. Ore, to Collins Radio Co. Log periodic structure feed system. 3,123,827, 3–3–64, Cl. 343—792.5.
Arnold, William E., ½ to Watliff Co. Ltd. Method of manufacturing a rotor for a dynamo-electric machine. 3,122,820, 3–3–64, Cl. 29—155.53.
Ash, Michael E., G. C. Philipotts, and G. Wittenberg, to Arthur Guiness Son and Co. (Park Royal) Ltd. Production of hopped wort. 3,123,476, 3–3–64, Cl. 99—50.5.
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Fagel, Roger. 3,123,729.
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Conner, James E., Jr., and Shipley. 3,123,548.

Atlantic Research Corp.: *See*—
Grover, John H., and MacPherson. 3,122,884.

Atlas Bolt & Screw Co., The: *See*—
Schellentrager, Eugene W. 3,123,166.

Atlas Copco Aktiebolag: *See*—
Åkerson, Iwan E. R., and Ribbens. 3,123,093.

Atwood, Seth G. Drive arrangement for golf car having low pressure tires. 3,123,168, 3–3–64, Cl. 180—27.

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Knorr, Roland, Auer, and Hennig. 3,122,979.

Auslender, Leland I., and J. G. Bourne, to Dynamic Frame Corp. Method and apparatus for producing motion pictures. 3,122,964, 3–3–64, Cl. 88—16.

Ausnit, Edgar M. Slider for a pouch and the like. 3,122,807, 3–3–64, Cl. 24—201.

Austin, Thomas A. Auto tire bead breaker. 3,123,126, 3–3–64, Cl. 157—1.17.

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Ayers, George W., and W. A. Krewer, to The Pure Oil Co. Method of neutralizing oil with diazomethane. 3,123,549, 3–3–64, Cl. 208—180.

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Bailey, William D., and D. R. Schurman, to Textron Inc. Method of manufacture of metal articles. 3,122,831, 3–3–64, Cl. 29—556.

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Baker, James K., and J. Voytko. Container. 3,123,204, 3–3–64, Cl. 206—1.

Baker, John G., to Baker Mfg. Pressure sensing device. 3,123,689, 3–3–64, Cl. 200—81.

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Baker, Reese. Personalized label kit. 3,123,884, 3–3–64, Cl. 282—1.

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Barksdale, Leon S. Railroad track guard rail clamp. 3,123,801, 3–3–64, Cl. 238—28.

Barna, Alexander: *See*—
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Barnes, Charles R., and C. R. Geesner, to United States of America, Air Force. Process for depositing silicon dioxide dielectric coatings. 3,123,497, 3–3–64, Cl. 117—230.

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Gross, Maurice J. 3,122,867.

Barnum, Donald L., and H. Dickstein, to Liberty Optical Mfg. Co., Inc. Packaging and display device and method for packaging and displaying spectacle frames. 3,123,208, 3–3–64, Cl. 206—45.14.

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Barr, Arthur. Musical straw means. 3,122,959, 3–3–64, Cl. 84—94.

Barr, Courtland H., Jr.: *See*—
Barr, Courtland H., Sr., C. H. Barr, Jr., and J. W. Barr. 3,123,073.

Barr, Courtland H., Sr., C. H. Barr, Jr., and J. W. Barr. Blood sampling assembly. 3,123,073, 3–3–64, Cl. 128—276.

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Dowd, Howard M., and Barrows. 3,123,357.

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Husome, Robert G. 3,123,715.

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Bateman, Franklin L., to Jervis B. Webb Co. Trolley conetruction. 3,123,016, 3–3–64, Cl. 105—154.

Baude, John, to Allis-Chalmers Mfg. Co. Phase sequence sensing circuit. 3,123,813, 3–3–64, Cl. 340—248.

Baudoin, Louis, to Compagnie de Construction Electrique. Electric induction watt-hour meter with separate voltage and current magnetic structures and current flux adjusting means. 3,123,770, 3–3–64, Cl. 324—137.

Bauer Bros. Co., The: *See*—
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Bausch & Lomb Inc.: *See*—
Brumley, Corwin H. 3,123,066.
Daly, Robert A. 3,123,368.
Oswold, Oluf G. 3,123,738.

Baverstock, Richard, to Imperial Machine Products Co. LPG fuel system for internal combustion engines. 3,123,451, 3–3–64, Cl. 48—184.

Baxter Laboratories Inc.: *See*—
Bellamy, David, Jr. 3,123,072.

Baybick, Solomon, and S. M. Shelley, to Radio Corp. of America. Braking mechanism for tape feeding apparatus. 3,123,181, 3–3–64, Cl. 188—65.1.

Beardsley, Kenneth D., and E. J. Wilk, to General Electric Co. Method of making magnetic cores. 3,122,821, 3–3–64, Cl. 29—155.57.

Beaumont, Lewis, to The Metal Box Co. of South Africa Ltd. Method of coating the inside surface of a container with palladium and adhesive for vacuum-packing of edible and like products. 3,123,491, 3–3–64, Cl. 117—8.

Beaver, Wallace W., and B. B. Lympany, to The Brush Beryllium Co. Process for the production of ammonium beryllium compounds. 3,123,435, 3–3–64, Cl. 23—88.

Beck, Basil D., to Owens-Illinois Glass Co. Refractory structure for molden glass. 3,123,345, 3–3–64, Cl. 263—46.

Beck, Walther: *See*—
Wagner, Anton, Beck, and Diskus. 3,123,526.

Beckadolph, Richard, to Continental Gummi-Werke Aktiengesellschaft. Pneumatic tire with reinforcement in zenith portion thereof. 3,123,122, 3–3–64, Cl. 152—330.

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Beckwith, Sterling, to Dual Jet Refrigeration Co. Refrigerated display cabinet and method of operation. 3,122,892, 3–3–64, Cl. 62—81.

Bednar, Joseph A., and R. T. Warner, to General Motors Corp. Power steering system for articulated vehicles. 3,123,174, 3–3–64, Cl. 180—79.2.

Beebe, Emmett R., to S & C Electric Co. Arc welding apparatus. 3,123,704, 3–3–64, Cl. 219—125.

Beers, Roland F., Jr. Process for recovering catalase from the cells of micrococcus lysodeikticus. 3,123,539, 3–3–64, Cl. 195—66.

Begbetto, Raymond A., Jr. Means for securing a pendant to a chain, including means for blocking release thereof. 3,122,900, 3–3–64, Cl. 63—23.

Behrens, Heinz. Tunnel kilns for the calcining particularly of sensitive ceramic ware. 3,122,814, 3–3–64, Cl. 25—142.

Belford, Adam J. R., to Stewarts and Lloyds Ltd. Crane hook suspensions. 3,123,340, 3–3–64, Cl. 254—139.

Bell & Howell Co.: *See*—
Call, Daniel D., and Quateman. 3,123,082.
Michaels, Bruno. 3,122,965.

Bellamy, David, Jr., to Baxter Laboratories Inc. Flexible tube coupling and closing apparatus. 3,123,072, 3–3–64, Cl. 128—221.

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Kaenel, Reginald A. 3,123,670.
Kamentsky, Louis A. 3,123,804.
Knox-Seith, John. 3,123,718.
Laico, Joseph P. 3,123,430.
Pfann, William G., and Thurston. 3,123,788.
Poole, Kenneth M. 3,123,771.
Prescott, Robert E., and Watkinson. 3,123,676.

Beloit Corp.: *See*—
Hornbostel, Lloyd, Jr. 3,123,316.
Washburn, Robert S. 3,122,958.

Bender, Stanley O., to CTS Corp. Combination switch and variable resistor. 3,123,795, 3–3–64, Cl. 338—172.

Bendix Corp., The: *See*—
Kjellman, Thomas K., and Watson. 3,123,687.

Bens, Robert, to United States of America, Atomic Energy Commission. Preparation of PuFa. 3,123,436, 3–3–64, Cl. 23—14.5.

Berg, Edgar A. Tire repair plug inserting apparatus. 3,122,951, 3–3–64, Cl. 81—15.7.

Berg, Vernon R. Tie-stall for cattle. 3,123,051, 3–3–64, Cl. 119—119.

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Bernard, George G., and O. C. Holbrook, to The Pure Oil Co. Waterflooding of clay containing reservoirs. 3,123,135, 3–3–64, Cl. 166—9.

Bernhard, Richard L., to American Radiator & Standard Sanitary Corp. Hermetic motor cooling by direct expansion of system refrigerant into motor. 3,122,894, 3–3–64, Cl. 62—117.

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Bertin, Daniel, H. Fritel, G. Muller, J. Mathieu, R. Joly, and J. Jolly, to Roussel-UCLAF. 20-bis-(hydroxymethyl)-11-oxygenated-pregnanes and derivatives thereof. 3,123,597, 3–3–64, Cl. 260—239.5.

Bertrang, Hermann, and W. Haupt, to Kienzle Apparate G.m.b.H. Wind-up arrangement for spring motors. 3,123,179, 3–3–64, Cl. 185—40.

Beumkes, Teunis, to Algemene Kunstzijde Unie, N.V. Dish mop. 3,122,768, 3–3–64, Cl. 15—244.

Bieber, Philip. Horse jump with simulated brush. 3,123,046, 3–3–64, Cl. 119—29.

Biesecker, Donald L., to Illinois Tool Works Inc. Quarter turn fastener. 3,123,389, 3–3–64, Cl. 292—218.

Bigliano, Robert P., to E. I. du Pont de Nemours and Co. Sphygmomanometer. 3,123,068, 3–3–64, Cl. 128—2.05.

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Bird Machine Co.: *See*—
Carvill, Richard E. 3,122,767.

Bishop, Robert H. Multiple louver damper. 3,123,098, 3–3–64, Cl. 137—601.

Biskis, Kestutis, to International Harvester Co. Hitch linkage control mechanism. 3,123,152, 3–3–64, Cl. 172—239.

Bjerkan, Theodore J. Grain dryer. 3,123,234, 3–3–64, Cl. 214—17.

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Blair, Boyd C., to Brackett Stripping Machine Co. Article vibrating machine. 3,123,019, 3–3–64, Cl. 108—21.

Blair, Robert A., and H. H. Wagnon, to Drilprodco, Inc. Drilling shock absorber. 3,122,902, 3–3–64, Cl. 64—23.

Blair, Robert C., to Western Gypsum Products Ltd. Plaster mixing device. 3,123,341, 3–3–64, Cl. 259—8.

Blake, Joyce C., to The International Nickel Co., Inc. Electrodeposition of ruthenium. 3,123,544, 3–3–64, Cl. 204—47.

Blake, William T. Sliding center sill railway car equipment. 3,123,226, 3–3–64, Cl. 213—8.

Blanchet, Lucien. Removable terminal carrier bar. 3,123,425, 3–3–64, Cl. 339—198.

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Kharasch, Robert N., and Blanchette. 3,122,844.

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Stephenson, Daniel W., and Schroyer. 3,123,699.

Blechschmidt, Otto. Apparatus for supporting sausage casings. 3,122,779, 3–3–64, Cl. 17—41.

Blieske, Herbert, to Alfred Gauthier, G.m.b.H. Photographic camera with automatic exposure setting mechanism. 3,122,978, 3–3–64, Cl. 95—10.

Bloch, Lillian F., to Campbell Pharmaceuticals, Inc. Method for producing 2-pyridinealdoxime methochloride. 3,123,613, 3–3–64, Cl. 260—296.

Blogdett, Leo S.: *See*—
Blodgett, Richard E., and L. S. 3,122,835.

Blodgett, Richard E., and L. S. Layout board for use in the graphic arts. 3,122,835, 3–3–64, Cl. 33—80.

Blohm, Thomas R.: *See*—
Palopoli, Frank P., Feil, and Blohm. 3,123,643.

Blomberg, Richard N., to E. I. du Pont de Nemours and Co. Textile filament anti-static graft copolymers of acrylonitrile polymers and specific vinyl sulfonic acids or water-soluble salts thereof. 3,123,434, 3–3–64, Cl. 8—115.5.

Blount, Floyd E., and C. J. Fritts, to Socony Mobil Oil Co., Inc. Method and structure for repairing pipelines. 3,123,101, 3–3–64, Cl. 138—97.

Bluck, Raymond M.: *See*—
Roesch, Franklyn W., and Bluck. 3,123,243.

Bocchino, Roger P. A. Decoy fish. 3,122,852, 3–3–64, Cl. 43—42.08.

Bodeker, Gunter, to Industrie-Companie Kleinewefers Konstruktions- und Handelsgesellschaft m.b.H. Device for controlling the pressure in a furnace chamber. 3,123,028, 3–3–64, Cl. 110—163.

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Moller, Waldemar. 3,123,785.

Bodine, Albert G., Jr. Method and apparatus for transmitting sonic vibrations into liquid bodies. 3,123,043, 3–3–64, Cl. 116—137.

Bodine, Albert G. Acoustic method for extracting hydrocarbon constituents from oil-sands. 3,123,546, 3–3–64, Cl. 208—11.

Boeger, Ray L.: *See*—
Kendall, William D., and Somhegyi. 3,123,376.

Boehner, Ludwig G., and A. Balbaschewski, to Ford Motor Co. Integrated power unit. 3,122,944, 3–3–64, Cl. 74—700.

Boening, Wilfred L. Cover for drain tile joints. 3,122,888, 3–3–64, Cl. 61—11.

Boertlein, Paul L., Sr., and E. L. Fowler, Jr. Article holders. 3,122,864, 3–3–64, Cl. 43—57.5.

Boggess, Alpheus G., and H. W.; said A. G. Boggess assor. to said H. W. Connector for fishing tackle. 3,122,803, 3–3–64, Cl. 24—73.

Boggess, Helen W.: *See*—
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Bolle, Victor W., to Collins Radio Co. System for improving F.M.-doppler radar. 3,123,825, 3–3–64, Cl. 343—14.

Bolomey, René A., H. A. Miller, and L. M. Greenstein, to Francis Earle Laboratories, Inc. Method for preparing nacreous pigments. 3,123,489, 3–3–64, Cl. 106—291.

Bolomey, René A., H. A. Miller, and L. M. Greenstein, to Francis Earle Laboratories, Inc. Nacreous pigment and method for preparing same. 3,123,490, 3–3–64, Cl. 106—291.

Bolt, Robert O., and W. W. Hanneman, to United States of America, Atomic Energy Commission. Irradiation method including the production of polyaromatic ethers. 3,123,584, 3–3–64, Cl. 176—39.

Boltz, George F., and J. H. Bornsin, to International Harvester Co. Air pre-cleaning apparatus. 3,123,456, 3–3–64, Cl. 55—492.

Bonamy, Robert P. Tide operated water lifting device. 3,122,880, 3–3–64, Cl. 61—30.

Bonheimer, Howard P.: *See*—
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Bonner, Francis J., and D. A. Reed, to Socony Mobil Oil Co., Inc. Lubricating oil composition of improved low-temperature detergency. 3,123,570, 3–3–64, Cl. 252—32.7.

Boone, Joseph E., and J. S. Hill, II, to Metrotek Electronics, Inc. Frequency selective signalling system. 3,123,675, 3–3–64, Cl. 179—87.

Boothroyd, Brian: *See*—
Rhodes, Alan, Boothroyd, Fantes, McGonagle, and Crosse. 3,123,530.

Boots Pure Drug Co. Ltd.: *See*—
Fenton, Albert H. 3,123,528.

Borden, John V. Floating capsule for dental handpiece. 3,123,338, 3–3–64, Cl. 253—2.

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Borgfeldt, Merton J., to California Research Corp. Anionic bituminous emulsions. 3,123,569, 3–3–64, Cl. 252—311.5.

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Ramsden, Henry C. 3,122,903.

Bork, Hugo W., to Skil Corp. Means for preventing loss of lubricant in gear chambers. 3,123,109, 3–3–64, Cl. 143—33.

Bornzin, James H.: *See*—
Boltz, George F., and Bornzin. 3,123,456.

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Bosler, Warren W. Emergency signal device. 3,123,801, 3–3–64, Cl. 340—52.

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Bouvier, Ward A., to General Binding Corp. Book binding machine. 3,122,761, 3–3–64, Cl. 11—1.

Bower, John L.: *See*—
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Boyle, Howard R., to The H. C. Shaw Co. Tool bar and clamp unit for spring-tooth harrow shanks. 3,123,154, 3–3–64, Cl. 172—691.

Brackett Stripping Machine Co.: *See*—
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Bradley, Carl P., 50% to W. R. Palmer, Jr. Faucet handle stop. 3,122,758, 3–3–64, Cl. 4—1.

Bradley, Richard C. Applicator gun for synthetic resins. 3,123,306, 3–3–64, Cl. 239—142.

Bradley, Richard C. Apparatus for spray depositing reinforced synthetic resins. 3,123,307, 3–3–64, Cl. 239—336.

Braithwaite, Robert C., and F. N. M. Sergeant, to Smiths America Corp. Electrical system for maintenance of mechanical oscillations. 3,123,755, 3–3–64, Cl. 318—132.

Brandenburg, Ewald, A. Pohle, and K. Görlich, to Huttenwerk Oberhausen Aktiengesellschaft. Machines for the continuous simultaneous rolling of several wires with alternating vertical and horizontal stands arranged one behind the other. 3,122,949, 3–3–64, Cl. 80—35.

Brandt, Robert E., to Amphenol-Borg Electronics Corp. Pile fabric knitting machine for striped pile. 3,122,904, 3–3–64, Cl. 66—9

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Bredehoeft, Victor N., and F. J. Miehe, to General Service Co. Motor speed control. 3,123,005, 3–3–64, Cl. 103—35.

Bredtschneider, Kurt B., to Crane Co. Pressure relief gate valve. 3,123,090 3–3–64, Cl. 137—112.

Breeback, Rudolph H., to Crown Cork & Seal Co., Inc. Rotary filling machine with valve trip controlling mechanism. 3,123,105, 3–3–64, Cl. 141—147.

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Brenn-Albertoni, Gemma. Hair curlers. 3,123,080, 3–3–64, Cl. 132—40.

Breuning, Erich E., and J. Torres, to Purolator Products, Inc. High pressure fluid coupling. 3,123,099, 3–3–64, Cl. 137—614.06.

Brick, Robert M., to Continental Can Co., Inc. Art of bonding of vacuum metallized coatings to metal subtrates. 3 123 493. 3–3–64. Cl. 117—50.

Bridwell, Chalon E. Rotary boat. 3,123,039, 3–3–64, Cl. 115—1.

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Bromwell, Theodore R. Merchandise inventory control means. 3,123,385, 3–3–64, Cl. 283—55.

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Bronson, Irving, to American Machine & Foundry Co. Self-leveling devices. 3,123,024, 3–3–64, Cl. 108—136.

Bronson, Irving, to American Machine & Foundry Co. Self-leveling device. 3,123,218, 3–3–64, Cl. 211—49.

Bronson, Irving, to American Machine & Foundry Co. Self-leveling device. 3,123,829, 3–3–64, Cl. 108—136.

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Brooks, Charles H.: *See*—
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Brooks, Chester E., G. B. Crofutt, Jr., J. L. Henry, and W. C. Sand, to Bell Telephone Laboratories, Inc. Distributed telephone line concentrator. 3,123,674, 3–3–64, Cl. 179—18.

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Brouwer, Johannes M., to North American Philips Co., Inc. Number testing arrangement. 3,123,809, 3–3–64, Cl. 340—174.

Brownlow, James M., to International Business Machines Corp. Ferrite composition. 3,123,748, 3–3–64, Cl. 317—158.

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Brugger, Hugo, and H. Burkhard, to Sandos Ltd. Reactive dyestuffs. 3,213,595, 3–3–64, Cl. 260—151.

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Uraneck, Carl A., and Buck. 3,123,590.

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Buckmann, John P., to Union Oil Co. of California. Motor fuel. 3,123,450, 3–3–64, Cl. 44—69.

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Budroni, Frank J. Fuel injection apparatus. 3,123,061, 3–3–64, Cl. 123—139.

Buesgen, William G. Permanent wave rod. 3,123,079, 3–3–64, Cl. 132—40.

Bukovsky, John. Skirt marker. 3,122,834, 3–3–64, Cl. 33—9.

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Bullock, Earle C., to Steelcase, Inc. Pedestal with locking means. 3,123,417, 3–3–64, Cl. 312—221.

Bundy, Robert W., to E. I. du Pont de Nemours and Co. Process for forming a non-woven sheet of fibers and fibrids. 3,123,518, 3–3–64, Cl. 162—216.

Bunger, Hilary D. Pour spout carton. 3,123,275, 3–3–64, Cl. 229—17.

Burch, Neil R., and H. E. Childers. Apparatus including transmitting and receiving means for analyzing aperiodic waveforms. 3,123,768, 3–3–64, Cl. 324—77.

Bureau d'Etudes Industrielles Fernand Courtoy: *See*—
Zimmer, Frantisek. 3,123,447.

Burke, Norman E., to General Electric Co. Packaging carton for clocks or the like. 3,123,274, 3–3–64, Cl. 229—14.

Burket, Richard S., and R. E. Clough, to E. I. du Pont de Nemours and Co. Packages. 3,123,209, 3–3–64, Cl. 206—62.

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Brugger, Hugo, and Burkhard. 3,123,595.

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Burt, William E., to Ethyl Corp. Cycloheptatriene iron tricarbonyls fungicidal compositions. 3,123,524, 3–3–64, Cl. 167—30.

Burton, Lawrence A., to Allis-Chalmers Mfg. Co. Movable contact assembly with a magnetic shield. 3,123,691, 3–3–64, Cl. 200—87.

Bush and Rank Cintel Ltd.: *See*—
Freeman, George S. P. 3,123,733.

Bushway, George H., by S. M. Burns, executor of said G. H. Bushway, deceased, to Shu-Conditioner Inc. Self-adjusting box toe blank conditioning machine. 3,123,500, 3–3–64, Cl. 118—426.

Butterfield, James F., to J. F. Butterfield and E. Levitt. Apparatus for producing forms and colors in motion. 3,122,966, 3–3–64, Cl. 88—27.

Butts, Philip G., and C. R. Fingerhood, to Olin Mathieson Chemical Corp. Combustible explosive charges. 3,123,507, 3–3–64, Cl. 149—19.

Byl, Theodore R., to Code-A-Phone Electronics, Inc. Rotary programming switch. 3,123,682, 3–3–64, Cl. 200—38.

Byrd, James T. Propeller with selectively variable pitch. 3,123,145, 3–3–64, Cl. 170—160.6.

Byrne, John F., to Minneapolis-Honeywell Regulator Co. Photographic composition. 3,123,474, 3–3–64, Cl. 96—108.

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Caillet, Rene. Rigid roll-up screen, particularly for use as a hatch-cover. 3,123,129, 3–3–64, Cl. 160—41.

Caldwell, Everette V. Wheel suspension assembly. 3,123,378, 3–3–64, Cl. 280—104.5.

Caldwell, Richard L., and R. F. Sippel, to Socony Mobil Oil Co., Inc. Density measurements of borehole fluids using axially spaced radioactive source and detector means. 3,123,709, 3–3–64, Cl. 250—43.5.

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Call, Daniel D., and J. I. Quateman, to Bell & Howell Co. Currency dispenser. 3,123,082, 3–3–64, Cl. 133—80.

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Mutter, Karl J. 3,122,781.

Cameron Iron Works, Inc.: *See*—
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Kernander, Warren N., Van Bennekom, and Camp. 3,123,293.

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Canada Rice Mills Ltd., The: *See*—
Menzies, Alastair R. 3,123,277.

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Anderson, Charles C., and Rinehart. 3,123,429.

Carey, Earle V.: *See*—
Wilson, Harry H., and Carey. 3,123,343.

Carpenter, Austin T., and C. E. Shilton, to United Shoe Machinery Corp. Sealants compositions and article of organosilicon compounds with polysulfide polymer. 3,123,495, 3–3–64, Cl. 117—72.

Carr, Norman L., to The Pure Oil Co. Isomerization catalyst and process. 3,123,573, 3–3–64, Cl. 252—442.

Carroll, Francis R.: *See*—
Pelas, Alan R., and Carroll. 3,123,133.

Carroll, Frederick C.: *See*—
Adler, Clarence E., and Carroll. 3,122,995.

Carson, Neill J., Jr., H. W. Ostrander, and C. N. Munter, to United States of America, Atomic Energy Commission. Friction-free balance. 3,123,165, 3–3–64, Cl. 177—208.

Carter, Reginald H. F., to X-O-Matics (Sales) Ltd. Vending machines. 3,123,415, 3–3–64, Cl. 312—97.1.

Carvill, Richard E., to Bird Machine Co. Sectional doctor blade holder. 3,122,767, 3–3–64, Cl. 15—236.

Casey, Joseph J., and J. W. Berhman, to Amalgamated Growth Industries, Inc. Method of producing titanium. 3,123,464, 3–3–64, Cl. 75—10.

Caslni, Vittorio, to Piaggio & C.S.p.A. Two-stroke-cycle engine with an admission port in the crankcase at the periphery of the cranks of the drive shaft. 3,123,059, 3–3–64, Cl. 123—73.

Cedar Lake Engineering Co.: *See*—
Hodges, Hubert E., and Frame. 3,123,112.

Cessna Aircraft Co., The: *See*—
Darling, Marvin C. 3,123,335.

Chalken, Robert F.: *See*—
Schultz, Robert D., Branson, and Chalken. 3,122,882.

Chamberlain & Hookham Ltd.: *See*—
Lewis, Harry S., and McGuirk. 3,123,683.

Champ-Items, Inc.: *See*—
Dumpis, Janis. 3,123,245.

Channing Corp.: *See*—
Heim, Lewis R. 3,123,413.

Chapman, John L., Jr., and R. P. Loeper, to Western Electric Co., Inc. Method and apparatus for feeding articles. 3,123,543, 3–3–64, Cl. 204—28.

Charreau, Paul A. J. Process for the dry cleaning and waterproofing of fabrics. 3,123,494, 3–3–64, Cl. 117—62.

Chase Brass & Copper Co., Inc.: *See*—
Crampton, Donald K. 3,123,466.

Chass, Jacob, to International Resistance Co. Accelerometer. 3,122,927, 3–3–64, Cl. 73—517.

Chase-Shawmut Co., The: *See*—
Kozacka, Frederick J. 3,123,693.
Kozacka, Frederick J. 3,123,694.

Chatjimikos, Theodore. Last for making footwear. 3,122,762, 3–3–64, Cl. 12—133.

Chauvin, Bernard, J. A. Daubert, and A. P. Meier, to Westinghouse Electric Corp. Positioning apparatus for sealing lamps. 3,122,825, 3–3–64, Cl. 29—203.

Chemical Research Laboratories of America, Inc.: *See*—
Wentworth, John F., and Hefler. 3,123,521.

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Wildervs, Johannes H. A., and Van der Kroonenberg. 3,123,472.

Chemische Werke Witten: *See*—
Katzschmann, Ewald. 3,123,632.

Childers, Harold E.: *See*—
Burch, Neil R., and Childers. 3,123,768.

Chinoin Gyogyszer-es Vegyeszeti Termekek Gyara RT: *See*—
Földi, Zoltán, Heidt, and König. 3,123,603.

Chope, Henry R., to Industrial Nucleonics Corp. Space communication system. 3,123,714, 3–3–64, Cl. 250—199.

Christoffers, William H., and J. E. Nevins, Jr., to Hughes Aircraft Co. Severed traveling-wave tube with external terminations. 3,123,736, 3–3–64, Cl. 315—3.6.

Christophers, Nicholas J.: *See*—
Monaghan, Cecil Z., and Christophers. 3,123,178.

Chrysler Corp.: *See*—
Marshall, Robert W. 3,123,471.

Chung, Jackson, to Dodge Mfg. Corp. Combination pulley and speed reducer. 3,122,945, 3–3–64, Cl. 74—802.

Ciba Corp.: *See*—
Koller, Eugen J., and Gunst. 3,123,594.

Ciba Ltd.: *See*—
Duennenberger, Max, Siegrist, and Maeder. 3,123,647.
Hagenboecker, Alfred. 3,123,645.

Cialo, Casimer J., to General Motors Corp. Hydraulic leveling device with integrated automatic control. 3,123,349, 3–3–64, Cl. 267—60.

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Clark, Leland C., Jr. Process and apparatus for determining the presence of foreign substances in the blood streams of living animals. 3,123,067, 3–3–64, Cl. 128—2.05.

Clark, Richard E., J. V. Simek, and C. C. Veale, to Western Electric Co., Inc. Tension control device. 3,123,317, 3–3–64, Cl. 242—75.3.

Clark, Stephens C., Jr., and J. E. Jones, to General Electric Co. Automatic control apparatus. 3,123,657, 3–3–64, Cl. 266—23.

Clemens, Ogden A., H. P. Bonheimer, and H. H. Trombly, to Swift & Co. Continuous manufacture of sausage. 3,122,980, 3–3–64, Cl. 99—358.

Closson, Rex D., to Ethyl Corp. Manufacture of organic esters by reacting alpha-metallo-acetate salts with hydrocarbon halides. 3,123,628, 3–3–64, Cl. 260—410.9.

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Cocker Machine & Foundry Co.: *See*—
Cocker, John, III. 3,123,449.

Code-A-Phone Electronics, Inc.: *See*—
Byl, Theodore R. 3,123,682.

Coffee, Robert D., to Eastman Kodak Co. Extrusion die incorporating a hydraulically deformable orifice. 3,122,789, 3–3–64, Cl. 18—12.

Cogsdill, Stuart A., to Cogsdill Tool Products Inc. Deburring tool. 3,122,947, 3–3–64, Cl. 77—73.5.

Cogsdill Tool Products Inc.: *See*—
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Coleman, John H., to Radiation Research Corp. Radioactive treatment of insulating materials and process and apparatus for measuring radioactivity. 3,123,511, 3–3–64, Cl. 166—272.

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Collier, Paul A. Fishing tackle rack and box. 3,122,855, 3–3–64, Cl. 43—57.5.

Collins Radio Co.: *See*—
Arnold, Forrest G., and Ore. 3,123,827.
Bolle, Victor W. 3,123,825.
Gerks, Irvin H. 3,123,772.
Haerther, Lester W., and Zimmerman. 3,123,418.
Kaufman, Theodore P. 3,123,721.
Petry, Frank L., Jr. 3,122,929.
Strauch, Frederic P., Jr., and Wals. 3,123,810.

Combustion Engineering, Inc.: *See*—
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Commercial Solvents Corp.: *See*—
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Compagnie Francaise des Matieres Colorantes: *See*—
Du Peloux, Guy C. M., and Leroy. 3,123,483.

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Conner, James E., Jr., and C. S. Shipley, to The Atlantic Refining Co. Removal of metallic impurities from cracking catalysts. 3,123,548, 3–3–64, Cl. 208—120.

Connally, Carl, Jr., to Socony Mobil Oil Co., Inc. Method of reducing gas coning around a producing well. 3,123,140, 3–3–64, Cl. 166—42.

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Continental Can Co., Inc.: *See*—
Brick, Robert M. 3,123,493.
Miller, William L. 3,123,273.
Tryzna, Joseph J. 3,123,582.

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Continental Oil Co.: *See*—
Conley, Francis R., Felsenthal, Heuer, and Knutson. 3,123,139.
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Coombs, John M., to Sperry Rand Corp. Data storage apparatus controls. 3,122,943, 3–3–64, Cl. 74—661.

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Cordis, Nat. Demountable paddle-link conveyor assembly for stock feeders of the continuous trough type. 3,123,048, 3–3–64, Cl. 119—52.

Cordis, Nat. Trough feeder with reciprocating impeller. 3,123,049, 3–3–64, Cl. 119—52.

Corsetti, John A., to Kover-Kar Inc. Automobile windshield rain visor. 3,123,394, 3–3–64, Cl. 296—95.

Cosgrove, Albert S., and R. C. Morris, to Multifax Co. Vacuum process of treating hatching eggs. 3,123,045, 3–3–64, Cl. 119—1.

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Schmidt, Wilhelm G., and Bucknall. 3,123,437.

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Cousens, Reginald, to Dietz Machine Works, Inc. Apparatus and method for winding and cutting sheets of web material. 3,123,315, 3–3–64, Cl. 242—56.

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Crane, Edward J., and A. L. Masters, to Equity Financial Corp. Drive for poultry picking machine. 3,122,778, 3–3–64, Cl. 17—11.1.

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Dale, Edvard. Bark peeling devices. 3,122,832, 3–3–64, Cl. 30—121.

Dale, Thomas L., 40% to P. Fultz. Windshield wiper. 3,122,771, 3–3–64, Cl. 15—250.36.

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Phelps, Stuart M., and Daly. 3,123,800.

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Davidovitch, Vlastimir, now by change of name V. Davidovic. Gas turbine cycle improvement. 3,122,886, 3–3–64, Cl. 60—39.16.

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Hewitt, Alan R., and Davis. 3,123,195.
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Davis, William A., to Davis-Lynch, Inc. Conduit string fill-up device. 3,123,517, 3-3-64, Cl. 166—224.
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Day, Thomas A., to Du Pont of Canada Ltd. Plastic bag. 3,123,279, 3-3-64, Cl. 229—53.
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De Lisle, William E., and R. G. Fryer, to Sylvania Electric Products Inc. Data transmission system with error correction capabilities utilizing maximum and nonmaximum length sequence registers for encoding and decoding. 3,123,803, 3-3-64, Cl. 340—146.1.
Demaison, Raymond J., to Quigley Co., Inc. Flexible form for repairing the oxygen lance holes in open hearth furnace roofs. 3,122,813, 3-3-64, Cl. 25—118.
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McMaster, Elmer L., and Nagle. 3,123,440.
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Easterday, Kenneth P., and D. S. Magargee, to Western Electric Co., Inc. Article feeding device. 3,123,199, 3-3-64, Cl. 198—33.
Eastman Kodak Co.: *See*—
Coffee, Robert D. 3,122,789.
Rosenburgh, Norman J. 3,122,957.
Easton, Nelson R., to Eli Lilly, and Co. Primary acyclic amines. 3,123,646, 3-3-64, Cl. 260—583.
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Nofer, Paul, and Eberhardt. 3,122,868.
Nofer, Paul, and Eberhardt. 3,123,241.
Echenique, Jesus L., and H. Voegeli, to Inventors Finance Corp. Electronic-measuring and recording system. 3,123,164, 3-3-64, Cl. 177—1.
Economisto, Bureau voor Economische Stoomproductie, N.V.: *See*—
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Edinger, Joseph Y.: *See*—
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Edward, Harold H.: *See*—
Newhouse, Vernon L., Bremer, and Edward. 3,123,720.
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Kilburn, Tom, Edwards, and Aspinall. 3,123,707.
Eggert, Walter S., Jr., and D. L. Buchanan, to The Budd Co. Roof ventilation damper assembly. 3,122,982, 3-3-64, Cl. 98—18.
Ehrman, Leonard. Distance measuring device. 3,123,797, 3-3-64, Cl. 340—1.
Ehrsam, Frederick. Waterproof match package. 3,123,205, 3-3-64, Cl. 206—33.
Eiland, Ehrlich M., to Aluminum Co. of America. Coated aluminum and process. 3,123,516, 3-3-64, Cl. 161—218.
Eisenkraft, Bernard J. Hydrodynamic vibrative atomizer. 3,123,305, 3-3-64, Cl. 239—102.
Eisenman, Herbert C., to Minnesota Mining and Mfg. Co. Tape dispenser. 3,122,955, 3-3-64, Cl. 83—233.
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Dunne, Carroll J. 3,123,784.
Electrokinetics Corp.: *See*—
Fajans, Jack. 3,123,711.
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Tardoskegyi, Louis V. 3,123,084.
Eliason, Edward A. Wrench winch. 3,122,952, 3-3-64, Cl. 81—53.
Ellis, Robert M., and R. P. Neeb, to Rotolite Corp. Gaseous photo-developing apparatus. 3,122,981, 3-3-64, Cl. 95—94.
Ellison, Luther A. Link for crawler type tractor tread. 3,123,411, 3-3-64, Cl. 305—50.
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Lobur, Walter. 3,123,740.
Elsey, Cleo A. Convertible motor valve. 3,123,091, 3-3-64, Cl. 137—270.
Elston, Thomas J. Automobile safety belt anchor construction. 3,123,402, 3-3-64, Cl. 297—385.
Eltonhead, Robert W., to Crompton & Knowles Corp. Azopyrazolone dyes. 3,123,596, 3-3-64, Cl. 260—162.
Elvers, George C., Sr. Fertilizer gun. 3,123,362, 3-3-64, Cl. 275—1.
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Zajcew, Mykola. 3,123,574.
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Hopkins, Thomas R., Rea, and Epperly. 3,123,463.
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Nickerson, James K., and Pennington. 3,123,633.
O'Neill, Michael P., and Kanzler. 3,122,912.
Palmer, Jewell S., and Roquemore. 3,123,547.
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Skomoroski, Robert M., and Schriesheim. 3,123,550.
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Burt, William E. 3,123,524.
Closson, Rex D. 3,123,628.
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Evans, George Q. Stacking frame assembly for a pallet. 3,123,021, 3-3-64, Cl. 108—53.
Evans Harbor Products Co.: *See*—
Jackson, Charles Q., Larmore, and Edinger. 3,122,750.
Evans, Kenneth: *See*—
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Exline, Inc.: *See*—
Exline, Douglas W. 3,123,057.
Facius, Arnold F., and E. G. Israelson, to Sperry Rand Corp. Manifold control for typewriters. 3,123,194, 3-3-64, Cl. 197—60.
Fagel, Roger, to Ateliers de Constructions Electriques de Charleroi. Stators for electric motors and generators. 3,123,729, 3-3-64, Cl. 310—43.
Fagel, Roger, to Ateliers de Constructions Electriques de Charleroi. Totally enclosed electric motor. 3,123,730, 3-3-64, Cl. 310—54.
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Farmer, Bobby J., to Ling-Temco-Vought, Inc. Fuel ignitor. 3,122,887, 3-3-64, Cl. 60—39.82.
Farr, Homer D.: *See*—
Thrap, John E., and Farr. 3,123,089.
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Albrecht, Hans J. 3,122,968.
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Felts, James A. Anesthetic vaporizer. 3,123,071, 3-3-64, Cl. 128—188.
Fenton, Albert H., to Boots Pure Drug Co. Ltd. New therapeutic compositions. 3,123,528, 3-3-64, Cl. 167—55.
Ferneau, Richard H., to Ferno Mfg. Co. Combined stretcher and stair chair. 3,122,758, 3-3-64, Cl. 5—82.
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Ferneau, Richard H. 3,122,758.
Field, Allen I. and S. P. Merchandise display hook. 3,123,331, 3-3-64, Cl. 248—317.
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Field, Allen I. and S. P. 3,123,331.
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Wilkinson, Raymond G., and Fields. 3,123,648.
Figge, Carroll C. Method of roofing. 3,122,862, 3-3-64, Cl. 50—537.
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Fijisawa Pharmaceutical Co., Ltd.: *See*—
Ohara, Masao, Haraoka, Deguchi, Miura, and Ito. 3,123,625.
Fillery, William J., to Short Bros. & Harland Ltd. Gyroscopic apparatus. 3,122,937, 3-3-64, Cl. 74—388.
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Butts, Philip G., and Fingerhood. 3,123,507.
Fink, Richard R., to Heyman Mfg. Co. Strain relief collet. 3,123,662, 3-3-64, Cl. 174—65.
Fischer, Paul W., to Union Oil Co. of California. Inhibited drilling fluid. 3,123,559, 3-3-64, Cl. 252—8.5.
Fischer's, Ernest H., Sohne, Aktiengesellschaft: *See*—
Ganahl, Alfred. 3,123,013.
Fish, Floyd H., Jr., to E. I. du Pont de Nemours and Co. Apparatus for forming a waterlaid sheet of staple fibers and fibrids. 3,123,520, 3-3-64, Cl. 162—342.
Fisher, James T., to B & C Metal Stamping Co. Meter box with a moisture barrier assembly. 3,123,744, 3-3-64, Cl. 317—104.
Fisher & Ludlow Ltd.: *See*—
Maxwell, Stewart A. 3,123,419.
Fisher, Myron W., to Parke, Davis & Co. Antibacterial compositions. 3,123,527, 3-3-64, Cl. 167—51.5.
Fisher, Stanton E. Molded rawhide. 3,123,047, 3-3-64, Cl. 119—29.5.
Flank, William H., J. E. McEvoy, and H. Shailt, to Air Products and Chemicals, Inc. Fat hydrogenation. 3,123,627, 3-3-64, Cl. 260—409.
Fleer, Thomas P., to White-Rodgers Co. Control system for clothes dryers. 3,123,448, 3-3-64, Cl. 34—45.
Fleming, Robert W., to Parke, Davis & Co. 2-(t-alkylaminoalkyl)-imidazolines and tetrahydropyrimidines. 3,123,606, 3-3-64, Cl. 260—256.4.
Flygstad, Dean W., and D. A. Meyer, to The Telex Corp. Variable impedance. 3,123,793, 3-3-64, Cl. 338—154.
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Földi, Zoltán, D. Heidt (nee Lányi), and R. König, to Chinoin Gyogyszer-es Vegyeszeti Termekek Gyara RT. Product of diuretic activity and process to prepare same. 3,123,603, 3-3-64, Cl. 260—243.

Fontaine, Paul J., to Goodman Mfg. Co. Wood chipper. 3,123,311, 3-3-64, Cl. 241—28.

Fontaine, Robert R., and J. M. Raffel, to ACF Industries, Inc. Servo system for controlling the oscillation of a shaft through variable sectors of rotation. 3,123,659, 3-3-64, Cl. 35—10.4.

Forbes-Robinson, Elliott, to TA Mfg. Corp. Tripod head. 3,123,330, 3-3-64, Cl. 248—183.

Ford Motor Co.: *See*—
Boehner, Ludwig G., and Balbaschewski. 3,122,944.
Di Salvo, Anthony J., and Westerdale. 3,123,388.
Frevik, Ralph C., and Britts. 3,122,871.
Hildebrandt, Eugene E. 3,123,348.
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Page, Ernest. 3,123,183.
Pulleyblank, Thomas A. 3,122,775.

Fournet, André, and A. Rio, to Societe des Usines Chimiques Rhone-Poulenc. Blend of a copolymer of alpha-methylstyrene and acrylonitrile and a copolymer of butadiene, acrylonitrile, and styrene or alpha-methylstyrene and injection moulded articles thereof. 3,123,584, 3-3-64, Cl. 260—45.5.

Fowler, Emmett L., Jr.: *See*—
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Foxwell, Leo G., and G. F. Humiston, to United Aircraft Corp. Zero gravity gas analyzer. 3,123,444, 3-3-64, Cl. 23—254.

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Hodges, Hubert E., and Frame. 3,123,112.

Franck, Kurt, to Holophane Co., Inc. Fluorescent street lighting system. 3,123,308, 3-3-64, Cl. 240—25.

Frankel, John S., and H. Hirst, to S. Smith & Sons (England) Ltd. Servo systems. 3,123,752, 3-3-64, Cl. 318—18.

Franklin, Burton P., to General Electric Co. Fan guard and motor support. 3,123,288, 3-3-64, Cl. 230—273.

Frants, Virgil L., to Graham-White Sales Corp. Sander. 3,123,386, 3-3-64, Cl. 291—11.

Frase, Roland J., to International Harvester Co. Planter drives. 3,123,030, 3-3-64, Cl. 111—34.

Fredrickson, Leslie B. Bottle cap opener. 3,122,950, 3-3-64, Cl. 81—3.44.

Freeman, George S. P., to Bush and Rank Cintel Ltd. Rotary anode cathode ray tube. 3,123,733, 3-3-64, Cl. 313—146.

French, Walter K., to International Business Machines Corp. Associative memory. 3,123,706, 3-3-64, Cl. 235—61.11.

Frevik, Ralph C., and B. Britts, to Ford Motor Co. Flail type cutter. 3,122,871, 3-3-64, Cl. 56—294.

Fridlund, Olof. Operating device for Venetian blinds. 3,123,130, 3-3-64, Cl. 160—168.

Fried, Louis. Window top containers. 3,122,990, 3-3-64, Cl. 99—369.

Friedemann, Oscar R.: *See*—
Pintauro, Nicholas D., and Friedemann. 3,123,635.

Frieder, Leonard P., and J. V. Weinberger, to Gentex Corp. High temperature resistant tubing. 3,123,102, 3-3-64, Cl. 138—125.

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Annis, Max R., Robinson, and Friedman. 3,123,143.

Fritel, Hubert: *See*—
Bertin, Daniel, Fritel, Muller, Mathieu, Joly, and Jolly. 3,123,597.

Fritts, Charles J.: *See*—
Blount, Floyd E., and Fritts. 3,123,101.

Fryer, Raymond G.: *See*—
De Lisle, William E., and Fryer. 3,123,803.

Fugelstad, Johan O., to Platforadling, Aktiebolaget. Arrangement in safe walls or the like. 3,123,025, 3-3-64, Cl. 109—83.

Fultz, Palmer: *See*—
Dale, Thomas L. 3,122,771.

Fur Industrielle Elektronik Agie Losone Bei Locarno, A.G.: *See*—
Langel, Gérard. 3,122,864.

Futterman, Julius. High fidelity amplifier. 3,123,780, 3-3-64, Cl. 330—74.

Gadekar, Shreekrishna M., J. R. Vaughan, Jr., and B. Selby, to American Cyanamid Co. 2-acylated 2,3-dihydro-1H-pyrrolo[3,4-C]pyridines. 3,123,612, 3-3-64, Cl. 260—295.

Gagg, James, to Molins Machine Co. Ltd. Mechanism for joining webs of material. 3,123,268, 3-3-64, Cl. 226—111.

Gallus, Julius P., to Jersey Production Research Co. Method for sealing porous surfaces. 3,123,158, 3-3-64, Cl. 175—59.

Galson, Allen E., to United States of America, Atomic Energy Commission. Pressure relief device for neutronic reactors. 3,123,533, 3-3-64, Cl. 176—38.

Ganahl, Alfred, to Ernest H. Fischer's Sohne, Aktiengesellschaft. Hydraulic piston machines. 3,123,013, 3-3-64, Cl. 103—161.

Gapstur, John J., to Rubbermaid Inc. Rotary and percussive tool. 3,123,156, 3-3-64, Cl. 173—48.

Garrett Corp., The: *See*—
Lones, Dain B., and Padgett. 3,123,754.

Gaskell, Walter L., and C. L. Seitz, to King-Seeley Thermos Co. Radial arm saw. 3,123,108, 3-3-64, Cl. 143—6.

Gasparoni, Francesco, and C. Longiave, to Montecatini, Societa Generale per l'Industria Mineraria e Chimica. Process for polymerizing isobutylene to polyisobutylene. 3,123,592, 3-3-64, Cl. 260—94.8.

Gaudet, James A., to Alexander Kusko, Inc. Motor speed control system. 3,123,757, 3-3-64, Cl. 318—327.

Gauthier, Alfred, G.m.b.H.: *See*—
Bileske, Herbert. 3,122,978.

Geary, Robert J., to Plant Products Corp. Cyclic terpene N-methyl carbamates and pesticidal compositions containing same. 3,123,525, 3-3-64, Cl. 167—30.

Geesner, Charles R.: *See*—
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Gehringer, Mervin L. Sewing machine attachment. 3,123,052, 3-3-64, Cl. 112—107.

Geigy, J. R., A.-G.: *See*—
Häusermann, Heinrich. 3,123,617.

General Aniline & Film Corp.: *See*—
Duggins, William E., Hessel, and Werner. 3,123,462.
Turetzky, Melvin N., and Katz. 3,123,605.

General Binding Corp.: *See*—
Bouvier, Ward A. 3,122,761.
Nadherny, Russell J. 3,122,791.

General Dynamics Corp.: *See*—
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General Electric Co.: *See*—
Abbott, Roy W. 3,123,286.
Beardsley, Kenneth D., and Wilk. 3,122,821.
Burke, Norman E. 3,123,274.
Clark, Stephen C., Jr., and Jones. 3,123,657.
Denison, James W., Jr. 3,123,470.
Doersam, Henry F. 3,122,769.
Franklin, Burton P. 3,123,288.
Grimshaw, Charles. 3,123,697.
Harle, Harold P. 3,122,795.
Kernander, Warren N., Van Bennekom, and Camp. 3,123,293.
Kettler, Clarence J. 3,123,763.
Leeds, Laurance M. 3,123,775.
Leis, Robert F. 3,123,283.
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General Electronic Laboratories, Inc.: *See*—
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General Fireproofing Co., The: *See*—
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General Foods Corp.: *See*—
Pintauro, Nicholas D., and Friedemann. 3,123,635.

General Mills, Inc.: *See*—
Graber, Robert P., and Meyers. 3,123,600.
Graber, Robert P., and Meyers. 3,123,620.
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Drayer, William L. 3,123,802.
Kuilin, Walter G. 3,122,898.
Kuyk, Aart K. 3,123,118.
Mumby, Herald W. 3,122,872.
Naffziger, Dewein H. 3,122,800.
Partridge, Dale M. 3,123,006.
Sandor, Bela, and Sarosy. 3,123,390.
Schaad, Theodore A., and Widmer. 3,122,829.
Schilke, Warren R. 3,123,504.
Stawinski, Benjamin S. 3,122,804.
Stormer, Joseph R., and Jacobs. 3,123,347.
Touchkoff, Dimitar. 3,123,094.
Welsh, Harvey W. 3,123,187.
Zeigler, Philip B., and White. 3,123,350.
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General Service Co.: *See*—
Bredehoeft, Victor N., and Miehe. 3,123,005.

General Signal Corp.: *See*—
Phelps, Stuart M., and Daly. 3,123,800.

Genoud & Cie, Etablissements: *See*—
Gilberton, Emile. 3,122,907.

Gentex Corp.: *See*—
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Geraghty, Robert M., to E. D. Bullard Co. Back-up alarm mount. 3,123,040, 3-3-64, Cl. 116—60.

Gerber, Gary A. Cigarette package or the like. 3,123,206, 3-3-64, Cl. 206—41.

Gerks, Irvin H., to Collins Radio Co. System for measuring refractive index of ionosphere. 3,123,772, 3-3-64, Cl. 325—67.

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Shuart, Stanley R., Gessler, and Hawley. 3,123,581.

Ghose, Rabindra N., to Space-General Corp. Apparatus for determining the conductivity and dielectric constant of the earth along its surface. 3,123,767, 3-3-64, Cl. 324—6.

Giacalone, Dino B., to John R. Hollingsworth Co. Battery charging. 3,123,758, 3-3-64, Cl. 320—36.

Giers, Alfred J. A. and O. G. H. Maus, to Carl Schenk Maschinenfabrik G.m.b.H. Method and apparatus for dynamic balance testing of rotors. 3,122,926, 3-3-64, Cl. 73—463.

Gilbert, Joseph J., to Link-Belt Co. Sewage treatment plants. 3,123,556, 3-3-64, Cl. 210—151.

Gilberton, Emile, to Etablissements Genoud & Cie. Gas lighter of the suspended container type. 3,122,907, 3-3-64, Cl. 67—7.1.

Gilmont, Roger, to Roger Gilmont Instruments, Inc. Absolute pressure measuring device. 3,122,923, 3-3-64, Cl. 73—400.

Gilmont, Roger, Instruments, Inc.: *See*—
Gilmont, Roger. 3,122,923.

Gilreath, Lafayette E. Hydraulic slip setting apparatus. 3,122,811, 3-3-64, Cl. 24—263.

Gilreath, Lafayette E. Hydraulic gear apparatus. 3,123,012, 3-3-64, Cl. 103—126.

Glass, Henry P. Body supporting furniture of the polygonal tension type. 3,123,395, 3-3-64, Cl. 297—16.

Glass, John P., to Litton Industries, Inc. Magnetizable core. 3,123,747, 3-3-64, Cl. 317—158.

Glass, William A., Jr. Hand fin for swimming. 3,122,760, 3-3-64, Cl. 9—308.

Glaxo Group Ltd.: *See*—
Rhodes, Alan, Boothroyd, Fantes, McGonagle, and Crosse. 3,123,530.

Goch, Heinz, and O. Suter, to G. Kromschroder Aktiengesellschaft. Temperature responsive controller for gas burners. 3,123,300, 3-3-64, Cl. 236—102.

Gofman, John W.: *See*—
Seaborg, Glenn T., Gofman, and Stoughton. 3,123,535.

Goldberg, Moses W., and L. M. Jampolsky, to Hoffman-La Roche Inc. Phenanthrene carboxamides and derivatives thereof. 3,123,611, 3-3-64, Cl. 260—294.7.

Golden, Robert K., to International Business Machines Corp. Magnetic core analog to digital converter. 3,123,817, 3-3-64, Cl. 340—347.

Goldsmith, Paul H., to International Harvester Co. Transmission control mechanism. 3,122,941, 3-3-64, Cl. 74—473.

Goldstein, Amnon: *See*—
Mandel, Gerald, Lieblich, and Goldstein. 3,123,542.

Goldstein, Daniel, to Schenley Industries, Inc. Combination shipping container and display device. 3,123,207, 3-3-64, Cl. 206—44.

Gondek, John T. Fluid pressure switch. 3,123,690, 3-3-64, Cl. 200—82.

Gongwer, Calvin A., to Aerojet-General Corp. Swimmer's propulsion device. 3,122,759, 3-3-64, Cl. 9—308.

Goodman Mfg. Co.: *See*—
Fontaine, Paul J. 3,123,811.

Goodrich, B. J., Co., The: *See*—
Fibe, John L. 3,122,934.

Gorand, Alfred J., and C. H. Brooks, to Sun Oil Co. Venting arrangements for storage tanks. 3,123,249, 3-3-64, Cl. 220—85.

Gordon, James. Hydraulic actuated brush and holder. 3,123,731, 3-3-64, Cl. 310—243.

Gorlich, Kurt: *See*—
Brandenburg, Ewald, Pohle, and Gorlich. 3,122,949.

Gorman, Gerald W. Seal. 3,123,365, 3-3-64, Cl. 277—88.

Gorman, William G., to Sterling Drug Inc. Metered aerosol valve. 3,123,261, 3-3-64, Cl. 222—394.

Gornston, David, and W. Berg. Device for beating time to music. 3,122,961, 3-3-64, Cl. 84—484.

Gory, Frank A. Tile manufacturing machine. 3,122,812, 3-3-64, Cl. 25—43.

Gossen, P., & Co., G.m.b.H.: *See*—
Hautmann, Heinrich. 3,122,980.
Schrenk, Gotthilf, and Krappatsch. 3,123,724.

Gottesman, Roy T., to Heyden Newport Chemical Corp. Herbicidal compositions. 3,123,461, 3-3-64, Cl. 71—2.5.

Gottsmann, Christian F.: *See*—
Notaro, Joan, Gottsmann, and Heath. 3,123,096.

Graber, John N., to Graber Mfg. Co., Inc. Pulley hold-down for traverse rods. 3,123,351, 3-3-64, Cl. 267—71.

Graber Mfg. Co., Inc.: *See*—
Graber, John N. 3,123,351.

Graber, Robert P., and M. B. Meyers, to General Mills, Inc. Preparation of 6α,16α-dimethyl-17α-hydroxyprogesterone. 3,123,600, 3-3-64, Cl. 260—239.55.

Graber, Robert P., and M. B. Meyers, to General Mills, Inc. Preparation of 6α,16α-dialkyl substance S and acylates thereof. 3,123,624, 3-3-64, Cl. 260—397.47.

Grace, W. R., & Co.: *See*—
Lard, Edwin W., Horn, and Green. 3,123,637.
Stover, William A., and Briggs. 3,123,575.
Vill, John J. 3,123,619.

Graham, Arthur. Tube reinforcing machine. 3,122,977, 3-3-64, Cl. 93—77.

Graham, John W., to Jersey Production Research Co. Recovery of drill cuttings from subsurface earth formations. 3,123,157, 3-3-64, Cl. 175—58.

Graham-White Sales Corp.: *See*—
Frants, Virgil L. 3,123,386.

Green, Howard D.: *See*—
Lard, Edwin W., Horn, and Green. 3,123,637.

Greenawalt, John E., to Greenawalt Sintering Co., Inc. Suction fan. 3,123,284, 3-3-64, Cl. 230—128.

Greenawalt Sintering Co., Inc.: *See*—
Greenawalt, John E. 3,123,284.

Greenberg, Walter H., to Riverside Plastics Corp. Sonar dome. 3,123,176, 3-3-64, Cl. 181—.5.

Greene, William J., to Air Reduction Co., Inc. Regulated power supplies utilising negative feedback control employing saturable reactors. 3,123,761, 3-3-64, Cl. 321—25.

Greenstein, Leon M.: *See*—
Miller, Harold A., Schapiro, and Greenstein. 3,123,485.
Bolomey, René A., Miller, and Greenstein. 3,123,489.
Bolomey, René A., Miller, and Greenstein. 3,123,490.

Gresor, Wilhelm, to Licentia Patent-Verwaltungs-G.m.b.H. Fluid-machine with axial piston-cylinder arrangement. 3,123,014, 3-3-64, Cl. 103—162.

Greiner, Rudolf, to Greiner Electronic A.G. Stud for fastening the outer end of a hair spring for a timepiece. 3,122,880, 3-3-64, Cl. 58—115.

Grey, Geoffrey H., to Dynamics Instrumentation Co. Automatic battery charger. 3,123,759, 3-3-64, Cl. 320—40.

Griesser A.G.: *See*—
Griesser, Fritz. 3,123,131.

Griesser, Fritz, to Griesser A.G. Roller-shutter. 3,123,131, 3-3-64, Cl. 160—232.

Grillot, Homer N., to International Harvester Co. Differential needle brake for balers. 3,122,991, 3-3-64, Cl. 100—19.

Grim, John V. and R. R., to Grim Mfg., Inc. Vehicle means for elongated and/or heavy objects. 3,123,380, 3-3-64, Cl. 280—404.

Grim Mfg., Inc.: *See*—
Grim, John V. and R. R. 3,123,380.

Grim, Richard R.: *See*—
Grim, John V. and R. R. 3,123,380.

Grimm, David W., and J. Rath, to Kaynar Mfg. Co., Inc. Floating anchor nut. 3,123,120, 3-3-64, Cl. 151—41.7.

Grimshaw, Charles, to General Electric Co. Thermally responsive switch. 3,123,697, 3-3-64, Cl. 200—137.

Griswold, Hector W., to Johnson & Johnson. Absorbent dressing. 3,123,076, 3-3-64, Cl. 128—290.

Gross, George E. Submersible device. 3,123,652, 3-3-64, Cl. 261—28.

Gross, George E., and W. F. Cramer, Jr. Impeller device. 3,123,651, 3-3-64, Cl. 261—24.

Gross, Maurice J., to Barnes Drill Co. Workpiece locator. 3,122,866, 3-3-64, Cl. 51—227.

Gross, Maurice J., to Barnes Drill Co. Fixture for holding workpieces. 3,122,867, 3-3-64, Cl. 51—227.

Grossman, Evelyn. Heel protector. 3,122,848, 3-3-64, Cl. 36—7.3.

Grover, John H., and J. R. MacPherson, to Atlantic Research Corp. Rocket motor. 3,122,884, 3-3-64, Cl. 60—35.6.

Guiness, Arthur, Son and Co. (Park Royal) Ltd.: *See*—
Ash, Michael E., Phillpotts, and Wittenberg. 3,123,476.

Gunderson, Ralph R. Foldable warning signal. 3,123,041, 3-3-64, Cl. 116—63.

Gunst, Raymond: *See*—
Koller, Eugen J., and Gunst. 3,123,594.

Gustin-Bacon Mfg. Co.: *See*—
McIntyre, Daniel. 3,123,408.

Gutschmit, Alan, to Alamac Knitting Mills, Inc. Knitting machine. 3,122,905, 3-3-64, Cl. 66—50.

Gynn, George E.: *See*—
Koons, John C., and Gynn. 3,122,853.

Haag, Theodore T., to Borroughs Mfg. Co. Clothes rack. 3,123,221, 3-3-64, Cl. 211—177.

Haden, Walter L., Jr., and F. J. Dzierzanowski, to Minerals & Chemicals Philipp Corp. Synthetic crystalline lithium aluminum silicate zeolite and method for making same. 3,123,441, 3-3-64, Cl. 23—113.

Haen, Eugene P., to Badger Northland, Inc. Livestock feeding apparatus. 3,123,050, 3-3-64, Cl. 119—52.

Haerther, Lester W., and P. A. Zimmerman, to Collins Radio Co. Chassis unit insert tightening-extract device. 3,123,418, 3-3-64, Cl. 312—319.

Hagenboecker, Alfred, to Ciba Ltd. Process for the reduction of aromatic compounds. 3,123,645, 3-3-64, Cl. 260—580.

Hahn, Henry, H. H. Haniuk, R. D. Lloyd, J. Loprete, and H. Lorsch, to Curtiss-Wright Corp. Interlocked tape pressure vessel. 3,123,242, 3-3-64, Cl. 220—3.

Hakim, Albert S. Bow knot fastener. 3,122,805, 3-3-64, Cl. 24—119.

Hall, C. M., Lamp Co.: *See*—
Worden, Norbert P. 3,123,309.

Haller, John. Torsion testing machine. 3,122,915, 3-3-64, Cl 73—99.

Halliburton Co.: *See*—
Young, Bill M., Knox, and Rensvold. 3,123,137.

Hallowell, Dennis F., Jr., to Richfield Oil Corp. Grease composition. 3,123,560, 3-3-64, Cl. 252—28.

Hallowell, Dennis F., Jr., to Richfield Oil Corp. Dual purpose cutting oil. 3,123,562, 3-3-64, Cl. 252—33.6.

Hamburger, Berthold: *See*—
Stabe, Heinrich, and Hamburger. 3,122,914.

Hammell, Allan K., to Minneapolis-Honeywell Regulator Co. Control apparatus. 3,123,324, 3-3-64, Cl. 244—77.

Hammons Products Co.: *See*—
Howard, Kenneth H. 3,123,115.

Haniuk, Herman H.: *See*—
Hahn, Henry, Haniuk, Lloyd, Loprete, and Lorsch. 3,123,242.

Hanneman, Walter W.: *See*—
Bolt, Robert O., and Hanneman. 3,123,534.

Hanson, Edward W. Multi-purpose storage unit. 3,123,220, 3-3-64, Cl. 211—88.

Haraoka, Raitaro: *See*—
Ohara, Masao, Haraoka, Deguchi, Miura, and Ito. 3,123,625.

Hare, Richard C.: *See*—
Swift, Elijah K., Jr., Hare, and Baron. 3,122,875.

Harle, Harold P., to General Electric Co. Sliding door structure. 3,122,795, 3-3-64, Cl. 20—19.

Harlow, Chester A.: *See*—
Musel, Robert J., and Harlow. 3,123,259.

Harpell, George F., to United States of America, Air Force. Antenna rotation angle measuring apparatus. 3,123,820, 3-3-64, Cl. 340—350.

Harper, Chester H.: *See*—
Allen, Kenneth M., and Harper. 3,122,930.

Harris, William M., D. Mackie, and W. F. Meredith, to Titanium Zirconium Co., Inc. Glass polish and process of polishing glass. 3,123,452, 3-3-64, Cl. 51—307.

Hartmann & Braun Aktiengesellschaft: *See*—
Stabe, Heinrich, and Hamburger. 3,122,914.

Hartson, Oliver E., to The Tappan Co. Removable oven door assembly. 3,123,064, 3-3-64, Cl. 126—191.

Harvestore Products, Inc.: *See*—
Osborne, LeRoy M. 3,122,985.

Harvey, Gilbert N., and J. C. Moden. Correction of magnetic compasses. 3,122,841, 3-3-64, Cl. 33—224.

Haupt, Wilhelm: *See*—
Bertrang, Hermann, and Haupt. 3,123,179.

Häusermann, Heinrich, to Geigy, J. R., A.-G. 3-phenyl-7-pyrasolyl coumarins. 3,123,617, 3-3-64, Cl. 260—310.

Hautmann, Heinrich, to P. Gossen & Co., G.m.b.H. Automatic diaphragm arrangement for cameras. 3,122,980, 3-3-64, Cl. 95—64.

Havel, Charles J., to Special Metals, Inc. Conversion of heat-sensitive alloys with aid of a thermal barrier. 3,122,828, 3–3–64, Cl. 29—423.

Hawk, Dale W., to Allis-Chalmers Mfg. Co. Earth mover. 3,122,849, 3–3–64, Cl. 37—129.

Hawkes, Ivor: *See*—
Emery, Charles L., and Hawkes.

Hawkins, William R., to Newcomb Electronics Corp. Mounting for phonograph tone arms. 3,123,332, 3–3–64, Cl. 248—358.

Hawley, Roger S.: *See*—
Shuart, Stanley R., Gessler, and Hawley.

Hayes, Maurice S. Hydraulic timing apparatus. 3,123,184, 3–3–64, Cl. 188—97.

Haseltine Research, Inc.: *See*—
Bailey, William F.

Heath, Carlos M.: *See*—
Notaro, John, Gottsmann, and Heath.

Heath, Donald M., to Morton Salt Co. Solution-making apparatus. 3,123,445, 3–3–64, Cl. 23—271.

Heatwole Associates Inc.: *See*—
Heatwole, Henry T.

Heatwole, Henry T., to Heatwole Associates Inc. Information storage system. 3,122,996, 3–3–64, Cl. 101—93.

Heckhoff, Heinz. Machine for treating skins. 3,122,910, 3–3–64, Cl. 69—42.

Hedgecock, Charles W., to Standard Oil Co. Device for fluid cleaning of heat exchanger tubes. 3,123,132, 3–3–64, Cl. 165—95.

Hedges, George D., to Minneapolis-Honeywell Regulator Co. Power transmission. 3,122,946, 3–3–64, Cl. 74—805.

Hedtke, Robert G., to Minneapolis-Moline, Inc. Manure spreader. 3,123,363, 3–3–64, Cl. 275—6.

Heder, John R. F.: *See*—
Wentworth, John F., and Hefler.

Heidmann, Marcus F., to United States of America, National Aeronautics and Space Administration. Injector for diprepellant rocket engines. 3,122,885, 3–3–64, Cl. 60—35.6.

Heidt, Dorottya: *See*—
Földi, Zoltán, Heidt, and Kõnig.

Heim, Lewis R., to Channing Corp. Antifriction bearing. 3,123,413, 3–3–64, Cl. 308—193.

Heiss, Herbert L., to Mobay Chemical Co. Method of liquefying cellular polyurethane plastics. 3,123,577, 3–3–64, Cl 260—2.3.

Hendley, James A. Means for weaving a pre-formed slide fastener filament to a tape. 3,123,103, 3–3–64, Cl. 139—11.

Hennig, Fridolin: *See*—
Knorr, Roland, Auer, and Hennig.

Henry, James L.: *See*—
Brooks, Chester E., Crofutt, Henry, and Sand.

Henry, William F., and S. I. Greenberg, to The Pillsbury Co. Process for starch modification with chlorine. 3,123,502, 3–3–64, Cl. 127—71.

Hens, Carl, to Compagnie de St. Gobain. Process and apparatus for bending glass. 3,123,459, 3–3–64, Cl. 65—106.

Hepworth Machine Co., Inc.: *See*—
McPhee, Alexander H., and Reid.

Herman, Daniel F., and R. C. Kollman, to National Lead Co. Polymerization catalyst. 3,123,572, 3–3–64, Cl. 252—431.

Hermanson, William A., and E. J. Cosgrove, to Bard-Parker Co., Inc. Package and seal. 3,123,210, 3–3–64, Cl. 206—63.2.

Herr, Fritz: *See*—
Trick, Kuno, Schulte, Herr, and Wolber.

Herring, David L., to United States of America, Navy. Preparation of aryl azides and aryl diazides by the reaction of diazoniumfluoroborate salts with alkali azides. 3,123,621, 3–3–64, Cl. 260—349.

Herst Lighting Corp.: *See*—
Dameral, Ray C.

Hessel, Frederick A.: *See*—
Duggins, William E., Hessel, and Werner.

Heuer, George J., Jr.: *See*—
Conley, Francis R., Felsenthal, Heuer, and Knutson.

Heyden Newport Chemical Corp.: *See*—
Gottesman, Roy T.
Kraft, William M.

Heyman Mfg. Co.: *See*—
Fink, Richard R.

Hewitt, Alan R., and R. A. Davis, to International Computers and Tabulators Ltd. Web feeding control means in business machines. 3,123,195, 3–3–64, Cl. 197—133.

Hewitt, Jack G., Jr., J. C. Sagnia, Jr., and P. E. Stuckert, to International Business Machines Corp. Dynamic magnetic device. 3,123,717, 3–3–64, Cl. 307—88.

Hickey, Thomas N., to Cryovac, Inc. Pump heat radiation shield. 3,122,696, 3–3–64, Cl. 62—259.

Hildebrandt, Eugene E., to Ford Motor Co. Suspension system. 3,123,348, 3–3–64, Cl. 267—16.

Hill, John S., II: *See*—
Boone, Joseph E., and Hill.

Hills, Eric G., to Her Majesty's Postmaster General. Drum-type segregating apparatus. 3,122,216, 3–3–64, Cl. 209—86.

Hill-Shaw Co.: *See*—
Ruhnke, Edward J.

Hirst, Harry: *See*—
Frankel, John S., and Hirst.

Hitz, Clifford L. Rotary gate valve. 3,123,334, 3–3–64, Cl. 251—147.

Hodges, Hubert E., and B. G. Frame, to Cedar Lake Engineering Co. Stump cutter. 3,123,112, 3–3–64, Cl. 144—2.

Hoerbiger Ventilwerke Aktiengesellschaft: *See*—
Kohler, Robert.

Hoff, Frederick B., Jr.: *See*—
Hutson, Jearld L., and Hoff.

Hoffmann-La Roche Inc.: *See*—
Goldberg, Moses W., and Jampolsky.
Kariss, John, and Newmark.

Hogen Faximile Corp.: *See*—
Mandel, Gerald, Lieblich, and Goldstein.

Hogsed, Milton J., to E. I. du Pont de Nemours and Co. Polyester wash-wear fabric. 3,123,587, 3–3–64, Cl. 260—75.

Hohl, John, and G. L. Webster, to Owens-Illinois Glass Co. Closure cap orienting apparatus. 3,123,198, 3–3–64, Cl. 198—33.

Hokama, Takeo: *See*—
Bachman, Gustave B., and Hokama.

Holbrook, Orrin C.: *See*—
Bernard, George G., and Holbrook.

Hollingsworth, John R., Co.: *See*—
Giacalone, Dino B.

Holloway, John R.: *See*—
Holloway, Rolland O. and J. R.

Holloway, Rolland O. and J. R. Fish finder. 3,123,798, 3–3–64, Cl. 340—3.

Holophane Co., Inc.: *See*—
Franck, Kurt.

Hood, Bruce G., to Davidson Rubber Co. Automobile arm rest. 3,123,403, 3–3–64, Cl. 297—412.

Hopkins, Thomas R., J. H. Rea, and J. R. Epperly, to Spencer Chemical Co. Herbicidal composition and method. 3,123,463, 3–3–64, Cl. 71—2.6.

Hoppe, Peter: *See*—
Weinbrenner, Erwin, Hoppe, and Breer.

Horn, Richard C.: *See*—
Lard, Edwin W., Horn, and Green.

Hornbostel, Lloyd, Jr., to Beloit Corp. Speed matching device for flying splicer. 3,123,816, 3–3–64, Cl. 242—58.4.

Horne, Thomas: *See*—
Maud, Fred, and Horne.

Horsley, Edward A., to Provincial Engineering Ltd. Hoist motor control with eddy current braking system. 3,123,756, 3–3–64, Cl. 318—209.

Horstman, Anton J., to The Bauer Bros. Co. Hydraulic barker. 3,123,113, 3–3–64, Cl. 144—208.

Hough, Frank G., Co., The: *See*—
Kampert, Keith W.

Houser, Dan B., to Fedco Corp. Tape dispenser. 3,123,265, 3–3–64, Cl. 225—19.

Houston, David. Duct perforator for a damper. 3,122,833, 3–3–64, Cl. 30—361.

Howard, John.: *See*—
Parson, Henry.

Howard, Kenneth H., to Hammons Products Co. Apparatus for hulling nuts. 3,123,115, 3–3–64, Cl. 146—11.

Howard, William S., and W. T. Cooper, to Phillips Petroleum Co. Mixing procedure for compositions of polymers of 1-olefins and natural or synthetic rubber. 3,123,583, 3–3–64, Cl. 260—45.5.

Huck Mfg. Co.: *See*—
Baugh, Charles W., and Wehlann.

Huddleston, William P. Collapsible or extensible table. 3,123,022, 3–3–64, Cl. 108—129.

Hughes Aircraft Co.: *See*—
Christoffers, William H., and Nevins.
Jepson, Robert M.
Rust, John B., and Segal.
Shifrin, Gordon A.

Hughes, Alvin W. Emulsifier. 3,123,116, 3–3–64, Cl. 146—192.

Huisman, Klaas, to Econosto, Bureau voor Economische Stoomproductie, N.V. Apparatus for internally lining pipes. 3,122,786, 3–3–64, Cl. 18—5.

Hull, Joseph F., to Litton Precision Products, Inc. Broadband crossed-field amplifier with slow wave structure interaction means for phase-focusing the electromagnetic energy with the electron stream. 3,123,735, 3–3–64, Cl. 315—3.6.

Hull, R. Dell. Control means for spinning reel. 3,123,319, 3–3–64, Cl. 242—84.51.

Humiston, Gerald F.: *See*—
Foxwell, Leo G., and Humiston.

Humpal, Willard J. Safety device. 3,123,363, 3–3–64, Cl. 280—457.

Humphreys, Victor T., to Koppers Co., Inc. Treatment of dyed anodized aluminum. 3,123,508, 3–3–64, Cl. 134—41.

Hunt Electronics Co.: *See*—
Hutson, Jearld L., and Hoff.

Huntoon, Robert D., to United States of America, Army. Proximity fuse with two oscillators. 3,123,821, 3–3–64, Cl. 343—7.

Husome, Robert G., to Barry-Wehmiller Machinery Co. Photoresponsive circuit for bottle inspection. 3,123,716, 3–3–64, Cl. 250—214.

Hutchens, Charles T. Tandem suspension for eliminating brake-hopping. 3,123,377, 3–3–64, Cl. 280—104.5.

Hutson, Jearld L., and F. B. Hoff, Jr., to Hunt Electronics Co. Multiple junction semiconductor device. 3,123,750, 3–3–64, Cl. 317—235.

Hutson, Thomas, Jr., and R. V. Denton, to Phillips Petroleum Co. Process and catalyst for the alkylation of aromatic hydrocarbons. 3,123,650, 3–3–64, Cl. 260—671.

Huttenwerk Oberhausen Aktiengesellschaft: *See*—
Brandenburg, Ewald, Pohle, and Görlich.

Tydrand Corp., The: *See*—
Sutton, Robert W.

Iden, Charles H., to Owens-Illinois Glass Co. Field replacement of block in masonry walls and panels. 3,122,861, 3–3–64, Cl. 50—683.

Igarashi, Kikuo, to Shionogi & Co., Ltd. Process for the preparation of 3β-oxy-20-oxo-16β-methylpregnanes and intermediates produced therein. 3,123,602, 3–3–64, Cl. 260—239.57.

Illinois Tool Works Inc.: *See*—
Biesecker, Donald L.

Ilsen, Roland R.: *See*—
Ruddock, Kenneth A., Ilsen, and Laich.

Imperial Machine Products Co.: *See*—
Baverstock, Richard.

Industrial Nucleonics Corp.: *See*—
Chope, Henry R.

Industrie-Compagnie Kleinewefers Konstruktions- und Handelsgesellschaft m.b.H.: *See*—
Bodeker, Gunter.

Ingersoll-Rand Co.: *See*—
Burnett, Elmer B.

International Business Machines Corp.: *See*—
Brownlow, James M.
French, Walter K.
Golden, Robert K.
Hewitt, Jack G., Jr., Sagnia, and Stuckert.
Kilburn, Tom, Edwards, and Aspinall.
Ward, Robert L.

International Computers and Tabulators Ltd.: *See*—
Hewitt, Alan R., and Davis.
Sharp, John J.

International Harvester Co.: *See*—
Blekis, Kestutis.
Bolta, George F., and Bornsin.
Frase, Roland J.
Goldsmith, Paul H.
Grillot, Homer N.
Jennings, Marvin D.
Livingston, Frank S., Earney, and Evans.
Marindin, Robert.
Morhooki, James, and Evans.
Morling, Roy W.
Toland, Wayne G.

International Nickel Co., Inc., The: *See*—
Blake, Joyce C.

International Postal Supply Corp.: *See*—
Lundquist, Ingemar H.

International Resistance Co.: *See*—
Chase, Jacob.
Rochle, Norlin J., and Pegram.

Inventors Finance Corp.: *See*—
Echenique, Jesus L., and Voegeli.

Irvin, Howard B., and J. W. Davidson, to Phillips Petroleum Co. Level control with fluid actuated pump.

Israelson, Evert G.: *See*—
Facius, Arnold F., and Israelson.

Ito, Masumi: *See*—
Ohara, Masao, Haraoka, Deguchi, Miura, and Ito.

Jackson, Alfred D., R. H. Colley, and J. A. Petrie, to Rolls-Royce Ltd. Aircraft power plant.

Jackson, Andrew, B. M. Petroff, and C. B. Sparkman, to Jackson Exit Device Corp. Panic exit lock.

Jackson, Charles Q., F. D. Larmore, and J. Y. Edinger, to Evans Harbor Products Co. Apparatus for assembling plywood units.

Jackson, Curtis E., to The Daven Co. Electrical brush assembly.

Jackson Exit Device Corp.: *See*—
Jackson, Andrew, Petroff, and Sparkman.

Jacobs, Charles D. Variable speed drive mechanism for golf carts.

Jacobs, John C.: *See*—
Stormer, Joseph R., and Jacobs.

Jacobsen, Calvin R. Bullet puller.

Jacobson, Harvey J., deceased; by V. M. Jacobson, legal representative. Propeller lift assembly.

Jamison, Samuel J., to Johnson & Johnson. Self-stabilizing, non-raveling seams.

Jampolsky, Lester M.: *See*—
Goldberg, Moses W., and Jampolsky.

Janome Sewing Machine Co., Ltd.: *See*—
Okazaki, Yasukichi.

Jang, Monroe. Clothes hanger.

Jenkins, Cecil, and J. R. Woolslayer, to Lee C. Moore Corp. Oil well with drill pipe transferring boom.

Jennings, Marvin D., to International Harvester Co. Rear wheel mounting for two-way plow.

Jensen, Irving J. Boat anchor.

Jepson, Robert M., to Hughes Aircraft Co. Polycrystalline article and method for making same.

Jernigan, Holley S., to The Dow Chemical Co. Tape dispenser.

Jersey Production Research Co.: *See*—
Annis, Max R., Robinson, and Friedman.
Gallus, Julius P.
Graham, John W.
Kyte, John R., and Naumann.
Orr, Willis P.
Rowley, David S.

Johns, Stanley K., to St. Lawrence Mfg. Co., Inc. Skate tooth guard.

Johnson, Carl E., to Nalco Chemical Co. Alkali metal metalates.

Johnson, Carl T., G. A. Kane, M. C. Neuman, and K. A. Riach, to United States of America, Navy. Ammunition handling and loading system for major caliber guns.

Johnson, Frank O.: *See*—
Maschi, Angelo P., and Johnson.

Johnson, George N., to Minnesota Mining and Mfg. Co. Tape drive mechanism.

Johnson & Johnson: *See*—
Griswold, Hector W.
Jamison, Samuel J.
Lieberman, Emanuel R.
Lieberman, Emanuel R.
Lieberman, Emanuel R.
Lieberman, Emanuel R.
McKnight, James T.
Seiler, John A., Jr.

Johnson Products, Inc.: *See*—
Kueny, Kenneth E.

Johnson, Rodney W. Electronic code typewriter.

Johnson, Terry R.: *See*—
Miller, William E., Stethers, and Johnson.

Johnson, Willard L.: *See*—
Millhiser, Robert G., Panzica, and Johnson.

Johnston, Loren B., to Radio Corp. of America. Color kinescope display system.

Jolliffe, Charles N., to E. I. du Pont de Nemours and Co. Gauge control apparatus for manufacturing web material.

Jolliffe, Charles N., and J. A. Parkins, to E. I. du Pont de Nemours and Co. Gauge control apparatus for manufacturing web material.

Jolly, Jean: *See*—
Bertin, Daniel, Fritel, Muller, Mathieu, Joly, and Jolly.

Joly, Robert: *See*—
Bertin, Daniel, Fritel, Muller, Mathieu, Joly, and Jolly.

Jones, David J.. Trap.

Jones, John E.: *See*—
Clark, Stephen C., Jr., and Jones.

Jones & Laughlin Steel Corp.: *See*—
Meals, William D.

Jones, Morris L. Auto glove compartment rack.

Jons, Kurt, to Asoplate Corp. Electrophotographic developing apparatus.

Jonsson, Gregor. Machine for cleaning shrimp.

Joo, Louis A.: *See*—
Kramer, Walter E., and Joo.

Jordan, Robert D., to United States of America, Navy. Tridynamic helmet suspension system.

Joslyn Mfg. and Supply Co.: *See*—
Schmitt, Louis P.

Jucker, Peter, to Zellweger Ltd., Uster Factories for Apparatus and Machines. Apparatus for detecting and removing defective sections of advancing textile material.

Julia, Marc, to Societe des Usines Chimiques Rhone-Poulenc. Dihydrochrysanthemic acid intermediates.

Julie, Loebe, to Julie Research Laboratories, Inc. Compact resistor-capacitor unit.

Julie Research Laboratories, Inc.: *See*—
Julie, Loebe.

Kaczmarek, Leo W.: *See*—
Kmiecik, Leopold J., and Kaczmarek.

Kadin, Mels E. Easel stand.

Kaenel, Reginald A., to Bell Telephone Laboratories, Inc. Multiphase data system.

Kamborian, Jacob S. Method of activating shoe stiffeners.

Kamentsky, Louis A., to Bell Telephone Laboratories, Inc. Character recognition system.

Kammerer, Archer W., Jr.: *See*—
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Kammerer, Archer W., ⅝ to said A. W. Kammerer, ⅛ to J. K. Lamphere, and ⅛ to A. W. Kammerer, Jr. Retrievable subsurface well bore apparatus.

Kampert, Keith W., to The Frank G. Hough Co. Elastomer tire drive and seal.

Kanao, Seizo: *See*—
Okumura, Shinji, Tsugawa, Tsunoda, Motozaki, Suyama, and Kanao.

Kane, Garold A.: *See*—
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Kansler, Benjamin W.: *See*—
O'Neill, Michael P., and Kansler.

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Karam, Henry J.: *See*—
Otting, Robert G., Rieke, Nagle, Karam, and Zimmerman.

Kariss, John, and H. L. Newmark, to Hoffmann-La Roche Inc. Parenteral compositions containing benzodiazepines.

Karsay, Bela I., and A. W. Michener, Jr., to Allied Chemical Corp. Process for decomposition of sulfuric acid waste materials.

Karstens, Edward S. Precision leveling device.

Kath, Alfred W., to R. P. Scherer Corp. Multidose jet injector.

Katz, David. Anti-skid means for automotive vehicles. 3,123,121, 3–3–64, Cl. 152—214.

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Kaufman, Tibor. Paper clamping device. 3,122,802, 3–3–64, Cl. 24—66.

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Kearns, Robert W., and K. J. Law, to K. J. Law, Engineers. Bi-directional step motor drive voltage divider switching apparatus. 3,123,753, 3–3–64, Cl. 318—29.

Keating, John H., to Monarch Aluminum Mfg. Co. Inclined furnace. 3,123,658, 3–3–64, Cl. 266—33.

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Kemper, Maxwell F. Apparatus for lining tunnels with concrete. 3,122,890, 3–3–64, Cl. 61—42.

Kendall, William D., and K. C. Somhegyi, to R. L. Boeger. Vehicle steering linkage. 3,123,376, 3–3–64, Cl. 280—92.

Kendrick, Webster M., to United States of America, Army. Capacitive pressure gage. 3,122,919, 3–3–64, Cl. 73—167.

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Keway, Charles F., Sr. 3,123,110.

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Mahler, Joseph, to American Optical Co. Method of making optical filters. 3,123,568, 3–3–64, Cl. 252—300.

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Maira, Thomas G., to Waldorf Paper Products Co. Collapsible egg cases. 3,123,276, 3–3–64, Cl. 229—41.

Mallachewski, Bernard, to Varta Aktiengesellschaft. Manufacture of microporous plastic separators for storage batteries. 3,123,654, 3–3–64, Cl. 264—126.

Malone, Carl E., and S. L. Polack. Push button drape cord operator. 3,123,182, 3–3–64, Cl. 188—65.1.

Maloof, Emile A. Spring-lock nut and bolt assembly. 3,123,119, 3–3–64, Cl. 151—11.

Mandel, Gerald, I. Lieblich, and A. Goldstein, to Hogen Faximile Corp. Electrolytic marking medium. 3,123,542, 3–3–64, Cl. 204—2.

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Markwick, Verdun E. Camper coach and method of construction. 3,123,393, 3–3–64, Cl. 296—23.

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Martin, Albert E., to Sir Howard Grubb Parsons & Co. Ltd. Means for analysing combustion products and varying air fuel ratio. 3,123,295, 3–3–64, Cl. 236—15.

Martin, Ernest N. Drink mixing device. 3,123,255, 3–3–64, Cl. 222—145.

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Marx, Robert D. Truck tank bidirectional venting valve means. 3,123,088, 3–3–64, Cl. 137—73.

Marx, Robert D. Vacuum or pressure relief safety valve for tanks. 3,123,087, 3–3–64, Cl. 137—43.

Maschi, Angelo P., and F. O. Johnson, to United States of America, Army. Slide fastener and quick release. 3,122,808, 3–3–64, Cl. 24—205.

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McAllister, Craig L., to McGraw-Edison Co. Protectors for electric circuits with coils formed on the ends of the terminals. 3,123,696, 3–3–64, Cl. 200—132.

McCarthy, John J. Portable laundry device. 3,122,909, 3–3–64, Cl. 68—219.

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McKee, William H., to United-Carr Fastener Corp. Electrical connector. 3,123,428, 3–3–64, Cl. 339—256.

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McMaster, Elmer L., and F. B. Nagle, to The Dow Chemical Co. Ammonium bromide composition. 3,123,439, 3–3–64, Cl. 23—100.

McMaster, Elmer L., and F. B. Nagle, to The Dow Chemical Co. Ammonium bromide composition. 3,123,440, 3–3–64, Cl. 23—100.

McMillan, Stewart H., R. E. Mottin, W. A. Sutton, R. D. MacDonald, and E. Linck, to Parke, Davis & Co. Capsule inspection method and sorting machine. 3,123,217, 3–3–64, Cl. 209—111.5.

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McPhee, Alexander H., and T. H. Reid, to Hepworth Machine Co., Inc. Centrifugal machine basket. 3,123,557, 3–3–64, Cl. 210—382.

McReynolds, Horace J., Jr., to Waldorf Paper Products Co. Can carriers. 3,123,214, 3–3–64, Cl. 206—60.

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Merlin, André E. C., to Auxitrol. Indicating or measuring instrument. 3,123,042, 3–3–64, Cl. 116—129.

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Keidel, Ralph A., and Metropulos. 3,123,702.

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Flygstad, Dean W., and Meyer. 3,123,793.

Meyer, Hans: *See*—
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Meyer, Maurice A., to Laboratory for Electronics, Inc. Frequency detection system including paralleled inverse characteristic phase shifters. 3,123,769, 3–3–64, Cl. 324—82.

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Miles, Gilbert D., to Colgate-Palmolive Co. Valves and method for mass producing them. 3,123,260, 3–3–64, Cl. 222—394.

Miles Laboratories, Inc.: *See*—
Smeby, Robert R. 3,123,443.

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Miller, Donald L., ⅓ to R. G. Miller. Nestable support for container. 3,123,257, 3–3–64, Cl. 222—185.

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Bolomey, René A., Miller, and Greenstein. 3,123,490.

Miller, Harold A., B. Schapiro and L. M. Greenstein, to Francis Earle Laboratories, Inc. Colored optical elements. 3,123,485, 3–3–64, Cl. 106—148.

Miller, Jack M., R. L. Scott, W. W. Crafton, and L. B. Van Dyke, to Marlen Equipment Co. Machine for forming meat balls and automatically placing the meat balls in cans. 3,122,869, 3–3–64, Cl. 53—122.

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Miller, Stuart G.: *See*—
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Miller, William E., H. L. Stethers, and T. R. Johnson, to United States of America, Atomic Energy Commission. Process for preparing uranium carbide. 3,123,435, 3–3–64, Cl. 23—14.5.

Miller, William L., to Continental Can Co., Inc. Cup for hot beverages. 3,123,273, 3–3–64, Cl. 229—1.5.

Millhiser, Robert G., N. J. Pansies, and W. L. Johnson, to Alem Laboratories, Inc. Scalloped edge on settling tank for grit blasting. 3,122,863, 3–3–64, Cl. 51—8.

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Millsaps, William A., and J. L. Staubly, to Pennsalt Chemicals Corp. Process for tinting laundry chemicals in the dry state. 3,123,565, 3–3–64, Cl. 252—135.

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Minerals & Chemicals Philipp Corp.: *See*—
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Davis, Henry F. 3,123,774.
Donahue, Lawrence E. 3,123,294.
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Koch, Robert B. 3,122,921.
Mutalger, John S. 3,123,811.
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Johnson, George N. 3,123,271.
Snyder, Donald L., and Teske. 3,123,700.

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Mock, Harold J., and R. V. Keys. Connector for miniature multiple conductor tape or wires. 3,123,422, 3–3–64, Cl. 339—75.

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Moody, Bryan, to J. W. Roberts Ltd. Machine for spraying asbestos or the like. 3,122,792, 3–3–64, Cl. 19—93.

Moore, Edward J., to E. I. du Pont de Nemours and Co. Gauge control apparatus for manufacturing web material. 3,122,782, 3–3–64, Cl. 18—2.

Moore, John R. Automatic sewage disposal for individual homes and buildings. 3,123,555, 3–3–64, Cl. 210—124.

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Moreland, Robert S. Spare selector apparatus and method for setting less than ten pins for practice bowling. 3,123,356, 3–3–64, Cl. 273—43.

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Morley, Robert I., and W. A. Farrand, to North American Aviation, Inc. Handler for folding tape. 3,123,269, 3–3–64. Cl. 226—118.

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Morton, William A., to Loftus Engineering Corp. Cover for soaking pits. 3,123,029, 3–3–64, Cl. 110—173.

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Mumby, Herald W., to General Motors Corp. Flexible cable winding machine. 3,122,872, 3–3–64, Cl. 57—17.

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Murcott, Charles E. Combined chair, table and foot rest structure. 3,123,397, 3–3–64, Cl. 297—150.

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Murphey, John R., Jr., and J. T. Duree, to The Pure Oil Co. Metering device. 3,122,920, 3–3–64, Cl. 73—224.

Murray, William B. Method of disinfecting and automatically maintaining the pH of water in a swimming pool. 3,123,554, 3–3–64, Cl. 210—60.

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Nadoay, Edward J. Venetian blind slats. 3,122,954, 3–3–64, Cl. 83—42.

Naftziger, Dewein H., to General Motors Corp. Automatic metal pouring machine. 3,122,800, 3–3–64, Cl. 22—77.

Nagamatsu, Noboru: *See*—
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McMaster, Elmer L., and Nagle. 3,123,440.

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Nickerson, James K., and R. E. Pennington, to Esso Research and Engineering Co. Production of dimethylterephthalate. 3,123,633, 3–3–64, Cl. 260—475.

Nieda, Yoriyuki. Hall effect dynamoelectric machine. 3,123,725, 3–3–64, Cl. 310—2.

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Roesch, Franklyn W., and R. M. Bluck, to Thompson Ramo Wooldridge Inc. Sectionalized motor case construction. 3,123,248, 3–3–64, Cl. 220—3.
Rogier, Edgar R., to General Mills, Inc. Hydroxy polyamines. 3,123,604, 3–3–64, Cl. 260—247.6.
Rohn, Ivan D. Method for assembling cross braces on a multi-leg tower. 3,122,819, 3–3–64, Cl. 29—155.
Rohr Corp.: *See*—
Lacey, Elbert M., Jr. 3,123,125.
Rolls-Royce Ltd.: *See*—
Jackson, Alfred D., Colley, and Petrie. 3,123,322.
Roman, Stanley S. Retractable mirror for a lipstick tube. 3,123,661, 3–3–64, Cl. 88—96.
Romine, Roy T.: *See*—
Smith, Jack C., Etterman, and Romine. 3,123,256.
Root, John J. Animal stunner. 3,122,776, 3–3–64, Cl. 17—1.
Roquemore, William K.: *See*—
Palmer, Jewell S., and Roquemore. 3,123,547.
Rorig, Kurt J., to G. D. Searle & Co. 5-[α,β-bis(-oxyphenyl)ethyl]-1H-tetrasoles. 3,123,615, 3–3–64, Cl. 260—308.
Rosen, Fred, and R. Hula skirt belt. 3,122,755, 3–3–64, Cl. 2—221.
Rosen, Robert: *See*—
Rosen, Fred, and R. 3,122,755.
Rosenburgh, Norman J., to Eastman Kodak Co. Cutoff mechanism. 3,122,957, 3–3–64, Cl. 83—443.
Rosenfeld, Morton M. Door for bomb shelter. 3,122,984, 3–3–64, Cl. 98—87.
Rosenfeld, Morton M. Boiler having refractory headers. 3,123,055, 3–3–64, Cl. 122—235.
Rosher, John W.: *See*—
Northwood, John V., and Rosher. 3,123,083.
Ross, Arthur H., to United States of America, Army. Speech security system. 3,123,672, 3–3–64, Cl. 179—1.5.
Ross, James F., to Esso Research and Engineering Co. Fractionation of polymerization diluent containing acetylacetone. 3,123,591, 3–3–64, Cl. 260—93.7.
Ross, Raymond W.: *See*—
Dawson, Charles A., and Ross. 3,122,880.
Rose, Robert E., to Libbey-Owens-Ford Glass Co. Glass bending furnaces. 3,123,344, 3–3–64, Cl. 263—6.
Rota, Beniamino. Automatic machine for the preparation of coffee infusion in doses sufficient for one or two cups. 3,122,988, 3–3–64, Cl. 99—302.
Rotolite Corp.: *See*—
Ellis, Robert M., and Neeb. 3,122,981.
Roussel-UCLAF: *See*—
Bertin, Daniel, Fritel, Muller, Mathieu, Joly, and Jolly. 3,123,597.
Rowlands, Tom, to Molins Machine Co. Ltd. Manufacture of mouthpiece for cigarettes. 3,122,974, 3–3–64, Cl. 93—1.
Rowley, David S., to Jersey Production Research Co. Drill string stabiliser. 3,123,162, 3–3–64, Cl. 175—325.
Royal McBee Corp.: *See*—
Lapointe, Lloyd J. 3,123,819.
Rubbermaid Inc.: *See*—
Gapstur, John J. 3,123,156.
Ruddock, Kenneth A., R. R. Ilsen, and A. L. Leich, to Varian Associates. Airborne electromagnetic prospecting apparatus having a lightweight truss structure to support transmitter and receiver coils. 3,123,766, 3–3–64, Cl. 324—4.
Rue, Howard M., to Sun Oil Co. Bis(hydroxyphenyl) ethers of polyalkylene glycols. 3,123,561, 3–3–64, Cl. 252—33.3.
Ruelle, Louis, and M. Noble, to Pechiney, Compagnie de Produits Chimiques et Electrometallurgiques. Preparation of carbon and metal oxide materials. 3,123,567, 3–3–64, Cl. 252—188.
Ruhnke, Edward J., to Hill-Shaw Co. Modular construction of brewing apparatus and heating stands. 3,122,987, 3–3–64, Cl. 99—280.
Rupp, Richard L. Combination pulpit and register desk. 3,123,414, 3–3–64, Cl. 312—33.
Russell, Robert C., to MacTaggart, Scott & Co. Ltd. Multi-cylinder hydraulic motors. 3,122,971, 3–3–64, Cl. 91—205.

Rust, John B., and C. L. Segal, to Hughes Aircraft Co. Glycidyl ethers of mononuclear polyhydric phenol-ketone condensation products and process of making same. 3,123,586, 3–3–64, Cl. 260—50.
S & C Electric Co.: *See*—
Beebe, Emmett R. 3,123,704.
SCM Corp.: *See*—
Paone, Anthony N. 3,123,196.
Sacke, Ivor S. Vibrating systems and means for varying the frequency of vibration. 3,123,177, 3–3–64, Cl. 181—.5.
Sagnis, James C., Jr.: *See*—
Hewitt, Jack G., Jr., Sagnis, and Stuckert. 3,123,717.
Sahyun, Melville. Shampoo composition comprising betadialkylaminoethyl-3-phenylsalicylate. 3,123,531, 3–3–64, Cl. 167—87.
St. Gobain, Compagnie de: *See*—
Hens, Carl. 3,123,459.
St. Lawrence Mfg. Co., Inc.: *See*—
Johns, Stanley K. 3,123,372.
Salem-Bronius (England) Ltd.: *See*—
Willott, Roland L. 3,123,127.
Sand, William C.: *See*—
Brooks, Chester E., Crofutt, Henry, and Sand. 3,123,674.
Sandor, Bela, and E. F. Sarosy, to General Motors Corp. Door latch. 3,123,300, 3–3–64, Cl. 292—280.
Sandos Ltd.: *See*—
Brugger, Hugo, and Burkhard. 3,123,595.
Sargent's, C. G., Sons Corp.: *See*—
Stevens, Samuel W. 3,123,202.
Sarosy, Edmund F.: *See*—
Sandor, Bela, and Sarosy. 3,123,390.
Sasaki, Kanzo, to Shionogi & Co., Ltd. 6-amino-4-pregnene-3,20-dione and N-acyl derivatives thereof. 3,123,623, 3–3–64, Cl. 260—397.3.
Saunders, Philip G. Method and device for producing reference lines on printing dies. 3,123,000, 3–3–64, Cl. 101—401.1.
Saunders Valve Co. Ltd.: *See*—
Price, Richard H. 3,123,336.
Schaad, Theodore A., and P. Widmer, to General Motors Corp. Method of assembling a coil spring seat cushion. 3,122,829, 3–3–64, Cl. 29—436.
Schaeffer, William D., to Union Oil Co. of California. Amidomethylation of aromatic hydrocarbons. 3,123,638, 3–3–64, Cl. 260—562.
Schäfer, Werner, R. Wegler, and L. Eue, to Farbenfabriken Bayer Aktiengesellschaft. Method for combating weeds. 3,123,460 3–3–64, Cl. 71—2.3.
Schapiro, Bernard: *See*—
Miller, Harold A., Schapiro, and Greenstein. 3,123,485.
Schaschl, Edward, and G. A. Marsh, to The Pure Oil Co. Corrosion test apparatus. 3,123,789, 3–3–64, Cl. 338—13.
Scheirman, William L.: *See*—
Loomer, James A., Welch, Arenson, and Scheirman. 3,123,453.
Schellentrager, Eugene W., to The Atlas Bolt & Screw Co. Load cell mounting and alignment for weighing means. 3,123,166, 3–3–64, Cl. 177—211.
Schenk, Carl Maschinenfabrik G.m.b.H.: *See*—
Giers, Alfred J. A., and Maus. 3,122,926.
Kreiskorte, Heins. 3,123,728.
Schenley Industries, Inc.: *See*—
Goldstein, Daniel. 3,123,207.
Scherer, Otto, K. Reichner, and L. F. Emmel, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning. Pesticides. 3,123,522, 3–3–64, Cl. 167—30.
Scherer, R. P., Corp.: *See*—
Kath, Alfred W. 3,123,070.
Schilke, Warren R., to General Motors Corp. Process and apparatus for making battery electrodes. 3,123,504, 3–3–64, Cl. 136—34.
Schilke, Lee R., to Swift & Co. Dispensing container. 3,123,258, 3–3–64, Cl. 222—215.
Schlack, Paul, G. Lobaße, H. Sommer, and G. Koch, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning. Process for the finishing of textile materials. 3,123,496, 3–3–64, Cl. 117—161.
Schlaudecker, George F.: *See*—
Staiger, Roger P., Schlaudecker, and Miller. 3,123,631.
Schloemann Aktiengesellschaft: *See*—
Zilgen, Franz-Josef, and Krause. 3,123,215.
Schmidt, Wilhelm G., and A. T. Bucknall, to Courtaulds Ltd. Purification of a spent thiocyanate solvent solution containing sulfate ions as impurities. 3,123,437, 3–3–64, Cl. 23—75.
Schmitt, Louis P., to Joslyn Mfg. and Supply Co. Receptacle and plug assemblies. 3,123,423, 3–3–64, Cl. 339—184.
Schmunk, Harry: *See*—
Okawaki, William N., and Schmunk. 3,123,155.
Schneeberger, Robert J., to Westinghouse Electric Corp. Electronic discharge device. 3,123,737, 3–3–64, Cl. 315—10.
Schneider, John F., Jr. Apparatus for feeding shank buttons to an attaching station. 3,123,251, 3–3–64, Cl. 221—156.
Schoolcroft, Orville D.: *See*—
Morgan, Jake E., and Schoolcroft. 3,123,278.
Schramel, Franz J., and W. F. Brok, to North American Philips Co., Inc. Binary code conversion. 3,123,816, 3–3–64, Cl. 340—347.
Schreitmueller, Rudolph F., to Sperry Rand Corp. Doppler radar signal tracker. 3,123,823, 3–3–64, Cl. 343—8.
Schrenk, Gotthilf, and H. Krappatsch, to P. Gossen & Co., G.m.b.H. Photosensitive light control system. 3,123,724, 3–3–64, Cl. 250—217.
Schriesheim, Alan: *See*—
Skomoroski, Robert M., and Schriesheim. 3,123,550.
Schroyer, Robert J.: *See*—
Stephenson, Daniel W., and Schroyer. 3,123,699.
Schulte, Theodor: *See*—
Trick, Kuno, Schulte, Herr, and Wolber. 3,122,879.
Schultz, Robert D., L. K. Branson, and R. F. Chaiken, to Aerojet-General Corp. Propulsion means. 3,122,882, 3–3–64, Cl. 60—35.5.
Schüly, Hans: *See*—
Mathes, Wilhelm, and Schüly. 3,123,608.
Schulze, Douglas W., and W. J. Foote. Adjustable instrument bench. 3,123,353, 3–3–64, Cl. 269—82.
Schulze, Richard B., to The Englander Co., Inc. Insulated panels for refrigerated vehicles. 3,122,860, 3–3–64, Cl. 50—268.
Schumacher, William J.: *See*—
Zegers, William H., and Schumacher. 3,122,798.
Schumann, Edward L., E. M. Roberts, and G. P. Claxton. 9,10-dihydroanthracene-9,10-endo-3',4'-pyrrolidines. 3,123,618, 3–3–64, Cl. 260—313.
Schurman, Donald R.: *See*—
Bailey, William D., and Schurman. 3,122,831.
Schutte, Rudolf: *See*—
Stumpers, Frans L. H. M., and Schutte. 3,123,678.
Stumpers, Frans L. H. M., and Schutte. 3,123,779.
Scott, Raymond L.: *See*—
Miller, Jack M., Scott, Crafton, and Van Dyke. 3,122,869.
Scovill Mfg. Co.: *See*—
Shee, William S. 3,122,809.
Seaborg, Glenn T., J. W. Gofman, and R. W. Stoughton, to United States of America, Atomic Energy Commission. Device for production of nuclear energy from Um. 3,123,535, 3–3–64, Cl. 176—41.
Searle, G. D., & Co.: *See*—
Cusic, John W. 3,123,610.
Rorig, Kurt J. 3,123,615.
Twelt, Robert C. 3,123,622.
Searle, Lindley. Hammock seat. 3,123,396, 3–3–64, Cl. 297—114.
Sedlacek, Rudolf, to Stanford Research Institute. Brittle-materials tensile-strength tester. 3,122,916, 3–3–64, Cl. 73—97.
Segal, Charles L.: *See*—
Rust, John B., and Segal. 3,123,586.
Segre, Valfredo. Window frame with removable windows. 3,122,797, 3–3–64, Cl. 20—52.2.
Segur, Asa B. Poultry meat removal method. 3,122,780, 3–3–64, Cl. 17—45.
Seiler, John A., Jr., to Johnson & Johnson. Tanned edible collagen casing and method of producing same. 3,123,481, 3–3–64, Cl. 99—176.
Self, Robert L., to Western Electric Co., Inc. Apparatus for connecting wire conductors to terminals. 3,122,826, 3–3–64, Cl. 29—203.
Seltz, Charles L.: *See*—
Gaskell, Walter L., and Seltz. 3,123,108.
Sepe, Manlio O. Scoring device. 3,122,851, 3–3–64, Cl. 40—70.
Sergeant, Frank N. M.: *See*—
Braithwaite, Robert C., and Sergeant. 3,123,755.
Sessions Clock Co., The: *See*—
Wagner, Karl T. 3,123,192.
Setco Industries, Inc.: *See*—
Falls, John J. 3,123,420.
Shames, Harold: *See*—
Shames, Sidney J. and H. 3,122,969.
Shames, Sidney J. and H. Faucet re-seating tool. 3,122,969, 3–3–64, Cl. 90—12.5.
Sharp, John J., to International Computers and Tabulators Ltd. Voltage amplitude detection apparatus. 3,123,776, 3–3–64, Cl. 328—116.
Sharp, Lorld G., to Socony Mobil Oil Co., Inc. Method of secondary recovery of oil from reservoirs. 3,123,136, 3–3–64, Cl. 166—9.
Shaw, H. C., Co., The: *See*—
Bovle, Howard R. 3,123,154.
Shee, William S., to Scovill Mfg. Co. Actuator for zipper fastener sliders. 3,122,809, 3–3–64, Cl. 24—205.15.
Shell Oil Co.: *See*—
Robichaux, Thomas J. 3,123,138.
Shelley, Rulon G., and J. L. Bower, to North American Aviation Inc. Filter for information expressed in rotating coordinates. 3,123,822, 3–3–64, Cl. 343—7.4.
Shelley, Steven M.: *See*—
Baybick, Solomon, and Shelley. 3,123,181.
Sherertz, Paul C. Target designation system. 3,123,824, 3–3–64, Cl. 343—11.
Shifrin Gordon A., to Hughes Aircraft Co. Toroidal transformer having a high turns ratio. 3,123,787, 3–3–64, Cl. 336—229.
Shilton, Colin E.: *See*—
Carpenter, Austin T., and Shilton. 3,123,495.
Shimwell, Rodney H., and E. L. Robinson, to Simms Motor Units Ltd. Electrical selection apparatus or systems. 3,122,940 3–3–64, Cl. 74—472.
Shionogi & Co., Ltd.: *See*—
Igarashi, Kikuo. 3,123,602.
Komeno, Taichiro. 3,123,599.
Sasaki, Kanzo. 3,123,623.
Shipley, Clifford S.: *See*—
Connor, James E. Jr., and Shipley. 3,123,548.
Shirota, Minoru, N. Nagamatsu, and Y. Takechi. Method for cultivating lactobacilli. 3,123,538, 3–3–64, Cl. 195—48.
Shoemake, Estel S., H. T. Miser, and R. W. Shoemake. Dump trailer for automatic hay baler. 3,123,239, 3–3–64, Cl. 214—355.
Shoemake, Robert W.: *See*—
Shoemake, Estel S., Miser, and R. W. Shoemake. 3,123,239.
Shook, Earley M., to Socony Mobil Oil Co. Identification of the time of arrival of seismic events. 3,123,799, 3–3–64, Cl. 340—15.5.

Short Bros. & Harland Ltd.: *See*—
Fillery, William J. 3,122,937.
Shuart, Stanley R., A. M. Gessler, and R. S. Hawley, to Esso Research and Engineering Co. Processing isoolefin-diolefin rubbery copolymers with kaolin clays. 3,123,581, 3–3–64, Cl. 260—41.5.
Shu-Conditioner Inc.: *See*—
Bushway, George H. 3,123,500.
Shurts, Robert F., to Basic Inc. Method of and apparatus for feeding ground materials. 3,123,407, 3–3–64, Cl. 302—53.
Siegrist, Adolf E.: *See*—
Duennenberger, Max, Siegrist, and Maeder. 3,123,647.
Sieling, Cornelis. Bascule or tilting beam plow. 3,123,148, 3–3–64, Cl. 172—26.
Silva, John D., to Paramount Television Productions, Inc. Video tape editing system. 3,123,668, 3–3–64, Cl. 178—6.6.
Simek, Jerry V.: *See*—
Clark, Richard E., Simek, and Veale. 3,123,317.
Simms Motor Units Ltd.: *See*—
Shimwell, Rodney H., and Robinson. 3,122,940.
Sinclair Research Inc.: *See*—
Verley, Guy M. 3,123,563.
Singer Co., The: *See*—
Donaldson, Charles V. 3,123,200.
Pickett, Charles G. 3,123,031.
Sippel, Robert F.: *See*—
Caldwell, Richard L., and Sippel. 3,123,709.
Skil Corp.: *See*—
Bork, Hugo W. 3,123,109.
Skomoroski, Robert M., and A. Schriesheim, to Esso Research and Engineering Co. Hydrotreating of mineral oil distillates. 3,123,550, 3–3–64, Cl. 208—254.
Slaughter, Eldon E. Vertical rise aircraft. 3,123,320, 3–3–64, Cl. 244—12.
Smeby, Robert R., to Miles Laboratories, Inc. Composition for diagnosing glucose. 3,123,443, 3–3–64, Cl. 23—253.
Smith, A. O., Corp.: *See*—
Keidel, Ralph A., and Metropulos. 3,123,702.
Maynard, John T. 3,123,726.
Reed, Daniel J. 2,123,313.
Smith, Alexander M., II. Needle board for needle loom. 3,122,815, 3–3–64, Cl. 28—4.
Smith, David B.: *See*—
Webster, Kenneth E., and Smith. 3,123,053.
Smith, Donald E., to Air Reduction Co., Inc. Separation of air into nitrogen, oxygen, argon, etc. 3,123,457, 3–3–64, Cl. 62—28.
Smith, Howard O. Shooting garment. 3,122,753, 3–3–64, Cl. 2—94.
Smith, Jack C., E. E. Etterman, and R. T. Romine, to Detrex Chemical Industries, Inc. Automotic filter powder dispenser. 3,123,256, 3–3–64, Cl. 222—146.
Smith, Melvin A., Jr. Water heater. 3,123,054, 3–3–64, Cl. 122—135.
Smith, S., & Sons (England) Ltd.: *See*—
Frankel, John S., and Hiret. 3,123,752.
Smith, Walter A.: *See*—
Newton, Russell B., and Smith. 3,122,793.
Smiths America Corp.: *See*—
Braithwaite, Robert C., and Sergeant. 3,123,755.
Snyder, Donald L., and R. G. Teske, to Minnesota Mining and Mfg. Co. Radiation exposure unit. 3,123,700, 3–3–64, Cl. 219—19.
Snyder, Lee S., to Stampliator, Inc. Stamp feeding and affixing device. 3,123,513, 3–3–64, Cl. 156—522.
Socony Mobil Oil Co., Inc.: *See*—
Blount, Floyd E., and Fritts. 3,123,101.
Bonner, Francis J., and Reed. 3,123,570.
Caldwell, Richard L., and Sippel. 3,123,709.
Connally, Carl, Jr. 3,123,140.
Sharp, Lorid G. 3,123,136.
Shook, Earley M. 3,123,799.
Somhegyi, Kristof C.: *See*—
Kendall, William D., and Somhegyi. 3,123,376.
Sommer, Hans: *See*—
Schlack, Paul, Lohaus, Sommer, and Koch. 3,123,496.
Sorenson, James L. Multiple sterile zone package structure. 3,123,211, 3–3–64, Cl. 206—63.2.
Sövik, Edward A., Jr., to Sovik, Mathre & Madison, Inc. Articles of furniture. 3,123,416, 3–3–64, Cl. 312—195.
Sovik, Mathre & Madison, Inc.: *See*—
Sövik, Edward A., Jr. 3,123,416.
Sowards, Edward W. Toilet ventilating system. 3,122,757, 3–3–64, Cl. 4—213.
Sowinski, Francis A.: *See*—
Yale, Harry L., Sowinski, and Bernstein. 3,123,614.
Space-General Corp.: *See*—
Ghose, Rabindra N. 3,123,767.
Sparkman, Carl B.: *See*—
Jackson, Andrew, Petroff, and Sparkman. 3,123,387.
Special Metals, Inc.: *See*—
Havel, Charles J. 3,122,828.
Spencer Chemical Co.: *See*—
Hopkins, Thomas R., Rea, and Epperly. 3,123,463.
Sperry Rand Corp.: *See*—
Coombe, John M. 3,122,943.
Facius, Arnold F., and Israelson. 3,123,194.
Schreitmueller, Rudolph F. 3,123,823.
Whippo, Walter B. 3,123,346.
Sprague Electric Co.: *See*—
Spool, James. 3,123,002.
Spinoza, Rudolph P. Container and lid arrangement. 3,123,246, 3–3–64, Cl. 220—42.
Spofa, Sdruzeni Podniku pro zdravotnickou vyrobu: *See*—
Mayer, Jiří, Čtvrtnik, and Nemeček. 3,123,616.
Spool, James, to Sprague Electric Co. Fusing device. 3,123,002, 3–3–64, Cl. 102—70.2.
Spooner, Robert B., to Koppers Co., Inc. Apparatus for measuring the height and contour of material. 3,123,712, 3–3–64, Cl. 250—71.5.
Springings, Donald G., to H. K. Porter Co., Inc. Current collector mechanism. 3,123,191, 3–3–64, Cl. 191—58.
Stabe, Heinrich, and B. Hamburger, to Hartmann & Braun Aktiengesellschaft. Viscometers. 3,122,914, 3–3–64, Cl. 73—59.
Staiger, Roger P., G. F. Schlaudecker, and E. B. Miller, to Maumee Chemical Co. Process for preparing esters of anthranilic acid. 3,123,631, 3–3–64, Cl. 260—471.
Stamberger, Paul. Diaper inserts. 3,123,075, 3–3–64, Cl. 128—287.
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Standard Oil Co. (Indiana): *See*—
Hedgecock, Charles W. 3,123,132.
Udelhofen, John H. 3,123,634.
Stanford Research Institute: *See*—
Sedlacek, Rudolf. 3,122,916.
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Lichti, Robert D. 3,123,167.
Stansbary, Meredith J.: *See*—
Andrew, Richard A., Rickard, and Stansbary. 3,123,114.
Stanulis, Leonard M., and G. D. Phillips, to Whirlpool Corp. Automotive dry cleaning machine with refrigeration means. 3,122,098, 3–3–64, Cl. 68—12.
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Millsaps, William A., and Staubly. 3,123,565.
Stawinski, Benjamin S., to General Motors Corp. Molding fastener. 3,122,804, 3–3–64, Cl. 24—73.
Steelcase, Inc.: *See*—
Bullock, Earle C. 3,123,417.
Steele, Floyd G., to Digital Control Systems, Inc. Bidirectional quantizer. 3,123,818, 3–3–64, Cl. 340—347.
Stemmler, Kurt, to Boston Envelope Co. Envelope banding machine. 3,122,870, 3–3–64, Cl. 53—198.
Stephens, George B. Aircraft arrester. 3,123,325, 3–3–64, Cl. 244—110.
Stephenson, Daniel W., and R. J. Schroyer, to Blaw-Knox Co. Induction heated circular film die. 3,123,699, 3–3–64, Cl. 219—10.49.
Sterling Drug Inc.: *See*—
Gorman, William G. 3,123,261.
Stethers, Howard L.: *See*—
Miller, William E., Stethers, and Johnson. 3,123,435.
Stevens, Samuel W., to C. G. Sargent's Sons Corp. Slatted-type conveyor. 3,123,202, 3–3–64, Cl. 198—198.
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Belford, Adam J. R. 3,123,340.
Stiefel, Christian J.: *See*—
König, Helmut, and Stiefel. 3,123,017.
Stitzer, Jesse: *See*—
Wouk, Victor, Stitzer, and Wasserman. 3,123,760.
Stocking, Max V. Adjustable seat for child's vehicle. 3,123,379, 3–3–64, Cl. 280—282.
Stone, Guthrie B. Potato ricer. 3,122,986, 3–3–64, Cl. 99—246.
Stormer, Joseph R., and J. C. Jacobs, to General Motors Corp. Shock absorber with preformed plastic gas cell. 3,123,347, 3–3–64, Cl. 267—1.
Stoughton, Raymond W.: *See*—
Seaborg, Glenn T., Gofman, and Stoughton. 3,123,535.
Stover, William A., and W. S. Briggs, to W. R. Grace & Co. Process for the preparation of a clay cracking catalyst. 3,123,575, 3–3–64, Cl. 252—450.
Strauch, Frederic P., Jr., and D. A. Wals, to Collins Radio Co. Synchronized readout system for data tape. 3,123,810, 3–3–64, Cl. 340—174.1.
Strubberg, Ronald J., to Curtiss-Wright Corp. Thermal time relay with large time constant. 3,123,695, 3–3–64, Cl. 200—122.
Stuckert, Paul E.: *See*—
Hewitt, Jack G., Jr., Sagnis, and Stuckert. 3,123,717.
Stühlen, Ferdinand, to Plate, Dr., G.m.b.H. Bow for a string instrument. 3,122,960, 3–3–64, Cl. 84—282.
Stulen, Frank L., and A. C. Ballauer, to Parsons Corp. Composite construction for helicopter rotor blades and the like. 3,123,144, 3–3–64, Cl. 170—159.
Stumpers, Frans L. H. M., and R. Schutte, to North American Philips Co., Inc. Device for stereophonic reproduction of signals. 3,123,673, 3–3–64, Cl. 179—15.
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Tancsyn, Harry, to Armco Steel Corp. Alloy steel and method. 3,123,469, 3–3–64, Cl. 75—128.
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U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

March 3, 1964 Volume 800 Number 1

TRADEMARKS

NOTICES

International Convention for the Protection of Industrial Property

Adherence of the Malagasy Republic to the Lisbon 1958 Revision

The Secretary of State has been notified by the Embassy of Switzerland of the adherence, effective December 21, 1963, of the Malagasy Republic to the Convention of Union of Paris for the Protection of Industrial Property, as last revised at Lisbon on October 31, 1958.

The note also confirms the membership of that State in the International Union of Paris for the Protection of Industrial Property.

January 27, 1964. EDWIN L. REYNOLDS, *Acting Commissioner of Patents.*

International Convention for the Protection of Industrial Property

Adherence of Senegal to the Lisbon 1958 Revision

The Secretary of State has been notified by the Embassy of Switzerland of the adherence, effective December 21, 1963, of the Republic of Senegal to the Convention of Union of Paris for the Protection of Industrial Property, as last revised at Lisbon on October 31, 1958.

The note also confirms the membership of that State in the International Union of Paris for the Protection of Industrial Property.

January 27, 1964. EDWIN L. REYNOLDS, *Acting Commissioner of Patents.*

Service by Publication

A petition to cancel each of the registrations identified below having been filed, and the notice of such proceedings sent by registered mail to each registrant at the last known address having been returned by the Post Office as undeliverable, notice is hereby given that unless the registrants listed herein, their assigns or legal representatives, shall enter an appearance within thirty days from the date of this publication, the cancellation will be proceeded with as in the case of default.

Rosalie Nagel, d.b.a. Herald Products Co., New York, N.Y., Reg. No. 429,145, Canc. No. 8195.

HORACE B. FAY, JR., *Assistant Commissioner of Patents.*

Effect of Public Law 86–362 on Due Date of Responses

Inquiry has been made as to whether the time for taking any action on paying any fee falling due on Friday, February 21, 1964, will be extended to Monday, February 24, 1964, by reason of Public Law 86–362, approved September 22, 1959, and the fact that, under said Act, the Patent Office will be closed on February 21, 1964.

February 21, 1964, is not "a holiday within the District of Columbia" (35 U.S.C. 21; Patent Office Rule 7, 37 C.F.R. 1.7). Accordingly, any action or fee due on that date will be considered timely only if respectively taken or paid on that date.

Manifestly the same rule would apply on May 29 and July 3.

Feb. 7, 1964. EDWIN L. REYNOLDS, *Acting Commissioner of Patents.*

CONDITION OF TRADEMARK APPLICATIONS AS OF JANUARY 31, 1964

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)] 14,580
Date of oldest new application ..... June 26, 1963
Date of oldest amended application ..... June 21, 1963

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 2, 4, 5, 8, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 39, 41, 42, 43, 44	7–1–63	7–2–63
(II) H. E. KASCHUB, Classes 1, 3, 6, 7, 9, 10, 18, 22, 27, 38, 40, 45, 46, 47, 48, 49, 50, 51, 52; Service Marks, Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	6–26–63	6–21–63
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Applications filed during the month of January 1964—2,056

Registrations Issued ..... 435—No. 765,692 to No. 766,126
Renewals Issued 50

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington, D. C., 20402 to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington, D.C., 20231.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 157,992. The General Tire & Rubber Company, Akron, Ohio. Filed Nov. 27, 1962.

GENERAL TIRE

Owner of Reg. Nos. 152,068, 372,525, 634,201, and others.
For Crude, Natural, and Synthetic Rubber, Linear and Rubbery Plastics, Synthetic Resinous Materials—e.g., Resins, Plasticizers, and Other Compositions Used in the Manufacture Thereof.
First use Nov. 6, 1962.

SN 163,899. Texas Plastics, Inc., Elsa, Tex. Filed Mar. 4, 1963.

POLY-PLANT

For Black and Clear Polyethylene Film for Agricultural Uses.
First use Jan. 10, 1963.

SN 167,403. National Polychemicals, Inc., Wilmington, Mass. Filed Apr. 23, 1963.

TETRA-FLEX

Owner of Reg. No. 667,265.
For Flexible Resins in the Form of Powders and Liquids.
First use Feb. 12, 1963.

SN 169,670. United States Packaging Corporation, Michigan City, Ind. Filed May 24, 1963.

STRIKE ONE

For Instant Igniting Charcoal Briquettes.
First use May 1, 1963.

SN 170,532. Globe Rubber Products Corp., Philadelphia, Pa. Filed June 7, 1963.

TUFFITE

Owner of Reg. No. 737,493.
For Vinyl Fabric Having a Reinforcing Fabric Back and Useful as an Upholstery Material and for Similar Applications.
First use Dec. 5, 1962.

SN 170,647. Keystone Granite Company, Elberton, Ga. Filed June 10, 1963.

KEYSTONE BLUE GRANITE

The words "Blue Granite" are disclaimed apart from the mark as shown.
For Rough, Slab, and Finished Blue Granite.
First use Jan. 25, 1963.

SN 170,649. Kingsford Company, Louisville, Ky. Filed June 10, 1963.

KLEEN COOK'N

For Self-Lighting Charcoal.
First use May 10, 1963.

SN 171,145. C. Kind & Co., Inc., New York, N.Y. Filed June 17, 1963.

C. KIND

For Fresh Live Flowers and Plants.
First use in December 1958.

SN 171,443. The General Tire & Rubber Company, Akron, Ohio. Filed June 20, 1963.

TURON

For Coated Fabrics—e.g., in the Manufacture of Shoes, Slippers, Etc.
First use Dec. 29, 1941.

SN 171,896. Harry G. Lynn, Inc., d.b.a. Uline Ice Co., Washington, D.C. Filed June 26, 1963.

DIAMOND SPARKLE

Applicant disclaims any exclusive rights in the representation of the goods apart from the mark as shown.
For Ice Cubes.
First use in April 1963.

SN 174,830. City Products Corporation, Chicago, Ill. Filed Aug. 12, 1963.

HOMECREST

For Natural and Synthetic Sponges.
First use Dec. 1, 1962.

Class 2—Receptacles

SN 174,831. City Products Corporation, Chicago, Ill. Filed Aug. 12, 1963.

HOMECREST

For Garment Bags, Blanket Bags, Shoe Bags and Dampening Bags.
First use July 1, 1962.

SN 175,621. Syracuse Ornamental Co., Inc., Syracuse, N.Y. Filed Aug. 22, 1963.

SYROCO

Owner of Reg. Nos. 422,195 and 425,741.
For Flower Holders and Planters.
First use on or about May 1, 1963; in or about May 1911 as to "Syroco."

SN 176,035. The Seamless Rubber Company, New Haven, Conn. Filed Aug. 29, 1963.

CUT-RAK

For Devices Used in Dispensing Adhesive Tapes or Plasters.
First use Apr. 10, 1942.

SN 176,082. Fashioncraft-Excello, Brooklyn, N.Y. Filed Aug. 30, 1963.

SAFE-T-TOUCH

For Infants' Heat Insulated Feeding Plate.
First use Mar. 11, 1963.

SN 176,280. Continental Can Company, Inc., New York, N.Y. Filed Sept. 4, 1963.

CONOPLEX

For Plastic Bags.
First use July 24, 1963.

SN 177,051. Interstate Bakers Corporation, Kansas City, Mo. Filed Sept. 16, 1963.

PONYTAIL

For Packages Containing Bakery Products.
First use Jan. 4, 1962.

SN 177,152. Berlex Carton Company, Inc., Paterson, N.J. Filed Sept. 17, 1963.

RE-O-LID

For Cartons.
First use on or about Aug. 10, 1963.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 175,657. Hartmann Luggage Company, Lebanon, Tenn. Filed Aug. 23, 1963.

The hartmann INTERNATIONAL

Owner of Reg. Nos. 211,455 and 508,774.
For Hand Luggage Including Pullman Cases, Overnight Cases, Weekend Cases, Garment Carrying Bags, Suit Cases, Utility Cases, Hat Boxes, Cosmetic Cases, and Wardrobe Cases.
First use July 24, 1963.

SN 175,754. Hogar Industries, Inc., Los Angeles, Calif. Filed Aug. 26, 1963.

Natural Fold

The word "Fold" is disclaimed apart from the mark.
For Leather Wallets for Men and Women.
First use June 4, 1963.

Class 4—Abrasives and Polishing Materials

SN 173,486. Norton Company, Troy, N.Y. Filed July 22, 1963.

SAABA

For Coated Abrasive Belt Joints.
First use July 2, 1963.

SN 175,846. Custom Crest Car Products, Inc., Syracuse, Ind. Filed Aug. 27, 1963.

CUSTOM

For Auto Polish.
First use Oct. 1, 1957.

SN 176,808. James R. Karn, d.b.a. Karn Automotive Products, Memphis, Tenn. Filed Sept. 12, 1963.

KAR-NEET

For Automobile Polish.
First use Apr. 18, 1963.

Class 5 — Adhesives

SN 159,263. Mystik Tape, Inc., Chicago, Ill., assignee of Mystik Adhesive Products, Inc., Chicago, Ill. Filed Dec. 17, 1962.

TAPE-A-RAMA

For Package for Shipment and Display of Merchandise—e.g., Pressure-Sensitive Adhesive Tape.
First use Nov. 30, 1962.

SN 163,831. The Franklin Glue Company, Columbus, Ohio. Filed Mar. 4, 1963.

Franklin's TOPSPEED

Owner of Reg. No. 519,612.
For Glue and Adhesives—Namely, a White Ready To Use Resin Adhesive for Industrial Uses Such as General Wood-Working Joiner and Cabinet Room Assembly Work.
First use Feb. 11, 1963.

SN 165,746. Chemical Development Corporation, Danvers, Mass. Filed Apr. 1, 1963.

DEVCON

Owner of Reg. No. 622,543.
For All-Purpose Adhesive and Mender.
First use April 1957.

Class 6 — Chemicals and Chemical Compositions

SN 112,577. Velveray Corporation, Passaic, N. J. Filed Jan. 26, 1961.

VELVERAY

Owner of Reg. Nos. 287,011, 690,475, and others.
For Dyes and Pigments Used in Decorating and Printing Textile and Plastic Materials.
First use 1929.

SN 140,827. Oma M. Engelhart, d.b.a. Car-Pal Company, Columbus, Ohio. Filed Mar. 27, 1962.

Car Pal

For Wick-Type Liquid Deodorant for Treating the Air.
First use Nov. 18, 1961.

SN 157,289. Diamond Laboratories, Inc., Des Moines, Iowa. Filed Nov. 15, 1962.

ANATEST

For Kit Containing Antigen and Other Test Materials for the Diagnosis of the Carrier State of Anaplasmosis in Cattle.
First use June 27, 1961.

SN 160,714. Nialum Chemical Company, Brooklyn, N.Y. Filed Jan. 15, 1963.

NIALUM

For Metal Treating Compound for Bonding Bright Nickel Directly Onto Aluminum and for Preparing the Base Metal for the Bonding of Surface Metal Thereto.
First use Dec. 10, 1962.

SN 161,109. Stauffer Chemical Company, New York, N.Y. Filed Jan. 21, 1963.

BETASAN

For Selective Herbicide.
First use Jan. 11, 1963.

SN 161,283. L. B. Russell Chemicals, Inc., Long Island City, N.Y. Filed Jan. 23, 1963.

REDI-LITH

Owner of Reg. No. 743,206.
For Liquid Photomechanical Developer.
First use October 1960.

SN 161,990. Guard Chemical Co., Inc., Ossining, N.Y. Filed Feb. 4, 1963.

PURASAN

For Cationic Germicidal Concentrates Sold for Manufacturing Purposes.
First use January 1950.

SN 161,991. Guard Chemical Co., Inc., Ossining, N.Y. Filed Feb. 4, 1963.

MERSYNATE

For Chemical Composition Sold for Manufacturing Purposes and Containing Phenyl Mercuric Acetate and Potassium 2,4,6-Trichlorophenate as the Active Ingredients.
First use February 1952.

SN 161,992. Guard Chemical Co., Inc., Ossining, N.Y. Filed Feb. 4, 1963.

PURASEED

For Seed Disinfectant.
First use January 1955.

SN 162,700. Carus Chemical Company, Inc., La Salle, Ill. Filed Feb. 14, 1963.

CAIROX

For Potassium Permanganate.
First use June 21, 1962.

SN 164,488. W. R. Grace & Co., New York, N.Y. Filed Mar. 12, 1963.

DAVISON

Owner of Reg. No. 430,511.
For Adsorbents for Specialized Refrigerant Dehydration and Filtration.
First use 1945.

SN 165,746. Chemical Development Corporation, Danvers, Mass. Filed Apr. 1, 1963.

DEVCON

Owner of Reg. No. 622,543.
For Rust Remover and Flexibility-Imparting Liquid Chemical Agent (or Additive).
First use August 1958.

SN 167,270. Jefferson Chemical Company, Inc., Houston, Tex. Filed Apr. 22, 1963.

JEFFERSOL

For Alkylene Glycol Monoalkylethers (e.g., 2-(2-Ethoxy-Ethoxy) Ethanol; 2-(2-Methoxyethoxy) Ethanol; 2-Ethoxyethanol and 2-Methoxyethanol), for Use as Solvents and for Other Industrial Use.
First use Mar. 29, 1963.

SN 168,183. Gamlen Chemical Company, South San Francisco, Calif. Filed May 6, 1963.

SULVANOL

For Liquid Preparation To Be Added to Fuel Oil for Fireboxes of Steam Generating Units for the Control of Sulphur and Vanadium Combustion Deposits Therein.
First use Feb. 12, 1963.

SN 168,774. Stecker Chemicals, Inc., Ho-Ho-Kus, N.J. Filed May 13, 1963.

QUICKSAN

For Organic Mercury Compounds.
First use Jan. 19, 1954.

SN 168,856. St. Regis Paper Company, New York, N.Y. Filed May 14, 1963.

STRactan

For Carbohydrate Wood Sugar.
First use Jan. 26, 1962.

SN 169,550. H. Kohnstamm & Co. Inc., New York, N.Y. Filed May 23, 1963.

DIASAN

For Textile Sanitiser.
First use Feb. 7, 1961.

SN 170,995. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed June 14, 1963.

DEENALL

Owner of Reg. Nos. 419,757 and 419,763.
For Single Preparation Used as an Insecticide, Fungicide and Miticide for Roses, Asters, Carnations and Other Flowers and Flowering Bushes.
First use Mar. 4, 1963.

SN 172,508. Mid-States Distributing Company, Inc., St. Paul, Minn. Filed July 5, 1963.

DURONE

For Antifreeze for Motor Vehicles.
First use in September 1953.

SN 172,509. Mid-States Distributing Company, Inc., St. Paul, Minn. Filed July 5, 1963.

DUREX

Applicant claims use for the area comprising the entire United States excluding the States of Oregon, Washington, Idaho, Utah, Nevada and California.
For Antifreeze for Motor Vehicles.
First use June 1, 1953.
Subj. to concurrent use proceeding with Reg. No. 725,508.

SN 173,854. Otto B. May Inc., Newark, N.J. Filed July 26, 1963.

MAY ESTER

For Disperse Dyes.
First use June 14, 1963.

SN 173,942. Monsanto Chemical Company, St. Louis, Mo. Filed July 29, 1963.

TACKOL

Owner of Reg. No. 215,517.
For Compounding Ingredient and Rubber Softener.
First use Jan. 16, 1926.

SN 174,114. Nalco Chemical Company, Chicago, Ill. Filed July 31, 1963.

NALCO

Owner of Reg. Nos. 298,080, 746,095, and others.
For Chemical Additives for Paper Manufacture.
First use 1928.

SN 174,655. The Down Chemical Company, Midland, Mich. Filed Aug. 8, 1963.

VERSIMINE

Owner of Reg. Nos. 578,635, 748,607, and others.
For Chelating Agents and Metal Chelates.
First use Dec. 2, 1959.

SN 175,217. Silverlith Corporation, Edmonston, Md. Filed Aug. 16, 1963.

NEWSLITH

For Chemicals for Processing Printing Plates, Including De-Sensitisers, Developers and the Like.
First use June 28, 1963.

Class 8 — Smokers' Articles, Not Including Tobacco Products

SN 155,255. Imperial Import Company, Inc., New York, N.Y. Filed Oct. 16, 1962.

Imperial

For Cigarette Lighters.
First use June 1962.

SN 158,648. L. & A. Pipe Co., Queens Village, N.Y. Filed Dec. 6, 1962.

Lord Pearl

For Smoking Pipes.
First use Aug. 6, 1962.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

SN 173,316. Alcan Shells, Inc., Alton, Ill. Filed July 19, 1963.

MAX-SPEED

For Shotgun Shells.
First use July 9, 1963.

Class 10 — Fertilizers

SN 123,257. American Humates, Inc., Dallas, Tex. Filed July 3, 1961.

AQUA HUMUS HI PLANT FOOD

Applicant disclaims the words "Aqua Humus" apart from the mark as shown, and without any waiver of its common-law rights, applicant disclaims the words "Organic Plant Food Humic and Fulvic Acid Derivatives" apart from the mark as shown. The drawing is stippled to show shading only.
For Plant Food.
First use on or about Mar. 8, 1961.

SN 161,461. The J. E. Baker Company, York, Pa. Filed Jan. 28, 1963.

GRANDOL

For Fertilizer Filler Material.
First use on or about Dec. 2, 1962.

SN 166,449. The Davey Tree Expert Company, Kent, Ohio. Filed Apr. 10, 1963.

Da-V-Green

Owner of Reg. Nos. 508,415 and 579,534.
For Plant Food.
First use Dec. 12, 1962.

Class 12 — Construction Materials

SN 155,022. Superior Concrete Accessories, Inc., Franklin Park, Ill. Filed Oct. 11, 1962.

SUPERIOR

For Items Used in Concrete Construction Including Wall Forms, Ties, Clamps, Hangers and Shores.
First use Sept. 19, 1962.

SN 165,746. Chemical Development Corporation, Danvers, Mass. Filed Apr. 1, 1963.

DEVCON

Owner of Reg. No. 622,543.
For All-Purpose Rubber Filler and Sealer and an Elastomer Resin Additive Therefor, All-Purpose Metal Filler and Sealer, Caulking Compound, Epoxy Resin Floor Coating, and Epoxy Sealer.
First use February 1959.

SN 165,865. J. T. Thorpe Company, Houston, Tex. Filed Apr. 1, 1963.

K-GARD

For Thermal Pipe Insulation.
First use Nov. 26, 1962.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

SN 122,919. Henry K. Dannelly and James I. Gillespie (joint owners), d.b.a. Diamond Drill & Pin Co., Dallas, Tex., and Diamond Drill & Pin Co., Atlanta, Ga. Filed June 27, 1961.

ROCKETIP

For Explosive Propelled Fasteners.
First use May 25, 1961.

SN 153,211. The Plastex Company, Columbus, Ohio. Filed Sept. 14, 1962.

PAR-EX

For Plastic Pipe.
First use May 18, 1962.

SN 164,990. Norken Co., Inc., New York, N.Y. Filed Mar. 19, 1963.

PRESTO THERM

For Steam Traps.
First use Mar. 12, 1963.

SN 170,230. Speedfast Corporation, Long Island City, N.Y. Filed June 3, 1963.

LOAD-O-MATIC

Owner of Reg. No. 729,339.
For Staples in Flexible Strip Form.
First use Aug. 3, 1960.

SN 174,500. The Ever-Roll Manufacturing Corporation, Dayton, Ohio. Filed Aug. 6, 1963.

BLACK KNIGHT

For Sliding and Folding Door Hardware, Commercial and Residential Thresholds, Closet Rods, Weather Stripping, Door Pockets, Sliding Panel Tracks, and Parts and Accessories Therefor.
First use in July 1959.

SN 174,547. Timber Engineering Company, Washington, D.C. Filed Aug. 6, 1963.

LINEAJOIST

For Lumber Connectors.
First use Dec. 11, 1962.

SN 174,722. Valve Corporation of America, Bridgeport, Conn. Filed Aug. 8, 1963.

VCA

For Valves, Valve Actuators, Containers and Aerosol Dispensers.
First use in January 1951.

SN 174,851. The Ever-Roll Manufacturing Corporation, Dayton, Ohio. Filed Aug. 12, 1963.



For Sliding and Folding Door Hardware, Commercial and Residential Thresholds, Closet Rods, Weather Stripping, Door Pockets, Sliding Panel Tracks, and Parts and Accessories Therefor.
First use in July 1959.

SN 175,021. Essex Products, Inc., Haverhill, Mass. Filed Aug. 14, 1963.

SYNTHA PIN

For Metal Dowels Used as Heel Inserts and the Like.
First use on or about Apr. 8, 1960.

SN 175,033. W. J. Hoover Company, Cleveland, Ohio. Filed Aug. 14, 1963.



Professor Instok

For Nuts, Bolts, Screws, and Metallic Fasteners.
First use on or about Nov. 15, 1962.

SN 175,621. Syracuse Ornamental Co., Inc., Syracuse, N.Y. Filed Aug. 22, 1963.



SYROCO

Owner of Reg. Nos. 422,195 and 425,741.
For Wall Brackets.
First use on or about May 1, 1963; in or about May 1911 as to "Syroco."

Class 14 — Metals and Metal Castings and Forgings

SN 165,746. Chemical Development Corporation, Danvers, Mass. Filed Apr. 1, 1963.

DEVCON

Owner of Reg. No. 622,543.
For General-Purpose Metal and Plastic Composition Fillers and Sealers.
First use February 1960.

SN 173,902. Detroit Steel Corporation, Detroit, Mich. Filed July 29, 1963.

ECON-O-GRADE

For High Carbon Spring Wire.
First use Aug. 15, 1962.

SN 174,043. New England Brass Company, Taunton, Mass. Filed July 30, 1963.

NEB-BRONZE

For Copper-Zinc-Tin Alloy.
First use on or about May 29, 1957.

SN 174,163. Bridgeport Rolling Mills Company, Bridgeport, Conn. Filed Aug. 1, 1963.

FLEX-O-LOY

For Brass Alloy Containing 70% Copper and 30% Zinc.
First use May 14, 1963.

Class 15—Oils and Greases

SN 121,759. Radiator Specialty Company, Charlotte, N.C. Filed June 9, 1961.

INSTANT

For Starting Fluid for Engines.
First use May 26, 1961.

SN 166,952. Texaco Inc., New York, N.Y. Filed Apr. 17, 1963.

TEXACO

The drawing is lined for the colors red and green. Owner of Reg. Nos. 660,721, 669,519, and others.
For Gasoline, Lubricating Oils, and Lubricating Greases.
First use Feb. 5, 1963.

Class 16—Protective and Decorative Coatings

SN 157,281. Champion Bronze Powder and Paint Company, Inc., Chicago, Ill. Filed Nov. 15, 1962.

SPRAY CHAMP

The word "Spray" is disclaimed apart from the mark as shown.
For Paints, Lacquers, Clear Plastic Coatings and Enamels.
First use Nov. 17, 1959.

SN 165,746. Chemical Development Corporation, Danvers, Mass. Filed Apr. 1, 1963.

DEVCON

Owner of Reg. No. 622,543.
For Protective Coatings for Metals.
First use November 1961.

SN 167,155. Mary Carter Paint Company, Tampa, Fla. Filed Apr. 19, 1963.

ROL HIDE

Owner of Reg. No. 724,415.
For Interior Paint.
First use Mar. 1, 1963.

SN 168,888. Purex Corporation, Ltd., Wilmington, Calif. Filed May 10, 1963.

NO-PER-VEX

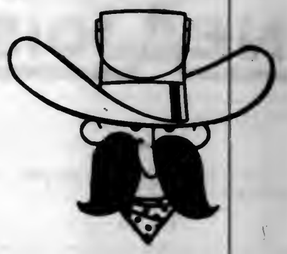
Owner of Reg. No. 404,530.
For Varnish Preparation for Finishing of Floors, Furniture, and the Like.
First use on or about Apr. 1, 1935.

SN 171,081. Bernz O Matic Corporation, Rochester, N.Y. Filed June 17, 1963.

BERNZ O MATIC

For Aerosol Type Paints and Varnishes.
First use June 1962.

SN 171,731. Western Paint Company, Duluth, Minn. Filed June 24, 1963.



For Paints.
First use about June 14, 1963.

SN 173,677. Penn Crete Products Company, Inc., Philadelphia, Pa. Filed July 24, 1963.

PTA

For Interior Wall Paints.
First use on or about Nov. 12, 1962.

SN 173,681. Penn Crete Products Company, Inc., Philadelphia, Pa. Filed July 24, 1963.

FLOR-TRED

For Concrete Floor Enamel Paint.
First use on or about Dec. 28, 1962.

SN 178,740. Rock Paint and Chemical Company, Fort Atkinson, Wis. Filed Oct. 10, 1963.

ROCKLAC

For Fire Retardent and Flame Resistant and Intumescent Lacquer for Coating Flammable Objects.
First use Sept. 15, 1956.

Class 17—Tobacco Products

SN 157,819. La Primadora Cigar Corporation, New York, N.Y. Filed Nov. 23, 1962.

LA PRIMADORA DIPLOMAT

Owner of Reg. No. 543,255.
For Cigars.
First use Nov. 9, 1962.

SN 163,689. Carreras Limited, Basildon, Essex, England. Filed Feb. 28, 1963.



Piccadilly
NUMBER ONE

Owner of British Reg. No. 822,477, dated June 29, 1961.
For Cigarettes.

SN 169,595. Carreras Limited, Basildon, Essex, England. Filed May 22, 1963.



Owner of British Reg. No. 693,185, dated Oct. 20, 1950.
For Tobacco Whether Manufactured or Unmanufactured.

SN 176,088. Mabel M. Goike, executrix of the will of John A. Goike, deceased, d.b.a. Goike's Kashub Snuff Co., Detroit, Mich. Filed Aug. 30, 1963.

GOIKE'S KASHUB

Owner of Reg. No. 404,049.
For Snuff.
First use Nov. 7, 1918.

Class 18—Medicines and Pharmaceutical Preparations

SN 151,307. Hicaela D. Frye, d.b.a. Lightning Hair Products Company, Chicago, Ill. Filed Aug. 16, 1962.

LIGHTNING

For Preparation for Application to Hair for Dressing and Beneficially Treating and Lessening Excessive Dandruff and Falling Hair.
First use January 1958.

SN 155,199. R. P. Scherer Corporation, Detroit, Mich. Filed Oct. 15, 1962.

REDI-LEASE

For Pharmaceutical Gelatin Capsules—Namely, Vitamin Capsules.
First use June 1, 1962.

SN 155,200. R. P. Scherer Corporation, Detroit, Mich. Filed Oct. 15, 1962.

ROTO-CAPS

For Pharmaceutical Gelatin Capsules—Namely, Vitamin Capsules.
First use June 1, 1962.

SN 156,893. Charles A. Morris, d.b.a. Medical Specialties Company, Paris, Tex. Filed Nov. 8, 1962.

Little Maverick

For Medical Bolus for Veterinary Use in Treating Cattle Scours.
First use Sept. 4, 1962.

SN 162,651. J. J. Newberry Co., New York, N.Y. Filed Feb. 13, 1963.

NEWCREST

For Vitamins, Glycerin Suppositories, Milk of Magnesia, Medicated Skin Cream for Relief of Minor Burns, Scalds, Chafing and Minor Skin Irritations, Aspirin, Mineral Oil for Medicinal Use, Saccharin Tablets for Medicinal Use, and Analgesic Preparation.
First use Nov. 16, 1962.

SN 168,069. Carter Products, Inc., New York, N.Y. Filed May 3, 1963.

SANAL

For Pharmaceutical Preparation—Namely, a Peri-Anal Cleanser and Healing Agent.
First use Feb. 4, 1963.

SN 168,652. George Zofchak, d.b.a. Tatra Company, Morrisville, Pa. Filed May 10, 1963.

ZESTEA

For Herb Tea.
First use Mar. 13, 1963.

SN 168,710. Dawe's Laboratories, Inc., Chicago, Ill. Filed May 13, 1963.

Dawe's

DURA-DEE

Owner of Reg. No. 709,867.
For Medicated Supplements Used in Livestock and Poultry Feeds.
First use Nov. 15, 1961.

SN 172,949. Scott-Lee Laboratories, Inc., New Orleans, La. Filed July 12, 1963.

INFADORM

For Antispasmodic Preparation.
First use July 6, 1961.

SN 173,204. Viva Laboratories, Inc., Horsham, Pa. Filed July 17, 1963.

VIVA VAC

For Parenteral Intravenous Solutions.
First use May 16, 1963.

SN 173,318. American Home Products Corporation, New York, N.Y. Filed July 19, 1963.

PRE-EMPTIN

For Analgesic Preparation.
First use June 18, 1963.

SN 173,324. American Home Products Corporation, New York, N.Y. Filed July 19, 1963.

CONTRACIN

For Analgesic Preparation.
First use July 3, 1963.

SN 173,325. American Home Products Corporation, New York, N.Y. Filed July 19, 1963.

SEQUENCIN

Owner of Reg. No. 692,328.
For Analgesic and Antipyretic Preparation.
First use July 3, 1963.

SN 173,326. American Home Products Corporation, New York, N.Y. Filed July 19, 1963.

INFRAROLL

Owner of Reg. No. 582,831.
For Analgesic Preparation.
First use June 18, 1963.

SN 173,566. Delta Pharmaceuticals, Inc., Atlanta, Ga. Filed July 23, 1963.

STELLATE

For Anti-Spasmodic Sedative and Muscle Relaxant Preparation.
First use June 19, 1962.

SN 173,577. Hoyt Pharmaceutical Corporation, Needham Heights, Mass. Filed July 23, 1963.

LURIPHOS

For Medicinal Preparation in Liquid Form To Be Taken Internally To Aid in the Protection Against Dental Caries.
First use May 1, 1963.

SN 173,578. Hoyt Pharmaceutical Corporation, Needham Heights, Mass. Filed July 23, 1963.

NOCTOQUIN

For Medicinal Preparation To Be Taken Internally for the Symptomatic Relief of Myotonia and Nocturnal Leg Cramps.
First use June 18, 1963.

SN 174,194. Lemmon Pharmacal Company, Sellersville, Pa. Filed Aug. 1, 1963.

PYRACORT

For Nasal Spray for Symptomatic Relief of Acute and Chronic Allergic Rhinitis, Sinusitis, and Upper Respiratory Infections.
First use February 1957.

SN 175,812. Temple Corporation, Munster, Ind. Filed Aug. 26, 1963.

UROMENDESIC

For Urinary Antiseptic and Anti-Spasmodic Urinary Antiseptic.
First use July 10, 1963.

SN 176,254. The Upjohn Company, Kalamazoo, Mich. Filed Sept. 3, 1963.

MEDRONE

For Medicinal Hormone Preparation.
First use Sept. 18, 1956.

SN 176,406. Syntex Laboratories, Inc., Palo Alto, Calif. Filed Sept. 5, 1963.

FLUCORT

For Anti-Inflammatory Steroid Hormone Preparation.
First use July 22, 1963.

SN 176,423. The Borden Company, New York, N.Y. Filed Sept. 6, 1963.

METHASEPTIC

Owner of Reg. No. 714,937.
For Medicinal Powder Used in the Preparation of a Dermatological Product Which Aids in Preventing Infection in Minor Cuts and Abrasions.
First use June 30, 1961.
Subj. to Intf. with SN 154,176.

Class 19—Vehicles

SN 78,645. NSU Motorenwerke Aktiengesellschaft, Neckarsulm, Wurttemberg, Germany, by change of name from NSU-Werke Aktiengesellschaft, Neckarsulm, Wurttemberg, Germany. Filed July 29, 1959.

NSU-PRINZ

Priority claimed under Sec. 44(d) on German application filed Apr. 22, 1959; Reg. No. 726,373, dated June 26, 1959. Owner of U.S. Reg. Nos. 621,709, 639,960, and others.
For Motorcycles, Motor Scooters, Mopeds (Motorized Bicycles), Bicycles, Tricycles, Three- and Four-Wheel Passenger and Commercial Motor Vehicles, Aircraft, Motor Boats; Frames, Running Gear, Wheels and Brakes for Such Motorcycles, Motor Scooters, Mopeds, Bicycles, Tricycles; Bodies, Frames, Running Gear, Wheels and Chassis for Such Three- and Four-Wheel Passenger and Commercial Motor Vehicles; Side Cars, Trailer Couplings and Hitches, and Structural Parts for the Above-Named Goods.

SN 162,804. Studebaker Corporation, South Bend, Ind. Filed Feb. 7, 1963.

CONESTOGA

For Camper Body.
First use Oct. 6, 1962.

SN 162,613. American Motors Corporation, Kenosha, Wis. Filed Feb. 13, 1963.

R

For Automobiles and Structural Parts Thereof—Namely, Hub Caps, Wheel Covers, Mirrors, Radio Grills, Trunk Handles, Gas Tank Caps, Floor Mats, and Seat Belts.
First use in or before October 1954.

SN 170,989. Concord Mobile Homes, Inc., Elkhart, Ind. Filed June 14, 1963.

TITAN

For Mobile Homes.
First use Mar. 22, 1963.

Class 20—Linoleum and Oiled Cloth

SN 159,272. Pegulan-Werke Aktiengesellschaft, Frankenthal, Pfalz, Germany. Filed Dec. 17, 1962.

PEGULAN

Owner of German Reg. No. 647,023, dated Oct. 31, 1953.
For Synthetic Floor and Wall Coverings Consisting of Vinyl, With or Without a Composition Backing.
First use Jan. 1, 1951; in commerce Nov. 9, 1955.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 105,809. Hutchins Company, Inc., St. Louis, Mo. Filed Oct. 5, 1960.

AH-OOO-GAH

No claim of exclusive right is made to the sound of the goods.
For Electric Vehicle Horns.
First use November 1953.

SN 118,632. Torei Kogyo Co., Ltd., Ohta-Ward, Tokyo, Japan. Filed Apr. 4, 1961.

PIXIE

Priority claimed under Sec. 44(d) on Japanese application filed Oct. 13, 1960; Reg. No. 619,589, dated June 28, 1963.
For Electrically Driven Beverage Shaker.

SN 128,185. Matsushita Electric Industrial Co., Ltd., Kitakawachi-gun, Osaka, Japan. Filed Sept. 19, 1961.

National

Priority claimed under Sec. 44(d) on Japanese application filed July 3, 1961; Reg. No. 625,996, dated Oct. 7, 1963.
For Portable Electric Space Heaters, Portable Electric Percolators, Portable Electric Rice Boilers, Portable Electric Bakers, and Portable Electric Blenders.

SN 132,461. Claud S. Gordon Company, Cleveland, Ohio. Filed Nov. 21, 1961.

XACTPAK

Owner of Reg. Nos. 423,567 and 723,568.
For Thermocouple Wires for Thermocouple Assemblies, Electrical Leads and Terminals, and Electrical Heaters.
First use June 17, 1960.

SN 147,849. Pacific American Corp., Honolulu, Hawaii. Filed June 27, 1962.

ECTROSECT
INSECT CONTROL

Exclusive appropriation of the words "Insect Control" is disclaimed apart from the mark as a whole. The drawing is lined for the colors red and blue and claim to color is made as shown.
For Electric Insect Control Units.
First use May 1, 1962.

SN 148,411. Numec Instruments and Controls Corporation, Apollo, Pa. Filed July 5, 1962.

Numinco

For Low Voltage Transistorized Regulated Power Supplies.
First use Mar. 14, 1962.

SN 154,877. Atlantic Research Corporation, Alexandria, Va. Filed Oct. 10, 1962.

TELEPRODUCT

For Electrical and Electronic Test Equipment—Namely, Coils, Transformers, Inductors and Reactors, and Electric Relays.
First use Aug. 16, 1962.

SN 162,082. Deco Electronics, Incorporated, Leesburg, Va. Filed Feb. 5, 1963.

DECO

For Electronic Apparatus, Phase Sensors, High Transmission Line Standing-Wave Ratio and/or Peak Voltage Sensors, and Radio Frequency Communication Networks, Particularly Underground Communication Systems.
First use Apr. 20, 1953.

SN 162,339. Electrostatic Printing Corporation of America, San Francisco, Calif. Filed Feb. 8, 1963.



For Apparatus for Printing on Objects Using Electrostatic Techniques, Including Apparatus for Establishing an Electric Field Between an Apertured Image Electrode and Said Object and Applying Electroscopic Powder Particles to Said Image Electrode.
First use Oct. 18, 1962.

SN 163,588. Signetics Corporation, Sunnyvale, Calif. Filed Feb. 27, 1963.

PRE-FEB

For Individual Components Which Can Be Combined To Simulate Integrated Solid State Circuits.
First use Nov. 26, 1962.

SN 164,062. Ohmite Manufacturing Company, Skokie, Ill. Filed Mar. 6, 1963.

BE RIGHT WITH OHMITE

Owner of Reg. Nos. 252,608, 523,146, and 666,817.
For Rheostats, Resistors, Tap Switches, Relays, R.F. Chokes, Variable Transformers, Tantalum Capacitors and Diodes.
First use June 1939.

SN 165,539. Sperry Rand Corporation, New York, N.Y. Filed Mar. 27, 1963.



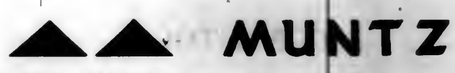
For Power-Pack for Use With Electric Shavers.
First use Apr. 10, 1962.

SN 166,194. Industrial Electronic Hardware Corp., New York, N.Y. Filed Apr. 5, 1963.



The matter applied for comprises the letters IEH and design.
For Components Used in Electrical and Electronic Circuitry—Namely, Vacuum Tube Sockets, With or Without Collapsible Tube Shields, Retainer Clips, or Shield Base; Sockets for Nuvistor, for Transistor and Other Semiconductor Components, for Kinescope, for Speaker, and for Crystal; Battery Connector, Multiple Pin Connector, Interlock Connector, A.C. Connector, Antenna Connector, and Phonograph Connector; Terminal Strips, Terminal Boards, Terminal Lugs, and Terminal Brackets; Panel Connector, Edgeboard Connector, Angle Connector, and Tape Cable Connector; Transistorized Line Amplifier, Printed Circuit Board Amplifier, Fuse Holder, Capacitor Mounting Board; Radiation Detection Devices, Dosimeter, Computer Indicator for Dosimeter, Self-Indicating Dosimeter, and Dosimeter Charger; Transformers, Coil Assemblies, and Chokes.
First use Mar. 1, 1963.

SN 166,741. Muntz TV, Inc., Wheeling, Ill. Filed Apr. 15, 1963.



Owner of Reg. Nos. 545,731 and 672,738.
For Television Receiving Sets; Radio Receiving Sets; or Any Combination of Television Receivers, Radio Receivers and Record Players.
First use Feb. 1, 1963.

SN 167,350. Richard H. Wann, Barrington, Ill. Filed Apr. 22, 1963.



For Intercommunication Equipment, Systems and Apparatus.
First use on or about Nov. 1, 1962.

SN 167,883. Dixon Corporation, Bristol, R.I. Filed May 1, 1963.

RULON

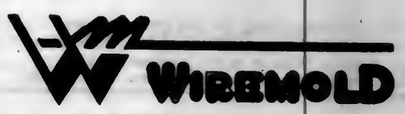
Owner of Reg. No. 655,024.
For Electrical Insulators, Electrical Switch and Relay Cams.
First use at least as early as 1955.

SN 168,309. Fieldcrest Mills, Inc., Spray, N.C. Filed May 7, 1963.

WINTERSONG

For Automatic Electric Bed Coverings.
First use Nov. 2, 1960.

SN 171,061. The Wiremold Company, Hartford, Conn. Filed June 14, 1963.



Owner of Reg. Nos. 124,280, 750,865, and others.
For Flexible Tubing, Raceways, and Fittings for Electrical and Communication Wiring, Multi-Outlet Assemblies, and Parts and Accessories.
First use Sept. 7, 1962; Jan. 10, 1918, as to "Wiremold."

SN 172,229. Panavision Incorporated, Los Angeles, Calif. Filed July 1, 1963.

PANATRON

For Portable Power Supply for Motor-Driven Motion Picture Cameras.
First use Dec. 17, 1962.

SN 174,542. Sprague Electric Company, North Adams, Mass. Filed Aug. 6, 1963.

ESTAREL

Owner of Reg. No. 549,690.
For Electronic Components—Namely, Resistors, Interference Filters, Toroidal Inductors and Capacitors.
First use June 10, 1963.

SN 178,140. Sprague Electric Company, North Adams, Mass. Filed Oct. 1, 1963.

TANOX

Owner of Reg. No. 592,160.
For Electrical Capacitors.
First use Sept. 9, 1963.

Class 22—Games, Toys, and Sporting Goods

SN 138,988. Spec-Tickles, Inc., Great Neck, N.Y. Filed Mar. 2, 1962.

SPEC-TICKLES

For Novelty Items, for Example, a Wall Plaque, an Ashtray, and a Desk Pen Holder, Intended for the Amusement and Entertainment of Persons Working in the Eye Wear Field.
First use Dec. 5, 1961.

SN 165,922. Harnell, Inc., Venice, Calif. Filed Apr. 2, 1963.



Owner of Reg. No. 551,036.
For Fishing Rods, Fishing Rod Blanks, Fishing Rod Handles, Accessories and Parts Thereof.
First use January 1950.

SN 170,337. The J. Roberts Manufacturing Co., Kingston, Pa. Filed June 4, 1963.

ISO-CIZER

For Passive Exercising Devices—Namely, Bar Bells, Poles, Etc., for Use in Pushing, Pulling and Lifting Against an Immovable Object.
First use Mar. 1, 1963.

SN 172,006. Craft Master Corporation, Toledo, Ohio, by change of name from Palmer-Pann Corporation, Toledo, Ohio. Filed June 27, 1963.

RAK-PAK

For Hobby Craft Kits Each Consisting of Small Quantities of Basic Materials Relating to the Particular Field of the Hobby for Assembling Into a Completed Hobby Craft Project.
First use Dec. 2, 1958.

SN 172,336. Parker Brothers, Inc., Salem, Mass. Filed July 2, 1963.



For Equipment for Use in the Play of Board, Card and Parlor and Children's Games, for Dolls and Doll Clothing, and for Children's Entertainment and Educational Devices—Namely, Puzzles, Drawing Books and Coloring Sets.
First use Mar. 26, 1963, on board game equipment.

SN 172,699. Winthrop-Atkins Co., Inc., Middleboro, Mass. Filed July 9, 1963.

POP-ETTES

For Hand Puppets.
First use Apr. 11, 1963.

SN 173,073. Wilson Sporting Goods Co., River Grove, Ill. Filed July 15, 1963.

FLEETWOOD

Owner of Reg. No. 661,607.
For Golf Clubs and Golf Balls.
First use November 1928.

SN 173,344. Del Mar Tackle Co., Inc., Corpus Christi, Tex. Filed July 19, 1963.

MR CHAMP

For Fishing Lures.
First use July 10, 1948.

SN 173,405. Albin Enterprises, Inc., d.b.a. Jack Built Toy Manufacturing Company, Burbank, Calif. Filed July 22, 1963.

SILENT SHARK

For Toy Submarines.
First use Jan. 31, 1963.

SN 173,858. Mataweill, San Francisco, Calif. Filed July 26, 1963.

SNYMBOLS

For Fortune Cards.
First use June 28, 1963.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 143,974. Jorgensen Conveyors, Inc., Milwaukee, Wis. Filed May 7, 1962.



For Industrial Conveyors—Namely, Fabric and Rubber Belts, Metal Chain, Link Flights, Apron Conveyors, Conveyor Parts, and Mechanical Portions of Automation Equipment.
First use Apr. 1, 1953.

SN 149,389. Grubbens & Co. Aktiebolag, Stockholm, Sweden. Filed July 19, 1962.

PIGMENTA

Priority claimed under Sec. 44(d) on Swedish application filed July 2, 1962; Reg. No. 106,148, dated May 10, 1963.
For Mixing Apparatus Including a Container Intended for Use in the Paper and Cellulose Industry To Suspend Chemicals, Etc. in Water at High Concentration.

150,924. Conco Engineering Works, Inc., Mendota, Ill. Filed Aug. 10, 1962.

STAK·O·MATIC

For Material Handling and Stacking Equipment.
First use May 21, 1962.

SN 151,543. Union Special Machine Company, Chicago, Ill. Filed Aug. 20, 1962.

UNION SPECIAL THREAD Ratio CONTROL

Owner of Reg. No. 49,861.
For Sewing Machines and Attachments Therefor.
First use Dec. 27, 1940.

SN 155,918. Heimlich Brothers, Inc., New York, N.Y. Filed Oct. 25, 1962.

BUTTON KING

Owner of Reg. No. 729,710.
For Sewing Machines.
First use Apr. 30, 1962.

SN 160,491. Geo. W. King Limited, Stevenage, England. Filed Jan. 10, 1963.

STANRUN

Owner of British Reg. No. 702,430, dated Nov. 5, 1951.
For Electrically Operated Overhead Chain Conveyors.

SN 160,643. Kingman Manufacturing Company, Inc., Cunningham, Kans. Filed Jan. 14, 1963.

PRESSMASTER

For Agricultural Press Wheels and Parts Thereof.
First use Dec. 28, 1962.

SN 164,594. Burn-Strauss, Inc., d.b.a. Woodpecker Woodware, Los Angeles, Calif. Filed Mar. 14, 1963.



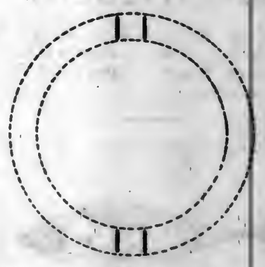
Applicant makes no claim to the word "Woodware" alone.
Owner of Reg. No. 571,250.
For Cutting Boards, Knives, Knife Racks With Knives, Knife Sets, Salad Servers and Salad Sets, Carving Boards, Hors d'Oeuvre Picks and Pick Sets, Pepper Mills and Sets, Fork and Spoon Sets, Chopping Blocks and Bar Sets Comprising a Stand With Can and Bottle Opener, Bar Fork, Tongs, Strainer, Jigger and Mixing Spoon.
First use Dec. 15, 1950.

SN 165,539. Sperry Rand Corporation, New York, N.Y. Filed Mar. 27, 1963.



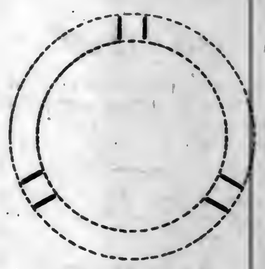
For Electric Shavers.
First use Apr. 10, 1962.

SN 165,811. New Hampshire Ball Bearings, Inc., Peterborough, N.H. Filed Apr. 1, 1963.



For Instrument Precision Ball Bearings Manufactured of Chrome Steel.
First use during October 1955.

SN 165,812. New Hampshire Ball Bearings, Inc., Peterborough, N.H. Filed Apr. 1, 1963.



For Instrument Precision Ball Bearings Manufactured of Stainless Steel.
First use during October 1955.

SN 165,813. New Hampshire Ball Bearings, Inc., Peterborough, N.H. Filed Apr. 1, 1963.

NHBB

For Instrument Precision Ball Bearings.
First use during October 1955.

SN 165,950. Page Belting Company, Concord, N.H. Filed Apr. 2, 1963.

PAGE CHECK CONTROL

Owner of Reg. Nos. 142,691, 524,968, and others.
For Picker Stick Control Straps.
First use Nov. 25, 1958.

SN 167,571. Pines Engineering Co. Inc., Aurora, Ill. Filed Apr. 25, 1963.

TRANSLOADER

For Machines for Handling, Feeding and/or Loading Tubing, Pipe, and Round Stock Into Machines.
First use Mar. 20, 1963.

SN 167,688. Automatic Poultry Feeder Company, Zeeland, Mich. Filed Apr. 29, 1963.



Owner of Reg. No. 541,457.
For Poultry and Animal Raising and Handling Equipment—Namely, Poultry, Cattle and Hog Feeders and Waterers, Including Those of the Automatic Type, and Parts and Accessories Therefor, Feed Cleaners, Pit Cleaners, Egg Stamping Equipment, Egg Transporting and Conveying Equipment, Egg Stacking Equipment, Egg Packing Equipment, Egg Collecting Equipment and Egg Washers.
First use on or about Mar. 1, 1963.

SN 167,966. Wil-Gard Specialties, Inc., Chicago, Ill. Filed May 1, 1963.



For Gasoline Motors and/or Engines.
First use January 1951.

SN 169,412. Hercules Gallon Products, Inc., d.b.a. Gallon Allsteel Body Co., Gallon, Ohio. Filed May 21, 1963.

LOAD-EVATOR

Owner of Reg. No. 554,836.
For Power Operated Tailgates for Trucks.
First use Oct. 15, 1952.

SN 169,805. Walker Manufacturing Company, Racine, Wis. Filed May 27, 1963.

CHALLENGER

For Internal Combustion Engine Exhaust System Parts, Such as Mufflers.
First use Apr. 29, 1963.

SN 170,868. Anker-Phoenix Nähmaschinen A.G., Bielefeld, Germany. Filed June 5, 1963.

PHOENIX

Owner of U.S. Reg. No. 587,509.
For Sewing Machines and Sewing Machine Parts.
First use 1880; in commerce prior to 1914.

SN 170,791. Aer-O-Flo Corporation, Cincinnati, Ohio. Filed June 12, 1963.

AER-O-FLO

For Prefabricated Sewage Treatment Plants.
First use Sept. 6, 1960.

SN 171,061. The Wiremold Company, Hartford, Conn. Filed June 14, 1963.

WIREMOLD

Owner of Reg. Nos. 124,280, 750,865, and others.
For Installation Tools—Namely, Wire Pulleys, Snak Leaders, Cover Removal Tools, Benders, Cutting Boxes, Shears, and Canopy Covers.
First use Sept. 7, 1962; Jan. 10, 1918, as to "Wiremold."

SN 171,604. The Aro Corporation, Bryan, Ohio. Filed June 24, 1963.



For Glue Dispensing Devices.
First use Aug. 1, 1962.

SN 174,805. Swing Precision Products, Inc., White Plains, N.Y. Filed Aug. 9, 1963.

OMEGA

For Razor Blades.
First use May 9, 1963.

SN 174,990. Stewart-Warner Corporation, Chicago, Ill. Filed Aug. 13, 1963.

CHANGE-O-MATIC

For Machines for Changing Tires in Service Stations.
First use July 23, 1963.

SN 177,631. Gyro Universal Joint Corp., Glenwood, Minn. Filed Sept. 24, 1963.

GYRO-U-JOINT

For Universal Joints.
First use July 19, 1963.

SN 177,683. Clark Equipment Company, Buchanan, Mich. Filed Sept. 25, 1963.

HYDRACOOL

For Clutches.
First use Apr. 10, 1963.

SN 177,706. Lehigh Inc., Easton, Pa. Filed Sept. 25, 1963.

COMPACTAIRE

For Air Cylinders, Air Motors, Air Valves, and Silencers.
First use Oct. 30, 1962, on air cylinders.

SN 177,760. Burns Manufacturing Company, Inc., Louisville, Ga. Filed Sept. 26, 1963.

WEAR-TOUGH

For Guide Bars for Chain Saws.
First use July 7, 1961.

SN 177,761. Burns Manufacturing Company, Inc., Louisville, Ga. Filed Sept. 26, 1963.

TOUGH-PLY

For Guide Bars for Chain Saws.
First use July 13, 1961.

Class 24 — Laundry Appliances and Machines

SN 158,244. Claude J. Falconer, d.b.a. Falconer Products, Inc., Sonoma, Calif. Filed Nov. 30, 1962.

SWIRLAWAY

For Portable Diaper Washer.
First use Aug. 21, 1962.

SN 174,832. City Products Corporation, Chicago, Ill. Filed Aug. 12, 1963.

HOMECREST

For Ironing Board Pads and Covers, Basket Liners, and Clotheslines and Clothespins.
First use July 1, 1962.

Class 25 — Locks and Safes

SN 174,038. Marshall Tool Co., Norwalk, Conn. Filed July 30, 1963.

SEGAL

For Keys and Locks.
First use January 1917.

Class 26 — Measuring and Scientific Appliances

SN 148,411. Numec Instruments and Controls Corporation, Apollo, Pa. Filed July 5, 1962.

Numinco

For Radiation Instruments and Detectors; Nucleonic Process Control Equipment—Namely, Detector and Analyzer Systems and Gauges; Radioactive Sources and Compounds; Radioactive Shielding Apparatus; Electrochemical Analytical Instruments; Educational Mass Spectrometers; Apparatus for Determining Surface Area and Porosity of Small Particles and Solids of Such Particles.
First use Mar. 14, 1962.

SN 154,877. Atlantic Research Corporation, Alexandria, Va. Filed Oct. 10, 1962.

TELEPRODUCT

For Pulse and Telephone Transmission Test Equipment, Signal Monitoring Equipment and Signal Regenerators and Repeaters.
First use Aug. 16, 1962.

SN 156,804. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Nov. 7, 1962.

DU PONT

Owner of Reg. Nos. 413,806, 701,803, and others.
For Measuring and Scientific Apparatus—Namely, Process Instrumentation, Laboratory Instrumentation, Computing and Data Reduction Equipment, and Control and Alarm Devices—Namely, Photometric Analyzers and Differential Thermoanalyzers, and Associated and Accessory Equipment Relating to the Foregoing.
First use Oct. 4, 1962.

SN 166,251. Botany Industries, Inc., d.b.a. Renauld of France, Reno, Nev. Filed Apr. 8, 1963.

BIKINI SPECTACULARS

Owner of Reg. No. 754,120.
For Sun Glasses.
First use Feb. 6, 1963.

SN 171,285. Systron-Donner Corporation, Concord, Calif. Filed June 18, 1963.

SYSTRAC

Owner of Reg. No. 732,716.
For Electronic Data Acquisition Systems.
First use Apr. 16, 1963.

SN 172,033. Barry Wright Corporation, Watertown, Mass. Filed June 27, 1963.

BARRY B CONTROLS

No claim is made to the word "Controls" apart from the remainder of the mark. Owner of Reg. Nos. 608,702 and 618,146.
For Shock Testing Machines for Use in Testing Electronic Units of All Types Including Consoles, Components, Servo-Mechanisms, and the Like, and Mechanical Units of All Types Including Valves, Tanks, Pumps and the Like.
First use June 7, 1963.

SN 172,964. Aero-Chatillon Corporation, New York, N.Y. Filed July 15, 1963.

CHATILLON

Owner of Reg. No. 683,241.
For Force Measuring Devices—Namely, Weighing Scales, Computing Scales, Dynamometers, Tension Measuring and Testing Devices.
First use Dec. 24, 1960, on dynamometers.

Class 27 — Horological Instruments

SN 105,635. Fabrique Juvenia, Didisheim et Cie (Juvenia Mfg. Didisheim and Co.), La Chaux-de-Fonds, Switzerland, by change of name from Fabrique Juvenia, Petits-Fils de Didisheim-Goldschmidt, La Chaux-de-Fonds, Switzerland. Filed Oct. 3, 1960.

Mystere

For Watches.
First use not later than Oct. 1, 1951; in commerce not later than Oct. 1, 1951.

SN 147,663. Lucien Piccard Watch Corp., New York, N.Y. Filed May 29, 1962.



For Watches.
First use June 1961.

SN 152,404. Hawthorne Watch Co., Inc., Los Angeles, Calif. Filed Sept. 4, 1962.

BARKLEY

For Watches.
First use in March 1950.

SN 176,745. Parechoc S.A., Le Sentier, Vaud, Switzerland. Filed Sept. 11, 1963.

DUOBIL

Owner of Swiss Reg. No. 175,979, dated June 20, 1959.
For Bearings for Timepieces and Separate Parts Thereof.

SN 176,980. Waltham Watch Company, Chicago, Ill. Filed Sept. 13, 1963.



For Watches.
First use May 3, 1960.

SN 177,421. Hamilton Watch Company, Lancaster, Pa. Filed Sept. 20, 1963.

DATELINE

For Watches.
First use Aug. 1, 1963.

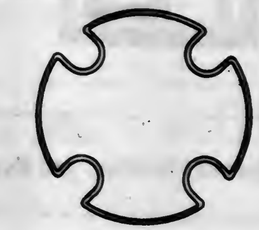
Class 28 — Jewelry and Precious-Metal Ware

SN 144,713. Alfred H. Glasser Corp., New York, N.Y. Filed May 16, 1962.

GEMMARIUS

For Bracelets, Rings, Pins, Charms, and Tie Tacks, Made Wholly or in Part of Precious Metals.
First use on or before Nov. 1, 1961.

SN 147,664. Lucien Piccard Watch Corp., New York, N.Y. Filed May 29, 1962.



For Jewelry for Personal Wear—Namely, Cuff Links, Tie Bars, Collar Holders, Money Clips, Key Chains, Keys, Rings, Bracelets, Tie Tacks, Collar Pins, Belt Buckles, Pocket Knives, Key Rings, Pill Boxes, Earrings, Pins, and Pendants.
First use June 1961.

SN 175,057. Queen's-Way, Inc., Skokie, Ill. Filed Aug. 14, 1963.

QUEEN'S-WAY

For Costume Jewelery—Namely, Earrings, Pins, Bracelets and Necklaces.
First use July 29, 1963.

SN 176,738. Bernard Kimmelman, Philadelphia, Pa. Filed Sept. 11, 1963.



For Jewelry Mountings, Bracelets, Rings, Charms, Earrings and Pendants.
First use on or about Nov. 1, 1962.

SN 177,642. Krasnow Bros., New York, N.Y. Filed Sept. 24, 1963.

KB

For Jewelry—Namely, Precious Metal Rings.
First use Nov. 5, 1962.

SN 177,894. Jacques Kreisler Manufacturing Corporation, North Bergen, N.J. Filed Sept. 27, 1963.

UMAT

For Watch Bands.
First use Sept. 10, 1963.

SN 177,981. Harold Glaser, d.b.a. H. Glaser Co., New York, N.Y. Filed Sept. 30, 1963.

HG

For Gold and Precious Metal Jewelry, Other Than Silver.
First use May 5, 1962.

Class 29 — Brooms, Brushes, and Dusters

SN 173,781. Rubberset Company, East Newark, N.J. Filed July 25, 1963.

OXLON

For Paint Brushes.
First use Jan. 17, 1963.

SN 177,142. B. Altman & Co., New York, N.Y. Filed Sept. 17, 1963.

BALTA

Owner of Reg. No. 393,034.
For Untreated Cleaning Cloths.
First use at least as early as December 1962.

Class 32 — Furniture and Upholstery

SN 145,224. Trans-Continental Industries, Inc., Fullerton, Calif. Filed May 22, 1962.

SAFETY SERVER

Applicant disclaims in the descriptive name of the goods, the word "Server" apart from the mark as shown. The drawing is lined for red, but no claim is made to color.
For Infants' Serving Table-Chairs and Accessories Therefor.
First use October 1948.

SN 171,551. Masterpiece Mirror Corporation, Memphis, Tenn. Filed June 21, 1963.

Masterpiece MIRRORS

Applicant disclaims any exclusive right in the word "Mirrors" apart from the mark as shown.
For Mirrors.
First use 1855.

SN 173,284. Presentation, Inc., New York, N.Y. Filed July 18, 1963.

presentation frame

Applicant disclaims the word "Frame" apart from the mark as shown. The drawing is lined for green and is part of the mark as claimed.
For Quick Change Picture Frames for Photographs, Water-Colors, Drawings, Prints, Documents and the Like.
First use May 20, 1963.

SN 175,621. Syracuse Ornamental Co., Inc., Syracuse, N.Y. Filed Aug. 22, 1963.

SYROCO

Owner of Reg. Nos. 422,195 and 425,741.
For Furniture and Upholstery.
First use on or about May 1, 1963; in or about May 1911 as to "Syroco."

SN 179,407. Drexel Enterprises, Inc., Drexel, N.C. Filed Oct. 21, 1963.

REPERTOIRE

For Bedroom, Dining Room, Living Room, Occasional and Upholstered Furniture.
First use Oct. 3, 1963.

SN 179,467. Schnadig Corporation, Chicago, Ill. Filed Oct. 21, 1963.

LEGACY

For Upholstered Furniture.
First use Oct. 11, 1963.

SN 180,239. The Seng Company, Chicago, Ill. Filed Oct. 31, 1963.

SWIVEL WITH A MEMORY

No claim is made to the exclusive use of the word "Swivel" alone.
For Furniture Swivels.
First use in June 1961.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 154,858. Smithco Engineering, Inc., Tulsa, Okla. Filed Oct. 9, 1962.

SMITHCO

The drawing is lined for red, however, no claim is made to any particular color.
For Heat Exchangers—Namely, Finned Tube Heat Exchangers and Sections Therefor.
First use on or about Jan. 1, 1961.

SN 156,797. Universal Oil Products Company, Des Plaines, Ill., assignee of Catalytic Combustion Corporation, Detroit, Mich. Filed Nov. 7, 1962.

CC

The drawing is lined for the color grey, but no claim is made to a particular color.
For Catalytic Units for Heat Generation and for Air Pollution Control.
First use Oct. 5, 1962.

SN 175,621. Syracuse Ornamental Co., Inc., Syracuse, N.Y. Filed Aug. 22, 1963.

SYROCO

Owner of Reg. Nos. 422,195 and 425,741.
For Sconces.
First use on or about May 1, 1963; in or about May 1911 as to "Syroco."

SN 177,772. Controlled Air and Water Equipment Co., Brentwood, Mo. Filed Sept. 26, 1963.

CAWCO

For Humidifiers.
First use Nov. 9, 1959.

SN 177,885. Van der Heem N.V. Elektrotechnische Industrie, The Hague, Netherlands. Filed Sept. 27, 1963.

VAN DER HEEM heem-air

Owner of Dutch Reg. No. 147,327, dated Mar. 21, 1963.
For Industrial and Domestic Air Treatment Installations (Air Cleaning, Air Humidifying, Air Drying, Air Cooling and Air Heating Installations), Compressors and Fans, as Well as the Component Parts and Accessories of Same.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 167,289. McCreary Tire & Rubber Company, Indiana, Pa. Filed Apr. 22, 1963.

McCREARY SCOT

For Rubber Vehicle Tires.
First use Feb. 4, 1963.

Class 36 — Musical Instruments and Supplies

SN 166,741. Munts TV, Inc., Wheeling, Ill. Filed Apr. 15, 1963.

MUNTZ

Owner of Reg. Nos. 545,731 and 672,738.
For Record Players.
First use Feb. 1, 1963.

Class 37 — Paper and Stationery

SN 148,602. The Crystal Tissue Company, Middletown, Ohio. Filed July 9, 1962.

For Tissue Paper of All Kinds.
First use 1952.

SN 156,202. Waldorf Paper Products Company, St. Paul, Minn. Filed Oct. 29, 1962.

BRITE-WALD

Owner of Reg. No. 747,769.
For Coated Paperboard Having a High Gloss Surface.
First use Aug. 21, 1962.

SN 160,585. American Can Company, New York, N.Y. Filed Jan. 14, 1963.



The mark consists of a geometrical representation of the letter "A" upon which is superimposed a solid oval figure.
For Napkins, Facial Tissue, Toilet Tissue, Paper Towels, Waxed Paper, Paper Adhesive Tape for Floral Uses, Paperboard, and Offset Paper.
First use Oct. 12, 1962, on napkins.

SN 169,538. A. W. Faber-Castell Pencil Co., Inc., Newark, N.J. Filed May 23, 1963.

THERMOCHROM

Owner of Reg. No. 700,509.
For Pencils, Pens, Ball Point Pens, Ink Pens, Crayons, Leads, Erasers, Chalks.
First use June 10, 1941.

SN 171,893. Lakeside Central Company, Chicago, Ill. Filed June 26, 1963.

POUCHEE

For Notebooks.
First use May 2, 1963.

SN 172,541. Gebr. Fend, Pforzheim, Baden, Germany. Filed July 3, 1963.

FENDBOY

Priority claimed under Sec. 44(d) on German application filed Jan. 14, 1963; Reg. No. 774,929, dated June 28, 1963.
Owner of U.S. Reg. No. 707,807.
For Multicolor Ball-Point Pens.

SN 172,542. Gebr. Fend, Pforzheim, Baden, Germany. Filed July 3, 1963.



Priority claimed under Sec. 44(d) on German application filed Jan. 4, 1963; Reg. No. 772,592, dated Apr. 17, 1963.
Owner of Reg. No. 707,807.
For Multicolor Pens and Pencils.

SN 173,579. Imprinting Corporation of America, New York, N.Y. Filed July 23, 1963.

CHARM

For Ball Point Pens.
First use May 1, 1962.

SN 174,919. Vincent P. Trigg, d.b.a. Vincent P. Trigg & Sons, West Hartford, Conn. Filed Aug. 12, 1963.

PINKY

For Writing Instruments Attached to the User's Finger.
First use July 8, 1963.

SN 177,139. B. Altman & Co., New York, N.Y. Filed Sept. 17, 1963.

BALTA

For Cleansing Tissue, Toilet Tissue and Paper Towels.
First use at least as early as November 1962 on cleansing tissue.

Class 38 — Prints and Publications

SN 162,477. Newspaper Enterprise Association, Inc., Cleveland, Ohio. Filed Feb. 11, 1963.

BEN CASEY

For Comic Strip for Newspapers or Other Publications.
First use Nov. 26, 1962.

SN 164,653. Oxford Paper Company, New York, N.Y. Filed Mar. 14, 1963.

SELECT-O-GUIDE

For Printed Booklets Containing Samples of Various Types of Paper.
First use May 1960.

SN 166,400. The National Milk Producers Federation, Washington, D.C. Filed Apr. 9, 1963.

THE YOUNG COOPERATOR

For Newsletter Containing Items of Interest to Young Dairy Farmers and Young Dairy Cooperative Leaders and Members.
First use Mar. 18, 1963.

SN 166,664. Standard Milling Company, Kansas City, Mo. Filed Apr. 12, 1963.

THROUGH THE OVEN DOOR

Owner of Reg. No. 643,940.
For Leaflets Containing Recipes Published and Distributed From Time to Time.
First use on or about June 6, 1956.

SN 168,609. Charles C. Hoffberger, Baltimore, Md. Filed May 10, 1963.

SAF-I-PLAC

For Sign for Use in a Vehicle To Identify the Driver as Being a Student Driver.
First use May 1, 1963.

SN 169,111. Craft-Bilt Homes, Inc., Pampa, Tex. Filed May 17, 1963.

CRAFT-BILT

For Plans, Specifications and Printed Instructions for Erection of Prefabricated Houses and Components Thereof.
First use on or about Apr. 23, 1961.

SN 170,345. W. R. C. Smith Publishing Co., Atlanta, Ga. Filed June 4, 1963.

SOUTHERN AUTOMOTIVE JOURNAL

For Trade Magazine.
First use August 1930.

SN 170,430. W. R. C. Smith Publishing Co., Atlanta, Ga. Filed June 5, 1963.

ELECTRICAL SOUTH

For Trade Magazine.
First use January 1921.

SN 171,614. Catholic Book Publishing Company, Inc., New York, N.Y. Filed June 24, 1963.

SAINT JOSEPH

For Catholic Religious Books.
First use Dec. 8, 1950.

SN 172,039. Kenneth J. Barrist, d.b.a. National Collection Service, Philadelphia, Pa. Filed June 28, 1963.

COLLECT-A-KIT

For Kit Consisting of a Book, Letter and Index Forms for Collecting Delinquent Accounts.
First use May 15, 1963.

SN 172,819. John Giusti, d.b.a. Giusti Card Co., New York, N.Y. Filed July 11, 1963.

Giusti BELLE ART

For Greeting Cards.
First use September 1949.

SN 173,735. The Chek-Chart Corporation, Chicago, Ill. Filed July 25, 1963.

AUTOMOBILE INVOICE SERVICE COMPANY

The word "Company" is disclaimed. Owner of Reg. No. 654,780.
For Publication of Dealers' Cost and List Price Information About New Automobiles.
First use Sept. 22, 1955.

Class 39 — Clothing

SN 121,920. The Great Western Garment Company Ltd. Edmonton, Alberta, Canada. Filed June 13, 1961.

COWBOY KING

Owner of Canadian Reg. No. 187 NS 47,599, dated July 10, 1953; and U.S. Reg. No. 606,109.
For Clothes for Men, Women and Children—Namely, Shirts, Coats, Pants and Overalls.
First use November 1929; in commerce November 1929.

SN 135,415. Wohl Shoe Company, St. Louis, Mo. Filed Jan. 8, 1962.

GLUVLINGS

For Ladies' and Misses' Shoes.
First use 1956.

SN 135,416. Wohl Shoe Company, St. Louis, Mo. Filed Jan. 8, 1962.

ROLLICKERS

For Ladies' and Misses' Shoes.
First use 1959.

SN 138,024. The Joseph & Feiss Company, Cleveland, Ohio. Filed Feb. 15, 1962.

HARMONIZER

For Men's Tailored Clothing—Namely, Suits, Topcoats, Overcoats, Sportcoats, Jackets and Slacks.
First use Feb. 9, 1962.

SN 144,257. Kayser-Roth Corporation, New York, N.Y. Filed May 10, 1962.

DREAMAWAY

For Infants', Boys' and Girls' Pajamas and Night Gowns.
First use Aug. 3, 1953.

SN 145,703. Melrose Hosiery Mills, Inc., High Point, N.C. Filed May 29, 1962.

Varsity Crew

For Crew Socks.
First use June 7, 1957.

SN 146,512. Powerhouse, Inc., New Brunswick, N.J. Filed June 8, 1962.

Hy•Test

Owner of Reg. No. 394,632.
For Hosiery.
First use Dec. 30, 1940.

SN 147,242. Tru Balance Corsets, Inc., New York, N.Y. Filed June 19, 1962.

PRIVATE LIFE

For Ladies' Corsets, Girdles, Corselettes, Brassieres, Bathing Suits, and Underwear.
First use Mar. 15, 1962, on ladies' corsets, girdles, and corselettes.

SN 147,966. Superior Pants, Inc., New York, N.Y. Filed June 28, 1962.



The representation of the trousers as set forth in the mark is disclaimed apart from the mark as shown.
For Shorts, Walking Shorts, Slacks, Trousers and Pants.
First use June 1, 1956.

SN 154,715. Gay Gibson, Inc., Kansas City, Mo. Filed Oct. 8, 1962.

Gay *petites*
by GAY GIBSON

The mark "Gay Gibson" is a fictitious name. The word "Petites" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 388,752 and 510,093.
For Ladies' Dresses.
First use Nov. 29, 1961.

SN 154,741. Melville Shoe Corporation, New York, N.Y. Filed Oct. 8, 1962.

MILES TEEN-TYPES

No registration rights are claimed for the wording "Teen-Types" apart from the mark as shown. Owner of Reg. No. 621,367, and others.
For Misses' Shoes.
First use Aug. 1, 1962; Jan. 1, 1905, as to the trademark "Miles."

SN 155,506. Robert Hall Clothes, Inc., d.b.a. Robert Hall Clothes, New York, N.Y. Filed Oct. 19, 1962.

Larini

For Men's Raincoats.
First use on or about Sept. 28, 1962.

SN 155,608. Fit-Rite Pants Company, Inc., New York, N.Y. Filed Oct. 22, 1962.

"DOETWIST"

Owner of Reg. No. 678,490.
For Boys' and Men's Trousers, and Slacks.
First use Oct. 10, 1962.

SN 155,823. Mitsubishi International Corporation, New York, N.Y. Filed Oct. 24, 1962.

MR. SNEEKERS

The term "Sneekers" is disclaimed apart from the mark as a whole.
For Shoes for Men, Women and Children.
First use Apr. 4, 1962.

SN 155,824. Mitsubishi International Corporation, New York, N.Y. Filed Oct. 24, 1962.



The term "Sneekers" is disclaimed apart from the mark as a whole.
For Shoes for Men, Women and Children.
First use Apr. 4, 1962.

SN 155,917. Robert Hall Clothes, Inc., d.b.a. Robert Hall Clothes, New York, N.Y. Filed Oct. 25, 1962.

Larini

For Men's Raincoats.
First use on or about Sept. 28, 1962.

SN 156,339. Robby Len, Inc., New York, N.Y., assignee of Teen Age Beachwear Corp., New York, N.Y. Filed Oct. 31, 1962.

ROBBY LEN

The name "Robby Len" is fanciful.
For Swimwear, Beachwear and Playsuits.
First use Dec. 1, 1955.

SN 156,743. Isidro Jover & Ca. S.A., Barcelona, Spain. Filed Nov. 6, 1962.

PULLIGAN

For Wool and Lisle Shirts.
First use July 17, 1962; in commerce July 17, 1962.

SN 159,046. Country Store Clothing Company, Inc., Yakima, Wash. Filed Dec. 13, 1962.



For Men's and Boys' Shirts, Jeans and Jackets; Men's and Women's Sweaters; and Women's Nylon Hosiery.
First use Sept. 1, 1955.

SN 159,484. Andrew Geller, Inc., Brooklyn, N.Y. Filed Dec. 20, 1962.

AD LIB

For Ladies' and Misses' Shoes.
First use Dec. 11, 1962.

SN 160,818. A-1 Manufacturing Company, Los Angeles, Calif. Filed Jan. 17, 1963.

Racers

For Trousers.
First use Nov. 5, 1962.

SN 164,443. The Joseph & Feiss Company, Cleveland, Ohio. Filed Mar. 12, 1963.

CREASE CONTROLLED

For Men's Tailored Wearing Apparel—Namely, Suits, Slacks, Coats and Jackets.
First use Feb. 13, 1963.

SN 165,110. Belle Furs, Inc., New York, N.Y. Filed Mar. 21, 1963.

A
HILDABELLE
ORIGINAL

No claim is made to the words "A" and "Original" apart from the mark as shown.
For Women's Fur Garments—Namely, Fur Collars, Fur Stoles, Fur Capes and Fur Hats.
First use Feb. 1, 1963.

SN 166,535. Martin J. Dubin, d.b.a. American Hosiery Company, Philadelphia, Pa. Filed Apr. 11, 1963.

Miss Wink

For Nylon Hosiery.
First use on or about Mar. 1, 1960.

SN 167,340. Ray Strauss Unlimited, Inc., New York, N.Y. Filed Apr. 22, 1963.

KEYHEART

For Ladies' Bonnets, Hats, Hoods, Shrugs, Dickies, Boleros, Scarves, Mufflers and Jackets.
First use Mar. 1, 1962, on ladies' scarves.

SN 167,859. Alba-Waldensian, Inc., Valdese, N.C. Filed May 1, 1963.

DU SOIR

The English translation of the French words "Du Soir" is "of the evening," "from the evening," "by the evening" or "for the evening."
For Women's Hosiery.
First use Apr. 3, 1963.

SN 169,243. Fleetwood Sportwear, Inc., New York, N.Y. Filed May 20, 1963.

LOR-LEN

For Ladies' Sweaters.
First use Apr. 30, 1962.

SN 169,324. Super-Form Brassiere, Inc., Orange, N.J. Filed May 20, 1963.

Tempteen

For Brassieres and Girdles.
First use Mar. 14, 1960.

SN 169,952. Maidenform, Inc., New York, N.Y. Filed May 29, 1963.

DREAMTIME

Owner of Reg. Nos. 705,284, 743,826, and others.
For Foundation Garments.
First use May 10, 1963.

SN 170,499. Symphony Classics, Inc., New York, N.Y. Filed June 6, 1963.

SUFFOLK DOWNS

For Women's Blouses.
First use Apr. 19, 1963.

SN 171,320. Countess Mara, Incorporated, New York, N.Y. Filed June 19, 1963.

"MARA TEX"

Owner of Reg. No. 586,155.
For Men's Shirts and Neckties.
First use in or about March 1963.

SN 173,143. Antoinette Fashions, Inc., Cleveland, Ohio. Filed July 17, 1963.

Antoinette

For Women's Sweaters, Skirts and Dresses.
First use Mar. 25, 1963.

SN 173,384. Saks & Company, New York, N.Y. Filed July 19, 1963.

GOURMETTE

For Women's and Misses' Aprons, Skirts and Overskirts.
First use July 11, 1963.

SN 173,386. Sam Silberstein Corp., New York, N.Y. Filed July 19, 1963.

BRAETOGS

For Coats.
First use June 11, 1963.

SN 173,453. Haggar Company, Dallas, Tex. Filed July 22, 1963.

ULTRAMATIC

For Men's and Boys' Clothing—Namely, Slacks.
First use on or about July 9, 1963.

SN 173,864. The Puritan Sportswear Corp., Altoona, Pa. Filed July 26, 1963.

PURITAN

Owner of Reg. Nos. 177,983, 727,739, and others.
For Men's and Boys' Sweaters, Sport Shirts, Swimwear, Knit Shirts, Jackets, Shorts, Slacks, Walk Shorts, and Vests.
First use September 1910.

SN 174,280. Melville Shoe Corporation, New York, N.Y. Filed Aug. 2, 1963.

HOOTENANNY
BOOTENANNY

For Women's and Girls' Shoes.
First use Aug. 1, 1963; Feb. 28, 1963, as to "Hootenanny."

SN 175,630. Bullock's, Inc., Los Angeles, Calif. Filed Aug. 23, 1963.

Debwyn

For Teen and Pre-Teen Dresses, Coats, Suits, Hats, Sweaters, Sportswear (Namely, Shorts, Pants, Jackets), Blouses, Skirts, Lingerie, Bathing Suits, Robes and Bed-jackets, and Raincoats.
First use May 1, 1963.

SN 175,771. Melville Shoe Corporation, New York, N.Y. Filed Aug. 26, 1963.

GUNG-HO

For Men's Casual Shoes of Canvas and Rubber.
First use Aug. 12, 1963.

Class 40—Fancy Goods, Furnishings, and Notions

SN 167,502. Thin-Flex, Inc., Savage, Minn. Filed Apr. 24, 1963.

Smart-eez

For Hose Supporters.
First use Mar. 29, 1963.

SN 170,742. The Glemby Company, Inc., New York, N.Y. Filed June 11, 1963.

Vogue

For Hair Goods—Namely, Chignons, Braids, Switches, Curls, Pony Tails, and Foundations.
First use Nov. 7, 1938.

SN 171,991. International Assemblix Corporation, Toledo, Ohio. Filed June 27, 1963.

GLITTER-AMA

For Kits Consisting of Packages of Sequins and Vari-Colored Glitter.
First use Apr. 2, 1963.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 162,200. Textile Corporation of America, Los Angeles, Calif. Filed Feb. 6, 1963.

Texcopa

Owner of Reg. No. 526,928.
For Printed Fabric Used in the Manufacture of Sport Shirts, Sun Dresses, Swim Suits and Similar Garments.
First use Dec. 31, 1962.

SN 162,666. Societe Rhodiaceta, Paris, France. Filed Feb. 13, 1963.

DOLCETA

Priority claimed under Sec. 44(d) on French Reg. No. 508,296, dated Oct. 11, 1962 (Paris); Natl. Inst. No. 192,862.
Owner of French Reg. No. 508,296.
For Textile Fabrics for Making Into Coats, Suits, Dresses, Sweaters, Skirts, Shirts, Scarfs, Ties and the Like.

SN 162,669. Societe Rhodiaceta, Paris, France. Filed Feb. 13, 1963.



Priority claimed under Sec. 44(d) on French Reg. No. 508,297, dated Oct. 11, 1962 (Paris); Natl. Inst. No. 192,863.
Owner of French Reg. No. 508,297.
For Textile Fabrics for Making Into Coats, Suits, Dresses, Sweaters, Skirts, Shirts, Scarfs, Ties and the Like.

SN 164,209. Burlington Industries, Inc., New York, N.Y. Filed Mar. 8, 1963.



For Pillow-Cases and Sheets.
First use at least as early as 1955.

SN 165,092. Troy Mills, Inc., Troy, N.H., by change of name from Troy Mills Incorporated, Troy, N.H. Filed Mar. 20, 1963.

TROYELLA

Owner of Reg. Nos. 299,668, 534,679 and 593,965.
For Soft Finish Fabric in the Piece Used for Lining in Men's, Women's, and Children's Heavy Garments and for Heavy Sport Shirts.
First use Jan. 31, 1963.

SN 170,541. C. H. Masland & Sons, Carlisle, Pa. Filed June 7, 1963.

The Magic of Masland Carpets

Applicant disclaims "Carpets" apart from the mark as shown. Owner of Reg. Nos. 428,361 and 543,627.
For Textile Carpets and Rugs.
First use June 18, 1962.

SN 172,854. The Springs Cotton Mills, Lancaster, S.C. Filed July 11, 1963.

AQUA-SHED

Owner of Reg. No. 751,348.
For Durable Water Repellent Finish—Mildew, Soil and Perspiration Resistant as Applied to Cotton Piece Goods.
First use May 23, 1963.

Class 44—Dental, Medical, and Surgical Appliances

SN 153,277. John F. Greer Company, Oakland, Calif. Filed Sept. 17, 1962.

GREER

For Surgical Appliances and Parts Used in Irrigation of the Colostomy.
First use 1929.

SN 162,118. Sonotone Corporation, Elmsford, N.Y. Filed Feb. 5, 1963.

Wisp-Ear

Owner of Reg. Nos. 731,904 and 734,259.
For Hearing Aids and Parts Thereof.
First use Apr. 16, 1962.

SN 168,478. William V. and Peggy C. Buchanan, d.b.a. Adjusta Chair Company, Bridgeton, Mo. Filed May 9, 1963.

ADJUSTA CHAIR

The word "Chair" is disclaimed apart from the mark as shown.
For Corrective and Therapeutic Chair for Handicapped Children.
First use Nov. 15, 1962.

SN 170,694. Sonotone Corporation, Elmsford, N.Y. Filed June 10, 1963.

MIGHTY WISP

Owner of Reg. Nos. 731,904 and 784,259.
For Hearing Aids.
First use May 21, 1963.

SN 173,637. Edward Don & Company, Chicago, Ill. Filed July 24, 1963.

HOSPI-KING

For Hospital Utensils and Supplies—Namely, Bed Pans, Urinals, Catheter Trays, Emesis Basins and Bags.
First use July 10, 1963.

SN 174,915. Joseph V. Scullin, d.b.a. Scullin Dental Laboratory, Cleveland, Ohio. Filed Aug. 12, 1963.

ARTIC-U-LOC

For Dental Articulator Accessories—Viz, Magnet Assemblies and Parts Thereof.
First use Nov. 8, 1961.

Class 45—Soft Drinks and Carbonated Waters

SN 156,725. Companhia Uniao Fabril Portuense S.A.R.L., Porto, Portugal. Filed Nov. 6, 1962.

TELSTAR

Priority claimed under Sec. 44(d) on Portuguese application filed July 27, 1962; Reg. No. 115,353, dated Apr. 8, 1963.
For Carbonated Soft Drinks.

SN 159,758. Mr. Boston Distiller Inc., Boston, Mass. Filed Dec. 26, 1962.

OLD MR. BOSTON

Owner of Reg. Nos. 351,462 and 595,649.
For Non-Alcoholic Cocktail Mixes.
First use Nov. 28, 1962.

SN 159,759. Mr. Boston Distiller Inc., Boston, Mass. Filed Dec. 26, 1962.

MR. BOSTON

Owner of Reg. Nos. 351,462 and 595,649.
For Non-Alcoholic Cocktail Mixes.
First use Nov. 28, 1962.

SN 165,338. Robert Kreis, d.b.a. R.K. Foods, Los Angeles, Calif. Filed Mar. 25, 1963.

Robair's DWINK

For Non-Alcoholic Mix for Use in Making Soft Drinks and Alcoholic Cocktails.
First use Feb. 20, 1963.

SN 166,257. The Coca-Cola Company, Atlanta, Ga. Filed Apr. 8, 1963.

TaB

For Flavored Dietary Soft Drink and Syrup for Making Same.
First use Mar. 21, 1963.

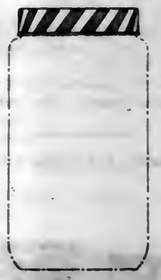
SN 169,291. Milko Products, Inc., Chicago, Ill. Filed May 20, 1963.

ZING

For Powdered Beverage Base for Making Soft Drinks.
First use Jan. 28, 1963.

Class 46—Foods and Ingredients of Foods

SN 122,936. Kretschmer Wheat Germ Corp., Saginaw, Mich. Filed June 27, 1961.



The drawing is lined for the color red.
For Wheat Germ.
First use June 15, 1961.

SN 137,679. Zaninovich Bros. Inc., Orange Cove, Calif. Filed Feb. 9, 1962.

Ful-o'C

Owner of Reg. No. 684,501.
For Fresh Citrus Fruits.
First use May 22, 1961.

SN 138,422. Raoul Dubois-Prevost, Paris (Seine), France. Filed Feb. 21, 1962.

ZYMOSUGAR

Priority claimed under Sec. 44(d) on French Reg. No. 498,480, dated Aug. 25, 1961 (Seine); Natl. Inst. No. 171,633.
For Sugar Containing Enzymes in Bulk and Canned Form.

SN 142,106. Leaf Brands, Inc., Chicago, Ill. Filed Apr. 12, 1962.



For Bubble Gum.
First use July 23, 1947.

SN 147,827. Israel Kosher Sausage Co., Philadelphia, Pa. Filed June 27, 1962.

ISRAEL

For Cured and Processed Meats—Namely, Beef Bologna, Beef Salami, and Kosher Pastrami.
First use on or about Jan. 27, 1950.

SN 148,547. Vessey & Co., Inc., El Centro, Calif. Filed July 6, 1962.



No claim is made to the word "Spice," and the representation of the goods apart from the mark as shown.
For Garlic.
First use June 14, 1962.

SN 152,764. City Stores Company, d.b.a. Maison Blanche, New York, N.Y. Filed Sept. 10, 1962.



For Candy.
First use Nov. 1, 1922.

SN 154,234. California Canners and Growers, San Francisco, Calif., by merger from Filice & Perrelli Canning Company, Richmond, Calif. Filed Oct. 1, 1962.

OLD WORLD CUISINE

No claim is made to the word "Cuisine" apart from the mark as shown.
For Canned Zucchini With Tomatoes.
First use Sept. 13, 1962.

SN 155,396. Arthur A. Doumakes, d.b.a. Candycraft, Los Angeles, Calif. Filed Oct. 18, 1962.

mr. mello

The word "Mello" is disclaimed.
For Candy Bar.
First use Mar. 15, 1961.

SN 155,675. Worthington Foods, Inc., Worthington, Ohio. Filed Oct. 22, 1962.

FIBROTEIN

For Processed Soybean Protein Which Is Useable as the Main Ingredient of a Meat Substitute Food Product.
First use Nov. 9, 1961.

SN 155,950. United Frozen Foods Corp., Los Angeles, Calif. Filed Oct. 25, 1962.

United

For Frozen Foods—Namely, Vegetables and Fish.
First use Aug. 19, 1959.

SN 157,178. Wilson-Jacobi, Inc., Syosset, N.Y. Filed Nov. 13, 1962.



For Bread, Rolls, Cakes, and Pies.
First use May 10, 1962.

SN 157,915. Sol Lazar, d.b.a. Lazar's Kosher Sausage Factory, Chicago, Ill. Filed Nov. 26, 1962.



For Frankfurters.
First use about 1958.

SN 157,965. The Rona Company, Westbury, N.Y., assignee of Blair Chocolates, Inc., d.b.a. The Rona Co., New York, N.Y. Filed Nov. 27, 1962.

THE CANDY TREE

No claim of exclusive right is made to "Candy," said word being the name of the goods.
For Candy.
First use in September 1960.

SN 158,504. American Home Products Corporation, New York, N.Y. Filed Dec. 5, 1962.

INDIAN COUNTRY

For Unpopped Popcorn.
First use Sept. 25, 1962.

SN 159,830. Larrowe Feed Co., Detroit, Mich. Filed Dec. 27, 1962.

LARRO

For Feeds for Livestock, Rabbits, Dogs, Deer and Poultry.
First use Aug. 29, 1962.

SN 160,414. Fallbrook Citrus Association, Fallbrook, Calif. Filed Jan. 9, 1963.

HERMOSA

"Hermosa" is a Spanish word meaning "beautiful" or "handsome." Owner of Reg. No. 414,837.
For Fresh Citrus Fruit.
First use in 1916.

SN 164,631. Joe Lowe Corporation, New York, N.Y. Filed Mar. 14, 1963.

PARTY CAKE

Applicant disclaims the word "Cake" apart from the mark as shown.
For Frozen Confections on Sticks, and Liquid Concentrates for Making the Same.
First use Oct. 31, 1962.

SN 164,825. Wm. H. Floyd, d.b.a. Wm. H. Floyd & Company and Wm. H. Floyd & Co., S. Pasadena, Calif. Filed Mar. 18, 1963.

CALITALIA

For Olives, Tomato Paste and Canned Tuna.
First use Feb. 14, 1963.

SN 169,831. Continental Baking Company, Rye, N.Y. Filed May 28, 1963.

WONDER

Owner of Reg. Nos. 215,188, 722,297, and 732,800.
For Donuts and Pastries.
First use at least as early as July 14, 1941, on donuts.

SN 170,288. Bill & Ed Koda, South Dos Palos, Calif. Filed June 4, 1963.

KOKUHO ROSE

The English translation of the Japanese word "Kokuho" is "country treasure."
For Rice.
First use Dec. 19, 1962.

SN 170,390. East Coast Food Corp., Riverhead, N.Y. Filed June 5, 1963.

Warner's

For Potato Chips, Potato Sticks, Corn Chips, Corn Sticks, Cheese Chips, Cheese Sticks, Barbecue Flavored Pretzels and Unshelled Nuts.
First use Sept. 4, 1952.

SN 170,436. Sucrest Corporation, New York, N.Y. Filed June 5, 1963.

SUCREST

Owner of Reg. Nos. 297,908, 670,710, and others.
For Refined Sugar.
First use Jan. 30, 1962; Mar. 15, 1932, in a different form.

SN 171,670. La Sierra College, d.b.a. La Sierra College Farms, Arlington, Calif. Filed June 24, 1963.

VEG-A-PRO

For Fresh Eggs.
First use in or about May 1956.

SN 172,235. Pure Dairy & Food Products Corp., Brooklyn, N.Y. Filed July 1, 1963.

puredale BRAND

Applicant disclaims the word "Brand" separate and apart from the mark. The drawing is lined for blue.
For Margarine, Frozen Fish Sticks, and Dairy Products—Namely, Domestic and Imported Cheeses.
First use in or about December 1962.

SN 172,285. American Salt Corporation, Omaha, Nebr. Filed July 2, 1963.

BIG 6

For Product Comprising Salt and Trace Minerals for Use by Livestock.
First use on or about May 10, 1950.

SN 172,359. Armour and Company, Chicago, Ill. Filed July 3, 1963.

JACK FROST

"Jack Frost" is not the name of a particular living individual. Owner of Reg. No. 541,314.
For Frozen Beef Steaks.
First use Mar. 11, 1963.

SN 173,107. Green River Corporation, Chicago, Ill. Filed July 16, 1963.

GREEN RIVER

Owner of Reg. Nos. 129,217 and 669,029.
For Ice Cream and Sherbet, and Bases and Concentrates and Syrups and Extracts for Making the Same.
First use May 1963.

SN 173,223. Central Soya Company, Inc., d.b.a. Central Soya, Fort Wayne, Ind. Filed July 18, 1963.

SOYALOSE

Owner of Reg. No. 355,762.
For Soybean Flour.
First use Apr. 14, 1937.

SN 173,224. Central Soya Company, Inc., d.b.a. Central Soya, Fort Wayne, Ind. Filed July 18, 1963.

SOYARICH

Owner of Reg. No. 367,933.
For Soybean Flour.
First use Oct. 31, 1936.

SN 173,225. Central Soya Company, Inc., d.b.a. Central Soya, Fort Wayne, Ind. Filed July 18, 1963.

SOYAFLUFF

Owner of Reg. No. 355,763.
For Soybean Flour.
First use Oct. 2, 1936.

SN 173,237. Don the Beachcomber, Los Angeles, Calif. Filed July 17, 1963.

DON THE BEACHCOMBER

Owner of Reg. No. 520,918.
For Tea.
First use Jan. 1, 1954.

SN 173,258. Jul. A. Jorgensen A/S, Aarhus, Denmark. Filed July 18, 1963.

JULIA

For Cookies.
First use Jan. 30, 1963; in commerce Jan. 30, 1963.

SN 173,690. The Quaker Oats Company, Chicago, Ill. Filed July 24, 1963.



For Biscuits and Cookies.
First use 1957.

SN 174,614. Sea Pak Corporation, d.b.a. Atlantic Seafood Company, St. Simons Island, Ga. Filed Aug. 7, 1963.

Coastal BRAND

No claim is made to the word "Brand."
For Frozen Breaded Fish Sticks and Frozen Breaded Shrimp.
First use Dec. 1, 1952.
Subj. to Intf. with SN 175,385.

SN 175,385. Caribou Fisheries, Ltd., Gloucester, Mass. Filed Aug. 20, 1963.

Coastal BRAND

The word "Brand" is disclaimed apart from the mark as a whole.
For Packed Fish Fillets, Fresh and Fresh-Frozen.
First use Dec. 19, 1961.
Subj. to Intf. with SN 174,614.

SN 176,986. Ben F. Adamek, d.b.a. Sunrise Packing Company, Blythe, Calif. Filed Sept. 16, 1963.

ADCO

For Fresh Vegetables.
First use Apr. 1, 1963.

SN 177,069. Lovelace Candy Manufacturing Co., Nashville, Tenn. Filed Sept. 16, 1963.

LOV-LIKS

For Candy.
First use Aug. 6, 1963.

SN 177,121. Vicki Foods, Inc., Detroit, Mich. Filed Sept. 16, 1963.

VICKI'S

For Hot Sauce, Barbecue Sauce, and Tomato Catsup.
First use February 1960 on barbecue sauce.

SN 177,324. The Quaker Oats Company, Chicago, Ill. Filed Sept. 18, 1963.

LITTLE BETSY'S

The mark is fanciful and not the name of any living person.
For Biscuits and Cookies.
First use June 18, 1963; at least as early as 1938 as to "Betsy's."

SN 177,429. Leaf Brands, Inc., Chicago, Ill. Filed Sept. 20, 1963.

CHU-MAN-CHU

For Bubble Gum.
First use Jan. 30, 1963.

SN 177,463. Stinson Canning Company, Prospect Harbor, Maine. Filed Sept. 20, 1963.

BEACH CLIFF

For Canned Sardines.
First use 1929.

SN 177,532. Mark III Enterprises, Inc., San Francisco, Calif. Filed Sept. 23, 1963.

ANNOUNCEMINTS

For Candy.
First use Sept. 16, 1963.

SN 178,132. Chas. Pfizer & Co., Inc., New York, N.Y. Filed Oct. 1, 1963.

LACTIVASE

For Enzyme Preparation for Dairy Products.
First use Feb. 13, 1940.

Class 47 — Wines

SN 152,613. Meier's Wine Cellars, Inc., Silverton, Ohio. Filed Sept. 6, 1962.

MEIER'S
Niagara Rose

Applicant disclaims "Niagara Rose" apart from the mark as shown. Owner of Reg. Nos. 266,625 and 628,819.
For Pink Grape Wine.
First use July 30, 1962.

SN 169,555. Alexis Lichine & Co., Margaux, Gironde, France. Filed May 23, 1963.

ALEXIS LICHINE

"Alexis Lichine" is the name of an individual whose consent is of record.
For Wines.
First use Oct. 25, 1955; in commerce Oct. 25, 1955.

SN 169,705. Cucamonga Vineyard Company, d.b.a. Cucamonga Vineyard Co., Cucamonga, Calif. Filed May 27, 1963.

Cuvée d'Or

The English translation of the mark is "vat of gold." No claim is made to the word "Cuvée" except in the association shown.
For Wines and Champagnes.
First use May 13, 1963.

SN 170,896. E. J. Gallo Winery, d.b.a. Gourmet di California, Modesto, Calif. Filed June 13, 1963.

SCOTTY

For Hard Cider.
First use May 10, 1963.

Class 48 — Malt Beverages and Liquors

SN 156,725. Companhia Uniao Fabril Portuense S.A.R.L., Porto, Portugal. Filed Nov. 6, 1962.

TELSTAR

Priority claimed under Sec. 44(d) on Portuguese application filed July 27, 1962; Reg. No. 115,353, dated Apr. 8, 1963.
For Beer.

SN 172,573. Drewrys Limited U.S.A., Inc., South Bend, Ind. Filed July 8, 1963.

DREWRYS

Owner of Reg. Nos. 320,940, 658,607, and others.
For Beer.
First use Apr. 1, 1963.

Class 49 — Distilled Alcoholic Liquors

SN 154,859. Societe Anonyme J. and J. Pallas, Nerac-en-Armagnac, Lot-et-Garonne, France. Filed Oct. 9, 1962.

NAPOLEON

Applicant does not have the exclusive use of the word "Napoléon and therefore disclaims all rights to the exclusive use of said word. Owner of French Reg. No. 255, dated Dec. 11, 1961 (De Nerac); Natl. Inst. No. 176,381.
For Brandy.

SN 171,149. H. C. Macpherson, d.b.a. Macpherson & Company, and A. & B. Mackay & Company, San Francisco, Calif. Filed June 17, 1963.

KINGS BANQUET

For Scotch Whisky.
First use Feb. 1, 1934.

Class 50 — Merchandise Not Otherwise Classified

SN 156,333. Robbins Incubator Company, Denver, Colo. Filed Oct. 31, 1962.

ROBBINS
hatch-O-matic

For Incubators Including Accessories Therefor and Parts Thereof Such as Temperature, Timing and Humidity Control Mechanisms, Incubating and Hatching Trays and Egg Turning Equipment.
First use on or about July 1, 1962.

SN 171,363. Le Trappeur, Inc., Westwood, Mass. Filed June 19, 1963.

EZ 3

For Shoe Trees.
First use Mar. 25, 1963.

SN 175,621. Syracuse Ornamental Co., Inc., Syracuse, N.Y. Filed Aug. 22, 1963.

SYROCO

Owner of Reg. Nos. 422,195 and 425,741.
For Wall Plaques.
First use on or about May 1, 1963; in or about May 1911 as to "Syroco."

Class 51 — Cosmetics and Toilet Preparations

SN 128,943. Aloe Creme Laboratories, Inc., Fort Lauderdale, Fla. Filed Oct. 2, 1961.

SATELLITE

For Lipstick.
First use Aug. 2, 1957.

SN 143,998. Picaso-Anstalt, Vaduz, Liechtenstein. Filed May 7, 1962.

"AMADIS"

The French word "Amadis" means close-fitting sleeve buttoned at the wrist. Owner of Liechtenstein Reg. No. 1,160, dated Apr. 20, 1961.
For Perfume and Toilet Water.

SN 145,202. Maw-Vack Inc., Aurora, Ohio. Filed May 22, 1962.

Fashion Two Twenty

Beauty Aids, Perfumes, Salts, Emulsions, Paints, Polishes, Dyes, Soaps, Hair Preparations, Skin Lotions, Creams, Powders, and Oils and Toilet Articles Used for Treating, Cleaning, Dressing or Embellishing the Skin, Hair, Face, Scalp, Hands, Fingernails, Eyebrows, Eye-Lashes.
First use May 8, 1962.

SN 146,031. Division Sales Specialty Merchandise Association, Chicago, Ill. Filed June 4, 1962.

Really Beautiful!

For Hair Spray, Spray Hair Lotions and Spray Hair Setting Liquid, Hair Conditioning Creams and Lotions, Liquid Waving Solutions—Namely, Permanent Waving Solutions, Hair Coloring Preparations, Depilatories, Brilliantines, Toilet Water, Perfume, and Cologne, Lipstick, Nail Enamel and Remover, Lip Makeup, and Eye Lotion.
First use Apr. 12, 1962, on hair spray and spray hair setting liquid.

SN 159,858. Marvin Societa per l'Industria Farmaceutica e Cosmetica Istituto Farmaco Biologico Societa in Nome Collettivo, Milan, Italy. Filed Dec. 26, 1962.



Owner of Italian Reg. No. 159,733, dated July 12, 1962.
For Hair Lotions, Dentifrices, Toilet Waters; Perfumes and Colognes; Cosmetic Creams; Lotions and Powders; Body Deodorants; Bath Oils and Powders; Hair Creams and Lotions; Waving Preparations; Shaving Lotions; Sachet Powders; Brilliantines; Suntan Lotions; Nail Enamels and Removers; Eye Make-Ups; Lipsticks; Hair Straighteners; Hair Lacquers; Hair Pomades; Massage and Vanishing Creams.

SN 162,653. J. J. Newberry Co., New York, N.Y. Filed Feb. 13, 1963.

NEWCREST

For Shave Lotion, Bay Rum, Instant Lather Shave Cream, Bath Oil, Nail Polish Remover, Hair Spray, Hand Lotion, All Purpose Cream, and Talcum Powder.
First use Nov. 16, 1962.

SN 164,012. Colgate-Palmolive Company, New York, N.Y. Filed Mar. 6, 1963.

FLUORIGARD

For Dentifrice.
First use Jan. 11, 1963.

SN 165,208. Carley, Inc., Haddonfield, N.J. Filed Mar. 22, 1963.

TROPHETTE

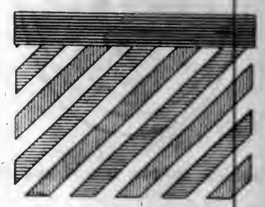
For Toilet Water.
First use Mar. 8, 1963.

SN 165,209. Carley, Inc., Haddonfield, N.J. Filed Mar. 22, 1963.

SPORTS TROPHY

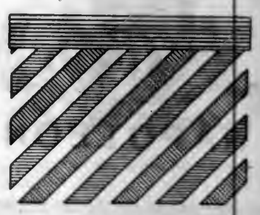
For After Shave Lotion.
First use Mar. 8, 1963.

SN 169,859. Chas. Pfizer & Co., Inc., New York, N.Y., by merger from Thomas Leeming & Company, Inc., New York, N.Y. Filed May 28, 1963.



The drawing is lined for the colors blue and red. Owner of Reg. Nos. 725,452, 187,443, and others.
For Shaving Preparations.
First use May 23, 1963.

SN 169,948. Chas. Pfizer & Co. Inc., New York, N.Y., by merger from Thomas Leeming & Company, Inc., New York, N.Y. Filed May 29, 1963.



The drawing is lined for the colors blue and green. Owner of Reg. Nos. 725,452, 187,443, and others.
For Shaving Preparations.
First use May 23, 1963.

SN 170,060. The Gillette Company, Boston, Mass. Filed May 31, 1963.

WHITE RAIN

Owner of Reg. Nos. 551,925, 578,266, and 581,574.
For Hair Spray.
First use Sept. 5, 1962.

SN 170,162. Hazel Bishop Inc., Union, N.J. Filed June 3, 1963.

MAGIC PLUS

For Hair Spray Set.
First use May 16, 1963.

SN 172,871. Canadian Aerasols Limited, Toronto, Ontario, Canada. Filed July 12, 1963.

CHARMAINE

Owner of Canadian Reg. No. 128,440, dated Oct. 19, 1962.
For Cosmetics Namely, Hair Shampoo, Hair Set, and Hair Tint.

SN 173,117. Maradel Products, Inc., New York, N.Y. Filed July 16, 1963.

EYE WONDER

For Eye Make-Up Remover.
First use July 10, 1963.

SN 173,376. Monsanto Chemical Company, St. Louis, Mo. Filed July 19, 1963.

LUSTRE-PHOS

For Dentifrice Cleansing Agent.
First use June 28, 1963.

SN 173,939. Maybelline Co., Chicago, Ill. Filed July 29, 1963.

ULTRA-LASH

For Mascara for Eye Make-Up.
First use July 25, 1963.

SN 174,041. Miner's, Inc., New York, N.Y. Filed July 30, 1963.

MINER'S

For Cologne and Personal Deodorants.
First use 1918.

SN 174,094. Sup-Erb Brush Company, Inc., East Greenville, Pa., assignee of George S. Erb, d.b.a. Sup-Erb Brush Company, East Greenville, Pa. Filed July 31, 1963.

ELIZABETH BOYSON

The name "Elizabeth Boyson" is a living individual, whose consent is of record.
For Shampoo, Hair Rinse, Moisturizing Gel, Bubbling Bath Oil, Milk Bath, Hand Lotion, Hand Cream, Lipstick, Liquid Foundation, Compact Make-Up, Matte-Make-Up, Liquid Rouge, Deep Pore Cleanser, All Purpose Cream, Body Lotion, Deodorant, Hair Spray, Lotion Perfume Sachet, Splash Cologne, Medicated Skin Cream, Sachet Powder, Skin Freshener, Dusting Powder, Eye Shadow Stick, Mascara, Eyebrow Pencil, Moisture Lotion, Hormone Cream, Facial Mask, Nail Polish, Base and Top Coat, Nail Polish Remover, Bath Oil, Cologne Spray Mist, Perfume Spray.
First use Mar. 1, 1963.

Class 52—Detergents and Soaps

SN 153,213. The Procter & Gamble Company, Cincinnati, Ohio. Filed Sept. 14, 1962.

SAFEGUARD

Owner of Reg. No. 299,200.
For Soap for Personal Use.
First use July 13, 1962.

SN 154,391. Ajem Laboratories, Inc., Livonia, Mich. Filed Oct. 3, 1962.

JEM PHOS

No claim is made to the term "Phos" apart from the mark as shown. Owner of Reg. Nos. 641,141, 740,345, and others.
For Compounds for Cleaning Metals and Compounds Effective Both as Cleaner and for Undercoating Metals and Especially Solutions for Preparing Ferrous Metals for Organic Coatings.
First use on or about Aug. 30, 1962.

SN 154,392. Ajem Laboratories, Inc., Livonia, Mich. Filed Oct. 3, 1962.

JEM MULSION

No claim is made to the term "Mulsion" apart from the mark as shown. Owner of Reg. Nos. 641,141, 740,345, and others.
For Compounds for Surface Cleaning and Compounds Effective Both as Cleaner and Rust Inhibitor.
First use on or about Aug. 24, 1962.

SN 159,499. Kanner Industries, Inc., Cleveland, Ohio. Filed Dec. 20, 1962.

MEDICATED PROTECTION DAILY MPD

No registration rights are claimed for the words "Medicated Protection Daily" apart from the mark as shown, but applicant reserves its common-law rights in the mark as shown or any feature thereof.
For Waterless Skin Cleaner.
First use Apr. 13, 1962.

SN 159,858. Marvin Societa per l'Industria Farmaceutica e Cosmetica Istituto Farmaco Biologico Societa in Nome Collettivo, Milan, Italy. Filed Dec. 26, 1962.



Owner of Italian Reg. No. 159,733, dated July 12, 1962.
For Shampoos, Soaps and Detergents.

SN 159,924. Texize Chemicals, Inc., Greenville, S.C. Filed Dec. 28, 1962.

TEL-STAR

For Household Cleaner.
First use Dec. 10, 1962.

SN 168,473. Bissell Inc., Grand Rapids, Mich. Filed May 9, 1963.

BISSELL

Owner of Reg. Nos. 668,491 and 710,700.
For Aerosol Grill and Oven Cleaner and Aerosol Household Detergents.
First use January 1963.

SN 170,899. Economics Laboratory, Inc., St. Paul, Minn. Filed June 13, 1963.

MIKROKLENE

Owner of Reg. No. 344,369.
For General Purpose Detergent Having Germicidal Properties.
First use Jan. 16, 1958.

SERVICE MARKS

Class 100 — Miscellaneous

SN 120,736. Memorial Shield, Inc., Kansas City, Mo. Filed May 24, 1961.



Owner of Reg. No. 743,133.
For Service of Operating a Funeral Prepayment Plan.
First use June 28, 1960.

SN 135,916. School Pictures, Inc., Jackson, Miss. Filed Jan. 16, 1962.

MULTI-CHROME

For Portrait Photography.
First use Dec. 6, 1961.

SN 155,469. Air Conditioning and Refrigeration Institute, Washington, D.C. Filed Oct. 11, 1962.



THE CROWNING TOUCH

For Association Services Namely, the Promotion of the Interest of Applicant's Members in the Field of Air Conditioning, Including Advertising and Promotional Programs in Cities and Local Communities Designed To Make the Homeowner and the Homebuyer Aware of the Benefits of Air Conditioning; Furnishing Advice and Consultation to Builders, Financial Institutions, Utility Companies, Suppliers, and Realtors as a Part and in Furtherance of Said Advertising and Promotional Programs; Promoting, in Every Lawful Manner, the General Welfare of the Air Conditioning Refrigeration Industry.
First use May 1, 1961.

SN 171,808. S. E. Rykoff & Co., Los Angeles, Calif. Filed June 25, 1963.

SERCO

For Household and General Purpose Cleaners, Silver Cleaner, Bar Laundry Soap, Dishwashing Compound and Floor Cleaner.
First use Dec. 21, 1960.

SN 172,400. Noreen Laboratories, Inc., Lincoln, Nebr. Filed July 3, 1963.

FLEAVOL

For Shampoo Preparation Used in Veterinary Medicine.
First use June 16, 1936.

SN 163,885. Skispree Inc., New York, N.Y. Filed Mar. 4, 1963.

SKISPREE

For Arranging Package Ski Trips Including Planning, Transportation, Accommodations, Rental Equipment, Free Ski Instruction, and All Necessary Incidentals.
First use Dec. 16, 1960.

Class 101 — Advertising and Business

SN 132,799. Associated Grocers of Colorado, Inc., Denver, Colo. Filed Nov. 27, 1961. COLLECTIVE MARK.

SHUR-VALU

For Retail Grocery Store Services.
First use Nov. 22, 1961.

SN 149,675. Rayflex Exploration Company, Dallas, Tex. Filed July 24, 1962.

RAYFLEX

For Making Subsurface Surveys for Others in a Search for Oil and/or Gas Bearing Geological Structures; and Surveying Gas Transmission and/or Distribution Lines To Determine the Location of the Points of Gas Leakage From These Lines.
First use Oct. 21, 1946.

SN 158,213. Amerad Corporation, Charlottesville, Va. Filed Nov. 30, 1962.



For Computer Programming and Computer-Oriented Research Services.
First use at least as early as Feb. 3, 1961.

SN 166,093. Handy-Andy Labor, Inc., New York, N.Y. Filed Apr. 4, 1963.

HANDY-ANDY

For Employment Services—Namely, Furnishing Temporary Industrial Help.
First use Dec. 5, 1962.

SN 166,836. Reddy Kilowatt, Inc., New York, N.Y. Filed Apr. 16, 1963.

REDDY

Owner of Reg. No. 412,269.
For Design and Formulation of Advertising and Public Relations Material To Be Used by Investor-Owned Public Utilities in Promoting the Sale of Their Services.
First use Mar. 14, 1926.

Class 102 — Insurance and Financial

SN 141,384. Teachers Service Organization, Inc., Philadelphia, Pa. Filed Apr. 2, 1962.



Applicant disclaims the words "Thrift," "Credit" and "Character" alone and apart from the mark as shown.
For Loan Services.
First use September 1957.

SN 166,752. Restaurants Preferred, Washington, D.C. Filed Apr. 15, 1963.



"Restaurants" is disclaimed apart from the mark as shown.
For Credit Services—Namely, Issuing Credit Cards Which Enable the Card Holder To Purchase Services and Merchandise From Participating Establishments and To Pay for Such Purchases Periodically Upon Receipt of a Statement.
First use Dec. 28, 1962.

SN 170,325. Murphy Finance Company, St. Paul, Minn. Filed June 4, 1963.

MAILMONEY

For Personal Loan Services.
First use Apr. 22, 1963.

SN 171,117. The First National Bank of Kansas City, Kansas City, Mo. Filed June 17, 1963.

FIRST-O-MATIC

For Checking Account Services.
First use at least as early as May 6, 1963.

Class 103 — Construction and Repair

SN 157,604. Custom Squire, Inc., Charleston, W. Va. Filed Nov. 20, 1962.



For Making Clothing and Apparel for Men to Order.
First use July 1, 1962.

Class 105 — Transportation and Storage

SN 168,367. T.E.K. Van Lines, Inc., South El Monte, Calif. Filed May 7, 1963.

TEK vanlines, inc.

For Transportation of Household Goods by Motor Vehicles in Interstate Commerce.
First use May 1962.

SN 169,781. Hertz System, Inc., New York, N.Y. Filed May 27, 1963.

3-R

For Combined Plane, Car Rental, and Motel/Hotel Reservation Service.
First use Nov. 1, 1961.

SN 170,502. Western Transportation Co. Inc., Los Angeles, Calif. Filed June 6, 1963.

WESTWORLD TRAVEL SERVICE

The words "Travel Service" are disclaimed apart from the mark as shown.
For Operation of a Travel Service, Ticket Agency, Travel Bureau, and Travel Tour Arranging Service.
First use Oct. 1, 1961.

Class 106 — Material Treatment

SN 172,115. Synthetics Finishing Corporation, Philadelphia, Pa. Filed June 28, 1963.

SAGSET

For Finishing, Sizing, and Stabilizing the Fabrics of Others.
First use Oct. 11, 1957.

Class 107 — Education and Entertainment

SN 173,530. Storer Broadcasting Company, Miami Beach, Fla. Filed July 22, 1963.

GHOULARDI

For Furnishing Entertainment Services in the Nature of Acting as a Host on Shock, Horror, or Science Fiction Motion Pictures Broadcast by Television.
First use Jan. 18, 1963.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 138,942. Brotherhood Commission of the Southern Baptist Convention, Memphis, Tenn. Filed Mar. 2, 1962.



Owner of Reg. No. 692,227.
For Indicating Membership in Applicant Organization.
First use Oct. 1, 1961.

SN 162,216. Western Motels, Inc., Phoenix, Ariz. Filed Feb. 6, 1963.



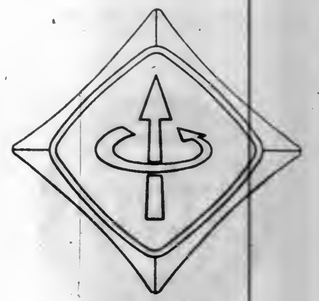
Applicant makes no claim to the exclusive right to use the words "Best," or "Motels," or "Member," apart from the mark as shown. Owner of Reg. Nos. 677,103 and 687,405.
For Indicating Membership in Applicant's Organization.
First use August 1962.

SN 163,449. Plymouth Pennant Squadron, Plymouth, England. Filed Feb. 25, 1963.



The drawing is lined for green, which color is claimed as a feature of the mark.
For Indicating Membership in Applicant.
First use June 1962; in commerce June 1962.

SN 170,319. Institute of Electrical and Electronics Engineers, New York, N.Y. Filed June 4, 1963.



For Indicating Membership in Applicant.
First use on or about Jan. 25, 1963.

SN 171,561. National Slurry Seal Association, Waco, Tex. Filed June 21, 1963.



The lining shown on the drawing is for shading purposes only.
For Indicating Membership in Applicant.
First use Jan. 18, 1963.

CERTIFICATION MARKS

Class A — Goods

SN 160,160. Chain Link Fence Manufacturers Institute, New York, N.Y. Filed Jan. 4, 1963.



The mark certifies that the goods bearing the mark conforms to specifications adopted by applicant as to quality of material and workmanship, and that the work on the goods and performance of services on the goods was performed by members of the applicant.
For Chain Link Fencing Fabric, Posts and Hardware Necessary for Installation of the Same.
First use May 25, 1961.

TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

765,692. APC PRECISION MADE AND DESIGN. American Plastics Corporation. SN 141,688. Pub. 12–17–63. Filed 4–6–62.

765,693. LASOL. The Dow Chemical Company. SN 154,704. Pub. 12–17–63. Filed 10–8–62.

765,694. NUF. Ferro Corporation. SN 155,601. Pub. 12–17–63. Filed 10–22–62.

765,695. COLVETTA. The Borden Company, d.b.a. The Borden Chemical Co. SN 159,949. Pub. 12–17–63. Filed 12–31–62.

765,696. THIEM. Thiem Products, Inc. SN 160,518. Pub. 12–17–63. Filed 1–10–63.

765,697. BANDEL. Union Carbide Corporation. SN 163,087. Pub. 12–17–63. Filed 2–19–63.

765,698. RIPL PROSTRAN. E. B. & A. C. Whiting Company. SN 164,762. Pub. 12–17–63. Filed 3–15–63.

Class 2 — Receptacles

765,699. APC PRECISION MADE AND DESIGN. American Plastics Corporation. SN 141,689. Pub. 12–17–63. Filed 4–6–62.

765,700. "THRIFTY-3." A. J. Canfield Company. SN 147,352. Pub. 12–17–63. Filed 6–21–62.

765,701. ROYALON. Royalon, Inc. SN 150,279. Pub. 12–17–63. Filed 8–1–62.

765,702. KETTLE KARTON. Frisch Restaurants, Inc. SN 163,832. Pub. 12–17–63. Filed 3–4–63.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

765,703. ORBIT. Beco Products Corporation, d.b.a. Oshkosh Luggage. SN 141,791. Pub. 12–17–63. Filed 4–9–62.

Class 4 — Abrasives and Polishing Materials

765,704. SWORD. Colgate-Palmolive Company. SN 165,900. Pub. 12–17–63. Filed 4–2–63.

765,705. BLUE GRASS. Belknap Hardware and Manufacturing Company. SN 168,384. Pub. 12–17–63. Filed 5–8–63.

Class 5 — Adhesives

765,706. GESCO. G. E. Smith, Inc. SN 136,930. Pub. 6–18–63. Filed 1–30–62.

765,707. TITAN II. Hudson Pulp & Paper Corp. SN 152,133. Pub. 3–19–63. Filed 8–29–62.

Class 6 — Chemicals and Chemical Compositions

765,708. SENSALITH. Algraphy Limited. SN 141,238. Pub. 12–17–63. Filed 4–2–62.

765,709. REPRESENTATION OF A TIGER'S HEAD. Salem Oil & Grease Co. SN 141,367. Pub. 12–17–63. Filed 4–2–62.

765,710. STYSOLAC AW. F. H. Paul & Stein Bros., Inc. SN 141,748. Pub. 12–17–63. Filed 4–6–62.

765,711. BUGFREE. Chemical Corporation of America. SN 149,819. Pub. 12–17–63. Filed 7–26–62.

765,712. PROTECTOTHERM AND DESIGN. Thermidaire Corporation of America. SN 154,527. Pub. 12–17–63. Filed 10–4–62.

765,713. R.T.F. AND DESIGN. Thermidaire Corporation of America. SN 154,529. Pub. 12–17–63. Filed 10–4–62.

765,714. C.T.B. AND DESIGN. Thermidaire Corporation of America. SN 154,531. Pub. 12–17–63. Filed 10–4–62.

765,715. NEUTRATHERM AND DESIGN. Thermidaire Corporation of America. SN 154,534. Pub. 12–17–63. Filed 10–4–62.

765,716. GLO-TOX. Chas. Pfizer & Co., Inc. SN 155,005. Pub. 12–17–63. Filed 10–11–62.

765,717. HANDY FUEL. Hotel Research Laboratories, Inc. SN 155,509. Pub. 12–17–63. Filed 10–19–62.

765,718. MARVIN AND DESIGN. Marvin Società per l'Industria Farmaceutica e Cosmetica Instituto Farmaco Biologico Società in Nome Collettivo. SN 156,629. Pub. 12–17–63. Filed 11–5–62.

765,719. ESCALOL. Van Dyk & Company, Inc. SN 156,843. Pub. 12–17–63. Filed 11–7–62.

765,720. SUR PHIL AND DESIGN. William Louden, d.b.a. Tinicum Research Company. SN 163,565. Pub. 12–17–63. Filed 2–27–63.

765,721. SILVAPLAST. Ciba Limited. SN 165,990. Pub. 12–17–63. Filed 4–3–63.

765,722. SILVAFAR. Ciba Limited. SN 165,991. Pub. 12–17–63. Filed 4–3–63.

765,723. CITOFIX. Ciba Limited. SN 165,992. Pub. 12–17–63. Filed 4–3–63.

765,724. R AND DESIGN. The Richardson Company. SN 166,040. Pub. 12–17–63. Filed 4–3–63.

765,725. R AND DESIGN. The Richardson Company. SN 166,041. Pub. 12–17–63. Filed 4–3–63.

765,726. CARDI. Plymouth Cordage Company. SN 166,772. Pub. 12–17–63. Filed 4–10–63.

765,727. AXOTHENE. Axton-Cross Company. SN 167,362. Pub. 12–17–63. Filed 4–23–63.

765,728. CRC FORMULA 5–56 DEMOISTURANT AND DESIGN. Corrosion Reaction Consultants, Inc. SN 167,615. Pub. 12–17–63. Filed 4–26–63.

765,729. UNICHLOR. The Neville Chemical Company. SN 169,159. Pub. 12–17–63. Filed 5–17–63.

765,730. TRAILER-GLO. Wyandotte Chemicals Corporation. SN 170,147. Pub. 12–17–63. Filed 5–31–63.

765,731. QUINTOLUBRIC. Quaker Chemical Corporation. SN 170,425. Pub. 12–17–63. Filed 6–5–63.

Class 7 — Cordage

765,732. W WRIGHT'S RIBBON DESIGN. Wm. E. Wright & Sons Co. SN 154,319. Pub. 12–17–63. Filed 10–1–62.

Class 8 — Smokers' Artides, Not Including Tobacco Products

765,733. ROYAL HOUSE LTD. Winston Briar Pipe Manufacturing Co. Ltd. SN 173,539. Pub. 12–17–63. Filed 7–22–63.

765,734. BISCAYNE. C.P. Plastic Engineering Co. Inc. SN 173,626. Pub. 12–17–63. Filed 7–24–63.

765,735. ALPHA. Modern Distributors Trading Inc. SN 173,774. Pub. 12–17–63. Filed 7–24–63.

765,736. VU-LIGHTER. Scripto, Inc. SN 173,967. Pub. 12–17–63. Filed 7–29–63.

Class 10 — Fertilizers

765,737. B-NINE. United States Rubber Company. SN 174,997. Pub. 12–17–63. Filed 8–13–63.

Class 11 — Inks and Inking Materials

765,738. PORELON. S. C. Johnson & Son, Inc. SN 143,399. Pub. 6–11–63. Filed 4–30–62.

765,739. ALLWRITE ETC. AND DESIGN. John H. Sperry Company. SN 154,446. Pub. 12–17–63. Filed 10–3–62.

Class 12 — Construction Materials

765,740. TREVI. Trevi-Tile Inc., assignee of Wall Construction Company Limited. SN 95,194. Pub. 12–17–63. Filed 4–16–62.

765,741. DUNDEE. Dundee Cement Company. SN 101,760. Pub. 12–17–63. Filed 8–1–60.

765,742. HIDE-AHL. American Screen Products Company. SN 139,009. Pub. 12–17–63. Filed 3–5–62.

765,743. KOLORMATE. Nicolet Industries, Inc., assignee of Keasbey & Mattison Company. SN 143,241. Pub. 12–17–63. Filed 4–27–62.

765,744. DU VERRE AND DESIGN. International Pipe and Ceramics Corporation, assignee of Du Verre, Incorporated. SN 160,411. Pub. 12–10–63. Filed 1–9–63.

765,745. THIEMITE. Thiem Products, Inc. SN 160,519. Pub. 12–17–63. Filed 1–10–63.

765,746. HOMIX. Robert W. Gould, d.b.a. Connecticut Dry Mix Co. SN 164,130. Pub. 12–17–63. Filed 3–7–63.

765,747. ZEROMIX. Tri County Asphalt Corp. SN 164,668. Pub. 12–17–63. Filed 3–14–63.

765,748. SILASTIC. Dow Corning Corporation. SN 169,024. Pub. 12–17–63. Filed 5–16–63.

765,749. PEPCO-SEAL. Peck's Products Company. SN 169,164. Pub. 12–17–63. Filed 5–17–63.

765,750. PERMAPIPE. Pittsburgh Chemical Company. SN 169,166. Pub. 12–17–63. Filed 5–17–63.

765,751. TAHITI. Tahiti Tile Co., Inc. SN 169,182. Pub. 12–17–63. Filed 5–17–63.

765,752. WITCOGARD. Witco Chemical Company, Inc. SN 169,333. Pub. 12–17–63. Filed 5–20–63.

765,753. WITCOPAVE. Witco Chemical Company, Inc. SN 169,334. Pub. 12–17–63. Filed 5–20–63.

765,754. F AND DESIGN. Flockhart Foundry Company. SN 169,363. Pub. 12–17–63. Filed 5–21–63.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

765,755. FLEXI-PHRAGM. George W. Dahl Company, Inc. SN 108,280. Pub. 5–2–61. Filed 11–14–60.

765,756. TUBE TRACK. James C. White and Bettye W. White, d.b.a. James C. White Company. SN 136,816. Pub. 12–17–63. Filed 1–22–62.

765,757. TWISTY. Bert E. Tudor. SN 164,282. Pub. 12–17–63. Filed 3–8–63.

765,758. INTERPACE. International Pipe and Ceramics Corporation. SN 167,001. Pub. 12–17–63. Filed 4–18–63.

765,759. CONTINENTAL. Kirsch Company. SN 167,277. Pub. 12–17–63. Filed 4–22–63.

765,760. SPEAKMAN AND DESIGN. Speakman Company. SN 168,444. Pub. 12–17–63. Filed 5–8–63.

765,761. LOKTILE. Swingline Inc. SN 173,058. Pub. 12–17–63. Filed 7–15–63.

Class 14 — Metals and Metal Castings and Forgings

765,762. MISCO. AND DESIGN. The Mercury Iron & Steel Co. SN 68,927. Pub. 5–29–62. Filed 3–4–59.

765,763. REYNOLDS. Reynolds Metals Company. SN 145,733. Pub. 12–17–63. Filed 5–29–62.

765,764. PLACOVAR. Hamilton Watch Company. SN 161,340. Pub. 9–10–63. Filed 1–24–63.

765,765. SUPERCON. Supercon. SN 163,976. Pub. 12–17–63. Filed 3–5–63.

Class 15 — Oils and Greases

765,766. FAST DRAW. Jasper Blackburn Corporation. SN 169,205. Pub. 12–17–63. Filed 5–20–63.

765,767. MOLY-GRAPH. Adam Cook's Sons, Inc. SN 169,223. Pub. 12–17–63. Filed 5–20–63.

Class 16 — Protective and Decorative Coatings

765,768. BLASTIK. The Thomas Company. SN 164,577. Pub. 12–17–63. Filed 3–13–63.

Class 18 — Medicines and Pharmaceutical Preparations

765,769. VETSPRAY. Menlo Park Laboratories, Inc. SN 139,651. Pub. 12–17–63. Filed 3–12–62.

765,770. STIM-U-DREEN. El-Ar Enterprises, Inc. SN 148,962. Pub. 12–17–63. Filed 7–13–62.

765,771. VITAMILK. Meyer-Blanke Company. SN 149,582. Pub. 3–12–63. Filed 7–23–62.

765,772. LITTLE KING AND DESIGN. King Kullen Grocery Co., Inc. SN 150,071. Pub. 12–17–63. Filed 7–30–62.

765,773. PONDERAL. Biofarma, Société Anonyme. SN 150,845. Pub. 12–17–63. Filed 8–9–62.

765,774. P WITHIN TRIANGLE. Palmedico, Inc. SN 154,508. Pub. 12–17–63. Filed 10–4–62.

765,775. NORELAVIL. Merck & Co., Inc. SN 155,087. Pub. 12–17–63. Filed 10–12–62.

765,776. PALMINATE. Palmedico, Inc. SN 155,327. Pub. 12–17–63. Filed 10–17–62.

765,777. ULTRA FEMININE. Helena Rubinstein, Inc. SN 156,030. Pub. 12–17–63. Filed 10–26–62.

765,778. HALLS MENTHO-LYPTUS. Hall Brothers (Whitefield) Limited. SN 156,490. Pub. 12–17–63. Filed 11–2–62.

765,779. P.M. WORMER-34. The Dow Chemical Company. SN 156,947. Pub. 12–17–63. Filed 11–9–62.

765,780. SEROGEN. Diamond Laboratories, Inc. SN 157,291. Pub. 10–1–63. Filed 11–15–62.

765,781. MC-1. The Wander Company. SN 157,582. Pub. 12–17–63. Filed 11–19–62.

765,782. D. D. WILLIAMS. Standard Medical Company, Inc., d.b.a. Standard Medical Company. SN 161,212. Pub. 12–17–63. Filed 1–22–63.

765,783. DR. E. Z. JONES AK-KWIK. Hulon N. Jones, d.b.a. Ak-Kwik Company. SN 164,632. Pub. 12–17–63. Filed 3–14–63.

765,784. NASPRIN. Rexal Drug and Chemical Company, d.b.a. Rexall Drug Company. SN 165,159. Pub. 12–17–63. Filed 3–21–63.

765,785. BRONCHO-VENT. Thomas J. Mahon, Inc. SN 166,296. Pub. 12–17–63. Filed 4–8–63.

765,786. TRI-MELTS. Schuemann Laboratories, Inc. SN 168,359. Pub. 12–17–63. Filed 5–7–63.

765,787. MI-PILO. Barnes-Hind Ophthalmic Products, Inc. SN 168,677. Pub. 12–17–63. Filed 5–13–63.

765,788. NECTAVITE. Hudson Vitamin Products, Inc. SN 172,906. Pub. 12–17–63. Filed 7–12–63.

765,789. BAN-DROWZ. Hudson Vitamin Products, Inc. SN 172,907. Pub. 12–17–63. Filed 7–12–63.

765,790. GERIBAN. Hudson Vitamin Products, Inc. SN 172,908. Pub. 12–17–63. Filed 7–12–63.

765,791. PREVAM. U.S. Vitamin & Pharmaceutical Corporation. SN 173,300. Pub. 12–17–63. Filed 7–18–63.

Class 19—Vehicles

765,792. NSU PRINZ. NSU Motorenwerke Aktiengesellschaft, by change of name from NSU-Werke Aktiengesellschaft. SN 59,050. Pub. 12–17–63. Filed 9–17–58.

765,793. SEC CAR TARY. Joseph M. Cullinan. SN 157,198. Pub. 12–17–63. Filed 11–14–62.

765,794. KWIK-KABLE. Thexton Manufacturing Company. SN 168,874. Pub. 12–17–63. Filed 5–14–63.

765,795. STOW 'N GO AND DESIGN. Fruehauf Corporation. SN 170,463. Pub. 12–17–63. Filed 6–6–63.

765,796. BREEZE. Northeastern Distributors, Inc. SN 173,379. Pub. 12–17–63. Filed 7–19–63.

765,797. TLDX. Pullman Incorporated. SN 173,597. Pub. 12–17–63. Filed 7–23–63.

Class 21—Electrical Apparatus, Machines, and Supplies

765,798. PAMPER PAD. Pamper Pad Incorporated. SN 114,637. Pub. 12–17–63. Filed 2–28–61.

765,799. AEI AND DESIGN. American Electronics, Inc. SN 145,431. Pub. 12–17–63. Filed 5–25–62.

765,800. ALUGARD. General Electric Company. SN 158,815. Pub. 12–17–63. Filed 12–10–62.

765,801. DURABUTE. General Electric Company. SN 158,817. Pub. 12–17–63. Filed 12–10–62.

765,802. TELE-TAPS. Telesystem Services Corporation. SN 159,625. Pub. 12–17–63. Filed 12–21–62.

765,803. QSR. General Electric Company. SN 159,717. Pub. 12–17–63. Filed 12–26–62.

765,804. CERATRIM. CTS Corporation. SN 160,468. Pub. 12–17–63. Filed 1–10–63.

765,805. LAMICODE. Stranco Products, Inc. SN 162,995. Pub. 12–17–63. Filed 2–18–63.

765,806. FOUR STAR AND DESIGN. Four Star Products Corp. SN 163,723. Pub. 12–17–63. Filed 3–1–63.

765,807. DIMATROL. Eagle Electric Mfg. Co. SN 165,910. Pub. 11–5–63. Filed 4–2–63.

765,808. NCR AND DESIGN. The National Cash Register Company. SN 168,023. Pub. 12–17–63. Filed 5–2–63.

765,809. TINY TIM. Amphenol-Borg Electronics Corporation. SN 170,724. Pub. 11–5–63. Filed 6–11–63.

765,810. AMP-BOLT. AMP Incorporated. SN 171,064. Pub. 12–17–63. Filed 6–17–63.

765,811. FASTIN-FASTON. AMP Incorporated. SN 172,626. Pub. 12–17–63. Filed 7–9–63.

765,812. HEMISPHERE. The Sampson Company. SN 172,779. Pub. 12–17–63. Filed 7–10–63.

765,813. FOR GREATER SEE-ABILITY. Westinghouse Electric Corporation. SN 172,789. Pub. 12–17–63. Filed 7–10–63.

Class 22—Games, Toys, and Sporting Goods

765,814. ZEBFLEX. Brunswick Corporation. SN 141,495. Pub. 12–17–63. Filed 4–4–62.

765,815. KING TUT'S PYRAMID. Milton Bradley Company. SN 144,598. Pub. 12–17–63. Filed 5–15–62.

765,816. TENISCOR AND DESIGN. Stan Drobac and Robert E. Rood (joint owners), d.b.a. Drobac/Rood. SN 147,191. Pub. 12–17–63. Filed 6–19–62.

765,817. PEER. Penn Fishing Tackle Mfg. Co. SN 150,601. Pub. 12–17–63. Filed 8–6–62.

765,818. PEERLESS. Penn Fishing Tackle Mfg. Co. SN 150,602. Pub. 12–17–63. Filed 8–6–62.

765,819. HOLDEX. Anthony M. Kluge. SN 155,260. Pub. 12–17–63. Filed 10–16–62.

765,820. IDEAL KING AND DESIGN. Ideal Fishing Float Company, Inc. SN 162,643. Pub. 12–17–63. Filed 2–13–63.

765,821. WIG-LERS AND DESIGN. Wilbur C. Dietzel, d.b.a. Will's Hybred Wig-Lers. SN 163,816. Pub. 12–17–63. Filed 3–4–63.

765,822. SALLY SERVER. De Luxe Reading Corporation. SN 163,823. Pub. 12–17–63. Filed 3–4–63.

765,823. ARCHERMATIC. West Coast Engineering, Inc. SN 164,198. Pub. 12–17–63. Filed 3–7–63.

765,824. ACE TELESTAR AND DESIGN. Amerace Corporation. SN 164,415. Pub. 12–17–63. Filed 3–12–63.

765,825. ACE SEA STAR AND DESIGN. Amerace Corporation. SN 164,586. Pub. 12–17–63. Filed 3–14–63.

765,826. ACE STAR AND DESIGN. Amerace Corporation. SN 164,683. Pub. 12–17–63. Filed 3–15–63.

765,827. ASPEN. L. T. York Company, by change of name from Lucky Tiger Manufacturing Company, d.b.a. Aspen Associates. SN 164,861. Pub. 10–29–63. Filed 3–18–63.

765,828. LOOK LIKE DOLL AND DESIGN. Charm Originals, Inc. SN 167,214. Pub. 12–17–63. Filed 4–22–63.

765,829. SUPER LOCK. Wilson Sporting Goods Co. SN 168,786. Pub. 12–17–63. Filed 5–13–63.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

765,830. POWER-MASTER. The McNeil Machine & Engineering Company. SN 115,504. Pub. 12–17–63. Filed 3–13–61.

765,831. WEIR. G. & J. Weir Limited. SN 134,861. Pub. 12–17–63. Filed 12–28–61.

765,832. P AND TWO CIRCLES DESIGN. Potter Instrument Company, Inc. SN 137,653. Pub. 12–17–63. Filed 2–9–62.

765,833. LETTER M AND DESIGN. Mosstype Corporation. MULTIPLE CLASS (Classes 23 and 50). SN 151,507. Pub. 12–17–63. Filed 8–20–62.

765,834. CRIMPOMATIC. Crimpomatic Mill and Equipment Company. SN 153,762. Pub. 12–17–63. Filed 9–24–62.

765,835. HY-MAC. Hydraulic Machinery Company. SN 154,416. Pub. 11–5–63. Filed 10–3–62.

765,836. PACEMAKER. Walker Manufacturing Company. SN 160,521. Pub. 10–15–63. Filed 1–10–63.

765,837. GALAXY. Philip Morris Incorporated. SN 163,068. Pub. 12–17–63. Filed 2–19–63.

765,838. RANCHERO. Howard T. Johnston, d.b.a. California Seed & Fertilizer Company. SN 164,139. Pub. 7–2–63. Filed 3–7–63.

765,839. DURA PAC. Acme Ball Bearing & Manufacturing Co. SN 166,238. Pub. 12–17–63. Filed 4–8–63.

765,840. BATCO AND DESIGN. Brockton Automatic Transmission Co., Inc. SN 167,201. Pub. 12–17–63. Filed 4–22–63.

765,841. RIVOLI. Edward Don & Company. SN 167,233. Pub. 12–17–63. Filed 4–22–63.

765,842. KIMCO. Kimco Auto Products, Inc. SN 167,276. Pub. 12–17–63. Filed 4–22–63.

765,843. SPORK. Hyde W. Ballard. SN 167,445. Pub. 12–17–63. Filed 4–24–63.

765,844. TUPPERWARE. Rexall Drug and Chemical Company, d.b.a. Tupperware. SN 167,491. Pub. 12–17–63. Filed 4–24–63.

765,845. ARTAG AND DESIGN. Artag Plastics Corporation. SN 168,469. Pub. 12–17–63. Filed 5–9–63.

765,846. ARIENS GARD-N-YARD A AND DESIGN. Ariens Company. SN 170,156. Pub. 12–17–63. Filed 6–3–63.

765,847. ABC. Automated Building Components, Inc. SN 170,157. Pub. 12–17–63. Filed 6–3–63.

765,848. LUBEMATION. Houdaille Industries, Inc. SN 172,311. Pub. 12–17–63. Filed 7–2–63.

765,849. KITTYTRACK. Lennox Industries Inc. SN 172,504. Pub. 12–17–63. Filed 7–5–63.

765,850. PNEUMA-FLO. Pneuma-Flo Systems Inc. SN 172,682. Pub. 12–17–63. Filed 7–9–63.

765,851. PF. Pneuma-Flo Systems Inc. SN 172,683. Pub. 12–17–63. Filed 7–9–63.

765,852. AMP-TAPETRONIC. AMP Incorporated. SN 172,706. Pub. 12–17–63. Filed 7–10–63.

Class 24—Laundry Appliances and Machines

765,853. SHUR-FIL. McGraw-Edison Company. SN 163,159. Pub. 12–17–63. Filed 2–20–63.

Class 26—Measuring and Scientific Appliances

765,854. DYNATRAN. Dynatran Electronics Corp. SN 115,132. Pub. 9–25–62. Filed 3–8–61.

765,855. LA CROIX. La Croix Optical Company. SN 124,557. Pub. 12–17–63. Filed 7–24–61.

765,856. P AND TWO CIRCLES DESIGN. Potter Instrument Company, Inc. SN 137,654. Pub. 12–17–63. Filed 2–9–62.

765,857. BORDEN'S. The Borden Company. SN 145,515. Pub. 12–17–63. Filed 5–28–62.

765,858. MICRO-SINE. Micro-Sine Enterprises. SN 146,915. Pub. 12–17–63. Filed 6–14–62.

765,859. FLOW MASTER. Sporlan Valve Company. SN 157,159. Pub. 12–17–63. Filed 11–13–62.

765,860. LUMIX. Ciba Limited. SN 157,467. Pub. 12–17–63. Filed 11–19–62.

765,861. ALTIPAN. Ciba Limited. SN 157,468. Pub. 12–17–63. Filed 11–19–62.

765,862. MIRA SCREEN AND DESIGN. Frank K. Reid, d.b.a. Frank K. Reid Company. SN 158,651. Pub. 10–29–63. Filed 12–6–62.

765,863. KONTAKTOR. Guardian Electric Manufacturing Co. SN 160,633. Pub. 12–17–63. Filed 1–14–63.

765,864. LODAR AND DESIGN. Litton Industries, Inc. SN 165,144. Pub. 12–17–63. Filed 3–21–63.

765,865. SPECIALIST. Bell & Howell Company. MULTIPLE CLASS (Classes 26 and 36). SN 166,249. Pub. 12–17–63. Filed 4–8–63.

765,866. LO-LOSS. Penn Meter Company. SN 166,579. Pub. 12–17–63. Filed 4–11–63.

765,867. LITHO-MATE. Statmaster Corporation. SN 167,424. Pub. 12–17–63. Filed 4–23–63.

765,868. VORNADO. Vornado, Inc. SN 169,089. Pub. 12–17–63. Filed 5–16–63.

765,869. MARVA. Marva Ignition Test-O-Meter, Inc. SN 169,056. Pub. 12–17–63. Filed 5–29–63.

765,870. AVANT. Avant Incorporated. SN 170,022. Pub. 12–17–63. Filed 5–31–63.

765,871. DOUBLE-X. Eastman Kodak Company. SN 170,391. Pub. 12–17–63. Filed 6–5–63.

765,872. ANSCOTRACE. General Aniline & Film Corporation. SN 171,127. Pub. 12–17–63. Filed 6–17–63.

765,873. ECONO-VALVE. The Marley Company. SN 171,151. Pub. 12–17–63. Filed 6–17–63.

Class 27—Horological Instruments

765,874. QUALCO. Belforte Watch Company, Inc. SN 154,200. Pub. 6–4–63. Filed 10–1–62.

765,875. KIF. Parechoc S.A. SN 159,915. Pub. 12–17–63. Filed 12–28–62.

Class 28—Jewelry and Precious-Metal Ware

765,876. JR. Jobe-Rose Jewelry Company. SN 145,082. Pub. 12–17–63. Filed 5–21–62.

765,877. MISCELLANEOUS DESIGN. F. Zerrenner. SN 154,079. Pub. 12–17–63. Filed 9–27–62.

765,878. JLC. John L. Cole. SN 157,471. Pub. 12–17–63. Filed 11–19–62.

765,879. M AND DESIGN. Marchal, Inc. SN 159,832. Pub. 12–17–63. Filed 12–27–62.

765,880. STYLIZED HA AND M. Harold A. Milbrath. SN 163,387. Pub. 12–17–63. Filed 2–25–63.

765,881. A AND DESIGN. American Gold Chain Company, Inc. SN 165,662. Pub. 12–17–63. Filed 3–29–63.

Class 31—Filters and Refrigerators

765,882. REPRESENTATION OF A MAN BALANCING A DROP. Granger Sofwater Supply & Mfg. Corp., d.b.a. International Watercare Corporation. SN 158,620. Pub. 12–17–63. Filed 12–6–62.

765,883. TRINITY. Pall Corporation, assignee of Trinity Equipment Corporation. SN 159,015. Pub. 12–17–63. Filed 12–12–62.

765,884. BRINK. Monsanto Chemical Company. SN 162,852. Pub. 12–17–63. Filed 2–15–63.

Class 32—Furniture and Upholstery

765,885. POSTUREPEDIC IMPERIAL 200. Sealy, Incorporated, d.b.a. Sealy Mattress Company. SN 142,865. Pub. 12–17–63. Filed 4–23–62.

765,886. TIXIT AND DESIGN. Emile Wodli. SN 149,237. Pub. 12–17–63. Filed 7–17–62.

765,887. S.C.P. Lakewood Manufacturing Co. SN 152,074. Pub. 12–17–63. Filed 8–28–62.

765,888. HAMPTON HALL. Artistic Furniture Co. SN 156,357. Pub. 12–17–63. Filed 11–1–62.

765,889. POSTURLATOR. S & S Mfg. Company. SN 156,666. Pub. 12–17–63. Filed 11–5–62.

765,890. SLEEP N KEEP. Marius. SN 162,960. Pub. 12–17–63. Filed 2–18–63.

765,891. SERTA-ORTHO-LUX. Serta Associates, Inc. SN 165,636. Pub. 12–17–63. Filed 3–28–63.

765,892. CORTRITE. Educators Manufacturing Company. SN 170,397. Pub. 12–17–63. Filed 6–5–63.

765,893. CAMPUS. Educators Manufacturing Co. SN 173,103. Pub. 12–17–63. Filed 7–16–63.

765,894. SIZE-MASTER. Clopay Corporation. SN 173,429. Pub. 12–17–63. Filed 7–22–63.

765,895. VAL-AIDE. Spiegel Industries Corp. SN 173,524. Pub. 12–17–63. Filed 7–22–63.

765,896. CUSTOM FOLIO ONE. Henredon Furniture Industries, Incorporated. SN 173,573. Pub. 12–17–63. Filed 7–23–63.

765,897. F-63. Flex-O-Lators, Inc. SN 173,837. Pub. 12–17–63. Filed 7–26–63.

765,898. DURAFOLD. Chairs & Tables, Inc. SN 174,082. Pub. 12–17–63. Filed 7–31–63.

Class 33 — Glassware

765,899. HANDI-SQUARE. Owens-Illinois Glass Company. SN 176,830. Pub. 12–17–63. Filed 9–12–63.

Class 34 — Heating, Lighting, and Ventilating Apparatus

765,900. RIELLO CONDIZIONATORI AND DESIGN. Riello Condizionatori S.p.A. SN 137,007. Pub. 12–17–63. Filed 1–31–62.

765,901. MICRON-AIRE. Ray Products Company, Inc. SN 138,649. Pub. 12–17–63. Filed 2–26–62.

765,902. GLASS-TITE. Elgen Manufacturing Corp. SN 160,474. Pub. 12–17–63. Filed 1–10–63.

765,903. A AND DESIGN. Aerotec Industries, Inc. SN 167,439. Pub. 12–17–63. Filed 4–24–63.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

765,904. "RESISTAN." Johns-Manville Corporation. SN 141,449. Pub. 12–17–63. Filed 4–3–62.

765,905. FLEXSYN. The B. F. Goodrich Company. SN 161,049. Pub. 8–20–63. Filed 1–21–63.

765,906. RULON. Dixon Corporation. SN 167,886. Pub. 12–17–63. Filed 5–1–63.

765,907. INTERURBAN SUPER TRACTION. The Dayton Tire & Rubber Company. SN 169,435. Pub. 12–17–63. Filed 5–22–63.

765,908. BLAZER. Gulf Oil Corporation. SN 173,353. Pub. 12–17–63. Filed 7–19–63.

Class 36 — Musical Instruments and Supplies

765,865. (See Class 26 for this trademark.)

765,909. CUMBERLAND. Mercury Record Productions, Inc. SN 177,268. Pub. 12–17–63. Filed 9–18–63.

765,910. GALAXIE. Magnus Organ Corporation. SN 177,362. Pub. 12–17–63. Filed 9–19–63.

Class 37 — Paper and Stationery

765,911. TAG-A-LONG. Chicago Printed String Company. SN 148,363. Pub. 12–17–63. Filed 7–5–62.

765,912. SWANETTE. Swanee Paper Corporation. SN 151,790. Pub. 12–17–63. Filed 8–23–62.

765,913. SCRIPTEXT. Robert Fletcher & Son Limited. SN 151,813. Pub. 12–17–63. Filed 8–24–62.

765,914. ZIP-STRIP. The Dow Chemical Company. SN 154,961. Pub. 12–17–63. Filed 10–11–62.

765,915. B BARKLEY ETC. AND DESIGN. C. L. Barkley & Co. SN 161,651. Pub. 12–17–63. Filed 1–24–63.

765,916. A. W. FABER-CASTELL. A. W. Faber-Castell Pencil Co., Inc. SN 165,125. Pub. 12–17–63. Filed 3–21–63.

765,917. MAGNE-COPY. Wausau Paper Mills Company. SN 167,780. Pub. 12–17–63. Filed 4–29–63.

765,918. CAMP-COTE. Union Bag-Camp Paper Corporation. SN 168,122. Pub. 12–17–63. Filed 5–3–63.

765,919. INFORMAL ELEGANCE. Norcross, Inc. SN 172,764. Pub. 12–17–63. Filed 7–10–63.

Class 38 — Prints and Publications

765,920. DESILU. Desilu Productions Inc. SN 136,447. Pub. 12–17–63. Filed 1–24–62.

765,921. GOLDEN GATE EDITIONS AND DESIGN. W. H. Freeman and Company. SN 138,397. Pub. 3–19–63. Filed 2–21–62.

765,922. CHICAGO ELECTRICAL NEWS. Rickard Publishing Company. SN 151,167. Pub. 12–17–63. Filed 8–14–62.

765,923. INTERCHANGE B AND DESIGN. Bekins Van & Storage Co. SN 155,885. Pub. 12–17–63. Filed 10–25–62.

765,924. SCOTS N' WATER. Flying Scot Sailing Association. SN 156,392. Pub. 12–17–63. Filed 11–1–62.

765,925. PARADISE. Outdoor American Corporation. SN 156,755. Pub. 12–17–63. Filed 11–6–62.

765,926. BERNAT. Emile Bernat & Sons Co. SN 161,865. Pub. 12–17–63. Filed 2–1–63.

765,927. PHOTOMIC. Lester S. Lipschultz. SN 161,998. Pub. 12–17–63. Filed 2–4–63.

765,928. FASHION FLAIR IN KNIT WEAR. Melrose Yarn Co., Inc. SN 162,176. Pub. 12–17–63. Filed 2–6–63.

765,929. INTERNATIONAL HARVESTER WORLD. International Harvester Company. SN 162,645. Pub. 12–17–63. Filed 2–13–63.

765,930. MSR MEDICO SURGICAL REFERENCE AND DESIGN. Medical Economics, Inc. SN 163,744. Pub. 12–17–63. Filed 3–1–63.

765,931. MSR. Medical Economics, Inc. SN 163,745. Pub. 12–17–63. Filed 3–1–63.

765,932. RHODE ISLAND RED. Newspaper Enterprise Association, Inc. SN 163,856. Pub. 12–17–63. Filed 3–4–63.

765,933. CSPC AND DESIGN. Champion Sports Publishing Corp. SN 163,929. Pub. 12–17–63. Filed 3–5–63.

765,934. WESTVACO INSPIRATIONS. West Virginia Pulp and Paper Company. SN 164,199. Pub. 12–17–63. Filed 3–7–63.

765,935. GENTLEMAN'S REMINDER. Carey Press Corporation. SN 165,988. Pub. 12–17–63. Filed 4–3–63.

Class 39 — Clothing

765,936. MONIQUE. Tweedie Footwear Corporation. SN 118,016. Pub. 12–17–63. Filed 4–17–61.

765,937. SKI-MATES. Artnell Company. SN 118,853. Pub. 2–6–62. Filed 4–28–61.

765,938. NATURAL TREAD. The Nobil Shoe Company. SN 119,787. Pub. 5–22–62. Filed 5–11–61.

765,939. SKANS BY LA JOLLA. La Jolla Sportswear Company. SN 126,172. Pub. 12–17–63. Filed 8–17–61.

765,940. MESQUITE. Western Wear, Inc. SN 126,705. Pub. 12–17–63. Filed 8–25–61.

765,941. J. Blue Bell, Inc. SN 132,218. Pub. 12–17–63. Filed 11–17–61.

765,942. MAISON PETITE AND DESIGN. Trimfoot Company. SN 132,270. Pub. 12–17–63. Filed 11–17–61.

765,943. THE NEW TWIST FOR DANCING FEET AND DESIGN. S. Goldberg & Co., Inc. SN 137,230. Pub. 12–17–63. Filed 2–5–62.

765,944. ARNAVON. Arnav Shoe Corporation, by change of name from Intercontinental Development Corporation. SN 143,831. Pub. 12–17–63. Filed 5–4–62.

765,945. JOY CREATION. Brecher Brothers, Inc. SN 145,030. Pub. 12–17–63. Filed 5–21–62.

765,946. MR. McIVER. Mr. McIver, Inc. SN 145,204. Pub. 7–30–63. Filed 5–22–62.

765,947. MAC IVOR. Commonwealth Clothing Company. SN 145,525. Pub. 7–30–63. Filed 5–28–62.

765,948. LACEKINS. Mistee Lingerie, Inc. SN 148,056. Pub. 12–17–63. Filed 6–29–62.

765,949. DOUBLE RING AND DESIGN. Elmer Gottehrer, d.b.a. Elmer's Stocking House. SN 148,808. Pub. 12–17–63. Filed 7–11–62.

765,950. ROYAL DEB. Mercantile Stores Company, Inc. SN 149,110. Pub. 12–17–63. Filed 7–16–62.

765,951. GOLD LEAF AND DESIGN. Sidney H. Evans, d.b.a. Evans Manufacturing Co. SN 150,163. Pub. 12–17–63. Filed 7–31–62.

765,952. COUNT DOWN. The Lovable Company. SN 150,354. Pub. 12–17–63. Filed 8–2–62.

765,953. CAREER CASUALS. Sy Frankl, Inc. SN 151,406. Pub. 12–17–63. Filed 8–17–62.

765,954. EXTENDERALL. Associate Fashion Industries, Inc. SN 152,486. Pub. 12–17–63. Filed 9–5–62.

765,955. VENTURE. Smith Brothers Manufacturing Co. SN 155,657. Pub. 12–17–63. Filed 10–22–62.

765,956. JET-SET CASUAL. Nelly Don, Inc. SN 155,936. Pub. 12–17–63. Filed 10–25–62.

765,957. PLUS 4. Hanes-Millis Sales Corporation. SN 156,294. Pub. 12–17–63. Filed 10–31–62.

765,958. SHOE CLUB. Shoe Club No. 1, Inc. SN 156,439. Pub. 12–17–63. Filed 11–1–62.

765,959. DEVON AND DESIGN. Devon Knitwear Company. SN 159,391. Pub. 12–17–63. Filed 12–19–62.

765,960. MISS B. Belk Stores Services, Inc. SN 159,803. Pub. 12–17–63. Filed 12–27–62.

765,961. AIRTEX CUSHION. The Hagerstown Rubber Company. SN 161,788. Pub. 10–8–63. Filed 1–31–63.

765,962. BABY TAN. Colgate, Culp & Co. Inc. SN 157,285. Pub. 11–19–63. Filed 11–15–62.

765,963. VANTASTIC. Vanity Fair Mills, Inc. SN 163,681. Pub. 12–17–63. Filed 2–28–63.

765,964. KITTEN KUDLERS AND DESIGN. Jayvee Brand, Inc. SN 164,351. Pub. 12–17–63. Filed 3–11–63.

765,965. FASHION TRIM. Piedmont Shirt Company. SN 165,157. Pub. 12–17–63. Filed 3–21–63.

765,966. TWIN DESIGN. James Southall & Company Limited. SN 165,466. Pub. 12–17–63. Filed 3–26–63.

765,967. WORKLON. Superior Surgical Mfg. Co., Inc. SN 166,223. Pub. 12–17–63. Filed 4–5–63.

765,968. BY CAPUCI AND DESIGN. Berkshire Sportswear Co., Inc. SN 167,194. Pub. 12–17–63. Filed 4–22–63.

765,969. ST. IVES TRADITIONALS. Phoenix, Inc. SN 167,753. Pub. 12–17–63. Filed 4–29–63.

765,970. EDW. HAWK ETC. AND DESIGN. Roos Bros., Inc. SN 167,757. Pub. 12–17–63. Filed 4–29–63.

765,971. FLEXSTED. Rough Rider, Inc. SN 169,310. Pub. 12–17–63. Filed 5–20–63.

765,972. JO-JAC. Murray Olewitz, Inc. SN 169,471. Pub. 12–17–63. Filed 5–22–63.

765,973. PATTI JANE. Cassie Wear, Inc. SN 169,909. Pub. 12–17–63. Filed 5–29–63.

765,974. ESPRIT. H. Lubovsky, Inc. SN 169,951. Pub. 12–17–63. Filed 5–29–63.

765,975. FORMIDABLE. Maidenform, Inc. SN 169,953. Pub. 12–17–63. Filed 5–29–63.

765,976. SWEET NOTHING. Maidenform, Inc. SN 169,954. Pub. 12–17–63. Filed 5–29–63.

765,977. SWEET STAR. Maidenform, Inc. SN 169,955. Pub. 12–17–63. Filed 5–29–63.

765,978. WOODS EXECU-WEAR AND DESIGN. Woods Manufacturing Company. SN 171,213. Pub. 12–17–63. Filed 6–17–63.

765,979. THE SHIRTSMITH. Grotta Corporation. SN 171,653. Pub. 12–17–63. Filed 6–24–63.

765,980. EVERDUR THIRTY. Robinson Manufacturing Company. SN 171,702. Pub. 12–17–63. Filed 6–24–63.

765,981. LOVELAND AND DESIGN. Joseph Love, Inc. SN 172,207. Pub. 12–17–63. Filed 7–1–63.

765,982. IT MUST BE LOVE AND DESIGN. Joseph Love, Inc. SN 172,208. Pub. 12–17–63. Filed 7–1–63.

765,983. GOLDEN HANGER AND DESIGN. Troy Sportswear Co. SN 172,258. Pub. 12–17–63. Filed 7–1–63.

765,984. BOTTICELLI AND DESIGN. Botticelli, Inc. SN 172,565. Pub. 12–17–63. Filed 7–8–63.

Class 40 — Fancy Goods, Furnishings, and Notions

765,985. PUFFIES. Puffies Company. SN 113,555. Pub. 12–17–63. Filed 2–13–61.

765,986. MISCELLANEOUS DESIGN. Udo Colsman, d.b.a. Ph. Barthels-Feldhoff. SN 159,604. Pub. 12–17–63. Filed 12–21–62.

765,987. PLEAT-O-MATIC. John Dritz & Sons, Inc. SN 160,167. Pub. 7–16–63. Filed 1–4–63.

765,988. DANDY. Coast Empire, Inc. SN 165,898. Pub. 12–17–63. Filed 4–2–63.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

765,989. SP STATE PRIDE AND DESIGN. Belk Stores Services, Inc. SN 159,811. Pub. 12–17–63. Filed 12–27–62.

765,990. GLO-GARD. Coated Textile Mills, Inc. SN 160,750. Pub. 12–17–63. Filed 1–16–63.

765,991. QUALITEX. Cranston Print Works Company. SN 165,303. Pub. 10–1–63. Filed 3–25–63.

765,992. STAR STREAM FABRICS. M. Lowenstein & Sons, Inc. SN 166,391. Pub. 12–17–63. Filed 4–9–63.

765,993. TEMP-R-GLAS. The Connecticut Hard Rubber Company. SN 166,620. Pub. 12–17–63. Filed 4–12–63.

765,994. PERMALAST CAST-COATED FABRIC AND DESIGN. Beaunit Corporation. SN 166,686. Pub. 12–17–63. Filed 4–15–63.

765,995. IMPERIAL ROSE. Fieldcrest Mills, Inc. SN 167,132. Pub. 12–17–63. Filed 4–19–63.

765,996. BOCS AND DESIGN. Orcon Corporation. SN 169,386. Pub. 12–17–63. Filed 5–21–63.

Class 44 — Dental, Medical, and Surgical Appliances

765,997. SANOVAL. S. H. Kress and Company. SN 171,777. Pub. 12–17–63. Filed 6–25–63.

Class 45 — Soft Drinks and Carbonated Waters

765,998. METRI COLA. Mead Johnson & Company, assignee of American Dry Beverage Corp., d.b.a. Metri-Cola Beverage Company. SN 125,866. Pub. 1–22–63. Filed 8–14–61.

765,999. STEP 'N HIGH. Flavorex Company, Inc. SN 153,751. Pub. 12–17–63. Filed 9–24–62.

766,000. DRINK GRAPE DEW GOOD FOR YOU! Brandimist, Inc. SN 153,859. Pub. 12–17–63. Filed 9–25–62.

766,001. GOLDEN AGE ETC. AND DESIGN. American Beverage Corporation. SN 155,769. Pub. 12–17–63. Filed 10–24–62.

Class 46 — Foods and Ingredients of Foods

766,002. MELLO CRISP. The Frito-Nicolay, Dancey Company, d.b.a. Mello Crisp Foods Company. SN 86,653. Pub. 11–29–60. Filed 12–4–59.

766,003. ASTRO-NUT. Fox-Cross Candy Company. SN 133,870. Pub. 5–1–62. Filed 12–12–61.

766,004. TRIP-LITE. S. Gumpert Co., Inc. SN 140,257. Pub. 12–17–63. Filed 3–20–62.

766,005. LAY'S AND POTATO MAN DESIGN. Frito-Lay, Inc. SN 141,429. Pub. 6–18–63. Filed 4–3–62.

766,006. SMORGAS AND DESIGN. Adams and Brooks, Inc. SN 141,781. Pub. 12–17–63. Filed 4–9–62.

766,007. VC ETC. AND DESIGN. The Swiss Colony, Inc., d.b.a. Viennese Confections. SN 143,293. Pub. 12–17–63. Filed 4–27–62.

766,008. OAK FARMS. The Southland Corporation, d.b.a. Oak Farm Dairies, by change of name from The Southland Corporation of Texas. SN 144,649. Pub. 12–17–63. Filed 5–15–62.

766,009. SAFFLONAISE. Pacific Vegetable Oil Corporation, assignee of Fayette Brands, Inc. SN 150,541. Pub. 1–15–63. Filed 8–6–62.

766,010. FRENCH DONUT SHOPPES AND DESIGN. French Donut Shoppes, Inc. SN 152,787. Pub. 12–17–63. Filed 9–10–62.

766,011. BOUTIQUE. The Borden Company. SN 158,051. Pub. 12–17–63. Filed 11–28–62.

766,012. DRESEAM. The Battelle Development Corporation. SN 158,314. Pub. 12–17–63. Filed 12–3–62.

766,013. MAR LINDO. Robert C. Wian Enterprises, Inc., d.b.a. Leonard A. Dunagan Company. SN 159,372. Pub. 12–17–63. Filed 12–18–62.

766,014. RICARDO'S AUTHENTIC MEXICAN FOOD. Richard Correa, Jr., d.b.a. Ricardo's. SN 161,374. Pub. 12–17–63. Filed 1–24–63.

766,015. MRS. FILBERT'S. J. H. Filbert, Inc. SN 162,251. Pub. 12–17–63. Filed 2–7–63.

766,016. ANGEL DIP. House of Herbs, Inc. SN 162,549. Pub. 12–17–63. Filed 2–12–63.

766,017. HERBACUE. House of Herbs, Inc. SN 162,550. Pub. 12–17–63. Filed 2–12–63.

766,018. WD AND DESIGN. Winn-Dixie Stores, Inc. SN 162,802. Pub. 12–17–63. Filed 2–14–63.

766,019. LOLA AND DESIGN. Josephina Maggiore, executor of the will of Peter Maggiore, deceased, d.b.a. Lola Macaroni Co. SN 163,572. Pub. 12–17–63. Filed 2–27–63.

766,020. NUTRI-ZYME. Nutrilite Products, Inc. SN 163,651. Pub. 12–17–63. Filed 2–28–63.

766,021. SIGNATURE QUALITY GAIL BORDEN 1857 AND DESIGN. The Borden Company. SN 163,799. Pub. 12–17–63. Filed 3–4–63.

766,022. PESQUERA DEL PACIFICO, S. DE R.L. AND DESIGN. Pesquera del Pacifico, S.A. SN 163,996. Pub. 12–17–63. Filed 3–4–63.

766,023. McDONALD. M & O Company, Incorporated. SN 164,449. Pub. 12–17–63. Filed 3–12–63.

766,024. SERVIETTE. Beluga Caviar Corp. SN 165,289. Pub. 12–17–63. Filed 3–25–63.

766,025. TORO AND DESIGN. Growers Exchange, Inc. SN 165,326. Pub. 12–17–63. Filed 3–25–63.

766,026. JOHNSTON. Robert A. Johnston Company. SN 166,101. Pub. 12–17–63. Filed 4–4–63.

766,027. LAC. L. A. Champon & Co., Inc. SN 166,529. Pub. 12–17–63. Filed 4–11–63.

766,028. PEP. Burnett's Foods Inc. SN 166,614. Pub. 12–17–63. Filed 4–12–63.

766,029. YIPPEE. Thompson's Dairy, Inc., d.b.a. Thompson's Honor Dairy. SN 167,343. Pub. 12–17–63. Filed 4–22–63.

766,030. FLEX-A-FLASH. Drew Chemical Corporation. SN 167,456. Pub. 12–17–63. Filed 4–24–63.

766,031. CATTLE-IZER. The Quaker Oats Company. SN 167,933. Pub. 12–17–63. Filed 5–1–63.

766,032. NESTLE'S CHOCO-BAKE. The Nestlé Company, Inc. SN 168,213. Pub. 12–17–63. Filed 5–6–63.

766,033. BLUE SEAL AND DESIGN. Interstate Bakeries Corporation. SN 168,929. Pub. 12–17–63. Filed 5–15–63.

766,034. REGAL. Sunshine Biscuits, Inc. SN 171,583. Pub. 12–17–63. Filed 6–21–63.

766,035. ADAM-N-EVE. Gem Canning Company, d.b.a. Gem Canning Co. SN 173,447. Pub. 12–17–63. Filed 7–22–63.

766,036. HPGA AND DESIGN. Hastings Potato Growers Association. SN 173,458. Pub. 12–17–63. Filed 7–22–63.

766,037. TREASURE ISLAND. Mother's Cake & Cookie Co., d.b.a. Old Mission Biscuit Co. SN 173,481. Pub. 12–17–63. Filed 7–22–63.

Class 47 — Wines

766,038. PAVILLON CHAUVENET AND DESIGN. Societe Commerciale des Bourgognes de Marque F. Chauvenet, ou par Abreviation "S.C.B.M." SN 149,332. Pub. 12–17–63. Filed 7–18–62.

766,039. DRY GUINGUET CHATEAU LA FRANCE. Chateau la France. SN 149,537. Pub. 12–17–63. Filed 7–23–62.

766,040. SUNNY CALIFORNIA. Franzia Brothers Winery, d.b.a. Bona Wine Co. SN 153,753. Pub. 12–17–63. Filed 9–24–62.

766,041. TAITTINGER. Champagne Taittinger Compagnie Commerciale & Viticole Champenoise. SN 156,376. Pub. 12–17–63. Filed 11–1–62.

Class 49 — Distilled Alcoholic Liquors

766,042. A DRAM OF DRAMBUIE. The Drambuie Liqueur Co., Ltd. SN 154,099. Pub. 12–17–63. Filed 9–28–62.

766,043. GLEN MORVEN. Lynedoch Whisky Company Limited. SN 165,062. Pub. 12–17–63. Filed 3–20–63.

766,044. WILLIAM LIGHT & SONS ALL THAT THE NAME IMPLIES. Schenley Distillers, Inc., d.b.a. Park & Tilford Distillers Co. SN 166,494. Pub. 12–17–63. Filed 4–10–63.

766,045. COCKNEY. Felton & Son, Incorporated, d.b.a. Joshua Bennett Dist. Co. SN 167,621. Pub. 12–17–63. Filed 4–26–63.

766,046. JOSHUA TREE. Jas. Barclay & Co. Limited. SN 168,672. Pub. 12–17–63. Filed 5–13–63.

766,047. DESERT SPRINGS. Jas. Barclay & Co. Limited. SN 168,673. Pub. 12–17–63. Filed 5–13–63.

766,048. RIDGE CREST. Jas. Barclay & Co. Limited. SN 168,674. Pub. 12–17–63. Filed 5–13–63.

766,049. TWIN PEAKS. Jas. Barclay & Co. Limited. SN 168,675. Pub. 12–17–63. Filed 5–13–63.

Class 50 — Merchandise Not Otherwise Classified

765,833. (See Class 23 for this trademark.)

766,050. PC AND DESIGN. The Plastic Coating Corporation. SN 92,493. Pub. 4–10–62. Filed 3–9–60.

766,051. APC PRECISION MADE AND DESIGN. American Plastics Corporation. SN 141,690. Pub. 12–17–63. Filed 4–6–62.

766,052. SHORE STATION. Midwest Industries, Inc. SN 152,324. Pub. 12–17–63. Filed 8–31–62.

766,053. T. The Testor Corporation. SN 152,352. Pub. 12–17–63. Filed 8–31–62.

766,054. SEALMARK. Rock of Ages Corporation. SN 161,423. Pub. 12–17–63. Filed 1–25–63.

766,055. SAFE-T-NEST AND DESIGN. Grace B. Myaida and Shogo J. Myaida, d.b.a. Birdhouses by Myaida. SN 166,575. Pub. 12–17–63. Filed 4–11–63.

Class 51 — Cosmetics and Toilet Preparations

766,056. HIDE 'N CLEAR. Helene Curtis Industries, Inc., d.b.a. Helene Curtis Laboratories. SN 153,554. Pub. 12–17–63. Filed 9–20–62.

766,057. DEW-O-GEN. Hazel Bishop Inc. SN 155,965. Pub. 12–17–63. Filed 10–26–62.

766,058. MAKING EYES. Avon Products, Inc. SN 157,877. Pub. 12–17–63. Filed 11–26–62.

766,059. FASHIONALYSIS. Neiman-Marcus Company. SN 158,266. Pub. 12–17–63. Filed 11–30–62.

766,060. FIRM TOUCH. Avon Products, Inc. SN 163,519. Pub. 12–17–63. Filed 2–27–63.

766,061. LYLYAN. Lillian M. Smithwick, d.b.a. Lylyan. SN 164,909. Pub. 12–17–63. Filed 3–18–63.

766,062. SWORD. Colgate-Palmolive Company. SN 165,902. Pub. 12–17–63. Filed 4–2–63.

766,063. DOVE. Lever Brothers Company. SN 166,815. Pub. 12–17–63. Filed 4–16–63.

766,064. THE YOUNG SET. Rayette, Inc. SN 167,321. Pub. 12–17–63. Filed 4–22–63.

766,065. SCOTT'S FOUR ROSES. Lee H. Scott, d.b.a. Scott Laboratories. SN 167,419. Pub. 12–17–63. Filed 4–23–63.

766,066. BONAT FRAGRANT. Samuel Bonat & Bro. Inc. SN 167,605. Pub. 12–17–63. Filed 4–26–63.

Class 52 — Detergents and Soaps

766,067. MARVIN AND DESIGN. Marvin Societa per l'Industria Farmaceutica e Cosmetica Istituto Farmaco Biologico Societa in Nome Collettivo. SN 156,630. Pub. 12–17–63. Filed 11–5–62.

766,068. TUILERIES. Celarea, Inc. SN 160,696. Pub. 12–17–63. Filed 1–15–63.

766,069. DISPOZ. Irl Daffin Associates Incorporated. SN 165,658. Pub. 12–17–63. Filed 3–28–63.

766,070. SWORD. Colgate-Palmolive Company. SN 165,901. Pub. 12–17–63. Filed 4–2–63.

766,071. DEFINITE. Wyandotte Chemicals Corporation. SN 170,142. Pub. 12–17–63. Filed 5–31–63.

766,072. RAPOFF. Wyandotte Chemicals Corporation. SN 170,144. Pub. 12–17–63. Filed 5–31–63.

766,073. STELEX. Wyandotte Chemicals Corporation. SN 170,145. Pub. 12–17–63. Filed 5–31–63.

766,074. TORBAX. Wyandotte Chemicals Corporation. SN 170,146. Pub. 12–17–63. Filed 5–31–63.

Service Marks

Class 100 — Miscellaneous

766,075. DOWNTOWNER MOTOR INNS AND DESIGN. The Downtowner Corporation. SN 160,165. Pub. 12–17–63. Filed 1–4–63.

766,076. DOWNTOWNER MOTOR INN AND DESIGN. The Downtowner Corporation. SN 160,410. Pub. 12–17–63. Filed 1–9–63.

766,077. FIGURINE OF A DUCK (DESIGN). Wetlands for Wildlife, Inc. SN 162,388. Pub. 12–17–63. Filed 2–8–63.

Class 101 — Advertising and Business

766,078. INVITEGRAM. The Gracious Lady Service, Inc., assignee of Practical Surveys, Inc. SN 153,982. Pub. 12–3–63. Filed 9–26–62.

766,079. CB CORP. Central Broadcast Corporation. SN 155,570. Pub. 12–17–63. Filed 10–22–62.

766,080. CENTRONIC. Central Broadcast Corporation. SN 155,571. Pub. 12–17–63. Filed 10–22–62.

766,081. BANSA AND DESIGN. Bansa Incorporated. SN 159,036. Pub. 12–17–63. Filed 12–13–62.

Class 102 — Insurance and Financial

766,082. THE INSURANCE SOCIETY THAT CARES FOR YOU. Cuna Mutual Insurance Society. SN 144,466. Pub. 12–17–63. Filed 5–14–62.

766,083. REPRESENTATION OF AN ELK STANDING ON A RIDGE. Elkridge National Bank. SN 162,544. Pub. 12–17–63. Filed 2–12–63.

Class 103 — Construction and Repair

766,084. HIGHLANDER. The Maytag Company. SN 153,788. Pub. 12–17–63. Filed 9–24–62.

766,085. DELTA ETC. AND DESIGN. Delta Electric Construction Co., Inc. SN 160,611. Pub. 12–17–63. Filed 1–14–63.

Class 105 — Transportation and Storage

766,086. REGAL IMPERIAL AND DESIGN. Northwest Airlines, Inc. SN 165,816. Pub. 12–17–63. Filed 4–1–63.

766,087. U. Union Tank Car Company. SN 171,503. Pub. 12–17–63. Filed 6–20–63.

Class 106 — Material Treatment

766,088. AMERICAN INSTITUTE OF LAUNDERING CERTIFIED MEMBER 1962 ETC. AND DESIGN. American Institute of Laundering. SN 149,519. COLLECTIVE MARK. Pub. 12–17–63. Filed 7–23–62.

766,089. ELGIN JEWEL SOLDERING. Erie Resistor Corporation. SN 151,740. Pub. 12–17–63. Filed 8–23–62.

Class 107 — Education and Entertainment

766,090. SAMMY SKIMMER SHOW. Durward B. Early. SN 140,112. Pub. 12–17–63. Filed 3–19–62.

766,091. TOASTMISTRESS INTERNATIONAL AND DESIGN. International Toastmistress Clubs, Inc. SN 142,822. Pub. 12–17–63. Filed 4–23–62.

766,092. THE U.S. BOWL AND DESIGN. The U.S. Bowl, Inc. SN 153,233. Pub. 12–17–63. Filed 9–14–62.

766,093. AMERICAN FREEDOM NETWORK. Morris C. Allen, d.b.a. American Freedom Network. SN 153,241. Pub. 12–17–63. Filed 9–17–62.

766,094. SOUL'S HARBOR. Calvary Temple Evangelistic Association. SN 164,596. Pub. 12–17–63. Filed 3–14–63.

Collective Membership Marks

Class 200

766,095. P.E.O. AND DESIGN. The Supreme Chapter of the P.E.O. Sisterhood. SN 159,664. Pub. 12–17–63. Filed 12–24–62.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 1 — Raw or Partly Prepared Materials

766,096. Keystone Plastics, Inc., Newark, N.J. SN 153,180. Filed P.R. 9–14–62; Am. S.R. 12–26–63.

WAV-E

For Synthetic Monofilaments for Use in the Industrial Arts.
First use on or about Sept. 10, 1962.

766,097. Claremont Flock Corporation, Claremont, N.H. SN 165,674. Filed P.R. 3–29–63; Am. S.R. 12–17–63.



For Flock.
First use Aug. 1, 1962.

766,098. Iowa Limestone Company, Des Moines, Iowa. SN 170,074. Filed P.R. 5–31–63; Am. S.R. 1–2–64.



The drawing is lined for shading purposes only.
For Livestock Limestone Feed Consisting Essentially of Calcium Carbonate.
First use on or about Jan. 5, 1962.

Class 6 — Chemicals and Chemical Compositions

766,099. The Slick-Shine Co. Inc., Newark, N.J. SN 119,896. Filed P.R. 5–12–61; Am. S.R. 12–23–63.

KLEER-FLAME

For Lighter Fuel for Use in Cigarette and Cigar Lighters.
First use June 15, 1960.

Class 12 — Construction Materials

766,100. Products Research Company, Burbank, Calif. SN 140,178. Filed P.R. 3–19–62; Am. S.R. 11–13–63.

PRC RUBBER CALK

For Glazing, Caulking and Sealing Compounds Made of Synthetic Polymerized Rubber Compounds Including Polysulfide and Polyurethene Compositions.
First use July 1957.

Class 22 — Games, Toys, and Sporting Goods

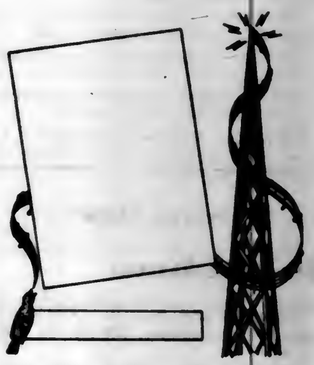
766,101. The M. T. & D. Company, d.b.a. Modern Tool & Die Company, Cleveland, Ohio. SN 133,476. Filed P.R. 12–6–61; Am. S.R. 1–8–64.

TEENY WEENY

For Coaster Wagons for Juveniles.
First use on or about Mar. 12, 1961.

Class 38 — Prints and Publications

766,102. Ruth Hollis Aragon, d.b.a. Songbird Music Publishers, Los Angeles, Calif. SN 121,624. Filed P.R. 6–8–61; Am. S.R. 12–26–63.



For Sheet Music.
First use Feb. 26, 1954.

766,103. Learning Materials, Inc., Chicago, Ill. SN 134,819. Filed P.R. 12–28–61; Am. S. R. 11–12–63.

LEARNING MATERIALS

For Series of Educational Picture Story Booklets.
First use Nov. 16, 1961.

766,104. The Bernarr Macfadden Foundation, Inc., New York, N.Y. SN 153,784. Filed P.R. 9–24–62; Am. S.R. 12–30–63.

THE GOOD HEALTH REPORTER

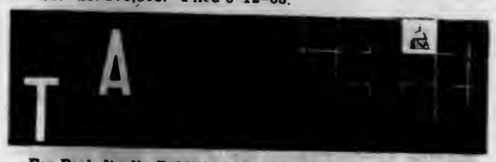
For Periodical Newsletter.
First use July 13, 1962.

766,105. Reinhold Publishing Corporation, New York, N.Y. SN 159,424. Filed P.R. 12–19–62; Am. S.R. 12–19–63.

THE MATERIALS AGE

For Feature Section of a Monthly Magazine.
First use Nov. 1, 1962.

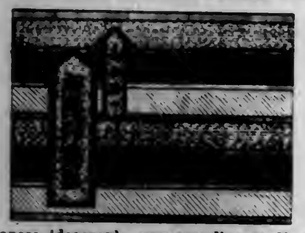
766,106. The Bureau of National Affairs, Inc., Washington, D.C. SN 170,805. Filed 6–12–63.



For Periodically Published Newsreports.
First use July 18, 1961.

Class 46 — Foods and Ingredients of Foods

766,107. Nagatanien & Co., Ltd., Minato-ku, Tokyo, Japan. SN 99,770. Filed P.R. 6–27–60; Am. S.R. 12–12–63.



The Japanese ideograph, corresponding to Nagatanien, in the mark, means "Mr. Nagatani's Garden." The mark consists of a rectangular design with arrows having Japanese characters superimposed thereon. The drawing is lined for yellow, green and red. Priority claimed under Sec. 44(d) on Japanese application filed Apr. 19, 1960; Reg. No. 596,538, dated Sept. 11, 1962.
For Dried Laver.

766,108. The Arkansas Rice Growers Cooperative Association, Stuttgart, Ark. SN 116,463. Filed P.R. 3–27–61; Am. S.R. 12–26–63.

RICE BITS

For Broken Rice Grains.
First use Feb. 18, 1955.

766,109. Southern States Cooperative, Incorporated, Richmond, Va. SN 157,733. Filed P.R. 11–21–62; Am. S.R. 10–22–63.

FORAGE EXTENDER

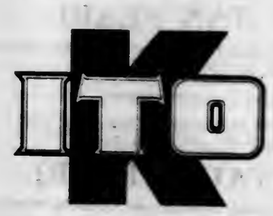
For Livestock Feed.
First use Oct. 13, 1962.

766,110. Leona Emma Rullfson, executrix of the estate of Ralph E. Rullfson, d.b.a. Wholesaler Warehouse and Wholesaler, Manchester, Iowa. SN 159,117. Filed P.R. 12–13–62; Am. S.R. 12–27–63.

WHOLE SALER

For Poultry Feeds, Hog and Pig Feeds, Dairy Feeds and Food Supplements for Addition to Feeds.
First use Oct. 6, 1938.

766,111. K. K. Ito, Camarillo, Calif. SN 160,544. Filed P.R. 1–11–63; Am. S.R. 1–8–64.



For Fresh Vegetables.
First use at least as early as the year 1958.

766,112. The Capital City Products Company, Columbus, Ohio. SN 160,601. Filed P.R. 1–14–63; Am. S.R. 1–8–64.

SPREDEZE

For Oleomargarine.
First use Dec. 28, 1962.

766,113. United Packaging Co., Inc., Minneapolis, Minn. SN 165,096. Filed P.R. 3–20–63; Am. S.R. 11–7–63.



For Shelled Nuts, Sugar and Tapioca, and Baking Ingredients—Namely, Chocolate Chips and Cocoa Bits.
First use Apr. 1, 1940.

766,114. Heggblade-Margulcas Co., San Francisco Calif. SN 172,188. Filed 7–1–63.

tastysweet

For Fresh Strawberries.
First use Apr. 15, 1953.

Class 49 — Distilled Alcoholic Liquors

766,115. Glenmore Distilleries Company, Owensboro, Ky. SN 155,067. Filed P.R. 10–12–62; Am. S.R. 12–4–63.
For Bourbon Whiskey.

BOURBON BOUQUET

First use Sept. 19, 1962; in 1928 as to the trademark "Old Bouquet Bourbon."

Class 51 — Cosmetics and Toilet Preparations

766,116. Samuel Bonat & Bro., Inc., West Paterson, N.J. SN 105,789. Filed P.R. 10–5–60; Am. S.R. 6–21–63.

FIRM MIST

For Holding Hair Spray.
First use Aug. 18, 1960.

766,117. Clairol Incorporated, New York, N.Y. SN 161,150. Filed P.R. 1-22-63; Am. S.R. 1-7-64.

TAN PEARL

For Hair Tinting, Dyeing, and Coloring Preparation.
First use Nov. 16, 1962.

766,118. Clairol Incorporated, New York, N.Y. SN 161,151. Filed P.R. 1-22-63; Am. S.R. 1-7-64.

TAUPE PEARL

For Hair Tinting, Dyeing, and Coloring Preparation.
First use Oct. 19, 1962.

766,119. Clairol Incorporated, New York, N.Y. SN 161,152. Filed P.R. 1-22-63; Am. S.R. 1-7-64.

BABY PEARL

For Hair Tinting, Dyeing, and Coloring Preparation.
First use Oct. 19, 1962.

766,120. Clairol Incorporated, New York, N.Y. SN 161,153. Filed P.R. 1-22-63; Am. S.R. 1-7-64.

PASTEL PEARL

For Hair Tinting, Dyeing, and Coloring Preparation.
First use Oct. 19, 1962.

766,121. Clairol Incorporated, New York, N.Y. SN 161,154. Filed P.R. 1-22-63; Am. S.R. 1-7-64.

STERLING PEARL

For Hair Tinting, Dyeing, and Coloring Preparation.
First use Nov. 16, 1962.

766,122. Clairol Incorporated, New York, N.Y. SN 161,236. Filed P.R. 1-23-63; Am. S.R. 1-7-64.

BLUSH PEARL

For Hair Tinting, Dyeing, and Coloring Preparation.
First use Oct. 19, 1962.

Class 52 — Detergents and Soaps

766,123. Gemcraft Company, Inc., Boston, Mass. SN 161,338. Filed P.R. 1-24-63; Am. S.R. 12-23-63.

PEARL BATH

For Cleaner for Pearls.
First use on or before Oct. 5, 1962.

Service Marks

Class 100 — Miscellaneous

766,124. The People to People Health Foundation, Inc., Washington, D.C. SN 158,729. Filed P.R. 12-7-62; Am. S.R. 12-13-63.

Health Opportunity for People Everywhere

For Health and Medical Services Provided Without Charge to People of Other Countries on and From a Floating Hospital and Clinic and Medical Teaching Center.
First use November 1958.

Class 104 — Communication

766,125. Arizona Citizens Radio Association, Scottsdale, Ariz. SN 147,069. Filed P.R. 6-18-62; Am. S.R. 12-13-63.

ARIZONA CITIZENS RADIO ASSOCIATION

The drawing is lined for red, yellow, green, and blue.
For Providing Emergency Radio Services to Communities by Means of Citizens Radio Facilities.
First use Apr. 9, 1962.

Class 105 — Transportation and Storage

766,126. Scoot-A-Rent Corporation, Salt Lake City, Utah. SN 109,898. Filed P.R. 12-8-60; Am. S.R. 1-7-64.

SCOOT A RENT

For Motor Scooter Rental.
First use Nov. 1, 1959.

TRADEMARK REGISTRATIONS RENEWED

171,558. KEY DESIGN. Cl. 43. 8-7-23.
174,772. SECURITY. Cl. 50. 10-23-23.
174,898. CASTROLEUM. Cl. 15. 10-23-23.
175,451. J.T.P.F. AND DESIGN. Cl. 43. 11-6-23.
175,945. TRU-TEX. Cl. 39. 11-13-23.
176,053. JOHNSON'S. Cl. 29. 11-13-23.
178,209. BANKO. Cl. 23. 1-8-24.
178,272. 124. Cl. 23. 1-8-24.
178,340. PABST AND DESIGN. Cl. 48. 1-8-24.
178,341. PABST. Cl. 48. 1-8-24.
178,521. DESIGN OF RED STAR. Cl. 39. 1-15-24.
178,563. LEVCO. Cl. 27. 1-15-24.
178,636. BEN-MONT. Cl. 37. 1-15-24.
178,999. FLAKICE. Cl. 31. 2-5-24.
179,939. TI KI. Cl. 16. 2-19-24.
180,019. ENSIGN. Cl. 46. 2-19-24.
180,693. CORAMINE. Cl. 18. 3-4-24.
181,153. TIGER BRAND AND DESIGN. Cl. 7. 3-11-24.
182,143. ROKA. Cl. 46. 4-1-24.
182,330. CLAREX. Cl. 46. 4-8-24.
183,100. PABST AND DESIGN. Cl. 46. 4-22-24.
184,580. PLYMOUTH ROCK AND DESIGN. Cl. 46. 5-27-24.
184,689. DESIGN REPRESENTATION OF A SHIELD. Cl. 46. 5-27-24.
184,690. JAMES. Cl. 46. 5-27-24.

185,394. DESIGN REPRESENTATION OF A SPINNING WHEEL. Cl. 37. 6-17-24.
185,395. DUOPOST. Cl. 37. 6-17-24.
404,068. BROOKLYN EAGLE. Cl. 38. 11-2-43.
404,624. SAL-ETS AND DESIGN. Cl. 46. 12-7-43.
404,873. TONE-RAY. Cl. 26. 12-28-43.
404,926. JIFFY-KLEEN. Cl. 50. 12-28-43.
404,980. MEAD BOND AND DESIGN. Cl. 37. 1-4-44.
404,984. PLEASANT VALLEY AND DESIGN. Cl. 47. 1-4-44.
405,037. BROOKS BROTHERS AND DESIGN. Cl. 29. 1-4-44.
405,146. DIAL TONE AND DESIGN. Cl. 16. 1-11-44.
405,413. 3-M. Cl. 5. 2-1-44.
405,672. SWEEP'S GRADED HANDICAPS. Cl. 38. 2-15-44.
405,762. ROYAL LONDON. Cl. 3. 2-22-44.
405,764. ORCO AND DESIGN. Cl. 35. 2-22-44.
405,887. HARDY CRAFT. Cl. 42. 2-29-44.
405,888. HARDY TEX. Cl. 42. 2-29-44.
405,940. ARDEN. Cl. 39. 2-29-44.
406,018. PERMAJOINT. Cl. 12. 3-7-44.
406,043. FEPICAL. Cl. 18. 3-7-44.
406,523. ROYAL LONDON. Cl. 40. 4-11-44.
407,031. FUNCTIONAL PAINTING AND DESIGN. Cl. 16. 5-16-44.
407,219. QUACHROM GLUCOSATE. Cl. 6. 5-23-44.
407,465. SODIUM CHROM GLUCOSATE. Cl. 6. 6-6-44.
407,482. "DAMSEL" CREATIONS FROM HOLLYWOOD. Cl. 39. 6-6-44.
407,574. SCHWINN ETC. Cl. 19. 6-13-44.
407,825. HUMDINGER. Cl. 46. 6-27-44.

TRADEMARK REGISTRATIONS CANCELED

Section 7(d)

211,190. ZUINOIDAS. Cl. 6. 4-6-26.
357,836. LARRO AND DESIGN. Cl. 46. 6-14-38.
435,143. "CITROSCORDEX." Cl. 6. 12-9-47.
570,617. RONGALITE. Cl. 6. 2-17-53.
699,296. Q-4. Cl. 18. 6-14-60.
699,718. Q-DELTA. Cl. 18. 6-21-60.
712,676. TERAFILM. Cl. 1. 3-21-61.
760,527. M AND DESIGN. Cl. 16. 11-26-63.

Section 8

414,728. JUDCO. Cl. 23. 6-26-45.
654,343. MACK-HEMP. Cl. 14. 11-12-57.

The following registrations issued Jan. 14, 1958

656,956. HY-PEAT FLORIDA-MUK ETC. AND DESIGN. Cl. 1.
656,963. SEAL LABEL AND DESIGN. Cl. 2.
656,972. GASFAZE. Cl. 6.
656,974. SMART & FINAL. Cl. 6.
656,977. HAWTHORN II. Cl. 6.
659,988. GERBER AND FIGURE OF BABY. Cl. 18.
656,990. FRIGIDAL. Cl. 13.
656,997. FLOMASTER. Cl. 13.
657,004. EXCELINE. Cl. 16.
657,019. MATURON. Cl. 18.
657,023. WORMETTES. Cl. 18.
657,024. BELAROPEOL. Cl. 18.
657,025. ESTANFORT. Cl. 18.
657,029. PROSPIRIN. Cl. 18.
657,030. TENTONE. Cl. 18.
657,032. FOSFOCIN. Cl. 18.
657,034. MENTOR. Cl. 19.
657,035. ORION. Cl. 19.
657,038. AIRFLO. Cl. 19.
657,043. POLYLUX. Cl. 21.
657,045. SONIC SERVANT. Cl. 21.
657,052. DESIGN OF AIRPLANE. Cl. 21.
657,053. THERM ON. Cl. 21.
657,054. HURON. Cl. 21.
657,056. EMCOTRONIC. Cl. 21.
657,057. CAROUSEL. Cl. 21.
657,063. POPLITE. Cl. 21.
657,071. FISHER PRICE FP. Cl. 22.
657,073. SEAL LABEL AND DESIGN. Cl. 22.
657,074. JET HAWK. Cl. 22.
657,077. LUCIFER. Cl. 21.
657,079. PRINCESS. Cl. 22.
657,082. PEDOMATIC. Cl. 23.
657,085. SCULLTROL. Cl. 23.
657,091. SEAL LABEL AND DESIGN. Cl. 23.
657,093. BURMEISTER PORTO PLANT. Cl. 23.
657,094. CHAIN SAWS AND DESIGN. Cl. 23.
657,096. CRAGSTAN. Cl. 23.
657,097. S SHERMAN PRODUCTS INC. Cl. 23.
657,101. GENERAL RESEARCH & SUPPLY CO. AND DESIGN. Cl. 23.
657,109. MORLA. Cl. 23.
657,111. FUEL-A-MATIC. Cl. 23.
657,114. PYRO-SCANNER. Cl. 26.
657,117. OMNIHOMER. Cl. 26.
657,120. DREAM-TONE. Cl. 27.
657,122. MASTER-MATIC. Cl. 29.
657,125. TUNED-CONDUIT. Cl. 31.
657,126. SEALLABEL AND DESIGN. Cl. 31.
657,129. MYERS AND DESIGN. Cl. 31.
657,130. LAZY-CHAIR. Cl. 32.
657,139. ELECTRONE. Cl. 36.
657,141. VANGUARD. Cl. 36.
657,159. BOPITS. Cl. 39.
657,163. PETTI-TOES. Cl. 39.
657,164. GIAVANNI'S. Cl. 39.
657,167. VEST-EEZ. Cl. 39.
657,169. KINDER-GRAD. Cl. 39.
657,170. KINDERGARB. Cl. 39.
657,171. POM-POM. Cl. 39.
657,172. WIND-VIEW. Cl. 39.
657,173. ACRIGLO. Cl. 40.
657,174. CASHEEN. Cl. 40.
657,182. KNIT-CALE. Cl. 42.
657,187. NAPELLO. Cl. 42.
657,189. BRITELLA. Cl. 42.
657,195. COGG'S. Cl. 44.
657,202. MEDICAL CENTER. Cl. 44.
657,207. FROSTI-KOOLER. Cl. 46.
657,217. FROSTY. Cl. 46.
657,218. TOM SAWYER TWAIN-PAK. Cl. 46.
657,222. BOUCHON DE CHAMPAGNE. Cl. 46.
657,224. JIM-BO'S. Cl. 46.
657,226. RES-Q DIET. Cl. 46.
657,228. SNAC-SUB. Cl. 46.
657,242. INVERLIDO. Cl. 47.
657,243. KIVA KRAFT AND DESIGN. Cl. 50.
657,245. RIVESTIMENTO DALMINE. Cl. 50.
657,255. BEAUTY-SET. Cl. 51.
657,260. JANDARY INTENSO. Cl. 51.
657,270. LUBRI-SHAVE. Cl. 51.
657,275. GREASEFOE. Cl. 52.
657,277. TRU-ART. Cl. 52.
657,278. CRANBOW. Cl. 106.
657,282. KOR BOARD AND DESIGN. Cl. 12.
657,290. SNUG-FIT. Cl. 32.
657,293. OWENS. Cl. 44.
657,294. HICKORY 'N HONEY. Cl. 46.
657,295. MEL-OH GOOD. Cl. 46.
657,301. VAN GOGH VERMILION. Cl. 51.
657,303. DUCTALUMINUM. Cl. 106.

REGISTRATIONS PUBLISHED UNDER SEC. 12(c)

The following marks registered under the act of 1905, or the act of 1881, are published under the provisions of section 12(c) of the Trademark Act of 1946. These registrations are not subject to opposition but are subject to cancellation under section 14 of the act of 1946.

Class 2 — Receptacles

248,856. Oct. 30, 1928. Pi Beta Phi, Chapin, Ill. Pub. by registrant.

ARROWCRAFT

For Textile Goods—Namely, Bags and Bag Bodies, Baskets and Trays of Splint, or Bark, or Willow, or Corn Shuck, or Similar Material or of a Combination Thereof; and Certain Wooden Articles—Namely, Flower Vases, Drinking-Glass Coasters, and Boxes for Holding Cigarettes or for Similar Use.

405,532. Feb. 1, 1944. Southern Advance Bag & Paper Co., Inc., Bangor Maine and Boston, Mass. Pub. by Continental Can Company, Inc., New York, N.Y.

BUTTE

For Paper Bags.

405,533. Feb. 1, 1944. Southern Advance Bag & Paper Co., Inc., Bangor, Maine and Boston, Mass. Pub. by Continental Can Company, Inc., New York, N.Y.

GOLD LEAF

For Paper Bags.

Class 6 — Chemicals and Chemical Compositions

406,609. Apr. 11, 1944. E. I. du Pont de Nemours and Company, Wilmington, Del. Pub. by registrant.

TETRALIN

For Tetrahydronaphthalene.

Class 11 — Inks and Inking Materials

181,804. Mar. 25, 1924. D. Gestetner Limited, London, England. Pub. by A. B. Dick Company, Niles, Ill.

DUROTYPE

For Inks for Printing and Stenciling.

Class 14 — Metals and Metal Castings and Forgings

114,239. Dec. 5, 1916. The Haynes Stellite Co., Kokomo, Ind. Pub. by Union Carbide Corporation, New York, N.Y.

STELLITE

For Metal Alloys.

407,351. May 30, 1944. Vanadium-Alloys Steel Company, Latrobe, Pa. Pub. by registrant.

MOSIL

For Punch and Chisel Steel.

423,980. Sept. 17, 1946. Haynes Stellite Company, New York, N.Y. Pub. by Union Carbide Corporation, New York, N.Y.

MULTIMET

For Ferro-Alloy.

Class 16 — Protective and Decorative Coatings

179,973. Feb. 19, 1924. Samuel Cabot, Incorporated, Boston, Mass. Pub. by registrant.

DOUBLE-WHITE

For White Covering Composition Applied Like a Paint.

Class 21 — Electrical Apparatus, Machines, and Supplies

405,924. Feb. 29, 1944. Philco Corporation, Philadelphia, Pa. Pub. by registrant.

PHILCO

For Radio and Television Aerial Masts, Vacuum Tube Amplifiers, and Radio and Public Address Microphone Kits.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

134,158. Aug. 17, 1920. The Haynes Stellite Co., Kokomo, Ind. Pub. by Union Carbide Corporation, New York, N.Y.

STELLITE

For Blades and Cutters for Milling, Turning, and the Like Metal-Working Machinery.

166,782. Apr. 17, 1923. Edward Weck & Son, Inc., New York, N.Y. Pub. by Edward Weck & Company, Inc., Long Island City, N.Y.

WEXTEEL

For Pocket Knives, Kitchen Knives, Table Knives of Base Metal, Scissors, Razors, and Razor Blades.

442,837. June 7, 1949. Spartan Tool Company, Chicago, Ill. Pub. by Conco Engineering Works, Inc., Mendota, Ill.

Spartan

For Flexible Cable Type, Portable, Hand Manipulated Tools for Use in Cleaning Sewers.

Class 32 — Furniture and Upholstery

248,756. Oct. 30, 1928. Pi Beta Phi, Chapin, Ill. Pub. by registrant.

ARROWCRAFT

For Wooden Furniture—Namely, Chairs, Stools, Tables, Taborets, Wall Shelves, and Flower Stands.

Class 37 — Paper and Stationery

180,007. Feb. 19, 1924. Noesting Pin Ticket Company, Incorporated, New York, N.Y. Pub. by registrant.

Noesting

For Pin Tickets, Paper Clips, Tags, and Thumb Tacks.

Class 38 — Prints and Publications

406,120. Mar. 14, 1944. Magazines of Industry, Inc., New York, N.Y. Pub. by Dun & Bradstreet Publications Corporation, New York, N.Y.

MODERN INDUSTRY

For Periodical Publication Devoted to Matters of Interest to National Industry.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

183,087. Apr. 22, 1924. Fred S. Bennett, Inc., New York, N.Y. Pub. by Reeves Brothers, Inc., New York, N.Y.

Vivatex

For Waterproof and Water Repellent Knitted, Netted and Woven Fabrics.

281,322. Mar. 17, 1931. Pi Beta Phi, Chapin, Ill. Pub. by registrant.

ARROWCRAFT

For Textile Goods—Namely, Rugs, Towels, Pillow Covers, Runners and Scarfs for Use on Tables and Bureaus and the Like, Tablecloths, Doilies, Napkins, Blankets, Robes in the Nature of Lap Robes, Bath Mats, Bedspreads, Removable Chair-Seat Covers, Curtains and Drapes and Portieres and Couch Covers.

Class 43 — Thread and Yarn

181,475. Mar. 18, 1924. Gudebrod Bros. Silk Co., New York, N.Y. Pub. by Gudebrod Bros. Silk Co., Inc., Philadelphia, Pa.

"NEVERKNOT" CHAMPION SILK

For Silk Threads and Yarns.

Class 46 — Foods and Ingredients of Foods

305,246. Aug. 8, 1933. Dugan Brothers of New Jersey, Inc., Newark, N.J. Pub. by Noramco, Inc., Queens Village, N.Y.

Dugan's

For 100% Whole Wheat Products—Namely, Bread, Raisin Bread, Sandwich Loaf Bread, Rolls, Village Biscuits, Parker House Rolls, Sugar Buns, Muffins, Krimples; Doughnuts, Sugared or Unsugared; Crackers, Cookies, Pecan Rolls, Coffee Ring, Zwieback, Raisin Zwieback, Whole Wheat Crumbs, Cup Cakes, Layer Cakes; Pound Cakes, Plain, Citron, Nut; Fruit Cakes, Cereal Breakfast Food, Self-Rising Flour; Unbleached White Flour Products—Namely, Home Made Bread, Loaf or Sliced; Crusty Loaf Bread, Home Made Raisin Bread, French Bread, French Sticks, 50–50 Bread (Half Unbleached White Flour, Half Whole Wheat Flour), Twist Bread, Oatmeal Bread; Rye Bread, Plain or Seed; Swedish Rye Bread, Sour Rye Bread, Boston Brown Bread, Gluten Bread, Nut Bread, Rolls, Plain or Seeded, Frankfurter Rolls, Parker House Rolls,

Village Biscuits, Cinnamon Buns, Honey Buns, Sugar Buns, Crumb Buns, Corn Muffins, Bran Gems; Doughnuts, Sugared or Unsugared; Cookies, Cocoanut, Fruit, Ginger, Oatmeal, Orange, Assorted; Landy Fingers, Angel Cake; Angel Food Cake, Iced, Vanilla, Chocolate; Apple Dumpling, Apple-Cake, Apple-Sauce Cake; Hollis Bar Cakes, Chocolate, Vanilla, Orange, Pineapple; Butter Cake; Special Cream Layer Cake, Chocolate, Vanilla, Orange; Cheese Cake, Pineapple Cheese Cake; Cup Cakes, Chocolate, Vanilla, Orange, Strawberry; Cream Cup Cakes, Lunch Cakes, Spice Cakes, French Apple Cake, Hanover Cake, Fruit Cake, Jelly Roll; Jelly Roll, Chocolate, Cocoanut, Orange; Layer Cake, Chocolate, Cocoanut, Orange, Pineapple, Vanilla, Lemon, Coffee, Maple; Molasses Cake; New England Cake, Plain or Raisin; Orange Cake; Pound Cake, Plain, Raisin, Citron, Marble, Nut; Scallop Cake, Silver Cake, Sunshine Cake, Plain Sponge Layers, Sponge Cake; Sponge Cake, Chocolate, Orange; Nut Cake, Almond Filled Ring, Coffee Ring, Crumb Cake, Square Crumb Cake; Vienna Crumb Cake, Pecan Roll, Stollen, Nut Stollen; Pies, Apple, Lemon, Raisin, Pineapple, Coconut, Custard, Meringue, Berry; 100% Whole Corn Meal, Pure Apple Jelly, Pure Apple Butter; Pure Apple-Black (Jelly Made From Fresh Apples and Blackberries); Gluten Zwieback, Gluten Flour, Unbleached White Flour.

404,593. Dec. 7, 1943. Kansas City Macaroni & Importing Co., d.b.a. The American Beauty Macaroni Co., Kansas City and St. Louis, Mo., and Denver, Colo. Pub. by the American Beauty Macaroni Company, Kansas City, Kans.

BABY-RONI

For Macaroni.

404,928. Dec. 28, 1943. Stockmens Feed Manufacturing Company, Clovis, N. Mex. Pub. by El Rancho Milling Company, Clovis, N. Mex.

El Rancho

For Mixed Feeds for Livestock and Poultry.

Class 51 — Cosmetics and Toilet Preparations

179,258. Feb. 5, 1924. Richard Hudnut, Morris Plains, N.J. Pub. by registrant.

THREE FLOWERS

For Perfumes, Toilet Water, Vanishing Cream, Face Powder, Compact Powder, Compact Rouge, Talcum Powder, Brilliantine, Sachet, Skin and Tissue Cream, Cleansing Cream, Bath Crystals, and Lip Sticks.

INDEX OF REGISTRANTS

MARCH 3, 1964

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

AMP Inc., Harrisburg, Pa. 765,810–11, pub. 12–17–63. Cl. 21.
AMP Inc., Harrisburg, Pa. 765,852, pub. 12–17–63. Cl. 23.
Abraham & Straus, Inc., New York, to Federated Department Stores, Inc., Brooklyn, N.Y. 175,945, ren. 3–3–64. Cl. 39.
Acme Ball Bearing & Mfg. Co., Detroit, Mich. 765,839, pub. 12–17–63. Cl. 23.
Acme White Lead & Color Works, Hamtramck, to Acme Quality Paints, Inc., Detroit, Mich. 179,939, ren. 3–3–64. Cl. 16.
Acme Quality Paints, Inc.: *See*—
Acme White Lead & Color Works.
Adams and Brooks, Inc., Los Angeles, Calif. 766,006, pub. 12–17–63. Cl. 46.
Aerotec Industries, Inc., Greenwich, Conn. 765,903, pub. 12–17–63. Cl. 34.
Ak-kwik Co.: *See*—
Jones, Hulon N.
Algraphy Ltd., London, England. 765,708, pub. 12–17–63. Cl. 6.
Allen, Morris C., d.b.a. American Freedom Network, Bonita, Calif. 766,093, pub. 12–17–63. Cl. 107.
Allied Mills, Inc., Chicago, Ill. 657,226, canc. Cl. 46.
Amerace Corp., New York, N.Y. 765,824–6, pub. 12–17–63. Cl. 22.
American Beauty Macaroni Co., The: *See*—
Kansas City Macaroni & Importing Co.
American Beverage Corp., Youngstown, Ohio. 766,001, pub. 12–17–63. Cl. 45.
American Cyanamid Co., New York, N.Y. 657,030, canc. Cl. 18.
American Dry Beverage Corp.: *See*—
Mead Johnson & Co.
American Electronics, Inc., Fullerton, Calif. 765,799, pub. 12–17–63. Cl. 21.
American Freedom Network: *See*—
Allen, Morris C.
American Gold Chain Co., Inc., New York, N.Y. 765,881, pub. 12–17–63. Cl. 28.
American Home Products Corp., d.b.a. Ayerst Laboratories, New York, N.Y. 657,019, canc. Cl. 18.
American Institute of Laundering, Joliet, Ill. 766,088, pub. 12–17–63. Cl. 106.
American Machine and Foundry Co., New York, N.Y. 657,038, canc. Cl. 19.
American Plastics Corp., Bainbridge, N.Y. 766,051, pub. 12–17–63. Cl. 50.
American Plastics Corp., Bainbridge, N.Y. 765,692, pub. 12–17–63. Cl. 1.
American Plastics Corp., Bainbridge, N.Y. 765,699, pub. 12–17–63. Cl. 2.
American Screen Products Co., Chicago, Ill. 765,742, pub. 12–17–63. Cl. 12.
American Steel and Wire Co. of New Jersey, The, to United States Steel Corp., Pittsburgh, Pa. 181,153, ren. 3–3–64. Cl. 7.
Ames Harris Neville Co., San Francisco, Calif. 656,963, canc. Cl. 2.
Ames Harris Neville Co., San Francisco, Calif. 657,126, canc. Cl. 31.
Ames Harris Neville Co., San Francisco, Calif. 657,091, canc. Cl. 23.
Ames Harris Neville Co., San Francisco, Calif. 657,073, canc. Cl. 22.
Amphenol-Borg Electronics Corp., Broadview, Ill. 765,809, pub. 11–5–63. Cl. 21.
Anabolic Food Products, Inc., to Anabolic, Inc., Glendale, Calif. 406,043, ren. 3–3–64. Cl. 18.
Anabolic, Inc.: *See*—
Anabolic Food Products, Inc.
Aragon, Ruth H., d.b.a. Songbird Music Publishers, Los Angeles, Calif. 766,102. Cl. 38.
Ariens Co., Brillion, Wis. 765 846, pub. 12–17–63. Cl. 23.
Arizona Citizens Radio Association, Scottsdale, Ariz. 766,125. Cl. 104.
Arkansas Rice Growers Cooperative Association, The, Stuttgart, Ark. 766,108. Cl. 46.
Armstrong, Helen V., Denver, Colo. 657,243, canc. Cl. 50.
Arnav Shoe Corp., from Intercontinental Development Corp., Little Ferry, N.J. 765 944, pub. 12–17–63. Cl. 39.
Arnold, Schwinn & Co., Chicago, Ill. 407,574, ren. 3–3–64. Cl. 19.
Artag Plastics Corp., Chicago, Ill. 765,845, pub. 12–17–63. Cl. 23.
Artistic Furniture Co., St. Louis, Mo. 765,888, pub. 12–17–63. Cl. 32.
Artnell Co., Chicago, Ill. 765,937, pub. 2–6–62. Cl. 39.
Ash, Thomas & Co. Ltd., Birmingham, England. 657,082, canc. Cl. 23.
Ashwander, R. E., d.b.a. R. E. Ashwander & Co., McAllen, Tex. 657,023, canc. Cl. 18.
Ashwander, R. E., & Co.: *See*—
Ashwander, R. E.
Aspen Associates: *See*—
York, L. T.
Associate Fashion Industries, Inc., New York, N.Y. 765,954, pub. 12–17–63. Cl. 39.
Atco Food Co., Dallas, Tex. 657,224, canc. Cl. 46.
Atlantic Packing Co., The, Detroit, Mich. 657,294, canc. Cl. 46.
Automated Building Components, Inc., Miami, Fla. 765,847, pub. 12–17–63. Cl. 23.
Avant Inc., Lincoln, Mass. 765,870, pub. 12–17–63. Cl. 26.
Avon Products, Inc., New York, N.Y. 766,058, pub. 12–17–63. Cl. 51.
Avon Products, Inc., New York, N.Y. 766,060, pub. 12–17–63. Cl. 51.
Axton-Cross Co., Shelton, Conn. 765,727, pub. 12–17–63. Cl. 6.
Ayerst Laboratories: *See*—
American Home Products Corp.
Bradley, Milton, Co., Springfield, Mass. 765,815, pub. 12–17–63. Cl. 22.
Brandimist, Inc., Atlanta, Ga. 766,000, pub. 12–17–63. Cl. 4.
Brecher Brothers, Inc., New York, N.Y. 765,945, pub. 12–17–63. Cl. 39.
Brockton Automatic Transmission Co., Inc., Brockton, Mass. 765,840, pub. 12–17–63. Cl. 23.
Brooklyn Eagle, Inc., The, Brooklyn, N.Y., to Graphic Investors Co., New York, N.Y. 404,068, ren. 3–3–64. Cl. 38.
Brooks, Brothers, New York, N.Y., to Julius Garfinckel & Co., Washington, D.C. 405,037, ren. 3–3–64. Cl. 29.
Bruks, Igelfors, Aktiebolag, Stockholm, Sweden. 178,209, ren. 3–3–64. Cl. 23.
Brunswick Corp., Chicago, Ill. 765,814, pub. 12–17–63. Cl. 22.
Buffalo-Eclipse Corp., d.b.a. The Eclipse Lawn Mower Co., Prophetstown, Ill. 657,094, canc. Cl. 23.
Bureau of National Affairs, Inc., The, Washington, D.C. 766,106. Cl. 38.
Burmeister, L., Co., to Chain Belt Co., Milwaukee, Wis. 657,093, canc. Cl. 23.
Burnett's Foods Inc., Newark, N.J. 766,028, pub. 12–17–63. Cl. 46.
Bymart-Tintair, Inc., New York, N.Y. 657,255, canc. Cl. 51.
Ballard, Hyde W., West Chester, Pa. 765,843, pub. 12–17–63. Cl. 23.
Bansa Inc., Baldwin, N.Y. 766,081, pub. 12–17–63. Cl. 101.
Barclay, Jas., & Co. Ltd., Peoria, Ill. 766,046–9, pub. 12–17–63. Cl. 49.
Barkley, C. L., & Co., Chicago, Ill. 765,915, pub. 12–17–63. Cl. 37.
Barnes-Hind Ophthalmic Products, Inc., Sunnyvale, Calif. 765,787, pub. 12–17–63. Cl. 18.
Battelle Development Corp., The, Columbus, Ohio. 766,012, pub. 12–17–63. Cl. 46.
Beaunit Corp., New York, N.Y. 765,994, pub. 12–17–63. Cl. 42.
Beco Products Corp., d.b.a. Oshkosh Luggage, Chicago, Ill. 765,703, pub. 12–17–63. Cl. 3.
Becton, Dickinson and Co., Rutherford, N.J. 657,202, canc. Cl. 44.
Bekins Van & Storage Co., Los Angeles, Calif. 765,923, pub. 12–17–63. Cl. 38.
Belforte Watch Co., Inc., New York, N.Y. 765,874, pub. 6–4–63. Cl. 27.
Belknap Hardware and Mfg. Co., Louisville, Ky. 765,705, pub. 12–17–63. Cl. 4.
Belk Stores Services, Inc., Charlotte, N.C. 765,960, pub. 12–17–63. Cl. 39.
Belk Stores Services, Inc., Charlotte, N.C. 765,989, pub. 12–17–63. Cl. 42.
Bell & Howell Co., Chicago, Ill. 765,865, pub. 12–17–63. Multiple Class (Classes 26 and 36.)
Beluga Caviar Corp., New York, N.Y. 766,024, pub. 12–17–63. Cl. 46.
Bennett, Fred S., Inc., by Reeves Brothers, Inc., New York, N.Y. 183,087, 12(c) pub. 3–3–64. Cl. 42.
Bennett, Josua, Dist. Co.: *See*—
Felton & Son, Inc.
Bennington Wax Paper Co., Bennington, Vt., to The Dow Chemical Co., Midland, Mich. 178,636, ren. 3–3–64. Cl. 37.
Berkshire Sportswear Co., Inc., New York, N.Y. 765,968, pub. 12–17–63. Cl. 39.
Bernat, Emile & Sons Co., Jamaica Plain, Mass. 765,926, pub. 12–17–63. Cl. 38.
Biofarma, Societe Anonyme, Neuilly-sur-Seine, France. 765,773, pub. 12–17–63. Cl. 18.
Birdhouses by Myaida: *See*—
Myaida, Grace B., and Shogo J. Myaida.
Bishop, Hazel, Inc., Union, N.J. 766,057, pub. 12–17–63. Cl. 51.
Blackburn, Jasper, Corp., St. Louis, Mo. 765,766, pub. 12–17–63. Cl. 15.
Bliss, E. W., Co., Pittsburgh, Pa. 654,343, canc. Cl. 14.
Blue Bell, Inc., Greensboro, N.C. 765,941, pub. 12–17–63. Cl. 39.
Bonat, Samuel, & Bros., Inc., West Paterson, N.J. 766,066, pub. 12–17–63. Cl. 51.
Bonat, Samuel, & Bro., Inc., West Paterson, N.J. 766,116. Cl. 51.
Bona Wine Co.: *See*—
Franzia Brothers Winery.

Borden Chemical Co., The: *See*—
Borden Co., The.
Borden Co., The, New York, N.Y. 766,021; pub. 12–17–63. Cl. 46.
Borden Co., The, New York, N.Y. 765,857, pub. 12–17–63. Cl. 26.
Borden Co., The, New York, N.Y. 766,011, pub. 12–17–63. Cl. 46.
Borden Co., The, d.b.a. The Borden Chemical Co., New York, N.Y. 765,695, pub. 12–17–63. Cl. 1.
Boss Mfg. Co., The, Kewanee, Ill., and Brooklyn, N.Y., to Boss Mfg. Co., Kewanee, Ill. 178,521, ren. 3–3–64. Cl. 39.
Boss Mfg. Co.: *See*—
Boss Mfg. Co., The.
Botticelli, Inc., New York, N.Y. 765,984, pub. 12–17–63. Cl. 39.
C.P. Plastic Engineering Co. Inc., Chicago, Ill. 765,734, pub. 12–17–63. Cl. 8.
CTS Corp., Elkhart, Ind. 765,804, pub. 12–17–63. Cl. 21.
Cabot, Samuel, Inc., Boston, Mass. 179,973, 12(c) pub. 3–3–64. Cl. 16.
California Seed & Fertilizer Co.: *See*—
Johnson, Howard T.
Calvary Temple Evangelistic Association, Minneapolis, Minn. 766,094, pub. 12–17–63. Cl. 107.
Canfield, A. J., Co., Chicago, Ill. 765,700, pub. 12–17–63. Cl. 2.
Carey Press Corp., New York, N.Y. 765,935, pub. 12–17–63. Cl. 38.
Capital City Products Co., The, Columbus, Ohio. 766,112. Cl. 46.
Carousel Sign Co.: *See*—
Hutchens, Howard T.
Cassie Wear, Inc., New York, N.Y. 765,973, pub. 12–17–63. Cl. 39.
Celares, Inc., New York, N.Y. 766,068, pub. 12–17–63. Cl. 52.
Central Broadcast Corp., Kansas City, Mo. 766,079–80, pub. 12–17–63. Cl. 101.
Chain Belt Co.: *See*—
Burmeister, L., Co.
Chairs & Tables, Inc., Bellwood, Ill. 765,898, pub. 12–17–63. Cl. 32.
Champagne Taittinger Compagnie Commerciale & Vitacole Champenoise, Reims (Marne), France. 766,041, pub. 12–17–63. Cl. 47.
Champion Sports Publishing Corp., New York, N.Y. 765,933, pub. 12–17–63. Cl. 38.
Champon, L. A., & Co., Inc., New York, N.Y. 766,027, pub. 12–17–63. Cl. 46.
Charm Originals, Inc., Kansas City, Mo. 765,828, pub. 12–17–63. Cl. 22.
Chateau La France, Beychac, near Bordeaux, France. 766,039, pub. 12–17–63. Cl. 47.
Chemical Machinery Experiment Co. Inc., New York, to Flakice Corp., Brooklyn, N.Y. 178,999, ren. 3–3–64. Cl. 31.
Chemical Corp. of America, Tallahassee, Fla. 765,711, pub. 12–17–63. Cl. 6.
Chicopee Mills, Inc., New York, N.Y. 657,182, canc. Cl. 42.
Chicago Printed String Co., Chicago, Ill. 765,911, pub. 12–17–63. Cl. 37.
Ciba Corp.: *See*—
Society of Chemical Industry in Basle.
Ciba, Ltd., Basel, Switzerland. 765,721–3, pub. 12–17–63. Cl. 6.
Ciba Ltd., Basel, Switzerland. 765,860–1, pub. 12–17–63. Cl. 26.
Clairol Inc., New York, N.Y. 766,117–22. Cl. 51.
Claremont Flock Corp., Claremont, N.H. 766,097. Cl. 1.
Clopay Corp., Cincinnati, Ohio. 765,894, pub. 12–17–63. Cl. 32.
Cluett, Peabody & Co., Inc., New York, N.Y. 405,940, ren. 3–3–64. Cl. 39.
Coast Empire, Inc., Salt Lake City, Utah. 765,988, pub. 12–17–63. Cl. 40.
Coated Textile Mills, Inc., Pawtucket, R.I. 765,990, pub. 12–17–63. Cl. 42.
Coggeshall, E. Owen, Shirley, Mass. 657,195, canc. Cl. 44.
Cole, John L., New York, N.Y. 765,878, pub. 12–17–63. Cl. 28.
Colgate, Culp & Co. Inc., New York, N.Y. 765,962, pub. 11–19–63. Cl. 39.
Colgate-Palmolive Co., New York, N.Y. 765,704, pub. 12–17–63. Cl. 4.
Colgate-Palmolive Co., New York, N.Y. 657,270, canc. Cl. 51.
Colgate-Palmolive Co., New York, N.Y. 766,062, pub. 12–17–63. Cl. 51.
Colgate-Palmolive Co., New York, N.Y. 766,070, pub. 12–17–63. Cl. 52.
Commonwealth Clothing Co., Boston, Mass. 765,947, pub. 7–30–63. Cl. 39.
Conco Engineering Works, Inc.: *See*—
Spartan Tool Co.
Connecticut Hard Rubber Co., The, New Haven, Conn. 765,993, pub. 12–17–63. Cl. 42.
Connecticut Dry Mix Co.: *See*—
Gould, Robert W.
Continental Can Co., Inc.: *See*—
Southern Advance Bag & Paper Co. Inc.
Continental Mills, Inc., Philadelphia, Pa. 657,187, canc. Cl. 42.
Cook & Dunn Paint Corp., Newark, N.J. 405,146, ren. 3–3–64. Cl. 16.
Cook Enterprises, d.b.a. Cook Farms, Clermont, Fla. 656,956, canc. Cl. 1.
Cook Farms: *See*—
Cook Enterprises.
Cook's, Adam, Sons, Inc., Linden, N.J. 765,767, pub. 12–17–63. Cl. 15.
Correa, Richard, Jr., d.b.a. Ricardo's, Council Bluffs, Iowa. 766,014, pub. 12–17–63. Cl. 46.
Corrosion Reaction Consultants, Inc., Philadelphia, Pa. 765,728, pub. 12–17–63. Cl. 6.
Cragstan Corp., New York, N.Y. 657,096 canc. Cl. 23.
Crane & Co., Inc.: *See*—
Crane, Z. & W. M., Inc.
Crane, Z. & W. M., Inc., to Crane & Co., Inc., Dalton, Mass. 185,394, ren. 3–3–64. Cl. 37.
Cranston Print Works Co., Cranston, R.I. 765,991, pub. 10–1–63. Cl. 42.
Cranston Print Works Co., New York, N.Y. 657,278, canc. Cl. 106.
Creamette Co., The: *See*—
Quality Macaroni Co.
Cresco Industries, Inc., Cresco, Iowa. 657,053, canc. Cl. 21.
Crimpomatic Mill and Equipment Co., Bryan, Tex. 765,834, pub. 12–17–63. Cl. 23.
Cullinan, Joseph M., Vista, Calif. 765,793, pub. 12–17–63. Cl. 19.
Cuna Mutual Insurance Society, Madison, Wis. 766,082, pub. 12–17–63. Cl. 102.
Curtis, Helene, Industries, Inc., Chicago, Ill. 657,277, canc. Cl. 52.
Curtis, Helene, Industries, Inc., d.b.a. Helene Curtis Laboratories, Chicago, Ill. 766,056, pub. 12–17–63. Cl. 51.
Curtis, Helene, Laboratories: *See*—
Curtis, Helene, Industries, Inc.
Curtis, J. D., Corp., Collingswood, N.J. 657,052, canc. Cl. 21.
Daffin, Irl, Associates Inc., Lancaster, Pa. 766,069, pub. 12–17–63. Cl. 52.
Dahl, George W., Co., Inc., Bristol, R.I. 765,755, pub. 5–2–61. Cl. 13.
Dalmon Werke G.m.b.H., Berlin-Reinickendorf, Germany. 657,043, canc. Cl. 21.
Dalmine S.p.A., Milan, Italy. 657,245, canc. Cl. 50.
Dayton Tire & Rubber Co., The, Dayton, Ohio. 765,907, pub. 12–17–63. Cl. 35.
Delta Electric Construction Co., Inc., San Antonio, Tex. 766,055, pub. 12–17–63. Cl. 103.
De Luxe Reading Corp., Elizabeth, N.J. 765,822, pub. 12–17–63. Cl. 22.
Desilu Productions Inc., Hollywood, Calif. 765,920, pub. 12–17–63. Cl. 38.
Devon Knitwear Co., Philadelphia, Pa. 765,959, pub. 12–17–63. Cl. 39.
Diamond Laboratories, Inc., Des Moines, Iowa. 765,780, pub. 10–1–63. Cl. 18.
Dick, A. B., Co.: *See*—
Gestetner, D., Ltd.
Dickinson, H. L., Cincinnati, Ohio. 657,207, canc. Cl. 46.
Dietzel, Wilbur C., d.b.a. Will's Hybred Wiglers, Dunellen, N.J. 765,821, pub. 12–17–63. Cl. 22.
Dixon Corp., Bristol, R.I. 765,906, pub. 12–17–63. Cl. 35.
Dollfus-Mieg & Cie, Societe Anonyme: *See*—
Frings, Maurice, & Cie, Societe en Commandite.
Pere, J. Thiriez, & Fils, La Societe en Nom Collectif.
Don, Edward, & Co., Chicago, Ill. 765,841, pub. 12–17–63. Cl. 23.
Don, Nelly, Inc., Kansas City, Mo. 765,958, pub. 12–17–63. Cl. 39.
Dow Chemical Co., The: *See*—
Bennington Wax Paper Co.
Dow Chemical Co., The, Midland, Mich. 765,914, pub. 12–17–63. Cl. 37.
Dow Chemical Co., The, Midland, Mich. 765,779, pub. 12–17–63. Cl. 18.
Dow Chemical Co., The, Midland, Mich. 765,693, pub. 12–17–63. Cl. 1.
Dow Corning Corp., Midland, Mich. 765,748, pub. 12–17–63. Cl. 12.
Downtowner Corp., The, Memphis, Tenn. 766,075–6, pub. 12–17–63. Cl. 100.
Drambuie Liqueur Co., Ltd., The, Edinburgh, Scotland. 766,042, pub. 12–17–63. Cl. 49.
Drew Chemical Corp., New York, N.Y. 766,030, pub. 12–17–63. Cl. 46.
Dritz, John, & Sons, Inc., Spartanburg, S.C. 765,987, pub. 7–16–63. Cl. 40.
Drobac/Rood: *See*—
Drobac, Stan, and Robert E. Rood.
Drobac, Stan, and Robert E. Rood, d.b.a. Drobac/Rood, Lansing, Mich. 765,816, pub. 12–17–63. Cl. 22.
Dugan Brothers of New Jersey, Inc., Newark, N.J., by Noramco, Inc., Queen's Village, N.Y. 305,246, 12(c) pub. 3–3–64. Cl. 46.
Dunagan, Leonard A., Co.: *See*—
Wian, Robert C., Enterprises, Inc.
Dun & Bradstreet Publications Corp.: *See*—
Magazines of Industry, Inc.
Dundee Cement Co., Dundee, Mich. 765,741, pub. 12–17–63. Cl. 12.
Du Pont de Nemours, E. I., and Co., Wilmington, Del. 406,609, 12(c) pub. 3–3–64. Cl. 6.
Du Verre, Inc.: *See*—
International Pipe and Ceramics Corp.
Dynatran Electronics Corp., Mineola, N.Y. 765,854, pub. 9–25–62. Cl. 26.
Eagle Electric Mfg. Co., Long Island City, N.Y. 765,807, pub. 11–5–63. Cl. 21.
Eagle-Picher Co., The: *See*—
Ohio Rubber Co., The.
Early, Durward B., Cheyenne, Wyo. 766,090, pub. 12–17–63. Cl. 107.
Eastman Kodak Co., Rochester, N.Y. 765,871, pub. 12–17–63. Cl. 26.
Eclipse Lawn Mower Co., The: *See*—
Buffalo-Eclipse Corp.
Educators Mfg. Co., Tacoma, Wash. 765,802–3, pub. 12–17–63. Cl. 32.

El-Ar Enterprises, Inc., New York, N.Y. 765,770, pub. 12–17–63. Cl. 18.
Electronic Pianos, Inc., Santa Ana, Calif. 657,139, canc. Cl. 36.
Elevator Maintenance Co., Ltd., Los Angeles, Calif. 657,056, canc. Cl. 21.
Elgen Mfg. Corp., Long Island City, N.Y. 765,902, pub. 12–17–63. Cl. 34.
Elkridge National Bank, Elkridge, Md. 766,083, pub. 12–17–63. Cl. 102.
Elmer's Stocking House: *See*—
Gottehrer, Elmer.
El Rancho Milling Co.: *See*—
Stockmens Feed Mfg. Co.
Empire Button Mfg. Co., Inc., Union City, N.J. 657,173–4, canc. Cl. 40.
Erie Resistor Corp., Erie, Pa. 766,089, pub. 12–17–63. Cl. 106.
Evans Mfg. Co.: *See*—
Evans, Sidney H.
Evans, Sidney H., d.b.a. Evans Mfg. Co., Philadelphia, Pa. 765,951, pub. 12–17–63. Cl. 39.
Faber-Castell, A. W., Pencil Co., Inc., Newark, N.J. 765,916, pub. 12–17–63. Cl. 37.
Fabrique d'Horlogerie de Saint-Blaise S.A., St. Blaise, Neuchatel, Switzerland. 657,120, canc. Cl. 27.
Fayette Brands, Inc.: *See*—
Pacific Vegetable Oil Corp.
Federated Department Stores, Inc.: *See*—
Abraham & Straus, Inc.
Felton & Son, Inc., d.b.a. Josua Bennett Dist. Co., South Boston, Mass. 766,045, pub. 12–17–63. Cl. 49.
Ferro Corp., Cleveland, Ohio. 765,694, pub. 12–17–63. Cl. 1.
Fieldcrest Mills, Inc., Spray, N.C. 765,995, pub. 12–17–63. Cl. 42.
Filbert, J. H., Inc., Baltimore, Md. 766,015, pub. 12–17–63.
Fisher-Price Toys, Inc., East Aurora, N.Y. 657,071, canc. Cl. 22.
Fitzsimmons Stores, Ltd., d.b.a. Smart & Final Iris Co., Los Angeles, Calif. 656,974, canc. Cl. 6.
Flakice Corp.: *See*—
Chemical Machinery Experiment Co. Inc.
Flavorex Co., Inc., Baltimore, Md. 765,999, pub. 12–17–63. Cl. 45.
Flexible Products, Inc., Brooklyn, N.Y. 657,290, canc. Cl. 32.
Flex-o-lators, Inc., Carthage, Mo. 765,897, pub. 12–17–63. Cl. 32.
Fletcher, Robert, & Son Ltd., Stoneclough, near Manchester, England. 765,913, pub. 12–17–63. Cl. 37.
Flockhart Foundry Co., Newark, N.J. 765,754, pub. 12–17–63. Cl. 12.
Flying Scot Sailing Association, Riverside, Conn. 765,924, pub. 12–17–63. Cl. 38.
Fox-Cross Candy Co., Everett, Mass. 766,008, pub. 5–1–62. Cl. 46.
Four Star Products Corp., Yonkers, N.Y. 765,806, pub. 12–17–63. Cl. 21.
Frankl, Sy, Inc., New York, N.Y. 765,958, pub. 12–17–63. Cl. 39.
Franzia Brothers Winery, d.b.a. Bona Wine Co., Ripon, Calif. 766,040, pub. 12–17–63. Cl. 47.
French Donut Shoppes, Inc., West Seneca, N.Y. 766,010, pub. 12–17–63. Cl. 46.
Freeman, W. H., and Co., San Francisco, Calif. 765,921, pub. 3–19–63. Cl. 38.
Frings, Maurice, & Cie, Societe en Commandite, to Dollfus-Mieg & Cie, Societe Anonyme, Paris, France. 171,558, ren. 3–3–64. Cl. 43.
Frisch Restaurants, Inc., Cincinnati, Ohio. 765,702, pub. 12–17–63. Cl. 2.
Frito-Lay, Inc., Dallas, Tex. 766,005, pub. 6–18–63. Cl. 46.
Frito-Nicolay, Dancey Co., The, d.b.a. Mello Crisp Foods Co., Detroit, Mich. 766,002, pub. 11–29–60. Cl. 46.
Fruehauf Corp., Fairless Hills, Pa. 765,795, pub. 12–17–63. Cl. 19.
G & M Battery Co., Detroit, Mich. 657,054, canc. Cl. 21.
Garcrest, Realcraft and Gilead: *See*—
United Mills Corp.
Garfinckel, Julius, & Co.: *See*—
Brooks Brothers.
Gemcraft Co., Inc., Boston, Mass. 766,123. Cl. 52.
Gem Canning Co., Emmett, Idaho. 766,035, pub. 12–17–63. Cl. 46.
General Aniline & Film Corp., New York, N.Y. 765,872, pub. 12–17–63. Cl. 26.
General Coating Co., Woodbridge, N.J. 657,004, canc. Cl. 16.
General Dyestuff Corp., New York, N.Y. 570,617, canc. Cl. 6.
General Electric Co., Pittsfield, Mass. 765,800–1, pub. 12–17–63. Cl. 21.
General Electric Co., Hudson Falls, N.Y. 765,803, pub. 12–17–63. Cl. 21.
General Mills, Inc., Minneapolis, Minn. 357,836, canc. Cl. 46.
General Research and Supply Co., Grand Rapids, Mich. 657,101, canc. Cl. 23.
Gerber Products Co., Fremont, Mich. 659,988, canc. Cl. 13.
Germaine-Henriette Betschart-Fresneau, Grand-Saconnex, Geneva, Switzerland. 657,260, canc. Cl. 51.
Gestetner, D., Ltd., London, England, by A. B. Dick Co., Niles, Ill. 181,804, 12(c) pub. 3–3–64. Cl. 11.
Glenmore Distilleries Co., Owensboro, Ky. 766,115. Cl. 49.
Globe Novelty House, to Globe Novelty House, Inc., New York, N.Y. 405,523, ren. 3–3–64. Cl. 40.
Globe Novelty House, to Globe Novelty House, Inc., New York, N.Y. 405,762, ren. 3–3–64. Cl. 3.
Globe Novelty House, Inc.: *See*—
Globe Novelty House.
Goldberg, S., & Co., Inc., Hackensack, N.J. 765,943, pub. 12–17–63. Cl. 39.
Goodrich, B. F., Co., The, Akron, Ohio. 765,905, pub. 8–20–63. Cl. 35.
Goshen Churn & Ladder Co., The, to Goshen Churn & Ladder, Inc., Goshen, Ind. 174,772, ren. 3–3–64. Cl. 50.
Goshen Churn & Ladder, Inc.: *See*—
Goshen Churn & Ladder Co., The.
Gottehrer, Elmer, d.b.a. Elmer's Stocking House, Baltimore, Md. 765,949, pub. 12–17–63. Cl. 39.
Gould, Robert W., d.b.a. Connecticut Dry Mix Co., Wauregan, Conn. 765,746, pub. 12–17–63. Cl. 12.
Gracious Lady Service, Inc., The, from Practical Surveys, Inc., Philadelphia, Pa. 766,078, pub. 12–3–63. Cl. 101.
Granger Sofwater Supply & Mfg. Corp., d.b.a. International Watercare Corp., Manitowoc, Wis. 765,882, pub. 12–17–63. Cl. 31.
Graphic Investors Co.: *See*—
Brooklyn Eagle, Inc., The.
Gregan, J. V., & Son, Inc., Manchester, Conn. 657,024, canc. Cl. 18.
Grotta Corp., New York, N.Y. 765,979, pub. 12–17–63. Cl. 39.
Growers Exchange, Inc., Salinas, Calif. 766,025, pub. 12–17–63. Cl. 46.
Guardian Electric Mfg. Co., Chicago, Ill. 765,863, pub. 12–17–63. Cl. 26.
Gudebrod Bros. Silk Co., Inc.: *See*—
Gudebrod Bros. Silk Co.
Gudebrod Bros. Silk Co., New York, N.Y., by Gudebrod Bros. Silk Co., Inc., Philadelphia, Pa. 181,475, 12(c) pub. 3–3–64. Cl. 43.
Gulf Oil Corp., Pittsburgh, Pa. 765,908, pub. 12–17–63. Cl. 35.
Gumpert, S., Co., Inc., Jersey City, N.J. 766,004, pub. 12–17–63. Cl. 46.
Haering, D. W., & Co., Inc., San Antonio, Tex. 407,465, ren. 3–3–64. Cl. 6.
Haering, D. W., & Co., Inc., San Antonio, Tex. 407,219, ren. 3–3–64. Cl. 6.
Hagerstown Rubber Co., The, Hagerstown, Md. 765,961, pub. 10–8–63. Cl. 39.
Hall Brothers (Whitefield) Ltd., Manchester, England. 765,778, pub. 12–17–63. Cl. 18.
Hamilton Watch Co., Lancaster, Pa. 765,764, pub. 9–10–63. Cl. 14.
Hanes-Millis Sales Corp., High Point, N.C. 765,957, pub. 12–17–63. Cl. 39.
Hardy, James G., & Co. Inc., New York, N.Y. 405,887–8, ren. 3–3–64. Cl. 42.
Hastings Potato Growers Association, Hastings, Fla. 766,036, pub. 12–17–63. Cl. 46.
Hawthorn Chemical Corp., Wilmington, Del. 656,977, canc. Cl. 6.
Haynes Stellite Co., by Union Carbide Corp., New York, N.Y. 423,980, 12(c) pub. 3–3–64. Cl. 14.
Haynes Stellite Co., The, Kokomo, Ind., by Union Carbide Corp., New York, N.Y. 114,239, 12(c) pub. 3–3–64. Cl. 14.
Haynes Stellite Co., The, Kokomo, Ind., by Union Carbide Corp., New York, N.Y. 134,158, 12(c) pub. 3–3–64. Cl. 23.
Hegsblade-Marguleas Co., San Francisco, Calif. 766,114. Cl. 46.
Henredon Furniture Industries, Inc., Morganton, N.C. 765,896, pub. 12–17–63. Cl. 32.
Hepfinger, Harry F., Inc., Detroit, Mich. 657,275, canc. Cl. 52.
Hermant, Percy, Ltd., to Imperial Optical Co., Ltd., Toronto, Ontario, Canada. 404,873, ren. 3–3–64. Cl. 26.
Herve, G. Edouard, Fecamp, France. 657,222, canc. Cl. 46.
Hollins, William, & Co. Ltd., Nottingham, England. 657,189, canc. Cl. 42.
Homemakers' Products Corp., New York, N.Y. 656,972, canc. Cl. 6.
Hotel Research Laboratories, Inc., Closter, N.J. 765,717, pub. 12–17–63. Cl. 6.
Houdaille Industries, Inc., Buffalo, N.Y., to Purolator Products, Inc., Rahway, N.J. 657,125, canc. Cl. 31.
Houdaille Industries, Inc., Buffalo, N.Y. 765,848, pub. 12–17–63. Cl. 23.
House of Herbs, Inc., Salisbury, Conn. 766,016–7, pub. 12–17–63. Cl. 46.
Hudnut, Richard, Morris Plains, N.J. 179,258, 12(c) pub. 3–3–64. Cl. 51.
Hudson Pulp & Paper Corp., New York, N.Y. 765,707, pub. 3–19–63. Cl. 5.
Hudson Vitamin Products, Inc., New York, N.Y. 765,788–90, pub. 12–17–63. Cl. 18.
Humble Oil & Refining Co.: *See*—
Pennsylvania Lubricating Co.
Hutchens, Howard T., d.b.a. Carousel Sign Co., Lakeland, Fla. 657,057, canc. Cl. 21.
Hutt, Lester R., Buffalo, N.Y. 657,063, canc. Cl. 21.
Hydraulic Machinery Co., Butler, Wis. 765,835, pub. 11–5–63. Cl. 23.
Ideal Fishing Float Co., Inc., Richmond, Va. 765,820, pub. 12–17–63. Cl. 22.
Illinois Testing Laboratories, Inc., Chicago, Ill. 657,114, canc. Cl. 26.
Imperial Optical Co., Ltd.: *See*—
Hermant, Percy, Ltd.
Indian Head Mills, Inc.: *See*—
Ulmann, Bernhard, Co. Inc.
Intercontinental Development Corp.: *See*—
Arnav Shoe Corp.
International Harvester Co., Chicago, Ill. 765,929, pub. 12–17–63. Cl. 38.
International Pipe and Ceramics Corp., East Orange, N.J., from Du Verre, Inc., Arcade, N.Y. 765,744, pub. 12–10–63. Cl. 12.
International Pipe and Ceramics Corp., East Orange, N.J. 765,758, pub. 12–17–63. Cl. 13.

International Toastmistress Clubs, Inc., Huntington Park, Calif. 766,091, pub. 12–17–63. Cl. 107.
International Watercare Corp.: *See*— Granger Sofwater Supply & Mfg. Corp.
Interstate Bakeries Corp., Kansas City, Mo. 766,033, pub. 12–17–63. Cl. 46.
Iowa Limestone Co., Des Moines, Iowa. 766,098. Cl. 1.
Ito, K. K., Camarillo, Calif. 766,111. Cl. 46.
James Brothers, to James Candy Co., Atlantic City, N.J. 184,689–90, ren. 3–3–64. Cl. 46.
James Candy Co.: *See*— James Brothers.
Jayvee Brand, Inc., Lake Oswego, Oreg. 765,964, pub. 12–17–63. Cl. 39.
Jobe-Rose Jewelry Co., Birmingham, Ala. 765,876, pub. 12–17–63. Cl. 28.
Johns-Manville Corp., New York, N.Y. 765,904, pub. 12–17–63. Cl. 35.
Johnson, Howard T., d.b.a. California Seed & Fertilizer Co., Yuba City, Calif. 765,836, pub. 7–2–63. Cl. 23.
Johnson, S. C., & Son, Inc., Racine, Wis. 765,738, pub. 6–11–63. Cl. 11.
Johnson, S. C., & Son, Inc.: *See*— Johnson, S. C., & Son.
Johnson, S. C., & Son, to S. C. Johnson & Son, Inc., Racine, Wis. 176,053, ren. 3–3–64. Cl. 29.
Johnston, Robert A., Co., Milwaukee, Wis. 766,026, pub. 12–17–63. Cl. 46.
Jones, Hulon N., d.b.a. Ak-kwik Co., Paris, Tenn. 765,783, pub. 12–17–63. Cl. 18.
Judson Mfg. Co., Philadelphia, Pa. 414,728, canc. Cl. 23.
Kansas City Macaroni & Importing Co., d.b.a. The American Beauty Macaroni Co., by The American Beauty Macaroni Co., Kansas City, Kans. 404,593, 12(c) pub. 3–3–64. Cl. 46.
Kansas City Stuffed Date Co.: *See*— Sogas, Nicholaos Co.
Keasbey & Mattison Co.: *See*— Nicolet Industries, Inc.
Keystone Plastics, Inc., Newark, N.Y. 766,096. Cl. 1.
Kiefer, C. K.: *See*— Kiefer, Charles K.
Kiefer, Charles K., d.b.a. C. K. Kiefer, Lancaster, Pa. 657,228, canc. Cl. 46.
Kimco Auto Products, Inc., Memphis, Tenn. 765,842, pub. 12–17–63. Cl. 23.
King Kullen Grocery Co., Inc., Westbury, N.Y. 765,772, pub. 12–17–63. Cl. 18.
Kirsch Co., Sturgis, Mich. 765,759, pub. 12–17–63. Cl. 13.
Kluge, Anthony M., Rego Park, N.Y. 765,819, pub. 12–17–63. Cl. 22.
Kraft, J. L., & Bros. Co., to National Dairy Products Corp., Chicago, Ill. 182,143, ren. 3–3–64. Cl. 46.
Kress, S. H., and Co., New York, N.Y. 765,997, pub. 12–17–63. Cl. 44.
La Croix Optical Co., Kirkland, Ill. 765,855, pub. 12–17–63. Cl. 26.
La Jolla Sportswear Co., Los Angeles, Calif. 765,939, pub. 12–17–63. Cl. 39.
Lakewood Mfg. Co., Westlake, Ohio. 765,887. pub. 12–17–63. Cl. 32.
Lear, Inc., Santa Monica, Calif. 657,117, canc. Cl. 26.
Learning Materials, Inc., Chicago, Ill. 766,103. Cl. 38.
Lennox Industries Inc., Marshalltown, Iowa. 765,849, pub. 12–17–63. Cl. 23.
Lever Brothers Co., New York, N.Y. 766,063, pub. 12–17–63. Cl. 51.
Levitz, Mendel, d.b.a. M. Levitz & Co., to M. Levitz & Co., Albany, N.Y. 178,563. ren. 3–3–64. Cl. 27.
Levitz, M., & Co.: *See*— Levitz, Mendel.
Lipschultz, Lester S., Los Angeles, Calif. 765,927, pub. 12–17–63. Cl. 38.
Litton Industries, Inc., Beverly Hills, Calif. 765,864, pub. 12–17–63. Cl. 26.
Lola Macaroni Co.: *See*— Maggiore, Josephina.
Louden William, d.b.a. Tinicum Research Co., Erwinna, Pa. 765,720, pub. 12–17–63. Cl. 6.
Lovable Co., The, Atlanta, Ga. 765,952, pub. 12–17–63. Cl. 39.
Love, Joseph, Inc., New York, N.Y. 765,981–2, pub. 12–17–63. Cl. 39.
Lowenstein, M., & Sons, Inc., New York, N.Y. 765,992, pub. 12–17–63. Cl. 42.
Lubovsky, H., Inc., Boston, Mass. 765,974, pub. 12–17–63. Cl. 39.
Lucifer S.A., Carouge-Geneva, Switzerland. 657,077, canc. Cl. 21.
Lucky Tiger Mfg. Co.: *See*— York, L. T., Co.
Lylyan: *See*— Smithwick, Lillian M.
Lynedoch Whisky Co. Ltd., Glasgow, Scotland. 766,043, pub. 12–17–63. Cl. 49.
Lyntone Co., The, Oklahoma City, Okla. 657,159, canc. Cl. 39.
M & O Co., Inc., Wauchula, Fla. 766,023, pub. 12–17–63. Cl. 46.
M.T. & D. Co., The, Cleveland, Ohio. 766,101. Cl. 22.
MacFadden, Bernarr, Foundation, Inc., The, New York, N.Y. 766,104. Cl. 38.
Magazines of Industry, Inc., by Dun & Bradstreet Publications Corp., New York, N.Y. 406,120, 12(c) pub. 3–3–64. Cl. 38.
Maggiore, Josephina, executor of the will of P. Maggiore, deceased, d.b.a. Lola Macaroni Co., Cicero, Ill. 766,019, pub. 12–17–63. Cl. 46.
Maggiore, Peter: *See*— Maggiore, Josephina.
Magnus Organ Corp., Linden, N.J. 765,910, pub. 12–17–63. Cl. 36.
Mahon, Thomas J., Inc., Englewood Cliffs, N.J. 765,785, pub. 12–17–63. Cl. 18.
Maidenform, Inc., New York, N.Y. 765,975–7, pub. 12–17–63. Cl. 39.
Marchal, Inc., New York, N.Y. 765,879, pub. 12–17–63. Cl. 28.
Margien, Juliette, Inc., to Juliette Margien, Inc., Ridgefield, N.J. 657,301, canc. Cl. 51.
Marley Co., The, Kansas City, Mo. 765,878, pub. 12–17–63. Cl. 26.
Marlus, Sherman Oaks, Calif. 765,890, pub. 12–17–63. Cl. 32.
Martin-Marietta Corp., Chicago, Ill. 760,527, canc. Cl. 16.
Marva Ignition Test-O-Meter, Inc., Stamford, Conn. 765,869, pub. 12–17–63. Cl. 26.
Marvin Societa per l'Industria Farmaceutica e Cosmetica Instituto Farmaco Biologico Societa in Nome Collettivo, Milan, Italy. 765,718, pub. 12–17–63. Cl. 6.
Marvin Societa per l'Industria Farmaceutica e Cosmetica Instituto Farmaco Biologico Societa in Nome Collettivo, Milan, Italy. 766,067, pub. 12–17–63. Cl. 52.
Master Mfg. Co., Inc.: *See*— Master Mfg. Co.
Master Mfg. Co., to Master Mfg. Co., Inc., Cleveland, Ohio. 657,122, canc. Cl. 29.
Maytag Co., The, Newton, Iowa. 766,084, pub. 12–17–63. Cl. 103.
McGraw-Edison Co., Elgin, Ill. 765,853, pub. 12–17–63. Cl. 24.
McNeil Machine & Engineering Co., The, Akron, Ohio. 765,830, pub. 12–17–63. Cl. 23.
Mead Corp., The, Dayton, Ohio. 404,980, ren. 3–3–64. Cl. 37.
Mead Johnson & Co., Evansville, Ind., from American Dry Beverage Corp., d.b.a. Metri-Cola Beverage Co., Manchester, N.H. 765,998, pub. 1–22–63. Cl. 45.
Medical Economics, Inc., Oradell, N.J. 765,930–1, pub. 12–17–63. Cl. 38.
Meeker, Roy J., Los Angeles, Calif. 407,482, ren. 3–3–64. Cl. 39.
Mello Crisp Foods Co.: *See*— Frito-Nicolay, Dancey Co., The.
Melrose Yarn Co., Inc., Brooklyn, N.Y. 765,928, pub. 12–17–63. Cl. 38.
Menlo Park Laboratories, Inc., Edison, N.J. 765,769, pub. 12–17–63. Cl. 18.
Mercantile Stores Co., Inc., Wilmington, Del. 765,950, pub. 12–17–63. Cl. 39.
Merck & Co., Inc., Rahway, N.J. 765,775, pub. 12–17–63. Cl. 18.
Mercury Iron & Steel Co., The, Cleveland, Ohio. 765,762, pub. 5–29–62. Cl. 14.
Mercury Record Productions, Inc., Chicago, Ill. 765,909, pub. 12–17–63. Cl. 36.
Metallurgical Associates, Inc., New York, N.Y. 657,303, canc. Cl. 106.
Metri-Cola Beverage Co.: *See*— Mead Johnson & Co.
Meyer-Blanke Co., St. Louis, Mo. 765,771, pub. 3–12–63. Cl. 18.
Michigan Brass Co., Grand Haven, Mich. 656,997, canc. Cl. 13.
Micro-Sine Enterprises, Detroit, Mich. 765,858, pub. 12–17–63. Cl. 26.
Midwest Industries, Inc., Huron, Ohio. 657,074, canc. Cl. 22.
Midwest Industries, Inc., Ida Grove, Iowa. 766,052, pub. 12–17–63. Cl. 50.
Milbrath, Harold A., Milwaukee, Wis. 765,880, pub. 12–17–63. Cl. 28.
Miles Laboratories, Inc.: *See*— Takamine Laboratory, Inc.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 405,413, ren. 3–3–64. Cl. 5.
Mistee Lingerie, Inc., Boyertown, Pa. 765,948, pub. 12–17–63. Cl. 39.
Mr. McIver, Inc., New Bedford, Mass. 765,946, pub. 7–30–63. Cl. 39.
Modern Distributors Trading Inc., New York, N.Y. 765,735, pub. 12–17–63. Cl. 8.
Monsanto Chemical Co., St. Louis, Mo. 765,884, pub. 12–17–63. Cl. 31.
Morris, Philip, Inc., New York, N.Y. 765,837, pub. 12–17–63. Cl. 23.
Mosstype Corp., Waldwick, N.J. 765,833, pub. 12–17–63. Multiple Class (Classes 23 and 50.)
Mother's Cake & Cookie Co., d.b.a. Old Mission Biscuit Co., Oakland, Calif. 766,037, pub. 12–17–63. Cl. 46.
Myalda, Grace B., and Shogo J. Myalda, d.b.a. Birdhouses by Myalda, Albertson, N.Y. 766,055, pub. 12–17–63. Cl. 50.
Myers, F. E., & Bro. Co., The, Ashland, Ohio. 657,129, canc. Cl. 31.
NSU Motorenwerke Aktiengesellschaft, from NSU-Werke Aktiengesellschaft, Neckarsulm, Wurttemberg, Germany. 765,792, pub. 12–17–63. Cl. 19.
NSU-Werke Aktiengesellschaft: *See*— NSU Motorenwerke Aktiengesellschaft.
Nagatanien & Co., Ltd., Tokyo, Japan. 766,107. Cl. 46.
National Cash Register Co., The, Dayton, Ohio. 765,808, pub. 12–17–63. Cl. 21.
National Dairy Products Corp.: *See*— Kraft, J. L., & Bros. Co.
Neiman-Marcus Co., Dallas, Tex. 766,059, pub. 12–17–63. Cl. 51.
Nestle Co., Inc., The, White Plains, N.Y. 766,032, pub. 12–17–63. Cl. 46.
Neville Chemical Co., The, Pittsburgh, Pa. 765,729, pub. 12–17–63. Cl. 6.
New England Industries, Inc., The, New York, N.Y. 657,282, canc. Cl. 12.

Newspaper Enterprise Association, Inc., Cleveland, Ohio. 765,932, pub. 12–17–63. Cl. 38.
Nicolet Industries, Inc., Florham Park, N.J., from Keasbey & Mattison Co., Ambler, Pa. 765,743, pub. 12–17–63. Cl. 12.
Nobil Shoe Co., The, Akron, Ohio. 765,938, pub. 5–22–62. Cl. 39.
Noesting Pin Ticket Co., Inc., New York, N.Y. 180,007, 12(c) pub. 3–3–64. Cl. 37.
Noramco, Inc.: *See*— Dugan Brothers of New Jersey, Inc.
Norcross, Inc., New York, N.Y. 765,919, pub. 12–17–63. Cl. 37.
Northeastern Distributors, Inc., Cambridge, Mass. 765,796, pub. 12–17–63. Cl. 19.
Northwest Airlines, Inc., Saint Paul, Minn. 766,086, pub. 12–17–63. Cl. 105.
Nutrilite Products, Inc., Buena Park, Calif. 766,020, pub. 12–17–63. Cl. 46.
Ohio Rubber Co., The, Willoughby, Ohio, to The Eagle-Picher Co., Cincinnati, Ohio. 405,764, ren. 3–3–64. Cl. 35.
Old Mission Biscuit Co.: *See*— Mother's Cake & Cookie Co.
Olewitz, Murray, Inc., New York, N.Y. 765,972, pub. 12–17–63. Cl. 39.
Orcon Corp., Livermore, Calif. 765,996, pub. 12–17–63. Cl. 42.
Oshkosh Luggage: *See*— Beco Products Corp.
Outdoor American Corp., Spokane, Wash. 765,925, pub. 12–17–63. Cl. 38.
Owens-Illinois Glass Co., Toledo, Ohio. 765,899, pub. 12–17–63. Cl. 33.
Pabst Brewing Co.: *See*— Pabst Corp.
Pabst Corp., to Pabst Brewing Co., Milwaukee, Wis. 178,340–1, ren. 3–3–64. Cl. 48.
Pabst Corp., to Pabst Brewing Co., Milwaukee, Wis. 183,100, ren. 3–3–64. Cl. 46.
Pacific Vegetable Oil Corp., San Francisco, Calif., from Fayette Brands, Inc., Long Island City, N.Y. 766,009, pub. 1–15–63. Cl. 46.
Pall Corp., Glen Cove, N.Y., from Trinity Equipment Corp., Cortland, N.Y. 765,883, pub. 12–17–63. Cl. 31.
Palizzio, Inc., New York, N.Y. 657,164, canc. Cl. 39.
Palmedico, Inc., Columbia, S.C. 765,774, pub. 12–17–63. Cl. 18.
Palmedico, Inc., Columbia, S.C. 765,776, pub. 12–17–63. Cl. 18.
Pamper Pad Inc., St. Marys, Ohio. 765,798, pub. 12–17–63. Cl. 21.
Parechoc S.A., Le Sentier, Vaud, Switzerland. 765,875, pub. 12–17–63. Cl. 27.
Park & Tilford Distillers Co.: *See*— Schenley Distillers, Inc.
Paul, F. H., & Stein Bros., Inc., New York, N.Y. 765,710, pub. 12–17–63. Cl. 6.
Peck's Products Co., St. Louis, Mo. 765,749, pub. 12–17–63. Cl. 12.
Penn Fishing Tackle Mfg. Co., Philadelphia, Pa. 765,817–8, pub. 12–17–63. Cl. 22.
Penn Meter Co., Philadelphia, Pa. 765,866, pub. 12–17–63. Cl. 26.
Pennsylvania Lubricating Co., Pittsburgh, Pa., to Humble Oil & Refining Co., Houston, Tex. 174,898, ren. 3–3–64. Cl. 15.
People To People Health Foundation, Inc., The, Washington, D.C. 766,124. Cl. 100.
Pere, J. Thiriez, & Fils, La Societe en Nom Collectif, Lille, France, to Dollfus-Mieg & Cie, Societe Anonyme, Paris, France. 175,451, ren. 3–3–64. Cl. 43.
Pesquera del Pacifico S.A., Ensenada, Mex. 766,022, pub. 12–17–63. Cl. 46.
Pfizer, Chas., & Co., Inc., New York, N.Y. 765,716, pub. 12–17–63. Cl. 6.
Ph. Barthels-Feldhoff, Wuppertal-Barmen, Germany. 765,986, pub. 12–17–63. Cl. 40.
Philco Corp., by Philco Corp., Philadelphia, Pa. 405,824, 12(c) pub. 3–3–64. Cl. 21.
Phoenix, Inc., New York, N.Y. 765,969, pub. 12–17–63. Cl. 39.
Pi Beta Phi, Chapin, Ill. 248,756, 12(c) pub. 3–3–64. Cl. 32.
Pi Beta Phi, Chapin, Ill. 248,856, 12(c) pub. 3–3–64. Cl. 2.
Pi Beta Phi, Chapin, Ill. 281,322, 12(c) pub. 3–3–64. Cl. 42.
Piedmont Shirt Co., Greenville, S.C. 765,965, pub. 12–17–63. Cl. 39.
Pittsburgh Chemical Co., Pittsburgh, Pa. 765,750, pub. 12–17–63. Cl. 12.
Plastic Coating Corp., The, Holyoke, Mass. 766,050, pub. 4–10–62. Cl. 50.
Pleasant Valley Wine Co., Rheims, to The Taylor Wine Co., Inc., Hammondsport, N.Y. 404,984, ren. 3–3–64. Cl. 47.
Plymouth Citrus Growers Assn., Plymouth, Fla. 184,580, ren. 3–3–64. Cl. 46.
Plymouth Cordage Co., Plymouth, Mass. 765,726, pub. 12–17–63. Cl. 6.
Pneuma-Flo Systems, Inc., New York, N.Y. 765,850–1, pub. 12–17–63. Cl. 23.
Potter Instrument Co., Inc., Plainview, N.Y. 765,832, pub. 12–17–63. Cl. 23.
Potter Instrument Co., Inc., Plainview, N.Y. 765,856, pub. 12–17–63. Cl. 26.
Practical Surveys, Inc.: *See*— Gracious Lady Service, Inc.
Products Research Co., Burbank, Calif. 766,100. Cl. 12.
Puffies Co., Philadelphia, Pa. 765,985, pub. 12–17–63. Cl. 40.
Pullman Inc., Chicago, Ill. 765,797, pub. 12–17–63. Cl. 19.
Purolator Products, Inc.: *See*— Houdaille Industries, Inc.
Quaker Chemical Corp., Conshohocken, Pa. 765,731, pub. 12–17–63. Cl. 6.
Quaker Oats Co., The, Chicago, Ill. 766,031, pub. 12–17–63. Cl. 46.
Quality Macaroni Co., St. Paul, to The Creamette Co., Minneapolis, Minn. 404,624, ren. 3–3–64. Cl. 46.
Ray Products Co., Inc., Alhambra, Calif. 765,901, pub. 12–17–63. Cl. 34.
Rayette, Inc., St. Paul, Minn. 766,064, pub. 12–17–63. Cl. 51.
Reeves Brothers, Inc.: *See*— Bennett, Fred S., Inc.
Regal Shirt Corp., New York, N.Y. 657,167, canc. Cl. 39.
Reid, Frank K., Co.: *See*— Reid, Frank K.
Reid, Frank K., d.b.a. Frank K. Reid Co., McAllen, Tex. 765,862, pub. 10–29–63. Cl. 26.
Reinhold Publishing Corp., New York, N.Y. 766,105. Cl. 38.
Reynolds Metals Co., Richmond, Va. 765,763, pub. 12–17–63. Cl. 14.
Rexall Drug and Chemical Co., d.b.a. Rexall Drug Co., Los Angeles, Calif. 765,784, pub. 12–17–63. Cl. 18.
Rexall Drug and Chemical Co., d.b.a. Tupperware, Los Angeles, Calif. 765,844, pub. 12–17–63. Cl. 23.
Rexall Drug Co.: *See*— Rexall Drug and Chemical Co.
Rice Growers Association of California: *See*— Rosenberg Bros. & Co.
Ricardo's: *See*— Correa, Richard, Jr.
Richardson Co., The, Melrose Park, Ill. 765,724–5, pub. 12–17–63. Cl. 6.
Rickard Publishing Co., Chicago, Ill. 765,922, pub. 12–17–63. Cl. 38.
Rielio Condizionatori S.p.A., Bevilacqua, Verona, Italy. 765,900, pub. 12–17–63. Cl. 34.
Robinson Mfg. Co., Elizabeth City, N.C. 765,980, pub. 12–17–63. Cl. 39.
Rock of Ages Corp., Barre, Vt. 766,054, pub. 12–17–63. Cl. 50.
Rood, Robert E.: *See*— Drobac, Stan, and Robert E. Rood.
Roos Bros., Inc., San Francisco, Calif. 765,970, pub. 12–17–63. Cl. 39.
Rosenberg Bros. & Co., San Francisco, to Rice Growers of California, Sacramento, Calif. 180,019, ren. 3–3–64. Cl. 46.
Rough Rider, Inc., Napa, Calif. 765,971, pub. 12–17–63. Cl. 39.
Royalon, Inc., Sebring, Ohio. 765,701, pub. 12–17–63. Cl. 2.
Rubinstein, Helena, Inc., New York, N.Y. 765,777, pub. 12–17–63. Cl. 18.
Ruilfson, Leona E., executrix of the estate of R. E. Ruilfson, d.b.a. Wholesaler Warehouse, and also d.b.a. Wholesaler, Manchester, Iowa. 766,110. Cl. 46.
Ruilfson, Ralph E.: *See*— Ruilfson, Leona E.
S & S Mfg. Co., Toledo, Ohio. 765,889, pub. 12–17–63. Cl. 32.
Salem Oil & Grease Co., Salem, Mass. 765,709, pub. 12–17–63. Cl. 6.
Sampson Co., The, Chicago, Ill. 765,812, pub. 12–17–63. Cl. 21.
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Sapolin Paints Inc.: *See*— Sapolin Co. Inc.
Sawyer, Tom, Foods, Los Angeles, Calif. 657,218, canc. Cl. 46.
Schenley Distillers, Inc., d.b.a. Park & Tilford Distillers Co., New York, N.Y. 766,044, pub. 12–17–63. Cl. 49.
Schenley Industries, Inc., d.b.a. Weston Winery, New York, N.Y. 657,242, canc. Cl. 47.
Schering Corp., Bloomfield, N.J. 657,029, canc. Cl. 18.
Schminke-Werke, G m.b.H., Bad Wildungen, Germany. 657,034–5, canc. Cl. 19.
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Scoot-A-Rent Corp., Salt Lake City, Utah. 766,126. Cl. 105.
Scott Laboratories: *See*— Scott, Lee H.
Scott, Lee H., d.b.a. Scott Laboratories, Corpus Christi, Tex. 766,065, pub. 12–17–63. Cl. 51.
Scott–Atwater Mfg. Co., Minneapolis, Minn. 657,111, canc. Cl. 23.
Scripto, Inc., Atlanta, Ga. 765,736, pub. 12–17–63. Cl. 8.
Scully Signal Co., Melrose, Mass. 657,085, canc. Cl. 23.
Sealy, Inc., d.b.a. Sealy Mattress Co., Chicago, Ill. 765,885, pub. 12–17–63. Cl. 32.
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Sherman Products, Inc., Royal Oak, Mich. 657,097, canc. Cl. 23.
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Smith Brothers Mfg. Co., Carthage, Mo. 765,955, pub. 12–17–63. Cl. 39.
Smith, G. E., Inc., Pittsburgh, Pa. 765,706, pub. 6–18–63. Cl. 5.
Smithwick, Lillian M., d.b.a. Lylyan, Washington, D.C. 766,061, pub. 12–17–63. Cl. 51.

Societe Commerciale des Bourgognes de Marque F. Chauvenet, ou par Abreviation "S.C.B.M.," Nuits-Saint-Georges, Cote d'Or, France. 766,038, pub. 12–17–63. Cl. 47.
Society of Chemical Industry in Basle, Basel, Switzerland, to Ciba Corp., New York, N.Y. 180,693, ren. 3–3–64. Cl. 18.
Sogas, Nicholaos C., d.b.a. Kansas City Stuffed Date Co., Kansas City, Mo. 657,295, canc. Cl. 46.
Songbird Music Publishers: *See*—
Aragon, Ruth H.
Sonic Specialties, Inc., North Hollywood, Calif. 657,045, canc. Cl. 21.
Southall, James, & Co. Ltd., Norwich, Norfolk, England. 765,966, pub. 12–17–63. Cl. 39.
Southern Advance Bag & Paper Co. Inc., Bangor, Maine, and Boston, Mass., by Continental Can Co., Inc., New York, N.Y. 405,532–3, 12(c) pub. 3–3–64. Cl. 2.
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Speakman Co., Wilmington, Del. 765,760, pub. 12–17–63. Cl. 13.
Sperry, John H., Co., Boston, Mass. 765,739, pub. 12–17–63. Cl. 11.
Spiegel Industries Corp., Teaneck, N.J. 765,895, pub. 12–17–63. Cl. 32.
Spielhofer, J. Martin, d.b.a. Super Garni S.A., Lugano, Switzerland. 657,130, canc. Cl. 32.
Sporlan Valve Co., St. Louis, Mo. 765,859, pub. 12–17–63. Cl. 26.
Standard Medical Co.: *See*—
Standard Medical Co., Inc.
Standard Medical Co., Inc., d.b.a. Standard Medical Co., Lansford, Pa. 765,782, pub. 12–17–63. Cl. 18.
Statmaster Corp., Hialeah, Fla. 765,867, pub. 12–17–63. Cl. 26.
Stockmens Feed Mfg. Co., by El Rancho Milling Co., Clovis, N. Mex. 404,928, 12(c) pub. 3–3–64. Cl. 46.
Stranco Products, Inc., Chicago, Ill. 765,805, pub. 12–17–63. Cl. 21.
Sunshine Biscuits, Inc., Long Island City, N.Y. 766,034, pub. 12–17–63. Cl. 46.
Super Garni S.A.: *See*—
Spielhofer, J. Martin.
Supercon, Houston, Tex. 765,765, pub. 12–17–63. Cl. 14.
Superior Surgical Mfg. Co., Inc., Huntington, N.Y. 765,907, pub. 12–17–63. Cl. 39.
Supreme Chapter of the P.E.O. Sisterhood, Des Moines, Iowa. 766,095, pub. 12–17–63. Cl. 200.
Swanee Paper Corp., New York, N.Y. 765,912, pub. 12–17–63. Cl. 37.
Swingline Inc., Long Island City, N.Y. 765,761, pub. 12–17–63. Cl. 13.
Swiss Colony, Inc., The, d.b.a. Viennese Confections, Monroe, Wis. 766,007, pub. 12–17–63. Cl. 46.
Tahiti Tile Co., Inc., Jonesboro, Ga. 765,751, pub. 12–17–63. Cl. 12.
Takamine Laboratory, Inc., Clifton, N.J., to Miles Laboratories, Inc., Elkhart, Ind. 182,330, ren. 3–3–64. Cl. 46.
Taylor Wine Co., Inc., The: *See*—
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Telesystem Services Corp., Glenside, Pa. 765,802, pub. 12–17–63. Cl. 21.
Tension Envelope Co., Inc., New York, and Brooklyn, N.Y., to Tension Envelope Corp., New York, N.Y. 185,395, ren. 3–3–64. Cl. 37.
Tension Envelope Corp.: *See*—
Tension Envelope Co., Inc.
Terafilm Corp., Stamford, Conn. 712,676, canc. Cl. 1.
Testor Corp., The, Rockford, Ill. 766,053, pub. 12–17–63. Cl. 50.
Thermidaire Corp. of American, Syracuse, N.Y. 765,712–5, pub. 12–17–63. Cl. 6.
Thexton Mfg. Co., Minneapolis, Minn. 765,794, pub. 12–17–63. Cl. 19.
Thiem Products, Inc., Milwaukee, Wis. 765,696, pub. 12–17–63. Cl. 1.
Thiem Products, Inc., Milwaukee, Wis. 765,745, pub. 12–17–63. Cl. 12.
Thomas Co., The, Minneapolis, Minn. 765,768, pub. 12–17–63. Cl. 16.
Thompson, J. L., Co.: *See*—
Thompson, J. L.
Thompson, J. L., d.b.a. J. L. Thompson Co., Somerton, Ariz. 407,825, ren. 3–3–64. Cl. 46.
Thompson's Dairy, Inc., d.b.a. Thompson's Honor Dairy, Washington, D.C. 766,029, pub. 12–17–63. Cl. 46.
Thompson's Honor Dairy: *See*—
Thompson's Dairy, Inc.
Tinicum Research Co.: *See*—
Louden, William.
Tremco Mfg. Co., The, Cleveland, Ohio. 406,018, ren. 3–3–64. Cl. 12.
Trevi-Tile Inc., Wenatchee, Wash., from Wall Construction Co. Ltd., Winnipeg, Manitoba, Canada. 765,740, pub. 12–17–63. Cl. 12.
Tri County Asphalt Corp., Roseland, N.J. 765,747, pub. 12–17–63. Cl. 12.
Triangle Publications, Inc., Philadelphia, Pa. 405,672, ren. 3–3–64. Cl. 38.
Trimfoot Co., Farmington, Mo. 765,942, pub. 12–17–63. Cl. 39.
Trinity Equipment Corp.: *See*—
Pall Corp.
Troy Sportswear Co., San Francisco, Calif. 765,983, pub. 12–17–63. Cl. 39.
Tudor, Bert E., National City, Calif. 765,757, pub. 12–17–63. Cl. 13.
Tupperware: *See*—
Rexall Drug and Chemical Co.
Tweedie Footwear Corp., Jefferson City, Mo. 765,936, pub. 12–17–63. Cl. 39.
Twin Trees Gardens, Inc., Lynbrook, N.Y. 657,217, canc. Cl. 46.
Ulmann, Bernhard, Co. Inc., to Indian Head Mills, Inc., New York, N.Y. 404,926, ren. 3–3–64. Cl. 50.
Union Bag-Camp Paper Corp., New York, N.Y. 765,916, pub. 12–17–63. Cl. 37.
Union Carbide Corp.: *See*—
Haynes Stellite Co., The.
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Union Special Machine Co., Chicago, Ill. 178,272, ren. 3–3–64. Cl. 23.
Union Tank Car Co., Chicago, Ill. 766,087, pub. 12–17–63. Cl. 105.
United Mills Corp., d.b.a. Garcrest, Realcraft and Gilead, Mt. Gilead, N.C. 657,172, canc. Cl. 39.
United Packaging Co., Inc., Minneapolis, Minn. 766,113. Cl. 46.
U.S. Bowl, Inc., The, Washington, D.C. 766,092, pub. 12–17–63. Cl. 107.
United States Rubber Co., New York, N.Y. 657,079, canc. Cl. 22.
United States Rubber Co., New York, N.Y. 765,737, pub. 12–17–63. Cl. 10.
United States Steel Corp.: *See*—
American Steel and Wire Co. of New Jersey, The.
U.S. Vitamin & Pharmaceutical Corp., New York, N.Y. 765,791, pub. 12–17–63. Cl. 18.
Upjohn Co., The, Kalamazoo, Mich. 211,190, canc. Cl. 6.
Upjohn Co., The, Kalamazoo, Mich. 435,143, canc. Cl. 6.
Upjohn Co., The, Kalamazoo, Mich. 699,294, canc. Cl. 18.
Upjohn Co., The, Kalamazoo, Mich. 657,032, canc. Cl. 18.
Upjohn Co., The, Kalamazoo, Mich. 699,716, canc. Cl. 16.
Van Dyk & Co., Inc., Belleville, N.J. 765,719, pub. 12–17–63. Cl. 6.
Vanadium-Alloys Steel Co., Latrobe, Pa. 407,351, 12(c) pub. 3–3–64. Cl. 14.
Vanguard Recording Society, Inc., New York, N.Y. 657,141, canc. Cl. 36.
Vanity Fair Mills, Inc., Reading, Pa. 765,963, pub. 12–17–63. Cl. 39.
Vereinigte Deutsche Nickel-Werke Aktien-Gesellschaft vormals Westfalisches Nickelwalswerk Fleitmann, Witte & Co., Schwerte, Ruhr, Germany. 656,990, canc. Cl. 13.
Viennese Confections: *See*—
Swiss Colony, Inc., The.
Vornado, Inc., Garfield, N.J. 765,866, pub. 12–17–63. Cl. 26.
Walker Mfg. Co., Racine, Wis. 765,836, pub. 10–15–63. Cl. 23.
Wall Construction Co., Ltd.: *See*—
Trevi-Tile Inc.
Wallace Silversmiths, Inc., Wallingford, Conn. 657,109, canc. Cl. 23.
Wander Co., The, Chicago, Ill. 765,781, pub. 12–17–63. Cl. 18.
Ward, C. E., Co., The, New London, Ohio. 657,169–70, canc. Cl. 39.
Wausau Paper Mills Co., Brokaw, Wis. 765,917, pub. 12–17–63. Cl. 37.
Weck, Edward, & Co. Inc.: *See*—
Weck, Edward, & Son, Inc.
Weck, Edward, & Son, Inc., New York, by Edward Weck & Co. Inc., Long Island City, N.Y. 166,782, 12(c) pub. 3–3–64. Cl. 23.
Weir, G. & J., Ltd., Glasgow, Scotland. 765,831, pub. 12–17–63. Cl. 23.
West Coast Engineering, Inc., Seattle, Wash. 765,823, pub. 12–17–63. Cl. 22.
West Virginia Pulp and Paper Co., New York, N.Y. 765,934, pub. 12–17–63. Cl. 38.
Western Wear, Inc., Fort Worth, Tex. 765,940, pub. 12–17–63. Cl. 39.
Westinghouse Electric Corp., Pittsburgh, Pa. 765,813, pub. 12–17–63. Cl. 21.
Wetlands for Wildlife, Inc., Milwaukee, Wis. 766,077, pub. 12–17–63. Cl. 100.
White, Bettye W.: *See*—
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White, James C., and Bettye W. White, d.b.a. James C. White Co., Greenville, S.C. 765,756, pub. 12–17–63. Cl. 13.
White, James C., Co.: *See*—
White, James C., and Bettye W. White.
White Laboratories, Inc., Kenilworth, N.J. 657,025, canc. Cl. 18.
Whiting, E. B. & A. C., Burlington, Vt. 765,698, pub. 12–17–63. Cl. 1.
Wholesaler: *See*—
Rullfson, Leona E.
Wholesaler Warehouse: *See*—
Rullfson, Leona E.
Wian, Robert C., Enterprises, Inc., d.b.a. Leonard A. Dunagan Co., Glendale, Calif. 766,013, pub. 12–17–63. Cl. 46.
Will's Hybred Wig-lers: *See*—
Dietzel, Wilbur C.
Wilson Sporting Goods Co., River Grove, Ill. 765,829, pub. 12–17–63. Cl. 22.
Winchester Mills, Inc., New York, N.Y. 657,293, canc. Cl. 44.
Winn-Dixie Stores, Inc., Jacksonville, Fla. 766,018, pub. 12–17–63. Cl. 46.
Winston Briar Pipe Mfg. Co., Ltd., Lindenhurst, N.Y. 765,733, pub. 12–17–63. Cl. 8.

Witco Chemical Co., Inc., New York, N.Y. 765,752–3, pub. 12–17–63. Cl. 12.
Wodli, Emile, Strasbourg, Bas-Rhin, France. 765,886, pub. 12–17–63. Cl. 32.
Woods Mfg. Co., Fort Smith, Ark. 765,978, pub. 12–17–63. Cl. 39.
Woolworth, F. W., Co., New York, N.Y. 657,171, canc. Cl. 39.
Wright, Wm. E., & Sons Co., West Warren, Mass. 765,732, pub. 12–17–63. Cl. 7.
Wyandotte Chemicals Corp., Wyandotte, Mich. 765,730, pub. 12–17–63. Cl. 6.
Wyandotte Chemicals Corp., Wyandotte, Mich. 766,071–4, pub. 12–17–63. Cl. 52.
York, L. T., Co., from Lucky Tiger Mfg. Co., d.b.a. Aspen Associates, Kansas City, Mo. 765,827, pub. 10–29–63. Cl. 22.
Zerrenner, F., Pforzheim, Germany. 765,877, pub. 12–17–63. Cl. 28.
Zimmermann, Chn., & Son Co., New York, N.Y. 657,163, canc. Cl. 39.

U.S. GOVERNMENT PRINTING OFFICE: O—1964

U.S. DEPARTMENT OF COMMERCE
OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE
March 10, 1964 Volume 800 Number 2

PATENTS
NOTICES

Board of Appeals Decisions Rendered in the Month of January 1964

Examiner affirmed	343
Examiner affirmed in part	45
Examiner reversed	112
Total	500

Amendments After Second Action

Amendments filed after the second action on the merits are not entered until approved by the Examiner. It is suggested that, when extensive amendments to the claims are proposed, a copy of the claims as proposed to be amended be included either in the "Remarks" or in a separate paper. Bracketing deleted matter and underlining inserted matter would also be helpful.

EDWIN L. REYNOLDS,
Acting Commissioner of Patents.

February 12, 1964.

English Translation of Manual of Patent Classification (1959) of the German Federal Republic Now Available

A complete translation into English of the Manual of Patent Classification of the Patent Office of the German Federal Republic (Deutsches Patentamt) has been published for the U.S. Patent Office, Department of Commerce, and the National Science Foundation. This is a translation of the 7th edition of the manual, 1959, the most recent German patent classification, and consists of 643 printed pages. The only known previous translation was of the edition of 1910 by G. A. Lovett of the U.S. Patent Office. The manual is useful for searching the German patents and may be of interest to anyone interested in the classification of scientific and technical information.

Orders for the manual, referring to order number OTS 63–11190, should be accompanied by check or money order for $6.50 payable to the Office of Technical Services, and should be sent to the following address:

Office of Technical Services
U.S. Department of Commerce
Washington, D.C. 20230

Conflict of Interest

On October 15, 1963, there was published in the OFFICIAL GAZETTE (795 O.G. 519) a notice that the preparation by Patent Office draftsmen of drawings to become part of a patent application was considered to fall within the area of activity prohibited by Commissioner's Administrative Order No. 50 of January 29, 1963.

The following opinion of the Criminal Division of the Department of Justice is published for the information of all who may be concerned.

Title 18, Section 203 of the United States Code provides in part:

(a) Whoever, otherwise than as provided by law for the proper discharge of official duties, directly or indirectly receives or agrees to receive, or asks, demands, solicits, or seeks, any compensation for any services rendered or to be rendered either by himself or another—

* * * * * * * *

(2) at a time when he is an officer or employee of the United States in the executive, legislative, or judicial branch of the Government, or in any agency of the United States, including the District of Columbia,

in relation to any proceeding, application, request for a ruling or other determination, contract, claim, controversy, charge, accusation, arrest, or other particular matter in which the United States is a party or has a direct or substantial interest, before any department, agency, court-martial, officer, or any civil, military, or naval commission, or

(b) Whoever, knowingly, otherwise than as provided by law for the proper discharge of official duties, directly or indirectly gives, promises, or offers any compensation for any such services rendered or to be rendered at a time when the person to whom the compensation is given, promised, or offered, is or was such a Member, Commissioner, officer, or employee—

Shall be fined not more than $10,000 or imprisoned for not more than two years, or both; and shall be incapable of holding any office of honor, trust, or profit under the United States.

It is the opinion of the Criminal Division of the Department of Justice (1) that the preparation of drawings for patent applications by Patent Office draftsmen for compensation, outside their official duties, is a violation of 18 U.S.C. 203; and (2) that the compensation, directly or indirectly, of Patent Office draftsmen for the preparation of drawings for patent applications by those filing applications of patent for themselves or for others is a violation of 18 U.S.C. 203.

Patents Available for Licensing or Sale

Des. 197,521. Cabinet. Elizabeth D. Hartzell, 417 W. Barry Ave., Chicago, Ill. 60657.

2,796,251. Load Indicating Gauge for Vehicles. Jack D. Donaldson, Rte. 4, Box 206A, Chehalis, Wash. 98532.

New Applications Received During January 1964

Patents	6,858
Plant Patents	10
Reissues	7
Designs	472
Total	7,347

Issue—March 10, 1964

Patents	975	No. 3,123,830 to No. 3,124,804, incl.
Designs	55	No. 197,636 to No. 197,690, incl.
Plant Patents	3	No. 2,373 to No. 2,375, incl.
Reissues	6	No. 25,531 to No. 25,536, incl.
Total	1039	

2,903,905. Speed Control Device. Edward C. Rhode, 1164 Mattox Road, Hayward, Calif.

2,909,739. Transducing Devices. Geo. S. Cherniak, 522 Andros Lane, Harbour Isles, Indian Harbour Beach, Fla. 32937.

3,103,299. Method of Shaving. August R. Werft, 233 Dixon Blvd., Uniontown, Pa. 15401.

3,105,999. Multi-Story Garage Construction. Ludwig Wilhelm Piasolo, Dortmund, Germany. Correspondence to: Michael S. Striker, 360 Lexington Ave., New York, N.Y.

3,116,131. Method and Materials for Disposing of Radioactive Waste. Victor Comptometer Corporation, Attn: Mr. R. G. Koch, 3900 N. Rockwell St., Chicago 18, Ill.

3,116,806. Tractor Cutoff Switch. Dalton H. Rose, 1217 S. Third, Brownfield, Tex.

3,119,638. Trailer House Combination. Laymon G. Sneed, Rte. 1, Box 97A, Kilgore, Tex.

General Electric Company is prepared to grant non-exclusive licenses under the following 16 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following 3 patents may be addressed to: General Electric Company, Motor and Generator Division, 3001 E. Lake Road, Erie, Pa., Attn: Patent Counsel.

2,866,944. Unidirectional Voltage Control Network for Generator Systems.

2,886,764. Unidirectional Voltage Multiplier and Divider.

3,018,966. Electric Function Network.

Applications for license under the following 4 patents may be addressed to: General Electric Company, Component Products Division, 1635 Broadway, Fort Wayne, Ind., Attn: Patent Counsel.

2,905,267. Single-Stage Vacuum Cleaner.

2,937,331. Magnetic Amplifier.

2,947,893. Thrust Bearing Support and Spacer Arrangement for Electric Motors.

2,987,678. Attenuation Circuit.

Applications for license under the following patent may be addressed to: General Electric Company, Atomic Products Division, Attn: Patent Counsel, 175 Curtner Ave., San Jose, Calif.

3,115,450. Nuclear Reactor Containment Apparatus.

Applications for license under the following 7 patents may be addressed to: Patent Counsel, Turbine Division, General Electric Company, 1 River Road, Bldg. #53, Schenectady 5, N.Y.

3,030,071. Erosion-Resistant Turbine Blade.

3,109,461. Hose Structure.

3,110,636. Steam Turbine Rotor Shafts and Method of Heat Treating.

3,111,111. Bevel Gear Drive.

3,112,415. Control of Widing Temperatures of Liquid Cooled Generators.

3,116,429. Cooling Arrangement for the Stator Teeth of a Dynamoelectric Machine.

3,118,015. Balanced Transposition for Stranded Conductor With Assymetrically Disposed Strand Ends.

PATENT EXAMINING CORPS

H. B. WHITMORE, Superintendent

PATENT EXAMINING OPERATIONS AND GROUPS	Oldest Application	
	New	Amended
CHEMICAL EXAMINING OPERATION—P. E. MANGAN, Director.		
GENERAL CHEMISTRY, GROUP 110—R. L. CAMPBELL, Supervisory Examiner Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries.	3-16-62	3-20-62
GENERAL ORGANIC CHEMISTRY, GROUP 120—L. MARCUS, Supervisory Examiner Heterocyclic; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids.	6-1-62	7-3-62
PETROLEUM CHEMISTRY, GROUP 130—J. R. LIBERMAN, Supervisory Examiner Hydrocarbons; Halogenated Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices; Organic Chemistry (Part) e.g.: Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhydrides; Acid Halides.	7-10-62	7-23-62
HIGH POLYMER CHEMISTRY, GROUP 140—M. STERMAN, Supervisory Examiner Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins; Reclaiming; Pore-Forming.	3-16-62	3-9-62
COMPOSITIONS AND MOLDING, GROUP 150—L. H. GASTON, Supervisory Examiner Compositions (Part) e.g.: Coating; Molding; Adhesive Compositions; Abrading; Liquid Purification or Separation; Gas Separation; Special Utility; Molding Processes.	5-1-62	4-2-62
COATING AND LAMINATING, GROUP 160—J. REBOLD, Supervisory Examiner Coating: Processes, Apparatus and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Ornamentation; Adhesive Bonding; Special Manufactures.	3-1-62	3-8-62
SPECIALIZED CHEMICAL ARTS AND INDUSTRIES, GROUP 170—W. B. KNIGHT, Supervisory Examiner Bleaching and Dyeing; Fertilizers; Foods; Fermentation; Photography; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Metallurgical Apparatus; Gas, Heating and Illuminating; Cleaning Processes; Liquid Purification; Thermolytic Distillation; Preserving.	3-30-62	4-16-62
CHEMICAL ENGINEERING, GROUP 180—G. D. MITCHELL, Supervisory Examiner Gas, Liquid and Solid Separation; Centrifugal Bowl Separators; Gas and Liquid Contact Apparatus; Distillation; Drying; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	6-19-62	6-20-62
ELECTRICAL EXAMINING OPERATION—N. H. EVANS, Director.		
POWER, GROUP 210—M. L. LEVY, Supervisory Examiner Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art.	5-21-62	5-2-62
SECURITY, GROUP 220—S. BOYD, Supervisory Examiner Ordnance, Firearms and Ammunition; Radar, Sonar, Directional Radio, Torpedoes, Seismic Exploring, Radio-Active Batteries; Nuclear Reactors, Powder Metallurgy, Rocket Fuels; Radio-Active Material.	8-1-62	4-23-62
INFORMATION TRANSMISSION, GROUP 230—S. W. CAPELLI, Supervisory Examiner Communications; Multiplexing Techniques; Facsimile and Related Art.	8-29-62	7-31-62
INFORMATION STORAGE AND RETRIEVAL, GROUP 240—W. W. BURNS, Supervisory Examiner Data Processing, Computation and Conversion; Storage Devices and Related Art.	3-13-62	2-2-62
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—B. G. MILLER, Supervisory Examiner Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks.	5-1-62	5-7-62
RADIATION AND INSTRUMENTS, GROUP 260—F. M. STRADER, Supervisory Examiner Optics; Radiant Energy; Measuring.	5-10-62	5-9-62
ELEMENTS, GROUP 270—E. J. SAX, Supervisory Examiner Conductors; Switches; Miscellaneous.	7-31-62	8-17-62

CONDITION OF PATENT APPLICATIONS AS OF JANUARY 31, 1964

Total number of pending applications (excluding Designs)	204, 383
Total number of Design applications pending	5, 782
Total number of applications awaiting action (excluding Designs)	124, 799
Total number of Design applications awaiting action	2, 083
Date of oldest new application awaiting action	Mar. 1, 1962
Date of oldest amended application awaiting action	Feb. 2, 1962

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during March 1964, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*

Patents ..... Numbers 2,416,665 to 2,418,108, inclusive

Plant Patents ..... Numbers 723 to 732, inclusive

PATENT EXAMINING OPERATIONS AND GROUPS (Continued)	Oldest Application	
	New	Amended
MECHANICAL ENGINEERING EXAMINING OPERATION—R. A. WAHL, Director.		
MATERIAL OR ARTICLE HANDLING AND DISPENSING, GROUP 310—A. BERLIN, Supervisory Examiner Material or Article Handling and Dispensing; Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Fluid Sprinkling and Fire Extinguishers; Coin Handling and Check Controlled Apparatus; Classifying and Assorting Solids.	1-2-63	12-24-62
METAL AND PLASTICS WORKING, GROUP 320—N. BERGER, Supervisory Examiner Mefal Bending, Drawing, Extruding, Forging, Rolling; Sheet Metal Working; Wireworking; Chain, Staple, Horseshoe Making; Metal Founding; Wire Fabrics; Plastic Working Apparatus; Plastic Block, Earthenware Apparatus.	9-21-62	9-14-62
MANUFACTURING AND ASSEMBLING MISCELLANEOUS ARTICLES, GROUP 330—A. M. HORTON, Supervisory Examiner Special Article Making; Assembling, Tool and Implement Making; and Metal Working.	7-12-62	7-2-62
MACHINE TOOLS, MECHANISMS AND ELEMENTS, GROUP 340—F. H. BRONAUGH, Supervisory Examiner Machine Tools for Shaping or Dividing Involving Cutting or Breaking; Machine Elements Including Power Transmission Components, Work and Tool Holders.	10-4-62	6-14-62
HARDWARE, TOOLS AND JOINTS, GROUP 350—T. J. HICKEY, Supervisory Examiner Miscellaneous Hardware; Tools; Joints; Cutlery; Locks; Fasteners; Rod Pipe and Electrical Connectors; Buckles; Buttons, Clasps, Etc.; Pushing and Pulling.	6-4-62	6-7-62
FLUID HANDLING, GROUP 360—E. PAUL, Supervisory Examiner Fluid Handling; Valves; Pipes and Tubular Conduits; Fluent Material Handling; Lubrication; Baths, Closets and Sinks; Joint Packing.	9-4-62	11-13-62
POWER PLANTS, MOTORS AND PUMPS, GROUP 370—C. F. GAREAU, Supervisory Examiner Power Plants, Combustion Power Plants, Expansible Chamber Motors, Rotary Motors and Rotary Expansible Chamber Motors, Expansible Chamber Devices and Internal Combustion Engines, Pumps and Pump Regulation.	8-27-62	11-19-62
HEATING, COOLING AND VENTILATING, GROUP 380—P. L. PATRICK, Supervisory Examiner Furnaces, Liquid Heaters and Vaporizers, Burners, Heat Exchange, Automatic Temperature and Humidity Regulation, Refrigeration, Ventilation, and Illumination.	10-16-62	9-10-62
GENERAL ENGINEERING AND INDUSTRIAL ARTS EXAMINING OPERATION—J. A. MANIAN, Director.		
AGRICULTURE, GROUP 410—A. RUEGG, Supervisory Examiner Animal Husbandry; Butchering; Fishing, Trapping and Vermin Destroying; Plant Husbandry; Tobacco, Earth Working.	12-21-62	12-24-62
CIVIL ENGINEERING, GROUP 420—B. BENDETT, Supervisory Examiner Building Structures; Bridges, Closures; Closure Operators; Safes; Earth Engineering; Drilling; Mining.	9-13-62	9-18-62
PHYSICS, GROUP 430—R. L. EVANS, Supervisory Examiner Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.	8-7-62	8-9-62
TEXTILES AND APPAREL, GROUP 440—R. C. MADER, Supervisory Examiner Textiles; Winding and Reeling; Tying Strands; Apparel; Boot and Shoe Making; Sewing Machines.	10-22-62	11-6-62
TRANSPORTATION, GROUP 450—P. ARNOLD, Supervisory Examiner Railways and Rolling Stock; Brakes; Land Vehicles; Aeronautics; Ships.	10-3-62	11-8-62
FURNITURE AND RECEPTACLES, GROUP 460—W. S. COLE, Supervisory Examiner Furniture; Supports; Cabinet Structures; Receptacles; Baggage.	10-31-62	12-18-62
PRINTING, STATIONERY AND MATERIAL TREATMENT, GROUP 470—L. W. VARNER, Supervisory Examiner Printing; Typewriters; Stationery; Material Treatment.	10-4-62	9-10-62
PERSONAL TREATMENT, ADORNMENT AND AMUSEMENTS, GROUP 480—L. R. PRINCE, Supervisory Examiner Surgery; Dentistry; Artificial Body Members; Toiletry; Amusement Devices; Jewelry; Mechanical Guns; Projectors.	11-1-62	11-9-62
DESIGNS, GROUP 490—J. A. MANIAN, Supervisory Examiner Industrial Arts; Household, Personal and Fine Arts.	8-12-63	8-9-63

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

JAMES L. GIANLADIS *v.* GUS S. KASS

No. 7019. Decided November 14, 1963

[51 CCPA —; 324 F.2d 322; 139 USPQ 300]

1. INTERFERENCE—REDUCTION TO PRACTICE—CORROBORATION.

Where in July 1954, the appellant Gianladis met Packwood, a manufacturer interested in purchasing his cosmetic composition, and gave samples to Packwood on July 9, 10 or 11, 1954, and where those samples were tested cosmetically before July 22, 1954, and found to be satisfactory, but at the time Packwood so tested the samples he did not know their formulation, and where on July 22, 1954, Gianladis disclosed the formulation of the samples to Packwood as part of contract negotiations in which the rights to the formulation were sold to Packwood, *Held* that corroboration of the Gianladis reduction to practice would not require that Packwood have tested the composition cosmetically and know of his own independent knowledge the chemical constituents thereof.

2. SAME—SAME—SAME.

"The goal of corroboration here is simply to establish that the inventor actually produced the product and knew it would work, by proof that could not have been fabricated or falsified. All the evidence must be considered in determining whether or not the appellant has met such requirement. We believe he has. On July 22, 1954, Packwood had *the* composition of the count, knowledge that it worked (because he had tried it), and knowledge of its formulation (albeit derived from Gianladis). Packwood commenced producing the composition in 1955 and was still producing it in 1961. Nothing in the record indicates that Packwood even had a doubt that the commercially formulated material corresponded to that which he successfully tested in July 1954. We are satisfied that it did and that Packwood proceeded with his business on the basis that it did, a powerful corroborating circumstance."

3. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—INTERFERENCE—MATTER BEFORE COURT—CONSIDERATION BELOW.

"Appellant's allegation of error point (3) is that Kass was not diligent from a time prior to July 22, 1954 (Gianladis' conception date) to the Kass filing date as required by 35 U.S.C. 102(g). The Board did not rule on diligence, though it was foreseeable that it might require consideration on appeal. The parties have fully briefed and argued the issue before us and neither party questions our authority to pass on it. Moreover, we have held that such matters may properly be considered by this court when necessary to a priority decision, even though not specifically passed upon below."

4. INTERFERENCE—DILIGENCE.

"• • • we disagree with appellant's position that Kass was not diligent. Both Kass and his attorney from inception engaged in activity directed to an expeditious preparation and filing of the application. Following the disclosure on July 8 the search and report were completed in three weeks. The fact that Kass 'did nothing' during the interval July 8–August 17 is immaterial since the attorney's activity inures to Kass' benefit. • • • The interval July 30–August 17 was not unreasonably long for Kass to study the 12-page report and fourteen patent copies, write a memorandum to his superior and furnish his attorney with a detailed report as basis for the patent application. The attorney prepared and filed the application in less than 3 weeks. In all, less than 2 months elapsed from the date of disclosure to the date of filing. Kass was manifestly diligent."

5. SAME—PRIORITY OF INVENTION.

"We hold • • • that Kass, being first to conceive and last to reduce to practice and diligent from a time prior to the earliest date to which appellant is entitled, is thus entitled to the award of priority."

APPEAL from the Patent Office. Interference No. 89,307.

AFFIRMED.

Kingsland, Rogers, Ezell & Robbins, Estill E. Ezell, Glenn K. Robbins and Edmund C. Rogers for appellant.

Mason, Kolehmainen, Rathburn & Wyss, Warren D. McPhee, for appellee.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, JR., *Associate Judges*

RICH, *J.*, delivered the opinion of the court.

This appeal is from the decision of the Board of Patent Interferences of the United States Patent Office awarding priority of the subject matter of the single count of interference No. 89,307 to the senior party Gus S. Kass.

Kass is involved in the interference on his application Serial No. 454,222, filed September 3, 1954, entitled "Silicone Composition." James L. Gianladis, the junior party, is involved in the interference on his application Serial No. 714,712, filed February 12, 1958, entitled "Silicone Emulsified Lotion and Method for its Preparation."[1]

The single count adequately describes the invention and reads as follows:

1. A cosmetic composition consisting essentially of isopropyl myristate and an organopolysiloxane, forming a single phase.

The problem solved by the invention was finding a suitable solvent for organopolysiloxanes.[2] The composition may be used as a cosmetic as is or may mixed with compatible oils or emulsified in water to form lotions and creams.[3]

To facilitate understanding the issues, we shall first outline the chronology of events leading up to this interference. Gianladis, the junior party, testified that he tried various formulations in the period January through March of 1954 during which time he made the composition of the count. He introduced uncorroborated notebook records dated as early as January 3, 1954, showing specific formulations within the count. Gianladis also testified that he gave samples containing the composition of the count to personal friends Morris and Moore for testing some time between January and March, 1954, but did not disclose the formulation to them. He also sent letters to various cosmetic houses in an unsuccessful attempt to interest them in his composition. In none of the letters did he disclose the contents of the composition, referring to it simply as "silicone emulsion." Morris and Moore both testified that they received samples from Gianladis as alleged and that they cosmetically tested the samples,

[1] The involved Gianladis application was substituted for Serial No. 454,625, filed September 7, 1954, which was originally involved in the interference. The later-filed application is a continuation-in-part of the former.

[2] The terms "organopolysiloxanes" and "silicone" refer to a class of polymers with the recurring unit —[SiR_2—O]— wherein R is ordinarily a monovalent organic radical connected directly to the Si atoms by a C atom. We shall hereinafter refer to such compounds as "silicones."

[3] Both applications state that prior to the instant invention, those skilled in the art recognized the usefulness of silicones as skin protectants. However, no cosmetically compatible solvent for silicones was known nor are silicones emulsifiable in water or conventional cosmetic bases. Both parties found that isopropyl myristate, an ester of isopropyl alcohol and myristic acid, not only dissolved silicones but also rendered the silicones emulsifiable in water and dispersible in conventional cosmetic bases.

Gianladis, according to his application, prepared water emulsions of the silicone-isopropyl myristate solution. He first dissolved silicone in isopropyl myristate then treated the solution with so-called "water-phase" components. The resultant compositions are emulsions of silicone-isopropyl myristate solution in admixtures of water and other cosmetic base materials.

Kass prepared not only water emulsions of silicone-isopropyl myristate solutions but also admixtures of the solutions with plain cosmetic oils. For example, one Kass composition consists of the silicone-isopropyl myristate solution admixed with mineral oil, another with lanolin, still another with petrolatum. Kass also prepared cosmetic which was simply silicone dissolved in isopropyl myristate.

The count of this interference defines only a solution of silicone in isopropyl myristate. Such solution is useful as a cosmetic per se and in combination with water or other cosmetic materials.

finding them to be satisfactory. Neither Morris nor Moore knew the contents of the samples tested.

In July 1954, Gianladis met Packwood, a manufacturer who was interested in purchasing the composition. Samples were given to Packwood on July 9, 10 or 11, 1954, which samples were tested cosmetically before July 22, 1954, and found to be satisfactory. Packwood retained a portion of one sample. At the time Packwood so tested the samples he did not know their formulation.

On July 22, 1954, Gianladis disclosed the formulation of the samples to Packwood as part of contract negotiations in which the rights to the formulation were sold to Packwood. This was the first time Gianladis disclosed the formulation to anyone. In 1961 Packwood had the retained portion of one sample analyzed. This was long after the declaration of the interference on April 23, 1958. The analysis confirmed that the sample was in fact what Gianladis stated it was,[4] a composition which at least *contains* the composition of the count.

Based on the disclosure and contract negotiations of Gianladis on July 22, 1954, Packwood commenced commercial production of the composition and was still producing it in 1961. A patent application was prepared and filed September 7, 1954, Serial No. 454,625, the parent of the application now involved.

Turning to the activity of Kass, he alleges experimentation in June 1954 culminating in a disclosure of the invention to his patent attorney on July 8, 1954. The testimony of the attorney shows that he recommended a novelty search; that such search was made and reported to Kass on July 30, 1954; that on August 17, 1954, Kass instructed his attorney to prepare a patent application; and that such application was prepared and filed on September 3, 1954.

The Board held that Kass corroborated conception on July 8, 1954, and constructively reduced to practice September 3, 1954; that Gianladis did not prove conception until July 22, 1954 when he disclosed his formulation to Packwood; and that Gianladis never corroborated actual reduction to practice since Packwood did not know the formulation at the time he cosmetically tested the samples earlier in July, 1954. Since the Board held Kass was first to conceive and first to reduce to practice, it awarded him priority. The Board found it unnecessary to consider diligence on the part of Kass.[5]

For reasons hereinafter set out, we believe the Board erred in not finding both conception *and* reduction to practice for Gianladis on

[4] Based on activities preceding July 8, 1954, the Board held that Gianladis failed to corroborate conception stating "in no case did he reveal the formula of his preparation, and in particular the use therein of isopropyl myristate, to any of these persons or companies. The evidence of these activities * * * has thus no probative value to establish either conception or reduction to practice."

In his brief before this court, appellant argues that the Board erred in not holding that the activities preceding July 8, 1954, when considered in conjunction with the giving of a sample to Packwood on July 9, 10 or 11, 1954, show that Gianladis conceived prior to July 8, 1954. Appellant also points to the testimony of Morris, a chemist, that to date (December 29, 1960, the date of Morris' deposition) no other solvent for silicones was known, the implication being that Gianladis necessarily prepared the solution of the count since he undoubtedly had a "silicone solution." Further, appellant argues that Packwood possessed the sample, later proved to be the composition of the count, on July 9, 10 or 11, 1954, and that such sample was not produced "overnight," lending weight to the argument that conception occurred prior to July 8, 1954.

Although we see logic in the appellant's position, the fact remains that the record does not satisfactorily establish that the composition tested by Moore and Morris and alluded to in appellant's letters of solicitation to cosmetic houses was the same as the composition given to Packwood. Moore's testimony concerning the lack of other solvents for silicones is limited to the deponent's "personal knowledge" and we cannot accept it as scientific fact, particularly in view of the disclosure by Kass (Example 10) that isopropyl *laurate* will also dissolve silicones. The notebook records dated January 3, 1954, are uncorroborated and are of little probative value even when considered with the other activities preceding July 1954.

[5] The Board stated, "Since neither party has proved an actual reduction to practice before the filing date, Kass, as the first to conceive and the first to constructively reduce to practice, must prevail in this interference and *it is unnecessary to consider diligence on his part*." [Emphasis ours.]

July 22, 1954. Accordingly, it becomes necessary for us, in reviewing the award of priority, to consider diligence on the part of Kass.[6] We hereinafter consider the diligence issue and find that Kass was diligent from a time prior to conception by Gianladis to the filing of the Kass application. Thus, the award of priority to Kass must stand though it rests on grounds different from those underlying the Board's decision.

Appellant, Gianladis, alleges that the Board erred in: (1) denying Gianladis a corroborated reduction to practice on July 22, 1954; (2) awarding Kass a conception date of July 8, 1954; and (3) not finding lack of diligence on the part of Kass, assuming Gianladis actually reduced to practice on July 22, 1954. We shall consider these three points seriatim.

As to point (1), the Board said:

> We note that the tests of the cream and lotion made by Packwood were made before the formulas were revealed to him so that he was not at this time aware of the specific composition of the material being tested. The record does not show that any subsequent tests were made. Although in view of the broad statement of the utility of the composition in the count the test might have been adequate to establish reduction to practice if made by a witness with knowledge of the composition, reduction to practice cannot be established by a witness who does not have personal knowledge of the nature of the product tested. *Fausek et al.* v. *Vincent*, 25 CCPA 770, 92 F.2d 909, 1938 C.D. 184, 35 USPQ 520; *Collins* v. *Olsen*, 26 CCPA 1017, 1939 C.D. 405, 102 F.2d 828, 41 USPQ 220; *Keefe* v. *Watson*, 31 CCPA 1080, 142 F.2d 283, 565 O.G. 523, 61 USPQ 441, 445.
>
> The disclosure made by Gianladis after the contract was signed was sufficiently corroborated in the testimony of Packwood to accord Gianladis conception as of its date July 22, 1954 but as to reduction to practice cannot make up for the lack of knowledge of Packwood during the tests. The information in such disclosure, although it was bought and paid for, still stems from the inventor. The knowledge of a corroborating witness must be independent of the inventor. *Thurston* v. *Wulff et al.*, 35 CCPA 794, 164 F.2d 612, 607 O.G. 578, 76 USPQ 121; *Kear* v. *Roder*, 28 CCPA 774, 115 F.2d 810, 1941 C.D. 158, 47 USPQ 458. Such corroboration must cover every essential element of the count. Obviously it must cover the isopropyl myristate in this case. *Lichtenwalter* v. *Caron*, 34 CCPA 792, 158 F.2d 1011, 598 O.G. 325, 72 USPQ 271.
>
> The situation is not remedied by the analyses made of the contents of Gianladis Exhibit 1 in 1961 by Gaebler. Although it is stipulated that the results appeared to indicate a silicone and isopropyl myristate to be present, reduction to practice cannot be established nunc pro tunc. *Jira* v. *Weber et al.*, 40 CCPA 762, 201 F.2d 914, 670 O.G. 5, 96 USPQ 372; *Searle* v. *Glarum et al.*, 37 CCPA 896, 179 F.2d 974, 1950 C.D. 206, 84 USPQ 454.

[1] As we understand the Board's position, corroboration of the Gianladis reduction to practice would require that Packwood have tested the composition cosmetically and know of his *own independent* knowledge the chemical constituents thereof. We do not agree.

This court stated in *Phillips and Starcher* v. *Carlson*, 47 CCPA 1007, 278 F.2d 732, 126 USPQ 146:

> While each and every element of a reduction to practice must be corroborated, there is no fixed single formula in proving corroboration. It may be established by documentary evidence and the activity of others * * *

[2] The goal of corroboration here is simply to establish that the inventor actually produced the product and knew it would work, by proof that could not have been fabricated or falsified. All the evidence must be considered in determining whether or not the appellant has met such requirement. We believe he has. On July 22, 1954, Packwood had *the* composition of the count, knowledge that it

[6] 35 U.S.C. 102(g) states, inter alia, "In determining *priority* of invention there shall be considered * * * the reasonable *diligence* of one who was first to conceive and last to reduce to practice from a time prior to conception by the other." [Emphasis ours.]

worked (because he had tried it), and knowledge of its formulation (albeit derived from Gianladis). Packwood commenced producing the composition in 1955 and was still producing it in 1961. Nothing in the record indicates that Packwood even had a doubt that the commercially formulated material corresponded to that which he successfully tested in July, 1954. We are satisfied that it did and that Packwood proceeded with his business on the basis that it did, a powerful corroborating circumstance.

The Board relies on this court's decision in *Thurston* v. *Wulff et al.*, 35 CCPA 794, 164 F.2d 612, 76 USPQ 121, in requiring that Packwood's knowledge of the formulation be *independently* derived. In *Thurston*, however, the "independent knowledge" issue related to the *identity* of a sample and the *chemical structure* of a new compound. The corroborator in the spring of 1939 observed the admixing of reactants by the inventor and observed a crystalline product. In the summer of 1939 the corroborator saw another crystalline product which the *inventor said* was the same material. This court held that knowledge of the *identity* of the samples was derived from the inventor and was not corroborative. But in that case neither the *inventor* nor the corroborator knew *what the material was*. The instant case is clearly distinguishable. Gianladis *knew* he had a composition of silicone and isopropyl myristate. No questionable chemical structure is involved, a mixture only. Packwood produced such compositions commercially, never doubting the veracity of Gianladis' disclosed formulation. The commercial compositions behaved just as the earlier tested samples. In *Phillips and Starcher*, cited supra, the Board took a position similar to the instant one. The inventor labelled a bottle with the chemical name of the compound of his invention. He sent the compound in the labelled bottle for tests as a resin-producing component. The tester-corroborator completed the tests successfully and stated that he knew what the chemical was only through the description on the bottle, which knowledge was derived through the inventor. The Board held the corroboration to be insufficient since the tester had "no personal knowledge" of the nature of the compound. This court rejected such argument stating at page 1012:

> If the compound which [the corroborator] actually tested was that of the count, it is obvious that the requirement of corroboration to establish a reduction to practice has been fulfilled.
>
> So the next question to be resolved is whether the tested compound was [the compound in question] * * *.

The same rationale applies in this case. The fact that the tests by Packwood came before he knew the formulation is immaterial. The composition tested was in fact that defined by the count and the evidence corroborates the testimony of the inventor that he had it on July 22, 1954. We hold, therefore, that Gianladis reduced to practice on that date.[7]

[7] The Board relied on *Searle* v. *Glarum et al.*, cited supra, in holding that the 1961 analysis is not probative since reduction to practice cannot be established nunc pro tunc. The 1961 analysis showed that the sample tested by Packwood in July 1954, in fact contained the composition of the count. We think *Searle* is inappositely cited. The inventor in *Searle*, unlike Gianladis in the instant case, did *not* know that he had made the chemical compound of the count at the time he reacted his starting materials. He knew only what he had reacted and the results of an incomplete analysis of the product. The Board specifically held that this was insufficient to *identify* the compound. Six years later after chemical structural analysis the compound of the count was found in fact to exist. It was thus properly held that the *identification* of the compound, being a necessary element of reduction to practice, was established only nunc pro tunc.
In the instant case, Gianladis knew ab initio of what his admixture consisted since no chemical reaction was involved. Thus, no nunc pro tunc situation exists since it is not necessary to look to the analysis of 1961 to establish identification of the composition made in July 1954.

We turn now to point (2), the allegation of error in awarding Kass a conception date of July 8, 1954. Appellant argues that the disclosure by Kass to his attorney does not corroborate conception since the disclosure indicates a mere "possibility" that isopropyl myristate will dissolve silicones, and that no tests were disclosed confirming such allegations. Further appellant argues that the idea was still in the "state of experimentation" when disclosed to the attorney.

The Board stated (all emphasis ours):

> The evidence of Kass for proof of conception is embodied in his oral disclosure on July 8, 1954 to his attorney Richard M. S. Manahan. * * * Kass made this disclosure to enable Manahan to make a search in the Patent Office to determine whether or not a patent application should be filed on a discovery which he had made and thought might be inventive.
>
> Manahan took notes as to the Kass disclosure which are embodied in Kass Exhibit J. * * *
>
> According to Manahan's testimony: (* * * "he" refers to Kass)
>
> "I can't remember his exact words, but I can remember that he told me that these silicone oils were difficultly soluble but they had uses in the cosmetic field. And, that he had found that they were completely miscible with certain esters. By completely miscible—I guess it doesn't need any explanation. I understood it as a chemist. *They were completely miscible with isopropyl myristate*, but not with isopropyl palmitate, butyl stearate, or propylene glycol laurate. All of these materials were discussed at the time of the conference, and I made the notes indicated on Exhibit J."
>
> In the next paragraph in Manahan's deposition, the mixtures of *silicone oils with isopropyl myristate are referred to as "solutions."*
>
> Kass further disclosed to him that the solutions were compatible with mineral oil, petrolatum and lanolin. He also stated that crude formulation of isopropyl myristate containing up to 30% of closely related fatty acid esters might be employed. He gave examples of four commercially available silicones which might be employed making reference to literature published by Dow Chemical Company and General Electric Company. A *specific composition* mentioned contained *isopropyl myristate*, 8% mineral oil and 4% Viscasil, identified as an *organo-polysiloxane* marketed by General Electric Company.
>
> We believe this disclosure to be sufficient to indicate conception by Kass as of its date, July 8, 1954. The substance of the count * * * is clearly met by the mixture or solution disclosed by Kass. It is clear from the quoted passage that a cosmetic use was contemplated. We see no merit in the contentions of Gianladis that Kass has not proved conception because his experimentation with compositions of this type was not complete at this date or because he had not tested the solution as a cosmetic. *These matters pertain to a reduction to practice, which Kass does not claim, not to conception.*

We agree with the Board. Our review of Exhibit J, referred to in the above quotation, shows unequivocally that Kass conveyed a complete idea of the invention to his attorney on July 8, 1954. The attorney was a chemical engineer and testified that he understood the invention, having worked with silicones himself. The concept of complete miscibility of silicones in isopropyl myristate was conveyed. The term "solution" was conveyed. Even a specific formulation was mentioned. As this court stated in *Townsend* v. *Smith*, 17 CCPA 647, 36 F.2d 292, 4 USPQ 269:

> It is therefore the formation in the mind of the inventor of a definite and permanent idea of the complete and operative invention as it is thereafter to be applied in practice that constitutes an available conception within the meaning of the patent law. A priority of conception is established when the invention is made sufficiently plain to enable those skilled in the art to understand it.

[3] Appellant's allegation of error point (3) is that Kass was not diligent from a time prior to July 22, 1954 (Gianladis' conception date) to the Kass filing date as required by 35 U.S.C. 102(g). The Board did not rule on diligence, though it was foreseeable that it might require consideration on appeal. The parties have fully briefed and argued the issue before us and neither party questions our authority to pass on it. Moreover, we have held that such matters may properly be considered by this court when necessary to a priority decision, even though not specifically passed upon below, *St. Pierre* v. *Harvey*, 43 CCPA 918, 233 F.2d 337, 110 USPQ 47.

Appellant argues that Kass was not diligent since he "did nothing" from July 8 when he disclosed the invention to his attorney until August 17, 1954, when he instructed the attorney to prepare the patent application. The record shows that after the July 8 disclosure Manahan, the attorney, made a search in the Patent Office the following week, dictated a report of his search before July 29, and mailed a copy of the report to Kass on July 29, 1954. The report consisted of twelve pages plus fourteen patent copies. On July 30 Kass sent a memorandum to his superior recommending that a patent application be filed. On August 17 Kass sent a detailed experiment report to Manahan with instructions to prepare a patent application. The application was completed by the end of August and filed on September 3, 1954.

[4] On the above facts, we disagree with appellant's position that Kass was not diligent. Both Kass and his attorney from inception engaged in activity directed to an expeditious preparation and filing of the application. Following the disclosure on July 8 the search and report were completed in three weeks. The fact that Kass "did nothing" during the interval July 8–August 17 is immaterial since the attorney's activity inures to Kass' benefit. *Rines* v. *Morgan*, 45 CCPA 743, 250 F.2d 365, 116 USPQ 145. The interval July 30–August 17 was not unreasonably long for Kass to study the 12-page report and fourteen patent copies, write a memorandum to his superior and furnish his attorney with a detailed report as basis for the patent application. The attorney prepared and filed the application in less than 3 weeks. In all, less than 2 months elapsed from the date of disclosure to the date of filing. Kass was manifestly diligent.

[5] We hold, therefore, that Kass, being first to conceive and last to reduce to practice and diligent from a time prior to the earliest date to which appellant is entitled, is thus entitled to the award of priority. The decision of the Board is affirmed.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

CONTOUR CHAIR-LOUNGE CO., INC. *v.* THE ENGLANDER COMPANY, INC.

No. 7011. Decided November 14, 1963

[51 CCPA —; 324 F.2d 186; 139 USPQ 285]

1. TRADEMARK—OPPOSITION—OPPOSER'S REGISTRATIONS.

> "The starting point in this case is that opposer's registrations are valid and enjoy the benefits of section 7(b). The next point is that this is an opposition only and in an opposition, this court has always held, the validity of the opposer's registrations are not open to attack. * * * As long as a registration relied on by an opposer remains uncancelled, we treat it as valid, entitled to the section 7(b) presumptions, and take it at face value."

2. SAME—SAME—SAME.

> "Short of saying so in haec verba, the Board could not have stated more clearly its opinion that opposer has no trademark rights in 'CONTOUR' with respect to chairs. This conclusion is in direct conflict with the existence of Reg. No. 642,944 of the word 'CONTOUR' for chairs, which the Board left on the register by denying the petition to cancel it, and is legally impermissible. We are obliged, by the facts of this case, to treat opposer as the owner of

the trademark 'CONTOUR,' at least as applied to chairs, and to decide the opposition on that basis. It is impermissible to indulge in the fiction, as did the Board, that some 'trademark' rights remain while effectively reducing the legal concomitants of trademark ownership and registration to zero by holding that the mark *does not* distinguish opposer's goods."

3. SAME—CONFUSING SIMILARITY—"CONTOUR" FOR CHAIRS AND "CONTURFOAM" FOR MATTRESSES.

"Assuming, as we must, that 'CONTOUR' *is* a trademark, which means simply that it is capable of and does indicate the source or origin of the chairs to which opposer applies it * * * we believe it likely that confusion would result from the concurrent use of 'Conturfoam' on mattresses, presumably of the foamed latex type. Foam is purely descriptive of such an article and 'Contur' but a slight misspelling of 'Contour,' with identical pronunciation and meaning. The evidence shows that mattresses and opposer's lounge chairs are sold in the same stores to the same class of purchasers for home use and advertised together through the same media."

4. SAME—SAME—PURCHASER DISCRIMINATION RESPECTING EXPENSIVE GOODS.

"It is argued that the goods [mattresses and lounge chairs] are expensive and for that reason the purchasers and potential purchasers would be discriminating. We do not believe that mere high cost necessarily makes a purchaser discriminating *as to the source* of the goods, such discrimination as is urged here being largely a matter of consciousness as to *whose* merchandise is being purchased. The department store purchaser-consumer is wont to look to the trademark as the indication of source and we believe that on these goods, which such purchasers may buy only once, or at most a very few times, during a lifetime, the concurrent use of 'CONTOUR' and 'Conturfoam' would be likely to result in a substantial amount of confusion as to source, assuming, *as we must*, that 'CONTOUR' indicates origin."

5. SAME—SAME—OPPOSITION—OPPOSER'S REGISTRATIONS.

"Opposer * * * produces Reg. No. 696,071 * * * of 'CONTOUR COMFORT' for chairs, beds, mattresses, and box springs. That registration must be taken as prima facie evidence of opposer's exclusive right to use that mark on those goods (section 7(b)). We cannot sanction the registration of 'Conturfoam' for goods identical in part with those named in the registration, considering the prohibition of section 2(d). We do not see that the fact opposer adopted and used this mark on these goods *after* the applicant's first use on mattresses and box springs is a relevant consideration here. As between the parties, the opposer was the first use of 'CONTOUR' and additionally possesses this registration. Applicant's mark is not yet registered and before it can be it must clear all of opposer's registrations in accordance with the statutory provisions. Section 2(d) does not speak of priority but of a 'mark registered.' 'CONTOUR COMFORT' is so registered for mattresses and box springs. This is not an interference proceeding and we do not see that we are concerned with any issue of priority of use on particular goods as between the parties."

APPEAL from the Patent Office. Opposition No. 36,890.

REVERSED.

Kingsland, Rogers, Ezell & Robbins, Estill E. Ezell, Edmund G. Rogers, for appellant.

Olson, Trexler, Wolters & Bushnell (*Richard Bushnell* of counsel) for appellee.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, JR., *Associate Judges*

RICH, *J.*, delivered the opinion of the court.

This is an appeal by the opposer in a consolidated opposition and cancellation proceeding wherein the Patent Office Trademark Trial and Appeal Board dismissed both the opposition and the petition to cancel (133 USPQ 573).

The petitioner for cancellation, who was the applicant in the opposition, took no appeal from the dismissal of its petition, wherefore that proceeding (No. 7,462) has terminated and is not before us. The only decision here for review is the dismissal of the opposition, No. 36,890.

Appellee, The Englander Company, Inc., filed application Ser. No. 16,195, September 24, 1956, to register "Conturfoam" (written in upper and lower case script) on the Principal Register as a trademark for "Mattresses and Box Springs," claiming use since September 5, 1956.

Appellant, Contour Chair-Lounge Co., Inc., filed its notice of opposition to the registration on the basis of its ownership of the trademarks "CONTOUR," "CONTOUR CHAIR," and "CONTOUR CHAIR-LOUNGE." The last-named trademark is the subject of Reg. No. 520,737 of February 7, 1950, Principal Register. The Board noted that on August 23, 1955, a combined affidavit under secs. 8 and 15 of the trademark statute was filed, which was evidently accepted. The goods named in that registration are "Upholstered Chairs of the Elongated Type, which are Longitduinally Adjustable for Variation of Inclination."

The trademark "CONTOUR" is the subject of Reg. No. 642,944, registered on the Principal Register March 19, 1957, on an application filed August 23, 1956, for "Chairs." The opposition notice was filed February 26, 1957, which was during the pendency of this application. Ownership of the mark "CONTOUR" having been pleaded in the notice, we regard the date of registration as unimportant here and, of course, must take the registration into account. The date of its aplication antedates appellee's earliest claimed use.

Also introduced in evidence in both proceedings was opposer's Principal Register Reg. No. 696,071 of April 12, 1960, granted on an application filed August 19, 1959, for "Chairs, Beds, Mattresses, and Box Springs" of the trademark "CONTOUR COMFORT." The first use claimed in the registration for this mark is November 15, 1958.

The record before us, being that of the opposer and containing only matters relating to the opposition proceeding, contains only such incidental information about the cancellation proceeding as appears in the testimony and opinions of the Board.[1] It is stated that applicant-appellee petitioned to cancel the registrations of "CONTOUR" and "CONTOUR CHAIR-LOUNGE" "on the ground that said terms are merely descriptive or generic designations as applied to opposer's goods." As aforesaid, the Board dismissed that petition and no appeal was taken from that decision. The posture of the case in this court, therefore, is the same as though no such petition had been filed and we are obliged to treat opposer's registrations as valid and to consider opposer as entitled to all the benefits of such registrations provided by statute. (Having dismissed the cancellation petition, the Board was likewise obliged to so treat the registrations.) Among the statutory benefits accorded registrations on the Principal Register are those of section 7(b) of the Trademark Act of 1946 (15 U.S.C. 1057b) which reads:

A certificate of registration of a mark upon the Principal Register provided by this act shall be prima facie evidence of the validity of the registration, registrant's ownership of the mark, and of registrant's exclusive right to use

[1] There are 3 opinions: the original; an opinion of May 1, 1962, on a petition for reconsideration; and one of May 17, 1962, on a petition for modification of the Board's opinion, which was denied.

the mark in commerce in connection with the goods or services specified in the certificate, subject to any conditions and limitations stated therein.

No conditions are stated in the certificates of registration.[2]

[1] The starting point in this case is that opposer's registrations are valid and enjoy the benefits of section 7(b). The next point is that this is an opposition only and in an opposition, this court has always held, the validity of the opposer's registrations are not open to attack. *E. Daltroff & Cie* v. *V. Vivaudou, Inc.*, 19 CCPA 715, 717, 53 F.2d 536, 11 USPQ 54; *Skelly Oil Co.* v. *The Powerine Co.*, 24 CCPA 790, 792, 86 F.2d 752, 32 USPQ 51; *Coty, Inc.* v. *Perfumes Habana, S.A.*, 38 CCPA 1180; 1185, 190 F.2d 91, 90 USPQ 224; *Eureka Williams Corp.* v. *Willoughby Machine and Tool Co.*, 39 CCPA 832, 833, 194 F.2d 543, 93 USPQ 12. To the same effect, see the Board's decision in *The Julep Company* v. *Lipsey*, 131 USPQ 334. As long as a registration relied on by an opposer remains uncancelled, we treat it as valid, entitled to the section 7(b) presumptions, and take it at face value. *General Shoe Corp.* v. *Lerner Bros. Mfg. Co., Inc.*, 45 CCPA 872, 254 F.2d 154, 117 USPQ 281.

In its handling of this case, the Board has, in effect, violated the foregoing legal principles. Its decision *in the opposition* is found in the following paragraphs from its combined opinion on both issues:

> * * * the record in this case can only lead to a conclusion that the use in the trade of "CONTOUR" to indicate generally a chair designed to conform to the contour of the human body has been so widespread and of such duration that it has come to signify any such chair rather than a chair of opposer's manufacture.
>
> With regard to the opposition, in view of the above conclusion that the term "CONTOUR" does not identify opposer's goods and distinguish them from similar goods of others, it necessarily follows that issuance of the registration for which applicant has made application could not involve damage to opposer.

On petition for reconsideration, the Board added these thoughts:

> While it is true, as opposer contends, that the validity of an opposer's registration may not be collaterally attacked in an opposition, the registrations of the instant opposer were directly attacked by applicant in a separate petition to cancel the same. * * * it is believed that the evidence introduced by applicant to show the lack of distinctiveness of the term "CONTOUR" was properly considered by the Board in its finding in the opposition of no likelihood of confusion between the respective marks.

Opposer correctly notes that the original opinion of the Board said nothing whatever about likelihood of confusion.

In denying a further petition to modify its opinion, the Board said:

> The Board's finding in the decision in question [meaning its original opinion] that "CONTOUR" does not identify opposer's goods and distinguish them from similar goods of others is believed proper and is accordingly adhered to.

[2] Short of saying so in haec verba, the Board could not have stated more clearly its opinion that opposer has no trademark rights in "CONTOUR" with respect to chairs. This conclusion is in direct conflict with the existence of Reg. No. 642,944 of the word "CONTOUR" for chairs, which the Board left on the register by denying the petition to cancel it, and is legally impermissible. We are obliged, by the facts of this case, to treat opposer as the owner of *the trademark* "CONTOUR," at least as applied to chairs, and to decide the

[2] Appellant—and several cited cases likewise—speaks at length on the subject of the "validity of opposer's trademarks," which we take to mean the validity of its *registrations*. Reflection should show that the expression "validity of a trademark" is meaningless. An alleged trademark which is not "valid" is *not* a trademark and is therefore *nonexistent*. A registration, on the other hand, is a government certificate which can be declared to be "invalid," i.e., of no legal effect. A dispute about whether or not a word or device is or is not a trademark under the law, however, is not a dispute about the validity of anything except the proponent's argument.

opposition on that basis. It is impermissible to indulge in the fiction, as did the Board, that some "trademark" rights remain while effectively reducing the legal concomitants of trademark ownership and registration to zero by holding that the mark *does not* distinguish opposer's goods.

What remains, therefore, is the question of registrability of "Conturfoam" for mattresses and box springs under section 2(d) of the statute. The question is whether it "so resembles" "CONTOUR," or "CONTOUR CHAIR-LOUNGE" or the trade name CONTOUR CHAIR-LOUNGE CO., "as to be likely to cause confusion, or to cause mistake, or to deceive."

[3] Assuming, as we must, that "CONTOUR" *is* a trademark, which means simply that it is capable of and does indicate the source or origin of the chairs to which opposer applies it (and also certain heated pillows on which the trademark was used, according to the testimony, though they are not included in any registration), we believe it likely that confusion would result from the concurrent use of "Conturfoam" on mattresses, presumably of the foamed latex type. Foam is purely descriptive of such an article and "Contur" but a slight misspelling of "Contour," with identical pronunciation and meaning. The evidence shows that mattresses and opposer's lounge chairs are sold in the same stores to the same class of purchasers for home use and advertised together through the same media.

[4] It is argued that the goods are expensive and for that reason the purchasers and potential purchasers would be discriminating. We do not believe that mere high cost necessarily makes a purchaser discriminating *as to the source* of the goods, such discrimination as is urged here being largely a matter of consciousness as to *whose* merchandise is being purchased. The department store purchaser-consumer is wont to look to the trademark as the indication of source and we believe that on these goods, which such purchasers may buy only once, or at most a very few times, during a lifetime, the concurrent use of "CONTOUR" and "Conturfoam" would be likely to result in a substantial amount of confusion as to source, assuming, *as we must*, that "CONTOUR" indicates origin.

[5] Opposer also argues that it would not be unreasonable to expect that it might extend its business under the "CONTOUR" mark into the bedding field and that registration of applicant's mark would be damaging to it for this reason because it would potentially interfere with its use of "CONTOUR" on such things as mattresses. It supports the reasonableness of such an assumption by evidence that it has in fact done so, and in this connection produces Reg. No. 696,071, above noted, of "CONTOUR COMFORT" for chairs, beds, mattresses, and box springs. That registration must be taken as prima facie evidence of opposer's exclusive right to use that mark on those goods (section 7(b)). We cannot sanction the registration of "Conturfoam" for goods identical in part with those named in the registration, considering the prohibition of section 2(d). We do not see that the fact opposer adopted and used this mark on these goods *after* the applicant's first use on mattresses and box springs is a relevant consideration here. As between the parties, the opposer was the first user of "CONTOUR" and additionally possesses this registration. Applicant's mark is not yet registered and before it can be it must clear all of opposer's registrations in accordance with the statutory provisions. Section 2(d) does not speak of priority but of a "mark

registered." "CONTOUR COMFORT" is so registered for mattresses and box springs. This is not an interference proceeding and we do not see that we are concerned with any issue of priority of use on particular goods as between the parties.

We note as a matter of interest *In re Restonic Corporation*, 122 USPQ 100, in which, on June 25, 1959, the Board affirmed the ex parte rejection of an application to register a mark consisting of the words "CONTOUR CONTROL" plus a design consisting of a reclining figure on a mattress, for mattresses and box springs, rejection being predicated on likelihood of confusion in view of opposer's registrations of "CONTOUR" and "CONTOUR CHAIR-LOUNGE" here invloved.

We also note the case of *Plastic Lens Co.* v. *Contact Lens Foundation, Ltd.*, 125 USPQ 358, wherein the Board granted a petition to cancel the registration of "CONTOUR" for contact lenses on the ground of descriptiveness of those goods.

Neither of these cases, which were cited by the parties respectively, seems important on the issue before us. The first case seems somewhat inconsistent with what the Board has done here and the second case, dealing with cancellation and the descriptiveness of a word we are obliged under the circumstances of the present case to treat as a good trademark by virtue of a registration, is beside the point.

Appellee's argument is largely devoted to its contentions that "CONTOUR" is a common or descriptive name of a class of chair and is used descriptively in the trade, "by 'hundreds' of retailers," and lacks trademark significance. We have not overlooked these arguments but see no point in discussing their merits because the registrations constitute complete legal refutation and are binding on us. Apparently appellee, in failing to appeal in the cancellation proceeding, did not appreciate the parlous state in which the Board's seemingly favorable decision left it.

The decision of the Board is reversed.

REVERSED.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,491,852, T. Carvel, Apparatus for agitating and dispensing frozen foods; **2,576,995**, same, Agitating and scraping mechanism; **2,731,925**, same, One-piece barrel end and dispenser tip; **Des. 167,443**, same, Combination cover and dispensing fancet; **Des. 168,828**, T. Carvel, Advertising device for roadside stores; **Des. 169,055**, same, Building structure; **Des. 176,003**, same, Combined service and display counter; **Des. 178,493**, same, Combination freezer and dispenser, **filed** Oct. 10, 1963, D.C., S.D.N.Y., Doc. 63/2965, *Thomas Carvel* v. *Leon Schneider*.

2,563,794, Rickes and Wood, Vitamin B_{12}, **filed** Oct. 31, 1963, D.C., E.D.N.Y. (Brooklyn), Doc. 63C–1161, *Merck & Co., Inc.* v. *Lambda Pharmacal Lab., Inc.*

2,576,995. (See 2,491,852.)

2,589,224, G. W. Ashlock, Jr., Fruit Pitting Chuck, **filed** Sept. 27, 1962, D.C., N.D. Calif. (San Francisco), Doc. 41029, *Geo. W. Ashlock Co.* v. *Atlas-Pacific Engineering Co.* Complaint dismissed; claims 1 and 3 held invalid Oct. 17, 1963.

2,594,255, A. P. Charbonneau, Anticorrosion mounting for electric immersion heaters, **filed** Nov. 8, 1962, D.C., S.D.N.Y., Doc. 63/3697, *Cutler-Hammer, Inc.* v. *Stillman Mfg. Corp. et ano.* Stipulation and order of dismissal Oct. 28, 1963.

2,610,167, T. A. Te Grothenhuis, Pigmented silicone elastomers, **filed** Nov. 28, 1961, D.C., E.D. Mich. (Bay City), Doc. 2343, *Westwood Chemical, Inc.* v. *Dow Corning Corporation.*

2,711,193, C. Jungblut, Flexible pipe joint with screw-threaded sleeve; **2,752,955**, P. C. Consoletti, **filed** Apr. 30, 1963, D.C., W.D.N.C. (Charlotte), Doc. 1776, *Draper Corporation* v. *Sherrill Manufacturing Co., Inc.* Patents held valid and infringed; defendant enjoined Nov. 5, 1963.

2,719,714, Pratt and Gray, Sheet conveyor for microfilm apparatus, **filed** Oct. 29, 1963, D.C., S.D. Tex. (Houston), Doc. 63–H–569, *Photostat Corporation* v. *Sperry Rand Corporation.*

2,731,925. (See 2,491,852.)

2,752,955. (See 2,711,193.)

2,765,373, A. L. Smith, Hearing aid, construction and support therefor; **3,000,462**, same, Air-conduction hearing aid clamps, **filed** Dec. 12, 1961, D.C., N.D. Okla. (Tulsa), Doc. 5309, *Alonzo L. Smith* v. *Myron O. Weil et al.* Claim 4 of Patent No. 2,765,373 and claims 6 through 9 of Patent No. 3,000,462 held invalid and not infringed (notice Oct. 30, 1963).

2,806,962, C. C. Quantz, Regulating device, **filed** Nov. 4, 1963, Ct. Cls., Doc. 310–63, *Duo-Matic, Inc.* v. *The United States.*

2,888,818, E. G. Leuthesser, Swimming pool structure; **3,031,801**, same, Method of installing swimming pools, **filed** Jan. 4, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c26, *Edward G. Leuthesser* v. *William J. Crooks et al.* Patents held valid and infringed; defendants enjoined, unless licensed by patent owner. Counts II and III of complaint dismissed Oct. 28, 1963.

2,936,514, R. J. Millard, Electrolytic device; **3,006,247**, P. Robinson, Electrical capacitors, **filed** May 10, 1961, D.C. Ariz. (Phoenix), Doc. 3060, *Sprague Electric Company* v. *U.S. Semiconductor Products, Inc. et al.* Consent decree; defendant enjoined Oct. 28, 1963.

2,944,728, H. M. Whitman, Envelope for banking use; **2,997,225**, same, Banking envelope; **Reg. No. 699,666** (DRIVE-IN-VELOPE), Curtis 1000, Incorporated, Banking envelopes of paper, **filed** Sept. 4, 1963, D.C.N.J. (Newark), Doc. 728–63, *Curtis 1000, Incorporated* v. *Pavey Envelope and Tag Corporation.* Consent judgment; injunction issued Nov. 1, 1963.

2,950,637, Merrill and Waite, Fitting for tapping steel walled members; **2,990,731**, P. D. Merrill et al., Fitting for perforating steel walled members, **filed** Nov. 6, 1963, D.C., S.D. Ill. (Springfield), Doc. 3445, *M. B. Skinner Co., a division of Textron, Inc.* v. *Mueller Company.*

2,990,731. (See 2,950,637.)

2,997,225. (See 2,944,728.)

3,000,462. (See 2,765,373.)

3,013,917, Karlan and Silver, Dry transfer sheet and method, **filed** Nov. 4, 1963, D.C., E.D.N.Y. (Brooklyn), Doc. 63C–1188, *Mac Karlan et al.* v. *B & B Write-Off Type Corp.*

3,025,778, L. J. Stuckens, Photocopy apparatus and document carrier for same, **filed** Oct. 25, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c1908, *American Photocopy Equipment Co.* v. *S.C.M. Corp.*

3,029,716, R. P. Shea, Paving machine control system, **filed** Oct. 24, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c1905, *Reeford P. Shea et al.* v. *Quinn Equipment Co., Inc.*

3,031,801. (See 2,888,818.)

3,034,481, J. B. Godshalk, Poultry waterer **filed** Oct. 24, 1963, D.C., N.D. Calif. (San Francisco), Doc. 41866, *Fox Products Company* v. *Abraham I. Reitman.*

3,066,247. (See 2,936,514.)

3,066,660, E. Bryant, Jr., Gear shift lever cover and attaching bracket therefor, **filed** Oct. 28, 1963, D.C., N.D. Ala. (Birmingham), Doc. 63–526, *Ernest Bryant, Jr.* v. *Mack Trucks, Inc.*

3,103,924, R. D. Porter, Method of installing furnace, and furnace for easy installation, **filed** Oct. 25, 1963, D.C. Oreg. (Portland), Doc. 63–509, *Kleer-Kleen Manufacturing Co. et al.* v. *Porter & Company.*

Des. 167,433. (See 2,491,852.)

Des. 168,828. (See 2,491,852.)

Des. 169,055. (See 2,491,852.)

Des. 176,003. (See 2,491,852.)

Des. 178,493. (See 2,491,852.)

Des. 189,004, F. Abel, Combined can opener and Spout, **filed** Oct. 28, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63–1315 WB, *The Huffman Manufacturing Company* v. *Hollywood Accessories, Inc.*

Des. 189,757, J. L. Hazelquist, Finger ring; **Reg. No. 134,105** (TT), The Traub Manufacturing Company, Finger rings; **Reg. No. 146,380** (ORANGE BLOSSOM), same, **filed** Oct. 26,1963, D.C. Conn. (New Haven), Doc. 10111, *Traub Manufacturing Co.* v. *Vanderkruik Jewelers.*

Des. 189,968, Casselman and Stoller, Carrying case; **Reg. No. 540,179** (POLAROID), Polaroid Corporation, Light-polarizing organic plastic in sheet form for further manufacture and photographic cameras, photographic camera shutters, photographic exposure meters, etc.; **Reg. No. 607,263**, same, Camera cases, exposure meter cases, master compartment cases, etc., **filed** Oct. 30, 1963, D.C.N.J. (Trenton), Doc. 907–63, *Polaroid Corporation* v. *Louis Lefkowitz & Bro., Inc.*

Des. 190,918, T. D. Poulsen, Doll, **filed** Oct. 30, 1963, D.C., S.D.N.Y., Doc. 63/3202, *Thomas Dam Poulsen* v. *Uneeda Doll Company.*

Des. 195,924, R. Perlmutter, Ball-point pen or similar article, **filed** Aug. 12, 1963, D.C., S.D.N.Y., Doc. 63/2395, *Royal Die Cutting & Sealing Corp.* v. *Duro Pen Company.* Stipulation and order of dismissal without prejudice Nov. 1, 1963.

REISSUES

MARCH 10, 1964

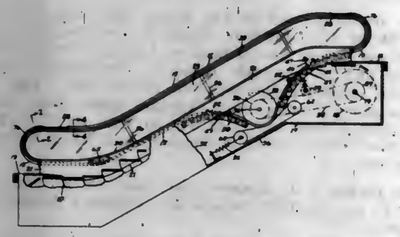
Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,531
PASSENGER CONVEYOR SYSTEM

Andrew Fabula, Hohokus, N.J., assignor to Otis Elevator Company, New York, N.Y., a corporation of New Jersey

Original No. 3,049,213, dated Aug. 14, 1962, Ser. No. 23,932, Apr. 22, 1960. Application for reissue Mar. 6, 1963, Ser. No. 265,577

5 Claims. (Cl. 198—16)



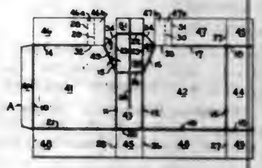
1. *In a conveyor system* [A moving stairway] for carrying passengers from one landing to another, said *system* [stairway] having *a first* [an upper] and a *second* [lower] landing section and an intervening [inclined] portion supported on a structural truss, said *conveyor* [stairway] comprising; an endless *load carrying element* [series of steps] positioned on said truss for movement between said landings; a vertically disposed balustrade positioned along a side edge of said *load carrying element*, [steps,] said balustrade terminating in a semicircular newel section at each of said landings and *having* [consisting of] a handrail guide portion forming its periphery, a skirt panel section mounted closely adjacent the side edge of said *load carrying element* [steps] and extending [at] substantially [step height] from one of said semicircular newel sections to the other, and a side panel section of transparent material intermediate said skirt panel section and said handrail guide portion; an endless moving handrail supported on said guide portion for its exposed run; mechanism for driving said *load carrying element* [steps] and handrail in synchronism, said mechanism including a handrail drive sheave *rotatably* [rotably] mounted in the *intervening* [inclined] portion of said truss beneath the *lower* [lowermost] edge of said transparent side panel section in tractional engagement with the inner surface of said handrail, handrail tensioning devices mounted on said truss in said *intervening* [inclined] portion, one on each side of said drive sheave in position to engage the outer surface of said handrail and support it in contact with the drive sheave immediately before and after its engagement with said drive sheave, the tensioning means on one side being movable for effecting an adjustment of the tension in the handrail and the angle of wrap between the handrail and its drive sheave; and mechanism mounted on said truss in engagement with the inner surface of said handrail on its return run for maintaining the return run of said handrail at a level beneath the *lower* [lowermost] edge of said transparent side panel section.

25,532
DISPENSING CARTON

Norman J. Asman, Appleton, Wis., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

Original No. 3,002,673, dated Oct. 3, 1961, Ser. No. 73,060, Dec. 1, 1960. Application for reissue Sept. 25, 1963, Ser. No. 311,604

3 Claims. (Cl. 229—17)



3. A reclosable dispensing carton formed of a single blank suitably cut and scored to provide a pair of opposed main panels, each of said panels having one of a pair of opposed edge-defining biased score lines extending from a lateral to a top edge near one corner theerof; a pair of opposed side panels hingedly connected to the lateral edges of said main panels, one of said side panels terminating in a score line at the point where said biased score lines intersect said lateral edges; a pair of bottom closure flaps hingedly connected to adjacent ends of said main panels; a pair of top closure flaps hingedly connected to adjacent ends of said main panels, a spout front panel hingedly connected to said one side panel along said terminating score line; a pair of opposed spout side panels each being superposed against and between said main panels and each hingedly connected along one edge to the edge of one of said main panels along said biased score lines, and hingedly connected along another edge to said spout front panel, and having a third edge of each spout side panel positioned adjacent one of said top closure flaps; a spout tab hingedly connected to the upper edge of said spout front panel and lying in subposed relationship under and adhered to one of said top closure flaps and extending approximately to the upper termini of said biased score lines; said spout front panel forming an angle with an extension of said one side panel twice that of the angle formed by said biased score lines and said extension; and lines of weakness in said top closure flaps and along the score lines connecting said top closure flaps and said main panels to facilitate tearing to open the spout; said spout in opened position having said spout front panel and spout side panels lying coplanarly with said one side panel and said main panels respectively.

25,533
PROCESS FOR MAKING POLYMERS CONTAINING ACRYLONITRILE AND A VINYL PYRIDINE

Harry W. Coover, Jr., and Joseph B. Dickey, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Original No. 2,990,393, dated June 27, 1961, Ser. No. 750,568, July 24, 1958. Application for reissue June 27, 1963, Ser. No. 290,895

5 Claims. (Cl. 260—45.5)

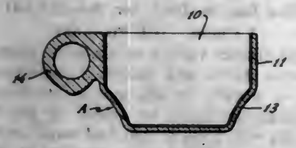
1. A process for preparing a resinous fiber-forming [graft copolymer] *composition* which comprises heating a polymerization reaction mixture comprising (1) water, (2) a peroxide polymerization catalyst and (3) from 5–45 parts by weight of a polymer selected from the group consisting of homopolymers of unsubstituted vinyl pyridines, homopolymers of vinyl pyridines having a methyl group substitutent on the pyridyl nucleus and copolymers of from 5–95% by weight of said vinyl pyridines and 95–5% by weight of acrylonitrile, the said polymer having been formed in and not separated from said mixture and containing, in polymerized form, substantially 100% of the polymerizable monomers originally present in said mixture, with (4) conversely from 55–95 parts by weight of acrylonitrile monomer, until at least 60% of said acrylonitrile monomer has [combined with the said polymer to give the said graft copolymer] *reacted.*

25,534
METHOD OF MOLDING PLASTIC ARTICLES

Paul K. Schilling, St. Paul, Minn., assignor to Plastics, Inc., St. Paul, Minn., a corporation of Minnesota

Original No. 3,057,016, dated Oct. 9, 1962, Ser. No. 721,731, Mar. 17, 1958. Application for reissue May 31, 1963, Ser. No. 288,069

3 Claims. (Cl. 264—250)



1. The method of forming concave thermoplastic articles through the use of two molds each including a plurality of mold sections, one of the sections of a first mold being substantially identical with one of the sections of the second mold and the other sections of said molds being of different sizes so as to make the void within said second mold larger than that of said first mold, the method including the steps of injecting thermoplastic resin into the first mold to produce a relatively thin walled article having one of its surfaces formed by said one mold section, removing the article formed and inserting the article into the second mold so that said one surface of the article thus formed in the first mold is in surface contact with the similar section of the second mold, injecting thermoplastic resin into the second mold while maintaining the similar mold surface at a temperature below the melting temperature of the article formed in the first mold, the themoplastic resin injected into the second mold being sufficiently in excess of that inserted into the first mold to heat the exposed surface of the article formed in the first mold sufficiently to bond thereto without melting the surface of the article contacting the similar mold surface, the two layers being substantially coextensive.

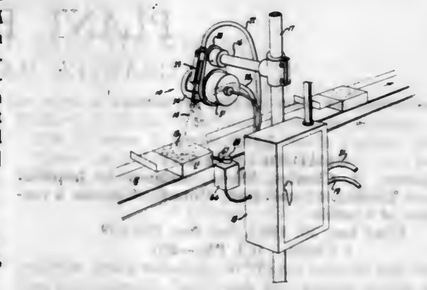
25,535
METHOD OF SPRAYING AND DISPENSING LIQUID

Roy M. Magnuson, deceased, late of Saratoga, Calif., by Morton Salt Company, Chicago, Ill., a corporation of Delaware, assignee

Original No. 2,992,928, dated July 18, 1961, Ser. No. 594,651, June 28, 1956. Application for reissue Mar. 29, 1963, Ser. No. 272,819

10 Claims. (Cl. 99—182)

1. The method of treating a product within a container with a treating liquid, which comprises carrying the container past a spray station, establishing a constant continuous spray in air of liquid at the spray station from a source of liquid said liquid spray being passed continuously through an air gap at the spray station at a substantially constant volume and at a substantially constant speed while normally collecting and by-passing the liquid spray for a selected time interval back to the source of liquid, and interrupting the collecting and by-passing of



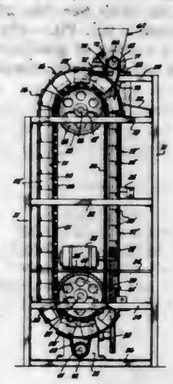
the spray during travel of the container past the spray station without changing the substantially constant volume and speed of said liquid spray to spray the product in the container with a selected amount of liquid.

25,536
APPARATUS FOR MAKING AN ANNULUS

Daniel T. Thompson, 10584 Bradbury Road, Los Angeles, Calif.

Original No. 3,031,979, dated May 1, 1962, Ser. No. 841,153, Sept. 21, 1959. Application for reissue Apr. 29, 1963, Ser. No. 276,680

13 Claims. (Cl. 107—8)



12. An apparatus for forming a substantially imperforate, ball-like batch of dough into an annulus, comprising:

an elongated forming rod having a tapered dough-receiving end;

sleeve means having its axis in alignment with the axis of said rod;

means for supplying a substantially imperforate, ball-like batch of dough into contact with said tapered end of said rod; and

means for moving said sleeve means and rod relative to each other so that the sleeve means extends substantially around and encompasses said rod and dough during relative movement of the rod and sleeve means, said sleeve means including means for moving said dough around and along said rod to form said dough into an annulus by rotation of the dough about the circular center line of such annulus.

PLANT PATENTS

GRANTED MARCH 10, 1964

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing

2,373
GLADIOLUS PLANT
Carl Fischer, St. Charles, Minn., assignor to Imperial Flowers Limited, Leamington, Ontario, Canada, a corporation of Canada
Filed Jan. 30, 1963, Ser. No. 255,139
1 Claim. (Cl. Plt.—85)

A new and distinct variety of gladiolus plant, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of a habit of easily producing marketable flower spikes in abundant quantity, robust and vigorous habits of growth, good temperature tolerance, good disease resistance, and a distinctive and attractive general color tonality of the flowers corresponding to Phlox Pink, said color shading lighter in the heart of the flower and merging with a large, soft blotch of Mimosa Yellow in the flower throats, and with the petals having white midribs.

2,374
GLADIOLUS PLANT
Carl Fischer, St. Charles, Minn., assignor to Imperial Flowers Limited, Leamington, Ontario, Canada, a corporation of Canada
Filed Jan. 30, 1963, Ser. No. 255,140
1 Claim. (Cl. Plt.—85)

A new and distinct variety of gladiolus plant, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of a prolific habit of propagation, robust health, freedom from crooking, a precise and graceful flower form, heavy flower petal substance, and a distinctive and intense Buttercup Yellow general color tonality of the flowers, with the color being most intense in the flower throats.

2,375
GLADIOLUS PLANT
Carl Fischer, St. Charles, Minn., assignor to Imperial Flowers Limited, Leamington, Ontario, Canada, a corporation of Canada
Filed Jan. 30, 1963, Ser. No. 255,141
1 Claim. (Cl. Plt.—85)

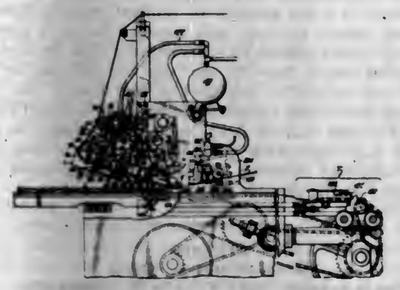
A new and distinct variety of gladiolus plant, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of a prolific propagating habit, an ability of the flowers to open unusually well from a tight bud stage, and a distinctive and attractive general color tonality of the flowers corresponding to delicate rose shades, with ivory white blotches on the lips of the flower petals and in the flower throats, said flowers having the ability to retain the aforementioned coloring and sometimes to even improve the same, especially when cut in the tight bud stage.

PATENTS

GRANTED MARCH 10, 1964

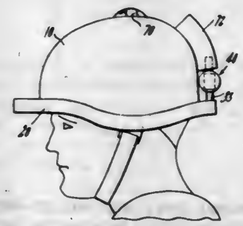
GENERAL AND MECHANICAL

3,123,830
MECHANISM FOR FEEDING BINDING WIRE INTERMITTENTLY TO WIREBOUND BOX-MAKING MACHINE
William J. Hogan, Dover, and Allan R. Kishpaugh, Rockaway, N.J., assignors to Stapling Machines Co., Rockaway, N.J., a corporation of Delaware
Filed May 7, 1962, Ser. No. 192,889
5 Claims. (Cl. 1—121)



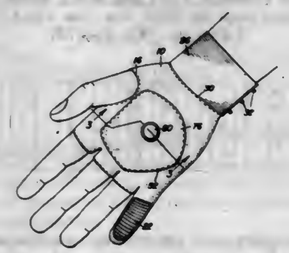
1. In a wirebound box-making machine of the type in which properly assembled box parts are conveyed beneath a transverse row of three or more stapling units which drive staples astride longitudinally extending binding wires and into the box parts to form a plurality of box sections foldably secured together by at least three longitudinally extending binding wires, means for adapting said machine to form box blanks which have intermediate binding wires on selected sections and not on other sections, said means comprising a movable wire feed element for feeding a binding wire strand to an intermediate stapling unit, feed element drive means for driving said wire feed element to feed said binding wire strand to said stapling unit, effectuating means for rendering said wire feed element effective or ineffective to feed said binding wire strand to said stapling unit, a movable wire cutter arranged to cut said binding wire strand, wire cutter drive means for driving said wire cutter, pattern switch means connected to control said effectuating means and said wire cutter drive means, and pattern switch actuating elements driven in synchronism with the movement of said box parts, said pattern switch actuating elements actuating said pattern switch means to cause said wire feed element to commence feeding of said binding wire strand to said intermediate stapling unit at such time that the leading cut end of said binding wire strand will reach said intermediate stapling unit shortly prior to the driving of its first staple in said selected sections, and to cease the feeding of said binding wire strand during times corresponding to the movement of said other box sections past said stapling units, and to cause said wire cutter to cut said binding wire strand at such times that the trailing cut end of said binding wire strand will reach said intermediate stapling unit shortly after the driving of its last staple in said selected sections.

3,123,831
DEPLOYABLE FACE MASK
Richard D. Wells, Westwood, Ernest R. Kaswell, Waban, and Thomas T. Constantine, South Easton, Mass., assignors to Fabric Research Laboratories, Inc., Dedham, Mass., a corporation of Massachusetts
Filed Aug. 9, 1960, Ser. No. 48,520
10 Claims. (Cl. 2—2)



1. A mobile protective face mask comprising a headdress having a rigid brim, a storage receptacle extending around at least the front of said brim, a face mask constituted of flexible material collapsed and stored in said receptacle, said mask being in the form of a bag having an inner and outer wall and having its upper edges attached to said brim, said mask being adapted in deployed position to extend downwardly over the face of the wearer of the headdress, with the inner and outer walls of the bag defining an insulating space between said walls, and automatic means for propelling the unattached portion of said mask out of said receptacle into deployed position.

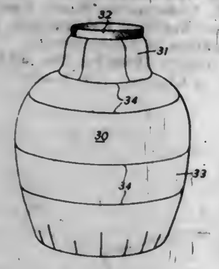
3,123,832
BOWLING GLOVE
Clayton J. Kubik, Broomfield Heights, Colo. (1596 Irving St., Idaho Falls, Idaho)
Filed Sept. 29, 1960, Ser. No. 59,417
5 Claims. (Cl. 2—161)



1. A bowler's glove having palm and back sections joined together for receiving the hand of a bowler therein, a full finger enclosing stall for receiving the little finger, three partial finger stalls being of a length only sufficient so as to retain the glove on the hand of a bowler, and means secured to said palm section and projecting therefrom, said means having a concave surface adapted to

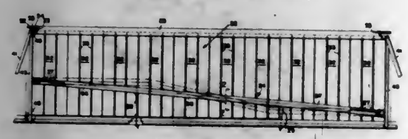
conform to and engage a bowling ball, said ball engaging means being provided with a threaded bore therein, and a peg, said peg having its inner end threadedly received within said bore and its outer end projecting beyond said means for engagement in a bore in the surface of a ball.

3,123,833
BOWL SHAPED HOOP SKIRT
Geoffrey William Hedges Stevens, "Merryway," 159 Mytchett Road, Mytchett, Aldershot, England
Filed Feb. 20, 1961, Ser. No. 90,264
3 Claims. (Cl. 2—216)



1. A bowl-shaped skirt comprising an outer skirt member having a waist portion, a hem portion and a body portion which extends between the waist portion and the hem portion and which has its maximum circumferential measurement above the hem portion, an inner skirt member having a waist section, a hem section and a body section which extends between the waist section and the hem section and is of the same general shape as the body portion of the outer skirt member, means for stiffening the body section of the inner skirt member in zones transverse to the axis of the skirt, and fastening means securing the hem portion of the outer skirt member to the hem section of the inner skirt member, the length of the inner skirt member being so related to that of the outer skirt member that, in use of the skirt, the inner skirt member is held in tension by the weight of the outer skirt member acting upon it thereby enabling the body section of the inner skirt member to displace outwardly the body portion of the outer skirt member to impart thereto the desired bowl shape.

3,123,834
SWIMMING POOL AND SAFETY PLATFORM
Richard E. Rank, School Road and Vine St., Hatfield, Pa., and Marvin Gurman, 776 Creek Road, Bellmawr, N.J.
Filed June 28, 1961, Ser. No. 120,337
7 Claims. (Cl. 4—172)



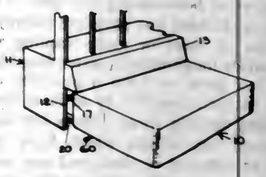
1. A swimming pool comprising a bottom and sides, a coping extending inwardly from the sides of the pool, a floatable safety platform which can rise to the surface of said pool, means connected to said safety platform exerting a buoyant force thereon in water relative to said pool so that it nests against the bottom of said coping in a substantially horizontal position, and means connected to said safety platform and extending downwardly therefrom for moving it downwardly against said buoyant force and holding it in a desired position.

3,123,835
COMBINATION SINK STOPPER AND WATER CIRCULATOR
Albert Shernov, 1775 Clay Ave., New York, N.Y.
Filed Dec. 19, 1962, Ser. No. 245,798
2 Claims. (Cl. 4—286)



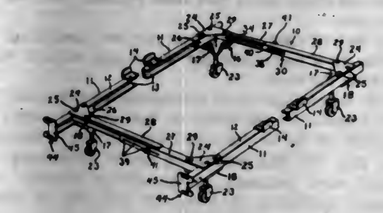
1. A combination sink stopper and water circulator comprised of a flat member of resilient material having top and bottom surfaces, said member having a central opening therein defined by a beveled cut with the bottom of greater extent than the top, said cut defining an integral flap secured to said disk at one side of the cut, said flap comprising a one-way valve which is closed when the top of said member is up, and a protuberance on the top of said flap which, when the member is reversed, raises said flap to define a drainage opening about the periphery of said annular cut.

3,123,836
DUAL PURPOSE SOFA
David Bendell, 7240 SW. 125th St., Miami, Fla.
Filed Sept. 21, 1961, Ser. No. 139,645
3 Claims. (Cl. 5—17)



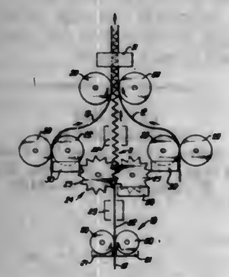
1. A dual purpose sofa comprising a mattress frame having side wall portions, support means, a pair of spaced apart tracks secured to said support means and extending under said mattress frame, roller means secured to said mattress frame and rotatably mounted in said tracks, a plurality of coil springs connecting said side wall portions at one of a plurality of positions adjacent one end of said mattress frame and one end of said support means yieldingly urging said mattress frame to slide on said roller means along said tracks to an extended position adjacent said one end of said support means, a guide rod mounted on said support means, a bracket mounted on said mattress frame at said one end thereof, a pair of rollers mounted on said bracket, said rollers engaging said guide rod, interengaging latch means mounted on said guide rod and said mattress frame for releasably maintaining said mattress frame in a retracted position and operating means connected to said guide rod for releasing said latch means and permitting said mattress frame to slide on said tracks to its extended position and brake means mounted on said support means in the path of said pair of rollers whereby said pair of rollers impinge on said brake means to stop said mattress frame in said extended position.

3,123,837
FOLDABLE BED FRAME
Stuart R. Paine, Louisville, Ky., Harold E. Johnson, Indianapolis, Ind., Walter A. Mauch, Lima, Ohio, and William P. Sells, Valley Station, Ky., assignors to Moderne Products Co., Inc., Seymour, Ind., a corporation of Indiana
Continuation of application Ser. No. 801,140, Mar. 23, 1959. This application Dec. 13, 1961, Ser. No. 160,695
14 Claims. (Cl. 5—181)



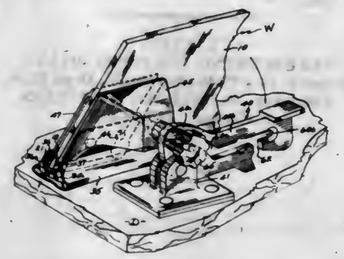
1. In an adjustable folding bed frame, a pair of spaced apart side rails for the support of a box spring thereon, a supporting leg assembly fixed to each of said rails adjacent each end thereof, a U-shaped channel section end rail pivotally mounted to each of said assemblies for movement between a folded position parallel to the associated said side rail and an extended position normal to said associated side rail and in said extended position projecting toward the other of said side rails adjacent the corresponding end rail thereof to form pairs of end rails, said pairs of end rails having flanges disposed toward each other and proportioned for interfitting self-supporting engagement with the flanges of one of said end rails fitted within the flanges of the other when so extended to form a box section portion, and means for fixing each said pair of end rails together in predetermined adjusted position for the adjustment of the spaced apart width of said side rails.

3,123,838
VENTILATED SEAT CUSHION
Thomas E. Wilson, 7622 Alberta Drive, Huntington Beach, Calif.
Filed Mar. 10, 1961, Ser. No. 94,859
13 Claims. (Cl. 5—347)



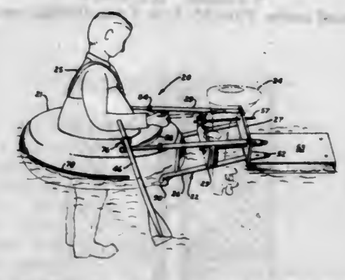
9. A cushion material comprising a fabric made of strands woven in predetermined open air-passing formation and having curved deflections outwardly from a medial plane of the fabric, the composition of said strands including a progressively settable elastomer of the group consisting of natural and synthetic rubbers which has set from a softer to harder condition while in the form of said curved deflections to render said fabric self-sustaining and elastically self-restorable from flattening effects.

3,123,839
WINDSHIELD OPERATING MECHANISM
James S. Reid, Hudson, Ohio, assignor to The Standard Products Company, Cleveland, Ohio, a corporation of Ohio
Filed Mar. 28, 1961, Ser. No. 98,960
2 Claims. (Cl. 9—1)



1. In combination, a windshield and means pivotally mounting said windshield on a boat deck, operating mechanism for swingably adjusting said windshield about said pivotal means, comprising a lever attached to said deck about an axis generally perpendicular to said windshield and swingably movable laterally of said windshield between latching and unlatching positions, means defining an open ended slot in said lever, said slot having an arcuate portion of constant radius about said axis and a communicating linear portion, lock means extendable into said slot and interconnecting said lever and said windshield, said lock means being movable with said windshield to one of a plurality of adjusted positions about said pivotal means, said lock means moving along said lever and through said linear slot portion, and means on said lever adjacent said slot and cooperating with said lock means for releasably locking said windshield to said lever in said adjusted position.

3,123,840
PORTABLE COLLAPSIBLE BOAT
Louis Cefalo, Jr., 102 Rousseau St., San Francisco, Calif.
Filed Apr. 9, 1962, Ser. No. 186,117
14 Claims. (Cl. 9—2)



1. A portable collapsible one-man boat for sportsmen, adapted to be propelled by an outboard motor and comprising in combination:
- an inflatable body member for supporting a person in an upright position in the water;
- a prefabricated frame structure;
- means for removably attaching said frame structure to said body member in a position extending outwardly from one side therefrom;
- means on said frame structure for supporting an outboard motor in a generally transverse position relative to said frame structure when propelling the boat in the water;

and means on said frame structure for retaining the outboard motor in a fixed generally parallel position on said frame structure when the latter is detached from said body member;

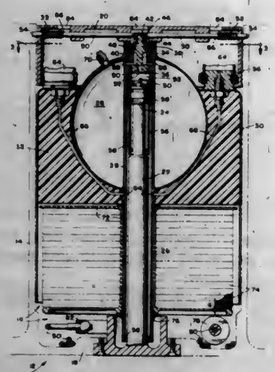
whereby when said frame structure is detached from said body member it serves as a pack rack for carrying the motor and the disassembled components of said boat.

3,123,841
TELESCOPING FOLDING BOATS
John Bronner, 64—77 Wetherole St., Rego Park, N.Y.
Filed Apr. 30, 1962, Ser. No. 190,865
5 Claims. (Cl. 9—2)



2. A telescopic folding boat comprising a hull of rigid material having a continuous outer surface and consisting of a bow section formed with a converging closed end and an open male end, a stern section formed with a converging closed end and at least one intermediate shell section having open ends and an open top portion adapted to receive the open ends of said bow section and said stern section respectively, in overlapping relationship, a longitudinally extending compression member adapted to bias said bow and stern section in opposite directions relative to said intermediate section, and a flexible cover of waterproof material in intimate contact with the outer surface of said hull, said cover having an open top portion adapted to coincide with the open top portion of said intermediate section, and means for securing said open top portion of the cover in coincidence with the open top portion of said intermediate section.

3,123,842
GAS EJECTED APPARATUS FOR LOCATING AND RECOVERING SUNKEN OBJECTS
Ernest N. Oeland, Jr., 1707 Idahome St., West Covina, Calif., and John S. Young, Jr., 531 Drake Road, Arcadia, Calif.
Filed Apr. 19, 1963, Ser. No. 274,361
9 Claims. (Cl. 9—9)
(Granted under Title 35, U.S. Code (1952), sec. 266)



9. Apparatus for locating and recovering an object disposed on the bed of a body of water, comprising:

(*a*) an ejectable floatation device adapted to be ejected from the body and ascend to the surface of the body of water,

(*b*) said device comprising a gas pressurized vessel,

(*c*) an ejector cylinder having an ejector piston therein engageable with an abutment on the object disposed within the cylinder,

(*d*) means for delivering gas from the vessel to the cylinder during ejection of the device from the object,

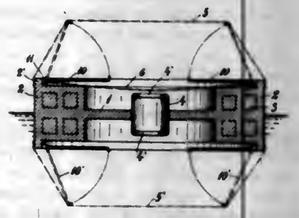
(*e*) an inflatable resilient bag,

(*f*) means for delivering gas from the vessel to the bag for inflation of the latter to ambient water pressure after the device has been ejected from the object, and

(*g*) a reel of cord adapted to pay out cord from the device as it ascends in the water and without water drag on the cord,

(*h*) the construction and arrangement being such that the pressure in the vessel is first utilized solely for ejection of the device and thereafter for inflation of the bag, the bag expanding under decreasing ambient water pressure as the device ascends, constantly increasing its buoyancy and rate of ascent.

3,123,843
LIFE-SAVING RAFT
Walter Tangen, Hegdehaugsveien 2, Oslo, Norway
Filed May 23, 1961, Ser. No. 111,960
Claims priority, application Norway May 27, 1960
1 Claim. (Cl. 9—11)



A life-saving raft of the type which is symmetrically arranged about a horizontal central plane, comprising a circumferential toroidal body of a cellular artificial material and a central bottom arranged therein, the circumference of the toroidal body as well as the bottom being composed from a cellular artificial material, free from stiffening and reinforcing frames and bottom parts, whereby the entire raft is semi-rigid and somewhat yieldingly elastic, and a peripheral rim edge with a cover and supports with the peripheral rim edge projecting from the body and integral therewith and the cover and supports being secured and pivoted thereon.

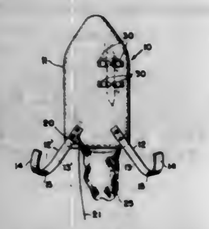
3,123,844
SKIING DEVICE
Ronald W. Bailey, 1126 Laurel St., Cadillac, Mich.
Filed Sept. 17, 1962, Ser. No. 224,091
2 Claims. (Cl. 9—310)



2. A ski apparatus comprising an elongated body member having a fixed upwardly curved portion at its front

end, a seat fixedly mounted on said body member in substantially spaced relation to its front and rear ends, a shaft disposed above and transversely of and fixedly secured to said body member with its ends projecting laterally therefrom and in forwardly spaced relation to said seat, a pair of elongated substantially duplicate supporting and steering members having upwardly curved portions at their front ends pivotally mounted on said shaft in substantially laterally spaced relation to said body member, the upwardly curved front ends of said support and steering members constituting foot rests and being provided with rearwardly opening foot hold members, and a propelling rope, the upturned end of said body member having an opening therein through which said rope is slidably disposed, the rope having a stop member thereon engageable with the upper side of said body member and having a portion extending rearwardly from said stop and provided with a bar-like hand hold engageable by an operator positioned on said seat.

3,123,845
SWIMMER'S BUOY
Barney B. Girden, 32 W. 76th St., New York, N.Y.
Filed Sept. 14, 1962, Ser. No. 223,631
4 Claims. (Cl. 9—311)



1. A swimmer's safety buoy and float comprising

A. a substantially flat buoyant member having large surface areas at the opposite sides thereof, and

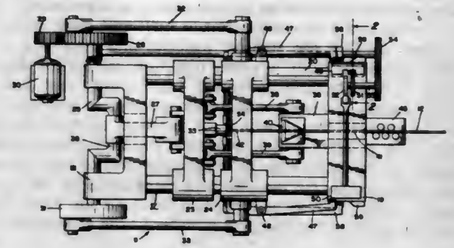
B. hooked, non-buoyant weighted arms extending from one end of said buoyant member,

(1) said arms being of sufficient weight to cause said buoyant member to float in an erect position with said one end lowermost and with major portions of said large surface areas exposed to view above the waterline upon release of the buoy and float by a swimmer, and

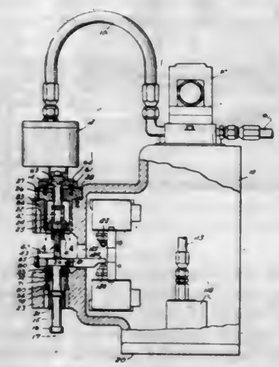
(2) said hooked arms being laterally spaced apart to engage under a swimmer's shoulders for buoyantly supporting the swimmer.

3,123,846
WIRE HEADING MACHINE WITH PUNCH AND GRIPPER ANVIL MOVABLE TOWARDS AND AWAY FROM EACH OTHER
Daniel H. Prutton, 5305 W. 130th St., Cleveland 30, Ohio
Filed Aug. 15, 1960, Ser. No. 49,609
15 Claims. (Cl. 10—43)

1. A wire operating machine comprising, in combination, a frame, a first slide having punch means reciprocable on said frame, a second slide reciprocable on said frame to cooperate with said first slide, means to substantially simultaneously advance and retract said slides relative to each other, gripper dies movable with said second slide to advance wire stock during a portion of the advancing movement of said second slide to head the wire stock against the punch means as the first and second slides complete their advancing strokes, wire feed means to advance wire stock during a majority of the retraction of said first slide, and cutoff means to cut off a wire portion generally at the area of maximum separation of the slides.



3,123,847
FLUID DRIVEN ROTARY TAP SPINDLE WITH FLUID DRIVE MEANS TO ADVANCE SPINDLE TO WORK
Grant N. Willis and Lionel H. Seccombe, Jr., Bristol, and Irving Y. Lake, Terryville, Conn., assignors to United-Carr Fastener Corporation, Boston, Mass., a corporation of Delaware
Filed Feb. 4, 1960, Ser. No. 6,684
4 Claims. (Cl. 10—136)



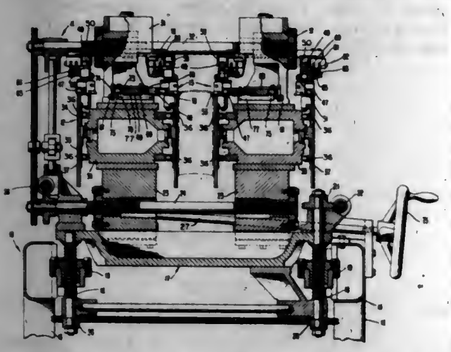
1. A high speed tapping device comprising a frame having a top support pedestal and a bottom support pedestal mounted thereon in spaced apart relationship, a drive shaft rotatably supported by said top pedestal, a cylindrical passageway formed in said bottom support pedestal coaxial with said drive shaft, a driven shaft of smaller diameter than the passageway in said bottom pedestal, means supporting said driven shaft in the passageway for rotation coaxial with said drive shaft and for axial movement relative thereto, said support means cooperating with said dirven shaft to close the upper end of the passageway, a coupling connecting said drive shaft in said driven shaft for simultaneous rotation while permitting relative axial movement, a collar rotatably mounted on said driven shaft and axially movable therewith, said collar having a portion thereof in engagement with said frame intermediate said pedestals to preclude rotation thereof, a piston mounted on said driven shaft within the cylindrical passageway and of smaller diameter than the cylindrical passageway, a chuck mounted on the end of said driven shaft for releasably retaining

a tap therein, means to supply air to said cylnider to move the tap into operative engagement with the workpiece. said last-nameed means nicluding a solenoid valve operable in one direction to vent the air in the cylinder to the atmosphere, restoring means opposing movement of said driven shaft by said piston, a hydraulic gear motor mounted on said top support pedestal and operative to rotate said drive shaft in either direction, means for supplying hydraulic fluid to rotate said motor, said last-named means including a solenoid operable in one direction to reverse the direction of rotation of said drive shaft, and a limit switch mounted on said frame and engageable by said collar to effect operation of said solenoid valve to reverse the direction of rotation of the hydraulic motor and to operate said solenoid air valve to vent the air contained in said cylinder to the atmosphere.

3,123,848
BUILDING-IN MACHINE

Edwin K. Smith, Jr., Haworth, N.J., and Richard H. Raunecker, Jamaica, and Thomas Byro, North White Plains, N.Y., assignors to Miehle-Goss-Dexter, Incorporated, Chicago, Ill., a corporation of Delaware

Filed Apr. 18, 1962, Ser. No. 188,349
16 Claims. (Cl. 11—1)



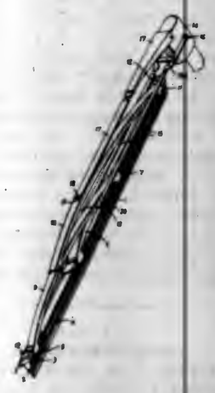
1. A book forming apparatus comprising a continuously moving conveyor means for gripping and compressing the page blocks of successively fed cased books and moving the same in a straight path with their hinge areas exposed and longitudinally aligned with each other, a plurality of pairs of nippers for engaging the hinge area of each of said books and continuously movable with said conveyor, and means independent of said conveyor to move the nippers of each pair toward each other and into continuous pressing engagement with each of said books on each side of the hinge area of each book and through said straight path.

3,123,849
WINDSCREEN WIPERS

William Edward O'Shel, 11a Bath Road, Harlington, England

Filed Feb. 8, 1960, Ser. No. 7,486
Claims priority, application Great Britain Feb. 6, 1959
13 Claims. (Cl. 15—250.35)

1. In a windscreen wiper, a wiper comprising a squeegee element and a pressure distributing superstructure, a driving arm connecting said wiper to a driving spindle so as to effect wiping driving movement of the wiper blade while exerting substantially no pressure thereon in the direction to urge the squeegee element against the windscreen, and a separate spring-pressed arm connected to said driving spindle to swing with said driving arm while maintaining a substantially constant angular position relative thereto, said second arm acting on the pressure



distributing superstructure to apply thereon a pressure urging the squeegee element against the windscreen.

3,123,850
SHOE HOLDER

Samuel S. Piken, 5816 N. Sheridan Road, Chicago, Ill., assignor to Gertrude W. Piken, Chicago, Ill.

Filed Feb. 9, 1961, Ser. No. 88,186
2 Claims. (Cl. 15—257)

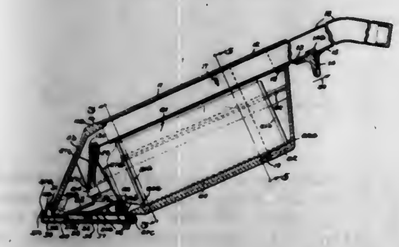


1. A holder for supporting a shoe in a generally horizontal inclined position to facilitate cleaning and polishing of the same comprising: a one-piece device embodying a vertically elongated flat-faced plate adapted to be superposed upon and secured to a stationary supporting wall, said plate being provided at a paint spaced above a lower end thereof with a horizontal right angularly projecting shelf rectangular in cross section and said shelf having a downturned free end, the juncture of the downturned end and body portion constituting a restricted supporting and fulcruming surface for the heel of the shoe, an attaching and retaining arm having an upper laterally directed end integrally joined to an upper median portion of the plate and a depending portion directed toward and aligned with said shelf, the lower end of said arm being spaced above the plane of said shelf a predetermined distance to facilitate ready handling and positioning of the shoe and also being directed forwardly and downwardly and having an upturned terminal portion providing an oblique angled tip to assist in piloting a shoe into an in-use position and also in dislodging and removing it from said in-use position.

3,123,851
SELF-FEEDING MOP

Robert E. S. Arndt, Dover, and Franklin R. Hoar, Concord, Mass., assignors, by mesne assignments, to Martin-Marietta Corporation, Chicago, Ill., a corporation of Maryland

Filed Feb. 24, 1960, Ser. No. 10,652
13 Claims. (Cl. 15—546)

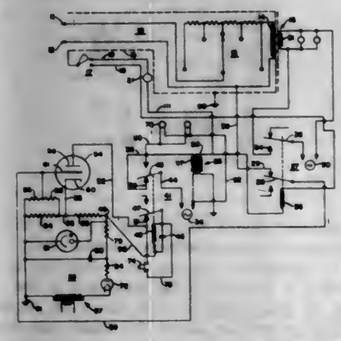


1. A self-feeding mop, for applying fluid material to floors, comprising a handle and a head connected thereto, a housing mounted on said mop and having an opening closely adjacent and overlying said head and communicating directly with said head, a pressurized fluid container received in fixed position in said housing and having an aerosol dispensing valve disposed toward said opening, means defining a confined channel for delivery of an aerosol spray extending between said valve and said opening, movable valve operating means in said housing releasably engaged with said valve, said valve and said container being readily disengageable as a unit from said housing and operating member and control means movably mounted on said handle and connected to said valve operating means.

3,123,852
CONTROL APPARATUS

Curtis M. Cervin, 5253 Xerxes Ave. S., Minneapolis, Minn.

Filed Aug. 8, 1960, Ser. No. 48,107
11 Claims. (Cl. 17—1)

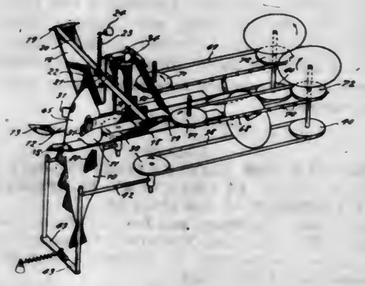


1. In electrical stunning apparatus, a pair of spaced electrodes, means comprising a voltage transformer winding for energizing said electrodes, connecting means coupling said electrodes and transformer winding, further means associated with said winding and effective on energization to complete a circuit energizing said transformer winding, manually operable switch means energizing said further means, and monitoring means connected to the further means and to one of the electrodes and effective on a malfunction contact of an electrode with said further means, rendering said further means ineffective.

3,123,853
APPARATUS FOR BEHEADING FISH, ESPECIALLY COD AND THE LIKE

Johannes Radloff, Lubeck-Schlutup, and Karl Schlichting, Lubeck, Germany, assignors to Nordischer Maschinenbau Rud. Baader, Lubeck, Germany, a firm

Filed Aug. 4, 1960, Ser. No. 47,533
Claims priority, application Germany Aug. 7, 1959
10 Claims. (Cl. 17—4)

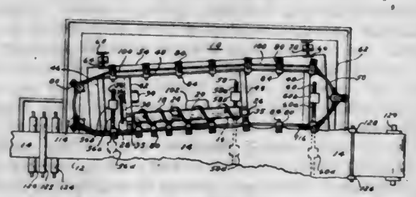


1. Apparatus for beheading fishes, especially of the cod and similar species, comprising a pair of guides for supporting the fish hanging freely tail downwards and having fish-receiving front ends and rear ends, a pair of circular knives arranged at an incline to each other symmetrically to the symmetry plane of the guides between the front ends and the rear ends of the guides, a pair of conveying mechanisms located under said guides for engaging the body of the fish supported on said guides to move it along said guides, a centering device operatively associated with said guides for engaging the gill covers of the fish to adjust the symmetry plane of the fish to that of the guides, a tilting device arranged above said guides between said centering device and said knives in the path of movement of the fish to incline the fish to the vertical, said tilting device being normally locked, means operated by the fish for releasing said tilting device, and a second pair of conveying mechanisms located above said guides for engaging the head of the fish while it is in tilted position and carrying it to and past the pair of circular knives.

3,123,854
APPARATUS FOR BIAXIAL STRETCHING OF THERMOPLASTIC FILM

Ardashus A. Aykanian, Wilbraham, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

Filed Dec. 23, 1960, Ser. No. 78,010
6 Claims. (Cl. 18—1)



1. Stretching apparatus for continuously introducing biaxial stretch orientation into a thermoplastic material member of planar configuration which comprises in combination a pair of stretching means located in at least partially pivoted substantially planar spaced relationship to one another, and wherein each of the said stretching means comprises a helical member, capable at least in part of variable pitch, the helical members being axially disposed to effect a planar angular divergence from the

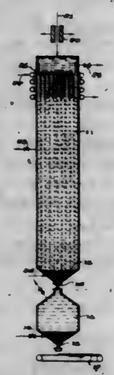
normal longitudinal axis of said stretching apparatus; said divergence being in the direction away from the initiating end of said stretching apparatus, and a plurality of thermoplastic member grippers at least some of which are in slideable captive relationship with said helical member, a drive cable adapted to disengage and engage said member grippers at the initiation and discharge ends respectively of said helical member, said cable being driven along a path such that the thermoplastic member grippers are being continuously returned to said helical member, tracking for stabilizing said member grippers with relation to said helical member during advance of the same, and actuating means for rotating said helical member provided in coactive relationship with each of said helical members.

3,123,855

APPARATUS FOR CONVERTING FUSIBLE MATERIALS, SOLID AT ORDINARY TEMPERATURES, INTO SPHERICAL GRANULES

Walter Fischer, Duisburg, and Jan L. Crütizen and Heinzpeter Nilles, Duisburg-Meiderich, Germany, assignors, by mesne assignments, to Koppers Company, Inc., a corporation of Delaware

Original application June 12, 1961, Ser. No. 116,579, now Patent No. 3,060,510, dated Oct. 30, 1962. Divided and this application Sept. 14, 1962, Ser. No. 223,794
1 Claim. (Cl. 18—2.7)



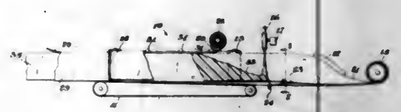
Apparatus for continuously producing small uniform spheres of a pitch material comprising a vertically elongated cylindrical cooling chamber whose lower end tapers to a frustoconical shape, a nozzle chamber closing the upper end of said cooling chamber and having a plurality of nozzles extending into said cooling chamber, whereby said nozzle chamber is adapted to receive molten pitch material and transmit it as streams of small diameter to said cooling chamber, said cooling chamber including means for supplying cooling liquid to the lower portion of said cooling chamber, means for removing heated liquid from a portion intermediate the upper and lower portions of said cooling chamber, whereby the cooling liquid and pitch flow countercurrently, means for initially supplying heat to the upper portion of said cooling chamber, a lock chamber positioned below said frustoconical end, a slide gate connecting said frustoconical end and lock chamber, said lock chamber having means for introducing cooling liquid thereto whereby spheres are cooled further in said lock chamber, transport means positioned below said lock chamber for removing said spheres, and an oscillating generator for causing the streams which flow out of said nozzles to oscillate longitudinally, whereby said streams change to spheres which cool as they move through said cooling chamber.

3,123,856

FOAMED PROCESS AND APPARATUS

Kenneth E. Dye, Wilbur L. Bressler, and Kenneth M. Tolleson, all of Lake Jackson, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed May 31, 1961, Ser. No. 113,888
8 Claims. (Cl. 18—4)



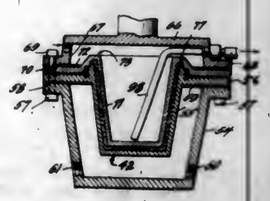
1. In the production of foam slab employing a flexible and deformable web trough, said trough being deformable by an expandable foamable plastic material placed therein, said trough having two upwardly extending sides and a bottom, at least one of said sides having a generally planar configuration the sides and bottom of which are supported by individual conveyor means synchronized to forward the web; and a source of supply of foamable plastic material, the improvement which comprises: forming at the bottom of said web trough a pair of longitudinal folds generally adjacent to the upwardly extending portions of the web; adding a quantity of foam plastic producing material to said trough permitting said material to expand and open said folds and subsequently set to a rigid foam slab having a cross sectional configuration corresponding to a trough whose configuration is generally defined by the conveyor means which support the flexible and deformable web trough.

3,123,857

PLASTIC MOLDING APPARATUS AND METHOD

William A. Wacker, Mobile, Ala., assignor to The Stellar Corporation, Mobile, Ala., a corporation of Alabama

Filed Feb. 1, 1960, Ser. No. 5,791
6 Claims. (Cl. 18—5)



3. A molding device comprising a pair of dies having complementary surfaces defining a mold cavity when the dies are in juxtaposed relation, said dies having a cylindrical sliding fit parallel to the mold axis at the common periphery of said surfaces, and means to oscillate one of said dies in rotation about the mold axis during approach of said dies.

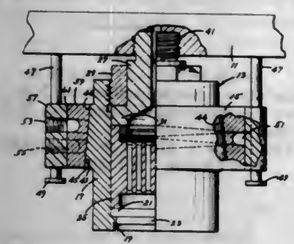
3,123,858

HEATED FILAMENT SPINNING PACK

Henry J. McDermott, Collingdale, Pa., assignor, by mesne assignments, to FMC Corporation, San Jose, Calif., a corporation of Delaware

Filed Feb. 21, 1961, Ser. No. 90,683
3 Claims. (Cl. 18—8)

1. A melt spinning apparatus including a spinning pack having a spinneret for shaping filament-forming material as it is extruded therethrough, heating means encircling said spinning pack and engaging therewith with a wedging action to maintain the same at a desired elevated temperature, and means supporting said heating means



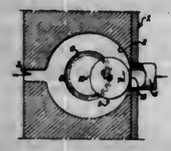
for slidable movement in an axial direction to permit removal of said spinning pack.

3,123,859

SLOT NOZZLE APPARATUS FOR PRODUCING THERMOPLASTIC FOILS, SHEETS AND THE LIKE

Rudolf Baralnsky, Bergisch-Gladbach, Germany, assignor to Dyna-Plastik-Werk G.m.b.H., Bergisch-Gladbach, Germany, a German corporation

Filed Mar. 29, 1961, Ser. No. 99,318
Claims priority, application Germany Mar. 30, 1960
6 Claims. (Cl. 18—12)



1. Slot nozzle for production of foils, sheets, and the like from flowable thermoplastic material which comprises means defining an elongated nozzle chamber provided with an interior wall of round cross-section and having an inlet for thermoplastic material and an outlet for said material, said outlet being defined by an axially extending slot means for passage of thermoplastic material therethrough to impart to said material an elongated strip form, and conveying means defining an axially oscillatable eccentric spiral path including at least one conveyor worm of constant diameter having a smaller periphery than that of said interior wall disposed within said chamber and mounted for rotation simultaneously about the axis of the worm and the axis of the chamber peripherally adjacent the interior wall of said chamber, for conveying thermoplastic material from said inlet to and through said outlet while distributing said material axially within said chamber along the extent of said slot means.

3,123,860

EXTRUDER SCREW

Paul E. Vesilind, Beaver, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

Filed Sept. 15, 1961, Ser. No. 138,374
2 Claims. (Cl. 18—12)



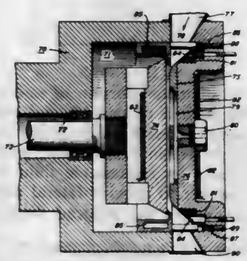
1. An extruding apparatus which comprises an extrusion cylinder having a bore of uniform diameter, a screw rotably mounted within said bore and having a feeding section, a compacting and plasticating section and a metering section, said screw having grooves cut therein to provide a single thread extending helically around the axis of the screw, the groove having a bottom portion extending upwardly from the front face of one thread to the rear face of the next thread at a constant angle relative to the axis of the screw to provide a channel which becomes progressively shallower, the cross-sectional flow area of said channel being constant in the feeding section but progressively decreasing in the compacting and plasticating section at a constant angle relative to the axis of the screw along the length of said section, and the cross-sectional flow area being constant in the metering section.

3,123,861

HYDRODYNAMIC PUMP OR EXTRUDER

Robert F. Westover, Princeton, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Nov. 8, 1962, Ser. No. 236,324
10 Claims. (Cl. 18—12)



1. A hydrodynamic device comprising a fluid-tight housing, a first disk member and a second disk member spaced from said first disk member in said housing, both disks being coaxially disposed, at least one of said disk members having a non-planar surface such that the spacing between said disk members converges in the same circumferential direction, means for introducing feed material into the space between said disk members approximately at the point of greatest separation between the disks, outlet means for discharging the fluid from a position of lesser separation between the disks and means for imparting relative rotary motion between said disk members, relative rotation between said disk members causing the generation of pressure in the converging space between said disk members.

3,123,862

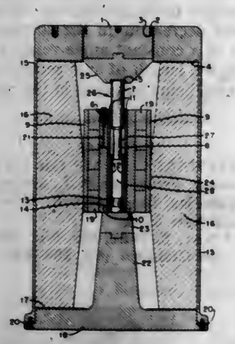
ULTRA-HIGH PRESSURE DEVICE

Ralph P. Levey, Jr., Oak Ridge, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed July 24, 1962, Ser. No. 212,177
3 Claims. (Cl. 18—16)

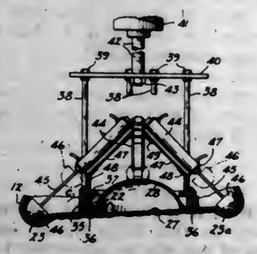
3. In a piston-cylinder type vessel for pressing comprising a multi-sided female die member having a stepped cylindrical interior wall defining larger and smaller diameter cavities, a closure member fitted into one end of said die member, and a movable, stepped cylindrical piston extending through the other end of said member, the reduced diameter end of said piston defining a first pressure chamber within said smaller diameter cavity, said first pressure chamber being adapted to receive a specimen to be pressed and a pressure transmitting medium, improved means for providing piston and cylinder wall support while permitting relatively extensive and uninhibited movement of said piston, comprising; a hollow cylindrical housing for receiving equal pressure on all surfaces, a plurality of anvil intensifiers disposed within

said housing, having external surfaces contacting the side walls of said housing, and cooperatively converging upon the outer walls of said female die member to provide lateral support to said die member, a slidable plug mounted at one end of and forming a part of the external surface of said housing, said slidable plug contacting the larger diameter end of said piston to impart thrust there-



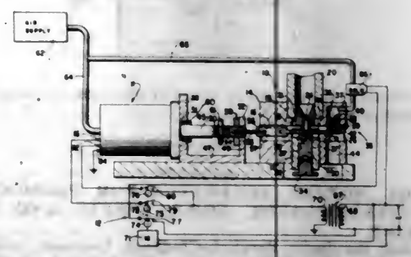
to, said reduced diameter portion of said piston and said larger diameter portion of said stepped cylindrical cavity defining a second, annular pressure chamber, means for relieving pressure within said second pressure chamber, and a substantially incompressible fluid disposed within said second chamber to provide lateral support, during a pressing operation, for the reduced diameter portion of said piston.

3,123,863
METHOD OF AND APPARATUS FOR FORMING THERMOPLASTIC SHEET MATERIAL
Walter T. Reilly, Akron, Ohio, and Louis Di Donato, Stoneham, Mass., assignors to The General Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Dec. 4, 1959, Ser. No. 857,296
10 Claims. (Cl. 18—19)



9. Apparatus for forming a sheet of upholstery covering material from a thin thermoplastic sheet having a hole therein comprising a mold having an elongated cavity of a predetermined generally quadrilateral shape and a semi-ellipsoidal dome rigidly mounted at the center of said cavity and elongated in the same direction as said cavity for engaging the edge of said hole near the top of said cavity and for enlarging the hole as the plastic sheet is moved downwardly over the dome toward the bottom of said cavity, said dome having a smooth highly polished surface that recedes gradually from its terminus to the bottom of said cavity, said dome extending more than half the distance between opposite sides of said cavity, a narrow smooth generally flat surface surrounding said dome and extending radially from the polished surface of the dome to the radially inner edge of said peripheral mold surface, and hold-down means for clamping the plastic sheet against said narrow flat surface around the periphery of said dome after the edge of said hole is near the bottom of said dome and before the sheet conforms to said mold surface.

3,123,864
MOLDING APPARATUS
Ronald MacIntyre, North Arlington, N.J., assignor to Specialties Development Corporation, Belleville, N.J., a corporation of New Jersey
Filed June 5, 1961, Ser. No. 115,009
4 Claims. (Cl. 18—30)



1. Apparatus for molding articles of an extrudable material comprising in combination an extruding die having a face provided with an outlet opening, a support member beneath and spaced from said face, a mold member having first and second surfaces and being provided with a mold bore extending therethrough from said first surface to said second surface, said mold member having said first surface in sliding contact with said die face and said second surface in sliding contact with said support member, said mold member being movable between a first position wherein said bore is between said die face and said support member and is in alignment with said die opening to allow material to fill said bore and a second position wherein said bore is disposed outwardly of said die face and said support member, a source of air under pressure, and means for removing said material from said bore when said mold member is in said second position including a reciprocating piston adjacent said mold member having an end face provided with an air passageway therethrough and being operated in one direction by air under pressure from said source and including means for slidably mounting said piston to move said end face into contact with said one of surfaces of said mold member and said passageway in registry with said bore when said piston is pressurized whereby air flows through said passageway to eject said material from said bore and including a return spring for said piston for operating the same in the other direction.

3,123,865
TIRE RETREADING MOLD
Raymond P. Hawkinson, Minneapolis, Minn., assignor to Paul E. Hawkinson Company, Minneapolis, Minn., a corporation of Minnesota
Filed Jan. 31, 1962, Ser. No. 170,034
2 Claims. (Cl. 18—38)

1. In a device of the class described,

(*a*) a cylinder-like sheet metal mold element having its opposite side edge portions extending radially outwardly to form marginal rails having parallel outer side faces,

(*b*) an annular matrix received within said mold element and comprising a plurality of cast metal matrix sections in end-to-end abutting relationship,

(*c*) said matrix at its opposite marginal sides defining laterally spaced radially inwardly projecting endless tread material-confining flanges having parallel outer faces which are in general alignment with the outer faces of said rails,

(*d*) the radially intermediate outer face portions of the flanges of each of said matrix sections being formed to define arcuate grooves which are in circumferential communication to collectively define endless oppositely open annular channels,



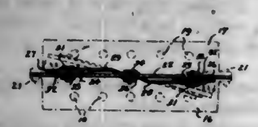
(*e*) and annular metallic heating tubes fixedly secured within said channels and retaining said matrix sections in annular end-to-end abutting form independently of said cylinder-like mold element.

3,123,866
STAVES
William Rennie Stewart and David Bruce Stewart, Angus, and Joseph Butler, Dundee, Scotland, assignors to Wm. R. Stewart & Sons (Hackliemakers) Ltd., Dundee, Scotland
Filed Feb. 25, 1959, Ser. No. 795,541
Claims priority, application Great Britain Feb. 25, 1958
33 Claims. (Cl. 19—97)



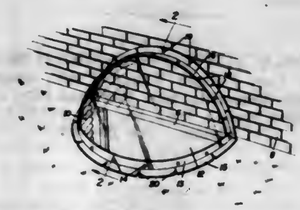
1. A stave for mounting on a drum, comprising an elongated body of substantially rectangular part-cylindrical shape having inner and outer faces, said body being curved about an axis extending parallel to the length of said body and being formed with at least three rows of cylindrical holes extending through said body between said faces, pins within said holes, each of said pins having a cylindrical portion disposed within said hole, the walls of said hole releasably gripping said cylindrical portion and constituting the only part of said stave holding said pin, and projection means for spacing the inner face of said stave body from said drum.

3,123,867
VESTIBULE PRESSURE EQUALIZER
Edgar L. Combs, Pekin, Ill.
Filed Apr. 4, 1962, Ser. No. 185,024
1 Claim. (Cl. 20—16)



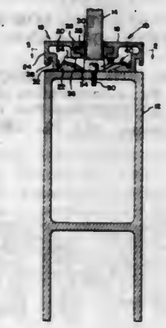
In combination, a door having two opposing recesses extending respectively from the opposite sides of the door, the sum of the depths of said recesses being less than the thickness of the door, a web disposed between said recesses and forming a rectangular frame for an aperture piercing the door, a valve venting device having a flat valve chassis plate of substantially the size and shape of one of the recesses, said plate having a pair of valve apertures, a pair of resilient disks each associated with one of said apertures, and spring means to press each of said disks into closure of the corresponding aperture, cup casings positioned in substantially coplanar relation with the inside and outside surfaces of the door, and having flanges extending about the periphery of the chassis plate and engaging respectively the opposite surfaces thereon, said cup casings respectively having vent holes therein, bolt means for securing said cup casings and the chassis plate to said door recess web, and one of said cup casings extending through the web aperture and one of the door recesses being of less depth than the other whereby the cup casings will lie fully within the confines of the door recesses and flush with the surfaces of the door.

3,123,868
WINDOW WELL COVER
Leo L. Gust, 6253 S. Broadway, Littleton, Colo.
Filed Nov. 22, 1961, Ser. No. 154,169
13 Claims. (Cl. 20—40)



1. A window well cover comprising a substantially segmental resilient transparent dome, and a resilient base bar mounted on the lower portion of the dome and depending therefrom and engageable under tension, upon a flexing of the dome and bar, in the upper portion of a window well for frictionally securing said dome thereon, said bar including an outwardly projecting flange adapted to rest on the well for supporting the dome thereon.

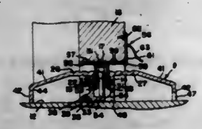
3,123,869
SNAP-IN GLASS SETTING CONSTRUCTION
Maurice May, Atlanta, Ga., assignor, by mesne assignments, to Anaconda Aluminum Company, Louisville, Ky., a corporation of Montana
Filed Dec. 19, 1956, Ser. No. 629,415
3 Claims. (Cl. 20—56.4)



1. A glass setting assembly for supporting a sheet of glass on edge on a support, said assembly comprising a pair of elongated channel-shaped stop members, said members being respectively located on opposed sides of said glass sheet and each including spaced upper and

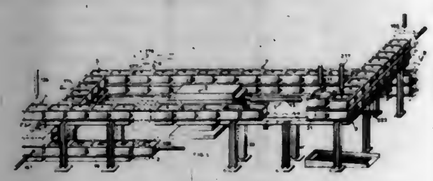
lower flanges, the lower flange of each member having an upper surface including a longitudinally extending groove and each lower flange being located upon said support and extending transversely from an inner longitudinal edge parallel to and adjacent said glass sheet to a vertical edge web connecting said lower flange to said upper flange, the upper flange of each member projecting inwardly from said web and including longitudinally extending sealing means engaging a side surface of said glass sheet, a plurality of relatively short spaced spring clips secured to said support between said inner longitudinal edges of said stop members, said clips having opposed arm portions respectively overlying the lower flanges of said stop members, each of said arm portions having a lip portion resiliently biased into seating engagement with said groove in the upper surface of each of said lower flanges, and blocking means wedged between one of said arm portions and the adjacent upper flange to retain the lip of said one of said arm portions in firm seating engagement with its associated groove, said blocking means being readily removable following removal of the stop member which is opposite from said blocking means.

3,123,870
DOOR-ACTUATED THRESHOLD SEAL
Benjamin Coe, Portola Valley, Calif., assignor to Woodside Industries, Inc., Redwood City, Calif.
Filed Mar. 2, 1962, Ser. No. 177,013
11 Claims. (Cl. 20—64)



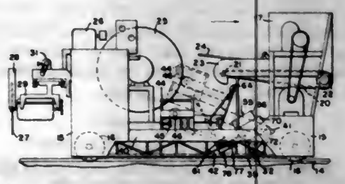
1. In a threshold of the character described, means defining a channel having substantially vertical longitudinally extending walls, means for sealing one said wall against outside weather, a bottom connecting the lower ends of said walls, said bottom sloping toward the other said wall, a step protruding along said bottom alongside said other wall, said step having a height substantially equal to the pitch of said bottom, and support means connected to the upper ends of said walls supporting said first mentioned means erect.

3,123,871
AUTOMATIC INSTALLATION FOR THE CONTINUOUS FABRICATION OF SAND MOLDS AND CASTINGS
Russell W. Taccone, Erie, Pa., assignor to Taccone Corporation, Erie, Pa., a corporation of Pennsylvania
Filed Apr. 25, 1961, Ser. No. 105,435
2 Claims. (Cl. 22—20)



1. An automatic installation comprising
a top and a bottom track,
said bottom track being disposed directly below a part of said top track,
said top track and said bottom track each extending approximately half way around a molding machine,
index means on said top track for moving flasks in ordered sequence to said molding machine,
a roll over device,
a closing means on said tracks,
a pouring station on said bottom track,
a punch out station on said bottom track,
said flasks being made up of a cope section and a drag section,
means moving said flasks one ahead of the other intermittently on said tracks,
said molding machine being supported adjacent said top track with a means below said flasks and said top track to support sand in said flasks resting on said top track,
a molding head above said top track to compress sand in said flasks above said sand support means,
said roll over device being along said top track on the same side thereof with said molding machine,
means on said machine for moving each said drag section down from the level of said top track to a position under said cope sections and for rolling said drag sections over,
said closing means having means thereon for moving said drag sections relative to said cope sections and into engagement therewith and for closing them together,
said pouring station being on said bottom track with means thereon for stopping said flasks to receive molten metal from a pouring device,
said bottom track functioning to carry said flasks while the molten metal cools,
means at one end of said top track to move completed molds to said bottom track,
and means at the other end of said top track for moving flasks from said bottom track to said top track.

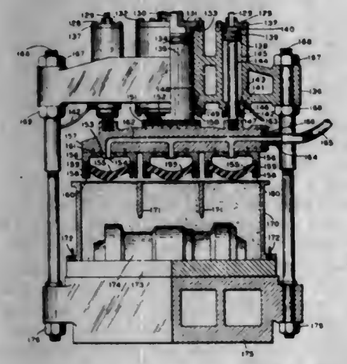
3,123,872
CONCRETE FORMING MACHINE
Jack H. Perlmutter, Denver, and Ruben J. Hartmeister, Golden, Colo., assignors to Prestressed Concrete of Colorado, Inc., Denver, Colo., a corporation of Colorado
Filed June 20, 1962, Ser. No. 203,874
6 Claims. (Cl. 22—41)



1. A bed supported traveling type concrete forming machine for forming long slabs of mesh reinforced concrete having vertical longitudinally extending ribs rising from the slab and prestressing cables located in the ribs, comprising
(*a*) a wheel supported main frame adapted to travel longitudinally on a bed,
(*b*) an auxiliary frame pivotally mounted on the main frame,
(*c*) a plurality of transversely spaced forms carried by the auxiliary frame and supported above and in spaced relation to the bed, the spaces between the forms being adapted to receive rib forming concrete and the spaces beneath the forms being adapted to receive slab forming concrete,

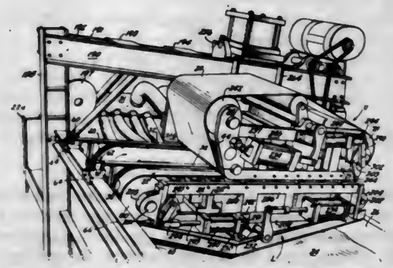
(*d*) means depositing concrete on the bed forwardly of the forms,
(*e*) a plurality of first concrete compacting mechanisms mounted on the auxiliary frame, each comprising
compactors extending in inclined downward rearward direction into rib forming concrete located between the forms and at opposite sides of prestressing cables embeded in the concrete, and means reciprocating said compactors in axial directions while the machine is traveling over the bed,
(*f*) a plurality of second concrete compacting mechanisms mounted on the auxiliary frame, each adjacent a first compacting mechanism, and each comprising
a compactor extending in inclined downward rearward direction into the slab forming concrete, and means reciprocating said compactors in axial directions while the machine is traveling on the bed, and
(*g*) means on the frame supporting reinforcing mesh in a plane between the forms and the bed.

3,123,873
MOLDING MACHINE
Russell W. Taccone, Erie, Pa., assignor to Taccone Corporation, North East, Pa., a corporation of Pennsylvania
Filed Jan. 3, 1961, Ser. No. 80,212
2 Claims. (Cl. 22—42)



1. A molding machine comprising a head, means to support a flask below said head, said head having a flat, downwardly facing, outer peripheral surface thereon, spaced, downwardly facing surfaces on said head inwardly disposed of said outer peripheral surface, said downwardly facing surfaces being disposed in substantially the same plane as said outer peripheral surface, a heavy flexible pad attached to said peripheral surface and to said inwardly disposed surfaces, a retainer frame generally coextensive with all said surfaces resting on said pad and attached to said head holding said pad to said head, said pad defining a plurality of chambers in said head, means to inject air under pressure into said head behind said pad, said head being slightly smaller in outside dimension than said flask, and means on said machine to force said head into said flask whereby said frame rigidly compacts sand therein adjacent the peripheral edges thereof, said frame overlying said inwardly disposed surfaces compacting sand inwardly from the edges of said flask with a positive force, said pad packing said sand between said frame edges, the parts of said head supporting said inwardly disposed surfaces having downwardly facing slots therein, said flask having transversely extending bars attached to its side edges and extending across it, said bars being received in said slots when said head is forced into said flask to compact sand therein.

3,123,874
METAL CASTING APPARATUS
Robert William Hazelett, Burlington, Vt., and Richard Hazelett, Rocky River, Ohio, assignors to Hazelett Strip-Casting Corporation, Fairfield, Conn.
Original application Mar. 17, 1958, Ser. No. 722,005, now Patent No. 3,036,348, dated May 29, 1962. Divided and this application May 17, 1961, Ser. No. 115,850
12 Claims. (Cl. 22—57.4)

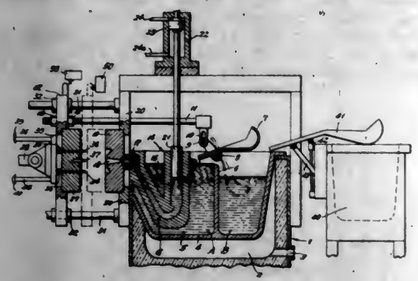


1. Apparatus for casting strips of metal directly from molten metal in a casting region between rectilinear portions of a pair of moving flexible metal bands and for steering said bands comprising a first metal band, first means supporting said first band for longitudinal movement along a first predetermined path a portion of which is substantially rectilinear including a first roll at one end of the rectilinear path portion around which the first band is flexed and including tensioning means for the first band, a second metal band, and second means supporting said second band for longitudinal movement along a second predetermined path a portion of which is substantially rectilinear and positioned in parallel spaced relationship with said rectilinear portion of said first path, said second means including a second roll at one end of the second rectilinear path portion around which the band is flexed and including tensioning means for the second band, first and second bearing means movably supporting a respective end of each of said first and second rolls, said first and second bearing means being movable in a direction perpendicular to the rectilinear path portions of said first and second bands, first and second eccentrics coupled to said respective bearing means, first and second power-operated mechanisms for turning said eccentrics to move the respective ends of said rolls, and belt-position sensing means engaging an edge of each belt for controlling the power-operated mechanism.

3,123,875
DIE CASTING METHODS AND APPARATUS
Albert Madwed, Bridgeport, Conn., assignor, by mesne assignments, to Automatic Casting Corporation, Bridgeport, Conn., a corporation of Connecticut
Filed May 31, 1962, Ser. No. 198,916
10 Claims. (Cl. 22—70)

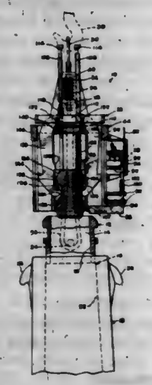
9. A die-casting process in which molten metal is injected through a nozzle and a sprue hole into the cavity of a pair of closed dies to form an article by operation of a plunger in a cylinder submerged in a pot of molten metal, the cylinder being connected to the nozzle by a gooseneck and receiving molten metal from the pot through a passage leading into its wall, the steps of closing the dies; operating the plunger to inject molten metal through the gooseneck and nozzle into the cavity formed by the dies and at the same time closing the passage from

the pot to the cylinder; while the dies remain closed applying rapid return movement to the plunger while maintaining said passage closed to create and maintain until the dies separate a strong suction in the gooseneck to withdraw the molten metal from the sprue, the nozzle and adjacent part of the gooseneck and thereby prevent any molten metal from dripping from the sprue or the



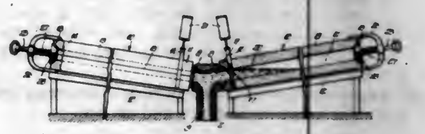
end of the nozzle or freezing in the nozzle and adjacent part of the gooseneck when the dies are separated and the casting is removed; separating the dies for the removal of the casting; and thereafter causing the passage between the pot and the cylinder to open and permit the cylinder and gooseneck to quickly refill for the next cycle of steps.

3,123,876
INGOT MOLD EXTRACTOR
Walter D. Maring, Shelby, Ind.
Filed Mar. 23, 1959, Ser. No. 801,022
12 Claims. (Cl. 22—95)



1. In a device for extracting an ingot from a mold having lug engaging means thereon, the combination comprising a main frame, a hammer slidably mounted to said main frame to be raised and projected downward upon an ingot, a hammer lifting frame slidably mounted to said main frame for raising and releasing said hammer, said lifting frame including lifting tongs pivotally mounted to automatically engage and raise said hammer within the confines of said main frame, means for lowering said device for initially engaging said hammer against an ingot to urge said hammer partially upward into engagement with said tongs, compression springs mounted to said main frame and confronting said hammer for biasing said hammer downward when raised by said lifting means relative to the main frame, arm means mounted to said main frame for anchoring said main frame relative to a mold when said hammer is raised by said lifting means, means on said arms to releasably engage said mold, cam means on said main frame automatically engaging and camming said tongs outward when said hammer reaches its raised position to release said hammer from said tongs whereby said hammer may be projected downward against an ingot with its movement accelerated by said biasing action of said compression springs.

3,123,877
APPARATUS FOR AND METHOD OF CASTING METAL MEMBERS
Edmund Quincy Sylvester, Shaker Heights, Ohio (% Griffin Wheel Co., 445 N. Sacramento Blvd., Chicago, Ill.)
Filed July 24, 1961, Ser. No. 128,337
5 Claims. (Cl. 22—141)



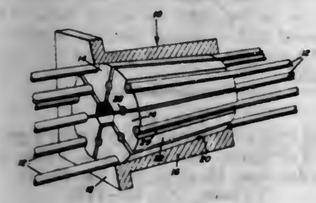
1. An apparatus for casting steel into directly rollable slabs, blooms, billets and the like, comprising a pressure container for holding molten metal, a pouring tube having one end extending upwardly from said container and the other end in communication with said molten metal, a graphite mold having a cavity formed therein secured to said upper end of said pouring tube in a manner causing said cavity to be slightly inclined from the horizontal, a first passageway formed in said mold for at times communicating between the upper end of said pouring tube and the lower portion of said cavity, a second passageway formed in said mold for at times communicating between the upper end of said cavity and the ambient atmosphere, a chill member for closing said first passageway when said cavity is filled, and means for at times completely closing said second passageway, said means comprising a support member secured to said mold, a second chill member axially aligned with said second passageway and slideably received by said support member, resilient means urging said second chill member toward said second passageway, and temperature responsive abutment means interposed between said second passageway and said second chill member preventing reception of said second chill member by said second passageway until the molten metal within said cavity causes said abutment means to melt.

3,123,878
METHOD OF MAKING HOT TOPS FOR INGOT MOLDS
Per Davidson, Sandviken, Sweden, assignor to Sandvikens Jernverks Aktiebolag, Sandviken, Sweden, a corporation of Sweden
Filed Mar. 3, 1961, Ser. No. 93,133
Claims priority, application Sweden Oct. 4, 1960
2 Claims. (Cl. 22—193)



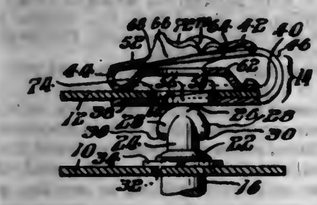
1. Method of making a hot top disposable sleeve which comprises forming said sleeve out of a composition consisting essentially of from 82% to 94% by weight of a finely divided refractory material having an average grain size within the range from 0.6 to 0.05 mm., from 3% to 9% by weight of an organic fibrous material and from 1% to 4% by weight of a solid organic binder material with sufficient water to give a moldable mixture, and drying and baking the molded sleeve at a temperature within the range from about 120° C. to 200° C., said sleeve being formed by filtering an aqueous slurry of the solid components of said composition under pressure through a porous mold.

3,123,879
WEDGE ANCHOR FOR TENSIONING AND ANCHORING WIRES
Lubicho Bodnaroff, Denver, and Homayoun J. Meheen, Cherry Hills Village, Colo., assignors to B & M Prestress Corp., Englewood, Colo.
Filed Jan. 18, 1960, Ser. No. 2,888
19 Claims. (Cl. 24—122.6)



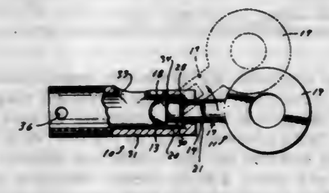
1. An anchor for tensioned prestressing elements comprising an elongated body having an opening extending entirely therethrough, said opening having a central longitudinal axis with the wall of said opening being tapered from end to end, a plurality of prestressing elements each having a straight and nontwisted portion, said portions being disposed within said opening in circumferentially spaced side-by-side relation about said axis, a plurality of wedges disposed in said opening in circumferentially spaced side-by-side relation about said axis and each disposed between a pair of adjacent element portions, adjacent surfaces of adjacent wedges having registering pairs of complementary rectilinear channels, each pair of registering channels being of sufficient cross-sectional area to receive and to compressively grip and retain therein the straight portion of a single prestressing element in a twist free condition, said channels being spaced from said opening wall, said wedges having other surfaces cooperating with said opening wall for squeezing said wedges and their associated registering channels towards each other when the wedges are forced axially of said body opening.

3,123,880
CLIP-ON RECEPTACLE OR SOCKET MEMBER FOR ONE-QUARTER TURN STUD
John K. Berry, Springfield, and Robert H. Bibbing, Upper Darby, Pa., assignors to South Chester Corporation, Lester, Pa., a corporation of Delaware
Filed Sept. 21, 1961, Ser. No. 139,794
4 Claims. (Cl. 24—221)



1. In a device for quick detachably fastening together a pair of mutually overlying plate members, a socket member consisting of a single flat strip of spring metal having first and second opposite end sections and an intermediate section, said first end section being turned with a small radius bend back over said intermediate section, said second end section being turned with a larger radius bend back over said first end section and disposed in predetermined spaced relation to said first end section for receiving between said end sections the marginal portion of an inner one of said plate members, and said intermediate section including an arm extending freely from the small bend end toward the larger bend end thereof, and a stud having a head on one end thereof for engaging with an outer one of said plate members, a main body part adapted for extending freely through registering openings in said plate members, opposite end sections and arm, and lug means on the opposite end of said stud, said stud being operable for turning said lug means thereby to effectively engage said arm and draw said plate members, opposite end sections and arm together and operatively seat each firmly upon an underlying one thereof against the inherent spring of said socket member.

3,123,881
LINE ATTACHING DEVICE
Eythor G. Westman, Rte. 2, Blaine, Wash.
Filed Sept. 29, 1961, Ser. No. 141,707
5 Claims. (Cl. 24—222)

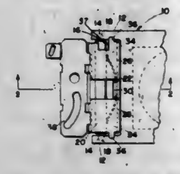


1. A line connecting device comprising a first member having a socket and a second rigid member having at its rear end a ferrule which is adapted to rotatably fit into said socket, each member being adapted to be attached to a related object, a rigid shank extending from said ferrule, and having a front portion, a middle portion of reduced width and a rear portion, said socket having a restricted front opening which is able to pass the front and rear portions of said shank, said socket member having an access opening leading to said socket and adapted to pass said ferrule, a through slot opening to said socket and leading from said access opening to said front opening, said slot adapted to pass only the middle reduced width portion of said shank so that when the ferrule is inserted into said access opening, the reduced width shank portion may be passed through said slot so that said shank may be made to extend through said front socket opening, thus coupling the two members.

3,123,882
TERMINAL LINK FOR WATCH BANDS
Stanley Meyerson, 1350 Ocean Parkway, Brooklyn, N.Y.
Filed Sept. 8, 1959, Ser. No. 838,600
5 Claims. (Cl. 24—265)

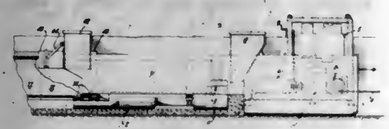
1. A watch band adapted to encircle the wrist of the wearer and means for attaching the watch band to a watch having spaced end lugs and a pivot pin pivoted between the end lugs, comprising a terminal link of the watch band having a space therethrough of greater dimensions lengthwise of the watch band than the diameter of the pivot pin and through which the pivot pin passes, and yielding means engaging the pivot pin and the terminal link for urging the end wall of the terminal link nearest

to the wall of the watch away from the axis of the pivot pin to a position adjacent to the wall of the watch, said



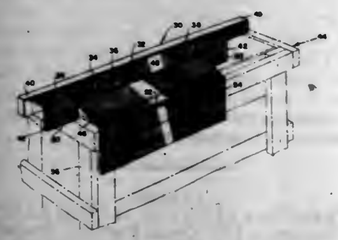
yielding means comprising a spring abutting against the pivot pin and against the end wall of the terminal link.

3,123,883
CAST-IN-PLACE PIPE MACHINE
James H. Peirsol, La Mirada, and Luther Wesley Irwin, Downey, Calif., assignors to American Pipe and Construction Co., South Gate, Calif., a corporation of Delaware
Continuation of application Ser. No. 778,803, Dec. 8, 1958. This application July 13, 1962, Ser. No. 212,182
18 Claims. (Cl. 25—32)



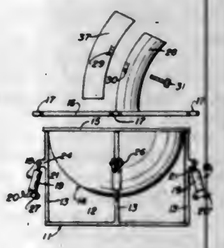
1. In an apparatus for producing cementitious conduits in a trench, and comprising: a vehicle adapted to be moved along said trench, a plurality of arch forms capable of being releasably secured together, each of said forms being received on said vehicle and secured to the preceding arch form, a brace means connected to each form and being self-actuable upon enlargement of the arch form's contour, and guide means mounted upon said vehicle and engageable with depending side edges of said arch form for producing an enlargement of the arch form's contour to actuate said brace means.

3,123,884
SEWER INLET FORM CONSTRUCTION
Dale W. Miller, R.D. 1, Huntingdon, Pa.
Filed Sept. 16, 1960, Ser. No. 56,521
3 Claims. (Cl. 25—118)



1. A manually-portable one-piece, face-form for forming the outer face of an integral sewer inlet-and-curb and being manually removable from a pre-erected form substructure for deposition on another similar pre-erected form substructure without dismantling of the form substructure upon which the face-form was previously disposed, said face-form consisting of a single sheet, an elongated body member of a relatively rigid material, said body member comprising an inner and outer surface and including a planar, vertical top panel bordered by a linear top margin normal to mutually parallel, free, uninterrupted side margins, the inner surface of said top panel comprising means for forming the front face of a section of curbing at a sewer inlet, said body member including an intermediate, planar panel including mutually parallel, free, uninterrupted side margins and extending downwardly and angularly from said top panel at a fold line parallel to the linear top marginal said top panel, the inner surface of said intermediate panel comprising means for forming the upper surface of a sewer inlet throat immediately below the outer face of the curb face being formed by the top panel, said body member including a planar bottom panel depending from said intermediate panel on a fold line parallel to the top margin of said top panel, said bottom panel being disposed in a plane parallel to said top panel, said bottom panel including parallel, free, uninterrupted side margins, the inner surface of said bottom panel comprising means for forming the face of a back wall portion of a sewer inlet immediately below the outer face of the sewer inlet throat, and support means on the top panel out of the plane of the inner surface thereof and including terminal support portions extending beyond the mutually parallel side margins of said top panel.

3,123,885
MEANS FOR MOLDING ARTICLES
Marion Lee Marler, 188 White Ave., Chico, Calif.
Filed Sept. 29, 1960, Ser. No. 59,339
1 Claim. (Cl. 25—118)

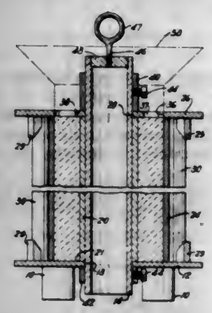


A mold comprising a stand including a base, a plurality of vertically disposed parallel legs arranged in a circle and having their lower ends affixed to said base, a hollow semi-spherical casing having a flange about its edge for supporting said casing upon said legs, a plate for overlying said casing, said plate being formed with a central opening and spaced lugs about its periphery, a tubular device disposed adjacent said plate and having one end in registry with said opening, said device comprising mating sections each of semi-circular form in cross-section and arcuately curved along its longitudinal axis with one of said sections fixedly secured to said plate and the other of said sections removably attached to said one section, and clamps anchored on said legs and engaging said lugs of said plate.

3,123,886
ASSEMBLY FOR FORMING REFRACTORY TUBES
Eldon D. Miller, Jr., Bethel Park, Pa., assignor to Harbison-Walker Refractories Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 21, 1961, Ser. No. 132,789
2 Claims. (Cl. 25—126)

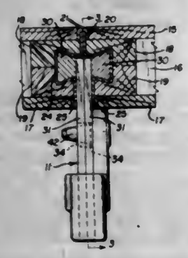
1. An assembly for forming refractory tubes with an accurate bore comprising a pair of fluid absorbent, porous concentric tubes, means mounted at each end of said concentric tubes to maintain them in fixed spaced relation to one another, said tubes defining an annular space between their opposing surfaces, rigid means within the central tube of said pair and in contact therewith throughout substantially its entire length, rigid means disposed

along the outer surface of the outer tube at circumferentially spaced intervals and in contact therewith throughout substantially its entire length, said pair of fluid absorbent, porous concentric tubes being composed of a ma-



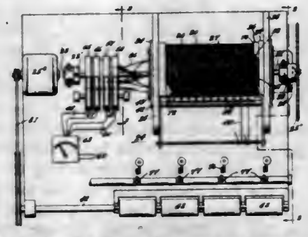
terial that withstands a temperature up to about 300° F. but chars away to a non-fused ash upon heating above about 300° F. but below its fluxing temperature, and closure means at one end of said annular space between said concentric tubes to retain therein refractory materials.

3,123,887
CONCONCRETE FORMS AND SYSTEM
Joseph L. Boettner, Denver, Colo., assignor to K.C. Construction Supply Co., Denver, Colo., a corporation of Colorado
Filed Apr. 21, 1961, Ser. No. 104,677
6 Claims. (Cl. 25—131)



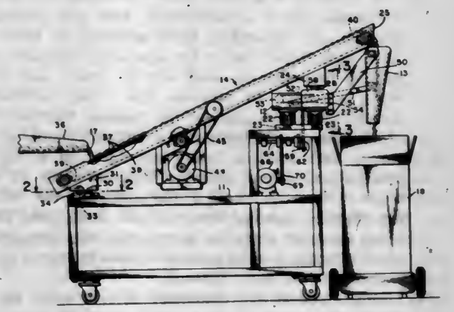
4. A reusable panel system for forming concrete form structures comprising a plurality of panels arranged to be positioned edgewise adjacent one another in a common plane and to form a concrete containing surface, each panel including a smooth, planar concrete containing surface and an outside surface sandwiched over a strengthening core, an edging member mounted on the edges of said adjacent panels, there being at least one raceway in each said edging member extending along the length of each member and arranged to be cooperatively positioned with and form with a similar raceway in the adjacent abutting panel an outwardly opening groove therebetween, the raceway in each panel including an undercut, a plurality of keys arranged to slidably fit in said raceways and having a portion to secure against the undercuts of the adjacent panels for temporarily holding adjacent panels together, clamp means externally of and adjacent said groove connected with each said key and bearing against at least one of said panels for clamping said keys in said keyways and thereby maintain said panels together, and means cooperative with means extending from said keys in said keyway and said clamp means for securing the same to shoring members.

3,123,888
YARN TEXTURING DEVICE
Gordon E. Meyers, Rydal, Pa., assignor to Clarence L. Meyers & Company, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed Mar. 24, 1961, Ser. No. 98,238
8 Claims. (Cl. 28—1)



1. In a device for texturing yarn, a rotor, longitudinal guides distributed around the circumference of the rotor in spaced relation, sliders in the guides each extending longitudinally of the rotor distributed around the circumference and slidable longitudinally to different relative positions, said sliders having a yarn-receiving path extending around the outside of the rotor and having projections on either side of the yarn-receiving path, the projections in one position of the sliders being in line circumferentially and in another position of the sliders overlapping to form a serpentine circumferential yarn path, means for turning the rotor, means for bringing the sliders into alignment at one circumferential position, means for relatively moving alternate sliders longitudinally with respect to intervening sliders at another circumferential position and forming said serpentine circumferential path, means for introducing yarn into said circumferential path at a position at which the sliders are in alignment, means for withdrawing said yarn from said circumferential path, means acting on the sliders after they have overlapped to form said serpentine circumferential path for reducing the overlap of the sliders while retaining overlap of the sliders as the yarn becomes heated to compensate for shrinkage, and means for heating said sliders to a temperature at which the yarn is heat set.

3,123,889
STRAND PACKAGERS
Troy E. Watts, Hartselle, and Robert G. Wilson, Mobile, Ala., assignors, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware
Filed Dec. 18, 1961, Ser. No. 160,005
8 Claims. (Cl. 28—21)



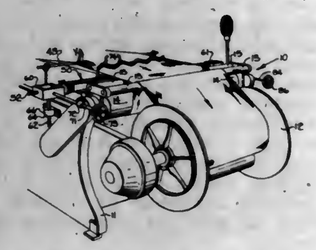
8. A tow packager, comprising a frame, a carriage mounted on the frame for reciprocation along a path on the frame, a pair of spaced rollers mounted on the frame at a location spaced laterally from the midpoint of said path, a pair of parallel plates secured to the frame be-

tween the rollers to define a guide slot extending in a direction normal to said path, a post secured to the carriage, a tow conveyer having one end thereof resting on the rollers and the other end thereof pivotally attached to the post on the carriage, a pin attached to said one end of the conveyer and extending into said guide slot for guiding said one end of the conveyer for movement in a direction normal to said path, means for feeding a tow onto said one end of said conveyer, means carried by the conveyer for driving said conveyer to advance the tow therealong, a bracket secured to the conveyer, a piddler chute pivotally secured at the upper end thereof to the bracket for receiving the tow from the conveyer, a first endless belt mounted on the frame and having spans parallel to said path, means on the frame for driving said first endless belt, a first link interconnecting the carriage and a point on the first endless belt so that movement of said first belt reciprocates the carriage along said path, a second endless belt mounted on the carriage and having spans normal to said path, means on the carriage for driving the second endless belt, and a second link interconnecting the chute and a point on the second endless belt so that movement of said second belt oscillates the lower end of the chute in a direction normal to said path.

3,123,890
CONTROL MEANS FOR STRAND PROCESSING MACHINES

Curtis C. Thompson, Rte. 3, Forest City, N.C.

Filed Jan. 12, 1962, Ser. No. 165,782
5 Claims. (Cl. 28—51)



1. A machine for processing a bank of textile yarns, said machine comprising

(*a*) a rotatable take-up beam adapted to wind the bank of yarns thereon,

(*b*) variable speed drive means operatively connected to said take-up beam and normally operable to rotate said take-up beam at a predetermined speed,

(*c*) an elongate expansion comb mounted for pivotal movement about a horizontal axis and having a plurality of upstanding teeth adapted to have the yarns pass therebetween for separating the yarns and guiding the same to said take-up beam, said teeth being arranged in sections and being sufficiently closely spaced to prevent the passage therebetween of abnormal enlargements or entanglements in the yarns, said sections being arranged in a zig-zag pattern and being movable longitudinally of said comb to vary the length of the comb and for varying the effective spacing between said teeth, said comb being movable about its pivot upon the engagement of an abnormal enlargement or entanglement in the yarns with the teeth thereof,

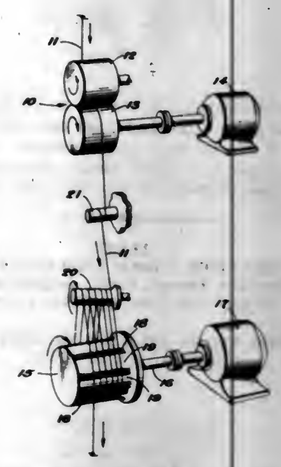
(*d*) means operatively connected to said comb for resisting movement of said comb about its pivot and being adjustable to vary the resistance applied to said comb for varying the amount of force necessary to pivot said comb upon the engagement of an enlargement or entanglement in the yarns with the teeth of the comb, and

(*e*) a switch mounted adjacent said comb and in the path of movement thereof to be actuated thereby, said switch being electrically connected to said variable speed drive means and operable when actuated to cause said variable speed drive means to rotate said take-up beam at a reduced speed.

3,123,891
APPARATUS FOR DRAWING TEXTILE FILAMENTS

Edmond Paul Brignac, Pensacola, and Robert T. Wright, Gulf Breeze, Fla., assignors, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware

Filed Apr. 10, 1961, Ser. No. 102,053
3 Claims. (Cl. 28—71.3)



1. Apparatus for drawing textile filaments comprising means to supply textile filaments from a source at a predetermined speed, a cylindrical draw roll adapted to be driven so that the filaments normally being supplied to it are under considerable tension, said draw roll having a plurality of high-friction polished strips and a plurality of low-friction matte strips formed on the peripheral surface thereof, the filaments normally engaging said high- and said low-friction strips, said strips being substantially parallel and extending axially of said draw roll, the polished strips and the matte strips following one another alternately about the periphery of said draw roll, the total surface area of the polished strips constituting about 50–80 percent of the total filament engaging peripheral area of said draw roll, and a separator roll mounted adjacent to said draw roll in spaced relationship therewith and positioned so that the axis of said separator roll is disposed at a slight angle with respect to the axis of said draw roll in order that the filaments normally progressing engagingly around said draw roll and said separator roll will describe generally a helix with convolutions being spaced apart.

3,123,892
METHOD OF CONSTRUCTING A DIMENSIONALLY STABLE DRYER FELT

Henry J. MacMillan, Delmar, and Robert R. Kelleher, Latham, N.Y., assignors to Albany Felt Company, Albany, N.Y., a corporation of New York

No Drawing. Filed Sept. 21, 1960, Ser. No. 57,398
3 Claims. (Cl. 28—72.2)

1. The method of constructing a felt for use in the dryer section of a papermaking machine consisting of weaving a coarse base fabric with three-ply lengthwise yarns and five-ply crosswise yarns, running the base fabric as an endless belt at elevated temperatures in the range of 300° to 400° F. while applying tension in the range of 20 to 30 lbs. per inch of width, applying selected fibers to one surface of the base fabric and passing the base fabric through a needling machine to cover the surface of the woven fabric with a plurality of fibers mechanically interlocked therewith, applying selected fibers to the remaining surface of the base fabric and passing the base fabric through a needling machine to cover the remaining surface of the woven fabric with a plurality of fibers mechanically interlocked therewith, repeating the application of fibers and needling until the fibers form 40 to 60% of the total weight of the resultant fabric and then washing and drying the fabric at elevated temperatures in the range of 300° to 400° F. while applying tension in the range of 20 to 30 lbs. per inch of width.

3,123,893
METHOD OF WORKING SHEET, STRIP AND SIMILAR MATERIALS

Natalie H. Polakowski, 500 Kin Court, Wilmette, Ill.

Filed June 26, 1961, Ser. No. 119,389
10 Claims. (Cl. 29—18)

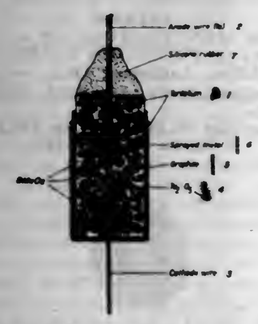


1. A process for the working of metallic sheet, strip and similar material comprising the steps of wrapping said material about a core, encasing the material wrapped about the core with a cylinder to hold said material in place, and working the assembly to reduce the outer diameter thereof, whereby said material is reduced in thickness and the width thereof is increased.

3,123,894
METHOD OF PRODUCING A SOLID ELECTROLYTIC CAPACITOR

Jochen von Bonin, Nurnberg, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Filed Jan. 5, 1961, Ser. No. 80,880
Claims priority, application Germany Jan. 16, 1960
5 Claims. (Cl. 29—25.31)



1. The method of producing a solid electrolytic capacitor which comprises anodizing an anode body of tantalum having a lead attached thereto; coating the face of said body adjacent said lead and a portion of said lead with a coating of insulating material, and forming a semiconducting layer around said anodized body at a temperature under the melting point of said insulating material by immersing the body in a solution of manganese-II-salts, reacting said salts adjacent said body with ammonia gas, and oxidizing the resultant product in oxygen at 150° to 250° C., the insulating material being capable of resisting the heat at said temperatures.

3,123,895
METHOD OF AND DEVICE FOR MAKING A REGENERATIVE CAPACITOR

Paul Henninger and Fritz Gaenge, Munich, Germany, assignors to Siemens & Halske Aktiengesellschaft, Berlin and Munich, Germany, a corporation of Germany

Filed Apr. 20, 1961, Ser. No. 104,268
Claims priority, application Germany Apr. 22, 1960
8 Claims. (Cl. 29—25.42)

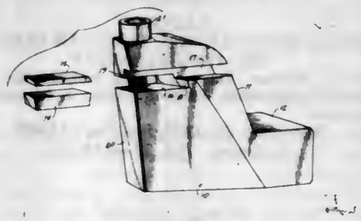


1. A method of making regenerative capacitors with high space capacitance comprising taking a suitable carrier foil, placing upon such carrier foil a first varnish layer, providing such first varnish layer with a relatively thin metal layer adapted for regenerative action while leaving a marginal strip-like area free, placing upon such metal layer a second varnish layer with a width thereof which corresponds to that of the first varnish layer, thereupon separating the carrier foil from the resulting three-layer foil consisting of two varnish layers and one metal layer, thereafter assembling at least four such three-layer foils to form a capacitor wherein similar varnish layers are disposed in mutual engagement, and wherein the metal layers with the respective marginal strip-like areas are mutually interconnected and contacted so as to dispose the respective first varnish layers in the field-free space while only the second varnish layers are dielectrically operative.

3,123,896
TOOL BITS AND HOLDERS FOR METAL WORKING TOOLS

Frederick J. Wilson, Jr., 57 Franklin St., Ansonia, Conn.

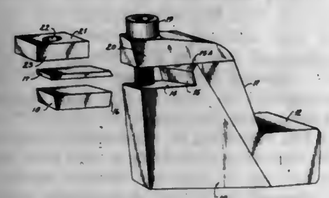
Filed Sept. 26, 1962, Ser. No. 226,369
4 Claims. (Cl. 29—96)



1. The combination of a tool bit holder and a disposable tool bit comprising a holder body having intersecting angularly disposed slots formed in adjacent faces of the holder body, said slots being located in different planes and each having spaced parallel surfaces and an inner wall, the inner wall of each of said slots intersecting one of said surfaces of the other of said slots in the holder body and cooperating therewith to define a pair of angularly disposed tool bit seating and positioning shoulders extending outward from the point of intersection of said inner walls of said slots to the faces of said holder body in which said slots are formed, and a disposable tool bit in the form of an element having outer sides and substantially flat opposite surfaces together with cutting edges extending about the outer sides

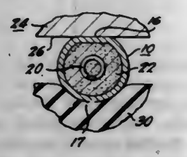
of the tool bit adjacent at least one of said flat surfaces of the tool bit, said tool bit being located in the intersecting portion of said slots and having adjacent outer sides thereof engaging said tool bit seating and positioning shoulders at points on said outer sides of the tool bit which are spaced from said flat opposite surfaces of the tool bit, the inner walls of said slots at opposite sides of said tool bit seating and positioning shoulders being spaced from said cutting edges of the tool bit, and clamping means carried by the tool bit holder body and extending across one of said slots adjacent the intersection thereof with the other slot in the body of the tool holder for urging the intersecting portions of said slots toward the flat faces of said tool bit and serving to hold the outer sides of the tool bit in engagement with said tool bit seating and positioning shoulders.

3,123,897
DISPOSABLE BIT LOCATING TOOL
Frederick J. Wilson, Jr., Ansonia, Conn., assignor to The Apex Tool & Cutter Co., Inc., Shelton, Conn., a corporation of Connecticut
Filed Sept. 26, 1962, Ser. No. 226,370
6 Claims. (Cl. 29—96)



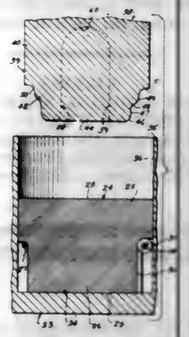
1. A bit locating and retaining tool for disposable and indexible tool bits, including a body having a slot therein presenting a transverse horizontal surface and an element projecting over said surface, the inner wall of said slot defining a locating wall for one face of a disposable tool bit to be located in said slot, a locating block mounted within said slot, and a securing bolt extending through said element, said block, and said slot to threadedly engage the body below said slot, said block defining a locating wall angularly disposed with respect to the inner wall defined by said slot.

3,123,898
METHOD OF MAKING A TUBULAR ELECTRIC HEATING ELEMENT
Robert D. Bremer, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 21, 1959, Ser. No. 814,899
2 Claims. (Cl. 29—155.63)



1. A method of forming a spiral tubular type heating element having an outer sheath, an inner resistance wire and a compactible powdered insulating substance surrounding said resistance element comprising the steps of, suspending said resistance element in said sheath, filling said sheath with said insulating substance, closing the ends of said sheath, forming said sheath into said spiral heating element, placing said spiral heating element between a resilient die member and a flat non-resilient die member with the bottom of said heating element in juxtaposition to said resilient die member, and uniformly deforming the top of said heating element with said non-resilient die member while non-uniformly deforming the bottom of said heating element with said resilient die member by moving at least one of said die members toward the other of said die members to flatten the top of said heating element and to effect uniform compaction of the insulating substance.

3,123,899
PISTON AND METHOD OF MAKING SAME
Arthur Townhill, 739 Alma Real, Pacific Palisades, Calif.
Filed Apr. 17, 1959, Ser. No. 807,052
8 Claims. (Cl. 29—156.5)



1. A method of forming a piston with a control ring in the skirt portion thereof, which comprises forming a slug with a reduced diameter end portion and shoulder portion connecting therewith, forming an axially extending slot in the end portion of the slug, locating a control ring having a washer member thereon in close surrounding relation with said end portion and in abutment with the shoulder portion with the washer member seated in the axial slot, moving a punch member relative to a die member containing the slug to move the metal mass of said slug axially and radially to form the piston head and skirt portions and essentially surround the control ring with the metal mass forming said skirt portion, and removing the washer member from the metal mass and from the control ring.

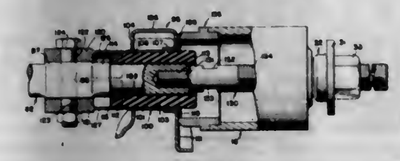
3,123,900
METHOD OF MANUFACTURE OF A FLOW ELEMENT OR PULSATION DAMPENER
Gordon H. Millar, Lakewood, Ohio, assignor to The Meriam Instruments Co., Cleveland, Ohio, a corporation of Ohio
Filed July 29, 1959, Ser. No. 830,241
4 Claims. (Cl. 29—157)



1. A method of making a laminar flow element, comprising superimposing in contact two substantially coextensive sheets of metal comprising a first sheet of planar metal and a second sheet of uniformly corrugated metal, spirally winding said superimposed sheets into a laminar flow element with the generating elements of the corrugations extending parallel to each other and to the axis

of said spiral with a flow passageway located between each corrugation and said first sheet, holding said sheets in spiral wound condition against substantial unwinding of the spiral during the vibration step hereafter, placing one spiral face of said flow element on a vibrating plate for vibrating said flow element along the axis of said spiral for axially aligning said sheets and for controlling the shape of said flow passageways by movement between said sheets on the peaks and valleys of the corrugations, axially aligning said sheets and controlling the shape of the passageways of the flow element by vibrating said flow element along the axis of said spiral to cause relative movement between said sheets on the peaks and valleys of the corrugations, and bonding said sheets together to give said flow passageways thereof substantially equal size and dimensional rigidity.

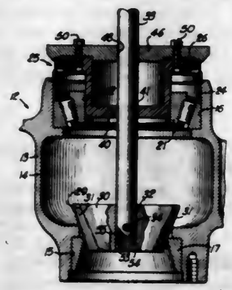
3,123,901
RUBBER BUSHING REMOVER AND REPLACER
Wilfred F. Traugott, Box 608, West Point, Va.; Bertha D. Traugott, executrix of the estate of Wilfred F. Traugott, deceased
Filed Feb. 18, 1959, Ser. No. 794,171
3 Claims. (Cl. 29—263)



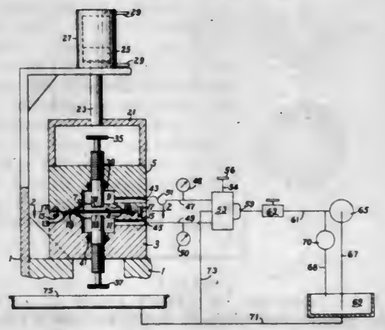
3. An assembly for removing and replacing the rubber bushings receiving an associated pivot shaft in the lower A frame of an independent front suspension unit comprising a generally cylindrical housing having an end wall at one end thereof and being open at its other end, a draw bolt assembly projecting through said housing and through said end wall and having means adjacent the open end of the housing adapted to be secured to the end of the associated pivot shaft, and there being nut means on the opposite end of the draw bolt for drawing the bolt through said housing from the open end thereof towards said end wall, an adaptor ring seated within the open end of said housing, and a plurality of separate adaptor plates adapted to be secured to an intermediate portion of the associated pivot shaft to sandwich an A frame arm between such plates and said housing, each of said adaptor plates having lateral bearing flanges thereon, said flanges on the adaptor plates being of semicircular configuration.

3,123,902
SEAL INSTALLATION TOOL
Robert O. Isenbarger, Chicago, Ill., assignor to Chicago Rawhide Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed Jan. 23, 1961, Ser. No. 84,187
5 Claims. (Cl. 29—271)

1. A tool for use in installing an annular seal in a seal mounting portion of a housing adapted to receive therein a shaft-type member, said tool comprising a seal carrying means provided with an outer annular portion including a radial surface and an axial surface projecting forwardly from said radial surface and adapted to mount a seal thereon for insertion into a housing in alignment with the seal mounting portion thereof for pressed installation thereagainst, a rod-like member extending rearwardly of said seal carrying means and of said radial surface, and striker means carried by said rod-like member and axially movable relative thereto and to said seal carrying means, said striker means including a sleeve portion arranged for abutment with a surface forming a part of said tool and which is fixed relative to said carrying means to transmit seal installation forces generated by said striker means through said seal carrying means and the radial surface thereof to the seal carried thereby, said radial surface of said seal carrying means being circumferentially recessed in an axial direction spaced inwardly of the outer periphery thereof, said recess being dimensioned to snugly receive a rear portion of a seal therein to position and hold the same in forwardly projecting fixed relation about said axial surface, the sleeve portion of said striker means and said recess being in concentric alignment.



3,123,903
MANUFACTURE OF SNAP-ACTING DEVICES
Charles D. Flanagan, Attleboro, Mass., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Aug. 23, 1961, Ser. No. 133,506
23 Claims. (Cl. 29—407)

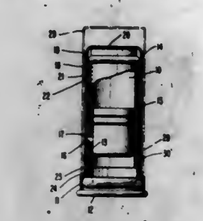


1. The method of manufacturing a snapacting plate comprising holding its margin, positioning a stop in spaced relation to one side of the plate for engagement thereby throughout an area of contact substantially less than all of its area, pressing the other side of the plate to deform it into engagement with said top, and thereafter while continuing to hold its margin supplying pressure to the side of the plate on which said stop is located to deflect the plate from its deformed configuration.

3,123,904
METHOD OF MAKING A LIPSTICK CONTAINER OR THE LIKE
Robert B. Hopgood, Thompson, Conn., assignor, by mesne assignments, to Nicholson File Company, Providence, R.I., a corporation of Rhode Island
Filed Jan. 17, 1962, Ser. No. 166,835
11 Claims. (Cl. 29—417)

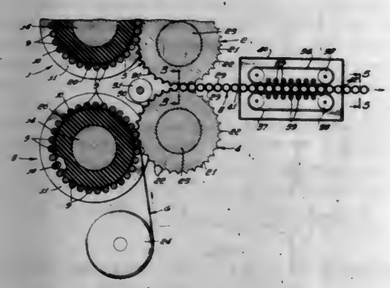
1. The method of forming from tubular plastic stock a cam sleeve to hub the cylindrical periphery of the inner

shell member of a lipstick container or the like, which comprises the initial step of generally longitudinally slitting the tubular stock at one end thereof, the second step of flexing the slitted length of the tube and holding the same substantially flat, the third step of blanking the flattened length of stock, one of said initial and



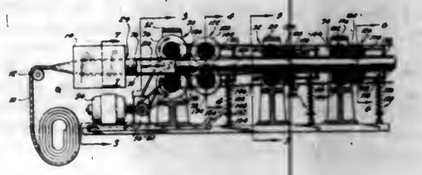
third steps producing a spiral cam-forming cut in said length of stock, and the final step of releasing the flattened blank to permit it to move toward restoration of its tubular shape, the inner shell member being placed within and in axial alignment with the axis of said blank, whereby the released blank resiliently hugs the periphery of the inner shell member.

3,123,905
METHOD OF MAKING HONEYCOMB CORE
Boyd F. Thomas, Pasadena, Calif., assignor to Young Spring & Wire Corporation, Detroit, Mich., a corporation of Michigan
Filed Jan. 18, 1960, Ser. No. 3,097
10 Claims. (Cl. 29—429)



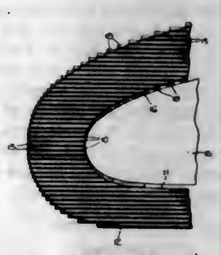
1. A continuous method of forming a unitary honeycomb core from two flat sheets of thin metal comprising feeding a first sheet of thin metal between a first set of mating circumferentially engaged male and female rollers, forcing elongated protrusions movably supported on said first male roller against said first sheet thereby forcing said first sheet into circumferentially-spaced re-entrant portions on said first female roller to form alternate raised and re-entrant portions on said first sheet, resiliently urging said protrusions radially outwardly on said first male roller feeding a second sheet of thin metal between a second set of circumferentially engaged male and female rollers, forcing elongated protrusions movably supported on said second male roller against said second sheet thereby forcing said second sheet into circumferentially-spaced re-entrant portions on said second female roller to form alternate raised and re-entrant portions on said second sheet, resiliently urging said protrusions radially outwardly on said second male roller moving the raised portions of said sheets of metal into contact with each other and joining said sheets together at said raised portions to form a unitary core with said re-entrant portions facing toward one another.

3,123,906
METHOD OF AND APPARATUS FOR SHROUDING WITH FLATTENED TUBE
Russell M. Frink, Bloomfield Hills, Mich., assignor to Calumet & Hecla, Inc., Allen Park, Mich., a corporation of Michigan
Filed May 9, 1960, Ser. No. 27,831
7 Claims. (Cl. 29—433)



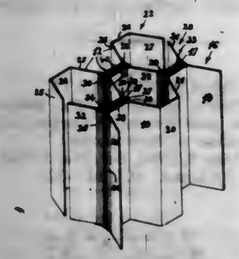
5. In a method of shrouding an elongated member, the steps of continuously advancing a flattened tube along a predetermined path, reforming the flattened tube to tubular shape at an initial point in said path during such advance, providing a yieldable support at a subsequent point in the path of advance of the tube, suporting the elongated member on said yieldable support so that its axis generally coincides with said path, separating said support from supporting engagement with the elongated member by the leading end of the advancing reformed tube to shroud the elongated member with the reformed tube, and thereafter supporting the reformed tube on said yieldable support.

3,123,907
METHOD OF MAKING HONEYCOMB STRUCTURE
Boyd F. Thomas, Pasadena, Calif., assignor to Utility Metal Products Division of Young Spring and Wire Corporation, Pasadena, Calif., a corporation of Michigan
Filed Sept. 29, 1958, Ser. No. 764,054
5 Claims. (Cl. 29—455)



1. That method of fabricating a core structure having a curvature face for a high strength laminated cellular material having non-planar exterior surfaces, said method comprising arranging thin-walled small diameter metal tubes in contacting side-by-side relation, off-setting the ends of adjacent tubes with a portion of one end edge of each lying in a desired curved face desired in the finished core and the remainder of the end portion of each projecting outwardly beyond said curved face, applying a bonding agent to the exterior of said tubes, holding the tubes firmly pressed together while subjecting the same to a temperature adequate to fuse the bonding agent, cooling said tubes until the fused bonding agent takes a set, removing that portion of the ends of said tubes at one end thereof projecting beyond said desired curved surface to provide a core structure having a curvate face crosswise of said one end of said tubes, and bonding a face sheet of thin flexible material to said curvate face of said tube ends.

3,123,908
METHOD OF PRODUCING A LAMINATED STRUCTURE
Ernest R. Boller, Marion, Ind., assignor to The Boller Development Corporation, Marion, Ind., a corporation of Indiana
Filed Apr. 5, 1956, Ser. No. 576,481
12 Claims. (Cl. 29—471.1)



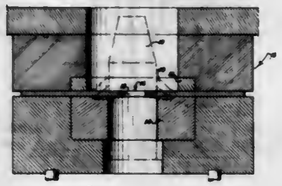
1. The method of bonding together metal pieces which comprises the steps of treating selected, separated areas of two metal pieces to render such areas receptive to a molten metal, bringing such selected areas of one piece into close but separated juxtaposition to treated areas of the other piece, dipping the two pieces, while held in such juxtaposition, into a bath of molten metal to immerse such selected areas therein, exerting pressure upon said pieces to move such selected areas of the two pieces toward each other while such areas are so immersed, and removing said pieces from the bath, while continuing such pressure substantially throughout the freezing of the metal adhering to said pieces.

3,123,909
METHOD OF MAKING A RUB RAIL FOR BOAT HULL
Richard W. Dorst, Menlo Park, Calif., assignor to Textron Inc., Providence, R.I., a corporation of Rhode Island
Filed June 13, 1960, Ser. No. 35,748
2 Claims. (Cl. 29—531)



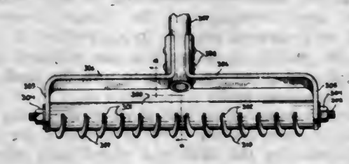
1. The method of making a rub rail for a motorboat which comprises severing a channel member having two relatively narrow side flanges and having a web portion wider than the combined width of both its side flanges, diagonally endwise along a line begining at one end of the web at a distance from one of the side flanges substantially equal to the width of such side flange to a point at the other end of the web similarly located with respect to the other side flange to thereby provide two angle members with one flange of each thereof of uniform width, and the other flange of each thereof tapered from one end thereof to the other, bending a short portion of the narrower end of each angle member inwardly in a curve toward the open side of the angle member, and cutting off each of the inwardly curved portions along a plane defined by the free edges of the two side flanges of each angle member, thereby causing each of the rub rails thus formed to terminate in a point at its narrower end.

3,123,910
METHOD OF UPSETTING METAL ABOUT AN OPENING
Robert S. Nellson, West Chester, Pa., assignor to Lukens Steel Company, Coatesville, Pa., a corporation of Pennsylvania
Filed Sept. 8, 1961, Ser. No. 136,902
6 Claims. (Cl. 29—545)



1. A method of upsetting metal around an opening in a metal body which comprises the steps of heating the metal around said opening to a state of workable plasticity, placing the heated metal body in a press over a die bed, enlarging said opening and fluing the heated metal substantially to coincide with the surface of an obtuse truncated cone around said opening away from said die bed by forcing a tapered die plug through said opening so that the metal around the opening remains substantially unthinned, withdrawing said plug, forming a thickened portion around said opening and flattening said flued portion by forcing said portion against said die bed with a further die plug which includes means to retain said opening at its enlarged dimension whereby said metal is crowded between the die bed and the further die plug and rollover of the flued portion is prevented.

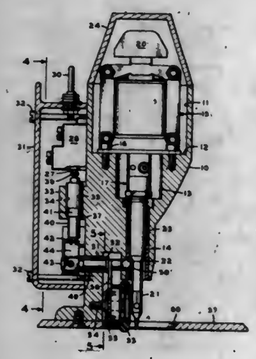
3,123,911
WALL PAPER SCARIFIER
John C. Snyder, 21 E. 23rd St., Indianapolis, Ind.
Filed Aug. 15, 1960, Ser. No. 50,050
6 Claims. (Cl. 30—172)



1. A wall paper scoring device comprising a hand-portable tool including a base, a plurality of spaced cutters carried by said base and angularly related to said base at an angle other than 90°, each of said cutters having a convex rim portion having a peripheral extent approximating 180° bevel sharpened to a cutting edge, said cutting edges normally being aligned side-by-side and spaced from each other along the length of said base in such a manner as to lie in a common cylindrical surface, said base and said cutters being so constructed and

arranged that said scoring device will score a surface while contacting said surface through a range of attitudes, and each of said cutters being independently resiliently mounted upon said base.

3,123,912
PUNCHING MACHINE
John B. Gury III, Kirkwood, Mo. (% J. B. Gury Mfg. Co., 801 N. Skinker, St. Louis 30, Mo.)
Filed Nov. 30, 1961, Ser. No. 156,077
10 Claims. (Cl. 30—362)



1. In a punching machine:
(*a*) a plunger,
(*b*) a solenoid for driving said plunger against the work upon energization,
(*c*) a switch operatively connected to said solenoid,
(*d*) means connected to said plunger for returning the plunger to its initial position upon deenergization of said solenoid,
(*e*) a wheel mounted to engage and roll along the work to be punched,
(*f*) a shaft,
(*g*) means selectively interconnecting the shaft with said wheel so as to rotate the shaft in response to rotation of said wheel,
(*h*) an element reciprocatively mounted to actuate the switch,
(*i*) camming means operatively interconnecting said element with said shaft to move the element in a direction to condition the switch and energize the solenoid upon rotation of said shaft,
(*j*) means operatively interconnecting the shaft and said plunger to move the shaft axially so as to disengage the means interconnecting the shaft with said wheel upon movement of the plunger toward the work, said element moving in a direction to condition the switch to deenergize the solenoid acting through said camming means to turn the shaft to its initial position, and
(*k*) means connected to said shaft to move the shaft axially to cause operative reengagement of the means interconnecting the shaft and wheel upon return of the plunger.

3,123,913
ORTHODONTIC ARCH WIRE
James M. Rubin, 250 W. 54th St., New York, N.Y.
Filed June 30, 1961, Ser. No. 121,165
2 Claims. (Cl. 32—14)

1. In a device for straightening teeth comprising tooth bands attached to a group of teeth, at least one of which requires straightening, wherein each of said tooth bands has an arch wire bracket attached thereto with a length of orthodontic arch wire secured by said brackets, the improvement comprising said arch wire being composed of



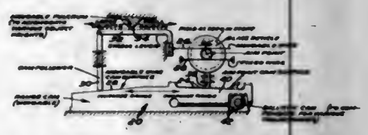
a plurality of braided-together, spring-tempered, light-gage wires.

3,123,914
MOUNTING PLATE
Anthony J. De Pietro, Springfield, Pa., assignor to Medical Electronics and Research Corporation, Camden, N.J., a corporation of New Jersey
Filed May 8, 1962, Ser. No. 193,081
3 Claims. (Cl. 32—32)



1. In combination with one of the bow members of a dental articulator, a denture mounting plate, means for detachably affixing said mounting plate to said bow member in a predetermined position relative thereto, a plurality of nuts having reduced size portions depending from the undersides thereof and seated upon the top of said mounting plate, said nuts being adapted for being firmly embedded in a mass of plaster overlying said mounting plate, a plurality of screws extending freely through said mounting plate and threaded respectively into said nuts and detachably securing the same to said mounting plate each in a predetermined position relative thereto.

3,123,915
RANGE-FINDING GUN SIGHT
Leonard A. Wilkinson, Snyder, N.Y., assignor to American Optical Company, Southbridge, Mass.
Filed Oct. 14, 1960, Ser. No. 62,609
19 Claims. (Cl. 33—50)



14. In a combination gun sight and range finder, first and second reference marks for "framing" a target therebetween, an aim point reticle, means for simultaneously (*a*) varying the "framing" space between said reference marks and (*b*) moving said aim point reticle within such space, and means for independently varying the rate of movement of said aim point reticle relative to the rate of movement between said reference marks.

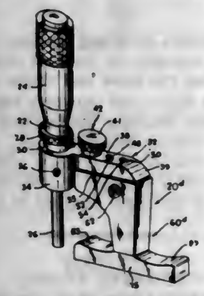
3,123,916
ADJUSTABLE SHOT GUN FLIGHT SIGHT
Thomas Underwood, % C. H. Hartin, Rte. 1, Box 70, Krum, Tex.
Filed Oct. 22, 1962, Ser. No. 232,232
5 Claims. (Cl. 33—56)

1. A lead compensating sight for shot guns comprising, in combination, a mounting plate, mounting means for securing said mounting plate upon a shot gun barrel, a rear sight vertically adjustably mounted upon one rear end of said plate, a front sight bar supported upon said plate having a front sight element upstanding from said rear bar adjacent to the opposite front end of said plate, and indexing means acting between said front end bar and said



plate for selectively rotating said front sight bar from a centered position in both directions a limited extent about a center of curvature adjacent said rear sight to adjust the line of sight between said front and rear sight relative to the axis of the gun barrel.

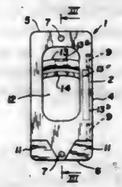
3,123,917
INTERCHANGEABLE MICROMETER FRAME
Joseph Haluska, 143—40 41st Ave., Flushing 55, N.Y.
Filed Sept. 14, 1961, Ser. No. 138,080
2 Claims. (Cl. 33—170)



1. In a micrometer assembly including a graduated thimble, a rotatable axially movable spindle, and a cylindrical spindle bearing rotatably supporting said spindle, a first frame section, said section having a cylindrical sleeve portion detachably receiving and holding said spindle bearing, a yoke arm depending radially from said sleeve portion, said arm having a plurality of bores axially parallel to each other and to said spindle, a bolt turnably engaged in one of said bores and having a threaded shank extending outwardly of one side of the arm, and a pair of guide rods seated in the other bores and extending parallel to each other out of said one side of the arm; and an anvil section, said anvil section having an angular shaped body with a flat end facing said one side of said arm, said body having a plurality of other bores, one of said other bores being threaded and engaging said threaded shank for adjustably positioning said anvil section with respect to the first frame section, said guide rods slidably engaging in the others of said other bores, and locking means carried by said anvil section for engaging the guide rods to lock the position of the anvil section with respect to the first frame section, said anvil section having a foot pivotally mounted at its other end, said foot having a flat end parallel to said one end of the anvil section for measuring distances between said spindle and said flat surface.

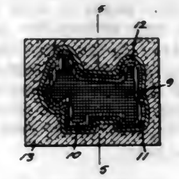
3,123,918
DEVICE FOR ALIGNING RECEPTACLE AND WALL SWITCH COVER PLATES
Gerald M. Crabtree, R.D. 1, Box 337, Wellsburg, W. Va.
Filed July 14, 1960, Ser. No. 42,825
4 Claims. (Cl. 33—207)

1. A plummet for use in aligning the cover plate of electrical wall switches within a wall box mounting with the adjacent wall surfaces comprising:
(*a*) an elongated body portion comprising a face portion and a longitudinal side wall portion.



(*b*) a pin mounted on one face of said body portion adjacent each end thereof for projection outwardly from said body portion and disposed in a plane parallel to a longitudinal side wall of the body, said pins being spaced to conform to the spacing of and receivable in the openings in said switches for reception of cover plate fasteners, and
(*c*) a level vial mounted on said body, said vial having its effective longitudinal centerline at right angles to a line bisecting the centers of said aligned body pins.

3,123,919
SCULPTURING BLOCK
Jim C. Meador, 5922 Southern Ave., Shreveport, La.
Filed Apr. 29, 1959, Ser. No. 809,685
3 Claims. (Cl. 35—26)

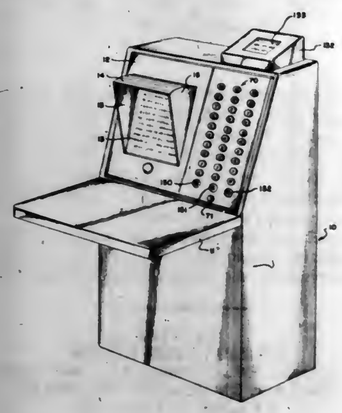


1. A sculpturing device as comprising a plastic block and a figure molded therein, said block being formed of a material capable of being carved or cut away for exposing the figure, and said block including a plurality of completely enclosed layers immediately surrounding the figure, said layers having contours similar to the contour of the figure and being distinctively colored relative to one another, to the figure and to the outer portion of the block in which said layers are embedded, said distinctively colored layers being of diminishing thickness from the outermost to the innermost layer and being shaped progressively to more nearly correspond to the contour of the figure from the outermost to the innermost layer.

3,123,920
INSTRUCTION SYSTEM
Norman A. Crowder and Franklyn G. Nickl, Santa Barbara, Calif., assignors to U.S. Industries, Inc., New York, N.Y., a corporation of Delaware
Filed Oct. 16, 1959, Ser. No. 846,840
9 Claims. (Cl. 35—9)

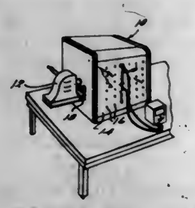
1. A tutoring device comprising: a plurality of unitary record strips, each of said record strips containing thereon a plurality of sections of discrete finite items of information which when displayed in logical sequence define a course of study of a given subject, said discrete items being randomly positioned on each of said record strips in a physical sequence differing from said logical sequence and from the physical sequence of said discrete items on the others of said record strips, certain of said items including an inquiry and different possible answers thereto; display means for presenting said discrete items of a record strip, one at a time, for consideration; reversible

drive means operatively connected to said display means to move a record strip past said display means to present any of said discrete items in said display means; indicia associated with said discrete items in said sections to indicate the physical location on a record strip of the next successive item to be considered in said logical sequence, each of said answers having said indicia associated therewith; and selectively operable control means operatively



connected to said drive means to cause said drive means to move a record strip to positions indicated by said indicia independently of the item then displayed, said control means including manually actuated means for selecting an indicia and direction selection means for automatically determining the direction of movement of said drive means as a function of the item being displayed and the next selected item.

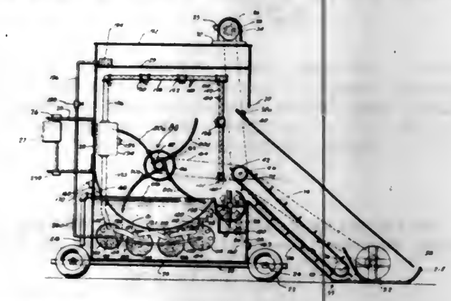
3,123,921
TRAINING DEVICE
Donald Bartelson, Mount Clemens, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed Oct. 18, 1960, Ser. No. 63,349
11 Claims. (Cl. 35—19)



1. A training device comprising: a screen having test probe contacts thereon; means to project a circuit diagram onto said screen with test points therein coinciding with certain of said contacts on said screen; and means to supply predetermined electric potential to said coinciding test points on said screen thereby simulating actual functioning of said circuit.

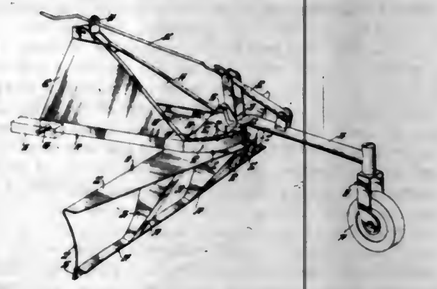
3,123,922
SNOW MELTING APPARATUS
Anthony F. Spinelli, 21 Sheridan Drive, Milton, Mass.
Filed Mar. 3, 1961, Ser. No. 93,205
3 Claims. (Cl. 37—12)

1. Snow melting apparatus comprising a chassis, means to gather and melt snow supported by said chassis embodying a tank, snow feeding mechanism including an upwardly inclined conveyor belt having its upper end arranged to deliver snow into the tank adjacent the front wall thereof, a rotary paddle wheel having curved and perforated blades disposed in said tank and having its center of rotation disposed in substantially horizontal alignment with the upper end of said conveyor belt, said blades extending the full width of the tank and extending radially to occupy a major portion of the length of



the tank, said blades providing pockets therebetween, a rotary member disposed in front of said conveyer belt arranged to gather the snow and throw a major portion thereof upwardly above said conveyer and into said pockets, any snow not reaching the pockets falling on said conveyer to be carried into said tank, a curved screen concentric with and disposed below said paddle wheel, and means disposed above said paddle wheel to distribute a medium to melt the snow received in said pockets.

3,123,923
SCRAPER BLADE
William L. Calabrese, Utica, Mich., assignor to Bebco Experimental & Manufacturing Co., Washington, Mich., a corporation of Michigan
Filed Oct. 11, 1961, Ser. No. 144,392
2 Claims. (Cl. 37—189)



1. A scraper blade attachment for use with a tractor, and comprising: a scraper blade member formed to include a concave blade portion and having a supporting flange provided integral therewith at the upper edge thereof, an angle iron member secured to the lower back edge of said blade portion and having a cutting blade secured thereto and disposed on the front lower edge of said blade portion, structural braces contoured on at least one side to the shape of the back side of said blade portion and secured thereto and to and between said angle iron member and supporting flange, a blade carrying member including means for pivotally securing said blade member thereto, a semi-circular guideway provided by said blade carrying member, stud means secured to said blade flange and received within said guideway, said stud and said means of pivotally securing said blade

member to said supporting member being interchangeable relative to said supporting flange for reversing said blade, said guideway including spaced guide walls and said stud including a square shank received in close fitted guiding engagement therebetween, and a locking pin and suitable accesses formed through said guide walls at spaced locations and through said stud in alignment therewith for locking said blade member in selected angular relation to said carrying member.

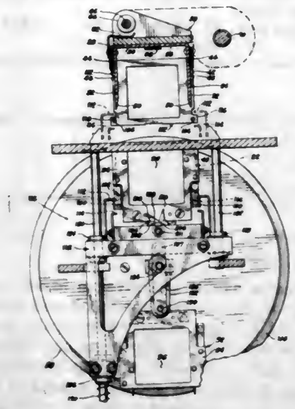
3,123,924
PAPER CLIP TAB
John W. Roberts, Ledyard, Conn.
(415 Glyn Wynne Road, Haverford, Pa.)
Filed Nov. 13, 1961, Ser. No. 151,687
2 Claims. (Cl. 40—11)



1. A tab clip comprising a single wire bent to successively form a first elongated convolution comprising an elongated first side leg connected at one end by an outwardly extending, coplanar, semi-circular bight portion to one end of a second elongated parallel side leg that terminates at its other end in an outwardly extending, coplanar, substantially V-shaped, formation that extends to the other end of said first side leg and continues therefrom so as to form a second elongated convolution surrounding said first convolution and comprising a third elongated side leg extending lengthwise of and adjacent said first side leg of said first convolution and terminates in an outwardly extending, coplanar, semi-circular, bight portion that continues so as to provide a fourth elongated side leg that extends lengthwise of and adjacent to said second side leg of said first convolution, said fourth side leg continuing and shaped to form an outwardly extending, laterally inwardly directed end portion, a connected circular tab ring closing the vertex of the V-shaped end formation of said first convolution and an inwardly extending, laterally outwardly directed end portion that extends to the third elongated side leg.

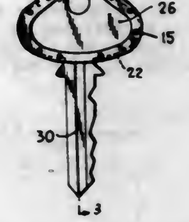
3,123,925
SLIDE CHANGER
Delmar R. Johnson, Chicago, Ill., assignor to Cook Electric Company, Chicago, Ill., a corporation of Delaware
Filed Oct. 6, 1961, Ser. No. 143,347
13 Claims. (Cl. 40—79)

1. In a slide changer, the combination comprising a movable carriage, a slide magazine removably mounted on said carriage and adapted to hold a plurality of slides, a lead screw for translating said carriage, a motor for rotating said lead screw, an indexing disk having a pair of slide holders therein for receiving the slides from said magazine, said disk being rotatable to index each of said slide holders between a transfer station adjacent said magazine and a viewing station displaced from said transfer station, a slider having a pair of feeding fingers and a pair of return fingers thereon movable between said magazine and said slide holder at said transfer station, said feeding fingers being adapted to move each slide from the magazine to the adjacent slide holder, means for reciprocating said slider to move said fingers between said magazine and said slide holder, means for indexing the disk to move the slide between the transfer and viewing positions, a cam on said slider for moving said return fingers inwardly and outwardly for selectively engaging the slide in the slide holder at the transfer posi-



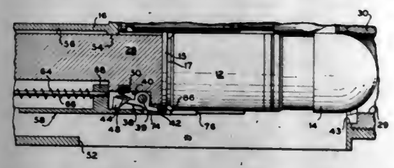
tion so as to return the slide from the slide holder to the magazine, a toothed wheel connected to said cam, and a crank for engaging and advancing said toothed wheel when said fingers are moved into their positions adjacent the slide holder at the transfer station.

3,123,926
COVER TO IDENTIFY KEYS
Ben Jacobson, 62 Broadfield Road, New Rochelle, N.Y.
Filed Aug. 16, 1962, Ser. No. 217,485
1 Claim. (Cl. 40—330)



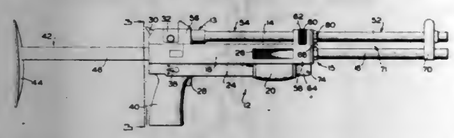
A key attachment of the kind described comprising an annular shaped open deformable body of resilient material with narrow closely spaced side flanges, the peripheral edge of the body and said flanges defining a shallow channel opening inwardly to fit a correspondingly shaped peripheral edge of the head of a key and adapted to be removably fitted over the peripheral edge of the key head, said body having a closed slot in its peripheral edge normally of a size considerably less than the wider extent of said key head and slightly greater than the width of the shank of the key the opening in the body being such that the shank of the key is adapted to be inserted therethrough and through the slot for snug embracing of the annular body upon the peripheral edge of the head with the flanges extending inwardly, means on the body for distinguishing a key from another, and means on the body to facilitate stretching of the annular shaped body over the peripheral edge of the head of the key, said latter means including an elongated closed slot in the peripheral edge of the annular body opposite said first-named slot.

3,123,927
COMBINED SUPPORT AND CHAMBERING GUIDE FOR MAGAZINE-FED CARTRIDGES WITH FRAGILE PROJECTILES
David L. Katz, Longmeadow, Mass., assignor to the United States of America as represented by the Secretary of the Army
Filed Dec. 27, 1962, Ser. No. 247,769
5 Claims. (Cl. 42—18)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a firearm having a receiver, a barrel, a bolt slidably disposed in the receiver for recoil and counterrecoil movement, and a lipless magazine vertically mounted in the top of the receiver for dispensing cartridges into the counterrecoil path of the bolt, the improvement comprising a cartridge holding tray slidably secured to the underside of the bolt for movement between a retracted and an extended position, spring means normally urging said tray forwardly into the extended position thereof beneath the cartrdge being dispensed from the magazine, said tray being positioned beneath the bolt for contact with the rear end of the barrel during the counterrecoil movement of the bolt whereby said tray is forced rearwardly to the retracted position thereof, and means for latching said tray in the retracted position until the next cartridge in the magazine is dispensed therefrom.

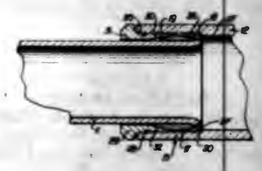
3,123,928
CONTRACTABLE SHOULDER ARM WITH RIFLE AND SHOTGUN UNIT
Albert J. Lizza, 14 Linwood Drive, North Wilbraham, Mass., assignor to the United States of America as represented by the Secretary of the Army
Filed Dec. 13, 1961, Ser. No. 159,191
2 Claims. (Cl. 42—72)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A contractable shoulder arm including a receiver, an ejection port in said receiver, a rifle barrel mounted over said receiver so as to extend forwardly therefrom, a shotgun firing tube mounted in said receiver so as to extend forwardly therefrom, means for contracting the shoulder arm at the front end of said receiver, a stock, and means for telescopically mounting said stock in said receiver, said means including a pair of supporting braces one of which is arranged to cover said ejection port when said stock is telescoped in said receiver.

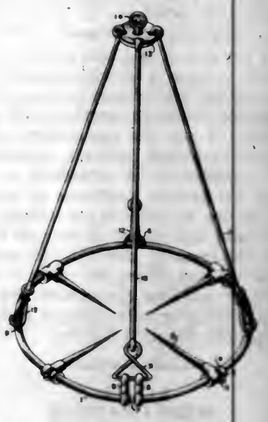
3,123,929
FIREARM CHOKE MOUNTING
Frank A. Pachmayr, Los Angeles, and Walter R. Nass, Escondido, Calif., assignors to Pachmayr Gun Works, Inc., Los Angeles, Calif., a corporation of California
Filed Jan. 16, 1962, Ser. No. 166,534
12 Claims. (Cl. 42—79)

1. The combination comprising a firearm barrel, a choke device including a tubular body applied about the end of the barrel, a first ring applied to the barrel inside the body and having outer forward and rearward surfaces tapered axially of the ring respectively forwardly and rearwardly of the barrel, and means mounting said body to the ring in angularly variable relation of the body axis



to the barrel axis, said means comprising a second ring threaded into the end of the body to surround and bear against the rearward surface of said first ring, said second ring being adjustably slideable longitudinally of the barrel on the first ring surface and being tightenable to hold the body in axially adjusted relation to the barrel.

3,123,930
FISHING-GAFFS OR FISH-SNAGGING DEVICES
Eugene Rimar, 7853 1st Ave. S., Pinellas County, Fla.
Filed Mar. 21, 1962, Ser. No. 181,487
1 Claim. (Cl. 43—5)



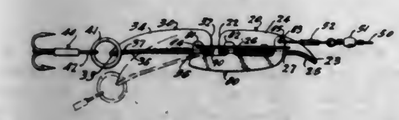
A fish-snagging device comprising a circular frame member, a plurality of T-shaped spike members each having a tubular base formed at right angles to the spike element, said spike members being threaded onto the said frame member and disposed at intervals thereon, a slot provided in the periphery of the tubular base member at right angles to the axis thereof to receive a restraining pin anchored in the circular frame member, a plurality of detachable supporting members fastened to the said circular frame member, one of said supporting members being disposed above a small gate opening in the circular frame, a loop element provided in the frame end of said supporting member, twin gate post members disposed at each side of the said gate opening to detachably receive the said loop member, and all of said supporting members extending upwardly to a junction member, for conveniently attaching a control line.

3,123,931
REEL AND FERRULE LOCK FOR FISHING RODS
Charles D. Stephens, San Antonio, Tex., assignor to Fredric P. Schwab, San Antonio, Tex.
Filed May 15, 1962, Ser. No. 194,789
4 Claims. (Cl. 43—22)



1. A fishing rod handle having an opening therein to receive the foot of a fishing reel, a lock member reciprocable in said handle to releasably secure the fishing reel thereto, said handle further including socket means at one end thereof to receive a rod ferrule, means in said handle to releasably lock the rod ferrule in said socket means, a single rotatable operating means movable in one direction to operate said reciprocable lock member and movable in the opposite direction to operate the rod ferrule lock means selectively, said rotatable operating means comprising an elongated operating rod having key means thereon engageable with said reciprocable lock member and said ferrule lock means selectively, an operating knob rotatably mounted in said handle at the end opposite said socket, and said operating rod being fixed to said operating knob.

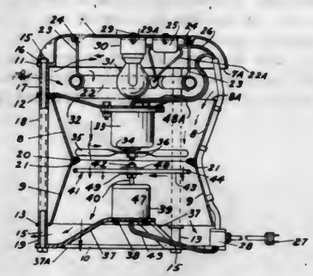
3,123,932
FISHING LURE
Robert F. Austin, Jr., 3029 Sherbrooke Road, Toledo, Ohio
Filed Mar. 16, 1962, Ser. No. 180,096
13 Claims. (Cl. 43—42.09)



1. A combination spoon type lure comprising:
(A) a forward and rearward spoon piece, each comprising:
(*a*) a substantial saddle shape, and
(*b*) a blunter and a rounder end with a pair of apertures aligned longitudinally thereof with one at each blunter end,
(B) a link means connecting said pieces together for relative movement through said apertures in said blunter end,
(C) a hook means received in the other aperture in said rearward spoon piece,
(D) a snap fastener means for releasably connecting a line to the other aperture in said forward spoon piece, and
(E) a bar means extending between and retained by said link means and said snap means for restricting the relative movement of said spoon pieces about said link means.

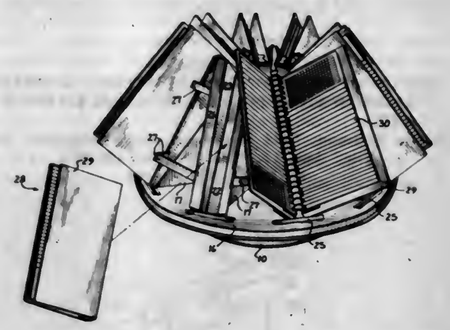
3,123,933
INSECT ERADICATOR
Thomas M. Roche, 116 N. Hamilton, Ypsilanti, Mich.
Filed June 11, 1962, Ser. No. 201,467
2 Claims. (Cl. 43—139)

1. A device of the character described, comprising a housing having an intake opening near the top and encompassing 360° of said housing and a discharge opening at the bottom, a circular black light tube having a yellow incandescent light axially positioned therein, visible throughout said first named opening, an air impeller below said light tube and light, means to drive said impeller, an eradicator wheel closely spaced below and concentric with said impeller and means to rotate said wheel, said housing consisting of an overhanging top and a pair of hollow frusto-conical side members, having flange



members at the smaller ends thereof, said side members being secured together through said flange members, to form a restricted area in said housing between said impeller and said wheel, the said top being spaced from said side members to form said intake opening.

3,123,934
BOOK HOLDER
Samuel Aston Loyd, Jr., Waynesboro, Va., assignor to Acme Visible Records, Inc., Crozet, Va., a corporation of Delaware
Filed June 22, 1962, Ser. No. 204,498
2 Claims. (Cl. 45—81)

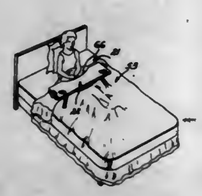


1. A book holder comprising a rotatable circular base, a plurality of forwardly open equally angularly spaced channel members supported thereon at an incline from adjacent the periphery of said base to adjacent the axis of rotation at their upper edges, each adapted to separably receive and endwise retain a closed book therein, the flanges of said channel members including outwardly inclined extensions adapted to support a book in open position on withdrawal from said channel, and abutment means on said base extending transversely of and adjacent to the lower end of each of said channel members.

3,123,935
TRAY MEANS AND MAGNETICALLY COOPERABLY RETAINABLE ARTICLE MEANS
Carol N. Williams, 305 W. 8th St., Los Angeles 14, Calif.
Filed Nov. 5, 1962, Ser. No. 235,323
13 Claims. (Cl. 45—85)

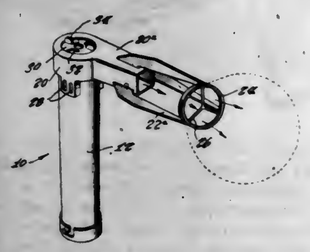
9. Platform means and magnetically cooperably retainable article means, comprising: a platform having a substantially horizontally directed top surface portion; at least

one article adapted to be magnetically cooperably retained in upstanding supported relationship on said top surface portion of said platform; two-element magnetic retaining means for effectively magnetically retaining said article in said upstanding supported relationship on said top surface portion of said platform, said two-element magnetic retaining means comprising a first magnetic means adjacent to said top surface portion of said platform and second magnetic means carried adjacent to the bottom of said article, said first and second magnetic means being magnetically attractively cooperable whereby to firmly retain said article in said upstanding supported relationship



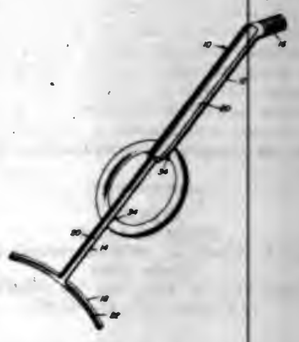
on said top surface portion of said platform in a manner inhibiting the likelihood of accidental and inadvertent dislodgment thereof until a slight amount of force is manually applied thereto for removal of said article from said top surface portion of said platform; said first magnetic means comprising polarized permanent magnet means coextensive with at least one particular limited area part of said top surface portion of said platform exclusive of the major area part of said top surface portion of said platform, said second magnetic means comprising ferromagnetic material carried by a base portion of said controllably removably and magnetically cooperably retainable article.

3,123,936
HAND OPERATED TOY ELECTRIC BUBBLE BLOWER THAT IS HELD IN HAND TO OPERATE
Charles Feltman, 1478 Fernwood Ave., Lakewood, N.J.
Filed Apr. 27, 1961, Ser. No. 105,953
1 Claim. (Cl. 46—6)



A bubble blower comprising an elongated sleeve member dimensioned to be held in the hand and adapted to house a plurality of batteries, an electric motor positioned within the upper end of said sleeve member, a switch mounted on said sleeve member positioned to be operated by the thumb for opening and closing the circuit through the batteries and the motor, a casing fixedly secured to the upper end of said sleeve, an impeller mounted on a vertical axis within said casing and drivingly connected to said motor, air inlet openings in said casing located beneath said impeller, an adjustable vent in said casing above said impeller, an air discharge conduit laterally projecting from one side of said casing and on the side of said sleeve member opposite to the side thereof on which said switch is mounted, an open frame structure mounted on the terminal end of said air conduit, and a multi-vaned ring element on which a film of a bubble forming liquid is adapted to be suspended, supported by said frame structure in axially spaced relation to the terminal end of said air conduit, whereby adjustment of said vent will regulate the amount of pressurized air supplied to said air conduit by said impeller, and thereby control the quantity and size of bubbles formed.

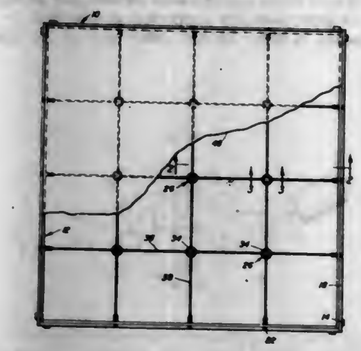
3,123,937
TOY HOOP STICK
General A. Pace, 3401 Loganville Drive, Baltimore, Md., assignor of fifty percent to Robert J. Dougherty, Towson, Md.
Filed Mar. 26, 1962, Ser. No. 182,408
5 Claims. (Cl. 46—220)



1. A telescopic hoop stick, comprising, a pair of telescoping and cooperating elongated shaped upper and lower handles, said lower handle having its upper end provided with a plurality of spaced grooves in its under face, the upper handle being provided with an angled corrugated grip at its upper end, resilient latch means secured to said upper handle and selectively engageable in any one of said spaced grooves in said lower handle for selectively engaging and holding said upper and lower handles in fixed telescopic relationship with respect to each other, the top faces of said upper and lower handles each being formed lengthwise with a concavity forming a continuous track for a hoop, and an upwardly curved rim head secured to the lower end of said lower handle and shaped with a concavity lengthwise in the upper face thereof for rolling and guiding said hoop.

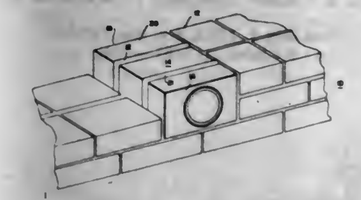
3,123,938
PLANT PROTECTOR
Palmer L. Hilliard, Rte. 1, Kittrell, N.C.
Filed Jan. 2, 1962, Ser. No. 163,723
7 Claims. (Cl. 47—28)

1. A plant bed protector comprising a plurality of rows of spaced upright, flexible and resilient supports, said spaced supports in each row being aligned with the spaced supports in every other row, a set of wires extending along said rows and between and supported in a relatively taut manner on the upper portion of the supports in each row, a second set of wires perpendicular to said first mentioned wires and extending between and supported in a relatively taut manner on the upper portion of the aligned supports, a cover supported on said wires, each of said wires being of a length so as to extend between adjacent supports and having means on the ends thereof for releasable engagement with said adjacent supports, a frame surrounding said supports and spaced therefrom, and adjustable means securing the outer ends of said sets of wires to said frame, said supports comprising



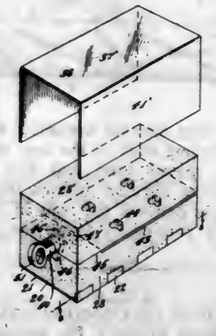
upstanding ground-engaging springs capable of expansion and contraction, and a plurality of anchor members engaged with a plurality of said springs and depending therefrom for piercing engagement with the ground.

3,123,939
DRYER VENTING ARRANGEMENT
Clifford E. Erickson, Chicago, Ill., assignor to General Electric Company, a corporation of New York
Filed Dec. 28, 1961, Ser. No. 162,800
5 Claims. (Cl. 50—70)



1. A building-wall fixture adapted to receive a vent pipe to be passed through a building-wall subsequent to the erection of said wall, comprising:
wall structures integral one with the other to define a hollow rectangular prism adapted to be installed within a building-wall during the fabrication thereof, said prism having a length substantially equal to the thickness of a wall whereby the end walls of said prism will be substantially flush with the adjacent wall surfaces;
said prism end wall structures being of a resilient material impervious to the passage of moisture and at least the outer end wall structure being imperforate;
each said end wall structure having a circular indentation bounded by an angularly extending wall portion, the respective indentations being coaxial and respectively providing a pattern for the removal of a circular portion of the end walls when after the placement of said prism within the wall it is desired to accommodate the passage therethrough of a vent pipe in spaced relation to the top, bottom and side walls of said prism;
the diameter of the resulting circular openings being such that there will be an interference fit between the respective angularly extending wall portions and a vent pipe.

3,123,940
ENCASED PLURAL BASIC REFRACTOR BRICK ELEMENTS
Russell Pearce Heuer, Villanova, Pa., assignor to General Refractories Company, a corporation of Pennsylvania
Filed Sept. 9, 1960, Ser. No. 55,046
Claims priority, application Canada Jan. 16, 1960
3 Claims. (Cl. 50—416)

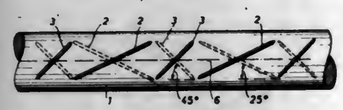


1. A basic refractory brick combination comprising two separate basic refractory bricks each of which has first, second, third and fourth lateral longitudinal faces, the first lateral longitudinal face of the first brick being in face-to-face adjacent relation with the third lateral longitudinal face of the second brick, a first oxidizable metallic plate having a base, supporting projecting tabs between opposed edges of the base and projecting arms at the edges of the base, said base being in abutting relation with the first lateral longitudinal face of the second brick which is opposite to said third lateral longitudinal face of the second brick, said projecting tabs and projecting arms being securely embedded in the refractory of the second brick and said projecting arms having outside faces which are flush with the second and fourth lateral longitudinal faces of said second brick which are transverse to said first lateral longitudinal face of said second brick, said arms extending substantially less than the transverse dimension of said second and fourth lateral longitudinal faces of said second brick, said second and fourth lateral longitudinal faces of said second brick being opposed to one another, and a second separate oxidizable metallic plate of U cross section having a base of the U directly abutting said third lateral longitudinal face of said first brick and having arms of the U abutting substantially the entirety of the facial areas of the second and fourth lateral longitudinal faces of the first brick which are transverse to said first lateral longitudinal face of the first brick and also abutting the second and fourth lateral longitudinal faces of said second brick, said second plate extending over the outside faces of said projecting arms of the oxidizable metallic plate first mentioned and being anchored to the body of the second brick by said first plate, said second plate being bonded to said projecting arms so that said first and second plates encase all the outside lateral longitudinal faces of the first and second brick and are retained as a casing on the refractory by said projecting arms.

3,123,941
REINFORCING BAR
Eduard Jean van Koot, Doorwerth, Netherlands, assignor to Tor-Isteg Steel Corporation S.A.H., Luxembourg
Filed Jan. 19, 1961, Ser. No. 83,720
Claims priority, application Germany Jan. 20, 1960
1 Claim. (Cl. 50—527)

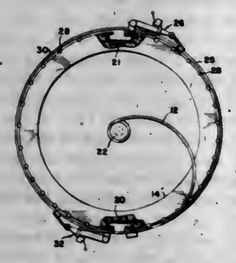
A reinforcing metal member for concrete comprising a longitudinal cylindrical bar, a set of relatively short

oblique lugs on the bar at each of two opposite sides only, each of said lugs being inclined relative to the longitudinal axis of the bar with the ends of each lug of one set being spaced from the ends of the lugs of the other set, said lugs of each set alternately varying in length and in the acute angle defined with the longitudinal axis of the bar, the corresponding ends of the inclined



lugs of one set being directed towards a first end of the bar, the corresponding ends of the lugs of the other set adjacent to and spaced from said first named corresponding ends being directed towards the other end of the bar, the spaces between the ends of the lugs of the two sets defining continuous longitudinal unobstructed areas.

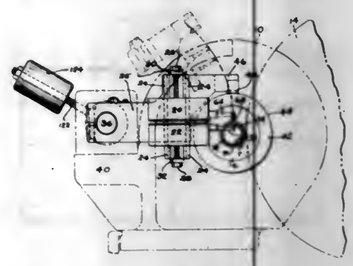
3,123,942
METHOD OF CONSTRUCTION
Fred Stinton, Mount Prospect, Ill., assignor to The Preload Company, Inc., Mount Prospect, Ill., a corporation of Delaware
Filed Oct. 5, 1960, Ser. No. 60,682
8 Claims. (Cl. 50—531)



1. A method of prestressing large substantially cylindrical walled concrete structures such as tanks and the like comprising the steps of anchoring one end of a high tensile strength flexible tension member, extending a first length of substantial extent of the tension member along the wall, continuously and uninterruptedly elastically elongating said first length to a desired total elastic elongation whereby a uniform elastic elongation and predetermined stress is developed in said first length, maintaining the elongation of said first length and continuously and uninterruptedly elastically elongating along the wall a series of additional lengths of said tension member, maintaining the elastic elongation and uniform stress in each successive length before continuously and uninterruptedly elastically elongating the next successive length, whereby the uniform elongation and the developed stress in said additional lengths are substantially equal to that of said first length, anchoring the end of the last of said additional lengths whereby a series of convolutions of said tension member are formed about the wall.

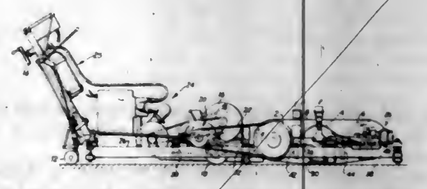
3,123,943
GAUGING APPARATUS
John D. Horsch and Harold W. Ferchland, Birmingham, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 22, 1961, Ser. No. 133,094
15 Claims. (Cl. 51—165)

1. In combination with a grinding machine having a rotatably driven spindle, means on the spindle for supporting and rotating a work piece during the grinding thereon of a surface of revolution coaxial with said spindle, a circular reference disc coaxial with and fastened on said spindle, bearing means on the grinding machine laterally spaced from and parallel to the axis of spindle rotation, an arm pivotally supported at one end by said bearing means, a shoe on the other end of the arm in



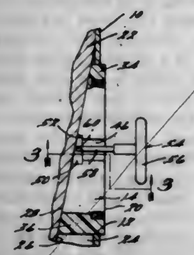
element-engaging contact with the reference disc above the spindle axis, a gauge mechanism mounted on the arm between the shoe and the pivoted end of the arm, a movable gauge finger in said mechanism, and a gauge point on said finger engageable with the surface being ground in the plane of said spindle axis and said element contact.

3,123,944
BELT CHANGING DEVICE FOR BOWLING LANE SANDING MACHINE
John Zuercher, Mansfield, Ohio, assignor to American Machine & Foundry Company, a corporation of New Jersey
Filed July 5, 1962, Ser. No. 207,503
1 Claim. (Cl. 51—174)



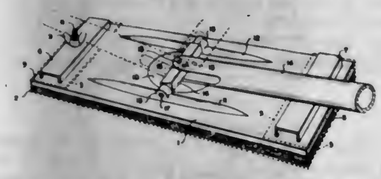
A frame structure for a large sanding machine comprising front and rear frame sections each comprising a pair of parallel side members rigidly interconnected by cross members, said front frame section being adapted to be principally supported from said rear frame section and to carry the main sanding parts, the front and rear side members at one side of the machine being in end-to-end alignment and rigidly interconnected under conditions wherein the front side member at the other side of the machine is slightly above a position of alignment with the rear side member at said other side, whereby the weight of said machine parts carried by said front frame section brings the front and rear side members at said other side into approximate alignment, and means rigidly but detachably connecting the side members at said other side and securing the alignment thereof, the stresses produced in said one side by the loading of said sanding parts being sufficient to prevent substantial dropping of the front side member at said other side upon removal of the last mentioned means for the purpose of interchanging said parts.

3,123,945
HONING TOOL HAVING FRICTIONALLY RETAINED HONING STONES
Robert C. Engle, Livonia, Mich., assignor, by mesne assignments, to Micromatic Hone Corporation, Detroit, Mich., a corporation of Michigan
Filed Feb. 20, 1961, Ser. No. 90,384
4 Claims. (Cl. 51—184.3)



1. A rotary honing tool including a hollow body member having a radially open slot, a honing stone press fit in said slot and having a length of abrasive material and a shell of non-abrasive material supporting said abrasive material and provided with a wall portion on one side of said abrasive material, said wall portion being confined against a wall of said slot for sliding radial movement therealong and having a radially extending groove confronting said slot wall to define a radially extending opening, said honing stone having a radially inwardly facing surface adjacent said opening engageable by a tool inserted through said opening to remove said honing stone from said slot in a radially outward direction.

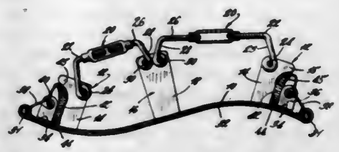
3,123,946
SANDER
Julian Cleon Hoveland, 9707 149th St., Edmonton, Alberta, Canada
Filed Aug. 6, 1962, Ser. No. 215,017
1 Claim. (Cl. 51—186)



A sander for dry wall plaster joints comprising a rigid rectangular plate having a bottom sanding material supporting surface, said surface being substantially plane and uninterrupted throughout its extent, said plate having a top surface, and a depression in said top surface, said depression having its entire wall surface in spaced relation to said bottom surface, a pair of opposed bosses on said top surface, a block journalled in said bosses and having an axis of rotation bridging said depression, a handle having one end pivotally connected to said block and having a pivotal axis disposed at right angles to said axis of rotation and between said axis of rotation and the adjacent extremity of said handle end, said handle extremity being receivable in said depression.

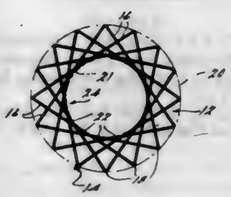
3,123,947
FORMING TOOL
Clyde G. Rawley, R.R. 4, Columbia City, Ind.
Filed May 8, 1963, Ser. No. 278,932
7 Claims. (Cl. 51—187)

3. A forming tool, comprising
a. an elongated flexible base,
b. a pair of brackets mounted on said base towards the ends thereof,
c. a third bracket mounted on said base between said pairs of brackets,



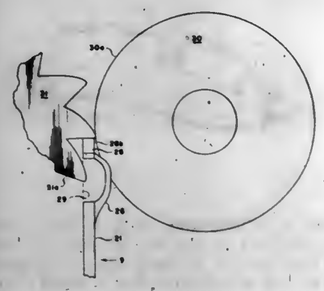
d. a pair of turn-buckles, each of which is swingably interconnected to one of said pair of brackets and said third bracket whereby upon adjustment of said turn-buckles said flexible base is flexed from a planar configuration into a curved configuration, and
e. means for releasably retaining a strip of abrasive material against the face of the base opposite the face upon which the brackets are mounted.

3,123,948
REINFORCED GRINDING WHEEL AND REINFORCING STRUCTURE THEREFOR
Samuel S. Kistler, Salt Lake City, Utah, and Charles V. Rue, Tiffin, Ohio, assignors to Wakefield Corporation, Detroit, Mich., a corporation of Michigan
Filed Oct. 4, 1962, Ser. No. 228,435
11 Claims. (Cl. 51—204)



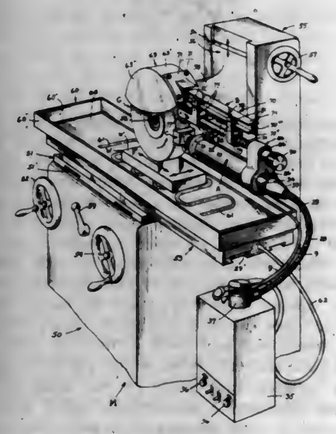
1. A reinforcing network for strengthening rotating articles subjected to centrifugal forces such as grinding wheels and the like, said reinforcing network comprising at least one reinforcing member comprising a continuous fiberglass cord positioned in a cuspate geometrical pattern and disposed in an annular region defined by an inner cylindrical surface and an outer cylindrical surface disposed in concentric axial alignment to each other, said pattern comprising a plurality of radially projecting cusps having the apexes thereof lying on the outer cylindrical surface and disposed in substantially equal angular increments therealong, said cusps formed by a plurality of pairs of chord elements lying in the annular region and extending between two points on the outer cylindrical surface and intersecting substantially equal arcuate segments thereof, at least about half of said chord elements passing through an inner chordal region which lies between the inner cylindrical surface and an intermediate cylindrical surface concentric to the inner cylindrical surface and spaced outwardly therefrom a distance of about one-third the radial depth of the annular region, said reinforcing member further characterized as having a distribution of said continuous fiberglass cord wherein the volume of said cord increases in the direction from the outer cylindrical surface to the chordal region.

3,123,949
CUTTER GUIDE FINGER
Elmer M. Ross, Rome, Ga., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed June 22, 1962, Ser. No. 204,381
1 Claim. (Cl. 51—238)



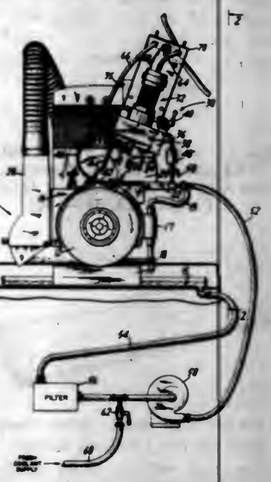
A cutter guide finger comprising:
a support post;
a platelike body removably secured at one end to said support post;
a pair of spaced-apart upstanding U-shaped posts rigidly fixedly secured to the other end of said body and extending cantilever from said body;
and a V-shaped guide bar rigidly fixedly secured between the free terminal ends of said U-shaped posts in spaced-apart relation above said body,
said guide bar being disposed in the plane of said body and oriented such that the apex of the V points in a direction opposite from said body.

3,123,950
ULTRASONIC CLEANING OF GRINDING WHEELS
Arthur Kuris, Riverdale, and Lewis Balamuth, Woodside, N.Y., assignors to Cavitron Ultrasonics Inc., a corporation of New York
Filed Aug. 4, 1959, Ser. No. 831,590
16 Claims. (Cl. 51—262)



1. A device effective to remove impacted material from the peripheral working surface of an abrasive wheel during working rotation thereof at production grinding peripheral speeds of not less than 25 feet per second which includes, a cleaning shoe which presents a cleaning face shaped in substantially arcute conformity to the peripheral working surface of the abrasive wheel with which it is associated, a pair of guide flanges extending along the opposite sides of said cleaning face and presenting inner surface portions designed to snugly overlap opposite side face portions of the abrasive wheel with minimal wheel rotative clearance therebetween, means for adjustably supporting the shoe cleaning face in predetermined spaced proximity to the peripheral working surface of the abrasive wheel to be cleaned to provide a cavitational gap therebetween extending in the direction of rotation of the abrasive wheel and defined between the inner surfaces of said guide flanges, means for vibrating said cleaning shoe at ultrasonic frequencies in a general radial direction and at a stroking amplitude which is less than one-half the radial depth of the cavitational gap defined between the shoe cleaning face and the adjacent peripheral working surface of the abrasive wheel, and means for injecting a cleaning fluid into said cavitational gap in sufficient quantity and under sufficient pressure to establish an effective cavitating layer of cleaning fluid in said cavitational gap which is confined to flow between said guide flanges, cleaning face and the adjacent peripheral working surface of the abrasive wheel and thence to discharge from said cavitational gap during working rotation of the abrasive wheel in the direction of rotation.

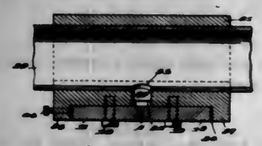
3,123,951
ULTRASONIC CLEANING OF GRINDING WHEELS
Arthur Kuris, Riverdale, and Lewis Balamuth, New York, N.Y., assignors to Cavitron Ultrasonics, Inc., a corporation of New York
Filed June 13, 1961, Ser. No. 116,777
21 Claims. (Cl. 51—262)



1. Apparatus for removing debris from the peripheral grinding surface of a grinding wheel while said wheel is rotating at normal grinding speeds which includes, a cleaning shoe having a cleaning face substantially conforming to the peripheral grinding surface of the wheel to which it is to be applied, a pair of flanges on opposite sides of said cleaning face spaced to closely overlap the sides of the grinding wheel to which it is to be applied with minimal clearance therebetween, means to vibrate said cleaning shoe at frequencies in the high sonic and ultrasonic ranges, means for mounting said cleaning shoe so that its longitudinal axis extends substantially radially of the wheel to which it is applied and with its flanges overlapping the sides of such wheel and with said cleaning face spaced from the peripheral grinding surface of such wheel a distance sufficient to induce cavitation at the peripheral grinding surface of such wheel and at the same time avoid any appreciable evidence of erosion of

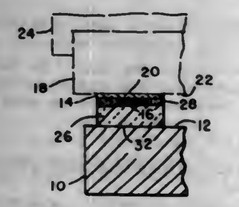
the cleaning face of the shoe when cavitational fluid is introduced therebetween, and means for introducing a cavitational fluid between said cleaning face and the peripheral grinding surface of such grinding wheel to which said shoe is applied, said cleaning shoe having a longitudinal length substantially corresponding to a half wavelength of sound or integral multiples thereof traveling longitudinally through the material of the shoe at the frequency of vibration, and which cleaning shoe further presents a vibration input section of substantially larger mass than the vibration output section thereof to thereby increase the amplitude of vibration of its cleaning face.

3,123,952
METHOD OF RECONDITIONING NOZZLES PRIMARILY USEFUL FOR DEBARKING LOGS WITH HIGH PRESSURE WATER JETS
Lemuel Roscoe Foreman, 310 W. Main St., Elizabeth City, N.C.
Original application Nov. 18, 1958, Ser. No. 774,668, now Patent No. 2,969,190, dated Jan. 24, 1961. Divided and this application Aug. 19, 1959, Ser. No. 834,869
2 Claims. (Cl. 51—281)



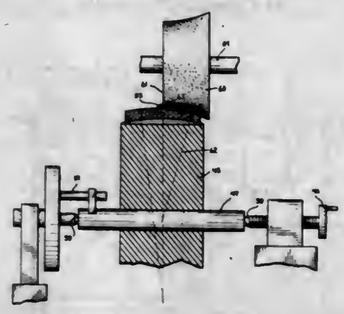
1. A method of restoring the efficiency of an eroded nozzle used for projecting jets of high pressure water, said nozzle being characterized by the employment of two abutted metallic nozzle blocks lying in the same plane and together providing an elonagted straight narrow jet-discharging aperture extending between the abutted surfaces of the blocks; said method consisting of first separating the blocks from the nozzle body and then grinding all the directly contacting surfaces of both the blocks and grinding the surfaces forming said elongated aperture, the grinding being continued until at the conclusion of operations, the aperture is a straight opening which at its narrowest point is about 1/25 in. wide throughout its length.

3,123,953
METHOD OF MAKING PIEZOELECTRIC CRYSTALS
Walter A. Merkl, Eatontown, N.J., assignor to the United States of America as represented by the Secretary of the Army
Filed Dec. 13, 1962, Ser. No. 244,533
4 Claims. (Cl. 51—283)
(Granted under Title 35, U.S. Code (1952), sec. 266)



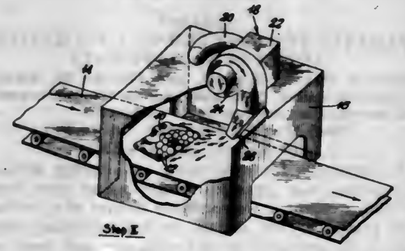
1. The method of making a piezoelectric crystal unit from a plate of crystalline material having a pair of opposing faces of which one is smooth and flat comprising the steps of mounting the smooth flat face of said plate on an optical flat, making the exposed face of said plate smooth, flat and parallel to said optical flat, detaching said plate from said optical flat, cementing a spacer to one of the parallel faces of said plate to form a laminated structure, mounting said laminated structure on said optical flat with the face of said plate abutting said optical flat and leaving a face of said spacer free, making the free face of said spacer smooth, flat and parallel to said optical flat, reversing said laminated structure on said optical flat such that the smooth flat face of said spacer abuts said optical flat and leaving a face of said plate uncovered, removing crystalline material from the uncovered face of said plate until the latter is reduced to the desired degree of thickness while leaving said uncovered face of said plate smooth, flat and parallel to said optical flat, detaching said laminated structure from said optical flat, and separating said plate from said laminated structure.

3,123,954
METHOD OF GRINDING LENSES
Tracy H. Calkins, Indianapolis, Ind., assignor, by mesne assignments, to Textron Inc., Providence, R.I., a corporation of Rhode Island
Filed June 9, 1961, Ser. No. 116,013
9 Claims. (Cl. 51—284)



1. A method of making one-piece multifocal lens blanks having distance and near fields of vision separated by straight line shoulders which comprises grinding the distance field of an unfinished blank to a spherical shape and simultaneously grinding the near field of said blank to a radius of cross curvature approximating the desired spherical radius of the near field, applying only a ribbon of hard adhesive at the juncture of the distance and near fields, and then grinding the near field portion of said blank through said hard adhesive to a spherical shape.

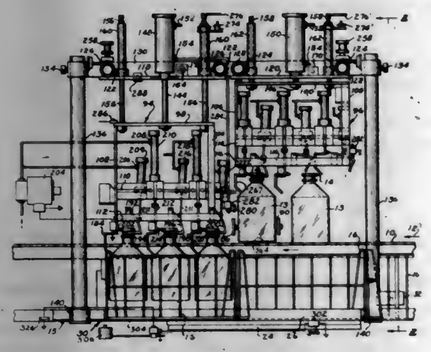
3,123,955
PACKAGING ARTICLES IN HEAT SHRINKABLE AND SEALABLE FILM
Gunther G. Weissensee, Park Forest, and Clyde N. Kracht, La Grange Park, Ill., assignors to Union Carbide Corporation, a corporation of New York
Filed Jan. 26, 1961, Ser. No. 85,079
4 Claims. (Cl. 53—30)



1. A method of packaging articles within a sheet of a heat shrinkable and sealable film comprising folding the

sheet of film into an open V-shape, placing the articles at the fold and between the plies of said film such that the film circumscribes the articles, feeding the thus film circumscribed articles through a heating zone with the centerfold of the film foremost, and directing a high velocity stream of heated gas obliquely downward onto said film within said zone while advancing said film-circumscribed articles so that said gas stream initially impinges against the centerfold of the film plies and thence flows onto the film subjecting the free margins of the film plies about the articles to a wiping action to mate them in mutual contact and concurrently seal said mated mutually contacting free margins to each other and progressively shrink the film plies about the articles to yield tightly film enveloped and sealed articles.

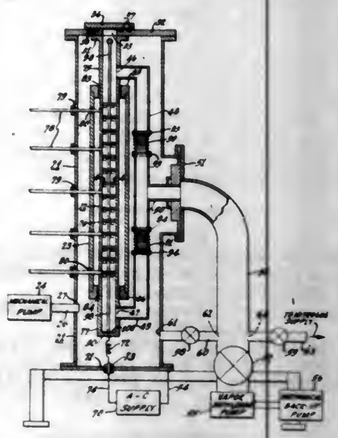
3,123,956
BOTTLE CASING APPARATUS AND METHOD
Homer Fisher, 413 Archdale Ave., Cuyahoga Falls, Ohio, assignor of one-half to Ivan H. Groom, Tallmadge, Ohio
Filed Nov. 20, 1961, Ser. No. 155,233
18 Claims. (Cl. 53—35)



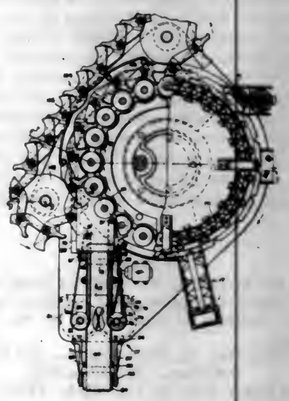
1. The method of loading bottles in groups in a case from an advancing single file of bottles disposed on a continuously moving conveyor comprising the steps of sequentially and separately clamping about the neck each of a series of bottles while in alignment on said conveyor and equal in number to the number of bottles in one row of a bottle case, moving the series of clamped bottles simultaneously laterally clear of the conveyor, repeating for each row in said case until the number of bottles equal to the number which can be received in a case have been clamped and moved clear of the conveyor, lowering the bottles into said case and thereafter releasing said bottles.

3,123,957
APPARATUS FOR PROCESSING A PLURALITY OF ARTICLES OR MATERIALS
William J. Helwig, Kearny, and George M. Rose, Jr., Mountain Lakes, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Mar. 22, 1960, Ser. No. 16,866
20 Claims. (Cl. 53—86)

15. Apparatus for evacuating and sealing articles of manufacture, said apparatus comprising an inner member providing a chamber for receiving articles of manufacture to be evacuated and sealed, an outer housing member substantially surrounding and enclosing said inner member, means for providing hermetic sealing of said members from one another, means adapted for receiving power from a source for heating said inner member, and passageways communicating with each of said outer housing member and said inner member allowing evacuation of said members.



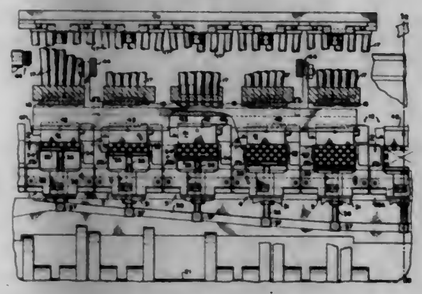
3,123,958
MACHINE FOR PACKING FISH IN CONTAINERS
Eben H. Carruthers, P.O. Box 1332, Warrenton, Oreg.
Filed Jan. 7, 1960, Ser. No. 1,077
23 Claims. (Cl. 53—123)



16. A machine having a forming position and a filling position for filling containers with tuna fish which has been cut transversely of the loins of the fish to form slices of a height somewhat less than the height of the containers which the slices are to occupy which comprises, in combination:
(*a*) a turret,
(*b*) means for rotating said turret about a vertical axis of rotation,
(*c*) a multiplicity of container pockets carried by said turret and movable into and out of said forming and filling positions.
(*d*) a stationary horizontally extending surface over which said containers are moved by said pockets,
(*e*) a multiplicity of forming members mounted in vertical alignment with said containers, said forming members being carried by said turret and being substantially half cylinders,

(*f*) a multiplicity of substantially half-cylinder forming elements, each of which is complementary to a forming member to cooperate therewith to form said slices into slugs of substantially cylindrical shape adapted to fit said containers,
(*g*) means driven from said turret for rotating said forming elements through a non-circular path but part of which is circular at and adjacent said forming and filling positions,
(*h*) means for feeding the slices of tuna to said forming position,
(*i*) means for transferring the formed tuna from said forming members and elements into said containers, and
(*j*) means for discharging the filled containers from the machine at a container discharge position.

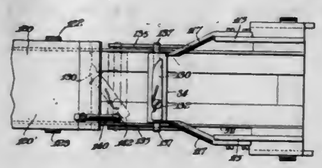
3,123,959
APPARATUS FOR PACKAGING ELONGATED ARTICLES
Maurice M. Carriere, Danbury, Clifford F. Casey, Stratford, Albert W. G. Ervine, Bridgeport, James K. Hamil, Westport, Robert G. Schimpf, Fairfield, Frank H. Smith, Trumbull, and John R. Turner, Stratford, Conn., assignors to Remington Arms Company, Inc., Bridgeport, Conn., a corporation of Delaware
Filed July 10, 1961, Ser. No. 122,962
33 Claims. (Cl. 53—143)



1. Apparatus for the packaging of cartridges comprising a conveyor, buckets on said conveyor adapted to receive and convey pre-formed groups of cartridges, a bucket loading station comprising a plurality of means for delivering cartridges to juxtaposed locations on opposite sides of said conveyor, means for forming and holding sub groups of cartridges in identical orientation and spaced relation to each other associated with each of said delivery means, and means for transferring said sub groups of cartridges toward and into inter-fitting relation to each other to form a single group within the confines of a conveyor bucket.

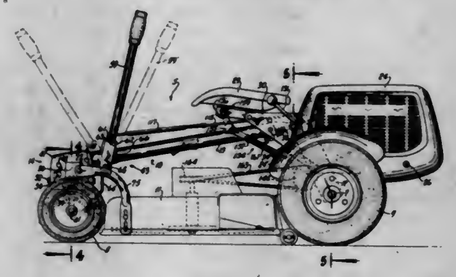
3,123,960
APPARATUS FOR PREPARING FILLED CARTONS FOR MERCHANDISING
Charles E. Wade, Jr., Roanoke, Va.
(P.O. Box 90, Morristown, N.J.)
Original application Sept. 1, 1959, Ser. No. 837,510. Divided and this application May 10, 1961, Ser. No. 118,752
2 Claims. (Cl. 53—376)

1. Apparatus for closing walled cartons having inwardly foldable flap structure extending laterally outwardly from the top portion of at least one wall thereof, said apparatus comprising means for arranging at least two cartons in spaced apart relation in a row with the flap structure of each in opposition, flap closure means positioned for insertion in the open space between the opposing walls and below the flap structure of said two cartons, and actuating means connected to move said closure means upwardly from said inserted position to lift the opposing flap structure, and to then move said flap closure means to a position in which a portion of the flap closure



means pushes one flap structure over the top of its carton and another portion of the flap closure means pushes the opposing flap structure over the top of the opposing carton, and means for moving said spaced apart cartons with respect to the actuating means and thereby operating said actuating means.

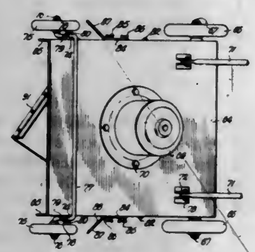
3,123,961
TRACTOR MOUNTED IMPLEMENT AND DRIVE MEANS THEREFOR
Igor Kamlukin, Milwaukee, Wis., assignor to Simplicity Manufacturing Company, Port Washington, Wis., a corporation of Wisconsin
Application May 28, 1959, Ser. No. 816,444, now Patent No. 2,989,134, dated June 20, 1961, which is a division of application Ser. No. 614,695, Oct. 8, 1956, now Patent No. 2,924,928, dated Feb. 16, 1960. Divided and this application July 18, 1960, Ser. No. 43,601
5 Claims. (Cl. 56—25.4)



1. In a power driven garden tractor: a chassis including spaced transverse front and rear axles having wheels, a longitudinal frame member connected with the front axle and extending rearwardly therefrom, and an upright fork structure having its lower end mounted upon the rear axle and its upper portion fixed to the rear of the frame member to hold the same at an elevation above that of the rear axle and higher than the front portion of the frame member; means carried by the fork structure defining a support for an internal combustion engine, which support extends rearwardly beyond but above the rear axle; an internal combustion engine mounted on said support behind the fork structure, and having a crankshaft; transmission means carried by said fork structure for transmitting torque from the engine to the rear wheels of the tractor; means for transmitting torque from the engine crankshaft to an implement that may be tractively coupled to the chassis for a degree of motion relative thereto, comprising a rotatable power take-off shaft having torque transmitting input and output means thereon; means carried by the chassis mounting the power take-off shaft for bodily motion relative to the tractor chassis; and means cooperable with said torque transmitting input means on the power take-off shaft for transmitting torque thereto from the engine crankshaft regardless of bodily

motion of the power take-off shaft relative to the tractor chassis.

3,123,962
LAWN MOWER WITH TILTABLE TOP
Robert W. Hester, 6001 Johnson Drive, Mission, Kans.
Original application June 6, 1956, Ser. No. 589,725, now Patent No. 2,993,321, dated July 25, 1961. Divided and this application Apr. 26, 1961, Ser. No. 105,601
2 Claims. (Cl. 56—25.4)



1. A lawn more construction comprising, in combination,

a normally horizontial plate member having front, rear and side portions,

a power source secured to the top side of said plate member and operative to drive a cutter on the bottom side thereof,

handle means connected to said plate member operative to permit pushing and pulling forces to be applied to said plate member,

a pair of rear wheels each rotatably mounted on axle means on opposite sides of the plate member adjacent the rear portion thereof,

a U-shaped member positioned with respect to the front portion of said plate member with the legs of the U extending downwardly on each side of the front portion of the plate member and the bight of the U extending across and over said plate member front portion,

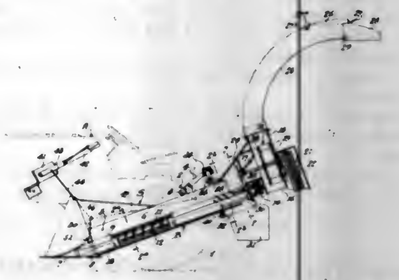
adjustable fastened means on each side of the front portion of said plate member independently interconnecting each U-leg to a side of the plate member front portion in such manner that the said U-legs extend substantially vertically,

a front wheel rotatably mounted on and adjacent the end of each U-leg,

said plate member movable from a first grass cutting position with said plate member and the cutter therebelow in substantially horizontal orientation to a second position wherein the front end of said plate member is elevated markedly relative to the rear end of said plate member with the said adjacent fastening means connecting the U-legs to the plate member adjacent the bight of the U-member whereby said mower may be transformed into a snow blower.

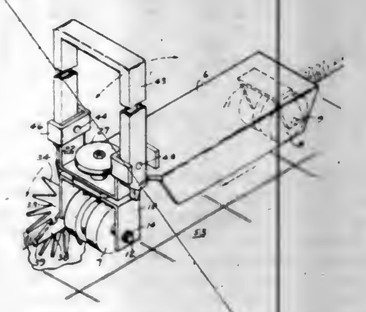
3,123,963
COTTON HARVESTER
Malcolm Allan Horton and John K. Williams, Waco, Tex., assignors to Central Texas Iron Works, Waco, Tex., a corportion of Texas
Filed July 24, 1961, Ser. No. 126,203
12 Claims. (Cl. 56—33)

1. In a harvester, a main frame; means on said main frame engageable with the ground for supporting said main frame on and for movement over the ground parallel to the longitudinal center of said main frame; two harvester units, each having front and rear ends and each comprising a mechanism frame and harvester mechanism carried thereby; cross connection means extending between said units across said main frame and being connected to said mechanism frames for positioning said units on opposite sides of said main frame and for integrating



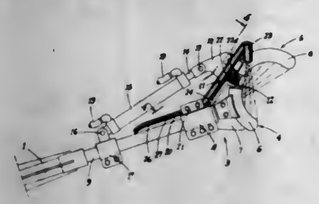
said units into a harvester assembly; and three universal movement suspension means movably interconnected between said main frame and said assembly and spaced from each other to provide a three-point suspension for said assembly.

3,123,964
LAWN EDGERS
Edmund Schwartz, Fair Lawn, N.J., and Isidore Epstein, New Hyde Park, N.Y., assignors to Leisure Research Corporation, Richmond Hill, N.Y., a corporation of New York
Filed Feb. 7, 1962, Ser. No. 171,669
6 Claims. (Cl. 56—256)



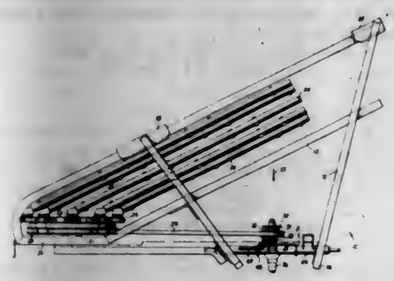
1. A lawn edging device comprising an elongated scooter platform, a rear roller wheel journalled on said platform with an axis parallel to said platform and at right angles to the elongated axis of said platform, a front fork member, means journalling said fork member on said platform on a central axis to enable complete reversal of the fork member between two opposite positions relative to the sides of the platform, a front roller wheel, means to journal said front roller wheel on said fork about a horizontal axis, detent means to lock said fork in either of two positions wherein said front roller wheel axis is parallel to the axis of said rear roller wheel, a cutter wheel, means to journal said cutter wheel coaxially with said front roller wheel at one side of the platform, a plurality of cutting teeth in said cutting wheel, a pair of shear blades secured to said fork, said shear blades being proximate to said cutting teeth at each end of a chord of said cutting wheel lying parallel to said platform, a handle, and means to secure said handle to said platform.

3,123,965
LIQUID LUBRICANT APPLYING DEVICE FOR A TREE SHAKER GRAPPLE UNIT
Frederick L. McEwen, 3729 S. McDonough Ave., Sanger, Calif.
Filed Aug. 6, 1962, Ser. No. 214,905
4 Claims. (Cl. 56—328)



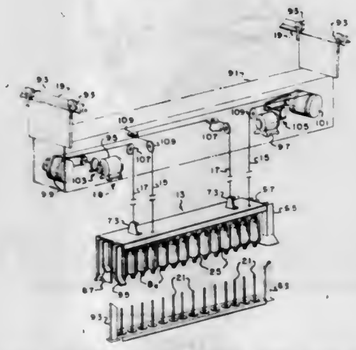
1. A liquid lubricant applying device for the grapple unit of a tree shaker, said unit including cooperating upper and lower jaws adapted to grip a tree limb, a rigid support for the jaws, and means to open and close the jaws; said device comprising a pipe leg on each side of the support, a nozzle on the outer end of each pipe leg clear of the jaws, one nozzle being positioned to discharge liquid lubricant upwardly and laterally onto the upper jaw, and the other nozzle being positioned to discharge liquid lubricant downwardly and laterally onto the lower jaw, and means to feed a lubricant to the pipe legs and nozzles simultaneously.

3,123,966
ADJUSTABLE DRIVE MECHANISM FOR SIDE DELIVERY RAKE
Warren H. Brackbill, Paradise, and Emmett F. Glass, Akron, Pa., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Mar. 8, 1962, Ser. No. 178,348
8 Claims. (Cl. 56—377)



1. In a side delivery rake, a frame, a basket connected to said frame, a raking reel rotatably mounted on said basket and extending diagonally relative to ground travel, a driven sheave connected to a forward end of said reel to transmit power thereto, a drive sheave carried on said frame, power means connected to said drive sheave, an endless belt connecting said drive and driven sheaves, both of said sheaves being rotatable in generally vertical planes and laterally spaced relative to each other, and means interposed between said frame and said drive sheave for adjusting the operative position of the drive sheave whereby the tightness of said endless belt may be regulated and the drive sheave may be properly aligned and located relative to said driven sheave, said adjusting means comprising a bracket affixed to said frame and extending vertically, said bracket having transverse slots, a support on which said drive sheave is rotatable, a plurality of fasteners extending through said slots and connecting said support to said bracket, said fasteners being angularly spaced relative to each other about the axis of rotation of said drive sheave, a plurality of curved seats on said support, one for each fastener, and means interposed between said support and said bracket to rock the support on said curved seats.

3,123,967
BOBBIN HANDLING METHOD AND APPARATUS
Robert M. Ingham, Jr., Spartanburg, S.C., assignor to Deering Milliken Research Corporation, Spartanburg, S.C., a corporation of Delaware
Filed July 13, 1960, Ser. No. 42,579
20 Claims. (Cl. 57—52)

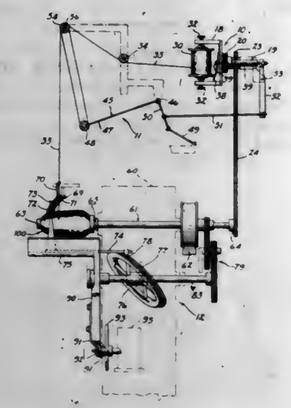


1. A bobbin handling arrangement for handling bobbins in doffing and donning relation to a bobbin-using textile processing device comprising first and second individually movable interengaging bobbin carrier members each having a plurality of bobbin holders carried thereby, a common support for said carrier members, said common support being movable horizontally, means for selectively moving one of said carrier members individually and separately and for moving said carrier members as an interengaging unit relative to a bobbin-using portion of a textile processing device.

3,123,968
YARN WINDING APPARATUS
George L. Flanigan, Amsterdam, Netherlands, assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Dec. 3, 1959, Ser. No. 857,172
14 Claims. (Cl. 57—62)

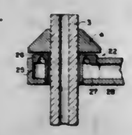
1. In a winding apparatus of the type described comprising a supply station for supplying yarn to a winding station, said supply station including spool mounting means, means for rotating the spool mounting means about an axis perpendicular to the axis of said spool mounting means, and braking means operatively connected to said spool mounting means; tensioning means, said tensioning means establishing a path of travel between said supply station and said winding station, means for simultaneously varying said path of travel and actuating said braking means to impart tension to yarn along said path of travel; said winding station including a winding shaft, motor means for rotating said winding shaft, drive means connecting said winding shaft to said means for rotating the spool mounting means, said winding shaft and means for rotating the spool mounting means turning in opposite directions and at the same speed, a pivoted traverse arm for laying down yarn on a packet core mounted on said winding shaft, and means for alternately increasing and decreasing the laying stroke of said traverse arm and for simultaneously oscillating its free end with a constant stroke, whereby yarn passing from said sup-

ply station will have a continuous twist impressed thereon in a direction opposite to that in which the yarn is being wound, and whereby the yarn will be laid down in increas-



ing and decreasing traverse lengths along the packet core by the action of imparting a constant throw to the arm and simultaneously changing its laying stroke.

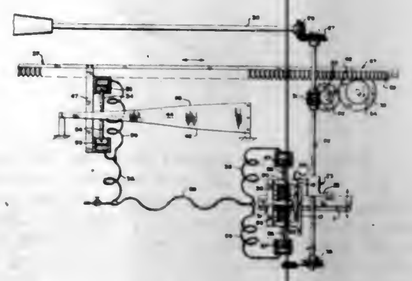
3,123,969
YARN TWISTING DEVICE
Pieter Klaas Noordenbos, Ede, Netherlands, assignor to Algemene Kunstzijde Unie N.V., Arnhem, Netherlands, a corporation of Netherlands
Filed Oct. 14, 1960, Ser. No. 62,648
Claims priority, application Netherlands Nov. 21, 1959
11 Claims. (Cl. 57—77.45)



1. A device for twisting yarn, comprising, in combination with a plurality of discs rotatable about spaced fixed axes and forming therebetween a throat, a tubular twisting spindle, adapted for rotation, received within said throat, drive means for imparting rotation to said tubular twisting spindle and for urging the same into the throat of said discs, and means including an air bearing for preventing movement of said tubular twisting spindle in the direction of yarn advance, said air bearing comprising an annular collar positioned on said tubular twisting spindle and a relatively fixed annular air chamber cooperating with said collar and having a source of supply of compressed air connected thereto.

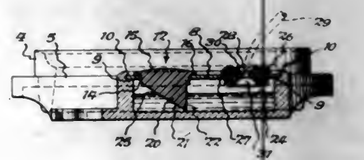
3,123,970
ROVING PACKAGE WINDING APPARATUS
Gaston G. Fornes, Charlottesville, Va., assignor to Institute of Textile Technology, Charlottesville, Va., a corporation of Virginia
Filed Apr. 25, 1961, Ser. No. 105,401
15 Claims. (Cl. 57—99)

1. In a roving frame, means for building packages of roving having curved end profiles which means comprises a flat cam means having at least one camming portion, a cam follower mounted in said frame against each camming portion, each said cam follower being movable with respect to each said camming portion, each said camming portion having a contour which is prescribed in terms of camming and reference dimensions of the cam wherein, in a reference system of coordinates, the reference dimension is an independent variable and the camming dimension is a dependent variable, which dependent variable increases through successively increasing increments as said independent variable increases through succes-



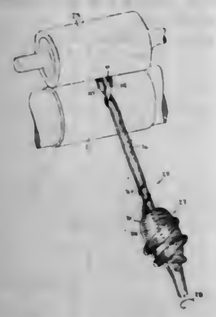
sively equal increments, and means connected to a tension gear mechanism in said frame adapted to drive said cam means and each said cam follower relatively to cause each said cam follower to change its position with respect to each said camming portion whereby each said cam follower is displaced by successively increasing increments, the position of each said cam follower being adapted to determine positions of actuation of a frame mechanism which controls the lengths of successive layers wound on the bobbins.

3,123,971
LUBRICATING MEANS FOR SPINNING RINGS
Hyatt B. Atwood, Buffalo, and James N. McLean, Eggertsville, N.Y., assignors to Herr Manufacturing Company, Inc., Buffalo, N.Y.
Filed Nov. 21, 1960, Ser. No. 70,556
3 Claims. (Cl. 57—120)



1. A spinning ring holder having an oil cup formed thereon, a cover for said oil cup secured to and closing said oil cup and having an aperture therein, and a transparent lubricant level indicator having a part which fits snugly into said aperture, and an upper shouldered part forming a stop to correctly position said indicator in said cup, the lower part of said indicator being of substantially prismatic form with an inclined face extending crosswise of the same at an inclination to said cover and terminating adjacent to the bottom of the oil cup, said inclined face when contacted by the upper surface of lubricant in said oil cup indicating the level of lubricant in said oil cup, said prismatic parts of said indicator being positioned below the lower face of said cover to guard against overfilling the oil cup and spaced from the bottom of said oil cup to leave a small quantity of oil in said cup when indicating empty.

3,123,972
SLUB YARN
William E. Stamps, Charlotte, N.C., Allen R. Merrill, Bridgewater, Va., and Malcolm R. Livingston, Charlotte, N.C., assignors to Celanese Corporation of America, New York, N.Y., a corporation of Delaware
Original application Aug. 26, 1958, Ser. No. 757,374, now Patent No. 3,044,251, dated July 17, 1962. Divided and this application Dec. 19, 1961, Ser. No. 160,547
8 Claims. (Cl. 57—140)



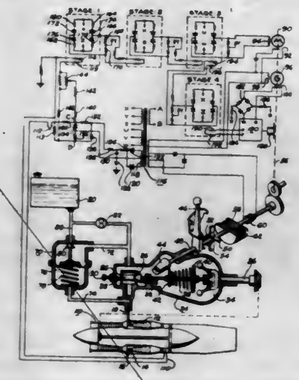
1. A slub-containing spun yarn comprising segments of spun yarn of staple length fiber and cockled slubs interconnecting said spun segments, said cockled slubs comprising staple fiber wrapped about a segment of a preformed yarn.

3,123,973
PROCESS FOR THE PRODUCTION OF FANCY YARNS HAVING A THREE DIMENSIONAL CURL
Henri Servage, Cremieu, France, assignor to Moulinage et Retorderie de Chavanoz, Chavanoz (Isere), France, a French body corporate
No Drawing. Filed Nov. 30, 1959, Ser. No. 855,993
6 Claims. (Cl. 57—157)

1. A novel process for the production of fancy yarns having a cellulosic basis which comprises providing a cellulosic yarn having an original twist level; imposing a twist upon said yarn; setting the imposed twist in the yarn by heating; removing the imposed twist whereby the yarn is returned to its original twist level; winding said yarn into a package under conditions whereby the yarn is permitted to undergo considerable shrinkage; and then subjecting the yarn to a further heat treatment at a temperature of 75–85° C. in the presence of steam while said yarn is substantially free from tension.

3,123,974
TEMPERATURE CONTROL SYSTEM WITH VARIABLE DYNAMIC RESPONSE
Paul E. Pearson, Jr., and Donald A. Reynick, South Bend, Ind., assignors to The Bendix Corporation, a corporation of Delaware
Filed June 30, 1959, Ser. No. 824,068
6 Claims. (Cl. 60—39.28)

1. In a fuel control system for a gas turbine engine including a fuel conduit to said engine, a valve in said conduit, an all-speed governor operatively connected to said valve including a speed reference device and an operator-operated means for supplying a request to said device; a temperature limiting system comprising means producing an electrical signal whose magnitude and polarity are determined by the magnitude and sense of the departure in temperature of the combustion gas temperautre from a given temperature, magnetic amplifier means including an output stage for amplifying said electrical signal, a motor driven by said output stage operatively connected to said speed reference device for varying its effective reference value, a rate generator driven by said motor for producing a signal varying with the velocity and direction of rotation of said motor, means for modifying said rate signal, a magnetic amplifier for amplifying said modified rate signal, said amplifier having a substantial effective control winding inductance producing a large lagging time constant, and means for connecting the output of said magnetic amplifier to said output stage to thereby provide to said magnetic amplifier means a stabilizing signal which appears as a leading time constant.

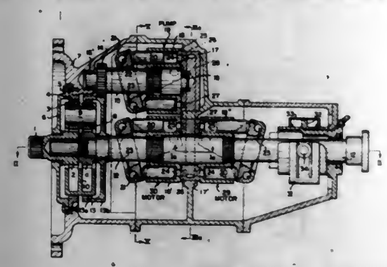


6. In an electrical control system, means producing a voltage signal whose magnitude and polarity are determined by the magnitude and direction of the departure of the sensed condition from the reference value, magnetic amplifier means including an output stage having input signal windings and feedback signal windings for amplifying said voltage signal, motor means driven by said output stage and means driven by said motor means effective to vary the value of said sensed condition, a rate generator driven by said motor means producing an output signal varying as a function of an instantaneous rate of change of said voltage signal, means responsive to a second variable condition for modifying said rate generator output signal, a magnetic amplifier for amplifying said modified rate generator signal, said amplifier having a substantial effective control winding inductance producing a large lagging time constant, and means connecting the output of said magnetic amplifier to said feedback windings to thereby provide to said magnetic amplifier means a stabilizing signal which appears as a leading time constant.

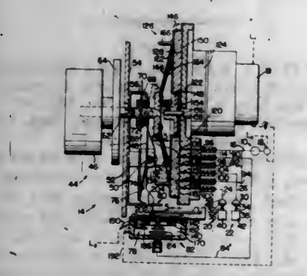
3,123,975
INFINITELY VARIABLE TRANSMISSION
Heinrich Ebert, Furth, Bavaria, Germany
Filed May 8, 1961, Ser. No. 108,349
Claims priority, application Germany Aug. 14, 1957
24 Claims. (Cl. 60—53)

1. In a hydrostatic transmission with swash plate operated pistons, a fluid conveying member having pressure fluid and suction fluid conveying means and also including control valve means associated with said pressure fluid and suction fluid conveying means, at least three hydraulic units of the axial piston type arranged on one and the same side of said one fluid conveying member, each one of said units having a swash plate and also having a cylinder block rotatable relative to said fluid conveying member and provided with a plurality of cylinders extending substantially in the direction of the axes of rotation of said cylinder blocks, said cylinder blocks engaging said fluid conveying member and said cylinders registering with said control valve means as said cylinder

blocks rotate, the axes of rotation of said cylinder blocks being substantially parallel to each other, a plurality of pistons respectively reciprocable in said cylinders and acting upon the respective swash plate, the plane of each of said swash plates in each respective angular position thereof remaining stationary relative to said fluid conveying member while the respective unit operates at the respective angular position of the respective swash plate, conduit means extending in axial direction of said cylinders, said control valve means being operable in response to the rotation of said cylinder blocks to alternately connect said cylinders of said cylinder blocks with said pressure fluid and said suction fluid conveying means respectively along planes parallel to each other and perpendicular to the axes of said cylinder blocks thereby to connect said units in closed circuit, said conduit means and said control valve means and at least a portion of said pressure and suction fluid conveying means being located within the projection of said cylinders on said fluid conveying member, said projection being confined by the projection of the shortest enveloping contour line around all of said cylinder blocks onto said fluid conveying member, a housing surrounding said transmission, input shaft means rotatably journalled in said housing and drivingly connected to at least one cylinder block, output shaft means drivingly connected to the other cylinder blocks, the unit pertaining to said one block constituting a pumping unit, and the remainder of said units being motor units.

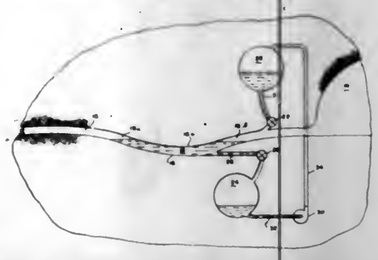


3,123,976
OPERATION AND STOPPING MECHANISM FOR PROGRAM CONTROL AND THE LIKE
Geoffrey A. Mansell, San Juan Capistrano, Calif., assignor to Robertshaw Controls Company, a corporation of Delaware
Filed Nov. 21, 1961, Ser. No. 153,960
13 Claims. (Cl. 60—60)



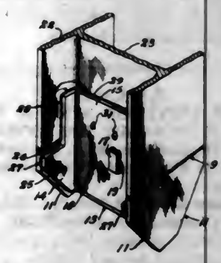
2. In combination: switch contact means having an "operation" condition and a "stopping" condition for controlling the operation and stopping of a device; manual means movable to "on" and "off" positions to cause operation and stopping of said device; latch means cooperating between said switch contact means and said manual means to lock said switch contact means in "operation" condition and to lock said manual means in "on" position; and stopping means to release said manual means to move to "off" position while temporarily maintaining said switch contact means in "operation" condition and thereafter to move said switch contact means to "stopping" condition.

3,123,977
BLAST RESISTANT WATER DOOR
Harold L. Brode, Santa Monica, Calif., assignor to the United States of America as represented by the Secretary of the Air Force
Filed July 11, 1961, Ser. No. 123,323
1 Claim. (Cl. 61—.5)



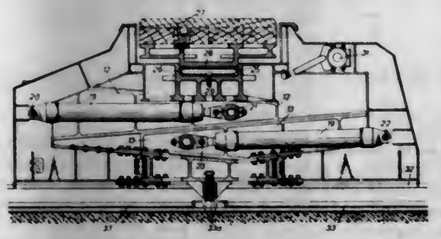
In an underground tunnel and the like connecting an underground installation to the outside, a blast barrier comprising: a gravity water trap within said tunnel, storage reservoir, said storage reservoir being underground and at an elevation greater than said tunnel, water stored within said storage reservoir, valve controlling the gravity flow of said water from said storage reservoir into said gravity water trap to a predetermined level higher than the tunnel ceiling at the low point of the water trap, passage for draining said water from said gravity water trap through an openable valve into a sump reservoir located at an elevation below the low point in said gravity water trap, and means for returning said drained water from said sump reservoir to said storage reservoir.

3,123,978
H-BEAM PILE CUTTER AND COMBINATION WITH H-BEAM PILE
Francis L. Pruyn, 46 E. 91st St., New York, N.Y.
Filed Jan. 14, 1960, Ser. No. 3,471
4 Claims. (Cl. 61—53)



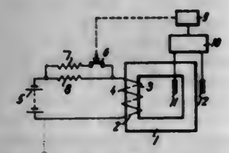
1. A point for a standard H-beam pile comprising a hardened blade portion having a section corresponding to that of the abutting end of said pile and a pair of channel-shaped coupling members fixedly attached to and extending upwardly from the channel portion of said point and arranged to socketly receive the web of said pile therebetween, the bottom of said point having a tapered edges to facilitate the driving of said point, said coupling when said point is fitted to said pile being arranged to lie wholly within the channel portion of said pile and point to provide reinforcement for both said web and at least a part of the flange portion of said pile, whereby the outer faces of the flanges of the point are in the same plane as the outer faces of the flanges of said pile so that when in operative position the outer faces of the flanges of point and pile present a continuous surface to contact the earth as the pile is driven.

3,123,979
BILGE BLOCKS AND DRY DOCKS UTILISING SUCH BILGE BLOCKS
Harold Scrutton, London, England, assignor to Cammell Laird & Company (Shipbuilders & Engineers) Limited, Birkenhead, England, a British company
Filed May 8, 1961, Ser. No. 108,385
Claims priority, application Great Britain May 13, 1960
7 Claims. (Cl. 61—66)



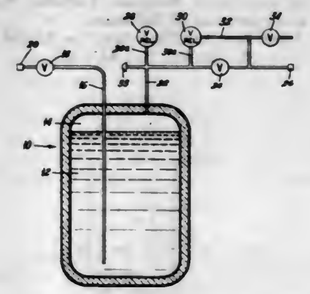
1. A bilge block comprising a body part, a wedge assembly including oppositely disposed overlapping wedge devices slidably supported in said body part and having wedge angles well below the maximum angle of friction for the surfaces in contact so that the load alone on the bilge block will not cause relative sliding movement between said surfaces and cause the block to collapse, means for effecting relative movement between said wedge devices so as to increase or decrease the height of the wedge assembly, a bilge block head-piece supported on said wedge assembly for vertical adjustment thereby on and relatively to the body part thereby to adjust the height of the bilge block, said head-piece having a cavity in its upper part, a bilge block cap having a piston-like part slidably located for vertical movement in said cavity, a cushion of fluid in said cavity below said bilge block cap and means for leaking-off fluid from said cushion thereby to relieve the load on the bilge block and permit said relative movement between the wedge devices for height adjustment of the bilge block.

3,123,980
METHOD AND APPARATUS FOR REGULATING HEAT TRANSFER
Karl Steimel, Konigstein-Johannniswald, Taunus, Germany, assignor to Licentia Patent-Verwaltungs-G.m.b.H., Frankfurt am Main, Germany
Filed Dec. 18, 1961, Ser. No. 160,138
Claims priority, application Germany Dec. 23, 1960
10 Claims. (Cl. 62—3)



2. A process for regulating the transfer of heat between two bodies so as to maintain preselected temperature conditions as between the two bodies by utilizing a thermoelectric assembly having a plurality of dissimilar thermoelectric elements electrically connected to provide a plurality of hot junctions in one body and a plurality of cold junctions in the other body upon the passage therethrough of electric current in a predetermined direction; and comprising the steps of determining a deviation from said preselected temperature conditions requiring such a heat transfer between said two bodies so as to restore said preselected temperature conditions, passing an electric current through the thermoelectric assembly in a predetermined direction to effect the transfer of heat between the bodies until said predetermined temperature conditions of the bodies are restored with the electric current being that at which the maximum quantity of heat is transferred by the thermoelectric assembly subsequently passing through the thermoelectric assembly in a predetermined direction an electric current at which the assembly operates most efficiently, and stopping the passage of electric current through the thermoelectric assembly when the predetermined temperature conditions are exceeded beyond predetermined limits.

3,123,981
VOLATILE LIQUID STORAGE CONTAINER PRESSURE REGULATING MEANS
Richard R. Carney, Kenmore, and Stanley R. Koch, Tonawanda, N.Y., assignors to Union Carbide Corporation, a corporation of New York
Filed Dec. 5, 1961, Ser. No. 157,087
10 Claims. (Cl. 62—51)

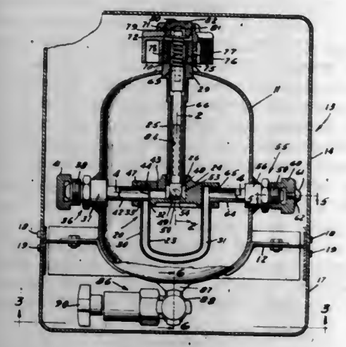


6. A method for storing a volatile liquid in a container and regulating the pressure therein which comprises the steps of providing a storage body of volatile liquid in a container; venting the container at a predetermined lower pressure through low pressure venting means; simultaneously equalizing the pressure across the low pressure venting means and pressurizing said storage body at a higher pressure thereby terminating the lower pressure venting of the container simultaneously in response to the pressurizing; transferring said storage body from the container at substantially said higher pressure; terminating the pressurizing of said storage body on cessation of the storage body transferring step and restoring the venting of the container at said predetermined lower pressure.

3,123,982
CRYOGENIC GAS SAMPLER
Ross M. Brown and Robert C. Emmerling, Manhattan Beach, and Angel R. Florez, Downey, Calif., assignors to The Cosmodyne Corporation, Hawthorne, Calif., a corporation of California
Filed Nov. 8, 1960, Ser. No. 68,031
12 Claims. (Cl. 62—55)

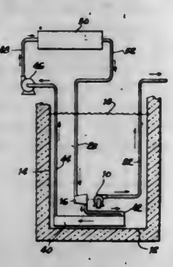
6. The method of obtaining a representative sample of a liquefiable gas from a tank comprising: flowing a liquefied gas, from a tank from which a sample is to be taken, adjacent to and isolated from a sampler receptacle

to lower the temperature of the receptacle to approximately that of said gas until the fluid flowing from the adjacency of said sampler receptacle is in liquid form;



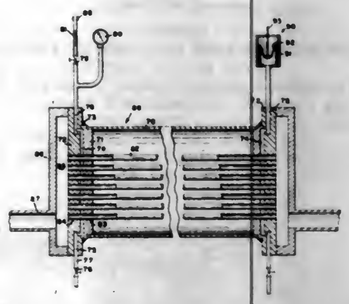
and thereafter continuing said flow of said liquified gas causing said gas in liquefied form to flow into said receptacle.

3,123,983
MEANS FOR REMOVAL OF LIQUEFIED GAS
Cedomir M. Sliepcevich, Norman, Okla., assignor to Conch International Methane Limited, Nassau, Bahamas, a corporation of Bahamas
Filed Jan. 16, 1961, Ser. No. 83,086
8 Claims. (Cl. 62—55)



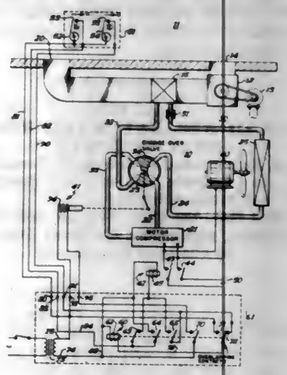
1. A system for the removal of a low boiling liquefied gas at a temperature below 25° F. from a closed container comprising a displacement pump housed within the liquefied gas in the container and having an inlet for the liquid and an outlet, a delivery passage in communication with the pump outlet and into which the liquefied gas is pumped, an expansion turbine housed within the liquefied gas in the container having an inlet and an outlet, an operative connection between the expansion turbine and the pump for operating the pump by the turbine, a driving fluid having a solidification temperature below the temperature of the liquefied gas, (a means outside of the container for pressurizing the driving fluid, a passage communicating the pressurized means with the turbine inlet for delivery of the pressurized driving fluid to the expansion turbine for operation thereof, and a passage communicating with the turbine outlet for returning the expanded fluid to the pressurizing means, the driving fluid being present at a gas in at least one stage of the cycle, the liquefied gas being liquefied natural gas housed within the container at about atmospheric pressure, and the driving fluid being a liquid at a different stage of the cycle, there being a condenser at the outlet of the turbine whereby the exhaust gases are condensed before returning to the pump.

3,123,984
REFRIGERATION APPARATUS
Louis H. Leonard, Jr., De Witt, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed Dec. 27, 1960, Ser. No. 83,129
9 Claims. (Cl. 62—125)



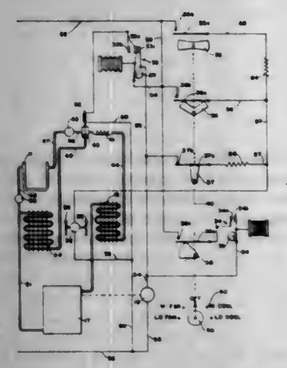
1. In an absorption refrigeration machine comprising an absorber, a generator, a condenser and an evaporator operatively connected in a refrigeration circuit, said condenser and said absorber each comprising heat exchangers, the improvement comprising at least one of said heat exchangers having a pair of tube sheets at one end thereof, each of said tube sheets being spaced from each other and forming a chamber therebetween, each of a plurality of heat exchange tubes being sealingly engaged with both of said pair of tube sheets, a substantially incompressible fluid filling said chamber to a level above said tubes, and means responsive to both increased and decreased changes in pressure exerted on said fluid to indicate leakage at said chamber.

3,123,985
CONTROL APPARATUS
William T. Burt, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed June 14, 1962, Ser. No. 202,461
4 Claims. (Cl. 62—160)



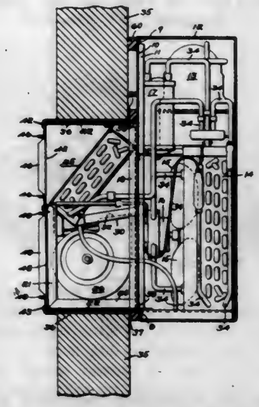
4. In a non-flushing heat pump control system having a refrigeration motor compressor, a first heat exchanger for heating or cooling space air, a second heat exchanger, and a changeover valve for connecting said compressor to said first and second heat exchangers to heat or cool the air depending upon said valve; a first space air temperature responsive switch means; first relay means having an energization winding; a source of power; circuit means including said first switch means for connecting said energization winding to said source; means connecting said first relay means when energized to operate said changeover valve to a heat position upon an initial call for heat by said first switch means; a holding circuit to maintain said first relay means energized when initially energized upon said call for heat, circuit means including said first switch means for connecting said compressor to said source upon a need for heat, second space air temperature responsive switch means closing upon a need for cooling in the space, circuit means including said second switch means for connecting said motor compressor to said source upon a need for cooling, and circuit means for connecting said second switch to render said holding circuit ineffective whereby said first relay means is deenergized and said changeover valve provides for cooling operation.

3,123,986
COMBINED REFRIGERATOR, AIR CONDITIONER AND CONTROLS
Walter Lukas, Glen Rock, Paul Komroff, Union, and Robert Miller, Iselin, N.J., assignors to Emerson Radio & Phonograph Corporation, Jersey City, N.J., a corporation of New York
Filed Nov. 28, 1962, Ser. No. 240,581
12 Claims. (Cl. 62—181)



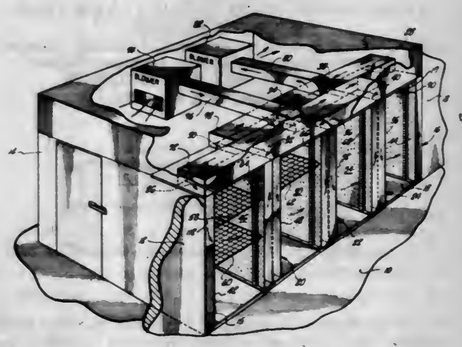
1. In a combination refrigerator and air conditioner, a housing adapted to extend through an opening in an exterior building wall and providing a portion in communication with the atmosphere outside the building and having a refrigerator condenser therein, a portion in communication with the atmosphere inside of the building having an air conditioning evaporator therein, and a portion insulated from the inside and outside atmosphere forming a refrigerator compartment having a refrigerator evaporator therein, a refrigerant compressor in said housing, means interconnecting said compressor, condenser and said evaporators in a refrigerant circuit, said evaporators being in parallel relationship, a first thermostatic means responsive to a rise in temperature in said refrigerator compartment to energize said compressor and direct the flow of refrigerant from said compressor through said condenser to said refrigerator evaporator and to the inlet side of said compressor and a second thermostatic means responsive to the temperature of air entering said air conditioner housing for causing operation of said compressor and flow of refrigerant through said air conditioner evaporator when said first thermostatic means has responded to a decrease in temperature to direct refrigerant to said air conditioner evaporator branch.

3,123,987
AIR CONDITIONING UNITS FOR OPENINGS IN WALLS
Paul B. Moore, Staunton, Va., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 2, 1962, Ser. No. 206,967
5 Claims. (Cl. 62—263)



1. In combination with a building having an exterior wall with an opening extending therethrough, an air conditioning unit having an indoor section within said opening, said indoor secton including an indoor heat exchange coil and an indoor fan, said unit having an outdoor section including an outdoor heat exchange coil, an outdoor fan and a refrigerant compressor, means connecting said coils and said compressor in a refrigeration circuit, said unit having a partition separating said sections and connected to said sections and extending vertically along the exterior surface of said wall beyond said opening.

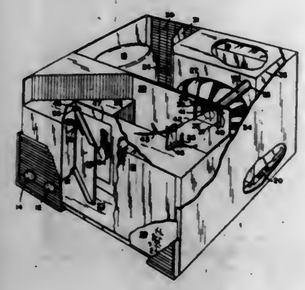
3,123,988
REFRIGERATED CABINET
Harry A. Richman, 737 N. Mansfield Ave., Los Angeles, Calif.
Filed Jan. 11, 1962, Ser. No. 165,566
5 Claims. (Cl. 62—418)



5. A refrigerated cabinet comprising a plurality of vertical hollow wall sections supported in spaced side-by-side relationship, each wall section having a substantially uniformly perforate wall facing the wall sections adjacent thereto, a plurality of horizontal shelves supported between adjacent perforate walls, and means selectively communicating with said hollow wall sections for circu-

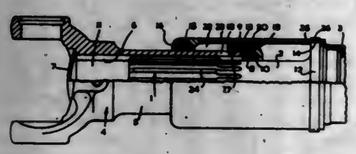
lating refrigerated air between pairs of facing perforate walls.

3,123,989
AIR CONDITIONING CONTROL SWITCH
Timothy A. Wright, Chittenango, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed Dec. 20, 1961, Ser. No. 160,819
5 Claims. (Cl. 62—427)



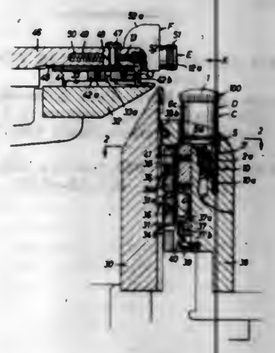
1. A room air conditioner comprising a casing; a refrigeration system in said casing including a motor-driven compressor, a first heat exchange coil, expansion means and a second heat exchange coil; partition means forming a first compartment and a second compartment in said casing; fan means for circulating air over the heat exchange coils; said partition means having a first opening and a second opening therein; a damper for closing each opening; switch means for controlling operation of the compressor motor and fan means; a rotatable control for actuating the switch means; a pair of flexible cable means connected to the rotatable control, one for operating each damper; and lost motion means connecting each cable means to a damper, whereby rotation of the rotatable control to different predetermined positions will selectively actuate the switch means to control operation of the compressor motor and fan means and will actuate the cables to operate the dampers.

3,123,990
LUBRICATION ARRANGEMENT FOR TELESCOPING SHAFTS
Leslie Gaillard Freeman, Berkswell, England, assignor to Birfield Engineering Limited, London, England
Filed July 20, 1961, Ser. No. 125,496
9 Claims. (Cl. 64—23)



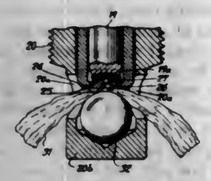
8. A mechanism comprising a cylinder member having a closed end, a plunger member including a portion projecting into the outer end of said cylinder member and slidably received therein, a sleeve member mounted on said plunger member, said sleeve member surrounding at least a portion of said cylinder member and being spaced therefrom, a first and a second seal disposed in axial spaced relationship and engaging said sleeve member and said cylinder member to provide a lubricant retaining chamber within said sleeve member, access means communicating the inner end volume of said cylinder member and said lubricant retaining chamber, a third seal engaging said cylinder member and said plunger member to prevent the escape of lubricant therebetween, and air escape means carried by one of said members and being sealed from said annular lubricant retaining chamber and the inner end volume of said cylinder member by at least one of said seals.

3,123,991
ADJUSTING AND INDICATING DEVICE FOR THE CAMS OF CIRCULAR KNITTING MACHINES
Richard Schmidt, Hopfauerstrasse 49, Stuttgart-Vaihingen, Germany
Filed Jan. 9, 1961, Ser. No. 81,427
Claims priority, application Germany Sept. 5, 1957
15 Claims. (Cl. 66—54)



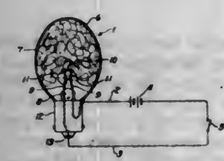
1. In a circular knitting machine, in combination, a cylinder cam box having an inner cylindrical surface having an axis; a first carrier movably mounted on said inner surface for movement in axial direction; first cam means mounted on said first carrier and having a first cam track for guiding the butts of cylinder needles surrounded by said cylinder cam box so that movement of said first carrier will influence the position of cylinder needles controlled by said first cam track; a circular dial cap; a second carrier mounted on said dial cap for movement in radial direction; second cam means mounted on said second carrier and having a second cam track for guiding the butts of dial needles so that movement of said second carrier will influence the position of dial needles controlled by said second cam track; and first and second adjusting and indicating devices located in a radial plane passing through said axis, said first device including a stationary member secured to said cam box, and said second device including a stationary member secured to said dial cap, each stationary member having a threaded part, each of said devices including a turnable member having a threaded part threadedly connected to said stationary threaded part, said turnable member being operatively connected to said first or second carriers, respectively, for moving the same; first indicating means fixed to said turnable member for indicating the turning angle of the same; second indicating means turnably mounted on the stationary member; and carry over means connecting said turnable member with said second indicating means and effecting movement of the same after each revolution of said turnable member so that said second indicating means indicates the number of revolutions of said turnable member and distance units, and so that said first indicating means indicates fractions of the distance units whereby the displacement of said first and second cam means is exactly indicated, said first and second indicating means facing in the same direction for simultaneous inspection.

3,123,992
VALVE FOR GAS FUELED LIGHTER
James Donald Smith, Stroudsburg, Pa., and Stephen P. Chernock, Milford, Conn., assignors to Ronson Corporation, Woodbridge, N.J., a corporation of New Jersey
Filed May 27, 1960, Ser. No. 32,437
6 Claims. (Cl. 67—7.1)



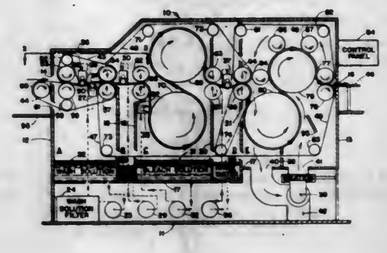
1. In a valve device of the class described, a housing, a tubular member supported within said housing and having a partition across an end thereof, a resilient gasket positioned between said tubular member and housing to prevent the passage of fluid therebetween, a protuberance on said partition extending into said tubular member, a stem loosely positioned within said tubular member and movable axially therein, the end of said stem opposed to said protuberance being concave, passage means extending axially through said protuberance, support means positioned near said partition opposite said stem, a wick positioned between said support means and said partition in communication with said passage means, manually adjustable means mounted for movement relatively to said housing and engaging said tubular member for controlling the degree of compression of said gasket and of said wick, and resilient plate means freely positioned between said protuberance and the concave end of said stem, said plate means being shaped normally to permit the flow of gas through said passage means and into said tubular member and being conformable to the contours of said concave stem end and said protuberance to seal said passage means upon axial movement of said stem towards said partition.

3,123,993
FLASH LAMP
George W. Cressman, Chagrin Falls, and Louis A. Demchock, Jr., Cleveland, Ohio, assignors to General Electric Company, a corporation of New York
Filed June 11, 1962, Ser. No. 201,546
3 Claims. (Cl. 67—31)



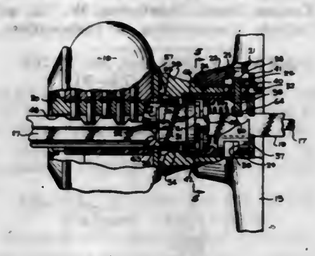
1. A photoflash lamp comprising a sealed light transmitting envelope, a filling of metallic combustible material and oxygen in said envelope, electrical lead wires extending into said envelope, a filament of tungsten-rhenium alloy electrically connected between and extending between said lead wires, and primer beads of combustible material carried by said lead wires and partially surrounding the filament, the rhenium in said filament ranging from about ½% to about 30% by weight of the tungsten-rhenium alloy.

3,123,994
WASHING APPARATUS
Arthur G. Brown, Menlo Park, and Paul H. Wendt, Arcadia, Calif., assignors, by mesne assignments, to Jet Stream Products, Inc., Reno, Nev., a corporation of Nevada
Filed June 5, 1961, Ser. No. 114,897
5 Claims. (Cl. 68—205)



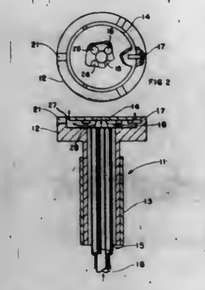
1. Washing apparatus comprising movable supporting means for the material to be washed, jet stream forming means adapted to provide a jet stream of washing fluid at a velocity of at least 360 inches per second, said jet stream forming means having at least one jet opening extending a distance not greater than about 0.05 inch in a direction generally parallel to the direction of movement of said material, and means for moving said supporting means across the path of said jet stream at a speed of at least 50 feet per minute whereby the material to be washed is subjected to the hydrodynamic action of said jet stream for a period of time not exceeding ten milliseconds.

3,123,995
SLIDING KEY-ACTUATED MECHANISM CONNECTOR
Fred J. Russell, 3800 Don Felipe Drive, Los Angeles, Calif., and George B. Solovieff, South Gate, Calif.; said Solovieff assignor to said Russell
Filed Apr. 17, 1961, Ser. No. 103,551
3 Claims. (Cl. 70—146)



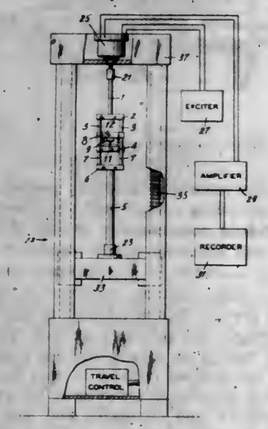
1. In a lock a relatively stationary portion, an operating assembly including a hand-hold and means for securing said hand-hold non-rotatably to said stationary portion, a latch bolt actuating spindle rotatably mounted in said operating assembly, a key-operated mechanism including a key plug rotatably mounted in the assembly and having a keyway therein adapted to receive a key, a connector having a non-rotatable position relative to said key plug and having an axially slidable position in said key-operated mechanism relative to said key plug, said connector being movable in response to key pressure from a position wherein said connector and said spindle are disengaged to a position wherein said connector is non-rotationally interconnected with said spindle whereby to rotate said spindle independently of said hand-hold.

3,123,996
HEAT FLUX MEASURING DEVICE
Norman T. Musial, 1804 Pleasantdale Drive, No. 6, Cleveland 9, Ohio
Filed June 8, 1960, Ser. No. 34,848
6 Claims. (Cl. 73—15)
(Granted under Title 35, U.S. Code (1952), sec. 266)



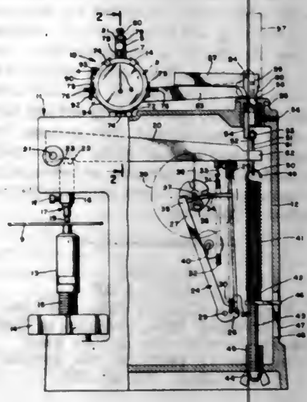
1. A heat flux detecting device comprising in combination,
first means having high thermal conductivity for absorbing environmental heat loads,
means to support said first means in an extremely hot environment having an elevated temperature above the destruction temperature of said first means,
means for thermally isolating said first means from said support means,
a plurality of thermocouple wires for connecting an E.M.F. detecting instrument through a cold junction to said first means forming thereby thermocouple means, and
means for directing a coolant to said first means and maintaining the same below the destruction temperature thereof while selectively enabling said instrument to detect changes in the E.M.F. output of said thermocouple means while said cooling is stopped for a time interval.

3,123,997
UNIVERSAL HARDNESS TESTER
Robert R. Cosner, South Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York
Filed May 9, 1960, Ser. No. 27,768
2 Claims. (Cl. 73—81)



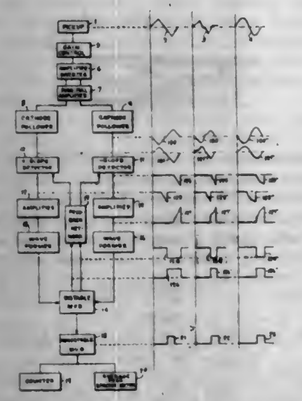
1. For use in a materials tensile testing machine having a fixed frame, a movable portion adapted to move reciprocally in relationship to the fixed frame, control and actuating means whereby precise movements of said movable portion may be continually and repeatedly made, means for sensing load data during operation, means for indicating sensed load data, and a pair of specimen holding jaws; a subassembly for performing hardness tests, which subassembly comprises, in combination, a first yoke assembly having a bottom jaw pin adapted to fit one of the specimen holding jaws, a bottom yoke arm transversely affixed to an end of said bottom jaw pin, a probe retainer base disposed parallel to the bottom yoke arm and attached thereto by at least two spacer rods, and pointed probe indenter means attached centrally to the probe retainer base; and a second yoke assembly having a top jaw pin adapted to fit the other of said pair of specimen holding jaws, a top yoke arm transversely affixed to an end of said top jaw pin, and a specimen holding table disposed parallel to the top yoke arm and attached thereto by at least another two spacer rods; said first and said second yoke assemblies being arranged in opposed interlocked slideably cooperable relationship with the pointed probe indenter means of the first yoke assembly subtending the specimen holding table of the second yoke assembly.

3,123,998
HARDNESS TESTER WITH TIMING DEVICE AND METHOD
John P. Newman, P.O. Box 1147, San Jacinto, Calif.
Filed Nov. 17, 1961, Ser. No. 152,989
7 Claims. (Cl. 73—83)



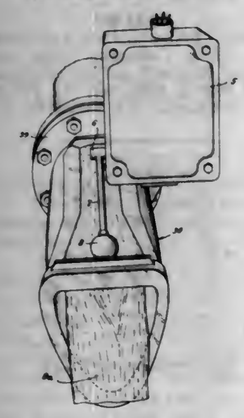
1. In an apparatus for use with a hardness testing machine for actuating the start-stop button and the reset button of a stop watch upon the actuation of the loading lever of the machine to impose the major load to the test specimen, the combination of: a frame for supporting the stop watch, an actuating lever movably mounted on said frame, an operating lever movably mounted on said frame and having means for engaging and operating the start-stop button of the stop watch, means on said operating lever engaging said actuating lever for causing movement of the operating lever to operate the start-stop button upon movement of said actuating lever, means movably mounted on said frame for operating the reset button of the stop watch, means on said actuating lever for engaging and moving the said reset button operating means to operate the reset button upon movement of said actuating lever, and means for connecting said actuating lever to the loading lever for causing movement of said actuating lever upon actuation of the loading lever.

3,123,999
APPARATUS FOR MEASURING SURFACE ROUGHNESS PEAKS
Tyler W. Judd, Chardon, Ohio, assignor to Republic Steel Corporation, Cleveland, Ohio, a corporation of New Jersey
Filed May 13, 1960, Ser. No. 28,932
7 Claims. (Cl. 73—105)



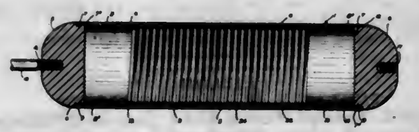
1. Apparatus for measuring the roughness of a surface, comprising a pick-up unit including a stylus movable relative to the surface and a transducer operatively connected to the stylus for producing an electrical signal varying in amplitude with the movements of the stylus perpendicular to the surface, and peak sensing means, including positive and negative slope detecting means, for detecting changes in the signal from amplitude variation in a sense indicative of increasing positive deviation of the surface contour from a datum to amplitude variation in the opposite sense.

3,124,000
SEWAGE OPEN FLOW METER
William Melas, Philadelphia, Pa., assignor, by mesne assignments, to Penn Meter Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 1, 1957, Ser. No. 693,835
10 Claims. (Cl. 73—215)



1. Apparatus for measuring the rate of flow of a gravity flowing stream of sewage comprising a channel-type open flow measuring device including liquid level sensing apparatus operatively mounted in said flow measuring device, said liquid level sensing apparatus comprising a housing, a pivot shaft journaled in said housing for rotation about a substantially horizontal axis and having one end thereof extending outside of said housing, a float arm outside of said housing and having one end thereof fixed to said pivot shaft for movement of said float arm in a vertical plane, a float rigidly affixed to the other end of said float arm and adapted to ride upon the surface of the flowing stream of sewage as it flows through said measuring device, and means connected with said pivot shaft for indicating the elevation of said float, said housing being mounted at such a level above said measuring device and said float arm being of such length that said float arm is disposed more nearly horizontal than vertical.

3,124,001
PRESSURE VESSEL
Edwin E. Conley, Tulsa, Okla., assignor to Conley Corporation, Tulsa, Okla., a corporation of Oklahoma
Filed Feb. 19, 1960, Ser. No. 9,828
4 Claims. (Cl. 73—322.5)

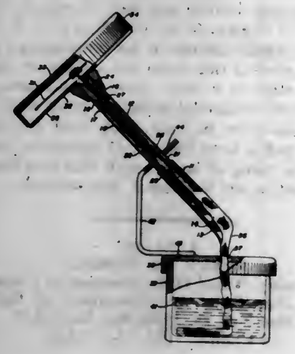


1. A high pressure float of resinous material for use with low density fluids under high pressure comprising, an elongate cylindrical hollow shell having thin walls with open ends and cylindrical inner surfaces adjacent thereto, end members having cylindrical portions sleeved into the shell ends and sealingly secured thereto in radially supporting relation to the ends of said shell, said shell having on the inside surface thereof spaced from said end members helical reinforcing ribs integral with said shell with the inner diameter of the shell between the ribs being no greater than the diameter of the inner surface adjacent the shell ends, said shell and ribs having reinforcing material embedded therein adjacent the inner surface thereof whereby said float exhibits low weight for its displacement volume while having high collapsing strength.

3,124,002
TEMPERATURE HUMIDITY INDEX INDICATOR
Vaughn F. Pierson, Morristown, and George F. Hageman, Union, N.J., and Edward M. Eadie, Jr., Topsfield, Mass., assignors, by mesne assignments, to Daystrom, Incorporated, Murray Hill, N.J., a corporation of Texas
Filed Oct. 27, 1960, Ser. No. 65,355
7 Claims. (Cl. 73—336)

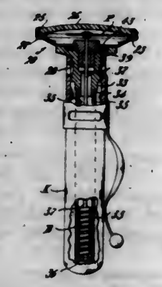
2. A temperature humidity index indicator comprising a cup-like casing, a transparent cover closing the casing, a tubular stem extending from the rear of the casing, said stem having a plug closing one end and the other end communicating with the interior of the casing, an elongated connector within the stem intermediate the ends thereof, said connector including an axial hole therethrough, a first helical coil of bimetallic material in said stem on one side of the connector, one end of the coil being secured to one end of the connector, means connecting the other end of the first helical coil to the stem, a second helical coil of bimetallic material in said stem on the other side of the connector, said second helical coil having one end secured to the connector, a staff secured to the other end of the said second coil and extending through the axial hole in the connector and through the coils into the casing, a scale plate with temperature humidity index values thereon within the

casing, a pointer secured to the other end of the staff and cooperating with the scale plate, and an absorbent



wick extending over the stem at one end thereof containing the said second coil.

3,124,003
PORTABLE TEST THERMOMETER
Joseph E. Gorgens, Easton, Conn., assignor to Manning, Maxwell & Moore, Incorporated, Stratford, Conn., a corporation of New Jersey
Filed Mar. 15, 1961, Ser. No. 95,860
5 Claims. (Cl. 73—363.9)



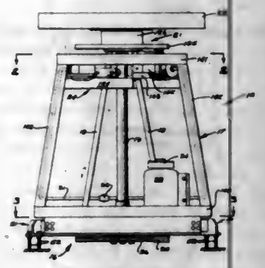
4. A dial thermometer of the kind wherein a pointer is fixed to the end of a rotary staff and a thermally-responsive motor turns the staff in response to temperature variations, said thermometer having a housing providing a chamber within which the pointer is located, said housing comprising a unitary base having an annular, substantially flat, resilient metal bottom wall portion, graduations fixed relative to said wall portion, a transparent panel constituting a top for the housing, a tubular stem housing said motor which comprises a bimetallic coil an end of which is fixed to the stem and the other end of which is fixed to said staff, and means connecting the housing and stem including an adapter having a bore which is coaxial with the stem, one end of the adapter being fixed to the stem, the other end of the adapter slidably contacting the under surface of said bottom wall portion, and a plug press-fit into the bore of the adapter and having a flange slidably contacting said bottom wall portion whereby the housing and stem are permanently united, but relatively rotatable about the axis of said staff, said bottom wall portion prior to assembly with the adapter having a slight conical slope but being held substantially flat and under bending stress by the flange of the plug thereby exerting friction pressure on the adapter such as to resist relative rotation of the adapter and housing.

3,124,004
WATCH INCORPORATING A BAROMETER
Willy Zenger, 53 Rue des 22 Cantons, La Chaux-de-Fonds, Switzerland
Filed Feb. 8, 1962, Ser. No. 172,002
Claims priority, application Switzerland Feb. 11, 1961
1 Claim. (Cl. 73—386)



The combination of a watch and aneroid barometer, comprising a case having a bottom, an aneroid barometer capsule disposed in said case and mounted on the bottom thereof, an inner casing overlying said capsule and provided with slots, a watch movement overlying said inner casing and having a dial above said movement, said inner casing being sandwiched between said capsule and movement, a first lever pivotally mounted in said casing for pivotal movement about an axis parallel to the bottom of said case and extending through a slot in said casing to engage the upper surface of said capsule so as to be movable by said capsule, a second lever pivotally mounted in said casing for pivotal movement about an axis parallel to the bottom of said case and perpendicular to the pivotal axis of said first lever, said second lever engaging said first lever so as to be moved thereby, a gear wheel rotatably mounted in said casing for rotation about an axis perpendicular to the bottom of said case and connected with said second lever to be oscillated by the pivotal movement of said second lever, a spindle rotatably mounted in said casing and extending up through said watch movement, and dial indicating means fixed on said spindle and extending over said dial, a pinion on said spindle in said casing, driving connections between said pinion and said gear wheel, whereby movement of said first lever by said aneroid capsule is transmitted through said second lever, gear wheel and pinion to said spindle, and means in said casing biasing said spindle in a direction corresponding to movement of said first lever toward said aneroid capsule.

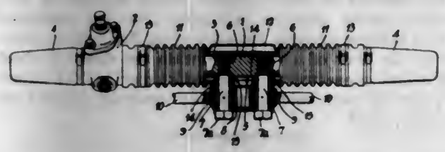
3,124,005
DYNAMIC BALANCING APPARATUS
William J. White, Columbus, Ohio, assignor to International Research and Development Corp.
Filed Mar. 2, 1962, Ser. No. 177,103
9 Claims. (Cl. 73—471)



1. In a balancing stand for determining the imbalance of a rotor, the combination comprising:
a base,
a pair of flexible reeds rigidly secured at one of their ends to the said base and extending therefrom in a common vertical plane;

a support block rigidly secured to the other ends of the said pair of flexible reeds;
an articulated drive shaft disposed centrally between the said pair of flexible reeds and having
a fixed segment journaled to the said base for rotation about a fixed axis lying in the said common vertical plane, and
a rocking segment extending through the said support block and pivotally journaled therein,
said articulated drive shaft being bendable at a rocking point between the said journals; and
mounting means for said rotor secured above the said support block to the said rocking segment of the said articulated drive shaft;
the axes of the said pair of flexible reeds and the said rocking segment of the said articulated drive shaft normally lying in the said common vertical plane;
the said pair of flexible reeds, the said support block, and the said rocking segment of the said articulated drive shaft being so related whereby they will oscillate in unison in a direction substantially perpendicular to the said common vertical plane.

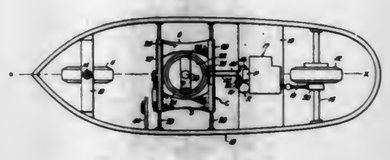
3,124,006
DUST-EXCLUDING SLEEVE FOR RACK AND PINION STEERING GEAR
Robert William Parker, Clevedon, Somerset, England, assignor to Engineering Productions (Clevedon) Limited, Clevedon, Somerset, England, a British company
Filed Mar. 30, 1962, Ser. No. 183,894
Claims priority, application Great Britain Apr. 7, 1961
5 Claims. (Cl. 74—18.2)



1. For use with a rack and pinion steering gear in which the rack is axially movable in a housing having an axially slotted wall and is connectible with steering links by overhanging bolts engaging the rack through said housing wall slot, an axially collapsible dust-excluding sleeve adapted to enclose said slotted housing wall and formed with holes for the passage therethrough of said bolts, means for clamping said sleeve around said housing wall beyond opposite ends of said slot and reinforced projecting flange means which respectively define said bolt holes and provide a sealing fit around the respective bolts.

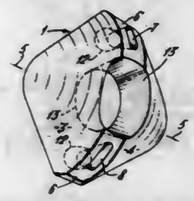
3,124,007
AUTOMATIC STABILIZATION SYSTEM FOR UNSTABLE VEHICLES
Louis E. Swinney, 2701 Oak Grove, Kansas City, Kans.
Filed Feb. 13, 1961, Ser. No. 88,971
16 Claims. (Cl. 74—5.22)

1. A dynamically stabilized body comprising a chassis supported for rocking movement about a horizontal support axis and having a first position with respect to said axis, a spinning gyro wheel having a normally vertical spin axis, a gimbal carrying said gyro wheel, one axis of the gimbal being parallel with said support axis, carrier means for said gimbal mounting said gimbal on the chassis for translation thereof to either side of said support axis, link mechanism connecting a point on said carrier means with said gyro wheel and operable to sense any angular displacement of said point relative to said spin axis caused by a rocking moment tending to rock said chassis about said support axis away from said first position, and means connected with and operated by said link mechanism in response to said angular displacement to cause translation



of said carrier in a direction to counterbalance said rocking moment and apply a righting moment to said body.

3,124,008
SWASH PLATE TYPE ROTARY MACHINES
Donald Firth and Roger Harvey Yorke Hancock, East Kilbride, Glasgow, Scotland, and Michael Hobson, Horsforth, near Leeds, England, assignors to Towler Brothers (Patents) Limited
Filed July 20, 1962, Ser. No. 214,441
Claims priority, application Great Britain July 28, 1961
8 Claims. (Cl. 74—60)

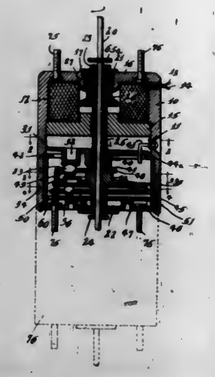


1. A swash plate assembly for a swash plate type rotary machine, comprising a swash plate having a rear face of which at least a substantial part is of arcuate form and a bearing member having an arcuate face slidably engaged by the arcuate face of the swash plate, whereby the angle of tilt of the swash plate can be adjusted, one of said arcuate faces being at least partly constituted by part of the curved surface of each of two similar co-axial cones disposed base-to-base and the other of said arcuate faces being of generally complementary form.

3,124,009
MOTION CONVERTING DEVICE
Philip D. Grover, Chicago, Ill. (3507 Glenwood Ave., Two Rivers, Wis.)
Filed Sept. 28, 1961, Ser. No. 141,346
20 Claims. (Cl. 74—99)

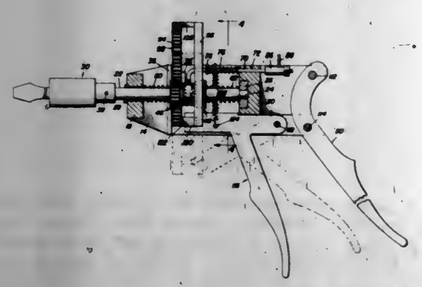
2. In a motion converting device, a rotatable output shaft, an output member connected to said output shaft for rotation therewith, an actuator member spaced from said output member and mounted for movement toward and away from the output member, a raised cam surface on one of said members, a rolling member disposed between the members and in rolling engagement with the cam surface, means engageable with the actuator member for urging the actuator member toward the output mem-

ber, a second rolling member engageable with the output member at the side opposite from and aligned with the first mentioned rolling member to balance the forces exerted on the output member, and a pair of retainers



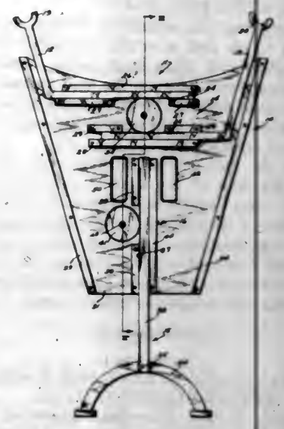
one for each of said rolling members mounted for rotation about the output shaft, and a connection between said retainers causing rotation thereof together while permitting movement of the retainers toward and away from each other.

3,124,010
RATCHET DRIVE MECHANISM
Hilton H. Eady, P.O. Box 19, Warner Robins, Ga.
Filed Aug. 4, 1961, Ser. No. 129,288
7 Claims. (Cl. 74—130)



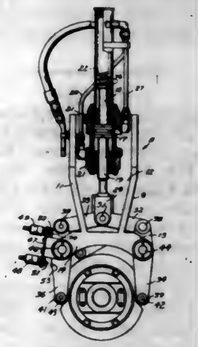
1. A pistol grip drive comprising a housing, a drive shaft rotatably journaled in said housing, a driven member mounted on said shaft for rotation therewith and against axial shifting relative thereto, first and second drive members rotatably and slidably mounted on said shaft on opposite sides of said driven member and individually drivingly engageable with the latter upon movement of a selected one of said drive members axially of said shaft toward said driven member, driving means movably supported from said housing and operatively engaged with each of said drive members and effecting opposite rotation of said drive members about the longitudinal axis of said shaft upon movement of said driving means relative to said housing, means yieldingly urging each of said drive members axially of said shaft toward driving engagement with said driven member, and reversible control means selectively engaged with the other of said drive members and operative to maintain the other of said drive members out of engagement with said driven member while said selected one of said drive members is in driving engagement with said driven member.

3,124,011
STEERING WHEEL LOCKING JACK
Fred Roth, 421 Birch Ave., Lake Bluff, Ill.
Filed Mar. 31, 1961, Ser. No. 99,802
5 Claims. (Cl. 74—495)



1. A mechanism for locking the steering system of a vehicle comprising a forked holding member having arms for engaging beneath the ring of a steering wheel, means for adjustably spreading said arms to extend to the ring of the wheel at the ends of spokes, means holding the arms in their spread positions, a support member connected to said holding member for supporting the holding member on the floor of a vehicle beneath the steering wheel, and means connected to said support member for adjustably forcing said holding member upwardly against the steering wheel.

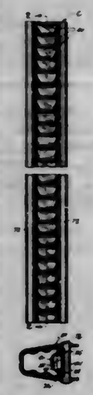
3,124,012
ROTARY DRIVE MULTIPLE POSITION LATCH
Ralph F. Hereth, Port Orchard, and George M. Sherman, Bremerton, Wash., assignors to the United States of America as represented by the Secretary of the Navy
Filed Mar. 2, 1962, Ser. No. 177,714
4 Claims. (Cl. 74—527)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. Apparatus for latching a rotary member in a plurality of rotated positions comprising a wheel, means coupling the wheel for rotation with said rotary member and provided peripherally with a plurality of detents, a

support bracket formed with a pair of flange members projecting outwardly in opposite directions, a reciprocably fluid pressure driven member carried by said support bracket, a pair of toggle links pivotally coupled on a common axis to said driven member and extending outwardly from said common axis generally parallel to said flanges, a rocker arm pivotally coupled at one end to the outer end of each of said toggle links, latch means carried by the other end of rocker arms, and means pivotally coupling the outer end of each of said flanges medially to each of said rocker arms, said links, arms and flanges forming a toggle arrangement supporting said latch means in diametrically-opposed positions on either side of said wheel, said toggle swingably moving said latch means into and out of detent-engaging positions.

3,124,013
LIFTING JACK SUPPORTING BARS
Russell K. Ulm, Butler, Ind., assignor to Universal Tool & Stamping Company, Inc., Butler, Ind., a corporation of Indiana
Original application Dec. 1, 1961, Ser. No. 156,398. Divided and this application Sept. 17, 1962, Ser. No. 223,970
3 Claims. (Cl. 74—575)



2. A rigid steel rack bar formed of tubular material comprising a rear wall having side walls connected at the sides thereof and relatively converging away from the rear wall, and a front wall connected to the margins of the side walls, the side walls being longitudinally ribbed for reinforcement and the rear wall having a longitudinal channel defining at the sides thereof a pair of projecting exposed trackways and having a series of rack teeth entirely within the channel set forwardly from the outer portions of the trackways.

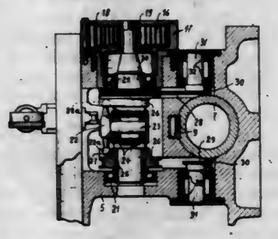
3,124,014
ADJUSTABLE MULTIPLE SECTION LIFTING RODS
David B. Cheskin, 407 S. Dearborn, Chicago 5, Ill.
Filed Oct. 22, 1962, Ser. No. 232,047
4 Claims. (Cl. 74—575)

1. An adjustable multiple section notch-like lifting rod comprising in combination, a continuous rigid core member, a plurality of tapered holding sections positioned in an abutting and engaging sequence over said core member, each of said sections shaped and positioned to have lower projecting portions symmetrical with respect to said core member and having central openings sized to pass over said core member and further having keying means at least at one end to engage the next adjacent section and precluding rotation of said sections with respect to one another, and holding means at each end of said core



member to keep said sections in abutting engagement thereon.

3,124,015
MACHINE TOOL OF THE VERTICAL SPINDLE TYPE
André Mottu, Geneva, Switzerland, assignor to Societe Genevoise d'Instruments de Physique, Geneva, Switzerland, a firm of Switzerland
Filed Dec. 13, 1961, Ser. No. 159,495
Claims priority, application Switzerland Dec. 21, 1960
5 Claims. (Cl. 77—4)

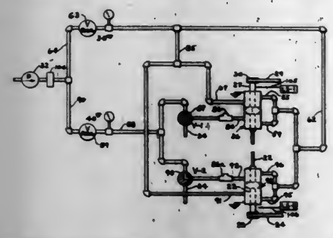


5. In a machine of the vertical spindle type, comprising a sliding spindle-carrying quill and means for balancing the weight thereof, the feature that said balancing means acts on the quill at two diammetrically opposite points with respect to the longitudinal axis of the quill and is in combination with means for distributing the forces at said points of action so that the resultant of the balancing forces produced by said balancing means passes through the center of gravity of the quill.

3,124,016
DRILLING MACHINE
Warren E. Reaser, Toledo, Ohio, assignor to The Sun Tool and Machine Company, Toledo, Ohio, a corporation of Ohio
Filed July 30, 1962, Ser. No. 213,448
12 Claims. (Cl. 77—21)

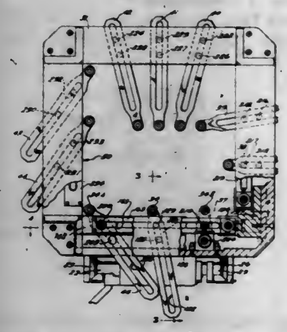
1. In a drilling machine of the class described, in combination, a cylinder, a drilling spindle extending through said cylinder, means for rotating said spindle, vertically spaced rear and front bearings for said spindle mounted one at each end of said cylinder, said spindle having a rear end extending outwardly from said rear bearing, liquid supply passages in said bearings for conducting liquid thereinto for lubricating said spindle in said bearings, a piston on said spindle positioned in said cylinder between said bearings, sealing means on said piston, a feeding liquid line connected to said cylinder

behind said piston, means for constantly supplying liquid at feeding pressure to said line, a retracting liquid line connected to said cylinder at the other side of said piston,



a source line for liquid at a pressure higher than feeding pressure, an exhaust line, and valve means for alternately connecting said retracting liquid line to said source line and to said exhaust line.

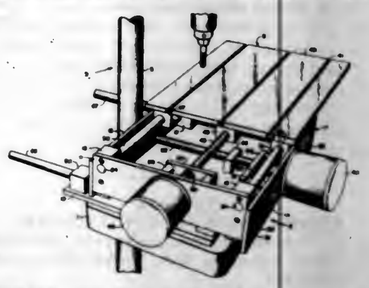
3,124,017
AUTOMATIC MULTIPLE SPINDLE DRILLING MACHINE
Wallace E. Brainard, Milwaukee, and Werner K. Behrendt, Wauwatosa, Wis., assignors to Kearney & Trecker Corporation, West Allis, Wis., a corporation of Wisconsin
Filed Oct. 31, 1960, Ser. No. 66,321
7 Claims. (Cl. 77—24)



1. In a multiple spindle drilling machine having a supporting frame, a plurality of spindle holders movably supported by said frame for lateral positioning movement, a plurality of tool spindles respectively journalled in said holders for rotation about axes perpendicular to the plane of lateral adjustment, a single selectively releasable clamp respectively associated with each of said spindle holders for releasably clamping the associated holder to said frame at one point, a plurality of releasable bridge clamps respectively operative to simultaneously clamp separate groups of said holders to said frame and each of said bridge clamps being located in laterally spaced relationship to said single clamps respectively associated with corresponding ones of said holders, and power operable control means respectively operative to selectively release said single clamps and said bridge clamps for effecting selective lateral positioning movement of said spindles and their associated holder.

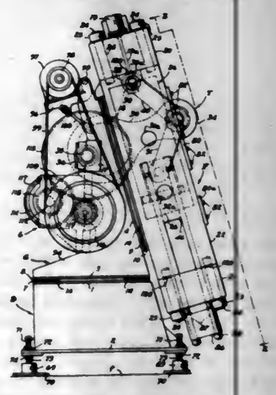
3,124,018
POSITIONING TABLE
George L. Gough, 3955 W. Lake Ave., Glenview, Ill.
Filed July 7, 1961, Ser. No. 122,501
9 Claims. (Cl. 77—63)

9. A selectively positionable worktable comprising a first part, a second part and a third part, first interrelated guiding facilities carried by said first part and said second part, second interrelated guiding facilities carried by said third part and said second part, said first and second guiding facilities disposed substantially orthogonally and in parallel planes, each of said guiding facilities having a corresponding portion thereof extending a predetermined distance beyond said second part in cantilever fashion, a



first actuating means mounted in said second part and including an element co-actively engaging an instrumentality attached to said first part, and a second actuating means also mounted in said second part and including an element co-actively engaging an instrumentality attached to said third part, whereby in response to the selective activation of said first and second actuating means selective positionment of said second and third parts is facilitated.

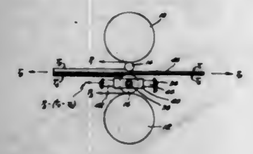
3,124,019
COLD FORMING MACHINE
Henry B. Chatfield, Santa Ana, Calif., assignor to Textron Inc., Providence, R.I., a corporation of Rhode Island
Filed Feb. 2, 1962, Ser. No. 170,841
16 Claims. (Cl. 78—13)



1. A metal working press having a capacity in the order of 100 tons or more comprising a press frame subassembly, a base subassembly, and a motive power subassembly, each of said subassemblies being characterized by at least two spacers which interfit with spacers of the corresponding subassembly and which are accurately machined and ground to a common reference plane.

3,124,020
METHODS OF AND APPARATUS FOR CONTROLLING ROLLING MILLS
Natalis H. Polakowski, 500 Kin Court, Wilmette, Ill.
Filed Oct. 26, 1960, Ser. No. 65,031
16 Claims. (Cl. 80—32)

1. The method of equalizing horizontal forces on a thin work roll of a 4-high rolling mill for rolling strip material and having a first direct-driven backing roll in frictional contact with said thin work roll, a larger work



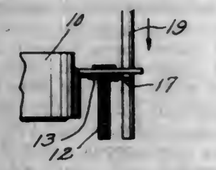
roll and a second direct-driven backing roll in frictional contact with said larger work roll, by satisfying the equation,

$$(P_1+P_2)=(T_F-T_B)+[P_2-(T_2-T_4)]$$

wherein P_1 is the tangential force acting between the thin work roll and first direct-driven roll, P_2 is the tangential force acting between the larger work roll and second direct-driven backing roll, T_F is the front tension acting on the strip material in the rolling direction, T_B is the back tension acting on the strip material, T_2 is the portion of T_F that acts on the larger work roll, and T_4 is the portion of T_B that acts on the larger work roll, comprising the steps of measuring the values of P_1, P_2, T_F, T_B, and $[P_2-(T_2-T_4)]$, producing a voltage proportional to the value of each, combining together the voltages representing P_1 and P_2 combining together the voltages representing T_F-T_B and $[P_2-(T_2-T_4)]$, comparing the combined voltages to produce an error signal and applying the error signal to the mill to change the horizontal forces on the thin work roll to equilibrium.

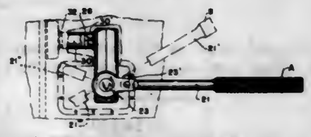
9. In a strip rolling mill comprising at least three rolls and having one thin work roll and a larger work roll, apparatus for automatically maintaining an equilibrium of forces applied to said thin work roll in a plane along the line of travel of the strip material comprising means to sense the tension forces in the strip being rolled, means to sense the propelling forces applied to the work rolls, means to sense the differential force acting upon the larger work roll along said plane, means to produce an error signal derived from combining the sensed forces, and means to alter the value of one of said forces in accordance with the error signal to restore an equilibrium of forces applied to the thin working roll.

3,124,021
WIRE INSULATION STRIPPER
George B. Benander, Oaklawn, R.I., assignor to General Electric Company, a corporation of New York
Filed Apr. 13, 1959, Ser. No. 805,822
5 Claims. (Cl. 81—9.5)



1. In a wiring device, insulation stripping means comprising a cutting base integral with said device, and an insulation-cutting member in engagement with said cutting base having a cutting edge angularly bendable from said cutting base, said cutting base defining a passageway for the insertion of insulated wire which, when inserted, bends said insulation-cutting member from said cutting base in the direction of insertion of said wire, and which, when withdrawn, produces a wedging return movement of the cutting edge of said insulation-cutting member followed by stripping of the insulation from the end of the insulated wire which was inserted through the passageway.

3,124,022
SELF LOCKING WORM GEARED WRENCH
Fred S. Corson, 3600 Woodbine Ave., Baltimore 7, Md.
Filed Dec. 4, 1961, Ser. No. 156,908
1 Claim. (Cl. 81—57)



An attachment for use between a socket wrench element and means for operating the socket element, comprising:

a. a substantially narrow elongated housing, the main portion of which is constructed of two interchangable sections, having, when assembled, flat parallel opposite front and back surfaces and substantially narrow side and end edges of substantially the same width, the side edges adjacent one end of the housing being in parallel planes throughout substantially one-half the length of the housing and the remaining half of the housing being tapered inwardly toward the elongated central axis and the opposite end of the housing,

b. means positioned adjacent the end portion of the elongated housing having the parallel side edges and adjacent each side edge thereof for supporting a first rotatable shaft having a worm gear fixedly associated therewith, said first shaft having means at least at one end thereof for connecting thereto a detachable operating means in close proximity to the side edge of the housing,

c. supporting means adjacent the center of the housing and on a line substantially with the elongated axis of the housing for supporting an intermediate gear associated therewith, the intermediate gear having its rotating axis perpendicular to the axis of the first shaft and positioned to engage the worm gear,

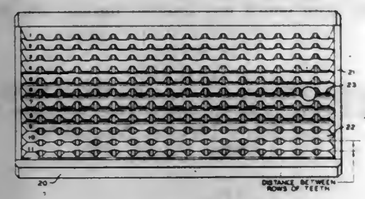
d. means adjacent the opposite and tapered end of the housing for supporting a second shaft parallel with the axis of the intermediate gear having means for connecting said second shaft to the socket element, said second shaft having a gear of substantially less diameter than the intermediate gear fixed thereto, adapted to engage the intermediate gear on the opposite side of the intermediate gear from the worm gear and to be rotated thereby,

whereby the socket wrench element may be rotated at a speed greater than the speed of the gear rotated by the worm gear.

3,124,023
DIES FOR PIPE AND TUBING TONGS
Duane E. Marquis and John H. Province, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Apr. 18, 1960, Ser. No. 22,842
10 Claims. (Cl. 81—186)

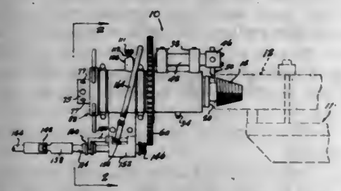
5. A die for pipe and tubing tongs, said die comprising: a bar-like body having a concave working face provided with a plurality of buttressed teeth thereon; said teeth being arranged in from 8 to 12 parallel rows spaced from 0.12 to 0.18 inch apart; each tooth having an apex length within the range of from 1/16 to 1/4 inch; said teeth being spaced apart in said rows a distance within the range of from 1/16 to 1/4 inch to provide from 12 to 20 inches total

lineal contacting surface and said apexes of said teeth providing an arcuate contacting surface having a curvature



essentially the same as the outer circumference of the pipe or tubing with which said die is to be employed.

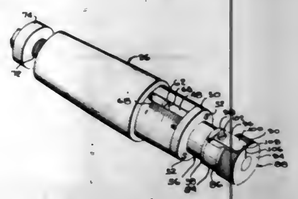
3,124,024
TOOL JOINT SHOULDER FACING MACHINE
Marcus L. Pittman, 4003 Greenwood Road, Shreveport, La.
Filed Mar. 16, 1962, Ser. No. 180,105
3 Claims. (Cl. 82—4)



1. In a pipe shoulder facing machine, a tubular cylindrical mandrel having a threaded conical tip on its forward end adapted to be threaded into the joint of a pipe, means on the rear end of the mandrel for rotating the tip into and out of the joint, a cutter assembly comprising a sleeve journaled on the mandrel behind the tip and having a concentric gearwheel fixed thereon, radial post means extending laterally from the sleeve, a longitudinal support bar extending securably through the post means and having a head on its forward end, a radially inwardly extending cutter mounted on said head and having a blade on its inward end, adapted to engage with the end of a pipe, said mandrel having an annular groove behind said tip in which the cutter blade is positioned, means mounted on the mandrel behind the cutter assembly sleeve for feeding the assembly forwardly, a drive assembly having a relatively stationary member mounted on the mandrel between the cutter assembly and the feed means, a drive shaft journaled on the member and having a pinion engageable with the gearwheel, said member comprising a rear sleeve slidably journaled on the mandrel and having a laterally extending web carrying a bearing through which the drive shaft is journaled, said drive shaft being slidable in the bearing and having a fitting thereon provided with an annular groove, a longitudinally movable shift bar mounted on the web and having a lateral finger engaged in the fitting groove, and a clutch lever pivoted intermediate its ends on the web and pivoted at its inward end to the shift bar.

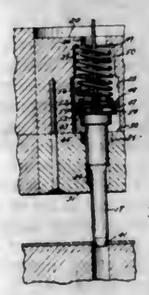
3,124,025
STOP ATTACHMENT FOR METAL LATHES
Emil Bohnet, 204 Ontario St., Buffalo, N.Y.
Filed Mar. 26, 1962, Ser. No. 182,252
8 Claims. (Cl. 82—34)

1. A lathe stop, comprising an elongate body adapted to be inserted into the forward end of the bored spindle of a lathe head stock, a stop spindle extending through and rotatable in the body, a threaded coupling between the body and stop spindle whereby rotation of the latter spindle in the body effects its axial movement relative to the body, the stop spindle having a forward end, a workpiece engaging head secured to the said forward end of



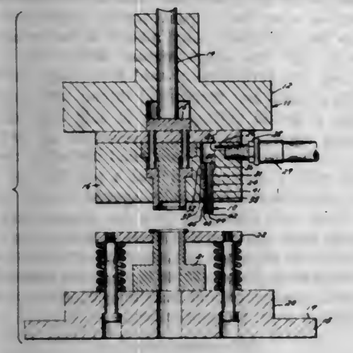
the stop spindle and cooperating index scale and pointer means carried by the body and the stop spindle for relative movement by and upon axial movement of the stop spindle.

3,124,026
MISFEED DETECTORS
Emil Loeffel, New York, N.Y., assignor to H.K. Metalcraft Manufacturing Corp., New York, N.Y., a corporation of New York
Filed May 8, 1961, Ser. No. 125,602
5 Claims. (Cl. 83—62)



1. A misfeed detector device for use in conjunction with a multistage progressive die press construction in which stock is fed in uniform increments beneath a die block, said device comprising: an upper casing element of generally cylindrical configuration and having a first bore axially extending therethrough, a second cylindrical casing element formed of electrically conductive material and having a second bore axially extending therethrough, said second bore being coaxially aligned with respect to said first bore in said first casing element; a pilot member arranged for limited sliding movement within said second bore and having a portion thereof extending outwardly of said second casing element; a generally cup-shaped contact member disposed within said first bore, resilient means within said first bore normally urging said contact member in a direction to contact a portion of said second casing element, insulated electrical conductor means extending in an opposite direction outwardly from said contact member; said cup-shaped contact member defining a recess, an insulating member disposed in said recess, said pilot member having an upper terminal of diameter smaller than said recess and positioned to selectively contact said insulating member; whereby upon the transmission of a force along the axis of said pilot member, contact of said upper terminal with said insulating member serves to interrupt contact of said contact member with said second casing element against the action of said resilient means.

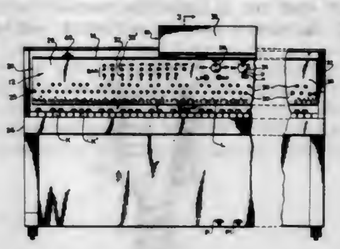
3,124,027
RECIPROCATING AIR NOZZLE FOR PUNCH PRESS MACHINES
Emil Loeffel, New York, N.Y., assignor to H.K. Metalcraft Manufacturing Corp., New York, N.Y., a corporation of New York
Filed May 8, 1961, Ser. No. 123,330
1 Claim. (Cl. 83—98)



In a forming press having a first relatively stationary base member, a second relatively movable member having a die block movable toward and away from said base member, and air blast nozzle means disposed in the area between said base and movable members for pneumatically clearing formed articles, the improvement comprising: said die block including a first elongated bore having a principal axis substantially parallel to the line of movement of said movable member, compressed air supply means communicating with said bore, air blast nozzle means disposed within said bore and arranged for limited reciprocating motion with respect thereto between first and second relative positions; said nozzle means in said first position being disposed wholly within said bore and having a portion partially projecting from said bore when in said second relative position; said nozzle means having an inner surface arranged transversely with respect to the axis of said first bore, and a substantially axially disposed second bore communicating with said air supply means; there being a third bore arranged laterally within said projecting portion of said nozzle means, and communicating with both said second bore and an outer surface of said nozzle means; said last-mentioned outer surface being concealed within said first bore when said nozzle means is in said first position to interrupt passage of air through said third bore; said nozzle being urged to said first position by contact of said projecting portion thereof with a portion of said base member, and normally urged to said second position by the action of pneumatic pressure upon said inner surface.

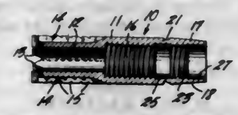
3,124,028
AUTOMATIC MUSICAL INSTRUCTOR
Robert L. Elston, 499 W. 130th St., New York, N.Y.
Filed Mar. 26, 1962, Ser. No. 182,494
4 Claims. (Cl. 84—478)

1. A device for teaching playing of a musical instrument having a series of keys, comprising a cabinet shaped to seat upon the instrument, said cabinet having a front panel disposable vertically transversely across the keys, a first series of lamps on the panel disposed horizontally to align with the respective keys, a second series of lamps on the panel representing numerically successive bars of music to be played on the instrument, an endless belt in the cabinet, roller means removably mounting the belt for travel continuously in the direction of its length, motor means connected to the roller means to drive the same, said belt having two groups of rows of holes, sensing elements supported in the cabinet adjacent the belt and disposed in alignment with said rows of holes, a contact bar adjacent the belt contacting said elements with the belt disposed therebetween, and electrical means in circuit with the contact bar, sensing elements for lighting the lamps selectively as the belt travels in the direction



of its length, the rows of holes in a first group thereof representing notes of a piece of music to be played on said instrument, the rows of holes of a second group thereof representing numerically successive bars of said music, at least one of the holes in the second group being aligned transversely across the belt with each one of the holes in the first group.

3,124,029
SELF-DRILLING SHIELD STRUCTURE
Lewis Walter Bell, Monroe, and Izhar Peskin, Cornwall on the Hudson, N.Y., assignors, by mesne assignments, to Star Expansion Industries Corporation, a corporation of Delaware
Filed Mar. 22, 1960, Ser. No. 16,772
1 Claim. (Cl. 85—2.4)

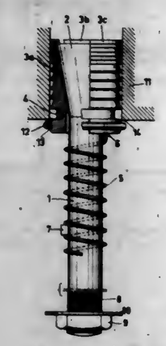


A self-drilling expansion shield comprising a cylindrical body having an axial bore extending from one end to the other and including a plurality of drilling teeth formed at one end, bore means at said one end to receive an expander, means in the cylindrical body adjacent to said one end to facilitate expansion thereof by said expander, an annular groove in the outer surface of the body spaced inwardly from the other end, an axially tapered outer surface between the annular groove and the other end, and two thread portions formed in the axial bore separated by a relatively smooth bore portion having a diameter greater than the thread portions, the smooth bore portion being surrounded by the annular groove in the outer surface.

3,124,030
BOLT STRUCTURE ADAPTED TO BE ANCHORED IN A BORE HOLE ESTABLISHED IN ROCK
Sven Hugo Strand, Hantverkargatan 50, Stockholm, Sweden
Filed May 26, 1960, Ser. No. 31,891
Claims priority, application Sweden June 10, 1959
1 Claim. (Cl. 85—2.4)

A bolt structure adapted to be anchored in a bore hole established in rock or similar anchoring structure, comprising a cylindrical shank which is, at one end, provided with a thread of arbitrary length and, at the other end, with a conical portion tapering towards the shank, a plurality of spaced wedge-shaped members hav-

ing an internal surface complementary to said conical portion and resting against said conical portion and being adapted, while cooperating with the conical portion, to engage the walls of a substantially cylindrical hole, means holding said members together whereby they can move as a unit axially of said conical portion, including a helical spring having spaced turns wound around the shank of the bolt and secured at one end to at least one of the wedge members and an outstanding lug member fixed on said shank, said lug mem-



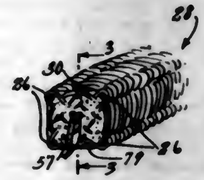
ber entering between the turns of the spring intermediate the ends thereof and being easily glidable between the turns whereby said spring may be compressed by rotation of said bolt, said bolt structure including a release device in the form of a ring-like member around the wedge members and is in engagement with said members whereby the latter are prevented from expanding prior to the ring-like member having been removed, said ring-like member extending radially beyond said wedge members to provide an abutment whereby said ring may be removed as by being pushed off against the edge of the hole.

3,124,031
SCREW FASTENER
Friedrich Karl Knohl, Chicago, Ill., assignor to Illinois Tool Works Inc., a corporation of Delaware
Filed Oct. 20, 1958, Ser. No. 768,317
1 Claim. (Cl. 85—47)



A mounting screw formed from a multi-diameter blank and adapted for application to an apertured workpiece having a given thickness and for receiving a complementary fastener such as a nut, said screw comprising an elongated shank having a length substantially greater than said thickness, a head integral with a trailing end of said shank and having a laterally outwardly projecting clamping face and a tapering free entering end, said shank comprising a first section adjacent said head having a length for extending substantially entirely through an apertured workpiece and including integral helical left-hand thread convolutions having first root and crest diameters and a helix angle less than about 45 degrees, a second section extending from said first section and including right-hand machine screw helical thread convolutions having predetermined root and crest diameters, said root diameter of said first mentioned thread convolutions being at least as great as and the crest diameter of said first mentioned thread convolutions being substantially greater than the crest diameter of said machine screw thread convolutions for promoting full depth secure engagement between said first mentioned thread convolutions and an apertured workpiece through which said second mentioned thread convolutions may freely pass during application of the screw to the workpiece, slot means at the entering end portion of said first shank section defined by a surface intersecting the periphery of said first shank section and a portion of said first mentioned thread convolutions for providing a thread cutting edge at said intersection for facilitating application of the screw into an unthreaded aperture in the workpiece, said head including means cooperable with a driving tool and a plurality of integral protuberances circumferentially spaced around and projecting from said clamping face for engagement with a workpiece, each of said protuberances presenting a cutting face toward the direction of tightening rotation of the first mentioned shank section relative to a workpiece for digging into a workpiece and resisting stripping of the first shank section from the workpiece.

3,124,032
IMPREGNATED BRAIDED PACKING AND METHOD OF MAKING THE SAME
James R. Webster, George E. Houghton, and Theodore L. Velt, Palmyra, N.Y., assignors to Garlock Inc., Palmyra, N.Y., a corporation of New York
Filed Mar. 31, 1961, Ser. No. 99,767
9 Claims. (Cl. 87—1)

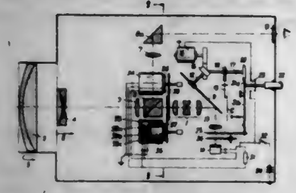


1. Braided packing material comprising an elongate braid of strands of fibrous material, said strands and interstices therebetween being thoroughly impregnated with impregnating material comprising finely divided sintered polytetrafluoroethylene.

3,124,033
CONTROL ARRANGEMENT FOR THE DIAPHRAGM OF A PHOTOGRAPHIC OR CINEMATOGRAPHIC TAKING OBJECTIVE
Otto Freudenschuss, Vienna, Austria, assignor to Karl Vockenhuber and Christl Hauser, both of Vienna, Austria
Filed Feb. 6, 1962, Ser. No. 171,416
Claims priority, application Austria Feb. 17, 1961
13 Claims. (Cl. 88—16)

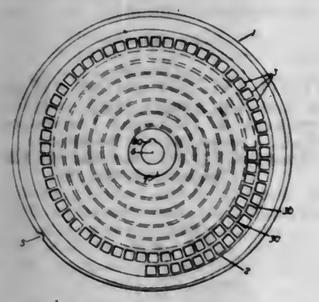
1. In a control arrangement for the diaphragm of a photographic or cinematographic taking objective, the combination of an objective, diaphragm blades provided within said objective and adapted to control the light incident through said objective, a photo resistor arranged to receive light incident through said objective and controlled by said diaphragm blades, a comparison resistor, a galvanometer comprising a permanent magnet and coordinated to each of said diaphragm blades, a rotatable coil arranged in the field of said permanent magnet, two coaxial windings within said coil wound in opposite directions, at least three current-carrying wires of soft metal

connecting said two windings with fixed terminals, said wires being arranged in such a way that they exert no restoring moment to said galvanometer coil upon turning the latter, a source of current, two circuits energized by said source of current, one of said two circuits including one of said two coaxial windings of said galvanometer coil and the other of said two circuits including the other of said two coaxial windings of said galvanometer coil, a first of said two circuits including said photo resistor, a



second of said two circuits including said comparison resistor, the said galvanometer being in driving connection with said diaphragm blades, said galvanometer being adapted to effect an increase of the aperture determined by said diaphragm blades when the light impinging on said photo resistor is decreased and increased, respectively, due to an unbalance of ampere turns in said two windings of said galvanometer coil, in the stationary condition the ampere turns in both said windings being equal.

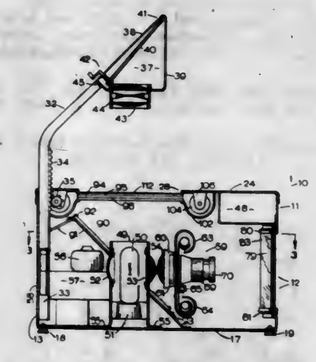
3,124,034
PICTURE RECORD DISC
Ronald Sidney Edhouse, Lower Hutt City, Wellington, New Zealand (164 Oriental Parade, Box 3352, Wellington, Wellington, New Zealand)
Filed Feb. 12, 1959, Ser. No. 792,896
Claims priority, application Great Britain Feb. 19, 1958
9 Claims. (Cl. 88—16.2)



1. A rotatable disc having cinematographic photographic areas arranged successively in a continuous spiral thereon, and circumferentially narrow radially extending partition means provided circumferentially between each pair of adjacent photographic areas, said partition means extending axially from the plane of said photographic areas so as to form drive engaging means to be engaged by drive means of a photographic apparatus whereby when the disc is rotatably driven the succession of photographs are reproduced in cinematic form.

3,124,035
MULTI-PURPOSE PROJECTION DEVICE
James W. Lucas, Santa Monica, Calif. (1122 S. Robertson Blvd., Suite 5, Los Angeles 36, Calif.)
Filed Jan. 8, 1959, Ser. No. 785,693
10 Claims. (Cl. 88—24)

1. An overhead projection device, comprising, a case having an aperture in the top and the front thereof; light source means, a first hinged reflecting surface and a second stationary reflecting surface resepectively disposed adjacent said front and top apertures and being relatively disposed and spaced apart so as to direct the light beam from said light source through a light path of substantially the same length as that of a conventional projector, and through said top aperture in said case; a condensing Fresnel lens supported interiorly of said top aperture and means for positioning movably thereabove a transparent band of image-bearing material; film guide means, independent of said light source and being movable into the light path thereof, for supporting pictorial film and slide material in the light beam of said light source, and lens means associated therewith for projecting said pictorial material whereby aerial images thereof are formed along a plane substantially coincident with

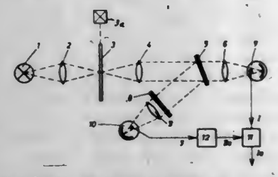


that of said transparent band of image-bearing material interiorly of said top aperture; an external reflecting surface and projection lens adjacent thereto being disposed above said case and adapted to project images formed in said top aperture along an angular light path and to focus said images on a viewing screen; said first reflecting surface being mounted on the inner surface of a door hinged to said case and rotatable so as to open or close said frontal aperture; said second stationary reflecting surface being spaced from and angularly disposed relative to said frontal and said top apertures whereby an image-bearing light beam from a projector disposed externally of said case when directed through said frontal aperture upon said second reflecting surface is directed upwardly through said Fresnel lens so as to form aerial images in substancoplanar alignment with said image-bearing transparent band.

3,124,036
METHOD AND APPARATUS FOR MULTICOLOR PRINTING
Rudolf Hell and Hans Keller, Kiel, Fritz-Otto Zeyen, Heikendorf, near Kiel, and Eberhard Hennig, Aschberg, Germany, assignors to Dr.-Ing. Rudolf Hell, Kiel K.G., Kiel, Germany
Filed Dec. 14, 1959, Ser. No. 859,276
Claims priority, application Japan Nov. 4, 1959
19 Claims. (Cl. 88—24)

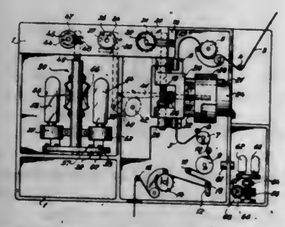
1. In the art of reproducing a multicolor copy picture from a multicolor pattern picture by point-by-point, line-by-line scanning of said pattern picture by subjecting said pattern to illumination, a method generating a corrected color extract signal to serve as control signal for the color reproducing means, said method comprising the steps of projecting the beam of light emanating from said pattern as a result of said illumination onto a first filter capable of transmitting colors of a preselected group and of reflecting other colors, directing the reflected light through

a second color selective filter, generating electrical potentials in accordance with the light intensities passed by



said filter respectively, and modifying the electrical signal derived from said first filter in accordance with the signal derived from said second filter.

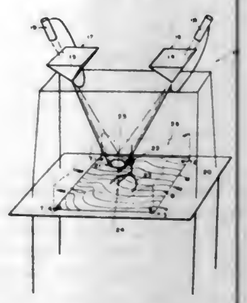
3,124,037
PHOTOGRAPHIC PROJECTOR
Albert Straub, Stuttgart-Bad Cannstatt, and Josef Schleifer, Krumbach, Schwaben, Germany, assignors to Eugen Bauer G.m.b.H., Stuttgart-Unterturkheim, Germany
Original application May 22, 1957, Ser. No. 660,801. Divided and this application Nov. 1, 1960, Ser. No. 66,544
Claims priority, application Germany June 7, 1956
2 Claims. (Cl. 88—24)



1. In a photographic projector, in combination, a housing; an elongated shaft extending substantially vertically in said housing and supported for rotation about its axis by said housing; carrier means connected to said shaft for turning movement about the axis thereof and including a block member and a pair of pins fixed to said block member and projecting spaced from each other substantially normal to the axis of the shaft to one side of said block member; an objective carrier mounted on said pins of said carrier means for shifting movement therealong in a direction parallel to the optical axis; an objective carried by said carrier; an adjusting spindle turnably supported for rotation about its axis by said block member of the carrier means, extending parallel to the optical axis of the projector, and threadedly connected to said objective carrier so that when said spindle is turned said carrier will be shifted along said pins with said objective for adjusting the position of the latter; transmission means interconnecting said spindle with said shaft for turning said spindle about its axis when said shaft is turned; and manually operable means accessible from opposite sides of said housing at the exterior thereof and operatively connected to said shaft for turning the latter about its axis so as to adjust the objective.

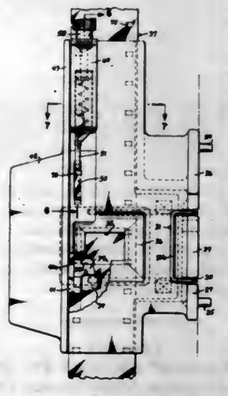
3,124,038
METHOD OF PLOTTING OUTCROP CONTOURS OF SUB-SURFACE MINERAL DEPOSITS
William J. Dimond, 1941 Shady Oak Circle, Allison Park, Pa.
Filed Oct. 25, 1962, Ser. No. 233,030
11 Claims. (Cl. 88—24)

1. In the art of photogrammetric mapping, the method of establishing the loci of points indicating the outcropping contour of a sub-surface mineral stratutum underlying a given area of the earth's surface, on a map of said area devoid of surface contour lines, said method comprising depicting on a map of said area elevation lines indicating the elevation of various points in the surface of the sub-surface stratum, placing said map on a datum plane beneath a pair of stereoscopic projectors having therein diapositives of the area to be mapped, stereoscopically projecting a three-dimensional image on said datum plane of the diapositive images, disposing a pickup screen between the projectors and said datum



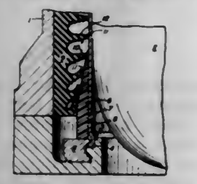
plane, positioning the screen at an elevation corresponding to the elevation of a selected elevation line on the map, moving the screen in a plane parallel to the datum plane along a path corresponding in vertical projection to the contour of said selected elevation line, and inscribing directly on said selected elevation line by vertical projection points corresponding to the points of coincidence between the plane of the screen and the surface delineations of the three-dimensional stereoscopic image as the screen is moved along said path and then repeating the operations of the last three steps in connection with the other elevation lines on the map.

3,124,039
FILM GATE AND ADVANCING APPARATUS
Charles H. Anderson, Auburn, Wash., assignor to United States Projector & Electronics Corporation, Federal Way, Wash., a corporation of Washington
Filed July 23, 1959, Ser. No. 829,129
3 Claims. (Cl. 88—28)



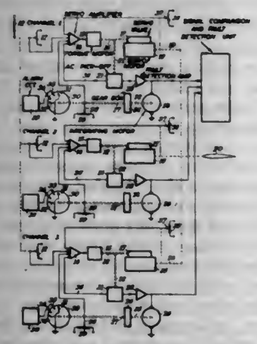
1. Combination film gate and advancing apparatus for use with a strip of film having multiple picture frames therealong and a row of advancing holes spaced apart in correspondence to the length of said frames, film gate means presenting a film path, a slot arranged to register with the travel line of said row of a film in said path, and an aperture intersecting said path for revealing one picture frame at a time, said slot having a film feed and discharge ends, a film advancing spring finger carried by said film gate means and self-urged into said slot to consecutively interfit by its tip with said advancing holes in the film, and finger advancing and retracting means mounted on said film gate means and operatively associated with said finger, said feed end of the slot being sloped toward its discharge end and said path, and said discharge end of the slot being undercut to generally parallel said slope of the feed end.

3,124,040
SUPPORT SYSTEM FOR TUBE LAUNCHED MISSILE
Willy A. Fiedler, Los Altos, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Feb. 26, 1962, Ser. No. 175,853
9 Claims. (Cl. 89—1.7)



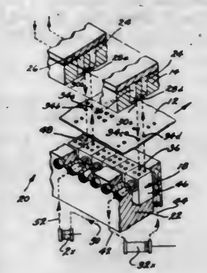
1. As a soft-support system for tube-launched missiles, the combination of a cylindrical missile, a tube and a resilient, annular mat secured within said tube, said cylindrical missile being releasably retained within said tube and mat, said mat having attached thereto a plurality of flexible ring protrusions, which ring protrusions are normal to the axis of said missile and are in circumferential contiguity with said missile whereby tendencies toward excessive movement of a stowed missile within the launching tube is retarded and possible damage to the missile as a result of externally applied shocks and vibrations is obviated.

3,124,041
ELECTRO-HYDRAULIC CONTROL SERVO-MECHANISMS
George McMurtry, Belfast, and James Stark, Newtownabbey, Northern Ireland, assignors to Short Brothers & Harland Limited, Belfast, Northern Ireland
Filed Mar. 21, 1962, Ser. No. 181,372
Claims priority, application Great Britain Apr. 10, 1961
7 Claims. (Cl. 91—1)



1. An electro-hydraulic servo system comprising a common input control member and a common output member, at least three independent channels for the transmission of signals from the input control member to the output member, each channel comprising a first motor adapted to be controlled by control signals developed by movement of the input control member, a hydraulic servo motor mechanically coupled to drive the said common output member, a hydraulic servo valve operated by said first motor for controlling the flow of hydraulic fluid to said servo motor, means in each channel to generate a valve signal representative of the position of the servo valve, and feedback means for each channel and including an integrator connected to integrate the valve-position signal to generate a feedback signal representative of the first time integral of the valve-position signal, and means to feed back said feedback signal to said channel.

3,124,042
MULTIPLE SEQUENCE VALVE
Guy S. Mahan, Hudson, Ohio, assignor to International Basic Economy Corporation, New York, N.Y., a corporation of New York
Filed Nov. 1, 1961, Ser. No. 149,394
11 Claims. (Cl. 91—37)

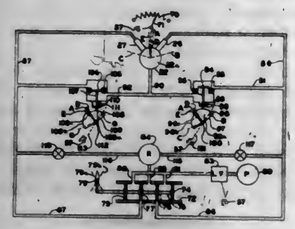


1. A fluid-operated device for controlling the movement of a movable output member in accordance with patterns of apertures in a movable tape, comprising: a cylinder; a piston reciprocable within said cylinder, said movable output member being attached to said piston for movement therewith; an intake manifold; means for supplying an operating fluid to said intake manifold; an exhaust manifold; means for exhausting fluid from said exhaust manifold; a fluid passage communicating with said cylinder; and ports connecting said passage with each of said manifolds, fluid flow through said ports being blocked by said tape, whereby said apertures in said tape selectively connect said manifolds and passage in such a manner as to cause said piston to move selectively in two directions.

3,124,043
FLUID MOTOR
Giles A. Kendall, Van Nuys, and Robert C. Lauterwasser, Rolling Hills, Calif., assignors to Menasco Manufacturing Company, Burbank, Calif., a corporation of California
Filed Oct. 19, 1960, Ser. No. 63,607
8 Claims. (Cl. 91—178)

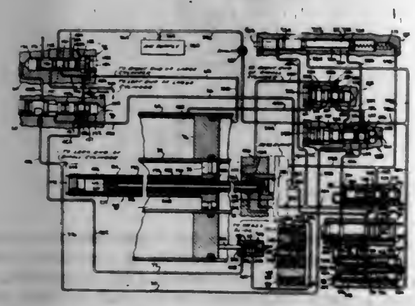
1. A fluid motor comprising, a crank case having a chamber containing a crank shaft, first and second cylinders extending from said crank case at an angle with respect to each other, first and second pistons in said cylinders connected to said crank shaft by piston rods, separate fluid passages connected to the outer end of each of said cylinders for directing fluid to the upper side of said pistons; and a fluid passage connected to said crank case chamber for directing fluid to the undersides of both said pistons simultaneously, and valve means for controlling the flow of pressure fluid to the ends of said cylinders and

to said crank case through said passages in such a manner that the undersides of said first and second pistons are simultaneously pressurized when one of said pistons



is pressurized on its upperside and are simultaneously relieved of pressure when the other said piston is pressurized on its upper side.

3,124,044
HYDROPNEUMATIC DRIVE MECHANISM
Nathan Ackerman, Lake Success, N.Y. (% Sandex, Inc., 678 Berriman St., Brooklyn, N.Y.)
Filed Mar. 9, 1961, Ser. No. 94,570
29 Claims. (Cl. 91—280)



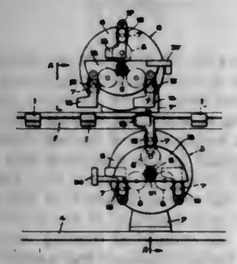
1. In a fluid drive mechanism, a first cylinder, a fluid actuated first piston movable forwardly and rearwardly in said first cylinder and separating said cylinder into two chambers, a second cylinder, a second piston, said second piston being relatively movable forwardly and rearwardly in said second cylinder as a function of the movement of the first piston in its cylinder and separating said second cylinder into two chambers, a fluid actuated first valve means for selectively connecting either chamber of the first cylinder to a source of fluid under pressure, a second valve means including a restricted passageway, a liquid filled path including said second valve means connecting the two chambers of the second cylinder whereby when the liquid flows through said path and restricted passageway the liquid pressure in a portion of said path between the second piston and the restricted passageway is raised and whereby the movement of the first piston is restrained, a passageway connecting said portion of the path with the first valve means to maintain the first valve means in a first position in which fluid under pressure is supplied to one chamber of the first cylinder, and means biasing the first valve means to a second opposite position whereby when movement of the first piston is obstructed the high pressure of the liquid in said portion of the path will drop and the biasing means will shift the first valve means to its second position so as to supply fluid under pressure to the other chamber of the first cylinder and thereby reverse the direction of movement of the drive mechanism.

3,124,045
PLUNGER RECIPROCATING MEANS FOR OIL-FEEDING DEVICES
Takeshi Kuwauchi, Tokyo, Japan, assignor to Toyoo Yamada, Tokyo, Japan
Filed Feb. 4, 1963, Ser. No. 255,844
Claims priority, application Japan Apr. 12, 1962
3 Claims. (Cl. 91—342)



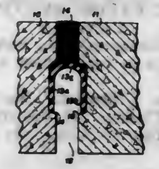
1. Plunger reciprocating means for an oil feeding device or the like comprising a machine body having a piston chamber and a closure head therefor, a slidable piston separating said piston chamber into upper and lower chambers, a plunger rod slidably extending through said body into said lower chamber with an internal end secured to said piston and an external end adapted to be connected to a pump rod, bore means in said plunger rod, and passage means through said plunger rod establishing communication between said bore means and said lower chamber, said piston housing a central bore, a hollow sliding tube defining an internal passage, said tube having upper and lower ends and having an intermediate portion slidably extending through the central bore of said piston, perforation means in said sliding tube adjacent the lower end thereof establishing communication between said bore means and said internal passage, a pushing element secured to the lower end of said tube, compression spring means spaced in said bore means on opposite sides of said pushing element to bias the same upon movement in two directions, means defining a slide bore in said closure head and upper and lower annular recesses on opposite ends of said slide bore, a slide cylinder in said slide bore having an upper end in said upper annular recess and a lower end in said lower annular recess, the lower end of said slide cylinder being attached to the upper end of said tube for unitary movement therewith and having an internal bore communicating with the internal passage of said tube, aperture means through said slide cylinder adjacent its upper end establishing communication between said internal bore and said upper annular recess, annular passage means in said upper annular recess separating the same in upper and lower portions, outlet means in said closure head communicating with said annular passage means for exhausting the same, upper and lower annular packings fixed to said slide cylinder below said aperture means so as to be on opposite sides of annular passage means for alternate control thereof, a passageway in said closure head establishing communication between said upper chamber and the lower portion of said upper annular recess, valve means in said lower annular recess separating the same into upper and lower parts, passage means in said closure head establishing communication between said upper chamber and the lower part of said lower annular recess, an annular projection on the lower end of said slide cylinder to control said passage means leading from the lower part of said lower annular recess, second aperture means in said slide cylinder adjacent said annular projection establishing communication between said internal bore and the lower part of said lower annular recess, said valve means engaging said annular projection to close said second aperture means, inlet means commuicating with the lower part of said lower annular recess and being adapted to guide compressed fluid therein causing movement of said valve means away from said annular projection to open said second aperture means, and exhaust means for the upper part of said lower annular recess.

3,124,046
MECHANISM FOR FOLDING-IN OR FOLDING-OVER THE BOTTOM PARTS OF A BAG IN A BAG-FABRICATING MACHINE
Theodor Jungmayr, Stuttgart, Germany, assignor to Firma Fr. Hesser, Maschinenfabrik-Aktiengesellschaft, Stuttgart-Bad Cannstatt, Germany, a corporation of Germany
Filed Dec. 14, 1960, Ser. No. 76,439
Claims priority, application Germany May 29, 1956
2 Claims. (Cl. 93—12)



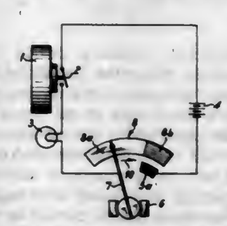
1. In a bag making machine, in combination: continuously operative conveyor means providing a rectilinear path of travel; a series of elongated regularly spaced mandrels carried by said conveyor means and extending outwardly therefrom with their longitudinal axes perpendicular to said path of travel, each of said mandrels having a flat free end adapted to have an incompletely folded end portion of a bag tube project therebeyond; two planetary gear means disposed adjacent to said path of travel at opposite sides thereof, each of said gear means being driven in synchronism with said conveyor means, the rotational axes of said gear means being parallel to said longitudinal axes, each of said gear means comprising a plurality of regularly arranged planet members which travel in a common circular path concentric with the rotation axis of its associated gear means, each of said planet members remaining substantially fixedly oriented with respect to said rectilinear path of travel during the course of its travel around said circular path, the rotational axis of one of said gear means being located beyond the rotational axis of the other gear means along said rectilinear path such that the common plane of the rotational axes of said two gear means is inclined obliquely with respect to said rectilinear path; a folding finger carried by each of said planet members; means mounting each folding finger on its respective planet member for pivotal movement about an axis perpendicular to the rotational axis of its associated gear means, each folding finger traveling in a circular path which intersects said rectilinear path with a free end portion of said finger progressively advancing and retreating laterally over said free end of one of said mandrels with a velocity component along the direction of travel of said mandrel which is substantially the same as that of the mandrel, the free end portions of successive fingers carried by each gear means passing over the free ends of successive mandrels; and cam means causing said free end portion of each finger to be displaced toward and away from said free end of said one of said mandrels during the course of said lateral advancing and retreating movement thereover, one of the fingers associated with one of said gear means preceding one of the fingers of said other of said gear means during the course of said lateral movements for performing two consecutive folding operations on said projecting end portion of each bag tube.

3,124,047
JOINT SEAL
John M. Graham, 1808 E. Yale St., Phoenix, Ariz.
Filed Sept. 2, 1960, Ser. No. 53,806
1 Claim. (Cl. 94—18)



An expansion joint and structure for sealing the top of a gap between masonry slabs, comprising opposed end surfaces on the slabs spaced apart and defining a gap therebetween, the end surfaces each having a continuous recess widening the gap at a location above its bottom and below its top and providing opposed shoulders in both end surfaces of the slabs mutually spaced above the bottom of the gap; a continuous elongated resilient sheet material member having a wall thickness which is small as compared with the width of the gap, and bowed in the shape of an arch of inverted U-shaped cross-section, and having a substantially semi-cylindrical upper arched portion with depending parallel side portions yieldably pressing against the surfaces located between the opposed shoulders, said depending portions being confined by said opposed shoulders and supported thereby, said side portions being separated from each other by spacing greater than said wall thickness and the portion of the gap below said member remaining substantially open; and an elastic sealing compound initially flowed into and filling the space between the end surfaces of the slabs above the semi-cylindrical portion of said member and supported thereby substantially level with the tops of said end surfaces.

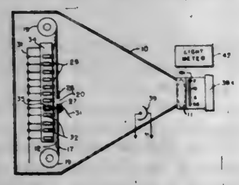
3,124,048
PHOTOGRAPHIC CAMERA WITH AUXILIARY ELECTRIC LIGHT SOURCE HAVING ENERGIZING CIRCUIT INCLUDING EXPOSURE METER INDICATOR
Paul Greger and Erwin Doring, Braunschweig, Germany, assignors to Voigtländer A.G., Braunschweig, Germany, a corporation of Germany
Filed June 27, 1962, Ser. No. 205,703
11 Claims. (Cl. 95—10)



1. A photographic camera comprising, in combination, a scene illuminating electric light source operatively associated with said camera; an exposure meter including an

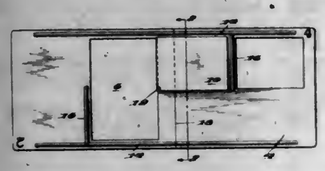
indicator movable relative to a scale having consecutive first and second ranges, the first range representing values of ambient light adequate within the range of possible time-exposure combinations of the camera, and the second range representing values of ambient light inadequate within the range of possible time-exposure combinations of the camera; said indicator being electrically conductive; an energizing circuit for said source open at a normally open switch device; said switch device including said indicator and contact means extending along said second range and engaged by said indicator, when in said second range, to close said switch device.

3,124,049
AUTOMATIC EXPOSURE CONTROL FOR CAMERA
Vincent W. Ball, Allenhurst, N.J., assignor to the United States of America as represented by the Secretary of the Army
Filed Apr. 1, 1963, Ser. No. 269,826
4 Claims. (Cl. 95—10)
(Granted under Title 35, U.S. Code (1952), sec. 266)



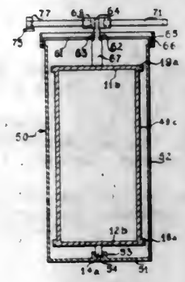
1. In a photographic camera means to control the quantity of light reaching the film at different areas thereof during an exposing cycle comprising a lens for focusing an image upon a focal plane, a focal plane shutter having a slot therein, a linear type electromagnetic motor acting to drive said shutter, light sensing means operable to read light flux values of the image at successive positions of said slot in said shutter, an energy source connected to actuate said motor, means to control the output of said source in accordance with the output of said sensing means whereby the changes in speed of travel of the shutter will control the exposure upon the film.

3,124,050
MULTIPLE EXPOSURE DEVICE FOR CAMERAS
Harry Bay, 2215 Westfield Ave., Reno, Nev.
Filed Aug. 21, 1962, Ser. No. 218,384
5 Claims. (Cl. 95—36)



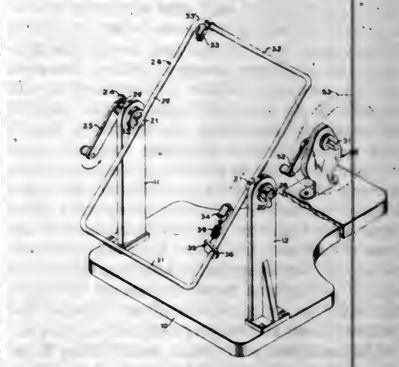
1. A multiple-picture masking device comprising a plate of substantially twice the length of the exposure area of the camera with which the device is to be used, a first transverse quarter area of the plate adjacent one shorter end of the plate and a second transverse quarter area in the other half of the plate remote from the shorter end of the plate both being opaque, a third quarter area having a first opening therein of substantially half the size of the exposure area, means carried by the plate and movable for selectively covering and uncovering half of said opening, and the fourth quarter area having a second opening therein of substantially one-fourth the size of the exposure area located on one side of the longitudinal center line of the plate.

3,124,051
PHOTOGRAPHIC APPARATUS
Werner W. Buechner, 2205 Jenkins Drive, Midland, Mich.
Filed Apr. 19, 1960, Ser. No. 23,313
25 Claims. (Cl. 95—96)



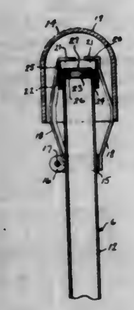
1. An apparatus for the treatment of photographic sheet materials having a cylindrical configuration at constant temperature comprising as the principal components a waterbath, having at least one vertical wall and a horizontal bottom, a multiplicity of upright cylindrical treating vessels contained in the waterbath and at least one cylindrical closed drum-type support of a diameter slightly smaller than the inside diameter of the said treating vessels such that upon insertion of the drum-type support into any one of the cylindrical treating vessels a narrow annular void is formed between the interior wall of the vessel and the exterior wall of the closed drum-type support.

3,124,052
APPARATUS FOR PROCESSING CINEMATOGRAPHIC FILM
Norman E. Elsas, 3025 E. Pine Valley Road NW., Atlanta, Ga.
Filed Nov. 6, 1958, Ser. No. 772,253
4 Claims. (Cl. 95—100)



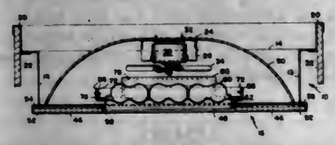
1. A device for use in processing of cinematographic film and comprising a substantially rectangular frame of substantially inert wire having side and end members and corner portions at the junction thereof, film mounting clips on the frame for holding taut film mounted on the frame, the mid-portions of a parallel pair of the members having notches with flat bottoms substantially parallel with the plane of the frame, the notches providing abutment walls at each end of the bottoms and providing sections of the members with reduced dimensions, and axially aligned shafts having transversely slotted end portions, a pair of said sections being disposed in the slots of said end portions respectively with the walls abutting the end portions to prevent slippage of the frame in the slots, the frame being of somewhat yieldable material to permit resilient bending of the side members for the removal of the frame from the shafts for disposition in a processing tray.

3,124,053
FALLOUT SHELTER
Robert E. Zahn, Milwaukee, and William H. Welty, Brookfield, Wis., assignors to Air Filter Corporation, Milwaukee, Wis.
Filed Nov. 15, 1961, Ser. No. 152,449
4 Claims. (Cl. 98—1)



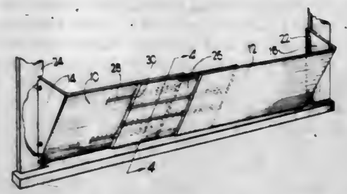
1. In a fallout shelter having an outlet stack communicating with the upper end thereof and including a length of vertical pipe extending into the atmosphere, an assembly detachably connected with the outer end of said pipe including a collar for connection with the pipe, upwardly extending bracket arms secured to the collar, a protecting hood secured to the bracket arms and extending over the outlet end of the pipe in spaced relation thereto, a cap carried by said bracket arms including an annular plate detachably fitted on the extreme upper end of the pipe, a lightweight valve plate normally seated on the upper end of said annular plate for preventing flow of air into the pipe, said valve plate being freely movable off of the annular plate by pressure of air in said pipe, and means for limiting the movement of said valve plate in an upward direction.

3,124,054
TELEPHONE BOOTH CEILING STRUCTURE
Percival H. Sherron, Jamaica, N.Y. (% Sherron Metallic Corp., 1201 Flushing Ave., Brooklyn 37, N.Y.)
Filed Nov. 21, 1961, Ser. No. 153,956
7 Claims. (Cl. 98—33)



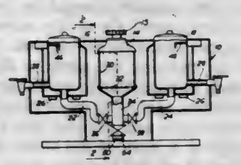
1. A telephone booth having a ceiling structure comprising a housing adapted to be mounted at the top of the telephone booth and including a horizontally extending panel means providing the telephone booth ceiling, said panel means including a light transmitting panel, means pivotally supporting said light transmitting panel for swinging movement downwardly from the horizontal position thereof, means for illuminating the telephone booth including a light producing panel, and means for mounting said illuminating means on said light transmitting panel for movement therewith, said light producing panel being mounted on the upper side of said light transmitting panel and being smaller than said light transmitting panel in the horizontal extent to avoid interference with the booth ceiling during conjoint pivotal movement of said light transmitting panel and said light producing panel.

3,124,055
WINDOW VENTILATOR
Anthony J. Rubera, 483 Woodbridge St., Manchester, Conn.
Filed Nov. 29, 1962, Ser. No. 241,000
2 Claims. (Cl. 98—99.5)



1. A window ventilator comprising
two relatively adjustable panels,
said panels being formed integrally of a single sheet of molded plastic material and having an end portion thereof bent at right angles to the main portion of said panels,
interengaging grooves and projections on said panels extending lengthwise of said panels to permit lengthwise adjustment thereof,
and intermediate panel having grooves extending from end to end on one surface thereof and projections formed on the opposite surface thereof extending from end to end,
the grooves and projections on said intermediate member being adapted to engage respectively the grooves and projections on said first mentioned panels,
and means to detachably attach said end portions to a window frame.

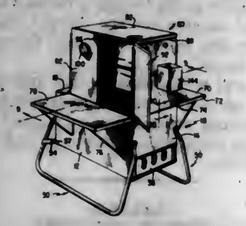
3,124,056
COFFEE INFUSERS
Cecil Hayes, London, England, assignor to W. M. Still & Sons Limited, London, England, a British company
Filed Aug. 27, 1962, Ser. No. 219,411
Claims priority, application Great Britain Aug. 29, 1961
5 Claims. (Cl. 99—283)



1. A coffee infuser comprising a generally rectangular cabinet housing all the main parts of the infuser and of such a size and shape that it can be readily mounted on a service counter, the said main parts of the infuser including an electrically-heated horizontally-arranged cylindrical boiler disposed in the rear part of said cabinet, an upright coffee infusion chamber located in the front part of the said cabinet, a pair of upright storage containers made of transparent material and arranged one on each side of said infusion chamber, a plurality of pipe connections joining said boiler to said infusion

chamber and said infusion chamber to each of said storage containers whereby coffee is infused within said infusion chamber and is then delivered direct to said storage containers, means for heating each storage container so that coffee stored in said storage containers is kept hot, removable lids on said storage containers so that their contents can be inspected, and tap-controlled outlets at the lower ends of said storage containers, said pipe connections connecting said infusion chamber to said two storage containers including two independently-operated solenoid-actuated valves whereby the infusion can be delivered to either one of said storage containers at will, two electric switches, one switch for each storage container, connected electrically to a third solenoid-operated valve contained in said pipe connection connecting said boiler to said infusion chamber, each of said electric switches being respectively connected to said first and second solenoid-operated valves whereby operation of either one of said switches causes said third valve and one of said other valves to be opened so that coffee is infused within said infusion chamber and is then delivered to one of said storage containers, a control device at the upper end of each of said storage containers adapted to close said opened valves automatically directly the infused coffee within said last-mentioned storage container reaches a certain level, said control device comprising an electrical probe arranged to complete an electrical circuit through the infused coffee directly the latter touches said probe.

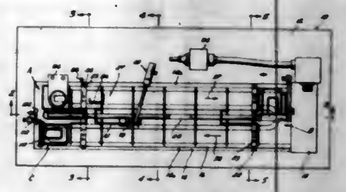
3,124,057
PORTABLE CAMP STOVE
Vernon R. Kiser, P.O. Box 482, Somerville, N.J.
Filed Aug. 1, 1961, Ser. No. 128,573
12 Claims. (Cl. 99—340)



1. A portable stove comprising walls defining an enclosure, a pair of handles each of U-shape pivoted at their free ends to opposite walls of the stove, said handles being rotatable from a lower position in which they extend below the stove for support thereof to two upper positions in which they extend above the stove, said handles in one of said upper positions having their bights engaged to be grasped for carrying the stove, a detachable strap slideably engaging said handles to hold them in said lower and spread condition, said strap having inturned end portions slideably grasping said handles and a flange seating under and engaging a wall of the stove to prevent further outward spread of the handles under weight of the stove, and said detachable strap being inverted and engaged with the handles in the second of their upper positions with said flange seating on an upper edge of a wall of the stove wherein the handles are fixed in said second upper position and spread in diverging directions for support of a rotatable spit.

4. A portable stove comprising a bottom wall, vertical side, front and rear walls, a top wall partly enclosing the interior of the stove, an opening in said top wall removably receiving a chimney including a damper, a draft and ash removal opening in the lower portion of one of said side, front and rear walls, a panel having openings hinged to said one wall and pivotally movable to engage and cover said draft opening and away from said wall to uncover the draft opening to permit ash removal, a panel having draft openings slideably mounted on said hinged panel to regulate the draft, and a top closure for the stove removably seated on the front and rear walls to enclose the open top next to said top wall, in combination with a collapsed oven stored within the stove, said oven having a top panel having a downturned peripheral flange, a pair of end panels hinged to the ends of said top panel, each of said end panels having a rear panel and a door panel hinged at the sides thereof whereby the end, rear and door panels may be folded to lie flat against the underside of the top panel and within the confines of the peripheral flange on the top panel.

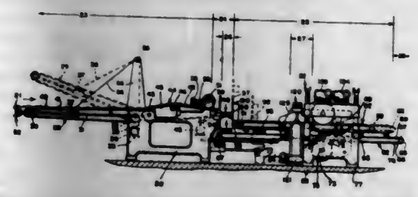
3,124,058
COOKING DEVICES
Arthur L. Elston, Kewanee, Ill., assignor to Kof-E-Brake Donut Company, Inc., Kewanee, Ill.
Filed July 15, 1960, Ser. No. 43,240
6 Claims. (Cl. 99—354)



1. Cooking apparatus comprising: a tank having a bottom wall for containing a heated fluid cooking medium, means in said tank for advancing a food article therethrough including; article engaging means, means mounting said article engaging means for reciprocating movement alternatively parallel to said bottom wall and normal to the bottom wall of said tank, a drop pan having a bottom and movable between a first position below supply means for introducing an uncooked food article into said tank whereby an introduced food article will be received in said drop pan, and a second position within the path of said article engaging means, means connecting said drop pan to said mounting means for non-reciprocating engagement when said mounting means moves said article engaging means normal to said bottom and for positive reciprocating movement of said drop pan between said two positions when said mounting means moves said article engaging means parallel to said bottom, means connected to said article advancing means for sequentially engaging a food article in said drop pan when the latter is in said second position, withdrawing the food article from said drop pan and maintaining the food article in said second position when said drop pan is returned to said first position whereby said article engaging means will engage and advance the food article, and means for actuating said advancing means.

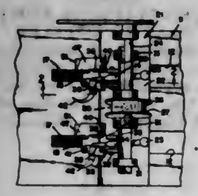
3,124,059
MACHINE FOR HANDLING PAPER SHEETS OR COLLAPSED BOXES
Raymond A. Labombarde, Lowell Road, Nashua, N.H.
Filed Feb. 14, 1962, Ser. No. 173,617
25 Claims. (Cl. 100—4)

1. A machine for building a plurality of sheets or like articles, said apparatus comprising lower carrier means for advancing a vertical stack of said sheets along a horizontal path from a stacking station, through a tying station to a discharge station; a hopper mounted over said carrier means at said stacking station for accumulating a vertical stack of horizontal, flatwise sheets; tying means, along said carrier means, at said tying station for tying each successive stack into a bundle; upper carrier and pressure means extending horizontally, at a spaced distance above said lower carrier means, from said stacking



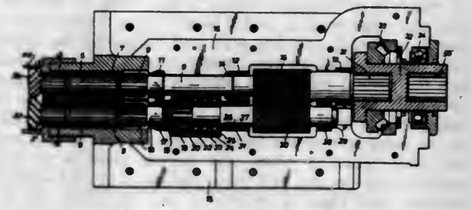
station through said tying station for compressing a stack before the tying thereof; power actuated indexing means for advancing said upper and lower carrier means a predetermined distance along said path and counting means, at said stacking station, for actuating said indexing means when a predetermined number of sheets have been accumulated in said hopper.

3,124,060
NEEDLE GUIDE FOR BALER
Manuel A. Mattos, P.O. Box 144–C, Patterson, Calif.
Filed Feb. 5, 1963, Ser. No. 256,302
2 Claims. (Cl. 100—23)



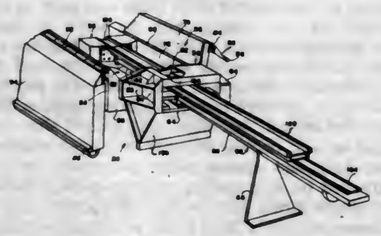
1. In a baler wire tying attachment of the type having a wire carrying needle, means for moving said needle through a baling column to projected position and removing said needle to original position, a first and a second gripper block, said blocks spaced apart approximately equally on either side of said needle in its projected position in the normal operation of said tying attachment, a gripper finger pivotally mounted between said blocks, means for pivoting said gripper finger alternately against said first or said second block in timed relation to movement of said needle, a twister shaft in proximity to said second block having a twister finger, and means for turning said twister shaft in timed relation to movement of said needle, the improvement which comprises a needle guide and mounting means mounting said needle guide on said first block, said needle guide having a tongue cooperating with said last named means and projecting from said first block generally parallel to a plane midway between said blocks at about the elevation of the top of said first block and then curving away in a flank curving from said second block and said plane and also curving away from said elevation of the top of said first block in a direction toward said original position of said needle, whereby when said needle moves from original position toward projected position displaced from said plane toward said first block, said needle contacts said flank and is guided back into said plane.

3,124,061
MULTIPLE SCREW PRESS
Hans Stüdli, Sr., Hard, Winterthur, Switzerland
Filed Nov. 20, 1962, Ser. No. 242,036
Claims priority, application Switzerland Jan. 20, 1959
3 Claims. (Cl. 100—146)



1. A twin screw press comprising two cooperating screws of opposite pitch, a main drive shaft connected to one screw, an auxiliary drive shaft connected to the other screw and parallel with the main drive shaft, said main and auxiliary shafts being of relatively large diameter and disposed relatively close together and spaced less than the diameter of either shaft, a pair of helical gears only and without additional gearing operatively mounted on and interconnecting said two shafts for driving the auxiliary drive shaft from the main drive shaft and provided with a pitch angle of substantially 45°, the helical gear mounted on the main drive shaft having a pitch in the same direction as the pitch of the said one screw and opposite to the pitch of the gear mounted on the auxiliary shaft and the pitch of the latter gear being in the same direction as the pitch of the said other screw, said screws projecting radially of the shafts a distance less than the diameter of either shaft, the main drive shaft having an extension projecting beyond the end of said auxiliary drive shaft, and an axial thrust bearing on said extension of greater diameter than the distance between the axes of the two shafts for taking up the axial thrust exerted by the said one screw onto the main drive shaft as well as the axial thrust exerted by the other screw transmitted by the said helical gears from the auxiliary shaft onto the main drive shaft.

3,124,062
SCRAP METAL SHEAR AND CHARGING BOX THEREFOR
Wallace M. Thompson, Cordele, Ga., assignor to Harris Foundry & Machine Co., Cordele, Ga., a corporation of Georgia
Filed June 15, 1960, Ser. No. 36,367
24 Claims. (Cl. 100—215)



1. A charging box for a machine for operating on metal scrap comprising: a box-like receptacle having an open top, a bottom wall, a pair of opposed end walls, and two opposed upright side walls, said bottom wall including a main portion and an edge portion hinged thereto about

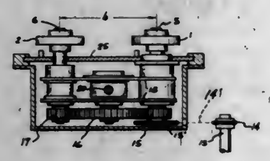
an axis parallel to said side walls for pivotal movement between substantially horizontal and substantially upright positions, one of said side walls being fixedly secured to said bottom wall edge portion, and one of said end walls having an inwardly movable portion the lower edge of which conforms to and is substantially coextensive with the width of said bottom wall main portion and the height of which is substantially equal to the width of said bottom wall edge portion; and a hopper plate coextensive in length with said one side wall and hinged to the upper edge thereof about an axis parallel to said first-mentioned axis for pivotal movement between a position extending outwardly at an angle approaching 90° to the plane of said one side wall and a position extending downwardly on the outer side of and substantially parallel to said one side wall, whereby when said hopper plate is in said parallel position and said edge portion is in said upright position, said plate is horizontal and scrap can be deposited thereon and subsequently dumped into said receptacle by pivotal movement of said edge portion toward its said horizontal position and pivotal movement of said plate toward its said angular position.

3,124,063

APPARATUS FOR EMBOSSING MARKINGS ON TRAVELLING WORKPIECES

Friedrich Pützler, Aachen, and Josef Kuckertz, Wurselen, Germany, assignors to Schumag Schumacher Metallwerke G.m.b.H., Aachen, Germany, a corporation of Germany

Filed Mar. 28, 1961, Ser. No. 98,874
Claims priority, application Germany Mar. 31, 1960
12 Claims. (Cl. 101—6)



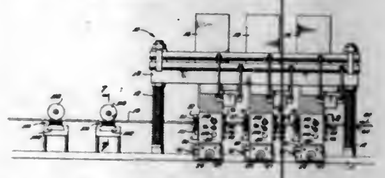
1. Apparatus for forming impressions at given intervals on elongated travelling workpieces, comprising guide means defining a travel path for the work, a first embossing die, a first shaft spaced a fixed distance from said path, said first die being rotatably mounted on said first shaft for forming an impression in the work during each revolution of the die, a second embossing die spaced from said first die along said path and mounted to rotate at the same speed as said first die for applying to the work another impression independently of the first die, a second shaft on which said second die is rotatable, control means connected with said second shaft for periodically varying the spacing of said second shaft from said path to bring said second die into contact with the work to thereby form an impression on the work at regular intervals separated by idle revolutions of said second die, and drive means connected with at least one of said dies and being independent of the work travel, a rocking member pivotally mounted on said first shaft, said second shaft being journalled on said rocking member in spaced relation to said first shaft, said control means comprising an eccentric journalled on said rocking member midway between said two shafts, a ring surrounding said eccentric and pivotally connected with a fixed point, a first pinion fastened on said first shaft, a spur gear coaxially joined with said eccentric and meshing with said first pinion, a second pinion fastened on said second shaft and meshing with said gear, said two pinions having like numbers of teeth, and said drive means being drivingly connected with said first shaft.

3,124,064

COLOR TAPE FEED MECHANISM FOR EMBOSSING MACHINE

William K. Schick, Fullerton, Calif., assignor, by mesne assignments, to Dashew Business Machines, Inc., Los Angeles, Calif., a corporation of Delaware

Filed Apr. 21, 1961, Ser. No. 104,658
8 Claims. (Cl. 101—18)



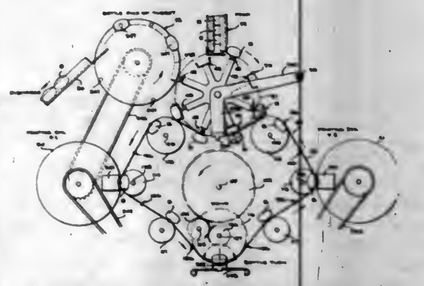
1. For use with an embossing machine having transfer apparatus for moving cards to an embossing station where type characters are impressed into the cards, the improvement comprising, in combination: spaced guides for positioning a flexible tape in a location between the type characters and one of the cards, the tape having color material on a side adjacent the card, a stationary housing, a continuously rotating motor on the housing, a pair of pulleys rotatably supported on the housing and forming a bight through which said tape extends from one of said guides, means whereby at least one of said pulleys is driven by said motor, and means actuated by movement of said cards for closing the bight to tension the tape and move a fresh portion thereof into position between said spaced guides.

3,124,065

METHOD AND MACHINE FOR PRINTING PLASTIC BOTTLES

John S. Bozek, Chicago, and Justin Simpson, Elmhurst, Ill., assignors to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed Aug. 8, 1960, Ser. No. 48,306
28 Claims. (Cl. 101—37)



1. An apparatus for printing on bottles and the like having an arcuate printed matter receiving surface, said apparatus comprising a printing member movable about an arcuate path, and a bottle conveyor for moving bottles past said printing member and in contact therewith, said bottle conveyor including an endless conveyor member, supports for said conveyor member including a wheel type support adjacent said printing member for changing the direction of movement of said conveyor member, and bottle supports carried by said conveyor member, said wheel type support having a shaft with an axis spaced from said printing member a distance equal to the radius of curvature of said printed matter receiving surface, whereby a bottle carried by said bottle conveyor is moved in an arcuate path during a printing operation by the movement of the conveyor member about said shaft axis.

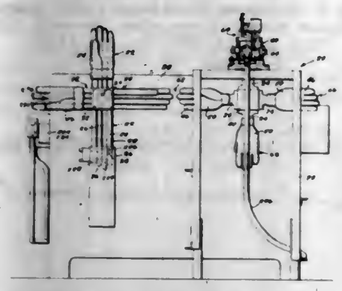
22. A bottle handling system for handling bottles in the presentation thereof to a printing station or like work stations, said system comprising an article feed means, a turret disposed adjacent to said feed means, said turret having alternating first and second bottle supports, only said first bottle supports receiving bottles from said feed means, a bottle conveyor for receiving bottles from said first bottle supports and moving the bottles through said work station, said bottle conveyor including an endless conveyor member and third bottle supports carried by said endless conveyor for receiving bottles from said first bottle supports, the spacing between said third bottle supports corresponding to the spacing between said first and second bottle supports and there being an odd number of third bottle supports, said second bottle supports being generally of the cradle type for engaging portions of bottles carried by said third bottle supports and removing the bottles therefrom subsequent to the passage thereof through said printing station, and a bottle pick-up unit for removing bottles from said second bottle supports.

3,124,066

GLOVE FORMING DEVICE HAVING GLOVE PRINTING MEANS INCORPORATED THEREIN

William B. Crane, Newton, N.C., and Russell C. Parrish, Greenville, Ala., assignors to Riegel Textile Corporation, a corporation of Delaware

Filed Nov. 29, 1961, Ser. No. 155,714
10 Claims. (Cl. 101—44)



1. In a glove forming device of the type having a glove form on which gloves are placed for forming, means for printing indicia on the gloves while the gloves are on the form, said printing means comprising a printing bed formed in the surface of said form, a printing mechanism adjacent said form and having a retractable printing plate movable toward said form and against said printing bed for printing of the surface of a glove on the form, means for automatically operating said printing mechanism to move said plate against said bed and glove sensing means for controlling said printing means.

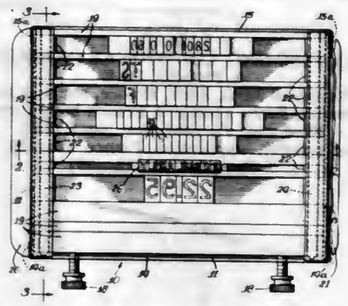
3,124,067

LAYOUT CHASE

Ray F. Morgan, Northfield, Ill., assignor to The Morgan Sign Machine Co., Chicago, Ill., a corporation of Illinois

Filed Dec. 6, 1962, Ser. No. 242,772
2 Claims. (Cl. 101—394)

1. A layout chase comprising a rectangular frame having an enclosed bottom portion for supporting type and slugs, a plurality of parallel spacer slugs arranged within and extending between two of the sides of said rectangular frame, flange means along the top of said two sides of said frame directed inwardly and overlying the ends of said spacer slugs for retaining the latter within the frame, quads disposed between successive spacer slugs at each of the ends thereof whereby spaces are defined between the successive spacer slugs intermediate of the quads for receiving the bodies of type characters, a pair of parallel rods one each underlying each of said flange



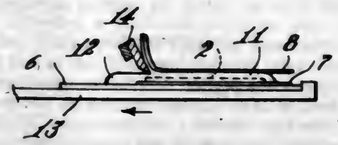
means and extending transversely through said spacer slugs and said quads for maintaining the spacer slugs and quads in assembled relation, and means for making the slugs and type fast within the frame.

3,124,068

FLEXIBLE ELECTROTYPE PRINTING PLATE AND METHOD OF MANUFACTURE

James E. Thomas, Winchester, Mass., assignor of one-half to New England Electrotype Co., Cambridge, Mass., a corporation of Massachusetts, and one-half to Clyde H. Thomas Trust, Oswego, N.Y.

Filed June 25, 1962, Ser. No. 205,041
3 Claims. (Cl. 101—401.1)



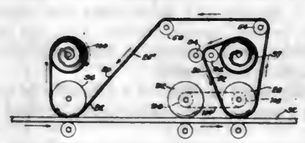
1. In the manufacture of an electrotype printing plate, the method which comprises forming a shell having raised characters on its face and corresponding recesses in its back, placing the shell on a support which extends beyond one edge of the shell, covering said back with thermoplastic material, fusing the material, subjecting the fused material to pressure to fill said recesses and form a layer of the material a portion of which flows beyond said edge of the shell and adheres to said support, with said support pulling the plate through a skiving machine to reduce said layer to uniform thickness, and then trimming off said portion.

3,124,069

MARKING DEVICE AND METHOD

John W. Krueger, Cottage Grove, and Jon F. Warner, Oregon, Wis., assignors to La Salle Steel Co., Hammond, Ind., a corporation of Delaware

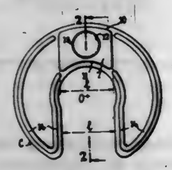
Filed Dec. 28, 1959, Ser. No. 862,121
17 Claims. (Cl. 101—426)



1. The method of marking moving surfaces by an offset reproduction process which comprises cleaning the

surface prior to its marking with one side of a moving tape, imposing a transferable marking on the other side of the tape and moving the marked portion side of the tape in contact with the surface.

3,124,070
RELAY FORMING ADDITIONAL CHARGE FOR A PROJECTILE
Joseph Raymond Jasse, Paris, France, assignor to Hotchkiss-Brandt, Paris, France, a French body corporate
Filed Jan. 17, 1961, Ser. No. 83,217
Claims priority, application France Jan. 28, 1960
7 Claims. (Cl. 102—39)



1. A relay constituting additional propellant means for a projectile having a tail portion, said relay having an axis and comprising, a hollow container, and a propellant charge in the hollow container, said container including an inflammable enclosing wall of plastic material with a fabric reinforcement layer, said container extending about said axis in a plane perpendicular to said axis substantially in the shape of a segment of a ring, said wall including a forward wall portion and a rear wall portion in axially spaced relation, said container including branches defining a radially extending passageway through which is adapted to be passed the tail portion of the projectile when the relay is mounted on the projectile, said container including a projecting portion on the forward wall portion extending axially and located at the same radial distance from said axis as said passageway, said projecting portion defining an inner cavity containing a portion of said propellant charge, said projecting portion extending axially a distance equal to the axial spacing between the forward and rear wall portions, said projecting portion having a shape corresponding substantially to the free space in the radial passageway with the relay mounted on the tail portion of the projectile whereby the projecting portion of an adjacent second relay identical to the first said relay and mounted on the tail portion can be accommodated within the radial passageway of the first relay while the projecting portion of the first relay can be accommodated in the radial passageway of the second relay and the propellant charges of said first and second relays are symmetrically disposed about said axis.

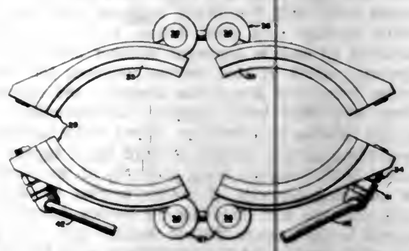
3,124,071
EXPLOSIVE BOLT OPERATED QUARTER BAND
Joseph O. Mobley, Silver Spring, and Allen J. Sondheimer, Chevy Chase, Md., assignors to the United States of America as represented by the Secretary of the Navy
Filed July 28, 1961, Ser. No. 127,745
1 Claim. (Cl. 102—49)
(Granted under Title 35, U.S. Code (1952), sec. 266)

A quickly detachable connector for coupling a motor section of a missile to a telescoping bird section having a clamping groove formed therein with one side of said groove inclined with respect to the longitudinal axis of said bird section, comprising:

a clamping band formed of a plurality of arcuate segments arranged in a substantially circular configuration,

said segments having cross-sectional configurations complementary to the shape of the clamping groove in said bird section,

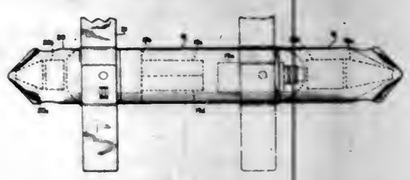
hinge means interconnecting pairs of said segments at alternate junctions thereof to enable said segments to pivot radially outward to uncouple said motor and bird sections, and



explosive bolts interconnecting adjacent segments at the remaining junctions thereof to form a continuous band wedged within the clamping groove for normally maintaining said motor and bird sections in coupled relationship,

said explosive bolts when detonated causing said segments to pivot radially outward.

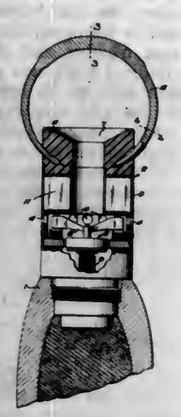
3,124,072
MISSILE PROPULSION
Werner E. Herrmann, Northridge, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Aug. 24, 1960, Ser. No. 51,621
4 Claims. (Cl. 102—51)



3. In a missile of the rocket propelled type, the combination comprising a main body portion, a first rocket means attached to one end of the body portion for propelling said main body portion in one direction, a second rocket means attached to the other end of the body portion for propelling said main body portion in the opposite direction, means for detaching the first rocket means after launching and means for actuating said second rocket means following a period of free flight of the missile.

3,124,073
PROXIMITY FUSE
Alfred S. Khouri, Milwaukee, Wis., and Ralph E. Carroll, Gainesville, Palmer H. Craig, Coral Gables, and Paul M. Tedder, Gainesville, Fla., assignors to the United States of America as represented by the Secretary of the Army
Filed Mar. 14, 1951, Ser. No. 215,441
3 Claims. (Cl. 102—78.1)

1. In combination with a projectile, a proximity fuse comprising: a cylindrical metal casing; a nose piece of insulating material mounted on the front end of said casing; radio proximity fuse circuitry located in said nose piece and said casing; and an external open-ring loop antenna supported at its ends by said nose piece and located in a plane passing through the axis of said projectile, the radial distance from the axis of said projectile to the outer surface of said projectile being substantially qeual to, and at least as large as, the maximum radial distance from said axis to the outer extremities of said open-ring loop antenna, the ends of said open-ring



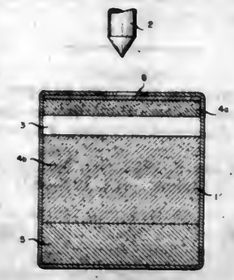
antenna extending into said nose piece and connected to operate in conjunction with said radio proximity fuse circuitry.

3,124,074
INERTIALLY ARMED FUZE
Paul Kaiser, Weihergasse 28, Schramberg, Wurttemberg, Germany, and Josef Müller, Unotweg 6, Schramberg-Sulgen, Wurttemberg, Germany
Filed Oct. 13, 1960, Ser. No. 62,466
Claims priority, application Germany Oct. 16, 1959
3 Claims. (Cl. 102—78)



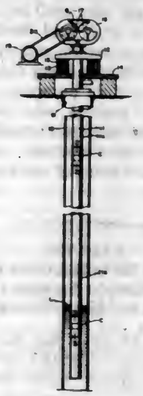
1. Time fuze with sensitive fuzing for projectiles with and without rifling, comprising a striker pin, a cylindrical worm with a spiral groove therein rotatably mounted on the striker pin, an inertia weight provided around the worm to drive the latter, a transverse pin in the weight projecting into and engaging in the groove in the worm, a timing mechanism having a balance regulator mounted in the fuze, means to prevent rotation of the weight, and a safety finger engaging the balance regulator and mounted on the weight parallel to a longitudinal axis of the fuze to secure the balance regulator of the timing mechanism.

3,124,075
MEANS FOR IGNITING AN IGNITER PRIMER
John Alex Dorge Eldh, Backaskiftsvagen 68, Enskede, Sweden, and Gösta Vilhelm Gustafsson, Satravagen 62, Hagersten, Sweden
Filed Oct. 9, 1961, Ser. No. 143,707
8 Claims. (Cl. 102—86.5)



1. Means for initiating an encapsulated igniter primer comprising in combination, an anvil with flat upper and lower surfaces, a thin layer ignition charge pressed onto said anvil and substantially coextensive in area with the upper surface thereof, the coextensive areas of said ignition charge and said upper surface being in surface to surface contact throughout, a priming charge contacting and substantially coextensive in area with the lower surface of the anvil, the coextensive areas of said priming charge and said lower surface being in surface to surface contact throughout, a pin arranged upon striking to penetrate the capsule and said ignition charge and to strike the upper flat surface anvil to thereby detonate the ignition charge at said upper flat surface.

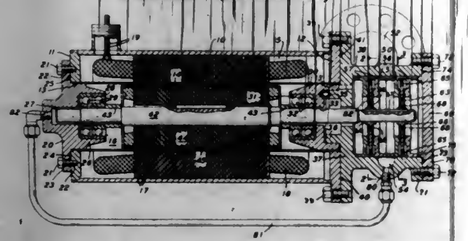
3,124,076
TUBING COUPLING FOR SONIC PUMP
Albert G. Bodine, Jr., Los Angeles, Calif. (7877 Woodley Ave., Van Nuys, Calif.)
Filed Feb. 7, 1962, Ser. No. 171,706
3 Claims. (Cl. 103—43)



1. A deep well pump which includes: an oscillatory fluid impelling pumping member adapted for placement in the well, a sonic wave generator located at the ground surface, and an elastic pump tubing string operatively interconnecting said sonic wave generator and said oscillatory fluid impelling pumping member, said elastic tubing string being adapted to transmit elastic deformation waves of compression and tension longitudinally therethrough from said generator to said pumping member,

said tubing string comprising at least two coupled lengths of elastic tubing having adjacent ends, an internally upset, externally tapered and screw-threaded coupling pin portion on said adjacent end of one of said two tubing lengths, and an externally flush, internally tapered and screwthreaded box portion for said pin on said adjacent end of the other of said two tubing lengths, the entirety of said coupling portions being located inside the perimeter of the lengths of tubing.

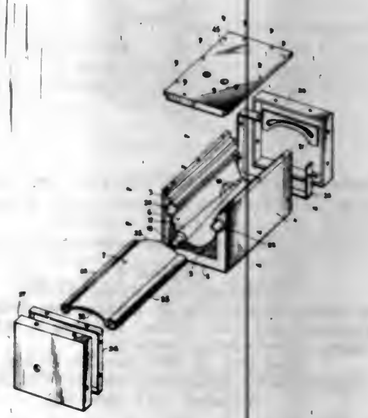
3,124,077
MOTOR DRIVEN PUMPS
Howard T. White, Melrose Park, Pa., assignor to Fostoria Corporation, Huntingdon Valley, Pa., a corporation of Ohio
Filed Jan. 5, 1962, Ser. No. 164,466
6 Claims. (Cl. 103—87)



1. A motor driven pump having a pump housing, end closures for the opposite ends of said pump housing, a shaft in said pump housing, said pump housing having a hollow cylindrical portion with an interior longitudinally axially elongated cylindrical face and fluid inlet and delivery connections extending to said interior face at longitudinally axially spaced locations along said face, said pump housing having a fluid transfer passageway intermediate said connections, said fluid transfer passageway comprising a groove along said face extending peripherally and longitudinally, a plurality of pump stator units in facing pairs mounted in said hollow cylindrical portion, said units each having outer annular rim portions engaged with said interior face, said rim portions each having circumferentially spaced inlet and outlet openings communicating respectively with said fluid inlet connection and said fluid transfer connection and with said fluid transfer connection and said fluid delivery connection, said units each having an annular fluid pumping space inwardly of and bounded by its rim portion, said rim portions providing a boundary wall for said fluid transfer passageway between an outlet and inlet opening, and fluid impeller members in each of said pairs of units keyed to said shaft for rotation therewith.

3,124,078
REFLEX DIAPHRAGM PUMP
Robert N. Hardy, Colorado Springs, Colo., assignor, by mesne assignments, to MBM Mineral Industries, a corporation of Arizona
Filed Nov. 15, 1960, Ser. No. 69,438
9 Claims. (Cl. 103—152)

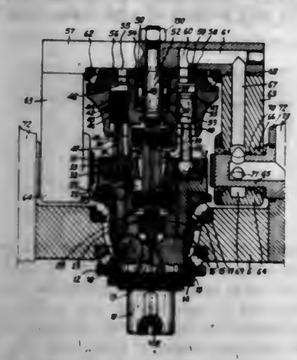
1. A collapsible chamber motor for the compression and displacement of fluids comprising in combination;
a base member having a pair of unstanding side walls;
a concave filler carried by said base member;
a resilient diaphragm;
means clamping said diaphragm in an arched configuration to said base member, said diaphragm extending the longitudinal length of the base member and, in cooperation with the concave surface of the said filler, defining a partially enclosed activating chamber;
the said means clamping the diaphragm further including, a pair of longitudinally slotted housing cylinders, a pair of longitudinally slotted clamping cylinders each of which is concentrically arranged with and journaled for rotation within one of the said housing cylinders, the said housing cylinders being rigidly attached to the upstanding side walls of the said pump base member and the lengthwise side edges of the resilient diaphragm proruding through the longitudinal slots of the inner clamping cylinders, whereby the said diaphragm side edges are tightly held by the inner cylinders and are adapted to move through an arc whose center is the longitudinal axis of the said concentric cylinders and whose length is defined by the width of the slot in the outer housing cylinders, said slots being of greater width than the slots in the inner clamping cylinders;



end caps secured to said base member at each end thereof completing the enclosure of the said activating chamber; resilient sealing seats mounted on the said end caps and receiving the ends of the said diaphragm, whereby the said activating chamber is air tight;
a passage lengthwise of the said filler and establishing communication with the said activating chamber;
a manifold, said manifold disposed within said passage and adapted for connection to a source of vacuum.

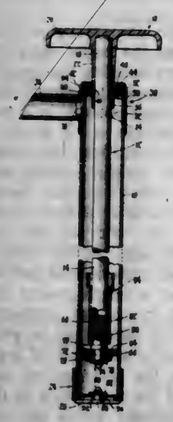
3,124,079
ROTARY MACHINE OPERATED BY COMPRESSED FLUID
Jean Jacques Boyer, Paris, France, assignor to Societe Anonyme Sciper, Monte-Carlo, Monaco, a corporation of Monaco
Filed Mar. 30, 1962, Ser. No. 183,926
Claims priority, application France Apr. 13, 1961
4 Claims. (Cl. 103—162)

1. A hydraulic rotary machine of the type comprising a cylinder head provided with passageways for an operative fluid, said passageways opening in ports on a flat surface of said cylinder head, a drum adapted to rotate around its axis perpendicular to said flat surface of said cylinder head and provided with a number of cylinders with parallel axes, said cylinders being distributed uniformly around the drum axis and opening in ports provided in a flat surface facing and parallel to the flat surface of the cylinder head, a piston in each cylinder and means to rotate the drum and means to reciprocate said pistons in said cylinders during rotation of the drum, means to urge said drum towards said cylinder head; a thrust bearing inserted between the drum and the cylinder head and spacing the facing flat surfaces provided with ports of said drum and of said cylinder head, a valve plate inserted in the space between the drum and the cylinder head, said valve plate being provided with ports opening on both its opposite surfaces for communication between



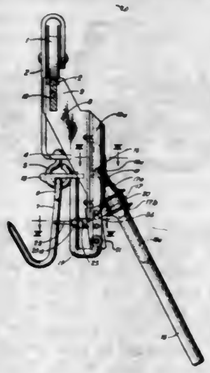
the ports in the cylinder head and the ports in the drum, a number of ring packing means surrounding the ports in one of the surfaces of said valve plate, a frictional packing on the opposite surface of said valve plate, and means rotatably securing the valve plate with the element cooperating with the ring packing means.

3,124,080
PLASTIC PUMP CONSTRUCTION
Earl L. Sisson, Stratford, Conn., assignor to Beckson Manufacturing Corporation, Bridgeport, Conn., a corporation of Connecticut
Filed Apr. 27, 1961, Ser. No. 106,075
2 Claims. (Cl. 103—178)



1. In a plastic hand pump construction, in combination, a pump cylinder and plunger shank reciprocable therein; a flexible plastic discharge fitting comprising a cap secured to the cylinder, said cap having an outlet passage for liquid and having a bearing opening through which latter the plunger shank extends; a substantially rigid plastic bearing bushing for the plunger shank, extending around the latter and carried by the discharge fitting at the bearing opening thereof, said bushing being constituted as a piece separate from the discharge fitting; a resilient plastic sealing collar separate from the bearing bushing and the discharge fitting and having a mounting flange portion and a depending skirt portion, said collar extending around the plunger shank with the skirt portion projecting inward of the pump cylinder, engaging the bearing bushing and discharge fitting and being carried by the latter, the skirt portion of the collar closely fitting and sealingly engaging the plunger shank under continual pressure and preventing the passage of liquid between the bearing bushing and plunger shank as the latter is moved outward of the cylinder; a rigid plastic support ring disposed within the discharge fitting and engaged with the flange portion of the sealing collar, for holding the collar in the fitting, said discharge fitting having a sleeve portion receiving one end of the pump cylinder and the end edge of said cylinder abutting the support ring and retaining the same engaged with the flange portion of the sealing collar, said bearing bushing having an annular recess in its outer periphery and said discharge fitting having an internal annular flange disposed in said recess and providing an interfitting engagement between the fitting and bushing, the periphery of the bearing bushing and flange portion of the sealing collar together with the support ring being clamped between the end edge of the cylinder and the internal annular flange of the discharge fitting.

3,124,081
MEAT HOOK STABILIZER
Charles N. Baker, 5207 Regatta, and Cecil H. Richards, 3006 Rolinda Drive, both of Dallas, Tex.
Filed Apr. 12, 1962, Ser. No. 186,935
5 Claims. (Cl. 104—89)

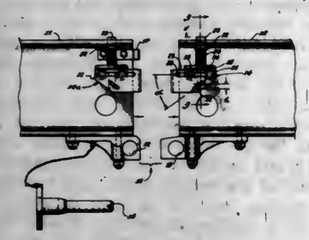


1. In a device of the class described a first frame member having a slot in the upper end thereof arranged to embrace a rail; a second frame member slidably attached to the first frame member; an operating handle pivotally attached to the first frame member; link means pivotally connected between the operating handle and the second frame member; a bifurcated hook member extending outwardly from the second frame member arranged to receive an eye of a meat suspension device therebetween and the eye of a meat suspension hook therebehind; and a hook retainer member extending outwardly of the second frame member having a slot therein arranged to receive the shank of a meat suspension hook.

3,124,082
TRACK INTERLOCK AND SAFETY STOP MEANS
Frank R. Larsen, Temple City, Calif., assignor, by mesne assignments, to Northrop Corporation, Beverly Hills, Calif., a corporation of California
Filed Jan. 28, 1963, Ser. No. 254,262
4 Claims. (Cl. 104—98)

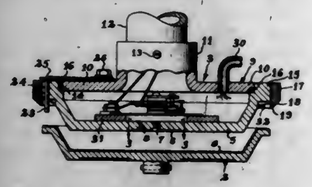
1. In material handling equipment the combination comprising: a rail member having flanges at least one of

which defines a plane outer surface; a clevis member; first means mounting said clevis member on said rail member for movement between normal and depressed positions; a pin member; second means mounting one end of said pin member in said clevis member and the other end in



an aperture provided in said one flange for movement between elevated and a lowered positions; and said second means including camming means functioning to move said pin member from said elevated to said lowered position in response to forces moving said clevis member from said normal position to said depressed position.

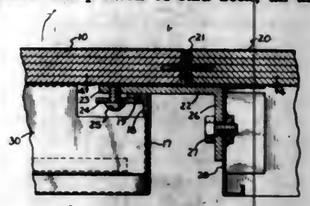
3,124,083
MOLD FOR PIE SHELLS
Harold T. Atwood, 11129 Eggleston Ave., Chicago 28, Ill.
Filed Aug. 30, 1961, Ser. No. 134,882
2 Claims. (Cl. 107—15)



1. A mold comprising a lower mold member adapted to hold a pan, an upper mold member having a closed top and having a bottom shaped to fit within said lower mold member, a sealing ring slidably mounted on the peripheral edge of said upper mold member, said sealing ring having a lower edge engageable with the upper surface of a pan positioned in said lower mold member to form a closed cavity prior to the interengagement of said upper and lower mold members as said upper mold member is moved toward said lower mold member, an air inlet extending through the top of said upper mold member, said air inlet being connected to a source of air under pressure, said bottom having a plurality of vertical bores extending therethrough, means in said upper mold member for hygienically cleaning the air therein, and a valve secured to the bottom of said upper mold member in registration with all of said bores to control the flow of said hygienically clean air into said closed cavity.

3,124,084
ADJUSTABLE DESK DEVICE
James L. Fuller, Waynesboro, and Charles W. Tomlinson, Orange, Va., assignors to Acme Visible Records, Inc., Crozet, Va., a corporation of Delaware
Filed Feb. 15, 1963, Ser. No. 258,823
3 Claims. (Cl. 108—64)

1. In combination a circular table top, support means for said table top, a cylindrical apron concentric with said top embracing said support means and fixedly secured to the latter with the upper edge of said apron spaced from the undersurface of said top, an inwardly projecting horizontally disposed holder flange fixedly secured to the inner periphery of said apron, and an auxiliary desk extending radially of said table top and adjustably secured thereabout, said desk including a top having its inner end disposed substantially in contiguous relationship to the outer periphery of said table top, means supporting the opposed outer end portion of said desk, an arm secured



to the underside of said desk top inner end portion and disposed adjacent and plane parallel to said desk and table tops, said arm projecting beneath the table top and above and beyond its said apron and holder flange, and clamp plate means carried by the terminal end portion of said arm disposed beneath said table top releasably securing said flange to said arm end portion.

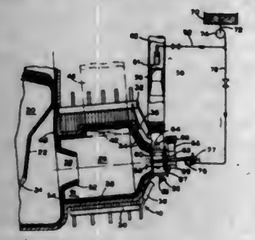
3,124,085
FOLDING TABLE
Pascual Jose Maria Oscoz Sanchez, Ibaiez de Bilbao 6, Bilbao, Spain
Filed Mar. 8, 1962, Ser. No. 178,506
4 Claims. (Cl. 108—115)



1. A folding table comprising a plurality of legs, a rigid bracer securing the upper ends of a pair of said legs, foldable bracers securing the remaining legs to said pair of legs and arranged to permit the remaining legs to be swung to lie contiguously in a plane adjacent the plane of said pair of legs, a top panel, and a joint connecting the top panel and legs including an open frame having two opposite parallel rodlike arms connected to each other at their ends by rodlike members, one of said frame arms being rotatably secured to the lower surface of said top panel, the other of said frame arms being rotatably secured to and parallel with said rigid brace connecting the upper ends of said pair of table legs, said frame arms being of a length greater than the combined length of the rigid brace and connected pair of table legs, whereby said top panel may be swung from a vertical position parallel to said pair of legs to a horizontal position resting on the plurality of unfolded legs with said rigid brace and the upper ends of the connected pair of legs partially enclosed within the open frame.

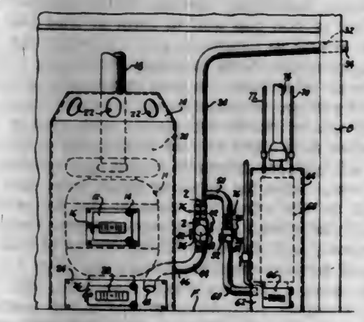
3,124,086
SLURRY FIRED CYCLONE FURNACE
Warnie L. Sage, Louisville, Fritz L. Heuker, Wadsworth, and Ralph M. Hardgrove, North Canton, Ohio, assignors to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed Dec. 8, 1960, Ser. No. 74,644
13 Claims. (Cl. 110—7)

3. The process of burning particle-form coal which comprises introducing whirling streams of air into a combustion chamber of circular cross-section so as to move at a high velocity along the circumferential wall thereof, introducing a stream of slurry comprising particle-form coal in an aqueous suspension into said combustion chamber so as to move towards the circumferential wall of the chamber and to mix and whirl with said air streams, while maintaining a normal mean temperature in the chamber above the coal ash fusion temperature, passing the slurry and air so introduced axially of the combustion chamber through a helical path along the circumferential wall of



the combustion chamber of sufficient length to cause evaporation of the moisture content of the slurry, combustion of the fuel, and the release of fuel ash in a condition to form a sticky surface on the circumferential wall to which fuel particles adhere and are scrubbed by the contacting gases, discharging the combustion chamber gases from said combustion chamber, and collecting and withdrawing the ash separated in the combustion chamber in a molten condition.

3,124,087
SAFETY INDICATOR FOR HEATING SYSTEM
Arnold F. Ross, 2448 S. 7th St., Columbus 7, Ohio
Filed Nov. 19, 1962, Ser. No. 238,598
2 Claims. (Cl. 110—72)



1. In a heating system having a furnace, a combustion air conduit passing vertically from an inlet above said furnace to an outlet in the base of said furnace,

(1) said furnace including a combustion chamber above and communicating with said base,

(2) a safety indicator device interposed in a vertical portion of said conduit,

(3) a pivoted-plate-containing air regulating valve also interposed in said vertical portion of said conduit, immediately adjacent and below said indicator device and in open communication with said indicator device,

(4) the said safety indicator device including a transparent cylindrical casing of a height approximately twice its diameter,

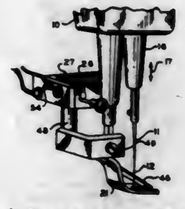
(5) a rotatable vertical axis spindle mounted in the casing extending the full height of said casing,

(6) a plural bladed fan secured at the midheight of said rotatable spindle,

(7) whereby an observer looking downwardly from outside the casing and above the fan,

(8) may clearly simultaneously see both the degree of rotation of the fan and the position of the pivoted plate of the valve, and by considering these simultaneous conditions, determine whether or not the conduit is open or whether it may be unsafely clogged somewhere along its length.

3,124,088
BOBBIN CONTROL FOR SEWING MACHINES
James L. Bryson, Clifton, N.J., assignor to Bryson Manufacturing Co., Inc., Clifton, N.J., a corporation of New Jersey
Filed June 29, 1961, Ser. No. 120,637
2 Claims. (Cl. 112—219)

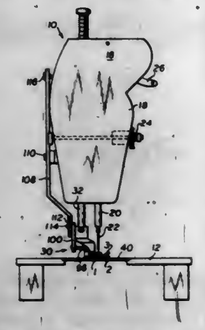


1. A control unit for a sewing machine having a stitching station provided with a threaded needle member for cooperation with a bobbin thread for stitching a length of material fed through said machine, said control unit being adapted for opening the electric power circuit for said machine on breaking of the bobbin thread, said control unit comprising a casing adapted to be secured to the machine at the stitching station, an elongated rod slidably secured in said casing for axial movement thereof in said casing and extending exteriorly of the casing to enable manual grasping of the rod to shift the rod, a first electric contact member secured to the free end of the said rod, a second electric contact member secured in said casing in line with the axial movement of the free end of said rod, spring means urging said rod for movement axially thereof to carry the first contact member into contact with said second electric contact member, a latch member mounted in the casing for movement in a plane transverse to the axis of said rod, complementary portions on the latch member and rod for movement of the latch member to a position in latching engagement with the rod, holding the rod to prevent movement thereof against the second contact member, an elongated arm secured to said latch member at one end for movement therewith in a given direction, the free end of said arm being disposed at the stitching station of said machine, means urging the said free end of the arm against the thread passing from the needle and into the material fed through the machine and the latch member into latching engagement with the rod to latch the latter so that the free end thereof will be spaced from the second contact, so that on breaking of the bobbin thread, the free end of the arm will move with the material, and said latch member will thereby be moved out of latching engagement with the rod, and the latter will move into closed contact with the second contact member.

3,124,089
COMPENSATING FOOT AND THREAD TRIMMER ASSEMBLY
Kenneth F. Diehm, Temple, and Felix L Leonard, Sinking Spring, Pa., assignors to Trim-Master Corporation, Reading, Pa., a corporation of Pennsylvania
Filed Apr. 21, 1961, Ser. No. 104,589
4 Claims. (Cl. 112—252)

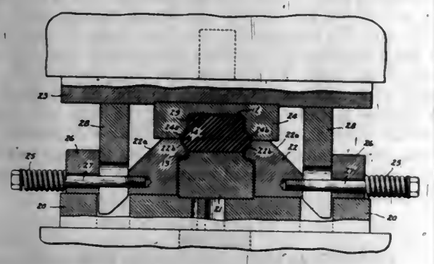
1. Compensating foot means for a combination presser foot and thread trimmer assembly, said assembly com-

prising a presser foot body having a recess in the bottom thereof, cutting blades received within said recess and means mounting said blades vertically adjustably and turnably against the bottom of said body; said compensating foot means comprising a shoe underlying said body, means mounting said shoe at the front and rear thereof vertically slidably on said body, said mounting means for said shoe being located on one side thereof, the other side of said shoe having its bottom cut away so as to reduce its thickness, a compensating foot mounted on said assembly within said shoe cutout, said compensating foot having front and rear posts extending upwardly therefrom, coil springs extending around said compensating



foot posts, said shoe having vertical through bores therein above said shoe cutout through which said compensating foot posts and said compensating foot springs extend clearingly, said body having vertical bores extending to the bottom thereof and slidably receiving said compensating foot posts, said compensating foot springs extending between said compensating foot and said shoe and normally maintaining said compensating foot with the bottom thereof substantially below the level of the bottom of said shoe, said compensating foot being upwardly movable to a level in which the bottom of said compensating foot is approximately in the same plane as the bottom of said shoe.

3,124,090
APPARATUS FOR MAKING SHEET METAL V-PULLEYS
Frank Zatyko, 11817 Parkhill Ave., Cleveland, Ohio
Original application Jan. 3, 1950, Ser. No. 136,461, now Patent No. 2,929,345, dated Mar. 22, 1960. Divided and this application Sept. 30, 1959, Ser. No. 844,609
1 Claim. (Cl. 113—44)

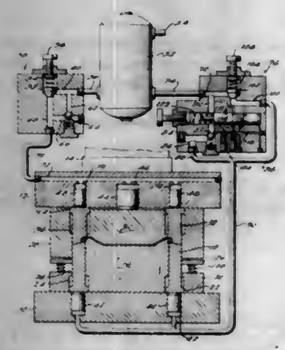


In apparatus for rough-forming a pulley from a pulley blank which is in the form of a seamless sheet metal cup having a cylindrical cup wall of substantially uniform thickness and an open mouth, first and second coaxial and axially apposite forming members relatively axially movable from (1) a first axially open position relative to each other at which said cup may be inserted between said first and second members in coaxial relation with each of them to (2) a second axially closed position relative to each other which is reached during engagement of both said first and second forming members with said inserted cup and can be reached only by axial foreshortening of said cup, crushing means for driving at least one of said first and second forming members in an axial direction relatively toward the other with sufficient force to accomplish said foreshortening at least partially by crushing, third forming means supported on one of said first and second forming means coaxially therewith and receivable within said cup in coaxial relationship therewith, fourth forming means located radially exteriorly of said third forming means in radially outwardly spaced relationship therewith, one of said third and fourth forming means being pre-extension means which shifts from a transversely withdrawn condition toward a locked transversely extended condition prior to said cup-engaging movement of said first and second forming members toward their said second axially closed condition, the other of said third and fourth forming means comprising transaxial-deflection imposing means which during said cup-engaging movement of said first and second forming members toward their said second axially closed condition shifts from (1) a non-interfering position in which the radially outermost parts of said third forming means are exceeded in their distance from the axis of the said first and second coaxial forming members by the distance between said axis and the most proximate part of said fourth forming means and even in said extended position of said pre-extension means there is no interference in the axial direction between said third and fourth forming means to (2) an interfering position in which the distance from the axis of the said first and second coaxial forming members of the radially outermost parts of said third forming means exceeds the distance between said axis and the most proximate part of said fourth forming means, which interfering position can be reached only by buckling of said cup wall to form at least two new annularly extending flanges in said cup wall with said pre-extension means being in axially interfering relation with each of said flanges in said transversely extended position of said pre-extension means but being withdrawn from said axially interfering relation with each of said flanges when withdrawn to said transversely withdrawn position of said pre-extension means, said shifting of said transaxial-deflection imposing means from said non-interfering to said interfering position and the resultant creation of said at least two new annular flanges occurring simultaneously with the said driving of one of said first and second forming members toward the other by said crushing means, retaining faces associated with said forming members and forming means for positively restraining the edge of said open mouth cup wall against spreading during said shifting of said transaxial-deflection imposing means from said non-interfering to said interfering position, said transaxial-deflection imposing means being driven to a foreshortened condition by said cup-engaging movement of said first and second forming members toward their said second axially closed condition.

3,124,091
RAM TYPE PRESS
Floyd M. Williamson, 452 Lakewood, Detroit 15, Mich.
Filed Feb. 9, 1961, Ser. No. 88,092
6 Claims. (Cl. 113—45)

1. In a ram type press adapted to perform multiple operations in sequence on a workpiece during the working stroke of the ram and wherein the press is provided with a first set of relatively movable first and second retractable dies arranged to successively engage the workpiece and an opposed second set of relatively movable first and second dies arranged to successively engage the

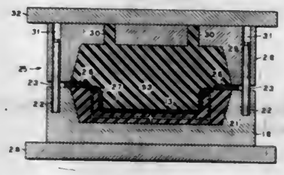
workpiece as the ram moves to closed position, a hydraulic cushion for the first die of the first set which is first to act on the workpiece and a hydraulic cushion for the first die of the second set which is first to act on the workpiece and is retracted as the ram moves to its closed position, each of said cushions comprising a cylinder and piston normally reacting against its respective die, a tank containing hydraulic fluid under pressure, hydraulic fluid connections between said tank and cylinder through which hydraulic fluid is supplied to said cylinder to react against the piston therein to bias the die associated therewith to its extended position, and a pressure relief valve in said connections operable to provide a predetermined resistance to displacement of hydraulic fluid from the cylinder associated therewith due to closing of the press ram so as to provide a predetermined resistance to retractile movement of the die associated with such cylinder, the pressure relief valve of the hydraulic cushion associated with the die of the first set being set to open at a lower pressure than the pressure relief valve of the hydraulic



cushion associated with the first die of the second set so that as the opposed dies successively engage and act on the workpiece as the ram moves to its closed position the dies of the first set will be successively retracted before the retraction of the first die of the second set, said first die of the second set while held in its extended position by its hydraulic cushion, and its opposite die while being retracted, being arranged so as to clamp the workpiece therebetween while the second die of the first set engages the workpiece and cooperates with its opposed die to form the workpiece as the ram moves toward closed position, said first die of said second set being positioned after the retraction of the dies of the first set so that said first die of the second set will be moved by the ram against the resistance provided by its hydraulic cushion and cooperate with its opposed die while the workpiece is held by the other dies of said sets to form the edge of the workpiece downwardly into a curl below the metal of the workpiece held by the adjacent edges of said other dies as the ram moves to its closed position.

3,124,092
PLASTIC MATING DIES AND METALLIC HOLDER SUPPORTS THEREFOR
Burt F. Raynes, Chula Vista, Calif., assignor to Rohr Corporation, a corporation of California
Filed Aug. 25, 1958, Ser. No. 756,849
3 Claims. (Cl. 113—49)

1. Light weight composite drop hammer dies for applying large forces for bending a workpiece in the form of a large thin flat sheet of metal to a predetermined shape of substantial curvature comprising a pair of metallic holders respectively attachable to the anvil and ram of a drop hammer and having confronting faces, said faces respectively having substantial and deep recesses with sidewalls which converge substantially away from said faces, a pair of insertable and detachable blocks of rigid molded polymerized plastic resin, said blocks having tapered portions, respectively seated interfittingly within said recesses and wholly supported therein and against the sidewalls thereof, said blocks having interfitting and matching male and female surface portions for engaging and forming the workpiece therebetween and conforming to said predetermined shape of the workpiece, said blocks having light weight relative to said metallic holders and having sufficient strength per se to withstand and transmit to said holders the stresses developed by the drop hammer on the workpiece, said blocks respectively having smooth molded surfaces which closely match and interfit with the surfaces of said recesses whereby said stresses incident to the drop hammer operation are trans-

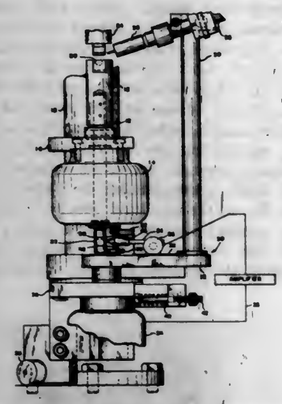


mitted to and absorbed by said holders, said holders having sufficient strength to receive and absorb said stresses transmitted thereto through said blocks and to withstand said stresses without bending, said holders having complementary means for aligning the same as the ram moves toward the anvil thereby to assure a mutually aligned relationship of said recesses and of said conforming surfaces of the blocks seated interfittingly within the recesses, said holders and blocks being forced into mutually tightly interfitting relationship by said stresses incident to the forming of the workpiece, said holders respectively having means for introducing pressurized gas between said closely interfitting surfaces of the blocks and their respective holders to release the blocks therefrom, at least one of said blocks and its holder having complementary means for releasably anchoring the block in seated position in the holder.

3,124,093
WELD TORCH MECHANISM
William M. Wakeley, Milwaukee, Wis., assignor to Acro Welder Mfg. Co., Milwaukee, Wis., a corporation of Wisconsin
Filed June 2, 1960, Ser. No. 33,549
13 Claims. (Cl. 113—124)

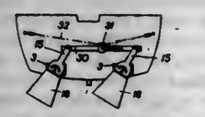
1. In combination, a work holder, a work device, means supporting said work device adjacent said work holder and operative to provide relative movement therebetween, a template of magnetic material, magnetic means having a magnetic axis, means mounting said magnetic means adjacent said template and operative to provide relative movement therebetween corresponding to the relative movement between said work holder and work device, means supporting said magnetic means for independent movement relative to said template so that said magnetic means is movable to assume a position wherein said magnetic axis is generally perpendicular to the portion of the surface of said template nearest said magnetic means and to maintain said perpendicular relationship during said relative movement between said template and said magnetic means, means for detecting movement of said magnetic means to maintain said perpendicular relationship, and means controlled by said detecting means and operative, in accordance with movement of said magnetic means to

maintain said perpendicular relationship, to move said work device to a position relative to said work holder



corresponding to the relative position between said template and said magnetic means.

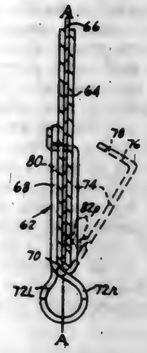
3,124,094
STABILIZING ARRANGEMENT FOR POWER BOATS
Kjell Bråten, Kr. Aubertsvei 32, Roa, Norway
Filed June 29, 1962, Ser. No. 206,315
13 Claims. (Cl. 114—66.5)



1. A stabilizer attachment for a boat comprising, in combination:
(*a*) a support;
(*b*) attaching means for attaching said support to a boat in a predetermined position;
(*c*) a plate shaped fin having two opposite major faces;
(*d*) pivot means interposed between said support and said fin for pivotal movement of said fin about two axes toward and away from a normal position in which the faces of said fin are directed upward and downward respectively, when said support is in said predetermined position, said axes being perpendicular to each other and normally horizontal; and
(*e*) means for pivoting said fin about one of said axes.

3,124,095
JIB SLIDE
Vincent Kanser, 59 Forest Ave., Glen Ridge, N.J.
Filed Nov. 21, 1960, Ser. No. 70,798
20 Claims. (Cl. 114—108)

1. An integral one-piece jib slide for attachment to the tape reinforced edge portion of a jib, said jib slide comprising a body for disposition on one side of said edge portion, oppositely directed hooks projecting integrally from said body beyond said edge portion for disposition about a stay wire, a leg projecting integrally from said body and formed to extend around said edge portion for supporting said edge portion, and to extend along the other side of said edge portion, a first securing means on said body, a first cooperating securing means on said leg for insertion through said edge portion and engageable with said first securing means to secure said jib slide to said edge portion, a second securing means on said leg between said first cooperating securing means and said hooks for wedging said edge portion against said body to further secure said jib slide to said edge portion and prevent oscillatory and longitudinal movement of said jib slide with respect to said first securing means, each of said securing means being integrally formed with said slide.



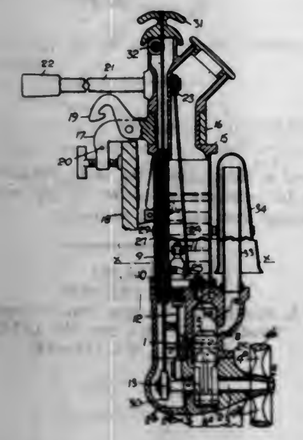
3,124,096
WATERCRAFT
Waldemar A. Graig, 729 Grand Ave., Dayton 6, Ohio
Filed Mar. 25, 1959, Ser. No. 801,793
13 Claims. (Cl. 114—151)



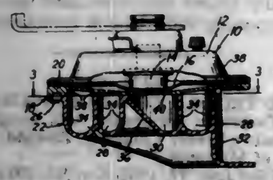
1. In a watercraft of the character described, at least one hydrofoil mounted on port and one hydrofoil mounted on starboard of said watercraft, said hydrofoils movably mounted in a manner which permits lowering and raising of said hydrofoils, said hydrofoils being oriented downwardly and normally mounted at least partially out of the water, each hydrofoil adapted to generate, when immersed to any extent, outwardly directed hydrodynamic lift forces, said lift forces following a line of action passing below the center of gravity of said watercraft, means in said watercraft responsive to control activation and operably connected to said hydrofoils, said last means adapted to move differentially said hydrofoils in said manner, thereby producing a resultant rolling moment causing said watercraft to assume a bank at the angle determined by said control activation.

3,124,097
DETACHABLE PROPULSION MECHANISMS FOR BOATS
Albert Thomas Claud Priddle, Twickenham, Middlesex, England, assignor to C.A.V. Limited, London, England
Filed Apr. 19, 1962, Ser. No. 188,721
6 Claims. (Cl. 115—17)

1. For use in propelling and steering a boat, a unitary propulsion mechanism adapted for detachable connection to the boat, and comprising in combination a compression ignition internal combustion engine which is totally submersible below water level when the propulsion mechanism is in normal use, and which has a cylinder block, a crankcase at the underside of said cylinder block, a piston slidably mounted in said cylinder block so as to be movable towards and away from the upper portion of said cylinder block, and a fuel injection nozzle which communicates with the interior of said cylinder block at a position above said piston, an oil sump in said crankcase at one end thereof, a crankshaft which is operatively connected to said piston, and which is rotatably supported in said crankcase with one end portion of said crankshaft extending into said oil sump, and the opposite end portion of said crankshaft extending outwardly from the end of said crankcase remote from said oil sump, a propeller mounted on the last mentioned end portion of said crankshaft, a fuel tank secured to, and extending upwardly from, the upper portion of said cylinder block, an injection pump which is mounted within the lower end of said fuel tank, and which is adapted to deliver fuel from said fuel tank to said fuel injection nozzle, a cam on the portion of said crankshaft within said oil sump, means for actuating said injection pump under the action of said cam, a hollow body part secured to the upper end of said fuel tank, and means which are connected to said hollow body part, and through the medium of which the unitary propulsion mechanism is detachably connectable to the boat.

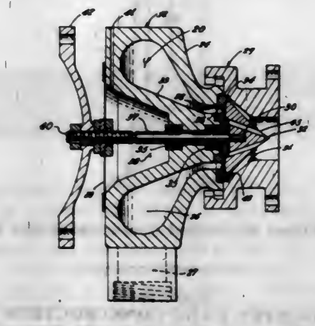


3,124,098
ELECTROMAGNETIC HORN PROJECTOR
Myron R. Theben, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 13, 1962, Ser. No. 209,532
10 Claims. (Cl. 116—142)



1. An electromagnetic horn comprising, projector means having a chamber, and reciprocable diaphragm means facing said chamber, an outlet passage communicating with said chamber having an axis which is located substantially parallel to said diaphragm, at least one wall of said chamber being substantially flat and being located at an angle of substantially 45° to the plane of said diaphragm means.

3,124,099
AIR MODULATOR ACOUSTIC GENERATOR
Donald C. Skilling, Los Angeles, Calif., assignor to Northrop Corporation, Beverly Hills, Calif., a corporation of California
Filed Sept. 18, 1961, Ser. No. 138,970
6 Claims. (Cl. 116—137)

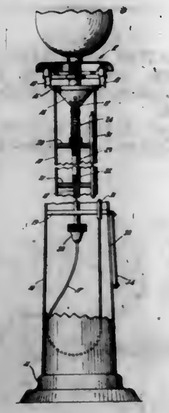


1. In sound producing apparatus, the combination comprising: an exciter including a housing and a driving member adapted to be actuated through a predetermined linear range; a sound producing member including a housing having a fluid passageway formed therein; means securing said sound producing housing in fixed relation with respect to said exciter housing; a disc-like valve seat mounted in said passageway; a valve member having head and stem portions, said valve member being slideably mounted in said passageway for movement between open and closed positions in which said head portion is spaced from said valve seat and is seated on said valve seat, respectively; the linear range through which said valve member moves when actuated between its open and closed positions being less than said predetermined range; resilient means connecting said valve stem and the driving member of said exciter; said fluid passageway including an intermediate portion of toroidal configuration, an inlet portion having a tangential relation with respect to said toroidal portion, and an annular outlet portion having a concentric relation with respect to said toroidal portion; and said passageway, at such times as said valve member is in its open position, cooperating with said head portion to define an unobstructed passageway increasing exponentially in cross-section up-stream and down-stream of said valve seat.

3,124,100
FLAG POLE
Fred W. Morley, 917 E. 49th, Indianapolis, Ind.
Filed Jan. 25, 1962, Ser. No. 168,609
12 Claims. (Cl. 116—173)

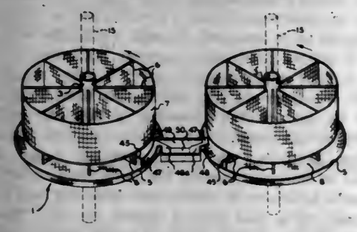
1. A flag pole, comprising an elongated hollow body supported at one end and having its other end located in an elevated, remote position, said body being provided with an opening at its remote end, a removable cap seated over said opening, a halyard-pulley mounted on said cap, and a Bowden-wire assembly extending within said body and including an inner element secured to said cap and an outer element which slidably receives the inner element and extends from the cap to an end near the supported end of the body, the inner element extend-

ing beyond said end of the outer element for a distance substantially equal to that through which said cap must



be lowered from its elevated position to render it readily accessible.

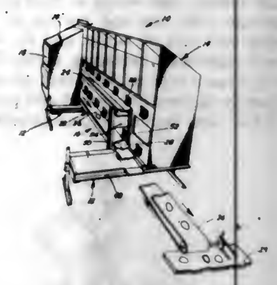
3,124,101
POULTRY CAGE CONSTRUCTION
William Wierenga, Sr., Rte. 1, Box 73, Nunica, Mich.
Filed Dec. 21, 1960, Ser. No. 77,338
4 Claims. (Cl. 119—22)



1. A cage construction for fowl comprising a generally cylindrical enclosure having a foraminous base; an imperforate disk spaced below said base; means mounting said enclosure and said disk for conjoint rotation about an axis; a scraper member interposed between said base and said disk and in engagement with the upper surface of the latter, said scraper member extending radially outwardly from said axis and being inclined in the direction of rotation of said disk; means fixedly mounting said scraper means, whereby relative rotation between said disk and said scraper member effects scraping of the upper surface of said disk; and means for rotating said enclosure and said disk.

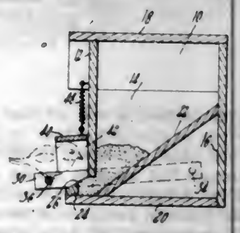
3,124,102
NEST SUPPORT
John S. Kurtz, Ephrata, Pa., and Jewel Graves, Holland, Mich., assignors to Automatic Poultry Feeder Company, Zeeland, Mich., a corporation of Michigan
Filed July 9, 1962, Ser. No. 208,297
6 Claims. (Cl. 119—48)

1. A nest structure comprising: at least two supporting stands arranged in spaced relationship, each stand having nest support portions separated by upstanding conveyor support means; a pair of nest housings supported on said nest support portions and spanning the distance between said stands; each of said housings having at least one tier of nest enclosures each having an egg roll-out opening adjacent to and facing said conveyor support means; and conveyor means on said conveyor support means, said conveyor means running intermediate said nest housings between said upstanding conveyor support



means and at substantially the same vertical level as said openings for receiving and conveying eggs passing through said openings from said nest enclosures.

3,124,103
BIRD FEEDER
Forest A. Stainbrook, 4 Angus Way, Centerville, Mass.
Filed Dec. 7, 1961, Ser. No. 157,733
1 Claim. (Cl. 119—51)

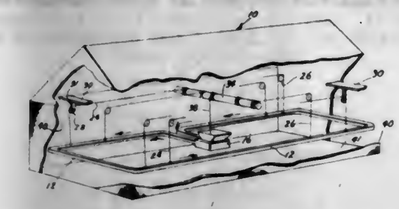


A bird feeder comprising an enclosed hopper with front, rear and side walls, said hopper having an upwardly facing trough projecting forward from the bottom of the front wall and communicating with the interior of the hopper to receive feed therefrom, a frame rotatably mounted on said hopper, said frame comprising two parallel arms pivotally attached at one end to respective side walls of the hopper and projecting forward beyond said trough, a perch extending between the forward end portions of said arms and normally located near the front of said trough, a cover member mounted on said arms and extending horizontally above said trough and normally spaced therefrom, and spring means resiliently supporting said frame in its normal position.

3,124,104
FEED TROUGH CONTROL MECHANISM
Elmer B. Carpenter, Springdale, Ark., assignor to Automatic Poultry Feeder Company, Zeeland, Mich., a corporation of Michigan
Filed June 11, 1962, Ser. No. 201,543
4 Claims. (Cl. 119—51.12)

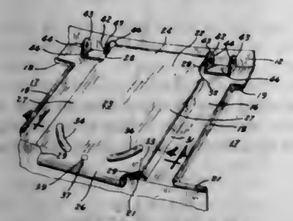
1. A method of providing controlled feeding of animals from a trough having feed conveying means comprising the steps of: providing a feed trough having feed conveying means therein; operating said feed conveying means to fill said trough while simultaneously maintaining said trough in a hoisted position out of reach of said animals; lowering said trough into the reach of said animals to

allow access thereto; continuing to operate said conveying means to fill said trough for a set period of time; and



hoisting said trough out of reach of said animals after said period of time.

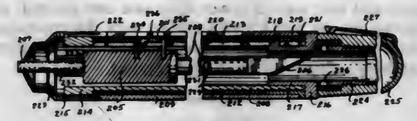
3,124,105
DOOR FOR ANIMAL FEEDING EQUIPMENT
Mathew H. Stapleton, National Ave., Jefferson, Iowa
Filed Aug. 23, 1962, Ser. No. 218,910
1 Claim. (Cl. 119—61)



In an animal feeder having a feed trough:
a substantially flat panel disposed thereover;
the panel having a series of openings formed therein;
each opening defined by a top edge, a pair of spaced, rolled, straight side edges, and a rolled bottom edge;
a relatively flat door pivotally connected at one end to said panel;
said door having a pair of straight, spaced flanges along each side thereof, said flanges flared downwardly and engageable on their undersurfaces with said side edges;
said door covering said top edge and said bottom edge when said flanges engage said side edges;
a pair of arcuately spaced, curved ribs formed in said door adjacent the end opposite said pivotally connected end, said ribs disposed substantially along the periphery of an imaginary circle the center of which is on the longitudinal axis of said door, and said ribs equally spaced from and on opposite sides of said axis; and
a resilient element secured to said door on the underside thereof on the axis and intermediate said ribs, said element engageable with said bottom edge when said flanges engage said side edges.

3,124,106
RETRACTABLE HOLDER FOR CHALK, CRAYON, ERASERS, AND SMALL WRITING AND CUTTING INSTRUMENTS
Charles Kosta, Bronx, N.Y.
(4 Dock St., Mount Vernon, N.Y.)
Filed July 13, 1961, Ser. No. 123,902
6 Claims. (Cl. 120—1)

1. A retractable holder for chalk, crayon, eraser, ball point pen and cutting elements and the like comprising an inner tube having a fast thread extending throughout substantially the full length thereof, a carriage operable within said inner tube, means tightly fitting one one of said elements to one end of the carriage, said inner tube having an elongated slot extending substantially throughout the entire length of the tube and through one end thereof, said carriage having spaced projections extending radially outwardly and into said slot and slidable therethrough, a propelling ring operable on said inner tube along the thread thereof and disposed between the spaced projections of the carriage and engageable therewith so that as the propelling ring is operated along the thread of the inner tube the carriage will be propelled through the inner tube, an outer holder tube fitted over the inner tube and the propelling ring, said inner tube being turnable in said outer tube, said outer tube having an elongated slot similar to the elongated slot of the inner tube, said propelling ring having



a pin extending into the slot of the outer tube and adapted to traverse the same, a turn knob extending from one end of the outer holder tube and fixed to the inner tube to turn the inner tube within the outer tube, said turn knob having an extension tightly fitted into the open slot end of the inner tube, a radially-extending pin projecting from the turn knob extension into the slot of the inner tube to drive the inner tube, said inner tube having a short slot extending from the open end of the tube inwardly and diametrically-opposed to the end of the elongated slot of the inner tube and said pin extending through the extension of the turn knob into the short slot of the inner tube to provide a double drive thereof.

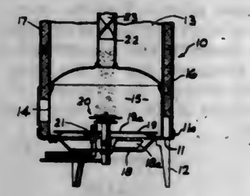
3,124,107
RESERVOIR SEAL
Hans Reinhard Fehling, Zug, Switzerland, and Edward Henry Harvey, London, England, assignors to I.R.C. Limited, London, England, a company of Great Britain
Filed July 19, 1961, Ser. No. 125,217
Claims priority, application Great Britain July 30, 1960
5 Claims. (Cl. 120—42.4)



1. A liquid reservoir including a seal comprising a conduit having a forward end and a rear end and having a bore of greater-than-capillary cross-sectional area which is subject to atmospheric pressure, piston means slidable within the conduit and having a peripheral shape similar to but slightly smaller than that of the inside surface of the conduit so as to provide a space of capillary dimen-

sions between the adjacent surfaces of the piston means and the conduit, urging means effective when the reservoir conduit is in a first position between horizontal orientation and an orientation wherein one of said rear end and said forward end is lower than the other thereof for applying a component of force to the piston means directed in the longitudinal direction of the conduit in a manner tending to thrust the piston means out of a liquid in the conduit which is sufficient to balance any capillary forces tending to draw the piston means into a liquid in the conduit, thereby preventing seepage of liquid through the space between the piston means and the conduit, and means for modifying the component of force applied by the urging means to the piston means when the reservoir conduit is in a second position wherein said other of said forward and rear ends is lower than said one thereof, said modifying means being ineffective to vary the component of force applied by said urging means to said piston means in said first position of said conduit.

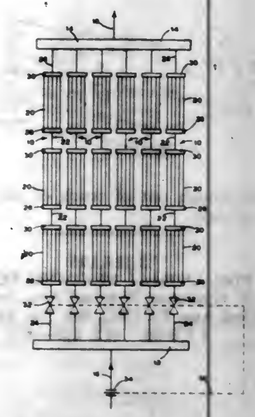
3,124,108
WATER HEATER WITH GAS BURNER MOUNTED BENEATH FLUE
Ernest Wenczl, Parma, Ohio, assignor to Mor-Flo Industries, Inc., a corporation of Ohio
Filed Aug. 1, 1961, Ser. No. 128,556
2 Claims. (Cl. 122—17)



1. In a water heater having a water tank, a heating chamber beneath the tank, and a central flue tending to collect condensation in use of the heater, a gas burner mounted beneath said flue pipe; said burner having means defining an upwardly directed opening through which a combustible gas is directed to be burned in use of the burner; means defining a flame-spreading surface surrounding said opening; cover means mounted in spaced relation above said opening and causing the flame to spread outwardly contiguous said flame-spreading surface in such manner as to silence the jet of gas; and a shield of incombustible, moisture absorbent material superposed above and covering said cover means and silencing condensation dripping from the central flue pipe and striking said cover means.

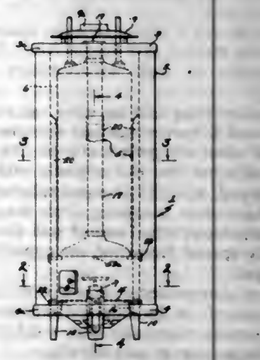
3,124,109
ONCE-THROUGH STEAM GENERATOR
Hans von Benten, Ratingen, Germany, assignor to Durrwerke Aktiengesellschaft, Ratingen, Germany, a corporation of Germany
Filed Sept. 30, 1960, Ser. No. 59,752
1 Claim. (Cl. 122—406)

In a steam generator having a forced circulation fluid circulation system, a plurality of fluid heating circuits arranged for parallel flow of fluid therethrough and connected into said circulation system and subject to the heat of high temperature gases, a common source of vaporizable fluid, means for supplying the fluid in parallel flow relation from said common source to said circuits, and means for maintaining the pressure drop of the fluid due to flow through said circuits substantially constant from full load to a predetermined partial load to effect balanced distribution of the fluid from the common source to said circuits, said last named means including a valve member in each of said circuits, means interconnecting all of said valve members, and means responsive only to



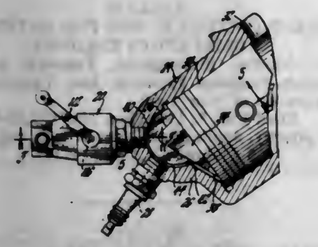
variations in total rate of fluid flow to said circuits for simultaneously moving the valves in a closing direction as the rate of fluid flow to said circuits decreases.

3,124,110
WATER HEATERS
Arnold L. Buehl, Cleveland, Ohio, assignor to Mor-Flo Industries, Inc., a corporation of Ohio
Filed Mar. 7, 1961, Ser. No. 94,061
2 Claims. (Cl. 122—494)



1. An underfired water heater of the type described comprising a storage tank; a casing surrounding said storage tank and spaced radially outwardly therefrom to form an outer flue around said tank; said casing seated upon a base; a plurality of legs supporting said base; leg extension means extending upwardly from said legs and interposed between said tank and said casing; spacer means mounted to said leg extension means spacing all of said leg extension means uniformly inwardly from said casing; attachment means securing said casing to said leg extension means; and said tank resting upon support means projecting inwardly from said leg extension means whereby the combined weights of said tank, casing, and base are directly supported by said legs.

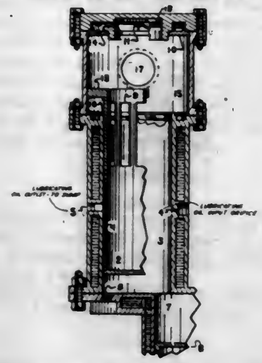
3,124,111
FUEL INJECTION SYSTEM
Vaclav Fuka, 31306 Campbell, Madison Heights, Mich.
Original application Sept. 18, 1961, Ser. No. 138,800, now Patent No. 3,101,701, dated Aug. 27, 1963. Divided and this application May 7, 1962, Ser. No. 192,842
2 Claims. (Cl. 123—32)



1. A charge forming device for an internal combustion engine comprising a cylinder, a piston slidably disposed in said cylinder, said cylinder including a head portion of a wedge shape configuration substantially diametrically coextensive with the diameter of and coacting with said piston to form a combustion chamber and a centrally disposed arcuate cavity extending upwardly from said chamber, a pair of threaded openings formed in said cylinder head and directly communicating with said arcuate cavity, said cylinder head openings being proximately disposed, said piston including a head portion comprised of a first portion corresponding in shape and size to the wedge shaped cylinder head configuration, a second arcuately shaped piston head portion extending upwardly from said first portion and substantially conforming in shape and size to the arcuate cavity, said second piston head portion and arcuate cavity having a clearance space therebetween when said piston is at the top of its stroke to define an auxiliary combustion chamber, a spark device disposed in one of said cylinder openings and a fuel injector mechanism mounted in the other of said cylinder head openings, said injector mechanism being adapted to inject a predetermined quantity of fuel into said arcuate cavity when the combustion chamber pressure exceeds a predetermined value, and manually controlled means for varying the quantity of injected fuel.

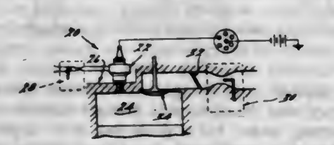
3,124,112
INTERNAL COMBUSTION ENGINES
Gus Schreiber, 3993 NW. Highway, Dallas, Tex.
Filed Apr. 5, 1961, Ser. No. 101,018
1 Claim. (Cl. 123—48)

In an internal combustion-type reciprocating piston engine having a combustion chamber, means for allowing a rapid expansion of the combustion space within the chamber during combustion which is followed by a rapid contraction of the combustion space with descent of the reciprocating piston, said means comprising a compartment having a large opening communicating with the combustion chamber, an accessory piston closing the compartment and movable therein away from and toward the combustion chamber in an oscillating manner, the compartment being provided with dashpots to decelerate this accessory piston at each end of its oscillation; said dashpots supplying a check-valve action by means of a spring-support washer forming the backwall of each dashpot, this washer moving with the accessory piston when the piston is leaving the dashpot, said washer then returning to its position at the back wall of the dashpot, such an action allowing air to enter from the backwall of the said dashpot thereby facilitating the release of the accessory piston from the dashpot, pursuant to entry of compressed



air to allow rapid expansion and contraction of the combustion space with each combustion stroke.

3,124,113
COMBUSTION SYSTEM FOR INTERNAL COMBUSTION ENGINES
Claude H. May and Keith H. Rhodes, Racine, Wis., assignors to Walker Manufacturing Company, Racine, Wis., a corporation of Delaware
Filed June 20, 1962, Ser. No. 203,883
3 Claims. (Cl. 123—75)



1. A combustion system for an internal combustion engine having a main combustion chamber, said system comprising

an auxiliary combustion chamber having an aperture communicating with the main combustion chamber,

an auxiliary carburetor for supplying an unthrottled relatively rich auxiliary fuel-air mixture to said auxiliary combustion chamber,

an inlet valve in said auxiliary combustion chamber for controlling the flow of the relatively rich air-fuel mixture thereinto,

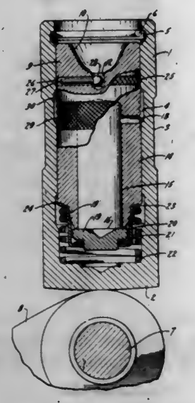
a recessed channel in said auxiliary combustion chamber adjacent said inlet valve and aperture for trapping a portion of the fuel in said auxiliary air-fuel mixture,

a second carburetor for supplying a relatively lean air-fuel mixture to said main combustion chamber related to engine load,

a second inlet valve for introducing said relatively lean air-fuel mixture into the main combustion chamber, and

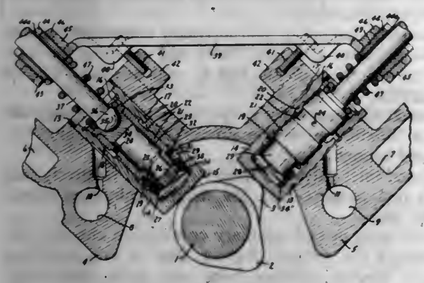
a spark plug in said auxiliary combustion chamber for igniting the mixture therein, flow of said relatively lean air-fuel mixture from said main combustion chamber to said auxiliary combustion chamber picking up a portion of the fuel in said channel to present a combustible air-fuel mixture to said spark plug, ignition of said combustible mixture effecting ignition of the relatively lean mixture in the working cylinder of the engine.

3,124,114
TAPPET
Carl Voorhies, Park Ridge, Ill.
Filed Aug. 5, 1960, Ser. No. 47,665
13 Claims. (Cl. 123—90)



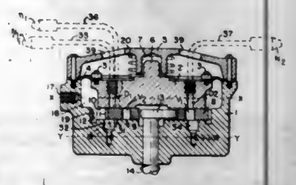
9. In combination in a hydraulic lash adjuster, a cylinder having a closed end and an open end, a hollow plunger mounted in said cylinder for reciprocation, means to retain said plunger in said cylinder, means positioned between the plunger and the closed end of the cylinder and biased to move the plunger outwardly, said plunger having an open end, a valve positioned to close said open end, a valve retainer mounted on the plunger and about the valve, a spring bearing upon said valve and biased to seat said valve, means defining a reservoir space about the exterior of said plunger, said means comprising a band of knurling extending about the exterior of said plunger, a passage connecting said reservoir space with the interior of said plunger, said plunger shaped to provide a receiving socket for a push rod in its upper end, a band of knurling positioned about the exterior of said plunger adjacent its upper end, and passage means extending from said socket to said band of knurling.

3,124,115
ANTIPUMP-UP DEVICE
Carl Voorhies, 917 S. Knight, Park Ridge, Ill.
Filed Apr. 13, 1962, Ser. No. 187,312
13 Claims. (Cl. 123—90)



3. In combination in a lash adjuster, means for supplying pressure fluid thereto, a cylinder closed at one end, a hollow piston mounted for reciprocation therein, said piston being open at its inner end, a valve positioned to close said inner end, a spring within the cylinder and biased to move the piston outwardly with respect to the cylinder, a second spring of greater load rate than said first mentioned spring, means establishing a fixed base for said second spring, fixed in relation to all parts of said lash adjuster, said second spring being at its end opposite said base positioned against said piston in opposition to said first mentioned spring.

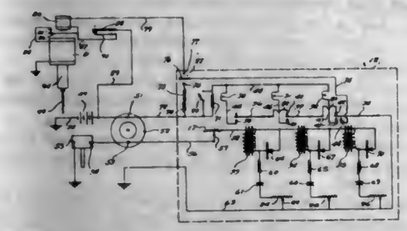
3,124,116
FUEL-INJECTION PUMPS FOR INTERNAL COMBUSTION ENGINES
John N. Morris, Birmingham, England, assignor to Simmonds Precision Products, Inc., Tarrytown, N.Y., a corporation of New York
Filed Feb. 9, 1962, Ser. No. 172,154
Claims priority, application Great Britain Aug. 12, 1961
5 Claims. (Cl. 123—139)



1. In a fuel injection pump for an internal combustion engine in the form of a single unit capable of performing two injections per cycle via two separate injection nozzles situated in each engine cylinder the combination comprising a casing having a liquid-fuel inlet port and two outlet ports for each cylinder, a ported valve mounted within the casing for rotary motion and formed with seating faces on opposite sides thereof, a metering block including a plurality of discharge ports mounted for movement within the casing and having one surface adjacent to one seating face of said valve and shaped complementary thereto, said valve being disposed between said block and one end of the casing with its other seating face in contact with said end of the casing, resilient means disposed within said casing for urging said metering block toward said one end of the casing to maintain intimate contact between the casing, the valve, and said metering block, plural metering chambers in said casing having one end opening adjacent to the seating face of said valve, reciprocable free pistons in the chambers, means for imparting motion to said valve, the valve being adapted to connect two of the metering chambers alternately to said liquid fuel inlet port and two outlet ports associated with a respective engine cylinder, and means for causing the free pistons to reciprocate whereby a metered quantity of liquid is alternately received in said metering chambers and expelled through the discharge ports into said engine cylinders.

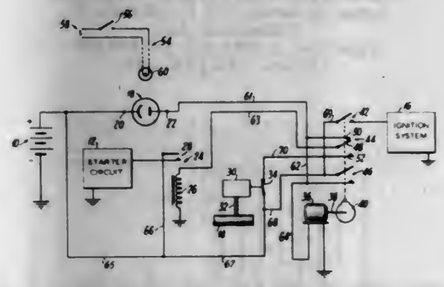
3,124,117
MOTOR VEHICLE SPEED INDICATING AND INHIBITING DEVICE
William W. Poindexter, 1 White Oak Drive, Newport News, Va.
Filed Dec. 22, 1961, Ser. No. 161,604
11 Claims. (Cl. 123—102)

2. In a motor vehicle having an internal combustion engine provided with a distributor and a movable fuel supply control member, a speed indicating and inhibiting device comprising an electrically operated speed indicating device, a solenoid having a movable plunger element, means connecting said plunger element to said fuel supply control member to inhibit movement of said member responsive to the energization of said solenoid, means connected to said distributor to develop a voltage in accordance with the speed of the engine, means to simultaneously energize said indicating device and said solenoid responsive to a predetermined value of said



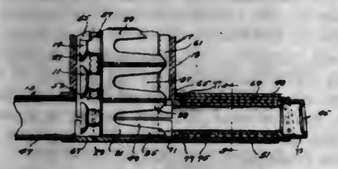
voltage, and means to deenergize said solenoid responsive to the energization thereof for a predetermined time period.

3,124,118
REMOTE-CONTROL FOR STARTING INTERNAL COMBUSTION ENGINE
Porter Sibert, 30 Lake St., Spring Valley, N.Y.
Filed Aug. 28, 1961, Ser. No. 134,429
9 Claims. (Cl. 123—179)



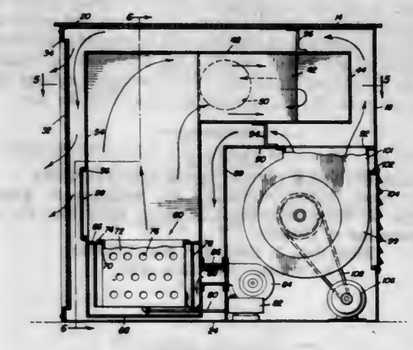
1. Control apparatus for remotely controlling the starting of an internal combustion engine having electrically operated means for starting the engine and a battery for energizing said starter means, said control apparatus comprising a photoelectric device in circuit with said battery and said starter means and fixed illuminating means for passing current from said battery to said starter means in response to illumination of said photoelectric device by said illuminating means.

3,124,119
TOY
Carl Ayala, Chicago, Ill., assignor to Marvin I. Glass, Chicago, Ill.
Filed Dec. 30, 1958, Ser. No. 783,948
5 Claims. (Cl. 124—12)



1. A blow gun comprising an elongated cylindrical barrel having an opening therein spaced from the rear end thereof, a dart magazine on said barrel communicating with said opening for affording passage of darts from said magazine to said barrel, and a tubular elongated mouthpiece having one end telescopically engaged with said rear end of said barrel and having the other end thereof extending outwardly from the rear of said barrel for engagement by the mouth of the user to direct a stream of air through said barrel, said mouthpiece having a length greater than the distance between said opening in said barrel and the rear end of said barrel, said mouthpiece being movable axially of said barrel between a first position wherein said one end of said mouthpiece is spaced from said opening and a second position wherein said one end of said mouthpiece blocks said opening to prevent passage of darts therethrough.

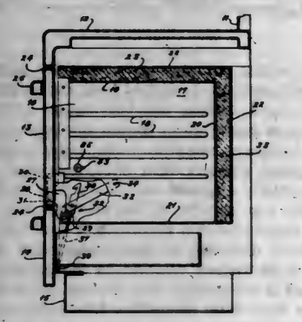
3,124,120
WARM FLOOR SPACE HEATER
Willie H. Best, Columbia, S.C., assignor, by mesne assignments, to Southern Industries, Inc., Richmond, Va., a corporation of Virginia
Filed Nov. 24, 1959, Ser. No. 855,226
1 Claim. (Cl. 126—110)



A space heater comprising a generally parallelepiped casing, a substantially L-shaped heat exchanger assembly disposed in said casing, bracket means supporting the heat exchanger assembly in spaced relation to the casing, said heat exchanger assembly including a substantial vertically disposed primary heat exchanger and a substantially horizontally disposed secondary heat exchanger disposed at the top portion of the primary heat exchanger and being communicated therewith, a generally L-shaped partition wall disposed in said casing and including a vertical wall in spaced relation to the primary heat exchanger and a horizontal wall spaced below the bottom wall of the horizontal secondary heat exchanger thereby defining a compartment with a portion of the bottom and a portion of one wall of the casing defining the exterior walls of the compartment, a convection air circulating blower mounted in said compartment, the exterior wall of the casing which cooperates with the partition to form a compartment having a louvered opening therein for intake of circulating air, said vertical primary heat exchanger having a bottom wall spaced from the bottom wall of the casing and an inwardly extending flange spaced vertically from the bottom wall of the primary heat exchanger, a tubular member communicating the compartment formed by the partition wall and the space between the bottom wall of the heat exchanger and the inwardly extending flange therein, a blower means mounted in said compartment formed by the partition wall and communicated with the tubular member for introducing combustion supporting air into the space between the bottom wall of the heat exchanger and the inwardly extending flange therein, said inwardly extending flange in the primary heat exchanger defining an enlarged opening, burner means positioned to direct flames and products of combustion toward said enlarged opening, said secondary

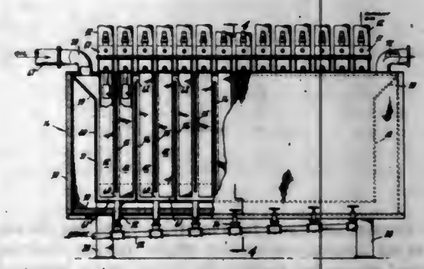
heat exchanger including a flue pipe communicated with one side wall thereof adjacent its point of communication with the upper end portion of the primary heat exchanger, a longitudinal baffle wall centrally disposed in said secondary heat exchanger with one end edge of the baffle being spaced from the outer end wall of the secondary heat exchanger, a closure wall extending between the end of the baffle adjacent the primary heat exchanger and the side wall of the secondary heat exchanger having the discharge flue communicated therewith thereby forming a discharge for hot combustion products through one-half of the secondary heat exchanger along one side of the baffle, around the end of the baffle and back along the other side of the baffle and out through the discharge flue, the horizontal wall of said partition wall having an enlarged opening for discharging convection air from the circulating blower completely around the periphery of the secondary and primary heat exchangers thereby cooling the interior surface of the casing and picking up heat from the exterior surface of the heat exchanger assembly, said casing having an enlarged screened opening extending throughout the length thereof and across one end wall thereof and a portion of the side wall in remote relation to the louvered air intake opening for discharge of heated air over a relatively large area for thoroughly mixing the heated air with the ambient air in a room or the like.

3,124,121
REMOVABLE OVEN DOOR MECHANISM
Albert Louis Baltz, Millstadt, Ill., assignor to Eagle Range & Manufacturing Company, Belleville, Ill., a corporation of Illinois
Filed Feb. 2, 1962, Ser. No. 170,680
4 Claims. (Cl. 126—191)



1. An oven having a removable door comprising:
(*a*) a chamber having side walls provided with longitudinal openings therein and an open front,
(*b*) an outer casing spaced from the side walls of said chamber and having front walls connected to the chamber side walls, said front walls being provided with openings therein,
(*c*) hinge brackets positioned on the front of said oven and projecting outwardly thereof, said brackets being provided with notches,
(*d*) a door adapted to close said chamber front,
(*e*) pins positioned on said door at the lower edge thereof, said pins adapted to engage said notches in said hinge brackets whereby said door may be pivoted from open to closed position,
(*f*) levers positioned on the inner side of said door and projecting outwardly and downwardly thereof, said levers being adapted to be inserted in the front wall openings,
(*g*) projections on the lower end of said levers,
(*h*) counterbalance mechanisms positioned between said chamber side walls and said outer casing, each of said mechanisms comprising:
(1) a bar pivoted at one end to said oven and having means on the other end engageable with the projection on said lever,
(2) a connecting member pivoted to said bar intermediate of the ends thereof and provided with a notch at the upper end thereof, and
(3) a spring anchored to said oven and fastened to the lower end of said connecting member, and
(*i*) a button positioned in said chamber side wall slots, a portion of said button projecting into said chamber and accessible therefrom, and second portion of said button projecting into the space between said chamber and said casing and therein adapted to be moved along said slots to engage said connecting member notches when said oven door is open, said button holding said counterbalance mechanism in its extended position so that said door can be removed from said hinge brackets.

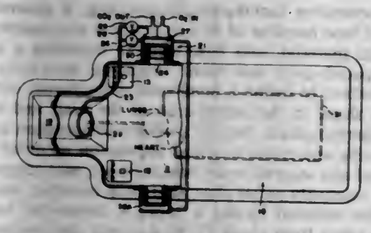
3,124,122
OIL HEATER FOR COOKING SYSTEM
Arthur G. Baron, 1321 N. Mitchner St., Indianapolis, Ind.
Filed Nov. 6, 1961, Ser. No. 150,339
1 Claim. (Cl. 126—360)



A heat exchanger for heating cooking oil and the like comprising a fluid-tight upright elongated container having vertical sides, a top and a bottom which curves smoothly into said sides;
a plurality of tubular conduits received in said container and spaced longitudinally therealong, said conduits being closely spaced to one another and to the walls of said container, each of said conduits including an inlet portion extending through the top of the container vertically downwardly into the container and an exhaust portion extending vertically upwardly and out of the container through the top thereof, said inlet and exhaust portions being connected by an intermediate curving portion closely spaced to and having the same shape as the bottom of said container, said intermediate curving portion being equally spaced from the bottom of the container all along the length of the intermediate portion, each of said conduits having a square cross section whereby the conduit fills a greater portion of the container;
said container having an inlet at one longitudinal end thereof and an outlet at the other longitudinal end thereof, means for pumping liquid through said container from said inlet to said outlet;
a plurality of burners each mounted on a respective one of said conduits and arranged to move heated gas into the inlet portion of the respective conduit;

a plurality of baffles formed of sheet material each fixed to said container between the conduits of a different pair of said conduits and dividing up said container into a plurality of sections each having a single conduit therein, said baffles being of two alternating types along the length of the container, one of which types is secured in fluid-tight manner to the top and sides of the container and provides communication between adjacent sections only adjacent the bottom of said container and the other of which types is secured to the bottom and sides of the container and provides communication between adjacent sections only adjacent the top of said container;
the baffles of said one type having a convexly curved bottom edge and the baffles of said other type having a straight top edge;
and heat insulation surrounding said container.

3,124,123
PILOT RESTRAINT SYSTEM
Earl A. Kops and Hugo F. Mohrlock, Jr., San Diego, Calif., assignors to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware
Filed Dec. 30, 1958, Ser. No. 783,907
4 Claims. (Cl. 128—1)



1. In a high altitude vehicle, a pilot restraint system comprising a liquid tight rigid housing container of such size as to receive an operator therein, a liquid having a density substantially the same as the density of the body of said operator and disposed within said container for completely surrounding said operator, said container having operator breathing apparatus for supplying oxygen to said operator and expelling exhaled air, and means for expanding the volume of said container to accommodate chest expansion of said operator in breathing.

ERRATUM

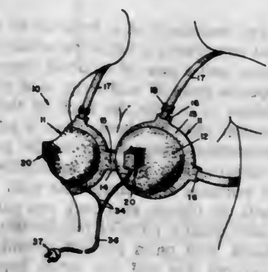
For Class 128—2.5 see:
Patent No. 3,124,132

3,124,124
RESUSCITATION APPARATUS
Allen S. Cross, 1241 Pennsylvania Ave. SE., Washington, D.C., assignor of one-tenth to Edward C. Sweeney, Washington, D.C.
Filed Oct. 16, 1957, Ser. No. 690,508
1 Claim. (Cl. 128—29)



A resuscitation device including means defining a conduit, one end thereof adapted to communicate with the mouth of a human operator for permitting the latter to intermittently blow his breath thereinto, the opposite end of said conduit means being adapted to communicate with a respiratory opening of a patient requiring resuscitation, and valve means within said conduit means including resilient means constructed to permit the valve means to operate solely in response to rising fluid pressure caused by the operator blowing his breath into said one end of said conduit means, the valve when operated opening a passage for said breath to said patient end of the conduit means for supplying said breath to said patient, said valve means being responsive to declining fluid pressure of said operator to block said passage between operator and patient and to open a second passage for exhaust of fluid from said patient to atmosphere, the valve means comprising a slidable piston body operable from a first position to a second position in response to said rising fluid pressure in said operator's end, resilient means normally biasing the piston body to its first position, and a vent opening in the conduit means located so as to be blocked by a portion of the piston body when the latter is in its second position, the device further including at least one vent opening in the conduit means, and wherein said piston body in the first position thereof clears said vent opening but in its second position blocks said vent opening.

3,124,125
VIBRATING BREAST DILATING APPARATUS
William Reginald Jones, 314 23rd St. SW., Calgary, Alberta, Canada
Filed May 21, 1962, Ser. No. 196,286
6 Claims. (Cl. 128—36)

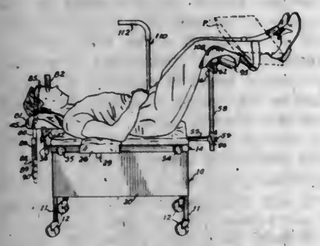


1. In a brassiere type breast dilating apparatus, the combination of a breast cup including a convexo-concave body having a recess provided substantially centrally on the convex surface thereof, and vibration producing means having a base removably mounted in said recess, said cup being formed from material which is sufficiently rigid to transmit vibrations from said vibration producing means to an entire breast embraced by the cup.

3,124,126
ORTHOPEDIC TRACTION APPARATUS
Joseph M. Spinks, 584 Manford Road SW., Atlanta, Ga.
Filed Jan. 27, 1961, Ser. No. 85,298
2 Claims. (Cl. 128—71)

1. An orthopedic traction apparatus comprising a platform on which a patient may be disposed in a supine position, a U-shaped head cradle at one end of said platform for supporting the head of said patient while said patient is in said supine position, means pivotally connecting said head cradle to said platform whereby said head cradle may pivot about a transverse axis, and means for yieldably pivoting said head cradle, said means for

yieldably pivoting said head cradle including spring means acting between said head cradle and said platform for



urging said head outwardly to apply a stretching action thereto in a direction away from the body of said patient

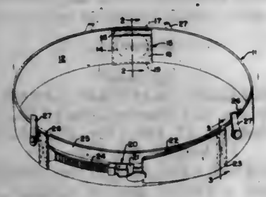
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3,124,127
ADJUSTABLE SPLINT
Paul E. Rueske, Mercer Island, Wash. (Medical Dental Bldg., Seattle, Wash.)
Filed Mar. 19, 1962, Ser. No. 180,494
3 Claims. (Cl. 128—89)



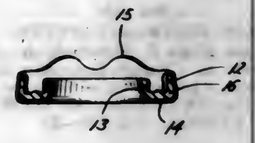
1. A splint for treatment of a fracture of the human hand, said splint comprising a flat, substantially rigid strip of bendable metal and a pair of securing straps interconnecting the opposite ends of said strip, said strip including a back portion to overlie the back of the hand and extend a substantial distance thereacross, a palm portion to extend a substantial distance across the palm of the hand and an intermediate portion interconnecting said back and palm portions and engageable with the side of the hand opposite the thumb, said back and palm portions extending in substantially parallel relationship when applied to the hand, said palm portion terminating at its free end in diverging legs and said straps being attached at their opposite ends respectively to said legs and the free end of said back portion.

3,124,128
UMBILICAL TRUSS
Alma J. Coates, 6030 Morgan St., Alexandria, Va.
Filed Feb. 5, 1962, Ser. No. 170,986
1 Claim. (Cl. 128—106)



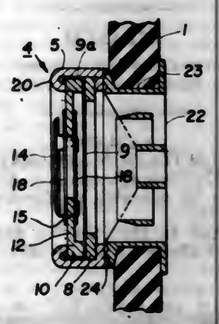
A unitary truss for maintaining pressure on a ruptured umbilical cord comprising a single relatively wide unitary elastic band having a first end and a second end thereof, a pocket secured to the inner side of said band, a metallic disk located in the pocket, said disk being substantially the same size as the pocket and said pocket containing a flap overlapping the end of the pocket, a discrete locking means for minutely varying the size of the band by varying the overlap of said first and second ends, said locking means comprising a row of zipper cleats positioned longitudinally along the band near said first end and the locking portion located on said second end and having a pivoted member for engaging the zipper cleats in varying positions of adjustment so that the locking means may be easily and readily adjusted while said first and second ends of the band remain in an overlap position.

3,124,129
TEETH PROTECTOR
Marc E. Groenberg, 5701 Jackson St., Houston, Tex.
Filed Apr. 30, 1962, Ser. No. 191,041
1 Claim. (Cl. 128—136)



A protective mouthpiece, comprising, a generally U-shaped base member of flexible resilient elastomeric composition material, said base member including a bottom and spaced-apart side walls extending outwardly from said bottom to define a tooth-receiving channel conforming in shape to the dental arch of the user, and a body of a thermo-plastic flexible resilient composition adapted to receive and retain a dental impression mounted in the channel and secured to the base member, said composition being relatively softer than said base member, said base member material having a Shore-A durometer hardness in the range from about 75–80 and said composition having a Shore-A durometer hardness in the range from about 30 to about 65 and a softening point in the range from about 120° to about 160° F.

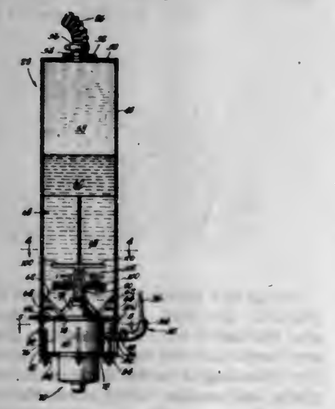
3,124,130
RESPIRATOR WITH SPEAKING DIAPHRAGM
Guy G. Klinger, Wernersville, Pa., assignor to The Electric Storage Battery Company, Philadelphia, Pa.
Filed Aug. 28, 1961, Ser. No. 134,213
2 Claims. (Cl. 128—141)



1. In combination with a respirator face piece having a circular opening forwardly thereof, a speaking diaphragm unitary assembly comprising a ring of channel shaped cross-section into the channel of which the face piece portion defining said opening is snugly fitted, a cylin-

drical shell integral with one leg of the channel of said ring and projecting forwardly of said respirator; a disc-shaped diaphragm mounted coaxially within said shell, a sealing ring for providing a gas-tight seal between said shell and the peripheral portion of said diaphragm, a guard element having a radial flange provided with holes and having a central opening, a cap element having finger-like extensions on spaced peripheral portions thereof extending through said holes and bent at the end portions thereof, said finger-like extensions having shoulders to provide a space extending radially outwardly between said cap element and said radial flange to permit voice signals to emerge therethrough, the outer edge of said shell being rolled inwardly against the peripheral portion of said guard element so as to tightly sandwich said diaphragm between said guard element and said sealing ring.

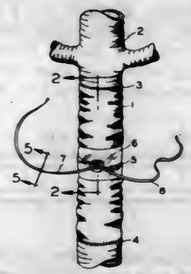
3,124,131
AIR SOURCE FOR A SKIN DIVER
George E. Gross, 8333 Niles Center Road, Skokie, Ill.
Filed Sept. 29, 1960, Ser. No. 59,287
13 Claims. (Cl. 128—145)



1. An air source for a skin diver comprising: chamber means defining a water space having water therein and an air space over said water space having air therein; means for securing said chamber means to the person of a skin diver; conduit means from said air space to the breathing organs of said diver; rotatable means in said water space; drive means for said rotatable means; and conduit means from the earth's atmosphere to said rotatable means, so constructed and arranged that air is aspirated by said rotatable means from said atmosphere to the water in said water space whereupon said air rises through the water space in said chamber means to said air space for breathing by said diver.

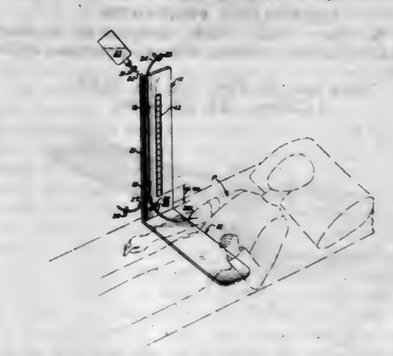
3,124,132
DYNAMIC FLUID PRESSURE TRANSDUCER
George H. Sullivan, Sherman Oaks, and Alan Dale Bredon, Granada Hills, Calif., assignors to Spacelabs, Inc., Van Nuys, Calif., a corporation of California
Filed Dec. 13, 1961, Ser. No. 158,960
7 Claims. (Cl. 128—205)

1. A transducer for measuring the pressure of a fluid flowing in a conduit comprising a resilient integral tubular member having inlet and outlet connections for series connection into said conduit whereby said fluid may continuously flow therethrough, a strain responsive filament encircling said conduit and having first and second terminals, first and second lead wires connected to said first and second terminals, respectively, and extending away from said conduit for providing a pressure signal, and



an impervious flexible covering sealing said strain responsive element to said tubular member.

3,124,133
INFUSION APPARATUS
Bernard O. Marbach, 5 Mariette Place, White Plains, N.Y.
Filed Mar. 6, 1961, Ser. No. 93,775
2 Claims. (Cl. 128—214)

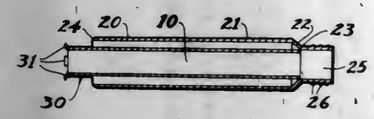


1. In a venous fluid infusion apparatus the combination of a vertically disposed support means adapted to be positioned with its bottom in the same horizontal plane as the back of a patient receiving a venous infusion, said support means being provided with a vertically disposed centimeter scale with its zero mark adapted to be positioned in a horizontal plane 10 centimeters above the back of said patient; said support means being provided with means adapted to position a fluid transfer means relative to said centimeter scale; and a fluid transfer means bifurcated at both ends; both upper ends being equipped with shut-off means and being adapted to receive venous infusion fluid and to provide communication with the atmosphere while one of the said upper ends is receiving venous infusion fluid; both lower ends being equipped with shut-off means, one of said lower ends being adapted to deliver venous infusion fluid into a vein and the other of said ends being adapted to allow escape of any air flowing through said fluid transfer means; said fluid transfer means being supported by said support means.

3,124,134
MOLDED PLASTIC TAMPON APPLICATOR
Norman S. Gardner, 55 Circuit Road, New Rochelle, N.Y.
Filed June 13, 1962, Ser. No. 202,233
8 Claims. (Cl. 128—263)

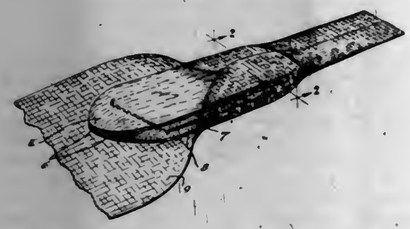
1. An applicator for receiving a catamenial tampon for insertion into the vaginal cavity, comprising, in combination, an outer tube, of plastic composition material,

having a relatively elongated and relatively large diameter main body portion and a reduced diameter portion joined to one end of the main body portion, said reduced diameter and transition portions being coaxial with said main body portion by a transition portion; a relatively elongated inner tube, of plastic composition material, within and coaxial with said outer tube and having an outer diameter substantially equal to the inner diameter



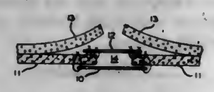
of said reduced diameter portion; said inner tube initially extending through said main body portion with its outer end projecting outwardly of the latter, and having its inner end integrally joined to said outer tube by thinned membrane means forming a weakened section severable by inward pressure on the outer end of said inner tube to disconnect said tubes for sliding telescoping engagement of said inner tube in said reduced diameter portion of said outer tube.

3,124,135
CELLULOSIC PRODUCTS
George B. Olson, Niles, Mich., assignor to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware
Filed June 30, 1960, Ser. No. 39,935
3 Claims. (Cl. 128—290)



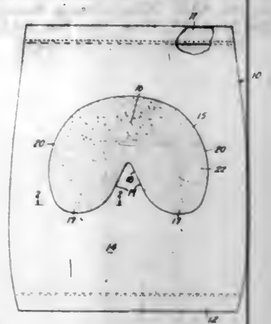
1. A sanitary napkin comprising multiple layers of absorbent elements, at least one of said elements having uniformly distributed therethrough a non-toxic protein-precipitating salt in an amount by weight at least equal to about the dry weight of the absorbent material in said element, said salt-containing element being positioned interiorly of said pad whereby dark-colored portions of menstrual fluid absorbed therein during normal use are precipitated out and retained interiorly of said napkin.

3,124,136
METHOD OF REPAIRING BODY TISSUE
Francis C. Usher, Houston, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Jan. 3, 1961, Ser. No. 80,073
5 Claims. (Cl. 128—334)



4. A method of repairing damaged living animal tissue, which method comprises: attaching a first layer of a physiologically inert knitted surgical mesh to the inner aspect of said tissue adjacent the site of damage; attaching a second layer of said knitted surgical mesh to the outer aspect of said tissue adjacent the site of damage so that said first and second layers of mesh effectively bridge said site of damage; said mesh being knitted from a polyethylene thread free of water-leachable irritant impurities, and having openings therein which permit growth of tissue therethrough, the threads within said mesh being unattached to one another at their points of crossing and having, individually, a tensile strength in the range of 50,000 to 150,000 p.s.i. and a diameter in the range of 1 to 10 mils; and causing said mesh to remain in place during the healing of said tissue.

3,124,137
ALL-WAY STRETCH FABRIC GIRDLE WITH A BACK LATEX REINFORCEMENT
Ernest Bradd, Shawanese, Pa., assignor to William Gluckin & Company, Inc., New York, N.Y., a corporation of New York
Filed Sept. 13, 1961, Ser. No. 137,888
1 Claim. (Cl. 128—518)



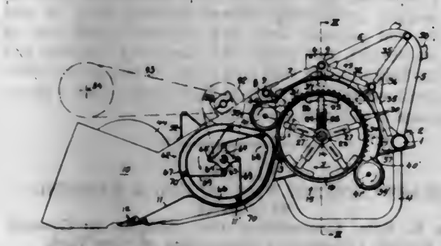
An all-way stretch braided tubular fabric girdle of the character described, comprising a latex reinforcing section vulcanized on and adhered to the back supporting area well below the upper portion of the girdle, said section extending a major distance across the back of the girdle, said section having a rounded upper portion and downwardly extending rounded and spaced side buttock supporting portions, the latex of the section conforming with the contour of loops of the fabric of the girdle at the surface only thereof to which the section is adhered while maintaining stretch of the reinforced back supporting area of the girdle, and the exposed surface of said section including a flock facing.

3,124,138
THRESHING MACHINE HAVING A SPECIFIC CYLINDER AND CONCAVE
Reinhold Claas, 64 August Claas Strasse, Harsewinkel, Westphalia, Germany
Filed Oct. 25, 1960, Ser. No. 64,950
Claims priority, application Germany Oct. 29, 1959
2 Claims. (Cl. 130—27)



1. A threshing mechanism, particularly for combine harvester comprising, in combination, a threshing drum; feeding means for feeding material to be threshed toward said threshing drum and having a delivery and directed toward said drum; a concave having an active surface of a given length directed toward and cooperating with said drum and having a receiving end spaced from said delivery end of said feeding means; extension means located between said delivery end of said feeding means and said receiving end of said concave, said extension means having a pair of surfaces inclined with respect to each other; and means mounting said extension means tiltable between an active position in which one of said surfaces form a continuation of said active surface of said concave for increasing the length of said active surface and a lead-in position in which said one surface is spaced from said receiving end of said concave to form a stone-catching gap therewith while the other surface forms a continuation of said delivery end of said feeding means for facilitating feeding of material to be threshed from said delivery end to said receiving end of said concave.

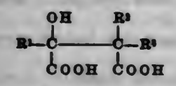
3,124,139
APPARATUS FOR THRESHING GRAIN
Sigmund Stokland, Nygaards Alle 3, Oslo, Norway
Filed Nov. 1, 1960, Ser. No. 66,468
Claims priority, application Norway Nov. 7, 1959
8 Claims. (Cl. 130—27)



1. In a threshing machine, the combination of a rotatable drum having a pair of ends and a lateral wall formed from resiliently yieldable material, tensioning means axially tensioning said wall, and a stationary concave disposed adjacent said drum, said concave including a plurality of spaced parallel longitudinal members formed from rigid material, said longitudinal members having rounded longitudinal edges facing said lateral wall of said drum in closely spaced relation.

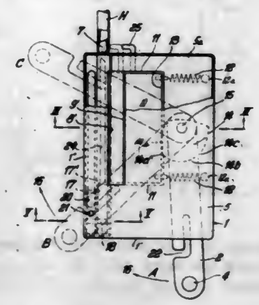
3,124,140
TOBACCO AND FLAVORING COMPOSITION
James Donald Fredrickson, Winston-Salem, N.C., assignor to R. J. Reynolds Tobacco Company, Winston-Salem, N.C., a corporation of New Jersey
No Drawing. Filed Feb. 6, 1963, Ser. No. 256,528
16 Claims. (Cl. 131—17)

1. A smoking product having incorporated therewith a small amount of a compound which enhances the flavor and aroma of the smoke from said product, said compound being selected from the group consisting of substituted malic acids having the formula



and the nontoxic salts and anhydrides thereof wherein R^1 is hydrogen or lower alkyl, R^3 is hydrogen, lower alkyl or benzyl, R^2 is hydrogen or lower alkyl and at least one of R^1, R^2 or R^3 is other than hydrogen.

3,124,141
CIGARETTE MAKING MACHINE
Walter Seltter, Hessbuhlstrasse 61, Stuttgart-Valhingen, Germany
Filed May 4, 1961, Ser. No. 107,742
Claims priority, application Germany May 7, 1960
10 Claims. (Cl. 131—78)

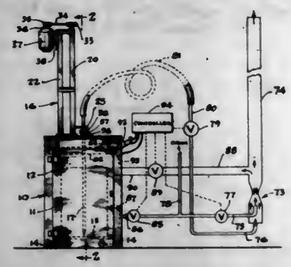


1. A machine for compressing a batch of tobacco into a substantially cylindrical body and for transferring the body into a prefabricated tube to form a cigarette, comprising a first and a movable second compressing member, said members having faces defining between themselves a tobacco receiving chamber having a first and a second end, said second member normally spaced from said first member; an actuating member having a fixed pivot axis and turnable about said axis in an arcuate path between a first and a second position and through an intermediate position; motion transmitting means rigid with and turnable by said actuating member so as to share all movements of the actuating member about said pivot axis, said motion transmitting means directly engaging and entraining said second member toward said first member when said actuating member moves from said first toward said intermediate position whereby the volume of said chamber is reduced and a batch of tobacco contained in said chamber is compressed by said faces into a substantially cylindrical body; tube supporting means aligned with and communicating with one end of said chamber; and means for expelling the compressed body from said chamber, said expelling means comprising a plunger located at the other end of said chamber and plunger entraining means rigid with the plunger and extending into the path of said actuating member so that the latter, while moving from said intermediate toward said second position, advances the plunger through said chamber by direct engagement with said entraining means and the plunger expels the body through said supporting means and into a tube mounted on the supporting means.

3,124,142
TOBACCO MOISTENING PROCESS AND APPARATUS
Herbert S. Philbrick, Jr., Evanston, Ill., and Leonard T. De Coursey, Yellville, Ark., assignors to John Mohr & Sons, Chicago, Ill., a corporation of Illinois
Continuation of application Ser. No. 87,348, Feb. 6, 1961. This application Sept. 5, 1961, Ser. No. 139,031
13 Claims. (Cl. 131—135)

1. The process of moistening a body of tobacco characterized by the steps of: placing the body of tobacco in an enclosed chamber having a steam evacuator associated therewith; driving an apertured probe into the body of the tobacco from a wall of the chamber, said probe being connected at one end to the steam evacuator; passing steam into said evacuator and evacuating the chamber by exhaustion through the probe; introducing steam into the chamber while maintaining the

evacuation through the probe; and thereafter introducing spent steam from the evacuator into the chamber and progressively reducing the fresh steam quantity as required to maintain a predetermined desired temperature and maintaining the same until the tobacco has received a predetermined desired quantity of moisture.

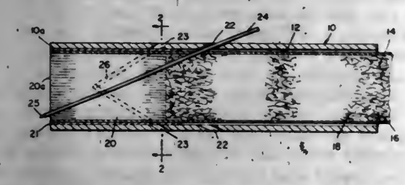


3,124,143

SMOKING ACCESSORIES

Frank T. Bartolomeo, 130 Kirkwood Ave., Merrick, N.Y.; Julia A. Bartolomeo, executrix of said Frank T. Bartolomeo, deceased

Filed May 7, 1957, Ser. No. 657,574
2 Claims. (Cl. 131—253)



1. A smoker's accessory of the character and for the purpose stated comprising a tubular jacket having a longitudinal axis of constant inside diameter throughout its length and adapted to snugly receive a cigarette or like smoking article, the jacket having a wall with an opening extending therethrough toward one end thereof and oblique to the longitudinal axis of the jacket, the said opening being located at a distance spaced from the end of the jacket toward which its inner end is directed whereby a pin, needle or like elongate pointed element may be extended therethrough into an end portion of a cigarette in the jacket toward and in close proximity to that end of the cigarette intended for placement in the mouth of the smoker, there being a second opening through the jacket wall oblique to and forming a wider angle with said axis than the first opening and located between a plane passing across the jacket through the first opening and the said end of the jacket.

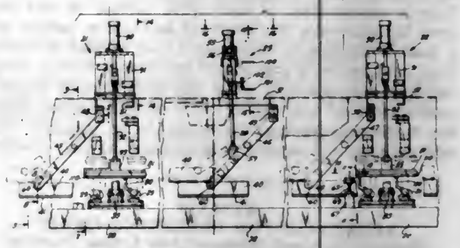
3,124,144

AUTOMATED WASHING OF MACHINE PARTS

Fred W. Koepke, Jr., Detroit, and Norman G. Zalewski, Garden City, Mich., assignors to Ajem Laboratories, Inc., Livonia, Mich.

Filed Apr. 18, 1963, Ser. No. 273,876
14 Claims. (Cl. 134—43)

3. In apparatus of the character described for the automatic power cleaning of internal cavities and passages of machine parts prior to the final assembly thereof by sequential treatment of said cavities and passages at a plurality of washing and rinsing and drying stations along said apparatus, the combination which comprises transfer means for transferring said parts sequentially from one of said stations to another, support means at each said station for supporting one of said parts thereat to receive a cleaning operation, hold-down means at each said station for contacting an off-set portion of said part and depressing said portion for positioning of said parts with said cavities and passages in position to be treated, jet manifold means including a pressure jet nozzle for each of said cavities and passages to be cleaned at said station, means for moving said jet manifold from a retracted position spaced from said parts during transfer



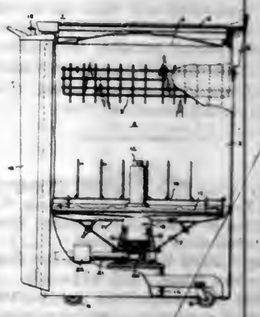
and indexing thereof to a working position in which each of said jet nozzles directly contacts a different one of said cavities and passages, indexing means for contacting and positioning said parts at said station for indexing and angular positioning thereof to bring each of said cavities and passages into flow alignment with one of said jet nozzles, and means for supplying cleaning and treating fluid through said jet nozzles in said jet manifold when each of said nozzles is in flow contact with a cavity or passage in said part to be treated.

3,124,145

DRAIN CONTROL SYSTEM FOR A WASHING MACHINE

John E. Egie, Georgetown, Ind., assignor to General Electric Company, a corporation of New York

Filed Oct. 29, 1962, Ser. No. 233,682
3 Claims. (Cl. 134—57)



1. A washing machine for providing an automatic washing cycle comprising:
(*a*) a tub;
(*b*) washing means arranged to effect washing of articles in said tub;
(*c*) a drain pump for removing vitiated liquid from said tub;
(*d*) a drain conduit connected to said pump;
(*e*) sequence control means for causing operation of said washing means and then operation of said pump, said sequence control means being effective to cause said operations to be repeated a predetermined number of times;

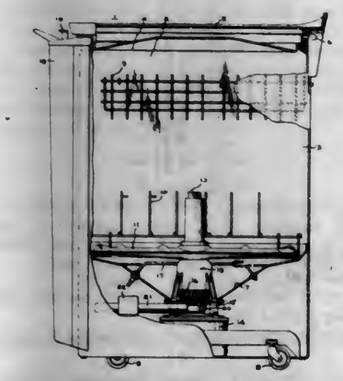
(*f*) said sequence control means including an electric timer motor, first and second cam means driven by said motor, and first and second switches controlled by said first and second cam means;
(*g*) a timer circuit for energizing said timer motor, said first switch enabling completion of said timer circuit;
(*h*) a pump circuit for causing operation of said pump, said second switch enabling completion of said pump circuit; and
(*i*) flow responsive means for sensing flow through said drain conduit including a third switch, said third switch having a normal position enabling completion of said timer circuit, said third switch being moved to a second position as long as there is flow through said drain conduit in which it prevents completion of said first circuit notwithstanding said first switch;
(*j*) said second cam means being configurated to promptly open said second switch upon reenergization of said timer motor.

3,124,146

DRAIN CONTROL SYSTEM FOR A WASHING MACHINE

Thomas E. Jenkins and Melvin R. Kauffman, Louisville, Ky., assignors to General Electric Company, a corporation of New York

Filed Oct. 29, 1962, Ser. No. 233,683
2 Claims. (Cl. 134—57)



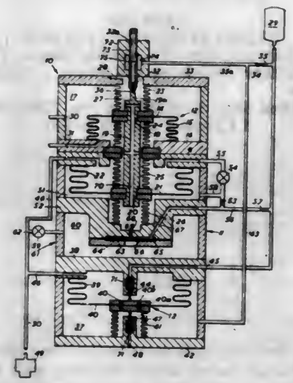
1. A washing machine to provide an automatic washing cycle comprising:
(*a*) a tub,
(*b*) washing means arranged to effect washing of articles in said tub,
(*c*) a drain pump to remove vitiated liquid from said tub,
(*d*) a drain conduit connected to said pump,
(*e*) sequence control means to control operation of said washing means and said pump,
(*f*) said sequence control means including a first switch to energize said pump and initiate operation thereof,
(*g*) said first switch being operated by a cam means which maintains said first switch closed at least until said drain conduit is filled with liquid and then opens said first switch for each operation of said pump,
(*h*) means responsive to liquid flow in said drain conduit including a normally open second switch effective when closed to bypass said first switch,
(*i*) said means responsive to liquid flow maintaining said second switch closed only as long as there is flow of liquid through said drain conduit.

3,124,147

PNEUMATIC FORCE-BALANCE CONTROLLERS

Henry Albert Hallett, Cheltenham, England, assignor to Cheltenham Auto Controls Limited, Cheltenham, England

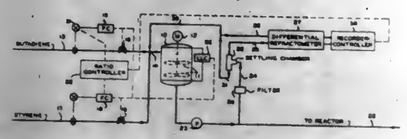
Filed Sept. 8, 1960, Ser. No. 54,644
7 Claims. (Cl. 137—86)



1. A pneumatic force-balance controller comprising a sensing device having a rigid plate to opposite sides of which in use a gas pressure of the desired value, obtained from a source of substantially constant gas pressure, and a signal pressure are respectively applied in direct opposition, a nozzle exhausting to atmosphere, means to feed gas under pressure to said nozzle, a first bellows at one end of which said plate is mounted so that said opposite sides of the plate are sealed from each other, a first chamber surrounding said first bellows and having a separating wall which closes the opposite end of said first bellows, a second bellows placed end to end with said first bellows to be concentric therewith but separated therefrom by said wall, a second chamber surrounding said second bellows, a pillar concentric with said first and second bellows, which passes therethrough and through said wall and is carried by said plate and a movable end of said second bellows, one end of said pillar cooperating with said nozzle so that deviation between said two pressures causes movement of said plate and pillar to vary a gap at the tip of said nozzle and produce a variable nozzle pressure upstream of said nozzle, relay valve means responsive to said variable nozzle pressure to control feed of gas pressure to a pneumatic regulator, said relay valve means being in the form of a unit comprising a third chamber having a wall, a third bellows contained within the third chamber secured at one end of the third wall, a second plate which closes the opposite end of the third bellows and movement of which operates valve means capable of admitting compressed gas to the interior of the third bellows or allowing gas to escape therefrom, said valve means comprising an inlet valve opening into the interior of said third bellows, an exhaust valve arranged externally of the third bellows, a further wall of said third chamber opposite to said third wall, a fourth bellows communicating with said third bellows and arranged between said second plate and said opposite wall of the third chamber, gas at nozzle pressure being fed to the third chamber, and gas at constant pressure being fed to the inlet valve whereby collapse of said third bellows under nozzle pressure causes the second plate to effect opening of the inlet valve to admit compressed gas to the interior of said third bellows to return the second plate to its original position, expansion of said third bellows causing the exhaust valve to open and the compressed gas to escape from the interior of the third bellows until equal pressure exists on both sides of the second plate, and

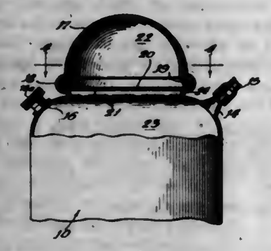
means for feeding back gas pressure from said relay valve means to said second bellows and second chamber to counterbalance the forces exerted by said plate, said feedback means including a first variable restrictor to proportion the pressure required of the relay valve means to produce the correct counterbalance force.

3,124,148
FLUID BLENDING SYSTEM
Louis D. Kleiss and John R. Connell, Borger, Tex., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Sept. 8, 1958, Ser. No. 759,699
5 Claims. (Cl. 137—93)



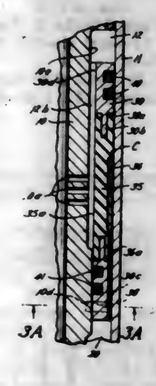
3. Fluid blending apparatus comprising a mixing chamber, first conduit means communicating with said chamber to introduce a first fluid, second conduit means communicating with said chamber to introduce a second fluid, third conduit means communicating with said chamber to remove blended fluid therefrom, first flow control means associated with said first conduit means to maintain flow therethrough at a predetermined rate, ratio controller means responsive to said first flow control means to maintain the flow through said second conduit means at a predetermined ratio with respect to the flow rate through said first conduit means, a refractometer cell comprising two adjacent chambers separated by a plate of radiation transparent material, one of said chambers being adapted to contain a reference fluid, means to circulate fluid from said third conduit means through the other of said chambers, means to direct a beam of radiation through said chambers, means to measure the deviation of said beam, and means responsive to said means to measure to reset said ratio controller means to change said predetermined ratio so as to maintain the refractive index of fluid in said third conduit means at a predetermined value.

3,124,149
GASOLINE TRANSFER CONTAINER
August C. Pape, 7216 W. 72nd St., Argo, Ill.
Filed Oct. 31, 1961, Ser. No. 148,881
1 Claim. (Cl. 137—150)



A liquid transferring device, comprising: a generally circular cylindrical container having one open end, said open end having an integral outwardly extending generally horizontal ledge, said ledge terminating at the base of a shoulder which is normal to said ledge, said shoulder being joined to an inwardly facing annular lip member substantially C shaped in cross section; a resilient, hollow, semi-globular cap having an outwardly extending annular flange on its open end generally circular in cross section, said cap flange positioned within the inwardly facing annular lip of said container to close the open end of said container with a generally airtight seal; partition means positioned on said horizontal ledge comprising a circular disk dividing said container into a liquid receiving chamber and an air evacuation chamber, said disk including a passage means establishing communication between said chamber; a closable air vent located on the liquid storage chamber of said container; a liquid passage port located on the liquid receiving chamber; and a flexible resilient hollow tubing secured to said port for conducting liquid to and from said container.

3,124,150
GAS LIFT VALVE
Thomas R. Alley, 341 Erin St., Houston 22, Tex.
Filed June 8, 1961, Ser. No. 126,399
5 Claims. (Cl. 137—155)



2. A gas lift valve comprising,
(*a*) a mandrel,
(*b*) an outer tubular body mounted on said mandrel forming a space therebetween,
(*c*) circumferentially spaced port means in said mandrel,
(*d*) circumferentially spaced diaphragm means opposite said spaced port means,
(*e*) means supporting said diaphragm means for contacting against said port means opposite thereto to close said port means,
(*f*) said mandrel and body forming a chamber to receive a pressure charge for urging said diaphragm means against said port means, and
(*g*) port means in said body for conducting fluid from the exterior of said body to act on said diaphragm means to aid in moving said diaphragm means away from said port means and thereby communicate said body port means and mandrel port means.

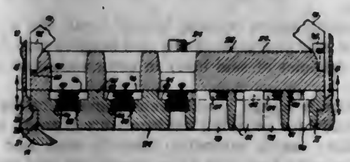
3,124,151
GAS LIFT VALVE
Mason M. Lilly, Houston, Tex., assignor to Harold Brown Company, a corporation of Texas
Filed Aug. 31, 1961, Ser. No. 135,227
3 Claims. (Cl. 137—155)

1. A casing pressure-operated gas lift valve, comprising, a generally cylindrical body adapted for coaxial connection into a well tubing string, a valve-receiving recess in the exterior wall of said body, an imperforate tubular sleeve slidably mounted about said body to completely enclose said recess and cooperating therewith to define a valve chamber, an inlet port communicating said valve chamber with the exterior of said body, discharge passage means communicating said chamber with the interior of said body, and a valve member and a



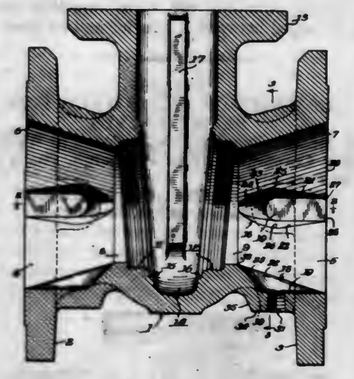
pressure-sensitive fluid pressure loading means therefor removably mounted in said recess to control communication between said inlet and discharge passage means, the ratio of the pressure-effective area of said pressure-sensitive loading means when the valve member is in the port-closing position to that of said port being in the range of 1.0 to 1 to 1.3 to 1.

3,124,152
POPPET-TYPE VALVE CONSTRUCTION
William H. Payne, Ocean, N.Y., assignor to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed Mar. 24, 1961, Ser. No. 98,053
2 Claims. (Cl. 137—269.5)



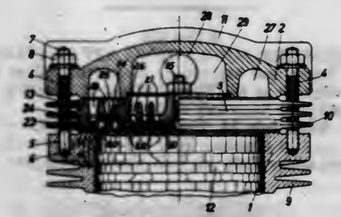
2. In a valve construction, the combination comprising a seat member provided with a plurality of passages, a valve for each of said passages and closing the same when engaging said seat member, a stop plate member for limiting the lift of said valves, spring means urging said valves toward a closed position, and means for securing said members together and including alined through holes provided in said members, the outer portion of each such hole in said members being internally threaded, and a fastener insertable into said alined holes from either end and including a head, shank and externally threaded end having a larger maximum transverse dimension than said shank, said head bearing against the outside of one of said members, said shank extending through said hole in said one of said members and being unattached thereto and said externally threaded end being received in said interally threaded hole portion in the other of said members.

3,124,153
FLANGED VENTURI ENDS WITH RECESSED LINE DRAINS
Charlie H. Lovelace, Glen Ellyn, Ill., assignor to Crane Co., Chicago, Ill., a corporation of Illinois
Filed Apr. 19, 1962, Ser. No. 188,791
8 Claims. (Cl. 137—312)



1. A pressure vessel comprising a casing having inlet and outlet ports;
at least one of said ports being provided with a venturi opening characterizing said port;
drain means for the said venturi port;
the said drain means consisting of a relieved portion constituting an interior depressed wall surface of said venturi port and extending substantially parallel to the longitudinal axis of said venturi port to the outer end limit of said latter port;
the said drain means having an opening from the casing venturi port, the inner end limit of said opening interrupting said interior depressed wall surface of the venturi port to communicate with said relieved portion.

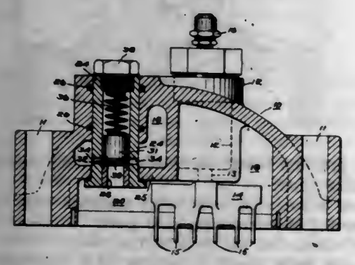
3,124,154
CONCENTRIC VALVE COMBINATION
Theodor Karl Kehler, Vienna, Austria, assignor to Hoerbiger Ventilwerke A.G., Vienna, Austria
Filed Feb. 13, 1961, Ser. No. 88,924
Claims priority, application Austria Feb. 12, 1960
4 Claims. (Cl. 137—338)



1. A valve assembly, particularly for piston type compressors and adapted to be clamped between a cylinder and cylinder head, comprising a common valve body formed of upper and lower discs concentrically arranged for gripping one over the other between a cylinder and cylinder head of a compressor, annular flow passages in said discs, a suction valve and an exhaust valve concentric with respect to each other in said passages, and spring means bearing against the said valves to close the flow passages, said upper disc having an outer rim extending the complete height of the valve assembly for gripping

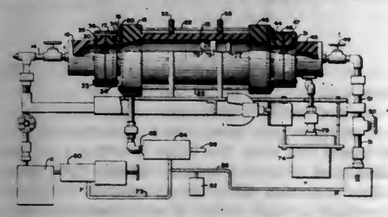
between a cylinder head and a cylinder, a concentric recess in the under surface of said upper disc for receiving the lower disc, said lower disc being much thinner than said upper disc and being nested in said concentric recess for gripping between the upper disc and a cylinder, the rims of said upper and lower disc being juxtaposed at the wall of said recess, and the lower faces of said rims being coplanar for resting tightly on the upper edge of the wall of a cylinder, whereby the valve assembly may more readily be sealed between a cylinder and its head.

3,124,155
COMPRESSOR HIGH-TO-LOW SIDE RELIEF VALVES
Erik H. Jensen, Staunton, Va., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 24, 1961, Ser. No. 126,226
1 Claim. (Cl. 137—540)



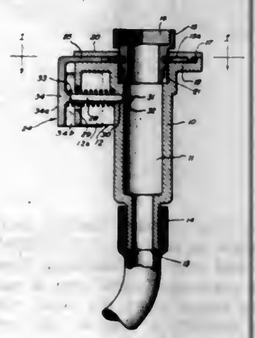
A gas pressure relief valve comprising a cylinder having a gas opening at one end and closed at the opposite end, means forming a seat for a valve disc in said cylinder adjacent to said open end, a flat valve disc normally seated on said seat, said disc having planar faces, one of said faces being normally in contact with said seat, a piston in said cylinder between said disc and said closed end, said piston having a domed surface in contact with the other one of said faces of said disc, said disc except for the contact of its said faces with said seat and said domed surface of said piston being freely floating, and a spring in said cylinder between said piston and said closed end for biasing said piston against said disc, said cylinder having a gas escape opening through its wall opposite said seat for permitting gas to pass from said cylinder when abnormal pressure in gas entering said one end unseats said disc.

3,124,156
PRESSURE EQUALIZING APPARATUS
Miles P. Eskin and Marvin S. Weinstein, Silver Spring, Md., assignors to the United States of America as represented by the Secretary of the Navy
Filed July 11, 1960, Ser. No. 42,185
8 Claims. (Cl. 137—559)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In the combination of a liquid filled system with a gas filled system, a pressure equalizing apparatus comprising an elongated vessel filled with a liquid, a flexible diaphragm carried at each end and within said vessel and sealing the vessel and liquid contents, the ends of the vessel beyond the diaphragms being connected respectively to the liquid filled system and the gas filled system, and means establishing and maintaining a constant pressure on the gas filled system, said pressure being transferred through said diaphragms and said vessel contained liquid to the liquid filled system.

3,124,157
CONJOINTLY OPERATED COUPLING AND VENT VALVE
Thomas Krzewina, Milwaukee, Wis., assignor to General Electric Company, a corporation of New York
Filed Dec. 31, 1962, Ser. No. 248,625
5 Claims. (Cl. 137—583)



1. A coupling for connecting a receiver to a tubular fixture adapted to be connected to a source of fluid under pressure,

(*a*) means providing a recess extending transversely of said fixture;

(*b*) a body having an inlet for receiving fluid flow from said fixture and an outlet for connection to said receiver;

(*c*) resilient means secured to said body and engageable in said recess to secure said body to said fixture with the inlet of said body in communication therewith;

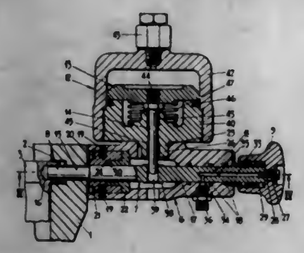
(*d*) normally closed valve means communicating with said body for relieving fluid pressure therein; and

(*e*) unitary means extending laterally from said body for actuating both said valve means and said resilient means,

(*f*) said unitary means being manually movable in a single direction for first actuating said valve means to relieve pressure within said body and thereafter effecting disengagement of said resilient means.

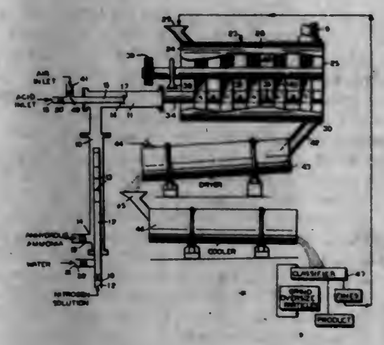
3,124,158
LOCKING ARRANGEMENTS FOR THE CLOSURES OF PRESSURE VESSELS
Leonard James Penfold, Wembley, Middlesex, England, assignor to The General Electric Company Limited, London, England
Filed Apr. 10, 1961, Ser. No. 101,840
Claims priority, application Great Britain Apr. 13, 1960
2 Claims. (Cl. 137—584)

1. In a safety locking arrangement for the closure of a pressure vessel, the improvement comprising a main body secured to the pressure vessel, a bolt slidable within said main body to a securing position in which it secures the closure in a closed position, a locking pin mounted in said main body transversely to the bolt, the bolt including a locking aperture for receiving said locking pin and disposed to be aligned with the locking pin when the bolt is in a securing position, pressure sensitive means for actuating the locking pin in accordance with the fluid



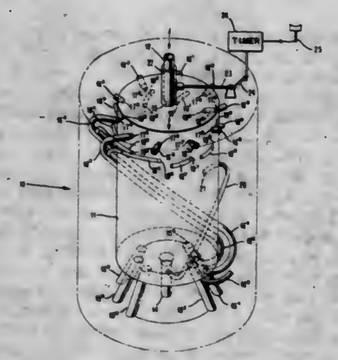
pressure within the vessel, and a slide valve comprising a first fluid coupling mounted on said main body for connection to a fluid pressure supply, a second fluid coupling mounted on said main body for connecting to the pressure vessel, and a duct within said bolt for providing a fluid connection between said first and second fluid couplings when the bolt is in the securing position.

3,124,159
APPARATUS FOR REACTING A PLURALITY OF LIQUID COMPONENTS
Grover L. Bridger and Norval K. Alfrey, Baltimore, Md., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut
Application June 10, 1960, Ser. No. 35,169, which is a division of application Ser. No. 837,943, Sept. 3, 1959. Divided and this application Nov. 3, 1960, Ser. No. 66,974
1 Claim. (Cl. 137—604)



Liquid blending apparatus comprising a first cylindrical blending chamber having an open end and a closed end, thus forming an elongated confined space; a first delivery tube extending through the closed end of said first chamber for a substantial distance therein, which distance is between the open and closed ends of the said first chamber, said first tube being closed at its extended end and disposed so as to provide an annular space between said first chamber and said first tube; a plurality of spaced wall openings in the extended portion of said first tube to provide communication between the interior thereof and said annular space for a substantial longitudinal area portion of the said first delivery tube; a second delivery tube communicating with the aforesaid annular space at a point between said plural openings and the closed end of said first chamber; a separate second cylindrical blending chamber having an open end and a closed end, thus forming a second elongated confined space of substantially uniform diameter; a third delivery tube of substantially uniform diameter extending through the closed end of said second chamber for a substantial distance therein, which distance is between the open and closed ends of said second chamber, said third delivery tube being disposed so as to provide annular space between said third tube and said second chamber, said third delivery tube communicating with the interior of said second chamber by means of perforations in its terminus; said first blending chamber being connected to said second blending chamber by a fourth tube connecting the open end of said first chamber with the annular space in said second chamber at a point between the closed end of said second chamber and the point at which the said third delivery tube communicates with said second chamber, said fourth tube being substantially concentric with said first mixing chamber.

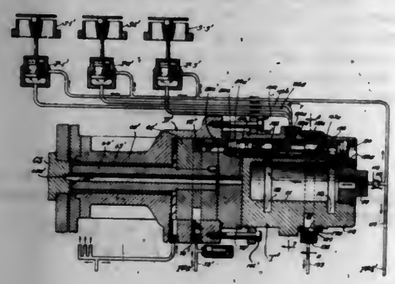
3,124,160
SEQUENTIAL FLUID AMPLIFIER
Saul N. Zilberfarb, Philadelphia, Pa., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed June 29, 1962, Ser. No. 206,270
19 Claims. (Cl. 137—610)



1. A pure fluid device comprising: a chamber, a power orifice in one end of said chamber adapted to direct a fluid power stream into said chamber, a plurality of N output channels, wherein N is a positive integer specifying the total number with *n* being any positive integer up to and including N, opening from said chamber at locations down stream from said power orifice, a group of N first control orifices arranged in the wall of said chamber with each *n*th first control orifice adapted to direct a first fluid control stream into said chamber to impinge upon and deflect said power stream into the *n*th output channel, a group of N second control orifices in the wall of said chamber with each *n*th second control orifice adapted to direct a second fluid stream into said chamber to impinge upon and deflect said power stream into the *n*th output channel, first means responsive to the power stream flow in the *n*th output channel to provide a first control stream to the *n*th first control orifice, second means responsive to the

power stream flow in the nth output channel to provide a second control stream to the $(n+1)$th second control orifice, where the relative energies of said first and second control streams are such that the former determines the deflection of said power stream even during the presence of the latter, and means to selectively interrupt the deflecting effect of any first control stream which is deflecting said power stream.

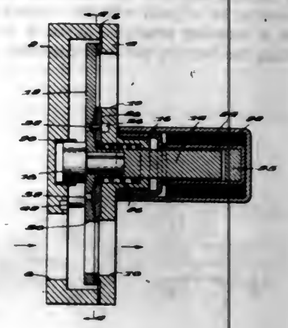
3,124,161
PRESSURIZED FLUID OPERATED DISTRIBUTOR-TIMER ASSEMBLY
Charles Yaindl, Allentown, Pa., assignor to The Aldrich Pump Company, Allentown, Pa., a corporation of Pennsylvania
Original application Jan. 21, 1958, Ser. No. 710,274, now Patent No. 3,039,393, dated June 19, 1962. Divided and this application Feb. 28, 1962, Ser. No. 176,342
10 Claims. (Cl. 137—624.18)



10. A distributor-timer assembly comprising, a housing formed with a chamber and a pair of fluid ports for conducting fluid to said chamber, said chamber having a mouth, a cylindrically-shaped rotor rotatably mounted in said chamber and having a peripheral groove open to one of said ports and having an axially extending passage open to the groove, a disk-like timer head mounted on the housing and covering the mouth of said chamber, the rotor being of an axial length shorter than said chamber whereby fluid entering said second port urges the rotor in close association with the timer head, means for holding the timer head firm against the housing but providing for the same to be angularly adjustable, a plurality of channels in said timer head, each adapted to register with the passage in said rotor as the same is rotated; for each channel, a control piston movable back and forth therein, fluid actuated means for yieldably biasing each piston toward said rotor, and each piston being adapted to be moved away from the rotor when fluid in said groove is transferred to the piston by the registry of said channels and said passage, a control mechanism including, for each piston, a valve connected thereto and arranged to control fluid flow, and means for releasing the fluid in said groove and in each of said channels as the latter register with the passage in said rotor so that said fluid actuated means is effective to return each of said pistons toward said rotor.

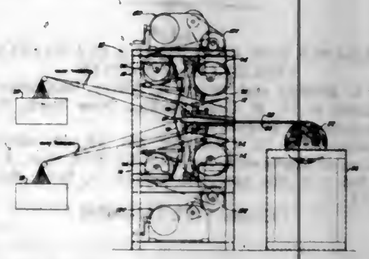
3,124,162
MULTI-WAY DISTRIBUTOR VALVE
John H. Cameron, 81 Alston Ave., New Haven, Conn.
Filed Apr. 30, 1962, Ser. No. 190,952
8 Claims. (Cl. 137—625.11)

1. A sequencing valve comprising a housing, an inlet port in the housing, a plurality of outlet ports in the housing, disc for closing at least one of the outlet ports, a shaft journaled for longitudinal and rotary motion, said disc being secured to the shaft, means for reciprocating the shaft longitudinally, a plurality of cam surfaces on opposite faces of the disc and means in the housing for



cooperating with the cam surfaces to rotate the disc to uncover sequentially the outlet ports.

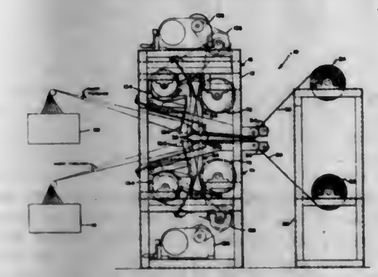
3,124,163
HIGH PRODUCTION LOOM
Games Slayter, Newark, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Filed Dec. 16, 1960, Ser. No. 76,340
5 Claims. (Cl. 139—12)



1. In a loom of the progressive shedding type having a frame, a shaft mounted horizontally on said frame, a plurality of reeds pivotally mounted on said shaft, a reed cam roll rotatably supported on said frame in a position spaced from said shaft, means for rotating said reed cam roll about an axis parallel to said shaft, said cam roll being positioned to contact portions of said reeds spaced from said shaft, means for establishing a supply of warp threads, means spaced from said supply means for moving said warp threads through said frame, a plurality of heddles, ends of which are engageable with the warp threads, a plurality of shuttles adapted to ride on said warp threads, each of said shuttles having a surface adapted to lie laterally to a path in which said reeds are moved and to said warp threads, said shuttles being movable across the warp threads by said reeds, and said warp threads being movable to positions above and below the paths of said shuttles by said heddles, the improvement comprising means supported by said frame for guiding said heddles through generally up and down movements, said heddles having pivotal means at the ends opposite the ends engageable with the warp threads, a plurality of rigid lever arms for said heddles, said lever arms being pivotally connected to said pivotal means, a lever arm shaft supported by said frame, said lever arms being pivotally mounted on said lever arm shaft, a heddle cam roll comprising a plurality of individual heddle cams rotatably mounted on said frame at a point spaced from said lever arm shaft, means for rotating said heddle cam roll for rotation about an axis

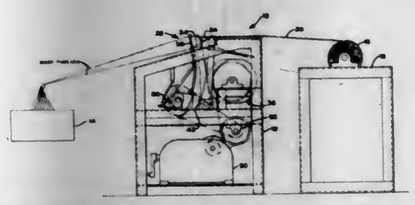
parallel to said lever arm shaft to contact portions of said lever arms spaced from said shaft, and means associated with the two rotating means for coordinating movement of said heddle cam roll and said reed cam roll.

3,124,164
SHUTTLE AND HEDDLE DRIVE MECHANISM FOR A PROGRESSIVE SHEDDING LOOM
William H. Ewing, Newark, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Filed Dec. 30, 1960, Ser. No. 79,639
7 Claims. (Cl. 139—12)



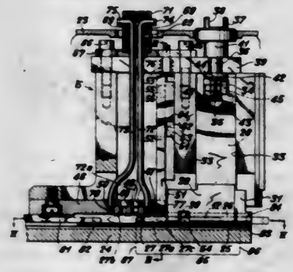
7. In mechanism for a loom of the progressive shedding type, a frame, a supply of warp threads, means for moving said warp threads across said frame, a plurality of shuttles adapted to ride on the warp threads, each of said shuttles having a surface lying angularly to said warp threads, said surface having a generally slanted, elongated 8-shaped contour, a bobbin carrying a fill thread in each of said shuttles, spring clip means releasably and rotatably holding said bobbins in said shuttles, and said shuttles having slots generally parallel to a plane in which a portion of said warp threads lie, fill threads from said bobbins extending through said slots.

3,124,165
DRIVE MECHANISM FOR HIGH PRODUCTION LOOM
Games Slayter and William H. Ewing, Newark, Ohio, assignors to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Filed Dec. 30, 1960, Ser. No. 79,894
7 Claims. (Cl. 139—12)



1. In a loom of the progressive shedding type, a frame, a shaft mounted horizontally on said frame, a plurality of reeds mounted on said shaft in contiguous relationship, the adjacent reeds being in slidable contact one with another, said reeds having thin tip portions adapted to extend between warp threads, a reed cam roll rotatably supported on said frame in a position spaced from said shaft to contact portions of said reeds spaced from said shaft and from said tip portions, means for rotating said reed cam roll about an axis parallel to said shaft, a supply of warp threads, means spaced from said supply for moving said warp threads in parallel, spaced relationship across said frame a plurality of flexible wire heddles, ends of which engage said warp threads, a plurality of guide means supported by said frame for guiding said heddles through movements laterally of said warp threads, a plurality of lever arms pivotally connected to ends of said heddles opposite the warp-engaging ends, a lever arm shaft on which said lever arms are pivotally mounted, a heddle cam roll mounted on said frame and spaced from said lever arm shaft, means for rotating said heddle cam roll for rotation about an axis parallel to said lever arm shaft to contact portions of said lever arms spaced from said lever arm shaft, a plurality of shuttles riding on a portion of said warp threads, each of said shuttles having a surface angularly disposed with relation to and intersecting the paths in which at least three of said reeds move, said shuttles being moved across said warp threads when the surfaces of said shuttles are engaged by said tip portions of said reeds, a plurality of the tip portions engaging said surfaces at any given instant, and means for coordinating rotational movement of said cam rolls.

3,124,166
SHUTTLE RECEIVING MECHANISM FOR GRIPPER SHUTTLE LOOMS
Erwin Pfarrwaller, Winterthur, Switzerland, assignor to Sulzer Freres, S.A., Winterthur, Switzerland, a corporation of Switzerland
Filed June 6, 1962, Ser. No. 200,476
Claims priority, application Switzerland June 14, 1961
6 Claims. (Cl. 139—126)



1. In a weaving machine of the gripper shuttle type wherein gripper shuttles pull weft threads through a shed formed by warp threads from a spool placed outside the shed:

a shuttle receiving mechanism for receiving the shuttles after having passed through the shed and after having inserted a weft thread thereinto,

said shuttle receiving mechanism including a brake for braking the speed of the shuttles and stopping the shuttles,

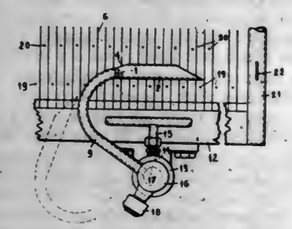
adjusting means operatively connected to said brake for adjusting the braking force thereof,

two shuttle feelers placed in said mechanism in spaced relation along the path of the shuttles for defining the last part of the path of the forward ends of the shuttles within said mechanism and affording adjustment of said adjusting means to effect stoppage of the shuttles within said defined part of the shuttle path.

3,124,167
PNEUMATIC WEFT INSERTING MEANS
Lambertus te Strake, Huize Geleia, Deurne (N.Br.), Netherlands
Filed Dec. 28, 1959, Ser. No. 862,147
Claims priority, application Netherlands Jan. 19, 1959
5 Claims. (Cl. 139—127)

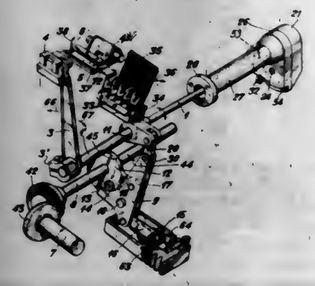
1. Weft inserting apparatus for a weaving loom comprising means for introducing a weft thread into an open

shed by jet action of air under pressure; at least one weft conveying nozzle adapted to be inserted by bell-crank lever means into said open shed between warp threads



intermediate the warp width of said shed; said weft conveying nozzle being adapted to receive and convey further through said opening shed a thread from said weft introducing means.

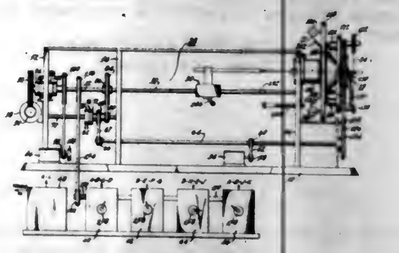
3,124,168
SHUTTLE PICKING MECHANISM FOR WEAVING MACHINES
Josef Wohlgemuth, Sulz-Attikon, and Hans Demuth, Winterthur-Toss, Switzerland, assignors to Sulzer Freres, S.A., Winterthur, Switzerland, a corporation of Switzerland
Filed Oct. 23, 1961, Ser. No. 146,924
Claims priority, application Switzerland Oct. 28, 1960
5 Claims. (Cl. 139—145)



1. A shuttle picking mechanism for weaving machines comprising a torsion spring rod, support means for supporting one end of said rod, means connected to said rod for revolving the second end of said rod for tensioning the rod, and means connected to said rod for picking a shuttle upon release of the tension of said rod, said support means including abutment means stopping rotation of the first end of said rod when the second end of the rod is revolved for tensioning the rod, said support means affording rotation of said rod through at least a predetermined angle in the direction of rotation of the expanding rod.

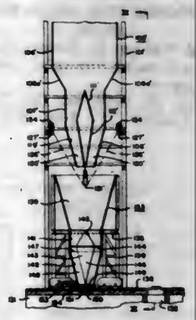
3,124,169
APPARATUS FOR WINDING HELICAL WIRE GRIDS FOR ELECTRON TUBES
Otto H. Schade, Sr., West Caldwell, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Mar. 9, 1959, Ser. No. 798,152
3 Claims. (Cl. 140—71.5)

1. Apparatus for winding variable pitch helical wire grids for electron tubes comprising supporting mandrel means, means for winding a helical grid wire around said mandrel at a constant rate, means for longitudinally advancing said mandrel at a plurality of different speeds to wind plural pitch helical grids, said last-named means comprising a lead screw coupled to said mandrel for longitudinally advancing said mandrel, a plurality of drive motors adapted for engagement with said lead screw, each of said motors adapted to rotate said lead screw at a different angular velocity, a plurality of electrically operable clutches for selectively and independently coupling a different one of said plurality of drive motors to said lead screw, switch means for actuating said plurality of



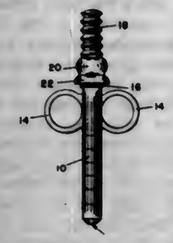
clutches, counting apparatus for selectively cyclically actuating said switch means, said counting apparatus comprising cam means for operating said switch means, means coupled to said lead screw for moving said cam means in synchronization with the advance of said mandrel, and manual means permitting adjustment of the position of said cam means for changing the amount of advancement of said mandrel at each of said plurality of speeds.

3,124,170
SOLIDS FLOW SYSTEM
Franklin D. Cooper, Arlington, Va., assignor to Bituminous Coal Research, Inc., Monroeville, Pa., a corporation of Delaware
Original application Feb. 27, 1959, Ser. No. 795,994, now Patent No. 3,081,009, dated Mar. 12, 1963. Divided and this application Oct. 29, 1962, Ser. No. 233,538
8 Claims. (Cl. 141—18)



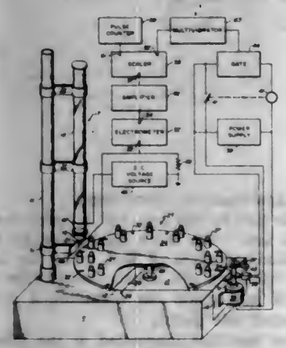
6. In a solids flow device, apparatus comprising, in combination, a bin, a car adapted to be moved into replenishment position beneath said pin, said car having a body with upwardly extending sides and at least one feeder spout extending from the bottom of said body, said feeder spout comprising a tapered portion sloped at a steep angle to a feeder outlet and a double conical member substantially in base-to-base relation with the lower end thereof adjacent said feeder outlet, said bases of said double conical member being adjacent but above the top of said tapered portion, and a closure member for said feeder spout.

3,124,171
MEDICINE DROPPER CONSTRUCTION
Joseph M. Mitchell, % Barmar Products Inc., 72 High St., Clinton, Mass.
Filed Aug. 9, 1961, Ser. No. 130,291
2 Claims. (Cl. 141—26)



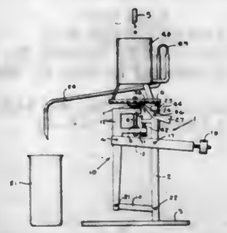
1. A two part molded plastic medicine dropper, one part comprising a pump member and the other comprising a rigid tubular medicine container member open at each end and attachable at one end to the pump member and adapted to discharge medicine through the other end; said pump member comprising a flexible bellows member having a relatively rigid base portion secured thereto and having a flaring skirt portion beyond the base portion for attachment to the container member, said bellows members, base portion, and skirt portion being integral, and said flaring skirt portion being adapted to snugly fit within the adjacent end of the tubular medicine container member when the parts are assembled, said medicine containing member having integral finger holds adjacent the end which fits over the flaring skirt portion of said pump member.

3,124,172
FRACTIONATING COLUMN PRODUCT COLLECTOR CONTROL
Gordon Donald Paxson, Jr., El Cerrito, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Mar. 1, 1961, Ser. No. 92,723
7 Claims. (Cl. 141—130)



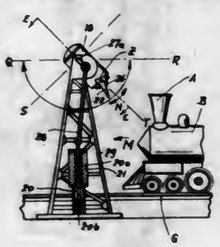
1. In apparatus for controlling a movable carrier to successively position a plurality of collector vessels for receiving globules of fluid product from the outlet of a chemical processing column, the combination comprising a D.C. voltage source applying an electrostatic charge to said fluid globules at said outlet of said column, an electrically conductive element spaced a small distance from the path of said globules between said outlet and said collecting vessels, an electrometer circuit having an input coupled to said conductive element and producing an output signal in response to an electrical charge induced thereon by the passage of said globules thereby, and an electrically actuated motor operating said carrier in response to said output signals from said electrometer circuit.

3,124,173
AUTOMATIC FRACTION COLLECTOR
Burris D. Tiffany, Kalamazoo, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware
Filed Oct. 14, 1960, Ser. No. 62,747
20 Claims. (Cl. 141—251)



1. In a collecting and distributing device, the combination comprising:
- a base; a table rotatably supported on said base for rotation about a vertical axis;
- a platform and means supporting said platform for unitary, linear, vertical movement with respect to said base supporting means being disposed adjacent to one side of said table;
- a ratchet and means mechanically connecting said ratchet to said table;
- a pawl operable in response to downward vertical movement of said platform for effecting stepwise rotative movement of said ratchet and thereby stepwise rotative movement of said table;
- a container mounted on said platform for movement therewith and a discharge for said container operable upon accumulation within said container of a predetermined amount of fluent material for discharging the contents thereof, said discharge discharging successively into a plurality of receptacles held on said table and presented one at a time to a filling station located under said discharge upon stepwise rotation of said table.

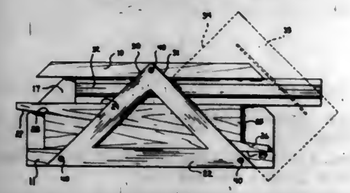
3,124,174
DEVICE FOR FEEDING THE STORAGE TANKS OF STEAM GENERATORS IN TOY LOCOMOTIVES
Eberhard Seuthe, Deizisau, Germany (Uhingen, Wurttemberg, Germany)
Filed Mar. 1, 1961, Ser. No. 99,333
Claims priority, application Germany Sept. 15, 1960
3 Claims. (Cl. 141—284)



1. A fueling device for toy locomotives, comprising a stand having two legs straddling the track of a toy locomotive, a shaft rotatably supported by said two legs over

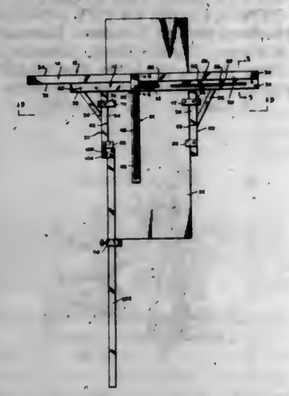
said track, electromagnetic means operatively connected to said shaft for rotating the same, a tank rotatably supported by said shaft, a cam rigidly secured to said shaft, piston means slidably disposed in said tank and abutting against said cam, a nozzle having swingable stop means projecting downwardly from said tank, said stop means being adapted to be engaged by a toy locomotive moving underneath said tank and swinging the latter through an angle, whereby said cam urges said piston means through a power stroke and thereby causes a predetermined quantity of liquid out of said tank through said nozzle.

3,124,175
MITER GUIDE BOX
Donald E. McCloud, 1322 E. Vermont St., Indianapolis, Ind., assignor of one-half to John D. Stafford, Southport, Ind.
Filed Jan. 23, 1961, Ser. No. 84,257
1 Claim. (Cl. 143—6)



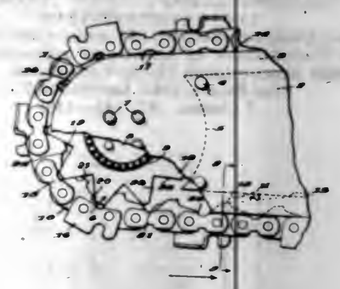
A miter box comprising a pair of elongated members of rectangular cross section, said members being arranged in parallel relation and having mutually facing surfaces which are grooved along their length, a sheet of material received in said grooves and extending between said elements, a triangularly shaped guide secured to said elongated members on one side thereof in parallel relation to said sheet of material, a U-shaped guide secured to said elongated members on the opposite side thereof in parallel relation to said sheet of material, said triangularly shaped guide having sides arranged at forty-five degree angles to the length of said elements, said U-shaped guide having sides arranged at ninety degree angles to the length of said elements.

3,124,176
ADJUSTABLE JIG FOR CUTTING WOOD
Arthur Vogini, 23—42 31st Road, Long Island City, N.Y.
Filed Sept. 14, 1961, Ser. No. 138,084
1 Claim. (Cl. 143—6)



A combination square and saw guide for use with a portable power driven saw comprising, an elongated rectangular fixed flat bar with opposed long straight side edges, said fixed bar having a threaded recess intermediate its ends, an L-shaped bar with straight edges along its base and with its angle leg connected to the fixed bar adjacent each end thereof so that the base of the L-shaped bar and the fixed bar form a right angle, an elongated flat rectangular saw guide bar with opposed long straight side edges pivotally connected to the distal end of said fixed flat bar, an elongated reading bar pivotally connected to the pivoted guide bar intermediate its ends, said reading bar having indicia on one surface thereof representing degrees, said reading bar having a central elongated closed slot extending thereabong and spaced recesses in the surface of the reading bar at the ends of the indicia, a wing bolt extending through the slot in said reading bar and threaded into the recess in the fixed bar to hold the movable guide bar in adjusted angular position relative to the fixed flat bar, and a pointer pivotally mounted on the fixed bar and extending over the reading bar and adapted to engage in said recesses for precisely locating certain angular settings and for holding the reading bar in moved position, an elongated angle iron detachably connected at one end to the distal end of the base of the L-shaped bar and forming an extension of said L-shaped bar, and a gauge slidably mounted on the detachable angle iron for gauging the length of the wooden board to be cut.

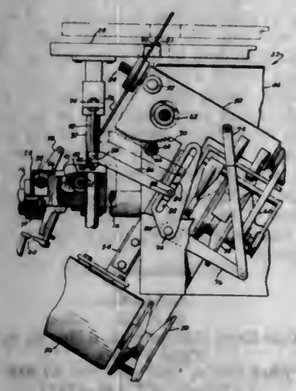
3,124,177
CHAIN SAW MACHINE
Anders Leonart Ekrud, Sandviken, Sweden, assignor to Sandvikens Jernverks Aktiebolag, Sandviken, Sweden, a corporation of Sweden
Filed Mar. 28, 1962, Ser. No. 183,202
3 Claims. (Cl. 143—32)



1. A chain saw machine, comprising
(*a*) a guide bar having one end adapted for connection with saw chain drive means and an idler end, the longitudinal edges of said guide bar containing grooves extending the length thereof, the idler end portion of said guide bar including a pair of laterally spaced side plates;
(*b*) an idler sprocket journalled at the idler end of said guide bar intermediate said side plates, said idler sprocket including teeth having at the free extremities thereof generally inclined forward and rear supporting surfaces; and
(*c*) a saw chain mounted on said guide bar and said idler sprocket for longitudinal and semi-circular end travel relative to said guide bar, said saw chain including pivotally connected center and outer links, said outer links including lower surfaces adapted to engage the peripheral longitudinal surfaces of said guide bar, at least some of said outer links comprising cutter links;

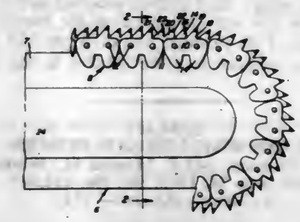
(1) each of said center links having below the pivotal connections thereof to said outer links a lower portion adapted to extend into said guide bar grooves, said lower portion extending below the lower surfaces of each of said outer links a distance less than the depth of said grooves whereby during longitudinal travel of the chain along the bar the chain is supported solely by the cooperation between the lower surfaces of the outer links and the peripheral longitudinal surfaces of said guide bar;
(2) the lower portion of each of said center links also having at the forward and rear edges thereof supporting surfaces adapted for engagement with the rear and forward supporting surfaces of said sprocket teeth, said center link supporting surfaces being adjacent but spaced downwardly from the lower surfaces of said outer links, the foot portions of said center links being of a size and configuration to define spaces in the bottoms of the grooves between sprocket teeth when the supporting surfaces of the sprocket teeth engage the supporting surfaces on the center links, said sprocket being so journalled between said side plates that the lower portions of the outer links are spaced from the guide bar side plates when the supporting surfaces on the sprocket teeth engage the supporting surfaces on the center links, whereby during semi-circular end travel the saw chain is supported solely by the cooperation between the supporting surfaces on the extremities of the sprocket teeth and the supporting surfaces on the center links.

3,124,178
CIRCULAR SAW VERSION OF A MULTI-PURPOSE TOOL HAVING A TILT ARBOR
Alfred R. Packard, Springfield, Mass., assignor to Toolkraft Corporation, Springfield, Mass., a corporation of Massachusetts
Filed May 18, 1962, Ser. No. 195,756
8 Claims. (Cl. 143—36)



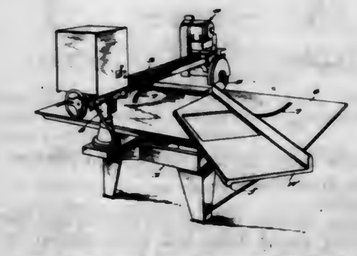
1. In a multi-purpose power tool, a power head, a driven spindle carried by said power head with a circular saw blade mounted thereon, means for pivoting said spindle relative to said power head from a normally horizontal position to an angularly disposed position, a worktable overlying said spindle and slotted to receive said saw blade, means for adjusting the heightwise position of said table to vary the depth of cut of said blade and means responsive to both angular adjustment of said spindle and heightwise adjustment of said table for shifting the table longitudinally of the normally horizontal position of said spindle and maintaining said slot aligned with said blade when said spindle is tilted from its horizontal position.

3,124,179
CHAIN SAW
Manuel Cavero, 151B Russ St., San Francisco, Calif.
Filed July 2, 1962, Ser. No. 206,672
2 Claims. (Cl. 143—135)



1. In combination, a chain saw chain comprising, pairs of spaced side-by-side cutter links having raker links pivotally connected at their opposite ends between the adjacent ends of adjacent pairs of cutter links in staggered relation thereto, a cutter tooth on one link of each pair of cutter links adjacent one end thereof and set to the corresponding side of the chain, a cutter tooth on the other link of each pair of cutter links adjacent the other end thereof, and also set to the corresponding side of the chain, a pair of oppositely set raker teeth on each of the raker links, said cutter and raker teeth being disposed at approximately equally spaced points along said chain and facing in the same direction, a support rail defining at least a portion of a closed path about which said chain is adapted to pass, said rail including a pair of generally parallel side guide surfaces terminating at one edge portion in a bearing surface extending between said disposed generally normal to said guide surfaces, said raker links each including a generally planar undersurface disposed in sliding contacting relation with said bearing surface and said cutter links each including a pair of depending longitudinally spaced projections, said projections of each pair of cutter links slidingly embracing said guiding surfaces, said raker teeth being slightly shorter than said cutter teeth.

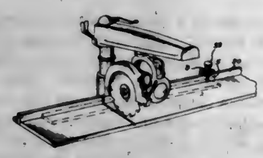
3,124,180
MITERING GAGE FOR WORK TABLES
Arthur W. Cate, Knoxville, Tenn., assignor, by mesne assignments, to Tynaman Machine Company, Inc., Knoxville, Tenn., a corporation of Delaware
Filed Mar. 23, 1961, Ser. No. 97,782
3 Claims. (Cl. 143—169)



1. A work table of the character described comprising a table top having an arcuate slot therein, a quadrant member extending through the slot lengthwise thereof with a

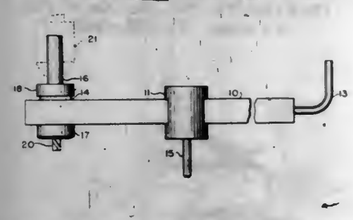
top surface substantially flush with the top surface of the table top, means for securing the quadrant member to the table top, said quadrant member having an elongated slot therein with a recessed underportion, serrations on the top surface of said quadrant member extending on each side of said elongated slot, the width of said arcuate slot being substantially equal to the combined widths of said elongated slot and said serrations, a fence member pivotally connected with the table top and extending in overlapping relation with the quadrant member, a clamp pin having operative connection with the fence member and extending downwardly through the slot in the quadrant member with a head portion received in the recessed portion of the slot and having means for bearing against opposite sides of the recessed portion of the slot for locking the fence member in place relative to the quadrant member.

3,124,181
CLAMP STOP FOR SAW FENCES
Orlo Willis Clemans, 542 S. Monroe St., Seattle, Wash.
Filed Aug. 21, 1962, Ser. No. 218,307
8 Claims. (Cl. 143—174)



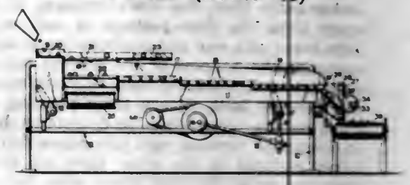
6. A clamp stop comprising two angle members arranged with one leg of one angle member in overlapping registry with one leg of the other angle member, said angle members having their other legs projecting in the same direction from said legs in overlapping registry and in a generally parallel spaced apart relationship with the included surfaces of said opposite legs diametrically opposed, pivot means connecting the end portion of one leg of one angle member in and parallel to the included corner of the other angle member, and adjustable thrust means between said legs of the respective angle members in overlapping registry and operable to effect relative swinging of the respective members.

3,124,182
CIRCLE CUTTER FOR USE WITH POWERED HAND DRILLS
Howard Silken, 309 Allen Ave., Oceanside, N.Y.
Filed Nov. 28, 1962, Ser. No. 240,694
4 Claims. (Cl. 145—121)



1. A circle cutter for use with a hand powered drill comprising, in combination,
(*a*) a beam,
(*b*) a pivot member slidably disposed on said beam,
(*c*) locking means fixing said pivot member to said beam,
(*d*) a center pin extending downward from said pivot member,
(*e*) an arbor shaft extending rotatably and vertically through one end of said beam, the upper end of said arbor shaft being engageable by a power drill, said arbor shaft having an enlarged lower portion below said beam,
(*f*) a collar disposed about said shaft above said beam, said collar having means fixing said collar to said shaft to secure said shaft within said beam, and
(*g*) a cutting bit of substantially the diameter of said center pin extending downward from said arbor shaft below said center pin.

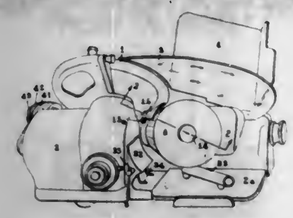
3,124,183
MACHINE FOR SLICING BERRIES IN HALF
Arthur B. McLauchlan, 1145 Lancaster Drive, Salem, Oreg.
Filed June 29, 1962, Ser. No. 206,439
1 Claim. (Cl. 146—73)



In a slicing machine of the character described, a pan having a plurality of identical, parallel, V-shaped troughs extending longitudinally along the pan and having open discharging ends at the forward end of said pan, the walls of said troughs at said discharging ends cut away so as to terminate in a plane sloping obliquely downwardly and inwardly with respect to the lines of the bottom vertices of said troughs, means connected with said pan for imparting a special oscillatory motion thereto so as to cause berries deposited in said troughs to move forwardly along said troughs to said discharging ends and to arrange themselves with their major axes in vertical planes bisecting the dihedral angles of said troughs, a stationary chute panel extending downwardly and forwardly from said pan, the upper receiving end of said panel positioned a short distance beneath said discharging ends of said troughs, said chute panel formed with identical parallel chute troughs corresponding in number and width to said troughs of said pan, the longitudinal center line of each chute trough extending in the same vertical plane as the bottom vertex line of a corresponding trough of said pan, and a rotating cutting knife at the bottom end of each chute trough of said panel positioned in the same vertical plane as the longitudinal center line of the chute trough and the bottom vertex line of the corresponding trough in said pan, whereby berries deposited in said troughs of said pan, upon being oriented and upon reaching said discharging ends of said pan troughs, will drop freely into said chute troughs and move more rapidly into contact with said knives.

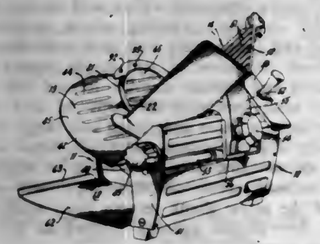
3,124,184
SLICER
Pierre Jean René Ducourneau, 8 Rue de la Voute, Paris, France
Filed Jan. 6, 1961, Ser. No. 81,068
5 Claims. (Cl. 146—102)

1. In a meat slicer, a rotating cutter, a reciprocating carriage supporting meat to be sliced by the cutter, a slice-receiving tray, a rotated frusto-conical member disposed in a position to receive each cut slice from the cutter, a pivoted flap disposed over the periphery of the frusto-conical member, means for causing said flap to be rotated in company with the frusto-conical member while a meat slice is gripped between the flap and the face of said member and until the said slice is brought to a position above the tray, means for causing the flap to be stationarily maintained until a slice enters between it and the said frusto-conical member and then causing the flap to grip



the slice between it and the face of said member and then rotated in company with the said member to bring the slice above the tray, and then moved away from said member to cause the release of the slice.

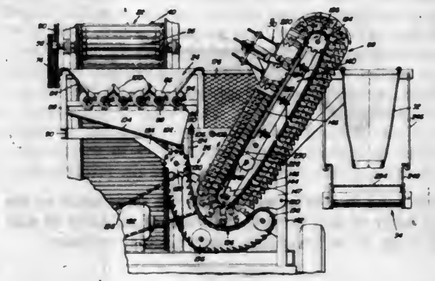
3,124,185
SLICER
Edward C. Karp, Belvidere, Ill., assignor to Sanitary Scale Company, Belvidere, Ill., a corporation of Illinois
Filed Aug. 1, 1962, Ser. No. 213,949
4 Claims. (Cl. 146—102)



1. A guard arrangement for shielding the peripheral cutting edge of a generally circular knife rotatably mounted on the base of a slicer, said guard arrangement comprising; framework means adapted to underlie the knife and be secured to the base of the slicer, said framework means including arm means supporting a segmentally circular rim having an inner surface with an inside diameter slightly greater than the outside diameter of the knife, said rim adapted to enclose the major portion of the knife's cutting edge whereby this major portion is inaccessible to operating and maintenance personnel, said rim having an upper surface surmounting the plane of the cutting edge, said inner surface of said rim disposed at an angle of at least 90° to the adjacent lower surface of the knife whereby regions of the knife immediately adjacent the cutting edge and the appropriate adjacent areas of the guard arrangement are readily accessible to cleaning without danger of contacting the cutting edge of the knife.

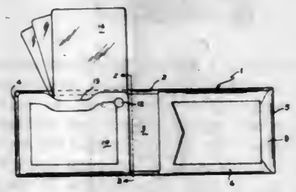
3,124,186
AUTOMATIC SEED POTATO CUTTER
George H. Siems, Box 337, Shelley, Idaho
Filed Aug. 3, 1960, Ser. No. 47,250
7 Claims. (Cl. 146—163)

6. In combination with a gravity feeding crop sizer, a crop transferring device comprising, upwardly moving means for receiving said crop and retarding falling movement thereof, divider means mounted above the moving means separating the crop into different size categories, movable crop conveying means mounted for movement between said divider means for separately conveying each size category of the crop away from the upwardly moving means and cutter means aligned with said divider



means and crop conveying means for sectioning the crop by different amounts for each size category.

3,124,187
CARD HOLDER
Orsino Hugo Bosca and Mario E. Bosca, Springfield, Ohio, assignors to Hugo Bosca Company, Inc., Springfield, Ohio, a corporation of Ohio
Filed Aug. 17, 1961, Ser. No. 132,225
1 Claim. (Cl. 150—38)

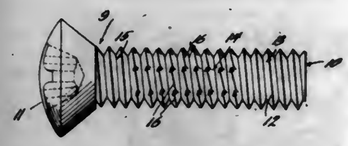


A device for carrying cards and papers on the person comprising, a pair of superposed sheet elements connected at their respective ends, the connection at said ends being the overlapping of the material of one sheet element on the other, an inner panel element disposed between said pair of sheet elements, said panel element being connected at one end to the superposed sheet elements, rectangular enlargements on both ends of one of said superposed sheet elements overlying substantially all of one of the other superposed sheet elements, said rectangular enlargements in relation with underlying sheet element forming pockets for the reception of cards and papers, one of said pockets having a pivot pin connecting the corner of the rectangular extension to the underlying sheet element, transparent envelopes in said last named pocket having openings in their corners receiving said pivot pin for allowing said envelopes to be swung out of said pocket for selective viewing thereof.

3,124,188
LOCKING SCREW WITH DISPLACED THREAD PORTION
Herman G. Muenchinger, Chaplin, Conn., assignor, by mesne assignments, to Phillips Screw Company, Natick, Mass., a corporation of Delaware
Filed Feb. 9, 1953, Ser. No. 335,879
8 Claims. (Cl. 151—22)

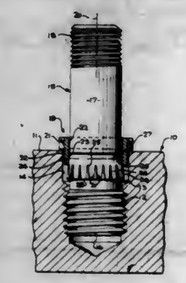
1. A fastening device comprising a threaded shank, said thread being generally helical and of V-type thread form having a wider root portion and a narrower crest, the thread crest being interrupted throughout a plurality of turns by the provision in each turn of the thread of a thread crest portion which is otherwise normal and of

uniform section throughout its length but is in disalignment with said helix, like points of all said disaligned



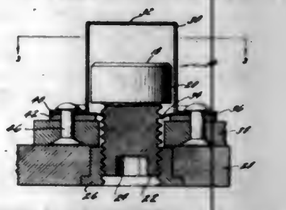
portions lying in a helix which is of the same pitch as the general helix of said thread, the crests of all parts of said thread lying in an imaginary right circular cylinder.

3,124,189
RING-LOCKED FASTENER
Robert W. Dietlein, La Crescenta, Calif., assignor to Components Engineering and Manufacturing Company, Inc., Los Angeles, Calif., a corporation of California
Filed Nov. 1, 1960, Ser. No. 66,508
1 Claim. (Cl. 151—41.73)



In a fastener attachable to a base and which includes a longitudinally forwardly extending shank member, the forward end of said shank being formed with external threads for threaded engagement with the wall of a recess formed in the base, said shank including a frusto conical boss having its base presented forwardly, and a ring member received on the shank member in retracted position relative to said thread, the ring having a series of radially outwardly presented circularly spaced axially extending serrations connectible into the base during relative forward advancement of the ring member along the shank to advanced position in said recess to secure the ring against rotation relative to the base, the outer edges of said serrations being tapered toward said forward end, the improvement that comprises said ring having a generally smooth bore, and ribbing on said shank boss flaring outwardly generally forwardly of the ring to be broached into said bore and to drive said ring forward portion into radially outwardly expanded configuration into engagement with the recess wall during completion of said forward advancement of the ring member thereby developing resistance to relative rotation of the shank and ring members, said ribbing being generally forward and inward of said serrations and comprising a plurality of circularly spaced generally axially extending ribs, each of said ribs having a pair of side surfaces and an outer surface, said side surfaces extending generally perpendicular to said boss and converging in directions away from said forward end until they meet, said outer surface being inclined toward said boss in a direction away from said forward end.

3,124,190
FASTENER DEVICE
Robert W. Cornell, West Hartford, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Mar. 30, 1961, Ser. No. 99,631
5 Claims. (Cl. 151—69)



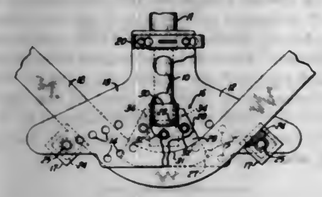
1. A fastener device including two elements to be held together, one of said elements provided with an opening, a retractable screw having an enlarged head and a shank, said shank having threads extending to said head, said screw shank extending through said opening, a shim-nut formed from a flexible material surrounding said opening, said shim-nut having a body and inwardly extending, circumferentially spaced tangs formed around the inner diameter of the shim-nut and engaged with the threads of said screw during the full movement of said screw, a tubular cap member secured to said one element, said screw head being contained within said tubular member, said tubular member including means overlying said screw head and cooperating with said screw for defining the maximum retraction of said screw, means securing said shim-nut and tubular member to said one element, said screw head overlying the body of said shim-nut, means providing a space underlying said tangs, said tangs being axially deflectable into said space, a nut carried by the other element and in a position to be engaged with the shank of said screw, tool receiving means carried on the end of the screw shank remote from said head and accessible through the opening formed in the nut for turning said screw.

3,124,191
SKIDDING GUARD FOR PNEUMATIC VEHICLE TIRES
Carl Axel Forslund, Medlemsvagen 71, Johanneshov, Sweden
Filed Mar. 23, 1962, Ser. No. 181,902
5 Claims. (Cl. 152—210)



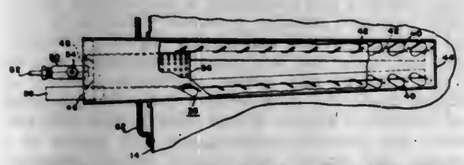
1. A skidding guard for a pneumatic vehicle tire, comprising a screw having a head and a body portion with the threads of trapezoidal profile, said screw being adapted to be threaded into the tire up to the lower surface of the head thereof, said head having an integral annular flange extending from and perpendicularly to said lower surface, whereby said flange projects into the tire when said screw is threaded into the tire up to said lower surface, said head having a cylindrical bore upon the outer surface thereof, and an inset firmly fixed within said bore and extending beyond said outer surface of the head, said inset having a conical outwardly extending recess coaxial with said screw, said head having side surfaces comprising conical portions extending in a direction opposite to that of the conical recess.

3,124,192
BENDING DEVICE
Jack R. Williams, Painesville, Ohio, and Clarence L. Flesate, Waukesha, Wis., assignors to Applied Power Industries, Inc., a corporation of Wisconsin
Filed Mar. 28, 1960, Ser. No. 17,882
4 Claims. (Cl. 153—38)



1. Apparatus for bending flat bar stock to produce edge bends therein, said apparatus comprising, power means movable axially along a guide member, at least one rigid plate secured to said guide member and extending in the direction of movement of said power means to provide a frame, a bending shoe movable axially by said power means relative to said frame, said bending shoe having a bending plate formed with a forwardly presented bending face and secured between side plates projecting forwardly beyond said face to form an open receiving groove for the edge of a bar to be bent, one of said side plates being detachable to permit free lateral access to said groove, and a grooved reaction block pivotally and removably mounted on said frame on each side of the path of movement of said bending shoe.

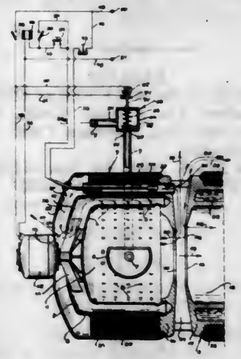
3,124,193
OIL BURNER ASSEMBLY
John J. Klein, Rochester, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 28, 1961, Ser. No. 106,429
7 Claims. (Cl. 158—28)



1. Combustion apparatus including in combination, a tapered tubular casing having an imperforate inner end and a row of ports on its upper surface, an apertured cap closing the outer end of said casing, a perforate tube supported by said cap having an open inner end, said perforate tube being disposed within said casing and spaced therefrom, an aspirating nozzle extending through said cap and into the outer end of said perforate tube for discharging air-oil mixture thereinto, and ignition means disposed within said perforate tube for igniting a portion of said air-oil mixture to heat the perforate tube and the casing to incandescence whereby the remaining oil is vaporized and burns as a gas at the ports of said casing.

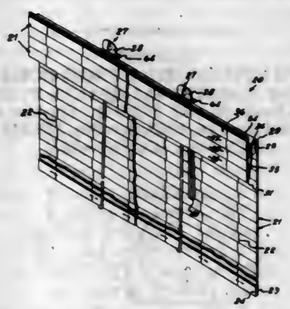
3,124,194
AUTOMATIC SAFETY DEVICE FOR FURNACES
Günter Fuchs, 9 Marienstr., Schwarzenbach (Saale), Germany
Filed May 24, 1961, Ser. No. 112,457
Claims priority, application Germany May 27, 1960
18 Claims. (Cl. 158—42.4)

1. An automatic safety device for furnaces, comprising, in combination, combustion chamber means having flue draft producing means and an inlet so that a stream of secondary air is drawn into said inlet by the flue draft; burner means in the region of said inlet; air moving means having a suction portion and a discharge portion for moving primary air past said burner means and flame gases produced thereby into said inlet; conduit means located in the proximity of said burner means to be heated by the same, and having one open end disposed in the region of said inlet so as to be located in said stream of secondary air and another open end located in the region of said suction portion so that at least part of the primary air is supplied through said conduit means



thereby cooling the latter whereby a normal temperature range is maintained in said conduit means during normal operation of the furnace; temperature responsive means located in said conduit means and adapted to be actuated when the temperature in said conduit means exceeds said normal temperature range due to a disturbance of said stream of secondary air toward said inlet or due to a failure of said air moving means; and control means for rendering at least said burner means inoperative when said temperature responsive means is actuated whereby operation of the furnace after stopping of said air moving means with insufficient draft in said combustion chamber is prevented.

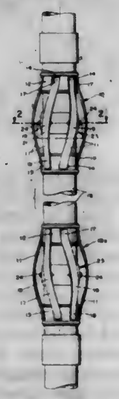
3,124,195
BLIND AND VALANCE COMBINATION
James A. Anderson, Muskegon, Mich., assignor to Breneman-Hartshorn, Inc., Cincinnati, Ohio, a corporation of Ohio
Filed Nov. 30, 1961, Ser. No. 155,935
4 Claims. (Cl. 160—19)



1. An article of manufacture comprising,
a plurality of parallel blind elements interwoven with cord to form a blind having a main blind forming

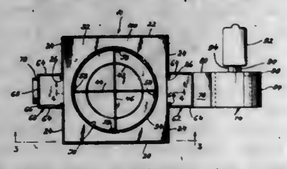
portion and a valance forming portion integral with said main blind forming portion,
said blind having an upper end portion,
a head rail secured to the upper end portion of said blind,
at least two pulleys mounted on said head rail and having lower portions extending below said head rail in front of said main blind forming portion,
said integral valance forming portion of said blind immediately adjacent said head rail being folded across said head rail and downwardly from said head rail to a position spaced from said main blind forming portion, with said lower pulley portion located between said main blind forming portion and said valance forming portion.

3,124,196
HELICAL BOW CENTRALIZER
James R. Solum, Los Angeles, Calif., assignor to B & W Incorporated, Torrance, Calif., a corporation of California
Filed July 5, 1961, Ser. No. 121,893
6 Claims. (Cl. 166—241)



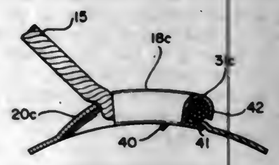
1. In a tool for use on the exterior of a well casing in a well bore, the combination of: a pair of axially spaced and aligned collars adapted to encircle the well casing, a plurality of bows each having two ends and an outwardly bowed mid-portion, each bow having one end mounted on one of said collars and the other end mounted on the other of said collars, the said ends of each bow being circumferentially offset from each other, and at least the mid-portion of each bow having a generally arcuate lateral cross-section forming a convex outer surface.

3,124,197
DEVICE TO UTILIZE HEAT FROM BOILER FLUE TO HEAT ADDITIONAL SPACES IN HOME
Richard S. Funk, 58—32 212th St., Flushing 64, N.Y.
Filed Apr. 26, 1963, Ser. No. 275,840
2 Claims. (Cl. 165—122)



1. A heat saver comprising a pipe, a hollow casing enveloping said pipe, the ends of the pipe extending outwardly of the casing for connection to the ends of a break in a smoke pipe to receive hot flue gases therefrom to flow through said pipe, said casing having an air inlet at one side at the top thereof, said casing having an air outlet at the other side at the bottom thereof, a sleeve concentrically positioned in spaced relation inside the pipe, said sleeve having spaced elongated slots intersecting one end edge thereof, elongated baffle plates inside said sleeve, said baffle plates having spaced elongated slots intersecting one end edge thereof, the slots in the sleeve interlocked with solid portions of the baffle plates, the slots in the baffle plates interlocked with solid portions of the sleeve, the outer ends of the baffle plates being fastened to the pipe, and a blower operative to propel ambient air through said inlet, casing and outlet.

3,124,198
TOOL FOR USE IN CEMENTING WELL CASING
James R. Solum, Los Angeles, and William C. Hempel and Conrad R. Solum, Jr., Manhattan Beach, Calif., assignors to B & W Incorporated, Torrance, Calif., a corporation of California
Filed Sept. 6, 1960, Ser. No. 54,314
6 Claims. (Cl. 166—172)

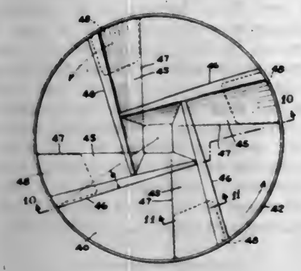


4. In a device of the class described for generating turbulence in the annular space between a well pipe and the well bore, the combination of: a metallic carrier adapted to be mounted on the outer surface of a well pipe, said carrier having a plurality of spaced apertures, a plurality of retainers having a wall portion of substantial length formed to the shape of at least a portion of said aperture and terminating at one end with an outwardly extending shoulder, a retainer positioned in each said aperture with said wall portion extending outwardly from said carrier and said shoulder positioned inwardly of and engaging said carrier, a continuous length of multiple strand wire cable forming arched loops between said retainers, a segment of said cable between each said arched loop partially encircling said wall portion of a retainer, said retainer wall portion formed outwardly and downwardly to encircle and squeeze said cable segment against the outer surface of said carrier for anchoring said retainer and said cable segment to said carrier, and means for forcing the loop portions of the cable length to project outwardly from the well pipe.

3,124,199
SPIRAL OIL WELL CEMENTING TOOL
James R. Solum, Los Angeles, and William C. Hempel, Manhattan Beach, Calif., assignors to B & W Incorporated, Torrance, Calif., a corporation of California
Filed July 14, 1961, Ser. No. 124,040
7 Claims. (Cl. 166—173)

1. In a device for use on a well casing for causing turbulence of the fluid in the annular space between the casing and the well bore, the combination of: a carrier having a plurality of spaced mounting means, a plurality of cable lengths with each cable length having one end mounted in one of said mounting means and the other end mounted in a separate and spaced mounting means, each said cable length forming a loop for projecting into the annular space, each of said loops lying substantially in a plane passing through the said plurality of mounting means, and the said cable length ends each positioned in said mounting means in the same direction and pointed toward the next adjacent mounting means in that direction for forming each said loop into a generally spiral configuration.

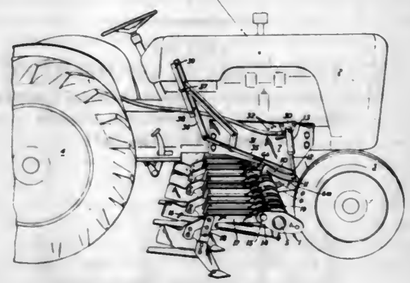
3,124,200
PROPELLER DEVICE
Everett E. Wilson, 17140 Hartwell, Detroit, Mich.
Filed July 26, 1962, Ser. No. 214,786
7 Claims. (Cl. 170—135)



1. A device for producing axial thrust by being rotated in air, said device comprising a shaft, a plurality of outwardly extending blades inclined to the plane normal to the axis of their rotation and secured to said shaft for rotation therewith, each of said blades having a leading edge and a trailing edge, with said edges extending in two substantially parallel planes, with the trailing edges of said blades being extended in a plane normal to the axis of said shaft to form a disc and thereby to close the spaces between the adjacent trailing edges but to leave openings in said disc, with each of said openings extending from the line of projection of the leading edge of the respective blade on said disc substantially to the edge of the trailing edge and to the peripheral edge of said disc, and a forwardly projecting rim provided along the circular peripheral edge of said disc and sealingly secured thereto with the inner surfaces of said rim being cylindrical.

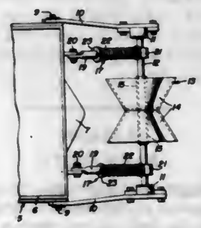
3,124,201
AGRICULTURAL IMPLEMENTS
Wilton William Waveney Downing, Uckington, near Cheltenham, and Kenneth Roland Adams, Ross-on-Wye, England, assignors to Gloster Equipment Limited, Gloucestershire, England, a company of Great Britain
Filed Nov. 7, 1962, Ser. No. 235,992
Claims priority, application Great Britain Nov. 8, 1961
17 Claims. (Cl. 172—303)

1. An implement support for mounting an implement upon a vehicle, the implement support comprising a support member, means pivotally engaging the support member with a support carrier supportable by the vehicle, a single acting jack, means securing one of the relatively movable parts of the jack movably to the vehicle, means coupling the other relatively movable part of the jack to the support member, and means for varying the direction of the line of action of the jack relative to the pivotal axis of the support member when the support member, support carrier and jack are secured to the vehicle so that for one direction of the line of action operation of the jack will move the support member in one direction about said axis and for another line of action of the jack



operation of the jack will move the support member in the opposite sense about said axis.

3,124,202
PACKING ROLLER ATTACHMENT FOR A PLANTER
Victor R. Van Dyk, % Inland Foundry Co., 320 W. Rainier Way, Spokane, Wash.
Filed July 17, 1961, Ser. No. 124,557
1 Claim. (Cl. 172—551)



A soil packer for potato planters comprising in combination a pair of rearwardly spaced extending arms disposed in side-by-side relation, each arm having a forward end pivotally secured to a lower rear portion of a potato planter for vertical swinging movement and having a free rear and outer end, oppositely alined and inwardly opened bearings, one each of said bearings being disposed on an inner side of each of said free outer ends, a transverse rotary shaft disposed between said arms and having end portions supported by and telescopically engaged in said bearings, a packing roller fixed on an intermediate portion of said shaft and having ends spaced from said bearings, resilient means yieldingly urging said roller downwardly and comprising a pair of braces disposed in side-by-side relation and positioned between said arms, each brace comprising separable male and female telescopic sections with a rear end of a male section having a bearing journaled on said shaft in spaced relation to one of said roller ends and its adjacent arm and with a forward end of the female section being pivotally connected to said potato planter at location disposed above the arm connections thereto, a coil spring mounted on each brace and abutting-

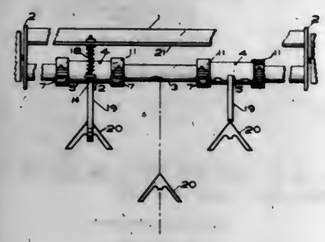
ly engaging said male section bearing, a collar secured to the female section engaging said spring and retaining the latter under compression and yieldingly urging said sections towards an extended position.

3,124,203

CULTIVATOR SHANK AND MOUNTING

Walter David Hofer, Brocket, Alberta, Canada

Filed Aug. 24, 1961, Ser. No. 133,636
1 Claim. (Cl. 172—762)



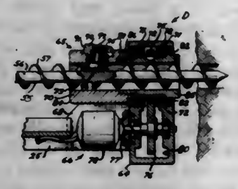
In a cultivator having a frame and a tubular shaft transversely mounted therein, and including a series of shovel carrying shanks, means mounting the shanks on the tubular shaft, said means comprising for each shank a sleeve to which the upper end of the shank is integrally fixed projecting at right angles thereto, and clamps attaching the sleeve on the shaft, said clamps comprising opposing semicircular halves embracing the shaft and including bolts attaching the halves together forming an annular unit, said clamp halves having each an annular recess on the inside thereof at one end and in which an end of the sleeve is engageable, with the sleeve free to turn therein on the shaft.

3,124,204

FACE DRILL

Charles P. Hudnall, Jr., and John B. Long, Oak Hill, W. Va., assignors to Marmon-Herrington Company, Inc., Indianapolis, Ind., a corporation of Indiana

Filed June 6, 1960, Ser. No. 34,269
6 Claims. (Cl. 173—145)



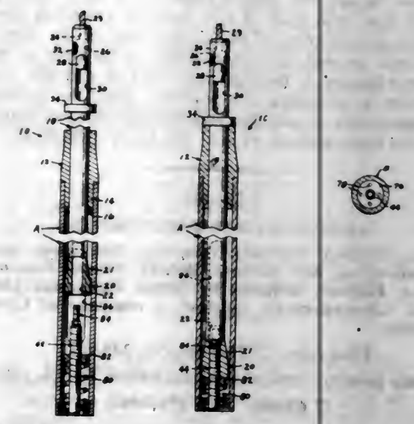
1. In a face drill for boring in a working face, the combination of a frame, said frame including a longitudinally extending track; an auger, said auger having a spiral scroll along the length thereof; a drill motor slidably mounted upon said track; means interconnecting said drill motor with said auger for rotatably supporting said auger in juxtaposition for rotation by said drill motor; and drill feeding means mounted upon said frame and operatively engaging said auger for advancing and retracting said auger with respect to said working face, said drill feeding means including a thrust housing having an auger receiving passageway therethrough, means for rotatably supporting said thrust housing upon said frame, adjacent one end of said track, said thrust housing normally rotating with and at the same speed as said auger, said auger extending longitudinally of said track from said drill motor, through the auger receiving passageway of said thrust housing and outwardly of the end of said track having said thrust housing mounted adjacent thereto, a plurality of cams mounted in a circumferentially spaced relationship upon said thrust housing and extending into the auger receiving passageway of said thrust housing, said cams being extendant into the auger receiving passageway of said thrust housing in juxtaposition for cooperative abutment with said scroll of said auger and providing means for the centering of said auger within the auger receiving passageway of said thrust housing and means for multiple engagement of said drill feeding means with said auger, and brake means interconnected with said thrust housing for retarding rotation thereof below the speed of rotation of said auger, the retarding of rotation of said thrust housing bringing said cams into cooperative abutment with said scroll of said auger, the abutment of said scroll with said cams advancing and retracting said auger into and out of the working face.

3,124,205

PNEUMATIC CLEAN OUT TOOL

Paul R. Yates, 1020 NW. 31st, Oklahoma City, Okla., assignor of thirty-three and one-third percent to William H. Lambdin and thirty-three and one-third percent to Gerold Anthony Shideli, Oklahoma City, Okla.

Filed Dec. 5, 1960, Ser. No. 73,730
5 Claims. (Cl. 175—93)



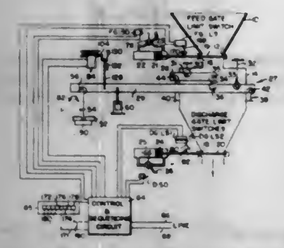
1. An oil well clean out tool, comprising: an elongated tubular body; a head closing the upper end of said body, said body having a pair of vertically spaced-apart diametrically reduced areas formed on its inner wall intermediate its ends; a pair of pistons slidably received by the reduced areas of said body and forming a compressed air chamber; a piston rod interconnecting said pistons and extending upwardly beyond the uppermost piston; spring means connected with the upper end portion of said piston rod and normally urging said pistons into sealing relation with the reduced areas of said body; a plunger slidably received by said head, said plunger having a lower end portion adapted for contacting said piston rod and moving the latter downwardly; a flap valve closing the lower end of said body; and a shoe connected with the lower end of said body.

3,124,206

WEIGHING SYSTEMS

Arthur J. Burke, Oakland, N.J., assignor to Howe Richardson Scale Company, a corporation of Delaware

Filed Feb. 15, 1962, Ser. No. 173,538
28 Claims. (Cl. 177—46)



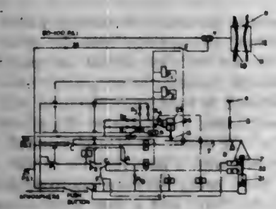
1. In an automatic weighing system having a weighing apparatus for receiving and balancing a predetermined weight of material, a member capable of movement in response to feeding of material to said apparatus to detect and manifest the amount of any overbalance acting on said apparatus in excess of said predetermined weight, and means having a series of electrically independent contacts each having a fixed element and a coacting movable element, the movable ones of said elements being progressively and accumulatively actuatable to closed engaging position with the fixed elements in response to the overbalancing movement of said member with the number of actuated contacts in said series corresponding to the weight value of overbalance acting on said weighing apparatus.

3,124,207

AUTOMATIC CONTROL OF WEIGHING AND FEEDING MACHINES

Arthur Kenneth Lloyd, Welwyn, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

Filed Feb. 6, 1961, Ser. No. 87,147
Claims priority, application Great Britain Feb. 10, 1960
13 Claims. (Cl. 177—105)



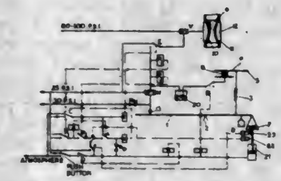
13. Automatic net weighing machine including a beam; a compressed air chamber having an air escape orifice therein; means providing pneumatic regulation of the tare setting and feed, the taring being responsive to the back pressure formed in said compressed air chamber by movement of said beam relative to said orifice; first means operatively connected to said beam for supporting a container to be filled; second means operatively carried by said beam for supporting a standard weight; valve actuated piston-and-cylinder lifting means positioned in cooperative relationship to said second support means to control a standard weight thereon; tare compensating and locking means including a cylinder having a piston movable therein, said piston being in connection with said compressed air chamber wherein movement of said piston causes movement of said air chamber, means for maintaining a constant fluid pressure on one side of said piston, and means for maintaining fluid pressure on the other side of said piston under control of the back pressure in said chamber so that when said chamber is in a zero position with respect to the beam, the pressures on either side of the piston are equal.

3,124,208

AUTOMATIC CONTROL OF WEIGHING AND FEEDING MACHINES

Arthur Kenneth Lloyd, Welwyn, and Raymond Alan Lolley, St. Albans, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

Filed Feb. 6, 1961, Ser. No. 87,178
Claims priority, application Great Britain Feb. 10, 1960
16 Claims. (Cl. 177—105)



1. In combination, a weighing machine including a weight measuring control element carried thereby, weight control means, means for supporting a container, and means for feeding flowable material therein; pneumatic means for automatically controlling the feed of flowable material to a container on said supporting means including: means providing a source of constant air pressure, chamber means restrictively connectable to said air pressure source, said chamber means including a small orifice opening from which said air emerges, said pneumatic means being operative for attachment to said weighing machine wherein a change of weight over a predetermined range of weights upon said weighing machine causes relative movement between said chamber means and said control element, and wherein said air issuing from said orifice impinges upon said control element during at least part of said relative movement wherein progressive reduction of the space near said orifice resulting from said relative movement causes an increase in back pressure in said chamber means, said back pressure being operative to control the feeding means for the flowable material wherein the feed is caused to stop at a predetermined pressure; adjusting means acting on at least a part of the weight counterbalancing means for restoring said chamber means and said control element to a balanced position when any weight causes a departure therefrom, said adjusting means including a fluid vessel arranged for

attachment to said weighing machine and including a part that moves in response to a change of pressure within said vessel to give rise to a force operative to effect a displacement of said weight counterbalancing means in a direction to restore a balance position; means for connecting said chamber means to said vessel wherein any pressure change in said chamber means during adjustment is followed by a corresponding change in said vessel to maintain a fixed pressure relationship therebetween and adjustment ceases when said force balances the force positioned by any weight; and means controlled by the back pressure in said chamber means for locking said adjustment means wherein no further adjustment takes place without a further change in weight.

3,124,209

APPARATUS FOR LOADING AND UNLOADING CARGO

John E. Flipse, Gloucester, Va., assignor to Newport News Shipbuilding and Dry Dock Company, Newport News, Va., a corporation of Virginia

Filed Feb. 15, 1961, Ser. No. 89,490
3 Claims. (Cl. 180—7)



1. Apparatus for loading and unloading cargo in ships comprising cargo support means having an upper portion for supporting cargo and an under portion, wall portions defining a plurality of air-tight chambers opening through said under portion, separate and independent outlet means disposed within and about the inner periphery of the lower portion of each of said chambers, said outlet means including means for directing gas under pressure inwardly of the associated chambers to provide a gas cushion beneath each of said chambers, means for connecting said outlet means with an external source of gas under pressure, and valve means for separately and individually controlling the flow of gas under pressure to the outlet means of each of said chambers to permit stabilizing and balancing of the support means.

3,124,210

WITHDRAWN

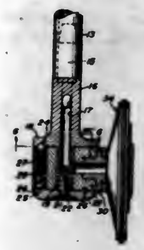
3,124,211

MULTIPLE HEADED ACOUSTIC STETHOSCOPE

Ralph Cefaly, Brentwood, Md., assignor, by mesne assignments, to Taylor Instrument Companies, a corporation of New York

Original application Feb. 11, 1960, Ser. No. 8,080, now Patent No. 3,109,508, dated Nov. 5, 1963. Divided and this application June 22, 1961, Ser. No. 127,072
3 Claims. (Cl. 181—24)

2. A multiple headed stethoscope comprising, in combination, a head member having a centrally disposed protruding boss having a sound transmitting passageway extending axially therethrough connected with a transverse aperture leading externally of said boss, said head having a bifurcated opposite end to that of the protruding boss, said bifurcations having sound transmitting passageways therethrough communicating with the sound transmitting apertures in the head and boss, sound transmitting conduits connected to said bifurcations on the head and terminating in sound transmitting binaural tips, a main rotary member having a centrally disposed aperture received over said boss, said rotary member having means securing it to said boss for rotary movement to selected positions, said rotary member having radially extending sound transmitting passageways therein in spaced apart position and extending transverse to the central disposed aperture therein, the central axis of each of said radially



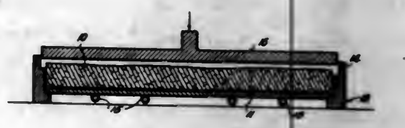
extending passageways and of said transverse aperture in said boss being positioned in the same plane, said radially extending passageways being selectively rotatable into position in alignment with said transverse aperture in said boss, and sound receiving members connected to said rotary member respectively in sound transmitting communication with said radially extending sound transmitting passageways therein, said head member and said main rotary member having spring pressed detent means for holding said rotary member in a selected position.

3,124,212

ACOUSTICAL INSULATION AND METHOD OF MAKING SAME

Joseph F. Stephens, Kansas City, Mo., assignor to Gustin-Bacon Manufacturing Company, Kansas City, Mo., a corporation of Delaware

Filed Mar. 5, 1959, Ser. No. 797,492
5 Claims. (Cl. 181—33)



1. A composite acoustical insulation panel comprising a porous resilient and springy mat-like glass fiber main body honeycombed with interstitial air spaces, the fibers having an average diameter of no greater than 10 microns and being disposed in random orientation with a substantial portion extending transverse to the planes of the opposed faces of the main body and bonded together at their intersections with a heat reactive binder, the density of the main body being between approximately 2 and 5 pounds per cubic foot, and a thin lamination of flexible rubber-like material applied to at least one face of the main body, the outermost fibers of said one face being firmly embedded in that side of said lamination confronting said one face and portions of the lamination distributed into some of the interstitial air spaces closely adjacent said one face with other portions bridging others

of said spaces, the exposed side of the lamination presenting an imperforate continuous surface.

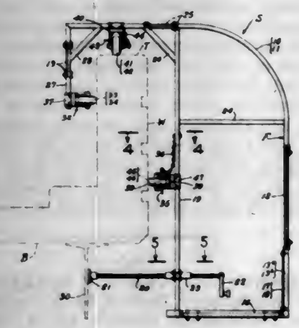
5. A method of manufacturing acoustical insulation panels from fibrous mat comprising the steps of applying to a plate-like surface a thin film of liquid plastisol, scattering over the top of said film a plurality of individual fibers, setting down on top of said film and fibers a resilient and springy fibrous mat, compressing said mat, fibers and film together with only enough pressure to cause said film to partially distribute itself into the adjacent surface of the mat and to force said fibers toward that side of the film in contact with said plate whereby to dispose the fibers closely adjacent said side, and heating said compressed mat and film while under compression to cure said film and cause it to adhere to the face of said mat and confine said fibers in the film.

3,124,213

ROLLING BRIDGE SCAFFOLD CARRIAGE

Felix D. Jorsey, 136 Reservoir Road, Kensington, Conn.

Filed Feb. 15, 1962, Ser. No. 174,366
1 Claim. (Cl. 182—13)



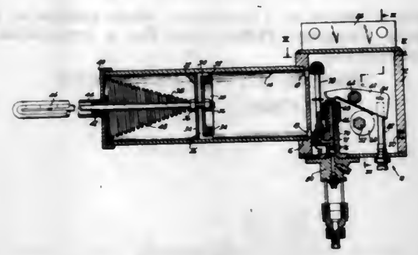
In a rolling bridge scaffold carriage for supporting workmen and materials alongside a concrete highway bridge wall having expansion joint grooves in its upper and front faces, a horizontal platform, a frame for supporting said platform comprising a pair of vertical end quadrant frames connected at their bottoms to the ends of said platform, said quadrant frames having front and rear vertical sections, the top of each quadrant frame having a horizontal rear extension overhanging the top of said bridge wall, a pair of cradle-mounted horizontally spaced soft rubber rimmed rollers in tandem supported by each of said overhanging extensions for engagement with the rear of said wall, a pair of cradle-mounted horizontally spaced soft rubber rimmed rollers in tandem supported by the intermediate portions of the tops of each of said extensions and resting on the top of said wall, a pair of cradle-mounted horizontally spaced rubber rimmed rollers in tandem mounted on the vertical rear sections of each of said quadrant frames for engaging the front of said wall, whereby said carriage will be capable of rolling freely along said wall to different operating positions with respect thereto, a manually-operated ratchet mechanism mounted on the overhanging rear extension of one of said quadrant frames and operably connected to one of the rollers supprted by said extension, said ratchet mechanism being located in position to be conveniently operated by a workman to propel said carriage intermittently along said wall, manually-operated brake means provided on the rear vertical section of one of said quadrant frames to engage one of the rollers mounted on said rear section of said quadrant frame to temporarily prevent free wheeling of said carriage, and a pin on the cradle of the rollers mounted on the rear vertical section of one of said quadrant frames for insertion into a hole in said cradle and one of the rollers supported thereby to lock said carriage in adjusted position.

3,124,214

LUBRICATING APPARATUS

Edward C. Aselman, Rte. 1, Box 424, High Ridge, Mo.

Filed Oct. 9, 1961, Ser. No. 143,919
7 Claims. (Cl. 184—27)



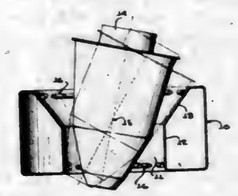
1. A lubricating apparatus mounted on a rotating mechanism for rotation therewith and lubrication thereof, said apparatus comprising a housing, a lubricant reservoir in fluid communication with said housing, said reservoir also being mounted for rotation with said mechanism and constantly supplying lubricant to said housing, a pump assembly inside said housing including a plunger and an outlet valve means spring biased to a closed position, pump actuating means within said housing and contacting said plunger, an eccentric means operatively connected to said pump actuating means, and a counterweight mounted on a rotatable shaft journalled in said housing, said eccentric means also being mounted on said shaft, said shaft and said eccentric means mounted thereon rotating through 360° relative to said mechanism and said housing.

3,124,215

DISASTER STOPS COLLAPSIBLE TUBE TYPE

Frederick W. Fox, Evergreen Park, and Richard E. Prendergast, Chicago, Ill., assignors to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed Apr. 19, 1962, Ser. No. 188,710
9 Claims. (Cl. 188—1)



1. In an apparatus wherein are provided a pair relatively movable elements having wall portions presented

for collision contact upon undesired overtravel of one element relative to another, the combination with said elements of elongated inelastic crushable disaster stop means disposed between said wall portions and substantially normally spaced from one of said pair of elements in position for being engaged and crushed by forces applied by said one element transversely of the length of the stop means during such one element overtravel, thereby to decelerate the movement of overtravel incidental to said crushing of the stop means and dissipate impact forces prior to direct contact between said wall portions.

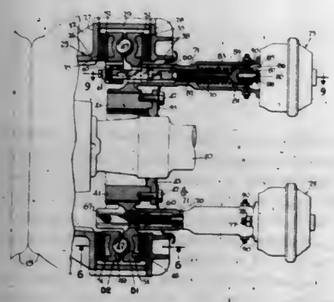
3,124,216

WEDGE OPERATED, SELF ENERGIZING, FLUID COOLED DISK BRAKE

Edwin K. Buyze, St. Clair Shores, Mich., assignor to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed Nov. 17, 1960, Ser. No. 70,040

7 Claims. (Cl. 188—72)



1. A disk brake assembly comprising in combination, a rotary drum provided with axially spaced radial brake surfaces arranged in outer annular zones facing each other at a fixed axial distance apart, said drum being open and free from rotating parts at one end within said annular zones, brake lining carried by said radial annular brake surfaces, a fixed support, a brake disk unit carried by said fixed support within said drum and having axial movement on said fixed support, said brake disk unit including two disk members mounted for limited axial and circumferential movement relative to each other and having radial outer annular metallic friction surfaces disposed between and facing the annular lined brake surfaces of said drum, one of said disk members being mounted on guides for axial movement on said fixed support and the other disk member being carried by and resiliently urged toward said one disk member with provision for limited axial and circumferential movement relative to said one disk member, self-energizing means, including parallel mating ramps on said disk members with roller means between ramps, for producing relative axial movement between said disk members when said disk members are first given circumferential movement, brake actuation means for producing said relative circumferential movement between said disk members and subsequently initiating said self-energizing means, said disk members having chambers therein for cooling fluid, and means extending out axially within the open end of said drum for circulating cooling fluid through the chambers of said disk members.

3,124,217

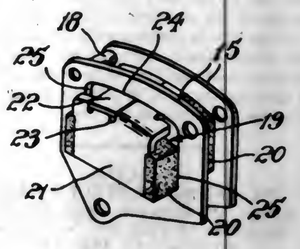
SPOT TYPE DISC BRAKES FOR VEHICLES

Henry James Butler, Sutton Coldfield, England, assignor to Dunlop Rubber Company Limited, London County, England, a British company

Filed Mar. 2, 1961, Ser. No. 92,921

Claims priority, application Great Britain Mar. 5, 1960

5 Claims. (Cl. 188—73)



1. A disc brake comprising a braking disc, fixed guide plates located on opposite sides of said disc and having apertures adjacent to said disc, friction pads in said apertures and movable therein into engagement with the opposed sides of said disc, and backing plates for the said friction pads, each said backing plate having at one end an out-turned ear which extends beyond the periphery of said disc into abutment with the other backing plate and and also with a corresponding ear on the end of the other backing plate, the ears contacting the outer edges of the apertures in the guide plates and the friction pads contacting the side edges of the apertures in the guide plates.

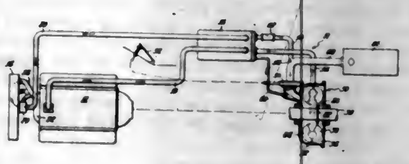
3,124,218

HYDRAULIC VEHICLE RETARDER

Byron D. Montgomery, Berkley, Mich., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois

Filed Aug. 7, 1958, Ser. No. 753,817

1 Claim. (Cl. 188—90)



An apparatus for retarding motion of a vehicle having a power transmitting driveshaft therein, comprising a housing having a fluid inlet, a fluid outlet, a vaned rotor rotatably mounted within said housing adapted to be connected to said driveshaft and a vaned stator non-rotatably mounted within said housing in operative relation to said vaned rotor; said housing being disposed substantially coaxially with respect to said driveshaft; an elongated heat exchanger having a bottom portion and a top portion positioned such that said bottom portion of said heat exchanger is about level with said fluid inlet; a tank having a bottom portion and a top portion positioned such that said bottom portion of said tank is below said top portion of said heat exchanger; first means communicating fluid from said fluid outlet directly to said heat exchanger, second means communicating fluid from said heat exchanger to said fluid inlet, by-pass means communicating fluid from said heat exchanger directly to said housing, flow control means to control the flow of fluid through said fluid inlet, check means in said second means to prevent the back flow of fluid through said heat exchanger and into said housing through said fluid outlet, and third means communicating fluid from said tank into said second means between said flow control means and said check means.

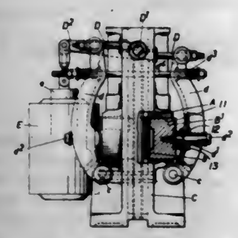
3,124,219

DISC BRAKE ASSEMBLY

Samuel Lee, Manchester, England, assignor to The Vaughan Crane Company Limited, Manchester, England, a body corporate of Great Britain

Filed Jan. 3, 1961, Ser. No. 80,355

1 Claim. (Cl. 188—173)



A disc brake assembly comprising a relatively stationary frame, a brake disc mounted for rotation about a fixed axis on said frame, two pairs of arms pivoted at adjacent ends on parallel axes perpendicular to said disc axis on the frame on diametrically opposite sides of said brake disc, pressure plates mounted on said arms and having friction surfaces engaging opposite sides of said brake disc in aligned opposed relation, means resiliently biasing said arms to rock about their respective pivots toward each other to apply said friction surfaces to said brake disc sides, two cams, each associated with one of said pairs of arms, a shaft carrying said cams rotatably mounted on said frame, said cams being disposed adjacent the other ends of said arms and rotatable on an axis that lies in the central plane of said disc radially outwardly of said disc and parallel to said arm pivots, a solenoid assembly having a shiftable armature, means connecting said armature to said shaft to rotate said cams upon electrical energization of said solenoid, and cam followers operably extending between said cams and said other ends of said arms whereby energization of said solenoid will rotate the cams to oppositely rock said arms to frictionally disengage said pressure plates from the brake disc and store energy in said resilient biasing means and failure of energization of said solenoid will result in said energized resilient means forcibly applying said pressure plates against the sides of said brake disc.

3,124,220

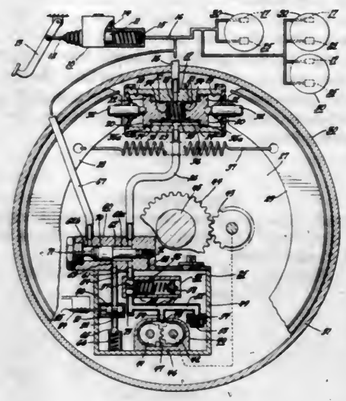
ANTI-SKID VEHICLE BRAKE SYSTEM

Nathaniel B. Kell, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Mar. 23, 1962, Ser. No. 182,017

9 Claims. (Cl. 188—181)

1. A brake control system, including in combination, a rotatable wheel including a brake, a fluid pump driven by said wheel and having a fluid reservoir, a fluid motor for operating the brake on the wheel, said fluid motor having differential piston areas, a master cylinder having fluid connection with the smaller of said differential piston areas, said pump having fluid connection with the larger of said differential piston areas, and valve means in said last-mentioned fluid connection controlling fluid pressure applied by said pump on said larger of said differential piston areas, said valve means having fluid connection with said master cylinder to operate said valve means to effect increase of fluid pressure in said last-mentioned fluid connection in proportion to increase of fluid pressure in said first-mentioned fluid connection.



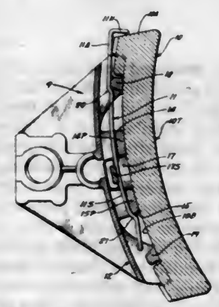
3,124,221

BRAKE SHOE RETAINER KEY

Allan L. Prentice, Ashtabula, Ohio, assignor to American Brake Shoe Company, New York, N.Y., a corporation of Delaware

Filed Feb. 21, 1962, Ser. No. 174,762

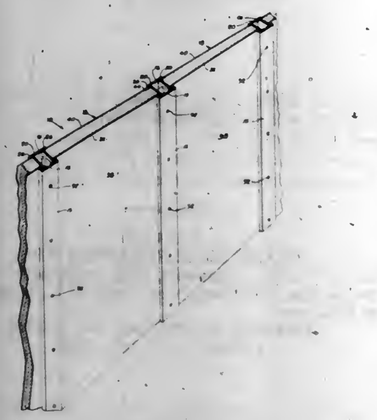
1 Claim. (Cl. 188—243)



Railroad brake structure including a brake head member, a brake shoe member and a retainer key; the brake head member including spaced end tie bars and spaced intermediate arch-like lugs having outer surfaces engaged by the back of the shoe member; said shoe member having an arch-like center attaching lug projecting from the back thereof and disposed between the first-named lugs to define therewith a key-way in which the key is disposed; said key in its fully inserted position including: an elongated shank and an angled head at one end of the shank, said head of the key being bent away from said head member to overhang for a substantial extent one end of the

shoe member and in close proximity thereto so that a prying tool can be effectively levered therebetween for removing the key; said key having first and second off-sets in the shank thereof spaced to respectively engage an edge of given hand of one of the lugs on the head member and an edge of the same hand of one of the tie bars to prevent accidental displacement of the key from the key-way, and the shank of said key being arched between said off-sets to such an extent that one portion thereof bears against said one lug, another portion thereof bears against said one tie bar and an intermediate portion thereof bears against the underside of said center attaching lug under spring tension to hold the shoe to the head member tightly with a spring force.

3,124,222
WALL PANEL
Roy F. Mote, Stoney Creek, Ontario, Canada, assignor to H. H. Robertson Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 14, 1959, Ser. No. 827,069
3 Claims. (Cl. 189—34)



1. A lightweight insulated wall panel structure particularly adapted for erection upon the structural framework of a building to enclose a vertical opening defined by a structural steel head member and a structural steel sill member, said wall panel structure comprising a plurality of spaced, hollow vertical supports spanning said opening and secured at their upper and lower ends to said head and sill members respectively, said hollow supports being substantially rectangular in cross-section, the rear wall of each support having a flange plate secured thereto providing laterally extended rear flanges, insulating panels, spanning said opening and extending between the sides of adjacent supports and engaged with said laterally extended rear flanges, each insulating panel comprising a relatively rigid sheet of insulating material having a relatively thin and lightweight metal facing sheet laminated to opposed sides thereof, the said facing sheets being entirely spaced apart and out of contact with each other, said supports being of greater cross-sectional depth than the thickness of the panel, the front sheet of each panel having offset longitudinal marginal portions extended outboard from the said front sheet and overlapping marginal portions of the front wall of the supports, a U-shaped cap member engaging said overlapping marginal portions, the legs of the U engaging the adjacent edges of the panel, and fastening means, each comprising a screw extended through the cap member and secured to the support, said fastening means effecting clamping of the said overlapping portions of the front facing sheet between the said cap member and the front wall of the supports and effecting clamping of adjacent panels between the leg portions of the cap member and said laterally extended rear flanges.

3,124,223
ADJUSTABLE FRAMEWORK MEMBERS
Adrian Kisovec, Elmira, N.Y., assignor, by mesne assignments, to Hico Corporation of America, New York, N.Y.
Filed Nov. 23, 1960, Ser. No. 78,799
Claims priority, application Germany Nov. 25, 1959
9 Claims. (Cl. 189—37)



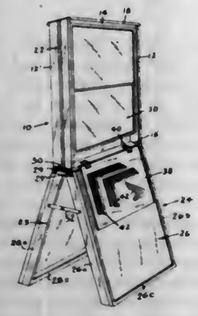
1. Adjustable framework member consisting of at least two longitudinally extended parts including an outer carrier having a lower edge, an upper edge and side walls which connect the lower edge and the upper edge, an inner carrier telescopically received in said outer carrier with vertical clearance between the two carriers, adjustable locking means disposed inwardly of the end of said outer carrier for displacing the inner end of the inner carrier upwardly with respect to the outer carrier, and inwardly projecting fulcrum means located below the lower surface of the upper edge of the outer carrier at a point which lies outwardly of said locking means.

3,124,224
METALLIC BUILDING CONSTRUCTION
Charles C. Paul, Franklin, and Norbert T. Kuypers, Warren, Mich., assignors to National Steel Corporation, a corporation of Delaware
Filed Mar. 3, 1961, Ser. No. 93,240
18 Claims. (Cl. 189—44)



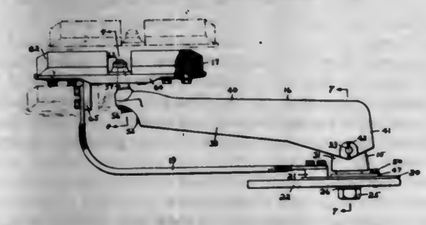
1. Window construction comprising a sheet metal frame surrounding an opening, the frame having a uniplanar first frame portion that defines the border of the opening, a flange extending outward from the first frame portion about the opening and terminating outward in a shoulder, and a uniplanar second frame portion extending from the shoulder away from the opening in a plane parallel to the plane of the first frame portion, the second frame portion having integral spaced hollow portions extending outward of the plane of the second frame portion.

3,124,225
SAMPLE CASES
Bernard Rosenberg, Teaneck, N.J., assignor to Win-Chek Industries, Inc., Moonachie, N.J., a corporation of New Jersey
Filed June 17, 1963, Ser. No. 288,374
3 Claims. (Cl. 190—16)



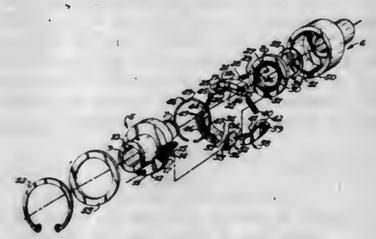
1. In a sample case having an interior frame, an outer housing which includes a front panel and a back panel spaced apart and hingedly connected at their top ends to provide a supporting stand for the interior frame, and at least one member mounted in the frame, said member including an opening therein, the combination therewith of a display panel hingedly attached to the frame for pivotal movement between a first position in which it overlies the opening in the member and a second position in which it projects outwardly from the frame, and at least one object mounted on the surface of said display panel which faces inwardly when said display panel is folded into said frame, said object positioned on said display panel so that it projects through the opening when said display panel is in said second position.

3,124,226
CURRENT COLLECTOR ARM
Donald G. Sprigings, Lynchburg, Va., assignor to H. K. Porter Company, Inc., Philadelphia, Pa., a corporation of Delaware
Filed Nov. 8, 1960, Ser. No. 67,981
6 Claims. (Cl. 191—59.1)



1. In apparatus for collecting current from an electric power line for transmission thereof to a mobile unit, an upright base having a pair of complementary parts electrically insulated from one another and movable relative to one another about the vertically extending principal axis of said base, an arm having a top wall and a pair of spaced apart sidewalls depending therefrom with a front wall bridging between the said sidewalls, said arm extending laterally from said base and connected proximate its rear end to one of said parts for pivotal movement about a horizontal axis and for pivotal movement about said vertically extending principal axis, a contact shoe mounted upon the free end portion of said arm and adapted for operation in contact with the power line throughout the range of pivotal movement of said arm, an elongated coil tension spring anchored at one end at a point above the horizontal axis for arm pivotal movement to the one of said complementary parts connecting to said arm and extending forward beneath and between the arm top wall and sidewalls respectively toward the arm front wall, a threaded bore plug disposed within and secured to the forward extending end of the said coil spring with the threaded bore substantially axially aligned with the coil spring long axis, a rearwardly extending threaded bolt projected through the arm front wall and into threaded engagement with the plug bore for variably stretching the spring to adjust the tension thereof to bias said arm and contact shoe upwardly for contact of the latter with the undersurface of said power line, and a shunt depending from said contact shoe for conducting the electric current around said arm, whereby the latter is bypassed.

3,124,227
AUTOMATICALLY RESETTING TORQUE CLUTCH
Gilman A. Helland, Wayzata, Minn., and Otto S. Nielsen, 4875 Sorrell Ave. N., Minneapolis, Minn.; said Helland assignor to Helland, Inc., Wayzata, Minn., a corporation of Minnesota
Filed Oct. 17, 1960, Ser. No. 63,099
14 Claims. (Cl. 192—56)

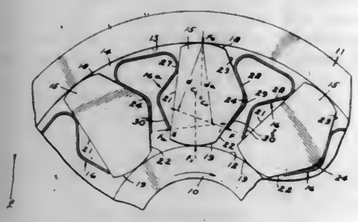


1. A torque clutch comprising a rotary driving member, a rotary driven member concentrically arranged with said driving member, a torque transmitting element movably mounted upon one of said members and extending between and engaging each of said members normally in driving relation and being movable between driving and non-driving positions relative to said members, and resiliently urged means movably carried by said member upon which said element is mounted and being movable only circumferentially of said members and engaging said element and urging the same into driving relation between said members, said means being movable to permit said element to move to non-driving position when a predetermined torque toward non-driving position is exerted upon said element by said driven member.

3,124,228
SPRAG CLUTCH AND ENERGIZING MEANS THEREFOR
Giovan B. Candela, East Detroit, Mich., assignor to Formsprag Company, Warren, Mich., a corporation of Michigan
Filed Nov. 20, 1961, Ser. No. 153,430
9 Claims. (Cl. 192—45.1)

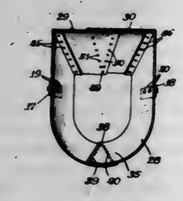
1. A sprag clutch comprising coaxial races having cylindrical race surfaces in radially spaced relation to one an-

other, circumferentially spaced sprags oriented similarly in succession in the radial space between said races, said sprags having first and second arcuate, radially spaced surfaces for wedging engagement with and between said race surfaces, and being provided with generally radially extending side surfaces of different contour on circumferentially opposite sides of the sprag, and individual energizing leaf springs acting in the circumferential spaces between successive sprags and on said respective differently contoured surfaces thereof to urge each sprag toward wedging engagement with one of the race surfaces, said leaf springs each being of a generally U-shaped outline having a bight portion between spaced, convexly out-



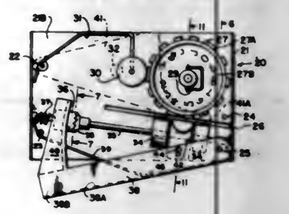
wardly rounded shoulders, a pair of legs converging from said shoulders to inwardly concave waist portions which are relatively closely adjacent one another when the spring is compressed in engagement between successive sprags, and terminal leg portions diverging from said respective waist portions, one leg of each spring having engagement at a shoulder and terminal leg portion thereof with one of said radially extending surfaces of a sprag at one circumferential side of the spring, the other leg having engagement at its waist portion with the differently contoured surface of the sprag on the opposite circumferential side of the spring, said bight portion of the spring having stable engagement with said sprags on opposite sides thereof to space the latter circumferentially.

3,124,229
HOPPER FOR SILO CHUTE
Donald E. Rutten, Division St., Plainfield, Ill.
Filed July 2, 1962, Ser. No. 206,901
8 Claims. (Cl. 193—2)



6. A frusto-conical shaped housing being generally semicircular in cross section comprising a housing, said housing including a cooperative pair of integral side and front parts, a cooperative pair of back parts, said front parts and said back parts disposed generally parallel to each other, means hingedly joining overlapping lower edges of the front parts and in axial alignment therewith means hingedly joining overlapping lower edges of the back parts, means fastening the longitudinal edges of said front parts above said lower edges and means fastening the longitudinal edges of said back parts above said lower edges whereby the front parts and the back parts may be placed in any one of selected positions of overlap of said cooperative parts.

3,124,230
PORTABLE CHECK WRITER
Cesar Bustamante, 150 W. 21st St., New York, N.Y.
Filed Mar. 23, 1961, Ser. No. 97,909
3 Claims. (Cl. 197—45)

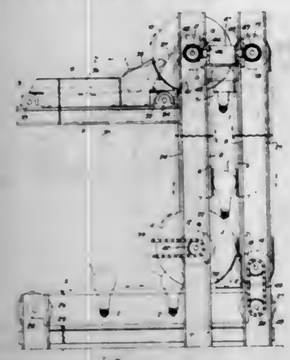


1. A portable pocket size check writer comprising a casing having a slot therein adapted to receive the blank check to be printed, a single digital printing wheel rotatably mounted in said casing so that the periphery of said digital wheel is disposed adjacent to said slot, an inking wheel mounted in said casing in rolling engagement with said digital wheel, means for feeding said check into said slot a predetermined amount, said feeding means including a shaft journalled to the ends of said casing, a feed roller connected to said shaft adjacent to said digital wheel, and means cooperating with said feed roller for releasably gripping the check therebetween for feeding said check; said gripping means including a plate pivotally connected to said casing and said plate having a spring finger extending into said slot adjacent said feed roller, a pair of cooperating ratchet members mounted on said shaft, one of said ratchet members being connected to said shaft to rotate therewith, and the other ratchet member being connected for relative rotation with said shaft, said rotatable member having an external gear sector, a coil spring normally urging said members into driving relationship, an actuator lever pivotally mounted to said casing, a gear rack connected to said lever for engagement with said gear sector of said rotatable ratchet member, a pressure plate connected to said lever intermediate the ends thereof, said pressure plate being disposed opposite said printing wheel and adapted to urge said check into printing engagement with said printing wheel upon the actuation of said lever.

3,124,231
TRANSFER MECHANISM
George E. Ott, Jr., Eastlake, Ohio, assignor to General Electric Company, a corporation of New York
Filed Feb. 23, 1962, Ser. No. 175,188
3 Claims. (Cl. 198—20)

1. A transfer mechanism comprising a pair of first and second endless elevator belts having generally coextensive vertical run portions in spaced and opposed relationship and running around respective pairs of upper and lower pulleys, the lower pulley for said second belt being at a lower elevation than the lower pulley for said first belt so that the vertical portion of the second belt extends below that of the first belt, the outer surfaces of said belts having thereon a plurality of closely spaced resilient protuberances for resiliently gripping an article between the opposed vertical run portions thereof, a generally horizontal input conveyor means arranged to carry articles along a path which lies in a vertical plane including the vertical run portions of both said elevator belts and which leads the articles to a point adjacent the lower end of the vertical run portion of the first said elevator belt, a pair of fixedly spaced apart transfer discs mounted on the same horizontal axis as the lower pulley for said first elevator belt for rotation adjacent opposite edges of said first elevator belt and said input conveyor and straddling the space between the elevator belts at the

lower end of the coextensive part of their vertical run portions, said transfer discs having their opposed inner faces provided with a plurality of closely spaced resilient protuberances and arranged to resiliently grip therebetween an article advanced thereto by said input conveyor and carry the article against the surface of said second elevator belt and up into the space between the



vertical run portions of said elevator belts, and means to move said elevator belts and input conveyor and to rotate said transfer discs in directions to effect movement of articles along said input conveyor to said transfer discs and thence into the lower end of the vertical run portions of said elevator belts and thence upwardly along said vertical run portions of the elevator belts.

3,124,232
ELECTRON TUBE APPARATUS
Nicholas Humen, Bayonne, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed June 1, 1961, Ser. No. 114,082
8 Claims. (Cl. 198—25)



1. A work piece transfer device comprising a stationary table, a turret mounted parallel to said table, slides each mounted on said turret for sliding in radial directions thereon, spring means for urging said slides radially inward and power means for urging said slides radially outward, said power means comprising an air cylinder fixedly mounted on said table and having a piston rod extending parallel to the directions of motion of said slides, there being mutually interengaging elements fixed to said slide and to said piston rod, a work piece holder mounted on each of the radially outward ends of said arms, and means for rotatably indexing said turret whereby, on rotatable indexing of said turret, said slides interchange positions.

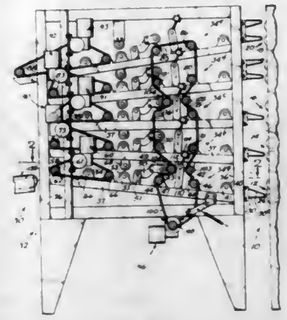
3,124,233
CONVEYOR UNLOADING MECHANISM
Otto G. Jeddeloh, 266 Lathrop Road, Grants Pass, Oreg.
Filed Jan. 14, 1963, Ser. No. 251,213
11 Claims. (Cl. 198—34)

1. For sheet-handling apparatus including a multi-deck conveyor, apparatus for unloading sheets from the decks of the conveyor comprising

unloading means for each deck,

said unloading means including speed-up means for withdrawing sheets from the deck at a faster speed than their speed of travel through the conveyor, and

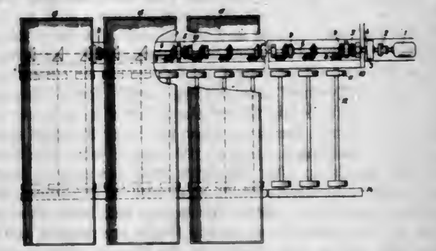
a receiving station for each deck positioned to receive sheets from the deck's unloading means,



said receiving station including friction means positioned to one side of the path of sheets thereinto engageable with the faces of the sheets,

said friction means operating to stop the travel of sheets delivered into the receiving station by braking the movement of the faces of the sheets therecross.

3,124,234
PROGRAMME-CONTROLLED AUTOMATIC CASTING AND MATURING FIELD FOR GAS SILICATE MANUFACTURING PLANTS
Rudolf Mičian, 120 Slezska, Prague 2, Czechoslovakia
Filed Feb. 1, 1961, Ser. No. 86,479
Claims priority, application Czechoslovakia Mar. 3, 1960
4 Claims. (Cl. 198—127)



1. A casting and maturing field for gas silicate bodies comprising, in combination,

(*a*) horizontally elongated support means;

(*b*) a plurality of rollers mounted on said support means for rotation about respective longitudinally spaced axes extending transversely of the direction of elongation of said support means, adjacent ones of said rollers forming a group, and a plurality of groups of said rollers constituting a roller track;

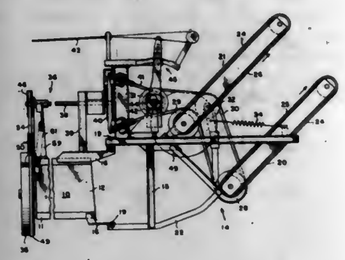
(*c*) actuating means for actuating rotation of said groups of rollers in timed sequence, said actuating means including

(1) a drive motor,

(2) a plurality of clutch means interposed between said motor and respective ones of said groups, each clutch means being engageable for transmitting movement of said motor to the rollers of the respective group, and

(3) control means for selectively engaging said clutch means at predetermined times.

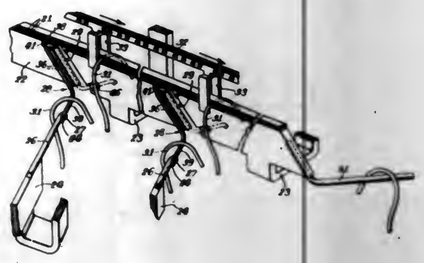
3,124,235
THROWER-TYPE CONVEYOR
James H. Hollyday, New Holland, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Dec. 20, 1962, Ser. No. 246,239
10 Claims. (Cl. 198—128)



1. A hay baler having a fore-and-aft extending bale case, a bale thrower mounted on a rear end of said bale case to receive bales therefrom and having a pair of rotatable conveyors engageable respectively with opposite sides of the bales to traject them away from the baler, a flywheel on said thrower and operatively connected to said pair of conveyors, a fore-and-aft extending drive shaft rotatably supported on said bale case, means connecting a rearward end of said shaft to said thrower to operate said pair of conveyors, a flywheel rotatably mounted on a forward portion of said baler and through which the baler is operated, said baler flywheel being rotatable about an axis parallel to said drive shaft, a driven sheave mounted on a forward end of said drive shaft, the diameter of said driven sheave being substantially smaller than the diameter of said baler flywheel, an endless belt extending around said baler flywheel and said driven sheave to transmit power from the baler flywheel to said drive shaft and through the shaft to said thrower, said endless belt having a power side and a slack side, the speed of rotation of said baler flywheel being non-uniform responsive to a non-uniform consumption of power by the baler and the thrower flywheel transmitting torque forces through said drive shaft to said driven sheave tending to cause the sheave to overrun the drive when the baler flywheel slows down and resisting a drive to the sheave when the baler flywheel speeds up after the drive shaft has slowed down, and means operatively associated with said endless belt to permit said driven sheave to overrun said baler flywheel when certain overrunning torque forces are present and to allow the belt to slip relative to the sheave when certain slip torque forces are present, said overrun and slip means comprising an idler engaging said slack side of said endless belt, means mounting said idler for shiftable movement in a direction toward and away from said endless belt, the slackness of said slack side being very substantial and said idler normally projecting between said baler flywheel and said driven sheave such an extent that a plane through the axis of the baler flywheel and the driven sheave crosses the idler, and spring means biasing said idler toward said belt.

3,124,236
SWITCH MEANS FOR CONVEYING AND SORTING APPARATUS
Rudolph F. Gerisch, Westchester, Ill. (% R. F. Gerisch Co., 1545 Circle, Forest Park, Ill.)
Filed Feb. 13, 1961, Ser. No. 88,771
15 Claims. (Cl. 198—169)

1. In a conveying and sorting system in which article-suspending hooks or the like are transferred from a main rail to a laterally extending branch rail spaced from said main rail and having means at the main rail for permitting passage of a hook along the main rail beyond the branch rail, the combination with said rails of a switch movable between a lower bridging position and an upper raised position, and means pivotally supporting said switch at said main rail for gravity actuation of the switch



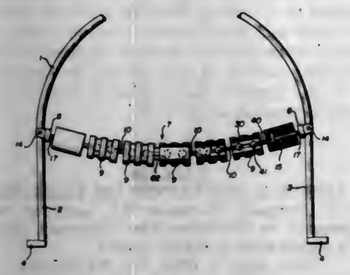
to said bridging position so as to span the space between said main rail and said branch rail for transferring a hook from the main rail to the branch rail, said switch being freely swingable to said raised position by contact with means moving along said main rail beyond said branch rail.

3,124,237
GUTTER CLEANERS FOR BARNS
Jule Peter Schommer, West Depere, Wis., assignor to H. D. Hudson Manufacturing Company, Chicago, Ill., a corporation of Minnesota
Filed Sept. 3, 1959, Ser. No. 837,888
5 Claims. (Cl. 198—171)



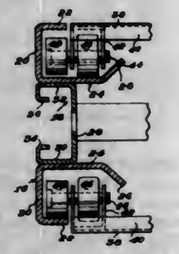
1. In a cleaner for cleaning a gutter of a dairy barn or other enclosure for livestock in which the gutter collects manure or other refuse, an elevator, a continuous chain movable over said elevator and through said gutter, spaced flights each having an end affixed to a closed link of the chain and free at its other end whereby movement of the chain along one side of the gutter carries therewith the spaced flights extending across the gutter with said flights scraping the gutter and carrying therewith the refuse collected in said gutter, and a flight connection for joining one end of each flight to the said closed link of the chain with the other end free, each flight comprising an elongated angle member of a length to span the width of the gutter and having a substantially horizontally disposed flange and a depending flange for scraping the gutter of collected refuse, said flight connector comprising a plate-like member overlapping the chain link for securing said link to said horizontally disposed flange and having spaced depending legs projecting through said link of the chain with one leg secured to the depending flange of the flight.

3,124,238
BELT CONVEYORS
Merle D. Tyler, Denver, Colo., assignor to Hughes-Tyler Manufacturing Co., Denver, Colo., a corporation of Colorado
Filed Apr. 28, 1960, Ser. No. 25,293
9 Claims. (Cl. 198—192)



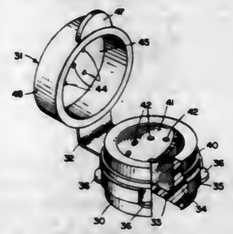
1. An idler for a belt conveyor comprising a series of interconnected rollers arranged to be rotatively suspended so as to hang in an approximate catenary curve for supporting a conveyor belt, each roller including mating grooved halves arranged to provide two spaced recesses in assembled halves with a passage providing external communication with each said recess, a connecting rod pivotally securing said rollers together, each said rod having a bulbous member on each end for riding in said recesses, means for holding the halves together in operative position, and means for suspending said series in a curve from its ends.

3,124,239
CONVEYOR FRAME
Andrew T. Kornylak, 400 Heaton St., Hamilton, Ohio
Filed Feb. 10, 1961, Ser. No. 88,434
3 Claims. (Cl. 198—204)



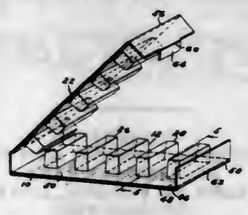
1. A conveyor frame comprising a supporting means, a pair of laterally spaced allochirally arranged longitudinally extending frame members mounted on said supporting means, each frame member comprising a pair of substantially parallel spaced apart channel members constituting upper and lower track members for the upper and lower reaches of an endless conveyor, each channel member comprising a bottom, a short side and a long side, and wherein the long side includes a lip turned inwardly at an angle in the direction of the short side, each of said laterally spaced pairs of channel members having the openings facing one another, and each channel member of a pair fixedly engaging a third channel member having its opening facing in the opposite direction and wherein the third channel member comprises a bottom and sides, said sides having flanges and said flanges being inturned toward said bottom.

3,124,240
CONTACT LENS CASE
Norman Croan, Egypt, Mass., assignor to Massachusetts Leather Products Company, Boston, Mass., a corporation of Massachusetts
Filed Nov. 25, 1960, Ser. No. 71,516
2 Claims. (Cl. 206—5)



1. A contact lens receptacle comprising a cylindrical base having a bottom and continuous side walls integral with said bottom and adapted to contain a fluid medium, a rigid shelf secured within said side walls at the edge remote from said bottom thereby forming a space between said shelf and bottom, said shelf having a plurality of holes formed therethrough through which a fluid medium may drain and having a concave surface on the side of said shelf remote from said bottom, said surface adapted to support a contact lens in facing relation, a cap for said base having a continuous side wall adapted to engage said side wall of said base and a top having means projecting from the inner surface thereof to maintain a contact lens located in said base in spaced relation from said top when said cap is closed, and a web integral with said cap and base forming a hinging means.

3,124,241
COMPOSITE PAPERBOARD AND PLASTIC CONTAINER
Danforth Holley, Grosse Pointe Farms, and Vincent R. Anderson, Rochester, Mich., assignors to Holley Plastics Company, Warren, Mich., a corporation of Michigan
Filed Mar. 21, 1960, Ser. No. 16,506
8 Claims. (Cl. 206—45.31)



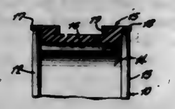
1. A container comprising a pair of composite paper board and plastic packages, each of said composite packages comprising an elongated plastic strip having a plurality of longitudinally spaced capsules formed therein, and an elongated sheet of paper board having a central, longitudinally extending fold line dividing said sheet of paper board into two portions between which the plastic strip is sandwiched, one of said portions having openings therein through which said plastic capsules extend, said paper board being bonded to said elongated plastic strip on both sides thereof about the periphery of each of the spaced capsules, a paper board connection between one end of the composite packages for holding said composite packages in spaced apart parallel relation and closure tabs secured to the other end of said packages for holding said container in a closed position.

3,124,242
YARN SHIPPING PACKAGE
Arthur L. Gottily, Mayfair, Pensacola, Fla., assignor, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware
Filed Nov. 21, 1960, Ser. No. 70,756
4 Claims. (Cl. 206—46)



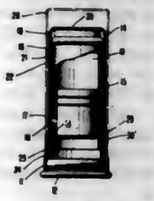
1. As a new article of manufacture, a yarn shipping package comprising, in combination:
(a) an elongated tubular yarn holder of circular cross section having windings of filamentary material thereabout, said holder being headless and having a top end portion on which no filamentary material is wound,
(b) a supple bag-like container made of a transparent film constructed from a rectangular integral blank of said film doubled over near the center thereof to form a line of fold across the width of the blank and to form two opposed walls having edges extending generally perpendicularly from the line of fold, adjacent edges of said walls being heat sealed together along the lengths thereof,
(c) a portion of the container near the line of fold cut away to accommodate the protrusion therethrough of only the said top end portion of the holder,
(d) the length of the container exceeding that of the holder enclosed therein to form a container flap that is folded under the bottom end portion of the holder,
(e) each of the said walls being weakened along a line below and substantially parallel with respect to the line of fold to provide quick detachability of the part of the container above the line where the walls are weakened,
(f) and completely visible indicia disposed on the top side of the end portion of said holder on which no filamentary material is wound.

3,124,243
TAPE REEL CLOSURE AND TAPE RETAINING MEANS
Thomas S. Kulka, 200 Film Bldg., 2108 Payne Ave., Cleveland, Ohio
Filed July 9, 1962, Ser. No. 208,516
19 Claims. (Cl. 206—53)



1. A tape reel closure and tape retaining means comprising a strap of yieldable material and of a length to extend around the periphery of the flanges of a reel, said strap having a body portion of a width to be tightly received between the flanges of the reel, annular flanges on opposite side edges of said body portion for engaging the peripheral edges of the flanges of the reel to limit radial inward movement of the body portion between the flanges of the reel and provide a closure for the space between the flanges of the reel, said body portion having a longitudinal dovetail groove in the outer surface extending throughout the length of said strap and an elongated tab of flexible material secured in said groove adjacent one end of said strap and projecting beyond the end of said strap, the width of said projecting portion being equal to or greater than the width of said groove, whereby with said strap received around a reel and with said body portion disposed between the flanges of the reel, the projecting portion of said tab may be forced into the groove in the opposite end portion of said strap to hold said strap in position on the reel.

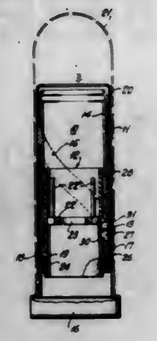
3,124,244
LIPSTICK CONTAINER OR THE LIKE
Robert B. Hopgood, Warwick, R.I., assignor, by mesne assignments, to Nicholson File Company, Providence, R.I., a corporation of Rhode Island
Filed Aug. 9, 1960, Ser. No. 48,444
8 Claims. (Cl. 206—56)



1. In a lipstick container, two relatively rotatable tubular members and a carrier cup slidable within the inner of said tubular members and including outwardly projecting cam-follower means, cam means on said tubular members cooperating with said cam-follower means and effective upon relative rotation of said tubular members to advance or retract said cup, said tubular members being of different materials one of which is a self-lubricated thermoplastic in substantially circumferentially continuous pressure contact with the other said tubular members, whereby uniform mutual support of said tubular members is achieved.

3,124,245
LIPSTICK CONTAINER
Robert B. Hopgood, Thompson, Conn., assignor, by mesne assignments, to Nicholson File Company, Providence, R.I., a corporation of Rhode Island
Filed Mar. 12, 1962, Ser. No. 178,945
7 Claims. (Cl. 206—56)

1. In a lipstick container, two relatively rotatable tubular members having propulsion cam slots therein, an elongated carrier slidably supported within the bore of the inner tubular member and having a generally centrally located divider establishing at one end an upper cup-shaped opening for insertion of pomade at the other end a lower elongated guide portion, and cam-follower means carried by said lower portion and projecting into both slots, said cam-follower means comprising a radially resilient spring tongue integrally formed with said carrier and including an outwardly extending cam slot engaging element at the free end of said tongue, said carrier being assembled within said tubular members with said cam-follower means resiliently loaded outwardly to cause said carrier to ride the bore of said inner tubular member at a location opposite that of said cam-follower, said divider having an opening therein to facilitate pomade insertion, and said cam-follower means being located wholly in the lower part of said carrier removed from the pomade section, whereby any radially undulating movement of



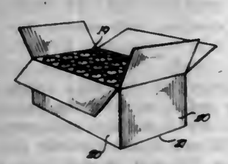
the cam-follower suspension will be unimpeded by pomade.

3,124,246
PACKAGING CONTAINER
James E. De Remer, Tobias J. Herringshaw, and John W. Parent, Toledo, Ohio, assignors to Continental Aviation and Engineering Corporation, Detroit, Mich., a corporation of Virginia
Filed Mar. 12, 1962, Ser. No. 179,115
11 Claims. (Cl. 206—56)



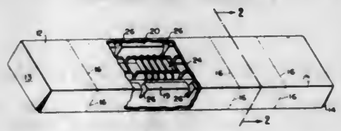
1. A packaging means comprising
(a) a carton provided with a readily removable circumferential strip,
(b) an article to be packaged carried in said carton,
(c) a rigid plastic foam in said carton and encasing said article,
(d) a wire disposed intermediate said foam and said article and completely encompassing said article,
(e) said wire being disposed in a plane substantially common to a plane containing the longitudinal axis of said strip.

3,124,247
CANDLE PACKAGE
Ralph H. Churchill, Chicago, Ill. (1201 Geringer Road, Algonquin, Ill.)
Filed Oct. 28, 1960, Ser. No. 74,127
2 Claims. (Cl. 206—65)



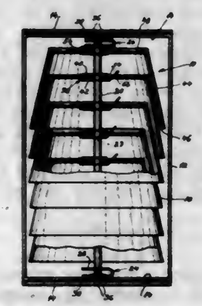
1. A candle package and carton combination comprising a carton having a flat non-porous and wax-impermeable bottom surface therein and having upstanding side walls, at least one candle package extending vertically within said carton and restrained against tipping therein by the carton's side walls, said package comprising a candle and a retaining sleeve therefor, said candle being formed of flowable semi-solid wax of a melting point within the range of approximately 90 to 130 degrees F. and having a stiff wick extending vertically therethrough, said sleeve being readily deformable and being formed from flexible, non-porous and non-stretchable sheet material, said sleeve being open at both its top and bottom ends and having the edges defining the open bottom end thereof resting upon said flat wax-impermeable bottom surface of said carton, said sleeve also being maintained under tension and in cylindrical shape by outward forces imposed thereon by the semi-solid and flowable wax of said candle.

3,124,248
COMPONENT PACKAGE
Richard P. Geoffrion, Lexington, and Charles L. Conley, Reading, Mass., assignors to Clevite Corporation, a corporation of Ohio
Filed Sept. 25, 1961, Ser. No. 140,291
3 Claims. (Cl. 206—65)



1. A package for semiconductor diodes having generally cylindrical bodies and end leads extending outwardly along the axes of said bodies for a first portion of their length and extending at an angle to said axes for the remainder of their length comprising a generally rectangular block of material having three grooves formed longitudinally in a surface thereof, said grooves being separated by two central walls, said central walls having a plurality of aligned notches formed therein, each said first portion of said leads being disposed in one of said notches, said diode bodies being thus suspended above the central groove of said three grooves and a sleeve closely fitted over said block and bearing on said bodies to retain said first lead portions in said notches.

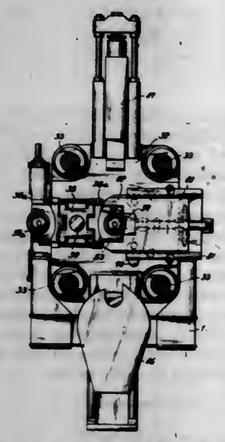
3,124,249
LAMPSHADE TREE FOR PACKAGING
Morris L. Flashman, 6815 Loretto Ave., Philadelphia 11, Pa.
Filed June 20, 1963, Ser. No. 289,184
5 Claims. (Cl. 206—65)



1. A package of lamp shades, comprising in combination a carton having spaced parallel top and bottom flaps, a plurality of spaced, parallel rods vertically disposed in the carton perpendicular to the top and bottom flaps, each rod having a plurality of transverse holes,

said holes being spaced apart axially of the rod, a plurality of looped wire members extending through some of the holes in the rods and having end portions extending outwardly of the rods, a plurality of lamp shades in the carton, said lamp shades having conical bodies with centrally located spider rings joined by radial spider arms to said bodies, each spider ring being engaged on one of the rods while the ring rests on one of the looped wire members, and one end of the wires being bent angularly, whereby the lamp shades are supported in axially vertical nested stacks with the bodies of the lamp shades spaced apart, and an anchoring plate fixed to each end of each rod and biting into the material of the flaps so that the rods are held axially vertical in the carton.

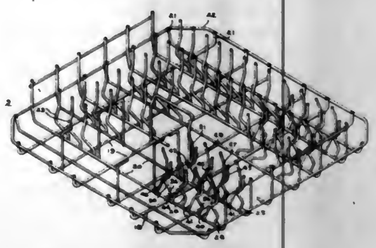
3,124,250
EXTRUSION PRESSES
Gerhard Paul Krause, Pittsburgh, Pa., assignor to Schloemann Aktiengesellschaft, Duesseldorf, Germany
Filed Jan. 19, 1961, Ser. No. 83,807
Claims priority, application Germany Jan. 25, 1960
7 Claims. (Cl. 207—1)



1. An extrusion press, comprising: a bolster, a container secured to the bolster, a die-holder arm pivotally mounted on the bolster in such a position that a die carried thereby can be rocked into and out of alinement with the axis of the container, a bed, serving as a slideway, carried by the bolster, and a slider displaceable in the bed towards and away from the axis of the container, the slider being adapted, when displaced towards the axis of the container, to lock the die-holder arm in its operative position, and being adapted, when displaced away from the said axis, to allow the die-holder arm to be turned about its pivotal axis, the bed being so mounted upon the bolster that it can be adjusted through a small angle about the pivotal axis of the die-holder arm, and the press further comprising means for clamping the bed in its adjusted position.

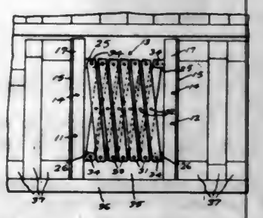
3,124,251
RACK STRUCTURE FOR DISHWASHER
Lauren W. Guth, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Aug. 16, 1962, Ser. No. 217,331
3 Claims. (Cl. 211—41)

1. An open framework dish rack comprising: a supporting base; a first plurality of aligned elongated members each secured at one end to said base and extending upwardly therefrom, each said member being curved adjacent its bottom end to form a first portion extending toward an adjacent one of said members; and a second plurality of elongated members respectively intersecting said first plurality of members intermediate the ends thereof and above said first portions thereof, and extending upwardly so as to form dish receiving recesses with said



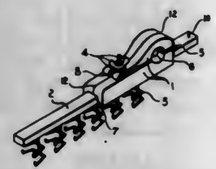
first plurality of members, each member of said second plurality extending from its intersection with a member of said first plurality in the opposite horizontal direction as each of said first portions, whereby larger dishes may be positioned between each two adjacent members of said first plurality and smaller dishes may be positioned between the larger dishes in said recesses.

3,124,252
SELF-EXTENSIBLE SHELF INSERT
Eugene F. Canham, 319 W. Pima Ave., Coolidge, Ariz.
Filed Oct. 30, 1961, Ser. No. 148,444
1 Claim. (Cl. 211—43)



A self-extensible insert adapted to occupy an otherwise unoccupied space of a shelf or rack for supporting articles thereon in upright positions, comprising a pair of end members and a lazy tongs comprised of bars interposed therebetween; each of said end members including an elongated casing having a longitudinally extending bore of noncircular cross section, a pair of elongated slide blocks of noncircular cross section having a relatively close fitting sliding engagement in said bore, said casing having an inner wall provided with longitudinally spaced longitudinally extending slots communicating with said bore, ears projecting transversely from intermediate portions of said slide blocks and extending outwardly through and slidably engaging in said slots, means pivotally connecting the free end of each of the bars at the ends of the lazy tongs to one of said ears and constituting the sole connection of the end member to the lazy tongs, and a contractile spring disposed in said bore and connected to adjacent ends of the slide blocks for urging said slide blocks toward one another for yieldably urging the lazy tongs toward an extended position whereby said lazy tongs exerts a yieldable force against each of the end members tending to displace the end members away from one another.

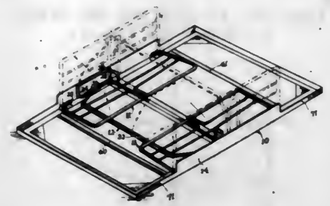
3,124,253
SLIDING NECKTIE RACK
John M. Petrich, Los Angeles County, Calif. (4116 Lorraine Road, San Pedro, Calif.)
Filed Feb. 6, 1962, Ser. No. 171,470
2 Claims. (Cl. 211—94)



1. A necktie rack capable of being removably mounted in any one of a plurality of possible positions on a closet clothes hanger rod of circular cross section without defacing the same, including:
(*a*) an elongate rigid bar;
(*b*) a plurality of longitudinally spaced necktie hangers depending from said bar, which hangers are positioned inwardly substantial distances from the longitudinal edges of said bar;
(*c*) a first elongate block having a first transverse semicircular recess formed therein of a lesser radius of curvature than that of said hanger rod with which it will be used, which block also has a recess of T-shaped transverse cross section formed therein that extends longitudinally through the lower portion thereof to define two laterally spaced tracks, said recess being of such cross section that it snugly and slidably engages said bar when said bar rests on said tracks, with a vertical portion of said T-shaped recess being of sufficient width that said hangers can extend downwardly therethrough;
(*d*) a second block disposed above said first block that has a second transverse recess formed therein which is complementary to said first recess and in vertical alignment therewith, with said first and second blocks being of sufficient width that when the surface portions thereof defining said first and second recesses are brought into pressure contact with said hanger rod, said rod will not be defaced;
(*e*) hinge means pivotally connecting the rear ends of said first and second blocks for removably placing said blocks in positions adjacent said hanger rod where said first and second recesses can be brought into pressure contact therewith;
(*f*) manually operable means for pivoting said first and second blocks towards one another to the extent that said first and second blocks frictionally grip said hanger rod with a force sufficient to prevent rotation of said blocks relative thereto, even when said rod is withdrawn from said blocks to its outermost position thereon; and
(*g*) stop means for preventing withdrawal of said rod beyond said outermost position.

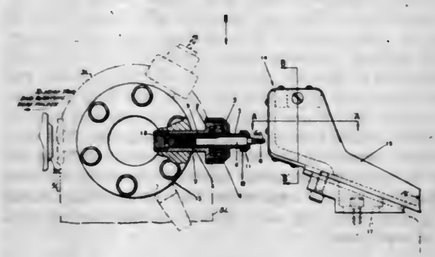
3,124,254
FOLDING AND NESTING DELIVERY TRAY FOR BAKERY GOODS OR THE LIKE
Charles Davidson, 246—07 86th Ave., Bellerose, N.Y.
Filed Mar. 16, 1962, Ser. No. 180,199
11 Claims. (Cl. 211—132)

1. A carrying device comprising a base, sidewalls swingably attached to the said base comprising catch means, a cross-span pivoted to the said base at right angles to the said side walls, and said cross-span including camming means, check means and catch means, with the said camming means adapted to contact a portion of each of the side walls to effect erection of said side walls upon upward rotation of the said cross span, and said cross-span will effect a lock with the aforementioned side walls through the said catch means, and said cross-span's upward motion will be checked by said check means when



both cross-span and side walls have attained the perpendicular; and comprising depressive means formed on the said cross-span whereby downward rotation of cross-span will effect collapse of said sidewalls to a horizontal position with relation to the aforementioned base.

3,124,255
APPARATUS FOR TRANSFERRING WORKPIECES IN MACHINE TOOLS
Maurice Stanley Springate, Oaklands, England, assignor to Aviation Developments Limited, Welwyn Garden City, Herts, England, a company of England
Filed Jan. 22, 1959, Ser. No. 788,413
Claims priority, application Great Britain Jan. 23, 1958
4 Claims. (Cl. 214—1)

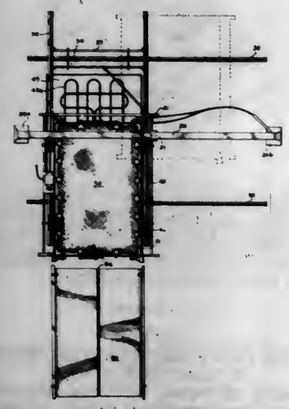


1. In a machine tool having a rotary work-holder for holding and rotating a workpiece while machining operations are performed thereon and a slide which is movable towards and away from said rotary work-holder, apparatus for transferring a workpiece from said rotary work-holder comprising, a gripping finger having an end portion formed of resiliently mounted parts for gripping said workpiece when the finger is moved into overlapping engagement with the workpiece, a turret supporting said finger on said slide with its longitudinal axis coincident with the axis of rotation of the workpiece and with said gripping portion directed towards said workpiece, said turret supporting said finger for rotation with respect to said slide and including means supporting said finger for free rotation about its longitudinal axis when engaging a workpiece carried by said rotating work-holder, said slide being movable towards said work-holder to effect overlapping gripping engagement of said finger with said workpiece while said workpiece is being rotated by said work-holder and to retain said workpiece on said finger after the workpiece is released from said work-holder, and workpiece disengaging means disposed in the path of movement of the finger as it rotates about the axis of the turret and being operative to strip the workpiece from said finger.

3,124,256
FRAME EXCHANGE MECHANISMS FOR QUILTING MACHINES

Arthur Schwarzberger, Chicago, Ill., assignor to Shirley Schwarzberger, doing business as A-B Mfg. Co., Chicago, Ill.

Filed Nov. 14, 1960, Ser. No. 68,801
3 Claims. (Cl. 214—1)

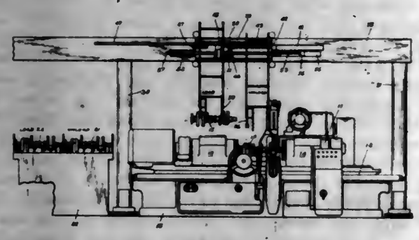


1. A frame exchange mechanism comprising a support and a carrier arranged laterally on which commodity bearing frames are adapted to be deposited singly, a pair of endless-conveyor side chains carried by the support and operable with upper runs in a direction departing from the carrier, arm means fixed to said side chains and movable therewith to draw and elevate each frame from the carrier in said direction to a position over the support, a third endless conveyor chain operable in a direction opposite that of the side chains intermediately of said pair of side chains and, including an upper arm with a projection to push each frame deposited on the support beneath an elevated frame to a position over the carrier, and driving means connected to and simultaneously driving the chains in opposite directions making the above drawing and pushing actions concurrent and the pushing action at a greater rate than said drawing action during each cycle of operation.

3,124,257
WORK TRANSFER APPARATUS FOR MACHINE TOOLS

Ralph E. Price and William E. Happel, Waynesboro, Pa., assignors to Landis Tool Company, Waynesboro, Pa.

Filed Nov. 18, 1960, Ser. No. 70,197
3 Claims. (Cl. 214—1)

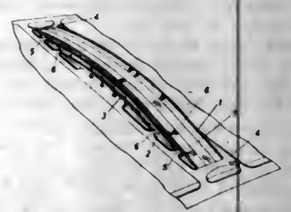


1. A work transfer apparatus for a machine tool comprising a support member, a horizontal track on said support member, a carriage on said track, work handling means on said carriage, means for traversing said carriage between two terminal positions, said traversing means comprising a piston and cylinder on said carriage, one of which is attached to a traveler member, said traveler member having a pair of pinions, a rack on said track in engagement with one of said pinions, a rack on said carriage in engagement with the other of said pinions, movement of said traveler member relative to said second rack causing rotation of said pinions whereby to traverse said traveler member and said carriage relative to said first rack to traverse said carriage between said two terminal positions, and means to actuate said second rack to rotate said pinions to move said carriage relative to said first rack whereby to provide a short range traversing movement of said carriage in any position on said track.

3,124,258
MEANS FOR PARKING VEHICLES

Jack Smith, Dewsbury, England, assignor to The Wheelwright Parking Company Limited, Dewsbury, England, a British company

Filed Dec. 19, 1960, Ser. No. 76,694
Claims priority, application Great Britain Dec. 24, 1959
11 Claims. (Cl. 214—16.1)

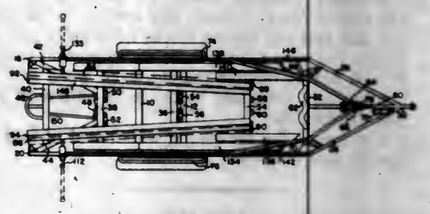


1. A parking system for road vehicles, including a multi-arched structure with the arches in superposed relation, at least one end of each arch being at ground level for vehicles to pass thereonto, at least one track running longitudinally of each arch to provide common passage means for vehicles, and vehicle parking bays extending laterally from the track on at least one side of the track.

3,124,259
FLOATING BOAT TRAILER

William H. Goettl, 4627 N. Granite Reef Road, Scottsdale, Ariz.

Filed Sept. 23, 1960, Ser. No. 58,060
4 Claims. (Cl. 214—84)

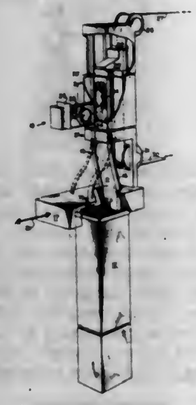


1. In a floating boat trailer the combination of: a trailer; buoyant means thereof causing said trailer to float in water; first means for supporting a boat on said trailer; and second means mounted on said trailer for elevating a boat thereon, said means for supporting a boat comprising hull engaging rollers; said second means operable to raise a boat to a position above the upper surface of said rollers, said second means comprising manually operable levers pivoted to said frame and extending upwardly at opposite sides thereof, said levers disposed to pivot outwardly in opposite directions away from the center of said frame; and hull engaging supports movably connected with said lever and movable laterally in a substantially horizontal plane by said levers and disposed to elevate the hull of a boat relative to said frame.

3,124,260
DATA STORAGE

Lloyd C. Tidball, Saratoga, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Continuation of application Ser. No. 798,069, Mar. 9, 1959. This application May 11, 1961, Ser. No. 112,155
11 Claims. (Cl. 214—95)



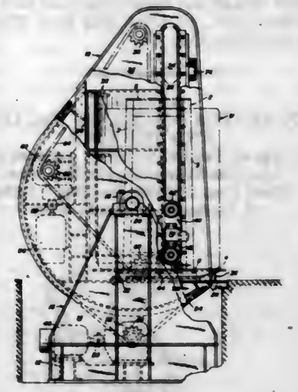
1. Apparatus for withdrawing from a bin a selected one of a plurality of record sheets having a magnetic tab, said apparatus comprising: a magnet movable into spaced relation with the bin for engaging and magnetically holding the tab of the selected record sheet; an outer frame slidably mounted on the magnet, said outer frame abutting against and retaining unwanted ones of the record sheets within the bin; resilient means coupled between the magnet and the outer frame for urging the frame forwardly of the magnet; and means drivingly coupled to the magnet for moving the magnet into engagement with the selected record sheet and then withdrawing the magnet together with the selected record sheet while the outer frame is resiliently held abutting against the unwanted record sheets.

3,124,261
APPARATUS FOR HANDLING BUNDLES OF WIRE

Will A. Breedon, South Euclid, William J. Schuster, Olmsted Falls, and George F. Schwartz, Cleveland, Ohio, assignors to United States Steel Corporation, a corporation of New Jersey

Filed Dec. 20, 1962, Ser. No. 246,188
8 Claims. (Cl. 214—130)

1. Apparatus for handling bundles of wire or the like comprising a stem for receiving a bundle of wire, a pivoted frame having spaced apart side plates and a bottom plate, said bottom plate extending between and fastened to said side plates, means pivotally supporting said frame about an axis substantially normal to said side plates, means for moving said frame from a position where the bottom plate is substantially horizontal to a position where it is substantially vertical, means on said bottom plate for detachably receiving said stem, tracks on said pivoted frame extending generally normal to said bottom plate, a cradle between said side plates, means for supporting said cradle on said tracks, a pair of diametrically opposed stripper arms fastened to said cradle at the end adjacent said bottom plate, and means for moving said carriage along



said tracks when said bottom plate is in vertical position to strip said bundle from said stem.

3,124,262
EASY LAUNCH KEEL ROLLER BRACKET

George F. Demore, Rte. 4, Box 553, Springfield, Mo.

Filed Aug. 14, 1961, Ser. No. 131,344
2 Claims. (Cl. 214—512)

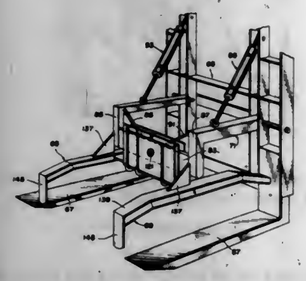
1. In a boat trailer having a boat-lifting device, the improvement wherein the boat-lifting device comprises a base member secured to the trailer and having a generally vertical guide, a boat lifter having a downward extension slidably mounted in said guide to permit generally vertical movement of said boat lifter between a lowered position and a raised position, an expansible linkage for moving said boat lifter between said positions, said linkage comprising a lever, a first pivotal connection between one end of said lever and said boat lifter, a link, a second pivotal connection between the lower end of said link and said base member at the lower end of the base member, a fulcrum pin pivotally connecting the upper end of said link to said lever at a point between the ends of said lever, the total distance between said first pivotal connection and said fulcrum pin and between said fulcrum pin and said second pivotal connection being greater than the distance from the first pivotal connection to the second pivotal connection when said boat lifter is in its lowered position, said lever extending generally downwardly and toward one side of the trailer, a rod engaging the lower end of said lever and extending generally laterally to the other side of the trailer, a handle on said rod, and a stop for limiting the movement of the lower end of the lever and the upper end of said link toward said other side, said handle, when grasped and pulled generally laterally of the trailer, swinging the lower end of said lever and the upper end of said link toward said other side of the trailer to raise the boat lifter, the distance between said first and second pivotal connections being substantially equal to the total distance between the first pivotal connection and the fulcrum pin and between the fulcrum pin and the second pivotal connec-

tion when the boat lifter is in its raised position, the linkage engaging said stop when the fulcrum pin is closer to said other side of the trailer than said first and second pivotal connections, whereby said boat lifter is maintained in a raised position.

3,124,263
APPARATUS FOR HANDLING LOGS AND THE LIKE

James J. Eaves, Louisville, Miss., assignor to Taylor Machine Works, Louisville, Miss.

Filed Dec. 1, 1960, Ser. No. 73,100
5 Claims. (Cl. 214—654)



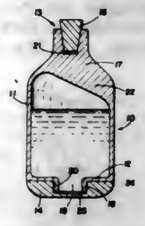
5. In a machine for handling a load as logs and the like of the type including a carriage and a load supporting structure connected to said carriage and projecting forwardly therefrom, the improvement in said machine comprising support means movable between a lowered position and a raised position, at least one load engaging arm, means pivotally coupling said load engaging arm intermediate the ends thereof to said support means for pivot about a substantially horizontal axis, said load engaging arm being supported through said coupling means by said support means in a normal substantially horizontal balanced position about said axis above said load supporting structure, means for moving said support means between said lowered position and said raised position to carry said load engaging arm therewith into a raised position and a lowered position, when in said raised position said load engaging arm being spaced from said load supporting structure to permit the load to be moved from and to said supporting structure, movement of said support means towards said lowered position being effective to move said load engaging arm into holding contact with a load carried by said load supporting structure, when a load is contacted by said load engaging arm said arm being normally pivotal into a flat position against the top of the load, said load engaging arm including a main body portion and a forward end portion angled downwardly from said main body portion, and stop means cooperating between said support means and said load engaging arm for limiting pivot of said load engaging arm to stop said load engaging arm in a fixed load engaging position relative to said support means and in which position said forward end portion is angled forwardly and downwardly relative to the horizontal, whereby said forward end portion is adapted to act as a wedge to wedge the load rearwardly on said load supporting structure.

3,124,264
SAFETY BOTTLE

Jacob Waisberg, 57 Neptune Drive, Apt. 106, Toronto, Ontario, Canada

Filed Apr. 15, 1963, Ser. No. 273,044
3 Claims. (Cl. 215—9)

1. A container having side walls, a bottom wall, a base and a top end, removable means capping said top end of said container, means sealing said top end of said container, said bottom wall having a first opening formed therein and communicating with the interior of said container, said bottom wall having a first threaded neck protruding therefrom, said first opening in said bottom wall extending through said first threaded neck, said base threadably engaging said first threaded neck, whereby said base removably seals said first opening, at least the marginal portions of said base being adapted to abut said bottom wall when said base is in position sealing said first

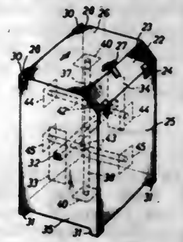


opening, the width of said base where said base abuts said bottom wall being substantially the same as the width of said container at said bottom wall, said base registering with said side walls of said container where said marginal portions of said base abut said bottom wall, and means permanently unbalancing said container towards one side thereof about the point of intersection of the longitudinal axis of said container with said base, said last mentioned means comprising an unbalanced excess of material at said top end towards said one side of said container creating an unbalance moment about said point.

3,124,265
TILTABLE TRANSPORT CONTAINER FOR POURABLE BULK MATERIAL

Josef Bertels, Bergdorf-Wesseling, near Cologne, Germany, assignor to Wibau Westdeutsche Industrie- und Strassenbau - Maschinen - Gesellschaft m.b.H., Gelnhausen, Germany

Filed Dec. 1, 1961, Ser. No. 156,313
Claims priority, application Germany Dec. 7, 1960
2 Claims. (Cl. 220—1.5)



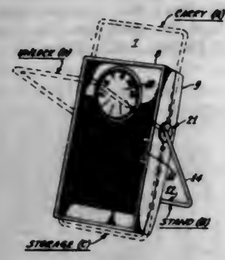
1. A tiltable transport container for pourable bulk materials, said containers being in the general shape of a rectangular parallelepipedon and including a supernumerary wall portion slanted with respect to two perpendicular walls of the container, said slanted wall portion comprising a lid pivotally secured to one of the walls of the container to provide a single aperture for both filling and discharging said bulk materials, latch means for immobilizing said lid in its closed position, a hollow noncircular supporting bar braced between two opposing walls and including non-circular external apertures for receiving a cooperating non-circular tool for lifting, transporting, and discharging said container, at least two additional supporting bars braced between the remaining walls, a leg at each corner of the bottom of said container, and two

recesses in the top of said container opposite said slanted wall for receiving two legs of a second container.

3,124,266
CASING FOR PORTABLE ELECTRICAL APPARATUS

Gary Wayne Morgan, Indianapolis, Ind., assignor to Radio Corporation of America, a corporation of Delaware

Filed Feb. 16, 1962, Ser. No. 173,696
4 Claims. (Cl. 220—4)

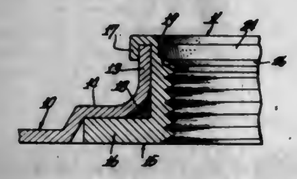


1. A casing for portable radio receivers and the like, comprising in combination, separable complementary front casing and back-cover parts providing a unitary casing structure, means providing locking-pin openings through both parts in aligned relation on opposite sides of the casing structure, means providing a pair of aligned locking pins movable axially through said openings from an inserted locked position holding the parts together to a retracted unlocked position permitting separation of said parts, a wire bail carrying handle for said casing having flexible arms connected to and integral wtih said locking pins for resiliently holding said pins in the locked position, said pins providing a pivot axis of movement for said handle, a circular detent boss carried by the front casing part and surrounding each of said openings, detent means on said bosses defining fixed angular stop positions for said handle including a carrying position and intermediate positions sequentially and preceding an unlocking position, cam means on each of said detent bosses for actuating said arms to axially retract the pins to said unlocked position in response to movement of said handle to said unlocking position, and stop means on each of said detent bosses for restraining movement of said handle from the carrying position directly to said unlocking position.

3,124,267
METHODS OF AND MEANS FOR SEALING CONTAINERS

Vincent B. Cetrone, 563 Adelaide NE., Warren, Ohio

Filed June 16, 1961, Ser. No. 127,424
6 Claims. (Cl. 220—39)

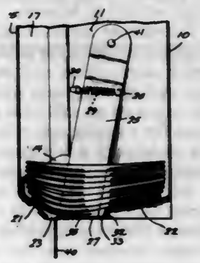


1. The combination comprising a container having an internally threaded opening and a tapered annular seat circumscribing such opening with the largest diameter portion of said seat being adjacent the exterior of said container and with the smallest diameter portion of said seat being adjacent the interior of said container, an externally threaded plug for closing said container opening and adapted to be threaded into the latter from the container exterior, and means on said plug to establish a fluid-tight seal with the container and providing an annular, knife-like edge having a diameter smaller than the largest diameter portion of said container seat but larger than the smallest diameter portion of said container seat and said knife-like edge forceably engaging said container seat intermediate the aforesaid largest and smallest diameter portions thereof as said plug is threaded tighily into said container opening, said means being of a material sufficiently rigid to resist flowing under the pressure exerted by tightening said plug in said container opening but such material being softer than said container seat to provide for slight deformation of said knife-like edge as a result of the high pressure per unit of area developed thereon when said plug is so tightened.

3,124,268
DISPENSER FOR FOLDED PAPER ARTICLES

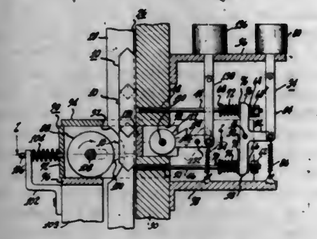
Archie S. Krueger, Green Bay, Wis., assignor to Alwin Manufacturing Company, Green Bay, Wis., a corporation of Wisconsin

Filed Feb. 1, 1960, Ser. No. 6,011
6 Claims. (Cl. 221—36)



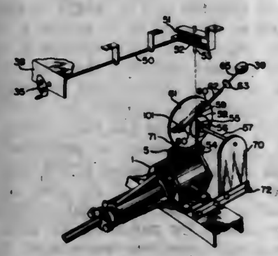
1. A dispensing cabinet for flexible articles respectively having flap portions folded rearwardly beneath their forward margins, said flap portions having rearward extent materially less than that of the respective article, whereby each successive flap portion has a rear margin spaced well forwardly of the rear of each said article, said cabinet comprising front and rear bottom wall portions spaced to provide a dispensing slot centrally positioned with reference to the articles resting on said front and rear bottom wall portions and of length as great as the flap portions and so disposed as to expose a substantial part of the flap portion of each successive lowermost article, the part exposed including the said rear margin thereof, a plate normally substantially spanning the slot for providing supplemental support for articles within the cabinet resting on the front and rear bottom wall portions aforesaid, said plate being so positioned that the said flap portion of each successive article rests thereon, arms connected with the ends of the plate and having upwardly extending portions in pivotal connection with the sides of the cabinet for mounting the plate for substantially frictionless retractive movement rearwardly from beneath the flap portion of the lowermost article within the cabinet, the margin of such flap portion thereupon falling through the slot ahead of the plate, and means biasing the plate for return to its said normal position, whereby the plate engages the fallen flap portion to force its said margin forwardly in front of the plate.

3,124,269
APPARATUS FOR FREEING ELEMENTS IN A CHUTE
Arnold Tobler, East Orange, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Dec. 19, 1960, Ser. No. 76,632
4 Claims. (Cl. 221—251)



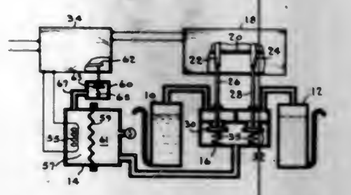
4. In combination, a chute comprising a guide means along which articles may be moved, said chute having an opening therethrough, escapement means operatively associated with said chute and comprising a pair of spaced fingers, means for moving one of said fingers at least partially into said chute and into blocking relation with respect to an article in said chute, means for moving another of said fingers at least partially into said chute and into blocking relation with respect to a different article in said chute, said fingers being alternately movable, and means for moving an article between said fingers along said chute, said last-named means comprising a support means mounted adjacent said guide means and said opening, a slide member mounted on said support means and extending through said opening, said slide member having two ends, a roller mounted on said slide member near one of said ends, means for rotating said roller, and means for moving said slide member in a first direction through said opening for causing engagement of said roller with said article between said fingers and for moving said slide member in a second direction opposite to said first direction, said last-named means comprising a cam follower mounted on said slide member near the other of said ends thereof, cam means cooperating with said cam follower for moving said slide member in one of said two directions, and resilient means for moving said slide member in the other of said two directions.

3,124,270
METERING PUMP CONTROL SYSTEM
Mead Cornell, 149 California St., San Francisco, Calif.
Filed Mar. 16, 1961, Ser. No. 96,249
5 Claims. (Cl. 222—23)



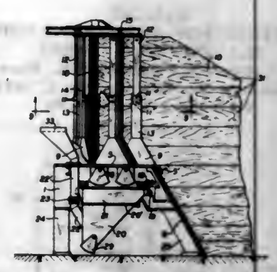
1. In a liquid pumping and metering system, in combination, a metering pump, means for supplying liquid to the pump at a pressure substantially equal to the discharge pressure of the pump, volumetric displacement control means for the pump that varies the pump volumetric displacement in exact proportion to the movement of the control means, a linear displacement indicator, drive means coupled to the control means for driving the linear displacement indicator through equal increments of distance for equal increments of movement of the control means, and means for adjusting said drive means to vary the magnitude of an increment of distance per increment of movement of the control means.

3,124,271
TIMER CONTROLLED PRESSURE OPERATED DISPENSER
Frederick R. Beck, Maywood, and William H. Jones, Villa Park, Ill., assignors to Controls Company of America, Schiller Park, Ill., a corporation of Delaware
Filed Sept. 27, 1960, Ser. No. 58,839
13 Claims. (Cl. 222—70)



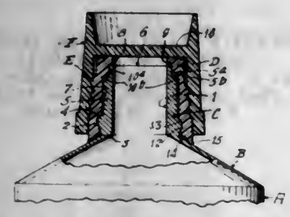
1. In a washing machine, a liquid dispensing system comprising, a first timer, a number of liquid reservoirs, pressure distributor means connected to said liquid reservoirs for separately activating said reservoirs, means operatively connecting said pressure distributor means to and for control by said first timer so that said reservoirs are activated during predetermined periods of the timer operation, a second timer energized by the first timer during said predetermined periods, and pump means connected to the pressure distributor and controlled by the second timer to pressurize the distributor according to a preselected sequence of operations.

3,124,272
BATCHING PLANT, PARTICULARLY FOR THE PREPARATION OF CONCRETE WITH AGGREGATES AND CONCRETE BINDERS
Hartmut W. Maier, Ettlingen, Baden, and Ernst E. Kühner, Bruchhausen, Baden, Germany, assignors to Elba-Werk, Ettlinger Baumaschinen- und Hebezeugfabrik G.m.b.H., Ettlingen, Baden, Germany, a corporation of Germany
Filed Sept. 2, 1960, Ser. No. 53,803
Claims priority, application Germany Sept. 5, 1959
5 Claims. (Cl. 222—77)



1. A batching plant, particularly for the preparation of concrete with aggregates and concrete binders, comprising a foundation frame, a base plate supported by said foundation frame and having a plurality of outlets, closure means on each of said outlets, a plurality of pairs of supports carried by and projecting upwardly from said base plate such that the bases of said supports of each pair thereof are disposed opposite each other, an upper frame mounted on top of said supports to define jointly with the latter an open structure, a plurality of horizontally disposed planks arranged substantially vertically in superposed position and extending through said structure between corresponding pairs of said supports up to a predetermined level, said supports of each pair thereof being spaced apart for a distance substantially equal to the thickness of said planks, said planks forming separating walls for storage compartments for said aggregates surrounding the batching plant, each of said supports being formed of telescoping sectional irons of channel cross-section and consisting of upper parts and lower parts, each of said upper parts sliding telescopically into the corresponding of said lower parts, said upper frame being adapted to support feeding means to move said aggregates from said storage compartment toward said batching plant, and a weighing bin removably supported by said foundation frame and adapted to batch said aggregates according to the weight required for the mixture of said concrete.

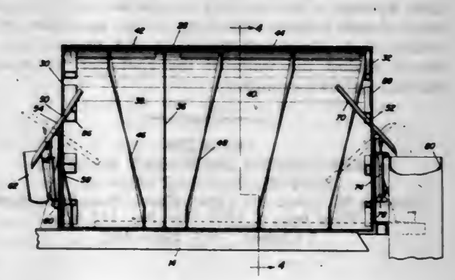
3,124,273
METALLIC COLLAPSIBLE TUBES HAVING PLASTIC NECKS
Frederic Remington, Elizabeth, and Richard A. Tartaglia, East Orange, N.J., assignors to Peerless Tube Company, Bloomfield, N.J., a corporation of New Jersey
Filed Dec. 19, 1962, Ser. No. 245,762
10 Claims. (Cl. 222—92)



1. A collapsible tube comprising a metal body with a shoulder in one end thereof, a metal neck extending from said shoulder and having a generally cylindrical portion provided with an outer end surface in a plane perpendicular to the axis of the metal neck, and a tubular plastic neck having inherent resiliency and an internal cylindrical portion corresponding approximately in diameter to the cylindrical portion of the metal neck, said plastic neck being longitudinally slidably fitted on said metal neck, the exterior of said metal neck and the interior of said plastic neck having smooth approximately cylindrical surfaces in snug frictional contact with each other, said exterior of the metal neck and the interior of the plastic neck also having mating longitudinal grooves and ribs spaced circumferentially of the necks and longitudinally of the necks from said smooth portions to prevent relative rotation of the plastic neck and the metal neck, the external surface of the metal neck and the internal surface of the plastic neck between said shoulder and said ribs and grooves having interlocking portions for holding the plastic neck firmly against outward movement on the metal neck.

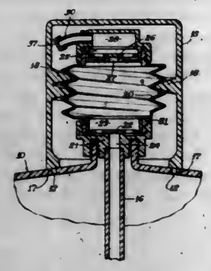
3,124,274
SPREADER WITH ROTATABLE HOPPER
Charles P. de Biasi, 74 Braman Road, Waterford, Conn.
Filed July 25, 1961, Ser. No. 126,704
3 Claims. (Cl. 222—136)

1. A material spreader comprising, in combination, mobile frame structure movably supported for traversing a given course, a substantially cylindrical drum defined by a peripheral side wall portion and spaced apart end wall portions, means for mounting said drum on said frame structure for rotation about a generally horizontally disposed longitudinal axis which extends in a direction substantially common to the direction which the frame structure travels while traversing the given course with one end wall portion of the drum being disposed forwardly and the other end wall portion thereof being to the rear of said frame structure, partition means disposed within the interior of said drum intermediate the end wall portions thereof, said partition means extending generally transversely relative to the longitudinal axis of rotation of the drum and terminating in engagement with the peripheral side wall portion thereof to divide the interior of the drum into a plurality of non-communicating compartments, access means in the peripheral side wall portion of the drum opening into each of the compartments to enable material to be placed within and maintained separate in each of the compartments, each of the end wall portions of the drum having an aperture therein disposed in alignment with the longitudinal axis of rotation of the drum for enabling material to be discharged from the respective compartment through the adjacent end wall portion,



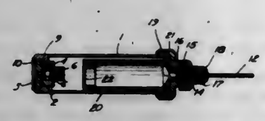
mixing and conveying means disposed within the confines of each of the compartments of the drum for effectively mixing and conveying material from the access means through the confines of each of the compartments of the drum toward the respective aperture in the end wall portions thereof, means for rotating said drum in a direction about the longitudinal axis to pass material within each of the compartments toward the adjacent end wall portion of the drum and in an opposed direction to urge material to pass toward the partition within the drum, means carried by each of the end wall portions of the drum within the confines of the respective compartment and adjacent the aperture in the end wall portion for passing material from within the confines of the respective compartment of the drum to the aperture in the adjacent end wall portion, and discharge means pivotally mounted to each of the end wall portions of the drum for movement between operative and inoperative positions for effectively opening and closing the aperture in the respective end wall portion of the drum, said discharge means projecting through the respective aperture in the end wall portion for enabling material to pass from within the confines of the adjacent compartment in the drum through the aperture in the respective end wall portion when the discharge means is in the operative open position.

3,124,275
LIQUID DISPENSING CONTAINER
Robert A. Lake, 1311 Wildwood Lane, Northbrook, Ill.
Filed Apr. 9, 1962, Ser. No. 186,149
4 Claims. (Cl. 222—182)



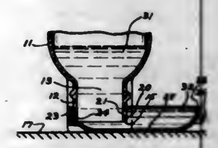
3. A device for containing and dispensing liquids comprising in combination, a liquid container having an outlet, a bellows-type pump mounted over said outlet and having collapsible bellows formed with corrugated walls surrounding said outlet, a substantially cylindrical rigid cap open at one end and formed with internal projections adapted to connectively engage the said corrugated walls of said bellows whereby said cap may protectively enclose said pump and the open end thereof may be forced against the walls of the container to maintain the said bellows extended.

3,124,276
PRESSURIZED DISPENSER HAVING DISPOSABLE CARTRIDGE
Kenneth M. Grout, 25 Forest Road, Wakefield, Mass.
Filed June 5, 1961, Ser. No. 115,023
2 Claims. (Cl. 222—183)



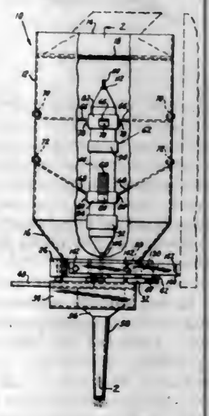
1. Apparatus for dispensing a viscid material, such as an epoxy resin, the dispensing apparatus comprising:
a hollow housing adapted to be internally pressurized;
a nozzle body having in it a dispensing valve;
a cartridge for containing the material to be dispensed, the cartridge being impermeable to the contained material and having a flanged end terminated in a neck having a central port permitting efflux of the material in the cartridge;
the housing and nozzle body having cooperating means removably securing the dispensing valve to the housing with the flange of the cartridge clamped between the housing and the nozzle body form a pressure tight seal and the major portion of the cartridge being within the housing;
the neck of the cartridge fitting closely adjacent to the nozzle body whereby material issues from the cartridge directly into the dispensing valve;
a check valve secured to the housing, the check valve when unseated permitting the interior of the housing to be pressured;
and the other end of the cartridge being permeable to the pressurized medium in the housing.

3,124,277
RODENTICIDE DISPENSER
Edward C. Helland, 7138 Oakland Ave., Minneapolis, Minn.
Filed Jan. 2, 1962, Ser. No. 163,401
5 Claims. (Cl. 222—185)



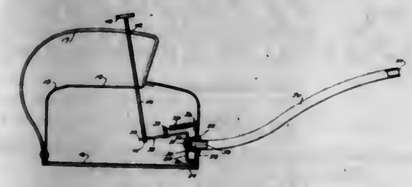
5. A rodenticide dispenser comprising a substantially upright receptacle, a substantially tubular neck integral with said receptacle, said neck having a terminal edge surface and being provided with an annular groove adjacent said terminal edge surface, said neck further being provided with an orifice positioned between said terminal edge and said said receptacle, a semicylindrical trough member having an attaching ring portion integral therewith adjacent one end thereof, said attaching ring portion having an internal rib engageable with said groove in said neck thereby to retain said trough member on said neck, the terminal edge of the neck being spaced from a bottom wall of said trough and said orifice being positioned within the space defined by said trough member with said rib positioned in said groove, said semi-cylindrical trough being no wider than said neck.

3,124,278
GRAVITY FLOW DISTRIBUTOR FOR GRANULAR MATERIAL
Rex E. Cox, P.O. Box 81, Dilley, Tex.
Filed Apr. 10, 1961, Ser. No. 101,877
9 Claims. (Cl. 222—196)



1. A gravity flow distributor for granular material comprising a hopper assembly, a spout assembly, valve means between said hopper assembly and spout assembly, an orifice in said hopper assembly in register with the spout assembly, and means in said hopper assembly for preventing adhesion of particles in said orifice, said last-mentioned means comprising an elongated vertical tubular housing, openings at opposite ends of said tubular housing, said openings being aligned with said orifice, a rod extending from the interior of said tubular housing, through the lower opening, into said orifice, said rod being suspended from a spring at its upper end, said spring being suspended from an adjustable threaded rod in the upper opening, a weight mounted on said rod within said tubular housing, and flexible diaphragm means encompassing said rod within said tubular housing.

3,124,279
WATERING CAN
Earl J. Seifert, 3135 N. 49th St., Milwaukee, Wis.
Filed July 14, 1958, Ser. No. 748,439
3 Claims. (Cl. 222—471)



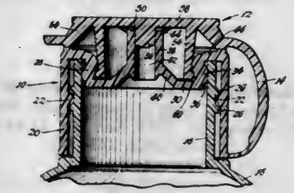
1. A watering can having a spout with a terminal aperture sufficiently small to maintain a meniscus when flow of water through such spout is arrested, said can having valve means remote from the terminal aperture for arresting flow, the means for arresting flow comprising a valve seat adjacent the wall of the can, a valve movable in directions to and from the seat, means biasing the valve for movement from the seat and means for manually moving the valve toward the seat.

3,124,280
DISPENSING CAP CONSTRUCTION
Morton B. Stull, % Stull Engraving Co., 221–223 Banta Ave., Garfield, N.J.
Filed May 1, 1961, Ser. No. 106,756
8 Claims. (Cl. 222—541)



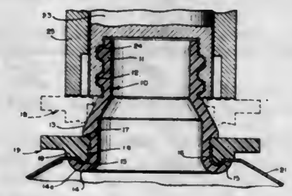
1. A dispensing cap construction comprising a cap body of resilient plastic substance, said body having means for attaching it to a container mouth; a tubular, projecting dispensing member carried by the cap body, said member having at a location spaced from the body an annular outward and radially extending dripless nozzle tip surrounding an outlet orifice, said tip comprising a pronounced outward flange effecting a substantial reinforcement of the walls of the member at said orifice, said member further including an integral combined sealing and stopper portion comprising a deeply grooved plug which closes over the said orifice and said member having thin and intentionally frangible walls at the juncture of the plug and orifice whereby a forcible bending of the plug effects fracture of said walls and severance of the plug, thereby to expose the orifice, said plug including at its end a stopper portion which is adapted to be press-fitted in the orifice to close the same, the reinforcement effected by the said flange of the dripless tip imparting a stability to the dispensing member at the orifice and the portions of the plug between the grooves stiffening the same while avoiding excessive wall thickness, whereby the breaking-off of the plug is facilitated.

3,124,281
CLOSURE CAP CONSTRUCTION
Morton B. Stull, % Stull Engraving Co., 221–223 Banta Ave., Garfield, N.J.
Filed June 8, 1961, Ser. No. 115,720
11 Claims. (Cl. 222—542)



1. In combination, a container neck having annular inner and outer surfaces and a plastic closure cap construction carried by the container neck, said cap construction being constituted of, a molded resilient plastic piece comprising a cap body portion and a cooperable stopper portion, said body portion having means engaging the exterior of and mounting it on the container neck and having an annular inner wall engaging the interior of the container neck to seal thereagainst and further having a transverse bottom wall connected to and disposed inwardly of the lower portion of the inner wall and together therewith defining an outwardly-opening recess, said bottom wall having a discharge orifice portion for dispensing the contents of a container on which the cap construction may be carried and the stopper portion having a depending resilient sealing skirt receivable in said recess and a sealing plug concurrently receivable in said orifice portion whereby a double seal is effected when the stopper portion is in place on the cap body portion, said annular inner wall having a sealing surface engaged with the container neck and disposed closely adjacent the said bottom wall for reinforcement thereby.

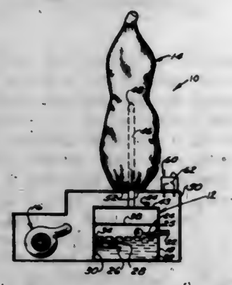
3,124,282
TWO-PIECE CLOSURE FITTING FOR PLASTIC CONTAINERS
Thomas W. Winstead, Baltimore, Md., assignor to Hedwin Corporation, New York, N.Y., a corporation of Maryland
Filed Oct. 20, 1961, Ser. No. 146,492
5 Claims. (Cl. 222—569)



3. A closure fitting means for a restricted wall opening in a resilient plastic container, comprising an annular body portion having a neck at one end and terminating at its opposite end in an enlarged base, a radially extending flange on said base, adapted to be forcibly inserted through said restricted opening from the exterior, an annular peripheral recess in said base, the diameter of the recessed portion of the periphery of said base being greater than that of said wall opening, to thereby stretch

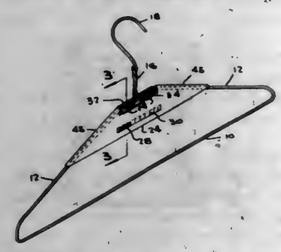
the material of the wall bounding said opening, forming an annular collar of said material which embraces said recessed portion, a radial shoulder overhanging the upper end of said recess, a resilient locking ring slidable over said neck and of an inside diameter normally less than the outside diameter of said annular recess, and means for temporarily expanding said ring to clear said shoulder, whereby upon contraction said ring snaps into sealing engagement with said annular collar in said recess, and the material of said wall embracing said flange.

3,124,283
MIST GENERATOR
James D. Robbins, 326 South, and David K. Johnston, 109 Mason St., both of Spring Lake, Mich.
Filed Sept. 27, 1960, Ser. No. 58,842
7 Claims. (Cl. 223—51)



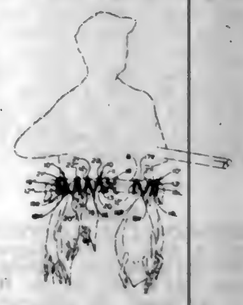
1. In a clothes steaming device, the combination of a porus garment holding form; a tank adjacent said form for holding water; water inlet means in said tank; water level control means in said tank; heating means in said tank; thermostatic control means for controlling the energization of said heating means for holding the water in said tank at a temperature slightly below boiling; said thermostatic control means being selectively responsive to selectively energize said heating means for raising the temperature of said water to above boiling to create steam; and mist outlet means from said tank including an orifice for venting said tank to the atmosphere inside of said form.

3,124,284
GARMENT WEAR RECORD
Theodore J. Collum, P.O. Box 4993, Columbus, Ohio
Filed May 3, 1963, Ser. No. 277,851
4 Claims. (Cl. 223—98)



1. For attachment to a garment hanger, a tally device for recording the number of garment uses comprising an envelope generally planiform in collapsed condition, said envelope having a profile in the general form of a truncated isosceles triangle including a base, a pair of slant sides, and a flat top section parallel to the base and joining said sides, and said envelope comprising a unitary sheet of paper in folded condition to provide two walls with outer edges coinciding and defining an opening along the line of said base and having diagonal folds at its ends providing a four-ply thickness in each of the two triangular areas and defining said slant sides, said envelope having an edge slit along and coextensive with said top section, and a slit at each end of said edge slit perpendicular thereto and defining a pair of foldable tabs, said edge slit adapted to slip over the hook of a garment hanger, said slant sides adapted to mate with the shoulder bars of the garment hanger, and either of said tabs adapted for folding to bring both tabs on one side of the central portion of the garment hanger to provide a detent against unintentional withdrawal of the envelope, said envelope having a series of foldable tabs as recording devices.

3,124,285
GAME CARRIER
Alfonso Castellanos, 1555 Shortridge Ave., San Jose, Calif.
Filed Oct. 9, 1961, Ser. No. 143,937
1 Claim. (Cl. 224—7)



A game carrier comprising a double ended single length of rigid wire having one or more U-shaped central nooses each adapted to receive the neck, leg or the like of game, said U-shaped central nooses each having upwardly diverging leg portions and the outer leg portions of the outermost nooses being bent back downwardly at abrupt upper bights adapted to engage the upper edge of a waistband belt, the terminal ends of the outer leg portions of the outermost nooses being disposed to lie in a common plane between such belt and the body of the wearer thereof, and the several U-shaped nooses and their leg portions protruding forwardly slightly beyond the plane in which said terminal ends lie whereby the load of the game on any one of said nooses tends to weigh the latter toward the belt and the said terminal ends behind the belt against the body of the wearer thereof for stabilizing said central nooses relative to the waist band belt.

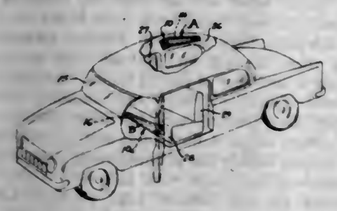
3,124,286
EXPANSIBLE BRACELET FOR KEYS
Rafe F. Dompier, Wolfcreek, Oreg.
Filed Aug. 4, 1961, Ser. No. 129,289
2 Claims. (Cl. 224—28)



1. A key holder comprising a wrist-encircling bracelet embodying an elongated stone provided at one end with

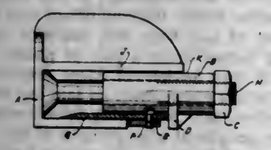
a passage opening through said one end and opening at its opposite end through a median portion of one lengthwise surface of the stone, said median portion being provided with a recess constituting a bead-receiving seat, an elongated elastic wrist-encircling element having one end permanently attached to a cooperating end of the stone opposite to the first-named end of the stone, the other end of said flexible element being free and passing slidingly through said passage from said one end toward said median portion and through the end of the passage which opens through said median portion, a chain-anchoring bead connected to the terminal of said free end portion and normally but accessibly lodged in said seat, a plurality of beads strung on that portion of the elastic element between the respective end portions of said stone, a key ring, and means connecting said key ring with said anchoring bead.

3,124,287
AUTOMOBILE POCKET
Alfred Belzer, 209—45 18th Ave., Bayside, N.Y.
Filed May 12, 1961, Ser. No. 109,780
1 Claim. (Cl. 224—29)



In an automobile having a body including a front seat section and a rear seat section, said rear seat section having a side window; said body having inner upholstery; an upholstery pocket located above said side window and comprising an elongated strip of fabric having diverging longitudinal margins and ends directed transversely of said margins, and means connecting said strip along its longitudinal margins and one end to said upholstery for forming therewith a pocket having an opening located at the other end of said strip and facing said front seat section; the width of said strip being increasingly wider from the first-mentioned end in the direction of the other end, a portion of said strip adjacent said opening being inclined downwardly with respect to the rest of said strip.

3,124,288
DEVICE FOR REMOVING SICKLE BAR SECTIONS
Ralph A. Tanner, Alfalfa County, Okla.
(Box 135, Burlington, Okla.)
Filed Feb. 7, 1963, Ser. No. 257,816
4 Claims. (Cl. 225—103)



1. A device for removing a section riveted to the upper surface of a sickle bar and extending forwardly from the sickle bar without removing the sickle bar from the machine on which it was used, comprising:

a frame of a size to be positioned above the sickle bar and the section to be removed;

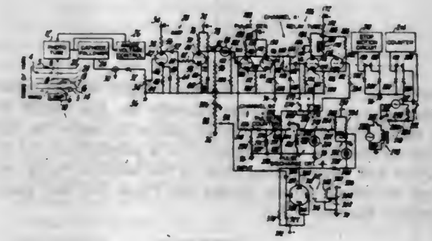
an arm rigidly supported on the frame in a position to extend rearwardly under the section to be removed into contact with the forward edge of the sickle bar;

guide means on the frame extending horizontally over the section to be removed;

a jaw slidingly supported on the guide means and having a downwardly extending flange thereon positioned to engage the trailing edge of the section to be removed; and

means for forcing the jaw forwardly on the guide means while holding said arm against the forward edge of the sickle bar for shearing the rivet securing the section to be removed to the sickle bar.

3,124,289
DETECTION SYSTEM
Vincent E. Lynch, South Huntington, and Louis Sidrer, Brooklyn, N.Y., assignors, by mesne assignments, to Instrument Systems Corporation, Westbury, N.Y., a corporation of New York
Filed Aug. 10, 1961, Ser. No. 130,675
18 Claims. (Cl. 226—1)

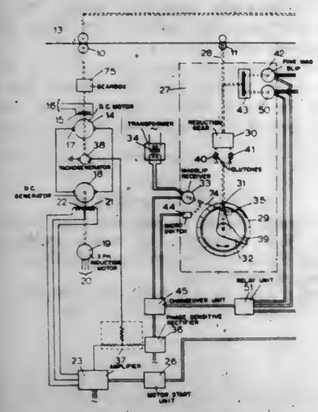


1. A detection system having a photomultiplier tube adapted to provide voltage signals when defects occur in a material driven transversely to a path of light emanating from a lamp and impinging on said tube, comprising means responsive to said voltage signals for generating corresponding signals from selected ones of said voltage signals, means responsive to said corresponding signals for generating composite signals the amplitude of which depends on the quantity of said corresponding signals produced in respective preselected periods of time, and means responsive to each of said composite signals for controlling the movement of said material.

3,124,290
MACHINES FOR AUTOMATICALLY FEEDING STRIP MATERIAL
Reginald J. Lloyd, Poole, England, assignor to Humphris & Sons Limited, Poole, Dorset, England, a British company
Filed Oct. 18, 1961, Ser. No. 145,940
Claims priority, application Great Britain Oct. 27, 1960
7 Claims. (Cl. 226—143)

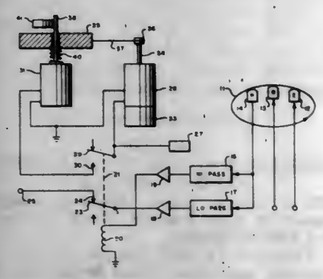
1. In or for an apparatus for feeding strip material to a fabricating machine, said apparatus comprising reversible feed means for feeding the material, and measuring means for measuring the material fed by the feed means, the provision of length setting means driven by the measuring means and settable by the operator to a selected value, the length setting means including a fine length setting means having a predetermined measuring range and a coarse length setting means having a measuring range greater than that of the fine length setting means, control means for controlling the starting, stopping and reversing of said feed means, connecting means for operatively alternately connecting the coarse length setting means and the fine length setting means to the control

means, said connecting means including switch means operable by the coarse length setting means to disconnect the said coarse length setting means from the control means and to connect the fine length setting means to the control means when said feed means has fed the strip material to within a predetermined distance from the end of the value preset on the length setting means, said dis-



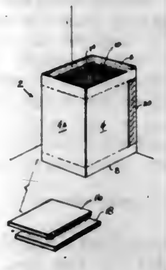
tance being a fraction of the fine length setting means measuring range, and means whereby the fine length setting means operates the control means to cause the feed means to feed the strip material in a selected one of the forward and reverse directions to the selected value preset on the length setting means and cause the feed means to stop at the said value.

3,124,291
TWO-SPEED TAPE RECORDER TRANSPORT MECHANISM
Emanuel E. Beer, White Plains, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Filed July 3, 1962, Ser. No. 208,669
3 Claims. (Cl. 226—178)



1. A multiple speed tape transport comprising,
a low speed motor,
a flywheel,
means for drivingly connecting said flywheel to said low speed motor,
a high speed motor,
a capstan driven directly by said high speed motor,
and a one-way clutch for drivingly connecting said flywheel to said capstan to rotate said capstan in the same direction as said high speed motor whereby said flywheel supplies driving torque to said capstan only when the rotational speed of said capstan due to the high speed motor is less than the rotational speed of the flywheel.

3,124,292
BOX STRUCTURE
Douglass Miller Stegner, Baltimore, Md., assignor to Baltimore Box Company, Baltimore, Md., a corporation of Virginia
Filed Mar. 20, 1962, Ser. No. 181,518
7 Claims. (Cl. 229—14)



1. A shipping carton casing having side and end walls, said side walls being formed from a blank having at least an outer facing layer and an inner fill layer of plastic foam bonded to said facing layer, said blank also having integral marginal flaps unitarily formed therewith and projecting from the top and bottom ends thereof, said flaps having a thickness of only a minor fractional part of the thickness of said side walls and extending contiguous to the outer face thereof, said fill layer having exposed top and bottom edges defining top and bottom inner peripheral shelves within the confines of said flaps adjacent the junctions of said flaps with said side walls, said fill layer having top and bottom edge portions which are thicker than the central portion thereof, said end walls being formed from a pair of planar panels freely supported at their peripheral edges respectively directly and in contacting engagement on said top and bottom peripheral shelves, said flaps being folded-over and secured to the outer peripheral edge portions of the outer faces of said blanks, said flaps extending beyond the top and bottom ends of said blanks by a distance substantially greater than the thickness of said panels and only a minor fractional part of the dimension of said carton in the directions which said flaps respectively extend as folded over, whereby the major portion of said outer faces of each of said panels is exposed.

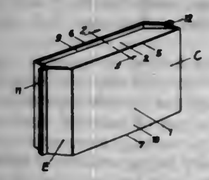
2. A shipping carton casing having side and end walls, said side walls being formed from a blank having at least an outer facing layer and an inner ruffled layer fixed to said outer facing layer to provide corrugations, the longitudinal edge portions of said ruffled layer being mashed against said outer layer to provide integral marginal flaps projecting from the top and bottom ends of said blank, said flaps having a thickness of only a minor fractional part of the thickness of said side walls and extending contiguous to the outer face thereof, said inner ruffled layer having exposed top and bottom edges adjacent the mashed portions thereof and defining top and bottom inner peripheral shelves within the confines of said flaps adjacent the junctions of said flaps with said side walls, said end walls being formed from a pair of planar panels freely supported at their peripheral edges respectively directly and in contacting engagement on said top and bottom peripheral shelves, said flaps being folded-over and secured to the outer peripheral edge portions of the outer faces of said blanks, said flaps extending beyond the top and bottom ends of said blanks by a distance substantially greater than the thickness of said panels and only a minor fractional part of the dimension of said carton in the directions which said flaps respectively extend as folded over, whereby the major portion of said outer faces of each of said panels is exposed.

3,124,293
MERCHANDISING CONTAINER
Felix Transport, New York, N.Y., assignor to Donrico Inc., New York, N.Y., a corporation of New York
Filed Nov. 9, 1962, Ser. No. 236,626
14 Claims. (Cl. 229—16)



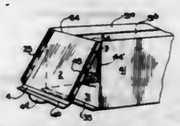
1. A merchandising container comprising upper and lower portions hingedly interconnected with one another, said upper portion comprising a top wall, a first pair of upper side walls formed integral with and extending from opposite side edges of said top wall, each of said upper side walls having flaps formed integral therewith and extending from opposite free ends of the associated side walls, said upper portion including an upper interior wall disposed in spaced relationship to said top wall, a second pair of upper side walls formed integral with and extending from opposite side edges of said upper interior wall, each of the upper side walls of said second pair of upper side walls having an integral extension hingedly connected to the outer edges thereof, each of said extensions being positioned between a pair of said flaps and the inner surface of said top wall, said lower portion including a bottom wall, a first pair of lower side walls formed integral with and extending from opposite side edges of said bottom wall, each of said lower side walls having flaps extending from the opposite free ends thereof, one of said first pair of lower side walls being hingedly interconnected with one of said first pair of upper side walls, said lower portion also including a lower interior wall spaced from said bottom wall, said lower interior wall being hingedly interconnected with said upper interior wall, a second pair of lower side walls formed integral with and extending from opposite side edges of said lower interior wall, each of said second pair of lower side walls having an extension hingedly interconnected with the outer edge thereof, each of said last-mentioned extensions being positioned between a pair of flaps connected with said first pair of lower side walls and the inner surface of said bottom wall.

3,124,294
LIQUID-TIGHT CONTAINERS
Hans Zerlin, Dusseldorf, Germany, assignor to Jagenberg-Werke AG, Dusseldorf, Germany
Filed Oct. 13, 1961, Ser. No. 145,023
Claims priority, application Germany Oct. 20, 1960
9 Claims. (Cl. 229—17)



1. A liquid tight container comprising a polygonal hollow body having upper, lower and side walls and closed ends, at least said upper wall having an outturned free edge, one of said side walls having an outwardly projecting free edge coinciding with said outturned free edge, means securing said free edges together for providing a fin seam extending longitudinally of said body, and said upper wall having the outturned free edge being inclined throughout its length toward the interior of the body relative to the plane defined by the outer edge of the fin seam and the other edge of said upper wall.

3,124,295
PULL-OPEN CONTAINER
Don B. Kaufeld, Lexington, Ky., assignor to Folls Packaging Corporation, a corporation of Ohio
Filed Dec. 1, 1961, Ser. No. 156,388
3 Claims. (Cl. 229—43)



1. An improved pull-open structure for a sheet material container of the type including side panels forming a hollow substantially polygonal body and having an end panel shaped to fit transversely across the end of the hollow body, and said end panel having flange flaps bent normal to the plane of the end panel to lie against the side panels of the body facing outwardly thereof, the improved pull-open structure comprising the following combination:

(*a*) an auxiliary flap joining along its inner edge the outer edge of one flange flap, and a pull-tab joining the auxiliary flap along the outer edge of the latter, the auxiliary flap being folded back to overlie the flange flap to which it is attached, and the pull-tab lying flat against the outer transverse surface of the end panel;

(*b*) and an end flap joining each body panel along a transverse crease line adjacent the outer edge of a flange flap, the end flaps being bent inwardly to overlie said flange flaps and said auxiliary flap, and said body having a row of perforations located along and coextensive with the transverse crease lines which are located adjacent to the crease line along the end flap which overlies said auxiliary flap, said perforations weakening the intersections between the related side panels and the end flaps thereby permitting the container to be torn open along the sides contiguous to the auxiliary flap when the pull-tab is pulled outwardly away from said transverse surface to pull the end panel away from the side panels.

3,124,296
CONTAINER CLOSURE
Beatrice L. Haines, Hotel Vosburg, San Jacinto, Calif.
Filed Mar. 11, 1963, Ser. No. 264,283
5 Claims. (Cl. 229—43)



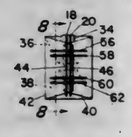
1. In combination with a container having a bottom and at least one wall defining an opening, a container closure comprising a cover having an inner and outer sur-

face, the cover being shaped to fit over the opening and including a peripheral portion in engagement with the wall of the container, an adhesive providing sealing engagement between the inner surface of the cover and the wall, first and second members joined to separate portions of the upper surface of the cover, the first member having a portion overlapping a part of the second member and the second member having a portion overlapping a part of the first member, means secured to the overlapping portion of the first and second members respectively to extend upwardly and positioned with respect to each other to enable application of a force for buckling the cover and breaking the sealing engagement between the cover and the wall of the container.

3,124,297
LINER BAG

John G. Vergobbi, Quincy, Mass., assignor to Pneumatic Scale Corporation, Limited, Quincy, Mass., a corporation of Massachusetts

Filed Jan. 30, 1961, Ser. No. 85,538
2 Claims. (Cl. 229—48)



1. A liner bag comprising a thermoplastic sheet of material folded to provide a rectangular tube open at one end and provided with a bottom closure, said bag having a side seam formed by overlapping marginal portions of the sheet material heat sealed along two relatively narrow spaced lines to fuse together the overlapping portions along said line, said seal lines extending to the bottom of the bag with the bottom end of the overlapping portions unsealed in the partially completed bag, said bottom closure comprising opposed inwardly folded end wall portions of the tube defining tapered flaps connected by intervening gusset folds and including a first folded pair of opposed flaps having their end portions in spaced relation, and a last folded pair of opposed flaps having their free ends in overlapping relation, said bottom closure having a pair of relatively narrow spaced heat seal lines coextensive with said side seam seal lines and extending across the overlapping portions of said last folded flaps to seal the open ends thereof and to fuse the flaps together and to the underlying flaps and the unsealed extended portion of the side seam occurring in the bottom closure, said bottom closure further including two pairs of relatively narrow spaced heat seal lines intersecting said last named bottom closure heat seal lines and arranged to seal the open ends of said first folded flaps and to fuse the same to the overlying flaps, the bottom closure heat seal lines along the overlapping portions of the last folded flaps and which are coextensive with the side seam seal lines at one end being arranged to terminate short of the adjacent side wall of the bag at the other end, and the intersecting heat seal lines being arranged to terminate short of the adjacent side walls at both ends of the seal lines.

3,124,298
ELASTIC FILM DISPENSER-PAK

John P. Repko, Parma, Ohio, assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Oct. 31, 1960, Ser. No. 66,159
4 Claims. (Cl. 229—66)

1. A container formed of a rectangular sheet of elastic film folded upon itself and heat sealed along two side edges to provide a two sided bag having an opening at one end, an integral lip portion provided at the open end of the bag, a pleated bottom portion formed by inwardly extending folded sections, and a tear strip ar-

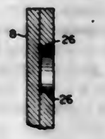


ranged in the bottom portion, said tear strip being formed of two rows of parallel extending serrations, said tear strip being further defined by a crosscut extending between the serrations at both ends of the tear strip.

3,124,299
BOXBOARD CONTAINER

Orison W. Stone, Valley Cottage, and Ernest P. Pioppo, Elmhurst, N.Y., assignors, by mesne assignments, to Riegel Paper Corporation, New York, N.Y., a corporation of Delaware

Filed Aug. 3, 1960, Ser. No. 47,229
2 Claims. (Cl. 229—81)



1. In a container of the character described and formed from a blank of a suitably stiff, foldable sheet material having a laminar structure characteristic of combined board and vat lined board, the combination of

(*a*) a front wall panel,

(*b*) a rear wall panel constituting an extension of the lower end of the front wall panel and disposed behind said front wall panel,

(*c*) a top flap of predetermined shape connected to the upper edge of the front wall panel and folded around the top of the container to lie behind the rear wall panel,

(*d*) a pair of side flaps connected to opposed side edges of the front wall panel and folded around the sides of the container to lie behind the rear wall panel,

(*e*) said side flaps being secured to said rear wall panel but having upper end portions free of said rear wall panel,

(*f*) said top flap having its opposite edge extremities received between said rear wall panel and the free upper end portions of said side flaps, whereby the upper end portions of said side flaps are in overlapping relation to the edge extremities of said top flap,

(*g*) the rearwardly facing surfaces of said edge extremities being adhesively secured to the forwardly facing surfaces of said upper end portions over a predetermined limited area of contact at each side, and

(*h*) breakaway fastening elements associated with one of the adhesively secured surfaces at each side of the container and including the said predetermined limited area of contact at each side,

(*i*) said breakaway fastening elements being separable from the respective surfaces with which they are associated to effect release of said top flap from said side flaps during opening of said container, said top flap retaining its predetermined shape after being released from said side flaps

(*j*) said breakaway fastening elements being located wholly within the peripheral confines of the edge extremities of said top flap and the free upper portions of said side flaps,

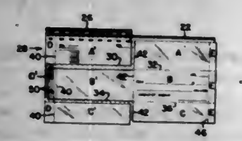
(*k*) each of said breakaway fastening elements comprises an area of a flap defined by a cut score of closed configuration,

(*l*) said cut score having a depth less than the thickness of the sheet material and extending through at least the top layer of said sheet material, thereby accommodating separation of a predetermined layer of the sheet material, circumscribed by the cut score, from the remainder of the flap.

3,124,300
NEGOTIABLE INSTRUMENT FORM

Gene Vonderscher, Cincinnati, Ohio, assignor to Checkmakers, Inc., Glendale, Ohio, a corporation of Ohio

Filed Nov. 29, 1961, Ser. No. 155,578
1 Claim. (Cl. 229—92.1)

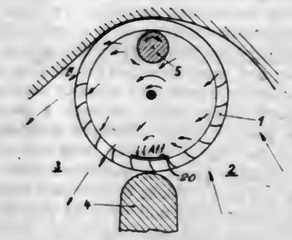


A combined negotiable instrument and envelope, comprising a sheet of paper having top, bottom and lateral edges, the sheet having on one side a first vertical line adjacent to the center thereof and dividing the sheet vertically in two main sections, the sheet further having on said one side transversely extending lines dividing the sheet into three transverse areas of substantially equal width, a second vertical line, forming a severance line, adjacent to and paralleling one lateral edge and defining tabs at adjacent ends of said areas, said transversely extending lines constituting tear lines in the portions thereof extending from the other lateral edge of the sheet to said first vertical line and constituting fold lines in the portions thereof extending from said first vertical line through said defining tabs to said one lateral edge, said first vertical line constituting a tear line from each end thereof up to its intersection with the tear line portion of the adjacent transversely extending line and constituting a fold line in the portion thereof lying between said transversely extending lines, said sheet when divided along said tear lines providing three parallel equal length panels joined at said transverse fold lines and a lateral panel of approximately the same width as and extending from the end of the central one of said three panels opposite from said one lateral edge, said lateral panel being of greater length than said three panels and having a vertical severance line there across adjacent to said other lateral edge of the sheet, thereby providing a sealing tab, one of said three panels having one face designed to receive writing, printing and similar matter, said three panels being foldable, one over another to cover material on said one face of the said one panel, said lateral panel being foldable over said three foldable panels and adapted to have the sealing tab extending therefrom folded across and under to the outer side of the tab of the middle one of said three panels, and said sealing tab having an adhesive means thereon for effecting, when so folded, its attachment to said middle panel.

3,124,301
TRANSVERSE FLOW TYPE BLOWERS

Theodor Helmbold, Hedwigstrasse 4, Munich 2, Germany

Filed Apr. 5, 1961, Ser. No. 101,014
Claims priority, application Germany Apr. 25, 1960
9 Claims. (Cl. 230—125)

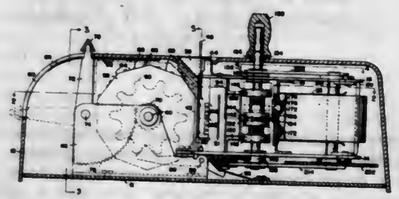


1. A transverse flow type blower comprising a rotatable bladed drum-shaped blower rotor, means including a partition providing a rotor fluid inlet and a rotor fluid outlet with said rotor being disposed between said inlet and said outlet and rotatable in a predetermined direction to convey fluid from said inlet to said outlet, said partition being disposed externally adjacent to said rotor between said inlet and said outlet, and an essentially cylindrical flow guiding body rotatably mounted within said rotor eccentrically of the rotational axis of said rotor and on the side thereof opposite from said partition for directing a portion of the fluid passing through said rotor to a predetermined region in said outlet.

3,124,302
CODED TAPE PUNCHING APPARATUS

Burney Keeton Arnett, Jr., Malden Ave., Holden, Mass., and Richard W. Pitman, 7807 Cobden Road, Cheltenham, Pa.

Filed May 16, 1962, Ser. No. 195,196
16 Claims. (Cl. 234—45)

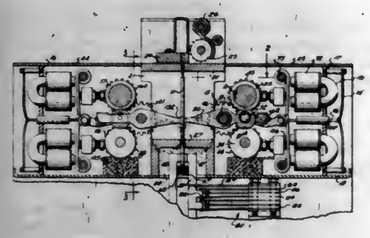


1. Apparatus for providing coded perforations in a record member at a perforating station comprising punching means at the perforating station including a movably mounted frame and a plurality of rows of punches carried by said frame, means for selecting which of said punches is activated to perforate said record member during a punching operation of the apparatus, said selecting means being located in opposed relation to said punching means and including a plurality of code members having elements arranged in a coded relationship in alignment with selected punches, and actuator means movable across said perforating station to effect perforation of the record member by contact between said elements and said selected punches, said actuator means contacting said frame to move said rows of punches progressively toward said

selecting means for sequential contact of said selected punches with said elements whereby said record member is punched progressively.

14. Apparatus for providing coded perforations in a record member at a perforating station comprising punching means at the record member perforating station including a frame extending thereacross and a plurality of rows of punches carried by said frame, means for selecting which of said punches is activated to perforate said record member during a punching operation of the apparatus, said selecting means being located in opposed relation to said punching means, and including a plurality of code members having elements arranged in a coded relationship, said frame having cam means extending across said perforating station and being mounted for rocking movement toward said selecting means, and actuator means movable across said perforating station through a power stroke from a home position to a full-stroke position to effect perforation of the record member, said actuator means having cam operating means arranged to contact said cam means during said power stroke to rock said frame toward said selecting means with said rows of punches moving progressively toward said selecting means for sequential contact of said selected punches with said elements whereby said record member is punched progressively, said actuator means being movable through a return stroke from said full-stroke position to said home position, and including means for positioning said cam operating means out of contacting relation with said cam means during said return stroke.

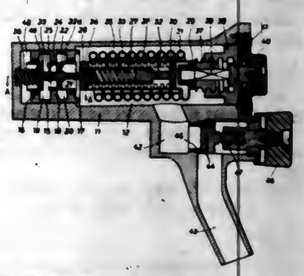
3,124,303
SELECTIVELY OPERABLE POWER TRANSMISSION DEVICE
Jacob H. Drillick, Granada Hills, Calif., assignor, by mesne assignments, to Clary Sales & Supply Corporation, San Gabriel, Calif., a corporation of California
Filed Apr. 12, 1961, Ser. No. 102,526
14 Claims. (Cl. 234—107)



1. In a selectively operable power transmission device, the combination comprising an actuating member, an eccentric roller, means rotatably mounting said roller on said actuating member, a rotatable drive roll in rolling frictional engagement with said roller, said roll being adapted to rotate said roller whereby to operate said actuating member, a brake engageable with the eccentric surface of said roller whereby to prevent rotation of said roller, and means for selectively releasing said brake from said roller.

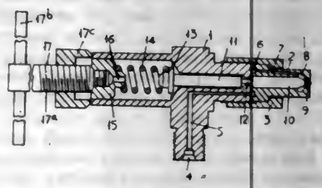
3,124,304
THERMOSTATIC MIXING VALVE
Bruno Stuhl, Buchs, Aargau, Switzerland, assignor to Aktiengesellschaft Karrer, Weber & Cie, Armaturenfabrik und Metallgiesserei, Unterkulm, Aargau, Switzerland
Filed Dec. 19, 1961, Ser. No. 160,580
1 Claim. (Cl. 236—12)

A thermostatic mixing valve for mixing hot and cold water to a predetermined mixing temperature, comprising means defining a hot water chamber; means defining a cold water chamber, said hot and cold water chambers being adjacently positioned along the axis of said thermostatic mixing valve; a partition wall separating said hot and cold water chambers; means defining a mixed water chamber; a temperature sensitive member arranged completely within said mixed water chamber; a fixed valve member carried by said partition wall; two movable mixed component valve members operatively connected to said temperature sensitive member, said movable valve members having axially separated peripheral edges oppositely located on either side of said partition wall to define a single axial wall opening; said wall opening coacting with said fixed valve member in response to the temperature of the mixed water for varying the axial extent of said single axial wall opening positioned at either side of said partition wall, thereby controlling the flow of



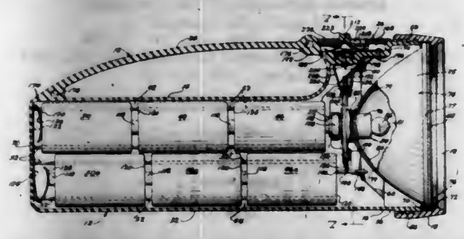
hot and cold water from said hot and cold water chambers to said mixed water chamber; the rate of discharge of water from said mixed water chamber being controlled by an outlet valve; said cold water chamber and said hot water chamber together with said two mixed component valves being arranged within a cylindrical valve body insertable as a unit into a housing of said mixing valve; said cylindrical valve body defining within said housing a counterforce chamber which communicates with said cold water chamber by a capillary orifice; said temperature responsive member producing an axial force in a first direction responsive to temperature rise; the resetting force for said thermostat being hydraulically produced in a direction opposed to said first directional axial force, one of said movable valve members having a larger piston surface on the side of the counterforce chamber than on the opposite side.

3,124,305
FUEL INJECTION NOZZLE UNITS
Fraser Mackie Evans, Ickenham, Uxbridge, England, assignor to C.A.V. Limited, London, England
Filed June 9, 1961, Ser. No. 116,163
1 Claim. (Cl. 239—533)



A fuel injection nozzle unit comprising in combination an elongated body provided with a bore extending longitudinally therethrough, a nozzle which is secured to, and extends from one end of said body, and which is provided with an internal chamber adjacent a fuel outlet orifice in the end of said nozzle remote from said body, a fuel inlet at one side of said body, the latter and said nozzle being provided with passages through which said inlet communicates with said chamber, a plunger slidably mounted in said nozzle, and extending at one end of said plunger into the bore in said body, a cylindrical abutment having an interference fit within the end portion of said bore remote from said nozzle so that said abutment is axially adjustable relative to said body, but is retainable in its adjusted positions by said interference fit, said cylindrical abutment having a coaxial and screw-threaded hole and a compression spring arranged between said abutment and said stem for urging said plunger into a position in which it closes the fuel outlet orifice in said nozzle, said plunger being movable against the action of said spring, to open said fuel outlet orifice, by the pressure of fuel admitted to said chamber from said inlet when said pressure is sufficiently high.

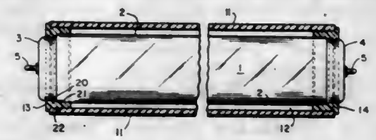
3,124,306
PORTABLE LAMP
Otto W. Schotz, 14351 Ashton Road, Detroit 23, Mich.
Filed Sept. 28, 1960, Ser. No. 58,989
18 Claims. (Cl. 240—10.63)



6. A portable hand lamp comprising a casing including a hollow elongated shank portion and an outwardly flaring integrally connecting hollow head portion, said shank portion being closed at its end opposite its head portion, said shank portion defining a pair of generally parallel wells for receiving the batteries for powering said lamp, said head portion being substantially coaxial with the axis of one of said wells and having a plurality of inwardly projecting wall portions arranged around said axis but spaced from the other of said pair of wells, a recess in each of said projecting wall portions facing inwardly of said head portion, a split spring ring mounted in said recesses and slidable therein concentric to said one well, said spring ring having an open section between its ends, one end of said ring being formed with a U loop extending generally normal to said ring in a direction away from said head for overlying and contacting the terminal end of a battery received in said other well and one of the legs of said loop extending generally normal to said ring in a direction away from said shank for forming a ring manipulating projection, the other end of said ring being formed with a lateral projection to provide a limit stop for sliding movement of said ring, said ring being movable from a position wherein said loop is in contact with the said terminal end of a battery in said other well to a position wherein said loop portion is clear of the said battery and with the latter positioned relative to the ring with its body within the open section between the ends of said ring whereby to pass the same for removing said battery from said lamp.

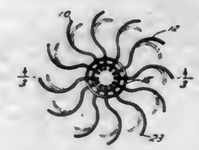
3,124,307
VAPOR LAMP UNITS
Thomas E. Hoskins, Moon Township, Allegheny County, and Frederick J. O'Reilly, Bethel Park, Pa., assignors to Tishman Research Corporation, New York, N.Y.
Filed Feb. 15, 1963, Ser. No. 258,692
3 Claims. (Cl. 240—11.4)

1. A lamp unit comprising in combination an elongated tubular fluorescent lamp having an elongated glass tube and a base member at each end, said base members having a smaller diameter than the diameter of said tube adjacent the juncture of said tube and said base members; an annular resilient support member, having an outer diameter greater than the diameter of said tube, frictionally fitted over each end of the lamp, each of said support members having a shoulder portion in frictional engagement with the associated base member and a



stepped portion of greater diameter than said shoulder portion in frictional engagement with a portion of the associated end of said tube so that the juncture between the base member and tube is reinforced; and an elongated transparent tubular shield member having a diameter greater than the diameter of said tube fitted over said tube and having its ends tightly held by the outer surface of said support members, whereby an insulating space is provided around the lamp tube.

3,124,308
ILLUMINATION DIFFUSER CONSTRUCTION
Arnold Goldstein, 3363 Trexler Blvd., Allentown, Pa.
Filed Sept. 8, 1958, Ser. No. 759,712
2 Claims. (Cl. 240—46.01)

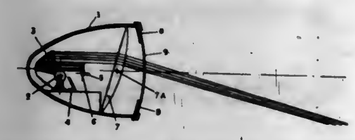


1. In a combination louver and lamp shade having an opening for the emission of light rays of fixed dimension, said louver being resiliently maintained within said opening, the improvement comprising: said louver including a centrally disposed circular support member; a plurality of radial members, each having a substantially inner straight shank portion and an outer curved portion, curved longitudinally thereof, with an outer end; said straight shank portions being connected to said circular support member; said outer curved portions being of substantially arcuate shape with the convex surfaces thereof outwardly disposed, whereby the convex surfaces of said outer ends may engage the inner surface of said lamp shade within said opening said outer ends being spaced at substantially equal intervals about the inner periphery of said lamp shade.

3,124,309
ANTI-GLARE HEADLIGHT FOR MOTOR VEHICLES
Giuseppe Cantoni and Giuseppe Cicottino, both of Via Gorizia 26, Novara, Italy, and Luigi Chiesa, Novara, Italy; said Chiesa assignor to said Cantoni
Filed Mar. 18, 1960, Ser. No. 15,983
Claims priority, application Italy Mar. 26, 1959
3 Claims. (Cl. 240—46.03)

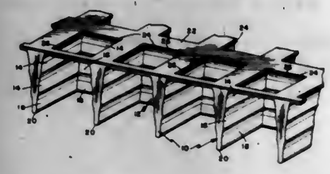
1. An anti-glare headlight for motor vehicles and the like, comprising a parabolic casing having a pointed rear and a flat front, a source of light located close to the rear and below the axis of said parabolic casing, a parabolic mirror located between said source of light and the rear of the casing for projecting light emitted by said source

toward the front of the casing, the axis of said mirror and the axis of said casing being coincident, a screen located between said source of light and the front of the casing, said screen being inclined at an acute angle to said source of light and being located below the axis of said mirror for restricting the direct projection of light from said source toward the front of the casing, another screen located between the first-mentioned screen and the front of the casing, means pivotally supporting said other screen



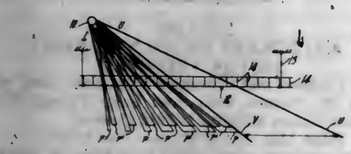
for swinging movement about an axis extending perpendicularly to the axis of said casing from a first position wherein said other screen extends wholly below said casing axis to a second position wherein said other screen extends partly below and partly above said casing axis to vary the amount of reflected light projected toward the front of the casing, and a plano-convex prism covering the front of the casing and extending at an angle to the axis thereof.

3,124,310
LIGHTING FIXTURE LOUVER
Willis L. Lipscomb, 2208 Willow, San Diego, Calif.
Filed Oct. 13, 1961, Ser. No. 144,893
4 Claims. (Cl. 240—78)



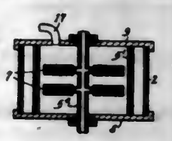
4. A louver, comprising:
a plurality of intersecting walls defining open cells therebetween;
said walls being tapered toward one face of the louver and having concave opposed sides;
said walls being hollow and light transmissive;
and the inner surfaces of said walls being reflective.

3,124,311
LIGHTING
Michael Henry Kruger, Chestnut Hill, Mass., assignor to Smithcraft Corporation, Chelsea, Mass., a corporation of Massachusetts
Filed Dec. 18, 1961, Ser. No. 160,087
12 Claims. (Cl. 240—78)



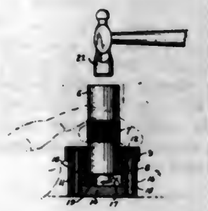
1. A room light quality control member supported below a lighting source for controlling the quality of illumination of a room area below said source, said light quality control member being comprised of a horizontal array of successive spaced-apart wall portions of dichroic polarizing material, each portion having an extent with a substantial vertical component, these wall portions being relatively aligned so that adjacent wall portions are superposed relative to light rays emitted from said light source at large angles to the vertical, and being so spaced apart and related that light rays moving downwardly at smaller angles to the vertical pass through one only of said portions, being thereby polarized to reduce glare reflected from objects in the room being illuminated, adjacent wall portions having their transmission axes disposed at substantial angles to each other, each group of three adjacent wall portions defining a cut-off angle for preventing the passage to the room area of light making large angles with the vertical, said array having a substantial horizontal extent so that rays from selected portions of said lighting source fall upon a multiplicity of said wall portions at angles to the vertical larger than said cut-off angle.

3,124,312
METHOD AND APPARATUS FOR FINE GRINDING
Antonio Baricordi, 20 Via Cantonale, Lugano, Switzerland
Filed May 26, 1960, Ser. No. 31,920
Claims priority, application Germany May 26, 1959
9 Claims. (Cl. 241—5)



1. An apparatus for finely grinding, dispersing, homogenizing, and mixing solids, liquids and gases, said apparatus comprising a hollow rotary shaft, a plurality of whirlers having hollow stems carried by said shaft and communicating with the interior thereof, said stems extending radially from said shaft and a separate member carried by each stem at the outer end of the stem, each of said members having outer surfaces consisting of a large number of open outwardly facing cells communicating with the interior of a stem, at least one cylindrical wall coaxially surrounding said shaft and having surfaces consisting of a large number of open cells substantially facing the cells of said whirlers and a housing enclosing said wall.

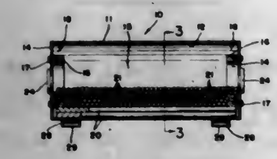
3,124,313
CRUSHING TOOL FOR MINERAL ASSAYING
Harold Kraus, 716 Northumberland Road, Teaneck, N.J.
Filed June 6, 1962, Ser. No. 200,558
1 Claim. (Cl. 241—74)



In a crushing tool for granulating specimens, a hollow cup-shaped housing including a base with an enlarged central portion constituting an anvil, a screen seated on the base and sleeved around said anvil in the housing, a removable cylindrical tubular shield member seated on the periphery of said anvil against said screen, said shield member and anvil defining an inner chamber

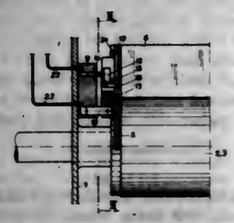
in the housing for receiving specimens to be granulated, said shield member having an annular lid member seated on the top edges of the screen and housing and having an inwardly extending flange sleeved around the top edge of the housing said screen, base, housing and annular lid member defining an outer collection chamber in the housing, an elongated cylindrical solid hardened member movable in the inner chamber and constituting a plunger, and hammer means for driving said plunger against the specimens in the inner chamber for granulating said specimens, said screen constituting a screen device and discharge outlet into the outer chamber for the granulated material when the shield member is removed, the open top of the housing constituting a discharge outlet from the outer chamber.

3,124,314
ROD-BALL MILL
Alexander Klein, 351 La Questa Drive, Danville, Calif., assignor of one-third each to Cecil H. Best, Berkeley, Calif., and Lee A. Turzillo, Akron, Ohio
Filed June 29, 1961, Ser. No. 120,660
12 Claims. (Cl. 241—172)



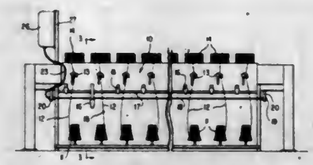
8. A drum type rotary mill having, in combination, a rotary grinding chamber comprising a longitudinal side wall generally circular in cross-section with respect to the axis of rotation of said chamber, an end wall attached to each end of said side wall and extending substantially normal to the axis of rotation to form with said wall a grinding chamber, a plurality of arcuately aligned rods within and extending substantially the length of said chamber and defining thereabove a concavity for containing ball-like comminuting members, a plurality of ball-like comminuting members supported in major part in said concavity, and means for rotating the grinding chamber.

3,124,315
FEED HOPPER FOR FINE GRINDING ROLLER MILLS
Alfred Siebert, Niederuzwil, Switzerland, assignor to Gebrueder Buehler, Uzwil, Switzerland, a firm of Switzerland
Filed Sept. 25, 1961, Ser. No. 140,274
Claims priority, application Switzerland Sept. 27, 1960
5 Claims. (Cl. 241—224)



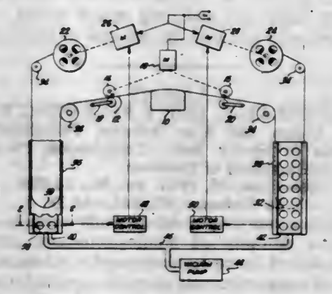
1. In a material grinding mill including a pair of parallel axially rotatable rollers, each having a circumferential peripheral grinding surface, the peripheral grinding surfaces being juxtaposed so that material fed between said juxtaposed surfaces can be ground by opposing rotations of the rollers, a hopper, for feeding the material between the juxtaposed surfaces, comprising: two longitudinal walls, one wall being juxtaposed against one roller and longitudinally extending parallelly along the axis of rotation of the one roller, the other wall being juxtaposed against the other roller and longitudinally extending parallelly along the axis of rotation of the other roller; two side plates, said side plates being spaced apart and forming with said two walls said hopper, each side plate being disposed in juxtaposed relation with the rollers; and, magnet means for holding said plates and said walls together.

3,124,316
KNOT COUNTING ATTACHMENT FOR TEXTILE WINDERS
Martin F. O'Brien, Greenville, and Rudolph V. Hall, Mauldin, S.C., assignors to Frontier Electronics, Inc., Greenville, S.C., a corporation of South Carolina
Filed Sept. 26, 1962, Ser. No. 226,210
6 Claims. (Cl. 242—35.5)



1. In a textile machine of the type employed to wind yarn from supply packages to packages of different form, a reset lever shaft, a plurality of reset levers mounted upon said shaft and adapted to be individually depressed by an operator for restarting winder units of the machine subsequent to breakage of yarn ends and manual tying of such ends, a conductor element spanning said machine lengthwise thereof beneath said levers and adapted to be engaged by any one of said levers upon depression thereof by the operator, and electrical circuit means including a digital counter connected with said conductor and grounded and energized for actuating said counter one count upon engagement of one of said levers with said conductor subsequent to the stopping of an associated winder unit of said machine.

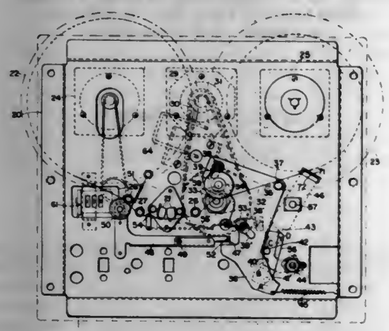
3,124,317
TAPE TRANSPORT APPARATUS
Paul R. Gilson, West Covina, Calif., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Mar. 18, 1957, Ser. No. 646,913
11 Claims. (Cl. 242—55.12)



11. In a web storing and sensing device that controls the feeding of a web, the combination of a storage chamber with an open end and a closed end, comprising a plurality of walls, means to cause the passage of a web into

and out of said chamber while maintaining a portion of said web in a free loop, portions of said web contacting opposite walls of said chamber to form an isolated sub-chamber at said closed end, evacuation means connected to said sub-chamber for maintaining a vacuum in said sub-chamber, vacuum responsive means for continously sensing differential increments in the length of said sub-chamber, and means responsive to said sensing means for controlling the feeding of said web.

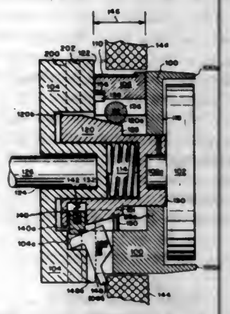
3,124,318
TAPE RECORDER TRANSPORT
Stanley Berger and Leonard Rosenblatt, Brooklyn, N.Y., assignors to Auricord Corporation, Brooklyn, N.Y.
Filed July 18, 1962, Ser. No. 210,764
8 Claims. (Cl. 242—55.12)



5. In a magnetic tape recording machine having magnetic tape spooling means, means for rotating said tape spooling means, at least one magnetic head, magnetic tape adapted to travel in intimate association with said head, a capstan arranged in the path of said tape, drive means for said capstan, and tape guiding means arranged in said path of said tape in proximity of said head; a pinch roller operatively engaging said tape and said capstan for frictionally driving said tape, a movably mounted cam having said pinch roller rotatably mounted thereon, drag means operatively engaging said tape and said tape guiding means, said drag means frictionally maintaining said tape under uniform tension, a lever having said drag means mounted thereon, spring means on both said cam and on said lever, said spring means keeping said pinch roller and said drag means in contact with said tape, a plurality of cam faces on said cam, one of said cam faces engaging said lever, and a displaceable means contacting at least one of said plurality of cam faces on said cam for moving said pinch roller and said drag means out of frictional engagement with said tape against said spring means.

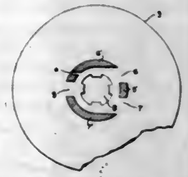
3,124,319
SELF-LOCKING, QUICK-RELEASING HUB
Neal B. Cohen and Kurt Sotman, Philadelphia, Pa., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Jan. 25, 1961, Ser. No. 84,885
16 Claims. (Cl. 242—68.3)

1. A hub comprising a substantially cylindrical housing unit, a plurality of holding elements retractably mounted around the circumference of said housing unit, a plurality of trigger elements pivotally mounted around the circumference of said housing unit, said holding elements and said trigger elements being mounted in an alternating arrangement, and actuating means mounted within said housing unit and having two stable positions, said holding elements extending from said housing unit and said trigger elements assuming a first position when said actuating means is in a first stable position, said holding elements



being retracted and said trigger elements assuming a second position when said actuating means is in a second stable position.

3,124,320
SPOOL
Aaron H. Brennesholtz, Lancaster, Mass., and Lansing V. Reynolds, Westfield, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Feb. 10, 1961, Ser. No. 88,433
1 Claim. (Cl. 242—71.8)

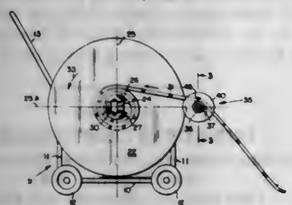


A one-piece spool for holding film comprising spaced, end flange members having an axial mounting aperture adapted to receive a coacting member and a hollow cylindrical hub extending therebetween and integrally connected therewith, said hub having first, second and third slots extending through the walls of said hub and longitudinally the length of said hub terminating at said flange members thereby separating said hub into first, second and third sections, the centerlines of said second and third slots being parallel to and equally offset from a diameter of said hub and the centerline of said first slot being a diameter of said hub and parallel to said other two centerlines, said first slot at the opposite end of its diameter centerline being opposed by a first section of said hub of circumferential length equal to that of said first slot, said second and third slots being located on either side of said first hub section, both said second and third slots along the opposite ends of their centerlines being opposed respectively to said second and third sections of said hub which are located on either side of said first slot.

3,124,321
APPARATUS FOR WINDING FIRE HOSE
Pierce A. Rylott, 700 Stove Road, Pittsford, N.Y., and Ernest Raymond Conner, Jr., 3825 Atlantic Ave., Fairport, N.Y.
Filed May 31, 1962, Ser. No. 198,890
11 Claims. (Cl. 242—86.2)

1. Apparatus for winding fire hose having interlocking coupling members at opposite ends comprising, in combination,

(*a*) means for rotating one of said coupling members about an axis extending laterally through substantially its center of gravity, said means being arranged to align the center of gravity of said one coupling member with said axis thereby being dynamically balanced upon rotation thereof, and



(*b*) means for aligning a first edge of said hose radially from said axis as the hose is being wound, thereby winding said hose spirally upon itself.

3,124,322
AIRCRAFT WITH FLUID SUSTAINING MEANS
Christopher Sydney Cockerell, East Cowes, Isle of Wight, England, assignor to Hovercraft Development Limited, London, England, a British company
Filed Oct. 18, 1960, Ser. No. 63,296
Claims priority, application Great Britain May 2, 1957
7 Claims. (Cl. 244—12)



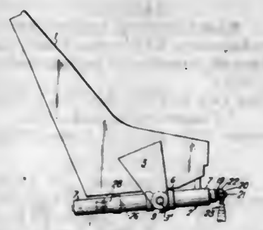
1. A wing for an aircraft provided with a first supply port in the bottom surface of the wing adjacent and substantially parallel to the leading edge and a second supply port in the bottom surface of the wing adjacent and substantially parallel to the trailing edge, means for supplying a gas to the supply ports and causing said gas to issue from the supply ports in the form of gaseous curtains which at least partially bound a space beneath the wing, said supply ports being so constructed and arranged that the gaseous curtains are discharged therefrom at substantial angles to the bottom surface of said wing, and means for forming and maintaining at least one cushion of pressurised fluid in said space during operation of the aircraft, said cushion assisting in supporting the aircraft during take-off and landing and also acting to produce aerodynamic lift on the wing when the aircraft is in motion.

3,124,323
AIRCRAFT PROPULSION AND CONTROL
John C. M. Frost, Epsom, Auckland, New Zealand, assignor to Hawker Siddeley Canada Ltd., Malton Village, Ontario, Canada, a corporation
Filed Mar. 7, 1963, Ser. No. 263,532
26 Claims. (Cl. 244—12)

1. An aircraft having a body structure; walls within the structure forming first and second gas displacement passages; the first gas displacement passage terminating in a downwardly directed propulsive nozzle having a mouth arranged to discharge at a multiplicity of positions distributed around a periphery on the underside of the aircraft and the second gas displacement passage leading off the first passage at a junction and terminating in a peripheral nozzle extending around a rear portion of the periphery of the structure; one of said walls forming the inboard boundary of said mouth and curving inboardly away therefrom in a smooth convex surface and another wall forming the outboard boundary of the mouth; variable flow-proportioning means at the junction between the passages; means within the structure to impel propulsive gas along said first passage to the junction and thence to the nozzles in the proportions determined by the position of the flow-proportioning means; gas directing means associated with the mouth of the downwardly directed nozzle; suspension means interposed between the gas directing means and the structure to movably suspend the gas directing means adjacent to the outboard boundary of said mouth; said gas directing means having a gas control surface which forms a movable extension of said outboard boundary and which is shaped to direct gas expelled from the mouth inboardly around said convex surface; first actuating means to operate the flow-proportioning means to variably apportion between the passages the flow of propulsive gas; and second actuating means to move the gas directing means to vary the position of the gas control surface relative to said mouth and thus to variably control the direction of flow of the propulsive gas expelled from the mouth.



3,124,324
EJECTION OF ONE BODY FROM ANOTHER
James Martin, Southlands Manor, Southlands Road, Denham, near Uxbridge, Middlesex, England
Filed Jan. 16, 1962, Ser. No. 166,490
Claims priority, application Great Britain Jan. 20, 1961
10 Claims. (Cl. 244—122)



1. An ejection system for ejecting an ejection seat/airman combination from an aircraft, comprising the combination of

(*a*) an ejection gun for ejecting the combination ejection seat/airman from the aircraft in a predetermined direction relatively to the aircraft;

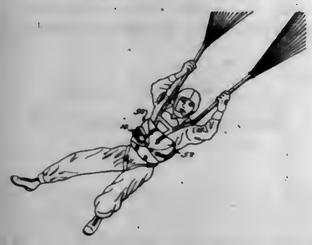
(*b*) a primary rocket motor means carried by the seat independently of the ejection gun and being arranged to produce a thrust vector extending substantially through the center of gravity of the combination ejection seat/airman and substantially aligned with said predetermined direction whereby the combination ejection seat/airman is accelerated in said direction;

(*c*) an auxiliary rocket motor means arranged to produce a thrust vector causing a variation in the flight path produced by the operation of the ejection gun and the primary rocket motor means; and

(*d*) means for firing the primary and auxiliary rocket motor means individually and independently of the

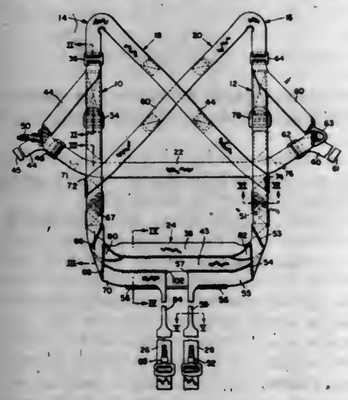
ejection gun after the combination ejection seat/airman has been ejected from the aircraft by the ejection gun.

3,124,325
RIP CORD HANDLE GUARD FOR CHEST TYPES OF PARACHUTES
Arthur A. Somlitz, Vienna, Ohio
(2115 Ewalt Ave. NE., Warren, Ohio)
Filed Jan. 25, 1963, Ser. No. 253,888
5 Claims. (Cl. 244—149)



1. As an article of manufacture, a guard to receive the rip cord handle of a chest or reserve type parachute and comprising a panel having a substantially rectangular configuration, said panel having a pair of side walls projecting, respectively, laterally therefrom adjacent a pair of opposed sides of said panel, said side walls being disposed in spaced, parallel and confronting relation relative to one another, said panel having a centrally-located substantially rectangular window formed therein extending transversely therethrough, a tongue fixedly connected to said panel and projecting laterally therefrom adjacent a marginal edge of said window, said tongue being disposed between said side walls in spaced relation relative thereto, said tongue having a pair of spaced substantially rectangular slots formed therein and extending transversely therethrough, a plate adjacent an end of said tongue, means fixedly securing said plate to said side walls.

3,124,326
PARACHUTE HARNESS
Victor G. Bockelmann, El Centro, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Oct. 8, 1962, Ser. No. 229,252
7 Claims. (Cl. 244—151)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a parachute harness for a person wherein the harness has a seat sling and leg straps; the improvement comprising:

(*a*) said sling being constructed of a pair of elongate webs, each of which is connected along a lengthwise edge to a common edge of at least one other web forming the sling;

(*b*) said pair of webs first extending toward one another from opposite ends of the sling and then extending angularly from the sling to form said leg straps, whereby bulkiness and unevenness of the sling is minimized so as to eliminate areas of pressure from being applied to the person wearing said harness.

3,124,327
CHRISTMAS LIGHT BRACKET
William Meszaros, 161 Clear Meadow Drive, East Meadow, N.Y.
Filed Sept. 14, 1962, Ser. No. 223,786
1 Claim. (Cl. 248—74)



A wire supporting bracket comprising a planar base plate, an elongated portion of said plate being partially cut out and bent into a substantially parallel but spaced-apart position with respect to said plate, at least two sides of said plate have ribs thereon protruding on the same side of said plate from which said elongated portion is spaced apart, means for securing said bracket to a structure, the bracket being adapted to releasably hold a wire between said ribs on said base plate and said elongated portion so that said wire forms two bends over said ribs.

3,124,328
ARM RESTS FOR DENTISTS OR THE LIKE
William E. Kortsch, 3204 N. Cambridge Ave., Milwaukee, Wis.
Continuation of application Ser. No. 114,935, June 5, 1961. This application July 23, 1962, Ser. No. 213,571
4 Claims. (Cl. 248—118)



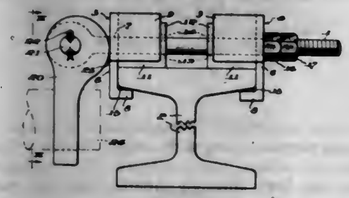
4. An arm rest adapted to be secured to the head rest device for a dentist's chair, said arm rest comprising a pair of clamping members clamping said head rest therebetween, a bracket adapted to be adjusted in a vertical plane with respect to one of said clamping members, said bracket including a member fixed to said one clamping member and a second member pivoted with respect thereto in such plane, means for locking said bracket in a desired position, an arm pivoted on said second member including means for adjustably locking the position of said arm with respect to said second member, a second arm pivoted with respect to said first named arm, and an arm support mounted at the free end of said second arm, said support including a support stem with a saddle secured to the upper end thereof.

3,124,329
SUPPORT COLUMN FOR AN OPTICAL SIGHTING INSTRUMENT
Richard Sutton Ransom, Holywood, County Down, and Mervyn Francis Wilson, Belfast, Northern Ireland, assignors to Short Brothers & Harland Limited, Belfast, Northern Ireland
Filed Mar. 9, 1961, Ser. No. 94,499
Claims priority, application Great Britain Mar. 21, 1960
3 Claims. (Cl. 248—160)



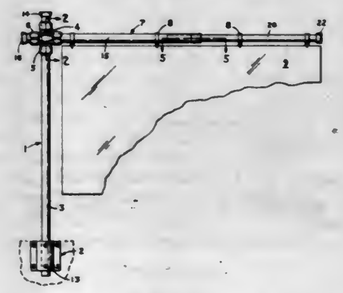
1. A support column for an optical sighting instrument, comprising a compound-section telescopic tube having at least two relatively longitudinally movable sections one of which is an upper section and the other a lower section, a rotatable base mounting for said tube, a universal joint connecting the foot of said lower section to said base mounting, means for mounting an optical sighting instrument on the said upper section of said tube whereby said instrument is capable of rotation about the longitudinal axis of the tube, radial motion in elevation, rotary motion in azimuth, and free axial adjustment in relation to the tube, and resilient means connected externally of said tube between said upper section and said rotatable base mounting for normally constraining the column towards a vertical position.

3,124,330
I-BEAM CLAMP
Frederick W. Robinson, 323 High St., Hanover, Pa.
Substituted for abandoned application Ser. No. 108,083, Aug. 2, 1949. This application July 2, 1962, Ser. No. 213,838
2 Claims. (Cl. 248—228)



1. A clamp adapted to be attached to I-beams for suspending an object therefrom, comprising a horizontal eye-bolt adapted to extend across an I-beam, a pair of jaws slidably mounted on the bolt with their inner sides notched to receive flanges of the beam, a nut screwed on the bolt and engaging one of the jaws, a clevis straddling the eye of the bolt, and a pivot pin extending through the eye and pivotally connecting the clevis to the bolt so that the clevis can be swung from an upright position down to a depending position, the pivoted end of the clevis being provided with cam surfaces for engaging and pushing the slidable jaw toward the other jaw when the clevis is swung down to its depending position, and the opposite end of the clevis forming a loop for receiving and supporting said object when the clevis is in depending position.

3,124,331
MOUNTING MEANS FOR BLUEPRINTS
Trent M. Di Renna, 6 Lenox Terrace, West Orange, N.J.
Filed Feb. 3, 1961, Ser. No. 86,944
11 Claims. (Cl. 248—279)

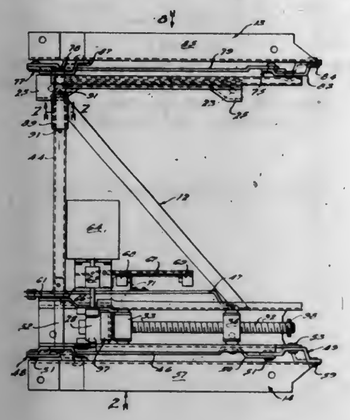


1. A mounting means for blueprints or the like comprising a base for connection to a support, an upright standard connected to said base, a support member for blueprints or the like, a joint means about said standard and comprising first and second body elements, said first and second body elements connected in transverse relation with each other, a pair of spaced opposed retaining means in said first body element, a pair of spaced opposed retaining means in said second body element, means connected to the pair of spaced opposed retaining means on said first body element to coact therewith for receiving said standard and normally frictionally holding said joint means at a desired level on said standard, and means in the pair of spaced opposed retaining means of said second body element for receiving said support member and normally frictionally holding same at a predetermined position relative said upright standard.

3,124,332
SEAT TRACK
Russell G. Heyl, Jr., Birmingham, Mich., assignor to American Metal Products Company, Detroit, Mich., a corporation of Michigan
Filed Sept. 9, 1960, Ser. No. 54,973
20 Claims. (Cl. 248—420)

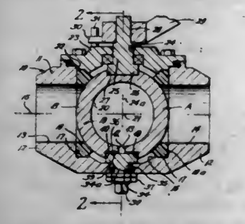
6. In a seat supporting structure, a pair of spaced supporting tracks embodying a pair of slides each having a fixed and movable portion with the fixed portion having a floor engaging portion and spaced aligned extending flanges, said flanges being disposed horizontally on the fixed portion of one slide and vertically on the fixed portion of the other slide to provide vertical and horizontal stability to the structure, said movable portion having a web portion and channel portions presenting toward each other, blocks of low friction material within the channel portions locked to the edges of the spaced aligned flanges, an upwardly facing channel element on the horizontally disposed slide, a bell crank pivoted to the front of said element, a bell crank pivoted to the rear of said element, said bell cranks having a pair of arms, drive means within said channel element comprising a lead screw and a pair of solenoid operated nuts thereon, link means connecting one of said nuts to an arm of each bell

crank for swinging the bell crank in a clockwise or counterclockwise direction depending upon the direction of rotation of the lead screw, a seat supporting element pivoted to the other arm of said bell cranks to be raised and lowered thereby, bell cranks pivoted directly to opposite ends of the vertically disposed slide of the spaced track, a torsion bar interconnecting the pivots of the for-



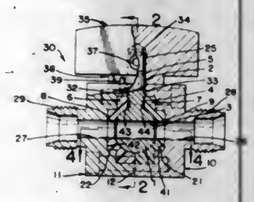
wardly pivoted bell cranks of the spaced tracks, a seat supporting element pivoted to one arm of the bell cranks on the vertically disposed slide, a link joining the other arms of said last bell cranks for moving the last seat supporting element upwardly and downwardly with the first said seat supporting element, and a diagonal brace extending from said channel-shaped element on the horizontally disposed slide to a sleeve on said torsion bar.

3,124,333
SPLIT BALL VALVES HAVING CAM SEALING INCREASING MEANS
Robert B. Sivyer, 1314 Bentel Drive, Houston, Tex.
Filed Apr. 24, 1961, Ser. No. 105,146
8 Claims. (Cl. 251—161)



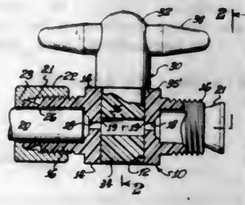
1. A ball valve comprising a valve body having a hollow interior and passageways opening to said hollow interior, an integral ball member received in said hollow interior and having a passageway therethrough for completing fluid communication between said passageways in one rotative position of said ball member in said valve body, sealing elements disposed about said passageways between said ball member and said valve body, said sealing elements being sized to cooperate with said ball member to close off the opening of the passageways to the hollow interior when said ball member is in another rotative position relative to the valve body, a stem coupled to said ball member to rotate the same, said ball member having a single split extending between said ball member passageway and the exterior of said ball member at a diametrical location from said stem, said ball member further having cam follower surfaces respectively disposed to each side of said split, a cam member in said valve body engageable by said cam follower surfaces in said other rotative position to urge the surfaces defined by said split away from one another thereby to mechanically compress said sealing elements.

3,124,334
ROTATABLE BALL VALVE STRUCTURE WITH A PARTICULAR STEM SEAL
Zoltan Szohatzky, Cleveland, Ohio, assignor to Whitey Research Tool Company, Oakland, Calif., a corporation of California
Filed Sept. 15, 1961, Ser. No. 138,413
14 Claims. (Cl. 251—214)



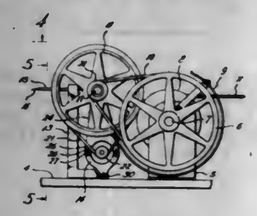
1. A valve comprising a rotatable plug having a passageway, integral stem means projecting from the periphery of said rotatable plug, circular grooves on said stem means adjacent said plug, sealing inserts under compression intimately surrounding said plug and the grooves of said stem means, passageways in said inserts communicating with the passageway of said plug, housings fixedly securing and intimately surrounding said inserts, passageways in said housings communicating with the passageways of said inserts, and channels in said housings for receiving said stem means and exposing an end thereof, whereby upon rotation of said exposed end of said stem means said plug is rotated relative to said inserts thereby opening and closing said valve.

3,124,335
GREASELESS VACUUM-TIGHT VALVE
Jimmie L. Mason, San Gabriel, Calif., assignor to Mace, a corporation of California
Filed Oct. 9, 1961, Ser. No. 143,866
4 Claims. (Cl. 251—214)



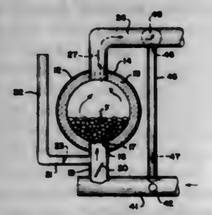
1. A valve comprising in combination a unitary valve body having therein a bore with a right circular cylindrical bore wall and at least two transverse fluid passages that open into the bore through mouths that are mutually spaced in said wall;
and a valve member that includes a right circular cylindrical stem coaxially received in the bore and movable therein between a closed position in which its cylindrical surface covers at least one of the passage mouths in fluid sealing relation and an open position exposing both the passage mouths to permit fluid flow therebetween, the opposing cylindrical faces of the stem and bore being free of lubricant;
the valve body and the stem of the valve member being formed both of the same solid polyethylene material selected from the group consisting of polymerized tetrafluoroethylene and polymerized trifluoromonochloroethylene;
the diameter of stem being larger than the diameter of the bore by an amount substantially within the range from 0.0002 to 0.0006 inclusive, the stem of the valve member being insertable in the bore and manually movable therein in complete absence of lubricant, and the opposing cylindrical faces of the stem and the bore forming a fluid tight seal in complete absence of lubricant.

3,124,336
MOTOR DRIVEN WINCH FOR ANCHOR LIFT
Charles T. Scanlin, 5008 Ward, and Paul J. Pecora, 1113 Pearson, Houston, Tex.
Filed Dec. 19, 1960, Ser. No. 76,650
1 Claim. (Cl. 254—186)



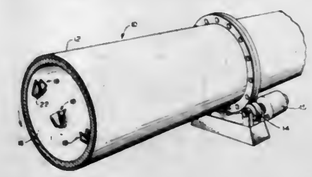
In an anchor winch, a base member, a bracket mounted on said base member, said bracket being formed of an upper and lower section, the lower section being pivotally mounted on said base member and the upper section being mounted at one end on said lower section and being vertically adjustable thereon, a motor mounted on said lower section having a drive shaft extending therefrom, a pulley on said drive shaft, a large pulley and a small pulley coaxially mounted for unitary rotation on the other end of said upper section, a drive belt for imparting rotation from said drive shaft pulley to said large and small pulley, a drum rotatably mounted on said base member, a drum pulley on said drum, a belt mounted on said small pulley and said drum pulley imparting rotation from said small pulley to said drum pulley when said bracket is pivoted to place tension on said latter belt and to discontinue said rotation when said bracket is pivoted to relieve the tension on said latter belt.

3,124,337
HOT BLAST HEATER
Leonard Fritz, Belleville, Mich., assignor to Huron Valley Steel Corporation, Belleville, Mich.
Filed May 11, 1962, Ser. No. 193,957
1 Claim. (Cl. 263—19)



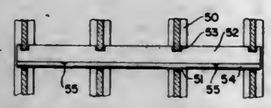
A low pressure, hot blast heater comprising
an elongated cylindrical tank having closed ends and arranged on its side with its axis horizontal;
an elongated, narrow duct extending the full length of the lowermost part of the tank wall parallel to the axis of the tank, and having a perforated top opening into the tank for substantially its full length;
a loose filling formed of small pieces of refractory material filling the lower part of the tank about one-half full and covering said duct top, the filling being semi-circular in cross-section and the space in the tank above the filling likewise being semi-circular in cross-section, but inverted relative to the filling;
an exhaust conduit opening into said space at the top of the tank;
a combustion type heater located in the tank space above the filling for providing heated combustion gases in such space for flow of same down through the filling and out through said duct;
an opening in said duct for exhausting said combustion gases from the duct;
a conduit opening into said duct for the flow of cold gas into and through the duct and then up through the filling and into the space above it and out through the exhaust conduit whereby the heated filling will heat the cold gas;
and means for alternating the operation of said heater means and the flow of hot gas down through the filling for heating it and the flow of cold gas to be heated by passing same up through the filling.

3,124,338
ROTARY KILN
Philip H. Harris, Upland, Calif., assignor to American Cement Corporation, Los Angeles, Calif., a corporation of Delaware
Filed Nov. 22, 1960, Ser. No. 71,099
4 Claims. (Cl. 263—33)



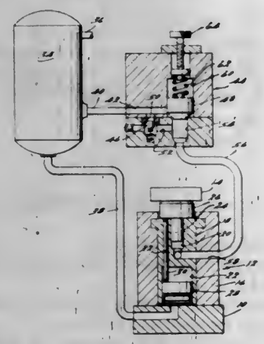
1. A rotary kiln for treating particulate matter comprising:
(*a*) an elongated hollow shell,
(*b*) means for rotating the shell about its longitudinal axis, and
(*c*) a plurality of plowing elements mounted on the interior of the shell and having:
(1) a leading edge oriented in the direction of rotation of the shell and projecting inwardly from the interior of the shell, and
(2) two turning surfaces having an outer edge adjacent the interior of the shell and an inner edge spaced inwardly from the interior of the shell, each diverging from a transverse plane passing through the leading edge,
(3) each point on the outer edge of the turning surface being located substantially closer to the transverse plane than a corresponding opposite point on the inner edge of the turning surface,
(4) the plowing elements acting upon rotation of the shell to plow particulate matter from adjacent the interior surface of the shell and to roll it over on particulate matter spaced from the interior surface of the shell.

3,124,339
HEAT TREATING TRAYS
Martin N. Ornitz, Wilkinsburg, and Edward T. Betzig, Pittsburgh, Pa., assignors to Blaw-Knox Company, Pittsburgh, Pa., a corporation of Delaware
Filed Sept. 10, 1958, Ser. No. 760,263
2 Claims. (Cl. 263—47)



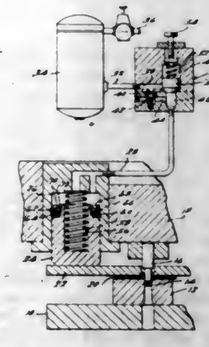
1. An annealing tray and the like comprising a plurality of substantially parallel load bearing elements, each having a plurality of slots at spaced intervals along its length, a plurality of spaced substantially parallel cross tie elements having notches spaced along their lengths, the cross tie elements being horizontally disposed at substantially right angles to the load bearing elements through the slots therein whereby the notches loosely embrace a portion of one side adjacent each slot in loose interlocking engagement, said notches engaging the same side of corresponding slots in each load bearing element and a keeper extending through the slots beside the cross tie elements on the side thereof opposite the notches and fixed thereto, whereby the load bearing elements are restrained from relative longitudinal movement to hold the cross tie notches in engagement with the load bearing element.

3,124,340
HYDRAULIC CONTROL FOR DIE PADS IN PRESSES
Floyd M. Williamson, % Di-Dro Engineering Co., 2405 E. Grand Blvd., Detroit, Mich.
Filed June 1, 1961, Ser. No. 114,264
6 Claims. (Cl. 267—1)



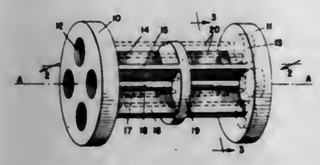
1. In a ram type press having a movable die pad engaged by the work so as to be moved to a retracted position upon closing of the press and a hydraulic cushion for said pad to resist such movement of said pad and to effect return movement of said pad upon opening of the press, said hydraulic cushion comprising a hydraulic work cylinder on said press having a piston reciprocable therein, a tank containing hydraulic fluid under relatively low pressure, a hydraulic fluid connection between said tank and said cylinder through which fluid is supplied under said tank pressure to said cylinder to move said work piston to its extended position, a check valve in said connection preventing return flow therethrough, a return line through which hydraulic fluid is returned from said cylinder to said tank, a normally closed pressure relief valve in said return line which opens to provide predetermined resistance substantially greater than tank pressure to movement of said piston to its retracted position upon closing of the press, an auxiliary hydraulic cylinder on said press of larger diameter than said hydraulic cushion cylinder, a piston reciprocable in said auxiliary cylinder, an open hydraulic fluid connection between said tank and said auxiliary cylinder whereby hydraulic fluid under tank pressure is supplied to said auxiliary cylinder and reacts on said piston therein, one of said cylinders and the piston therein reacting on said die pad so as to resist retraction thereof upon closing of the press with a resistance substantially greater than tank pressure, and a positive motion transmitting connection between said pistons, both of said cylinders and the pistons therein being arranged with respect to said die pad so that movement of both of said pistons to their extended positions under pressure of the hydraulic fluid in said tank is transmitted to said die pad to move the latter to its extended position to strip the work from the die upon opening of the press.

3,124,341
HYDRAULIC DIE PADS FOR PRESSES
Floyd M. Williamson, % Di-Dro Engineering Co., 2405 E. Grand Blvd., Detroit 11, Mich.
Filed June 30, 1961, Ser. No. 121,043
1 Claim. (Cl. 267—1)



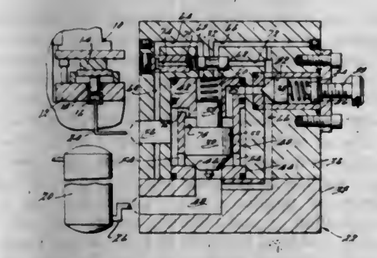
In a press having a movable die pad engaged by the work upon closing of the press and a hydraulic cushion for said die pad for resisting movement of the die pad upon closing of the press and for returning the die pad to its extended position to strip the work from the die upon opening of the press, said hydraulic cushion comprising a cylinder having a piston reciprocable therein and reacting against the die pad, a source of hydraulic fluid under relatively low pressure remote from said cylinder, a fluid connection between said fluid pressure source and said cylinder located at the end wall thereof and through which hydraulic fluid is supplied to said cylinder under the low pressure at said source, and a pressure relief valve in said connection providing a predetermined resistance to return flow of hydraulic fluid from said cylinder to said source due to movement of the die pad to its retracted position; the improvements comprising an axially extending cavity in said piston opening from one end thereof, the open end of said piston having an annular laterally and axially extending groove on its outer periphery, a seal in said groove comprising a flexible annular packing ring of U-shaped cross section with the ends of said packing ring extending toward said end wall of said cylinder, the outer leg of said packing ring lying against the cylinder side wall and having a bevel in its inner periphery whereby the fluid in said cylinder exerts a force on said bevel normal to the cylinder side wall to maintain said outer leg of said packing ring in sealing engagement against said cylinder side wall, the inner leg of said packing ring sealingly engaging said groove in said piston, an O-ring seated at the bottom and between the legs of said packing ring, an annular collar secured within said groove at the open end of said piston engaging said packing ring and said O-ring for forcing the packing ring into sealing engagement with said piston, means for retaining said collar against said seal; and a coil spring disposed within said cavity in said piston and reacting against said end wall of said cylinder and the closed end of said piston to supplement the fluid under said low pressure in returning said piston and die pad to their extended position upon opening of the press.

3,124,342
ROLL FLEXURE
Alfred N. Ormond, 11969 Riviera Road, Santa Fe Springs, Calif.
Filed Oct. 6, 1961, Ser. No. 143,353
4 Claims. (Cl. 267—1)



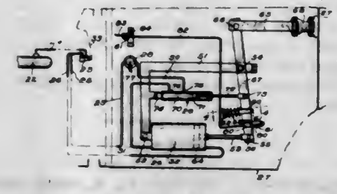
1. A roll flexure comprising, in combination: first and second end plates in parallel relationship to each other and spaced along a roll axis normal to said plates; a flexure structure extending axially between and secured to opposing surfaces of said plates, said flexure structure including a plurality of flexure webs radially extending from said roll axis and successively spaced at equal angles from each other; a plurality of columns extending in parallel relationship between and secured to said opposing surfaces of said plates adjacent to said webs; and a central plate disposed midway between said end plates and secured to mid portions of said webs and columns.

3,124,343
HYDRAULIC CUSHION FOR DIE PADS IN PRESSES
Floyd M. Williamson, % Di-Dro Engineering Co., 2405 E. Grand Blvd., Detroit 11, Mich.
Filed Oct. 8, 1962, Ser. No. 229,138
11 Claims. (Cl. 267—1)



1. In a ram type press wherein a die pad engages the work and is retracted upon the closing of the press ram, a hydraulic cylinder and piston reacting on said die pad to resist such movement and to return the die pad to its extended position after opening of the press ram, a tank of hydraulic fluid under relatively low pressure, hydraulic fluid flow and pressure transmitting connections between said tank and cylinder for supplying hydraulic fluid under tank pressure to the cylinder when the tank pressure exceeds that of the cylinder, and normally closed valve means disposed in said hydraulic connections so as to provide a high pressure resistance to the discharge of hydraulic fluid from said cylinder during closing of the press ram, said valve means comprising a normally closed combined check and pressure relief valve having hydraulic pressure responsive surfaces exposed to the hydraulic fluid in said connections, said hydraulic connections including a fluid port forming a seat on which said valve seats in its closed position, a spring biasing said valve toward its seat, said valve being constructed so as to open by movement in one direction only when the effective pressure acting on the valve surface exposed to fluid pressure on the tank side of the valve exceeds the effective pressure on the opposite side of the valve exposed to fluid pressure on the cylinder side of the valve and means operable in response to an increase in the pressure on the hydraulic cylinder side of said valve substantially above tank pressure for suddenly reducing the pressure on at least one of said valve surfaces exposed to the pressure on the cylinder side of said valve so that resultant pressure on said valve surfaces will cause said valve to open and permit the flow of hydraulic fluid from the hydraulic cylinder side of the valve through said connections and valve toward said tank.

3,124,344
AUTOMATIC DOOR OPERATING DEVICE
Takeo Mano, Kawasaki City, Japan, assignor to Kayaba Industry Co., Ltd., Minato-ku, Tokyo, Japan
Filed Dec. 5, 1960, Ser. No. 73,644
9 Claims. (Cl. 268—3)

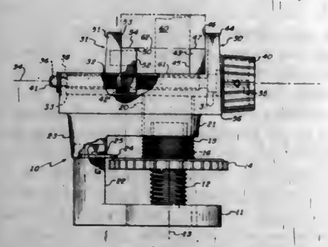


1. In a means for operating the door of a motor vehicle comprising a door, a frame therefor, a fluid pressure motor having a cylinder mounted on said door, said cylinder having a reciprocating piston and piston rod therein, means for connecting one side of said piston to a source of fluid at subatmospheric pressure and admitting fluid at atmospheric pressure at the other side of the piston, a lever system connected to the piston rod and to said door frame, a controlling valve means for controlling at least one of the fluids admitted to said fluid motor, said lever system comprising a pair of superposed levers consisting of a first lever pivoted at one end on said door and being connected at the other end to said piston rod, and a second lever pivoted intermediate its ends on the pivot means for said first lever and having a link connected at one end to one end thereof, said link being connected at its other end to said door frame.

3,124,345
ADJUSTABLE WAVEGUIDE SUPPORT TEST STAND
Paul C. Ely, Jr., and Robert J. McCaw, Clearwater, Fla., assignors to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Mar. 16, 1962, Ser. No. 180,178
6 Claims. (Cl. 269—60)

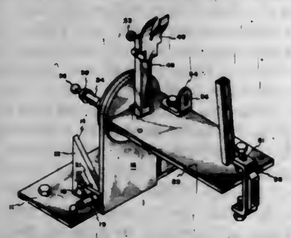
1. An adjustable support test stand for waveguides having broad and narrow walls comprising,

(*a*) a stationary base member,
(*b*) a support element adjustably mounted on said base member for positioning in a direction along a first axis,
(*c*) adjustable means for positioning said support element in the direction of said first axis,
(*d*) means mounted on said base member and cooperative with said support element for preventing rotation of said support element relative to said base member,
(*e*) first and second cooperative clamping jaws,
(*f*) said support element including said first clamping jaw integral therewith,



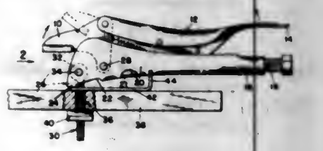
(*g*) said second clamping jaw being adjustably mounted on said support element and arranged for positioning with respect to said first jaw along a second axis perpendicular to said first axis,
(*h*) each of said jaws having first and second face portions,
(*i*) said first and second face portions being cooperative respectively with respect to each other,
(*j*) each of said first face portions protrude a predetermined distance from said second face portions respectively in the direction of said second axis and towards each other thereby forming cooperative stepped jaw faces,
(*k*) and means for adjusting said jaws relative to each other.

3,124,346
ENGINE CLAMP
Dallas J. Foster, 805 9th Ave. N., Buhl, Idaho
Filed Jan. 2, 1962, Ser. No. 163,713
5 Claims. (Cl. 269—70)



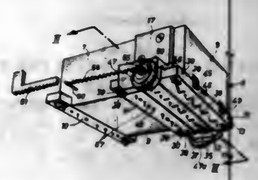
1. A device for fixedly mounting articles such as small engines in any of a plurality of positions to enable work thereon comprising a base, an upwardly extending support plate, means hingedly connecting said support plate to said base for angular movement with respect thereto, said means comprising a pair of spaced apart hinge plates extending upwardly from said base, a pair of spaced apart hinge straps adjacent the bottom of said support plate and means pivotally joining said hinge straps to said spaced apart hinge plates; stop means cooperative between said base and said support plate limiting angular movement of the latter said stop means comprising angled surface portions formed adjacent the upper ends of said spaced apart hinge plates, said surface portions being adapted to engage said support plate upon angular movement thereof toward said hinge plates, an article clamp including a clamp plate having clamp members adapted to secure articles to at least one face thereof, means rotatably mounting said clamp plate to said support plate to extend therefrom in cantilever fashion whereby said clamp plate is rotatable about its axis, and lock means co-operative between said clamp plate and said support plate to lock said clamp plate against rotation.

3,124,347
QUICK-ACTING VICE GRIPS
Arthur K. Haddad, 14 Oxford St., Worcester, Mass.
Filed Apr. 3, 1961, Ser. No. 100,403
9 Claims. (Cl. 269—91)



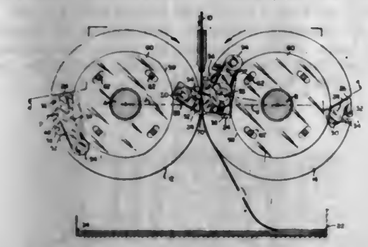
1. A hold-down device of the class described comprising a first handle member, a jaw pivoted thereto, a second handle member pivoted to said jaw, said first handle member including two spaced plates, means connecting the plates along certain edges thereof, an aperture formed in said connecting means, a fastener projecting through said aperture, a pivot for said fastener connecting said plates together, and means for securing said fastener and the first handle member to a support.

3,124,348
COMBINED CONVEYER AND FABRIC FOLDING DEVICE
Conrad Arbter and Günter Maisch, Saal (Saale), Germany, assignors to G. M. Pfaff A.G., Kaiserslautern, Pfalz, Germany, a corporation of Germany
Filed Sept. 7, 1962, Ser. No. 221,963
Claims priority, application Germany Sept. 9, 1961
9 Claims. (Cl. 270—61)



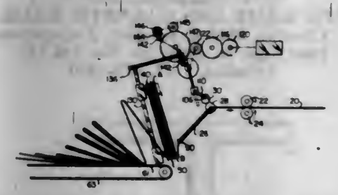
1. The combination with a conveyer for transporting fabric pieces, of a combined fabric conveying and edge folding device comprising a fabric pickup and transporting head having a substantially plane surface, a folding flap rotatably mounted upon said head, said flap being normally substantially flush with and having an edge adjoining the edge of said surface, spring-urged fabric retaining means upon said head projectable from and retractible below said surface, to penetrate and pick up a fabric piece in the projected position and to release the same in the retracted position of said retaining means, first actuating means upon said head to rotate said flap towards and into engagement with said surface, to fold the edge of said fabric piece, second stationary actuating means positioned in the path of said head for cooperation with said first actuating means, to operate said flap to folding position by said head while en route along said conveyer, said flap being recessed to receive said retaining means in the folded position, whereby to cause said retaining means to seize and to hold the folded portion against the unfolded portion of said fabric, and means to return said flap to its initial position upon completion of a folding operation.

3,124,349
CAMMED TUCKER-BLADE FOLDER
Harold W. Huffman, Hamilton, Ohio, assignor to The Hamilton Tool Company, Hamilton, Ohio, a corporation of Ohio
Filed Mar. 15, 1962, Ser. No. 179,844
10 Claims. (Cl. 270—73)



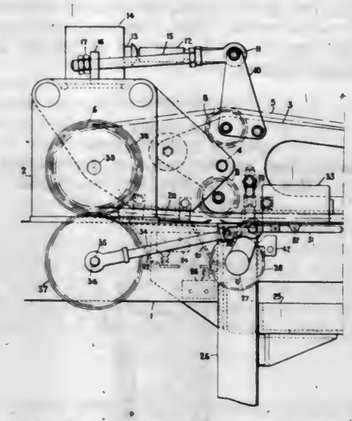
1. In a cammed, tucker-blade folder, the combination of a pair of carrier cylinders rotatably mounted adjacent to one another, a tucker blade movably secured to and carried by one of said cylinders with the tip of the blade projecting from the periphery of said one cylinder, a pair of web-receptive folder-jaws secured to and carried by the other cylinder with the throat of said jaws located inwardly of the periphery of said cylinder, means rotating said cylinders in timed relationship for sequentially presenting the tip of the tucker blade to, inserting it between, and retracting it from said jaws, operating means operatively connected to at least one of said jaws adapted to close said jaws on the tip of the blade and a portion of said web after insertion therebetween, and means for moving the tucker blade relative to said one carrier cylinder for maintaining the tip of the blade in phase with the folder-jaws while engaged by said jaws.

3,124,350
SCREW FOLDER FOR CONTINUOUS FORMS
Harold W. Huffman, Hamilton, Ohio, assignor to The Hamilton Tool Company, Hamilton, Ohio, a corporation of Ohio
Filed Mar. 15, 1962, Ser. No. 179,907
20 Claims. (Cl. 270—79)



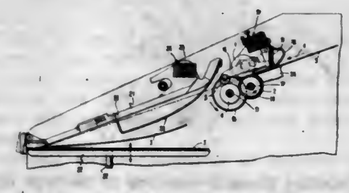
1. The combination with rotatable fold-conveying screws of a zig-zag screw folder including an oscillatable chute intermediate the screws for producing alternate opposed loops transversely of a continuous web passing therethrough, and means for rotatably supporting the screws; of a tucker blade for each of said conveying screws, and means supporting each blade and operative to advance the blade in a plane substantially parallel with a side of a fold and interiorly of a loop, engage the loop and provide a positive fold in the outer ends thereof, and advance the folded outer end of the loop onto the leading edge of a fold-conveying screw.

3,124,351
DEVICE FOR FEEDING WORK PIECES FOR PROCESSING
Alfredo Ruben Scarrone, Santiago de Anca 1614, Montevideo, Uruguay
Filed Nov. 29, 1960, Ser. No. 72,477
Claims priority, application Great Britain Sept. 13, 1960
3 Claims. (Cl. 271—34)



1. A device for feeding work pieces from a pile for processing comprising a fixed frame, a jib pivoted to the frame, jib-raising means coupled to the jib for positively raising the jib between a de-actuated lowered position engaging the pile and an actuated raised position clear of the pile, at least one belt support carried by the frame, at least one belt support carried by the jib, a circulatory belt system circulating around said supports so that only that portion of the belt system supported by the jib is movable bodily with the jib, the other portion of the belt system not being bodily movable, means carried by the belt system for entraining each work piece successively, means adjacent said other portion of the belt system to be operated by each work piece for causing the jib-raising means to be successively actuated and then de-actuated, means for disengaging each work piece from the belt system located at the end of the belt system adjacent the frame, and a vertically movable table supporting the pile of work pieces located below the jib.

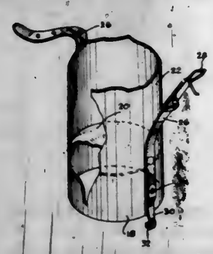
3,124,352
DOCUMENT HANDLING APPARATUS
James A. Weidenhammer, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 14, 1961, Ser. No. 117,128
7 Claims. (Cl. 271—71)



1. In a document handling apparatus wherein documents are advanced serially along a defined path, the combination of document driving means, a displaceable member forming part of said driving means and extending into the path of the documents and physically displaced by a document whenever any part of the document

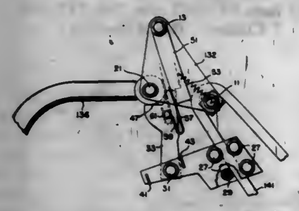
is at a certain point along said path, decelerating means disposed less than one document length downpath of said point and operable to decelerate the documents to a speed substantially lower than that at which they pass by the displaceable member, means providing a positive mechanical connection between the displaceable member and decelerating means and responsive to displacement of said displaceable member to render the decelerating means ineffective, and means including the connection-providing means for rendering said decelerating means effective as soon as the trailing edge of the document passes said point and thus passes by and out of contact with said displaceable member.

3,124,353
NECK DEVELOPER
John Sharkey, 221 Hancock Ave., Jersey City, N.J.
Filed Mar. 30, 1961, Ser. No. 99,533
4 Claims. (Cl. 272—80)



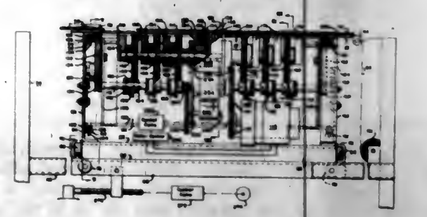
1. A neck exerciser comprising a helmet having a head piece with ear pieces depending therefrom, a flexible cylindrical sheaf having said head piece disposed in one end thereof, said cylindrical sheath forming a compartment to receive sand in its other end that is foldable to close said sand receiving compartment, sand disposed in said sand receiving compartment, said sand receiving compartment with the sand substantially conforming in shape with said head piece when folded, and strap means disposed across said sheaf and having ends releasably engaging said ear pieces for holding said sheaf immovable on said helmet and the sand receiving compartment folded when closed.

3,124,354
SHADOW BALL ATTACHMENT FOR AUTOMATIC PINSETTERS
David George Asmuth, Walker Road and Shoreacres Drive, Hilton, N.Y.
Filed Aug. 3, 1961, Ser. No. 129,039
7 Claims. (Cl. 273—43)



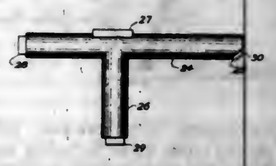
1. A bowling pinsetter machine of the type having a pit cushion movable between a lower position wherein impact of a ball against the pit cushion will trigger the machine to initiate a pinsetting cycle and an elevated position wherein impact of a ball against the pit cushion will be ineffective to initiate a pinsetting cycle, a stationary frame member, and a plate pivoted to said frame member to swing upwardly and downwardly to raise and lower the pit cushion, characterized by a bracket stationary mounted on said frame member, and a support pivotally mounted on said bracket for swinging movement between an inoperative position and an operative position effective to hold said pivoted plate at a sufficiently elevated position to keep said pit cushion sufficiently elevated so that impact of a bowling ball will not initiate a pinsetting cycle, to permit the rolling of a shadow ball.

3,124,355
AUTOMATIC SCORING, TOTALIZING AND PRINTING APPARATUS FOR BOWLING GAME
Everett K. Mentzer, Struthers, and Robert H. Boucherle, Avon Lake, Ohio, assignors, by mesne assignments, to The Cleveland Trust Co., a banking institution, trustee
Filed Feb. 9, 1962, Ser. No. 175,865
2 Claims. (Cl. 273—54)



1. In combination with apparatus for automatically registering and totalizing the score for a bowling game, the improvement comprising substantially flat and transparent plate means, a score sheet divided into frame score spaces, said score sheet being formed of material which will permit light to pass therethrough and supported in close abutting relationship with said transparent plate means such that substantially the entire sheet is visible during the progress of a bowling game and the score sheet can be illuminated by light passing through the transparent plate means, means for registering the number of pins knocked down after each ball is rolled in a game, means responsive to said registering means for tabuling the accumulated score for each frame in a normal ten frame game, and means located adjacent said score sheet on the side thereof opposite the transparent plate and responsive to said tabulating means for printing the accumulated score in successive score spaces on the score sheet.

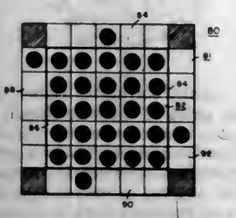
3,124,356
MAGNETIC GAME AND MAGNETIC GAME PIECE
John W. Chordas, 2812 S. Schenley, Youngstown, Ohio
Filed Sept. 26, 1961, Ser. No. 140,773
3 Claims. (Cl. 273—93)



1. A game of skill comprising in combination a ferrous metal game board and a game piece comprising a rod-like member having a right angular rod-like extension inwardly from its ends, a permanent magnet affixed to each of the end faces of said rod-like member and to the end face of said rod-like extension and to the opposite side of said rod-like member with respect to said right angular extension, said game board carrying a representation of a game to be played and said game piece arranged to be

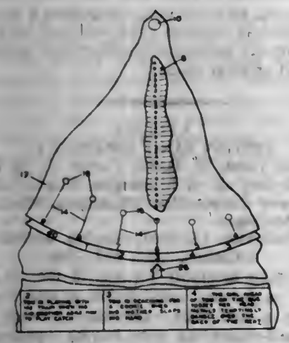
positioned by chance on said game board in a plurality of alternate positions.

3,124,357
MATRIX GAME
Glenn W. Preston, Oreland, Pa., assignor to General Atronics Corporation, Bala-Cynwyd, Pa., a corporation of Pennsylvania
Original application July 1, 1957, Ser. No. 669,293, now Patent No. 2,953,379, dated Sept. 20, 1960. Divided and this application June 2, 1960, Ser. No. 37,018
4 Claims. (Cl. 273—130)



1. A game apparatus comprising a substantially flat surface, a playing field outlined on a portion of said surface by means of mutually intersecting heavy lines, said field being subdivided into regions arranged in intersecting rows and columns by means of light dividing lines, said light lines extending beyond said heavy lines to define on said surface outside said playing field regions forming extensions of said intersecting rows and columns of regions and a corner region adjacent each intersection of said heavy lines, all of said corner regions being marked distinctively to distinguish them from other regions on said surface, a plurality of counters equal to the number of said regions within said playing field for placement in said last named regions, any two of said counters being marked to represent different numerical values, and at least two additional counters for placement on said additional regions in visible alignment with one of said rows and one of said columns, respectively, each of said additional counters being of one-piece construction and of a size small enough to fit within any one of said additional regions.

3,124,358
PSYCHOLOGY GAME
Gail H. Woodman, Peoria, Ill.
(211 Lody Lane, Kokomo, Ind.)
Filed Oct. 14, 1957, Ser. No. 689,929
5 Claims. (Cl. 273—134)



1. In a psychology game in which participants try to select from a plurality of different responses to a given circumstance that response which has been predetermined to be most appropriate and therefore has the most advantageous game value:

(*a*) a first member having indicia thereon comprising a plurality of said game values arranged in a plurality of spaced rows, each row having first indicia means carried by said member for identifying said row with one of a plurality of circumstances;

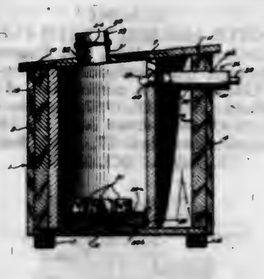
(*b*) a second member having spaced second indicia means thereon, each corresponding to one of said responses, said members being relatively movable in such manner that any one of said first indicia means may be juxtaposed to any one of said second indicia means;

(*c*) means responsive to said juxtapositioning for isolating a single value in the row of values corresponding to one of said first indicia means, said values being so arranged in said rows that the magnitude of the thus isolated value corresponds to the degree of appropriateness of the selected response;

(*d*) a plurality of indicia bearing means each displaying an individual circumstance and an indicium corresponding to one of said first indicia means; and

(*e*) a plurality of other indicia bearing means each displaying an individual response and an indicium corresponding to one of said second indicia means.

3,124,359
DICE AGITATING AND VIEWING GAME BOX
Raymond S. Bottini, 511 W. 111th St., Chicago, Ill.
Filed Aug. 3, 1960, Ser. No. 47,275
7 Claims. (Cl. 273—145)



4. A game device for the playing of bluffing type dice games, comprising, in combination;

an upright dice enclosing and concealing container having a base to support it on a surface such as a table top at least during dice viewing after dice tumbling and having sides and a top,

dice in said container,

means to manually tumble said dice,

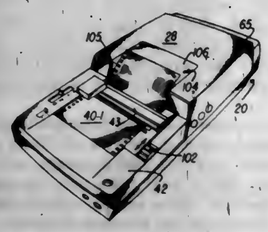
and means to permit only authorized and readily observable viewing of said dice and to advise opposing players of any such viewing,

said means including substantially opaque said sides and top and only one opening means permitting vision into said otherwise closed and opaque container,

said opening means comprising an eyepiece directed down at said dice and including a lens requiring that the user observably move to place his eye close to said eyepiece in order to see said dice to thus advise his opponents of his dice viewing,

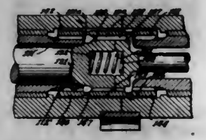
and separate means to illuminate said dice without permitting viewing thereof except through said opening means.

3,124,360
DICTATING MACHINE DRIVE MECHANISM
Marcel Jules Helene Staar, Brussels, Belgium, assignor to Usines Gustave Staar, S.A., Brussels, Belgium, a corporation of Belgium
Filed Mar. 22, 1962, Ser. No. 181,543
Claims priority, application Belgium July 14, 1961
21 Claims. (Cl. 274—4)



1. In apparatus for sound recording and playback on a relatively wide record tape, including means for advancing the tape in even increments of movement, a sound recording and playback head, and means including an arm supporting the head for transverse movement with respect to the tape so that the recording on said tape is in the form of spaced transverse traces across the tape, the combination comprising, a rotary member supported by the arm, power means carried by the arm for rotating said member, and means including an element fixed against transverse movement and engageable with said rotary member so as to produce a reaction force tending to move said arm transversely of the tape.

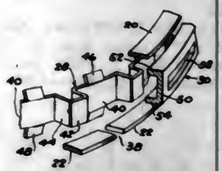
3,124,361
PUMP DRIVE ASSEMBLY WITH FLUID SEAL
Fred C. Haberland, Cleveland, and Eugene A. Moore, Bedford Heights, Ohio, assignors to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Original application Feb. 19, 1957, Ser. No. 641,198, now Patent No. 2,979,902, dated Apr. 18, 1961. Divided and this application Nov. 17, 1960, Ser. No. 73,475
3 Claims. (Cl. 277—8)



1. In a pump drive assembly, a driving shaft having a portion with an external, curviform surface, a driven shaft coaxially journalled with respect to said driving shaft, said shafts being subject to misalignment, said driven shaft having a portion with an internal, complementary surface, means urging said internal and external surfaces into engagement to maintain a fluid seal between said surfaces, and shearable means connecting said driving and driven shafts together for conjoint rotation.

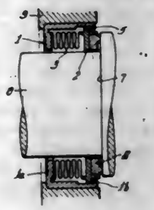
3,124,362
SELF-CLEANING PISTON RING
Lewis M. Davis, Muskegon, Mich., assignor to Sealed Power Corporation, Muskegon, Mich., a corporation of Michigan
Filed Sept. 20, 1961, Ser. No. 139,551
10 Claims. (Cl. 277—24)

1. A ring assembly for use in a ring groove of a piston comprising an annular cylinder-engaging element, an annular spacer disposed adjacent said element for positioning said element axially in the groove and an expander for engaging and urging said element radially outward, said spacer having outer and inner diameters in the operating condition thereof respectively smaller and larger than the outer and inner operating diameters of said element to permit said spacer to float radially and circumferentially relative to said element and said expander, said expander



comprising a radially corrugated ribbon of flat metal having alternating series of circumferentially extending inner and outer crowns and substantially radially extending legs joining the outer and inner crowns together, said spacer having a circumferentially extending recess in the inner periphery thereof adapted to receive said outer crowns and said legs of said expander with a clearance fit.

3,124,363
PUMP SEAL
Walter J. Cieslik, Cleveland, Ohio, assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Jan. 30, 1962, Ser. No. 169,895
5 Claims. (Cl. 277—42)

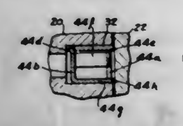


1. A seal comprising a generally tubular body member, a sealing ring adapted to ride against a rotatable member, resilient means for connecting said seal ring to said body member in fluid sealing relation thereto, said sealing ring being disposed concentrically within and spaced from said body member to define an annular space therebetween, and a resilient lock ring in said annular space in contiguous relation with said body member and said sealing ring, said lock ring comprising a wire member having a relatively uniform cross-sectional area and having a substantially polygonal configuration prior to insertion into said annular space.

3,124,364
PISTON RING ASSEMBLY
Leo C. Burns, Lewis M. Davis, Calvin N. De Bruin, and Lee H. Saylor, all of Muskegon, Mich., assignors to Sealed Power Corporation, Muskegon, Mich., a corporation of Michigan
Filed Mar. 15, 1961, Ser. No. 95,945
8 Claims. (Cl. 277—76)

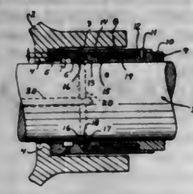
1. An oil ring assembly for use in the oil groove of a piston in an internal combustion engine including in combination, a one-piece expander-spacer of the non-bottoming self-expanding type having openings therein for passage of oil therethrough, said expander-spacer being generally circular with radial corrugations providing alternate inner and outer series of crowns and generally radial

flexing portions intermediate said crowns, said intermediate radial flexing portions individually comprising a single leg integral with said crowns and being axially offset from the center line of said expander-spacer towards the upper longitudinal edge thereof to provide maximum circumferential expansion forces therealong, said inner crowns each having a supporting pad portion integral with the bottom thereof and extending radially outward at a right angle therefrom and terminating with an outer peripheral edge curved to fit the cylinder wall of the engine so that said pads together form a circumferential oil scraping structure at the lower side of the oil groove,



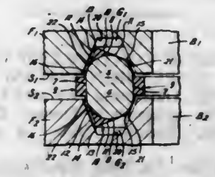
said pads being circumferentially spaced from one another a predetermined distance to provide oil passage gaps therebetween, and annular, parted rail means disposed solely between said expander-spacer and the upper side of the oil groove, said rail means being biased into sealing engagement with the cylinder wall by said expander-spacer whereby said rail means follows said pads on the downward stroke of the piston to shear the oil remaining on the cylinder wall after passage of said pads, said rail means directing such oil through said openings in said expander-spacer in sufficient quantity to flush and cool the same to prevent clogging of the oil ring assembly during operation of the engine.

3,124,365
SHAFT SEAL WITH AXIALLY ENGAGING FACES AND SHAFT-SUPPORTED, AXIALLY SLIDABLE SEAL ELEMENT
Oswald A. Wright, 516 Calle Mayor, Redondo Beach, Calif.
Filed June 23, 1961, Ser. No. 119,174
2 Claims. (Cl. 277—86)



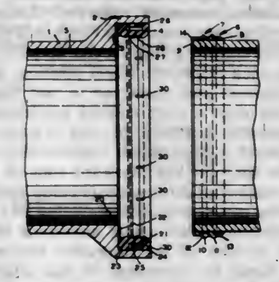
1. Means for effecting a seal between a rotatable shaft and a surrounding housing, comprising: mating, fixed, and rotatable sealing rings surrounding said shaft and having mutually engageable annular sealing faces, said fixed sealing ring secured to said housing; a tubular sleeve extending from said rotatable sealing ring; a collar secured to said shaft; means connecting said collar and sleeve to secure said sleeve to said collar for rotation with said shaft and permit limited axial movement of said sleeve and said rotatable sealing ring; said sleeve forming with said shaft an annular sealing chamber of greater diameter than the internal diameter of said sealing faces; a sealing unit axially slidable in said chamber and including seal means forming a sealing connection with said sleeve and also with said shaft, and dividing said chamber into an inner and an outer chamber; said inner chamber being subject to pressures internally of said sealing faces to urge the rotatable sealing face against the fixed sealing face, said outer chamber being exposed to ambient pressures externally of said sealing faces to urge the rotating sealing face against the fixed sealing face, when the external pressure exceeds the pressure internally of said sealing faces.

3,124,366
RING-TYPE GASKET
Carl J. Hillman, % Rubber Oil Well Products Co., 7623 Katy Road, Houston, Tex.
Filed June 7, 1961, Ser. No. 115,448
11 Claims. (Cl. 277—180)



1. A gasket adapted to form a seal between two opposed parts having inwardly facing grooves, said gasket, comprising, an annular relatively rigid body having portions receivable in the grooves in engagement with the opposite walls thereof, annular ribs extending radially from the inner and outer peripheries of said body for compression between the portions of the opposed parts adjacent said grooves, oblique triangular annular ribs projecting from the ends of said body toward the bottoms of said grooves, said triangular ribs being offset toward the outer periphery of said body whereby to be compressively engaged by the outer side walls of said grooves throughout the entire areas of said outer side walls between the body and the bottoms of the grooves as the parts are drawn toward each other, all of said ribs comprising resilient packing material molded to the surface of said body.

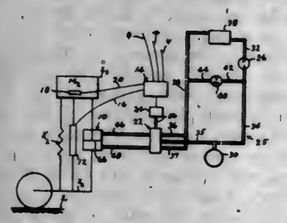
3,124,367
SEAL ASSEMBLY FOR PIPE JOINT
Richard S. Kaynor, Coral Gables, Fla. (% South Florida Plastics Inc., 1046 E. 43rd St., Hialeah, Fla.)
Filed Dec. 6, 1960, Ser. No. 74,032
5 Claims. (Cl. 277—190)



1. A seal assembly for a pipe joint of the bell and spigot type, comprising a resilient flexible male sealing ring adapted to fit over the spigot end of a pipe, at least one annular locking ring on the exterior of said male ring and a radially extending portion on said male ring adapted to fit over the end wall of said spigot end, a resilient flexible female sealing ring having a side wall adapted to be fitted into the bell end of a pipe, at least one inner groove in said side wall complementary in shape to said annular locking ring on said male seal, a radially extending portion connected to said side wall adapted to fit against a radially extending shoulder in the bell end of a pipe and to engage said radially extending portion on said male ring, a bearing ridge on either end of said side wall adapted to engage

the inner periphery of said bell end, and an envelope portion of greater diameter than and spaced from said side wall extending along a substantial length of said side wall adapted to engage the inner periphery of the bell end of a pipe and connected to said bearing ridge located at the opposite end of said side wall from said radially extending portion; said male ring adapted to sealingly engage said female ring when placed on the end of a spigot portion of a pipe and when said pipe is forced into the bell portion of a pipe having the female sealing ring mounted therein so that each said locking ring locks into one of said inner grooves.

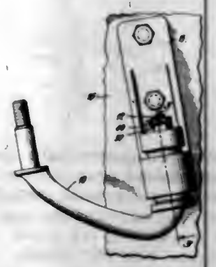
3,124,368
ELECTRONIC CONTROLLED VEHICLE SUSPENSION SYSTEM
Henry P. T. Corley, Oklahoma City, and Loyd G. Dorsett, Norman, Okla., assignors to Dorsett Electronics Laboratories, Inc., Norman, Okla., a corporation of Oklahoma
Filed Nov. 14, 1960, Ser. No. 68,706
1 Claim. (Cl. 280—6)



A suspension control system for a vehicle having wheel supported axles and having a vertically movable frame supported in spaced relation above said axles, comprising: a hydraulic cylinder interposed between and connected with said frame and said axle at each wheel position; a position control apparatus for controlling the actual position of said frame relative to a predetermined desired position of said frame with respect to the variable elevations of a wheel supporting surface, said control apparatus including a hydraulic system having a valve operatively connected with each said hydraulic cylinder, a servo mechanism connected with each hydraulic valve, signal computing means connected with said servo mechanism; a bounce control accelerometer connected with said frame above each respective wheel position; a transducer interposed between and connected to said frame and the respective said axle; a pitch control accelerometer longitudinally mounted centrally of said frame; and a roll and yaw control accelerometer transversely mounted at the respective forward and rearward ends of the vehicle, said accelerometers and transducers being connected with said computing means and each providing an output signal to said computing means whose amplitude is a function with respect to time of the respective forces applied to the vehicle frame by movement of the vehicle across a supporting surface, said computing means transmitting integrated output frame corrective positioning signals to said servo mechanism and actuating said hydraulic cylinders and positioning said frame in a desired predetermined position.

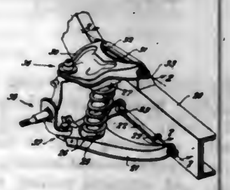
3,124,369
VEHICLE IDLER ARM MOUNTING
Wilfred F. Traugott, Box 608, West Point, Va.; Bertha D. Traugott, executrix of the estate of said Wilfred F. Traugott, deceased
Filed July 27, 1961, Ser. No. 127,183
4 Claims. (Cl. 280—95)

1. A bracket mounting for connecting an idler arm of a vehicle thereto, in which the idler arm is secured to said bracket mounting through a hub member and a stud member pivotally joined to each other, said hub member having a bore extending therethrough, mounting sleeves extending into each end of said bore, a ball bearing disposed in each of said sleeves, said stud member comprising an elongated substantially cylindrical member and extending through and being surrounded by said hub member, said sleeves and said bearings for pivotal movement with respect thereto, a flange portion formed integral with said stud member in a one-piece construction and extending radially outwardly thereof at least a distance approximately equal to the outer radius of the



adjacent sleeve, locking means for detachably securing said stud member in said hub member, spacer means adjacent said locking means and extending radially outwardly at least a distance approximately equal to the outer radius of the adjacent sleeve, gasket means disposed adjacent the outer end portion of each of said sleeves, one of said gasket means being interposed between the end portion of the associated sleeve and said integral flange, the other of said gasket means being interposed between the end of the associated sleeve and said spacer means, each of said gasket means cooperating with its associated sleeve to enclose the associated ball bearing to prevent lubricant from escaping from the bearing.

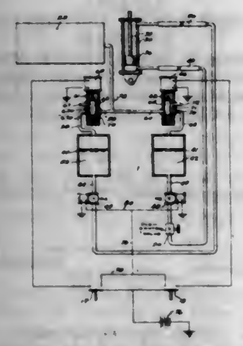
3,124,370
ADJUSTABLE PIVOTAL MOUNTING FOR WHEEL CONTROL ARM
Wilfred F. Traugott, Box 608, West Point, Va.; Bertha D. Traugott, executrix of the estate of said Wilfred F. Traugott, deceased
Filed Feb. 6, 1961, Ser. No. 87,189
8 Claims. (Cl. 280—96.2)



1. In a vehicle independently sprung front wheel assembly, a shaft for pivotally mounting the front wheel assembly, a control arm, means mounting the control arm upon said first shaft, said means including an adjusting bushing, said adjusting bushing having a cylindrical outer support surface and having a longitudinally extending bore formed therethrough eccentrically disposed with respect to said outer support surface, one end portion of said shaft extending through said bore, said shaft having a shoulder formed thereon spaced from said adjusting bushing, a first spacer means in surrounding relationship to the end portion of said shaft and being disposed between and engagement with said shoulder and one end

portion of said adjusting bushing, a second spacer means in surrounding relationship to the outer end portion of said shaft and having one end thereof disposed in engagement with the opposite end portion of said adjusting bushing, and means adjustably mounted at the outer end of said shaft for engaging said second spacer means to urge the second spacer means toward said adjusting bushing so as to lock the adjusting bushing to said shaft and prevent relative rotation therebetween while permitting rotation of the control arm member with respect to the adjusting bushing.

3,124,371
TRAILER STEERING CONTROL
James F. Weir, New Holstein, Wis., assignor to M-B-Corporation, New Holstein, Wis., a corporation of Wisconsin
Filed Nov. 15, 1960, Ser. No. 69,498
11 Claims. (Cl. 280—463)



3. A trailer steering device comprising the combination with steering means, of steering piston means having operative connection with said steering means, and steering cylinder means in which the steering piston means is reciprocable, the steering cylinder means comprising a plurality of cylinder chambers, separate reservoirs containing a hydraulic liquid in closed circuit connection with said steering cylinder means whereby displacement of liquid from one reservoir to said cylinder means requires reception of liquid from said steering cylinder means into the other of said reservoirs, normally closed valve means precluding flow between each of the reservoirs and the steering cylinder means, and means connected to one of said reservoirs and to both of said normally closed valve means for concurrently applying fluid pressure to said one reservoir and for opening both of said normally closed valve means.

3,124,372
TOWING CONNECTIONS
Harold George Poole, Aspenden House, Aspenden, near Buntingford, Hertfordshire, England
Filed Dec. 26, 1961, Ser. No. 161,851
Claims priority, application Great Britain Dec. 28, 1960
14 Claims. (Cl. 280—477)

1. A towing connection for connecting two vehicles and permitting the vehicles to be hitched and unhitched, said towing connection comprising:

(*a*) a beam adapted at one end for pivotal connection to one of said vehicles to swing about a first axis parallel to the rear axle of said one vehicle,

(*b*) a saddle member pivotally connected to said beam at its other end to swing about a second axis extending fore and aft of the vehicles and at right angles to said first axis,

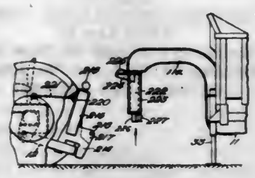
(*c*) said saddle member having a pillar part rigid therewith and extending upwardly therefrom at right angles to said first and second axes,

(*d*) a tow bar on the other of said vehicles,

(*e*) said tow bar having at its forward end a downwardly depending part, and

(*f*) means interconnecting said pillar part and said downwardly depending part and permitting both relative rotation of said parts about a vertical axis, which is at right angles to both said first axis and said second axis, and hitching and unhitching of said parts, said means including

(*g*) a sleeve rotatively mounted on one of said parts to rotate about said vertical axis,



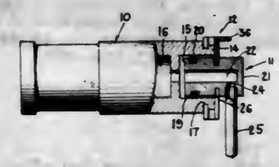
(*h*) a first abutment on said sleeve adjacent its upper end to rotate therewith,

(*i*) a second abutment rigidly mounted on the other of said parts adjacent the upper end thereof, said first and second abutments being brought into abutment by upward movement of one relative to the other,

(*j*) guide means carried on said other of said parts and below said second abutment, said guide means defining a channel which is open towards said sleeve, said sleeve entering said channel during movement of the tractor vehicle towards the trailer vehicle and being guided to a position in which both said parts are vertical and said abutments are engaged, and

(*k*) retractable locking means on said other of said parts and releasably retaining said sleeve in said channel.

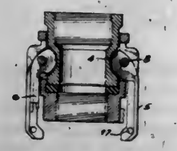
3,124,373
THREADLESS COUPLING
William A. V. Thomsen, Glen Ridge, N.J., assignor to Specialties Development Corporation, Belleville, N.J., a corporation of New Jersey
Filed May 31, 1960, Ser. No. 32,799
3 Claims. (Cl. 285—18)



1. In a threadless coupling, the combination of a first member having a central bore and having an annular sunken recess at its exterior disposed in a plane intersecting the axis of said bore and being concentric with said bore; a second member inserted into said bore and having an annular sunken recess at its exterior of much smaller diameter than said first mentioned recess and being disposed outwardly of said bore and in a plane parallel to and closed adjacent the plane in which said recess of said first member is disposed and being concentric with said bore; and a one-piece key having a rectangular plate portion formed with a lengthwise extending elongate slot at the middle thereof and being provided with an open end at one end of said plate portion and with a semi-circular closed end and providing a pair of spaced inwardly fac-

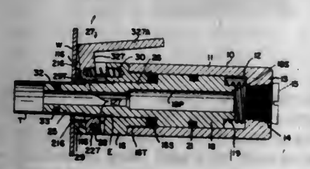
ing parallel edges extending into said recess of said second member with the edge provided by said semi-circular closed end being seated in said last mentioned recess, and said key having an L-shaped formation on one face at opposite sides extending lengthwise from one end of said plate portion to the other and providing a pair of spaced inwardly facing parallel edges disposed in a plane parallel to and closely adjacent the plane in which said first mentioned pair of edges are provided and being spaced apart a much greater distance than said first mentioned pair of edges and extending into said recess of said first member, whereby said members are coupled.

3,124,374
SELF VENTING SEPARABLE COUPLING WITH LOCK
John T. Krapp, 254 W. 54th St., New York, N.Y.
Filed Aug. 14, 1961, Ser. No. 131,441
8 Claims. (Cl. 285—85)



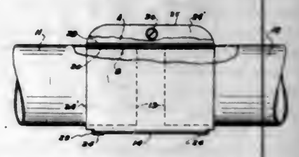
1. A safety lock coupling comprising a tubular male member and a complementary female member, said male member having a circumferential grooved portion thereon, the plane of which is substantially perpendicular to the axis of said male member, at least one clamping surface substantially complementary to said grooved portion mounted on said female member for pivotal movement into and out of clamping relationship with said grooved portion, at least one retaining surface of somewhat smaller dimensions than said grooved portion mounted on said female member for movement into and out of said grooved portion whereby, when said clamping surface is out of clamping relationship with said grooved portion, and said retaining surface is in said grooved portion, the coupling can separate slightly.

3,124,375
INTERNAL TUBE SEAL AND CONNECTOR
Oliver Maisch, Chicago, Ill., assignor to Tuthill Pump Company, Chicago, Ill., a corporation of Illinois
Filed Aug. 9, 1960, Ser. No. 48,488
1 Claim. (Cl. 285—317)



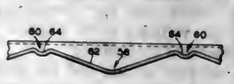
In a high pressure tube seal and connector for association with a relatively short projecting end of a metal tube, an elongated body having a longitudinal opening therethrough, a head at one end of said body having a longitudinal opening therethrough and a counterbore at one end of the head substantially larger than the tube end with which the connector is to be associated and into which counterbore such a tube end may extend, an anchoring ring disposed in said counterbore and pivoted at one edge on the head for shifting movement from a mounting position perpendicular to the counterbore axis to an angular position wherein said ring will engage and clamp onto a tube end that projects therethrough, spring means urging said ring toward its clamping relation, said body having a longitudinal cylinder formed therein, a piston reciprocable in said cylinder, a spring in said cylinder urging said piston toward said head, a pilot rigid with said piston and adapted to be inserted into such a tube end, and said pilot being extended through said counterbore and said anchoring ring and beyond said one end of the head, a filler portion forming part of said pilot and adapted to fill the end portion of a tube and react against the anchoring ring to prevent distortion of said end portion by said clamping ring, said pilot having a shoulder adapted to engage the end edge of the end of such a tube when the end portion of such a tube is disposed within said anchoring means, and an O ring seal on said pilot near the end thereof for sealing cooperation with the internal surface of the tube.

3,124,376
EXHAUST PIPE REPAIR AND REPLACEMENT ADAPTER
William R. Stoval', Milford, Mich. (3507 S. Epperly, Del City, Okla.)
Filed Mar. 4, 1960, Ser. No. 12,836
3 Claims. (Cl. 285—398)



1. A vehicle exhaust pipe repair adapter consisting of a unit strip of metal having a series of reverse folds and formed defining a pair of concentric sleeves adapted to span and interconnect the spaced ends of a damaged exhaust pipe or tail pipe, cross-over portions in said strip extending between and interconnecting said sleeves and having opposed pairs of spaced longitudinal slots extending inwardly from their respective ends, adapted to receive end portions of said exhaust pipe or tail pipe ends, said sleeves respectively engaging and overlying the inner and outer surfaces of said exhaust or tail pipe ends, a pair of said reverse folds being formed in the outer sleeve defining a pair of upright oppositely apertured free ends, and a fastener interconnecting and drawing up and maintaining said ends in fixed relation for immovably securing said sleeves relative to said exhaust or tail pipe ends.

3,124,377
SELECTIVE LOCKOUT HUB
Loren J. O'Brien, Grabill, Everson M. De Coursey, Auburn, and Leonard W. Harry, Jr., Fort Wayne, Ind., assignors to Dana Corporation, Toledo, Ohio, a corporation of Virginia
Filed Nov. 5, 1959, Ser. No. 851,119
2 Claims. (Cl. 287—53)



1. In a clutch for effecting a driving connection between a power shaft and a wheel hub the combination comprising,

(*a*) an inner clutch member adapted to be drivingly associated with a power shaft,

(*b*) a housing having a closed end and an open end and being adapted for connection to the wheel hub,

(*c*) an outer clutch member positioned in said housing in axially movable relationship and drivingly connected thereto,

(*d*) said inner and outer clutch members having cooperating coupling means thereon adapted for driving engagement,

(*e*) said outer clutch member being axially movable into and out of driven engagement with said inner clutch member,

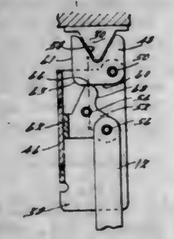
(*f*) resilient means disposed in said housing and compressed between said outer clutch member and said housing for normally urging said outer clutch member into engagement with said inner clutch member,

(*g*) cam means operable to effect axial movement of said outer clutch member and including a circumferentially extending cam surface element and a cam follower element in cooperating engagement therewith, said cam surface element having circumferentially displaced alternately disposed high spots and low spots,

(*h*) and carrying means mounted in said housing and being rotatable in either direction and disposed radially inwardly of said resilient means,

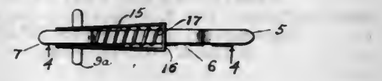
(*i*) one of said cam elements being carried by said carrying means and the other of said cam elements being carried by said outer clutch member whereby upon rotation of said carrying means in either direction said cam follower element will engage alternately the high and low spots of said cam surface element effecting axial movement of said outer clutch member against the bias of said spring means.

3,124,378
LATCH DEVICE FOR DOORS
Harvey W. Jackson, 336 Hillcrest, Grosse Pointe 36, Mich.
Filed May 24, 1962, Ser. No. 197,735
13 Claims. (Cl. 292—5)



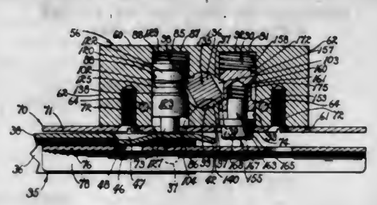
1. A latch device adapted to be mounted adjacent the top edge of a door and to operate in conjunction with a strike projecting downwardly from the door frame above said device, comprising: latch housing means positioned adjacent the top edge of a door; a bolt mounted on said means for movement between a latched position and a released position; means defining strike-engaging means on said bolt so arranged that when said door is closed engagement of the strike with said bolt will cause the latter to move from its released position to its latched position; lever means for locking said bolt in its latched position when the door is closed and for releasing said bolt when said door is to be opened; means for actuating said lever means, said actuating means being manually operable to actuate said lever means to release said bolt and operable by gravity to actuate said lever means to lock said bolt; and means on said lever means adapted to be engaged by said bolt when the latter is in its released position to lock said lever means in its bolt releasing position until the door is again closed and the strike moves said bolt to its latched position to release said lever means, whereupon the influence of gravity on said actuating means will actuate said lever means to its door locking position to lock said bolt.

3,124,379
ANTI-RATTLING HOOK
Allen E. Lorch, 5120 Lincoln Ave., Los Angeles, Calif.
Filed Oct. 3, 1961, Ser. No. 142,670
1 Claim. (Cl. 292—114)



A device of the kind comprising a hook provided with a shank consisting of a rod circularly looped at one end, thus providing an eye, a clip of form retaining sheet material mounted upon said shank and forming a partial sleeve therearound, said clip having oppositely disposed spaced apart eyeletted portions at one end and having at its opposite end a cross-wall with an opening through it through which the shank of the hook is slidable, a fastening member for the hook having an annular end portion extending through both the eyeletted end portions of said clip and through the eyelet of said rod, and a compression spring loosely coiled around said rod under compression, one end of said spring abutting said cross-wall and the opposite end thereof abutting the eyeletted end portion of said rod, the part of said fastener which passses through the eye of said rod occupying only a part of the diameter of that eye, thus allowing a limited longitudinal movement of said rod in opposition to said spring.

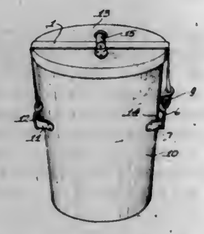
3,124,380
DIRECTIONAL CONTROL APPARATUS FOR A MOVABLE CLOSURE MEMBER
Hamilton S. Carlston, 556 Tower Ave., Fresno, Calif.
Filed Oct. 17, 1960, Ser. No. 62,905
9 Claims. (Cl. 292—163)



9. A directional control apparatus comprising an elongated track member having spaced opposite ends defining a predetermined length; a mounting body adapted for longitudinal movement relative to said track member, the range of said movement including a first portion extending longitudinally beyond one of said ends; locking means carried by the body and adapted for engagement with said track member and including means permitting only uni-directional movement between said track member and said locking means; latch means carried by the body and operable selectively to disable said locking means to permit unrestricted relative longitudinal movement between said track member and said locking means; a latch control means carried by the body and adapted to engage said track member throughout a predetermined second portion of said range of relative movement, and when in such engagement normally preventing movement of said latch means, said latch control means being shiftable to a

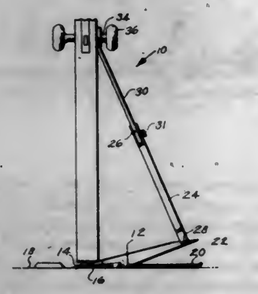
disabling position when the body is in said first portion of the range of movement; and means urging said latch control means in a direction toward said track member and operable to move said latch control means to a disabling position when said body is positioned in said first portion of the range of relative movement beyond said one of said ends of the track member so that selective movement of said latch means is permitted.

3,124,381
CONTAINER LID FASTENER
David M. Geldart, R.R. 2, Aylmer East, Quebec, Canada
Filed Sept. 11, 1961, Ser. No. 137,401
1 Claim. (Cl. 292—258)



A container lid locking device comprising a flat strap of elastic rubber having a hole extending therethrough adjacent each end thereof, and closed end loops each formed by passing a portion of the strap through one of said holes, and a rigid metal strip having a hook at one end and a hole extending therethrough adjacent the other end thereof, one of said loops extending through said hole in said strip to secure said strip to one end of said strap, the other of said loops being adapted to receive a container handle for securing said device to said handle.

3,124,382
DOOR BLOCK
Roscoe S. Strother, 426 Carter St., Vallejo, Calif.
Filed June 29, 1962, Ser. No. 206,469
6 Claims. (Cl. 292—343)



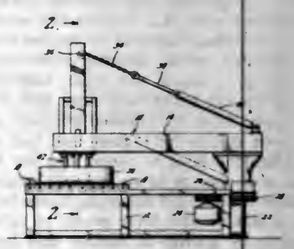
1. A door block comprising, in combination, a substantially triangular-shaped wedge, a substantially triangular-shaped block of frictional material carried within the lower surface of said wedge for gripping engagement with a floor, a pair of telescopic and substantially elongated rods secured to the upper end of said wedge, providing carrying means for said wedge when said door is urged partially closed and an elongated spring carried within the sole portion of said wedge which slidably engages with said floor and springingly urges the upper end of said wedge upwardly.

3,124,383
FIREPLACE TONGS
Alvin M. Cahan, 84 Carlton Road, Woban, Mass.
Filed Apr. 2, 1962, Ser. No. 184,351
5 Claims. (Cl. 294—11)



4. Fireplace tongs comprising an elongated rigid substantially straight supporting member and an elongated rigid gripping member, said members pivotally connected intermediate their ends, said gripping member rigidly providing near its lower end a pointed transverse projection extending toward said straight supporting member and opposed to it when the tongs are open, said gripping member also providing a firewood engaging surface extending from the point of said transverse projection upwardly and initially away from and then back toward said supporting member when said tongs are open, the point of said projection lying on the circumference of a circle centered at the pivot axis of the members and passing through the lower tip of the straight supporting member, the portion of said firewood engaging surface immediately adjacent to the point of said projection being substantially tangent to said circle whereby closing together of said members allows a stick initially to be engaged by said projection from beneath and by the lower tip of said straight supporting member from the side, and upon continued closing of said tongs, to be carried up said firewood engaging surface until locked against the portion of said surface that extends back toward said straight supporting member.

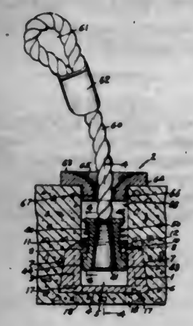
3,124,384
COIL STACKER HEAD
Luther F. Ezzell, Houston, Tex., assignor to Anderson, Clayton & Co., Houston, Tex., a corporation of Delaware
Filed Oct. 26, 1962, Ser. No. 233,411
3 Claims. (Cl. 294—88)



2. The improvement in a coil stacker head for engaging, moving and releasing metal coils and the like which includes a vertically movable support carrier comprising,

a plurality of horizontally extending supporting tracks carried by the support carrier and extending radially outwardly from the vertical axis of said carrier,
a downwardly depending arm movably supported from each track,
projection means pivotally mounted at the lower end of each of said arms for being expanded laterally outward in a radial direction for engaging the bottom of a coil,
first power means mounted on said carrier for moving said depending arms inwardly and outwardly for being positioned in various size central openings of coils,
means connected to each of said arms and to said power means for moving all of said arms simultaneously an equal distance and in the same radial direction,
second power means mounted on the vertical axis of said carrier and connected to said projections for moving said projections laterally to a coil engaging position and for retracting said projections from engagement with a coil.

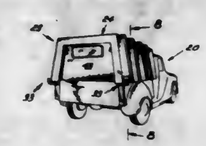
3,124,385
CABLE LIFT PICK-UP UNIT
Herman P. Neptune, 2204 Moreno Drive, Los Angeles 39, Calif.
Filed June 11, 1962, Ser. No. 201,675
6 Claims. (Cl. 294—89)



1. A pick-up unit for concrete slabs, panels and the like, including: a nut imbedded in the concrete slab, the concrete slab formed with an access bore to the nut, a pick-up assembly comprising a stud for passage through the bore of the concrete and separate means for the stud and for the nut for detachably locking the stud and nut in working relationship, a cable connected to the stud and a pressure plate received in part within the bore of the concrete and overlying a surface of the concrete through which said cable is passed.

3,124,386
CONTROLLABLY EXPANDABLE CAMPER APPARATUS FOR A PICK-UP TRUCK
Sunee I. Jonas, 4125 F St., Bremerton, Wash., assignor of one-tenth to Gadget-Of-The-Month Club, Inc., North Hollywood, Calif., a corporation of California
Filed Jan. 24, 1961, Ser. No. 84,558
5 Claims. (Cl. 296—23)

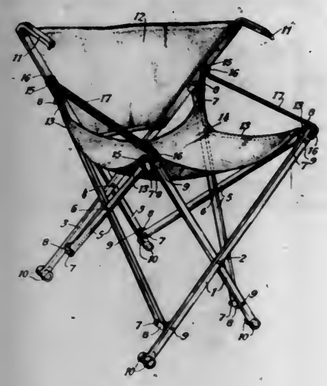
1. A combination pick-up truck and controllably expandable camper comprising: a pick-up truck having a rearwardly directed horizontal bed provided with laterally spaced parallel upstanding side wall parts terminating in upper edges; a first wall-defining portion of substantially inverted U-shaped configuration normally overlying the bed of the pick-up truck and substantially coextensive with the plan view area thereof, said first wall-defining portion being provided with pivotal mounting means at rear bottom edges thereof fixedly attached to upper rear corner portions of the side wall parts of the pick-up truck bed for arcuate pivotal movement of said first wall-defining portion about a horizontal axis from said position superimposed over the pick-up truck bed into a rearwardly extended position lying behind and partially below the pick-up truck bed and defining a rearwardly directed partially downwardly stepped extension of the pick-up truck bed; a second wall-defining portion of substantially inverted U-shaped configuration superimposed above the pick-up truck bed in rearwardly slidably mounted relationship with respect thereto and positioned within said first wall-defining portion when in an initial position; said second wall-defining portion having downwardly directed longitudinal lower side edges provided with slidable engaging means; said first wall-defining portion, when in said rearwardly extended position, having upwardly directed longitudinal upper side edges positioned in substantial horizontal alignment with corresponding ones of said upper edges of said side wall parts of the pick-up truck bed and being provided with slidable engaging means adapted to slidably mount corresponding ones of said downwardly directed longitudinal lower side edges and said slidable engaging means carried thereby of said second wall-defining portion for rearward longitudinal slidable movement of said second wall-defining portion into a position directly over said rearwardly extended first wall-defining portion whereby to define therebetween a rearwardly extended auxiliary room lying behind the pick-up truck bed; and a third wall-defining portion of substantially inverted U-shaped configuration fixedly mounted over the pick-up truck bed within the first and second wall-defining portions whereby, when said first and second wall-defining portions have been, respectively, moved into their rearwardly extended room-defining cooperative positions, said third wall-defining portion defines a forward room extension communicating with said rearwardly extended auxiliary room.



3,124,387
SEATING STRUCTURES
Owen Finlay Maclaren, Arnold House, Barby, near Rugby, England
Filed Sept. 6, 1962, Ser. No. 221,822
2 Claims. (Cl. 297—16)

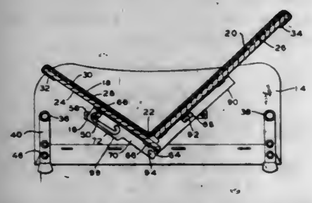
1. A folding chair comprising a frame consisting of a front pair of vertical crossing frame members and a rear pair of vertical crossing frame members, said front frame members being pivotally connected to each other adjacent their crossing points, said rear frame members being pivotally connected to each other adjacent their crossing points, two side pairs of crossing brace members spaced laterally of each other, each of said side pairs being pivotally connected at their crossing points, said side pairs of bracing members being pivotally connected at their upper and lower ends to the upper and lower ends respectively of said front and rear frame members, said side pairs of brace members having their lower ends disposed inwardly of their upper ends so said side pairs are disposed in planes converging inwardly and toward each other adjacent the lower portion of said brace members, said rear frame members being substantially longer than said front frame members and extending upwardly a

greater distance than said front frame members to provide a back rest support, a flexible back rest connected between the rear frame members, flexible arm rests connected between said front and rear frame members, a pair of catenary cord seat support members, one of said cord members having its ends connected between the front and rear frame members on the other side of said chair,



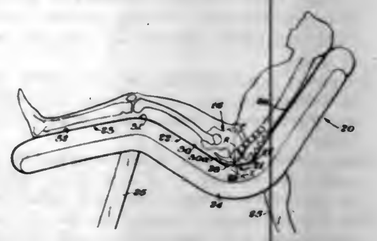
said catenary members being disposed in lateral alignment with each other and disposed to curve downwardly with respect to a horizontal plane and curve inwardly with respect to a vertical plane, and a flexible seat having substantially parallel front and rear edges and curved side edges corresponding to the curvature of said cord members, each of said curved side edges being secured to one of said cord members.

3,124,388
CHILD'S CONVERTIBLE BED AND SEAT
Daniel Berlin, 4424 Paul St., Philadelphia 24, Pa.
Filed Apr. 5, 1961, Ser. No. 100,847
2 Claims. (Cl. 297—320)



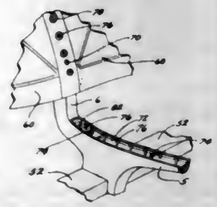
1. A child's convertible bed and seat comprising a forward portion adapted to serve as a seat portion and a rearward portion adapted to serve as a back portion. said forward and rearward portions being positioned between two side members and being hingedly secured together along a common edge, cam means secured to both of said side members, locking means secured to one of said portions, said locking means including a guide channel with a guide slot, said guide slot being generally U-shaped and having nesting portions at both open ends of the U, said cam means being positioned within said guide slots, and a pair of brackets connecting said side members, each of said brackets having horizontal sections between said side members whereby said portions may be inclined away from each other to form a seat and brought to a horizontal position to form a bed with the undersides of said portions resting on said horizontal sections.

3,124,389
CHAIR CONSTRUCTION
Venzel R. Mikan, 1274 Fisher Drive, Saginaw, Mich.
Filed Sept. 7, 1961, Ser. No. 136,468
5 Claims. (Cl. 297—454)



1. A chair construction comprising a back portion; a seat portion having a low point forwardly of said back portion; a thigh supporting portion; and support means for each of said portions, said back portion being inclined to the vertical and having a substantially planar body supporting section merging at its lower end with said seat portion, said seat portion being curved upwardly from said low point and merging with one end of said thigh supporting portion, the juncture of said seat portion and said thigh supporting portion being located at a zone which is elevated relatively to the low point of said seat portion and to said lower end of said back portion, said thigh supporting portion being substantially planar from its juncture with said seat portion.

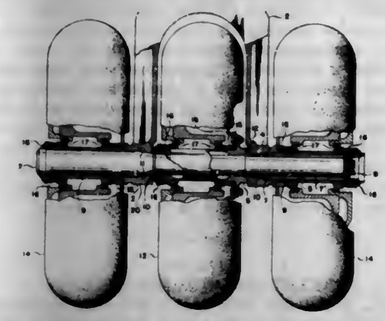
3,124,390
SEATING PAD ATTACHMENT
Charles Eames, Venice, and Robert L. Staples, Manhattan Beach, Calif., assignors to Herman Miller, Inc., Zeeland, Mich., a corporation of Michigan
Filed Oct. 8, 1962, Ser. No. 229,132
5 Claims. (Cl. 297—458)



1. A seat structure comprising: a pair of spaced frame elements; elongated mounting strips secured to each of said frame elements; each of said strips having a plurality of support pins projecting outwardly of said frame elements; a body supporting member having a plurality of apertures along each of two of its edges, said member being seated over said pins with said pins received through said apertures; cover means attached to said frame elements, said cover means being seated over said pins and concealing them, and also engaging and cooperating with said projecting support pins to help stabilize said body supporting member.

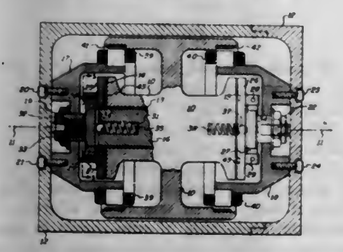
3,124,391
HIGH CAPACITY, COMPACT LANDING GEAR
Gus K. Dishman, Van Nuys, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Aug. 8, 1962, Ser. No. 215,659
4 Claims. (Cl. 301—1)

1. An aircraft landing gear comprising a landing gear strut for attachment to an aircraft, a fork-like axle supporting member attached to said strut, hollow lateral extensions on the outer sides of the lower extremities of the fork member, a tie-rod member extending through said



hollow extensions, and lying in the same plane as said extensions, an axle mounted on said tie-rod between said fork members, and wheel assemblies removably mounted on said axle and each extension.

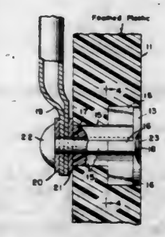
3,124,392
THRUST BEARINGS
Henry W. Rappuhn, East Norwich, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Sept. 10, 1962, Ser. No. 222,505
9 Claims. (Cl. 308—9)



8. In a thrust bearing of the hydrodynamic gas pressure type, a stationary shaft having an end with respective axial and diametral openings, a thrust pad with an annular opening loosely threading the shaft and a fixed diametral part bridging the pad opening and loosely threading the diametral opening in the shaft, means fitting the axial end opening in the shaft having a part engaging the outside face of the bridging part of the pad for universally mounting the pad in determined axial relation to the shaft, and means fitting the axial end opening in the shaft having a part engaging the inside face of the bridging part of the pad for biasing the pad in its determined axial relation to the shaft.

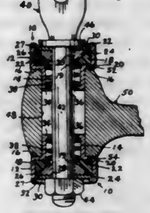
3,124,393
ONE PIECE BUSHING AND MOUNTING PLATE FOR EMBEDMENT IN SOFT MATERIALS
Gerson Meyer, 1620 Union Ave., Baltimore, Md.
Filed Jan. 31, 1962, Ser. No. 170,142
5 Claims. (Cl. 308—22)

1. An article of manufacture comprising the combination of a wall member of a soft, thick, bulky material, a member hingedly attached to the wall, said member comprising a shaft transversely disposed in the wall member, and a one-piece bushing in said wall receiving said shaft, said bushing comprising a disc section, a hollow shank section abutting and directly integral with the disc section, said shank section extending from the disc to the opposite face of the wall, a group of fins widely spaced circumferentially, integral with the shank section



and extending radially therefrom embedded into the mass of the wall material adjacent the shank, said fins having portions at the inner end of the shank adjacent to and integral with the disc section.

3,124,394
IDLER ARM REPAIR KIT
Willard A. Rowlett, P.O. Box 14-W, Oklahoma City, Okla.
Filed Oct. 27, 1961, Ser. No. 148,219
4 Claims. (Cl. 308—36)

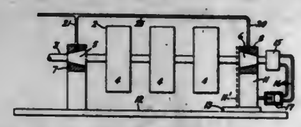


1. Bearing means for interconnecting an idler arm and idler arm bracket for pivoting movement of the idler arm relative to the idler arm bracket, said idler arm bracket having an annular shoulder surrounding a fixed shaft, said idler arm having a bore loosely surrounding said shaft, said bearing means, comprising: a cylindrical housing having an outer wall diametrically reduced at one end portion and closely received by the bore in said idler arm; a first centrally bored antifriction member closely surrounding said shaft within said housing; a second centrally bored antifriction member loosely surrounds said shaft within said housing and contiguously contacting the adjacent surface of said first antifriction member; and a spring positioned within the reduced end portion of said housing in contact with the adjacent surface of said first antifriction member.

3,124,395
METHOD AND APPARATUS FOR BYPASSING CRITICAL SPEEDS OF ROTORS
Beno Sternlicht, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed June 27, 1961, Ser. No. 120,088
8 Claims. (Cl. 308—122)

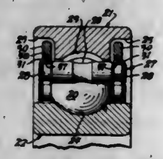
6. In a bearing system, the combination of a rotatable member having a journal, a bearing for engaging and continuously supporting said journal at a predetermined stiffness value, means for changing the stiffness of said bear-

ing when the critical speed is approached to achieve a bearing stiffness of different predetermined value, and



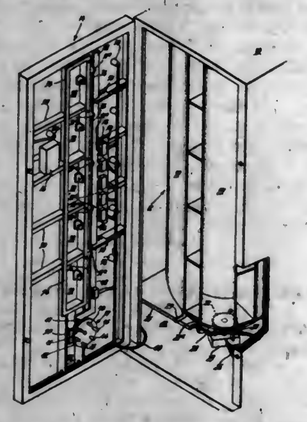
speed responsive means for controlling the stiffness changing means.

3,124,396
ROLLER SEPARATOR FOR BALL BEARINGS
Alfred T. Barager, P.O. Box 304, Nunda, N.Y.
Filed Nov. 12, 1959, Ser. No. 852,265
7 Claims. (Cl. 308—200)



3. In a ball bearing having an outer race ring, an inner race ring concentrically arranged within said outer race ring, said race rings having raceways disposed in opposition, a series of balls arranged between and in the raceways, a series of rollers arranged in alternation and in contact with said balls and being disposed between said series of balls and one of said race rings with their axes parallel with the axis of the ball bearing, each of said rollers being provided at its opposite ends with peripheral annular grooves, and an endless ring at each end of said roller bearing and interposed between the ends of said rollers and said one of said race rings, the combination therewith of means retaining said endless ring on said roller ends, comprising a split ring secured concentrically in said endless ring and extending into said grooves to hold said endless rings against axial displacement from said ends of said rollers.

3,124,397
VENDING MACHINES
Heinz Braunsberg, 856 Burlington Ave., Bristol, Conn.
Filed Apr. 27, 1961, Ser. No. 106,049
5 Claims. (Cl. 312—97.1)



1. In a bulk vending machine having a cabinet with a main front door and a step-by-step rotatable drum with a plurality of shelves, each of which has a plurality of storage areas, a vertical arrangement of small hinged doors in the main door, positioned to be cooperative with the different shelves selectively, latches for said smaller doors to primarily hold them latched, indicating lights in said main door for showing which of said smaller doors is unlatched, a programming mechanism on the main door comprising a cam and a dual-purpose slide supported on said cam against the force of gravity and having means for progressively unlatching the hinged doors while simultaneously operating the indicator light for the unlatched door, friction drive means for said drum, and means on said frictionally driven drum for rotating said cam a step once each revolution of the drum whereby said slide drops by force of gravity to effect its stated purposes.

3,124,398
ROTARY RECORD EQUIPMENT
James L. Fuller and Samuel Aston Loyd, Waynesboro, Va., assignors to Acme Visible Records, Inc., Crozet, Va., a corporation of Delaware
Filed Jan. 17, 1963, Ser. No. 252,159
5 Claims. (Cl. 312—198)



1. A rotatable filing unit composed of a plurality of separable components and readily engageable, comprising a circular base plate, a plurality of equi-angularly spaced vertically disposed radially extending truss members each comprising a vertically disposed leg and a roller mounted on the upper end of each leg, said rollers collectively horizontally supporting said base plate, means for driving at least one of said roller whereby to rotate said base plate, a plurality of equi-angularly spaced vertically disposed radially extending upper truss members, means securing the latter to the upper face of said base plate, tie members secured to and extending between said upper truss members, means carried by the adjacent inner terminal end portions of the upper truss members engaged with companion means carried by the adjacent inner terminal ends of the lower truss members retaining said truss assemblies in axial alignment, the outer defines of the tie members for said upper truss members being adapted to support radially extending record filing receptacles.

3,124,399
TOOTH BRUSH HOLDER
Bruno Seta, 20/10 Via Carlo Canepa, Genoa, Italy
Filed Jan. 4, 1962, Ser. No. 164,365
Claims priority, application Italy Jan. 9, 1961
8 Claims. (Cl. 312—206)

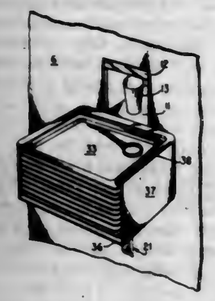
1. A tooth brush holder adapted for traveling service and comprising a quiver-like open top tooth brush container, a sheath open at the front and bottom separably receiving said container, said sheath having a rear wall, two side walls and a top wall, means on said rear wall for fixedly securing said sheath to a building wall, a pair of coaxially projecting hinge pivots fixed in the lower part of said container and lying below the barycenter of said container, a pair of forwardly inclined parallel-spaced open top slots in the lower portions of the side walls and spaced from the rear wall of said sheath for re-

movably inserting therein the said hinge pivots carried by the container, and coacting abutment members on said sheath and container allowing the said container when pivoted in the slots of the sheath to swing a certain angle



in both directions beyond the vertical plane passing through the said hinge pivot axis, for holding said container either fully capped by the top part of said sheath in one end position or inclined outwardly.

3,124,400
VENDING MACHINE SERVICE TRAY
Harold E. Nelson, Lombard, Ill., assignor to Automatic Canteen Company of America, Chicago, Ill., a corporation of Delaware
Filed May 8, 1962, Ser. No. 193,208
7 Claims. (Cl. 312—281)



1. In combination, a vending machine having a discharge opening and a tray assembly, said tray assembly having a first member affixed to said vending machine below said discharge opening, a second member pivotally attached to said first member, a tray member removably attached to said second member and engageable with said first member to prevent relative motion between said first and second members, said tray member when in engagement with said first member presenting a substantially horizontal surface directly below and exterior to said discharge opening.

3,124,401
DRAWER SLIDE MECHANISM
Ralph E. McClellan, 2011 Fernwood, Toledo 6, Ohio
Filed Nov. 15, 1961, Ser. No. 152,418
18 Claims. (Cl. 312—337)

1. A drawer slide mechanism comprising:

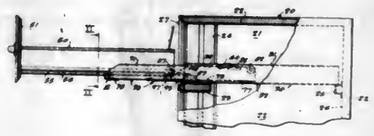
(I) an enclosure having a pocket with spaced parallel inner side walls extending therealong between which a drawer may slide,

(A) a pair of parallel channel tracks having C-shaped cross sections attached to said side walls with their open sides facing each other,

(1) a pivoted stop pawl mounted on at least one of said tracks,

(2) a notch in said track for said pawl,

(3) an elongated bearing in said pawl for its pivot, said bearing being longer than the clearance between said pawl and one side of said notch whereby engagement of said pawl against its stop engages said pawl against the edge of said notch instead of said pivot and bearing,



(II) a drawer movable between said side walls parallel to said tracks from a position completely within said pocket to a position completely outside of said pocket,

(A) a pair of double faced rails on opposite sides of said drawer movable parallel to and projecting between the flanged edges of said tracks,

(B) a stop projecting from said drawer,

(III) a slide cradle between said drawer and said chamber comprising:

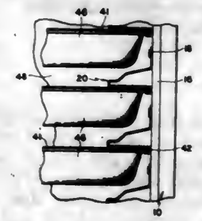
(A) a pair of parallel strips movable in said track between said tracks and said rails,

(B) spanner means for connecting said strips together around one side of said drawer,

(C) separate stop means on said cradle for abutment with said stop on said drawer and said pivoted pawl stop on said track, and

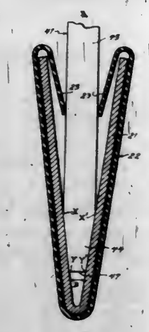
(D) plastic rollers mounted on said strip for rolling engagement between said tracks and said rails for supporting said drawer and cradle and for movement of said cradle at half the speed and distance of said drawer.

3,124,402
PAN AND TRAY SUPPORTS
Delmar D. Rhoads, 5311 Indiana Ave., Fort Wayne, Ind.
Filed Mar. 25, 1960, Ser. No. 17,616
3 Claims. (Cl. 312—350)



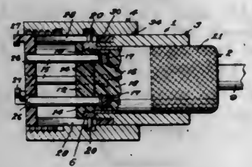
2. A combination deep dish pan and tray support member comprising a mounting flange having means for removably suspending the support member at its opposite ends, a doubled-over section of said support member proportioned with a spacing therebetween and including on one part of said doubled-over section an inclined and stepped configuration defining a first carrying ledge at the outer extremity thereof for a tray, and a U-shaped cross section portion of said support member at the side opposite said mounting flange and opening in the direction of said first carrying ledge defining a second carrying ledge for a deep dish pan having a rectangular shape larger than the tray.

3,124,403
ELECTRICAL BUS CONDUCTOR
Raymond N. Rowe, Plainville, Conn., assignor to General Electric Company, a corporation of New York
Filed Dec. 21, 1960, Ser. No. 77,445
5 Claims. (Cl. 339—22)



1. In an electrical distribution system, a flexible V-shaped bus conductor, a V-shaped stab having a V angle exceeding that of the bus but adapted to be inserted therein, and a covering for the bus opening comprising a plurality of flaps of insulating material disposed thereacross in a V configuration with the apex thereof within the interior of the bus, the V angle of the flap configuration exceeding the V angle of the stab.

3,124,404
ELECTRICAL MALE CONNECTOR
Gilbert F. Chesnov, 116 Richard St., Dover, N.J.
Filed Sept. 1, 1961, Ser. No. 135,684
3 Claims. (Cl. 339—34)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An electrical male connector comprising a tubular central unit having an open forward end, a wafer disc threadably engaging the open end of said central unit, a series of electrical contact pins supported by and extending forwardly of said wafer disc, electrical leads connected to the rearward ends of said contact pins, a base housing assembly having a closed frontal wall and a series of longitudinal grooves in its side wall thereof there being a series of bores in said frontal wall, said base housing being slidably and non-rotatably mounted on said central unit, said bores receiving the forwardly extending contact pins slidably therein, a collar rotatably mounted on said base housing, there being an annular groove on the inner peripheral wall of said collar, and means carried by said central unit and coacting with said groove to limit the sliding movement of said central unit on said base housing whereby when said base housing is moved rearwardly said contact pins are realigned by said bores in said closed frontal wall and housed in said base housing and when said base housing assembly is moved forwardly, said contact pins are exposed.

3,124,405
UNDERWATER SEPARABLE CONNECTOR
Frank Massa, Cohasset, Mass., assignor to Massa Division of Cohu Electronics, Inc.
Filed May 3, 1961, Ser. No. 107,398
2 Claims. (Cl. 339—60)



1. The improvement of a separable waterproof electrical connector comprising the combination of a first set of terminals, a second set of terminals formed to mate with said first set of terminals, electrical conductor means connected to said first set of terminals, electrical conductor means connected to said second set of terminals, flexible waterproof insulation means securely bonded to said first set of mating terminals to form a unitized, waterproof plug assembly, flexible waterproof insulation means securely bonded to said second set of mating terminals to form a unitized waterproof socket assembly, said plug and socket assemblies being capable of being nested to establish a waterproof electrical connection between said first set of terminals and said second set of terminals, at least one member of the two piece plug and socket assembly comprising a central insulating portion enclosing a set of terminals and peripherally spaced outer flexible skirt sealed to one end of said central insulating portion and extending therefrom to form an annular opening at the other end of said central insulating portion, said central insulating portion comprising a first bead extending outwardly around its periphery and said outer flexible skirt being formed with a first recessed groove extending around its inner periphery, and the other member of the two piece plug and socket assembly comprising a projecting shell adapted to be snugly fitted within said annular opening when the plug and socket members are operatively coupled to each other, the outer periphery of said projecting shell comprising a second bead extending outwardly for mating with said first recessed groove of the outer flexible skirt and the inner periphery of said projecting shell being formed with a second recessed groove extending therearound for mating with said first bead of the central insulating portion to provide a dual waterproof seal when the plug and socket members are operatively coupled together.

3,124,406
COAXIAL CONNECTOR
Owen L. Cook, Wakefield, Mass., assignor to General RF Fittings, Inc., Boston, Mass.
Filed Sept. 20, 1962, Ser. No. 225,013
7 Claims. (Cl. 339—89)

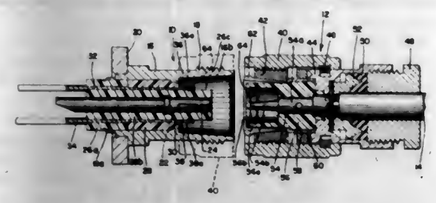
1. In an improved coaxial connector assembly comprising

(*a*) a first connector having
  (1) a center conductor provided with an aperture at the connecting end thereof, and
  (2) a first insulator around said first center conductor at said connecting end,

(*b*) a second connector having
  (1) a second center conductor provided with a first end sized to fit within said aperture, and
  (2) a second insulator around said second conductor at said end thereof and radially spaced therefrom,
  (3) said first insulator fitting within said second insulator when said end of said second conductor is within said aperture;

the improvement comprising monitoring means including

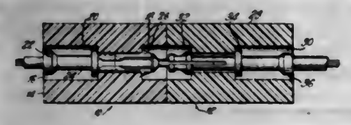
(*c*) a pair of auxiliary conductors extending along the surface of one of said insulators from the region of overlap with the other insulator in a direction away from said ends of said center conductors,



(*d*) an annular conductor extending circumferentially along the surface of the other of said insulators,

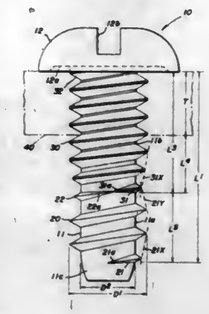
(*e*) said annular conductor engaging said auxiliary conductors when said connectors are sufficiently joined together to provide reliable radio frequency contacts between them.

3,124,407
REMOVABLE PIN AND SOCKET CONNECTOR
Michael Lazar, White Plains, and Frederick J. Ruderman, New Rochelle, N.Y., assignors to Burndy Corporation, a corporation of New York
Continuation of application Ser. No. 738,881, May 29, 1958. This application Dec. 1, 1960, Ser. No. 73,149
3 Claims. (Cl. 339—213)



1. An electrical contact assembly, comprising: a metal contact member, and a split sleeve spring member disposed circumferentially about said contact member; wherein said contact member includes, in axial alignment, a mating portion for engaging a mating contact, a body portion, a conductor receiving portion, and a first and a second annular flange on said body portion axially spaced a given distance apart; said body portion further including a first subportion of a given diameter and a second subportion of less than said given diameter, each disposed between said flanges; and wherein said spring member is positioned between said flanges, the opposite ends thereof engaging respectively said first and said second flanges to prevent axial displacement thereof, and the inner diameter of said split sleeve is equal to said given diameter; said spring member including a plurality of longitudinally disposed resilient fingers formed therein extending over said second subportion of said body, each finger having an outwardly extending radial projection thereon including a sloping camming surface for deflecting said fingers inwardly toward said second subportion in response to an axial force applied thereto.

3,124,408
SCREW FASTENERS AND TERMINAL BOARDS INCORPORATING THE SAME
Louis Oestereicher, Teaneck, N.J., assignor to General American Transportation Corporation, Chicago, Ill., a corporation of New York
Filed Feb. 13, 1962, Ser. No. 173,094
9 Claims. (Cl. 339—220)

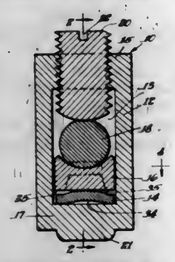


1. A screw fastener of the self-threading type comprising an elongated shank, an enlarged head terminating the rear end of said shank, a first thread carried by the front portion of said shank and including a number of helical turns and having a first fixed pitch, and a second thread carried by the rear portion of said shank and including a number of helical turns and having a second fixed pitch, the frontmost turn of said first thread terminating adjacent to the front end of said shank and the rearmost turn of said second thread terminating adjacent to the rear end of said shank, the rearmost turn of said first thread and the frontmost turn of said second thread both terminating adjacent to the boundary between the front and rear portions of said shank and closely adjacent to and in alignment with each other so that said first and second threads constitute continuations of each other along said shank, said first and second threads having substantially the same major diameter and having substantially the same minor diameter and said first and second pitches being substantially different from each other, the roots of the turns of said first thread having a great amount of truncation and the roots of the turns of said second thread having a small amount of truncation, whereby in the forward driving movement of said fastener into a set position with respect to an associated workpiece said first thread forms a corresponding first threaded structure in the workpiece pilot hole and then said second thread breaks-up the first threaded structure mentioned and forms a corresponding second threaded structure in the workpiece pilot hole, and whereby in initial retrograde movement of said fastener from its set position into a partially withdrawn position with respect to the workpiece said second thread rotates readily in the second threaded structure mentioned and in further retrograde movement of said fastener beyond its partially withdrawn position with respect to the workpiece said first thread binds in the second threaded structure mentioned, thereby effectively to secure said fastener to the workpiece and to establish a limited range of subsequent ready movements of said fastener between its set position and its partially withdrawn position.

3,124,409
ELECTRICAL CONNECTOR

John F. Nisula, Cedar Rapids, Iowa, assignor to Square D Company, Park Ridge, Ill., a corporation of Michigan

Filed Dec. 11, 1961, Ser. No. 158,365
8 Claims. (Cl. 339—272)



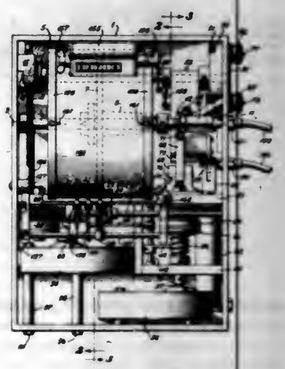
1. An electrical connector comprising:
(*a*) a body formed of an aluminum alloy and having an aperture extending therethrough,
(*b*) an electrical conductor formed of a resilient copper alloy and having an end portion extending into said aperture in engagement with a lower portion of said body,
(*c*) a clamping shoe formed of an aluminum alloy and positioned in said aperture in engagement with said end portion of said electrical conductor on the opposite side thereof from said lower portion of said body, said end portion of said electrical conductor being shaped differently from the engaging surfaces of said clamping shoe and said lower portion of said body so as to be resiliently deformable thereby, and
(*d*) clamping means associated with an upper portion of said body and adapted to clamp an end of an electrically conductive wire against said clamping shoe and to resiliently deform said end portion of said electrical conductor by compression thereof between said clamping shoe and said lower portion of said body.

3,124,410
WELL DEPTH RECORDER

James O. Melton, Norman, and Irvin M. Carpenter, Oklahoma City, Okla., assignors to The Geograph Company, Oklahoma City, Okla., a corporation of Oklahoma

Filed Aug. 7, 1961, Ser. No. 129,636
14 Claims. (Cl. 346—49)

1. A drilling recorder comprising a frame, a chart mounted within said frame, means mounted within said frame for supporting said chart and for moving said chart over a predetermined path, means for moving said chart supporting means stepwise, a recording element mounted within said frame and being engageable with said chart for marking a record thereon, means for moving said recording element from a given reference position across said chart in a direction transverse to the path movement of said chart, a constant speed driving means mounted within said frame, a clutch means interconnected between said constant speed driving means and the means for moving said recording element for moving said recording element across said chart at a constant rate of speed, a clutch operating means for engaging and disengaging



said clutch means, means for urging said recording element towards its reference position when said clutch means is disengaged, a reciprocating means mounted within said frame movable in response to the completion of a given increment of drilling and being connected in driving relation with the means for moving said chart supporting means and with the means for engaging and disengaging said clutch means, and means for supplying a signal to said reciprocating means in response to the completion of said given increment of drilling so as to actuate said reciprocating means, whereby, when said reciprocating means is actuated, the chart will be advanced stepwise and said recording element will simultaneously be returned to its reference position.

CHEMICAL

3,124,411
METHOD FOR DYEING TEXTILE MATERIALS WITH VAT DYES

Gilbert S. Panson and Carol E. Weill, Livingston, N.J., assignors to Metal Hydrides Incorporated, Beverly, Mass., a corporation of Massachusetts

No Drawing. Filed July 17, 1961, Ser. No. 124,373
6 Claims. (Cl. 8—34)

1. In a method for continuously dyeing textile materials with vat dyes which involves padding the textile material with an aqueous dispersion of the vat dye and passing the dye impregnated textile material through an aqueous solution of a vat dye reducing agent, the improvement wherein the textile material is impregnated with a mixture of the vat dye and an alkali metal bisulfite and the textile material impregnated with the vat dye and bisulfite is passed through an aqueous solution of a borohydride and an alkali metal hydroxide having a pH between about 9.5 and 13, said borohydride being selected from the group consisting of alkali metal borohydrides and quaternary ammonium borohydrides.

3,124,412
CONTINUOUS DYEING METHOD FOR FIBROUS MATERIALS AND COMPOSITIONS THEREFOR

Louis I. Fidell, Bound Brook, and Jerry M. Mecco, Somerville, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed July 14, 1960, Ser. No. 42,750
16 Claims. (Cl. 8—54)

1. A continuous dyeing process adapted for dyeing basic nitrogen containing material, selected from the group consisting of the natural and synthetic protein, "nylon" and "acrylic" fibers, with an anionic dye which process comprises the steps of: passing said material into and through an aqueous acidic pad-bath composition maintained at about ambient room temperature, said composition consisting of said dye in a colored, oil-in-water type emulsion wherein the inner phase is comprised of at least one dyeing assistant selected from the group consisting of toluene, xylene, butanol, p-dichlorbenzene, trichlorbenzene and the lower alkyl esters of carbocyclic, aromatic, monocarboxylic acids having not more than two carbocyclic rings; maintaining the period of dwell until said material is wet out; removing the excess pad-bath liquor; passing the resultant wet material into and through an aqueous, acidic, developing-bath composition; maintaining the developing-bath at a temperature in the range of from about 200° to about 220° F.; maintaining a period of dwell less than about ten minutes but sufficient to develop the color; and separating resultant colored material from the said developing-bath.

3,124,413
METHOD OF MAKING ESSENTIALLY COLORLESS, PARTIALLY HYDROLYZED, DYE RECEPTIVE ACRYLONITRILE POLYMERS

Fred J. Lowes, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed May 29, 1961, Ser. No. 113,135
4 Claims. (Cl. 8—115.5)

1. The method which comprises immersing an article consisting essentially of a linear polymer of which at least 80 percent of the recurring units are

$$-CH_2-\underset{\displaystyle CN}{\underset{|}{CH}}-$$

and which when dried is normally hydrophobic, in an aqueous alkaline agent selected from the class consisting of alkali metal hydroxides and ammonium hydroxide, of at least 20 weight percent concentration only until the article acquires both a yellow discoloration and a slippery surface, rinsing the article in water to remove adherent alkali, and immersing it until decolorized in an aqueous non-alkaline oxidizing bleach from the class consisting of hydrogen peroxide, chlorine water and bromine water.

3,124,414
TEXTILE FINISHING PROCESS

Hans Dolmetsch, Siegburg, Germany, assignor to Phrix-Werke Aktiengesellschaft, Hamburg, Germany

No Drawing. Filed Feb. 2, 1960, Ser. No. 6,097
Claims priority, application Germany Feb. 11, 1959
10 Claims. (Cl. 8—116.2)

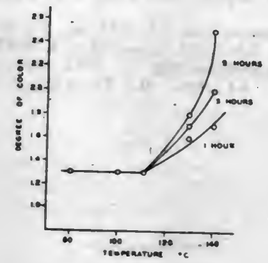
1. Process for treating a fibrous material derived from cellulose, comprising the steps of treating said fibrous material substantially without prior alkali treatment, esterification and etherification of the same for a short period of time with a small proportion of an aqueous dispersion of a cyanuric halide, said dispersion having a pH within the range of between about 7 to 10; drying the thus-treated material; and subjecting the material to a heat treatment at a temperature between above 100° C. and 160° C., whereby a material of substantially decreased swelling characteristics, substantially insoluble in solvents for cellulose, and of high resistance to scouring is obtained.

3,124,415
POLYVINYL ALCOHOL FIBERS HAVING HIGH CRYSTALLINITY AND KNOT STRENGTH

Masamitsu Nagano and Hideo Tokumitsu, Okayama City, Japan, assignors to Kurashiki Rayon Co., Ltd., Kurashiki-shi, Japan, a corporation of Japan

Filed Sept. 2, 1960, Ser. No. 53,671
1 Claim. (Cl. 8—130.1)

Polyvinyl alcohol fibers having a high percentage of crystallinity and a high knot strength produced by heating polyvinyl alcohol fibers to a temperature above the second transition point but below the melting point and effecting step-wise cooling of said fibers by maintaining them at a



temperature above the second transition point but at a maximum of about 100° C. for a period of time up to 2 hours and then cooling the fibers to room temperature.

3,124,416
METHOD OF REMOVING OXYGEN FROM GASES

Johann G. E. Cohn, West Orange, and Alfred J. Haley, Jr., Colonia, N.J., assignors to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware

No Drawing. Filed Aug. 12, 1960, Ser. No. 49,120
1 Claim. (Cl. 23—2)

A process for effecting the removal of elemental oxygen from a gas mixture consisting essentially of primarily elemental nitrogen and also a small amount of the oxygen of the order of about 3%, which comprises admixing a material selected from the group consisting of ethylene and benzene as fuel with said gas mixture, the fuel being present in the resulting admixture in amount of from that stoichiometrically equivalent to the oxygen content to a slight excess over the stoichiometric equivalent, and passing the resulting gaseous admixture into contact with a palladium metal catalyst at an ignition temperature of said admixture within the range of 140° C. to about 150° C. thereby reacting the fuel with the elemental oxygen to remove the oxygen from the admixture.

3,124,417
METHOD FOR PREPARING METAL ALUMINUM HYDRIDE COMPOUNDS

Mario D. Banus, Topsfield, Mass., assignor to Metal Hydrides Incorporated, Beverly, Mass., a corporation of Massachusetts

No Drawing. Filed Mar. 11, 1960, Ser. No. 14,190
7 Claims. (Cl. 23—14)

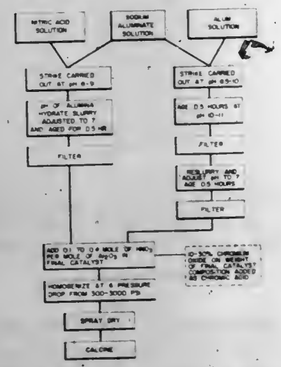
1. The method for preparing a metal aluminum hydride having the formula $M(AlH_4)_x$ where M is a metal selected from the group consisting of alkali metals and alkaline earth metals and x is the valence of the selected metal which comprises heating in a confined reaction zone a material selected from the group consisting of alkali metals, alkaline earth metals and hydrides of such metals with finely divided aluminum metal and finely divided zinc metal as a reaction promoter in an amount from about 0.1 to 25 percent by weight based upon the weight of said selected material used in an inert liquid carrier at a temperature above about 100° C. but below the decomposition temperature of the metal aluminum hydride in the presence of hydrogen under superatmospheric pressure above about 2500 p.s.i. while agitating the mixture until reaction between said selected material, aluminum and hydrogen is complete.

3,124,418

PROCESS FOR PREPARING HIGH DENSITY FLUID ALUMINA BASE CATALYST MATERIAL

Thomas J. Malley, Stamford, Conn., and Harvey D. Schindler, Brooklyn, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

Original application Nov. 15, 1957, Ser. No. 696,664, now Patent No. 3,032,514, dated May 1, 1962. Divided and this application July 11, 1961, Ser. No. 123,267
6 Claims. (Cl. 23—143)



1. A method of producing alumina suitable for use in fluid catalyst materials having high density and good attrition resistance which comprises precipitating a hydrated alumina from an aqueous solution of a water-soluble alkali metal aluminum compound by admixture therewith of a neutralizing agent selected from the group consisting of alum and a mineral acid, at a pH of from 8 to 10, ageing said precipitate at a pH of from 6.5 to 11 for at least 0.25 hour, filtering and washing said hydrated alumina free from contaminating salts, adding an inorganic acid selected from the group consisting of nitric acid and hydrochloric acid to said final filter cake hydrated alumina, said acid being added thereto in relative amounts of from 0.1 to about 0.4 mole per mole of alumina as Al_2O_3, densifying said acid containing hydrated alumina so that upon drying it will have a density above 0.8 cc. per gram by homogenizing to an extent corresponding to that obtained by passing said alumina through a homogenizing valve at a pressure drop from about 300 to about 3000 p.s.i. and spraying the resulting product into a current of hot gases.

3,124,419

PURIFICATION OF PHOSPHORIC ACID

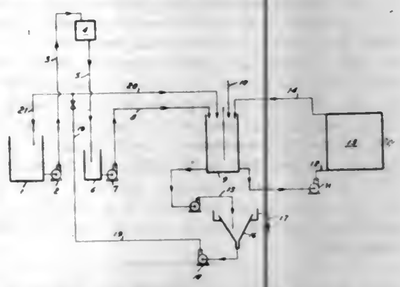
Louis Germain, Tassin, and Pierre Desire, Saint Claire-du-Rhone, France, assignors to Societe Progil, Paris, France

Filed Nov. 29, 1961, Ser. No. 155,650
Claims priority, application France Apr. 20, 1961
5 Claims. (Cl. 23—165)

1. In a process for the manufacture of phosphoric acid comprising reacting calcium phosphate with an aqueous solution of sulfuric acid to produce a suspension of calcium sulfate in phosphoric acid containing from 250 to 450 grams of P_2O_5 per liter, the sulfuric acid being reacted in excess such that said suspension contains from 10 to 50 grams per liter of sulfuric acid, the improvement comprising purifying said phosphoric acid by

separating a phosphoric acid containing solution from the calcium sulfate precipitated during the reaction;

admixing said solution with (1) a calcium compound the calcium sulfate precipitated during the reaction; in an amount at least equal to the stoichiometric quantity required for reaction with the sulfuric acid present in said solution to produce calcium sulfate, and (2) a precipitating agent comprising crystalline calcium sulfate dihydrate in an amount of at least 50 grams per liter of said solution;



agitating the resulting mixture and simultaneously cooling the same to temperatures within the range of from 0° to 50° C. to precipitate calcium sulfate therefrom; and

separating the resulting purified aqueous solution of phosphoric acid from the last mentioned calcium sulfate precipitate.

3,124,420

MANUFACTURE OF PYROPHOSPHORYL CHLORIDE

Rudolf G. Grautigam, New Brunswick, N.J., assignor to The American Agricultural Chemical Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 5, 1960, Ser. No. 73,539
10 Claims. (Cl. 23—203)

1. A method of preparing pyrophosphoryl chloride which comprises, in a first contacting operation contacting a solution of yellow phosphorus in an inert solvent with a gas consisting essentially of gaseous oxygen, thereupon in a second contacting operation contacting said solution with a gaseous mixture consisting essentially of chlorine and oxygen until said solution is substantially saturated with oxygen, in a third contacting operation contacting said solution with a gas consisting essentially of gaseous chlorine until the resulting chlorination reaction is substantially completed and fractionating the resulting reaction mixture to separate pyrophosphoryl chloride therefrom as product, the total amount of chlorine consumed in the aforesaid contacting operations being less than three atoms of chlorine per atom of phosphorus, the total amount of oxygen consumed in the aforesaid contacting operation being greater than one atom of oxygen per atom of phosphorus, the amount of oxygen consumed in said first contacting operation being in the range 8–20% by weight of said total amount of oxygen consumed and the amount of chlorine consumed in said second contacting operation being in the range 8–20% by weight of said total amount of chlorine consumed, the aforesaid contacting operations being carried out at a temperature in the range 65–150° C. and at substantially atmospheric pressure.

3,124,421

PROCESS FOR MANUFACTURING HYDROGEN PEROXIDE

Werner Lohringer and Johann Sixt, both of Munich, Bavaria, Germany, assignors to Wacker-Chemie G.m.b.H., Munich, Bavaria, Germany, a corporation of Germany

No Drawing. Filed July 27, 1959, Ser. No. 829,495
Claims priority, application Germany Sept. 16, 1958
8 Claims. (Cl. 23—207)

1. Process for producing hydrogen peroxide which comprises reacting an organic peracid selected from the group consisting of peracetic and perpropionic acids with an aliphatic primary alcohol having 1 to 4 carbon atoms in the presence of an acidic esterification catalyst selected from the group consisting of sulphuric acid, phosphoric acid, and a strongly acidic cation-exchange resin at a temperature below 100° C. and separating the resulting organic ester from the hydrogen peroxide.

3,124,422

SYNTHESIS OF DIAMONDS

Jan F. H. Custers, Bernard W. Senior, Henry B. Dyer, and Peter T. Wedepohl, all of Johannesburg, Transvaal, Republic of South Africa, assignors to Adamant Laboratories (Proprietary) Limited

Filed July 20, 1961, Ser. No. 125,565
3 Claims. (Cl. 23—209.1)

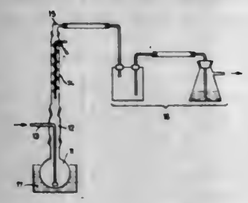
1. In a process for synthesizing diamonds by forming a saturated solution of carbon in a solvent and subjecting the saturated solution simultaneously to high pressure and temperature to bring the solution into that zone of the diamond-graphite equilibrium diagram in which diamond is the stable phase of carbon, thereby causing carbon to precipitate out of the solution in the form of diamond; the steps of subjecting a mixture of carbon and solvent to pressure and temperature to melt the solvent while the mixture is in the zone of the equilibrium diagram in which graphite is the stable phase, increasing the temperature and pressure to bring the solution into the diamond zone; maintaining both temperature and pressure constant at their required level for a period of time, then decreasing the temperature; and finally reducing the pressure to atmospheric.

3,124,423

METHOD OF PURIFYING ELEMENTAL PHOSPHORUS FOR SEMICONDUCTOR USES

Hans Merkel and Siegfried Leibenzeder, Erlangen, Germany, assignors to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt and Erlangen, Germany, a corporation of Germany

Filed Oct. 30, 1962, Ser. No. 234,168
Claims priority, application Germany Nov. 2, 1961
8 Claims. (Cl. 23—223)



1. The method of removing electronically injurious impurities from phosphorus, which comprises subjecting phosphorus to impurity-oxidizing acidic treatment with nitric acid of 10 to 50% concentration at a temperature of 45 to 100° C., and distilling the acid-treated phosphorus with steam.

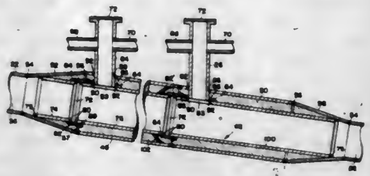
3,124,424

HIGH TEMPERATURE THERMAL CRACKING

Daniel Hartley, Summit, and Norman W. Nelson, Union, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed May 23, 1960, Ser. No. 30,890
8 Claims. (Cl. 23—262)

4. An apparatus of the character described which includes a transfer line for receiving high temperature fluids, a tubular member of larger diameter than said transfer line surrounding a quench section of said transfer line and spaced therefrom, means for sealing the ends of said tubular member to said transfer line, said transfer line including a plurality of sections spaced apart and forming a smooth flow path therethrough, slip joint



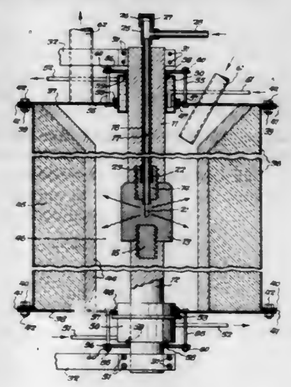
means surrounding said spaces between said sections and being rigidly secured to one section only of each pair of sections and slidably mounted on the adjacent section of each pair.

3,124,425

REACTION FURNACE

Mark Richelsen, 400 Prospect Ave., Medina, N.Y.

Filed Oct. 30, 1958, Ser. No. 770,740
9 Claims. (Cl. 23—277)



1. A gas heating device comprising a porous diffusion section of carbon having a cavity therein having an entrance on the exterior thereof, a tubular carbon electrode section electrically joined to said diffusion section adjacent the entrance to said cavity, and a solid carbon electrode section electrically joined to said diffusion section at a point removed from said entrance, said electrode sections having lower resistance than said diffusion section and being adapted for separate connection to a source of electrical current.

3,124,426

PROCESS FOR TREATING PHOTOSENSITIVE INDIUM SULFIDE COMPOSITIONS

Georges Offergeld, Brussels, and Jean Leon Van Cakenberghe, Lot-Beersel, Belgium, assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed May 25, 1961, Ser. No. 112,499
2 Claims. (Cl. 23—293)

1. A process for improving the photosensitive properties of a photosensitive indium sulfide composition selected from the group consisting of (*a*) a tetragonal crystalline form of indium sesquisulfide; (*b*) a tetragonal crystalline form of indium sesquisulfide containing less than two atom percent in the aggregate of one or more elements selected from the group consisting of copper, silver, gold, zinc, cadmium, mercury, germanium, tin, lead, nitrogen, phosphorus, arsenic, antimony, fluorine, chlorine, bromine, and iodine; (*c*) indium sesqui-

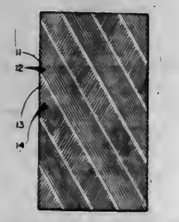
sulfide and a chalcogenide of at least one element selected from the group consisting of zinc, cadmium, mercury, gallium, thallium, aluminum, and divalent lead, the ratio of the number of molecules of chalcogenide to the number of molecules of indium sesquisulfide being between 0.1 and 1.5; (*d*) indium sesquisulfide, a chalcogenide of at least one element selected from the group consisting of zinc, cadmium, mercury, gallium, thallium, aluminum, and divalent lead, the ratio of the number of molecules of chalcogenide to the number of molecules of indium sesquisulfide being between 0.1 and 1.5, and less than two atom percent in the aggregate of at least one element selected from the group consisting of copper, silver, gold, zinc, cadmium, mercury, germanium, tin, lead, nitrogen, phosphorus, arsenic, antimony, fluorine, chlorine, bromine, and iodine, which process comprises maintaining said composition at a temperature between about 750 and about 950° C. for at least one hour; decreasing the temperature of said composition to about 700° C. at a rate less than about 200° C. per hour; adjusting the temperature of said composition to about 250° C.; and then decreasing the temperature of said composition to about 250° C. to room temperature at a rate between about 1 and about 20° C. per hour, said composition being maintained under a saturating sulfur pressure throughout said process.

3,124,427

THROUGH-WALL FLASHING STRUCTURES HAVING A SPECIFIC GROOVE ARRANGEMENT

Harry Chomes, 29 Jameson Road, Newton 58, Mass.

Filed Apr. 26, 1961, Ser. No. 105,749
11 Claims. (Cl. 29—183)



1. A rectangular strip of flexible water-resistant metal having spaced, non-intersecting grooves on its top surface and corresponding ridges on its bottom surface; the grooves being arranged as arrays in two sets of parallel bands; each band of one set alternating with and being adjacent to a band of the second set; the array of grooves in any band extending the length of the band; the spacing between adjacent grooves being uniform in all bands; all bands being of uniform width and having uniform longitudinal margins which are flat on both surfaces; all the grooves in one set being at a first identical angle of less than 90° with respect to the width of the strip; all the grooves in the second set being at a second identical angle which is the supplement to said first angle.

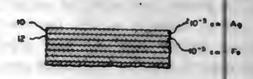
3,124,428

HIGH STRENGTH STRUCTURAL MATERIAL

Ernest Rabinowicz, Waltham, Mass., assignor to Alloyd Research Corporation, Watertown, Mass., a corporation of Massachusetts

Filed Nov. 23, 1959, Ser. No. 854,905
4 Claims. (Cl. 29—183.5)

1. A structural product comprising a multiplicity of discrete sequential strata bonded together, each adjacent pair of discrete sequential strata including a first stratum composed of a first material and a second stratum composed of a second material, said first material and said second material being incompatible, the boundary between said first material and said second material being sharp, at least fifty of said discrete sequential strata



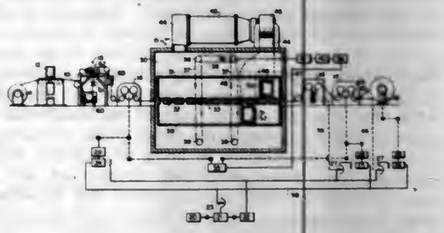
each being composed of an inorganic material and ranging in thickness from 10^{-7} to 10^{-4} centimeters, said inorganic material being metallic.

3,124,429

WEB AND STRAND TREATING APPARATUS

Alexander V. Alexeff, Cleveland, and Howard R. Richards, Lakewood, Ohio, assignors to Industrial Ovens, Incorporated, Cleveland, Ohio, a corporation of Ohio

Filed Feb. 21, 1958, Ser. No. 716,791
5 Claims. (Cl. 34—48)



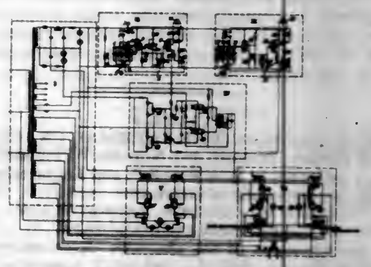
1. In continuous and semi-continuous strip treating apparatus for heating a strip to a desired temperature and simultaneously stretching said strip to a desired degree, heating means for heating a strip at a controllable and variable rate, means to feed said strip through said heating means, measuring means for measuring the stretch occurring in the strip being fed, means responsive to said measuring means for varying the heating rate of said variable-rate heating means as an inverse function of the amount by which stretch occurring during feeding of said strip through said heating means exceeds or falls short of said desired degree of stretching, and means for maintaining a constant tension on said strip in said heating means.

3,124,430

APPARATUS PERMITTING THE DETERMINATION OF THE PERCENTAGE OF MOISTURE CONTAINED IN NON-CONDUCTING OR SEMI-CONDUCTING MATERIALS AND THE AUTOMATIC CONTROL OF MACHINES TREATING SUCH MATERIALS

Henri Eicken, 5 Chemin Malombre, Geneva, Switzerland

Filed May 18, 1960, Ser. No. 29,861
7 Claims. (Cl. 34—56)



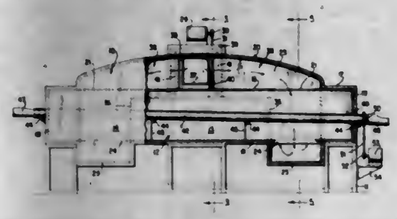
1. Apparatus for determining simultaneously at two separate locations the moisture content of material being treated, in which the material changes, its electrical characteristics between conducting and insulating states, for the automatic control of the treatment of the material, said apparaus comprising at least two electrically separated and independent measuring means, each of said means being operatively associated with the material being treated to produce characteristic electrical signals representing the respective moisture content of the material at the location being measured, means connected to both said means and operative in dependence upon the said characteristic signals to provide control signals dependent upon the difference between a previously chosen value for the moisture content and the actual moisture measured at the different locations and means responsive to the control signals of the last said means to control the moisture content of the material as the latter is treated such that the moisture content of the treated material corresponds substantially to the first mentioned chosen value of the moisture content.

3,124,431

DRIER APPARATUS FOR LOOM DROP WIRES

Samuel L. Huffman and Richard J. Irwin, Greenville, S.C., assignors to Carolina Plating & Stamping Company, Greenville, S.C., a corporation of South Carolina

Filed May 9, 1961, Ser. No. 108,897
1 Claim. (Cl. 34—131)



A drier apparatus for loom drop wires comprising a main drier chamber which is horizontally elongated, rectangular in cross section and laterally narrow in comparison to its vertical height, said main drier chamber having substantially aligned inlet and outlet openings in the top and bottom walls thereof near and inwardly of its opposite ends, an elongated small diameter, cylindrical, foraminous, open-ended drier tube extending longitudinally through said main chamber and disposed centrally therein at a slight angle of inclination to the horizontal and disposed substantially midway between the top and bottom walls of said chamber, small diameter tumbler rod elements secured to the interior surface of said drier tube in circumferentially spaced relation and extending longitudinally of said tube, roller bed supporting means for said drier tube supporting the same, freely rotatably upon and within the main drier chamber, power means connected with said drier tube to rotate it upon its longitudinal axis, a pair of generally horizontal baffle plates in the main drier chamber on diametrically opposite sides of the drier tube and having inner edges disposed close to said tube and parallel thereto and substantially coextensive therewith lengthwise of said tube, an elongated cowling overlying said main drier chamber and being of the same width as the drier chamber and extending thereabove and extending continuously for the major portion of the length of the main drier chamber and having its end portions in direct communication with the main drier chamber through said inlet openings of the latter, said cowling having a side opening at the longitudinal center thereof, an upper horizontal duct adjacent one side of said cowling and being substantially coextensive therewith lengthwise and horizontally and communicating with said cowling through said side opening, a blower within said duct having an outlet nozzle close to and in alignment with said side opening and having a pair of inlets at the opposite sides of said blower near the longitudinal center of said duct and facing the opposite ends of said duct, power means on said duct connected with said blower to operate it, a pair of electrical heating elements within said duct in closely spaced relation to the inlets of said blower, and a pair of generally U-shaped ducts extending substantially vertically in underlying relation to the end portions of the upper horizontal duct and in open communication with such end portions and extending beneath end portions of the main drier chamber and having inlets in registration with the outlet openings of the drier chamber, whereby air from said blower circulates in opposite longitudinal directions through said cowling, into and through said main drier chamber and tube and then into said U-shaped and horizontal ducts and back to said pair of blower inlets.

3,124,432

FUEL IGNITER

Chalmus C. Gentry, Vanderburgh County, Ind., assignor to Gentry, Inc., Lafayette, Ind., a corporation of Indiana

Filed Feb. 12, 1959, Ser. No. 792,905
5 Claims. (Cl. 44—40)

1. An article of manufacture comprising at least two flammable containers each having an open end, a layer of petroleum wax and a layer of fine cut wood disposed within each of said flammable containers, said petroleum wax layer being above said fine cut wood layer and at said open end of each of said flammable containers, and said flammable containers each having a rim extending above said petroleum wax layer serving as a starting wick, and another volume of fine cut wood disposed between said flammbale containers.

3,124,433

DIESEL OILS

Jacques Riegert and Emmanuel Siganos, Notre-Dame-de-Gravenchon, France, assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Nov. 14, 1960, Ser. No. 69,049
3 Claims. (Cl. 44—57)

1. An improved fuel oil composition which reduces the tendency of the fuel oil to smoke, increases engine efficiency, and reduces fuel consumption, said composition consisting essentially of a hydrocarbon fuel oil containing from 0.001 to 0.2% by weight of an additive composition, consisting of from 20 to 35% by weight of a lead alkyl compound, and from 65 to 80% by weight of an alkanolamine.

3,124,434

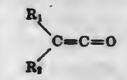
METHOD FOR IMPROVING ANTIKNOCK QUALITY OF GASOLINES

Robert W. Malone, Rahway, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Aug. 26, 1960, Ser. No. 52,041
13 Claims. (Cl. 44—69)

1. A process for the improvement of motor fuels, which process comprises:

treating a gasoline with a minor amount sufficient to improve the antiknock response of said fuel of an organic ketene having the formula:



wherein R_1 and R_2 are selected from the group consisting of hydrogen and aliphatic, unsubstituted alicyclic and aromatic radicals whereby the treated fuel

exhibits an enhanced responsiveness to lead antiknock additives.

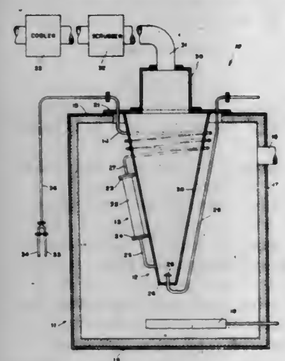
2. A process as defined in claim 1 wherein said fuel prior to treatment contains a minor amount sufficient to reduce knock of a lead antiknock agent whereby said treatment improves the octane quality of said leaded fuel.

3,124,435

METHOD AND APPARATUS FOR GENERATING COMBUSTIBLE GAS

William H. Byrne, 47—21 41st St., Long Island City, N.Y., and John H. Sadler, Bolton, Conn. (Lakeside Lane, R.F.D. 1, Vernon, Conn.)

Filed Jan. 21, 1960, Ser. No. 3,810
4 Claims. (Cl. 48—105)



2. Apparatus for converting liquid hydrocarbons into gaseous products comprising means for mixing hydrocarbon feed with water to form an emulsified product, a catalytic chamber, means for passing said emulsified product only through said catalytic chamber, a vertically disposed conversion chamber tapering from the upper terminal end thereof to the lower terminal end thereof, the diameters of the upper and lower terminal ends of said conversion chamber being about 2.5" and 0.5" respectively and the length of said conversion chamber being about 24 times the diameter of the upper terminal end of said conversion chamber, means connecting the lower terminal end of said conversion chamber with said catalytic chamber for passing the catalyzed emulsified product to said conversion chamber, means for injecting superheated steam into the lower end of said conversion chamber, means for heating said chambers to pyrolytic temperatures, and means for removing gaseous products from the upper terminal end of said conversion chamber.

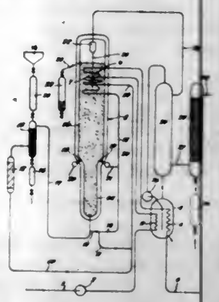
3,124,436

GASIFICATION OF HYDROCARBON-CONTAINING OILS

Frederick James Dent, Solihull, and Lionel Arthur Moignard, Olton, Solihull, England, assignors to The Gas Council, London, England

Filed July 20, 1959, Ser. No. 828,297
Claims priority, application Great Britain July 21, 1958
5 Claims. (Cl. 48—213)

1. A process for the gasification of oil consisting of petroleum hydrocarbons having an average of 4 to 10 carbon atoms and of which at least 70 percent consist of aliphatic hydrocarbons to produce non-alkylated aromatic hydrocarbons and gaseous saturated hydrocarbons, said process comprising the steps of first passing said oil and a gas comprising mainly hydrogen at the rate of at least 10 gallons of oil per 1000 cubic feet of hydrogen, when measured at 60° F. and 30 inches of mercury pressure saturated, and under a pressure of at least 10 atmospheres through a first bed of particulate solid material maintained in the fluidized stage by the gas and having a temperature within the range of 700° C. to 800° C. for heating said oil and said gas to produce a gaseous mixture comprising alkylated and non-alkylated aromatic hydrocarbons and saturated and unsaturated gaseous hydrocarbons, and thereafter passing said gaseous mixture in admixture with a further proportion of said gas through a second fluidized bed of solid particulate material having



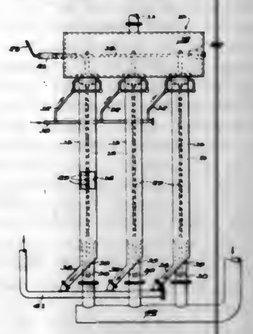
a temperature within the range of 700° C. to 850° C. and under a pressure of at least 10 atmospheres, the said further proportion of said gas containing a quantity of hydrogen such that the sum of the quantities of said hydrogen and of the hydrogen supplied to the first fluidized bed amounts to 1000 cubic feet for every 5 to 10 gallons of oil supplied to the first fluidized bed and such that the alkylated aromatic hydrocarbons are dealkylated and the unsaturated gaseous hydrocarbons are converted into saturated gaseous hydrocarbons.

3,124,437

METHOD OF OPERATING A HIGH VELOCITY IRRIGATED PRECIPITATOR

John S. Lagarias, Pittsburgh, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

Filed Oct. 10, 1961, Ser. No. 144,133
1 Claim. (Cl. 55—13)



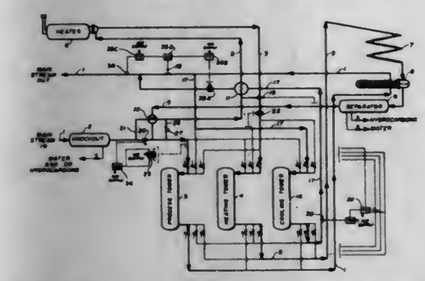
The process of separating suspended particles from gases comprising the steps of passing a stream of gas to be treated at a temperature in the range of between 370° F. and 750° F. between a cylindrical collecting electrode surface having an aqueous film uniformly applied thereover and an axially disposed discharge electrode having barbs thereon spaced about 1 inch apart, and applying a voltage to said discharge electrode in excess of 50 kilovolts, said stream of gas having a rate of flow between 20 and 60 feet per second and a residence time of less than 0.75 second.

3,124,438

PROCESS AND APPARATUS FOR RECOVERING HYDROCARBON FROM GAS STREAMS

Charles A. Lavery, Tulsa, Okla., assignor to National Tank Company, Tulsa, Okla., a corporation of Nevada

Filed Dec. 16, 1960, Ser. No. 76,191
22 Claims. (Cl. 55—20)



1. The method of recovering condensable hydrocarbons from a main flow stream of natural gas which includes;

contacting a bed of adsorbent material with the main flow stream of natural gas, whereby condensable hydrocarbons are adsorbed by the bed material;

heating a reactivation flow stream of natural gas, whereby the vaporizing capacity of the reactivating flow stream is raised;

contacting the bed of adsorbent material with the heated reactivation flow stream;

cooling the reactivation flow stream to its dew point, whereby condensable hydrocarbons are recovered;

diverting at least a portion of the main flow stream after the stream has hydrocarbons adsorbed from it;

cooling the bed with the diverted portion of the main flow stream, whereby the bed is prepared to be again contacted with the main flow stream of natural gas to remove hydrocarbons from the main flow stream by adsorption;

returning the diverted portion of the main flow stream to the undiverted remainder of the main flow stream;

establishing a control signal varying in accordance with a predetermined program for the flow of the diverted portion of the main flow stream which will reduce the temperature of the cooled bed at a predetermined rate to that temperature which will prepare the bed to be again contacted with the main flow stream of natural gas;

and utilizing the established control signal to regulate the size of the diverted portion of the main flow stream cooling the bed.

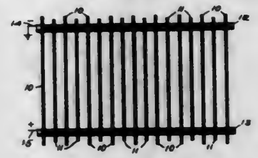
3,124,439

COLLECTOR CELLS FOR ELECTROSTATIC PRECIPITATORS

Earl G. Rittenhouse, Canton, Mass., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Mar. 3, 1961, Ser. No. 93,203
2 Claims. (Cl. 55—143)

1. A collector cell for an electrostatic precipitator comprising a plurality of parallel, aligned, spaced-apart, metal collector plates, alternate ones of said plates having aligned circular openings extending therethrough, a tube of thermo-setting plastic extending through said openings with the edges of said alternate plates around said openings embedded in the wall of said tube, a first conductor within said wall in contact with said edges, the others of said plates having openings through which said tube passes, the edges of said other plates around said last mentioned openings being spaced from said conductor, said other plates having aligned circular openings extending therethrough, a second tube of thermo-setting plastic extending through said last mentioned openings, the edges of said other plates around said last mentioned openings being embedded in the wall of said second tube,



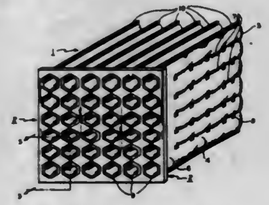
a second conductor within said wall of said second tube in contact with said edges of said other plates, said alternate plates having openings through which said second tube passes, the edges of said alternate plates around said last mentioned openings being spaced from said second conductor.

3,124,440

POCKET-TYPE FILTER STRUCTURE

George W. Hogg, Louisville, Ky., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware

Filed Apr. 20, 1961, Ser. No. 104,357
3 Claims. (Cl. 55—484)



1. A pocket type fluid filter comprising:

(*a*) spaced pleats of flexible filtering material with each pleat divided into at least two pocket members having an open-end mouth immediately adjacent opposite supporting portions of said pleat;

(*b*) frame means including a plurality of spaced parallel rows of spaced apertures;

(*c*) a plurality of pairs of separate contiguous skirt strips of pliant materal;

(*d*) each of said skirt strip pairs being fastened to said opposite supporting portions of a pleat and bent one with respect to the other in mirror image form to displace said supporting portions in continuously running successively opposed crests and valleys to form apertures substantially in alignment with said pocket members of said pleat and in conformation in shape to the apertures of said frame; and,

(*e*) apron means to fasten said skirt strip pairs to said frame to extend along the periphery of the aperture rows in said frame so that the apertures formed by each of said skirt strip pairs in a pleat are substantially aligned with the spaced apertures of an aperture row of said frame.

3,124,441

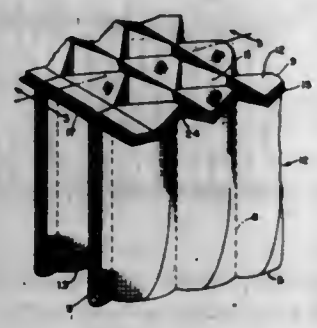
POCKET-TYPE FILTERS

Richard D. Rivers, Louisville, Ky., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware

Filed Apr. 17, 1961, Ser. No. 104,200
16 Claims. (Cl. 55—500)

1. A pocket type fluid filter comprising: flexible filtering material including a pair of pleat forming sections

joined together in end-to-end fashion along a common line and having terminal supporting portions remote from said common line, said pleat forming sections being folded to face each other and form a pleat, spaced seams extending across said pleat transverse to said common line to join said facing sections of said pleat and form at least



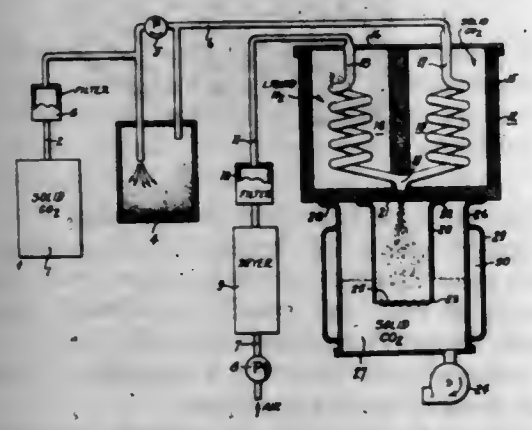
two pocket members having an open-end mouth immediately adjacent said supporting portions, and displacing means co-operable with said supporting portions, said displacing means having portions extending into said mouth to displace said supporting portions and maintain said mouth of said pocket members in opened position to receive a fluid stream to be filtered.

3,124,442

METHOD AND APPARATUS FOR MANUFACTURING AN AEROSOL

Theodore A. Rich, Scotia, N.Y., assignor to General Electric Company, a corporation of New York

Filed Jan. 17, 1962, Ser. No. 166,794
10 Claims. (Cl. 62—10)



1. A method for producing an aerosol comprising the steps of encapsulating particles of size as small as 5×10^{-7} centimeter radius with a sheath of solid material which is characterized by its capacity to sublime, and exposing the encapsulated particles to ambient temperature when the aerosol particles are to be released.

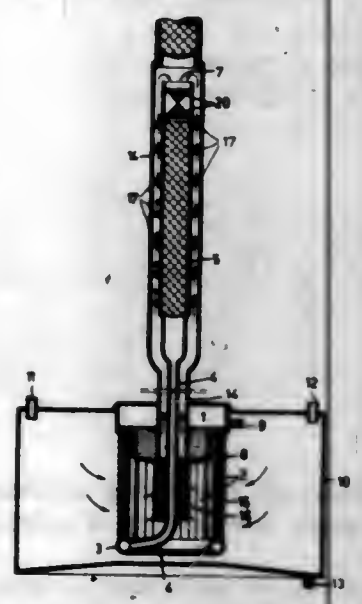
3,124,443

GAS FRACTIONATING SYSTEM

Evert Hellingman and Klaas Roozendaal, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed May 12, 1961, Ser. No. 109,550
Claims priority, application Netherlands May 17, 1960
4 Claims. (Cl. 62—42)

1. A gas fractionating system having a feed gas containing acetylene and producing a product in a liquid state comprising a fractionating column provided at the bottom thereof with a boiling vessel for collecting liquid from said column, a housing having openings therein through which the feed gas to be fractionated is supplied, said boiling vessel being located in said housing, a cage in said housing having a gas permeable wall, said cage depending from and connected to said boiling vessel and being the first cooler for said gas, a second cooler arranged in the path of gas flow toward said fractionating column and cooling the gas further, said second cooler being a plurality of spaced gas-pervious members secured to and in heat exchange with the lower part of said column which collect acetylene and other substances sep-



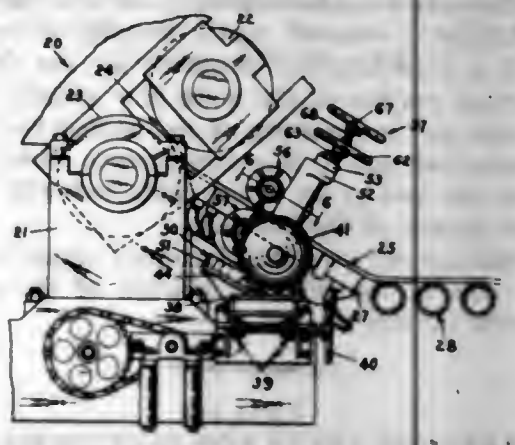
arated out by the freezing of the feed gas flowing through said members, the path of said feed gas being through said openings in said housing, through the gas permeable walls on said cage, along the outer periphery of said column, and through said spaced gas-pervious members secured to said column and into the interior of the latter.

3,124,444

METHOD AND APPARATUS FOR REMOVING EDGES DURING FORMING OF SHEET GLASS

George F. Ritter, Jr., Delmar E. Carney, Roy A. Nyquist, and Alfred H. Miller, Toledo, Ohio, assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio

Filed Mar. 25, 1960, Ser. No. 17,627
13 Claims. (Cl. 65—25)



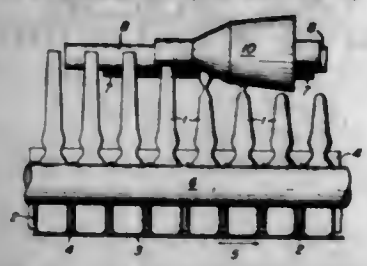
1. Apparatus for forming sheet glass wherein a mass of molten glass is reduced to a continuous sheet of uniform thickness by a pair of counter-rotating forming rolls and the newly formed sheet is conveyed forwardly into an annealing zone, including means disposed in the path of said sheet adjacent said forming rolls for continuously removing the marginal edge portions of said sheet as said sheet advances and while it is in a plastic condition.

12. A method of removing the marginal edge portions from a newly formed continuous sheet of glass while the sheet is still in a plastic condition, comprising advancing said sheet along a predetermined path, supporting said sheet as it advances along said path on a fluid film, and continuously removing the marginal edge portions of the sheet while said sheet is in a plastic condition and is supported on said fluid film.

3,124,445
APPARATUS FOR AUTOMATICALLY SEALING AMPULES

Hideo Tatibana, 23 Showadori-2-chome, Nakano-ku, Tokyo, Japan

Filed Nov. 21, 1961, Ser. No. 153,934
5 Claims. (Cl. 65—270)



2. Apparatus for fusion sealing the open neck portion of a glass ampule, said apparatus comprising means for advancing said ampule in an inclined supported position along a path of advancement with the neck portion of the ampule extending upwardly, means supported proximate the first said means for engaging said ampule to rotate the same as the ampule is being advanced, means located along the path of advancement of the ampule for heating the neck portion thereof to heat soften the same whereby the neck portion of the ampule will sag, means extending in the direction of advancement of the ampule at a location beneath the neck portion for receiving the latter to support and convey the same in the direction of advancement after the neck portion has sagged due to the heating thereof, and a rotatable cone element supported adjacent the means for receiving the sagging neck portion of the ampule and extending in the direction of advancement of the ampule, said cone element having increasing diameters in the direction of advancement of the ampule, said cone element being operatively spaced from the means for receiving the neck portion of the ampule to contact the sagged neck portion and urge the same away from the remainder of the ampule to thereby sever the neck portion from the ampule, said means for heating the neck portion extending beyond the rotatable cone element for fusion sealing the ampule after the neck has been severed.

3,124,446
CONTROLLING THE GROWTH OF UNDESIRED VEGETATION

Margaret D. Cameron, Beaumont, Tex., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Oct. 9, 1958, Ser. No. 766,204
9 Claims. (Cl. 71—2.3)

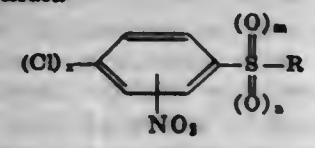
1. A method for the control of undesired vegetation which comprises applying to said vegetation a growth inhibiting amount of an acetylenic alcohol selected from the class consisting of 1-ethynylcyclohexanol and 1-(1-propynyl)cyclohexanol.

3,124,447
METHOD OF CONTROLLING VEGETATION

Robert J. Wineman, Concord, Mass., and Gino J. Marco, Webster Groves, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Aug. 10, 1959, Ser. No. 832,494
18 Claims. (Cl. 71—2.3)

1. A method of controlling undesired plants which comprises applying to the locus to be protected, in an amount sufficient to exert a herbicidal action, a compound of the formula



wherein R is an aliphatic radical selected from the group consisting of alkyl, alkenyl, alkynyl, alkoxyalkyl and alkylthioalkyl radicals having up to five carbon atoms in an unbroken chain and x, m and n are integers of from 0 to 1, provided that when m and n are 0 then x is 0.

3,124,448
HEALING OF WOUNDS IN PLANT PRODUCTS

Gestur Johnson, Dept. of Chemistry, Endocrine Section, Colorado State University, Fort Collins, Colo.

No Drawing. Filed Jan. 4, 1961, Ser. No. 80,538
Claims priority, application Germany Jan. 6, 1960
8 Claims. (Cl. 71—2.4)

1. Composition for healing wounds in plant products, comprising a carrier; 2,4,5-trihydroxybenzoic acid in an amount sufficient when applied to a plant wound to promote healing of the same and hydrogen peroxide.

3,124,449
METHOD AND COMPOSITION FOR THE TREATMENT OF SOIL

Joyce D. Nault, Garden Grove, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed May 31, 1960, Ser. No. 32,524
7 Claims. (Cl. 71—2.7)

1. A method useful for the purpose of inhibiting the growth of seeds and seedlings and destroying soil inhabiting invertebrate organisms which comprises applying to and mixing with soil 1,6-dichloro-2,4-hexadiyne as an active agent in the amount of at least 0.1 part by weight per million parts by weight of the soil.

3,124,450
PURIFICATION OF METALS

Richard K. Matuschkovitz, Chicago, and Henning J. Christensen, Addison, Ill., assignors to Chemetron Corporation, Chicago, Ill., a corporation of Delaware

No Drawing. Filed Jan. 13, 1961, Ser. No. 82,405
5 Claims. (Cl. 75—57)

1. Method of desulfurizing iron which comprises forming a layer of calcium carbide on the bottom of a cupola furnace below the coke bed and the tuyere level of the furnace, continuously melting iron in the melting zone of the cupola, continuously flowing the resultant molten iron downward below the tuyere level into the well of the cupola where it contacts the calcium carbide, the calcium carbide being in the form of solid pieces through which the molten iron circulates, thereby causing intimate contact between the molten iron and the calcium carbide to diminish the sulfur content of the iron by reaction with said calcium carbide, then removing said molten desulfurized iron from contact with the said calcium carbide by withdrawing the iron from the cupola.

3,124,451
MANGANESE-BASE BRAZING ALLOYS

Arthur T. Cape, Monterey, Calif., assignor to Coast Metals, Inc., Little Ferry, N.J., a corporation of Delaware

No Drawing. Filed Jan. 4, 1962, Ser. No. 164,411
5 Claims. (Cl. 75—134)

2. A brazing alloy consisting of the following elements, within the ranges stated:

	Percent
Manganese	63.0–69.0
Nickel	14.0–18.0
Cobalt	14.0–18.0
Boron	0.05–1.1
Silicon	max. 1.0
Carbon	max. .06
Other elements	max. 1.0

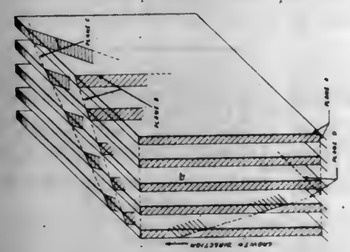
4. A brazing alloy consisting of about 63 to about 69% manganese, about 14 to about 18% nickel, and about 14

to about 18% cobalt, said alloy being resistive to substantial age hardening at temperatures of 1000° F. for prolonged periods.

3,124,452
UNIDIRECTIONAL SOLIDIFICATION OF LAMELLAR EUTECTIC ALLOYS

Ralph W. Kraft, Glastonbury, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Sept. 30, 1960, Ser. No. 59,556
24 Claims. (Cl. 75—135)



1. The method of forming anisotropic polyphase alloys having a microstructure of eutectic composition in which lamellae of one phase of the eutectic are imbedded in another phase of the eutectic, said lamellae being substantially parallel to a common direction over extended distances of up to several inches, said method comprising establishing a eutectic alloy which is selected from that class of eutectics which solidify in the form of three-dimensional lamellae of one of the phases imbedded in another phase, heating the composition to a temperature above the eutectic temperature to melt at least a portion thereof throughout its entire cross-sectional area and to establish a liquid-solid interface, unidirectionally solidifying at the liquid-solid interface by moving the interface in a direction such as to give the desired lamellar orientation, subjecting the interface to a cooling medium while the interface is moving in said direction to thereby solidify the alloy at said interface, and regulating the solidification rate and the thermal gradient of the liquid at the liquid-solid interface so that the ratio of the thermal gradient in the liquid phase at the solid-liquid interface to the solidification rate is between about 0.1 and 1000° C./cm.² hr. to thereby form upon solidification phase-lamellae which are normal to the liquid-solid interface and parallel to the growth direction over extended distances of up to several inches.

3,124,453
BRAZING ALLOY

Arthur T. Cape, Monterey, Calif., assignor to Coast Metals, Inc., Little Ferry, N.J., a corporation of Delaware

No Drawing. Filed Nov. 21, 1961, Ser. No. 154,030
2 Claims. (Cl. 75—151)

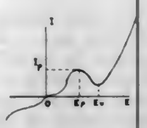
1. A brazing alloy consisting of from about 4.00% to about 5.8% silver, zinc in an amount of from about 0.005% to about 0.5%, and copper in an amount of about 0.1% to about 0.45%, the combined percentage of zinc and copper being from about 0.2% to about 0.55%, the balance of the alloy being substantially all cadmium, said alloy having a melting point of about 675° F., and a shear strength of from about 15,000 to about 18,500 pounds per square inch.

3,124,454
METHOD OF MAKING SILICON CARBIDE NEGATIVE RESISTANCE DIODE

Irvin Berman, Swampscott, Mass., assignor to the United States of America as represented by the Secretary of the Air Force

Filed June 20, 1961, Ser. No. 118,477
1 Claim. (Cl. 75—177)
(Granted under Title 35, U.S. Code (1952), sec. 266)



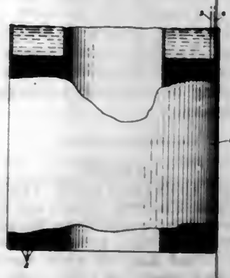


The process of fabricating a diode exhibiting in the 500° C. to 700° C. temperature range a negative resistance characteristic terminating at approximately 0.6 volt in the forward direction comprising the steps of: preparing a 1.0 mm. thick platelet of silicon carbide semiconductor of n-type conductivity sufficiently doped to provide a resistivity of 10^{-1} to 10^{-2} ohm-centimeter, placing an ohmic contact to one side of said platelet, placing an aluminum disc of approximately 1.0 mm. diameter and 0.5 mm. thickness on the other side of said platelet opposite said ohmic contact, heating the resultant structure at a temperature of about 1800° C. maintained for about 20 seconds in a furnace charged with the atmosphere of an inert gas, and removing the heat and allowing cooling to room temperature so that at said other side of said platelet a silicon carbide p-n junction is formed.

3,124,455
FABRICATION OF Nb_3Sn SUPERCONDUCTING ELEMENT

Ernest Buehler, Chatham Township, Morris County, and John E. Kunzler, Washington, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Jan. 9, 1961, Ser. No. 81,400
18 Claims. (Cl. 75—214)



1. Method for fabricating a superconducting element comprising the steps of filling a hollow metallic member with powdered material comprising powder of a composition selected from the group consisting of (1) Nb_3Sn and (2) niobium and tin, mechanically reducing the said member together with contents at least 60 percent and heating at a temperature of from about 500° C. up to about 1500° C. and for a time of from about two hours up to about fifty hours sufficient to produce a continuous superconducting current path of Nb_3Sn along the length of the said member.

3,124,456
ELECTROSTATIC PRINTING

Thomas H. Moore, Franklin Park, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed Dec. 2, 1959, Ser. No. 856,841
5 Claims. (Cl. 96—1)

1. A method of electrostatic printing comprising the steps of exposing a photoconductive insulating layer to an electromagnetic radiation image, said layer having an insulating coating on and integral with one surface thereof, the volume under the exposed areas of said layer combining in series with the volume of said coating under the same said areas to provide at least one electrical network having a predetermined time constant, equal to $R_L(C_1+C_p)$ wherein: R_L is the resistance of the volume under an exposed area of said layer, C_i is the capacitance of the volume of said coating under the same said area and C_p is the capacitance of the volume of said layer under the same said area, C_i being substantially larger than C_p, applying an electric field across said layer and said coating for a time about equal to

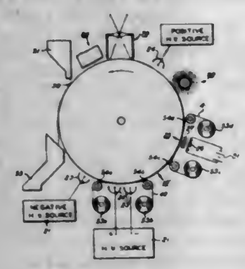
$$\frac{R_L R_D(C_1+C_p)\ \ln R_D/R_L}{R_D-R_L}$$

R_D being the resistance of the same volume of said layer when unexposed and having a value at least 10 times the value of R_L, to provide an electrostatic image on said coating, and developing said electrostatic image by applying thereto a finely-divided developer substance.

3,124,457
DIFFERENTIAL IMAGE TRANSFER SYSTEM

Frederick A. Schwertz, Pittsford, N.Y., assignor to Xerox Corporation, Rochester, N.Y., a corporation of New York

Filed Apr. 2, 1962, Ser. No. 184,327
12 Claims. (Cl. 96—1)



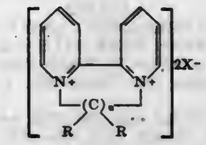
1. An electrostatic apparatus for forming differential images on copy surfaces comprising:
(*a*) an insulating image surface,
(*b*) means to apply two image patterns of opposite polarity electrostatic charge in register with each other to said insulating image surface,
(*c*) means to apply finely divided electroscopic developing particles charged to both polarities to said images, the particles charged to one of said polarities also being magnetic,
(*d*) means to charge the developing particles of both developed image patterns to one polarity,
(*e*) means to transfer a substantial portion of said particles on said images to a first copy surface,
(*f*) and means to magnetically transfer the remaining magnetic particles to a second copy surface.

3,124,458
DIRECT POSITIVE PHOTOGRAPHIC MATERIALS

Douglas James Fry and Bernard Alan Lea, Ilford, England, assignors to Ilford Limited, Ilford, England, a British company

No Drawing. Filed Feb. 23, 1962, Ser. No. 175,318
Claims priority, application Great Britain Mar. 10, 1961
7 Claims. (Cl. 96—101)

1. A direct positive photographic element comprising a fogged gelatino silver chloride emulsion containing a desensitising compound selected from the class consisting of compounds of the formula:



where each R is selected from the class consisting of hydrogen and alkyl of 1 to 4 carbon atoms, *n* is selected from 2, 3 and 4, and X is an anion, and the said compounds in which at least one of the pyridine nuclei carries an alkyl substituent.

3,124,459
ORGANOLEPTIC COMPOSITIONS

Charles Ward Erwin, 228 N. La Salle St., Chicago, Ill.

No Drawing. Filed Mar. 16, 1961, Ser. No. 96,104
11 Claims. (Cl. 99—1)

1. A food composition containing water-soluble compounds of ferrous iron and cupric copper in a ratio of from about 1000:1 to about 1:10 of metallic iron content to metallic copper content, a part of each of said metals being present in the form of an edible water-soluble ionizable salt, the remainder of each being present in the form of an edible water-soluble non-ionizable chelate, said metals in the form of salt making up from about 10 to about 90 percent of the total amount of said metals, said composition further comprising an edible water-soluble phosphate in an amount ranging from about 1 to about 10 parts by weight for each part by weight of said ionizable and non-ionizable compounds, the total added copper content of said food composition being from 0.1 to less than 10 parts per million.

3,124,460
ORGANOLEPTIC COMPOSITIONS

Charles Ward Erwin, 228 N. La Salle St., Chicago, Ill.

No Drawing. Filed Mar. 16, 1961, Ser. No. 96,105
5 Claims. (Cl. 99—1)

1. A food composition containing water soluble compounds of ferrous iron and cupric copper in a ratio of from about 1000:1 to about 1:10 of metallic iron content to metallic copper content, a part of each of said metals being present in the form of an edible water-soluble ionizable salt, the remainder of each being present in the form of an edible water-soluble non-ionizable chelate, said metals in the form of salt making up from about 10 to about 90 percent of the total amount of said metals, the amount of copper being from 0.1 to less than 10 parts per million of said food composition.

3,124,461
PROCESSING OF COTTONSEED

Wilmon W. Meinke and Raymond Reiser, Bryan, Tex., assignors to The Texas A & M Research Foundation, College Station, Tex., a corporation of Texas

No Drawing. Filed Apr. 24, 1961, Ser. No. 104,809
8 Claims. (Cl. 99—2)

1. A process for the preparation of cottonseed flour of reduced gossypol content which comprises subjecting

comminuted cottonseed, at least a portion of which having a particle size in the range of about 5 to 50 microns, containing unruptured pigment glands and having a total volatile and moisture content not in excess of about 10% by weight and a cottonseed oil content not in excess of about 10% by weight, to a substantially-dry, moving, non-deleterious gaseous classifying medium having a velocity sufficient whereby a fraction rich in cottonseed meal is preferentially separated from a fraction rich in said unruptured pigment glands.

3,124,462

PROCESS OF PREPARING AND PACKAGING FRESH PORK SAUSAGE

Virgil W. Vogel and Paul W. Vogel, Pekin, Ill., assignors to Bird Provision Co., Pekin, Ill., a corporation of Illinois

No Drawing. Filed Aug. 10, 1960, Ser. No. 48,561
7 Claims. (Cl. 99—109)

1. A method of preparing pork products, comprising the steps of: boning a freshly slaughtered carcass while still hot into trimmings; grinding desired carcass trimmings while still warm and fluent; mixing the ground trimmings while fluent and above approximately 80° F., mixing to be completed not more than approximately 3½ hours after the carcass has been bled and stuffing the warm and fluent mixed trimmings into air impermeable casings.

3,124,463

METHOD OF MAKING MARGARINE LESS SPATTERING

Gerardus Martinus Maria Houben, and Everhardus Wilhelmus Jonker, Gouda, Netherlands, assignors to N.V. Koninklijke Stearine Kaarsenfabrieken "Gouda-Apollo," Gouda, Netherlands, a corporation of the Netherlands

No Drawing. Filed Aug. 19, 1960, Ser. No. 50,559
Claims priority, application Netherlands Aug. 21, 1959
3 Claims. (Cl. 99—123)

1. A method of reducing the spattering properties of margarine which comprises adding to said margarine up to 0.3% by weight of a partial ester product obtained by heating about two mols of an alcohol selected from the group consisting of alkanols having 8 to 16 carbon atoms, oleyl alcohol, glycerol monoethers of alkanols having 8 to 16 carbon atoms and oleyl alcohol and monofatty acid esters of propylene glycol wherein the fatty acid has 8 to 24 carbon atoms with about one mol of citric acid at a temperature between 100 and 165° C. until a homogeneous mixture is obtained and then reacting another mol of citric acid with the homogeneous mixture and from 0.02% to less than 0.08% by weight of a phosphatide, the amount of said partial ester product being greater than the amount of said phosphatide.

3,124,464

EMULSIFIER BLENDS AND A METHOD FOR IMPROVING FROZEN CONFECTIONS

William H. Knightly and Gabriel P. Lensack, Wilmington, Del., assignors to Atlas Chemical Industries, Inc., Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 31, 1961, Ser. No. 99,717
13 Claims. (Cl. 99—136)

1. A dry, free-flowing emulsifier composition for a frozen confection mix consisting essentially of a blend of a hard partial glyceride emulsifier, said partial glyceride having a minimum melting temperature of at least about 130° F., and a liquid emulsifier which improves the dryness of frozen confections, said liquid emulsifier being a polyoxyethylene derivative of a higher fatty acid ester of a polyhydric alcohol containing from 3 to 6 hydroxyl groups, and said polyoxyethylene compound being present in amounts ranging from about 3 to about 40% by weight of said blend.

8. In a method for making an improved frozen confection, the improvement which comprises incorporating a blend of a partial glyceride emulsifier and a polyoxyethylene sorbitan monooleate in a confection mix prior to freezing the mix, said polyoxyethylene sorbitan monooleate amounting to from about 3 to about 30% by weight of the partial glyceride plus polyoxyethylene compound.

3,124,465

PRODUCTION OF CONDIMENTAL, LIQUID-SAUCE SOY

Hiroshi Watanabe, Choshi-Shi, Japan, assignor to Takara Shoyu Kabushiki Kaisha, Tokyo, Japan, a joint-stock company

No Drawing. Filed Apr. 5, 1961, Ser. No. 100,799
Claims priority, application Japan Apr. 28, 1960
2 Claims. (Cl. 99—145)

1. A process for the production of a condimental, liquid-sauce soy, which comprises adding to fresh soy in its natural state substantially 19 percent ethyl alcohol, adding thereto koji of polished nonglutinous rice and steamed glutinous rice and mixing these ingredients thereby forming a mash; allowing the same to saccharify and ripen thus forming a mirin; compressing and filtering the mixture thus obtained and utilizing the filtrate.

3,124,466

COLORED GLUTEN

Elliott M. Ziegenfuss, Keokuk, Iowa, assignor to General Mills, Inc., a corporation of Delaware

No Drawing. Filed Jan. 24, 1961, Ser. No. 84,505
2 Claims. (Cl. 99—148)

1. The method of preparing a uniformly colored dry gluten powder which consists of forming a wet gluten mass, mixing thoroughly therewith an aqueous liquid coloring solution, drying said mass, and then pulverizing the dried mass to obtain the uniformly colored dry gluten powder.

3,124,467

METHOD OF TREATING EDIBLE ANIMAL CARCASSES

Beverly E. Williams, La Grange Park, Ill., assignor, by mesne assignments, to Hodges Development Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 15, 1960, Ser. No. 15,069
9 Claims. (Cl. 99—174)

1. An improved method of treating edible animal carcasses which comprises covering the skinned surface of the carcass with a woven cloth, having between about 15 and about 30 yarns per inch in the warp and fill, moistened with an aqueous solution comprising at least one edible, water-soluble material selected from the group consisting of water-soluble cellulose ethers, in a concentration between about 0.08 and about 8%, by weight; gelatin, in a concentration between about 0.01 and about 5%, by weight; and water-soluble polyhydric aliphatic alcohols of from 3 to 6 carbon atoms containing at least three alcoholic hydroxyl groups, in a concentration between about 0.15 and about 15%, by weight.

3,124,468

METHOD OF TREATING SKINNED ANIMAL CARCASSES

Beverly E. Williams, La Grange Park, Ill., assignor, by mesne assignments, to Hodges Development Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 15, 1960, Ser. No. 15,070
9 Claims. (Cl. 99—174)

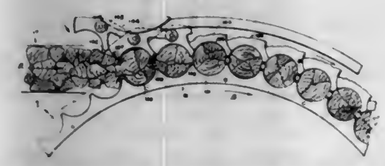
1. In the treatment of a skinned edible carcass of a four footed mammal involving applying to said carcass a permeable, woven wrap moistened with an aqueous brine solution, the improvement which comprises the step of including in said brine solution an antibiotic in a concentration, equivalent to between about 10 and about 500 parts per million of oxytetracycline hydrochloride having a potency of approximately 795 mcg./g., sufficient to inhibit the development of obnoxious microorganisms, including odor-forming bacteria, on the surface of said carcass.

3,124,469

METHOD OF PACKING FISH IN CONTAINERS

Eben H. Carruthers, P.O. Box 1332, Warrenton, Oreg.

Original application Jan. 7, 1960, Ser. No. 1,077. Divided and this application Nov. 14, 1960, Ser. No. 69,061
13 Claims. (Cl. 99—188)



1. A method of packing formable food material into each of a series of containers in which the material has been cut to a height corresponding to the height of material desired to be placed in the containers which comprises the steps of feeding the material in a substantially unbroken flow to a forming section, exerting a forming action on the material in a direction substantially normal to its height while the material is moved through said forming section, confining the cut top and cut bottom of the material while it is moving through said forming section, feeding containers in substantially touching relation to a filling position and at the same rate of speed as the material is fed through said forming section and transferring the cut and formed material to the containers successively at said filling position.

3,124,470

GRADE GLASS

Edwin P. Arthur, Fullerton, Calif., assignor to Beckman Instruments, Inc., a corporation of California

No Drawing. Filed Jan. 16, 1961, Ser. No. 82,695
2 Claims. (Cl. 106—52)

1. A lead-free silicate glass having a coefficient of expansion between about 96 and 99×10^{-7} and consisting essentially of in mole percent, silica about 68 percent, titanium dioxide about 4 percent, calcium oxide about 12.2 percent, lithia about 0.7 percent, soda about 10.5 percent, potassium oxide about 2 percent, and lanthanum oxide about 2.6 percent.

3,124,471

BASIC PATCHING MATERIAL FOR ROTATABLE DRUM TYPE FURNACES

Edgar Spetzler and Josef Auer, Oberhausen, Germany, assignors to Hüttenwerk Oberhausen Aktiengesellschaft, Oberhausen, Germany

No Drawing. Filed Nov. 30, 1960, Ser. No. 72,560
Claims priority, application Germany Dec. 21, 1959
4 Claims. (Cl. 106—58)

1. A basic lining material for repairing the refractory lining of rotary drum furnaces in hot condition, which consists essentially of dolomite and a bonding substance the latter consisting essentially of tar containing 60 to 65% pitch, said tar being in amount ranging from 5 to 11% by weight of said dolomite, and hard pitch to the extent that the total pitch content of the lining material is from 7 to 25% by weight of said lining material, said lining material being in a granular friable condition.

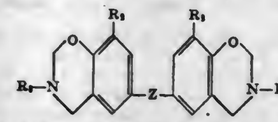
3,124,472

USE OF 6,6'-ALKYLIDENEBIS(BENZOXAZINES) FOR IMPROVING PHYSICAL PROPERTIES OF CLAYS AND CLAY-CONTAINING SOILS AND COMPOSITIONS RESULTING THEREFROM

John B. Hemwall, Long Beach, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Apr. 24, 1961, Ser. No. 104,784
10 Claims. (Cl. 106—84)

1. The method of treatment of clays and clay-containing soils by admixing therewith a compound having the formula:



in which R_3 is a member of the group consisting of alkyl and cycloalkyl groups containing up to 12 carbon atoms; R_4 is a member of the group consisting of H, Cl and CH_3; and Z is a member of the group consisting of cyclohexylidene and 3 to 9 carbon alkylidene groups, in amount sufficient to provide at least 0.0025 and up to 2 weight percent of said compound, dry clay basis.

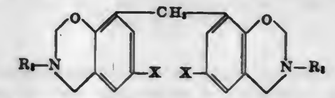
3,124,473

USE OF 8,8'-METHYLENEBIS(BENZOXAZINES) FOR IMPROVING PHYSICAL PROPERTIES OF CLAYS AND CLAY-CONTAINING SOILS AND COMPOSITIONS RESULTING THEREFROM

John B. Hemwall, Long Beach, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Apr. 25, 1961, Ser. No. 105,263
7 Claims. (Cl. 106—84)

2. A composition of a clay material of the group consisting of clays and clay-containing soils and in admixture therewith at least 0.0025 and up to 2 weight percent, clay bases, of a compound having the formula:



in which R_3 is a member of the group consisting of alkyl, cycloalkyl, aryl and alkaryl groups containing up to 12 carbon atoms and X is a member of the group consisting of Cl and Br.

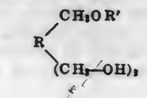
3,124,474

HEAT-SENSITIVE WATER SOLUBLE CELLULOSE ETHER COMPOSITIONS

Garth H. Beaver and Donald E. Cobb, both of Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Dec. 13, 1961, Ser. No. 159,143
13 Claims. (Cl. 106—189)

1. A composition of matter comprising a water-soluble, thermoplastic, mixed methyl-hydroxyalkyl cellulose ether selected from the group consisting of methylhydroxypropyl cellulose ether having a methoxyl degree of substitution from about 1.4 up to about 1.8 and a hydroxypropoxyl degree of substitution from about 0.07 up to about 0.3 and methyl-hydroxybutyl cellulose ether having a methoxyl degree of substitution from about 1.6 up to about 1.8 and a hydroxybutoxyl degree of substitution from about 0.05 up to about 0.2 and a triol plasticizer characterized according to the formula:

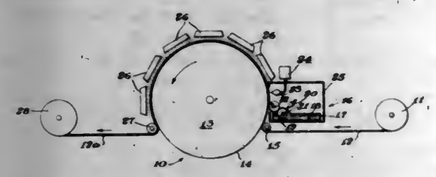


wherein R is a trivalent hydrocarbon radical having from 2 to 5 carbon atoms and R' is selected from the group consisting of hydrogen and hydroxyalkyls having from 2 to 4 carbons, said composition containing from about 0.5 to about 3 parts of the triol plasticizer for each part of the cellulose ether.

3,124,475
METAL SALT DRIER COMPOSITIONS
Alfred Fischer, Bronx, N.Y., and Theodore A. Girard, Wayne, N.J., assignors to Heyden Newport Chemical Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Oct. 4, 1960, Ser. No. 60,314
9 Claims. (Cl. 106—310)

1. A drier composition comprising a salt of a metal selected from the group consisting of alkaline earth metals, heavy metals, and mixtures thereof and a saturated, branched-chain, acyclic acid containing from 8 to 18 carbon atoms, said acid having at least 6 carbon atoms in its longest straight chain and having no substituent in the 2-position of said chain, and a liquid hydrocarbon solvent for said metal salt.

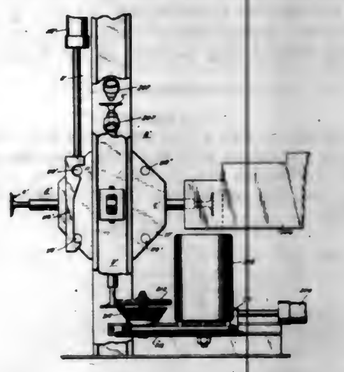
3,124,476
METHOD OF COATING AN ORIENTED THERMOPLASTIC WEB
William R. R. Park, Midland, Mich., and Herbert W. Heisterkamp, Cleveland, Ohio, assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed June 16, 1961, Ser. No. 117,671
4 Claims. (Cl. 117—47)



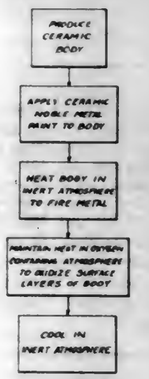
1. A method of coating an oriented thermoplastic web comprising supporting a continuous web of oriented thermoplastic film by a heated generally cylindrical rotating surface maintaining said web at a temperature in the range of from about 50 to about 1 degree centigrade below the deorientation temperature of said web, applying to the face of said web a dryable liquid coating composition, drying said composition by applying heat to said coated face and removing said coated web from said cylindrical surface.

3,124,477
ART OF METAL COATING
Edward P. Schreyer and Marshall G. Whitfield, both of Brookfield, Conn., assignors to Whitfield Laboratories, Inc., Ridgefield, Conn., a corporation of Connecticut
Original application July 30, 1957, Ser. No. 675,085, now Patent No. 3,044,439, dated July 17, 1962. Divided and this application Sept. 7, 1961, Ser. No. 136,649
5 Claims. (Cl. 117—102)

1. The method of forming a protective, heat resistant, corrosion resistant and erosive resistant metal coating on a metal article which comprises the steps of applying a coating of molten metal selected from the group consisting of aluminum and aluminum alloys, on an individual article over the entire effective surface thereof and while the coating is still molten to permit alloying of the coating material with the metal article, brushing the effective surface of the article in manner to remove substantially all of the excess coating material on such surface, while retaining the article and the brushing means in the same relative position with respect to each other, said brushing step being continued until the coating material is in non-molten condition.



3,124,478
METHOD FOR MAKING A BARRIER LAYER CAPACITOR
Werner Cirkler and Harald Löbl, Munich, and Gerhard Langbein, Darmstadt, Germany, assignors to Siemens & Halske Aktiengesellschaft, Berlin and Munich, a corporation of Germany
Filed July 18, 1960, Ser. No. 43,644
Claims priority, application Germany July 21, 1959
3 Claims. (Cl. 117—200)

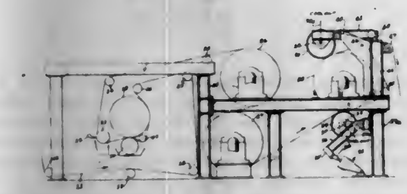


1. A method of making a barrier layer capacitor, comprising taking a ceramic body produced by reduction of ferroelectric material with high dielectric constant and perowskite structure, placing upon said body a ceramic noble metal paint to form coatings thereof on said body, heating said body in an inert gas atmosphere to a temperature at which the ceramic noble metal paint is fired thereon, providing an oxygen containing atmosphere, maintaining said firing-on temperature for a period of time in the presence of said oxygen containing atmosphere so as to oxidize the surface layers of said body including the parts thereof which extend underneath said coatings, providing an inert atmosphere, and thereafter cooling said body with said coatings fired thereon in said inert atmosphere.

3,124,479
COPPER-NICKEL ALLOY WELDING ELECTRODE
Charles E. Witherell, Bound Brook, N.J., assignor to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed July 25, 1961, Ser. No. 126,504
6 Claims. (Cl. 117—205)

1. A welding electrode having a core wire containing about 30% nickel, about 0.6 iron, about 0.1% silicon, about 0.8% manganese, about 0.25% titanium with the balance essentially copper and having a flux coating containing in parts by weight about 23 parts calcium carbonate, about 21 parts manganese carbonate, about 22 parts titanium dioxide, about 21 parts cryolite, about 1 part silicon, about 1 part titanium, about 3 parts bentonite and a silicate type binder.

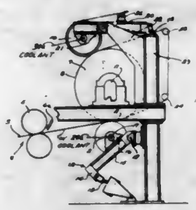
3,124,480
HOT PRESSURE FINISHING APPARATUS FOR WEB MATERIALS
Ralph P. Mahoney and Edgar J. Justus, Beloit, Wis., assignors, by mesne assignments, to Beloit Corporation, Beloit, Wis., a corporation of Wisconsin
Filed Apr. 4, 1960, Ser. No. 19,644
10 Claims. (Cl. 118—60)



9. In an apparatus for improving the surface characteristics of a paper web, the combination comprising,
a coating mechanism applying liquid coating to a surface of the web,
means drying the coating until it is set,
a first large diameter roll having a smooth precisely finished non-resilient surface,
a second roll formed of a metal core and an outer resilient cover having a high hardness being in nip-defining relationship with said first roll,
said second roll being smaller than said first roll and forming a narrow nip therebetween,
heating means for heating the surface of the web in the nip,
means forcing the rolls together forming a transversely uniformly distributed high intensity unit pressure in said nip,
and guide means separating the web from the surface of the first roll substantially immediately following the nip,
said web moving from the drying means into the nip between the rolls with a coated side engaging the surface of the first roll in the nip.

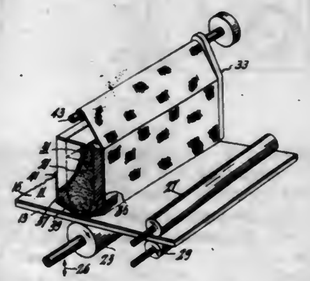
3,124,481
APPARATUS FOR IMPROVING THE SURFACE CHARACTERISTICS OF A PAPER WEB
Ralph P. Mahoney, Beloit, Wis., assignor, by mesne assignments, to Beloit Corporation, Beloit, Wis., a corporation of Wisconsin
Filed Sept. 19, 1960, Ser. No. 56,719
5 Claims. (Cl. 118—60)

4. In an apparatus for improving the surface characteristics of a paper web, the combination comprising,
a first large diameter roll having a smooth precisely finished non-resilient surface,
a second roll formed of a metal core and a relatively thin outer resilient cover of a plastic having a high hardness of less than 30 P. and J. (⅛" ball) being in nip-defining relationship with said first roll,
said second roll being smaller than said first roll and forming a narrow nip therebetween,
means spaced ahead of the nip applying a size to the surface of the web exposed to said first roll,



heating means for heating the surface of the first roll to a temperature of between a lower limit of 220° F. and an upper limit up to the decomposition point of the web to plasticize the surface of the web in the nip,
and means forcing the rolls together forming a transversely uniformly distributed high intensity unit of pressure in said nip of between 250 pounds per square inch to 2400 pounds per square inch,
so that the sized surface of the web is glossed in the nip.

3,124,482
APPARATUS FOR DEVELOPING ELECTROSTATIC IMAGE
Roger G. Olden, Trenton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Dec. 22, 1960, Ser. No. 77,561
10 Claims. (Cl. 118—637)



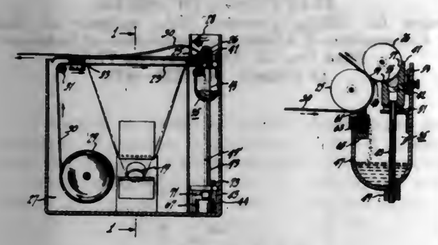
1. Apparatus for developing electrostatic images comprising a container for a supply of finely-divided electroscopic developer particles, a portion of said container defining an opening covered with a material adapted to contact an electrostatic image bearing surface, the pores in said material being of the size to permit developer particles to be electrostatically drawn therethrough; and means for moving one of said trough and said image bearing surface with respect to the other with said material in contact with said image bearing surface.

3,124,483
APPARATUS FOR TRANSFERRING POWDER IMAGES AND METHOD THEREFOR
John J. Rheinfrank, Columbus, Ohio, assignor, by mesne assignments, to Xerox Corporation, a corporation of New York
Original application May 12, 1958, Ser. No. 734,683. Divided and this application Feb. 12, 1962, Ser. No. 172,694
3 Claims. (Cl. 118—637)



1. Apparatus for developing an electrostatic latent image on a flexible linear web comprising means to advance said web along a predetermined developing path, means to support at least a portion of said web such that said web is advanced in a substantially horizontal plane while being inclined from the horizontal plane at an angle perpendicular to its direction of advance with the electrostatic latent image uppermost, and means to flow electrostatic image development material downwardly across the upper surface of said web while supported in said inclined position.

3,124,484
ELECTROSTATIC PRINTING APPARATUS
Knut J. Magnusson, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Mar. 27, 1962, Ser. No. 182,881
6 Claims. (Cl. 118—637)



1. Apparatus for applying liquid developer composition to a continuous web bearing a latent electrostatic image, said apparatus comprising:
(*a*) liquid developer supplying means,
(*b*) a pair of pressure rollers adapted to contact opposite surfaces of said web, one of said rollers being adapted to have said web contact a substantial portion of the periphery thereof, the other of said rollers being positioned in a plane above said one roller so as to make substantially line contact with said web and providing means for bringing liquid developer composition into contact with said web,
(*c*) means providing a continuous column of said liquid developer extending transversely substantially across said other roller for applying said liquid developer composition to said other roller to develop said latent image on said web and to substantially obliterate offset images formed on said other roller as a result of previous development of electrostatic images on said web with said other roller,
(*d*) said liquid applying means comprising an element having one edge surface and adjacent end surfaces contacting said other roller and shaped to conform to the curvature thereof, and having another undercut edge surface between said end surfaces closely spaced from said other roller along a substantial portion of its length, and a longitudinal slotted portion between each of said surfaces, said slotted portion communicating with the developer supply means, and
(*e*) means for rotating said rollers and moving said web therebetween.

3,124,485
APPARATUS FOR HANDLING PLATES TO BE PREPARED AS PRINTING FORMS
Robert Kaulen, Lovenich, Bezirk Cologne, Germany, assignor to Dr. Bekk & Kaulen Chemische Fabrik G.m.b.H., Lovenich, Bezirk Cologne, Germany, a firm
Filed July 18, 1961, Ser. No. 124,893
Claims priority, application Germany July 22, 1960
2 Claims. (Cl. 118—643)

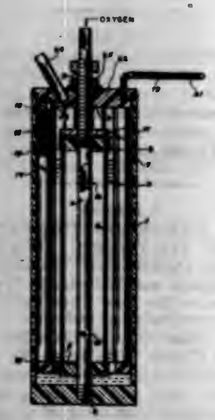


1. Apparatus for coating a plate to be prepared as relief printing forms by immersion into a solution, comprising a transport device, means for suspending a plate from said transport device, a solution container over which said transport device moves said plate, means for raising and lowering said container completely to immerse the plate, laterally offset flanges on the upper edges of the container, said flanges having outer edges, supports carried at said outer edges of said offset flanges, and infrared lamps carried by said supports and movable with said container, said flanges being provided with screened openings between said supports and said container to provide apertures for upwardly flowing air drafts.

3,124,486
METHOD OF MANUFACTURING STORAGE BATTERY ELECTRODES
James P. Malloy, Cheltenham, Pa., assignor to The Electric Storage Battery Company, a corporation of New York
No Drawing. Filed Dec. 28, 1960, Ser. No. 78,876
4 Claims. (Cl. 136—27)

1. In the method of manufacturing lead battery electrodes of the type in which the active material is mounted on metal spines and held thereagainst by insulating sheaths the improvement which comprises pelletizing the lead oxide active material prior to filling said sheaths by the addition of water in a fine spray to said oxide while said oxide is being vigorously agitated in an amount of from 4% to 10% by weight of said oxide to produce oxide granules such as will all pass through a 20-mesh screen and no more than 10% will pass through a 325-mesh screen.

3,124,487
GAS DEPOLARIZED CELL
Joseph C. Duddy, Trevose, Pa., and James W. Consolloy, Pennington, N.J., assignors to The Electric Storage Battery Company, a corporation of New Jersey
Filed Nov. 4, 1960, Ser. No. 67,225
6 Claims. (Cl. 136—136)



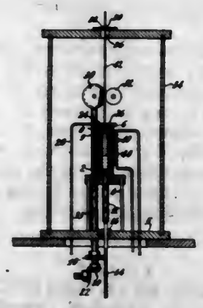
1. A gas depolarized cell comprising a container, an alkaline electrolyte within said container, an electrically conductive gas feed tube disposed within a cylindrical microporous metallic gas electrode, said gas feed tube having a gas input port located within said gas electrode, end caps firmly attached to said gas feed tube and disposed so as to support and seal the ends of said gas electrode, said gas feed tube extending through the end cap sealing the bottom of said gas electrode so that said gas feed tube is in contact with the electrolyte within said container between said end cap and the bottom of the container, means for electrically connecting said gas electrode to said gas feed tube, and an anode having spaced pencils of electrochemically active material, said pencils being disposed about said cylindrical gas electrode.

3,124,488
BATTERY VENTING MEANS
Paul Ruetschi, Yardley, Pa., assignor to The Electric Storage Battery Company, a corporation of New Jersey
Filed Feb. 6, 1962, Ser. No. 171,393
5 Claims. (Cl. 136—178)



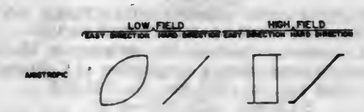
1. A venting means for a storage battery comprising a body having a first surface in communication with the interior of the battery and a second surface in communication with the atmosphere, a peripheral rim extending outward from said second surface of said body, a resilient cover engaging said rim and defining with said rim and said body a chamber, at least one passage communicating said chamber with the interior of said battery through the first surface of said body, a central opening in said cover, and means for fastening said cover to said body, said fastening means comprising a shaft extending through said opening and an outwardly extending head engaging said cover around said opening, said shaft being smaller than said opening, said fastening means in the absence of a predetermined internal pressure within said battery holding said cover in a sealed relationship with said rim and in the absence of a predetermined vacuum within said battery holding said cover in a sealed relationship with said head.

3,124,489
METHOD OF CONTINUOUSLY GROWING THIN STRIP CRYSTALS
Ferdinand L. Vogel, Jr., Glen Gardner, and Eric F. Cave, Somerville, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed May 2, 1960, Ser. No. 25,933
5 Claims. (Cl. 148—1.6)



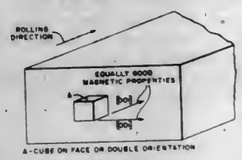
1. A method of preparing a ribbon, having predetermined transverse cross-sectional area and shape, of single crystal material, comprising maintaining a melt of said material, applying pressure to said melt such that a portion thereof flows into a restrictive passage having an exit opening of approximately said area and shape, contacting a nucleating means to said portion, withdrawing said nucleating means at a predetermined rate while directing a cooling stream of gas which is inert with respect to said material, adjacent the exit of said passage so as to maintain the liquid level at the exit of said passage and to cause said molten material to solidify within said passage and form a continuous, emerging, single crystal ribbon having said predetermined transverse cross-section area and shape and attached to said nucleating means, and continuing to apply pressure to said melt to supply molten material to said passage at the same rate said ribbon is solidifying.

3,124,490
VARIABLE AXIS MAGNETIC FILMS
Arnold Schmeckenbecher, Elkins Park, Pa., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed June 30, 1960, Ser. No. 40,008
9 Claims. (Cl. 148—31.55)



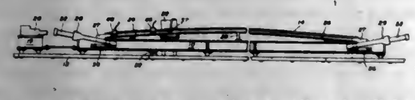
1. A thin film of a nickel-iron base magnetic alloy of a thickness of 500 to 10,000 A. and containing more than 0.5% and not more than 4.5% of an interstitial element selected from the group consisting of carbon, nitrogen, boron, phosphorus and sulphur, said film being partly anisotropic and changing easy and hard directions at room temperature on application of a high magnetic field.

3,124,491
HEAVY GAUGE DOUBLE ORIENTED MAGNETIC SHEET MATERIAL
Karl Foster, Wilkins Township, Allegheny County, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 23, 1960, Ser. No. 30,980
3 Claims. (Cl. 148—31.55)



1. A double oriented magnetic sheet comprising a molybdenum-iron alloy containing from 3% to 5% molybdenum and the remainder iron except for incidental impurities, the sheet having a thickness of up to 8 mils to 25 mils, the sheet comprising at least 90% by volume of secondary recrystallized grains having an orientation such that a (100) plane is within 10° of the plane of the sheet and at least 85% of these planes having a [001] direction within 10° of the direction of rolling.

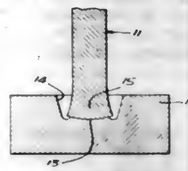
3,124,492
METHOD FOR HEAT-TREATING RAILS
Fernand J. Dewez, Jr., Hempfield Township, Westmoreland County, and Joseph M. Wandrisco, Monroeville Borough, Pa., assignors to United States Steel Corporation, a corporation of New Jersey
Filed Oct. 12, 1962, Ser. No. 230,119
4 Claims. (Cl. 148—130)



1. A method of heat treating a railroad rail having a head, web and flange which comprises bending the rail in the plane of the web thereof, within the elastic limit, so that the head is convex and the flange concave, continuously heating the head of the rail progressively, from one end thereof to the other, above the austenitization temperature while holding the rail in its curved condition, initially quenching the surface of the head progressively a predetermined time after the heating, then, at a predetermined time after self tempering of the quenched surface has occurred by absorption of heat from the interior of the head, finally quenching the head throughout substantially to ambient temperature and then releasing the rail from bending stress thereby permitting it to resume its normal substantially straight condition.

3,124,493
ALLOY-JUNCTION SEMICONDUCTORS AND METHOD FOR MAKING THE SAME
Sheldon L. Matlow, Chicago, Ill., assignor to Hoffman Electronics Corporation, a corporation of California
Filed Jan. 26, 1959, Ser. No. 788,808
5 Claims. (Cl. 148—178)

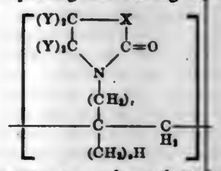
1. A method of making an alloy-junction semiconductor comprising the steps of: heating both a semiconductor body composed of silicon having N-type conductivity and a lead composed of aluminum doped with boron in a concentration of between approximately .25% and 2%; pressing said body and an end of said lead together; maintaining sufficient pressure and heat until diffusion occurs between said silicon body and said boron-doped aluminum lead at the place of contact; cooling said body and said lead to obtain recrystallization of said diffused portion and the creation of a P-N junction between said lead end



and said body; and etching said body at said place of contact to restrict contact between said lead and said body to solely said P-N junction.

3,124,494
AUTOGENOUS GAS-PRODUCING COMPOSITIONS CONTAINING POLYMERIC OXAZOLIDINONE AND A SOLID INORGANIC OXIDIZER
William F. Tousignant and Wilhelm E. Walles, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Nov. 28, 1960, Ser. No. 71,889
6 Claims. (Cl. 149—19)

1. A solid rocket fuel composition comprising a solid inorganic oxidizing agent and containing as a fuel-binder a water-soluble polymer consisting of at least 90 percent by weight of a repeating unit having the formula

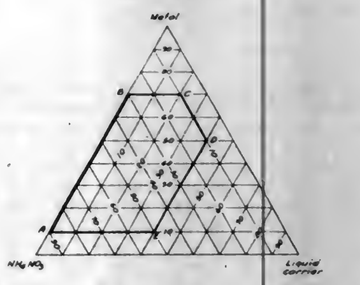


wherein X represents a member selected from the group consisting of

$-CH_2-$, $-O-$, $-CH_2O-$ and $-O-CH_2-$

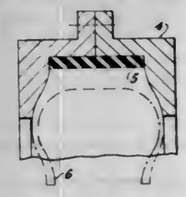
each Y is independently selected from the group consisting of hydrogen, and lower alkyl radicals having from 1 to 4 carbon atoms, inclusive; r represents an integer from 0 to 2, inclusive; s represents an integer from 0 to 1, inclusive; said polymerization being carried out at a temperature between about 35° and 200° C.

3,124,495
EXPLOSIVE COMPOSITIONS
Joseph R. Hradel, Mount Pleasant, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Aug. 11, 1960, Ser. No. 48,981
8 Claims. (Cl. 149—43)



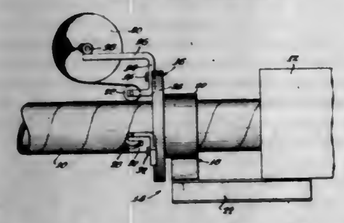
1. An explosive composition which comprises in the proportions by weight defined by the area ABCDE of the drawing, (1) ammonium nitrate, (2) a light metal selected from the group consisting of magnesium, magnesium alloys, aluminum, aluminum alloys, and mixtures thereof, said light metal having a particle size greater than that which passes a number 20 U.S. standard sieve, and (3) a liquid, hydrogen-containing solvent for ammonium nitrate, said solvent also containing at least one atom selected from the group consisting of nitrogen and oxygen.

3,124,496
RE-TREADING OF TYRES
Jan Herbert Farquharson Kent, La Coupe, St. Martins, Jersey, Channel Islands, assignor to Kentredder Limited, Jersey, Channel Islands, a company of Channel Islands
Filed May 26, 1961, Ser. No. 112,777
3 Claims. (Cl. 156—95)



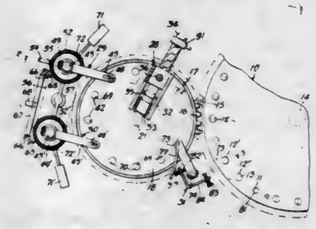
1. A method of treading and re-treading tyres by attaching to the outer cover thereof a preformed tread band by means of a moulding process, which comprises bending said tread band into an annulus of approximately the required diametral size and of approximately the tread band width required on the tyre, placing the so formed annulus into an annular flanged mould with said band projecting in both directions from the central plane of the mould towards the mould flanges, spreading the beads of said tyre to reduce its effective diameter, inserting said tyre into said mould, releasing said beads to cause direct pressure contact between said outer cover and said tread band and between said tread band and the patterned surface of said mould, vulcanising said tread band during which vulcanisation said tread band is bonded to said outer cover, and finally removing said tyre after cooling from said mould, said tread band being formed from an unvulcanised and uncured rubber mix which is such that the resulting tread band is inherently resilient, thereby enabling said tread band to be held in position in the mould prior to insertion of the tyre therein by virtue of the resiliency of said tread band and without the use of adhesives or pressure operations.

3,124,497
APPARATUS FOR AND METHOD OF APPLYING ADHESIVE BANDS TO CORES
Wallace E. Sydanmaa, Wisconsin Rapids, Wis., assignor to Consolidated Papers Inc., Wisconsin Rapids, Wis., a corporation of Wisconsin
Filed June 23, 1961, Ser. No. 119,142
10 Claims. (Cl. 156—215)



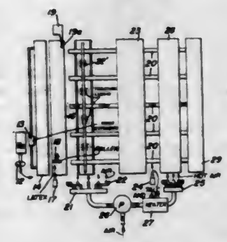
1. A method of applying a longitudinally extending straight band of adhesive to a rotating core as it issues from the core-making machine, comprising the steps of conjointly rotating an adhesive applicator with the core, holding the applicator against longitudinal movement, and engaging the applicator with the surface of the core.

3,124,498
APPARATUS FOR FORMING, TREATING AND APPLYING LABELS TO PRODUCTS
Louis C. Ziegler, 5 Skyline Drive, Englewood Cliffs, N.J.
Filed Oct. 4, 1960, Ser. No. 60,391
16 Claims. (Cl. 156—384)



1. An apparatus of the character described comprising an intermittently driven label feeding disc, a second disc intermittently operated in synchronism with the first disc, a plurality of stations spaced circumferentially of said first disc, one station having means for applying a label to an upper surface of said first disc, a second station having means for printing a label supported on said first disc and positioned at said second station, and a third station having means for engaging and removing a printed label then positioned at said third station and for applying the same to a product supported on and exposed at the upper surface of the second disc and positioned adjacent said third station.

3,124,499
APPARATUS FOR MAKING RUBBER-LINED HOSE
Sakae Akiyama, Minoo, Japan, assignor to Ashimori Industry Co., Ltd., Osaka, Japan
Filed Dec. 31, 1959, Ser. No. 863,230
Claims priority, application Japan Sept. 25, 1959
2 Claims. (Cl. 156—423)



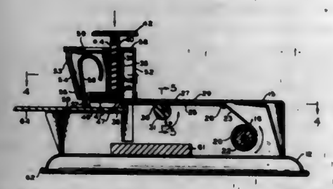
1. An apparatus for continuously producing rubber lined hose, comprising in combination a means for continuously coating a thin layer of rubber on a plastic tubular core, means for feeding lengths of textile hose body into a stretched out position, a conveyor means extending from said feeding means in a direction transverse to the stretched out length of the hose body, an adhesive latex injecting means adjacent said conveyor means and directed transversely thereof for injecting latex into a length of hose body, means movable parallel to the stretched out length of the hose body for moving along the hose body for spreading the injected latex evenly therein, means for feeding coated lengths of plastic tubular core from said coating means into the lengths of

hose body with the latex therein, means adjacent said conveyor and spaced therealong from the latex injecting and tubular core feeding means in the direction of movement of said conveyor and being movable therealong for supplying air under pressure to the tubular core, spray means above said conveyor means and spaced therealong from the latex injecting means and tubular core feeding means for spraying surface treating material on the exterior of the hose bodies being conveyed along the conveyor means, a first heating means above and below said conveyor means and spaced therealong from said air pressure means and said spray means, a powdered talc and air injection means spaced along said conveyor means and directed transversely thereof, means adjacent said conveyor and spaced therealong from said talc and air injection means and movable along said conveyor for supplying hot air under pressure, and a second heating means above and below said conveyor means and spaced therealong from said talc and air injection means.

3,124,500
MAILING MACHINE

Pasquale Di Benedetto, 214 Kensett Road, Manhasset, N.Y.

Filed Dec. 7, 1959, Ser. No. 857,863
2 Claims. (Cl. 156—531)



1. A mailing machine comprising, in combination, a main housing including a horizontal top wall and having a platform at one end below, adjacent to and parallel with said horizontal top wall, a postage stamp strip dispenser carrier by said main housing and comprising a strip stamp roller frictionally mounted thereby and a manually operated advancing roller spaced therefrom, a horizontal chute formed with the underside of the housing top wall and a lower spaced parallel wall, the latter being penetrated by said advancing roller for advancing the stamp strip therethrough, an auxiliary housing carried by the main housing and disposed above said platform and having a spring actuated plunger having a presser foot disposed above and adjacent the position of a strip portion advanceable beyond said chute, said plunger carrying a shearing blade for shearing said portion whereby on depression of the plunger the strip portion is cut and forced against the platform, said auxiliary housing also carrying a moistener extending to the platform whereby when an envelope is introduced on the platform therebeneath same is moistened for stamp affixation when the plunger is depressed.

3,124,501
FACING WITH MAGNET ATTACHMENT MEANS

Glenn E. Wise, 2415 39th Place NW., Washington 7, D.C.

Filed July 7, 1960, Ser. No. 41,425
2 Claims. (Cl. 161—7)



1. An ornamental facing adapted to be supported by a magnet-attracting surface comprising: a flexible normally planar panel having substantially parallel opposite faces and including a border portion coextensive with the margin-forming edge portions thereof; magnet means having portions adapted to engage said surface, said magnet means comprising a plurality of spaced magnets located along substantially the entire border portion of said panel adjacent one of said faces; and means attaching said magnet means to said one of said faces, said attaching means including elongated flexible strip means having notch means therein to increase the flexibility thereof, said strip having one side engaged with said one of said panel faces and an opposite side adapted to face said surface when said facing is supported thereon, said notch means including a plurality of spaced notches having tops which open toward said opposite side of said strip and bottoms which are located closer to said panel than said tops, each of said notches being located substantially transversely to the length of that portion of said strip in which each notch is formed, and each notch top comprising spaced opposed notch walls which intersect with and interrupt the continuity of said opposite side of said strip, said panel being sufficiently flexible that said panel is capable of flexing from its normally planar condition to assume substantial parallelism with said surface when supported thereon in the event that said surface exhibits a contour other than flat.

3,124,502
COMPOSITE FIBROUS LUBRICANT PACKING

Rudolf Radke, Frankfurt am Main Eschersheim, Germany, assignor to Frankfurter Asbestwerke Paul Kind Kommandit-Gesellschaft, Frankfurt am Main, Germany, a company of Germany

Filed Aug. 18, 1958, Ser. No. 755,657
2 Claims. (Cl. 161—182)



1. An annular stuffing box packing comprised of an impregnable punched out solid section made up of a plurality of thin sheets made up of fibers, said fibers having the orientation of fibers in paper, at least 70% by weight of finely divided solid lubricants incorporated in the fibrous material, each single fiber having a coat of finely divided solids held in a layer completely enveloping said fiber with said lubricants, said fibers being in defined position with relation to said lubricants and said sheets being combined and solidified to form the solid section punched out of said sheets.

3,124,503
FORMALDEHYDE PULPING

Karsten Andreas Zachariasen, Memphis, Tenn., assignor to The Buckeye Cellulose Corporation, Cincinnati, Ohio, a corporation of Ohio

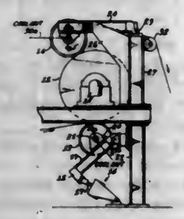
No Drawing. Filed Mar. 30, 1962, Ser. No. 183,748
3 Claims. (Cl. 162—9)

1. A process for producng pulp from subdivided hardwood material wherein said material is digested at a temperature of about 130° C. to about 200° C. for a period of about 5 to about 300 minutes in the presence of about two to about ten times its bone dry weight of an aqueous solution containing about 25% to about 50% of formaldehyde, thereby substantially completely releasing the lignin in said material from its bound condition with the cellulosic material and converging any remaining lignin to a condition wherein it is readily extractable with a dilute aqueous solution of sodium hydroxide, the final pH of the digesting solution being from about 1 to about 11, recovering from the digestion solution a pulp having a substantially reduced lignin and pentosan content as compared with the undigested lignocellulosic material, and extracting the recovered pulp with a dilute aqueous solution of sodium hydroxide.

3,124,504
GLOSS FINISHING OF UNCOATED PAPER

Ralph P. Mahoney and Edgar J. Justus, Beloit, Wis., assignors, by mesne assignments, to Beloit Corporation, Beloit, Wis., a corporation of Wisconsin

Filed Apr. 4, 1960, Ser. No. 19,862
7 Claims. (Cl. 162—206)



2. The method of making a finished glossed paper web comprising continuously forming a travelling paper web on a Fourdrinier section of a paper machine, removing moisture from the web in a press section and a dryer section of the machine to a dryness of less than 35% moisture and immediately passing the web through a high pressure nip formed between a heated smooth non-resilient roll heated to a temperature between a lower limit of 220° F. and an upper limit up to the decomposition point of the web and a roll having a surface of a resilient material with a high hardness for heating the web in the nip, and applying pressure to the heated web in the nip in the range of 250 pounds per square inch to 2400 pounds per square inch to plasticize the surface fibers of the web and coalesce the surface fibers and to further effect drying.

3,124,505
AEROSOL CONCENTRATES CONTAINING A STABILIZED SUSPENSION OF FINELY DIVIDED SILICA

Carroll F. Doyle, Ellicott City, and Luther O. Young and Joseph Albert Chatard, Jr., Baltimore, Md., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed Aug. 15, 1961, Ser. No. 131,485
27 Claims. (Cl. 167—39)

1. An aerosol concentrate suitable for preparing aerosol compositions which comprises a suspension medium selected from the group consisting of 1,1,1-trichloroethane, solvent naphtha and mixtures thereof; an effective amount of a low molecular weight suspension stabilization agent selected from the group consisting of alcohols and ketones, said alcohols and ketones containing no more than 10 carbon atoms and from about 10 to about 20 percent by weight, based on the weight of the total concentrate, of finely divided silica.

3,124,506
COMPOSITIONS CONTAINING LACTIC ACID, MALIC ACID, AND SALTS THEREOF

Emmette R. Holman, Palos Verdes Estates, Calif., assignor, by mesne assignments, to Purex Corporation, Ltd., a corporation of California

No Drawing. Filed June 30, 1960, Ser. No. 39,774
11 Claims. (Cl. 167—58)

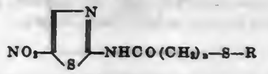
1. A composition effective as a dentifrice and prophylactic nose and throat composition which consists essentially of a substance of the class consisting of lactic acid and the ammonium, alkali metal and non-toxic alkaline earth metal salts of lactic acid, and a member of the group consisting of malic acid, and the ammonium, alkali metal and non-toxic alkaline earth metal salts and acid salts of malic acid.

3,124,507
ANTIMICROBIAL COMPOSITIONS COMPRISING AMIDES OF 2-AMINO-5-NITROTHIAZOLE THIOETHERS

David B. Reisner, Cedar Grove, and Sidney Gister, Bound Brook, N.J., and Howard C. Klein, Brooklyn, N.Y., assignors to Nopco Chemical Company, Newark, N.J., a corporation of New Jersey

No Drawing. Filed Mar. 23, 1961, Ser. No. 97,733
4 Claims. (Cl. 167—58)

1. A composition of matter in dosage unit form having antiprotozoal, antibacterial and antifungal activity comprising a compound of the formula



wherein *n* is an integer selected from the group consisting of 1 and 2, and R is selected from the group consisting of lower alkyl, benzyl, halobenzyl, nitrobenzyl, lower alkyl benzyl, lower alkoxy benzyl, phenyl, halophenyl, nitrophenyl, lower alkyl phenyl and lower alkoxy phenyl, and a pharmaceutical vehicle, said compound being present in dosage unit form in an amount of from about 0.2% to about 95.0% by weight of said compound and said pharmaceutical vehicle.

3,124,508
MONO (N-METHYLAMINOETHYL)-PHOSPHORIC ACID FOR HYPERCHOLESTEROLEMIA

Joseph Nordmann, Paris, France, assignor to Compagnie Francaise des Matieres Colorantes, Paris, France, a company of France

No Drawing. Filed Mar. 27, 1962, Ser. No. 182,962
Claims priority, application France Apr. 7, 1961
3 Claims. (Cl. 167—65)

1. Process for the treatment of hypercholesterolemia which comprises orally administering to the patient a member selected from the group consisting of mono (N-methylaminoethyl)-phosphoric acid and its pharmaceutically acceptable acid salts.

3,124,509
PROCESS FOR THE PURIFICATION OF ACTH

Richard H. Johnson, Kalamazoo Township, Kalamazoo County, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Filed Oct. 18, 1952, Ser. No. 315,601
6 Claims. (Cl. 167—74)

1. In a process for the purification of ACTH, the steps of mixing ACTH with a pectic compound selected from the group consisting of pectic acid, pectinic acid having a methyl ester content of up to about ten percent, and metal salts of said acids, precipitating the ACTH pectic compound at a pH between about 2.5 and about 5.0, separating the ACTH pectic compound from the mixture, acidifying the ACTH pectic compound with an acid solution having a pH of less than about 1.5, and separating purified ACTH from the mixture.

3,124,510
STABLE DRY POWDERED FAT-SOLUBLE VITAMINS

Adolf Rosenberg, Forest Hills, N.Y., assignor to Commercial Solvents Corporation, a corporation of Maryland

No Drawing. Filed Apr. 26, 1960, Ser. No. 24,653
8 Claims. (Cl. 167—81)

1. Method of manufacturing dry, powdered, fat-soluble vitamins in a stable form, which comprises mixing water,

fat-soluble vitamin-bearing oil having a high concentration of said vitamin, edible fat which is a normally solid edible fat having a melting point ranging from about 35° to 75° C. and a non-fat vehicular material comprising a combination of gelatin and skim milk solids, homogenizing said mixture, and spray-drying said homogenizate.

3,124,511
DIAGNOSTIC TEST FOR HOG CHOLERA
Robert L. Taylor and Fred Zuschek, Des Moines, Iowa, assignors, by mesne assignments, to Diamond Laboratories Inc., Des Moines, Iowa
No Drawing. Filed July 7, 1961, Ser. No. 122,424
7 Claims. (Cl. 167—84.5)

1. A method of determining whether a pig had hog cholera comprising determining the pancreatic activity of the pig and comparing it with the impared pancreatic activity of a pig known to have hog cholera.

3,124,512
COMPOSITIONS FOR USE IN CARIES PROPHYLAXIS
Hans Schmid, Muttenz, and Hans Rudolf Mühlemann, Zurich, Switzerland, assignors to GABA A.G., Basel, Switzerland, a Swiss company
No Drawing. Filed May 25, 1959, Ser. No. 815,253
Claims priority, application Switzerland May 29, 1958
11 Claims. (Cl. 167—93)

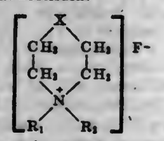
1. A dental composition for caries prophylaxis comprising (1) a water-soluble quaternary ammonium fluoride having the structural formula:



wherein R is an alkyl radical having from 8 to 20 carbon atoms,

said water-soluble quaternary ammonium fluoride being present in an amount sufficient to provide from about .01% to about 2.0% by weight of the total composition of ionizable fluorine, and (2) a fluorine-compatible carrier, said composition being essentially free of anion-active adjuvants.

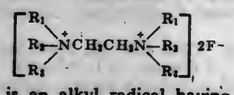
3. A dental composition for caries prophylaxis comprising (1) a water-soluble quaternary ammonium fluoride having the structural formula:



wherein R_1 is an alkyl radical having not more than 20 carbon atoms, R_2 is an alkyl radical having from 8 to 20 carbon atoms and X is a member selected from the group consisting of oxygen and sulfur,

said water-soluble quaternary ammonium fluoride being present in an amount sufficient to provide from about .01% to about 2.0% by weight of the total composition of ionizable fluorine, and (2) a fluorine-compatible carrier, said composition being essentially free of anion-active adjuvants.

6. A dental composition for caries prophylaxis comprising (1) a water-soluble quaternary ammonium fluoride having the structural formula:



wherein R_1 is an alkyl radical having from 8 to 20 carbon atoms and R_2 and R_3 are lower alkyl radicals, said water-soluble quaternary ammonium compound being present in an amount sufficient to provide from about .01% to about 2.0% by weight of the total composition of ionizable fluorine and (2) a fluorine-compatible carrier, said composition being essentially free of anion-active adjuvants.

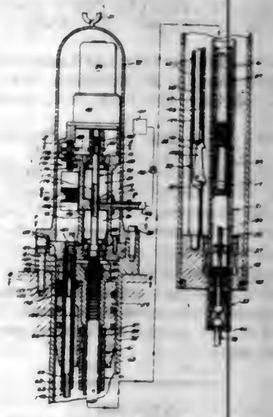
8. A dental composition for caries prophylaxis comprising (1) a water-soluble quaternary ammonium fluoride having the structural formula:

wherein R_1 is an alkyl radical having from 8 to 20 carbon atoms, R_2, R_3, and R_5 are lower alkyl radicals, R_4 is a lower alkylene radical, and R_6 is a member selected from the group consisting of hydrogen and a lower alkyl radical,

said water-soluble quaternary ammonium fluoride being present in an amount sufficient to provide from about .01% to about 2.0% by weight of the total composition of ionizable fluorine, and (2) a fluoride-compatible carrier, said composition being essentially free of anion-active adjuvants.

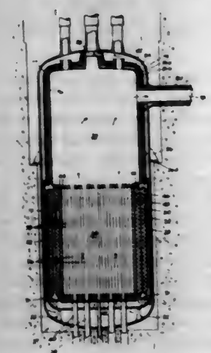
11. A dental composition for caries prophylaxis comprising (1) N-(2-carbocyclohexoxyethyl)-N-myristyl-dimethyl-ammonium fluoride in an amount sufficient to provide from about 0.1% to about 2.0% by weight of the total composition of ionizable fluorine and (2) a fluoride-compatible carrier, said composition being essentially free of anion-active adjuvants.

3,124,513
CONTROL ROD DRIVE
Basil C. Hawke, San Diego, and Irving C. Thompson, Ramona, Calif., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed Mar. 13, 1961, Ser. No. 95,446
4 Claims. (Cl. 176—36)



1. A control rod drive for a nuclear reactor, said drive comprising a scram tube carried for axial movement toward and away from the reactive core of the reactor, the end of said scram tube adjacent to the reactive core being closed and being adapted for connection with a control rod; a housing extending slidably within said scram tube from the other end thereof for axial relative movement therebetween; releasable latch means coupling said scram tube and said housing to prevent axial relative movement therebetween, said latch means being releasable incident to the application of pressure fluid to disconnect said scram tube from said housing, thereby affording axial movement of said scram tube relative to said housing; a lead screw extending within said housing; means interconnecting said lead screw and said housing so as to cause relative movement of said housing axially of said lead screw incident to rotation of said lead screw; and means for applying pressure fluid to said latch means so as to disconnect said scram tube from said housing and for applying pressure fluid within said scram tube for action against said closed end of said scram tube so as to rapidly drive said scram tube toward the reactive core.

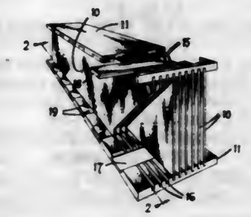
3,124,514
CORE REFLECTOR FOR NUCLEAR REACTOR
Stanley L. Koutz, San Diego, Wilbert A. Kalk, Poway, and Frederick B. Nimtz, National City, Calif., assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed Aug. 2, 1961, Ser. No. 128,910
4 Claims. (Cl. 176—58)



1. A gas cooled nuclear reactor including a vertically disposed pressure vessel, a reactor core assembly within the lower portion of said vessel comprising a plurality of elongated, vertically disposed fuel elements, and a side reflector surrounding said core assembly for substantially its entire height, said reflector comprising a ring of reflector material, said ring being formed of a plurality of blocks of reflector material disposed in side-by-side relation circumferentially of said core assembly, and means supporting each of said blocks comprising a link pivotally interconnecting the lower end of said block to said vessel, said reactor also including a plenum shroud disposed in the upper portion of said vessel in inwardly spaced relation to the wall thereof, and forming a substantial seal at its lower edge with the upper edge of said reflector ring to define a chamber located above said core assembly for heated gases emerging from said core assembly, an outlet conduit connected to said plenum shroud to provide an outlet for the gases from said chamber, and an inlet conduit connected to said pressure vessel to provide an inlet for coolant gases into the vessel outwardly of said plenum shroud and said reflector ring.

3,124,515
PLATE FUEL ELEMENT ASSEMBLY FOR A NUCLEAR REACTOR
Jackson S. Neal, Baltimore, Md., assignor to Martin-Marietta Corporation, a corporation of Maryland
Filed Oct. 16, 1959, Ser. No. 846,961
3 Claims. (Cl. 176—75)

3. A plate fuel element assembly for a nuclear reactor comprising two face opposed side plates, a plurality of plate fuel elements supported by and essentially disposed edgeways between said side plates, said side plates having on their facing surfaces a plurality of substantially parallel spaced first grooves in opposed spacial alignment and adapted to receive in each the outward edge of a said spaced plate fuel element, said side plates having a plurality of substantially parallel spaced dovetail shaped sec-



ond grooves intersecting said spaced first grooves, said plate fuel elements having a plurality of spaced dovetail shaped grooves disposed on the outward edges thereof so as to be aligned to form keyways with said spaced second grooves when disposed within said assembly, and keying means for engaging in said keyways to rigidly join said side plates and said plate fuel elements into a unitary structure.

3,124,516
NUCLEAR REACTOR DUCT CLOSURE DEVICE
Leon Le Flem, Enghien-les-Bains, Daniel Voeltzel, Paris, and Jacques Jouin, Chaville, France, assignors to Commissariat a l'Energie Atomique, Paris, France
Filed May 2, 1960, Ser. No. 25,935
Claims priority, application France May 5, 1959
6 Claims. (Cl. 176—87)



1. In a nuclear reactor duct closure device for at least one duct of a nuclear reactor having a radiological shield, a sheath passing through the radiological shield eccentric with respect to the duct, a first outer drum mounted in said sheath in the longitudinal axis thereof, a second interior drum mounted beneath said first drum in said sheath, the longitudinal axes of said drums being coaxial with the longitudinal axis of said sheath, at least one canal passing longitudinally through each of said drums and parallel and eccentric with respect to the longitudinal axis of said drum, means for rotating said first drum angularly with respect to said sheath from a first angular position to a second angular position in which said canal of said first drum forms a prolongation of the duct of the reactor, second means for rotating said second drum angularly with respect to said sheath from a first angular position to a second angular position in which said canal

of said second drum forms a prolongation of the duct of the reactor and of said canal of said first drum and means for limiting the angular rotation of said second drum, said drums providing in their initial angular positions a closure for the duct of the reactor and radiological protection for the reactor toward its surface.

3,124,517
NEW LYTIC ENZYME AND PREPARATION THEREOF

Philippe R. Eloy, Paris, France, assignor to Laboratoires Toraude, Paris, France, a French Company

No Drawing. Filed Sept. 15, 1958, Ser. No. 760,835
2 Claims. (Cl. 195—66)

1. A process for preparing a lytic enzyme from spores of *Bacillus cereus* No. 5832, comprising culturing *Bacillus cereus* No. 5832 under aerated conditions for a period of about 24 hours in the synthetic culture medium having the composition:

	Grams
Monopotassium phosphate	6.8
Magnesium sulfate .7H_2O	0.123
Manganese sulfate .14H_2O	0.00223
Ferric sulfate	0.02
Zinc sulfate .7H_2O	0.0144
Yeast autolysate	0.5
Saccharose	6.0
Protein hydrolysate	1.0

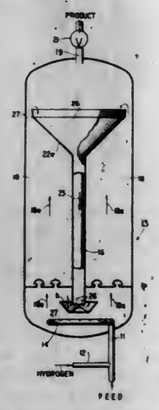
Distilled water to make 1,000 milliliters.

centrifuging the culture medium, pulverizing the spores thus obtained, fractionating a water suspension of the pulverized spores at pH 3, filtering the pH 3-soluble fraction, treating the filtrate with ammonium sulfate to form a precipitate of the crude enzyme and purifying the crude enzyme by dialysis.

3,124,518
APPARATUS FOR TREATMENT OF LIQUID WITH GAS

Luis H. Guzman, Sulphur, and Roger P. Van Driesen, Lake Charles, La., assignors to Cities Service Research and Development Company, New York, N.Y., a corporation of New Jersey

Filed May 29, 1961, Ser. No. 113,239
4 Claims. (Cl. 196—46)

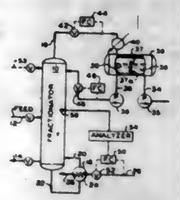


1. Apparatus comprising a generally vertical reaction vessel, means for introducing liquid and gaseous feed into the lower portion of said vessel, a generally vertical recycle conduit positioned within said vessel, said conduit having an enlarged upper end in fluid communication with the upper portion of said reaction vessel and an open lower end in fluid communication with the lower portion thereof, said conduit having a cross-sectional area between about 1/30 and about 1/10 that of the reaction vessel and said enlarged upper end of said conduit having a cross sectional area at least about 0.2 times that of the reaction vessel and being spaced horizontally from the walls thereof, and means for withdrawing material from said vessel.

3,124,519
METHOD OF CONTROLLING FLUID IN PROCESS AND AN ACCUMULATOR THEREFOR

Lyman W. Morgan, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Aug. 15, 1958, Ser. No. 755,329
17 Claims. (Cl. 202—40)

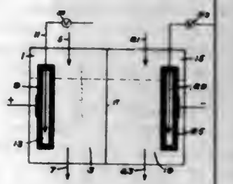


1. An accumulator for receiving a processed liquid stream from a treating vessel comprising a tank having a first chamber and a laterally adjacent second chamber separated by a partition providing fluid flow over the top but closing the lower section of the tank to flow between chambers, said second chamber being at least as large as said first chamber; as the sole inlet to said accumulator, a fluid inlet to said first chamber; a separate fluid outlet from each of said chambers; and a fluid conduit connecting said chambers and having a check valve therein permitting flow only from the bottom of said second to the bottom of said first chamber.

3,124,520
ELECTROCHEMICAL CONVERSION OF ELECTROLYTE SOLUTIONS

Walter Juda, Lexington, Mass., assignor to Ionics, Incorporated, Cambridge, Mass., a corporation of Massachusetts

Filed Sept. 28, 1959, Ser. No. 842,892
12 Claims. (Cl. 204—86)

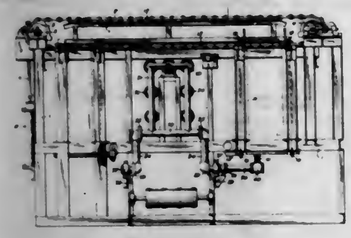


7. A process for electrolytic conversion of electrolyte solutions in an electrolytic cell comprising: a container adapted to contain an electrolyte solution, spaced electrodes therein at least the anode being a porous catalytic electrode, a cation exchange membrane between said electrodes and spaced from the cathode electrode, comprising the steps of: introducing an electrolyte solution into the container, passing a direct electric current between said electrodes, and passing a combustible fuel through said porous anode to lower the energy requirements for conversion of said electrolyte solution by the reaction of said combustible fuel.

3,124,521
MACHINE FOR SEPARATING STRIPPING ZINC OR OTHER METAL SHEETS FROM ALUMINUM OR SIMILAR CATHODES

Yury Nickolaevich Svisdoshch, Ust'-Kamenogorsk, ul. Promyshlennaia 14, Apt. 1; Alexander Andreevich Shpekht, Ust'-Kamenogorsk, prospekt Lenina 8, Apt. 71; Vladimir Jakovlevich Jakobchuk, Ust'-Kamenogorsk, ul.-Voroshilova 165, Apt. 13; Nickolay Ivanovich Podlesnykh, Ust'-Kamenogorsk, prospekt Lenina 25, Apt. 39; and Grigory Sergeevich Ignatov, Ust'-Kamenogorsk, prospekt Lenina 23, Apt. 1, all of Moscow, U.S.S.R.

Filed Aug. 31, 1962, Ser. No. 222,990
4 Claims. (Cl. 204—194)

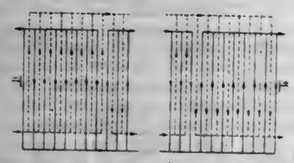


1. A machine for stripping electrolytically deposited zinc on a sheet cathode comprising a frame, a horizontally positioned endless conveyer supported by said frame, said endless conveyer having hanging means, motive means adapted to move said endless conveyer in intermittent fashion, delivery means for moving said zinc coated cathodes onto said hanging means whereby said cathodes are longitudinal with respect to said conveyer, percussive means positioned on said frame whereby to strike the upper surface of said cathodes, stripping means, said percussive means positioned between said delivery means and said stripping means, said stripping means positioned on said frame and along the path of said conveyer, said stripping means including two means pivoted along the bottom thereof and presenting confronting surfaces pivotable towards one another, said stripping means positioned whereby said cathodes are passed therebetween by said conveyer, suction means positioned on said confronting surfaces to strip said zinc from said cathodes during residency between said stripping means, conveyer means positioned below said stripping means to receive said stripped zinc, cathode removal means positioned proximate said conveyer after said stripping means to remove said cathodes.

3,124,522
ELECTRODIALYSIS PROCESSES AND ELECTRODIALYSIS CELLS

Thomas Victor Arden, London, England, and Gilbert William Merriman, Pontyclun, Wales, assignors to The Permutit Company Limited, London, England

Filed Mar. 21, 1956, Ser. No. 572,959
Claims priority, application Great Britain Mar. 22, 1955
7 Claims. (Cl. 204—301)

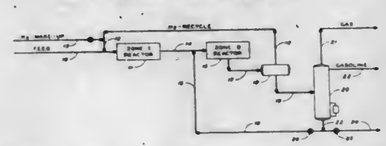


1. An electrodialysis apparatus comprising a plurality of juxtaposed multi-membraned groups comprised of a plurality of parallel alternating anion-selective and cation-selective membranes forming alternate diluting and concentrating compartments having inlets and outlets, all the membranes of the apparatus being parallel to each other, manifold conduit means interconnecting the outlets of all the diluting compartments of each group to the inlets of the diluting compartments of another group, thereby combining the effluents of the diluting compartments of a group for passage as influent for the diluting compartments of said other group, and electric current supplying means consisting of an anode at one end of the apparatus and a cathode at the other end of the apparatus for passing a direct current transversely through all the membranes and compartments.

3,124,523
PRODUCTION OF HIGH OCTANE GASOLINES FROM NAPHTHAS

John W. Scott, Jr., Ross, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

Filed Jan. 9, 1961, Ser. No. 84,475
1 Claim. (Cl. 208—62)



In a process for producing gasoline employing in combination a conventional reforming zone and an isomerization-cracking zone containing a catalyst comprising a hydrogenating-dehydrogenating component disposed on an active cracking support, said isomerization-cracking zone being operated during at least a portion of the on-stream period at a temperature between 700° and 900° F., a pressure above 600 p.s.i.g., a space velocity from about 0.2 to 15 v./v./hr. and a per-pass conversion of 25–75%, the improvement which comprises first reforming in said reforming zone a naphtha boiling from 180° to 550° F. and obtained from a source other than said isomerization-cracking zone, separating from the catalytic reformate all materials boiling below about 250° F. and above about 600° F., passing as a hydrocarbon feed to said isomerization-cracking zone only the remaining hydrocarbons boiling between about 250° and 600° F., comprising a major portion of the aromatics in the effluent from said reforming zone, converting a substantial portion of said feed in said isomerization-cracking zone at a temperature between about 500° and 900° F., a pressure of at least 600 p.s.i.g., and a space velocity between about 0.2 and 15, in the presence of a catalyst comprising nickel sulfide on an active cracking support and in the presence of at least 1500 s.c.f. of H_2 per barrel of feed to a normally liquid gasoline having an appreciably lower aromatics content than said feed, and recovering from said isomerization-cracking zone as a product at least substantially all of said gasoline boiling up to 300° F.

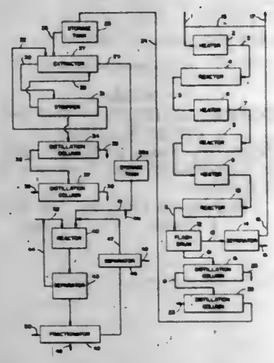
3,124,524
METHOD OF PRODUCING A HIGH OCTANE GASOLINE BY REFORMING A NAPHTHA IN TWO STAGES

Bernard S. Friedman, Chicago, Ill., assignor, by mesne assignments, to Sinclair Research, Inc., New York, N.Y., a corporation of Delaware

Filed June 1, 1959, Ser. No. 817,063
4 Claims. (Cl. 208—65)

1. In a method of converting a straight run hydrocarbon fraction boiling in the motor fuel range, the steps comprising contacting said hydrocarbon fraction with a platinum metal-alumina catalyst in the presence of free hydrogen at a temperature of about 750 to 1000° F. and

a pressure of about 50 to 1000 p.s.i.g. to provide a product boiling in the motor fuel range of increased octane value, separating from this product paraffinic hydrocarbons consisting essentially of paraffinic hydrocarbons boiling predominantly in the C_8 to C_9 range, said paraffinic hydrocarbons containing at least about 15 weight percent of normal paraffin and having less than about 10 weight percent aromatics, contacting in the liquid phase isobutane and the separated paraffinic hydrocarbons with a



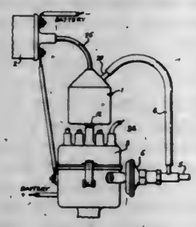
catalyst consisting essentially of hydrogen fluoride and boron trifluoride at a temperature of about 0 to 300° F. and at a boron trifluoride partial pressure of at least about 200 p.s.i. with there being a net consumption of butanes of at least about 5 weight percent based upon the said paraffinic hydrocarbons, said contacted isobutane being about 50 to 600 weight percent of said paraffinic hydrocarbon, and separating a hydrocarbon boiling in the motor fuel range.

3,124,525

OZONE GENERATOR

John Remonte, P.O. Box 837, Corsicana, Tex., assignor of forty-five percent to Bennett Miller, Dallas, Tex.

Filed Mar. 14, 1963, Ser. No. 265,275
2 Claims. (Cl. 208—179)



2. The method of purifying lubricating oil in the crankcase of an automobile comprising the step of supplying the crankcase with ozone to thereby contact the lubricant with ozone.

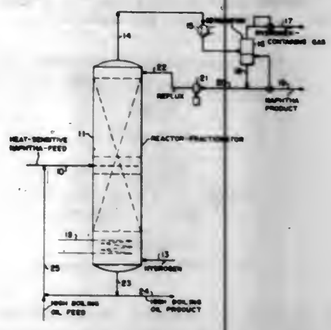
3,124,526

HYDROFINING PROCESS

Roger M. Butler and Jackson Eng, Sarnia, Ontario, Canada, assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed July 11, 1960, Ser. No. 41,974
4 Claims. (Cl. 208—264)

1. The method of catalytically hydrogenating heat sensitive naphtha feed stocks that tend to form a deposit upon a heat transfer surface when preheated to a temperature above about 250–350° F. and which tend to form an excessive amount of carbonaceous deposit upon hydrogenating catalyst in a reaction zone, which comprises mixing the said naphtha feed stock with a higher boiling gas oil, introducing the resultant mixture at about the mid-section of a vertical reaction zone containing a hydrogenation-dehydrogenation catalyst, supplying heat to said reaction zone and maintaining it at a temperature of about 400–800° F. and at a pressure of about 50–500 p.s.i.g. to vaporize said naphtha in said reaction zone and at least a portion of the gas oil, passing naphtha vapors upwardly through the upper portion of said reaction zone,



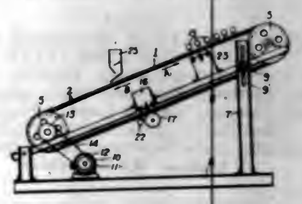
supplying hydrogen-containing treat gas to the bottom of said reaction zone and passing said gas upwardly through said reaction zone countercurrently to the descending gas oil in the lower portion of the zone and concurrently with the naphtha vapors in the upper portion of said reaction zone, removing hydrofined naphtha product overhead from the said reaction zone, removing liquid gas oil as bottoms from said reaction zone, condensing hydrofined naphtha product and returning a portion of said liquid hydrofined naphtha product to the top of said reaction zone to maintain liquid oil in contact with catalyst in the upper portion of said reaction zone.

3,124,527

MAGNETIC SEPARATING MACHINES

Seiichiro Watanabe, Toshio Kobayashi, and Hiromitsu Shoji, all of Tokyo, Japan, assignors to Japan Special Steel Company Limited, Tokyo, Japan, a corporation of Japan

Filed Dec. 26, 1961, Ser. No. 161,782
Claims priority, application Japan Dec. 30, 1960
6 Claims. (Cl. 209—218)



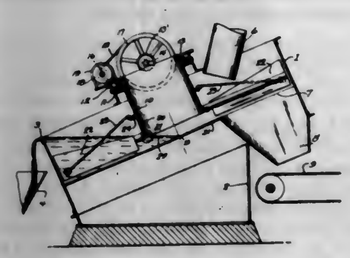
1. A magnetic separator for magnetic particles which comprises an endless belt conveyor having upper and lower runs arranged in an inclined position, the conveyor belt being made of flexible material mixed with ferrite powders and magnetized to have a desired number of spaced apart magnetic poles, said spaced apart magnetic poles comprising north and south poles in alternately different polarities, a driving means for said flexible magnetic belt, water injection nozzles arranged above the upper run of said belt at the upper end of the incline and positioned to spray upon the upper surface of the upper run of said belt, a magnetic take-off device mounted adjacent the lower run of said belt to remove the particles held on the belt surface, said device comprising means for establishing magnetic fields cancelling the attractive fields of said magnetic poles in said belt, and means for adjusting the slope of the belt.

3,124,528

METHOD AND APPARATUS FOR DEWATERING SOLIDS SUCH AS SAND

Charles E. Wood, deceased, late of Milwaukee, Wis., by Gertrude S. Wood, administratrix, Milwaukee, Wis., assignor of one-third to Helen W. Aker, Hackensack, N.J., one-third to Jean W. Re, Pawling, N.Y., and one-third to Gertrude S. Wood, Milwaukee, Wis.

Filed Oct. 16, 1958, Ser. No. 767,710
6 Claims. (Cl. 210—19)



1. A method of dewatering particulate solid material which has been conveyed by a liquid current, such method consisting in delivering the liquid current and entrained material into a relatively quiescent pool, mechanically withdrawing the solids from below the level of the pool and advancing such solids at an upward incline to a point above such level, facilitating the segregation of solids from the liquid of the pool by mechanically applying vibratory motion to the liquid and the solids only adjacent the point of emergence of the solids from the liquid level of the pool and subsequently discharging the solids relatively free of liquid while continuously draining liquid from the level of the pool surface.

3,124,529

PROCESS FOR THE TREATMENT OF FLUIDS WITH CARBON

Pieter Smit, Santpoort, Netherlands, assignor to N.V. Octrooien Maatschappij Activit, Amsterdam, Netherlands, a limited-liability company of the Netherlands

No Drawing. Filed Mar. 17, 1960, Ser. No. 15,556
Claims priority, application Netherlands Mar. 17, 1959
1 Claim. (Cl. 210—39)

A process of decolorizing aqueous solutions which consists essentially of contacting the solution with the particular carbon black resulting from the partial combustion of a hydrocarbon with oxygen during production of a combustible gas, said hydrocarbon and oxygen being preheated to at least approximately 200° C., and said partial combustion being conducted at a temperature of a least 1000° C. and under a pressure of at least 2 atmospheres.

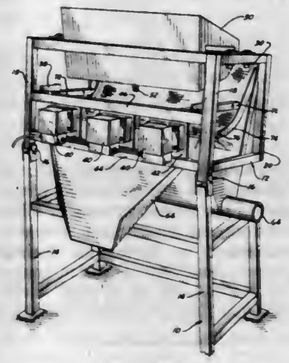
3,124,530

FILTER

Hans Jakobs, Chicago Heights, Ill., assignor to Novo Industrial Corporation, a corporation of New York

Filed Nov. 27, 1959, Ser. No. 855,710
2 Claims. (Cl. 210—389)

1. In a filter, a support, a flexible filter mesh positioned on the support in an inclined position with a degree of slack between the upper and lower ends thereof and the inclined side edges being free and otherwise directly unsupported, the upper end of said mesh being fixed on the support, the lower end of said mesh and a substantial portion of the extent of the mesh directly adjacent the lower end extending generally horizontally, means for supporting the lower end of said flexible mesh including a vibrator on the support attached to the lower end of the mesh whereby the lower end of the mesh is free to move with respect to and independently of the support, the vibrator being constructed and attached to the lower end of the mesh to apply vibrations thereto only in a direction generally parallel to the plane of the lower end for simultaneously creating generally perpendicular vibrations in an intermediate area of the mesh due to the instantaneous variations in said degree of slack and generally parallel vibrations at the lower end, an inlet on the support above the mesh for feeding material to be filtered to the intermediate area, a discharge on the support below the lower end of the mesh for receiving separated material discharged over the lower end of the mesh, and a flexible side seal attached to the support and disposed along each inclined side edge of the mesh rising a substantial distance above it and constructed to prevent material from flowing over the side edges thereof thereby creating a substantial depth of material in the mesh without substantially dampening or otherwise hindering the vibrations generated in the mesh so that all separated material will be confined to movement only over the lower end of the mesh after separation.



3,124,531

METAL WORKING LUBRICANT

Joshua C. Whetzel, Jr., Fox Chapel, and Sayre Rodman, Oakmont, Pa., assignors to Far-Best Corporation, Los Angeles, Calif., a corporation of California

No Drawing. Filed Oct. 28, 1959, Ser. No. 849,147
4 Claims. (Cl. 252—52)

1. A metal working lubricant consisting essentially of an additive dissolved in a light petroleum oil having a viscosity between 30 and 80 Saybolt seconds, universal, at 100° F., the additive constituting about 1 to 25%, by weight, of the oil, the additive being a mixture of fatty alcohols of the general formula R—OH, where R is a straight paraffinic chain of from 10 to 20 carbon atoms with not more than one double bond, and polypropylene glycol having an average molecular weight between 134 and 4000, the polypropylene glycol amounting to about 1 to 75%, by weight, of the additive.

3,124,532
LUBRICATING OIL COMPOSITIONS
George W. Ayers, Chicago, Ill., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
No Drawing. Filed Dec. 28, 1959, Ser. No. 862,094
12 Claims. (Cl. 252—45)

7. An extreme pressure lubricant consisting essentially of a major portion of a mineral lubricating oil and about 2.5 to 5.0 wt. percent of a composition of matter of the formula

$$R(CH_2X)_x$$

wherein X is a halogen, x is an integer from 1 to 3 and R is a complex, polynuclear sulfur and nitrogen-containing heterocyclic nuclei derived from solvent extracts obtained in the solvent refining of mineral lubricating oils using a solvent selective for aromatic compounds and is characterized by having an average molecular weight of above about 300, a sulfur content of above about 0.6 wt. percent and an average number of about 1.7 to 3.5 aromatic rings per mean aromatic molecule.

9. An extreme pressure lubricant consisting essentially of a major portion of a mineral lubricating oil and about 2.5 to 5.0 wt. percent of a composition of matter of the formula

$$RCH_2—S—S—CH_2R$$

wherein R is a complex, polynuclear sulfur and nitrogen-containing heterocyclic nuclei derived from solvent extracts obtained in the solvent refining of mineral lubricating oils using a solvent selective for aromatic compounds and is characterized by having an average molecular weight of above about 300, a sulfur content of above about 0.6 wt. percent and an average number of about 1.7 to 3.5 aromatic rings per mean aromatic molecule.

3,124,533
FLUORINE CONTAINING ESTERS OF POLYCARBOXYLIC ACIDS
Stephen J. Metro, Scotch Plains, Adolph J. Garbus, Linden, and Robert E. Barnum, Fanwood, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Feb. 25, 1960, Ser. No. 10,862
8 Claims. (Cl. 252—54.6)

1. A lubricating oil composition comprising a major amount of a synthetic ester lubricating oil and about 0.1 to 10.0 wt. percent, based upon the weight of said synthetic ester lubricating oil, of a partial ester of a C_6 to C_8 saturated aliphatic hydrocarbon polycarboxylic acid having 3 to 4 carboxy groups and an alcohol of the formula:

$$X(CF_2)_nCH_2OH$$

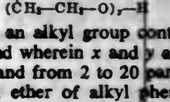
wherein X is selected from the group consisting of hydrogen and fluorine and n is an integer of 2 to 19.

3,124,534
CORROSION INHIBITOR
James K. O'Brien, Montclair, and Howard B. Trombley, Caldwell, N.J., assignors to Maco, Incorporated, Caldwell, N.J., a corporation of New Jersey
No Drawing. Filed Aug. 1, 1958, Ser. No. 752,405
26 Claims. (Cl. 252—147)

1. In an aqueous acid cleaning composition based on an acid substance selected from the group consisting of sulfuric, sulfamic, phosphoric acids and an alkali metal bisulfate, the method of inhibiting the corrosive action of said composition on metals which comprises incorporating in said composition a corrosion inhibitor constituting about 3% to 10% by weight of the acid in the composition, said inhibitor having a composition consisting essentially of about 50% to 95% by weight of an alkali metal compound selected from the group consisting of sodium, potassium and lithium phosphates, and sodium, potassium and lithium borates, and mixtures thereof, substantially the balance of the inhibitor consisting essentially of a mixture of a lower alkyl thiourea and a complex organic reaction product of an organic chloride with a coal tar base and with a substance selected from the group consisting of water soluble inorganic thiocyanates and thiourea, the proportion by weight of the lower alkyl thiourea to the complex organic reaction product ranging from about 3:1 to 1:3.

3,124,535
FUR CLEANING COMPOSITION
Willis C. Ware, 1018 N. Clark St., Chicago, Ill.
No Drawing. Filed Sept. 10, 1956, Ser. No. 608,702
3 Claims. (Cl. 252—153)

1. A liquid, fur cleaning composition comprising: from 1 to 10 parts by weight of an alkyl trimethyl ammonium salt wherein the alkyl group contains from 8 to 18 carbon atoms; from 5 to 20 parts by weight of a tertiary amine having the structural formula:



wherein R signifies an alkyl group containing from 8 to 18 carbon atoms and wherein x and y are numbers totalling from 2 to 10; from 5 to 20 parts by weight of a polyethylene glycol ether of alkyl phenol being a condensation product of one molecule of an alkyl phenol wherein the alkyl group contains from 8 to 10 carbon atoms with from 2 to 10 molecules of ethylene oxide; and sufficient dry cleaning solvent to make 100 parts by weight.

3,124,536
COMPOSITION FOR CLEANING SYNTHETIC FUR
Willis C. Ware, 1018 N. Clark St., Chicago, Ill.
No Drawing. Filed Sept. 10, 1956, Ser. No. 608,703
2 Claims. (Cl. 252—153)

1. For dry cleaning and dissipating static electrical charges on synthetic fur garments, a composition adapted to be diluted by a compatible solvent for use and comprising: an organic solvent having dispersed therein from 2.5 to 15 parts by weight of a dialkyl dimethyl ammonium salt wherein the alkyl groups each contain from 8 to 18 carbon atoms; from 2 to 10 parts by weight of a tertiary amine having the structural formula:

wherein R signifies an alkyl group containing from 8 to 18 carbon atoms and wherein x and y are numbers totalling from 2 to 10; and from 2 to 20 parts by weight of a polyethylene glycol ether of alkyl phenol being a condensation product of one molecule of an alkyl phenol, wherein the alkyl group contains from 8 to 10 carbon atoms, with from 2 to 10 molecules of ethylene oxide.

3,124,537
SPOT REMOVER FOR CLEANING CLOTHES
Ralph Milholland, 2314 Brown St., Little Rock, Ark.
No Drawing. Filed Aug. 11, 1961, Ser. No. 130,748
3 Claims. (Cl. 252—153)

1. A spot remover for use with apparel, the spot remover comprising a mixture of amyl acetate, lacquer thinner, a water-soluble sulphonated castor oil for holding the spot in suspension prior to washing out of the spot, and a quantity of pyridine that serves as a penetrating oil, the lacquer thinner comprising approximately 66% toluene; 5% butyl alcohol; and the balance ethyl and butyl acetate, the quantities of ethyl and butyl acetate being such that a combination is obtained that will mix with the sulfonated castor oil to form a heavy viscous solution, the spot remover being approximately 46.8% of sulphonated castor oil, 25% of amyl acetate, 25% of lacquer thinner and 3.2% pyridine.

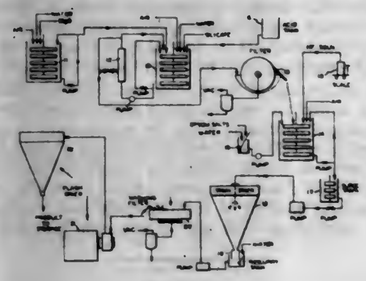
3,124,538
METHOD FOR CONVERSION OF CESIUM ALUM TO RADIATION SOURCE MATERIAL
Robert E. Lewis, Kingston, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Filed Mar. 1, 1963, Ser. No. 262,277
6 Claims. (Cl. 252—301.1)

1. The method of recovering radioactive cesium values from an aqueous solution containing the same together with aluminum values and sulfate values which comprises reacting said solution with oxalic acid whereby cesium tetraoxalate is formed and separating said cesium tetraoxalate from the resulting solution.

3,124,539
METHOD FOR IMPROVING THE PERFORMANCE OF CALCIUM HALOPHOSPHATE PHOSPHORS
William E. Ishler, Lyndhurst, and Eugene F. Apple, Highland Heights, Ohio, assignors to General Electric Company, a corporation of New York
Filed Oct. 10, 1961, Ser. No. 144,155
2 Claims. (Cl. 252—301.4)

1. The method of treating a calcium halophosphate phosphor activated with antimony and manganese and having the approximate formula $Ca_5(PO_4)_3(Cl,F):Sb,Mn$ wherein Cl is not less than 0.05 mole and F is not more than 0.95 mole and wherein Sb is in the range of 0.5% to 1.5% by weight and Mn is in the range of 0.5% to 3.0% by weight, in order to increase its brightness and resistance to depreciation under irradiation, which comprises heating the phosphor into the temperature range of 800° C. to 1200° C., and then quenching it to a temperature less than 400° C. in not more than approximately 1 minute.

3,124,540
PROCESS FOR PREPARING A SILICA-MAGNESIA-FLUORINE HYDROCARBON CRACKING CATALYST
Charles P. Wilson, Jr., 2840 Burnet Ave., Cincinnati 19, Ohio; John B. Jones, 933 Bardswell Ave., Baltimore 28, Md.; and Frank G. Ciapetta, 1628 Oaklawn Court, Silver Spring, Md.
Filed Dec. 22, 1960, Ser. No. 77,661
3 Claims. (Cl. 252—441)



1. A process for preparing a silica-magnesia-fluorine hydrocarbon cracking catalyst containing about 0.5 to 5% fluorine which comprises acidifying a dilute sodium silicate solution with sulfuric acid in an amount sufficient to cause gelation of the silica, adding sufficient sulfuric acid to neutralize 80–90% of the alkali originally present in the sodium silicate, adding a suspension of hydrated calcined magnesia to the resulting hydrogel, aging said slurry at a temperature of about 180° F. for a period of about 2–3 hours, recovering the resulting silica magnesia complex therefrom, dispersing on said complex an aqueous slurry containing free magnesium ions, reslurrying the resulting mass with a solution containing dissolved fluorine in an amount sufficient to impregnate said silica magnesia complex with from 0.5 to 5 weight percent residual fluorine and drying, washing and redrying the resulting composite.

3,124,541
PROCESS FOR THE PREPARATION OF SILICA-ALUMINA CRACKING CATALYSTS
Charles P. Wilson, Jr., Cincinnati, Ohio, and Frank G. Ciapetta, Silver Spring, and John B. Jones, Baltimore, Md., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut
No Drawing. Filed Nov. 14, 1960, Ser. No. 68,672
4 Claims. (Cl. 252—453)

1. A process for preparing a silica-alumina cracking catalyst which comprises providing an aqueous sodium silicate solution having a silica to sodium oxide mole ratio of about 3:1 to 3.4:1, heating said solution to a temperature of about 80–150° F., cogelling the silicate solution with a slurry containing aluminum sulfate and aluminum trihydrate in which the mole ratio of sulfate ions to alumina expressed as Al_2O_3 is 1.5:1 in an amount sufficient to react with the sodium silicate present in the mixture to give a pH of about 5 and purifying and drying the resulting composite.

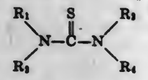
3,124,542
POROUS REFRACTORY HEAT-INSULATING MATERIAL AND METHOD OF PREPARING SAME
Samuel Kohn, Paris, France, assignor to Office National d'Etudes et de Recherches Aerospatiales, Chatillon-sous-Bagneux, France, a corporation of France
No Drawing. Filed Apr. 21, 1960, Ser. No. 23,601
Claims priority, application France Apr. 25, 1959
14 Claims. (Cl. 260—2.5)

1. A composition for protecting a body against high temperatures comprising a foam-forming resinous component which is thermo-plastic at a first temperature range and which is thermo-setting at a higher temperature range, said component forming a foam at said first temperature range, and a particulate refractory filler distributed throughout said resinous component, the particles of said filler agglutinating at a temperature near the destruction temperature of said resin, said destruction temperature being higher than said higher temperature range, said filler being present in an amount sufficient for said filler to agglutinate when said composition is heated to a temperature sufficiently high to agglutinate said particles, said resinous component comprising a thermo-setting boron containing methylolphenol resin and a pore forming material, and said filler comprising alumina in the ratio of about 260 parts by weight per hundred parts of resin.

3,124,543
METHOD OF STABILIZING CELLULAR POLYETHERURETHANES WITH THIOUREA AND DERIVATIVES THEREOF
George W. Fowler, South Charleston, and Fritz Hostettler and William R. Proops, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Apr. 26, 1960, Ser. No. 24,643
6 Claims. (Cl. 260—2.5)

1. In the method for preparing polyurethanes wherein a polyether polyol having a molecular weight of at least 250 and containing at least two active hydrogens as measured and determined by the Zerewitinoff method is reacted with an organic polyisocyanate in admixture with an organic tin catalyst and a blowing agent to form a polyurethane foam, the improvement which comprises incor-

porating into the reaction mixture a minor amount of an organic compound of the group consisting of a thiourea compound of the formula



wherein R_1, R_2, R_3 and R_4 are of the group consisting of hydrogen, alkyl, aryl, alkaryl, aralkyl and cycloalkyl; and ethylenethiourea, ethylidenethiourea, isopropylidenethiourea, benzylidenethiourea, thiobarbituric acid, diphenylthiocarbazone and dithiobiuret.

3,124,544

METHOD OF STABILIZING CELLULAR POLYETHERURETHANES WITH AN ALIPHATIC MERCAPTAN

William R. Proops, Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Apr. 26, 1960, Ser. No. 24,645
6 Claims. (Cl. 260—2.5)

1. In the method for preparing polyurethanes wherein a polyether polyol having a molecular weight of at least 250 and containing at least two active hydrogens as measured and determined by the Zerewitinoff method is reacted with an organic polyisocyanate in admixture with an organic tin catalyst and a blowing agent to form a polyurethane foam, the improvement which comprises incorporating into the reaction mixture a minor amount of a mercaptan compound of the formula

XRSH

where X is of the group consisting of hydrogen, mercapto and hydroxy; and R is a divalent aliphatic hydrocarbon radical of 2 to 24 carbons.

3,124,545

METHOD OF STABILIZING CELLULAR POLYETHERURETHANES WITH AN AROMATIC MERCAPTAN

William R. Proops, Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Apr. 26, 1960, Ser. No. 24,647
6 Claims. (Cl. 260—2.5)

1. In the method for preparing polyurethanes wherein a polyether polyol having a molecular weight of at least 250 and containing at least two active hydrogens as measured and determined by the Zerewitinoff method is reacted with an organic polyisocyanate in admixture with an organic tin catalyst and a blowing agent to form a polyurethane foam, the improvement which comprises incorporating into the reaction mixture a minor amount of a member of the group consisting of 2,5-dimercapto-1,3,4 - thiadiazole and an aromatic mercaptan of the formula

XRSH

wherein X is of the group consisting of hydrogen, amino, nitro and lower alkyl; and R is of the group consisting of phenylene, thiadiazolylene, phenanthrylene and benzothiazolylene.

3,124,546

METHOD OF STABILIZING CELLULAR POLYETHERURETHANES WITH AN AMINE BORANE

George W. Fowler, South Charleston, and William R. Proops, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Apr. 26, 1960, Ser. No. 24,649
8 Claims. (Cl. 260—2.5)

1. In the method for preparing polyurethanes wherein a polyether polyol having a molecular weight of at least 250 and having at least two active hydrogens as measured and determined by the Zerewitinoff method is reacted with an organic polyisocyanate in admixture with an organic tin catalyst and a blowing agent to form a polyurethane foam, the improvement which comprises incorporating into the reaction mixture a minor amount of an amine-borane of the formula

$X{:}BH_3$

wherein X represents a coordinately bonded nitrogen-containing compound of the group consisting of secondary and tertiary aliphatic amines and nitrogen-containing heterocycles.

3,124,547

PROCESS OF CONTACTING A MICROPOROUS RESIN WITH A PLASTICIZER AND SUBSEQUENTLY REMOVING SAID PLASTICIZER

Theodore H. Meltzer, Yardley, and Howard J. Strauss, Abington, Pa., assignors to The Electric Storage Battery Company, a corporation of New Jersey

No Drawing. Filed Sept. 11, 1961, Ser. No. 137,049
3 Claims. (Cl. 260—2.5)

1. In a process for producing an improved microporous resin selected from the group consisting of polyvinyl chloride and copolymers of vinyl chloride with vinyl acetate and vinyl alcohol which has been rendered microporous by mixing it with a temporary plasticizer and a soluble, inert, finely divided pore-forming agent, removing the temporary plasticizer and extracting the pore-forming agent, the improvement which comprises post-plasticizing the microporous resin by contacting it with a plasticizer after the pore-forming agent has been removed and subsequently removing the plasticizer from the microporous resin.

3,124,548

NEOPRENE-EPOXY-PHENOL-ALDEHYDE ADHESIVE CEMENT

Edmund J. Yaroch, Arden Hills, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed May 15, 1962, Ser. No. 194,986
6 Claims. (Cl. 260—19)

1. A liquid adhesive cement composition which is resistant to gelation during storage and upon application as coatings on smooth metal surfaces dries in minutes to provide tacky films that do not transfer to the finger when touched and for periods of up to about two hours form strong adhesive bonds under mere contact pressure at room temperatures, which bonds rapidly develop excellent resistance to shear and dead loads at elevated temperature, said cement composition being a spreadable liquid mixture in a volatile organic liquid solvent of components comprising (1) 100 parts by weight of polymerized chloroprene, (2) 3–40 parts of epoxy resin having an average of more than one 1,2-epoxy group per average molecular weight, (3) a room-temperature-reactive chemical hardening agent for epoxy resin in amount sufficient to provide at room temperature a rapid cure of epoxy resin in simple admixture therewith, and (4) 20 to 90 parts of a heat-hardening phenol-aldehyde resinous condensation product of formaldehyde and a substituted phenol compatible with said chloroprene polymer.

3,124,549

STABLE NON-DRAINING COMPOSITION OF MATTER AND METHOD OF PRODUCING THE SAME USING SOLUBLE LIGHT METAL SALT

Alvaro Salgado, Union, and Anthony R. Manyak, Pompton Plains, N.J., assignors to Reichhold Chemicals, Inc., White Plains, N.Y.

No Drawing. Filed July 18, 1960, Ser. No. 43,315
13 Claims. (Cl. 260—22)

1. A stable non-draining resin composition which comprises a polymerizable blend of (A) an unsaturated polyester resin of an aliphatic saturated dihydric alcohol, a polymeric fatty acid having at least 24 carbon atoms and containing the dimer as a major constituent, and an alpha, beta, ethylenically unsaturated dicarboxylic acid; (B) a miscible, polymerizable, monomer having at least one carbon-to-carbon double bond and a boiling point above 60° C., and a minor amount of a soluble salt of a carboxylic acid and of light metal selected from group II of the periodic chart, the amount of added metal salt being within the range of 0.05 to 1% by weight of the resin composition calculated in terms of the metal present in the salt.

3,124,550

STABLE NON-DRAINING COMPOSITION OF MATTER AND METHOD OF MAKING SAME USING SOLUBLE HEAVY METAL SALT

Alvaro Salgado, Union, and Anthony R. Manyak, Pompton Plains, N.J., assignors to Reichhold Chemicals, Inc., White Plains, N.Y.

No Drawing. Filed July 18, 1960, Ser. No. 43,329
12 Claims. (Cl. 260—22)

1. A stable non-draining resin composition which comprises a polymerizable blend of (A) an unsaturated poly ester resin of an aliphatic saturated dihydric alcohol, a polymeric fatty acid having at least 24 carbon atoms and containing the dimer as a major constituent, and an alpha, beta, ethylenically unsaturated dicarboxylic acid; (B) a miscible, polymerizable monomer having at least one carbon-to-carbon double bond and a boiling point above 60° C.; and a minor amount of a soluble salt of a carboxylic acid and of a heavy metal selected from groups VII and VIII of the periodic chart the amount of added metal salt being from 0.05 to 1% by weight of the resin composition calculated in terms of the metal present in the salt.

3,124,551

STABILIZED POLYPROPYLENE COMPOSITION CONTAINING AN A-STAGE PHENOLIC RESIN AND A PHOSPHORUS-CONTAINING COMPOUND

George W. Warren, Columbus, Ohio, assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Apr. 28, 1960, Ser. No. 25,191
14 Claims. (Cl. 260—43)

1. A propylene resin composition having improved stability toward heat and light induced molecular degradation and being stable toward color development which comprises a normally solid propylene polymer, a stabilizing amount of an A-stage para-tertiaryalkylphenol-formaldehyde resin in which the alkyl group of the para-tertiaryalkylphenol contains from 4 to 20 carbon atoms, and a decolorizing amount of a phosphorus compound having the general formula

$$[(RO)_2P—O]_nR'$$

wherein each R is individually a monovalent hydrocarbon radical having from 1 to 10 carbon atoms, *n* is an integer having a value of from 2 to 4, and R' is an inert polyvalent organic radical having a valence equal to *n* and containing terminal methylene groups through which chemical bonding to each $[(RO_2)P—O]$ occurs.

3,124,552

PROCESS OF POLYMERIZING COMPOUNDS POSSESSING A POLYMERIZABLE DOUBLE BOND

Robert Tirtiaux, Notre-Dame-de-Gravenchon, and Roger Tourret, Bolbec, France, assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed June 16, 1959, Ser. No. 820,580
Claims priority, application France Sept. 3, 1958
5 Claims. (Cl. 260—45.5)

1. A process for preparing an oil-soluble viscosity-index-improving copolymer of a vinyl alcohol ester of a C_1 to C_6 fatty acid with a copolymerizable ester of an alpha, beta ethylenically unsaturated dicarboxylic acid and a C_8 to C_{18} aliphatic alcohol which comprises adding to the monomers prior to copolymerization from 10 to 50 weight percent, based on the total weight of reactants to be polymerized, of a thickening aid selected from the group consisting of polypropylenes, polybutenes, polyisobutenes, polymerized alkyl acrylates containing 4 to 30 carbon atoms in the alkyl group, polymerized alkyl methacrylates containing 4 to 30 carbon atoms in the alkyl group, and copolymers of vinyl alcohol esters and alkyl fumarates, said thickening aid having a viscosity in the range of about 215 to about 21,500 centistokes at 99° C., and thereafter polymerizing the mixture at a temperature in the range of 50 to 110° C.

3,124,553

HIGH TEMPERATURE THICKENERS FOR POLYMERIC MATERIALS

Howard P. Cordts, Bay City, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed June 10, 1960, Ser. No. 35,121
5 Claims. (Cl. 260—45.5)

1. A composition of ar-halomethyldiphenyl oxide thickened with from about 0.25 to 5 weight percent, halomethylphenyl oxide basis, of a microgel of the group consisting of a resinous copolymer of (1) a member of the group consisting of styrene, alkyl substituted styrenes and mixtures thereof with (2) between about 0.04 and 1.1 mole percent of a crosslinking compound, of the group consisting of divinylbenzene, divinylnaphthalene, divinyltoluene, divinylxylenes, diacrylate esters, dimethacrylate esters and diallyl esters, halo being a member of the group consisting of bromo and chloro, wherein the halomethyl groups are ortho- and para-substituted with respect to the ether linkage and wherein up to 2 halomethyl groups are on one benzene ring.

3,124,554

LINEAR POLYESTERS OF COMPOUNDS CONTAINING UP TO TWO ALKENYL GROUPS SUBSTITUTED ON A BENZENE NUCLEUS AND MIXTURES THEREOF WITH A VINYL COMPOUND

Hermann Schnell and Werner Schulte-Huermann, Krefeld-Uerdingen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

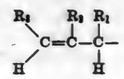
No Drawing. Filed Sept. 12, 1960, Ser. No. 55,131
12 Claims. (Cl. 260—45.5)

1. A linear unsaturated polyester having a K-value of at least about 20, based upon a 1-percent solution of the polyester in cresol at 25° C., consisting of a product of the reaction of

(*a*) a dihydroxy compound of the group consisting of saturated aliphatic and cycloaliphatic diols and dihydric phenols, with

(*b*) an acid of the group consisting of carbonic acid and dicarboxylic acids,

one of the said two reactants being a compound selected from the group consisting of dihydric phenols having up to two benzene nuclei, dihydroxy ethoxybenzenes having up to two benzene nuclei, dihydroxy propoxybenzenes having up to two benzene nuclei, dicarboxy methoxybenzenes having up to two benzene nuclei, dicarboxy ethoxybenzenes having up to two benzene nuclei, and dicarboxy propoxybenzenes having up to two benzene nuclei, at least one of the benzene nuclei of the said compound being substituted directly on the ring with up to two β-alkenyl radicals having the general formula



wherein R_1 is a substituent of the group consisting of hydrogen, lower alkyl and phenyl, R_2 is a substituent of the group consisting of hydrogen, halogen and lower alkyl, and R_3 is a substituent of the group consisting of hydrogen and lower alkyl, the radicals of the said compound being present in the polyester in such a proportion that the >C=C< portion of the alkenyl radicals amounts to at least about 1 percent by weight of the polyester, the linear polyesters being cross-linkable through the double bonds of the alkenyl radicals to produce insoluble resins.

3,124,555

STABILIZATION OF POLYOLEFINS

Delos E. Bown and Henry G. Schutze, Baytown, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

No Drawing. Filed Apr. 4, 1961, Ser. No. 100,539
20 Claims. (Cl. 260—45.5)

1. A composition comprising a solid polymer of an alpha mono-olefin having 2 to 8 carbon atoms in the molecule and a stabilizing amount of resinous solid distillation bottoms product obtained in the reaction of a phenol with a cycloalkylpolyene in solution in a hydrocarbon selected from the aromatic, naphthenic and paraffinic hydrocarbons, boiling in the range from about 100° F. to about 400° F., at a temperature within the range from about 5° to about 75° C. in the presence of an acidic condensing catalyst.

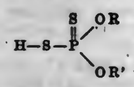
3,124,556

STABILIZING SYNTHETIC DIENE RUBBERS

Dudley B. Merrifield, Basking Ridge, N.J., and Rutherford B. Hill, St. Albans, W. Va., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Sept. 10, 1959, Ser. No. 839,084
5 Claims. (Cl. 260—45.7)

1. A composition of matter comprising unvulcanized sulfur vulcanizable synthetic diene polymer rubber containing an aliphatic conjugated diene hydrocarbon as a major component of the polymer and a small but preservative amount of a compound effective to inhibit hardening selected from the group consisting of phosphorodithioic acids of the structure



alkali metal, ammonium, alkaline earth metal, zinc cadmium, tin, lead, antimony III and substituted ammonium salts thereof, where R and R' each represent a phenyl radical.

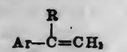
3,124,557

FLAME-PROOF ALKENYL AROMATIC POLYMERS AND METHOD OF MAKING THE SAME

Jacob Eichhorn, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed July 11, 1960, Ser. No. 41,770
11 Claims. (Cl. 260—45.7)

1. A resinous composition of matter consisting essentially of a thermoplastic alkenyl aromatic polymer of at least 70 percent by weight of at least one alkenyl aromatic compound having the general formula:



wherein Ar represents an aromatic radical of the group consisting of hydrocarbon and halohydrocarbon radicals of the benzene series and R is a member of the group consisting of hydrogen and the methyl radical, having intimately incorporated therewith from 3 to 10 parts by weight of a saturated aliphatic polychlorohydrocarbon containing from 2 to 4 carbon atoms and from 4 to 10 chlorine atoms in the molecule and from 0.5 to 3 parts by weight of an organic peroxygen compound having a half-life of at least 2 hours at 100° C., and having the general formula:

$$R[O—O—R']_n$$

wherein R represents a member of the group consisting of alkyl radicals having from 2 to 9 carbon atoms, and aryl and aralkyl hydrocarbon radicals of the benzene series, the acetyl, the benzoyl and the phthaloyl radical, R' is a member of the group consisting of hydrogen, alkyl radicals containing from 2 to 9 carbon atoms, and aryl, aralkyl hydrocarbon radicals of the benzene series, and n is a whole number from 1 to 2, each of said polychlorohydrocarbon and said peroxygen compound being based on 100 parts by weight of said polymer.

3,124,558

PRESSURE-SENSITIVE ADHESIVE TAPE

Nova E. Stucker, St. Paul, and Waldo Kellgren, Birchwood, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Jan. 26, 1962, Ser. No. 169,139
1 Claim. (Cl. 206—59)

A pressure-sensitive adhesive protective tape wound upon itself in roll form consisting of a semi-glassine wet-creped paper backing made from highly-beaten paper fibers and devoid of other components weighing more than 25% of the fiber weight, said paper weighing 120 to 180 pounds per thousand square yards and having 20 to 60 crepe lines per lineal inch, said backing being coated on the dull side with a very thin, highly stretchable but inelastic, water-and-oil-resistant pigmented polymeric barrier film backsizing and on the sharp side with an aggressively tacky pressure-sensitive adhesive; such that the adhesive tape has a dead stretch and a stretch value of at least 25%, a tensile strength of at least 6 pounds per inch width, and can be readily unwound from the roll without impairment and removed from surfaces to which temporarily applied.

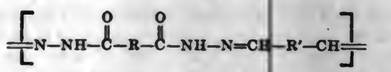
3,124,559

POLYMERS FROM DIALDEHYDES AND DIHYDRAZIDES

Hobson D. De Witt, New Wilmington, Pa., assignor, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware

No Drawing. Filed June 22, 1960, Ser. No. 37,846
15 Claims. (Cl. 260—72)

1. A long chain synthetic polymer composed of recurring structural units of the general formula



wherein R is a divalent hydrocarbon radical containing from 2 to 12 carbon atoms and R' is selected from the group consisting of a single valence bond and a divalent hydrocarbon radical containing from 1 to 12 carbon atoms, said polymer having a melting point of at least 180° C.

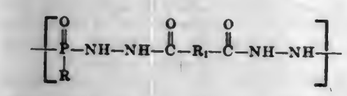
3,124,560

POLYHYDRAZIDES CONTAINING PHOSPHORUS

Hobson D. De Witt, New Wilmington, Pa., assignor, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware

No Drawing. Filed May 17, 1961, Ser. No. 110,645
17 Claims. (Cl. 260—78)

1. A synthetic linear organo-phosphorus polymer consisting of recurring structural units of the general formula



wherein R is a monovalent hydrocarbon radical substantially free from reactive substituents and R_1 is a divalent hydrocarbon radical containing from 1 to 12 carbon atoms and substantially free from reactive substituents.

3,124,561

POLYMERIZATION INITIATORS FOR POLAR MONOMERS

Lloyd T. Jenkins, Cary, N.C., assignor, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware

No Drawing. Filed Oct. 24, 1960, Ser. No. 64,312
10 Claims. (Cl. 260—88.7)

7. A process for the polymerization of ethylenically unsaturated polar monomers which comprises reacting the same in a solvent having a dielectric constant in excess of 2.0 at 25° C., under inert conditions, at a temperature in the range of from 40° C. to about 80° C., at a pressure in the range of from 1 to 150 atmospheres absolute and in the presence of a catalytic amount of a catalyst obtained by first introducing an organo-substituted phosphine into a solution of dioxane followed by the addition thereto of a metal halide, said organo-substituted phosphine having the general formula $P(R)_3$ wherein R is a hydrocarbon radical containing from 1 to 12 carbon atoms selected from the group consisting of alkyl, cycloalkyl, alkylcycloalkyl, aryl, alkylaryl and mixtures thereof and said metal halide being derived from a metal selected from Groups IV–A, IV–B and V–B of the Mendeleev Periodic Table, and wherein said organo-substituted phosphine and said metallic halide are present in a molar ratio of from 1:10 to 10:1, permitting reaction to take place in an anhydrous and inert atmosphere, allowing crystals to form and settle out from the resulting reaction mixture and thereafter recovering the crystals from said reaction mixture.

3,124,562

PRODUCTION OF POLYVINYL ALCOHOL

Ryunosuke Naito and Saburo Yamane, Toyama City, Japan, assignors to Kurashiki Rayon Co., Ltd., Okayama Prefecture, Japan, a corporation of Japan

No Drawing. Filed Apr. 20, 1960, Ser. No. 23,365
Claims priority, application Japan Apr. 23, 1959
4 Claims. (Cl. 260—91.3)

1. A process of producing a polyvinyl alcohol having a degree of polymerization of about 100 to 1500 from a polyvinyl ester which comprises simultaneously saponifying and degrading said ester in an alkaline medium containing an alkaline saponification catalyst and a small but effective amount of an oxidizer selected from the group consisting of periodic acid, alkali metal periodates and alkaline earth metal periodates, and recovering polyvinyl alcohol having a degree of polymerization which is in the range of about 100 to 1500 and lower than the degree of polymerization of polyvinyl alcohol produced by alkaline saponification of said ester in the absence of any oxidizer.

3,124,563

POLYMERIZATION OF ETHYLENE WITH ALUMINUM HYDROCARBON ALLYLIC METAL ALCOHOLATE CATALYSTS

George Robert McKay, Jr., and Emory Menefee, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed June 20, 1957, Ser. No. 667,019
6 Claims. (Cl. 260—94.9)

1. A process for polymerizing ethylene which comprises contacting ethylene with a catalyst formed by the reaction of an aluminum trihydrocarbon compound with an allylic metal alcoholate, wherein the metal is a transition metal of group IV and V of the periodic table of elements, in a molar ratio varying from 0.5 to 10.

3,124,564

PEPTIDE SYNTHESIS WITH ACYLAMINO ACIDS-ALKYL AND ARENE SULFONIC ACID MIXED ANHYDRIDES

Frank C. McKay, Schodack, N.Y., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 11, 1961, Ser. No. 81,945
13 Claims. (Cl. 260—112)

1. In a method for forming a peptide linkage, the step which comprises reacting an aminoacid having one amino group capable of being acylated with a mixed anhydride of an N-acylated aminoacid and an organic sulfonic acid selected from the group consisting of lower-alkane and arene sulfonic acids in the presence of a tertiary organic nitrogen base selected from the ground consisting of tri-lower-alkylamine and pyridine.

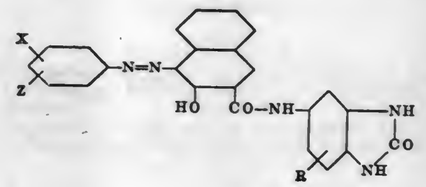
3,124,565

WATER-INSOLUBLE BENZIMIDAZOLONE MONOAZO-DYESTUFFS

Karl Schilling, Frankfurt am Main, and Erich Dietz, Kelkheim, Taunus, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Feb. 28, 1961, Ser. No. 92,163
Claims priority, application Germany Mar. 5, 1960
6 Claims. (Cl. 260—157)

1. The water-insoluble monoazo-dyestuffs having the formula



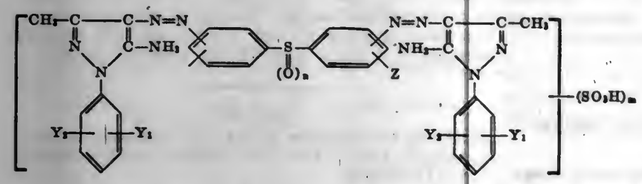
wherein X stands for a member selected from the group consisting of a chlorine atom, a nitro group, a carboxylic acid amide group, a carboxylic acid lower alkyl amide group, a carboxylic acid phenyl amide group, a lower alkyl- and chlorine-substituted carboxylic acid phenyl amide group and a carboxylic acid lower alkyl ester group, Z represents a member selected from the group consisting of a hydrogen atom, a chlorine atom, a lower alkyl group and a lower alkoxy group, and R represents a member selected from the group consisting of a hydrogen atom, a chlorine atom, a bromine atom, a lower alkyl group and a lower alkoxy group.

3,124,566
DISAZO DYESTUFFS

Jean-Pierre Jung, Riehen, near Basel, and Meinrad Hürbin, Basel, Switzerland, assignors to J. R. Geigy A.-G., Basel, Switzerland

No Drawing. Filed Nov. 27, 1962, Ser. No. 240,423
Claims priority, application Switzerland Dec. 1, 1961
5 Claims. (Cl. 260—160)

1. A member selected from the group consisting of disazo dyestuffs of the formula



and the sodium, potassium and ammonium salts thereof, wherein

Z is a member selected from the group consisting of hydrogen, chlorine, bromine and alkyl with maximally 4 carbon atoms,

Y_1 is a member selected from the group consisting of hydrogen, chlorine, bromine and alkyl with maximally 4 carbon atoms; phenoxy, chlorophenoxy, bromophenoxy, methylphenoxy, phenylsulphonyl, methylphenylsulphonyl, chlorophenylsulphonyl,

Y_2 is a member selected from the group consisting of hydrogen, chlorine, bromine,

n is an integer ranging from 1 to 2, and

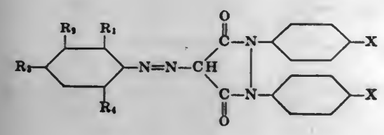
m is an integer ranging from 1 to 4.

3,124,567
AZO DYES CONTAINING A DIOXOPYRAZOLIDINE RADICAL

Willy Forter, Neuallschwil, Otto Senn, Ariesheim, and Walter Wehrli, Riehen, Basel, Switzerland, assignors to Sandoz Ltd., Basel, Switzerland

No Drawing. Filed Apr. 12, 1962, Ser. No. 187,463
Claims priority, application Switzerland Apr. 14, 1961
6 Claims. (Cl. 260—163)

1. Azo compound of the formula



wherein

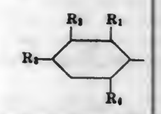
R_1 and R_3 each represents a member selected from the group consisting of H, Cl, Br, NO_2, alkyl with 1 to 4 carbon atoms, —COO.lower alkyl wherein the alkyl contains 1 to 4 carbon atoms, —$CONH_2$, and —$CONH.CH_3$,

R_2 represents a member selected from the group consisting of H, Cl, Br and —COO.lower alkyl wherein the alkyl contains 1 to 4 carbon atoms,

R_4 represents a member selected from the group consisting of H, Cl, Br and alkyl with 1 to 4 carbon atoms, and

X represents a member selected from the group consisting of H, Cl and Br,

the diazo moiety



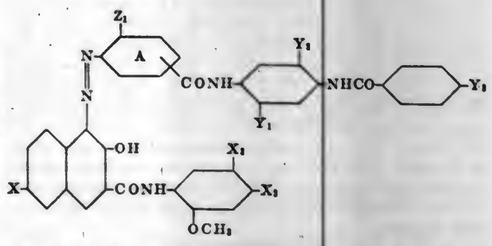
containing at least one member selected from the group consisting of NO_2, —$CONH_2$, —$CONH.CH_3$, —COO.lower alkyl wherein the alkyl contains 1 to 4 carbon atoms, Cl and Br.

3,124,568
AZO-DYESTUFFS

Rudolf Mory, Dornach, Hansrolf Loeffel, Neuallschwil, and Karl Ronco, Muttenz, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a company of Switzerland

No Drawing. Filed Jan. 12, 1962, Ser. No. 165,933
Claims priority, application Switzerland Jan. 13, 1961
6 Claims. (Cl. 260—203)

1. Azo-dyestuffs of the formula



in which Z_1 represents a member selected from the group consisting of chlorine, fluorine, lower alkyl, lower alkoxy, phenoxy and nitro groups, X represents a member selected from the group consisting of hydrogen and bromine, X_2 represents a member selected from the group consisting of chlorine and lower alkoxy, X_3 represents a member selected from the group consisting of chlorine, lower alkyl and alkoxy, Y_1 and Y_2 represent members selected from the group consisting of hydrogen, chlorine, lower alkyl and alkoxy and Y_3 represents a member selected from the group consisting of hydrogen and chlorine, and which formula the —CONH— group in the ring A is at least 3 carbons from the azo group.

3,124,569
SUBSTITUTED AZETIDINE COMPOUNDS

Emilio Testa, Vacallo, Ticino, Switzerland, and Luigi Fontanella and Giulio Maffii, Milan, Italy, assignors to Lepetit S.p.A., Milan, Italy

No Drawing. Filed Dec. 18, 1959, Ser. No. 860,314
Claims priority, application Great Britain Dec. 23, 1958
6 Claims. (Cl. 260—239)

1. 1-ethyl-3-phenylazetidine.

3,124,570
ADDITION OF HYPOHALITES TO UNSATURATED STEROIDS

Samuel G. Levine, Philadelphia, and Monroe E. Wall, Oreland, Pa., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed June 20, 1958, Ser. No. 743,480
3 Claims. (Cl. 260—239.55)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A process for the preparation of a steroid halohydrin acetate comprising reacting 3β-acetoxy-5α,22β,25D-spirost-9(11)-en, in solution in an inert, neutral organic solvent at a temperature of about from −20 to +30° C., with an acetylhypohalite selected from the group consisting of acetylhypobromite and acetylhypochlorite, and recovering a 9α-halo-3β,11β-diacetoxy-5α,22β,25D-spirostane.

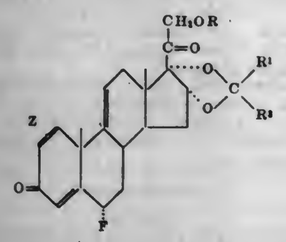
3,124,571
PROCESS FOR HYDROXYLATION OF 16α,17α-KETALS AND ACETALS OF CORTICAL HORMONES AND PRODUCTS DERIVED THEREFROM

Howard J. Ringold and George Rosenkranz, Mexico City, Mexico, assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed May 19, 1960, Ser. No. 30,080
Claims priority, application Mexico Jan. 26, 1960
16 Claims. (Cl. 260—239.55)

1. A method for preparing a 6α-fluoro-11β-hydroxy-cortical hormone selected from the group consisting of the 16α,17α-cyclic ketal of 6α-fluoro-16α-hydroxy-hydrocortisone, the 16α,17α-cyclic ketal of 6α-fluoro-16α-hydroxy-prednisolone, the 16α,17α-cyclic acetal of 6α-fluoro-16α-hydroxy-hydrocortisone and the 16α,17α-cyclic acetal of 6α-fluoro-16α-hydroxy-prednisolone in which the cyclic acetal and the cyclic ketal groups each contain up to 14 carbon atoms comprising incubating the corresponding 11-desoxy compound with a fungus selected from the group consisting of *Cunninghamella bainieri* ATCC 9244, *Cunninghamella blakesleeana* ATCC 8688a and *Cunninghamella blakesleeana* ATCC 8688b.

15. A compound of the following formula:



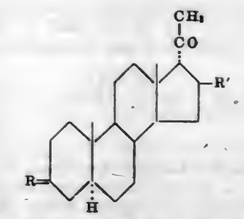
wherein R is a hydrocarbon carboxylic acyloxy group of less than 12 carbon atoms; R′ and R^2 are each selected from the group consisting of hydrogen and a hydrocarbon group containing up to 14 carbon atoms; and Z is selected from the group consisting of a saturated linkage between C–1 and C–2 and a double bond between C–1 and C–2.

3,124,572
DERIVATIVES OF ISOPREGNANE

Eugene L. Woroch, Itasca, Ill., assignor to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois

No Drawing. Filed Oct. 27, 1961, Ser. No. 148,030
9 Claims. (Cl. 260—239.55)

1. Steroids of the formula



wherein R is selected from the group consisting of oxygen and



and wherein R′ is selected from the group consisting of CH_2OH and COOH.

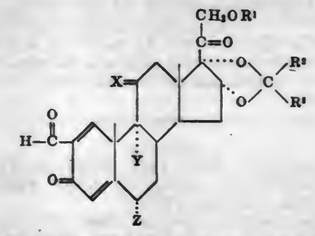
7. 16β - hydroxymethyl-20-ethylenedioxy-17α-pregn-5-en-3β-ol.

3,124,573
2-FORMYL CORTICOIDS

Albert Bowers and John Edwards, Mexico City, Mexico, assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed Dec. 4, 1961, Ser. No. 156,958
21 Claims. (Cl. 260—239.55)

19. A compound of the following formula:



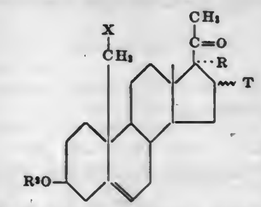
wherein X is selected from the group consisting of β-hydroxy and keto; Y is a member of the group consisting of hydrogen, fluorine and chlorine; Z is selected from the group consisting of hydrogen, fluorine, chlorine and methyl; R^1 is selected from the group consisting of hydrogen and a hydrocarbon carboxylic acyl group of less than 12 carbon atoms and R^2 and R^3 are hydrocarbon radicals of up to 8 carbon atoms.

3,124,574
19-HALO PREGNENES

Albert Bowers, Mexico City, Mexico, assignor to Syntex Corporation, Panama, Panama, a corporation of Panama

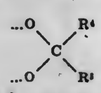
No Drawing. Filed May 14, 1962, Ser. No. 194,717
Claims priority, application Mexico Feb. 9, 1962
17 Claims. (Cl. 260—239.55)

1. A compound of the following formula:



wherein R is selected from the group consisting of hydrogen, hydroxyl and a hydrocarbon carboxylic acyloxy group of less than 12 carbon atoms; T is a member of

the group consisting of hydrogen, α-hydroxy, α-hydrocarbon carboxylic acyloxy of less than 12 carbon atoms, α-methyl and β-methyl; T and R together represent the group



wherein R^4 and R^5 each represent lower alkyl; and R^2 is selected from the group consisting of hydrogen and a hydrocarbon carboxylic acyl group of less than 12 carbon atoms; and X is selected from the group consisting of chlorine and fluorine.

3,124,575

DERIVATIVES OF DIHYDRO-2H-PYRIDO(2,3-E)-1,2,4-THIADIAZINE-1,1-DIOXIDE

Lincoln Harvey Werner, Summit, and George de Stevens, Willow Knoll, New Providence, N.J., assignors to Ciba Corporation, a corporation of Delaware

No Drawing. Filed Oct. 23, 1958, Ser. No. 769,066
9 Claims. (Cl. 260—243)

1. A member of the group consisting of 2-R_2'-3-R_1-4 - R_2'' - 6 - R_3 - 7 - (N - R_2''' - sulfamyl) - 3,4 - dihydro - 2H - pyrido[2,3 - e] - 1,2,4 - thiadiazine - 1,1-dioxide, in which R_1 stands for a member of the group consisting of hydrogen, lower alkyl, chloro-lower alkyl, bromo-lower alkyl, phenyl, chloro-phenyl, bromo-phenyl, lower alkoxy-phenyl, lower alkyl-phenyl, phenyl-lower alkyl, chlorobenzyl, bromo-benzyl, lower alkoxy-benzyl and lower alkyl-benzyl, each of the radicals R_2', R_2'' and R_2''' represents a member of the group consisting of hydrogen and lower alkyl, and R_3 stands for a member of the group consisting of lower alkyl and halogen, the lower alkanoic acid acyl derivatives thereof and the alkali metal salts thereof.

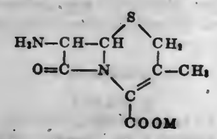
3,124,576

INTERMEDIATES FOR THE PREPARATION OF ANTIMICROBIAL AGENTS AND PROCESSES FOR THEIR PREPARATION

Robert John Stedman, Melrose Park, Pa., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

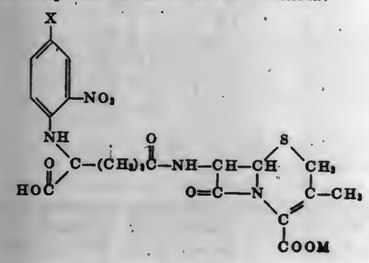
No Drawing. Filed Mar. 20, 1961. Ser. No. 96,644
8 Claims. (Cl. 260—243)

1. In the process for the preparation of the compound of the structural formula:



wherein M is selected from the group consisting of hydrogen and alkali metal cations, the step which comprises subjecting a compound selected from the group consisting of Cephalosporin C and 7-aminocephalosporanic acid to catalytic hydrogenation wherein said catalyst is palladium-on-an-inert carrier.

7. A compound of the structural formula:



wherein M is selected from the group consisting of hydrogen and alkali metal cations and X is a member selected from the group consisting of nitro and carbomethoxy.

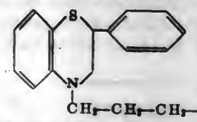
3,124,577

4-(HYDROXYALKYL CYCLIC AMINO)PROPYL-2-PHENYL-3,4-DIHYDRO-2H-1,4-BENZOTHIAZINES

Harman S. Lowrie, Glenview, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Mar. 8, 1962, Ser. No. 178,569
6 Claims. (Cl. 260—243)

1. A compound of the formula



wherein —NRR' is selected from the group consisting of lower monohydroxyalkyl piperidino and lower monohydroxyalkyl piperazino.

3. 4 - {3 - [4 - (2-hydroxyethyl)piperidino]propyl}-2-phenyl-3,4-dihydro-2H-1,4-benzothiazine.

3,124,578

METHOD OF PRODUCING CYCLOTRIMETHYLENETRINITRAMINE

Hans-Joachim Riedl, Recklinghausen, Germany, assignor to Wasag-Chemie A.G., Essen, Germany

No Drawing. Filed Sept. 19, 1961, Ser. No. 139,063
7 Claims. (Cl. 260—248)

1. A method of producing cyclotrimethylenetrinitramine, comprising the steps of reacting ammonium methyleneaminosulfonate under exclusion of water at a temperature of between about −30° C. and +30° C. with an anhydrous nitrating agent selected from the group consisting of sulfur trioxide-containing nitric acid, nitrogen pentoxide-containing nitric acid and mixed acid; and separating the thus formed cyclotrimethylenetrinitramine.

3,124,579

7-(β-BENZOYLOXY-2-DIISOBUTYLAMINOPROPYL)-THEOPHYLLINE

Niro Yoshida and Hiroichi Fukuda, Kyoto, Japan, assignors to Nippon Shinyaku Co., Ltd., Kyoto, Japan, a corporation of Japan

No Drawing. Filed Dec. 5, 1960, Ser. No. 73,482
Claims priority, application Japan Dec. 7, 1959
1 Claim. (Cl. 260—256)

The compound 7 - (β - benzoyloxy-γ-diisobutylaminopropyl)-theophylline.

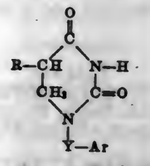
3,124,580

1-(AROMATIC-ALKYL)-2,4-DIOXOHEXAHYDROPYRIMIDINES AND THEIR PREPARATION

Alexander R. Surrey, Albany, and George Y. Lesher, Schodack Township, Rensselaer County, N.Y., assignors to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 12, 1958, Ser. No. 720,810
32 Claims. (Cl. 260—240)

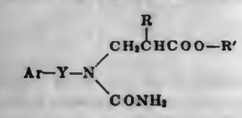
1. A compound having the structural formula



where R is a member selected from the group consisting of H, a lower-alkyl radical and a halo radical, Ar is a

member selected from the group consisting of phenyl, naphthyl, biphenylyl, furyl, pyridyl and thienyl radicals, and Y is a lower alkylene radical which can be substituted further by a second aromatic radical Ar.

24. A compound having the structural formula



where R and R' are each members selected from the group consisting of H and lower-alkyl radicals, Ar is a member selected from the group consisting of phenyl, naphthyl, biphenylyl, furyl, pyridyl and thienyl radicals, and Y is a lower-alkylene radical which can be substituted further by a second aromatic radical Ar.

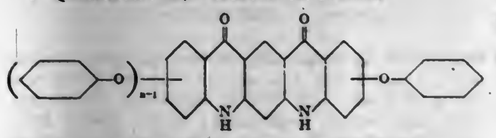
3,124,581

SUBSTITUTED QUINACRIDINE-12,14-DIONES AND THE PRODUCTION THEREOF

Hans Bohler, Rheinfelden, and Fritz Kehrer, Basel, Switzerland, assignors to Sandoz Ltd., Basel, Switzerland

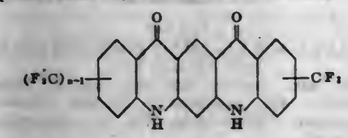
No Drawing. Filed May 29, 1961, Ser. No. 113,133
Claims priority, application Switzerland June 1, 1960
2 Claims. (Cl. 260—279)

1. Quinacridine-12,14-dione of the formula



wherein *n* is a whole number from 1 to 2 inclusive.

2. Quinacridine-12,14-dione of the formula



wherein *n* is a whole number from 1 to 2 inclusive.

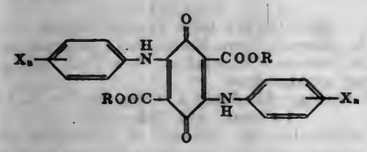
3,124,582

PROCESS FOR PRODUCING QUINACRIDONEQUINONES

Edward E. Jaffe, Union, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 25, 1963, Ser. No. 267,848
9 Claims. (Cl. 260—279)

1. In a process for producing a quinacridonequinone the steps comprising (1) heating, in an inert, high-boiling liquid at a temperature in the range of 225 to 300° C., a dialkyl 2,5-diarylaminobenzoquinone-3,6-dicarboxylate of the formula:



where R is an alkyl group having from 1 to 3 carbon atoms, X is not adjacent to an amino group attached to the central ring and is selected from the group consisting of halogen, alkyl having 1 to 3 carbon atoms, alkoxy having 1 to 3 carbon atoms, nitro, and dialkylamino having 1 to 3 carbon atoms in each alkyl, and *n* is from 0 to 2, whereby a quinacridonequinone is formed, and (2) separating the resulting quinacridonequinone from the inert liquid.

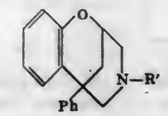
3,124,583

SUBSTITUTED DERIVATIVES OF 3-AZA-6,7-BENZO-8 - OXA - 5 - PHENYLBICYCLO[3.3.1]-NONANE

Harold Elmer Zaugg, Lake Forest, and Robert W. De Net, Waukegan, Ill., assignors to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois

No Drawing. Filed Jan. 15, 1962, Ser. No. 166,392
5 Claims. (Cl. 260—294.7)

1. A compound selected from the group consisting of compounds of the formula



and their non-toxic, pharmaceutically acceptable, acid-addition salts wherein Ph is phenyl and R' is a member of the group consisting of hydrogen, methyl, cinnamyl and β-hydroxy-γ-phenoxypropyl.

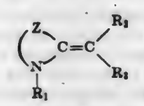
3,124,584

PROCESS FOR THE PRODUCTION OF HETEROCYCLIC METHYLENE COMPOUNDS

Oskar Weissel, Krefeld-Uerdingen, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Feb. 7, 1961, Ser. No. 87,552
Claims priority, application Germany Feb. 11, 1960
3 Claims. (Cl. 260—283)

1. A process for the production of a derivative of a heterocyclic methylene base having the formula



in which

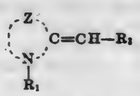
R_1 is an alkyl radical containing up to 8 carbon atoms,

R_2 and R_3 are each a radical of the group consisting of cyano, acetyl, propionyl, butyryl, isobutyryl, benzoyl, methoxycarbonyl, ethoxycarbonyl, and phenoxycarbonyl radicals, and

the ring consisting of R_1, Z, C, and N is a ring of the group consisting of lower alkyl-substituted indolines and dihydroquinolines

which comprises heating together at a temperature up to about 150° C.,

(*a*) a monoacyl derivative of a heterocyclic methylene base having the formula:



in which each of the symbols have the foregoing significance, and

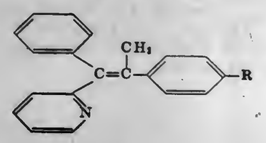
(*b*) an acylating agent of the group consisting of cyanogen chloride, acetic, propionic, butyric, isobutyric, and benzoic acid anhydrides and chlorides, and the methyl, ethyl, and phenyl esters of chlorocarbonic acid, in the presence of a catalyst of the group consisting of sulfuric acid, perchloric acid, hydrogen chloride, aluminum chloride, boron trifluoride, ferric chloride, antimony pentachloride and stannic tetrachloride.

3,124,585
1-(2-PYRIDYL) 1-PHENYL-2-ARYL PROPENES

Joseph H. Burckhalter, Ann Arbor, Mich., assignor to Parke, Davis & Company, Detroit, Mich., a corporation of Michigan

No Drawing. Filed June 19, 1961, Ser. No. 117,803
5 Claims. (Cl. 260—290)

1. A member of the class consisting of bases and their non-toxic acid-addition salts, said bases having the formula



where R is a member of the class consisting of hydrogen, mercapto, lower alkylthio, and lower alkoxy.

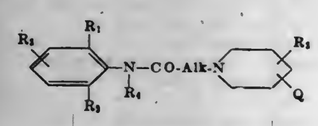
2. 1-(2-pyridyl)-1,2-diphenyl-1-propene.

3,124,586
1-PIPERIDYL-LOWER-ALKANOYLANILIDES

Bernard L. Zenitz, Colonie, N.Y., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 28, 1959, Ser. No. 842,562
17 Claims. (Cl. 260—294)

1. A member of the goup consisting of (A) compounds of the formula



wherein R_1 and R_2 represent lower-alkyl; R_3 and R_4 represent a member of the group consisting of hydrogen and lower-alkyl; R_5 represents a member of the group consisting of hydrogen and from one to five lower-alkyls; Q represents a member of the group consisting of hydroxy, lower-alkoxy, lower-alkanoyloxy, monocarbocyclic aroyloxy, unsubstituted carbamyloxy, N-lower-alkylcarbamyloxy, N,N-di-lower-alkylcarbamyloxy, hydroxy-lower-alkyl, lower-alkoxy-lower-alkyl, lower-alkanoyloxy-lower-alkyl, monocarbocyclic aroyloxy-lower-alkyl, unsubstituted carbamyloxy-lower-alkyl, N-lower-alkylcarbamyloxy-lower-alkyl, N,N-di-lower-alkylcarbamyloxy-lower-alkyl, carbo-lower-alkoxy, and lower-alkanoylamino; and Alk represents lower-alkylene containing from one to five carbon atoms; and wherein each lower-alkyl moiety contains form one to four carbon atoms, each lower-alkoxy moiety contains from one to six carbon atoms, each lower-alkanoyloxy moiety contains from one to six carbon atoms, each hydroxy-lower-alkyl group contains from one to six carbon atoms, and each lower-alkanoylamino moiety contains from one to six carbon atoms; (B) acid-addition salts; and (C) lower-alkyl, lower alkenyl, and monocarbocyclic aryl-lower-alkyl quaternary ammonium salts thereof.

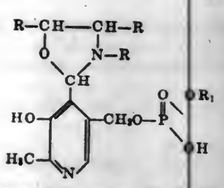
17. An acid-addition salt of α-[1-(3-acetylaminopiperidyl)]-2,6-dimethylacetanilide.

3,124,587
PROCESS FOR THE PRODUCTION OF PYRIDOXAL-5'-ORTHOPHOSPHORIC ACID ESTER

Gustav Schorre, Darmstadt-Eberstadt, Germany, assignor to E. Merck Aktiengesellschaft, Darmstadt, Germany

No Drawing. Filed Apr. 1, 1960, Ser. No. 19,201
Claims priority, application Germany Apr. 4, 1959
5 Claims. (Cl. 260—296)

1. A compound of the formula



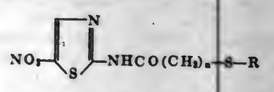
wherein R is selected from the group consisting of: hydrogen, anilino, alkyl, hydrocarbon aryl, hydrocarbon aralkyl, cycloalkyl having up to six carbon atoms in the ring, said hydrocarbon groups having no more than twelve carbon atoms, and R_1 is selected from the group consisting of: hydrogen and polyphosphoric acid.

3,124,588
2-ACYLAMIDO-5-NITROTHIAZOLE

David B. Reisner, Cedar Grove, and Sidney Gister, Bound Brook, N.J., and Howard C. Klein, Brooklyn, N.Y., assignors to Nopco Chemical Company, Newark, N.J., a corporation of New Jersey

No Drawing. Filed Mar. 23, 1961, Ser. No. 97,732
9 Claims. (Cl. 260—306.8)

1. A compound of the formula



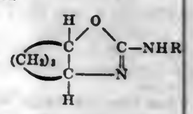
wherein *n* is an integer selected from the group consisting of 1 and 2, and R is selected from the group consisting of lower alkyl, benzyl, halobenzyl, nitrobenzyl, lower alkyl benzyl, lower alkoxy benzyl, phenyl, halophenyl, nitrophenyl, lower alkyl phenyl and lower alkoxy phenyl.

3,124,589
CERTAIN 2-ALKYLAMINO POLYMETHYLENE OXAZOLINES

George I. Poos, Ambler, and Raymond R. Wittekind, Philadelphia, Pa., assignors to McNeil Laboratories, Incorporated, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed July 2, 1959, Ser. No. 824,484
2 Claims. (Cl. 260—307)

1. 2-alkylamino-3a,4,5,6-tetrahydrocyclopentoxazolines having the formula



where R is an alkyl group containing from 1 to 4 carbon atoms.

2. 2-methylamino-3a,4,5,6 - tetrahydrocyclopentoxazoline.

3,124,590
RECOVERY OF CYCLOSERINE

Roger L. Harned, Terre Haute, Ind., assignor to Commercial Solvents Corporation, New York, N.Y., a corporation of Maryland

No Drawing. Filed July 6, 1959, Ser. No. 824,907
1 Claim. (Cl. 260—307)

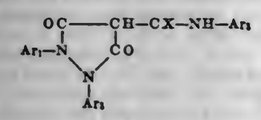
In a process for the recovery of cycloserine from an impure aqueous solution containing calcium by adsorbing cycloserine on a strongly acidic cation exchange resin which resin is regenerated with sulfuric acid, eluting the cycloserine from the resin, precipitating cycloserine from the eluate as a water-insoluble salt and recovering the insoluble cycloserine salt to obtain free cycloserine, the improvement which comprises adding oxalic acid to the impure aqueous solution of cycloserine and removing the precipitated calcium oxalate prior to adsorbing the cycloserine on the ion exchange resin.

3,124,591
4-SUBSTITUTED 1,2-DIARYL-3,5-DIOXO-PYRAZOLIDINES

Rolf Denss and Franz Häfliger, Basel, Switzerland, assignors to Geigy Chemical Corporation, Ardsley, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 3, 1960, Ser. No. 47,138
Claims priority, application Switzerland, Aug. 4, 1959
11 Claims. (Cl. 260—310)

1. A 4-substituted 1,2-diaryl-3,5-dioxo-pyrazolidine of the formula



wherein

Ar_1 is a member selected from the group consisting of phenyl, hydroxyphenyl, methylphenyl, lower alkoxyphenyl, benzyloxyphenyl and acetoxyphenyl,

Ar_2 is a member selected from the group consisting of phenyl and methylphenyl,

Ar_3 is a member selected from the group consisting of phenyl, methylphenyl, lower alkoxyphenyl, dimethoxyphenyl, acetylphenyl, acetoxyphenyl, benzyloxyphenyl and hydroxyphenyl, and

X is a member selected from the group consisting of O and S.

3,124,592
WATER-INSOLUBLE SALTS OF BASIC ANTI-HISTAMINIC COMPOUNDS, AND PROCESS OF MAKING SAME

Peter Rieckmann, Mannheim-Waldhof, Germany, assignor to C. F. Boehringer & Soehne G.m.b.H., Mannheim-Waldhof, Germany, a corporation of Germany

No Drawing. Filed July 19, 1960, Ser. No. 43,746
Claims priority, application Germany July 29, 1959
7 Claims. (Cl. 260—313)

2. The acid addition salt of N-[β-(N'-phenyl-N'-benzylamino)ethyl]pyrrolidine with cetyl sulfuric acid.

3,124,593
PHARMACOLOGICALLY ACTIVE 2,5-DISUBSTITUTED PYRROLIDINES

Giorgio Cignarella and Giangiacomo Nathansohn, Milan, Italy, assignors to Lepetit S.p.A., Milan, Italy

No Drawing. Filed June 12, 1961, Ser. No. 116,296
Claims priority, application Great Britain July 26, 1960
4 Claims. (Cl. 260—313)

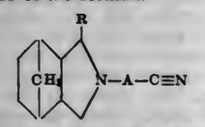
1. 1-benzyl-2-chloromethyl-5 - benzylaminomethyl-pyrrolidine dihydrochloride.

3,124,594
N-(CYANOALKYL)-ENDO-PERHYDRO-4,7-METHANOISOINDOLES

James W. Bolger, Canoga Park, Calif., assignor to Riker Laboratories, Inc., Northridge, Calif., a corporation of Delaware

No Drawing. Filed July 27, 1962, Ser. No. 213,004
5 Claims. (Cl. 260—319)

1. A compound of the formula



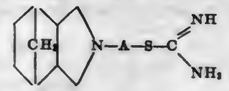
wherein R is a member selected from the group consisting of hydrogen and lower alkyl and A is lower alkylene.

3,124,595
N - (PSEUDOTHIOURONIUM LOWER ALKYL)-ENDO-PERHYDRO-4,7-METHANOISOINDOLES

James W. Bolger, Canoga Park, Calif., assignor to Riker Laboratories, Inc., Northridge, Calif., a corporation of Delaware

No Drawing. Filed July 27, 1962, Ser. No. 213,031
2 Claims. (Cl. 260—319)

1. A compound of the formula



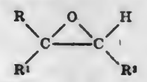
where A is lower alkylene.

3,124,596
ALKYLENE TRITHIOCARBONATES

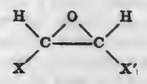
Harry A. Stansbury, Jr., John A. Durden, Jr., and William H. Catlette, South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Nov. 10, 1958, Ser. No. 772,693
6 Claims. (Cl. 260—327)

1. Process for preparing trithiocarbonates which comprises reacting a member of the group consisting of alkylene oxides of the formulas



and



wherein R, R^1 and R^2 taken separately are of the group consisting of hydrogen, alkyl to 1 to 10 carbons, cyclopentyl, cyclohexyl and phenyl, and R^1 and R^2 taken together are cyclohexyl; X is of the group consisting of hydrogen, alkyl of 1 to 10 carbons and

$$-(C_mH_{2m})-O-(C_nH_{2n-1})$$

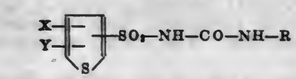
where *m* is an integer from 1 to 10 and *n* is an integer from 2 to 10; and X' is $-(C_mH_{2m})-O-(C_nH_{2n-1})$ where *m* and *n* have the aforementioned significance, with a stoichiometric excess of carbon disulfide and as catalyst, 0.1 to 10 weight percent based on total weight of the alkylene oxide and carbon disulfide, a member of the group consisting of trialkylamine wherein each alkyl group has 1 to 4 carbons and triethylenediamine, in the absence of extraneous solvents, at a temperature between 5° C. and 250° C., and under a pressure sufficient to maintain the reactants in liquid phase.

3,124,597
N'-SUBSTITUTED N-SULPHONYL-UREAS

Willy Stoll and Henri Dietrich, Basel, Switzerland, assignors to Geigy Chemical Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed May 12, 1958, Ser. No. 734,443
Claims priority, application Switzerland May 24, 1957
10 Claims. (Cl. 260—332.2)

1. A compound of the formula



wherein R represents a member selected from the group consisting of lower alkyl, lower alkenyl and cyclohexyl, and X and Y each represent a member selected from the group consisting of hydrogen, Cl and Br.

3,124,598

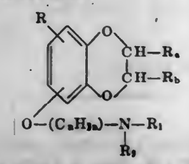
AMINOALKOXY SUBSTITUTED BENZODIOXANES

Lincoln Harvey Werner, Summit, N.J., assignor to Ciba Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 8, 1962, Ser. No. 215,513
10 Claims. (Cl. 260—340.3)

2. 5-[2-(N-n-butyl-amino)-ethyloxy] - 1,4 - benzodioxane.

10. A member selected from the group consisting of a compound of the formula:



in which R_1 is a member selected from the group consisting of alkyl having from one to twelve carbon atoms, cycloalkyl having from three to eight carbon atoms, cycloalkyl-lower alkyl, in which cycloalkyl has from three to eight carbon atoms, phenyl, phenyl-lower alkyl, [(lower alkyl)-phenyl]-lower alkyl [(lower alkoxy)-phenyl]-lower alkyl, [(halogeno)-phenyl]-lower alkyl, [(trifluoromethyl)-phenyl]-lower alkyl, and pyridyl lower alkyl, R_2 is a member selected from the group consisting of hydrogen and lower alkyl, and when taken together with R_1, alkylene having from four to seven carbon atoms, 3-oxa-1,5-pentylene, and 3-lower alkyl-3-aza-1,5-pentylene, the group of the formula $—(C_nH_{2n})—$, in which the letter n stands for an integer from 2 to 7, separates the oxygen atom from the nitrogen atom by at least two carbon atoms, each of the groups R_a and R_b is a member selected from the group consisting of hydrogen, and lower alkyl, and R is a member selected from the group consisting of hydrogen, lower alkyl and halogeno, and a pharmaceutically acceptable non-toxic acid addition salt thereof.

3,124,599

PROCESS FOR PREPARING 1,6-DIACETOXY-2,5-DIMETHYL-2-HEXENE; 1,2,6 - TRIACETOXY-2,5-DIMETHYL - HEXANE; AND 2,5 - DIMETHYL-TETRA-HYDROPYRAN-2-METHANOL ACETATE

Howard R. Guest, Charleston, Ben W. Kiff, Ona, and Harry A. Stansbury, Jr., South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Original application Feb. 20, 1957, Ser. No. 641,235, now Patent No. 2,910,520, dated Oct. 27, 1959. Divided and this application May 13, 1959, Ser. No. 812,823
4 Claims. (Cl. 260—345.8)

1. A process for preparing a mixture of 1,6-diacetoxy-2,5-dimethyl-2-hexene; 1,2,6-triacetoxy-2,5-dimethylhexane; and 2,5-dimethyltetrahydropyran-2-methanol acetate which comprises forming a mixture of 2,5-dimethyltetrahydropyran-2-methanol, acetic anhydride and a catalyst selected from the group consisting of a Lewis acid and a strong mineral acid and heating said mixture at a temperature of 140° C. to 160° C.

3,124,600

ORGANOMETALLIC COMPOUNDS

Thomas H. Coffield, Heidelberg, Germany, and Robert P. M. Werner, Farmington, Mich., assignors to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Aug. 20, 1959, Ser. No. 834,929
22 Claims. (Cl. 260—346.1)

4. Organometallic compounds having the formula

$$A_xM(CO)_y$$

wherein A is selected from the class consisting of

I cyclic saturated monodentate ethers having 4 to 9 methylene groups in the ring;

II cyclic saturated monodentate thioethers having 4 to 9 methylene groups in the ring;

III aliphatic saturated bidentate and tridentate ethers wherein the oxygen atoms are separated by ethylene groups and wherein the terminal groups are alkyl radicals having one to 20 carbon atoms;

IV aliphatic saturated bidentate and tridentate thioethers wherein the sulfur atoms are separated by ethylene groups and wherein the terminal groups are alkyl radicals having one to 20 carbon atoms;

M is a Group VIB metal, x is an integer equal to three when A is selected from subclasses I and II, and equal to one when A is selected from subclasses III and IV; y is an integer equal to three when A is selected from subclasses I and II, and the tridentate ethers and thioethers in subclasses III and IV, and equal to four when A is selected from the bidentate ethers and thioethers in subclasses III and IV, such that the sum of x and y is 6 when A is a monodentate ether, the sum of x and y is 5 when A is a bidentate ether, and the sum of x and y is 4 when A is a tridentate ether, said Group VIB metal being bonded to said constituent A through a chalkogen linkage.

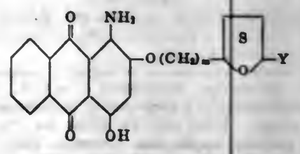
3,124,601

ANTHRAQUINONE DYESTUFFS

Guido R. Genta, Pitcairn, Pa., assignor to American Aniline Products, Inc., a corporation of Maryland

No Drawing. Filed June 8, 1962, Ser. No. 200,915
5 Claims. (Cl. 260—347.7)

1. A compound of the formula:



wherein m is an integer having a value of one to four, and Y is a member selected from the group consisting of hydrogen and $—(CH_2)_nOH$, wherein n is an integer having a value of one to four.

3,124,602

ALIPHATIC ESTERS OF UNSATURATED CARBOXYLIC ACIDS

Siegfried Altscher, Union, and Thomas F. Groll, Jr., Elizabeth, N.J., assignors to Nopco Chemical Company, Newark, N.J., a corporation of New Jersey

No Drawing. Original application Nov. 18, 1957, Ser. No. 696,969, now Patent No. 3,071,550, dated Jan. 1, 1963. Divided and this application Dec. 26, 1961, Ser. No. 163,959
11 Claims. (Cl. 260—410.6)

1. An aliphatic diester of an unsaturated carboxylic acid selected from the group consisting of oleic, linoleic, linolenic and abietic acids and mixtures thereof and a condensate of glycerine and from about 15 to about 27 moles of ethylene oxide.

5. A process for preparing a nonionic, water-soluble material comprising the steps of condensing from about one mole of glycerine and from about 15 to about 27 moles of ethylene oxide in the presence of a condensation catalyst and thereafter esterifying from about 1.3 to about 2.15 parts by weight of the resulting glycerine-ethylene-oxide condensate with about one part by weight of a carboxylic acid selected from the group consisting of oleic, linoleic, linolenic and abietic acids and mixtures thereof.

3,124,603

PREPARATION OF THORIUM OXALATE

Wallis R. Bennett and Clifford W. Kline, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed July 2, 1962, Ser. No. 207,106
5 Claims. (Cl. 260—429.2)

1. In a process for preparing a relatively high bulk density thorium oxalate wherein an aqueous solution containing thorium and having an acidity in the range of pH 4 to a hydrogen ion concentration of 10 normal is fed into an oxalic acid solution to form a reaction mixture which is maintained at a temperature in excess of about 40° C., the improvement which comprises: providing in the reaction mixture, from which thorium oxalate is precipitated, and throughout the precipitation step, as a constant ratio, from about 0.5 to 15 moles of a monovalent, inorganic, spectator, cation per mole of thorium in said reaction mixture, said cation being selected from the group consisting of sodium, potassium, ammonium, lithium, and mixtures thereof.

3,124,604

NEW ORGANIC ZINC COMPOUNDS AND A PROCESS FOR THE PRODUCTION OF THESE ORGANIC ZINC COMPOUNDS TOGETHER WITH ORGANIC ALUMINIUM MONOHALIDES

Edmund Hüther, Mulheim an der Ruhr, Germany, assignor to Karl Ziegler, Mulheim an der Ruhr, Germany

No Drawing. Filed Feb. 20, 1957, Ser. No. 641,269
Claims priority, application Germany Feb. 21, 1956
12 Claims. (Cl. 260—429.9)

1. Process for the production of organic compounds of zinc and of aluminium which comprises reacting a zinc dihalide having the general formula ZnX_2 in which X represents a halogen atom which is a member selected from the group consisting of chlorine and iodine atoms with an organic aluminium compound having the general formula AlR_3 in which R represents a hydrocarbon radical, in a molar ratio of about 1:2 to thereby form an organic zinc compound of the general formula ZnR_2 and an organic aluminium monohalide of the general formula R_2AlX, thereafter separating said organic zinc compound from said organic aluminium monohalide and recovering at least one of said separated compounds.

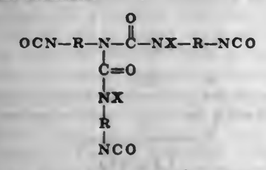
3,124,605

BIURET POLYISOCYANATES

Kuno Wagner, Leverkusen, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Apr. 15, 1959, Ser. No. 806,444
Claims priority, application Germany Apr. 24, 1958
5 Claims. (Cl. 260—453)

1. A compound having not more than six —NCO groups and the formula:



wherein X is selected from the group consisting of hydrogen and the grouping —CO—NX—R—NCO and R is the organic radical left after removal of the two —NCO groups from an organic diisocyanate selected from the group consisting of cyclohexane diisocyanate, hexamethylene diisocyanate, phenylene diisocyanate, lower alkyl substituted phenylene diisocyanate, lower alkoxy phenylene diisocyanate, diphenylmethane diisocyanate, dicyclohexyl diisocyanate and chloro-substituted phenylene diisocyanate, said hydrogen being the only one on the compound which is reactive with an —NCO group.

3,124,606

PARA-NITROPHENYL TERTIARY BUTYL CARBONATE

George W. Anderson, Allendale, and Anne C. (McGregor) Belcher, Thornwood, N.J., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Original application Nov. 13, 1958, Ser. No. 773,563. Divided and this application Dec. 2, 1960, Ser. No. 75,066
1 Claim. (Cl. 260—463)

Para-nitrophenyl tertiary butyl carbonate.

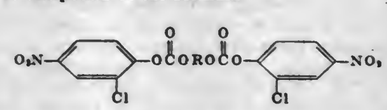
3,124,607

ORGANIC CARBONATE ESTERS

Robert M. Schisla, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Nov. 21, 1960, Ser. No. 70,400
4 Claims. (Cl. 260—463)

1. A compound of the formula



wherein R is a bivalent radical selected from the group consisting of alkylene radicals having from 2 to 4 carbon atoms, -alkylene-oxy-alkylene- radicals having from 2 to 4 carbon atoms in each alkylene group, and poly-alkylene-oxy-alkylene radicals having from 3 to 10 alkylene groups and from 2 to 4 carbon atoms in each alkylene group.

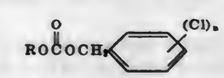
3,124,608

ORGANIC CARBONATE COMPOUNDS

Robert M. Schisla and Van R. Gaertner, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Nov. 22, 1960, Ser. No. 70,923
7 Claims. (Cl. 260—463)

1. A compound of the formula



wherein R is selected from the group consisting of alkyl, chloroalkyl, and bromoalkyl radicals having from one to eight carbon atoms, and n is a whole number of from one to five.

3,124,609

UNSATURATED ESTER PURIFICATION

Buster W. Higdon, Pampa, Tex., assignor to Celanese Corporation of America, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 8, 1959, Ser. No. 845,091
14 Claims. (Cl. 260—486)

1. The process of removing ketone impurities from a crude mixture containing an unsaturated monomeric acrylic ester and ketone impurities, said process comprising treating the mixture with an amine compound selected from the group consisting of ortho-phenylene-diamine, hydroxylamine, hydroxylamine salts, semi-carbazide, 2,4-dinitrophenylhydrazine, phenyl hydrazine and hydrazine to thereby form a ketone-amine complex having a substantially higher boiling point than that of the unsaturated ester monomer and separating from the resulting mixture a purified unsaturated ester monomer.

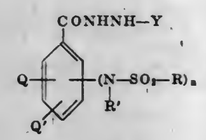
3,124,610

1-[MONO- AND BIS(ALKANESULFONAMIDO) BENZOYL] HYDRAZINE DERIVATIVES AND THEIR PREPARATION

Aubrey A. Larsen, Schodack, N.Y., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

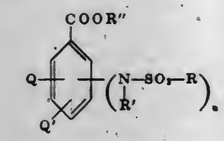
No Drawing. Filed Apr. 14, 1959, Ser. No. 806,235
23 Claims. (Cl. 260—501)

1. A member of the group consisting of (A) a compound having the formula

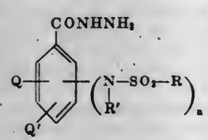


wherein *n* is an integer from 1 to 2, R is alkyl having from one to twenty carbon atoms, R′ is a member of the group consisting of hydrogen and lower-alkyl, Y is a member of the group consisting of lower-alkanoyl and lower-alkanoyl substituted on the α-carbon atom by a member of the group consisting of halogen, amino, and cyano, and Q and Q′ each is a member of the group consisting of: hydrogen; lower-alkyl; halogen hydroxy; lower-alkoxy; nitro; amino; cyano; lower-alkylmercapto; lower-alkylsulfinyl; lower-alkylsulfonyl; lower-alkanoylamino; lower-alkanoylamino substituted on the α-carbon atom by a member of the group consisting of halogen and cyano; lower-alkanoyl; lower-alkanoyl substituted on the α-carbon atom by a member of the group consisting of halogen and cyano; lower-alkanoyloxy; and lower-alkanoyloxy substituted on the α-carbon atom by a member of the group consisting of halogen and cyano, and (B) acid-addition salts thereof.

23. The process which comprises reacting with hydrazine a compound of the formula



wherein R′ is a member of the group consisting of hydrogen and lower-alkyl; R″ is lower-alkyl; R is alkyl of from one to twenty carbon atoms; Q and Q′ each is a member of the group consisting of: hydrogen, lower-alkyl, halogen, hydroxy, lower-alkoxy, nitro, amino, cyano, lower-alkylmercapto, lower-alkylsulfinyl, lower-alkylsulfonyl, lower-alkanoylamino, lower-alkanoylamino substituted on the α-carbon atom by a member of the group consisting of halogen and cyano, lower-alkanoyl, lower-alkanoyl substituted on the α-carbon atom by a member of the group consisting of halogen and cyano, lower-alkanoyloxy, and lower-alkanoyloxy substituted on the α-carbon atom by a member of the group consisting of halogen and cyano; and *n* is an integer from one to two thereby producing a compound of the formula



wherein R, R′, R″, Q, Q′, and *n* have the meanings given above.

3,124,611

OXIDATION OF AROMATIC COMPOUNDS

Alan John Shipman, Northwich, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Apr. 21, 1961, Ser. No. 104,541
Claims priority, application Great Britain May 3, 1960
5 Claims. (Cl. 260—524)

1. A process for making aromatic carboxylic acids and elemental sulphur which comprises heating to a temperature within the range of 250–350° C., a mixture consisting essentially of sulphur dioxide and an aromatic compound chosen from the group consisting of toluene, xylene, trimethyl benzene, ethyl benzene, benzyl chloride, benzyl alcohol, benzaldehyde, chlorobenzaldehyde, bibenzyl, methyl naphthalene and styrene, at an elevated pressure within the range of 100–400 atmospheres.

3,124,612

UREA CRYSTALLIZATION

Lucien H. Cook, Port Washington, N.Y., assignor to Chemical Construction Corporation, New York, N.Y., a corporation of Delaware

Filed June 13, 1962, Ser. No. 205,160
4 Claims. (Cl. 260—555)

3. A method of producing urea crystals essentially free of biuret from concentrated urea solutions having high biuret content which comprises regulating the temperature of said solution to temperatures from about 200° F. up to the boiling temperature of the concentrated urea solution, quickly cooling said solution within one second to a temperature within the range of 135° F.–185° F. whereby up to about 27% of the urea in said solution is crystallized, thereby producing fine crystals of urea, delivering the urea solution plus fine urea crystals to a holding tank where said solution and crystals are allowed to remain for a period of ½ to 2 hours to permit said urea crystals to grow to a maximum size such that no more than 2% of said crystals are held on a 20 mesh screen; thereafter separating the crystals from the solution and drying said crystals, thereby recoving a final urea crystal product characterized by the fact that said product does not contain over 0.04% biuret.

3,124,613

PRODUCTION OF OXIMES

Herbert L. Wehrmeister, Terre Haute, Ind., assignor to Commercial Solvents Corporation, a corporation of Maryland

No Drawing. Filed Jan. 16, 1959, Ser. No. 787,101
16 Claims. (Cl. 260—566)

1. A process for producing higher oxime compounds from lower oxime compounds by an exchange of radicals between the oxime radical of the lower oxime compound and the carbonyl radical of a higher carbonyl compound, the steps consisting essentially of heating and reacting, in the presence of an acidic catalyst, a carbonyl compound selected from the group consisting of a ketone having at least one carbon atom alpha to the carbonyl group unsubstituted and an aldehyde with an oxime selected from the group consisting of lower aldoximes and ketoximes, removing one of the compounds from the reaction mixture and recovering the higher oxime compound.

3,124,614

PREPARATION OF 2-SUBSTITUTED CYCLOHEXANONES

Lester J. Dankert, Ingersoll Township, Midland County, Mich., and Daniel A. Permoda, Warwick, Va., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Apr. 7, 1958, Ser. No. 726,614
3 Claims. (Cl. 260—586)

1. A method for the preparation of 2-alkylcyclohexanones which comprises catalytically hydrogenating an o-

alkyl monohydric phenol wherein one and only one of the positions ortho to the phenolic hydroxyl group is substituted, the substituent being selected from the class consisting of alkyl groups having at least three carbon atoms and the cyclohexyl group, with hydrogen at pressure of at least three atmospheres absolute and temperatures of from 100° to 300° C. in contact with an active palladium catlayst containing palladium in amount corresponding to at least 0.01 percent by weight of the starting phenol, and continuing the hydrogenation reaction until the phenol starting material is substantially reacted.

3. 2-sec-butylcyclohexanone.

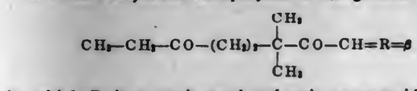
3,124,615

CAROTENOID COMPOUNDS

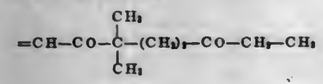
Basil Charles Leicester Weedon, London, and Charles Kenneth Warren, Barking, England, assignors to National Research Development Corporation

No Drawing. Filed Mar. 23, 1959, Ser. No. 800,903
Claims priority, application Great Britain Mar. 24, 1958
4 Claims. (Cl. 260—586)

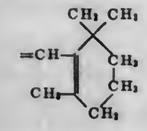
1. A keto-alkylidene alkapolyene of the general formula



in which R is a conjugated polyenic carotenoid hydrocarbon chain and =β is selected from the class consisting of groups of the formulae



and



3,124,616

METHOD FOR THE ALKYLATION OF DECABORANE

Ralph R. Schroeder, Harmony, and Paul R. Wunz, Jr., Gibsonia, Pa., assignors to Callery Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed Feb. 9, 1956, Ser. No. 564,366
6 Claims. (Cl. 260—606.5)

1. A method of preparing a high energy fuel consisting essentially of liquid lower alkyl decaboranes which comprises contacting a lower alkyl halide with decaborane in a stable solvent therefor in the presence of a catalytic amount of aluminum chloride and silica gel and recovering a high energy fuel consisting essentially of liquid lower alkyl decaboranes.

3,124,617

PREPARATION OF HIGH ENERGY BORON CONTAINING FUELS

Robert G. Brault, Mars, and George F. Huff, Fox Chapel, Pa., assignors to Callery Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed June 26, 1958, Ser. No. 745,801
12 Claims. (Cl. 260—606.5)

1. In a method of preparing a liquid high energy fuel in which ethylene and diborane are reacted in the gas phase to produce a liquid boron-containing product and said product is recovered, the improvement comprising carrying out said reaction in the presence of a non-oxidizing diluent gas and an appreciable amount of a catalyst selected from the group consisting of boron halides and aluminum halides.

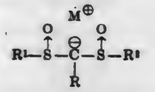
3,124,618

SALTS OF BIS-SULFINYL CARBANIONS, PROCESS FOR THEIR PREPARATION, AND REACTIONS OF SAID SALTS WITH ORGANIC HALIDES

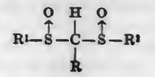
Jim Smither Berry, Springfield Township, Hamilton County, Ohio, assignor to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio

No Drawing. Filed Dec. 21, 1962, Ser. No. 246,312
6 Claims. (Cl. 260—607)

1. The process of forming an alkali metal salt of a bis-sulfinyl carbanion said salt having the formula



wherein M is an alkali metal and wherein R is selected from the group consisting of hydrogen and alkyl groups containing from one to about eighteen carbon atoms and R^1 and R^2 are each alkyl groups containing from one to about three carbon atoms comprising the step of reacting a bis-sulfoxide with the formula



wherein R is selected from the group consisting of hydrogen and alkyl groups containing from one to about eighteen carbon atoms and R^1 and R^2 are each alkyl groups containing from one to about three carbon atoms, with a base selected from the group consisting of amides, hydrides, and alkoxides of alkali metals, said alkoxides containing from one to about six carbon atoms.

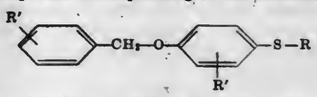
3,124,619

BENZYL ETHER THIOETHERS

Walter Reifschneider, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed June 27, 1962, Ser. No. 205,527
6 Claims. (Cl. 260—609)

1. A compound corresponding to the formula



wherein R represents a member of the group consisting of hydrocarbon aryl and hydrocarbon alkaryl of 6 to 10, inclusive, carbon atoms, alkyl containing from 1 to 4, inclusive, carbon atoms, and cyclohepyl, and R′ represents a member of the group consisting of hydrogen and lower alkyl.

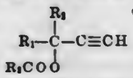
3,124,620

STABILIZATION OF CHLORINATED HYDROCARBONS WITH 1,4-DIOXANE AND ACETYLENIC ALCOHOL ESTER

George Davidowich, Bayonne, and Morton W. Leeds, Murray Hill, N.J., assignors to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York

No Drawing. Filed May 1, 1961, Ser. No. 106,475
8 Claims. (Cl. 260—652.5)

1. A composition of matter comprising carbon tetrachloride and small but stabilizing amounts of 1,4-dioxane and a compound having the formula



where R_1 is selected from the group consisting of alkyl radicals containing from 1 to about 10 carbon atoms and monocyclic aryl radicals containing from 6 to about 10

carbon atoms, R_2 is selected from the group consisting of methyl and ethyl, R_1 and R_2 together with the adjacent carbon atom constitute a cycloalkyl radical containing from 3 to 8 carbon atoms, and R_3 is selected from the group consisting of hydrogen and lower alkyl radicals.

3,124,621
ISOMERIZATION OF CYCLOOCTADIENE COMPOUNDS

Donald L. Crain and Roger F. Kleinschmidt, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed June 19, 1961, Ser. No. 117,854
18 Claims. (Cl. 260—666)

1. A process for isomerizing an unconjugated cyclooctadiene to a conjugated cyclooctadiene containing the same number of carbon atoms and hydrogen atoms as said starting cyclooctadiene, which method comprises: contacting said unconjugated cyclooctadiene under isomerizing conditions with an isomerization catalyst selected from the group consisting of alkali metal amides and alkaline earth metal amides in the presence of a solvent selected from the group consisting of ammonia and suitable pri- for both said unconjugated cyclooctadiene and said isomary, secondary, and tertiary amines which is a solvent merization catalyst; and recovering said conjugated cyclooctadiene.

3,124,622
PRODUCTION OF OLEFINS FROM ALDEHYDES AND ACETYLENES

Norbert F. Cywinski, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

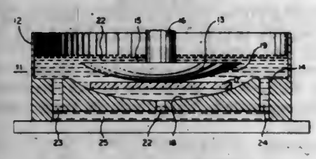
No Drawing. Filed May 22, 1961, Ser. No. 111,503
7 Claims. (Cl. 260—682)

1. A process for the production of olefins which comprises reacting an alkyl aldehyde containing at least 2 carbon atoms per molecule with an acetylenic material selected from the group consisting of acetylene and alpha-alkynes containing from 3 to 5 carbon atoms per molecule in the presence of a free radical initiator selected from the group consisting of organic peroxide and organic azo compounds having a half-life within the range of 0.05 to 50 hours under reaction conditions of temperature and pressure, and recovering the olefin product thus produced by said reaction.

3,124,623
METHOD OF SHAPING CRYSTAL BLANKS

Stewart I. Slawson, 1108 Mary Baldwin Drive, Alexandria, Va.

Filed Jan. 18, 1961, Ser. No. 83,595
5 Claims. (Cl. 264—1)
(Granted under Title 35, U.S. Code (1952), sec. 266)

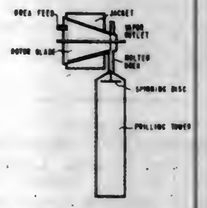


1. A method of shaping a substantially flat ammonium dihydrogen phosphate crystal blank, which is at least slightly soluble in a solvent, into a concavo-convex blank, by the use of a die and a crystal solvent which comprises substantially immersing said blank in said solvent, applying heat to said solvent, and applying pressure to said blank after said blank has been heated so as to produce concavo-convex surfaces on said blank.

3,124,624
PROCESS FOR PRODUCING PRILLED UREA OF LOW BIURET CONTENT

Doyne B. Berlien and Albert H. Musuma, Charleston, W. Va., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Mar. 15, 1962, Ser. No. 179,905
1 Claim. (Cl. 264—13)



In a process for producing prilled urea of low biuret content, the steps comprising taking solid urea which is substantially all in solid crystalline form and of low biuret content and forming said solid crystalline urea by centrifugal force into an annular film having a maximum thickness of 0.05 inch, moving the annular film in surface contact with a heat transfer surface for up to 12 seconds while maintaining an average film temperature of 132° to 150° C. to melt the urea, and then prilling the molten urea.

3,124,625
GRAPHITE PRODUCTION UTILIZING URANYL NITRATE HEXAHYDRATE CATALYST

Haskell Sheinberg, John R. Armstrong, and Donald H. Schell, Los Alamos, N. Mex., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed Mar. 24, 1958, Ser. No. 723,615
9 Claims. (Cl. 264—21)

1. The method of making graphite which comprises the steps of blending a graphitizable mixture including a primary source of carbon with a furfuryl alcohol binder, said binder containing a uranyl nitrate hexahydrate hardener, heating the blended mixture through a curing range of temperatures to polymerize said binder, heating said body through a baking range of temperatures, heating said body through a graphitizing range of temperatures, said process also including the operation of forming the graphitizable mixture to a desired shape by pressure, said pressure being initially applied prior to said polymerization of said mixture in said step of heating through a curing range of temperatures.

3,124,626
PROCESS FOR PRODUCING BOAT HULLS OF SANDWICH CONSTRUCTION

Donald L. Graham and James A. Struthers, Jr., Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Sept. 6, 1960, Ser. No. 54,169
8 Claims. (Cl. 264—45)

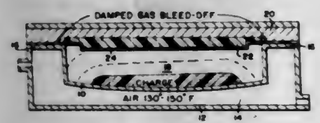


1. A process for producing a boat hull of sandwich construction with an outer plastic skin covering and a lightweight rigid core of beaded expanded thermoplastic material, comprising the steps of forming a lower mold section with an inner curved surface to provide a mold form for the exterior surface of a boat hull and an upper mold section with an outer curved surface to provide a mold form for the interior surface of said boat hull, each of said sections having means therein for releasing the boat hull from said sections after molding, and inlet means for charging the mold cavity formed when the mold sections are placed together, applying mold release material to said inner and said outer curved surfaces respectively, followed by application of a gel coat, allowing the gel coat to become tacky, applying a reinforcing material over the tacky gel coat, placing the mold sections together to form a mold cavity, charging prefoamed expandable thermoplastic beads into said mold cavity via said inlet means, then injecting an exothermous epoxy resin mixture via said inlet means into the bead charged cavity, said exothermous resin mixture chemically interacting with evolution of heat which causes further expansion and final setting of the prefoamed beads to produce a boat hull having a solid lightweight core with epoxy impregnated reinforcing material embedded on the exterior surfaces as a plastic skin covering, and removing the boat hull from the mold cavity utilizing the release means in said lower and upper mold sections.

3,124,627
MOLD FOR MOLDING POLYURETHANE FOAM AND PROCESS THEREFOR

Bruce Gardner Hood, Marblehead, Mass., assignor, by direct and mesne assignments, to Davidson Rubber Company, Inc., Dover, N.H., a corporation of New Hampshire

Filed Jan. 13, 1961, Ser. No. 82,549
3 Claims. (Cl. 264—54)



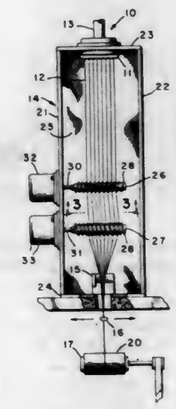
1. Apparatus for molding rapidly expanding low density, soft and sensitive plastic foams comprising: mold walls defining a horizontal and essentially flat cavity; a jacket surrounding said mold; said walls being adapted for rapid transfer of heat comprising materials selected from the group consisting in sheet metal, sheet plastic, fiberglass, reinforced epoxy resins and reinforced polyester resins; a cover for said mold; first and second abutting mating substantially horizontal mold enclosure surfaces, said first surface being associated with and connected to said mold wall, said second surface being associated with and connected to said cover; said first and second surfaces defining between them an elongated slotted orifice having a width of at least 2½ inches for damping fluctuations in the rate of gas bleed-off from said mold when a thermosetting resinous foam is expanded therein; and means for maintaining said mold walls at a highly uniform temperature including heated fluid in said jacket.

3,124,628
METHOD FOR PRODUCING TWISTED FILAMENT YARN

George B. Hughey, Pensacola, Fla., assignor, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware

Original application Nov. 7, 1960, Ser. No. 67,658, now Patent No. 3,067,461. Divided and this application Apr. 10, 1962, Ser. No. 186,454
9 Claims. (Cl. 264—103)

1. A method of producing twisted continuous filament yarn having enhanced bulk comprising the steps of extruding molten thermoplastic filament-forming polymer into plastic filaments, passing said filaments through a cooling zone to effect metastasis of the polymer from a plastic state to a more rigid state, collecting the resulting filaments at a speed sufficient to impart a substantial attenuation thereof while same are being cooled, rotating

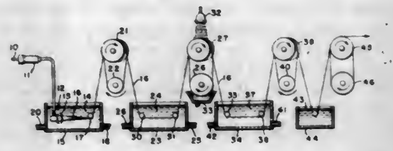


each individual filament about its longitudinal axis by applying a positive peripheral rotational effort below where metastasis occurs as same is being attenuated thereby imparting a twist running along each filament to a point above where metastasis occurs to effect permanently twisted filaments.

3,124,629
MANUFACTURE OF SHAPED OBJECTS OF ACRYLONITRILE POLYMER BY WET SPINNING

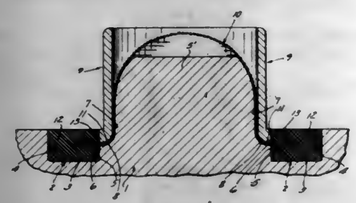
John P. Knudsen, Raleigh, N.C., assignor, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware

Original application Jan. 4, 1960, Ser. No. 314, now Patent No. 3,088,188, dated May 7, 1963. Divided and this application Nov. 14, 1961, Ser. No. 152,263
5 Claims. (Cl. 264—182)



1. A process for producing a filament from an acrylonitrile polymer which comprises dissolving said polymer in a solvent selected from the group consisting of N,N-dimethylacetamide and N,N-dimethylformamide, extruding the resulting solution through a shaped orifice immersed in a coagulating bath consisting essentially of polyalkylene glycol having a molecular weight of 200–6000, less than 10 percent water, and up to 20 percent of the selected solvent, thereby precipitating said polymer from its solution in the form of a filament, withdrawing said filament from said coagulating bath, stretching said filament to a substantial extent, and drying said filament, whereby a dense filament having a smooth surface is formed.

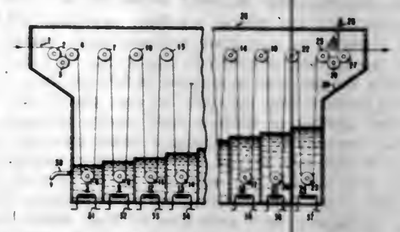
3,124,630
METHOD OF PRODUCING COUPLING WASHER-EQUIPPED FILTERING SCREENS
Jacob A. Ronning and Merle A. Vikre, Minneapolis, Minn., assignors to Ron-Vik, Inc., Minneapolis, Minn., a corporation of Minnesota
Filed Oct. 25, 1957, Ser. No. 692,310
10 Claims. (Cl. 264—276)



1. A method of producing a combined filter screen and coupling washer comprising steps as follows: forming a concavo-convex filter screen having an integral annular anchoring flange projecting outwardly from its base portion; providing a mold having a body comprising an open-topped vertical axis annular cavity, said cavity being defined by concentric inner and outer walls and a bottom wall, the outer wall of the cavity being of a diameter greater than the outside diameter of the screen anchoring flange and having a depth at least equal to the thickness of the filtering washer to be produced, the inner wall of the mold cavity being of a diameter to snugly receive and be in heat-conducting relationship with the base portion of the concavo-convex filtering screen and having a depth greater than the thickness of the filtering washer to be produced; telescopically applying the base portion of the concavo-convex screen over the inner cavity-defining wall with its anchoring flange spaced from the bottom of the cavity and its lower internal portion in heat-conducting relationship with said inner wall, preheating the mold and screen to an elevated temperature, while the mold and screen are at a suitably elevated temperature filling the mold cavity to a desired level above the top of the screen anchoring flange with a liquid material of a character that is free-flowing at room temperature but is converted to a resilient solid state upon subjection to an elevated temperature, the elevated temperature of the mold and screen resulting from preheating and present at the time of introduction of the liquid material into the mold being sufficiently high to cause rapid semi-hardening of the liquid material at areas of contact with the screen such as to stop flow of material over the surface of the screen by capillary action, subsequently subjecting the mold and screen together with the liquid material to such an elevated temperature and for such time as is necessary to convert the entire body of said material to a resilient solid state suitable for use as a conduit coupling washer, and finally removing the washer-equipped filtering screen from the mold.

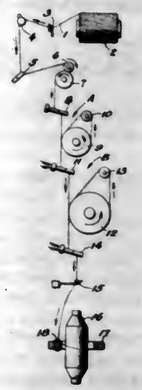
3,124,631
PROCESS FOR PROVIDING HIGH DENSITY DRY SPUN ACRYLONITRILE POLYMER FILAMENTS
Merton Louis Davis, Camden, S.C., and Louis Charles Palmer, Dordrecht, Netherlands, assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Mar. 22, 1961, Ser. No. 97,524
4 Claims. (Cl. 264—290)

1. In a process for providing high density, dry-spun acrylonitrile polymer filaments wherein said filaments are concurrently washed and drawn at least two times their original length by successively passing a bundle of undrawn, solvent-laden filaments into a plurality of reservoirs of a cascading water bath, the steps comprising heating the lower reservoirs of said bath to a temperature from about 90° to 100° C, successively passing said filaments into the first and each succeeding lower reservoir and withdrawing them at a rate to impart from about 40% to about 70% of the total draw, heating said upper reservoirs to a temperature from about 50° to 88° C.,



and successively passing said filaments into and withdrawing said filaments from each of said upper reservoirs at an increased rate to impart the remainder of said draw, and thereafter directing water at a temperature from about 50° to 60° C. onto said filaments and into the uppermost reservoir to provide cascading flow through said bath.

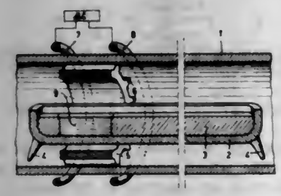
3,124,632
PROCESS FOR TREATING NYLON FILAMENTS
Frank L. Larkin, Pensacola, and Michael M. McNamara, Gulf Breeze, Fla., assignors, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware
Filed Apr. 10, 1961, Ser. No. 102,052
4 Claims. (Cl. 264—290)



1. A process for treating nylon filaments comprising the steps of longitudinally feeding nylon filaments capable of being molecularly oriented to a first stretch zone at a predetermined rate, withdrawing the said filaments from said first zone at a predetermined increased rate, whereby the filaments are attenuated therein, snubbing the movement of said filaments through the said first zone so that there is a tendency of the point of the necking down of the filaments to be localized, passing the said filaments through a second stretch zone and withdrawing same therefrom at a predetermined increased rate, whereby the filaments are stretched a second time, snubbing the movement of said filaments though the said second zone and heating the filaments at the same time, the overall draw ratio employed being about 2.5–5.5 and the draw ratio employed in the second stretch zone being about 1.2–1.9, heating the yarn under low tension permitting the yarn to shrink about 6–10 percent, and taking the filaments up in an orderly manner.

ELECTRICAL

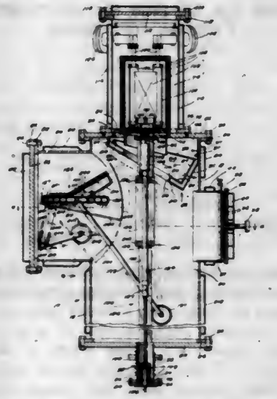
3,124,633
METHOD OF, AND APPARATUS FOR, MOVING-ZONE HEAT TREATMENT OF MATERIALS
Adrianus Martinus Jacobus Gerardus Van Run, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Sept. 14, 1961, Ser. No. 138,110
Claims priority, application Netherlands Sept. 15, 1960
8 Claims. (Cl. 13—1)



1. Zone-melting apparatus comprising means for supporting an elongated charge of a material to be subjected to a zone-melting treatment, an electrically-conductive heating ring surrounding an axial portion of the elongated charge, means permitting movement of the said heating ring in the direction of length of the charge, at least one high-frequency coil, a source of high-frequency currents, means connecting the source to the coil to energize the latter with high-frequency currents to establish a fluctuating electromagnetic field at the ring for inductively heating same and increasing its temperature to a value at which radiation from the ring will melt a transverse zone of the elongated charge, said high-frequency coil being located relative to the heating ring such that the region of maximum field intensity established by the coil is spaced from the ring center whereby the ring is generally located in a field region of lower intensity, and means for advancing the coil in the direction of length of the charge to cause the heating ring to be translated in a direction of a decreasing field gradient solely by means of the electromagnetic field forces and thus to cause the molten zone in the charge to be similarly advanced through the charge in its length direction.

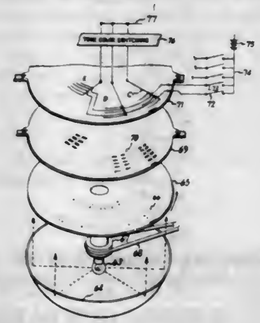
3,124,634
FURNACE CONSTRUCTION
Herbert W. Westeren, Barrington, and Stewart B. Ashton, Greenville, R.I., assignors to C. I. Hayes, Inc., Cranston, R.I., a corporation of Rhode Island
Filed May 21, 1962, Ser. No. 196,100
15 Claims. (Cl. 13—31)

4. In a furnace construction for use in the heat treatment of a work piece, a housing having a work transfer chamber formed in one portion thereof and a heat chamber formed in another portion thereof and in adjacent relation to said work transfer chamber, said heat chamber being normally maintained at a vacuum pressure and at a relatively high temperature, means for transferring the work piece from said work transfer chamber to said heat chamber for the heat treatment thereof, and for removing said work piece from said heat chamber after the heat treatment thereof, means for sealing said heat chamber upon wtihdrawal of said work piece from said heat chamber by said transferring means, thereby maintaining the relatively high temperature and vacuum pressure therein, means for cooling said sealing means including a plurality of cooling channels formed in said sealing means, and tubular guide means for guiding said sealing means in the movement thereof and communicating with said cooling



channels for defining a continuous flow cooling fluid circulating system therewith.

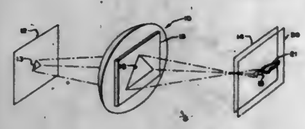
3,124,635
PHOTOELECTRIC MUSICAL INSTRUMENTS AND THE LIKE
Edward M. Jones and Wesley Love, Cincinnati, Ohio, assignors to D. H. Baldwin Company, a corporation of Ohio
Original application Aug. 25, 1955, Ser. No. 530,570, now Patent No. 3,023,657, dated Mar. 6, 1962. Divided and this application Mar. 5, 1962, Ser. No. 177,430
8 Claims. (Cl. 84—1.18)



1. In a photoelectric musical instrument, a photocell array on an insulative support, said array comprising a plurality of photocells each with three electrodes formed as metallic coatings on said support, and interconnected by photosensitive material, each photocell comprising an intermediate electrode and outer electrodes, means moving with respect to said insulative support to subject the individual photocells to rays of light productive of electrical vibrations at musical frequencies, selective means for applying polarizing potential to the intermediate electrodes, and means for connecting the outer electrodes of each photocell with an amplifier system of balanced type, wherein the direct current components in the said outer

electrodes neutralize each other, leaving the alternating current outputs for amplication.

3,124,636
CHARACTER RECOGNITION DEVICES
John A. Fitzmaurice, Arlington, Mass., assignor to Baird-Atomic, Inc., Cambridge, Mass., a corporation of Massachusetts
Filed Apr. 29, 1960, Ser. No. 25,659
3 Claims. (Cl. 88—1)



1. An electro-optical device for identifying an unknown visual representation, said device comprising focusing means defining an optic axis, a center plane at said focusing means, an object plane at one of a pair of foci of said focusing means, an image plane at the other of said pair of foci of said focusing means and a critically defocused plane spaced from said image plane, means for positioning said unknown visual representation in association with one of said object plane and said center plane, means including and positioning an array of known representations in association with the other of said object plane and said center plane, means including and positioning an array of detecting means in association with said critically defocused plane, and means for illuminating said unknown visual representation substantially in its entirety at any given time, a selected proportion of illumination from said unknown visual representation being directed to one each of said known representations and to one each of said detecting means, said object plane, said center plane, said image plane and said critically defocused plane being positioned such that; to a design approximation:

$$\frac{1}{x_1}+\frac{1}{x_2}=\frac{1}{f}$$

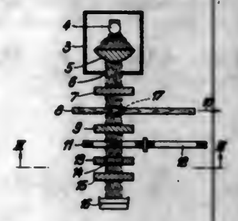
$$\frac{x_1}{x_2}=\frac{y_1}{y_2}$$

$$\frac{R}{d_1}=\frac{y_2}{x_2 d_1}$$

$$\frac{r_1}{d_1}=\frac{y_1}{x_1}$$

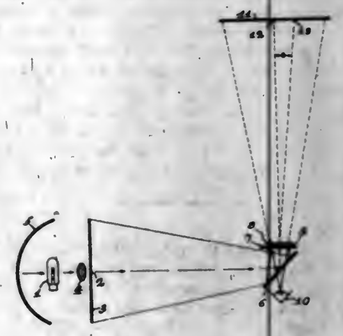
where:
- y_1 is the perpendicular distance from the optic axis to the extreme point in the object plane farthest from the optic axis;
- y_2 is the corresponding image size in the image plane;
- x_1 is the distance from the object plane to the center plane as measured along the optic axis;
- x_2 is the distance from the center plane to the image plane as measured along the optic axis;
- f is the focal length of the focusing means;
- R is the effective radius of the focusing means;
- d_1 is the distance measured along the optic axis from the center plane to the point where a ray, coming from the extreme point in the object plane and transmitted from the focusing means at a distance R from the optic axis, intersects the optic axis; and
- r_1 is the distance measured in the critically defocused plane of the optic axis to the ray from the extreme point in the object plane intersecting the optic axis at the center plane.

3,124,637
APPARATUS FOR EXAMINING PRESTRESSED GLASS
Xaver Heltzer, Porz (Rhine), Germany, assignor to Spiegelglaswerke Germania A.G., Porz-Urbach, Germany
Filed June 17, 1958, Ser. No. 742,512
Claims priority, application Germany July 3, 1957
2 Claims. (Cl. 88—14)



1. Apparatus for indicating the extent of stresses in glass and the like which comprises a source of parallel polarized light rays, an analyzer in the path of said light passing transversely through the full area of an intermediate sheet of glass under inspection, an apertured rotary disk for periodically screening said path of light and light indicating means for receiving said screened light.

3,124,638
APPARATUS FOR THE ORIENTATION OF CRYSTALS
Alberto Loro, Ville Lemoyne, Quebec, Canada, assignor to Northern Electric Company Limited, Montreal, Quebec, Canada, a corporation of Canada
Filed July 25, 1960, Ser. No. 45,075
4 Claims. (Cl. 88—14)



4. An apparatus for determining the orientation of a single crystal having an etched surface where the approximate crystallographic plane of the crystal is known, comprising:
- (a) a graticule having its lines forming a scale symmetrical about a central spot of the graticule;
- (b) means for illuminating the graticule with its central spot being illuminated to a greater intensity than the remainder of the scale;
- (c) a partial reflecting plane mirror spaced a predetermined distance from the graticule;
- (d) means for directing the light emanating from the graticule to be incident on one side of said mirror, the reflection therefrom forming a first virtual image of the illuminated graticule;

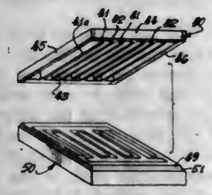
- (e) the apparatus being arranged to have the etched surface of the crystal to be tested placed in close proximity to and parallel with the opposite side to said one side of said mirror, whereby, when the crystal is so placed, the etched surface thereof also reflects the light emanating from the graticule to form a second virtual image of the illuminated graticule superimposed on the first virtual image and substantially in the same plane thereof, said directing means permitting the simultaneous viewing of said first and second virtual images of the illuminated graticule and its central spot, whereby the orientation of the crystal may be obtained from the visual location of the center of the second virtual image with respect to the scale of the first virtual image.

3,124,639
LIGHT POLARIZING STRUCTURES
Myron Kahn, 15445 Ventura Blvd., Sherman Oaks, Calif.
Filed Dec. 21, 1960, Ser. No. 77,428
11 Claims. (Cl. 88—65)



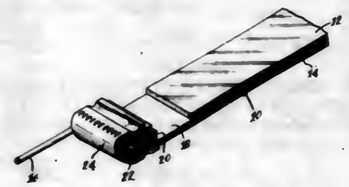
1. A light polarizing structure comprising a mass of light transmitting foamed cellular plastic material, a plurality of substantially flat gas filled thin walled bubbles joined together at their contacting surfaces and randomly disposed to form a film, said bubbles being flattened in the same direction and parallel with the plane of the film, said plastic and gas having abruptly different indicies of refraction and a transparent rigid supporting member secured to at least one side of the film and overlying the said film.

3,124,640
CONTACT STRUCTURES FOR LARGE TRANSISTORS
Harold Lewis Armstrong, Kingston, Ontario, Canada, assignor to Pacific Semiconductors, Inc., Culver City, Calif., a corporation of Delaware
Filed Jan. 20, 1960, Ser. No. 3,621
5 Claims. (Cl. 174—72)



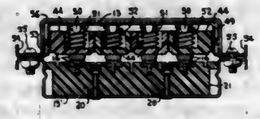
1. A conductor for forming electrical contact to a semiconductor body at a first region of one conductivity type and at a second region of another conductivity type comprising:
- a first plurality of elongate fin-shaped contact members of electrically conductive material;
- a second plurality of elongate fin-shaped contact members of electrically conductive material, each of said contact members having a height substantially greater than the thickness thereof, each of said contact members in first said plurality having one edge thereof adapted to contact said first region, each of said contact members in said second plurality having one edge adapted to contact said second region, said contact members in said first and second plurality being arranged in parallel relationship and alternately spaced apart;
- a frame including first and second electrically conducting spaced-apart end members and first and second electrically non-conducting side members joining said end members, said first plurality of contact members electrically affixed to said first end member within said frame, said second plurality of contact members affixed to said second end member within said frame in interleaved relationship with said first plurality, said first plurality being spaced from said second end member, and said second plurality being spaced from said first end member.

3,124,641
ELECTRIC TERMINAL
Richard F. Anderson, Columbus, Ind., assignor to Arvin Industries, Inc., Columbus, Ind., a corporation of Indiana
Filed May 20, 1960, Ser. No. 30,541
6 Claims. (Cl. 174—84)



1. An electric terminal for a foil grid of the type comprising a thin strip of metallic foil interposed between a pair of insulating sheets, one of said pair of sheets being removed from one end of said foil to expose a face thereof, a first strip of metal in surface-to-surface contact with the exposed foil face, a second strip of metal of greater rigidity than said foil and said first strip of metal in surface-to-surface contact with said first strip of metal and projecting outwardly therefrom, and means interlockingly engaging the interleaved strips and foil for retaining said first strip of metal in surface-to-surface contact with said second strip of metal and said foil, the metal of said first strip of metal having an electromotive potential at least as high as the electromotive potential of said metallic foil and the metal of said second strip having an electromotive potential lower than the electromotive potential of said foil.

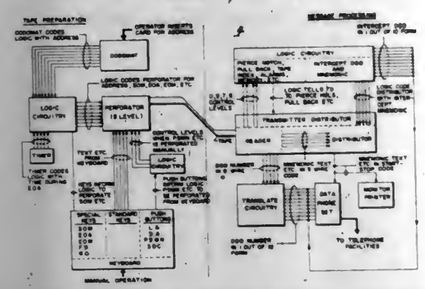
3,124,642
BUSWAY WITH RESILIENT CONNECTING MEANS FOR PLURAL BUSBARS
John W. Meacham, Endwell, N.Y., assignor to General Electric Company, a corporation of New York
Original application Oct. 23, 1958, Ser. No. 769,213, now Patent No. 3,015,082, dated Dec. 26, 1961. Divided and this application Apr. 26, 1960, Ser. No. 24,778
11 Claims. (Cl. 174—88)



3. An electric power busway system comprising: a plurality of interconnected lengths of busway, each of said busway lengths including an enclosure of generally rectangular cross-section and a plurality of electric power

bus bars supported in substantially a common plane in edge-to-edge insulated relation therein, the bus bars in one length overlapping the ends of respective bus bars in the next adjacent length; means for securing the enclosures of adjacent busway lengths to each other; an insulating spacer rigidly secured to an enclosure wall adjacent one side of said overlapping ends; and a plurality of insulating blocks each independently and resiliently biased away from an enclosure wall adjacent the opposite side of said overlapping bus bar ends and compressing said overlapping bus bar ends against said insulating spacer.

3,124,643
APPARATUS FOR AUTOMATICALLY EFFECTING LINE SWITCHING OF TELEGRAPH MESSAGES
Donald E. Huffman and Peter P. Petros, Chicago, and Walter J. Zenner, Des Plaines, Ill., assignors to Teletype Corporation, Skokie, Ill., a corporation of Delaware
Filed Sept. 5, 1961, Ser. No. 135,857
27 Claims. (Cl. 178—3)



1. In a printing telegraph line switching message transmission system, means operable under control of a tape for attempting to complete a connection to a station the address of which is perforated in permutation code in the tape, means for detecting the success or failure of such attempt, means rendered effective by the detection of the success of such attempt for transmitting a message text under control of the tape to the station the address of which is in the tape, and means operable under control of the detecting means upon the failure of such attempt to initiate at least one more attempt to complete the connection.

3,124,644
AUCTION BIDDING TELEGRAPH SYSTEMS
David Norman Hutchinson, Dorval, Quebec, Canada, assignor to The Bell Telephone Company of Canada, Montreal, Quebec, Canada, a corporation of Canada
Filed June 8, 1962, Ser. No. 201,079
6 Claims. (Cl. 178—3)

1. In a telegraph system, which includes a plurality of subscribers' stations, a master station, to which the subscribers' stations are connected by individual loops each loop being provided at the subscribers' station means to open and close the loops, comprising:

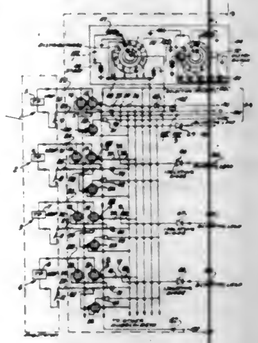
a teleprinter, having included a starting means,

a pentode tube sending means, individual to each loop, the output being coupled to the loops and the control-grid cathode input circuit to the teleprinter so that marking and spacing signals are transmitted over the loops, an individual diode inserted in the control-grid circuit poled so as to prevent interaction between the loops, when the system is operating, short circuiting means, responsive to the operation of the teleprinter, when connected across the control-grid-cathode circuit, permits the flow of current in the loops,

a pentode tube receiving means, included to each loop, having the input coupled to the loops, biasing means inserted in the loops effective to prevent or permit the operation of the receiving means when the loop is closed or open respectively,

a first electromagnetic relay individual to each loop, responsive to the operation of the respective receiving means, first pair of contacts therefor,

a control circuit, individual to each loop, a second electromagnetic relay having a second and a third pair of contacts therefor, a circuit completed through the said first pair of contacts effective to release the second electromagnetic relay when the first electromagnetic relay is operated,



a selecting matrix which includes a series of conductors, each containing the said second contact, equal in number to the loop circuits, a series of sets of diodes each set being individual to a loop circuit, the anodes of each set being individually connected to the conductors with the exception of one conductor specific to a loop circuit, and the cathodes of each set being connected together, a circuit connecting the connected cathodes to the respective control circuit and to the control-grid of the respective sending pentode tube means, a diode included in such circuit with the anode connected to the control grid and the cathode to the connected cathodes,

a diode connected in each of the conductors with the anodes individually connected to the second contacts, and the cathodes connected together, a third electromagnetic relay having a fourth pair of contacts, a connection between the said starting means and the fourth pair of contacts effective to disable the teleprinter when the third electromagnetic relay is released,

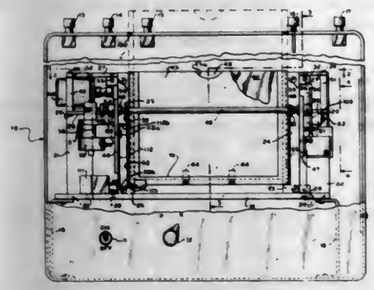
a registering circuit individual to each loop connected to the respective specific conductor,

a fourth relay connected across the cathode-control-grid circuit of the pentode tube sending means, responsive to the operation of the teleprinter, having a fifth pair of contacts, means for including the fifth pair of contacts and the third pair of contacts of the second electromagnetic relay in the cathode-screen-grid circuit of the pentode tube sending means, the third pair of contacts being closed when the second electromagnetic relay is operated.

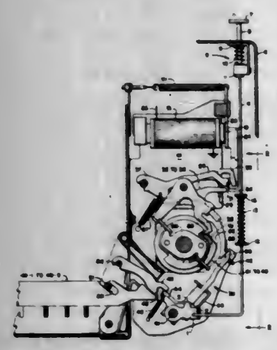
3,124,645
BINARY CODED PULSE RECORDING AND REPRODUCING APPARATUS AND SYSTEM
William G. Whitney, Pines Lake, N.J., assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
Filed Sept. 15, 1961, Ser. No. 138,332
14 Claims. (Cl. 178—17.5)

1. A system for recording binary coded pulses to be used for operating automatically an electric typewriter,

comprising a record medium having a recordable surface, a transversal recording machine having a recording head and means for driving said head back and forth across said medium while advancing the medium by one step during each reversal in the drive of said head whereby the head is moved back and forth along successive parallel transverse tracks on the record medium, means for feeding electric pulses to said head representing the coded signals for respective characters to be typed and for functional operations in controlling the automatic typewriter, said feeding means having a start circuit required to be activated before the transmission of the coded pulses representing each character and operational function, and switch means connected in said start circuit and operable by said head as it nears each end of its travel to open said start circuit and cause said feeding means to be in a stopped condition during each reversal in the drive of said head.

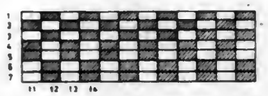


3,124,646
MANUAL UNSHIFT MECHANISM FOR TELETYPEWRITERS
William H. Baumgartner and Alexander Druschitz, Chicago, Ill., assignors to Teletype Corporation, Skokie, Ill., a corporation of Delaware
Filed June 29, 1961, Ser. No. 120,773
6 Claims. (Cl. 178—25)



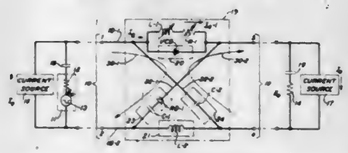
1. In a telegraph printing machine having a printing mechanism shiftable to either of two different states, a selector mechanism responsive to sequential signals forming permutational code combinations, selector bars selectively operable by said selector mechanism to control the printing mechanism, and a manually operable means operable means operable simultaneously with said selector mechanism to permutatively release all of said selector bars to shift said printing mechanism from one to another of its states irrespective of the permutative code combination being responded to by said selector mechanism.

3,124,647
SYNCHRONIZING TELEGRAPH TRANSMITTERS AND RECEIVERS
Hans Rudolph, Munich-Solln, Germany, assignor to Siemens & Halske Aktiengesellschaft, Berlin and Munich, a corporation of Germany
Filed Aug. 11, 1961, Ser. No. 130,969
Claims priority, application Germany Sept. 7, 1960
4 Claims. (Cl. 178—31)



1. A method of securing synchronous operation of transmitters and receivers in a telegraph system operating synchronously and with parallel transmission over a plurality of partial channels, comprising the steps of transmitting at least one telegraph symbol, effecting different polarity to given symbol elements, transmitting the symbol elements so formed following transmission of said first-mentioned telegraph symbol, and following reception of the latter and said symbol elements, forming synchronizchronizing impulses therefrom.

3,124,648
PULSE TRANSMISSION SYSTEMS EMPLOYING NEGATIVE RESISTANCE ELEMENTS
Stewart E. Miller, Middletown, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 29, 1960, Ser. No. 79,428
10 Claims. (Cl. 178—70)



1. A pulse repeater in a transmission path interconnecting a source of signals and a load, which repeater comprises means having a current-voltage characteristic with a threshold-terminated region of negative resistance, means for masking the negative resistance region of said characteristic for a steady bias signal supplied by the source, means for maintaining said negative resistance region unmasked for pulse signals propogated along the transmission path from said source, and means for confining the forward propagation of said pulse signals to said negative resistance means, whereby attenuated pulse signals passing through said negative resistance means and exceeding said threshold level are regenerated with enhanced energy supplied by said steady bias signal.

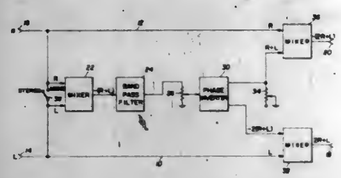
3,124,649
METHOD AND APPARATUS FOR AUDIO REPRODUCTION
Dennis L. Pflager and Maurice R. Jackson, Portland, Oreg., assignors to Inter-Aural Research, Inc., Portland, Oreg., a corporation of Oregon
Filed June 5, 1961, Ser. No. 114,979
13 Claims. (Cl. 179—1)

9. A method of audio reproduction comprising:

producing a pair of audio input signals, subtracting a portion from each of said pair of input signals, separating a mid-band range of frequencies from each of the subtracted portions of said pair of input signals,

mixing said subtracted portions to form a mixture of mid-band frequencies,

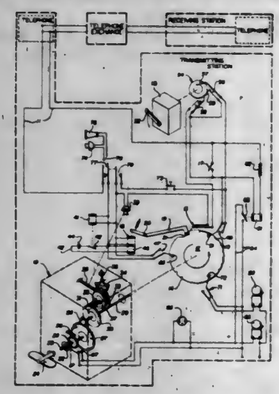
reversing the phase of one portion of said mixture without changing the phase of another portion of said mixture,



adding said phase reversed portion of said mixture to the remainder of one of said input signals and adding said unchanged portion of said mixture to the remainder of the other of said input signals to produce a pair of audio output signals, and

converting each of said output signals into sound at different separated positions.

3,124,650
AUTOMATIC TELEPHONIC ALARM SYSTEM
Rolf A. Rostad, 437 Belvedere St., San Francisco, Calif.
Filed Feb. 28, 1961, Ser. No. 92,215
6 Claims. (Cl. 179—5)



1. An automatic telephonic alarm system which transmits an alarm over telephone wires from a transmitting station having a telephone circuit to a receiving station having a telephone circuit, which comprises

an alarm circuit at the transmitting station connected to the telephone circuit,

a normally closed pulse switch in said alarm circuit,

a pulse unit having means to briefly and repeatedly open said pulse switch to produce pulses which represent the telephone number of the receiving station,

an electromagnet,

a normally open automatically operated alarm switch closable to cause said electromagnet to become energized,

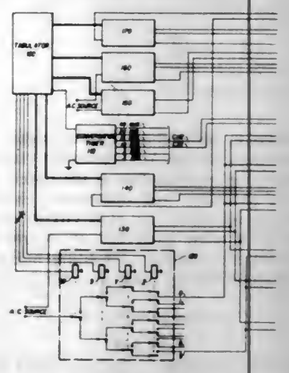
an armature movable from a hold position preventing operation of said pulse unit to a release position enabling operation of said pulse unit by said energized electromagnet,

biasing means urging said armature to its hold position whereby deenergization of said electromagnet results in said armature being conditioned to assume its hold position,

a source of power operable upon movement of said armature to its release position by said energized electromagnet to drive said pulse unit and thereby produce pulses which represent the telephone number of the receiving station, and

alarm message generating means connected to the alarm circuit and operable by said source of power in timed relationship with producing pulses which represent the number of the receiving station by said pulse unit to transmit the alarm message through said alarm circuit and the telephone wires to the receiving station.

3,124,651
TOLL CHARGE COMPUTER
Harold J. McCreary, Lombard, Ill., assignor to Automatic Electric Laboratories, Inc., a corporation of Delaware
Filed Feb. 20, 1959, Ser. No. 794,552
9 Claims. (Cl. 179—7.1)

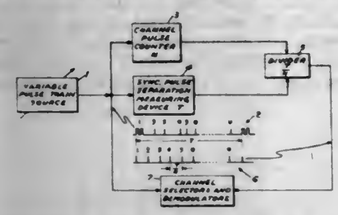


1. In an automatic toll ticketing telephone system comprising a plurality of offices each having a plurality of stations identifiable as being associated with said office by a common code, a tabulator, and a toll charge computer including: a plurality of magnetic cores each having square hysteresis loop characteristics, and each representative of a combination of an originating station office code and a terminating station office code; means for selectively marking one of said cores; means operated for detecting a marked core, comprising a conversation timing device, a plurality of read-out wires having circuit connections to said conversation timing device, and each selectively threaded through all of said cores representative of the same toll charge, said wires adapted to receive a pulse of potential induced by the marking of one of said cores; means responsive to the operation of said detecting means for registering the marking of said core as a toll charge; and means for extending markings indicative of said toll charge to the telephone system.

3,124,652
MULTIPLEX SIGNAL DEMODULATOR
Fernando Biagi, Wayne, Richard A. Morrow, Clifton, and Martin Masonson, Nutley, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Dec. 2, 1960, Ser. No. 73,454
20 Claims. (Cl. 179—15)

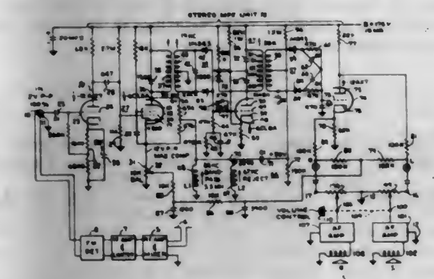
1. A demodulator for pulse time modulation time division multiplex signals having a variable number of channel signals and a variable frame period defined by adjacent synchronizing pulses comprising a first means responsive to said channel signals to determine the number of said channel signals, a second means responsive to said adjacent synchronizing pulses to determine said frame period,

means coupled to the outputs of said first and second means to produce a train of equally spaced pulses, and



means responsive to said multiplex signals and said train of pulses to separate and demodulate said channel signals.

3,124,653
RADIO SIGNAL RECEIVERS
John O. Schroeder, Trenton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed July 2, 1962, Ser. No. 206,765
9 Claims. (Cl. 179—15)



5. For a stereophonic frequency modulation receiver including means to provide a composite signal including main channel audio frequency components, a pilot signal component, and subcarrier sideband components,

an amplifier circuit for separating a pilot signal component from the composite signal component including an amplifying device having an input electrode an output electrode and a common electrode,

an input circuit for said composite signal coupled to said input electrode,

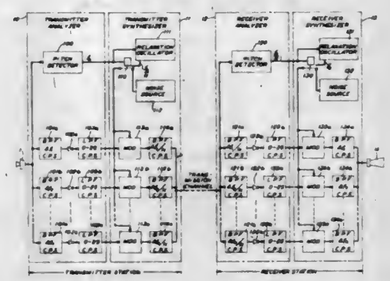
a resonant circuit tuned to said pilot signal component coupled between one of said output and common electrodes and a point of reference potential,

a first impedance element connected between the other of said output and common electrodes and said point of reference potential, and

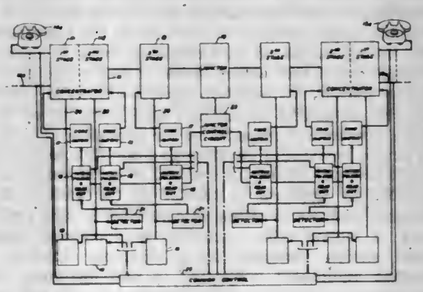
second and third impedance elements connected between said output and common electrodes, the impedance values of said impedance elements being so related that the pilot signal voltage at the junction thereof is substantially balanced out.

3,124,654
VOCODER APPARATUS
Gordon Raisbeck, Bernards Township, Somerset County, N.J., assignor to Bell Telephone Laboratories Incorporated, New York, N.Y., a corporation of New York
Filed May 22, 1961, Ser. No. 111,704
5 Claims. (Cl. 179—15.55)

3. Apparatus for transmitting a plurality of channel vocoder control signals over a single transmission channel which comprises a source of chanel vocoder control signals representative of the information-bearing characteristics of a speech wave, means for synthesizing from said control signals a plurality of frequency components occurring at frequencies f_1/N, f_2/N, . . . f_n/N cycles per second and having amplitudes that are proportional to the amplitudes of the corresponding frequency components, f_1, f_2, . . . f_n cycles per second, of said speech wave, means for combining said synthesized frequency components to form a narrow band signal, and a single transmission channel for transmitting said narrow band signal to a receiver station.

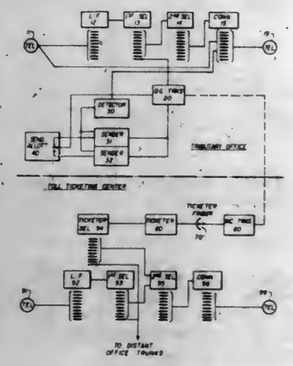


3,124,655
TELEPHONE SWITCHING CIRCUIT
Alexander Feiner, Boonton, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 30, 1959, Ser. No. 862,811
27 Claims. (Cl. 179—18)



1. A communication switching network comprising a plurality of relay structures including members having two stable remanent magnetic states and windings magnetically coupled to said members, each of said relay structures being operable responsive to partial switching pulses in said windings of a predetermined combined magnitude, column circuit means interconnecting certain of said windings in vertical columns, row circuit means interconnecting certain other of said windings in horizontal rows, means for applying partial switching pulses to said column circuit means, and pulse source means for applying partial switching pulses to said row circuit means, said partial switching pulses in said column and row circuit means having a combined magnitude substantially equal to said predetermined combined magnitude, said pulse source means including a matrix of magnetic cores having a pair of stable remanent magnetic states, coordinate pulse means for switching the state of each of said cores, and winding means on each of said cores and connected to said row circuit means.

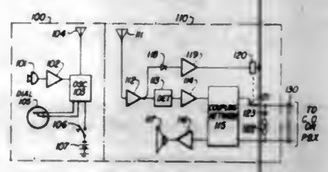
3,124,656
AUTOMATIC NUMBER IDENTIFICATION
Ernest J. Bonanno, Roselle, Ill., assignor to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Filed Oct. 7, 1960, Ser. No. 61,302
10 Claims. (Cl. 179—18)



1. In an automatic toll ticketing telephone system: a first office including, an outgoing trunk, a calling station identified by a directory number and including a calling device, first switching means connected to said calling station operated in response to operation of said calling device to extend a circuit connection to said outgoing trunk, a plurality of sender means, sender allotter means connected to said plurality of sender means and to said outgoing trunk operated in response to the connection of said calling station to said outgoing trunk to connect a selected one of said sender means to said outgoing trunk, calling station identification means connected between said first switching means and said plurality of sender means operated in response to the operation of said calling device to transmit the calling station directory number to said selected sender means, said selected sender means operated in response to receipt of the calling station directory number to repeat said number to said outgoing trunk; a second office including an incoming trunk, a called station identified by a directory number, toll ticketing equipment connected to said incoming trunk, and second switching means connected to said toll ticketing equipment operable to extend a circuit connection to said called station; a trunk line connecting said outgoing trunk to said incoming trunk; said outgoing trunk operated in response to the combined operation of said calling device and the reception of the calling station directory number to transmit the directory numbers of said calling and called stations through said incoming trunk to said toll ticketing equipment at said second office; said toll ticketing equipment operated in response to reception of said directory numbers to record said numbers and to extend said called station directory number to operate said second switching means to extend a circuit connection to said called station.

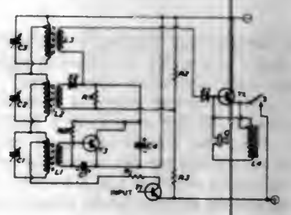
3,124,657
WIRELESS LOUDSPEAKING TELEPHONE
Edward S. Peterson, Bensenville, Ill., assignor to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Filed Oct. 4, 1960, Ser. No. 60,469
14 Claims. (Cl. 179—81)

1. In a telephone system, a telephone line and a wireless loudspeaking telephone comprising: a transmitting unit including signal generating means, a transmitting antenna connected to said signal generating means for radiating signals generated by said means, and switch means operated for actuating said signal generating means; a receiving unit including voice frequency signal reproduction means, a receiving antenna for receiving signals from said transmitting unit, a coupling network, line connecting



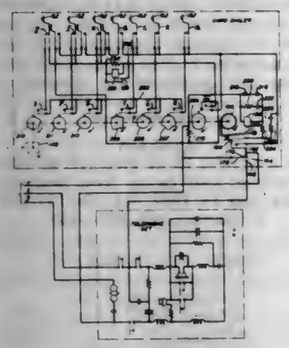
means connected to said receiving antenna operated in response to signals received from said transmitting unit to connect said coupling network to said telephone line, said coupling network operated to couple signals from said receiving antenna to said telephone line and further to couple signals received from said line to said voice frequency signal reproduction means.

3,124,658
SELECTIVE CALL SYSTEMS
Oswald Barber Sneath, London, England, assignor to Multitone Electric Company Limited, London, England
Filed Feb. 24, 1959, Ser. No. 794,933
Claims priority, application Great Britain Feb. 28, 1958
1 Claim. (Cl. 179—84)



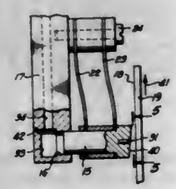
In a selective receiver for consecutive electromagnetic signals of different frequencies and separated by predetermined respective time intervals, at least three interconnected tuned circuit selective filters, signal input means connected to said first filter, the first of said filters being tuned to pass a signal of one frequency, the second being tuned to pass a signal of another frequency, and the third to pass a signal of a third frequency, a first transistor having a base, emitter and collector, a capacitor, means connecting said first filter and said capacitor in series with said base and emitter, means connecting the second filter in series with said collector and emitter, means biasing the first transistor into the conductive state, means to change the bias to render the first transistor non-conductive upon passage of a signal at the first frequency through the first filter, a second transistor connected to the third filter, means biasing the second transistor to a non-conductive condition, the second filter being connected to the biasing means, and means to generate bias upon the passage of a signal of the second frequency through the second filter so as to render the second transistor conductive upon the passage of a signal at the third frequency through the third filter.

3,124,659
CARD DIALER
Ernest R. Andregg, Newark, William Pferd, Watchung, and Rembert R. Stokes, Springfield, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 2, 1959, Ser. No. 844,054
8 Claims. (Cl. 179—90)



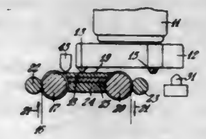
4. A call transmitter for a telephone substation including a speech path and means for connecting the call transmitter and the speech path across a telephone line connected to a source of electrical power, the call transmitter being responsive to a code bearing member having each digit of a number to be called encoded thereon, the call transmitter comprising a plurality of switches, sensing means for actuating selected ones of the switches responsive to the coding on the code bearing member, means for providing relative movement between the code bearing member and the sensing means to sequentially present each encoded digit to the sensing means, means under the control of the actuated switches for generating electrical signals representing the digits of the encoded telephone number, and switching means for disabling the speech path and enabling the signal generating means during the signaling of each digit, the signal generating means being operated solely on power received from the telephone line and transmitting signals out on the telephone line.

3,124,660
READ HEAD FOR MAGNETIC SURFACE RECORDING
Harry E. Criner, Sierra Madre, Calif., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Mar. 7, 1960, Ser. No. 13,048
8 Claims. (Cl. 179—100.2)



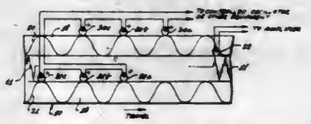
1. In a read head for a magnetic recording system including a moving record surface, the combination of: a frame; a piston mounted in said frame for movement toward and away from said record surface, said piston having a back disposed within said frame and a face disposed adjacent said record surface, with the distance between said face and record surface decreasing in the direction of motion of said surface; a magnetic pickup unit mounted in said piston face; and spring means for coupling said piston and frame, said frame having a gas flow passage for directing a source of gas at substantially constant pressure to said piston back urging said piston out of said frame toward said record surface against the action of said spring means, whereby the gas force on said piston back is balanced by the sum of the force exerted by said spring means and the force due to relative motion of said piston face and record surface.

3,124,661
SCANNER
George Joseph Trapp, 105 Aylward Road, Merton Park, London SW. 20, England
Filed Mar. 16, 1960, Ser. No. 15,436
Claims priority, application Great Britain Feb. 17, 1960
11 Claims. (Cl. 179—100.2)



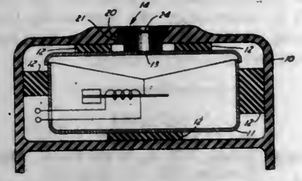
1. Magnetic recording apparatus comprising magnetic tape, a tape table having a plane surface, means to move said tape at a predetermined rate over said tape table, a magnetic recording head disposed to rotate about an axis perpendicular to said plane surface, a plurality of magnetic recording elements in said recording head equally spaced on a circle centred on said axis, means to move said tape at a predetermined rate over said plane surface while maintaining said tape in a taut condition, means to rotate said recording head in magnetic recording relation with said tape, whereby said recording elements produce magnetic records on said tape on a series of curved paths spaced along said tape, and means for moving said axis transversely relatively to said tape, whereby said elements substantially follow said curved paths while said tape is stationary, and the matter recorded in a selected one of said paths may be reproduced.

3,124,662
MAGNETIC RECORDING AND REPRODUCING SYSTEM
Loren L. Ryder, 3506 Berry Drive, North Hollywood, Calif.
Filed Apr. 5, 1960, Ser. No. 20,095
2 Claims. (Cl. 179—100.2)



1. A magnetic reproducer for reproducing a substantially sinusoidal signal from a signal record extending along a traveling record medium in the direction of travel thereof, comprising: a plurality of reproducer heads associated with said record medium and spaced from one another in the direction of travel of the medium by any multiple, including unity, of a full wave length distance along the medium, and means connecting said reproducer heads in phase.

3,124,663
HEARING AID NOISE SUPPRESSOR
John R. Beaudry, 9424 Foley Blvd. NW., Minneapolis, Minn., assignor of one-half to John B. Beaudry, Minneapolis, Minn.
Filed Aug. 28, 1962, Ser. No. 219,923
5 Claims. (Cl. 179—107)



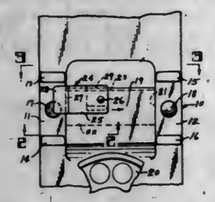
1. A mechanical device for reducing background noise caused by wind effects and metallic sounds to be used with a hearing aid microphone located within the housing of the hearing aid where an aperture in the housing is disposed in spaced and confronting relation with an aperture in the microphone, said device comprising:

(*a*) a first hollow cylindrical member defining a longitudinal axis, said cylindrical member aligned with the aperture of the microphone;

(*b*) a second hollow cylindrical member defining a longitudinal axis concentrically aligned with that of said first hollow cylindrical member and having a greater inner diameter than the outer diameter of said first hollow cylindrical member, both of said members having their longitudinal axes aligned with the aperture in the housing, at least one member of which is of sufficient length to communicate with said housing aperture;

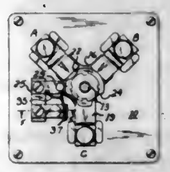
(*c*) and a sound responsive diaphragm constructed of extremely thin animal tissue stretched tightly over the end of said first hollow cylindrical member which is adjacent the housing aperture and is held in place between said cylindrical members, at least one of said members being fixedly secured to the microphone for reducing said background noises.

3,124,664
LOCK DEVICE FOR TELEPHONES
Milton R. Beatty, Detroit, Mich., assignor to David G. Carty and Steve J. Ternyak, both of Wayne County, Mich.
Filed Feb. 24, 1961, Ser. No. 91,416
1 Claim. (Cl. 179—189)



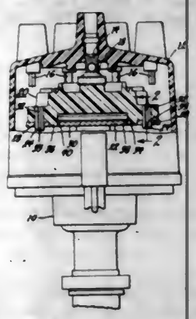
The combination of, a telephone having a cradle for the reception of a combination receiver and mouthpiece, said cradle including a pair of spaced apart flat elevated portions which are interconnected by a flat platform, a switch button movably mounted in each of the flat elevated portions, each of said switch buttons being normally spring biased upwardly to an operative position above the flat elevated portions when the combination receiver and mouthpiece is removed from the cradle and being pressed downwardly to an inoperative position when the combination receiver and mouthpiece is placed in the cradle, and, a lock means comprising a C-shaped clamp member slidably mounted on the flat platform between said flat elevated portions, a slider plate integrally connected to the C-shaped clamp member and extended outwardly sidewardly toward one of the flat elevated portions, a vertically upwardly extended arm portion integrally connected to the outer end of the slider plate, and, an integral horizontally extended sliding lock plate formed on the outer end of said arm portion and adapted to slidably engage the surface of one of said flat elevated portions to hold the switch button in said flat elevated portion in an inoperative position, and adapted to release said switch button when the C-shaped clamp member is moved away from the last mentioned flat elevated portion.

3,124,665
NON-ARCING ELECTRICAL SWITCH
Roger Pelletier, 2560 Ocean Ave., Seaford, N.Y.
Filed May 25, 1962, Ser. No. 197,799
2 Claims. (Cl. 200—10)



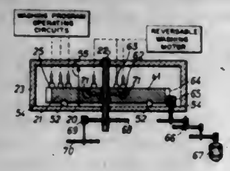
1. In an electrical marine switch having a centrally disposed conventional V-shaped hand operated rotatable blade for selective engagement of one or more batteries and having a molded insulator base engaging said blade, the substantially non-sparking improvement comprising a suitably rim notched insulator circular cam keyed to said blade; a first metal contact means having a pin fixed thereto secured to said base; a second metal L-shaped contact means secured to said base; a two prong metal contact spring disposed at its apex about said pin, one leg of which is a curved leg continuously engaging the rim of said cam and the other being a straight leg disposed adjacent to said L-shaped contact means for suitable break and make contact therewith respective to the notches on said rotatable cam.

3,124,666
DISTRIBUTOR HAVING A SNAP-FITTED ROTOR
Donald W. O'Brien, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 26, 1961, Ser. No. 113,020
1 Claim. (Cl. 200—19)



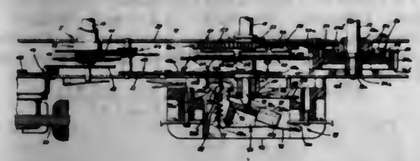
In combination, a distributor having a distributor cap, said distributor cap having a plurality of circumferentially spaced electrodes, a part rotatable with respect to said distributor cap having first and second pairs of openings, a rotor formed as a one-piece plastic part carried by said distributor cap having an electrode which cooperates with said circumferentially spaced electrodes of said distributor cap, said rotor having a first pair of integral projections fitting within said first pair of openings in said rotatable part and having a second pair of integral teeth passing respectively through said second pair of openings in said rotatable part, a portion of each of said teeth engaging an underside of said rotatable part to prevent axial separation of said rotor from said rotatable part, said projections and teeth forming a means for driving said rotor from said rotatable part, and wedge means for forcing said teeth outwardly and retaining said portions of said teeth in tight engagement with the underside of said rotatable part, said rotor being snap-fitted to said rotatable part prior to insertion of said wedge means that force said teeth outwardly.

3,124,667
CONTROL APPARATUS FOR AUTOMATIC WASHING MACHINES
Walter Holzer, Drosteweg 19, Meersburg (Bodensee), Germany
Filed May 19, 1960, Ser. No. 30,327
Claims priority, application Germany June 1, 1959
7 Claims. (Cl. 200—33)



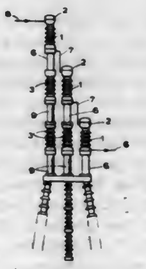
1. An apparatus for the control of automatic washing machines comprising: a casing; a main control disc in said casing having a plurality of concentric cam tracks and having an annular recess; an auxiliary control disc having cam tracks and being rotatably supported in said recess; a first and second set of contacts respectively scanning the tracks of said discs in axial direction; and means for driving said discs.

3,124,668
CAM OPERATED RANGE TIMER SWITCH
Wladyslaw S. Zagorski and Gerhard K. Losert, Morrison, Ill., assignors to General Electric Company, a corporation of New York
Filed Dec. 18, 1961, Ser. No. 160,101
12 Claims. (Cl. 200—38)



1. A timer comprising a rotatable cam, a first manually operable setting means arranged in concentric relationship to said cam for rotating said cam to a predetermined position, an axially movable rotatable control element arranged to coact with said cam, a second manually operable setting means for rotating said element to a predetermined position, cooperating means on said element and said cam for moving said element between a first axial position when said cam and element have a same relative angular location and a second axial position when said cam and element have different angular locations, motor driven means for engaging and rotating said element at a fixed speed when said element is in said second axial position, switch means mounted for operation in response to the axial movement of said element, and differential gearing means disposed in concentric and integral association with said second setting means and interconnecting said second setting means with said control element and said cam to allow independent setting of said cam by said first setting means and independent setting of said control element by said second setting means.

3,124,669
HIGH VOLTAGE ELECTRICAL CIRCUIT-BREAKERS
Marcel Charles Perolini, Neuilly-sur-Seine, France, assignor to Societe Generale de Constructions Electriques et Mecaniques (Alsthom), Paris, France, a French body corporate
Filed Sept. 14, 1960, Ser. No. 55,984
Claims priority, application France Sept. 23, 1959
3 Claims. (Cl. 200—48)



1. A high-voltage circuit-breaker assembly comprising a plurality of columns each of which columns contains a circuit-breaking device mounted above a control means therefor, and wherein at least one of said columns also includes at least one supporting insulator, the several said control means all being located at the same height, and said at least one supporting insulator being located between the control means and the circuit-breaking device of at least one of said columns, for positioning the said several circuit-breaking devices all at different heights, and means for connecting all said circuit-breaking devices electrically in series.

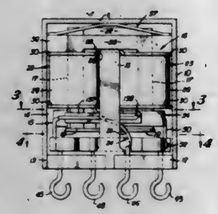
3,124,670
REED SWITCH HAVING IMPROVED REED POSITIONING MEANS
George M. Rose, Jr., Mountain Lakes, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Sept. 25, 1961, Ser. No. 140,603
10 Claims. (Cl. 200—87)



1. An hermetically sealed reed switch comprising a ceramic tubular envelope member having a pair of longitudinal internal grooves in the wall at each end thereof, and a pair of reeds having wing portions, said wing por-

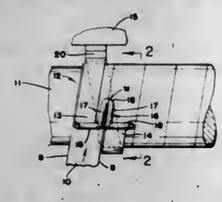
tions being held snugly within said grooves for accurately positioning the reeds with respect to one another within said envelope member.

3,124,671
PROTECTION OF RELAYS AGAINST ORGANIC VAPOR
Wilhelm F. Juptner, Laguna Beach, Calif., assignor to Babcock Electronics Corporation, Costa Mesa, Calif., a corporation of California
Filed June 11, 1962, Ser. No. 201,649
5 Claims. (Cl. 200—87)



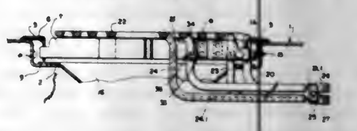
1. In a relay unit, an encapsulating shell, an assembly sealed within the shell and including a frame having pole means, wiring including electromagnetic coil means carried by the frame, an armature supported to pivot toward and away from the pole means, electrical contacts engageable and disengageable in response to armature pivoting, organic insulation on said wiring and from which molecules escape to produce organic vapor within the shell, and porous glass insert means within the shell interior to adsorb organic vapor keeping adsorbed vapor from condensing on said contacts, said insert means consisting of a solid, structurally strong body having a modulus of rupture of several thousand p.s.i. and the body consisting essentially of oxides of silicon, sodium and boron.

3,124,672
WELDING INDUCTOR
Richard A. Sommer, Parma, and George C. Nebesar, Cleveland, Ohio, assignors to The Ohio Crankshaft Company, Cleveland, Ohio, a corporation of Ohio
Filed Aug. 1, 1961, Ser. No. 128,462
7 Claims. (Cl. 219—8.5)



4. An inductor for forming continuous tubing from a metal strip helically wound on a mandrel, said strip having a leading edge and a trailing edge converging at a point on the outer surface of said mandrel, said inductor comprising, a first portion and a second portion, said first portion having two ends and being substantially C-shaped to match the circumferential surface of said mandrel, said second portion electrically joining the ends of said first portion and forming an electrical loop, said loop extending along said edges to define a preheat portion adjacent said converging edges and across said joint to define a welding portion adjacent said point of convergence, said electrical loop being spaced only slightly radially from said edges and said joint.

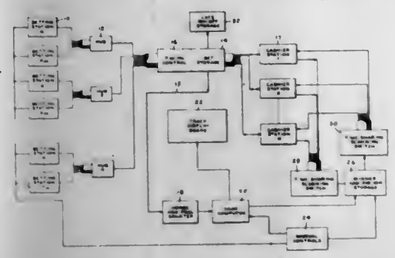
3,124,673
SURFACE COOKING UNIT FOR ELECTRIC RANGES
Charles H. Yohe, Glen Ellyn, Ill., assignor to General Electric Company, a corporation of New York
Filed Dec. 21, 1961, Ser. No. 161,230
3 Claims. (Cl. 219—37)



1. A heating unit for surface cooking operations on an electric cooking range, comprising, in combination:
- at least one heating element of the sheathed resistance conductor type arranged in a flat spiral coil, the sheath of said element throughout said coil portion thereof having a flattened upper portion defining a horizontal plane to provide a platform for the support of a cooking vessel,
- terminal end portions of said sheath extending vertically downwardly from said plane and being of circular cross section;
- support means including structure having a plurality of radially extending arm members extending beyond the radially outermost convolution of said spiral coil and presenting coil-supporting surfaces in a horizontal plane;
- and means for securing said heating element to said support means with the sheath of the spiral coil portion thereof free of said arm members to permit substantially unrestrained lateral and vertical movements of the flat spiral coil portions of said heating element, said securing means including
- a horizontally disposed first bracket element accommodating the passage therethrough of one of said circular terminal portions, said bracket element having a substantially hexagonal collar, wall portions of which grip said sheath to distort a portion thereof intermediate upper and lower circular portions into a polygonal shape conforming to said collar wall portions to prevent rotational or axial displacement of said sheath relative thereto,
- and a vertical second bracket element fixed to a side wall of one of said bracket members to establish the first and bracket element at a fixed distance below the plane occupied by the flat spiral coil portion of said heating element,
- said collar being spaced from said second bracket element by less than the diameter of said sheath.

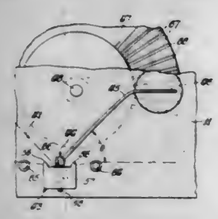
3,124,674
DATA COLLECTION AND DISTRIBUTION SYSTEM
Robert Edwards, Westfield, N.J., and William A. Wheatley, Ypsilanti, Mich., assignors to Electronic Assistance Corporation, Red Bank, N.J., a corporation of New York
Filed May 19, 1961, Ser. No. 111,232
15 Claims. (Cl. 235—61.1)

11. Data collection and distribution apparatus for use in a parimutuel wagering system comprising, a plurality of wagering stations for generating electrical signals representative of wager data, storage means for receiving and storing wager data from said wagering stations, means for computing and storing data indicating the returns due on successful wagers and the identities of the winners of the contest wagered upon, a plurality of cashier stations coupled to said storage means, each of said cashier stations including means for generating additional electrical signals representative of wager data, means for comparing said additional electrical signals with wager data signals stored in said storage means, means responsive to a predetermined relationship between said additional electrical signals and said stored wager data signals for comparing the data represented by said additional electrical signals



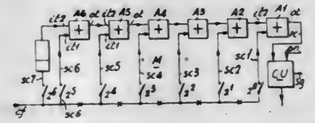
with the winner identifying data, and means responsive to a correspondence between the data represented by said additional electrical signals and said winner identifying data for indicating the return due on the wager.

3,124,675
PHOTOELECTRIC TAPE READER
Herman Epstein, Philadelphia, Pa., assignor to Omnitronics, Inc., Philadelphia, Pa., a corporation of Delaware
Filed June 30, 1961, Ser. No. 121,037
3 Claims. (Cl. 235—61.11)



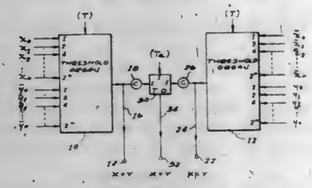
1. A photoelectric tape reader for reading coded information from a tape having a plurality of code channels, comprising
- means including a light source for directing light rays to strike the tape at a predetermined angle of incidence,
- a light pick-up head including a cylindrical body member riding in contact with the upper surface of the tape,
- a plurality of light channel defining means each having first and second end portions, the first end portions being oriented to pass only light rays reflected from the tape at a preassigned angle of reflection, thus to provide at the second end portions light signals related to the information on the respective code channels of the tape,
- a plurality of photosensitive detectors positioned in alignment with the second end portions of the light channel defining means, and spaced from the second end portions to define a gap therebetween,
- a rotating disc defining a plurality of spaced apart light apertures and extending into said gap, to modulate the output signals of said detectors at a frequency related both to the angular velocity of the disc and to the disc aperture spacing,
- a plurality of alternating current amplifier means respectively coupled to said detectors to amplify the modulated signals,
- a plurality of demodulator means respectively coupled to said amplifier means for demodulating the amplified signals to provide output signals related to the information in the respective code channels,
- a first tape guide means disposed at one side of the pick-up head to contact the lower surface of the tape,
- and a second tape guide means disposed at the other side of the pick-up head to contact the lower surface of the tape, passage of the tape over the first tape guide means, under the cylindrical body member of the pick-up head, and over the second tape guide means being effective to substantially eliminate tape flutter at the point of information detection.

3,124,676
BINARY DIGITAL MULTIPLIER AND ADDER ARRANGEMENT
Dennis James Mynall, Rugby, England, assignor to Associated Electrical Industries Limited, London, England, a British company
Filed Oct. 21, 1960, Ser. No. 63,997
Claims priority, application Great Britain Oct. 23, 1959
4 Claims. (Cl. 235—164)



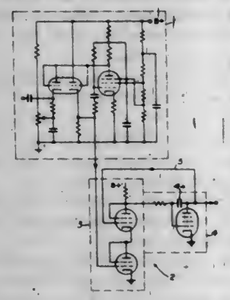
1. A digital computing arrangement for providing, from a recorded binary digital number, a digital output representing that number modified in accordance with the product of a given numerical quantity and a variable modification factor an instantaneous value of which is digitally recorded in binary form along with the digital number, which arrangement comprises:
- a first input lead for receiving the modification factor digits as a first serial digit group;
- a second input lead for receiving the digital number or digits as a second serial digit group following in time said first group, the least significant digit being first in each of said groups;
- a plurality of binary switching devices respectively operable according to the digit values of said numerical quantity in binary form;
- a plurality of digital addition circuits acting with a delay of at least one digit period each and having respective first input connections connected to said first input lead through respective ones of said switching devices except that of greatest digital significance;
- said addition circuits also having respective second input connections and respective output connections of which, considering the addition circuits in order of decreasing digital significance of the switching devices with which their first input connections are associated, the output connection of each addition circuit except the last is connected to the second input connection of the next;
- a delay element connected through the switching device of greatest digital significance between the first input lead and the second input connection of the first addition circuit in said order;
- a first output lead connected to the output connection of the last addition circuit in said order;
- and a combining circuit connected to receive digital inputs from said second input lead and from said output lead respectively, and to algebraically add said inputs with time coincidence of digits of like significance, said combining circuit having a final output lead on which will appear a series of digits representing the required modified value of the original digital number.

3,124,677
COMPARATOR UTILIZING THRESHOLD ORGANS
Henry S. Miller, Trenton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed July 18, 1960, Ser. No. 43,660
15 Claims. (Cl. 235—177)



1. A comparator for comparing first and second multi-digit binary quantities comprising, in combination: first and second threshold organs; means for applying to said first and second organs weighted signals representing the binary digits of said first and second quantities, respectively; means for applying to said first and second organs weighted signals representing the bit by bit binary complements of the digits of said second and first quantities, respectively; and signal responsive means connected to the outputs of said first and second organs.

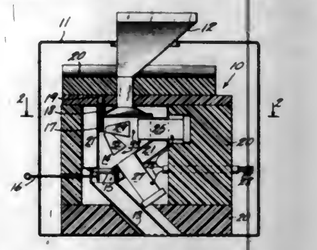
3,124,678
GAUSSIAN WAVEFORM GENERATOR
Martin Masonson, Nutley, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed May 28, 1959, Ser. No. 816,583
2 Claims. (Cl. 235—197)



1. A Gaussian waveform generator comprising:
a sawtooth generator;
a multiplier having one of its inputs coupled to the output of said generator;
a single integrator coupled to the output of said multiplier; and
substantially linear means coupling the output of said integrator to the input of said multiplier.

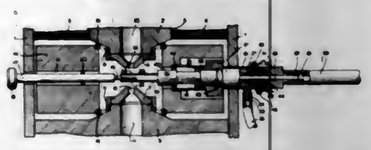
3,124,679
NUCLEAR DETERMINATION OF NITROGEN CONTENT
Jay Tittman, Danbury, William B. Nelligan, Candlewood Lake, and Stephen Antkiw and Frank F. Johnson, Danbury, Conn., assignors to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Filed Dec. 4, 1958, Ser. No. 778,109
14 Claims. (Cl. 250—43.5)

1. A method for determining the content of an element responsive to neutron capture in a sample comprising the steps of irradiating the sample with neutrons, detecting the gamma radiations emitted by the sample with detectors positioned in at least two different locations in the sample and generating a pulse signal in response to each radiation detected having an amplitude proportional to the energy of the radiation, blocking all the pulse signals from each location corresponding to radiations having an energy below a predetermined value, then mixing the remaining



pulse signals from all the detecting locations, selecting pulse signals corresponding to radiations having energy characteristic of a reaction of a neutron with an atom of the element, measuring the number of these pulse signals generated per unit time, and measuring the intensity of thermal neutrons in the sample.

3,124,680
ELECTRON MICROSCOPE SPECIMEN HOLDER POSITIONED BETWEEN A PAIR OF TEMPERATURE CONTROLLED APERTURED PLATES
Adrianus Cornelis Van Dorsten, and Adrianus Jacobus Jozef Franken, Emmasingel, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Sept. 14, 1959, Ser. No. 839,750
Claims priority, application Netherlands Sept. 13, 1958
5 Claims. (Cl. 250—49.5)

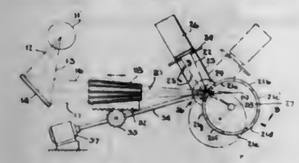


1. In an electron microscope, the combination of a housing, a pair of spaced members within the housing defining an object space and having coaxial apertures in the electron optical axis of the microscope, an object holder positioned between said members in the path of the electron beam, means to cool said spaced members to a temperature below the temperature of the object holder extending through a portion of the wall of said housing, a supporting member for said object holder extending through another portion of the wall of said housing without being in contact therewith for maintaining a small temperature difference between the object holder and the cooled spaced members, and means within the housing to hermetically seal the supporting member.

3,124,681
FLUORESCENT X-RAY ANALYZER USING A CYLINDRICALLY CURVED ANALYZING CRYSTAL
Placido William Zingaro, Hartsdale, N.Y., assignor to Philips Electronics & Pharmaceutical Industries Corp., New York, N.Y., a corporation of Maryland
Filed Mar. 16, 1961, Ser. No. 96,215
3 Claims. (Cl. 250—51.5)

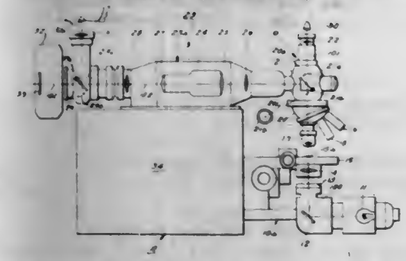
1. An X-ray spectrograph comprising a source of X-rays traveling along an X-ray axis; a convergent collimator located on said X-ray axis to permit substantially only X-rays converging toward a focal point on said X-ray axis to pass through; an analyzer having a fixed

curvature located on said X-ray axis with the convex surface of said analyzer facing said collimator, said X-rays striking a fixed, limited area of said convex surface, the radius of said surface being such as to make the X-rays strike all parts of said fixed, limited area substantially perpendicularly when the center of curvature of said surface is coincident with said X-ray axis at said focal



point; means to rotate said analyzer about an axis that is perpendicular to said X-ray axis and is coincident with said convex surface within said area; and means coupled to said last-named means to change the distance between said collimator and said analyzer to permit said X-rays to strike substantially only said fixed, limited area of said analyzer as said analyzer is rotated.

3,124,682
MICROSCOPE SYSTEM FOR USE WITH BOTH INFRA-RED AND VISIBLE RAYS
Hiroshi Kojima, Akio Kasahara, and Susumu Saruta, all of Tokyo, Japan, assignors to Nippon Electric Company, Limited, Tokyo, Japan
Filed Oct. 4, 1961, Ser. No. 142,943
Claims priority, application Japan Oct. 6, 1960
6 Claims. (Cl. 250—65)



1. A microscope system for observing both visual and infra-red rays emanating from a specimen comprising first means for focusing rays emanating from said specimen, second means for viewing infra-red rays emanating from said specimen, said second means including means sensitive to infra-red rays for converting said rays into visible rays; said first means including an eye-piece for observing visible rays and deflecting means pivotally mounted in said first means for deflecting rays from said specimen away from said eye-piece and towards said second means when in a first position; manually operable means operatively connected to said deflecting means for rotating said deflecting means from said first position enabling rays emanating from said specimen to pass through said eye-piece for observance of said visible rays enabling the usable light wavelength range of said microscope system to be greatly expanded.

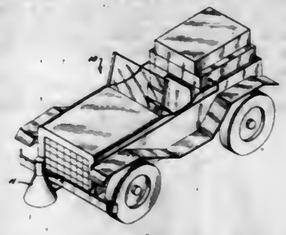
3,124,683
RADIOGRAPHIC FILM PACKAGE
Ernest T. Larson, Jr., Binghamton, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
Filed Feb. 8, 1960, Ser. No. 7,217
3 Claims. (Cl. 250—68)

1. A film package suitable for use in making radiographs utilizing radiations of the order of 500 kvp. and higher which comprises a base, an emulsion layer coated on one side only of said base, a lead screen in contact with said emulsion layer, a screen formed of a low-atomic-number material which emits relatively few electrons in a backward direction, one surface of said last mentioned screen being in direct contact with the un-



coated side of said base and a lead screen in contact with the other surface of said low-atomic-number material screen, the two lead screens being of substantially the same thickness and the thickness of said low-atomic-number material screen being materially greater than the thickness of said lead screens.

3,124,684
PLUTONIUM DETECTOR
Howard C. Eberline, Santa Fe, N. Mex., assignor to Eberline Instrument Corporation, Santa Fe, N. Mex.
Filed July 6, 1959, Ser. No. 825,140
1 Claim. (Cl. 250—71.5)

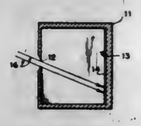


A detector for plutonium scattered over a surface comprising a vehicle for guided passage over the surface, a detector head including a fluorescent screen responsive to gamma radiation from plutonium, means to mount said detector head on the vehicle close to the surface of the ground while spaced therefrom so that the screen thereof is located at a position away from the vehicle whereby contamination on the vehicle will not produce a response on the screen, and a housing covering said fluorescent screen and a photomultiplier in said housing in coupled arrangement with said fluorescent screen whereby a scintillation produced on said fluorescent screen from gamma radiation will produce an impulse in said photomultiplier tube, a linear amplifier, a pulse height analyzer and an information presentation device on said vehicle, said pulse height analyzer being of the predetermined window type for the passage of scintillations resulting from a limited range of gamma radiation whereby the information presentation will indicate only the gamma rays corresponding to the predetermined window opening, said structure providing for ready monitoring of the surface suspected of contamination from plutonium with a minimum of danger to the personnel doing the monitoring and the collecting of the information.

3,124,685
THERMAL RADIATION EXPLOSION LOCATOR
Leo Banet, New York, N.Y. (41—11 40th St., Long Island City, N.Y.), and Abraham Hirschman, New York, N.Y. (30—33 82nd St., Jackson Heights, N.Y.)
Filed Sept. 28, 1954, Ser. No. 458,994
17 Claims. (Cl. 250—83)
(Granted under Title 35, U.S. Code (1952), sec. 266)

17. A self-sufficient and self-operating device unaffected by adverse weather conditions to which it may be exposed in use for determining the direction of the source of

an intense explosion relatively to an observation station which comprises, for use at said observation station, a recording direction finder having an enclosure resistant to intense transistory thermal radiation, a film in said enclosure having a surface sensitive to heat radiation from intense explosions and insensitive to ambient heat radiation and said enclosure having an aperture in a wall there-



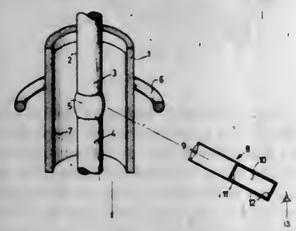
of in front of and spaced from said surface and operable to image upon a relatively small local area only of said surface a beam of intense thermal radiation from an explosion, depending for the location of said area upon the direction from which the thermal radiation beam is received by said aperture, leaving the balance of the area of said surface relatively unmodified by heat radiation.

3,124,686

METHOD OF AND APPARATUS FOR HEAT TREATMENT OF SEMI-CONDUCTOR MATERIAL

Jan Goorissen, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Sept. 12, 1960, Ser. No. 55,372
Claims priority, application Netherlands Sept. 24, 1959
4 Claims. (Cl. 250—83.3)



1. A method of treating semiconductor material within an enclosure containing a portion substantially transparent to infra-red radiation and controlling the said treatment, comprising the steps of heating the semiconductor material as part of the treatment under conditions at which semiconductor vapors are formed that condense on the substantially transparent enclosure portion forming a layer that is substantially opaque to visible radiation but substantially transparent to infra-red radiation, and utilizing an infra-red image converter located outside the enclosure for detecting through the said substantially transparent enclosure portion and layer an infra-red image of the heated semiconductor material and for converting that infra-red image into a visible image of the heated semiconductor material which can be observed for the purpose of controlling the treatment of the material.

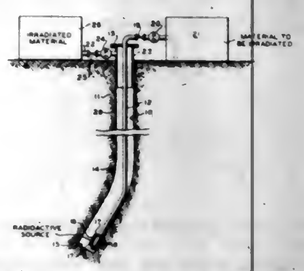
3,124,687

METHOD OF AND APPARATUS FOR IRRADIATING FLUID AND SOLID MATERIALS WITH EMANATIONS FROM A RADIOACTIVE SOURCE

Hugh M. Barton, Jr., Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed May 19, 1954, Ser. No. 430,865
5 Claims. (Cl. 250—106)

1. The method of irradiating material which comprises lowering a radioactive source into a curved bore hole in the earth so that the strata between the surface of the earth and the region to which the source is lowered and the curvature of the bore hole prevent dangerous radiation from reaching the surface of the earth, positioning



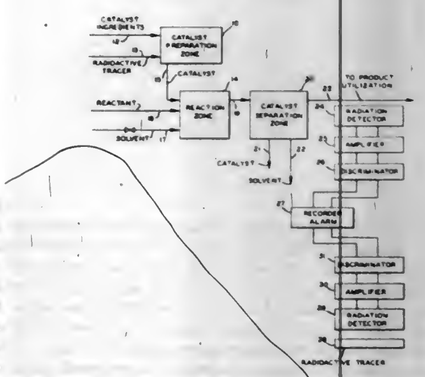
material to be irradiated in a hollow container, lowering the container into the bore hole to the region of the source, and thereafter raising the container to the surface of the earth, the source remaining in the bore hole at the time the container is raised.

3,124,688

CATALYST DETERMINATION IN THE PRODUCTS OF CATALYTIC REACTION BY RADIOACTIVE TRACER

Frederick L. Stoller, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Sept. 20, 1956, Ser. No. 610,973
7 Claims. (Cl. 250—106)



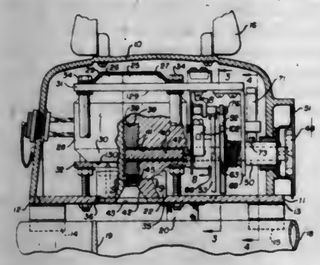
1. The method of determining the quantity of granular catalyst present in the product of a catalytic reaction which comprises adding a predetermined amount of a radioactive tracer material to a batch of granular catalyst prior to conducting said catalytic reaction, said tracer corresponding to at least one ingredient of said catalyst, catalytically converting a 1-olefin feed with said granular catalyst, substantially separating said catalyst from the effluent from said catalytic reaction producing a signal representative of the radioactivity of the substantially catalyst-free effluent from the catalytic process, producing a signal proportional to the decay in activity of the radioactive tracer material, and combining said signals to produce a resultant output signal in accordance with a calibration that correlates radioactivity with the amount of catalyst in the effluent so that said resultant output signal is represenative of the quantity of granular catalyst present in said effluent.

3,124,689

ISOTOPE CAMERA

Lloyd I. Shure, Willowick, Ohio, assignor to Picker X-Ray Corporation, Waite Mfg. Division, Inc.

Filed Sept. 14, 1959, Ser. No. 839,734
27 Claims. (Cl. 250—106)



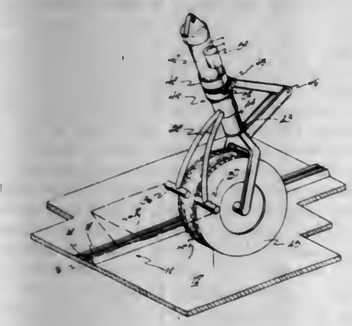
1. A radiant-energy camera comprising a frame structure, an active material support journaled in the frame, a quantity of radioactive material eccentrically carried by the support, a radiant energy shield means surrounding the material and at least a substantial portion of the support, the shield means having a portion defining a window for an energy beam, the active material having storage and exposure positions, a spring operatively connected to the support to rotate the support and the active material from each position to the other of the positions, an operator driven means connected to the spring for selective pretensioning of the spring independent of and prior to rotation of the support, and control means for selectively actuating and terminating rotation of the support by the drive means.

3,124,690

RADIATION SENSING SYSTEM FOR AUTOMATICALLY GUIDING AND POSITIONING PLANES ON AIRCRAFT CARRIERS

William A. Savin, Philadelphia, Pa., assignor to the United States of America as represented by the Secretary of the Navy

Filed Mar. 31, 1961, Ser. No. 99,970
2 Claims. (Cl. 250—106)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An automatic steering system for guiding aircraft having wheel landing gear along a predetermined path on a metallic landing surface into a desired position for launching said aircraft, comprising an elongated, open top, stainless steel container having a wall thickness of approximately one inch and secured to said surface along said predetermined path,

a stainless steel capillary tube disposed in said container having a wall thickness of approximately one hundredth of an inch,

a gamma ray source within said tube having an emission rate of one mr. per hour at a distance of about eighteen inches, said landing gear including an outer tube with a wheel supporting inner piston tube for swivelable movement therebetween,

a ring gear rotatably mounted on said outer tube,

link means connecting said ring gear and inner piston for transmitting rotative motion therebetween while permitting telescopic action between said tube and said piston,

a reversible motor supported on said outer tube having a pinion meshed with said ring gear for rotation thereof,

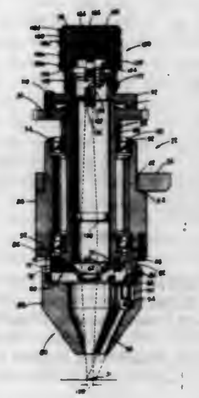
a pair of gamma ray detectors supported from said outer tube above said container for detecting unequal amounts of gamma emissions with lateral movement of said landing gear relative said path and producing electrical signals, and circuit means coupling said detectors to said motors for actuation thereof upon production of said unequal signals.

3,124,691

LIGHT SENSITIVE LINE TRACING APPARATUS

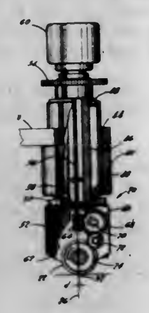
Frans Brouwer, Glencoe, Ill., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia

Filed Sept. 19, 1960, Ser. No. 56,920
20 Claims. (Cl. 250—202)



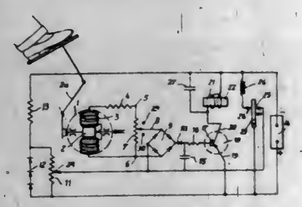
11. A system for scanning a line comprising a scanning head, said scanning head comprising photosensitive means having a sensitive area positioned to have an image of the scanning field containing the line cast thereon, said photosensitive means adapted to cause fluctuations in an electric signal proportional to variations in light intensity, the length of the sensitive area in a direction transverse to the line being substantially greater than the width of the image of the line, opaque means disposed between the sensitive area and the line, means for oscillating said opaque means essentially transversely to the line for periodically obstructing the image of the line on the sensitive area, said opaque means oscillating with equal amplitude across a plane perpendicular to said sensitive area and containing the center of the scanning field, means for selecting from the fluctuating signal output of the scanning head an odd harmonic component of the oscillation frequency, said odd harmonic component having the property of reversing its phase as the line moves from one side of said plane to the other, and means synchronized with the oscillations of said opaque means and recipient of said odd harmonic component for producing different electrical outputs for the two opposite phases.

3,124,692
PHOTOSENSITIVE PATTERN TRACING DEVICE
Frans Brouwer, Glencoe, Ill., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Filed Oct. 10, 1960, Ser. No. 61,698
10 Claims. (Cl. 250—202)



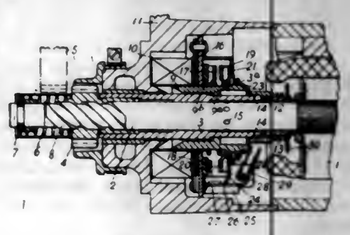
6. In an apparatus for tracing a line having means for sensing a line rotatably mounted in a frame, a traction wheel, mounting means for the traction wheel rotatably supported by the frame, a drive shaft for the wheel having an axis perpendicular to the axis of said wheel, said line sensing means and wheel mounting means being rotatable about separate axes parallel to one another and perpendicular to the surface containing the line, means for simultaneously rotating the line sensing means and the wheel mounting means in the same angular direction and means for driving the drive shaft at a substantially constant angular velocity to move the apparatus in a forward direction, the improvement in which the axis of rotation of said line sensing means passes centrally therethrough and the point of contact of the wheel with the surface along which it travels is offset behind and to one side of the axis of said drive shaft.

3,124,693
ELECTRIC CONTROL DEVICES
Lucien Péras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
Filed Nov. 14, 1960, Ser. No. 69,033
Claims priority, application France Nov. 20, 1959
9 Claims. (Cl. 290—7)



1. A device for use in a vehicle to control elements such as speed gear boxes, clutch engagement means, and the like, as a function of various parameters of which at least one is the velocity of rotation of a rotary shaft, comprising in combination a rotary shaft of the vehicle, an alternating current generator drivingly connected to said shaft and having an output crest voltage which is a function of the velocity of said shaft, a potentiometer connected across the output of said generator and having an adjustable contact, rectifier circuit means connected between the adjustable contact and one terminal of said potentiometer, said rectifier circuit means including at least one Zener diode which transmits only current peaks corresponding to the crest voltage generated by the generator, a condenser connected to said rectifier means to integrate said current peaks and to develop a resultant crest voltage thereacross, a transistor, means to apply said resultant crest voltage to the base of the transistor, a battery, a relay, means connecting the emitter and collector of the transistor to the terminals of said battery through the winding of said relay, said relay having a pair of contacts closing responsive to energization of the relay, and a control element having an energizing circuit including said contacts, whereby said control element can become energized when the velocity of the shaft exceeds a predetermined value.

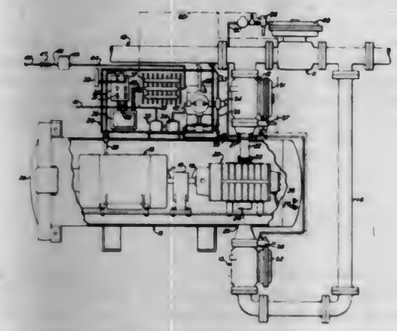
3,124,694
ELECTRIC STARTING MECHANISM FOR INTERNAL COMBUSTION ENGINES
Alec Harry Selly, Middlesex, England, assignor to C.A.V. Limited, London, England
Filed Apr. 13, 1962, Ser. No. 188,617
Claims priority, application Great Britain Apr. 24, 1961
1 Claim. (Cl. 290—38)



An electric starting motor for an internal combustion engine having in combination, an armature shaft, an axially slidable sleeve mounted on said shaft and provided with a pinion for engagement with a toothed wheel of the engine, means interconnecting the sleeve and the shaft so that relative rotation thereof will impart axial movement to the sleeve, a hollow cylindrical solenoid core surrounding said sleeve, a stationary annular electromagnet winding surrounding one end of said core and serving, when energised, to impart axial movement to said sleeve through said core, a disc surrounding said core, means engaging said disc and the core for permitting tilting of the disc relative to the core, a first motor control switch movable to a closed position by said disc for permitting an initial restricted supply of current to the motor, a second motor controlled switch movable to a closed position by said disc for permitting a full supply of current to the motor, a pivotal catch member for preventing movement of said disc to close said second switch, a spring for urging said catch member into engagement with said disc, said spring having one limb bearing against the catch member and its other limb bearing against said core so that when the core moves under the influence of the solenoid the force required to move the catch will be reduced, and a tripping member mounted on the sleeve for moving the catch member to a position to release the disc.

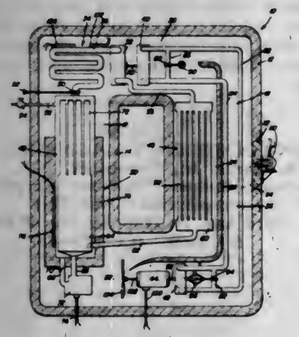
3,124,695
AUTOMATICALLY CONTROLLED FLUID PRESSURE OPERATED ELECTRIC POWER PLANTS
William H. Middleton and Marvin L. Hall, Houston, Tex., assignors to Jay L. Robison, Houston, Tex.
Filed Jan. 6, 1961, Ser. No. 81,023
5 Claims. (Cl. 290—40)

5. An automatically controlled fluid pressure operated electric power plant comprising a throttle valve for installation in a fluid pressure conduit to throttle flow of fluid through the conduit, a fluid inlet valve for connection to said conduit upstream from said throttle valve, a fluid return valve for connection to said conduit downstream from said throttle valve, an alternating current generator, a fluid motor for driving said generator, said inlet valve being connected to the inlet of said motor, the exhaust outlet of said motor being connected to said return valve, a synchronous motor connected to the output of said generator, means for connecting the output of said generator to a load, a tachometer generator driven



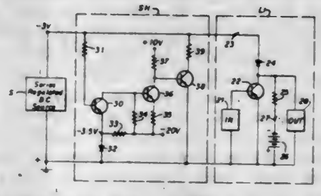
by said synchronous motor, an actuator for said throttle valve, means connecting said actuator and said tachometer generator, an inlet valve actuator, a return valve actuator, means for operating said actuators, whereby upon partial closing of said throttle valve fluid pressure from said conduit will cause operation of said motor and generator, the output of said tachometer generator controlling said throttle valve to maintain the speed of said motor constant and means for opening said throttle valve and for closing said inlet and return valves upon stopping of said motor.

3,124,696
POWER UNIT INCLUDING A REFRIGERANT POWER CYCLE AND HYDRAULIC SYSTEM FOR DRIVING GENERATOR
Burnell A. Tucker, 1233 Peamar Ave. SE., Roanoke, Va.
Filed Jan. 25, 1961, Ser. No. 84,867
20 Claims. (Cl. 290—52)



1. A method of producing usable power comprising the steps of: removing kinetic energy from a gas at a constant high pressure to reduce the pressure thereof by a constant amount to a low pressure; condensing the gas at said low pressure into liquid by heat exchange with evaporating liquid; pressurizing the condensed liquid for evaporation into gas; heating the evaporated gas to raise the pressure thereof to said constant high pressure; converting said removed kinetic energy into a different form; removing heat energy dissipated by the conversion of energy; and supplying the heat energy so dissipated to said evaporated gas for said heating thereof to raise its pressure.

3,124,697
VOLTAGE REGULATING ARRANGEMENT
John R. Trenchard, Des Plaines, Ill., assignor to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Filed Jan. 23, 1961, Ser. No. 84,064
5 Claims. (Cl. 307—51)



1. In combination with a utilization circuit arrangement having a pair of terminals coupled to a first direct-current supply source, with means included in the utilization circuit arrangement to selectively couple a second direct-current supply source to said terminals by way of circuit elements, with the poles of like polarity of the two said direct-current supply sources coupled respectively to the same terminals of said pair, the second direct-current supply source having a potential greater than that of the first direct-current supply source, there being effectively a high series impedance on the first-supply-source sides of said terminals to current flowing in a reverse direction corresponding to a transfer of power from the second direct-current supply source toward the first direct-current supply source so that in response to the coupling by the utilization circuit arrangement of the second direct-current supply source to said terminals the potential at said terminals tends to rise above said nominal value;

apparatus comprising variable impedance means connected in shunt across said terminals, and control means connected to sense the shunt potential across said terminals and in response to an increase in said potential above said nominal value to supply a control signal to reduce the impedance of the variable impedance means, thereby to absorb power and to decrease the potential at said terminals towards said nominal value, irrespective of whether the cause of the potential rise and the source of the power is the first supply source, or the utilization circuit arrangement has coupled the second supply source to cause the current to reverse and power to flow from the second supply source through said circuit elements to said terminals; the only control sensing means between said first direct-current supply source and said terminals being elements in circuits connected in shunt across said terminals.

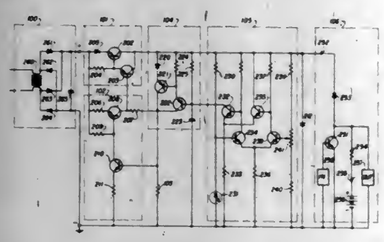
3,124,698
VOLTAGE REGULATING ARRANGEMENT
Joseph W. Semmer and Frederick A. Stich, Chicago, Ill., assignors to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Filed Feb. 27, 1961, Ser. No. 91,773
7 Claims. (Cl. 307—51)

1. In combination with a utilization circuit arrangement having a pair of terminals coupled to a first direct-current supply source, with means included in the utilization circuit arrangement to selectively couple a second direct-current supply source to said terminals by way of circuit elements, with the poles of like polarity of the

two said direct-current supply sources coupled respectively to the same terminals of said pair, the second direct-current supply source having a potential greater than that of the first direct-current supply source, there being effectively a high series impedance on the first-supply-source side of said terminals to current flowing in a reverse direction corresponding to a transfer of power from the second direct-current supply source toward the first direct-current supply source so that in response to the coupling by the utilization circuit arrangement of the second direct-current supply source to said terminals the potential at said terminals tends to rise above said nominal value;

apparatus comprising first variable impedance means connected in shunt directly across said terminals, and first control means including an amplifying arrangement connected to sense the shunt potential across said terminals and supply a control signal to the first variable impedance means;

second variable impedance means connected in series between the first direct-current supply source and the first variable impedance means, at least a part of said high series impedance to reverse current flow on the first supply source side of said terminals being that produced by said second variable impedance means, second control means including an amplifying arrangement connected to sense the current through the first variable impedance means and to supply a control signal to the second variable impedance means;



the only control sensing means between said first direct-current supply source and said terminals being elements in circuits connected in shunt across said terminals;

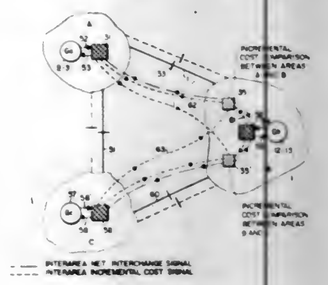
the apparatus being so constructed and arranged that with a zero value of load current both the first and the second variable impedance means have a relatively high impedance so that a small value of current flows through them, that in response to increasing load current flowing in the forward direction which tends to decrease the potential across said terminals the impedance of the first variable impedance means is increased so that the current flowing through it and detected by the second control means is decreased and in response thereto the impedance of the second variable impedance means is decreased, and that in response to a voltage greater than said given value at said terminals the impedance of the first variable impedance means is reduced to thereby absorb power and to decrease the potential at said terminals toward said nominal value, irrespective of whether the cause of the voltage rise and the source of the power is the first supply source, or the utilization circuit arrangement has coupled the second supply source to cause the current to reverse and the power to flow from the second supply source through said circuit elements to said terminals, the impedance of the second variable impedance means being increased in response to the increased current flow through the first variable impedance means.

3,124,699

APPARATUS FOR CONTROLLING THE INTERCHANGE OF POWER BETWEEN A PLURALITY OF POWER SYSTEMS

Leon K. Kirchmayer, Scotia, N.Y., assignor to General Electric Company, a corporation of New York

Filed Nov. 28, 1960, Ser. No. 72,099
28 Claims. (Cl. 307—57)



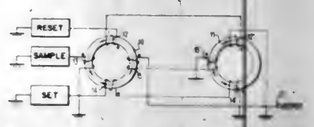
1. An electric power control system for controlling the generation of an integrated power transmission system having at least three interconnected local power generating systems, each local system including means to automatically control generation of the generating stations therein comprising: tie lines interconnecting each of said local systems with at least one other of said local systems, means to provide incremental power cost comparisons between $n-1$ different pairs of local power systems, each of said local power systems being included in at least one of said power cost comparisons, said cost comparison means receiving incremental cost signals from more than two power systems for delivering power between the two systems being compared by the associated cost comparison means, said comparison means providing modifying power interchange signals for each of the pair of local systems being compared thereby, means to transmit said modifying power interchange signals from each comparison means to the local systems being compared thereby, and means in each of the local power systems having associated cost comparison means to combine the respective modifying power interchange signal with a scheduled power interchange signal to modify the power interchange of said local power systems, and means to vary the generation of the generating stations within said pair of local power systems to cause generation of the integrated power system with the power interchange between said pair of local systems being based upon economic considerations.

3,124,700

NON-COINCIDENCE MAGNETIC GATE

Herbert R. Burns, Jr., Woodstock, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Aug. 10, 1960, Ser. No. 48,632
5 Claims. (Cl. 307—88)



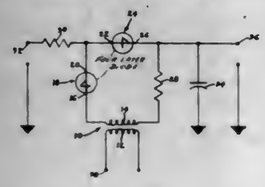
1. A logic circuit comprising a pair of bistable magnetic cores having substantially square hysteresis loop characteristics, each core having a common set winding for carrying current pulses that drive said cores toward a first state of saturation and a common reset winding for carrying current pulses that drive each of said cores toward its other state of saturation and a common output winding for each core, said common output winding being wound on one core opposite to the polarity of its winding on the second core whereby the simultaneous switching of each core from the same bistable state to the other stable state will not produce an output signal in said common output winding, but the switching of only one core from a first state of magnetism to the opposite state will produce an output pulse in said common output winding.

3,124,701

FOUR LAYER DIODE TRANSMISSION GATE

Richard L. Given, El Paso, Tex., Richard G. Nyder, Glenview, Ill., and Richard C. Lee, Allston, Mass., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed July 23, 1959, Ser. No. 829,164
5 Claims. (Cl. 307—88.5)



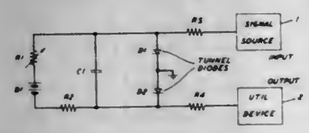
1. A gate circuit comprising a transformer having a primary input winding and also having a secondary output winding, a first diode means and a second diode means, each of said first and second diode means having plate and cathode elements, the plate element of said first diode means being directly connected to the cathode element of said second diode means and each of said other diode elements being connected to an opposing end of said secondary output winding of said transformer, variable signal input means coupled to the plate element of said first diode means and signal output means directly coupled to the cathode element of said first diode means, wherein each of said diodes is a four-layer diode.

3,124,702

MULTIVIBRATOR EMPLOYING TWO-TERMINAL NEGATIVE RESISTANCE DEVICES

Owen E. De Lange, Rumson, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 31, 1959, Ser. No. 863,341
14 Claims. (Cl. 307—88.5)



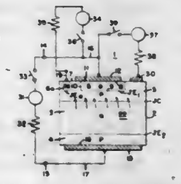
1. A multivibrator circuit comprising, in combination, a series pair of two-terminal, similarly-poled, voltage-controlled, bistable, negative-resistance, asymmetrically conducting impedance devices, means for biasing one of said devices in a low voltage condition and the other of said devices in a high voltage condition, means for applying an input signal of preassigned magnitude and polarity across only a single one of said devices, whereby a first voltage difference is developed across said one device as said one device is switched from one of its stable states to the other, reactance means for applying said voltage difference across said other device in a direction opposite to said difference across said one device, said reactance means comprising a two-terminal reactance device having one terminal connected directly to one terminal of one of said asymmetrically conducting impedance devices and the other terminal connected directly to the opposite terminal of the other one of said asymmetrically conducting impedance devices, whereby a second voltage difference is developed across said other device as said other device is switched, in a direction opposite to the switching of said one device, from one of its stable states to the other, utilization means, and means for applying said second voltage difference to said utilization means.

3,124,703

SEMICONDUCTOR DEVICES

Tage P. Sylvan, Liverpool, N.Y., assignor to General Electric Company, a corporation of New York

Filed June 13, 1960, Ser. No. 35,606
10 Claims. (Cl. 307—88.5)



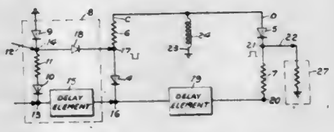
5. In circuit, a semiconductor device comprising a body of semiconductor material having a pair of major faces on opposite sides thereof and including four layers of one and the opposite conductivity type between said major faces, layers of one conductivity type being interleaved with layers of the opposite conductivity type forming a plurality of P-N junctions therein, a first electrode on one of said pair of major faces in low resistance ohmic contact with a surface of an external layer of said body and an adjacent exposed surface of an adjacent intermediate layer, a second electrode on the opposite one of said pair of major faces in low resistance ohmic contact with a surface of the other external layer of said body, a zone of said one conductivity type in said adjacent intermediate layer, a third electrode connected to said zone, a fourth electrode connected in low resistance ohmic contact to said adjacent intermediate layer, circuit means for applying a signal of one polarity between said third electrode and said first electrode to render conductive the P-N junction formed therebetween thereby rendering said body between said first and said second electrode conductive, and circuit means for applying a signal of the same polarity between said fourth electrode and said first electrode to render said body non-conductive between said first and second electrode.

3,124,704

LOGIC INVERTER CIRCUITS

Ernest H. P. Bigo, Nutley, N.J., and Peter Pleshko, Bronx, N.Y., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland

Filed Feb. 14, 1961, Ser. No. 89,290
10 Claims. (Cl. 307—88.5)



1. A circuit for logically inverting binary valued input signals comprising first and second paths, each of said

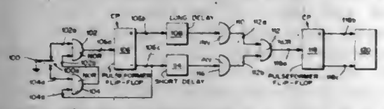
paths including a negative resistance device in series with a fixed resistance with the fixed resistance of one path and the negative resistance device of the other path being nearest one end of each of said paths, each of said negative resistance devices being in an initially low resistance state and adapted to exhibit a high resistance state upon being switched by a given current, a current source coupled to said pair of paths at said one end, an output means connected at the junction of said negative resistance device and said fixed resistance of said second path, means for applying a voltage to said first and second paths at the other end thereof opposite said current source whereby said voltage appears substantially across said fixed resistance of said second path causing said output means to be at a first potential, and means to switch the negative resistance device in said first path to its high resistance state thereby causing an increased current in said second path for switching said negative resistance device therein to its high resistance state whereby said voltage appears substantially across said negative resistance device of said second path causing said output means to be at a second potential.

3,124,705

SYNCHRONIZED SINGLE PULSE CIRCUIT PRODUCING OUTPUT OF PREDETERMINED LENGTH FROM DELAY LINES HAVING DISSIMILAR PERIODS

Harry J. Gray, Jr., Springfield, Pa., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed Mar. 24, 1961, Ser. No. 98,216
14 Claims. (Cl. 307—88.5)



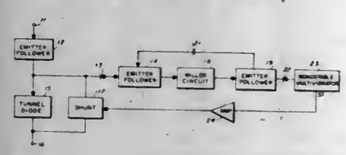
1. A synchronizing circuit comprising a switchable source, first and second NOR-logic gates coupled to said switchable source such that only one of said gates is connected to said source at any time, means coupling the output of said second gate to an input of said first gate, a first flip-flop, means coupling the output of said first gate to said first flip-flop, feedback means coupling one output of said first flip-flop to an input of said second gate whereby an input signal applied to either of said first and second gates by said switchable source may be recirculated, first and second delay lines coupled to said first flip-flop, said delay lines having dissimilar delay periods, a second flip-flop, and means for gating together the outputs from said delay lines and applying the resultant signal to a second flip-flop.

3,124,706

SAWTOOTH WAVE FORM GENERATOR EMPLOYING MONOSTABLE CIRCUIT TO CONTROL RESET

Donald I. Alexander, 4882 Cole, San Diego, Calif.

Filed Apr. 28, 1961, Ser. No. 106,287
3 Claims. (Cl. 307—88.5)



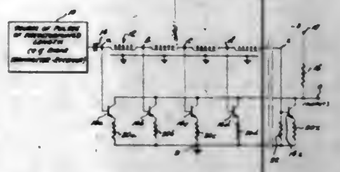
1. A sawtooth waveform circuit comprising sawtooth waveform generating means having a threshold input circuit susceptible to a first predetermined voltage level, whereby upon said input circuit's receiving said first voltage level a sawtooth waveform will start, said waveform generating means having an output coupled through a second voltage level threshold means to a timed voltage level generating means, said timed voltage level generating means operable to produce a second predetermined voltage level for a predetermined time, said timed voltage generating means having an output connected to a holdoff means, said holdoff means having a bistable current-voltage means with current diverting means connected in parallel therewith, said current diverting means connected for control to an output of said timed voltage generating means, said holdoff means having an output connected to said sawtooth generating means input, said holdoff means operable to disable said sawtooth generating means input circuit during said predetermined time.

3,124,707

NOISE-DISCRIMINATOR VIDEO CIRCUIT EMPLOYING TAPPED DELAY TIME TO FORM PULSE TO BE DETECTED

Leland T. Thomasson, Seattle, Wash., assignor to The Boeing Company, Seattle, Wash., a corporation of Delaware

Filed June 12, 1961, Ser. No. 116,546
5 Claims. (Cl. 307—88.5)



1. In a noise-discrimination video pulse system, in combination with means to produce video pulses of predetermined duration to be detected amidst electrical noise, a time delay network having a succession of taps spaced apart along the electrical length of said network and dividing the network into sections, a plurality of amplifiers having control elements responsively connected to said taps respectively and having load elements, a common load impedance for said amplifiers connected in circuit with said load elements to develop an output wave form proportional to the summation of amplifier load currents, an input connected to one end of said delay network for application of said video pulses thereto, and an output terminal connected to said common load impedance for delivering said output wave form from the system, the summation of the delay periods of the respective network sections between the tap adjacent the input end of the network and the tap adjacent the opposite end of the network being not more than the duration of individual video pulses produced by said means.

3,124,708

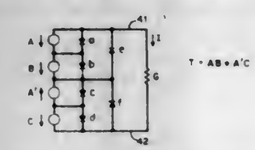
CURRENT-OPERATED DIODE LOGIC GATES

Henry Reinecke, Jr., Solana Beach, and Richard W. Hofheimer, Del Mar, Calif., and Kenneth E. Perry, Arlington, Mass., assignors to Massachusetts Institute of Technology, Cambridge, Mass., a corporation of Massachusetts

Filed Aug. 4, 1961, Ser. No. 129,426
10 Claims. (Cl. 307—88.5)

1. A diode switching circuit responsive to the direction of current as a binary variable to perform a predetermined logic function comprising, a plurality of input current sources, one for each input variable, each of said sources being adjustable to produce an input current flow having a direction representing the binary value of said input, a load impedance, said sources being connected in

a closed series loop with said load, a plurality of semiconductor diodes, each junction of adjacent sources in said series loop being connected to a pair of diodes oppositely poled for current flow toward and away from said junction, said diodes also being connected to provide at least one series circuit shunting said load, the diodes being polarized for conduction according to said function, thereby forming a series-parallel network having a plurality of



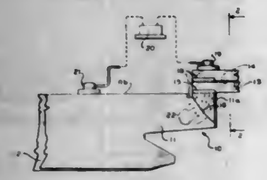
meshes such that there is a diode shunt path for each current source for each direction of current flow therein, whereby each conducting diode carries current in two of said meshes and develops a voltage drop of a polarity to maintain a reverse bias on non-conducting diodes, thereby causing current flow in said load to occur in a predetermined direction for specified states of said input variables and causing any current of opposite direction of flow to be shunted from said load.

3,124,709

COMMUTATOR CONNECTION CONSTRUCTION

Herbert G. Jungk, Columbus, Ohio, assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware

Filed June 6, 1962, Ser. No. 200,437
2 Claims. (Cl. 310—234)



1. In combination, a bar of a commutator having an arm at one end extending in line with the brush surface thereof, said arm being recessed at the sides to provide air spaces between the side walls of the arm and the adjacent insulation strips of the commutator, and a pair of armature coil leads of rectangular cross section superimposed on each other and seated onto said arm, said coil leads being welded together and the coil lead adjacent to said arm being in turn welded to the latter.

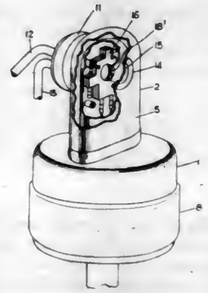
3,124,710

X-RAY TUBES

Cyril Gray, New Barnet, England, assignor to Associated Electrical Industries Limited, London, England, a British company

Filed Mar. 6, 1961, Ser. No. 93,477
Claims priority, application Great Britain Mar. 17, 1960
3 Claims. (Cl. 313—57)

1. An X-ray tube comprising an evacuated envelope consisting of a cylindrical member having a re-entrant end portion and a flattened end portion providing two substantially parallel walls, an anode providing a target surface which forms part of one of said walls, a window permeable to X-radiation and forming part of the other of said walls and located in alignment with said target surface, a cathode assembly supported within said flattened end portion between said window and said target surface by said re-entrant end portion, said cathode assembly comprising at least one electron emitting filament, the major extension of which lies in a plane substantially parallel with those of said target surface and said window and a focusing electrode positioned between each filament and said window, said assembly being formed with an



opening in alignment with said window and said target surface through which X-radiation produced at the target surface, in response to bombardment thereof with electrons from each filament passes to reach said window.

3,124,711

NEUTRON GENERATOR

Otto Reifenschweiler, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed May 4, 1960, Ser. No. 26,745
Claims priority, application Netherlands May 5, 1959
4 Claims. (Cl. 313—61)



1. A neutron generator comprising an envelope, a source of deuterium and tritium ions within said envelope, a target electrode within said envelope and spaced from said ion source, and means to accelerate deuterium and tritium ions toward said target, said target electrode having a first layer of a material which readily absorbs hydrogen isotopes and into which hydrogen isotopes are readily diffused, and a second layer of material relatively impermeable to hydrogen isotopes supporting said first layer, said first layer having a thickness equal to about the depth of penetration of tritium and deuterium ions thereinto.

3,124,712

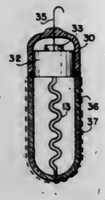
LUMINOUS HIGH TENSION INDICATOR

Focsaneanu Alexander, 3011 153rd St., Flushing, N.Y.

Filed Apr. 27, 1961, Ser. No. 106,104
4 Claims. (Cl. 313—202)

1. A device for indicating alternating current high tension comprising a luminous gas discharge tube having

a pair of electrodes, an insulating light-pervious enclosure enveloping said tube, a terminal conductor extending from one of said electrodes through said enclosure and adapted for connection to a high tension carrying part to



be indicated, a light-pervious floating electrode having an extended surface and mounted within said enclosure in electrically isolated relation from said conductor, and means electrically connecting said floating electrode to the remaining electrode of said tube.

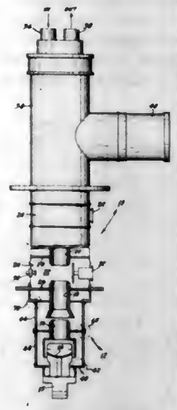
3,124,713
SPRING-LOADED LAMP FILAMENT SUPPORT
Jacob A. Randmer, Norwalk, Conn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Original application July 23, 1956, Ser. No. 599,385, now Patent No. 3,003,633. Divided and this application Aug. 28, 1961, Ser. No. 134,319
7 Claims. (Cl. 313—271)



1. In a lamp of the class described comprised of a substantially evacuated envelope having an elongate filament supported therein and external terminals for connecting the lamp to a power source, means for securing one end of said filament to one of said terminals, a framework disposed within said envelope, said framework including a portion of electrically conductive material secured to said other terminal and another portion in bearing contact with the inner surface of said envelope, a filament support member joined to said other end of the filament and mounted to slide along a plane on said framework, yieldable means electrically connecting said support member with the electrically conductive portion of said framework, and means connected to said support member for urging said support member in a direction to stretch said filament.

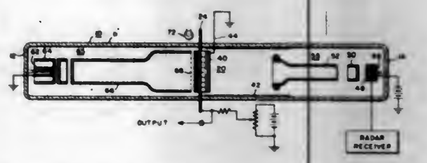
3,124,714
VACUUM-TIGHT SEALS FOR KLYSTRON TUBES
John R. Bendorf, Los Altos, Calif., assignor to Litton Precision Products, Inc., a corporation of Delaware
Filed Aug. 18, 1961, Ser. No. 132,412
10 Claims. (Cl. 315—5.39)

3. An improved vacuum-tight seal arrangement for an electron discharge tube comprising: a pair of ceramic cylinder sections each having a tapered surface section at both ends; a pair of flexible metallic cylindrical single flange ring members each having at one end a tapered surface complementary to said tapered surface of said ceramic cylinder and being vacuously sealed to and uniformly engaging a portion of the tapered surface of said ceramic cylinder, the other end of said ring forming a flange; and a U-shaped ring member having two outward flared flange ends, each connected to the flange ends of said single flange ring member forming a pair of vacuum-tight seals and being connected at its cylindrical middle



section to a cylindrical support flange forming a part of the electron discharge tube.

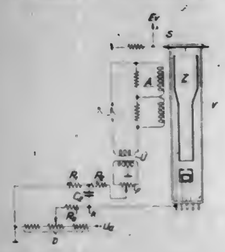
3,124,715
STORAGE DEVICE
Glenn L. Cox, Elmira, N.Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 16, 1960, Ser. No. 56,572
4 Claims. (Cl. 315—10)



1. An electrical discharge system comprising an electron storage tube having a target electrode positioned therein, said target electrode including a fiber optic support plate consisting of a first and second end face with a plurality of light transmitting fibers between said end faces, a layer of phosphor positioned and supported on said first end face of said fiber optic plate and an electrically conductive layer positioned and supported on said second end face of said fiber optic support plate, a photoconductive storage member provided on said electrically conductive layer and exhibiting the property of storing an information pattern including half tones in response to light excitation and discharge of said information pattern in a predetermined time in the absence of electron bombardment, said photoconductive storage member also exhibiting the property of retaining said information pattern for a greater length of time than said predetermined time in response to a constant current of electrons, means positioned on one side of said target for directing a first electron beam modulated with information to be stored onto said phosphor layer to generate a light pattern corresponding to said information to be stored which is in turn transmitted through said fiber optic support plate to said photoconductive member to thereby modify the conductivity of said photoconductive member corresponding to said light pattern, means for directing a second electron beam onto said photoconductive member and means associated therewith to derive a signal representative of the conductivity image impressed on said photoconductive member while

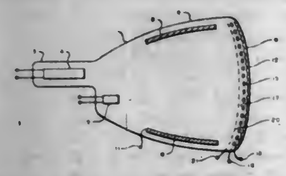
simultaneously providing retention of the stored image within the photoconductive member for a greater length of time than said predetermined time.

3,124,716
ARRANGEMENT FOR THE COMPENSATION OF SPURIOUS VOLTAGES IN IMAGE PICKUP TUBES OF THE VIDICON TYPE
Hans-Dieter Schneider, Darmstadt, Germany, assignor to Fernseh G.m.b.H., Darmstadt, Germany
Filed Sept. 29, 1960, Ser. No. 59,260
Claims priority, application Germany Oct. 8, 1959
5 Claims. (Cl. 315—10)



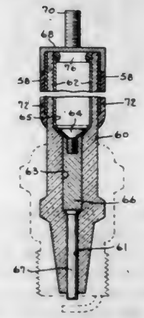
1. Vidicon camera circuit comprising in combination a vidicon tube, a line deflection circuit including deflection coils surrounding the tube, an anode circuit comprising means for applying a D.C. voltage to the anode of the vidicon tube, a variable resistance network in said anode circuit, means for deriving from said line deflection circuit an auxiliary voltage which contains the peaks occurring during the flyback stroke of the line deflection and means for applying said auxiliary voltage to the junction between the vidicon anode and said resistance network, so that flyback peaks occurring on the output electrode of the vidicon tube due to capacitive coupling between the deflection coils and the output electrode are compensated by opposite voltage variations at the vidicon anode.

3,124,717
DIRECT VIEW STORAGE TUBE ERASURE CIRCUIT
George W. King, Pleasantville, and Walter E. Sallstrom, Croton Falls, N.Y., and James L. Foy, Gardena, Calif., assignors to General Precision, Inc., a corporation of Delaware
Filed Dec. 23, 1960, Ser. No. 77,918
7 Claims. (Cl. 315—14)



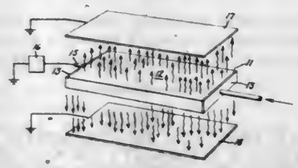
1. A circuit for controlling the erasure of a direct view storage tube which includes a storage surface electrode and a phosphor screen, said circuit comprising first means for supplying electric signals at a predetermined frequency, delay means actuated by said first means for supplying pulsed electrical energy at the frequency of the first means but delayed in time, second means for connecting said delayed pulses to the storage surface electrode, third means for supplying a regulated high voltage connected to said phosphor screen, and fourth means responsive to the said first means and said delay means for periodically reducing the voltage from the regulated power supply to a predetermined negative value and restoring it to the initial value at the termination of the pulse applied to storage surface electrode.

3,124,718
COMBINATION SPARK PLUG AND ELECTRICAL ELEMENT
Bert H. Marks and Leonard J. Sperry, Milwaukee, Wis., assignors to Globe-Union, Inc., Milwaukee, Wis., a corporation of Delaware
Original application Jan. 12, 1960, Ser. No. 1,903, now Patent No. 3,013,181, dated Apr. 27, 1960. Divided and this application Mar. 30, 1961, Ser. No. 112,141
3 Claims. (Cl. 315—58)



1. In a spark plug of substantially conventional size and shape, a unitary center electrode assembly comprising, an insulator having a bore, a center electrode mounted in said bore and projecting from one end of said insulator, a terminal on the other end of said insulator, a capacitive electrical current limiting element incorporated within said insulator and connected in series between said center electrode and said terminal, said current limiting element including a metallized coating on a portion of the outer surface of the insulator and a metalized coating on a portion of the inner surface of said insulator, said outer surface metalized coating being connected to said terminal, and said inner surface metalized coating being connected to said center electrode, whereby a portion of the insulator itself forms the capacitor dielectric.

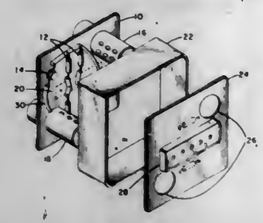
3,124,719
SURFACE COMBUSTION APPARATUS FOR FLAME CHARGING
Frank W. Van Luik, Jr., Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed May 26, 1961, Ser. No. 112,984
6 Claims. (Cl. 317—3)



3. A flame particle charging apparatus comprising a closed hollow relatively flat box-like electrically conductive member having flat opposed electrically conductive surfaces formed from continuously permeable metal and an electrically insulated gaseous fuel supply inlet for introducing combustible gases to the hollow interior of said member whereby the gaseous fuel will seep through the permeable metal surfaces and will sustain combustion

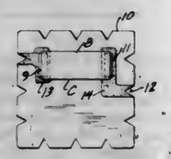
on the exterior sides, and means for applying a high voltage direct current electric potential to said electrically conductive member.

3,124,720
MODULAR ELECTRONIC ASSEMBLIES WITH COOLING MEANS
Sidney S. Green, Minneapolis, Minn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed July 7, 1961, Ser. No. 122,493
13 Claims. (Cl. 317—100)



1. A modular assembly for electronic circuits, comprising: a base plate member of electrically insulative material for mounting heat-dissipating electrical components and associated electrical circuitry; a wall member attached to said base plate member encompassing said components; a fluid-transporting member constructed of electrically conductive material mounted through said base plate independent of said wall member and coupled in heat transfer relationship to said components; and means for electrically connecting said fluid-transporting member to said electrical circuitry.

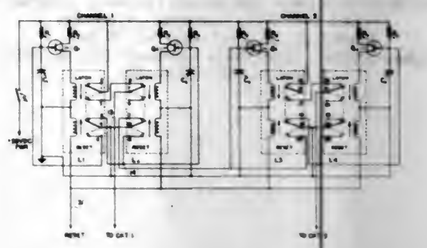
3,124,721
WAFER AND ELECTRONIC COMPONENT FUSED THERETO
Charles C. Rayburn, Falls Church, and Forrest T. Mullikin, Springfield, Va., assignors, by mesne assignments, to Illinois Tool Works, Inc., a corporation of Delaware
Original application Sept. 24, 1957, Ser. No. 685,890, now Patent No. 3,034,198, dated May 15, 1962. Divided and this application Feb. 19, 1962, Ser. No. 174,115
5 Claims. (Cl. 317—101)



2. In a modular electronic assembly, a ceramic wafer, and an electronic component having a polyethylene terephthalate cover in fused engagement with said wafer.

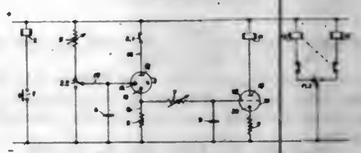
3,124,722
MULTIPLE CHANNEL PROGRAMMER FOR CONTROLLING A PLURALITY OF CIRCUIT OPERATIONS IN A PREDETERMINED TIME SEQUENCE
Richard F. Steiner, Granada Hills, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Feb. 10, 1960, Ser. No. 7,850
1 Claim. (Cl. 317—139)

A multiple channel programmer comprising a plurality of channels, each channel having a function to be controlled in a predetermined time sequence in relation to the other channels, a plurality of relays each having an unlatched position and latched position, a variable delay means associated with each relay and consisting of a condenser, means for charging said condenser at a variable rate and a transistor responsive to the condenser charge for energizing said relay, each relay having one set of contacts for controlling said channel function and at least another set of contacts for establishing a shorting circuit across the condenser of the succeeding delay means



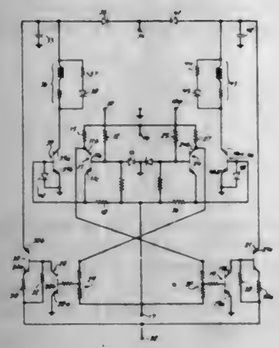
and for breaking a shorting circuit across the condenser of the associated delay means when said relay is in the unlatched position, and for breaking the shorting circuit across the condenser of the succeeding delay means and establishing a shorting circuit across the condenser of the associated delay means when said relay is in the latched position, whereby in the event of power failure only the next succeeding delay means following the last latched relay will be operative when power is restored.

3,124,723
METHOD FOR THE AUTOMATIC SELECTION OF THE SPEED OF ESCALATORS
Karl Stutz, Hinterbramberg 6, Lucerne, Switzerland
Filed June 3, 1959, Ser. No. 817,930
Claims priority, application Switzerland June 5, 1958
11 Claims. (Cl. 317—142)



1. An arrangement for automatically varying the speed of an escalator between predetermined values, depending upon the passenger frequency, comprising, in combination, relay switch means movable by energization between a normal and an alternative position and adapted to be operatively connected with the escalator and to cause, when in said normal position, escalator operation at a predetermined speed, and to cause, when in said alternative position, escalator operation at a predetermined lower speed; circuit means including a source of electric energy and normally open main contact means positioned and adapted to be actuated once for every passenger traveling on the escalator; and time comparator means controllable by closing of said main contact means and including a timing circuit establishing a predetermined reference time period, for comparing the actual intervals between consecutive actuations of said main contact means with said predetermined reference time period, and for delivering an energizing voltage to said relay switch means so as to move the latter to said alternative position only when said actual intervals are longer than said predetermined reference time period.

3,124,724
CONTROL CIRCUIT
Robert M. Mihalek, Redding, Conn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Oct. 11, 1961, Ser. No. 144,345
5 Claims. (Cl. 317—148.5)



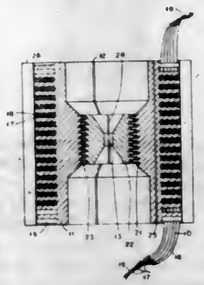
1. A circuit using solid state components for supplying peak power and steady state power at separate levels to at least a pair of electromechanical devices being alternately energized at high speeds comprising a functionally symmetric branch for each electromechanical device of said pair, each branch including a source of peak power, transistor switch means for controlling the application of said peak power to said device, a source of steady state power, unidirectional means for connecting said steady state power to said device when said peak power drops to a predetermined level, a source of recovery energy, means interconnecting said circuit branches, said last named means selectively connecting said source of recovery energy to said peak power source and simultaneously disconnecting said steady power source from said device, said last named means further permitting peak power or steady state power to be applied to only one of said devices at a time.

3,124,725
FLEXIBLE PLASTIC PERMANENT MAGNETS
Charles W. Leguillon, 211 Overwood Road, Akron 13, Ohio
Filed Nov. 18, 1959, Ser. No. 853,727
3 Claims. (Cl. 317—158)



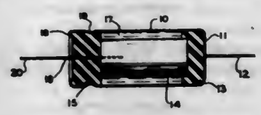
1. A flexible easily distortionable permanent plastic magnet in the form of a woven tape having warp and weft elements and consisting essentially of a plurality of long small cross-sectional easily distortionable plastic warp elements, each of the warp elements having finely divided magnetized magnetic material uniformly dispersed through the plastic thereof, and also having a thin high skin strength easily distortionable elastic non-magnetic plastic surface skin portion highly resistant to cracking under repeated distortions, the thin surface skin portion surrounding and being integral with the said plastic warp elements and distortionable therewith, and a highly flexible weft of non-magnetic material interwoven with the magnetic plastic warp elements to form a woven permanent magnetic tape.

3,124,726
FLUX CONCENTRATOR FOR HIGH INTENSITY PULSED MAGNETIC FIELDS
Bradford Howland, Cambridge, Mass., assignor, by mesne assignments, to Massachusetts Institute of Technology, a corporation of Massachusetts
Filed Oct. 5, 1960, Ser. No. 60,610
9 Claims. (Cl. 317—158)



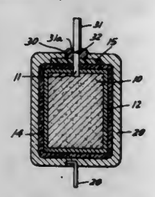
1. A flux concentrator for a high intensity pulsed electromagnet comprising, a massive cylindrical metallic block having a central axial bore and having a helical slot extending along the outer surface thereof, the inner surface of said cylinder being shorter in axial length than said outer surface, an electrical conductor imbedded in said slot and spaced from the walls of said slot by electrical insulating material to form a multi-turn coil, said cylinder having a radial slit extending axially from said inner surface to said outer surface to form a single turn rigid coil closely coupled to said multi-turn coil, whereby currents induced in said outer surface by the application of electrical pulses to said multi-turn coil flow along the surfaces of said cylinder to said inner surface to produce a region of high magnetic field intensity within said cylinder.

3,124,727
CAPACITOR WITH AT LEAST ONE ELECTRODE IN A SEALED CONTAINER
Myles N. Murray, Lyndhurst, Ohio, assignor to Industrial Electronic Rubber Company, Solon, Ohio, a corporation of Ohio
Filed Oct. 23, 1959, Ser. No. 848,434
2 Claims. (Cl. 317—230)



1. In a capacitor having an electrode member housed in a container open at one end, with a conductor extending from such electrode member through such open end; means for closing the open container end and fixing the relative position of such conductor, said means comprising a plug-like body of resiliently deformable material, said body being formed with aligned openings of slightly smaller diameter than the conductor, said openings extending respectively inwardly from the end faces of said body and being separated by an internal membrane of the body material, the conductor passing in sealed relation through said openings in said body and penetrating said membrane under hand pressure, and the body being tightly fitted in the open end of the container.

3,124,728
SEALED ELECTROLYTIC CAPACITOR
Samuel Ruben, 52 Seacord Road, New Rochelle, N.Y.
Filed Oct. 19, 1960, Ser. No. 63,524
6 Claims. (Cl. 317—230)



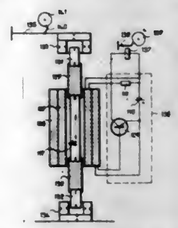
1. An electrical capacitor comprising an anode of film-forming metal having a polarized dielectric film thereon, a solid electrolyte layer in contact with said film, an encapsulation of low melting point metal cast around said electrolyte layer and substantially completely surrounding the said layer with the exception of a small opening therein, cast metal encapsulation having such accentuated thickness that upon solidification and shrinking it will maintain the underlying electrolyte layer under strong compression thereby providing low resistance electrical connection with said electrolyte layer, an anode terminal lead for the capacitor spacedly extending through said opening in the encapsulation, and an apertured insulative disc around said lead compressed between the end of the anode from which the said lead extends and the corresponding end of the cast metal encapsulation, said disc constituting a sealing gasket for the encapsulation and defining with said encapsulation a hermetically sealed enclosure for the capacitor.

3,124,729
METHOD FOR PREPARING SURFACES COMPRISING ISOTACTIC POLYPROPYLENE FOR PRINTING
Franco Ranalli, Milan, Italy, assignor to Montecatini Società Generale per l'Industria Mineraria e Chimica, a corporation of Italy
No Drawing. Filed May 13, 1958, Ser. No. 734,839
Claims priority, application Italy June 4, 1957
3 Claims. (Cl. 317—262)

1. A process for increasing the receptivity to printing inks of sheet material formed of a polypropylene consisting prevailingly of isotactic macromolecules and comprising the steps of supporting the sheet material on a grounded metal roll, maintaining a brush electrode at a voltage lower than the voltage which would cause disruption of the sheet material, and passing the sheet material under the brush electrode in contact therewith at a controlled speed to subject the surface to a continuous non-disrupting electrical charge whereby the receptivity of the polypropylene at said surface to printing ink is increased.

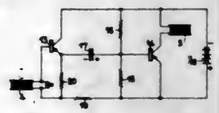
3,124,730
ELECTROMECHANICAL FREQUENCY GENERATING DEVICE FOR CLOCKS AND THE LIKE
Fritz Thoma, St. Georgen, Black Forest, Germany, assignor to Kieninger & Obergfell, St. Georgen, Black Forest, Germany, a company of Germany
Filed Feb. 10, 1958, Ser. No. 714,404
Claims priority, application Germany Feb. 12, 1957
25 Claims. (Cl. 318—128)

1. A battery-operated generator for watches, clocks and other constant-speed apparatus, comprising a magnetic member and circuit means cooperably disposed for periodic repetitive movement relative to each other, said circuit means having an input circuit, an output circuit and feedback means, said feedback means comprising a first coil connected in the input circuit of said circuit means, and a second coil inductively coupled to the first coil and connected in the output circuit of said circuit means, operative to generate a burst of pulses of relatively high frequency compared to the frequency of said periodic movement, responsive to each period of said relative movement between the magnetic member and the



circuit means, dependent on the relative velocity therebetween, said circuit means being dimensioned to determine the relatively high frequency of the pulses of the periodic pulse bursts, such pulse bursts being operative to maintain periodic movement between the circuit means and the magnetic member.

3,124,731
ELECTRONIC TIME PIECES
Richard Eysen, Bienne, and Adrien Nogarede, Geneva, Switzerland, assignors, by mesne assignments, to Fabrique des Montres Zenith SA, Le Locle, Switzerland
Filed Nov. 28, 1960, Ser. No. 71,967
Claims priority, application Switzerland Dec. 28, 1959
17 Claims. (Cl. 318—132)

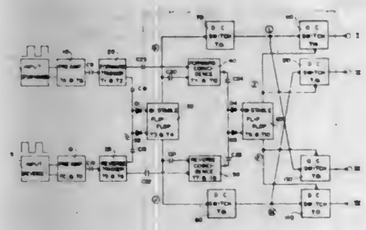


1. In an electronic watch, a balance pivotably connected for oscillating about a given axis, a permanent magnet disposed on said balance and having a magnetic axis parallel to said given axis, a drive coil and a control coil coaxially displaced from each other and so disposed that said permanent magnet passes between said coils with the magnetic axis being parallel to the common axis of said coils, a transistor amplifying means including at least a base, an emitter and a collector, a source of voltage having a first terminal connected to said emitter and a second terminal, means for connecting said drive coil between said second terminal and said collector, means for connecting said control coil between said emitter and said base, whereby magnetic fields are generated by said coils, means associated with said balance for causing said balance to have a rest state wherein said magnetic axis is displaced from the common axis of said coils and said permanent magnet is under the influence of the magnetic fields generated by said coils, and means for applying a voltage to the base of said transistor amplifying means for temporarily increasing the emitter-collector current passing through said drive coil for starting said balance oscillating.

3,124,732
REVERSIBLE STEP MOTOR SWITCHING CIRCUIT
Olin L. Dupy, West Los Angeles, Calif., assignor to Wiesner-Rapp Co., Inc., Buffalo, N.Y.
Filed Oct. 1, 1959, Ser. No. 843,739
11 Claims. (Cl. 318—138)

1. A system for converting electrical input pulses into incremental mechanical motions, comprising input means

receiving said pulses one at a time; mechanical actuator means having terminals which when energized in sequence cause the actuator to move through one increment per pulse; electronic counter means connected to said input means and receiving said pulses, said counter means having output terminals connected to said mechanical actuator terminals and energized by the counter in sequence for each of said input pulses, switch means comprising a power transistor connected between each wind-



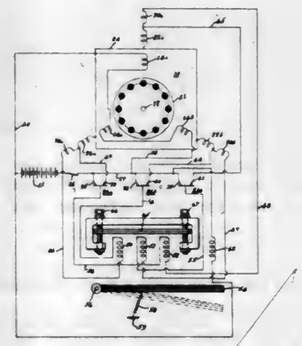
ing and said power source and each coupled to one output terminal of the counter means; a resistance connected in series with each winding for limiting the current therethrough, said power being unidirectional; and a condenser connected in circuit to the power source and to the resistance and providing with the resistance an RC time constant which places substantially the full source voltage across the winding when the transistor is first rendered conductive, and this voltage decaying with time to a smaller steady-state value.

3,124,733
PERMANENT MAGNET MOTORS
John M. Andrews, Evanston, Ill., assignor to Cook Electric Company, Chicago, Ill., a corporation of Delaware
Filed June 6, 1960, Ser. No. 34,275
16 Claims. (Cl. 318—138)



14. In a motor, the combination comprising a stator having a set of electromagnet stator poles, a rotor having a set of permanent magnet rotor poles, said sets having equal numbers of poles, said rotor poles being rotatable closely adjacent said stator poles, said rotor and stator poles being disposed around concentric circles, said rotor poles being of alternate magnetic polarity around the corresponding circle, said stator poles having first and second sets of coils thereon for magnetizing said poles with opposite magnetic polarities, each of said stator poles having a projecting portion extending inwardly toward the rotor poles and disposed asymmetrically with respect to the central radial plane of the stator pole so that said rotor poles will come to rest out of alignment with said stator poles, all of said projecting portions being displaced in the same angular direction from said central radial planes of the corresponding poles, and means for energizing said first and second sets of coils alternately to turn said rotor.

3,124,734
CIRCUITRY FOR OPERATING A MULTI-PHASE ALTERNATING CURRENT MOTOR
Achilles C. Sampietro, Birmingham, Mich., and John D. Grigsby, Willoughby, Ohio, assignors to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed June 9, 1960, Ser. No. 35,053
14 Claims. (Cl. 318—138)

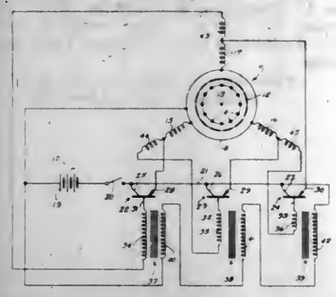


1. An electric motor system, comprising a rotor, stator means having a number of phase positions and operatively associated with said rotor, said stator means comprising a series of first winding means and a series of second winding means at the respective phase positions and coupled with said rotor, means for supplying a steady direct current to each of said first winding means to generate respective first steady magnetic fields at the respective phase positions, a series of trigger means each controlling current flow to one of said second winding means and having a conducting and a non-conducting state, and means for cyclically and successively activating said trigger means to supply out of phase pulsating direct currents to the respective second winding means of amplitude and polarity to produce a resultant multi-phase alternating magnetic field pattern for driving said rotor, said actuating means for said trigger means comprising a series of control windings associated with the respective phase positions and coupled to the trigger means of the succeeding phase position for actuating the succeeding trigger means in response to the wave form of the resultant magnetic field at the preceding phase position.

3,124,735
MEANS FOR OBTAINING SINGLE PHASE AND MULTI-PHASE CURRENTS FOR OPERATING ALTERNATING CURRENT MOTORS
Achilles C. Sampietro, Birmingham, Mich., and John D. Grigsby, Willoughby, Ohio, assignors to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed Sept. 27, 1960, Ser. No. 58,810
10 Claims. (Cl. 318—138)

1. An electric motor system comprising:
(*a*) a rotatably mounted rotor;
(*b*) a stator mounted adjacent to said rotor;
(*c*) a plurality of field windings mounted on said stator, and each constructed to be connected at one side to one polarity of a D.C.-power source;
(*d*) a plurality of trigger devices respectively operative to connect the other side of all of said field windings to the opposite polarity of such D.C.-power source;
(*e*) a plurality of separate electrical impedance means; and

(f) a plurality of control windings respectively inductively coupled with each of said field windings,



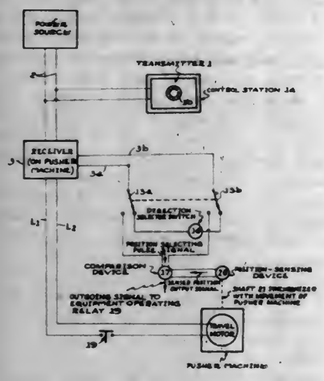
and respectively connected through one of said impedance means to that one of said trigger devices associated with the next succeeding field winding.

3,124,736

AUTOMATIC CONTROLS FOR POSITIONING A MACHINE

Geoffrey Edward Charles Randell, Frederick James Burridge, and Frank Victor Lambert, all of London, England, assignors to Woodall-Duckham Construction Company Limited, London, England, a British company

Filed July 20, 1959, Ser. No. 828,139
4 Claims. (Cl. 318—162)



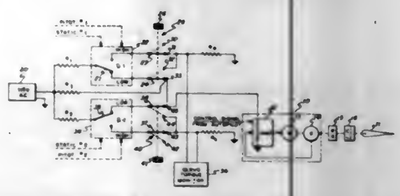
1. A system for controlling a machine in the conduct of certain mechanical procedures in connection with the operation of a coke-oven battery comprising a control station, means for carrying electric power from a power source through said control station to said machine, transmitting means in said control station for superimposing high-frequency positional-significant signals on said power carrying means, means on said machine responsive to the high-frequency signals from said transmitting means for controlling the operation of said machine, said control means comprising first means connected to said power carrying means for automatically selecting a position to which said machine is to be moved in response to the high-frequency signals, second means connected to said power carrying means for connecting said power carrying means to said machine in response to the high-frequency signals whereby power is supplied thereto, third means mounted on said machine and actuated by movement of said machine for automatically sensing the position of said machine, fourth means connected to said first means and to said third means for impressing on said first means the position sensed by said third means and fifth means connected between said power carrying means and said second means for deactivating said second means in response to coincidence between the sensed position of the machine and the position selected therefor.

3,124,737

CONTROLLING AND MONITORING APPARATUS

Harry Miller, Scottsdale, Ariz., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware

Filed Apr. 2, 1962, Ser. No. 184,121
3 Claims. (Cl. 318—489)



1. Apparatus for controlling the maximum torque applied by a servo mechanism to a control surface of an aircraft and monitoring apparatus therefor comprising

(1) a source of power,

(2) first, second and third resistors, each having one end connected to said source of power, said third resistor having its other end connected to said servo mechanism,

(3) first and second aircraft condition responsive switches connected to the other ends of said first and second resistors respectively, said first and second condition responsive switches having first and second operating positions respectively, the particular position depending upon the magnitude of the condition experienced by said aircraft,

(4) first and second test switches connected to said first and second condition responsive switches respectively, each of said first and second test switches having first and second pairs of operating positions adapted to be responsive to said first and second operating positions of said first and second condition responsive switches respectively,

(5) fourth and fifth resistors, each having one end connected to respective first and second test switches and the other end connected to a predetermined potential,

(6) and monitoring means having one end connected between said first test switch and said fourth resistor and another end connected between said second test switch and said fifth resistor whereby at one aircraft condition the first, second and third resistors are connected in parallel to form a low resistance network between said source of power and said servo mechanism and at another condition only the third resistor is connected between said source of power and said servo mechanism to form a high resistance network therebetween in which portions of said circuit may be selectively monitored by said monitoring means.

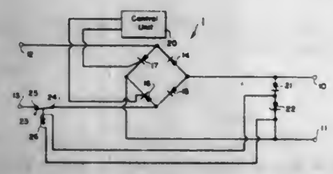
3,124,738

OVERVOLTAGE PROTECTION APPARATUS

John W. Smith, Whitestone, and Donald F. Cleary, West Islip, N.Y., assignors to Hogan Faximile Corporation, New York, N.Y.

Filed Dec. 16, 1960, Ser. No. 76,300
4 Claims. (Cl. 321—14)

4. A circuit for preventing a voltage rise in the output of a direct current power supply comprising a source of alternating current, a load, a bridge connected solid state rectifier including a pair of controlled rectifiers, the rectifier bridge adapted to be connected in series between the alternating current source and the load, a pair of zener diodes connected in series across the load, and a relay switch including normally closed contacts and an operating coil, the switch contacts connected in series between the source of alternating current and the rectifier, the



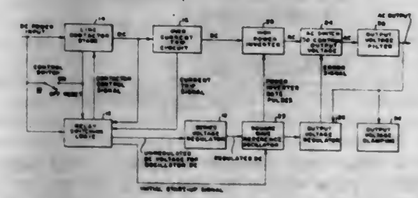
operating coil connected in parallel with one of the zener diodes, the relay switch having an operating time constant of greater magnitude than the zener diodes, so that upon the occurrence of an excessive voltage rise of the current source a voltage drop is provided by the zener diodes thereby preventing a voltage rise in the direct current voltage for the period of time until the relay contacts are opened.

3,124,739

REGULATING SYSTEM UTILIZING MEANS FOR MODULATING THE OUTPUT VOLTAGE IN RESPONSE TO A DERIVED DIFFERENCE VOLTAGE

Armistead L. Wellford, Waynesboro, Va., assignor to General Electric Company, a corporation of New York

Filed Mar. 16, 1961, Ser. No. 96,153
3 Claims. (Cl. 321—18)



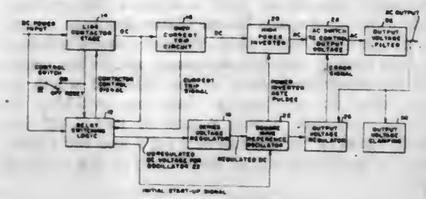
1. In a system wherein power from a D.C. source is converted to an A.C. power output in power switching means adapted to be coupled to the D.C. source according to a voltage from a square wave source, means for regulating the voltage of said output comprising means in circuit with said power switching means for driving a reference unidirectional voltage of a chosen value, means in circuit with said power switching means and said reference voltage deriving means for comparing said output with said reference voltage to derive a difference voltage therebetween, a pair of gate controlled rectifiers in circuit with said square wave source, a transformer, means for applying said output to said gate controlled rectifiers through said transformer to alter the operating impedance level of said gate controlled rectifiers, means in circuit with said comparing means and said gate controlled rectifiers for applying said difference voltage to said silicon controlled rectifiers, said rectifiers being respectively switched into conductivity upon the coincidence of a positive half cycle from said square wave source and a difference voltage whereby the pulse width of the output of said power switching means is modulated.

3,124,740

INVERTER CIRCUIT UTILIZING SILICON CONTROLLED RECTIFIERS AND MODULATING THE OUTPUT WITH A DERIVED DIFFERENCE VOLTAGE

Philip D. Corey, David L. Plette, and Armistead L. Wellford, Waynesboro, Va., assignors to General Electric Company, a corporation of New York

Filed Mar. 16, 1961, Ser. No. 96,286
24 Claims. (Cl. 321—45)



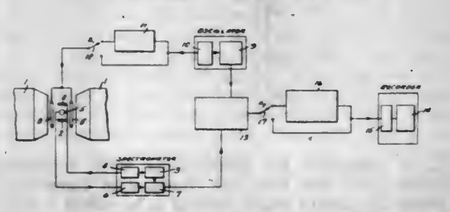
1. A system for converting D.C. power from a source to A.C. power comprising means adapted to be coupled to the source for generating an A.C. voltage in response to the application thereto of a D.C. voltage derived from the source, power switching means responsive to the application thereto of said A.C. voltage and said D.C. power for producing an A.C. power output having the frequency of said A.C. voltage, a reference voltage, comparing means in circuit with said reference voltage and responsive to the application thereto of the voltage of said A.C. power output for producing an error voltage indicative of a deviation of said last-named voltage from said reference voltage, and means for modulating said A.C. power output with said error voltage to regulate the voltage of said A.C. power output.

3,124,741

DEVICE FOR RECORDING OF NUCLEAR INDUCTION SPECTRA

Johann Jaroslav Primas, Zurich, Switzerland, assignor to Trub, Tanber & Co. A.G., Zurich, Switzerland

Filed Apr. 27, 1962, Ser. No. 190,748
1 Claim. (Cl. 324—.5)



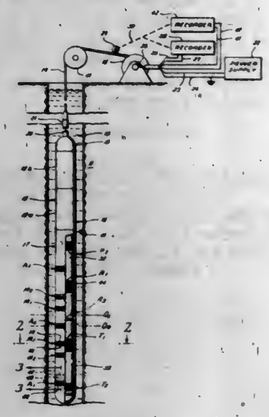
A device for recording high resolution nuclear magnetic resonance spectra by the method of sideband spectrum techniques comprising a magnet for producing a unidirectional magnetic field, a pair of transmitter coils mounted between the poles of the magnet, said coils being connected to a transmitter through a first variable attenuator, a receiver coil mounted between the poles of the magnet, said receiver coil being connected to a receiver, a first phase-sensitive detector connected to the transmitter and to the receiver, a pair of modulation coils mounted between the magnet poles and connected to a low frequency oscillator through a second variable attenuator, a second phase-sensitive detector connected to the oscillator and to the first phase-sensitive detector, a recorder connected to the second phase-sensitive detector through a third variable attenuator having a time constant, an integrator provided in the circuit between the second phase-sensitive detector and the recorder, switch means

connected to the circuit between the second phase-sensitive detector and the integrator for switching the integrator into the circuit between the second phase-sensitive detector and the recorder, an attenuator having a fixed value provided in the circuit between the modulation coils and the oscillator, said attenuator having a ratio of 1.84/2.405, and second switch means connected to the circuit between the modulation coils and the fixed value attenuator for switching said attenuator into the circuit between the modulation coils and the oscillator, whereby the produced alternating field modulates the unidirectional field of the magnet, the oscillator produces an amplitude of the modulation field, thereby causing sideband spectra, the second variable attenuator adapts the amplitude of the modulation field to the value at which the principal spectrum disappears, thus, by switching the fixed value attenuator having a ratio of 1.84/2.405 into the circuit between the modulation coils and the oscillator effects a maximum signal/noise ratio of the sideband spectrum.

3,124,742
APPARATUS FOR INVESTIGATING EARTH FORMATIONS HAVING AN ELECTRODE SYSTEM AND COIL SYSTEM ON THE SAME SUPPORT MEMBER

William P. Schneider, Houston, Tex., assignor to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas

Filed June 23, 1958, Ser. No. 743,604
29 Claims. (Cl. 324—1)



22. In apparatus for investigating earth formation traversed by a bore hole, the combination comprising: an elongated support means adapted to be moved through a borehole; a system of inductance coils individually secured to the support means encircling the longitudinal axis thereof for electromagnetic coupling with the earth formations; and a system of electrodes for emitting a focussed beam of current into the earth formations secured to the support means adjacent the coil system.

3,124,743
POTENTIAL MEASURING APPARATUS INCLUDING AMPLIFIER MEANS WITH INPUT AND OUTPUT CHOPPERS AND PLURAL FEEDBACK PATHS

John H. Riseman, 18 Mount Auburn St., Cambridge 38, Mass.

Filed Feb. 26, 1960, Ser. No. 11,251
11 Claims. (Cl. 324—30)

1. Electrical apparatus comprising, an input terminal, a reference terminal, a D.-C. coupled amplifier having an input and output, means for periodically direct-coupling said amplifier input alternately between said input terminal and said reference terminal at a first rate, a feedback network for inversely feeding back signals at said output to the direct-coupled path between said input and said output, said feedback network inversely feeding back D.-C. components from said output while rejecting signals having spectral components of said first rate and

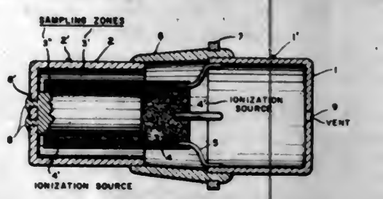


higher, a pair of output terminals, means for direct-coupling said output alternately between said pair of output terminals in synchronism with said alternate switching between said reference terminal and said input terminal, means for providing an indication of the direct potential between said output terminals, and means for establishing the time said output is connected to said output terminals as less than the time said input is connected to said input terminal and said reference terminal.

3,124,744
COLD CATHODE IONIZATION GAUGE ALTIMETER WITH EQUILIBRIUM RESTORING MEANS

George V. Zito, Northvale, N.J., assignor to The Bendix Corporation, a corporation of Delaware

Filed Oct. 30, 1957, Ser. No. 693,323
10 Claims. (Cl. 324—33)



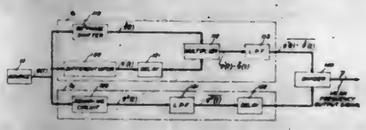
1. A wide range altimeter including a cold cathode ionization gauge subject to changes in air density and comprising anode and cathode elements opposing one another and providing a sampling zone therebetween, and a source of ionizing material uniformly distributed on one of the elements to ionize the sampling zone substantially uniformly, a source of potential for energizing said gauge, and circuit means connected to said ionization gauge and cooperating with the gauge to provide an output when the air density changes, and means responsive to the output and cooperating with said circuit means for restoring equilibrium between said circuit means and said ionization gauge to null the output.

3,124,745
SYSTEM FOR DETERMINING MOMENTS OF POWER SPECTRA

Manfred R. Schroeder, Gillette, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Mar. 2, 1960, Ser. No. 12,331
10 Claims. (Cl. 324—77)

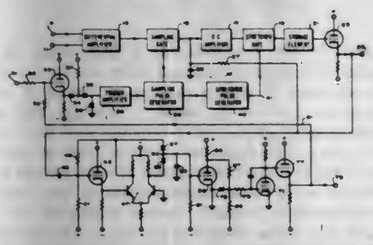
1. Apparatus for determining normalized odd-order moments of the power spectrum of a complex wave, which comprises means for obtaining the Hilbert transform of said wave by shifting the phase of said wave by 90°, means for differentiating said wave, means for deriving a signal proportional to the product of said differentiated wave and the Hilbert transform of said wave, means for averaging said product signal, means for developing a signal proportional to the power of said wave, and means for dividing said averaged product signal by said power signal.



3,124,746
WAVEFORM SAMPLING CIRCUIT

John H. Strathman, Menlo Park, Calif., assignor to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California

Filed June 14, 1960, Ser. No. 35,988
10 Claims. (Cl. 324—77)



4. A circuit for driving a graphic recorder at a constant writing rate to reproduce a periodically recurring waveform, said circuit comprising a sampling gate having an input and an output, means to apply said waveform to the input of said sampling gate, a stretcher having an input and an output, said stretcher comprising another gate and a storage element, means connecting the output of said sampling gate and the input of said stretcher, first and second output terminals, means connecting the output of said stretcher and first of said output terminals, means connecting said first output terminal to the output of said sampling gate, a voltage comparator having one output and two input terminals, said voltage comparator producing an output signal when the voltages applied to the input terminals thereof bear a predetermined relationship to each other, means to apply a fast substantially linear ramp voltage to one input terminal of said voltage comparator, means connecting the other input terminal of said voltage comparator and second of said output terminals, means responsive to said output signal to actuate both of said gates, a differentiator responsive to the rate of change of voltage appearing on the first of said output terminals, a ramp voltage generator having input and output terminals, means including said differentiator to vary the slope of said ramp voltage connecting the said first output terminal and the input of said generator, and means connecting the output of said generator and the second of said output terminals.

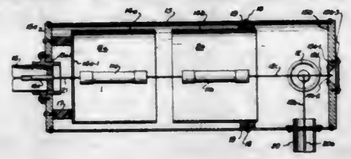
3,124,747
COAXIAL THERMAL VOLTAGE CONVERTER

Francis L. Hermach, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of Commerce

Filed May 11, 1960, Ser. No. 28,502
3 Claims. (Cl. 324—95)

1. In a themal voltage converter, a thermocouple having a heater element and first and second output terminals,

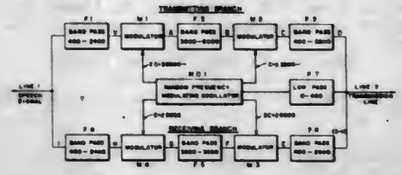
an output connector having first and second pins connected to said first and second output terminals, respectively, a coaxial line having an outer and inner conductor, the inner conductor of said coaxial line comprising said heater element and resistive impedance means connected in series, first and second end members of conductive material, each end member being connected across a respective end of the outer conductor of said coaxial line, a fitting having an outer conductive sleeve and an inner conductor insulated therefrom, the outer sleeve being connected to said first end member, the inner conductor of said coaxial line being connected between the inner conductor of said fitting and the second end member, and a shield of conductive material positioned between the inner and outer conductor of said coaxial line and about a portion of said resistive impedance means, said shield being connected to the inner conductor of said fitting.



3,124,748
SECRET SIGNALLING SYSTEMS

Edwin Y. Webb, Jr., 3145 Dumbarton Ave. NW., Washington, D.C.

Filed Apr. 17, 1961, Ser. No. 103,568
10 Claims. (Cl. 325—35)



1. The method of transforming normal speech into unintelligible signals for transmission over radio or telephone circuits which consists of subjecting the voice input to a first band pass filter, modulating the filtered signal with a random frequency carrier, subjecting the modulated signal to a second band pass filtering operation, modulating the band pass filtered signal with a second random frequency carrier of a frequency exactly one-half that of the first modulation operation and subjecting the second modulation signal to a third low pass filtering action to produce a shifting inverted band of the original speech signal within the original speech band but unintelligible.

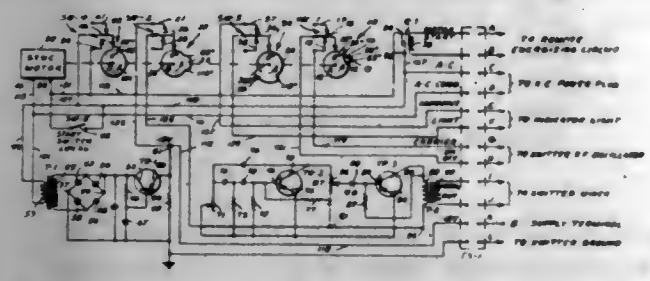
3,124,749
CONELRAD BROADCAST STATION CONTROL DEVICE

Bryant F. Craig, Arlington, Tex., assignor to Amalga Corporation, Dallas, Tex., a corporation of Texas

Filed Nov. 22, 1961, Ser. No. 154,220
7 Claims. (Cl. 325—64)

1. An emergency warning system for audibly informing the general public of an impending national emergency comprising: a transmitter for transmitting signals; a receiver being responsive to said signals; and a control unit connected to said transmitter for sequentially disabling said transmitter in accordance with a predetermined signal code and for modulating said signals during a predetermined interval of said signal code; said control unit including a frequency developing means, at least two

switches, one for sequentially disabling said transmitter in accordance with said signal code and another for coupling the output of said frequency developing means to said transmitter during said predetermined interval of said signal code; said signal code comprising two five second intervals of non-transmission of said signals separated by a five second interval of transmission of said signals and followed by a fifteen second interval of transmission of said signals modulated with the output of said frequency



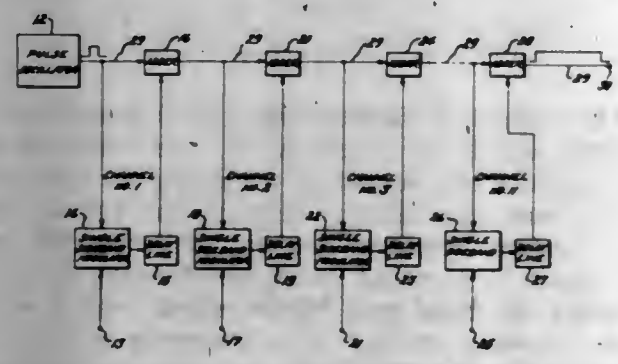
developing means and wherein said control unit further includes a visual indicator with said indicator being actuated at the end of said fifteen second interval of said signal code by said control unit, and means for momentarily energizing said control unit either locally or remotely, said receiver developing and reproducing the modulation of said signals when transmitted in accordance with said signal code for audibly informing the general public of an impending national emergency.

3,124,750

CONTROLLED PULSE WIDTH TRANSMITTER COMPRISING MULTIPLEX INPUTS TO INDIVIDUAL MODULATOR-DELAY MEANS

John B. McLean, Scotch Plains, N.J., and Philip L. Sandler, Rome, N.Y., assignors to the United States of America as represented by the Secretary of the Air Force

Filed Jan. 11, 1961, Ser. No. 82,668
1 Claim. (Cl. 325—142)
(Granted under Title 35, U.S. Code (1952), sec. 266)



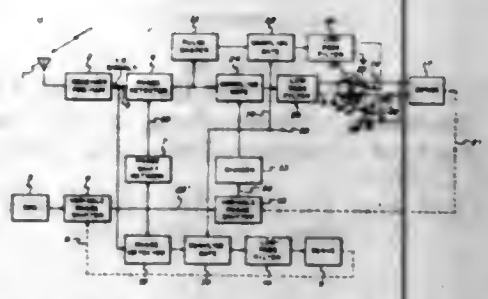
A pulse transmission system comprising means to generate pulses having a predetermined period and frequency, first single sideband modulator means receiving directly said generated pulses, said first modulator means also receiving simultaneously a first modulating signal having a preselected frequency, first means having a preselected delay equal to said period of said generated pulse, said first delay means receiving directly the modulated output signal from said first modulator means, first adder means having two inputs and one output, said first adder means receiving directly at one of said inputs said generated pulse and at the other of said inputs the output signal from said first delay means, second single sideband modulator means receiving directly the output signal from said first adder means, said second modulator means also simultaneously receiving a second modulating signal having double the frequency of said first modulating signal, second means having a preselected delay equal to twice said period of said generated pulse, said second delay means receiving directly the modulated output signal from said second modulator means, and a second adder having two inputs and one output, the first of said inputs receiving directly the output signal from said first adder and the second of said inputs receiving directly the output signal from said second delay means.

3,124,751

POLARITY INSENSITIVE PULSE SYNCHRONIZING SYSTEM

Stanley W. Gery, Old Bethpage, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware

Filed Dec. 4, 1959, Ser. No. 857,432
8 Claims. (Cl. 325—419)



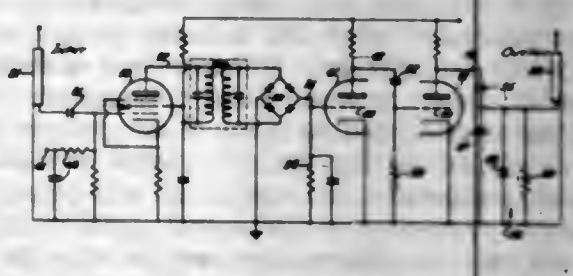
1. Apparatus for synchronizing a first series of unipolar pulses with a predetermined point on the envelopes of a second series of pulses, said second series of pulses being of either positive or negative polarity, said apparatus comprising a source for producing said first pulses, means for comparing the times of occurrence of said first pulses and said predetermined point of said second pulses to produce an error signal representative of any misalignment therebetween, control means connected to said source and responsive to said error signal for modifying the times of occurrence of said first pulses, means for developing a control signal when said second pulses are of a predetermined polarity, and means for selectively reversing the sense of operation of said control means in response to said control signal.

3,124,752

PULSE GATE NOISE LIMITER CONTAINING FULL WAVE BRIDGE DETECTOR

James Wesley Howard, 510 S. Gloster, Tupelo, Miss.

Filed July 3, 1961, Ser. No. 121,463
8 Claims. (Cl. 325—482)



1. A pulse gate noise limiter for a radio frequency communications receiver having a receiver first intermediate frequency path, which comprises: first circuit means connected to said receiver first intermediate frequency signal path for sampling the signal in the receiver first intermediate frequency signal path of the receiver; second circuit means connected to said first circuit means for producing direct current pulses comparable to unwanted noise pulses in the receiver first intermediate frequency signal path; and third circuit means connected to said second circuit means, and connected to the receiver first intermediate frequency signal path after the connection of said first circuit means, for introducing said direct current pulses into the receiver first intermediate frequency signal path so as to reduce the amplitude of said unwanted noise pulses, said second circuit means including a radio frequency amplifier having an input portion connected to said first cir-

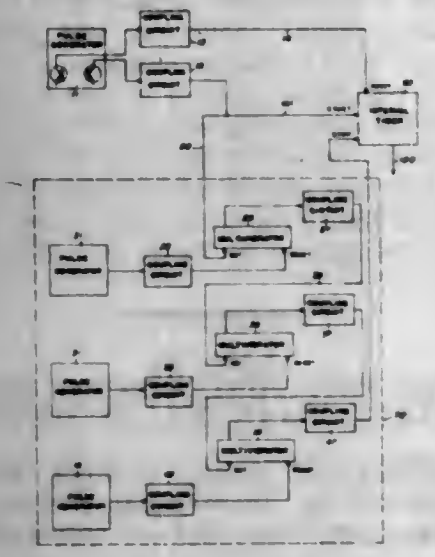
cuit means, and having an output portion, a full wave bridge detector connected to said amplifier output portion so as to rectify the amplified sampled signal, and circuit structure for connecting said full wave bridge detector to said third circuit means.

3,124,753

METHOD AND APPARATUS FOR PRODUCING RANDOM NUMBERS EMPLOYING PLURAL GENERATORS HAVING DIFFERENT REPETITION RATES

Luther P. Gieseler, Falls Church, Va., assignor to C-E-I-R, Inc., Arlington, Va., a corporation of Delaware

Filed Aug. 21, 1961, Ser. No. 132,824
14 Claims. (Cl. 328—61)



1. A random number generator comprising an initiating pulse generator, an interval timing device, first means coupling the output of said initiating pulse generator to said interval timing device for resetting said device, second means coupling said pulse generator to said timing device for initiating a time interval measurement by said device in response to a pulse from said initiating pulse generator, a plurality of pulse generators having predetermined pulse repetition rates, activate-trigger means for each of said plurality of pulse generators, each activate-trigger means having an "activating" terminal and a "trigger" terminal, said activate-trigger means coupled to said pulse generators by means of a "trigger" terminal, means coupling an "activating" terminal of the first of said activate-trigger means to the output of said initiating pulse generator, means coupling the output of each of said activate-trigger means to the input of the next following activate-trigger means, each of said pulse generators impulsing the "trigger" terminal of its respective activate-trigger means, each of said activate-trigger means having an output which impulses the "activate" terminal of the following activate-trigger means and means coupling the output of the last of said activate-trigger means to said interval timing device for stopping said timing device in response to an output from said last means.

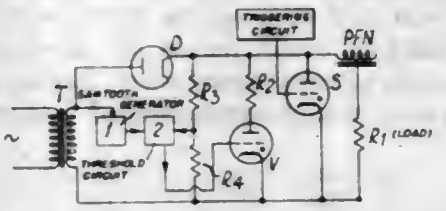
3,124,754

A.C. INPUT PULSE GENERATOR USING SUCCESSIVELY DISCHARGED PULSE FORMING NETWORK

Graham John Scoles, Bowdon, England, assignor to Associated Electrical Industries (Manchester) Limited, a company of Great Britain

Filed Nov. 9, 1959, Ser. No. 851,757
Claims priority, application Great Britain Nov. 10, 1958
7 Claims. (Cl. 328—65)

7. A pulse modulation circuit comprising a pulse forming network, a load circuit, means for charging said pulse forming network, an auxiliary discharge circuit for partially discharging said pulse forming network, a main discharge circuit for discharging said pulse forming network through said load circuit, means for triggering first the auxiliary discharge circuit and then the main discharge



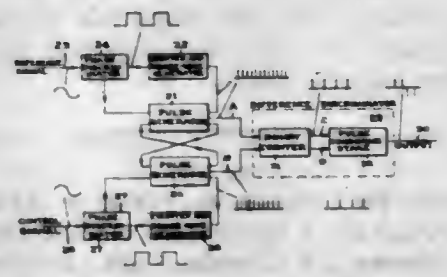
circuit and means for controlling the auxiliary discharge in accordance with the voltage produced across the pulse forming network to produce a substantially constant voltage at the time the main discharge circuit is triggered.

3,124,755

APPARATUS FOR CONVERTING ELECTRICAL SIGNALS FROM PHASE-MODULATED SINUSOIDAL FORM TO PULSE FORM

David Theodore Nelson Williamson, Priorwood, Polton, Midlothian, and Donald Ferguson Walker, Barnton, Midlothian, Scotland, assignors to Ferranti, Limited, Hollinwood, Lancashire, England, a company of Great Britain and Northern Ireland

Filed Dec. 28, 1959, Ser. No. 862,241
Claims priority, application Great Britain Nov. 27, 1956
5 Claims. (Cl. 328—134)



1. Signal-translating apparatus for converting electrical signals from phase-modulated sinusoidal form to pulse form, the phase-modulated signals being represented by the phase displacement between a control sinusoidal signal and a reference sinusoidal signal and the output pulses being some of positive sense and some of negative sense dependent on the sense of such displacement including first and second generators of electrical pulses of constant sense but controllable repetition frequency, means to which the reference signal is applied for so controlling the first generator that the number of pulses generated by it during each half cycle of said reference signal has a constant value $N/2$, means to which the control signal is applied for so controlling the second generator that the number of pulses generated by it during each half cycle of said control signal has said constant value $N/2$, and a difference discriminator to which the pulse outputs of the generators are applied for producing an output train of pulses having a repetition frequency equal to the difference between the repetition frequency of the pulses of one generator and the repetition frequency of the pulses of the other generator, the sense of the pulses in said output train being dependent on which of the generator frequencies is the greater.

3,124,756

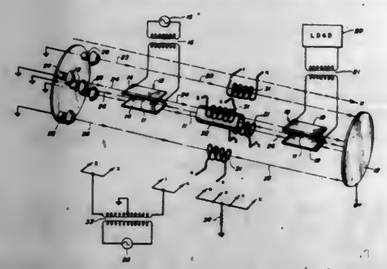
EXTREMELY HIGH FREQUENCY PUMP FOR ELECTRON BEAM PARAMETRIC AMPLIFIER

George W. Hrbek, Elk Grove Village, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware

Filed Sept. 11, 1961, Ser. No. 137,108
8 Claims. (Cl. 330—4.7)

1. A parametric amplifier comprising: means for projecting a first electron beam along a first path; means for

establishing electron resonance for electrons in said beam; input coupler means for developing on said beam a wave corresponding to input signal energy at a predetermined frequency and with a predetermined propagation constant; means for projecting at least one additional electron beam along a second path disposed in field coupling relationship with said first beam; means for developing on said additional beam a pump signal wave, having a frequency equal to the sum of said predetermined frequency and the



frequency of the idler wave produced by the parametric process with the sum of said predetermined propagation constant and the propagation constants of said pump signal wave and said idler wave being equal to zero, to subject said electrons in said first beam to a time variable periodic inhomogeneous field having a phase relationship with said first-beam wave to deliver energy to a component thereof in proportion to the amplitude of said component; and means for extracting amplified signal energy from said first electron beam.

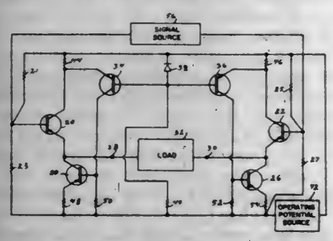
3,124,757

BALANCED TRANSISTOR POWER AMPLIFIER CONNECTED IN A BRIDGE CONFIGURATION

Richard C. Heyser, La Canada, Calif., assignor to California Institute Research Foundation, a corporation of California

Original application Oct. 21, 1957, Ser. No. 691,254. Divided and this application Dec. 29, 1960, Ser. No. 79,467

4 Claims. (Cl. 330—17)



4. A transistor amplifier for driving a load having a first and second end from a source of signals comprising four transistors each having a collector, emitter and base electrode, means respectively coupling the emitter of a first of said transistors to the collector of a second of said transistors and to said first end of said load, means respectively coupling the emitter of a third of said transistors to the collector of a fourth of said transistors and to said second end of said load, means for establishing a quiescent current for said first and second transistors, said means including a first resistor in series with said first transistor collector, a fifth transistor having collector, emitter and base electrodes, and, said fifth transistor being of a type which is complementary to the types of said first and second transistors, and means for coupling said fifth transistor between said first transistor collector and said second transistor base to establish current flow to said second transistor responsive to the potential of said first transistor collector including means connecting said fifth transistor emitter to said first transistor collector, means connecting said fifth transistor collector to said second transistor base, bias means, and means for connecting said fifth transistor base to said bias means; means for establishing a quiescent current for said third and fourth transistors, said means including a second resistor in series with said third transistor collector, a sixth transistor, said sixth transistor having collector, emitter and base electrodes, and being of a type which is complementary to the types of said third and fourth transistors, and means for coupling said sixth transistor between said third transistor collector and said fourth transistor base to establish current flow through said fourth transistor responsive to the potential of said third transistor collector including means connecting said sixth transistor emitter to said third transistor collector, means connecting said sixth transistor collector to said fourth transistor base, and means connecting said sixth transistor base to said bias means, means for applying operating potential across said first and second resistors and the emitters of said second and fourth transistors, and means to apply signals from said source to the bases of said first and third transistors.

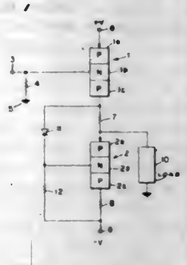
3,124,758

TRANSISTOR SWITCHING CIRCUIT RESPONSIVE IN PUSH-PULL MANNER TO SINGLE-ENDED INPUT

Paul D. Bellamy and George Mueller, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Sept. 8, 1960, Ser. No. 54,719

6 Claims. (Cl. 330—18)



1. An amplifier of the push-pull operating type comprising, a pair of transistors of like conductivity type and having biasing means for rendering said transistors operable, each transistor having an emitter, a base, and a collector, means connecting the collector of one of said transistors to the emitter of the other, output means coupled to the common connection of said two transistors, means for applying an input signal only to the base of said one transistor, and unidirectional conducting means providing a substantially constant voltage drop coupled between the collector of said one transistor and the base of the other of said transistors.

3,124,759

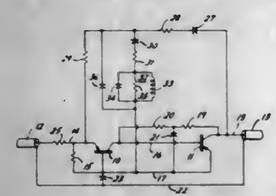
TWO STAGE TRANSISTOR AMPLIFIER WITH BROAD-BAND GAIN-EQUALIZING FEEDBACK

Robert S. Dahlberg, Paoli, Pa., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware

Filed Feb. 23, 1960, Ser. No. 10,179

3 Claims. (Cl. 330—19)

1. In a signal amplifier, a first transistor having a base, an emitter and a collector, a signal input conductor connected to said emitter, a second transistor having a base, an emitter and a collector, a first connection between the collector of said first transistor and the base of said second transistor, a second connection between the base of said first transistor and the emitter of said second transistor, a signal output conductor connected to the



collector of said second transistor, and feedback means comprising a series arm including a capacitor and two resistors serially connected between said output conductor and said input conductor, and a shunt arm including a capacitor and a resistor serially connected between the junction of said two resistors and said second connection.

3,124,760

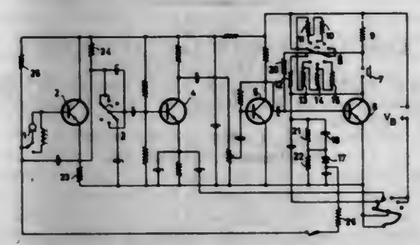
TRANSISTOR AMPLIFIER WITH VARIABLE PEAK CLIPPING AND AGC

Jan Dijkstra, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Dec. 12, 1960, Ser. No. 75,367

Claims priority, application Germany Jan. 27, 1960

7 Claims. (Cl. 330—29)



1. A transistor amplifier comprising a transistor having base, emitter and collector electrodes, collector circuit means connected to said collector electrode, a source of signals connected to said base electrode, means connecting said emitter electrode to a point of constant potential, said collector circuit comprising first variable resistor means in series with the parallel combination of load means and second variable resistor means, rectifier means, and means connecting said rectifier means to said collector electrode for producing an automatic gain control voltage.

3,124,761

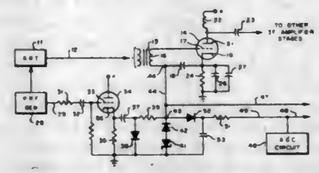
GATING CIRCUIT

John D. Fackler, Bedford, and Charles R. Kenny, Purdy's Station, N.Y., assignors to General Precision, Inc., a corporation of Delaware

Filed Apr. 27, 1961, Ser. No. 105,945

6 Claims. (Cl. 330—51)

1. A gating circuit for an amplifier stage comprising, a bias terminal in said amplifier stage having a potential referred to a datum potential, automatic gain control means having an output terminal, a unilaterally conducting element connecting said output terminal to said bias terminal, gating pulse generator means producing gating pulses, a capacitor periodically charged and discharged thereby and having a capacitor output terminal, means connecting said capacitor output terminal to said bias terminal for gating off said amplifier stage during the



period of said gating pulses, and means connected to said bias terminal for limiting the potential thereof during the peaks of said gating pulses to a potential referred to said datum potential.

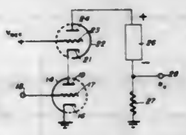
3,124,762

CASCODE AMPLIFIER CIRCUITS

John H. Reaves, Lexington, Mass., assignor to Elcor, Inc., Falls Church, Va., a corporation of Virginia

Filed Oct. 19, 1960, Ser. No. 63,673

5 Claims. (Cl. 330—70)



1. A cascode amplifier comprising first and second triodes, each having a cathode, an anode and a control grid, means connecting said cathode of said first triode to a reference potential, means connecting said anode of said first triode to said cathode of said second triode, means for applying an input signal to said control grid of said first triode, means for connecting said control grid of said second triode to a fixed operating potential to maintain said control grid of said second triode at a substantially invariable potential relative to the reference potential, a load impedance, means connecting one end of said load impedance to the reference potential means for connecting an anode supply voltage between the other end of said load impedance and said anode of said second triode a signal utilization means and a substantially purely resistive means connecting said signal utilization means to receive signal voltages developed across said load impedance.

3,124,763

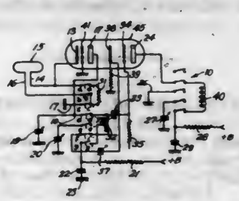
WIRELESS RECEIVER SET

Henry Megard, Geneva, Switzerland, assignor to Sautter & Jaeger, Geneva, Switzerland, a firm

Filed Feb. 9, 1959, Ser. No. 791,942

Claims priority, application Switzerland Jan. 26, 1954

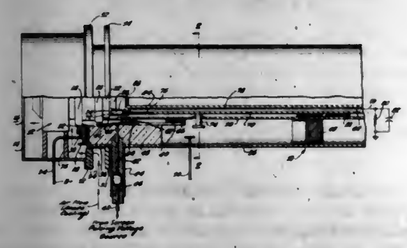
4 Claims. (Cl. 330—78)



1. Radio frequency amplifier stage having extremely wide bandwidth, comprising an amplifying means the input terminal of which is coupled to the output terminal of

a preceding stage by means permitting the flow of alternating current only from said preceding stage to said input terminal and further coupled to a tunable circuit consisting of a capacitance and an inductance which are both coupled with one end to said input terminal while the other end of said inductance is coupled to a terminal of said amplifying means common to both its input and its output circuit, a tap of said inductance intermediate its ends being coupled to ground so as to reflect any change in the potential of said common terminal in the inverse sense to said input terminal in an amount increasing with the frequency of said change, the other end of said capacitance being connected to the same terminal of said amplifying means as said other end of said inductance, and an inherent capacitance, being inherent capacitance exclusively, and connecting said input terminal with the output terminal of the same stage.

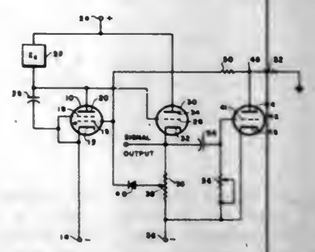
3,124,764
COAXIAL RESONATOR OSCILLATOR
William P. Stearns, Scottsdale, Ariz., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Oct. 4, 1960, Ser. No. 60,365
10 Claims. (Cl. 331—98)



1. A resonator structure for use with an ultra high frequency vacuum tube which has annular cathode, grid, screen and anode contact surfaces all spaced along an axis thereof, said resonator structure including in combination: a plurality of hollow cylindrical conductive members coaxially positioned with respect to one another and positioned to receive the vacuum tube at a first end thereof in coaxial relationship therewith and to establish respective electrical contacts with said annular contact surfaces thereof; said hollow cylindrical members respectively forming a screen-anode resonator, a screen-grid resonator and a grid-cathode resonator; the one of said hollow cylindrical conductive members forming said screen-grid resonator extending from said first end of said plurality of conductive members along a part only of the length of the others of said conductive members; and a plurality of angularly positioned feedback probes mounted on a second of said cylindrical members and axially spaced from said first end of said plurality beyond the second end of said one of said cylindrical members and extending radially from said grid-cathode resonator into said screen-anode resonator to provide feedback between said screen-anode resonator and said grid-cathode resonator.

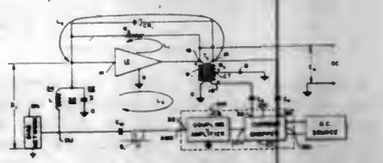
3,124,765
GENERATOR OF MODIFIED SAWTOOTH WAVEFORM
Ernest V. Ruda, East Amherst, N.Y., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed Aug. 9, 1961, Ser. No. 130,418
3 Claims. (Cl. 331—129)

1. A circuit for generating a voltage waveform consisting of successive sweeps separated by a "dwell" period, comprising, a thyratron having a cathode, a control grid, and a plate, a first capacitor connected between said cathode and said plate, means connecting said plate to a source of positive potential through a load impedance, means biasing said thyratron to fire and thereby discharge said first capacitor to terminate a sweep when said first capacitor is charged to a predetermined potential, and a circuit for maintaining said thyratron conducting for a predetermined period after it is fired to thereby prevent recharging of said first capacitor, said last-mentioned circuit comprising a first electron tube having plate, control grid, and cathode electrodes and connected



as a cathode-follower, means connecting the plate of said thyratron to the control grid of said first electron tube, a second electron tube having plate, control grid, and cathode electrodes and connected as an amplifier, a timing circuit including a second capacitor and a resistor coupling the cathode of said first tube to the grid-cathode circuit of said second tube, means resistively connecting the plate of said second tube to the control grid of said thyratron, and a unidirectional conducting device connected from the cathode circuit of said first electron tube to the control grid of said thyratron.

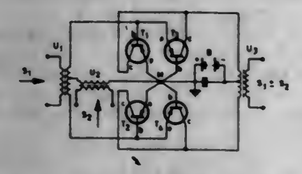
3,124,766
AMPLITUDE CONTROLLED FREQUENCY MODULATED OSCILLATOR
Leon F. Edelson, Los Angeles, Calif., assignor to United Electrodynamics, Inc., Pasadena, Calif., a corporation of California
Filed Jan. 3, 1961, Ser. No. 80,247
14 Claims. (Cl. 332—19)



1. In a frequency modulated oscillator employing:
an amplifier with a positive feedback circuit interconnecting the amplifier output with the amplifier input for generating an oscillatory carrier wave at its output;
a parallel resonant network included in said positive feedback circuit and connected across the input of said amplifier,
said parallel resonant network comprising two branch circuits connected in parallel, one of said branch circuits being capacitive and the other inductive,
a modulator circuit having a carrier wave input connected to the output of said amplifier and having a control input for receiving a modulating control signal and also having a modulator output, whereby a modulated carrier wave is generated at said modulator output, said modulated carrier wave having an amplitude that varies in accordance with the magnitude of said control signal;

means for maintaining the amplitude of the oscillation carrier wave developed across the parallel resonant network constant;
and means for feeding said modulated carrier wave into one of said branch circuits in phase with the oscillatory carrier wave developed across said parallel resonant network,
whereby the frequency of the oscillatory wave appearing at the output of said amplifier varies as a function of said control signal.

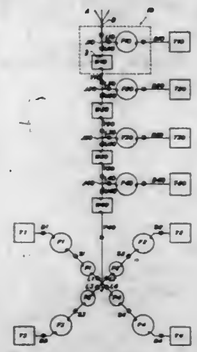
3,124,767
DOUBLE BALANCED MODULATOR
Reginhard Pospischil, Munich, Germany, assignor to Siemens & Halske Aktiengesellschaft, Berlin and Munich, a corporation of Germany
Filed Feb. 27, 1962, Ser. No. 175,948
Claims priority, application Germany Mar. 2, 1961
2 Claims. (Cl. 332—47)



1. A double balanced modulator for the mutual modulation of two signals, comprising, disposed in two pairs, four transistors of identical conductivity type, means for directly interconnecting the collectors of each pair of transistors, means for connecting the base electrode of one transistor of each pair with the emitter of the other transistor of such pair, means for connecting the emitter-base connection of one of said pairs of transistors with an emitter-base connection of the other pair, means for conducting one signal over a first transformer with symmetrical secondary winding to the two other base-emitter connections, means for conducting the second signal over a second transformer with non-symmetrical construction to the center point of the secondary winding of the first transformer and the common point of the respective base-emitter connections of all four transistors, means for obtaining the modulated signal in a circuit including the collectors of said transistors over an output transformer having a symmetrical primary winding, and a direct current source operatively connected between the mid-point of the symmetrical primary winding of said output transformer and the mid-point of the symmetrical secondary winding of said first transformer.

3,124,768
RESONATOR FILTERING SYSTEM
William V. Tilston, Toronto, Ontario, Canada, assignor to Sinclair Radio Laboratories Limited, Toronto, Ontario, Canada, a corporation
Filed Dec. 15, 1958, Ser. No. 780,405
15 Claims. (Cl. 333—9)

1. A filtering system comprising a plurality of cavity resonators, a short impedance matching transmission line for each of the resonators, each line having one end at a common junction of the lines, the resonators being of too large physical dimensions to be all located at and coupled directly to the opposite ends of the lines, and means for coupling the resonators to said opposite ends of the lines with adequate physical space for the resonators, said means including, between and in series with at least one of the resonators and its line, an additional cavity resonator of smaller physical size than said one resonator and located at and terminating said opposite end of the line of said one resonator, and an additional transmission line coupling said additional resonator and said one resonator.



11. A filtering system for coupling to a common antenna a plurality of signalling devices tuned to different frequencies, comprising a filtering unit for each signalling device, each unit including a first branch and a second branch, the second branches of the different units being in series, the first branch of each unit having resonator means tuned to pass only the frequency of the signalling device of the unit, the second branch of each unit having resonator means tuned to block only the said frequency of the signalling device of the unit and pass both higher and lower frequencies of other signalling devices.

3,124,769
HIGH ELONGATION STRAIN GAGE
Charles W. Peterson, Brighton, Mass., assignor to Baldwin-Lima-Hamilton Corporation, a corporation of Pennsylvania
Filed Sept. 26, 1961, Ser. No. 140,785
6 Claims. (Cl. 338—2)

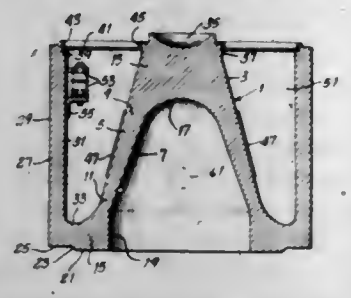


1. A strain gage comprising, in combination, an elongated carrier membrane of electrical insulating material having top and bottom sides and two edges, an electrical strain sensitive filament bonded to one of said sides of the membrane so as to be supported thereby and extending in the direction of the elongated axis thereof, the membrane and filament being helically curved about an axis so that said gages of the successive helical coils are freely spaced apart along said axis whereby the gage may have a relatively large elongation along said axis of the helix for a given change in electrical resistance of the gage filament.

3,124,770
STRESS MEASURING DEVICE
Armando Ciavatta, Cheshire, Conn., assignor to Revere Corporation of America, Wallingford, Conn., a corporation of New Jersey
Filed Feb. 21, 1961, Ser. No. 90,784
36 Claims. (Cl. 338—5)

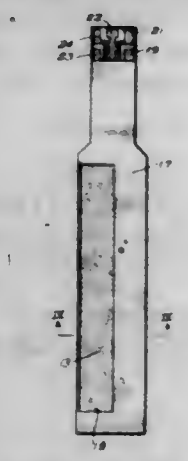
1. A stress measuring device comprising a strain element capable of resiliently developing strain therein under stress applied thereto, means for supporting said strain element to receive the stress acting along a given

line and for transmitting the stress through said strain element concomitantly with developing the strain therein, said strain element providing an annular wall extending about said line of action of the stress, said wall being defined by an exterior surface tapering in the direction



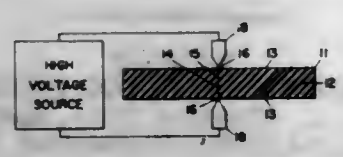
along said line of action from an end portion thereof of larger dimension about said line of action to an end portion thereof of smaller dimension about said line of action, the material of said wall being continuous about said line of action of least in a plurality of planes transverse to and spaced along said line of action.

3,124,771
CORROSION MEASURING PROBE AND METHOD OF MAKING SAME
Gilson H. Rohrback, Whittier, Calif., assignor to Magna Corporation, a corporation of California
Filed June 26, 1961, Ser. No. 119,482
7 Claims. (Cl. 338—13)



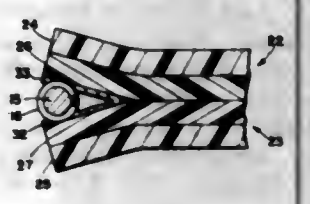
1. A corrosion measuring probe comprising a substrate of an electrically insulating material, a thin corrodible metallic film on said substrate defining a corrodible leg, a temperature-compensating reference leg, and a tap between said corrodible leg and said reference leg, and an overlay over said film protecting said reference leg against corrosion, said corrodible leg being exposed to the corrosive environment to be tested.

3,124,772
NEGATIVE RESISTANCE DEVICES
Terry F. Newkirk, Madison, Wis., assignor to Trionics Corporation, a corporation of Illinois
Filed Nov. 20, 1961, Ser. No. 153,413
13 Claims. (Cl. 338—22)



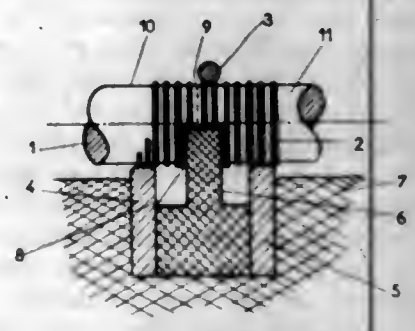
2. A continuous semiconductive path comprised of breakdown products having a relatively high negative temperature coefficient of resistance, said path being imbedded in a normally insulating material from which said breakdown products were formed and having ends terminating at opposed points on substantially parallel surfaces of said material, said surfaces having conductive coatings in communication with the ends of said path, said path having a negative resistance characteristic when voltages above a critical value are impressed across said conductive coatings.

3,124,773
ELECTRIC CONTROL APPARATUS
John E. Crowley, St. Anthony Village, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed July 28, 1961, Ser. No. 127,701
5 Claims. (Cl. 338—150)



1. In combination, a pair of coextensive elongated flexible members, each comprising at least a layer of Fiberglas and a layer of nylon, arranged with their nylon layers in contact, except along an edge thereof, to form a laminated fabric, an elongated filar resistance element partially between said members along said edge, and means adhesively joining said element to said members.

3,124,774
PRECISION POTENTIOMETER
Michel Lafont, Paris, France, assignor to Les Laboratoires de Physique Appliquee, Paris, France, a corporation
Filed July 5, 1962, Ser. No. 207,610
Claims priority, application France July 5, 1961
3 Claims. (Cl. 338—162)

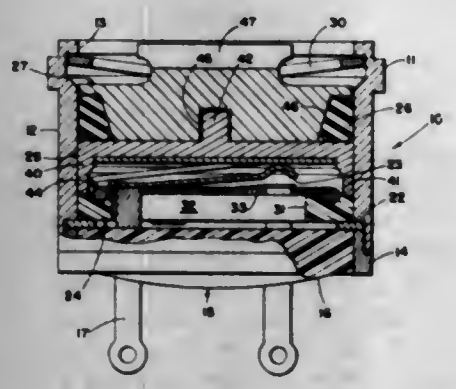


1. In a potentiometer of the continuous rotation type: an electrical resistance coil having a plurality of turns; a toroidal insulating member for supporting said coil; two terminals electrically connected to said coil at two respective points thereof; said coil having a first portion having turns which are cut out over a part of their length and a second portion having complete turns, said first portion being located in the space between said two points, the cut-out turns individually adhering on said insulating member, whereas the complete turns are spirally wound on said insulating member; a contact member in sliding relationship with each of said cut-out and complete turns successively, whereby an electrical connection is established between said contact member and said complete turns, while the cut-out turns co-operate with said contact member for ensuring the mechanical passage thereof.

3,124,775
ELECTRIC CONTROL DEVICES
August Hamelberg, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Aug. 28, 1961, Ser. No. 134,508
16 Claims. (Cl. 338—163)

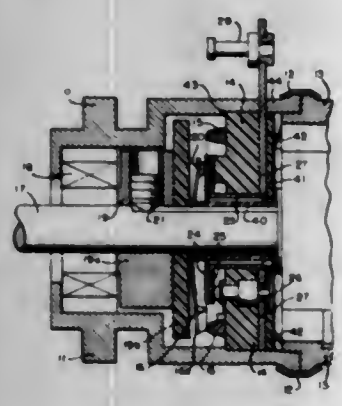
1. In combination: a housing having a bottom of insulating material with several electrically conducting pins

passing therethrough in hermetically sealed relation to project inwardly therefrom; a resilient contact member carried within said housing by one of said pins; a resistance wafer insertable in and removable from said housing including an insulating base having a first clearance opening for said one of said pins and said contact member and further clearance openings for further pins, a circular resistance element mounted on said base, and spring contact means secured to said base in alignment with said further openings for engagement by said further pins



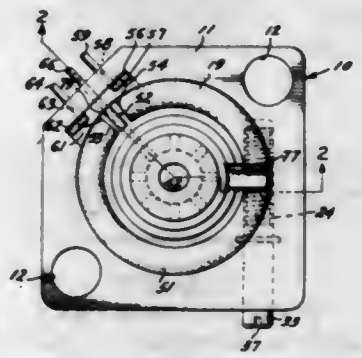
and electrically connected to the ends of said resistance element; a wiper wafer independently insertable in and removable from said housing including an electrically conductive disk, means mounting said disk for rotation in its own plane adjacent to said resistance wafer in electrical engagement with said contact member, and a wiper arm extending from said disk to engage said element; and means resiliently maintaining and sealing said wiper wafer in said housing for frictionally resisted rotation with respect to said resistance wafer.

3,124,776
POTENTIOMETERS
S. Frederic Guggenheim, 101 Grayson Place, Teaneck, N.J.; Hans H. Wormser, 356 Shea Drive, Milford, N.J.; and Arnold S. Louis, 87 Southgate Ave., Hastings on Hudson, N.Y.
Filed June 16, 1961, Ser. No. 117,730
8 Claims. (Cl. 338—174)



1. A potentiometer comprising a casing, a shaft passing through at least one end of said casing, a brush member having a first brush portion and a second brush portion mounted on said shaft and electrically connected to one another, a resistance element mounted on an insulator base within said casing substantially concentric with said shaft, internal terminal means for said resistance element mounted on said base and closer to said shaft than said resistance element, said resistance element being positioned so that it is slidably engaged by said first brush portion, a slip-ring of high conductance mounted within said casing substantially concentric with said resistance element and positioned to be slidably engaged by said second brush portion, said slip-ring overlying said internal terminal means in an axial direction with respect to said shaft the outer diameter of said slip-ring being greater than the distance of said internal terminals from said shaft and less than the internal diameter of said resistance element, and means for connecting external terminals to said internal terminal means and said slip-ring.

3,124,777
POTENTIOMETER
Robert H. Mellor, Reseda, Calif.
(7109 Skyview Drive, Riverside, Calif.)
Filed Sept. 13, 1961, Ser. No. 137,811
10 Claims. (Cl. 338—174)

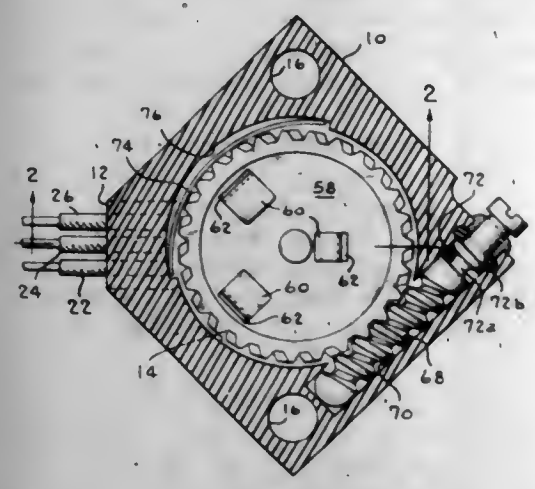


1. A potentiometer comprising: a casing having an upper recess, a lower recess, a bore communicating between said recesses, a top wall closing said upper recess in sealed relationship with said casing and a bottom wall closing said lower recess in sealed relationship; a wound wire resistance element mounted in said upper recess; an annular conductive terminal in said upper recess and in insulated relationship relative to said resistance element; resilient conductive wiper means rotatably supported in said upper recess and having a pair of sliding resilient contacts, one of said sliding contacts being engaged with said terminal and another of said contacts being in engagement with said resistance element; said resistance element, said wiper means and said conductive terminal being adapted to be electrically connected through said casing to an electrical circuit; a shaft rotatably mounted in said bore and connected to said wiper means; manually operable means mounted in said lower recess in driving engagement with said shaft and extending outwardly through a side wall of said casing for rotating said wiper means to vary the position of the other of said sliding contacts relative to said resistance element; and an annular sealing means mounted in said bore intermediate said recesses for sealing said shaft and said bore so as to seal said upper recess from said lower recess.

3,124,778
VARIABLE RESISTORS
Karl W. Youngbeck, Milwaukee County, Wis., assignor to Globe-Union Inc., Milwaukee, Wis., a corporation of Delaware
Filed Sept. 5, 1961, Ser. No. 136,048
12 Claims. (Cl. 338—175)

1. A subminiature variable resistor comprising, a metallic heat conducting housing having a recess therein, an insulating cover for closing said recess, a wire wound resistance member mounted in said cover, an electrically conductive member embedded in said cover and electrically insulated from said resistance member, terminal leads for said resistance member and conductive member carried by said cover, a gear wheel positioned in said recess, an integral resilient contactor mounted on said wheel and slidably engaging both the resistance member and the conductive member, said contactor bias-

ing the wheel into the recess when the cover is mounted on the housing and means operable externally of said

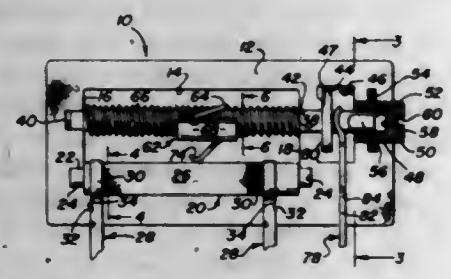


housing for rotating said wheel to vary the position of the contactor on the resistance member.

3,124,779
POTENTIOMETERS

Richard E. Caddock, Riverside, Calif., and Marlan E. Bourns, 2530 Piedmont Drive, Riverside, Calif.; said Caddock assignor to Bourns, Inc., a corporation of California

Filed Nov. 14, 1960, Ser. No. 69,060
20 Claims. (Cl. 338—180)

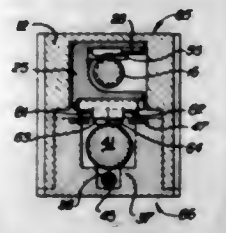


20. A leadscrew-adjusted variable resistor comprising:
first means, including an elongate housing having a body;
an elongate resistance element mounted in said housing;
a leadscrew rotatably supported by said housing and having a threaded portion exposed in said housing, said leadscrew being arranged substantially parallel to said resistance element;
a slider arranged for movement along said leadscrew in said housing, said first means comprising means preventing rotation of said slider around said leadscrew;
a contact carried by said slider, said contact having a portion in electrical contact with said resistance element;
a bent wire spring, insulated from said contact, carried by said slider, said bent wire spring having a portion extending transversely across said leadscrew and normally engaged in the groove of the thread of the leadscrew whereby rotation of the leadscrew normally induces movement of the bent wire spring and the slider along the leadscrew, a portion of said bent wire spring yielding and snapping over the thread of the leadscrew as rotation of the leadscrew is continued to excess, and whereby said leadscrew is insulated from said contact;
and means providing electrical connections to said contact and said resistance element.

3,124,780
RECTILINEARLY ADJUSTABLE VARIABLE RESISTOR

Warren D. Hulbert, Hacienda Heights, Calif., assignor to Spectrol Electronics Corporation, San Gabriel, Calif., a corporation of Delaware

Filed July 3, 1962, Ser. No. 207,234
8 Claims. (Cl. 338—180)

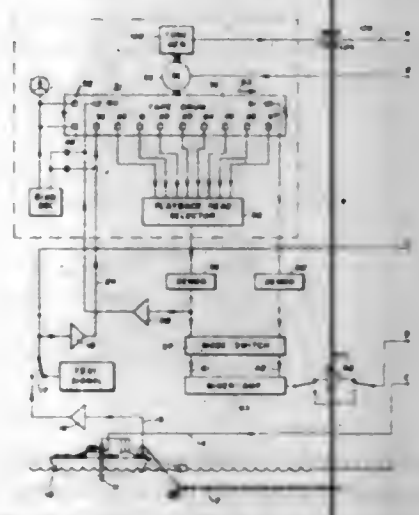


5. A miniature variable resistor comprising: a substantially planar base member; a pair of spaced apart upstanding side walls longitudinally extending along said base member and spaced inwardly from the end and side edges thereof; a resistance element disposed between said side walls; a collector bar mounted upon the top edge of at least one of said side walls; a unitary box-like structure having one open side and carrying a lead screw therein; a slider block disposed about and spaced from said lead screw; resiliently deformable means engaging said slider block and said lead screw for moving said slider block upon rotation of said lead screw; a contact member carried by said slider block; said open side of said box-like structure receiving said side walls on said base member, the edges of said open side contacting said base member whereby a closed housing is provided for said potentiometer, said contact member making sliding contact with said resistance element and said collector bar; and electrical leads connected to said resistance element and said collector bar and extending externally of said housing.

3,124,781
CONTINUOUS SEISMIC EXPLORATION

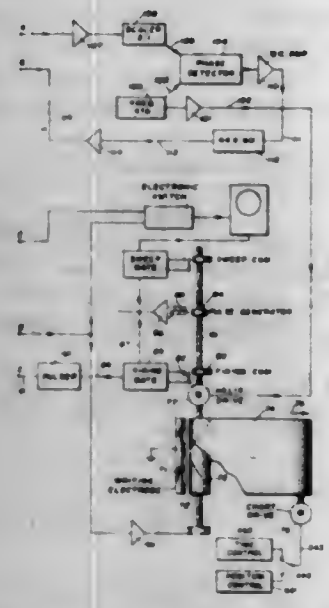
George B. Loper, Dallas, Carroll D. McClure, Rockport, and Edward B. Simpson, Arlington, Tex., assignors, by mesne assignments, to Socony Mobil Oil Company, Inc., New York, N.Y., a corporation of New York

Filed May 4, 1959, Ser. No. 810,731
7 Claims. (Cl. 340—15.5)



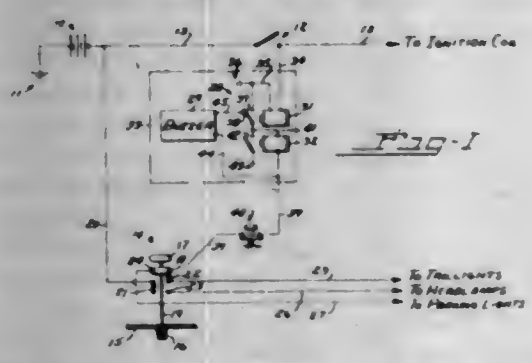
5. A system for seismic exploration which comprises a source and a plurality of detectors in fixed space relation, means for moving said source and detectors along a path adjacent a surface of a zone to be explored, means in circuit with said source for periodically energizing said source to produce a series of equally time-spaced seismic impulses for travel between the source and detectors by way of the zone to be explored, said detectors being responsive to seismic impulses arriving at the detectors after travel through the zone for producing elec-

trical signals representative of the character of the impulses, means coupled to said detectors for storing in sequences signals produced by said detectors, a plurality of signal-sensing means equally spaced from one another and operatively associated with said storing means, means for moving said stored signals past said signal-sensing means at a rate such that said signals arrive in



sequence at each sensing means at a time related to the production of each seismic impulse, signal-combining means, and means connecting selected ones of said sensing means with said combining means for applying to said combining means selected combinations of said signals wherein at least one signal of each combination is common to at least one other combination.

3,124,782
APPARATUS CONTROL SYSTEM FOR VEHICLES
Robert K. Norton, 3024 Cannon Road, Twinsburg, Ohio
Filed Nov. 20, 1959, Ser No. 854,390
2 Claims. (Cl. 340—52)



1. In an automotive vehicle having a battery, an ignition system, an exterior lighting system, and control circuitry connected to said battery for each said system including an ignition switch for the ignition system and a light switch for the lighting system;

(*a*) a first relay having a coil, a set of normally open contacts, and a set of normally closed contacts;

(*b*) a first circuit having electrical conductors connecting in series said battery, the ignition switch, and the coil of the first relay;

(*c*) a hold-in relay having a coil and a set of normally open contacts;

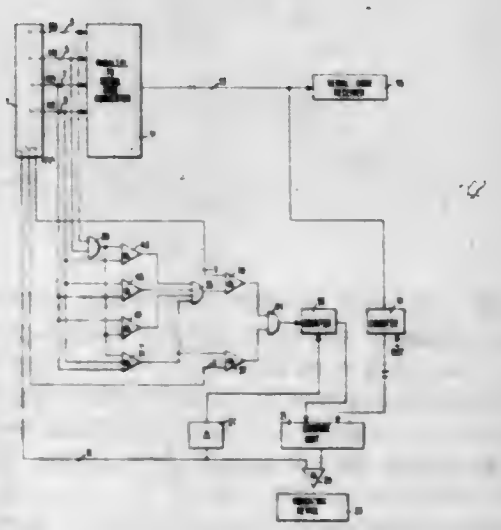
(*d*) a second circuit for operating said hold-in relay including in series said battery, the light switch, the coil of the hold-in relay, and the normally open contacts of the first relay;

(*e*) a hold-in circuit for said hold-in relay including in series the light switch and the normally open contacts of the hold-in relay;

(*f*) electrically operated means for signalling an energized condition of said lighting system whenever said ignition switch is operated to deenergize both the ignition system and said first relay; and

(*g*) a fourth circuit having electrical conductors connecting in series said battery, said light switch, said signalling means, the normally closed contacts of said first relay, and the contacts of said hold-in relay, for operating said signalling means when said fourth circuit is closed.

3,124,783
DATA TRANSMISSION CHECKING MEANS
Francis V. Adams, Endicott, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 22, 1959, Ser. No. 821,900
10 Claims. (Cl. 340—146.1)

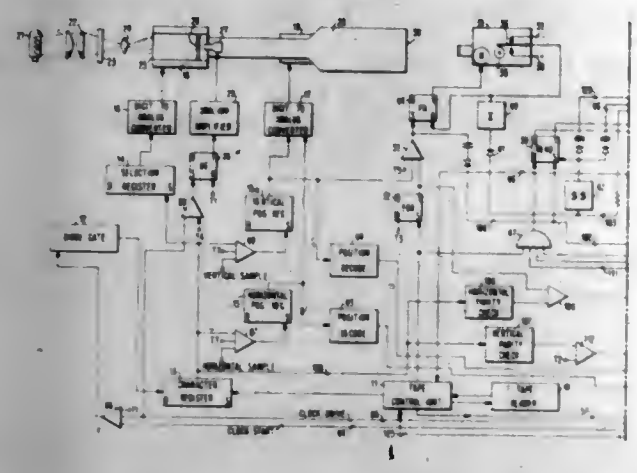


1. In a data transmission system in which characters to be transmitted comprise one or more signals existing in various combinations on a plurality of signal lines and in which at least one signal is always transmitted for each character, checking means for checking the correct transmission of the data comprising, in combination, transmitting check counting means, means for setting said transmitting check counting means to an initial count representing the number of characters to be transmitted, means for increasing the count in said counting means by one for each signal in excess of one in each character transmitted, receiving check counting means for counting the total number of signals received, and means for comparing the counts in said counting means.

3,124,784
CATHODE RAY TUBE PRINTER
Fred W. Schaaf and Glenn L. Scott, Apalachin, and Sander Rubin, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 23, 1959, Ser. No. 861,594
4 Claims. (Cl. 340—173)

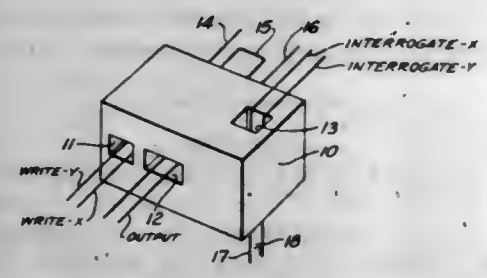
4. In a cyclically operable cathode ray tube printer system having control circuitry for transforming digital input information into a character display on the face of the tube, the combination of, a tape reader operable in either a forward direction or in a reverse direction to feed and read tape records bearing said digital input information, a cyclically operable recording camera for recording the displayed information onto film, said camera including means for advancing a frame of film after a plurality of displays have been recorded, means for putting said tape reader into forward operation to effect the recording of a plurality of tape records onto a frame

of film, error detection means operable during forward feeding of said tape to sample the digital information being printed, means responsive to said error detection means upon detection of an error to disable said printer control circuitry and stop said tape reader, selectively operable means for effecting reverse operation of said tape reader to feed tape backward, an end-of-record counter, trigger means controlled by said tape reader for advancing said counter once for each tape record being read in the forward direction, means responsive to said selectively operable means for causing said counter to complement



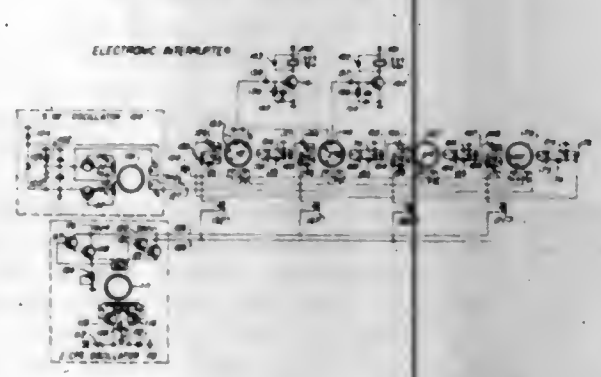
and add one, said counter also being controlled by said trigger means to advance one for each tape record being read in the backward direction, means responsive to said counter when it registers zero for stopping the backward movement of said tape and for operating said camera advancing means to advance a new frame of film, switch means operative at the end of the advance of said new frame to operate said tape reader in a forward direction, and means effective during forward operation of said tape reader to render said printer control circuitry operable whereby a frame reprint cycle is taken.

3,124,785
MAGNETIC MEMORY CORE
Cravens L. Wanlass, Woodland Hills, Calif., assignor, by mesne assignments, to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Apr. 20, 1959, Ser. No. 807,390
6 Claims. (Cl. 340—174)



1. In a circuit element for use as a memory unit or the like, the combination of: a block of magnetic material having first and second openings therethrough parallel to each other with a first flux zone therebetween, and a third opening therethrough perpendicular to said second opening with a second flux zone therebetween, and including a first flux path about said first opening, a second flux path about said second opening such that magnetic fluxes along said first and second paths aid and cancel in said first zone, with said second flux path having a greater reluctance than said first flux path, and a third flux path about said third opening intersecting and perpendicular to said second flux path in said second zone; first means for generating a flux about said first opening; second means for generating a flux about said first opening with simultaneous operation of said first and second means producing a flux about said second opening and in said second zone; third means for generating a flux about said third opening; and output means for determining flux changes occurring about said second opening during operation of said third means, with flux change about said second opening producing an output pulse on a conductor in said second opening with the polarity of said output pulse being a function of the polarity of the flux about said second opening and independent of the polarity of the flux about said third opening.

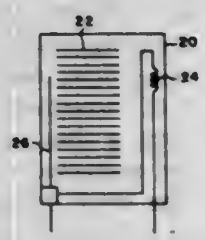
3,124,786
ELECTRONIC INTERRUPTER
Otho D. Grandstaff, Oak Park, and William A. Alden, St. Charles, Ill., assignors to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Filed July 7, 1960, Ser. No. 41,416
10 Claims. (Cl. 340—174)



10. A signal generator for providing signals which may be varied in time and duration comprising: a plurality of magnetic cores of substantially rectangular hysteresis loop material, each having a plurality of windings; signal generating means for applying a signal to a winding on at least one of said magnetic cores, said plurality of windings including a signal input, a signal advance and a signal output winding; coupling means individually connecting said signal advance winding on one of said magnetic cores with said signal input winding on a succeeding magnetic core, said coupling means enabling said signal to be progressively advanced through each of said magnetic cores in succession; control means connected to said signal input winding on each of said magnetic cores for controlling the advancement of said signal through said magnetic cores; and means serially connected between said signal input winding on each of said magnetic cores and said control means for maintaining a signal flow through said signal input winding allowing a signal to be magnetically induced in said output winding during the time said signal is flowing in said signal input winding, said means comprising a battery eliminator winding having a rectifier serially connected therewith and a capacitor bridging said battery eliminator winding and said rectifier such that a signal from said signal generating means induced in said battery eliminator winding is rectified to charge said capacitor to maintain current flow in said input winding.

3,124,787
FERRITE CORE STORAGE DEVICE
William J. Bartik, Hatboro, Pa., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Sept. 1, 1960, Ser. No. 53,417
8 Claims. (Cl. 340—174)

1. In a ferrite core storage device the improvement comprising heating means associated with said device



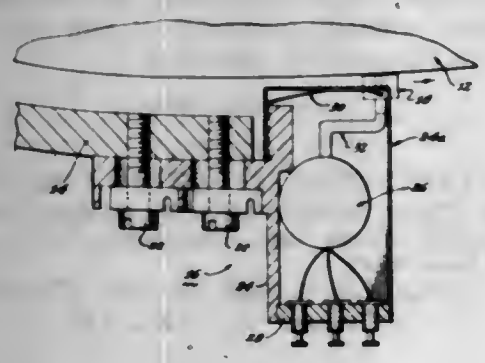
and effective to maintain the temperature of the ferrite cores at a substantially constant predetermined level above normal atmospheric temperature.

3,124,788

MAGNETIC HEAD AND DRUM MEMORY SYSTEM

Russell D. Ricketts, Woodland Hills, and Claus O. Silldorff, Venice, Calif., assignors to Litton Industries of California, Beverly Hills, Calif.

Filed June 16, 1958, Ser. No. 742,179
8 Claims. (Cl. 340—174.1)



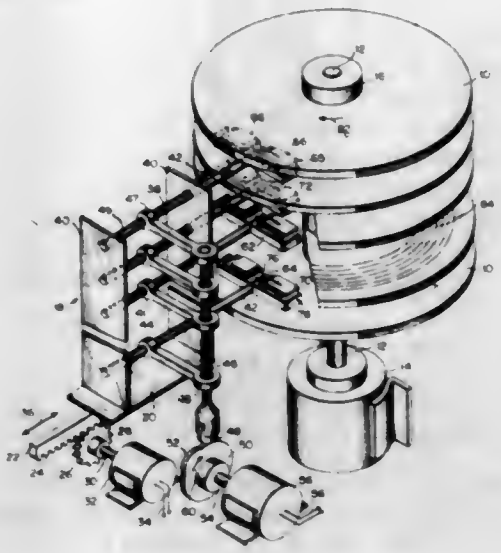
1. In a magnetic memory system responsive to an applied electric signal for recording the applied electric signal, the applied electrical signal representing intelligence information, the combination comprising: a rotatable drum having a magnetizable periphery; frame means positioned adjacent said drum; first means mounted on said frame for rotating said drum; a transducer mounting station connected to said frame, said station being contiguous with said magnetizable periphery of said drum; a magnetic transducer including a transducer mounting bracket coupled to said transducer mounting station and a transducer head having a gap therein and a bottom side, said gap intersecting said bottom side along a gap line; second means for urging said bottom side of said transducer head against said drum; third means for connecting said transducer head to said transducer mounting bracket to permit said transducer head to rotate about an axially oriented axis and a circumferentially oriented axis and to move radially in response to contact with the drum periphery whereby said gap line remains in contact with said magnetizable periphery despite irregularities therein; constraining means for constraining said transducer head from circumferential movement; said constraining means including a member supported on the magnetic head and stop means affixed with respect to the transducer and cooperating with said member to prevent circumferential movement of said head, and first coupling means for adjustably positioning said transducer mounting bracket to said transducer mounting station whereby said transducer is circumferentially adjustable with respect to said drum.

3,124,789

MOUNTING DEVICE FOR MULTIPLE MAGNETIC TRANSDUCER ASSEMBLIES

William J. Wasylenko, Philadelphia, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Filed Aug. 19, 1958, Ser. No. 755,915
1 Claim. (Cl. 340—174.1)



Electromagnetic transducer mounting apparatus for use with movable record media comprising:

(*a*) a frame member including a pair of upstanding parallel arms,

(*b*) a plurality of rigid bar-like members rockably mounted between said parallel arms and including an extension projecting away from one of said arms terminating in a reduced end portion,

(*c*) each of said bar-like members being provided with a longitudinal groove extending at least the width of said frame member,

(*d*) a yoke-shaped member carried by each extension of said bar-like member,

(*e*) a rectangular frame member pivotally mounted on opposite sides of said reduced end portion between the outer end of each side of said yoke member and said end portion,

(*f*) an electromagnetic transducer pivotally mounted within each said rectangular frame member at right angles to said frame member mounting effectively providing a gimbal mounting for said transducer,

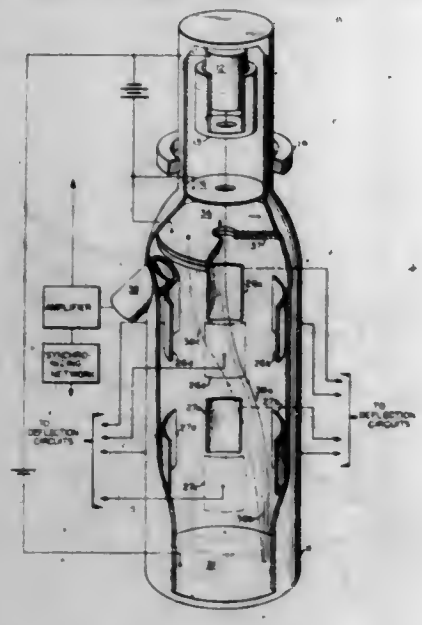
(*g*) a vertical shaft disposed adjacent to said frame member,

(*h*) a rocker arm for each bar-like member one end of which is slidable in the groove in a respective bar-like member and the opposite end of which is pivoted to said vertical shaft and rockable therewith,

(*i*) a rack and pinion for moving said frame member effective to impart horizontal motion to said transducers thereby to position said transducers between confronting record members with which each pair of transducers may be operatively associated, and

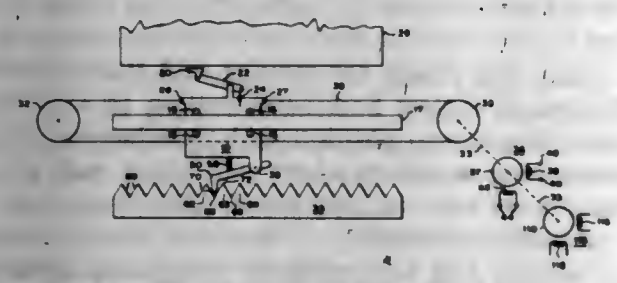
(*j*) cam means driven by a source of rotative torque for moving said vertical shaft in opposite directions thereby to shift said bar-like members thus to move the transducers of each bar-like member in opposite directions relative to one another whereby to position each transducer adjacent the confronting surface of a respective recording member.

3,124,790
APPARATUS FOR READING MAGNETIC OR ELECTROSTATIC BITS
Jack D. Kuehler, San Jose, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Jan. 30, 1959, Ser. No. 790,249
1 Claim. (Cl. 340—174.1)



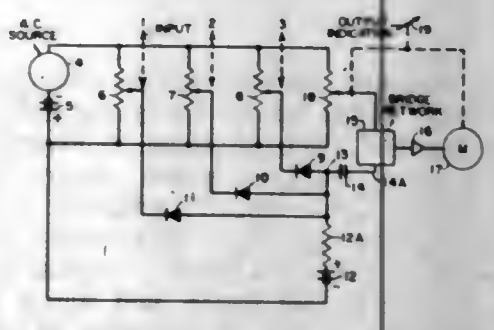
Apparatus for determining the distribution of magnetic or electrostatic bits on a surface comprising means for directing a beam of electrons toward said surface, means for decelerating and reversing said electrons as they approach said surface so that said beam reverses direction just prior to reaching said surface but after coming within the field of a bit on said surface immediately adjacent the point of said beam reversal, means for scanning said beam across said surface to cause said beam to successively come within the fields of different ones of said bits, a light-emissive plate having an opening disposed on the path of the returning beam after said reversal of direction, whereby said returning beam passes through said opening when said beam is not deflected by one of said fields surrounding one of said bits, and said beam strikes said light-emissive plate when said beam is deflected by one of said fields, and means for detecting the emission of light from said plate to determine the distribution of said bits on said surface.

3,124,791
POSITIONING MECHANISM CONTROL CIRCUIT
Herbert F. Welsh, Philadelphia, and James B. Deysher, Ambler, Pa., and Beverly L. Crew, Rockville, Md., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed June 17, 1960, Ser. No. 36,964
2 Claims. (Cl. 340—174.1)



1. A recording system comprising:
a recording member mounted for movement in a certain direction and having a plurality of tracks extending in said direction and spaced transversely thereto,
a recording transducer carriage having a transducer movable adjacent said recording member and transverse to said direction of movement to different positions corresponding to said tracks,
a rack having a plurality of V-shaped teeth spaced to correspond to said tracks, said rack being transverse to said direction of movement, the junction between each tooth defining a step position,
a spring biased pawl mounted on said carriage for engagement with the teeth of said rack,
a motor coupled to move said carriage with respect to said rack,
control means for selectively energizing said motor with a source of power for moving said carriage from one step position to another, said energization being applied for a predetermined period of time sufficient in duration to cause said motor to move said carriage along said rack a distance to move said pawl from a step position junction along the face and over the point of its associated tooth to the opposite face thereof, and
a tachometer coupled in driving relationship with said motor and said carriage and electrically coupled to said control means in a manner to oppose the energization of said motor by said source, said tachometer being effective to brake the motion of said carriage as the spring bias of the pawl causes said pawl to move along said opposite face of said associated tooth to its associated junction defining the next step position, whereby overshoot of said next step position is substantially prevented.

3,124,792
ELECTRONIC SELECTION CIRCUIT
Sherwood Thaler, Stamford, Conn., assignor to Simmonds Precision Products, Inc., Tarrytown, N.Y., a corporation of New York
Filed Aug. 3, 1960, Ser. No. 47,190
5 Claims. (Cl. 340—179)

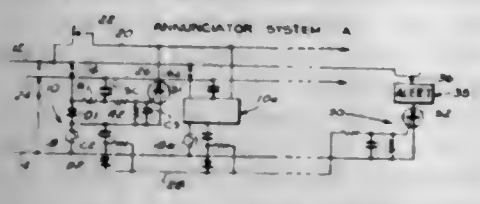


1. An electronic scanning and selection circuit comprising a series of at least two potentiometer means for individually receiving at least two input signals mechanically coupled to the adjustable tap of said potentiometer means, means connected to all of said potentiometer means for producing at a node a signal equal to the maximum signal of said individually received input signals, means for supplying both direct current and alternating currents to said potentiometer means and means for indicating the magnitude of said maximum input signal.

3,124,793
ANNUNCIATOR SYSTEMS
George E. Foster, 7917 S. Yale Ave., Chicago, Ill.
Filed Mar. 16, 1961, Ser. No. 96,253
20 Claims. (Cl. 340—213.2)

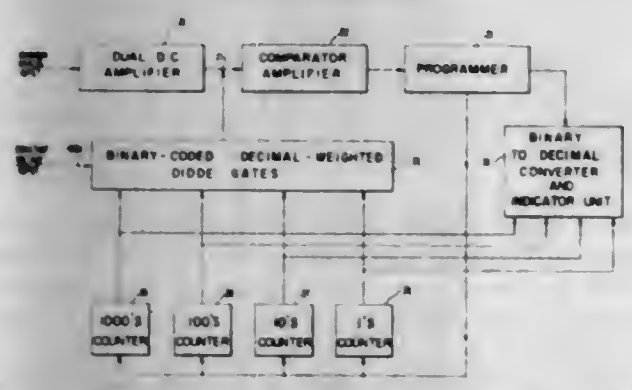
1. An annunciator system for monitoring respective remote locations each having a circuit over which a respective signal is transmitted responsive to a change in the condition at the respective location, the improvement comprising a bistable element connected in shunt with a respective one of each of the circuits and whose stable state

is reversed responsive to a signal transmitted over the respective circuit means for applying signals transmitted over said circuits in controlling relation to a respectively associated bistable element thereby to shift said last named element to a reversed, conducting condition, and an indicator connected in series with a respective one of each of



the bistable elements and with the respective transmitting circuit and operated either by the signal or by the respective bistable element in the reversed state whereby said indicator is energized by way of both said circuit and said element upon application of a signal to said circuit and remains operative irrespective of the disappearance of said signal.

3,124,794
ELECTRONIC DIGITAL VOLTMETER
James R. Patmore, Neptune, N.J., assignor to Electronic Associates, Inc., Long Branch, N.J., a corporation of New Jersey
Filed Dec. 5, 1958, Ser. No. 778,364
10 Claims. (Cl. 340—347)



9. In an analog-to-digital conversion system for measuring unknown analog signals and presenting the measurements in decimal form, in combination,

at least three binary coded decimal counters each including at least one set circuit for generating binary coded decimal signals corresponding to their count, a binary to decimal converter being connected to said counters for producing a reference signal of amplitude corresponding to the value of said binary coded decimal count,

means for continuously comparing an amplitude significant signal of unknown value with the reference signal for and for supplying an output signal indicative of disagreement between the values thereof,

each of said counters corresponding respectively to one of at least three decimal digits in a number the final value of which corresponds to the value of the input signal,

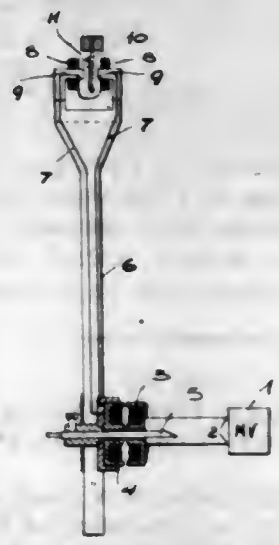
programming means operatively connected to said comparing means and to said counters to vary the amplitude of the reference signal according to a predetermined program in dependence upon the output signals from said comparing means and for producing an initial condition of the reference signal by application of signals to said set circuits for initially setting that one of said counters which corresponds to the most significant decimal digit in the number to a minimum count and for initially setting all of the remaining counters which correspond to less significant decimal digits in the number to a maximum count,

said programming means including shift means connected to each of said counters for producing from the counter last set to its minimum count an actuating signal for application to the set circuit of the counter which represents the next less significant decimal digit with respect to said last minimum set counter to set to a minimum count said last significant digit counter when (1) the count setting of said last minimum set counter agrees with the corresponding decimal digit to said input signal and (2) the value of said reference signal is greater in magnitude than the value of said input signal,

means for actuating each said counter to count upwardly upon application thereto of count signals, and

said programming means including additional means for application to said counter last set to its minimum count of count signals only (1) when the magnitude of said reference signal is less than the magnitude of said input signal and (2) until the count attained by said actuated counter agrees with the corresponding decimal digit of said input signal.

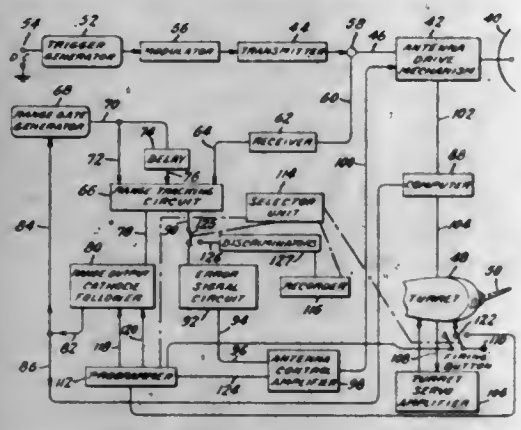
3,124,795
WEIGHING MACHINE
Carlo Zardi, Milan, Italy, assignor to Atoma S.p.A., Milan, Italy
Filed July 24, 1961, Ser. No. 126,256
Claims priority, application Italy July 28, 1960
5 Claims. (Cl. 340—347)



1. A weighing machine having electrically energizable recording means for recording the result of a weighing operation, comprising, in combination, a stationary reference member subdivided into different areas respectively associated with different weights; mechanical indicator means movable between a plurality of positions along said reference member, said different positions individually corresponding to said different areas associated with different weights that may be established as result of a weighing operation; a source of alternating voltage; electric indicator means including magnetic field producing means operatively connected with said source for being energized thereby and mounted on said mechanical indicator means in a position to be moved by the latter along said stationary reference member; and signal producing means including a plurality of induction coil means arranged along said stationary reference member in different positions respectively corresponding to said different areas thereof associated with different weights for being selectively energized inductively by said field producing means when the latter are in any position of said mechanical indicator means located substantially opposite at least a portion of any of said induction coil means and

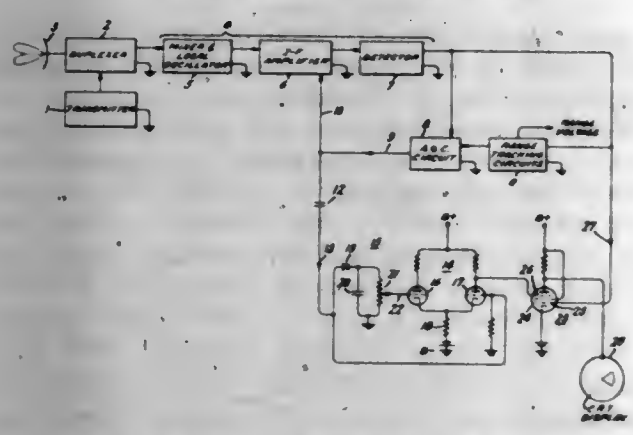
for issuing in such position corresponding to a weight established by a weighing operation an energizing signal representing such weight to the recording means.

3,124,796
ARMAMENT EVALUATOR
Thaddeus V. Tubielewicz, New York, and Roy B. Fredrickson, Kirkwood, N.Y., assignors to General Electric Company, a corporation of New York
Filed Jan. 19, 1959, Ser. No. 787,513
1 Claim. (Cl. 343—7)



An armament evaluator for use with the fire control system comprising an evaluator device electrically connected with the fire control system, said evaluator device having means for operating the antenna of such system for simulating the tracking of a target, additional means being provided to simulate a variable target range to the range tracking circuitry of the fire control system, said evaluator device being designed to fire the gun of the fire control system when the simulated target is at the correct range and position for scoring a hit, and including means for obtaining an indication of the closeness of the path of the fired projectile to the area in space where the simulated target is located, whereby the effectiveness of the fire control system may be evaluated.

3,124,797
SPIRAL SCAN RADAR UTILIZING A.G.C. MODULATION VOLTAGE FOR DERIVING TARGET POSITION
Edward R. Orear, Whitesboro, N.Y., assignor to General Electric Company, a corporation of New York
Filed June 29, 1959, Ser. No. 823,771
8 Claims. (Cl. 343—16)



1. In an airborne conical scan radar including means for transmitting electromagnetic energy in a predetermined pattern about a reference axis, means for receiving pulses reflected from an airborne target, and an antenna common to the transmit and receive means, means to determine the line-of-sight to an airborne target with respect to a reference axis comprising:

(*a*) AGC means to keep substantially constant the amplitude of the output of the receiving means;

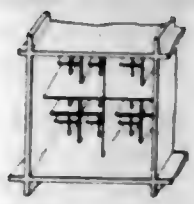
(*b*) means to derive from said AGC means and AGC modulation signal varying sinusoidally with the spin rate of the antenna, whereby the phase of the AGC signal is indicative of the position of the antenna with respect to the reference axis, the AGC modulation signal having an instantaneous minimum value when the antenna is pointed closest to the target;

(*c*) means for amplifying the output of the receiver, the AGC modulation signal being applied to said amplifying means;

(*d*) gating means responsive to the amplitude and phase of said AGC signal to control the duration and occurrence in time of the output signal of said amplifying means; and

(*e*) target position indicating means, the output of said amplifying means being applied to said target position indicating means to obtain an indication of the position of the target with respect to the reference axis.

3,124,798
REFLECTION-FREE DAMPING STRUCTURE FOR SPACE-PROPAGATED WAVES
Otto Zinke, Darmstadt, Germany, assignor to Siemens & Halske Aktiengesellschaft, Munich and Berlin, Germany, a corporation of Germany
Filed Oct. 19, 1955, Ser. No. 541,405
13 Claims. (Cl. 343—18)

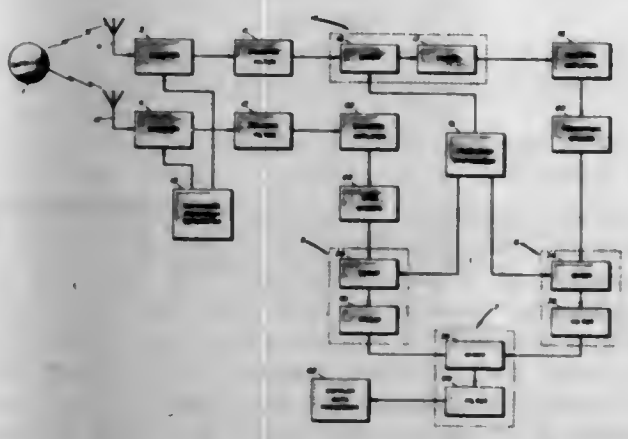


1. In a substantially reflection-free damping structure for space-propagated electromagnetic waves, the combination of a plurality of walls made of plane plates of non-metallic wave-damping material, arranged to define a system comprising a plurality of mutually adjacent relatively large and relatively small cells, with each relatively large cell being subdivided by a plurality of relatively small cells, each of said cells being open at a corresponding end, at which space-propagated waves may enter, corresponding cells being symmetrically disposed with respect to a plane extending transverse to said walls, each of said walls being relatively thin as compared with the corresponding dimension of the respective cell which is at least partially defined thereby, said walls being provided with surfaces formed of a material having electromagnetic wave-damping characteristics, said corresponding open ends of the relatively small cells, at which space-propagated waves may enter, being spaced inwardly from the corresponding open ends of the relatively large cells whereby successively smaller cells are presented in the direction of propagation of waves entering such open ends.

3,124,799
IONOSPHERIC REFRACTION CORRECTION SYSTEM
Guenter E. Hagedorn, Washington, D.C., William H. Guier, Silver Spring, Md., George C. Weiffenbach, Washington, D.C., and Lauren J. Rueger, Silver Spring, Md., assignors to the United States of America as represented by the Secretary of the Navy
Filed July 5, 1962, Ser. No. 207,828
14 Claims. (Cl. 343—100)

1. In an ionospheric refraction correction system for an orbiting satellite wherein a pair of continuous wave signals are transmitted from said satellite in a predetermined ratio; a refraction corrector comprising, means for receiving the transmitted signals, means for extract-

ing a pair of composite frequencies from each received signal, means to divide one of said composite frequencies by the base of the ratio of the transmitted frequencies, means to divide the other of said composite frequencies by the percentage of the ratio of the transmitted frequencies, each of said composite frequencies including



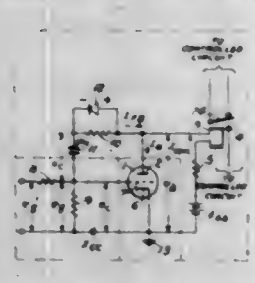
a frequency component attributable to Doppler change and an error frequency component attributable to the refractive effect of the ionosphere, and means to subtract one quotient frequency from the other quotient frequency to cancel the error frequency attributable to the refractive effect of the ionosphere.

3,124,800

ELECTRONIC SWITCHING DEVICE

Etienne C. L. de Faymoreau, Nutley, and Mark Mandel, Bloomfield, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland

Filed Aug. 4, 1959, Ser. No. 831,557
5 Claims. (Cl. 343—106)



1. A switching control circuit comprising an amplifier device having at least first, second and third electrodes, a current-responsive device having at least two stable output signal producing conditions connected to said first electrode, a source of input energy coupled to said second electrode to control the operation of said amplifier device and maintain said current responsive device in a predetermined one of said stable conditions, and means connected to said first and second electrodes to maintain said current responsive device in said predetermined stable condition for a predetermined interval of time whenever said input energy is interrupted, and should any such interruption be shorter than said predetermined interval of time said current responsive device will remain in said predetermined stable condition.

3,124,801

LINEAR ARRAY WITH ADJUSTABLE COUPLING NETWORK FOR BEAM STEERING

Francis P. Callahan, Jr., Levittown, Pa., assignor to General Atronics Corporation, Bala-Cynwyd, Pa., a corporation of Pennsylvania

Filed Feb. 12, 1958, Ser. No. 714,721
12 Claims. (Cl. 343—854)

10. An antenna device comprising a plurality of at least three antenna units, and a network interconnecting said units and a signal terminal, said network including a plurality of banks of signal paths, the bank nearest the terminal consisting of a pair of paths branching out from said terminal toward said antenna units, and each succeeding one of said banks comprising pairs of signal paths, different ones of said paths branching out toward said



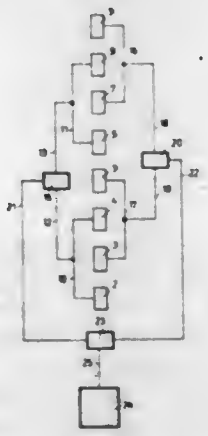
antenna units from different ends of the signal paths of the preceding bank, one path in each said pair of signal paths including a signal delay element, and each said bank other than said bank nearest said terminal means being provided with means for joining the path in each said pair which includes a delay element to the path in a different pair in the same bank which is without a delay element.

3,124,802

PLURAL MAST-MOUNTED ANTENNAS SELECTIVELY DEENERGIZABLE IN GROUPS WITHOUT DESTRUCTION OF RADIATION PATTERN

Georg von Dall'Armi, Erding-Klettham, Germany, assignor to Siemens & Halske Aktiengesellschaft, Berlin and Munich, a corporation of Germany

Filed June 5, 1962, Ser. No. 200,088
Claims priority, application Germany June 28, 1961
6 Claims. (Cl. 343—876)



1. A high gain antenna comprising a plurality of radiators arranged, for operation with identical frequency, vertically successively upon a mast, said radiators being subdivided to form at least two independent groups which are individually independently operatively connectible, the subdivision of said radiators being such that radiators of the respective groups are along the mast distributed in mixed manner with radiators of one group alternately followed by radiators of another group.

3,124,803

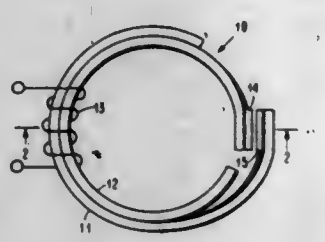
MAGNETIC TRANSDUCER

William J. Homan, San Jose, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Sept. 20, 1960, Ser. No. 57,343
3 Claims. (Cl. 346—74)

3. A magnetic transducer comprising a ring structure having an air gap offset from the plane of the ring and a

coil spaced from the air gap, the overall height of the transducer being only a fraction of the diameter of the ring structure, said ring being formed of a plurality of sheet metal strips arranged in partial overlapping relation, each strip having a laterally extending tab adjacent one end, the tabs of adjacent strips being aligned in over-



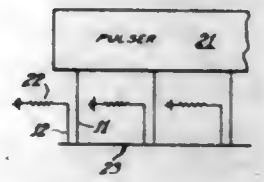
lapping relation on a common radius of the ring, the tabs converging away from the plane of the ring to define an air gap between their free extremities, the longitudinal axis of the air gap being normal to the common radius through the tabs, and a coil wound on the overlapped strips at a point diametrically removed from the tabs.

3,124,804

ELECTROSTATIC RECORDING HEAD

Edward M. Johnson, King of Prussia, and Herman Epstein, Philadelphia, Pa., assignors to Omnitronics, Inc., Philadelphia, Pa., a corporation of Delaware

Filed Oct. 16, 1961, Ser. No. 145,373
7 Claims. (Cl. 346—74)

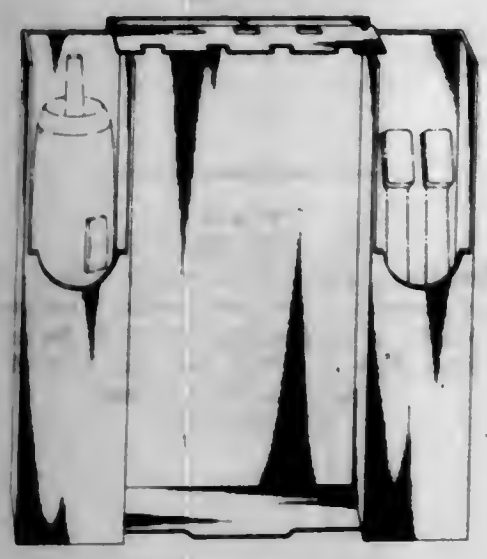


2. In an electrostatic recording head for recording a plurality of code channels on a recording medium, the combination of a pair of high melting point pin electrodes disposed parallel to each other and each having a free end adjacent the recording medium, a high voltage pulse circuit for providing negative high voltage pulses to one of said electrodes, and a current limiting resistor connected in series between the other of said electrodes and ground.

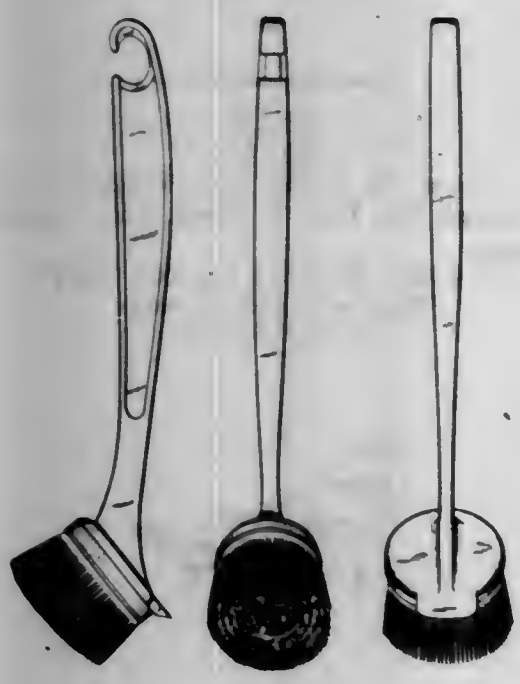
DESIGNS

MARCH 10, 1964

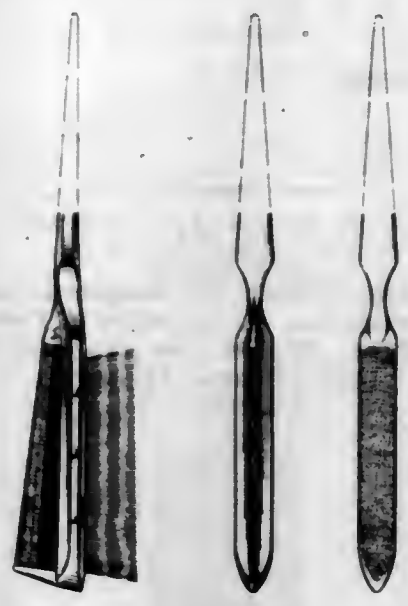
197,636
CASING FOR STORAGE OF AN ELECTRIC TOOTHBRUSH POWER UNIT AND BRUSHES THEREFOR
George H. Frost, Mansfield, Ohio, assignor to Westinghouse Electric Corporation, a corporation of Pennsylvania
Filed May 24, 1963, Ser. No. 75,063
Term of patent 14 years
(Cl. D4—3)



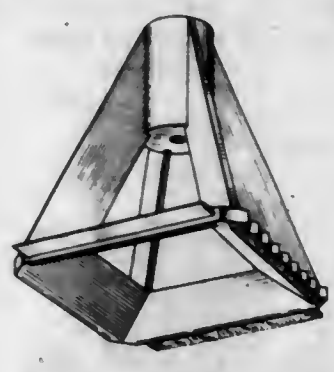
197,637
COMBINATION DISHWASHING BRUSH AND SCRAPER
Joseph Vallis, Toronto, Ontario, Canada, assignor to Valden Company, Toronto, Ontario, Canada
Filed Mar. 19, 1962, Ser. No. 69,334
Term of patent 14 years
(Cl. D9—2)



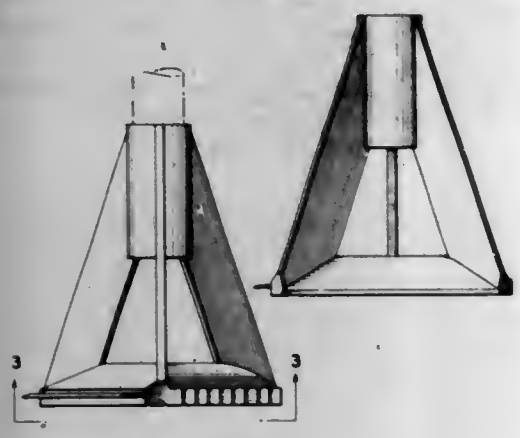
197,638
COMBINED BRUSH AND COMB OR THE LIKE
Robert Lardenois, Hermes, Oise, France, assignor to Dent & Vallis (Canada) Ltd., Toronto, Canada
Filed Dec. 27, 1962, Ser. No. 73,146
Claims priority, application France June 30, 1962
Term of patent 14 years
(Cl. D9—2)



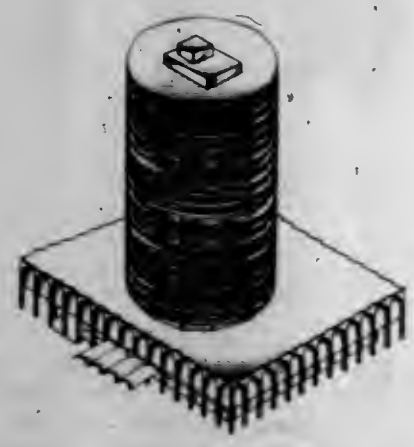
197,639
COMBINATION BRUSH, SCRAPER AND SQUEEGEE FOR CLEANING WINDSHIELDS
Anne Doster, Toronto, Ontario, Canada, assignor to Woodbridge Moulded Products Limited, Toronto, Ontario, Canada, a corporation of Canada
Filed June 12, 1963, Ser. No. 75,314
Term of patent 3½ years
(Cl. D9—6)



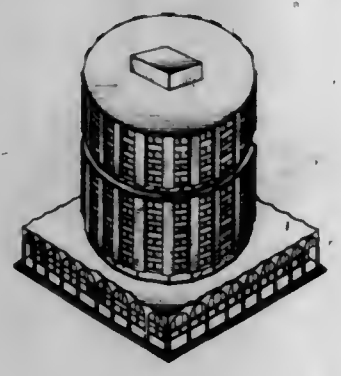
197,640
COMBINATION SCRAPER AND SQUEEGEE FOR CLEANING WINDSHIELDS
Anne Doster, Toronto, Ontario, Canada, assignor to Woodbridge Moulded Products Limited, Toronto, Ontario, Canada, a corporation of Canada
Filed June 12, 1963, Ser. No. 75,321
Term of patent 3½ years
(Cl. D9—6)



197,641
BUILDING
Ross E. Garrett, Chicago, Ill., assignor to Kesk, Inc., New Orleans, La., a corporation of Delaware
Filed Mar. 25, 1963, Ser. No. 74,116
Term of patent 14 years
(Cl. D13—1)



197,642
BUILDING
Ross E. Garrett, Chicago, Ill., assignor to Kesk, Inc., New Orleans, La., a corporation of Delaware
Filed Mar. 25, 1963, Ser. No. 74,122
Term of patent 14 years
(Cl. D13—1)



197,643
CHAIR
Gideon A. Kramer, 2401 SW. 172nd, Seattle, Wash.
Filed Aug. 31, 1962, Ser. No. 71,507
Term of patent 14 years
(Cl. D15—1)



197,644
CHAIR
Carl W. Sundberg and Montgomery Ferar, Southfield, Mich., assignors to American Seating Company, Grand Rapids, Mich., a corporation of New Jersey
Filed July 26, 1963, Ser. No. 75,978
Term of patent 14 years
(Cl. D15—1)



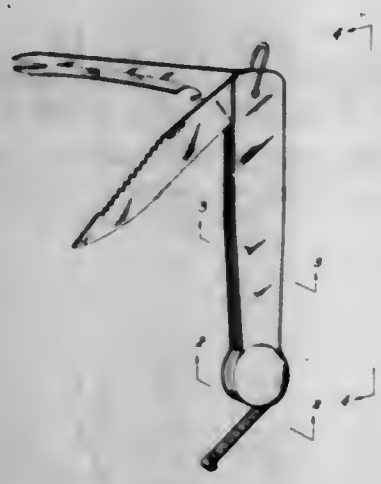
197,645
CHAIR
Arthur C. Ferro, St. Louis, Mo., assignor to Contour Chair-Lounge Co., Inc., St. Louis, Mo., a corporation of Missouri
Filed Mar. 29, 1963, Ser. No. 74,217
Term of patent 14 years
(Cl. D15—11)



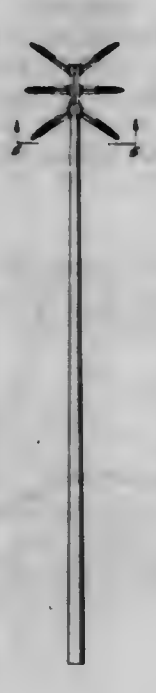
197,646
PODIATRIST CHAIR
Hyman J. Rose, Swampscott, Mass., assignor to Contour Chair-Lounge Co., Inc., St. Louis, Mo., a corporation of Missouri
Filed Sept. 3, 1963, Ser. No. 76,454
Term of patent 14 years
(Cl. D15—11)



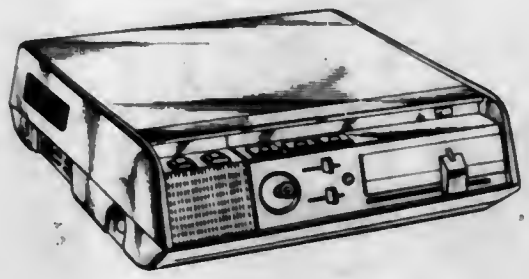
197,647
FISHERMAN'S KNIFE
Julius Feist, 141 W. 73rd St., New York, N.Y.
Filed Mar. 7, 1962, Ser. No. 69,134
Term of patent 14 years
(Cl. D22—3)



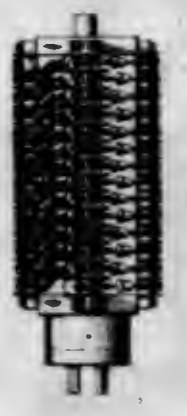
197,648
POWER TRANSMISSION POLE
Henry Dreyfuss, South Pasadena, Calif., assignor to Southern California Edison Company, Los Angeles, Calif., a corporation of California
Filed Jan. 9, 1963, Ser. No. 73,106
Term of patent 14 years
(Cl. D26—12)



197,649
DICTATING MACHINE
Frank A. Ilenin, Bloomfield Hills, Mich., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Dec. 24, 1959, Ser. No. 58,810
Term of patent 14 years
(Cl. D26—14)



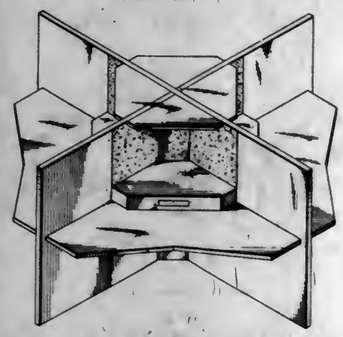
197,650
DIODE RECTIFIER
Earl P. Lind, Belleville, Ontario, Canada, assignor to Northern Electric Company, Limited, Montreal, Canada, a corporation of Canada
Filed Jan. 23, 1963, Ser. No. 73,286
Term of patent 14 years
(Cl. D26—15)



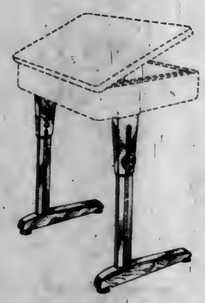
197,651
SCHOOL DESK OR THE LIKE
Carl W. Sundberg and Montgomery Ferar, Southfield, Mich., assignors to American Seating Company, Grand Rapids, Mich., a corporation of New Jersey
Filed Jan. 10, 1963, Ser. No. 73,125
Term of patent 14 years
(Cl. D33—11)



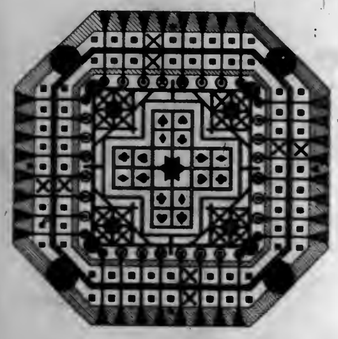
197,652
STUDY CARRELL
Robert M. Courtwright, Tacoma, Wash., assignor to Educators Manufacturing Company, Tacoma, Wash.
Filed May 15, 1963, Ser. No. 74,894
Term of patent 14 years
(Cl. D33—11)



197,653
SCHOOL DESK OR THE LIKE
Carl W. Sundberg and Montgomery Ferar, Southfield, Mich., assignors to American Seating Company, Grand Rapids, Mich., a corporation of New Jersey
Filed July 26, 1963, Ser. No. 75,980
Term of patent 14 years
(Cl. D33—11)



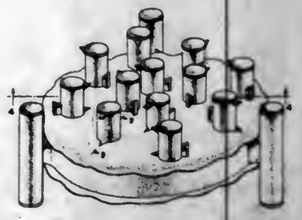
197,654
GAME BOARD
Jay Ward, Box 214, Huron, Ohio
Filed June 6, 1963, Ser. No. 75,254
Term of patent 14 years
(Cl. D34—5)



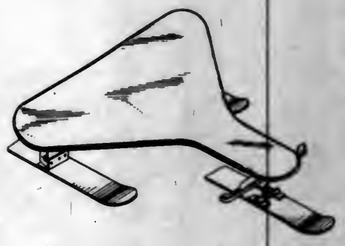
197,655
TOY BUILDING SET UNIT
James O. Kuhn, Cincinnati, Ohio, assignor to Kenner Products Company, Cincinnati, Ohio, a corporation of Delaware
Filed Sept. 24, 1962, Ser. No. 71,823
Term of patent 14 years
(Cl. D34—15)



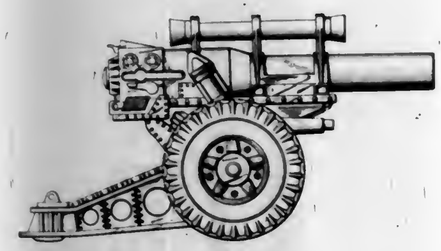
197,656
POUNDING TOY
Bill Markham, Los Angeles, Calif., assignor to Lakeside Industries, Inc., Minneapolis, Minn., a corporation of Delaware
Filed Nov. 8, 1962, Ser. No. 72,438
Term of patent 14 years
(Cl. D34—15)



197,657
SNOW SLED
William R. Gibson, Butte, Mont.
Filed Dec. 31, 1962, Ser. No. 72,992
Term of patent 14 years
(Cl. D34—15)



197,658
TOY HOWITZER
Roy Fitzgerald Constan, Staten Island, N.Y., assignor to Deluxe Reading Corp., Elizabeth, N.J., a corporation of New Jersey
Filed Apr. 24, 1963, Ser. No. 74,602
Term of patent 14 years
(Cl. D34—15)



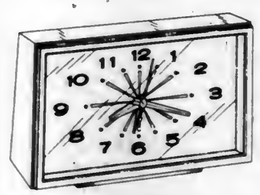
197,659
LAWN MOWER
Frank Hill, 301 Rockmont Road, Greenville, S.C.
Filed Oct. 25, 1962, Ser. No. 72,265
Term of patent 14 years
(Cl. D40—1)



197,660
CLOCK
Gordon Florian, Fairfield, Conn., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed Oct. 18, 1961, Ser. No. 67,145
Term of patent 14 years
(Cl. D42—7)



197,661
CLOCK
Donald E. Leman, Chicago, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed June 8, 1962, Ser. No. 70,487
Term of patent 14 years
(Cl. D42—7)



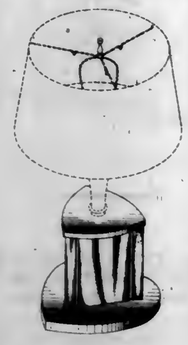
197,662
CLOCK
Benjamin Levy, 1703 Exeter Road, Hewlitt, N.Y.
Filed Mar. 21, 1963, Ser. No. 74,068
Term of patent 7 years
(Cl. D42—7)



197,663
GRILL
Campbell O'Reilly, 30 W. 11th St., New York, N.Y.
Filed Nov. 15, 1961, Ser. No. 67,546
Term of patent 14 years
(Cl. D44—1)



197,664
COMBINED LAMP AND PICTURE HOLDER
Wellings J. Blackmon, 1521 Park Place S., North Charleston, S.C.
Filed July 3, 1963, Ser. No. 75,655
Term of patent 14 years
(Cl. D48—20)



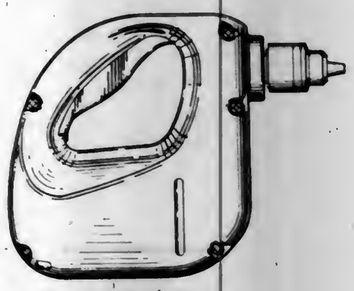
197,665
DECORATIVE COLUMN
Edward J. Kusel, 2343 Ridgewood Road, and Robert S. Mankin, 167 Overwood Road, both of Akron, Ohio
Filed Aug. 6, 1963, Ser. No. 76,122
Term of patent 14 years
(Cl. D54—2)



197,666
SPOON OR SIMILAR ARTICLE
Marianne Denzel, Berndorf, Lower Austria, Austria, assignor to Vereinigte Metallwerke Ranshofen-Berndorf Aktiengesellschaft, Braunau am Inn-Ranshofen, Upper Austria, a corporation of Austria
Filed Oct. 23, 1961, Ser. No. 67,208
Claims priority, application Austria Apr. 22, 1961
Term of patent 3½ years
(Cl. D54—12)



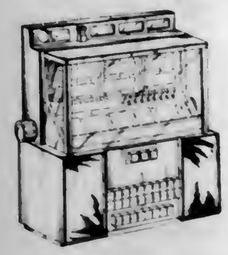
197,667
PORTABLE POWER TOOL OR SIMILAR ARTICLE
Charles Henry Gubbins, London, England, assignor to Wolf Electric Tools Limited, London, England, a company of Great Britain
Filed Nov. 23, 1962, Ser. No. 72,587
Claims priority, application Great Britain June 19, 1962
Term of patent 3½ years
(Cl. D54—14)



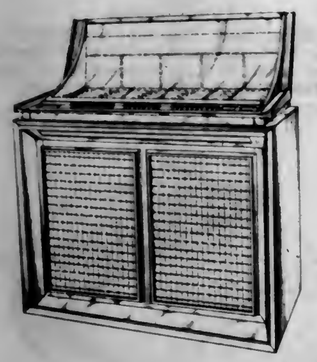
197,668
INDICATOR DIAL FOR A RADIO OR THE LIKE
Melvin H. Boldt, Glenview, Ill., assignor to Zenith Radio Corporation, Chicago, Ill., a corporation of Delaware
Filed Jan. 22, 1962, Ser. No. 68,394
Term of patent 7 years
(Cl. D56—4)



197,669
COMBINED REMOTE CONTROL UNIT AND SPEAKER FOR AN AUTOMATIC PHONOGRAPH
Mahlon W. Kenney, Oak Park, Ill., and Carl W. Sundberg, Bloomfield Hills, Mich., assignors to The Seeburg Corporation, Chicago, Ill.
Filed Nov. 2, 1962, Ser. No. 72,349
Term of patent 14 years
(Cl. D56—4)



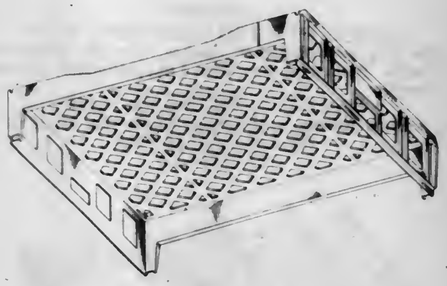
197,670
PHONOGRAPH CABINET
Carl W. Sundberg, Bloomfield Hills, Mich., and Theodore A. Dobson, Chicago, Ill., assignors to The Seeburg Corporation, Chicago, Ill.
Filed Nov. 2, 1962, Ser. No. 72,350
Term of patent 14 years
(Cl. D56—4)



197,671
STORAGE BAG FOR UNDERGARMENTS OR THE LIKE
Dorothy W. Styer, 1011 La Cadena Drive, Riverside, Calif.
Filed May 16, 1963, Ser. No. 74,912
Term of patent 14 years
(Cl. D58—2)



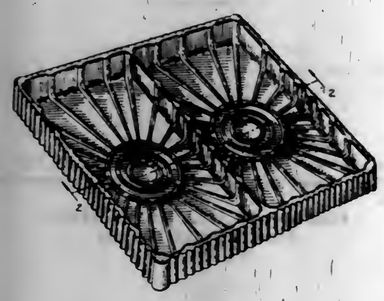
197,672
BREAD TRAY OR THE LIKE
Glen A. Rebka, Cincinnati, Ohio, assignor to The Metal Specialty Company, Cincinnati, Ohio, a corporation of Ohio
Filed May 23, 1963, Ser. No. 75,025
Term of patent 14 years
(Cl. D58—4)



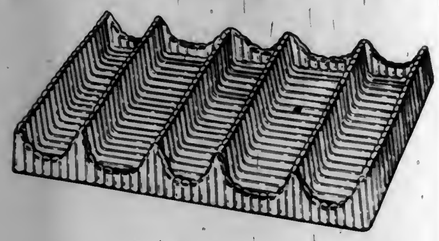
197,673
BOTTLE FOR MALT LIQUOR
Edward J. Goodall, 3944 Suitland Road SE., Washington, D.C.
Filed Dec. 22, 1961, Ser. No. 68,024
Term of patent 14 years
(Cl. D58—6)



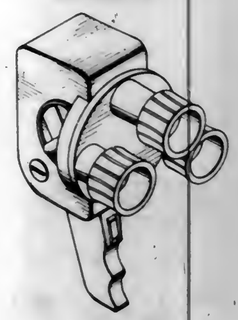
197,674
PACKAGING TRAY
Carlo Caprioli, Montreal, Quebec, Canada, assignor to Plastic Packaging Products Limited, Montreal, Quebec, Canada
Filed Sept. 10, 1962, Ser. No. 71,617
Term of patent 14 years
(Cl. D58—13)



197,675
COMPARTMENTED PACKAGING TRAY
Carlo Caprioli, Montreal, Quebec, Canada, assignor to Plastic Packaging Products Ltd., Montreal, Quebec, Canada
Filed Nov. 7, 1962, Ser. No. 72,417
Claims priority, application Canada May 10, 1962
Term of patent 14 years
(Cl. D58—13)



197,676
TRANSPARENCY FILM VIEWER
Jack W. Olsen, Santa Ana, Calif., assignor to Mario N. Tartoglio
Filed July 22, 1963, Ser. No. 75,901
Term of patent 14 years
(Cl. D61—1)



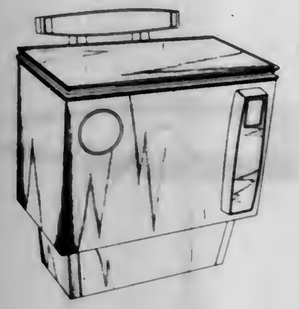
197,677
TAPE EMBOSSING TOOL
Dane H. Pedersen, Moraga, Calif., assignor to Dymo Industries, Inc., Emeryville, Calif., a corporation of California
Filed Sept. 4, 1963, Ser. No. 76,463
Term of patent 14 years
(Cl. D64—10)



197,678
TYPEWRITER
George H. Kress, Short Hills, N.J., and Yasuhiro Okuda, Brooklyn, N.Y., assignors to Royal McBee Corporation, New York, N.Y., a corporation of New York
Filed Mar. 13, 1962, Ser. No. 69,239
Term of patent 14 years
(Cl. D64—11)



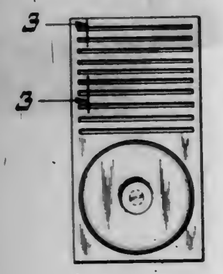
197,679
VENDOR FOR BOTTLED BEVERAGES, OR SIMILAR ARTICLE
Richard T. Cornelius, Minneapolis, Minn., and E. Burton Benjamin, Highland Park, Ill., assignors to The Cornelius Company, Anoka, Minn., a corporation of Minnesota
Filed July 3, 1962, Ser. No. 70,781
Term of patent 14 years
(Cl. D67—3)



197,680
SUBMARINE VESSEL
Thomas J. Athey, 1545 Royal Blvd., Glendale, Calif.
Filed Aug. 6, 1962, Ser. No. 71,180
Term of patent 14 years
(Cl. D71—1)



197,681
DOOR BELL
Norman William Stevenson, Macclesfield, England, assignor to V. & E. Friedland Limited, Macclesfield, England, a British company
Filed Mar. 12, 1962, Ser. No. 69,216
Claims priority, application Great Britain Sept. 13, 1961
Term of patent 14 years
(Cl. D72—1)



197,682
STAND FOR MAILBOXES
Norman B. Huret, Wadsworth, Ohio, assignor to Locke Manufacturing Company, Lodi, Ohio, a corporation of Ohio
Filed July 29, 1963, Ser. No. 75,998
Term of patent 14 years
(Cl. D74—9)



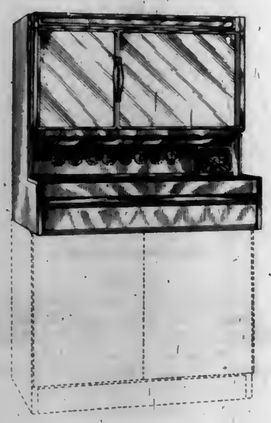
197,683
STAND FOR MAILBOXES
Edward J. Kusel, 2343 Ridgewood Road, Akron, Ohio
Filed July 29, 1963, Ser. No. 76,028
Term of patent 14 years
(Cl. D74—9)



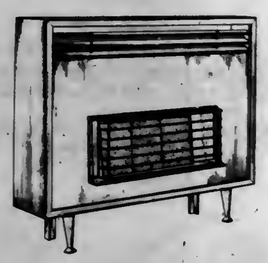
197,684
ROLLED FABRIC DISPENSER
Virgil E. Gray, 1033 Haverhill Road, West Sacramento, Calif.
Filed July 30, 1962, Ser. No. 71,076
Term of patent 14 years
(Cl. D80—1)



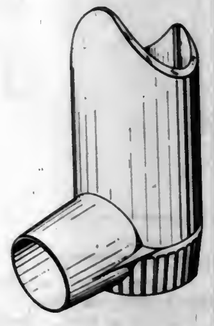
197,685
COOKING RANGE
Richard A. Heck, Southfield, Montgomery Ferar, Huntington Woods, and Charles R. Russell, Southfield, Mich., assignors to Sears, Roebuck and Co., Chicago, Ill., a corporation of New York
Filed May 11, 1962, Ser. No. 70,081
Term of patent 7 years
(Cl. D81—4)



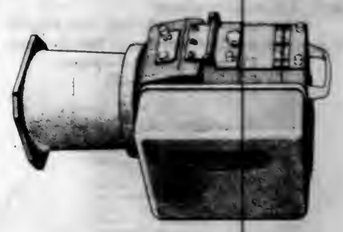
197,686
SPACE HEATER
Donald John McFall, 39a Beauchamp Ave., Leamington Spa, England
Filed Mar. 6, 1962, Ser. No. 69,112
Term of patent 14 years
(Cl. D81—19)



197,687
COMBINED AEROSOL ACTUATOR AND DISPENSER FOR MEDICAMENTS
Kenneth J. Gurian, Encino, and Robert W. Service, Burbank, Calif., assignors to Riker Laboratories, Inc., Northridge, Calif., a corporation of Delaware
Filed June 8, 1962, Ser. No. 70,483
Term of patent 14 years
(Cl. D83—1)



197,688
PHOTOFLUOROGRAPHIC CAMERA
Edgar J. Bastin, 685 Sperry Road, Chesterland, Ohio
Filed June 17, 1963, Ser. No. 75,386
Term of patent 14 years
(Cl. D83—1)



197,689
CIGARETTE HOLDER
Monte L. Levin, Roslyn Heights, N.Y., assignor to S. Lawrence Atkins, Jamaica, N.Y.
Filed Aug. 5, 1963, Ser. No. 76,113
Term of patent 14 years
(Cl. D85—8)



197,690
EMBOSSED PLASTIC SHEET MATERIAL
Staley A. Carpenter, Marietta, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
Filed Mar. 6, 1962, Ser. No. 69,106
Term of patent 14 years
(Cl. D87—3)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 10TH DAY OF MARCH, 1964

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

American Can Co.: *See*—
Asman, Norman J. Re. 25,532.
Asman, Norman J., to American Can Co. Dispensing carton. Re. 25,532, 3–10–64, Cl. 229—17.
Coover, Harry W., Jr., and J. B. Dickey, to Eastman Kodak Co. Process for making polymers containing acrylonitrile and a vinyl pyridine. Re. 25,533, 3–10–64, Cl. 260—45.5.
Dickey, Joseph B.: *See*—
Coover, Harry W., Jr., and Dickey. Re. 25,533.
Eastman Kodak Co.: *See*—
Coover, Harry W., Jr., and Dickey. Re. 25,533.
Fabula, Andrew, to Otis Elevator Co. Passenger conveyor system. Re. 25,531, 3–10–64, Cl. 198—16.
Magnuson, Roy M., deceased, by Morton Salt Co., assignee. Method of spraying and dispensing liquid. Re. 25,535, 3–10–64, Cl. 99—182.
Morton Salt Co.: *See*—
Magnuson, Roy M. Re. 25,535.
Otis Elevator Co.: *See*—
Fabula, Andrew. Re. 25,531.
Plastics, Inc.: *See*—
Schilling, Paul K. Re. 25,534.
Schilling, Paul K., to Plastics, Inc. Method of molding plastic articles. Re. 25,534, 3–10–64, Cl. 264—250.
Thompson, Daniel T. Apparatus for making an annulus. Re. 25,536, 3–10–64, Cl. 107—8.

LIST OF PLANT PATENTEES

Fischer, Carl, to Imperial Flowers Ltd. Gladiolus plant. 2,373, 3–10–64, Cl. 85.
Fischer, Carl, to Imperial Flowers Ltd. Gladiolus plant. 2,374, 3–10–64, Cl. 85.
Fischer, Carl, to Imperial Flowers Ltd. Gladiolus plant. 2,375, 3–10–64, Cl. 85.

Imperial Flowers Ltd.: *See*—
Fischer, Carl. 2,373.
Fischer, Carl. 2,374.
Fischer, Carl. 2,375.

LIST OF DESIGN PATENTEES

American Seating Co.: *See*—
Sundberg, Carl W., and Ferar. 197,644.
Sundberg, Carl W., and Ferar. 197,651.
Sundberg, Carl W., and Ferar. 197,653.
Athey, Thomas J. Submarine vessel. 197,680, 3–10–64, Cl. D71—1.
Atkins, S. Lawrence: *See*—
Levin, Monte L. 197,689.
Bastin, Edgar J. Photofluorographic camera. 197,688, 3–10–64, Cl. D83—1.
Benjamin, E. Burton: *See*—
Cornelius, Richard T., and Benjamin. 197,679.
Blackmon, Wellings J. Combined lamp and picture holder. 197,664, 3–10–64, Cl. D48—20.
Boldt, Melvin H., to Zenith Radio Corp. Indicator dial for a radio or the like. 197,668, 3–10–64, Cl. D56—4.
Caprioli, Carlo, to Plastic Packing Products Ltd. Packaging tray. 197,674, 3–10–64, Cl. D58—13.
Caprioli, Carlo, to Plastic Packaging Products Ltd. Compartmented packaging tray. 197,675, 3–10–64, Cl. D58—13.
Carpenter, Staley A., to The B. F. Goodrich Co. Embossed plastic sheet material. 197,690, 3–10–64, Cl. D87—3.
Constan, Roy F., to Deluxe Reading Corp. Toy howitzer. 197,658, 3–10–64, Cl. D34—15.
Contour Chair-Lounge Co., Inc.: *See*—
Ferro, Arthur C. 197,645.
Rose, Hyman J. 197,646.
Cornelius Co., The: *See*—
Cornelius, Richard T., and Benjamin. 197,679.
Cornelius, Richard T., and E. B. Benjamin, to The Cornelius Co. Vendor for bottled beverages or similar article. 197,679, 3–10–64, Cl. D67—3.
Courtwright, Robert M., to Educators Mfg. Co. Study carrell. 197,652, 3–10–64, Cl. D33—11.
Deluxe Reading Corp.: *See*—
Constan, Roy F. 197,658.
Dent & Vallis (Canada) Ltd.: *See*—
Lardenois, Robert. 197,638.
Densel, Marianne, to Vereinigte Metallwerke Ranshofen-Berndorf Aktiengesellschaft. Spoon or similar article. 197,666, 3–10–64, Cl. D54—12.
Dobson, Theodore A.: *See*—
Sundberg, Carl W., and Dobson. 197,670.
Doster, Anne, to Woodbridge Moulded Products Ltd. Combination brush, scraper and squeegee for cleaning windshields. 197,639, 3–10–64, Cl. D9—6.
Doster, Anne, to Woodbridge Moulded Products Ltd. Combination scraper and squeegee for cleaning windshields. 197,640, 3–10–64, Cl. D9—6.
Dreyfuss, Henry, to Southern California Edison Co. Power transmission pole. 197,648, 3–10–64, Cl. D26—12.
Dymo Industries, Inc.: *See*—
Pedersen, Dane H. 197,677.
Educators Mfg. Co.: *See*—
Courtwright, Robert M. 197,652.
Feiet, Julius. Fisherman's knife. 197,647, 3–10–64, Cl. D22—3.
Ferar, Montgomery: *See*—
Heck, Richard A., Ferar, and Russell. 197,685.
Sundberg, Carl W., and Ferar. 197,644.
Sundberg, Carl W., and Ferar. 197,651.
Sundberg, Carl W., and Ferar. 197,653.
Ferro, Arthur C., to Contour Chair-Lounge Co., Inc. Chair. 197,645, 3–10–64, Cl. D15—11.
Florian, Gordon, to Sunbeam Corp. Clock. 197,660, 3–10–64, Cl. D42—7.
V. & E. Friedland Ltd.: *See*—
Stevenson, Norman W. 197,681.
Friedland, V. & E. Ltd.: *See*—
Frost, George H., to Westinghouse Electric Corp. Casing for storage of an electric toothbrush power unit and brushes therefor. 197,636, 3–10–64, Cl. D4—3.
Garrett, Ross E., to Kesk, Inc. Building. 197,641, 3–10–64, Cl. D13—1.
Garrett, Ross E., to Kesk, Inc. Building. 197,642, 3–10–64, Cl. D13—1.
Gibson, William R. Snow sled. 197,657, 3–10–64, Cl. D34—15.
Goodall, Edward J. Bottle for malt liquor. 197,673, 3–10–64, Cl. D58—6.
Goodrich, B. F., Co., The: *See*—
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Gray, Virgil E. Rolled fabric dispenser. 197,684, 3–10–64, Cl. D80—1.
Gubbins Charles H., to Wolf Electric Tools Ltd. Portable power tool or similar article. 197,667, 3–10–64, Cl. D54—14.
Gurian, Kenneth J., and R. W. Service, to Riker Laboratories, Inc. Combined aerosol actuator and dispenser for medicaments. 197,687, 3–10–64, Cl. D83—1.
Heck, Richard A., M. Ferar, and C. R. Russell, to Sears, Roebuck and Co. Cooking range. 197,685, 3–10–64, Cl. D81—4.
Hill, Frank. Lawn mower. 197,659, 3–10–64, Cl. D40—1.
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Leman, Donald E., to Sunbeam Corp. Clock. 197,661, 3–10–63, Cl. D42—7.
Levin, Monte L., to S. L. Atkins. Cigarette holder. 197,689, 3–10–64, Cl. D85—8.
Levy, Benjamin. Clock. 197,662, 3–10–64, Cl. D42—7.
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O'Reilly, Campbell. Grill. 197,663, 3–10–64, Cl. D44—1.
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TO WHOM

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Altscher, Siegfried, and T. F. Groll, Jr., to Nopco Chemical Co. Aliphatic esters of unsaturated carboxylic acids. 3,124,602, 3–10–64, Cl. 260—410.6.
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Anderson, James A., to Breneman-Hartshorn, Inc. Blind and valance combination. 3,124,195, 3–10–64, Cl. 160—19.
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Thomasson, Leland T. 3,124,707.

Boettner, Joseph L., to K. C. Construction Supply Co. Concrete forms and system. 3,123,887, 3–10–64, Cl. 25—131.

Bohler, Hans, and F. Kehrer, to Sandoz Ltd. Substituted quinacridine-12,14-diones and the production thereof. 3,124,581, 3–10–64, Cl. 260—279.

Bohnet, Emil. Stop attachment for metal lathes. 3,124,025, 3–10–64, Cl. 82—34.

Bolger, James W., to Riker Laboratories, Inc. N-(cyanoalkyl) - endo - perhydro-4,7-methanoisoindoles. 3,124,594, 3–10–64, Cl. 260—319.

Bolger, James W., to Riker Laboratories, Inc. N-(pseudothiouronium lower alkyl)-endo-perhydro-4,7-methanoisoindoles. 3,124,595, 3–10–64, Cl. 260—319.

Boller Development Corp., The: *See*—
Boller, Ernest R. 3,123,908.

Boller, Ernest R., to The Boller Development Corp. Method of producing a laminated structure. 3,123,908, 3–10–64, Cl. 29—471.1.

Bonanno, Ernest J., to Automatic Electric Laboratories, Inc. Automatic number identification. 3,124,656, 3–10–64, Cl. 179—18.

Borg-Warner Corp.: *See*—
Cieslik, Walter J. 3,124,363.
Haberland, Fred C., and Moore. 3,124,361.
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Bosca, Hugo, Co., Inc.: *See*—
Bosca, Orsino H., and M. E. 3,124,187.

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Bosca, Orsino H., and M. E. 3,124,187.

Bosca, Orsino H., and M. E., to Hugo Bosca Co., Inc. Card holder. 3,124,187, 3–10–64, Cl. 150—38.

Bottini, Raymond S. Dice agitating and viewing game box. 3,124,359, 3–10–64, Cl. 273—145.

Boucherle, Robert H.: *See*—
Mentzer, Everett K., and Boucherle. 3,124,355.

Bourns, Marlan E.: *See*—
Caddock, Richard E., and Bourns. 3,124,779.

Bowers, Albert, to Syntex Corp. 19-halo pregnenes. 3,124,574, 3–10–64, Cl. 260—239.55.

Bowers, Albert, and J. Edwards, to Syntex Corp. 2-formyl corticoids. 3,124,573, 3–10–64, Cl. 260—239.55.

Bown, Delos E., and H. G. Schutze, to Esso Research and Engineering Co. Stabilization of polyolefins. 3,124,555, 3–10–64, Cl. 260—45.5.

Boyer, Jean J., to Societe Anonyme Sciper. Rotary machine operated by compressed fluid. 3,124,079, 3–10–64. Cl. 103—162.

Bozek, John S., and J. Simpson, to Continental Can Co., Inc. Method and machine for printing plastic bottles. 3,124,065, 3–10–64, Cl. 101—37.

Brackbill, Warren H., and E. F. Glass, to Sperry Rand Corp. Adjustable drive mechanism for side delivery rake. 3,123,966, 3–10–64, Cl. 56—377.

Bradd, Ernest, to William Gluckin & Co., Inc. All-way stretch fabric girdle with a back latex reinforcement. 3,124,137, 3–10–64, Cl. 128—518.

Brainard, Wallace E., and W. K. Behrendt, to Kearney & Trecker Corp. Automatic multiple spindle drilling machine. 3,124,017, 3–10–64, Cl. 77—24.

Bråten, Kjell. Stabilizing arrangement for power boats. 3,124,094, 3–10–64, Cl. 114—66.5.

Brault, Robert G., and G. F. Huff, to Callery Chemical Co. Preparation of high energy boron containing fuels. 3,124,617, 3–10–64, Cl. 260—606.5.

Braunsberg, Heins. Vending machines. 3,124,397, 3–10–64, Cl. 312—97.1.

Brautigam, Rudolf G., to The American Agricultural Chemical Co. Manufacture of pyrophosphoryl chloride. 3,124,420, 3–10–64, Cl. 23—203.

Bredon, Alan D.: *See*—
Sullivan, George H., and Bredon. 3,124,182.

Breedon, Will A., W. J. Schuster, and G. F. Schwartz, to United States Steel Corp. Apparatus for handling bundles of wire. 3,124,261, 3–10–64, Cl. 214—130.

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Brennesholtz, Aaron H., and L. V. Reynolds, to E. I. du Pont de Nemours and Co. Spool. 3,124,320, 3–10–64, Cl. 242—71.8.

Bressler, Wilbur L.: *See*—
Dye, Kenneth E., Bressler, and Tolleson. 3,123,856.

Bridger, Grover L., and N. K. Alfrey, to W. R. Grace & Co. Apparatus for reacting a plurality of liquid components. 3,124,159, 3–10–64, Cl. 137—604.

Brignac, Edmond P., and R. T. Wright, to Monsanto Chemical Co. Apparatus for drawing textile filaments. 3,123,891, 3–10–64, Cl. 28—71.3.

Brode, Harold L., to United States of America, Air Force. Blast resistant water door. 3,123,977, 3–10–64, Cl. 61—.5.

Bronner, John. Telescoping folding boats. 3,123,841, 3–10–64, Cl. 9—2.

Brouwer, Frans, to Stewart-Warner Corp. Light sensitive line tracing apparatus. 3,124,691, 3–10–64, Cl. 250—202.

Brouwer, Frans, to Stewart-Warner Corp. Photosensitive pattern tracing device. 3,124,692, 3–10–64, Cl. 250—202.

Brown, Arthur G., and P. H. Wendt, to Jet Stream Products, Inc. Washington apparatus. 3,123,994, 3–10–64, Cl. 68—205.

Brown, Harold Co.: *See*—
Lilly, Mason M. 3,124,151.

Brown, Ross M., R. C. Emmerling, and A. R. Flores, to The Cosmodyne Corp. Cryogenic gas sampler. 3,123,982, 3–10–64, Cl. 62—55.

Bryson, James L., to Bryson Mfg. Co., Inc. Bobbin control for sewing machines. 3,124,088, 3–10–64, Cl. 112—219.

Bryson Mfg. Co., Inc.: *See*—
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Buckeye Cellulose Corp., The: *See*—
Zachariasen, Karsten A. 3,124,503.

Budd Co., The: *See*—
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Buechner, Werner W. Photographic apparatus. 3,124,051, 3–10–64, Cl. 95—96.

Buehl, Arnold L., to Mor-Flo Industries, Inc. Water heaters. 3,124,110, 3–10–64, Cl. 122—494.

Buehler, Ernest, and J. E. Kunzler, to Bell Telephone Laboratories, Inc. Fabrication of NBaSn superconducting element. 3,124,455, 3–10–64, Cl. 75—214.

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Siebert, Alfred. 3,124,315.

Burckhalter, Joseph H., to Parke, Davis & Co. 1-(2-pyridyl) 1-phenyl-2-aryl propenes. 3,124,585, 3–10–64, Cl. 260—290.

Burke, Arthur J., to Scale Co. Weighing systems. 3,124,206, 3–10–64, Cl. 177—46.

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Burns, Herbert R., Jr., to International Business Machines Corp. Non-coincidence magnetic gate. 3,124,700, 3–10–64, Cl. 307—88.

Burns, Leo C., L. M. Davis, C. N. De Bruin, and L. H. Saylor, to Sealed Power Corp. Piston ring assembly. 3,124,364, 3–10–64, Cl. 277—76.

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Gilson, Paul R. 3,124,317.
Waxylenko, William J. 3,124,789.

Burt, William T., to Minneapolis-Honeywell Regulator Co. Control apparatus. 3,123,985, 3–10–64, Cl. 62—160.

Bustamante, Cesar. Portable check writer. 3,124,230, 3–10–64, Cl. 197—45.

Butler, Henry J., to Dunlop Rubber Co. Ltd. Spot type disc brakes for vehicles. 3,124,217, 3–10–64, Cl. 188—73.

Butler, Joseph: *See*—
Stewart, William R., Stewart, and Butler. 3,123,866.

Butler, Roger M., and J. Eng, to Esso Research and Engineering Co. Hydrofining process. 3,124,526, 3–10–64, Cl. 208—264.

Buyze, Edwin K., to The Budd Co. Wedge operated, self energizing, fluid cooled disk brake. 3,124,216, 3–10–64, Cl. 188—72.

Byrne, William H., and J. H. Sadler. Method and apparatus for generating combustible gas. 3,124,435, 3–10–64, Cl. 48—105.

Byro, Thomas: *See*—
Smith, Edwin K., Jr., Raunecker, and Byro. 3,123,848.

C.A.V. Ltd.: *See*—
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Priddle, Albert T. C. 3,124,097.
Seilly, Alex H. 3,124,694.

C-E-I-R, Inc.: *See*—
Gieseler, Luther P. 3,124,753.

Caddock, Richard E., and M. E. Bourns; said Caddock assor. to Bourns, Inc. Potentiometers. 3,124,779, 3–10–64, Cl. 338—180.

Cahan, Alvin M. Fireplace tongs. 3,124,383, 3–10–64, Cl. 294—11.

Calabrese, William L., to Bebco Experimental & Mfg. Co. Scraper blade. 3,123,923, 3–10–64, Cl. 37—180.

California Institute Research Foundation: *See*—
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Calkins, Tracy H., to Textron Inc. Method of grinding lenses. 3 123,954, 3–10–64, Cl. 51—284.

Callahan, Francis P., Jr., to General Atronics Corp. Linear array with adjustable coupling network for beam steering. 3,124,801, 3–10–64, Cl. 343—854.

Callery Chemical Co.: *See*—
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Schroeder, Ralph R., and Wuns. 3,124,616.

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Cameron, John H. Multi-way distributor valve. 3,124,162, 3–10–64, Cl. 137—625.11.

Cameron, Margaret D., to Monsanto Chemical Co. Controlling the growth of undesired vegetation. 3,124,446, 3–10–64, Cl. 71—2.3.

Cammell Laird & Co. (Shipbuilders & Engineers) Ltd.: *See*—
Scrutton, Harold. 3,123,979.

Candela, Giovan B., to Formaprag Co. Sprag clutch and energizing means therefor. 3,124,228, 3–10–64, Cl. 192—45.1.

Canham, Eugene F. Self-extensible shelf insert. 3,124,252, 3–10–64, Cl. 211—43.

Cantoni, Giuseppe, G. Cicottino, and L. Chiesa; said Chiesa assor. to said Cantoni. Anti-glare headlight for motor vehicles. 3,124,309, 3–10–64, Cl. 240—46.03.

Cape, Arthur T., to Coast Metals, Inc. Manganese-base brazing alloys. 3,124,451, 3–10–64, Cl. 75—134.

Cape, Arthur T., to Coast Metals, Inc. Brazing alloy. 3,124,453, 3–10–64, Cl. 75—151.

Carlston, Hamilton S. Directional control apparatus for a movable closure member. 3,124,380, 3–10–64, Cl. 292—163.

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Carney, Richard R., and S. R. Koch, to Union Carbide Corp. Volatile liquid storage container pressure regulating means. 3,123,981, 3–10–64, Cl. 62—51.

Carolina Plating & Stamping Co.: *See*—
Huffman, Samuel L., and Irwin. 3,124,431.

Carpenter, Elmer B., to Automatic Poultry Feeder Co. Feed trough control mechanism. 3,124,104, 3–10–64, Cl. 119—51.12.

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Melton, James O., and Carpenter. 3,124,410.

Carrier Corp.: *See*—
Leonard, Louis H., Jr. 3,123,984.
Wright, Timothy A. 3,123,989.

Carriere, Maurice M., C. F. Casey, A. W. G. Ervine, J. K. Hamil, R. G. Schimpf, F. H. Smith, and J. R. Turner, to Remington Arms Co., Inc. Apparatus for packaging elongated articles. 3,123,959, 3–10–64, Cl. 53—143.

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Carruthers, Eben H. Machine for packing fish in containers. 3,123,958, 3–10–64, Cl. 53—123.

Carruthers, Eben H. Method of packing fish in containers. 3,124,469, 3–10–64. Cl. 99—188.

Carty, David G.: *See*—
Beatty, Milton R. 3,124,664.

Casey, Clifford F.: *See*—
Carriere, Maurice M., Casey, Ervine, Hamil, Schimpf, Smith, and Turner. 3,123,959.

Castellanos, Alfonso. Game carrier. 3,124,285, 3–10–64, Cl. 224—7.

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Catlette, William H.: *See*—
Stansbury, Harry A., Jr., Durden, and Catlette. 3,124,596.

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Vogel, Ferdinand L., Jr., and Cave. 3,124,489.

Cavero, Manuel. Chain saw. 3,124,179, 3–10–64, Cl. 143—135.

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Kuris, Arthur, and Balamuth. 3,123,951.

Cefalo, Louis, Jr. Portable collapsible boat. 3,123,840, 3–10–64, Cl. 9—2.

Cefaly, Ralph, to Taylor Instrument Co.'s. Multiple headed acoustic stethoscope. 3,124,211, 3–10–64, Cl. 181—24.

Celanese Corp. of America: *See*—
Higdon, Buster W. 3,124,609.
Stamps, William E., Merrill, and Livingston. 3,123,972.

Central Texas Iron Works: *See*—
Horton, Malcolm A., and Williams. 3,123,963.

Cervin, Curtis M. Control apparatus. 3,123,852, 3–10–64, Cl. 17—1.

Cetrone, Vincent B. Methods of and means for sealing containers. 3,124,267, 3–10–64, Cl. 220—39.

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Doyle, Carroll F., Young, and Chatard. 3,124,505.

Chatfield, Henry B., to Textron Inc. Cold forming machine. 3,124,019, 3–10–64, Cl. 78—13.

Checkmakers, Inc.: *See*—
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Matuschkovitz, Richard K., and Christensen. 3,124,450.

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Chernock, Stephen P.: *See*—
Smith, James D., and Chernock. 3,123,992.

Cheskin, David B. Adjustable multiple section lifting rods. 3,124,014, 3–10–64, Cl. 74—575.

Chesnov, Gilbert F. Electrical male connector. 3,124,404, 3–10–64, Cl. 339—34.

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Wilson, Charles P., Jr., Ciapetta, and Jones. 3,124,541.

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Ciramì, Salvatore. Walking-figure amusement land vehicle. 3 124,210, 3–10–64, Cl. 180—8.

Cirkler, Werner, H. Lobl, and G. Langbein, to Siemens & Halske Aktiengesellschaft. Method for making a barrier layer capacitor. 3,124.478, 3–10–64, Cl. 117—200.

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Claas, Reinhold. Threshing machine having a specific cylinder and concave. 3,124,138, 3–10–64, Cl. 130—27.

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Coffield, Thomas H., and R. P. M. Werner, to Ethyl Corp. Organometallic compounds. 3,124,600, 3–10–64, Cl. 260—346.1.

Cohen, Neal B., and K. Sotman, to Sperry Rand Corp. Self-locking quick-releasing hub. 3,124,319, 3–10–64, Cl. 242—68.3.

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Collum, Theodore J. Garment wear record. 3,124,284, 3–10–64, Cl. 223—98.

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Compagnie Francaise des Matieres Colorantes: *See*—
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Cook, Lucien H., to Chemical Construction Corp. Urea crystallization. 3,124,612, 3–10–64, Cl. 260—555.

Cook, Owen L., to General RF Fittings, Inc. Coaxial connector. 3,124,406, 3–10–64, Cl. 339—89.

Cooper, Franklin D., to Bituminous Coal Research, Inc. Solids flow system. 3,124,170, 3–10–64, Cl. 141—18.

Cordts, Howard P., to The Dow Chemical Co. High temperature thickeners for polymeric materials. 3,124,553, 3–10–64, Cl. 260—45.5.

Corey, Philip D., D. L. Piette, and A. L. Wellford, to General Electric Co. Inverter circuit utilizing silicon controlled rectifiers and modulating the output with a derived difference voltage. 3,124,740, 3–10–64, Cl. 321—45.

Corley, Henry P. T., and L. G. Dorsett, to Dorsett Electronics Laboratories, Inc. Electronic controlled vehicle suspension system. 3,124,368, 3–10–64, Cl. 280—6.

Cornell, Mead. Metering pump control system. 3,124,270, 3–10–64, Cl. 222—23.

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Cox, Glenn L., to Westinghouse Electric Corp. Storage device. 3,124,715, 3–10–64, Cl. 315—10.

Cox, Rex E. Gravity flow distributor for granular material. 3,124,278, 3–10–64, Cl. 222—196.

Crabtree, Gerald M. Device for aligning receptacle and wall switch cover plates. 3,123,918, 3–10–64, Cl. 33—207.

Craig, Bryant F., to Amaiga Corp. Conelrad broadcast station control device. 3,124,749, 3–10–64, Cl. 325—64.

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Crain, Donald L., and R. F. Kleinschmidt, to Phillips Petroleum Co. Isomerization of cyclooctadiene compounds. 3,124,621, 3–10–64, Cl. 260—666.

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Crane, William B., and R. C. Parrish, to Riegel Textile Corp. Glove forming device having glove printing means incorporated therein. 3,124,066, 3–10–64, Cl. 101—44.

Cressman, George W., and L. A. Demchock, Jr., to General Electric Co. Flash lamp. 3,123,993, 3–10–64, Cl. 67—31.

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Criner, Harry E., to Ford Motor Co. Read head for magnetic surface recording. 3,124,660, 3–10–64, Cl. 179—100.2.

Croan, Norman, to Massachusetts Leather Products Co. Contact lens case. 3,124,240, 3–10–64, Cl. 206—5.

Cross, Allen S., ½0 to E. C. Sweeney. Resuscitation apparatus. 3,124,124, 3–10–64, Cl. 128—29.

Crowder, Norman A., and F. G. Nicki, to U.S. Industries, Inc. Instruction system. 3,123,920, 3–10–64, Cl. 35—9.

Crowley, John E., to Minneapolis-Honeywell Regulator Co. Electric control apparatus. 3,124,773, 3–10–64, Cl. 338—150.

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Custers, Jan F. H., B. W. Senior, H. B. Dyer, and P. T. Wedepohl, to Adamont Laboratories (Proprietary) Ltd. Synthesis of diamonds. 3,124,422, 3–10–64, Cl. 23—209.1.

Cywinski, Norbert F., to Phillips Petroleum Co. Production of olefins from aldehydes and acetylenes. 3,124,622, 3–10–64, Cl. 260—682.

Dahlberg, Robert S., to Philco Corp. Two stage transistor amplifier with broad-band gain-equalizing feedback. 3,124,759, 3–10–64, Cl. 330—19.

Dana Corp.: *See*—
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Dankert, Lester J., and D. A. Permoda, to The Dow Chemical Co. Preparation of 2-substituted cyclohexanones. 3,124,614, 3–10–64, Cl. 260—586.

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Davidowich, George, and M. W. Leeds, to Air Reduction Co., Inc. Stabilization of chlorinated hydrocarbons with 1,4-dioxane and acetylenic alcohol ester. 3,124,620, 3–10–64, Cl. 260—652.5.

Davidson, Charles. Folding and nesting delivery tray for bakery goods or the like. 3,124,254, 3–10–64, Cl. 211—132.

Davidson, Per, to Sandvikens Jernverks Aktiebolag. Method of making hot tops for ingot molds. 3,123,875, 3–10–64, Cl. 22—193.

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Erwin, Charles W. Organoleptic compositions. 3,124,460, 3–10–64, Cl. 99—1.

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Thoben, Myron R. 3,124,098.

General Precision, Inc.: *See*—
Beer, Emanuel E. 3,124,291.
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King, George W., Sallstrom, and Foy. 3,124,717.

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Genta, Guido R., to American Aniline Products, Inc. Anthraquinone dyestuffs. 3,124,601, 3–10–64, Cl. 260—347.7.

Gentry, Chalmus C., to Gentry, Inc. Fuel igniter. 3,124,432, 3–10–64, Cl. 44—40.

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Gentry, Chalmus C. 3,124,432.

Geoffrion, Richard P., and C. L. Conley, to Clevite Corp. Component package. 3,124,248, 3–10–64, Cl. 206—65.

Geolograph Co., The: *See*—
Melton, James O., and Carpenter. 3,124,410.

Gerisch, Rudolph F. Switch means for conveying and sorting apparatus. 3,124,236, 3–10–64, Cl. 198—169.

Germain, Louis, and P. Desire, to Societe Progil. Purification of phosphoric acid. 3,124,419, 3–10–64, Cl. 23—165.

Gery, Stanley W., to Sperry Rand Corp. Polarity insensitive pulse synchronizing system. 3,124,751, 3–10–64, Cl. 325—419.

Gieseler, Luther P., to C-E-I-R, Inc. Method and apparatus for producing random numbers employing plural generators having different repetition rates. 3,124,753, 3–10–64, Cl. 328—61.

Gilson, Paul R., to Burroughs Corp. Tape transport apparatus. 3,124,317, 3–10–64, Cl. 242—55.12.

Girard, Theodore A.: *See*—
Fischer, Alfred, and Girard. 3,124,475.

Girden, Barney B. Swimmer's buoy. 3,123,845, 3–10–64, Cl. 9—311.

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Reisner, David B., Gister, and Klein. 3,124,588.

Given, Richard L., R. G. Nyder, and R. C. Lee, to United States of America, Navy. Four layer diode transmission gate. 3,124,701, 3–10–64, Cl. 307—88.5.

Glass, Emmett F.: *See*—
Brackbill, Warren H., and Glass. 3,123,966.

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Ayala, Carl. 3,124,119.

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Downing, Wilton W. W., and Adams. 3,124,201.

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Goettl, William H. Floating boat trailer. 3,124,259, 3–10–64, Cl. 214—84.

Goldstein, Arnold. Illumination diffuser construction. 3,124,-308, 3–10–64, Cl. 240—46.01.

Goorissen, Jan, to North American Philips Co., Inc. Method of and apparatus for heat treatment of semi-conductor material. 3,124,686, 3–10–64, Cl. 250—83.3.

Gorgens, Joseph E., to Manning, Maxwell & Moore, Inc. Portable test thermometer. 3 124,003, 3–10–64, Cl. 73—363.9.

Gottlly, Arthur L., to Monsanto Chemical Co. Yarn shipping package. 3,124,242, 3–10–64, Cl. 206—46.

Gough, George L. Positioning table. 3,124,018, 3–10–64, Cl. 77—63.

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Bridger, Grover L., and Alfrey. 3,124,159.
Doyle, Carroll F., Young, and Chatard. 3,124,505.
Wilson, Charles P., Jr., Ciapetta, and Jones. 3,124,541.

Graham, Donald L., and J. A. Struthers, Jr., to The Dow Chemical Co. Process for producing boat hulls of sandwich construction. 3,124,626, 3–10–64, Cl. 264—45.

Graham, John M. Joint seal. 3,124,047, 3–10–64, Cl. 94—18.

Graig, Waldemar A. Watercraft. 3,124,096, 3–10–64, Cl. 114—152.

Grandstaff, Otho D., and W. A. Alden, to Automatic Electric Laboratories, Inc. Electronic interrupter. 3,124,786, 3–10–64, Cl. 340—174.

Graves, Jewel: *See*—
Kurtz, John S., and Graves. 3,124,102.

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Gray, Harry J., Jr., to Sperry Rand Corp. Synchronized single pulse circuit producing output of predetermined length from delay lines having dissimilar periods. 3,124,-705, 3–10–64, Cl. 307—88.5.

Green, Sidney S., to Sperry Rand Corp. Modular electronic assemblies with cooling means. 3,124,720, 3–10–64, Cl. 317—100.

Greger, Paul, and E. Doring, to Voigtlander A.G. Photographic camera with auxiliary electric light source having energizing circuit including exposure meter indicator. 3,124,048, 3–10–64, Cl. 95—10.

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Sampietro, Achilles C., and Grigsby. 3,124,735.

Groll, Thomas F., Jr.: *See*—
Altscher, Siegfried, and Groll. 3,124,602.

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Gross, George E. Air source for a skin diver. 3,124,131, 3–10–64, Cl. 128—145.

Grossberg, Marc E. Teeth protector. 3,124,129, 3–10–64, Cl. 128—136.

Grout, Kenneth M. Pressurized dispenser having disposable cartridge. 3,124,276, 3–10–64, Cl. 222—183.

Grover, Philip D. Motion converting device. 3,124,009, 3–10–64, Cl. 74—99.

Guest, Howard R., B. W. Kiff, and H. A. Stansbury, Jr., to Union Carbide Corp. Process for preparing 1,6-diacetoxy-2,5-dimethyl-2-hexene; 1,2,6-triacetoxy-2,5-dimethyl-hexane; and 2 5-dimethyltetrahydropyran-2-methanol acetate. 3,124,599, 3–10–64, Cl. 260—345.8.

Guggenheim, S Frederic, H. H. Wormser, and A. S. Louis. Potentiometers. 3,124,776, 3–10–64, Cl. 338—174.

Guier, William H.: *See*—
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Gurman, Marvin: *See*—
Rank, Richard E., and Gurman. 3,123,834.

Gury, John B., III. Punching machine. 3,123,912, 3–10–64, Cl. 30—362.

Gust, Leo L. Window well cover. 3,123,868, 3–10–64, Cl. 20—40.

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Eldh, John A. D., and Gustafsson. 3,124,075.

Gustin-Bacon Mfg. Co.: *See*—
Stephens, Joseph F. 3,124,212.

Guth, Lauren W., to General Electric Co. Rack structure for dishwasher. 3,124,251, 3–10–64, Cl. 211—41.

Guzman, Luis H., and R. P. Van Driesen, to Cities Service Research and Development Co. Apparatus for treatment of liquid with gas. 3,124,518, 3–10–64, Cl. 196—46.

H. K. Metalcraft Mfg. Corp.: *See*—
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Loeffel, Emil. 3,124,027.

Haberland, Fred C., and E. A. Moore, to Borg-Warner Corp. Pump drive assembly with fluid seal. 3,124,361, 3–10–64, Cl. 277—8.

Haddad, Arthur K. Quick-acting vise grips. 3,124,347, 3–10–64, Cl. 269—91.

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Denss, Rolf, and Häfliger. 3,124,591.

Hagedorn, Guenter E., W. H. Guier, G. C. Weiffenbach, and L. J. Rueger, to United States of America, Navy. Ionospheric refraction correction system. 3,124,799, 3–10–64, Cl. 343—100.

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Haines, Beatrice L. Container closure. 3,124,296, 3–10–64, Cl. 229—43.

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Cohn, Johann G. E., and Haley. 3,124,416.

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Middleton, William H., and Hall. 3,124,695.

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Hallett, Henry A., to Cheltenham Auto Controls Ltd. Pneumatic force-balance controllers. 3,124,147, 3–10–64, Cl. 137—86.

Haluska, Joseph. Interchangeable micrometer frame. 3,123,917, 3–10–64, Cl. 33—170.

Hamelberg, August, to Minneapolis-Honeywell Regulator Co. Electric control devices. 3,124,775, 3–10–64, Cl. 338—163.

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Huffman, Harold W. 3,124,350.

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Hardy, Robert N., to MBM Mineral Industries. Reflex diaphragm pump. 3,124,078, 3–10–64, Cl. 103—152.

Harned, Roger L., to Commercial Solvents Corp. Recovery of cycloserine. 3,124,590, 3–10–64, Cl. 260—307.

Harris Foundry & Machine Co.: *See*—
Thompson, Wallace M. 3,124,062.

Harris, Philip H., to American Cement Corp. Rotary kiln. 3,124,338, 3–10–64, Cl. 263—33.

Harry, Leonard W., Jr.: *See*—
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Perlmutter, Jack H., and Hartmeister. 3,123,872.

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Fehling, Hans R., and Harvey. 3,124,107.

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Hawke, Basil C., and I. C. Thompson, to United States of America, Atomic Energy Commission. Control rod drive. 3,124,513, 3–10–64, Cl. 176—36.

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Hawkinson, Paul E., Co.: *See*—
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Westeren, Herbert W., and Ashton. 3,124,634.

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Hazelett, Richard: *See*—
Hazelett, Robert W. and R. 3,123,874.

Hazelett, Robert W. and R., to Hazelett Strip-Casting Corp. Metal casting apparatus. 3,123,874, 3–10–64, Cl. 22—57.4.

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Heil, Rudolf, H. Keller, F.-O. Zeyen, and E. Hennig, to Dr.-Ing. Rudolf Heil Kiel K.G. Method and apparatus for multicolor printing. 3 124,036, 3–10–64, Cl. 88—24.

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Helland, Gilman A., and O. S. Nielsen, said Helland assor. to Helland, Inc. Automatically resetting torque clutch. 3,124,227, 3–10–64, Cl. 192—56.

Hellingman, Evert, and K. Roosendaal, to North American Philips Co., Inc. Gas fractionating system. 3,124,443, 3–10–64, Cl. 62—42.

Helmbold, Theodor. Transverse flow type blowers. 3,124,301, 3–10–64, Cl. 230—125.

Helwig, William J., and G. M. Rose, Jr., to Radio Corp. of America. Apparatus for processing a plurality of articles or materials. 3,123,957, 3–10–64, Cl. 53—86.

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Solum, James R., Hempel, and C. R. Solum, Jr. 3,124,198.

Hemwall, John B., to The Dow Chemical Co. Use of 6,6'-alkylidenebis (benzoxazines) for improving physical properties of clays and clay-containing soils and compositions resulting therefrom. 3,124,472, 3–10–64, Cl. 106—84.

Hemwall, John B., to The Dow Chemical Co. Use of 8,8'-methylenebis(benzoxazines) for improving physical properties of clays and clay-containing soils and compositions resulting therefrom. 3,124,473, 3–10–64, Cl. 106—84.

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Henninger, Paul, and F. Graenge, to Siemens & Halske Aktiengesellschaft. Method of and device for making a regenerative capacitor. 3,123,895, 3–10–64, Cl. 29—25.42.

Hereth, Ralph F., and G. M. Sherman, to United States of America, Navy. Rotary drive multiple position latch. 3,124,012, 3–10–64, Cl. 74—527.

Hermach, Francis L., to United States of America, Commerce. Coaxial thermal voltage converter. 3,124,747, 3–10–64, Cl. 324—95.

Herr Mfg. Co., Inc.: *See*—
Atwood, Hyatt B., and McLean. 3,123,971.

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Hesser, Fr., Maschinenfabrik-Aktiengesellschaft, Firma: *See*—
Jungmayr, Theodor. 3,124,046.

Hester, Robert W. Lawn mower with tiltable top. 3,123,962, 3–10–64, Cl. 56—25.4.

Heuer, Russell P., to General Refractories Co. Encased plural basic refractor brick elements. 3,123,940, 3–10–64, Cl. 50—416.

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Heyl, Russell G., Jr., to American Metal Products Co. Seat track. 3,124,332, 3–10–64, Cl. 248—420.

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Hill, Rutherford B.: *See*—
Merrifield, Dudley B., and Hill. 3,124,556.

Hilliard, Palmer L. Plant protector. 3,123,938, 3–10–64, Cl. 47—28.

Hillman, Carl J. Ring-type gasket. 3,124,366, 3–10–64, Cl. 277—180.

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Banet, Leo, and Hirschman. 3,124,685.

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Williams, Beverly E. 3,124,468.

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Hofer, Walter D. Cultivator shank and mounting. 3,124,203, 3–10–64, Cl. 172—762.

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Hogan, William J., and A. R. Kishpaugh, to Stapling Machines Co. Mechanism for feeding binding wire intermittently to wirebound box-making machine. 3,123,830, 3–10–64, Cl. 1—121.

Hogg, George W., to American Air Filter Co., Inc. Pocket-type filter structure. 3,124,440, 3–10–64, Cl. 55—484.

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Holley Plastics Co.: *See*—
Holley, Danforth, and Anderson. 3,124,241.

Hollyday, James H., to Sperry Rand Corp. Thrower-type conveyor. 3,124,235, 3–10–64, Cl. 198—128.

Holman, Emmette R., to Purex Corp., Ltd. Compositions containing lactic acid, malic acid, and salts thereof. 3,124,506, 3–10–64, Cl. 167—58.

Holzer, Walter. Control apparatus for automatic washing machines. 3,124,667, 3–10–64, Cl. 200—33.

Homan, William J., to International Business Machines Corp. Magnetic transducer. 3,124,803, 3–10–64, Cl. 346—74.

Hood, Bruce G., to Davidson Rubber Co., Inc. Mold for molding polyurethane foam and process therefor. 3,124,627, 3–10–64, Cl. 264—54.

Hopgood, Robert B., to Nicholson File Co. Method of making a lipstick container or the like. 3,123,904, 3–10–64, Cl. 29—417.

Hopgood, Robert B., to Nicholson File Co. Lipstick container or the like. 3,124,244, 3–10–64, Cl. 206—56.

Hopgood, Robert B., to Nicholson File Co. Lipstick container. 3,124,245, 3–10–64, Cl. 206—56.

Horsch, John D., and H. W. Ferchland, to General Motors Corp. Gauging apparatus. 3,123,943, 3–10–64, Cl. 51—165.

Horton, Malcolm A., and J. K. Williams, to Central Texas Iron Works. Cotton harvester. 3,123,963, 3–10–64, Cl. 56—33.

Hoskins, Thomas E., and F. J. O'Reilly, to Tishman Research Corp. Vapor lamp units. 3,124,307, 3–10–64, Cl. 240—11.4.

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Howard, James W. Pulse gate noise limiter containing full wave bridge detector. 3,124,752, 3–10–64, Cl. 325—482.

Howland, Bradford, to Massachusetts Institute of Technology. Flux concentrator for high intensity pulsed magnetic fields. 3,124,726, 3–10–64, Cl. 317—158.

Hradel, Joseph R., to The Dow Chemical Co. Explosive compositions. 3,124,495, 3–10–64, Cl. 149—43.

Hrbek, George W., to Zenith Radio Corp. Extremely high frequency pump for electron beam parametric amplifier. 3,124,756, 3–10–64, Cl. 330—4.7.

Hudnall, Charles P., Jr., and J. B. Long, to Marmon-Herrington Co., Inc. Face drill. 3,124,204, 3–10–64, Cl. 173—145.

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Huffman, Harold W., to The Hamilton Tool Co. Cammed tucker-blade folder. 3,124,849, 3–10–64, Cl. 270—73.

Huffman, Harold W., to The Hamilton Tool Co. Screw folder for continuous forms. 3,124,350, 3–10–64, Cl. 270—79.

Huffman, Samuel L., and R. J. Irwin, to Carolina Plating & Stamping Co. Drier apparatus for loom drop wires. 3,124,431, 3–10–64, Cl. 34—181.

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Hulbert, Warren D., to Spectrol Electronics Corp. Rectilinearly adjustable variable resistor. 3,124,780, 3–10–64, Cl. 338—180.

Humen, Nicholas, to Radio Corp. of America. Electron tube apparatus. 3,124,232, 3–10–64, Cl. 198—25.

Humphris & Sons Ltd.: *See*—
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Hürbin, Meinrad: *See*—
Jung, Jean-Pierre, and Hürbin. 3,124,566.

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Hutchinson, David N., to The Bell Telephone Co. of Canada. Auction bidding telegraph systems. 3,124,644, 3–10–64, Cl. 178—3.

Huther, Edmund, to K. Ziegler. New organic zinc compounds and a process for the production of these organic zinc compounds together with organic aluminium monohalides. 3,124,604, 3–10–64, Cl. 260—429.9.

Huttenwerk Oberhausen Aktiengesellschaft: *See*—
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Ingham, Robert M., Jr., to Deering Milliken Research Corp. Bobbin handling method and apparatus. 3,123,967, 3–10–64, Cl. 57—62.

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International Basic Economy Corp.: *See*—
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International Business Machines Corp.: *See*—
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Bellamy, Paul D., and Mueller. 3,124,758.
Burns, Herbert R., Jr. 3,124,700.
Homan, William J. 3,124,803.
Kuehler, Jack D. 3,124,790.
Schaaf, Fred W., Scott, and Rubin. 3,124,784.
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International Nickel Co., Inc., The: *See*—
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International Research and Development Corp.: *See*—
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International Standard Electric Corp.: *See*—
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International Telephone and Telegraph Corp.: *See*—
Biagi, Fernando, Morrow, and Masonson. 3,124,652.
Bigo, Ernest H. P., and Pleshko. 3,124,704.
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Ionics, Inc.: *See*—
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Pelrsol, James H., and Irwin. 3,123,883.

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Huffman, Samuel L., and Irwin. 3,124,431.

Isenbarger, Robert O., to Chicago Rawhide Mfg. Co. Seal installation tool. 3,123,902, 3–10–64, Cl. 29—271.

Ishler, William E., and E. F. Apple, to General Electric Co. Method for improving the performance of calcium halophosphate phosphors. 3,124,539, 3–10–64, Cl. 252—301.4.

Jackson, Harvey W. Latch device for doors. 3,124,378, 3–10–64, Cl. 292—5.

Jackson, Maurice R.: *See*—
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Jacobson, Ben. Cover to identify keys. 3,123,926, 3–10–64, Cl. 40—330.

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Jenkins, Thomas E., and M. R. Kauffman, to General Electric Co. Drain control system for a washing machine. 3,124,140. 3–10–64, Cl. 134—57.

Jensen, Erik H., to Westinghouse Electric Corp. Compressor high-to-low side relief valves. 3,124,155, 3–10–64, Cl. 137—540.

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King, George W., W. E. Sallstrom, and J. L. Foy, to General Precision, Inc. Direct view storage tube erasure circuit. 3,124,717, 3–10–64, Cl. 315—14.

Kirchmayer, Leon K., to General Electric Co. Apparatus for controlling the interchange of power between a plurality of power systems. 3,124,699, 3–10–64, Cl. 307—57.

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Reisner, David B., Gister, and Klein. 3,124,588.

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Kojima, Hiroshi, A. Kasahara, and S. Saruta, to Nippon Electric Co., Ltd. Microscope system for use with both infra-red and visible rays. 3,124,682, 3–10–64, Cl. 250—65.

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Kosta, Charles. Retractable holder for chalk, crayon, erasers, and small writing and cutting instruments. 3,124,106, 3–10–64, Cl. 120—1.

Kouts, Stanley L., W. A. Kalk, and F. B. Nimtz, to United States of America, Atomic Energy Commission. Core reflector for nuclear reactor. 3,124,514, 3–10–64, Cl. 176—58.

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Krueger, John W., and J. F. Warner, to La Salle Steel Co. Marking device and method. 3,124,069, 3–10–64, Cl. 101—426.

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Kuris, Arthur, and L. Balamuth, to Cavitron Ultrasonics, Inc. Ultrasonic cleaning of grinding wheels. 3,123,951, 3–10–64, Cl. 51—262.

Kurtz, John S., and J. Graves, to Automatic Poultry Feeder Co. Nest support. 3,124,102, 3–10–64, Cl. 119—48.

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Lloyd, Arthur K., and R. A. Lolley, to Imperial Chemical Industries Ltd. Automatic control of weighing and feeding machines. 3,124,208, 3–10–64, Cl. 177—105.

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Magnusson, Knut J., to Radio Corp. of America. Electrostatic printing apparatus. 3,124,484, 3–10–64, Cl. 118—637.

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Mahoney, Ralph P., to Beloit Corp. Apparatus for improving the surface characteristics of a paper web. 3,124,481, 3–10–64, Cl. 118—60.

Mahoney, Ralph P., and E. J. Justus, to Beloit Corp. Hot pressure finishing apparatus for web materials. 3,124,480, 3–10–64, Cl. 118—60.

Mahoney, Ralph P., and E. J. Justus, to Beloit Corp. Gloss finishing of uncoated paper. 3,124,504, 3–10–64, Cl. 162—206.

Maier, Hartmut W., and E. E. Kühner, to Elba-Werk, Ettlinger Baumaschinen- und Hebezeugfabrik G.m.b.H. Batching plant, particularly for the preparation of concrete with aggregates and concrete binders. 3,124,272, 3–10–64, Cl. 222—77.

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Malley, Thomas J., and H. D. Schindler, to American Cyanamid Co. Process for preparing high density fluid alumina base catalyst material. 3,124,418, 3–10–64, Cl. 23—148.

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Salgado, Alvaro, and Manyak. 3,124,550.
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Mihalek, Robert M., to Sperry Rand Corp. Control circuit. 3,124,724, 3–10–64, Cl. 317—148.5.
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Paul, Charles C., and N. T. Kuypers, to National Steel Corp. Metallic building construction. 3,124,224, 3–10–64, Cl. 189—64.
Paxson, Gordon D., Jr., to United States of America, Atomic Energy Commission. Fractionating column product collector control. 3,124,172, 3–10–64, Cl. 141—130.
Payne, William H., to Dresser Industries, Inc. Poppet-type valve construction. 3,124,152, 3–10–64, Cl. 137—269.5.
Pearson, Paul E., Jr., and D. A. Reynick, to The Bendix Corp. Temperature control system with variable dynamic response. 3,123,974, 3–10–64, Cl. 60—39.28.
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Penfold, Leonard J., to The General Electric Co. Ltd. Locking arrangements for the closures of pressure vessels. 3,124,158, 3–10–64, Cl. 137—584.
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Philbrick, Herbert S., Jr., and L. T. De Coursey, to John Mohr & Sons. Tobacco moistening process and apparatus. 3,124,142, 3–10–64, Cl. 131—135.
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Polakowski, Natalis H. Method of working sheet, strip and similar materials. 3,123,893, 3–10–64, Cl. 29—18.
Polakowski, Natalis H. Method of and apparatus for controlling rolling mills. 3,124,020, 3–10–64, Cl. 80—32.
Poole, Harold G. Towing connections. 3,124,372, 3–10–64, Cl. 280—477.
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Proops, William R., to Union Carbide Corp. Method of stabilizing cellular polyetherurethanes with an aromatic mercaptan. 3,124,545, 3–10–64, Cl. 260—2.5.

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Olden, Roger G. 3,124,482.
Rose, George M., Jr. 3,124,670.
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Radloff, Johannes, and K. Schlichting, to Nordischer Maschinenbau Rud. Baader. Apparatus for beheading fish, especially cod and the like. 3,123,853, 3–10–64, Cl. 17—4.
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Ranalli, Franco, to Montecatini Societa General per l'Industria Mineraria e Chimica. Method for preparing surfaces comprising isotactic polypropylene for printing. 3,124,729, 3–10–64, Cl. 317—262.
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Randmer, Jacob A., to Sperry Rand Corp. Spring-loaded lamp filament support. 3,124,713, 3–10–64, Cl. 313—271.
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Rappuhn, Henry W., to Sperry Rand Corp. Thrust bearings. 3,124,392, 3–10–64, Cl. 308—9.
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Salgado, Alvaro, and Manyak. 3,124,550.
Reid, James S., to The Standard Products Co. Windshield operating mechanism. 3,123,839, 3–10–64, Cl. 9—1.
Reifenschweiler, Otto, to North American Philips Co., Inc. Neutron generator. 3,124,711, 3–10–64, Cl. 313—61.
Reifschneider, Walter, to The Dow Chemical Co. Benzyl ether thioethers. 3,124,619, 3–10–64, Cl. 260—609.
Reilly, Walter T., and L. Di Donato, to The General Tire & Rubber Co. Method of and apparatus for forming thermoplastic sheet material. 3,123,863, 3–10–64, Cl. 18—19.
Reinecke, Henry, Jr., R. W. Hofheimer, and K. E. Perry, to Massachusetts Institute of Technology. Current-operated diode logic gates. 3,124,708, 3–10–64, Cl. 307—88.5.
Reisner, David B., S. Gister, and H. C. Klein, to Nopco Chemical Co. Antimicrobial compositions comprising amides of 2-amino-5 nitrothiazole thioethers. 3,124,507, 3–10–64, Cl. 167—58.
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Richelsen, Mark. Reaction furnace. 3,124,425, 3–10–64, Cl. 23—277.
Richman, Harry A. Refrigerated cabinet. 3,123,988, 3–10–64, Cl. 62—418.
Ricketts, Russell D., and C. O. Sliidorff, to Litton Industries of California. Magnetic head and drum memory system. 3,124,788, 3–10–64, Cl. 340—174.1.
Rieckmann, Peter, to C. F. Boehringer & Soehne G.m.b.H. Water-insoluble salts of basic antihistaminic compounds, and process of making same. 3,124,592, 3–10–64, Cl. 260—313.
Riedl, Hans-Joachim, to Wasag-Chemie A.G. Method of producing cyclotrimethylenetrinitramine. 3,124,578, 3–10–64, Cl. 260—248.
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Bolger, James W. 3,124,595.
Rimar, Eugene. Fishing-gaffs or fish-snagging devices. 3,123,930, 3–10–64, Cl. 43—5.
Ringold, Howard J., and G. Rosenkranz, to Syntex Corp. Process for hydroxylation of 16α,17α-ketals and acetals of cortical hormones and products derived therefrom. 3,124,371, 3–10–64, Cl. 260—239.55.
Riseman, John H. Potential measuring apparatus including amplifier means with input and output choppers and plural feedback paths. 3,124,743, 3–10–64, Cl. 324—30.
Rittenhouse, Earl G., to Westinghouse Electric Corp. Collector cells for electrostatic precipitators. 3,124,439, 3–10–64, Cl. 55—143.
Ritter, George F., Jr., D. E. Carney, R. A. Nyquist, and A. H. Miller, to Libbey-Owens-Ford Glass Co. Method and apparatus for removing edges during forming of sheet glass. 3,124,444, 3–10–64, Cl. 65—25.
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Roberts, John W. Paper clip tab. 3,123,924, 3–10–64, Cl. 40—11.
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Rose, George M., Jr., to Radio Corp. of America. Reed switch having improved reed positioning means. 3,124,670, 3–10–64, Cl. 200—87.
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Rosenberg, Bernard, to Win-Chek Industries, Inc. Sample cases. 3,124,225, 3–10–64, Cl. 190—16.
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Ross, Elmer M., to Lockheed Aircraft Corp. Cutter guide finger. 3,123,949, 3–10–64, Cl. 51—238.

Rostad, Rolf A. Automatic telephonic alarm system. 3,124,650, 3–10–64, Cl. 179—5.

Roth, Fred. Steering wheel locking jack. 3,124,011, 3–10–64, Cl. 74—495.

Rowe, Raymond N., to General Electric Co. Electrical bus conductor. 3,124,403, 3–10–64, Cl. 339—22.

Rowlett, Willard A. Idler arm repair kit. 3,124,394, 3–10–64, Cl. 308—2.

Ruben, Samuel. Sealed electrolytic capacitor. 3,124,728, 3–10–64, Cl. 317—230.

Rubera, Anthony J. Window ventilator. 3,124,055, 3–10–64, Cl. 98—99.5.

Rubin, James M. Orthodontic arch wire. 3,123,913, 3–10–64, Cl. 32—14.

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Russell, Fred J., and G. B. Solovieff; said Solovieff assor. to said Russell. Sliding key-actuated mechanism connector. 3,123,995, 3–10–64, Cl. 70—146.

Rutten, Donald E. Hopper for silo chute. 3,124,229, 3–10–64, Cl. 193—2.

Ruuska, Paul E. Adjustable splint. 3,124,127, 3–10–64, Cl. 128—89.

Ryder, Loren L. Magnetic recording and reproducing system. 3,124,662, 3–10–64, Cl. 179—100.2.

Rylott, Pierce A., and E. R. Conner, Jr. Apparatus for winding fire hose. 3,124,321, 3–10–64, Cl. 242—86.2.

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Sage, Warnie L., F. L. Hemker, and R. M. Hardgrove, to The Babcock & Wilcox Co. Slurry fired cyclone furnace. 3,124,086, 3–10–64, Cl. 110—7.

Salgado, Alvaro, and A. R. Manyak, to Reichhold Chemicals, Inc. Stable non-draining composition of matter and method of producing the same using soluble light metal salt. 3,124,549, 3–10–64, Cl. 260—22.

Salgado, Alvaro, and A. R. Manyak, to Reichhold Chemicals, Inc. Stable non-draining composition of matter and method of making same using soluble heavy metal salt. 3,124,550, 3–10–64, Cl. 260—22.

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Sampietro, Achilles C., and J. D. Grigsby, to Thompson Ramo Wooldridge Inc. Means for obtaining single phase and multi-phase currents for operating alternating current motors. 3,124,735, 3–10–64, Cl. 318—138.

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Scanlin, Charles T., and P. J. Pecora. Motor driven winch for anchor lift. 3,124,336, 3–10–64, Cl. 254—186.

Scarrone, Alfredo R. Device for feeding work pieces for processing. 3,124,351, 3–10–64, Cl. 271—34.

Schaaf, Fred W., G. L. Scott, and S. Rubin, to International Business Machines Corp. Cathode ray tube printer. 3,124,784, 3–10–64, Cl. 340—173.

Schade, Otto H., Sr., to Radio Corp. of America. Apparatus for winding helical wire grids for electron tubes. 3,124,169, 3–10–64, Cl. 140—715.

Schell, Donald H.: *See*—
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Schick, William K., to Dashews Business Machines, Inc. Color tape feed mechanism for embossing machine. 3,124,064, 3–10–64, Cl. 101—18.

Schilling, Karl, and E. Dietz, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning. Water-insoluble benzimidazolone monoazo-dyestuffs. 3,124,565, 3–10–64, Cl. 260—157.

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Schneider, William P., to Schlumberger Well Surveying Corp. Apparatus for investigating earth formations having an electrode system and coil system on the same support member. 3,124,742, 3–10–64, Cl. 324—1.

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Schommer, Jule P., to H. D. Hudson Mfg. Co. Gutter cleaner for barns. 3,124,237, 3–10–64, Cl. 198—171.

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Williams, Carol N. Tray means and magnetically cooperably retainable article means. 3,123,935, 3–10–64, Cl. 45—85.

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Williamson, Floyd M. Hydraulic die pads for presses. 3,124,341, 3–10–64, Cl. 267—1.

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Wilson, Frederick J., Jr., to The Apex Tool & Cutter Co., Inc. Disposable bit locating tool. 3,123,897, 3–10–64, Cl. 29—96.

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Wood, Charles E., deceased; by G. S. Wood, administratrix, ⅛ to H. W. Aker, ⅛ to J. W. Re., and ¼ to G. S. Wood. Method and apparatus for dewatering solids such as sand. 3,124 528, 3–10–64, Cl. 210—19.

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Ziuke, Otto, to Seimens & Halske Aktiengesellschaft. Reflection-free damping structure for space-propagated waves. 3,124,798, 3–10–64, Cl. 343—18.

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CLASSIFICATION OF PATENTS

ISSUED MARCH 10, 1964

NOTE.—First number=class, second number=subclass, third number=patent number

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U.S. DEPARTMENT OF COMMERCE
OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE
March 10, 1964 Volume 800 Number 2

TRADEMARKS
NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 22,406 (COCA-COLA in script), The Coca-Cola Company, Nutrient or tonic beverages; **Reg. No. 47,189**, same, Tonic beverages and syrups for the manufacture of such beverages; **Reg. No. 238,145** (COCA-COLA), same, Beverages and syrups for the manufacture of such beverages; **Reg. No. 238,146** (COCA-COLA in script), same; **Reg. No. 415,755** (COKE), same, Non-alcoholic maltless beverages and the syrups for making such beverages, **filed** Oct. 7, 1963, D.C. Oreg. (Portland), Doc. 63–486, *The Coca-Cola Company* v. *John A. Dodok et al.* **Same**, Doc. 63–487, *The Coca-Cola Company* v. *Mac's Pit Restaurant et al.* Final judgment enjoining defendant Oct. 28, 1963. **Same, filed** Oct. 9, 1963, D.C., W.D. Wash. (Tacoma), Doc. 3032, *The Coca-Cola Company* v. *The Hidive.*

Reg. No. 47,189. (See Reg. No. 22,406.)

Reg. No. 187,901 (CHRYSLER AND DESIGN), Chrysler Motor Corporation, Automobiles and their structural parts; **Reg. No. 272,960**, same, Chrysler Corporation, same; **Reg. No. 409,314** (CHRYSLER SEA MULE MARINE TRACTOR AND DESIGN), same, Marine tug; **Reg. No. 428,619** (CHRYSLER), same, Automobiles and their structural parts; **Reg. No. 503,315** (CHRYSLER AIRTEMP AND DESIGN), same, Refrigerating apparatus and parts thereof—namely, a refrigerant condensing unit comprised of a refrigerant compressor, refrigerant compressor driving means, etc.; **Reg. No. 503,316** (CHRYSLER AIRTEMP), same; **Reg. No. 511,503**, same, Air conditioning units to cool for bodily comfort and parts therefor, etc.; **Reg. No. 511,504** (CHRYSLER AIRTEMP AND DESIGN), same; **Reg. No. 570,186** (CHRYSLER), same, Automobiles and their structural parts, **filed** Oct. 17, 1963, D.C., W.D. Mo. (Kansas City), Doc. 14644–4, *Chrysler Corporation* v. *Harold A. Berger et al.*

Reg. No. 238,145. (See Reg. No. 22,406.)

Reg. No. 238,146. (See Reg. No. 22,406.)

Reg. No. 272,960. (See Reg. No. 187,901.)

Reg. No. 383,668 (SPARE-TIME), Spare-Time Corporation, Dice games, **filed** Nov. 21, 1962, D.C., S.D.N.Y., Doc. 62/3849, *Spare-Time Corp. et ano.* v. *Lido Corp.* Consent judgment; defendant enjoined Oct. 24, 1963.

Reg. No. 409,314. (See Reg. No. 187,901.)

Reg. No. 415,755. (See Reg. No. 22,406.)

Reg. No. 428,619. (See Reg. No. 187,901.)

Reg. No. 503,315. (See Reg. No. 187,901.)

Reg. No. 503,316. (See Reg. No. 187,901.)

Reg. No. 511,503. (See Reg. No. 187,901.)

Reg. No. 511,504. (See Reg. No. 187,901.)

Reg. No. 512,451 (HAMILTON BEACH), Scovill Manufacturing Company, Electrical apparatus—namely, drink mixers, food mixers, juice extractors, etc., **filed** Sept. 5, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63–1056–WM, *Hamilton Beach Division* v. *Western States Claim Adjusters et al.* Consent judgment; defendants enjoined Oct. 14, 1963.

CONDITION OF TRADEMARK APPLICATIONS AS OF JANUARY 31, 1964

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	14,580
Date of oldest new application	June 26, 1963
Date of oldest amended application	June 21, 1963

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 2, 4, 5, 8, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 39, 41, 42, 43, 44	7–1–63	7–2–63
(II) H. E. KASCHUB, Classes 1, 3, 6, 7, 9, 10, 18, 22, 27, 38, 40, 45, 46,47, 48, 49, 50, 51, 52; Service Marks, Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	6–26–63	6–21–63
Renewals (All Classes)	1–13–64	1–2–64
Sec. 12 (c) Publications (All Classes)	1–3–64	

Applications filed during the month of January 1964—2,056

Registrations Issued 394—No. 766,127 to No. 766,520
Renewals Issued 50

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington, D. C., 20402 to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington, D.C., 20231.

Reg. No. 524,738 (CORONET), Schenley Distillers Corporation, Brandy; **Reg. No. 653,881** (CORONET AND DESIGN), same, filed Oct. 22, 1963, D.C., S.D.N.Y., Doc. 63/3099, *Brown & Williamson Tobacco Co.* v. *Schenley Industries, Inc.*

Reg. No. 570,186. (See Reg. No. 187,901.)

Reg. No. 639,770 (FROSTIE AND DESIGN), The Frostie Company, Root beer and extract for making same; **Reg. No. 643,670** (FROSTIE OLD FASHION), same, Root beer, and syrups and extracts therefor; **Reg. No. 650,594** (FROSTIE OLD FASHION ROOT BEER AND DESIGN), same, Root beer and syrups and extracts from which a soft drink having a root beer flavor may be prepared; **Reg. No. 653,485** (FROSTIE), same, Root beer and extract for making same; **Reg. No. 662,052** (FROSTIE OLD FASHION ROOT BEER AND DESIGN), same, Root beer; **Reg. No. 678,542** (MR. FROSTIE AND DESIGN), same; **Reg. No. 728,893** (FROSTIE), same, Soft drinks and flavoring bases for making the same; **Reg. No. 752,303** (FROSTIE AND DESIGN), same, Paper drinking cups; **Reg. No. 756,054**, same, Glass bottles, filed Oct. 15, 1963, D.C. Colo. (Denver), Doc. 8239, *The Frostie Company* v. *Dr. Pepper Company.*

Reg. No. 643,670. (See Reg. No. 639,770.)

Reg. No. 650,594. (See Reg. No. 639,770.)

Reg. No. 653,485. (See Reg. No. 639,770.)

Reg. No. 653,881. (See Reg. No. 524,738.)

Reg. No. 655,102 (YOUR INDEPENDENT INSURANCE AGENT "SERVES YOU FIRST" AND DESIGN), National Association of Insurance Agents, Services as insurance agents; **Reg. No. 724,339** (YOUR INDEPENDENT INSURANCE AGENT SERVES YOU FIRST), same, filed Oct. 22, 1963, D.C. Conn. (New Haven), Doc. 10099, *National Association of Insurance Agents, Inc.* v. *Advertising Service for Insurance Agents, Inc.*

Reg. No. 662,052. (See Reg. No. 639,770.)

Reg. No. 671,020 (MARTINIZING), The American Laundry Machinery Company, Fabric cleaning and processing service, filed Oct. 23, 1963, D.C.N.J. (Newark), Doc. 881–63, *Martin Equipment Sales et al.* v. *Emanuel J. Tubis.*

Reg. No. 678,542. (See Reg. No. 639,770.)

Reg. No. 712,722(a) (GLAMOURAMA), Pionart Plastics Corporation, Plastic in slab form for general construction and fabricating purposes; **3,072,973**, S. R. Barnette, Method of making cast plastic laminates, filed Feb. 8, 1963, D.C.N.J. (Newark), Doc. 114–63, *Dimensional Plastics Corp.* v. *American Casting Corporation et al.* Action dismissed Oct. 15, 1963.

Reg. No. 712,722(b) (GLAMOURAMA), Pionart Plastics Corporation, Plastic in slab form for general construction and fabricating purposes, filed Oct. 24, 1963, D.C.N.J. (Newark), Doc. 888–63, *Dimensional Plastics Corp.* v. *American Casting Corporation et al.*

Reg. No. 724,339. (See Reg. No. 655,102.)

Reg. No. 727,813 (KNOWLEDGE THROUGH READING AND DESIGN), Evelyn Wood Reading Dynamics Corporation, Conducting courses of instruction in rapid and perceptive reading and carrying out research in reading techniques; **Reg. No. 731,962** (READING DYNAMICS), Evelyn Wood Reading Dynamics Institutes of America, Inc., Conducting courses of instruction in rapid and perceptive reading techniques; **Reg. No. 748,155** (EVELYN WOOD), same, filed Sept. 28, 1963, D.C. Dist. of Col., Doc. 2410–63, *Evelyn Wood Reading Dynamics Institutes of America, Inc.* v. *Frederick W. Babbel & Associates, Inc. et al.*

Reg. No. 728,893. (See Reg. No. 639,770.)

Reg. No. 731,962. (See Reg. No. 727,813.)

Reg. No. 738,181 (CROSSFIRE), Channel Master Corporation, Television antennas, accessories therefor and parts thereof; **3,066,206**, H. Greenberg, End fire planar dipole array with line transposition between dipoles and impedance increase towards feed, filed Sept. 27, 1963, D.C., N.D. Ill (Chicago), Doc. 63c1746, *Channel Master Corporation* v. *Trio Manufacturing Co. et al.*

Reg. No. 748,155. (See Reg. No. 727,813.)

Reg. No. 752,303. (See Reg. No. 639,770.)

Reg. No. 756,054. (See Reg. No. 639,770.)

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1 — Raw or Partly Prepared Materials

SN 131,501. O. A. Newton & Son Company, d.b.a. Newton's, Bridgeville, Del. Filed Nov. 7, 1961.



For Baby Chicks.
First use July 1956.

SN 150,318. Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany. Filed Aug. 2, 1962.

KORESIN

For Vinyl Resin—Auxiliary for the Rubber Industry.
First use Oct. 24, 1939; in commerce Mar. 11, 1959.

SN 160,725. Soluble Products Corp., Brooklyn, N.Y. Filed Jan. 15, 1963.

TAB-U-LETS

For Bases for the Manufacture of Chewable Tablets, Said Bases Containing a Combination of Carbohydrate Component Materials With Artificial Food Colors, Flavors and Excipients.
First use July 27, 1961.

SN 161,034. Fiberfil, Inc., Warsaw, Ind. Filed Jan. 21, 1963.

STYRAGLAS

Owner of Reg. No. 723,431.
For Reinforced Synthetic Resinous Injection-Molding Materials in Pellet or Granular Form.
First use on or about Nov. 2, 1962.

SN 161,783. S. B. Foot Tanning Company, Red Wing, Minn. Filed Jan. 31, 1963.

TROUT BROOK

For Side Leather.
First use Jan. 1, 1909.

SN 163,557. Jefferson Lake Asbestos Corporation, New Orleans, La. Filed Feb. 27, 1963.

MOTHER LODE

For Asbestos Fiber (Non-Metallic Minerals).
First use Aug. 15, 1962.

SN 169,517. Comet Fibers, Inc., Brooklyn, N.Y. Filed May 23, 1963.

POLYBOND

For Processed Synthetic Fibers Used as Interlinings and as Filling for Quilted Fabric.
First use Mar. 26, 1963.

SN 170,021. American Marbline, Inc., Santa Fe Springs, Calif. Filed May 31, 1963.

MARBLINE

For Synthetic Marble in the Form of Slabs, Panels, Sheets, Sections, and the Like.
First use November 1959.

Class 2 — Receptades

SN 159,448. Wembley, Inc., New Orleans, La. Filed Dec. 19, 1962.

WEMBLEY

Owner of Reg. Nos. 349,654, 729,779, and others.
For Carrying Case for Neckties, and Jewelry Chests.
First use June 14, 1962, on carrying case.

SN 166,009. Hofstal Company, Bryan, Ohio. Filed Apr. 3, 1963.

LAUNDREMINDER

For a Holder Comprising a Printed Sheet With Pockets Therein for Use in Cataloging and Filing Garment Washing or Cleaning Instructions.
First use Mar. 25, 1963.

SN 166,311. Plastic Packaging Corporation of America, Central Falls, R.I. Filed Apr. 8, 1963.

PPCA

For Plastic Boxes, Containers, and Liners for Packaging and Storing Various Articles.
First use on or about Mar. 20, 1963.

SN 172,015. Stone Container Corporation, Chicago, Ill. Filed June 27, 1963.

POST-L-PAK

For Collapsible Paperboard Shipping Containers for Books and the Like.
First use on or about Feb. 24, 1962.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 146,323. John P. Sheldon, Inc., d.b.a. The Sheldon Company, Los Angeles, Calif. Filed June 6, 1962.

SHELDON

For Pocketbooks, Portfolios and Baggage, Including Specifically: Wallets; Key Cases; Card Cases; Bill Clips; Credit Card Wallets and Cases; Billfolds; Secretaries; Coat Wallets; Trip Kits; Travel Valets; Fitted Kits; Fitted Dressing Sets; Optical Cases; Shoe Shine Kits; and Tray Purses.
First use at least as early as February 1940.

SN 159,444. Wembley, Inc., New Orleans, La. Filed Dec. 19, 1962.

WEMBLEY

Owner of Reg. Nos. 349,654, 729,779, and others.
For Attaché Cases and Briefcases.
First use July 20, 1962.

SN 166,055. Westerman Mfg. Co., Inc., New York, N.Y. Filed Mar. 29, 1963.

RANGER

For Wallets.
First use Jan. 5, 1962.

SN 172,939. Prince Gardner Company, Inc., St. Louis, Mo. Filed July 12, 1963.

TREE OF GOLD

For Purses.
First use June 29, 1961.

SN 176,200. Robert M. Kastner, d.b.a. Pet Products Manufacturing Co., New York, N.Y. Filed Sept. 3, 1963.

"DOGGY DIVAN"

The word "Doggy" is disclaimed apart from the mark as shown.
For Dog Beds.
First use 1938.

SN 176,481. Bienen-Davis, Inc., New York, N.Y. Filed Sept. 9, 1963.

original by Siminy

The words "Original By" are disclaimed apart from the mark.
For Ladies' Pocket Books.
First use Aug. 29, 1963.

Class 4 — Abrasives and Polishing Materials

SN 166,298. Robert Penn, d.b.a. Marglo Co., Chicago, Ill. Filed Apr. 8, 1963.

MARGLO

For A Kit Containing Abrasive Powder for Polishing Marble and a Liquid Wax Polish for Use on Marble.
First use Dec. 12, 1955.

Class 6 — Chemicals and Chemical Compositions

SN 136,479. National Gypsum Company, Buffalo, N.Y. Filed Jan. 24, 1962.

CARBON/WHITE

For Precipitated Calcium Carbonate of Uniform Fine Particle Size.
First use Sept. 9, 1954.

SN 137,629. Hayes-Sammons Chemical Co., Mission, Tex. Filed Feb. 9, 1962.

TERBEN

For Emulsifiable Concentrate of Terpene Polychlorinates for Use as an Agricultural Insecticide.
First use Jan. 4, 1962.

SN 142,165. American Grease Stick Company, Muskegon Heights, Mich. Filed Apr. 13, 1962.

IRON-SMOOTH

For Preparation for Application to the Ironing Surface of Electric and Other Irons for Facilitating the Ironing of Fabrics and the Like.
First use Oct. 16, 1961.

SN 146,280. George F. Doleshal, d.b.a. Geo. F. Doleshal Laboratories, Towson, Md. Filed June 6, 1962.

E-Z ICED

For Refrigerant Packs Comprising a Chemical Which Freezes Solid and Is Placed in Lunch Boxes To Refrigerate Foods Which Are Contained Therein.
First use June 1958.

SN 149,205. Puratized, Inc., Division of Biscayne Gallowhur Corporation, New York, N.Y. Filed July 17, 1962.

PURATIZED

For Fungicides and Mildewcides for Agricultural and Industrial Uses, Excluding Only Uses for Fruit Trees, Ornamental Bushes and Trees, Roots, Sugar Cane and Bulbs.
First use Feb. 23, 1940.

SN 151,279. Velsicol Chemical Corporation, Chicago, Ill. Filed Aug. 15, 1962.

DICAMBA

For Herbicides for Manufacturing Use.
First use Aug. 6, 1962.

SN 151,280. Velsicol Chemical Corporation, Chicago, Ill. Filed Aug. 15, 1962.

TRICAMBA

For Herbicides for Manufacturing Use.
First use Aug. 6, 1962.

SN 151,334. S. C. Johnson & Son, Inc., Racine, Wis. Filed Aug. 16, 1962.

HI FASHION

For Household Air Deodorants.
First use on or about July 6, 1962.

SN 151,536. Sun Chemical Corporation, New York, N.Y. Filed Aug. 20, 1962.

WARWICK

For Chemicals and Chemical Compositions for Use in the Textile Industries—Namely, Textile Delustrants, Softeners, Dyeing Assistants, Penetrants, Wetting Agents, Sizing Agents, Humectants, Dye Leveling Agents, Stabilizers, Water Repellents, Mildewproofing Agents, Scouring Agents, Fiber Lubricants, Cross-Linking Agents for Providing Crease Resistance, Shrinkage Control and Wash and Wear Characteristics, Gas Fading Inhibitors, Dye Fixatives, Germicidal Agents for Textiles, Flame Retarding Agents, Sanforizing Agents and Slip-Proofing Agents.
First use 1928.

SN 151,994. S. B. Penick & Company, New York, N.Y. Filed Aug. 27, 1962.

ODAMASK

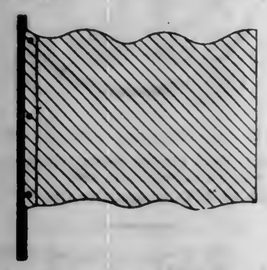
For Industrial Deodorants and Reodorants.
First use Nov. 5, 1953.

SN 152,204. Chapman Chemical Company, Memphis, Tenn. Filed Aug. 30, 1962.

NO-VINE

For Granular, Non-Selective Weed, Grass and Vine Killer.
First use Nov. 30, 1961.

SN 152,811. Mallinckrodt Chemical Works, St. Louis, Mo. Filed Sept. 10, 1962.



The drawing is lined for the color green.
For Turf Fungicides.
First use January 1956.

SN 153,391. Dycol Chemicals, Inc., New York, N.Y. Filed Sept. 18, 1962.



For Pure and Chemically Modified Mannogalactan Gums Suitable for Thickeners and Dispersing Agents in the Food Industry; Printing Gums, Sizing and Finishing Agents in the Textile Industry; Beater and Wet End Additives for Use in the Paper Industry; Stabilizers, Thickeners, Dispersing Agents and Fillers in the Pharmaceutical Industry; Flocculants and Flotation Agents in the Mining Industry; Fluid Loss Control Additives and Fracking Fluid Thickeners for Oilwell Drilling; Cosmetic Stabilizers and Thickeners; and Pasting and Leather Dressing Agents.
First use Sept. 8, 1962.

SN 153,415. Mallinckrodt Chemical Works, St. Louis, Mo. Filed Sept. 18, 1962.

PHENMAD

For Turf Fungicide.
First use June 29, 1962.

SN 154,110. The Grand Union Company, East Paterson, N.J. Filed Sept. 28, 1962.

GRAND

Owner of Reg. Nos. 52,300, 738,901, and others.
For Bleach for Laundry, Deodorant, Disinfectant and Other Uses.
First use June 1961.

SN 155,150. Halby Products Company, Inc., Wilmington, Del. Filed Oct. 10, 1962.

HALBY

For Inorganic and Organic Thiocyanates, Sulfides, Hydrosulfides, Thioglycolic Acid, Thioglycoats Including Esters, Thiodipropionates Including Esters, Thiodipropionic Acid and Thiodipropionitrile.
First use 1946.

SN 156,904. L. B. Russell Chemicals, Inc., Long Island City, N.Y. Filed Nov. 8, 1962.

RAY-OMAT

For Developer-Replenisher for Automatic X-Ray Film Processing.
First use October 1959.

SN 158,448. Hercules Powder Company, Wilmington, Del. Filed Dec. 4, 1962.



For Amine D Acetate Used as an Algicide, as a Flotation Agent, and as an Ingredient in Adhesives.
First use Oct. 29, 1962.

SN 160,656. Pennsalt Chemicals Corporation, Philadelphia, Pa. Filed 1-14-63.

PENNODORANT

For Volatile Chemical Additives for Fuel Gas To Impart Odor Warning Characteristics.
First use Nov. 13, 1962.

SN 161,269. Nepera Chemical Co., Inc., Village of Harriman, N.Y. Filed Jan. 23, 1963.

MANDESTAT

For Antibacterial Agent for Lubricating Oils.
First use Jan. 8, 1963.

SN 161,479. The Delman Company, Cookeville, Tenn. Filed Jan. 28, 1963.

N D

For Windshield Washer Solvent.
First use about Feb. 27, 1962.

SN 161,792. Hooker Chemical Corporation, Niagara Falls, N.Y. Filed Jan. 31, 1963.

POLYSTREAM

For Composition for Controlling Shellfish Predators.
First use June 19, 1961.

SN 161,947. H. A. Calahan, Inc., Mamaroneck, N.Y. Filed Feb. 4, 1963.

BORABAN

For Fungicides To Protect Wood Against Rot.
First use Dec. 18, 1962.

SN 162,016. Purex Corporation, Ltd., Lakewood, Calif. Filed Feb. 4, 1963.

PUREX

Owner of Reg. Nos. 155,699, 737,343, and others.
For Chlorine and Muriatic Acid for Use in Swimming Pools.
First use Apr. 15, 1948, on chlorine.

SN 162,034. Stauffer Chemical Company, New York, N.Y. Filed Feb. 4, 1963.

PERFECTION

For Sodium Acid Pyrophosphate for Use in Baked Products.
First use on or about June 7, 1933, on sodium acid pyrophosphate.

SN 162,085. Drew Chemical Corporation, New York, N.Y. Filed Feb. 5, 1963.

AMEROID

Owner of Reg. Nos. 594,077, 517,529, and others.
For Chemical Reagents, Chemicals and Chemical Compositions for Water Treatment and Conditioning, All for Marine and Industrial Use.
First use Jan. 2, 1930.

SN 162,116. Rohm & Haas Company, Philadelphia, Pa. Filed Feb. 5, 1963.

TOK

For Agricultural Herbicide for Pre-Emergence or Post-Emergence Use in the Control of Weeds in Crop and Non-Crop Areas.
First use on or about Dec. 15, 1962.

SN 162,166. Kolmar Laboratories, Inc., Milwaukee, Wis. Filed Feb. 6, 1963.

POROSITONE

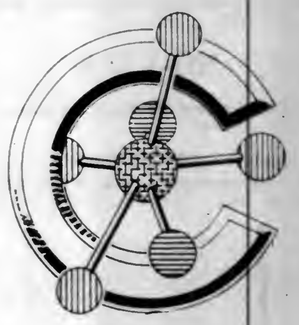
For Organic Compound To Be Incorporated With a Fat Component in Cosmetic, Pharmaceutical and Proprietary Drug Products To Increase the Water Porosity of the Fat Component.
First use Jan. 8, 1963.

SN 162,833. Foseco International Limited, Birmingham, England. Filed Feb. 15, 1963.

TERRAPAINT

For Refractory Based Mold, Core, and Cover Dressings for Use in the Castings of Ferrous Metals.
First use July 19, 1955; in commerce July 19, 1955.

SN 162,905. Climax Chemical Company, Houston, Tex. Filed Feb. 18, 1963.



The drawing is lined for the colors yellow, red and blue.
For Muriatic Acid and Sulphuric Acid.
First use Sept. 23, 1962, on muriatic acid.

SN 163,049. Hooker Chemical Corporation, Niagara Falls, N.Y. Filed Feb. 19, 1963.

CP-468

Owner of Reg. No. 527,697.
For Chlorinated Hydrocarbon.
First use Aug. 23, 1962.

SN 163,099. Albert-Acan X-Ray Solutions, Inc., Woodside, N.Y. Filed Feb. 20, 1963.

CON-PAK

For Packaged Solutions and Chemicals for Radiographic Purposes.
First use Feb. 1, 1962.

SN 163,226. Dril-Kem, Inc., Houston, Tex. Filed Feb. 21, 1963.

FLUID-TROL

For Liquid Surface Tension Reducing Composition for Addition to Drilling Mud Fluid in the Drilling of Wells.
First use Jan. 14, 1963.

SN 163,461. Luther B. Arnold, Jr., d.b.a. Vikon Chemical Company, Elon College, N.C. Filed Feb. 26, 1963.

MERKYL

For Chemical Compositions for Use in Manufacture of Bactericides, Anti-Bacterial Agents, Mildewcides and Mildew-Proofing Agents for the Treatment of Textiles and Fibers, Containing Phenyl Mercury Triethanol Ammonium Lactate as the Active Ingredient.
First use Nov. 21, 1962.

SN 167,823. Hoffmann-La Roche Inc., Nutley, N.J. Filed Apr. 30, 1963.

MELONIA

For Aromatic Scent Chemical Substance for General Industrial Use.
First use Mar. 13, 1963.

SN 169,456. H. Kohnstamm & Co. Inc., New York, N.Y. Filed May 22, 1963.

SOFT-STAT

For Textile Softener and Bacteriastat.
First use Oct. 4, 1962.

SN 170,093. Moser Paper Company, Chicago, Ill. Filed May 31, 1963.

PYRO/SORB

For Absorbefacient Embalming Chemical Used by Undertakers.
First use Apr. 22, 1963.

SN 170,168. Castech, Inc., Tulia, Tex. Filed June 3, 1963.

SPECTRAL

For Castor Oil.
First use Feb. 28, 1961.

SN 170,452. The R. H. Bogle Company, Alexandria, Va. Filed June 6, 1963.

BO-RID

For Weed and Grass Killer for Industrial Use.
First use Feb. 18, 1963.

SN 171,273. Quaker State Oil Refining Corporation, Oil City, Pa. Filed June 18, 1963.

QUAKER STATE

For Anti-Freeze.
First use Nov. 7, 1962.

SN 171,281. The L. S. Starrett Company, Athol, Mass. Filed June 18, 1963.

STARRETT

Owner of Reg. Nos. 85,923 and 88,215.
For Layout Dye.
First use July 1, 1959.

SN 171,432. Corrosion Reaction Consultants, Inc., Philadelphia, Pa. Filed June 20, 1963.

5·56

For Rust and Corrosion Inhibitor.
First use Dec. 11, 1959.

SN 172,693. Sternco Industries, Inc., Allendale, N.J. Filed July 9, 1963.

LONGLIFE

Owner of Reg. Nos. 360,987 and 674,270.
For Chemical Compounds for the Treatment of Water in Aquariums.
First use Nov. 14, 1960.

SN 173,446. Fritzsche Brothers, Inc., New York, N.Y. Filed July 22, 1963.

EST 1871



Owner of Reg. No. 62,482.
For Essential Oils and Essences, Substitutes for Essential Oils, Aromatic Chemicals, Deodorants for Industrial Use, and Antioxidants.
First use June 7, 1963.

SN 174,375. Philip A. Hunt Company, Palisades, Park, N.J. Filed Aug. 5, 1963.

STARLITH

For Photographic Developer.
First use Apr. 29, 1963.

SN 174,543. The Standard Oil Company, Cleveland, Ohio. Filed Aug. 6, 1963.

SOHIO

The drawing is lined for red and blue.
For Urea.
First use about Apr. 1, 1955.

Class 8—Smokers' Articles, Not Including Tobacco Products

SN 172,939. Prince Gardner Company, Inc., St. Louis, Mo. Filed July 12, 1963.

TREE OF GOLD

For Cigarette Cases and Cigarette Lighters.
First use June 29, 1961.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 147,121. Ithaca Gun Company, Incorporated, Ithaca, N.Y. Filed June 18, 1962.

FEATHERLIGHT

Owner of Reg. No. 541,130.
For Firearms and Firearms Accessories—Namely, Shotguns, Component Parts Thereof, and Pistol and Gun Cases.
First use 1938 on shotguns.

SN 166,790. Eugene D. Depue and Lester E. Depue, Long Beach, Calif. Filed Apr. 16, 1963.



For Rifle and Shotgun Stocks.
First use Dec. 17, 1962.

SN 173,314. Alcan Company, Incorporated, Alton, Ill. Filed July 19, 1963.

KWIK-SERT

For Shot Cups for Shotgun Cartridges.
First use June 4, 1963.

SN 174,787. Olin Mathieson Chemical Corporation, East Alton, Ill. Filed Aug. 9, 1963.

WIN-WAD

For Wads for Shotshells.
First use on or about July 29, 1963.

Class 10—Fertilizers

SN 159,111. Organic Compost Corporation, Germantown, Wis. Filed Dec. 18, 1962.



For Fertilizer.
First use Nov. 19, 1962.

SN 174,802. Smith-Douglas Company, Inc., Norfolk, Va. Filed Aug. 9, 1963.

GATEWAY

For Fertilizer.
First use Apr. 25, 1963.

Class 11—Inks and Inking Materials

SN 176,208. Jas. H. Matthews & Co., Pittsburgh, Pa. Filed Sept. 3, 1963.

MATTH-A-MAJIC

For Ink for Marking Upon Paper, Plastic and Metal Objects.
First use on or about Apr. 1, 1961.

Class 12—Construction Materials

SN 155,848. Southwestern Portland Cement Company, Los Angeles, Calif. Filed Oct. 24, 1962.



Applicant disclaims the use of the words "Portland Cement Company" as applied to this mark. Owner of Reg. Nos. 531,379, 719,505, and others.
For Portland Cement and Masonry Cement.
First use on or about May 1907.

SN 167,389. Walter H. Laabs, d.b.a. Fountain of Youth Pools, Inc., Riviera Beach, Fla. Filed Apr. 23, 1963.

FOUNTAIN OF YOUTH

For Swimming Pools.
First use June 11, 1959.

SN 175,661. Joslyn Mfg. and Supply Co., Chicago, Ill. Filed Aug. 23, 1963.

AAS

For Electric Utility and Telephone Poles.
First use May 31, 1963.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 158,267. Nippon Hatsujyo Kabushiki Kaisha, Isogo-ku, Yokohama-City, Japan. Filed Nov. 30, 1962.

NHK

Owner of Japanese Reg. No. 401,765, dated Aug. 18, 1951.
For All Kinds of Springs.
First use Nov. 14, 1948; in commerce April 1960.

SN 166,702. The Ferry Cap & Set Screw Company, Cleveland, Ohio. Filed Apr. 15, 1963.

F-C

For Cap Screws, Set Screws, Bolts and Studs.
First use Aug. 1, 1949.

SN 167,297. Monaplastics Inc., Georgetown, Conn. Filed Apr. 22, 1963.

MONORAC

For Article Supports, Such as Paper Towelling Racks.
First use Feb. 20, 1963.

SN 175,430. Olin Mathieson Chemical Corporation, East Alton, Ill. Filed Aug. 20, 1963.

DYNABOLT

For Masonry Anchors.
First use on or about July 9, 1963.

SN 175,453. Westinghouse Air Brake Company, Wilmerding, Pa. Filed Aug. 20, 1963.

CONTROLAIR

Owner of Reg. No. 402,998.
For 3- and 4-Way Pressure Controlling Directional Valves.
First use July 9, 1942.

SN 175,454. Westinghouse Air Brake Company, Wilmerding, Pa. Filed Aug. 20, 1963.

RELAYAIR

Owner of Reg. No. 402,997.
For Fluid Controlled Pneumatic 3-Way Valves, Which Are Operated by Fluid Signal at or Above a Specific Pressure, or at or Below a Specific Pressure, on Either Increasing or Decreasing Pressure, Respectively.
First use July 8, 1942.

SN 177,886. Illinois Tool Works Inc., Chicago, Ill. Filed Sept. 27, 1963.

"TEKS"

For Screws—Namely, Drilling and Tapping Screws.
First use Sept. 25, 1963.

Class 14—Metals and Metal Castings and Forgings

SN 174,149. Adamas Carbide Corporation, Kenilworth, N.J. Filed Aug. 1, 1963.

TITAN

For Titanium Carbide Base Cutting Tool Stock.
First use July 30, 1963.

Class 15—Oils and Greases

SN 171,280. The L. S. Starrett Company, Athol, Mass. Filed June 18, 1963.

STARRETT

Owner of Reg. Nos. 85,923 and 88,215.
For Instrument Oil.
First use July 1, 1959.

SN 177,424. Hudson Oil Company, Kansas City, Kans. Filed Sept. 20, 1963.

HUDSON PLUS

Owner of Reg. Nos. 614,216 and 748,326.
For Gasoline.
First use during July 1963.

Class 16—Protective and Decorative Coatings

SN 168,252. United States Plywood Corporation, New York, N.Y. Filed May 6, 1963.

FORMLIFE

Owner of Reg. Nos. 365,947, 742,246, and others.
For Water Repellent Composition for the Protection Against Swelling, Warping, Shrinking and Checking of Wood Forms for Concrete and Other Wood Products and To Prevent Adhesion of Material to Wooden Surfaces.
First use Feb. 4, 1963.

SN 177,116. United States Borax & Chemical Corporation, Los Angeles, Calif. Filed Sept. 16, 1963.



Owner of Reg. Nos. 50,555, 327,549, and 588,361.
For Sealers for Wood, Cork, Cement, Oxychloride, Linoleum, Terrazzo and Stone Floors.
First use July 30, 1963.

Class 17—Tobacco Products

SN 171,096. Corral, Wodiska y Ca., Tampa, Fla. Filed June 17, 1963.



Owner of Reg. Nos. 185,311, 752,796, and others.
For Cigars.
First use May 31, 1963.

Class 18—Medicines and Pharmaceutical Preparations

SN 114,063. George H. Watson, Anniston, Ala. Filed Feb. 20, 1961.

WATSON'S

For Remedy for Chronic Sores, Poison Ivy, Athletes' Foot, Eczema, Mange, Etc.
First use Apr. 24, 1940.

SN 154,724. Interstate Industries, Inc., d.b.a. Interstate Chemical Company, Kansas City, Mo. Filed Oct. 8, 1962.



For Iodine Additive for Veterinary Feed Stuffs.
First use July 28, 1962.

SN 154,995. Chas. Pfizer & Co. Inc., New York, N.Y. Filed Oct. 11, 1962.

SULFA-URE-ZOL

For Veterinary Antiseptic Preparation.
First use in or before September 1954.

SN 155,183. George E. Plancon, Sr., New Plymouth, Idaho. Filed Oct. 15, 1962.

VAPOROINTPLANÇON

For Ointment for the Treatment of Certain Ailments—Namely, Cuts, Bruises, Wounds, Sores, Chapped Hands, Etc.
First use July 6, 1921.

SN 158,600. Carbisulphoil Company, Dallas, Tex. Filed Dec. 6, 1962.

IVAREST

For Cream for Temporary Relief of Itching and Discomfort Caused by Poison Ivy, Poison Sumac, Insect Bites and Other Minor Skin Irritations.
First use Oct. 30, 1962.

SN 163,791. Barnes-Hind Laboratories, Inc., Sunnyvale, Calif. Filed Mar. 4, 1963.

COMED

For Lotion for Treatment of Acne.
First use Jan. 16, 1963.

SN 164,587. American Cyanamid Company, Wayne, N.J. Filed Mar. 14, 1963.

D PLUS D

For Medicated Cough Preparation.
First use Feb. 21, 1963.

SN 165,017. American Cyanamid Company, Wayne, N.J. Filed Mar. 20, 1963.

D+D

For Medicated Cough Preparation.
First use Feb. 21, 1963.

SN 165,888. American Cyanamid Company, Wayne, N.J. Filed Apr. 2, 1963.

DEXTRAL

For Vitamin-Mineral Supplement.
First use Mar. 20, 1963.

SN 166,444. Ciba Corporation, New York, N.Y. Filed Apr. 10, 1963.

LOCACORTEN

For Cortical Steroid Preparation.
First use Feb. 19, 1963.

SN 168,120. Sterling Drug Inc., New York, N.Y. Filed May 8, 1963.



The drawing is lined for red. Owner of Reg. Nos. 24,395, 55,600, and others.
For Liquid Petrolatum.
First use September 1961.

SN 169,226. Charles A. Crete, d.b.a. Pharmaceutical Associates, San Francisco, Calif. Filed May 20, 1963.

Q-TINE

For An Antiseptic Mouthwash With Incidental Germicidal and Deodorant Properties.
First use April 1963.

SN 170,199. International Minerals & Chemical Corporation, Skokie, Ill. Filed June 3, 1963.

DUO-FOS

Owner of Reg. No. 628,947.
For Diammonium Phosphate, for Use in Livestock Feeds.
First use Feb. 8, 1963.

SN 172,799. Atlas Chemical Industries, Inc., Wilmington, Del. Filed July 11, 1963.

MYLICON

Owner of Reg. No. 697,006.
For Pharmaceutical Preparations for the Relief of Gastro Intestinal Distress.
First use June 24, 1959.

SN 173,327. American Home Products Corporation, New York, N.Y. Filed July 19, 1963.

MEDITHANE

For Preparation for the Relief and Treatment of Hemorrhoids.
First use July 3, 1963.

SN 173,329. American Home Products Corporation, New York, N.Y. Filed July 19, 1963.

DUALIN

Owner of Reg. No. 581,661.
For Antacid and Analgesic Preparation.
First use July 3, 1963.

SN 173,330. American Home Products Corp., New York, N.Y. Filed July 19, 1963.

POWERIN

For Analgesic Preparation.
First use June 18, 1963.

SN 173,814. C. H. Boehringer Sohn, Ingelheim am Rhein, German. Filed July 26, 1963.

CENTALUN

Owner of German Reg. No. 339,889, dated Oct. 2, 1925.
For Tranquilizer, Sedative and Hypnotic Agent.

SN 173,834. Dunhall, Inc., Gravette, Ark. Filed July 26, 1963.

PRONDOL

For Medicinal Preparation in Tablet Form for Relief of Pain Where Mild Sedative Action Is Also Desirable.
First use Apr. 1, 1963.

SN 174,153. American Home Products Corporation, New York, N.Y. Filed Aug. 1, 1963.

EPIGRAN

For Healing Ointment for Relief and Treatment of Irritations of the Skin.
First use July 16, 1963.

SN 174,198. Leslie Salt Co., San Francisco, Calif. Filed Aug. 1, 1963.

TAFURA PREMIX

No claim is made to the word "Premix."
For Antibiotic and Furazolidone Premix.
First use Feb. 15, 1956.

SN 174,336. J. R. Brown, Jr., Opelousas, La. Filed Aug. 5, 1963.

BROWNLINE

For Vitamins and Athlete's Foot Preparation for the Relief of Toe Itch, Ring-Worm, Etc.
First use Oct. 1, 1960, on vitamins.

SN 174,410. Mayo-Reese Co. Inc., New York, N.Y. Filed Aug. 5, 1963.



For Breath Deodorant.
First use June 14, 1963.

SN 174,613. Schering Corporation, Bloomfield, N.J. Filed Aug. 7, 1963.

NAQUASONE

Owner of Reg. No. 712,403.
For Diuretic Preparation for Veterinary Use.
First use Jan. 7, 1963.

SN 174,616. Smith Kline & French Laboratories, Philadelphia, Pa. Filed Aug. 7, 1963.

DYREN

For Diuretic Preparation.
First use July 12, 1963.

SN 174,822. Barnes-Hind Barium Products, Sunnyvale, Calif. Filed Aug. 12, 1963.

TANATRAST

For Special Stabilised Tannic Acid for Diagonostic Radiological Use.
First use May 20, 1963.

SN 174,936. Atomic Basic Chemicals Corporation, Pittsburgh, Pa. Filed Aug. 13, 1963.



The wording "Healthy Hoof" is disclaimed apart from the mark as shown.
For Supplement Containing Ethylene Diamine Dihydriodide for Use as an Additive in Cattle, Poultry and Hog Feed for the Prevent of Foot Rot and Other Animal Ailments.
First use Feb. 11, 1963.

SN 175,190. Hoffmann-La Roche Inc., Nutley, N.J. Filed Aug. 16, 1963.

VERSINOX

For Analgesic Sedative Preparation.
First use July 25, 1963.

SN 175,228. The Wander Company, Chicago, Ill. Filed Aug. 16, 1963.

COURAGE

For Product Used as a Therapeutic Protein Supplement.
First use Aug. 2, 1963.

SN 175,229. The Wander Company, Chicago, Ill. Filed Aug. 16, 1963.

LERTAID

For Product Used as a Stimulant.
First use Aug. 5, 1963.

SN 175,369. American Home Products Corporation, New York, N.Y. Filed Aug. 20, 1963.

DON'T CRY

For Antiseptic Analgesic First Aid Preparation.
First use June 18, 1963.

SN 175,370. American Home Products Corporation, New York, N.Y. Filed Aug. 20, 1963.

MR. MED

For Antiseptic Analgesic First Aid Preparation.
First use June 18, 1963.

SN 175,380. Blair Laboratories, Inc., Yonkers, N.Y. Filed Aug. 20, 1963.

LAXAID

For Laxative Preparation.
First use Aug. 9, 1963.

SN 175,381. Blair Laboratories, Inc., Yonkers, N.Y. Filed Aug. 20, 1963.

MEDILAX

For Laxative Preparation.
First use Aug. 16, 1963.

SN 175,706. Abbott Laboratories, North Chicago, Ill. Filed Aug. 26, 1963.

FLAVOR BURST

For Flavor Component of Vitamin Preparations.
First use July 19, 1963.

SN 175,925. Mead Johnson & Company, Evansville, Ind. Filed Aug. 28, 1963.

LICTINE

For Anti-Spasmodic Preparation.
First use on or prior to Aug. 21, 1963.

SN 176,025. Pritchard Pharmaceutical Products, Inc., Kansas City, Mo. Filed Aug. 29, 1963.

COLEMUL

For Rectal Suppository.
First use July 2, 1963.

SN 176,255. The Upjohn Company, Kalamazoo, Mich. Filed Sept. 3, 1963.

KAOBIOTIC BOLUS

Applicant makes no claim for the word "Bolus" apart from the mark shown in the drawing. Owner of Reg. No. 603,863.
For Veterinary Antibiotic Preparation.
First use Nov. 20, 1956.

SN 176,259. Winston Pharmaceuticals, Incorporated, Winston-Salem, N.C. Filed Sept. 3, 1963.

NASEC

For Pharmaceutical Preparation Consisting of Sustained-Release Capsules To Be Used for Antihistaminic, Decongestant and Antisecretory Medication.
First use Aug. 16, 1963.

SN 176,342. American Home Products Corporation, New York, N.Y. Filed Sept. 5, 1963.

FONDLE

For Medicinal Preparation for the Treatment and Alleviation of Diaper Rash.
First use Aug. 8, 1963.

SN 177,044. Hudson Vitamin Products, Inc., New York, N.Y. Filed Sept. 16, 1963.

RECTOLATUM

For Hemorrhoidal Ointment.
First use Sept. 6, 1963.

SN 177,137. The Wander Company, Chicago, Ill. Filed Sept. 16, 1963.

RASH-GARD

For Preparation To Be Used in the Treatment of Diaper Rash.
First use Aug. 30, 1963.

SN 177,541. Provident Pharmaceuticals, Incorporated, Chattanooga, Tenn. Filed Sept. 23, 1963.

VAGITROL

For An Ethical Pharmaceutical Preparation for the Treatment of Vaginitis and Cervicitis.
First use Feb. 1, 1963.

SN 177,603. Baxter Laboratories, Inc., Morton Grove, Ill. Filed Sept. 24, 1963.

CO-ORD

For Anticonvulsant.
First use Aug. 23, 1963.

SN 177,675. Baxter Laboratories, Inc., Morton Grove, Ill. Filed Sept. 25, 1963.

URONAMIDE

For Urinary Antiseptic for Combating Infection in the Genito-Urinary Tract.
First use Jan. 15, 1956.

Class 19—Vehicles

SN 167,981. Cardinal Manufacturing Company, Fort Valley, Ga. Filed May 2, 1963.



For Interior and Exterior Mirrors, Sun Visors and Manual Entrance Door Controls.
First use Feb. 4, 1963.

SN 174,080. Caterpillar Tractor Co., East Peoria, Ill. Filed July 31, 1963.

CATERPILLAR

Owner of Reg. Nos. 277,417, 558,877, and others.
For Motor Trucks, Dump Wagons, Wheel Tractor-Dump Wagon Combinations, Wheel Tractors and Parts Therefor.
First use 1941 on dump wagons.

SN 176,426. Bunting Tractor Company, Inc., Boise, Idaho. Filed Sept. 6, 1963.

TEL STAR

For Mobile Homes.
First use Apr. 3, 1963.

SN 176,698. Utility Body Company, Berkeley, Calif. Filed Sept. 10, 1963.

UTILCO

For Service Bodies for Mounting on a Motor Vehicle Chassis and Metal Containers Useful as Compartments for Tools and the Like.
First use May 1957.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 142,944. Lyndon V. Grover, Glendale, Calif. Filed Apr. 24, 1962.

SpeediSmooth

Owner of Reg. No. 512,000.
For Electrical Sanding Machines.
First use June 3, 1946.

SN 165,585. Electric Regulator Corporation, Norwalk, Conn. Filed Mar. 28, 1963.

STATOHM

For Packaged Adjustable Speed D.C. Drive.
First use Mar. 4, 1963.

SN 167,981. Cardinal Manufacturing Company, Fort Valley, Ga. Filed May 2, 1963.



For Electric Defroster Fans, Electric Dome Lights, Electric Warning Lights and Electric Identification Lights.
First use Feb. 4, 1963.

SN 169,613. Crawford Door Company, Detroit, Mich. Filed May 24, 1963.

MAGI-MATIC

For Electrically Operated Radio Controlled Operators for Residential Garage Doors.
First use Feb. 12, 1963.

SN 171,393. Sony Corporation, Tokyo, Japan. Filed June 19, 1963.

SONY

Owner of U.S. Reg. Nos. 691,940, 692,023, and 705,902.
For Television Cameras.
First use Mar. 30, 1961; in commerce Mar. 30, 1961.

SN 171,740. Anaconda Wire and Cable Company, Hastings-on-Hudson, N.Y. Filed June 25, 1963.

ANA-DUR

For Insulated Electrical Conductor.
First use May 23, 1963.

SN 172,198. JFD Electronics Corporation, Brooklyn, N.Y. Filed July 1, 1963.

TV COLORTENNA

The designation "TV" is claimed only in connection with the mark as shown.
For Television Antennae.
First use Nov. 15, 1954.

SN 172,480. General Electric Company, Schenectady, N.Y. Filed July 5, 1963.

IRRICON

For Electrically Semi-Conducting Tape Sheet and Film for Use in Conjunction With Electrical Equipment.
First use May 22, 1963.

SN 173,454. Halex, Inc., El Segundo, Calif. Filed July 22, 1963.

HALEX

For Thin Film Electronic Microcircuits Consisting of Integrated Networks of Circuit Components and Interconnections Made of Thin Metal Films Deposited on an Insulating Substrate.
First use Feb. 20, 1961.

SN 175,164. Channel Master Corporation, Ellenville, N.Y. Filed Aug. 16, 1963.

SLIM JIM

For Loud Speakers and Parts Thereof.
First use May 14, 1963.

SN 177,805. McGraw-Edison Company, Canonsburg, Pa. Filed Sept. 26, 1963.

Suburbanite

For One-Piece Electrical Power Distribution Substation.
First use Apr. 2, 1962.

Class 22 — Games, Toys, and Sporting Goods

SN 135,813. Clinton D. Moffatt, Long Beach, Calif. Filed Jan. 15, 1962.

TEE-OFF

For Sporting Goods Consisting of a Practice Golf Ball Suspended by an Unbreakable Nylon Cord From an Arm Around Which the Ball Orbits When Hit.
First use Feb. 8, 1958.

SN 149,825. Donald F. Duncan, Incorporated, Evanston, Ill. Filed July 26, 1962.

DUNCAN

Owner of Reg. Nos. 298,607, 618,981, 622,084, and 700,880.
For Spinning Top.
First use Apr. 16, 1962.

SN 157,958. Admiration Toy Co., Inc., New York, N.Y. Filed Nov. 27, 1962.

ATC

For Toys—Namely, Dolls, Dolls' Clothing and Parts of and Accessories for Such Goods.
First use February 1954.

SN 169,783. John H. Stroop, d.b.a. Products Development, New York, N.Y. Filed May 27, 1963.

GREENMEADOW

For Self Operated Contour Massage Tread Roller-Type Exercising Machines.
First use May 9, 1963.

SN 173,285. Recreation Products, Inc., Brooklyn, N.Y. Filed July 18, 1963.

SLATE-TEX

For Pool Table Tops.
First use July 12, 1963.

Class 23 — Cutlery, Machinery, and Tools and Parts Thereof

SN 137,962. Universal Manufacturing Co. Inc., Irvington, N.J. Filed Feb. 14, 1962.

UNIVERSAL

The drawing is lined for orange. Applicant does not claim the exclusive right to use the word "Universal" apart from the mark as shown.
For Electrical Coil Winding Machines.
First use Mar. 29, 1960.

SN 144,024. Ultrasonic Laboratories, Inc., Rahway, N.J. Filed May 7, 1962.

VACUUM TWEEZER

For Tool Systems and Parts Thereof for Handling Precision Miniature Elements.
First use Mar. 15, 1961.

SN 147,322. Jacob H. Sperman, d.b.a. Sperman Metal Specialties, Brooklyn, N.Y. Filed June 20, 1962.



For Radius Dressers and Angle Dressers for Grinding Tools, Coil Stock Straighteners and Floating Air Platforms for Jigs and Fixtures, and Parts Thereof.
First use May 1945.

SN 154,061. Regie Nationale des Usines Renault, Billancourt, Seine, France. Filed Sept. 17, 1962.

SIERRA

Priority claimed under Sec. 44(d) on French Reg. No. 503,628, dated Mar. 22, 1962 (Seine); Natl. Inst. No. 181,912.
For Electric, Diesel and Gasoline Motors for Automobiles, Trucks, Truck Tractors and Motor Boats; and Parts of Said Motors—Namely, Pistons, Connecting Rods, Crank Shafts, Piston Rings, Water and Fuel Pumps, Timing Assemblies, Cam Shafts, Cylinder Blocks and Heads, Valves, Valve Tappets, Rockers, Intake and Exhaust Manifolds, and Engine Mountings, But Not Including Chains and Sprockets.

SN 154,918. New Jersey Machine Corporation, Hoboken, N.J. Filed Oct. 10, 1962.

ALPHA

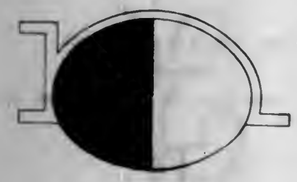
For Paper Box Covering Machines.
First use on or about Oct. 4, 1934.

SN 157,495. Clarence G. Grube, Brookfield, Wis. Filed Nov. 19, 1962.

ROTO-DUNKER

For Machine for Cleaning and Heat Treating Castings.
First use Mar. 28, 1958.

SN 161,546. J. M. Nash Company, Inc., d.b.a. J. M. Nash Co., Inc., Oshkosh, Wis. Filed Jan. 28, 1963.



For Engine Driven Water Pumps, Engine Driven Electric Power Generating Plants, Internal Combustion Engines, Woodworking Machines, Metal Working Machines, Wrapping Machines, Container Filling Machines, and Packaging Machines.
First use June 3, 1961, on woodworking machines.

SN 161,573. Western Cutlery Co., Boulder, Colo. Filed Jan. 28, 1963.

WESTERN

Owner of Reg. No. 639,304.
For Knives Such as Hunting, Pocket and Fish Knives, Axes and Leather Sheaths for the Knives and Axes.
First use on or about Dec. 15, 1962.

SN 166,350. Otto Eckerle, Apparate- und Maschinenbau, Malsh (Kreis Karlsruhe), Germany. Filed Apr. 8, 1963.

GOTEC

Priority claimed under Sec. 44(d) on German application filed Oct. 4, 1962; Reg. No. 778,610, dated Oct. 8, 1963.
For Axial Piston Pumps, Piston Pumps, Gear Pumps for Low and High Pressure, Oil Burner Pumps, Suction Pumps, Air Vessels (Pressure-Compensating Vessels) for Pumps, Hydraulic Valves for Pumps.

SN 170,241. True Temper Corporation, Cleveland, Ohio. Filed June 3, 1963.

TT

Owner of Reg. No. 708,047.
For Hand Tools for Home, Garden and Agriculture, Including Trowels, Rakes, Edgers, Hoes, Cultivating Tools, Shovels, Spades, Forks, Hooks, Drags, Scrapers, Chisels, Mattocks, Diggers, Shears, Loppers, Cutters, Scythes, Scoops, Bulb Planters, Seeders, Picks, Trimmers, Hammers, Hatchets, Axes, Adzes, and Handles Therefor.
First use June 1, 1955.

SN 171,221. Arkwright Merchandising Corporation, New York, N.Y. Filed June 18, 1963.

PACEMAKER

Owner of Reg. No. 480,114.
For Tools—Namely, Trowels, Spades, Hoes, Rakes, Shears, Garden Cultivators and Weeders.
First use June 10, 1947.

SN 171,281. The L. S. Starrett Company, Athol, Mass. Filed June 18, 1963.

STARRETT

Owner of Reg. Nos. 85,923 and 88,215.
For Cutlery, Machinery, and Tools—Namely, Band Saws.
First use July 1, 1942.

SN 174,510. Laconia Needle Manufacturing Co., Inc., Laconia, N.H. Filed Aug. 6, 1963.

LACONIA

For Knitting Machine Needles.
First use 1909.

SN 175,311. National Broach and Machine Co., Detroit, Mich. Filed Aug. 19, 1963.

NALOY

Owner of Reg. No. 749,926.
For Cutting Tools Such as Broaches Heat Treated To Improve Resistance to Wear and Galling.
First use Oct. 23, 1962.

SN 175,509. Pembroke Carton & Printing Co. Ltd., Basildon, Essex, England. Filed Aug. 21, 1963.

FOLDMASTER

For Carton Making or Carton-Folding Machines.
First use Mar. 21, 1956.

SN 177,756. Burns Manufacturing Company, Inc., Louisville, Ga. Filed Sept. 26, 1963.

SPEED-PLY

For Guide Bars for Chain Saws.
First use July 13, 1961.

SN 177,757. Burns Manufacturing Company, Inc., Louisville, Ga. Filed Sept. 26, 1963.

PENFIELD

For Guide Bars for Chain Saws.
First use July 7, 1961.

Class 26—Measuring and Scientific Appliances

SN 150,881. Minneapolis-Honeywell Regulator Company, Minneapolis, Minn. Filed Aug. 9, 1962.

MODUFLOW

For Temperature Controlling and Regulating Devices Comprising Thermostats and Amplifier Relays.
First use October 1944.

SN 171,280. The L. S. Starrett Company, Athol, Mass. Filed June 18, 1963.

STARRETT

Owner of Reg. Nos. 85,928 and 88,215.
For Measuring Tools, Precision Instruments, and Service Products Therefor—Namely, Optical Flats, Optical Polygons, Gage Blocks, Angle Gage Blocks, Optical Height Gages, Temperature Meters, Gage Reference Bars, and Linear Measuring Machines.
First use July 12, 1962.

Class 27—Horological Instruments

SN 176,746. Parechoc S.A., Le Sentier, Vaud, Switzerland. Filed Sept. 11, 1963.

RETROCHOC

Owner of Swiss Reg. No. 171,167, dated June 27, 1958.
For Shock-Absorbing Bearings for Timepieces.

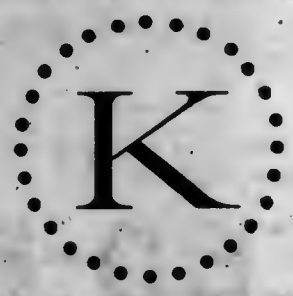
Class 28—Jewelry and Precious-Metal Ware

SN 156,663. Barnett Robinson, Inc., New York, N.Y. Filed Nov. 5, 1962.



For Precious Metal Jewelry—Namely, Finger Rings.
First use July 2, 1962.

SN 167,563. The May Department Stores Company, St. Louis, Mo. Filed Apr. 25, 1963.



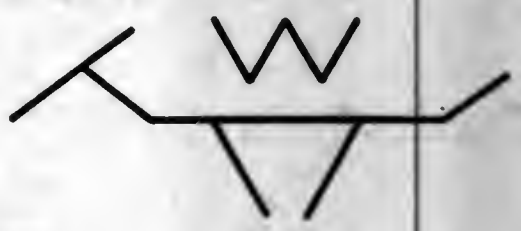
For Gold and Silver Jewelry, Gold and Silver Flatware and Hollow Ware.
First use Apr. 24, 1962.

SN 167,564. The May Department Stores Company, St. Louis, Mo. Filed Apr. 25, 1963.



For Gold and Silver Jewelry, Gold and Silver Flatware and Hollow Ware.
First use Dec. 1, 1962.

SN 170,253. Western Manufacturing Jewelers, Los Angeles, Calif. Filed June 3, 1963.



For Jewelry.
First use at least as early as Jan. 14, 1963.

SN 170,609. Deiss Chain Co., Inc., Swansea, Mass. Filed June 10, 1963.



For Jewelry Neckchains.
First use July 1962.

SN 173,104. Elanay Jewelry Manufacturing Company, Inc., Philadelphia, Pa. Filed July 16, 1963.

L & A

For Jewelry.
First use Apr. 8, 1963.

SN 176,512. Fine Jewelry of Europe, Inc., Newark, N.J. Filed Sept. 9, 1963.

FJE

For Jewelry Including Necklaces, Finger Rings, Bracelets, Pendants, Earrings and Brooches.
First use Jan. 23, 1963.

SN 176,872. Ansul-Craft, Inc., Johnston, R.I. Filed Sept. 18, 1963.

CRAFTMERE

For Ladies Costume Jewelry.
First use July 29, 1963.

SN 177,611. Coro, Inc., New York, N.Y. Filed Sept. 24, 1963.

NUT HEADS

For Necklaces, Bracelets, Earrings, Jewelry Clips, Brooches, Lockets, Finger Rings, Charm Bracelets, Charms, Pendants, All Pearls for Personal Wear and the Following Goods Made in Whole or in Part of Precious Metal or Plated With Same: Beads, Pins, and Jewelry Initials.
First use June 12, 1963.

SN 177,663. Sweet Manufacturing Company, West Mansfield, Mass. Filed Sept. 24, 1963.

SWEET

For Jewelry.
First use in or about 1908.

SN 177,812. Seymour Schulman, d.b.a. Schulman Engravers, New York, N.Y. Filed Sept. 26, 1963.



For Jewelry for Personal Wear or Adornment—Namely, Brooch Pins, Charms, Bracelets, Necklaces, Finger Rings, Earrings, Clips, Cuff Links, Tie Clips and Tie Tacks.
First use Apr. 2, 1956.

SN 177,895. Jacques Kreisler Manufacturing Corporation, North Bergen, N.J. Filed Sept. 27, 1963.

PHILMONT

For Watch Bands.
First use June 6, 1952.

Class 29 — Brooms, Brushes, and Dusters

SN 170,692. Robert Simmons, Inc., New York, N.Y. Filed June 10, 1963.

LANCER

For Paint Brushes.
First use May 29, 1963.

SN 174,484. Allied Stores Corporation, New York, N.Y. Filed Aug. 6, 1963.

ALTEST

For Toothbrushes.
First use Mar. 2, 1962.

Class 31 — Filters and Refrigerators

SN 149,624. Berkefeld-Filter Gesellschaft und Celler Filterwerke G.m.b.H., Celle, Hannover, Germany. Filed July 23, 1962.



Priority claimed under Sec. 44(d) on German application, filed Jan. 22, 1962; Reg. No. 763,412, dated July 16, 1962.
For Water Filtration Plants, Water Purification Plants, Water Purification Apparatus, Filters for Liquids and Ion Exchange Water Softeners, Water Distributing Systems Inside of Filters and Parts for and Accessories of Such Goods.

SN 171,353. Hungerford & Terry, Inc., Clayton, N.J. Filed June 19, 1963.

FERROSAND

For Granular Filtering Media.
First use Apr. 25, 1929.

Class 32 — Furniture and Upholstery

SN 165,547. Tiffany Stand Company, St. Louis, Mo. Filed Mar. 27, 1963.

Tiffany Stand

The word "Stand" is disclaimed apart from the mark as shown. Owner of Reg. No. 733,099.
For Metal Stands for Business Machines.
First use Jan. 21, 1963; 1921 as to "Tiffany."

SN 175,582. Jarke Corporation, Chicago, Ill. Filed Aug. 22, 1963.

UTILITIER

For Racks for Supporting Articles.
First use Aug. 9, 1963.

SN 178,204. Kroehler Mfg. Co., Naperville, Ill. Filed Oct. 2, 1963.

PLAIN'N FANCY

For Dining Room, Bedroom, Living Room and Occasional Furniture.
First use on or about Aug. 15, 1963.

SN 178,239. Eclipse Sleep Products, Inc., Brooklyn, N.Y. Filed Oct. 1, 1963.

VALOR

For Mattresses and Box Springs.
First use June 1, 1963.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 104,404. Stewart-Warner Corporation, Chicago, Ill. Filed Sept. 13, 1960.

SAF-AIRE
Safety Sealed

Owner of Reg. No. 554,807.
For Gas or Liquid Fired Space Heating Equipment.
First use as early as May 17, 1960; in 1946 as to "Saf-Aire."

SN 154,623. Niagara Blower Company, New York, N.Y. Filed Oct. 5, 1962.

NO-FROST

Owner of Reg. Nos. 427,036 and 516,454.
For Apparatus for Cooling or Refrigerating Air and Other Gases by Contact With a Liquid for the Cold Storage or Freezing of Products, and for Other Purposes and Apparatus for Reconcentrating Such Liquid.
First use on or about May 27, 1937.

SN 157,294. Elgen Manufacturing Corp., Long Island City, N.Y. Filed Nov. 15, 1962.

LINK-BALL

For Heating, Ventilating, and Air Conditioning Damper Fixtures.
First use Oct. 30, 1962.

SN 157,567. Erich Schumm G.m.b.H., Murrhardt, Wurttemberg, Germany. Filed Nov. 19, 1962.

Esbit

For Non-Electric Cooking Stoves.
First use 1933; in commerce June 30, 1953.

SN 178,682. The Dow Chemical Company, Midland, Mich. Filed Oct. 10, 1963.

MAPP

For Tips for Cutting and Welding Torch Apparatus.
First use Nov. 16, 1962.

SN 178,687. Electronic's Incorporated, Vermillion, S. Dak. Filed Oct. 10, 1963.

ELECTRO-JUNIOR

For Portable Space Heaters (Oil or Gas Fired).
First use Apr. 4, 1963.

SN 178,898. Ebco Manufacturing Company, Columbus, Ohio. Filed Oct. 14, 1963.

AQUARIUS

Owner of Reg. Nos. 717,876 and 737,544.
For Electrically-Operated, Forced-Air Humidifiers.
First use Sept. 18, 1963.

SN 179,043. Hexacon Electric Company, Roselle Park, N.J. Filed Oct. 15, 1963.

XTRADUR

For Soldering Tips for Electric Soldering Irons.
First use in December 1956.

Class 36 — Musical Instruments and Supplies

SN 125,263. Word Records, Inc., Waco, Tex. Filed Aug. 2, 1961.

FAMILY RECORD CLUB

For Grooved Phonograph Records.
First use May 1958.

SN 127,021. Mars Broadcasting, Inc., Stamford, Conn. Filed Aug. 31, 1961.

FUN TEST

For Pre-Recorded Tapes for Use by Radio Stations in Programming and Promotion.
First use Apr. 1, 1961.

Class 37 — Paper and Stationery

SN 94,487. Hammermill Paper Company, Erie, Pa. Filed Apr. 6, 1960.



HAMMERMILL

Owner of Reg. Nos. 137,793 and 686,654.
For Safety Paper for Business Forms Such as Checks, Tickets, Certificates, and the Like.
First use Feb. 1, 1960.

SN 133,972. Milo Harding Company, Monterey Park, Calif. Filed Dec. 13, 1961.

TEMPO TITLE PRINT

Applicant disclaims the words "Title Print" apart from the mark as shown. Owner of Reg. Nos. 293,678 and 530,573.
For Mechanical Negatives for Photographic Printing and for Stencilling.
First use February 1961.

SN 139,203. Dri Mark Products, Inc., Mount Vernon, N.Y. Filed Mar. 6, 1962.

DRIMARK
JUNIOR
MARKER

Applicant disclaims the words "Junior Marker" apart from the mark as shown. Owner of Reg. Nos. 729,143, 738,238, and 759,232.

For Felt Nib Markers.

First use Feb. 14, 1962.

SN 144,401. Management Aids Corporation, Mount Vernon, N.Y. Filed May 11, 1962.

EXEC-U-TROL EXECUTIVE PLANNING AIDS

The words "Executive Planning Aids" are disclaimed apart from the mark as shown.

For Partially Printed Materials and Devices (Such as Posters, Charts, Graphs, Business Record Forms) Which Are for Visual Aids and for Record Keeping in Connection With Selling, With Production, With Management Planning and With Office Clerical Work.

First use Apr. 23, 1962.

SN 144,978. Professional Printing Company, Inc., New Hyde Park, N.Y. Filed May 18, 1962.

SCAN-A-MONTH

For Appointment Books.

First use on or about May 10, 1962.

SN 150,945. Hudson Pulp & Paper Corp., New York, N.Y. Filed Aug. 10, 1962.

SHOWCASE

Owner of Reg. No. 751,753.

For Paper Tissues, Facial Tissues and Paper Napkins.

First use August 1958.

SN 156,347. Weber-Costello Co., Chicago Heights, Ill. Filed Oct. 31, 1962.

P/C

For Chalkboard Chalk.

First use September 1956.

SN 156,385. Demco Library Supplies, Madison, Wis. Filed Nov. 1, 1962.

PERM-INDEX

For Catalog Cards.

First use Sept. 26, 1962.

SN 157,473. Curtis 1000, Incorporated, West Hartford, Conn. Filed Nov. 19, 1962.

STURDEE

Owner of Reg. No. 350,220.

For Mailing Envelopes of Paper.

First use June 6, 1934.

SN 164,735. Michael Loyer, d.b.a. Dat-A-Aid, Dunellen, N.J. Filed Mar. 15, 1963.

DAT-A-AID

For Specialized Business Forms—Namely, Stock Market Record Forms.

First use Nov. 14, 1962.

SN 166,180. Engineered Container Corporation, Houston, Tex. Filed Apr. 5, 1963.

X PORT
BOARD

No claim is made to the word "Board" apart from the mark as shown.

For High Wet Strength Paper Board Especially Designed for Shipping Containers.

First use Sept. 1, 1962.

SN 168,799. Jane Adler Incorporated, Beverly Hills, Calif. Filed May 14, 1963.

Handsprings

For Plastic Coated Metal Paper Clips.

First use Mar. 11, 1963.

SN 170,176. Crown Zellerbach Corporation, San Francisco, Calif. Filed June 3, 1963.

CROWN TANGO

Owner of Reg. No. 744,086.

For Clear Plastic Wrap Made From Polyethylene, Polyprophelene and Other Plastic Material.

First use Apr. 16, 1962.

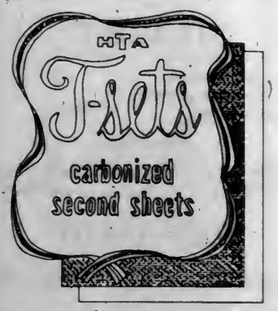
SN 172,890. Groveton Papers Co., Groveton, N.H. Filed July 12, 1963.

WINTER

For Fine Papers Such as Bond, Mimeograph and Duplicator Papers.

First use Jan. 30, 1961.

SN 173,982. Harry Tehan Associates, Inc., Greensboro, N.C. Filed July 29, 1963.



Applicant disclaims "Carbonized Second Sheets" apart from the mark as a whole. The drawing is lined for gold.
For Stationery Copy Sheets With Carbon Paper Attached for Single Use.
First use Apr. 1, 1962.

SN 174,259. Business Systems Incorporated, Los Angeles, Calif. Filed Aug. 2, 1963.



For Blank Forms Used in Connection With Bookkeeping Systems.
First use Oct. 1, 1951.

SN 178,081. The Central Forms Committee, New York, N.Y. Filed Sept. 26, 1963.



For Insurance Forms and Endorsements.
First use Mar. 20, 1956.

SN 178,226, Samuel C. Silipo, M.D., d.b.a. Medical Mechanics Company, Santa Barbara, Calif. Filed Oct. 2, 1963.

HI-SIGN

For Clips for Stationery Files, Hospital Records, Hospital Chart Covers, and the Like.
First use July 3, 1963.

Class 38 — Prints and Publications

SN 147,873. Van Leer Corporation, Chicago, Ill. Filed June 27, 1962.



The words appearing on the said circular insignia trademark are disclaimed apart from the mark as shown.
For Price Buying Directory Published Periodically.
First use on or about Jan. 13, 1961.

SN 159,198. Thomas W. Boykin, Jr., New York, N.Y. Filed Dec. 17, 1962.

PRIVATE WIRE

For Monthly Publication in the Form of a Newsletter, Comprised of Articles of General Interest.
First use Aug. 21, 1950.

SN 168,823. Human Development in Action, Inc., Flossmoor, Ill. Filed May 14, 1963.

THE MAGAZINE OF

Human Development in Action

The word "Magazine" is disclaimed apart from the mark as a whole.
For Booklets Published Six Times Per Year.
First use Feb. 28, 1963.

SN 169,571. Putman Publishing Company, Chicago, Ill. Filed May 23, 1963.



Owner of Reg. Nos. 696,467 and 721,353.
For Magazine.
First use May 15, 1963.

SN 170,062. The Hall Syndicate, Inc., New York, N.Y. Filed May 31, 1963.

WINKY RYATT

The name "Winky Ryatt" is fanciful. Owner of Reg. No. 655,854.
For Comic Strips.
First use June 24, 1962.

SN 170,118. W. R. C. Smith Publishing Co., Atlanta, Ga. Filed May 31, 1963.

SOUTHERN BUILDING SUPPLIES

For Trade Magazine.
First use April 1946.

SN 170,119. W. R. C. Smith Publishing Co., Atlanta, Ga. Filed May 31, 1963.

SOUTHERN POWER & INDUSTRY

For Trade Magazine.
First use June 1939.

SN 170,265. W. R. C. Smith Publishing Co., Atlanta, Ga. Filed May 31, 1963.

SOUTHERN HARDWARE

For Trade Magazine.
First use April 1926.

SN 170,312. The Hall Syndicate, Inc., New York, N.Y. Filed June 4, 1963.

LONG SHOTS

For Cartoon Panels Published in Newspapers.
First use Oct. 15, 1962.

SN 170,431. W. R. C. Smith Publishing Co., Atlanta, Ga. Filed June 5, 1963.

LIGHTING

For Trade Magazine.
First use August 1921.

SN 170,432. W. R. C. Smith Publishing Co., Atlanta, Ga. Filed June 5, 1963.

TEXTILE INDUSTRIES

For Trade Magazine.
First use January 1947.

SN 170,438. The Torrington Manufacturing Company, Torrington, Conn. Filed June 5, 1963.

INFORMING FACTS

For Company Bulletin.
First use on or about May 24, 1963.

SN 171,849. Breskin Publications Inc., New York, N.Y. Filed June 26, 1963.

THE PLASTICS MARKET ANALYST

For Weekly Newsletter.
First use Apr. 27, 1963.

Class 39 — Clothing

SN 92,305. Salamander Aktiengesellschaft, Kornwestheim, Wuerttemberg, Germany. Filed Mar. 7, 1960.

FUSSARZT

Owner of German Reg. No. 327,138, dated Jan. 19, 1925.
For Footwear—i.e. Shoes and Slippers, Leggings, Rubber Soles, Rubber Heels; Knitwear—i.e. Hosiery for Men, Women and Children.
First use Oct. 14, 1924; in commerce July 1953.

SN 121,128. Arshag Sarjanian, d.b.a. Sarjanian Glove Company, Detroit, Mich. Filed May 31, 1961.

BLOCK-BUSTER

For Abrasion Resistant Work Gloves.
First use May 9, 1961.

SN 121,141. Superba Cravats, Inc., Rochester, N.Y. Filed May 31, 1961.

DOUBLET

For Men's Scarves and Mufflers, and Men's Combination Scarves and Vests.
First use May 15, 1961.

SN 124,593. Natalie Simonoff, d.b.a. Naymor, Long Beach, N.Y. Filed July 24, 1961.



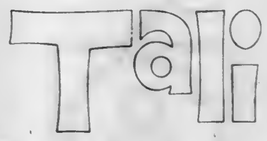
For Jump Suit for Women and Men's Garments.
First use July 14, 1961.

SN 125,660. Evelyn Hat Co., Inc., Boston, Mass. Filed Aug. 9, 1961.

EVELYN

For Women's Hats.
First use on or before Dec. 31, 1919.

SN 138,119. Sheffield Hosiery Mills, Inc., Miami, Fla. Filed Feb. 16, 1962.



For Hosiery.
First use Sept. 4, 1959.

SN 148,291. Blue Gem Manufacturing Company, Greensboro, N.C. Filed July 3, 1962.

RIFLEMAN

For Men's, Boys' and Kiddies' Dungarees, Jeans, and Boxer Longies—Namely, Ankle Length Children's Pants With an Elastic Waistband.
First use June 22, 1962.

SN 153,253. College Hall Fashions, Inc., Philadelphia, Pa. Filed Sept. 17, 1962.

COUNTRY LADY

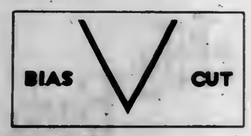
For Women's and Misses' Blazers, Sport Coats and Suits.
First use June 25, 1962.

SN 154,152. Playboy of Miami, Inc., Miami, Fla. Filed Sept. 28, 1962.



The words "of Miami" are disclaimed when used apart from the mark as shown.
For Men's and Boys' Clothing—Namely, Suits, Coats, Trousers, Slacks, Shorts, Shirts, Neckties, Hats and Caps, Sox, Drawers, Bathing Trunks and Bathing Suits, Scarfs, and Handkerchiefs.
First use Sept. 5, 1956.

SN 155,070. P. H. Hanes Knitting Company, Winston-Salem, N.C. Filed Oct. 12, 1962.



Owner of Reg. No. 651,331.
For Underwear Shorts.
First use October 1948.

SN 155,148. Great American Knitting Mills, Inc., New York, N.Y. Filed Oct. 15, 1962.



For Men's Socks.
First use January 1936.

SN 155,149. Great American Knitting Mills, Inc., New York, N.Y. Filed Oct. 15, 1962.

GOLD TOE

Owner of Reg. No. 319,669.
For Men's Socks.
First use July 25, 1934.

SN 156,681. Superba Cravats, Inc., Rochester, N.Y. Filed Nov. 5, 1962.



For Neckwear and, More Particularly, Neckties.
First use June 8, 1962.

SN 156,806. Fairfield Knitwear, Inc., New York, N.Y. Filed Nov. 7, 1962.

BELCOULEUR

For Sweaters.
First use Oct. 25, 1962.

SN 158,322. Davey's Inc., Worcester, Mass. Filed Dec. 3, 1962.



For Men's, Ladies' and Children's Belts.
First use December 1953.

SN 160,256. Ainsbrooke Corporation, New York, N.Y. Filed Jan. 7, 1963.

TAPER-LOK

For Men's and Boys' Underwear and Pajamas.
First use Dec. 24, 1962.

SN 161,418. Nu Meth Corporation, Milton, Del. Filed Jan. 25, 1963.

NU METH

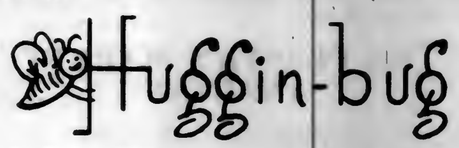
For Ladies' Hosiery.
First use Oct. 5, 1962.

SN 161,742. Joseph Schultz and Sons, Inc., Miami, Fla. Filed Jan. 30, 1963.



For Women's Dresses.
First use Nov. 5, 1962.

SN 161,837. Weiss-Lawrence, Inc., Dover, N.H. Filed Jan. 31, 1963.



For Women's Shoes.
First use June 29, 1961.

SN 163,366. Industrial Products Company, Philadelphia, Pa. Filed Feb. 25, 1963.

AIR WEAVE

For Liquid-Proof Garments for Industry—Namely, Rain Suits, Coveralls, Rain Hats, Hoods, Leggings, Aprons, Raincoats and Gloves.
First use Oct. 4, 1962.

SN 163,414. Schneider, Battinus & Simon, Inc., Chicago, Ill. Filed Feb. 25, 1963.

BODY BILT

For Men's and Boys' Underwear, Pajamas and Sweaters; Men's, Boys' and Ladies' Insulated Underwear; Men's and Boys' Shirts; and Sportswear—Namely, Shorts.
First use in March 1930.

SN 165,137. Louis Koplon, d.b.a. I & K Shoe Company, Birmingham, Ala. Filed Mar. 21, 1963.

JOHN STACY

The name "John Stacy" is not the name of any particular living individual.
For Men's and Boys' Shoes.
First use Jan. 28, 1955.

SN 165,938. Manchester Modes, Inc., Manchester, Conn. Filed Apr. 2, 1963.

CLIMATE-TAMER

Owner of Reg. No. 397,400.
For Ladies', Men's and Children's Coats.
First use Feb. 10, 1941.

SN 165,966. Swim-Safe, Inc., New York, N.Y. Filed Apr. 2, 1963.



For Buoyant Undergarment for Use in Swimming.
First use Nov. 14, 1962.

SN 166,584. Schuhfabrik Ködach F. Herunter OHG, Vienna, Austria. Filed Apr. 11, 1963.



The words "Made in Austria" as shown on the drawing are hereby disclaimed. Priority claimed under Sec. 44(d) on Austrian application filed Oct. 12, 1962; Reg. No. 49,434, dated Jan. 14, 1963.
For Shoes and Skiing Boots.

SN 167,788. Alamo Manufacturing Co., Inc., New York, N.Y. Filed Apr. 30, 1963.

snap*active

For Ladies' Dresses.
First use Mar. 20, 1963.

SN 168,483. Cute Mates, Inc., New York, N.Y. Filed May 9, 1963.

HOODNIK

For Women's Apparel—Namely, Misses', Juniors' and Teens' Jackets and Parkas.
First use Feb. 20, 1963.

SN 169,608. Compax Corp., Woodside, N.Y. Filed May 24, 1963.



Owner of Reg. Nos. 738,717, 739,418, and others.
For Knitted Textile Garments—Namely, T-Shirts, Athletic Shirts, Polo Shirts, Briefs, Shorts, Pajamas, Sleepers, and Similar Garments Made of Knitted Fabric.
First use on or about Feb. 1, 1962.

SN 170,117. Alfreda L. Siddons, d.b.a. Circle Eight, Hawthorne, Calif. Filed May 31, 1963.



For Men's Shirts, Trousers, Jackets and Neckties and Women's Dresses, Blouses, Skirts, Slips and Pantalettes.
First use Dec. 8, 1962.

SN 170,307. Gettysburg Shoe Co., Gettysburg, Pa. Filed June 4, 1963.



For Ladies', Misses' and Children's Shoes.
First use May 23, 1963.

SN 171,674. The Londontown Manufacturing Company, Baltimore, Md. Filed June 24, 1963.

STATITE

For Rainwear for Men, Women and Children—Namely, Raincoats and Golf Jackets.
First use June 14, 1963.

SN 172,858. Unimart, Inc., Los Angeles, Calif. Filed July 10, 1963.

SYBURNE

For Dress Shirts, Sport Shirts, Neckwear, Pajamas, Socks, Handkerchiefs, Casual Pants, Walk Shorts, Swim Wear, Sweat Shirts, Robes, and Belts for Men and Boys.
First use Feb. 6, 1961.

SN 172,860. Russell Hosiery Mills, Inc., Star, N.C. Filed July 11, 1963.

FOOT-COZIES

For Foot Socks and Hosiery.
First use June 24, 1963, on foot socks.

SN 174,293. Silver Knit Hosiery Mills, Inc., High Point, N.C. Filed Aug. 2, 1963.

GRAND PRIX

For Hosiery for Men, Women and Children.
First use Aug. 29, 1962.

SN 175,203. Oxford Boyswear, Inc., New York, N.Y. Filed Aug. 16, 1963.

OX-FLEX

For Boys' and Girls' Sportswear—Namely, Shorts, Slacks, Shirts, Sport Jackets, Eton Suits, Overalls, Walk Shorts, Deck Pants and Sun Suits.
First use June 11, 1963.

SN 180,828. The Board of Publication of the Methodist Church, Inc., Nashville, Tenn. Filed Nov. 12, 1963.

COKESBURY

For Ministerial Robes and Choir Gowns and Parament Sets.
First use Nov. 1, 1962.

Class 40—Fancy Goods, Furnishings, and Notions

SN 172,269. F. W. Woolworth Co., New York, N.Y. Filed July 1, 1963.

PRIMSTYLE

For Hose Supporters; Roll Garters; Ladies' Adjustable Flat Garters, and Brassiere Fasteners, Back Replacements and Back Enlargers.
First use Nov. 30, 1962, on hose supporters.

SN 173,883. Elizabeth Arden Sales Corporation, New York, N.Y. Filed July 29, 1963.

CAPRICORN

For Hair Piece.
First use June 11, 1963.

SN 174,340. Stanley M. Carlson, d.b.a. Collegiate Beaus of California, Santa Monica, Calif. Filed Aug. 5, 1963.

COLLEGIATE BEAUS

For Hair Ornaments Made of Cloth.
First use July 25, 1963.

SN 174,873. Kee Industries, Inc., Seaford, N.Y. Filed Aug. 12, 1963.

TAPERITE

For Combs.
First use May 28, 1963.

Class 41—Canes, Parasols, and Umbrellas

SN 170,843. Liberty Umbrella Co., Inc., New York, N.Y. Filed June 12, 1963.

STORMATIC

For Umbrellas.
First use June 7, 1963.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 158,485. Sweetwater Rug Corporation, New York, N.Y. Filed Dec. 4, 1962.

AVANTI

For Textile Tufted Floor Covering—Namely, Rugs and Carpets.
First use July 15, 1962.

SN 162,201. Textile Corporation of America, Los Angeles, Calif. Filed Feb. 6, 1963.

Texsilca

For Printed Fabric Used in the Manufacture of Sport Shirts, Sun Dresses, Swim Suits and Similar Garments.
First use Oct. 10, 1962.

SN 162,202. Textile Corporation of America, Los Angeles, Calif. Filed Feb. 6, 1963.

Tesesateena

For Printed Fabric Used in the Manufacture of Sport Shirts, Sun Dresses, Swim Suits and Similar Garments.
First use Sept. 13, 1962.

SN 169,000. American Enka Corporation, Enka, N.C. Filed May 16, 1963.

FIBER-WISE

For Fabrics Made of a Blend of Natural and Synthetic Fibers or a Blend of Synthetic Fibers Used in Making Dresses, Blouses, Slacks, Shirts, Jackets, Sheets, Pillow Cases, Curtains, Bed Spreads, Draperies, and the Like.
First use May 9, 1963.

SN 172,878. Deering Milliken, Inc., New York, N.Y. Filed July 12, 1963.

CREPINELLA

For Textile Fabrics Made of Wool, Cotton and Synthetic Fibers and Combinations Thereof.
First use June 18, 1963.

SN 173,009. Pauline B. Kauffman, d.b.a. Memoryette Pillow Co., Los Angeles, Calif. Filed July 15, 1963.

Memoryette*

For Pillow Covers.
First use Mar. 19, 1963.

Class 44—Dental, Medical, and Surgical Appliances

SN 141,880. Professional Tape Company Inc., Riverside, Ill. Filed Apr. 9, 1962.

TSI

For Self-Sticking Tape and Labels Indicating Sterilized Condition by a Change in Color of Printing Material Thereon and Used Mainly in the Medical Field.
First use in or about February 1959.

SN 153,767. Andre Jeres, Montreal, Quebec, Canada. Filed Sept. 24, 1962.

ENUREFLEX

Priority claimed under Sec. 44(d) on Canadian application filed Mar. 27, 1962; Reg. No. 130,022, dated Feb. 22, 1963.
For Impermeable Pads and Signal Devices for Combatting Enuresis.

SN 173,410. American Timber Homes, Inc., Escanaba, Mich. Filed July 22, 1963.

NORDIC SAUNA

The word "Sauna" is disclaimed apart from the mark as shown.
For Indoor and Outdoor Sauna Rooms, Sauna Stoves, and Accessory Sauna Equipment.
First use Feb. 8, 1963.

SN 173,765. Johnson & Johnson, New Brunswick, N.J. Filed July 25, 1963.

BARRIER

For Sterile Disposable Towel Drapes.
First use May 27, 1963.

SN 174,319. American Dental Company, Chicago, Ill. Filed Aug. 5, 1963.

AC-RHO-DYNE

For Prosthetic Devices—Namely, Plastic Dentures and Partials and Hearing Aid Ear Molds.
First use Jan. 25, 1962.

SN 176,470. Baxter Laboratories, Inc., Morton Grove, Ill. Filed Aug. 5, 1963.

BOLSANG

For Kits and Packages of Flexible Containers, Flexible Tubing, and Hypodermic and Coupling Needles Constituting Blood Collecting Units, Blood Storing Units and Blood Infusing Units.
First use July 13, 1962.

Class 45—Soft Drinks and Carbonated Waters

SN 165,493. Booth Bottling Co., Inc., Philadelphia, Pa. Filed Mar. 27, 1963.



For Soft Drinks.
First use May 1960.

SN 166,256. The Coca-Cola Company, Atlanta, Ga. Filed Apr. 8, 1963.

TaB

For Flavored Dietary Soft Drink and Syrup for Making Same.
First use Mar. 21, 1963.

Class 46—Foods and Ingredients of Foods

SN 122,916. Chicken-A-Go, San Diego, Calif. Filed June 27, 1961.

CHICKEN-A-GO

For Prepared Packaged Chicken Dinners Comprising Chicken, a Salad, French Fried Potatoes, a Bread Roll and Honey.
First use Nov. 14, 1960.

SN 132,114. Toshoku Ltd., Chuo-ku, Tokyo, Japan. Filed Nov. 15, 1961.

TOP-FOOD

For Canned Seafood and Frozen Seafood—Namely, Canned Tuna Fish, Canned Smoked Oysters, Frozen Tuna Fish, Frozen Shrimp, Frozen Sword Fish, Frozen Frogs Legs, Frozen Trout, Frozen Eel and Frozen Halibut.
First use Feb. 26, 1949; in commerce Feb. 26, 1949.

SN 138,424. Raoul Dubois-Prevost, Paris, Seine, France. Filed Feb. 21, 1962.

LYSOSUGAR

Owner of French Reg. No. 498,479, dated Aug. 25, 1961 (Seine); Natl. Inst. No. 171,632.
For Sugar Containing Enzymes in Bulk and Canned Form.

SN 140,796. Milton J. Willner, d.b.a. Mister Taco, Aurora, Colo. Filed Mar. 26, 1962.



For Condiments and Prepared Mexican-Type Foods—Namely, Tamales, Tacos, Enchiladas, and Chile Con Carne, Packaged in Boxes or Other Sealed Containers.
First use on or about July 1, 1961.

SN 149,510. Lizaur, S.A., Montilla, Spain. Filed July 9, 1962.

ORO Y SOL

The English translation of the words "Oro y Sol" is "gold and sun."
For Edible Olive Oil.
First use Dec. 11, 1956; in commerce Sept. 26, 1961.

SN 150,441. Norris Inc., Atlanta, Ga. Filed Aug. 3, 1962.

SWEET TALK

For Candy.
First use Feb. 1, 1951.

SN 152,957. Meyenberg Milk Products, Inc., San Francisco, Calif., by change of name from Meyenberg-Old Fashion Products Company, d.b.a. Silver Top Dairy Co., San Francisco, Calif. Filed Sept. 10, 1962.



No claim is made to the words "California's Best" apart from the mark as shown. Owner of Reg. No. 306,368.
For Canned Condensed Milk.
First use Aug. 8, 1962; Mar. 23, 1933, as to "Cal-Best."

SN 153,110. Pettijean, Gay & Cie, Le Pre-Saint-Gervais, Seine, France. Filed Sept. 13, 1962.

Pettijean

Priority claimed under Sec. 44(d) on French Reg. No. 505,605, dated June 7, 1962 (Paris); Natl. Inst. No. 186,882.
For Infants' and Invalids' Foods; Meat, Fish, Poultry, Game; Meat Extracts; Preserved, Dried and Cooked Fruits and Vegetables; Jellies, Jams; Eggs; Milk and Other Dairy Products; Edible Oils and Fats; Preserves, Pickles; Coffee, Tea, Cocoa, Sugar, Rice, Tapioca, Sago, Coffee Substitutes; Flour and Preparations Made From Cereals; Bread, Biscuits, Cakes, Pastry and Confectionery, Ices; Honey, Treacle; Yeast; Mustard; Pepper, Vinegar, Sauces; and Spices.

SN 155,595. Etablissements Lefevre Utile, Societe en Nom Collectif, Nantes, France. Filed Oct. 22, 1962.

FIGOLU

Priority claimed under Sec. 44(d) on French Reg. No. 10,850, dated May 16, 1962 (Nantes); Natl. Inst. No. 613.
For Fruits and Vegetables, Preserved, Dried and Cooked, Jellies, Jams, Coffee, Tea, Cocoa, Sugar, Rice, Tapioca, Sago, Substitute for Coffee, Flour and Bread, Biscuits, Cakes, Pastry and Edible Ices, Honey, Syrup of Molasses, Yeast, Yeasting Powder, Salt, Mustard, Pepper, Vinegar, Spices, Sauces.

SN 156,870. Foremost Dairies, Inc., San Francisco, Calif. Filed Nov. 8, 1962.

PECAN DANDY



Applicant disclaims any exclusive right to the word "Pecan" apart from the mark shown in the drawing.
For Ice Cream.
First use June 20, 1962.

SN 157,658. Weis Markets, Inc., Sunbury, Pa. Filed Nov. 20, 1962.

DUTCH VALLEY

Owner of Reg. No. 701,482.
For Bacon, Butter, Frankfurters and Potato Chips.
First use Sept. 22, 1959.

SN 157,899. The Haserot Company, Cleveland, Ohio. Filed Nov. 26, 1962.

FORMOSAN GOLD

The word "Formosan" is disclaimed apart from the mark as shown.
For Canned, Sliced and Crushed Pineapple, Pineapple Tidbits, and Pineapple Juice.
First use Nov. 13, 1962.

SN 158,107. Strohmeyer & Arpe Company, New York, N.Y. Filed Nov. 28, 1962.

KING UMBERTO



Owner of Reg. Nos. 67,727, 736,593, and others.
For Canned Sardines.
First use Aug. 31, 1962.

SN 158,145. County Fair Distributing Company, Los Angeles, Calif. Filed Nov. 29, 1962.

PANTRY QUEEN

For Frozen Pies.
First use Nov. 9, 1959.

SN 159,465. Blumenthal Bros. Chocolate Company, Philadelphia, Pa. Filed Dec. 20, 1962.

DOLLY DEERE

The name "Dolly Deere" is fanciful.
For Candy.
First use Aug. 14, 1962.

SN 159,777. Rose Packing Company, Inc., Chicago, Ill. Filed Dec. 28, 1962.

CHEF'S DELIGHT

For Smoked Ham, Smoked Butts, Smoked Picnics, Bacon, Canadian Style Bacon, Boiled Ham, Capacola, Cooked Boneless Pork Loins, Pork Sausage, and Canned Pork Gravy.
First use Feb. 6, 1961.

SN 159,784. Sioux Honey Association, d.b.a. Sioux Honey Assn., Sioux City, Iowa. Filed Dec. 26, 1962.



Applicant disclaims the expressions "Honey Creme" and "Soft Creamed" except as shown herein. Owner of Reg. Nos. 642,942, 647,196, and others.
For Finely Granulated Pure Honey.
First use April 1962.

SN 161,754. Frederick R. Hennig, d.b.a. Green Bay Cheese Company, Green Bay, Wis. Filed Jan. 28, 1963.



No claim is made to the word "Cheese."
For Cheese.
First use Oct. 10, 1961.

SN 162,269. Lever Brothers Company, New York, N.Y. Filed Feb. 7, 1963.

Dinner-
Redy
1·2·3

Owner of Reg. Nos. 708,813 and 645,212.
For Frozen Cooked Poultry and Frozen Cooked Meat.
First use Dec. 4, 1962.

SN 163,749. Milnot Company, Litchfield, Ill. Filed Mar. 1, 1963.



If cows could...they'd give
MILNOT

Owner of Reg. No. 682,615.
For Blend of Evaporated Nonfat Milk and Vegetable Oil.
First use on or about Mar. 15, 1961.

SN 165,709. S & R Cheese Corporation, Plymouth, Wis. Filed Mar. 29, 1963.

S & R

For Cheese—Namely, Provolone, Mozzarella, Scamorza, Parmesan, Asiago, and Romano.
First use May 1939.
Subj. to Intf. with SN 173,512.

SN 167,175. Standard Market Company, Lincoln, Nebr. Filed Apr. 19, 1963.

SMOKEY POKEY

For Ham.
First use Sept. 3, 1962.

SN 167,515. American Bakeries Company, d.b.a. Cushman's Sons, Chicago, Ill. Filed Apr. 25, 1963.

HOMESTEADER

For Bread.
First use Feb. 3, 1960.

SN 167,863. Cameco, Inc., Verona, N.J. Filed May 1, 1963. Owner of Reg. No. 703,642.



For Prepared Meats—Namely, Canned Corn Beef, Canned Hams, Canned Luncheon Meat, Canned Chopped Ham, Canned Picnics, Canned Pork, Canned Lard, Sliced Packaged Ham, Sliced Packaged Luncheon Meat, Sliced Packaged Chopped Ham, Sliced Packaged Canadian Bacon, Sliced Packaged Veal, and Sliced Packaged Ham Roll.
First use on or about Oct. 1, 1962; in October 1937 as to "Cameco."

SN 168,090. Lincoln Foods Inc., d.b.a. Fresha Juice Company, Lawrence, Mass. Filed May 3, 1963.

FRESHA'S

For Food Beverages Consisting of Fruit Juices and Lesser Ingredients.
First use 1949.

SN 169,250. Good Humor Corporation, Hoboken, N.J. Filed May 20, 1963.

JUNGLE STRIPE

For Frozen Confection on a Stick.
First use May 6, 1963.

SN 170,113. Safeway Stores, Incorporated, Baltimore, Md. Filed May 31, 1963.

POOCH

Owner of Reg. No. 662,057.
For Canned and Dry Dog Food.
First use Mar. 7, 1949.

SN 171,072. American Inn Foods, Inc., Waukesha, Wis. Filed June 17, 1963.

AMERICAN INN

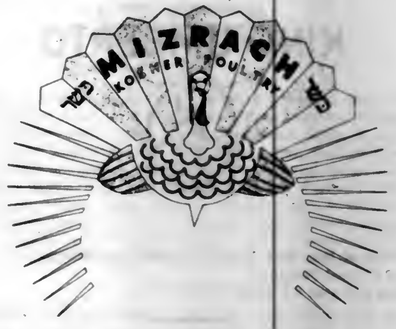
For Canned and Frozen Vegetables; Canned and Frozen Meat and Poultry; Canned and Frozen Fish and Seafood; Canned and Frozen Fruits and Fruit Juices; Canned and Frozen Soups and Soup Bases; Canned and Frozen Macaroni and Spaghetti; Fruit and Vegetable Extracts; Dried Fruits; Dried Eggs; Salad Dressings; Jams, Jellies, and Preserves; Coffee; Tea; Syrups for Food Purposes; Garlic Salt; Cake, Custard and Pie Fillings and Mixes; Flour and Vegetable and Animal Shortening; Sugar; Gelatin Dessert Powder; Canned Nuts and Nut Meats; Molasses; and Vinegar.
First use January 1960.

SN 171,366. Monsanto Chemical Company, St. Louis, Mo. Filed June 19, 1963.

PAN-O-LITE

For Leavening Agents of a Chemical Nature.
First use May 27, 1963.

SN 171,686. Mizrach Kosher Provisions, Inc., New York, N.Y. Filed June 24, 1963.



The word "Mizrach" is Hebrew meaning "east." Owner of Reg. No. 660,186.
For Raw Poultry, Prepared Frozen Poultry and Prepared Frozen Eviscerated Poultry.
First use January 1960; July 7, 1954, as to "Mizrach."

SN 171,744. Arthur F. Barker, d.b.a. F. C. Barker & Company, Mesilla Park, N. Mex. Filed June 25, 1963.

BARKER'S

For Chili Pods, Chili Powder, and Crushed Chili.
First use Sept. 5, 1954.

SN 172,101. Red Owl Stores, Inc., d.b.a. Apex Candy Co., Hopkins, Minn. Filed June 28, 1963.

MERRY-TREET

For Candy.
First use May 10, 1963.

SN 172,270. Francisco Nunez Fernandez, Sevilla, Spain. Filed July 1, 1963.



The English translation of the words "Torre del Oro" is "tower of gold." Owner of Spanish Reg. No. 71,822, dated April 11, 1929.
For Edible Olive Oil.

SN 172,279. Met Provisions, Inc., Jamaica, N.Y. Filed June 14, 1963.

MET'S

For Fresh Meats, Prepared Meat Products, Frankfurters, Salami, Pastrami, Cooked Ham, and Rolled Beef.
First use June 11, 1962.

SN 173,032. Philip Morris Incorporated, New York, N.Y. Filed July 15, 1963.

CLEARMINT

For Chewing Gum.
First use June 21, 1963.

SN 173,061. Byron W. Boothe, d.b.a. Funny Hunny Co., Wichita, Kans. Filed July 11, 1963.

FUNNY HUNNY

No claim of exclusive right is made to the misspelled word "Hunny" as the name of the goods herein.
For 100% Pure Extracted, Strained, Liquid, Comb or Chunk Honey, or Both, Sold in Either Glass, Metal, Plastic, Paper or Wood Containers of Varying Size and Shape.
First use Apr. 23, 1963.

SN 173,135. Strohmeyer & Arpe Company, d.b.a. United Pure Food Company, New York, N.Y. Filed July 16, 1963.

WINDOW PAK

No claim for purposes of this registration is made to the word "Pak" other than as it appears in the composite mark.
For Canned Mushrooms.
First use Mar. 11, 1963.

SN 173,512. S. E. Rykoff & Co., Los Angeles, Calif. Filed July 22, 1963.



Owner of Reg. Nos. 671,288, 669,028, and 669,679.
For Dried Beef; Ham Shanks; Cocktail Meat Balls; Beef Tamales in Sauce; Vienna Sausage; Dried Non-Fat Milk; Canned Evaporated Milk; Canned Noodle Nests; Fruit Pie Filling; Pudding Mixes; Potato Pancake Mix; Potato Salad; Shoestring Potatoes; Bread Sticks; Batter Mixes; Garlic Spread; Dried Fruits; Food Stabilizers; Arrowroot; Dehydrated Vegetables; Dehydrated Dressing Mixes; Grated Cheese; Chow Mein Noodles; Tartar Sauce; Canned Tomato Paste; Canned Tomato Puree; Spanish Omelet Sauce; Pizza Sauce.
First use June 1960.
Subj. to Intf. with SN 165,709.

SN 174,272. Hanks Seafood Co., Inc., Easton, Md. Filed Aug. 2, 1963.



The figure representation in the drawing is that of "Fletcher Hanks" whose consent is present herewith.
For Fresh, Frozen and Canned Seafood—Namely, Steamer Clams and Fried Clams.
First use July 17, 1962.

SN 174,647. Cream Products Company, Inc., Cicero, Ill. Filed Aug. 8, 1963.

COFFEE HIGH

Owner of Reg. No. 743,071.
For Liquid Imitation Cream.
First use on or about Apr. 23, 1963.

SN 174,717. C. E. Sullivan, d.b.a. C. E. Sullivan Ranch and C. Ed. Sullivan Orchards, Yuba City, Calif. Filed Aug. 8, 1963.

ROSE GOLD

For Fresh Fruits.
First use July 26, 1963.

SN 174,817. American Sugar Company, New York, N.Y. Filed Aug. 12, 1963.

BROWNULES

For Sugar.
First use June 28, 1963.

SN 174,818. American Sugar Company, New York, N.Y. Filed Aug. 12, 1963.

BROWNETTES

For Sugar.
First use June 28, 1963.

SN 174,819. American Sugar Company, New York, N.Y. Filed Aug. 12, 1963.

BROWNULAR

For Sugar.
First use June 28, 1963.

SN 175,282. Idaho Potato Growers, Inc., Idaho Falls, Idaho. Filed Aug. 19, 1963.

LITTLE SWEDE

For Frozen French Fried Potato Puffs.
First use Apr. 1, 1963.

SN 177,335. Chesterton Candy Company, d.b.a. Mrs. Leland's Kitchens, Chicago, Ill. Filed Sept. 19, 1963.

JINGLE BELLS

For Candy.
First use July 26, 1963.

SN 177,342. Dina Food Corp., Chicago, Ill. Filed Sept. 19, 1963.

DA VINCI

For Pepperoncinis, Sliced Egg Plant in Vinegar, Stuffed Eggplant, Antipasto Peppers, Pepper Salad, Lupini Beans, Olive Appetizer, Stuffed Cherry Peppers, Italian Giardiniera, Mushroom Salad, Cipollini, Sliced Cherry Peppers in Oil, Hot Pizza Sauce, Mild Pizza Sauce, Garlic Wine Vinegar, Red Wine Vinegar, Hot Cherry Peppers, Meat Sauce, Mushroom Sauce, Meatless Sauce, and Marinara Sauce and Red Clam Sauce To Be Used Over Pasta Products.
First use on or about Sept. 9, 1963.

SN 177,440. Philadelphia Chewing Gum Corporation, Havertown, Pa. Filed Sept. 20, 1963.

BIG FRUIT

For Chewing Gum.
First use May 17, 1960.

SN 177,580. United Biscuit Company of America, Melrose Park, Ill. Filed Sept. 23, 1963.

GOLDEN NECTAR

Owner of Reg. Nos. 181,356 and 262,627.
For Cookies.
First use Sept. 4, 1963.

SN 177,818. Thompson's Dairy, Inc., d.b.a. Thompson's Honor Dairy, Washington, D.C. Filed Sept. 26, 1963.

Seventeen
17

For Bread.
First use Sept. 12, 1963.

SN 177,958. Blue Star Foods, Inc., Council Bluffs, Iowa. Filed Sept. 30, 1963.

Blue Star

The drawing is lined for blue. Owner of Reg. No. 672,604.
For Frozen Soft Pies.
First use June 19, 1963.

SN 178,287. LBM-Importwaren G.m.b.H., Bremen, Germany. Filed Oct. 3, 1963.

INTER-MI-EL

Priority claimed under Sec. 44(d) on German application filed Apr. 17, 1963; Reg. No. 777,762, dated Sept. 27, 1963.
For Honey.

SN 178,440. General Mills, Inc., Minneapolis, Minn. Filed Oct. 7, 1963.

REX

Owner of Reg. No. 561,482.
For Flour and Donut Mix.
First use Apr. 13, 1893, on flour.

SN 181,593. Eskimo Pie Corporation, Richmond, Va. Filed Nov. 22, 1963.

WHOPPER

For Frozen Desserts—Namely, Chocolate Covered Ice Cream Bars.
First use July 18, 1939.

Class 47 — Wines

SN 174,172. Danforth Wines Limited, Toronto, Canada. Filed Aug. 1, 1963.

ZOOM

Owner of Canadian Reg. No. 130,117, dated Mar. 1, 1963.
For Distilled or Fermented Alcoholic Beverages.

Class 49 — Distilled Alcoholic Liquors

SN 170,479. Charles Jacquin et Cie, Inc., d.b.a. Greenbros Co., Philadelphia, Pa. Filed June 6, 1963.

CUSTOM CLUB

For Whiskey.
First use May 10, 1963.

SN 172,841. Old Grantian Company Limited, London, England. Filed July 11, 1963.

OLD GRANTIAN

Owner of U.S. Reg. Nos. 637,566 and 672,652.
For Scotch Whisky.
First use October 1954; in commerce October 1954.

SN 173,841. The Alfred Hart Company, d.b.a. Quality Distilled Products, Los Angeles, Calif. Filed July 26, 1963.

Crown Prince

For Blended Whiskey and Vodka.
First use on or about June 25, 1934, on whiskey.

SN 173,859. J. & G. Oldfield, Ltd., Worcester, England. Filed July 26, 1963.

BALMORAL

For Blended Scotch Whisky.
First use Apr. 2, 1963; in commerce Apr. 2, 1963.

SN 173,867. Schenley Industries, Inc., New York, N.Y. Filed July 26, 1963.

Schenley

Owner of Reg. Nos. 323,937, 709,433, and many others.
For Whiskey, Gin, Brandy, Rum, Vodka, Alcoholic Cordials, and Prepared Alcoholic Cocktails.
First use in or about December 1892.

SN 174,106. E. Martinoni Company, San Francisco, Calif. Filed July 29, 1963.

SILVER GLADE

For Gin.
First use Oct. 3, 1962.

Class 50—Merchandise Not Otherwise Classified

SN 135,155. Sculpture Under the Sky, Inc., New York, N.Y. Filed Jan. 3, 1962.

SCULPTURE
under the sky

For Reproductions of Articles of Sculpture.
First use Nov. 10, 1961.

SN 136,295. The Sculpcraft Corporation, Cleveland, Ohio. Filed Jan. 22, 1962.

SCULPCRAFT

For Educational and Amusement Kit Containing a Sculpturing Medium With Tools and Supplies for Working Said Medium.
First use July 1, 1961.

SN 153,264. Esteem Associates Incorporated, Stillwater, Okla. Filed Sept. 17, 1962.

ESTEEM

For Self-Improvement Course Consisting of Phonograph Records, an Album, and Printed Matter Contained in Instruction Manuals.
First use Sept. 18, 1961.

SN 161,569. Thermopatch Corporation, New York, N.Y. Filed Jan. 28, 1963.



The lining on the drawing does not represent color but forms a part of the mark.
For Mending Tape, Identification Tape, Label Tape, Patches Made of Fabric Coated With Thermoplastic Material.
First use Dec. 18, 1962.

SN 166,430. American Flange & Manufacturing Co. Inc., New York, N.Y. Filed Apr. 10, 1963.

POLLY-PRESS

For Closures, Parts Thereof and Pouring Spouts for Metal Drums, Cans, Tins and the Like.
First use Mar. 7, 1955.

SN 167,987. Paul Dziulak, d.b.a. Science Teaching Aids, Pell Lake, Wis. Filed May 2, 1963.



The drawing is lined for yellow.
For Biological Models and Key Cards Which Explain Parts of the Models.
First use Aug. 2, 1962.

SN 168,739. James J. Hite, Columbus, Ohio. Filed May 13, 1963.

HITIKI

For Statuary, Carvings, Novelties and Works of Art.
First use Feb. 1, 1962.

SN 175,216. Silverlith Corporation, Edmonston, Md. Filed Aug. 16, 1963.

NEWSLITH

For Printing Plates, Including Grained or Smooth Printing Plates, Pre-Sensitized Printing Plates and Pre-Cut Printing Plates Suitable for Use in Lithography.
First use June 28, 1963.

SN 180,829. The Board of Publication of the Methodist Church, Inc., Nashville, Tenn. Filed Nov. 12, 1963.

COKESBURY

For Altarware—Namely, Crosses and Vases.
First use May 1, 1963.

Class 51 — Cosmetics and Toilet Preparations

SN 147,609. Nethercutt Laboratories, d.b.a. Cosgenic Labs, Hollywood, Calif. Filed June 25, 1962.

SLIC STIC

No claim is made to the word "Stic" as a descriptive notation or in any other manner.
For Cosmetics—Namely, a Lip Pomade.
First use June 8, 1962.

SN 152,640. Studio Girl-Hollywood, Inc., d.b.a. Studio Girl, Glendale, Calif. Filed Sept. 6, 1962.

STRAWBERRY KISS

Applicant disclaims the word "Strawberry."
For Lip Pomade.
First use on or about Aug. 14, 1962.

SN 159,822. L. L. Henderson, d.b.a. Lustre Lux Company, Warren, Ohio. Filed Dec. 27, 1962.



No claim is made to "Bath Oil," apart from the mark as shown.
For Bath Oil.
First use May 15, 1962.

SN 160,136. Ray Drug Company, Inc., Oakland, Calif. Filed Jan. 3, 1963.

CAN TAN

Applicant disclaims the word "Tan," apart from the mark as shown.
For Sun Tan Lotion.
First use Dec. 14, 1962.

SN 161,010. Crowning Glory, Inc., Whittier, Calif. Filed Jan. 21, 1963.

WONDER-CURL

For Products for Beautifying the Hair—Namely, Conditioners, Curling Solutions, and Neutralizers.
First use September 1957.

SN 161,856. Crowning Glory, Inc., Whittier, Calif. Filed Feb. 1, 1963.

GLAMOR-CURL

For Products for Beautifying the Hair—Namely, Conditioners, Curling Solutions, and Neutralizers.
First use September 1957.

SN 167,477. L'Oreal, Paris, France. Filed Apr. 24, 1963.

'Firm 'n Fresh'

Owner of French Reg. No. 507,236, dated Aug. 9, 1962 (Seine); Natl. Inst. No. 192,727.
For Perfumes, Cosmetics, Cologne Waters, Make-Ups, Make-Up Removers, Creams and Lotions for the Hands, for the Face and for the Skin, Dyes, Coloring Agents, Rinses and Lotions for Hair and Beards, Preparations for Bleaching of Hair, Preparations for Care and Beauty of the Hair, and Preparations for Waving and Setting of Hair.

SN 167,478. L'Oreal, Paris, France. Filed Apr. 24, 1963.

'Double Deep'

Owner of French Reg. No. 507,234, dated Aug. 9, 1962 (Seine); Natl. Inst. No. 192,725.
For Perfumes, Cosmetics, Cologne Waters, Make-Ups, Make-Up Removers, Creams and Lotions for the Hands, for the Face and for the Skin, Dyes, Coloring Agents, Rinses and Lotions for Hair and Beards, Preparations for Bleaching of Hair, Preparations for Care and Beauty of the Hair, and Preparations for Waving and Setting of Hair.

SN 167,479. L'Oreal, Paris, France. Filed Apr. 24, 1963.

S.R.O.

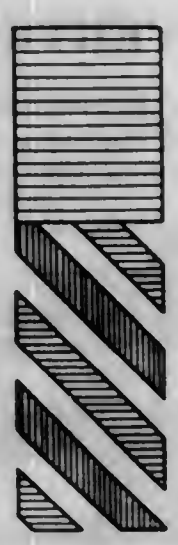
Owner of French Reg. No. 507,240, dated Aug. 9, 1962 (Seine); Natl. Inst. No. 192,731.
For Perfumes, Cosmetics, Cologne Waters, Make-Ups, Make-Up Removers, Creams and Lotions for the Hands, for the Face and for the Skin, Dyes, Coloring Agents, Rinses and Lotions for Hair and Beards, Preparations for Bleaching of Hair, Preparations for Care and Beauty of the Hair, and Preparations for Waving and Setting of Hair.

SN 167,480. L'Oreal, Paris, France. Filed Apr. 24, 1963.

E.S.P.

Owner of French Reg. No. 507,235, dated Aug. 9, 1962 (Seine); Natl. Inst. No. 192,726.
For Perfumes, Cosmetics, Cologne Waters, Make-Ups, Make-Up Removers, Creams and Lotions for the Hands, for the Face and for the Skin, Dyes, Coloring Agents, Rinses and Lotions for Hair and Beards, Preparations for Bleaching of Hair, Preparations for Care and Beauty of the Hair, and Preparations for Waving and Setting of Hair.

SN 170,413. Chas. Pfizer & Co., Inc., New York, N.Y., by merger from Thomas Leeming & Company, Inc., New York, N.Y. Filed June 5, 1963.



The drawing is lined for blue and red. Owner of Reg. Nos. 187,443, 725,452, and others.

For Shaving Preparations.

First use May 23, 1963.

SN 170,755. Lan-O-Sheen, Inc., St. Paul, Minn. Filed June 11, 1963.

LAN-O-BATH

For Foaming Milk Bath Preparation.
First use May 16, 1963.

SN 171,008. The Gillette Company, d.b.a. The Toni Company, Boston, Mass. Filed June 14, 1963.

FLIP

For Liquid Hair Setting Spray.
First use May 22, 1963.

SN 171,463. Luzier Incorporated, Kansas City, Mo. Filed June 20, 1963.

PINK PETAL

For Cosmetic Facial Mask, Being a Cream-Like Substance, Which Hardens on the Face to Draw Out Impurities From the Skin.

First use Feb. 14, 1963.
Subj. to Intf. with SN 174,964.

SN 172,099. Purex Corporation, Ltd., Lakewood, Calif. Filed June 28, 1963.

BUBBLE CLUB

For Bubble Bath.
First use June 3, 1963.

SN 173,019. Maradel Products, Inc., New York, N.Y. Filed July 15, 1963.

NAIL PROTEX

The word "Nail" is disclaimed apart from the mark as shown.

For Nail Conditioner.
First use July 10, 1963.

SN 173,733. Botany Industries, Inc., d.b.a. Sea and Ski Company, Reno, Nev. Filed July 25, 1963.

TEEN-TAN

For Body and Sun-Tan Lotion.
First use about May 29, 1963.

SN 174,459. Tri-Joi Co., St. Paul, Minn. Filed Aug. 5, 1963.

Tri-joi

For Deodorant and Nonperspirant Cream.
First use Feb. 1, 1933.

SN 174,567. Avon Products, Inc., New York, N.Y. Filed Aug. 7, 1963.

TWICE BRIGHT

For Tooth Paste.
First use July 23, 1963.

SN 174,772. La Maur, Inc., Minneapolis, Minn. Filed Aug. 9, 1963.

STYLAST

Owner of Reg. No. 753,442.
For Hair Fixative.
First use Feb. 16, 1956.

SN 174,773. La Maur, Inc., Minneapolis, Minn. Filed Aug. 9, 1963.

STYLON

Owner of Reg. No. 753,442.
For Hair Fixative.
First use Aug. 21, 1957.

SN 174,828. Caron Corporation, New York, N.Y. Filed Aug. 12, 1963.

DERRINGER

For Perfume.
First use May 28, 1963.

Class 52—Detergents and Soaps

SN 141,852. Lever Brothers Company, New York, N.Y. Filed Apr. 9, 1962.

GAYLA

Owner of Reg. Nos. 333,688 and 654,903.

For Detergent Compound for General Washing and Cleansing, Toilet Soap and Hair Shampoo.

First use Nov. 23, 1935.

SN 165,951. The Procter & Gamble Company, Cincinnati, Ohio. Filed Apr. 2, 1963.

ARIEL

Owner of Reg. No. 223,177.

For Special Combination of Cleaning and Microbicidal Agents Incorporated as Ingredients in a Distinfecting Detergent.

First use Feb. 8, 1963.

SN 165,952. The Procter & Gamble Company, Cincinnati, Ohio. Filed Apr. 2, 1963.

BREAKTHROUGH

For Disinfecting Detergent for Use in the Feed Industry.
First use Feb. 8, 1963.

SN 167,092. Renwood Chemical Company, Tulsa, Okla. Filed Apr. 17, 1963.

RENZ-IT

For Spray Type Cleaner for Use on Windows and Automobiles.
First use Jan. 5, 1963.

SN 169,375. H. Kohnstamm & Co., Inc., New York, N.Y. Filed May 21, 1963.

SANI-SUDS

For Bacteriostatic Laundry Soap.
First use Sept. 12, 1961.

SN 169,702. Colgate-Palmolive Company, New York, N.Y. Filed May 27, 1963.

Sword

Owner of Reg. No. 260,099.
For Soap.
First use Apr. 10, 1963.

SN 172,245. S. E. Rykoff & Co., Los Angeles, Calif. Filed July 1, 1963.

SilverRey

Owner of Reg. Nos. 669,678 and 676,798.
For Cleanser for General Use for Restaurants, Hotels, Institutions and Industrial Plants.
First use Oct. 24, 1962.

SN 173,108. The Hewitt Soap Company, Inc., Dayton, Ohio. Filed July 16, 1963.

WORKS

Owner of Reg. Nos. 318,096 and 631,931.
For Cleaning Compound for General Laundry Use.
First use May 20, 1963.

SN 173,129. Purex Corporation, Ltd., d.b.a. Turco Products, Inc., Wilmington, Calif. Filed July 16, 1963.

SUPERTROL

Owner of Reg. No. 405,426.
For Liquid Detergent Containing No Insoluble or Solid Ingredients, Used in Washing Away Grease, Carbon Deposits, and the Like.
First use on or about Oct. 29, 1939.

SN 173,130. Purex Corporation, Ltd., d.b.a. Turco Products, Inc., Wilmington, Calif. Filed July 16, 1963.

W.O. NO. 1

Owner of Reg. No. 405,442.
For Cleaning Preparation Intended Primarily for Use on Metal Surfaces for Removing Grease, Rust and Other Foreign Matter Therefrom and Having Incidental Rustproofing Properties.
First use in or about April 1936.

SN 174,049. Purex Corporation, Ltd., d.b.a. Turco Products, Inc., Wilmington, Calif. Filed July 30, 1963.

BAND WAGON

For General Purpose Detergent Cleaner.
First use July 16, 1963.

SN 180,118. Purex Corporation, Ltd., d.b.a. Turco Products, Inc., Wilmington, Calif. Filed Oct. 30, 1963.



For General Purpose Detergent Cleaner.
First use July 16, 1963.

SERVICE MARKS

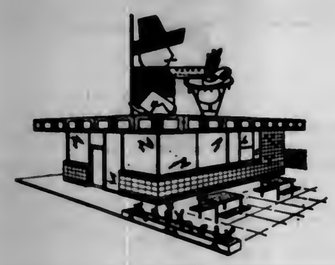
Class 100 — Miscellaneous

SN 140,797. Milton J. Willner, d.b.a. Mister Taco, Aurora, Colo. Filed Mar. 26, 1962.



For Restaurant Services.
First use on or about July 1, 1961.

SN 140,801. Milton J. Willner, d.b.a. Mister Taco, Aurora, Colo. Filed Mar. 26, 1962.



For Restaurant Services.
First use on or about July 1, 1961.

SN 155,304. Drive and Serve, Inc., Chicago, Ill. Filed Oct. 17, 1962.

King-Freez

For Mobile Snack Bar Services.
First use about January 1962.

SN 159,238. Ideal Leasing Corporation, Brooklyn, N.Y. Filed Dec. 17, 1962.

Leasco

For Rental of Machinery and Equipment Generally for Office Use.
First use June 1962.
Subj. to Intf. with SN 166,471.

SN 167,706. Colonial Enterprises, Inc., Minneapolis, Minn. Filed Apr. 29, 1963.

Colonial
PANCAKE
HOUSE



The drawing is lined for brown and yellow.
For Restaurants Specializing in the Preparation and Serving of Pancakes.
First use Aug. 15, 1962.

Class 101 — Advertising and Business

SN 105,187. Meredith Publishing Company, Des Moines, Iowa. Filed Sept. 26, 1960.

BETTER HOMES AND GARDENS IDEA CENTER

For Furnishing Building Material Suppliers With Information and Literature Collected From Various Building Material Manufacturers and From Other Sources.
First use May 1960.

SN 118,757. Acme Markets, Inc., Philadelphia, Pa., by change of name from American Stores Company, Philadelphia, Pa. Filed Apr. 27, 1961.

CAUL-A-DAY

For Service of Issuance and Redemption of Trading Stamps.
First use 1947.

SN 157,729. Shell Oil Company, New York, N.Y. Filed Nov. 21, 1962.

CARROUSEL

For Retail Auto Accessories, Toy and Garden Supply Services and for the Advertising of Such Services.
First use Sept. 11, 1962.

SN 158,260. The George Macy Companies, Inc., d.b.a. The Limited Editions Club, New York, N.Y. Filed Nov. 30, 1962.

THE LIMITED EDITIONS CLUB

Owner of Reg. No. 760,985.
For Book Club Services—i.e., Periodically Advising Subscribers of Availability of Certain Books With Details of Their Literary and Artistic Contents, Periodically Making Available to Subscribers Certain Selected Books, Under Special Arrangements.
First use in 1929.

SN 167,217. Circle K Food Stores, Inc., El Paso, Tex. Filed Apr. 22, 1963.



The drawing is lined for the colors red and green.
For Retail Grocery Services.
First use May 31, 1957.

SN 167,661. Sunset House Distributing Corporation, Los Angeles, Calif. Filed Apr. 26, 1963.

Sunset House

For Retail Mail Order Department Store Services.
First use 1953.

Class 102 — Insurance and Financial

SN 149,003. Provident Tradesmens Bank and Trust Company, Philadelphia, Pa. Filed July 13, 1962.



The wording "of Philadelphia" is disclaimed apart from the mark as shown. Owner of Reg. No. 527,917.
For Banking Services.
First use June 28, 1962; Feb. 10, 1959, as to the representation of the key and dotted oval.

SN 149,473. Lawrence Herz Joseph, Jr., d.b.a. Collection Management Company, Los Angeles, Calif. Filed July 20, 1962.



For Collection Agency Services.
First use July 20, 1958.

SN 169,641. Lutheran Brotherhood, Minneapolis, Minn. Filed May 24, 1963.

ANA-TRONIC

For Estimating the Present and Future Insurance Needs of Individuals and Families, Said Estimates Being Based on Confidential Personal Data Supplied by Those Seeking Such Information.
First use May 15, 1963.

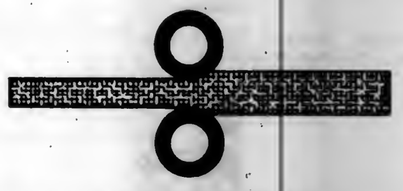
SN 174,625. Vanguard Fund, Inc., Pasadena, Calif. Filed Aug. 7, 1963.



For Investment Services.
First use Jan. 5, 1961.

Class 103 — Construction and Repair

SN 127,129. Morgan Construction Company, Worcester, Mass. Filed Sept. 1, 1961.



The drawing is lined for yellow, however, color is not claimed as an essential feature of the mark.
For Engineering Services Relating to the Hot Rolling of Ferrous and Non-Ferrous Metals in Rod, Bar, Skelp and Billet Mills; to Drawing of Ferrous and Non-Ferrous Wires; and to Reversible Heat Recovery and Draft Systems for Melting and Reheating Furnaces for Ferrous and Glass Materials.
First use Mar. 10, 1961.

Class 105 — Transportation and Storage

SN 150,707. McLean Trucking Company, Winston-Salem, N.C. Filed Aug. 7, 1962.

WE PULL FOR INDUSTRY

For Transportation of Freight by Truck.
First use at least by October 1953.

SN 150,708. McLean Trucking Company, Winston-Salem, N.C. Filed Aug. 7, 1962.

YOUR DIRECT LINE TO HIGHER PROFITS

For Transportation of Freight by Truck.
First use January 1962.

SN 166,395. Mexican Line (joint venture), New York, N.Y. Filed Apr. 9, 1963.

MEXICAN LINE

For Transportation of Cargo Between the United States Atlantic, United States Gulf, and Mexican Gulf Ports.
First use at least as early as March 1950.

SN 166,471. Leaseco, Inc., Nashville, Tenn. Filed Apr. 10, 1963.

LEASECO

For Leasing to Others of Automobiles, Trucks and Vehicles Used in Interstate Commerce.
First use Mar. 21, 1958.
Subj. to Intf. with SN 159,238.

Class 107 — Education and Entertainment

SN 165,011. Wrather Corporation, Beverly Hills, Calif. Filed Mar. 19, 1963.

THE LONE RANGER

Owner of Reg. Nos. 365,670 and 527,916.
For Title of a Dramatic Program Presented Serially on Television.
First use Sept. 15, 1949.

CERTIFICATION MARKS

Class A — Goods

SN 131,532. Union Carbide Corporation, New York, N.Y. Filed Nov. 7, 1961.



The mark certifies a mode of manufacture of the goods—namely, that the said articles made of or having surfaces of silver have had applied thereto an anti-tarnish finish, the composition, quality, nature and extent of application of which meet the standards set by applicant from time to time and communicated in writing to such authorized users.
For Goods—Namely, Articles Made of or Having Surfaces of Silver.
First use May 29, 1961.

SN 173,629. Chicago Rabbinical Council, Chicago, Ill. Filed July 24, 1963.



The mark is used to certify ritually kosher foods.
For Food and Food Products.
First use on or before June 1, 1948.

Class B — Services

SN 172,274. National Association of Mutual Insurance Agents, Washington, D.C. Filed July 1, 1963.



INDEPENDENT MUTUAL
INSURANCE AGENT

The mark certifies that the services on which the mark is used are performed by members of applicant and that the services conform to standards established by applicant.
For Insurance Services.
First use Nov. 15, 1962.

TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

766,127. ALABAR. James A. Goode. SN 139,936. Pub. 12–24–63. Filed 3–15–62.

766,128. EVERFLEX. W. R. Grace & Co. SN 167,545. Pub. 12–24–63. Filed 4–25–63.

Class 2 — Receptacles

766,129. DUCHESS AND DESIGN. Cellopak Co., Inc., d.b.a. Butler-Wilson Specialty Bag Co. SN 154,208. Pub. 12–24–63. Filed 10–1–62.

766,130. CONSOL CARRY-OUT. Consolidated Paper Company. SN 167,532. Pub. 12–24–63. Filed 4–25–63.

766,131. B AND DESIGN. The Buckeye Stamping Company. SN 168,689. Pub. 12–24–63. Filed 5–13–63.

766,132. QUIK-SET. Paper Goods Co., Inc. SN 168,850. Pub. 12–24–63. Filed 5–14–63.

766,133. CAROUSEL. Diamond National Corporation. SN 169,527. Pub. 12–3–63. Filed 5–23–63.

766,134. RUMP PAK. Keyes Fibre Company. SN 177,893. Pub. 12–24–63. Filed 9–27–63.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

766,135. HARNESS HOUSE. Greenhall Bros., Inc. MULTIPLE CLASS (Classes 3, 28, and 39). SN 167,257. Pub. 12–24–63. Filed 4–22–63.

Class 4 — Abrasives and Polishing Materials

766,136. RAY BUF. The Schlegel Manufacturing Company. SN 160,011. Pub. 12–24–63. Filed 12–31–62.

766,137. N-L ETC. AND DESIGN. Lehn & Fink Products Corporation. SN 161,798. Pub. 12–24–63. Filed 1–31–63.

766,138. CERALITE AND DESIGN. Globe-Union Inc. SN 165,919. Pub. 12–24–63. Filed 4–2–63.

766,139. TURTLE WAX. Turtle Wax, Inc. MULTIPLE CLASS (Classes 4, 6, 15, and 52). SN 166,226. Pub. 12–24–63. Filed 4–5–63.

766,140. KITCHEN PREEN. The Preen Company. SN 171,034. Pub. 12–24–63. Filed 6–14–63.

Class 5 — Adhesives

766,141. DAB-IT. Siomons Laboratories, Inc. SN 173,390. Pub. 12–24–63. Filed 7–19–63.

766,142. ENERGINE. Sterling Drug Inc. SN 173,714. Pub. 12–24–63. Filed 7–24–63.

766,143. PANEL-UP. Wilhold Glues, Inc. SN 174,812. Pub. 12–24–63. Filed 8–9–63.

766,144. 3M. Minnesota Mining and Manufacturing Company. SN 175,424. Pub. 12–24–63. Filed 8–20–63.

Class 6 — Chemicals and Chemical Compositions

766,139. (See Class 4 for this trademark.)

766,145. HY-PHOS. Franklin H. Mackenzie. SN 123,332. Pub. 12–24–63. Filed 7–3–61.

766,146. PURO FR FLUID. The Puro Oil Company. SN 141,543. Pub. 12–24–63. Filed 4–4–62.

766,147. MATRIX. The Borden Company, d.b.a. Galloway-West Company. SN 150,673. Pub. 12–24–63. Filed 8–7–62.

766,148. RANCH-RITE. Charles M. Daniel, d.b.a. Western Marketing Affiliates. MULTIPLE CLASS (Classes 6, 21, 23, and 101). SN 154,571. Pub. 12–24–63. Filed 10–5–62.

766,149. BLASTICIDIN. Kaken Kagaku Kabushiki Kaisha. SN 160,056. Pub. 12–24–63. Filed 1–2–63.

766,150. BLA-S. Kaken Kagaku Kabushiki Kaisha. SN 160,057. Pub. 12–24–63. Filed 1–2–63.

766,151. ESELLAR. J. M. Huber Corporation. SN 166,637. Pub. 12–24–63. Filed 4–12–63.

766,152. ENERGINE. Sterling Drug Inc. SN 173,713. Pub. 12–24–63. Filed 7–24–63.

Class 7 — Cordage

766,153. GREEN MOUNTAIN. Van Waters & Rogers, Inc. SN 167,851. Pub. 12–24–63. Filed 4–30–63.

Class 10 — Fertilizers

766,154. UNIPEL. California Chemical Company, by merger and change of name from California Spray-Chemical Corporation. SN 81,677. Pub. 3–8–60. Filed 9–21–59.

766,155. NATURE BOY. Howell W. Oliver, d.b.a. Nature Boy Plant Food Company. SN 154,504. Pub. 12–24–63. Filed 10–4–62.

Class 12 — Construction Materials

766,156. SUPER SALTS AND DESIGN. Southern Coatings & Chemical Company. SN 122,035. Pub. 12–24–63. Filed 6–14–61.

766,157. PAX-FORMS. Pax-Products. SN 138,529. Pub. 12–24–63. Filed 2–23–62.

766,158. WEB CAST AND DESIGN. H. J. Sherwood, Inc. SN 143,767. Pub. 12–24–63. Filed 5–3–62.

766,159. MIRAFINISH. Inland Steel Products Company. SN 145,460. Pub. 12–24–63. Filed 5–25–62.

766,160. FOUR SEASONS. C. M. Christiansen Co. SN 150,759. Pub. 12–3–63. Filed 8–8–62.

766,161. 4 SEASONS AND DESIGN. C. M. Christiansen Co. SN 150,760. Pub. 12–3–63. Filed 8–8–62.

766,162. WEATHER STRIPPING BY ZERO AND DESIGN. Zero Weather Stripping Co., Inc. SN 150,830. Pub. 12–24–63. Filed 8–8–62.

766,163. DOCAL. Douglas Oil Company of California. SN 151,667. Pub. 12–24–63. Filed 8–22–62.

766,164. SUPER INSUTAPE. Unarco Industries, Inc., by change of name from Union Asbestos & Rubber Company. SN 153,345. Pub. 12–24–63. Filed 9–17–62.

766,165. INSUTAPE. Unarco Industries, Inc., by change of name from Union Asbestos & Rubber Company. SN 153,346. Pub. 12–24–63. Filed 9–17–62.

766,166. FORMBLOC. Formbloc, Inc. SN 153,472. Pub. 12–24–63. Filed 9–19–62.

766,167. ARMA-SEAL AND DESIGN. Huttig Sash & Door Co. SN 153,566. Pub. 12–24–63. Filed 9–20–62.

766,168. BAKER TELE-SCAF. Baker-Roos, Inc. SN 153,723. Pub. 12–24–63. Filed 9–24–62.

766,169. KENCEL. Hexcel Products Inc. SN 153,761. Pub. 12–24–63. Filed 9–24–62.

766,170. PLASTO-JOINT STIK. Lake Chemical Co. SN 153,964. Pub. 12–24–63. Filed 9–26–62.

766,171. PERF-O-TUBE. Perf-O-Strut, Inc. SN 154,762. Pub. 12–24–63. Filed 10–8–62.

766,172. GLA-ZIT. H. I. Surla, d.b.a. Cle-Vac Company. SN 155,113. Pub. 12–24–63. Filed 10–12–62.

766,173. CASCO. L. C. Cassidy & Son, Inc. SN 155,135. Pub. 12–24–63. Filed 10–15–62.

766,174. ANGLE-SEAL. Bridgeport Fabrics, Inc. SN 155,370. Pub. 12–24–63. Filed 10–18–62.

766,175. FLIP SEAL. Bridgeport Fabrics, Inc. SN 155,371. Pub. 12–24–63. Filed 10–18–62.

766,176. QUIETCOTE. Daubert Chemical Company. SN 155,381. Pub. 12–24–63. Filed 10–18–62.

766,177. ALLPRO. Allpro Corporation. SN 155,549. Pub. 12–24–63. Filed 10–22–62.

766,178. FLEX-A-FOLD. Sterling Products Co., Inc. SN 157,261. Pub. 12–24–63. Filed 11–14–62.

766,179. AMES ETC. AND DESIGN. Ames Drywall Products Company. SN 157,438. Pub. 12–24–63. Filed 11–19–62.

766,180. BYRNOVER. Byrne Doors, Inc. SN 160,600. Pub. 12–24–63. Filed 1–14–63.

766,181. GEOMETRIC DESIGN. Smith Cedar Products Limited. SN 165,274. Pub. 12–24–63. Filed 3–22–63.

766,182. GLOBE-STRUT. The Globe Company. SN 166,549. Pub. 12–24–63. Filed 4–11–63.

766,183. STA-PUT COLD PATCH. Cold River Hot Mix Corporation. SN 166,787. Pub. 12–24–63. Filed 4–16–63.

766,184. VITRI FLOOR. The Robinson Brick and Tile Company. SN 166,932. Pub. 12–24–63. Filed 4–17–63.

766,185. HYLO. The Eagle-Picher Company. SN 167,236. Pub. 12–24–63. Filed 4–23–63.

766,186. SELBAGRIP. Selby, Battersby &. Company. SN 167,328. Pub. 12–24–63. Filed 4–22–63.

766,187. PROMDEK. Selby, Battersby & Company. SN 167,330. Pub. 12–24–63. Filed 4–22–63.

766,188. PALCO-FACE. The Pacific Lumber Company. SN 167,855. Pub. 12–24–63. Filed 4–30–63.

766,189. WOODALOY. Elliott Bay Lumber Company. SN 170,051. Pub. 12–24–63. Filed 5–31–63.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

766,190. RIGID OVERLAP. Kirsch Company. SN 149,748. Pub. 12–24–63. Filed 7–25–62.

766,191. BEKINOX. Trefileries Leon Bekaert, SPRL. SN 149,786. Pub. 12–24–63. Filed 7–25–62.

766,192. ABFO. Alum-Brass Foundry and Manufacturing, Inc. SN 150,307. Pub. 12–24–63. Filed 8–2–62.

766,193. SYMBOL. Textron, Inc., d.b.a. Griswold Manufacturing Company. SN 152,656. Pub. 12–24–63. Filed 8–21–62.

766,194. ILLINOIS AND DESIGN. The Illinois Lock Company. MULTIPLE CLASS (Classes 13, 14, and 25). SN 153,288. Pub. 12–24–63. Filed 9–17–62.

766,195. SUNFLEX. Suntemp Industries, Inc. SN 154,450. Pub. 7–9–63. Filed 10–3–62.

766,196. BUTTERFLY DESIGN. Crane Co. SN 156,568. Pub. 12–24–63. Filed 11–5–62.

766,197. V-TIP. Vernay Laboratories, Inc. SN 164,672. Pub. 12–24–63. Filed 3–14–63.

766,198. SPITZ-ALL. Akron Brass Company. SN 165,886. Pub. 12–24–63. Filed 4–2–63.

766,199. INSUL-VALV. Young Sales Corporation. SN 166,341. Pub. 12–24–63. Filed 4–8–63.

766,200. ZS. Atlas Corporation. SN 167,604. Pub. 12–24–63. Filed 4–26–63.

766,201. CENTURY 21. National Lock Co. SN 168,427. Pub. 12–24–63. Filed 5–8–63.

766,202. LOAD-FLO. Ekco Products Company. SN 169,918. Pub. 12–24–63. Filed 5–29–63.

766,203. HAPPY HOME. F. W. Woolworth Co. SN 170,140. Pub. 12–24–63. Filed 5–31–63.

766,204. COPPERSERT. Perfection Corporation. SN 173,496. Pub. 12–24–63. Filed 7–22–63.

766,205. THERA-FLO. Swimquip, Inc. SN 173,979. Pub. 12–24–63. Filed 7–29–63.

Class 14 — Metals and Metal Castings and Forgings

766,194. (See Class 13 for this trademark.)

766,206. PROTO-PAT. Precision Metalsmiths, Inc. SN 156,186. Pub. 12–24–63. Filed 10–15–62.

766,207. NATIONAL N AND DESIGN. Union Carbide Corporation. SN 159,544. Pub. 10–29–63. Filed 12–20–62.

766,208. MACH-5. United States Steel Corporation. SN 162,886. Pub. 12–24–63. Filed 2–15–63.

766,209. ACCU-CAST. Manco Products Incorporated. SN 168,827. Pub. 12–24–63. Filed 5–14–63.

766,210. T-K. The Carpenter Steel Company. SN 168,902. Pub. 12–24–63. Filed 5–15–63.

766,211. R.D.S. The Carpenter Steel Company. SN 168,903. Pub. 12–24–63. Filed 5–15–63.

766,212. KIF AND DESIGN. Kaiser Aluminum & Chemical Corporation. SN 168,931. Pub. 12–24–63. Filed 5–15–63.

Class 15 — Oils and Greases

766,139. (See Class 4 for this trademark.)

766,213. ELMER'S AND DESIGN. The Borden Company. SN 163,800. Pub. 12–24–63. Filed 3–4–63.

766,214. ALL STAR. West Penn Oil Company. SN 167,588. Pub. 12–24–63. Filed 4–25–63.

766,215. JT–7. Cato Oil and Grease Company. SN 170,028. Pub. 12–24–63. Filed 5–31–63.

766,216. VALVOLINE XLD AND DESIGN. Ashland Oil & Refining Company. SN 170,273. Pub. 12–24–63. Filed 6–4–63.

766,217. DIESELMOTIVE. Gulf Oil Corporation. SN 170,403. Pub. 12–24–63. Filed 6–5–63.

766,218. SAPHIRE. Gulf Oil Corporation. SN 170,404. Pub. 12–24–63. Filed 6–5–63.

766,219. BORON AND DESIGN. The Standard Oil Company. SN 170,435. Pub. 12–24–63. Filed 6–5–63.

766,220. AMWAY. Amway Sales Corporation. SN 170,801. Pub. 12–24–63. Filed 6–12–63.

766,221. MANOR HOUSE. Candle Artisans, Incorporated. SN 170,806. Pub. 12–24–63. Filed 6–12–63.

Class 16 — Protective and Decorative Coatings

766,222. TILE-IT. McDougall-Butler Co., Inc. SN 148,740. Pub. 3–19–63. Filed 7–10–62.

Class 17—Tobacco Products

766,223. FINITE. Bayuk Cigars Incorporated. SN 174,640. Pub. 12–24–63. Filed 8–8–63.

Class 18—Medicines and Pharmaceutical Preparations

766,224. SIREX. Pharmaceutical Specialties, Inc. SN 110,168. Pub. 7–18–61. Filed 12–13–60.

766,225. ARGOS ETC. AND DESIGN. Charles F. Pentler, d.b.a. Argos Kennel Products. SN 116,908. Pub. 12–24–63. Filed 3–31–61.

766,226. TRANQUMIL. Carter Products, Inc. SN 123,611. Pub. 5–8–62. Filed 7–10–61.

766,227. UNIAMP. Sterimed, Inc. SN 127,966. Pub. 12–24–63. Filed 9–15–61.

766,228. MARVIN AND DESIGN. Marvin Societa per l'Industria Farmaceutica e Cosmetica Istituto Farmaco Biologico Societa in Nome Collettivo. SN 136,788. Pub. 12–24–63. Filed 1–29–62.

766,229. FARMITALIA. Societa Farmaceutici Italia. SN 140,054. Pub. 12–24–63. Filed 3–16–62.

766,230. KAO-T. Xttrium Laboratories, Inc., d.b.a. Blue Ridge Vitamin Co. SN 147,976. Pub. 12–24–63. Filed 6–28–62.

766,231. LICATON. Pharmaton A.G., d.b.a. Pharmaton S.A. and Pharmaton Ltd. SN 155,638. Pub. 12–24–63. Filed 10–22–62.

766,232. TRAVENON. Baxter Laboratories, Inc. SN 156,262. Pub. 12–24–63. Filed 10–31–62.

766,233. MEDICOPASTE BANDAGE. Medicosane Laboratories. SN 156,783. Pub. 12–24–63. Filed 10–23–62.

766,234. BIO-CIN III. Alberto-Culver Company. SN 159,032. Pub. 12–24–63. Filed 12–13–62.

766,235. CORTOSAN. The Purdue Frederick Company. SN 161,556. Pub. 12–24–63. Filed 1–28–63.

766,236. PROLEEN. Diamond Laboratories, Inc. SN 166,979. Pub. 12–17–63. Filed 4–18–63.

766,237. CONJUNCTIN. Allergan Pharmaceuticals, Inc. SN 168,461. Pub. 12–24–63. Filed 5–9–63.

766,238. CONJUNCTILONE. Allergan Pharmaceuticals, Inc. SN 168,462. Pub. 12–24–63. Filed 5–9–63.

Class 19—Vehicles

766,239. WOODSBUGGY. Henry J. McCarthy. SN 157,313. Pub. 12–24–63. Filed 11–15–62.

766,240. ROAD MASTER. Monroe Auto Equipment Company. SN 157,531. Pub. 12–24–63. Filed 11–19–62.

766,241. CUP. Michigan Wheel Company. SN 161,354. Pub. 12–24–63. Filed 1–24–63.

766,242. PIK-POCKET. Vern V. Burns, d.b.a. Burns Saddlery. SN 161,590. Pub. 12–24–63. Filed 1–29–63.

766,243. SKYCRANE. United Aircraft Corporation. SN 165,093. Pub. 12–24–63. Filed 3–20–63.

766,244. VAN DYKE AND DESIGN. Guerdon Industries, Inc. SN 169,449. Pub. 12–24–63. Filed 5–22–63.

766,245. SUNMASTER. Plast-O-Craft Company. SN 173,686. Pub. 12–24–63. Filed 7–24–63.

766,246. HYDRONECK. Talbert Manufacturing, Inc. SN 173,980. Pub. 12–24–63. Filed 7–29–63.

766,247. ASE AND DESIGN. American Safety Equipment Corporation. SN 174,000. Pub. 12–24–63. Filed 7–30–63.

Class 20—Linoleum and Oiled Cloth

766,248. CUSHIONFLOR. Congoleum-Nairn Inc. SN 153,552. Pub. 12–24–63. Filed 9–20–62.

766,249. TRAMPOLINO. The Tayside Floorcloth Company Limited. SN 157,651. Pub. 12–24–63. Filed 5–9–63.

Class 21—Electrical Apparatus, Machines, and Supplies

766,148. (See Class 6 for this trademark.)

766,250. DELTA. Edward M. Shiepe, d.b.a. Delta Radio Company. SN 116,351. Pub. 12–24–63. Filed 3–23–61.

766,251. MODERNAGE. Consolidated Sewing Machine Corp. SN 126,209. Pub. 12–24–63. Filed 8–18–61.

766,252. METROTEK. Metrotek Electronics, Inc. SN 135,811. Pub. 12–24–63. Filed 1–15–62.

766,253. NOBRUSH. Georator Corporation. SN 140,443. Pub. 11–12–63. Filed 3–22–62.

766,254. TECH-NEON. Industrial Electronics Corporation. SN 141,070. Pub. 12–11–62. Filed 3–29–62.

766,255. TERRALINE. Omni Spectra, Inc. SN 150,360. Pub. 12–24–63. Filed 8–2–62.

766,256. RAYOLIN N AND DESIGN. Raychem Corporation. SN 152,002. Pub. 12–24–63. Filed 8–27–62.

766,257. GOLD TONE AND DESIGN. Jameco Metal Products Co. Inc., assignee of Daniel Silverman, d.b.a. Jameco Metal Products Company. SN 152,926. Pub. 12–24–63. Filed 9–11–62.

766,258. POCKET GLIDE-SWITCH GUARD. Bright Star Industries, Incorporated, by merger from Bright Star Industries. SN 153,458. Pub. 10–8–63. Filed 9–19–62.

766,259. SAFE-T-START. Quick Start Corp. SN 156,657. Pub. 12–24–63. Filed 11–5–62.

766,260. PER-LUX. Light Distribution, Inc., assignee of Orville H. Kritz, d.b.a. All Weather Light Co. SN 156,817. Pub. 12–24–63. Filed 11–7–62.

766,261. ENCON AND DESIGN. Energy Conversion, Inc. SN 159,710. Pub. 12–24–63. Filed 12–26–62.

766,262. MILLISTRIP. Cannon Electric Company. SN 159,954. Pub. 12–24–63. Filed 12–31–62.

766,263. MILLI-K. Cannon Electric Company. SN 159,955. Pub. 12–24–63. Filed 12–31–62.

766,264. HI AND DESIGN. Hearth Industries, Inc. SN 160,052. Pub. 12–24–63. Filed 1–2–63.

766,265. TWIST-EX. Samuel Moore & Company. SN 160,065. Pub. 12–24–63. Filed 1–2–63.

766,266. ELECTUS. E. K. Ackerman Corporation. SN 160,085. Pub. 12–24–63. Filed 1–3–63.

766,267. JUMPERITE. The Electric Auto-Lite Company. SN 161,245. Pub. 12–24–63. Filed 1–23–63.

766,268. TONE-ALERT. E. F. Johnson Company. SN 161,713. Pub. 12–24–63. Filed 1–30–63.

766,269. NUGGET. Rotron Manufacturing Company, Inc. SN 162,290. Pub. 12–24–63. Filed 2–7–63.

766,270. DONUT ROBOT. Belshaw Brothers, Incorporated. SN 164,008. Pub. 12–24–63. Filed 3–8–63.

766,271. PN. The Pyle-National Company. MULTIPLE CLASS (Classes 21 and 34). SN 164,172. Pub. 12–24–63. Filed 3–7–63.

766,272. ACID-EATERS. Advanced Concepts, Inc. SN 164,680. Pub. 12–24–63. Filed 3–15–63.

766,273. FOGMASTER TRI-JET. AFA Corporation of Florida. SN 165,275. Pub. 12–24–63. Filed 3–25–63.

766,274. TROL-O-MATIC. Bender Machine Works, Inc. SN 165,739. Pub. 12–24–63. Filed 4–1–63.

766,275. RIVIERA. National Housewares, Inc. SN 166,306. Pub. 12–24–63. Filed 4–8–63.

766,276. ROLL-O-FORM. Malcus Tools Corp. SN 167,153. Pub. 12–24–63. Filed 4–19–63.

766,277. SENTINEL. Rotron Manufacturing Company, Inc. SN 167,325. Pub. 12–24–63. Filed 4–22–63.

766,278. HEATMASTER. Robbins & Myers, Inc. SN 167,493. Pub. 12–24–63. Filed 4–24–63.

766,279. HEATLINER. Robbins & Myers, Inc. SN 167,494. Pub. 12–24–63. Filed 4–24–63.

766,280. CYCL-TORQ. Eaton Manufacturing Company. SN 167,988. Pub. 12–24–63. Filed 5–2–63.

766,281. PARALTA. Paralta Equipment Co. SN 168,107. Pub. 12–24–63. Filed 5–3–63.

766,282. J-CORE. Electro-Netic Steel, Inc. SN 168,912. Pub. 12–24–63. Filed 5–15–63.

766,283. TALLY-HO. Woodard Research Corporation. SN 170,258. Pub. 12–24–63. Filed 6–3–63.

766,284. PARATUF. Essex Wire Corporation. SN 171,865. Pub. 12–24–63. Filed 6–26–63.

766,285. SEATBELT WATCHDOG. William C. Campbell, d.b.a. Carlson's Alinement Service. SN 172,468. Pub. 12–24–63. Filed 7–5–63.

766,286. DIMPLEX. Dimplex Limited. SN 173,903. Pub. 12–24–63. Filed 7–29–63.

Class 22—Games, Toys, and Sporting Goods

766,287. AGV. A.G.V. SN 125,705. Pub. 12–24–63. Filed 8–10–61.

766,288. BUMBLE BEES. Ad Lib Records Inc. SN 135,652. Pub. 12–24–63. Filed 1–12–62.

766,289. TRUE FLIGHT AND DESIGN. Caldwell Industries Co. Ltd. SN 135,871. Pub. 12–24–63. Filed 1–16–62.

766,290. SKULLY CHEK. Irving Klein, d.b.a. Klein Enterprises. SN 153,089. Pub. 12–24–63. Filed 9–13–62.

766,291. A DESIGN BAR. Acushnet Process Sales Company. SN 159,183. Pub. 12–24–63. Filed 12–17–62.

766,292. RACING CAR 22 (DESIGN). Dowst Manufacturing Company. SN 168,305. Pub. 12–24–63. Filed 5–7–63.

766,293. MINI-MEDAL. Lowell Toy Manufacturing Corp. SN 168,619. Pub. 12–24–63. Filed 5–10–63.

766,294. MR. DO BEE. Romper Room, Inc. SN 168,855. Pub. 12–24–63. Filed 5–14–63.

766,295. MISS CLAIROL. Clairol Incorporated. SN 169,212. Pub. 12–24–63. Filed 5–20–63.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

766,148. (See Class 6 for this trademark.)

766,296. ROLLING OUTRIGGERS. Crane Products Manufacturing Co., Inc. SN 133,542. Pub. 12–24–63. Filed 12–7–61.

766,297. VAUGHN ROLLMATIC. The Vaughn Machinery Company. SN 136,409. Pub. 12–24–63. Filed 1–23–62.

766,298. POTTER. Potter Instrument Company, Inc. SN 137,655. Pub. 12–24–63. Filed 2–9–62.

766,299. ALSTEELE. Entoleter, Inc., assignee of Alsteele Engineering Works, Inc. SN 139,006. Pub. 12–24–63. Filed 3–5–62.

766,300. 4–E. Crucible Steel Company of America. SN 152,286. Pub. 12–24–63. Filed 8–31–62.

766,301. GOLD TONE AND DESIGN. Jameco Metal Products Co. Inc., assignee of Daniel Silverman, d.b.a. Jameco Metal Products Company. SN 152,927. Pub. 12–24–63. Filed 9–11–62.

766,302. SKIM-MATE AND DESIGN. J & F Products Co. SN 153,293. Pub. 12–24–63. Filed 9–17–62.

766,303. ASTROBEAM. Astrosonics, Incorporated. SN 158,954. Pub. 12–24–63. Filed 12–12–62.

766,304. SIDE-O-SEAL. Hamac-Hansella Machinery Corporation. SN 159,726. Pub. 12–24–63. Filed 12–26–62.

766,305. RAM LOC AND DESIGN. Ronson Hydraulic Units Corp. SN 162,361. Pub. 12–24–63. Filed 2–8–63.

766,306. STERLING. Philip Morris Incorporated. SN 163,069. Pub. 12–24–63. Filed 2–19–63.

766,307. SNO-COMMANDER. Dura Corporation, assignee of Moto-Mower, Inc. SN 163,160. Pub. 12–24–63. Filed 2–20–63.

766,308. CATAMOUNT. Production Chemicals, Inc. SN 164,656. Pub. 12–24–63. Filed 3–14–63.

766,309. COATS. The Coats Company, Inc. SN 165,300. Pub. 12–24–63. Filed 3–25–63.

766,310. WATER TWISTER. All American Engineering Company. SN 165,483. Pub. 12–24–63. Filed 3–27–63.

766,311. UNION CARBIDE AND DESIGN. Union Carbide Corporation. SN 166,672. Pub. 12–24–63. Filed 4–12–63.

766,312. WHIRL-A-WAY. Dyna-Therm Corporation. SN 168,400. Pub. 12–24–63. Filed 5–8–63.

766,313. CARDOX. Chemetron Corporation. SN 168,480. Pub. 12–24–63. Filed 5–9–63.

766,314. FARRINGTON AND DESIGN. Farrington Manufacturing Company. SN 168,490. Pub. 12–24–63. Filed 5–9–63.

766,315. GT AND DESIGN. G. T. Schjeldahl Company. SN 168,861. Pub. 12–24–63. Filed 5–14–63.

766,316. HAPPY HOME. F. W. Woolworth Co. SN 170,141. Pub. 12–24–63. Filed 5–31–63.

766,317. DRAF. Draf Tool Co., Inc. SN 170,303. Pub. 12–24–63. Filed 6–4–63.

766,318. SPANNER. Koehring Company. SN 171,146. Pub. 12–24–63. Filed 6–17–63.

766,319. INTERNATIONAL. International Harvester Company. SN 171,354. Pub. 12–24–63. Filed 6–19–63.

766,320. METAL WIZZ. J. Wiss and Sons Co. SN 172,003. Pub. 12–24–63. Filed 6–27–63.

766,321. VOTOMATIC. Harris Votomatic, Inc. SN 172,995. Pub. 12–24–63. Filed 7–15–63.

766,322. COLLAPSAW. S. L. Patterson, d.b.a. The Collapsaw Company. SN 173,128. Pub. 12–24–63. Filed 7–16–63.

766,323. SANIMATIC. Federated Machine Co. SN 173,348. Pub. 12–24–63. Filed 7–19–63.

766,324. B·M·B. BMB Corporation. SN 173,562. Pub. 12–24–63. Filed 7–23–63.

766,325. WIL-NUMAT. Wil-Numat Corporation. SN 173,611. Pub. 12–24–63. Filed 7–23–63.

766,326. SKIN-TITE. Wedgelock Corporation of California. SN 173,879. Pub. 12–24–63. Filed 7–26–63.

766,327. PRONTO CLUTCH. Shepherd Machinery Co., d.b.a. Shepherd Marine. SN 173,972. Pub. 12–24–63. Filed 7–29–63.

Class 25—Locks and Safes

766,194. (See Class 13 for this trademark.)

766,328. CENTURY 21. National Lock Co. SN 168,428. Pub. 12–24–63. Filed 5–8–63.

Class 26—Measuring and Scientific Appliances

766,329. TWO CIRCLES AND "I" DESIGN. Ricoh Company, Ltd., by change of name from Riken Optical Industries, Ltd. SN 113,368. Pub. 6–12–62. Filed 2–9–61.

766,330. FACITAPE. Aktiebolaget Atvidaberg-Facit, assignee of Aktiebolaget Atvidabergs Industrier. SN 120,467. Pub. 12–24–63. Filed 4–11–61.

766,331. ASDA. A. Gallenkamp & Co. Limited. SN 132,827. Pub. 12–24–63. Filed 11–27–61.

766,332. ROBOTESTER. Lavoie Laboratories, Inc. SN 135,981. Pub. 12–24–63. Filed 1–17–62.

766,333. ACCU-RAMIC. United-Greenfield Corporation. SN 146,760. Pub. 6–11–63. Filed 6–12–62.

766,334. PISTON-PAK. The Partlow Corporation. SN 154,989. Pub. 12–24–63. Filed 10–11–62.

766,335. PARA-PAQUE. Para-Tone Incorporated. SN 156,158. Pub. 12–24–63. Filed 10–29–62.

766,336. UNITRON. The Budd Company. SN 160,746. Pub. 12–24–63. Filed 1–16–63.

766,337. VELONEX. Pulse Engineering, Inc. SN 160,892. Pub. 12-24-63. Filed 1-17-63.

766,338. VELONEX AND DESIGN. Pulse Engineering, Inc. SN 160,893. Pub. 12-24-63. Filed 1-17-63.

766,339. STEEL CITY. Ametek, Inc. SN 162,400. Pub. 12-24-63. Filed 2-11-63.

766,340. VISI-TRACK. E.M.E. Corporation. SN 163,297. Pub. 12-24-63. Filed 2-21-63.

766,341. THERMA-BOND. Louisville Optical Company, d.b.a. Therma-Bond Products. SN 164,858. Pub. 12-24-63. Filed 3-18-63.

766,342. V-TRACK. V. & E. Manufacturing Co. SN 165,066. Pub. 12-24-63. Filed 3-20-63.

766,343. PORT-A-STAT. General Thermostat Corporation. SN 165,591. Pub. 12-24-63. Filed 3-28-63.

766,344. SLIMLINE. William M. Wilson's Sons, Inc. SN 170,009. Pub. 12-24-63. Filed 5-29-63.

766,345. SSPH. Moore Products Co. SN 170,092. Pub. 12-24-63. Filed 5-31-63.

766,346. PA. The Pneumatic Applications Company. SN 170,104. Pub. 12-24-63. Filed 5-31-63.

Class 28 — Jewelry and Precious-Metal Ware

766,135. (See Class 3 for this trademark.)

766,347. BN AND DESIGN. Bratt & Nudelman, Inc. SN 142,689. Pub. 12-24-63. Filed 4-20-62.

766,348. UG. Ugo Gaglia. SN 159,983. Pub. 12-24-63. Filed 12-31-62.

766,349. RH. Rudolph Heilbron. SN 159,985. Pub. 12-24-63. Filed 12-31-62.

766,350. STYLIZED JET. Jack E. Tock. SN 166,323. Pub. 12-24-63. Filed 4-8-63.

766,351. K & L. Kordes & Lichtenfels. SN 170,480. Pub. 12-24-63. Filed 6-6-63.

766,352. CONTINENTAL COLLECTION BY POOLE. Poole Silver Co., Inc. SN 170,670. Pub. 12-24-63. Filed 6-10-63.

766,353. CIRCLE OF FIRE. Speidel Corporation. SN 171,050. Pub. 12-24-63. Filed 6-14-63.

766,354. LNY. Peter Corrao, d.b.a. Lafayette Mfg. Jewelry Co. SN 171,234. Pub. 12-24-63. Filed 6-18-63.

766,355. DASON. Davidson & Sons Jlry. Co., Inc. SN 171,238. Pub. 12-24-63. Filed 6-18-63.

766,356. CAMBRIDGE. Simon Golub & Sons, Inc. SN 171,648. Pub. 12-24-63. Filed 6-24-63.

766,357. EXETER. Simon Golub & Sons, Inc. SN 171,649. Pub. 12-24-63. Filed 6-24-63.

766,358. AIR-I-DENT. James F. McDevitt, d.b.a. Air-I-Dent Company. SN 171,903. Pub. 12-24-63. Filed 6-26-63.

Class 29 — Brooms, Brushes, and Dusters

766,359. GUTTER GUN AND DESIGN. Martha J. Goddard, executrix of the estate of Charles H. Goddard, deceased, assignee of Charles H. Goddard. SN 149,180. Pub. 12-24-63. Filed 7-17-62.

766,360. GOLD TONE AND DESIGN. Jameco Metal Products Co. Inc., assignee of Daniel Silverman, d.b.a. Jameco Metal Products Company. SN 152,928. Pub. 12-24-63. Filed 9-11-62.

766,361. AQUA-DENT. Precision Development Co. Inc. SN 157,324. Pub. 12-24-63. Filed 11-15-62.

766,362. LUCKY DOLLAR. Red & White Foundation. SN 159,612. Pub. 12-24-63. Filed 12-21-62.

766,363. CLEOPATRA. Sponge Specialties Mfg. Corp. SN 168,640. Pub. 12-24-63. Filed 5-10-63.

Class 31 — Filters and Refrigerators

766,364. RAINBOW. John A. Commers, d.b.a. Northwest Soft Water Company and as Water Softener Supply Co. SN 125,010. Pub. 1-1-63. Filed 7-31-61.

766,365. REXYN. Fisher Scientific Company. SN 167,133. Pub. 12-24-63. Filed 4-19-63.

766,366. METASIL. The Metafiltration Company Limited. SN 168,209. Pub. 12-24-63. Filed 5-6-63.

766,367. ISO-CON. The Marley Company. SN 169,740. Pub. 12-24-63. Filed 5-27-63.

766,368. TRI PHASE AND DESIGN. Novo Industrial Corporation. SN 170,549. Pub. 12-24-63. Filed 6-7-63.

766,369. FOR TOUGH REQUIREMENTS AND DESIGN. Refrigeration Research, Incorporated. SN 170,676. Pub. 12-24-63. Filed 6-10-63.

Class 32 — Furniture and Upholstery

766,370. BUTLERACK. Otis Steel Products Corporation. SN 151,689. Pub. 3-19-63. Filed 8-22-62.

766,371. SUNWAY. Venetian Vogue Limited. SN 158,880. Pub. 12-24-63. Filed 10-18-63.

766,372. DURA-GARD. Sealy, Incorporated, d.b.a. Sealy Mattress Company. SN 159,920. Pub. 6-11-63. Filed 12-28-62.

766,373. NUTONE. Nutone, Incorporated. SN 174,427. Pub. 12-24-63. Filed 8-5-63.

Class 34 — Heating, Lighting, and Ventilating Apparatus

766,271. (See Class 21 for this trademark.)

766,374. EE AND DESIGN. Edwards Engineering Corporation. SN 143,015. Pub. 12-24-63. Filed 4-25-62.

766,375. CINTARG. Robertshaw-Fulton Controls Company. SN 150,105. Pub. 8-6-63. Filed 7-30-62.

766,376. AQUA-CHEM. Aqua-Chem, Inc. SN 161,761. Pub. 12-24-63. Filed 1-31-63.

766,377. SOFVENT AND DESIGN. Leslie Welding Co., Inc. SN 166,144. Pub. 12-24-63. Filed 4-4-63.

766,378. NICROGAP. Wall Colmonoy Corporation. SN 166,504. Pub. 12-24-63. Filed 4-10-63.

766,379. WEATHERKING. Weatherking of Florida, Inc. SN 168,553. Pub. 11-12-63. Filed 5-9-63.

766,380. LAWNTERN AND DESIGN. Trilex Corporation. SN 169,668. Pub. 12-24-63. Filed 5-24-63.

766,381. DURAFUSED. Heil-Quaker Corporation. SN 169,853. Pub. 12-24-63. Filed 5-28-63.

766,382. SOF-STEAM AND DESIGN. KEW, Incorporated. SN 173,768. Pub. 12-24-63. Filed 7-25-63.

766,383. OVERTEC. Eutectic Welding Alloys Corporation. SN 174,357. Pub. 12-24-63. Filed 8-5-63.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

766,384. VIM-THANE. E. F. Houghton & Co. SN 157,503. Pub. 12-24-63. Filed 11-19-62.

766,385. O.K. MULTI-STAR. O.K. Rubber Welders, Incorporated. SN 159,840. Pub. 12-24-63. Filed 12-27-62.

766,386. SNYDER STANDARD S AND DESIGN. M. L. Snyder & Son, Inc. CONSOLIDATED CERTIFICATE. SN 167,052, pub. 12-24-63, filed 4-18-63, Cl. 35; SN 167,051, pub. 11-12-63, filed 4-18-63, Cl. 39.

766,387. CAF AND DESIGN. Turner Brothers Asbestos Company Limited. SN 173,397. Pub. 12-24-63. Filed 7-19-63.

766,388. SINTERMET. American Brake Shoe Company. SN 173,997. Pub. 12-24-63. Filed 7-30-63.

766,389. EPCONITE. Ecoff Products Co., Inc. SN 174,354. Pub. 12-24-63. Filed 8-6-63.

Class 36 — Musical Instruments and Supplies

766,390. SLIP GRIP. Eugene B. Reglein, d.b.a. J. J. Babbit Company. SN 168,669. Pub. 12-24-63. Filed 5-13-63.

Class 37 — Paper and Stationery

766,391. KEGLER AND DESIGN. The Kegler Club, Inc. SN 115,814. Pub. 12-24-63. Filed 3-16-61.

766,392. INVERBOARD. Beloit Corporation. SN 150,994. Pub. 12-24-63. Filed 8-13-62.

766,393. LINDNER ETC. AND DESIGN. Firma Lindner Faizlos Gesellschaft KG. SN 151,132. Pub. 12-24-63. Filed 8-14-62.

766,394. MACBOND. Morgan Adhesives Company. SN 153,971. Pub. 12-24-63. Filed 9-26-62.

766,395. CURTIS-RAND ETC. AND DESIGN. Curtis-Rand Industries, Inc. SN 158,604. Pub. 12-24-63. Filed 12-6-62.

766,396. JA-CO LAW AIDS AND DESIGN. Jay M. Jacobus, d.b.a. Ja-Co. SN 165,332. Pub. 12-24-63. Filed 3-25-63.

766,397. PICK-A-PAIR. Doeskin Products, Inc. SN 167,805. Pub. 12-24-63. Filed 4-30-63.

766,398. ONE HUNDRED. Lew Mfg. Co. SN 168,510. Pub. 12-24-63. Filed 5-9-63.

766,399. TWIST-O-MATIC. Lew Mfg. Co. SN 168,511. Pub. 12-24-63. Filed 5-9-63.

766,400. HERALD SQUARE. F. W. Woolworth Co. SN 168,554. Pub. 12-24-63. Filed 5-9-63.

766,401. CHECK-LITE. G. J. Aigner Company. SN 171,943. Pub. 12-24-63. Filed 6-27-63.

766,402. MIST. Kimberly-Clark Corporation. SN 172,595. Pub. 12-24-63. Filed 7-8-63.

Class 38 — Prints and Publications

766,403. MULTILEVEL LEARNING LABORATORIES. Science Research Associates, Inc. SN 139,890. Pub. 12-24-63. Filed 3-14-62.

766,404. ARTISTIC. Artistic Weaving Company. SN 162,133. Pub. 12-24-63. Filed 2-6-63.

766,405. MEDICAL TRIBUNE AND MEDICAL NEWS. Medical Tribune, Inc. SN 166,568. Pub. 12-24-63. Filed 4-11-63.

766,406. J. TERRELL AND DESIGN. John J. Terrell. SN 166,837. Pub. 12-24-63. Filed 4-9-63.

Class 39 — Clothing

766,135. (See Class 3 for this trademark.)

766,386. CONSOLIDATED CERTIFICATE. See Class 35.

766,407. TRIMSUIT. La Lanne Incorporated. SN 113,839. Pub. 12-24-63. Filed 2-16-61.

766,408. SUZY-Q. Francis-Louise Full Fashion Mills, Inc. SN 121,479. Pub. 12-24-63. Filed 6-6-61.

766,409. MEMOIRS AND DESIGN. Wohl Shoe Company. SN 123,390. Pub. 12-24-63. Filed 7-3-61.

766,410. SOLETTES. O'Donnell-Reed Shoe Products Corp. SN 133,893. Pub. 12-24-63. Filed 12-12-61.

766,411. LASTIQUE. Wear-Right Gloves, Inc. SN 136,706. Pub. 4-9-63. Filed 1-26-62.

766,412. THE TWISTETTE AND DESIGN. Sidney Lobel, d.b.a. Dixie Undergarment Company. SN 137,350. Pub. 12-24-63. Filed 2-6-62.

766,413. MARDI BRA. Mardi Bra Creations Corporation. SN 141,631. Pub. 12-24-63. Filed 4-5-62.

766,414. DALE OF NEW YORK. Bernard L. Schachter, Inc. SN 142,742. Pub. 12-24-63. Filed 4-20-62.

766,415. EZ AND DESIGN. E-Z Mills, Inc. SN 144,946. Pub. 12-24-63. Filed 5-18-62.

766,416. COUNTRY MISS AND DESIGN. Country Miss, Inc. SN 150,396. Pub. 12-24-63. Filed 8-3-62.

766,417. YSL. Yves Saint Laurent A.G. (S.A.) (Ltd.). SN 150,663. Pub. 12-24-63. Filed 8-6-62.

766,418. SPORNETTE. Walter Sporn Co., Inc. SN 151,091. Pub. 12-24-63. Filed 8-13-62.

766,419. FEATHERBED. Fort Schuyler Knitting Company. SN 152,688. Pub. 12-24-63. Filed 9-7-62.

766,420. MARY QUANT. Mary Quant Limited. SN 154,058. Pub. 12-24-63. Filed 9-27-62.

766,421. NATIONAL NAPA GOAT AND DESIGN. National Glove, Inc. SN 155,935. Pub. 12-24-63. Filed 10-25-62.

766,422. SPORTSTITCH. Powerhouse, Inc. SN 162,109. Pub. 12-24-63. Filed 2-5-63.

766,423. SHIRTVILLE. Mansfield Sportswear, Inc. SN 163,254. Pub. 12-24-63. Filed 2-21-63.

766,424. TRICIA AND DESIGN. Gibbs Underwear Company. SN 164,828. Pub. 12-24-63. Filed 3-18-63.

766,425. RUGBY STROKE SAVER SHIRT AND DESIGN. Rugby Knitting Mills, Inc. SN 165,261. Pub. 12-24-63. Filed 3-22-63.

766,426. ANN LOY ORIGINAL. Ann Loy Markowski. SN 166,824. Pub. 12-24-63. Filed 4-16-63.

766,427. THE NECKER. Superba Cravats, Inc. SN 167,061. Pub. 12-24-63. Filed 4-18-63.

766,428. UPPERCLASSMAN. Lamar Manufacturing Company. SN 167,148. Pub. 12-24-63. Filed 4-19-63.

766,429. A S BECK DOAGIES AND DESIGN. A. S. Beck Shoe Corporation. SN 167,192. Pub. 12-24-63. Filed 4-22-63.

766,430. QUEEN NAN AND DESIGN. Durham Hosiery Mills. SN 167,536. Pub. 12-24-63. Filed 4-25-63.

766,431. BRIDGESTREET. David Richard. SN 168,959. Pub. 12-24-63. Filed 5-15-63.

766,432. ROOSTER. Eloesser-Heynemann Company. SN 169,439. Pub. 12-24-63. Filed 5-22-63.

766,433. JACOAT. Leonard L. Charnay, Inc. SN 172,641. Pub. 12-24-63. Filed 7-9-63.

766,434. DOLL-UPS. International Latex Corporation. SN 172,663. Pub. 12-24-63. Filed 7-9-63.

766,435. DIALOGUE. Maidenform, Inc. SN 172,924. Pub. 12-24-63. Filed 7-12-63.

766,436. UNDERCURRENT. Maidenform, Inc. SN 172,926. Pub. 12-24-63. Filed 7-12-63.

766,437. G4 AND DESIGN. N.V. Nederlandse Schoen- en Lederfabrieken "Bata-Best." SN 173,121. Pub. 12-24-63. Filed 7-16-63.

Class 40 — Fancy Goods, Furnishings, and Notions

766,438. FASHION BOW. American Greetings Corporation. SN 150,383. Pub. 12-24-63. Filed 8-3-62.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

766,439. AIR FIBRE. Daniel A. Cooper, d.b.a. Cooper Engineering Co. SN 131,348. Pub. 12-24-63. Filed 11-6-61.

766,440. CHICRON. Chicopee Mills, Inc. SN 157,069. Pub. 12-24-63. Filed 11-13-62.

766,441. VICTORY K & B AND DESIGN. Kemp & Beatley, Inc. SN 165,787. Pub. 12-24-63. Filed 4-1-63.

766,442. CLARENCE HOUSE AND DESIGN. Clarence House Imports, Ltd. SN 169,214. Pub. 12-17-63. Filed 5-20-63.

766,443. GENIE AND LAMP (DESIGN). C. H. Masland & Sons. SN 169,642. Pub. 12-24-63. Filed 5-24-63.

766,444. VICUNOOR. Einiger Mills, Inc. SN 169,840. Pub. 12-24-63. Filed 5-28-63.

766,445. INSUL-LON. The Rockland Bleach & Dye Works Co. SN 169,871. Pub. 12-24-63. Filed 5-28-63.

766,446. MIRA-LON. The Rockland Bleach & Dye Works Co. SN 169,872. Pub. 12-24-63. Filed 5-28-63.

766,447. HAPPY HOME. F. W. Woolworth Co. SN 170,012 Pub. 12-24-63. Filed 5-29-63.

766,448. WOOLSTAR. Pearce Woolen Mills. SN 170,551. Pub. 12-24-63. Filed 6-7-63.

Class 43 — Thread and Yarn

766,449. GEOMETRIC DESIGN. Astro Dye Works, Inc. SN 170,514. Pub. 12-24-63. Filed 6-7-63.

766,450. YARN+PLUS. Elise H. Beatty. SN 170,583. Pub. 12-24-63. Filed 6-6-63.

Class 44 — Dental, Medical, and Surgical Appliances

766,451. FETAL RKG[3000]. Vector Manufacturing Company, Incorporated. SN 140,777. Pub. 12-24-63. Filed 3-26-62.

766,452. CEPHALOMETRIX. Moss X-Ray and Medical Equipment Company. SN 158,009. Pub. 12-24-63. Filed 11-27-62.

766,453. DURALIGHT. Dupaco Incorporated. SN 159,975. Pub. 12-24-63. Filed 12-31-62.

766,454. WISPAIR. The Dental Manufacturing Company Limited. SN 167,804. Pub. 12-24-63. Filed 4-30-63.

766,455. CLARITEX. Lewis Woolf Griptight Limited. SN 174,554. Pub. 12-24-63. Filed 8-6-63.

766,456. MAGNO-PAD. Kurt Eichholz. SN 174,848. Pub. 12-24-63. Filed 8-12-63.

Class 46 — Foods and Ingredients of Foods

766,457. WUNDER BAR. Fleetwood Company. SN 116,012. Pub. 12-18-62. Filed 3-20-61.

766,458. LAZY PAMPERED BIRDS! GOOD FOR NOTHING BUT EATING AND DESIGN. Dutchess Turkey Farm, Inc., d.b.a. Dutchess Farms. SN 133,375. Pub. 12-24-63. Filed 12-5-61.

766,459. GOLDEN ACRES. The W. E. Long Co. Independent Bakers' Cooperative. SN 146,499. COLLECTIVE MARK. Pub. 3-19-63. Filed 6-8-62.

766,460. BUCKSKIN. Calcific Products, Inc. SN 149,534. Pub. 12-24-63. Filed 7-23-62.

766,461. PILARINA. Refinadora de Maiz Venezolana, C.A. ("Remavenca"). SN 150,894. Pub. 12-24-63. Filed 8-9-62.

766,462. JAPANESE CHARACTERS. Mitsuji Okada, d.b.a. Kino Kuni. SN 151,991. Pub. 12-24-63. Filed 8-27-62.

766,463. RABBIT (DESIGN). Paul F. Beich Company. SN 152,270. Pub. 12-24-63. Filed 8-31-62.

766,464. SPICEHYDRATE. H. J. Mayer & Sons Co., Inc. SN 152,322. Pub. 12-24-63. Filed 8-31-62.

766,465. MI-RIN-ZUKE. Nishimoto Trading Co. of Hawaii, Ltd. SN 156,240. Pub. 12-24-63. Filed 10-30-62.

766,466. AUTUMN GOLD. Cadbury Brothers, Limited. SN 158,428. Pub. 12-24-63. Filed 5-7-63.

766,467. 4C AND DESIGN. Brooklyn Cheese Company, Incorporated. SN 158,513. Pub. 12-24-63. Filed 12-5-62.

766,468. ANIMATED RICE DESIGN. Rice Growers Association of California. SN 160,664. Pub. 12-24-63. Filed 1-14-63.

766,469. CORONA. Goya Foods, Inc. SN 160,703. Pub. 12-24-63. Filed 1-15-63.

766,470. HLH AND DESIGN. Hunt Oil Company, d.b.a. HLH Products. SN 166,719. Pub. 12-24-63. Filed 4-15-63.

766,471. AAA. Chicago Smoked Fish Co. SN 166,975. Pub. 12-24-63. Filed 4-18-63.

766,472. FLING. Thompson's Dairy, Inc., d.b.a. Washington Dairy Foods and Thompson's Honor Dairy. SN 167,342. Pub. 12-24-63. Filed 4-22-63.

766,473. CHOO SHOO. Norbert C. Basan, d.b.a. California Animal Products Co., and Capco. SN 167,694. Pub. 12-24-63. Filed 4-29-63.

766,474. WESTERN FLOUR MILLS, INC., SIGN OF QUALITY AND DESIGN. Western Flour Mills, Inc. SN 167,964. Pub. 12-24-63. Filed 5-1-63.

766,475. BAKE-RITE. Wilson & Co., Inc. SN 168,373. Pub. 12-24-63. Filed 5-7-63.

Class 47 — Wines

766,476. A-OK. Michigan Wineries, Inc. SN 137,260. Pub. 12-24-63. Filed 2-5-62.

Class 49 — Distilled Alcoholic Liquors

766,477. TERRY. Fernando A. de Terry S.A. SN 135,191. Pub. 12-24-63. Filed 1-4-62.

766,478. LUANA. McKesson & Robbins, Incorporated. SN 138,103. Pub. 12-24-63. Filed 2-16-62.

Class 50 — Merchandise Not Otherwise Classified

766,479. "A"-TEX. Jomac, Inc. SN 151,758. Pub. 12-24-63. Filed 8-23-62.

766,480. BROWN'S HUMMY-BIRD BAR AND DESIGN. Marian Brown, d.b.a. Hummingbird Heaven. SN 159,199. Pub. 12-24-63. Filed 12-17-62.

766,481. ZOO-STIRS. Zoo-Piks. SN 168,376. Pub. 12-24-63. Filed 5-7-63.

766,482. TECHNIVUE. Technical Displays Inc., d.b.a. Technical Displays, Inc. and Technical Displayers, Inc. SN 169,183. Pub. 12-24-63. Filed 5-17-63.

Class 51 — Cosmetics and Toilet Preparations

766,483. MARVIN AND DESIGN. Marvin Societa per l'Industria Farmaceutica e Cosmetica Istituto Farmaco Biologico Societa in Nome Collettive. SN 136,787. Pub. 12-24-63. Filed 1-29-62.

766,484. TRIEGE. Studio Girl-Hollywood, Inc. SN 139,438. Pub. 12-24-63. Filed 3-8-62.

766,485. SWEAT. Products of Tomorrow, Inc. SN 140,865. Pub. 12-24-63. Filed 3-27-62.

766,486. SHERALEEN. Les Parfums Jean Desses. SN 142,109. Pub. 12-24-63. Filed 4-12-62.

766,487. FORM TEX. The Wells Corporation. SN 143,070. Pub. 12-24-63. Filed 4-25-62.

766,488. JASER. Alfred Berti. SN 149,039. Pub. 12-24-63. Filed 7-16-62.

766,489. SOBRIQUE. Alfred Berti. SN 149,040. Pub. 12-24-63. Filed 7-16-62.

766,490. JEAN BERTE. Alfred Berti. SN 149,041. Pub. 12-24-63. Filed 7-16-62.

766,491. SOLACE. Theodore G. Barnes, d.b.a. Solace of Miami. SN 149,437. Pub. 12-24-63. Filed 7-20-62.

766,492. ENCHANTRESS. Yardley & Company Limited. MULTIPLE CLASS (Classes 51 and 52). SN 149,992. Pub. 12-24-63. Filed 7-27-62.

766,493. SIP 'N RINSE. Drug Concentrates Inc. SN 153,388. Pub. 12-24-63. Filed 9-18-62.

766,494. BAIN PARFAIT. Parfums Lucien Lelong Corporation. SN 153,507. Pub. 12-24-63. Filed 9-19-62.

766,495. MY PETS. Cardinal Laboratories, Inc., d.b.a. Westwood Laboratories. SN 153,619. Pub. 12-17-63. Filed 9-21-62.

766,496. LASTING SPRING. Merle Norman Cosmetics, Inc. SN 154,983. Pub. 12-24-63. Filed 10-22-63.

766,497. MILLERESQUE. I. Miller & Sons, Inc. SN 158,719. Pub. 12-24-63. Filed 12-7-62.

766,498. SILK FASHION. Helena Rubinstein, Inc. SN 167,760. Pub. 12-24-63. Filed 4-29-63.

Class 52 — Detergents and Soaps

766,139. (See Class 4 for this trademark.)

766,492. (See Class 51 for this trademark.)

766,499. DEOFECT. Armour Pharmaceutical Company. SN 147,070. Pub. 12-24-63. Filed 6-18-62.

766,500. CBC. Airkem, Inc. SN 155,679. Pub. 12-24-63. Filed 10-23-62.

766,501. NU LIFE. Pittsburgh Plate Glass Company. SN 158,173. Pub. 12-24-63. Filed 11-29-62.

766,502. TURCOAT. Purex Corporation, Ltd., d.b.a. Turco Products, Inc. SN 158,860. Pub. 12-24-63. Filed 12-10-62.

Service Marks

Class 100 — Miscellaneous

766,503. A ROYAL HOST MOTEL AND DESIGN. Paul Light. SN 140,025. Pub. 12-24-63. Filed 3-16-62.

766,504. GERBERMANSHIP. M. Gerber Construction Co., Inc. SN 161,700. Pub. 12-24-63. Filed 1-30-63.

Class 101 — Advertising and Business

766,148. (See Class 6 for this trademark.)

Class 105 — Transportation and Storage

766,505. DIAL-A-CAR. Dial A Car Rental Systems, Inc. SN 153,465. Pub. 12-24-63. Filed 9-19-62.

Class 107 — Education and Entertainment

766,506. COUNTRY GENTLEMEN. The Country Gentlemen. SN 160,698. Pub. 12-24-63. Filed 1-15-63.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 4 — Abrasives and Polishing Materials

766,507. Bay State Abrasive Products Company, Westboro, Mass. SN 136,338. Filed P.R. 1-23-62; Am. S.R. 12-9-63.

READYMOUNT

For Abrasive Wheels.
First use on or about Nov. 15, 1961.

Class 7 — Cordage

766,508. Topco Associates, Inc., Skokie, Ill. SN 149,494. Filed P.R. 7-20-62; Am. S.R. 1-7-64.

NOEL

For Ribbon.
First use Apr. 13, 1961.

Class 21 — Electrical Apparatus, Machines, and Supplies

766,509. General Fittings Company, East Greenwich, R.I. SN 146,813. Filed P.R. 6-18-62; Am. S.R. 12-18-63.

LECTRICOIL

For Electric Heating Elements.
First use June 5, 1962.

766,510. Topco Associates, Inc., Skokie, Ill. SN 149,495. Filed P.R. 7-20-62; Am. S.R. 1-7-64.

NOEL

For Christmas Lights.
First use Aug. 25, 1961.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

766,511. J. Wiss & Sons Co., Newark, N.J. SN 133,607. Filed P.R. 12-7-61; Am. S.R. 1-15-64.

PINKIT

For Scissors and Shears.
First use Nov. 24, 1961.

Class 31 — Filters and Refrigerators

766,512. Liberty Industries, Inc., Brooklyn, N.Y. SN 90,928. Filed P.R. 2-15-60; Am. S.R. 12-23-63.

LONG LIFE OIL FILTER

The expression "Oil Filter" is disclaimed apart from the trademark.
For Oil Filters.
First use Dec. 31, 1959.

Class 32 — Furniture and Upholstery

766,513. Conway Bedding Company, Inc., Chicopee, Mass. SN 143,800. Filed P.R. 5-4-62; Am. S.R. 10-16-63.

Super Cushion

For Mattresses, Box Springs, Pillows for Sleeping Purposes, and Upholstered Furniture.
First use June 22, 1961.

Class 36 — Musical Instruments and Supplies

766,514. David Arden, d.b.a. David Arden Enterprises, San Diego, Calif. SN 137,886. Filed P.R. 2-14-62; Am. S.R. 11-26-63.

TRU-FI TONE

For Speaker Enclosure Accessory, Specifically a Back Pressure Control Valve Securable to the Apertured Back of a Speaker Enclosure.
First use Nov. 23, 1961.

766,515. Zayre Corp., Natick, Mass. SN 152,938. Filed P.R. 9-11-62; Am. S.R. 1-9-64.

SUPER PHONIC

For Magnetic Recording Tape.
First use on or about Sept. 1, 1961.

Class 39 — Clothing

766,516. Cowden Manufacturing Company, Lexington, Ky. SN 131,194. Filed P.R. 11-2-61; Am. S.R. 12-26-63.

SPINDLE LEGS

For Slacks and Jeans.
First use Oct. 2, 1961.

766,517. Perfect Manufacturing Corp., Newark, N.J. SN 159,846. Filed P.R. 12-27-62; Am. S.R. 12-19-63.

PLAIN AND FANCY

For Complete Baby Pants Wardrobe.
First use July 2, 1962.

Class 40 — Fancy Goods, Furnishings, and Notions

766,518. The Boye Needle Company, Chicago, Ill. SN 153,248. Filed P.R. 9-17-62; Am. S.R. 1-9-64.

EZY-KNIT

For Knitting Needles.
First use Aug. 1, 1962.

Class 51 — Cosmetics and Toilet Preparations

766,519. Merle Norman Cosmetics, Inc., Los Angeles, Calif. SN 159,419. Filed P.R. 12-19-62; Am. S.R. 1-8-64.

TROPIC BRONZE

For Powder Base.
First use Nov. 8, 1962.

766,520. Merle Norman Cosmetics, Inc., Los Angeles, Calif. SN 159,420. Filed P.R. 12-19-62; Am. S.R. 1-8-64.

SURE PINK

For Lipstick.
First use Nov. 14, 1962.

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175,808. TELECHRON. Cl. 27. 11-13-23.
176,030. MOVIOLA. Cl. 26. 11-13-23.
177,366. PEACHES AND CREAM AND DESIGN. Cl. 42. 12-18-23.
177,976. HOLLYWOOD AND DESIGN. Cl. 39. 1-1-24.
178,513. RADIOVOX. Cl. 21. 1-15-24.
179,283. FANSTEEL. Cl. 14. 2-5-24.
180,004. CONTINUOUS MANI-FOLD FORMS AND DESIGN. Cl. 37. 2-19-24.
180,180. HELIO. Cl. 6. 2-26-24.
180,217. SIVOL. Cl. 6. 2-26-24.
180,530. PYROFAX. Cl. 6. 3-4-24.
180,622. IMMUNOGEN. Cl. 18. 3-4-24.
182,449. MAIN SPRING. Cl. 39. 4-8-24.
182,789. NATURE'S-REMEDY. Cl. 18. 4-15-24.
183,303. SUNSHINE AND DESIGN. Cl. 17. 4-29-24.
183,385. PABST. Cl. 45. 4-29-24.
183,840. SEAL-TITE. Cl. 13. 5-6-24.
184,400. RODINE. Cl. 6. 5-20-24.

184,622. DUROCAST. Cl. 44. 5-27-24.
184,764. LUXON. Cl. 40. 6-3-24.
185,687. ROTARY. Cl. 15. 6-24-24.
185,838. ORIDINE. Cl. 18. 6-24-24.
403,749. OCTAVEE. Cl. 18. 10-19-43.
403,859. MOLLY PITCHER. Cl. 47. 10-19-43.
405,112. TOWNFIELD AND DESIGN. Cl. 39. 1-11-44.
405,120. VANLINERS AND DESIGN. Cl. 19. 1-11-44.
405,150. IND RIO. Cl. 46. 1-11-44.
405,222. IVI-FLEX. Cl. 21. 1-11-44.
405,471. CECO. Cl. 12. 2-1-44.
405,479. ANTRYPOL. Cl. 18. 2-1-44.
405,494. HALAMULT. Cl. 18. 2-1-44.
405,527. HAPAMINE. Cl. 18. 2-1-44.
405,798. IVI-FLEX. Cl. 35. 2-22-44.
406,170. TREADLITE. Cl. 20. 3-14-44.
406,547. CO-TAR-OX AND DESIGN. Cl. 18. 4-11-44.
406,548. MAMLENE AND DESIGN. Cl. 18. 4-11-44.
406,564. PADRINA. Cl. 18. 4-11-44.
406,566. ALPRINE AND DESIGN. Cl. 18. 4-11-44.
406,567. CALMAZIN AND DESIGN. Cl. 18. 4-11-44.
406,568. COR-AL-GESIC AND DESIGN. Cl. 18. 4-11-44.
406,569. TA-POFF AND DESIGN. Cl. 6. 4-11-44.
406,570. VAN-TEK AND DESIGN. Cl. 18. 4-11-44.
406,683. SSC. Cl. 14. 4-18-44.
406,911. FERROSTAN. Cl. 14. 5-9-44.
406,947. WEDGE AND OVAL (DESIGN). Cl. 46. 5-9-44.
407,110. RED SHADOW. Cl. 14. 5-16-44.
407,197. CARMELLETES. Cl. 39. 5-23-44.
407,669. VITAMINETS. Cl. 18. 6-20-44.
407,767. COL-VI-NOL AND DESIGN. Cl. 18. 6-27-44.
407,772. CHAMPION. Cl. 36. 6-27-44.

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657,176. SUPERFINE AND DESIGN. Cl. 42. 1-14-58.

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657,314. GOLDEN-VEIN. Cl. 1.
657,322. CANCO-MATIC AND DESIGN. Cl. 2.
657,323. STA-TEMP. Cl. 2.
657,325. CRAGSTAN. Cl. 3.
657,333. YANKEE. Cl. 6.
657,336. OZARK. Cl. 10.
657,337. OZARK AND DESIGN. Cl. 10.
657,338. BLUE SPRUCE. Cl. 11.
657,339. JALOWALL. Cl. 12.
657,342. SIMCAR. Cl. 12.
657,345. MODULITE AND DESIGN. Cl. 12.
657,346. KOOL-E-KIT. Cl. 12.
657,349. SUPIRA. Cl. 12.
657,350. VOLASCO AND DESIGN. Cl. 12.
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657,390. STERADAPTER. Cl. 21.
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657,392. SNO-PLANE. Cl. 22.
657,393. SLINGIN' SAMMY BAUGH'S PASSER'S TAGET. Cl. 22.
657,395. A MICKEY VERNON GAME ETC. AND DESIGN. Cl. 22.
657,401. SO SLEEPY. Cl. 22.
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657,405. BIG MOUTH. Cl. 22.
657,409. INCLINA-VEYOR. Cl. 23.
657,413. CARGON. Cl. 23.
657,417. BANDRIVE 2. Cl. 26.
657,418. NUMAR. Cl. 26.
657,421. CUB. Cl. 26.
657,426. EASY GLITTER. Cl. 29.
657,428. LUBRICOOLER. Cl. 31.
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657,458. R AND DESIGN. Cl. 39.
657,472. CLUB-LAZER. Cl. 39.
657,473. GLOVE MOULD SHOE. Cl. 39.
657,480. DUNKIRK AND DESIGN. Cl. 39.
657,488. PEGGIN-BO TIE. Cl. 39.
657,492. SOOTY AND DESIGN. Cl. 40.
657,496. SOOTY AND DESIGN. Cl. 42.
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657,498. VERTI-STRIPE. Cl. 42.
657,499. MASSE. Cl. 42.
657,500. KATYALENA. Cl. 42.
657,502. GOLDEN TREAD. Cl. 42.
657,503. FAHRENHEIT. Cl. 42.
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657,539. CARDINAL. Cl. 46.
657,540. OSPREY. Cl. 46.
657,546. ARMOR CHALK BOARD AND DESIGN. Cl. 50.
657,547. SEALLABEL AND DESIGN. Cl. 50.
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657,581. "DON'T ANNEAL YOUR TOOL STEEL." Cl. 103.

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208,676. MAR-O-VEL. Cl. 6. 2-9-26.
536,401. HILLSIDE. Cl. 46. 1-16-51.
591,603. GLECO AND DESIGN. Cl. 21. 6-22-54.
653,448. KUSHION KRADLE HEEL. Cl. 39. 10-22-57.
665,155. GOLDEN FRY. Cl. 46. 7-29-58.
695,859. CUP-O-COLA. Cl. 45. 4-5-60.
716,404. MINIVOX. Cl. 21. 6-6-61.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

116,424. NATIONAL. Cl. 46. 5–1–17. L. Frank & Son Co., Frigorifico Nacional of Montevideo, Montevideo, Uruguay. Amended: In the statement, column 2, line 3, "canned pork, canned lamb," is deleted and lines 4 and 5 are deleted and *more particularly corned beef and roast beef* is inserted.

116,424. NATIONAL. Cl. 46. 5–1–17. L. Frank & Son Co., Frigorifico Nacional of Montevideo, Montevideo, Uruguay. Restricted under the provisions of Sec. 18 of the Trademark Act of 1946 to that area of the United States comprising the States of Alabama, Alaska, Arizona, California, Connecticut, Delaware, District of Columbia, Florida, Georgia, Hawaii, Idaho, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Texas, Vermont, Virginia, Washington and Utah, the territories of Canal Zone, Guam, Puerto Rico and Virgin Island, by order of the Assistant Commissioner dated February 6, 1964, following decision on Cancellation No. 7449, *National Tea Co., doing business as National Food Stores* v. *Frigorifico Nacional of Montevideo, assignee of L. Frank & Son Co.*

180,528. LENTHERIC. Cl. 51. 3–4–24. Velsch & Holtz, Helene Curtis Industries, Inc., doing business as Lentheric, Chicago, Ill. Amended: "In the statement, column 1, lines 16 and 17, "brilliantine, rouge" is deleted and in line 18, "dye for the hair" is deleted.

252,200. HTH. Cl. 6. 1–29–29. The Mathieson Alkali Works, Inc., Olin Mathieson Chemical Corporation, New York, N.Y. Amended to appear:

HTH

269,174. HAYNES STELLITE. Cl. 23. 3–25–30. The Haynes Stellite Company, Union Carbide Corporation, New York, N.Y. Amended to appear:

HAYNES STELLITE

269,549. HAYNES STELLITE. Cl. 14. 4–8–30. The Haynes Stellite Company, Union Carbide Corporation, New York, N.Y. Amended to appear:

HAYNES STELLITE

269,557. HAYSTELLITE. Cl. 14. 4–8–30. The Haynes Stellite Company, Union Carbide Corporation, New York, N.Y. Amended to appear:

HAYSTELLITE

269,898. HASTELLOY. Cl. 14. 4–22–30. The Haynes Stellite Company, Union Carbide Corporation, New York, N.Y. Amended to appear:

HASTELLOY

269,966. HASCROME. Cl. 14. 4–22–30. The Haynes Stellite Company, Union Carbide Corporation, New York, N.Y. Amended to appear:

HASCROME

621,409. TABLE TALK. Cl. 46. 2–14–56. Theodore J. Mavrogianis, doing business as Table Talk, Wilmington, N.C. Restricted under the provisions of Sec. 18 of the Trademark Act of 1946 to that area of the United States excluding the States of Massachusetts, New York, Connecticut, Rhode Island, Maine, New Hampshire and Vermont, by order of the Assistant Commissioner dated February 6, 1964, following decision on Concurrent Use Proceeding No. 237, *Table Talk Pastry Company Incorporated* v. *Theodore J. Mavrogianis, doing business as Table Talk.*

658,155. CONSOWELD AND DESIGN. Cl. 50. 2–4–58. Consoweld Corporation, Wisconsin Rapids, Wis. Amended to appear:

CONSOWELD

700,766. JET-DRY. Cl. 6. 7–12–60. Economics Laboratory, Inc., St. Paul, Minn. Amended: In the statement, column 2, lines 1 through 3, the description of goods is deleted and *drying agents for use in dishwashing machines* is inserted.

707,562. FLUORBESTOS. Cl. 35. 11–22–60. Raybestos-Manhattan, Inc., Manheim, Pa. Corrected: In the statement, column 2, lines 1 through 3, the description of goods should be deleted and *impregnated asbestos felt products in sheet form for use in making gaskets* should be inserted.

714,171. METRO-GOLDWYN-MAYER. Cl. 38. 4–18–61. Metro-Goldwyn-Mayer Inc., by change of name from Loew's Incorporated, New York, N.Y. Corrected: In the statement, column 1, lines 1 and 4, "New York" should be deleted and *Delaware* should be inserted.

758,170. FOOD FAIR. Cl. 46. 10–8–63. Food Fair Stores, Inc., Philadelphia, Pa. Amended: In the statement, column 2, line 1, "to be restricted to" is deleted and *for* is inserted.

758,171. FOOD FAIR. Cl. 46. 10–8–63. Food Fair Stores, Inc., Philadelphia, Pa. Amended: In the statement, column 1, line 6, "to be restricted to" is deleted and *for* is inserted.

760,938. THORO TEST AND DESIGN. Cl. 21, 26 and 36. 12–3–63. Thurow Electronics, Inc., Tampa, Fla. Corrected: In the statement, column 1, line 1, "doing" should be deleted and line 2 should be deleted.

761,004. SUAVE-AIR. Cl. 42. 12–3–63. J. P. Stevens & Co., Inc., New York, N.Y. Corrected: In the statement, column 1, line 1, "Company" should be deleted and *Co.* should be inserted.

761,532. KNOLL. Cl. 6. 12–17–63. Knoll Aktiengesellshaft, Ludwigshafen (Rhine), Germany. Corrected: In the statement, column 2, line 1, after "chemical" *products* should be inserted.

761,698. PLYMOUTH. Cl. 46. 12–17–63. Piggly Wiggly Corporation, Jacksonville, Fla. Corrected: In the statement, column 2, lines 1 through 4, the description of goods should be deleted and *tea; fresh eggs, vegetables, mushrooms, fruits (exclusive of citrus fruits), berries, and coconuts; raisins; fruit jellies and preserves; orange marmalade; peanut butter; meatless sandwich spread; margarine; mayonnaise; honey; salad dressing; vegetable cooking oil; coffee; ice cream; flour; corn meal; vegetable shortening; mustard; French dressing; salad oil; table syrup and vinegar* should be inserted.

761,848. CS 5000. Cl. 19. 12–24–63. Products Research Company, Burbank, Calif. Corrected: In the statement, column 2, line 1, "and" should be deleted and *for* should be inserted.

762,838. B-POL. Cl. 46. 1–7–64. Reliance Chemicals Corporation, Houston, Tex. Corrected:

B-POL

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MARCH 10, 1964

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AFA Corp. of Florida, Miami, Fla. 766,273, pub. 12–24–63. Cl. 21.
A.G.V., Valenza, Alessandria, Italy. 766,287, pub. 12–24–63. Cl. 22.
Ackerman, E. K., Corp., Cleveland, Ohio. 766,266, pub. 12–24–63. Cl. 21.
Acushnet Process Sales Co., Bedford, Mass. 766,291, pub. 12–24–63. Cl. 22.
Ad Lib Records Inc., Staten Island, N.Y. 766,288, pub. 12–24–63. Cl. 22.
Advanced Concepts, Inc., Jeannette, Pa. 766,272, pub. 12–24–63. Cl. 21.
Algner, G. J., Co., Chicago, Ill. 766,401, pub. 12–24–63. Cl. 37.
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Airkem, Inc., New York, N.Y. 766,500, pub. 12–24–63. Cl. 52.
Akron Brass Co., Wooster, Ohio. 766,198, pub. 12–24–63. Cl. 13.
Aktiebolaget Atvidaberg-Facit, from Aktiebolaget Atvidabergs Industrier, Atvidaberg, Sweden. 766,330, pub. 12–24–63. Cl. 26.
Alberto-Culver Co., Melrose Park, Ill. 766,234, pub. 12–24–63. Cl. 18.
Alex, Desela, d.b.a. Americas International Co., San Francisco, Calif. 657,567, canc. Cl. 23.
All American Engineering Co., Wilmington, Del. 766,310, pub. 12–24–63. Cl. 23.
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Allergan Pharmaceuticals, Inc., Santa Ana, Calif. 766,237–8, pub. 12–24–63. Cl. 18.
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Alsynite Co. of America, San Diego, Calif. 657,346, canc. Cl. 12.
Alum-brass Foundry and Mfg., Inc., Los Angeles, Calif. 766,192, pub. 12–24–63. Cl. 13.
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American Brake Shoe Co., New York, N.Y. 766,388, pub. 12–24–63. Cl. 35.
American Can Co., New York, N.Y. 657,322, canc. Cl. 2.
American Chemical Paint Co., Philadelphia, Pa., to Amchem Products, Inc., Ambler, Pa. 184,400, ren. 3–10–64. Cl. 6.
American Greetings Corp., Cleveland, Ohio. 766,438, pub. 12–24–63. Cl. 40.
American Latex Products Corp., Hawthorne, Calif. 657,502, canc. Cl. 42.
American Safety Equipment Corp., New York, N.Y. 766,247, pub. 12–24–63. Cl. 19.
Americas International Co.: *See*—
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Ames Harris Neville Co., San Francisco, Calif. 657,547, canc. Cl. 50.
Ametek, Inc., New York, N.Y. 766,339, pub. 12–24–63. Cl. 26.
Amway Sales Corp., Ada, Mich. 766,220, pub. 12–24–63. Cl. 15.
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Art Wire and Stamping Co., Newark, N.J. 184,764, ren. 3–10–64. Cl. 40.
Artistic Weaving Co., Pompton Lakes, N.J. 766,404, pub. 12–24–63. Cl. 38.
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Bay State Abrasive Products Co., Westboro, Mass. 766,507. Cl. 4.
Baxter Laboratories, Inc., Morton Grove, Ill. 766,232, pub. 12–24–63. Cl. 18.
Bayuk Cigars Inc., Philadelphia, Pa. 766,223, pub. 12–24–63. Cl. 17.
Bazan, Norbert C., d.b.a. California Animal Products Co., and Capco, Monterey Park, Calif. 766,473, pub. 12–24–63. Cl. 46.
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Belshaw Brothers, Inc., Seattle, Wash. 766,270, pub. 12–24–63. Cl. 21.
Bemis Bro. Bag Co., St. Louis, Mo. 657,436, canc. Cl. 37.
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Brooklyn Cheese Co., Inc., Brooklyn, N.Y. 766,467, pub. 12–24–63. Cl. 46.
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Carpenter Steel Co., The, Reading, Pa. 766,210–11, pub. 12–24–63. Cl. 14.
Carter Products, Inc., New York, N.Y. 766,226, pub. 5–8–62. Cl. 18.
Cassidy, L. C., & Son, Inc., Indianapolis, Ind. 766,173, pub. 12–24–63. Cl. 12.
Cato Oil and Grease Co., Oklahoma City, Okla. 766,215, pub. 12–24–63. Cl. 15.
Ceco Steel Products Corp., Omaha, Nebr., to Ceco Steel Products Corp., Chicago, Ill. 405,471, ren. 3–10–64. Cl. 12.
Cellopak Co., Inc., d.b.a. Butler-Wilson Specialty Bag Co., Miami, Fla. 766,129, pub. 12–24–63. Cl. 2.
Charnay, Leonard L., Inc., New York, N.Y. 766,433, pub. 12–24–63. Cl. 39.
Chateau Wines Corp., Royal Oak, to Molly Pitcher Wines Corp., Harbert, Mich. 403,859, ren. 3–10–64. Cl. 47.
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Chester Packaging Products Corp., Yonkers, N.Y. 657,311, canc. Cl. 1.
Chicago Smoked Fish Co., Chicago, Ill. 766,461, pub. 12–24–63. Cl. 46.
Chicopee Mills, Inc., New York, N.Y. 766,440, pub. 12–24–63. Cl. 42.
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Patterson, S. L.
Collins & Aikman Corp., New York, N.Y. 657,506, canc. Cl. 42.
Commers, John A., d.b.a. Northwest Soft Water Co. and Water Softener Supply Co., Minneapolis, Minn. 766,364, pub. 1–1–63. Cl. 31.
Congoleum-Nairn Inc., Kearny, N.J. 406,170, ren. 3–10–64. Cl. 20.
Cooper, Daniel A., d.b.a. Cooper Engineering Co., Van Nuys, Calif. 766,439, pub. 12–24–63. Cl. 42.
Cooper Engineering Co.: *See*—
Cooper, Daniel A.
Congoleum-Nairn Inc., Kearny, N.J. 766,248, pub. 12–24–63. Cl. 20.
Consolidated Paper Co., Monroe, Mich. 766,130, pub. 12–24–63. Cl. 2.
Consolidated Sewing Machine Corp., New York, N.Y. 766,251, pub. 12–24–63. Cl. 21.
Consoweld Corp., Wisconsin Rapids, Wis. 658,155. Am. 7(d). Cl. 50.
Conway Bedding Co., Inc., Chicopee, Mass. 766,513. Cl. 32.
Corrao, Peter, d.b.a. Lafayette Mfg. Jewelry Co., New York, N.Y. 766,354, pub. 12–24–63. Cl. 28.
Country Gentlemen, The, Stateline, Calif. 766,506, pub. 12–24–63. Cl. 107.
Country Miss, Inc., Bangor, Pa. 766,416, pub. 12–24–63. Cl. 39.
Cowden Mfg. Co., Lexington, Ky. 766,516. Cl. 39.
Cragstan Corp., New York, N.Y. 657,325, canc. Cl. 3.
Crane Co., Chicago, Ill. 766,196, pub. 12–24–63. Cl. 13.
Crane Products Mfg. Co., Inc., Las Vegas, Nev. 766,296, pub. 12–24–63. Cl. 23.
Crucible Steel Co. of America, Pittsburgh, Pa. 766,300, pub. 12–24–63. Cl. 23.
Curtis, Helene, Industries, Inc., Velsch & Holtz, d.b.a. Lentheric, Chicago, Ill. 180,528. Am. 7(d). Cl. 51.
Curtis-Rand Industries, Inc., Brooklyn, N.Y. 766,395, pub. 12–24–63. Cl. 37.
Daniel, Charles M., d.b.a. Western Marketing Affiliates, Yakima, Wash. 766,148, pub. 12–24–63. Multiple Class (Classes 6, 21, 23, and 101.)
Daubert Chemical Co., Chicago, Ill. 766,176, pub. 12–24–63. Cl. 12.
Davidson & Sons Jiry. Co., Inc., New York, N.Y. 766,355, pub. 12–24–63. Cl. 28.
Decca Records, Inc., New York, N.Y. 407,772, ren. 3–10–64. Cl. 36.
Delta Radio Co.: *See*—
Shiepe, Edward M.
Dental Mfg. Co. Ltd., Blackpool, England. 766,454, pub. 12–24–63. Cl. 44.
Desbrow, Floyd H., d.b.a. Peggin-Bo Mfg. Co., Woodward, Okla. 657,488, canc. Cl. 39.
De Terry, Fernando A., S.A., Puerto de Santa Maria, Spain. 766,477, pub. 12–24–63. Cl. 49.
Dey, T. O., Service Corp., New York, N.Y. 657,473, canc. Cl. 39.
Dial A Car Rental Systems, Inc., Garden City, N.Y. 766,505, pub. 12–24–63. Cl. 105.
Diamond Laboratories, Inc., Des Moines, Iowa. 766,236, pub. 12–17–63. Cl. 18.
Diamond National Corp., New York, N.Y. 766,133, pub. 12–3–63. Cl. 2.
Di Giorgio Fruit Corp.: *See*—
Indian River Canners, Inc.
Dimplex Ltd., Millbrook, Southampton, England. 766,286, pub. 12–24–63. Cl. 21.
Dixie Undergarment Co.: *See*—
Lobel, Sidney.
Doeskin Products, Inc., New York, N.Y. 766,397, pub. 12–24–63. Cl. 37.
Douglas Oil Co. of California, Los Angeles, Calif. 766,163, pub. 12–24–63. Cl. 12.
Dowst Mfg. Co., Chicago, Ill. 766,292, pub. 12–24–63. Cl. 22.
Draf Tool Co., Inc., White Plains, N.Y. 766,317, pub. 12–24–63. Cl. 23.
Drug Concentrates Inc., Wilton, Conn. 766,493, pub. 12–24–63. Cl. 51.
Drywall, Ames, Products Co., San Carlos, Calif. 766,179, pub. 12–24–63. Cl. 12.
Dupaco Inc., Arcadia, Calif. 766,453, pub. 12–24–63. Cl. 44.
Dura Corp., from Moto-mower, Inc., Oak Park, Mich. 766,307, pub. 12–24–63. Cl. 23.
Durham Hosiery Mills, Durham, N.C. 766,430, pub. 12–24–63. Cl. 39.
Dutchess Farms: *See*—
Dutchess Turkey Farm, Inc.
Dutchess Turkey Farm, Inc., d.b.a. Dutchess Farms, Salt Point, N.Y. 766,458, pub. 12–24–63. Cl. 46.
Dyna-Therm Corp., Houston, Tex. 766,312, pub. 12–24–63. Cl. 23.
E.M.E. Corp., Bronxville, N.Y. 766,340, pub. 12–24–63. Cl. 26.
E-Z Mills, Inc., New York, N.Y. 766,315, pub. 12–24–63. Cl. 39.
Eagle-Picher Co., The, Cincinnati, Ohio. 766,185, pub. 12–24–63. Cl. 12.
Easy Glitter Wax Co., West Palm Beach, Fla. 657,426, canc. Cl. 29.
Eaton Mfg. Co., Cleveland, Ohio. 766,280, pub. 12–24–63. Cl. 21.
Ecoff Products Co., Inc., Cleveland, Ohio. 766,389, pub. 12–24–63. Cl. 35.
Economics Laboratory, Inc., St. Paul, Minn. 700,766. Am. 7(d). Cl. 6.
Edwards Engineering Corp., Pompton Plains, N.J. 766,374, pub. 12–24–63. Cl. 34.
Eichholz, Kurt, Joliet, Ill. 766,456, pub. 12–24–63. Cl. 44.
Ekco Products Co., Chicago, Ill. 766,202, pub. 12–24–63. Cl. 13.
Electric Auto-Lite Co. The, Toledo, Ohio. 766,267, pub. 12–24–63. Cl. 21.
Electro-Netic Steel, Inc., Schiller Park, Ill. 766,282, pub. 12–24–63. Cl. 21.
Elliott Bay Lumber Co., Seattle, Wash. 766,189, pub. 12–24–63. Cl. 12.
Eloesser-Heynemann Co., San Francisco, Calif. 766,432, pub. 12–24–63. Cl. 39.
Emsley, John, (U.S.A.) Ltd., New York, N.Y. 657,176, canc. Cl. 42.
Eniger Mills, Inc., New York, N.Y. 766,444, pub. 12–24–63. Cl. 42.
Energy Conversion, Inc., Cambridge, Mass. 766,261, pub. 12–24–63. Cl. 21.
Entoleter, Inc., Hamden, Conn., from Alsteele Engineering Works, Inc., Framingham, Mass. 766,299, pub. 12–24–63. Cl. 23.
Essex Wire Corp., Detroit, Mich. 766,284, pub. 12–24–63. Cl. 21.
Ettelbrick Shoe Co., Greenup, Ill. 653,448, canc. Cl. 39.
Eutectic Welding Alloys Corp., Flushing, N.Y. 766,383, pub. 12–24–63. Cl. 34.
Fansteel Metallurgical Corp.: *See*—
Fansteel Products Co., Inc.
Fansteel Products Co., Inc., to Fansteel Metallurgical Corp., North Chicago, Ill. 179,283, ren. 3–10–64. Cl. 14.
Farrington Mfg. Co., Needham Heights, Mass. 766,314, pub. 12–24–63. Cl. 23.
Federated Machine Co., Haverford, Pa. 766,323, pub. 12–24–63. Cl. 23.
Firma Lindner Falzlos Gesellschaft KG, Stuttgart-Zuffenhausen, Germany. 766,393, pub. 12–24–63. Cl. 37.
Fisher Scientific Co., Pittsburgh, Pa. 766,365, pub. 12–24–63. Cl. 31.
Fleetwood Co., Chicago, Ill. 766,457, pub. 12–18–62. Cl. 46.
Folger, J. A., & Co., Kansas City, Mo. 536,401, canc. Cl. 46.
Food Fair Stores, Inc., Philadelphia, Pa. 758,170–1. Am. 7(d). Cl. 46.
Formbloc, Inc., Concord, N.H. 766,166, pub. 12–24–63. Cl. 12.
Fort Schuyler Knitting Co., Utica, N.Y. 766,419, pub. 12–24–63. Cl. 39.
Francis-Louise Full Fashion Mills, Inc., Valdese, N.C. 766,408, pub. 12–24–63. Cl. 39.
Frank, L., & Son Co., Frigorifico Nacional of Montevideo, Montevideo, Uruguay. 116,424. Am. 7(d). Cl. 46.
Frank, L., & Son Co., Frigorifico Nacional of Montevideo, Montevideo, Uruguay. 116,424, rest. Cl. 46.
Freitas, John, Corning, N.Y. 657,540, canc. Cl. 46.
Fuller, D. B., & Co., Inc., New York, N.Y. 657,499, canc. Cl. 42.
Gaglia, Ugo, New York, N.Y. 766,348, pub. 12–24–63. Cl. 28.
Gallenkamp, A., & Co. Ltd., London, England. 766,331, pub. 12–24–63. Cl. 26.
Galloway-West Co.: *See*—
Borden Co. The.
Gaut Laboratories, Inc., Payne, Ohio. 665,155, canc. Cl. 46.
General Aniline & Film Corp.: *See*—
Grasselli Chemical Co., The.
General Electric Co.: *See*—
Warren Clock Co.
General Fittings Co., East Greenwich, R.I. 766,509. Cl. 21.
General Lighting & Equipment Co. Inc., Houston, Tex. 591,603, canc. Cl. 21.
General Research and Supply Co., Grand Rapids, Mich. 657,433, canc. Cl. 34.
General Thermostat Corp., Bartlett, N.H. 766,343, pub. 12–24–63. Cl. 26.

Georator Corp., Manassas, Va. 766,253, pub. 11–12–63. Cl. 21.
Gerber, M., Construction Co., Inc., Maspeth, N.Y. 766,504, pub. 12–24–63. Cl. 100.
Gibbs Underwear Co., Ardmore, Pa. 766,424, pub. 12–24–63. Cl. 39.
Globe Co., The, Chicago, Ill. 766,182, pub. 12–24–63. Cl. 12.
Globe-Union Inc., Milwaukee, Wis. 766,138, pub. 12–24–63. Cl. 4.
Goddard, Charles H.: *See*—
Goddard, Martha J.
Goddard, Martha J., from C. H. Goddard, West Orange, N.J. 766,359, pub. 12–24–63. Cl. 29.
Golub, Simon, & Sons, Inc., Seattle, Wash. 766,356–7, pub. 12–24–63. Cl. 28.
Goode, James A., Wetaskiwin, Alberta, Canada. 766,127, pub. 12–24–63. Cl. 1.
Gordon Clothes, Inc., Philadelphia, Pa. 657,472, canc. Cl. 39.
Gottlieb, Charlotte, d.b.a. The Professional Shoe Service, Washington, D.C. 657,573, canc. Cl. 39.
Goya Foods, Inc., Brooklyn, N.Y. 766,469, pub. 12–24–63. Cl. 46.
Grace, W. R., & Co., Cambridge, Mass. 766,128, pub. 12–24–63. Cl. 1.
Grasselli Chemical Co., The, Cleveland, Ohio, to General Aniline & Film Corp., New York, N.Y. 180,180, ren. 3–10–64. Cl. 6.
Greenhall Bros., Inc., New York, N.Y. 766,135, pub. 12–24–63. Multiple Class (Classes 3, 28, and 39).
Griswold Mfg. Co.: *See*—
Textron, Inc.
Guerdon Industries, Inc., Southfield, Mich. 766,244, pub. 12–24–63. Cl. 19.
Gulf Oil Corp., Pittsburgh, Pa. 766,217–18, pub. 12–24–63. Cl. 15.
HLH Products: *See*—
Hunt Oil Co.
Hamac-Hansella Machinery Corp., Palisades Park, N.J. 766,304, pub. 12–24–63. Cl. 23.
Harrington & Waring, to Hollywood Hose, Inc., New York, N.Y. 177,976, ren. 3–10–64. Cl. 39.
Harris Votomatic, Inc., Berkeley, Calif. 766,321, pub. 12–24–63. Cl. 23.
Harvey, G. F., Co., Inc., The: *See*—
Harvey, G. F., Co., The.
Harvey, G. F., Co., The, Saratoga Springs, to The G. F. Harvey Co., Inc., Yonkers, N.Y. 403,749, ren. 3–10–64. Cl. 18.
Hassenfeld Bros., Inc., Central Falls, R.I. 657,405, canc. Cl. 22.
Haynes Stellite Co., The. Union Carbide Corp., New York, N.Y. 269,174. Am. 7(d). Cl. 23.
Haynes Stellite Co. Union Carbide Corp., New York, N.Y. 269,549. Am. 7(d). Cl. 14.
Haynes Stellite Co., The, Union Carbide Corp., New York, N.Y. 269,557. Am. 7(d). Cl. 14.
Haynes Stellite Co., The, Union Carbide Corp., New York, N.Y. 269,898. Am. 7(d). Cl. 14.
Haynes Stellite Co., The, Union Carbide Corp., New York, N.Y. 269,966. Am. 7(d). Cl. 14.
Hearth Industries, Inc., Friendship, N.Y. 766,264, pub. 12–24–63. Cl. 21.
Heilbron, Rudolph, New York, N.Y. 766,349, pub. 12–24–63. Cl. 28.
Heil-Quaker Corp., Nashville, Tenn. 766,381, pub. 12–24–63. Cl. 34.
Held, Paul C., Co.: *See*—
Held, Paul C.
Held, Paul C., d.b.a. Paul C. Held Co., Salt Lake City, Utah. 657,375, canc. Cl. 18.
Hexcel Products Inc., Berkeley, Calif. 766,169, pub. 12–24–63. Cl. 12.
Hoffmann-La Roche, Inc., Nutley, N.J. 407,669, ren. 3–10–64. Cl. 18.
Hollywood Hose, Inc.: *See*—
Harrington & Waring.
Houghton, E. F., & Co., Philadelphia, Pa. 766,384, pub. 12–24–63. Cl. 35.
Huber, J. M., Corp., Borger, Tex. 766,151, pub. 12–24–63. Cl. 6.
Hummingbird Heaven: *See*—
Brown, Marian.
Hunt, Helm, Ferris & Co., to Starline Inc., Harvard, Ill. 183,840, ren. 3–10–64. Cl. 13.
Hunt Oil Co., d.b.a. HLH Products, Dallas, Tex. 766,470, pub. 12–24–63. Cl. 46.
Huttig Sash & Door Co., St. Louis, Mo. 766,167, pub. 12–24–63. Cl. 12.
Illinois Lock Co., The, Wheeling, Ill. 766,194, pub. 12–24–63. Multiple Class (Classes 13, 14, and 25.)
Imperial Chemical Industries Ltd.: *See*—
Imperial Chemical (Pharmaceuticals) Ltd.
Imperial Chemical (Pharmaceuticals) Ltd., Slough, England, to Imperial Chemical Industries Ltd., London, England. 405,479, ren. 3–10–64. Cl. 18.
Indian River Canners, Inc., Fort Pierce, Fla., to Di Giorgio Fruit Corp., San Francisco, Calif. 405,150, ren. 3–10–64. Cl. 46.
Industrial Electronics Corp., Newark, N.J. 766,254, pub. 12–11–62. Cl. 21.
Inland Steel Products Co., Milwaukee, Wis. 766,159, pub. 12–24–63. Cl. 12.
International Harvester Co., Chicago, Ill. 766,319, pub. 12–24–63. Cl. 23.
International Latex Corp., Dover, Del. 766,434, pub. 12–24–63. Cl. 39.
International Magnetic Electronics Co., Minneapolis, Minn. 657,390, canc. Cl. 21.
Invex, Inc., Coral Gables, Fla. 657,362, canc. Cl. 15.
Irvington Varnish & Insulator Co., Irvington, N.J., to Minnesota Mining and Mfg. Co., St. Paul, Minn. 405,222, ren. 3–10–64. Cl. 21.
Irvington Varnish & Insulator Co., Irvington, N.J., to Minnesota Mining and Mfg. Co., St. Paul, Minn. 405,798, ren. 3–10–64. Cl. 35.
J & F Products Co., Los Angeles, Calif. 766,302, pub. 12–24–63. Cl. 23.
Ja-Co.: *See*—
Jacobus, Jay M.
Jacobs and Levy, Richmond, Va. 405,112, ren. 3–10–64. Cl. 39.
Jacobus, Jay M., d.b.a. Ja-Co., Orinda, Calif. 766,396, pub. 12–24–63. Cl. 37.
Jameco Metal Products Co.: *See*—
Jameco Metal Products Co., Inc.
Jameco Metal Products Co., Inc., Jamaica, N.Y., from Daniel Silverman, d.b.a. Jameco Metal Products Co., New York, N.Y. 766,257, pub. 12–24–63. Cl. 21.
Jameco Metal Products Co., Inc., Jamaica, N.Y., from Daniel Silverman, d.b.a. Jameco Metal Products Co., New York, N.Y. 766,301, pub. 12–24–63. Cl. 23.
Jameco Metal Products Co., Inc., Jamaica, N.Y., from Daniel Silverman, d.b.a. Jameco Metal Products Co., New York, N.Y. 766,360, pub. 12–24–63. Cl. 29.
Jay Publishing Co., Inc., Philadelphia, Pa. 657,451, canc. Cl. 38.
Jelenko, J. F., & Co., to J. F. Jelenko & Co., Inc., New York, N.Y. 184,622, ren. 3–10–64. Cl. 44.
Jelenko, J. F., & Co., Inc.: *See*—
Jelenko, J. F., & Co.
Johnson, E. F., Co., Waseca, Minn. 766,268, pub. 12–24–63. Cl. 21.
Jomac, Inc., Philadelphia, Pa. 766,479, pub. 12–24–63. Cl. 50.
Kaiser Aluminum & Chemical Corp., Oakland, Calif. 766,212, pub. 12–24–63. Cl. 14.
Kaken Kagaku Kabushiki Kaisha, Bunkyo-ku, Tokyo, Japan. 766,149, pub. 12–24–63. Cl. 6.
Kaken Kagaku Kabushiki Kaisha, Bunkyo-ku, Tokyo, Japan. 766,150, pub. 12–24–63. Cl. 6.
Kegler Club, Inc., The, New York, N.Y. 766,391, pub. 12–24–63. Cl. 37.
Kemp & Beatley, Inc., New York, N.Y. 766,441, pub. 12–24–63. Cl. 42.
Keith, Geo. E., Co., to Geo. E. Keith Co., Brockton, Mass. 182,449, ren. 3–10–64. Cl. 39.
Kennel, Argos, Products: *See*—
Pentler, Charles F.
Kew, Inc., Los Angeles, Calif. 766,382, pub. 12–24–63. Cl. 34.
Keyes Fibre Co., Waterville, Maine. 766,134, pub. 12–24–63. Cl. 2.
Kiefer, Charles K., Lancaster, Pa. 657,531–2, canc. Cl. 46.
Kimberly-Clark Corp., Neenah, Wis. 766,402, pub. 12–24–63. Cl. 37.
Kino Kuni: *See*—
Okada, Mitsuji.
Kirsch Co., Sturgis, Mich. 766,190, pub. 12–24–63. Cl. 13.
Klein Enterprises: *See*—
Klein, Irving.
Klein, Irving, d.b.a. Klein Enterprises, New York, N.Y. 766,290, pub. 12–24–63. Cl. 22.
Knoll Aktiengesellschaft, Ludwigshafen (Rhine), Germany. 761,532, cor. Cl. 6.
Koehring Co., Milwaukee, Wis. 766,318, pub. 12–24–63. Cl. 23.
Kordes & Lichtenfels, Pforzheim, Germany. 766,351, pub. 12–24–63. Cl. 28.
Kritz, Orville H.: *See*—
Light Distribution, Inc.
Lafayette Mfg. Jewelry Co.: *See*—
Corrao, Peter.
Lake Chemical Co., Chicago, Ill. 766,170, pub. 12–24–63. Cl. 12.
La Lanne Inc., Hollywood, Calif. 766,407, pub. 12–24–63. Cl. 39.
Lamar Mfg. Co., Bowdon, Ga. 766,428, pub. 12–24–63. Cl. 39.
Lavoie Laboratories, Inc., Morganville, N.J. 766,332, pub. 12–24–63. Cl. 26.
Lee, Terri, Sales Corp., Apple Valley, Calif. 657,391, canc. Cl. 22.
Lee, Terri, Sales Corp., Apple Valley, Calif. 657,401, canc. Cl. 22.
Lehn & Fink Products Corp., Bloomfield, N.J. 766,137, pub. 12–24–63. Cl. 4.
Lentheric: *See*—
Curtis, Helene, Industries, Inc.
Velsch & Holtz.
Les Parfums Jean Desses, Paris, France. 766,486, pub. 12–24–63. Cl. 51.
Leslie Welding Co., Inc., Franklin Park, Ill. 766,377, pub. 12–24–63. Cl. 34.
Lew Mfg. Co., Coventry, R.I. 766,398–9, pub. 12–24–63. Cl. 37.
Lewis, A. H., Medicine Co., The, to Lewis-Howe Co., St. Louis, Mo. 182,789, ren. 3–10–64. Cl. 18.
Lewis-Howe Co.: *See*—
Lewis, A. H., Medicine Co., The.
Liberty Industries, Inc., Brooklyn, N.Y. 766,512. Cl. 31.
Light Distribution, Inc., Los Angeles, from O. H. Kritz, d.b.a. All Weather Light Co., San Marino, Calif. 766,260, pub. 12–24–63. Cl. 21.
Light, Paul, Los Angeles, Calif. 766,503, pub. 12–24–63. Cl. 100.
Lilly, Eli, and Co., Indianapolis, Ind. 185,838, ren. 3–10–64. Cl. 18.
Lobel, Sidney, d.b.a. Dixie Undergarment Co., New York, N.Y. 766,412, pub. 12–24–63. Cl. 39.

Loew's Inc.: *See*—
Metro-Goldwyn-Mayer Inc.
Long, W. E., Co. Independent Bakers' Cooperative, The, Chicago, Ill. 766,459, pub. 3–19–63. Cl. 46.
Louisiana State Rice Milling Co., Inc., Abbeville, La. 406,947, ren. 3–10–64. Cl. 46.
Louisville Optical Co., d.b.a. Therma-Bond Products, Louisville, Ky. 766,341, pub. 12–24–63. Cl. 26.
Lowell Toy Mfg. Corp., New York, N.Y. 766,293, pub. 12–24–63. Cl. 22.
Luther Corp., Warsaw, Ind. 657,385, canc. Cl. 19.
MacKenzie, Franklin H., Lansdowne, Pa. 766,145, pub. 12–24–63. Cl. 6.
Magnavox Co., The, Oakland, Calif., to The Magnavox Co., Fort Wayne, Ind. 178,513, ren. 3–10–64. Cl. 21.
Maidenform, Inc., New York, N.Y. 766,435–6, pub. 12–24–63. Cl. 39.
Malcus Tools Corp., New York, N.Y. 766,276, pub. 12–24–63. Cl. 21.
Manco Products Inc., Melvindale, Mich. 766,209, pub. 12–24–63. Cl. 14.
Mani-fold Co., The, Cleveland, Ohio, to Uarco Inc., Barrington, Ill. 180,004, ren. 3–10–64. Cl. 37.
Mansfield Sportswear, Inc., New York, N.Y. 766,423, pub. 12–24–63. Cl. 39.
Mardi Bra Creations Corp., New York, N.Y. 766,413, pub. 12–24–63. Cl. 39.
Markowski, Ann L., Grand Island, Nebr. 766,426, pub. 12–24–63. Cl. 39.
Marley Co., The, Kansas City, Mo. 766,367, pub. 12–24–63. Cl. 31.
Mar-O-Vel Co., Oklahoma City, Okla. 208,676, canc. Cl. 6.
Marvin Societa per l'Industria Farmaceutica e Cosmetica Instituto Farmaco Biologico Societa in Nome Collettivo, Milan, Italy. 766,228, pub. 12–24–63. Cl. 18.
Marvin Societa per l'Industria Farmaceutica e Cosmetica Instituto Farmaco Biologico Societa in Nome Collettivo, Milan, Italy. 766,483, pub. 12–24–63. Cl. 51.
Masland, C. H., & Sons, Carlisle, Pa. 766,443, pub. 12–24–63. Cl. 42.
Masters, George R., Waco, Tex. 657,393, canc. Cl. 22.
Mathieson Alkali Works, Inc., The: *See* Olin Mathieson Chemical Corp., New York, N.Y. 252,200. Am. 7(d). Cl. 6.
Mavrogianis, Theodore J., d.b.a. Table Talk, Wilmington, N.C. 621,409, rest. Cl. 46.
Mayer, H. J., & Sons Co., Inc., Chicago, Ill. 766,464, pub. 12–24–63. Cl. 46.
Mayer-Seaton, Inc., Mansfield, Ohio 657,581, canc. Cl. 103.
Meat Industry Suppliers, Inc., Chicago, Ill. 657,536, canc. Cl. 46.
Medical Tribune, Inc., New York, N.Y. 766,405, pub. 12–24–63. Cl. 38.
Medicosane Laboratories, Woodside, N.Y. 766,233, pub. 12–24–63. Cl. 18.
Merck & Co., Inc.: *See*—
Sharp & Dohme, Inc.
Metafiltration Co. Ltd., The, Hounslow, Middlesex, England. 766,366, pub. 12–24–63. Cl. 31.
Metro-Goldwyn-Mayer Inc., from Loew's Inc., New York, N.Y. 714,171, cor. Cl. 38.
Metrotek Electronics, Inc., Raleigh, N.C. 766,252, pub. 12–24–64. Cl. 21.
Miami Window Corp., Hialeah, Fla. 657,351, canc. Cl. 12.
Michigan Wheel Co., Grand Rapids, Mich. 766,241, pub. 12–24–63. Cl. 19.
Michigan Wineries, Inc., Paw Paw, Mich. 766,476, pub. 12–24–63. Cl. 47.
Miller, L., & Sons, Inc., Nashville, Tenn. 766,497, pub. 12–24–63. Cl. 51.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 766,144, pub. 12–24–63. Cl. 5.
Minnesota Mining and Mfg. Co.: *See*—
Irvington Varnish & Insulator Co.
Modulite Co., Los Angeles, Calif. 657,345, canc. Cl. 12.
Mohasco Industries, Inc., Amsterdam, N.Y. 657,497, canc. Cl. 42.
Monroe Auto Equipment Co., Monroe, Mich. 766,240, pub. 12–24–63. Cl. 19.
Montgomery Coal & Coke Co., Inc., Brooklyn, N.Y. 657,314, canc. Cl. 1.
Moore Products Co., Spring House, Pa. 766,345, pub. 12–24–63. Cl. 26.
Moore, Samuel, & Co., Mantua, Ohio. 766,265, pub. 12–24–63. Cl. 21.
Morgan Adhesives Co., Stow, Ohio. 766,394, pub. 12–24–63. Cl. 37.
Morris, Philip, Inc., New York, N.Y. 766,306, pub. 12–24–63. Cl. 23.
Moss X-Ray and Medical Equipment Co., Chicago, Ill. 766,452, pub. 12–24–63. Cl. 44.
Moto-mower, Inc.: *See*—
Dura Corp.
Moviola Mfg. Co.: *See*—
Serrurier, Iwan.
McCarthy, Henry J., Marblehead, Mass. 766,239, pub. 12–24–63. Cl. 19.
McCrary, John R., Jr., New York, N.Y. 657,421, canc. Cl. 26.
McDevitt, James F., d.b.a. Air-I-Dent Co., Canton, Mass. 766,358, pub. 12–24–63. Cl. 28.
McDougall-Butler Co. Inc., Buffalo, N.Y. 766,222, pub. 3–19–63. Cl. 16.
McKesson & Robbins, Inc., New York, N.Y. 766,478, pub. 12–24–63. Cl. 49.
N.V. Nederlandse Schoen-en Lederfabrieken "Bata-Best," Best, Netherlands. 766,437, pub. 12–24–63. Cl. 39.
National Glove, Inc., Coshocton, Ohio. 766,421, pub. 12–24–63. Cl. 39.
National Housewared, Inc., Miami, Fla. 766,275, pub. 12–24–63. Cl. 21.
National Lock Co., Rockford, Ill. 766,201, pub. 12–24–63. Cl. 13.
National Lock Co., Rockford, Ill. 766,328, pub. 12–24–63. Cl. 25.
National Spectrographic Laboratories, Inc., Cleveland, Ohio. 657,453, canc. Cl. 38.
Nature Boy Plant Food Co.: *See*—
Oliver, Howell W.
Nelsworth Distributors, Long Beach, Calif., to The Pedifieur Corp., San Francisco, Calif. 657,549, canc. Cl. 51.
New York Silicate Book Slate Co., Inc., New York, N.Y. 657,546, canc. Cl. 50.
Nishimoto Trading Co. of Hawaii, Ltd., Honolulu, Hawaii. 766,465, pub. 12–24–63. Cl. 46.
Norden-Ketay Corp., Milford, Conn. 657,417, canc. Cl. 26.
Norman, Merle, Cosmetics, Inc., Los Angeles, Calif. 766,496, pub. 12–24–63. Cl. 51.
Norman, Merle, Cosmetics, Inc., Los Angeles, Calif. 766,519–20. Cl. 51.
Northwest Soft Water Co. and Water Softener Supply Co.: *See*—
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Novo Industrial Corp., New York, N.Y. 766,368, pub. 12–24–63. Cl. 31.
Nuclear Magnetics Corp., Boston, Mass. 657,418, canc. Cl. 26.
Nutone, Inc., Cincinnati, Ohio. 766,373, pub. 12–24–63. Cl. 32.
O.K. Rubber Welders, Inc., Littleton, Colo. 766,385, pub. 12–24–63. Cl. 35.
O'Connell, Thomas M. A., Wellington, New Zealand. 657,413, canc. Cl. 23.
O'Donnell-Reed Shoe Products Corp., Opa-locka, Fla. 766,410, pub. 12–24–63. Cl. 39.
Okada, Mitsuji, d.b.a. Kino Kuni, Los Angeles, Calif. 766,462, pub. 12–24–63. Cl. 46.
Olin Mathieson Chemical Corp.: *See*—
Mathieson Alkali Works, Inc., The.
Oliver, Howell W., d.b.a. Nature Boy Plant Food Co., Taylor, Mich. 766,155, pub. 12–24–63. Cl. 10.
Olson, Samuel, Mfg. Co., Inc., Chicago, Ill. 657,409, canc. Cl. 23.
Omnia Constructions Ltd., London, England. 657,349, canc. Cl. 12.
Omni Spectra, Inc., Detroit, Mich. 766,255, pub. 12–24–63. Cl. 21.
Otis Steel Products Corp., Ellicottville, N.Y. 766,370, pub. 3–19–63. Cl. 32.
Ozark-Mahoning Co., S.W., Tulsa, Okla. 657,336–7, canc. Cl. 10.
Pabst Brewing Co.: *See*—
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Pabst Corp., to Pabst Brewing Co., Milwaukee, Wis. 183,385, ren. 3–10–64. Cl. 45.
Pacific Lumber Co., The, San Francisco, Calif. 766,188, pub. 12–24–63. Cl. 12.
Paper Goods Co., Inc., Cambridge, Mass. 766,132, pub. 12–24–63. Cl. 2.
Paralta Equipment Co., Los Angeles, Calif. 766,281, pub. 12–24–63. Cl. 21.
Para-Tone Inc., La Grange, Ill. 766,335, pub. 12–24–63. Cl. 26.
Parfums Lucien LeLong Corp., New York, N.Y. 766,494, pub. 12–24–63. Cl. 51.
Parke, Davis & Co., Detroit, Mich. 180,217, ren. 3–10–64. Cl. 6.
Parke, Davis & Co., Detroit, Mich. 405,527, ren. 3–10–64. Cl. 18.
Parke, Davis & Co., Detroit, Mich. 180,622, ren. 3–10–64. Cl. 18.
Partlow Corp., The, New Hartford, N.Y. 766,334, pub. 12–24–63. Cl. 26.
Patterson, S. L., d.b.a. The Collapsaw Co., Norman, Okla. 766,322, pub. 12–24–63. Cl. 23.
Pax-Products, Des Moines, Iowa. 766,157, pub. 12–24–63. Cl. 12.
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Peggin-Bo Mfg. Co.: *See*—
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Pentier, Charles F., d.b.a. Argos Kennel Products, Cupertino, Calif. 766,225, pub. 12–24–63. Cl. 18.
Perfect Mfg. Corp., Newark, N.J. 766,517. Cl. 39.
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Perf-O-Strut, Inc., Wayne, Mich. 766,171, pub. 12–24–63. Cl. 12.
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Pharmaton Ltd.: *See*—
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Pharmaton S.A.: *See*—
Pharmaton A.G.
Phelan, Louis A. M., d.b.a. Products Plus, Rockton, Ill. 657,524, canc. Cl. 46.
Phillips, Charles H., Chemical Co., The, to Sterling Drug, Inc., New York, N.Y. 24,049, ren. 3–10–64. Cl. 18.
Physicians and Hospitals Supply Co., Inc., d.b.a. Ulmer Pharmacal Co., Minneapolis, Minn. 406,547–8, ren. 3–10–64. Cl. 18.
Physicians and Hospitals Supply Co., Inc., d.b.a. Ulmer Pharmacal Co., Minneapolis, Minn. 406,566–70, ren. 3–10–64. Cl. 18.
Physicians and Hospitals Supply Co., Inc., d.b.a. Ulmer Pharmacal Co., Minneapolis, Minn. 407,767, ren. 3–10–64. Cl. 18.

Piggly Wiggly Corp., Jacksonville, Fla. 761,698, cor. Cl. 46.
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Powerhouse, Inc., New Brunswick, N.J. 766,422, pub. 12–24–63. Cl. 39.
Precision Development Co. Inc., Los Angeles, Calif. 766,361, pub. 12–24–63. Cl. 29.
Precision Metalsmiths, Inc., Cleveland, Ohio. 766,206, pub. 12–24–63. Cl. 14.
Preen Co., The, South Norwalk, Conn. 766,140, pub. 12–24–63. Cl. 4.
Premier Knitting Co., Inc., New York, N.Y. 657,480, canc. Cl. 39.
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Red & White Foundation, Chicago, Ill. 766,362, pub. 12–24–63. Cl. 29.
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Rice Growers Association of California, Sacramento, Calif. 766,468 pub. 12–24–63. Cl. 46.
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Rotron Mfg. Co., Inc., Woodstock, N.Y. 766,269, pub. 12–24–63. Cl. 21.
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Schachter, Bernard L., Inc., New York, N.Y. 766,414, pub. 12–24–63. Cl. 39.
Schjeldahl, G. T., Co., Northfield, Minn. 766,315, pub. 12–24–63. Cl. 23.
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Southern Oil Co. of New York, Inc., Horseheads, N.Y. 185,687, ren. 3–10–64. Cl. 15.
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Standard Oil Co., The, Cleveland, Ohio. 766,219, pub. 12–24–63. Cl. 15.
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Sterling Drug, Inc.: *See*—
Phillips, Charles H., Chemical Co., The.
Sterling Drug Inc., New York, N.Y. 766,142, pub. 12–24–63. Cl. 5.
Sterling Drug Inc., New York, N.Y. 766,152, pub. 12–24–63. Cl. 6.
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Technical Displayers, Inc.: *See*—
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Topco Associates, Inc., Skokie, Ill. 766,508. Cl. 7.
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Tremco Mfg. Co., The, Cleveland, Ohio. 657,560, canc. Cl. A.
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Vector Mfg. Co., Inc., Southampton, Pa. 766,451, pub. 12–24–63. Cl. 44.
Venetian Vogue Ltd., Slough, England. 766,371, pub. 12–24–63. Cl. 32.
Vernay Laboratories, Inc., Yellow Springs, Ohio. 766,197, pub. 12–24–63. Cl. 13.
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Amendments After Second Action

Amendments filed after the second action on the merits are not entered until approved by the Examiner. It is suggested that, when extensive amendments to the claims are proposed, a copy of the claims as proposed to be amended be included either in the "Remarks" or in a separate paper. Bracketing deleted matter and underlining inserted matter would also be helpful.

EDWIN L. REYNOLDS,
February 12, 1964. *Acting Commissioner of Patents.*

Adjudicated Patents

(C.A. Mich.) Holstensson and Arvidius Patent No. 2,291,158 (274—10), for talking machine for playing a plurality of records in succession. Claim 1 *Held* invalid. *Holstensson* v. *V-M Corp.*, 325 F.2d 109; 139 USPQ 401.

(C.A.D.C.) Bennett Patent No. 2,585,530 (293—97) for multibumper grille, *Held* not infringed. *Bennett* v. *Ford Motor Co.*, 325 F.2d 243; 139 USPQ 236.

(C.A. Mass.) Marasco Patent No. 2,962,736 (12—38) for press for heel-attached shoe bottoms, *Held* invalid. *Marasco* v. *Compo Shoe Machinery Corp.*, 325 F.2d 695; 140 USPQ 47.

(D.C. Oreg.) Gray Patent No. 193,943 (84—197) for hand winch, *Held* invalid. *Gray* v. *Montgomery Ward & Company*, 224 F. Supp. 760; 139 USPQ 376.

(D.C. Calif.) Flamm Patent No. 2,571,435 (67—7.1) for gas fueled cigar lighter, *Held* valid and infringed. *Ronson Corp.* v. *Maruman of Calif. Inc.*, 224 F. Supp. 479; 139 USPQ 436.

(D.C. Colo.) Ruth Patent No. 2,611,680 (23—2) for exhaust gas conditioning methods. Claims 1 to 6 *Held* invalid. *Ruth v. Blue River Constructors*, 224 F. Supp. 717; 139 USPQ 257.

(D.C. Calif.) Zellweger Patent No. 2,882,940 (141—293), for filling valves for liquefied gas lighters, *Held* valid and infringed. *Ronson Corp.* v. *Maruman of Calif. Inc.*, 224 F. Supp. 479; 139 USPQ 437.

(D.C.N.Y.) Raszl Patent No. 2,907,302 (120—42.02) for writing instrument, *Held* invalid. *Laka* v. *Columbia Pen & Pencil Co.*, 224 F. Supp. 741; 139 USPQ 334.

(D.C. Calif.) Zelleweger Reissue Patent No. 24,163 (141—330) for valves for filling pyropyoric lighters for liquefied gas. Claims 9, 10 and 12 *Held* valid and infringed. *Ronson Corp.* v. *Maruman of Calif. Inc.*, 224 F. Supp. 479; 139 USPQ 437.

English Translation of Manual of Patent Classification (1959) of the German Federal Republic Now Available

A complete translation into English of the Manual of Patent Classification of the Patent Office of the German Federal Republic (Deutsches Patentamt) has been published for the U.S. Patent Office, Department of Commerce, and the National Science Foundation. This is a translation of the 7th edition of the manual, 1959, the most recent German patent classification, and consists of 643 printed pages. The only known previous translation was of the edition of 1910 by G. A. Lovett of the U.S. Patent Office. The manual is useful for searching the German patents and may be of interest to anyone interested in the classification of scientific and technical information.

Orders for the manual, referring to order number OTS 63–11190, should be accompanied by check or money order for $6.50 payable to the Office of Technical Services, and should be sent to the following address:

Office of Technical Services
U.S. Department of Commerce
Washington, D.C. 20230

New Applications Received During January 1964

Patents	6,858
Plant Patents	10
Reissues	7
Designs	472
Total	7,347

Issue—March 17, 1964

Patents	956—No.	3,124,805 to No.	3,125,760, incl.
Designs	67—No.	197,691 to No.	197,757, incl.
Plant Patents	5—No.	2,376 to No.	2,380, incl.
Reissues	2—No.	25,537 to No.	25,538, incl.
Total	1030		

PATENT EXAMINING CORPS

H. B. WHITMORE, Superintendent

PATENT EXAMINING OPERATIONS AND GROUPS	Oldest Application	
	New	Amended
CHEMICAL EXAMINING OPERATION—P. E. MANGAN, Director.		
GENERAL CHEMISTRY, GROUP 110—R. L. CAMPBELL, Supervisory Examiner. Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries.	3-16-62	3-20-62
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Supervisory Examiner. Heterocyclic; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids.	6-1-62	7-3-62
PETROLEUM CHEMISTRY, GROUP 130—J. R. LIBERMAN, Supervisory Examiner. Hydrocarbons; Halogenated Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices; Organic Chemistry (Part) e.g.: Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhydrides; Acid Halides.	7-10-62	7-23-62
HIGH POLYMER CHEMISTRY, GROUP 140—M. STERMAN, Supervisory Examiner. Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins: Reclaiming; Pore-Forming.	3-16-62	3-9-62
COMPOSITIONS AND MOLDING, GROUP 150—L. H. GASTON, Supervisory Examiner. Compositions (Part) e.g.: Coating; Molding; Adhesive Compositions; Abrading; Liquid Purification or Separation; Gas Separation; Special Utility; Molding Processes.	5-1-62	4-2-62
COATING AND LAMINATING, GROUP 160—J. REBOLD, Supervisory Examiner. Coating: Processes, Apparatus and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Ornamentation; Adhesive Bonding; Special Manufactures.	3-1-62	3-8-62
SPECIALIZED CHEMICAL ARTS AND INDUSTRIES, GROUP 170—W. B. KNIGHT, Supervisory Examiner. Bleaching and Dyeing; Fertilizers; Foods; Fermentation; Photography; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Metallurgical Apparatus; Gas, Heating and Illuminating; Cleaning Processes; Liquid Purification; Thermolytic Distillation; Preserving.	3-30-62	4-16-62
CHEMICAL ENGINEERING, GROUP 180—G. D. MITCHELL, Supervisory Examiner. Gas, Liquid and Solid Separation; Centrifugal Bowl Separators; Gas and Liquid Contact Apparatus; Distillation; Drying; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	6-19-62	6-20-62
ELECTRICAL EXAMINING OPERATION—N. H. EVANS, Director.		
POWER, GROUP 210—M. L. LEVY, Supervisory Examiner. Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art.	5-21-62	5-2-62
SECURITY, GROUP 220—S. BOYD, Supervisory Examiner. Ordnance, Firearms and Ammunition; Radar, Sonar, Directional Radio, Torpedoes, Seismic Exploring, Radio-Active Batteries; Nuclear Reactors, Powder Metallurgy, Rocket Fuels; Radio-Active Material.	8-1-62	4-23-62
INFORMATION TRANSMISSION, GROUP 230—S. W. CAPELLI, Supervisory Examiner. Communications; Multiplexing Techniques; Facsimile and Related Art.	8-29-62	7-31-62
INFORMATION STORAGE AND RETRIEVAL, GROUP 240—W. W. BURNS, Supervisory Examiner. Data Processing, Computation and Conversion; Storage Devices and Related Art.	3-13-62	2-2-62
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—B. G. MILLER, Supervisory Examiner. Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks.	5-1-62	5-7-62
RADIATION AND INSTRUMENTS, GROUP 260—F. M. STRADER, Supervisory Examiner. Optics; Radiant Energy; Measuring.	5-10-62	5-9-62
ELEMENTS, GROUP 270—E. J. SAX, Supervisory Examiner. Conductors; Switches; Miscellaneous.	7-31-62	8-17-62

CONDITION OF PATENT APPLICATIONS AS OF JANUARY 31, 1964

Total number of pending applications (excluding Designs)	204, 383
Total number of Design applications pending	5, 782
Total number of applications awaiting action (excluding Designs)	124, 799
Total number of Design applications awaiting action	2, 083
Date of oldest new application awaiting action	Mar. 1, 1962
Date of oldest amended application awaiting action	Feb. 2, 1962

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during March 1964, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*

Patents	Numbers 2,416,[illegible] to 2,418,106, inclusive
Plant Patents	Numbers 728 to 732, inclusive

PATENT EXAMINING OPERATIONS AND GROUPS (Continued)	Oldest Application	
	New	Amended
MECHANICAL ENGINEERING EXAMINING OPERATION—R. A. WAHL, Director.		
MATERIAL OR ARTICLE HANDLING AND DISPENSING, GROUP 310—A. BERLIN, Supervisory Examiner. Material or Article Handling and Dispensing; Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Fluid Sprinkling and Fire Extinguishers; Coin Handling and Check Controlled Apparatus; Classifying and Assorting Solids.	1-2-63	12-24-62
METAL AND PLASTICS WORKING, GROUP 320—N. BERGER, Supervisory Examiner. Metal Bending, Drawing, Extruding, Forging, Rolling; Sheet Metal Working; Wireworking; Chain, Staple, Horseshoe Making; Metal Founding; Wire Fabrics; Plastic Working Apparatus; Plastic Block, Earthenware Apparatus.	9-21-62	9-14-62
MANUFACTURING AND ASSEMBLING MISCELLANEOUS ARTICLES, GROUP 330—A. M. HORTON, Supervisory Examiner. Special Article Making; Assembling, Tool and Implement Making; and Metal Working.	7-12-62	7-2-62
MACHINE TOOLS, MECHANISMS AND ELEMENTS, GROUP 340—F. H. BRONAUGH, Supervisory Examiner. Machine Tools for Shaping or Dividing Involving Cutting or Breaking; Machine Elements Including Power Transmission Components, Work and Tool Holders.	10-4-62	6-14-62
HARDWARE, TOOLS AND JOINTS, GROUP 350—T. J. HICKEY, Supervisory Examiner. Miscellaneous Hardware; Tools; Joints; Cutlery; Locks; Fasteners; Rod Pipe and Electrical Connectors; Buckles; Buttons, Clasps, Etc.; Pushing and Pulling.	6-4-62	6-7-62
FLUID HANDLING, GROUP 360—E. PAUL, Supervisory Examiner. Fluid Handling; Valves; Pipes and Tubular Conduits; Fluent Material Handling; Lubrication; Baths, Closets and Sinks; Joint Packing.	9-4-62	11-13-62
POWER PLANTS, MOTORS AND PUMPS, GROUP 370—C. F. GAREAU, Supervisory Examiner. Power Plants, Combustion Power Plants, Expansible Chamber Motors, Rotary Motors and Rotary Expansible Chamber Motors, Expansible Chamber Devices and Internal Combustion Engines, Pumps and Pump Regulation.	8-27-62	11-19-62
HEATING, COOLING AND VENTILATING, GROUP 380—P. L. PATRICK, Supervisory Examiner. Furnaces, Liquid Heaters and Vaporisers, Burners, Heat Exchange, Automatic Temperature and Humidity Regulation, Refrigeration, Ventilation, and Illumination.	10-16-62	9-10-62
GENERAL ENGINEERING AND INDUSTRIAL ARTS EXAMINING OPERATION—J. A. MANIAN, Director.		
AGRICULTURE, GROUP 410—A. RUEGG, Supervisory Examiner. Animal Husbandry; Butchering; Fishing, Trapping and Vermin Destroying; Plant Husbandry; Tobacco, Earth Working.	12-21-62	12-24-62
CIVIL ENGINEERING, GROUP 420—B. BENDETT, Supervisory Examiner. Building Structures; Bridges, Closures; Closure Operators; Safes; Earth Engineering; Drilling; Mining.	9-13-62	9-18-62
PHYSICS, GROUP 430—R. L. EVANS, Supervisory Examiner. Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.	8-7-62	8-9-62
TEXTILES AND APPAREL, GROUP 440—R. C. MADER, Supervisory Examiner. Textiles; Winding and Reeling; Tying Strands; Apparel; Boot and Shoe Making; Sewing Machines.	10-22-62	11-6-62
TRANSPORTATION, GROUP 450—P. ARNOLD, Supervisory Examiner. Railways and Rolling Stock; Brakes; Land Vehicles; Aeronautics; Ships.	10-3-62	11-8-62
FURNITURE AND RECEPTACLES, GROUP 460—W. S. COLE, Supervisory Examiner. Furniture; Supports; Cabinet Structures; Receptacles; Baggage.	10-31-62	12-18-62
PRINTING, STATIONERY AND MATERIAL TREATMENT, GROUP 470—L. W. VARNER, Supervisory Examiner. Printing; Typewriters; Stationery; Material Treatment.	10-4-62	9-10-62
PERSONAL TREATMENT, ADORNMENT AND AMUSEMENTS, GROUP 480—L. R. PRINCE, Supervisory Examiner. Surgery; Dentistry; Artificial Body Members; Toiletry; Amusement Devices; Jewelry; Mechanical Guns; Projectors.	11-1-62	11-9-62
DESIGNS, GROUP 490—J. A. MANIAN, Supervisory Examiner. Industrial Arts; Household, Personal and Fine Arts.	8-12-63	8-9-63

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE ROY SAPP

No. 7046. Decided December 12, 1963

[51 CCPA —; 324 F.2d 1021; 139 USPQ 522]

1. PATENTABILITY—OBVIOUSNESS—CROWDED ART.

"We agree with appellant that progress is important in simple structures as in complex machines. The same may be said of an old and crowded art such as that reflected by the meat cooking industry. However, the limited advances made therein must not be obvious to one of ordinary skill in the art."

2. SAME—PARTICULAR SUBJECT MATTER—BARBECUE TRAY.

The refusal of a claim to a barbecue tray, as unpatentable over the prior art, is affirmed.

APPEAL from the Patent Office. Serial No. 1,725.

AFFIRMED.

Kimmel & Crowell, A. Harry Crowell, Marvin R. Stern, for appellant.

Clarence W. Moore (*Jere W. Sears* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, SMITH, and ALMOND, JR., *Associate Judges*

ALMOND, *J.*, delivered the opinion of the court.

This is an appeal from the decision of the Board of Appeals affirming the Examiner's rejection on prior art of appellant's claim 4, the only claim remaining in the case.

The claim reads as follows:

4. A barbecue tray comprising a sheet forming a bottom comprised of a series of alternate V-shaped trenches and relatively sharp edged ridges extending in aligned parallel relation, the apices of said ridges having a series of equidistantly spaced circular openings extending the full length thereof to permit the passage of smoke and gas therethrough.

The invention relates to a barbecue tray adapted to fit on top of a barbecue grill. The appealed claim is sufficiently descriptive of the device. The tray is concentrically disposed over a charcoal brazier of a conventional type.

The application recites that:

A primary object of this invention is the provision of such a tray provided with a plurality of trenches for the retention of grease, extending over substantially the entire cooking area, to prevent the fire flaming up and scorching the meat, the tray being provided with a plurality of spaced apart holes to permit the charcoal heat to come through and cook the food.

It is further recited that the plurality of holes permit the smoke from the charcoal, or other material used for grilling, to impregnate the meat being cooked with the proper flavoring.

The references relied on are:

Rietzke, 640,030, December 26, 1899.
Jones, 850,654, April 16, 1907.

Rietzke shows a portable broiler or utensil "adapted to be placed on the stove above and about the ordinary stove-opening * * * to permit the heat of the fire in the stove to come up through the stove-opening into the utensil, * * *." The meat supporting element is a slightly crowned, sinuously corrugated gridiron so arranged "that

the fluids discharged from the meat in the process of broiling will fall into the grooves 10 of the corrugations and * * * will run outwardly into" a channel. The ridges of the corrugations which alternate with the grooves "are perforated with a large number of apertures 12, whereby the hot air produced by the combustion below the utensil passes freely upwardly through the gridiron, directly against the meat thereon, * * *." The apertures are round and are evenly spaced along the ridges of the corrugations.

Jones discloses a broiler for cooking meat over an open fire. The patent illustrates "a plate of corrugated sheet metal, in which the alternate corrugations 6 are somewhat higher than the intervening corrugations 7, and each of these smaller corrugations 7 are provided at suitably-spaced-apart intervals, adjacent to or at the apex thereof with the elongated longitudinally-disposed openings 8, in which case the articles to be broiled rest upon the tops of the higher corrugations." The trenches between corrugations are V-shaped, the corrugations having relatively sharp ridges. The openings disclosed are of elongated rectangular form. The grease and meat juices rendered are conveyed by channels to a gutter with "none of the juices reaching the fire," thus preventing "kindling a flame, burning the meat, and at the same time dampening the fire, * * *." The patentee states that "the spaces beneath the meat and between the corrugations and intermediate of the openings therein form pockets, * * * in which the heat is retained and by which it is evenly distributed."

The Board sustained the Examiner's rejection of the appealed claim as unpatentable over Jones in view of Rietzke, taking note of the fact that the claim calls for circular openings in the apices of the ridges while Jones discloses elongated longitudinally-disposed openings of rectangular form in spaced-apart positions and that Rietzke discloses the use of equidistantly-spaced circular openings in the ridges of the grill. In view of the teachings in these references, the Board held that it would be obvious to substitute the circular openings of Rietzke for the rectangular openings used by Jones. In this connection the Board pointed out that since the appealed claim uses the word "comprising," it does not rule out the use of the alternate ridges, which are slightly higher than the intervening ridges provided with the elongated longitudinally-disposed openings adjacent to or at the apex. The intervening corrugations of Jones are in aligned parallel relation to each other and hence it is obvious, reasoned the Board, to substitute one form of opening for another by using the spaced circular openings disclosed by Rietzke in place of the rectangular-shaped spaced openings of Jones.

The Examiner also rejected the appealed claim as unpatentable over Rietzke, advancing the position that "to use alternate V-shaped trenches and ridges instead of the rounded trenches and ridges disclosed in Rietzke would be merely a matter of choice, and hence obvious, especially in view of Jones." The Board agreed that, since both forms of corrugations are disclosed to be old by the references, the particular form used, whether V-shaped or rounded, would appear to be largely a matter of choice. The Board held that it is obvious that Rietzke could be made flat and thereby have the ridges in aligned relation. The purpose served by the crowning form of the surface of the Rietzke grill is to induce the fluids discharged from the meat in the process of broiling to run outwardly into the channel and away

from the fire. In view of the Jones showing of a flat tray affording the facility of conveying the grease and meat juices so that "no part of them can possibly reach the fire," we agree with the Board that it would be obvious to one skilled in the art to make the Rietzke tray flat.

Appellant contends that the specific design of his barbeque tray achieves "two specific objectives." The first is avoiding fire flareups with consequent scorching or burning of the meat. The second is to allow the heat and smoke to reach the meat to cook it and impregnate it with a barbecued flavor.

There can be no question that both Jones and Rietzke clearly anticipate these objectives. Jones discloses channels to convey the greases and juices to a gutter and away from the fire so as to prevent flareups. Rietzke discloses means whereby the fluids discharged from the meats fall into grooves and run outwardly into a channel. Both references disclose openings, the purpose of which is to conduct heat and smoke to the cooking meat.

The record before us does not sustain appellant's argument that he "has found a peculiar relation and position of the members of the corrugations and the placing of the openings therein which provide much better results than devices" disclosed by the cited prior art. There is no proof of record nor supportable inference properly to be drawn therefrom that from a grease draining and heat application and distribution point of view appellant's device constitutes any significant advance over similar features taught by the cited references.

[1] We agree with appellant that progress is important in simple structures as in complex machines. The same may be said of an old and crowded art such as that reflected by the meat cooking industry. However, the limited advances made therein must not be obvious to one of ordinary skill in the art.

[2] Finding no reversible error in the decision of the Board of Appeals that appellant's claim 4 is unpatentable over prior art, the decision is accordingly affirmed.

AFFIRMED.

MARTIN, *J.*, did not sit or participate in decision.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

Notices under 35 U.S.C. 290; Patent Act of 1952

2,254,144, A. J. Higgins, Engine control for marine engines; **2,552,001,** J. J. Dugas, Dual control for marine motors, **filed** Oct. 7, 1963, D.C., E.D. Wis. (Milwaukee), Doc. 63–C–247, *Higgins, Inc.* v. *Kickhaefer Corporation.*

2,450,155, G. H. Packwood, Jr., Soap powder dispenser; **2,569,774,** same, Orifice guard construction for dispenser, **filed** Mar. 28, 1963, D.C., E.D. Mo. (St. Louis), Doc. 63C–114(1), *George H. Packwood, Jr. et al.* v. *Continental Machine Corp et al.*

2,475,579, J. W. Napier, Tire recapping apparatus; **2,712,156,** H. E. Potter et al., Tire retreading apparatus; **2,723,425,** Z. Mattox et al., Tire bead spreading device, **filed** Nov. 7, 1963, D.C., W.D.N.C. (Charlotte), Doc. 1834, *Charles C. Hertwig, trustee (Precision Recapping Equipment Company)* v. *Retreading Equipment Company et al.*

2,552,001. (See 2,254,144.)

2,563,794, Rickes and Wood, Vitamin B_{12}; **2,703,302,** same, Vitamin B_{12}-active composition and process of preparing same, **filed** July 12, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c1248, *Merck & Co., Inc.* v. *Patrice Michael Emile Francois Dupont Danican Phildor.* Patents held valid and infringed; defendant enjoined Nov. 4, 1963.

2,569,774. (See 2,450,155.)

2,620,938, C. J. Jesnig, Container closure, **filed** Nov. 7, 1963, D.C., E.D. Pa. (Philadelphia), Doc. 34483, *Package Devices, Inc.* v. *E. J. Korvette, Inc.*

2,643,890, O. W. Smith, Tandem trailer device; **2,816,776,** H. A. Nimtz, Wheeled tandem attachment for coupling tractor-trailers, **filed** June 22, 1961, D.C., S.D. Ind. (Indianapolis), Doc. IP61–C–188, *Calumet Tonnage Master Fabricators, Inc.* v. *Otho W. Smith.* Patent No. 2,643,890 held valid; claims 1 and 3 of Patent No. 2,643,890 infringed; plaintiff enjoined; complaint dismissed Nov. 6, 1963.

2,677,634, H. P. Collier, Jr., Method of making spectacle frames, **filed** Mar. 13, 1963, D.C., S.D.N.Y., Doc. 63/706, *Titmus Optical Co., Inc.* v. *Jason Optics Co., Inc. et ano.* Cause voluntarily dismissed Nov. 13, 1963.

2,699,054, L. H. Conover, Tetracycline, **filed** Nov. 12, 1963, D.C., N.D.N.Y. (Utica), Doc. 9832, *Chas. Pfizer & Co., Inc.* v. *Approved Pharmaceutical Corporation.* **Same, filed** Nov. 12, 1963, D.C.N.J. (Newark), Doc. 936–63, *Chas. Pfizer & Co., Inc.* v. *Zenith Laboratories, Inc. et al.* **Same, filed** Nov. 12, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c2026, *Chas. Pfizer & Co., Inc.* v. *Hallmark Laboratories, Inc.* **Same, filed** Nov. 13, 1963, D.C., S.D.N.Y., Doc. 63/3327, *Chas. Pfizer & Co., Inc.* v. *Davis-Edwards Pharmacal Corp.* **Same, filed** Nov. 14, 1963, D.C., W.D. Pa. (Pittsburgh), Doc. 63–1011, *Chas. Pfizer & Co., Inc.* v. *Pennex Products Co.*

2,703,302. (See 2,563,794.)

2,712,156. (See 2,475,579.)

2,723,425. (See 2,475,579.)

2,784,616 R. C. Quackenbush Feed control attachment for hand tools; **2,893,276** same Automatic tool feeding device, **filed** June 30, 1960, D.C., S.D. Calif. (Los Angeles), Doc. 772–60–WB, *Robert C. Quackenbush and A. B. Quackenbush Company* v. *Gardner-Denver Company.* Complaint dismissed Oct. 17, 1963.

2,812,800, C. Eames, Multiple seating assembly, **filed** Nov. 7, 1963, D.C., S.D.N.Y., Doc. 63/3269, *Herman Miller, Inc.* v. *Crucible Products Corp.*

2,816,776. (See 2,643,890.)

2,827,141, M. Kessler, Framed panel construction, **filed** Mar. 8, 1963, D.C., N.D. Ohio (Cleveland), Doc. C63–154, *Melton Kessler* v. *Imperial Plastics Co., Inc. et al.* Consent judgment; patent infringed; injunction issued Nov. 7, 1963.

2,893,276. (See 2,784,616.)

2,920,971, S. D. Stookey, Method of making ceramics and product thereof, **filed** Nov. 8, 1963, D.C. Del. (Wilmington), Doc. 2763, *Corning Glass Works* v. *Anchor Hocking Glass Corporation.*

2,950,035, C. J. Wheeler, Method for parting elongated fracturable members, **filed** Nov. 12, 1963, D.C., N.D. Ohio (Cleveland), Doc. C63–876, *The Ridge Tool Company* v. *Wheeler Manufacturing Corporation et al.*

3,000,398, G. Link, Automatic time-controlled sprinkler systems, **filed** Nov. 6, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63–1347–WM, *Link Sprinkler & Mfg. Co.* v. *Cal-Val Co. et al.*

3,026,580, H. K. Lundgren, Window sash stop, **filed** Nov. 9, 1963, D.C., W.D. Mich. (Grand Rapids), Doc. 4622, *All-metal Weatherstrip Company* v. *Grand Rapids Hardware Company, Inc.*

3,038,808, J. R. Perrozzi et al., Method of making angel food cake and premix therefor, **filed** Nov. 1, 1963, D.C. Minn. (Minneapolis), Doc. 4–63/408, *The Pillsbury Company* v. *General Mills, Inc.*

Des. 195,401, J. Johnson, Armchair, **filed** July 22, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63–865–Y, *Charlton Co. of Calif., Inc.* v. *Murphy-Miller, Inc.* Order dismissed on motion of defendant for lack of jurisdiction Oct. 15, 1963.

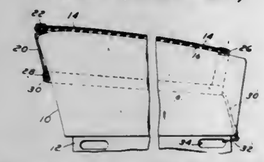
Des. 196,227, A. Polatchek, Motor driven shoe brush, **filed** Nov. 6, 1963, D.C. Mass. (Boston), Doc. 63–923–J. *Shields, Inc.* v. *Silvercraft Company, Incorporated.*

REISSUES

MARCH 17, 1964

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

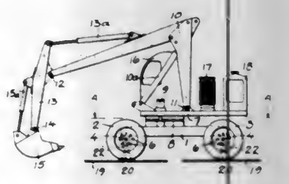
25,537
SEAT COVER
Daniel Charles Larkin, 3134 Woodstock Drive, Detroit 21, Mich.
Original No. 2,744,567, dated May 8, 1956, Ser. No. 354,555, May 12, 1953. Application for reissue Nov. 5, 1963, Ser. No. 321,707
7 Claims. (Cl. 297—219)



4. In a seat cover for automobiles and the like a top pad, a sponge rubber layer secured to the lower surface of said top pad and coextensive therewith, a skirt depending from the front and side edges of said top pad, said skirt having a width less than the height of the seat to which it is applied, an elastic cord secured to the lower edge of said skirt throughout its entire length and extending beyond the lower rear corners of said skirt, and hook members secured to the ends of said elastic cord.

25,538
ARRANGEMENT IN MOBILE EXCAVATORS
Ingebret Söyland and Kristian Söyland, Bryne, near Stavanger, Norway
Original No. 3,021,023, dated Feb. 13, 1962, Ser. No. 47,039, Aug. 2, 1960. Application for reissue Aug. 1, 1963, Ser. No. 299,694
Claims priority, application Norway Aug. 19, 1959
3 Claims. (Cl. 214—138)

1. A mechanical shovel comprising, in combination, a chassis frame, pairs of freely rotatable front and rear wheels, a rotatably driven shovel supporting platform pivotally mounted for rotation on said frame about a vertical axis, wheel-locking means operable at will to releasably [look] *lock* at least one pair of wheels to preclude rotation of at least said one pair of wheels, [an angle shaped] *a* jib arm having one end pivotally mounted on the platform and movable in a vertical plane, a shovel arm having opposite ends and pivotally connected [intermediate its opposite ends] to the other free end of said jib arm, a shovel bucket pivotally connected to one end of the shovel arm, a double acting mechanism connected to the shovel arm and to the jib arm for actuating



the bucket, a second double acting mechanism pivotally connected to the platform and intermediate opposite ends of the jib arm for raising and lowering said jib arm, a circular carrying disc placed below each of the pairs of wheels, said disc having a diameter [at least equal to] *greater than* the distance between [the outer sides of] the wheels of the pair in question, support means connecting each of said discs to the adjacent end of the chassis frame, said means being pivotally secured to the frame about an axis coinciding with the axis of rotation of the wheels and to the plane centrally thereof, for rotation about a vertical axis.

PLANT PATENTS

GRANTED MARCH 17, 1964

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,376
ROSE PLANT
Carlos Camprubi, Cornella de Llobregat (Barcelona), Spain, assignor to The Conard-Pyle Company, West Grove, Pa., a corporation of Pennsylvania
Filed Mar. 21, 1963, Ser. No. 267,065
1 Claim. (Cl. Plt.—23)

A new and distinct variety of rose plant of the floribunda class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of a bushy, vigorous and well-branched habit of growth, with the plant being of greater breadth than height, outstanding floriferousness, as evidenced by the ability to grow freely, with exceptional continuity of flowering, medium size flowers of semi-double form which are borne in clusters of several to a stem, a pure white general color tonality of the flowers, better than agerage disease resistance in comparison with other varieties grown under the same cultural conditions, and an unusually strong flower fragrance for a flower of the floribunda class.

2,377
MAPLE TREE
John McIntyre, Gresham, Oreg., assignor to Wayne E. McGill, doing business as A. McGill & Son, Fairview, Oreg.
Filed Apr. 2, 1963, Ser. No. 270,127
1 Claim. (Cl. Plt.—51)

A new and distinct variety of maple tree, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of a habit of bearing leaves of smaller size than those of the average seedlings of *Acer rubrum* and *Acer rubrum schlesingeri*, with the leaves being borne in greater profusion, an extremely early coloring of the foliage ranging from two to three weeks earlier than *Acer rubrum schlesingeri*, combined with the ability to hold the colored leaves for an unusually long period of time, and a distinctive and attractive brilliant scarlet autumn coloring of the foliage.

2,378
ROSE PLANT
Alain Meilland, Alpes Maritimes, France, assignor to The Conard-Pyle Company, West Grove, Pa., a corporation of Pennsylvania
Filed Apr. 9, 1963, Ser. No. 271,819
Claims priority, application France Sept. 7, 1962
1 Claim. (Cl. Plt.—11)

A new and distinct variety of rose plant of the hybrid tea class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of a vigorous habit of growth and superior flower productivity when grown in a greenhouse for cut-flower production, a habit of bearing the flowers on strong and heavy necks, an excellent flower form and slow-opening habit, said flowers maintaining their form throughout the life of the blooms, good flower petalage and strong petal abundance, a distinctive and attractive Rhodamine Pink general color tonality of the flowers, and superior flower longevity as cut flowers when kept under living room conditions.

2,379
ALMOND TREE
Frederic W. Anderson, Merced, Calif., assignor to Irvin M. Burchell, doing business as The Burchell Nursery, Modesto, Calif.
Filed Mar. 29, 1963, Ser. No. 269,223
1 Claim. (Cl. Plt.—30)

A new and distinct variety of almond tree, substantially as illustrated and described, characterized by vigor of growth, by a relatively late blooming period, by an excellent spur system, and by high production; and further characterized in comparison with the IXL by a blooming period approximately two weeks later, by general resemblance of the nuts in shape and color but usually of smaller size, and by substantially heavier production.

2,380
ALMOND TREE
Frederic W. Anderson, Merced, Calif., assignor to Fowler Nurseries, Inc., Newcastle, Calif., a corporation of California
Filed Apr. 12, 1963, Ser. No. 272,814
1 Claim. (Cl. Plt.—30)

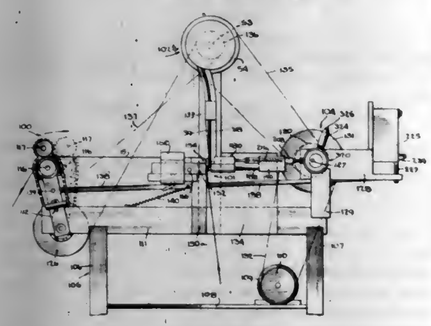
A new and distinct variety of almond tree, substantially as illustrated and described, characterized by a vigorous tree blooming heavily late in the season, followed by the regular bearing of very heavy crops of medium to small nuts which are harder and better sealed than the Nonpareil and with broader kernels than the Mission; and further characterized by blooming with the Mission or a day or two earlier and lasting a day or two longer; and additionally characterized by a harvest period following the Nonpareil but before the Mission; the variety being interfertile with the Nonpareil, Mission, Ruby, and Emerald.

PATENTS

GRANTED MARCH 17, 1964

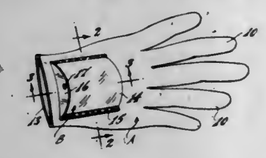
GENERAL AND MECHANICAL

3,124,805
BOTTOM STOP APPLICATOR
Harry M. Fisher, 157—36 22nd Ave., Whitestone, N.Y.
Filed Oct. 3, 1960, Ser. No. 60,087
7 Claims. (Cl. 1—106)



1. A machine for applying bottom stops to a zipper blank, said zipper blank comprising elongated side-by-side tapes and scoops, said tapes having scoop intervals wherein said tapes respectively have said scoops secured thereto with the scoops of one tape interlocking with the scoops of the other tape, said tapes also having scoop interruption intervals in which they are free of scoops; said machine comprising an anvil, means for drawing said blank over said anvil and through said machine, means mounting said draw means and said anvil so that one is movable relative to the other, said anvil having a through slot opposite said blank, a pin slidably received within said slot, spring means urging one end of said pin against said blank and into a scoop interruption interval, means responsive to the engagement of the trailing end of said scoop interruption interval against said pin for causing relative movement of said draw means and said anvil, and means responsive to said relative movement of said draw means and said anvil to apply a bottom stop to said blank against said anvil, said stop thereby striking and retracting said pin, said pin being shaped for resulting sliding movement of said bottom stop and said scoops over said end of said pin for resumption of movement of said blank.

3,124,806
GOLF TRAINING DEVICES
Roderick D. Campbell, 1737 Vine St., Philadelphia 39, Pa., and Stanley K. Herbets, 1850 N. 76th St., Philadelphia 51, Pa.
Filed Dec. 14, 1962, Ser. No. 244,762
1 Claim. (Cl. 2—160)



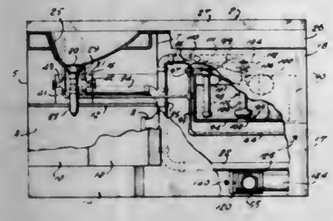
A golf training glove comprising a hand encapsulating member including a dorsum portion; a palmar portion; phalanx receivers and a cuff portion; pocket means in the dorsum portion so configured as to substantially cover the dorsum zone of the user's hand, said zone being that area bounded longitudinally by the wrist and a line adjacent the user's four knuckles and laterally contained between the ulna and the radius of the user's forearm; and weight means received within the dorsum pocket for complementary, substantially uniform, contoured distribution of load over the aforesaid dorsum zone, said load being restricted within the margins bounded by said dorsum zone and defining a center of gravity centrally disposed therewithin without in any way intrusively extending into areas of the phalanx receivers, whereby the back of the gloved hand which is carrying a golf club will be centrifugally urged into a plane perpendicular to the path of the hand arc during the downswing of the forearm and lead the arc of the club so as to provide maximum transmittal of power to each golf shot with optimum accuracy.

3,124,807
METHOD OF MAKING THREE-DIMENSIONAL HAND COVERINGS
Marvin A. Frenkel, Huntington Woods, and Claude H. Haney, Dearborn, Mich., assignors to Advance Glove Manufacturing Company, Detroit, Mich., a corporation of Michigan
Filed Jan. 19, 1962, Ser. No. 167,370
2 Claims. (Cl. 2—169)

1. The method of making a three-dimensional hand covering comprising the steps of placing a first sheet of flexible thermoplastic material over a die which contains a recessed portion having the contour of a human hand, evacuating air from said recessed portion to draw a portion of said first sheet into said recessed portion to thereby impart said contour to said portion of said first sheet, positioning a second sheet of said material in contact with said first sheet, and dielectrically heat sealing the sheets together along the periphery of said recessed portion.

3,124,808
LAVATORY AND WATER CLOSET BATHROOM FIXTURE
James Alexander Tiller, Louisville, Ky., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 9, 1961, Ser. No. 130,356
9 Claims. (Cl. 4—3)

4. A combination lavatory and water closet bathroom fixture, comprising a plurality of mated structural members and panels fastened together to form a cabinet unit having a generally flat back and a stepped front, a counter top supported on said cabinet unit, said panels and said counter top generally enclosing said cabinet unit such that the latter is generally hollow, said counter top having a lavatory extending into said hollow cabinet unit beneath said counter top, a support structure within said hollow cabinet unit, a toilet bowl mounted on said support structure and projecting outwardly from an inclined front portion of said stepped front of said cabinet unit such that the toilet bowl extends at an angle towards a



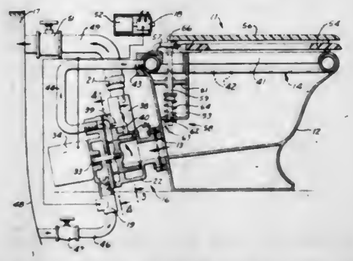
generally central portion of the cabinet as the forward outer end of the toilet bowl is approached, supply and drain piping passing through the interior of said hollow cabinet unit for supplying and draining said lavatory and water closet, and means between said structural members and at least one of said panels shiftably mounting the latter on said cabinet unit to provide access to the supply and drain piping and to the other components within said hollow cabinet unit.

3,124,809
FLUSHING ARRANGEMENT, BACKFLOW PREVENTER, AND WATER CLOSET COMBINATION
John H. Schmid, 1315 G. Daniel Baldwin Bldg., Erie, Pa.
Filed Feb. 20, 1961, Ser. No. 113,049
11 Claims. (Cl. 4—26)



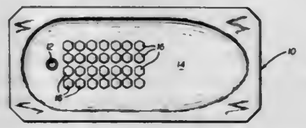
1. A flushing tank for a water closet comprising
a pressure tight tank adapted to be supported adjacent a water closet,
connection means comprising a tubular body connecting said tank to the inside of said water closet,
means to connect a water supply line to said tank,
valve means connecting said tank to said water closet through said tubular body,
vent means comprising a tubular member in said tank supported from the bottom of said tank to a position adjacent the top of said tank connecting the interior of said tank to atmosphere through said connection means,
allowing air to enter said tank from said connection means when said tank is flushed and allowing said air to escape from said tank into said connection means when said tank is being filled,
and a backflow prevention means in said tubular body between said valve means and said closet positively closing the flow passage through said connection means when the pressure in said tank and on the side of said backflow prevention means adjacent said tank falls below a predetermined value.

3,124,810
TOILET WITH WASTE DISPOSING APPARATUS
Homer H. Cobler, Oakland, Calif., assignor to Cast Aluminum and Brass Corp., San Leandro, Calif., a corporation of California
Filed Aug. 14, 1961, Ser. No. 131,230
3 Claims. (Cl. 4—90)



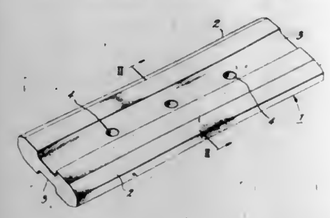
2. A ship board toilet comprising a toilet bowl having a tubular rim with perforations adjacent the bowl interior and an outlet, an open-topped reservoir projecting from the interior of said bowl in underlying relation to a portion of said rim and having an aperture through its bottom, a vertical plunger reciprocably mounted in said reservoir and extending through said aperture, said plunger having a sealing member at its lower end and spring loaded to normally maintain the sealing member in engagement with the undersurface of its bottom in closing relation to said aperture, a seat disposed upon said rim and pivotally secured thereto, a lid disposed upon said seat and pivotally secured to said rim, said lid having an extending portion projecting beyond its pivot point engageable with said plunger upon upward pivotal movement of the lid, a casing formed with two chambers sealed from each other, the first of said chambers having an outlet communicably connected to the interior of said rim and an inlet, the second of said chambers having an inlet communicably connected to said bowl outlet and an outlet, a dual sided impeller mounted for rotation in said casing with one side of the impeller in the first chamber and the other side of the impeller in the other chamber, an electric motor connected in driving relation to said impeller, piping means including a solenoid actuated valve connected to said inlet of said first chamber and adopted for connection to a sea cock, piping means including a check valve connected to said outlet of said second chamber and adapted for connection to a second sea cock, and a time delayed opening push button switch for connection on one side to a source of electricity and electrically connected on the other side to said motor and solenoid actuated valve.

3,124,811
SAFETY TREAD FOR BATH EQUIPMENT FLOOR
Cyril S. Treacy, 164 Boulevard, Scarsdale, N.Y.
Filed Sept. 26, 1962, Ser. No. 226,378
3 Claims. (Cl. 4—173)



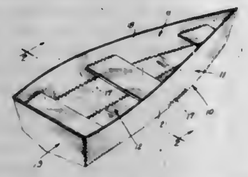
1. A bathtub comprising a floor of substantially planar upper surface, a glazed enamel coating thereover, and preformed antislip elements, said elements being in the form of plates of thickness about 0.05–0.5 inch and of shortest dimension across the face thereof about 0.3–1.5 inches, disposed in spaced relationship to each other and bonded at their backs to the surface of said coating.

3,124,812
PILLOWS
William Frank Milton and Harvey Brockenshaw, Wellington, Somerset, England, assignors to Price Brothers and Co. Limited
Filed July 3, 1962, Ser. No. 207,295
2 Claims. (Cl. 5—338)



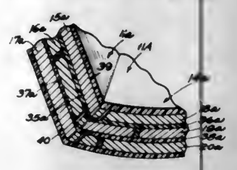
1. A pillow comprising in combination a unitary elongated rectangular body formed of a synthetic foamed plastic and having upper and lower longitudinal faces, a recess formed centrally in each of said faces of the body and extending longitudinally thereof from one end to the other, a plurality of apertures formed to extend through the body to communicate the recesses one with the other and spaced lengthwise of the said recesses and an outer covering of a freely porous material enclosing said body and lying taut across the recesses to form therewith enclosed air channels extending longitudinally of each face of the pillow.

3,124,813
BOAT
Wilbur C. Graef, 1921 Maplewood Road, Northbrook, Ill.
Filed June 12, 1961, Ser. No. 116,354
3 Claims. (Cl. 9—6)



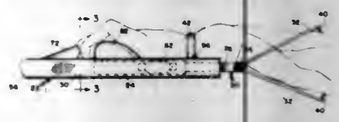
1. A boat body including a bottom wall, opposing side walls and a stern wall, each of said side walls and stern wall having a lower edge portion abutting an edge portion of said bottom wall so as to form a joint therewith, said side and stern walls each extending upwardly from said bottom wall so that the inner surfaces thereof each form a corner with the upper surface of said bottom wall, each of said edge portions having a row of holes formed therethrough, elongated flexible non-metallic lacing means threaded through adjacent rows of holes so as to secure said side and stern walls to said bottom wall, portions of said lacing means extending diagonally across said corners in spaced relationship to said inner and upper surfaces, a flexible liner of glass fabric cloth extending over each side of each pair of said abutting edge portions so as to cover both sides of the joint therebetween, one of said flexible liners at each joint extending over said portions of said lacing means and spaced from said corners so as to define a chamber of triangular cross section, synthetic flexible plastic resinous adhesive impregnating said flexible liners so as to secure them to said walls, said adhesive filling the spaces in said holes not occupied by said lacing means and filling each chamber defined between each corner at each of said one flexible liners so as to encase said diagonal portions of said lacing means and secure said walls strongly together.

3,124,814
BOAT CONSTRUCTION
Wilbur C. Graef, Duffy Lane, Deerfield, Ill.
Filed Nov. 23, 1962, Ser. No. 239,549
3 Claims. (Cl. 9—6)



1. A boat body comprising a plurality of substantially identical internesting hull sections telescoped together, each hull section including side walls, a bottom wall and a stern wall, said bottom wall having edge portions abutting lower edge portions of said side and stern walls so as to define joints, each of said edge portions having a row of holes formed therethrough, and an elongated flexible non-metallic lacing means threaded through adjacent rows of holes at each joint so as to secure said edge portions together; a water resistant layer of adhesive material between adjacent hull sections securing said hull sections together, an inner layer of said adhesive material covering the inner surface of the inner most hull section, an outer layer of said adhesive material covering the outermost surface of the outermost hull sections, said adhesive material extending into said holes and completely covering said lacing means.

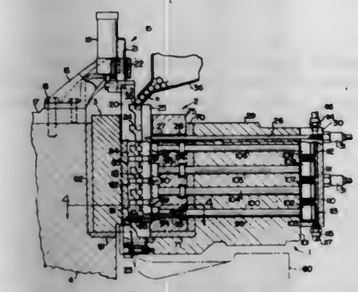
3,124,815
SWIMMING TRAINING APPARATUS
Leslie A. Harvey, 2350 4th Ave., Yuma, Ariz.
Filed July 29, 1963, Ser. No. 298,031
10 Claims. (Cl. 9—311)



1. A swimming student's floating support comprising:
an elongated buoyant platform;
means defining elongated openings on opposite sides thereof for guiding a student's arms through the proper swimming technique;
means defining an opening at one end of said platform;
resilient means in said last named opening for supporting and exerting an upward pressure on the student's head; and
adjustable means extending from the other end of the platform for limiting the vertical movement of the student's legs.

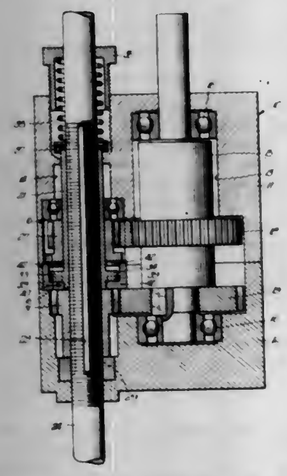
3,124,816
FORGING MACHINE DIE MECHANISM WITH ADDITIONAL BLANK GRIPPING MEANS
Albert R. Kull, Beachwood, Ohio, assignor to The Ajax Manufacturing Company, Euclid, Ohio, a corporation of Ohio
Filed June 22, 1961, Ser. No. 118,806
13 Claims. (Cl. 10—12)

1. In an upsetting forging machine having a first gripping die including a plurality of vertically spaced die cavities, a second horizontally reciprocable gripping die including corresponding opposed die cavities adapted to be reciprocated into and out of cooperative work-gripping relationship to said first gripping die thus to exert a gripping pressure on a workpiece within such cavities, and a third die horizontally reciprocable in a direction substantially normal to such reciprocation of said second gripping die to engage and upset an end portion of a workpiece



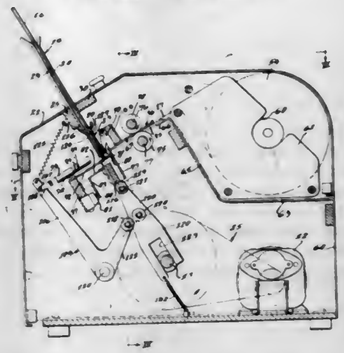
thus gripped by said gripping dies; individual fluid pressure back-up means for each of such cavities in at least one of said gripping dies operative to exert an increased gripping pressure on the workpiece therein.

3,124,817
ROTARY TOOL SPINDLE HAVING RAPID TRAVERSE MOVEMENT FOLLOWED BY SLOWER FEED RATE
Kenneth C. Mosier, 1900 W. Dorothy Lane, Dayton 39, Ohio
Filed Sept. 22, 1961, Ser. No. 139,988
14 Claims. (Cl. 10—128)



11. A self-feeding drill comprising, a housing, a drill spindle mounted in said housing for rotational and longitudinal movements, a sleeve member disposed about a portion of said spindle in threaded engagement therewith, a feed gear freely rotatable about said sleeve member and being characterized by an internal spline formation in the bore thereof, a drive gear disposed about another portion of said spindle and drivingly connected thereto in a manner permitting longitudinal movement of the spindle relative thereto, means for simultaneously rotating said feed and drive gears in a manner such that drive and feed gears are rotated at slightly different speeds, radially extending lug members formed on one end of said sleeve member, a mating external spline formation formed on said sleeve member intermediate said lug members and said feed gear, said sleeve member being longitudinally movable between a first position wherein said mating spline formations are engaged one with the other whereby said sleeve member is drivingly connected to said feed gear during rotation of said spindle by said drive gear whereby to impart a positive low rate of longitudinal feed movement to said drill spindle and a second position wherein said spline formations are disengaged from each other and said lug members are engaged with stationary jaw members formed on said housing whereby to prevent rotation of said sleeve member during rotation of said spindle by said drive gear whereby to impart a rapid traverse movement to said drill spindle, and spring means normally urging said sleeve member into said second position whereby said spindle is moved toward the work to be drilled with said rapid traverse movement until the tip of a drill bit mounted in the spindle engages the work whereby the pressure of the work against the drill tip overcomes the action of said spring means and shifts said sleeve member into said second position whereby to automatically impart said positive feed movement to said drill spindle.

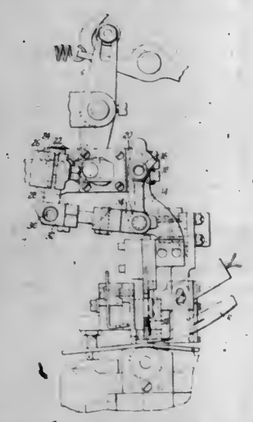
3,124,818
AUTOMATIC BINDING MACHINE
Henry Lowell Byland, Deerfield, Ill., assignor to General Binding Corporation, a corporation of Illinois
Filed June 29, 1962, Ser. No. 206,215
7 Claims. (Cl. 11—1)



1. In an apparatus for binding a stack of sheets having at least one perforation therein adjacent an edge thereof,
feed and guide means for a ribbon of heat sealable material,
a guide chute for a stack of sheets extending at right angles to said feed and guide means, stop means spaced from said guide chute and operable to align the perforation with the ribbon feed and guide means,
a ribbon guide extensibly movable through the perforation into juxtaposition with said ribbon feed and guide means, for guiding a ribbon to be threaded through said perforation,
said ribbon guide being retractible from said perforation after the ribbon has advanced therealong through the perforation to release the leading end of the ribbon and thereby complete the threading of the ribbon through the stack of sheets,
a cut-off knife movable along the discharge end of said feed and guide means for severing the ribbon,
a ribbon folder forming a continuation of said chute and spaced between the end of said chute and said feed and guide means and movable along the stack of sheets toward said stop to first clamp the ribbon for severing and to then fold the ribbon along opposite sides of the stack of sheets to extend beyond the edge thereof,

and heat sealing means disposed beneath said stop and clamping the adjacent ends of the ribbon together and sealing the ends of the ribbon by heat.

3,124,819
PRESSURE FOOT FOR RIB ATTACHING MACHINES
Stephen P. Lotarski, Beverly, and Francis R. Speight, Dedham, Mass., assignors to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed Jan. 3, 1963, Ser. No. 249,236
4 Claims. (Cl. 12—20)



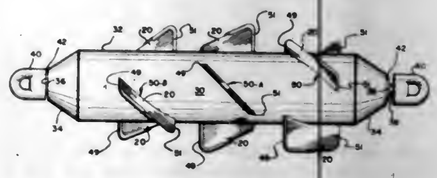
1. A presser foot for an insole rib attaching machine comprising an inner grip member, a displaceable grip member on said inner grip member, said grip members having generally co-planar work-engaging surfaces, means mounting the displaceable grip member adjacent to the inner grip member for movement into and out of alinement therewith while maintaining its work-engaging surface in the plane of the work-engaging surface of the inner grip member, and means normally maintaining said displaceable member in line with the inner grip member but permitting its displacement upon engagement with a previously formed rib on the insole.

3,124,820
DEVICE FOR CLEANING INTERNAL TUBULAR SURFACE
Melvin D. Berry, Marion, Ind., assignor to Radio Corporation of America, a corporation of Delaware
Filed Feb. 20, 1963, Ser. No. 259,929
4 Claims. (Cl. 15—104.09)



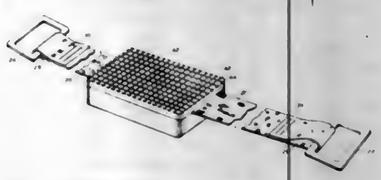
1. Apparatus for cleaning internal tubular surfaces comprising a ribbon-like squeegee blade twisted about its longitudinal axis into a helical auger-like form, said squeegee blade having adjacent a longitudinal edge thereof a longitudinal wiping groove in one of its flat surfaces and a longitudinal folding groove radially offset relative to said wiping groove in the other of its flat surfaces.

3,124,821
DEVICE FOR CLEANING SEWERS
Lewis E. Mathews, Columbus, Ohio, assignor to U. Ebert Whiteis and Le Roy J. Schneider, Columbus, Ohio
Filed Nov. 30, 1960, Ser. No. 82,369
5 Claims. (Cl. 15—104.16)



1. An apparatus for clearing obstructions in passageways comprising, in combination, frame means; a first plurality of radially outwardly extending front cutters mounted on said frame means and inclined to impart rotation to said tool; a second plurality of radially outwardly extending cutters mounted on said frame means rearwardly of said first plurality, and inclined to impart rotation to said tool, the leading portions of said rearwardly positioned cutters being circumferentially advanced relative to said front cutters, in the direction of rotation of said tool, whereby said front cutters can not block said leading portions of said rearwardly positioned cutters from directly engaging obstructions; and means on said frame means for connecting said apparatus to a prime mover for moving said apparatus through said passageways.

3,124,822
END GRIP BATH APPLIANCE FOR WASHING AND MASSAGING THE BACK
Lorenzo Marchese, 709 N. Townsend St., Syracuse, N.Y.
Filed Sept. 12, 1963, Ser. No. 308,379
1 Claim. (Cl. 15—118)



An end grip bath appliance for washing and massaging the back comprising a relatively long hand strap of uniform width and thickness composed of thin flexible sheet plastic, hand grip loops on the opposite ends thereof including portions of the strap ends folded back upon the strap and sewed thereto, a substantially rectangular thin block of sponge rubber, and a substantially rectangular block of cellulosic sponge of substantially the same rectangular shape as the sponge rubber block and at least double the thickness of said sponge rubber block disposed on opposite sides of a central portion of said strap, and a thin rigid rectangular plastic plate interposed between the strap and sponge rubber, said plate being of a width greater than the width of said strap, and less than the width of said blocks, and of a length less than the length of said blocks, the contacting and facing surfaces of said blocks, plate, and the central portion of the strap disposed between the blocks being adhesively bonded

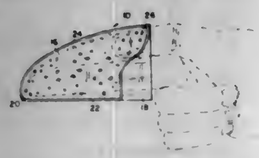
to one another and with the facing side portions of said blocks beyond the width of said plate and strap being bonded together to conceal said plate, and the outside face of said sponge rubber block having a corrugated surface.

3,124,823
STEM BRUSH AND METHOD FOR MAKING SAME
Vernon K. Charvat, Bay Village, Ohio, assignor to The Osborn Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Apr. 19, 1961, Ser. No. 104,152
21 Claims. (Cl. 15—206)



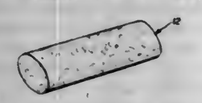
12. In a brush comprising two stem members and a flat layer of brush material held therebetween, strong adhesive bonding material embedding said brush material in the region of said stem members and also adhesively bonding said two stem members directly together to prevent separation of the latter.

3,124,824
TOOTH CLEANING DEVICE
Herbert Spencer Lutz, New York, N.Y., assignor to International Process & Product Development Corporation, a corporation of New York
Filed Mar. 2, 1962, Ser. No. 176,941
1 Claim. (Cl. 15—227)



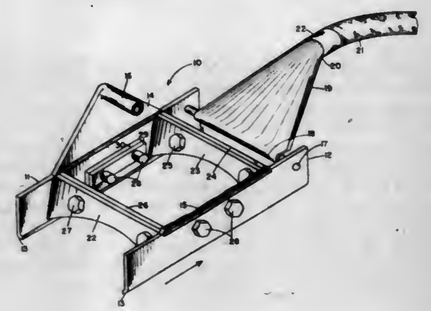
A tooth cleaning instrumentality formed of two layers of thin plastic film heat sealed along their longitudinal edges to form a cot, one layer being substantially longer than the other so as to project at the bottom of the cot to form a tab which may be grasped by the fingers of one hand for pulling the cot onto a finger of the other hand, the shorter layer of film having secured thereto a layer of plastic foam of substantially the same shape as said film layer, said shorter film layer and foam layer having a lobe-like formation at the bottom thereof of smaller size than the extension tab on the longer plastic layer so as to leave a part of the extension tab exposed for grasping while still forming an area which may be overlapped by the thumb adjacent to the finger on which the cot is applied.

3,124,825
NAIL POLISH REMOVER
Michael Iovenko, New York, N.Y., assignor to The Handee-Pak Corporation, New York, N.Y., a corporation of Delaware
Filed May 8, 1962, Ser. No. 193,256
4 Claims. (Cl. 15—506)



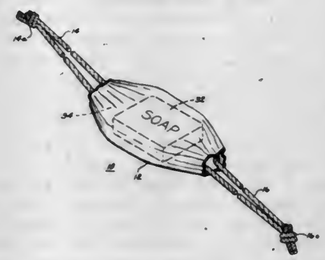
1. An article for removing nail polish comprising a fibrous material impregnated with a liquid solution containing more than 80 percent ethylene glycol monomethyl ether, and 2 to 8 percent each of methyl salicylate and butyl acetate.

3,124,826
APPLICATOR FOR APPLYING A BONDING AGENT TO INERT SLIVERS THAT ARE TO BE USED IN SOLID PROPELLANT ROCKET MOTORS
Bryce L. Middlebrooks, Athens, Ala., assignor to Thiokol Chemical Corporation, Bristol, Pa., a corporation of Delaware
Filed Apr. 12, 1963, Ser. No. 272,762
4 Claims. (Cl. 15—513)



1. An applicator for applying a bonding agent to an inert sliver for use in a motor case of a solid propellant rocket motor comprising a pair of side rails, means on said side rails for supporting the inert sliver therebetween, means carried by said side rails for applying and determining the thickness of the bonding agent as it is applied to the inert sliver, a funnel having a supply hose connected thereto for supplying the bonding agent to said applicator, a support rod secured at its opposite ends to said rails and a curved longitudinal edge on said funnel for mounting said funnel on said support rod for oscillatory movement thereof with relation to said support rod.

3,124,827
WASHCLOTH
William D. Hull, 1714 Courtland, Park Ridge, Ill.
Filed Mar. 24, 1961, Ser. No. 98,243
6 Claims. (Cl. 15—568)



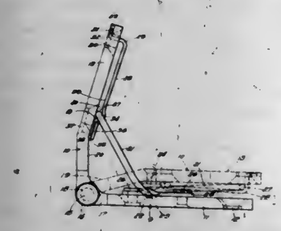
5. A washcloth comprising a soap-receiving pocket of absorbent material open at least at one end, a hem along said open end forming a drawstring pocket, a pair of diametrically opposed eyelets extending into said drawstring pocket, and a drawstring having each of its ends in said pocket extending through an opposite one of said eyelets, each end being secured in said drawstring pocket adjacent the opposed one of the eyelets.

3,124,828
APPLICATOR DEVICE HAVING GAS PERMEABLE LIQUID IMPERMEABLE VENT
Alan G. Barber and David L. Kayser, Tonawanda, and Paul H. Lahr, Buffalo, N.Y., assignors to Union Carbide Corporation, a corporation of New York
Filed Dec. 5, 1961, Ser. No. 157,057
6 Claims. (Cl. 15—569)



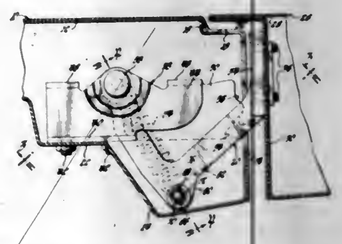
1. An applicator device for dispensing liquids which comprises a container adapted to hold a liquid and having one perforated wall; an applicator pad coextensive with said perforated wall and communicating with said container through said perforated wall; and a vent provided in an opening in the container, normally submerged in said liquid, maintaining a pressure differential between the surroundings and the head space of the container sufficient to offset substantially the effect of the liquid head in the container, and comprising a gas permeable-liquid impermeable membrane integrally affixed around the perimeter of said opening in said container.

3,124,829
HINGE EMBODYING HOLD-OPEN MEANS
Angelo R. De Vito, Rockford, Ill., assignor, by mesne assignments, to Atwood Vacuum Machine Company, Rockford, Ill., a corporation of Illinois
Filed May 16, 1960, Ser. No. 29,342
7 Claims. (Cl. 16—140)



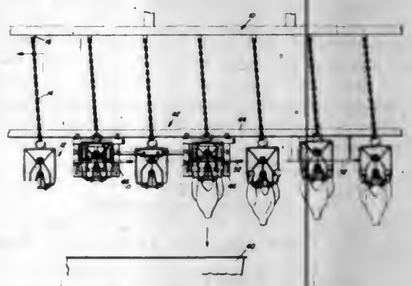
1. In a hinge comprising two hinge members pivotally connected to swing relative to one another through a given angularity, the improvement which consists in an elongated link pivotally connected at one end to one of said hinge members in radially spaced parallel relation to the hinge axis and having a cross-pin on its other end also parallel to said hinge axis and slidable lengthwise of the other hinge member toward and away from said hinge axis in the opening and closing of the hinge, an elongated leaf spring adapted to be secured to and extending lengthwise of said other hinge member and closely slidably confining said cross-pin between it and said hinge member to resist by its deflection the sliding movement of said cross-pin and accordingly hold said hinge members yieldingly in different open positions, said spring carrying hinge member having an opening provided therein adjacent one end of said leaf spring, said leaf spring having that end thereof bent substantially at right angles to the hinge member and extending into the opening and then again substantially at right angles so as to hook onto said hinge member detachably in said opening and thereby also substantially positively limit deflection of said leaf spring at that end away from said hinge member but with a small amount of spring restrained yield by virtue of deflection of the bent extremity relative to said hinge member, and means rigidly securing the other end of said leaf spring to said hinge member, said leaf spring providing at its opposite ends full clearance for said cross-pin between it and the hinge member.

3,124,830
HINGE AND HOLD OPEN
Edmond R. Gionet, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 8, 1961, Ser. No. 94,351
6 Claims. (Cl. 16—140)



1. A hinge and hold open comprising, in combination, a pair of pivotally interconnected hinge members movable relative to each other between open and closed positions, one of said members including spaced walls receiving said other member therebetween, the edge portion of one of said walls being provided with at least one detent shoulder therein, a detent member located generally transversely of said other hinge member, said detent member being swingably supported adjacent one end thereof on said other of said hinge members for swinging movement in a plane transverse of said hinge members and having the other end thereof engageable with said edge portion and detent shoulder, and means continuously biasing said detent member into engagement with said edge portion.

3,124,831
AUTOMATIC RELEASE FOR POULTRY SHACKLES
William F. Altenpohl, Philadelphia, Pa.
(Union Hill Industries Park, West Conshohocken, Pa.)
Filed July 9, 1962, Ser. No. 208,398
9 Claims. (Cl. 17—11)



1. An automatic poultry shackle release mechanism for use with an overhead poultry conveyor system of the type having an overhead conveyor track, a plurality of poultry shackles each having a releasable poultry retaining means provided with a laterally projecting movable actuator, supports each secured to a shackle and being secured to said track for movement therealong and for movement of said shackle laterally of said track; said release mechanism comprising a guide rail assembly disposed in fixed relation to and below said track for engaging and positioning each shackle and its actuator in a predetermined attitude, a rotatable impact means disposed adjacent said track and guide rail assembly and positioned to extend into the path of movement of and in contacting relation with said actuators to strike and operate said actuators as successive shackles move therepast whereby to effect release of poultry from said shackles.

3,124,832
CHICKEN PICKING FINGER
John J. Kravetz and Arnold W. MacAlonan, Bedford, Ohio, assignors to The Stalwart Rubber Company, Bedford, Ohio, a corporation of Ohio
Filed Jan. 17, 1961, Ser. No. 83,294
9 Claims. (Cl. 17—11.1)

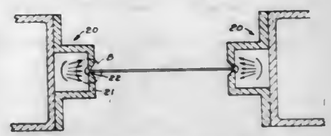


1. In a chicken picking finger comprised of a length of soft elastic flexible material, the improvement which comprises: at least one strand of flexible material extending generally along the length of said finger, embedded therein and bonded thereto, said strand having a high modulus of elasticity as compared to said soft material.

3,124,833
POULTRY SHACKLE FOR OVERHEAD CONVEYOR AND CARRIAGE ASSEMBLY
William F. Altenpohl, Philadelphia, Pa.
(Union Hill Industries Park, West Conshohocken, Pa.)
Filed July 9, 1962, Ser. No. 208,399
16 Claims. (Cl. 17—44.1)

1. A poultry shackle for a poultry conveyor system of the overhead type comprising a support and a holder, a means slidably and guidingly mounting and retaining said holder on said support for relative vertical movement, pairs of cooperating opposed vertical surfaces in side-by-side relation on said support and holder defining vertical pockets between said surfaces of a substantially uniform width sufficient for receiving and retaining by gravity the extremity of a fowl when placed therein, said support having a bottom wall toward and from which said holder is movable, said bottom wall in the lower position of said holder cooperating with and engaging said opposed surfaces and defining a bottom closure for said pockets and in the holder upper position being out of engagement with said holder surfaces and affording an outlet opening for said pockets of greater width than that of said pockets.

3,124,834
APPARATUS FOR STRETCHING THERMOPLASTIC FILMS WITH BEADED EDGES
Constant Andre Vandierendonck, Borsbeek-Antwerp, Belgium, assignor to Gevaert Photo-Producten N.V., Mortsel-Antwerp, Belgium, a Belgian company
Filed Aug. 16, 1960, Ser. No. 49,991
4 Claims. (Cl. 18—1)



1. Apparatus for stretching organic thermoplastic films having continuously beaded longitudinal edges, comprising.

(*a*) rotating film feed rolls mounted at one end of said apparatus,

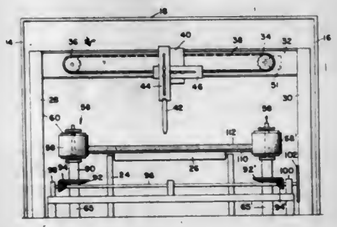
(*b*) film pulling rollers mounted at the other end of said apparatus, rotating at a peripheral speed at least as great as that of said feed rolls,

(*c*) elongate film-edge guide frames mounted between said feed rolls and said pulling rolls and coplanar with the film passing between said rolls, said guide frames diverging laterally from the centerline of said strip in the direction from the feed rolls to the pulling rolls,

(*d*) each of said guide frames including vertically spaced, longitudinally continuous wall elements defining between their proximate edges a continuous slot sized to receive an edge of said film with its bead constrained by said wall elements to travel outwardly of said centerline by sliding engagement of the bead with the outer surfaces of said wall elements;

(*e*) at least the surfaces of said wall elements which engage said bead being formed of continuous strips of solid material having a low coefficient of sliding friction with respect to the material forming said thermoplastic film.

3,124,835
LAMINATING APPARATUS
Peter J. Celano, Laurel Springs, N.J., and Emil G. Marcmann, Collegeville, Pa., assignors to United Foam & Plastics Industries, Barrington, N.J., a corporation of New Jersey
Filed Dec. 14, 1961, Ser. No. 159,290
6 Claims. (Cl. 18—4)



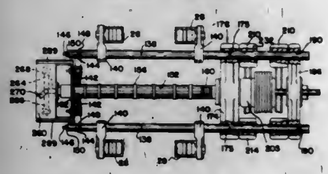
1. Apparatus comprising a plurality of horizontally disposed rollers for supporting sheets of rigid material, a belt drive means on opposite sides of said rollers for engaging a side edge of the sheets of rigid material and moving the same along said rollers, a nozzle above said rollers for dispensing a liquefied foam polymeric resin on said sheets of rigid material, said belt drive means being adapted to cooperate with the sheets of rigid material to simulate a mold capable of providing a pre-

determined shape for the side edges of the foam resin, and heat means above said rollers for curing the polymeric resin into a layer of foam bonded to the sheets of rigid material.

3,124,836
MOLDING MACHINE

Edward Fischer, Saline, Mich., assignor to Hoover Ball and Bearing Company, Ann Arbor, Mich., a corporation of Michigan

Filed Mar. 14, 1961, Ser. No. 95,730
13 Claims. (Cl. 18—5)

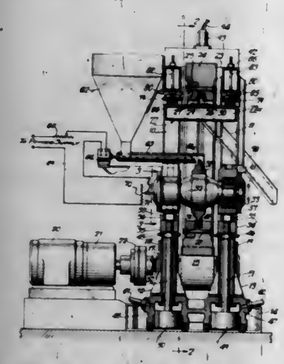


2. In a molding machine having a main frame and an extruder for a heated plastic material, said extruder including a hollow barrel and a rotatable screw mounted axially therein, means rigidly mounting one end of said barrel on said frame, guide bar means mounted on said frame, means slidably mounted on said guide bar means and arranged in a supporting relation with said barrel at a position spaced from said one end thereof, and means mounted on said frame and drivingly connected to said screw.

3,124,837
RING-ROLLER PRESSURE MOLDING OF METAL POWDERS AND THE LIKE

James A. Jackson and Paul F. Holder, Birmingham, Ala., assignors to R-N Corporation, New York, N.Y., a corporation of Delaware

Filed May 17, 1961, Ser. No. 110,691
3 Claims. (Cl. 18—9)

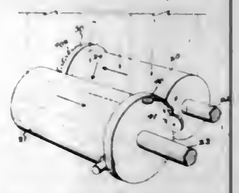


1. Apparatus for pressure molding metal powders and the like, comprising: a peripherally flanged roll member and an interiorly grooved ring member of larger diameter, means rotatably mounting said members on parallel axes for adjustable axial spacing and with said roll flange penetrating said groove, said means including spaced rolls on which said ring member is rotatably supported, and vertically displaceable bearings for said roll member, hydraulic pressure actuated hold-down means urging said roll flange to maximum penetration in said groove under a preselected hydraulic pressure, means for concurrently rotating said members, means for continuously feeding said powders into said groove for compression therein between said members at said preselected pressure, and means for thereafter progressively stripping said compacted powder from said groove in self-sustaining arcuate segments, said powder feeding means including a variable speed motor for varying the rate of feed, a power supply circuit for said motor including a speed control for said motor, and an actuating arm for said control mounted on one of said bearings for actuating said control to reduce the motor speed as said bearing is raised, and for opening said supply circuit to stop said motor at a preselected elevation of said bearing.

3,124,838
APPARATUS FOR COMPACTING METAL AND METAL COATED PARTICLES

John A. H. Lund, Vancouver, British Columbia, and Tibor Krantz, Fort Saskatchewan, Alberta, Canada, assignors to Sherritt Gordon Mines Limited, Toronto, Ontario, Canada, a company of Ontario

Filed Sept. 14, 1961, Ser. No. 138,116
2 Claims. (Cl. 18—9)

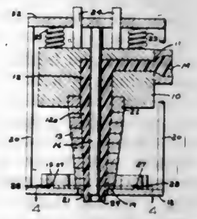


1. A rolling mill for producing compacted shapes from metal and metal-coated particles which comprises a pair of rotatable, oppositely positioned rolls mounted on horizontal roll shafts in spaced relation and defining a roll-gap therebetween, said rolls having a normal tendency to shift axially in opposite directions when rotated under load, means for confining particles to the roll gap which comprises two flexible discs of a radius greater than the radius of the rolls by at least the width of the roll gap, one of said flexible discs being mounted on one of the rolls at the end corresponding to the direction in which the roll would normally tend to shift axially and the other disc being mounted at the other end of the other roll whereby binding of the discs against the opposing faces of the rolls is avoided, means for pressing each disc firmly against the opposing faces of the ends of the rolls during their rotation from a point approaching the roll gap to a point beyond the roll gap, and means for flexing the discs away from the opposing faces of the ends of the rolls at a point spaced from the roll gap.

3,124,839
APPARATUS FOR PRODUCING EXTRUDED TUBING OF THERMOPLASTIC MATERIAL

Elmer L. Adams, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio

Filed Oct. 23, 1961, Ser. No. 146,951
15 Claims. (Cl. 18—14)

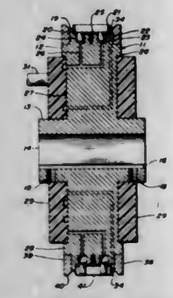


11. An extruder orifice comprising an element defining one wall of an annular passageway, a coiled resilient member defining the other wall of said annular passageway, and means for variably twisting said coiled member to vary the width of said passageway.

3,124,840
CAPSULE FORMING DIE ROLL WITH GUARD RINGS

Arthur Sinclair Taylor, Spring Valley, and William P. Konazewski, Pearl River, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

Filed Mar. 5, 1962, Ser. No. 177,365
7 Claims. (Cl. 18—21)



1. In a die roll for forming soft plastic capsules from plastic sheet material which comprises: a substantially cylindrical die roll blank, having in the cylindrical periphery thereof a series of capsule-forming cavities, each consisting of a hardened-steel, raised-rim, capsule cavity insert fitted into an insert slot in the periphery of said cylindrical roll and having at least one piston cylinder under said insert, at least one capsule ejector plug extending towards the insert cavity in the insert, said capsule ejector plug having thereon a capsule ejector piston, fitting in said cylinder, whereby said plug may be, by air pressure, raised to substantially the top of said cavity, or retracted to form a portion of the bottom of said cavity, a manifold passage from adjacent the axial end of said cylinder to a valve surface of said die roll blank, whereby air pressure, acting through adjacent valve means at desired times during the rotation of the roll, causes an increase or reduction in the pressure in said cylinder, thereby actuating said piston and plug;

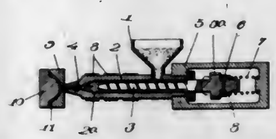
the combination therewith of a separate continuous hardened steel guard ring on each side of the periphery of said cylindrical die roll blank and concentric with said die roll, and of a diameter such that the greatest diameter of the guard ring is substantially the same as and coaxial with the diameter of the face of the cutting out rims of said inserts.

3,124,841
INJECTION MOLDING MACHINE OF THERMOPLASTICS

Keisosuke Kaji, 38 Aza-Ganjiyama, Oobu-cho, Chita-gun, Japan

Filed Feb. 20, 1961, Ser. No. 90,443
Claims priority, application Japan Apr. 21, 1960
3 Claims. (Cl. 18—30)

1. An injection molding device consisting of a cylinder having a discharge opening at one end, means for delivering material to be injected connected to said cylinder at a spaced location from the discharge opening, a rotatable and reciprocable screw in said cylinder having means thereon effective upon rotation thereof to feed material from said means for delivering material to be injected to said discharge opening, valve means for opening and closing said discharge opening, pressure accumulator means opposing movement of said screw in a direction away from said discharge screw and said pressure accommodation means being disposed so that when material is fed by rotation of said screw toward said discharge to cause, when said opening is closed, a build up of pressure ahead of said screw which urges said screw in a direction to act on said pressure accumulator means,

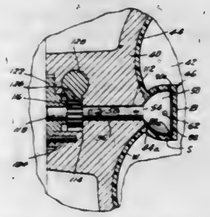


said pressure accumulator means being of a construction and arrangement to cause a build up of a force sufficient to drive said screw toward said discharge and in proportion to the rotation of said screw the force being effective to drive said screw toward said discharge when said opening is opened by said valve means, and means to rotate said screw.

3,124,842
METHOD AND APPARATUS FOR MOLDING A DOLL'S HEAD

Helmuth Moormann, Elmont, N.Y., assignor to Ideal Toy Corporation, Hollis, N.Y., a corporation of New York

Filed Jan. 22, 1962, Ser. No. 167,513
10 Claims. (Cl. 18—34)



10. An eye insert including an insert body providing a molding surface, at least one pin projecting from said molding surface, means mounting said pin for movement between retracted and extended positions relative to said molding surface, said molding surface and said pin when in said extended position having built up thereon during molding an eyeball socket wall having an opening therein, at least one cutter blade on said insert body, means mounting said cutter blade for movement relative to said molding surface, means biasing said cutter blade to a normal position extending beyond said molding surface such as to be embedded in said socket wall incident to molding, and actuating means operatively connected to said cutter blade for moving said cutter blade and for simultaneously moving said pins to said retracted position.

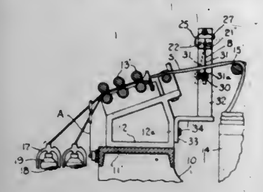
3,124,843
CONTROL MEANS FOR TEXTILE MACHINES

Cecil S. Adams, Saluda Lake, Greenville, Walter A. Dean, Greenville, and George W. Martin, Ware Shoals, S.C., assignors to Adams, Inc., Greenville, S.C., a corporation of South Carolina

Filed Oct. 25, 1961, Ser. No. 147,582
6 Claims. (Cl. 19—.25)

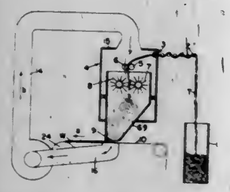
1. A control system for a textile machine having motor driving means, a supply of moving strands for a plurality of deliveries being fed from a supply over a lifting roll to a drafting system, said strands being fed from the drafting system to packaging means including; first sensing means detecting faulty strands being fed from the drafting system; second sensing means moved by a faulty

strand being fed to the drafting system detecting such faulty strands; said second sensing means including; a bar disposed beneath a plurality of such strands resulting in a plurality of deliveries; switch means carried adjacent said bar; said bar being so mounted that its movement responsive to a strand falling thereon results in actuation of the switch means; electrically operated means actuated by the first and second sensing means stopping said motor



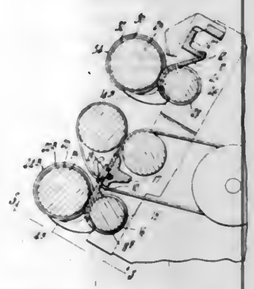
driving means responsive to faulty strands being fed from the drafting system and to the drafting system respectively; and electrically operated signalling means actuated by the first and second sensing means distinguishing between stoppage caused by faulty strands being fed from the drafting system and to the drafting system; whereby strand run out is avoided and the machine stopped promptly upon the occurrence of a faulty strand whether on the supply side of the delivery side of the drafting system.

3,124,844
MEANS TO PROCESS FIBERS IN A TOW OR SHEET-LIKE MATERIAL
Thomas T. Constantine, South Easton, and Richard D. Wells, Westwood, Mass., assignors to Crompton & Knowles Corporation, Worcester, Mass., a corporation of Massachusetts
Original application June 10, 1960, Ser. No. 35,157, now Patent No. 3,071,821, dated Jan. 8, 1963. Divided and this application Dec. 29, 1960, Ser. No. 79,360
19 Claims. (Cl. 19—155)



1. In a machine for producing a nonwoven web from a tow of continuous filaments having a free leading end portion, a pair of feed rolls in side by side frictional contact between which the tow extends downwardly beyond said rolls and effective to deliver said portion downwardly in substantially vertical alignment with said contact at a given linear rate, a pair of oppositely rotatable members in side by side spaced relationship underneath and remote from said feed rolls and between which the leading end portion of the tow extends, tow beater blade elements on each of said members and extending radially therefrom in vertically meshing but nonengageable relationship remotely below and in substantially vertical alignment with said contact, and means to rotate said members and cause said elements to move downwardly along the filaments at said end portion at a rate several times said given rate and flex the end portion first in one direction and then in the opposite direction to effect rupture of said continuous filaments between said elements into discontinuous fibers of random lengths for depositation thereof on a conveyor to form the nonwoven web.

3,124,845
MAGNETIC TOP ROLL SUPPORT GUIDE
Erhard E. Stiepel and Christoph W. Aurich, Clemson, S.C., assignors to Saco-Lowell Shops, Clemson, S.C., a corporation of Maine
Filed Mar. 28, 1962, Ser. No. 183,166
10 Claims. (Cl. 19—295)



6. A support for a magnetic top roll in a textile processing machine frame having said magnetic top roll, provided with spaced processing surfaces and a groove therebetween, a supported and driven bottom roll, provided with spaced processing surfaces for co-action with those of said top roll and a groove therebetween, and a stationary frame element positioned behind said bottom roll, comprising:

a curved member of strong, rigid material, having the characteristics of substantially frictionless surface area, extending from said stationary frame element to said bottom roll and having a downwardly extending concave surface conforming to the configuration of said bottom roll, said concave surface extending about and resting upon the upper and forward portion of said bottom roll in its said groove,

support means extending forwardly and upwardly in concave configuration from said curved member, adjacent the front portion of said bottom roll, adapted to support and guide said top rolls at positions between said processing surfaces thereof, the terminal portions of said support means being positioned on a line substantially parallel to the longitudinal axis of said bottom roll, and

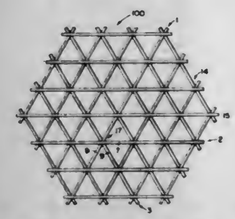
holding means adjacent said frame element adapted to co-act therewith for maintaining said support means in a predetermined position,

said curved member having widths corresponding to the widths of said top and bottom roll grooves and a portion of said curved member being adapted to extend from said bottom roll groove into said top roll groove, said curved member being thus adapted to co-act with said top and bottom roll grooves to provide axial stability for said top roll.

3,124,846
INTERLOCKING TRUSS
Paul W. Duesler, 3455 W. Beltline Highway, Madison, Wis.
Filed Sept. 16, 1960, Ser. No. 56,453
3 Claims. (Cl. 20—.5)

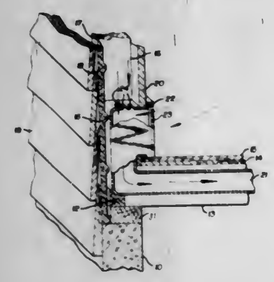
1. A structural building panel comprising a plurality of intersecting beams, each beam comprising two corresponding upper and lower parallel flange members and a plurality of web members lying in a single plane extending between said flange members in each beam so as to form the inside portion of said beam, each flange member being continuous throughout the length of the beam, each of said intersecting beams intersecting others of said beams at spaced intersection points, said points being spaced substantially the length of one of said web

members, at least two of said beams intersecting at each of said points, the beams intersecting at each point so that the flanges of the intersecting beams lie in different horizontal planes, each of said beams intersecting the other beams at each of said intersection points so that



one of said flanges of each intersecting beam passes between the flanges of each beam with which it intersects at said intersection point and the other flange of each intersecting beam passes outside of the corresponding upper and lower flanges of each of the other intersecting beam with which it intersects at said intersection point.

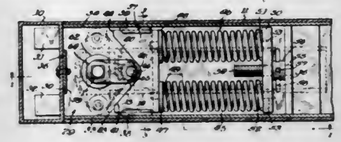
3,124,847
VENTILATING WALL CONSTRUCTION
Joseph Charniga, Jr., Box 296, Poland 14, Ohio
Filed Nov. 8, 1961, Ser. No. 151,041
1 Claim. (Cl. 20—4)



The combination in a frame wall construction of studding forming a framework and defining a plurality of spaced chambers, an interior wall material on one side of said studding and exterior wall material comprising sheathing boards formed of cane fibre or the like on the other side of said studding, said exterior wall material having a plurality of integral spaced ribs positioned to space the major portion of said exterior wall material with respect to said studding and thereby establish communication between said spaced chambers.

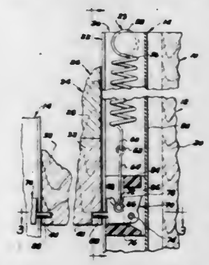
3,124,848
DOOR CLOSING CONTROL MECHANISM
James D. Wheeler and Pelham H. Anderson, Jr., Birmingham, Ala., assignors to Brasco Manufacturing Company, Harvey, Ill., a corporation of Delaware
Filed Sept. 20, 1960, Ser. No. 57,309
7 Claims. (Cl. 20—16)

1. In combination with a door pivotally mounted in a door frame, means secured to the door and to the frame whereby it is spring biased toward closed position, a channel member having side and end portions mounted in a horizontal element of the door frame, a longitudinally movable cam mounted in said channel and having the cam surface thereon extending diagonally thereof at an angle of 20–25 degrees, a hinge pin rotatably mounted in the channel member extending through the channel member and into the door and fixed against rotation in the door, an arm on the hinge pin fixed to the hinge pin at one of its ends and extending outward therefrom with its free end in engagement with the cam surface on the longitudinally movable cam and so positioned relative to the cam surface that a braking force is exerted upon the biasing means for the door for the major portion of



the closing movement of the door and an accelerating closing force exerted upon the biasing means in the final closing movement of the door, and pressure means in the door frame in engagement with said cam whereby the cam surface is held in engagement with free end of the said arm throughout the entire closing movement of the door.

3,124,849
SPRING-BALANCE-MOUNTED REMOVABLE SASH WINDOW
Fred C. Osten, Sr., 14500 Abington St., Detroit 27, Mich.
Filed Oct. 11, 1960, Ser. No. 61,988
1 Claim. (Cl. 20—52.2)



A combination self-locking spring sash balance and tiltable sash-supporting device used with a horizontally-pivoting tiltably-removable sash, said device comprising

an elongated vertical sash balance casing having a front wall with an elongated vertical aperture extending therethrough,

a resilient sash-balancing member mounted within said casing and anchored thereto,

a locking member carrier reciprocably mounted in said casing,

a locking member movably mounted on said carrier for motion into and out of locking engagement with said casing,

a combined pivot and lock-operating member connected to said locking member and in the absence of the sash projecting outwardly from said casing through said aperture in an upwardly and inwardly inclined direction and swingable downwardly in response to engagement of the sash therewith;

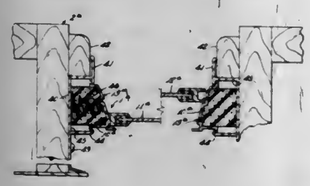
means responsive to the engagement of the sash with said combined pivot and lock-operating member for swinging said combined pivot and lock-operating member downwardly into an approximately horizontal position and thereby moving said locking member out of locking engagement with said casing, and responsive to the disengagement of the sash from said combined pivot and lock-operating member for swinging said combined pivot and lock-operating member upwardly and consequently moving said locking member into locking engagement with said casing,

and a sash-supporting bearing structure containing an open-ended notch of approximately inverted U-shape at the bottom of the sash pivotally engageable with said combined pivot and lock-operating member when the pivot and lock-operating member is contained in said notch to permit the horizontal pivotal tilting movement.

3,124,850
WINDOW ASSEMBLY HAVING A REMOVABLE SASH THEREIN

Waldo O. Johnson, Wooster, Ohio, assignor to Weather-Seal, Inc., North Barberton, Ohio, a corporation of Ohio

Filed June 20, 1961, Ser. No. 118,329
5 Claims. (Cl. 20—52.2)

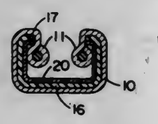


1. In a window assembly, an upper and a lower sash with a pair of vertically extending metal side rails on each sash and each side rail having a laterally outwardly extending flange thereon, vertically extending metal side stiles adapted to be positioned in a frame of a double hung wood window with the windows and center stop therein removed, said side stiles having edge flanges thereon for engaging inner stops of a wood window, a longitudinally flexible track having a pair of parallel laterally inwardly open sash rail flange engaging recesses therein operatively engaged with each of said side stiles for movement laterally of the window at all portions of a horizontal section of said track, and compressible means positioned in said side stiles and urging said tracks laterally inwardly, one of said sashes being wider than the other, said tracks diverging towards the inner surface of the window assembly between said sash rail flange engaging recesses and with the said wider one of said sashes being the inner sash, the divergence of said tracks facilitating replacement of said sashes and removal thereof by springing at least one of said tracks laterally outwardly of the window assembly.

3,124,851
WINDLACE STRUCTURE

Edward R. Straight, Fairport, and James R. Davidson, Rochester, N.Y., assignors to Vogt Manufacturing Corp., Rochester, N.Y.

Filed July 18, 1960, Ser. No. 43,649
13 Claims. (Cl. 20—69)

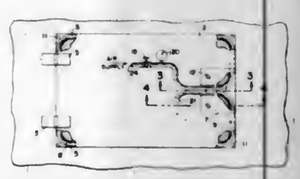


10. A windlace structure having longitudinal formability and transverse resilience, and comprising an elongate assembly of generally U-shaped cross-section for mounting along the margin of a supporting member with its arms embracing and resiliently gripping said member, comprising an elongate, flexible unitary body that is hardened from a fused thermoplastic material and that has a generally U-shaped cross-section, an elongate, longitudinally formable, transversely resilient skeletal stiffening member embedded in said body and substantially conforming in cross-section and lengthwise extent to said body, said stiffening member being formed from a stiff metallic wire that is looped back and forth to provide spaced reaches that extend transversely of the length of said body, and loops that are disposed substantially at the respective edges of said body, the arms of said assembly, and the portions of said stiffening member embedded therein, having lateral marginal portions adjacent their respective free ends that are turned toward each other to provide resilient gripping jaws, and a web of a flexible covering material disposed over the exterior surface of said body in contact therewith and bonded thereto substantially continuously over their contiguous surfaces, said web having a pair of longitudinally-extending welts that are disposed at its lateral edges respectively, the lateral marginal portions of said web being folded over the edges of said body and bonded thereto and extending over said gripping jaws, said welts being disposed in confronting relation to each other adjacent said jaws and interiorly thereof on the interior surface of said assembly, and said welts projecting toward each other beyond said jaws for engagement against opposite surfaces of said supporting member respectively.

3,124,852
INFLATABLE SEAL CONNECTION

Oscar C. Holderer, Huntsville, Ala., assignor to the United States of America as represented by the Secretary of the Army

Filed Jan. 5, 1962, Ser. No. 164,633
2 Claims. (Cl. 20—69)
(Granted under Title 35, U.S. Code (1952), sec. 266)

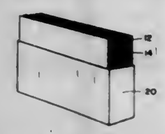


1. In a closure for an access opening in the wall of a chamber, a door mounted in said opening for movement into substantially closing relation thereto, a groove extending around a major portion of the peripheral edge of said door, a resilient inflatable sealing tube mounted in said groove, said door having a recess disposed at one edge thereof, a seal retaining member secured in said recess and having, at each end of its edge lying along the peripheral edge of the door, a groove that connects with said groove extending around said door and that extends the latter groove into a wedge-shaped void that extends across a portion of the inner face of said member and that opens into a channel that extends across the central portion of that side of said member opposite the connecting groove, said connecting groove, void, and channel serving to house portions of said tube and for leading the terminal ends of said tube away from the peripheral edge of said door to a means for controlling the inflation of said tube, a wedge-shaped plug made of elastic material, said plug being smaller than said void and being mounted therein with its converging sides in contact with portions of said tube, and with the base of the wedge effecting the peripheral edge continuity of the seal formed by said tube in the area in which the terminal ends of said tube have been led away from the peripheral edge.

3,124,853
PROCESS FOR FORMING INSULATION AND RESULTING PRODUCT

Peter E. Glaser, Lexington, Alexis Pastuhov, Harvard, and Laurence R. B. Hervey, West Concord, Mass., assignors to Arthur D. Little, Inc., Cambridge, Mass., a corporation of Massachusetts

Filed May 19, 1960, Ser. No. 30,386
6 Claims. (Cl. 20—101)

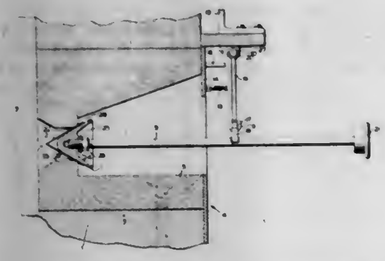


1. Process for forming insulation, containing finely divided particulate material at a predetermined density, comprising the steps of mixing said finely divided particulate material with a fugitive sublimable bonding agent, forming a solid molded shape of the mixture by applying sufficient heat and pressure to said mixture to bond said particulate material, incorporating said shape within an insulation structure, and removing said bonding agent through sublimation subsequent to incorporating said shape within said insulation structure thereby to cause said material to revert to its original finely divided particulate condition in said insulation.

3,124,854
REFRACTORY STOPPER FOR ALUMINUM CASTING APPARATUS AND METHOD OF CASTING

James E. Dore, Milford, Conn., assignor to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware

Filed Apr. 16, 1962, Ser. No. 187,827
11 Claims. (Cl. 22—84)



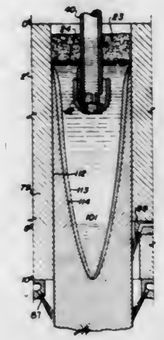
10. An apparatus for releasing and stopping the flow of molten metal from a molten metal holding receptacle comprising a tapping block provided with an orifice having a cylindrical bore, a conical cast iron plug which partially fits within said orifice wherein a line of contact may be made between the outer peripheral surface of said plug and the inner periphery of said orifice, and an aluminum-silicate fiber material covering said conical plug in the area of contact between said plug and said orifice.

3,124,855
CONTINUOUS CASTING

Richard Baier, New Brunswick, N.J., assignor to American Smelting and Refining Company, New York, N.Y., a corporation of New Jersey

Filed Mar. 26, 1958, Ser. No. 724,114
5 Claims. (Cl. 22—200.1)

1. The method of continuously casting metal in a mold, said mold having a mold pocket, said mold pocket having a graphite wall with an effective length of longitudinal taper converging toward its discharge end, said mold pocket having, with respect to its longitudinal axis and throughout said effective length of taper, a cross section substantially symmetrical with respect to radial heat transfer, said effective length of taper being greater than the maximum cross-sectional dimension of the mold pocket at said effective length of taper, the angle of said taper, with respect to said longitudinal axis, being sufficiently small that the mold pocket retains substantial uniformity of cross section throughout said effective length of taper; said method comprising melting the metal at a point removed from the mold and feeding molten metal into the mold pocket, casting and cooling at such rates as to form a crater shell with a comparatively long, slender, substantially circular crater extending along the mold

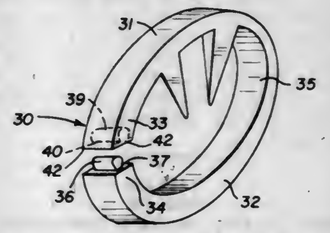


pocket a distance equal at least to the effective length of taper, said molten metal having a free surface in the mold, positively pulling the congealed casting out of the mold with such force and at such speed as to wedge the small taper of the crater shell directly against the small mold taper to plastically permanently deform and lightly draw the crater shell over substantially the entire effective length of mold taper and around the peripheral surface of the crater shell, thereby to permanently slightly decrease the cross section of the emerging embryo casting, the wedging action serving to increase heat flow across the interface from crater shell to graphite wall.

3,124,856
SUPPORTING DEVICE FOR SUSPENDING SMALL ARTICLES

Suzanne A. Fleminger, 1559 Monroe St., Denver 6, Colo.

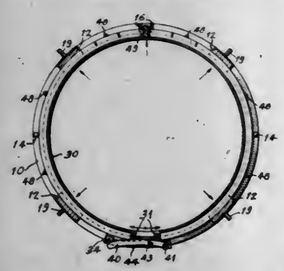
Filed June 29, 1962, Ser. No. 206,473
4 Claims. (Cl. 24—73)



1. A detachable support for Christmas tree ornaments and the like comprising a one-piece flexible plastic ring open at one point and having an area of reduced material generally opposite the opening in the ring thereby providing a weakened hinge portion on the ring whereby the ends of the ring may be moved toward and away from each other to afford placing of the ring about a tree branch or the like, releasable latch means for said ring including integral locking lug means formed on

and extending circumferentially from one end of said ring and a mating restricted opening recess formed in the other end of said ring cooperatively forming snap latch means closable by circumferential movement of said ring ends, and an integral pair of adjacent and spaced apart pins formed on and depending from the inner surface of said ring, said pins extending from one side thereof for engaging an object encircled by the ring leaving the other side of said ring substantially smooth for receiving and supporting another object, and said pins extending inwardly from the ring and having a length on the order of about the radius of the ring.

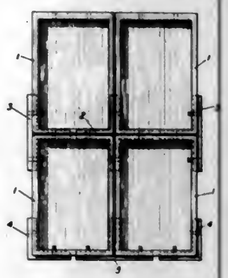
3,124,857
SPIGOT GROOVE FORMER FOR CONCRETE PIPE
Alexandre Delisle, Ville St. Laurent, Quebec, Canada, assignor to Canada Iron Foundries, Limited, Montreal, Quebec, Canada
Filed Dec. 4, 1961, Ser. No. 156,752
5 Claims. (Cl. 25—39)



1. A spigot groove former for moulding a seal receiving groove in the spigot end of an interconnectable concrete pipe having opposed spigot and bell ends, comprising, a base ring of continuous circular outline having an interior diameter corresponding to the exterior dimensions of said pipe spigot end and being provided with a plurality of supporting brackets extending upwardly therefrom in circumferentially spaced relationship, a top ring of continuous circular outline having an inner diameter substantially equal to that of said base ring being mounted on said supporting brackets with the lower surface of said top ring spaced from the upper surface of said base ring to provide therebetween a continuous annular recess, a retractible forming ring of split circular outline slidably mounted in said annular recess with its free ends connected by a toggle clamp assembly, said retractible ring by said toggle clamp connection having an adjustable inner diameter between a closed condition where it is equal to the maximum depth of the groove to be formed and an open condition where it is at least equal to the inner diameter of the portions of said base and top rings bordering said annular recess, and cooperating stop and guide means mounted on said base ring and retractible ring and adapted to maintain said retractible ring in aligned and concentric relationship relative to said base and top rings.

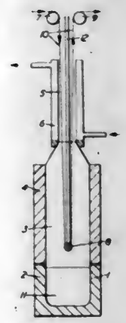
3,124,858
MOLDS
Guy Blondé, La Frette-sur-Seine, Seine-et-Oise, France, assignor to Outinord, Societe Anonyme, Nord, France
Filed Feb. 13, 1961, Ser. No. 88,780
Claims priority, application France Feb. 16, 1960
3 Claims. (Cl. 25—131)

1. A mold comprising a rigid system of coplanar rectangular panels of which each side includes an outer outwardly facing channel-shaped member, the channel-shaped members on the cooperating sides of any two adjacent panels registering with each other to form a passage between said sides, and a plurality of assembling, aligning and locking members fitted throughout the breadth of the pasages formed by the channel-shaped members of the cooperating panels having a common apex and including two sections extenting longitudinally in said



passages respectively in two directions perpendicular to each other along fractions of the corresponding panel sides which meet at said apex, and means rigidly interconnecting said assembling members with the cooperating panels.

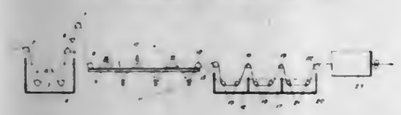
3,124,859
YARN DRAWING APPARATUS
Paul Jacques Corbiere and Pierre Jean Terra, Lyon, France, assignors to Societe Rhodiaceta, Paris, France, a French body corporate
Filed Oct. 17, 1960, Ser. No. 63,031
Claims priority, application France Nov. 3, 1959
9 Claims. (Cl. 28—59.5)



1. Apparatus for drawing synthetic yarns, such appartus comprising a boiler for producing vapors from a suitable liquid, a vapor treatment chamber communicating with said boiler so as to receive therefrom vapors produced therein, a condenser positioned above the vapor treatment chamber so as to receive vapor passing out from said chamber and communicating with the boiler so that vapors condensed in the condenser return to the boiler, a feed device adapted to receive yarn and positioned to feed such yarn into said vapor treatment chamber at a linear velocity V_1, means within the vapor treatment chamber for guiding yarn received from said feed device through the vapor in said chamber and a drawing means positioned to receive yarn from said guide means and withdraw yarn from the vapor treatment chamber at a linear velocity not less than $3V_1$.

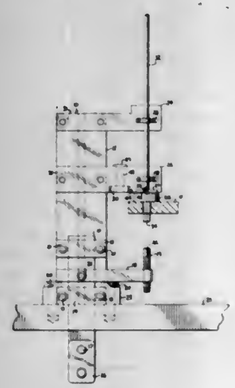
4. Apparatus for use in the drawing of synthetic yarns, such appparatus comprising a vapor treatment chamber, a boiler constructed and arranged to supply vapors of a suitable liquid to the vapor treatment chamber, a condenser positioned above the vapor treatment chamber so that vapor from the latter passes into the condenser and is condensed therein, means for collecting vapor condensed in the condenser, a purifying device connected to receive condensed vapor from said collecting means, duct means connecting said purifying device to said boiler for passing to the latter condensed vapor received from the condenser, means within the vapor treatment chamber for guiding yarn on the passage of the latter through the vapor in said chamber, roller feed means adapted to receive yarn and to feed such yarn to said guiding means at a velocity V_1 and roller drawing means for removing the yarn from said guiding means at a velocity not less than $3V_1$.

3,124,860
TEXTILE PROCESS AND PRODUCT
Robert S. Kenyon and William Frank Taylor, Mobile, Ala., assignors, by mesne assignments, to Courtaulds, Limited, London, England, a British company
Filed June 23, 1960, Ser. No. 38,282
5 Claims. (Cl. 28—76)



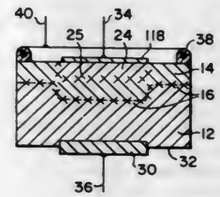
1. A method for imparting a high resistance to raveling to woven fabrics containing at least 50% polynosique viscose rayon fibrous material which comprises treating said fabrics with a swelling agent for the cellulose equivalent to an aqueous solution containing between about 5 and about 20% by weight NaOH.

3,124,861
BEAD LOADER FOR AN ASSEMBLY MACHINE
David I. Cropp, Meadville, Chalmer C. Jordan, Saegertown, and Robert W. Lingo, Meadville, Pa., assignors, by mesne assignments, to Saegertown Glasseals, Inc., Saegertown, Pa., a corporation of Delaware
Filed Oct. 8, 1959, Ser. No. 845,132
7 Claims. (Cl. 29—25.3)



1. A bead loader comprising a base, a table supported on said base, wire receiving means on said table, tube means on said base adapted to contain beads, means to move said table to carry a wire supported in said wire receiving means to a position adjacent said tube means, a lateral slot in said tube means, a closure over the end of said tube means adjacent said wire, a central slot in said closure, said central slot being slightly wider than the diameter of said wire, means to move said wire upwardly in said receiving means to move an end of said wire through said slot in said closure and into the holes in said beads, and means to move said table with said wire thereon to move said beads with said wire therein through said lateral slot in said closure.

3,124,862
ALLOY DOUBLE-DIFFUSED SEMICONDUCTOR DEVICE
Charles E. Benjamin, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania.
Filed Dec. 14, 1959, Ser. No. 859,189
8 Claims. (Cl. 29—25.3)

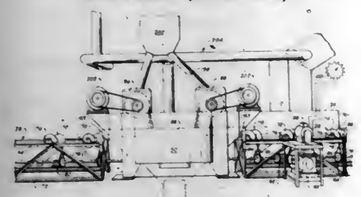


1. A process for preparing a semiconductor device comprising, (1) vapor diffusing a doping impurity into a selected surface portion of a wafer of semiconductor material having a first type semiconductivity, to produce a zone of a second type of semiconductivity, said zone of second type semiconductivity extending from the surface portion of said wafer a predetermined distance into the interior thereof, the remainder of the surface of the wafer being of the first type of semiconductivity (2) disposing a quantity of an alloy upon that surface portion of the wafer having the second type semiconductivity, said alloy consisting of at least one doping material capable of imparting said first type of semiconductivity into the wafer, at least one doping material capable of imparting said second type of semiconductivity within the wafer and a carrier metal, said doping material capable of imparting said second type semiconductivity within the wafer having a greater diffusion rate within the wafer than the doping material capable of imparting said first type of semiconductivity, (3) heating said alloy to a temperature above its melting point but below the melting point of the wafer, whereby, the alloy melts and dissolves a portion of the wafer but does not extend through the zone of second type of semiconductivity, (4) cooling the molten mass to a second elevated temperature whereby, that portion of the wafer that has been dissolved within the molten alloy resolidifies with a quantity of both the first type and second type semiconductivity doping material dispersed therein, (5) maintaining said temperature for a predetermined length of time, whereby, the doping material capable of imparting the second type of semiconductivity diffuses into the wafer to a first predetermined depth and the doping material capable of imparting the first type of semiconductivity diffuses into the wafer to a second predetermined depth, said second predetermined depth being less than said first predetermined depth, (6) cooling the alloy and wafer to room temperature, and (7) affixing at least three electrical contacts including a base contact to said wafer, said base contact being made on that surface of the wafer having a second type semiconductivity, said base contact being physically separated from the resolidified alloy, and one of the remaining contacts being affixed to the surface of the wafer other than the said selected portion which was vapor diffused and the other contact being affixed to the resolidified alloy.

3,124,863
DRILL PIPE PEENING

Robert A Clay, Odessa, Tex., assignor to American Shotpeening Corporation, Fort Worth, Tex., a corporation of Texas

Filed Sept. 10, 1959, Ser. No. 839,191
11 Claims. (Cl. 29—90)

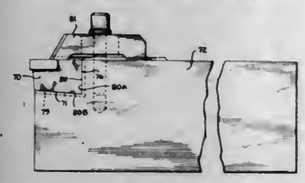


1. In a system for increasing the fatigue life of a joint or drill pipe, the combination comprising: a shot receiving chamber having an opening in one wall thereof, a base positioned adjacent said receiving chamber, an elongated platform for receiving and supporting the joint thereon, legs at each end of the platform pivotally secured to the platform and to the base for pivotal movement of the legs about a horizontal axis and in a vertical plane toward and away from said receiving chamber, means for pivoting said legs on said base for simultaneously raising the joint and moving the joint toward said receiving chamber, and, alternately moving the joint away from the receiving chamber and lowering the joint, means for rotating the joint about its longitudinal axis while said one end portion extends into said opening, means for shot peening the inner surfaces of the rotating joint and discharging the used shot through the joint into said shot receiving chamber, an outside peening chamber positioned adjacent said inner surface shot peening means for peening the outer surface of said drill pipe joint immediately following the peening of the inner surface thereof, conveyor means for moving the joint lengthwise through the outside peening chamber while simultaneously rotating the joint about its longitudinal axis, means for manually controlling the axial and rotative movement of said joint by said conveyor means to permit the duration of exposure of the surfaces of said joint in said outside peening chamber to be controlled, and means in the outside peening chamber for throwing shot onto the outer surfaces of the joint as it is moved through the outside peening chamber.

3,124,864
REPLACEABLY MOUNTED INSERT

Horace A. Frommelt, Philadelphia, Pa., and Robert E. Watling, Salem, Ind., assignors to Ferro Powdered Metals, Inc., Salem, Ind., a corporation of Indiana

Filed Oct. 5, 1960, Ser. No. 60,653
1 Claim. (Cl. 29—96)

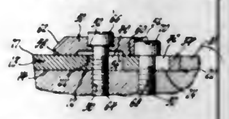


A tool holder comprising a generally rectangular shank having a generally rectangular recess in one end thereof formed by two faces at an acute angle of approximately 85 degrees to one another, a tool carrying insert received in said recess and having two faces mating with the faces of said recess, said insert faces being arranged at an angle of approximately 85 degrees to one another, said insert faces having a continuous ridge extending therealong, said recess faces having a continuous indentation receiving said ridge, said shank and insert having aligned ridges, a clamp having an arched shape one foot of which engages said insert and one foot of which engages said shank, said clamp having indentations in the feet thereof receiving said last mentioned ridges, a fastener securing said clamp to said shank, said fastener being threadedly received in said shank and extending through the central portion of said clamp and resiliently deforming the arch of said clamp toward said shank, the axis of said fastener being parallel to one of said recess faces whereby the force exerted thereby is parallel to said one recess face and urges through said clamp, said insert against the two faces of said recess.

3,124,865
TOOL HOLDERS

Earl C. Clark, Ingalls, and Herley J. Harless, North Drive, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Dec. 15, 1960, Ser. No. 75,951
2 Claims. (Cl. 29—96)



1. A tool holder adapted to mount throwaway-type inserts characterized by becoming worn in service and being rendered capable of repeated use by regrinding operations thus altering the standard basic size, said tool holder comprising a block portion having a slide receiving channel formed therein, an adjustable insert seat having a bottom portion joined by wall portions formed in one end of said block, said channel connecting with said seat at a wall portion thereof, a slidable member received in said channel and being extendable into said seat area, the end of said slidable member forming a movable wall portion of said seat and cooperating with the other wall portions thereof by moving relative thereto to change the insert seat area to form an adjustable insert pocket accommodating a reground throwaway insert, clamping means aligned with said slidable member and adapted for movement relative thereto, a fore portion of said clamping means extending above said insert seat and located for clamping engagement with a throwaway-type insert seated thereon and an aft portion extending above said slidable member for clamping engagement therewith, first fastener means for securing the clamping means being anchorable to the block intermediate said fore and aft portions, and second fastener means anchorable to the block rearwardly of the first fastener means and being engageable with the aft portion of the clamping means to maintain the alignment thereof with the slidable member and insert seat, the second fastener means cooperating with said aft portion for securing only the slidable member to the block independently of said first fastener means thus serving the dual function of holding the position of the slidable member while maintaining the alignment of the clamping means whereby the first fastener means may be released without affecting the setting of said slidable member.

3,124,866
ADJUSTABLE CHIP BREAKER

Raymond E. Novkov, 1730 17th St., Cuyahoga Falls, Ohio

Continuation of application Ser. No. 13,740, Mar. 9, 1960. This application Nov. 8, 1962, Ser. No. 237,435
5 Claims. (Cl. 29—96)

1. A cutting tool of the character described, comprising:

(1) a tool holder having

(a) front and top surfaces that are undercut to define a tool pocket opening into said surfaces;

(2) a tool bit received in said pocket and having

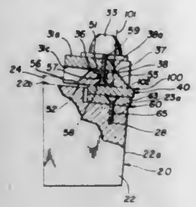
(a) a cutting edge projecting beyond the front surface of said body;

(3) a clamping member releasably secured to said body and

(a) having a bottom surface overlying said top surface of said body and

(b) a front edge that overlies said bit adjacent the projecting portion thereof;

(4) a chip breaker;



(5) mating rib and groove means

(a) interconnecting said clamping member and said chip breaker and

(b) extending transversely theerof in substantial parallelism to said front edge portions thereof, whereby

(1) cutting forces applied normal to said front edge portions will be absorbed by said interconnected rib and groove means;

(6) a protuberance projecting from said bottom surface of said clamping member adjacent said front edge,

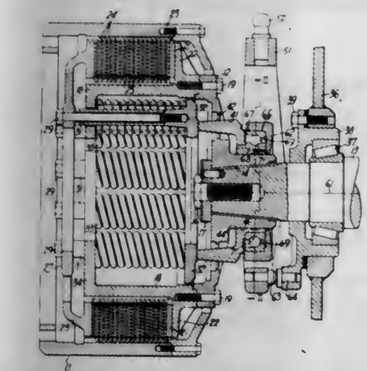
(a) with said protuberance engaging said chip breaker; and

(7) means carried by said holder for moving said clamping member and said chip breaker relatively of said holder and said tool bit.

3,124,867
METHOD OF MACHINING A BEARING CAGE

Frederick A. Schick, Springfield, Ill., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Filed Apr. 3, 1961, Ser. No. 100,067
3 Claims. (Cl. 29—148.4)

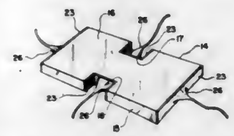


1. A method of manufacturing a cage for an antifriction bearing of a clutch operating mechanism comprising the steps of: placing a resilient cage under a load simulating the actual load to which it is subjected in operation, and forming a radially extending flat bearing seating surface and an axially extending cylindrical bearing seating surface in said cage for one of the raceways of said antifriction bearing while said cage is subjected to said simulated load.

3,124,868
METHOD OF MAKING SEMICONDUCTOR DEVICES

Alexander R. Zacaroli, Columbus, Ohio, assignor, by mesne assignments, to Radio Frequency Laboratories, Inc., Boonton, N.J., a corporation of New Jersey

Filed Apr. 18, 1960, Ser. No. 22,936
6 Claims. (Cl. 29—155.5)

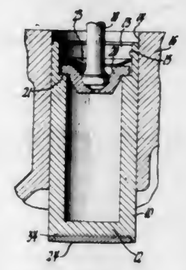


1. A method of forming electrical contacts on semiconductor elements comprising: forming a bar of semiconductor material; forming a pair of opposed, parallel, longitudinal grooves in the said bar; forming a coating of electrically-conductive metal metallurgically bonded to the walls defining said grooves; slicing the bar in a plane perpendicular to said grooves to form a thin semiconductor element; and securing electrical contacts to the coating of conducting metal in the grooves of said element in a manner to establish electrical continuity therebetween.

3,124,869
VALVE LIFTER

Robert C. Behnke, Grand Rapids, and Austin R. Walker, Holland, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed June 5, 1961, Ser. No. 114,698
1 Claim. (Cl. 29—156.7)

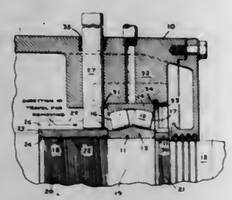


A method of making a valve lifter having a wear-resistant foot comprising the steps of extruding a low carbon steel tubular element closed on one end thereof to form a foot and having a peripheral ridge on said foot forming a recess therewithin, applying a powdered metal briquette within said recess, said briquette being formed of a powdered ferrous metal composition leading on fusion to the formation of a wear-resistant alloy and including about 2.5% to 3.5% carbon, heating the briquette at a temperature and for a time sufficient to cause the briquette to fuse and flow across said recess in a uniform layer and to extend only between the extremities of said ridge and for the constituents thereof to diffuse into the low carbon steel body to form a diffusion bond, said diffusion including the carburization of a layer of said foot beneath said coating and co-extensively therewith and including the carburization of a layer of said ridge to provide a hard support for the coating co-extensively therewith.

3,124,870
MEANS FOR REMOVING BEARINGS FROM A ROTATABLE SHAFT

Birger O. G. Hugoson, Wellsville, N.Y., assignor to Worthington Corporation, Harrison, N.J., a corporation of Delaware

Filed Aug. 11, 1961, Ser. No. 130,995
3 Claims. (Cl. 29—256)



1. A device for removing a bearing mounted on a rotatable shaft in a housing having a threaded section adjacent the bearing comprising:

(*a*) an annular removing member means,

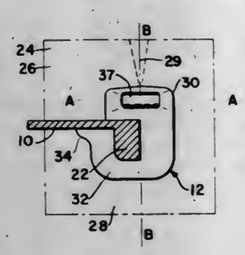
(*b*) the removing member means having internal threading adapted to be threadedly connected to the shaft on one side of the bearing and adjacent thereto, and

(*c*) pin means to engage the outer perphery of the removing member means to prevent the removing member means from rotating with the shaft and on rotation of the shaft to permit the removing member means to be urged axially in the direction of the bearing to force the bearing to be unseated from the shaft, the pin means adapted to extend into the housing and to be held in operative position by the housing.

3,124,871
METHOD OF MAKING COVERED SLIDE FASTENERS

Ernst Ryser, Via Turconi, Mendrisio, Tessin, Switzerland, assignor of one-half to Bertrand Voumard, La Chaux-de-Fonds, Switzerland

Original application Mar. 7, 1955, Ser. No. 492,607. Divided and this application Oct. 22, 1962, Ser. No. 242,338
Claims priority, application Switzerland Mar. 6, 1954
3 Claims. (Cl. 29—410)

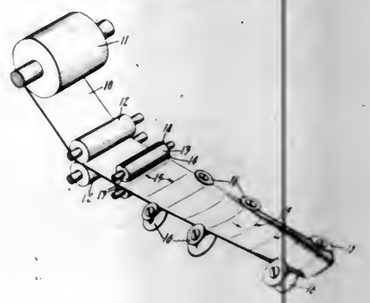


1. A method of manufacturing a sliding clasp fastener comprising casting each fastening element directly on to an edge of the supporting strip so that its clasp portion covers a smaller width of the strip than is covered on the opposite side, and deforming upwardly the end of the arm of the fastening element on the said opposite side towards the central longitudinal plane of the fastener projection so that the strip extends as far as that plane and thus covers that side of the clasp portion which would otherwise be visible when the fastener is closed.

3,124,872
METHOD AND APPARATUS FOR SEVERING A CONTINUOUS TUBE INTO CAN BODIES

Charles Harold Knodel, Jr., Palatine, Ill., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

Filed June 11, 1962, Ser. No. 201,656
10 Claims. (Cl. 29—413)

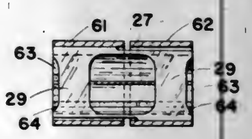


1. A method of separating predetermined lengths from a continuous tube of flexible material, which tube is weakened along a line extending transversely around the greater portion of its circumference at spaced intervals corresponding to said predetermined lengths but is integral and unweakened along a longitudinally extending portion thereof comprising, passing said tube along a path of travel including: (1) a straight-line path wherein said tube moves continuously and said transverse weakened lines remain closed; (2) a lateral path spaced from said straight-line path with said unweakened portion on the inside thereof wherein said tube moves intermittently and a V-shaped space is opened between the foremost predetermined length and the remainder of said tube, the unweakened portion at the apex of said space remaining stationary for a time interval due to the intermittent movement of said tube in said lateral path; and (3) a path at an angle to and between said straight line and lateral paths variable within limits wherein the continuous movement of said straight-line path changes to the intermittent motion of said lateral path, inserting a cutting element into said space and severing said unweakened portion and removing said element from said lateral path while said unweakened portion is stationary, and separating the completely severed length from said tube.

3,124,873
METHOD OF MAKING A FLEXURAL PIVOT

Henry Troeger, Cooperstown, N.Y., assignor to The Bendix Corporation, Utica, N.Y., a corporation of Delaware

Filed Oct. 3, 1961, Ser. No. 142,724
9 Claims. (Cl. 29—416)



1. The method of manufacturing a flexural pivot comprised of providing four sleeve quadrants, two of said quadrants having axially-extending openings, providing two flat spring means having at least one side projection at each end, assembling said quadrants and said spring means so that said spring means are arranged perpendicular to each other and said quadrants form a tubular assembly having said axially-extending openings diametrically-located and further having the edges of said quadrants abutting the projections and the outer parts of said spring means, bonding said tubular assembly, providing said tubular assembly with reduced-diameter semi-circular surfaces at diagonally-opposite locations between said openings, providing outer sleeve means, encasing said tubular assembly with said sleeve means so that a crossed-spring arrangement is provided having two semi-circular surfaces at diagonally-opposite locations spaced radially from said outer sleeve means, bonding said crossed-spring arrangement, removing the ends of said arrangement inwardly of the ends of said openings so that a semi-circular inner finger-like means exist at each end of the tubular arrangement, severing said outer sleeve means at the inner ends of said radially-spaced surfaces so that outer mounting means axially spaced from outer support means is formed with said mounting means connected to one of said finger-like-means and said support means connected to the other of said finger-like means whereby said mounting means can be fixed and said support means can be rotated with flexing of said flat spring means.

3,124,874
METHOD OF FASTENING PIPE TOGETHER

Kenneth C. Woolley, Houston, Tex., assignor to Tex-Tube, Inc., Houston, Tex., a corporation of Texas

Filed Sept. 23, 1960, Ser. No. 58,004
4 Claims. (Cl. 29—458)



1. The method of fastening together metal pipe with substantial springback characteristics and having a bell end and a pin end comprising, inserting the pin end of one pipe into the bell end of another pipe, and progressively reducing the diameter of the bell along its axial dimension and radially inwardly deforming both the bell and pin by drawing a ring-type swaging die of less diameter than the bell over the bell in a direction along the axial dimension of the bell, said die having a cylindrical portion axially extending from the mouth of the die to prevent the radially inwardly deformed portion of the bell adjacent the mouth of the die from springing back as the bell and pin are deformed.

3,124,875
METHOD OF PREPARING HOLLOW TYPE HIGH DENSITY CERAMIC NUCLEAR FUEL ELEMENTS

Shuichiro Takahashi, Yutaka Honda, Kinichi Ishikawa, Hajime Uchikoshi, and Tadashi Kubota, all % Engr. & Research Lab. of Mitsubishi Atomic Power Industries Inc., 297 Kitabukuromachi 1-chome, Omiya, Japan

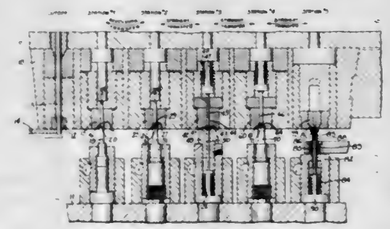
Filed Oct. 11, 1960, Ser. No. 61,904
Claims priority, application Japan Oct. 15, 1959
2 Claims. (Cl. 29—473.3)

1. A method of making a metallic clad nuclear reactor fuel element comprising, providing a given quantity of nuclear reactor fuel material, confining said fuel material in an elongated cylindrical tubular metallic sheath having an outer sheath portion and inner coaxial sheath portion defining an axially extending bore therethrough and a tubular space between said portions with one end open and an opposite end closed, inserting a mandrel through said bore the full length thereof and fitting snugly therein, said mandrel having an elastic modulus of at least 5×10^3 kg./mm.^{2} and a yield point of not less than 5 kg./mm.^{2} and having a melting point less than the melting point of said inner and outer portions of said metallic sheath, subjecting the tubular sheath to rotary swaging to reduce the outer diameter of said sheath and compress said outer sheath portion radially inwardly while permitting elongation thereof thereby to compact and densify nuclear reactor fuel material in said space without reduction of the diameter and said bore, melting said mandrel and removing the melted mandrel from said bore, before beginning said rotary swaging filling said tubular space with nuclear reactor fuel material and confining it therein, removing the opposite end portions of said coaxial sheath portions, and subsequently sealing the ends of the remaining metallic sheath tubular space filled with dense compacted fuel material thereby sealing said fuel material therein..

3,124,876
METHOD OF FORMING CUPPED ARTICLES

Anthony Michael Putetti, Waterbury, Conn., assignor to Textron Inc., Providence, R.I., a corporation of Rhode Island

Filed Dec. 19, 1958, Ser. No. 781,672
3 Claims. (Cl. 29—534)



1. The method of forming a cupped metal article with a central opening therethrough comprising cutting a workpiece from a length of solid bar stock, confining the workpiece in the opening in a suitable die and applying pressure to both faces thereof to form it into generally cylindrical shape with a tapered portion at the die end of the workpiece, turning the workpiece end for end and confining it in another die opening in the same machine to enlarge its diameter, form a chamfer adjacent one end and indenting both faces of the workpiece, then guiding the workpiece into a third die opening by the indentation so made and there flattening the workpiece to further enlarge its diameter and form a shoulder thereon, and tapering the metal of the workpiece inwardly in both directions from said enlarged portion while indenting one face thereof, then driving a punch into said intended face to a point beyond said shoulder to deeply indent the punch face of the workpiece and form a cup-shaped article and piercing an opening through the wall of the workpiece at the bottom of said deep indentation.

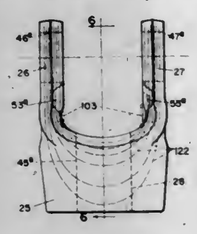
3,124,877
FORGING UNIVERSAL JOINT YOKES, AND THE LIKE

Mario Macchini, Riverside, Ill.

Filed May 31, 1961, Ser. No. 124,252
5 Claims. (Cl. 29—551)

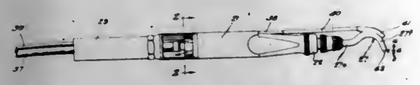
5. The process for the manufacture of a forged metal power transmitting universal joint yoke, which yoke includes a body hub having a shaft receiving opening extending axially through such hub, and which yoke also includes oppositely disposed ears connected to the top of the hub at opposite sides of the axis of such shaft receiving opening, said ears being constituted for receiving bearing openings aligned with each other on an axis extending normal to the axis of the shaft receiving opening of the hub; said process including the steps of; first

heating a billet of the metal to hot forging temperature and forging the central portion of such billet to produce a central enlargement of such billet with the grain of the metal extending continuously through the enlargement in curvilinear form; secondly, subjecting such so-treated billet to hot forging operations in companion dies of contour to form such enlargement into a hub central of the work body with the axis of such hub extending normal to the work body and to simultaneously forge a recess in the central portion of the top of the hub and co-axial with the hub, said recess being of diameter and depth sufficient to produce lateral displacement of the metal, forged from such recess and against the side walls of the dies and displacement of metal into the roots of the ears and lateral displacement of the grain stream lines of such laterally displaced metal, and with the grain stream lines of such displaced metal extending in con-



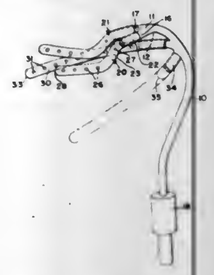
tinuous curvilinear paths lengthwise between the roots of the two ears and through the hub at the sides of the recess, and to form the work body at opposite sides of said hub into generally flattened ears lying in a common plane normal to the hub axis, and with the ears extending outwardly from the hub in opposite directions and aligned with each other on a line extending through the axis of the hub and at right-angles to said axis; thirdly while still hot forming the shaft receiving opening through the hub in direction along the axis of the hub and through the hub recess; and, finally while still hot, bending the ears symmetrically with respect to the hub axis to positions of the ears parallel to the hub axis; whereby the grain stream lines extend in continuous curvilinear paths lengthwise through the parallel ears and through the roots of the ears and through the laterally displaced metal of the hub at both sides of the formed deep hub recess.

3,124,878
SONIC DENTAL TOOL
Albert G. Bodine, Jr., Sherman Oaks, Calif. (7877 Woodley Ave., Van Nuys, Calif.), and Ernest A. von Seggern, Burbank, Calif.; said Von Seggern assignor to said Bodine
Filed Apr. 12, 1961, Ser. No. 102,610
3 Claims. (Cl. 32—26)



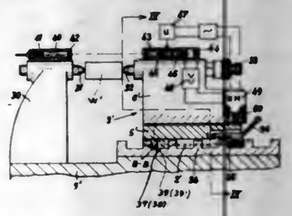
1. In a vibratory dental tool, the combination of: a laterally elastically vibratory bar having a longitudinal axis, a vibration generating means coupled to an end of said bar operable at a frequency for lateral resonant elastic vibration of said bar, for applying to said bar at said frequency a rotating force vector which turns in the plane of lateral vibration of the bar and turns about an axis at right angles to said plane and to said longitudinal axis of said bar, and a dental tip on the opposite end of said bar having a bend in said plane of lateral vibration, said tip terminating in a working extremity facing generally away from the longitudinal axis of the bar.

3,124,879
MOUTH EVACUATOR
Louis R. Van Lanigan, Le Claire Hotel, Moline, Ill.
Filed Apr. 11, 1960, Ser. No. 21,340
10 Claims. (Cl. 32—33)



1. A mouth evacuator comprising: a main rigid tubular conduit adapted to depend from the front of the mouth with the lower end thereof adapted for connection to a suction line and with the upper end thereof extending over and resting on the upper front edge of the lower teeth and formed to be loosely restricted against fore and aft movement relative to the teeth, said conduit having thereon a pair of relatively short laterally extending tubular stems disposed forward of the teeth and directed to opposite sides of the mouth, said conduit further having a pair of relatively short laterally extending tubular stems disposed internally of the lower row of teeth and directed to opposite sides of the mouth; tubular extensions composed of flexible material supported on the stems, the tubular extensions supported on the laterally disposed stems forward of the teeth being adaptable to shape themselves to the outer curvature of the lower row of teeth and having spaced apart suction openings throughout the length thereof, each of the tubular extensions on the stems projecting internally of the teeth formed with a connecting portion adjacent to the respective stem, from thence to a downwardly inclined portion lying adjacent the forward wall of the mouth, and from thence to a rearwardly directed lateral portion lying on the floor of the mouth, the latter portion having spaced apart suction openings throughout its length and being adapted to flex relative to the inclined portion whereby the rearwardly directed portion will rise and fall according to the rise and fall of the floor of the mouth.

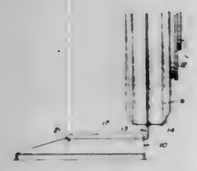
3,124,880
MEASURING DEVICE WITH A GUIDE WAY ADAPTED TO MEASURE THE DISPLACEMENT OF A SLIDABLE CARRIAGE THEREIN
Kurt Rantsch, Wetzlar (Lahn), Germany, assignor to M. Hensoldt & Sohne Optische Werke AG., Wetzlar (Lahn), Germany
Filed Mar. 14, 1960, Ser. No. 17,725
Claims priority, application Germany Mar. 12, 1959
4 Claims. (Cl. 33—143)



1. In a measuring device including means forming a horizontal guide way provided with a series of spaced

abutments, and a carriage structure slidably mounted on said guide way and having means for selectively engaging said abutments to arrest said carriage structure, said carriage structure consisting of a lower part slidably supported by said guide way and an upper part pivotally connected to said lower part about a horizontal axis extending transversely to said guide way and closely adjacent thereto, a tail stock having a tail spindle thereon fixedly mounted at one end of said guide way, a tail spindle mounted slidably in said upper part and adapted to be slidably moved against the pressure of a spring in said upper part when a workpiece to be measured is placed between said two tail spindles, said stationary tail stock and said upper part of said carriage structure having each means mounted thereon which in cooperation with each other indicate any deviation of said upper part from a horizontal position, and micrometer means connected with said slidable tail spindle and adapted to adjust the latter.

3,124,881
WHEEL ALIGNMENT TESTING APPARATUS
Jack B. Butler, 209 Hermitage Road, Greensboro, N.C.
Filed July 26, 1960, Ser. No. 45,398
8 Claims. (Cl. 33—169)



1. A wheel alignment testing apparatus comprising a base plate, a platform pivotally mounted on said base plate, means for yieldably biasing said platform to an elevated position, said platform having a tire caliper slidably mounted thereon and projecting from the platform to communicate with a ground-engaging surface of a tire, a pair of tire-displacement indicating standards pivotally mounted on said platform, means on the slidable caliper for pivoting said standards in response to tire movement, and a calibrated scale on the platform for indicating displacement of the standards from a reference position.

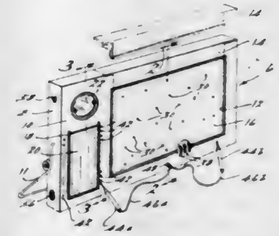
3,124,882
BORE HOLE INCLINATION RECORDER
Harold Black, P.O. Box 5053, Abilene, Tex.
Filed Sept. 6, 1962, Ser. No. 221,825
3 Claims. (Cl. 33—205.5)

1. A bore hole inclination recorder for use in a drill string, said recorder comprising:
a sealed capsule within said drill string,
an inclination responsive switch within said capsule, said switch having multiple contacts and means closing one or more of said contacts according to the inclination thereof,
a printing bar within said capsule, said printing bar having multiple spaced contacts on its surface,
an electrical circuit individually connecting the contacts of said switch with the contacts of said printing bar and with a power source,
a normally open switch in said electrical circuit,
a movable sheet of electro-sensitive material adjacent the contacts of said printing bar,
piston means exposed on one end to pressure from drilling fluid,
pressure means applied to said piston in a direction opposite that applied by said drilling fluid,
means operated by said piston opening and closing said normally open switch, and



means operated by said piston moving said sheet of electro-sensitive material relative to the contacts on said printing bar.

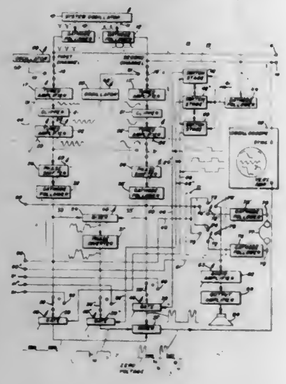
3,124,883
EDUCATIONAL DEVICE
Martin W. Kern, 24221 Parklawn, Oak Park, Mich.
Filed Apr. 27, 1961, Ser. No. 105,962
3 Claims. (Cl. 35—9)



1. In an educational device providing for interchangeability of matched pairs of question and answer panels, the combination comprising a cabinet including a face panel having a first frame thereon for removably receiving a question panel and a second frame for removably receiving an answer panel, a plurality of question contacts on the face of said question panel and a plurality of answer contacts on said face panel disposed adjacent to said answer panel, conductor means for electrically connecting one of each of said question contacts to a corresponding answer contact forming therewith matched pairs of contacts, said conductor means including a series of first contacts on said question panel electrically connected to said question contacts by conductors disposed beneath said face of said question panel, said first contacts disposed in electrical contact with a corresponding series of second contacts along said first frame each of which is electrically connected to said answer contacts by conductors disposed beneath the face of said face panel, electric circuit means in said cabinet including indicator means on said face panel and switching means for alternatively electrically connecting one terminal of said indicator means to a self-contained power supply and to an output terminal of a step-down transformer in said

cabinet adapted to be electrically connected to an outside power supply, a pair of portable probe members electrically connected respectively to the other terminal of said indicator means and to said power supply and adapted to be manipulated and disposed in electrical contact with each contact of one of said matched pairs of contacts for energizing said indicator means.

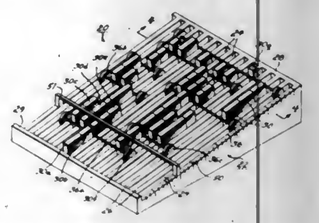
3,124,884
METHOD AND APPARATUS FOR DEMONSTRATING WAVE MOTION PHENOMENA
Achille Capecelatro, Madison, William J. Spaven, North Arlington, and Rene Baker, Paterson, N.J., assignors to Madison Associates, Inc., Madison, N.J., a corporation of New Jersey
Filed Oct. 29, 1958, Ser. No. 770,450
3 Claims. (Cl. 35—19)



1. A method of demonstrating wave motion phenomena on the screen of an oscilloscope having horizontal plates and vertical deflection plates, which method comprises applying a synchronizing electrical signal of predetermined frequency to the horizontal plates of the oscilloscope; sequentially applying first, second and third electrical signals to the vertical deflection plates of the oscilloscope for the simultaneous display of the three signals on the screen of the oscilloscope, said first and second signals being sine waves and the third signal being a composite of the first and second signals, adjusting the D.C. level of the first, second and third signals to thereby vertically space the resulting signal traces on the oscilloscope screen, adjusting the frequency of the first and second signals relative to that of the said synchronizing signal so that the traces of the first and second signals become traveling sine wave traces and the trace of the composite signal travels at the average speed of the first and second signal traces.

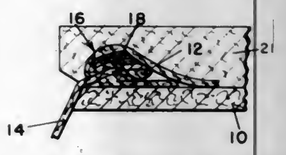
3,124,885
GRAPHICAL CHART DISPLAY
Stanley Mendell, Haddonfield, N.J., assignor to Management Studies, Inc., a corporation of New Jersey
Filed Feb. 12, 1962, Ser. No. 172,671
15 Claims. (Cl. 35—24)

1. A graphical chart display for the critical path of a scheduled program comprising a plurality of gauge elements of different lengths for representing the time durations of activities of the program, said gauge elements being positioned in a plurality of series paths and in a plurality of parallel paths parallel to a certain axis, a plurality of nodal elements positioned across said parallel paths perpendicular to the axis and at the starting ends of the gauge elements in the parallel paths to provide junction indications thereof, and means providing a time scale along said axis, whereby the critical path is indicated to



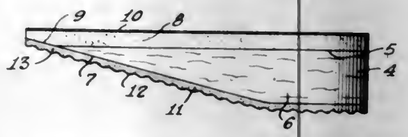
be along the path of gauge elements extending from one nodal element to the next.

3,124,886
WRAP-AROUND GOODYEAR WELT SEAM CONSTRUCTION
Victor A. Sherbrook, 164 Colonel Hunt Drive, Abington, Mass.
Filed Dec. 7, 1961, Ser. No. 157,652
2 Claims. (Cl. 36—17)



1. A Goodyear welt construction for shoes comprising an insole, a sewing rib on the insole adjacent the edges thereof, an upper secured to the rib, and a welt strip secured to the rib at the outer aspect thereof, with a portion of the upper between the welt strip and the rib, the welt strip being folded over the rib and cemented down onto the same and to the insole at the inner aspect of the rib, said welt strip covering the rib, and the rib being folded down onto the insole so that the rib and folded-over welt strip form a relatively small projection in the area of the rib on the insole, and an outsole secured onto the folded-over welt strip and the insole.

3,124,887
HEIGHT INCREASING DEVICES FOR SHOES
Charles C. Vassar, 847 Simcoe St., Oshawa, Ontario, Canada
Filed Dec. 26, 1961, Ser. No. 162,034
3 Claims. (Cl. 36—81)



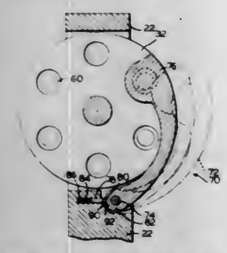
1. A height increasing device for loose insertion in the heel portion of a shoe, comprising a flexible elevating member formed of a resilient material, said member having a longitudinal dimension slightly longer than the heel portion of a shoe and lateral dimensions and curvature conforming in shape to the heel portion of a shoe, said member having a plane top surface, and said member having a bottom surface in two parts, the rear part being horizontal for a relatively short distance from its rear end and the forward part being inclined upwardly and forwardly into meeting engagement with said top surface, said bottom surface thus containing a lateral line separating the horizontal and inclined parts, whereby said member has a rear portion having a constant thickness longitudinally and a forward portion which is constantly decreasing in thickness longitudinally toward the front, said portions being defined at the bottom surface by said lateral line at the intersection of said horizontal and upwardly inclined bottom surface parts, said member when loosely inserted in a shoe and taking the weight of a wearer in a downward direction through his heel being rocked about said lateral line as a fulcrum to lower said rear portion and elevate said forward portion whereby to produce a reactive force upwardly on the forward part of the heel and medial part of the foot of the wearer.

3,124,888
DEPTH GAUGE AND SCARIFIER FOR A BULLDOZER BLADE
Clarence L. Jeffrey, 814 W. Center St., Fairfield, Ill.
Filed Apr. 5, 1962, Ser. No. 185,462
1 Claim. (Cl. 37—145)



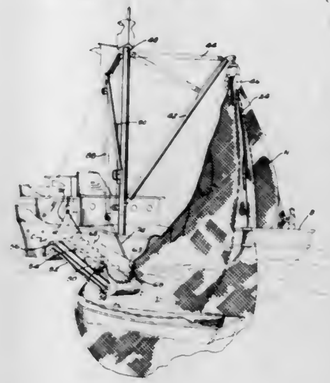
The combination consisting of a scarifier tooth and depth gauge mounted upon a tiltable bulldozer blade having a lower cutting edge, consisting of a metal body which is mounted integrally with said blade on the back thereof, and a leg formed to project at an angle perpendicular to the body of said scarifier tooth, said perpendicular leg positioned so that its lowermost surface is in the same plane as the lower cutting edge of said blade and terminating in a sharpened point projecting rearward of said blade and positioned to be rotated above and below said cutting edge when the bulldozer blade is tilted clockwise or counterclockwise.

3,124,889
REVOLVER GATE
Douglas R. Hellstrom, Wellesley Hills, Mass., assignor to Smith and Wesson, Inc., Springfield, Mass., a corporation of Massachusetts
Filed Mar. 16, 1961, Ser. No. 96,278
8 Claims. (Cl. 42—59)



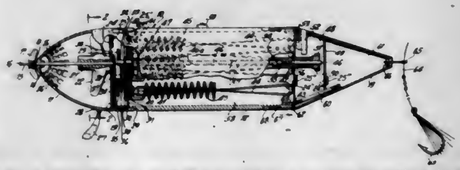
5. A revolver firearm having a rotatable cylinder with chambers formed therein, said chambers being adapted to receive either full-size cartridge cases or smaller cartridge case assemblies including tubular sleeves surrounding smaller cartridge cases; a recoil plate behind said cylinder, said recoil plate being cut away to form an opening; a swingably mounted gate; means for holding said gate at a position where it provides an opening having the size of the full cross-sectional area of a chamber; and means for holding said gate at a position where it provides an opening for the insertion and removal of the smaller cartridge cases but obstructs the tubular sleeve so as to hold the sleeve in the chamber.

3,124,890
CONVEYOR APPARATUS FOR FISHING BOATS
Mario J. Puretic, 30514 Avenida Corona, San Pedro, Calif.
Filed Nov. 21, 1961, Ser. No. 153,957
4 Claims. (Cl. 43—6.5)



1. Apparatus for transferring fish from a net to a fishing boat, comprising:
an enclosure that is normally arranged in a stowed position on said boat until the commencement of a fish transferring operation;
means on said boat for moving said enclosure from said stowed position to an upwardly inclined operative position alongside said boat wherein the lower portion of said enclosure is submerged;
conveyor means supported within said enclosure;
power-operated means on said enclosure to drive said conveyor means;
net-holding elements on the lower portion of said enclosure adapted to hold one portion of said net;
and power-operated net retrieving means on said boat that progressively raise and gather the remaining portion of said net towards the lower portion of said enclosure whereby fish trapped in said net are dumped out of said net and onto the lower end of said conveyor means, with said conveyor means lifting said fish for transfer onto said boat.

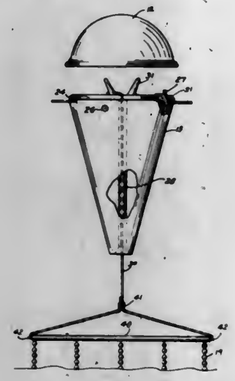
3,124,891
LURE FOR GAME FISH
Robert H. Van Sant, 434 Sea Spray Ave., Palm Beach, Fla.
Filed Feb. 26, 1962, Ser. No. 175,569
8 Claims. (Cl. 43—26.2)



5. A lure for game fish comprising a central cylindrical section, a head section and a longitudinally movable tail

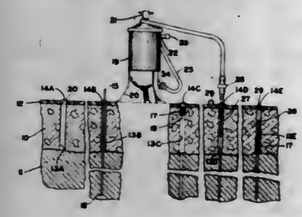
section which partially overlap opposite ends of the central cylindrical section and are connected thereto, motive energy means located in said central cylindrical section, an impeller located in said head section, mechanical energy transmission means located in the forward portion of said central cylindrical section, said means being connected at its rearward end to said motive energy means and at its forward end to said impeller, and braking means integrally connected with said motive energy means and said energy transmission means and extending into said tail section.

3,124,892
FISH ATTRACTOR
James V. O'Brien, Bexar County, Tex. (110 Fairchild, San Antonio 36, Tex.)
Filed May 1, 1962, Ser. No. 191,478
6 Claims. (Cl. 43—42)



1. A fish attractor comprising a float, said float being partitioned into an upper portion and a lower portion by means of a partition, said lower portion being an inflatable envelope, a line having one end secured to the surface of the partition which is in the upper portion, a conduit extending through said lower portion from said partition to an extremity of said envelope, said envelope being hermetically sealed around the conduit, said line extending through an aperture in said partition and through said conduit extending through said lower portion and an agitation means secured to the other end of said line.

3,124,893
METHOD OF DISPERSING FLUID BENEATH SLAB FLOORS
Lester W. Glenn, 1825 14th St. NW., Bradenton, Fla.
Filed Mar. 1, 1961, Ser. No. 92,638
14 Claims. (Cl. 43—124)



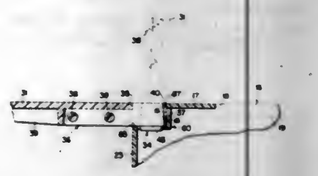
1. The method of dispersing a fluid into the earth supporting a slab floor, which compirses the steps of forming through such a slab and any covering thereon a passage having a major transverse dimension not substantially exceeding one-fourth inch, seating within said passage a transversely-elastic plug conformable to said passage in cross section, having equilibrium transverse dimensions at least equal to the transverse dimensions of said passage and having an axial length at least equal to its transverse dimensions, forcing a tubular element axially through said plug and into the portion of said passage below said plug with the elastic material of said plug gripping the walls of said tubular element in substantially fluid-tight relation, forcing a fumigant through said tubular element to permeate the earth beneath said slab, withdrawing said tubular element from said plug while leaving said plug in place in said passage, and promptly thereafter driving a snugly-fitting dowel into the upper end of said passage and into intimate, sealing engagement with the upper end of said plug.

3,124,894
DOILY STRETCHER
Fred H. Via and Lessie C. Via, Henry, Va.
Filed Jan. 29, 1962, Ser. No. 169,413
6 Claims. (Cl. 45—24)



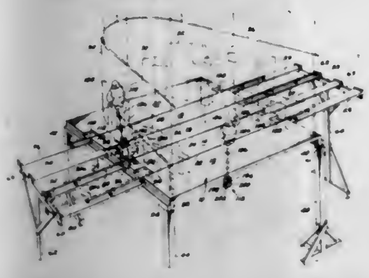
1. A stretcher for a doily having a flat center portion and a perimetral ruffle area of considerable fullness comprising, a center plate to overlie the center portion of a doily to be stretched, a post seatable vertically in the center plate, and a ruffle attaching plate adjustably positionable in said post in vertically spaced relation to the center plate, the ruffle attaching plate having at least one row of ruffle impaling hooks perimetrically thereabout.

3,124,895
SEWING MACHINE CARRYING CASE WITH HINGED DROP PANEL
William Hofgesang, Avenel, N.J., assignor to The Singer Company, a corporation of New Jersey
Filed May 14, 1962, Ser. No. 194,567
4 Claims. (Cl. 45—68.2)



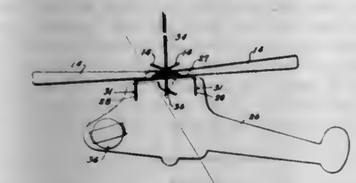
1. In combination a plastic carrying case, a drop panel and a hinge for movingly connecting said drop panel to said carrying case, said carrying case having an apertured work supporting wall, an apertured end wall, and a three-cavity projection formed adjacent to the junction of the work supporting wall and said end wall, one of the cavities in the three-cavity projection communicating with the apertures in the work supporting wall and the end wall, said hinge having a fixed leaf, a movable leaf and a pivot pin for swinging said movable leaf on said fixed leaf, said fixed leaf having a portion thereof positioned in one of the said cavities and having other portions thereof positioned in the other of said cavities.

3,124,896
STAGE FOR PUPPETS
Robert M. Cook, 6506 McLennan Ave., Van Nuys, Calif.
Filed Oct. 9, 1961, Ser. No. 143,834
13 Claims. (Cl. 46—13)



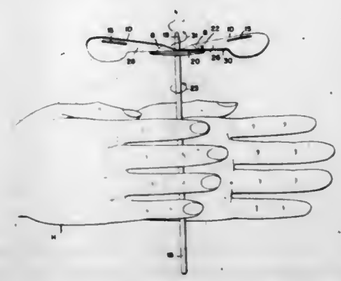
12. In a miniature stage for performance thereon of puppetry with a separate mechanical puppet assembly which includes a puppet figure for appearance upon the stage, a control member to be concealed from view below the stage, and a relatively slender control column interconnecting said puppet figure and said control member, apparatus comprising: a stage floor; a relatively narrow slot extending across said floor from side to side thereof and through said floor from the top surface to the undersurface thereof; a slide member slidable lengthwise of and substantially closing the width and entire length of said slot; a sidewardly opening recess formed in one edge of said slide member, said recess and side opening thereof extending between the top surface and the bottom surface of said slide member for detachably receiving thereinto the control column of such puppet assembly for movement with said slide member along said slot while extending therethrough transversely of the top surface of said floor, the side opening of said recess being closed by the adjacent floor edge of said slot during such movement.

3,124,897
WHIRLING TOY WITH PROPELLER
William J. Shapiro, 658 Montgomery St., Brooklyn 25, N.Y.
Filed Nov. 12, 1958, Ser. No. 774,070
17 Claims. (Cl. 46—51)



1. A twirling toy comprising a unitary vehicle having a substantial surface, at least one vehicle bearing carried by the vehicle with an axis, means for attaching string means to the vehicle, the vehicle having a size and weight such that it can be twirled on a string, a portion of the vehicle extending forwardly of the string attaching means when twirled, means for carrying a weight carried by the forwardly extending portion of the vehicle and located a substantial distance from the string attaching means, the weight carrying means being of such size that it will receive a weight of such magnitude as to displace the center of gravity of the vehicle forwardly of the point of attachment of the twirling means, a propeller having a central hole providing a propeller bearing, and string means having one end secured to the vehicle and then passing through the vehicle bearing and next passing through the propeller bearing to provide a string means axle upon which the propeller turns and the string means including solely a twirling string.

3,124,898
FLYING TOY
William Henrichsen, Box 17, Edinburg, N.Y.
Filed July 10, 1961, Ser. No. 122,760
2 Claims. (Cl. 46—82)

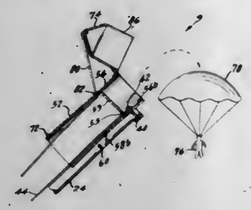


1. A toy comprising in combination a flying structure and a launching structure, said flying structure including a central portion having an aperture therein and a plurality of aerodynamic portions having leading and trailing edges capable of producing an aerodynamic lifting force upon rotation of said flying structure in one direction, said launching structure including a spindle having a longitudinal axis, an abutment member having an upper surface secured to said spindle, the upper end of said spindle extending upwardly of said upper surface and passing through said aperture when said flying structure is in engagement with said upper surface, said launching structure further including means secured to said upper surface for engaging and imparting rotation of said spindle to said flying member and for camming said flying structure out of engagement with said upper surface upon continued rotation of the flying structure relative to the launching structure, said means comprising a pair of cam elements secured to said upper surface, said cam elements extending above said trailing edges of said flying structure and terminating below said leading edges of said flying structure when said flying structure is in engagement with said upper surface and said cam elements being spaced apart on the abutment member a distance at least as great as the spacing between the trailing edges of a pair of said aerodynamic portions of the flying structure whereby said cam elements cam said flying structure out of engagement with said upper surface upon rotation of said flying structure into engagement with said cam elements.

3,124,899
MULTISTAGE PROJECTILE WITH ARTICLE RELEASING CAPSULE
Julius P. Taubman, Hicksville, N.Y., assignor to Fallout Assemblies Corporation, Mineola, N.Y., a corporation of New York
Filed June 4, 1962, Ser. No. 199,874
10 Claims. (Cl. 46—86)

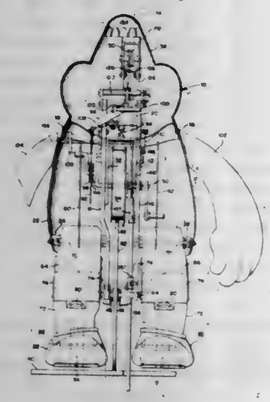
9. In a toy, a base, a turntable rotatable on said base, crank means mounted on said base and engaging said turntable to rotate the same, track means mounted on said turntable for rotation therewith, said track means being elongated and having spaced track surfaces, a projectile on said track means for movement therealong and along the surfaces thereof, tensioned guide means on said track means and connected with said projectile to retain the same on said track surfaces during the movement of

said projectile therealong, said projectile including a plurality of separable stages, a plurality of stop means relatively positioned along the length of said track means, means on certain of said stages each selectively engageable with a respective one of said stop means during the movement of said projectile to retain said certain stages at its respective selected ones of said stop means, and means on said projectile connecting said stages together for conjoint movement and operable to disconnect said stages each from the other at their pre-selected respective stop means.



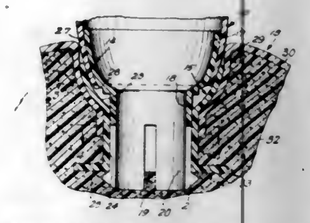
10. In a toy as in claim 9, an operable capsule on one of said stages for containing a releasable article, and means on said projectile connected with said capsule to operate the same to release an article contained thereby.

3,124,900
PUPPET MOVABLE ON A WHEEL TO SIMULATE WALKING
Robert M. Cook, 6506 McLennan Ave., Van Nuys, Calif.
Filed June 23, 1960, Ser. No. 38,391
15 Claims. (Cl. 46—105)



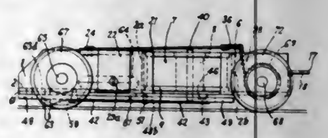
12. A mechanical puppet comprising:
a hollow puppet body having a pair of legs, said body and legs simulating a human form;
pivot means pivotally supporting said legs from within said puppet body;
a relatively thin wheel member rotatably carried by and partially enclosed and partially hidden within the lower portion of said puppet body and extending between said legs, the lowermost portion of which wheel member is located adjacent to and substantially horizontally opposite the lower ends of said legs;
and coupling means interconnecting said legs and said wheel member and operative upon rotation of said wheel member to swingingly pivot said legs about said pivot means.

3,124,901
BALL JOINT BETWEEN DOLL HEAD AND BODY
Herbert R. Beebe, Richmond Hill, N.Y., assignor to American Doll & Toy Corp., New York, N.Y., a corporation of New York
Filed Dec. 7, 1961, Ser. No. 157,675
1 Claim. (Cl. 46—161)



In a toy figure, a head of resilient material having a hollow neck portion formed integrally with the head and of substantially semi-spherical formation with an axial opening therein, a toy body of resilient material having an inwardly directed wall portion formed integrally with the body and of substantially semi-spherical formation providing a semi-spherical cavity in the upper portion of the body and with an axial opening in the inner end of said wall portion, interfitting first and second hollow parts of rigid material, the first of said interfitting hollow parts having a substantially semispherical end portion and a reduced tubular portion connected with said semi-spherical portion, said tubular portion having circumferentially spaced fingers provided with outwardly projecting enlargements on the ends thereof, the second of said interfitting parts having a substantially semi-spherical end portion and a reduced tubular portion connected therewith and with a peripheral flange at the end of said tubular portion, said first part fittingly engaging within the neck portion of said head with the reduced tubular portion thereof protruding through the opening in the neck portion, the said second of said interfitting parts fittingly engaging within said inwardly directed wall portion of said body with the reduced tubular portion of said second part protruding through the opening in the inner end thereof, said tubular portion of said first part being of a size to slidably interfit with the tubular portion of said second part to dispose said enlargements beyond said peripheral flange to thereby connect said first and second parts together with the semi-spherical neck portion of said first hollow part nested within the semi-spherical neck portion of the head and with the semi-spherical portion of said second hollow part nested within the semi-spherical portion of said toy body and all of said semi-spherical portions being in combined nested relation and the semi-spherical neck portion of the head protruding from said cavity for articulatively mounting the head on the body.

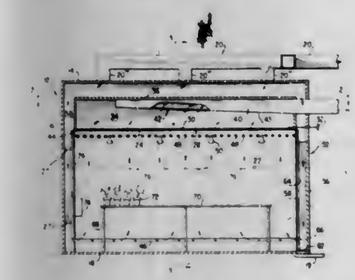
3,124,902
TOY VEHICLE CHASSIS AND ELECTRIC MOTOR
Douglas Kelvin Gowland and Carl W. Robinette, both of Kellogg Ave., Santa Barbara, Calif.
Filed Nov. 16, 1959, Ser. No. 853,046
2 Claims. (Cl. 46—243)



1. The combination with a toy vehicle chassis comprising a support of trough shape having a flat base and

upstanding side walls, and formed of non-ferrous material, of a vibrating armature motor comprising an energising coil mounted on said base, a member of ferrous metal located adjacent said coil for concentrating magnetic flux therein, a longitudinally-apertured polepiece mounted within said coil, an armature mounted by one end between said walls with a part thereof located above said polepiece, a pair of separable electric contacts operatively mounted on said base, means connecting said contacts in circuit with said coil, and a pressure member located in the aperture of said polepiece and moveable longitudinally by said armature for separation of said electrical contacts.

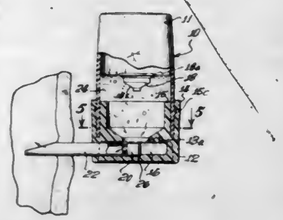
3,124,903
CONTROLLED ENVIRONMENT ROOM SYSTEM
Andrew Truhan, R.D. 3, Box 392T, New Brunswick, N.J.
Filed Nov. 28, 1961, Ser. No. 155,369
5 Claims. (Cl. 47—17)



1. An air circulating system comprising an outer housing having a top wall, side walls, and a bottom wall, an inner compartment disposed in spaced relation within said outer housing, said inner compartment including side walls and a perforated top wall, an air inlet communicating with the interior of the upper portion of said outer housing for directing air downwardly in heat exchange relation between the inner surface of the side walls of said outer housing and the outer surface of the side walls of said inner compartment, heat exchange elements affixed to the outer surface of the side walls of said inner compartment, air distributing means in said inner compartment for directing air into the interior thereof, said air distributing means including means for generally uniformly directing air from the space between the outer housing side walls and the inner compartment side walls into the inner compartment adjacent the floor of the inner compartment and an outlet chamber in communication with the perforated top wall of said inner compartment for exhausting the air within said compartment, said outlet chamber blocking communication between the perforated top wall of said inner compartment and the interior of said outer housing.

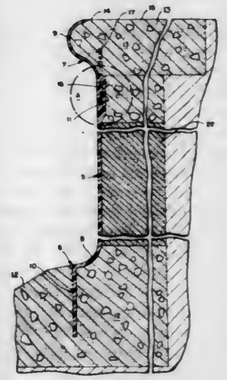
3,124,904
PLANT INJECTION DEVICE
James J. Mauget, 1043 Bilton Way, San Gabriel, Calif.
Filed June 18, 1962, Ser. No. 203,348
11 Claims. (Cl. 47—57.5)

1. A device for injecting a quantity of liquid into the stem of a plant, comprising:
a container having an interior compartment and a passage communicating at one end thereof with the exterior of the container and also communicating with the inner compartment through a port located at a position spaced from said one end of the passage, said passage being adapted to receive a feeder tube at its outer end;
a quantity of liquid in the compartment;
a first displaceable means closing said port to prevent communication between the passage and the compartment;
a second displaceable means closing the passage to communication with the exterior of the container, said two displaceable means being spaced apart and forming a sealed secondary compartment within the passage;



the second displaceable means being movable within the passage to engage and displace from the port the first displaceable means to place the passage and compartment in communication with each other;
and a quantity of a substance in the secondary compartment that evolves a gas upon being mixed with the liquid from the first mentioned compartment and drives the liquid out of the container through the passage.

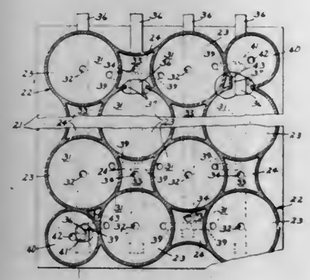
3,124,905
SWIM POOL WALL PANEL STRUCTURE
Kurt L. Stier, 6100 S. Archer Road, Summit, Ill.
Filed Dec. 12, 1960, Ser. No. 75,323
4 Claims. (Cl. 50—100)



3. An excavated swimming pool the vertical-defining wall of which comprises a plurality of laterally abutting panel-structures surrounding a supporting concrete base and integrated at their top ends with a bordering concrete walk, each panel-structure comprising a flat middle portion terminating in specially-formed top and bottom end portions, the bottom end portion being curved forwardly and then extending downwardly to form a concavely rounded corner having a vertically downward extension embedded in the concrete base, the concave face of said bottom end portion terminating flush with the adjacent upper face of the said concrete base, the upper end portion of the panel being curved forwardly and then rearwardly to form a rounded forwardly projecting rim having its upper edge flush with the surface of the bordering walk, the said rim forming a half-round overhanging coping around the perimeter of the pool, and

an upwardly-disposed extension integrated with the said middle portion of the panel and spaced rearwardly of the said rim, the said upwardly disposed extension being embedded in the concrete of the said bordering walk.

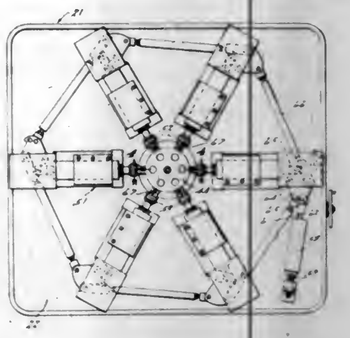
3,124,906
STORAGE BIN ARRANGEMENT FOR GRAIN ELEVATORS AND THE LIKE
Donald B. Fegles, Minneapolis, Minn., assignor to Fegles Construction Company, Inc., Minneapolis, Minn., a Minnesota corporation
Filed Dec. 20, 1960, Ser. No. 77,071
3 Claims. (Cl. 50—113)



1. A storage unit for granular material, said unit comprising a horizontal generally planar base structure and wall structure integral with and extending upwardly from said base and defining connected upright side walls of a plurality of parallel rows of vertical generally cylindrical primary storage bins, each of said rows of bins extending in a direction parallel to one of the horizontal longitudinal and transverse axes of said unit, said primary bins of each row being spaced apart longitudinally of the row thereof and each being disposed in staggered overlapping relationship with respect to and extending partially inbetween the primary bins of an adjacent row, portions of oppositely disposed inner walls of adjacent primary bins being connected by an integrally formed common wall to provide inner connected side walls of vertically extending interstice bins of materially less transverse areas than said primary bins, said primary and interstice bins each having bottoms disposed above the level of said base, said bottoms having closable discharge apertures substantially on the axes of their respective bins, corresponding opposed wall portions associated with each of said bins in each row thereof having openings therethrough below the level of said bottoms, said openings associated with each row being aligned with the other openings associated with the same row of bins and defining spaced portions of a passage for conveyor means, the passage associated with each row of bins having a longitudinal axis underlying the central portions of the alternately arranged primary and interstice bins in its respective row, and other bin discharging means carried by said bottoms of certain aligned primary bins and extending laterally with respect thereto to a discharge position upon a conveyor of an adjacent parallel row of bins.

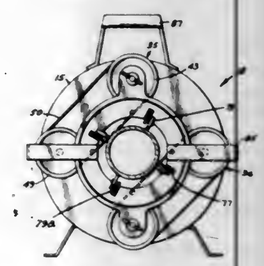
3,124,907
MACHINE FOR GRINDING WORKPIECES HAVING FACING SURFACES
Wilhelm Dralle, Detroit, Mich., assignor to Michigan Tool Company, Detroit, Mich., a corporation of Delaware
Filed Jan. 10, 1962, Ser. No. 165,339
13 Claims. (Cl. 51—46)

1. In a grinding machine for an annular workpiece having a plurality of circumferentially spaced apertured portions, means for continuously oscillating said workpiece about its axis, means for axially moving said workpiece in either direction from a central position during such oscillation, a plurality of circumferentially arranged grinding wheel spindles, and means for simultaneously moving said spindles toward or away from the workpiece axis, said means for axially moving the work-



piece including means for moving the workpiece a predetermined distance from said central position to an initial grinding position upon movement of said spindles toward the workpiece axis and from said initial grinding position past said central position to a second initial grinding position equidistant to said first initial grinding position from said central position upon movement of said spindles away from the workpiece axis.

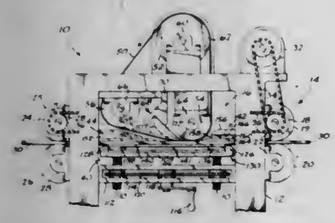
3,124,908
APPARATUS FOR FINISHING THE EXTERNAL SURFACE OF EXTENDED BODIES
George S. Wing, Palos Verdes Estates, and Harry Louis Bochman, Jr., Seal Beach, Calif., assignors to Hi-Shear Corporation, Torrance, Calif., a corporation of California
Filed Dec. 27, 1962, Ser. No. 247,706
6 Claims. (Cl. 51—140)



1. A polisher for polishing the external surface of an elongated, cylindrical body, comprising: a hub having a hub axis; a hub gear immovably mounted on said hub; a drive plate journaled to the hub; an intermediate gear journaled to the drive plate; a spindle shaft having a shaft axis parallel to the hub axis and journaled to the drive plate; a spindle gear mounted to the spindle shaft to turn with the same, the spindle gear and hub gear meshing with the intermediate gear, whereby relative rotation of the hub and drive plate causes rotation of the spindle shaft around its own axis, and around the hub axis; a drive pulley pinned to the spindle shaft; a support arm journaled to the drive plate and rotatable around the spindle axis; an idler pulley supported by said support arm; a flexible, abrasive belt wrapped around said pulleys

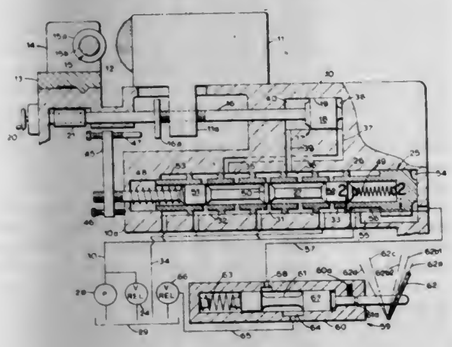
and driven by the drive pulley; adjustment means interlinking the support arm and the drive plate for adjusting the angular position of the support arm and thereby the spacing of the belt relative to the hub axis; drive means mounted to the hub for rotating the drive plate relative to the hub; and guide means mounted to the hub for centering a body to be polished on the hub axis.

3,124,909
COMBINATION DRUM AND BELT SANDING SURFACING MACHINES
John A. Nylund, Portland, and Frank J. Miehe, Lake Grove, Oreg., assignors to Tidland Machine Company, a corporation of Washington
Filed Apr. 24, 1961, Ser. No. 105,184
18 Claims. (Cl. 51—141)



1. In a sanding machine having a pair of spaced pulleys and a sanding belt traveling over the pulleys with a run of the belt extending between the pulleys, pressure means intermediate the pulleys training said run of the belt, said pressure means comprising a deflecting portion deflecting said run of the belt outwardly from a plane tangent to the two pulleys and tensioning the belt, said deflecting portion being of nonyieldable material that is heat conductive, means for cooling said deflecting portion including conduit means for circulating a coolant, and a backing portion of resilient material yieldably backing a portion of said belt between said deflecting portion and one of said pulleys.

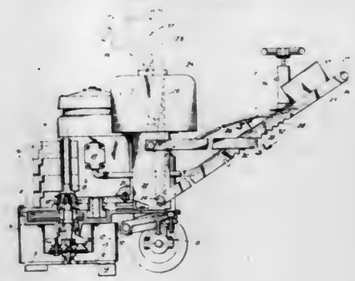
3,124,910
HYDRAULIC SYSTEM FOR CONTROLLED MOVEMENT OF MACHINE TOOL MEMBER
Lewis A. Dever and Harry E. Luebkemann, Cincinnati, Ohio, assignors to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed July 10, 1962, Ser. No. 208,705
13 Claims. (Cl. 51—165)



5. In a grinding machine, a hydraulic feed system for the remote control of relative feed movement between a wheelhead member and a workpiece supporting member comprising:

(a) a hydraulic motor connected to one of said members to effect movement thereof relative to the other of said members,
(b) a source of fluid under pressure and a sump,
(c) a first hydraulic valve hydraulically connected between the motor and the source of fluid under pressure, said valve having a ported sleeve received therein and a plunger having spaced spools slidably received in the sleeve, said sleeve and said plunger positionable relative to each other in neutral relationship to stop the motor, sad valve having a first fluid chamber in communication with said sleeve and connected to the source of fluid under pressure to apply a constant force against said sleeve, said valve having a second fluid chamber in communication with the sleeve and connected to the source of fluid under pressure to apply a force to said sleeve opposing said constant force,
(d) means defining a passage from said second chamber to the sump,
(e) a second hydraulic valve remote from said motor connected in said passage and having a movable valve member to define a variable restriction therein, said second hydraulic valve having a lever to move the valve member thereof and change the pressure in said second chamber, said sleeve shifting from neutral relationship relative to the plunger in response to an unbalance of said forces,
(f) means responsive to movement of said sleeve to reduce the unbalance of said forces thereon, and
(g) means to effect a mechanical connection between said plunger and said one grinding machine member after a predetermined movement of said one grinding machine member to move said plunger toward neutral relationship relative to said sleeve.

3,124,911
FLOOR FINISHING MACHINES
Frank P. Vinella, 2536 24th Ave. S., Minneapolis, Minn.
Filed July 17, 1962, Ser. No. 210,354
7 Claims. (Cl. 51—177)



1. A floor finishing machine comprising in combination, a running gear including at least one supporting wheel, a spider affording a mounting station for a plurality of grinding stones, an electric motor supported by the running gear and adapted to be energized by a source of electric current, gearing and flexible driving connections between the electric motor and the spider whereby said spider is rotated about a vertical axis, a housing surrounding said spider and its driving connections, adjustable weight means mounted on the housing whereby the engagement of the grinding stones with work surfaces may be varied, an improved handle assembly for guiding the machine at its work said handle assembly further affording a mounting station for electrical and hydraulic control components, said improved handle assembly providing adjusting means therefor and comprising, a handle

bar having grip sections, a pair of opposed handle brackets mounted on the housing and a pair of rearwardly projecting handle stop side bars pivotally mounted at their respective inner end portions to the said handle brackets, a pair of handle side members pivotally mounted at their respective inner end portions on the said handle brackets at a point beneath the mounting position of the said handle stop side bars, the outer end portion of the handle stop side bars being provided with transverse bores to receive a positioning shaft and the outer end portion of the handle side members being terminated and secured to the handle bar, said positioning shaft being mounted in the said handle stop bars for limited rotation about its longitudinal axis, a plurality of longitudinally spaced positions defined in the underside of the respective handle side members affording means for engagement with the positioning shaft and adjustable means carried by the said handle side members for connecting and locking the handle side members and the handle stop side bars in engagement, the one with the other.

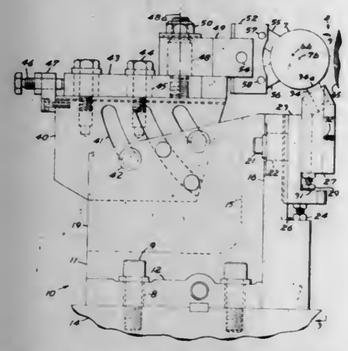
3,124,912

MACHINE TOOL WORKPIECE SUPPORT

Wilbur F. Jessup, Lyons, France, assignor to The Cincinnati Milling Machine Company, Cincinnati, Ohio, a corporation of Ohio

Continuation of application Ser. No. 39,138, June 27, 1960. This application Apr. 12, 1962, Ser. No. 188,612

5 Claims. (Cl. 51—238)



1. In a grinding machine the combination comprising a workpiece driver having a face plate rotatable about a longitudinal axis to slidably engage in eccentric relation one end of an elongated workpiece of circular cross section to rotate said workpiece for grinding, at least two shoe members circumferentially spaced about the face plate each of said shoe members pivotally mounted for swiveling about a fixed axis during grinding in a longitudinally extending plane, each of said shoe members extending longitudinally along the workpiece to engage the periphery of the workpiece and provide the sole support for the workpiece in one lateral direction, each shoe member having two longitudinally spaced extreme workpiece engaging contact points on each side of the pivot point in the longitudinal direction to engage the workpiece near its opposite ends.

3,124,913

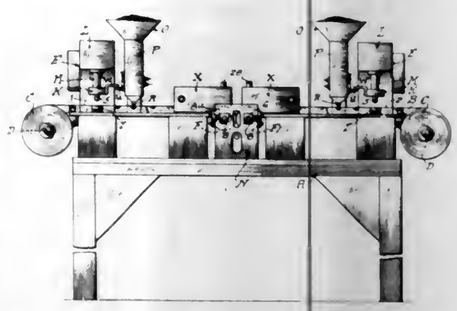
METHOD OF AND APPARATUS FOR MAKING SUPPOSITORY PACKAGES

Joseph L. Arcudi, Elizabeth, and Edward J. David, Point Pleasant, N.J., assignors to Ivers-Lee Company, Newark, N.J., a corporation of Delaware

Filed Oct. 6, 1961, Ser. No. 143,359

4 Claims. (Cl. 53—25)

1. The method of making material-containing packages consisting of moving two strips of ductile packaging material linearly in a horizontal plane, forming identical recesses in equidistantly spaced apart relation in each of said strips of ductile material, depositing in each recess heated flowable material that hardens upon cooling, causing the strips with the material therein to pass through a cooling atmosphere to cool and harden the material in each recess, bringing said strips into contact with each other with the recess of each strip and the hardened material therein facing a recess of the other strip and the hardened material therein, and sealing the strips together in a zone bounding said recesses thereby forming a package compartment containing said material.



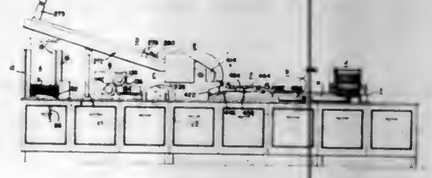
3,124,914

CARTON FORMING AND FILLING APPARATUS AND METHOD

Oswald E. Eissmann and Hans G. Krohne, Richmond, Va., assignors to American Machine & Foundry Company, a corporation of New Jersey

Filed Sept. 26, 1960, Ser. No. 58,390

10 Claims. (Cl. 53—26)



1. In a machine for forming cartons and filling them with articles, a supply of carton blanks, conveyor means for advancing successive carton blanks from said supply through said machine continuously, means along the path of said conveyor means for applying adhesive to each blank, an assembly stage along the path of said conveyor means, means for supplying articles to said assembly stage, said assembly stage having means for segregating groups of said articles and means for placing the groups upon successive blanks, and means along the path of said conveyor means for folding said blanks about said articles to form cartons, said folding means comprising means for folding up the sides of the blanks to form corners with the bottom of the blanks and means for folding down the top of the blanks to form the blanks into tubes, said folding means further comprising means for folding trailing flaps of the tubes and means for folding leading flaps of the tubes, the last-mentioned means being located at the end of the path of said conveyor means, and comprising additional conveyor means for advancing filled cartons step-by-step transversely from the first-mentioned conveyor means.

3. In a packaging machine, apparatus for assembling articles with a carton blank, said apparatus comprising a horizontal conveyor for feeding a series of blanks, an assembling wheel mounted for rotation above said conveyor, said wheel being disposed in a substantially vertical plane, a curved chute adjacent the periphery of said wheel, spaced pusher units carried by the periphery of said wheel and adapted to operate in succession along said chute, a conveyor belt positioned transversely to said wheel above said chute and adapted to convey articles to said chute, a multi-columnar supply source of articles, means for intermittently delivering a group of articles from said supply source to said belt, a plurality of spaced plates mounted eccentrically on a shaft above said belt, said plates lying in planes generally parallel to the plane of said wheel, and means for turning said shaft in timed relation to the operation of said pusher units on said wheel, whereby at predetermrined times said plates are moved to release articles for movement with said belt toward said chute and to drop therein, whereupon said wheel pusher units control the advancement of articles through said chute to a blank.

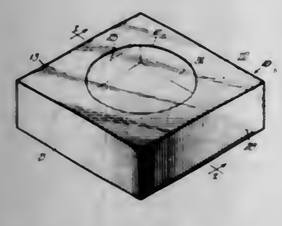
3,124,915

METHOD OF FORMING A LINED CARTON

Edwin L. Arneson, Morris, Ill., assignor to Federal Paper Board Company, Inc., Bogota, N.J., a corporation of New York

Filed Jan. 23, 1961, Ser. No. 84,141

5 Claims. (Cl. 53—27)



1. A method of forming a lined carton which comprises forming a carton which has, when set up, top, bottom and side walls with an aperture of substantial size in one of the walls providing an opening of lesser size than the apertured wall into the interior of the carton and with certain of the other walls being perforated, securing over said aperture a sheet of plastic film which is stretchable without rupture when heated by sealing the marginal portions thereof to the outside face of the apertured wall around the entire periphery of the aperture, heating the film until the portion thereof extending over said aperture is softened so that it will stretch and applying a vacuum through the perforated walls of the carton to stretch the softened film and pull the same into contact with the interior surfaces of the walls of the carton so as to conform substantially to said wall surfaces and form a seamless liner therefor.

3,124,916

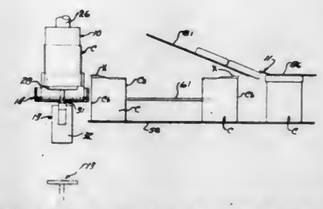
FILLING AND CAPPING MACHINE

Ralph F. Anderson and Robert P. Sorensen, both of Rockford, Ill., assignors to Ralph F. Anderson, Rockford, Ill.

Filed Sept. 13, 1961, Ser. No. 137,883

7 Claims. (Cl. 53—37)

1. The method of filling and capping a container which comprises, flowing a semi-solid material through a nozzle downwardly into a container, moving the upper edge of the container crosswise of the lower end of the nozzle to shear the semi-solid material in the container from the stream in the nozzle along the top of the container, the said shearing action producing a displacement of material at the top of the container resulting in a bulge of material at the one side of the container that trails during movement of the container across the nozzle, advancing the container past a capping station, turning the container during movement of the same from the nozzle to the capping station until said one side of the container leads as the container is moved past the capping station, and supporting a cover at the capping station with the cover inclined downwardly in the path of movement of the top of the container to engage the bulge of material at said one side of the container and press the same back into the container.



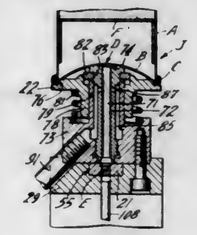
3,124,917

CAN SEALING MACHINE

Walter James Dobbins, Lake Zurich, Ill., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

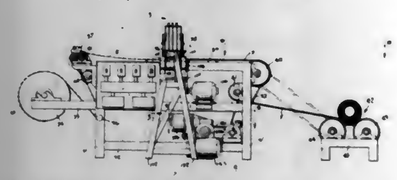
Filed Dec. 19, 1960, Ser. No. 76,916

6 Claims. (Cl. 53—88)



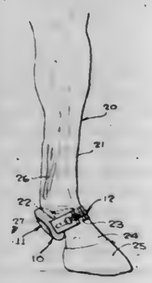
1. A machine for sealing a vent hole in a container with a resilient plug, comprising a support for holding a container in an upright position, a sealing head disposed adjacent said support, said sealing bead being formed with an open end channel extending therethrough and having a transverse section substantially the same as that of a said plug throughout substantially the length of the channel, said channel terminating at its discharge end in an inwardly tapering portion and a hole substantially conforming to the size and shape of a said vent hole, said support having locating means for locating a container with its vent hole in alignment with said discharge end of the channel, means for pressing said sealing head into sealing engagement with said container, pressure modifying means communicating with said channel for changing the pressure in said container through said channel and said vent hole, pusher means operable in said channel for pushing a said resilient plug through said channel and into said vent hole by about half the length of said plug, said plug being compressed laterally to the size said vent hole as it passes through said tapered portion of the channel and a portion of the trailing end of the plug being left temporarily in said tapered portion, and means for moving said support and sealing head axially relative to each other to effect withdrawal of said sealing bead from said container and from said portion of the plug left temporarily in said channel.

3,124,918
INDUSTRIAL APPARATUS
Quentin W. Hall and Anthony T. Solomon, Burlington, N.C., assignors to Burlington Industries, Inc., Greensboro, N.C., a corporation of Delaware
Filed Dec. 8, 1961, Ser. No. 158,090
15 Claims. (Cl. 53—125)



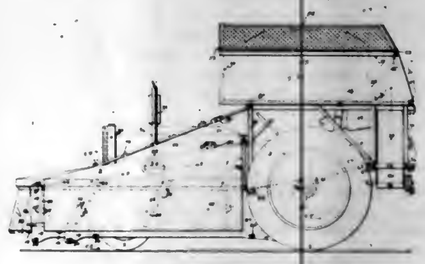
1. In apparatus for filling the pleats of a running length of textile fabric the combination which comprises a platform over which said fabric travels, driving means for moving the fabric across said platform, means for intermittently engaging and disengaging said driving means, edge control means for maintaining the travel of one selvedge of the fabric within predetermined limits, a plurality of spring loaded clamps mounted above said platform at a loading station along said aligned selvedge, means for sequentially actuating said clamps to hold the fabric selvedge in a registered position at the loading station, a needle for inserting a length of stuffing material into an aligned empty pleat positioned between two of said clamps, means for driving said needle into the pleat to insert a length of stuffing material therein, means for holding a length of material carried by the needle in the pleat, and means for pulling the empty needle out of the opposite end of the pleat.

3,124,919
HEEL SUPPORT FOR HORSES
George W. Thompson, 135—15 114th St., Ozone Park 20, N.Y.
Filed Nov. 17, 1961, Ser. No. 153,143
5 Claims. (Cl. 54—82)



1. A heel support for horses particularly adapted to overlie and protect the heels of a horse's foreleg between the hoof and the pastern joint, said heel support comprising a substantially thick and long impervious cushion of springy soft material adapted to overlie a horse's heel to support and cushion the heel and sesamoid bones thereof when the pastern joint is nearly parallel to the ground, said cushion being of a generally rectangular trapezoidal outline increasing in thickness from a first end portion toward a second end portion thereof, said cushion having a wear resistant area between said end portions to prevent undue wearing of the cushion during the use of the heel support, strap means connected to said cushion for securing the cushion in place on a horse's foreleg, said strap means comprising a strap element passing through said cushion and being secured thereto, and said strap element being adjacent said first portion of said cushion whereby a major portion of said cushion effectively supports and cushions the sesamoid bones of a horse's heel during the use of the heel support.

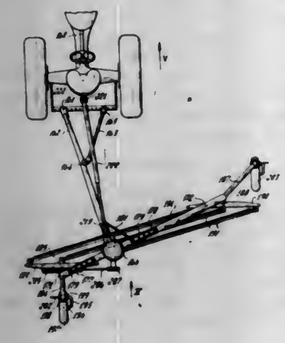
3,124,920
COTTON HARVESTING MACHINES
Frank W. McLarty, 337 S. Edgefield Ave., Dallas 8, Tex.
Filed Nov. 17, 1958, Ser. No. 774,410
14 Claims. (Cl. 56—12)



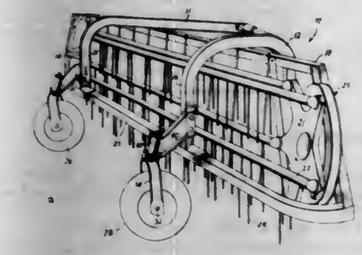
1. A harvester mounted on wheels and containing: a semi-closed suction chamber having air-tight side-walls and connecting ceiling astride the row being harvested by passage of said suction chamber having partially open ends and bottom for passage of any plants being harvested; substantially horizontal and rigid pans suspended beneath the side-walls in close proximity to the lower edges thereof and extending inward toward such plants a short distance, thereby partially closing the bottom of the suction chamber astride the plants and providing a container for very temporarily collecting particles of the crop being harvested; ascending air suction conduits in communication with the suction chamber through the space between the pans and the side-walls above the pans, whereby the particles of the crop being harvested are drawn continuously to the source of suction by the same air which has drawn the crop particles away from the plant by virtue of passage of a very large volume of air at high speed caused by the fact that the ends and bottom of the suction chamber are somewhat obstructed, thus causing high speed of the air momentarily on entrance into the said suction chamber.

3,124,921
DEVICE FOR THE LATERAL DISPLACEMENT OF CROP LYING ON THE GROUND
Cornelis van der Lely, Zug, Switzerland, and Ary van der Lely, Maasland, Netherlands, assignors to C. van der Lely N.V., Maasland, Netherlands, a Dutch limited company
Original application Jan. 26, 1955, Ser. No. 484,165, now Patent No. 2,939,265, dated June 7, 1960. Divided and this application June 7, 1960, Ser. No. 34,566
Claims priority, application Netherlands Jan. 29, 1954
5 Claims. (Cl. 56—377)

1. A device adapted for connection to a tractor having a normal forward direction of movement and further adapted for the lateral displacement of crop lying on the ground, said device comprising a frame, means connected to said frame and adapted to connect the same to said tractor in trailing relationship, spaced rotatable means on said frame rotatable in planes substantially transverse of said direction and on axes substantially parallel to said direction, horizontal bars extending between said rotatable means and pivotally connected to the latter, the first said means including driving means adapted for being coupled to said tractor, driven means coupled to one of said rotatable means in trailing relationship thereto, said driven means being coupled to and driven by said driving means, and raking elements on said bars.

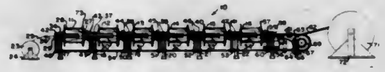


3,124,922
CASTER WHEEL FOR A SIDE DELIVERY RAKE
Emmett F. Glass, Akron, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Mar. 7, 1962, Ser. No. 178,046
4 Claims. (Cl. 56—377)



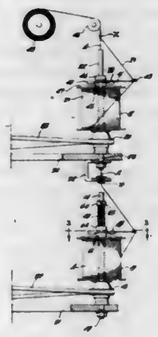
1. A side delivery rake comprising a frame having a forward end and a rear end, said forward end being attachable to a tractor or the like for moving the rake over the ground, a raking reel mounted on said frame and extending diagonally relative to ground travel, said frame rear end including a member extending generally parallel to the extension of said reel, a support connected to said rear end of said frame and extending rearwardly therefrom, a sleeve bearing on said support, said sleeve bearing extending in a vertical plane and having an axis inclined forwardly, with an upper end of the sleeve forward of a lower end, and a caster wheel mounted on said support, said caster wheel comprising a tire, a fork straddling and rotatably supporting the tire, and a spindle fixedly connected to said fork and forming therewith an obtuse angle, said spindle extending through said sleeve bearing and providing a forwardly inclined axis around which the caster wheel is pivotal 360°, said caster wheel being located in close proximity to said frame member with said fork extending rearwardly when the rake is travelling forwardly and pivoting 180° about said inclined axis to extend the fork forwardly when the rake is moved rearwardly, the proximity of said caster wheel to said frame member being such that if said spindle axis extended vertically the movement of the rake from forward to rearward travel would result in the wheel striking said frame member.

3,124,923
METHOD AND APPARATUS FOR TWISTING A PLURALITY OF STRANDS
Victor F. Volk, Hastings on Hudson, N.Y., assignor to Anaconda Wire and Cable Company
Filed Aug. 2, 1961, Ser. No. 128,717
6 Claims. (Cl. 57—17)



1. An apparatus for twisting together elongated strands comprising means for mounting each of a plurality of coils of said strands in tandem on a common axis through their centers, means for rotating said coils around said axis, guide means for withdrawing said strands from the inside of said coils, each of said strands passing through the centers of the more forward of said coils, means downstream of said coils for bringing together said strands and twisting said strands together due to the rotation of said coils, and means for taking up said twisted strands.

3,124,924
SYSTEM AND APPARATUS FOR MAKING ELASTIC YARN
Wilbert D. Smith, Philadelphia, Pa., assignor to Para-yarn Elastic Co., Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 14, 1962, Ser. No. 237,668
4 Claims. (Cl. 57—18)

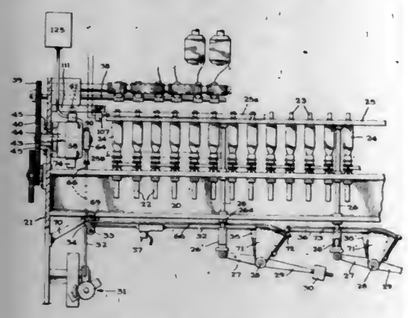


1. In apparatus for making elastic yarn by wrapping an inelastic cover thread about an elastic core filament, a spool having an elastic core filament thereon, means for rotating said spool in a predetermined direction, a flyer assembly for withdrawing the elastic core filament from the spool, biasing means acting on the flyer assembly operable to effect a predetermined uniform relative rotation between the flyer and spool whereby the core filament is continuously withdrawn from its spool and stretched a predetermined uniform amount, means for helically wrapping at least one inelastic cover thread around the stretched core filament and means for selectively adjusting the biasing means to vary the relative rotation between the flyer assembly and spool.

3,124,925
AUTOMATIC CONTROL SYSTEM FOR SPINNING FRAMES

Harry R. Kennedy, Charles J. Andersen, and Coy V. Jones, Sr., Greer, S.C., assignors to Southern Machinery Company, Greer, S.C., a corporation of South Carolina

Filed Aug. 6, 1962, Ser. No. 214,992
13 Claims. (Cl. 57—54)



1. In a spinning frame and automatic control system therefor, a vertically oscillating ring rail adapted to traverse bobbins during the building thereof, builder motion means including counterweight means to oscillate the ring rail during the building of the bobbins, an electromagnetically operated escapement device connected in the builder motion means and operable after the building of the bobbins to allow the ring rail to shift upwardly to a tip bunch applying position, a continuously driven front draft roll to deliver yarn, a ring rail lowering unit including a clutch device mounted upon the spinning frame, gearing drivingly interconnecting said front draft roll and ring rail lowering unit, electromagnetic means on the ring rail lowering unit to clutch and de-clutch the same, a pulley on the ring rail lowering unit and driven thereby when the unit is clutched, a flexible element connected with said pulley and adapted to be wound thereon for lowering the ring rail to a doffing position after application of the tip bunch to the bobbins and connected with the builder motion means and adapted to override the latter for taking over control of the ring rail, a yarn yardage predetermining device connected with and driven by the front draft roll and including switch contacts, a limit switch in the path of travel of the ring rail to be engaged thereby for completing a circuit subsequent to the closing of said switch contacts of the yardage predetermining device, a rotary control timer unit including cam operated switches to control and cycle the operation of the escapement device, ring rail lowering unit and spinning frame after closing of said limit switch, and control circuitry electrically interconnecting said control timer unit, ring rail lowering unit, escapement device, limit switch and yardage predetermining device.

3,124,926
BULKY YARN

Rudolph Woodell, Richmond, Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Oct. 24, 1962, Ser. No. 233,205
5 Claims. (Cl. 57—140)

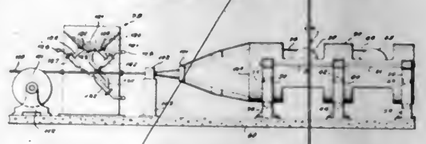


1. A blended bulky yarn comprising continuous wet-spun synthetic filaments intermingled with other continuous synthetic filaments, said yarn being looped and entangled at spaced intervals along the yarn length to form spaced bulky sections in the yarn, said bulky sections being separated from each other by an axial distance varying in completely random fashion and the bulkiness of said sections continuously varying in completely random fashion, the minimum variation in length being at least five-fold and the minimum variation in bulkiness being at least two-fold, the yarn in said sections separating said bulky sections comprising substantially straight filaments in compact even alignment.

3,124,927
METHOD OF MAKING WIRE ROPE

Emmett H. Mann, Pittsburgh, Pa., and Robert J. Carr, Affton, Mo., assignors, by mesne assignments, to Wire Rope Corporation of America, Incorporated, St. Joseph, Mo., a corporation of Connecticut

Filed Apr. 3, 1961, Ser. No. 100,435
8 Claims. (Cl. 57—161)

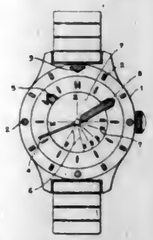


7. A method of manufacturing a preformed strand for a wire rope which includes the steps of laying wire into a strand in a wire stranding machine by twisting and bending the wires into a strand, preforming the strand by twisting and bending the strand into a helix, and subsequently treating the exposed surfaces of the wires in the preformed strand by cold working to produce thereon a dimpled surface to stress relieve the said surfaces after the bending and twisting operations performed during laying the wires into a strand and preforming the strand into a helix.

3,124,928
INDICATING MEANS FOR SO-CALLED DIVING-WATCHES

Louis Brunet, Annecy, France, assignor to Society Zaccolo, Rochet & Cie "Z.R.C.," Annecy, France, a French corporation

Filed May 8, 1962, Ser. No. 193,102
Claims priority, application France June 21, 1961
1 Claim. (Cl. 58—57)

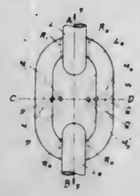


A device to indicate to a diver the time left before he starts climbing, if he intends to come straight up without stopping at least at one level of decompression, said device including: a watch having a dial with at least a minute hand, a concentric and adjustable rotating rim round said dial, at least a distinguishing reference mark on said rim, a disk mounted to rotate jointly with the minute hand inside the rim, a graduation in depths, experimentally determined and indicated on said disk, whereby the rim may be rotated to establish the coincidence of the depth indicated on the graduation with the distinguishing reference mark on the rim.

3,124,929
ELEMENT LINK FOR LINK CHAINS

Ryoichiro Kito, Takeshi Inomata, and Norio Kanetake, all of Tokyo, Japan, assignors to Kabushiki Kaisha Kito Seisakusho, Kanagawa-ken, Japan

Filed June 15, 1960, Ser. No. 36,189
3 Claims. (Cl. 59—90)

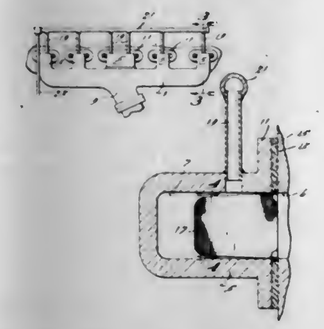


1. In a hardened and tempered link for link chains, comprising: a pair of opposite curved shoulder end portions and substantially straight side portions with at least one of said side portions being formed by separate legs welded together along a welded joint which is located in a central portion of the link between the end portions and substantially transverse to the longitudinal axis thereof, the improvement comprising a central portion of the link between the end portions and having a welded joint being of a hardness lower than said shoulder end portions, the ratio of the hardness of said central portion to said shoulder end portions being such that the tensile strength of the chain in the central portion is at least as great as the end portions.

3,124,930
EXHAUST SYSTEM

Walter H. Powers, Jackson, Mich., assignor, by mesne assignments, to Walker Manufacturing Company, Racine, Wis., a corporation of Delaware

Filed Mar. 20, 1959, Ser. No. 800,670
1 Claim. (Cl. 60—30)



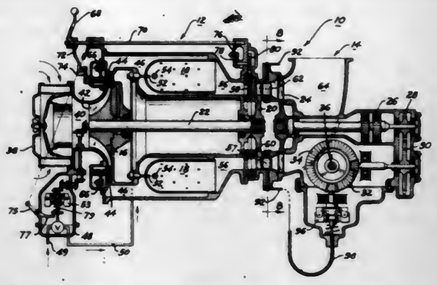
A smog reducing element comprising a gasket to fit between an exhaust manifold and an engine and a catalytic element attached to the gasket.

3,124,931
MOTIVE FLUID CONTROL FOR A RE-EXPANSION GAS TURBINE ENGINE

Frank C. Mock, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware

Filed May 2, 1960, Ser. No. 26,062
6 Claims. (Cl. 60—39.25)

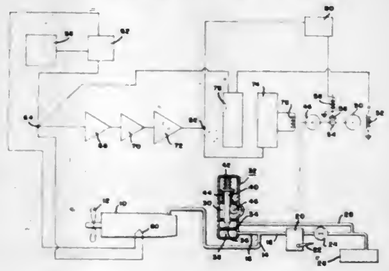
1. In a gas turbine engine having a gasifier section and a rotational independent power turbine driven by gas supplied from said gasifier section, guide vane means disposed between said gasifier section and said power turbine, said guide vane means being movable for changing the direction of the gas leaving said guide vane means, and speed responsive means driven by said power turbine operatively connected to said guide vane means for progressively moving said guide vane means solely as a function of power turbine speed to maintain that gas angle of attack with respect to said power turbine which provides optimum efficiency for all power turbine speeds.



3,124,932
TURBINE AIR INLET TEMPERATURE FUEL CONTROL FOR A GAS TURBINE ENGINE

Robert E. Nelson, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

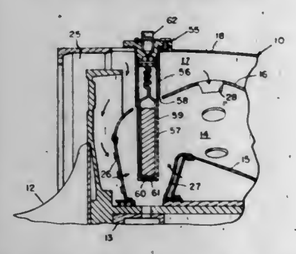
Filed May 23, 1960, Ser. No. 30,979
4 Claims. (Cl. 60—39.28)



3. A fuel control amplifier for controlling the fuel supplied to a gas turbine engine in accordance with turbine air inlet temperature comprising, thermocouple means positioned to respond to turbine air inlet temperature and providing an output voltage that is proportional to said air inlet temperature, voltage reference means including a Zener diode providing a source of constant potential direct current voltage, means providing a control voltage that is proportional to the difference in voltage developed by said voltage reference means and said thermocouple means, fuel control means connected with said engine including a shiftable element for varying the amount of fuel supplied to said engine, an A.C. electric motor connected with the shiftable element of said fuel control means for shifting the same, a saturable reactor motor drive circuit connected with said A.C. motor for energizing the same, a plurality of magnetic amplifiers connected in series, one of said magnetic amplifiers being connected with said control voltage and one of them being connected with said saturable reactor motor drive circuit, a tachometer generator having an A.C. output driven by said motor, a source of A.C. voltage, a phase responsive circuit connected with said A.C. tachometer generator and with said source of A.C. voltage, said phase responsive circuit including a pair of transistors and a pair of diodes, a voltage developing circuit element

forming a part of said phase responsive circuit and developing a D.C. voltage which is applied to the input of said magnetic amplifiers, a first circuit connected across said source of A.C. voltage including in a series connection the emitter-collector circuit of one of said transistors, one of said diodes and said voltage developing circuit element, a second circuit connected across said source of A.C. voltage including in a series connection the emitter-collector circuit of said other transistor, said other diode and said voltage developing circuit element, the output voltage of said A.C. tachometer generator being connected with the base electrodes of said transistors, an electrically controlled brake for holding the shiftable element of said fuel control means in a predetermined position, and means including a magnetic amplifier causing said brake to be released when the output of said series connected magnetic amplifiers is of a predetermined value, the magnetic amplifier controlling said electrically operated brake including positive and negative feedback windings and a Zener diode connected with the negative feedback winding.

3,124,933
STARTING SYSTEM
Le Roy Stram, Jr., Royal Oak, Seymour A. Genden, Oak Park, and Henry C. Maskey, Grosse Pointe Farms, Mich., assignors to Continental Aviation and Engineering Corporation, Detroit, Mich., a corporation of Virginia
Filed Mar. 9, 1959, Ser. No. 798,218
2 Claims. (Cl. 60—39.82)



1. A high altitude starting system for a turbojet engine and comprising

(*a*) a housing structure,

(*b*) a combustor structure disposed within said housing structure and defining a combustion chamber,

(*c*) a fuel supply means delivering a primary fuel stream to said combustion chamber,

(*d*) air induction means delivering air to said combustion chamber to provide high energy fuel, and

(*e*) a flame producer operable to provide a high energy flame within said combustion chamber for initiating combustion of said primary fuel,

(*f*) said flame producer comprising a pyrotechnic flare supported within said combustion chamber and having a charge of high energy solid rocket fuel including an oxidizer and means igniting said rocket fuel,

(*g*) said flare comprising a metal sleeve secured to said housing structure and having an open end disposed adjacent said combustor structure and exteriorly of said combustion chamber,

(*h*) said flare further comprising a combustible tube carrying said charge of rocket fuel and carried within said sleeve and extending from said open end through said combustor structure and into said combustion chamber, whereby said sleeve is disposed substantially entirely exteriorly of said combustion chamber and said combustible tube is disposed substantially entirely inside said combustion chamber.

3,124,934
METHOD OF REDUCING SEEPAGE FROM WATERWAYS
John H. Glenn, Torrance, and George M. Brown, Los Angeles, Calif., assignors to Brown Mud Company, Torrance, Calif., a corporation of California
No Drawing. Filed Jan. 13, 1958, Ser. No. 708,386
17 Claims. (Cl. 61—36)

1. The process of treating water in a waterway having a soil bed to cause the bed to become less permeable to water, comprising forming a water-in-oil emulsion, the major portion of which is a saponified mixture comprising petroleum hydrocarbon oil and organic acid of at least one member of the group consisting of fatty acids having from 16 to 18 carbon atoms and rosin acid, and adding said emulsion to the water in the waterway in the relative proportions of hundredths to thousandths parts of emulsion per million parts of waterway water.

3,124,935
GRAVING DOCKS
Christopher J. Foster, Sands Point, N.Y.
(44 Whitehall St., New York, N.Y.)
Continuation of application Ser. No. 724,470, Mar. 27, 1958. This application Apr. 5, 1962, Ser. No. 185,360
17 Claims. (Cl. 61—64)

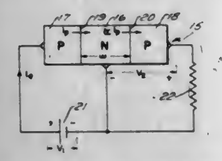


1. In a graving dock having a generally continuous, bottom-enclosing floor situated on bearing soil or the like at a depth which is below the natural water level in such soil, the improvement comprising means for reducing excess natural hydrostatic pressure as would otherwise be directed upwardly against the underside of said floor, said means comprising drainage means for removing accumulating water from below said floor including pump means, a seepage bed of material disposed underneath substantially the entire area of said floor, conduit means including portions substantially adjacent the underside of said floor and communicating with said seepage bed to admit entry of accumulating water from the latter, at least said conduit portions being disposed in direction which is generally parallel to the general plane of said floor and said conduit means being adapted to conduct said accumulating water to said pump means at a rate which is at least equal to that at which such water naturally accumulates under said floor, and means defining open vent passages between said seepage bed and the atmosphere, said drainage means being disposed to remove said accumulating water at a flow level whereby such natural hydrostatic pressure excess is maintained at negligible value at the level of the underside of said floor.

3,124,936
THERMOELECTRIC P-N JUNCTION DEVICES
Mahmoud A. Melehy, Scotland, Conn.
Filed Nov. 13, 1961, Ser. No. 152,964
7 Claims. (Cl. 62—3)

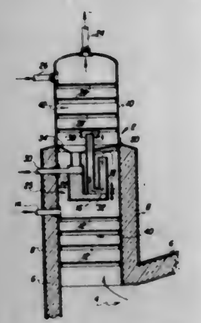
1. A thermoelectric device comprising a semiconductor body of alternate opposite conductivity types with at least one active p-n junction and at least one passive p-n junction forming inner and outer regions, the outer regions having higher conductivity than the inner region, the width of the inner region being much less than the

diffusion length for minority carriers in said inner region wth distance between the said p-n junctions being suffi-



ciently large so that the heat conduction between the junctions is small.

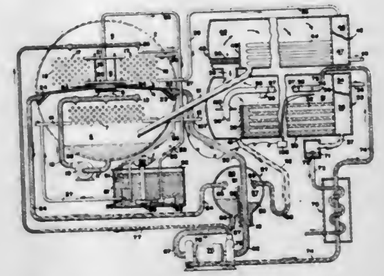
3,124,937
PRESSURE CONTROL IN STORAGE TANKS
Robert Q. King, Escondido, Calif., assignor to Union Tank Car Company, Chicago, Ill., a corporation of New Jersey
Filed Nov. 7, 1961, Ser. No. 150,789
12 Claims. (Cl. 62—54)



1. An apparatus for controlling the pressure in a storage tank or the like comprising a housing communicating with said storage tank, said housing having an opening communicating with the atmosphere, means for condensing within said housing vapors from said storage tank, and a pressure regulator within said housing between said condenser means and said opening in said housing communicating with the atmosphere, said pressure regulator being operable when the pressure in the storage tank reaches a predetermined value, means for condensing with a liquid, vapors passing through said pressure regulator, said liquid being collected by said pressure regulator.

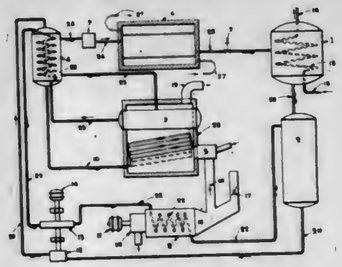
3,124,938
ABSORPTION REFRIGERATION SYSTEMS AND METHOD OF OPERATION
Louis H. Leonard, Jr., Dewitt, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed May 27, 1960, Ser. No. 32,452
39 Claims. (Cl. 62—103)

28. In an absorber-evaporator arrangement for use in an absorption refrigeration system, the combination of a shell, a barrier separating the shell into two chambers in communication with one another, the first chamber forming a solution evaporator and being adapted to be connected to the generator of the system to receive strong solution therefrom, said chamber being adapted to be maintained at a pressure less than generator pressure during operation of the system whereby strong solution discharged therein is flash-cooled, the first chamber being adapted to be connected to the absorber of the system to receive solution therefrom to mix with flash-cooled solution and to return the mixture to the absorber of the system, the second chamber receiving vapor from the first chamber, said second chamber being adapted to be connected to the generator to supply weak solution thereto. solution in the second chamber absorbing vapor therein created in the first chamber.



29. In the method of operation of an absorption refrigeration system, the steps which consist in placing weak solution in the generator in heat exchange relation with a heating medium to vaporize refrigerant from the solution thus forming a strong solution, forwarding the vapor to a condenser, condensing the vapor, forwarding the refrigerant condensate to an evaporator at a pressure less than pressure in the condenser, flash-cooling the condensate in the evaporator, vapor formed in the evaporator passing to an absorber to be absorbed by solution therein, placing the cooled refrigerant condensate in heat exchange relation with a medium to be cooled, forwarding strong solution from the generator to a solution evaporator at a pressure less than generator pressure, flash-cooling the solution in the solution evaporator, mixing the flash-cooled solution with absorber solution, absorbing the flashed vapor in solution and forwarding the solution to the generator.

3,124,939
METHOD OF PRODUCING REFRIGERATION EMPLOYING BICARBONATE SOLUTIONS
Thomas L. Hartman, Winter Park, Fla., assignor to H_2O International, Inc.
Filed Aug. 13, 1962, Ser. No. 216,559
7 Claims. (Cl. 62—112)

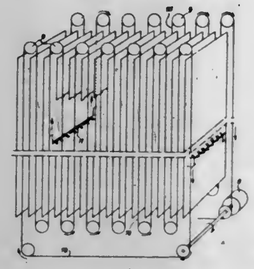


1. A method of producing refrigeration in a closed system which includes thermally separating carbon dioxide gas and a residual from a chemical solution, causing the separated carbon dioxide gas to condense to form a liquid, expanding the liquid into a lower pressure to cause refrigeration, the heat absorbed evaporating the liquid into a gas again, reducing the pressure on the residual, effecting a recombination chemically of all the gas with the residual to restore the aforesaid chemical solution to its original character and increasing the pressure on the chemical for reuse in succeeding cycles of operation.

3,124,940
DEFROSTING DEVICE FOR A LIQUEFIED GAS EVAPORATOR

Yves Guelton, Paris, France, assignor to L'Air Liquide Societe Anonyme pour l'Etude et l'Exploitation des Procedes Georges Claude

Filed Sept. 28, 1961, Ser. No. 141,362
Claims priority, application France Oct. 12, 1960
1 Claim. (Cl. 62—284)

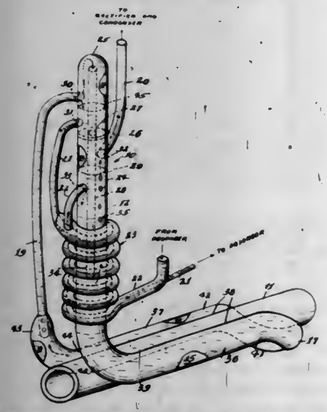


An evaporator for gas liquefied at low temperature by heat exchange with a flow of ambient air, said evaporator comprising heat-exchange surfaces between which said ambient air flow passes and means for defrosting said heat-exchange surfaces which are swept by the ambient air flow, wherein the heat-exchange surfaces are formed by a plurality of tubes containing said liquefied gas and parallel metal plates affixed to said tubes, and wherein said defrosting means comprises brushes, means for moving said brushes continuously in a single direction along a closed path at a substantially constant speed, and means for maintaining said brushes in frictional contact with said heat-exchange surfaces at least during the major part of their travel, the brush-moving means comprising at least one endless chain, to which said brushes are affixed, disposed along said closed path, and means for driving said chain in said single direction to constrain said brushes to pass successively through the intervals between said plates.

3,124,941
GENERATOR FOR AN ABSORPTION SYSTEM

Benjamin A. Phillips and John Roeder, Jr., both of Benton Harbor, Mich., assignors to Whirlpool Corporation, a corporation of Delaware

Filed May 25, 1961, Ser. No. 112,719
2 Claims. (Cl. 62—487)

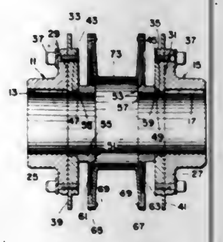


1. In a generator for use in an absorption refrigeration apparatus, structure comprising: a unitary tube member having an upright portion closed at the upper end thereof, a first substantially horizontal portion connected at one end to the lower end of the upright portion and defining a vaporizing space, a second substantially horizontal portion extending parallel to and spaced horizontally laterally of said first horizontal portion defining a pumping space, a connecting portion connecting the other end of the first horizontal portion to the corresponding end of the second horizontal portion, said connecting portion extending to a horizontal level below that of said first and second horizontal portions and defining a vapor directing means; and a partition member transversely dividing the interior of said upright portion into an upper vapor separating space and a lower analyzer space, said upright portion being provided with a first opening communicating with said vapor separating space and a second opening communicating with said analyzer space, for passing weak liquid from said vapor generating space and delivering rich liquid to said analyzer space.

3,124,942
FLEXIBLE COUPLING

Neal B. Rothfuss, Clinton, and Henry Troeger, Cooperstown, N.Y., assignors to The Bendix Corporation, Utica, N.Y., a corporation of Delaware

Filed Feb. 26, 1962, Ser. No. 175,689
8 Claims. (Cl. 64—13)

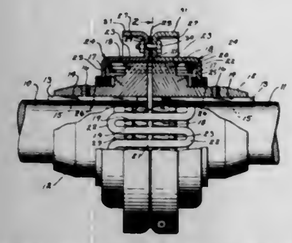


1. A flexible coupling for two shafts having a fixed or varying misalignment comprised of:
first tubular connector means having structure for attaching to a driving shaft,
second connector tubular means having structure for attaching to a driven shaft,
said first and second connector means being arranged on a common axis,
flexible diaphragm means arranged between and connecting said first and second connector means,
said flexible diaphragm means including a plurality of annular diaphragm elements,
each of said diaphragm elements having a circumferential flange and inwardly thereof a contoured section having radially-outwardly-decreasing thickness such that substantially uniform bending and torsional stress results,
the radially-inner part of the diaphragm element adjacent said first connector means having indented side structure facing said first connector,
the radially-inner part of said first connector means having mating structure received in and rigidly connected to said facing indented side structure of said diaphragm element adjacent thereto,
the radially-inner part of the diaphragm element adjacent said second connector means having indented structure facing said second connector, and
the radially-inner part of said second connector means having mating structure received in and rigidly connected to said facing indented side structure of said diaphragm element adjacent thereto.

3,124,943
COUPLING

Walter P. Schmitter, deceased, late of Wauwatosa, Wis., by A. Louise Schmitter, Wauwatosa, and Robert V. Abendroth, Whitefish Bay, Wis., co-executors, assignors to The Falk Corporation, Milwaukee, Wis., a corporation of Wisconsin

Filed Jan. 3, 1963, Ser. No. 249,975
5 Claims. (Cl. 64—15)

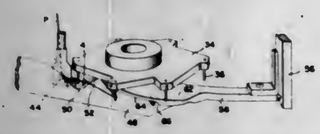


1. A coupling for connecting driving and driven shafts comprising: a pair of hub members connectible to said driving and driven shafts for rotation therewith, each of said hub members including a plurality of axially extending and peripherally spaced teeth, said teeth each having stepped side walls which define therebetween slots having cross sections of progressively increasing width in a direction radially outwardly of the respective hub member; and a grid member received within said slots and forming a torque transmitting element between said hub members, said grid member having side faces which match the stepped side walls of said teeth.

3,124,944
CIRCULAR KNITTING MACHINE FOR KNITTING PILE FABRICS

Milton Bond, Levittown, Pa., and Emanuel Stotter, Long Island City, and Joseph Weltz, Brooklyn, N.Y., assignors to Scott & Williams, Incorporated, Laconia, N.H., a corporation of Massachusetts

Filed Dec. 18, 1959, Ser. No. 860,430
9 Claims. (Cl. 66—9)



1. In a circular knitting machine having independent needles, means for feeding a base yarn to the needles, means for feeding a pile-forming yarn to the needles, means for effecting longitudinal movement of the needles to draw stitches of both the base and pile-forming yarns, elements movable in succession between pairs of needles to engage and draw bights of said pile-forming yarn, means for so moving said elements, and means for effecting disengagement of said bights from said elements, the last mentioned means comprising a cam for engaging the bights to move them from said elements.

3,124,945
TWO FEED CIRCULAR KNITTING MACHINE AND METHOD

Giuseppe Moretta, Via Sieme, 5, Varese, Italy

Filed May 22, 1956, Ser. No. 586,430
Claims priority, application Italy Nov. 14, 1955
6 Claims. (Cl. 66—42)

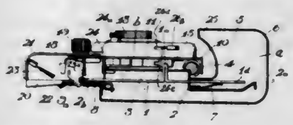
6. A method of knitting seamless stockings with a main yarn and an auxiliary yarn in a circular knitting machine having a rotary cylinder and needles, a main feeding and knitting station, and an auxiliary feeding and knitting station, comprising the steps of knitting the leg of said stocking with both yarns simultaneously, a main yarn being knit at the main station with tuck stitches at intervals and an auxiliary yarn being knit at the auxiliary station with plain stitches, whereby the leg fabric has alternate tuck and plain courses, withdrawing the auxiliary yarn from the fabric one course before going into the heel, whereby the last leg course before the heel is a tuck course knitted at the main station, knitting the heel by reciprocatory knitting at the main station, and knitting the foot of said stocking with both yarns simultaneously, a main yarn being knit at the main station with tuck stitches at intervals and an auxiliary yarn being knit at the auxiliary station with plain stitches, wherein the foot knitting of the auxiliary yarn at the auxiliary station is initiated one course after the heel.



3,124,946
KNITTING MACHINE

Hideaki Hiromatsu, Tokyo, Japan, assignor to Silver Knitting Machine Manufacturing Co., Inc., Tokyo, Japan

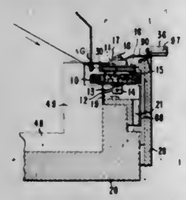
Filed May 17, 1960, Ser. No. 29,630
3 Claims. (Cl. 66—60)



1. A knitting machine comprising
a main body,
a carriage slidably mounted on said main body,
a cover releasably secured to said main body,
said main body including a needle board,
a plurality of stationary pins mounted parallel relative to each other along the front edge of said needle board, and bent downwardly and then upwardly and forwardly to form a sloping front end portion,
a plurality of knitting needles slidably mounted on said needle board for movement between a withdrawn and advanced position and including hooks at their front end,
said front end portions of said stationary pins and said knitting needles being adapted to stretch knitting yarn between said stationary pins and said knitting needles by operation of said carriage,
a setting bar disposed between said hooks of said knitting needles and said front end portions of said stationary pins and adapted to be placed on the first stretched course of said knitting yarn,
said knitting needles moving forwardly and backwardly over said setting bar, and said setting bar being pulled

out in axial direction upon completion of the required number of courses for finishing the knit cloth, a plate spring mounted on said needle board for each of said knitting needles and pressing against the latter, pressure members secured to the front portion of said carriage, and a rotary brush rotatably mounted on the bottom surface of each of said pressure members, and said rotary brushes moving the knit cloth into spaces defined between said front end portions of said stationary pins, and to push down the knit cloth by cooperation between said rotary brushes and said stationary pins.

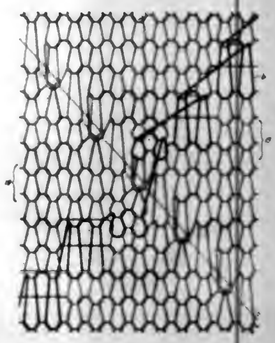
3,124,947
POSITIVE TYPE FEEDING APPARATUS
James Otis Farmer, New Castle, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed July 10, 1962, Ser. No. 208,702
3 Claims. (Cl. 66—132)



1. An improved yarn feed mechanism for a rotary knitting machine of the type comprising a needle bed structure and a needle actuating cam assembly structure one of said structures being relatively rotatably movable with respect to the other, said improved mechanism comprising, in combination, a yarn engaging feed means for receiving yarn from a supply source and directing said yarn into a knitting machine, a rotary driving means for said feed means and operatively connected therewith, said rotary driving means constructed and arranged to be rotatably supported on the cam assembly structure of a rotary knitting machine and to be positioned in frictional driven engagement with a needle bed structure of such machine so that upon relative rotation between said structure said driving means is rotated to actuate said yarn feed means at a rate proportional to the rate of relative rotation; said driving means comprising a first rotatable member mounted for rotation about an axis, a plurality of elongated resiliently flexible elements secured to said member, said elements having terminal portions circumferentially spaced in an annular path, the plate of which lies substantially perpendicular to said axis, said terminal portions constructed and arranged for continuous frictional engagement with the needle bed structure of a circular knitting machine to yieldingly impart rotation to said first member during relative rotation between said knitting machine structures, said feed means provided with sufficient frictional surface for engaging a yarn line to prevent slippage of the yarn line relative to said surface under variations in the tension of the yarn supplied thereto.

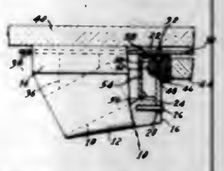
3,124,948
PATTERNED FABRIC
Nathan Levin, Trenton, N.J., assignor to Textile Machine Works, Wyomissing, Pa., a corporation of Pennsylvania
Original application July 17, 1956, Ser. No. 598,298, now Patent No. 2,919,565, dated Jan. 5, 1960. Divided and this application Oct. 26, 1959, Ser. No. 848,695
1 Claim. (Cl. 66—179)

A weft knit fabric having a plurality of walewise extending overlapping pattern sections each of which is composed of a number of fabric areas having courses of stitches knit of a body yarn and suture-joined to adjoining fabric areas of adjoining pattern sections, and an overplaid design incorporated in at least certain of said areas, a portion of said design being formed of stitches of an individual yarn incorporated in the courses of and ex-



tending back and forth between the centers of the adjoining fabric areas of an adjoining pair of pattern sections, individual stitches of said overplaid stitches being between the stitches of and extending over a pair of adjacent courses of said body yarns in said adjoining fabric areas, and said body yarns floating across said overplaid stitches in said adjacent courses.

3,124,949
SHOWCASE LOCK MECHANISM
George J. Friedman, Brooklyn, N.Y., assignor, by mesne assignments, to Iris Friedman, New York, N.Y.
Filed Nov. 28, 1961, Ser. No. 155,349
4 Claims. (Cl. 70—14)

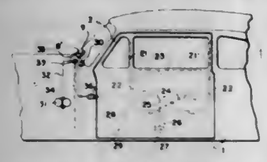


1. A lock mechanism comprising a housing, said housing including a casing and a base, said base having a plate forming the front of said housing, a longitudinally extending slot defined in said casing and base and extending through said plate, a locking slide longitudinally movable into and out of said casing along said slot, operable lock means in said casing to releasably lock said slide in said slot, means in said casing to operate said lock means, and drill resistant guard means on and having a portion thereof spaced longitudinally from the rear of said plate and being positioned within said casing.

3,124,950
LOCKING MECHANISM FOR VEHICLES
Friedrich K. H. Nallinger, Stuttgart, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Filed Jan. 3, 1961, Ser. No. 80,273
Claims priority, application Germany Dec. 31, 1959
3 Claims. (Cl. 70—264)

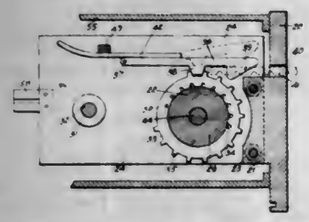
3. In a motor vehicle having a passenger space and a front and a rear door on each side thereof, a locking mechanism including a pressure fluid operated locking device for each door having a locked-in position and a lock-releasing position and means for locking-in said

doors, when all said locking devices are in the lock-releasing position, in the sequence consisting of the right rear door, the left rear door, the front door opposite the vehicle driver and the front door adjacent the vehicle driver and releasing said doors, when all said doors are in locked-in position, in a sequence which is the reverse of said first-named sequence, said last-mentioned means for locking-in said doors including a source of pressure fluid, a locking-in and lock-releasing distributor consisting of a valve means arranged within the passenger space of the vehicle and adapted to be operated manually with ease from the driver's seat, said valve means including a housing having an inlet means connected to said source of pressure fluid and four fluid-collecting conduits each



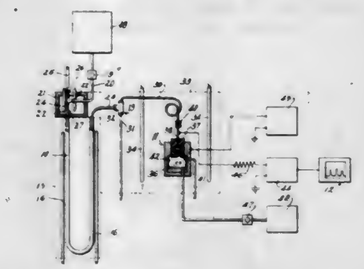
operatively connected with a respective locking device, and operatively connected with said power means, said power-collecting a movable valve member for connecting said outlets individually in sequence with said inlet, said outlets being arranged such that the individual locking devices of the vehicle doors are connected with the power source through said distributor in a sequence starting when said locking devices are all in the lock-releasing position, consisting of first the locking device associated with the right rear door, second the locking device associated with the left rear door, third the locking device associated with the door adjacent to the passenger front seat opposite the driver, and fourth the locking device associated with the door adjacent the driver's seat.

3,124,951
KEY OPERATED COMBINATION LOCK
Frank Marik, 188 Queen St., Campbelltown, New South Wales, Australia
Filed Mar. 14, 1960, Ser. No. 14,784
Claims priority, application Australia Sept. 7, 1959
1 Claim. (Cl. 70—383)



A lock assembly comprising a lock casing, a fascia plate having front and rear faces so mounted as to be at least partially rotatable with respect to said lock casing and a plurality of lock mechanism units secured to the rear face of said fascia plate; each said lock unit consisting of an apertured mounting plate, a shaft extending through said aperture, a selector wheel rotatably mounted on said shaft, a slot in said mounting plate extending from said aperture, a tooth on said selector wheel engageable in said slot, a circular rack having external teeth and internal recesses mounted for rotative and axial movement on said shaft, the tooth of said selector wheel being engageable in any one of the recesses of the circular rack in the locked position of the lock and in the said slot and out of engagement with said recesses in the unlocked position, a spring pressed detent carried by the mounting plate for engagement between two teeth of the circular rack but arranged to be displaced from such engagement by insertion of a rack-like key member through the said fascia plate and into engagement with the said external teeth to rotate the said circular rack through a predetermined angle corresponding to the effective length of the said key member, the said shaft and selector wheels being slidable with respect to said circular racks so that the tooth of each selector wheel when displaced into a position corresponding to the key combination is in engagement with the recesses of the circular rack and adjacent the slot of the mounting plate or a corresponding slot in an end plate; a stationary cam surface between the lock casing and the lock mechanism units in engagement with the ends of the shaft, the fascia plate upon rotation causing the ends of the shaft to follow the cam contour to axially displace the shaft with the fascia plate and parts carried thereby defining rotative movement about an axis transverse to the said shaft, axial movement of the shaft displacing the selector wheels so that their teeth extend into the respective slots in the unlocked position of the lock and out of engagement with the recesses of the respective circular racks, the key being withdrawable and insertable in the locked and unlocked positions, and if withdrawn when in the unlocked position and set to a new combination upon subsequent reinsertion, turning of the fascia plate to the locked position and withdrawal from the lock in the locked position resetting the lock mechanism to the new combination.

3,124,952
GAS CHROMATOGRAPH
Royce E. Johnson, Rockford, Ill., assignor to Barber-Colman Company, Rockford, Ill., a corporation of Illinois
Filed Sept. 23, 1960, Ser. No. 58,043
1 Claim. (Cl. 73—23)

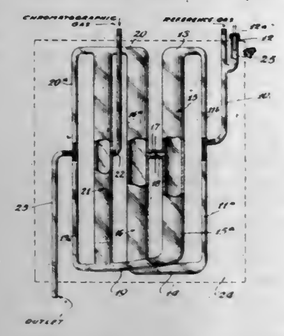


A gas chromatography apparatus comprising a partitioning column, means for supplying a stream of carrier gas under pressure to the inlet end of the column, means for injecting and vaporizing a measured quantity of a liquid sample in the carrier gas stream at the inlet end of the column, and means for splitting the effluent gases from the column into two precisely proportioned streams, means for supplying one of said streams through a small-volume ionization detector, means for recording the change of ionization current with time elapsing as said one stream flows through the detector, and means for supplying the other of said streams to a collector.

3,124,953
GAS DENSITY BALANCE
Arvle Glenn Nerheim, Crown Point, and James Miskovich, East Chicago, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Filed Jan. 30, 1958, Ser. No. 712,107
1 Claim. (Cl. 73—30)

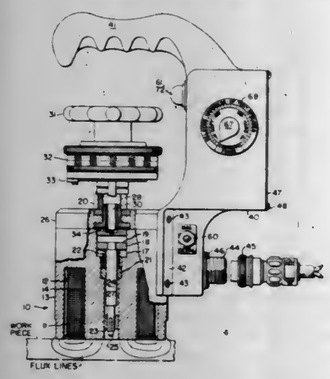
In a system for testing gas mixtures with respect to the density thereof, the improvement characterized by elimi-

nation of movable parts heretofore required to establish null leakage when sample gas and reference gas have identical densities, comprising in combination a clear reference gas manifold, a pair of reference gas detector tubes communicating with said manifold, a leakage path duct between said tubes, a pair of clear outlet ducts each communicating with a discharge end of said reference gas de-



tector tubes, a capillary outlet means into which said outlet ducts discharge, a substantially vertical sample tube communicating at its opposite ends with said outlet ducts, a sample inlet conduit for introducing the gas mixtures into said sample tube intermediate the ends thereof, and a temperature-sensitive electrical resistance element in said leakage path duct responsive to changes in rate of flow therethrough.

3,124,954
HARDNESS TESTERS
Robert C. Scott, 340 Common St., Belmont, Mass.
Filed Sept. 19, 1960, Ser. No. 56,766
1 Claim. (Cl. 73—83)



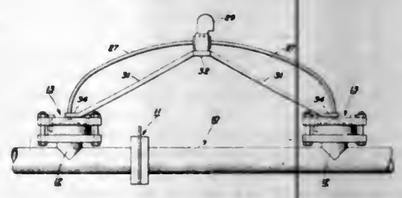
In a hardness tester for magnetizable metals, the combination comprising electromagnetic means for holding a work piece to be tested, means including a penetrator for testing the hardness of a work piece held by said electromagnetic means, said electromagnetic means including a coil, double-throw switch means electrically connected with said coil, first circuit means connected to supply direct current to said switch means in a first position thereof for energizing said coil to magnetize and magnetically affix the tester to the work piece, and second circuit means including a manually-variable resistor connected to supply direct current of adjustable preselected magnitude and opposite polarity to said switch means in a second position thereof to energize said coil in the opposite sense to demagnetize the tester and the work piece and scale means cooperating with said manually-variable resistor to indicate the setting thereof, said scale means having indicia indicating relative hardnesses of test specimens in inverse scalar relationship to corresponding resistance settings, whereby upon setting of said resistor according to the hardness of a test specimen, the value of the demagnetizing current supplied by said second circuit means is in direct relationship to the relative hardness of the specimen.

3,124,955
METHOD AND MEANS FOR DETERMINING ADHERENCE OF A COATING BONDED TO A SURFACE
Glen E. Naslund and Bruce O. Hallberg, Longview, Wash., assignors to Weyerhaeuser Company, Tacoma, Wash., a corporation of Washington
Filed Feb. 15, 1960, Ser. No. 8,563
4 Claims. (Cl. 73—150)



1. The method of determining the adherence of a coating bonded to a surface comprising uniformly applying an extended pressure sensitive adhesive strip with a pressure of at least 10 p.s.i. on said adhesive strip to the surface bonded coating, applying an impact force of predetermined kinetic energy to the extended portion of said adhesive strip at an angle in the range of about 70° to about 110° to said surface, thereby to suddenly remove the adhesive strip from the bonded coating, and measuring the residual energy of the impact force.

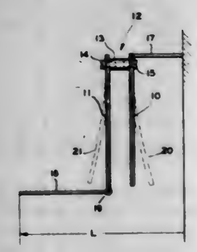
3,124,956
PURGELESS FLOW METER
Oliver H. Stohldrier, Webster Groves, Mo., assignor to National Lead Company, New York, N.Y., a corporation of New Jersey
Filed Feb. 8, 1961, Ser. No. 87,858
2 Claims. (Cl. 73—211)



1. A sealed, integrated differential pressure metering unit for measuring the pressure of a fluid in a pipe line having pipe taps and an orifice between said pipe taps

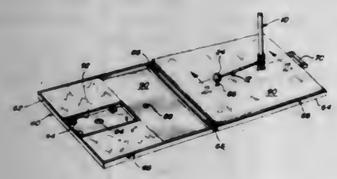
said metering unit comprising in combination: a pair of sealed pressure responsive means constructed and arranged to be detachably mounted on the respective pipe taps of a pipe line; a differential pressure measuring cell; tubular members constructed and arranged to connect said sealed pressure responsive means to said cell; an air-free fluid filling said sealed pressure responsive means, said tubular members, and said cell; and rigid connecting means constructed and arranged independently of said tubular members to permanently connect each of said sealed pressure responsive means to said cell to form an integrated unit.

3,124,957
ADJUSTABLE TEMPERATURE COMPENSATOR
Joseph Bungo, Totowa, N.J., assignor to The Bendix Corporation, a corporation of Delaware
Filed May 29, 1959, Ser. No. 816,951
9 Claims. (Cl. 73—362.4)



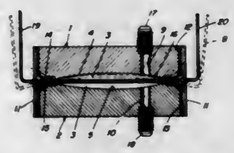
7. An adjustable temperature compensating device comprising a pair of temperature responsive elements, and a clamp member rigidly attached to each of said elements and disposed between said elements and securing said elements at the points of attachment in spaced relationship to one another to permit the elements to flex relative to one another, said clamp member being adjustable lengthwise of the elements to vary the effective lengths of the elements.

3,124,958
GOLF STROKE MEASURING DEVICE
Thomas Michael McDonnell, 836 S. Ridgeland Ave., Oak Park, Ill.
Filed July 17, 1962, Ser. No. 210,409
7 Claims. (Cl. 73—380)



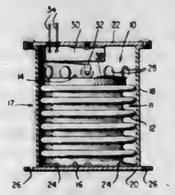
1. A device for measuring the force of a golfer's stroke, comprising:
(*a*) a vertically disposed post;
(*b*) a laterally disposed arm having an inboard end pivotally connected to said post;
(*c*) a golf ball mounted at an outboard end of said arm;
(*d*) spring means movably mounted on said arm and having an inboard end fixed with respect to the inboard end of said arm; and
(*e*) a marker movably mounted on said arm and abuttably engageable with said spring means for movement therewith, so that when the ball is struck causing the arm to pivot about the post, centrifugal force will cause the spring means to move said marker outboardly on the arm;
(*f*) said marker being free from positive attachment to said spring means, so that when the centrifugal force terminates and the spring means returns to its original position on said arm, the marker will remain in its outboardmost position; and
(*g*) means for mounting said post in a fixed vertical position;
(*h*) said mounting means including a horizontal platform for supporting the weight of the golfer.

3,124,959
PRIMARY DIFFERENTIAL PRESSURE SENSING ELEMENTS AND TRANSDUCERS
David B. Pall, Roslyn Heights, and Mathias P. L. Siebel, Glen Cove, N.Y., assignors to Pall Corporation, Glen Cove, N.Y., a corporation of New York
Filed July 19, 1960, Ser. No. 43,913
9 Claims. (Cl. 73—407)



1. A primary differential pressure sensing element comprising a chamber, an elastic pressure-responsive diaphragm across one side thereof, at least one side of the diaphragm being subject to variable fluid pressure, the diaphragm being supported for deflection of a central portion thereof responsive to differences in pressure applied to opposite sides thereof, reinforcing cup means having a flat portion attached to the diaphragm and having a cylindrical portion attached to a wall of the chamber, and sensing means extending laterally from a point adjacent an edge of the diaphragm, responding to pressure-responsive deflection of the central portion of the diaphragm.

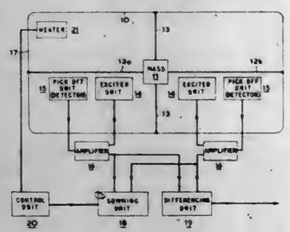
3,124,960
PRESSURE RESPONSIVE MOTOR
Wendall J. Clark, Henrico County, Va., assignor to Texaco Experiment Incorporated, Richmond, Va., a corporation of Virginia
Filed Mar. 2, 1961, Ser. No. 92,978
2 Claims. (Cl. 73—410)



1. A pressure responsive motor comprising wall means forming a closed chamber, at least one wall of said chamber being movable in response to external ambient pressure variations, an opening through the wall means, differential pressure responsive valve means for said opening to restrict flow of ambient pressure fluid therethrough in one direction and permit flow of ambient pressure fluid in the other direction, and motion sensing means, and

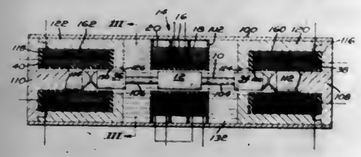
means mounting said motion sensing means in the path of travel of said one movable wall of the chamber.

3,124,961
ACCELEROMETERS
Leslie Herbert Bedford, London, England, assignor to The English Electric Company Limited, London, England, a British company
Filed Sept. 26, 1957, Ser. No. 686,537
8 Claims. (Cl. 73—497)



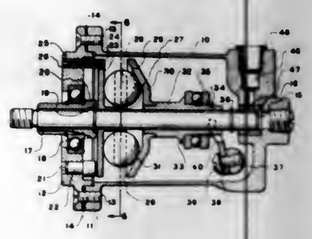
1. An accelerometer of the kind set forth, comprising, in combination, an assembly formed by a frame structure, a suspended body, and two strings which hold one another in tension by supporting the body from the frame structure, thermal means for controlling the tension of the two strings adapted to heat and cool the assembly to promote expansion or contraction in a sense which will change the stress in the strings, exciter means for maintaining both strings in a state of vibration, detector means responsive to the vibration of the strings for producing electrical signals which are a measure of the string frequencies, and control means responsive to these signals and operative to govern the thermal means to cause the string frequencies to have a predetermined mathematical relationship which is independent of acceleration.

3,124,962
ACCELEROMETER APPARATUS
Walter J. Hirtreiter, 239 Norwalk Ave., Buffalo 16, N.Y.
Filed Dec. 17, 1954, Ser. No. 475,982
10 Claims. (Cl. 73—516)



1. An accelerometer comprising a mass including magnetic material, a pair of spaced electromagnets coaxially disposed on opposite sides of said mass, each said electromagnet including a core and a first and second coil, a source of power, means to proportionally supply current from said power source to said first coil of said electromagnets to energize each said electromagnet to thereby suspend said mass in a neutral position between said electromagnets, said electromagnets constituting the principal supporting means for said mass, means to detect axial movements of said mass from its neutral position due to axial components of external forces acting on the mass, control means connected in circuit with each said second coil of each electromagnet, said control means being further connected to said detector means and being responsive to signals therefrom to oppositely vary the current supplied to each said second coil of each electromagnet to differentially vary the strength thereof to create an opposing magnetic force to counter said external axial force components to maintain said mass stable in its neutral position, and means connected to the control means for measuring and indicating the magnitude of the applied opposing magnetic force applied by said electromagnets.

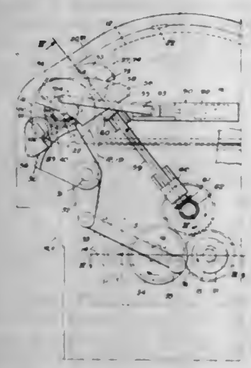
3,124,963
SPEED RESPONSIVE DEVICES
Herman G. Adler, Detroit, Mich., assignor to Continental Motors Corporation, Muskegon, Mich., a corporation of Virginia
Filed May 31, 1962, Ser. No. 199,031
13 Claims. (Cl. 73—551)



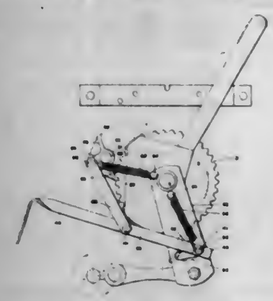
13. A speed responsive device comprising
(*a*) a housing,
(*b*) a shaft rotatably carried in said housing,
(*c*) a first ball race axially slidably carried on said shaft in a position spaced from said housing,
(*d*) a second ball race axially aligned with said first ball race and spaced therefrom,
(*e*) means securing said second ball race to said housing,
(*f*) a plurality of centrifugal balls carried intermediate said first and second ball races,
(*g*) a rotary drive member carried by said shaft and having radially extending arms engaging said balls,
(*h*) said first ball race having a dished surface,
(*i*) resilient means operable to urge said surface into engagement with said balls,
(*j*) said second ball race having a surface engaging said balls,
(*k*) said surface of said second ball race being provided with a plurality of radially extending, annularly spaced, arcuately formed depressions.

3,124,964
APPARATUS FOR CONVERTING OSCILLATING INTO INTERMITTENT MOTION
William Frank Golding, 22 Parry's Close, Stoke Bishop, Bristol 9, England
Filed Sept. 12, 1961, Ser. No. 137,554
Claims priority, application Great Britain Sept. 26, 1960
2 Claims. (Cl. 74—88)

1. Apparatus for converting oscillating into intermittent motion comprising a planet carrier, means for oscillating said carrier about its axis, a planet gear supported for rotation on the carrier, a first and a second sun gear both supported for rotation about the axis of said carrier and both meshing with said planet gear, means for preventing rotation of said first sun gear when said carrier moves in the one direction of its oscillation and preventing rotation of said second sun gear when the carrier moves in the other direction of its oscillation, said planet gear co-operating to drive said first sun gear when said carrier moves in said other direction and to drive said second sun gear when said carrier moves in said one direction; said rotation-preventing means comprising in respect of at least one of said sun gears a locking member, means for continuously rotating said locking member, said locking member being dimensioned to engage said at least one sun gear to prevent rotation thereof at least in the direction in which said at least one sun gear moves when driven by said planet.



3,124,965
REVERSIBLE SINGLE WHEEL RATCHET DRIVE MECHANISM FOR CONVEYORS
Peter Sammarco, Bellwood, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Dec. 12, 1960, Ser. No. 75,140
6 Claims. (Cl. 74—118)



1. In a two-way ratchet wheel drive, the combination of ratchet wheel means having teeth providing one set of driving surfaces for driving the wheel means in one direction and another set of driving surfaces for driving the wheel means in the opposite direction, pendulating drive means cooperable with the wheel means and including a driving pawl, a holiday pawl cooperable with the wheel means, and shift means operatively interconnecting said pawls simultaneously moving both of said pawls to engage with the corresponding set of surfaces and a speed control member having means for keeping said pawls out of a first position when the pawls are engaging one set of surfaces and out of another position when the pawls are engaging another set of surfaces for reversing drive.

3,124,966
MOTION TRANSMITTING MEANS
Francis P. Devine, Buena Park, Calif., assignor to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed Aug. 1, 1960, Ser. No. 46,814
2 Claims. (Cl. 74—136)

1. In a motion transmitting apparatus, the combination comprising:
a first shaft and a second shaft;
first, second, and third wheels non-rotatably mounted coaxially on said first shaft;
a sleeve rotatably mounted coaxially on said second shaft;
first and second pulleys rotatably mounted coaxially on said second shaft;
a third pulley rotatably mounted coaxially on said sleeve;
a first clutch interposed between said first pulley and said second shaft, said first clutch drivingly interconnecting said first pulley and said second shaft only when said first pulley is rotated in one direction;
a second clutch interposed between said second pulley and said second shaft, said second clutch drivingly interconnecting said second pulley and said second shaft only when said second pulley is driven in said one direction;
a third clutch interposed between said second pulley and said sleeve, said third clutch drivingly interconnecting said second pulley and said sleeve only when said second pulley is rotated in the opposite direction;

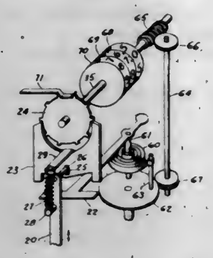


a fourth clutch interposed between said third pulley and said sleeve, said fourth clutch drivingly interconnecting said third pulley and said sleeve only when said third pulley is rotated in said opposite direction;
first drive means drivingly interconnecting said first pulley and said first wheel, whereby rotation of said first shaft in a given direction produces rotation of said first pulley in said one direction;
second drive means drivingly interconnecting said second pulley and said second wheel, said second drive means being oppositely connected from said first drive means, whereby rotation of said first shaft in said given direction produces rotation of said second pulley in said opposite direction; and
third drive means drivingly interconnecting said third pulley and said third wheel, said third drive means being connected to said third pulley to drive said third pulley in the same direction as said first pulley,
whereby oscillatory rotation of said first shaft results in continuous rotation of said second shaft in one direction and continuous rotation of said sleeve in the opposite direction,
said first, second and third drive means being chosen from a class consisting of belts, cables, and bands, each of said drive means being anchored both to its respective wheel and to its respective pulley.

3,124,967
INCREMENTAL SERVO MECHANISM
Leo Kull, Jersey City, N.J.
(2 Washburn Place, Caldwell, N.J.)
Filed Aug. 1, 1961, Ser. No. 128,512
13 Claims. (Cl. 74—157)

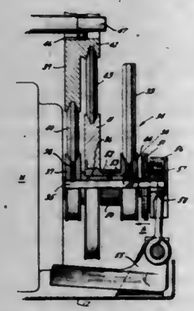
1. In a servo control system, a two-directional intermittent drive comprising an output member capable of movement in opposite directions, a driver for said output member, a control means movable in relation to said output member and a power input means for reciprocating said driver in respect to said output member and control means and providing alternately a sensing stroke and a power stroke of the driver, said driver being tiltable with respect to the input means and having a pair of sensing

arms and a pair of drive arms, at least one of said sensing arms interfering with the position of said control means during a sensing stroke of the driver, said interference causing a tilting action of said driver solely by the energy



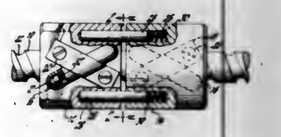
of said power input means and said tilting action setting up one of said drive arms to control the direction in which said output member will be driven by said driver during the power stroke imparted to said driver by said power input means.

3,124,968
TWO-SPEED TRANSMISSION MECHANISM FOR WASHING MACHINE
Hermann A. Trupp, Philadelphia, and Leonard I. Kownurko, Holland, Pa., assignors to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Feb. 1, 1962, Ser. No. 173,320
3 Claims. (Cl. 74—217)



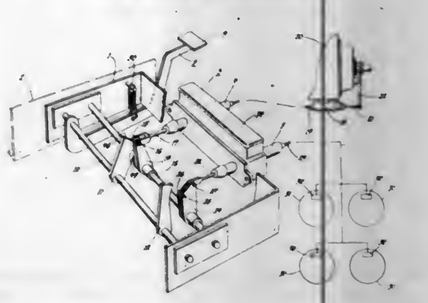
1. For a washing machine having a rotatable cylinder, a two-speed transmission mechanism for driving the cylinder selectively either at tumbling speed or at centrifuging speed, said mechanism comprising a constant speed motor shaft, an axle mounted in spaced parallelism with respect to said shaft, a first pulley anchored to said motor shaft to rotate therewith, a first idler rotatably carried by said axle and belted to said first pulley to be rotated thereby, a second idler also rotatably carried by said axle and rotatable with said first idler, a second pulley mounted to rotate about said shaft and belted to said second idler to be rotated thereby, a third pulley mounted to rotate about said shaft and with respect to said second pulley and adapted for connection with the machine cylinder to impart rotational motion thereto, a one way clutching element arranged between said second pulley and said third pulley to drive the latter in response to rotation of said second pulley, a friction clutch element connected between said motor shaft for rotation therewith and for movement thereon with respect to said third pulley, and means for moving the friction clutch into clutching engagement with said third pulley to drive the same directly from the motor shaft while overriding said one way clutch element.

3,124,969
PRELOADED BALL BEARING SCREW ASSEMBLY
Leonard R. Grabowski, Bay City, and George A. Widmoyer, Reese, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 14, 1961, Ser. No. 131,160
3 Claims. (Cl. 74—441)



1. A device for translating linear motion into rotary motion or vice versa comprising a screw component, a pair of nuts carried on said screw component in end-to-end relation each having an internal helical groove formed complementarily to the screw groove to provide ball races, and a train of balls in each such race, said nuts being interconnected via a plurality of plungers located in axially disposed registering blind bores in said nuts, one of said nuts having in each of its bores a spring disposed between the end of the bore and the corresponding plunger, the spring being in a compressed state and operating to preload the balls in said races.

3,124,970
PEDAL MECHANISM
Raymond Walker, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 18, 1960, Ser. No. 70,174
5 Claims. (Cl. 74—478)



1. In a clutch and brake control system having a first operable member for operating a clutch and a second operable member for operating a brake, a frame mounting said members,

first and second cam follower means pivotally mounted on said frame and operatively connected to respectively operate said first and second operable members,

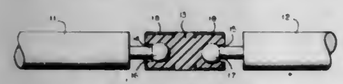
first and second cam means pivotally mounted on said frame and operatively and respectively engageable with said first and second cam follower means in camming relation,

and unitary pedal means operatively connected for simultaneously moving said first and second cam means,

said first cam means being positioned relative to said second cam means to engage said first cam follower means and operate said first operable member to a predetermined position of operation thereof upon movement of said first and second cam means by said unitary means before said second cam means engages said second cam follower means,

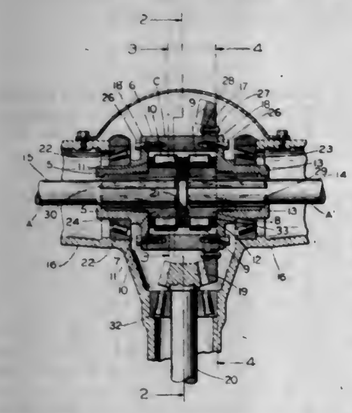
said first cam means being so formed that, upon further movement of said first and second cam means to operate said second operable member by said second cam means engaging and acting on said second cam follower means, said first cam means holds said first operable member in said predetermined position of operation.

3,124,971
COUPLING DEVICE
Pete J. Peters, 36—27 30th St., Long Island City, N.Y., and Paul V. De Luca, 79—03 19th Drive, Jackson Heights, N.Y.
Filed Mar. 1, 1962, Ser. No. 176,607
8 Claims. (Cl. 74—579)



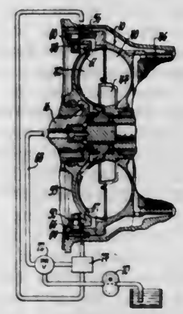
1. A coupling device for coupling a reciprocating driven potentiometer shaft to a reciprocating driving shaft for the transmission of reciprocating rectilinear motion therebetween, said coupling device comprising an elongated body, said body having a first end and a second end; a concavity formed in each of said first and second ends; said concavities being spherical in shape; said first and second ends having passages formed therein for providing said concavities with access from the outside of said body; and a generally spherical protuberance on an end of each of said shafts; each of said protuberances being formed to mate with one of said concavities and each being fitted within one of said concavities whereby rectilinear motion may be transmitted from said driving shaft through its protuberance to the coupling device and through the coupling device and the other protuberance to said driven shaft even though said driven and driving shafts are not axially aligned.

3,124,972
DIFFERENTIAL MECHANISM
James M. Seliger, 303 SE. 172nd Ave., Portland, Oreg., and Harry J. Hegar, Portland, Oreg., assignors, by mesne assignments, to James M. Seliger, Portland, Oreg.
Filed June 14, 1960, Ser. No. 35,930
1 Claim. (Cl. 74—650)



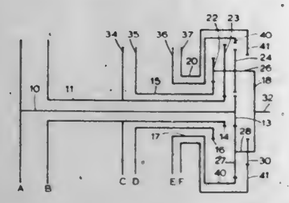
A differential driving mechanism comprising a rotatable drive casing, a pair of driven members coaxially mounted in end to end relation in said casing for independent rotation, recesses on the inner periphery of said drive casing, rollers freely mounted between said casing and each of said driven members for circumferential movement between a released position and a drive connection between said casing and said driven members in either direction by a wedging action of the rollers therebetween, a pair of annular cages for the rollers freely mounted concentrically on said driven members for adjustable rotation relative thereto, a pair of longitudinal extending slots in one of said cages extending inwardly from one of the ends of the latter, a pair of projections in the other of said cages engaged with respective ones of said slots, the width of said slots being greater than the width of said projections, said width relationship of said slots and projections being preselected whereby to permit relative rotation of said cages equal to approximately one-half of the free movement of said rollers between their released and driving connections in said recesses to disengage the rollers in one cage from one of said driven members and hold them in an intermediate disengaged position in the recesses upon a differential requirement of said mechanism, and an O-ring operative frictionally between said cages and said driven members to provide relative rotation of said cages in response to a differential requirement.

3,124,973
HYDRODYNAMIC TORQUE TRANSMITTING DEVICE
Earl L. Egbert, Northville, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 29, 1961, Ser. No. 113,537
3 Claims. (Cl. 74—731)



3. In a transmission, the combination of gearing and ratio changing means conditioning the gearing for different drive ratios, the ratio changing means including a fluid coupling operative when discharged of fluid to cause a change from one ratio to another, the fluid coupling having a pair of rotors and means controlling the discharge of fluid therefrom, the controlling means comprising a valve housing revolvable with one of the rotors and including a pair of exhaust passages extending to the exterior of the coupling, valve bores intersecting the exhaust passages, exhaust valves slidable in each valve bore to control the discharge of fluid from the coupling via the exhaust passages, a source of holding pressure, means for supplying said holding pressure to said valves for maintaining the valves closed, and for interrupting the supply of holding pressure to the valves upon initiation of a ratio change, said valves being so differently calibrated that one of the valves opens when the supply of holding pressure is interrupted so as to commence the discharge of fluid from the device at one rate, the other of the valves being responsive to centrifugal force and arranged to open when the valve housing attains a certain speed so as to increase the discharge rate.

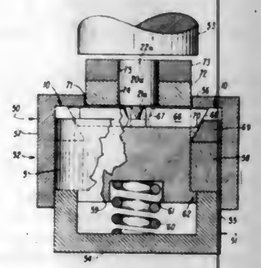
3,124,974
POWER TRANSMISSION APPARATUS
Howard Frederick Hobbs, Leamington Spa, England, assignor to Hobbs Transmission Limited, Leamington Spa, England
Filed Jan. 18, 1962, Ser. No. 166,992
Claims priority, application Great Britain Jan. 24, 1961
4 Claims. (Cl. 74—759)



4. A power transmission mechanism comprising two input clutches, said clutches having a common input part for connection to an engine and separate output parts, the output part of the first of said clutches being engaged with the input part for all forward ratios while the output part of the second clutch is also engaged with the input part for direct drive, an output shaft, an epicyclic gearing driven by said output parts of said clutches and in turn driving the output shaft, said epicyclic gear including a rotary cage concentric with the clutches and carried by output shaft a three pinion cluster carried by the rotary cage on an axis eccentric with respect to the axis of the cage, and a two pinion cluster carried by the rotary cage on another axis eccentric with respect to the axis of the cage; and four reaction brakes for holding different parts of said gear stationary, said brakes each including a rotary part which can be held stationary or released so that it can rotate, said gear including first and second sunwheels, connected with the output parts of the first and second clutches, respectively, the first sunwheel being in mesh with the first pinion of the two pinion cluster, said first pinion of the two pinion cluster being in mesh with the third pinion of the three pinion cluster, the second sunwheel being in mesh with the second pinion of the three pinion cluster and being connected to the rotary part of the first brake, and a third sunwheel connected to the rotary part of the second brake and in mesh with the first pinion of the three pinion cluster, said epicyclic gear including a first and a second ring gear, said first ring gear being connected with the rotary part of the third brake and in mesh with the first pinion of the two pinion cluster, said second ring gear being connected with the rotary part of the fourth brake and in mesh with the second pinion of two pinion cluster, whereby five forward ratios are obtained in which the cage has progressive speed changes in said ratios respectively.

3,124,975
METHODS OF MAKING COMBINATION RECESS-FORMING AND HEAD-FORMING PUNCHES
Louis J. Lovisek, Ridgewood, N.J., assignor to General American Transportation Corporation, Chicago, Ill., a corporation of New York
Filed Jan. 6, 1961, Ser. No. 81,171
6 Claims. (Cl. 76—101)

1. The method of making a combination recess-forming and head-forming punch for use in the production of threaded fasteners, said method comprising providing a metal blank including a front nib section and a rear body section disposed substantially in axial alignment with each other, said nib section being substantially frustoconical having a forwardly tapered cone surface, the front end of said body section terminating in a front face disposed substantially normal to the axis thereof and surrounding the base of said nib section, providing a block having an axially extending nib-receiving opening therein and an outer surface disposed substantially normal to the axis thereof and surrounding said nib-receiving opening, pressing said blank and said block axially toward each other with said nib section in inserted position in said nib-receiving opening and with said front face in firm engagement with said outer surface, providing a plurality of substantially chisel-like dies disposed in angularly spaced-apart relation and mounted upon said block for guided movements substantially radially inwardly toward the axis thereof and into said nib-receiving opening, simultaneously moving said chisel-like dies in guided relation upon said block radially inwardly toward the axis thereof and toward the axis of said nib section in its

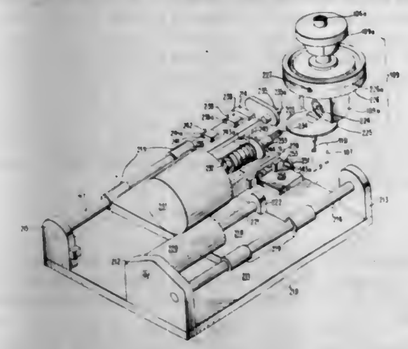


inserted position in said nib-receiving opening and into respective engagements with angularly spaced-apart portions of said cone surface in order to effect substantial extrusion of the metal of said nib section radially of the axis thereof so as to form both a corresponding plurality of angularly spaced-apart elongated flutes in said nib section and a corresponding plurality of angularly spaced-apart elongated ribs on said nib section, wherein said chisel-like dies are so shaped and disposed that said flutes and said ribs thus formed extend generally axially along said nib section in alternate circumferential disposition thereabout and with said ribs forwardly inclined with respect to the axis thereof, and then subjecting said blank to pressure so as simultaneously to displace said nib section axially rearwardly into said body section and to form a substantially concave recess in said front face surrounding the base of said nib section.

3,124,976
AUTOMATIC TOOL SETTING SYSTEM
Donald G. Pittwood, Salt Point, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed May 29, 1961, Ser. No. 113,342
10 Claims. (Cl. 77—4)

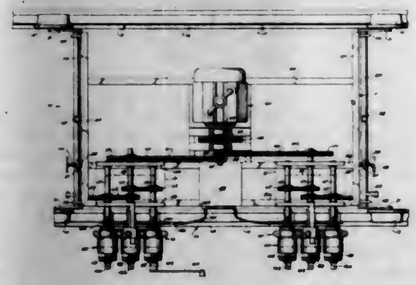
1. In a machine having a member which bears a tool, means for adjusting the position of said tool relative to said member, a table having a surface divided into zones and movable with respect to said tool, means directively operative for moving said table, and means for moving said member and said tool with respect to said table in order to allow performance of operations employing said member and apparatus fixed to the surface of said table in one of said zones, the combination comprising: setting means including a unit fixed to a particular zone of said table for operating said tool position adjusting means, programming means for directing said table moving means and said unit into working relationship with said member, other means for directing said setting means to perform a routine of sequential operations, and means

including an element operative in response to the movement of said table and the zone to which said unit is



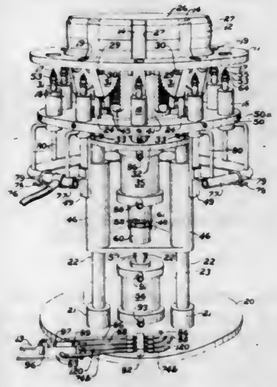
fixed into working relationship with said member for making said other means operative.

3,124,977
MULTIPLE DRILLING APPARATUS
Edward F. Obear, Los Angeles, Calif., assignor to American Railway Supply Company, Inglewood, Calif., a corporation of California
Filed Jan. 31, 1961, Ser. No. 86,023
2 Claims. (Cl. 77—11)



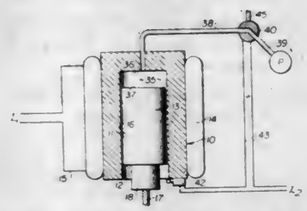
1. A multiple drilling apparatus for simultaneously drilling a plurality of transverse apertures in one of a pair of spaced parallel rails, said apparatus including: a frame; a plurality of wheels rotatably mounted on said frame in position to engage said rails and permit the apparatus to be moved along said rails; a plurality of driven shafts rotatably mounted on said frame in spaced parallel relationship and extending across said frame to project over at least one of said rails; drive means for driving said driven shafts; a plurality of drill heads pivotally mounted on respective ones of said driven shafts in side by side relationship and linearly movable with respect thereto; a plurality of bit holding members rotatably mounted in respective ones of said heads, each of said bit holding members having an axis of rotation spaced from the axis of rotation of the corresponding one of said driven shafts and each of said bit holding members being adapted to grip a drill bit and direct the same towards said one of said rails for drilling a hole therein; each drill head having a power transmission means mounted therein for coupling said respective bit holding members to the driven shafts upon which it is mounted to translate the rotation of said driven shaft to said bit holding member; releasable clamping means engaging said heads to permit pivotal movement thereof with respect to said frame; said clamping means including a plurality of bosses on respective ones of said heads, and a template having apertures at a predetermined lateral spacing positioned over said bosses; and means engaging said heads for establishing the axis of rotation of said bit holding members at a predetermined relative lateral displacement with respect to one another.

3,124,978
TIRE PIERCING APPARATUS
Fred K. Barns and Ralph F. Cooper, Akron, Ohio, assignors to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
Filed May 1, 1961, Ser. No. 106,747
14 Claims. (Cl. 77—23)



1. An apparatus to provide venting openings in a sidewall of a pneumatic tire comprising, a plurality of tire piercing members supported in a generally circular configuration, means to removably and substantially unyieldingly clamp said tire sidewall in concentric relationship to said members, means to effect relative axial movement between said clamped sidewall and said members to cause the latter to enter the former, and means to effect operation of said clamp means and the said means to effect relative axial movement in predetermined timed relationship.

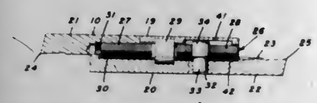
3,124,979
TOOL SUPPORT AND DRIVE
Elmer Fred Macks, Willow Lane, Vermilion, Ohio
Filed Aug. 22, 1960, Ser. No. 50,940
11 Claims. (Cl. 77—33.5)



1. A drive mechanism for a drill or the like comprising, a spindle member having a peripheral surface defining at least segments of a cylinder and first and second ends, a spindle support member having a surface defining at least segments of a cylinder and the walls of a bore, said spindle member being disposed at least in part in the bore, said peripheral surface of said spindle member and the walls of said bore being complemental and closely spaced to define a load carrying fluid film forming region therebetween, one of said members being magnetically susceptible, the other of said members including magnetic

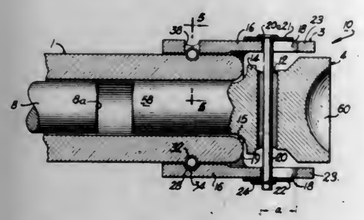
field producing means generating a magnetic field to position the magnetically susceptible member axially, said support member including a portion closing one end of the bore to define a fluid cavity between the portion and the spindle first end when the spindle is magnetically positioned, fluid means connected to a first one of the members to introduce fluid under pressure to the cavity and drive the spindle axially, said spindle including tool holding means at said second end, said spindle and member including means to cause relative rotation thereof, and means for generating a load-carrying film of ambient fluid in said film forming region for radially supporting said spindle member out of frictional contact with the walls of said bore.

3,124,980
BORING CUTTER
Warren E. Gill, Spring Lake, and Albert O. Eckerman, Muskegon, Mich., assignors to Muskegon Tool Industries, Inc., Muskegon, Mich., a corporation of Michigan
Filed Mar. 27, 1961, Ser. No. 98,532
1 Claim. (Cl. 77—58)



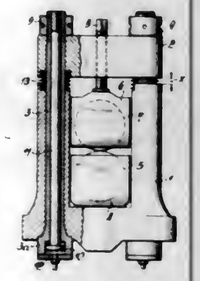
A diametral boring cutter, comprising: a central frame having a locating discontinuity in an edge thereof, said frame including partially overlapped members normally fixed with respect to each other, said overlapped members providing oppositely-extending interengaged guideway means, respectively, and a central discontinuity; first and second blade members secured to said frame and having means engaging said guideway means, respectively, for sliding movement, said second blade member having a transverse bore; a screw rotatably mounted in one of said overlapped members on an axis parallel to said guideway means, said screw having a central cylindrical portion engaging said discontinuity in said central frame to axially fix said screw with respect to said central frame, and also having threaded engagement with said first blade member with threading of a particular hand; an actuator member having threaded engagement with said screw means with threading of opposite hand to said first-named threading, said actuator member having a shank engaging said transverse bore in said second blade member; and locking means for securing the adjusted position of said blade members determined by said screw means.

3,124,981
RIVET HAMMER DIE SET RETAINER
Harry L. Hedden, Midlothian, and Rudolph D. Selven, Chicago, Ill., assignors to Union Tank Car Company, Chicago, Ill., a corporation of New Jersey
Filed Jan. 12, 1961, Ser. No. 82,295
9 Claims. (Cl. 78—46)



1. A pneumatic hammer comprising a hammer barrel, a hammer means positioned within said barrel for reciprocating movement, said hammer means normally moving less than a predetermined distance when said hammer is properly operated, a first retaining means formed within said hammer means, a retaining mechanism detachably secured to said barrel and comprising a sleeve positioned around said hammer barrel and said hammer means, said sleeve having second retaining means formed therein, and a third retaining means movably supported from said sleeve for movement axially of said sleeve and said hammer means for coacting with said first retaining means and said second retaining means for preventing ejection of said hammer means from said barrel during inadvertent operation of said hammer.

3,124,982
ROLLING MILL AND CONTROL SYSTEM
Karl Neumann, St. Ingbert, Saar, Germany, assignor to Moeller & Neumann G.m.b.H., St. Ingbert (Saar), Germany
Filed Nov. 4, 1960, Ser. No. 67,223
Claims priority, application Germany Nov. 5, 1959
11 Claims. (Cl. 80—56)

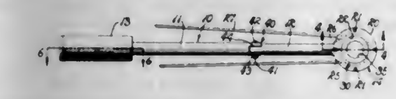


1. A rolling mill including an upper roll and a lower roll, an upper frame member, said upper roll being rotatably carried by said frame member, a lower frame member, said lower roll being rotatably carried by said lower frame member, yieldable means for maintaining said upper and lower frame members in spaced relationship, stay bolts connecting said upper and lower frame members and being dimensioned to absorb the rolling pressure transmitted from said rolls, fluid pressure operated means operatively associated with said stay bolts to elongate the same before operation of the rolls within the elastic limit of the material of said stay bolts at a predetermined stressing value higher than the maximum rolling pressure, so that in operation the actual roll pressure causes additional elongation of of said stay bolts, and a fluid pressure adjusting means connected between a source of fluid pressure and said fluid pressure operated means, whereby the elongation of said stay bolts will be varied in accordance with variations in roll pressure to maintain the accuracy of work pieces being rolled, in that the sum of the actual roll pressure and the actual elongating force and thus the stress within said stay bolts is maintained substantially constant.

3,124,983
HAND WRENCH WITH CABLE AND SPOOL DRIVE MEANS
Manuel K. Emerzian, 610 King St., Parlier, Calif.
Filed Jan. 30, 1962, Ser. No. 169,718
4 Claims. (Cl. 81—54)

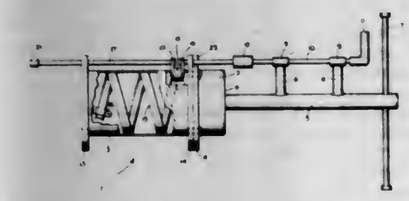
1. In a hand wrench having an elongated handle presenting opposed ends, a cylindrical housing secured to one end of the handle, the housing having an axial bore providing spaced bearing surfaces therealong and having an annular recess of predetermined radial and axial dimensions intermediate said bearing surfaces; an annular spool having an axial cavity adapted to receive a nut

and having a centrally located radially outwardly extended flange and a pair of bearing trunnions embracing said flange, the flange being received in said annular recess and being of a relative dimension to provide an annular chamber therein; means to retain said trunnions in said bore for rotatable support on said bearing surfaces, the housing having an inlet and an outlet port



circumferentially spaced and in communication with said annular chamber; and an elongated flexible cable encircling said flange and threaded through said ports, the diametrical dimension of said cable being slightly greater than that of said annular chamber so that the cable is urged into frictional engagement with said flange whereby longitudinal movement of the cable effects rotation of said spool.

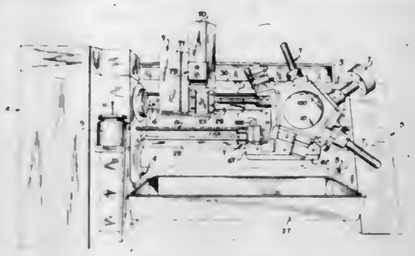
3,124,984
FRICTION WRENCH
Christian Anderson, West Baldwin, Maine, assignor to Yankee Atomic Electric Company, Boston, Mass., a corporation of Massachusetts
Filed Apr. 24, 1962, Ser. No. 189,765
12 Claims. (Cl. 81—64)



1. A handling device for performing work on objects having smooth exterior surfaces comprising a separable body section defining a central hollow passageway adapted to receive the object on which the work is to be performed, a flexible helically wound friction-bearing member disposed adjacent to the wall surfaces of said passageway, a roller cam member externally mounted on said body section, wall structure defining an opening in said body section dimensioned to expose a portion of said flexible member and to receive said roller cam member, an end body section adapted to abut and be joined to said separable body section, said end section defining manually operable means for the application of a torque force and means for the control and displacement of said roller cam member after the body sections have been joined to exert a compression force upon the exposed portion of said flexible member.

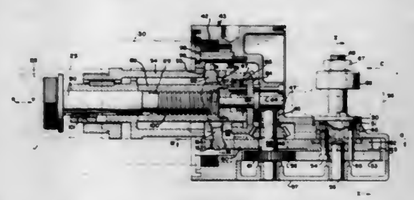
3,124,985
MACHINE TOOL
Myron S. Curtis, Cleveland, and Harry Schoepe, New Philadelphia, Ohio, assignors to The Warner & Swasey Company, Cleveland, Ohio, a corporation of Ohio
Filed May 2, 1958, Ser. No. 732,737
9 Claims. (Cl. 82—2)

6. In a machine tool, a rotatable spindle for rotating a workpiece, a longitudinally extending bed having first and second spaced ways thereon extending in a direction parallel to the axis of rotation of said spindle, a turret carriage mounted on said ways and movable therealong, a turret mounted on said carriage and having a plurality of tool supporting surfaces which upon rotation of said turret sequentially take a position wherein each supporting surface lies in a plane perpendicular to the axis of said spindle and faces said spindle, said carriage having a portion which extends beyond the tool supporting surface which faces said spindle, a toolholder operatively connected to one of said tool supporting surfaces, said toolholder being disposed between the plane of said ways and a parallel plane through the spindle axis and offset from the spindle axis toward and over said second way and adapted to support a tool in a position wherein the cutting edge thereof lies between said planes and for engaging the outer periphery of the workpiece at a point substantially on a line tangent to the workpiece and which intersects the plane of the ways between said ways with the rotation of said workpiece being downwardly toward said second way at



said point, and supporting pad means disposed to the side of said axis toward said second way and located on said portion of said carriage forwardly of the tool supporting surface when facing the spindle and adjacent said second way intermediate said toolholder and said second way, said toolholder having a bearing surface on the underside thereof which engages said supporting pad means on said carriage when the tool supporting surface of the turret on which said toolholder is mounted is rotated into position facing said spindle and the tool supported thereby operates on the outer periphery of the workpiece and the forces created by the tool engaging the outer periphery of the workpiece are transmitted downwardly to said pad means and downwardly through said pad means to said second way.

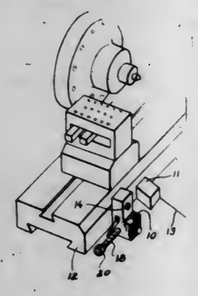
3,124,986
AUTOMATIC CONTROLS FOR MACHINE TOOLS
Alfred E. Bader and Adolf F. Umgelter, Stuttgart, Germany, assignors to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Continuation of application Ser. No. 482,352, Jan. 17, 1955. This application June 8, 1959, Ser. No. 818,968
Claims priority, application Germany Jan. 16, 1954
25 Claims. (Cl. 82—3)



1. In a semi-automatic machine having a relatively stationary part and spindle means rotatably supported therein an automatic chucking fixture adapted to be secured to said spindle means comprising movable workpiece supporting means adapted to support thereon the work-piece to be machined in a number of different predetermined positions thereof, indexing means operatively connected with said work-piece supporting means to index

the same in said predetermined positions including an indexing disk, clamping means including a sliding member operative to selectively clamp said workpiece supporting means during machining of the work-piece or to release said work-piece supporting means during movement from one of said predetermined positions to the next, tubular work-piece advancing means operatively connected with one of said indexing means and said work-piece supporting means to selectively actuate the same, tubular locking means operatively connected with said clamping means to selectively actuate the same, and thrust bolt means and thrust pin means for tightening said index disk in the locking position thereof.

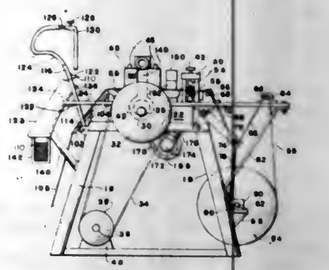
3,124,987
MICROMETER CROSS SLIDE STOP FOR SECOND OPERATION IN MACHINE
Wilbert Waldelich, 46 Havemeyer Lane, Commack, N.Y.
Filed Mar. 19, 1962, Ser. No. 180,515
2 Claims. (Cl. 82—34)



1. An adjustable stop for a second operation machine having a cross slide and a stop block on the frame thereof, which comprises a body, means for mounting said body on said cross slide, said body being provided with a threaded bore extending in the direction of movement of said cross slide, a threaded shaft in threaded engagement with the threads of said bore, one end of said shaft positioned to engage said stop block, a drum on the end of said shaft, said drum carrying indicia relating to the axial advance of said shaft for a predetermined angular rotation thereof, said body having a second bore extending into said first threaded bore along a diameter of said first bore, said second bore having internal threads therein, and a locking shaft threadably received within said second bore, a Teflon button mounted on one end of said locking shaft to engage the threads of said threaded shaft to lock said threaded shaft in a predetermined position, said locking shaft being provided with a knurled drum on the other end of said locking shaft to enable rotative driving of said locking shaft by finger tenson on said knurled drum, whereby said locking shaft may be repeatedly driven into locking engagement with said threaded shaft to frictionally hold said shaft in a selected position by finger tension and retracted to release said threaded shaft enabling rotation of said threaded shaft by finger tension applied to said indicia-carrying drum thereon.

3,124,988
BLANK CUTTING MACHINE WITH MOVABLE PRODUCT HANDLING AND STACKING MEANS
Marcel O. Albert, Alexandria, Va., assignor to Standard Packaging Corporation, New York, N.Y., a corporation of Virginia
Filed Aug. 5, 1958, Ser. No. 753,275
2 Claims. (Cl. 83—94)

1. A blank cutting apparatus for cutting predetermined blanks from a web having indicia thereon comprising a machine frame, a reciprocating blanking die supported by said frame and movable into engagement with the web at uniform intervals to cut the blank without removing the blanks from the web, web feeding means for feeding the web to the blanking die, means for intermittently actuating the web feeding means, sensing means for detecting the indicia on the web, means responsive to the detection of the indicia on the web by the sensing means to interrupt the web feeding means and thereby register the web relative to the blanking die and a blank previously cut in a predetermined waiting position to be lifted from the web, blank receiving and stacking means adjacent but spaced apart from the discharge end of said machine frame, spaced-apart supports mounting the blank receiving

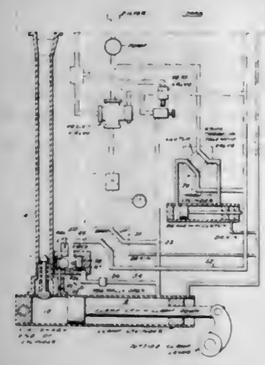


and stacking means from the discharge end of the machine frame, said blank receiving and stacking means and spaced apart supports cooperating to define a narrow, downwardly extending feed path for said web while providing a short path of travel for the blanks from the web to the blank receiving and stack means, suction means, and a movable transporter on the downstream side of the blanking die for carrying the suction means from engagement with the cut blank in waiting position, lifting the blank from the web and transporting it to the blank receiving means, and means controlled by the position of the transporter for establishing said suction to enable the suction means to pick up a blank in waiting position and disconnecting the suction to enable the suction means to release the blank at the receiving means.

3,124,989
KNIFE CHANGING CONTROLS FOR PAPER CUTTING MACHINES
Carl Thumim, Westbury, N.Y., assignor to Miehle-Goss-Dexter, Incorporated, Chicago, Ill., a corporation of Delaware
Filed Dec. 9, 1960, Ser. No. 74,993
2 Claims. (Cl. 83—399)

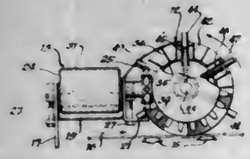
1. In a knife-changing control system for a guillotine type paper cutter having a hydraulically operated clamp, a hydraulic double-ended cylinder and piston therein for actuating said clamp to up and down position, and means for effecting restricted flow from the exhausting end of said cylinder when said clamp is being moved upwardly by power of said piston, said means comprising a valve biased to closing position and a passage leading from an end of said cylinder to one side of said valve, and a passage leading from the other side of said valve, whereby flow may be substantially unrestricted past said valve when said valve is open, a pressure operable valve operating piston element disposed upon actuation to open said valve, a restricted flow passageway on the same side of said valve as said first-mentioned passageway, means for effecting pressure on said valve operating piston for maintaining said valve normally open, and means for removing pressure from said valve operating piston whereby said valve automatically closes to effect movement of exhaust

fluid from said cylinder through said restricted flow passageway at a predetermined reduced rate whereby the



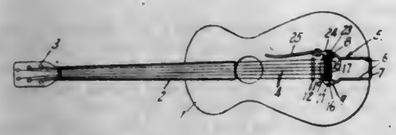
full pressure acting in said cylinder is utilized to maintain said clamp in raised position.

3,124,990
DOUGH CUTTER MECHANISM WITH STRIPPER MEANS
Joseph F. Anetsberger, Northbrook, Ill., and Irving J. Winterfeldt, Appleton, Wis., assignors to Anetsberger Brothers, Inc., Northbrook, Ill., a corporation of Illinois
Filed July 10, 1957, Ser. No. 671,069
16 Claims. (Cl. 83—117)



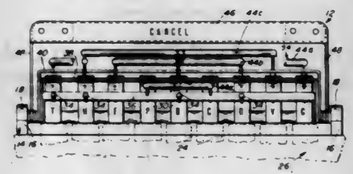
1. Dough cutter mechanism for rolling engagement with a sheet of dough, comprising a plurality of cutter elements, means for supporting said dough sheet, a second means for supporting said cutter elements for movement relative to said dough sheet to form a plurality of dough pieces and scrap pieces from said dough sheet, and picker members mounted on said second supporting means for movement relative thereto to embedding engage said scrap pieces and separate the same from said dough pieces.

3,124,991
VIBRATO TUNING DEVICE FOR STRINGED MUSICAL INSTRUMENTS
Donald W. Costen, Orchard Park, N.Y., assignor to Gibson, Inc., Kalamazoo, Mich.
Filed Oct. 2, 1961, Ser. No. 142,234
6 Claims. (Cl. 84—267)



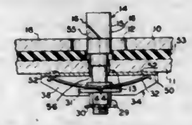
6. A stringed musical instrument of the class described including a body,
a plurality of strings,
tuning means to which said strings are connected at one end, a tailpiece to which said strings are connected at their other ends and comprising a body member having a plurality of laterally spaced annular string rests of varying radial diameters spaced therealong and having a longitudinal bore therein,
supporting means for said tailpiece comprising a torsionally twistable bar nonrotatably mounted at one end and rotatably mounted at its other end on said instrument body and disposed through said longitudinal bore in said member,
said body member being connected at one end to said bar,
and manually operable means operatively connected to one end of said member and said bar for rotatably adjusting said member thereby variably varying the degrees of tension on said strings to vary the tones thereof whereby at least the highest treble string and the next three lower pitched strings will always be in tune.

3,124,992
ORGAN STOP SELECTOR
Louis C. McClure, Sr., 1803 Sweetbrier St., Lancaster, Calif., assignor of one-half to Carter P. Humphrey, Lancaster, Calif.
Filed Sept. 6, 1960, Ser. No. 54,271
4 Claims. (Cl. 84—345)



1. In an organ stop selector, the combination of: a frame adapted to be mounted adjacent a plurality of organ stop tablets having a transverse axis of pivot; a plurality of actuators arranged across said stop tablets, each of said actuators having extremities engageable, respectively, with the heel and toe of an associated stop tablet; means mounting said actuators for pivotal movement in one direction for engaging the toes of said stop tablets and in the opposite direction for engaging the heels of said stop tablets; an actuator bar pivotally mounted to said frame and oriented to pivotally sweep over said actuators in their direction of pivotal movement; and a plurality of elements mounted to certain ones of said actuators in the path of said actuator bar for engagement with said actuator bar upon pivotal movement thereof whereby a single pivotal movement of said actuator bar can pivot said certain ones of said actuators to thereby pivot the associated stop tablets.

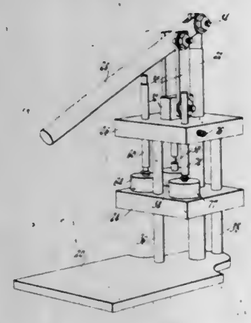
3,124,993
QUARTER TURN FASTENER HAVING CAMMING HEAD
Ernest Schlueter, 74 Edwards Road, Troy, N.Y.
Filed Oct. 21, 1959, Ser. No. 847,842
3 Claims. (Cl. 85—1)



1. A cam bolt assembly comprising a cam bolt having a head provided with lateral end portions having under

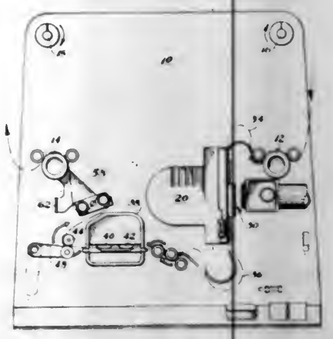
and side faces, the latter being parallel to each other and to the bolt axis, at least a portion of the diagonally opposite end corners of said end portions being removed to form a cam surface merging the adjacent under and side faces, the under face including an area disposed normal to the bolt axis, said cam surfaces engaging slot marginal portions of a plate-like member to be held by the assembly, and the cam bolt also having a shank, a channel shaped stop member on the shank and having a web and flanges, the shank passing through the web; an eye-shaped stop-washer on the bolt and between the flanges, the minimum diameter of the stop-washer being slightly less than the distance between flanges, and the stop washer having diagonally opposite substantially right angular corner portions to engage the flanges and limit turning of the washer to about 90°, the stop washer having radial grooves open toward the head and web and provided with a hub projecting toward the web, the stop washer and hub being slidable on the bolt and constrained by cooperating non-circular means to turn therewith; a bowed rectangular spring washer having end portions engaging the web, closely fitting between the flanges, and provided in its mid portion with an opening to receive the hub of the stop-washer, the mid portion being provided with transverse detent ridge means to engage in said grooves when said corner portions are substantially at said flanges, and means on the outer end of the bolt for fixing the maximum distance between the stop washer and the head.

3,124,994
APPARATUS FOR RECAPPING SHELL PRIMERS
James A. Kiess, Jr., 42 Bayberry Lane, Groton, Conn.
Filed Oct. 31, 1961, Ser. No. 148,939
1 Claim. (Cl. 86—36)



Apparatus for reconditioning and recapping shell primers of the general type comprising a primer cup, and an anvil and primer cap within said cup, having, in combination, a base, a tool support and a die support relatively movable on said base toward and away from one another, a primer cap ejector device comprising a used primer cap ejector tool on said tool support, and a primer cup supporting die aligned with said ejector tool on said die support arranged for supporting thereon a cup with the inner end thereof toward the cap ejector tool, an anvil relocating device comprising an anvil relocating tool on the tool support adapted to enter the outer end of a primer cup, and a cup supporting die on said die support aligned with said relocating tool on which a primer cup is supported with the outer end toward the anvil relocating tool, and a primer recapping device comprising a recapping tool mounted on said tool support and a primer cup supporting die on said die support aligned with said recapping tool on which said cup is supported with the outer end toward the recapping tool, and a manual control lever pivoted on said base and connected with one of said supports for effecting the relative movement of said supports between a retracted and an advanced operating position to effect a simultaneous operation of the respective tools.

3,124,995
LIP SYNC CONTROL APPARATUS AND METHOD FOR SOUND FILM PROJECTORS
Raymond G. Hennessey, Huntington, N.Y., assignor to Fairchild Camera & Instrument Corporation, a corporation of Delaware
Filed Dec. 8, 1960, Ser. No. 74,684
16 Claims. (Cl. 88—16.2)



1. A sound motion picture apparatus comprising; a picture gate and a sound head spaced therefrom, means for feeding a sound motion picture film past said picture gate and sound head with a loop between said picture gate and said sound head, including a capstan for smoothly feeding the sound motion picture film past the sound head and a sprocket for feeding the sound motion picture film beyond the capstan, a movably mounted member contacting said sound picture film between said capstan and said sprocket, and means for adjusting the position of said movably mounted member for varying the length of sound motion picture film between said capstan and said sprocket and inversely varying the length of sound motion picture film in the loop between said picture gate and sound head in order to correct for any improper synchronization of the pictures being projected and the sound being reproduced.

3,124,996
PORTABLE MICROFILM CAMERA
William A. Pfaff, East Norwalk, Conn., assignor, by mesne assignments, to Photostat Corporation, Rochester, N.Y., a corporation of Rhode Island
Application July 13, 1956, Ser. No. 600,647, now Patent No. 3,010,361, dated Nov. 28, 1961, which is a division of application Ser. No. 241,418, Aug. 11, 1951, now Patent No. 2,771,816, dated Nov. 27, 1956. Divided and this application Sept. 16, 1960, Ser. No. 65,556
2 Claims. (Cl. 88—17)

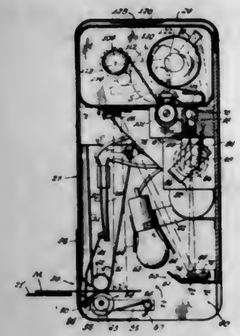
1. For a microfilm camera that is formed with drive means to engage and advance the film, a film magazine comprising:

a casing that is formed with a wall having at least two parallel side edges, said wall having a pair of spaced apertures therein disposed such that the centers thereof lie on an axis parallel to one side edge;

means to mount the film in the casing;

means to guide the film from a first, supply location in the casing through a path and along an interior surface of said wall in which a surface of the film is in confronting relation to the interior wall surface of a second, take-up location in the casing;

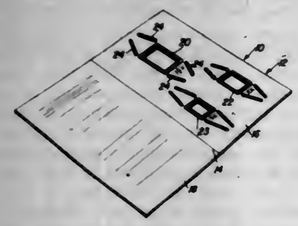
curtain means in said casing for movement to a first position in which both apertures are open and to a second position in which both apertures are closed;



means mounted in said casing to position the film at one of said apertures in a focal plane for exposure for the photographic recording thereon of desired images; and

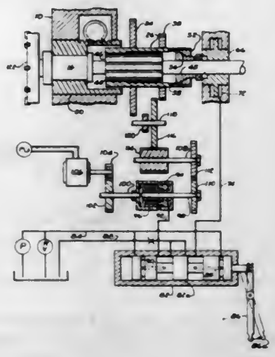
means mounted in the casing at the other of said apertures for positioning the film to permit the film to be engaged by said camera drive means.

3,124,997
PHOTOGRAPH CROPPING AND ENLARGEMENT GUIDE
Henry J. Morton, East Orange, N.J. (263 79th St. S., St. Petersburg, Fla.)
Filed Nov. 7, 1961, Ser. No. 150,814
7 Claims. (Cl. 88—24)



1. A photograph transparency cropping and enlargement guide for use with transparencies of the type having an open marginal framework disposed about a film transparency, said guide comprising a panel-like member having a plurality of apertures formed therein of the same shape but of different sizes corresponding to the shape of the desired finished transparency or print and proportional in size to the enlargement of the original transparency desired, said panel-like member having a set of openings formed therein about each aperture, each set of openings being defined by distinguishing opening boundary defining portions of said panel-like member and adapted to guide a marking tool inserted through said openings along at least some of the marginal framework of said transparency with whose film transparency said aperture has been registered while maintaining said panel-like member and said transparency stationary relative to each other, the opening boundary defining portions of said panel-like member defining different lines of movement for said marking tool adjacent each opening whereby registry of one of said sets of opening-defining portions with the marks on a transparency marginal framework made by a tool guided by the opening boundary defining portions of another set of openings will not be possible.

3,124,998
TRANSMISSION MECHANISM
Emery C. Raehrs, Cincinnati, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed Apr. 14, 1961, Ser. No. 103,006
5 Claims. (Cl. 90—11)



1. A machine tool spindle transmission comprising in combination, a rotatable drive member having a splined bore therein, a spindle received through said drive member having a splined diameter mating with said bore, the spindle subjected to a rapidly varying load torque tending to produce chatter between said drive member and spindle, means to rotate said drive member and effect rotation of said spindle, a contractable annular collet received on said spindle having a tapered external surface, an expandable annular collet received in said drive member having a tapered internal surface, means to urge said collets together at said tapered surfaces and produce forces tending respectively to contract and expand said collets for relatively fixing said drive member and spindle together, said forces tending to suppress said chatter, means to separate said collets and free said spindle for axial adjustment, and means to axially adjust said spindle in said drive member.

3,124,999
FLUID OSCILLATOR
Kenneth E. Woodward, McLean, Va., assignor to the United States of America as represented by the Secretary of the Army
Filed Feb. 1, 1963, Ser. No. 256,217
5 Claims. (Cl. 91—3)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. In a fluid oscillator;

(*a*) a fluid power source;

(*b*) a fluid amplifier comprising a power nozzle connected to said fluid power source,

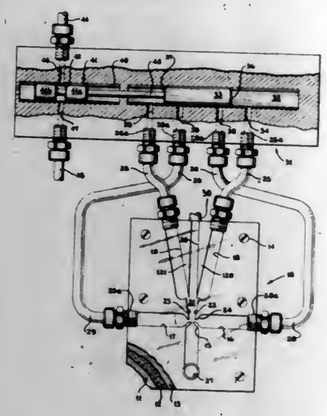
(*c*) said power nozzle issuing a power jet,

(*d*) a pair of opposed control nozzles positioned to direct fluid jets against said power jet in such a manner as to cause amplifier displacement of said power jet,

(*e*) a pair of opposed output tubes positioned to receive said power jet as a result of displacement by fluid issuing from said control nozzles; and

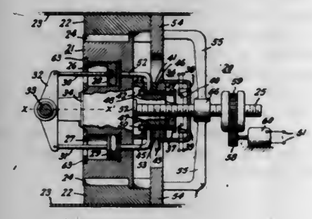
(*f*) oscillating means adapted to periodically direct fluid flow into a predetermined combination of ports formed in said oscillating means,

(*g*) said control nozzles and output tubes communicating with said oscillating means by means of said ports,



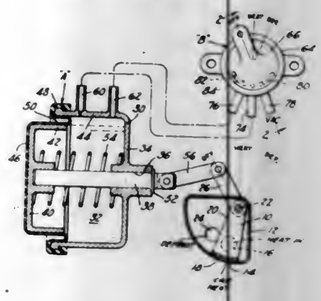
(*h*) said ports being arranged such that fluid issuing from one output tube is directed by said oscillating means into that control nozzle which is positioned to deflect said power jet into the output tube opposite the tube issuing fluid.

3,125,000
AIRFOIL CONTROLLING ACTUATOR
Peter G. Reuter, Vestal, N.Y., assignor to General Electric Company, a corporation of New York
Filed July 13, 1961, Ser. No. 123,802
6 Claims. (Cl. 91—186)



1. An actuator, for positioning an airfoil, comprising: two pistons; two piston rods, one piston rod coupled to one piston, the other piston rod coupled to the other piston; a crossbar pivotally arranged for rotation through a finite arc length about its midpoint, one piston rod being coupled to one end of the crossbar and the other piston rod being coupled with an opposing end of the crossbar, said crossbar being adapted to be coupled to an airfoil; a cylinder block assembly including a fixed block and a movable block, the movable and fixed blocks being keyed so that the movable block may be slideably positioned relative to the fixed block, the movable block having bores therein for receiving the pistons; an energizing fluid source; valve means operable for selectively admitting energized fluid to, or exhausting it from, the bores whereby the piston rods are driven in push-pull fashion; and, means connected with the movable block for positioning it relative to the fixed block whereby the airfoil may be rotated through variable finite arc lengths.

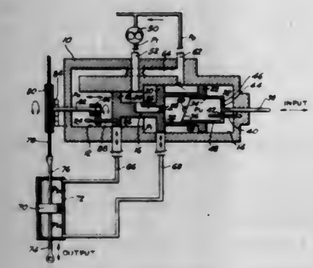
3,125,001
MULTI-POSITION VACUUM MOTOR
Maxwell L. Cripe, South Bend, Ind., assignor to The Bendix Corporation, South Bend, Ind., a corporation of Delaware
Filed Oct. 2, 1961, Ser. No. 142,194
3 Claims. (Cl. 91—357)



1. In a vacuum motor control system: a housing having an internal chamber, a movable wall in said internal chamber, the sides of said movable wall having a predetermined clearance with respect to the sidewalls of said chamber, a curtain diaphragm overlying said movable wall with a rolling U-shaped portion extending into said predetermined clearance to roll between the sidewalls of said chamber and the surface of said movable wall during movement of said movable wall, said curtain diaphragm having its outer edge sealingly fixed to the sidewalls of said housing, a driven shaft operatively connected to said movable wall, means biasing said movable wall to a normal position adjacent the open end of said internal chamber, a first vacuum connection in the sidewalls of said internal chamber spaced inwardly of the normal position of said diaphragm and rolled over and sealed off by said diaphragm during inward movement of said movable wall from said normal position to provide a first actuated position of said driven shaft, which sealing is maintained throughout any further inward movement of said movable wall, abutment means limiting inward movement of said movable wall to a second actuated position wherein said movable wall is spaced inwardly from said first actuated position, a second vacuum connection to said internal chamber and not closed off by said diaphragm to cause said movable wall to engage said abutment and provide a second actuated position of said shaft, and a valve means for selectively applying vacuum to respective first and second vacuum connections.

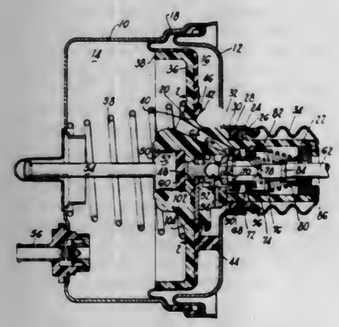
3,125,002
FLUID SERVO
Howard L. McCombs, Jr., South Bend, Ind., assignor to The Bendix Corporation, South Bend, Ind., a corporation of Delaware
Filed Apr. 2, 1962, Ser. No. 184,057
5 Claims. (Cl. 91—365)

1. A multiple stage fluid servo comprising: a housing defining an interior cylindrical chamber, a first stage piston member slidably arranged in said chamber, a cylindrical bore formed in one end of said first stage piston member, means supplying pressurized control fluid to opposing sides of said first stage piston member, a servo control orifice formed in the sidewall of said first stage piston within said cylindrical bore, a cylindrically formed input valve sleeve slidably disposed in said cylindrical bore of said first stage piston member, said input valve sleeve having an angled edge operative with said servo control orifice to control the effective area thereof and thereby control the fluid pressure positioning said first stage piston member, said input valve sleeve including a member secured thereto and extending externally of said housing member for receiving an input signal, a second stage piston device located externally of said housing member, conduit means supplying a controlling fluid pressure to said second stage piston from within said housing, valve land means secured to said first stage piston and movable



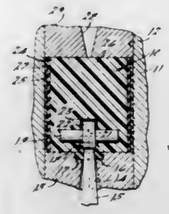
therewith operative to control the fluid pressure transmitted by said conduit means to said second stage piston in response to axial movement of said first stage piston, rotary feedback means connected between said first and second stage pistons operative to rotate said first stage piston in response to axial movement of said second stage piston and thereby affect the effective area of said servo control orifice as controlled by said angled edge of said input valve sleeve.

3,125,003
DIAPHRAGM PLATE CONSTRUCTION
Herman M. Hoekstra, South Bend, Ind., assignor to The Bendix Corporation, South Bend, Ind., a corporation of Delaware
Filed Mar. 16, 1961, Ser. No. 96,269
4 Claims. (Cl. 91—376)



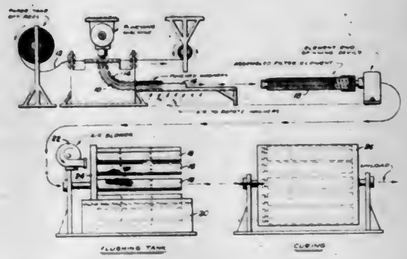
1. In a fluid pressure motor: a housing having an axially extending chamber therein, a diaphragm plate in said chamber, said diaphragm plate having an internal chamber therein and a radially inwardly extending groove in its external surface, said diaphragm plate having a radially extending opening extending between said groove and its internal chamber, a pin positioned in said radially extending opening, and an annular diaphragm having a central opening with its radially inner portion surrounding its central opening snapped into said groove to retain said pin.

3,125,004
LOW FRICTION SURFACES PROVIDED UNDER PRESSURE
Charles S. White, Rte. 3, Box 454–H, Palmdale, Calif.
Original application May 9, 1956, Ser. No. 583,680. Divided and this application May 8, 1961, Ser. No. 108,610
4 Claims. (Cl. 92—155)



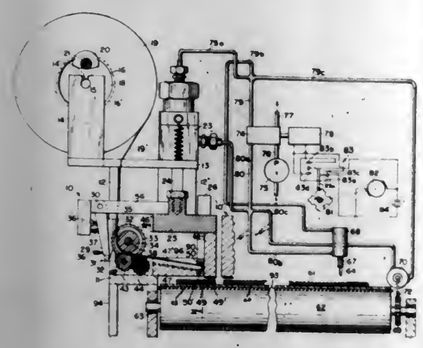
1. In a piston member and cylinder member combination, one of said members being accurately machined to have a cylindrical surface, the other of said members being of plastic material having a cylindrical surface formed by molding against said first surface, the mated cylindrical surfaces being maintained in contact engagement at all times with substantially no clearance therebetween, and means for relatively reciprocating said members.

3,125,005
PROCESS FOR MAKING AND TREATING EDGE TYPE ELEMENTS
Walter Kasten, Madison Heights, Mich., assignor to The Bendix Corporation, a corporation of Delaware
Filed May 2, 1960, Ser. No. 25,906
1 Claim. (Cl. 93—1)



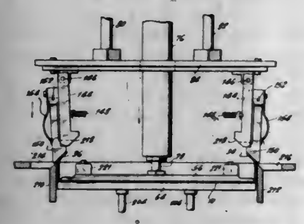
A process for making a resin impregnated washer type element in which fluid is filtered by flowing through spaces formed between adjacent contacting washers comprising the steps of punching uniform size washers out of raw unimpregnated crepe paper, aligning said washers to form a substantially cylindrical element of predetermined length, said alignment of said washers including the steps of placing said washers loosely on a member and blowing compressed air tangentially to said washers to cause a degree of relative rotation therebetween so as to cause the ridges found on the faces of said crepe paper washers to normally be at an angle with respect to the ridges of the next adjacent washers, flushing a resinous solution through said element to uniformly impregnate said paper washers with a predetermined resin content, blowing air through said element to assist in draining off any excess solution, and heating said element to cure the resin impregnated therein.

3,125,006
ADHESIVE-STRIP-APPLYING APPARATUS
Sidney Welcher, New Rochelle, and Albert Einbinder, Brooklyn, N.Y., assignors to Inland Paper Products Corp., Brooklyn, N.Y., a corporation of New York
Filed Feb. 6, 1962, Ser. No. 171,411
10 Claims. (Cl. 93—1)



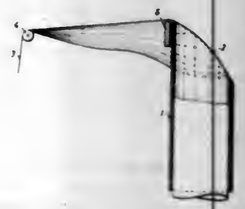
1. A tape dispenser comprising a base, support means on said base for carrying a roll of tape to be dispensed, feed means on said base for drawing tape from said roll, and plunger means reciprocably displaceable on said base and operatively coupled with said feed means for applying a strip of tape advanced by said feed means past said plunger means to a substrate, said plunger means being formed with a cutting edge extending transversely of said tape for severing said strip therefrom prior to its application to said substrate, said feed means including a first roller journaled on said base for rotation about an axis extending transversely of said tape in engagement with a non-adhesive surface thereof, a second roller rotatable about another axis extending transversely of said tape in engagement with an adhesive surface thereof, drive means for intermittently unidirectionally rotating at least one of said rollers, and tape-engaging means including said feed roller for imparting a transverse curvature to a portion of tape advanced past said cutting edge, said tape-engaging means including a pair of disks axially spaced by a distance less than the width of said tape and bracketing said feed roller while being rotatable therewith, said disks forming confining surfaces engaging the edges of said tape.

3,125,007
BOX FOLDING MACHINE
David B. Jaroff, Yonkers, and Robert Postal, Great Neck, N.Y., assignors to Techmation Corp., a corporation of New York
Filed Aug. 28, 1961, Ser. No. 134,267
7 Claims. (Cl. 93—51)



1. A box folding machine comprising, means defining a die, means for forcing a blank into said die to form a box, and means for folding inwardly the upper edges on opposite sides of the box while in the die, said last mentioned means comprising a member mounted for reciprocation relative to said die, a pair of laterally spaced folding elements carried by said member and a bending finger mounted on each folding element and projecting forwardly therefrom, said bending fingers each being operable in response to the movement of said reciprocable member toward said die to initially bend one of said upper edges into the path of movement of the associated folding element and the latter being operable in response to said movement to complete the inward folding of the associated upper edge.

3,125,008
APPARATUS FOR CONVERTING A WEB INTO TUBULAR FORM
Robert Herdina, Vienna, Austria, assignor to Hamac-Hansella Aktiengesellschaft, Viersen, Germany, a corporation of Germany
Filed Jan. 28, 1963, Ser. No. 254,168
Claims priority, application Austria Jan. 31, 1962
1 Claim. (Cl. 93—82)

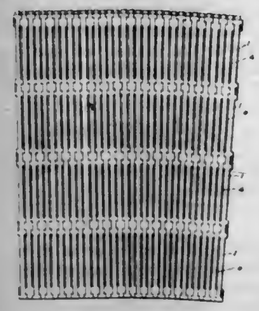


A forming apparatus for converting a continuous web of flexible material such as paper or plastic into tubular form, consisting of a cylindrical pipe having an inlet end oblique to the longitudinal axis of the pipe, means for directing the web toward said inlet end along a direction substantially perpendicular to said longitudinal axis and then over the summit of said inlet end into and longitudinally through said pipe, the inlet edge being of rounded cross-section and having a contour which when developed conforms substantially to a half of a sine curve, and an auxiliary element closely adjacent to the outer surface of the pipe in the region of the summit of said inlet edge, said auxiliary element conforming in curvature to said summit, and the outer edge of said auxiliary element extending a small distance beyond said inlet edge whereby said auxiliary element causes the tension on said web to be concentrated at its central portion leaving its lateral portions unstressed.

3,125,009
COMPOUND BEAM STRUCTURE
Franz Rudolf Eberl, Brockmanngasse 87, Graz VI, Styria, Austria
Filed Jan. 26, 1960, Ser. No. 4,789
7 Claims. (Cl. 94—4)

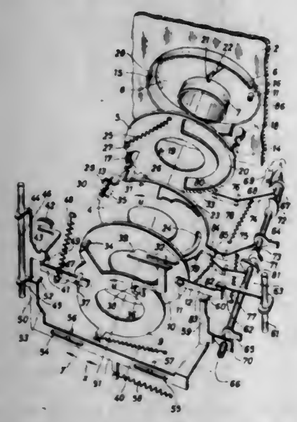
1. A structural assembly for forming carrying lattice structures and tread surfaces, comprising a plurality of beams arranged on edge and approximately on the same level having laterally protruding connectors at their ends and at points spaced along the length of said beams, said connectors comprising open-topped cavities on alternate beams, a supporting edge face extending laterally of the beam forming the bottom wall of said cavities, the beams

located intermediate said alternate beams having projections thereon interfitting with said cavities to form a



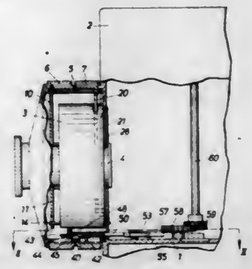
carrying structure and said connectors spacing said beams from one another slightly.

3,125,010
CAMERA CONTROLS
Alfred Winkler and Dieter Engelsmann, Munich, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany
Filed Dec. 15, 1959, Ser. No. 859,739
Claims priority, application Germany Dec. 19, 1958
26 Claims. (Cl. 95—10)



8. In a camera, in combination, rotary exposure time setting means; rotary aperture setting means; shutter operating means; detent means cooperating with one of said setting means for releasably maintaining the latter at a given angular position when said detent means is operated; blocking means cooperating with said shutter operating means for blocking the operation of the latter when said blocking means is in a blocking position; manually turnable shaft means turnable by the operator to a selected angular position; and cam means carried by said shaft means and cooperating with said detent means and blocking means for rendering said detent means inoperative and said blocking means operative to block operation of said shutter operating means when said shaft means is placed by the operator in an angular position for automatic operation, said cam means moving said blocking means to an unblocking position and rendering said detent means operative when said shaft means is set by the operator to a position for hand operation, said shaft means extending parallel to the optical axis.

3,125,011
AUTOMATIC OR MANUALLY OPERABLE CAMERA
Fridolin Hennig, Munich, Germany, assignor to Agfa Aktiengesellschaft in Leverkusen-Bayerwerk, Munich, Germany
Filed Aug. 28, 1961, Ser. No. 134,422
Claims priority, application Germany Sept. 7, 1960
12 Claims. (Cl. 95—10)



1. In a camera which is capable of being operated either manually or automatically, in combination, support means; combined scanning and indicating means movably supported by said support means; moving means cooperating with said combined scanning and indicating means for moving the latter to a position indicative of the settings of the exposure aperture and exposure time of the camera irrespective of whether the camera is operated manually or automatically; meter means responding to the lighting conditions and also carried by said support means; pointer means moved by said meter means to positions indicative of the lighting conditions, said combined scanning and indicating means having an indicating portion cooperating with a portion of said pointer means to indicate to the operator when the exposure time and exposure aperture of the camera have been properly set during manual operation of the camera; and positioning means positioning said combined scanning and indicating means and said pointer means one with respect to the other in a position where a scanning portion of said combined scanning and indicating means cooperates with said pointer means to determine automatically the position of said combined scanning and indicating means during automatic operation of the camera and in a position where said combined scanning and indicating means and said pointer means do not cooperate with each other during manual operation of the camera.

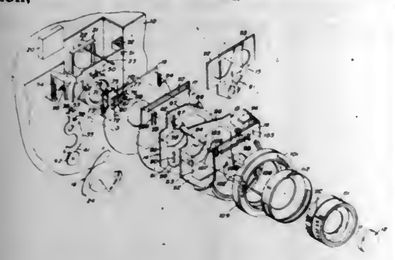
3,125,012
APERTURE AND EXPOSURE CONTROL MECHANISM FOR PHOTOGRAPHIC CAMERA
Clarence W. Pribus, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed June 27, 1962, Ser. No. 205,588
10 Claims. (Cl. 95—10)

1. In a camera having an exposure meter disposed for energization by scene light and having an output member constituting a part of said meter and positioned as a function of the intensity of said light, the combination comprising:

an exposure regulating device comprising a shutter having a speed setting member movable to any one of a plurality of positions for daylight operation and to a predetermined position for flash operation;

a yieldably movable control means including a member adapted to be moved in one direction for daylight operation to engage said output member for sensing the position thereof and cooperating with said setting member to control movement of the latter to one of

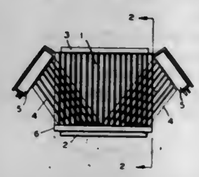
said plurality of positions corresponding to the position of said output member, and adapted to be moved in another direction for flash operation for cooperating with said setting member to control movement of the latter to said predetermined position;



a first manually operable means controlling said sensing means and movable between a daylight position in which said sensing member is free to move into and out of engagement with said output member and a flash position in which said sensing member is moved thereby in said other direction and inhibited from movement in said one direction; and

a second manually operable means normally holding said setting member in a position disengaged from said control means and movable through a first distance for releasing said setting member for movement into engagement with said control means to establish said shutter speed and beyond said first distance for actuating said shutter.

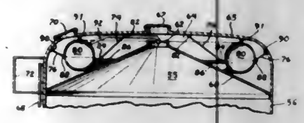
3,125,013
APPARATUS FOR REFLEX COPYING BY THE USE OF FIBER OPTICAL DEVICES
Clifford E. Herrick, Jr., Chenango Forks, and John W. Weigl, Binghamton, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 7, 1959, Ser. No. 857,963
7 Claims. (Cl. 95—75)



1. In a photocopy apparatus utilizing light reflected from an original to be copied, means for supporting said original and said light-sensitive copy material in spaced relation from each other, a first set of fiber optical elements arranged between said original and said copy material for conveying light reflected from the latter and a second set of fiber optical elements interspersed among said first set for conveying light to said original and a light source for illuminating said second set of elements.

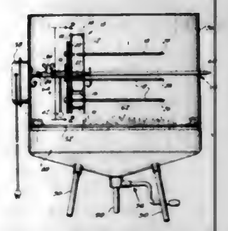
3,125,014
BREATHER BAG
Robert A. Herbruck, 151 Hadley Road, Dayton 9, Ohio
Filed Feb. 13, 1961, Ser. No. 88,992
6 Claims. (Cl. 99—235)

4. In a silo construction for storing commodities in a controlled atmosphere, the combination comprising a sealed receptacle for storage of said commodities including a ceiling member, a roof member on said receptacle cooperating with said ceiling member to form a chamber open to atmosphere, an expandable substantially completely flexible gas retaining envelope of generally annular configuration positioned within said chamber, gas conducting means interconnecting the interior of said sealed receptacle to the interior of said expandable gas retaining envelope, and suspension means affixed to said



roof member and to said envelope at at least two points for maintaining said gas retaining envelope in partially expanded condition above said ceiling member, whereby said gas retaining envelope expands and contracts in accordance with the variations in pressure within said sealed receptacle relative to atmospheric pressure to maintain the pressure differential therebetween approximately zero.

3,125,015
ROTISSERIE WHEEL
Gene A. Schlaegel, Iowa City, Iowa
Filed Dec. 17, 1959, Ser. No. 860,198
7 Claims. (Cl. 99—421)



7. In a rotisserie wheel, a support member adapted for rotation about a central axis in a vertical plane, a spit rotatably secured to said support member for rotation about its longitudinal axis, said spit projecting from said support member in a horizontal plane from a point radially spaced from the axis of said support member, a gear wheel on said spit, an axially disposed bearing member on said support member for rotation therewith, a spur gear carried by said bearing member, said bearing member being rotatable independently of said spur gear, said gear wheel and spur gear bearing operatively connected, a freely movable weighted anchor connected to said spur gear so as to extend radially therefrom in depending relationship thereto, the weight on said anchor being such as to maintain its depending position by gravity for holding said spur gear against rotation during rotation of said bearing member, and as said support member is rotated said gear wheel acting against said spur gear to effect the continuous rotation of said gear wheel about its individual axis as it rotates with said support member.

3,125,016
COMBINATION BARBECUE GRILL AND STEAM ACTUATED ROTISSERIE
Earl E. McDowell, Perry, Iowa
Filed Mar. 1, 1961, Ser. No. 92,611
4 Claims. (Cl. 99—421)

1. In a device of the class described,

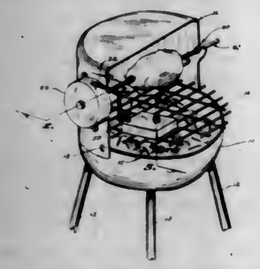
a supporting container adapted to hold ignited charcoal and the like,

a horizontal grill secured to said container and extending over the top thereof,

a hood means secured to said container and extending upwardly and over at least a portion of said container,

a steam turbine means including a turbine rotor adapted to provide rotational power, secured to said hood means,

a horizontally disposed rotisserie rod mounted on said hood means and being operatively connected to said turbine rotor whereby said rotor can impart rotational motion to said rotisserie rod,



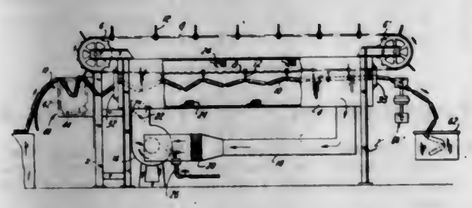
a closed reservoir container adapted to hold water detachably and movably resting above and on top of said grill,

a flexible tube connecting said closed reservoir container with said steam turbine whereby steam created in said reservoir by ignited charcoal in said container can impart rotational movement to said turbine rotor,

said reservoir container being free from engagement with said supporting container,

said flexible tube being the only means of connection between said reservoir container and said steam turbine.

3,125,017
RAPID PROCESSING OF FRANKFURTERS
Francis W. Tauber, Chicago, and Roy N. Olson, Worth, Ill., assignors to Union Carbide Corporation, a corporation of New York
Filed Nov. 1, 1960, Ser. No. 66,497
1 Claim. (Cl. 99—443)



Apparatus for forming shaped meat products from a continuous strand of links of encased comminuted meat emulsion having tie portions between the links, which apparatus comprises:

(*a*) a horizontally elongated cooking tunnel;

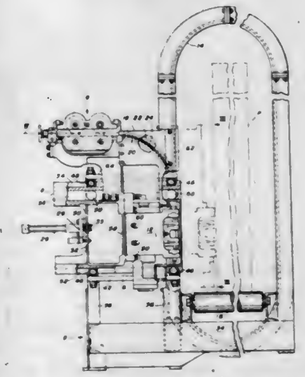
(*b*) a conveyor for transporting said strand of encased links longitudinally through the cooking tunnel, said conveyor having a continuous link chain extending horizontally through the cooking tunnel with hooks depending vertically from said chain within said tunnel, said hooks being spaced along said chain at a distance less than the length of two cooked links;

(*c*) feed unit having means for engaging alternate tie portions and advancing said strand longitudinally, and means for displacing said alternate tie portions of said strand sideways onto said depending hooks at the input end of said tunnel so that said links hang from said hooks in a V-shape;

(*d*) means for feeding a hot stream of gas at a high velocity through said cooking tunnel for cooking the encased meat emulsion;

(*e*) and means for doffing the links of encased shaped meat product from said depending hooks at the output end of said tunnel.

3,125,018
CARRIAGE-SUPPORT FOR AUTOMATIC STRAPPING MACHINE
Shirley B. Brouse, Oak Lawn, and Jack J. Dalton, Olympia Fields, Ill., assignors to United States Steel Corporation, a corporation of New Jersey
Filed Aug. 13, 1962, Ser. No. 216,665
4 Claims. (Cl. 100—26)

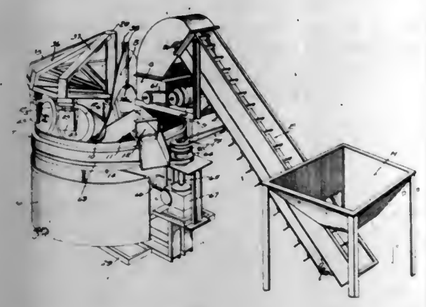


1. In a strapping machine including a package-supporting platform, a guide-track substantially surrounding said platform, means for feeding strap to and retracting strap from said guide-track, and a joining mechanism, the combination therewith of a supporting plate of channel section, including a web and flanges, mounted adjacent said track with its web parallel to the plane of the track, a first pair of spaced rollers journaled in one of the flanges of said supporting plate on the side thereof toward the other flange, one adjacent each end of said plate, a second pair of spaced rollers journaled in said other flange of said supporting plate on the side thereof toward said one of the flanges, one adjacent each end of said plate, the axes of rotation of said rollers being normal to said flanges, a third pair of spaced rollers journaled in the web of said supporting plate between said flanges, one adjacent each end of said plate, the axes of rotation of the rollers of said third pair of rollers being normal to said web, a carriage mounted on said rollers for reciprocal movement on said supporting plate between and parallel with said flanges toward and from said platform, said carriage having ways extending therealong cooperatively engaging said pairs of rollers, and means for reciprocating said carriage toward and from said platform, said strap feeding and retracting means and said joining mechanism being mounted on said carriage.

3,125,019
JUICE EXTRACTOR
George L. Ackerman, Rte. 1, Richmond, Ill.
Filed Oct. 26, 1962, Ser. No. 233,218
6 Claims. (Cl. 100—139)

1. A juice extractor machine comprising, a rotatably driven table having a circular track on the upper side thereof, said track being U-shape in cross section and including opposite sides and a screen bottom, a plurality of rotatable but bodily stationary tapered rollers in said track and having opposite ends which abut against said

track sides, a continuous and flexible belt located between said rollers and screen bottom and of substantially the same width as said track, said rollers having a resilient periphery and their lower edge being parallel with said screen bottom, means for rotatably driving at least one of said rollers in synchronization with said table; said rollers, beginning with one of said rollers and then continuing in the direction in which said table rotates, being mounted progressively closer to said screen bottom, the

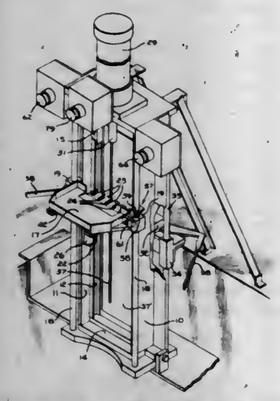


last of said rollers having its resilient periphery abutting tightly against said belt; and material crushing means located above said track for feeding juice containing material between said belt and said bottom, whereby said material is pressed progressively tighter by the action of successive rollers pressing said belt against said material and consequently the latter against said screen bottom, to thereby extract juice from the material and force said juice through said screen bottom as said table and material rotate beneath said rollers.

3,125,020
APPARATUS FOR SEQUENTIALLY COMPRESSING RESILIENT ARTICLES

Robert L. Surina, Westmont, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Apr. 9, 1962, Ser. No. 186,031
8 Claims. (Cl. 100—215)



1. Apparatus for sequentially compressing resilient articles, which comprises:

a holder defining a chamber into which the articles to be compressed may be inserted in a succession of loosely stacked groups with each succeeding group after the first being placed against an outer surface of the preceding group after the preceding group has been compressed;

reciprocable means for compressing each group of articles in turn to a lesser thickness, the first group being compressed against a base surface of the chamber, and the succeeding groups respectively against the outer surface of the preceding group;

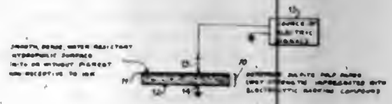
means for engaging and holding the outer surface of the compressed group after each compression operation to maintain the compressed state of the previously compressed articles; and

means for moving said engaging and holding means into and out of the chamber and along said holder, so that said engaging and holding means may be moved into engagement with the outer surface of each compressed group in turn after the compression operation and before the retraction of said compressing means.

3,125,021
ELECTRO-RESPONSIVE FACSIMILE RECORDING AND PLANOGRAPHIC PLATE

Harold R. Dalton, Jenkintown, Pa., assignor to Timefax Corporation, New York, N.Y., a corporation of New York

Filed Nov. 14, 1955, Ser. No. 546,400
7 Claims. (Cl. 101—149.2)

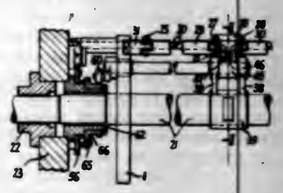


1. An electro-responsive planographic plate especially prepared to produce a facsimile record by electrolytic action in response to applied voltage at selected areas of the plate, said plate consisting of a paper having at least 50 percent hardwood sulfite pulp mixed with a wet strength imparting ingredient, said paper having incorporated therein during manufacture a water resistant but hydrophilic material to provide the paper with a smooth hydrophilic water resistant surface, the paper also containing an impregnation of a chemical electrolytic marking compound to render it electrically responsive to applied voltages to produce corresponding record marked areas which are ink receptive.

3,125,022
REGISTERING ADJUSTMENT FOR MULTI-COLOR PRINTING

Robert Reinartz and Hermann Fischer, Augsburg, Germany, assignors to Maschinenfabrik Augsburg-Nurnberg A.G., Augsburg, Germany, a corporation of Germany

Filed Apr. 3, 1962, Ser. No. 184,901
Claims priority, application Germany May 6, 1961
10 Claims. (Cl. 101—183)

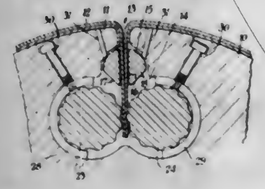


1. In a sheet-fed multi-color printing press having a plurality of printing stations for sequential printing of superimposed images on congruent areas of sheets fed through all said stations and having an impression cylinger at each said printing station for receiving said sheets to be printed and for impression thereof against a printing plate at each said station and in which said sheets are susceptible to dimensional variations and deformations during said printing of said sequential images thereon, the combination which comprises a plurality of sheet gripping means on said impression cylinder gripping the axially extending leading edge of each said sheet fed thereto, and including a plurality of said grippers spaced axially along said cylinder and normally axially aligned with respect thereto, an articulated rail along said cylinder with portions thereof independently movable circumferentially thereof, means for mounting said sheet grippers along said articulated rail, means for displacing selected portions of said articulated rail and said grippers mounted thereon into and out of axial alignment with said cylinder for distorting said leading edge of said sheets effecting concomitant distorting of the area of said sheets to be printed for compensating for said dimensional variations and deformations thereof, said distortion of said sheets being positively maintained throughout substantially the entire passage of each said sheet through each said printing station, and means for adjusting the extent and direction of said selective displacement of said articulated rail and said grippers thereon for controlling the distortion of said sheets to compensate for said dimensional variations and deformations thereof during said printing at each said printing station.

3,125,023
BLANKET TENSIONING MEANS FOR THE IMPRESSION CYLINDERS OF ROTARY PRINTING PRESSES

Charles Henry Skinner and William Gordon Robson, both of Westminster, London, England, assignors to Vickers-Armstrongs (Engineers) Limited, London, England, a British company

Filed Mar. 7, 1961, Ser. No. 94,075
Claims priority, application Great Britain Mar. 8, 1960
6 Claims. (Cl. 101—415.1)

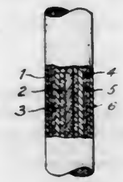


1. In a rotatable impression cylinder for a printing press having a blanket slot extending longitudinally thereof and including a top blanket-gripping and tensioning means located in the cylinder inwardly of said slot and extending lengthwise of the cylinder, said means being provided with a blanket inlet aligned with the blanket slot, and means for operating the blanket-gripping and tensioning means to grip the leading and trailing ends of a top blanket introduced through the blanket slot into the blanket inlet and for tensioning the top blanket on the cylinder, the improvement including a clamping bar for gripping the leading end of an underblanket, said clamping bar being located between the blanket slot and the top blanket-gripping and tensioning means and extending lengthwise of the cylinder, said bar being movable angularly about its longitudinal axis into and out of an operative position in which it is effective in conjunction with an internal longitudinal surface in the cylinder for gripping the leading end of an underblanket.

3,125,024
EXPLOSIVE CONNECTING CORD

Mervyn Anthony Hicks and William Mann, Brownsburg, Quebec, Canada, assignors to Canadian Safety Fuse Company Limited, Montreal, Quebec, Canada, a corporation of Canada

Filed May 3, 1962, Ser. No. 192,111
Claims priority, application Canada Mar. 23, 1962
6 Claims. (Cl. 102—27)



1. An improved explosive connecting cord comprising essentially a core of pentaerythritol tetranitrate having a specific surface of from about 900 to 3400 square centimeters per gram in a concentration of from 1.5 to 10 grains per foot of length, confined within a textile sheath surrounded by a protective and reinforcing covering.

3,125,025
PYROTECHNIC IGNITER

Brian F. Boggs, Canoga Park, and Steven S. Laifman, Los Angeles, Calif., assignors to North American Aviation, Inc.

Filed Jan. 4, 1960, Ser. No. 198
3 Claims. (Cl. 102—28)



1. A pyrotechnic generator of hot combustion products comprising a cup member, a pyrotechnic charge disposed within said cup member, a pair of electrical conductive rings substantially concentrically positioned and adjacently spaced from said pyrotechnic, spaced from said cup member, and concentrically spaced from one another, said rings being mounted within and insulated from said cup and from one another, pyrotechnic squib means mounted between said rings, two pairs of electrical conductive leads through said cup member between and insulated from said rings, a first pair of said leads connected to said rings, one of said last-mentioned leads connected to each said ring, electrical heater means contacting said squib means and connected to said rings, and combustion sensing means connected across a second pair of said leads.

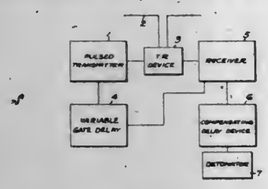
3,125,026
REFLECTED ELECTRIC WAVE ACTUATED DETONATOR

John L. Johnson, Catonsville, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army

Filed July 28, 1945, Ser. No. 607,641
4 Claims. (Cl. 102—70.2)

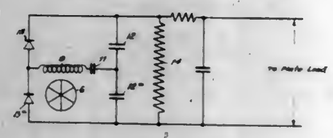
1. A projectile comprising, means for detonating said projectile, means for radiating a wave pulse, means for

producing an energy pulse on said projectile in response after a predetermined time following said emission to a



reflection of said wave pulse, and means for actuating said detonating means after a predetermined interval subsequent to the production of said energy pulse.

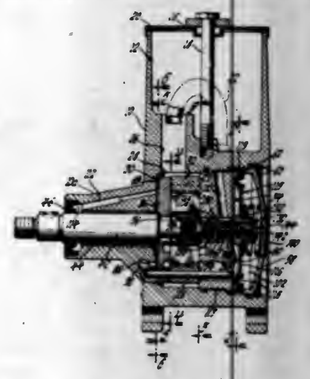
3,125,027
SELF-REGULATING POWER SUPPLY
Hugh M. Stoller, deceased, late of Mountain Lakes, N.J., by Marian M. Stoller, executrix, Mountain Lakes, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Filed Aug. 4, 1950, Ser. No. 177,657
1 Claim. (Cl. 102—70.2)



In an ordnance projectile, a self-regulating power supply system comprising: a wind-responsive vane adapted to rotate in response to flight of the projectile through the air; a generator having stationary high-voltage and low-voltage armature windings and a rotatable magnetic field member so constructed and arranged that rotation of said field member causes voltages to be generated in said windings; rotatable shaft means connecting said vane to said field member for rotating said field member in response to rotation of said vane; first and second output circuit points; a first diode having its anode connected to a first end of said high-voltage winding and its cathode connected to said first circuit point; a second diode having its cathode connected to said first end of said high-voltage winding and its anode connected to said second circuit point; first and second equal capacitances connected in series between said first and second circuit points; an output resistor connected between said first and second circuit points; and a third capacitance connected between the second end of said high-voltage winding and the junction of said first and second capacitances, said third capacitance having such a value, in relation to said first and second capacitances and to the inductance of said winding, as to cause said winding to be tuned to resonance at a frequency corresponding to a low speed of rotation of said vane.

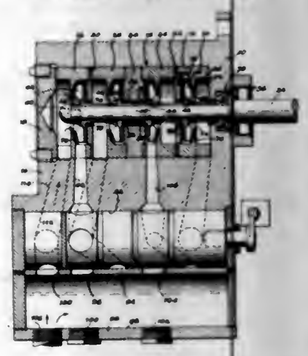
3,125,028
PUMP
Robert P. Rohde, Saginaw, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 25, 1960, Ser. No. 10,527
16 Claims. (Cl. 103—42)

1. In a constant displacement pump of the type comprising an inlet passage and a flow control orifice through which discharge fluid passes, diaphragm means in which the orifice is located, means coacting with said diaphragm means to provide a pressure chamber at one side of said diaphragm means and upstream of said orifice, means coacting with said diaphragm means to provide an outlet chamber at the other side of said diaphragm means, a valve element operatively connected with said diaphragm means, means providing a valve



seat complementary to said element, the latter being displaced on the flexing of said diaphragm means to open said pressure chamber to said inlet passage and spring means tending to maintain said element on said seat.

3,125,029
HIGH SPEED PUMP
Dietrich E. Singelmann, Snyder, N.Y., assignor to Bell Aerospace Corporation
Filed Oct. 17, 1962, Ser. No. 231,174
4 Claims. (Cl. 103—106)



1. A compound pump assembly comprising
a body having a bore therein,
a plurality of centrifugal pump devices received in said bore, each such pump device having an annular discharge chamber and an inlet,
shaft means for driving said pump devices,
said body also having a valve bore and an inlet bore, with the valve and inlet bores being substantially parallel to each other and to the first mentioned bore and with the axes of the valve and inlet bores aligned on a straight line tangentially intersecting the discharge chambers of said pump devices,
valve means received in said valve bore,
said body having a discharge passage from each of said outlet chambers extending tangentially therefrom to said valve bore along a line passing through the axes of said valve and inlet bores, and an inlet passage from said valve bore to the inlet of each pump device, said body also having discharge passages extending from said valve bore externally of said body,

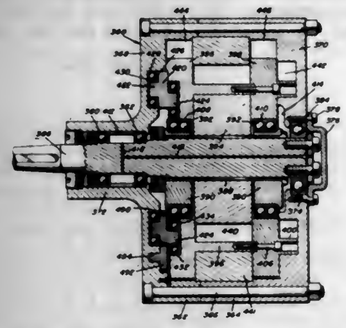
said valve means having ports for alignment with said inlet passages and said outlet passages for selectively connecting said pump devices in series and in parallel.

3,125,030
SELFPRIMING CENTRIFUGAL PUMP
Hidekuni Yokota, 671 Yoshijima-cho, and Shingo Yokota, 1627 Midori-machi, both of Hiroshima-shi, Japan
Filed Feb. 19, 1962, Ser. No. 174,132
1 Claim. (Cl. 103—113)



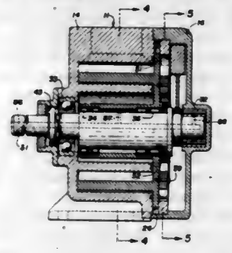
In a self priming centrifugal pump,
a casing having an internal wall portion defining a substantially cylindrical impeller section between the top and bottom thereof;
a rotating impeller in said section substantially tangent to said wall portion towards the top thereof so as to define a main involute vortex chamber around the top, one side and the bottom of said section, discharging into the bottom of a first vertically disposed cylindrical diffuser;
an auxiliary vortex chamber formed between said diffuser and the other side of said section, said auxiliary vortex chamber terminating in a second diffuser integral with said auxiliary vortex chamber, said second diffuser discharging into said first diffuser towards the top thereof and tangential thereto; and
a cone-shaped cavity holder in said first diffuser being open at its base, the apex of the cone being fastened to the bottom of said first diffuser, the open end of the cone being disposed towards the lower central portion of said first diffuser allowing a passage between said cone-shaped cavity holder and said first diffuser, said cavity holder acting to prevent air bubbles from recycling down towards the bottom of said first diffuser.

3,125,031
MULTI-CHAMBER ROTARY PUMP
George Emil Rydberg and Albert J. Jacobs, Calgary, Alberta, and Peter C. Jacobs, Edmonton, Alberta, Canada; Mary Caroline Denise Cote, executrix of said George E. Rydberg, deceased
Filed June 7, 1957, Ser. No. 664,321
14 Claims. (Cl. 103—131)



1. An expansible chamber device including a stator having a central opening and a rotor received therein,
(*a*) said stator having a peripheral wall and a pair of end walls secured thereto and enclosing said central opening,
(*b*) an annular projection on said peripheral wall extending into said opening and having a cylindrical internal surface together with planar side surfaces,
(*c*) said side surfaces together with the adjacent surfaces of said end walls and said peripheral wall defining annular recesses on opposite sides of said cylindrical internal surface,
(*d*) a cylindrical core disposed in said opening and having a cylindrical exterior surface centrally of said cylindrical internal surface and defining therewith a main annular chamber,
(*e*) said stator having an auxiliary annular chamber therein in spaced coaxial relation to said main chamber and provided with inner and outer cylindrical surfaces,
each received in one of said annular recesses and
(*f*) said rotor consisting of a pair of support plates slidably engaging the side walls of the latter,
(*g*) a ring in said annular chamber comprising a main piston and being secured to and extending between said support plates and surrounding said core and defining with said cylindrical surfaces inner and outer working chambers in said main chamber,
(*h*) an auxiliary ring secured to one of said support plates and projecting laterally therefrom into said auxiliary chamber and comprising an auxiliary piston defining inner and outer auxiliary working chambers,
(*i*) each of said rings having a transverse slot therethrough,
(*j*) each of said main and auxiliary working chambers having a blade therein extending through and slidable in the associated slot and providing a stationary piston in both of the associated inner and outer working chambers,
(*k*) fluid intake and exhaust means communicating with each of said working chambers,
(*l*) means causing epicyclic movement of said rings throughout said annular chambers with the rings each being in tangency with both of said cylindrical surfaces of an annular chamber.

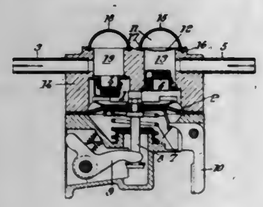
3,125,032
ROTARY PUMP
Edwin E. Smith, Santa Clara, Calif., assignor to Fluid Dynamics Corp., Los Altos, Calif., a corporation of California
Filed Sept. 6, 1960, Ser. No. 53,970
10 Claims. (Cl. 103—131)



1. In a rotary pump, a closed casing comprising a body and a cover, the body having inlet and outlet passages and an opening extending into inlet and outlet passages, the body being provided with inner and outer concentric cylindrical walls defining a working space, partition means forming an integral part of said body in said working space and separating the inlet passage from the outlet passage, and dividing the opening to provide

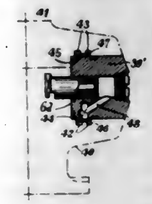
two separate openings, a piston adapted to operate in said casing, said piston having inner and outer cylinders, said outer cylinder operating in said working space and defining inner and outer pump chambers in said working space, said piston having an end plate outside the working space, said outer cylinder being slotted for movement about the partition means, a drive shaft rotatably journalled in said casing, an eccentric mounted on said drive shaft, said eccentric being rotatably mounted in said inner cylinder of said piston and serving to transmit working movements from the drive shaft to the piston as the shaft is rotated, said shaft having a collar for engaging the plate on the piston, annularly continuous resilient sealing means disposed between the ends of the inner and outer concentric cylindrical walls and said plate for establishing a uniform pressure type seal between the same, means for applying force to said shaft to draw said plate towards the ends of the inner and outer cylindrical walls and control means mounted on said end plate of said piston and on the cover and serving to cause circular gyratory movement of said piston without axial rotation as said piston is moved by rotation of said drive shaft.

3,125,033
RECIPROCATING DIAPHRAGM PUMPS
Jean Henri Albert Marye, Elancourt, France, assignor to Etablissements A. Guiot, Paris, France, a society of France
Filed May 29, 1961, Ser. No. 113,473
Claims priority, application France June 17, 1960
3 Claims. (Cl. 103—150)



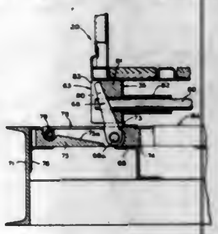
1. A liquid pump which comprises, in combination, a casing, an oscillating diaphragm mounted in said casing to form therewith a pump chamber, inlet and outlet valves carried by said casing to control the inflow of liquid to said chamber and its outflow therefrom, respectively, a delivery conduit for the outflow of liquid from said outlet valve, said casing comprising means, adjoining said outlet valve on the downstream side thereof, forming a pulsation absorbing chamber in direct communication with said delivery conduit, said pulsation absorbing chamber having a rigid edge extending along a closed line located in a plane, and said pulsation absorbing chamber being located on one side of said plane, means forming a third chamber located on the other side of said plane from said pulsation absorbing chamber, said third mentioned chamber having a single opening limited by a rigid edge fitting against said first mentioned edge with a slight play, a flexible diaphragm of a thickness just a little greater than said play and the periphery of which follows said edges on the outside thereof, one of said means being provided, along said rigid edge thereof and on the outside of said edge, with a groove accommodating with a gas-tight fit the whole of the edge of the other of said means and of said diaphragm periphery extending over said last mentioned edge, said groove having a depth, in a direction perpendicular to said plane, such that, with said last mentioned edge and said diaphragm periphery fully engaged in said groove, the closed space between said diaphragm and the inner face of said second mentioned means is under a pressure greater than atmospheric pressure and said diaphragm bulges into said pulsation absorbing chamber.

3,125,034
PUMP WITH RADIAL CYLINDERS
René Lucien, Neuilly-sur-Seine, and Emile Tetart, Louvie Juzon, France, assignors to Societe a Responsabilite Limitee: Recherches Etudes Production R.E.P., Paris, France, a corporation of France
Filed Mar. 21, 1961, Ser. No. 97,339
Claims priority, application France Sept. 1, 1960
10 Claims. (Cl. 103—174)



1. A pump comprising a pump body provided with a plurality of cylinders in radial arrangement about an axis, a piston slidably supported in each of said cylinders, a driving shaft adapted for rotation about said axis, means coupled to said shaft and each of the pistons for reciprocating the same upon rotation of said shaft to provide suction and compression strokes, each of said pistons having an axial bore and a transverse opening in communication with the bore, said pump body defining an axial well around said shaft adapted for connection to a source of fluid, the transverse openings of the pistons passing into said well with the pistons in the suction stroke to admit fluid into the corresponding cylinder through said transverse opening and the bore of a respective piston, said body being provided with a passageway extending from each cylinder for enabling discharge of fluid therefrom with the piston therein in the compression stroke, a pair of isolated chambers being provided, in respective communication wtih paired groupings of said cylinders through said passageways, and a valve for each of said chambers for closing communication between the associated chamber and respective passageways of associated cylinders, said chambers being of annular form and extending in planes parallel to the cylinders, each of the valves including a deformable blade.

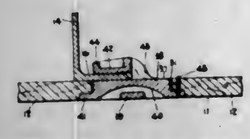
3,125,035
FREIGHT HANDLING MEANS
Jack E. Loomis, Kalamazoo, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Original application Apr. 9, 1956, Ser. No. 577,118, now Patent No. 3,014,604. Divided and this application Mar. 22, 1961, Ser. No. 97,608
2 Claims. (Cl. 105—366)



1. A mechanism for securing a freight carrier to a conveyance, comprising a horizontally disposed member

adapted to be secured to the conveyance, the said horizontally disposed member having an opening therethrough, an anchor plate pivotally mounted on the said member and arranged to be positioned selectively in an upright position in which the anchor plate projects through the said opening adjacent one edge thereof and in a horizontally disposed position below the upper surface of the said horizontal member, means on the said anchor plate member for moving it from the said horizontally disposed position to the said upright position, a cover plate pivotally mounted on the said member and arranged in the said opening to serve as a stop for the said anchor plate member in its upright position and as a cover for the anchor plate member in its horizontally disposed position, and the said cover plate member having an opening therein whereby a hook member may be inserted to engage the said means and move the said anchor plate member from its horizontally disposed to its upright position.

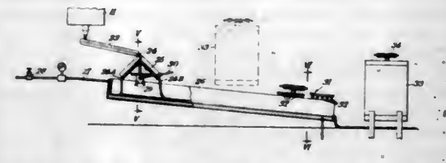
3,125,036
LADING BAND ANCHOR
James B. Reynolds, Chicago, Ill., assignor to The Youngstown Steel Door Company, Cleveland, Ohio, a corporation of Ohio
Filed Jan. 29, 1962, Ser. No. 169,441
3 Claims. (Cl. 105—369)



1. In a railway car having a side wall including a post having a vertically extending flange parallel to the side wall and an inner lining secured to said post in engagement with said flange and having spaced openings at said flange, the free edge of said flange being spaced from the lining openings, lading band anchors, each of said anchors comprising a circular body, a tie bar on one side of said body, a wall projecting at an angle from the opposite side of said body within the peripheral boundary thereof and in offset relationship to the center thereof and a flange extending from said wall in spaced overlapping relationship with said body, said flange being spaced from said body a distance substantially equal to the thickness of said post flange, said anchors being seated in the lining openings with said bodies bearing against one face of said post flange and said walls and anchor flanges contiguous to said free edge of said post flange for rotation in the lining openings, said post flange being received between said bodies and said anchor flanges after rotation of said anchors in said lining openings and said walls being engaged with said free edge of said post flange and limiting rotation of said anchors and propertly positioning said anchors in the lining openings.

3,125,037
MANUFACTURE OF HARD CANDY
Peter W. G. Johnston, Jesmond, Newcastle-on-Tyne, England, assignor to Baker Perkins Holdings Limited, Peterborough, England, a company of Great Britain
Filed Oct. 22, 1959, Ser. No. 848,096
Claims priority, application Great Britain Oct. 29, 1958
6 Claims. (Cl. 107—1)

1. Apparatus for the manufacture of high boiled sugar confectionery, comprising a continuous cooker, a cooled conveyor band, a chute for delivering a continuous flow of sugar from the cooker, a deflector plate positioned beneath the discharge end of the band and effective to split the sugar discharged by the chute into two streams which flow downwardly from the deflector plate and are delivered in superposition to the band to form a single ribbon thereon, a nozzle situated beneath the deflector plate and between said descending streams of sugar, means for supplying volatile liquid flavouring to said



nozzle and thereby continuously introducing said flavouring between said streams of sugar so that said flavouring will be trapped between said streams upon their reunion and at least one plough for folding over said ribbon of sugar as it travels on the band.

3,125,038
LONG GOODS SPREADER STICK
John Amato, Brooklyn, N.Y., assignor to Clermont Machine Co., Inc., Brooklyn, N.Y., a corporation of New York
Filed May 31, 1960, Ser. No. 32,864
3 Claims. (Cl. 107—7)

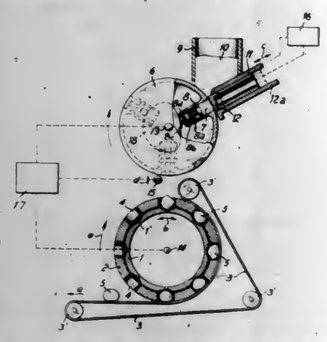


1. A serrated macaroni stick for handling inverted loops of extruded macaroni formed of an extruded tubular aluminum alloy having both interior and exterior longitudinally extending indented valley portions of V-shaped cross section with curved sloping sides, said valley portions being offset from one another and elevated intervening portions, said elevated intervening portions consisting of smooth convex faces extending obliquely away from the valley portions and extending parallelly and longitudinally on both the inside and the outside faces of the tubular stick and said convex faces on the interior and exterior of the stick being peripherally offset from each other and the convex faces having parallel linear intersections forming said valley portions with the intersections being offset as between the inside and outside faces of the stick so that the convex surfaces and intersections will be displaced with respect to each other by at least half of the width of the intervening portions.

3,125,039
METERING DEVICE FOR A DOUGH KNEADING MACHINE
Friedrich Haug, Stuttgart-Weilimdorf, Max Stüdlein, Stuttgart, and Manfred Wolff, Grunbach, Kreis Waiblingen, Germany, assignors, by mesne assignments, to Werner & Pfleiderer G.m.b.H., Zug, Switzerland
Filed Feb. 24, 1961, Ser. No. 91,525
Claims priority, application Germany Feb. 27, 1960
6 Claims. (Cl. 107—9)

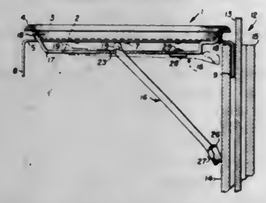
1. A dough feeding and portioning device for a dough kneading machine of the kind wherein an inner horizontally disposed rotary kneading drum having in its outer wall a row of circumferentially spaced recesses and a coaxially mounted outer rotary kneading drum having a corresponding row of transverse circumferentially spaced openings in its wall are rotated in the same direction, whereby the inner drum also performs rotational and axial reciprocatory motions in reference to the outer drum,

the openings in the outer drum constituting kneading chambers in which dough portions are kneaded by the relative rotational and axial motions of the two drums, said device comprising a rotary dough metering means rotatably mounted above said kneading drums rotatable about an axis parallel to the rotational axis of the kneading drum, said axes being situated in a common perpendicular plane, said metering drum having a peripheral outer wall portion including several spaced dough feeding chambers, said feeding chambers being rotational in a plane in which successive downwardly facing feeding chambers are aligned with successive upwardly facing kneading chambers in a perpendicular plane, dough feeding means charging successive feeding chambers of the metering means with dough, dough discharge means discharging



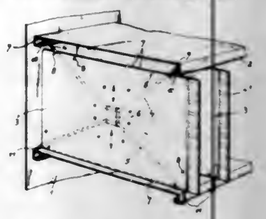
the dough from a charged feeding chamber and into the respective kneading chamber when the latter occupies said upwardly facing perpendicular position, a dough retaining and transporting band conveyor driven in the rotational direction of the kneading drums and engaging the periphery of said outer kneading drum at a point closely adjacent to and posterior of the position occupied by a kneading chamber in its upwardly facing position and enveloping part of the circumference of the outer drum, and a rotary stripper means disposed closely adjacent and posterior to the position occupied by a feeding chamber in its downwardly facing position as seen in the direction of the rotation of the metering means, said stripper means engaging dough discharged from the respective feeding chamber to facilitate passage of the dough into the respective kneading chamber.

3,125,040
CAR TRAY
Albert O. Roberson, 873 Franklin St., Apt. 8, Santa Clara, Calif.
Filed Nov. 1, 1962, Ser. No. 234,613
5 Claims. (Cl. 108—18)



1. A car tray comprising a tray having a bottom, four legs of equal length attached to said tray and projecting downwardly from said bottom, two of said legs being located adjacent each of two opposite sides of said tray, the two legs adjacent one of said sides being thin enough to fit in the space between the glass and adjacent frame on a car door, a guide rail and means suspending said rail below the bottom of the tray, a clamp arm having a cushioning pad adjacent one end, connecting means adjacent the other end of said arm permitting said arm to be pivoted about and slide along said rail, locking means on said rail engageable by said other end of the arm when the cushioned end of the arm is pivoted away from said rail, said arm being pivotal to a retracted position substantially parallel to said rail, said cushioned end of said arm being positioned adjacent said one side of the tray when the arm is in said retracted position, and magnetic catch means holding said arm and rail in said retracted position, the distance between the legs on opposite sides of the tray being greater than the width of the tray.

3,125,041
FILING DEVICE
Otto Alfred Becker, 59 Robert-Koch-Str., Saarbrucken 6, Germany
Filed Mar. 3, 1961, Ser. No. 93,231
12 Claims. (Cl. 108—60)



1. A filing device comprising
(*a*) a vertical back support;
(*b*) at least two vertically spaced, horizontally extending shelves carried by said support, each of said shelves comprising two guiding means extending parallel to said support and to said shelves along the front and rear portions thereof;
(*c*) a plurality of vertical partitions extending between said shelves and transversely thereof, each of said partitions comprising two interconnected slightly spaced parallel walls, first and second wire support members disposed between said walls and being slidable relative to said partition longitudinally thereof, each of said wire support members engaging at least one of said guiding means with at least one of its ends, and resilient means disposed between said walls for urging said wire support members into engagement with said guiding means to thereby maintain the partition in the vertical plane disposed for sliding movement in a direction parallel to said guiding means and transverse to said partitions.

3,125,042
MERCHANDISE DISPLAY SHELF
Donald L. Mapson, La Habra Heights, Calif., assignor to M & D Store Fixtures, Inc., a corporation of California
Filed Aug. 23, 1961, Ser. No. 133,342
4 Claims. (Cl. 108—135)

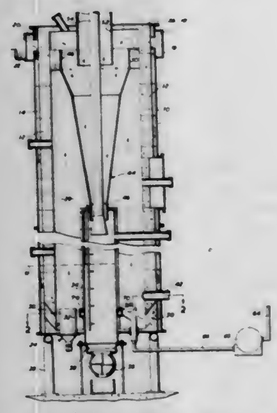
1. An angularly adjustable shelf supported, when in use, on a pair of vertical posts having vertical rows of perforations, said shelf comprising a rectangular flat body; sheet metal brackets secured to said body across end portions thereof and extending downwardly from said body; coaxial pivot rivets provided on said brackets on an axis located beneath said body and close to the rear edge thereof, said brackets having short closed coextensive slots disposed near lower edges of said brackets said slots being elongated radially with reference to said pivot axis; sheet metal bracket bases pivotally mounted near their upper ends on said pivot rivets to lie flat against external vertical faces of said brackets, back edges of said bases being provided with lugs fitting into perforations in said posts to support said shelf on said posts, lower edges of said bases

including central sections inscribed from said axis by a radius reaching approximately to the middle of said slots, stop shoulders extending downward a greater distance than said radius from said axis being provided on said bases at opposite ends of said edge sections, there being a series of notches correspondingly spaced in said two bases and formed upwardly from said central edge sections thereof; and two spring wire latches comprising lengths of spring wire lying flat against inner faces of said brackets, with front end portions thereof rigidly attached to said brackets, said lengths extending substantial distances from their areas of such attachment toward upper portions of said slots and lying approximately normal to radii from said axis through said slots, horizontally extending thumb



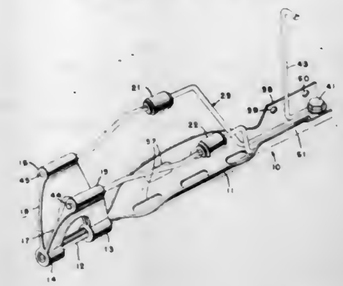
loops being formed from said wire lengths adjacent said slots, portions of said wire lengths extending outwardly from said loops through the slots of the brackets to form latch bars which also extend through a corresponding pair of said notches when said notches are opposite said bars, to lock said brackets and bases against relative rotation, said thumb loops being simultaneously engageable by the thumbs of both hands reaching under said shelf to depress said latch bars out of a given corresponding pair of notches to permit the slope of said shelf to be adjusted by rocking said shelf about said axis until another pair of notches are opposite said latch bars, the spring action of said wire lengths thereupon snapping said latch bars into said last mentioned pair of notches and locking said shelf in its adjusted position.

3,125,043
METHOD OF REMOVING VOLATILE CONSTITUENTS AND CARBON FROM RICE HULLS
Jean J. O. Gravel, Westmount, Quebec, Canada, assignor to Mount Royal Rice Mills Ltd. and Canada Rice Mills Co., Montreal, Quebec, and Vancouver, British Columbia, Canada, jointly
Filed Oct. 28, 1960, Ser. No. 65,762
4 Claims. (Cl. 110—28)



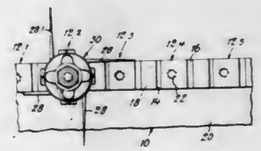
1. A method of removing carbon from carbonaceous rice hull ash from which the volatile constituents have been removed, comprising the steps of forming a bed of such carbonaceous ash, causing oxygen-containing gas to flow upwardly therethrough at a rate controlled to maintain said carbonaceous ash at a temperature of greater than 500° C. and not more than 800° C. in the presence of an oxygen-containing gas until said carbon is removed.

3,125,044
PLANT-CARRYING ARM FOR TRANSPLANTING MACHINE
Raymond G. Kolk, 65 W. 27th St., Holland, Mich.
Filed July 3, 1961, Ser. No. 121,693
4 Claims. (Cl. 111—2)



4. In combination with a planting machine having conveying means establishing a path of movement from a loading position to a planting position, and also having spaced cam plates adjacent said conveying means and substantially parallel to the path of movement thereof, a plurality of plant-carrying arms mounted on said conveying means, each of said arms comprising: a beam secured to and extending from said conveying means for movement therewith on a path disposed between said cam plates; a resilient actuator member having portions at one end rigidly fixed with respect to said beam, said actuator member having intermediate portions transversely offset from said beam and normally spaced on opposite sides beyond the path of movement of said beam, and said actuator member having spaced ends; and a V-shaped gripping member of flexible material having a portion at the apex thereof engaging said beam, and also having holes at the sides extremities thereof engaging the ends of said actuator member, said cam plates serving to bring the opposite sides of said actuator member together over predetermined portions of the path of movement thereof in resilient deflection of the material of said actuator member to close said gripping member.

3,125,045
NEEDLE TURRET
Lester Moise, Maywood, N.J., assignor to The Joseph L. Schlesinger Company, North Bergen, N.J., a partnership
Filed Feb. 27, 1963, Ser. No. 261,341
19 Claims. (Cl. 112—83)



1. A needlework machine comprising:
a needle carriage driveable by the said machine through an operating stroke;

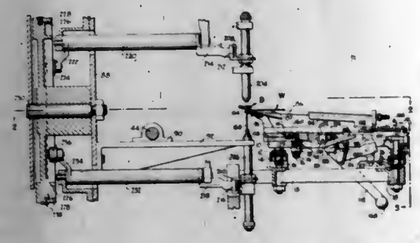
a plurality of needle-mounting stations formed on the said needle carriage adapted to mount respective needles for simultaneous operation;

and at least one needle turret at one of said needle-mounting stations;

said needle turret comprising means for mounting a plurality of needles pointing in different directions and being operable to achieve a plurality of positions;

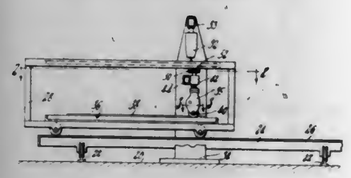
said turret positions being adapted to bring respective ones of said plurality of needles into position for operation simultaneously with the operation of needles mounted at the other needle-mounting stations on said needle carriage.

3,125,046
WORK SUPPORT TABLE FOR BUTTON STITCHING MACHINE
Mathias Pedersen, Valley Stream, N.Y., assignor to American Machine & Foundry Company, a corporation of New Jersey
Filed Sept. 6, 1960, Ser. No. 54,215
13 Claims. (Cl. 112—110)



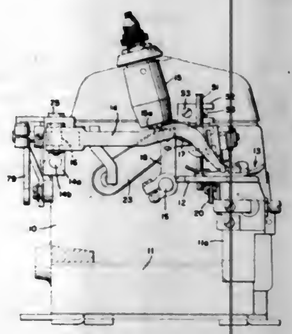
1. A work support table for a button sewing machine comprising a moveable table, a first carriage movably mounted on said table, a clamp plate mounted at one end of said first carriage, a work supporting tongue, a second carriage mounting said tongue for movement into a position adjacent said clamp plate to hold work to which a button is to be attached in position for attachment of said button thereto, means for locating said carriages in said position, an ironing finger for smoothing said work on said tongue, and means operative in response to the movement of said second carriage to dispose said work in said position for moving said ironing finger into engagement with said work on said tongue.

3,125,047
PATTERN CONTROLLED DRIVING MECHANISM FOR QUILTING MACHINE
Frederick E. Kalning, Quincy, Mass., assignor to United Mattress Machinery Company, Quincy, Mass., a corporation of Maine
Filed Feb. 17, 1961, Ser. No. 90,073
3 Claims. (Cl. 112—118)



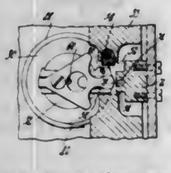
1. A pattern controlled driving mechanism for imparting relative feed movements in a horizontal plane to the sewing mechanism and to the quilt panel supporting table assembly of a quilting machine including a templet and a power driven tracking head engaged therewith, which comprises a templet mounted in a fixed relation to one of said sewing mechanism and said quilt panel supporting table assembly, said templet having mounted thereon a cog tracking belt laid out in accordance with the desired pattern, a tracking assembly comprising a tracking head supported to turn on a vertical axis fixed with relation to the other of said sewing mechanism and quilt panel supporting table assembly, a power input drive member supported for rotation on said vertical axis to supply power to said tracking head, and a tracking gear mounted on said tracking head to turn on a horizontal axis, having teeth for engagement with said cogs, and at each side thereof flanges to guide the tracking gear on said tracking belt in directions conforming to the tracking directions of said tracking belt, and connections carried by the tracking head between said input drive member and the tracking gear for transmitting a rotational driving torque to said tracking gear and an incidental rotational torque to said tracking head, said tracking gear being offset along said horizontal axis from said vertical rotational axis in a direction which will oppose the rotational bias of the back thrust of said tracking gear upon the tracking head to the bias of said incidental rotational torque, said offset being chosen so that the product of said offset and said back thrust substantially equals said incidental rotational torque to permit the free turning of said tracking gear in directions conforming to the tracking direction of said tracking belt.

3,125,048
ADJUSTABLE TRIMMING MECHANISM
Richard C. Tringali, Mount Prospect, Ill., assignor to Union Special Machine Company, Chicago, Ill., a corporation of Illinois
Filed Aug. 1, 1960, Ser. No. 46,800
12 Claims. (Cl. 112—123)



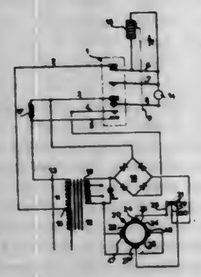
1. In an overedge sewing machine having stitch forming devices including a needle adapted to penetrate the work to be stitched and having edge trimming mechanism for trimming the edge of the work along a line spaced from the line of needle penetration, said edge trimming mechanism comprising a rockable arm carrying a movable trimmer blade, means carrying another trimmer blade ccooperating with said movable trimmer blade to trim the edge of the work, a rock shaft to which said rockable arm is secured, said shaft being shiftable axially, spring means axially aligned with said shaft normally urging said shaft in one direction into a predetermined axial position, and means comprising a rock arm arranged to engage one end of said shaft to shift the latter axially in opposition to said spring means.

3,125,049
SEWING MACHINE
Howard E. Redman, Weymouth, Mass., assignor to United Mattress Machinery Co., Inc., Quincy, Mass., a corporation of Maine
Filed Nov. 1, 1962, Ser. No. 234,782
3 Claims. (Cl. 112—184)



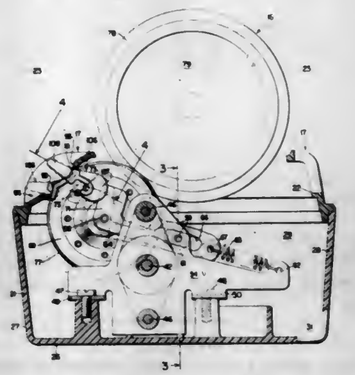
1. In a sewing machine having a reciprocating straight needle at one side of the work and a rotary hook assembly at the other side of the work comprising a rotary hook disposed to rotate continuously in one direction about an axis parallel to the needle, and a bobbin case mounted within the hook, the combination of work supporting means including a base, a throat plate mounted in the base having an aperture of a diameter providing a loose fit with the needle to loosely engage and guide the needle below the work level, and a needle guide fixedly supported on said base beneath and separated from said throat plate at one side of the rotary hook shaped to provide a needle receiving bore cylindrically walled-in at its upper end, with a narrow vertical thread receiving slot facing the hook of less width than the diameter of the needle and larger than the diameter of the yarn and opening into said bore through said walled-in portion of the bore, and a rotary hook receiving cutout extending across the rotary hook side of said guide toward the lower end of said bore with the rear face of said cutout lying in a vertical plane passing through said bore, and a forwardly sloping upper portion of said cutout providing surfaces for guiding the needle thread drawn about the rotary hook assembly upwardly through said slot and through the needle eye during the retracting movement of the needle.

3,125,050
CONTROL SYSTEM FOR ELECTRIC SEWING MACHINES
Georges Bertrand, 18 Rue de Toul, Paris, France
Filed Mar. 6, 1961, Ser. No. 115,582
Claims priority, application France Mar. 11, 1960
16 Claims. (Cl. 112—219)



1. In an electric sewing machine, the combination of a needle, a motor controlling the reciprocation of the needle and including an armature winding and a field winding, a source of A.C., a supply circuit normally connecting said source and said windings in series, a rectifying bridge, a first circuit connecting said source with the input of the rectifying bridge, a second, normally open circuit connecting the output of the rectifying bridge with the windings in parallel relationship, a primary switch simultaneously disconnecting said source with reference to the windings and closing the second circuit to make the motor run under low voltage, low speed, high torque conditions as a D.C. motor fed by the second circuit, and means moving synchronously with the needle and breaking the first circuit at a predetermined moment corresponding to a predetermined position of the needle.

3,125,051
DRIVE MECHANISM FOR SEWING MACHINES
Russell A. Fritts, Cranford, N.J., assignor to The Singer Company, a corporation of New Jersey
Filed Feb. 19, 1962, Ser. No. 173,912
7 Claims. (Cl. 112—220)

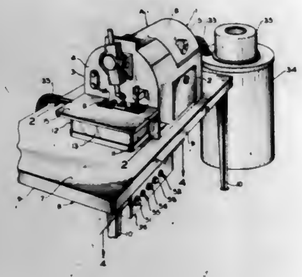


1. A drive mechanism for a sewing machine mounted in an apertured supporting case, said drive mechanism comprising a motor driven rotary element, a rotary element formed as part of said sewing machine, a lever supported by said case, an idler wheel carried by said lever, means for biasing said lever in a direction to cause said idler wheel to engage both of said rotary elements, an operating handle extending through said apertured case and having a portion located outside of said case and a portion located inside of said case, means for connecting said operating handle to said lever, and a cam projection on said case, said cam projection acting upon movement of said handle to shift said lever against said biasing means thereby to disengage said idler wheel from one of said rotary elements.

3,125,052
THREAD-CHAIN CUTTER FOR SEWING MACHINES
Warren R. Spivey, Marvell, Ark.
Filed Oct. 6, 1961, Ser. No. 143,386
9 Claims. (Cl. 112—252)

1. In combination with a sewing machine having a stitching means for stitching successive spaced sections of stitched material and feeding means for conveying the stitched material beneath and rearwardly from the stitching means, a said sewing machine further having means defining a substantially enclosed chamber extending beneath and rearwardly from the stitching means, said chamber having an aperture disposed rearwardly and in the path of the stitched material as it travels rearwardly from the feeding means, said aperture being relatively large with respect to the thread-chain so as to allow a substantial volume of air to flow through the aperture suction means communicating with said chamber for drawing a substantial stream of air through said aperture, a heated wire mechanically supported beneath said

aperture and interposed in the path of the air-stream so as to be cooled thereby when the aperture is unrestricted, means surrounding said heated wire for preventing stitched material from being sucked into direct contact with the heated wire while allowing a thread-chain to be drawn across the heated wire for severance

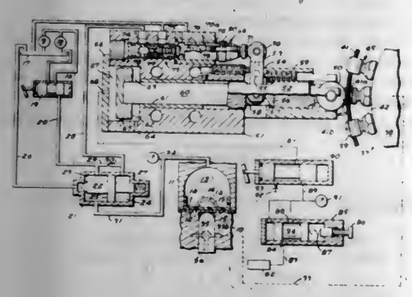


thereby, said aperture being so arranged that the air-flow therethrough will be intermittently restricted by the sections of stitched material as they pass over the aperture so as to reduce the cooling effect of the air-stream upon the heated wire and allow said wire intermittently to increase its temperature preparatory to each severing operation.

3,125,053
PRESSURE REGULATING MECHANISM FOR HYDRAULIC PRESS AND METHOD OF PROGRAMMING CAM THEREFOR

Charles L. Mitchell, Cincinnati, Ohio, assignor to The Cincinnati Milling Machine Company, Cincinnati, Ohio, a corporation of Ohio

Filed Aug. 26, 1960, Ser. No. 52,246
6 Claims. (Cl. 113—45)

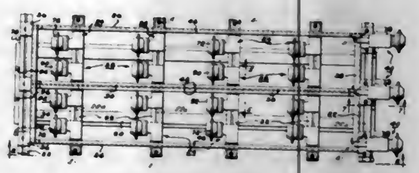


1. In a forming press having a hydraulic pressure chamber and a die plunger movable to alter the size of said chamber, said press having means to mount a cam thereon, the combination of a movable cam follower adjacent the cam mounting means, means to apply a selected positioning force to the cam follower, means providing a restoring force to the cam follower whereby the cam follower will assume an equilibrium position determined by the magnitude of the selected positioning force applied thereto when unimpeded, said equilibrium position of the cam follower indicating a desired cam face position, means to move the cam mounting means in accordance with movement of the die plunger during forming, and means responsive to the position of the cam follower when urged into contact with a cam on said cam mounting means during forming to regulate the pressure in said chamber.

3,125,054
CLAMPING APPARATUS

Walter Lach, Chicago, and George J. Novak, Riverside, Ill., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Feb. 17, 1961, Ser. No. 90,037
14 Claims. (Cl. 113—99)

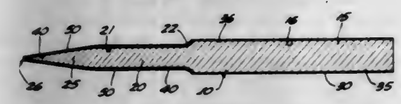


6. A device for clamping structural members in position for assembly as a frame, which comprises an elongated support, transversely-spaced clamping assemblies on said support intermediate the ends thereof for clamping longitudinally-extending members of a frame in spaced relationship, upstanding means on said support adjacent one end thereof and forming a limit for an adjacent end of a frame, a clamping assembly on said support adjacent the other end thereof including a base member having an upstanding side faced toward said upstanding means and forming a limit for an adjacent end of a frame, a reciprocable clamping member mounted in said base member including a rod and laterally projecting clamping means adjacent one end of the rod, the clamping means being positionable adjacent the upstanding side of said base member for clamping transversely-extending structural members against said base member, and said rod extending through said base member beyond the opposite side thereof, a pair of clamping bars movably mounted above and below said clamping member in spaced relationship with respect thereto, said clamping bars extending substantially co-extensively with said clamping member and having outer ends which extend substantially beyond the upstanding side of said base member and which are movable toward one another for clamping transversely-extending structural members against upper and lower sides of the longitudinally-extending members, a fluid cylinder for moving said clamping member and said clamping bars to member-clamping positions and having a piston and a housing, first rod means connected to said piston and slidably extending through said housing, second rod means connected to said housing, linkage connecting the inner ends of said clamping bars to one of said rod means, and means mounting said other rod means on the rod of said clamping member so that said other rod means is reciprocable with said clamping member, and so that said clamping member is rotatable relative to said rod means, operation of said fluid cylinder causing said clamping member and said clamping bars to exert reactive forces upon transversely-extending structural members which are to be clamped thereby, and to move into their member-clamping positions simultaneously, and said clamping member moving the transversely-extending structural members to be clamped thereby, relative to the longitudinally-extending structural members and against the upstanding side of said base member when the members have been placed in said clamping assembly spaced from said side.

3,125,055
SOLDERING TIP

Henry C. Lerner, 1220 Sunset Plaza Drive, Los Angeles 46, Calif.

Filed Mar. 1, 1960, Ser. No. 12,193
2 Claims. (Cl. 113—105)



1. A soldering tip for use with electric soldering irons, comprising:

an elongated solid copper rod including a cylindrical portion forming a supporting shank, and a working part consisting of a base portion that projects from one end of said supporting shank and a tapered portion which extends from the other end of said base portion;

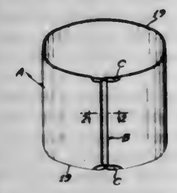
successive coatings of electrolytically deposited metals that cover the surface of said working part, the first being a uniform deposit of iron having a thickness selected in proportion to the diameter of said base portion of the working part, the final coat being silver;

and a seamless cylindrically shaped stainless steel sleeve that encompasses the entire surface area of said supporting shank and is permanently mounted thereon, said stainless steel sleeve having a uniform thickness selected in proportion to the diameter of said supporting shank so as to inhibit radial expansion thereof and being adapted for close-fitted complete insertion within an electric soldering iron in easily removable and non-sticking relationship therewith.

3,125,056
METHOD OF MAKING CAN BODIES

Edward William Kaiser, Palatine, Ill., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

Filed Mar. 9, 1961, Ser. No. 94,524
5 Claims. (Cl. 113—120)

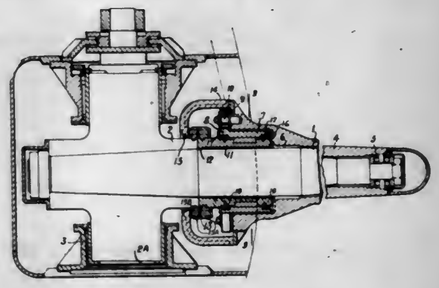


1. A method of forming a tubular can body having a cemented side seam including interlocked hooked portions from a flat sheet metal blank comprising the steps of applying to predetermined widths of both marginal surfaces of said blank adjacent both longitudinal edges thereof which are to be joined in said side seam a fluid composition containing a heat-softenable bonding material, hardening said fluid composition to form thin solid deposits of said bonding material on said marginal surfaces, bending longitudinal edge portions of said blank to form reversely bent body hooks, shaping said blank into a partial tubular form, interengaging and bumping said body hooks to interlock the hooks and form a side seam with said bonding material confined wholly within said seam and between the parts to be joined, said bonding material covering substantially all of the contiguous surfaces of the interlocked body hooks, heating said seam to soften the bonding material enclosed therein, and bumping said heated seam with a predetermined force to press the seam parts into close engagement and simultaneously cause said softened bonding material to flow uniformly within and completely fill the interstices of said seam whereby all parts of said seam are fully bonded throughout to provide a strong hermetically sealed side seam on said body.

3,125,057
STABILISING APPARATUS FOR SHIPS

Colin C. Mitchell, Edinburgh, Scotland, assignor of one-fourth to Brown Brothers & Co. Limited, Edinburgh, Scotland, a British company; one-fourth to William Denny & Brothers Limited, Dunbarton, Scotland, a British company; one-fourth to Allegemeine Elektricitats-Gesellschaft Schiffbau, Hamburg-Finkenwerder, Germany, a German company; and one-fourth to Deutsche Werft Aktiengesellschaft, Hamburg, Germany, a German company

Filed Mar. 19, 1962, Ser. No. 180,438
Claims priority, application Great Britain Mar. 22, 1961
3 Claims. (Cl. 114—126)

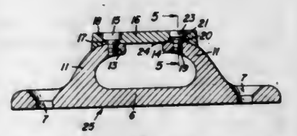


1. A stabilizing apparatus for a ship incorporating a support, a non-rotary shaft engaged at one end with the support, a fin rotatable about the shaft, and a rotary vane drive motor having an inner casing surrounding the shaft and coupled to the shaft but radially spaced from the shaft over at least the greater part of its length, an outer casing, a flexible coupling connecting the outer casing to the fin in suchwise as to constrain the fin to rotate with the casing but otherwise to permit relative lateral movement between the fin and the casing, vanes presented by the outer casing projecting radially into the annular space between the casings, and radial partitions projecting from the inner casing into the annular space between the casings, each vane being between two adjacent partitions, and means for conducting operating fluid to and from the annular space between the casings.

3,125,058
BOAT CHOCK LOCK AND FENDER AND MOORING CLEAT

Glenn G. Peterson, 2817 NE. 32nd St., Pompano Beach, Fla.

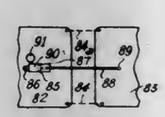
Filed Oct. 1, 1962, Ser. No. 227,229
7 Claims. (Cl. 114—218)



5. A boat fitting comprising an elongated horizontal base for mounting on a boat, a pair of spaced, opposed arms on the base for receiving an element therebetween, a bar pivotally mounted on one of the arms and engage-

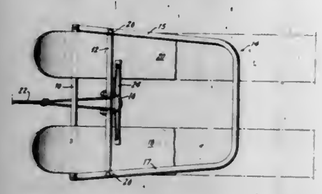
able with the other arm for retaining the element between said arms, and a keeper on said other arm for releasably securing the bar in an operative position, said keeper including a screw threadedly mounted on said other arm and comprising a head spaced therefrom, said bar being engageable with the keeper from one side of the base and including a free end portion having a lateral recess therein for receiving the keeper, the wall of the recess having a rabbet therein for receiving the head and providing a shoulder engageable therebeneath, said shoulder being inwardly and downwardly inclined for frictionally securing the bar to the keeper.

3,125,059
ARTICULATED BOAT TRAIN AND COUPLING TENDING TO RE-ALIGN THE LATTER AUTOMATICALLY
Jean Eugène Paul Verneaux, 11 Rue Cernuschi, and Adolf Cornélis Melchior, 106 Ave. de Suffren, both of Paris, France, assignors of eighty-four percent to Societe Anonyme des Chantiers Navals Franco-Belges, Villeneuve-la-Garenne, France
Filed Oct. 19, 1960, Ser. No. 63,645
Claims priority, application France Oct. 22, 1959
25 Claims. (Cl. 114—235)



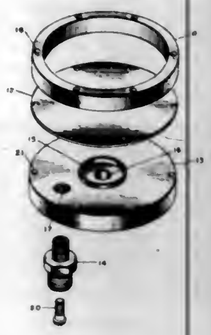
1. A propelled train of boats comprising a plurality of articulated coupling means each of which interconnects two successive boats of the train and includes elastic means for generating by the resilient reaction thereof a righting torque between two successive boats misaligned under the action of a force, said righting torque having a variable magnitude which is a function of the degree of misalignment between said two successive boats and which is effective to automatically re-align said boats after the removal of said force, and two rudder assemblies respectively pivotably secured to the front end of the leading boat and to the rear end of the rear boat of the train, said train being advanceable along an arcuate path of determinable curvature with the rudder assemblies pivoted to assume positions in which the righting torque generated by each coupling means balances the moment applied to said coupling means by the pivoted rudder assemblies.

3,125,060
WATER SKI STARTING DEVICE
Stewart J. Leonard, Westport, Conn. (40 Catherine St., Norwalk, Conn.)
Filed Nov. 15, 1962, Ser. No. 237,810
14 Claims. (Cl. 115—6.1)



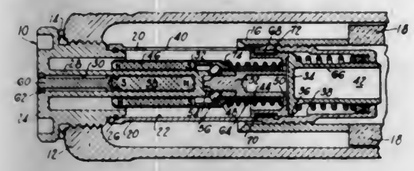
1. A training device for water skiers for use by a skier in combination with a pair of water skis, a tow line, and towing means; the device comprising a front clamping bar, a rear clamping bar spaced from the front clamping bar, handle means providing a rigid interconnection between the spaced front and rear clamping bars, and means for securing the tow line to the device; the front clamping bar being adapted to fit under the pair of water skis, the rear clamping bar being adapted to fit over the pair of water skis, whereby the skis may rest in the space between the front and rear clamping bars so that the handle means extends away from the front of the skis and toward the skier.

3,125,061
UNDERWATER FLUID-OPERATED HORN
Leonard N. Liebermann, 2644 Ellentown Road, La Jolla, Calif., and Stanley H. Lai, 4164 Hill St., San Diego, Calif.
Filed Aug. 10, 1961, Ser. No. 130,698
2 Claims. (Cl. 116—27)



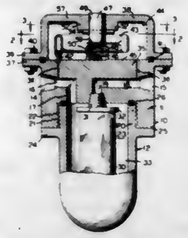
1. An underwater fluid operated horn comprising:
a substantially rigid circular backing plate having a centrally disposed hole passing therethrough, a threaded hole passing therethrough parallel to and laterally offset from said centrally disposed hole, and an annular raised ring formed in one face of said plate, said ring being concentric with said central hole and having a radius less than the offset distance between said central hole and said threaded hole;
a flexible vibrating diaphragm hermetically sealed to the periphery of said one face of said backing plate, the inner face of said diaphragm being in contact with said annular raised ring and the outer face of said diaphragm being in substantially full area-contact with the water in which the horn is submerged;
a small volume annular cavity formed between said inner face of said sealed diaphragm and said one face of said plate, exteriorly of said raised ring;
a cylindrical cavity formed between said inner face of said diaphragm and said one face of said backing place, interiorly of said raised ring;
means for introducing compressed operating fluid at a reduced pressure through said threaded hole in said backing plate to said annular cavity; and
means for exhausting operating fluid from said cylindrical cavity through said backing plate, said means comprising said centrally disposed hole whereby the sound emitting function of said horn is performed by the substantially full water contact area of the outer face of said diaphragm and the reduced pressure compressed operating fluid is introduced between said diaphragm and said backing plate and then exhausted through said backing plate in a direction away from said backing plate thus supporting and enhancing the pressure waves emitted by said diaphragm.

3,125,062
DIFFERENTIAL PRESSURE RESPONSIVE DEVICE
Ray J. Raupp and James C. Whiting, Madison Heights, Mich., assignors to The Bendix Corporation, Madison Heights, Mich., a corporation of Delaware
Filed June 12, 1961, Ser. No. 116,537
6 Claims. (Cl. 116—70)



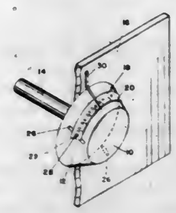
1. A differential pressure indicating device comprising a housing having a first bore formed therein, a fitting for closing one end of said first bore, said fitting having a hollow tubular member extending into said first bore, said tubular member having a second bore formed therein, partition means located in said tubular member for preventing communication between said first and second bores and for forming a cavity within and at one end of said tubular member, a piston member slidable in said first bore from a first position to a second position, stop means formed on said housing for preventing movement of said piston member past said second position, first passage means located in said housing for communicating one side of said piston member with a first pressure source, second passage means located in said housing for communicating the other side of said piston member with a second pressure source, first spring means located in said first bore and confined between said housing and said piston member for opposing movement of said piston member from said first to said second position, a sleeve-like retainer member surrounding said tubular member and movable from a first site to a second site, said retainer member having inner and outer surfaces and a shoulder formed on the inner surface thereof, passage means for communicating said cavity with said first bore, a plurality of balls located in said passage means, said balls being partially located within said cavity and partially protruding from said tubular member for abutting said shoulder and preventing movement of said retainer member to said second site, a control member located in said first bore, a trigger pin operatively connected to said control member and extending into said cavity for contacting and maintaining said balls in a protruding position for abutment with said shoulder, first magnetic means operatively connected to said retainer member and movable therewith from said first to said second site, second magnetic means located in said second bore and movable from a non-signalling to a signalling position, said second magnetic means being magnetically retained in said non-signalling position by magnetic attraction to said first magnetic means while said retainer member remains at said first site and being magnetically moved to said signalling position by magnetic attraction to said first magnetic means when said retainer member is moved to said second site, second spring means located in said housing between said retainer member and said control member for urging said retainer member towards said second site and for urging said control member towards said piston member, said second spring means upon movement of said piston member towards said second position being arranged to initially cause movement of said control member and the trigger pin connected thereto towards the second position of said piston member until said balls are free to move into said cavity and to subsequently cause movement of said retainer member to said second site after said balls have moved into said cavity, and an indicator pin operatively connected to said second magnetic means and movable therewith from said non-signalling to said signalling position.

3,125,063
SIGNAL DEVICE
William H. Hultgren, Mount Carmel, Ill., assignor to Purolator Products, Inc., Rahway, N.J., a corporation of Delaware
Filed Oct. 4, 1962, Ser. No. 228,364
12 Claims. (Cl. 116—70)



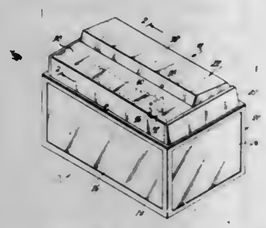
1. A differential pressure indicator device comprising a housing having a high pressure side and a low pressure side, a rotatable member located in said housing and axially moveable from a non-signaling position to a signaling position, means urging said member in an axial direction toward said signaling position, a Bourdon tube differential pressure sensing means disposed in the low pressure side of said housing in a plane normal to the axially moveable direction of said member and encircling said member, the interior of said tube means being in communication with the high pressure side of said housing so differential pressure in the housing is directly transmitted thereacross, and flexible cable means extending in a plane substantially parallel to said first mentioned plane and secured to said rotatable member and said tube means for rotating and permitting axial movement of said member to a signaling position when the differential pressure exceeds a predetermined value.

3,125,064
SCALING DEVICE
Heinz M. Zeutschel, Arlington, Mass., assignor to Itek Corporation, Lexington, Mass., a corporation of Delaware
Filed Dec. 6, 1961, Ser. No. 157,446
3 Claims. (Cl. 116—124)



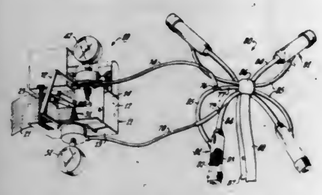
1. A scaling device, comprising:
a rotatable body having a tapered circumferential surface and being mounted to rotate about a fixed axis;
a scale element having a surface complementary to that of said body and being provided with graduations spaced circumferentially of said scale element; and
means for attaching said scale element to the surface of said body at an adjustable location relative to and along said fixed axis,
thereby to vary the circumferential spacing between said marks with respect to said fixed axis.

3,125,065
AQUARIUM HOOD
Allan H. Willinger, New Rochelle, N.Y., assignor to Aquariums Incorporated, Maywood, N.J., a corporation of Delaware
Filed Dec. 11, 1961, Ser. No. 158,445
4 Claims. (Cl. 119—5)



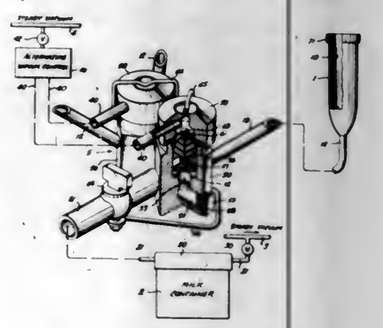
1. A hood comprising a frame member adapted to overlie substantially the entire open top of an aquarium, said frame member having a bottom flange which is substantially continuous throughout the periphery thereof, said flange having a depending portion adapted to sit on the rim of the aquarium, opposing end walls provided on said frame member and extending upwardly from opposite ends of said flange, a shelf extending between said end walls, said shelf and one side of said bottom flange defining an access opening, a first cover pivotally mounted by said end walls to close said access opening, and a second cover pivotally mounted by said end walls for movement between a closed position thereof overlying said shelf to an open position thereof exposing said shelf.

3,125,066
MILKING MACHINE ANALYZER
Francis F. Smith, Saratoga, and Maurice S. Beckley, San Jose, Calif., assignors to Dairy Equipment Testing Company, Inc., San Jose, Calif., a corporation of California
Filed Oct. 23, 1961, Ser. No. 146,888
5 Claims. (Cl. 119—14.14)



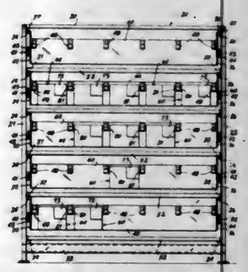
1. Apparatus for analyzing the operation of automatic milking machines in which the teat cups of the milking machine each has a flexible liner disposed within a shell and in which the interior of said liner is connected by a hose to a source of constant subatmospheric pressure and the space between the liner and shell is connected to a pulsating source of subatmospheric pressure, said apparatus comprising: means for moving a tape past a recording station, first and second marking members engageable with said tape at said recording station, first and second mounting means mounting said first and second marking members respectively for independent movement across the same width of said tape in close adjacency to each other, means inserted into the interior of a teat cup liner hose and responsive to the subatmospheric pressure therein for actuating said first mounting means to move said first marking member across said tape a distance proportioned to the degree of said subatmospheric pressure, and means connected to the space between a teat cup liner and shell and responsive to the subatmospheric pressure therein for actuating said second mounting means to move said second marking member across said tape a distance proportional to the degree of said subatmospheric pressure.

3,125,067
MILKING MACHINE MANIFOLD
Kenneth E. Fosnes, 10602 NE. 26th, Bellevue, Wash.
Filed Oct. 2, 1961, Ser. No. 142,387
3 Claims. (Cl. 119—14.55)



1. A milking machine manifold comprising a body having twin valve chambers therein in side by side relationship, a valve reciprocable in each such valve chamber, a valve seat in each such valve chamber beneath said valve and closeable by the valve of such valve chamber in its lower position, said valve body having therein two ducts positioned to communicate respectively with such valve chambers and adapted to be connected to separate teat cups, said body having a milk outlet and steady suction duct communicating past said valve seat and a portion of each of the valve chambers below its valve when its valve is raised out of engagement with the valve seat of its chamber for withdrawing milk from such valve chambers, and said valve body having two ducts communicating respectively with the two valve chambers above said valve seats and adapted to be connected to an alternating suction source for holding one of said valves out of engagement with its valve seat when the other of said valves is in engagement with its valve seat.

3,125,068
CAGING SYSTEM FOR SMALL LABORATORY ANIMALS
John K. Hampton, Jr., New Orleans, La., assignor to Tower Investment Company, New Orleans, La., a partnership
Filed Oct. 10, 1960, Ser. No. 61,632
16 Claims. (Cl. 119—17)



1. In a cage assembly, a main support having spaced end supports, means holding the end supports in upright, spaced relation, corresponding ledges on the spaced supports, and a panel frame having complementary ledge elements engageable over the first-named ledges so that the panel frame may be removably mounted on the support; the panel frame including end parts and a panel having substantially vertical faces, the end parts being secured to the opposite ends of the panel and supporting the aforementioned ledge elements, and a plurality of individual cages supported on the panel frame.

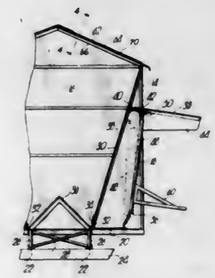
3,125,069
HUMMINGBIRD FEEDING DEVICE
Bruce D. Fowler, 1714 S. 3rd St., Mount Vernon, Wash.
Filed Oct. 29, 1962, Ser. No. 233,557
4 Claims. (Cl. 119—51)



1. A hummingbird feeding device, comprising:
(*a*) a dispensing housing having means for engaging a liquid food container in a leak-proof manner and communicating with the interior of said liquid food container;
(*b*) a liquid food container of vertically elongated form and having means on its upper end, as used, for engaging supporting means;
(*c*) said dispensing housing further having a plurality of substantially radially disposed holes slanting upwardly from the interior of said housing to the exterior thereof;
(*d*) feeding tubes secured in said radially disposed holes, said tubes having a small diameter liquid conveying passageway terminating in a substantially conical liquid collecting cup;
(*e*) an ant shield having a plurality of slender wire-like members enclosing the said liquid collecting cup and spaced apart an amount allowing the passage of a hummingbird's beak but denying the passage of ants and
(*f*) supporting means secured to the upper end of said food container.

3,125,070
DOOR ASSEMBLY FOR SELF-FEEDER STRUCTURE
Ray E. Shrimplin, R.R. 2, Westphalia, Kans.
Filed July 30, 1962, Ser. No. 213,518
2 Claims. (Cl. 119—53.5)

1. An animal feeding bin including:
a hollow structure adapted to receive a supply of feeding material and provided with a bottom and a substantially vertical side having an opening in the lower major portion thereof, there being an inclined partition within the structure in disposition with the upper edge of the partition abutting said side and the lower margin thereof spaced from the side and in closely spaced relationship with the bottom;
a stop mounted on said bottom between said lower margin of the partition and the major plane of said side;
a protective roof member hingedly connected to said partition at a point thereon in spaced relationship to said bottom and the major plane of said side for swinging movement of the roof member about a substantially horizontal axis between an inoperative position where the roof member is between the partition and the major plane of said side, and an operative position where the roof member extends outwardly from the structure through said opening; and



an elongated closure member having opposed, upper and lower ends, said upper end being hingedly attached to the underside of said roof member adjacent said partition for pivotal movement of the closure member about a substantially horizontal axis during said swinging of the roof member, the closure member spanning the distance between the roof member and said stop with said lower end abutting the stop, said stop maintaining said lower end in greater spaced relationship from the major plane of said side than said upper end, the closure member and the stop cooperating to present a unit in closing relationship to said opening, whereby the closure member is maintained in inclined relationship with respect to said side permitting gravitational force to hold the closure member in engagement with the stop to prevent moisture and foreign particles from entering the structure.

3,125,071
BALL PEN ATTACHABLE TO USUAL PENHOLDER
Tozaburo Nakada, 19 Otakimachi, Nakano-ku, Tokyo, Japan
Filed Sept. 3, 1959, Ser. No. 837,960
Claims priority, application Japan June 30, 1959
2 Claims. (Cl. 120—42.4)

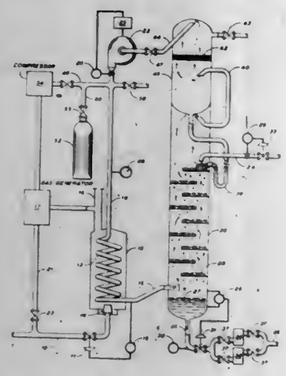


1. A writing instrument for replacing the usual steel nib in a penholder, comprising a tubular thin-walled ink reservoir, a writing element including a ball point, said element being secured to the lower end of said reservoir in communication therewith, said reservoir including an integral upwardly-extending, thin-walled extension arcuate in transverse cross section, for insertion into the nib-holding means of a conventional penholder.

3,125,072
METHOD AND APPARATUS FOR HEATING LIQUID FOR HOT WATER FLOODING

Harry Brandt and Joseph F. Chittum, Whittier, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware

Filed June 7, 1961, Ser. No. 115,429
5 Claims. (Cl. 122—4)

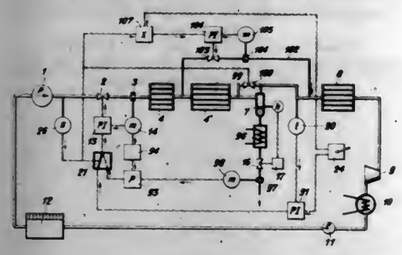


1. The method of increasing the temperature of brine above about 200° F. comprising increasing the temperature of an oxygen-free gas, flowing said increased temperature gas in direct contact heat-exchange relationship with brine to heat the brine and cool the gas, separating the now cooled gas from said brine and removing residual droplets of said brine from said gas, increasing the temperature of the cooled gas and again flowing said gas in direct contact heat-exchange relationship with brine to heat the brine and cool the gas.

3,125,073
METHOD AND APPARATUS FOR CONTROLLING FEEDWATER SUPPLY TO A FORCED FLOW STEAM GENERATOR

Paul Profos, Winterthur, Switzerland, assignor to Sulzer Freres, S.A., Winterthur, Switzerland, a corporation of Switzerland

Filed Dec. 23, 1960, Ser. No. 78,004
Claims priority, application Switzerland Dec. 31, 1959
10 Claims. (Cl. 122—379)

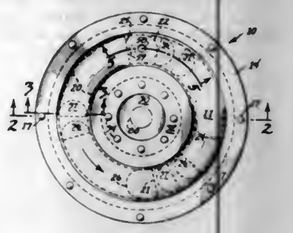


10. A method of controlling the rate of feedwater supply to a forced flow steam generator having an evaporating section, a superheater section, and a water separator interposed in the flow of operating medium between said sections, comprising the steps of measuring the salt content of the feedwater, of increasing the rate of feedwater supply to the steam generator upon an increase of the salt content of the feedwater, of decreasing the rate of feedwater supply to the steam generator upon a decrease of the salt content of the feedwater, and of by-passing operating medium around the water separator upon a decrease of the salt content of the operating medium below a predetermined minimum.

3,125,074
ROTARY INTERNAL COMBUSTION ENGINE

Samuel Theodore Scott, 3613 Meadowbrook Ave., Nashville, Tenn.

Filed Jan. 22, 1962, Ser. No. 167,604
5 Claims. (Cl. 123—17)

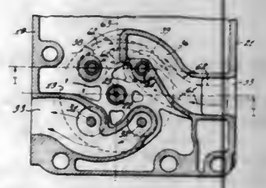


1. A rotary internal combustion engine comprising:
(*a*) a toroidal casing comprising opposed first and second sections spaced apart symmetrically about a centric plane.
(*b*) an annular piston carrier in relative rotational engagement between said sections,
(*c*) a first recess in said first section to form a compression chamber with one side of said piston carrier,
(*d*) a second recess in said second section to form a firing chamber with the other side of said piston carrier,
(*e*) said recesses being alternately spaced circumferentially of said casing and having overlapping end portions,
(*f*) pistons pivotally mounted about radial axes in said piston carrier for movement between and through said compression and firing chambers,
(*g*) means for pivoting said pistons between one operative position in said compression chamber and another operative position in said firing chamber,
(*h*) an air intake valve in said compression chamber,
(*i*) an exhaust valve in said firing chamber, and
(*j*) means to synchronously fire a gaseous charge in said firing chamber for driving said pistons circumferentially relative to said toroidal casing.

3,125,075
DUAL INLET PASSAGES FOR INTERNAL COMBUSTION ENGINES

Hans L. Wittek, Flossmoor, Ill., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Filed Nov. 20, 1961, Ser. No. 153,315
3 Claims. (Cl. 123—30)

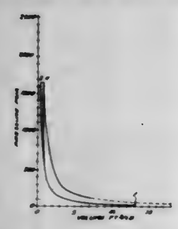


1. A cylinder head for an internal combustion engine of the type having a pair of intake valves disposed on opposite sides of a longitudinal plane through the axis of the cylinder associated with said valves and spaced in one longitudinal direction from a transverse plane through said axis at right angles to said longitudinal plane, said head comprising: a bottom wall, a longitudinally extending vertical side wall, a pair of inlet ports for said valves in said bottom wall at laterally opposite sides, respectively, of said longitudinal plane, walls defining a first streamlined passage extending from a portion of said side wall intersected by said transverse plane inwardly toward said axis and curving in said one longitudinal direction toward the one of said ports nearest said side wall in tangential relation to said cylinder and downwardly to said one port at an acute vertical angle to said bottom wall, and walls defining a second streamlined passage extending vertically above said first passage from said side wall inwardly and in said one longitudinal direction around the intake valve for said one port on the side thereof remote from said axis and thence curving to a tangential relationship with said cylinder and sloping downwardly to the other port at an acute vertical angle to said bottom wall, said passages being effective upon installation of said head on said engine to direct air tangentially to the cylinder wall of said cylinder and downwardly through said ports, respectively, at an acute vertical angle thereby inducing said air to swirl unidirectionally about the axis of said cylinder.

3,125,076
CONSTANT PRESSURE COMBUSTION AUTO-IGNITION ENGINE

George J. Mullaney, Burnt Hills, N.Y., assignor to General Electric Company, a corporation of New York

Filed Oct. 21, 1957, Ser. No. 691,358
5 Claims. (Cl. 123—32)



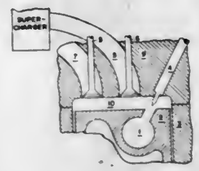
1. A method of operating a diesel engine which comprises, establishing compression, pressure, and temperature in said engine to reduce ignition lag of a predetermined fuel to substantially zero, introducing the said fuel into the engine beginning at top dead center of the piston on compression stroke, and maintaining fuel injection in a quantity versus time ratio commencing at 0 with a smooth upwardly substantially concave curve and a sharp cutoff to produce a substantially constant pressure combustion only.

3,125,077
PROCESS FOR IMPROVING THE OPERATING CONDITIONS OF COMPRESSION IGNITION ENGINES, THE WORK CYCLE OF WHICH COMPRISES A SCAVENGING PHASE

Georges Monnot and Rostislav Vichnievsky, Paris, Jacques Ollier, Neuilly, and Georges Grosshans, Paris, France, assignors to Institut Francais du Petrole, des Carburants et Lubrifiants, Paris, France

Filed Sept. 12, 1960, Ser. No. 55,565
Claims priority, application France Sept. 15, 1959
5 Claims. (Cl. 123—32)

1. A method for improving the operating conditions of compression-ignition engines of the diesel type the work cycle of which comprises a scavenging phase, consisting of injecting the total fuel charge destined to each cylinder in two successive fractions per work cycle, the first of which is injected into an auxiliary combustion chamber communicating with the main combustion chamber but positioned substantially apart from the scavenge zone, at a moment where residual gases from the end of the exhaust period are remaining in said auxiliary chamber

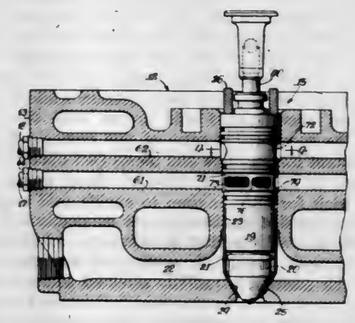


substantially in the absence of air. the remaining fraction of said fuel charge being injected into the space defined by said two communicating combustion chambers toward the end of the compression period.

3,125,078
FUEL SUPPLY SYSTEM

Neville M. Reiners, Columbus, Ind., assignor to Cummins Engine Company, Inc., Columbus, Ind., a corporation of Indiana

Filed Jan. 16, 1961, Ser. No. 82,781
4 Claims. (Cl. 123—32)

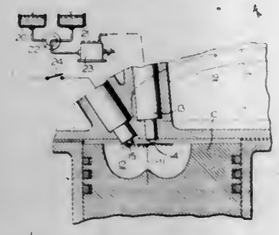


1. The combination of a cylinder head for an internal combustion engine having a plurality of cylinders and having a plurality of fuel injectors mounted in said cylinder head for supplying fuel to the respective cylinders, said cylinder head being provided with a fuel supply bore and a fuel discharge bore formed longitudinally therein and said bores being spaced from each other and each extending from an opening formed at one end of said cylinder head, said openings defining ports adapted to be connected respectively to a fuel supply line and a fuel discharge line, said fuel injectors each having a circumferential inlet groove formed therein, said inlet groove being aligned with and communicating with said fuel supply bore at longitudinally spaced points along the length thereof intermediate the ends of said cylinder head, each of said fuel injectors having a circumferential outlet groove formed therein, said outlet groove being aligned with and communicating with said fuel discharge bore at longitudinally spaced points along the length thereof intermediate the ends of said cylinder head, said circumferential inlet and outlet grooves each forming a continuation of the flow path provided by said bores and permitting the free flow of fuel around the respective injectors between points in the respective bores on either side of said injectors.

3,125,079
MULTI-PURPOSE INTERNAL COMBUSTION ENGINE

Heinrich Hoffmann, Stuttgart-Unterturkheim, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany

Filed Mar. 20, 1961, Ser. No. 96,776
Claims priority, application Germany Apr. 1, 1960
9 Claims. (Cl. 123—32)

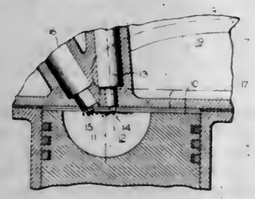


1. An internal combustion engine adapted to operate selectively, at the same compression ratio, with gasoline or diesel fuel injection, comprising cylinder means, piston means within said cylinder means and delimiting in part a combustion chamber which is at least approximately axially symmetrical, means for producing an air vortex within said combustion chamber about an axis extending essentially in the cylinder longitudinal direction, multi-apertured injection means for substantially simultaneously injecting from within the area of said first-mentioned axis essentially radially directed fuel jets into said combustion chamber spaced substantially over the entire combustion chamber cross section as seen in a plane perpendicular to said axis, and means enabling applied ignition operation of said engine with gasoline fuel injection while enabling auto-ignition operation of said engine with diesel fuel injection, the compression ratio of said engine, which remains constant for gasoline and diesel fuel operation, being selected to be relatively low for diesel engines and relatively high for Otto engines to enable said engine to operate with applied ignition in case of gasoline fuel injection and with self-ignition in case of diesel fuel injection, the strength of said air vortex and the penetrating power of the essentially radially directed fuel jets being so matched to one another that said fuel jets fail to reach the cylinder walls but are deflected prior thereto essentially in the circumferential direction by said air vortex.

3,125,080
INTERNAL COMBUSTION ENGINE

Heinrich Hoffmann, Stuttgart-Unterturkheim, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany

Filed Mar. 20, 1961, Ser. No. 96,986
Claims priority, application Germany Apr. 1, 1960
4 Claims. (Cl. 123—32)

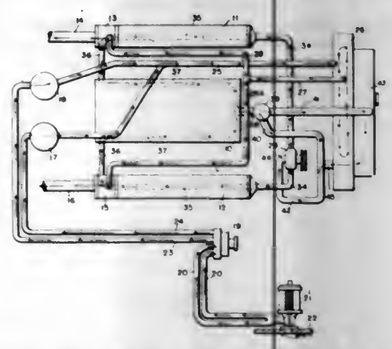


1. A method of operating a gasoline internal combustion engine having externally controlled applied ignition and including piston and cylinder means, said piston means being provided with a compact piston combustion chamber of a shape at least approximately axially symmetrical about a longitudinal axis and of diameter substantially smaller than the diameter of the cylinder space, means for producing air eddying within said combustion chamber about an axis extending essentially in the longitudinal direction of said piston means, and multi-aperture injection means for injecting the fuel essentially from the area of the longitudinal axis of said combustion chamber, comprising the steps of operating said gasoline combustion engine at a compression ratio of about 1:10 to 1:14 by injecting fuel substantially radially from said multi-aperture injection means into said combustion chamber and by so adjusting the magnitude of said air eddy and the penetrating force of the initially essentially radially moving fuel particles to each other that the fuel particles do not reach the walls of said piston-combustion chamber with the piston imagined in the dead center position thereof but are deflected prior thereto in the circumferential direction by said air eddy.

3,125,081
COOLING SYSTEMS FOR MARINE ENGINES

Elmer P. Jasper, Algonac, Mich., assignor to Chris-Craft Corporation, Pompano Beach, Fla., a corporation of Michigan

Filed Jan. 30, 1963, Ser. No. 255,058
6 Claims. (Cl. 123—41.09)



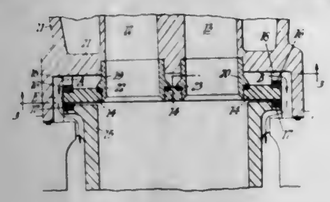
1. A marine engine cooling system comprising separate seat water circuit and fresh water circuit, a heat exchanger connected into both of said circuits, a sea water pump, a supply line from the sea water pump to said heat exchanger, a return sea water line from said heat exchanger to an exhaust pipe and overboard, a fresh water pump, a supply line from said fresh water pump to an exhaust manifold, a fresh water connection from said manifold through the engine cylinder block, a thermostatic valve at the outlet of said engine cylinder block, a return conduit from said thermostatic valve to the inlet of said fresh water pump, a second conduit from said thermostatic valve to said heat exchanger and a return fresh water conduit from said heat exchanger to the inlet of said fresh water pump.

3,125,082
INTERNAL COMBUSTION ENGINE CYLINDER HEADS

Frank M. Stansfield, Alan J. Glasspoole, and George W. Morland, Lincoln, and Thomas A. Bradshaw, London, England, assignors to Ruston & Hornsby Limited, Lincoln, England, a corporation of Great Britain

Filed Feb. 20, 1962, Ser. No. 174,529
Claims priority, application Great Britain Mar. 1, 1961
7 Claims. (Cl. 123—41.77)

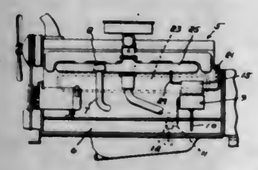
1. An internal combustion engine structure including a cylinder and a cylinder head therefor, a separate removeable, and replaceable fire plate interposed between said cylinder and said cylinder head and forming a combustion space wall or deck, said fire plate being a substantially flat plate, means rigidly but releasably securing a small area of the center of said fire plate to a comparatively cool part of the cylinder head, the remaining area of said plate being substantially free to expand and contract in its own plane, said cylinder head providing a coolant space above the top surface of said plate, and sealing means at the periphery of said plate providing a coolant seal between said plate and said cylinder and a gas seal between said plate and said cylinder, said sealing means permitting radial expansion of the periphery of said plate.



3,125,083
DEVICE FOR PREVENTING CONTAMINATION OF CRANK CASE OIL

Willard W. Scribner, 931 Forest Ave., Portland, Maine

Filed Aug. 11, 1960, Ser. No. 49,071
6 Claims. (Cl. 123—119)



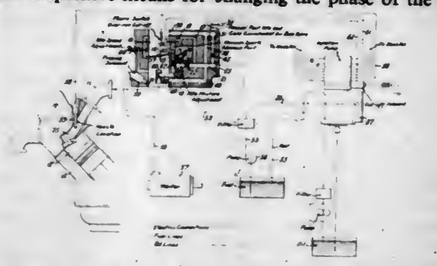
1. In combination with an internal combustion engine of the type having a crank case to contain its lubricating oil and provided with an air inlet, a chamber, means connecting said chamber to said engine to be heated thereby and including a partition dividing it into upper and lower compartments and having a port effecting communication therebetween, said upper compartment having a port for connection to the air intake of said engine, said lower compartment having a port for connection with the interior of the engine in a zone above the oil level in the crank case, a drain for said lower compartment, and a valve mounted in said upper compartment and normally closing said port but opened in response to intake suction.

3,125,084
FUEL INJECTION SYSTEM

Leon H. Hall, South Burlington, Vt., assignor to Simmonds Precision Products, Inc., Tarrytown, N.Y., a corporation of New York

Filed Jan. 19, 1962, Ser. No. 167,234
9 Claims. (Cl. 123—119)

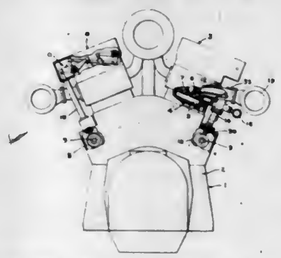
1. In a fuel injection system for an internal combustion engine adapted to provide a flow of fuel to the engine in one stream and a flow of air to the engine in a separate stream, means for measuring the flow of air in the air stream, said means including a throttle body provided with a bore therethrough, said bore being associated with intercommunicating passageways for sensing conditions of atmospheric and manifold air, means for metering the flow of fuel in the fuel stream, and a connection between said means adapted to maintain the flow of fuel proportional to the flow of air, said connection including an engine responsive means for changing the phase of the fuel metering means relative to the air measuring means thereby to change the proportion of fuel flow to air flow.



3,125,085
CONTROL OF FUEL INTRODUCTION TO ENGINE CYLINDER

William M. Kauffmann, Hamburg, N.Y., assignor to Worthington Corporation, Harrison, N.J., a corporation of New Jersey

Filed June 28, 1962, Ser. No. 205,919
5 Claims. (Cl. 123—120)



1. A mechanism for controlling the introduction of gaseous fuel having a high hydrogen content into an internal combustion engine comprising:

(*a*) a main inlet valve for introducing the fuel into the engine,

(*b*) a main exhaust valve for exhausting the burned fuel from the engine,

(*c*) a manifold for supplying air to the engine,

(*d*) conduit means connecting the manifold and the inlet valve,

(*e*) an injection valve extending into the conduit means intermediate the manifold and inlet valve and adapted to introduce the gaseous fuel therethrough to an area adjacent the inlet valve,

(*f*) actuating means operatively associated with said valves and adapted to individually operate the valves so that the opening and closing of the injection valve occurs within the open period of the inlet valve a predetermined period after the exhaust valve closes whereby backfiring will be prevented.

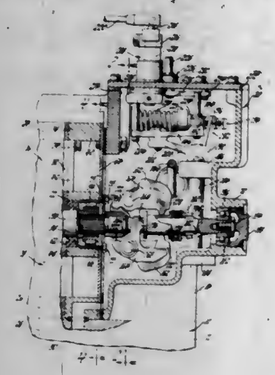
3,125,086
CONTROL MECHANISM FOR PRESSURE CHARGED INTERNAL COMBUSTION ENGINE

William R. Fox, Wayne, Richard J. Hames, Livonia, and Frederick Schwartz and Karl Zaruba, Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Sept. 12, 1961, Ser. No. 137,665
6 Claims. (Cl. 123—140)

1. A control mechanism for an internal combustion engine comprising a positive displacement blower includ-

ing a housing defining a blower chamber and having an inlet port and an outlet port connectable to the air receiving chamber of the engine, engine driven impeller means rotatably mounted within said blower chamber and adapted to effect positive pumping displacement between the inlet and outlet ports, one end of said housing having a pressure bypass outlet port adjacent the inlet portion of the blower chamber, a pressure bypass inlet port adjacent the outlet portion of the blower chamber, and two arcuate passageways interconnecting said pressure bypass ports, two valves pivotally mounted by said housing for opposite rotation within said passageways between fully opened and closed bypass controlling positions, fuel control linkage means associated with said bypass defining end of said blower housing and normally operable to control engine speed by regulation of the engine fuel supply between minimum and maximum fuel supply conditions, a throttle control lever, means providing a lost motion connection between said lever and said fuel control linkage, centrifugal governor means mounted within said housing adjacent said bypass pas-



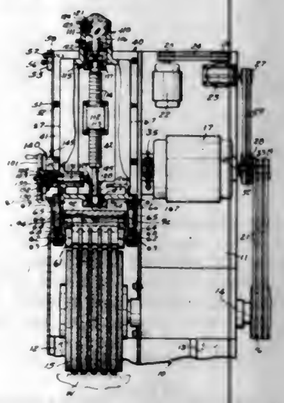
sageways and rotatably driven by said impeller means, said governor means being operably connected through said fuel control linkage means to modulate the engine fuel supply to maintain the engine speed established by said linkage within idle and maximum engine speed limits, and adjustable linkage means intermediate said fuel control linkage means and said bypass controlling valves and operable to vary the opening of said bypass valves between their fully closed and opened positions in accordance with decreasing fuel regulation of the engine fuel supply between governor modulated maximum and idle engine speed fuel supply limits corresponding respectively to movement of said throttle control lever and said fuel supply control linkage means between a first intermediate fuel supply controlling condition slightly less than the maximum fuel supply controlling condition and a second intermediate fuel supply controlling condition slightly above the minimum fuel supply controlling condition, opening movement of said valves between said intermediate fuel supply controlling conditions being effected independently of the idle and maximum engine speed maintaining operation of said governor means.

3,125,087
CRUSH TRUING DEVICE FOR GRINDING MACHINES
Walter G. Johnson, Holden, Mass., assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts
Filed June 11, 1962, Ser. No. 201,460
11 Claims. (Cl. 125—11)

5. Crush truing apparatus for grinding wheels comprising,

a supporting means mounted for rectilinear movement radially toward and away from a rotating grinding wheel,

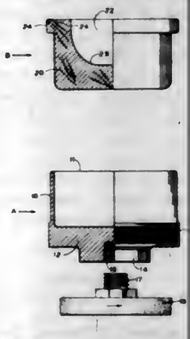
first and second bearing means mounted upon said supporting means respectively concentric of first and second spaced axes both located in fixed relation to said supporting means,



first and second back-up rolls respectively rotatably mounted concentric of said first and said second bearing means,

a crushing roll movably supported upon said supporting means adjacent to said first and said second back-up rolls so that it is maintained in rolling engagement with both of said back-up rolls by engagement of said crushing roll with a rotating grinding wheel to be trued thereby.

3,125,088
GRINDING APPARATUS FOR PRECIOUS STONE WORKING
Edwin W. O'Neal, 6115 E. 20th St., Tulsa, Okla.
Filed Aug. 17, 1962, Ser. No. 217,682
3 Claims. (Cl. 125—30)



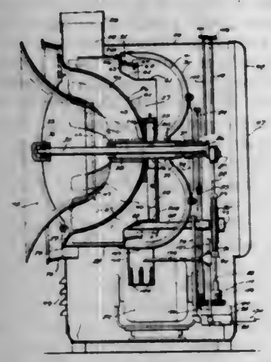
1. A grinding apparatus for gem stone working attachable to a rotatable shaft comprising in combination:

a first substantially cylindrical cup shaped member attachable to a rotating drive mechanism for rotating said member about its axis;

a second member coaxially detached within said first member and comprising a lower external portion of diameter slightly less than said cup of said first member, an upper graspable flange portion of diameter greater than said cup, said lower portion of length less than the depth of said cup whereby said upper flange portion will normally rest on the top of said first member, and

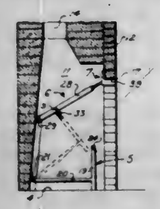
said second member including a grinding surface for said gem stone working.

3,125,089
SPACE HEATER AND COOLER
William H. Taylor, 1372 E. 52nd St., Chicago, Ill.
Filed Mar. 30, 1953, Ser. No. 345,429
45 Claims. (Cl. 126—110)



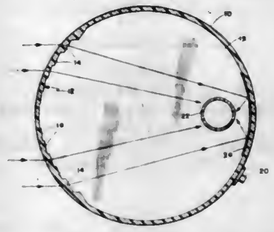
1. In a device of the character described, the combination with a combustion chamber having a heat exchange wall and an annular reflecting wall of concave form opposed to the heat exchange wall for directing radiant energy thereupon, and a rotor centrally disposed and rotatable with reference to the heat exchange wall and provided externally of the combustion chamber with vanes having free margins in immediate proximity to said heat exchange wall and movable across said wall for the propulsion in scouring heat receiving relation to said wall of fluid to be heated thereby and means for introducing fuel and oxygen into the combustion chamber and directing the products of combustion against said heat reflecting wall.

3,125,090
ANDIRON SET
Glenn E. Wise, 501 13th St. NW., Washington, 4, D.C.
Filed Dec. 19, 1960, Ser. No. 76,913
3 Claims. (Cl. 126—164)



1. An andiron device of the character described comprising: upwardly and forwardly inclined mounting means having an upper end and a lower end, and adapted to extend and be compressively fixed between the lintel and the corner formed at the juncture of the rear wall and the hearth of a fireplace, one end of said mounting means including means for adjusting the distance between said upper end and said lower end whereby said mounting means are adapted to be compressively fixed in fireplaces of various sizes; means for supporting fuel and adapted to be positioned above said hearth; and pivot means having a generally horizontal pivot axis swingably joining said fuel-supporting means to said mounting means.

3,125,091
INFLATABLE SOLAR ENERGY COLLECTOR
Harvey P. Sleeper, Jr., 516 Nardo Ave., Solana Beach, Calif.
Filed Sept. 17, 1962, Ser. No. 224,892
17 Claims. (Cl. 126—271)



1. A solar energy collector comprising:

(A) Wall means forming an inflatable casing, said wall means including:

(1) A wall section of substantially flexible and collapsible material, said section having:

(*a*) A transparent portion generally conforming to the configuration of said section and being configurated to concentrate solar energy onto a restricted area;

(B) energy receiving means mounted in fixed relation to said wall portion and within the restricted area;

(C) and means carried by said wall means for admitting a fluid to inflate said casing.

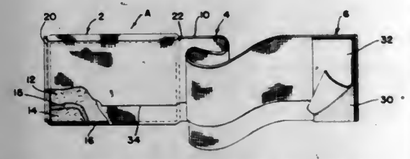
3,125,092
INFUSION FLASK
Milton J. Cohen, Chevy Chase, Md., assignor to Pharmedical, Inc., Chicago, Ill., a corporation of Illinois
Filed June 30, 1961, Ser. No. 121,070
5 Claims. (Cl. 128—272)



1. An additive container for matter to be administered by means of an infusion flask, said container comprising a portion for holding additive material and having an open end, a flange extending outwardly substantially perpendicularly continuously from the open end of the container, a compression member formed of flexible material consisting of a central bulbous member of substantially elongate, cylindrical shape for transverse compression to create a pumping action, said compression member having a flange extending outwardly substantially perpendicularly from one end and adapted to be received in abutting end to end, parallel relationship with the flange on the container, and a sleeve section of smaller dimension than the compression member at the other end with a continuous passage therethrough to the bulbous portion and from the bulbous portion through the flange section without any obstructions in between, a clamping ring interconnecting the abutting flanges of the compression member and the container in sealing relationship with the bulbous member disposed substantially entirely beyond the open end of the container for full access thereto for engagement

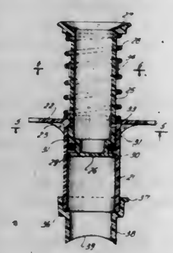
between fingers, and an elongate stiff penetrating tube having a tubular inner end portion received in fitting relationship in said sleeve section and having a pointed outer end portion for piercing the infusion flask for establishing a connection between the container and the flask whereby fluid may be withdrawn from the flask into the container, mixed with the material in the container and re-injected into the flask.

3,125,093
SURGICAL BANDAGE
Frieda D. Hutchins, 913 Sunset Drive, Lake Lucerne, Chagrin Falls, Ohio
Filed July 14, 1961, Ser. No. 124,155
3 Claims. (Cl. 128—283)



1. In a combined surgical binder and bandage comprising, an intermediate strap, an absorbent dressing adjacent one end of said strap and an adhesive surface adjacent the opposite end of said strap, the improvement comprising: said intermediate strap being formed from a gauze-like material folded to provide a pocket at one end thereof, means for securing said dressing within said pocket so that it is surrounded by said gauze-like material, said dressing having a first and a second large area surface and an edge surface, a non-absorbent material covering only said first large area surface and said edge surface, said second large area surface being covered by only said gauze-like material and adapted to be positioned over a profuse drainage wound, and said adhesive surface being located on the same side of said gauze-like material as said second large area surface of said dressing.

3,125,094
SUCTION DEVICE
Albert E. Krug, Wyckoff, N.J., assignor to Becton Dickinson and Company, Bergen, N.J., a corporation of New Jersey
Filed Jan. 5, 1962, Ser. No. 164,547
2 Claims. (Cl. 128—300)



1. A suction device for removing venom comprising: a cylindrical barrel of plastic material having an open upper end provided with laterally projecting, finger-engaging flange means and with an open lower end provided with a fitted nozzle portion which is generally elliptical in cross section with its major transverse axis being substantially greater than its minor transverse axis and with the outer face thereof being curved concavely inwardly towards the central portion of the side walls thereof which extend along the major axis so as to provide a contoured skin engaging surface; a tubular plastic plunger projecting into the open upper end of the barrel and being closed at its lower end and open at its upper end to provide a receptacle for accessories in the interior thereof and having a packing ring extending around the exterior of its lower end to form a sealing fit with the interior of the barrel and an outwardly flared operating head extending around the open upper end with a concave surface for engagement by the thumb of the operator, the outside diameter of the plunger for the major portion of the length thereof being slightly smaller than the inside diameter of the barrel so as to provide a sliding and guiding fit therebetween; and a helical spring disposed around the plunger and extending between the open upper end of the barrel and the outwardly flared operating head of the plunger so as to normally urge the plunger in a direction outwardly of the barrel, said barrel being formed with an inwardly projecting retaining collar extending around the inner surface of the open upper end thereof and said plunger being formed with a plurality of outwardly projecting lugs spaced a short distance from the operating head which are engageable with the retaining collar to limit the inward shift of the plunger and said plunger also being formed with a plurality of resilient retaining tabs spaced around the periphery thereof a short distance above the packing ring with the lower end of said retaining tabs being integral with the lower portion of the plunger and flaring outwardly and upwardly at an angle terminating in upper ends providing shoulders projecting beyond the peripheral surface of the plunger so as to engage the retaining collar when the plunger is shifted outwardly by the spring and thereby limit the relative outward movement of the plunger, said tabs being shiftable inwardly so as to be substantially flush with the plunger whereby the plunger may be assembled with the barrel, the lower end of said plunger being completely closed and sealed so that there is no access from the interior of the plunger to the interior of the barrel and the interior of said barrel being free from obstructions so as to provide maximum displacement as the plunger is shifted inwardly and maximum suction as the plunger is shifted outwardly.

3,125,095
FLEXIBLE STAINLESS STEEL SUTURES
David Kaufman, Newton, Gaetano Salvatore Buccino, Bethel, and Arthur Glick, Danbury, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
Filed Nov. 1, 1961, Ser. No. 149,449
7 Claims. (Cl. 128—335.5)

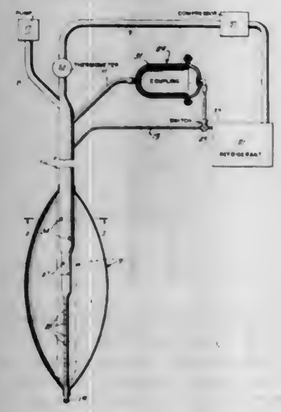


3. A stainless steel surgical suture comprising: at least 19 individual surgically clean stainless steel filaments in conductive contact with each other over the entire length of the suture, each filament with a diameter from about 0.0011 to about 0.0018 inch, and of a configuration selected from the following:

U.S.P. size	Construction	Turns per inch
0	7 x 7 x 0.0018	8
00	7 x 7 x 0.0014	9
3-0	7 x 7 x 0.0012	9
4-0	7 x 3 x 0.0011	11
or		
4-0	19 x 0.0016	11
5-0	19 x 0.0012	12

where the construction column shows first the number of strands in the suture, second the number of filaments (or ends) in each strand, and third the diameter of each filament in inches, and with the twist direction of the filaments in each strand opposed to the direction of twist of the strands in the suture, and an eyeless surgical needle attached to and in conductive contact with the surgically clean stainless steel filaments at at least one end of the suture.

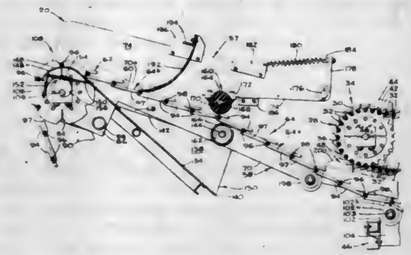
3,125,096
BODY COOLING APPARATUS
Leonard Antilles, Albany, and Norman C. Jeckel, Glens Falls, N.Y., assignors to United States Catheter & Instrument Corporation, Glens Falls, N.Y., a corporation of New York
Filed July 7, 1961, Ser. No. 122,507
3 Claims. (Cl. 128—401)



1. A body cavity cooling device comprising a thin-walled inflatable container adapted to be positioned within said cavity and capable of lining the boundary wall of said cavity, an elongated member extending through and leading from one end of said container and adapted to reach from said cavity through a natural channel to the exterior of said body, a feed tube extending through said elongated member terminating at a plurality of small orifices in said container adapted for spraying a liquid refrigerant, a withdrawal tube extending through said elongated member terminating in an opening in said container adapted to withdraw gaseous refrigerant therefrom, and a monitoring tube extending through said elongated member terminating in an aperture in said container adapted to communicate the pressure in said container to the exterior of said body.

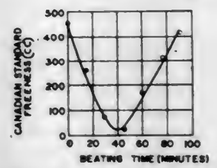
3,125,097
ROOT CROP HARVESTER HAVING A SPECIFIC CROP SEPARATING MEANS
Leon R. McRobert, Williamston, Mich., assignor to FMC Corporation, a corporation of Delaware
Filed Feb. 9, 1960, Ser. No. 7,645
4 Claims. (Cl. 130—30)

1. A potato retarding device comprising a conveyor having transverse flights, said conveyor being adapted to advance potatoes having attached plants carried by said conveyor, potato engaging means having a fixed location beneath said conveyor, potato retarding means movably mounted above said potato engaging means and said conveyor, a spring connected to said potato retarding means and urging the same toward said potato engaging means into resilient engagement with potatoes that are being advanced by said conveyor and are engaging said potato engaging means, adjusting means connected to said spring to vary the effective force thereof and the resulting retarding effect of said potato retarding means during engagement thereof by the potatoes, and an abutment stop engageable by said potato retarding means for limiting movement of said potato retarding means toward said potato engaging means by said spring to a position spaced



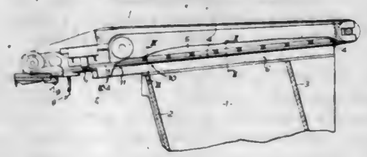
therefrom to enable the flights of said conveyor to pass between said potato engaging means and said potato retarding means unobstructed by engagement with said potato retarding means.

3,125,098
TOBACCO SHEET MANUFACTURE
Robert J. Osborne, Norwalk, Conn., assignor to American Machine & Foundry Company, a corporation of New Jersey
Filed Sept. 23, 1960, Ser. No. 58,093
24 Claims. (Cl. 131—17)



3. The method of forming self-supporting reconstituted tobacco sheet which comprises reducing tobacco to a finely divided state, mixing with said tobacco from about 2% to about 30%, based on the weight of tobacco, of a highly refined softwood sulfite pulp having an inverted freeness as measured by the Canadian Standard Freeness Test, and an aqueous fluid containing a film forming agent to form a homogeneous dispersion having a solids content of at least 5% forming a film of said dispersion on a substantial impervious film forming surface and evaporating moisture from the film.

3,125,099
TOBACCO-MANIPULATING MACHINES
Francis Auguste Maurice Labbé, Orleans, France, assignor to Molins Machine Company Limited, Deptford, London, England, a British company
Filed May 31, 1960, Ser. No. 32,922
Claims priority, application Great Britain June 3, 1959
2 Claims. (Cl. 131—84)



1. A continuous rod cigarette making machine comprising, in combination, means for forming an elongated continuous tobacco filler, an elongated conveyor to convey the filler in the direction of its length, a pair of spaced,

opposed, stationary side guides between which the filler is conveyed, said side guides having opposed faces shaped to provide therebetween an elongated channel of which the conveyor forms the base, said channel having a narrow part adjacent the conveyor and a wider part remote from the conveyor and beyond said narrow part, said narrow part being substantially of uniform width and progressively increasing depth in the direction of the movement of the filler said channel having a leading end having a depth substantially less than the depth of the filler, means to exert air pressure on the filler in said channel to urge the filler toward the conveyor and into the progressively deepening narrow part of said channel as the filler is conveyed along the channel, so that the quantity of filler confined in the narrow part of the channel is progressively increased said channel having a trailing end and a trimming device positioned adjacent said trailing end and so spaced therefrom as to trim and remove surplus tobacco from said filler; said surplus tobacco extending beyond the narrow part of said channel.

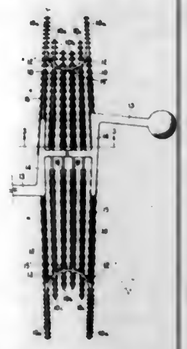
3,125,100
FILTER CARTRIDGE FOR CIGARETTE HOLDERS
José Jany, Av. Angelica 2.860, Sao Paulo, Brazil
Filed Mar. 4, 1960, Ser. No. 12,829
Claims priority, application Brazil Jan. 7, 1960
3 Claims. (Cl. 131—208)



2. A filter cartridge for tobacco smoke, comprising in combination, a tubular casing having first and second end walls having a pointed metal tube projecting inward therefrom, said tubular casing being formed of transparent material, said end walls of said tubular casing each containing an aperture, said end wall disposed adjacent the first end of said casing containing an aperture located in the upper portion of said end wall and said end wall disposed adjacent the second end of said casing containing an aperture in the lower portion of said said end wall, smaller tubes fixed to extend inwardly of said casing from said end walls and fitted through the apertures in said ends walls for a distance greater than one half the length of said tubular portion, solid plugs closing the inwardly disposed ends of said pointed tubes, the longitudinal axes of the smaller tubes being substantially parallel to, and spacedly offset relative to one another, said plugs containing a plurality of capillary channels extending therethrough, a chemical liquid occupying substantially one half the volume within said tubular casing, and elastic members closing the outwardly disposed ends of said smaller tubes, said elastic members being transfixed by said pointed metal tubes.

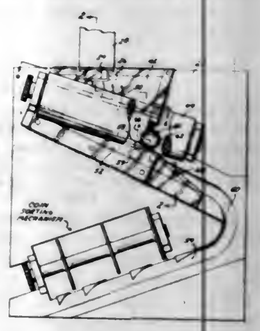
3,125,101
HAIR-CUTTING GUIDE
Willard L. Clark, Greeley, Colo.
(1010 Shortleaf Court, Loveland, Colo.)
Filed Nov. 7, 1960, Ser. No. 67,528
1 Claim. (Cl. 132—45)

In a hair-cutting guide, an elongated, substantially-rigid, unitary frame assembly of similar, longitudinally-arcuate bars conjoined in uniform spaced relation and transverse registration of their convex margins by a strut laterally thereof and a yoke inwardly adjacent the ends thereof remote from the strut, said bars being formed to convergently taper in their arc planes outwardly from said strut to and beyond said yoke, a manipulating handle fixedly outstanding laterally of said frame adjacent said strut, and means instanding from the concave margins of said bars and the corresponding margin of said yoke effective in raking contact with hair-bearing areas of a human head to reflect longitudinal actuations of said frame as elevation of the encountered hair between and to projection beyond the convex margins of the frame bars, said means comprising doubly- and oppositely-tapered teeth fixed in spaced succession and like inclination along the concave bar and corresponding yoke margins in a length-graduation from a minimum at the ends of the bars remote from the strut to a maximum adjacent the strut terminally determinative of a convexity more deeply pronounced than that of the bars and with their



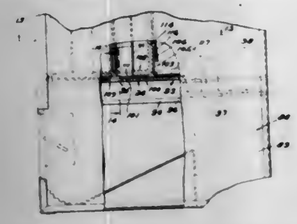
free ends advanced toward the strut relative to their conjunctions with elements of the frame, said teeth fixedly engaging with elements of the frame in an attachment relatively wide longitudinally of the frame and relatively narrow laterally thereof, whereby to securely connect the teeth to the frame with minimal obstruction of the spaces separating the frame bars and to present the free ends of the so-tapered teeth in a width laterally of the frame much exceeding the free end dimension longitudinally of the frame, effective to broadly engage and elevate to projection through the frame human hair rakingly contacted thereby incident to longitudinal manipulations of the frame.

3,125,102
COIN SINGLING APPARATUS
Clyde S. Bower, Yeadon, Pa., assignor to Shoup Toll Collecting Devices, Inc., Ridley Park, Pa.
Filed Aug. 17, 1960, Ser. No. 50,199
7 Claims. (Cl. 133—3)



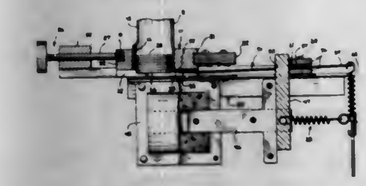
3. A toll collecting machine including a hopper for receiving an assortment of coins of different sizes, an inclined rigid chute through which said coins travel after leaving said hopper, the height of said chute being slightly larger than the diameter of the largest of said coins, and the width of said chute being only slightly larger than the thickness of said largest coin, said chute having an opening in a side thereof, a plunger passing through said opening and disposed at an angle to the movement of the coins through said chute, and means for reciprocating said plunger to prevent tilting of a coin while it moves down said chute to prevent wedging of said coin in said chute.

3,125,103
VENDING MACHINE CHANGE DISPENSER
Wilbur L. Davidson, 16766 Warwick Road, Detroit 19, Mich., and Thomas G. Davidson and Robert W. Shiker, Detroit, Mich.; said Thomas G. Davidson and said Shiker assignors to said Wilbur L. Davidson
Filed May 15, 1961, Ser. No. 109,909
5 Claims. (Cl. 133—5)



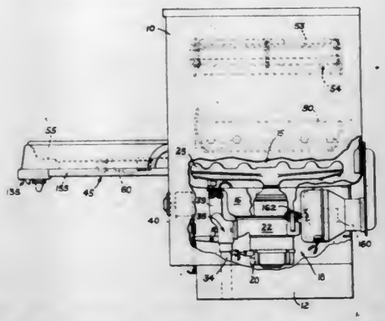
1. A coin return device comprising a fixed coin receiving member including a horizontal portion having a coin opening and an upright fixed part, a movable coin slide having a coin receiving opening and guided for movement beneath said portion of said member to be alternately brought into and out of register with said opening of said member to receive a coin from the latter, a fixed coin discharge member having a discharge opening in laterally offset relation to the coin opening of said coin receiving member, in the direction of movement of said slide, the opening of said slide being registrable with that of said discharge member in the movement of the slide opening out of register with that of said coin receiving member, and means engaging one another directly to urge the slide in one direction and limit the motion of the slide in that direction, including a leaf spring part mounted on said upright fixed part of said coin receiving member, and an upright on said slide engaged by said leaf spring part to move the slide, said slide part engaging said fixed part to limit said movement.

3,125,104
COIN DISPENSER
Edward J. Tryon, Trafalgar, Ind., assignor to Standard Change-Makers, Inc., Indianapolis, Ind., a corporation of Indiana
Filed Dec. 12, 1961, Ser. No. 158,702
6 Claims. (Cl. 133—5)



1. A dispenser comprising a base, a guide mounted on said base for holding a stack of objects, stop means positioned adjacent said guide and sufficiently closely thereto so that the endmost object of said stack is positioned just outside of said guide by urging said stack against said stop means, a push rod reciprocal in a given direction with relation to said base, said push rod having two opposite ends one of which is positioned to slidably rake the lower end of said stack to push the lowermost object in said stack away from said stack, guide means fixed to said base and having two mutually facing surfaces between which said push rod extends, a spring acting between said base and the other end of said push rod and urging said one end of said push rod toward said stack with said guide means as a fulcrum.

3,125,105
TIMER CONTROL FOR DISHWASHING APPARATUS
Russell C. Geiger, Troy, Ohio, assignor to The Hobart Manufacturing Company, Troy, Ohio, a corporation of Ohio
Filed Nov. 20, 1961, Ser. No. 153,388
3 Claims. (Cl. 134—58)

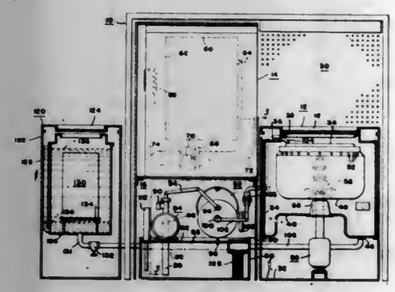


1. In a dishwashing machine having a washing chamber, power driven spray means arranged to spray cleansing liquid over soiled dishes and like articles supported in said chamber, fill control means connected to admit liquid to said chamber, drain control means connected to drain liquid from said chamber, and an electric power driven timer connected to all of said aforementioned means for controlling the sequence of operation thereof to produce a normal cleansing cycle of operation, the improvement comprising a timer advance motor connected to said timer for driving said timer at a speed substantially faster than its normal rate of operation, and manually selectable control circuits including said timer and said advance motor producing an abbreviated cycle of operation in which soiled articles are rinsed preparatory to subsequent cleansing and to return said timer to its starting position thereby making available a full cycle of operation immediately subsequent to said abbreviated cycle.

3,125,106
SOLVENT RECLAIMING DRY CLEANING APPARATUS
Byron L. Brucken and Victor A. Williamitis, both of Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 27, 1961, Ser. No. 148,248
1 Claim. (Cl. 134—113)

For use with a dry cleaner solvent circulation system including a disposable, porous filter cartridge interposed therein for conditioning a dry cleaning solvent flowing therethrough, a solvent reclaimer comprising a box-like outer casing having a top opening and an access door for closing said top opening, a solvent displacing chamber in said outer casing having an open top in alignment with said top opening in said outer casing and adapted to contain a solvent displacing liquid therein having a lesser density than the solvent retainable in the pores of said filter cartridge, said chamber having a sight glass in communication therewith at the bottom thereof and extending upwardly between the sides of said chamber and said outer casing to a point above the highest level of said

solvent displacing liquid in said chamber, said outer casing being adapted adjacent the sight glass for visual observation of same as a means for ascertaining the highest level of solvent displacing liquid in said chamber, said access door being openable and adapted for inserting a solvent soaked filter cartridge into said chamber before the filter cartridge is disposed of, a perforated support stand in said chamber adapted to support an inserted filter cartridge in a submerged condition totally within said solvent displacing liquid whereby the displacing liquid in said chamber will enter the pores of the filter cartridge to displace the solvent retained therein solely due to the lesser density thereof, said solvent then settling to the



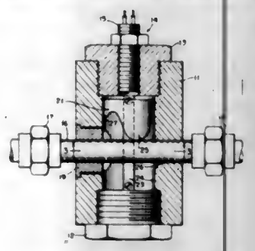
bottom of said chamber solely due to the greater density thereof to form a plane of stratification dividing the displacing liquid above from the solvent below, said support stand being spaced sufficiently above the said plane of stratification and below the highest level of said solvent displacing liquid to position a filter cartridge supported thereon totally within said displacing liquid, conduit means having one end connected to the bottom of said chamber below the said plane of stratification and its other end extending through the outer casing below the said one end of said conduit means and adapted for connection to a solvent circulation system, and valve means in said conduit means openable for removing reclaimed solvent from said chamber.

3,125,107
PROCESS OF CONVEYING MOLTEN POLYMERS
Stanley David Wood, Kingston, Ontario, Canada, assignor, by mesne assignments, to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Aug. 23, 1961, Ser. No. 133,289
Claims priority, application Canada Aug. 25, 1960
5 Claims. (Cl. 137—13)

1. A process of removing gel from a flow conduit for a polymer which tends to gel on the conduit wall when in the molten condition, said process comprising stopping the polymer flow, freezing the polymer in said conduit, subsequently remelting said polymer and pumping the remelted polymer together with the gel out of said flow conduit.

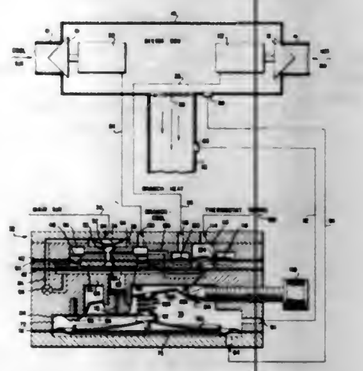
3,125,108
INTERSTAGE EXPLOSIVELY OPERATED HYDRAULIC LINE SEPARATION DEVICE
Emmet J. Murphy, Redwood City, Calif., assignor to General Precision, Inc., a corporation of Delaware
Filed Jan. 13, 1961, Ser. No. 82,490
1 Claim. (Cl. 137—68)

A hydraulic line sealing and cutting device comprising:
(A) a cylinder having a first and second coaxial transverse opening extending through the walls thereof and disposed intermediate the ends and in open communication with the hollow portion of said cylinder, the first of said openings being adapted to receive a hydraulic line,
(B) a sleeve loosely mounted in the second of said openings, the inside diameter of said sleeve being the same as the inside diameter of said first coaxial transverse opening,
(C) a first and a second closure means for respectively sealing the upper and lower ends of said cylinder,



(D) a ram slidably mounted within said cylinder and normally positioned adjacent said first closure means, said ram having:
(*a*) a head portion and a depending portion thereon, the overall length of said ram being no greater than the distance between the inside surface of said first closure means and the side of said first opening adjacent said upper closure,
(*b*) a cutting edge thereon adapted to sever said hydraulic line and positioned adjacent said sleeve between the head portion of said ram and the lower extremity of said depending portion,
(*c*) a recess thereon positioned adjacent said first transverse opening for coaction with the inner wall of said cylinder between said first opening and said second closure, whereby said hydraulic line is pinched therebetween,
(E) ram actuating means, and
(F) said second closure means being positioned to coact with the lower extremity of said depending portion to close said tube when said ram is actuated.

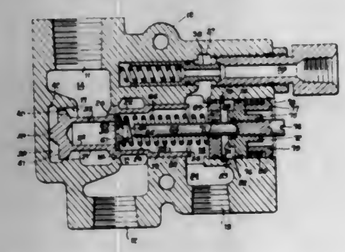
3,125,109
CONSTANT VOLUME CONTROL
Kenneth G. Kreuter, Goshen, Ind., assignor to Robertshaw Controls Company, a corporation of Delaware
Filed May 9, 1962, Ser. No. 193,522
5 Claims. (Cl. 137—82)



1. A pneumatic control device comprising,
a supply port for connection with a source of compressed air,
a control chamber having a leak port connected with the supply port,

a branch chamber separated from the control chamber by a pressure responsive movable wall,
valve means between the branch chamber and supply port for controlling supply and exhaust of air to the branch chamber in response to increases and decreases, respectively, in the control chamber pressure,
a flapper valve movable relative to the leak port to vary the pressure in the control chamber,
a diaphragm for actuating the flapper valve in response to pressure differentials acting on the diaphragm,
a transfer chamber having two inlets and a single outlet,
one of the inlets being connected with the branch chamber and the other adapted for connection with a variable signal pressure,
and a selector valve in the transfer chamber operative to connect the outlet with the inlet subject to the higher pressure.

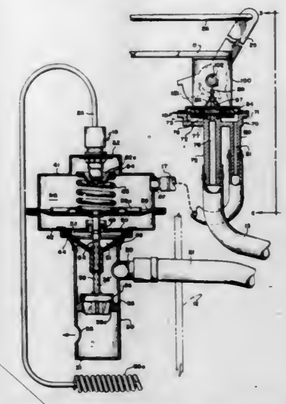
3,125,110
DEMAND TYPE FLOW DIVIDER
John D. Allen, South Euclid, and Ray G. Holt, Westlake, Ohio, assignors to Fawick Corporation, Cleveland, Ohio, a corporation of Michigan
Filed July 10, 1961, Ser. No. 123,035
5 Claims. (Cl. 137—101)



5. A flow divider valve comprising a valve body having inlet, excess flow and controlled flow chambers connected respectively to inlet, excess flow and controlled flow openings thereinto, valve means in the valve body between said inlet chamber and said excess flow and controlled flow chambers, said valve means being responsive to the pressure of the fluid in the inlet chamber for controlling flow from the inlet chamber to the excess flow and controlled flow chambers, and means in the valve body normally positioned in confronting relationship to an orifice portion of said valve means and cooperating therewith to modulate the flow from the inlet chamber to the controlled flow chamber, said means being movable, in response to a sufficiently high pressure in the controlled flow chamber, away from said portion of said valve means to increase the flow from the inlet chamber to the controlled flow chamber.

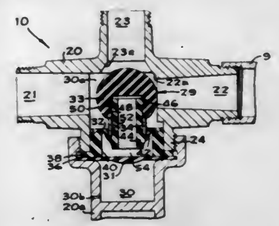
3,125,111
VACUUM REGULATOR
James Urban Daly, Columbus, Ohio, assignor to Ranco Incorporated, Columbus, Ohio, a corporation of Ohio
Filed Feb. 6, 1962, Ser. No. 171,419
4 Claims. (Cl. 137—102)

1. A vacuum regulator comprising:
(*a*) a body defining a chamber having inlet and outlet ports for connection to vacuum operated apparatus and a vacuum source respectively,
(*b*) said outlet port being defined in a boss projecting inwardly of said chamber from one wall thereof,
(*c*) flexible diaphragm means defining a wall of said chamber and movable toward and away from said outlet port in response to decreases and increases in pressure in said chamber,
(*d*) said flexible diaphragm means comprising an annular web portion surrounding a central tongue portion defined by an opening therebetween, with said tongue portion overlying said outlet port,



(*e*) a rigid plate disposed against the chamber facing surface of said diaphragm means and bridging said tongue defining opening,
(*f*) said plate being movable with said diaphragm means and having a central opening adapted to receive said boss to permit movement of said diaphragm means to bring said tongue portion into and out of closing engagement with said outlet port, and
(*g*) biasing means resiliently urging said plate and diaphragm means outwardly of said chamber.

3,125,112
SEQUENCE IRRIGATION VALVE
Richard W. Fitz Maurice, Santa Clara, Calif., assignor to FMC Corporation, San Jose, Calif., a corporation of Delaware
Filed Sept. 12, 1962, Ser. No. 223,051
7 Claims. (Cl. 137—119)

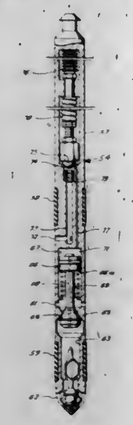


6. A sequential irrigation valve comprising a valve body having an inlet port and two outlet ports, a valve member in said valve body, and a valve actuator in said valve body; said actuator including a resilient tubular stem, a flexible skirt extending from said stem, skirt mounting means, a resilient diaphragm sealed with said skirt mounting means to form a control chamber, a valve ball mounted on said tubular stem for selectively closing said outlet ports, a water transfer port in said tubular stem, and a foraminous sleeve surrounds said stem and overlying the port in the stem.

3,125,113
GAS LIFT VALVE

Charles P. Lamb and William A. Dudley, Dallas, Tex., assignors to Merla Tool Corporation, Dallas, Tex., a corporation of Texas

Filed Jan. 26, 1961, Ser. No. 85,039
7 Claims. (Cl. 137—155)

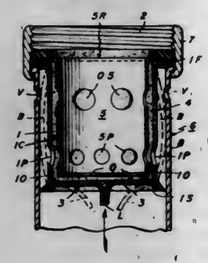


1. A gas lift valve comprising, a housing having a main inlet and a main outlet, a passageway interconnecting said inlet and outlet, a main valve seat in said passageway, a main valve member cooperable with said seat and controlling flow through said passageway, a first pressure-responsive member connected to the main valve member, second pressure-responsive means in said housing, means establishing communication between said outlet and one side of said second pressure-responsive means and one side of the first pressure-responsive member including a bleed passage between said one side of the first pressure-responsive member and the outlet, a pilot gas inlet, means establishing communication between the pilot gas inlet and said one side of said second pressure-responsive means and said one side of the first pressure-responsive member, and a pilot valve seat and pilot valve member positioned between the pilot gas inlet and the second pressure-responsive means and controlling flow through the pilot gas inlet, said pilot valve member associated with said second pressure-responsive means, pressure from said pilot inlet being effective on the valve member when seated in a direction urging the pilot valve member toward unseated position.

3,125,114
DUAL VALVED VACUUM BREAKER

Jesse D. Langdon, 1 John St., East Rockaway, N.Y.

Filed Aug. 15, 1960, Ser. No. 49,549
7 Claims. (Cl. 137—218)

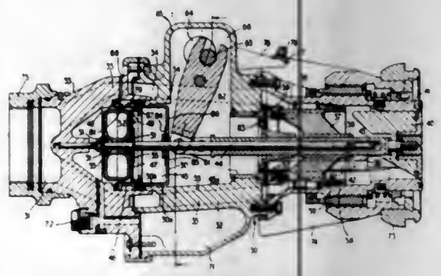


1. A dual valved breaker comprising a tubular casing having inlet and outer ends with a passage therebetween, sleeve valve means of deformable material depending from the inlet end into said passage toward the outlet end, said sleeve valve means provided with an imperforate wall portion overlying vent means perforated through the casing wall near said inlet end and forming first check valve means, second check valve means of deformable material extending across, secured within and normally closing the casing passage between said sleeve valve means and said outlet end, said second check valve means including lip means having outer face portions disposed toward said outlet end, supporting means supporting said sleeve in operative position and said second check valve means in spaced relation to said first check valve, said supporting means including a portion thereof for supporting said lip means against reversal under pressure from said outlet end, passage means being provided between the first and second check valve means whereby when a negative pressure exists within said inlet end external pressure is effective to collapse said imperforate wall of said sleeve to permit external pressure enter and break any vacuum existing within the inlet end of said casing.

3,125,115
PRESSURE RESPONSIVE FLOW CONTROL VALVES

Kenneth Victor John Gard, East Perth, Western Australia, Australia, assignor to Flight Refuelling Limited, Blandford, England

Filed Sept. 4, 1962, Ser. No. 221,219
4 Claims. (Cl. 137—220)



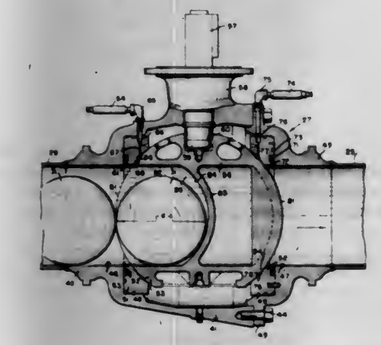
1. A flow control valve for maintaining a predetermined substantially constant pressure in liquid flowing therethrough comprising a valve body defining a flow passage therethrough, a flow controlling member movable in the said body to provide a variable restriction of said flow passage, means defining a control chamber co-axial with said flow controlling member, a plunger movable in said control chamber and coupled to said flow controlling member so as to move therewith, said plunger having a small clearance in said control chamber, sealing means for said plunger comprising a pair of sleeve-like diaphragms turned back on themselves so as to lie each against part of the wall of the chamber and part of the peripheral wall of the plunger and to roll from one surface to the other as the plunger moves longitudinally in the chamber, the plunger dividing the control chamber into two parts, passage means connecting one of said parts to a source of constant fluid pressure which acts on said plunger to move the flow controlling member and reduce the restriction of the flow passage thereby, a partition defining the end wall of the other part of the control chamber, apertures in said partition providing communication with the downstream side of the flow controlling member, a one-way flap valve controlling said apertures to prevent flow of liquid out of said control chamber part therethrough, a constantly open bleed aperture in said partition, a member mounted on said plunger and having a rim, and a sealing ring mounted

in said rim and adapted to make contact with said partition to seal the control chamber from the downstream side of said flow passage when the flow controlling member is moved to its fully open position.

3,125,116
APPARATUS FOR LAUNCHING AND EXTRACTING SPHEROIDS IN PIPELINES

Burt P. Schaberg, Colorado Springs, Colo., assignor to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Aug. 8, 1960, Ser. No. 48,265
3 Claims. (Cl. 137—268)

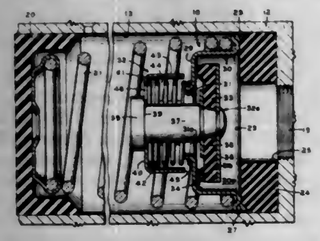


1. In a spheroid launching assembly comprising an inclined tube forming a gravity feed supply chamber for a plurality of spheroids in a row, the improvement characterized by a movable transfer member at the lower end of said chamber, a spheroid conveying passage at the other side of said transfer member, means providing an open pocket in said transfer member adapted to wholly receive one spheroid at a time, a spheroid in said pocket of such a diameter that when wholly received within said pocket with the pocket aligned with said chamber the next spheroid in the chamber row may contact the spheroid in the pocket under influence of gravity but remains outside the pocket, means for moving said transfer member to align the pocket with said passage for delivery thereto of the pocketed spheroid, and means on said transfer member effective during said movement of the transfer member for preventing displacement of the said next spheroid toward the transfer member.

3,125,117
CHECK VALVE ASSEMBLY

Glenn E. Borgard, Overland, Mo., assignor to Wagner Electric Corporation, St. Louis, Mo., a corporation of Delaware

Filed Aug. 8, 1961, Ser. No. 130,155
4 Claims. (Cl. 137—493.4)

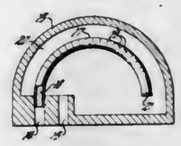


3. A self-aligning check valve for controlling pressure fluid flow through a master cylinder outlet having a seal disposed in circumscribing relation therewith comprising a valve housing and retainer normally in axial alignment, said valve housing and retainer being radially and axially movable and displaceable into a cocked position with respect to each other, said valve housing including an annular sidewall connected with a radially extending end wall, a free end on said side wall forming an annular lip for sealing engagement with the master cylinder outlet seal, a centrally located port in said end wall for fluid pressure communication with said master cylinder outlet, said valve retainer having a radially extending and substantially planar base wall, centrally located aperture means extending through said base wall, a self-aligning valve element extending through said port and aperture means and having a spaced abutment thereon, said abutment member extending axially beyond said base wall to obviate interference therebetween when said valve retainer is displaced to the cocked position, a radial shoulder on said abutment member for coplanar engagement with said base wall, a radially extending sealing member on said valve element for coplanar engagement with the end wall on said valve housing about said port, spring means interposed between said valve housing and retainer base wall normally urging said retainer into coplanar engagement with said abutment member and said end wall of said valve housing into coplanar engagement with said sealing member to close said port, and a predetermined radial clearance between said valve element and said aperture means and port and between said sealing member and said annular side wall of said housing to permit self-aligning movement of said valve element in both radial and axial directions relative to said valve housing and retainer in response to the spring force acting thereon upon relative displacement of said valve housing and retainer into the cocked position in order to predetermine the sealing position of said sealing member in substantially co-planar relation with said end wall.

3,125,118
THROTTLING VALVES

Harry C. Zeisloft, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Original application Jan. 14, 1960, Ser. No. 2,401. Divided and this application Apr. 16, 1963, Ser. No. 273,409
8 Claims. (Cl. 137—494)

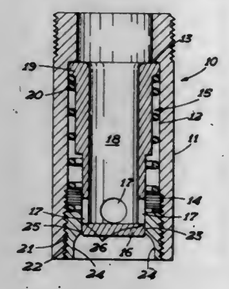


4. A throttling valve comprising a curved elastic Bourdon tube, a support connected to the tube and holding a portion of the tube fixed relative to the support, the remainder of the tube including the end thereof standing free, the tube being biased to vary consistently in curvature in response to a pressure differential between the interior and the exterior of the tube, a fluid connection to the said portion of the tube, and means on the tube closing the free end of the tube, the tube having a plurality of slits therein distributed along the tube and each extending generally normal to the axis of the tube disposed at one side, in the radial direction, of the axis of the tube so that variation of the curvature of the tube varies the area of the slits.

3,125,119
SLURRY AGITATOR VALVE

Harry J. Richgels, Manitowoc, Wis., assignor to Lakeside Machine Shop, Inc., Manitowoc, Wis., a corporation of Wisconsin

Filed June 15, 1960, Ser. No. 36,323
1 Claim. (Cl. 137—538)



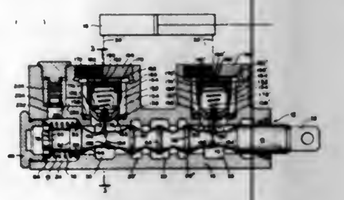
A slurry agitator valve comprising a tubular housing having open upper and lower ends and cylindrical inner and outer surfaces each of constant diameter, an annular stop flange secured to said housing at its upper end and projecting radially inwardly from its inner surface, a tubular valve member within said housing having an upper cylindrical outer surface and a lower cylindrical outer surface smaller in diameter than said upper cylindrical outer surface, a radial shoulder connecting said cylindrical surfaces of said valve member, an upper flange integrally formed on the upper end of said upper cylindrical surface and projecting radially outwardly therefrom, said upper flange slidably engaging the inner surface of said housing below said stop flange and spacing said upper and lower cylindrical surfaces from said inner surface of said housing so as to form an annular chamber, threads formed within the lower end of said housing, a ring shaped valve seat threaded into said lower end of said housing, said valve seat having an inner cylindrical surface slidably receiving said lower cylindrical surface of said tubular member, a wall closing the lower end of said tubular member and said tubular member having ports extending radially therethrough directly above said wall, a coil spring in said annular chamber compressed between said seat and upper flange so as to urge said upper flange upwardly into abutting engagement with said stop flange, said radial shoulder adapted to engage said valve seat so as to limit downward movement of said tubular member and compression of said coil spring, the lower inner surface of said valve seat being formed with a recess defined by a lower cylindrical surface coaxial with said housing and a curved dome shaped surface merging with said lower cylindrical surface and intersecting the inner cylindrical surface of said valve seat so as to define a sharp circular shearing edge, said dome shaped surface adapted without causing turbulence to gradually change movement of gases flowing through said ports from a radial direction to an axial direction relative to said tubular housing when said valve is open, and said wall sealing said chamber from said recess when said spring urges said upper flange into engagement with said stop flange.

3,125,120
CONTROL VALVE

Woodrow A. Hasbany, South Bend, Ind., assignor to Clark Equipment Company, a corporation of Michigan

Filed Feb. 6, 1961, Ser. No. 87,214
7 Claims. (Cl. 137—596.12)

5. In a valve for controlling the operation of a hydraulic cylinder, a body having a bore and a fluid inlet and a fluid outlet passage intersecting said bore, a fluid control means in said bore extending into said outlet passage and having a laterally extending surface within said outlet passage: a poppet valve in said outlet passage, comprising a chamber with a valve seat defining a port and facing away from said control means, a hollow cylindrical element in said chamber having a surface engaging said seat and closing said port and having an

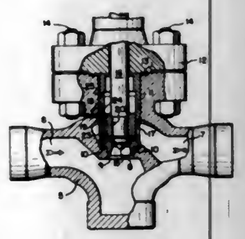


orifice in the end adjacent to said port, a valve means for closing said orifice, a means adapted to be engaged by said surface on the control means for opening said valve means, a means for reciprocably receiving and supporting said element and having a restricted orifice in the side thereof closed by said element when the element is fully retracted from its seat, and a spring means for urging said valve means and said element to their respective seats.

3,125,121
THROTTLING VALVE

John T. Muller, Nutley, N.J., assignor to Leslie Co., Lyndhurst, N.J., a corporation of New Jersey

Filed Feb. 17, 1961, Ser. No. 90,088
1 Claim. (Cl. 137—614.11)

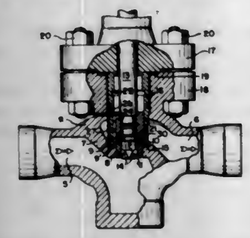


In a throttling valve comprising a valve body having an inlet side and an outlet side, a valve seat between the inlet and outlet sides, a valve member cooperating with the valve seat, a valve stem operatively associated with the valve member, a sleeve-like member surrounding the valve stem and axially locked to the stem so as to be movable axially therewith, and a cylinder in the valve body closely surrounding the sleeve-like member and having a port on only one side thereof facing the outlet side of the valve body, the improvement which comprises a sleeve-like member composed essentially of a sector portion and a separate guide portion, the sector portion being positioned adjacent the port of the cylinder, the thickness of the sector portion being substantially less than the space between the valve stem and cylinder within which the sector portion is positioned, the outer surface of the sector portion having a radius of curvature identical with that of the inner surface of the cylinder, and in which the guide portion of the sleeve-like member is substantially U-shaped in transverse cross-section.

3,125,122
THROTTLING VALVE

John R. Bermingham, Santa Ana, Calif., assignor to Leslie Co., Lyndhurst, N.J., a corporation of New Jersey

Filed Dec. 5, 1961, Ser. No. 157,877
4 Claims. (Cl. 137—625.3)

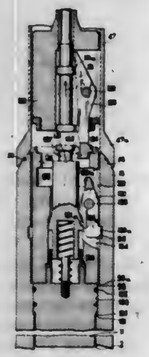


1. In a throttling valve comprising a valve body having an inlet side and an outlet side, a valve seat between the inlet and outlet sides, a valve member cooperating with the valve seat, a valve stem operatively associated with the valve member, a sleeve-like member surrounding the valve stem and axially locked to the stem so as to be movable axially therewith, and a cylinder in the valve body closely surrounding the sleeve-like member and having a port on only one side thereof facing the outlet side of the valve body, the sleeve member having a lower throttling edge axially aligned with the cylinder port, the improvement which comprises a valve seat body portion having a central passageway communicating between the valve seat and the inlet side of the valve, a second throttling valve seat formed in the central passageway, the valve stem having a portion extending beyond the valve member and into the central passageway of the valve seat body portion, and a throttling surface formed on said extending portion of the valve stem, the overlap between the lower throttling edge of the sleeve and the cylinder port being substantially equal to the overlap between the second throttling valve seat and the upper edge of the throttling surface on the valve stem when the valve stem is in the valve-closed position.

3,125,123
DEVICES FOR ANCHORING AND EXTRACTING PLUGS IN AND FROM FUEL CHANNEL OF NUCLEAR REACTORS

Roland Roche, Clamart, Jean-Marc Hässig, Paris Orsay, and Pierre Cousseran, Clamart, France, assignors to Commissariat a l'Energie Atomique, Paris, France

Filed Aug. 10, 1962, Ser. No. 216,231
6 Claims. (Cl. 138—89)

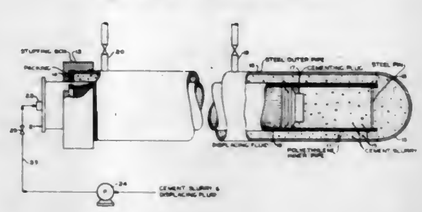


1. A device for anchoring and extracting plugs in and from fuel channel of nuclear reactors, which comprises, on a recessed portion of the plug, a plurality of pawls pivoted on said plug and adapted to lock same relative to the fuel channel to be closed, a member for locking said pawls which is axially movable inside said plug between two positions in which said pawls are locked and released relative to said channel, an inner shoulder adjacent to the open end of the plug and, on a clamp axially movable in relation to said plug, a plurality of levers axially fast on said clamp but pivoted thereon so as to be radially movable in relation thereto, each lever carrying on its end an outer projection and an inner projection, means for controlling the radial movements of said levers which are associated with means for controlling the axial movements of said clamp and lever assembly in relation to said plug between a first position in which said outer projections of said levers abut against the edge of said shoulder so as to stop said clamp at a predetermined distance from said plug, a second position in which said inner projections of said lever engage said locking member and said levers are retracted to permit their introduction into said plug, and a third position in which said clamp contacts said plug, said outer projections of said levers drivingly engage the shoulder and release the pawls and said inner projections keep said locking member in the unlocking position.

3,125,124
CONDUIT WITH CORROSION RESISTANT LINER

Charles A. Daniels, Bartlesville, Okla., William M. Schul, Renton, Wash., and William B. Buck, Oklahoma City, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Filed Nov. 4, 1960, Ser. No. 67,390
4 Claims. (Cl. 138—141)



1. A reinforced, corrosion resistant line pipe assembly comprising a steel pipe; a substantially rigid, resinous pipe selected from the group of resinous materials consisting of solid linear polyethylene, a solid linear copolymer of ethylene and propylene, and a solid linear copolymer of ethylene and 1-butene, said resinous pipe being positioned in said steel pipe so as to provide an annulus between said pipes; and a hydrated hydraulic cement substantially filling said annulus.

3,125,125
DOBBY

Erwin Pfarrwaller, Winterthur, Switzerland, assignor to Sulzer Freres, S.A., Winterthur, Switzerland, a corporation of Switzerland

Filed Feb. 1, 1961, Ser. No. 86,489
Claims priority, application Switzerland Feb. 12, 1960
7 Claims. (Cl. 139—71)

1. in a dobby for actuating the heddle frames of a weaving machine:

a main drive shaft,

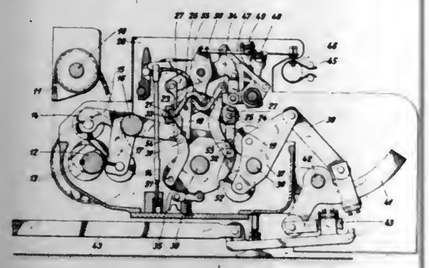
two reciprocatingly movable lifter rails,

rockable members,

means operatively connected to each of said rockable members for actuating a heddle frame,

a rocking lever operatively connected to said drive shaft to be rocked thereby,

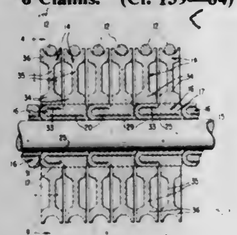
separate means individually operatively connecting said lifter rails to said rocking lever at different distances from the fulcrum of said lever,



two lifting blades operatively connected to each of said rockable members, the lifting blades connected to the same rockable members being alternatingly engageable by said lifter rails for rocking said rockable members, and

leverage changing means formed in the operative connection between said rocking lever and said rockable members for equalizing the angles through which said rockable members are rocked by said lifter rails.

3,125,126
HARNESS PULLEYS FOR LOOMS
Walter Engels, Tryon, N.C., assignor to Southern Machinery Company, Greer, S.C., a corporation of South Carolina
Filed Mar. 22, 1963, Ser. No. 267,303
6 Claims. (Cl. 139—84)



6. In a loom, in combination, a harness sheave support shaft, a uniformly closely spaced stack of harness sheaves independently rotatably mounted upon said shaft and arranged in pairs, a two-part bearing for each pair of sheaves and carrying the latter, said bearing comprising a generally J-shaped sleeve and a telescopically interfitting stepped diameter cylindrical sleeve, said pair of sheaves press fitted on the exteriors of the interfitting sleeves to rotate therewith, said interfitting sleeves being independently rotatable and said J-shaped sleeve rotatable upon said shaft, said interfitting sleeves having a combined axial length approximating the combined axial width of said pair of sheaves, said interfitting sleeves having all of their bores lined with Teflon.

3,125,127
WARP FEEDING
Hans Locher, Uster, Switzerland, assignor to Zellweger Ltd., Uster Factories for Apparatus and Machines, Uster, Switzerland, a corporation of Switzerland
Filed Nov. 6, 1961, Ser. No. 150,280
5 Claims. (Cl. 139—97)

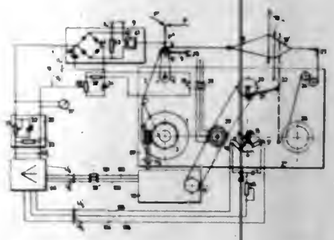
1. In a method for maintaining the tension of the warp supplied from a warp beam in a loom, the steps of:

producing a first electric signal corresponding to the warp tension,

comparing said first signal with a second electric signal that corresponds to the set point of the warp tension for producing a third electric signal that corresponds to the difference between the first two signals and has a certain polarity when the warp tension exceeds the set point and has the opposite polarity when the warp tension is below the set point,

amplifying said third signal to produce a fourth signal,

actuating an electromechanical motor operator including a shaft by said fourth signal to change the rotation of the shaft upon a polarity change of the third signal and to rotate the shaft at a speed corresponding to the amplitude of the fourth signal,

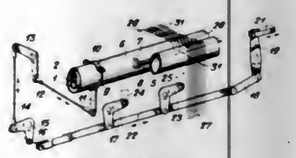


rotating the warp beam at a direction and speed corresponding to the direction and speed of the shaft whereby the warp beam pays out warp at increasing warp tension and takes up warp at decreasing warp tension,

producing an additional electric signal of a certain polarity when closing the shed of the loom and producing an additional electric signal of the opposite polarity when opening the shed, and

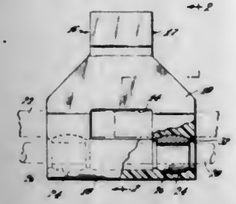
amplifying said additional signals and superimposing same on the fourth signal for operating said shaft and the warp beam to let off additional warp upon opening the shed and to take up warp upon closing the shed, independently of the magnitude of the third signal.

3,125,128
WARP TENSION CONTROL IN WEAVING MACHINES
Erwin Pfarrwaller, Winterthur, Switzerland, assignor to Sulzer Freres, S.A., Winterthur, Switzerland, a corporation of Switzerland
Filed May 9, 1961, Ser. No. 108,900
Claims priority, application Switzerland May 11, 1960
4 Claims. (Cl. 139—115)



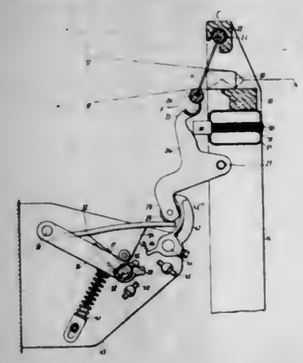
1. In a weaving machine having a warp beam, a warp tensioning beam for all warp threads, a carrier beam supporting said tensioning beam, the axes of rotation of said beams being parallel, and warp threads running off said warp beam and over said tensioning beam: a rodlike element placed in parallel relation and adjacent to said carrier beam, and means for oscillating said rodlike element around the longitudinal axis of said carrier beam, at least a portion of said warp threads passing from said tensioning beam to engagement with said rodlike element and with said carrier beam for periodic stretching and slackening of said portion of said warp threads.

3,125,129
LOOM PICKER
Clayton E. Schmidt, New Bedford, Mass., assignor to Schmidt Mfg. Co., New Bedford, Mass., a corporation of Massachusetts
Filed Jan. 17, 1962, Ser. No. 166,766
1 Claim. (Cl. 139—160)



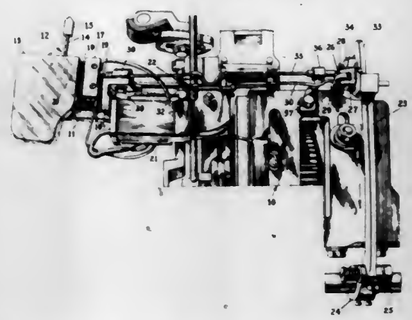
A loom picker comprising a rigid body of high molecular weight polyethylene containing an aperture for receiving the end of a picker stick, an impact head at one side of the aperture, a guide sleeve at the other side of the aperture, said guide sleeve having near its ends spherically curved recesses, the cylindrical portions of the sleeve inwardly thereof being of lesser diameter than the maximum diameter of the spherically curved surfaces of the recesses, and the cylindrical portions of the sleeve outwardly of the recesses flaring from a diameter which is less than the diameter of the spherical curved surfaces to a greater diameter, and bearing elements disposed in said recesses, said bearing elements having spherically curved outer surfaces for rotatable engagement with the recesses whereby each bearing element is universally rotatable about a point on the axis of the sleeve, said bearings having cylindrical holes for slidably receiving a guide rod, said flaring portions of the sleeve facilitating the insertion of the bearings into the recesses.

3,125,130
ARRANGEMENT ON A LOOM WITH FIXABLE LOOSE REED
Hans Zollinger, Ruti, Zurich, Switzerland, assignor to Ruti Machinery Works Ltd., Ruti, Zurich, Switzerland
Filed Aug. 2, 1961, Ser. No. 128,883
Claims priority, application Switzerland Aug. 25, 1960
5 Claims. (Cl. 139—189)



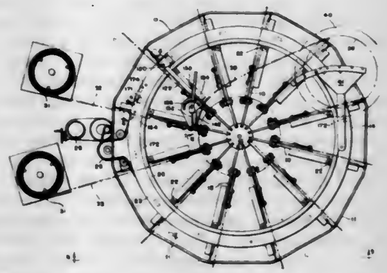
1. In a loose reed motion for power looms having a shed, a lay movable alternately forwardly to beat up the weft and rearwardly, a reed movably supported for movement with said lay, the improvement which comprises, means operable cyclically for releasably locking said reed in place when said reed is moved forwardly to beat up said weft and said shed is free of obstructions, means to render ineffective said means operable cyclically to lock said reed when said shed is obstructed, and means responsive to the last-mentioned means to swing the reed rearwardly independent of the movement of said lay when said shed is obstructed thereby to preclude the reed from being moved rearward solely by the obstruction in said shed and the warp threads and thereby to positively preclude breakage of said warp threads.

3,125,131
FEELER MECHANISM FOR LOOMS
Joseph M. Budzyna, East Douglas, Mass., and Albert A. Laferte, Woonsocket, R.I., assignors to Draper Corporation, Hopedale, Mass., a corporation of Maine
Filed Jan. 5, 1962, Ser. No. 164,487
3 Claims. (Cl. 139—273)



1. A filling feeler mechanism for looms having in combination a slidable filling feeler, bobbin transferring linkage, a switch member adapted to be energized by said slidable filling feeler, a solenoid activated by said switch for initiating filling replenishment by means of said linkage, said switch member including an energizing control and a reset control, said linkage including a mechanical means effective upon said reset control during said filling replenishment.

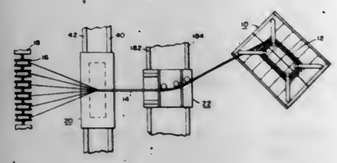
3,125,132
METHOD AND MEANS FOR MAKING CAGES FOR REINFORCING CONCRETE TUBULAR ELEMENTS
James D. Knisely, Houghton, Wash., assignor to George P. Duecy and Howard F. Sievers, both of Everett, Wash.
Filed Mar. 19, 1962, Ser. No. 180,636
8 Claims. (Cl. 140—71)



4. Apparatus for making wire cages for reinforcement of concrete structures comprising means to longitudinally guide a plurality of radially spaced cage wires from a plurality of wire supply reels through a curved path upwardly into a generally circular pattern in which each of said wires is vertically disposed, means to grasp and positively

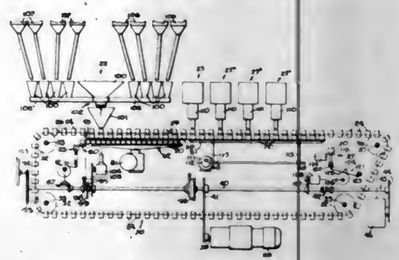
advance said wires individually and intermittently to cause said vertically disposed wires to move upwardly in equal increments, annular means revolvable around said vertically disposed wires to wind a cage wire about said circular pattern of vertical wires to cause the wire which is wound to contact said upwardly moving vertically disposed wires, one by one, in a helical pattern, radially mounted clamping means associated with each of said vertically disposed wires to clamp said wound wire against each of said vertically disposed wires where they contact one another, welding means including said clamping means associated with each of said vertically disposed wires to weld said wound wire to said vertically disposed wires at said points of contact and while the same are clamped together, and means actuated by revolution of said annular means to operate said wire advancing means, said clamping means and said welding means.

3,125,133
SHELL COIL WINDING MACHINE
John A. Klingensmith, Muncie, Ind., Herbert W. Speight, Sharpsville, Pa., and Sydney L. Gale, Rochester, N.Y., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 30, 1961, Ser. No. 99,564
7 Claims. (Cl. 140—92.2)



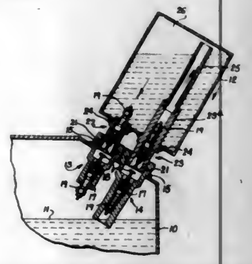
1. Apparatus for winding pancake conducting coils to be disposed on a transformer magnetic core from multi-strand cable, said apparatus comprising a multi-spool supply source from which said multi-starand cable is supplied with one wire strand of said cable being supplied by each spool of said source, a winding table rotatable about an axis normal to the plane of the table, a plurality of mandrel elements secured to the table top, means for adjusting the positions of the respective mandrel elements along the plane of the table top to any one of a plurality of positions to form bounds of a winding form, a flat removable lifting frame on said table top, said frame including a plurality of sections forming a grid pattern defining a plurality of windows, said mandrel elements extending through windows of the frame whereby when a coil is wound around said mandrel elements the coil is formed flat on the lifting frame which may be removed from the table with the coil after the coil is wound, a tension device interposed between the winding table and the source of wire strands for applying a drag to the strands, said tension device comprising a plurality of pairs of shoes, each having a movable endless belt thereabout, the belts of each pair of shoes facing each other to receive a wire strand therebetween, and means for forcing the shoes of each pair toward each other whereby wire strands passing between the shoes are frictionally engaged by the belts to apply drag to the strands, and a back-bender interposed between the tension device and the winding table for applying a reverse bend to the cable relative to the bend applied to the cable as it is wound around the winding form, said back-bender comprising a rotatable bending roll, and guide means fore and aft of the bending roll along the line of cable flow for constraining strands of the cable in side by side order in the flat plane of the cable and for guiding the cable into edgewise engagement with the roll, said flat plane of the cable being that plane which will lie within the plane of the coil when the cable is part of the coil.

3,125,134
MACHINE FOR FILLING PREFORMED CONTAINERS
Kenneth R. Johnson, Rockford, Ill., assignor to Bartelt Engineering Company, Inc., Rockford, Ill., a corporation of Delaware
Filed June 4, 1962, Ser. No. 199,690
12 Claims. (Cl. 141—78)



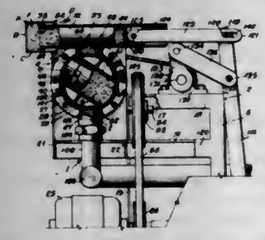
12. A machine for filling cans of uniform height having, in combination, an endless movable conveyor supported in a vertical plane and having a run guided along a straight horizontal path, a multiplicity of tubular filling spouts adapted to telescope loosely within said cans and supported on and spaced uniformly along said conveyor for travel along said horizontal path with their parallel axes disposed vertically while traveling along said path, an elongated horizontal track spaced below the lower ends of the spouts on said run a distance less than the height of said cans, mechanism for driving said conveyor to advance said row of spouts to and along said track, mechanism operable in timed relation with said conveyor to elevate an empty can into telescoping relation with the lower end of the first spout short of the inlet end of said track and support such can substantially at the level of said track until such spout engages the inside of the can and slides the latter onto said track, and a filler intermediate the ends of said track operable to discharge a quantity of material to be canned into the upper end of one of said spouts.

3,125,135
FILLING DEVICE WITH DETACHABLE FLOW COUPLING MEANS
Ralph K. Boyer, Cleveland, Henry W. Krohn, Jr., North Olmsted, and Ewald F. Tobold, Willoughby, Ohio, assignors, by mesne assignments, to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Aug. 14, 1961, Ser. No. 131,264
6 Claims. (Cl. 141—290)



1. In combination with an apparatus including a container adapted to receive a liquid fuel, a fuel supply container, and a filling device for interconnecting said supply container and said apparatus container and comprising two detachable flow coupling means connected with a wall of said supply container and a wall of the apparatus container, one of said flow coupling means being for fuel transfer and communicating with the interior of the supply container adjacent the wall thereof with which it is connected and with the interior of the apparatus container above a desired predetermined liquid level therein, the other of said flow coupling means being for air transfer and having a first passage portion communicating with the interior of the supply container adjacent the opposite wall thereof from the first mentioned wall and a second passage portion including an air inlet opening communicating with the interior of the apparatus container below said desired predetermined liquid level, both of said flow coupling means being provided with valve means operatively associated with said containers and which are closed or opened automatically when said flow coupling means are detached or attached and whereby when attached and the liquid fuel in the apparatus container rises to said desired predetermined liquid level therein it covers the air inlet opening of said second passage portion and terminates transfer of air through said other flow coupling means from said apparatus container to said supply container and of fuel from said supply container to said apparatus container through said one of said flow coupling means.

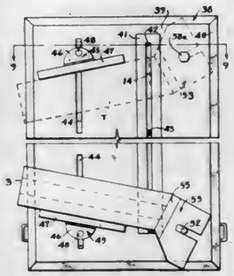
3,125,136
CAN FILLING MACHINE
Jack M. Miller, Shawnee Mission, Kans., Lewis F. Alley, Kansas City, Mo., Marshall Long, Overland Park, Kans., and Charles F. Rapp, Kansas City, Mo., assignors to Marlen Equipment Company, Overland Park, Kans., a corporation of Missouri
Filed July 10, 1961, Ser. No. 122,811
10 Claims. (Cl. 141—369)



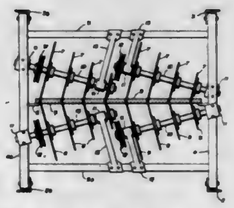
1. A machine for filling cans with a pasty material, including a nozzle having a discharge end over which an empty can is sleeved with the bottom of the can abutting the discharge end of the nozzle, a ram in the nozzle, a rocker arm, a link connecting the rocker arm with the ram, a crank, a link connecting the crank with the rocker arm for swinging the rocker arm to reciprocate the ram from a retracted position in said nozzle to a projected position with the ram projecting slightly from the discharge end of the nozzle, and means for injecting a measured quantity of material directly into the nozzle at a point between the retracted position of the ram and said discharge end of the nozzle for ejection into the can during movement of the ram to said projected position, one of said links providing a lost motion connection to supplement lag of the ram at limits of its movement.

3,125,137
METHOD AND APPARATUS FOR FABRICATING INSULATION SECTIONS FOR TUBE TURNS
George P. Walker, Westport, Conn., assignor to Johns-Manville Corporation, New York, N.Y., a corporation of New York
Filed Dec. 31, 1958, Ser. No. 784,253
9 Claims. (Cl. 143—25)

1. A system for cutting insulation sections for tube turns from a standard semi-cylindrical insulation section comprising a saw blade, a table mounted adjacent the blade for movement past the cutting edge of the blade, a slot in the table in which the blade is mounted allowing movement of the table past the blade, adjustable positioning means on the table, and a template having a projection to be inserted in the slot and with which the positioning means is mated thereby to locate the positioning means at a predetermined angle relative to the cutting blade.



3,125,138
GANG SAW FOR IMPROVED TONGUE AND GROOVE JOINTS FOR FLOORING
Adolf Bolenbach, 12630 Gail Ave., Sunnyvale, Calif.
Filed Oct. 16, 1961, Ser. No. 145,511
1 Claim. (Cl. 143—38)



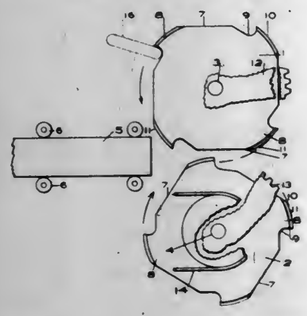
An improved table gang saw comprising a framework in the form of a rectangular parallelepipedon having two sides, two ends, a vertical bar near the center of each side of the frame and attached slidably up or down to the upper and lower part of the frame, a top element, a lower element near the bottom of the framework and a slotted horizontal worktable intermediate the height of the framework; two upper bearings above the worktable and secured one at each side of the framework; two upper bearing-supporting arms depending from the mid-portion of the top element with the bearing in each alined with the upper bearing nearest it; an upper shaft journalled in each pair of such alined bearings; an upper series of spaced circular saws of progressively increasing diameters mounted on each upper shaft for rotation therewith, said upper bearings, shafts and saws being so inclined and positioned above the worktable as to produce a series of inclined cuts of equal depths in the top of a work piece on said worktable; two lower bearings below the worktable and secured to the respective sides of the framework; two lower bearing supporting arms extending upwardly from the mid-portion of said lower element with the bearing in each alined with the lower bearing nearest it; a lower shaft journalled in each pair of these alined bearings; a lower series of spaced circular saws of progressively increasing diameter mounted on each lower shaft for rotation therewith; said lower bearings, shafts and saws being so inclined and positioned below the worktable that the saws being so inclined and positioned below the worktable that the saws project through the slot in said worktable and make a series of inclined cuts of equal depths in the bottom of a workpiece on said

worktable; the upper and lower saws combining to cut obtuse-angled V-sectioned kerfs in a wide board to divide it into a plurality of narrow boards with obtuse-angled matching edges; and means to rotate said shafts and saws.

3,125,139
CIRCULAR SAW BLADES FOR OPERATION IN A COMMON KERF

Franz Weinzierl, Nakusp, British Columbia, Canada (2667 E. 57th Ave., Vancouver 16, British Columbia, Canada)

Filed Jan. 31, 1962, Ser. No. 170,143
1 Claim. (Cl. 143—40)

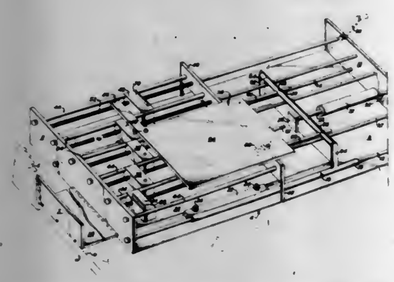


A sawmill having one or more pairs of circular blades of a common diameter and parallel arbors on which the blades are mounted with the blades of each pair aligned for travel in a common kerf, said blades having cut away portions therein, in which the arbors are spaced apart less than the overall diameter of a blade and formed with each blade cut away at intervals on straight lines tangential to imaginary circles concentric with but of less diameter than the saw blades, and including a single tooth on the peripheral uncut portions of the blade rearwardly of each sawdust gullet and with said teeth spaced at quarterly intervals on the blade, the saw blades mounting on the arbors in relation to each other by which the teeth of each blade are aligned with their points extending centrally in relation to the cut away portion of the opposing blade.

3,125,140
SAW SET WORKS

Luther E. Nichols, Morristown, Tenn., assignor to Walters Mfg. Company, Morristown, Tenn., a corporation of Tennessee

Filed Oct. 6, 1960, Ser. No. 60,845
2 Claims. (Cl. 143—174)

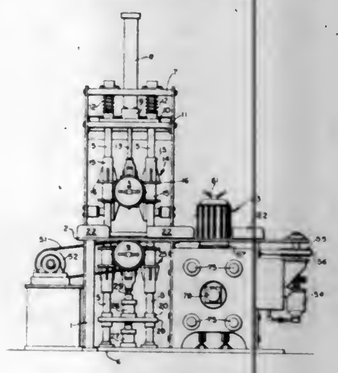


1. In apparatus of the character described having a plurality of stop members and index means to engage said stop members; the improvement comprising an electrical control system having a circuit for each stop member, switch means for selectively completing individual ones of said circuits, separate contact means for each of said circuits sequentially disposed on said switch means, and secondary contact means disposed between each of said first contact means, said secondary contact means completing a circuit which causes rearward movement of said index means.

3,125,141
TIMBER INCISING APPARATUS

Charles W. Best and Joe T. Napier, Lafayette, Calif., assignors to J. H. Baxter & Co., San Francisco, Calif., a corporation

Filed Dec. 19, 1960, Ser. No. 76,608
12 Claims. (Cl. 144—2)



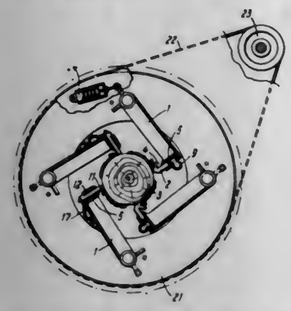
8. In combination with apparatus in which a pair of horizontal and a pair of vertical cylindrical, opposed incising drums having radially projecting teeth are positioned to sequentially receive between the drums of each said pair an elongated timber of rectangular cross section for respectively incising the horizontal and vertical faces of such timber by penetration of said teeth, first carriages each supporting at least one drum of each said pair for movement toward and away from the respective other drum of each pair for accommodating timbers of varied widths and thicknesses therebetween, hydraulic cylinder means connected to each said first carriage for so moving said first carriage and its associated drum, and step control means connected to each said cylinder means for controlling the extent of movement of the same and operable in increments corresponding to the nominal widths and thicknesses of timbers to be so incised.

3,125,142
TOOL MEANS FOR A ROTARY DEBARKING MACHINE AND MOUNTING MEANS THEREFOR

Axel Erland Andersson, deceased, late of Gavle, Sweden, by Hans Lindberg, legal representative, Central Plan 5, Gavle, Sweden

Filed Feb. 19, 1962, Ser. No. 174,313
Claims priority, application Sweden Mar. 24, 1961
7 Claims. (Cl. 144—208)

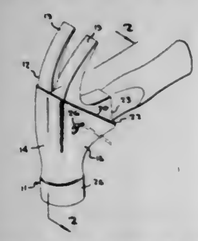
1. In a debarking machine of the type in which logs while restrained against rotation are fed axially to and through the machine, a rotor having a central opening through which the logs to be debarked are fed, a plurality of tool-supporting arms carried by said rotor and mounted for pivotal movement about axes parallel to the axis of the rotor whereby such arms can move toward and away from the axis of the opening in the rotor, debarking tool means mounted at the free end of each arm comprising a plurality of shaped, individual bark-removing members, support means carried by the free end of each arm for supporting said individual members one behind another in the feed direction of logs to be debarked, each member terminating in a blunt debarking edge, said support means including surfaces guiding the individual members for displacement in a plane substantially at right angles to the longitudinal axis of the associated arm, elastic means interconnected between each of the individual bark-removing members and the associated arm for yieldingly maintaining the debarking edge of each such member against the surface of a log to be debarked and means for moving the tool arms about their axes to urge such arms toward said log to be debarked.



3,125,143
COMBINED GUARD AND NAIL SETTING ATTACHMENT FOR A CLAW HAMMER

John M. Wilson, 843 McNeilly Road, Pittsburgh 26, Pa.

Filed Oct. 16, 1962, Ser. No. 230,900
6 Claims. (Cl. 145—30)



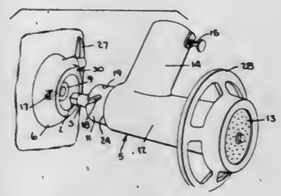
1. A guard for a claw hammer head comprising a single resilient and stretchable hollow body adapted to closely receive and to conformably fit over the striking portion of a claw hammer head, said body comprising an outer longitudinal wall, a pair of side walls, an inner longitudinal wall, and an end wall, whereby the body is closed at one end, the inner longitudinal wall being arcuately curved to iit between the shank portion and striking head portion of a hammer head, the outer longitudinal wall being of sufficient length to completely cover the outer end surface of a claw hammer head except for the claws thereof, and both of said side walls having substantially diagonally extending continuous end edges extending from the end edge of the outer longitudinal wall to the end edge of the inner longitudinal wall, said side walls being adapted to cover major portions of both side surfaces of the hammer head.

3,125,144
LOCKING MEANS FOR MEAT CHOPPER

Arnold W. Lundell, 220 Byram Shore Road, Byram, Conn.

Filed Sept. 22, 1961, Ser. No. 140,977
3 Claims. (Cl. 146—182)

1. In a commodity processing machine, the combination of a frame having a sleeve, said sleeve having a first annular extension, a fixed pin protruding from the inner periphery of said first annular extension, and a casing having a worm for a rotary cutter, said casing having a second annular extension fitting into said first annular extension, said second annular extension having a first recess in its outer periphery to receive said fixed pin and enable said casing when turned to be drawn into operative position, a second lock for anchoring said second annular extension to said first annular extension, a locking ring for anchoring said worm in place, said worm rotating in a counterclockwise direction in said casing when functioning, said first recess cooperating with said fixed pin



to anchor said casing to said frame when said casing rotates in a counterclockwise direction relative to said frame, said ring screw-threadedly connected to said casing rotating in a clockwise direction when being turned into anchoring position in order to enable said worm when functioning to cooperate with said first recess and fixed pin to anchor said casing to said frame, and said locking ring when turning into locking position indicating to the attendant that the casing is not in locked position with said fixed pin should the rotation of said locking ring turn said casing a clockwise out of locking relation with said fixed pin.

3,125,145
HANDBAG

Lowene B. Williams, U.S. Embassy—AID Santo Domingo, Dominican Republic

Filed Feb. 18, 1963, Ser. No. 259,285
4 Claims. (Cl. 150—28)



1. A handbag comprising two similar article carrying pockets spaced from each other, said pockets being connected by a pair of central portions through which the wrist of the user may be inserted, said pockets and said central portions being of substantially the same width, each of said pockets having an opening therein, said openings being substantially hidden from view and inaccessible to others, said openings each having closure means thereon.

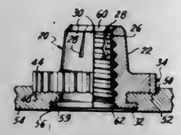
3,125,146
SHEET METAL FASTENERS, DRIVING TOOLS, AND METHOD OF DRIVING

Joseph Rosán, Newport Beach, Calif., assignor to Rosan Engineering Corporation, Newport Beach, Calif., a corporation of California

Filed Dec. 16, 1959, Ser. No. 860,015
8 Claims. (Cl. 151—41.73)

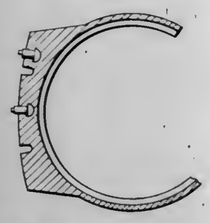
1. A metallic fastener for attachment to a workpiece having an aperture therein, said fastener including, a body of material which is harder than the material of the workpiece and having a pilot flange of approximately the same diameter as the diameter of the aperture in the workpiece in which it is to be mounted, said body having an

abutment flange, said flanges being spaced apart by an axial wall on said body to define an annular recess having upper and lower wall portions constituted, respectively, by a portion of the underside of said abutment flange and the upper side of said pilot flange and extending generally normal to the axis of said body, said abutment flange being provided with teeth extending around the outer periphery thereof adapted to be embedded in the metal of said workpiece to positively lock said abutment flange and said body against rotation relative to said workpiece, said teeth being defined by surfaces which merge to form generally axially extending edges, said abutment flange having a diameter, exclusive of said teeth, that is substantially greater than the diameter of said pilot flange to cause said abutment flange to overlie a substantial portion of the surface of said workpiece surrounding said aperture, the ends of said teeth including axial portions that extend therefrom slightly beyond the



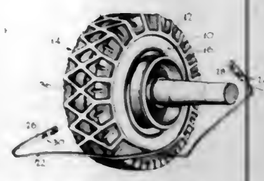
underside of said abutment flange, said ends having upwardly and inwardly inclined extremities adapted to be embedded in said workpiece to prevent relative rotation between said body and said workpiece and to assist in producing an inward radial flow of metal into said recess, whereby, upon applying an axial force to said abutment flange in a direction toward said workpiece, said abutment flange will be forced into said workpiece, thereby causing a portion of the metal of said workpiece surrounding said aperture to flow radially into and substantially fill said recess, the axial dimension of said recess being substantially less than the thickness of said workpiece so that only a small penetration of said large abutment flange into said workpiece is necessary to displace sufficient metal to fill said recess, said body having an axially extending extremity portion formed integrally therewith and incorporating a thread engageable by an associated fastener.

3,125,147
ANTI-SKID DEVICE
Ernest Juhana Hakka, Ottawa, Ontario, Canada, assignor to Lennart Hakka, Lauttasaari, Finland
Filed July 5, 1961, Ser. No. 121,879
Claims priority, application Canada July 4, 1960
8 Claims. (Cl. 152—210)



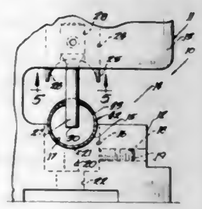
1. An anti-skid element comprising, in combination, an elongated metal body having a substantially uniform cross section throughout its length and being formed with an axial bore extending from one toward but short of the other end thereof and having at said other end a head integrally connected at one end thereof to said elongated body, said head extending at its connected end with an annular face substantially normal to the axis of the body beyond the periphery of the latter and tapering from said face toward its free end so that said head may be forced with its tapering end into a radial hole formed in the tread surface of a tire to anchor said head and body in the tire; and a wear resistant rod-shaped insert having a length only slightly longer than that of said bore and extending through the length of the latter fixedly secured along a major portion of the length in said bore and projecting only with a short end portion thereof beyond said one end of said body.

3,125,148
ANTI-SKID TRACTION DEVICE
Richard J. Fox, 158 Cobalt Ridge Drive S., Levittown, Pa.
Filed Sept. 11, 1963, Ser. No. 308,110
6 Claims. (Cl. 152—221)



1. An anti-skid traction device for vehicle tires comprising an integral, molded assembly including an annular inner side strip and an annular discontinuous outer side strip, said inner and outer side strips being spaced from but parallel to each other and being connected by a series of transverse strips extending therebetween and forming treads for the device, said inner side strip being discontinuous and having a pair of elongated free end portions, said free end portions being molded to normally overlap each other and to bend around from the inner side strip to a position overlying the outer side strip, a pair of spaced eyelets on the ends of said outer side strip, a pair of spaced connecting means on said outer side strip, each of said connecting means being diagonally opposed to a corresponding eyelet, an engagement means on each of said elongated free end portions, and each of said elongated free end portions being constructed to releasably pass through a corresponding eyelet and to be releasably attached to the corresponding diagonally opposed connecting means by connection therewith of its engagement means.

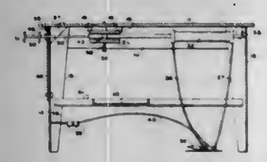
3,125,149
PERFORATING APPARATUS FOR TUBING
Harry J. May, Lombard, Ill., assignor to Vogel Tool & Die Corporation, Melrose Park, Ill., a corporation of Illinois
Filed Aug. 28, 1961, Ser. No. 134,351
5 Claims. (Cl. 153—2)



1. A piercing apparatus for piercing holes in a tube comprising a C-shaped base having a lower platen and an upper punch guide disposed above said platen to provide a space therebetween, a tube support on said platen including a die having a transversely extending semi-cylindrical cavity adapted to support a lower side of a tube with

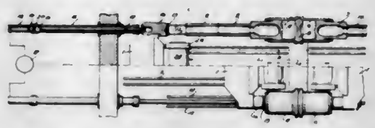
an upper side of said tube projecting upwardly into said space in unsupported relation, said die having a central vertical bore providing in said cavity a cylindrical cutting edge, said punch guide having a vertical bore open at its upper and lower ends, said bore having its vertical axis coincident with the vertical axis of said central bore, a punch holder slidably disposed in said bore, said punch holder having a reshaping lower end comprising a recess defining a semi-cylindrical wall conforming generally to the upper side of a tube which projects into said space prior to a piercing operation, a piercing punch removably connected to said lower end and projecting centrally through said recess below said end, a plate disposed above said punch guide, means connecting said plate to said punch holder, said plate and punch holder being movable downwardly whereby said piercing punch initially pierces the upper side of said tube and extends into said central bore to then pierce the lower side of said tube and said semi-cylindrical wall then engages said projecting side of said tube to reshape said projecting side to remove any deformation.

3,125,150
ROTARY BENDING MACHINE
Myron Lubow, 4 Washington Square Village, New York, N.Y.
Filed July 19, 1961, Ser. No. 125,143
2 Claims. (Cl. 153—19)



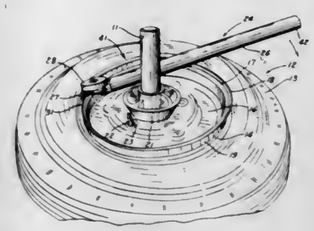
1. A rotary bending machine comprising, in combination, a heavy metal table top containing a large circular aperture, workpiece holding means fixed on said table top, longiutdinal side braces extending along and fixed beneath the sides of said table top, an air cylinder having a piston and being attached beneath one end of said table top, means activating the piston of said air cylinder, a rack gear extended and retracted upon the activation of the piston of said air cylinder, an upper plate fixed below the large aperture in said table top, a lower plate fixed a spaced distance below said upper plate, a vertical shaft slidably journaled in said upper and lower plates, a spur gear fixed to said shaft between said upper and lower plates, a rotary mounting plate fixed to the upper end of said shaft within the large aperture in said table top, an adjustment support member fixed below said lower plate, an adjustment screw turned upwards into said adjustment support member supporting the lower end of said vertical shaft, said adjustment screw positioning said rotary mounting plate a desired distance beneath said table top, said rack gear engaging said spur gear to rotate said rotary mounting plate, a bending fixture secured over the center of said rotary mounting plate, a pin extending upward from said rotary mounting plate beside said bending fixture, stop means beyond the end of said rack gear limting its lateral motion away from said cylinder, a second vertical shaft extending through said upper and lower plates, means holding said second vertical shaft within said upper and lower plates, and a back-up roller mounted on said second vertical shaft and bearing against the back of said rack gear holding said rack gear in engagement with said spur gear, said second vertical shaft and said back-up roller being removable allowing said spur gear and said rotary mounting plate to be rotated relative to said rack to index said rotary mounting plate.

3,125,151
STRETCHING MACHINE FOR STRETCHING METAL SHEETS AND THE LIKE
Ernst Müller and Albert Hertl, Duisburg, Germany, assignors to Hydraulik G.m.b.H., Duisburg, Germany
Filed Feb. 3, 1958, Ser. No. 712,892
Claims priority, application Germany Feb. 7, 1957
6 Claims. (Cl. 153—35)



1. A stretching machine for stretching sheets of metal and the like, comprising, in combination, support means; a pair of gripping means located in a given plane for respectively gripping the ends of a sheet of metal or the like which is to be stretched, said pair of gripping means being supported by said support means for movement in said plane away from each other to stretch a sheet of metal or the like; a pair of substantially parallel columns located in said plane between said pair of gripping means and being spaced from each other, each column having a pair of opposite ends respectively engaging said pair of gripping means; hydraulic means located substantially midway between the ends of each column and forming part of each column for increasing the length of each column to move said pair of gripping means away from each other, said hydraulic means increasing the length of said columns substantially equally at each side of said hydraulic means, each of said columns comprising, in addition to said hydraulic means, a plurality of coaxial spacer elements arranged in a row and capable of being exchanged for other spacer elements of different sizes; and guide means supporting said spacer elements for movement along the axes of the respective columns.

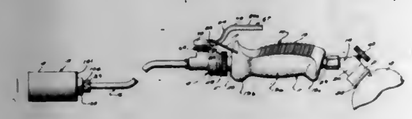
3,125,152
TIRE MOUNTING APPARATUS
James R. Foster, Fort Dodge, Iowa, assignor to The Coats Company, Inc., Fort Dodge, Iowa, a corporation of Iowa
Filed June 8, 1961, Ser. No. 115,818
2 Claims. (Cl. 157—1.22)



1. A tool for mounting a tire casing on a wheel supported on a stand having an upright post projected outwardly from the center of the wheel, the wheel having a rim and the tire casing having beads, said tool comprising, handle means including an elongated member adapted to be fulcrumed against the post, a fan shaped member secured to one of said handle means in an axially offset position, one straight side of said fan shaped member defining the junction of the fan shaped member with said handle means, the other straight side of said fan shaped member being turned in to provide elongated hook means engageable with and overhanging the rim, said hook means extending laterally from said handle means and

the end thereof at the junction of the handle means constituting the trailing end of the tool, the third or arcuate side of the fan shaped member extending from the handle means to the free end of the laterally extending hook means and constituting the leading edge of the tool, cam means on the top surface of said fan shaped member over which a bead is slidable during movement of said tool, said cam means having a surface inclined upwardly from the arcuate leading edge of the tool toward the trailing end, a roller mounted on said fan shaped member above said top surface and in a trailing position relative to said leading edge, said roller being in a plane inclined downwardly toward the leading edge and of a size such that a peripheral portion thereof extends from the end of said arcuate side remote from the hook means to the trailing end of said tool, said roller engageable with a bead as it slides over the top surface of the cam member whereby to guide the bead over the trailing end of said tool to a position below the rim peripheral edge.

3,125,153
BACKFIRE TORCH
William L. Lindgren, Sycamore, Ill., assignor to Turner Corporation, Sycamore, Ill., a corporation of Illinois
Filed Dec. 6, 1961, Ser. No. 157,378
5 Claims. (Cl. 158—33)



2. In a propane appliance, an elongated conduit forming means comprising coupling connections for attachment to a source of fuel and to a device for burning the fuel separated from one another and having a passage extending on a longitudinal axis disposed therebetween, a portion of said conduit forming means being enlarged to form a pistol-grip handle boss, said boss having a back surface spaced radially outwardly of said axis and being curved to engage the palm of a user when the boss is manually grasped, said boss further including a smooth finger surface spaced radially outwardly on the opposite side of said axis and being curved to engage the fingers of the user when the boss is manually grasped, said boss having a general body structure adapted for conforming to the hand of the user, spaced protuberances on opposite longitudinal ends of said finger surface to prevent the handle boss from slipping out of the grip of the user, and a valve in said passage having actuator means extending into an area immediately adjacent said back surface of said handle for ready thumb actuation by the user of the appliance, thereby to afford a simultaneous pistol gripping of the handle while regulating the flow of fuel through the passage.

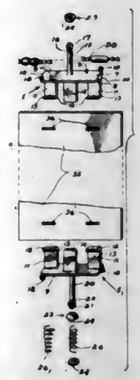
3,125,154
VANE HOLDERS FOR VERTICAL BLINDS
Allan S. Woodle, 160 Harrison Ave., Harrison, N.Y.
Filed Apr. 10, 1962, Ser. No. 186,520
2 Claims. (Cl. 160—178)

1. In combination with a fabric vane of a vertical blind, the vane having hems at opposite ends, channeled bars in each hem, a pair of openings in the hems, a vane holder detachably connected to the upper hem including:

(*a*) a base having a top and bottom

(*b*) two resilient arms disposed vertically in parallelism beneath the bottom toward one side of the base having their bottom ends right angled inwardly and gripping the channeled bar of the upper hem.

(*c*) a single resilient arm beneath the bottom of the base in parallelism with the aforesaid pair of arms but medially thereof and spaced therefrom toward the opposite side

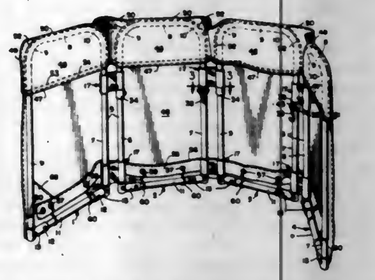


(*d*) an upstanding cylindrical-like central post above the top of the base, said post having an enlarged head

(*e*) a centrally bored semi-spherical bushing slidably mounted on the post having its rounded peripheral surface disposed toward the base

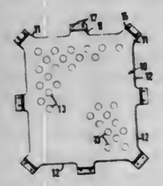
(*f*) a pair of upstanding studs mounted on opposite corners of the base, the studs having enlarged heads.

3,125,155
PORTABLE SCREEN STRUCTURES
Cyril P. Frommelt and Sylvan J. Frommelt, Dubuque, Iowa, assignors to Dubuque Awning & Tent Company, Dubuque, Iowa, a corporation of Iowa
Filed Nov. 28, 1961, Ser. No. 155,322
1 Claim. (Cl. 160—230)



A portable and foldable screen comprising a plurality of frame sections in side-by-side relationship, each frame section being a four-sided, open frame made from a tube bent in the shape of an inverted U having a straight bight segment and two side members at right angles thereto, said bight segment forming the upper leg of said frame section and said side members forming the side legs of said frame section, the lower leg of each of said frame sections being formed by a straight tube extending between the lower portions of said side legs and being adjustably coupled thereto by means of slip T's on each end of said straight tube and slidably mounted on said side legs of the corresponding frame section, locking means coacting with said slip T's and said side legs to lock releasably said slip T's on said side legs, hinge means hingedly connecting the side legs of adjacent frame sections, a readily removable screen curtain of flexible sheet material mounted on said frame sections and extending across all of said frame sections and the spaces therebetween, said curtain having across its upper side a plurality of pockets defined by the upper portion of said curtain and a strip of flexible sheet material extending across the upper portion of one face of said flexible sheet and stitched to said upper portion by stitching defining pockets opening downwardly and corresponding to the dimensions of the upper portions of said frame sections, in which pockets the upper portions of said frame sections are seated, a second strip of flexible material extending across the lower portion of said face of said flexible sheet, said second strip having its upper longitudinal edge stitched to said flexible sheet and having its lower longitudinal edge unattached thereto, said longitudinal lower edge being spaced a substantial distance from the bottom edge of said flexible curtain, a plurality of grommets at spaced intervals in said second strip, and detachable means connecting said grommets and the lower legs of said frame sections to hold the lower portion of said flexible sheet adjacent the lower portion of said frame sections.

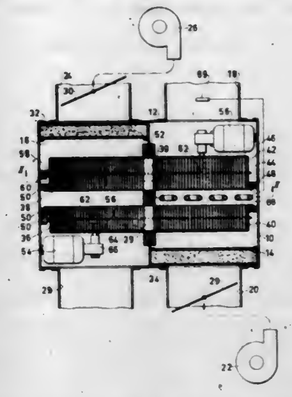
3,125,156
CUSHION SUPPORTING MEMBERS
Norman Grimshaw, Ashton-under-Lyne, England, assignor to Vitaform Limited, a company of Great Britain
Filed Sept. 25, 1961, Ser. No. 140,436
3 Claims. (Cl. 160—382)



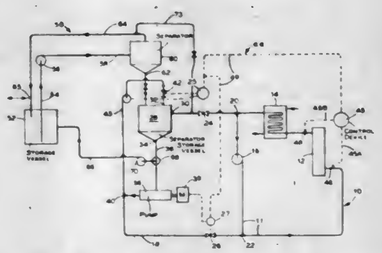
1. A support for being secured to furniture framework comprising, a sheet of rubber having tongues extending outwardly from its periphery, a generally U-shaped metal member for each of said tongues and having a pair of generally parallel arms, said arms having a plurality of holes therein, means for attaching said members to said furniture framework for securing said support thereto, said tongues being bonded at least in part between said generally parallel arms and having portions extending into and keyed in said holes in both of said arms.

3,125,157
COMBINED HEAT AND MOISTURE EXCHANGER
Carl Georg Munters, Danderydsvagen 3, Stocksund, Sweden, and Per Gunnar Norbäck, Bergsliden 1C, Lidingo, Sweden
Filed Feb. 2, 1955, Ser. No. 485,633
Claims priority, application Sweden Feb. 3, 1954
2 Claims. (Cl. 165—7)

1. In an air conditioning system for an enclosure, a combined heat and moisture exchanger between the incoming air and the outgoing air comprising, a housing provided with a separate air passage for each of the air currents, a pair of transferrers arranged in the two passages and mounted to move cyclically between said passages, heating means located in one of the passages for heating the incoming air, both passages communicating at one end with the outdoors and communicating at the other end with the enclosure, one of the transferrers being located between the heating means and the enclosure and having hygroscopic qualities and being adapted for the transfer of both heat and moisture, the second transferrer being located between the heating means and outdoors and being adapted for heat transfer.

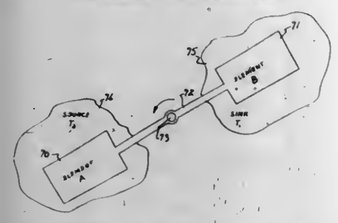


3,125,158
GAS-SOLIDS HEAT TRANSPORT SYSTEM
Donald C. Schluderberg, Lynchburg, Va., assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed June 21, 1960, Ser. No. 37,771
4 Claims. (Cl. 165—39)



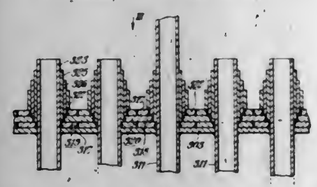
1. A heat transport system having a coolant containing fine solid particles suspended in a gas and comprising walls forming a vessel containing a heat source, a heat exchanger spaced from said vessel, a closed coolant circuit for continuously passing the coolant through said vessel wherein it absorbs heat from the heat source and through said heat exchanger wherein it gives up the heat absorbed in said vessel, means disposed in said closed circuit for circulating the coolant therethrough, a coolant by-pass circuit connected at its inlet and outlet ends to separate parts of said closed coolant circuit, a separator positioned in said coolant by-pass circuit to separate coolant received from said closed coolant circuit into a light phase and a heavy phase, a light phase outlet from said separator to return said separated light phase to the by-pass circuit downstream from the point at which said separator receives the coolant from said closed coolant circuit, a heavy phase storage vessel connected to said separator to receive said separated heavy phase therefrom, means for controlling flow into and out of said coolant by-pass circuit, and means for adding said heavy phase taken from said storage vessel into said coolant by-pass circuit downstream from the connection of said light phase outlet to said by-pass conduit.

3,125,159
APPARATUS FOR TRANSFERRING HEAT
John E. Lindberg, Jr., 1170 Oleander Drive, Lafayette, Calif.
Original application Nov. 8, 1957, Ser. No. 695,357. Divided and this application July 3, 1961, Ser. No. 130,446
2 Claims. (Cl. 165—86)



1. In a turbine having an axial hub, a heat source and a diametrically opposite heat sink, a plurality of rotor blades rotatably mounted on said hub in diametrically opposite pairs, each blade being hollow, passage means connecting together the hollows in each pair of blades, a metal that ingasses and outgasses hydrogen reversibly, retained at all times in the hollow of each said blade, and a supply of hydrogen for circulation through said passage means between said blades from one said metal to the other, whereby said hydrogen is ingassed into the metal in one blade when that blade is at the heat sink, thereby imparting heat from the blade to the sink, while the metal in the opposite blade is outgassing hydrogen at the heat source, thereby cooling said opposite blade, only said hydrogen being circulated while the metal remains fixed.

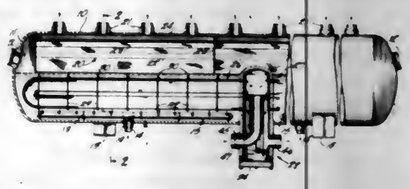
3,125,160
HEAT INSULATION DEVICES
Everett Long, Culcheth, near Warrington, England, assignor to United Kingdom Atomic Energy Authority, London, England
Filed June 24, 1958, Ser. No. 744,154
Claims priority, application Great Britain June 24, 1957
4 Claims. (Cl. 165—135)



1. In combination with a tank having a metal diaphragm therein dividing the tank into a cold fluid compartment and a hot fluid compartment and pipes extending through the diaphragm into each of the compartments for conveying fluid from one compartment into the other, means for heat insulating the diaphragm comprising layers of tiles extending adjacent and parallel to at least one side of the diaphargm, said pipes passing through the layers of tiles, the tiles in each layer being spaced from one another at their edges and overlapping the tiles in adjacent layers.

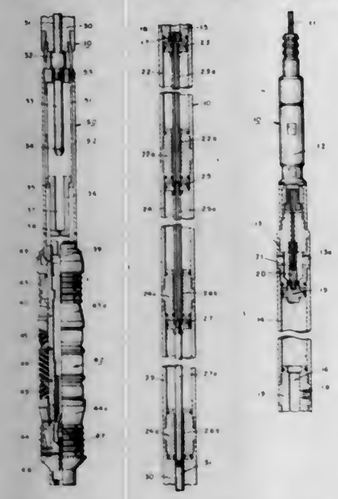
3,125,161
TUBE MANIFOLD FOR A STEAM GENERATOR
Nicholas D. Romanos, Chattanooga, Tenn., assignor to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 29, 1959, Ser. No. 862,666
3 Claims. (Cl. 165—159)

1. A heat exchanger comprising a shell adapted, to contain a fluid, a plurality of tubes mounted in the shell, a manifold mounted in the shell to which the plurality of tubes is connected within the shell and extending to the outside of the shell, the manifold including a rigid elongated outer enclosure which is divided into two compartments and a rigid elongated inner enclosure which passes through one of the compartments and has a fluid passageway leading to the other compartment, a removable cover mounted on the end of the elongated outer enclosure outside the shell to provide longitudinal access to the interior thereof, means forming an opening in the side wall of the outer enclosure outside the shell to provide a fluid passageway to the interior of the outer enclosure, a fluid nozzle formed in the side wall of the outer enclosure at the opening therein, and having an opening directed laterally inwardly to the interior thereof, means forming an opening in the inner enclosure directed laterally outwardly thereof adjacent to and communicating with the fluid nozzle opening, transversely extending flange means affixed to the means forming an opening in the inner enclosure and abutting the inner end of the nozzle so as to permit relative sliding motion of the fluid nozzle and the means forming an opening the a direction parallel to the direction of elongation of the inner and outer enclosures upon differential expansion of the inner and outer enclosures while maintaining communication between the openings therein, and means cooperating with the inner and outer enclosures to urge the flange means and the nozzle together so as to maintain sealed communication between the openings in the inner and outer enclosures while permitting relative longitudinal expansion of one of the enclosures with respect to the other.



3,125,162
HYDROSTATIC SETTING TOOL
George E. Briggs, Jr., and Bliss Adamson, Jr., Houston, Tex., assignors to Halliburton Company, a corporation of Delaware
Filed Dec. 10, 1959, Ser. No. 858,641
6 Claims. (Cl. 166—123)

1. An actuation device of the character described comprising: a body adapted to be suspended in the hydrostatic fluid pressure environment of a well bore by means of a wireline; said body comprising a succession of chambers including a last chamber; a succession of pistons, one in each of said chambers defining first and second chamber portions therein; a separate piston rod associated with each of the penultimate and preceding ones of said succession of pistons and extending through the second chamber portion defined thereby, through a chamber end wall in sealed slidable relation therewith, and into the first chamber portion of a successive chamber; said rod extending into said successive chamber adapted for transmission of force from its associated piston to the piston in said successive chamber; a last piston rod associated with the last chamber of said succession of chambers extending through the second chamber portion thereof, through an end wall thereof in sealed slidable relation therewith, and externally of said body; all the pistons, including their respectively associated piston rods, respectively associated with the penultimate and preceding chambers of said succession of chambers being provided with fluid passageways intercommunicating the first chamber portions of each chamber of said succession of chambers; means in said device for application of well bore fluid pressure to said intercommunicated first chamber portions and to effective areas of the pistons respectively defining said first chamber portions; and all said pistons, by virtue of said transmission of force by said rods and upon said application of well bore fluid pressure, being cooperatively adapted to further extend said last piston rod from said last chamber with a force capability which varies as a function of the product of the applied well bore fluid pressure and the effective area of all said pistons.

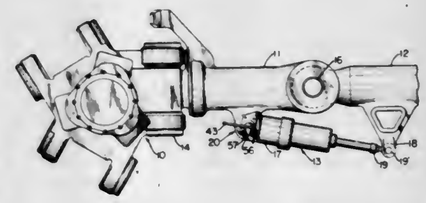


3,125,163
INFLATABLE EXPANSION PLUG
Walter Gordon Smith, 8803 65th Ave., Edmonton, Alberta, Canada
Filed Mar. 26, 1962, Ser. No. 182,328
5 Claims. (Cl. 166—187)



1. A pneumatic inflatable expansion plug for sealing off a hole bore at any point thereof comprising a conductor pipe connected at its upper end to a source of pneumatic pressure fluid, a supply pipe threadingly connected in axial alignment to the lower end of said conductor pipe, a one-way valve located at the joint between said conductor pipe and said supply pipe, the said valve being movable in an axial direction to permit a flow of pneumatic pressure fluid from said conductor pipe into said supply pipe, a first flange secured about said supply pipe, a guide rod slidably mounted in said supply pipe and projecting downwardly through the lower end thereof, the lower end of said supply pipe forming an annular passage about said guide rod, a second flange secured about the lower end of said guide rod, a sleeve of elastic material attached at its opposite ends to said first and second flanges to form an expandable enclosure about said supply pipe and guide rod, and a removable air valve fitted to the upper end of said conductor pipe, the said air valve permitting the flow of pneumatic pressure fluid through said conductor pipe and supply pipe and into said expandable enclosure, the said one-way valve being movable axially to exhaust the said expandable enclosure when the said air valve is removed from the said conductor pipe.

3,125,164
RELEASABLE COUPLING DEVICE
Norman E. Merrell, Perkiomenville, Pa., assignor to The Boeing Company, Seattle, Wash., a corporation of Delaware
Filed Dec. 4, 1962, Ser. No. 242,135
16 Claims. (Cl. 170—160.12)

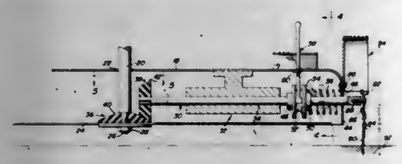


9. In a rotary wing aircraft, a releasable coupling for interconnecting a damper assembly and a foldable rotor blade assembly, said releasable coupling comprising female coupling means and male coupling means, said female coupling means being mounted on one of said assemblies and having a central opening therein with a lateral entrance slot communicating with the central opening and directed outwardly therefrom, said male coupling means being mounted on the other of said assemblies, cam means on said female coupling means, said male coupling means having pin meals including locking surfaces thereon for mating with the central opening, said pin means being rotatable between a first position to enable movement of said locking surfaces into the central opening and a second position to hold said pin means in locked relation within the central opening, lever means mounted on said pin means for rotating said pin means between the first and the second positions, flexible holding means mounted on said female coupling means for engaging said lever means to releasably lock said lever means against rotational movement during locked condition of said pin means, and cam follower means associated with said male coupling means and responsive to said cam means to position said male coupling means and to yieldingly oppose rotational movement of said lever means toward and away from engagement with said holding means.

3,125,165
ROTARY LAWN MOWER EDGING ATTACHMENT
Gene A. Boudreaux, 118 St. Louis St., and John J. Aguillard, 7688 Maribel Court, both of Baton Rouge, La.
Filed Dec. 20, 1961, Ser. No. 160,822
4 Claims. (Cl. 172—14)

1. In combination with a rotary lawn mower of the type including a generally horizontally disposed guard platform through which a journalled upstanding drive shaft projects, a rotary cutter blade mounted on a lower

portion of said drive shaft below said guard platform, an edging attachment including a power take-off shaft, an elongated journal block fixedly and dependingly supported from said platform inwardly of the outer peripheral edge portions thereof and journalling said power take-off shaft for axial displacement along and rotation about a generally horizontally disposed axis extending generally radially of the axis of rotation of said drive shaft, first and second coacting drive means carried by said drive shaft and the end portion of said power take-off shaft adjacent said drive shaft respectively for releasably drivingly connecting said driven shaft to said power take-off shaft upon axial displacement of said power take-off shaft and said first drive means relative to said journal block toward a limit position physically engaging said second drive means with said first drive means, a rotary edging member carried by the other end portion of said power take-off shaft remote from said drive shaft and disposed outwardly of the corresponding



edge portion of said platform means for selectively axially shifting said power take-off shaft into and out of driving connection with said drive shaft, said corresponding edge portion of said platform including a depending flange through which the other end of said power take-off shaft projects, a rotary shifting yoke mounted on said power take-off shaft inwardly of said flange, a compression spring disposed about said take-off shaft and between the confronting surfaces of said flange and shifting yoke, said shifting means comprising a shifting fork lever engaged with said yoke at one end and pivotally secured at a point intermediate its opposite ends to said platform for movement about an axis extending generally at right angles to said power take-off shaft, and latch means carried by said platform releasably engageable with the other end of said shifting fork lever for retaining the latter in an operative position with said second drive means out of driven engagement with said first drive means.

3,125,166
ROTARY TILLING IMPLEMENT
Lloyd Q. Hines, Sr., P.O. Box 1098, Suffolk, Va.
Filed Apr. 9, 1963, Ser. No. 271,661
6 Claims. (Cl. 172—120)

1. In a rotary tilling implement wherein a plurality of disc-like tilling elements are mounted upon a positively driven rotary shaft, the shaft being arranged at right angles to the direction of implement travel and the tilling elements being spaced along said shaft to rotate in parallel planes, parallel to the direction of implement travel, a plurality of tilling elements each element including:

a tilling plate of generally dic shape, said plate having at least six sectors, each sector having:

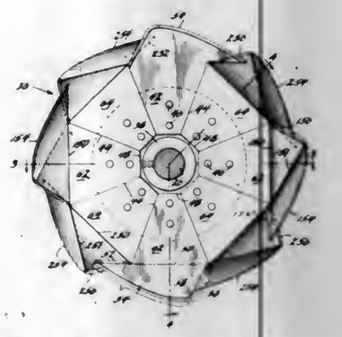
a central body portion extending outwardly along the two radii of the sector, said body portion being defined by said radii and a chord segment of said disc,

said chord segment being a part of a chord of said disc, the length of said chord being approximately equal to a radius of said disc when six sectors are used, said chord having a length relatively less than that of said radius when more than six sectors are used, and

a segment portion extending outwardly of the body portion toward the circumference of said disc and defined by a pair of straight lines and said circumference,

one of said lines being an approximate extension of one end of said chord segment to said circumference, and the other of said lines joining the other end of said chord segment to the circumference and forming an internal acute angle with said chord segment,

the edge defined by said other of said lines being sharpened to a cutting edge;



at least two of said sectors being circumferentially spaced sectors wherein:

the segment portion is bent with respect to the body portion along the chord segment joining said portions forming an obtuse dihedral angle between the two portions and wherein;

the segment portion is further bent into an inner, triangular portion and an outer, circumferential portion, said last named portions forming a second obtuse dihedral angle,

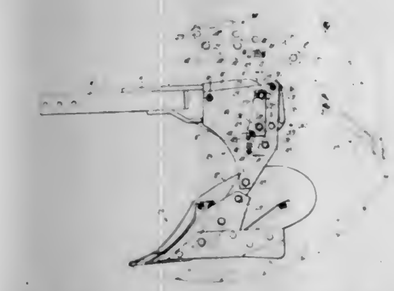
the line forming the intersection of said last named portions extending from the junction of said chord segment and said chord segment extension to the circumferential end of the cutting edge;

at least two other of said sectors being circumferentially spaced sectors wherein each segment portion is bent similarly to the first pair of sectors but in the opposite sense with respect to the plane of the body portions of the sectors, said second pair of sectors being individually circumferentially interspersed with said first pair of sectors and hub means for removably securing said element to said shaft.

3,125,167
EARTH WORKING TOOL RELEASE MECHANISM
Guenther Mannheim, South Bend, Earl D. Zeltwanger, Mishawaka, and Donald E. Kuska, South Bend, Ind., assignors to Oliver Corporation, Chicago, Ill., a corporation of Delaware
Filed Jan. 9, 1963, Ser. No. 250,256
8 Claims. (Cl. 172—269)

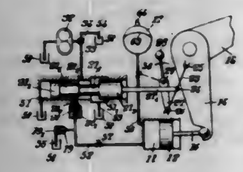
1. In earth working tool means, in combination, a beam member arranged and adapted to be pulled endwise in a forward generally horizontal direction and having a rearwardly opening socket with a downwardly facing upper side, a tool carrying frame pivoted about a horizontal axis on said beam, an earth working tool secured to and depending from said frame, said earth working tool in operative position on being drawn through the earth having a force applied thereto and to said frame tending to rotate them upwardly about said axis to an

inoperative position; and means for releasably holding said frame and earth working tool in said operative position on said beam member including a generally vertically extending linkage having a detent extending horizontally from its upper end and in said operative position bearing against said downwardly facing upper side of said socket, a relatively rigid lever pivotally mounted intermediate its ends on said frame, means pivotally mounting the lower end of said linkage on one end of said



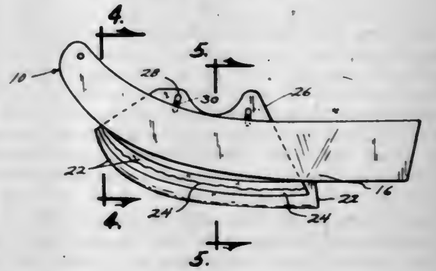
lever, and spring means interposed between the other end of said lever and said frame, the application of said earth working tool and thereby to said frame of a force sufficient to rotate said lever against the biasing force of said spring means rotating said linkage and moving said detent carried thereby out of engagement with said downwardly facing upper side of said socket whereupon said frame and said earth working tool are released from said operative position to swing to said inoperative position.

3,125,168
TRACTOR HITCH CONTROL DEVICES
Gabriel Jean Seguenot, Paris, France, assignor to Societe d'Etudes et de Recherches Techniques Sertec, Paris, France, a society of France
Filed Mar. 21, 1960, Ser. No. 16,280
Claims priority, application France July 17, 1956
3 Claims. (Cl. 172—465)



1. For use with a ground tilling implement towed by a tractor by means of a three-point hitch including rigid link means pivoted at one end to said tractor and at the other end to said implement: a device for controlling the operation of said implement and comprising a cylinder fixed to said tractor, a piston slidable with a liquid-tight fit in said cylinder so as to form therewith a variable volume chamber filled with liquid, said piston being operatively connected with said link means to control the position thereof with respect to said tractor, a pressure accumulator comprising a vessel supported by said tractor and a resilient diaphragm dividing said vessel into a compartment filled with a gas under pressure and a compartment filled with liquid, means communicating the last mentioned compartment directly with said variable volume chamber of said cylinder, a continuously operating liquid pump supported by said tractor, means fixed to said tractor defining a housing having a cylindrical wall in communication with said pump, said housing being provided with a discharge opening in the cylindrical wall thereof, a conduit in communication with said variable volume chamber and opening into the cylindrical wall of said housing, a spring loaded check valve in said conduit opening toward said variable volume chamber, a slide valve slidably supported in said housing to control the communication between said pump and said discharge opening, said slide valve having a neutral position in which communication between said pump and said discharge opening is established, said slide valve being adapted for displacement thereof from said neutral position in one direction to cut off the communication between said pump and said discharge opening, means carried by said slide valve for cooperating with said check valve for positively opening said check valve upon displacement of said slide valve from said neutral position in a direction opposite said one direction whereby said chamber of said cylinder which is filled with liquid is then placed into communication with said discharge opening, a control lever pivotally supported on said tractor and adapted to occupy with respect thereto a multiplicity of different positions, and follow up means operatively connecting said control lever both with said slide valve and with said link means for operating said two valves for a given position of said control lever and upon displacement of said link means to establish the pressure of the liquid entrapped in said variable volume chamber in accordance with the hardness of the ground so that the position of said piston in said cylinder and that of said tilling implement in the ground are fixed for a given position of said control lever irrespective of the hardness of the ground.

3,125,169
PLANTER SHOE ATTACHMENT
Clifford D. Geisler, Colo, Iowa
Filed July 24, 1963, Ser. No. 297,370
4 Claims. (Cl. 172—719)



1. In combination,

an arcuate planter shoe having upper and lower edges, said lower edge extending from a substantially horizontal direction upwardly and forwardly in an arcuate path to the forward end of said planter shoe,

said planter shoe having a widened portion at its rearward end,

a runner attachment detachably mounted on said planter shoe,

said runner attachment including an arcuate bar having an upper edge with a smaller radius of curvature than the lower edge of said planter shoe so that the lower edge of said planter shoe will engage only the forward and rearward ends of the upper edge of said arcuate bar,

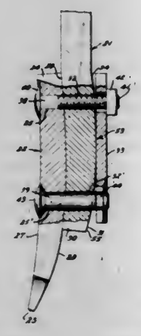
parallel spaced apart plate portions extending upwardly from said bar and extending upwardly adjacent the side edges of said planter shoe and beyond the upper edge thereof,

the lower edge of said bar having a length at least as great as the length of the lower edge of said plates,

the spaced apart distance of said plates being less than the width of the widened portion on the rearward end of said planter shoe so that the rearward edges of said plates tightly engage said widened portion to prevent any rearward movement of said runner attachment on said planter shoe,

and connecting means on the top portions of said plates above said planter shoe for detachably urging the ends of the upper edge of said arcuate bar into tight engagement with the lower edge of said planter shoe.

3,125,170
DETACHABLY MOUNTED CULTIVATOR TOOTH APPARATUS
Leo Rosenvold, Wildrose, N. Dak.
Filed Apr. 17, 1961, Ser. No. 103,279
7 Claims. (Cl. 172—762)



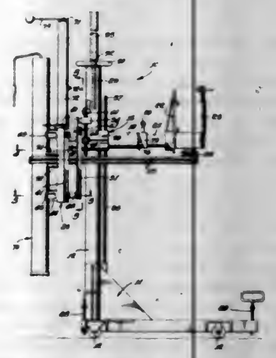
1. A detachably mounted cultivator tooth apparatus comprising an elongated tooth, an elongated shank having its upper end connected to the frame of a cultivator, said tooth and said shank being positioned in offset relation to one another with said shank having a front face and with said tooth adjacent said front face, the tooth and shank each having a pair of longitudinal spaced apertures, the shank and tooth apertures being in axial alignment with one another, a pair of elongated bolts passing into the tooth apertures and on through the shank apertures, the bolts having heads which abut the exterior face of the tooth adjacent the edge of the tooth apertures, a flat generally upright plate having upper and lower ends, said shank having a curved rearward face abutting the central portion of said plate, said curved rearward face having its upper and lower portions curving away from said upper and lower ends of said plate, said plate having an aperture at its upper end for receiving the end of one of said bolts passed through the tooth and shank, said one bolt being threaded along its end portion, a threaded nut for threading onto the end of the bolt and engaging the exterior face of the plate and acting to clamp the tooth and shank and plate together, said plate having a slot extending upwardly from the lowermost edge of the plate, said other bolt having a pair of opposed grooves extending laterally of the length of the bolt, said plate slot acting to be slidably received in the grooves of the bolt, said plate being substantially straight whereby when the nut upon the upper one bolt is tightening the plate will pivot and flex centrally upon the fulcrum formed by the curved shank abutting relation with said plate so that the slot in the lower end of the plate will be forced against the outer edges of the bolt grooves and cause the lower end of the tooth to be tightened against the shank while the upper end of the tooth is also being tightened against the shank.

3,125,171
OFFSHORE DRILLING EQUIPMENT
William Nolan Stewart III, Houston, Tex., assignor to Zapata Off-Shore Company, Houston, Tex., a corporation of Delaware
Filed Oct. 27, 1958, Ser. No. 769,791
2 Claims. (Cl. 175—5)



1. Off shore drilling apparatus comprising a hollow casing projecting from the water bottom to the vicinity of the surface of the water, a hollow pile received within said casing and firmly embedded in the water bottom, a floating vessel anchored alongside and independently of said casing, a platform projecting beyond the edge of said vessel and subject to rocking action relative thereto, drill powering means mounted on said platform above said casing and pile, well head instrumentalities mounted on the upper portions of said casing and pile, and a torque transmitting, longitudinally flexible drill string extending from said powering means through said platform and said instrumentalities and said hollow pile, said casing and instrumentalities terminating substantially below said platform and said powering means to expose a substantial length of said string for flexing during rocking of said vessel, there being substantial clearance between said string and said instrumentalities and upper portions of said casing and pile permitting lateral play of said string to accommodate flexing thereof.

3,125,172
PORTABLE DRILLING APPARATUS
Carl V. Tilden, Capistrano Beach, Calif. (209 Los Molinos, San Clemente, Calif.)
Filed Sept. 8, 1959, Ser. No. 838,568
8 Claims. (Cl. 175—114)



1. A drill chucking assembly comprising a main support, means mounted thereon for supporting a plurality

of groups of rollers, the rollers of each group having their axes in general alignment, means for canting the axes of the rollers of one group in the same direction but opposite to the angle of cant of the other group of rollers, said groups of rollers cooperating to engage and cradle therebetween the cylindrical shank of a drill, power-driven belt means embracing a drill shank and effective when tensioned to rotate the drill while simultaneously holding the same firmly cradled between said groups of rollers, belt tensioning means mounted on said assembly and operable to tension said belt means, and manually operable means to relax and later re-tension said belt means to permit removal and replacement of the drill with another drill having a shank of different diameter.

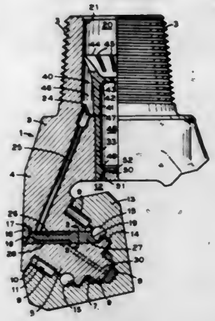
3,125,173
TUBULAR DRILL STRING MEMBERS
Fred K. Fox, 242 Stoney Creek, Houston, Tex.
Filed Oct. 12, 1961, Ser. No. 144,663
6 Claims. (Cl. 175—323)



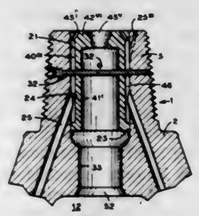
1. An integral, elongate tubular member having means at its opposite ends for connection above the drill bit in an oil or gas well drill string and a plurality of helical grooves in its outer periphery and arranged longitudinally thereof, longitudinally successive ones of said grooves angling in opposite directions with respect to the axis of said tubular member.

3,125,174
ROCK BIT WITH REPLACEABLE AIR COURSE
James D. Medlock, Edward M. Galle, and Gerald O. Atkinson, Houston, Tex., assignors to Hughes Tool Company, Houston, Tex., a corporation of Delaware
Filed Feb. 9, 1961, Ser. No. 88,160
19 Claims. (Cl. 175—337)

1. A rolling cutter rock bit suitable for use with gaseous flushing media comprising a head section with an upwardly extending shank suitable for connection to a drill string, said head and shank having an axially extending and coextensive central passageway therethrough, at least one leg extending downwardly from said head, a bearing pin thereon extending generally inwardly beneath said passageway, a rolling cutter rotatably mounted on said bearing pin to define therewith a bearing gap, passage means in said head, leg and bearing pin extending from said bearing gap to a bearing port in said central passageway, and a member extending generally transverse said passageway upstream from the exit end thereof, said member having at least one restricted orifice therethrough and being supported from the wall of said passageway to divide the passageway into a high pressure zone and a low pressure zone, said low pressure zone lying downstream from said member and above the exit end of the passageway, said member being secured to said wall against at least downward movement with respect thereto and to prevent the flow of flushing fluid into said low pressure zone except through said orifice, and said bearing port being in communication with said high pressure zone.



3,125,175
ROCK BIT WITH REPLACEABLE AIR COURSE
James D. Medlock, Edward M. Galle, and Gerald O. Atkinson, all of Houston, Tex., assignors to Hughes Tool Company, Houston, Tex., a corporation of Delaware
Filed May 22, 1961, Ser. No. 111,518
12 Claims. (Cl. 175—337)

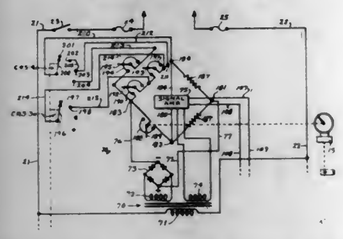


1. A rolling cutter rock bit suitable for use with gaseous flushing media comprising a head section with an upstanding shank suitable for connection to a drill string, said head and shank having an axially extending and coextensive central passageway therethrough, at least one leg extending downwardly from said head, a bearing pin thereon extending generally inwardly beneath said passageway, a rolling cutter rotatably mounted on said bearing pin to define therewith a bearing gap, passage means in said head, leg and bearing pin extending from said bearing gap to a bearing port in said central passageway, and a member extending transverse said passagewy upstream from the exit end thereof, said member having at least one restricted orifice therethrough and being supported from the wall of said passageway to divide the passageway into a high pressure zone and a low pressure zone, said low pressure zone lying downstream from said member and above the exit end of the passageway, said member being secured to said wall against at least downward movement with respect thereto and to prevent the flow of flushing fluid into said low pressure zone except through said orifice, said bearing port being in communication with said high pressure zone, said passageway over the axial extent of said low pressure zone having a clear transverse cross-section generally at least as large as such cross-section immediately below said transverse member.

3,125,176
AUTOMATIC CONTROL FOR CUMULATIVE DELIVERY OF MATERIALS

Alton G. Bale, Jr., South Milwaukee, and Greg F. Turner, Brookfield, Wis., assignors to Wisconsin Electrical Mfg. Co., Inc., Milwaukee, Wis., a corporation of Wisconsin

Filed Jan. 8, 1960, Ser. No. 1,276
5 Claims. (Cl. 177—80)

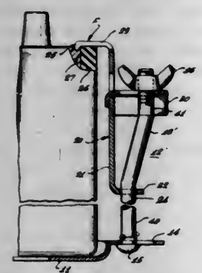


4. In an automatic control for delivery of materials from a plurality of bulk sources to a common receiving means, a bridge circuit connectable to a power source and having a preset arm and a delivery responsive arm, said delivery responsive arm including a potentiometer having a movable contact means coupled to the receiving means and positioned in accordance with the material received therein, said preset arm including a plurality of series connectable preset potentiometers having separably movable contact means for positioning in accordance with the separate quantity of material to be delivered from the bulk sources, said preset arm further including a discharge sensing potentiometer having a movable contact means, and a stepping switch having a first switch bank to sequentially operably connect the series connectable preset potentiometer in the bridge circuit and thereafter the discharge sensing potentiometer and having a second switch bank operated concurrently with said first switch bank to sequentially insert the several potentiometers in said series of preset potentiometers, and means operated by the output of the bridge circuit to control delivery of material from the bulk sources in accordance with the output of the bridge circuit and to actuate said stepping switch to automatically deliver material from said bulk sources in accordance with the separate settings of said preset potentiometers and to reset the stepping switch in response to discharge of material from the common receiving means.

3,125,177
BATTERY CLAMPING DEVICE

Frederick C. Paller, Northridge, Calif., assignor to Superior Industries, Inc., North Hollywood, Calif., a corporation of California

Filed Mar. 6, 1961, Ser. No. 93,486
1 Claim. (Cl. 180—68.5)



A battery clamping device for use with an inverted generally vertically extending clamping bolt and a nut threaded to the upper end of said bolt to secure one side of a battery upon a shelf, comprising:

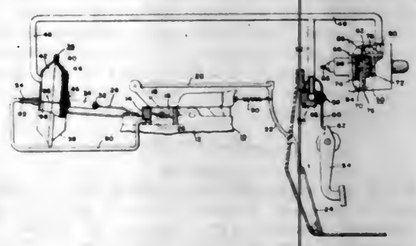
a rigid, unbendable plate having a flat vertical body section and a pair of upper and lower oppositely extending horizontal legs parallel to one another and perpendicular to said body portion, said upper leg having a depending foot that engages the side of said battery to be clamped, said lower leg being formed with an opening for slidable mating engagement with the shank of said clamping bolt, said plate being formed with a plurality of vertically spaced slots providing horizontal ledges at a plurality of different vertical levels including a level spaced below said upper leg;

and a horizontal load-bearing arm formed at one end with a rib that is selectively engageable with any one of the horizontal ledges of said plate, means on said rib to engage the inner side of said plate, said arm having a vertical surface that abuts the outer side of said plate to maintain said arm horizontal when said rib is engaged with said ledges, said arm also being formed with an elongated aperture that receives the upper portion of said clamping bolt, with said nut then being tightened upon said bolt to impose a downwardly directed force against said arm that is transferred to said plate, the lower end of said plate being restrained against lateral movement away from said battery by the engagement of said bolt with the opening in the lower leg of said plate, with the upper portion of said bolt being positioned laterally away from the vertical body section of said plate when said rib is engaged with a slot spaced below said upper leg to permit unobstructed rotation of said nut.

3,125,178
VEHICLE ROAD SPEED CONTROL SYSTEM

Donald D. Stoltman, Henrietta, and Thomas R. Beveridge, Spencerport, N.Y., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Apr. 26, 1962, Ser. No. 190,429
4 Claims. (Cl. 180—82.1)

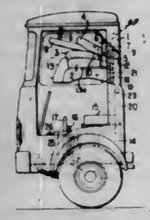


1. A vehicle speed and load-demand responsive control system for a vehicle engine having a throttle valve and an intake manifold controlled by the throttle valve, said control system comprising, a servo having a movable wall connectible to said throttle valve for actuation thereof, first conduit means for connecting the engine intake manifold to said servo to provide engine intake manifold vacuum thereto for powering said servo, second conduit means having vehicle speed sensitive means therein and connected with said servo, said vehicle speed sensitive means acting through said second conduit means to modify vacuum acting on said servo movable wall in accordance with vehicle speed, and variable restriction valve means in said first conduit means having a movable element operatively connected with said servo movable wall to increasingly and decreasingly restrict delivery of vacuum to said servo from said first conduit means in direct relationship to manifold vacuum variations reflecting changing load-demand and resulting from opening and closing movement of the throttle valve under control of said servo.

3,125,179
SEAT CONSTRUCTION FOR MOTOR VEHICLES

Alfred H. Müller, Waiblingen, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany

Filed Sept. 14, 1961, Ser. No. 138,153
Claims priority, application Germany Sept. 16, 1960
7 Claims. (Cl. 180—89)

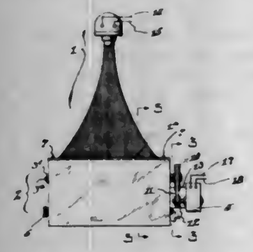


1. In a motor vehicle, such as a truck, provided with vehicle drive means arranged below the seat assembly for at least one of the driver and passenger seated alongside of the driver and with a cab surrounding said seat assembly including roof means and a floor, the combination of said seat assembly, said seat assembly comprising seat means, backrest means, pivot means for attaching said backrest means to said seat means to enable said backrest means to be pivoted downwardly onto said seat means, the floor of the vehicle below said seat assembly being provided with an aperture to enable access therethrough to said drive means, and liftable hood-shaped means supporting thereon said seat means and normally closing said aperture, the rim of said aperture being provided with sealing abutment means for the lower edge of said hood-shaped means, means for vertically lifting said seat assembly in an essentially horizontal plane to within proximity of said roof means to thereby enable access to said drive means through said aperture and for maintaining said assembly in the raised position thereof, and guiding means for said seat assembly comprising a pair of vertically extending guide rails secured adjacent the respective ends of said seat means and means for maintaining said seat assembly in its horizontal position guidingly securing said seat assembly to said rails, whereby during vertical movement of said seat assembly, said assembly remains in its horizontal position.

3,125,180
ELECTRO ACOUSTIC TRANSDUCER DEVICE

Jerome Markowitz, Allentown, Pa., assignor to Allen Organ Company, Macungie, Pa., a corporation of Pennsylvania

Filed Sept. 17, 1962, Ser. No. 223,899
13 Claims. (Cl. 181—27)



1. An electro acoustic transducer device comprising, a loudspeaker, a chamber structure arranged at the sound discharge end of the loudspeaker which chamber is provided with a sound emitting opening; and two similar elements rotatably mounted in relatively spaced relationship within said chamber, one of which elements is operatively arranged to effect agitation of the air within the chamber, and the other one of which elements is operatively arranged to effect variation of said sound emitting opening.

3,125,181
LOUDSPEAKER SYSTEM

Robert J. Pawlowski, Niles, Mich., assignor to Electro-Voice, Incorporated, Buchanan, Mich., a corporation of Indiana

Filed June 21, 1961, Ser. No. 118,673
7 Claims. (Cl. 181—31)

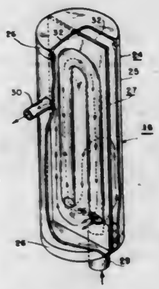


1. A loudspeaker system for reproducing a predetermined range of frequencies comprising an enclosure having an elongated circular concave face with a radius of curvature between the longest wavelength and shortest wavelength of sound to be reproduced, a plurality of loudspeakers having members adapted to vibrate along an axis mounted on the face of the enclosure with the axes of the members disposed in a common plane normal to the central axis of face, said loudspeakers being disposed closely adjacent to each other and being responsive to electrical excitation in the same frequency range, thus forming a line source of acoustical radiation when driven in phase, said loudspeakers forming an arc length at least equal to the wavelength of sound at a frequency an octave above the lowest frequency in said range, said face having an opening confronting the vibratile member of each loudspeaker and the vibratile member of each of said loudspeakers having dimensions small relative to the length of the arc of the line source of radiation.

3,125,182
MUFFLER

Robert W. Earley, Worthington, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

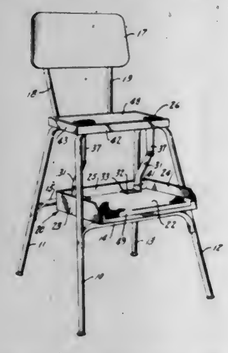
Continuation of application Ser. No. 771,069, Oct. 31, 1958. This application Dec. 22, 1961, Ser. No. 162,319
2 Claims. (Cl. 181—53)



1. A muffler for a gas compreessor,
said muffler comprising a cylindrical shell and
a wall containing the axis of said shell for partitioning the interior of said shell into first and second compartments,

said shell being provided with an inlet for said first compartment and an outlet for said second compartment,
said wall comprising twin plates of flat rectangular shape,
each of said plates being provided with a depression in one surface thereof which extends from one side of said axis to the other along a U-shaped line that is symmetrical with respect to said axis,
each of said plates having an opening formed therein at one end of said line,
said plates being secured together with their respective depressions in complementary relationship and their respective openings offset from each other so that a passage connecting said compartments is provided.

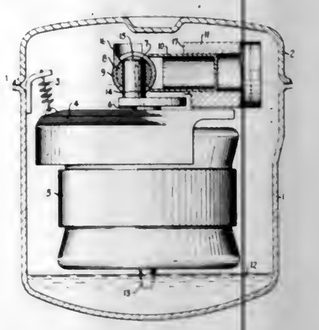
3,125,183
COMBINATION STEP STOOL AND CHAIR
Duncan McRae, Whitehall, Mich., assignor to Novo Industrial Corporation, New York, N.Y., a corporation of New York
Filed Feb. 13, 1962, Ser. No. 173,030
8 Claims. (Cl. 182—33.6)



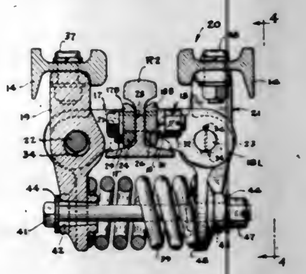
1. In a combination step stool and chair, a platform having a top tread surface, back and front legs extending from the bottom of the platform, a crossbrace between the front legs, a pivotal seat with opposed seat and tread surfaces, seat brackets having a generally vertical upper portion fixed to the tread surface of the pivotal seat and a rearwardly angled lower portion having a longitudinal slot, generally vertical platform brackets having an upper end fixed to the bottom of the platform and a pin in the lower end to slidably engage the slot, whereby the seat is supported on the platform in an up position with the seat surface exposed and is supported on the crossbrace, with tread surface exposed, when pivoted to a down position.

3,125,184
LUBRICATING DEVICE FOR A MOTOR COMPRESSOR
Knud V. Valbjørn, Nordborg, Denmark, assignor to Danfoss ved ing. M. Clausen, Nordborg, Denmark, a company of Denmark
Filed Nov. 13, 1961, Ser. No. 151,781
Claims priority, application Germany Nov. 12, 1960
2 Claims. (Cl. 184—6)

1. A lubricating device for a motor compressor of the type having a crank pin provided with an oil outlet at its top, a piston adapted to be reciprocated in response to circular movements of the crank pin, and connecting means surrounding said crank pin and freely receiving said pin and being movable with said pin to transfer the movements of said crank pin to said piston, said connecting means comprising a member rigidly connected to said piston, said lubricating device comprising an oil-collecting dam disposed on a surface of said connecting means, said oil collecting dam having a main body portion and side portions defining an enclosed area facing said pin, and being open in a direction towards said piston, and said dam being disposed on the portion of said surface on the side of said pin remote from said piston and being disposed to intercept the oil stream traveling in a trajectory from the oil outlet of the crank pin and thereby collect oil during movement of the crankpin and transfer said collected oil onto said piston in response to reciprocating travel of said piston and connecting means upon return movement from a top dead center position toward a bottom dead center position.

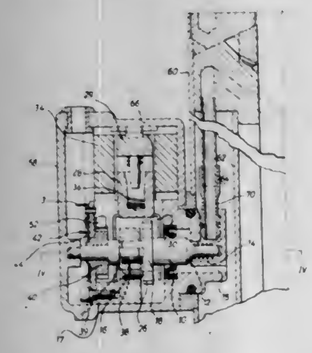


3,125,185
RAILROAD CAR RETARDERS
Fred W. Creedle, Park Ridge, and Nicholas N. Dohrn and John R. Wilhelm, Chicago, Ill., assignors to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Filed July 8, 1960, Ser. No. 41,613
5 Claims. (Cl. 188—62)



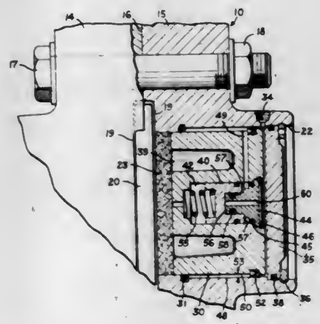
1. A car retarder of the kind described and comprising, a pair of support members each including a base bolted directly to opposite sides of the web of a railroad traffic rail and each including a pair of outwardly projecting lugs formed with pin receiving openings, said traffic rail having a base flange to be supported by ties, said base flange presenting upwardly disposed surfaces and said support members having bottom surfaces engaged with and supported by the upwardly disposed surfaces of the flanges of the traffic rail so that the rail flanges bear the weight of the car retarder, a pair of lever arms having pin-receiving openings formed therein, pin means disposed within said openings and pivotally supporting each of the lever arms at a location intermediate the ends thereof on one of the support members in a manner such that each of the lever arms extends generally vertically alongside the rail with a lower end portion projecting below said rail, the pin means having a smaller diameter than said openings in said lever arms so that said lever arms are rotatable to a limited extent about their longitudinal axes, guard members mounted on the lever arms at the upper ends thereof and disposed above the head of said traffic rail on opposite sides thereof so that there is a gage side guard member at the inside of the traffic rail and a field side guard member at the outside of the traffic rail, biasing means disposed between the lower portions of the lever arms for exerting a force on the lever arms and effective to rotate the arms about the respective pivotal connections to move the guard members toward one another so that said guard members are operative to grip a railroad car wheel rolling along said rail and thereby exert a retarding force on a railroad car, and connecting means extending between the lower end portions of the lever arms for limiting the extent of the movement of the guard members toward one another.

3,125,186
ADJUSTABLE HYDRAULIC SHOCK ABSORBERS
Alan R. A. Day, York, England, assignor to Armstrong Patents Co. Limited, London, England, a British company
Filed Nov. 27, 1961, Ser. No. 155,044
Claims priority, application Great Britain Dec. 1, 1960
3 Claims. (Cl. 188—88)



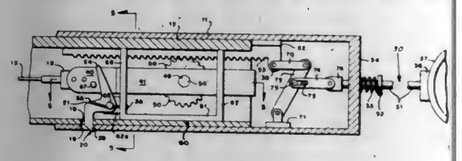
1. In a hydraulic shock absorber system, a telescopic, hydraulic shock absorber comprising a hydraulic cylinder, an apertured piston assembly telescopically arranged in said cylinder and defining a hydraulic pressure chamber at one end region of said cylinder, a hydraulic reservoir cylinder coaxially surrounding said hydraulic cylinder and co-operating with said hydraulic cylinder to define a hydraulic reservoir therearound, first passage means including first fluid flow restricting means connecting said reservoir with said pressure chamber, second fluid flow restricting means in the piston apertures, second passage means connecting the other end region of said hydraulic cylinder with said reservoir, a valve seat in said second passage means and a valve member co-operating with said valve seat to govern the cross-sectional area of said second passage means; an auxiliary housing carried by said reservoir cylinder, a solenoid in said auxiliary housing, an axially and resiliently displaceable ratchet wheel adjacent said solenoid, an armature displaceable on energisation of said solenoid, pawl means on said armature and engaged with said ratchet wheel for rotating said wheel in discrete steps responsive to energisation of said solenoid, said valve member extending axially from one face of said ratchet wheel and the other face of said wheel being formed with a plurality of circularly spaced, stepped lands, a fixed abutment in said auxiliary housing and bearing against said other face of said ratchet wheel; a solenoid energising circuit, and control means for said circuit comprising a first multiple position rotary switch having a rotatable switching member rotatable with said ratchet wheel and a second multiple position rotary switch having a manually rotatable switching member for completing said energising circuit and effecting a rotation of said ratchet wheel whenever said two switching members are displaced from a predetermined phase relationship with one another, thereby axially to displace said ratchet wheel by moving the lands thereof relative to said abutment and also to displace said first-mentioned switching member for restoring said predetermined phase relationship and interrupting said energising circuit.

3,125,187
FLUID OPERATED, BRAKE APPLYING AND RETRACTING CYLINDER AND PISTON UNIT, INCLUDING FLUID OPERATED AUTOMATIC SLACK ADJUSTER
Gianni A. Dotto, Dayton, Ohio, assignor to The Dayton Steel Foundry Company, Dayton, Ohio, a corporation of Ohio
Filed Oct. 28, 1960, Ser. No. 65,806
8 Claims. (Cl. 188—152)



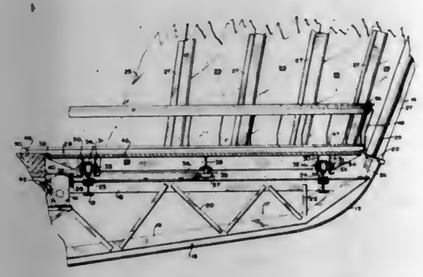
3. A hydraulic actuator, comprising a fixed housing, a primary piston movable in said housing to apply a force upon the application of a source of hydraulic fluid pressure thereto, a secondary piston in said housing having a smaller area than said primary piston, means defining a fluid chamber between said pistons, one way valve means connecting said chamber for fluid flow thereinto from said hydraulic fluid pressure source, pressure operated valve means connecting said chamber for discharge into said source upon a predetermined pressure differential therebetween, means providing for limited fluid displacing movement of said secondary piston in said chamber between a rest position establishing a retraction gap and moved position upon the initial movement of said primary piston, means biasing said secondary piston into said rest position, said secondary piston having an effective area exposed to hydraulic pressure in said chamber correlated with said biasing means so as to maintain said moved position during at least a portion of the initial movement of said primary piston in said housing with initial release of said hydraulic pressure, and said biasing means being operable upon the further release of said pressure to effect retracting movement of said secondary and primary pistons together to said rest position.

3,125,188
EXTENDABLE DRAWBAR
Melmore Zugermayer, Southampton, Pa., assignor to the United States of America as represented by the Secretary of the Navy
Filed Oct. 26, 1962, Ser. No. 233,491
4 Claims. (Cl. 188—167)
(Granted under Title 35, U.S. Code (1952), sec. 266)



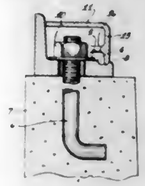
4. An extendable drawbar comprising:
an outer longitudinally extending sleeve member,
an inner longitudinally extending sleeve member telescoping within said outer sleeve member,
fastening means associated with said inner sleeve for normally locking said outer sleeve relative to said inner sleeve,
operating means slidably received within said inner sleeve,
wheel means rotatably mounted within said operating means,
lock means secured to said operating means for engaging said wheel means to preclude rotation thereof,
spring means interposed between said operating means and said lock means for urging said lock means into engagement with said wheel means,
a longitudinally extending operating member slidably supported in said inner sleeve and engageable by said wheel means,
brake means supported by said outer sleeve and secured to said operating member,
and control means connected to one end of said inner sleeve member for actuating said fastening means and said operating means.

3,125,189
RESTAURANT WITH ROTATING FLOOR
John Graham, 1426 5th Ave., Seattle 1, Wash.
Filed Aug. 15, 1961, Ser. No. 131,563
1 Claim. (Cl. 189—1)



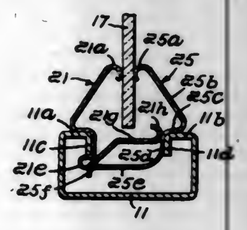
A building comprising a stationary base of circular outline and including a plurality of radially-disposed cantilever frames, an annular floor above and concentric with the base and of an outside diameter approximating that of the base, inner and outer concentric tracks mounted on said cantilever frames, said annular floor having wheels mounted for travel on said tracks, means beneath said annular floor for rotating said floor relative to said stationary base, a stationary floor mounted on the base and lying in the plane of and closing the central opening through the annular floor, a circularly arranged series of transparent panels stationarily mounted on the base near its periphery and rising therefrom outwardly near the outer edge of the annular floor, a stationary roof over the floor, means on the base for supporting the panels, a structure secured to the base and supporting it in elevated position, and means of access to the floor disposed within the supporting structure.

3,125,190
NUT COVER ASSEMBLY
Edward H. Brennan, Calgary, Alberta, Canada, assignor to Barber Machinery Limited, Calgary, Alberta, Canada
Filed Nov. 22, 1961, Ser. No. 154,215
2 Claims. (Cl. 189—29)



1. A nut cover assembly comprising a base plate having a raised portion providing a pad thereon and a bolt-receiving opening extending through said plate and pad, a bolt-receiving washer removably seated on said pad and having side edges extending beyond said pad to overhang said plate, a pair of spaced opposed shoulders on one end of said pad, said washer having inclined corner edges engaged with said shoulders to prevent rotation of said washer relative to said pad, a bolt fixed to a member below the base plate and extending upwardly through the plate, pad and washer, a nut on the upper end of the bolt tightened against the washer, a projecting rib on said plate forward of the opposite end of the pad, and a nut cover having a top, depending side walls with internal inwardly extending lips engaged between said overhanging side edges of said washer and said plate, and a forward wall engaged with said rib to retain said cover in fixed position on said plate, said pad having a transverse width less than the transverse distance between the inner edges of the lips, said side walls defining an open end whereby the cover can be slid over the nut from the forward end of the pad with the lips beneath the overhanging side edges of the washer.

3,125,191
PARTITION PANEL ASSEMBLY
Max E. Singer, Boston, and Kendall L. Strout, Framingham, Mass., assignors, by mesne assignments, to James F. Power
Filed Dec. 21, 1959, Ser. No. 860,757
1 Claim. (Cl. 189—34)



A partition panel assembly comprising: a supporting frame, including a channel member having a first flange with a first reentrant lip having an inner end, and a second flange with a second reentrant lip, said flanges extending toward each other, and said lips having opposed spaced side faces; a panel centrally disposed with respect to said flanges, a primary molding made of resilient material having a rim engaging said panel outside said channel, a first portion sloping from said rim away from said panel toward said channel, a second portion seated on said first flange, a third portion extending along the side face of said first lip, a loop engaged inside said inner end, and a fourth portion extending toward the other lip; and a secondary molding made of resilient material, having a rim engaging said panel opposite the rim of said primary molding, and a first portion sloping oppositely and symmetrically with respect to the first portion of said primary molding, a second portion engaged between said fourth portion and said second lip, and a third portion extending toward said first flange and engaged inside said primary molding in the region of said loop.

3,125,192
PANEL CONNECTOR ASSEMBLY
Vardry D. Ramseur, Jr., 212 Riverside Drive, Greenville, S.C.
Filed Mar. 6, 1961, Ser. No. 94,413
8 Claims. (Cl. 189—34)



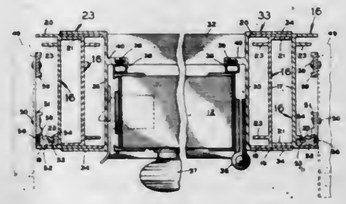
1. A panel connector assembly compirsing a pair of panels disposed in closely spaced relationship to one another, connector means forming a structurally strong, insulated and vapor-tight joint between said panels, said connector means including rigid flange means secured to adjacent portions of each of said panels, said connector means also including channel means and flexible gasket means clamped within said channel means and extending angularly from said flange means, said gasket means substantially filling the space between said panels.

3,125,193
MOVABLE PARTITION SYSTEMS
Donald A. Brown, Westlake, and Lucien R. Downing, Jr., Sheffield Lake, Ohio, assignors to Donn Products Incorporated, Westlake, Ohio, a corporation of Ohio
Filed Jan. 12, 1962, Ser. No. 165,834
8 Claims. (Cl. 189—34)



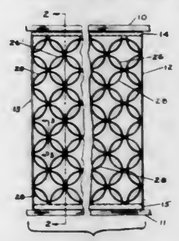
1. In a movable partition system having a pair of frame members disposed in spaced parallel relation, a second pair of frame members disposed in parallel spaced relation transverse to said first pair of frame members and coacting therewith to form a regular geometric frame assembly adapted to receive and removably support a panel member therein, the improvement wherein each of said second pair of frame members includes a web having bilaterally extending flange portions along at least one marginal edge and having integral means for releasably receiving and engaging opposite edges of said panel member, respectively, and means slidably carried at at least one extremity of said each of said second pair of frame members for releasable interlocking coaction with the adjacent member of said first pair of frame members, said movable interlocking means including a member having a web including a cut-out portion of the web adapted to receive and engage the adjacent frame member of said first pair of frame members and coacting when extended to restrain movement transverse to the plane of said partition and when retracted to permit movement transverse to said plane.

3,125,194
PREFABRICATED BUILDING STRUCTURE
Irvine Kimmel, Miami Beach, and Albert H. Frey, Hialeah, Fla., assignors to Endure A Lifetime Products, Inc., Miami, Fla., a corporation of Florida
Filed Sept. 22, 1959, Ser. No. 841,560
1 Claim. (Cl. 189—41)



An interlocking member for panel structures comprising a web portion, a pair of channel portions mounted adjacent the ends of said web portion, said channel portions formed by a leg portion extending at substantially right angles to said web portion from the same side of said web portion at the ends of said web portion and a second leg portion of shorter length in spaced and parallel relation to each of said first named leg portions, a pair of flanged portions of substantially equal length mounted on said web portion at substantially right angles to said web portion and extending in the opposite direction to said channel portions, one of said flanged portions lying in the same plane as one of said first named leg portions and the other of said flanged portions being stepped inwardly of the other of said first named leg portions a distance equal to the thickness of said last named leg portion.

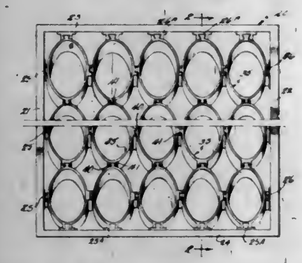
3,125,195
ARCHITECTURAL SCREEN
Roger N. Moore, Henrico County, Va., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed May 20, 1959, Ser. No. 814,633
7 Claims. (Cl. 189—82)



1. A structure comprising: a first flat layer of substantially parallel, double-ended, straight, sheet metal tubes with their axes transverse to the broad sides of said layer; and a second flat layer of substantially parallel, double-ended, straight, sheet metal tubes with their axes transverse to the broad sides of said second layer, each tube of one of said layers having an end provided with a pair of spaced slots and with deformable means disposed between

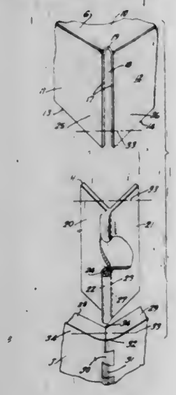
said slots, each tube of said one layer receiving ends of a pair of tubes of the other layer in said slots thereof, said pair of tubes of said other layer having cavities adjacent their respective ends receiving said deformable means of said tube of said one layer to interlock said tubes together.

3,125,196
SCREEN
Carlton F. Fenner, 6055 SW. 22nd St., Miami 55, Fla.
Filed Feb. 2, 1960, Ser. No. 6,183
3 Claims. (Cl. 189—82)



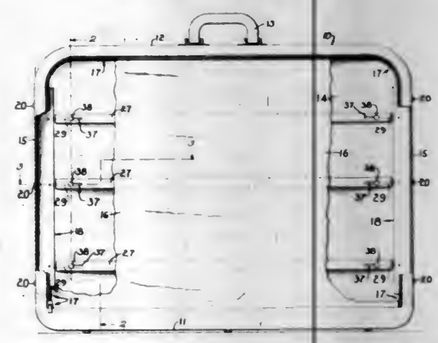
1. A screen including a frame comprised by top, bottom, and end members arranged at a right angle quadrilateral, a plurality of units within the frame each having a longitudinal axis inclined at an angle with respect to the plane of the frame and being arranged in rows with transverse horizontal axes parallel to the top and bottom frame members and ranged in columns with transverse vertical axes parallel to the end frame members, complementary locking elements on the periphery of each unit along said horizontal axes for interlocking the units in the adjacent columns, complementary locking elements on the end frame members for engaging the locking elements on the units in the end columns, complementary locking elements on the periphery of each unit along said vertical axes for interlocking the units in the adjacent rows, and complementary locking elements on the top and bottom frame members for engaging the latter locking elements on the units in the top and bottom rows.

3,125,197
ATTACHÉ CONSTRUCTION
Lewis Lifton, 151 W. 26th St., New York, N.Y.
Filed Sept. 23, 1960, Ser. No. 58,103
7 Claims. (Cl. 190—37)



1. An attaché case edge construction comprising a wooden rectangular base frame and an outer fabric cover, said cover having a rectangular base cover portion with transverse side flaps to cover the bottom, top and side walls of the case and with separated corner edges, and inside wood frame structure having wall, top, bottom and side plaques formed together at the corner edges and an intervening bead element having corner side flaps to fit under the edges of the transverse side flaps and with a corner bead to fit between and abut the separated corner edges and oblique stitching extending through the joined wood corner edges, the transverse side flaps and the corner side flaps, said corner edges of said wood frame having an outside rounded dovetail construction and said stitching extending at an angle of 45° therethrough midway between the outer and inner edges of each corner.

3,125,198
TRAVELING CASE WITH ADJUSTABLE SHELVES
Clarence J. Stark, 10 W. State St., Battle Creek, Mich.
Filed Feb. 10, 1960, Ser. No. 7,853
6 Claims. (Cl. 190—51)

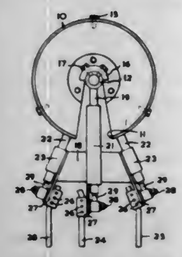


1. In a traveling case having a bottom, a top having a handle, a vertical back wall, and vertical end walls, said bottom, top, and end walls all forming a unitary frame holding said end walls substantially fixed against spreading relative to each other, and a vertical forwardly movable front wall; two vertical substantially rectangular plates at the inner sides of said end walls respectively, each of said plates having a front and a rear vertically disposed shelf mounting rail, means fixedly mounting said plates on said end walls respectively, vertically spaced horizontal shelves extending from the rails of one of said plates to the rails of the other of said plates, and releasable means mounting said shelves on said rails for vertical adjustment.

3,125,199
SLOTTED COAXIAL LINE HAVING SLIDABLE TAP FOR TRANSMISSION OF ELECTRICAL POWER AT HIGH FREQUENCIES
Bernard Thompson, Sutton Coldfield, England, assignor to Tube Products Limited, Birmingham, England, a British company
Filed Sept. 6, 1960, Ser. No. 54,290
1 Claim. (Cl. 191—23)

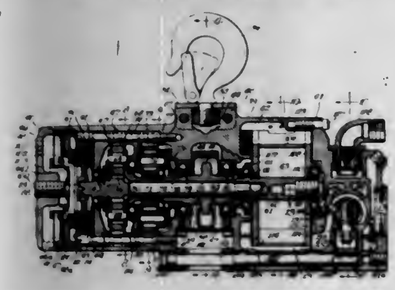
A low capacitance loss transmission system for conveying high tension electric current to a moving current consuming unit such as a welding head travelling along the length of an elongated workpiece, comprising a hollow cylindrical outer conductor having a longitudinal slot, an inner conductor extending axially through said outer conductor, axially separated spacers in said outer conductor supporting said inner conductor concentrically within said outer conductor, a slider of insulating material guided for movement parallel to said outer conductor, a current collecting brush mounted on said slider and extending through said longitudinal slot in the outer conductor into

sliding engagement with said inner conductor, and two oppositely inclined current collecting brushes mounted



on said slider and engaging substantially radially with the outer conductor on opposite sides of said longitudinal slot.

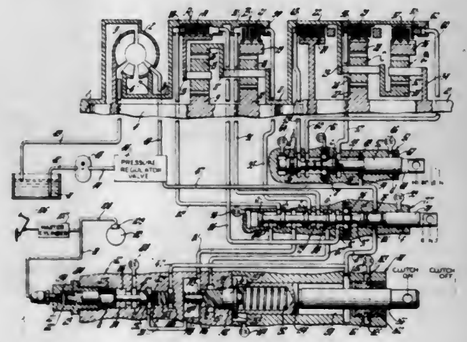
3,125,200
PNEUMATIC HOIST
Frank A. Kaman, Aurora, Ill., assignor to Thor Power Tool Company, Aurora, Ill., a corporation of Delaware
Filed Mar. 2, 1959, Ser. No. 796,574
7 Claims. (Cl. 192—3)



1. A control mechanism for a hoist of the type having an air motor, load engaging means driven by the motor and engageable with a load for raising or lowering the load, brake means for applying a braking force against said load raising and lowering means comprising means for normally applying said braking force and means operable by air under pressure to release the brake, said control mechanism comprising a valve for directing the flow of air under pressure to said air motor and to said brake means, means for conducting pressure air from a source to said valve, means for conducting pressure air from said valve to said air motor to drive the same in a load raising direction, means for conducting pressure air from said valve to said brake means, said valve being movable in one direction in the load raising operation to a first position in which said valve has passage means for directing pressure air to said motor air conducting means whereby a driving force is applied to said air motor prior to brake release and said valve means being movable beyond said first position to a second position in which said valve has additional passage means for directing pressure air to the brake air conducting means to release the brake, and means for moving said valve in said one direction and return.

3,125,201
TRANSMISSION
Mark E. Fisher, Carmel, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 21, 1961, Ser. No. 104,573
12 Claims. (Cl. 192—4)

3. In a transmission, a multiratio drive train having a plurality of fluid operated friction engaging drive devices, a source of fluid under pressure, a selector valve having an operating supply port and operable to a plurality of positions to selectively connect said operating supply port to each of said plurality of friction engaging drive devices and having a lubrication supply port and operable in each of the positions to connect said lubrication supply port to lubricate the engaged friction engaging device being engaged, a brake system providing a brake apply pressure, cut off valve means, first passage means connecting said brake apply pressure to said cutoff valve means, said cutoff valve means operatively connecting said source of fluid pressure to said operating supply port in a normal position and operative in response to an increase in the brake apply pressure to a predetermined value to cut off the supply of fluid pressure from said source to said operating supply port, and manually controlled means operative to

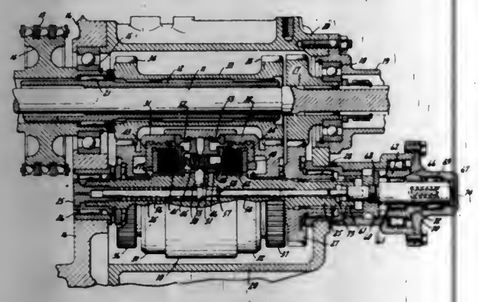


control the pressure of the operating fluid supplied by said cutoff valve to said operating supply port, said manually controlled means including a valve element having an area acted on by the operating fluid supplied by said cutoff valve and movable from a closed position by said operating fluid to an exhaust position exhausting said operating fluid, second passage means connecting the fluid exhausted to said lubrication supply port, and variable rate biasing means biasing said valve element, said biasing means being manually maneuverable relative to said valve element from a position effecting a minimum biasing force at which the fluid pressure supplied to said operating supply port is regulated at a minimum value through increasing biasing force positions to a maximum biasing force position at which the fluid pressure supplied to said operating supply port is regulated at a maximum value.

3,125,202
CLUTCH FOR DIFFERENTIAL CONTROL
Claude Hill, Kenilworth, England, assignor to Harry Ferguson Research Limited, Gloucestershire, England, a British company
Filed Feb. 6, 1962, Ser. No. 171,449
Claims priority, application Great Britain Feb. 9, 1961
5 Claims. (Cl. 192—47)

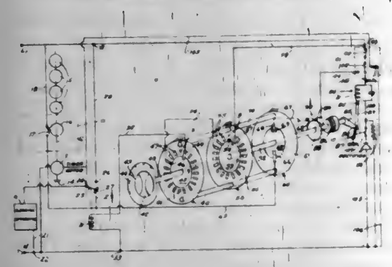
1. A control for a pair of rotatably mounted parts arranged for rotation in forward and reverse directions comprising, in combination, a shaft, a first one-way clutch having one driven element rotatably coupled to one of said parts and a second driven element coupled through said shaft to the other of said parts so as to positively limit rotational speed variations between said parts by clutching said elements, and thus said parts, together at a predetermined rotational speed variation, said clutch including a movable member positioned to resist the clutch actuating force developed in said clutch so as to permit operation of said clutch, a latch holding said member in position, a helical cam having an axis coupled for rotation

with said shaft and being axially slidable, a rotatably mounted abutment disposed against said cam, a second one-way clutch anchoring said abutment against rotation



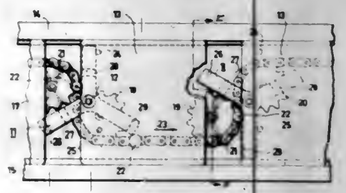
with said cam when said parts rotate in reverse direction so as to drive said cam axially, and means for releasing said latch upon said axial movement of the cam so as to disable said first clutch.

3,125,203
COIN COUNTING CIRCUITRY FOR A DRY CLEANER
Guy D. Phillips, St. Joseph, and James L. McConnell, Stevensville, Mich., assignors to Whirlpool Corporation, St. Joseph, Mich., a corporation of Delaware
Filed Aug. 8, 1962, Ser. No. 215,644
13 Claims. (Cl. 194—1)



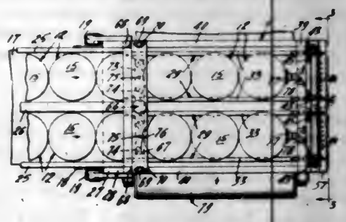
1. Control apparatus for a coin-operated machine having coin receiving means and control circuitry including a sequential controller for energizing said machine through a cycle of operations,
said control apparatus comprising:
an electric circuit connected to said sequential controller to energize said sequential controller through said cycle of operations,
a switch assembly including a normally open homing switch connected in said electric circuit and a normally open machine start switch connected in said electric circuit and controlling the energization of said sequential controller, said homing switch and said machine start switch having mechanically interconnected corotatable portions,
means responsive to the insertion of a predetermined number of coins in said coin receiving means for rotating said corotatable portions from an initial indexed position to a second angular position in which both said homing switch and said machine start switch are closed and in which position said sequential controller is energized,
and a switch connected in said electric circuit and actuated by said sequential controller subsequent to the energization of said sequential controller for moving said corotatable portions back to their normal positions so as to automatically reposition both said homing switch and said machine start switch in their original indexed positions preparatory for a subsequent cycle of operations.

3,125,204
WORK STATION TYPE CONVEYOR
Carl-Fredrik Christian Loven, Satuna, Bjorklinge, Sweden
Filed July 3, 1961, Ser. No. 121,443
Claims priority, application Sweden July 6, 1960
8 Claims. (Cl. 198—19)



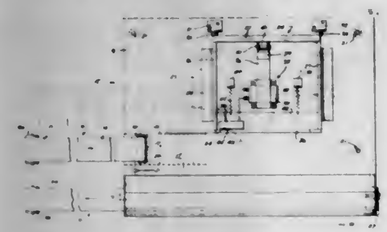
1. A conveyor for workpieces in a production line including platens for conveying the workpieces to and from work positions giving each platen a dwell time at least one work station, said conveyor including track means defining a predetermined path for the platens, a plurality of sprockets located along said track means, a flexible element rove about said sprockets to describe a sinuous path parallel to said track means between work stations, and at right angles to said track means at said work stations, pushing members mounted on said flexible element, said platens being provided with an abutment face to be engaged by said pushing members to move the platens along said track means.

3,125,205
PACKAGING HANDLING APPARATUS
Alfred William Kinney, Washington, N.J., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Sept. 22, 1961, Ser. No. 140,110
3 Claims. (Cl. 198—21)



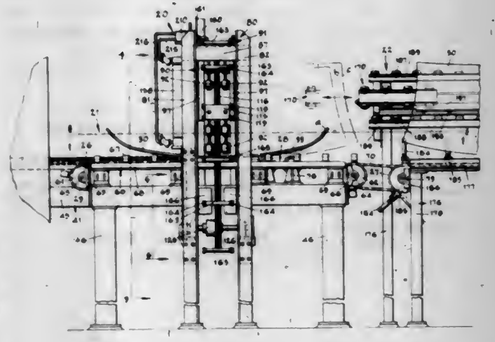
1. An apparatus for grouping and delivering in a predetermined quantity and pattern a plurality of frustoconical shaped containers having the larger ends thereof uppermost, each container having an outwardly disposed peripheral bead formed in the side wall adjacent the larger upper end, comprising receiving means, grouping means disposed above said receiving means, conveyer means continuously feeding a plurality of said containers in a predetermined number of parallel rows into said grouping means, said grouping means having a pair of oscillatable support gates disposed in alignment with each of said rows, each gate of said pairs of gates being pivotally mounted at the lower end and having an inwardly extending flange formed on the upper end thereof, spring means connecting and urging the two gates in each pair of gates inwardly towards each other, stop means limiting the inward movement of said support gates whereby said flanges automatically assume a predetermined spacing for slidably receiving said containers therebetween with said flanges engaging the underside of said beads to form the sole support of said containers in said grouping means, each of said pairs of supporting gates having a length sufficient to receive a predetermined number of said containers therebetween, means for sensing when said grouping means has a predetermined quantity of said containers therein, first means responsive to said sensing means for interrupting the entry of said containers into said grouping means and second means responsive to said sensing means for oscillating said support gates outwardly to positively and simultaneously retract said flanges from beneath the beads of all of the containers in said grouping means whereby the predetermined quantity of containers in said grouping means maintain their attitude and position in the group pattern as they move unsupported into said receiving means.

3,125,206
CIGARETTE CARTON TRANSFER AND CONVEYING MACHINE
John D. Munch, 2351 Ogden Ave., Downers Grove, Ill.
Filed Oct. 2, 1961, Ser. No. 142,213
4 Claims. (Cl. 198—24)



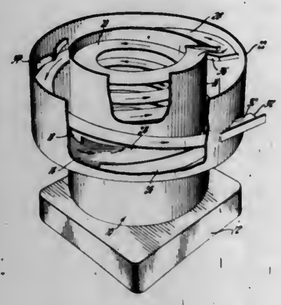
1. A cigarette carton conveying and transfer apparatus having a receiving station and a discharge station adjacent to each other comprising:
a first conveyor means traveling in one direction and one end thereof receiving cigarette cartons,
a transfer table means connected to the other end of the first conveyor means to receive cigarette cartons from the first conveyor,
a well delivery means connected to said transfer table,
said well delivery means having two side walls and two end walls forming a cigarette carton delivery well,
one of said side walls is connected to the transfer table so that the top thereof is flush with the surface of the table,
said one side wall having a top portion diverging downwardly from the transfer table and a bottom portion extending perpendicular to the transfer table,
the other side wall is spaced a predetermined distance from the one-side wall and extends perpendicular to the transfer table and above the surface thereof,
said delivery well end walls connecting the side walls to form the cigarette carton delivery well,
a second conveyor means positioned below said first conveyor means and traveling in the opposite direction,
said second conveyor having a receiving end positioned below the delivery well and a discharge end positioned adjacent to the receiving end of the first conveyor,
said delivery well side walls and one end wall having their bottoms spaced from the surface of the second conveyor less than the thickness of a cigarette carton,
the other delivery well end wall being spaced from the surface of the second conveyor a distance greater than the thickness of the cigarette cartons to allow the carton to pass thereunder to the discharge station,
a transfer means connected to the transfer table,
said transfer means including
a carriage slidably mounted between guide rails on the transfer table surface,
a solenoid coupled to said carriage and to said transfer table, and
electrical switch means mounted on said carriage and electrically connected to energize the solenoid,
a pusher bar connected to said carriage,
said transfer means being mounted on the transfer table so that cigarette cartons delivered from the first conveyor to the transfer table will contact the transfer electrical switch and energize the solenoid to move the transfer carriage and have the pusher bar contact the cigarette carton to push the cigarette carton from the table into the delivery well
whereby the cigarette carton is delivered to the second conveyor and therefrom to the cigarette carton discharge station.

3,125,207
CONVEYOR TRANSFER APPARATUS
Carl B. Williams, Toledo, Ohio, assignor to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
Filed Sept. 18, 1961, Ser. No. 138,956
9 Claims. (Cl. 198—33)



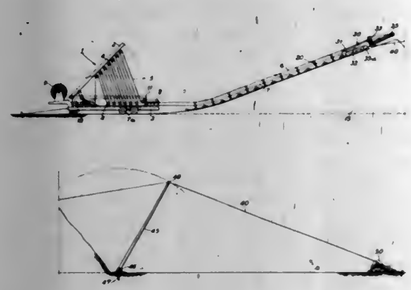
1. Transfer apparatus for use between two conveyors disposed in substantially aligned end-to-end relationship to transfer sheets delivered to the apparatus by one of said conveyors while supported in one plane to the other of said conveyors wherein the sheets are supported in a plane angularly disposed to said one plane, said transfer apparatus comprising an interim conveyor disposed between adjacent ends of said two conveyors, means disposed adjacent one side and intermediate the ends of said interim conveyor for engaging and lifting an adjacent edge of a sheet resting on said interim conveyor and rocking it about an opposite edge as an axis from said one plane to said angularly disposed plane and to support said sheet in said angularly disposed plane as it is advanced toward said other conveyor by said interim conveyor, and means responsive to the movement of sheets along said one conveyor for actuating said engaging and lifting means.

3,125,208
MULTIPLE BOWL VIBRATORY FEEDING APPARATUS
Kenneth Secunda, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 9, 1961, Ser. No. 143,818
6 Claims. (Cl. 198—33)



1. In vibratory feeding apparatus for feeding articles from a common mass to individual article receiving means: an inner feed bowl, a first feed track extending upwardly from the bottom of said inner feed bowl to the top thereof, an outer feed bowl concentrically mounted relative to said inner feed bowl, a second feed track extending downwardly from the top of said outer feed bowl to the bottom thereof, bridge means connecting said first feed track with said second feed track, and vibratory means supporting said inner feed bowl and said outer feed bowl and adapted to drive articles from within said inner feed bowl, upwardly along said first feed track and across said bridging means and downwardly along said second feed track to the article receiving means.

3,125,209
STACKER CONVEYOR AND METHOD OF CONVEYING
William S. Butler, Clarendon Hills, and Paul J. Fontaine and Roy F. Lo Presti, Chicago, Ill., assignors to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed Aug. 11, 1961, Ser. No. 130,854
19 Claims. (Cl. 198—36)



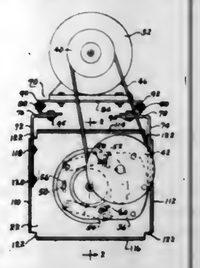
1. A method for stacking materials in a rising pile which includes the steps of receiving materials at a loading station, transferring the material to an endless conveyor, extending the endless conveyor, conveying the material on the endless conveyor to a discharge area, forming a rising pile of the discharged material, pulling a line connected to the endless conveyor at a point spaced from the conveyor, and adjusting the line intermediate the endless conveyor and the spaced point so that the line is substantially parallel to the rising surface of the pile.

3,125,210
ROTARY FRUIT HANDLING APPARATUS
Charles E. Sheetz, Woodstock, Va., assignor to FMC Corporation, a corporation of Delaware
Filed Nov. 23, 1959, Ser. No. 854,741
14 Claims. (Cl. 198—209)



1. Rotary fruit handling apparatus comprising a disc, means including a framework supporting said disc for rotation, an annulus concentric with said disc, means defining a ridge on the inner periphery of said annulus, means carried by the disc and in engagement with said ridge to maintain the annulus coplanar with said disc, means for delivering fruit to said disc, means for rotating the disc and the annulus, and a wall member fastened to the framework for retaining the fruit on the rotating annulus.

3,125,211
MOTOR MOUNT
John M. Macy, South Bend, Ind., assignor to Dodge Manufacturing Corporation, Mishawaka, Ind., a corporation of Indiana
Filed Jan. 17, 1962, Ser. No. 166,789
9 Claims. (Cl. 198—213)



5. In a motor mount assembly: an end plate with spaced parallel flanges, leg members secured to and arranged parallel with said flanges and projecting beyond the edge of said plate, elongated members secured to each of said legs in laterally spaced parallel relation to one another, and two spaced cross members secured at their ends to said elongated members for receiving and supporting a motor.

3,125,212
AUTOMOBILE DOOR-HUNG WASTE RECEPTACLE
William C. Gerber, Dalton, Ohio, assignor to Rubbermaid Incorporated, Wooster, Ohio
Filed Sept. 11, 1962, Ser. No. 222,808
4 Claims. (Cl. 206—19.5)

4. A combined waste receptacle and hanger for an automobile door comprising a plastic receptacle having a front wall having a rim bead at its upper edge and a rear wall, said rear wall having keyhole slots with their lower portions enlarged and their upper portions curved laterally, a hanger strap having headed pins at its bottom end adapted to enter said enlarged slot portions and engage behind said curved portions to detachably lock said receptacle, a hook at the top of said strap for detachably engaging the window crank pintle of an automobile door for supporting said receptacle thereon, a plastic cover for the



receptacle, a flex-type hinge connecting said cover to the upper edge of said rear wall and integral with said cover and wall, and said cover having a latch lug normally engaging under the rim bead of said front wall with a snap fit.

3,125,213
SELF THINNING COLLAPSIBLE CIGARETTE PACKAGE
Jerome V. Keating, 34—21 77th St., Jackson Heights, N.Y.
Filed Sept. 14, 1959, Ser. No. 839,655
10 Claims. (Cl. 206—41)



1. A self-thinning collapsible cigarette package comprising a collapsible wrapper having a foldable bottom panel with side adhesive flaps, foldable side panels folded upwardly respectively from the opposite ends of the bottom panel and having stiffened front and rear panels extending respectively therefrom but in opposite directions, the lower edges of the front and rear panels having the adhesive flaps of the obttom panel secured thereto, adhesive flaps on the respective side panels respectively adhered to the side edges of the respective front and rear panels, whereby the contents of the package will be prevented from being bent and crushed while permitting the package to be automatically thinned as the cigarettes are removed.

3,125,214
ARTICLE DISPENSING UTILITY BOX
John B. Merlla, 3120 Forest, Kansas City, Mo.
Filed Oct. 1, 1962, Ser. No. 227,393
6 Claims. (Cl. 206—42)

1. A utility box comprising:

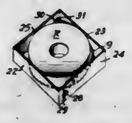
a. a cup-shaped outer body member having a cylindrical side wall and a generally planar end wall, said side wall having an aperture formed therein and a peripheral groove formed in the inner surface thereof, said groove being a limited angular extent and terminating at each end, in a shoulder radial to said body member,

b. a cup-shaped inner body member having a cylindrical side wall telescoped rotatably within the side wall of said outer body member and a generally planar end wall spaced apart from the end wall of said outer body member, the side wall of said inner body member having an aperture formed therein adapted by relative rotation of said body members to be brought into registry with the side wall aperture of said outer body member, and a groove formed peripherally in the outer surface thereof, said grooves conjointly forming a tubular passage, the groove of the inner body member also terminating in shoulders radial to the body members, and



c. a flexible compression spring disposed in the tubular passage formed by said grooves and normally abutting at its ends corresponding end shoulders of both of said grooves, whereby to secure said body members in assembly, and to hold said body members releasably in a closed position with the side wall apertures thereof out of registry.

3,125,215
COMBINED HOUSING AND RETAINING MEANS FOR REELS OF TAPE
Thomas S. Kulka, 200 Film Bldg., 2108 Payne Ave., Cleveland 14, Ohio
Filed June 21, 1962, Ser. No. 204,137
14 Claims. (Cl. 206—52)

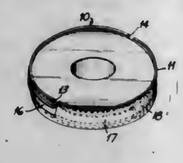


1. A combined housing and retaining means for a reel and tape carried thereby, said reel having flanges with said tape disposed between said flanges and having an outer diameter less than the diameter of said flanges, said housing comprising two pairs of opposed substantially parallel sidewalls and a bottom wall providing a generally rectangular box, said retaining means comprising an elastic band extending above and across said bottom wall and secured to said housing and a tape engaging member on said band intermediate the length thereof, said band having a width or thickness less than the distance between said flanges and said member having a thickness greater than the width or thickness of said band, whereby a reel of tape may be disposed in said box with a flat side of said reel resting on said bottom wall with said band and member received between the flanges of said reel to retain said reel in said box, said member engaging the peripheral surface of said tape to prevent unwinding thereof and said member preventing entry of said band between the tape and the flange of said reel.

3,125,216
COMBINED REEL HOUSING AND TAPE RETAINING MEANS

Thomas S. Kulka, 200 Film Bldg., 2108 Payne Ave., Cleveland 14, Ohio

Filed June 21, 1962, Ser. No. 204,288
14 Claims. (Cl. 206—52)

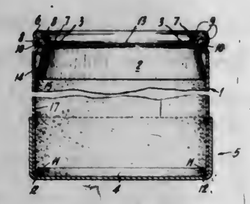


1. A combined reel housing and tape retaining means comprising a circular sidewall and a bottom wall providing a circular box open at the top, an elastic band extending across a major portion of said box and secured to said sidewall and a tape engaging member on said band, said tape engaging member having a thickness greater than that of said band, whereby a reel of tape may be disposed in said box with said band and member received between the flanges of said reel and said member engaging the tape on said reel to retain said reel in said box and prevent unwinding of said tape.

3,125,217
SOFT PRODUCTS DISCHARGE CONTAINER FOR VENDING MACHINE

Laddie Karlik, 410 E. 163rd St., Bronx, N.Y.

Filed July 10, 1961, Ser. No. 123,401
3 Claims. (Cl. 206—56)

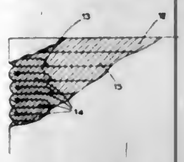


1. An improved soft products discharge container comprising: casing having opposite open ends provided with peripheral stop ends, one of said stop end of the filled casing having a resiliently expandable gripping socket to grip and release respectively upon relatively exerted pressure a resiliently contractual bolt projection of a resiliently balanced transverse member and close said casing on said one open end, and the opposite stop end having a trapping socket to engage a springy wedge-rim projection of said transverse member to stop and retain said transverse member reciprocably, operably and permanently in said casing from which can be separable only by breakage; resiliently balanced transverse member slidably and permanently nested in said casing with equilibrate balance by the associated assistance of two contiguous resilient sealing parts projections comprising: a resiliently contractual bolt projection defined at the adjoining periphery of the bottom and sides and shaped complementary with the said gripping socket for clutch seal engagement therein when the casing is filled and for later frictional resilient sealing engagement with the inner periphery of said casing when disengaged therefrom; and a springy wedge-rim projection diverging axially from the concavo-jut sides of said bolt projection for a resilient frictional sealing contact with the inner periphery of said casing.

3,125,218
PACKING NON-RESILIENT COMPRESSIBLE MATERIAL

Frederick Floyd, Strood, England, assignor to Ozonair Engineering Company Limited, Rochester, England

Filed Nov. 30, 1959, Ser. No. 856,260
3 Claims. (Cl. 206—59)



1. A method of protecting a strip of non-resilient compressible porous filter material against stretching or compressing of the central filter portion thereof which comprises a coiled package of non-resilient compressible, normally expanded filter strip material in roll form for use in air filters having a central width of relatively uncompressed filter strip material and inturned compressed edges of double thickness providing incompressible lateral margins absorbing compressive forces resulting from the winding tension of the roll, which comprises providing an elongated length of the filter strip material, lapping over the marginal edges thereof to form a double thickness of material adjacent the edges leaving the major portion of the width of the strip material in unlapped and uncompressed condition and rolling up the filter strip material and compressing the overlapped portions at the edges so that they will have the same thickness as the uncompressed central width of the relatively uncompressed material.

3,125,219
RETAINING MEANS FOR TAPE WOUND ON REELS

Thomas S. Kulka, 200 Film Bldg., 2108 Payne Ave., Cleveland 14, Ohio

Filed June 21, 1962, Ser. No. 204,110
12 Claims. (Cl. 206—59)



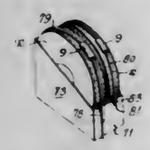
3. An album type housing and tape retaining means comprising a base of relatively stiff material, an upstanding stud on said base substantially centrally thereof, an upstanding flange on one edge of said base, an elastic band secured at its ends to said flange above said base, an enlarged tape engaging member on said band substantially midway of the length thereof, a finger engaging tab on said member and a cover hingedly mounted on said flange, whereby a reel of tape may be disposed on said base with said stud received in the spindle receiving aperture of said reel with said band and member received between the flanges of said reel and engaging said tape to retain said reel on said stud and prevent unwinding of said tape and said cover overlying said reel to protect the same.

3,125,220
COMBINED REEL CHEST AND TAPE RETAINING MEANS

Thomas S. Kulka, 200 Film Bldg., 2108 Payne Ave., Cleveland 14, Ohio

Filed June 21, 1962, Ser. No. 204,130
20 Claims. (Cl. 206—59)

13. A combined reel chest and tape retaining means comprising a relatively low front wall, a relatively high rear wall, sidewalls connecting said front and rear walls and a bottom wall providing a chest open at the top, an elastic band extending from the upper edge of the front wall to the upper edge of said rear wall, the ends of said band being secured to said front and rear walls and an enlarged tape engaging member on said band substantially

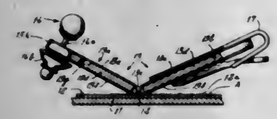


midway between said front and rear walls, whereby a reel of tape may be disposed in said chest with said band and member received between the flanges of said reel to retain the same in said chest, said member engaging the peripheral surface of the tape to prevent unwinding and also serving to prevent entry of said band between the tape and a flange of the reel.

3,125,221
INTERIOR CONSTRUCTIONS FOR JEWELRY CASES

John H. Ax, % London Leather Novelties, Inc., 121 W. 17th St., New York 11, N.Y.

Filed Sept. 4, 1962, Ser. No. 221,273
7 Claims. (Cl. 206—75)



5. In combination with a lining sheet of a jewelry case disposed in a plane, a tie bar and tie tack holder comprising a laminated structure having a relatively stiff core divided into spaced sections by a fold line, outer laminae extending across said fold line and interconnecting said spaced sections as panels of uniform thickness co-extensive with said core sections, stitching extending along said fold line securing the holder to said lining sheet, the outer laminae being compressed by the stitching in said fold line to dispose one of said panels adjacent the fold line as a wing in angular relation to said plane of the lining sheet, said wing being formed with spaced openings to receive therethrough portions of jewelry articles.

3,125,222
METHOD OF MAKING HIGH STRENGTH MAGNESIUM EXTRUDES

George S. Foerster and Roy J. Johnson, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

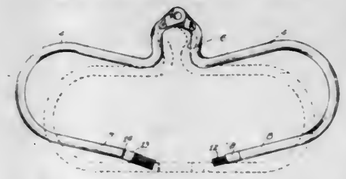
No Drawing. Filed Feb. 15, 1960, Ser. No. 8,493
4 Claims. (Cl. 207—10)

1. The method of direct extrusion of metal during which the metal undergoes cold working, said metal being composed of at least 75 percent by weight magnesium, to produce extrudes having superior strength properties, consisting of extruding said metal from the container of an extrusion press through the die orifice thereof wherein the extrusion reduction ratio of the cross-section of said container to that of the die orifice is between 2:1 and 50:1, lubricating the interface between said metal and the contacting surfaces of said container and die, and maintaining the temperature of the extrude being produced at not less than about 300° F. and below the recrystallization temperature of the extruded metal as measured as the extrude leaves the die orifice, and thereafter upsetting the extrude so produced whereby the cross-sectional area of the extrude is increased and the thus upset prior extrude of increased cross-sectional area is re-extruded, to produce an extrude which retains a substantial amount of the strain hardening induced therein during the extrusion operation.

3,125,223
DISPLAY HANGER

George P. Goldstein, 1255 North and South Road, University City, Mo.

Filed May 10, 1961, Ser. No. 120,457
5 Claims. (Cl. 211—46)

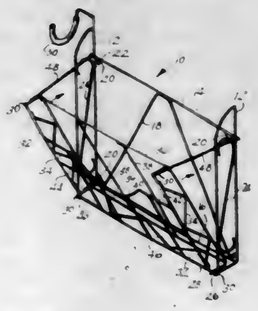


1. In combination, a pair of separable relatively inflexible rods having adjoining ends that are mutually opposed to one another and are movable into substantial axial registry and that are adapted to engagingly detachably interlock thereat, a threaded extension element projecting axially from one of said ends, and a second extension element movably secured at one end to the opposed end of the other rod to be tiltable about its secured end and extend axially therebeyond and threadedly rotatably engage said first extension element to detachably interlock said mutually opposed ends of said extension elements together.

3,125,224
WALL MOUNTED TELEPHONE BOOK RACK

Harry R. Cochrane, 1 Cross St., Saugus, Mass., and John A. Danieli, Saugus, Mass. (34 Moreland St., Somerville, Mass.)

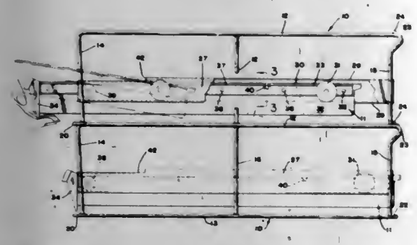
Filed Jan. 23, 1963, Ser. No. 253,462
6 Claims. (Cl. 211—106)



1. A wall mounted telephone book rack comprising, in combination, a pair of wire side frames, a plurality of cross bars carried by said side frames, a plurality of gussets of substantially triangular configuration carried by said side frames for receiving suitable fastening means to secure said rack to a wall near a telephone, a pair of substantially S shaped wire frames carried by said side frames and a substantially V-shaped wire frame providing stiffening means for said side frames, a second pair of parallel side frames received pivotably within said first pair of side frames, a pair of sawtooth frames received

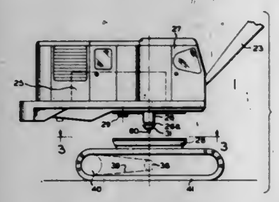
within said second pair of side frames, a plurality of vertical and a plurality of horizontal cross bars providing rigidity between said second side frames, a pair of chains secured to said first and second pair of side frames limiting the pivotable movement forward of said second pair of side frames, a hook carried by said first side frames providing means for supporting a telephone, a pair of parallelly spaced apart bottom bars and a sawtooth frame received within said bottom bars providing a base for the smaller compartment in front of said rack.

3,125,225
COMBINED TIERING FRAME AND TRAY
Wayne S. Brengman, Wooster, and Joseph A. Rogus, Cleveland, Ohio, assignors to Rubbermaid Incorporated, Wooster, Ohio, a corporation of Ohio
Filed Aug. 17, 1961, Ser. No. 132,165
5 Claims. (Cl. 211—126)



1. A tiering frame for a roll-out tray, comprising upper and lower longitudinal frame side rods connected by upright front and rear legs, the lower side rods being connected at their rear ends by transverse rod portions, a cross bar resting on top of and connecting the rear ends of said upper side rods, the rear ends of said lower side rods extending beyond said transverse rod portions and being notched to lock under the cross bar of a like frame on which said first frame is tiered, and the front ends of said lower side rods having loops to interlock with the front ends of the upper rods of said like frame.

3,125,226
DISCONNECT MEANS
George W. Mork, South Milwaukee, and Ralph L. Bauer and Max D. Wolff, Milwaukee, Wis., assignors to Bucyrus-Erie Company, Milwaukee, Wis., a corporation of Delaware
Filed Sept. 28, 1962, Ser. No. 227,018
9 Claims. (Cl. 212—38)



1. In a machine having an upper works and a lower works wherein said upper works is swingable relative to said lower works, said upper works includes a deck, and said lower works includes a frame and propel means for propelling said machine, said deck being supported by a swing means, and said swing means being supported by the frame of said lower works, the combination of: means for detachably securing said deck to said swing means; first gear means engageable with said swing means for swinging said upper works; second gear means for driving said propel means; said first and second gear means coupling said upper works to said lower works by engagement with said swing means and said propel means respectively; said means for detachably securing said deck to said swing means also coupling said lower works to said upper works; wherein said upper works is removable from said lower works by detaching said means for detachably securing said deck, and wherein said first and second gear means disengage from said swing means and said propel means when said upper works is removed from said lower works.

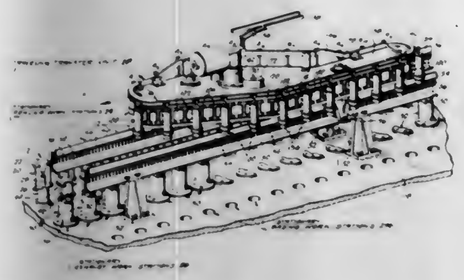
3,125,227
BOOM CONSTRUCTION
Roy D. Kauffman, 512 Northwest Drive, George Allen Kauffman, 709 Tanley Road, and Jay Roy Kauffman, 11820 Gordon Road, all of Silver Spring, Md.
Filed July 10, 1961, Ser. No. 122,713
13 Claims. (Cl. 212—144)



1. In a crane construction, embodying a main boom section having a head and foot portion adapted for attachment to a supporting base and an extension boom section; the combination with said sections of spaced foot plates at one end of the extension boom section for receiving the head of the main boom section, means coupling said head to said foot plates, means for maintaining said sections in working alignment, a terminal jib section having a foot portion formed to receive the head of said extension boom section, bracing means coupling the foot portion of the extension boom with the jib boom section and maintaining the same in working alignment, a sheave upon the head of the jib boom section, means carried by the extension and jib boom sections for operatively supporting a work cable longitudinally of all of the sections for extension over the sheave, the said work cable supporting means including A frames mounted upon the foot portions of the extension boom section and the jib boom section.

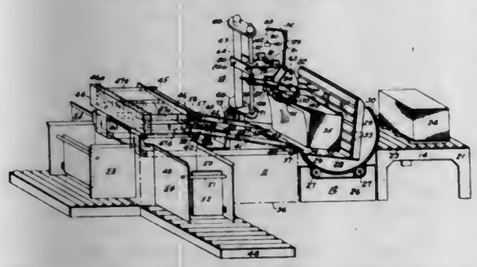
3,125,228
ARTICLE-TRANSFER APPARATUS
Alfred H. Laidig, Bloomfield, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Continuation of application Ser. No. 845,523, Oct. 9, 1959. This application Nov. 28, 1960, Ser. No. 72,081
11 Claims. (Cl. 214—1)

1. A transfer unit for transferring articles from an article feeding zone to an article receiving zone, said unit comprising, a carriage, power means for causing relative movement between said carriage and said article feeding and article receiving zones, means supported by said carriage and movable with respect thereto and operable to pick up articles from said article feeding zone and move said articles substantially transverse to the path of relative movement between said carriage and said zones and to transfer said articles to said article receiving zone, said carriage-supported means having a first portion thereof relatively stationary with respect to said article feeding zone during a predetermined period of the movement of said carriage-supported means with respect to the movement of said carriage to permit the transfer of said articles from said article feeding zone to said carriage-supported means while the latter is relatively stationary,



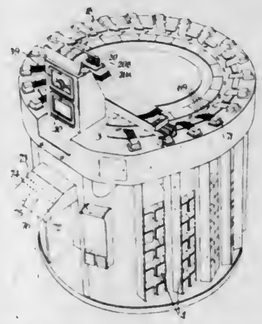
said carriage-supported means having a second portion thereof relatively stationary with respect to said article receiving zone during a predetermined period of the movement of said carriage-supported means with respect to the movement of said carriage to permit the transfer of said articles from the latter to said article receiving zone while the second portion of said carriage-supported means is relatively stationary, and said carriage-supported means having a portion intermediate said first and second portions of said carriage-supported means and operable to move said articles substantially transverse to the path of relative movement between said carriage and said article feeding and receiving zones at a fraction of the speed of relative movement therebetween.

3,125,229
APPARATUS FOR HANDLING SHEETS
William R. Mulquin, Baltimore, Md., and Ludwig Molvig, Jr., Bethlehem, Pa., assignors to Bethlehem Steel Company, a corporation of Pennsylvania
Filed June 5, 1959, Ser. No. 818,457
6 Claims. (Cl. 214—8.5)



1. Apparatus for selectively removing individual sheets from a pack of sheets stacked on edge, comprising
(*a*) a support for said pack of sheets,
(*b*) means adjacent the upper end of said pack for separating the upper edge of the foremost sheet from said pack,
(*c*) rotatable blade means, independent of said first mentioned means, adjacent the upper end of said pack for successively engaging the individual sheets of said pack, said rotatable blade means including a helical portion for engaging the rear face of the foremost sheet of said pack of sheets after it has been separated from said pack by said first mentioned means to force said face away from the pack and cause said sheet to pivot about its lower edge whereby said sheet is removed from said pack and a second portion adjacent the leading end of said helical portion for engaging the front face of the second sheet of said pack to restrain forward movement of said second sheet while said first sheet is being acted on by said helical portion and pivoted down, and
(*d*) means for rotating said rotatable blade means.

3,125,230
MACHINES FOR SORTING ARTICLES
Ivor Edmunds and James Arthur Halliwell, Swindon, England, assignors to Vickers-Armstrongs (South Marston) Limited, London, England, a company of Great Britain
Filed June 30, 1961, Ser. No. 121,249
Claims priority, application Great Britain July 5, 1960
6 Claims. (Cl. 214—11)

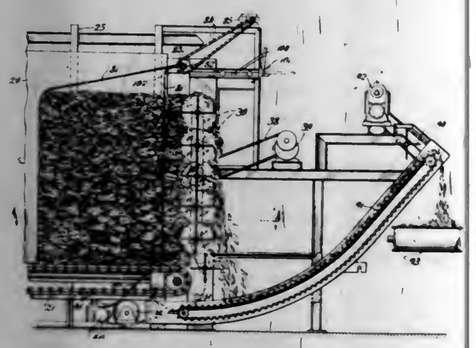


1. A machine for sorting articles, the machine comprising means for feeding articles in succession to a viewing station, a drum having an inner surface, means for continuously rotating the drum about its axis at a speed sufficient to maintain an article being sorted against said inner surface by centrifugal force, a plurality of fixed receiving stations spaced at intervals around the inner surface of the drum for receiving sorted articles, means at each receiving station for removing an article from the inner surface of the drum to collect the article at the station, each removing means being normally inoperative, means for selecting, as a result of viewing, which one of the removing means is to be rendered operative, means responsive to operation of the selecting means for transferring each article that has been viewed from the viewing station to the inner surface of the drum, and means associated with each receiving station for producing, when the station receives an article from the associated removing means, a release signal which is effective on the selecting means to render the operated removing means inoperative and to restore the selecting means to its initial condition.

3,125,231
APPARATUS FOR ADMIXING STRIP TOBACCOS
Sheldon L. Mortland, Durham, N.C., assignor, by direct and mesne assignments, to AMF Overseas Corporation S.A., Geneva, Switzerland, a Swiss company
Filed June 1, 1961, Ser. No. 114,196
3 Claims. (Cl. 214—17)

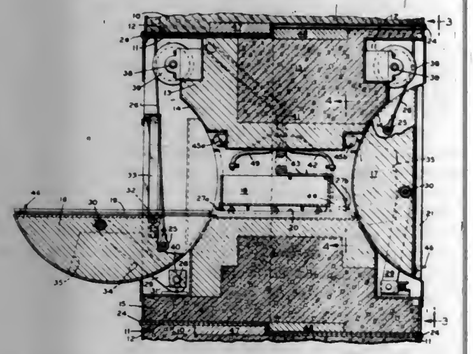
1. Apparatus for uniformly admixing a plurality of strip tobaccos of different types and grades comprising

bin means for receiving and holding an elongated mass of loose tobacco, movable conveyor means in said bin means for supporting and conveying said mass to one end of said bin, dislodging means at said one end of said bin arranged in a plane transverse the movement of said conveyor means and substantially vertical thereto for dislodging relatively thin vertical sections from said mass, a pliable curtain having one portion covering a substantially entire



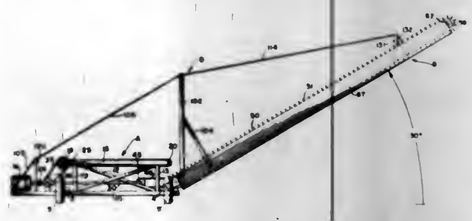
cross section of said bin means arranged in a plane substantially parallel to said first described plane and spaced therefrom said curtain having tensioning means extending over said mass in covering relationship thereto from said one portion substantially to said first plane, and removable coupling means coupling one end of said curtain to said conveyor means whereby said curtain moves with said conveyor means to maintain said mass of tobacco therealong.

3,125,232
TRANSFER DEVICE
Harold L. Brinkman, Flushing, and Oliver J. Saari, Brewster, N.Y., assignors to American Machine & Foundry Company, a corporation of New Jersey
Filed Aug. 10, 1961, Ser. No. 130,676
5 Claims. (Cl. 214—17)



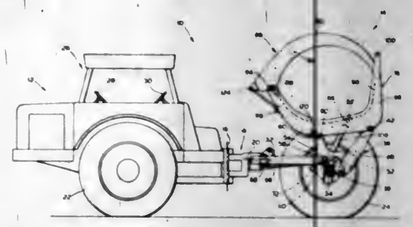
1. An apparatus for transferring articles into and from an isolated space without exposure of the atmosphere in said space which comprises in combination an article transfer carrier normally positioned in the wall which isolates said space, an outer door and an inner door spaced from said outer door, said doors having a flat side upon which said article transfer carrier may be transferred, as the door is horizontally positioned, each door supported and guided for pivotal movement to open and closed position, an interlocking arrangement for said doors preventing the opening of any one of said doors when the other is in open position, means for actuating said doors and means carried by said transfer carrier for movement of said article transfer carrier through said isolated space and onto said doors.

3,125,233
POTATO CELLAR LOADER
Frank Gilbert Lamb, Milton-Freewater, Oreg., assignor to Lamb-Weston, Inc., a corporation of Oregon
Filed May 11, 1961, Ser. No. 109,298
5 Claims. (Cl. 214—152)



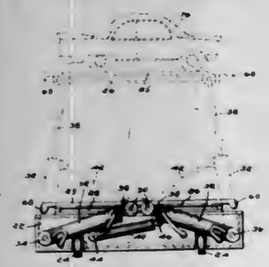
1. In a method for stacking food products, the steps comprising: conveying said products upwardly in a conveying zone, said zone being disposed angularly to the horizontal, said zone being tilted to one side with respect to the upward movement of said products, initially discharging said products at said side in the lower position of said zone to form a stack of products adjacent said lower portion, and gradually discharging said products at successively greater heights with respect to said lower portion, said heights conforming to the increase in height of said adjacent stack, whereby said products form a stack approximately equal to the height of said conveying zone, and said products are prevented from falling any appreciable distance by said adjacent stack.

3,125,234
MATERIAL HANDLING MACHINE
Charles W. Gustine, St. Joseph, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Filed Oct. 21, 1960, Ser. No. 64,066
6 Claims. (Cl. 214—508)



1. In a material handling machine having a horizontally disposed frame portion, a transverse axle connected to and supporting the frame and ground engaging means at the outer ends of the axle, a support member pivotally mounted on the frame closely adjacent the axle for movement between two operating positions, the said support member comprising boom arm means extending outwardly and terminating closely adjacent the outer periphery of the ground engaging means and support arm means extending outwardly at an angle to the said boom arm means and terminating adjacent the outer periphery of the ground engaging means, the said support arm means terminating within the said periphery when said support member is in one operating position and without the said periphery when said support member is in the other operating position, load engaging means pivotally mounted at the outer ends of the said boom arm means and adapted to be pivoted between one extreme position in which a portion of the load engaging means abuts the ends of the said support arm means and another position, first power means connected between said load engaging means and said support member for pivoting the load engaging means selectively between the said two positions, and second power means connected between the said support member and the frame for moving the said support member selectively between the said two operating positions in one of which the said load engaging means may be positioned immediately above the ground engaging means.

3,125,235
LOAD LIFTING MECHANISM
John W. Frangos, 2 Brimbal Hill Drive, Beverly, Mass.
Original application Aug. 4, 1960, Ser. No. 47,489, now Patent No. 3,042,228, dated July 3, 1962. Divided and this application Mar. 23, 1962, Ser. No. 181,933
2 Claims. (Cl. 214—512)



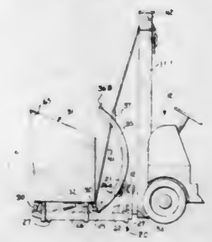
1. Load lifting mechanism comprising in combination, a base support, a platform receiving and supporting member on the base support, a load supporting platform resting loosely on and extending beyond the ends of said member, two pairs of fluid pressure cylinders pivoted on and respectively adjacent to the ends of the base support, the two cylinders of each pair being pivoted on a common axis and disposed at opposite sides of the base support, cooperating pistons within the cylinders operatively associated with the member and adapted to elevate the member and platform when the cylinders are pivoted upwardly and the pistons moved outwardly, means providing horizontal guideways in and at opposite sides of the member beneath the platform, two rods extending through the guideways parallel with said pivot axes and each connected at its ends to the two pistons of the adjacent cylinders, booster cylinders and pistons therein disposed between said axes, and means pivotally connecting each booster cylinder to the base support and its piston to the adjacent pressure cylinder, outward movement of the pistons from the cylinders being adapted to pivot said pairs of fluid pressure cylinders upwardly and outwardly from each other and move said rods outwardly in the guideways and elevate the member and platform.

3,125,236
ATTACHMENT FOR A FORK LIFT
Louie A. Huff, Box 111, Hutsonville, Ill.
Filed July 20, 1961, Ser. No. 125,445
5 Claims. (Cl. 214—620)

1. With a lifting device including a vertical support, an element mounted for vertical movement upon said support, and means for vertically moving said element upon said support, the combination comprising an open topped container;

rollers mounted at the bottom of said container;

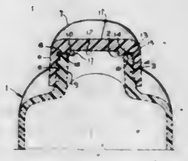
a frame secured to said element for vertical movement therewith, said frame including forwardly projecting supports adapted to extend under said container and to provide trackways for said rollers;



a pair of roller guides fixedly secured to said forwardly projecting supports adjacent the proximal ends thereof and defining an arcuate path which curves upwardly rearwardly and then forwardly, and forms a smooth continuation of said trackways said roller guides including limiting surfaces fixed with relation to said frame and arranged to limit said rollers to said arcuate path;

and a line secured to said container at a rearward portion thereof and extending upwardly to a connection with said support whereby downward movement of said frame causes said rollers to move into said roller guides and said container to be thereby dumped forwardly.

3,125,237
CONTAINER AND CLOSURE THEREFOR
Gary L. Kitterman, Kansas City, Kans.
(6100 Wilson Ave., Kansas City 23, Mo.)
Filed Apr. 23, 1962, Ser. No. 189,355
15 Claims. (Cl. 215—43)



1. In a device of the character described, in combination,

(*a*) a container having a wall defining a dispensing opening therein, and with said wall having external screw threads thereon,

(*b*) a closure member having an end wall and a collar portion depending from said end wall with internal screw threads on said collar engageable with said threads on the wall of the container for bonding the closure member onto said container in closing relation thereto,

(*c*) one of said container and closure member being of formable material characterized by being capable of returning to its original shape when deforming forces are removed therefrom,

(*d*) said container wall having a surface at the outer end of said dispensing opening and said closure member end wall having a surface that cooperates therewith, said surfaces being movable into engagement in response to screwing of the closure member onto said container, and

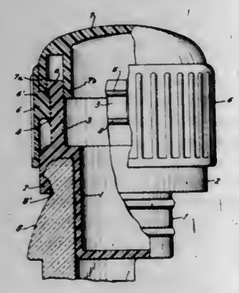
(*e*) one of said cooperating surfaces having a plurality of circumferentially spaced serrations with each serration having a face inclined and terminating in a second face substantially perpendicular to the respective surface, said serrations forming interlocking portions with similar serrations on the other cooperating surface that extend transversely of the direction of the rotative movement of said cooperating surface of the closure member to resist loosening of the closure member.

3,125,238

STOPPERS FOR BOTTLES AND THE LIKE

Herbert Brüne, Kolnerstrasse 9, Porz, near Cologne, Germany, assignor, by direct and mesne assignments, of one-third to Plaswin Corporation, a corporation of New York

Filed Jan. 26, 1962, Ser. No. 169,075
7 Claims. (Cl. 215—45)



1. A stopper for a bottle having an opening in its neck and a bead surrounding the opening, comprising means for sealing the opening, a wall surrounding said sealing means and having an inwardly projecting bulge adapted to cooperate with said bead when said sealing means is in bottle-sealing condition, a cylindrical jacket projecting above said wall, an outwardly projecting deformable stop element formed on said jacket and spaced above said wall, a ring surrounding said wall and jacket and having an upper position and a lower position, said ring serving to lock said bulge beneath said bead when in its lower position to prevent removal of said sealing means from the bottle and to release said bulge when in its upper position, and a detent formed on said ring adapted to rest upon said stop element when said ring is in its upper position and capable of being forced past said stop element to permit said ring to reach its lower position, whereby when said ring is in its upper position a continuous downward force on it is initially transmitted to said wall via said detent and stop element to move said bulge past said bead on the bottle and thereafter serves to move said ring to its lower position by forcing said detent past said stop element.

3,125,239

ACCESS HOLE COVER SECURING MEANS

Donald C. Baker, Burlington, Iowa, assignor to J. I. Case Company, Racine, Wis., a corporation of Wisconsin

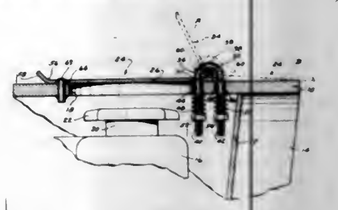
Filed Jan. 8, 1963, Ser. No. 250,153
6 Claims. (Cl. 220—35)

1. In a closure for a protective housing of the type providing an upwardly directed opening, and bolt holes spaced radially of the opening, the combination with said housing of a

plate larger than said opening, and having a portion overlying said spaced bolt holes and providing a notch registering with said spaced bolt holes, a

hinge pin bridging said notch and fixed in position on the upper surface of said plate, said hinge pin being

spaced inwardly from the edge thereof, a



U-bolt having a bight portion disposed about said hinge pin and a leg portion extending downwardly through each of said spaced bolt holes, one on each side of said hinge pin, a

spring disposed about each leg portion beneath said housing, and

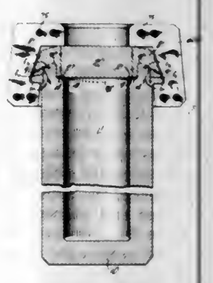
means on said leg portions engaged with said springs in position to maintain them compressed between said means and the under side of said housing.

3,125,240

CLOSURE SYSTEMS FOR PRESSURE VESSELS

George Gerard, Yonkers, and Jacob Brayman, Staten Island, N.Y., assignors to Barogenics, Inc., New York, N.Y., a corporation of New York

Original application Aug. 13, 1959, Ser. No. 833,420, now Patent No. 3,063,594. Divided and this application Oct. 5, 1962, Ser. No. 228,664
2 Claims. (Cl. 220—55)



1. In a vessel having a pressure-containing chamber and a mouth therefor, the combination of a lip surrounding said mouth and having an annular, outward-facing chamfer, a plug having a stem portion in said mouth and having a flange portion with an annular under side which matches the external configuration of said lip and chamfer and which is seated thereon, and cap means over said plug for retaining said flange portion seated on said lip by gripping the side of said vessel.

3,125,241

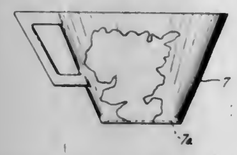
SPOT FOIL

John A. Kasper, Lincoln, Ill., assignor to Stetson China Company, Lincoln, Ill., a corporation of Illinois

Filed June 23, 1961, Ser. No. 119,223
2 Claims. (Cl. 220—63)

1. For use in combination with a cup-shaped plastic dinnerware item having a bottom provided with an external annular rim, a decorative foil comprised of a material compatible with the plastic from which the item is formed for integration into the surface of the item during molding thereof, said foil including a central portion

and at least a pair of decorative pattern portions integrally connected to said central portion, said central portion being circular in configuration and having a peripheral edge engageable with said rim and the bottom area of the item bounded by said rim, said decorative pattern portions being engageable with the sides of the item and integrally connected to said central portion so as to overlie said rim, the point of connection between said central portion and said decorative pattern portions being of



a width substantially less than the width of said first and second mentioned portions, said foil being applicable to said item during molding thereof at a point where the item is self-sustaining, but before the item is completely cured, said central portion when engaged with said rim and the bottom area of the item bounded by said rim defining a positioning means for the decorative pattern portions when the foil is first attached to the item and before the foil is integrated into the outer surface thereof during final curing of the item.

3,125,242

SANITARY SEALING APPARATUS FOR PORTS OF MEDICAL GAS CYLINDER VALVES

Lynn T. Davis, Kansas City, Mo., assignor to Puritan Compressed Gas Corporation, Kansas City, Mo., a corporation of Missouri

Filed Oct. 24, 1960, Ser. No. 64,544
7 Claims. (Cl. 220—85)



1. In a gas supply assembly including a gas cylinder provided with a valve body thereon having an outlet orifice in the same, the combination with said valve body of a sanitary sealing unit provided with a flexible, resilient, endless band frictionally surrounding the valve body in complemental, overlying, covering relationship to said orifice, and a locking component on the band and extending into the orifice in disposition requiring severance of the band before removal of the component from the orifice whereby re-use of the sealing unit is precluded.

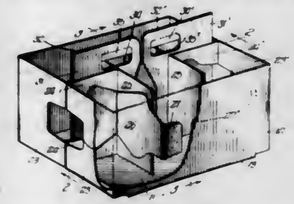
3,125,243

ARTICLE CARRIER

Edwin L. Arneson, Morris, Ill., assignor to Federal Paper Board Company, Inc., Bogota, N.J., a corporation of New York

Filed Oct. 30, 1961, Ser. No. 148,328
15 Claims. (Cl. 220—113)

1. An article carrier comprising, when completed and erected, a bottom wall panel, upstanding side wall panels hinged to opposite side edges of said bottom wall panel, a pair of end wall panels at each end thereof hinged to corresponding ends of the side wall panels and extending in end wall forming relation between the same, an upright longitudinal partition hinged at its opposite ends to the adjacent inner edges of the end wall panels, said longitudinal partition comprising pairs of longitudinal partition panels at each end thereof which are hinged at their outer edges to the adjacent inner edges of the end wall panels, a cross partition panel member hinged to the inner edge of each said longitudinal partition panel, a sup-



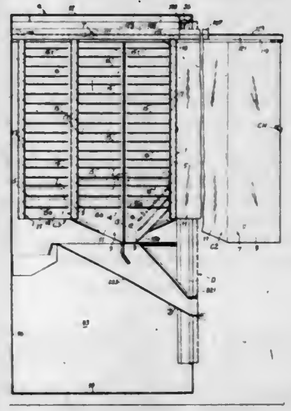
plemental cross partition panel member cut from a center portion in the vertical direction of each said longitudinal partition panel and hinged about the inner edge of the adjoining cross partition panel member into face engaging, double ply relation therewith, and a cross partition connecting member extending in hinged relation from said cross partition and secured to a side wall panel, said cross partition connecting member being an integral marginal extension on the free edge of said supplemental cross partition member and said connecting member being cut from an end wall panel.

3,125,244

VENDING MACHINE

Alvin W. Holstein, Lemay, Mo., assignor, by mesne assignments, to Universal Match Corporation, Ferguson, Mo., a corporation of Delaware

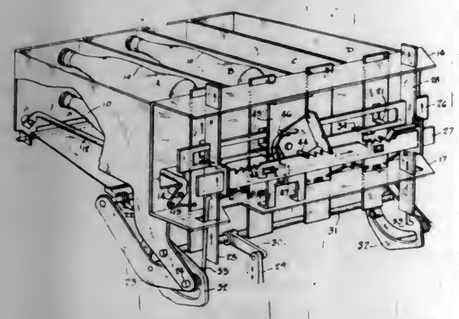
Filed June 6, 1960, Ser. No. 34,111
14 Claims. (Cl. 221—90)



1. A vending machine comprising a cabinet having a front door, a plurality of vending columns, each comprising a side wall and a plurality of walls extending laterally from one face of the side wall, the spaces defined by said walls constituting a plurality of magazines each having the side thereof opposite said side wall open to permit free access thereto, each magazine being adapted to hold a stock of items to be vended, means mounting the columns for individual sliding movement thereof from a position

within the cabinet through the front of the cabinet when the door is open to a loading position in front of the cabinet, the columns being positioned side-by-side closely adjacent one another when in the cabinet, and each column when in loading position being supported by its mounting means, any magazine being adapted to be loaded with items from the open side thereof when the column including that magazine is in loading position, and a plurality of actuating means, one for each magazine, for effecting dispensing of items therefrom, each actuating means including elements carried by the respective column.

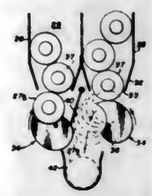
3,125,245
ARTICLE DISPENSING MECHANISM
Meigs W. Newberry, East Longmeadow, Mass., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 18, 1961, Ser. No. 138,646
4 Claims. (Cl. 221—114)



1. In a multi-column vending machine, the combination of a plurality of dispensing mechanisms each having a finger for effecting operation thereof, a longitudinally movable selector bar having a plurality of tabs adapted to register with the fingers of successive dispensing mechanisms upon successive longitudinal movements of the selector bar, means for actuating said selector bar transversely thereof and thereby actuating the dispensing mechanism whose finger is in registry with a tab on said selector bar, and mechanism for moving said selector bar longitudinally from one of said positions to the next upon such transverse movement, said last-mentioned mechanism comprising a ratchet pawl pivoted on a stationary structure and two sets of ratchet teeth which are engaged successively by said pawl upon the mentioned transverse movement to effect longitudinal movement of the selector bar, one set of such ratchet teeth effecting longitudinal movement in one direction and the other set effecting longitudinal movement in the other direction.

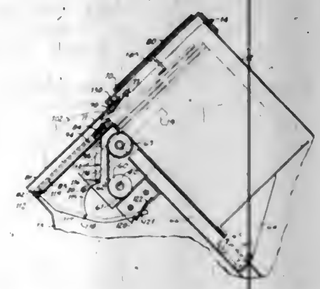
3,125,246
BOTTLED DRINK DISPENSER
Carlton L. Barnhart, 2928 W. Lancaster, Fort Worth, Tex.
Filed July 24, 1961, Ser. No. 126,005
2 Claims. (Cl. 221—116)

1. A bottled drink dispenser of the rotating cam type comprising at least one pair of vertical bottle receiving compartments in side by side relation, each compartment having an outlet at the bottom thereof wide enough to pass one bottle at a time, a cam assembly beneath the outlet of each said compartment, each said cam assembly comprising a shaft parallel with the length of the bottle thereabove to be dispensed, generally circular cams eccentrically mounted on said shafts, said cams being oppositely arranged on said shafts, their configurations having concavities in their outlines at points thereof nearest said shafts, said concavities having radii not less than the radius of the bottles to be dispensed, means positioning said concavities at the top of said cams when said bottle dispenser is not in operation, means selectively rotating one of said shafts at a time in a direction to dispense a



bottle between said cams, and a swinging divider between said cams, and parallel with said shafts, said divider having its axis of swing and its length such that the divider is contacted by a bottle being dispensed from one outlet by a rotating cam, and is swung out of the path of the said dispensed bottle and into a position adjacent to and blocking the other outlet.

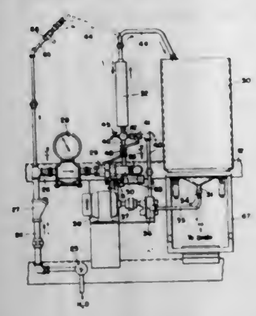
3,125,247
DISPENSING APPARATUS
Karl Knickerbocker, 400 Baycrest Drive, Venice, Fla.
Filed Dec. 2, 1960, Ser. No. 73,318
5 Claims. (Cl. 221—279)



1. A newspaper dispenser including, a cabinet defining a newspaper discharge opening, a newspaper supporting conveyor within said cabinet, means for moving said conveyor in successive step by step movements to successively present newspapers to said discharge opening, means responsive to the presentation of a paper at said opening for terminating the movement of said conveyor, and means successively operable in response to withdrawal of a newspaper from said opening for precluding unauthorized withdrawal of a succeeding paper.

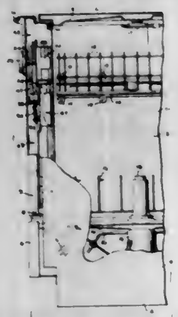
3,125,248
TEXTILE-TREATING SYSTEM AND METHOD OF DISPENSING
Grant H. Brewin, Souderton, Pa., assignor, by mesne assignments, to Proctor Hydro-Set Company, Montgomeryville, Pa., a corporation of Pennsylvania
Filed Sept. 6, 1960, Ser. No. 53,965
7 Claims. (Cl. 222—1)

4. In textile-treating apparatus of the type including a treating chamber for dyeing hosiery or the like the method of dispensing measured quantities of liquid dye into a mixing fluid line comprising pumping liquid dye from a reservoir into a metering container of less capacity than the reservoir, causing the liquid dye to recirculate from the metering container to the reservoir, after the metering container is full isolating the metering container from the reservoir and concurrently discharging the measured quantity of liquid dye from one end of the metering container into a mixing fluid line for discharge of the resulting mixture into the treating chamber to dye the hosiery therein, connecting the opposite end of the metering container to the mixing fluid line at a location up-



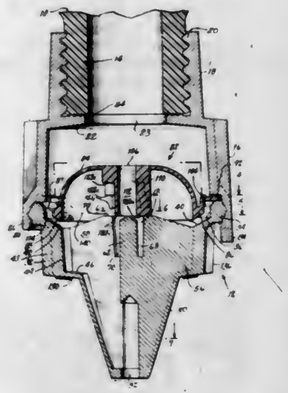
stream after isolating the first-named end of the metering container from the mixing fluid line, and pumping the mixing fluid through the metering container in reverse direction to the normal flow of the dye to flush the mixing chamber preparatory to dispensing another measured quantity of dye into the mixing fluid line for discharge into the treating chamber.

3,125,249
DISHWASHER WITH IMPROVED TREATING AGENT DISPENSER MECHANISM
Norman L. Kendt, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Nov. 3, 1961, Ser. No. 149,891
8 Claims. (Cl. 222—70)



1. In a washing machine having a washing enclosure including a closure member pivotable about its lower edge between a substantially vertical closing position and a substantially horizontal open position, and a sequence control assembly including a timer motor for operating said assembly, the improvement in treating agent dispensing systems comprising: cam means secured to said timer motor for operation thereby; cam follower means; means biasing said cam follower means to a first position, said cam follower means being movable by said cam means to a second position; a treating agent container mounted on said closure member and movable between first and second positions, said container in its first position being accessible to sprayed water within said enclosure for deposition of agent in said enclosure when said closure member is in its vertical position and for filling when said closure member is in its horizontal position, said container in its second position enclosing the agent therein and isolating it from said enclosure; a one-way clutch connecting said follower means to said container, said clutch being arranged to drive said container from its second position to its first position when said follower means moves from its second position to its first position; and spring means arranged to yieldably retain said container in its second position when said follower means is in its second position.

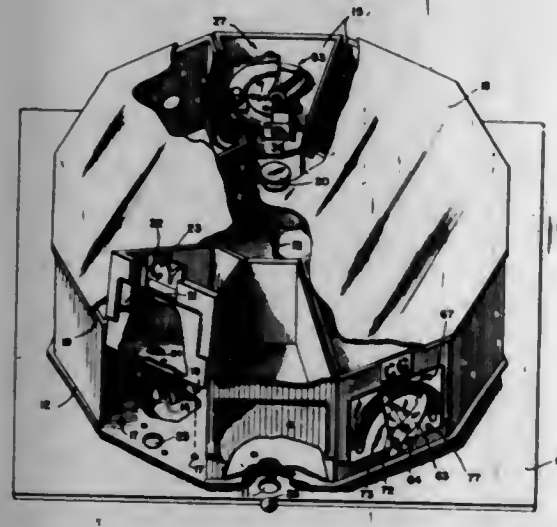
3,125,250
METERING DISPENSER FOR COLLAPSIBLE CONTAINERS
Gene Ballin, Valley Stream, N.Y., assignor to Dosamatic Dropper Corporation, Valley Stream, N.Y., a corporation of New York
Filed Jan. 18, 1960, Ser. No. 3,116
16 Claims. (Cl. 222—96)



1. An adjustable liquid dispenser fitment for use with a liquid containing flexible container having a discharge end comprising a hollow cap element open at both ends and adapted to have one of said ends sealably connected to the discharge end of said container, a nozzle element having a discharge orifice rotatably mounted to the other end of said cap element, a flexible diaphragm mounted transversely across said cap and adjacent to said other end thereof, said diaphragm having a movable portion adapted to be responsive to increase in pressure within said container, a generally tubular plunger having a bore therethrough and having one end fixed to the diaphragm movable portion for axially moving the other end of said plunger toward said nozzle element in response to increase in pressure within said container, said diaphragm having an aperture therethrough communicating with the bore of said tubular plunger for defining a liquid passage between the orifice in said nozzle element and said one end of said cap element, said plunger having a plurality of series of step surfaces in its outer wall, corresponding step surfaces of each series lying at predetermined distances from the other end of said plunger, each of said series of step surfaces disposed equally about the circumference of said plunger with corresponding step surfaces of each series lying in the same transverse plane, and stop means mounted within said nozzle element and coaxial to said plunger, said stop means having a closure rod axially aligned with said plunger and adapted to be slidably received within the bore of said plunger during movement of said diaphragm, said stop means having a plurality of arms extending radially outwardly from and spaced equidistant about said closure rod, each of said arms having a portion of the edge facing said plunger transversely aligned and being axially aligned for

engaging a corresponding step surface, said arms being adapted to be disposed in axially opposed spaced relation to selected corresponding step surfaces for selectably determining the movement of said diaphragm movable portion in response to increase in pressure within said container, said nozzle element adapted to receive a measured amount of liquid when the container is inverted, said closure rod closing said liquid passage to isolate the interior of said container and the discharge orifice of said nozzle in response to initial movement of said plunger, said liquid passage remaining blocked while said diaphragm deforms to eject liquid from said discharge orifice so that the quantity of the liquid content of said nozzle element to be dispensed from said discharge opening may be adjustably determined.

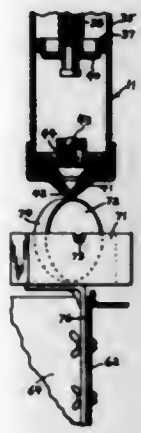
3,125,251
MULTIPLE FLUID MEASURING AND DISPENSING APPARATUS
Edward J. Poitras, Holliston, Mass., assignor to Highland Laboratories, Holliston, Mass.
Filed Nov. 29, 1960, Ser. No. 72,432
8 Claims. (Cl. 222—135)



1. In a multiple liquid mixing and dispensing apparatus, a plurality of canisters defining each a liquid reservoir having an outlet, means for positioning said canisters for discharging from their outlets to a mixture receptacle, and a pump in each said reservoir, each said pump comprising a curved piston chamber, a piston in the chamber, check valve means for opening between said chamber and said reservoir and between the chamber and said outlet, means supported through and manipulable from without a front wall of said reservoir for manual reciprocating of said piston in the curved path of said chamber, means on said reservoir wall for measuring and indicating unit reservoir volumes for dispensing, and means for controlling the actuation of said reciprocating means in relation to said measuring and indicating means whereby upon push-pull manipulation of said reciprocating means between the zero and the selected limit position the desired number of unit reservoir volumes is dispensed from the reservoir.

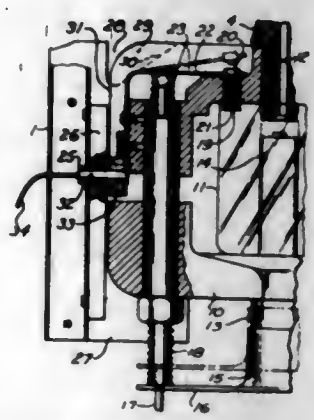
3,125,252
DISPENSING MACHINE WITH NOZZLE CLEANER
Frederick H. Heiss, Rockford, Kenneth C. Rolin, Lake Villa, and Francis J. Baudhuin, Rockford, Ill., assignors, by mesne assignments, to Valspar Corporation, Rockford, Ill., a corporation of Delaware
Original application Feb. 24, 1958, Ser. No. 717,017, now Patent No. 3,066,830, dated Dec. 4, 1962. Divided and this application Oct. 30, 1961, Ser. No. 148,407
5 Claims. (Cl. 222—135)

1. A machine for dispensing paint colorants and the like containing colored pigment in a liquid vehicle comprising, means defining a plurality of receptacles for storing a plurality of different paint colorants, dispensing means communicating with each receptacle and having a downwardly facing dispensing nozzle individual to each receptacle, common means for cleaning the tips of all of said dispensing nozzles including a solvent container containing a solvent for paint colorant, a wheel mounted for rotation about its axis with the underside of the wheel projecting into the solvent container to be partially im-



mersed in the solvent therein, and means for effecting relative movement between the wheel and the dispensing nozzles along a path transverse to the axis of the wheel and intersecting the upper periphery of the wheel whereby the wheel wipes the tips of the nozzles and the nozzles engage and turn the wheel through the solvent in the container to dissolve the colorant on the wheel and allow the colored pigment to settle to the bottom of the container.

3,125,253
DISPENSING HEAD MOUNTING ASSEMBLY
Daniel T. Hindman, Kenmore, N.Y., assignor to National-Precision Corporation, Buffalo, N.Y.
Filed Feb. 13, 1962, Ser. No. 173,009
4 Claims. (Cl. 222—181)

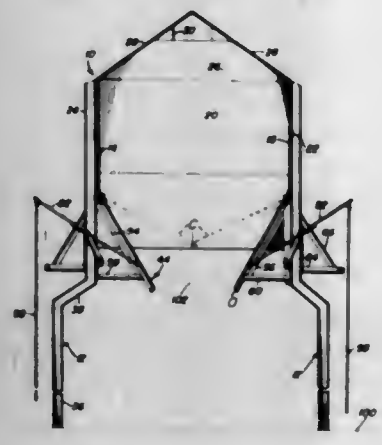


1. In a device of the class described, a dispensing unit, a normally upright support bracket for said dispensing unit, means for actuating said dispensing unit, said means including a part movable upwardly relative to said bracket and said unit, and an electric circuit associated with said actuating means, said electric circuit including a jack member and a plug member, one of said members being carried by said bracket and the other of said members being carried by said dispensing unit, said jack extending transversely of said bracket and said plug extending into said jack when said unit is mounted on said bracket, said unit being movable obliquely downwardly and inwardly relative to said bracket when mounting said unit on said bracket, and said unit and said bracket having coacting parts guiding said plug into said jack upon such movement of said unit relative to said bracket, said plug and jack precluding straight upward movement of said unit relative to said bracket.

3,125,254
HOPPER AND CLOSURE GATE

Roland J. Schuette, Jr., Slaton, Tex., assignor to Triangle Manufacturing Company, Inc., Slaton, Tex., a corporation of Texas

Filed Sept. 29, 1961, Ser. No. 141,779
7 Claims. (Cl. 222—185)



1. A hopper for storing and unloading flowable material comprising housing means including vertical side walls, a chamber within the housing means for retaining the material, an opening in the bottom of said housing means communicating with said chamber, door means pivotally connected to the side walls of said housing means so as to alternately open and close said opening, said door means including two doors converging downwardly toward each other to form a first angle when closed and converging downwardly toward each other to form a second angle when open, said first angle being greater than said second angle, operating means connected to each of said doors for pivoting said doors and support means rigidly fixed to and having portions angularly oriented with respect to said side walls for supporting said door means in their open position causing them to form a funnel for the flowable material and supporting said housing means above the ground level.

3,125,255
WATERING DEVICE FOR PLANTS

Bernhard Kaiser, Lagerstr. 76, Burgfarrnbach, near Fuerth, Bavaria, Germany

Filed May 29, 1961, Ser. No. 131,031
6 Claims. (Cl. 222—189)

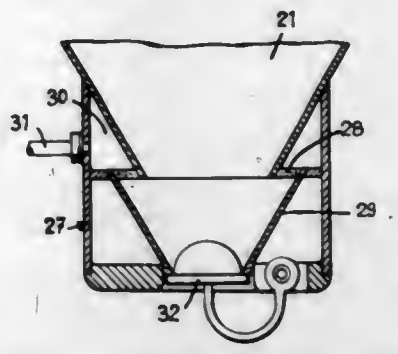


1. Watering device, consisting of a container for dropwise watering of plant roots with a water outlet on the bottom and an air inlet on the top, a stopper fitted into and closing said air inlet, made of porous material preventing the air from entering into the container, if it is extremely moistened, and being shaped in form of a small pot opening upwardly and exteriorly of the container.

3,125,256
APPARATUS FOR STORING AND DELIVERING MEASURED QUANTITIES OF GRANULAR OR LIKE FLOWABLE COMMINUTED MATERIALS

Theodor Kokeisl, Zurlindenstrasse 21, Aarau, Switzerland

Filed Nov. 21, 1960, Ser. No. 70,748
Claims priority, application Austria Nov. 20, 1959
3 Claims. (Cl. 222—195)

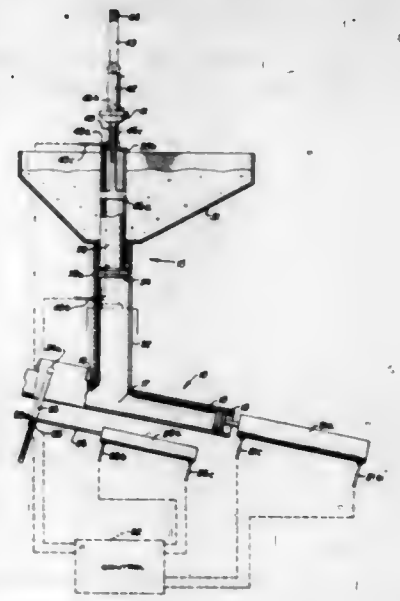


1. A dispenser for flowable comminuted material, comprising upwardly widening chute means formed with an inlet opening at the upper end thereof and an outlet opening at the lower end thereof, closure means at said lower end for releasably blocking said outlet opening, feed means at said upper end for introducing said material into said chute means through said inlet opening, said feed means extending with clearance into said inlet opening, and a porous body substantially coextensive with the space between said feed means and said chute means and in line with an external source of fluid under pressure for admitting fluid from said source into said chute means over substantially the entire area of said space.

3,125,257
LOADING DEVICE FOR A PUMPING MACHINE

Martin T. Vukich, 10891 Olinda St., Sun Valley, Calif.

Filed July 5, 1962, Ser. No. 207,706
7 Claims. (Cl. 222—255)



1. In a leakproof, jamproof loading device for a pumping machine having a loading chamber adapted to receive material containing aggregate, the provision of:

hopper means for holding a supply of material to be loaded;

a discharge duct extending from the lower portion of said hopper supply means and adapted to communicate with the loading chamber in a pumping machine

a hollow loading cylinder slidably mounted in said discharge duct for axial movement

said loading cylinder having an open discharge end within said duct and a filling end including a filling port adapted to extend into and move through the material in said hopper supply means

said loading cylinder being adapted to move axially within said discharge duct and through said hopper supply means between a filling position when said filling port is adapted to be open and in contact with the material in the lower portion of said hopper supply means and a discharging position when said filling port is adapted to be closed and out of contact with the material in said hopper supply means;

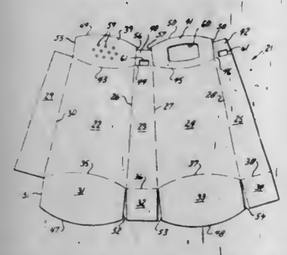
a movable valve carried by the loading device for opening and closing said filling port of said loading cylinder;

valve actuating means operatively connected with said valve for moving said valve into and out of sealing relation with said filling port;

drive means operatively connected with said loading cylinder for moving said loading cylinder axially within said discharge duct and through said hopper supply means between said filling position and said discharging position;

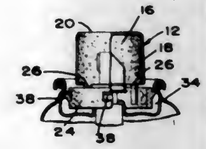
and control means operatively connected with said valve actuating means and said loading cylinder drive means for sequentially operating said means in timed relationship to move said open loading cylinder from the filling position through the material in said hopper supply means to the discharging position causing material to pour through said cylinder, to close and seal said filling port with said valve when the loading cylinder is in said discharging position and the filling port is out of contact with the material in said hopper supply means, and to return the closed loading cylinder to the filling position where the filling port is opened by removing the valve therefrom.

3,125,258
DISPENSING CONTAINER AND BLANK THEREFOR
Richard M. Watts, Henrico County, Va., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Nov. 4, 1960, Ser. No. 67,282
14 Claims. (Cl. 222—480)



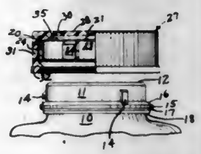
1. A dispensing container having side wall means defining an open end of said container at an outer edge of said side wall means, an underlying flap hingedly connected to said edge of said side wall means and being disposed over said open end, said underlying flap having a dispensing aperture provided therein, a pair of opposed intermediate flaps hingedly connected to said edge of said side wall means and respectively having slots provided therein, said intermediate flaps having free edges spaced from each other a distance greater than said aperture so that said aperture is not covered by said intermediate flaps, a slide member disposed against said underlying flap and having a pair of opposed outwardly projecting tabs respectively extending through said slots in said intermediate flaps, said slide member being disposed against and in sliding relation with both of said intermediate flaps, said slide member having a dispensing opening provided therein and being adapted to be moved to one position relative to said container to align said opening with said aperture for dispensing the contents of said container out through said aligned opening and aperture and to another position to cover said aperture to prevent dispensing of said contents, and an overlapping flap hingedly connected to said edge of said side wall means and being disposed over said underlying flap with said intermediate flaps and slide member disposed therebetween, said overlapping flap having an opening provided therein exposing part of said slide member and being aligned with said aperture in said underlying flap.

3,125,259
TWO-PART CLOSURE WITH FRANGIBLE ELEMENTS CONNECTING THE TWO PARTS
William H. Young, Jr., Baltimore, Md., assignor to Pharma Plastics Incorporated, a corporation of Maryland
Filed Apr. 14, 1961, Ser. No. 102,968
7 Claims. (Cl. 222—541)



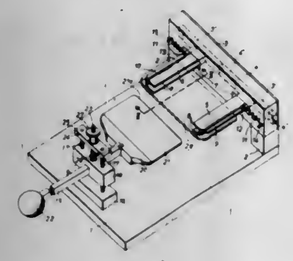
5. A unitary resilient moldable plastic closure comprising a tubular cover member having an axial wall, a relatively closed end and an open end, a tubular retaining member adjacent said open end, a plurality of frangible arcuately spaced bridging elemnts integral with said members and maintaining said members in spaced relationship and extending internally of said retaining member, and a peripheral projection carried externally of said retaining member, said retaining member providing an annular surface adjacent the open end of said cover member and extending radially outwardly therefrom.

3,125,260
SHAKER OR SIFTER-TYPE DISPENSERS
James R. Dreps, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Jan. 19, 1961, Ser. No. 83,690
5 Claims. (Cl. 222—548)



1. In combination, a container having an annular neck-forming wall defining a mouth, a plurality of radially projecting lugs on said wall, and an annular radial projection on said wall below said lugs for securing a closure cap to said container; a sifter-type fitment comprising a relatively flat disk provided with a multiplicity of perforations therethrough, a depending attaching skirt at the periphery of said disk, a plurality of radially projecting members on the exterior of said skirt, means on the interior of said skirt at each radially projecting member adapted to snugly engage said lugs on said wall, and means on said skirt to retard rotative movement of a closure cap placed thereon; and a closure cap adapted to overlie said fitment and container mouth, comprising a circular panel portion of greater diameter than said fitment, said panel portion being provided with a plurality of perforations alignable with the perforations in said fitment, a depending attaching skirt at the periphery of said panel portion, an annular internally projecting rib on the free end of said skirt cooperable with the projection on said container wall to secure said cap to said container and to retain said fitment within said closure cap, and means on the interior of said skirt to limit rotative movement of said cap.

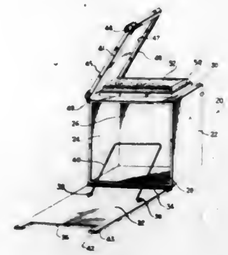
3,125,261
DEVICE FOR TURNING POCKET-LIKE ARTICLES
Conrad Arbter, Saal (Saale), Germany, assignor to G. M. Pfaff A.G., Kaiserslautern, Pfalz, Germany, a corporation of Germany
Filed Jan. 9, 1963, Ser. No. 250,188
Claims priority, application Germany Jan. 11, 1962
8 Claims. (Cl. 223—39)



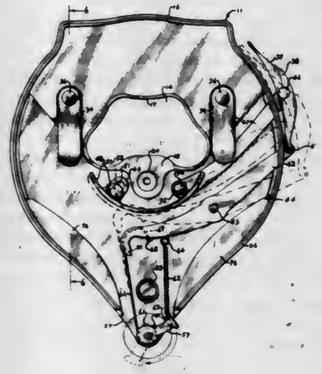
1. A device for turning inside out pocket-like work pieces consisting of superposed edge-sewn fabric or the like layers comprising a pair of parallel oblong turning members of U-shaped cross-section, said members each having a pair of leg portions and a connecting portion and arranged with the open ends of the U's facing one another, parallel guide and resilient biasing means to urge said members away from one another and to enable the mounting thereon in stretched condition of a pocket-like work piece to be turned, longitudinal aligning ridges coinciding with the symmetry plane of and projecting outwardly from the connecting portions of said members, and a turning plate adapted to have its opposite edges engage the inside of and to move within said members for turning a work piece placed thereon, said ridges being adapted to cooperate with the edge seams of said work piece to align and guide the same such as to effect turning thereof about said seams during a work turning operation.

3,125,262
EYEGLASS AND LENS CLEANING DEVICE
Charles Goodwin, 1506 Caton Ave., Brooklyn 26, N.Y.
Filed Apr. 26, 1963, Ser. No. 275,841
4 Claims. (Cl. 225—32)

1. A dispenser for lens cleaning tissue, comprising a containing having a front opening, a wall hinged at one edge of said opening for closing the same, said wall having a slot therein for passing one end of said tissue therethrough from the interior of the container, spring means in the container for holding said end of the tissue taut inside the container, a resilient pad on one end of the container near said slot for supporting a portion of said end of the tissue, and a clamp pivotally carried by the container for clamping a free edge of said end of the tissue while said end of the tissue overlays said pad and said spring cooperates with said clamp in holding the tissue in a taut condition overlying said pad, said one end of the container having a fixed rectangular frame thereon defining a receptacle for said pad, said end of the casing providing a bottom for the receptacle, said pad having a pressure sensitive adhesive bottom side detachably engaged with the bottom of said receptacle.

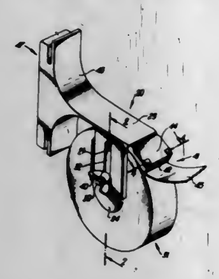


3,125,263
PRESSURE-SENSITIVE TAPE APPLICATOR AND DISPENSER
Marion E. Harbour, 2934 Arroyo Chico, Tucson, Ariz.
Filed July 7, 1961, Ser. No. 122,432
6 Claims. (Cl. 225—51)



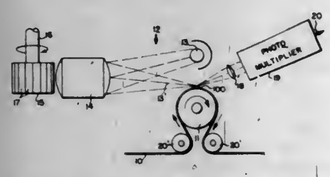
1. In a tape applicator and dispenser, a housing consisting of a housing and frame member and removable cover therefor, a peripheral opening being provided at one edge of the housing, a projection from the housing and frame member at such opening, a tape applicator roller carried by the projection exterior of the housing, a stabilizing roller also carried by the projection in general alignment radially with the applicator roller, an arcuate strip within the roll generally defining a circle with the flange which supports the roll, a pin carried by the housing and frame member, a projection carried by the arcuate strip into which said pin projects to permit radial movement of the arcuate strip with respect to the roll, a floating arm with one end extending through the housing and one end pivotably connected to the arcuate strip, and a pivoted trigger member pivoted to said floating arm intermediate its ends, whereby depressing the unpivoted end of the trigger member has the effect of displacing said arcuate strip bodily and axially with respect to the roll to apply a braking action thereto.

3,125,264
BODY ENGAGEABLE MEMBER FOR TAPE DISPENSER AND CUTTER THEREFOR
Edgar English, Jr., Edwards, Calif.
Filed Nov. 7, 1961, Ser. No. 158,925
7 Claims. (Cl. 225—78)



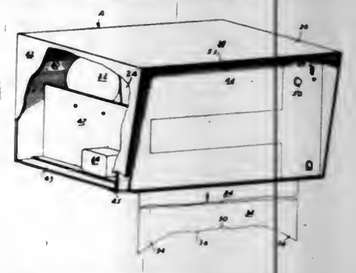
1. A combination dispenser and cutting device for tape in spirally rolled form adapted to be removably and firmly mounted on a body-engageable member for one-handed operation by a wearer thereof, comprising: a bifurcated substantially U-shaped holder means including a first side member, a second side member substantially parallel to and laterally spaced from said first side member and an interconnecting means connecting the adjacent upper ends of said first and second side members, said holder means having laterally spaced lower ends at least one of which is provided with spindle means adapted to receive and rotatively carry therearound a centrally apertured core of a spirally wound roll of tape, said interconnecting means being provided with severing blade means positioned exteriorly peripherally adjacent to an outer layer of the spirally wound tape carried by the centrally apertured core for exterior severing engagement therewith as a selected length of said tape is pulled outwardly away from the remainder of the spirally wound roll of tape against said severing blade means; said holder means being provided with mounting and fastening means for rigidly fastening it to a body-engageable member adapted to be worn by a user of the combination tape dispenser and cutting device in a position for one-handed tape dispensing and cutting operation thereof; said holder means being extendable and retractable whereby to receive between said laterally spaced side members said spirally wound roll of tape which may be of various desired size within the range of extension and retraction of said holder means.

3,125,265
METHOD AND APPARATUS FOR SCANNING THE SURFACE OF A MOVING WEB
Horace G. Warren and Welton O. Myers, both of Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed May 1, 1961, Ser. No. 106,860
8 Claims. (Cl. 226—1)



6. In a device for inspecting one face of a flexible web for imperfections the combination with means for optically scanning said web face as it moves past a scanning point; of a movable endless guiding member the surface of which passes adjacent said scanning point and on which surface the face of said web opposite that face to be scanned is adapted to be supported and moved over a given path intermediate the ends of which said scanning point is located; means normally acting to hold said web in surface contact with said guiding member for movement therewith; and means for yieldably forcing and holding a limited length of said web out of contact with said guiding member during the time it passes said scanning point.

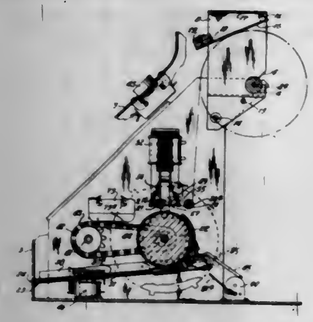
3,125,266
MACHINE FOR SELF-SERVICE DISPENSING OF INDIVIDUAL SECTIONS FROM A WEB OF FLEXIBLE MATERIAL
Harold V. Kindseth, Dennis L. Pommer, and Carl R. Neseth, Minneapolis, Minn., assignors, by mesne assignments, to Polyco, Inc., Englewood, Colo., a corporation of Minnesota
Filed Dec. 27, 1961, Ser. No. 162,507
10 Claims. (Cl. 226—43)



4. In a machine for dispensing individual sections formed in a web of flexible material by virtue of spaced recurrent slits therein, the slits being arranged so as to leave a central void in the web upon the separation of a section therefrom, a cabinet having an article discharge opening therein, a web supply roll in said cabinet, feed roll means for delivering the web from said supply roll through the discharge opening in said cabinet, electric means operable to drive said feed roll means, timing means associated with said feed roll means and said electric means operable to cause said feed roll means to advance the web a distance slightly less than an individual section length for each cycle of operation, and correctional advance control means cooperable with said electric means and responsive to the occurrence of a void in the web operable to cause said feed roll means to advance the web to replace the void whereby to correct for differences in section lengths.

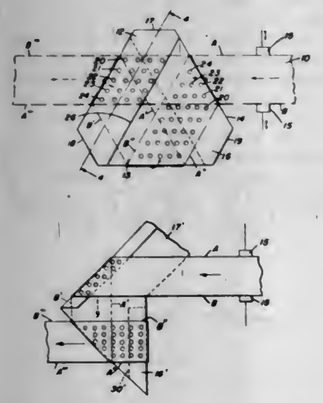
3,125,267
DISPENSING DEVICES
Charles E. Stansell, Dallas, Tex., assignor to Trolex Corporation, Dallas, Tex., a corporation of Texas
Filed Feb. 10, 1961, Ser. No. 88,530
7 Claims. (Cl. 226—83)

1. A tape dispensing device for dispensing tape having longitudinally spaced perforations comprising: a support; a roller journalled on said support and having drive means on its surface adapted to engage in the perforations in the tape; power drive means for rotating the roller; control means for controlling the operation of said power drive means; and brake means operatively associated with the roller for stopping rotation of the roller in either direction when the means for rotating the roller is rendered inoperable; supporting structure having elongate slots with slot extensions extending toward the roller and adjacent thereto; a pressure clamp pivotally mounted on a shaft, the end portions of said shaft extending outwardly through the elongate slots and slidable along said slots; and means on said supporting structure for biasing



said clamp against said roller when the shaft is in the slot extensions.

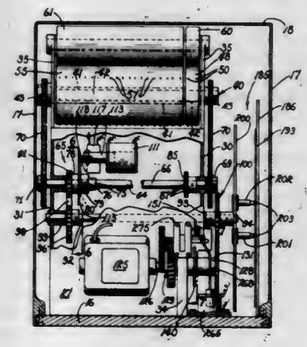
3,125,268
WEB INVERTER ARRANGEMENT
Robert P. Bartholomay, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Mar. 7, 1963, Ser. No. 263,578
14 Claims. (Cl. 226—97)



7. A web inverter arrangement comprising:
a hollow body of a generally triangular cross section, said body defining a plurality of surface apertures throughout a tortuous path therearound so that a web following such path will fold upon itself three times;
a step portion on said body of a thickness sufficient to prevent contact of the web upon itself when traversing said body in an overlapping relationship; and
means for developing air pressure within said body sufficient to support the web throughout the region of the tortuous path defined by the apertures.

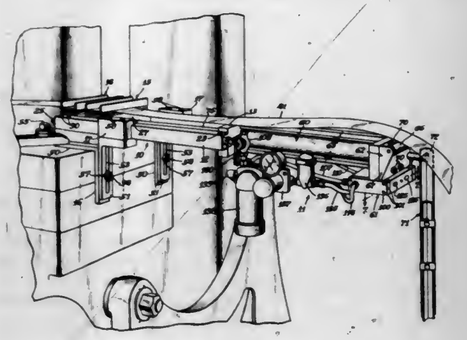
3,125,269
DISPENSING MACHINE
Robert P. McGraw, 668 Blackstone, Fresno, Calif., and Harry A. Snyder, 1920 N. Chester, Bakersfield, Calif.
Filed Mar. 6, 1961, Ser. No. 93,421
18 Claims. (Cl. 226—110)

1. In a dispenser including a support, a feeding shaft, a drive gear rotatably mounted in the support, a driven gear, means rotatably mounting the driven gear in the support for movement axially thereof into and out of coplanar, meshable relation with the drive gear, coupling means interconnecting the driven gear mounting means and the shaft for imparting rotation to the shaft upon rotation of the driven gear, an electrical solenoid borne by the support and mechanically connected to the driven gear for moving the driven gear axially out of meshable relation with the drive gear, said drive and driven gears



being urged into said meshable relation when the solenoid is de-energized, and switch controlled electrically powered means connected to the drive gear and to the solenoid for initially imparting rotation to the drive gear whereby the drive and driven gears mesh to impart rotation to the shaft and, after predetermined rotation of the shaft, for energizing the solenoid to move the driven gear out of meshed engagement with the drive gear thereby to stop rotation of the shaft.

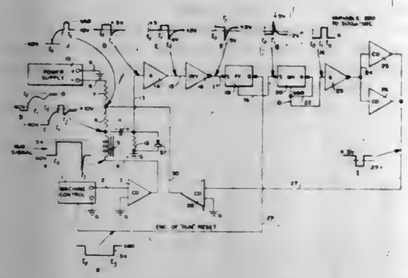
3,125,270
PRESS FEED MECHANISM
Howard W. Ronfeldt, Kalamazoo, Mich., assignor to Power Control Products, Inc., a corporation of Illinois
Filed Mar. 15, 1962, Ser. No. 179,939
19 Claims. (Cl. 226—141)



7. A feed mechanism for incrementally delivering strip stock to a press comprising, bracket means for adjustably carrying the forward end of said feed mechanism in cooperation with a press, a pair of channel members carried in said bracket means in a horizontally spaced apart relationship, a stationary jaw comprising a base

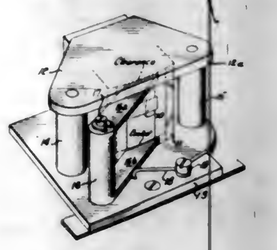
member secured between the forward ends of said channel members with the longitudinal axis of said base member being positioned transversely of said channel members, an end plate secured between the rearward ends of said channel members and substantially perpendicularly intersected by the plane of said channel members, a pair of tubular members, each of said tubular members secured between one end of said end plate and one end of said base member of said stationary jaw and within the confines of one of said channel members, a movable jaw journaled on said tubular members and having the end portions thereof carried within said channel members with the longitudinal axis of said movable jaw being positioned transversely of said channel members, a stroke adjustment bar journaled on said tubular members between said movable jaw and said end plate with the end portions of said stroke adjustment bar carried within said channel members and with a longitudinal axis of said stroke adjustment bar being positioned transversely of said channel members, reciprocating air cylinder and piston means secured to said end plate to extend substantially perpendicularly and rearwardly thereof, the piston rod of said reciprocating air cylinder and piston means extending through an opening formed in said end plate and an opening formed through said stroke adjustment bar and connected to said movable jaw for reciprocating movement of said movable jaw between said stationary jaw and said stroke adjustment bar responsive to reciprocating operations of said air cylinder and piston means, and a valve assembly carried on the rearward end of said air cylinder and piston means for operating said air cylinder and piston means.

3,125,271
ELECTROMAGNETIC PINCH ROLLER ACTUATOR
Charles E. Marshall, Port Washington, N.Y., assignor to Potter Instrument Company, Inc., Plainview, N.Y., a corporation of New York
Filed June 22, 1961, Ser. No. 118,905
6 Claims. (Cl. 226—176)



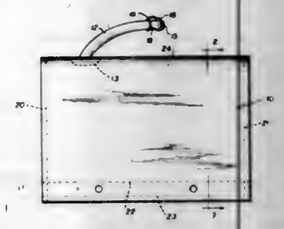
1. In a tape handler including an electromagnetically driven pinch roller, the combination of,
an electromagnet inductor including means for connecting a voltage source for providing current to the inductor for actuating the pinch roller,
first control means connected with the inductor to initiate a flow of current for actuating the pinch roller, and
second control means including a differentiating circuit connected to supply a signal in response to an inflection in the voltage across the inductor for momentarily modifying the current flow in said inductor after a predetermined interval,
whereby the tendency to develop a change in tape speed due to engagement of the pinch roller is reduced.

3,125,272
FLEXIBLE STRIP GUIDE
Raymond G. Hennessey, Huntington, and Kenneth Li Donnici, Brooklyn, N.Y., assignors to Fairchild Camera and Instrument Corporation, a corporation of Delaware
Filed Mar. 12, 1962, Ser. No. 178,968
7 Claims. (Cl. 226—196)



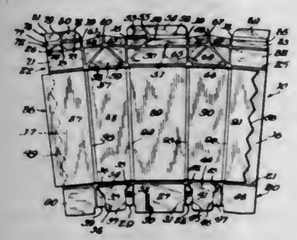
1. A self-locking guide for a movable flexible strip comprising:
(*a*) a support for the strip;
(*b*) guide members disposed on either side of said support for restraining the strip from lateral motion;
(*c*) a pivoted pressure shoe having at least one arm normally extending within, but movable to a position clearing, one of said guide members and normally registering with an edge of the strip;
(*d*) and means for biasing said shoe into engagement with the strip, whereby edgewise insertion of the strip between said arm and said guide member cams said arm clear of said guide member for insertion of the strip between said guide members.

3,125,273
PHOTOGRAPHIC SOLUTION POUCH
Herbert E. Ramm, Newton, N.J., assignor to Anken Chemical & Film Corporation, Newton, N.J.
Filed Oct. 16, 1961, Ser. No. 145,324
3 Claims. (Cl. 229—3.5)



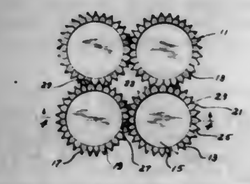
1. The combination of a pouch for containing an alkaline solution susceptible of aerial oxidation, the pouch being in the form of a generally rectangular envelope made of three-ply laminate, film, peripherally heat-sealed along three of its side edges, the side walls of said envelope being continuous with each other along the fourth side edge, the innermost ply being of material relatively inert to alkaline solutions, the intermediate ply being of material of relatively high tensile strength, and the outermost ply being of material of relatively high resistivity to gaseous diffusion; a tube extending from the pouch at its continuous side edge, the tube being made of the same material as that of the innermost ply and passed through the outermost and intermediate plies, the inner end of said tube being provided with an annular flange which is also made of the same material as the innermost ply, said flange being heat-sealed to said innermost ply, the outer end of the tube being provided with a closure to prevent escape of the contents of the pouch.

3,125,274
BLANK FOR DOUBLE WALLED CARTON
Julius A. Zinn, Stone Park, Ill.
Original application Mar. 16, 1960, Ser. No. 15,224. Divided and this application Mar. 5, 1962, Ser. No. 177,390
2 Claims. (Cl. 229—14)



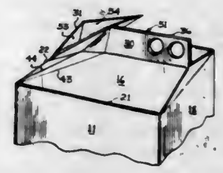
1. A flat carton blank of thin foldable material having a front panel portion, side panel portions and rear wall portions of the same width as the front panel when in partially overlapped relation with each other, the said panel portions being defined by vertical crease lines extending the width of the blank and having a top and bottom crease line extending the length of the blank and crossing the vertical crease lines defining a plurality of foldable flaps at the top of the blank to form a bellows closure for the carton and also defining a plurality of flaps to form a bottom for the carton integral with the front and rear panels and the said side panels, and a liner for the body portion of the carton having crease lines thereacross extending from top to bottom defining some panels comparable to the panels of the carton blank with the outer panels of the liner being narrower at one side and wider on the opposite edge than are the comparable carton panels the edge of the narrow panel of the liner being adapted to abut the edge of one rear wall portion of the carton with the other rear wall portion of the carton being adapted to overlie the meeting edges of the liner and carton, the crease lines being indented from the outer sides of the carton blank with ribs formed on the inner faces with the ribs on the carton blank being placed in register with the crease lines on the liner, with the crease lines on the liner being slightly wider than the ribs on the carton blank.

3,125,275
PLURAL RECEPTACLE CONTAINER
Albert L. Ehe, 166—41 Powells Cove Blvd., Whitestone, N.Y.
Filed Feb. 17, 1960, Ser. No. 9,250
3 Claims. (Cl. 229—15)



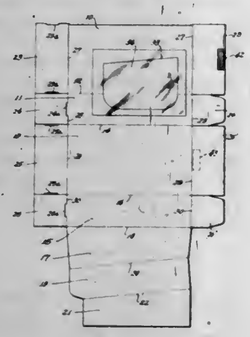
1. An integral plural receptacle container for holding articles to be shipped in cushioned spaced relationship with other such articles which comprises a foldable substantially non-stretching single sheet of material of substantially uniform thickness with folding characteristics similar to those of paper, folded into at least four cup-like shaped circular receptacles, each of which has a bottom and fluted sides extending and flaring upwardly and outwardly therefrom to a substantially circular fluted top, with bottoms and tops of the receptacle sides being substantially coplanar with other such bottoms and tops, respectively, the sides of the cup-like receptacles being integrally joined with the sides of at least two other such cup-like receptacles tangentially at the tops of the fluted sides thereof by narrow strips of such sides at least two non-aligned positions at the top of each cup-like receptacle, with the sides of the cups between the top attachment strips being free of attachment to each other and out of contact with each other so that the fluted cup walls are flexible and resilient and exert a cushioning and holding effect on materials packed therein.

3,125,276
GABLE TYPE CONTAINER
Julius A. Zinn, 3900 North Ave., Stone Park, Ill.
Filed Jan. 14, 1963, Ser. No. 251,084
8 Claims. (Cl. 229—17)



1. A top closure for a container including a laminated top ridge vertically extending across the top of the container and provided with gable like side members and bellows forming end flaps, one of said bellows forming end flaps defining in part an extensible pouring spout having a retracted position within said container when the end flap is in a collapsed position forming one end of said top closure, and means for moving with a snap-action said pouring spout from its retracted position to an extended position with respect to said top, said means comprising a perforated tear line extending inwardly from one end of said top ridge along its marginal edge to a point that lies in a substantial vertical plane extending from the innermost end of the collapsed portion of the said one of said bellows forming flaps and along which said ridge is separable into equal parts, fold lines in each of said gable like side members extending angularly from the lower outermost opposite corners of said members to a point at the base of said ridge immediately below the end of said perforated tear line, and continuing in a transverse direction up opposite sides of said ridge to the end point of said perforated tear line, said ridge and the end portions of said gable like side members, disposed outwardly of said fold lines, initially foldable along said angularly extending fold lines as said top closure is opened to extend said pouring spout therefrom, and means on each of said side members positioned by said initial folding of said side members along said fold lines into a spaced apart relation in a common plane extending transverse of said top closure and extrinsically of said fold lines and in an elevated position with respect thereto and into moving contact with certain portions of said one of said bellows forming end flaps so as to expel the same from beneath said side member and into a pouring spout position.

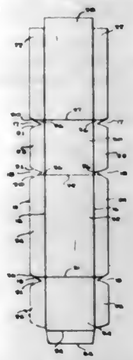
3,125,277
BOX AND CLOSURE THEREFOR
Edward C. Kozlowski, Trumbull, Conn., assignor to The Warner Brothers Company, Bridgeport, Conn., a corporation of Connecticut
Filed May 12, 1961, Ser. No. 109,609
2 Claims. (Cl. 229—27)



1. A box for footwear folded from a blank having folds producing a top panel, a first side panel, a bottom panel, a second side panel, a separator means extending from the second side panel, said blank having closure flaps extending from the ends of the top, bottom and side panels, said top and first side panels having a transparent portion therein adjacent the fold therebetween, said separator means being divided into three portions, a first mounting portion extending from the fold between the second side and separator means to be secured to the undersurface of the top panel and terminate adjacent the edge of the transperent portion in the top, a second portion having a height approximately the height of the side portions to extend between the top and bottom panels to provide support therebetween for said top adjacent the transparent portion whereby said boxes can be stacked without damage to the transparent portion and to divide the box longitudinally, and a third portion to slidably overlie the inner surface of the bottom panel and permitting the second portion to be laterally deflected to receive the footwear on either side thereof, the closure flaps being folded into overlapped relation with the closure flaps at least one end being secured together by cooperating surfaces on flexible strips carried thereby, said strips being woven to provide a plurality of releasably interlocked members whereby the closure can be readily opened and closed to provide access to the box.

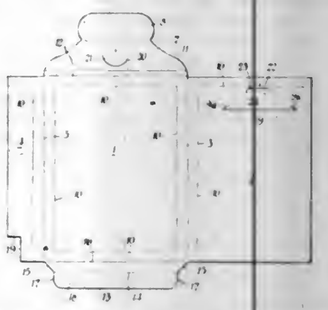
3,125,278
CAN RETAINING MEANS
Robert G. Hughes, Toronto, Ontario, Canada, assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed May 3, 1961, Ser. No. 107,533
2 Claims. (Cl. 229—40)

1. A blank for forming a holder for containers comprising an elongated generally rectangular strip, spaced parallel fold lines extending longitudinally of said strip, said spaced parallel fold lines dividing said strip into a central portion and outer flap defining portions at each side of said central portion, each of said flap defining portions having longitudinally spaced substantially V-shaped cutouts separating said flap defining portions into alternating locking flaps and reinforcing flaps, the V-shaped cutouts being defined by intersecting end edges of adjacent reinforcing and locking flaps, transverse fold lines extending across said strip and terminating at positions longitudinally offset from the apices of the V-shaped cutouts at end edges of the reinforcing flaps, and said apices each terminating short of an adjacent one of the longi-



tudinal fold lines to form narrow substantially triangular webs separating adjacent locking and reinforcing flaps.

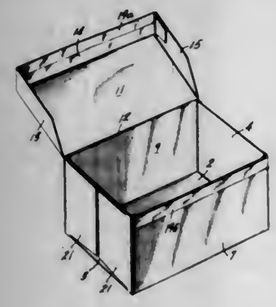
3,125,279
CARDBOARD AND LIKE CARTONS
John Robert Watts, Hornchurch, and Philip Wagman and John Robert Freshwater, London, England, assignors to M. Petrushkin Limited, London, England
Filed Mar. 14, 1962, Ser. No. 179,592
Claims priority, application Great Britain Mar. 15, 1961
3 Claims. (Cl. 229—40)



1. A cardboard or like carton in the form of a flat envelope-like object having a front panel and a back panel, a closure flap hinged along an edge of said front panel so as to be foldable flatwise on to the outside of said back panel, said back panel having a transverse slit and said closure flap being engageable with said slit by inserting its free end thereinto in one direction to close said carton, said back panel also having a second transverse slit located therein between the one first-mentioned and said edge, and a locking tongue formed in said closure flap in a manner for such tongue to enter into said second transverse slit in direction opposite to the direction in which the free end of said closure flap is engaged with the slit first-mentioned to close said carton.

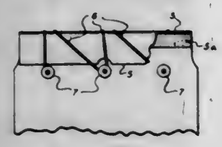
3,125,280
CARTON HAVING HINGED COVER
James W. Henry, Clarksville, Ind., assignor to Standard Packaging Corporation, New York, N.Y., a corporation of Virginia
Filed Apr. 28, 1961, Ser. No. 106,298
1 Claim. (Cl. 229—51)

A carton made from a cut and scored blank which can be partially set up for end filling and then closed or partially set up for top filling and then closed comprising a front wall panel, a bottom wall panel joined to the front wall panel by a scored line, a rear wall panel joined to the bottom wall panel by a scored line, means forming side wall panels at both sides of the carton joined to at least one of the aforementioned panels by scored lines, a flap joined by a scored line to a panel adjacent a panel to which a side wall panel is connected, said side wall panel being affixed to said flap, a cover panel joined to the rear wall panel by a scored line, a pair of panels in side-by-side relation joining the cover panel and the front wall panel, one connected by a scored line to the front edge of the cover panel and the other sandwiched between said last-mentioned panel and said front wall panel, said sand-



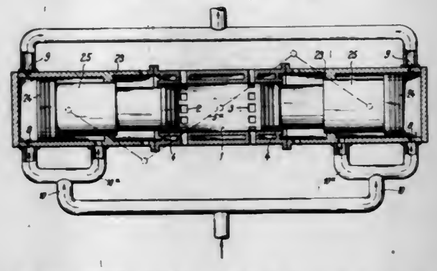
wiched panel being divided into upper and lower portions by an unbroken, weakened line, the upper portion being affixed in contact with the front face of the front wall panel, and the lower portion being affixed in contact with the rear face of the panel which is connected to the cover panel, depending side panels connected by scored lines to each side of the cover panel, and flaps joining said depending side panels at right angles to said depending front panel, the carton being opened by breaking the weakened line to provide a recloseable cover having three connected downwardly depending panels which telescope over the side and front wall panels, with the opposite edges of the broken line forming interlocking edges when the cover is closed.

3,125,281
BAG CLOSURE
Fletcher J. Woolen, 170 E. A St., Upland, Calif.
Filed June 6, 1962, Ser. No. 200,413
1 Claim. (Cl. 229—63)



In a paper bag, a closure means comprising cut away portions at each side of the bag top, the resulting flaps being joined by adhesive material and being reinforced by a cord laced back and forth over the said flaps, the cord being secured by looping the same under button type fasteners on the upper side walls of the bag body adjacent the lower portion of the said flaps, the said cut away portions at each side of the bag top being so shaped as to provide substantially circular openings.

3,125,282
FREE-PISTON COMPRESSOR
Hermann Jänicke, Ahornstrasse 10, Lochham, near Munich, Germany
Filed June 21, 1960, Ser. No. 37,745
Claims priority, application Germany July 1, 1959
3 Claims. (Cl. 230—56)

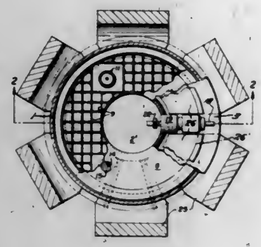


1. A free piston engine including an engine cylinder having disposed therein two oppositely reciprocating engine pistons defining between them an inner combustion chamber, a pair of piston rods and a pair of compressor pistons, each of which is rigidly connected by one of said piston rods to the outer side of one of said engine pistons, a pair of compressor cylinders aligned with said engine cylinder and slidably mounting said compressor pistons, the compressor pistons defining inner and outer compression chambers within the compressor cylinders arranged symmetrically with respect to said engine cylinder, the compression in said engine cylinder being effected by energy taken from the outer compression chambers of said compressor cylinders, supply conduits for supplying gas under super-atmospheric pressure to said compressor cylinders, the pressure of the gas in said supply conduits varying under operating conditions, delivery conduits for delivering the compressed gas from said compressor cylinders, and first branch conduits connecting said supply conduits to the inner compression chambers of each of the associated compressor cylinders, through which chambers the piston rods connected to the engine pistons extend, in order to continuously expose the inner sides of the associated compressor pistons to the supply pressure of the gas; second branch conduits connecting said supply conduits to the outer compression chambers of each of the associated compression cylinders; valve means in each of said second branch conduits for intermittently exposing the outer sides of the associated compressor pistons to the supply pressure of the gas.

3,125,283
VACUUM PUMP
Renn Zaphiropoulos, Los Altos, and William A. Lloyd, Sunnyvale, Calif., assignors to Varian Associates, Palo Alto, Calif., a corporation of California
Filed Mar. 24, 1960, Ser. No. 17,346
17 Claims. (Cl. 230—69)

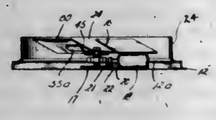
1. A getter ion vacuum pump apparatus including an envelope containing a central hollow chamber, a radially extending chamber surrounding said central hollow chamber and communicating therewith, said envelope having a centrally apertured wall member, a cylindrical exhaust tubulation having an aperture therein, said cylindrical exhaust tubulation carried by said wall member and communicating with said hollow chamber through the aperture in said wall member, a high voltage insulator positioned in the aperture of said cylindrical exhaust tubulation, a high voltage lead insulated by said insulator, anode member and cathode members disposed in said radially extending chamber with means connecting said high voltage lead to said anode member, said cathode members including a pair of spaced apart cathode members and said

anode member disposed between said pair of cathode members, means to fixedly connect said anode member to said cathode members to assure proper spacing therefrom, said anode member and cathode members adapted, when energized by said high voltage lead, to produce a glow discharge therebetween for pumping gaseous matter



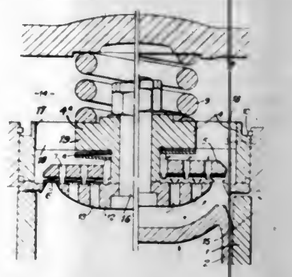
within said envelope, permanent magnets disposed around said radially extended chamber for providing a magnetic field within said radially extending chamber to enhance the pumping speed of the pump, said cylindrical exhaust tubulation being coupled to an annular flange for communicating with the structure it is desired to evacuate.

3,125,284
FAN
James R. Lawler, Houston, Tex., assignor to Consolidated General Products, Inc., Houston, Tex., a corporation of Texas
Filed Feb. 23, 1961, Ser. No. 91,129
6 Claims. (Cl. 230—117)



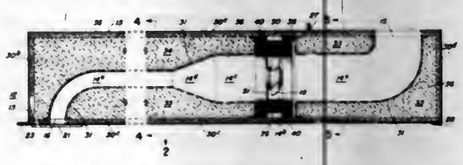
1. In a fan having a frame to which is journaled a shaft carrying a fan assembly at one of its ends and a driven disc at its other end, and a motor mounted on the frame, a drive connection between said motor and the disc, and a means for integrally connecting the disc to the shaft which comprises a hub with a non-circular cross section carried on the shaft, said disc provided with a non-circular opening centrally located, and adapted when in one rotary position relative to said hub to receive insertion of said hub to intermediate its ends and when in another rotary position relative to said hub to interfere with said hub so as to prevent movement of said hub therethrough, said hub provided with a recess about its side exterior surface in a plane at right angles to the axis of rotation of said shaft, the recess having dimensions that permit the hub to be rotated relative to the disc when the disc is in register with said recess to place said disc in said other rotary position relative to the hub and within the recess, the portions of the hub in which the disc resides upon such rotation to said other position, presenting closely adjacent confronting surfaces to the disc about such opening so that the disc is held against longitudinal movement relative to the hub and the hub having a portion displaced longitudinally into said recess and into the opening in said disc at a position further from the hub axis than the edge portion of the disc opening immediately adjacent thereto to lock the disc against rotation relative to the hub and into an integral connection with said hub in its said other position.

3,125,285
SAFETY DEVICE FOR REFRIGERATION COMPRESSORS
Nils Erik Birger Larsson, Finspang, Sweden, assignor to Stal Refrigeration Aktiebolag, Norrkoping, Sweden, a Swedish corporation
Filed May 15, 1961, Ser. No. 110,176
3 Claims. (Cl. 230—230)



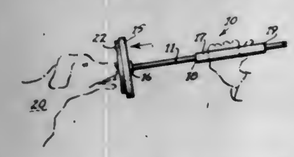
1. A safety device for refrigeration compressors comprising, a cylinder including a piston chamber, a pressure chamber and a suction chamber, a seat in the cylinder, a disc movable to and from the seat having a lower end for seating against the seat, spring means for urging the disc toward the seat, said disc having a head carried by it and having its perimeter spaced inwardly of the lower end of the disc and thus defining an annular spacing between its perimeter and the lower part of the disc, which spacing establishes communication between the pressure chamber and the piston chamber, a plate movably mounted on the disc, said plate being apertured, spring means for urging the plate toward the head, the head being apertured, pressure valves arranged between the head and plate and effective to close the apertures in the head when the plate is urged toward the head and also effective at that time to close the spacing between the perimeter of the head and the lower end of the disc, the disc when raised from its seat by refrigerant surge being effective to establish communication between the pressure chamber and the suction chamber, while raising of the plate relatively to the head also by said surge opens the annular spacing between the head and the disc and thus, establishes communication between the piston chamber and the pressure chamber.

3,125,286
SILENT VENTILATOR SYSTEM
Guy J. Sanders, Wyckoff, N.J., assignor to Industrial Acoustics Company, Inc., New York, N.Y., a corporation of New York
Filed Feb. 4, 1960, Ser. No. 6,826
6 Claims. (Cl. 230—233)



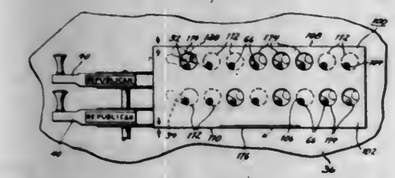
1. A substantially noiseless integral, forced-air ventilator comprising a casing, a first aperture in one side of said casing and a second aperture in another side of said casing, substantially baffle-free duct means within and spaced from said casing comprising a first section communicating with said first aperture, a second section communicating with said second aperture and a central section communicating with said first and second sections, isolating means, an impeller mounted on said isolating means in the region of and communicating with said central section whereby said impeller is acoustically and dynamically decoupled from said central region, acoustic absorbent means in said space between said casing and said duct sections, one of said sections having a single passageway of high perimeter area ratio, one of said sections including a bend, and said isolating means comprising a resilient impeller member sandwiched between a plurality of resilient mounting members, said impeller being mounted in said impeller member, said mounting members including integral resilient appendages for holding said mounting means in said ventilator.

3,125,287
PROJECTING DEVICE
Frederick E. Roehm, 1702 19th Ave. S., Nashville 12, Tenn.
Filed May 16, 1962, Ser. No. 195,136
6 Claims. (Cl. 231—2)



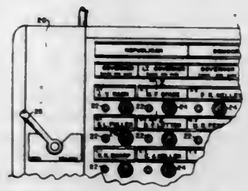
1. An animal repelling device comprising:
(*a*) an elongated shaft,
(*b*) a handle fixed to one end of said shaft,
(*c*) a disc mounted coaxially on the other end of said shaft,
(*d*) a first hard washer mounted on said one end of said shaft adjacent said handle,
(*e*) a second hard washer mounted around the opposite end of said shaft adjacent said disc,
(*f*) an elongated sleeve substantially shorter than said shaft, and mounted on said shaft to freely slide between said first and second washers, and
(*g*) a soft padded member mounted on the opposite face of said disc from said second washer.

3,125,288
GUIDE DEVICE FOR VOTING MACHINES
Joseph F. Lockard, 4427 Convent Lane, Philadelphia 14, Pa.
Filed June 23, 1958, Ser. No. 743,917
6 Claims. (Cl. 235—51)



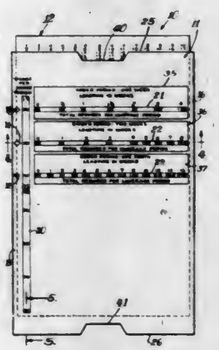
1. A personal guide device to be carried by a voter for use with voting machines comprising a member with an elongated portion for being positioned proximate the pivotal selecting levers of a voting machine, the elongated portion of said member being provided with a plurality of openings for respectively receiving therethrough the ends of said levers, predetermined ones of said openings being enlarged with respect to the other openings of said member allowing the movement within the enlarged openings of the respective ends of the levers received therethrough while the ends of the levers respectively received through the unenlarged openings are restricted in movement with respect to said elongated portion.

3,125,289
VOTING MACHINE AND DESIGN
Aaron B. Aronson, 2437 Harrison St., Glenview, Ill.
Filed Mar. 23, 1960, Ser. No. 24,637
16 Claims. (Cl. 235—54)



7. For use in a vote receiving device in association with a vote register, said receiving device including series of voting positions, voting and cancel switches at each voting position, a programming board including separate banks of terminals each corresponding to a different voting position, an N of M counter device comprising means for summing vote and cancellation counts received from said voting positions and establishing an interlock against overvoting, said N of M counter device including means for adding vote and cancel signals separately and means responsive to a prescribed difference count to establish a further vote prevention interlock when the prescribed permissible number of votes is reached.

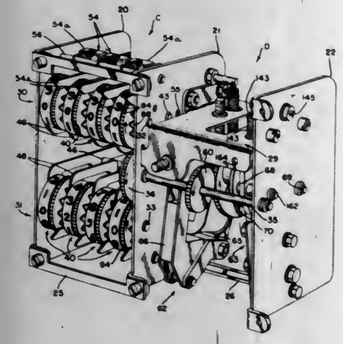
3,125,290
ORDER QUANTITY CALCULATOR
Spencer B. Smith, 402 Lee St., Evanston, Ill.
Filed Jan. 8, 1963, Ser. No. 250,099
4 Claims. (Cl. 235—89)



1. A calculating device for computing total quantities of items requisite to satisfy expected demand according to predetermined mathematical relationship of time and usage factors involved in replenishing inventory thereof under a predetermined periodic order system, comprising an elongated envelope member having a substantially opaque planar wall, an elongated table card member mounted substantially coextensively beneath said wall for sliding movement relative thereto, said wall having plural spaced order period areas defined thereon and within each said area an elongated indicia area extending substantially across the width of said wall and at which selected transversely extending portions of said table card member are visibly exposed, said wall also including an additional indicia area aligned substantially transversely of said elongated indicia areas and at which an additional selected lengthwise extending portion of said table card is visibly exposed; spaced index indicator means disposed

adjacent said additional indicia area with each such indicator means being aligned opposite one of said elongated indicia areas, linear lead time scale means extending in cooperating adjacency along each of said elongated indicia areas and each such scale means comprising plural spaced index means designating selected lead time periods related to an associated order period designated by a related said order period area; said table card member having plural parallel spaced scale means designated thereon and oriented substantially transversely of said lead time scale means with one of said scale means on said table card member comprising plural indicia located along said lengthwise extending portion of said card member and designating usage quantities, the remaining said scale means of said table card member comprising a series of plural computed indicia designating total quantities required to meet expected usage for predetermined coverage time intervals consisting of the sum of selected order periods and lead time periods; portions of all of said remaining scale means being visibly exposed at each of said elongated indicia areas with each of the said index means of each lead time scale means being related only to predetermined scales of said scale means whereby movement of said table card member relative to said wall to dispose a selected indicia of said usage quantity scale means opposite one of said selected scale indicator means serves to align and visually present a computed total quantity indicia representing the number of items requisite to meet expected usage for a selected order period opposite each index means of the lead time scale means associated with the said elongated indicia area aligned opposite the said selected one index indicator means, with said total quantity indicia required to meet a selected coverage period being presented opposite a selected one of said lead time scale index means for said selected order period.

3,125,291
HIGH-SPEED COUNTER
Frederick A. Komatar, East Moline, Ill., assignor to The Gamewell Company, Newton Upper Falls, Mass., a corporation of Delaware
Filed Apr. 9, 1962, Ser. No. 186,020
14 Claims. (Cl. 235—132)



9. A counting devvice comprising:
a first bank and a second bank of rotatable count indicating wheel means;
counter input shaft means commonly driving said banks for simultaneous equal increase and decrease of the numerical indication of respective banks;
tens transfer means operatively disposed between each pair of adjacent wheel means of each bank;
means for setting each bank to a desired count indication independently of the other;
and two like solenoidally actuated mechanisms each comprising a solenoid, an armature, a ratchet wheel and cooperating drive and lock pawls, said ratchet wheel connected to drive said counter input shaft oppositely to the other ratchet;
the solenoid coils each having a respective side connected to one side of a respective input circuit providing impulses of opposite sense and other sides of said solenoids and circuits commonly connected, for add-subtract operation.

3,125,292
HEATING AND COOLING PLANT CONTROL SYSTEM AND VALVES THEREFOR
Richard C. Larson, 4420 Great Oak Road, Rockville, Md.
Filed July 17, 1962, Ser. No. 210,438
4 Claims. (Cl. 236—1)

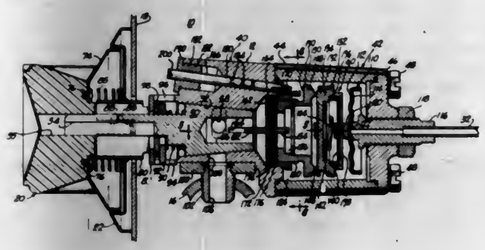


1. A temperature responsive valve comprising, a housing having means at opposite ends for connection to a fluid line, a pair of spaced, opposed, annular valve seats within the housing, the annular seats defining passages through the housing, a ball valve having its opposite sides seated in sealing relation in the valve seats, the ball having a port therethrough having open ends for registry with the passages through the housing, a helical, bimetallic thermostat, a tube connected at one end to the ball and projecting therefrom, the tube having an opposite end connected to an end of the thermostat adjacent the ball, and a stem extending through the thermostat, tube and ball, the stem having one end fixed to the end of the thermostat remote from the ball and the other end fixed for rotational adjustment relative to the housing, the means for fixing the stem for rotatable adjustment including a wheel having a warming scale and a cooling scale marked thereon, the housing carrying a datum line, the warming and cooling scales on the wheel being so spaced that when the wheel is rotated from one scale to the other relative to the housing datum line the ball port open ends are moved to opposite sides of the respective annular seats for opening and closing association therewith, whereby the valve will operate in opposite phase when the wheel is moved from one scale to the other.

3,125,293
THERMOSTATIC GAS VALVE
John T. Burdett, Princeton, Ill., assignor to Harper-Wyman Company, Chicago, Ill., a corporation of Illinois
Filed July 10, 1957, Ser. No. 670,975
22 Claims. (Cl. 236—99)

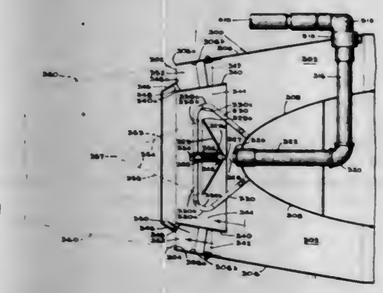
1. A thermostatic gas valve, including in combination, a valve body, a tapered plug receiving chamber therein, a rotatable tapered plug mounted in said chamber and having gas flow passages therein, means for rotating said plug from an off to an operative position corresponding to a temperature to be maintained by said valve, means including a thermostatically actuated valve in communication with said plug and comprising a seat portion and a thermostatically movable portion for regulating the flow of gas through said plug, said seat being movable

relative to said movable valve portion for determining the temperature to be maintained, means coupling said seat portion to said valve plug to effect movement of said



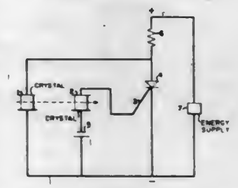
seat, and other means including adjusting means mounted on the valve body outside of the plug receiving chamber for effecting movement of said seat for calibration purposes.

3,125,294
APPARATUS FOR HANDLING FIBER IN SUSPENSION
Etchison G. Lill, East Lansing, Mich., assignor to FMC Corporation, a corporation of Delaware
Filed Aug. 17, 1960, Ser. No. 50,174
2 Claims. (Cl. 239—77)



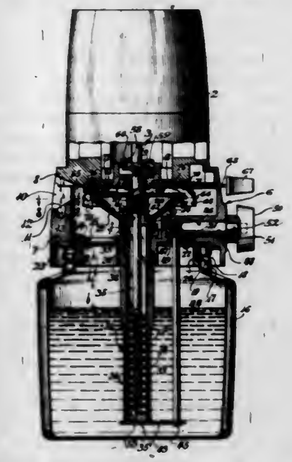
1. An apparatus for forming a fibrous mat on a predetermined surface comprising a housing having an outer wall circumscribing a discharge opening; means communicating with said housing for forcing air at high velocity toward said discharge opening; means mounted within said housing for discharging a slurry of liquid and fibers toward and substantially centrally of said opening, some of said fibers entangling in small masses in said slurry; an annular frustro-conical deflector having inside and outside surfaces; means mounting said deflector substantially concentric with said housing, adjacent to said discharge opening in the path of said air, and so that said deflector converges in the direction of movement of the air with its inside surface directed inwardly; and means mounted in said housing concentric with said deflector for guiding said slurry in a generally conical pattern diverging outwardly within said opening, transversely of said air stream and for causing said slurry to strike with force against the inside surface of said deflector whereby said entangled masses of fibers are broken apart upon impact with the deflector and the separated fibers are deflected back into said air stream so that when said housing is directed toward said predetermined surface, said fibers are carried in random dispersion in said air stream over said predetermined surface and are allowed to gravitate therefrom onto said predetermined surface in separated random orientation.

3,125,295
ULTRASONIC ATOMIZER
Gerald Moss, North Oxford, and Peter Oliver Rogers, Chievely, near Newbury, Berkshire, England, assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Dec. 22, 1961, Ser. No. 151,710
Claims priority, application Great Britain Dec. 30, 1960
5 Claims. (Cl. 239—102)



1. Means to apply an intermittent electrical surge effect to a piezo-electric crystal to cause it to vibrate at its resonance frequency or at a harmonic of its resonance frequency, said means comprising an electrical circuit having a resistance in series with a voltage source and with a silicon p.n. p.n. diode, said diode arranged in parallel with at least one piezo-electric crystal.

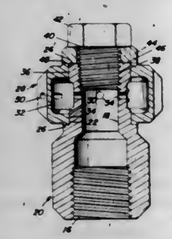
3,125,296
ATTENUATOR SPRAYING DEVICE
Allan R. Gold, Chicago, and Gilbert M. Baumann, Glen Ellyn, Ill., assignors, by mesne assignments, to Ziff-Davis Publishing Company, New York, N.Y., a corporation of Delaware
Filed July 12, 1962, Ser. No. 209,446
4 Claims. (Cl. 239—216)



1. In a spraying mechanism, a rotatably mounted attenuator apertured to provide an inlet, a housing enclosing said attenuator and defining a discharge outlet, means for directing liquid to said attenuator, said means comprising a tube and a screw conveyor positioned in said tube and having its outer peripheral surface contiguous to the inner surface of said tube to provide for positive feeding of said liquid, said tube and said screw conveyor each having its lower end adapted to be immersed in a supply of liquid, said tube having its upper end in communication with said inlet, a valve plate mounted for pivotal movement transversely across the lower end of said tube, said plate having an opening defined by diverging side walls whereby the cross sectional area of the

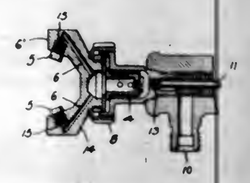
opening at the lower end of said tube will vary in accordance with the position of said plate, means for adjusting the position of said plate relative to the lower end of said tube to control the flow of liquid to said screw conveyor, and means to rotate said screw conveyor and said attenuator to feed the liquid to said attenuator from where it is discharged in the form of a spray.

3,125,297
ROTARY SPRAY HEAD
Jesse J. Copeland and Jack H. Coe, Hanford, Calif., assignors to Hitchcock Transportation Co., Hanford, Calif., a corporation of California
Filed June 28, 1961, Ser. No. 120,437
3 Claims. (Cl. 239—261)



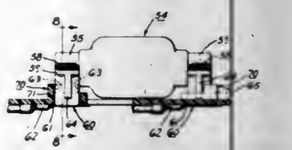
1. A reversible rotary spray head attachment adapted for securement to the discharge end of a fluid conduit and to effect a rotary spray from the discharge end of said conduit, said spray head attachment comprising an elongated mounting sleeve having a bore formed longitudinally therethrough, means on one end of said sleeve adapted for securement to the discharge end of a fluid conduit comprising an internally threaded diametrically enlarged end portion, a first pair of annular bearing surfaces formed on the exterior of the other end of said sleeve, one spaced longitudinally from the said one end of said sleeve and the other disposed at the other end of said sleeve, said bearing surfaces being spaced longitudinally of said sleeve and said sleeve being diametrically reduced between said bearing surfaces, an outwardly projecting annular shoulder on said sleeve defining a first thrust bearing surface and disposed between said one end of said sleeve and the annular bearing surface adjacent said one end, an elongated rotary spray head having a longitudinal bore formed therethrough and a centrally disposed inwardly opening annular recess formed in said bore disposed between opposite ends of said spray head thereby defining opposite end second annular bearing surfaces of the opposite ends of the last mentioned bore, said first and second annular bearing surfaces axially aligned and disposed in sliding contacting relation thereby journalling said spray head on said sleeve, the end of the first mentioned bore at said other end of said sleeve being internally threaded, a shouldered threaded shank member threadedly engaged in the last mentioned bore and an annular thrust washer on said shank between its shoulder portion and said other end of said sleeve defining an annular second thrust bearing surface confronting the adjacent end face of said cylindrical rotary spray head, said spray head including a plurality of jet outlet bores communicating said recess with the exterior of said spray head, and said mounting sleeve having a plurality of openings formed therein communicating the exterior of said sleeve between said first annular bearing surfaces with said first mentioned bore, the inner ends of said bores being disposed generally in the same plane extending at right angles to the axis of rotation of said spray head, some of said bores being circumferentially spaced about said spray head and being disposed in a plane passing along a diameter of said spray head, the other of said bores including outer end portions which are inclined outwardly and axially of said spray head, some of said other bores being outwardly inclined toward one end of said spray head and other of said other bores being outwardly inclined toward the other end of said spray head, said some bores opening outwardly in a direction disposed at an angle to radii of said spray head passing through the outer ends of said some bores.

3,125,298
SPRAY NOZZLE FOR AIRLESS SPRAY
Harukichi Iwata, Tokyo, Japan, assignor to Iwata Tosoki Kogyo Kabushiki Kaisha, Tokyo, Japan
Filed Oct. 23, 1962, Ser. No. 232,378
3 Claims. (Cl. 239—543)



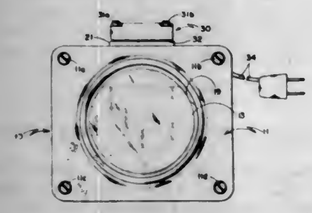
1. A spray nozzle for a liquid pressure spray gun, said spray nozzle comprising a nozzle cap having two outwardly angled arms extending in substantially opposite directions, said arms having tubular bores therein extending to the adjacent the ends of said arms, an inwardly angled nozzle tip on the end of each arm and connected to the bore in the arm, said nozzle tips each having a hole therein offset a little from the center of the end of the nozzle tip and said nozzle tips being rotatable about an axis through the center of the end thereof, the nozzle tips being inwardly angled toward a common point substantially equidistant from each nozzle tip, whereby the nozzle tips can be rotated to cause streams of liquid coming through the holes under pressure to collide substantially at said common point and atomise.

3,125,299
VEHICLE LAMP MOUNTING
Robert C. Woofter, Cortland, and Richard J. Lander and Samuel G. Griffith, Warren, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 12, 1961, Ser. No. 116,601
2 Claims. (Cl. 240—7.1)



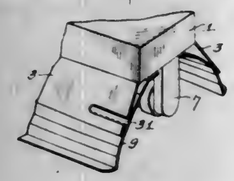
1. Illumination and mounting means, comprising, a mounting base member of insulating material provided with a pair of pocket-like socket portions integral with said base member and each having a substantially squared-off configuration as provided by walls and a pair of extensions thereof remote from each other on one side of undercut grooves in laterally opposite walls, a pair of identical terminal means each having integral wire crimp and U-shaped clip portions with laterally outwardly projecting barbs locking in the undercut grooves of each pocket-like socket portion, and an all-glass cylindrical bulb means having integral web ends on opposite sides thereof fitting into said clip portions and electrically engaging with the filament wiring directly.

3,125,300
SAFETY LANTERN
Thomas F. Roche, Rte. 110, 21 W. Main St., Merrimac, Mass.
Filed Jan. 4, 1962, Ser. No. 164,277
2 Claims. (Cl. 240—37.1)



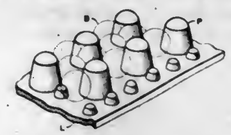
1. A safety lantern comprising in detachable assembly, a plastic casing having detachable front, rear and top sections; said front section and rear section having registering corner channel means, co-operable bolts for such channel means and gasket means between said sections; said top section being attachable to the top of said rear section by bolt and said gasket means; said front section having a rear opening and having a front opening against which a lamp is held by means including a gasket; said rear section having a front opening, a top opening, and space for insertion of a battery; said top section having a bottom opening and containing a relay switch connectible to an external source of current; circuit means being provided in conjunction with said relay switch to provide current from a battery to said lamp when there is no current in said external lead.

3,125,301
REFLECTOR ATTACHMENT FOR FLUORESCENT LIGHTING FIXTURES
Ernest Stotter, 2625 Albert St., Montreal, Quebec, Canada
Filed June 20, 1960, Ser. No. 37,133
Claims priority, application Canada Nov. 21, 1959
4 Claims. (Cl. 240—51.11)



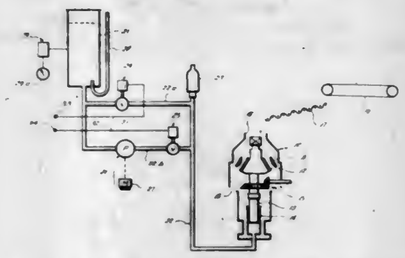
1. An auxiliary reflector for a fluorescent lighting fixture having a permanent reflector and a fluorescent lighting tube spaced therefrom, comprising, a one-piece elongated curved rigid sheet metal body of substantially trough-shape, said body being formed with a plurality of identical adjoining rectangular facets running in the longitudinal direction of the body, each of the facets being of a constant width and meeting the adjacent facets at an angle whereby the facets combine to present a composite concave parabolically curved uninterrupted vacuum-aluminized reflective surface extending from end to end and side to side of said body and a concave reverse face, said body being adapted to underlie the permanent reflector of a fluorescent lighting fixture and to intervene the surface of the latter and the fluorescent lighting tube as the sole reflecting surface, a magnet mounted on the convex surface of each end of the body for releasably engaging the permanent reflector of the fluorescent lighting fixture to hold the auxiliary reflector body thereto.

3,125,302
LINERS FOR BALL AND TUBE MILLS
Paul Emile Ernest Alfred Andre Henricot, 11 Rue Emile Henricot, Court-St.-Etienne, Belgium
Filed May 27, 1960, Ser. No. 32,309
11 Claims. (Cl. 241—183)



1. A lining covering the inner side of a grinding mill utilizing ball media, said lining having regularly spaced primary studs which project inwardly toward the axis of the mill and voids therebetween into which a number of the ball media are received, the primary studs having a height such that each of the ball media received into said voids enter to essentially the level of the ends of the primary studs to form with the ends of the primary studs an ordinating surface for the remainder of the ball media, said ends of the primary studs further having a spherical surface the radius of which is substantially equal to the average of the ball media, and smaller secondary studs between the primary studs which coact with the primary studs to align the ball media received in said voids in accordance with a predetermined lattice which includes the ends of the primary studs.

3,125,303
INDICATING AND CONTROL APPARATUS FOR CONE TYPE ORE CRUSHERS
James P. McCarty and Charles H. Curtis, Tucson, Ariz., assignors to Duval Sulphur & Potash Company, Houston, Tex., a corporation of Texas
Filed Jan. 9, 1961, Ser. No. 81,651
7 Claims. (Cl. 241—213)

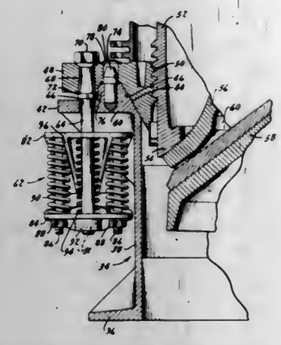


1. Ore crushing apparatus comprising, ore crusher means having a gyratable cone vertically adjustable relative to the crushing ring of the ore crusher, said cone supported on a hydraulic fluid piston mounted in a cylinder carried by the ore crusher, a hydraulic fluid reservoir, conduit means connecting the reservoir and cylinder, means including pump and valve means controlling transfer of hydraulic fluid between said reservoir and cylinder, and means determining the height of hydraulic fluid in said reservoir to thereby determine the amount of fluid in said cylinder and the height of the cone relative to the crushing ring.

3,125,304
HYDRAULIC RELEASE FOR CRUSHERS
Guy L. Saunders, Toronto, Ontario, Canada, assignor to Nordberg Manufacturing Co., Milwaukee, Wis., a corporation of Wisconsin
Filed Apr. 11, 1961, Ser. No. 102,246
8 Claims. (Cl. 241—231)

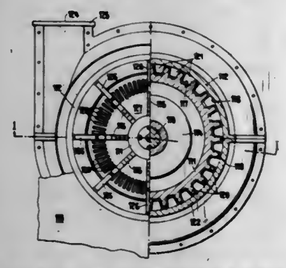
1. In a hydraulic system of bowl release for a cone crusher having a main frame, a bowl supporting ring

on said main frame, a bowl mounted on said ring, means for yieldingly holding said ring fixed on said main frame, but formed and adapted to permit its movement in relation to the frame during crushing, including a plurality of spring assemblies circumferentially arranged around the periphery of said crusher, and a plurality of hydraulic jacks circumferentially arranged about the crusher, each of said hydraulic jacks being associated with a



spring assembly and including a piston and cylinder, one of which is fixed to the main frame and the other being yieldingly mounted, through the spring assembly, to the bowl ring, each of said spring assemblies including an upper plate and a lower plate spaced therefrom, a plurality of springs between said plates, said cylinder being fixedly mounted on one of said plates and said piston being fixed to the crusher frame.

3,125,305
APPARATUS FOR TREATING MATERIAL
Peter Willems, Steinhofhalde 20–22, Lucerne, Switzerland
Filed Apr. 21, 1958, Ser. No. 729,694
Claims priority, application Switzerland Apr. 30, 1957
11 Claims. (Cl. 241—261)



7. In an apparatus for mechanical treatment of material, in combination:

(*a*) two bodies having respective face portions oppositely arranged to define a gap therebetween;

(*b*) means for rotating one of said bodies relative to the other about an axis, said face portions and said gap being substantially coaxially arranged relative to said axis;

(*c*) means for admitting a material to said gap for movement therethrough in a predetermined direction from an inlet to an outlet of said gap; and

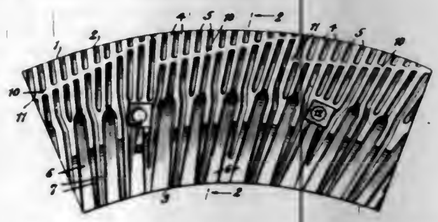
(*d*) a plurality of spaced projections on each of said face portions extending into said gap for cooperation with the projections of the other face portion, the projections on each of said face portions being arranged in a plurality of coaxial rows transverse to said predetermined direction,

(*e*) the projections in each of said rows being of substantially uniform shape and defining substantially uniform interstices therebetween.,

(*f*) a row of projections of each of said face portions being interposed in said direction between two rows of projections of the other face portions,

(*g*) the cross section of each projection of said two rows taken transversely of said direction substantially conforming to the corresponding cross section of the interstices of said one row of projections.

3,125,306
GRINDING DISK SEGMENT FOR WOOD CHIPS AND THE LIKE
Eric Kollberg, Harrison, Emil Moffa, Bronx, Hans Larsen, White Plains, and Thor Johansen, Nanuet, N.Y., assignors to American Defibrator Inc., New York, N.Y., a corporation of New York
Filed May 25, 1962, Ser. No. 197,744
1 Claim. (Cl. 241—298)

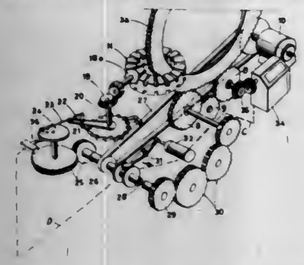


A grinding disk segment comprising an arcuate plate having an outer flat grinding section which extends inwardly from the outer periphery of said plate and merges with an inner dished feeding section which extends outwardly from the inner periphery of said plate, a plurality of spaced oblique transversely extending flaring grooves in said dished feeding section which progressively increase in width from said flat grinding section to the inner periphery of said plate, said flaring grooves communicating with aligned grooves of uniform width and depth in said flat grinding section which are of lesser depth and width than said flaring grooves and extend outwardly from said flaring grooves to the outer periphery of said plate, and a plurality of spaced cross rib means which extend angularly across said flat grinding section from the outer periphery of said plate and terminate radially inwardly from the said outer periphery with the inner end of each cross rib means being disposed in radial alignment with the outer end of the next succeeding cross rib means, each of said cross rib means intersecting a plurality of said contiguous aligned grooves.

3,125,307
MACHINE FOR WINDING COILS IN GROOVES OF STATOR RINGS
Ettore Buralli, Florence, Italy, assignor to Remital Societa per Azioni Studio e Realizzazioni Elettromeccaniche, Florence, Italy, a corporation of Italy
Filed Nov. 15, 1961, Ser. No. 152,445
Claims priority, application Italy Nov. 19, 1960
4 Claims. (Cl. 242—4)

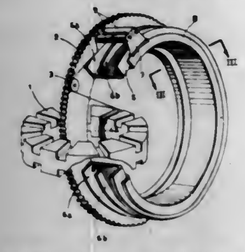
1. A machine for winding wire in circumferentially spaced grooves of a flat ring, comprising a horizontal support for said ring, a ring gear rotatable in a vertical plane and carrying a wire guide extending laterally of the gear, a grooved annular shuttle carrying a supply of wire and rotatable in a vertical plane slightly spaced from said gear, said wire guide drawing wire from said shuttle as the ring gear revolves, said ring gear and shuttle passing through the central aperture of the flat ring to be wound with wire, a plurality of rollers supporting said

shuttle for free rotation in a vertical plane as wire is drawn therefrom, a drive gear having teeth engaging in the grooves of the flat ring for rotating the same in its plane on said support, a motor, a gear train engaged with said ring gear for turning the same, and double clutch



means operatively connected between the motor and both said gear train and said drive gear for alternately driving the ring gear to wind wire in a selected groove and turning the flat ring to locate another groove in winding position for filling with said wire.

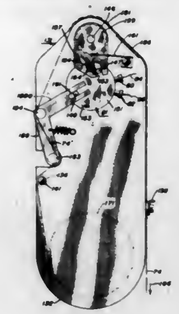
3,125,308
APPARATUS FOR WINDING A COIL ON A TOROIDAL CORE
Ettore Buralli, Florence, Italy, assignor to Remital Societa per Azioni Studio e Realizzazioni Elettromeccaniche, Florence, Italy, a corporation of Italy
Filed Nov. 15, 1961, Ser. No. 152,976
Claims priority, application Italy Nov. 19, 1960
7 Claims. (Cl. 242—4)



1. Apparatus for winding coils of wire or the like on annular cores, comprising: an annular structure, means supporting said annular structure for rotation about its axis, said structure being adapted to pass through the central aperture of an annular core being wound with a coil of wire or the like, a split ring having a pair of substantially parallel wire holding channels in its outer face, said split ring being substantially coaxially mounted on said annular structure by guide means interconnecting and permitting relative coaxial oscillation between said annular structure and said split ring, means for holding a coil of wire stretched into two substantially parallel arcuate reaches lying in said channels, a reversible pull feed guide for said wire overlying said channels and fixed to said annular structure, and a winding guide for said wire also fixed to said annular structure and spaced from said feed guide.

3,125,309
CHART DRIVE MECHANISM
Ernesto Aliaga Moyano, New York, N.Y., assignor to Thermo Electric Co., Inc., Saddle Brook, N.J., a corporation of New Jersey
Filed May 9, 1961, Ser. No. 108,818
3 Claims. (Cl. 242—55)

3. In a recording instrument, or the like, having a supply roll with a strip chart, or the like, wound thereon, means rotatably supporting said roll, a drum drivingly engaging said chart, means including a member operating between initial and second positions for operating the drive drum to drive the chart thereover during operation to second position and allowing the chart to remain stationary during a return to initial position, a pivotal lever, a rod extending from a side of said lever transversely of and engaging the chart between the supply



roll and drive drum, a shaft on which said pivotal lever is mounted, said strip chart passing from said supply roll on one side of said rod, past the side of said shaft remote from that of the rod which is engaged by said chart to said drive drum, and the member for operating the drive drum engaging the pivotal lever and swinging said rod away from the chart when said drum is driven and toward the chart while stationary.

3,125,310
UNWIND STAND
Joseph M. Margulis, % Jiffy Enterprises, Inc., 150 N. 13th St., Philadelphia, Pa.
Filed Sept. 4, 1962, Ser. No. 220,994
10 Claims. (Cl. 242—55.3)

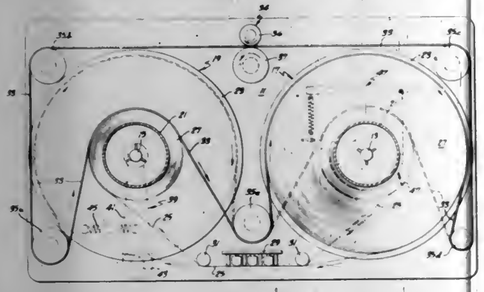


1. An unwind stand comprising an upright support means, a hub rotatably mounted on said means, a storage means on said support means, said storage means being adapted to support reels adjacent said hub, first and second guide members on said hub, said hub being adapted to support a reel between said guide members, and said second guide member being radially removable from said hub so that reels may be moved from said storage means onto said hub.

3,125,311
MOTOR REDUCTION SYSTEM COUPLING DEVICE
Jack K. Willis, San Bruno, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed Sept. 12, 1960, Ser. No. 55,266
4 Claims. (Cl. 242—55.14)

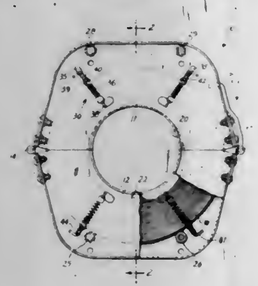
1. In a tape-transport system having a pair of tape-supporting reels and a flexible tape extending between

and wound upon said reels, means for causing said tape to be transferred from one of said reels to the other, said means comprising a continuous inelastic belt surrounding at least a portion of the tape supported on each of said reels, at least one rotatable member positioned adjacent a point on the path defined by said belt so as to provide support for said belt at said point, power means in contact with said belt for causing driving movement thereof, said belt being arranged on said reels such that movement of said belt causes said reels to rotate in the



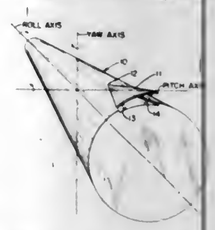
same direction, said tape being wound upon said reels such that said rotation will cause the tape to be unwound from one reel and wound upon the other reel, means for retarding movement of said belt at the reel from which the tape is being unwound, and a compliance arm and spring for said compliance arm, the reel upon which said tape is wound being mounted at the end of said compliance arm, and said spring being arranged to urge said arm and last-named reel in a direction to tension said tape.

3,125,312
CONTAINER
James W. McDuffie, New Holland, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Aug. 18, 1961, Ser. No. 132,397
8 Claims. (Cl. 242—129)



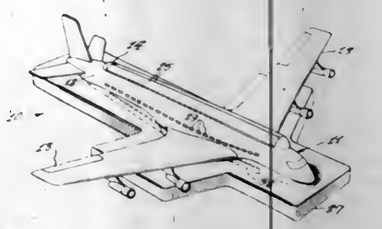
1. A wire coil container having a pair of side walls between which a coil is adapted to be positioned with the axis of the coil transverse to said walls, one of said walls, at least, having an opening through which wire may be withdrawn, means for retaining the coil in proper position relative to the container and for preventing the coil from collapsing therein as the size of the coil diminishes responsive to wire withdrawal, said retaining means comprising a retainer member extending between said side walls and engageable with the periphery of the coil, means mounting said retainer member on said container for movement relative thereto comprising tabs on said retainer member projectable through slots in said side walls and outside of said side walls, and spring means interconnected between said container and said retaining member for biasing the retaining member toward engagement with said coil.

3,125,313
AIRCRAFT CONTROL MEANS
Laurence R. Soderberg, Broomfield, Colo., assignor to Martin-Marietta Corporation, Baltimore, Md., a corporation of Maryland
Filed Nov. 16, 1962, Ser. No. 238,105
9 Claims. (Cl. 244—87)



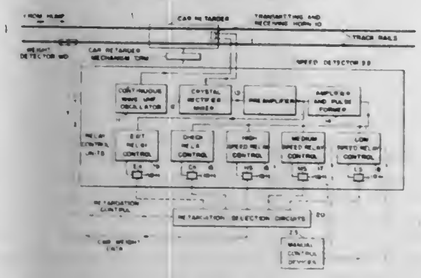
1. A control device for a body moving through a fluid which comprises body flap means provided with a control surface, attachment means for attaching a portion of the body flap means to the body so that the control surface is movable about three orthogonal axes for roll, pitch and yaw control of the body, and displacement means attached to a portion of the body flap means for displacing and tilting the control surface relative to the body shape.

3,125,314
SAFETY EQUIPMENT FOR AIRCRAFT OF ALL TYPES
Robert D. Smith, 2742 E. Tremont Ave., Bronx 61, N.Y.
Filed Oct. 17, 1962, Ser. No. 231,139
3 Claims. (Cl. 244—107)



1. In an airplane, the combination with a fuselage and wings, a safety device comprising an inflatable foldable air blanket, means for storage of said blanket within said fuselage and means for extending said blanket under the lower side of said fuselage, said fuselage having a longitudinal first compartment on one side within said fuselage, said blanket being stored in folded position within said first compartment, a hinged door on the outer side of said first compartment, a second compartment on the opposite side of said fuselage, a rotatable drum mounted within said second compartment, means for rotating said drum, said blanket having one edge thereof affixed to a longitudinal rod within the said first compartment, the opposite edge of said blanket being attached to a plurality of cords, said cords extending out of said first compartment under said door, said cord passing under the underside of said fuselage and through a plurality of openings in the opposite side of said fuselage into said second compartment, the ends of said cords being attached to said drum.

3,125,315
RAILWAY CAR RETARDER CONTROL SYSTEM
Hugh C. Kendall and John H. Auer, Jr., Rochester, N.Y., assignors to General Signal Corporation
Filed June 2, 1953, Ser. No. 359,162
10 Claims. (Cl. 246—182)



5. Apparatus for controlling the speed of a free rolling car in a stretch of railway track extending from a hump to a desired destination in a classification track comprising,

a car retarder at an intermediate point in said stretch of track,

said car retarder being operable selectively to any one of a plurality of braking positions and to nonbraking position,

velocity indicating means for generating a signal continuously related to the velocity of the car as it passes through the retarder,

track characteristics determining means for selecting a signal corresponding to the track characteristics from said retarder to said destination,

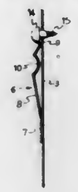
computing means including said track characteristic determining means and at least one parameter relating to the free rolling behavior of the car for computing an analog of the exit speed at which the car should leave the retarder to arrive at its destination at a desired coupling speed,

a plurality of multiple condition devices actuated jointly to one condition in response to the generation of a relatively high signal by said velocity indication means and actuated to another condition upon reduction of the speed of the car to different speeds respectively related to said analog of the exit speed,

and means for controlling said retarder to actuate it to a braking position selected by said devices to provide an extent of braking determined by the number of said devices that is in said one condition, said car retarder being actuated to a nonbraking position when said devices are all in said another condition.

3,125,316
THEFT-PROOF MOUNTING FOR MIRRORS AND THE LIKE
Louis F. Wilmhoff, Ludlow, Ky., assignor to The F. H. Lawson Company, Cincinnati, Ohio, a corporation of Ohio
Filed May 22, 1961, Ser. No. 111,739
1 Claim. (Cl. 248—28)

A locking device for a wall mirror adapted to be secured to a wall surface, said device comprising a hanger having a shank portion projecting outwardly from the wall surface and an enlarged head lying in closely spaced relation to the wall surface, a backing member for said mirror spaced rearwardly therefrom, said backing member having a forwardly projecting frame surrounding and supporting said mirror and an outer surface adapted to be juxtaposed to the supporting wall, at least one key hole slot in said backing member, said key hole slot having an enlarged portion of a size to receive the head of said hanger and a neck portion of a size to receive said shank portion but sufficiently narrow to prevent the passage of said head therethrough, and a spring clip secured to the inner surface of said backing member in the space between said backing member and said mirror, said spring clip having a flexible body portion terminating at one end in a base portion fixedly secured to the inner surface of said backing member and a free edge remote from said base portion positioned to overlie said key hole slot with



a portion at least of the neck of said key hole slot lying beyond the said free edge, the dimensioning of the parts being such that when the shank of the hanger is engaged in the neck portion of said key hole slot, the free end of said spring clip will engage beneath the head of said hanger, whereby attempted movement of the backing member in the direction to cause the shank of the hanger to enter the enlarged portion of said key hole slot will be arrested.

3,125,317
PAINT CAN HOLDER
Stanley B. Law, R.F.D. 4, Bucyrus, Ohio
Filed Mar. 2, 1962, Ser. No. 176,989
1 Claim. (Cl. 248—210)

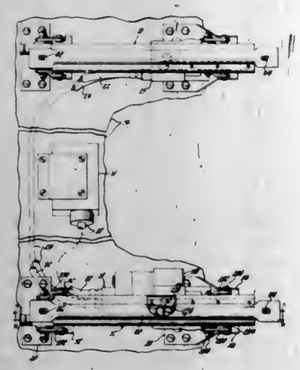


A can support comprising, in combination, a first clamping plate, a semi-circular flat resilient band having one end welded securely to said plate, the other end being free, smooth surfaced pins adapted to engage in the bail openings of a can extending inwardly in diametrically opposite relation from the welded and free ends of said semi-circular band, a second clamping plate, said first and second clamping plates having aligned bores therein, bolts extending through the aligned openings in said clamping plates, and lock nuts on said bolts for securing said clamping plates a predetermined distance apart, and adapted to clamp said first and second plates on opposite sides of a supporting member.

3,125,318
FOUR-WAY POWER SEAT ADJUSTER
Thomas E. Lohr and Harold P. Selleck, both of Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 18, 1961, Ser. No. 110,968
5 Claims. (Cl. 248—419)

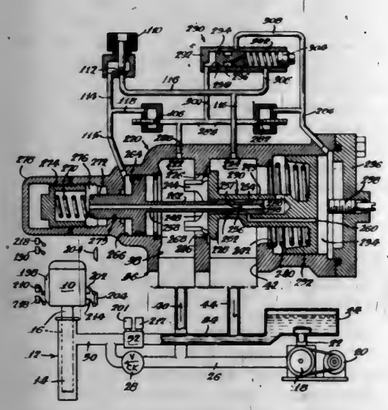
1. In a seat adjuster unit having a seat supporting channel member, support means fixedly mounted to a supporting structure and being adapted to movably support said channel member, slide groove means formed in said channel member, track means having guide portions adapted to be received and slidably retained within said groove means for fore and aft adjustment of said channel mem-

ber, linkage means connected between said track means and said support means for vertical displacement of said channel member, independent drive mechanism for effectuating fore and aft adjustment and vertical displacement of said seat supporting channel member, a drive mechanism housing integrally formed with said track means beneath said guide portions to provide an enclosure for said drive mechanism, cover means and seal means



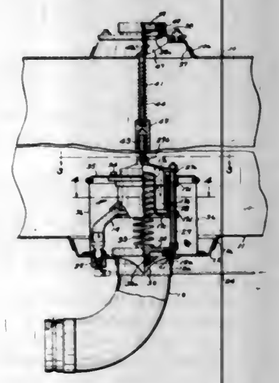
associated with said drive mechanism housing to completely enclose said drive mechanism, motor means, power transfer means connecting said motor means and said drive mechanism, and said power transfer means extending through said housing beneath said guide portions in a position substantially parallel to the channel member and the path of movement thereof during fore and aft adjustment.

3,125,319
HYDRAULIC ELEVATOR CONTROL SYSTEM
Duane J. Arbogast, Olive Branch, Miss., and Lawrence F. Jaseph, Memphis, Tenn., assignors to Dover Corporation, Memphis, Tenn., a corporation of Delaware
Original application Aug. 31, 1956, Ser. No. 607,496, now Patent No. 2,953,902, dated Sept. 27, 1960. Divided and this application Aug. 11, 1960, Ser. No. 48,988
4 Claims. (Cl. 251—29)



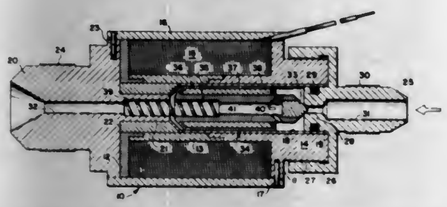
2. A bypass valve for a hydraulic control system for lifting devices having variable load conditions, having a source of fluid, and a constant output pump with its inlet connected to the fluid source and its outlet connected to the lifting device, comprising an inlet adapted to be connected to the output of the pump and an outlet adapted to be connected to the fluid source, a valve member controlling fluid flow between said inlet and said outlet, means for continuously biasing said valve member toward an open position, pressure operated means connected to said valve member for moving said valve member toward closed position, means including a restriction connecting said valve inlet to said pressure operated means for applying fluid under pressure thereto to move said valve member to closed position, second pressure operated means selectively responsive to the fluid pressure at said valve inlet, and means operated by both said pressure operated means for partially relieving the pressure applied to said first pressure operated means, thereby to hold said valve member in a partially open position to bypass a predetermined quantity of fluid from the said valve inlet to said valve outlet.

3,125,320
GUSHER EMERGENCY VALVE
Joseph H. De Frees, 414 Liberty St., Warren, Pa.
Filed Jan. 13, 1960, Ser. No. 2,211
4 Claims. (Cl. 251—62)



1. Means of the character described for controlling liquid discharge from a walled enclosure having a drain pocket depression in a lower wall portion thereof and a port aperture in said depression, said port aperture in said depression having a peripheral edge portion adapted to serve as a valve seat, an emergency valve structure disposed within said enclosure above and adjacent to said port, said valve structure comprising a cylinder, a plurality of legs supporting said cylinder and attached to said drain pocket at respective locations spaced around said port, a piston movable in said cylinder, a discharge valve adapted for vertical movement, into and out of sealing relationship with said valve seat, means establishing an operative connection between said piston and said valve whereby appropriate movement of said piston lifts said valve out of sealing engagement with said valve seat, one of said legs having a passage therethrough to establish air flow communication with said cylinder, and means for admitting compressed air to and through said passage when said valve is to be opened, each of said legs being of elongated transverse sectional contour, the longest dimension of the transverse section extending in the direction of liquid discharge flow to said port whereby to reduce turbulence and promote swirl-free liquid discharge, said legs being within said enclosure on the in-flow side of said port.

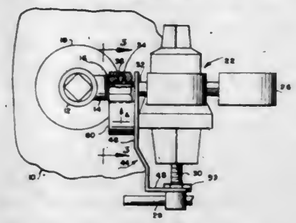
3,125,321
SOLENOID ACTIVATED FLOW VALVE
Carl H. Van Domelen, Kalamazoo, Mich., assignor to Pneumo Dynamics Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Feb. 6, 1961, Ser. No. 87,289
1 Claim. (Cl. 251—139)



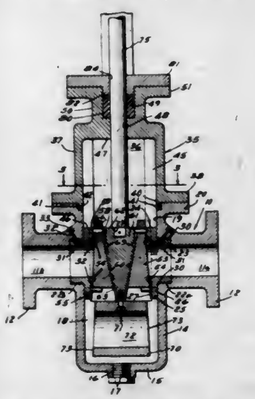
A valve structure for controlling flow of fluid comprising a main body member, fluid inlet means mounted on one end of said body member and providing a valve seat, said main body member having a longitudinally extending bore therethrough, a thin sheath member closely fitted within said bore and forming a liner therefor, said sheath member being non-magentic and non-reactive with said fluid and defining a passageway communicable with said fluid inlet means, an electric coil around said sheath and a portion of said body operable to produce a magnetic field extending through said sheath, a valve assembly closely fitting within said passageway and movable longitudinally relative to said sheath, said valve assembly comprising a thin outer cylindrical shell closely fitting the inner wall of said sheath, an inner, relatively thick cylinder concentric with and spaced from said shell, means formed of non-magnetic and non-reactive material interconnecting said shell and said cylinder thereby to provide an annular chamber therebetween, said inner cylinder defining an inner flow passage for said fluid through said valve assembly, said inner cylinder having radially extending ports formed therein for directing fluid from said passageway defined by said sheath to said inner flow passage defined by said inner cylinder, said outer shell and inner cylinder being formed from non-magnetic material which is non-reactive with said fluid, a ring of magnetic material enclosed within said annular chamber, a valve element mounted at one end of said inner cylinder adjacent to said valve seat for selective seating thereagainst, said valve member being non-reactive with said fluid, spring means engaging said inner cylinder and biasing said valve assembly axially for seating of said valve member on said seat, said coil when energized producing an axial force on said ring opposing the force of said spring to move said valve member away from said valve seat.

3,125,322
SAFETY DEVICE FOR PRESSURE REGULATORS OF THE LIKE USED WITH FLUID PRESSURE TANKS
Lester C. Halstead, 415 Bailey Ave., Beckley, W. Va.
Filed Sept. 28, 1960, Ser. No. 59,016
1 Claim. (Cl. 251—149.9)

In combination: a fluid pressure tank having a threaded outlet thereon, a fluid pressure regulator having control means thereon for dispensing fluid from said tank, said control means including a threaded valve operating member having a handle thereon, said fluid pressure regulator also having a fitting thereon for coupling to said outlet, said fitting including a ring nut for threadily engaging the threads of said outlet, an elongated member having an offset portion with an aperture therein through which said valve operating member extends, means securing said elongated member to said valve operating member for movement therewith, said elongated member having a free end provided with an open-ended slot adapted to receive said fitting on said pressure regulator and provide a guide for said elongated member when the same is moved by said valve operating member, a U-shaped guard member adjacent said free end for enclosing said ring nut when said valve operating member is moved to a position opening said pressure regulator whereby said pressure regulator is prevented from being uncoupled from said outlet, said U-shaped guard member being moved to a position to expose said ring nut when said valve operating member is moved to a position closing said fluid pressure regulator.



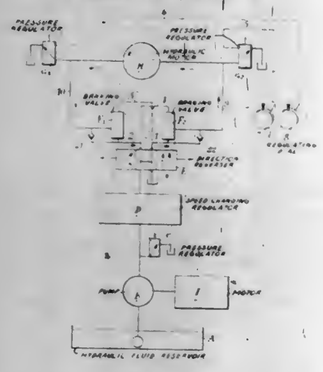
3,125,323
GATE TYPE SEAL VALVE
Irving Joseph Heinen, 4206 Fleetwood Haven Road, Lakewood Estates, Long Beach, Calif.
Filed Apr. 4, 1960, Ser. No. 19,591
2 Claims. (Cl. 251—197)



1. A gate type valve, comprising: a casing having a chamber therein and having a flow passage therethrough comprising oppositely arranged aligned flow passage parts communicating at their inner ends with said chamber; valve seat members mounted at the inner ends of said passage parts and having inner faces inclined inwardly and upwardly and having detent recesses adjacent the upper ends; a bonnet having longitudinally extending internal flanges spaced apart and in a plane of the axis of the flow passage; a pair of slips having their outer faces inclined to correspond with the inclination of the adjacent inner faces of the valve seat members, the inner faces of said slips being spaced apart longitudinally relative to the flow passage and inclined to diverge upwardly, said slips having oppositely arranged upwardly extending dovetailed recesses in their inner faces and horizontally arranged axially aligned openings adjacent the upper ends; stops within the chamber limiting downward movement of the slips; pins slidable in the openings in the upper ends of said slips and having their outer ends received in said detent recesses

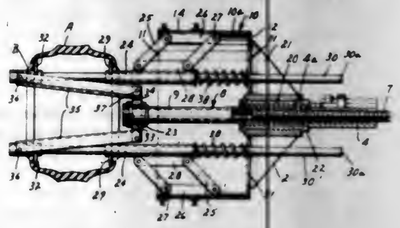
adjacent the upper ends of said valve seat members when the slips are resting on said tops; a wedge having its outer faces inclined to correspond to the inclination of the inner faces of the slips; vertically arranged dovetailed flanges on the sides of the wedge, said flanges being slidably received in the corresponding dovetailed recesses in the slips, the dovetailed flanges of the wedge having vertically extending grooves in the upper ends thereof, said grooves being open at the top and there being respective detent recesses at the lower ends thereof for reception of the inner ends of said pins when the wedge is raised to a predetermined position; a conduit sleeve having a longitudinally extending passage therethrough secured to the lower end of the wedge, the ends of said conduit sleeve being inclined to correspond to the inclination of the inner faces of the valve seat members, said conduit sleeve being spaced a predetermined distance below the lower ends of the slips when the wedge is in the lower position whereat the valve is closed, said conduit sleeve being engageable with the lower ends of the slips when the wedge is raised a predetermined distance and when said slips are raised the outer ends of said pins ride on the flanges in the bonnet; and means for raising and lowering the wedge.

3,125,324
VEHICLE HYDRAULIC EQUIPMENT
Claude Vivier, Charleville, Ardennes, France, assignor to Richier S.A., Paris, France
Filed Sept. 11, 1961, Ser. No. 137,406
Claims priority, application France Sept. 14, 1960
2 Claims. (Cl. 253—1)



1. A hydraulic installation connected to two supply orifices of a hydraulic motor actuating a vehicle, accomplishing automatically the control of the acceleration and deceleration of the vehicle during braking, reversal of direction and downhill travel, including a compressed liquid discharge line and a liquid return line, a manually-operated direction reverser connected to these two lines, two supply lines to the hydraulic motor connecting the direction reverser to the two supply orifices of the motor and, in each of said two connecting lines from the direction reverser to the two supply orifices of the motor, a braking valve, means by-passing said braking valve, a non-return valve mounted in said by-pass means and opposing backflow of the liquid toward the direction reverser, a pressure regulator mounted in said line between said braking valve and the hydraulic motor in order to prevent pressure of the liquid ahead of the supply orifice of the motor connected to said supply line from rising above a limiting value, a pilot line for said braking valve connecting said braking valve to the other motor supply line upstream from the braking valve mounted in the other motor supply line, said pilot line controlling the closing of the braking valve of the first supply line whenever the other supply line is not under pressure, and a means controlled by the driver of the vehicle, for setting the desired value of limiting pressure permitted by said pressure regulator.

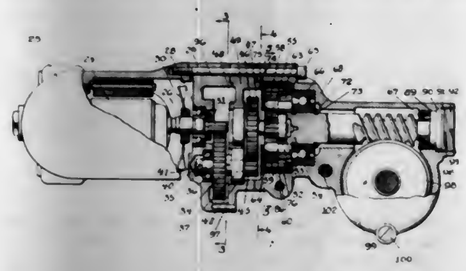
3,125,325
PNEUMATIC TIRE SPREADER
Wallace V. Sornsen, Minneapolis, Minn., assignor to Paul E. Hawkinson Company, Minneapolis, Minn., a corporation of Minnesota
Filed Nov. 7, 1962, Ser. No. 236,002
2 Claims. (Cl. 254—50.4)



1. In a tire spreader,
(*a*) a base frame,
(*b*) a horizontally disposed forwardly opening cup-like mounting member,
(*c*) means journalling said mounting member for rotation about the axis thereof,
(*d*) an elongated extensible and retractable member carried by said base frame and having its extendable forward end mounted for sliding movements in the closed inner end of said cup-like mounting member axially thereof,
(*e*) a plurality of circumferentially spaced bearing sleeves mounted within said cup-like member for limited swinging movements toward and away from said extensible and retractable member in parallel relationship to said member,
(*f*) the outer end portions of each of said bearing sleeves being formed to provide radially outwardly projecting spreader elements,
(*g*) parallel linkage connected to each of said sleeves and the side wall of said cup-like mounting member,
(*h*) a plurality of elongated mounting arms, each arm having an intermediate portion slidably received within one of said bearing sleeves, the inner end portions of each of said mounting arms being received and guided in radially extended slots in the closed inner end of said mounting member and the outer ends thereof being provided with spreader elements which cooperate with the spreader elements carried by said bearing sleeves,
(*i*) a collar mounted on the forward end of said extensible and retractable member,
(*j*) a plurality of actuator links one each pivotally connected at its outer end to the outer end of a different one of said spreader elements of said mounting arms and pivotally connected at their inner ends to said collar, and
(*k*) yielding means biasing said bearing sleeves toward their radially extended positions.

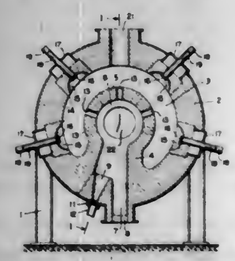
3,125,326
STRAPPING MACHINE
Arvid I. Ericsson, Chicago, Ill., assignor to Signode Steel Strapping Company, a corporation of Delaware
Filed July 19, 1960, Ser. No. 43,826
1 Claim. (Cl. 254—51)

A strapping machine comprising a frame member with a bundle-engaging surface thereon, strap gripping means and a wear plate carried by said frame member, a strap tensioning wheel movable between a strap-receiving position spaced from said wear plate and a strap-tensioning position adjacent said wear plate, and electrically powered means for rotating said tensioning wheel to cause the same to tension a strap around a bundle and maintain the tension which is applied until the strap is sealed, said electrically powered means comprising an electric motor adapted to supply continuous rotary power, a shaft-mounted spider including gear means operated by said shaft for rotating said tensioning wheel in one direction and means for directing the power supplied by said electric motor comprising a sun gear driven by said electric motor, planetary gears rotatably mounted on said spider and intermeshed with said sun gear, a ring gear encircling said



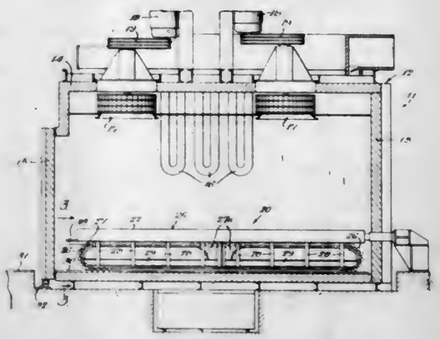
planetary gears and intermeshed therewith, split ring friction means encircling said ring gear and normally preventing rotation of said ring gear so that said sun gear rotates said planetary gears to cause said planetary gears to revolve around said sun gear to rotate said spider, means for adjusting the tension on said split ring to limit the strap-tensioning force which can be applied to said shaft by said planetary gears before rotation of said planetary gears results in sliding movement of said ring gear within said split ring to cause rotation of said spider to substantially cease, excess power being bled off by rotation of said ring gear within said split ring, whereby operation of said electric motor will cause a strap to be tensioned to a predetermined degree and maintained under such tension while said electric motor operates continuously and without overloading.

3,125,327
FURNACE
John Roger Williams, Ambler, Pa., assignor to Selas Corporation of America, Dresher, Pa., a corporation of Pennsylvania
Filed Feb. 23, 1962, Ser. No. 175,147
5 Claims. (Cl. 263—15)



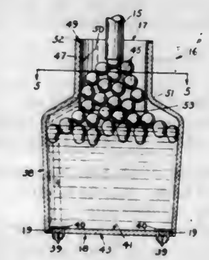
1. In a furnace, the combination of a first cylindrical wall forming an inner chamber, a second cylindrical wall forming an outer chamber, means to mount said first wall concentrically within said second wall to form a pair of inner and outer concentric chambers, a pair of end plates to close the ends of said chambers, at least one of said end plates having an opening concentric with said inner chamber through which work to be heated can be inserted, said means to mount being provided with a passage terminating in said inner chamber, a burner in said passage directed toward said inner chamber, burners in said second wall directed toward said first wall, means forming passages in said first wall for combustion products to flow from said inner chamber to said outer chamber, and means forming an exhaust stack from said outer chamber.

3,125,328
HOT CAR FURNACE
Robert C. Larko, Meadville, Pa., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed Nov. 20, 1961, Ser. No. 153,511
7 Claims. (Cl. 263—28)



1. In a car type heat treating furnace, an improved load supporting vehicle comprising a platform, a pair of continuous roller chains, guide means carried by said platform to support said roller chains, and channel-shaped tracks for receiving a portion of said chain, said platform being supported on said tracks by said roller chain, said roller chains having interconnected roller elements in rolling engagement with said guide means and said tracks.

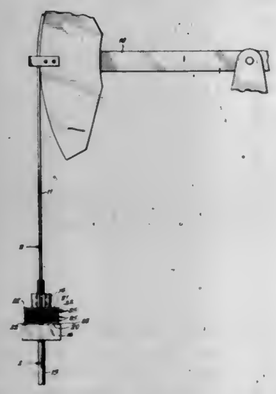
3,125,329
APPARATUS FOR PRODUCING GLASS FIBERS
Norman E. McFadden, Defiance, Ohio, assignor to Johns-Manville Corporation, New York, N.Y., a corporation of New York
Filed Dec. 10, 1959, Ser. No. 858,820
6 Claims. (Cl. 263—47)



1. A refractory crucible for melting glass marbles of a predetermined diameter comprising: a base portion defining a plurality of apertures for withdrawing molten glass, said base portion having a diameter adapted to be greater than the said predetermined diameter of said marbles; a lower side wall portion extending generally

upright from said base; an upper side wall portion defining an inlet opening having a diameter adapted to be greater than said predetermined diameter of said marbles but less than the diameter of said lower wall portion; an intermediate wall portion forming a transitional zone between said lower and upper wall portions; and a metallic liner having an outside diameter substantially equal to the inside diameter of said upper side wall portion and extending at least into said transitional zone, said liner having its lower terminal portion in spaced relationship with the side walls of said crucible.

3,125,330
POLISH ROD SHOCK ABSORBER
Herbert G. Dye, Tulsa, Okla., assignor to American Metal Climax, Inc., New York, N.Y., a corporation of New York
Filed Feb. 15, 1962, Ser. No. 173,415
3 Claims. (Cl. 267—4)



1. The combination with a pump polish rod, a beam hanger carrier bar, and a rod clamp, of a shock absorber unit interposed between the clamp and the bar, and composed of bottom and top plates constituted of flat metal sheets of substantial thickness, and a plurality of curled sections of the tread portion of an automobile tire arranged in like relation between said plates so that said tire sections all curl in the same direction and the inner tread surfaces of such sections are in opposed relation to the inner casing surfaces thereof, said plates and said tire sections being vertically stacked in face-to-face relation and having aligned openings through which the polish rod extends, and said plates and tire sections being loosely assembled in such stacked relation on said polish rod so that said tire sections are released in the raised position of said rod clamp.

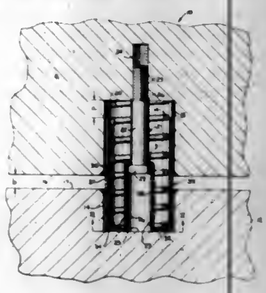
3,125,331
DIE CONSTRUCTION
Roland T. Gerhart, West Bloomfield Township, Oakland County, Mich. (5218 Doherty Drive, Orchard Lake, Mich.)
Filed Sept. 10, 1962, Ser. No. 222,328
1 Claim. (Cl. 267—1)

A die construction comprising:

a pair of die parts mounted for limited relative movement with respect to each other, said die parts having mutually confronting surfaces having aligned recesses therein;

a bolt secured to one die part and extending perpendicularly from the base wall of the recess therein toward the base wall of the recess in the other die part, said bolt having a head adjacent to said other die part;

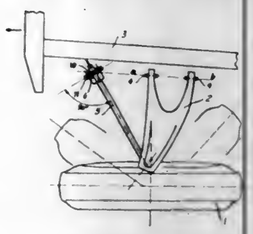
a retainer structure mounted in the recess in said other die part and including a tubular cap portion extending perpendicularly to the base wall of the recess in said other die part, said cap portion having an inturned flange at the end thereof which is adjacent to said one die part, the head of said bolt being slidably received within said cap portion and being engageable with said flange to limit movement of said one die part away from said other die part;



a tubular spring cage secured at one end thereof to said retainer structure and received within said recess in said other die part, said spring cage extending into the recess in said one die part and being spaced from the base wall in said recess in said one die part a distance greater than the distance between said confronting surfaces when said bolt head engages said inturned flange, said spring cage being coaxial with and spaced radially from said cap portion to provide an annular space therebetween; and

a coil spring encircling said cap portion and said bolt and received in said annular space, one end of said spring engaging the base wall in said recess in said one die part and the other end of said spring engaging said retainer structure and spring cage and holding same within the recess in said other die part.

3,125,332
DEVICES FOR CONNECTING THE WHEEL ARM TIE ROD TO THE FRAME OF AN AUTOMOBILE VEHICLE
Lucien Péras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
Filed Nov. 7, 1960, Ser. No. 67,775
Claims priority, application France Nov. 6, 1959
1 Claim. (Cl. 267—15)



A wheel suspension assembly for a motor vehicle having a chassis, comprising a wheel supporting arm supporting at one end a stub axle, means pivotally connecting the other end of the wheel arm to the chassis for vertical swinging movement of the wheel arm, a tie rod connected at one end to the wheel arm, a swivel joint connection between the other end of the tie rod and the chassis forward of the pivoted end of the wheel arm providing a

spherical movement of rotation of the tie rod, said connection including a rubber block having a central bore, a tube fitted in said bore and fixedly secured to said bore, a pair of metal shells, means clamping said shells onto the block so the surface of said block is fixedly secured to the surface of said clamps to prevent relative movement between said surfaces, a connecting member scured to the said other end of the tie rod, a bolt passed through said tube and attaching said connecting member to the block and means connecting the shells to the chassis, the intermediate portion of the bolt being located on the extension of the axis about which the other end of the wheel supporting arm is pivoted on the chassis, said bolt extending at right angles to said tie rod and the rubber block being of such a shape to permit a spherical movement of rotation of said tie rod.

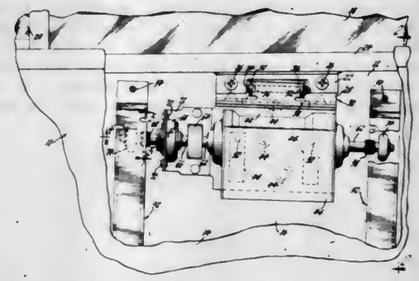
3,125,333
AWNING TYPE WINDOW
Allen J. Olsen, Detroit, and Raymond Baker, Livonia, Mich., assignors, by mesne assignments, to Security Aluminum Company, Detroit, Mich., a corporation of Michigan
Filed Dec. 2, 1960, Ser. No. 73,368
9 Claims. (Cl. 268—109)



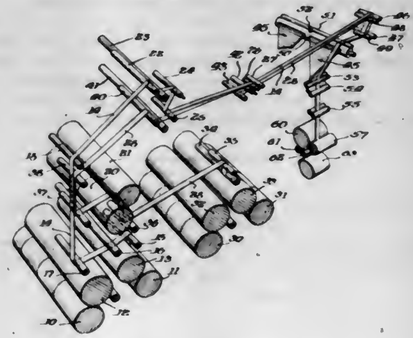
1. In an awning window, a hollow frame, including spaced side rails with upright side support flanges, a top rail and a sill, a horizontal torque bar within said frame at its upper end spaced below said top rail and at its ends journaled upon said side flanges, upright tiltable hinge plates secured upon the outer ends of said torque bar, a normally upright framed window vent extending between said side support flanges, said hinge plates below said torque bar adjustably secured angularly with respect to opposite ends of said window vent, and manually operable vertically reciprocal actuator means joined to one hinge plate for effecting alternate tilting opening and closing movements of said window vent relative to said hollow frame.

3,125,334
WINDOW REGULATOR
Thomas E. Lohr, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 2, 1961, Ser. No. 107,128
5 Claims. (Cl. 268—124)

1. In a vehicle body including a window opening and a window movable in a multiplicity of planes between open and closed positions with respect to said opening, the combination comprising, power operating means, means operatively interconnecting said power operating means and said window for selective movement of said window and said power operating means relative to each other about horizontal and vertical axes, rack means mounted on said body, pinion means driven by said power operating means and engageable with said rack means to thereby move said window, and means maintaining the working depth of said pinion means and said rack means regardless of the horizontal or vertical position of said window and said power operating means relative to each other.



3,125,335
WEBBING SYSTEM USING PREPRINTED TAPE
Ralph W. Becker, 2118 S. Bellaire, Denver, Colo.
Filed May 2, 1962, Ser. No. 191,854
7 Claims. (Cl. 270—5)

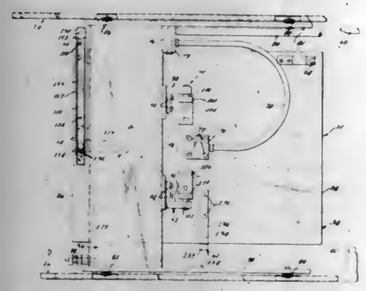


1. In a method of webbing a rotary printing press having associated therewith a printing unit, web leading rollers, compensator rollers and a former, the steps which include leading a length of tape from the said printing unit and around the web leading rollers and compensator rollers comprising the web path to the former, aligning certain registration marks on the tape with certain reference marks on the printing unit and former respectively, to thereby establish the approximate length for the web between the reference marks, attaching the end of the tape at the printing unit to a paper web to be printed by the printing unit, and then pulling in the tape to pull in the web through the web path to the former.

3,125,336
MOVABLE VACUUM PLATEN FOR REPRODUCING APPARATUS
Walter Wanielista, Westchester, Ill., assignor to Robertson Photo-Mechanix, Inc., a corporation of Illinois
Filed June 9, 1961, Ser. No. 116,061
13 Claims. (Cl. 271—3)

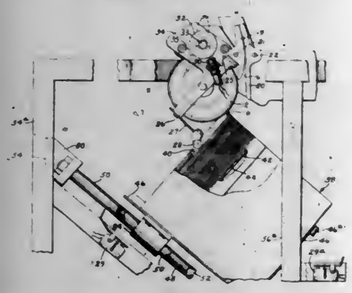
1. In a reproducing apparatus having a processing mechanism with a housing, a system for processing sheet material or the like, a carriage, track means guiding said

carriage along a predetermined straight path, a sheet carrying member, means pivotally supporting said sheet carrying member for pivotal movement about an axis perpendicular to the path, latch means releasably securing said sheet carrying member in predetermined angular relation to said carriage, cam means releasing said latch means at a predetermined point in said path, a laterally extending cam element on said sheet carrying member disposed in predetermined spaced relation to said pivotal axis and a cam structure positioned to engage said cam element upon release of said latch means, said cam struc-



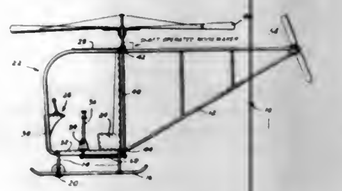
ture including a backing plate, means supporting said backing plate, a pair of cam plates secured to said backing plate and defining a cam track, said cam track opening to engage the cam element upon the release of said latch means and being disposed in a plane perpendicular to the carriage and configured to pivot the sheet carrying member during further progress of the carriage along the path, said housing having a vertical wall adjacent one end of the path and said cam backing plate being supported by post means extending perpendicularly from said vertical wall.

3,125,337
STACK HEIGHT CONTROL APPARATUS FOR A SHEET FEEDER
Larry L. Cruzen, Livonia, Mich., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Dec. 14, 1960, Ser. No. 75,756
2 Claims. (Cl. 271—62)



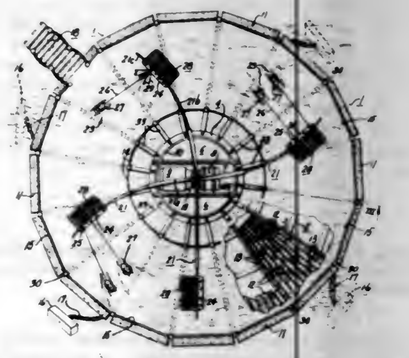
1. A variable amplitude voltage generating device for measuring the diminution of a stack of documents being individually fed by a document feeder, said device comprising a rotatable cylinder of magnetically impermeable material, a plurality of magnetically permeable elements carried by and spaced apart circumferentially of said cylinder in magnetically separated relation from each other, said elements being mounted at a common inner radius and terminating at the outer cylindrical surface of said cylinder, a sensing member mechanically displaceable by the stack of documents, a permanent bar magnet mounted on said sensing member for movement therewith in a direction intercepting the path of rotation of said cylinder with one end of the magnet spaced from and facing the cylindrical surface of the cylinder, and an induction coil surrounding said bar magnet to induce pulses of increasing voltage amplitude therein as the bar magnet approaches the cylinder.

3,125,338
EXERCISE PLAY HELICOPTER
Marion Allen Hain, Jr., 1580 Bougainvilla Way, Bartow, Fla.
Filed Sept. 6, 1961, Ser. No. 136,237
4 Claims. (Cl. 272—1)



3. An exercise and play device for children comprising a plurality of elongated bars secured to one another so as to resemble the appearance of a helicopter including a cockpit portion of such dimensions as to give entrance to at least one child, sheet material secured to the bars partially enclosing said device, a flexible rotor resembling a helicopter rotor mounted on a vertical shaft supported by said bars for rotation in a horizontal plane above the cockpit, a floor mounted in the cockpit, a child receiving seat mounted on said floor, a helicopter control stick-like exercise stick mounted on the floor adjacent the seat by a point intermediate the ends of the stick and means interposed between the stick and the rotor whereby oscillation of the stick rotates the rotor providing exercise and amusement for a child.

3,125,339
RECREATIONAL AND TRAINING APPARATUS FOR WATER SKIERS
Carl C. Nielsen, 1354 Van Antwerp Road, Schenectady, N.Y.
Filed Jan. 2, 1962, Ser. No. 163,498
11 Claims. (Cl. 272—32)



1. Recreational and training apparatus for water skiers comprising:

a floating open framework constructed and arranged to have a flat submerged deck portion covered by a relatively shallow area of water,

traction means mounted on said framework comprising a plurality of extending traction arms, which are movable over said water area,

a catching net suspended from each of said traction arms and extending into the water,

a plurality of tow handles attached to said traction arms above said submerged deck portion and adapted for gripping by water skiers, and

means driving said traction means to cause the traction arms to move over said deck portion and shallow water area, whereby water skiers may be pulled across the water by holding said tow handles, each of said catching nets being disposed on the respective traction arm substantially in the path of the skier being towed on the preceding arm.

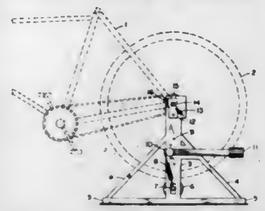
3,125,340
DIVING BOARD STRUCTURE
William O. Baker, West Covina, Calif., assignor to Swimquip, Inc., El Monte, Calif., a corporation of California
Original application Apr. 20, 1959, Ser. No. 807,506, now Patent No. 3,030,108, dated Apr. 7, 1962. Divided and this application Sept. 19, 1960, Ser. No. 61,800
3 Claims. (Cl. 272—66)



1. An adjustable fulcrum for a diving board, comprising: a fulcrum roller; a shaft upon which the fulcrum roller is angularly movable; pinions carried at opposite ends of the shaft and coupled thereto; a pair of companion right and left hand bracket supports each having a channel-like cross-section throughout a substantial portion of its length; one leg of the channel having an exterior surface that is transversely and concavely arcuate and longitudinally tapered; a pair of spaced parallel circular bars upon which the arcuate legs of the supports are seated; means securing the bracket supports upon corresponding portions of the circular bars respectively, so that the open sides of the supports face each other, and so that the tapered legs of the channel brackets diverge in the same direction; an untapered rack for each bracket, and located within the corresponding channel bracket, and secured to the arcuate, tapered leg thereof; and a spinner carried on the shaft end for pedal engagement; the other leg of at least one of the channel brackets having markings on its outer side whereby the position of the fulcrum roller along the racks is referenced.

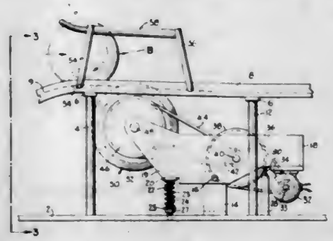
3,125,341
STATIONARY BICYCLE ATTACHMENT FOR PHYSICAL CONDITIONING
Jason Prentice Carrington, R.F.D. 1, Hornell, N.Y.
Filed Feb. 8, 1963, Ser. No. 257,334
1 Claim. (Cl. 272—73)

An exercising device to be used in connection with a bicycle, consisting of a base, with supports having slots in the tops to accommodate a bicycle's rear axle, said bicycle axle being firmly anchored by means of spring-adjusted locking devices consisting of units pivoting on the supports having slots in their sides which slip over the bicycle axle and are thus held firmly by springs of which one of the ends are fastened to said units and the other to said supports, with braces reinforcing the overall structure, said supports having slots in the sides wherein is positioned an axle with a roller turning on bearings properly adjusted by cones and locking studs on said axle, with said roller's pressure varied by means of springs of which one of the ends is secured to said roller axle and the other to handles pivotally fastened to said supports,



each of said supports having a series of adjustment holes arranged in an arc having the handle pivot as the center, said handles having slideably mounted spring-loaded knobs each carrying a pin, said knobs upon being pulled outward freeing the pins from said adjustment holes, the adjustment of said handles which raises or lowers the roller in the slots against the bicycle tire causing the desired amount of pressure.

3,125,342
BOWLING BALL RETARDING MECHANISM
Henry C. Clark, Herbert W. Easterling, and Lowell E. McKean, Shelby, and James C. Secord, Mansfield, Ohio, assignors to American Machine & Foundry Company, a corporation of New Jersey
Filed June 24, 1960, Ser. No. 38,472
3 Claims. (Cl. 273—47)



1. A bowling ball stop mechanism for a bowling alley comprising a ball track extending from a ball receiving position adjacent the pit of a bowling alley to a ball rest position adjacent the approach end of said alley, a ball storage rack located at said rest position, an upwardly inclined upsweep track portion forming a part of said track and operative to deliver a ball rolling therealong to said storage rack, a constantly traveling ball engaging and displacing member located in the path of travel of a ball between said upsweep track portion and said position of rest, spaced opposed guides located above said track, said guides being adapted for rolling of said ball thereagainst and coacting with said member to maintain it in engagement therewith, and means for driving said member at a constant speed substantially lower than that of said ball rolling into engagement with said traveling member, a pivoted mount for said member, means on one side of the pivot point of said mount normally biasing said mount in a direction to maintain said member in the path of travel of balls rolling between said guides, and other means on the other side of the pivot point of said mount for maintaining a predetermined pressure on a ball engaging said member.

3,125,343
BARRICADE MEANS TO BE STRUCK BY A GOLF CLUB WHEN AN IMPROPER GOLF SWING IS EXECUTED

Stanley J. Price, Jr., 6516 Springvale Drive, and George Raynovich, Jr., 5344 Meadowcrest Road, both of Pittsburgh 36, Pa.

Filed Aug. 25, 1961, Ser. No. 133,891
2 Claims. (Cl. 273—186)

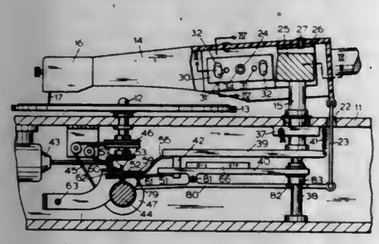


1. A device for training a golfer's swing comprising:
(*a*) a base member,
(*b*) a barricade member projecting upwardly therefrom,
(*c*) first indicating means on said base member, said first indicating means adapted to be aligned parallel to a desired line of flight,
(*d*) other indicating means on said base member, said other indicating means being arranged on said base member in such a manner that when said first indicating means is positioned parallel to said desired line of flight, an imaginary extension of said other indicating means will designate a point not located on said base member or said barricade member and said point will define a desired point of placement for a golf ball,
(*e*) said barricade member being positioned on said base member in such a manner that at least a portion thereof is positioned in close proximity to an imaginary straight line passing through said desired point of placement of golf ball and parallel to said first indicating means on said base mmeber,
(*f*) the position of the barricade member relative to said point of placement for a golf ball further being such that said portion thereof lies adjacent the approach portion of the swing and spaced from the path of the swing so as to be struck by an improperly swung club.

3,125,344
CONTROL MECHANISM FOR RECORD-CUTTING HEADS

Karl Immendorf, Uberlingen, Germany, assignor to NSM-Apparatebau, G.m.b.H., Kommanditgesellschaft, Bingen (Rhine), Germany, a company of Germany

Filed June 18, 1962, Ser. No, 203,127
18 Claims. (Cl. 274—32)

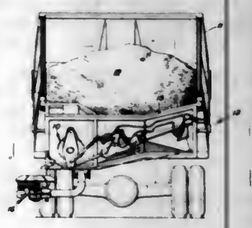


1. In a sound-recording mechanism including a cutting head and a rotatable platter adapted to hold a blank, said head having means for cutting an acoustically modulated spiral groove in said blank, the combination therewith of a lead screw having a thread divided into a small-pitch section and a large-pitch section, drive means for concurrently rotating said platter and said lead screw, a support for said head pivotable about an axis substantially parallel to that of said platter whereby said head is generally radially displaceable across said blank, coupling means selectively engageable with said small-pitch section and said large-pitch section, and link means between said coupling means and said support for advancing said head across said blank under the control of said coupling means upon rotation of said lead screw.

3,125,345
DUMP TRUCK UNLOADING AND SPREADING MECHANISM

John H. Ellis, Warrensburg, N.Y., assignor to Pyramid Truck Attachments, Inc., Warrensburg, N.Y., a corporation of New York

Filed Dec. 7, 1959, Ser. No. 857,603
10 Claims. (Cl. 275—8)

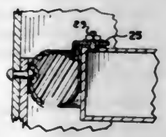


1. A mechanism for use with a dump truck body, comprising a dished tailgate having a vertical plane side wall, a door opening in the said side wall, an impeller wheel mounted in the tailgate adjacent the said door for rotation about a horizontal axis, a hydraulic motor connected to the wheel for the rotation thereof, a main flinger body suspended from the truck body under the said door, a flinger wheel mounted on the flinger body for rotation about a vertical axis, a hydraulic motor on the flinger body connected to the flinger wheel for the rotation thereof, and a common source of hydraulic power to which both motors are connected.

3,125,346
METHOD OF SEALING THE SPACE BETWEEN THE WALL OF A STORAGE TANK AND A FLOATING ROOF

Emil J. Poltorak, Somerville, N.J., assignor to Johns-Manville Corporation, New York, N.Y., a corporation of New York

Filed Sept. 16, 1959, Ser. No. 840,380
2 Claims. (Cl. 277—1)

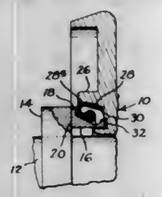


1. A method of making a seal for sealing the space between the wall of a storage tank and a floating roof which comprises: securing a flexible and fluid impervious sheathing to said roof; introducing a polyisocyanate compound together with a suitable catalyst into the interior of said sheathing, when said roof with the sheathing secured thereto is positioned in said tank; an expanding said sheathing and compressing the exterior surface of said sheathing into yieldable sealing engagement with said wall by the reaction of the polyisocyanate compound with said catalyst to produce an enlarged foam core.

3,125,347
RELATIVELY ROTATABLE FACE SEAL WITH FLEXIBLE BACKING MEMBER

Adrian J. De Moude, P.O. Box 392, Beaverton, Oreg.

Filed June 23, 1961, Ser. No. 119,226
8 Claims. (Cl. 277—92)

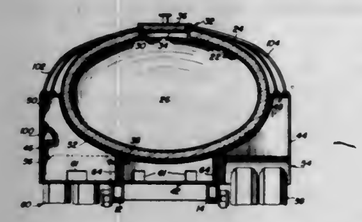


8. In combination with a shaft and housing where the shaft and housing are relatively rotatable, an annular mounting member encircling said shaft and loosely mounted thereon, said member including a portion bounded around its outside by a wall portion defining a shallow annular groove and an annular flaring seating surface joining at the smaller diameter end thereof with the wall portion defining said groove, a flexible annular sealing member having an inner annular bead that with the member in a relaxed state seats in said groove, said sealing member having joined to said bead one end of an annular web of material that progresses radially outwardly from said bead and terminates in a reversely turned skirt portion that tapers progressing toward the other end of the web of material, and a recess in said housing bounded by an annular wall that snugly receives said reversely turned tapered portion of said web of material.

3,125,348
COMBINATION TANK BODY CONSTRUCTION

Werner Zimmerman, 903 12th St., Monroe, Wis.

Filed June 22, 1961, Ser. No. 118,939
7 Claims. (Cl. 280—5)

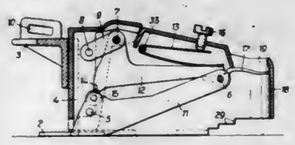


1. In combination with a vehicle having a plurality of spaced longitudinally extending frame members, a combination tank body construction mounted on the frame members for transporting bulk milk and whey while maintaining proportional fore-and-aft as well as transverse weight distribution of the tank construction on the vehicle frame members regardless of the amount each tank section is filled, said tank construction comprising a generally elongated horizontally disposed and tubular milk tank having arcuate side walls and closed at opposite ends by means of end walls, a generally elongated, horizontally disposed and tubular whey tank having at least a partial transversely concaved upper wall conforming to and cradling the lower portions of the side walls of said milk tank, said whey tank also including opposite side walls interconnected at their upper ends by means of said top wall, opposite end walls disposed at opposite ends of said whey tank and a bottom wall extending between the lower ends of said whey tank side and end walls, said milk tank including inner and outer side and end walls disposed in spatial relationship, insulating material disposed between said inner and outer walls of the milk tank, said whey tank including upstanding baffle plates extending between said bottom wall thereof and said transversely curved upper wall for preventing shifting of the whey in said whey tank and affording support for said upper wall upon which the lower portion of the sides of said milk tank are disposed, some of said baffle plates extending transversely of said whey tank between opposite side walls thereof for substantially supporting the entire width of the adjacent portion of said upper wall, others of said plates extending longitudinally of said tank, and means for securing said longitudinally extending plates in vertical alignment with and to said frame members whereby the load of said tank body is directly supported on the frame of the vehicle, said longitudinal baffle plates being notched in the upper edge thereof at longitudinally spaced points along the length thereof, portions of the upper wall of said whey tank being deformed to form a plurality of mounting brackets received within said notches in the longitudinal baffle plates, said securing means including means for tying said mounting brackets to the frame members of the vehicle.

3,125,349
SAFETY HEEL SKI BINDING

Gottfried Schweizer, Vienna, Austria, assignor to Wiener Metallwaren- und Schnallenfabrik Schar-Smolka, Vienna, Austria, a firm

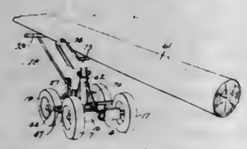
Filed Aug. 7, 1961, Ser. No. 130,713
Claims priority, application Austria Oct. 20, 1960
16 Claims. (Cl. 280—11.35)



1. In a safety ski binding, in combination, a support adapted to be connected to a ski; an upper ski boot heel engaging means having a front end portion adapted to engage a top rim of a heel of a ski boot; a lower elongated heel engaging means having a front end portion adapted to engage a bottom surface of the heel; first pivot means pivotally connecting the rear end of said lower elongated heel engaging means to said support and mounting said lower elongated heel engaging means tiltable between a holding position in which said front end portion thereof extends substantially parallel to and abuts against the top face of the ski and a releasing position in which said front end portion thereof is raised from and upwardly inclined to the top face; a lever pivotally connected at one end thereof to said upper heel engaging means; second pivot means located forwardly of said first pivot means for pivotally connecting the other end of said lever to said support; and connecting means forming part of said upper ski boot heel engaging means and extending rearwardly of said front end portion thereof toward said lower elongated heel engaging means and being pivotally connected at the lower end thereof to the latter for holding said front end portion of said upper heel engaging means in a holding position substantially parallel to said front end portion of said lower heel engaging means and spaced therefrom a distance substantially equal to that of the height of the heel, when said lower heel engaging means is in said holding position thereof, and for moving, in cooperation with said lever, said front end portion of said upper heel engaging means together with said lower heel engaging means to a releasing position in which said front end portion of said upper heel engaging means is

upwardly inclined to the top face of the ski at an angle greater than that of said lower heel engaging means and rearwardly withdrawn with respect to the front end portion of said lower heel engaging means.

3,125,350
MULTI-PURPOSE COLLAPSIBLE DOLLY
William E. Thiermann, Thiensville, Wis.
Filed Oct. 11, 1960, Ser. No. 61,905
7 Claims. (Cl. 280—34)



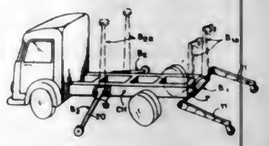
1. A collapsible dolly comprising front and rear wheeled frames and an extensible reach interconnecting said frames, a pole support cradle having one leg releasably engageable with one of said frames and another leg releasably engageable with the other said frame when the reach is retracted, to hold said reach against extension when the dolly is collapsed.

3,125,351
BOAT BEACHER
Larry McDonough, 529 E. Florence Ave., West Covina, Calif.
Filed Apr. 23, 1962, Ser. No. 189,504
6 Claims. (Cl. 280—47.13)



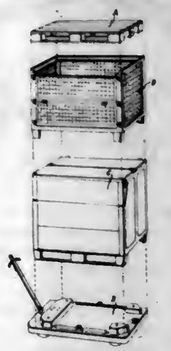
1. A boat beacher for use in moving boats across solid surfaces and in removing boats from water, comprising:
(*a*) first and second substantially identical support members for supporting the underside of a boat on opposite sides of the keel of the boat,
(*b*) a keel-holding member for supporting the keel of a boat,
(*c*) the keel-holding member being disposed between the support members and joined thereto along a reference axis passing through the center of each support member and the center of the keel-holding member,
(*d*) the support members each including a rolling portion whose cross-section transverse to the reference axis is circular, each rolling portion being rotatable about the reference axis to roll along its circumference,
(*e*) the keel-holding member having a circular cross-section transverse to the reference axis, the circular cross-section having a diameter smaller than that of the rolling portions of the support members,
(*f*) the keel-holding member and the adjacent portions of the support members cooperating to define a keel-receiving zone for receiving and supporting the downwardly extending keel and midsection of the underside of a boat while the boat's underside is engaged by the rolling portions of the support members.

3,125,352
COLLAPSIBLE STRUT
Paulette Gouin, née Gouin, 7 Square de la Dordogne, Paris, France
Filed Feb. 12, 1962, Ser. No. 172,559
Claims priority, application France Feb. 15, 1961
3 Claims. (Cl. 280—150.5)



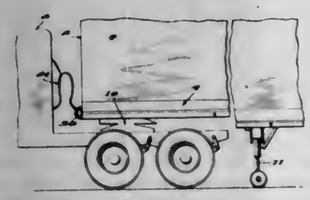
1. In combination with a vehicle including a chassis and wheels carrying same, the combination of at least one horizontally extending jack including a cylinder and a tubular shaft coaxially carried inside the cylinder with a large clearance therebetween and including an outer radial fin engaging the inner surface of the cylinder, means rigidly securing the cylinder to the chassis, means feeding fluid into the cylinder to produce an angular movement of the shaft with reference to the cylinder, at least one rod slidingly carried inside the tubular shaft and projecting beyond the corresponding end of the shaft outside the cylinder, means preventing rotation of the rods with reference to the shaft, and a strut rigid with the projecting end of each rod and adapted to be shifted upon rotation of the shaft between an upwardly raised position along one side of the chassis and an oblique downwardly and outwardly directed position engaging ground outside the base of support of the chassis.

3,125,353
TRANSPORT CONTAINER WITH REMOVABLE UNDERCARRIAGE OR TRUCK
Karl Göhmann, Haarstrasse 6, Hannover, Germany
Original application May 31, 1961, Ser. No. 113,900. Divided and this application July 2, 1962, Ser. No. 206,565
Claims priority, application Germany May 30, 1960
5 Claims. (Cl. 280—179)



1. In an assemblage consisting of a transport container means, a removable wheeled undercarriage means, and coupling devices removably securing the container means and undercarriage means together, said coupling and securing devices including locking components on one of said means, further locking components on the other of said means movable into and out of locking engagement with said first-named locking components, a trip switch system operably associated with said further locking components for holding the further locking components in either locking or non-locking position with respect to said first-named locking components, and re-setting means operably associated with said further locking components and with one of said means operative upon the removal of container means from the undercarriage means for returning the further locking components to the locking position.

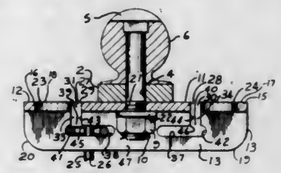
3,125,354
CONNECTOR GUARD FOR SEMI-TRAILER CHASSIS
Edwin B. Connerat, 49 Woodmont Road, Alexandria, Va.
Filed Nov. 19, 1962, Ser. No. 238,593
3 Claims. (Cl. 280—422)



1. In combination with a semi-trailer including a trailer chassis frame provided at its forward end with a horizontal transverse channel member, a plurality of connector elements spaced horizontally along and connected with said channel member for supplying power for lights to load circuits associated with said trailer, some of said connector elements including hinged covers that are adapted to pivot upwardly to substantially horizontal positions, and king pin means secured to the under surface of said chassis frame rearwardly of said connector means, said king pin means being arranged for connection with the fifth wheel of auxiliary truck means; guard means for protecting said connector elements against damage by said fifth wheel during connection of said truck with said trailer, comprising a connector guard having an arcuate cross-sectional configuration and arranged adjacent and parallel with the forward surface of said channel member, said connector guard having a concave rear surface and horizontal upper and lower edges in abutting engagement with said channel member, said guard containing a plurality of vertical slots that extend downwardly from its upper edge opposite, respectively, those connector elements which are provided with hinged covers, the slots being dimensioned to freely receive said covers when they are pivoted upwardly to said substantially horizontal positions, said guard also containing through openings opposite, and permitting frontal access to, the other connector elements, vertical plates arranged between and secured to the upper and lower edges of said connector guard, said plates being horizontally offset from said slots and openings, and bolt or stud means connected with said plates and extending rearwardly through corresponding openings in said channel member for rigidly connecting said connector guard with said chassis frame.

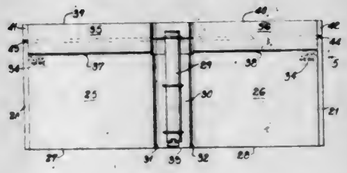
3,125,355
CHAIN ANCHOR
George K. Snuggins, Box 25, Tiff City, Mo.
Filed Nov. 20, 1961, Ser. No. 153,408
5 Claims. (Cl. 280—457)

1. Chain link-engaging apparatus comprising:
(*a*) a member having a horizontal and a vertical portion,
(*b*) an opening extending through said horizontal portion and of a transverse size adapted to freely receive chain links therethrough without contacting said member,
(*c*) a first slot located in said horizontal portion and communicating at one end thereof with said opening, said first slot terminating at the other end thereof in said vertical portion,
(*d*) a second slot located in said vertical portion and communicating at one end thereof with the other end of said first slot,



(*e*) a third slot located in said vertical portion and extending transversely to said second slot having a length slightly greater than the width of a chain link, the other end of said second slot communicating with said third slot at a position offset from the center of said third slot,
(*f*) said first, second and third slots having a transverse width slightly greater than the thickness of a chain link but smaller than the width of a following chain link whereby a chain link is freely receivable in said opening and threadable along said first and second slots and restable in said third slot for anchoring chain.

3,125,356
HEAVY BINDER EASEL CONSTRUCTION
Robert C. Cline, Saugerties, N.Y., assignor to F. L. Russell Corporation, Mount Marion, N.Y., a corporation of New York
Filed Apr. 23, 1962, Ser. No. 189,343
2 Claims. (Cl. 281—33)

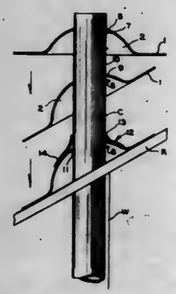


1. A heavy binder and easel construction comprising the combination of
a back and hingedly connected covers foldable into closed back formation and to unfold into open flat formation,
an easel board overlying said back and covers in the said open, flat relation,
said easel board consisting of flat side panels overlying said covers at opposite sides of the back and hingedly connected along their lower edges with the lower edges of said covers enabling said panels to be hinged upwardly at their upper edges into inclined position overstanding said covers,
sheet binding means between said side panels, overstanding said back and hingedly connected along opposite side edges with the inner edges of said side panels in line with the hinging connections of the covers with the back,
supporting strips for supporting the upper ends of said side panels coextensive with said side panels and having their lower edges hingedly connected with the upper edges of said side panels, enabling said supporting strips to fold back and hinge downwardly into supported engagement with the covers beneath the same,

positioning strips at the upper ends of and coextensive with said covers and hingedly connected at their lower edges with the upper edges of said covers enabling said positioning strips to fold upwardly and down over the top of said covers, and

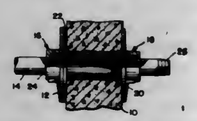
hinge connections between the upper edges of said supporting strips and the upper edges of said positioning strips for causing said positioning strips to follow and be located by said positioning strips when the latter are hinged downward into the supporting position and whereby said positioning strips will then locate and hold the supporting strips in substantially upright position supporting the easel board in inclined easel forming relation described.

3,125,357
FLASHING CONSTRUCTION
David E. Kifer, Parma, Ohio, assignor to The L. R. Oatey Company, Cleveland, Ohio, a corporation of Ohio
Filed Nov. 20, 1959, Ser. No. 854,374
3 Claims. (Cl. 285—44)



1. In combination, the assembly of a roof flashing and an elongated tubular member extending vertically therethrough, said roof flashing comprising a flat base portion and a generally centrally located upstanding dome portion having a circular aperture therein through which said elongated member passes, such aperture having a diameter slightly greater than the diameter of said elongated member whereby the latter may readily be passed therethrough when said flat base portion is in a plane substantially normal to said member, a lip portion adjacent such aperture formed integrally with said upstanding dome portion and deformed downwardly within the latter by engagement with said vertical elongated member when said flashing is inclined axially relative to the latter with said deformable lip portion being disposed to the upper side, said flashing being thus inclined and caused firmly to grip said vertical elongated member inwardly only of said dome portion to support said conduit when said flashing is mounted on a correspondingly inclined roof.

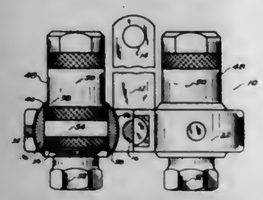
3,125,358
BUILDING LEAD-IN CONNECTION FOR A PIPE
Joseph S. Kleinberg, 217 Shirewood Drive, Rochester 25, N.Y., and Donald R. MacCollum, 7 Winhurst Drive, Rochester, N.Y.
Filed Jan. 31, 1962, Ser. No. 170,186
1 Claim. (Cl. 285—55)



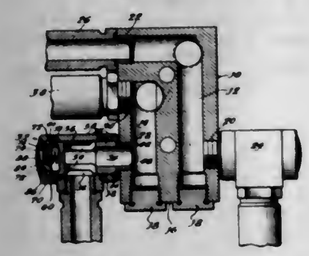
The combination with a building having a wall structure with an opening therethrough, and a service pipe projecting completely through said opening from the outside of the building to the building interior, of a lead-in connection for said service pipe, said lead-in connection comprising a sleeve pipe extending coaxially around and spaced radially outwards from said service pipe, projecting completely through the opening, and having its ends terminating outwardly a short distance beyond the outer and inner rims of said opening respectively, a cup-shaped outer flange nut surrounding said service pipe at a point directly outwards of the outer rim of the opening in the building wall structure and consisting of a cylindrical side wall, a bottom wall connected to, and extending transversely across, the outer end of the cylindrical side wall and provided with an opening through which the service pipe extends, and a comparatively large flat radial flange connected to, and extending outwards from, the inner end of the cylindrical side wall, said cylindrical side wall being interiorly threaded, the outer end portion of the sleeve pipe being externally threaded and threadedly received directly in the inner end region of said cylindrical side wall of the outer flange nut, an elongated sleeve gasket fitting snugly within and extending lengthwise of the cylindrical side wall of the outer flange nut, surrounding the adjacent portion of said service pipe and having its outer end in abutment with the bottom wall of said outer flange nut, said sleeve gasket being generally cylindrical and having the outer periphery of its inwardly directed end region tapered inwardly and projecting into the outer end portion of said sleeve pipe, said sleeve gasket, when the outer end portion of the sleeve pipe is screwed into connected relation with the cylindrical side wall of the outer flange nut, having its central and outer end portions compressed directly between said outer end portion of the sleeve pipe and the bottom wall of the outer flange nut in such manner that they are in direct and firm gripping and sealing relation with said adjacent portion of the service pipe, the tapered inwardly directed end region of the sleeve gasket being compressed directly between said outer end portion of the sleeve pipe and the adjacent portion of the service pipe when said outer end portion of the sleeve pipe is in full connected relation with the cylindrical side wall of the outer flange nut, a resilient flange gasket surrounding the outer end portion of the sleeve pipe and interposed between the flange of said outer flange nut and the outside face of the wall structure, and an inner flange nut extending around the inner end portion of the sleeve pipe and consisting of an internally threaded cylindrical side wall and a comparatively large flat radial flange connected to, and extending outwards from, the inner end of the last mentioned cylindrical side wall, said inner flange nut having its cylindrical side wall threadedly received on the inner end portion of the sleeve pipe and its radial flange bearing against the side face of the building wall structure and being adapted when screwed onto said inner end portion of the sleeve pipe to its fullest extent to apply tension to the sleeve pipe and thus compress said flange gasket between the radial flange of the outer flange nut and the outside face of said building wall structure.

3,125,359
PUSH-PULL BREAKAWAY COUPLING
Maynard G. Charles, Napoleon, Mich., assignor to Aeroquip Corporation, Jackson, Mich., a corporation of Michigan
Filed Jan. 28, 1959, Ser. No. 789,652
1 Claim. (Cl. 285—62)

In combination, a pair of self-contained detachable hose couplings, each having an external cylindrical barrel portion extending radially outwardly therefrom and providing spaced annular shoulders, mounting means for securing said couplings to a supporting structure comprising mating first and second holding members having cooperating interlocking portions, said members being substantially identical halves and containing first and second semi-spherical companion sockets, said holding members having a recess defined by opposed shoulders formed externally of and intermediate said first and second socket halves thereof, first and second semi-spherical ball socket members rotatably retained in said first and second sockets, respectively, said ball socket members each having a cylindrical opening extending therethrough with abutment means adjacent one end of said cylindrical opening, said cylindrical barrel portion of each of said couplings being disposed within one of said cylindrical openings wherein one of the annular shoulders on each of said barrel portions engages one of said abutment means, first and second releasable fastening means on said first and second ball socket members respectively engaging the other annular shoulders of said external cylindrical portions and securing each of said couplings within one of said cylindrical openings, an attachment member disposed in said recess in one of said holding members and engaging said opposed shoulders to thereby non-rotatably engage said one holding member, and a single fastening means extending through said holding members and said attachment member for securing the above parts together, whereby said hose couplings are held in said sockets in a substantially universal coupling.

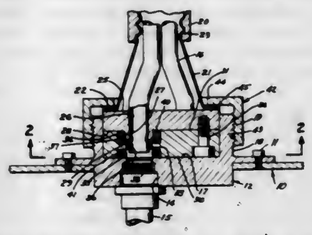


3,125,360
FLUID CONDUIT COUPLER
Raymond M. Ulrich, Roanoke, Ill., assignor to Ulrich Foundation, Inc., Roanoke, Ill., a corporation of Delaware
Filed Oct. 20, 1958, Ser. No. 768,150
10 Claims. (Cl. 285—137)



1. A swivel fluid coupler comprising, in combination, a sleeve having a cylindrical channel extending therethrough and an opening extending through the sleeve adapted to receive a hollow tube for conducting fluid, said sleeve having a continuous groove in the surface of the channel thereof extending about the channel in a plane normal to the axis of the channel, a member having a first portion with a cylindrical outer surface, a second portion with a cylindrical outer surface coaxial with the outer surface of the first portion and spaced from the first portion, and a third portion disposed between the first and second portions, the member being rotatably disposed within the sleeve and the first and second portions rotatably abutting the surface of the channel and being sealed thereto against the passage of fluid, said member having an axial bore extending through the second and third portions and having a mouth remote from the first portion and an orifice extending through the third portion communicating with the bore and the opening of the sleeve, the second portion of the member being adapted to be mounted on a fluid conveying device with the member extending therefrom and the mouth of the bore of the member in fluid communication with the fluid carried by said device, whereby fluid may be conducted through the mouth and bore of the member, the orifice of the member, and the opening of the sleeve, the first portion of the member having a surface generally normal to the axis of the bore impervious to the passage of fluid and provided with a recess in said surface extending therein from the end of the member, said first portion having an aperture extending therethrough from the recess to the cylindrical outer surface thereof, said aperture being aligned with the groove of the sleeve, a locking member movably disposed in the aperture, and latch means disposed in the recess of the member for controlling the position of the locking member, resilient means acting between said normal surface and said latch means, removable means operatively disposed between the latch means and the first portion of the member to limit outward movement of said latch means, said latch means being movable between two positions in said recess, the first of said positions forcing the locking member outwardly from the aperture into the groove and the second position, wherein the resilient means is compressed, releasing the locking member for retraction from the groove, whereby the sleeve may be released from the member and slidably disengaged from the member by actuation of the control means for the locking member located within the recess at the end of the member, thus disconnecting the hollow tube from the fluid carrying device without removing the member from the fluid carrying device.

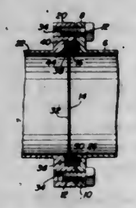
3,125,361
TUBE HARNESS
Paul J. Weaver, Pasadena, Calif., assignor to Stanley G. Harwood, South Pasadena, Calif.
Filed Feb. 7, 1961, Ser. No. 87,613
2 Claims. (Cl. 285—137)



1. A tube harness comprising: a plurality of tubes; an attachment plate having a plurality of attachment ports passing therethrough; a sleeve aligned with each of said attachment ports, integral with and projecting beyond the attachment plate, all of said sleeves being on the same side thereof, one of said tubes passing through each of said attachment ports, each sleeve being crimped into its respective tube to indent and retain the same; a transfer plate having a plurality of transfer ports, each being aligned with one of said attachment ports and adapted to receive a respective sleeve, and a counter-bore at each end of each transfer port, a sealing ring in each of said counter-bores; each sealing ring in one face of said transfer plate being adapted to encircle, extend between, and seal between the respective sleeve and the wall of its counter-bore; a base having a plurality of base ports, each being aligned with one of said transfer ports; an internally walled section on said base surrounding and em-

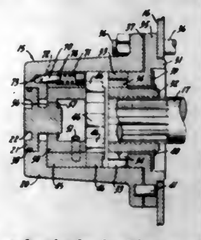
bracing the transfer plate and forming a sink for receiving the transfer plate, whereby the transfer ports are held aligned with the base ports, and with the sealing rings on the second face of the transfer plate extending between and sealing between the transfer plate and the base so as to seal around each of said transfer ports; external threads on said internally walled section; an internally flanged retainer cap threadedly engaged to the said internally walled section and adapted to clamp the attachment plate against the transfer plate, and the transfer plate against the base; and fastener means joining the attachment plate to the transfer plate, whereby fluid connection between the tubes and the base ports is accomplished by placing the transfer plate in the sink and against the base plate and tightening down the cap to move the flange to bear against the attachment plate.

3,125,362
HIGH AND LOW TEMPERATURE JOINT SEALING ASSEMBLY
Hans W. A. Borg, 4314 N. Maupin Ave., Baldwin Park, Calif.
Filed Mar. 1, 1961, Ser. No. 92,549
4 Claims. (Cl. 285—340)



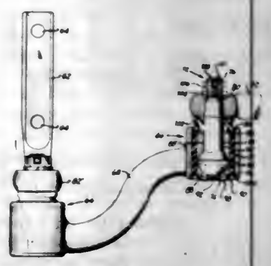
1. A high and low temperature joint sealing assembly comprising, in combination, a first pipe section having a terminal end portion provided with an integral outstanding flange having a radial face provided with a channel concentrically encircling an outer peripheral surface of said terminal end portion, the extremity of said terminal end portion terminating within said channel and also terminating short of the open side of said channel, a second pipe section cooperative with said first pipe section and having a terminal end portion in axial alignment and spaced from the terminal end of said first pipe section and provided with an integral outstanding flange having a face thereof opposed to and spaced from said radial face and having an annular groove opposed to and registering with the cooperating open side of said channel, the outer peripheral edge of said groove providing a stop shoulder, a rigid packing washer seated and bonded in said groove and having an outer peripheral edge abutting said stop shoulder and having an inner peripheral edge encircling and spaced from the cooperating peripheral surface of the terminal end portion of the second pipe section and cooperating therewith in defining an annular space, a truncated conical seal ring, an adapter carrying and having component portions circumferentially encompassing said seal ring, said adapter being conformingly seated and securely retained and sealed within the confines of said channel, said component portions abutting cooperating walls of said channel, the truncated end of said seal ring projecting through the open side of said channel and terminating in an endless annular joint-sealing collar, said collar having a smooth-finished inner peripheral surface snugly embracing the outer peripheral surface of the terminal end portion of said second pipe section and nosing and wedging itself into the aforementioned annular space, the outer peripheral surface of said collar having tight fitting engagement with the cooperating inner peripheral edge of said packing washer and cooperating therewith and providing a leak-proof seal.

3,125,363
VEHICLE LOCKING HUB
John M. Kapusta, Stickney, Ill., assignor to Cutlas Tool and Mfg. Co., Lyons, Ill.
Filed May 2, 1961, Ser. No. 107,174
6 Claims. (Cl. 287—53)



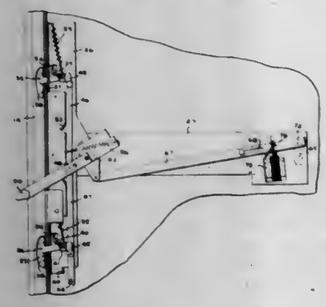
1. A hub for selectively locking a wheel on an axle comprising, in combination, a pair of interfitted, annular members one secured to said axle and the other to said wheel, said members having axially extending lugs adapted to come into radial alinement upon relative rotation of said members, a housing disposed about said members, a locking element slidably mounted in said housing for movement toward and away from said lugs, said locking element having annularly disposed projections adapted to fit between the extending lugs of said members when they are in radial alinement so as to lock said wheel to said hub, and means operable from outside of said housing to both rotate said element and urge it toward or away from said members, said locking element having at least one portion extending beyond said projections toward the member secured to said axle so that said rotation of said element causes said portion to catch one of said lugs and rotate the axle sufficiently far to bring said lugs into radial alinement, thus permitting said projections to enter between said lugs and lock the wheel to the axle.

3,125,364
BALL AND SOCKET JOINT
Raymond W. Springer, 33505 Michele Ave., Livonia, Mich.
Filed Apr. 12, 1961, Ser. No. 102,425
2 Claims. (Cl. 287—90)



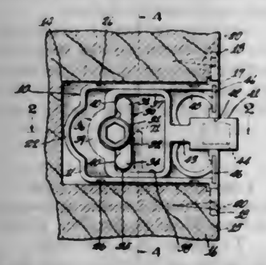
1. In a ball and socket joint, the combination with a rod having a cylindrical opening, an inwardly directed flange adjacent one end of the cylindrical opening, an annular washer positioned within the cylindrical opening and engaging said flange, a thrust transmitting ball positioned within the cylindrical opening and having an elongated cylindrical shank projecting through the washer, longitudinally split bearing members having semi-spherical surfaces engaging the ball and mating cylindrical surfaces engaging said elongated cylindrical shank, said bearing members having substantially straight outer cylindrical surfaces, a resilient member surrounding said bearing members in separating relation between the bearing members and the cylindrical opening, and means to seal opposite ends of the ball and socket joint.

3,125,365
DOOR LATCH MECHANISM
Ray C. Eigelbach, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Sept. 5, 1961, Ser. No. 135,876
5 Claims. (Cl. 292—7)



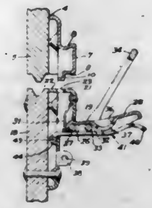
1. A latch mechanism adapted for locking a door, a door and a door frame where the door is hingedly mounted to the door frame along one edge thereof, said mechanism comprising a mounting bracket which is supported from the door frame adjacent the distal edge of the door, a pair of crank arms pivotally connected to the mounting bracket, a hook member pivotally supported from each crank arm, link means joining the two hook members, and a handle member cooperating with the link means and adapted for pivoting the hook members into and out of engagement with the door, the hook members being in a plane that lies parallel to the distal edge of the door, said latch mechanism being recessed within the door frame so as to be hidden when the handle member is in the unlatched position, and spring means for biasing the crank arms to remain in position until the hook members engage the door, after which the crank arms tend to shift away from the door so that the hook members tightly clamp the door shut.

3,125,366
LATCH MECHANISM
Vincent B. Cetrone, 563 Adelaide NE., Warren, Ohio, and Gerald H. Kreske, Warren, Ohio; said Kreske assignor to Vincent B. Cetrone, Warren, Ohio
Filed Aug. 11, 1960, Ser. No. 48,943
10 Claims. (Cl. 292—169)



6. A latch mechanism, comprising a housing, a latch plate mounted within said housing for reciprocation and including a latch bolt projectable from said housing for latching cooperation with a keeper, and resilient means for urging said latch plate in a direction wherein said latch bolt is projected from said housing, said latch plate and said resilient means being integrally formed of a high-melting thermoplastic polymer.

3,125,367
LATCHING ASSEMBLY
Maurice P. Koch, 2224 Lake St., San Francisco, Calif.
Filed Dec. 5, 1961, Ser. No. 157,103
1 Claim. (Cl. 292—247)



A latch assembly for fastening cooperating edge portions of separable parts of a structure comprising,

(*a*) a unitary hook member adapted to be secured to one of said parts,

(*b*) a latch member secured to another part of said structure for coaction with said hook member,

(*c*) said hook member being of a hollow spaced structure,

(*d*) a hollow hook boss integrally projecting from said hook member and having a hook channel formed therearound,

(*e*) a tongue extended from the lower end of said hook member toward the latch member of said assembly,

(*f*) said latch member including a hollow base,

(*g*) a hollow latch boss extended from said base in registry with said hollow hooked boss and having a slot therein for receiving said tongue,

(*h*) a latch handle pivoted on said latch boss,

(*i*) a leaf spring secured to the inside face of said latch boss and engaging the latch handle inwardly of said pivot to urge said latch handle over the center of its pivot,

(*j*) a loop pivoted on said latch handle and extensible over said hook channel when said handle is pulled into latching position over to said base,

(*k*) a lug extended from said base under the closed position of said latch handle,

(*l*) said latch handle having an inwardly dished portion and having a slot therethrough in registry with said lug in the latched position of said handle.

(*m*) said lug extending through said slot and having means therein for locking said latch handle in latched position,

(*n*) said base having a transverse slot below said latch handle pivot,

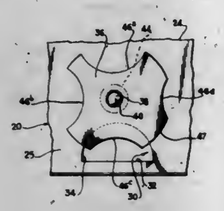
(*o*) a pair of journals struck out of said base below said latch handle pivot and at the ends of said transverse slot,

(*p*) an auxiliary lever extended along the underside of said latch handle and beyond the free end of said latch handle,

(*q*) inner ends of said auxiliary lever being journalled in said journals at said transverse slot,

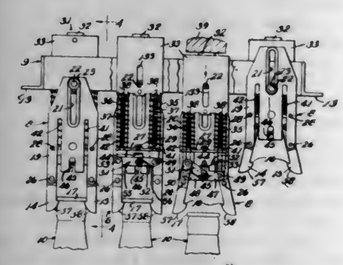
(*r*) and said auxiliary lever being curved to be engageable by a finger to exert leverage fulcrumed about said journals to lift said latch handle about its pivot.

3,125,368
COMBINED BUMPER AND BOTTLE OPENER
Rafael D. Bonnelly, 50 Park Terrace W., New York 34, N.Y.
Filed Jan. 18, 1963, Ser. No. 252,348
5 Claims. (Cl. 293—69)



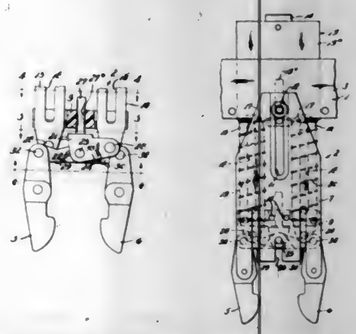
1. A combined container top remover and automobile bumper, comprising an upright bumper member, said member having an opening therein with opposing, spaced edge portions, one edge portion of said opening being adapted to engage under a removable top of said container, and means shiftably mounted on the bumper for adjusting the size of said opening and length of said one edge portion for removing tops of different sizes from different containers, one side of the opening being spaced from the other side sufficiently to receive container tops of different sizes.

3,125,369
BOTTLE GRIPPERS
Bruce G. Copping, Akron, Ohio, assignor to Atkron, Inc., Akron, Ohio, a corporation of Ohio
Filed Feb. 24, 1961, Ser. No. 91,405
18 Claims. (Cl. 294—87.24)



1. In bottle or article gripping apparatus,
an elongate carrier frame,
a plurality of positioning members operatively secured to longitudinally spaced portions of said carrier frame and extending downwardly therefrom for limited vertical movement towards and away from said carrier frame,
a pair of gripping jaws pivotally secured to each of said positioning members adjacent the lower ends thereof,
a control member for each of said pairs of gripping jaws operatively carrier by said carrier and extending thereabove,
said positioning members each including a pair of spaced plates, a said control member being received between each of said pairs of plates,
means including a resilient member operatively engaging said positioning members and said control means to urge said control members vertically upwardly from said carrier frame but to permit movement of said control members towards said carrier frame, and
connecting means including a spring means operatively engaging and extending between said control members and said gripping jaws to move them from normal bottle grasping positions to bottle receiving positions when said control members are moved towards said carrier frame.

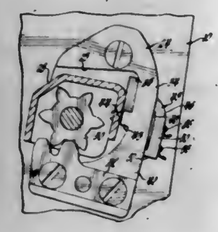
3,125,370
SELF-CENTERING ARTICLE GRIPPERS
Robert William McGill, Cuyahoga Falls, Ohio, assignor to Atkron, Inc., Akron, Ohio, a corporation of Ohio
Filed Jan. 3, 1962, Ser. No. 164,115
7 Claims. (Cl. 294—115)



1. In a bottle, or article gripping apparatus,
a carrier frame,
a dependent positioning means pivotally associated with said carrier frame and normally centered with relation thereto,
a pair of pivotal gripper jaws operatively carried by said positioning means,
a pair of coil spring means operatively engaging said positioning means and said carrier frame for movement of said positioning means towards and away from said frame but normally to urge said positioning means away from said frame,
a control member for said gripper jaws operatively carried by said carrier frame,
connecting means including a pair of lost-motion members operatively extending between and connecting said control member to said gripper jaws to move them from a locked bottle gripping position to bottle engaging and/or releasing position when said control member is moved,
a support plate carried by said positioning means and forming an end stop for one end of said coil spring means, and
a rocker link positioned parallel to said support plate and slidably connected to said support plate for only movement towards and away from said support plate while maintained parallel thereto,
said rocker link having fixedly positioned oppositely extending arms thereon parallel to said support plate and pivotally connected to said lost-motion members to provide lost motion in one of said members on lateral deflection of said positioning means.

3,125,371
CIRCUIT CONTROLLER
Alfred E. Krueger, 15862 Linnhurst, Detroit 5, Mich.
Filed Nov. 27, 1961, Ser. No. 155,158
7 Claims. (Cl. 296—44)

1. The combination comprising, a vehicle body having a closure movable between open and closed positions with respect to said body, a window mounted on said closure for movement between open and closed positions with respect thereto, power operating means for said window, light means mounted on said body, a source of power, separate circuit means connecting said power operating means and said light means across said source of power, and selector switch means operated by said closure for selectively enabling said light circuit means



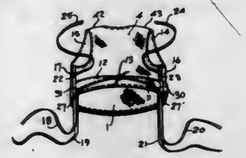
when said closure is in open position and selectively enabling said power operating circuit means when said closure is in closed position, said selector switch means disabling said light circuit means when said power operating circuit means is enabled and disabling said power operating circuit means when said light circuit means is enabled to prevent operation of said window unless said closure is in closed position.

3,125,372
CHAIR BOOK BOX AND CONNECTOR ACCESSORY
Fred G. Rose, Grand Rapids, Mich., assignor to American Seating Company, Grand Rapids, Mich., a corporation of New Jersey
Filed May 14, 1963, Ser. No. 280,348
2 Claims. (Cl. 297—188)



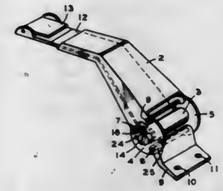
1. A combination book box and chair-connecting accessory for chairs which have at opposite sides thereof pairs of divergent front and rear legs, said accessory comprising: an upwardly opening box of rectangular parallelepiped form; pairs of elongated brackets mounted on opposite sides of said box in divergent disposition conforming to the divergence of said front and rear chair legs, the pair of brackets on one side of said box being detachably engageable with a front and rear pair of legs of one chair and the pair of brackets on the other side of said box being detachably engageable with a front and rear pair of legs of another chair, whereby said chairs are clamped together in side-by-side relation with said upwardly opening box supported therebetween.

3,125,373
SAFETY GARMENT
Mary E. Boatman, 2011 E. 48th Terrace, Kansas City, Mo.
Filed May 21, 1962, Ser. No. 196,081
4 Claims. (Cl. 297—384)



4. A safety garment for infants comprising:
(*a*) a body of flexible material having side edges tapering outwardly to form elongated, relatively narrow tie portions,
(*b*) said garment when placed around an infant having a back portion, a neck opening, arm holes, a front panel and a substantially straight bottom edge on the back portion,
(*c*) vertically extending straps secured to said back portion at the sides thereof adjacent the arm holes at least one of said straps having spaced stitching forming a loop near the bottom edge of said back portion through which one of said tie members extends, and
(*d*) means on the back portion near the bottom edge thereof through which the other tie member extends, whereby said tie members are tied at the back of the infant.

3,125,374
RETRACTABLE SAFETY BELTS
James J. Bissell, 114 Hawthorne, St. Louis County 31, Mo.
Filed Aug. 13, 1962, Ser. No. 216,435
2 Claims. (Cl. 297—388)

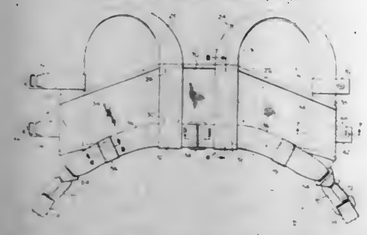


1. The combination with a passenger seat mounted upon the flooring of a car and comprised of a seat base and a seat back, of a safety belt comprising a pair of retractable belt members, each belt member retractably disposed in a casing and one end of said belt member projecting from one end of said casing, said casing projecting between said seat base and said seat back, a pair of reel sides rigidly mounted upon the other end of said casing, a spool rotatably mounted in and between said reel sides and the other end of said belt member fixed to and rolled around said spool, a slot in one end of said spool, a flat coil spring, one end of which is disposed in said slot in said spool end, the body of said spring being coiled around said slotted spool end, a pin mounted on the reel side next to said slotted spool end, the other end of said spring fixed to said pin, a spring cover mounted over said slotted end of said spool and said spring on the reel side, and an assembly mounting plate fixed to said reel sides and adapted to fix said reel sides and casings rigidly to said car flooring and cam means on the end of one of said belt members to lock said belt members together in any extended position.

3,125,375
SAFETY SEAT HARNESS FOR VEHICLE

George L. Bird and Robert A. Brown, Rochester, N.Y., assignors to Hickok Manufacturing Co., Inc., Rochester, N.Y., a corporation of New York

Filed May 10, 1962, Ser. No. 193,772
7 Claims. (Cl. 297—389)

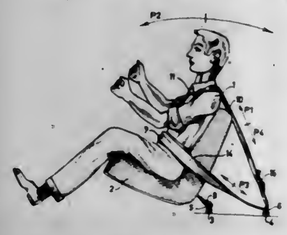


1. A safety seat harness for vehicles comprising a flexible fabric vest adapted to encircle and support the central portion of a wearer's body, means for adjusting the size of said vest to fit the wearer's body, a pair of shoulder straps each adapted to pass, separately of the other, over one shoulder of the wearer with one of its ends fixed to said vest and its other end slidably connected with said vest and extended to form a waist strap portion, means for adjustably connecting said waist strap portions to adjust the lengths of said shoulder straps and of said connected waist strap portions, and means for connecting said waist strap portions to said vehicle.

3,125,376
SAFETY BELT

Tonny van Duijvendijk, Rioumstraat 88c, The Hague, Netherlands, and Gerrit van Essen, Veldweg 2, Malden, Nijmegen, Netherlands

Filed June 13, 1962, Ser. No. 202,114
Claims priority, application Netherlands June 14, 1961
7 Claims. (Cl. 297—389)



1. A safety belt assembly for securing a human occupant in a vehicle seat having a bottom and back, said safety belt assembly comprising

two laterally spaced apart fittings fixedly mounted in back of the seat at a level adjacent the bottom of the latter;

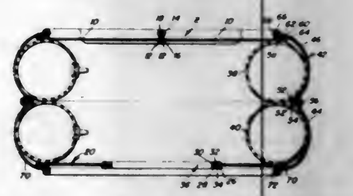
a first strap having its ends connected to said fittings to extend from the latter across the seat and thereby constitute a pelvis belt for an occupant of the seat, at least one of said fittings having a slot through which the end of said first strap attached thereto is longitudinally slidable; and

at least a second strap secured at one end to said pelvis belt at a location along the latter which is offset from the center of said pelvis belt, said second strap extending upwardly from said pelvis belt over the back of the seat and then downwardly and having its other end joined to the end of said first strap which is slidable through one of said fittings so that said second strap constitutes a shoulder belt adapted to extend diagonally across the chest of an occupant of the seat, whereby rapid deceleration of the vehicle seat tends to throw the upper part of the occupant's body forwardly and causes frictionally braked slipping of said first strap through said slot of said one fitting for braking the forward movement of the upper part of the occupant's body and simultaneously tightening said pelvis belt.

3,125,377
OTTOMAN WITH CHANGEABLE CUSHIONING MEANS THEREIN

Billie R. Bridges, 619 E. 23rd, Grandview, Wash.

Filed Dec. 27, 1961, Ser. No. 162,493
2 Claims. (Cl. 297—462)



1. A collapsible hassock comprising a cover made of flexible sheet material and embodying a horizontal annular ply providing a bottom wall having a centrally disposed opening providing an endless marginal edge, said edge being reinforced by binding tape which is attached thereto and borders said edge, a complemental horizontal top wall made up of a plurality of companion flexible sheet material patches having adjacent marginal edges joined by complemental outstanding welted seams, said top wall being of a diameter corresponding to the diameter of said bottom wall, a vertical connecting wall interposed between the outer marginal edges of said horizontal top and bottom walls and having upper and lower edges thereof united by welted seams to the cooperating outer marginal edges of said top and bottom walls, said connecting wall embodying a pair of duplicate elongated strips of flexible sheet material having transverse ends connected together and having their respectively adjacent cooperating lengthwise edges joined to each other by welted seams, all of said walls cooperating with each other and defining a hollow pocket to which access is had by way of the opening in said bottom wall, said pocket being designed and adapted to contain insertable and removable pneumatic tubes.

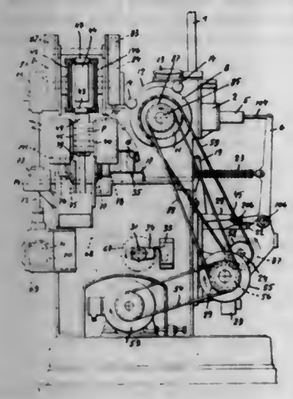
3,125,378
CIGARETTE PACKAGE CONVEYING AND GROUPING MACHINE

Goffredo Gamberini, Bologna, Italy, assignor to American Machine & Foundry Company, a corporation of New Jersey

Filed Dec. 23, 1960, Ser. No. 78,081
Claims priority, application Italy Jan. 14, 1960
13 Claims. (Cl. 302—2)

1. In a pneumatic article conveyor system including at least one conduit providing a path of travel for articles and means effecting therein a stream of air to convey the articles toward the downwardly extending outlet end of the conduit, an air-tight device for removing articles from said conduit at the outlet end thereof comprising: a housing at said outlet end, a drum rotating in air-tight fitting relation within said housing, said drum having at least one recess in its circular outer periphery adapted to receive said articles, said housing having a side opening at a location opposite the circular path of travel of said recess and providing communication with said outlet end for the transfer of articles to said recess, said housing

also providing a substantially horizontal supporting surface disposed across said outlet end and extending therefrom toward said opening, and means operable in timed relation to the arrival of said recess opposite said opening to transfer articles from said surface into said recess, said

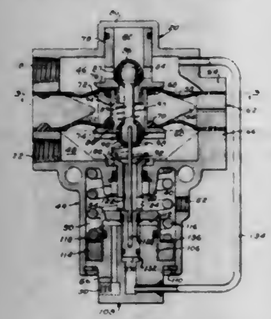


housing having further a downwardly opening discharge channel circumferentially spaced from said opening and at a location opposite said circular path, whereby upon rotation of said recess past said discharge channel the articles contained in the recess are delivered through the discharge channel.

3,125,379
VARIABLE PRESSURE RATIO VALVE

Harry M. Valentine, Elyria, Ohio, assignor to Bendix-Westinghouse Automotive Air Brake Company, Elyria, Ohio, a corporation of Delaware

Filed Dec. 28, 1960, Ser. No. 78,933
18 Claims. (Cl. 303—60)

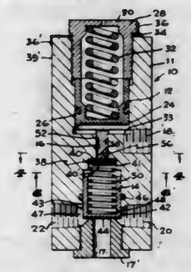


11. A fluid pressure control valve comprising a casing having inlet, delivery and exhaust ports, a pair of spaced diaphragms in said casing each having motive areas exposed respectively to the pressure at said inlet and at said delivery ports, said diaphragms being movable in unison in either of two opposing directions in response to changes in pressure at said inlet port, a pair of oppositely directed inclined surfaces in said casing each being adapted to be progressively engaged and disengaged by the respective diaphragms upon movement thereof so as to progressively change the effective size of the motive areas which are responsive to the respective fluid pressures at said inlet and delivery ports, and valve means responsive to the movement of said diaphragms for controlling connections between said inlet, delivery and exhaust ports, said valve means including a normally closed inlet valve for interrupting the connection between the inlet and delivery ports.

3,125,380
QUICK RELEASE PNEUMATIC CONTROL VALVE

Carl J. Strid, La Canada, Calif., assignor to Stratovalve & Engineering Company, Huntington Park, Calif., a corporation of California

Filed Aug. 21, 1961, Ser. No. 132,896
12 Claims. (Cl. 303—69)

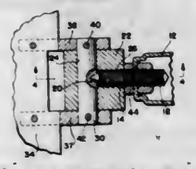


1. A valve which comprises a valve body, means forming a first cavity in said valve body, a biased piston mounted for slidable movement in said first cavity, a first port in said valve body communicating with said first cavity on one side of said piston, means forming a second cavity in said valve body, an outlet from said valve body, a biased valve means between said second cavity and said outlet, a positive mechanical connection between said piston and said valve means, a second port in said valve body, a vent in said valve body in fluid communication with said second port, a biased hollow piston type valve means in said second cavity between said second port and said vent, and an opening in said hollow piston type valve means providing fluid communication between said second port and said second cavity, said opennig being smaller than said outlet.

3,125,381
ADJUSTABLE MEANS FOR HAND TOOLS

Jens O. Anderson, 1111 3rd St., NE., Auburn, Wash.

Filed Nov. 14, 1960, Ser. No. 68,902
2 Claims. (Cl. 306—12)



1. An adjustable means for hand implements comprising, a locking member of closed cylindrical form having the outer periphery thereof interrupted only by a centrally positioned, transversely extending handle assembly receiving threaded bore and a shaft mounting bore positioned eccentrically of said periphery disposed forwardly of the longitudinal axis of said locking member and in line with said handle assembly receiving bore parallel to the longitudinal axis of said locking member, a rotatable handle having a threaded lower end which terminates in a conical metal point, an implement-carrying locking shaft rotatably fitted in said shaft mounting bore and having a plurality of conical recesses formed radially thereof and in the plane of said handle assembly receiving bore, said conical recesses being engageable by said conical metal point to rigidly secure said implement-carrying locking shaft, tool engaging arms disposed on

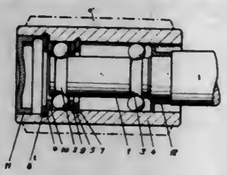
opposite ends of said locking member, said arms being fixedly secured to said implement-carrying locking shaft.

3,125,382
WELL TOOLS
Luther J. Herndon, Jr., and Jack B. Queen, Duncan, Okla., assignors to Halliburton Company, Duncan, Okla., a corporation of Delaware
Filed Oct. 20, 1960, Ser. No. 63,775
10 Claims. (Cl. 308—4)



3. A centralizer for an elongate member including: a base disposable about an elongate member; and a plurality of longitudinal resilient ribs extending outwardly from one side of the base, each of said ribs having a longitudinal recess providing a pair of lobes extending laterally outwardly relative to one another, said ribs extending radially outwardly from the base in circumferentially spaced relation to one another when said base is disposed about said elongate member, said ribs being spaced from the ends of said base, said base being provided with end flanges extending outwardly from said one side of said base and spaced from opposite ends of said ribs.

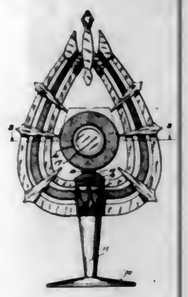
3,125,383
TOP ROLLER MOUNTING IN A SPINNING MACHINE
Wilhelm Stahlecker, Roosteige 28, Tieringen, near Balingen, Germany, and Sigmund Kemmler, Schultheiss-Schneider Strasse, Geislingen, Steige, Germany
Filed June 6, 1960, Ser. No. 34,204
Claims priority, application Germany June 26, 1959
3 Claims. (Cl. 308—174)



1. A top roller mounting in a spinning machine wherein a top roller is mounted for rotation on a shaft, means for journalling said top roller on said shaft comprising a sleeve, rows of ball bearings received in spaced tracks on said shaft, guidance means providing axial guidance of said sleeve, said guidance means comprising spring rings disposed on either side of one of said ball bearing rows, said spring rings being spaced from said shaft and being received in grooves in the bore of said sleeve, and abutment rings intermediate and in contact with said spring rings and the balls of said one of said ball bearing rows.

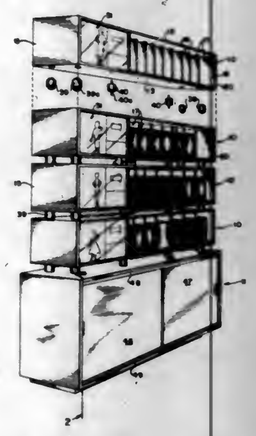
3,125,384
MONSTRANCES
Arlene Bauer, 3221 S. Superior St., Milwaukee 7, Wis.
Filed Nov. 24, 1961, Ser. No. 154,536
1 Claim. (Cl. 312—33)

A monstrance, comprising in combination, a frusto-conical supporting pedestal including a flat top having a recess therein, a permanent magnet seating in said recess and having a flat top surface flush with the flat top of said pedestal, a circular receptacle base having a flat bottom of a diameter substantially equal to that of the flat top of said frusto-conical pedestal, said bottom having a recess therein conforming in size and shape to, and vertically aligned with, said first mentioned recess, a ferrous metal plate in said last mentioned recess having



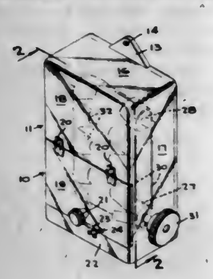
a flat bottom flush with the flat bottom of said base, said plate and said magnet cooperating to hold said base on said pedestal, a vertical standard carried centrally by the top of said base, a cylindrical sacred species receptacle having transparent end walls fixedly mounted on said standard with said transparent walls in vertical planes, rendering the sacred species visible from both ends and ornamental elements extending laterally and upwardly from said pedestal.

3,125,385
STOCKING DISPLAY BAR
Emerson J. Friedman, New York, N.Y., assignor to U.S. Industries, Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 3, 1962, Ser. No. 242,012
9 Claims. (Cl. 312—107)



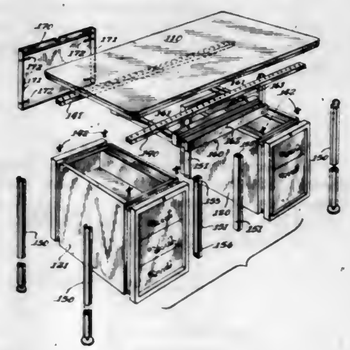
7. A display case for women's hosiery and the like comprising a plurality of elongate rectangular units having top, bottom, rear and side wall surfaces, each of said top and bottom surfaces defining a plurality of spaced longitudinal openings, a number of cylindrical mounting posts having radially reduced end portions for reception in said openings to permit stacking of said units one upon the other in vertically separated relation, means for dividing each of said units internally and longitudinally into a plurality of separate merchandise compartments accessible from the front of said unit, each of said compartments being adapted to contain several individual flat packages of women's hosiery wear stacked on edge therein with the ends thereof exposed for individual withdrawal from said compartment, a display compartment within the end portions of each of said units in combination with said merchandise compartments, said display compartment comprising internal lighting means for illuminating the interior thereof and further comprising a facing translucent member for covering the front thereof, said translucent member containing display items of advertising intelligence pertaining to the arrangement of said merchandise in the other of said compartments, a removable access door at the end of said rear wall and said display compartment, quick disconnect means connected to said door and to the interior of the top and bottom surfaces of said unit for fastening said door to said unit, said quick disconnect means permitting withdrawal of said door from the rear of said unit, said mounting posts intermediate said display compartments being hollow to form electrical conduit means, and wiring connections through said hollow mounting posts connected to each of said lighting means, said lighting means and wiring being provided with quick disconnect means in each of said units.

3,125,386
BOW TIE HOLDER
Palmer Hill Hanson, Orchards, Wash.
(9456 13th Ave. SW., Seattle 6, Wash.)
Filed June 25, 1962, Ser. No. 205,040
1 Claim. (Cl. 312—134)



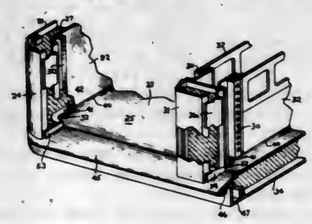
In a bow tie holder, a hollow case including a back wall, apertured ears on the upper and lower ends of said case, securing elements extending through said apertured ears for engaging a supporting structure, said case further including spaced parallel end walls and spaced parallel side walls, and said case further including a transparent front wall, a door hingedly connected to said front wall, a finger grip affixed to said door, said case including a flange portion, a spring connected to said flange portion for coaction with said door for selectively maintaining said door in closed position, spaced apart support members arranged in said case and affixed to said side walls, first and second spaced parallel rollers journaled between said support members, said first roller having a roughened outer periphery, a hand knob operatively connected to said first roller, an endless belt trained over said first and second rollers, a plurality of body pieces affixed to said belt and said body pieces being arranged contiguous to the outer surface of the belt in opposed relation with respect to each other adjacent the longitudinal outer edge portions of the belt, the body pieces adjacent one edge portion of the belt being spaced from the body pieces that are adjacent the other longitudinal edge of the belt, and said body pieces adapted to be engaged by the clasps of bow ties being supported in the case, said body pieces having only their outer portions secured to the outer edges of the belt, and there being a space between the inner portions of the body pieces of the belt, there being slots of generally V-shape between the inner portions of adjacent body pieces, the outer portions of the body pieces being free of slots, the inner edges of said body pieces being coplanar, the outer edges of said body pieces being coplanar, and wherein the inner portions of the body pieces flare outwardly away from the belt.

3,125,387
OFFICE FURNITURE
Charles M. Abrahamson, Aurora, Ill., assignor to All-Steel Equipment Inc., a corporation of Illinois
Filed Feb. 8, 1961, Ser. No. 87,897
13 Claims. (Cl. 312—195)



1. In a construction of the class described, in combination a top, a box-shaped support pedestal having exterior recesses having horizontal portions extending across the upper end of said pedestal and vertical portions extending down opposite side walls thereof, means including a set of mounting members secured to said top and nestable in the horizontal recesses across the upper end of said pedestal and fasteners receivable in the upper end of the vertical recesses to engage said mounting members for securing said pedestals to said top and a separate leg shaped member in each vertical recess to mask the fastener at the upper end thereof.

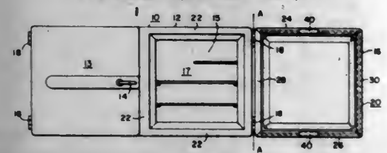
3,125,388
FLOOR-LOADING CABINET CONSTRUCTION
Anthony R. Costantini, Philadelphia, and Anthony di Angelus, Manoa, Pa., assignors to Victory Metal Manufacturing Company, doing business as Victory Metal Manufacturing Corporation, Plymouth Meeting, Pa., a corporation of Pennsylvania
Filed Apr. 5, 1961, Ser. 100,845
6 Claims. (Cl. 312—214)



1. In a cabinet having inside top, rear and side walls, and a door frame the sides of which are defined by a pair of mullions extending upward from the cabinet floor, the combination comprising, a one-piece cabinet floor liner

having edges adjacent to the cabinet inside rear and side walls turned up smoothly on a radius and smoothly joined to the lower terminal edges of the said rear and side walls completely peripherally about the cabinet interior at an elevation above the cabinet floor level, said floor liner extending outward through the door frame beyond the mullions to form a lead-in and exit ramp the terminating edge of which ramp is disposable substantially flush with the surface of the underlying floor upon which the cabinet is supported, and a cabinet bottom section disposed in downward-spaced underlying relation to the said cabinet floor liner, said bottom section being recessed inward from and secured to the cabinet outer walls and the ramp portion of the floor liner so that the front-to-back and side-to-side extent of the bottom section are less than the comparable dimensions of the cabinet, whereby the bottom section may be disposed downward into a recess in the floor which supports the cabinet so as to place the edge of the cabinet floor liner ramp substantially flush with the surface of the cabinet supporting floor.

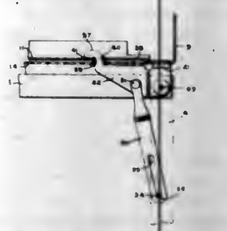
3,125,389
MAGNETIC DOOR GASKET
Anthony J. Swaneck, Jr., Columbus, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 31, 1962, Ser. No. 170,218
5 Claims. (Cl. 312—296)



1. The combination with a cabinet member having an access opening in an upright plane, having
a door member for closing said opening mounted on said cabinet member for swinging movement about an upright axis, and having
a gasket secured to one of said members along a line extending around said opening, said gasket having
top, bottom and side portions; of permanent magnets within said top and bottom portions and spaced from said side portions and having
flat sides facing the other of said members, said other member having
magnetically attractable surfaces opposite said flat magnet sides, said magnets having
like magnetic poles at their ends and having
magnetic poles opposite to said like poles at their centers.

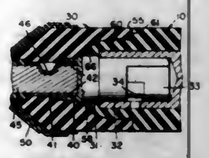
3,125,390
TWO DOOR CABINET INCLUDING IMPROVED DOOR HINGE AND STOP MECHANISM
Samuel J. Woolley, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Aug. 22, 1962, Ser. No. 218,629
3 Claims. (Cl. 312—329)

1. A cabinet comprising upper and lower compartments spaced from one another and having access openings at the front thereof,
said cabinet including an outer shell having side walls and inwardly extending side flanges at the front edges thereof,
a mullion extending across the front of the cabinet bridging the space between the access openings to said compartments,
separate closure members for closing said access openings having their opposed horizontal edge portions overlapping said mullion and spaced from one another,
a structural member secured to at least one side flange of said cabinet and extending into the space between said upper and lower compartments behind said mullion,
said structural member having an opening therein horizontally spaced from said one side flange,
hinge means for supporting at least one of said closure members for pivotal movement about an axis adjacent one side edge thereof,



said hinge means comprising a hinge bracket including a vertical base section overlying said one side flange and a flat horizontal section extending into the space between said opposed edge portions of said closure members,
a pivot pin on said horizontal section extending into the edge portion of said one of said closure members for pivotally supporting said one of said closure members,
said horizontal section having a hook-shaped portion extending through said mullion and said opening in said structural member and engaging the rear side of said structural member,
and fastening means passing through said one side flange and securing said hinge bracket base section to said structural member.

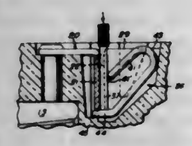
3,125,391
ELECTRICAL CONNECTOR ASSEMBLY
Oliver M. Hart, West Cornwall, Conn.
Continuation of application Ser. No. 835,922, Aug. 25, 1959. This application Oct. 4, 1962, Ser. No. 229,274
1 Claim. (Cl. 339—60)



An electrical connector assembly comprising a body means formed of electrical insulating material, a plurality of electrical coupling elements embedded within the insulating material of said body means, means electrically connecting said coupling elements to one another, said body means including a plurality of recesses formed in the outer surface thereof, each of said electrical coupling elements having a portion disposed within a central portion of one of said recesses, sleeves integral with said body means and being disposed in surrounding relationship to each of said coupling elements, each of said sleeves being disposed within one of said recesses and in spaced relationship to the adjacent wall of the associated recess, each of said sleeves having a contacting surface formed thereon, each of said contacting surfaces defining a continuous curve extending in a direction parallel to the longitudinal axis of the body means, and defining a plurality of cross-sectional areas extending substantially normally to the longitudinal axis of the sleeves and

spaced along such axes which are circular, each of said contacting surfaces including a base portion remote from the outer end thereof, said contacting surfaces flaring outwardly from said base portion to an intermediate portion and tapering inwardly from said intermediate portion to the outer end thereof, said base portion and said outer end of each of said contacting surfaces having cross-sectional areas of different diameters.

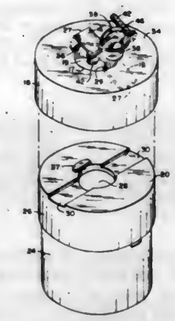
3,125,392
SPRING-WIRE, DUAL-GRIPPER FOR CONDUCTORS
Paul H. Winter, Syracuse, N.Y., assignor to Pass & Seymour, Inc., Syracuse, N.Y., a corporation of New York
Filed Apr. 2, 1962, Ser. No. 184,071
7 Claims. (Cl. 339—95)



1. An automatic dual conductor wire gripper comprising an insulating base, dual, parallel, laterally spaced substantially V-shaped notches in said base terminating substantially at a surface thereof and having one leg of each V-shaped notch substantially normal to said surface, a transverse channel connecting said legs for substantially their full depth and extending laterally beyond them, a terminal plate secured in and nearly filling said channel having a wing on each edge substantially at right angles to the plate and each directed generaly toward the other leg of each V, a conductor wire gripper comprising a pair of divergent arms of spring wire integrated by a bend of the order of 180° and arranged one pair in each said notch with the free end of each outermost arm substantially engaging said plate adjacent one of said wings at a position deeper in its notch than the bend between the arms of the pair, a straight transverse integral portion of said spring wire connecting the inner ends of the other arms together, and extending in said channel beneath the lower edge of said terminal plate, whereby the dual spring wire gripper unit is maintained in position in the V-shaped notches and connecting channel.

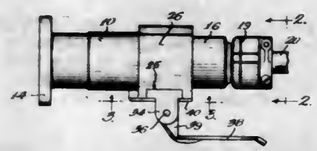
3,125,393
WIRING DEVICE WITH CORD CLAMP AND METHOD OF FABRICATION THEREOF
George F. Hawkes, Jr., Trumbull, Conn., assignor, by mesne assignments to Westinghouse Electric Corporation, a corporation of Pennsylvania
Filed Jan. 24, 1962, Ser. No. 168,417
3 Claims. (Cl. 339—103)

1. A wiring device comprising an insulative housing, a pair of generally L-shaped clamping members having respective upstanding legs confronting each other, means for adjusting the spacing of said upstanding legs so as to provide for accommodating variously sized cords in clamped relation between the same, a generally circular cord opening extending through one side of said housing, a pair of diametrically opposed elongated channels extending along said one housing side into said housing cord opening, respective elongated base legs of said clamping members being located in said housing channels for movement therealong, and means for securing a retaining member on said one housing side, said retaining member having a generally circular cord opening in alignment with said housing cord opening, said retaining member cord opening having a cross-dimension less than the dimension from the outer end of the base leg of one of said clamping members to the inner end of the base leg of the other clamping member thereby enabling said retaining member to captivate said clamping member base legs in said housing channels, said retaining member having a slot extending radially outwardly of said retaining member opening to such an extent that the sum of the slot radial dimension and the retaining member opening



cross-dimension is less than the dimension between the outer ends of said clamping member base legs thereby requiring said clamping members to be tilted when inserted through said retaining member opening, said slot being angularly displaced from said housing channels to prevent removal of said clamping member base legs from said channels, and said securing means preventing angular movement of said retaining member relative to said housing.

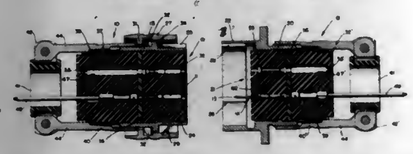
3,125,394
EXPLOSION PROOF PLUG AND RECEPTACLE
Arthur I. Appleton, Northbrook, Ill.
(1713 Wellington Ave., Chicago 13, Ill.)
Filed Oct. 28, 1960, Ser. No. 65,642
13 Claims. (Cl. 339—111)



1. An explosion proof receptacle for use with a plug having a plug body carrying a plurality of plug terminals extending therefrom, an annularly extending plug housing surrounding said plug terminals, and a radially extending arcuate shoulder on the outer surface of the plug housing, said receptacle comprising a receptacle body mounting a terminal block having a plurality of receptacle terminals telescopically engageable with the plug terminals, an annular receptacle housing extending from said receptacle body in spaced surrounding relation with said terminal block, said plug housing being received within said receptacle housing and closely surrounding said terminal block when the receptacle terminals are engaged with the plug terminals, a slide member mounted on said receptacle housing for transverse sliding movement with respect thereto between opposite positions, said slide member having means thereon defining opposed transversely spaced stop shoulders for successively engaging the plug shoulder upon transverse movement of said slide member from one to the other of said opposite positions so as to afford a two step delayed withdrawal and insertion of the plug respectively from and into the receptacle, a cover hingedly mounted on said slide and biased for closing the receptacle

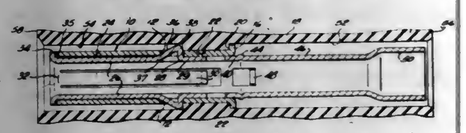
when the plug is removed therefrom and the slide is in one of said opposite positions, and means on said receptacle housing engageable with said cover for holding the same open when the slide is in the other of said opposite positions wherein the plug is inserted in place within the receptacle.

3,125,395
ELECTRICAL CONNECTOR
George J. Swanson, Sidney, N.Y., assignor to The Bendix Corporation, a corporation of Delaware
Filed Apr. 24, 1959, Ser. No. 808,611
18 Claims. (Cl. 339—176)



1. An electrical connector comprising in combination a substantially rigid contact supporting plate having a passage therethrough and an elongated metal contact extending through said passage, said contact having a first enlarged portion forming a shoulder engaging one face of said plate around said passage to hold said contact against movement in one direction relative to said plate and having a second enlarged portion axially spaced from said first portion forming a tapering shoulder facing said first-named shoulder and engaged intermediate the radial extremities thereof by said plate at the junction of the other face of the plate with the wall of said passage to restrain said contact against movement in the other direction relative to said plate, that portion of said contact between said shoulders being of smaller transverse section than said passage and said contact being rigid and so constructed in the region of said second enlarged portion that the peripheral shape and dimensions of said second enlarged portion are unaffected by compressive radial forces applied thereto.

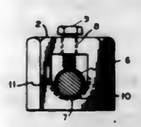
3,125,396
RELEASABLE LOCKING CONNECTOR
Joseph J. Bertram, Norwalk, Conn., assignor to Burndy Corporation, a corporation of New York
Filed June 4, 1962, Ser. No. 199,826
4 Claims. (Cl. 339—217)



1. A connector for mounting in an insulating housing having a connector receiving bore including a bore constriction forming two axially opposed shoulders therein, comprising:

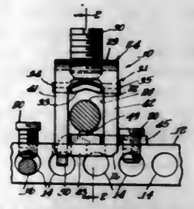
a substantially tubular conductive body member adapted to be inserted into said bore; means engaging said body member and one of said shoulders to limit insertion of said member into said bore; resilient locking means on said body member engaging the other of said shoulders to secure said body member against withdrawal from said bore; unlocking means to unlock said resilient locking means to release said connector from said bore, operable by further insertion of said tubular body into said bore; and auxiliary locking means on said tubular body to automatically lock said resilient locking means in unlocked position, whereby said connector may be withdrawn from said bore.

3,125,397
CONNECTOR
Thomas J. McGrath, White Plains, N.Y., assignor to Burndy Corporation, a corporation of New York
Filed Mar. 11, 1960, Ser. No. 14,319
8 Claims. (Cl. 339—272)



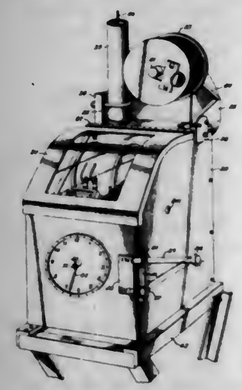
1. A connector for an electrical conductor comprising: a conductor receiving portion including a cavity therein; an arcuate spring element disposed in said cavity and adapted to receive a conductor within the arc thereof; a pressure applying means assembled to said conductor receiving portion for applying pressure to the medial part of said spring element to force the ends of the spring into camming engagement with the cavity inner wall; said spring element further being adapted to encircle more than one half the circumference of the inserted conductor; wherein the cavity inner wall is shaped to cam said resilient member around an inserted conductor into circumferential contact therewith for applying circumferential radially compressive pressure thereto in response to pressure applied by said pressure applying means.

3,125,398
ELECTRICAL CONNECTOR FOR NEUTRAL BARS
Clement W. Wolf, Mount Clemens, Mich., assignor to Square D Company, Park Ridge, Ill., a corporation of Michigan
Filed June 28, 1961, Ser. No. 122,376
6 Claims. (Cl. 339—272)



1. A neutral bar assembly comprising an elongated neutral bar having a portion generally rectangular in cross section and having a series of holes of predetermined size extending therethrough from one side to another and respectively adapted to receive the ends of electrical conductors, said neutral bar also having a corresponding series of threaded holes extending through a top surface thereof substantially perpendicularly to and respectively communicating with said conductor receiving holes, said threaded holes being adapted to receive screws for clamping to said neutral bar within said conductor receiving holes electrical conductors of a size up to the predetermined size of said conductor receiving holes, and a connector secured to said neutral bar, said connector including a generally U-shaped body having a bight portion and a pair of substantially parallel legs extending from said bight portion and adapted to straddle said neutral bar, each of said legs having a generally rectangular aperture therethrough dividing the respective leg into a pair of substantially parallel side portions extending from said bight portion and a connecting portion joining the ends of said side portions opposite said bight portion, a clamping screw threadedly mounted in said bight portion, and a generally flat attaching member secured to said neutral bar and extending longitudinally thereof, said attaching member having oppositely projecting portions extending transversely of said neutral bar respectively into said apertures, said body being reciprocably mounted on said transversely extending portions, and said apertures being larger than the predetermined size of said conductor receiving holes in said neutral bar after allowance is made for said transversely extending portions of said attaching member.

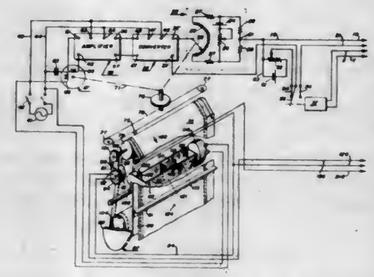
3,125,399
RECORDER
James O. Melton, Norman, Okla., assignor to The Geograph Company, Oklahoma City, Okla., a partnership consisting of Paul B. Nichols and H. Travis Brown
Filed Dec. 5, 1955, Ser. No. 551,004
8 Claims. (Cl. 346—33)



1. A recorder including support means for holding thereon a record chart, a recording arm pivotally mounted in said recorder, a recording element mounted on said recording arm and adapted to operatively engage a shart held on said support means and to mark a record thereon, a shaft rotatably supported in said recorder, a rotor mounted for free rotation on said shaft, clutch means drivingly connecting said rotor with said shaft, a movable stop mounted in said recorder and bearing against a portion of said recording arm, means resiliently urging said recording arm against said stop, means responsive to rotation of said shaft for moving said arm in a first direction away from said stop against the action of said resiliently urging means and said resiliently urging means moving said arm thereafter towards said stop to deflect said recording element on said chart, and a freely movable pick-up means mounted adjacent said rotor and engageable therewith and conected to deflect said recording element on said chart by moving said stop responsive to rotation of said rotor, said stop being moved by said pick-up means in a second direction opposite to said first direction.

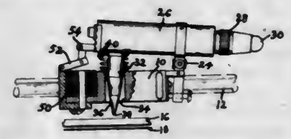
3,125,400
RECORDING INSTRUMENT
Ernesto Aliaga Moyano, New York, N.Y., assignor to Thermo Electric Co., Inc., Saddle Brook, N.J., a corporation of New Jersey
Filed Aug. 10, 1961, Ser. No. 130,561
4 Claims. (Cl. 346—34)

1. In a multiple point strip chart recorder of the null balance type, means connecting a plurality of input sources, one at a time, to the recorder input, means alternately connecting a source of reference potential and successive ones of a plurality of input potential sources to the input of the recorder, a recording element in continuous recording engagement with the chart, means intermittently advancing the chart past the recording element only during the time the reference potential source is connected to the recorder input, a stepping switch which



is continually energized for actuation of the means connecting the plurality of input sources, one at a time, to the recorder input, means under control of the said stepping switch for initiating recording operation of the recorder at a predetermined position of the said stepping switch, and means under control of the stepping switch for terminating the recording operation when the input sources have been scanned.

3,125,401
VIBRA-PEN SCRIBER ASSEMBLY
Stephen E. Boone, Mission Hills, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Apr. 7, 1961, Ser. No. 101,604
4 Claims. (Cl. 346—140)



1. A pen for inscribing lines on surfaces to indicate the flight path and speed of vessels comprising,

a carriage having,

a transversely extending aperture through approximately the center thereof,

electromagnetic means recessively connected to the body of said carriage and disposed in flush arrangement therewith,

supporting means connected to said carriage, said carriage being slidable therewith,

marking means longitudinally disposed angularly within said aperture in a non-writing position,

reservoir marking means at one end pivotedly mounted on the top portion of said carriage body adjacent one edge thereof and having the non-marking end of said marking means terminating in the lower portion of said reservoir means thereby providing gravity feeding for said marking means,

armature means juxtaposed to said electromagnetic means and rotatably disposed at one end thereof adjacent the other oppositely positioned carriage edge,

link means pivotedly coupling the other end of said armature means and the other end of said reservoir marking means,

spring bias means encircling said marking means whereby energization of said electromagnetic means will rotate the armature means and coupled reservoir means against the spring bias means to thereby vertically position the pen means preparatory to the marking operation.

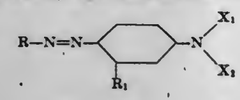
CHEMICAL

3,125,402
AZO DYEING OF POLYETHYLENE TEREPHTHALATE FIBERS AND FIBERS SO PRODUCED

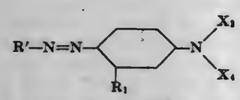
Winfried Kruckenberg, Leverkusen, and Konrad Weis, Cologne-Stammheim, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed May 10, 1960, Ser. No. 28,009
Claims priority, application Germany May 16, 1959
20 Claims. (Cl. 8—41)

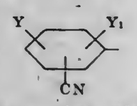
1. In the process for dyeing polyethylene terephthalate fibres, the improvement which comprises applying onto these fibres an azo dyestuff selected from the group



and



wherein R is a member selected from the group consisting of a cyano group-containing sulfur-free carbocyclic diazo component and a heterocyclic diazo component free of sulfur-containing substituents, R' is a radical of the formula



Y and Y_1 stand for members selected from the group consisting of hydrogen, halogen, cyano, nitro, lower alkyl and trifluoromethyl, R_1 is a member selected from the group consisting of hydrogen, halogen and lower alkyl, X_1 stands for an acylated hydroxy lower alkylene radical containing 2 to 4 carbon atoms between —N— and —O—, X_2 stands for a member selected from the group consisting of unsubstituted lower alkyl group and an acylated hydroxy lower alkylene radical containing 2 to 4 carbon atoms between —N— and —O—, X_3 means a lower alkylene group carrying a carboxyl group esterified with a lower aliphatic alcohol, and X_4 stands for a member selected from the group consisting of hydrogen, a lower aliphatic, benzyl, phenyl radical and a lower alkylene radical carrying a carboxyl group esterified with a lower aliphatic alcohol.

3,125,403
NEW COLOURATION PROCESS

Norbert G. B. Senger, Manchester, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

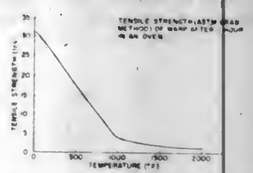
No Drawing. Filed May 29, 1961, Ser. No. 113,103
Claims priority, application Great Britain June 16, 1960
5 Claims. (Cl. 8—65)

1. Process for colouration of cellulose textile fabrics which comprises applying to a portion of one surface of the fabric a thickened printing paste which contains a nitrogenous resin precondensate selected from the class consisting of methylol derivatives of imidazolidones, methylol derivatives of triazones, methylol derivatives of melamine and methylol derivatives of acetylene diurea and a curing agent for said precondensate, thereafter subjecting the fabric to a heat treatment to cure the precondensate and thereafter applying to the same surface of the fabric a water-soluble reactive dyestuff.

3,125,404
HEAT RESISTANT FIBROUS PRODUCTS AND METHOD OF MAKING THE SAME

William P. Crawley, Tonawanda, N.Y., assignor to The Carborundum Company, Niagara Falls, N.Y., a corporation of Delaware

Filed Oct. 24, 1957, Ser. No. 692,206
10 Claims. (Cl. 8—115.7)



10. A heat-treated substantially fire-proof fabric woven from yarn comprising an intimate fiber blend consisting essentially of staple, inorganic, siliceous ceramic fibers containing a major proportion of aluminum silicate, and substantially non-flammable, heat-resistant, staple, acrylic carrier fibers containing at least about 85% by weight of polyacrylonitrile and up to about 15% by weight of a monoethylenically unsaturated monomer and having a softening point above about 320° F. prior to heat treatment, said ceramic fibers comprising about 80% by weight of said blend, said fabric having been subjected to a non-combustive heat treatment at a substantially uniform temperature in the range from about 482° F. to about 484° F. for a period of time of about 3 hours and sufficient to convert said carrier fibers to said substantially non-flammable, heat-resistant form, and said product having after said heat treatment a shrinkage representing a total loss in area of only about 3%.

3,125,405
METHOD OF CREASE-PROOFING CELLULOSIC FABRICS AND PRODUCTS THEREOF

John L. Gardon, Levittown, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed June 9, 1959, Ser. No. 819,009
14 Claims. (Cl. 8—116.3)

1. A process of treating textile material of cellulose fibers which comprises impregnating the material with an aqueous solution containing dissolved therein at least 5% by weight of a compound of the formula

$$CH_2{=}C(R^*){-}C(O){-}N(R){-}CH_2OR'$$

wherein R, R*, and R' are individually selected from the group consisting of hydrogen and methyl, and water-soluble acidic catalytic material selected from the group consisting of

(1) a water-soluble free-radical polymerization initiator of acidic character at a concentration of at least 0.1% by weight and

(2) a mixture of a water-soluble free-radical polymerization initiator selected from the group consisting of neutral and acidic initiators at a concentration of at least 0.1% by weight and a water-soluble acidic catalyst, other than a free-radical polymerization initiator, for the etherification reaction of —CH_2OR' groups of the aforesaid compound with hydroxyl groups of the cellulose at a concentration of at least about 0.05% by weight,

and drying and heating the impregnated material at a temperature of about 105° to 205° C. until cross-linking of the cellulose is obtained.

3,125,406
CREASE-PROOFED CELLULOSIC FABRICS AND PROCESS FOR MAKING THEM

John J. Herman, Trenton, N.J., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Feb. 28, 1961, Ser. No. 92,168
7 Claims. (Cl. 8—116.3)

1. A process of treating a fabric of cellulose fibers which comprises impregnating the fabric with an aqueous solution containing 5 to 30% by weight of a monomeric compound of the formula

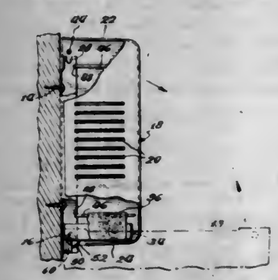
$$CH_2{=}C(R^*){-}C(O){-}N(R){-}CH_2OR'$$

wherein R, R*, and R' are individually selected from the group consisting of hydrogen and methyl, and acidic catalytic material dissolved in the aqueous medium selected from the group consisting of (1) a free-radical polymerization initiator of acidic character at a concentration of 1/10 to 3% by weight and (2) a mixture of a free-radical polymerization initiator selected from the group consisting of neutral and acidic initiators at a concentration of 1/10 to 3% by weight and, at a concentration of about 0.05 to 1% by weight, an acidic catalyst, other than a free-radical polymerization initiator, for the etherification reaction of —OR' groups of the aforesaid compound with hydroxyl groups of cellulose, heating the impregnated fabric at a temperature of about 90° to 175° C. until the moisture content of the fabric has been reduced at least to a value which is no more than 10% by weight based on the dry weight of the fabric to effect reaction of monomer including addition polymerization thereof and cross-linking of the cellulose by an etherification reaction of —OR' groups with hydroxyl groups of the cellulose, then terminating the preceding reaction step before all of the aforesaid monomeric compound has been reacted, rinsing the fabric to remove extractable material including residual monomeric compound and free-radical initiator, thereafter contacting the fabric with an aqueous solution of an acidic catalyst, other than a free-radical polymerization initiator, for the etherification reaction, and heating the fabric thus obtained at a temperature of 125° C. to 175° C. to effect additional etherification reaction within the fabric.

3,125,407
DEODORIZING APPARATUS

Arthur Kagan, Chicago, Ill., assignor to Creative Metal Products, Inc., Chicago, Ill., a corporation of Illinois

Filed Sept. 22, 1961, Ser. No. 140,035
6 Claims. (Cl. 21—122)

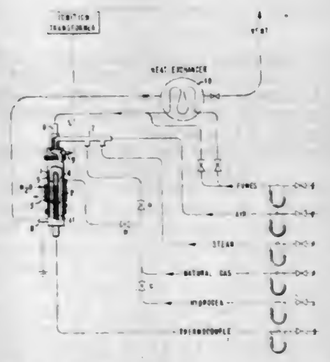


1. In a deodorizing apparatus in which there is a base plate adapted to be secured to a wall and an open face box-like housing adapted to be mounted to the base plate with its open face engaging against the base plate to close the housing, and there is a pivotal connection at one end of each of the base plate and housing to enable the housing to be swung away from the base plate to gain access to the interior of the housing and the face of the base plate; means for locking the housing to the base plate against swinging movement which comprises: structure providing a sliding connection between the base plate and housing in addition to the pivotal connection, means at the second end of each of the base plate and housing providing for separation of the base plate and housing at said second ends only under a particular condition of disposition of the base plate and housing and the sliding connection enabling manual movement of said base plate and housing relative to one another to said condition of disposition, and selective stop means at the first ends of said base plate and housing for preventing the said manual sliding movement, said stop means comprising a swinging latch on one of said housing and base plate and a latch engaging part on the other.

3,125,408
METHOD OF REMOVING NITROGEN OXIDES FROM GASES

Eugene Childers, South Charleston, W. Va., and Charles William Ellis and Donald James Ryan, Orange, Tex., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Dec. 19, 1955, Ser. No. 553,924
1 Claim. (Cl. 23—2)



A process for the disposal of waste gas containing nitrogen oxide fumes which comprises passing said waste gas together with a reducing gas, containing 60 to 90% of an alkane, said reducing gas being present in an amount in excess of the stoichiometric amount necessary to decompose the nitrogen oxide fumes, over a catalyst of platinum supported on activated alumina at a temperature between 450° C. and 1000° C., at a space velocity of between 25,000 and 150,000 reciprocal hours per cubic foot of catalyst, whereby the nitrogen oxide fumes are reacted with the reducing gas to form nitrogen, water and carbon dioxide, and thereafter discharging the nitrogen-oxide free waste gas to the atmosphere.

3,125,409
RECOVERY OF URANIUM FROM GAS MIXTURE

Stanley H. Jury, Knoxville, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed May 20, 1954, Ser. No. 431,305
12 Claims. (Cl. 23—14.5)

3. A method of separating uranium from a mixture of uranium hexafluoride and other inorganic fluorine-con-

taining gases that comprises bringing said mixture into contact with anhydrous calcium sulfate to adsorb the uranium hexafluoride on said sulfate preferentially and thereafter leaching the calcium sulfate with a selective solvent for the adsorbed uranium.

3,125,410
METHOD OF SOLVENT EXTRACTION
Nathan E. Ballou, 1531 Campus Drive, Berkeley 8, Calif., and Edith M. Scadden, 2637 Clay St., San Francisco, Calif.
No Drawing. Original application June 18, 1954, Ser. No. 437,893. Divided and this application Aug. 27, 1959, Ser. No. 31,415
2 Claims. (Cl. 23—14.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A method of extracting elements of group IV–A, indium and thorium from an aqueous solution formed with nitric acid having an aqueous phase of about one M, said solution including elements of both groups IVA and VA and protactinium, comprising intimately mixing said aqueous solution with a substantially equal volume of organic solution including di-n-butyl phosphoric acid in a concentration of about 0.06 M, said organic solution being immiscible with said aqueous solution and being otherwise physically and chemically compatible with the desired extraction, and said organic solution being formed by dissolving a mixture of di-n-butyl phosphoric and mono-n-butyl phosphoric acid (both in their pure form) in an organic solvent to a concentration of 0.06 di-n-butyl phosphoric acid and a one M ratio of di-to-mono-n-butyl phosphoric acids of 4.5 to 1.

3,125,411
PROCESS FOR PRODUCTION OF NON-BURNING FERTILIZER
Grover L. Bridger and Norval K. Alfrey, Baltimore, Md., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut
No Drawing. Filed Feb. 10, 1961, Ser. No. 89,097
1 Claim. (Cl. 23—105)

A process for the production of a fertilizer having a controlled rate of nitrification and a resistance to impact during handling comprising granulating a mixture of a 25–40% magnesium ammonium phosphate monohydrate aqueous slurry and solid crushed hydrated magnesium ammonium phosphate in the weight ratio of 1000 lbs. of said solid in said slurry to 300 lbs. of said crushed solid, aging the thus formed granules at a temperature in the range of 40–160° F. for 15–30 minutes, thereby to give hydrated magnesium ammonium phosphate, the degree of hydration being dependent on the aging temperature, with the product being substantially the hexahydrate below 104° F., and being less hydrated when using aging temperatures above 104° F., drying the aged granules at temperatures below about 250° F., classifying the dried granules according to size, crushing all particles retained on a 6 mesh screen, recycling said crushed particles and the particles passing a 16 mesh screen to the granulation step with additional slurry, and recovering the particles passing a 6 mesh screen and retained on a 16 mesh screen.

3,125,412
PROCESS OR THE MANUFACTURE OF ALKALI IMIDODIPHOSPHATES
Morris L. Nielsen, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Dec. 2, 1959, Ser. No. 856,656
9 Claims. (Cl. 23—107)

1. Process for the preparation of tetrasodium imidodiphosphate which comprises heating diphenyl imidodiphosphoric acid in the presence of from 200% to 600% of the stoichiometric proportion of sodium hydroxide at a temperature in the range of from 120° C. to 200° C. the said two reactants being heated in aqueous solution.

2. Process for the preparation of tetrapotassium imidodiphosphate which comprises heating diphenyl imidodiphosphoric acid in the presence of from 200% to 600% of the stoichiometric proportion of potassium hydroxide at a temperature in the range of from 120° C. to 200° C. the said two reactants being heated in aqueous solution.

7. Process for the preparation of a tetra alkali imidodiphosphate selected from the group consisting of the tetra sodium and tetra potassium imidodiphosphates which comprises heating diphenyl imidodiphosphoric acid in the presence of from 200% to 600% of the stoichiometric proportion of an alkali hydroxide selected from the group consisting of sodium hydroxide and potassium hydroxide, at a temperature of from 120° C. to 200° C., the said two reactants being heated in the presence of a solvent selected from the group consisting of water and nonreactive alcohols which boil in the range of from 120° C. to 200° C., and in the presence of a salt selected from the group consisting of sodium phenoxide, potassium phenoxide, sodium formate, and potassium formate, the said salt being present in an amount sufficient to maintain the boiling point of the mixture in the aforesaid reaction temperature range.

3,125,413
METHOD OF PREPARING MOLYBDENUM DISULFIDE
Edgar K. Leavenworth, Coldwater, Mich., and Louis S. Deltz, Jr., Westfield, N.J., assignors to American Metal Climax, Inc., New York, N.Y., a corporation of New York
No Drawing. Filed Aug. 24, 1960, Ser. No. 51,524
14 Claims. (Cl. 23—134)

1. The method of producing a molybdenum disulfide powder having a controlled quantity of a residuary oily substance comprising the steps of providing a powdered mass of molybdenum disulfide containing up to about 16% water and up to about 7% of an oily substance, heating said powdered mass in a retorting operation and controlling the temperature and retort time to reduce the water content to a level below about 0.5% and the oily substance to a level ranging from 0.05% to about 6% by evaporation.

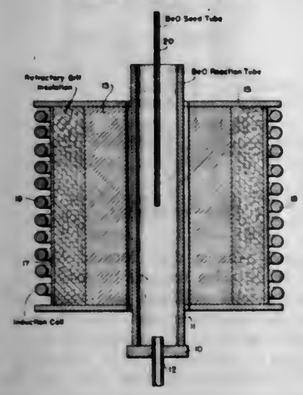
3,125,414
PRODUCTION OF SULFAMIC ACID
Everett E. Gilbert, Morris Township, Morris County, and Henry R. Nychka, Randolph Township, Morris County, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Feb. 19, 1962, Ser. No. 174,272
3 Claims. (Cl. 23—166)

1. A process for the production of sulfamic acid which comprises mixing urea, sulfuric acid, sulfur trioxide and sulfur dioxide, maintaining the mixture at a temperature within the range of 55° to 110° C. under superatmospheric pressure to effect reaction of the mixture to produce sulfamic acid which is insoluble and forms a slurry in the sulfur dioxide and also by-product carbon dioxide, releasing evolved carbon dioxide from the reaction mixture, and separating sulfamic acid from the sulfur dioxide.

3,125,415
MANUFACTURE OF SULFAMIC ACID
Everett E. Gilbert and Alphonso W. Marsilio, Morris Township, Morris County, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Feb. 19, 1962, Ser. No. 174,273
3 Claims. (Cl. 23—166)

1. A process for the production of sulfamic acid which comprises mixing urea and sulfuric acid and sulfur trioxide and chlorosulfonic acid, maintaining the mixture at a temperature within the range of 60–95° C. to effect reaction of the mixture to produce sulfamic acid which is insoluble and forms a slurry in the chlorosulfonic acid and also by-product carbon dioxide, releasing evolved carbon dioxide from the reaction mixture, and separating sulfamic acid from the chlorosulfonic acid.

3,125,416
METHOD FOR PRODUCING HIGH PURITY MONOCRYSTALLINE BERYLLIA FIBERS AND PLATELETS
Eugene I. Ryshkewitch, Ridgewood, and Allen R. Sheets, Haskell, N.J., assignors to National Beryllia Corp., Haskell, N.J., a corporation of New Jersey
Filed Mar. 7, 1962, Ser. No. 178,125
3 Claims. (Cl. 23—183)



1. Process for the production of monocrystalline beryllia fibers and platelets comprising

heating beryllia to from 1200° C., to about 2000° C., in a confined space and in the presence of a carrier gas containing about 35 to 100% of water vapor whereby a gas mixture containing $Be(OH)_2$ vapors is obtained,

passing the resultant vapors directly over a surface maintained at a temperature somewhat below that of said beryllia, said surface comprising seed crystals of beryllia.

3,125,417
PREPARATION OF CARBONYL SULFIDE
Raymond A. Franz and Richard N. Moore, St. Louis, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Dec. 29, 1961, Ser. No. 163,023
7 Claims. (Cl. 23—203)

1. A process for the production of carbonyl sulfide which comprises introducing a mixture consisting essentially of hydrogen sulfide and sulfur dioxide into a reaction medium consisting essentially of a tertiary amine at a temperature of 10 to 200° C., stopping the entry of the hydrogen sulfide and sulfur dioxide and subsequently introducing carbon monoxide into the amine solution at a temperature of 25 to 300° C. and recovering therefrom a gas stream containing a substantial amount of carbonyl sulfide.

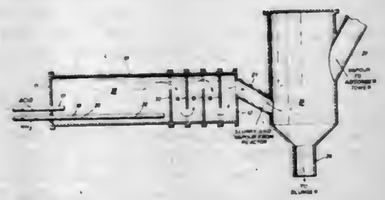
3,125,418
RADIOACTIVE DIAMOND COMPOSITION
Robert H. Wentorf, Jr., Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
No Drawing. Filed Mar. 20, 1961, Ser. No. 96,702
2 Claims. (Cl. 23—209.1)

1. A manufactured radioactive diamond material comprising a diamond having a radioactive adherent metallic surface of from about 0.5 to 5 microns in thickness.

3,125,419
METHOD OF DETERMINING THE CONCENTRATION OF PHOSPHORIC ACID IN A SOLUTION
Isidore Geld and Sidney Tudor, New York, N.Y., assignors to the United States of America as represented by the Secretary of the Navy
No Drawing. Filed July 29, 1960, Ser. No. 46,319
13 Claims. (Cl. 23—230)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A method of determining the concentration of phosphoric acid in a specimen solution that also contains a substantial and unknown amount of an oxidizing agent by comparison with color standards corresponding to different concentrations of water diluted phosphoric acid containing methyl purple color indicator, which comprises diluting with water a measured specimen example of such solution to a selected known dilution where any oxidizing agent in the solution is insignificant in its effect, incorporating in said diluted solution a measured known amount of methyl-purple color indicator, and visually comparing the color of the diluted specimen solution and added color indicator with color of solutions of known concentration of phosphoric acid with the same amount in each of said color indicator to enable one to compute the concentration of phosphoric acid in said specimen solution.

3,125,420
COMPACT REACTOR FOR PRODUCTION OF FERTILIZER SOLIDS
Benjamin Tyler Coon and Edward Gilbert Wiltshire, Rossland, British Columbia, Canada, assignors to The Consolidated Mining and Smelting Company of Canada Limited, Montreal, Quebec, Canada, a corporation of Canada
Filed Dec. 5, 1960, Ser. No. 73,637
3 Claims. (Cl. 23—259.1)

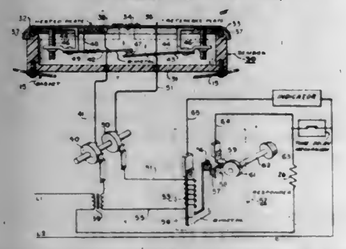


1. Apparatus for the production of chemical fertilizer solids which comprises an elongated reactor having a diameter less than its length and generally uniform in cross section, said reactor having an inlet end, an outlet end, an elongated, unobstructed reaction zone extending from said inlet end and constituting the major portion of the length of said reactor, a baffled discharge zone extending between said reaction zone and said outlet end, said baffled discharge zone comprising alternately spaced, upwardly and downwardly extending baffles with spaces between the free ends thereof and the opposing walls of the reactor, conduit means for separately feeding fluid reactants into said reactor at the inlet end thereof, and conduit means for discharging reaction mixture from the outlet end, whereby agitation of the mixture in said reactor is effected by steam generated by the reaction taking place therein.

3,125,421
CERIUM MONOSULFIDE ARTICLES
Donald H. Hollingsworth, Jr., Bay Village, Ohio, Adger S. Johnson, Englewood, N.J., and Lawrence M. Litz, Lakewood, and Rudolph W. Oliver, Cleveland, Ohio, assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed June 1, 1960, Ser. No. 33,106
11 Claims. (Cl. 29—183.5)

11. An article comprising cerium monosulfide which is clad with an oxidation resistant metal selected from the group consisting of nickel, chromium, iron, cobalt, gold, zirconium, platinum, and alloys thereof so as to protect said cerium monosulfide from oxidation.

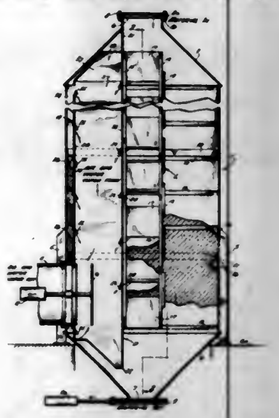
3,125,422
COMPARATOR CONTROL FOR A TUMBLING DRIER
Hans T. Thunander, Mansfield, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 13, 1959, Ser. No. 846,098
7 Claims. (Cl. 34—45)



1. In mechanism for measuring a condition of a material tumbling in a container, which condition affects the heat absorpion characteristic of the material, two bodies adapted to be contacted and cooled by the tumbling material, an electrical heater for one of the bodies, means providing an electrical circuit for the heater, means for controlling said electrical circuit including a main thermally responsive member associated with the body having the heater and being responsive to the temperature thereof, a reference thermally responsive member associated with the other body and being responsive to the temperature thereof, cooperating contacts carried by said thermally responsive members for opening and closing said electrical circuit, said thermally responsive members normally maintaining the contacts in circuit-closing engagement and separating said contacts only when the temperature difference of the two bodies sensed thereby exceeds a predetermined value, a responding thermally responsive member, means operable by said responding thermally responsive member, and an electrical heater in the circuit for heating said responding thermally responsive member when said circuit is closed.

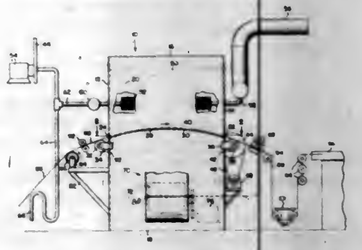
3,125,423
GRANULAR MATERIAL TANK HAVING AN INTERNAL VAPOR EXTRACTING MEANS
John S. Shapland and Erwin J. Goldfarb, Champaign, Ill., assignors to Koehring Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Aug. 28, 1961, Ser. No. 134,270
4 Claims. (Cl. 34—92)

3. Apparatus for conditioning granular material comprising, a tank adapted to contain a quantity of granular material and having an inlet opening adjacent its upper end and an outlet opening adjacent its lower end for gravitation of said material therethrough, said tank being sealable so as to support a vacuum therein, a stone ladder located generally centrally in said tank and including a series of vertically spaced steps over which said material passes, one side of said ladder being formed by a wall having openings therethrough and directly under at least some of said steps whereby said steps act as a shield for their respective openings to prevent material from passing therethrough, a series of vertically spaced and horizontally disposed rings secured around the inside of said tank and extending inwardly therefrom, a generally ver-



tically disposed exhaust duct located in said tank and having one of its sides formed by said wall, said duct having another wall adjacent said rings, said another wall having openings under said rings whereby said openings place the duct in vapor receiving communication with said tank, and an exhaust conduit extending outside of said tank and in communication with said duct for extracting vapor from said duct and tank by vacuum.

3,125,424
APPARATUS FOR DRYING FABRICS
Henry E. Peck, Fairport, N.Y., assignor to Tricot Equipment Company, Incorporated, Fairport, N.Y., a corporation of New York
Filed July 27, 1960, Ser. No. 45,582
5 Claims. (Cl. 34—155)



1. Apparatus for drying fabric comprising an enclosed heating chamber having an entry port at one end and an exit port at its opposite end, a perforate support of low resistance to passage of air therethrough, a bed of slippery porous material resting on said support and extending transversely of said chamber, said material offering a higher resistance to air flow therethrough than the fabric, a porous endless conveyor for conveying the fabric through said chamber from its entry port through its exit port, said conveyor carrying the fabric on the upper face of its upper reach and being mounted to pass through said ports and having the under face of its upper reach slidable on said bed, said conveyor being more porous than said bed, means for moving said conveyor, and means for drawing

air through the fabric, said upper reach of said conveyor, and said bed successively as said conveyor carries the fabric through said chamber, said bed having its marginal edges tightly engaging the walls of said chamber so that air moving from above said bed to below said bed must pass through said bed.

3,125,425
SEPARATION OF GASEOUS FLUORIDES
Adah B. Richmond, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Feb. 23, 1961, Ser. No. 90,913
10 Claims. (Cl. 55—22)

1. A composition useful for gas separations comprising activated silica admixed with from 5 to 30% of a perhalogenated polymer, liquid at 0° C. and having a molecular weight between 200 and 1500 and a boiling point of between 121° C. and 260° C. at 0.5 mm. of Hg pressure.

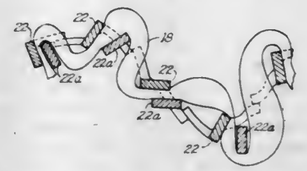
3,125,426
COLLECTING ELECTRODES AND ELECTRODE SYSTEM FOR ELECTRICAL PRECIPITATORS
Pierre Herber, Los Angeles, and Wayne T. Sproull, Glendale, Calif., assignors, by mesne assignments, to Joy Manufacturing Company, a corporation of Pennsylvania
Continuation of application Ser. No. 586,471, May 22, 1956. This application July 21, 1961, Ser. No. 126,817
5 Claims. (Cl. 55—130)



1. An electrode system for an electrical precipitator comprising: a pair of laterally spaced similar collecting electrodes, each collecting electrode including a central flat, imperforate sheet of metal, and a plurality of vertically extending angles attached to opposite faces of the metal sheet with one flange projecting into the gas stream, the angles at each face of the sheet being spaced apart horizontally in the direction of gas flow and having the terminal portions of each flange of each angle rolled into an arcuate shape of substantially uniform radius extending over an arc of more than about 180°; the projecting flanges on opposing faces of the two collecting electrodes projecting toward each other and reducing the width of the available gas passage between electrodes; and a pair of spaced discharge electrodes located midway between the two collecting electrodes and within said horizontal distance between two successive reinforcing elements on a collecting electrode.

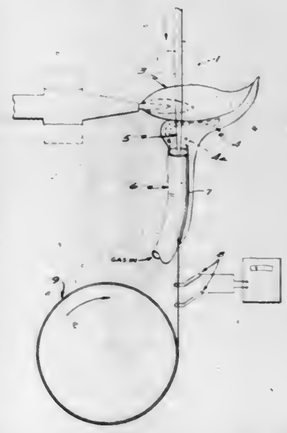
3,125,427
FILTER
Glenn O. Smith and Roger O. Smith, Moline, Ill., assignors to Smith Filter Corporation, Moline, Ill., a corporation of Illinois
Filed Aug. 3, 1961, Ser. No. 129,058
1 Claim. (Cl. 55—500)

A filter including two sheets of expanded metal, each sheet having a plurality of bars and strands interconnecting corner portions of said bars, the bars of each sheet extending in lines transverse of the sheet, said strands being dimensionally smaller than said bars and extending generally diagonally relative to said bars, a layer of porous flexible compressible filamentary plastic disposed between said sheets of expanded metal, said sheets being corrugated generally parallel to said transverse lines to provide ridges and valleys in nesting relation with the layer of filamentary plastic compressed therebetween, certain of the strands and bars of one metal sheet being interen-



gaged with certain of the strands and bars of the adjacent sheet, with the filamentary layer compressed in and around the interengaging parts.

3,125,428
METHOD FOR COATING SILICA RODS
Romwald W. Maczka, 6744 Oakwood Drive, Independence, Ohio
Filed Apr. 26, 1961, Ser. No. 105,768
2 Claims. (Cl. 65—3)

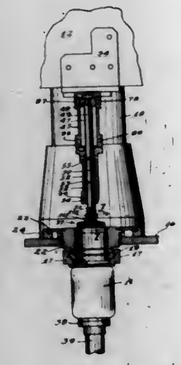


1. A process of pyrolytic deposition on silica consisting of the steps of continuously feeding a silica rod of preselected diameter at a specific rate into an adjustable heating flame, heating the rod until the heated section becomes viscous, drawing out a fiber from the viscous section, passing the drawn fiber immediately upon exit from the sharply defined heating zone coaxially and oppositionally through a moving gaseous hydrocarbon environment formed from gases from the group consisting of acetylene, propane, and methane and retaining the drawn fiber in the gaseous environment until its temperature has fallen below that degree where the coating would be reduced by contact with air.

3,125,429
METHOD AND APPARATUS FOR CONTROLLING MOLDED SHAPE OF NECK FINISH OF CONTAINERS
Albert G. Lauck and William L. Spix, Toledo, and Ambrose L. Walter, North Kenova, Ohio, assignors to Owens-Illinois Glass Company, a corporation of Ohio
Filed Sept. 11, 1958, Ser. No. 760,523
8 Claims. (Cl. 65—84)

6. In a glassware forming machine, a turret rotatably mounted, a plurality of partible neck molds continu-

ously carried by said turret, means for intermittently rotating said turret to bring each of said neck molds successively to a plurality of stations, a blow mold at a final molding station and coacting with said neck molds while at said final molding station, means at said final molding station to finish blow a parison in said blow mold, said neck molds thereafter moving to successively suspend the blown ware over a take-out device at a take-out station remote from said molding station, the improvement in said machine comprising neck cooling means including a radially directed, annular neck cooling nozzle device mounted over the turret at said take-out station and operable for movement to an operating position within the axial extent of the neck mold and inside of the neck finish of the blown ware while supported only by the neck molds at said take-out station, said cooling nozzle device being adapted in its axial operating position to direct a coolant radially substantially in a plane normal to the axis of the neck, each of said neck molds being carried first to said final blowing station and, subsequently to said take-out station, said neck molds supporting the glassware in cooperative relation with said neck cooling device at said take-out station and thereafter being opened at said take-out station to release the finished glassware.

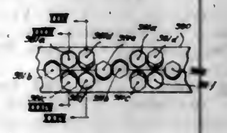


8. A method for controlling out-of-round distortion of the neck finish of machine molded glassware wherein said ware is blow molded and formed with a neck finish that is molded and held for transfer in a partible neck mold that is closed on a plane disposed axially of the ware, comprising bringing the blow molded glassware in succession and supported only by its said neck finish confined in said closed neck mold of the machine in which said neck finish is formed to a take-out station of the machine that is remote from the blow mold thereof whereat the interior bore of the neck finish is accessible through its neck opening, applying a coolant to the interior surface of the neck finish of the blown article while at said take-out station by a nozzle means that applies an annular, radially outwardly directed band of the coolant directed radially substantially in a plane normal to the axis of the neck, said coolant being applied against the interior surface of the neck finish and in a vertically defined, axially extending surface area thereof that is within the axial extent of the neck mold and held thereby and the greatest amount of said coolant application is intermediate the neck mold seams which are along the axial plane for closing the said partible neck mold, and releasing the article from the neck mold for take-out and transfer from the machine by opening said partible neck mold.

3,125,430
GLASS TEMPERING METHOD AND APPARATUS

Ronald E. Richardson, Oshawa, Ontario, Canada, assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa.

Filed Apr. 8, 1959, Ser. No. 804,943
Claims priority, application Canada Oct. 8, 1958
20 Claims. (Cl. 65—114)



1. Glass tempering apparatus comprising a blowing frame and means for supporting a glass sheet adjacent said frame, said frame comprising a plurality of parallel, spaced air supply pipes, each pipe having a plurality of groups of passageways extending through a wall thereof, each group comprising a plurality of mutually discrete passageways, the passageways of each group being mutually divergent from one another, the arrangement of said passageways on said pipes and the spacing between said pipes being so chosen in relation to the position occupied by the glass sheet that the points of intersection of the centre lines of said passageways with the adjacent surface of said glass sheet define a pattern on said surface in which every pair of adjacent said points forms with two further said points a pair of equilateral triangles.

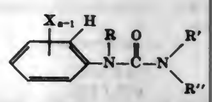
5. A method of tempering a glass sheet comprising causing groups of mutually divergent air jets to impinge on both surfaces of said sheet in patterns substantially uniformly distributed over said surfaces while providing spaces of increasing cross-section between said groups of air jets with increasing distance from the associated said surface to promote the removal of heated air therefrom.

3,125,431
COMPLEX OF PHENYLUREAS AND CHLOROBENZOIC ACIDS AND USE AS HERBICIDES

Richard S. Kittila, Hockessin, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 31, 1959, Ser. No. 863,121
4 Claims. (Cl. 71—2.6)

1. A 1:1 mole ratio chemical complex of a polychlorobenzoic acid selected from the group consisting of 2,3,6-trichlorobenzoic acid, 2,3,5-trichlorobenzoic acid, and 2,3,5,6-tetrachlorobenzoic acid with a substituted urea represented by the formula



wherein X is selected from the group consisting of hydrogen, halogen and alkyl groups of 1 through 4 carbon atoms; *n* is a whole positive integer of less than 5; R is selected from the group consisting of hydrogen and methyl; R′ is selected from the group consisting of methyl and ethyl; and R″ is selected from the group consisting of hydrogen and alkyl groups of 1 through 4 carbon atoms.

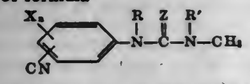
3. The method of controlling the growth of undesired vegetation comprising applying thereto, in an amount sufficient to control said growth, a herbicidally effective amount of a complex of claim 1.

3,125,432
HERBICIDAL METHOD EMPLOYING CYANOPHENYL METHYL UREAS

Charles W. Todd, Thornbury Township, Delaware County, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed July 18, 1960, Ser. No. 43,330
1 Claim. (Cl. 71—2.6)

The method comprising applying to an area to be protected from undesired vegetation, in an amount sufficient to exert herbicidal action, a cyanophenyl methyl substituted urea of formula



where X is chlorine, *n* is 0–2 inclusive; Z is selected from the group consisting of oxygen and sulfur; R is selected from the group consisting of hydrogen and methyl; and R′ is selected from the group consisting of hydrogen and alkyl of 1–4 carbon atoms inclusive.

3,125,433
METHOD OF INCREASING FRUIT SET

Gustave K. Kohn, Berkeley, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed Mar. 23, 1961, Ser. No. 97,735
4 Claims. (Cl. 71—2.6)

1. A method of increasing fruit-set in tomato plants, which comprises treating said plants with a growth-stimulating amount of a halosubstituted m-toluamide having from 1 to 3 halogens on the annular members of the ring, said halogens being selected from the class consisting of chlorine and bromine.

3,125,434
CONDITIONED AMMONIA DERIVATIVE COMPOSITION

Homer A. Smith, Berkeley Heights, and Edgar W. Sawyer, Jr., Metuchen, N.J., assignors to Minerals & Chemicals Philipp Corporation, a corporation of Maryland

No Drawing. Filed Apr. 11, 1958, Ser. No. 727,769
15 Claims. (Cl. 71—28)

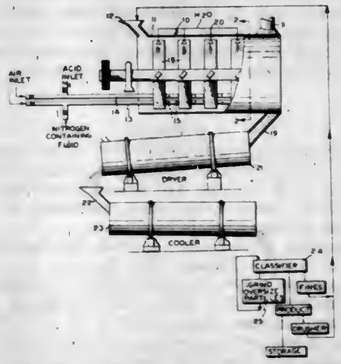
1. A composition of matter comprising discrete particles of a solid hygroscopic mineral ammonium salt which tends to decompose with evolution of ammonia in the presence of a sorptive siliceous mineral, individual particles of said ammonium salt being coated with from about 0.5 to 3 percent by weight, based on the weight of said ammonium salt, of a finely divided sorptive siliceous mineral having intimately associated with the surface thereof from 1 to 10 percent by weight, based on the weight of the siliceous mineral, of a mineral acidic substance capable of reacting with ammonia to form a stable nonvolatile compound therewith, said siliceous mineral being further characterized by having been treated with said mineral acidic substance prior to the coating of said ammonium salt therewith.

3,125,435
FERTILIZER MANUFACTURE

Norval K. Alfrey and Grover L. Bridger, Baltimore, Md., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

Filed July 29, 1960, Ser. No. 46,152
2 Claims. (Cl. 71—64)

1. A continuous process for producing substantially dry granular fertilizer grade ammonium salts by reacting ammonia with at least one strong mineral acid selected from the group consisting of sulfuric acid and phosphoric acid which process comprises continuously charging a mass of undersized finely divided solid particulate ammonium salt of said mineral acid into one end of an elongated mixing zone to form a bed of solids, continuously stirring said mass with a cutting and mixing action and simultaneously advancing said mass swiftly to the discharge end of the bed, continuously passing ammonia and said mineral acid into the lower portion of said bed of solids along a substantial portion of its length, said ammonia and said mineral acid being passed at a mole ratio corresponding stoichiometrically to the composition of the ammonium salt charged, said mineral acid thereby coating the particles of said ammonium salt constituting said bed, said ammonia immediately reacting with said

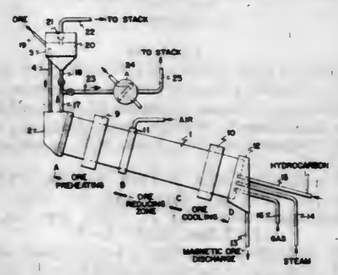


mineral acid coating to form a coating of additional ammonium salt around said particles, said coatings having substantially the same composition as said particles, thereby yielding larger granules of the said ammonium salt with the simultaneous evaporation of water, maintaining said bed over said incoming ammonia and incoming mineral acid to serve as a seal for the said reaction, discharging the thus evaporated water from above the mixing zone, continuously withdrawing the substantially dry particulate material from said zone, classifying said material into product and undersized material, and returning the undersized material to the said end of said zone for another pass therethrough.

3,125,436
IRON ORE MAGNETIC ROAST PROCESS

Harvey E. W. Burnside, Locust, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed Jan. 11, 1960, Ser. No. 1,730
8 Claims. (Cl. 75—1)



1. In a process for reducing ferric oxide in low grade iron ore to produce magnetic ore, the improvement which comprises preheating particles of the low grade ore in a preheating zone at a temperature of about 300–1100° F. by contact with higher temperature steam-diluted combustion gases to a temperature at which Fe_2O_3 will be reduced by H_2 to Fe_3O_4 in a subsequent reducing zone,

contacting the thus preheated ore in a reducing zone at a temperature of about 750–1500° F. with a hot gaseous mixture containing hydrogen as a predominant reducing reactant diluted with more than about 50 volume percent of steam, cooling resulting reduced ore having Fe_2O_3 converted to Fe_3O_4 by contact with a cooler gas mixture in a cooling zone at a temperature of below about 1100° F. where CO and hydrocarbon in said gas mixture are reacted with steam to form CO_2 and H_2 mixed with more than about 50 volume percent of steam, passing reducing gas at least in part produced in said cooling zone mixed with steam from said cooling zone to said reducing zone, passing steam-diluted partly oxidized reducing gas from said reducing zone to a combustion zone where oxygen-containing gas is added for combustion to form said higher temperature steam-diluted combustion gases contacted with the low grade ore in the preheating zone.

3,125,437

METHOD OF BRIQUETTING IRON ORES

James E. Moore, Mount Lebanon Township, Allegheny County, and Donald H. Marlin, Pittsburgh, Pa., assignors to Dravo Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed Apr. 10, 1962, Ser. No. 186,358
13 Claims. (Cl. 75—3)

1. The process for the beneficiation of hematite ore fines comprising heating and partially reducing said ore fines at temperatures below 1500° F. in the presence of a suitable reductant to provide synthetic magnetite fines, and pressing said fines with contacting partially reduced interfaces into briquettes at pressures between 10,000 and 80,000 p.s.i. and temperatures between 700° and 1300° F.

3,125,438

METHOD AND COMPOSITION FOR MAKING CARBONATE-BONDED AGGLOMERATES

Richard L. Franklin, Glassport, James R. Guseman, Hempfield Township, Westmoreland County, and Eugene A. Pelczarski, West Deer Township, Allegheny County, Pa., assignors to United States Steel Corporation, a corporation of New Jersey

No Drawing. Filed Nov. 8, 1962, Ser. No. 236,406
4 Claims. (Cl. 75—3)

1. A method of making carbonate-bonded ore agglomerates comprising mixing ore fines with about 3 to 7 percent by weight of an alkaline-earth metal sulfide, moistening the mixture, forming the moistened mixture into green agglomerates, adjusting the moisture content of the green agglomerates to a range of about 2 to 10 percent by weight, and treating the green agglomerates with CO_2 for a period of at least 15 minutes.

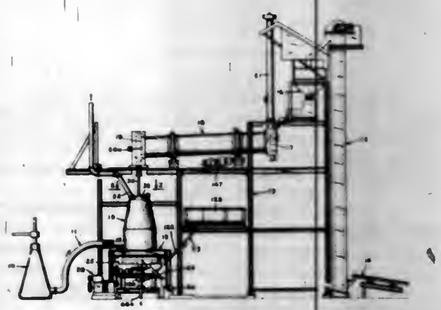
3,125,439

METHOD FOR PRODUCING SPONGE IRON

Charles R. Kuzell, Phoenix, Morris G. Fowler and John H. Davis, Jr., Douglas, Leonard Klein, Scottsdale, and Irvine MacDougall, Warren, Ariz., assignors to Phelps Dodge Corporation, New York, N.Y., a corporation of New York

Original application Mar. 8, 1960, Ser. No. 13,592, now Patent No. 3,051,467, dated Aug. 28, 1962. Divided and this application May 21, 1962, Ser. No. 196,322
7 Claims. (Cl. 75—7)

1. The method of treating a comminuted charge of solidified particles containing a predominant amount of iron-oxides and a minor amount of iron silicate and amenable to gaseous reduction to convert said charge to sponge iron form which comprises providing a charge of said particles in which sizes less than ¼" and greater than 30 mesh predominate, passing the charge in a continuous stream through a heated kiln in which a heated oxidizing atmosphere is maintained at a temperature within the range of 2,000° to 2,050° F. at which the silicate in said particles is softened sufficiently to cause consolidation of fines present in said charge into larger granules and thereby to convert lower oxides of iron present in said particles to hematite form, then passing said heat treated charge of particles in a continuous stream into the upper end of a vertically disposed reducing chamber having a rotating bottom end closure and causing said charge to form a columnar bed of particles resting on said rotating bottom closure and in which said particles are moving downwardly, continuously removing particles from the bottom of said columnar bed adjacent said bottom closure and continuously passing said stream of charge particles from said kiln into said chamber on top of said columnar bed at a rate which replenishes particles removed from the bottom of said bed to maintain said chamber full of particles and simultaneously while said particles are moving downwardly in said columnar bed passing a stream of



preheated reducing gases generated and heated outside of said reducing chamber into the lower end portion of said downwardly moving bed at a place above said bottom closure and causing said reducing gases to pass upwardly through the intertices between said particles in said downwardly moving columnar bed, the amount of gases introduced into said column being adjusted to maintain said particles in a state of free mobility above the place of introduction of said reducing gases thereby preventing blocking of the continuous uniform flow of said gases upwardly through said columnar bed in contact with said particles as the particles move downwardly through said reducing chamber and adjusting the temperature of said preheated gas prior to introduction into said chamber to maintain a temperature in said reducing chamber above 1450° F. and below 1800° F., thereby reducing said particles to sponge iron form before they are removed from the bottom of said columnar bed.

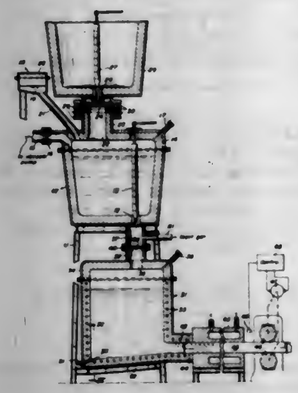
3,125,440

METHOD AND APPARATUS FOR TEEMING MOLTEN METAL

John N. Hornak, Munhall, and Max W. Lightner, Mount Lebanon Township, Allegheny County, Pa., assignors to United States Steel Corporation, a corporation of New Jersey

Filed Dec. 27, 1960, Ser. No. 78,551
2 Claims. (Cl. 75—49)

1. A method of degassing steel in a closed vacuum chamber having a top inlet and a stoppered bottom outlet, which comprises placing alloy additions in an enclosure communicating with said chamber, evacuating the chamber, placing on the chamber a ladle having a bottom outlet and containing molten steel of a higher carbon content than that desired in the final product, sealing the ladle outlet to the chamber inlet, teeming steel from said ladle into said chamber, holding the steel in the chamber for the time necessary to effect carbon deoxidation of the steel, then releasing said alloy additions from said enclosure into the steel in said chamber while maintaining a



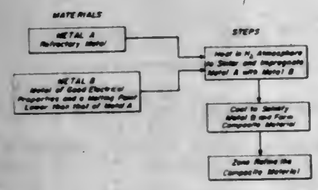
high vacuum therein, cracking the stopper in the chamber outlet, draining steel into a pouring vessel through a pipe connecting said chamber to said vessel and admitting inert gas under pressure to said pipe.

3,125,441

ELECTRODES FOR VACUUM CIRCUIT INTERRUPTERS AND METHOD OF MAKING SAME

James M. Lafferty, 1202 Hedgewood Lane, Schenectady, N.Y.; James D. Cobine, R.D. 1, Vischer Ferry, N.Y.; and Emmett E. Burger, 609 Plymouth Ave., Schenectady, N.Y.

Filed Apr. 11, 1960, Ser. No. 21,337
4 Claims. (Cl. 75—65)



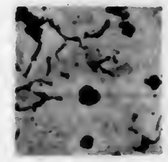
1. The method of producing a high purity composite electrode metal which evolves substantially no gases when subjected to arcing conditions comprising: providing a matrix of sintered refractory metal, said matrix having substantially continuous openings therethrough; heating said matrix in a reducing atmosphere and simultaneously impregnating said matrix with a metal having good electrical conducting characteristics, a melting point lower than that of said refractory metal, a vapor pressure higher than the vapor pressure of said refractory metal and capable of being absorbed into the openings of said matrix; cooling the composite body so formed to solidify the impregnating metal; and subjecting said composite body to a zone refining process wherein a narrow molten zone of the impregnating metal traverses said body to remove sorbed and chemically bound gases and gas forming compounds which cause the evolution of gas when said composite electrode metal is subjected to arcing conditions.

3,125,442

DUCTILE IRON CASTING

Adolph P. Alexander, Memphis, Tenn., assignor to International Harvester Company, a corporation of New Jersey

Filed Nov. 30, 1956, Ser. No. 625,298
1 Claim. (Cl. 75—123)



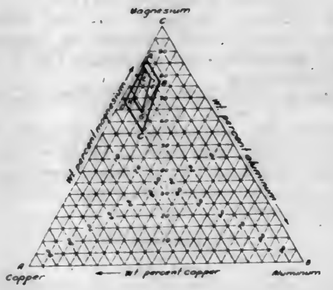
As an article of manufacture a ductile iron casting containing uncombined carbon substantially in spherulitic nodular form dispersed in the matrix thereof, said iron casting having no sulfur in excess of 0.03 percent by weight and containing from 0.02 percent to 0.04 percent by weight of elemental lanthanum as a nodular carbon impelling agent, said iron casting being re-meltable and re-cast while retaining said carbon in spherulitic nodular form without further addition of said nodular carbon impelling agent.

3,125,443

MAGNESIUM BASE CASTING ALLOY

George S. Foerster, Midland, and Francis L. Burkett, Breckenridge, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Apr. 3, 1963, Ser. No. 270,245
4 Claims. (Cl. 75—168)



1. A magnesium base alloy consisting essentially of aluminum and copper, the balance being magnesium, said alloy having a composition by weight within the composition range represented by the area ABCD, bounded by lines AB, BC, CD, and DA, of the graph in the appended drawing.

3,125,444

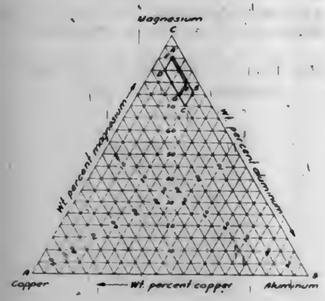
MAGNESIUM BASE CASTING ALLOY

George S. Foerster, Midland, and Francis L. Burkett, Breckenridge, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Apr. 3, 1963, Ser. No. 270,246
6 Claims. (Cl. 75—168)

1. A magnesium base alloy consisting essentially of aluminum and copper and magnesium, said alloy having

a composition by weight within the composition range



represented by the area ABCD of the graph in the appended drawing bounded by lines AB, BC, CD, and DA.

3,125,445
NIOBIUM BASE ALLOY

Neil M. Lottridge, Jr., Warren, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

No Drawing. Filed May 26, 1959, Ser. No. 816,109
8 Claims. (Cl. 75—174)

1. A high temperature niobium base alloy having an outstanding combination of fabricability, hot ductility, oxidation resistance and stress-rupture life of more than 100 hours under a load of 15,000 p.s.i. at a temperature of 2000° F., said alloy comprising about 9% to 11% molybdenum, 3% to 7% titanium, 5% to 10% aluminum, 0.5% to 2% zirconium, 5% to 10% hafnium and the balance substantially all niobium.

3,125,446
ZIRCONIUM BASE ALLOY

Richard E. Johnson, Pittsburgh, Pa., and William D. McMullen, Ames, Iowa, assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed Feb. 26, 1960, Ser. No. 11,120
1 Claim. (Cl. 75—177)

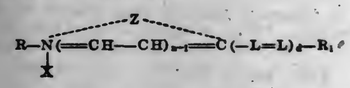
A zirconium base alloy comprising from 3% to 10% by weight aluminum, from 0.1% to 4% by weight molybdenum, from 0.05% to 1% by weight beryllium, up to 1% boron and the balance zirconium with incidental amounts of impurities.

3,125,447
SENSITIZED PHOTOCONDUCTIVE COMPOSITIONS COMPRISING ZINC OXIDE

Paul H. Stewart, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Nov. 25, 1960, Ser. No. 71,569
11 Claims. (Cl. 96—1)

1. A photoconductive composition comprising photoconductive zinc oxide, a high dielectric binder-insulator for said photoconductive zinc oxide, and adsorbed to the surface of said photoconductive zinc oxide a spectral sensitizing dye selected from those represented by the following general formula:

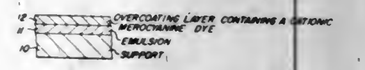


wherein R represents a member selected from the class consisting of an alkyl group, a hydroxyalkyl group, an alkoxyalkyl group, a carboxyalkyl group, a sulfoalkyl group, a carbalkoxyalkyl group, an acyloxyalkyl group and an aralkyl group, R_1 represents a member selected from the class consisting of an amino group and an aminoaryl group, L represents a methine group, X represents an acid anion, *n* and *d* each represent a positive integer of from 1 to 2, and Z represents the non-metallic atoms necessary to complete a heterocyclic nucleus containing from 5 to 6 atoms in the heterocyclic ring, provided said sensitizing dye contains at least one carboxyl radical attached to a carbon atom thereof.

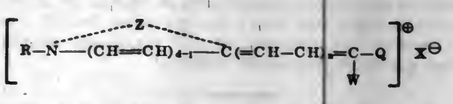
3,125,448
PHOTOGRAPHIC SILVER HALIDE EMULSIONS CONTAINING CATIONIC MEROCYANINE DYES

Donald W. Heseltine and Lewis L. Lincoln, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Mar. 10, 1960, Ser. No. 14,101
9 Claims. (Cl. 96—105)



1. A photographic element comprising a support having thereon at least one sensitive silver halide emulsion layer, at least one layer of said photographic element containing a dye having the formula:



wherein R is a lower alkyl group having from 1 to 6 carbon atoms, Z represents the non-metallic atoms needed to complete a heterocyclic nucleus containing from 5 to 6 atoms in the heterocyclic ring, *d* represents a positive integer of from 1 to 2, *n* represents a positive integer of from 1 to 3, Q represents a member selected from the class consisting of a pyridinium group and a quinolinium group such that the nitrogen atom in said Q group is attached to the terminal carbon atom in the conjugated chain, W represents a member selected from the class consisting of the cyano group, a benzoyl group, and a benzothiazolyl group, and X represents an acid anion.

3,125,449
AMINO-PHOSPHORYLCHLORIDE HARDENERS FOR GELATIN

Roy A. Jeffreys, Harrow, England, assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed July 25, 1962, Ser. No. 212,465
7 Claims. (Cl. 96—111)

1. A light sensitive gelatin-silver halide photographic emulsion containing a hardener selected from the group consisting of R_2NPOX_2 and $(R_2N)_2POX$, R being lower alkyl and X being halide.

3,125,450
PROCESSES FOR RECONSTITUTING MEAT

Beverly E. Williams, La Grange Park, Ill., assignor, by mesne assignments, to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

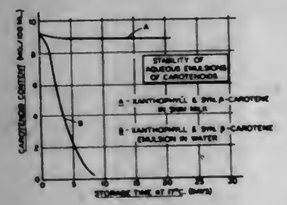
No Drawing. Filed Jan. 10, 1962, Ser. No. 165,297
5 Claims. (Cl. 99—107)

1. In a process for reconstituting meat and improving its cooked flavor the steps of stitch-pumping the major portions of an edible animal carcass after slaughter and before the completion of rigor mortis by multiple entry injection of water at approximately 50° F. between the outer layer of fat and fell and the adjacent lean meat at pressures of from 15 to 50 pounds per square inch with the injected water weighing approximately 1 to 3% by weight of the dressed weight of the meat whereby a hydrated barrier is established around the surface of the lean meat reducing evaporation of the natural meat juices and loss of volatile flavors and enhancing the flavor and juiciness of the meat after cooking.

3,125,451
CAROTENOID PIGMENT AND PROTEIN COMPLEX AND METHOD OF PRODUCING THE SAME

Winston H. Wingerd, Elgin, and Sidney Saperstein, Bartlett, Ill., assignors to The Borden Company, New York, N.Y., a corporation of New Jersey

Filed Oct. 6, 1960, Ser. No. 60,876
6 Claims. (Cl. 99—148)



1. In making a carotenoid composition of improved color retention, the process which comprises admixing 0.005–10 parts by weight of a carotenoid and 40–300 parts of an edible lipid solvent into an aqueous dispersion, at a temperature of at least about 160° F., of 100 parts of a protein that is selected from the group consisting of milk, soy and peanut proteins and that is soluble in water only at a pH of 5–9, homogenizing the resulting mixture, maintaining the mixture at all times at a pH within the range 5–9 and below the temperature of heat denaturing of the said protein until a complex of the carotenoid and the protein results and a substantial part of the carotenoid becomes unextractable from the protein by petroleum ether.

3,125,452
PROCESS FOR STABILIZING VEGETABLE JUICES

Federico Alejo Parodi, Montevideo, Uruguay, assignor to Stabil Internacional S.A., Montevideo, Uruguay, a corporation of Uruguay

No Drawing. Filed Nov. 25, 1959, Ser. No. 855,261
9 Claims. (Cl. 99—182)

1. A process for stabilizing a vegetable juice comprising the steps of charging the juice into its ultimate container, the temperature of the juice being below the boiling point of the juice at atmospheric pressure, deaerating the juice by applying vacuum to said container to boil the contents thereof while maintaining the temperature of the contents below said boiling point at atmospheric pressure, hermetically sealing said container while maintaining the contents under reduced pressure to prevent the entrance of air therein, and heating the container and its contents, while agitating the contents, at a temperature below said boiling point at atmospheric pressure for a period of time sufficient to sterilize the contents of said container.

3,125,453
WAX POLISH CONTAINING HEXAMETHYLENE TETRAMINE

Milton R. Simonds, Bainbridge, N.Y., assignor to The Borden Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed June 25, 1962, Ser. No. 205,122
9 Claims. (Cl. 106—10)

1. In a polishing composition comprising an emulsion of a polish wax and an emulsifying agent in a volatile liquid medium, the improvement comprising hexamethylenetetramine admixed as antislip agent and dispersed in said emulsion in the amount of about 10–80 parts by weight of the hexamethylene tetramine for 100 parts of the wax, the wax being a non-solvent for hexamethylenetetramine, being in proportion above half the weight of non-volatile material in said composition, and being selected from the group consisting of carnauba, beeswax blended with ozokerite, ceresin, paraffin, candellila, montan, curicuri, shellac, sugar cane, microcrystalline, and synthetic paraffin wax of melting point at least about 102° C. and mixtures of such waxes.

3,125,454
INSULATING COMPOSITIONS

James L. Dolph and Albert L. Renkey, both of Pittsburgh, Pa., assignors to Harbison-Walker Refractories Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Nov. 3, 1961, Ser. No. 149,938
5 Claims. (Cl. 106—64)

1. An insulating composition particularly resistant to attack by molten non-ferrous metals consisting essentially, by weight, of about 15 to 50 percent of calcium aluminate cement, about 20 to 70 percent of blast furnace slag, and about 2 to 30 percent of asbestos.

3,125,455
COATING COMPOSITIONS

Glenn H. Perkins, West Peru, Maine, assignor to Oxford Paper Company, Rumford, Maine, a corporation of Maine

No Drawing. Filed Sept. 12, 1960, Ser. No. 55,145
11 Claims. (Cl. 106—154)

2. An aqueous coating composition comprising a pigment, a protein, and solubilized 4,4-bis(4'-hydroxyphenyl)pentanoic acid.

4. The composition of claim 2 in which the protein is soya protein.

3,125,456
RESINOUS ADHESIVE COMPOSITION

Richard A. Smith, Cornwall on the Hudson, and Joseph R. Infantino, Chappaqua, N.Y., assignors to American Machine & Foundry Company, a corporation of New Jersey

Filed Apr. 5, 1961, Ser. No. 100,971
6 Claims. (Cl. 106—189)

1. A plastic adhesive composition of uniform consistency which is curable to a smooth, hard, non-brittle resinous state consisting essentially of from about 10% to about 35% by weight based on the total weight of the composition of ethyl cellulose having a viscosity of from about 50 to 100 centipoises; from about 0.5% to about 14%, based on the total weight of the composition, of nitrocellulose; from about 0.01% to about 10.5% by weight of a plasticizer for the ethyl cellulose based on the total weight of the composition; and an organic solvent which is compatible with ethyl cellulose in amounts to permit said composition to flow just sufficient to produce a substantially smooth surface before curing to a rigid state.

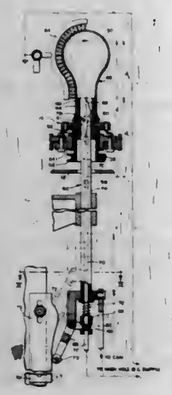
3,125,457
ELECTROSTATIC COATING METHOD AND APPARATUS

George Meister, Newark, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Dec. 5, 1961, Ser. No. 157,219
6 Claims. (Cl. 117—17)

1. The method of increasing the adherence of electrostatically deposited finely divided particles to the interior surface of an open-necked lamp bulb, which method comprises: heating the particle-coated bulb to render

same substantially uniformly electrically conductive; applying for a predetermined period between the bulb surface and a path within said bulb, spaced from said particle coating, and extending from a location bounded by the neck portion of said bulb to a location well within



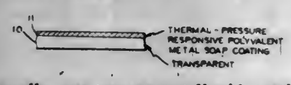
said bulb, a traveling electrostatic field of sufficient intensity to compact said coated particles and improve their adherence to said bulb; and maintaining at a substantially constant intensity the electrostatic field applied between the path within said bulb and the closest surface portion of said bulb.

3,125,458

PRESSURE AND HEAT SENSITIVE COATING COMPOSITIONS AND RECORDING BLANKS COATED THEREWITH

Harold R. Dalton, Rydal Road, Jenkintown, Pa.

Filed May 20, 1960, Ser. No. 30,616
17 Claims. (Cl. 117—36.7)



1. A normally non-transparent liquid coating material which when dried on a backing support changes its light transmission properties in response to heat or pressure at localized areas, comprising a spreadable and homogeneous dispersion as distinguished from an emulsion of discrete non-transparent particles of a polyvalent metal soap of a fatty acid having at least six carbon atoms, wherein the dispersion vehicle includes a resin binder of a cellulose derivative dissolved in a volatile resin solvent which dispersion also includes water, the soap particles being insoluble in said solvent and constituting from fifteen percent to eighty percent by weight of the solid constituents of the dispersion, amount of water being slightly less than otherwise would precipitate the resin from its solution.

13. A recording blank comprising a backing of transparent material having deposited thereon a dried coating according to claim 1.

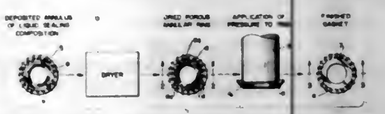
3,125,459

METHOD OF PRODUCING ELASTOMERIC POLYMER GASKETS FOR CONTAINER CLOSURES

Allen B. Foye, West Bridgewater, Mass., assignor to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut

Filed May 9, 1962, Ser. No. 193,622
7 Claims. (Cl. 117—43)

1. A method of making a gasket for a container closure which includes the essential steps of applying to the closure an annulus of a fluid comprising a water dispersion of an elastomeric polymer, heating said annulus to a relatively high temperature to drive off the water in not more than 10 minutes, leaving behind on the closure a ring of elastomeric polymer containing a multiplicity of intercon-



nected cells and having an open, porous surface, and thereafter compressing said polymer ring to collapse the cells and form an essentially solid, coherent gasket of the desired configuration, the step of compressing the gasket being carried out prior to the application of the closure to a container.

3,125,460

PHOTOGRAPHIC CORNERS

Kaye L. Rose, 8823 Lanier Drive, Silver Spring, Md.

Filed Mar. 13, 1961, Ser. No. 95,413
1 Claim. (Cl. 117—44)



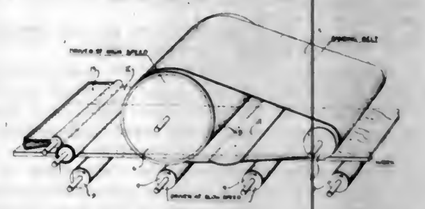
An indefinite length of transparent material having a tacky material applied to predetermined regions of one side of said length of material, equally spaced triangular regions of said one side of said length of material being non-tacky, said regions extending to at least one longitudinally extending edge of said length of material.

3,125,461

METHOD OF PREPARING WOOD AND PARTICLE BOARD SURFACES FOR FINISHING

Gilbert F. Hoffmann, Mukwonago, Wis., assignor to Sand-In Corporation, Milwaukee, Wis., a corporation of Wisconsin

Filed Feb. 27, 1963, Ser. No. 261,540
13 Claims. (Cl. 117—65.2)



1. The method of preparing a porous wood and the like surface for finishing, which comprises:

(A) wetting the surface with a liquid composition which comprises a solution of a resinous material and a volatile liquid which volatilizes at the temperature reached in the practice of the method and in which said resinous material is insoluble, the resinous material being infusible at the temperatures reached in the practice of the method and being incapable of forming a film until its solvent and said volatile liquid are voltailized; and

(B) while the surface is wet with said liquid composition subjecting it to a combined abrading and pore filling operation which comprises

(1) abrading said wet surface to thereby abrade small particles from the surface,

(2) commingling and combining the abraded particles with the resinous material, and

(3) pressing and compacting the resulting mixture into the surface pores.

8. The method of preparing highly porous wood and the like surfaces for finishing, which comprises:

(A) wetting the surface with a composition comprising a highly polymerized synthetic resin polymerizate dispersed in a liquid in which said resin is insoluble, said resin being infusible and incapable of forming a film at the temperature reached in the pratcice of the method; and

(B) while said surface is thus wetted, subjecting it to a combined abrading and pore filling operation which comprises

(1) abrading the thus wetted surface to thereby abrade small particles from the surface,

(2) commingling and combining the abraded particles with the dispersed polymerizate, and

(3) pressing and compacting the resulting mixture into the surface pores.

3,125,462

TEXTILE FABRICS TREATED WITH ETHYLENE-PROPYLENE COPOLYMERS

Michael R. Rachinsky, Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Apr. 10, 1962, Ser. No. 186,324
9 Claims. (Cl. 117—139.5)

6. As an article of manufacture a nonwoven textile fabric having uniformly distributed therethrough from about 10 to about 70% by weight of an ethylene-propylene copolymer containing from about 20 to about 45 mole percent propylene and selected from the group consisting of ethylene-propylene copolymers and ethylene-propylene copolymers modified by reaction with a polar compound so as to attach polar groups to said copolymer.

7. A process of preparing a treated textile fabric having uniformly distributed therethrough an ethylene-propylene copolymer comprising the following steps: (*a*) treating said textile fabric with a polymer latex containing a major polymeric amount of at least one ethylene-propylene copolymer containing from about 20 to about 45 mole percent propylene and selected from the group consisting of ethylene-propylene copolymers and ethylene-propylene copolymers modified by reaction with a polar compound so as to attach polar groups to said copolymer and (*b*) heating the latex treated fabric to a temperature sufficient to cause the copolymer to flow but below the temperature at which fibers of the fabric fuse and deform.

3,125,463

AUTOMATIC REELING MACHINE FOR MILLED RUBBER STOCK STRIP

Harry J. McCullough, Van Wert, Ohio, assignor to Federal-Mogul-Bower Bearings, Inc., Detroit, Mich., a corporation of Michigan

Filed Dec. 26, 1961, Ser. No. 161,945
10 Claims. (Cl. 118—2)

1. A reeling device for a hot rubber strip, including in combination:

conveying means for said strip,

control means having sensing means for detecting the presence and absence of said strip at a predetermined point on said conveying means,

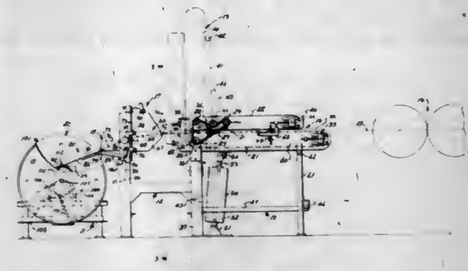
means actuated by said control means for spraying said strip with material to prevent it from sticking to itself later,

a reel having end-receiving means,

means for guiding the sprayed said strip onto said reel with the end of the strip going to said end-receiving means,

means to drive said reel, and

time-delay means actuated by said control means upon said strip passing said point for starting said means to drive said reel when said strip end reaches said end-receiving means



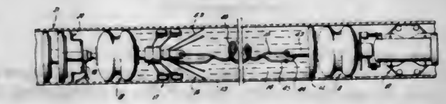
said control means stopping said means to drive said reel when said strip has been fully wound around said reel.

3,125,464

APPARATUS FOR COATING THE INSIDE SURFACE OF PIPE

Lee D. Harmes, Houston, Tex., assignor to Mission Manufacturing Company, Houston, Tex., a corporation of Texas

Filed Apr. 27, 1961, Ser. No. 105,931
10 Claims. (Cl. 118—105)



1. Apparatus for coating the interior of pipe comprising, seal means for engaging the wall of the pipe and preventing flow therepast of fluids from the rear of the seal means, wiper means provided by a hollow body of resilient material inflated to a selected pressure engaging the wall of the pipe rearwardly of said seal means, said seal means and wiper means defining with the pipe to be coated a chamber for containing liquid coating material to be applied to the pipe, said wiper means leaving on the pipe a selected thickness coating as the apparatus passes through a pipe and rearwardly facing cup-type seal means rearwardly of and connected to the wiper means for engaging the pipe wall and preventing flow therepast of fluids from the rear thereof.

3,125,465

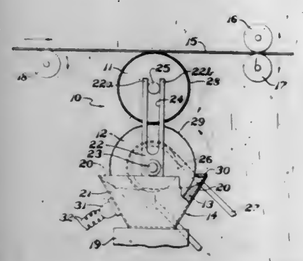
SHEET DUSTER

Richard M. Kuts, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

Filed Mar. 26, 1962, Ser. No. 182,292
6 Claims. (Cl. 118—244)

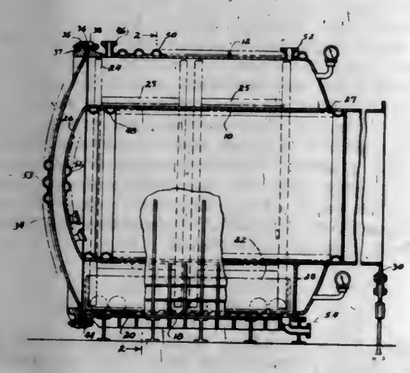
6. An apparatus for applying a lubricant dust onto a moving surface of sheet material, comprising a storage means containing a lubricant dust, conveying means for moving such sheet material at a predetermined speed along a first direction, first cylindrical means, means for rotatably mounting said first cylindrical means above said storage means with said first cylindrical means adjacent said storage means for partial peripheral containment thereof, said first cylindrical means having a knurled surface having contiguous portions successively moving

through said storage means, a second cylindrical means having a circumferential mohair covering and an axis spaced parallel to and above the axis of said first cylindrical means, said first and second cylindrical means being in surface rolling contacting relationship whereby said first cylindrical means drives said second cylindrical means, roller guide means mounted on said apparatus cooperative with said conveying means for guiding the



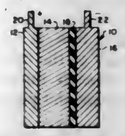
surface of sheet material into contacting relationship with the upper portion of said second cylindrical means, means for rotating said first cylindrical means to impart a surface speed to said second cylindrical means a surface speed greater than the surface speed of said roller guide means, and said means for rotating operative to rotate said second cylindrical means in the same advancing sense as said roller guide means such as to operate on the moving sheet material in a common direction.

3,125,466
CABLE IMPREGNATING TANK
Robert B. Yeakle, Scotch Plains, N.J., assignor to General Cable Corporation, New York, N.Y., a corporation of New Jersey
Filed May 11, 1962, Ser. No. 193,948
5 Claims. (Cl. 118—429)



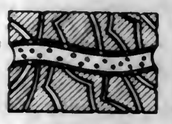
1. A horizontal impregnating tank comprising an inner and outer shell, said inner shell being a substantially cylindrical body, said outer shell being formed of a cylindrical body portion and an axially extending U-shaped channel portion, said cylindrical body portion of said outer shell being positioned concentrically with said inner shell, said channel portion being positioned to provide a substantially horizontal floor, said inner and outer shells being sealedly joined at one end thereof, means for sealing the other end of said inner shell, and a door for selectively sealing the other end of said outer shell.

3,125,467
ELECTRODE ARRANGEMENT FOR A BATTERY
Herbert E. Lawson, Glendora, Bobby K. Disney, Covina, and Oliver E. Accountius, Sierra Madre, Calif., assignors to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
Filed June 6, 1960, Ser. No. 34,089
4 Claims. (Cl. 136—83)



1. An electrode arrangement for a battery cell comprising: a cathode, a depolarizer element in electrical contact with said cathode and fixedly attached thereto, an anode in juxtaposition with said depolarizer element, and a nonporous insulating material interposed between said depolarizer element and said anode, said nonporous insulating material substantially covering the adjacent faces of said depolarizer element and said anode whereby exposing the nonadjacent faces of the electrodes to electrolyte produces a potential difference between the anode and the cathode.

3,125,468
COATED ELECTRODES
Charles E. Thompson, Fanwood, and Joseph M. Kelley, Jr., Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Apr. 4, 1960, Ser. No. 19,566
16 Claims. (Cl. 136—86)

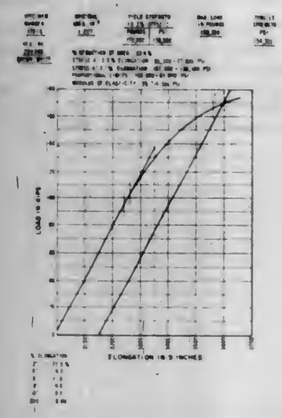


1. In a catalytic electrode comprising an electrically conductive porous structure having major pores whose diameters range between 0.2×10^4 A. and 2×10^5 A. interlaced therethrough and intersected by a series of minor pores whose diameters range between about 50 and 400 A. for use in an electrochemical process wherein a reactant gas is brought into contact with a liquid electrolyte within said major pores, the improvement which comprises a coating on surfaces of said structure which form walls of said major pores consisting of a solid, high molecular weight polymer formed in situ upon said surfaces, said polymer having a lower free surface energy than said structure and being of a thickness admitting of passage of said gas through said major pores.

3,125,469
METHOD OF PROCESSING STRESSED STEEL MEMBERS
Edward Schechter, Kingston, Pa., assignor to Streamsteel Corporation, Wilkes-Barre, Pa., a corporation of Delaware
Filed Jan. 16, 1963, Ser. No. 251,951
1 Claim. (Cl. 148—12)

A method of producing a hot-rolled alloy steel bar of high tensile strength, yield strength and ductibility and having a high proportional limit compared to its yield strength together with a predictable modulus of elasticity, said method comprising providing the rolled bar with

.45% to 1.00% carbon, providing the rolled bar with magnesium and chromium in amounts of less than 2% each, cold stretching the bar to a predetermined stress of 70% to 90% of the ultimate tensile strength whereby the permanent elongation is less than 3%, stress relieving the bar by furnace heating in a time-temperature cycle varying from approximately 1375° F. to approximately



485° F. and from approximately two minutes to approximately six hours depending upon the time and temperature selected, cooling the bar to a temperature of approximately 150° F. or less, whereby the bar has a proportional limit of between 75% and 85% of the yield strength and a modulus of elasticity above 29,000,000 p.s.i.

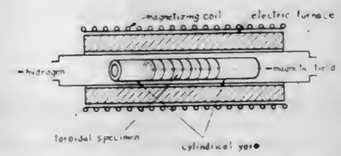
3,125,470
MANGANESE-CONTAINING FLUX COMPOSITION
Charles Eichhorn Witherell, Bound Brook, N.J., assignor to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Original application Mar. 17, 1960, Ser. No. 15,553, now Patent No. 3,024,137, dated Mar. 6, 1962. Divided and this application Sept. 25, 1961, Ser. No. 140,263
3 Claims. (Cl. 148—24)

3. A flux coating composition for an arc welding electrode consisting essentially of, on the basis of 100 parts by weight, about 15 to about 40 parts of an alkaline earth metal carbonate selected from the group consisting of calcium carbonate, barium carbonate and strontium carbonate, about 10 to about 35 parts of cryolite, about 5 to about 30 parts of manganese carbonate, about 10 to about 35 parts of titanium dioxide, about 5 to about 35 parts of manganese powder, about 2 to about 5 parts of bentonite, and up to about 20 parts of columbium.

3,125,471
COLORED STAINLESS STEELS
Jesse R. Conner, Jr., Sarver, Pa., assignor to Allegheny Ludlum Steel Corporation, Brackenridge, Pa., a corporation of Pennsylvania
No Drawing. Filed July 3, 1961, Ser. No. 121,353
2 Claims. (Cl. 148—31.5)

1. A stainless steel architectural member comprising heat tinted stainless steel having a visible metal oxide coating thereof produced by said heat tinting of from about 100 to 1000 A. in thickness integrally bonded to the surface thereof and a substantially transparent and water-insoluble baked alkali metal silicate coating on said metal oxide coating, said silicate coating not exceeding about .001" in thickness.

3,125,472
PROCESS FOR THE PRODUCTION OF MAGNETIC MATERIALS BY THE UTILIZATION OF MAGNETIC ANNEALING EFFECT
Takaaki Yamamoto, 6643 Kugenuma, Fujisawa-city, Kanagawa-ken, Japan; Yutaka Nakamura, 1001 Yukigaya-cho, Ota-ku, Tokyo, Japan; and Tomio Nagashima, 14, 3-chome, Nishimizue, Edogawa-ku, Tokyo, Japan
Filed Feb. 8, 1963, Ser. No. 257,210
1 Claim. (Cl. 148—108)



A process of the production of a magnetic material having a constancy of permeability by the utilization of a magnetic annealing effect, comprising the steps of

working an alloy composed of 30 to 50% Fe by weight, 70 to 50% Ni by weight, and 0 to 1% Mn by weight to a ferromagnetic tape wound to form a toroid and defining a plurality of layers,

applying magnesia powder of 500 mesh per/cm.^{2} between each pair of adjacent layers of said tape and defining an air gap of about 0.05 mm. across said wound tape in the magnetic path of said tape,

annealing said tape in an atmosphere of dry hydrogen at about 1000° C. to about 1200° C. for a time period of about 3 to 5 hours,

applying a magnetic field of up to about 30 Oe. in axial direction of said wound tape, and

cooling said wound tape at a cooling rate of no more than 100° C./hr. between a temperature range of about 600° C. to 200° C. in a magnetic field disposed perpendicularly to the direction of magnetizing,

whereby the crystal anisotropy constancy of the cubic symmetry is considerably reduced and the uniaxial anisotropy perpendicularly to the longitudinal direction of said wound tape is induced simultaneously.

3,125,473
METHOD OF PRODUCING GRAIN-ORIENTED SILICON STEEL
Henry C. Schneider, Penn Hills Township, Allegheny County, Harry F. Shannon, Monroeville Borough, and Edward B. Stanley, Washington Township, Westmoreland County, Pa., assignors to United States Steel Corporation, a corporation of New Jersey
No Drawing. Filed Mar. 31, 1961, Ser. No. 99,665
5 Claims. (Cl. 148—111)

1. A method of producing grain-oriented silicon steel characterized by a nonabrasive surface film comprising cold-reducing hot-rolled silicon electrical steel in two stages, annealing the steel intermediate said cold reductions in a reducing atmosphere and after the second cold reduction continuously annealing the steel in an oxidizing atmosphere consisting essentially of nitrogen, effective amounts up to .5% oxygen and 1 to 3% water vapor, coating the continuously annealed steel with a magnesium oxide separating medium, box annealing it in a reducing atmosphere and pickling in an aqueous acid solution for less than about 30 minutes to strip the scale therefrom.

3,125,474
PICKLING ZIRCONIUM AND ZIRCONIUM BASE ALLOYS

Robert M. Watkins, Squirrel Hill, Pa., and Ronald Cohen, Hillside, N.J., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Jan. 6, 1960, Ser. No. 797
9 Claims. (Cl. 156—18)

7. The process of pickling zirconium and zirconium base alloys, comprising, applying to members of the alloy an aqueous pickling solution consisting essentially of, by weight, from 0.3% to 3% hydrogen fluoride, not exceeding 20% of acetic acid, and 3% to 30% ammonium persultfate for a period of time at a temperature of from 70° F. to 120° F.

3,125,475
METHOD OF PRODUCING A BRIGHT FINISH ON STAINLESS STEEL

Sidney Livingston, Beechhurst, and Leonard Mackles, New York, N.Y., assignors to Chemclean Products Corporation, College Point, N.Y., a corporation of New York

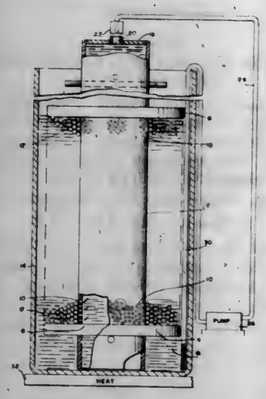
No Drawing. Filed Aug. 24, 1960, Ser. No. 51,498
1 Claim. (Cl. 156—20)

A method of treating austenitic stainless steel to produce a bright mirror-like surface thereon, which comprises immersing a stainless steel surface in a bath consisting of approximately 25 parts by weight of phosphoric acid, approximately 7.5 parts by weight of hydrochloric acid, approximately 2.5 parts by weight of nitric acid, approximately 65 parts by weight of water, approximately .05–6 parts by weight of an inhibiting agent consisting of 2-butyne-1,4-diol combined with 2-propyn-1-ol, and approximately .05–6 parts by weight of an activator catalyst selected from the formates, said bath being heated to and maintained at an elevated temperature of approximately 190–200 degrees Fahrenheit, and said stainless steel surface being immersed in said heated bath for a period of approximately one to five minutes.

3,125,476
METHOD OF EXTRACTING GLASS FIBERS

Thomas F. Anderson, Wilmington, Del., assignor to Haveg Industries, Inc., Wilmington, Del., a corporation of Delaware

Filed May 26, 1961, Ser. No. 112,869
3 Claims. (Cl. 156—24)

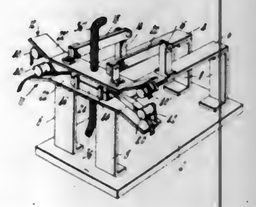


1. A method of extracting glass cloth comprising wrapping the glass cloth in a plurality of layers around a hollow foraminous roll, wherein said roll has uniformly distributed perforations throughout, said perforations covering 10 to 50% of the surface area of the roll, forcefully passing leaching acid through the perforations in said hollow roll and thence through the glass cloth, while exhausting the overflow of said acid so as to establish a continuous flow of acid through the system.

3,125,477
METHOD OF SPLICING RIBBON RUBBER THREAD

Arthur L. Laliberte, Easthampton, Mass., assignor to United Elastic Corporation, Easthampton, Mass., a corporation of Massachusetts

Original application Jan. 7, 1960, Ser. No. 1,049, now Patent No. 3,029,180, dated Apr. 10, 1962. Divided and this application Dec. 6, 1961, Ser. No. 157,508
3 Claims. (Cl. 156—154)

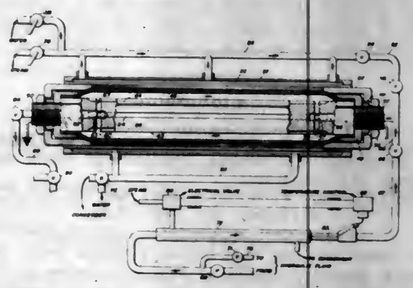


1. The method of splicing together two rubber ribbons substantially the same in thickness and each consisting of a multiplicity of fine rubber threads separably joined side by side widthwise of the ribbon, which comprises forming at least one of the ribbons to bring a portion of each of the ribbons near an end thereof to the same width, holding said portions at said width, positioning a widthwise face of said so-held portion of one ribbon in contact with a widthwise face of said so-held portion of the other ribbon with the corresponding edges of said faces in accurate registry with each other, adhesively uniting said faces while so held and positioned, whereby a face of each thread of one ribbon is united to a face of a thread of the other ribbon, removing the shorter end extending from the united face of each ribbon, and reducing the thickness of the united portions of the ribbons to the thickness of the unspliced ribbon.

3,125,478
METHOD OF MAKING PLASTIC TUBULAR MEMBERS OF RESIN REINFORCED SHEET MATERIAL

Robert C. Pratt, Scituate, Mass., assignor to Babbitt Pipe Company, Inc., Plymouth, Mass.

Filed Oct. 16, 1959, Ser. No. 846,878
10 Claims. (Cl. 156—184)



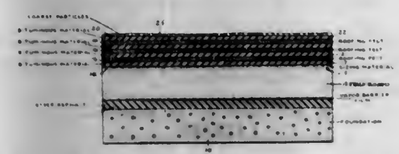
1. The process of manufacturing plastic tubular members which comprises, crinkling a sheet of fibrous material to shorten it, treating the material with resin, spirally winding the resin treated material into a tubular preform,

placing a tubular restraining member around the exterior of the preform, applying an outwardly acting fluid pressure internally of the preform to compress the plies together and expand them circumferentially to remove the crinkling and lengthen the material approximately the amount it was shortened, while simultaneously heating the preform to cure the resin.

3,125,479
METHOD OF PREPARING A BUILT-UP ROOF

James A. Finan, Glenolden, Pa., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York

Filed Mar. 31, 1959, Ser. No. 803,304
3 Claims. (Cl. 156—300)



3. A method of preparing a built-up roof which comprises applying an aqueous sizing material comprising, by weight, about 5%–10% bentonite clay dispersed in about 95%–90% water at an application rate of about 7–8 pounds per 100 square feet of board to only surfaces of rigid normally porous cellulose fiber insulation boards intended to be board outer surfaces in the roof structure, laying over a roof deck the surface-sized insulation boards in juxtaposition to one another to form a layer of thermal insulation thereon, the pores in the interior of the boards adjacent the outer surfaces only of the boards and the pores of the outer surfaces only of the boards relative to the roof deck filled with sizing material, applying an adhesive layer of heat-liquefied bituminous material onto the sized outer surfaces of said boards, from about 90%–100% of the bituminous material being retained on the outer surfaces of the boards due to the sizing material to avoid diminishing substantially the normal thermal insulating value of said boards by material diffusion of the bituminous material into the interior of the boards, applying a layer of bituminous material-saturated felt onto the retained bituminous layer while said bituminous layer is in a soft and tacky condition, and repeating the steps of applying the adhesive bituminous layer and then the bituminous material-saturated felt as aforesaid until a plurality of alternate superposed layers of bituminous material and bituminous material-saturated felt are applied.

3,125,480
NEOPENTYL GLYCOL ACRYLATE ESTER COMPOSITIONS

Wolf Karo, Elkins Park, and Benjamin D. Halpern, Jenkintown, Pa., assignors to The Borden Company, New York, N.Y., a corporation of New Jersey

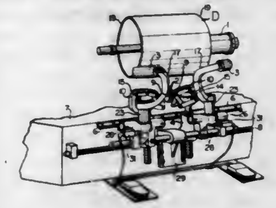
No Drawing. Filed June 27, 1961, Ser. No. 119,813
6 Claims. (Cl. 156—310)

6. The process of bonding metallic surfaces which comprises applying to one of the said surfaces an adhesive comprising approximately 95 parts by weight of neopentyl glycol dimethacrylate, 0.005 part of hydroquinone as inhibitor, and 5 parts of di-tertiary-butyl peroxide as initiator of polymerization, applying to the other of the said surfaces benzene sulfinic acid as an activator of the initiator and in the proportion of about 1%–10% of the weight of the said initiator, and then maintaining contact of the two surfaces, with the materials so applied therebetween and with restriction of access of air, until the said methacrylate polymerizes.

3,125,481
PLY STITCHING DEVICE

Edwin E. Mallory and Armindo Cantarutti, both of Cuyahoga Falls, Ohio, assignors to National Rubber Machinery Company, Akron, Ohio, a corporation of Ohio

Filed May 16, 1961, Ser. No. 110,457
5 Claims. (Cl. 156—408)

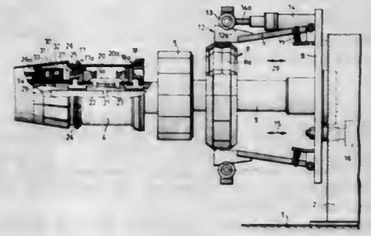


1. A ply stitching device for use with a tire building drum which is periodically rotated for wrapping of successive layers of ply stock therearound in axially overhanging relation to the ends of the drum, said device comprising a support structure; stitching means mounted on said structure for movement toward the drum to contact plies thereabout and for movement axially of the drum, means mounting said stitching means for movement axially of said drum; ply backup means mounted on said structure, and means mounting said ply backup means for movement around the ends of the drum to operating positions inside the overhanging ends of the plies and adjacent the ends of the drum whereby the overhanging ends of the plies are stitched together as said stitching means travel axially beyond the ends of the drum, each backup means comprising a roll which, when in operating position, has its outer surface substantially tangent to the outer surface of the drum, said means mounting said ply backup means comprising an arm having said roll journalled on one end thereof and having its other end rotatable in said support about an axis which is offset from, and disposed at an angle to the axes of said roll and drum.

3,125,482
TIRE BUILDING MACHINE

Walter Niclas, Altwarmbuchen, near Hannover, Hans Menell, Ahlem, near Hannover, and Gunter Johannes, Hannover-Herrenhausen, Germany, assignors to Continental Gummi-Werke Aktiengesellschaft, Hannover, Germany

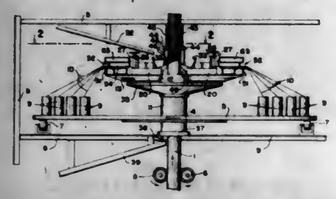
Filed May 2, 1961, Ser. No. 107,123
6 Claims. (Cl. 156—414)



1. In a tire building machine; a frame, a tire building drum for receiving a tire carcass, an auxiliary drum larger than the tire building drum for receiving thereon a tread to be placed on a carcass on the tire building drum, and

a tread holding means larger than said auxiliary drum for receiving therein a tread from said auxiliary drum and transferring it to a carcass on said tire building drum, said drums and tread holding means being in positions of parallel spaced coaxial relation in said frame with the tire building drum remote from the frame and having one side exposed for the removal of a tire therefrom, means in the frame movably interconnecting said drums and tread holding means for relative axial movement thereof to bring said tread holding means from said position of spaced relation to said drums into selective coplanar surrounding relation with said respective drums, said auxiliary drum being radially expansible and contractable, means located externally of said tread holding means for selectively radially expanding and contracting said tread holding means, said tire building drum comprising axially spaced bead rings having bead supporting surfaces facing each other and a flexible cylindrical member fixed to and extending between said rings, means for supplying fluid under pressure to the inside of said cylindrical member to expand said cylindrical member radially, the one said bead ring on said one side of said tire building drum being radially collapsible to permit a completed tire to be removed from said one side of said tire building drum, and means for collapsing said one bead ring.

3,125,483
APPARATUS FOR MAKING GLASS FIBER REINFORCED PLASTIC PIPE
Carl de Ganahl, Greenlawn, N.Y. (% Spiral Glas Pipe Co., P.O. Box 195, Old Bridge, N.J.)
Filed Nov. 8, 1960, Ser. No. 68,135
3 Claims. (Cl. 156—432)



1. In an apparatus for fabricating plastic pipe, a rotatable table having a central opening therein, a mandrel, power driven means for advancing the mandrel through said table opening at a fixed rate relative to the rate of rotation of the table, means for supporting a plurality of packages of sizing-coated glass fiber rovings on the table, a heating oven mounted on the table between said roving supporting means and the central opening of the table a dispensing pan for plastic resin composition mounted between said oven and the central opening of the table, and means for guiding rovings from the roving supporting means successively through the oven and the dispensing pan onto the mandrel.

3,125,484
FLEXIBLE PLASTIC SHEET HAVING OPALESCENT FINISH
Victor H. Weiss, Stratford, Conn., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Nov. 12, 1959, Ser. No. 852,235
1 Claim. (Cl. 161—6)

A plastic sheet material comprising:

(*a*) a substantially opaque colored film base layer comprising a vinyl chloride resin and opaque pigments,

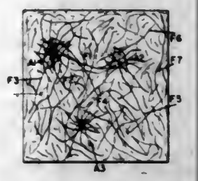
(*b*) integrally bonded to the surface of said base layer a translucent colored film layer consisting essentially of—

2–25% pearl essence selected from the class consisting of fish scales, bismuth subnitrate, lead iodide, bismuth oxychloride, lead phosphate, barium thiosulfate, zinc ammonium purine phosphate and chlorides of bismuth, tin, antimony and mercury,

.5–15% of a translucent colored pigment selected from the class consisting of quinacridone, flavanthrone, dibromoanthanthrone, polychloroanthraquinone 1,2(n) benzacridone, tri- to tetrabromopyranthrone, perylene, dibromopyranthone, anthrimide, dimethoxy dibenzene anthanthrone, the alumina hydrate lakes of said pigments, said percentages being based on the total dry weight of said translucent layer, and the balance of said translucent layer consisting essentially of about 2 parts of polyvinyl chloride per 1 part of polymethyl methacrylate,

(*c*) the color of said opaque layer being of greater brilliance than the translucent pigments in said translucent layer.

3,125,485
NONWOVEN WEB
Thomas T. Constantine, South Easton, and Richard D. Wells, Westwood, Mass., assignors to Crompton & Knowles Corporation, Worcester, Mass., a corporation of Massachusetts
Original application June 10, 1960, Ser. No. 35,157, now Patent No. 3,071,821, dated Jan. 8, 1963. Divided and this application Dec. 29, 1960, Ser. No. 79,361
1 Claim. (Cl. 161—169)



An imperforate nonwoven web comprising intertangled randomly disposed fibers some of which are relatively long of the order of three to four inches frictionally engaged and entangled with other fibers of a length of less than three inches, some fibers of the web forming localized areas of reinforcement wherein several fibers are entangled with each other, the reinforcement areas being randomly distributed throughout the web, a majority of said reinforcement areas being connected to other reinforcement areas by randomly extending, relatively long fibers frictionally engaged and entangled with the fibers of said reinforcement areas as well as the randomly disposed fibers therebetween.

3,125,486
METHOD FOR PREVENTING THE GROWTH OF ALGAE IN SWIMMING POOLS, TANKS, AND THE LIKE
Adolf Schmitz, Essen, Germany, and Alfred Muhr, Zurich, Switzerland, assignors to The Goldschmidt A.G., Essen, Germany
No Drawing. Filed Dec. 5, 1960, Ser. No. 73,515
Claims priority, application Germany July 26, 1960
5 Claims. (Cl. 167—22)

2. The method for inhibiting and preventing algae growth in water, comprising adding to the water an aqueous solution of an algicide containing as active ingredient higher alkyl substituted amino carboxylic acid of the formula

$$R_1(NHC_2H_4)_n—NHR_3.COOH$$

wherein R_1 stands for alkyl having 8–18 carbon atoms, *n*

is an integer from 1 to 3 inclusive and R_3 is a bridging member selected from the group consisting of lower alkylene, lower arylene and lower aralkylene, and adjusting the ingredient-water ratio to about 1:50000 to 1:400000.

3,125,487
BACTERIOSTATIC COMPOSITIONS AND METHODS OF TREATING FABRICS THEREWITH
Gordon C. Hutchinson, 331 Negley Ave., Butler, Pa.
No Drawing. Filed June 21, 1961, Ser. No. 118,525
1 Claim. (Cl. 167—38.6)

A composition for treating fabrics, comprising in percent by volume:

	Percent
Mineral oil	60 to 85
An emulsifying agent for the oil	5 to 18
A wetting agent	1 to 10
A bacteriostatic agent soluble in organic and aqueous solvents	2 to 10
A fatty alcohol	2 to 10
A detergent soluble in aqueous and organic solvents	1 to 4

wherein the emulsifying agent for the oil comprises sorbitan monooleate combined with polyoxyethylene ester of fatty and resin acid, the wetting agent is an alkyl aryl polyether alcohol, the bacteriostatic agent is selected from the group consisting of pyridinium chloride N(lauryl colaminoformylmethyl), diisobutyl phenoxy ethoxyethyl dimethyl benzyl ammonium chloride, and dihydroxy hexachlorodiphenylmethane, the fatty alcohol is selected from the group consisting of lauryl, myristyl and cetyl alcohols, and the detergent is a dioctyl ester of sodium sulfosuccinic acid.

3,125,488
METHOD OF INDUCING ANALGESIA BY 4-(p-CHLOROPHENYL) - 1,2,3,6 - TETRAHYDROPYRIDINE
John H. Biel, Milwaukee, Wis., assignor to Lakeside Laboratories, Inc., Milwaukee, Wis., a corporation of Delaware
No Drawing. Filed Aug. 8, 1961, Ser. No. 129,951
6 Claims. (Cl. 167—65)

1. A therapeutic composition in dosage unit form comprising a pharmaceutical carrier and from 5 to 500 mgm. of 4-(p-chlorophenyl)-1,2,3,6-tetrahydropyridine.

3,125,489
SUCKLING RODENT AND CHICK EMBRYO ATTENUATED MEF–1 POLIO VIRUS AND THE PRODUCTION THEREOF
Victor J. Cabasso, Pearl River, and Herald R. Cox, Suffern, N.Y., Arden W. Moyer, Park Ridge, N.J., and Manuel Roca-Garcia, Suffern, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Dec. 26, 1958, Ser. No. 783,007
4 Claims. (Cl. 167—78)

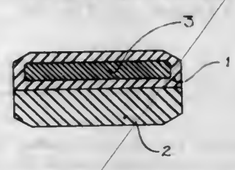
1. An oral vaccine for the stimulation of antibody production in humans against poliomyelitis virus of the Lansing type, which comprises live poliomyelitis virus of the MEF–1 strain of the Lansing type modified and attenuated by at least 119 serial passages through suckling rodents, each successive passage differentially selecting for propagation avirulent virus particles as compared to virulent, until modification results in ability to grow in chick embryos followed by serial passage through chick embryos of 1 to 12 days of age for at least ten serial passages, said serial passages being continued until on test by oral ingestion in primates the virus is avirulent and on oral ingestion by human beings transforms a majority of Lansing type sero-negatives to sero-positives.

3,125,490
TABLET WITH CONTRASTING INDICIA AND METHOD
Emanuel B. Hershberg, West Orange, N.J., assignor to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey
Filed Aug. 9, 1961, Ser. No. 130,346
6 Claims. (Cl. 167—82)



1. A method of producing a pharmaceutical tablet containing a visually contrasting indicia on a surface thereof which comprises forming a pharmaceutical composition into tablet form having an impressed indicia thereon differing in relief from the surface of the tablet adjacent to said indicia, and thereafter applying to the surface of said tablet a color composition wherein the higher of said indicia and adjacent surface is provided with a visually contrasting color from the lower thereof.

3,125,491
CHEWABLE HEMATINIC VITAMIN TABLET
Louis Nasir Elowe and Gerald James Jackson, Jr., Bardonia, N.Y., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine
Filed Apr. 6, 1962, Ser. No. 185,664
1 Claim. (Cl. 167—82)

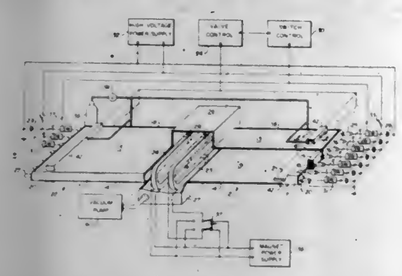


A chewable hematinic vitamin tablet form comprising a pre-compressed vitamin tablet core portion containing ethylcellulose-granulated mannitol and a source of vitamin C, said tablet core portion having smaller dimensions than the desired finished tablet, an inert compression-coated methylcellulose-granulated mannitol barrier coating completely surrounding said vitamin tablet core portion and a hemantinic granulation layer containing methylcellulose-granulated mannitol and a therapeutically acceptable ferrous iron compound, said chewable vitamin tablet form having the hematinic tablet layer compressed to one face of the mannitol-coated precompressed vitamin core portion.

3,125,492
PLASMA HEATING AND CONFINING SYSTEM
William R. Baker, Orinda, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Apr. 19, 1960, Ser. No. 23,343
10 Claims. (Cl. 176—2)

1. In a plasma heating and containment device the combination comprising a vacuum vessel, magnetic field generating means providing a field within said vessel which field is symmetrical about a median plane and which has a central region of less intensity than the peripheral regions, plasma source means disposed around a substantial portion of the perimeter of said field at said median plane thereof, said plasma source means having a pair of spaced apart conductive plates aligned parallel

with said median plane and forming a plasma chamber communicating with said vessel, means for admitting a quantity of gas into said chamber, and a power supply



connected with said plates for applying a potential difference therebetween whereby said gas is ionized and accelerated within said median plane into said central region of said field.

ERRATUM

For Class 176—41 see:
Patent No. 3,125,760

3,125,493
FUEL ELEMENT FOR A NUCLEAR REACTOR AND METHOD OF MANUFACTURE

Mead D'Amore, Penn Hills, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Sept. 29, 1960, Ser. No. 59,421
6 Claims. (Cl. 176—76)



1. A fuel element for use in a nuclear fuel assembly, said fuel element comprising means for supporting a plurality of fuel bearing pellets including an elongated cladding member in which said pellets are positioned in longitudinal tandem relation, said supporting means including a plurality of spacing members dividing said pellets into longitudinal segments, and means for disposing said spacing members at respective positions enabling each of said segments to expand in the longitudinal direction relative to said cladding member, said disposing means including groove means extending inwardly into each of said spacing members into which the adjacent material of said cladding member is deformed to engage said spacing members against displacement.

3,125,494
CALCIUM L (+) LACTATE AND L (+) LACTIC ACID PRODUCTION

Raymond L. Snell, Elkhart, Ind., and Charles E. Lowery, Jr., Austin, Tex., assignors to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana

No Drawing. Filed Apr. 30, 1962, Ser. No. 191,345
3 Claims. (Cl. 195—36)

1. In a process for producing L (+) lactic acid and calcium L (+) lactate by a submerged fermentation process comprising inoculating a medium containing carbohydrate, nutrient mineral salts, calcium carbonate, and a source of nitrogen with an L (+) lactic acid-producing strain of *Rhizopus oryzae* and heating the fermentation medium at 30° C. to 37° C. for 1 to 60 hours, the improvement comprising heating the fermentation medium to a temperature of about from 37° C. to 50° C. for 2 to 30 hours at the point where the concentration of calcium lactate reaches 8% by weight of the solution.

3,125,495
MICROBIAL PREPARATION OF 7- AND 15-HYDROXY STEROIDS

Allen I. Laskin, Somerset, and Josef Fried, Princeton, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Apr. 19, 1962, Ser. No. 188,899
4 Claims. (Cl. 195—51)

1. A process for converting a steroid of the estrane series containing an aromatic A-ring and unsubstituted in the 7 and 15 positions to its 7 and 15 hydroxy derivatives, which comprises subjecting such steroid to the action of enzymes of a microorganism of the species *Aspergillus carneus*.

3,125,496
RECOVERY OF α-NAPHTHOL FROM MIXTURES OF NAPHTHOL, TETRALON AND TETRALOL

André Thizy, Lyon, Rhone, France, assignor to Progil S.A., Lyon-Vaise, France, a corporation of France

No Drawing. Filed Mar. 13, 1961, Ser. No. 95,043
1 Claim. (Cl. 202—42)

A process for the recovery of purified α-naphthol from mixtures thereof with tetralon and tetralol, which comprises admixing with said mixture diethylene glycol to form an azeotropic mixture with tetralon and tetralol, fractionally distilling off the tetralon and tetralol as an overhead azeotropic mixture with the diethylene glycol, and recovering purified α-naphthol as an intermediate distillate.

3,125,497
PURIFICATION PROCESS FOR URANIUM CARBIDE

Wilford N. Hansen, Canoga Park, Calif., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed Dec. 15, 1961, Ser. No. 159,764
11 Claims. (Cl. 204—1.5)

1. A method of purifying uranium carbide in which uranium values are recovered which comprises electrolyzing uranium carbide under an inert gas atmosphere in an electrolytic cell having as its electrolyte a molten composition consisting essentially of a uranium halide and at least one halide salt selected from the group consisting of alkali metal and alkaline earth metal halides to form a cathode deposit containing uranium values forming a uranium quasi-amalgam reaction product of said cathode deposit and mercury, and thereafter recovering the uranium values from said quasi amalgam.

3,125,498
METHOD OF UPGRADING LIGHT HYDROCARBONS

William Bartok, Cranford, and Peter J. Lucchesi, North Plainfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

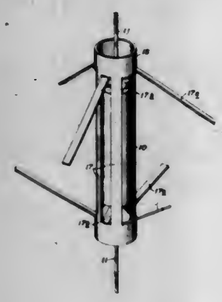
No Drawing. Filed Apr. 24, 1959, Ser. No. 808,552
8 Claims. (Cl. 204—154)

1. A hydrocarbon upgrading process which comprises subjecting a paraffin hydrocarbon having from 2 to 5 carbon atoms per molecule, in the presence of an effective amount of acetylene and in the absence of catalyst, to a total absorbed dosage in the range of 10^5 to 10^9 rads of high energy ionizing radiation equivalent to at least 100 electron volts with a radiation dose rate in the range of 10^5 to 10^9 rads per hour, wherein the paraffin/acetylene mole ratio is in the range of 1:1 to 100:1, said paraffin hydrocarbon and acetylene being at a temperature in the range of about 100° to 400° C. and a total pressure in the range of 10 to 55 atmospheres during said ionizing radiation, and recovering a normally gaseous branched-chain olefin.

3,125,499
COMBINATION INSULATING GUARD AND WIRE SUSPENDED ANODE

Richard B. Bender, P.O. Box 11302, Fort Worth, Tex.

Filed Feb. 26, 1962, Ser. No. 175,638
2 Claims. (Cl. 204—197)

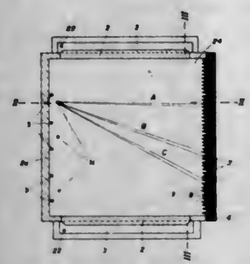


1. In combination:
a cylindrical anode suspended at one end on a conductor,
a tubular body of deformable dielectric material loosely receiving said anode, the length of said anode being less than the length of said body,
said body including spaced longitudinal openings between the ends thereof, and
inwardly directed clips integral with said body at the ends of said openings and positioned to engage the ends of said anode.

3,125,500
DEVICE FOR THE EXECUTION OF THE CARRIER FREE CONTINUOUS ELECTROPHORESIS

Wolfgang Grassman, Jungwirthstrasse 10, Munich, Germany, and Kurt Hannig, Pentenriederstrasse 45, Planegg, near Munich, Germany

Filed Apr. 4, 1961, Ser. No. 100,665
Claims priority, application Germany Apr. 5, 1960
14 Claims. (Cl. 204—299)



1. Apparatus for continuous free-flow electrophoresis comprising two rectangular plates of non-conductive material in spaced alignment to each other forming a separating space; a pair of electrode chambers, each tightly connected to one of a pair of opposite edges of said plates and communicating with said separating space between said plates through a strip of porous material clamped between the marginal section of said plates; each of said electrode chambers enclosing at least one electrode electrically connected to the output of a D.C.-source; a third marginal section of said separating space being tightly sealed between said electrode chambers; at least one connection to a feed inlet for supply of buffer solution to said separating space adjacent to said third marginal section; means for introducing material to be electrophoretically separated into said separating space between said plates adjacent to said third marginal section; the marginal space opposite said feed inlet connections being closed by a horizontal bar having a plurality of outlets arranged at regular intervals over its entire length between said electrode chambers communicating with a plurality of receptacles, each of said outlets extending from the inner separating space between said plates to its paired outer receptacle for collecting buffer solution flowing out of said outlet whereby each of said receptacles is in liquid connection; means for supplying buffer solution to said feed inlet connections; and means for intermittently withdrawing electrophoretically separated material and buffer solution from each of said collecting receptacles simultaneously and in equal volume in ratio to the flow rate through said separating space.

3,125,501
METHOD OF PREPARING FINELY-DIVIDED MATERIAL

Edwin C. Knowles, Poughkeepsie, Frederic C. McCoy, Beacon, and Howard V. Hess, Glenham, N.Y., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

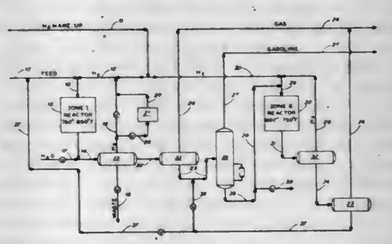
No Drawing. Filed Nov. 17, 1960, Ser. No. 69,802
4 Claims. (Cl. 208—25)

1. A method of preparing finely-divided powder from a material selected from the group consisting of aliphatic hydrocarbons and derivatives of aliphatic hydrocarbons having a straight chain portion of not less than 8 carbon atoms and capable of forming a solid complex with a complexing agent selected from the group consisting of urea and thiourea, comprising contacting a solution of said material with said complexing agent in the presence of a polar solvent for said complexing agent, forming a solid complex comprising said material and said complexing agent, separating said solid complex from the remaining solution, contacting said solid complex with water containing between about 0.01 and 0.2% by weight of a surface active agent at a temperature below that of the melting point of said material, subjecting the resulting mixture to agitation whereby said material separates out of said resulting mixture as finely-divided solid, and recovering said finely-divided solid.

3,125,502
STAGED CATALYTIC CONVERSION OF PETROLEUM DISTILLATES

John W. Scott, Jr., Ross, and William A. Raatz, San Rafael, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware

Filed Feb. 1, 1961, Ser. No. 87,051
6 Claims. (Cl. 208—59)



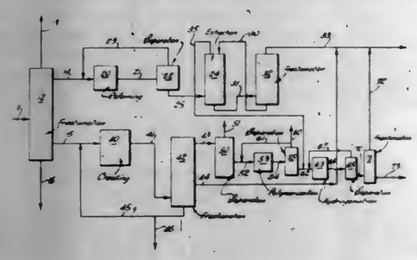
1. A process for upgrading a petroleum distillate to a gasoline of relatively high octane rating, which comprises passing said distillate along with at least 1500

s.c.f. of hydrogen per barrel of feed through a catalyst relatively free of aromatics hydrogenation characteristics under the reaction conditions employed incorporating a hydrogenating-dehydrogenating component disposed on an active cracking support in a first conversion zone at pressures during the on-stream period in the range of 600 to 3000 p.s.i.g. and at temperatures of from about 650° to 950° F. sufficiently high to effect a conversion of the feed of from 10 to 60% per pass; separating the effluent from said zone into at least a hydrogen-rich gaseous fraction, a gasoline product fraction boiling below 350° F. and a bottoms fraction boiling above 350° F.; feeding said bottoms fraction along with at least 1500 s.c.f. of hydrogen per barrel thereof through a catalyst relatively free of aromatics hydrogenation characteristics under the reaction conditions employed incorporating a hydrogenating-dehydrogenating component disposed on an active cracking support in a second conversion zone at pressures throughout the on-stream period in the range of 600 to 3000 p.s.i.g. and at instantaneous pressures during the on-stream period substantially the same as in said first conversion zone and at temperatures substantially lower than those in said first conversion zone, said second zone temperature ranging from about 550° to 850° F. and being sufficiently high to effect a conversion of said bottoms feed to lower boiling products of from 25 to 75% per pass; and recycling at least a substantial portion of the liquid effluent from said second conversion zone to at least one of said conversion zones; said process being characterized by a net consumption of from about 1000 to 2000 s.c.f. of hydrogen per barrel of feed converted in each of said zones.

3,125,503
PREPARATION OF A JET FUEL

Edwin Robert Kerr, Fishkill, Edward R. Christensen, Wappingers Falls, William F. Franz, Hopewell Junction, and Herbert E. Vermilllon, Wappingers Falls, N.Y., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

Filed Dec. 29, 1959, Ser. No. 862,592
5 Claims. (Cl. 208—79)

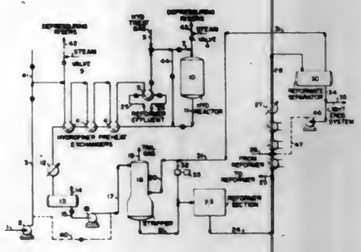


1. A process for the production of an improved jet fuel which comprises fractionating a crude petroleum into a first liquid fraction having a distillation end point of about 390° F. and a second liquid fraction boiling within the range of about 390–760° F., reforming said first liquid fraction to produce a reformate of increased aromatic content, separating said reformate into a portion rich in aromatics and a non-aromatic portion, contacting said second liquid fraction with a cracking catalyst under cracking conditions to produce a cracked product, separating the cracked product into a C_3–C_4 olefin-containing fraction and a cracked naphtha fraction, subjecting said C_3–C_4 olefin-containing fraction to polymerization conditions in the presence of a polymerization catalyst to produce a normally liquid polymer, combining said normally liquid polymer and said non-aromatic portion, contacting the combined stream with a hydrogenation catalyst in the presence of 5,000–15,000 s.c.f. hydrogen per barrel under saturation conditions and recovering a hydrocarbon fraction boiling in the jet fuel range from the hydrogenation product.

3,125,504
HYDROFINING PROCESS

Herbert P. Dengler, Fair Haven, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed Apr. 13, 1959, Ser. No. 805,972
3 Claims. (Cl. 208—89)



1. In the operation of a hydrofiner reactor in which a mixture of naphtha and hydrogen-containing treat gas is passed downwardly through a fixed bed of hydrofining catalyst particles and in which operation there is a gradual accumulation of scale and other fine particles at the top of the bed thereby causing a substantial increase in the pressure drop through the reactor, the improvement which comprises passing treat gas upwardly through the catalyst bed at a velocity of about 1 to about 4 feet per second sufficient to dislodge and disrupt the layer of scale but insufficient to fluidize or agitate the fixed bed of catalyst particles, entraining the scale particles in the treat gas and carrying the scale particles overhead from said reactor in the treat gas.

3,125,505
TREATMENT OF PETROLEUM FRACTIONS TO LOWER THE POUR POINT

Kenneth Tupman and Donald Richard Irving, Sunbury-on-Thames, England, assignors to The British Petroleum Company Limited, London, England, a joint-stock corporation of Great Britain

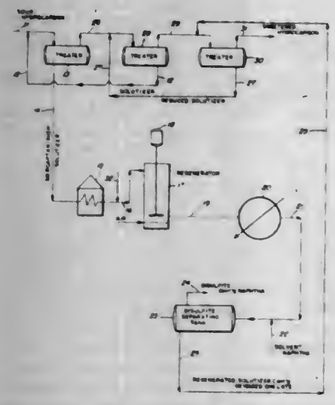
No Drawing. Filed Aug. 8, 1961, Ser. No. 129,962
Claims priority, application Great Britain Aug. 19, 1960
6 Claims. (Cl. 208—143)

1. A process for the treatment of distillate petroleum fractions boiling within the range 150–450° C. to lower the pour point at least 5° F. without material reduction in the specific gravity and diesel index of said distillate fractions, comprising contacting the distillate fraction as feedstock in a treating zone and in the presence of hydrogen with a catalyst comprising a platinum group metal on a support containing a major proportion of alumina, from 5–25% by weight of the support of a material selected from the group consisting of group II metal oxides, group III metal oxides, group IV metal oxides, and group III non-metallic oxides, group IV non-metallic oxides, and group V non-metallic oxides, and mixtures of the foregoing, and less than 1% wt. of halogen, the hydrogen to hydrocarbon mole ratio being from 1 to 1 to 20 to 1; maintaining a selected temperature and a selected space velocity in said zone, said selected temperature in said zone being maintained at least at 700° F. but not higher than about 950° F. and being a temperature at which, at said selected space velocity, not more than 20% wt. of the feedstock is converted to material boiling below 150° C. and said selected space velocity being at least 0.01 v./v./hr. but not higher than 8.0 v./v./hr. at which, at said selected temperature, not more than 20% wt. of the feedstock is converted to material boiling below 150° C.; maintaining a selected pressure in said zone in the range 100–1500 p.s.i. ga., said selected temperature and said selected space velocity being correlated to reduce the pour point of the feedstock such that the pour point of the material of the treated distillate fraction boiling above 150° C. is at least 5° F. lower than the pour point of the feedstock, and recovering the treated distillate fraction.

3,125,506
CHELATE SWEETENING

Kenneth F. Hayden and Richard N. Lovett, Woodbury, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York

Filed Sept. 19, 1961, Ser. No. 139,123
4 Claims. (Cl. 208—204)

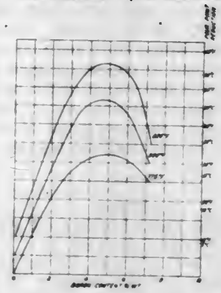


1. A process for decreasing the mercaptan content of a sour hydrocarbon while avoiding formation of gum comprising mixing said hydrocarbon in a first stage with a chelate-containing sweetening agent to remove mercaptans therefrom, said agent having the composition hereinafter described and having the chelate component thereof in a substantially reduced form by virtue of having been previously used to treat sour hydrocarbon, separating the treated hydrocarbon and passing the same to a second stage and coincidently passing spent treating agent to a regenerating step, mixing the sour hydrocarbon in the second stage with previously used sweetening agent to remove additional quantities of mercaptan therefrom, separating the treated hydrocarbon and passing the same to a third stage while coincidentally passing the used sweetening agent to said first stage, said hydrocarbon entering the third stage having a decreased content of mercaptans, mixing the sour hydrocarbon in the third stage with fresh sweetening agent to oxidize mercaptans, said fresh agent having said chelate component in substantially oxidized form and in an amount sufficient to oxidize the decreased mercaptan content of hydrocarbons in the third stage, separating and recovering the hydrocarbon from the third stage in a sweetened condition while coincidently passing the sweetening agent to said second stage, said sweetening agent comprising a preformed mixture of alkali metal hydroxide, alkali metal salt of alkyl phenols derived from petroleum fractions boiling in the range of 105 to 650° F., water, and 0.01 to 0.25% by weight of a chelate of a chelatable metal of group VIII of the periodic table.

3,125,507
HYDROFINING HYDROCARBON FRACTIONS

Kenneth Tupman and Robert William Willoughby, both of Sunbury-on-Thames, England, assignors to The British Petroleum Company Limited, London, England, a joint-stock corporation of Great Britain

Filed Jan. 16, 1962, Ser. No. 166,547
Claims priority, application Great Britain Jan. 26, 1961
10 Claims. (Cl. 208—216)



1. A process for the treatment of distillate petroleum fractions boiling within the range 150–450° C. to lower the pour point at least 5° F. without material reduction in the specific gravity and diesel index of said distillate fractions, comprising contacting the distillate fraction as feedstock in a treating zone and in the presence of hydrogen with a catalyst comprising a group VIa metal, a refractory oxide support, and from 3–7%, by weight of total catalyst, of boron, the hydrogen to hydrocarbon mole ratio being from 1 to 1 to 20 to 1; maintaining a selected temperature and a selected space velocty in said zone, said selected temperature in said zone being maintained at least about 750° F. but not higher than about 950° F. and being a temperature at which, at said selected space velocity, not more than 20% wt. of the feedstock is converted to material boiling below 150° C. and said selected space velocity being at least equal to the space velocity at which at said selected temperature not more than 20% wt. of the feedstock is converted to material boiling below 150° C. but not exceeding 8.0 v./v./hr.; maintaining a selected pressure in said zone in the range of 100–1500 p.s.i. ga., said selected temperature and said selected space velocity being correlated to reduce the pour point of the feedstock such that the pour point of the material of the treated distillate fraction boiling above 150° C. is at least 5° F. lower than the pour point of the feedstock, and recovering the treated distillate fraction.

3,125,508
TREATMENT OF DISTILLATE PETROLEUM FRACTIONS

Dennis George Adlington and Kenneth Tupman, Sunbury-on-Thames, England, assignors to The British Petroleum Company Limited, London, England, a British joint-stock corporation

No Drawing. Filed Oct. 14, 1960, Ser. No. 62,521
Claims priority, application Great Britain Oct. 20, 1959
14 Claims. (Cl. 208—264)

1. A process for the treatment of distillate petroleum fractions boiling within the range 150–450° C. to lower the pour point at least 10° F. without material reduction in the specific gravity and diesel index of said distillate fractions, comprising contacting the distillate fraction as feedstock in a treating zone and in the presence of hydrogen with a catalyst containing a group VIa metal on a silica-free, refractory oxide support, the hydrogen to hydrocarbon mole ratio being from 5 to 1 to 20 to 1; maintaining a selected temperature and a selected space velocity in said zone, said selected temperature in said zone being maintained above 800° F. but not higher than about 900° F. and being a temperature at which, at said

selected space velocity, not more than 20% wt. of the feedstock is converted to material boiling below 150° C. and said selected space velocity being at least equal to the space velocity at which at said selected temperature not more than 20% wt. of the feedstock is converted to material boiling below 150° C. but not exceeding 3.0 v./v./hr.; maintaining a selected pressure in said zone which is greater than the equilibrium pressure of the feedstock at said selected contacting temperature and said selected space velocity but not greater than about 1500 p.s.i. ga., said selected temperature and said selected space velocity being correlated to reduce the pour point of the feedstock such that the pour point of the material of the treated distillate fraction boiling above 150° C. is at least 10° F. lower than the pour point of the feedstock, and recovering the treated distillate fraction.

3,125,509
PROCESS FOR THE TREATMENT OF PETROLEUM DISTILLATES

Bernard Laine and Charles Vernet, Lavera par Martigues, Bouches-du-Rhone, France, assignors to The British Petroleum Company Limited, London, England, a British joint-stock corporation

No Drawing. Filed Oct. 26, 1960, Ser. No. 64,986
Claims priority, application France Oct. 26, 1959
11 Claims. (Cl. 208—264)

1. A process for the treatment of distillate petroleum fractions boiling within the range 150–450° C. to lower the pour point at least 5° C. without material reduction in the specific gravity and diesel index of said distillate fractions, comprising contacting the distillate fraction as feedstock in a treating zone and in the presence of hydrogen with a dehydrogenation catalyst on a silica-alumina base whose silica content is in the range 5 to 14% by weight of total catalyst, the hydrogen to hydrocarbon mole ratio being from 5 to 1 to 20 to 1; maintaining a selected temperature and a selected space velocity in said zone, said selected temperature in said zone being maintained at least about 400° C. but not higher than about 480° C. and being a temperature at which, at said selected space velocity, not more than 20% wt. of the feedstock is converted to material boiling below 150° C. and said selected space velocity being at least equal to the space velocity at which at said selected temperature not more than 20% wt. of the feedstock is converted to material boiling below 150° C. but not exceeding 3.0 v./v./hr.; maintaining a selected pressure in said zone in the range 100–1500 p.s.i. ga., said selected temperature and said selected space velocity being correlated to reduce the pour point of the feedstock such that the pour point of the material of the treated distillate fraction boiling above 150° C. is at least 5° C. lower than the pour point of the feedstock, and recovering the treated distillate fraction.

3,125,510
TREATMENT OF HYDROCARBON FRACTIONS

Kenneth Tupman and Peter Thomas White, Sunbury-on-Thames, England, assignors to The British Petroleum Company Limited, London, England, a British joint-stock corporation

No Drawing. Filed Oct. 24, 1961, Ser. No. 147,182
Claims priority, application Great Britain Oct. 28, 1960
10 Claims. (Cl. 208—264)

1. A process for the treatment of distillate petroleum fractions boiling within the range 150–450° C. to lower the pour point at least 5° F. without material reduction in the specific gravity and diesel index of said distillate fractions, comprising contacting the distillate fraction as feedstock in a treating zone and in the presence of hydrogen and of halogen added to the treating zone in an amount from about 0.001 to 1% by weight of feedstock with a catalyst comprising a platinum group metal on a refractory oxide support, the hydrogen to hydrocarbon mole ratio being from 1 to 1 to 20 to 1; maintaining a selected temperature and a selected space velocity in said zone, said selected temperature in said zone being maintained at least about 400° F. but not higher than about 480° F. and being a temperature at which, at said selected space velocity, not more than 20% wt. of the feedstock is converted to material boiling below 150° C. and said selected space velocity being at least 0.01 v./v./hr. but not higher than 8.0 v./v./hr. at which, at said selected temperature, not more than 20% wt. of the feedstock is converted to material boiling below 150° C.; maintaining a selected pressure in said zone in the range 100–1500 p.s.i.g.a., said selected temperature and said selected space velocity being correlated to reduce the pour point of the feedstock such that the pour point of the material of the treated distillate fraction boiling above 150° C. is at least 5° F. lower than the pour point of the feedstock, and recovering the treated distillate fraction.

3,125,511
TREATMENT OF HYDROCARBON FRACTIONS TO OBTAIN A LOWER POUR POINT PRODUCT

Kenneth Tupman and Peter Thomas White, both of Sunbury-on-Thames, England, assignors to The British Petroleum Company Limited, London, England, a joint-stock corporation of Great Britain

No Drawing. Filed Oct. 24, 1961, Ser. No. 147,208
Claims priority, application Great Britain Oct. 28, 1960
8 Claims. (Cl. 208—264)

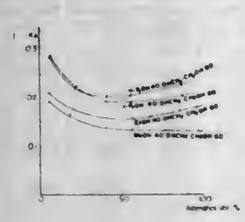
1. A process for the treatment of distillate petroleum fractions boiling within the range 150–450° C. to lower the pour point at least 5° F. without material reduction in the specific gravity and diesel index of said distillate fractions, comprising contacting the distillate fraction as feedstock in a treating zone and in the presence of hydrogen with a catalyst consisting essentially of a platinum group metal on a support containing a major proportion of alumina and from 1 to 15% wt. of halogen, the hydrogen to hydrocarbon mole ratio being from 1 to 1 to 20 to 1; maintaining a selected temperature and a selected space velocity in said zone, said selected temperature in said zone being maintained at least at 700° F. but not higher than about 950° F. and being a temperature at which, at said selected space velocity, not more than 20% wt. of the feedstock is converted to material boiling below 150° C. and said selected space velocity being at least 0.01 v./v./hr. but not higher than 8.0 v./v./hr. at which, at said selected temperature, not more than 20% wt. of the feedstock is converted to material boiling below 150° C.; maintaining a selected pressure in said zone in the range 100–1500 p.s.i.g.a., said selected temperature and said selected space velocity being correlated to reduce the pour point of the feedstock such that the pour point of the material of the treated distillate fraction boiling above 150° C. is at least 5° F. lower than the pour point of the feedstock, and recovering the treated distillate fraction.

3,125,512
PROCESS FOR THE EXTRACTIVE SEPARATION SELECTIVELY OF AROMATIC HYDROCARBONS FROM HYDROCARBONS CONTAINING BOTH AROMATIC AND NON-AROMATIC HYDROCARBONS

Kozo Higuchi, Tetsuro Ota, and Takao Takeuchi, all of Tokyo, Japan, assignors to Hokkaido Tanko Kisen Kabushiki Kaisha, Tokyo, Japan, a corporation of Japan

Filed July 14, 1959, Ser. No. 827,125
Claims priority, application Japan July 18, 1958
6 Claims. (Cl. 208—323)

1. A process for the extractive separation selectively of aromatic hydrocarbons from hydrocarbons containing both aromatic and non-aromatic hydrocarbons with at least about 50% aromatics by volume which comprises extracting said aromatic hydrocarbons with a mixed solvent of ethylene glycol, methyl alcohol, and water wherein the ethylene glycol content of said mixtures is 40–80%

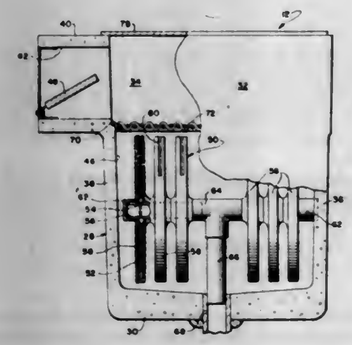


by weight and the water content is in excess of 1% and up to about 4% by weight.

3,125,513
FILTERING UNIT

Dawson Allen Johnson, 1900 S. Ocean Drive, Fort Lauderdale, Fla.

Filed Jan. 25, 1961, Ser. No. 84,818
5 Claims. (Cl. 210—169)

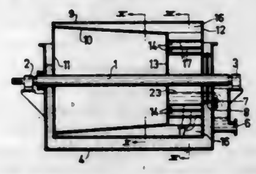


1. A filtering unit for swimming pools and the like comprising a filtering tank defining a filtering chamber having an open top, said filtering tank having a hollow section extending laterally from the upper portion thereof defining a lateral surface outlet communicating with said chamber, a floating weir swingably mounted in said lateral surface outlet, fitting means disposed in said tank for communicating said filtering chamber with a pump suction line, and a filtering element mounted within said filtering chamber for movement within the latter between a normal operative position within said chamber wherein the entire flow from said chamber to the pump suction line is through said filtering element and a cleaning position within said chamber wherein the flow from said chamber to the pump suction line is direct and bypasses said filtering element, said filtering element comprising a plurality of vertically extending horizontally spaced grids, conduit means rigidly interconnecting said grids and having a central vertical outlet pipe communicating with the interiors of said grids, filtering cloth means covering each of said grids having the major surfaces thereof disposed generally vertically, said fitting means including an opening communicating with the bottom of said chamber for receiving the lower end of said pipe to support said filtering element in said operative position.

3,125,514
FILTERS FOR DEWATERING SUSPENSIONS

Rune Helmer Frykhult, Sundsbruk, near Sundsvall, Sweden, assignor to Sunds Verkstader Aktiebolag, Sundsbruk, Sweden

Filed Mar. 23, 1960, Ser. No. 17,136
Claims priority, application Sweden Mar. 24, 1959
3 Claims. (Cl. 210—396)



1. A filtering device for liquid suspensions comprising a trough adapted to contain liquid suspensions, means for supplying liquid suspension to said trough, a screening drum mounted in said trough to rotate on a substantially horizontal axis partially immersed in said liquid suspension, means for rotating said drum, means for discharging filtrate from at least one interior space of said drum and means for separating solid material from the outer surface of said drum, said drum comprising an outer shell having a pervious, substantially cylindrical side wall and a wall at each end thereof which is perpendicular to said axis, at least one of said end walls having an opening therein, an inner shell having an impervious side wall of circular cross section spaced apart from the cylindrical side wall of said outer shell and an impervious wall at each end thereof perpendicular to said axis, at least one of said end walls of said inner shell being spaced a substantial distance from said end wall of said outer shell having an opening therein, a plurality of partitions extending axially and radially between said side walls of said outer and inner shells and spaced circumferentially from each other, said partitions dividing the space between said side walls into a plurality of axially extending cells, said cells extending substantially the full length of said outer shell, at least one group of circumferentially spaced apart curved walls forming at least one group of ducts, the ducts of such group equalling in number the number of cells, said spaced apart curved walls being tightly connected with said partitions forming said cells, each of said curved walls extending axially the entire distance between said spaced end walls of said inner and outer shells and inwardly from said partitions to said interior space, said ducts being axially alined and contiguous with each other thereby occupying the entire circumference of said interior space, the width of each duct being several times its height, said ducts curving backward with respect to the direction of rotation of said drum, the distance between said spaced apart end walls of said inner and outer shells being substantially less than the axial length of said drum and said curved walls being substantially parallel to each other adjacent said interior space and diverging outwardly adjacent to said partitions.

3,125,515
FILTER

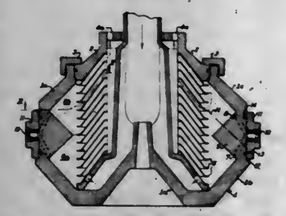
Frederick R. Gruner, Westfield, and James D. Abeles, Mendham, N.J., assignors to Purolator Products, Inc., Rahway, N.J., a corporation of Delaware

Filed Mar. 25, 1959, Ser. No. 801,808
1 Claim. (Cl. 210—493)

A paper filter having a high and a low flow rate section comprising a center tube, resin impregnated pleated filter paper disposed around said tube, end caps sealing off the opposite ends of the said paper, a predetermined area of said paper being compressed to form a thinner section of paper extending circumferentially around said tube to

provide a low flow rate section therein, the remaining circumferentially extending portion of said paper providing a high flow rate section, whereby two filter elements having different filtering characteristics are formed into a single filter cartridge from a continuous sheet of paper, said fast flow rate section consisting of resin impregnated paper having a porosity of 25 microns and said slow flow rate section having a porosity of 10 microns and this slow flow rate section comprising approximately one-half of the total area of the paper.

3,125,516
PERIPHERAL DISCHARGE SLUDGE COLLECTION CENTRIFUGAL DRUM
Franz Kaldewey, Oelde, Westphalia, Germany, assignor to Westfalia Separator Aktiengesellschaft, Oelde, Westphalia, Germany, a German corporation
Filed Mar. 14, 1961, Ser. No. 95,755
Claims priority, application Germany Mar. 14, 1960
6 Claims. (Cl. 233—39)

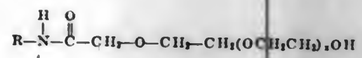


1. Centrifuge drum arrangement for centrifuging material including a rotatable drum having a top wall, a bottom wall, a constant outside diameter axially elongated intermediate wall axially separating said top and bottom walls and a radially inward separation zone containing a plurality of separator discs axially disposed in spaced relation one above the other for separating a lighter fraction from a heavier fraction of material centrifuged in the drum, at least two peripheral annular collection zones radially outwardly disposed with respect to said separation zone and axially positioned one above the other for collecting outwardly centrifuged heavier fraction material, each said collection zone defining a groove of V-shaped cross section, the apex of the V of each said groove being radially outwardly directed and the free ends of the V being radially inwardly directed, the free end of one groove and the corresponding free end of the next adjacent groove forming a radially inwardly directed common apex, all of the sides of the V-shaped grooves having a corresponding constant angle of slope with respect to the axis of the drum, a plurality of spaced apart outlet nozzles disposed along the drum periphery for peripherally discharging collected material, a corresponding plurality of spaced apart tubular conduit means being provided along the apex of the V of the groove in each said collection zone, a separate one of said tubular conduit means for one of said zones and a separate one of said tubular conduit means for the other of said zones jointly communicating with a common one of said outlet nozzles therefor, said annular collection zones being outwardly peripherally imperforate save for said tubular conduit means.

3,125,517
INVERT EMULSION DRILLING FLUID
Ronald L. Voda, Southgate, Mich., assignor to Wyandotte Chemicals Corporation, Wyandotte, Mich., a corporation of Michigan
No Drawing. Filed Nov. 10, 1960, Ser. No. 68,336
25 Claims. (Cl. 252—8.5)

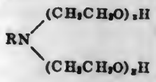
1. A stable water-in-oil emulsion drilling fluid having a pH in the range of 5 to 8 comprising, on a basis of 100 parts by weight of drilling fluid from about 70 to about 95 parts by weight of water, from about 5 to about 30 parts by weight of oil and from about 0.1 to about 10 parts by weight of an emulsifying agent comprising component A and component B wherein component A is an acid selected from the group consisting of monocarboxyl alkanoic, monocarboxyl alkenoic and monocarboxyl alkynoic fatty acids containing 2 to 22 carbon atoms, adipic acid, aliphatic sulfonic acids and alkyl aryl sulfonic acids and boric acid, and mixtures thereof and component B is a member selected from the group consisting of:

(1) hydroxyethyl acetamides and ethoxylated hydroxyethyl acetamides and mixtures thereof of the general formula



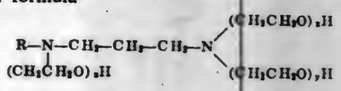
wherein R is a member selected from the group consisting of alkyl, alkenyl and alkynl radicals containing from 8 to 22 carbon atoms and x is in the range of 0 to an integer not to exceed one-third the number of carbon atoms contained in R, inclusive;

(2) ethoxylated amines and mixtures thereof of the general formula



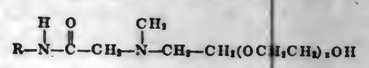
wherein R is a member selected from the group consisting of alkyl, alkenyl and alkynl radicals containing from 8 to 22 carbon atoms and wherein the total of $x+y$ is an integer of at least 2 and not to exceed one-third the number of carbon atoms contained in R;

(3) ethoxylated diamines and mixtures thereof of the general formula



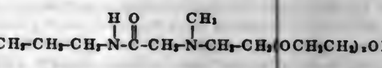
wherein R is a member selected from the group consisting of alkyl, alkenyl and alkynl radicals containing from 9 to 22 carbon atoms and wherein the total of $x+y+z$ is an integer of at least 3 and not to exceed one-third the number of carbon atoms contained in R;

(4) sarcosinamides and ethoxylated sarcosinamides and mixtures thereof of the general formula



wherein R is a member selected from the group consisting of alkyl, alkenyl and alkynl radicals containing from 8 to 22 carbon atoms and x is in the range of 0 to an integer not to exceed one-third the number of carbon atoms contained in R, inclusive; and

(5) sarcosinamides and ethoxylated sarcosinamides and mixtures thereof of the general formula



wherein R is a member selected from the group consisting of alkyl, alkenyl and alkynl radicals containing from 8 to 22 carbon atoms and x is in the range of 0 to an integer not to exceed one-third the number of carbon atoms contained in R, inclusive, and mixtures thereof.

3,125,518
TREATING OF WELLS
John A. Knox, Aleck B. Featherston, and Reginald M. Lasater, Duncan, Okla., assignors to Halliburton Company, Duncan, Okla., a corporation of Delaware
No Drawing. Filed Sept. 15, 1960, Ser. No. 56,113
7 Claims. (Cl. 252—8.55)

1. In a method of fracturing an underground zone or formation in oil and gas wells, the step of, introducing into the well an aqueous fracturing fluid containing a quantity of dispersed hard particles suitable for use as propping agents, said particles having been treated to be preferentially oil-wet and retaining said characteristic until at least reaching the formation to be fractured, and a quantity of a particulated polyphosphate compound which is slowly soluble in water for rendering said particles preferentially water-wet after said particles have been placed in the formation and thereby providing a continuous treatment of said particles when contacted with water to cause said particles to remain preferentially water-wet over a prolonged period of time.

3,125,519
LUBRICANTS
Georg Graue and Werner Läckerath, Homberg, Lower Rhine, Germany, assignors to Phoenix-Rheinrohr Aktiengesellschaft Vereinigte Hutten- und Rohrenwerke, Dusseldorf, Germany
Filed Feb. 3, 1961, Ser. No. 86,932
Claims priority, application Germany Feb. 9, 1960
3 Claims. (Cl. 252—11)

1. A heat-resistant, oil and fat-free, water-soluble lubricant consisting essentially of a molecularly dehydrated alkali metal phosphate and an alkali metal tetraborate, said alkali metal tetraborate being at least partially replaced by a salt selected from the group consisting of the sulfates and chlorides of sodium, potassium and magnesium in an eutectoid mixture.

3,125,520
OIL DISPERSIONS OF METALLIC SULFIDES AND METHOD FOR PREPARING THE SAME
Herbert Myers, Merchantville, N.J., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
No Drawing. Filed Mar. 31, 1961, Ser. No. 99,672
7 Claims. (Cl. 252—25)

1. A method for preparing a colloidal dispersion of metal sulfide in lubricating oil which comprises the steps of (1) forming an aqueous metal sulfide sol, said sol containing from about 0.1% to about 5% of a protecting colloid, (2) forming a mixture of said sol with (*a*) a water-soluble aliphatic alcohol in an amount to supply to said mixture at least about one-fourth part of alcohol per part of said sol and (*b*) a lubricating oil solution of a normal metal salt of an oil-soluble sulfonic acid having a molecular weight of from about 300 to about 800, the metal constituent of which is a metal of Group II of Mendeléeff's Periodic Table of the Elements, in an amount to supply to said mixture from about 0.1 to about 1.0 equivalent of metal per equivalent of metal supplied by said sol, whereby the colloidal metal sulfide is extracted from said sol and redispersed in the lubricating oil, and (3) removing the water and alcohol from said mixture to isolate the colloidal dispersion of metal sulfide in lubricating oil.

3,125,521
CALCIUM MIXED-SALT LUBRICANT STABILIZED AGAINST WATER CONTAMINATION
William Kenneth Detweiler, Westfield, William E. Lifson, Union, and Frederick L. Jonach, Short Hills, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Nov. 15, 1961, Ser. No. 152,680
7 Claims. (Cl. 252—32.7)

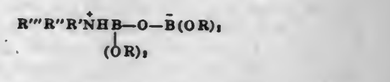
1. A composition suitable for the lubrication of the upper cylinders of marine diesel engine comprising a major amount of mineral lubricating oil, about 3 to 12 wt. percent of calcium mixed salts of acetic acid and C_7 to C_{12} fatty acid in a molar ratio of said acetic acid to said fatty acid of 11.5:1 to 25:1 and about 0.1 to 10.0 wt. percent of lubricating oil detergent additive capable of stabilizing said composition against separation upon water contamination of said composition, said detergent additive being selected from the group consisting of oil-soluble alkali metal and alkaline earth metal salts of alkyl phenol having about 5 to 20 carbon atoms in each alkyl group and about 1 to 3 alkyl groups per phenol group, P_2S_5 treated polymers of C_2 to C_5 olefins, said polymers having molecular weights in the range of about 500 to 200,000 Staudinger, and reaction products of said salts of said alkyl phenols and said polymers.

3,125,522
METAL ROPE LUBRICANT
Hendrik L. Reudink, Amsterdam, Netherlands, assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Nov. 30, 1960, Ser. No. 72,570
Claims priority, application Netherlands Feb. 29, 1960
3 Claims. (Cl. 252—33.4)

1. A metal rope lubricating composition comprising a mixture of (*a*) 20–30% by weight of a high melting point microcrystalline paraffin wax, (*b*) 25–35% by weight of an aromatic extract of a residual mineral lubricating oil fraction having a viscosity of from about 1000 to 5000 seconds, Redwood I at 140° F., (*c*) 5–15% by weight of lanolin, (*d*) 5–15% by weight of an oil-soluble petroleum sulfonate and (*e*) 25–45% by weight of a volatile aromatic hydrocarbon solvent.

3,125,523
LUBRICATING GREASES CONTAINING SALTS OF DIBORO ACIDS WITH AMINES
William R. Siegart, Wappingers Falls, and Norman R. Odell and Fred C. Toettcher, Fishkill, N.Y., and Edward L. Kay, Akron, Ohio, assignors to Texaco Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Jan. 17, 1961, Ser. No. 83,178
6 Claims. (Cl. 252—33.6)

1. A lubricating grease consisting essentially of a lubricating oil thickened to a grease consistency by a metal hydroxy fatty acid soap and containing about 0.1–10 percent by weight of the class of amine salts of diboro acids represented by the formula:



wherein R is a hydrocarbyl radical containing 1–24 carbon atoms, R′ is selected from the class consisting of aliphatic hydrocarbyl and hydroxy substituted aliphatic hydrocarbyl radicals containing 1–30 carbon atoms, and R″ and R‴ are selected from the class consisting of hydrogen, aliphatic hydrocarbyl and hydroxy substituted aliphatic hydrocarbyl radicals containg 1–24 carbon atoms.

3,125,524
LUBRICATING GREASES CONTAINING SALTS OF BORO ACIDS WITH AMINES
William R. Siegart, Wappingers Falls, and Norman R. Odell and Fred C. Toettcher, Fishkill, N.Y., and Edward L. Kay, Akron, Ohio, assignors to Texaco Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Jan. 17, 1961, Ser. No. 83,179
8 Claims. (Cl. 252—33.6)

1. A lubricating grease consisting essentially of a lubricating oil thickened to a grease consistency by a metal hydroxy fatty acid soap and containing about 0.1–10 per-

cent by weight of a compound of the class of amine salts of tetra-covalent boron acids represented by the formulas:

$$R'''R''R'\overset{+}{N}H\overset{-}{B}(YR)_4$$

and

$$(RY)_4\overset{-}{B}H\overset{+}{N}(R'R'')-X-\overset{+}{N}(R'R'')H\overset{-}{B}(YR)_4$$

wherein Y is selected from the group consisting of oxygen and sulfur, X is an aliphatic hydrocarbylene radical containing 2 to 10 carbon atoms, R is a hydrocarbyl radical containing 1 to 24 carbon atoms, R' is selected from the group consisting of aliphatic hydrocarbyl and halogen substituted aliphatic hydrocarbyl radicals containing 1 to 30 carbon atoms and R'' and R''' are selected from the group consisting of hydrogen and aliphatic hydrocarbyl radicals containing 1 to 24 carbon atoms.

3,125,525

LUBRICATING GREASES CONTAINING BORATE ESTER-AMINE COMPLEXES

William R. Siegart, Wappingers Falls, Clemence J. Henry, Newburgh, and Norman R. Odell and Fred C. Toettcher, Fishkill, N.Y., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 17, 1961, Ser. No. 83,183
14 Claims. (Cl. 252—33.6)

1. A lubricating grease consisting essentially of a lubricating oil thickened to a grease consistency by a metal hydroxy fatty acid soap and containing about 0.1–10 percent by weight of a complex of a borate ester and an aliphatic amine selected from the group consisting of monoamines containing at least 6 aliphatic carbon atoms per molecule and diamines, said borate ester and said amine being in a mol ratio of 10:1 to 1:1, respectively, and said borate ester being a compound of the class represented by the formulas:

$$R_nB(XR')_m$$

and

$$R_{n'}(BXB)(XR')_{m'}$$

wherein R is selected from the class consisting of hydrocarbon groups and substituted hydrocarbon groups, R' is selected from the class consisting of hydrogen, hydrocarbon groups and substituted hydrocarbon groups, X is selected from the class consisting of oxygen and sulfur, n is a whole number from 0 to 2, inclusive, m is a whole number from 1 to 3, inclusive, the sum of n and m being 3, n' is a whole number from 0 to 3, inclusive, m' is a whole number from 1 to 4, inclusive, the sum of n' and m' being 4, and at least one group represented by R and R' which is present in the compound being selected from the class consisting of hydrocarbon groups and substituted hydrocarbon groups.

3,125,526

LUBRICATING GREASES CONTAINING BORATE ESTER COMPOUNDS

William R. Siegart, Wappingers Falls, and Clemence J. Henry, Newburgh, N.Y., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 17, 1961, Ser. No. 83,186
7 Claims. (Cl. 252—40.7)

1. A lubricating grease consisting essentially of a lubricating oil thickened to a grease consistency by a metal hydroxy fatty acid soap and containing about 0.1–10 percent by weight of a compound selected from the class consisting of intramolecular coordinated borate esters represented by the formulas:

$$R_nB(XR')_m$$

and

$$R_{n'}(BXB)(XR')_{m'}$$

where R is selected from the class consisting of hydrocarbon groups and substituted hydrocarbon groups, R' is selected from the class consisting of hydrogen, hydrocarbon groups and substituted hydrocarbon groups, at least one group represented by R' being an aryl group containing an ortho positioned nucleophilic group, X is selected from the class consisting of oxygen and sulfur, n, is a whole number from 0 to 2, inclusive, m is a whole number from 1 to 3, inclusive, the sum of n and m being 3, n' is a whole number from 0 to 3, inclusive, m' is a whole number from 1 to 4, inclusive, and the sum of n' and m' is 4.

3,125,527

SYNERGISTIC COMBINATION OF EXTREME PRESSURE ADDITIVES FOR LUBRICATING OILS

Robert H. Krug, Cornwall, Raymond B. Tierney, Wappingers Falls, and Edwin C. Knowles, Poughkeepsie, N.Y., and Edward L. Kay, Akron, Ohio, assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 16, 1960, Ser. No. 49,841
8 Claims. (Cl. 252—46.3)

1. A synergistic extreme pressure additive combination for lubricants consisting essentially of from 5 to 80 parts by weight of a borate ester having the general formula:

$$B(OR)_3$$

wherein R is a hydrocarbyl radical having from 1 to 18 carbon atoms and one part by weight of a fatty acid selected from the group consisting of linoleic acid dimer, linolenic acid dimer and 13,15-docosadienoic acid dimer.

3,125,528

METHOD OF LUBRICATING AUTOMOTIVE VEHICLES

Edward L. Kay, Akron, Ohio, and Raymond B. Tierney, Wappingers Falls, Robert H. Krug, Cornwall, and Clemence J. Henry, Newburgh, N.Y., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 29, 1960, Ser. No. 59,179
7 Claims. (Cl. 252—49.6)

1. In the lubrication of the power train of an automotive vehicle having a transaxle unit comprising rear axle hypoid gears and a hydraulic transmission, the improvement which comprises supplying to both the rear axle gears and to the transmission a lubricating composition consisting essentially of a major amount of a lubricating oil, selected from the group consisting of mineral lubricating oil and a synthetic carboxylic acid ester lubricating oil, and from about 0.1 to 10 percent by weight of an organic boron compound of the class represented by the formulas:

$$R_nB(OR')_m$$

and

$$R_{n'}(BOB)(OR')_{m'}$$

wherein R is a hydrocarbon group having from 1 to 18 carbon atoms, R' is selected from the class consisting of hydrogen and a hydro-carbon group having from 1 to 18 carbon atoms, n is a whole number from 0 to 2, inclusive, m is a whole number from 1 to 3 inclusive, the sum of n and m being 3, n' is a whole number from 0 to 3 inclusive, m' is a whole number from 1 to 4 inclusive, the sum of n' and m' being 4, at least one of said groups represented by R and R' being a hydrocarbon group, said lubricating composition having a viscosity in the range from about 45 to about 60 seconds Saybolt Universal at 210° F.

3,125,529

MIXED ARYL PHOSPHATE ESTERS HAVING UNUSUAL KINEMATIC VISCOSITIES

Daniel Filmore Simmons and Henry Vedder Wainright, Point Pleasant, W. Va., assignors to Celanese Corporation of America, New York, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 19, 1960, Ser. No. 9,706
10 Claims. (Cl. 252—49.8)

1. A phosphate ester of a phenolic mixture comprising a member of the group consisting of 2,4-dimethyl phenol, 2,5-dimethyl phenol, 3,4-dimethyl phenol and mixtures thereof, the amount of said dimethyl phenols being at least 40% by weight of the phenolic mixture greater than any meta and para cresols present in said phenolic mixture and having at least 90% by weight of monocyclic phenols, said ester having a kinematic viscosity of at least 300 SUS at 100° F.

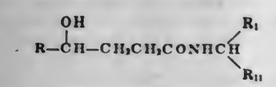
3,125,530

LUBRICATING GREASE COMPOSITIONS

Raymond L. Mayhew, Summit, N.J., and Joseph P. Copes, Easton, Pa., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 21, 1961, Ser. No. 97,128
4 Claims. (Cl. 252—51.5)

1. A grease composition comprising (a) a liquid petroleum hydrocarbon having a Saybolt viscosity at about 100° F. in the range of from about 50 to about 5,000, and (b) a thickening agent in an amount in the range of from about 0.1 to about 10 percent by weight of said petroleum hydrocarbon, said thickening agent consisting essentially of the reaction product of an alkanolamine and at least one N-substituted-γ-hydroxycarboxylic acid amide having the following general formula:



wherein R represents a member selected from the class consisting of hydrogen and methyl group, R_1 represents an organic radical containing from 10 to 30 carbon atoms, and R_{11} represents a member selected from the class consisting of hydrogen and an alkyl group of from 1 to 18 carbon atoms, the total number of carbon atoms constituting the groups in both R_1 and R_{11} being at least 10 and not more than 48 carbon atoms, said reaction product being formed by reacting equimolar amounts of said alkanolamine and said amide at about 150° C. for a period of about 1 hour.

3,125,531

LUBRICATING COMPOSITION

Howard J. Matson, Harvey, Ill., assignor, by mesne assignments, to Sinclair Research Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 3, 1961, Ser. No. 79,968
4 Claims. (Cl. 252—54.6)

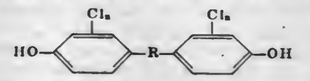
1. A lubricant composition consisting essentially of an ester-based synthetic fluid of lubricating viscosity, said ester-based fluid being of an alkanol of 4 to 12 carbon atoms and an alkane carboxylic acid of 4 to 12 carbon atoms and a minor amount sufficient to improve load-carrying capacity of said fluid of a base oil-compatible polyester reaction product of a material selected from the group consisting of a dicarboxylic acid having the structural formula:

$$HOOC-R-COOH$$

and an ester having the structural formula:

$$R'OOC-R-COOR'$$

wherein R in said formulae is an aliphatic saturated divalent hydrocarbon radical of 1 to 28 carbon atoms and R' is a lower alkyl radical of 1 to 5 carbon atoms, and a chlorobisphenol having the structural formula:



wherein R is a divalent aliphatic hydrocarbon radical of 1 to 8 carbon atoms and n equals 1 to 4, the molar ratio of said selected acid and ester to said chlorobisphenol reacted being 0.5 to 2:1.

3,125,532

METHOD OF DOPING SEMICONDUCTOR MATERIAL

Wolfgang Keller, Pretzfeld, Oberpfalz, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt, Germany, a corporation of Germany

No Drawing. Filed Mar. 28, 1961, Ser. No. 98,772
Claims priority, application Germany Mar. 31, 1960
13 Claims. (Cl. 252—62.3)

1. A method for doping semiconductor silicon, for making a semiconductor device, comprising fusing a vitreous material comprising a doping substance, to a semiconductor silicon rod, and subsequently subjecting the rod to a crucible free floating zone melting causing a molten zone to be displaced lengthwise of the rod.

3,125,533

SEMICONDUCTOR PROCESS

John E. Allegretti, Lawrence Brook Village, East Brunswick, N.J., and Joseph L. Waldman, Brooklyn, N.Y., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

Filed Aug. 4, 1961, Ser. No. 129,468
3 Claims. (Cl. 252—62.3)

1. A method for the production of a P-type semiconductor body having a resistivity of at least 1 ohm-cm. by simultaneous thermal deposition of semiconductor and a low concentration of P-type acceptor atoms from the vapor phase in the presence of hydrogen, said semiconductor having an agent present therein which ordinarily associates with said acceptor atoms in said low concentration range in a non-thermally decomposable form which comprises the steps of adding boron trichloride to liquid, predistilled, trichlorosilane in an amount in excess of that required to complex with said agent, distilling off the complex formed between said agent and said boron trichloride thereby rendering the remainder of said liquid substantially free of the influence of said agent, forming a gas stream of said thus-purified trichlorosilane, and introducing into said gas stream controlled, predetermined low concentrations of boron trichloride corresponding to the desired low concentration semiconductor body, and thereafter thermally decomposing said compounds from the vapor phase within a reactor onto a substrate to form said semiconductor body.

3,125,534

MAGNETIC GARNETS FOR MICROWAVE FREQUENCIES

Joel E. Zneimer, Verona, N.J., and Marshall H. Sirvetz, Boston, Mass., assignors to Raytheon Company, Lexington, Mass., a corporation of Delaware

Filed June 8, 1961, Ser. No. 120,118
8 Claims. (Cl. 252—62.5)

5. A composition of ferromagnetic material described by the formula $(Y_{1-\alpha}Sm_\alpha)_3Fe_5O_{12}$ in which α is greater than zero and less than one and related to the ferromagnetic resonance line width ΔH by the equation $\Delta H = 3{,}000\alpha$.

6. A composition of ferromagnetic material defined by the formula $(Y_{1-\beta}Gd_\beta)_3Fe_5O_{12}$ in which β is greater than zero and less than one and is substantially related to

the saturation magnetization of said composition, $4\pi M_s$, by the relation $4\pi M_s = 1900\ (1-\beta)$.

8. A composition of ferromagnetic material described by the formulae $(Y_{1-x-y}Gd_xSm_y)_3Fe_5O_{12}$ in which x is greater than zero and less than one and is substantially related to the ferromagnetic resonance line width ΔH by the relation $\Delta H = 3{,}000\alpha$ and in which β is greater than zero and less than one and is substantially related to the saturation magnetization of said material $4\pi M_s$ by the relation $4\pi M_s = 1900\ (1-\beta)$.

3,125,535
OPTICAL FILTERS AND METHOD OF MAKING SAME

Donald O. Hoffman, Sturbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts

Filed Mar. 20, 1961, Ser. No. 96,863
5 Claims. (Cl. 252—300)

1. A transparent plastic material having dispersed therein oxidatively polymerized dye compounds which are the reaction products of an organic substance selected from the group consisting of aniline, 2,5-diethoxyaniline, 2,5-dimethoxyaniline, o-toluidine, m-toluidine and N-phenyl-p-phenylenediamine reacted in situ within the plastic material with an oxidizing agent selected from the group consisting of permanganate salts, dichromate salts, chromate salts, ferricyanide salts, vanadate salts, vanadyl salts, chlorate salts, chlorite salts, hypochlorite salts, peroxides, dioxides, iodate salts, persulfate salts, bromate salts and nascent oxygen.

3,125,536
VINYL PRODUCTS AND PROCESS

William J. O'Brien, New Haven, Conn., assignor to The Seamless Rubber Company, New Haven, Conn., a corporation of Connecticut

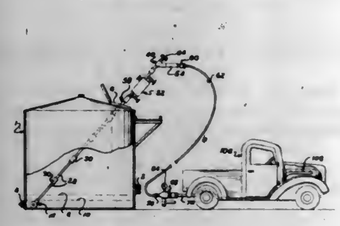
No Drawing. Filed Jan. 8, 1959, Ser. No. 785,564
4 Claims. (Cl. 252—301.3)

1. An article having a brilliant fluorescent color consisting essentially of a vinyl resin base, a fluorescent resin pigment distributed uniformly therethrough, and titanium dioxide also distributed uniformly therethrough and present in an amount equal to from about 2% to about 6% by weight of the vinyl resin; said article having a more brilliant fluorescent color than in the absence of titanium dioxide.

3,125,537
APPARATUS FOR TREATING CRUDE OIL EMULSIONS WITHIN A TANK

John E. Martin, Wichita Falls, Tex., assignor to Marmac Chemical Corporation, Wichita Falls, Tex., a corporation of Texas

Filed Feb. 14, 1961, Ser. No. 89,180
7 Claims. (Cl. 252—359)



7. A device for agitating and mixing emulsions and the like within a liquid storage tank, which tank has a plane bottom, by the use of a gaseous fluid, including a gaseous fluid supply; which device comprises an elongated tubular member having perforations formed therein, said tubular member having closed ends, a wheel rotatably mounted on each end of said perforate tubular member to hold said perforate tubular member a spaced distance above the plane on which said wheels are adapted to roll, a hollow connection connected to said perforate tubular member intermediate the length thereof, a rigid conduit connected in fluid communication with said hollow connection on said perforate tubular member, a flexible conduit connected to the distal end of said rigid conduit, means connecting said flexible conduit to said gaseous fluid supply, valve means within one of said conduits to control the supply of gaseous fluid directed into said perforate tubular member, which elongated, perforate tubular member has a curved plate attachably connected thereto, means provided on said curved plate to frictionally engage said rigid conduit to frictionally hold said curved plate in such manner that certain of said perforations in said tubular member are unobstructed, but which curved plate is so positioned that other of said perforations in said tubular member will direct the gaseous fluid escaping therefrom against said curved plate to divert the gaseous fluid at an angle with respect to the normal line of discharge from said perforations.

3,125,538
THALLIUM, ALKALI METAL AND SILVER ON SILICA CATALYST, AND ITS PREPARATION

Charles Arnold, Jr., Woodbury, and Jurgen M. Kruse, Pitman, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 29, 1958, Ser. No. 783,105
6 Claims. (Cl. 252—454)

1. An improved catalyst for catalyzing the reaction of propylene and nitric oxide to give acrylonitrile which consists essentially of elemental silver deposited on a silica support, said supported silver catalyst containing per gram-atom of silver 0.02 to 1 gram-atom of an ion of an alkali metal selected from the group consisting of potassium, cesium and rubidium and 0.3 to 1.3 gram-atoms of monovalent thallium ion, said silver being present in the amount of 2–5% by weight of the catalyst.

3,125,539
CERAMIC CATALYST HAVING A FLAME SPRAYED COATING OF A PLATINUM FAMILY METAL

Ernest Douglas Teague, Welwyn Garden City, England, assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts

No Drawing. Filed Dec. 12, 1958, Ser. No. 779,867
Claims priority, application Great Britain Dec. 16, 1957
4 Claims. (Cl. 252—455)

1. A ceramic catalyst consisting of a porous, catalytically inactive fired ceramic pellet containing at least 80% alumina and having a rough surface, and a coating thereon between .0001" and .010" thick of platinum family metal flame sprayed onto the pellet, said coating being interlocked with the surface of the pellet and integral with the pellet.

3,125,540
PREPARATION OF CELLULAR POLYURETHANE PLASTICS RESEMBLING NATURAL SPONGE

Günther Loew, Cologne, and Günther Hörl, Cologne-Flittard, Germany (% Farbenfabriken Bayer A.G., Leverkusen- Bayerwerk, Germany)

No Drawing. Filed July 18, 1960, Ser. No. 43,334
Claims priority, application Germany July 29, 1959
8 Claims. (Cl. 260—2.5)

1. A method for the production of cellular polyurethane plastics having a porous structure resembling that of natural sponge which comprises mixing a polyhydric polyalkylene ether having a molecular weight of at least about 500 with an organic polyisocyanate in the presence of a blowing agent substantially simultaneously in one step in the presence of from about 0.001 percent to about 5 percent by weight based on the weight of said polyhydric polyalkylene ether of a polysiloxane consisting of recurring structural units of the formula $\text{—O—Si(R)}_2\text{—}$ wherein R is selected from the group consisting of alkyl and aryl radicals, not more than about 50 percent by weight of the polysiloxane being said aryl radicals, said polysiloxane being sorbed on a carrier which is substantially insoluble in the polyhydric polyalkylene ether and having a viscosity within the range of from about 0.5 to about 25,000 centistokes at 25° C. and a water soluble silicone alkylene oxide copolymer and allowing the resulting mixture to foam to form said cellular polyurethane plastic.

3,125,541
METHOD FOR LEACHING A POLYURETHANE FOAM

Charles C. L. Hwa, Granville, and Daniel W. McNeil, Columbus, Ohio, assignors to Owens-Corning Fiberglas Corporation, a corporation of Delaware

No Drawing. Filed Oct. 18, 1960, Ser. No. 63,279
4 Claims. (Cl. 260—2.5)

1. A method for leaching a polyurethane foam comprising contacting the cell walls of a foam prepared by reacting an organic polyisocyanate and a compound selected from the group consisting of polyesters and polyethers for a time sufficient to exert a leaching effect upon said cell walls and to remove said cell walls, with a leaching composition consisting essentially of an alkaline solution and a hydroxyl substituted aliphatic hydrocarbon, said aliphatic hydrocarbon being present in a ratio of no more than one part by weight for each part by weight of said alkaline solution.

3,125,542
METHOD FOR LEACHING A POLYURETHANE FOAM

Richard M. Haines, Newark, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware

No Drawing. Filed Oct. 26, 1960, Ser. No. 65,003
3 Claims. (Cl. 260—2.5)

1. In a method for the leaching of a polyurethane foam by means of contacting a leachable polyurethane foam prepared by reacting an organic polyisocyanate and a polyester with an alkaline solution for a time sufficient to exert a leaching effect upon said foam and to remove the cell walls of said foam, the improvement comprising incorporating a monohydroxy glycol ether having the general formula $\text{R—O—R'}_n\text{—R'—OH}$, wherein R is an alkyl group having no more than two carbon atoms, R' is a divalent hydrocarbon group having no more than two carbon atoms, and n is an integer having a value from 0 to 1, in said alkaline solution.

3,125,543
STABILIZED CHLOROETHYLENIC POLYMER LATEXES

Edwin A. Blake and James J. Dahl, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Apr. 21, 1960, Ser. No. 23,613
15 Claims. (Cl. 260—23)

1. A stabilized composition of a chloroethylenic polymer latex containing about one percent of an alkali metal salt of an epoxy fatty acid, wherein said acid contains from about 16 to about 22 carbon atoms.

3,125,544
ASSOCIATION PRODUCT OF A POLYMERIC ETHER COMPOUND AND A PHENOLIC COMPOUND

Alfred E. Winslow, Scott Depot, and Keith L. Smith, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Mar. 25, 1960, Ser. No. 17,472
30 Claims. (Cl. 260—43)

5. An association product comprising between about 90 and 5 parts by weight of a polymeric ether compound having an average molecular weight between about 18,000 and 10,000,000 and containing from about 0.5 to 3.33 non-cyclic aliphatic oxygen ether groups per 100 molecular weight, and between about 10 parts and 95 parts by weight of a compound which contains at least one phenolic group and said phenolic groups constitute not less than 0.5 mole, on the average, per 100 molecular weight.

6. The association product of claim 5 wherein said polymeric ether compound comprises poly(alkylene oxide) resin and said phenolic compound comprises novolak phenolic resin.

7. The association product of claim 5 wherein said polymeric ether compound comprises poly(alkylene oxide) resin and said phenolic compound comprises resole phenolic resin.

3,125,545
HIGH IMPACT STRENGTH VINYL CHLORIDE RESIN COMPOSITIONS BLENDED WITH ETHYLENEVINYL ALKANOATE COPOLYMERS

Russell Van Cleve, Charleston, and Dennis H. Mullins, St. Albans, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Nov. 16, 1959, Ser. No. 852,935
10 Claims. (Cl. 260—45.5)

5. A homogeneous vinyl chloride resin composition comprising poly(vinyl chloride) resin having a molecular weight corresponding to a reduced viscosity of from about 0.5 to about 1.5 and, blended therewith, from about 10 percent to about 20 percent by weight based upon said resin composition of an ethylene-vinyl acetate copolymer resin containing from about 10 percent to about 35 percent by weight of the vinyl acetate component and having a molecular weight corresponding to a melt index of from about 1 to about 500.

10. A homogeneous vinyl chloride resin composition comprising a vinyl chloride-vinyl acetate copolymer resin containing up to about 20 percent by weight of the vinyl acetate component and having a molecular weight corresponding to a reduced viscosity of from about 0.5 to about 1.5 and, blended therewith, from about 10 percent to about 20 percent by weight of an ethylene-vinyl acetate copolymer resin containing from about 10 percent to about 35 percent by weight of the vinyl acetate component and having a molecular weight corresponding to a melt index of from about 1 to about 500.

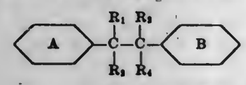
3,125,546
COMPOSITION AND PROCESS OF CROSSLINKING VINYL CHLORIDE POLYMER WITH DIALLYL MONOMER AND PEROXIDE CATALYST

Solomon Harris Pinner, London, Robert Roy Smith, Bergholt, Maurice Raymond Pettit, Brantham, and Edward Browell Atkinson, Ipswich, England, assignors to B.X. Plastics Limited, Essex, England, a British company

No Drawing. Filed Apr. 11, 1960, Ser. No. 21,078
Claims priority, application Great Britain Apr. 15, 1959
8 Claims. (Cl. 260—45.5)

7. A composition of matter which consists essentially of an intimate mixture of (1) a vinyl chloride polymer selected from the group consisting of vinyl chloride homopolymers and copolymers of vinyl chloride and vinyl acetate, (2) a compatible, polymerisable allyl monomer containing at least two olefinic double bonds, in a pro-

portion of at least 5 to less than 50% of allyl monomer, calculated on the total weight of (1) and (2), and (3) at least 1%, calculated on the weight of allyl ester (2) of a free radical polymerisation initiator selected from the group consisting of organic peroxy-type compounds and diphenyl ethanes of the general formula



in which R_1 to R_4 are each selected from the group consisting of hydrogen atoms and alkyl radicals containing up to 4 carbon atoms, at least two of R_1 to R_4 being alkyl radicals, and in which the benzene residues A and B are each selected from the group consisting of unsubstituted benzene residues, alkyl substituted benzene residues and alkoxy substituted benzene residues, which initiator, at a concentration of 0.1 mol of initiator per litre of pure diallyl phthalate monomer, will give a gelation time for pure diallyl phthalate monomer of 20 minutes at some temperature within the range of 120° C. to 250° C.

3,125,547

EXTRUDABLE COMPOSITION CONSISTING OF A POLYOLEFIN AND A FLUOROCARBON POLYMER

Philip Strubing Blatz, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Feb. 9, 1961, Ser. No. 88,004
10 Claims. (Cl. 260—45.5)

10. A melt extrudable thermoplastic polymer selected from the class consisting of polyethylene and ethylene α-olefin copolymers wherein the α-olefin has the structure $RCH=CH_2$, where R is an alkyl radical having from 1 to 8 carbon atoms, containing from 0.005 to 2 weight percent of a fluorocarbon fluid at temperatures between 120° to 300° C., selected from the class consisting of copolymers of vinylidene fluoride and hexafluoropropylene and telomerized polytetrafluoroethylene.

3,125,548

POLYETHYLENE BLEND

Edwin Lee Anderson, Orange, Tex., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 19, 1961, Ser. No. 111,140
6 Claims. (Cl. 260—45.5)

3. A polyethylene blend comprising 20 to 45 weight percent of a polyethylene having a density of less than 0.920 g./cc. and a melt index of 1.5 to 5 g./10 min., 30 to 60 weight percent of a polyethylene having a density of 0.924 to 0.933 g./cc. and a melt index of 5 to 15 g./10 min. and at least 10% of a polyethylene having a density above 0.945 g./cc. and a melt index of 3.0 to 35 g./10 min., said blend having a density of 0.925 to 0.935 g./cc.

3,125,549

HEAT STABILIZING VINYL RESINS

James A. Gallagher, Cranford, and Frank C. La Motta, Fords, N.J., and Walter L. Van Nostrand, Jr., Staten Island, N.Y., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Dec. 14, 1961, Ser. No. 159,456
2 Claims. (Cl. 260—45.7)

1. A composition of matter comprising polyvinyl chloride resin and as a heat stabilizing agent therefor 1 to 5 parts by weight per 100 parts of resin of an oxidized polymer of 25 to 100 parts by weight of a conjugated diolefin of 4 to 6 carbon atoms and 0 to 75 parts by weight of an ethylenically unsaturated monomer, containing 10 to 20% oxygen, said composition being stable to heating for at least 10 minutes to a temperature of at least 350° F.

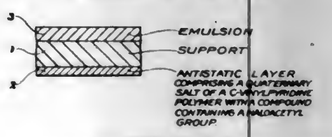
3,125,550

QUATERNARY SALTS OF C-VINYLPYRIDINE POLYMERS WITH COMPOUNDS CONTAINING A HALOACETYL GROUP

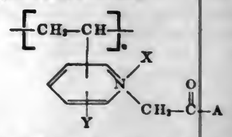
Thomas M. Laakso, Jack L. R. Williams, and Calvin S. Garber, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Original application Sept. 3, 1957, Ser. No. 681,601. Divided and this application Dec. 23, 1960, Ser. No. 77,904

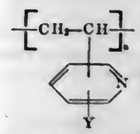
6 Claims. (Cl. 260—65)



1. A quaternary salt of a resinous C-vinylpyridine polymer consisting of from 70 to approximately 100% by weight in linear combination of a recurring unit of the following general structure:



the remainder of the polymer molecule being residual recurring C-vinylpyridine units of the following general structure:



wherein *n* represents a whole number, Y represents a member selected from the group consisting of a hydrogen atom and an alkyl group of 1 to 4 carbon atoms, X represents a halogen atom, and A represents a member selected from the group consisting of group —R which represents a member selected from the group consisting of an alkyl group to 1 to 4 carbon atoms, a phenyl group, a hydroxyphenyl group wherein the hydroxyl groups do not exceed 2, an acetamidophenyl group, an $—OR_1$ group wherein R_1 represents an alkyl group of 1 to 24 carbon atoms and an $—NR_2R_3$ group wherein R_2 represents a member selected from the group consisting of a hydrogen atom and an alkyl group of 1 to 4 carbon atoms, and R_3 represents a member selected from the group consisting of a hydrogen atom, an alkyl group of 1 to 4 carbon atoms and a phenyl group.

3,125,551

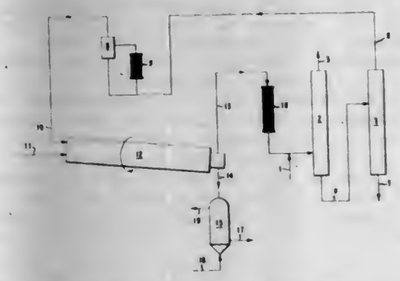
PROCESS FOR ESTERIFYING POLYOXYMETHYLENE GLYCOL WITH VAPORS OF AN ORGANIC CARBOXYLIC ACID ANHYDRIDE

John Oliver Punderson, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Mar. 9, 1959, Ser. No. 798,274
2 Claims. (Cl. 260—67)

1. A process for esterifying the hydroxyl groups on a polyoxymethylene starting material having a number average molecular weight of at least 10,000 and having at least one of the two ends of its polymer chain terminated by a hydroxyl group, which process comprises passing a continuously flowing stream of vapors of an anhydride of an aliphatic carboxylic acid having 2–6 carbon atoms per acid molecule into contact with said polyoxymethylene starting material in a substantially dry powdery form,

and initially at a temperature sufficiently low to cause said anhydride vapors to condense on the surfaces of said polyoxymethylene starting material, the said vapors during the period of contact with said polyoxymethylene consisting essentially of said anhydride and from 0–10% by weight of the carboxylic acid from which said anhydride is derived, the amount of said anhydride being from



0.05 to 5.0 parts by weight per part of said polyoxymethylene, maintaining the said vapors in contact with the said polyoxymethylene as the polyoxymethylene is heated to a temperature of 130°–175° C., and recovering a polyoxymethylene product in which substantially all of the hydroxyl groups in said starting material are converted to ester groups by reaction with said anhydride.

3,125,552

EPOXIDIZED POLYAMIDES

Samuel Loshaek, Hatboro, and Elizabeth A. Blommers, Abington, Pa., assignors to The Borden Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Sept. 21, 1960, Ser. No. 57,400
10 Claims. (Cl. 260—78)

1. In making a water soluble ethenoid bond polymerizable monomer containing terminal amide groups and a glycidyl ether group attached to and pendant from a secondary amine group, the process which comprises forming a mixture of (1) 1 mole of of an alkylene polyamine, having 2–4 carbon atoms per alkylene unit, two terminal primary amine groups and at least one intermediate secondary amine group, and (2) 0.9–1.6 moles of an alpha-unsaturated C_4–C_{10} aliphatic polycarboxylic acid, the proportion of said acid being so selected within the range stated as to provide the acid in amount less than equivalent to all amine groups and leave at least one secondary amine group, heating the resulting primary amine salt having therein unreacted secondary amine group at a temperature above the boiling point of water until said salt is decomposed to amide group and no substantial amount of additional water is liberated, then admixing epichlorohydrin in the proportion of about 0.4–3 moles for each mole of said acid used, and warming the resulting mixture at a temperature of at least 50° C. until the reaction that ensues between the unreacted secondary amine group and the epichlorohydrin is substantially completed and the pH has fallen to a substantially constant level.

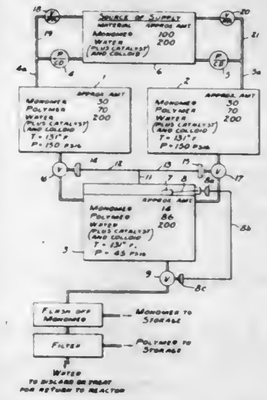
3,125,553

CONTINUOUS POLYMERIZATION PROCESS FOR VINYL MONOMERS

Robert E. Bingham, Cuyahoga Falls, Ohio, assignor to The General Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Filed June 22, 1960, Ser. No. 37,989
10 Claims. (Cl. 260—87.1)

1. A method for the suspension polymerization of unsaturated monomers at high rates of conversion which, free of a flowing inert gas, comprises delivering to a reaction zone a polymerizable monomer having from 1 to 3 $H_2C=C<$ groups, the polymer of said monomer being essentially insoluble in said monomer, in an amount of from about 5 to 50% by weight, about 95 to 50% by weight of water, and minor amounts of a catalyst to polymerize said monomer and protective colloid for said monomer, to form a mixture, polymerizing said monomer in said mixture in said reaction zone to a conversion of from about 40 to 90%, withdrawing from said reaction zone from about 1 to 60% by weight of a polymeric mixture of polymer, said monomer, water, colloid and catalyst residues, introducing into said reaction zone said monomer, water, catalyst and colloid to form a mixture substantially equivalent to the mixture originally in said



reaction zone, the amount by weight of said monomer in said second monomeric mixture being substantially equivalent to the amount by weight of monomer and polymer in said polymeric mixture withdrawn from said reactor, polymerizing the monomer in the mixture in said reaction zone to a conversion of from about 40 to 90%, and repeatedly withdrawing polymeric mixture from said zone, adding monomer, water, catalyst and colloid to said zone and polymerizing the monomer in the mixture in said zone to obtain increased yields of said polymer, the conversion of said monomer to said polymer being maintained at a substantially constant rate within the said ranges of from about 40 to 90% during the overall polymerization of said monomer to said polymer.

3,125,554

INTERPOLYMERS OF ALKENYL SILANES AND OLEFINIC HYDROCARBONS

Glenn D. Cooper and Alfred R. Gilbert, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York

No Drawing. Filed Nov. 25, 1958, Ser. No. 776,189
7 Claims. (Cl. 260—88.1)

4. The process for polymerizing to a solid high molecular weight composition a mixture of ingredients comprising (1) from 5 to 95 percent, by weight, of a monomeric alkenylsilane selected from the class consisting of vinyltrimethylsilane and allyltrimethylsilane and (2) from 95 to 5 percent, by weight, of a copolymerizable olefinic hydrocarbon having the formula

where R is selected from the class consisting of hydrogen and monovalent hydrocarbon radicals, which process comprises heating the aforesaid mixture of ingredients in the presence of a solvent and a mixed catalyst system

composed of an aluminum trialkyl and a titanium compound selected from the class consisting of titanium halides and titanium salts.

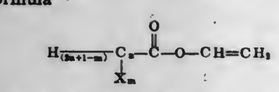
3,125,555

VINOXYCARBONYLMETHYLTRIALKYLPHOSPHONIUM HALIDES AND POLYMERS THEREOF

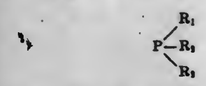
Philip John Paré, Yorktown Heights, N.Y., and Martin Hahser, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Oct. 26, 1961, Ser. No. 147,733
10 Claims. (Cl. 260—89.1)

1. A method for the production of a polymerizable monomer containing both vinyl ester and trialkyl phosphine groups which comprises reacting, in a substantially anhydrous medium, (1) a vinyl ester of a halo-acid having the formula



wherein X is an halogen radical, *m* is a whole positive integer of from 1 to 3, inclusive, and *n* is a positive whole integer from 1 to 4, inclusive, with (2) a trialkyl phosphine having the formula



wherein R_1, R_2 and R_3 are alkyl groups having from 1 to 8 carbon atoms, inclusive.

3,125,556

PROCESS OF MAKING HYDROXYALKYLATED POLYVINYL ALCOHOL

John C. Lukman, Fitchburg, Philip L. Gordon, Lexington, and Donald E. Dean, Fitchburg, Mass., assignors to The Borden Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Apr. 27, 1961, Ser. No. 105,866
7 Claims. (Cl. 260—91.3)

1. The process of making alkoxylated polyvinyl alcohol which comprises maintaining a C_2–C_4 alkylene oxide having an oxirane group therein in contact with polyvinyl alcohol and a catalyst at an elevated temperature, the catalyst being selected from the group consisting of ammonia and a mixture of ammonia and a C_2–C_4 alkanol amine.

3,125,557

SUSPENSION POLYMERIZATION OF VINYL CHLORIDE USING AMINO POLYACETIC ACID COMPOUNDS

Alva F. Harris, Wilbraham, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Dec. 19, 1960, Ser. No. 76,524
5 Claims. (Cl. 260—92.8)

1. In a process for polymerizing vinyl chloride with agitation in suspension in an aqueous medium containing a water-soluble suspending agent and a free radical-generating polymerization initiator at temperatures between 45–75° C., the improvement which comprises conducting the polymerization in the presence of 0.05–300 parts per million, based on the weight of vinyl chloride, of an amino polyacetic acid compound of the group consisting of compounds containing at least two $—CH_2COOH$ groups bound to a nitrogen atom and the alkali metal salts, alkylamine salts wherein the alkyl radical con ains 1 to 4 carbon atoms, dialkylamine salts wherein the alkyl radicals contain 1 to 2 carbon atoms, and alkyl esters wherein the alkyl radical contains 1 to 4 carbon atoms, of compounds containing at least two $—CH_2COOH$ groups bound to a nitrogen atom.

3,125,558

ORGANOALUMINUM-TRANSITION METAL HALIDE-ALKALI METAL FLUORIDE FOR OLEFIN POLYMERIZATION

Hugh J. Hagemeyer, Jr., and Marvin B. Edwards, Longview, Tex., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Feb. 17, 1959, Ser. No. 793,686
13 Claims. (Cl. 260—93.7)

1. In the polymerization of an α-monoolefin to form solid polymer by means of a catalyst consisting essentially of an alkyl aluminum halide selected from the group consisting of $RAlX_2$ and $R_3Al_2X_3$, wherein R is selected from the group consisting of alkyl radicals containing from 1–12 carbon atoms, phenyl and benzyl, and X is a halogen atom selected from the group consisting of chlorine, bromine, and iodine, and a halide of a transition metal selected from the group consisting of titanium, vanadium, chromium, molybdenum, and zirconium, the halogen atom being selected from the group consisting of bromine, chlorine, and iodine, the improvement which comprises effecting the polymerization in the presence of an alkali metal fluoride as a third component for the catalyst, said catalyst containing from 0.5 to 6 moles of alkyl aluminum halide and from 0.5 to 12 moles of alkali metal fluoride per mole of transition metal halide.

3,125,559

PROCESS FOR POLYMERIZING UNSATURATED MONOMERS WITH A CATALYST CONTAINING A METAL SALT PLATED ON A METAL

Edward C. Shokal, Walnut Creek, and Glen A. Short, Concord, Calif., assignors to Shell Oil Company, a corporation of Delaware

No Drawing. Filed Apr. 22, 1959, Ser. No. 808,019
14 Claims. (Cl. 260—93.7)

1. A process for polymerizing ethylenically unsaturated monomers which comprises contacting the ethylenically unsaturated monomer with a catalyst consisting essentially of a product obtained by plating an inorganic salt which is stable above 300° C., is free of oxygen and contains a metal of the group consisting of cobalt, magnesium, and cerium and mixtures thereof, with a layer from 1 molecule to 2,000 molecules thick of a metal of the group consisting of titanium, vanadium, cobalt and zirconium and mixtures thereof, said plating being accomplished at a temperature above 200° C.

3,125,560

PURIFICATION OF POLYMERS

John Brewster Rose, St. Albans, England, assignor to Imperial Chemical Industries Limited, Millbank, London, England, a corporation of Great Britain

No Drawing. Filed Oct. 5, 1959, Ser. No. 844,158
Claims priority, application Great Britain Oct. 13, 1958
21 Claims. (Cl. 260—93.7)

1. A process for the removal of catalyst residues from a polymer,

said catalyst containing a transition metal compound obtained by mixing an organometallic compound of aluminum with a member of the group consisting of titanium trihalide, titanium tetrahalide, vanadium tetrachloride and the product obtained by reaction of a titanium tetrahalide with aluminum,

said process comprising adding to the polymer, in the presence of a hydrocarbon liquid, a reagent A and subjecting the resultant mixture to an extraction treatment with an aqueous solution of a reagent B;

the reagent A being soluble in hydrocarbons and at least sparingly soluble in water, and, in hydrocarbon solution, forming with said transition metal compound a hydrocarbon solution of a transition metal coordination compound which is decomposable by said aqueous solution during extraction, said reagent A being a member of the group consisting of diketones having up to 8 carbon atoms in the molecule and having the formula R'—CO—CHR'''—CO—R'', β-keto esters having up to 8 carbon atoms in the molecule and having the formula

R'—CO—CHR'''—CO—OR''

where R' and R'' are alkyl groups and R''' is a member of the group consisting of hydrogen and alkyl groups and primary and secondary acyclic alkyl mono- and poly-amines having between 4 and 9 carbon atoms per amino group in the molecule;

and reagent B being soluble in water, and, in aqueous solution, decomposing said hydrocarbon soluble transition metal coordination compound during the extraction treatment to form a water soluble compound, stable to hydrolysis under the extraction conditions, which is effectively insoluble in hydrocarbon liquids, said reagent B being selected from the group consisting of complexing and sequestering agents which form complexes which are stable under the conditions used, oxalic acid, hydroxy carboxylic acids, mineral acids, boric acid, aliphatic polyamines, polyphosphates having the formula $(MPO_3)_m$, polyphosphates having the formula $M_{n+2}P_nO_{3n+1}$ and the alkali metal phosphate glasses, where M is an alkali metal selected from the group consisting of lithium, sodium and potassium, *m* is an integer not less than 3 and *n* is an integer not less than 2.

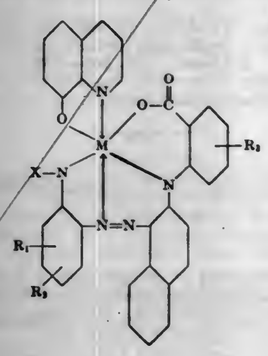
3,125,561

HEAVY METAL-CONTAINING MONOAZO DYES

Fabio Beffa and Guido Schetty, Basel, Switzerland, assignors to J. R. Geigy A.-G., Basel, Switzerland

No Drawing. Filed Oct. 11, 1960, Ser. No. 61,814
Claims priority, application Switzerland Oct. 12, 1959
7 Claims. (Cl. 260—146)

1. Metalliferous monoazo dye consisting of a metal compound of the formula



wherein

X represents a member selected from the group consisting of (lower)alkylsulfonyl, chloro(lower)alkylsulfonyl, phenylsulphonyl, (lower)alkylphenylsulphonyl, chlorophenylsulphonyl, bromophenylsulfonyl, (lower)alkoxyphenylsulphonyl and (lower)alkylsulphonylphenylsulphonyl,

M represents a member selected from the group consisting of chromium and cobalt,

R_1 and R_2 each represents a member selected from the group consisting of hydrogen, lower alkyl, lower alkoxy and chloro, and

R_3 represents a member selected from the group consisting of hydrogen and chlorine.

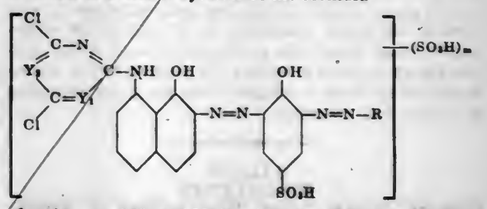
3,125,562

DISAZO DYESTUFFS

Jurg Ammann, Basel, and Werner Bossard, Riehen, near Basel, Switzerland, assignors to J. R. Geigy A.-G., Basel, Switzerland

No Drawing. Filed Mar. 17, 1961, Ser. No. 96,400
Claims priority, application Switzerland Mar. 18, 1960
6 Claims. (Cl. 260—146)

1. A metal-containing reactive dyestuff which contains one atom of a metal selected from the group consisting of copper and cobalt in complex union with one molecule in the case of copper and with two molecules in the case of cobalt of a disazo dyestuff of the formula



wherein one of Y_1 and Y_2 is =N— and the other is



R is a member selected from the group consisting of radicals of coupling components of the benzene, naphthalene and 1-phenyl-5-pyrazolone series, the radical containing —OH in ortho-position to the azo group to which R is directly bound, and

m is a positive whole number of at most 4.

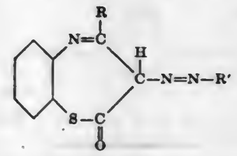
3,125,563

AZO DYES CONTAINING A BENZO-THIAZEPIN-ONE RING

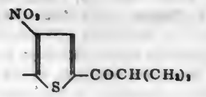
Edmund B. Towne, William H. Moore, and Joseph B. Dickey, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed July 19, 1962, Ser. No. 211,092
9 Claims. (Cl. 260—152)

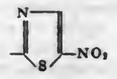
1. Monoazo compounds having the general formula



wherein R=a member of the class consisting of lower alkyl and a benzene radical, R_1=a member of the class consisting of a benzene radical and the radicals



and



3,125,564

DIHALO-TRIAZINYLAMINO-AZO AND ANTHRAQUINONE DYESTUFF COMPOSITIONS STABILIZED WITH MIXTURES OF ALKALI METAL PHOSPHATES

Robert Norman Heslop and William Elliot Stephen, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Jan. 9, 1959, Ser. No. 785,977
4 Claims. (Cl. 260—153)

1. Solid dyestuff compositions containing as the principal coloring matter the substantially neutral alkali metal salt of a dyestuff selected from the class consisting of azo and anthraquinone dyestuffs containing at least one ionogenic solubilizing group and an amino group selected from the class consisting of primary and secondary amino groups carrying as N-substituents a 1:3:5-triazine radical containing two halogens, selected from the group consisting of chlorine and bromine atoms attached to the carbon atoms of said triazine ring, and a stabilizer for said dyestuff consisting essentially of a mixture of water-soluble alkali metal salts of phosphoric acid, which mixture has an aqueous solution a pH of from 6 to 8, wherein said alkali metal is selected from the group consisting of sodium and potassium.

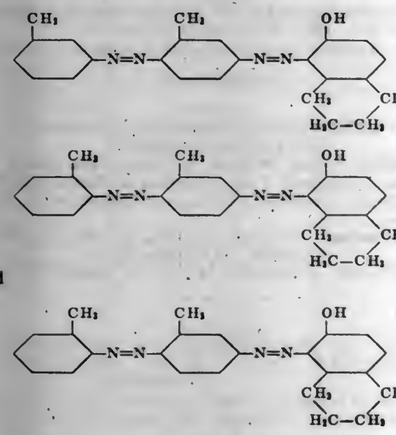
3,125,565

DISAZO DYES

Ermanno Gaetani, Milan, Italy, assignor to Aziende Colori Nazionali Affini Acna S.p.A., Milan, Italy, a corporation of Italy

No Drawing. Filed Apr. 14, 1960, Ser. No. 22,127
Claims priority, application Italy Mar. 7, 1960
4 Claims. (Cl. 260—191)

1. A disazo dye insoluble in water selected from the group consisting of the dyes of the formulae:



and

3,125,566

PROCESS FOR OBTAINING NOVOBIOCIN

Frank J. Wolf, Westfield, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Nov. 30, 1955, Ser. No. 550,200
10 Claims. (Cl. 260—210)

1. In a process for obtaining novobiocin from aqueous solutions containing the same, the steps that comprise subjecting the said aqueous solution to extraction with an organic extracting solvent at a hydrogen-ion concentration within the acid range below about pH 7.0, said organic solvent being a merely slightly polar, neutral, water-immiscible substance, soluble in cold concentrated sulfuric acid and in cold concentrated ortho-phosphoric acid, liquid at ordinary room temperatures and selected from the group consisting of esters, ketones and alkanols higher than butanol in the homologous alkanol series; and subjecting the organic solvent extract to extraction with an aqueous buffer solution having a pH of at least 8.5.

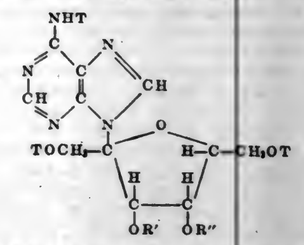
3,125,567

6-AMINO-9-D-PSICOFURANOSYLPURINE DERIVATIVES AND PROCESS THEREFOR

William Schroeder, Pavilion Township, Kalamazoo County, Charles Lewis, Kalamazoo, Herman Hoeksema, Kalamazoo Township, Kalamazoo County, Thomas E. Eble, Kalamazoo, and Brian Bannister, Kalamazoo Township, Kalamazoo County, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Filed Jan. 26, 1959, Ser. No. 788,748
8 Claims. (Cl. 260—211.5)

3. A compound having the formula:



wherein T is a trityl group, R′ and R″ are selected from the class consisting of hydrogen, a hydrocarbon carboxylic acid acyl group containing from one to twelve carbon atoms, inclusive, and a halo-, nitro-, hydroxy-, amino-, cyano-, thiocyano-, and lower-alkoxy-substituted hydrocarbon carboxylic acid acyl group containing from one to twelve carbon atoms, inclusive, and wherein R′ and R″ do not represent hydrogen simultaneously.

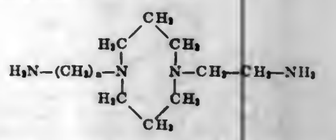
3,125,568

1,5-DIAZACYCLOOCTANE DERIVATIVES AND THE PREPARATION THEREOF

Ernst Jucker, Ettingen, Basel-Land, Adolf J. Lindenmann, Basel, and John Gmünder, Muttenz, Basel-Land, Switzerland, assignors to Sandoz Ltd., Basel, Switzerland, a Swiss firm

No Drawing. Filed Nov. 13, 1961, Ser. No. 152,054
Claims priority, application Switzerland Nov. 17, 1960
5 Claims. (Cl. 260—239)

1. A member of the class consisting of 1,5-diazacyclooctane derivatives of the Formula I

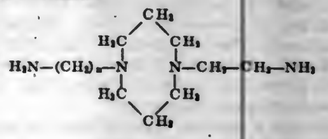


(I)

wherein *n* represents an integer from 2 to 12 inclusive, and their non-toxic therapeutically useful addition salts with an acid selected from the group consisting of hydrohalic and mono- and dibasic organic acids.

2. 1,5-bis-(β-aminoethyl)-1,5-diazacyclooctane.

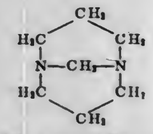
5. A method of preparing 1,5-diazacyclooctane derivatives of the Formula I



(I)

wherein *n* represents an integer from 2 to 12 inclusive,

which comprises reacting 1,5-diazabicyclo[3,3,1]nonane of the Formula II

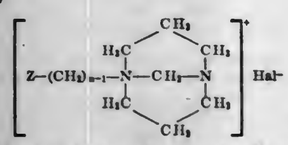


(II)

with a compound of the general Formula III

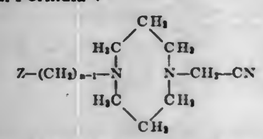
$$Z-(CH_2)_{n-1}-Hal \qquad (III)$$

wherein *n* has the above significance, Z is a member of the group consisting of CN and H_2NCO and Hal is a member of the group consisting of chlorine, bromine and iodine, treating the resulting compound of the general Formula IV



(IV)

wherein *n*, Z and Hal have the above significance, with an alkali metal cyanide and reducing the resulting compound of the general Formula V



(V)

wherein *n* and Z have the above significance.

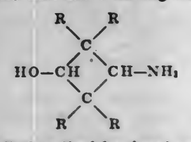
3,125,569

3-AMINO-2,2,4,4-TETRAALKYLCYCLOBUTANOLS

James C. Martin and Edward U. Elam, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Nov. 25, 1960, Ser. No. 71,399
3 Claims. (Cl. 260—563)

1. A cyclobutane derivative having the formula



wherein R is an alkyl radical having 1 to 8 carbon atoms.

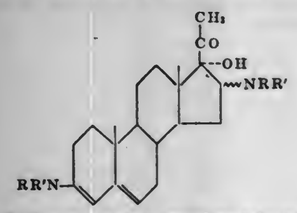
3,125,570

3,16-DIAMINO-3,5-PREGNADIENES AND PROCESS FOR PREPARING SAME

László Vargha, Márta Rados, Endre Kasztreiner, and László Szporny, all of Budapest, Hungary, assignors to Richter Gedeon Vegyészeti Gyár RT., Budapest, Hungary

No Drawing. Filed Aug. 21, 1962, Ser. No. 218,464
6 Claims. (Cl. 260—239.5)

1. A steroid derivative of the formula



wherein RR′N represents a member selected from the group consisting of di-(lower alkyl)-amino, morpholino, piperidino and pyrrolidino.

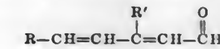
3,125,571

THIAPYRANS AND THEIR USE IN PREPARING POLYENES

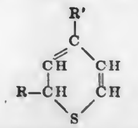
Albert J. Chechak and Charles D. Robeson, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Original application July 27, 1960, Ser. No. 45,561. Divided and this application May 28, 1962, Ser. No. 197,841
18 Claims. (Cl. 260—240)

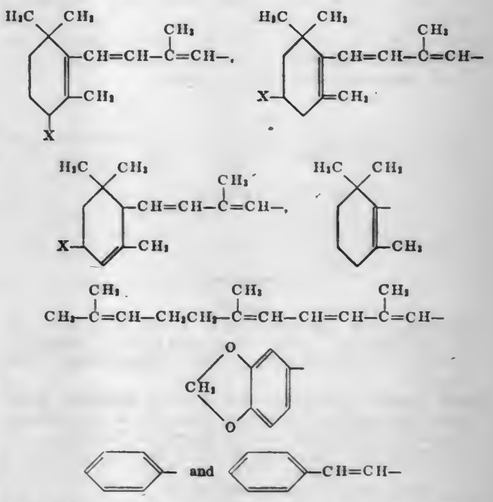
1. The process which comprises reacting at a temperature in the range of −40° C. to 15° C. hydrogen sulfide and an unsaturated aldehyde having the formula



and forming a substituted thiapyran having the formula



wherein R′ is alkyl and wherein R is a monovalent organic radical having a formula selected from the group consisting of

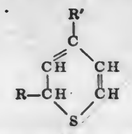


and wherein X is selected from the group consisting of hydrogen, oxo having the formula =O, alkoxy and acyloxy having the formula



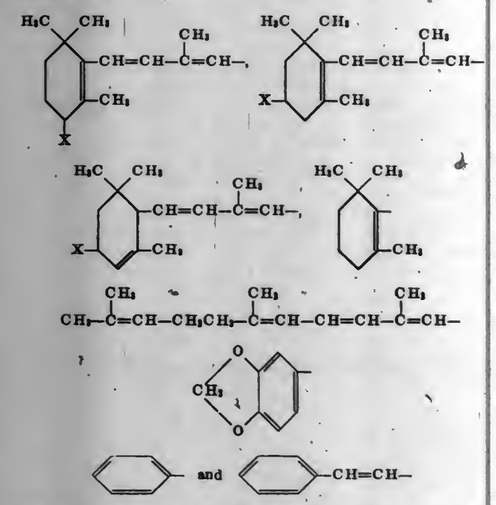
wherein R‴ is alkyl.

5. A compound having the formula

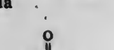


wherein R′ is alkyl and wherein R is a monovalent or-

ganic radical having a formula selected from the group consisting of

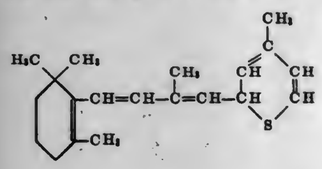


and wherein X is selected from the group consisting of hydrogen, oxo having the formula =O, alkoxy and acyloxy having the formula



wherein R''' is alkyl.

7. A compound having the formula



3,125,572

MORPHOLINE COMPOUNDS SUBSTITUTED IN 2,3-POSITIONS AND 2,3,6-POSITIONS RESPECTIVELY, AND PROCESS FOR PREPARING THE SAME

Harm Siemer, Konstanz, and Adolf Doppstadt, Konstanz-Litzelstetten, Germany, assignors to Ravensberg G.m.b.H., Chemische Fabrik, Konstanz, Germany

No Drawing. Filed July 23, 1958, Ser. No. 750,313
2 Claims. (Cl. 260—247)

1. 2-cyclohexyl-3-methylmorpholine.

2. As a chemical compound the 8-chlorotheophyllinate of 2-cyclohexyl-3-methylmorpholine.

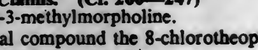
3,125,573

1 - TERTIARY - AMINO - 1 - (MONOCARBOXYLIC ARYL)-ω-TERTIARY - AMINO-2-AZA-1-ALKENES AND THEIR PREPARATION

Bill Elpern, Walnut Creek, Calif., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

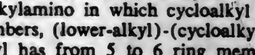
No Drawing. Filed May 17, 1960, Ser. No. 29,584
22 Claims. (Cl. 260—247.5)

1. A member of the group consisting of (A) a compound having the formula



wherein Ar represents monocarbocyclic aryl, Alk represents lower-alkylene, and N=B and N=B' represent members of the group consisting of di-lower-alkylamino, dicycloalkylamino in which cycloalkyl has from 5 to 6 ring members, (lower-alkyl)-(cycloalkyl)amino in which cycloalkyl has from 5 to 6 ring members, polymethyleniminо having from 5 to 7 ring members, 4-morpholinyl, di-(phenyl-lower-alkyl)amino, and lower-alkyl-(phenyl-lower-alkyl)amino; (B) acid-addition salts thereof; and (C) lower-alkyl, lower-alkenyl and monocarbocyclic aryl-lower-alkyl quaternary ammonium salts thereof; monocarbocyclic aryl in each intsance being selected from the group consisting of plenyl and phenyl substituted by from one to three substituents selected from lower-alkyl, lower-alkoxy, halogen, lower-alkylmercapto, trifluoromethyl and nitro.

7. A compound having the formula



wherein Ar represents 4-chlorophenyl, N=B represents di-lower-alkylamino, and N=B' represents 4-morpholinyl.

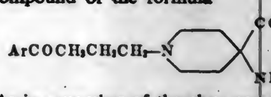
3,125,574

1-AROYLPROPYL-4-ACYL-4-AMINO-PIPERIDINES

Paul A. J. Janssen, Vosselaar, near Turnhout, Belgium, assignor to Research Laboratorium Dr. C. Janssen N.V., a corporation of Belgium

No Drawing. Filed Feb 21, 1962, Ser. No. 174,686
12 Claims. (Cl. 260—247.5)

1. A compound of the formula



wherein Ar is a member of the class consisting of fluorophenyl and thienyl; R is a member of the class consisting of lower alkyl and phenyl; and —NR'R'' is a member of the class consisting of dimethylamino, morpholino, piperidino and 1-pyrrolidinyl.

8. 1 - [γ-(4-fluorobenzoyl)propyl]-4-propionyl-4-morpholinopiperidine.

3,125,575

PIPERAZINOALKYL GLYCOLATES

John H. Biel, Milwaukee, Wis., assignor to Lakeside Laboratories, Inc., Milwaukee, Wis., a corporation of Delaware

No Drawing. Filed Mar. 14, 1960, Ser. No. 14,500
3 Claims. (Cl. 260—268)

1. Beta-piperazinoethyl benzilate.

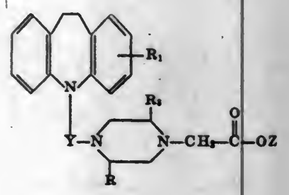
3,125,576

5 - (PIPERAZINOALKYL)10,11 - DIHYDRO - 5H - DIBENZ(b,f)AZEPINES, PROCESSES OF PRODUCING SAME AND USES THEREOF

John H. Biel, Milwaukee, Wis., assignor to Lakeside Laboratories, Inc., Milwaukee, Wis., a corporation of Delaware

No Drawing. Original application Jan. 22, 1960, Ser. No. 3,989. Divided and this application Nov. 21, 1960, Ser. No. 70,377
3 Claims. (Cl. 260—268)

1. A member of the group consisting of compounds of the formula



and nontoxic acid addition salts thereof, wherein R_1 is a member of the group consisting of hydrogen, halogen, lower alkyl, lower alkoxy, thiomethyl, trifluoromethyl and sulfonamido, R_2 and R_3 are members of the group consisting of hydrogen and methyl, Z is a member of the group consisting of hydrogen, lower alkyl and di-lower-alkylamino-lower alkyl groups and Y is an alkylene group of 2 to 5 carbons with at least two carbons between the azepine and piperazine nitrogens to which it is bonded.

2. 5 - (4-carbethoxymethyl-6-methylpiperazinopropyl)-10,11-dihydro-5H-dibenz(b,f)azepine.

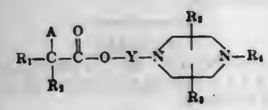
3,125,577

N-SUBSTITUTED PIPERAZINOALKYL GLYCOLATES

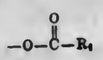
John H. Biel, Milwaukee, Wis., assignor to Lakeside Laboratories, Inc., Milwaukee, Wis., a corporation of Delaware

No Drawing. Filed May 3, 1962, Ser. No. 192,054
9 Claims. (Cl. 260—268)

1. A member of the group consisting of compounds of the formula



and nontoxic acid addition salts and nontoxic lower alkyl halide quaternary ammonium salts thereof, wherein R_1 and R_2 are members of the group consisting of phenyl, halophenyl, aminophenyl, lower alkoxyphenyl, thienyl, furyl, pyridyl, and cycloalkyl groups having 3 to 7 carbons in the ring, R_3 and R_5 are members of the group consisting of hydrogen and lower alkyl groups, R_4 is a member of the group consisting of phenyl-lower alkyl, phenyl-lower alkenyl and lower alkenyl, Y is an alkylene group of not more than 5 carbons, and A is a member of the group consisting of hydroxy, halo and the group



wherein R_6 is a lower alkyl.

3,125,578

4-(2',6'-DIOXO-3'-PIPERIDYL)-PIPERIDINES

Paul Adriaan Jan Janssen, Vosselaar, near Turnhout, Belgium, assignor to Research Laboratorium Dr. C. Janssen N.V., a corporation of Belgium

No Drawing. Filed May 17, 1962, Ser. No. 195,404
26 Claims. (Cl. 260—281)

1. A member selected from the group consisting of 1-R_1-4-(2,6-dioxo-3-R_2-3-piperidyl)-piperidine and therapeutically active, nontoxic acid addition salts, where R_1 is a member of the group consisting of benzyl, lower alkyl from 1 to 7 carbons, cinnamyl, phenyl-but-3-methyl, thienyl-alk, N-anilino-carbonyl-alk, pyridyl-alk, N-anilino-alk, phenyl-alk, phenyl-hydroxy-alk, halo-benzyl, halo-benzyl-alk, phenoxy-alk, benzoyl-alk, alk-benzyl, di-alk-benzyl, alko-phenoxy-alk and alk-phenoxy-alk; and R_2 is a member of the group consisting of phenyl, alko-phenyl, alk-phenyl, di-alk-phenyl, pyridyl and halo-phenyl, wherein alk is lower alkyl of 1 to 4 carbon atoms, alko is lower alkoxy of 1 to 4 carbon atoms and halo is a member of the group consisting of chloro, bromo, fluoro and iodo.

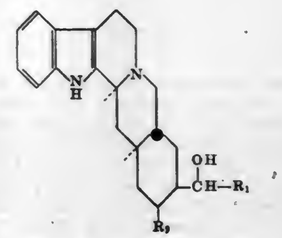
3,125,579

18-SUBSTITUTED YOHIMBONE DERIVATIVES AND PROCESS THEREFOR

John Shavel, Jr., Mendham, and Harold Zinnes, Denville, N.J., assignors to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware

No Drawing. Filed July 11, 1961, Ser. No. 123,106
7 Claims. (Cl. 260—288)

1. A member selected from the group consisting of compounds of the formula



wherein R_1 is phenyl substituted with one to two members selected from the group consisting of halogen, nitro and trifluoromethyl and R_2 is a member selected from the group consisting of keto and hydroxyl, and the pharmaceutically acceptable non-toxic acid addition and quaternary ammonium salts thereof with a compound selected from the group consisting of methyl iodide, ethyl bromide, n-hexyl bromide, benzyl chloride, methyl sulfate, ethyl sulfate and methyl p-toluene sulfonate.

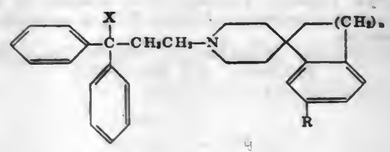
3,125,580

N-(3,3 - DIPHENYL - 3 - ALKANOYL)PROPYLSPIRO (TETRALIN - 1,4' - PIPERIDINES) AND RELATED COMPOUNDS

Paul A. J. Janssen, Vosselaar, near Turnhout, Belgium, assignor to Research Laboratorium Dr. C. Janssen, N.V., Beerse, Belgium, a company of Belgium

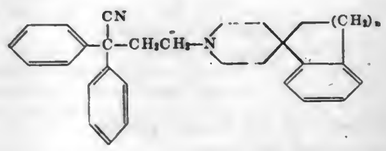
No Drawing. Filed Oct. 10, 1961, Ser. No. 144,018
10 Claims. (Cl. 260—293)

1. A compound of the formula



wherein X is selected from the group consisting of cyano and —CO-(lower alkyl); n is a positive integer less than 3; and R is selected from the group consisting of hydrogen and methyl.

9. A compound of the formula



wherein n is a positive integer less than 3.

3,125,581
2,3 AND 2,3,4, PERFLUORO CARBON SUBSTITUTED PERFLUORO OXETANES

Donald Drake Coffman, West Chester, Pa., and John Ferguson Harris, Jr., Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Oct. 10, 1958, Ser. No. 766,390
12 Claims. (Cl. 260—333)

1. A compound having the skeletal structure



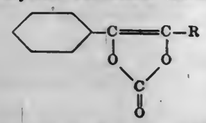
wherein each of bonds *a*, *b*, *c*, and *d* is satisfied by a member of the group consisting of F, perfluoroalkyl of 1 to 10 carbons inclusive, omega-hydroperfluoroalkyl of 1 to 10 carbons inclusive, perfluoroalkylene forming with carbon directly attached through bonds *a* and *b*, a carbocyclic ring of 4 to 7 carbons inclusive, and perfluoroalkylene forming with carbons directly attached through bonds *c* and *d*, a carbocyclic ring of 4 to 7 carbons inclusive, with the proviso that each of bond *c*, and at least one of bonds *a* and *b*, is satisfied by a member of said group other than F.

3,125,582
PHENYLVINYLENE CYCLIC CARBONATES

Leo R. Morris, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed June 23, 1961, Ser. No. 119,036
3 Claims. (Cl. 260—340.2)

1. A phenylvinylene carbonate having the formula:



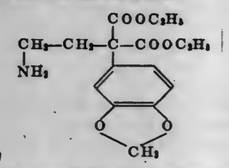
wherein R is a member of the class consisting of bromine and chlorine.

3,125,583
α-PHENYL-γ-AMINO BUTYRIC ACIDS AND DERIVATIVES THEREOF

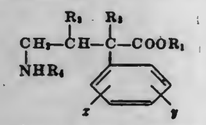
Frederick Leonard, Yonkers, N.Y., assignor to Geigy Chemical Corporation, Ardsley, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 29, 1960, Ser. No. 5,365
10 Claims. (Cl. 260—340.5)

6. The compound of the formula



9. A member selected from the group consisting of the compounds of the formula



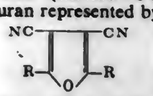
and the non-toxic salts thereof, wherein
R_1 is an alkali metal ion,
R_2 is a member selected from the group consisting of hydrogen and carbethoxy,
R_3 and R_4 each is a member selected from the group consisting of hydrogen and methyl,
x is a member selected from the group consisting of methyl, methoxy, chlorine and hydrogen,
y is a member selected from the group consisting of methyl and hydrogen, and
x and *y* taken together stand for —O—CH_2—O— attached to adjacent carbon atoms of the phenyl group.

3,125,584
CYANOFURANS

Claus D. Weis, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Feb. 2, 1961, Ser. No. 86,597
7 Claims. (Cl. 260—346.1)

1. A 3,4-dicyanofuran represented by the formula



wherein the R groups are alike and are from the class consisting of hydrogen, 1-4 carbon alkyl, carboxy, hydroxymethyl and chlorocarbonyl.

2. 3,4-dicyanofuran.

3,125,585
PREPARATION OF BICYCLO-(2,2,2)-OCT-7-ENE - 2,3,5,6 - TETRACARBOXYLIC ACID DIANHYDRIDE

William F. Yates, Dickinson, Tex., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Mar. 20, 1962, Ser. No. 181,176
2 Claims. (Cl. 260—346.3)

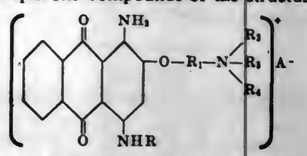
1. The process of preparing bicyclo-(2,2,2)-oct-7-ene-2,3,5,6-tetracarboxylic acid dianhydride which comprises reacting two moles of maleic anhydride with one mole of trans 1-chlorobutadiene at a temperature of about 200° C. to about 220° C.

3,125,586
QUATERNARY AMMONIUM SALTS OF 2-AMINO-ALKOXY SUBSTITUTED ANTHRAQUINONES

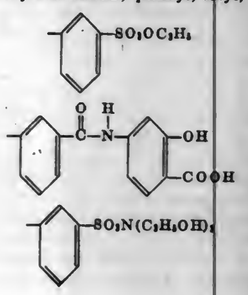
Leon Katz, Springfield, and Melvin N. Turetzky, East Brunswick, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 8, 1960, Ser. No. 1,183
9 Claims. (Cl. 260—377)

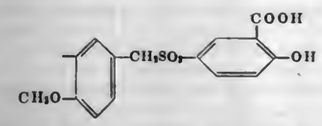
1. Anthraquinone compounds of the structure



where R is a radical selected from the group consisting of alkyl, hydrogen, cyclohexyl, phenyl, p-acetamidophenyl, (N-methylacetamido) phenyl, tolyl,

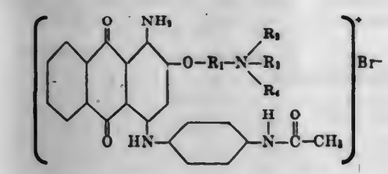


and



R_1 represents an alkylene group of 2 to 6 carbon atoms and R_2 and R_3 are each a radical selected from the group consisting of an alkyl of from 1 to 3 carbon atoms each and phenyl, and together with the nitrogen atom to which they are attached form a member selected from the group consisting of morpholino and piperidino, R_4 is a radical selected from the group consisting of alkyl and ethyl p-tolyl and A^- is an anion selected from the group consisting of sulfonate and inorganic chloride, bromide, iodide and sulfate.

4. The anthraquinone compounds of the following structure



where R_1 represents an alkylene group of 2 to 6 carbon atoms and each R_2, R_3, and R_4 is alkyl of from 1 to 3 carbon atoms.

3,125,587
$\Delta^{8(9)}$-7-KETO-11-OXY STEROIDS AND PROCESSES OF PREPARING THEM

John M. Chemerda, Metuchen, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed July 10, 1952, Ser. No. 298,205
9 Claims. (Cl. 260—397.1)

5. The process which comprises reacting methyl Δ^7-3,7-diacetoxy-9,11-epoxy-cholenate with a mild hydrolyzing agent comprising an aqueous solution of a lower alkanol to produce methyl $\Delta^{8(9)}$-3-acetoxy-7-keto-11-hydroxy-cholenate, and reacting the latter compound with chromic acid to form methyl $\Delta^{8(9)}$-3-acetoxy-7,11-diketo-cholenate.

3,125,588
SELECTIVE HYDROGENATION PREGNADIENOLONE AND ITS ESTERS AT THE C_{16}—C_{17} POSITION

Peter Edward Macey and Peter Oxley, Nottingham, England, assignors to Boots Pure Drug Company Limited, Nottingham, England, a British company

No Drawing. Filed Oct. 15, 1962, Ser. No. 230,682
Claims priority, application Great Britain Oct. 31, 1961
6 Claims. (Cl. 260—397.4)

1. A process for the selective hydrogenation at the 16—17 position of a compound selected from the group consisting of $\Delta^{5,16}$-pregnadien-3β-ol-20-one and its lower alkanoic acyl esters which comprises subjecting such compound to hydrogenation in the presence of a solvent selected from the group consisting of benzene and toluene.

3,125,589
4-CHLORO-6-(HYDROXYAMINO)-1,3-BENZENEDISULFONAMIDES AND INTERMEDIATE

Arthur H. Goldkamp, Glencoe, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Mar. 26, 1962, Ser. No. 182,633
2 Claims. (Cl. 260—397.7)

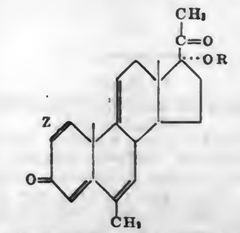
1. 4-chloro - 6 - hydroxyamino - 1,3 - benzenedisulfonamide.

3,125,590
6-METHYL-$\Delta^{4,6,9(11)}$-PREGNATRIENES AND DERIVATIVES THEREOF

Howard J. Ringold, Mexico City, Mexico, assignor, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed Apr. 6, 1960, Ser. No. 20,242
Claims priority, application Mexico June 1, 1959
6 Claims. (Cl. 260—397.45)

1. A compound of the following formula:



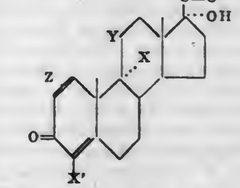
wherein R is a hydrocarbon carboxylic acyl group of less than 12 carbon atoms; and Z is selected from the group consisting of a double bond between C–1 and C–2 and a saturated linkage between C–1 and C–2.

3,125,591
4-CHLORO-9α-FLUORO-PREGNENES AND DERIVATIVES THEREOF

Howard J. Ringold, Shrewsburg, Mass., and George Rosenkranz and John Edwards, Mexico City, Mexico, assignors to Syntex Corporation, Panama, Panama, a corporation of Panama

No Drawing. Filed Dec. 13, 1962, Ser. No. 247,789
Claims priority, application Mexico Apr. 25, 1958
9 Claims. (Cl. 260—397.45)

1. A compound of the following formula:



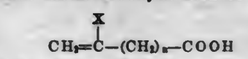
wherein R is selected from the group consisting of hydrogen and a hydrocarbon carboxylic acyl group of up to 12 carbon atoms; X is selcted from the group consisting of bromine, chlorine and fluorine, X′ is selected from the group consisting of chlorine and bromine; Y is selected from the group consisting of β-hydroxy and keto and Z is selected from the group consisting of a single and a double bond between C–1 and C–2.

3,125,592
PREPARATION OF POLYMERIZABLE VINYLATED COMPOUNDS

Charles S. Nevin, Decatur, Ill., assignor to A. E. Staley Manufacturing Company, Decatur, Ill., a corporation of Delaware

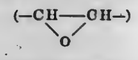
No Drawing. Filed June 26, 1961, Ser. No. 119,340
19 Claims. (Cl. 260—405)

1. The method of preparing a polymerizable vinylated monomer which comprises reacting an epoxidized ester of an alcohol and a higher aliphatic carboxylic acid with a vinyl aliphatic monocarboxylic acid of the formula



wherein *n* is an integer ranging from 0 to 2 and X is

a group selected from the class consisting of hydrogen, lower alkyl, phenyl, benzyl, halogen, cyano and —CH_2—COO (alkyl) in the presence of phenolic free radical inhibitor and of gaseous oxygen, said inhibitor and oxygen cooperating to inhibit vinyl polymerization, said higher aliphatic carboxylic acid having a chain of 10–24 carbon atoms, whereby said epoxidized ester is acylated with the carboxyl group of said vinyl acid at an oxirane segment



3,125,593
PROCESS FOR THE PRODUCTION OF VINYL ESTERS

Kenneth Raymond Hargrave, Kirkella, and Clive Gordon Gasser, Cottingham, England, assignors to The Distillers Company Limited, Edinburgh, Scotland

No Drawing. Filed Aug. 29, 1961, Ser. No. 134,565
Claims priority, application Great Britain Aug. 30, 1960
4 Claims. (Cl. 260—410.9)

1. Process for the production of vinyl ester of carboxylic acid having from 5 to 30 carbon atoms which consists of contacting at a temperature between 150 and 300° C. a liquid phase mixture consisting essentially of said carboxylic acid and acetic acid with acetylene in the presence as catalyst of a zinc salt of a carboxylic acid having less than 5 carbon atoms.

3,125,594
PROCESS FOR THE PREPARATION OF HALOGENATED ORGANIC COMPOUNDS

Karl W. Hubel and Emile Henri Braye, Brussels, Belgium, assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Mar. 31, 1960, Ser. No. 18,808
Claims priority, application Great Britain Apr. 7, 1959
10 Claims. (Cl. 260—448.2)

1. A process for the preparation of halogenated linear and cyclic organic compounds free of carbon to metal bonds, which comprises reacting an organo-metallic complex having the formula: $M_x(CO)_y(R'C_2R'')_z(B)_w$ wherein M is a transition metal of groups VI, VII and VIII of the periodic table, $(R'C_2R'')_z$ represents at least one moiety bonded to M by at least one carbon to metal bond, C_2 represents two carbons bonded to each other, R' and R'' represent monovalent groups selected from the group consisting of hydrogen, halogeno, carboalkoxy, alkyl, aryl, cycloaliphatic hydrocarbon groups, alkoxy and silyl, CO represents carbonyl bonded to one of the class consisting of M and C_2, B represents a group bonded to one of the class consisting of M and C_2 and is selected from the group consisting of hydrogen, mercury, halogen, alkyl, aryl, and acyl, *x* represents an integer of from 1 to 4, *y* represents an integer of from 1 to 10, *z* represents an integer of from 1 to 6, and *w* represents an integer of from 0 to 4, with a halogenation reagent whereby the carbon to metal bond between M and the moiety $(R'C_2R'')_z$ in said complex is broken and halogen is added to the $(R'C_2R'')_z$ moiety to form said halogenated organic compounds free of carbon to metal bonds, and recovering said halogenated organic compounds thus formed.

3,125,595
PROCESS FOR REMOVING IRON CONTAMINANTS FROM COBALT OXO CATALYST

William T. Brady, Austin, and Ben R. Hauk, Longview, Tex., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Nov. 21, 1958, Ser. No. 775,337
6 Claims. (Cl. 260—465.1)

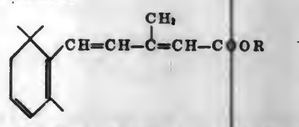
1. In a process for the hydroformylation of an olefinic compound with carbon monoxide and hydrogen in the presence of a cobalt hydroformylation catalyst wherein the hydroformylation reaction is conducted in the presence of iron-containing equipment and wherein the cobalt hydroformylation catalyst becomes contaminated with iron, the improvement for separating iron from said iron-contaminated cobalt hydroformylation catalyst which comprises digesting said iron-contaminated catalyst in nitric acid to convert iron and cobalt to corresponding nitrates, raising substantially the pH of resulting solution not above 5.4 wherein cobalt remains in solution and an iron-containing precipitate is formed and separating iron-containing precipitate from cobalt-containing solution.

3,125,596
PROCESS FOR THE PRODUCTION OF α,β-UNSATURATED ACIDS OF THE VITAMIN A SERIES

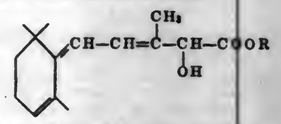
Hermann Oediger, Cologne-Flittard, and Karl Eiter, Cologne-Stammheim, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed July 27, 1960, Ser. No. 45,528
Claims priority, application Germany Aug. 9, 1959
6 Claims. (Cl. 260—468)

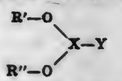
1. Process for the production of α,β-unsaturated acid esters of the formula



wherein R is an alkyl radical of 1 to 4 carbon atoms, which comprises splitting off water from an α-hydroxy carboxylic acid ester of the formula



wherein R is as above defined by treating said ester with a water splitting compound of the formula



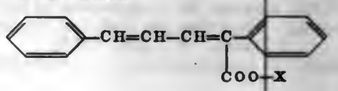
wherein R' is selected from the group consisting of alkyl radicals having up to five carbon atoms, cyclohexyl and phenyl, R'' is selected from the group consisting of alkyl radicals having up to five carbon atoms and cyclohexyl, X is selected from the group consisting of phosphorus and arsenic, and Y is selected from the group consisting of chlorine and bromine in the presence of an organic tertiary base selected from the group consisting of quinoline and dimethylaniline, at a temperature between 80° and 200° C., and recovering resulting α,β-unsaturated acid ester.

3,125,597
ANTI-FADING AGENTS ABSORBING ULTRAVIOLET RAYS

Ottmar Wahl, Baden-Baden, and Johannes Götze, Cologne-Stammheim, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

Filed Mar. 11, 1960, Ser. No. 14,357
Claims priority, application Germany Mar. 12, 1959
2 Claims. (Cl. 260—469)

2. A hydroxyalkyl ester of 1-carboxy-1,4-diphenyl-1,3-butadiene of the formula



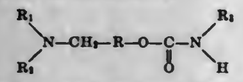
in which X is a hydroxyalkyl radical of the group consisting of 2-hydroxypropyl and 2,4-dihydroxybutyl.

3,125,598
DIALKYLAMINOARYL ARYLCARBAMATES

Engelbert Kühle, Cologne-Stammheim, and Ludwig Eue, Cologne-Mulheim, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Nov. 30, 1959, Ser. No. 855,989
Claims priority, application Germany Dec. 6, 1958
4 Claims. (Cl. 260—471)

1. A compound of the formula



wherein R_1 and R_2 stand for lower alkyl, R_3 stands for a member selected from the group consisting of phenyl and chlorophenyl and R is selected from the group consisting of dimethyl phenylene and naphthyl.

3,125,599
POLYMERS OF FLUOROCARBON EPOXIDES

Joseph Leo Warnell, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed June 15, 1961, Ser. No. 117,300
8 Claims. (Cl. 260—535)

1. A polyether of tetrafluoroethylene epoxide having the general formula

$$CF_3—CF_2—O—(CF_2—CF_2—O)_n—CF_2—COX$$

where *n* is a positive integer from zero to 50 and represents the number of —CF_2—CF_2—O— groups in the chain, and X is a radical selected from the class consisting of fluorine, hydroxyl, amino and methoxy radicals.

3,125,600
PROCESS FOR THE PRODUCTION OF ADIPIC ACID

Julius Jacob Fuchs, Charleston, W. Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Jan. 18, 1960, Ser. No. 3,142
1 Claim. (Cl. 260—537)

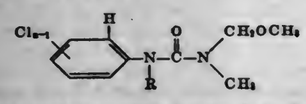
A process for the production of adipic acid which comprises subjecting methyl 1-hydroxycyclohexanecarboxylate to oxidation with aqueous nitric acid solution of 30–70% strength in the presence of 0.01–0.5% by weight, based on the nitric acid solution, of a mixture of salts of copper and vanadium at a temperature between 30° and 150° C. and at a pressure between atmospheric and about 500 p.s.i., and isolating adipic acid by crystallization from the nitric acid solution.

3,125,601
1-PHENYL, 3-METHOXYMETHYL, 3-METHYL-UREAS

Max T. Goebel, Chadds Ford, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Aug. 11, 1960, Ser. No. 48,853
1 Claim. (Cl. 260—553)

A compound of the formula



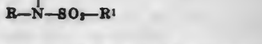
wherein *n* is a whole positive integer from 1 through 4, and R is selected from the group consisting of hydrogen and methyl.

3,125,602
N-ALKYL-N-NITROSO ALKYL SULFONAMIDES

Henry A. Hill, Watertown, Mass., and William P. ter Horst, Pikesville, Md., assignors to National Polychemicals, Inc., Wilmington, Mass., a corporation of Massachusetts

No Drawing. Filed Nov. 29, 1957, Ser. No. 699,445
3 Claims. (Cl. 260—556)

1. A liquid N-alkyl-N-nitroso alkyl sulfonamide having the general formula:



wherein R is a primary normal alkyl having 1 to 6 carbon atoms and R^1 is an alkyl radical.

3,125,603
PROCESS FOR THE PRODUCTION OF N-TRIALKYLBORAZANES

Roland Köster, Mulheim-Ruhr, Germany, assignor to Studiengesellschaft Kohle m.b.H., Mulheim-Ruhr, Germany

No Drawing. Filed Feb. 3, 1958, Ser. No. 712,666
Claims priority, application Germany Feb. 5, 1957
14 Claims. (Cl. 260—583)

1. Process for the production of N-trialkylborazanes, which comprises reacting in the presence of small proportions of halogen-free N-trialkylborazanes a compound of the general formula $R_3N.B(Hal)_3$, wherein each R represents a member selected from the group consisting of alkyl and cycloalkyl groups having up to 6 carbon atoms, the total number of carbon atoms in said R_3N moiety not to exceed 12, Hal designating a member selected from the group consisting of fluorine and chlorine, with a compound which is selected from the group consisting of alkali metal hydrides (MH), alkaline earth metal hydrides (MH_2), alkali metal borohydrides (MBH_4), alkaline earth metal borohydrides ($M[BH_4]_2$), complex compounds of alkali metal hydrides (MH) with trimethyl boric acid esters and complex compounds of alkaline earth metal hydrides (MH_2) with trimethyl boric acid esters, employing a molar ratio of said metal compound to $R_3N.B(Hal)_3$ of 3:1 when the metal component of said metal compound is monovalent, and of 3:2 when said metal component is divalent and recovering said N-trialkylborazane formed.

3,125,604
PRODUCTION OF DIARYL SULFONES

Gordon B. Robbins, Claymont, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Jan. 23, 1961, Ser. No. 83,935
7 Claims. (Cl. 260—607)

1. A process of producing a diaryl sulfone, which comprises adding from 0.2 to 1.0 mole of a halide of pentavalent phosphorous to a liquid mass containing substantially one mole of an aryl sulfonic acid and at least one mole of an unsulfonated H-aryl compound, each of said aryl compounds containing not more than 12 C-atoms in its nuclear structure and, when further substituted, said substituents are selected from members of the group consisting of alkyl, alkoxy, thioalkyl, halogen, phenyl, nitrophenyl and phenoxy, all alkyls mentioned being radicals of 1 to 4 C-atoms, heating the liquid mass to reflux until evolution of HCl is no longer observed, followed by the addition of a Friedel-Crafts catalyst and further heating the reaction mass whereby to cause reaction between any by-product aryl-sulfonyl halide, and non-sulfonated aryl compound present in the

reaction mass, producing additional quantities of the desired diaryl sulfone, then drowning the reaction mass in hot water, cooling to precipitate diaryl sulfone and recovering said precipitate.

3,125,605

PROCESS FOR THE PRODUCTION OF ALCOHOLS

Karl Büchner, Oberhausen-Sterkrade, Josef Meis, Oberhausen-Osterfeld, and Otto Roelen, Oberhausen-Holten, Germany, assignors to Ruhrchemie Aktiengesellschaft, Oberhausen-Holten, Germany, a German corporation

No Drawing. Filed Sept. 10, 1958, Ser. No. 760,077
Claims priority, application Germany Sept. 18, 1957
9 Claims. (Cl. 260—635)

1. A method of producing dialcohols which comprises mixing an aldehyde carboxylic acid derived by formylation in accordance with the oxo process of an ethylenically unsaturated acid containing from 18 to 22 carbon atoms with a water-soluble lower alcohol containing at least two carbon atoms contacting said mixture with hydrogen in the presence of a copper oxide-chromium oxide hydrogenation catalyst at a temperature above 150° C. and a pressure above 700 p.s.i. for a time sufficient to form said dialcohol and recovering said dialcohol.

3,125,606

PROCESS FOR THE MANUFACTURE OF NITROFORM AND ITS SALTS

Donald J. Glover, Bowie, Md., Joseph C. Dacons and Darrell V. Sickman, Washington, D.C., and Marion E. Hill, Kensington, and Mortimer J. Kamlet, Silver Spring, Md., assignors to the United States of America as represented by the Secretary of the Navy

No Drawing. Filed Jan. 12, 1959, Ser. No. 786,437
7 Claims. (Cl. 260—644)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. The process of producing light metal salts of nitroform consisting essentially of reacting tetranitromethane with a nitrite salt of a light metal in the ratio of at least two equivalents of salt per equivalent of tetranitromethane.

3,125,607

PURIFICATION OF VINYL CHLORIDE

Harry M. Keating and Phillip D. Montgomery, Texas City, Tex., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Dec. 22, 1960, Ser. No. 77,514
3 Claims. (Cl. 260—656)

1. A process for the purification of vinyl chloride containing minor amounts of butadiene which comprises intimately contacting said vinyl chloride in the liquid phase with chlorine at a temperature within the range from about −20° C. to about 0° C., the amount of chlorine being such that the mole ratio of chlorine to butadiene contained in said vinyl chloride is from about 1:1 to about 5:1, and recovering said vinyl chloride.

3,125,608

PURIFICATION OF VINYL CHLORIDE

David W. McDonald, Texas City, Tex., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Dec. 22, 1960, Ser. No. 77,515
2 Claims. (Cl. 260—656)

1. A process for the purification of vinyl chloride containing minor amounts of butadiene which comprises heating said vinyl chloride with hydrogen at a temperature from about 60° C. to about 250° C. in the presence of a catalyst consisting essentially of a catalytically active metal of group VIII of the periodic table supported upon an inert carrier and recovering vinyl chloride substantially free of butadiene.

3,125,609

PURIFICATION OF VINYL CHLORIDE

Phillip D. Montgomery, Texas City, Tex., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Dec. 23, 1960, Ser. No. 77,785
4 Claims. (Cl. 260—656)

1. A process for the purification of vinyl chloride containing minor amounts of butadiene which comprises contacting said vinyl chloride in the vapor state at a temperature within the range from about 25° C. to about 350° C. with cupric chloride supported upon a material having a high surface area and recovering vinyl chloride substantially free from butadiene.

3,125,610

PROCESS FOR THE PREPARATION OF AROMATIC COMPOUNDS FROM ACETYLENICALLY UNSATURATED HYDROCARBONS

Gustav Daendliker, Birsfelden, and Walter Scheller, Munchenstein, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a Swiss company

No Drawing. Filed Oct. 24, 1961, Ser. No. 147,155
Claims priority, application Switzerland Oct. 28, 1960
5 Claims. (Cl. 260—673)

1. A process for the manufacture of mononuclear aromatic hydrocarbons by cyclizing acetylenically unsaturated hydrocarbons, containing as polymerizable unsaturated bonds only one triple bond and being selected from the group consisting of acetylene, dimethylacetylene, diethylacetylene, diphenylacetylene, methylacetylene, ethylacetylene and mixtures thereof, in which process said acetylenically unsaturated hydrocarbons are introduced, at a temperature ranging from −10° to 200° C. and under a pressure ranging from 100 to 2000 mm. Hg, into an anhydrous organic solvent containing in suspension 2 to 40 grams of a cyclization catalyst per liter of solvent, said catalyst being a unitary catalyst consisting essentially of a tungsten compound containing halogen and said catalyst being selected from the group consisting of tungsten halides, tungsten oxyhalides and mixtures thereof, the mononuclear aromatic hydrocarbons produced are separated by distilling them out of the reaction mixture after filtering off the cyclization catalyst.

3,125,611

PROCESS FOR THE SEPARATION OF OLEFINIC HYDROCARBONS USING A SILVER SALT MODIFIED BY PENTAVALENT VANADIUM IONS

George Clarke Monroe, Jr., Orange, Tex., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 9, 1962, Ser. No. 193,617
5 Claims. (Cl. 260—677)

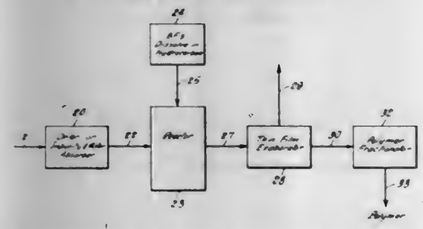
1. In the separation of olefinic hydrocarbons from fluid hydrocarbons containing such which also contain hydrogen, comprising contacting said fluid hydrocarbon mixture with an aqueous solution of a silver salt selected from the class consisting of silver fluoborate, silver fluosilicate and mixtures thereof, and thereafter regenerating the silver salt solution and recovering the olefinic hydrocarbons, the step of contacting the hydrocarbon mixture with a solution of said silver salt which has been modified by the addition of pentavalent vanadium ions in sufficient concentration to prevent the reduction of silver ions and by the addition of sufficient hydrofluoric acid to maintain the vanadium ion in solution.

3,125,612

METHOD FOR THE PRODUCTION OF POLYISOBUTYLENE

Edward T. Child and Marvin L. Rambo, Fishkill, and John T. Nolan, Jr., Wappingers Falls, N.Y., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

Filed Mar. 29, 1961, Ser. No. 99,088
7 Claims. (Cl. 260—683.15)



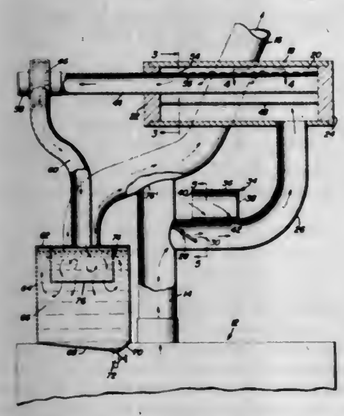
1. A method for producing polyisobutylene having a number average molecular weight in the range of 1000 to 1600 which comprises forming a feed mixture of isobutylene and a hydrocarbon, said mixture consisting of 50 to 65% by weight of said isobutylene, and polymerizing said mixture in the presence of 0.025 to 0.04% by weight of boron trifluoride based on said mixture at a temperature in the range of −5° to −10° F. for a residence time of 45 to 55 minutes.

3,125,613

SMOKE ELIMINATOR

Charles McCartney, 218 5th St., Dravosburg, Pa.

Filed Nov. 8, 1960, Ser. No. 68,097
3 Claims. (Cl. 261—17)



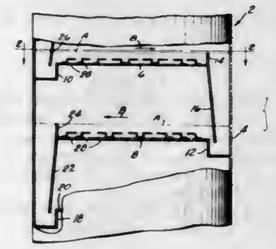
1. A smoke eliminator for a furnace having an exhaust stack comprising means forming an air chamber, means connected to said air chamber for communicating the air chamber with the exhaust stack of the furnace, a vacuum tube including a plurality of air inlet openings disposed in the air chamber, a blower having an inlet connected by means of a duct with the vacuum tube, a water tank, means connecting the discharge of the blower with the water tank, compartment means disposed in the water tank and connected to said connecting means to receive combustion products from said blower, said compartment means having a perforated outlet means disposed below the water level in the water tank for discharging combustion products into the tank through the water, and an exhaust duct communicated with the top of the water tank for discharging cleaned air from the water tank to the atmosphere, the exhaust stack of the furnace being also directly connected by means of a duct with the exhaust duct extending from the top of the water tank to the atmosphere at a point downstream from the water tank and spaced above said means communicating the air chamber with the exhaust stack for assuring discharge of combustion products even though the smoke eliminator is inoperative, an automatic draft control means for automatically closing said means communicating the air chamber with the exhaust stack when the blower is rendered inoperative thereby forcing furnace exhaust through the exhaust stack and exhaust duct to the atmosphere in lieu of through the smoke eliminator, and means on said communicating means for admitting atmospheric air continuously for cooling and diluting the combustion products.

3,125,614

DISTILLATION COLUMN

Franklin D. Mayfield and James H. Mayes, Baton Rouge, La., assignors to Foster Grant Co., Inc., Leominster, Mass., a corporation of Delaware

Continuation of application Ser. No. 797,405, Mar. 5, 1959. This application Dec. 4, 1961, Ser. No. 157,613
8 Claims. (Cl. 261—114)



1. A fluid-fluid contact device for causing intimate and efficient contacting of fluids comprising, in combination, a housing, a plurality of spaced-apart superposed contacting trays positioned in said housing, each of said trays having a plurality of spaced-apart rows of spaced-apart openings therethrough, and means for deflecting fluid rising through said openings substantially horizontally through fluid on at least one tray and for controlling the patterns of the respective fluid flows in accordance with the respective fluid flow rates, said means including a predetermined number of spaced-apart deflector members directioned in accordance with the respective fluid flow rates, at least one of said deflector members being positioned over at least a portion of an opening, and means for adjusting said deflector members in predetermined positions, said adjusting means including a strip member attached to said deflector members and clamping means removably attached to said strip member and to said tray, whereby there is accomplished the proper desired control of the fluid-fluid contacting.

3,125,615

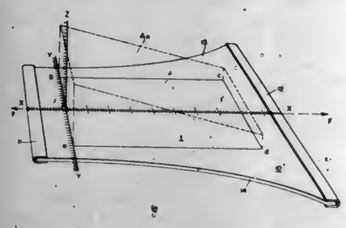
METHODS FOR THE MANUFACTURE OF PHOTOELASTIC DEVICES

Salomon Redner, Norristown, Pa. (% The Budd Co., Hunting Park Ave., Philadelphia, Pa.)

Original application Mar. 16, 1959, Ser. No. 799,798. Divided and this application Aug. 29, 1962, Ser. No. 220,187
3 Claims. (Cl. 264—1)

1. A method for the fabrication of a unitary, homogeneous, combination birefringent compensator and forced-birefringent testpiece means, which method com-

prises the steps of producing a blank by conforming the lateral edges of a uniform thickness sheet of a polymerized plastic forced-birefringent material according to a predetermined relationship between the shape of the blank and internal stress patterns produced therein by a given set of tensile loading forces, heating the blank to a diphase fusion temperature for the material of the blank, subjecting the



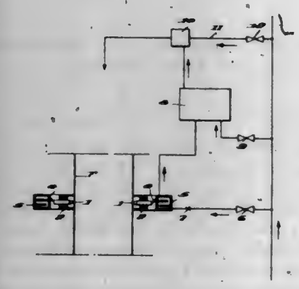
blank at the diphase fusion temperature to the given set of loading forces, cooling the blank below the diphase fusion temperature while applications of the given set of loading forces is maintained, and then separating a section from the blank to provide an individual compensator-testpiece means having the same upper and lower surfaces as the blank.

3,125,616

PROCESS FOR THE PRODUCTION OF THERMOPLASTIC POLYMERIC FILM

William Allan Cook, Wilmington, Del., and Sumner Sheldon Feinstein, Snyder, N.Y., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Apr. 23, 1962, Ser. No. 189,605
5 Claims. (Cl. 264—40)



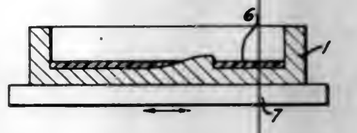
1. In a continuous process for the production of thermoplastic polymeric film in the form of an inflated tubular film of substantially circular cross section, wherein said inflated tubular film attains a predetermined diameter through the coaction of film temperature and gaseous pressure within said inflated tubular film, the improvement comprising: passing said inflated tubular film through an enclosing circular array of pneumatic proximity gauging nozzles disposed concentrically thereabout; detecting changes in said predetermined diameter of said inflated tubular film as fluctuations in the pressure of gaseous jets issuing from said nozzles; changing at least one of said coacting variables of temperature and pressure by means responsive to said pressure fluctuations, said change thereby counteracting the changes in the diameter of said inflated tubular film causing said pressure fluctuations.

3,125,617

METHOD OF MANUFACTURING A CELLULAR POLYURETHANE UNITARY SHOE SOLE AND HEEL

Peter Hoppe, Troisdorf, Germany, assignor, by direct and mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

Filed Jan. 28, 1959, Ser. No. 789,715
4 Claims. (Cl. 264—54)



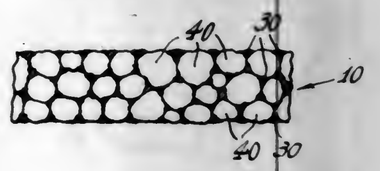
1. A process for producing a resilient light-weight shoe sole which comprises introducing into a mold having the configuration of a shoe sole, a foamable composition which comprises an hydroxyl polyester obtained from a polyhydric alcohol and a dicarboxylic acid, an organic diisocyanate, water and an accelerator, oscillating said mold to cause the mixing of said components and effecting foaming of said composition to the desired volume and cross-sectional shape.

3,125,618

METHOD OF MOLDING AND A CERAMIC BINDER FORMULATION

Solomon Levinson, Stamford, Conn., assignor to Vitramon Incorporated, Monroe, Conn., a corporation of Delaware

Filed Feb. 2, 1961, Ser. No. 86,743
6 Claims. (Cl. 264—63)



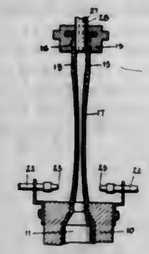
5. The method of forming ceramic bodies in sheet form which are substantially free of pinholes, which comprises mixing with a suitable ceramic powder a resinous binder composition consisting essentially of a synthetic resin selected from the group consisting of polymers and copolymers of acrylic and methacrylic acids, esters and amides, a plasticizer which is substantially incompatible with said resin and which is a liquid at temperatures below about 70° C., and a major amount by weight of a mixture of volatile organic solvents of different volatilities which provides for complete solvation of said synthetic resin and which may be gradually evaporated from said composition over an extended range of temperatures, said mixture comprising a major amount by weight of an aromatic hydrocarbon of medium volatility, at least about 3% by weight of an ester of a glycol ether which is substantially less volatile than said aromatic hydrocarbon, and at least about 5% by weight of an aliphatic ketone which is substantially more volatile than said aromatic hydrocarbon, casting said mixture upon a flat impervious surface and heating to evaporate said volatile solvents and form a self-supporting sheet, and firing said sheet to burn off said resin and form said ceramic body.

3,125,619

FORMING PLASTIC CONTAINERS

John G. Miller, Toledo, Ohio., assignor to Owens-Illinois Glass Company, a corporation of Ohio

Filed Mar. 1, 1957, Ser. No. 643,282
1 Claim. (Cl. 264—98)



In a method of making a blown organic plastic article from a hollow tube extruded to a substantially constant wall thickness through an orifice, the steps of applying a chilling medium to axially spaced portions only of the exterior surface of said hollow tube as the tube is extruded, said chilling medium being applied to substantially less than the entire tube length and extracting sufficient heat from the portions to which said medium was applied to substantially reduce the expansibility of said portions, subsequently axially elongating the tube to form a tubular blank of differential wall thickness, the wall thickness of said blank being greater at those portions to which said medium was applied, enclosing said tubular blank in a blow mold, and then injecting air under pressure into said blank to expand the blank to its final article configuration in the mold, the expansion of the blank being non-uniform due to the variant wall thickness thereof.

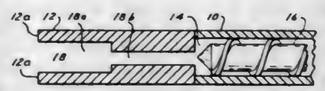
3,125,620

PROCESS FOR PROVIDING IMPROVED SURFACE GLOSS ON ARTICLES PRODUCED BY EXTRUDING THERMOPLASTIC SYNTHETIC RESINS

Stanley John Skinner, Malpas, Newport, England, assignor to Monsanto Chemicals Limited, London, England, a British company

Filed Nov. 30, 1960, Ser. No. 72,672
Claims priority, application Great Britain Dec. 1, 1959
6 Claims. (Cl. 264—176)

1. A process for the production of a shaped article of synthetic thermoplastic resin which comprises the steps of passing said resin in a softened state (1) through a die restriction located in the die channel of an extruder die head and (2) between die lips for determining the final form of said shaped article, while maintaining a high back-pressure of at least 900 pounds per square inch on the softened resin, the said die restriction positioned centrally in the said channel and adjacent to the die lips, and having a frontal cross-section essentially of the same geometrical shape as that of the final extruded section.

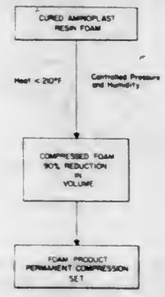


3,125,621

MODIFIED AMINOPLAST RESIN FOAMS AND PROCESS OF MANUFACTURE THEREOF

Sydney Coppick, Ridley Park, Pa., assignor to Scott Paper Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed Feb. 8, 1961, Ser. No. 87,743
5 Claims. (Cl. 264—321)



1. The process of improving the physical characteristics of a low density labile, cured aminoplast resin foam which comprises exerting a uniform compressive force against such foam to reduce the volume thereof from 50 to 95% and to exceed the elastic limit of the structural elements of the foam without material destruction, such compression being effected at a temperature between 125° and 210° F., maintaining the moisture content of the compressed foam below 10% by having a porous felt-like material in contact with the external surfaces of said foam when said foam is subjected to pressure, and maintaining the compression of said foam for a period less than 5 minutes to achieve a permanent set of the foam material in its compressed state.

ELECTRICAL

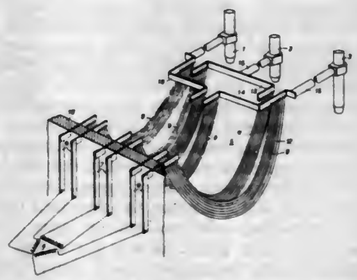
3,125,622

CONDUCTORS FOR ARC FURNACES

Francis Simon Joseph Leigh, Sutton Coldfield, and Edward May, Birmingham, England, assignors to Birlec-Efco (Melting) Limited, London, England, a British company

Filed July 14, 1961, Ser. No. 124,141
Claims priority, application Great Britain July 25, 1960
2 Claims. (Cl. 13—9)

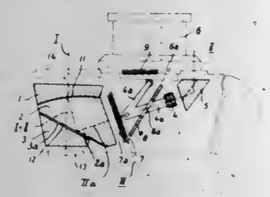
1. In a three-phase electric arc furnace an electrode system comprising three electrodes relatively movable into and out of the furnace, three electrode arms disposed one intermediate the other two and each supporting one of said electrodes, conducting connection pieces respectively connected to said arms and extending transversely thereof with the connection piece of the intermediate arm overlapped by and horizontally spaced from the other two connection pieces in non-interfering relationship, a stationary three-phase transformer spaced apart from the



electrodes with the phases of the secondary winding of the transformer arranged in open delta, a plurality of electrical connections extending from the transformer sec-

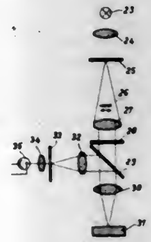
ondary winding and including a pair of single-phase conductors extending from each phase of the winding, each of said single-phase conductors having a flexible loop portion and the conductors and flexible loop portions of each single-phase conductor pair being located in juxtaposition to each other with the outer end of the flexible loop portion of two of said single-phase conductors from different phases of the winding connected to each connection piece to connect the separate phases of the secondary winding of the transformer in delta.

3,125,623
COMBINED VIEW AND RANGE FINDER FOR CAMERAS
Ernst Leitz and Willi Stein, Wetzlar (Lahn), Germany, assignors to Ernst Leitz, Gesellschaft mit beschrankter Haftung, Wetzlar (Lahn), Germany
Filed July 11, 1960, Ser. No. 41,944
Claims priority, application Germany July 11, 1959
1 Claim. (Cl. 88—2.4)



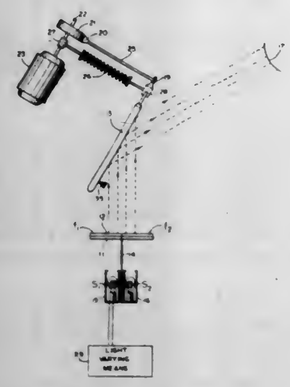
In a camera having a combined view and range finder to receive and combine an image-viewing-ray and a range-measuring-ray both coming from an object to be photographed, the combination comprising: a roof prism disposed in the path of said range measuring ray from said object for deflecting and partially inverting said measuring ray; a telescopic objective tiltably disposed in the deflected range-measuring-ray path from said roof prism, said telescopic objective forming an image in an intermediate image plane; a viewing field limiting means disposed in said intermediate plane; a first prism disposed in the ray path from said intermediate image plane and having a first lateral surface for entry of rays therefrom into said first prism, said first prism having a second surface in angled relationship to said objective and said intermediate image plane and separating the body of said first prism from a medium of lesser index of refraction so as to cause total reflection of the range-measuring-ray in a forward direction, said first prism having a third, convex surface provided with a semi-transparent mirror layer and orientated to said second surface at such an angle that the range-measuring-ray impinging thereupon is reflected rearwardly thereby and traverses said second surface of said first prism; a second prism having a first, concave surface and a second, plane image-viewing-ray entry surface; means for combining said convex and concave surfaces of said first and second prisms, respectively, with said semi-transparent mirror layer therebetween, said convex surface provided with said semi-transparent mirror layer constituting a collimator mirror for observing said intermediate image plane via said totally reflecting second surface of said first prism; a third prism disposed at the second surface of said first prism and separated therefrom by a gap containing said medium of lesser index of refraction, said third prism having a ray exit surface being parallel to the image-viewing-ray entry surface of the second prism so that the three prisms act as a plano-parallel plate for the image-viewing-ray; said roof prism, said telescopic objective and said second surface of said first prism producing an erect object image of said range-measuring-ray seen via the convex surface provided with said semi-transparent mirror layer; the image-viewing-ray entering the image-viewing-ray entry surface of the second prism and traversing the surface provided with said semi-transparent mirror layer and the gap between the first and the second prism, optically combining with said reflected range-measuring-ray at said semi-transparent mirror layer; the optical axes of said second surface and said third convex surface of said first prism being inclined to each other and to the optical axes of the image-viewing-ray and the range-measuring-ray whereby the optically combined rays from said semi-transparent mirror surface strike said second surface at a non-reflecting angle for passage therethrough; and lens means in the path of said combined rays permitting eye observation thereof.

3,125,624
DEVICE FOR DETERMINING THE DIMENSIONS OF AN OBJECT
Werner Illig, Heidenheim (Brenz), and Armin v. Hünerbein, Aalen, Germany, assignors to Carl Zeiss, Heidenheim (Brenz), Germany
Filed Mar. 27, 1959, Ser. No. 813,050
Claims priority, application Germany Mar. 29, 1958
3 Claims. (Cl. 88—14)



1. In a device for determining the thickness of an object by measuring its difference from the thickness of a standard object, an optical device including a light source, a single slit diaphragm illuminated by said light source, an optical lens system for producing an image of said slit diaphragm in the plane of the surface of said standard object, said optical lens system comprising two axially spaced lenses, a second diaphragm arranged between said two lenses of said optical lens system and having two slits arranged in a single plane for dividing the light beam passing through said single slit diaphragm and one of said two lenses into two light beams, a flicker diaphragm for alternately covering first one half and then the other half of the light beam passing through the single slit diaphragm, a partially transmitting reflecting means arranged between said second diaphragm and one of the two lenses of said optical lens system, and a measuring device for receiving from said partially transmitting reflecting means the light rays reflected by the surface of the object to be measured after this object has been substituted for said standard object, said surface of said object to be measured will reflect into said measuring device a pair of spaced luminous spots produced by said two light beams when the thickness of said object differs from the thickness of said standard object, means for adjusting said optical device until said two luminous spots merge into a single coincident image which appears on the surface of the object to be measured, and means for measuring the amount of adjustment made and indicating the thickness of said object.

3,125,625
OSCILLATING MIRROR PHOTOMETER
Leland J. Boardman, 8728 Colesville Road, Silver Spring, Md.
Filed Nov. 29, 1960, Ser. No. 72,534
3 Claims. (Cl. 88—14)
(Granted under Title 35, U.S. Code (1952), sec. 266)



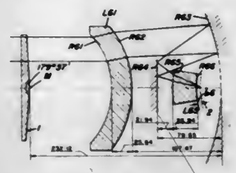
3. The method of determining the brightness of an unknown color which comprises projecting a beam of light from said unknown color onto a reflecting mirror, projecting another beam of light from a color of known brightness onto said reflecting mirror, the reflection of the two beams of light appearing as two abutting fields of light separated by a color division line, oscillating said mirror whereby the line separating the said two fields of color appears to produce a third field of color lying between and over-lapping of portion of said two fields and varying the brightness of the second color a known amount until the two lines visually vanish, at which point the two colors are of equal brightness and the brightness of the first color is determined.

3,125,626
ZONAL FILTER FOR CORRECTING ABBERATIONS
John R. Miles, Glenview, Ill., assignor, by mesne assignments, to Chicago Aerial Industries, Inc., Melrose Park, Ill., a corporation of Delaware
Filed Feb. 12, 1958, Ser. No. 714,739
7 Claims. (Cl. 88—57)



1. A photographic device comprising a lens unit uncorrected for chromatic aberration and another aberration which is a function of chromatic wave length, a film plane located substantially at the focal point of said lens unit, and a transparent selective wave length transmission device optically associated with said lens unit and said film plane, said selective wave length transmission device comprised of a plurality of zones, each of said zones transmitting light of a substantially predetermined chromatic wave length and being optically aligned with a portion of said lens unit, said predetermined chromatic wave length being such that the chromatic aberration caused by said wave length is substantially equal and opposite to said another aberration whereby said another aberration is eliminated.

3,125,627
OPTICAL IMAGERY SYSTEM
Johannes Becker, Delft, Netherlands, assignor to N.V. Optische Industrie "De Oude Delft," Delft, Netherlands
Filed Apr. 17, 1962, Ser. No. 188,030
10 Claims. (Cl. 88—57)

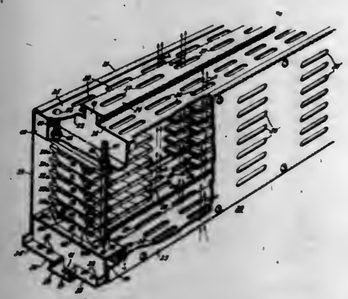


1. An optical system for the imagery of conjugate surfaces comprising in optical alignment, a concave spherical front surface mirror, a first meniscus lens axially air spaced from said spherical mirror and having spherical surfaces substantially concentric with said spherical mirror, said first meniscus lens being positioned in front of said spherical mirror to be traversed by light rays travelling between the long conjugate surface and said spherical mirror, a second meniscus lens having likewise spherical surfaces substantially concentric with said spherical mirror, said second meniscus lens being positioned to be traversed only by the light rays travelling between said spherical mirror and the short conjugate surface, said first and second meniscus lenses introducing over correction for spherical aberration, the ratio at the maximum height of incidence of the higher orders of spherical aberration to the third order of spherical aberration being substantially lower for said second meniscus lens than for said first meniscus lens, said first and second meniscus lenses correcting the spherical aberration of said spherical mirror with the exception of a residual amount of under correction, and a conical lens having at least one surface in the shape of a circular cone and being located substantially in the center of curvature of said spherical mirror, said conical lens substantially compensating for said residual amount of under correction.

3,125,628
VENTILATED BUSWAY AND HOUSING ARRANGEMENT
Lawrence E. Fisher, Southington, Conn., assignor to General Electric Company, a corporation of New York
Filed Mar. 30, 1962, Ser. No. 183,823
11 Claims. (Cl. 174—16)

6. A busway comprising a housing having two pairs of opposed walls, each wall of at least one pair having a plurality of ventilating slots, and a plurality of elongated bus bar assemblies electrically interconnected in polyphase relationship in the housing, said bus bar assemblies having flat lengths in face-to-face relation defining planes spaced in the direction of spacing of the walls of said one pair, each bus bar assembly comprising a pair of individual bars spaced transversely of the direction of spacing of the walls of said one pair, the spaces between the in-

dividual bars of each assembly providing a substantially continuous air passage extending between the walls of said

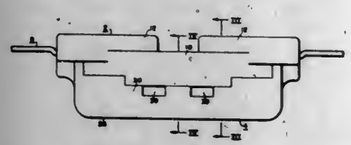


one pair to interconnect the ventilating slots in the walls of said one pair.

3,125,629
WIRING DEVICE AND SECURING MEANS THEREFOR

Owen L. Taylor, Bridgeport, Conn., assignor, by mesne assignments, to Westinghouse Electric Corporation, a corporation of Pennsylvania

Continuation of application Ser. No. 801,773, Mar. 25, 1959, which is a division of application Ser. No. 463,771, Oct. 21, 1954, now Patent No. 2,915,735. This application May 31, 1961, Ser. No. 113,907
5 Claims. (Cl. 174—53)



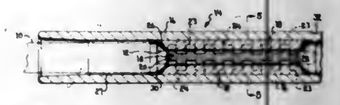
1. A wiring device comprising elongated upper and lower insulative housing members, a substantially flat elongated yoke adapted to be freely located longitudinally of and on the undersurface of said upper member, said yoke having at least one laterally extending tab disposed substantially centrally of the longitudinal dimension of said yoke, at least one securing means extending downwardly from the undersurface of said upper member and having an extending portion thereon spaced a distance approximately the thickness of said yoke from the plane of said undersurface, said extending portion and said tab being substantially in alignment in the yoke longitudinal direction, said tab being located above said extending portion when said yoke is moved toward said extending portion in the yoke longitudinal direction so that said yoke is held against said upper member, and means for holding said lower member against said yoke and said upper member and for preventing disengaging longitudinal movement between said yoke and said upper member so as to provide said wiring device in assembled form, said holding and preventing means including a deformable tab integral with and extending substantially transversely of said yoke and said lower member and bendable engageably over an outwardly facing portion of said lower member.

3,125,630
ELECTRICAL CONNECTOR

Frederick W. Wahl, West Chester, Pa., assignor to AMP Incorporated, Harrisburg, Pa.

Filed Feb. 9, 1962, Ser. No. 172,132
4 Claims. (Cl. 174—94)

1. An electrical connector adapted to be secured to an electrical conductor, said connector comprising an outer cylindrical tube of soft metal, and an insert located within said tube, said insert comprising a plurality of segments which are complementary to form an inner cylinder, each of said segments having an outer arcuate surface and an inner planar surface, said inner planar surfaces having a plurality of serrations thereon, each side of the planar portion having a series of projections with

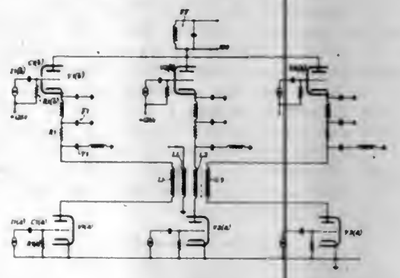


intermediate recesses therebetween, the recesses on one side corresponding with the projections on the opposite side so that each segment is identical, and the projections of one segment adapted to fit into the recesses on another segment whereby a plurality of segments may be interleaved within said tube to accept an electrical conductor and secured thereto through pressure-forging.

3,125,631
CIRCUIT FOR SYNCHRONOUSLY DETECTING AND REMODULATING COLOR DIFFERENCE SIGNALS

John Kenneth Oxenham and Reginald Graham, London, England, assignors to Sylvania-Thorn Colour Television Laboratories Limited, London, England

Filed May 31, 1960, Ser. No. 32,732
4 Claims. (Cl. 178—5.4)



1. In a color television receiver, apparatus comprising a transformer having first, second, third and fourth electromagnetically coupled windings; first, second and third low pass filters; and first, second, third, fourth, fifth and sixth electron discharge devices, each device having at least an anode and a cathode, the anodes of the even numbered devices being interconnected, the cathodes of the odd numbered devices being interconnected, the first winding and the first filter being connected in series between the anode of the first device and the cathode of the second device, the second winding and the second filter being connected in series between the anode of the third device and the cathode of the fourth device, the third winding and the third filter being connected in series between the anode of the fifth device and the cathode of the sixth device.

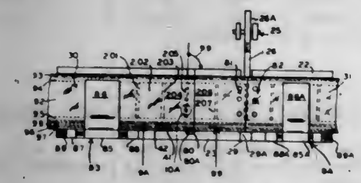
3,125,632
TAPE SPLICING APPARATUS AND METHOD

Cary Lee Sweet, 3821 Van Buren, Amarillo, Tex.

Filed Jan. 31, 1962, Ser. No. 170,007
1 Claim. (Cl. 178—5.8)

Cutting and splicing apparatus for video tape comprising video and control tracks, said video track comprising a series of video fields separated from each other by blanking intervals and the control track containing field pulses in a fixed relation to said blanking interval, comprising

tape support and transport means for supporting and transporting such tape along a path,
guide means at each side of said supporting means for guiding said tape along said path,
sensing means sensitive to a field pulse on the control track of said tape when said field pulse is in a limited zone of a width substantially that of a blanking interval, said sensing means being located adjacent said tape support means in the zone of travel of said control track,
indicating means operably connected to said sensing means,

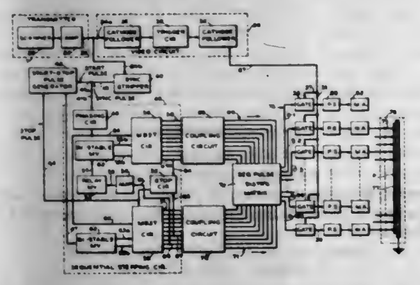


cutting means movably supported for movement to and from said tape supporting means, a cutting edge on said cutting means, said cutting edge in its operation passing through the zone of travel of said tape on said support means in a plane parallel to the blanking interval on said tape and located a full multiple of the length of the field pulse from the center of said limited zone, tape positioning means on said support and transport means maintaining said tape in contact with said support and transport means in the zone of said sensing means and in the zone of said cutting means, splicing tape dispensing means located adjacent said support means on the opposite side of said tape from said sensing element, and tape holding means on both sides of a line passing through said splicing tape dispensing means, said line being generally parallel to the length of said vertical blanking interval on said tape.

3,125,633
COMMUNICATIONS RECORDING SYSTEM

Hugh C. Ressler, Bayside, and John W. Smith, Whitestone, N.Y., and George M. Stamps, Palos Verdes Estates, Calif., assignors, by mesne assignments, to Hogan Faximile Corporation, a corporation of Delaware

Continuation of application Ser. No. 716,357, Feb. 20, 1958. This application Oct. 12, 1960, Ser. No. 62,297
8 Claims. (Cl. 178—6.6)

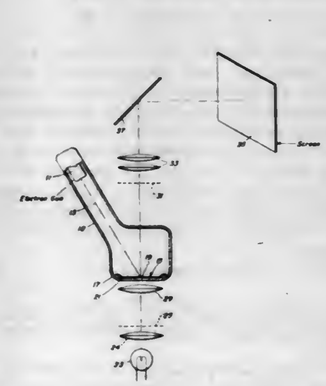


1. A communication system comprising means for generating successive electric signals each of a predetermined duration and each having a generally non-sinusoidal waveform, the amplitude of each electric signal varying during the duration thereof thereby representing transmitted information, means for producing a synchronizing pulse between each electric signal, a plurality of coincidence gate circuits, means for applying one of said electric signals at a time to a plurality of said gate circuits simultaneously, a pulse generator, means for applying each synchronizing pulse to said pulse generator to produce a group of successive timing pulses, each group of timing pulses occurring simultaneously with the electric signal following its accompanying synchronizing pulse, means for applying the successive timing pulses of a group thereof to the gate circuits in sequence while at least a portion of said electric signal is applied thereto to produce a succession of output pulses at the respective gate circuits, a plurality of pulse stretching circuits, means for applying said gate output pulses to the respective pulse stretching circuits to produce a group of recording pulses, the duration of each recording pulse not exceeding the duration of the electric signal and its synchronizing pulse, the respective recording pulses having substantially equal time durations and having amplitudes corresponding to successive portions of said electric signal, a parallel bit recording device, and means for applying said group of recording pulses simultaneously to said device to record practically instantaneously a display of the transmitted information.

3,125,634
COMPOSITIONS OF MATTER AND USES OF SAID COMPOSITIONS IN A PROJECTION SYSTEM

James G. Murray and Frederick F. Holub, Scotia, and Matthew J. Smith, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York

Filed June 5, 1962, Ser. No. 200,074
11 Claims. (Cl. 178—7.5)

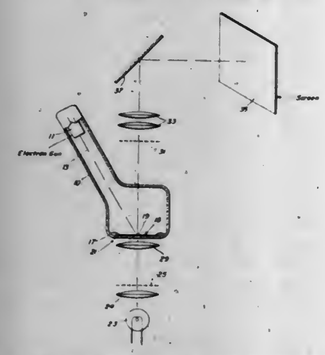


7. A projection system comprising a container having a conducting interior, a deformable medium in said container comprising a composition having the formula



where R is a member selected from the class consisting of the methyl radical and phenyl radical, Z is a member selected from the class consisting of the biphenylyl, phenoxyphenyl, and naphthyl radicals, *n* is a whole number equal to from 2 to 4, inclusive, an electron beam means for producing an electrical charge on the surface of said deformable medium as a function of an applied electrical signal and cooperating with said conducting interior to subject the medium to a deforming force to produce deformations on the surface of said medium, and a light and optical system for projecting light as a function of the deformations in the surface of said medium.

3,125,635
PROJECTION SYSTEM
James G. Murray and Frederick F. Holub, Scotia, and Matthew J. Smith, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
Filed June 5, 1962, Ser. No. 200,075
8 Claims. (Cl. 178—7.5)



1. A projection system comprising a container having a conducting interior, a deformable medium in said container comprising a composition having the formula

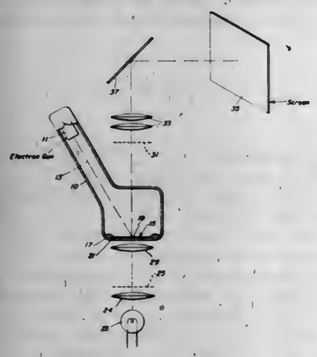
$$(R)_{4-m}Si—(OZ)_m$$

where R is a monovalent hydrocarbon radical selected from the class consisting of the methyl radical, aromatic radicals, and a radical having the formula

$$—O—CH_2CH_2—C_6H_5$$

Z is a radical selected from the class consisting of naphthyl, biphenylyl, and phenoxyphenyl radicals, and *m* is a whole number equal to from 1 to 4 inclusive, an electron beam means for producing an electrical charge on the surface of said deformable medium as a function of an applied electrical signal and cooperating with said conducting interior to subject the medium to a deforming force to produce deformations in the surface of said medium, and a light and optical system for projecting light as a function of the deformations in the surface of said medium.

3,125,636
COMPOSITION FOR USE AS DEFORMABLE MEDIUM AND APPARATUS USING THE SAME
Johann F. Klebe, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed June 5, 1962, Ser. No. 200,143
13 Claims. (Cl. 178—7.5)

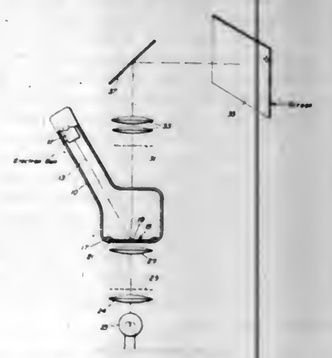


1. A projection system comprising a container having a conducting interior, a deformable medium in said container comprising a composition having the formula

$$Z—CH_2CH_2—O—CH_2Z$$

where Z is a member selected from the class consisting of biphenylyl and terphenylyl radicals and Z′ is a biphenylyl radical, the aforesaid terphenylyl radical being substituted in the 4′ position, an electron beam means for producing an electrical charge on the surface of said deformable medium as a function of an applied electrical signal and cooperating with said conducting interior to subject the medium to a deforming force to produce deformations in the surface of said medium, and a light and optical system for projecting light as a function of the deformations in the surface of said medium.

3,125,637
COMPOSITION AND APPARATUS USED IN THE SAME
Johann F. Klebe, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed June 5, 1962, Ser. No. 200,144
8 Claims. (Cl. 178—7.5)



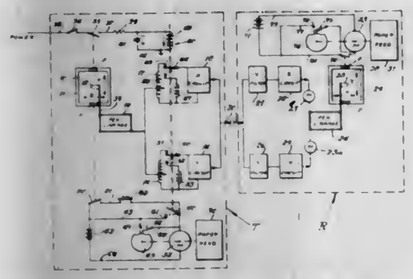
1. A projection system comprising a container having a conducting interior, a deformable medium in said container comprising a composition having the formula

$$(CH_3)(C_6H_5)_2Si—(CH_2)_2—Z$$

where Z is a member selected from the class consisting of biphenyl and terphenyl radicals and the terphenyl radical is substituted in the 4′ position, an electron beam means for producing an electrical charge on the surface of said deformable medium as a function of an applied electrical signal and cooperating with said conducting interior to subject the medium to a deforming force to produce deformations in the surface of said medium, and a light and optical system for projecting light as a function of the deformations in the surface of said medium.

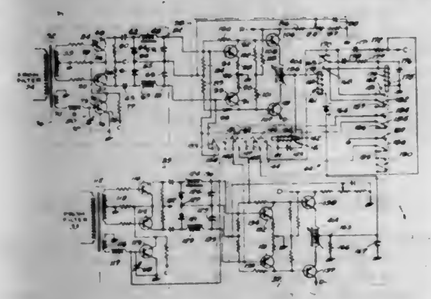
3,125,638
PAPER FEED MEANS
Joseph F. Brumbach, Niles, Ill., assignor to Victor Comptometer Corporation, Chicago, Ill., a corporation of Illinois
Filed Oct. 30, 1961, Ser. No. 148,368
8 Claims. (Cl. 178—18)

1. In a graphic communication system of the type wherein the communicated intelligence is graphically recorded on the surface of a replaceable recording medium by movable stylus means at intelligence signal transmitting and remote receiving stations, an improved means for selectively effecting the replacement of the recording medium at each of said stations comprising, power operated means at each of said stations operable for replacing the recording medium thereat, means at each of the receiving stations for initiating operation of its associated said power operated means in response to reception of a preselected signal, circuit means at the transmitting station for producing said preselected signal for a predetermined minimum time interval, relay means at said transmitting station operable for controlling energization of said preselected signal producing circuit means and for



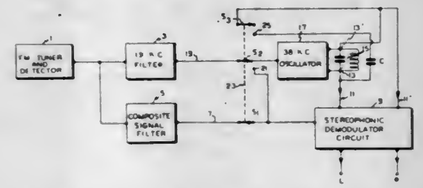
initiating energization of the said power operated means at said transmitting station within said time interval of said preselected signal, means activated by the stylus means at said transmitting station for selectively effecting operation of said relay means, and means operated by each of said power operated means for maintaining the same energized for a preselected time interval once the initiating energization of said power operated means is effected.

3,125,639
RECORDING DEVICES
Joseph F. Brumbach, Niles, Ill., assignor, by mesne assignments, to Victor Comptometer Corporation, Chicago, Ill., a corporation of Illinois
Filed Sept. 12, 1960, Ser. No. 55,516
12 Claims. (Cl. 178—19)



1. A signalling and control system for a receiver in a graphic communication system of the kind in which reproduction data are transmitted to the receiver as a frequency-modulated signal restricted to a given frequency range, comprising: control circuit means for the receiver including an operating circuit and data signal detector means having a balanced discriminator circuit with an electrical center point for developing control signals in the form of push-pull signal variations of the modulated data signal relative to said electrical center point of said discriminator circuit, the potential at said center point changing with the amplitude of the modulated data signal regardless of amplitude changes in the push-pull control signal output of said detector means; and a control device, effectively connected to said electrical center point and having means actuatable between a first operating condition and a second operating condition in response to predetermined changes in the potential of said electrical center point, said control device when in its said second operating condition enabling the receiver for operation by the push-pull signal output of said detector means.

3,125,640
STEREOPHONIC-BROADCAST INDICATING SYSTEM AND THE LIKE
Daniel R. von Recklinghausen, Arlington, Mass., assignor to H. H. Scott, Inc., Maynard, Mass., a corporation of Massachusetts
Filed May 22, 1962, Ser. No. 196,829
5 Claims. (Cl. 179—15)



1. Apparatus for indicating the transmission of a frequency-modulated carrier containing a pilot-frequency modulation, said apparatus having in combination, tuner means for receiving and detecting the carrier, a filter tuned to the pilot frequency and connected to the tuner for extracting the pilot frequency from the detected carrier, oscillator means connected to the filter and tuned for producing oscillations synchronized with and a multiple of the pilot frequency, demodulator means connected with the oscillator means and the tuner means, means for retuning the oscillator means to a frequency separated by an audible beat frequency from the pilot frequency, and means for disconnecting the tuner means from and connecting the filter means to the demodulator means.

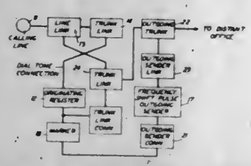
3,125,641
APPARATUS FOR INDICATING STEREOPHONIC BROADCASTING TRANSMISSION AND THE LIKE
Daniel R. von Recklinghausen, Arlington, Mass., assignor to H. H. Scott, Inc., Maynard, Mass., a corporation of Massachusetts
Filed June 25, 1962, Ser. No. 205,038
7 Claims. (Cl. 179—15)



1. Apparatus for indicating the transmission of a frequency modulated carrier containing a pilot-frequency modulation, said apparatus having, in combination, a tuner for receiving and detecting the carrier, a filter tuned to the pilot frequency and connected to the tuner for extracting the pilot frequency from the detected carrier, the filter producing noise in its output as an amplitude modulation of the pilot frequency during the reception of the same and as a noise signal alone in the absence of reception of the pilot frequency, first rectifying means connected with the filter for producing a direct-current component of the output thereof, further rectifying means connected with the filter for detecting the negative modulation peak components of the said amplitude modulation

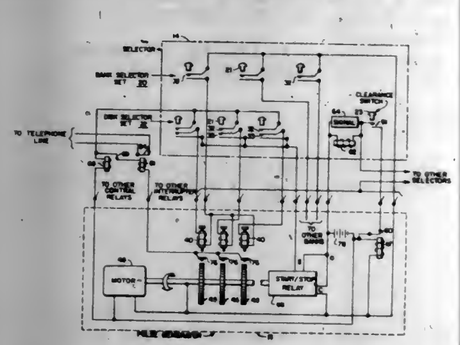
of the pilot frequency during the reception of the same, a mixing circuit for subtracting the said direct-current and negative modultion peak components, and indicating means connected with the mixing circuit for producing a direct current output substantially proportioned to the said negative modulation peak components.

3,125,642
HIGH-SPEED STEERING CIRCUIT FOR FREQUENCY SHIFT PULSE SENDER
Lynn T. Anderson, Gahanna, and Charles E. Kress, Columbus, Ohio, assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Jan. 15, 1962, Ser. No. 166,328
11 Claims. (Cl. 179—18)



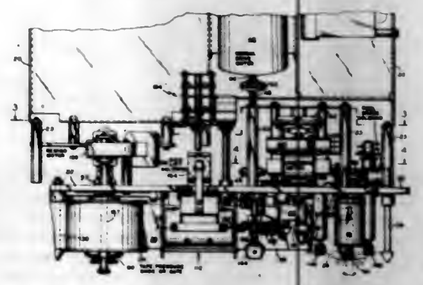
11. In a telephone system, a sender comprising a scanning circuit having an odd-scanning area and an even scanning area, a feed line connected to each of said scanning areas, digit registering means, a digit steering circuit for steering alternate digits to said feed lines, a digit being steered to one feed line while the priorly steered digit on the other feed line is being scanned, means for registering the addition and deletion of digits, and means responsive to said last mentioned means for reversing the connections of said feed lines to said scanning areas.

3,125,643
MULTIPLE REPERTORY DIALING TELEPHONE SYSTEM
Luther F. Day, Hawthorne, Calif., assignor, by mesne assignments, to Atlantic Research Corporation, Fairfax, Va., a corporation of Virginia
Filed Feb. 2, 1962, Ser. No. 170,726
17 Claims. (Cl. 179—90)



1. In an automatic dial telephone system having a plurality of telephone instruments and telephone line circuits, a repertory dialing apparatus including a single selectively operable dial pulse generator having a plurality of coded means, each being adapted to generate a set of dial pulses corresponding respectively to the call numbers of particular subscribers, a plurality of manually operable means respectively located near individual telephone instruments and coupled to share the pulse generator and the coded means on a common access basis, means responsive to the setting of a particular manually operable means for selecting a desired one of the coded means to generate a set of dial pulses corresponding to the call number of a desired subscriber, and means including a circuit interrupter unique to each line circuit for directing the generated dial pulses only to the telephone line circuit corresponding to the particular manually operable means.

3,125,644
AUTOMATIC RECORDER-REPRODUCER SYSTEMS
William H. Lyon, Orange, Conn., assignor to The Soundscriber Corporation, North Haven, Conn.
Filed July 5, 1960, Ser. No. 40,589
14 Claims. (Cl. 179—100.2)

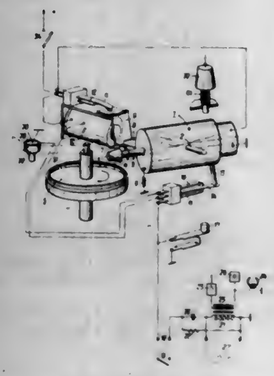


1. In tape recorder-reproducer apparatus having a power-driven capstan roller and associated guide means for directing a recording tape from a feed reel past a rotating transducer head to a take-up reel, the combination comprising a normal capstan drive including motor means for rotatably driving said transducer head and for driving said capstan at a predetermined speed through an incremental clutch, tape repositioning means for overriding said normal capstan drive through said incremental clutch and for driving said capstan at a higher speed than said predetermined speed, a movable and disengageable tape shoe positioned to urge said tape into resilient contact with said transducer head, disengaging means for withdrawing said shoe from said tape, and automatic means for actuating said disengaging means during the operation of said repositioning means, whereby said tape may be freely repositioned for recording or reproducing selected items of intelligence.

3,125,645
MINIATURE SOUND TAPE RECORDER OR THE LIKE
Karl Cech, Modling, near Vienna, Austria, assignor to Karl Vockenhuber, Vienna, Austria
Filed Sept. 12, 1961, Ser. No. 137,611
Claims priority, application Austria Sept. 23, 1960
3 Claims. (Cl. 179—100.2)

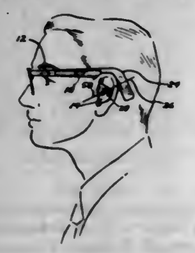
1. In a miniature sound tape recorder,
a motor having an outer casing and a motor shaft,
means for swingably mounting said motor about an axis disposed at a right angle relative to said motor shaft,
a capstan including a flywheel adapted to drive a sound tape,
a friction wheel carried by said motor shaft and engaging in its operative position said flywheel in order to drive said capstan,
spring means tending to swing said motor and thereby said friction wheel into its operative position,
means associated with said casing of said motor for retaining the latter in its inoperative position,
an electromagnet having an armature pivotally mounted and movable upon energization of said electromagnet,

said armature including an arm to operate as an abutment for said retaining means of said casing in the non-energized state of said electromagnet,
said arm of said armature being withdrawn upon energization of said electromagnet and permitting said motor to swing into its flywheel engaging position by the action of said spring means,
resetting means for returning said motor into its inoperative position,
a shift pin adapted to guide said sound tape during its movement through said recorder,



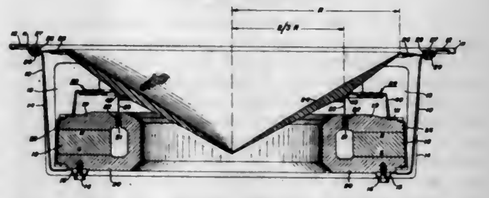
said shift pin having two conducting coats surrounding said shift pin and adapted to be conductively connected by a conducting layer of said sound tape,
a release circuit,
a throw-over switch operated by and responsive to the position of said motor and connecting said electromagnet selectively with said release circuit in the inoperative position of said motor and with said conducting coats of said shift pin in the operative position of said motor, and
contact means disposed in the motor circuit and operated by said armature of said electromagnet to open said motor circuit upon energization of said electromagnet, thereby stopping said motor in its operative position, upon conductively connecting said conducting coats.

3,125,646
ELECTROMAGNETICALLY COUPLED HEARING AID
Frederick Willard Lewis, Brooklyn Center, Minn., assignor, by mesne assignments, to The Telex Corporation, Tulsa, Okla., a corporation of Delaware
Filed Feb. 8, 1960, Ser. No. 7,298
8 Claims. (Cl. 179—107)



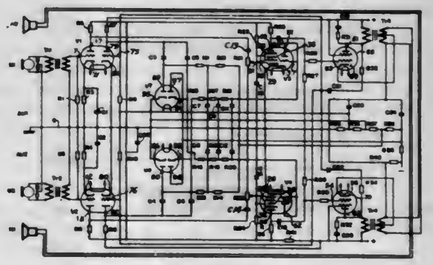
1. A hearing aid having two physically separate and independent units comprising in combination: an eyeglass templar member having a downwardly extending rear portion adapted to fit over and behind a user's ear and being adapted to be carried by an eyeglass frame; a first unit mounted within said templar member and including a microphone, a signal amplifier, and a carrier frequency modulator-oscillator means having a frequency determining circuit including an inductance disposed in the downwardly extending rear portion of said templar member and circuit means interconnecting all of said last named devices in electrical cooperating relationship whereby a modulated carrier frequency output signal is emitted from the inductance for coupling the electromagnetic output thereof to a second unit; and a second unit mounted within a preformed ear mold having a second outlet and adapted to be positioned within a user's auditory canal, said second unit including a sound output transducer, a capacitor-inductor tank circuit tuned to the carrier frequency output of said first unit, and means, including demodulating means, interconnecting said tank circuit and said transducer, said inductor being positioned in electromagnetic signal receiving relationship to the inductance in said first unit.

3,125,647
ELECTRO-ACOUSTIC TRANSDUCER
Auguste Louis Marie Antoine Rouy, 142 Edgemont Road, Scarsdale, N.Y.
Filed Mar. 31, 1960, Ser. No. 18,928
15 Claims. (Cl. 179—115.5)



12. An electro-acoustic transducer comprising means establishing a magnetic field across a circular gap, a circular drive coil operable in said gap, a conical diaphragm comprising a low density material having metallic skins bonded to the surfaces which skins are pre-stressed in tension, and means mechanically coupling the drive coil to the diaphragm.

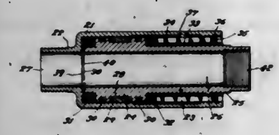
3,125,648
AUTOMATICALLY CONTROLLED TWO-WAY AMPLIFIER
David Eklov, Alvsjo, Sweden, assignor to Svenska Relafabriken Abn Ab, Tyreso, Sweden, a corporation of Sweden
Filed July 15, 1960, Ser. No. 43,175
Claims priority, application Sweden Feb. 24, 1954
25 Claims. (Cl. 179—170.2)



1. In a two-way amplifier having two amplifier units, one for each direction of transmission, and each amplifier unit comprising at least one stage having variable gain,

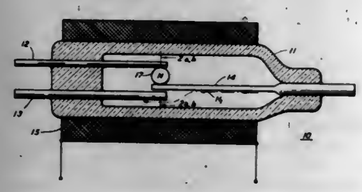
means connecting said amplifier units to have a moderate initial gain, each amplifier unit having operatively associated therewith means for deriving a first control voltage from signal currents passed through the respective amplifier unit when the strength of the signal currents exceeds a predetermined threshold value, means for deriving a second control voltage from the signal currents passed through the respective amplifier unit, means for applying said first control voltage to the respective amplifier unit to increase its gain, means for applying said second control voltage to the other amplifier unit to reduce its gain, and means for controlling the magnitude of said first control voltage to cause the increase of the gain in one amplifier unit to be less than the simultaneous reduction of the gain of the other amplifier unit.

3,125,649
COMBINED ELECTRICAL AND FLUID ROTATABLE CONNECTOR
Joseph A. St. Cyr, 6 Golf Road, Wethersfield 9, Conn.
Filed Oct. 25, 1960, Ser. No. 64,860
4 Claims. (Cl. 200—82)



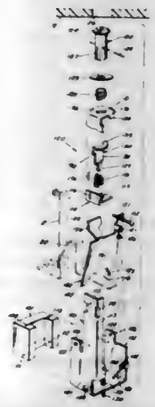
2. A combined electrical and fluid connector including a tubular outer member of electrically conductive material having a bore therethrough, a tubular inner member of electrically conductive material slidable in sealing relation in said bore, said inner member including a piston portion slidably engaging the wall of said bore and having a groove in its outer surface, an electrically conductive liquid material contained within said groove, stop means limiting movement of said inner member between first and second positions, means yieldably biasing said inner member toward one of said positions, said conductive liquid in said first position of said inner member establishing a continuous current path through said members, insulating means so disposed on said outer member as to render said conductive liquid inoperative when said inner member is in second position to thereby break said current path through said members, said biasing means yielding against a change in pressure in said connector to cause said inner member to automatically move from one of said positions to the other.

3,125,650
SEALED REED SWITCH
Walter B. Ellwood, New York, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 3, 1961, Ser. No. 129,130
1 Claim. (Cl. 200—87)



A magnetically neutral sealed reed switch comprising; first and second ferromagnetic conductors that are substantially parallel and have overlapping ends that are normally displaceable from each other; a signal coil surrounding the conductors which produces a magnetic flux along the conductors in response to a signal current, whereby the overlapping ends of the conductors are forced to make contact; a third conductor; means for maintaining electrical contact between the third conductor and the second ferromagnetic conductor when the signal coil is not energized, said last-mentioned means comprising a permanent magnet that is attached to the third conductor and in magnetic contact with the overlapping end of the second ferromagnetic conductor, whereby a predetermined gap is maintained between the first and second ferromagnetic conductors; the magnetic axis of the permanent magnet being at substantially right angles both to the magnetic flux produced by the signal coil in both reeds and gap and to any electric fields produced as a result of a potential difference between the first and second ferromagnetic conductors whereby the magnetic flux from the magnet acts on any ions in the gap between the ferromagnetic conductors which are thus prevented from forming an arc discharge of long duration.

3,125,651
MAGNETIC TRIP MEANS
John C. Brumfield, Philadelphia, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed June 15, 1961, Ser. No. 117,464
11 Claims. (Cl. 200—88)

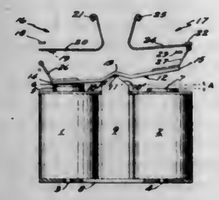


1. A magnetic trip means for a circuit breaker, said means comprising a generally U-shaped frame, a U-shaped magnetizable pole piece mounted to said frame with the pole piece extending at right angles to the arms of the frame, a plate-like armature pivotally mounted to said frame adjacent said pole piece and operatively positioned to form a V-shaped air gap with respect to the pole piece, pole faces, and biasing means urging one end of said armature away from said pole faces and urging the other end of said armature toward said frame at the web thereof, means carried by said armature at said one end thereof for tripping of a circuit breaker operating mechanism.

3,125,652
MULTIPLE COIL ELECTROMAGNETIC RELAYS
Walter Johannes Richert, Fort Branch, Ind., assignor to American Machine & Foundry Company, a corporation of New Jersey
Filed Dec. 28, 1960, Ser. No. 78,908
6 Claims. (Cl. 200—102)

1. In an electrical relay of the type described, the combination of

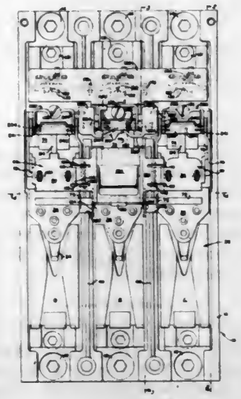
two spaced parallel electromagnets each having a core of magnetic material;
an elongated longitudinally magnetized permanent magnet disposed between and parallel to said electromagnets;
an armature of magnetic material mounted for pivotal movement about an axis located at one end of said permanent magnet,
said armature having a first portion on the side of said axis adjacent one of said electromagnets and a second portion on the side of said axis adjacent the other of said electromagnets,
pivotal movement of said armature in one direction about said axis causing one end of said armature to move toward an end of the core of said one electromagnet,
pivotal movement of said armature in the other direction about said axis causing the other end of said armature to move toward the corresponding end of the core of said other electromagnet;



means magnetically interconnecting said cores and said permanent magnet at the ends thereof opposite said armature, whereby engagement of one of said cores by said armature will complete a magnetic path comprising said permanent magnet, one-half of said armature, the one of said cores engaged thereby, and said last-mentioned means;
means interposed between said one end of said armature and the adjacent end of the core of said one electromagnet to stop said one end of said armature in a predetermined position in close proximity to but out of direct engagement with the adjacent end of the core of said one electromagnet; and
means provided in said relay for positioning said second portion of said armature nearer said permanent magnet when said other end of said armature is engaged with said corresponding end of the core of said other electromagnet than is said first portion of said armature when said one end of said armature is in said predetermined position,
whereby a stronger force of attraction exists between said armature and said permanent magnet when said other end of said armature is engaged with said corresponding end of the core of said other electromagnet than when said one end of said armature is in said predetermined position.

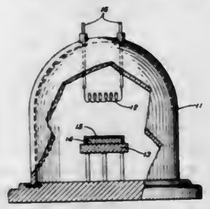
3,125,653
MULTIPLE AUTOMATIC CIRCUIT BREAKER
Thomas M. Cole, Harrison, N.Y., and Alfred E. Maier, Colonia, N.J., assignors to Federal Pacific Electric Company, a corporation of Delaware
Filed Mar. 20, 1959, Ser. No. 800,808
20 Claims. (Cl. 200—116)

1. A multi-pole circuit breaker having at each pole a movable contact member and companion contact means, means fixed to said movable contact members for rigidly coupling said contact members for conjoint movement with respect to their companion contact means between circuit closed and circuit open positions, individual spring-powered mechanisms disposed at a plurality of poles for actuating said contact members to said positions, each of said mechanisms including a cradle movable between latched and release positions, and an overcurrent responsive trip mechanism including an individual over-current responsive device in each pole, a common control element controlled by said over-current responsive devices,



and an individual latch disposed at each of said spring-powered mechanisms and normally arranged to restrain each of said cradles respectively but arranged for release by said common control element, said tripped mechanism being operable to release said cradles for movement to released position in response to fault currents in the circuit of said trip mechanism.

3,125,654
ELECTRICAL CONTACTING SURFACES
Sydney M. Arnold, Chatham, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 31, 1961, Ser. No. 149,096
6 Claims. (Cl. 200—166)

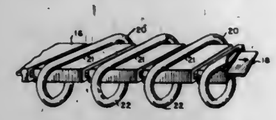


1. An electrical contacting surface including successively a substrate, a first layer in intimate contact with said substrate comprising a thin film of one metal selected from the group consisting of gold, lead, copper and bismuth, and a second layer consisting essentially of tin, said second layer being in intimate contact with said first layer.

3,125,655
INDUCTION HEATING COIL
Edward F. McBrien and Richard A. Sommer, Parma, Ohio, assignors to The Ohio Crankshaft Company, Cleveland, Ohio
Filed May 13, 1960, Ser. No. 29,015
5 Claims. (Cl. 219—10.49)

1. An induction coil comprising a ribbon of solid electrically conductive strip material wound about an axis to

form an elongated helix having a minimized internal dimension and in which the long transverse dimension of the ribbon extends substantially perpendicular to said axis and in which the edges of successive turns of the helix face each other, and an elongated helical cooling tube surrounding the helical ribbon and secured thereto



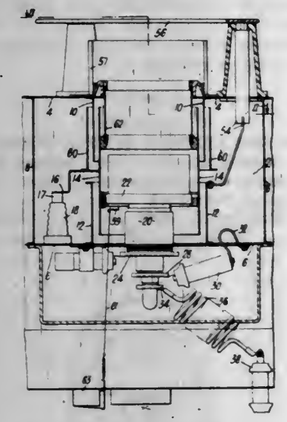
as spaced points along the length of said ribbon, the diameter of the helix defined by said cooling tube being substantially greater than the diameter of the helix defined by said ribbon whereby the helical ribbon is spaced from said cooling tube helix at the area between said spaced points and the resistance to the flow of fluid through the cooling coil will be minimized.

3,125,656

HIGH FREQUENCY HEATING APPARATUS

David Isaac Spash and Christopher Evan Mundell Tibbs, Wokingham, England, assignors to Radyne Limited, Wokingham, England, a British company

Filed Dec. 26, 1962, Ser. No. 247,400
Claims priority, application Great Britain Oct. 26, 1962
16 Claims. (Cl. 219—10.67)



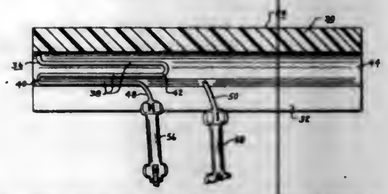
1. Radio frequency dielectric heating apparatus comprising: a radio frequency generator including a resonant circuit, which has as an electrical capacitance, a number of capacitor sections connected in series with each other and an oscillator circuit electrically connected across one of said capacitor sections for applying an oscillatory voltage across said section; a heating electrode circuit external to said resonant circuit and coupling means forming a direct electrical connection from the ends of the chain of capacitor sections to the heating electrode circuit whereby an increased alternating voltage developed across said chain of capacitor sections is applied to said heating electrode circuit, said resonant circuit including a wide strip coil consisting of a part of a single turn, the ends of which are capacitively coupled to different parts of a common conductive plate, whereby two series-connected capacitor sections are formed.

3,125,657

DEFROSTING UNIT

Jerrold L. Colten, South Bend, Ind., assignor, by mesne assignments, to Empire Electric Corporation, Lakeville, Ind., a corporation of Indiana

Filed Feb. 23, 1960, Ser. No. 10,258
3 Claims. (Cl. 219—19)



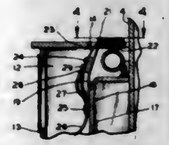
1. An insulating and heating unit, comprising a preformed elongated cylindrical member having a longitudinal axial hole therethrough and a slit extending the full length of said member parallel to said hole and extending inwardly from the external surface to said hole, said cylindrical member being resilient and form retaining with the edges along said slit being substantial together, a heating element in said hole on the internal surface of said member consisting of an electrical resistance wire arranged in a plurality of parallel sections disposed in and connected in series by end portions, said element commencing at one edge of said opening and terminating at the other edge thereof, longitudinal means on the internal wall of said member disposed between and paralleling said sections of wire, and means for retaining said sections in a prearranged configuration.

3,125,658

ELECTRIC CHAIN CLIPPERS

Warren R. Spivey, Marvell, Ark.

Filed Feb. 21, 1962, Ser. No. 174,865
5 Claims. (Cl. 219—19)



1. A device for clipping a chain seam, said device including support means having a single line of small apertures, a loosely convoluted spring threaded through said apertures so that the spring is secured to the support means at a plurality of points which lie in a single vertical plane, an electric resistance wire extending coaxially through the spring, and means for energizing said resistance wire.

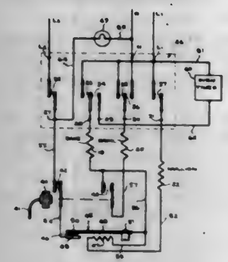
3,125,659

AUTOMATIC OVEN CLEANING WITH CONSTANT HEATING CONDITIONS

Stanley B. Welch, Louisville, Ky., assignor to General Electric Company, a corporation of New York

Filed Dec. 18, 1961, Ser. No. 159,864
3 Claims. (Cl. 219—20)

1. A high temperature electric oven comprising an oven liner and a door that forms an oven cooking cavity, resistance heating means for said cavity including an upper heating element, a lower heating element and a third heating element co-extensive with at least part of the oven liner adjacent the door, circuit means for connecting said heating means to a source of electrical energy, a control system having a circuit selector means and a temperature control device for energizing the heating elements in various circuit arrangements, a self-interrupting thermal relay means operatively connected in a circuit network to at least the lower heating element and the third heating element adjacent the door when the oven temperature is to be raised to a heat cleaning temperature of between 750° and 950° F. so that said relay means serves as a



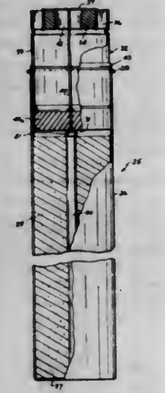
watts controller and maintains substantially constant wattage in the controlled circuit network over a wide range of line voltage variations, said temperature control device serving to de-energize the circuit network and heating elements once the oven cavity temperature reaches the predetermined degree of temperature set by the device.

3,125,660

PORTABLE ELECTRIC CIGARETTE, CIGAR AND PIPE LIGHTER

Belarmino Alvarez, Estado Bolivar, Venezuela (135 Pinelynn Road, Glen Rock, N.J.), and William H. Kroll, % Orinoco Mining Co., Puerto Ordaz, Estado Bolivar, Venezuela

Filed Oct. 21, 1960, Ser. No. 64,101
3 Claims. (Cl. 219—32)



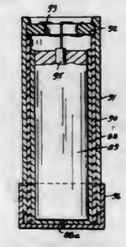
1. An electric lighter comprising in combination a casing of electrically conductive material, a battery provided in said casing and having an insulated pole contact and a second pole contact in circuit with the casing, and a reversible lighter element positioned in the casing, said lighter element being in circuit with the casing and having an insulated pole contact electrically engaged with said insulated pole contact of said battery only when the lighter element is in one of its two reversible positions in the casing, said lighter element comprising a jacket of conductive material in circuit with said casing, an insulating grid, and a resistance wire wound on said grid, one end of said wire being connected to said jacket and the other end thereof being connected to said insulated pole contact of the lighter elmeent.

3,125,661

PORTABLE ELECTRIC CIGARETTE, CIGAR AND PIPE LIGHTER

Belarmino Alvarez, Estado Bolivar, Venezuela (135 Pinelynn Road, Glen Rock, N.J.), and William H. Kroll, % Orinoco Mining Co., Puerto Ordaz, Estado Bolivar, Venezuela

Original application Oct. 21, 1960, Ser. No. 64,101. Divided and this application Aug. 2, 1961, Ser. No. 132,521
1 Claim. (Cl. 219—32)



In a portable electric lighter, the combination of a tubular inner casing having a closed end and an open end and formed from electrically conductive material, a battery positioned in said inner casing, one end of said battery constituting one of its poles and being in direct abutment with the closed end of the inner casing whereby the latter is in circuit with said one pole of the battery, an open-ended tubular sleeve of insulating material surrounding said inner casing with one end of the sleeve being flush with the closed end of the inner casing and the other end portion of the sleeve projecting beyond the open end of the inner casing, a disc-shaped grid mounted at the open end of said sleeve adjacent the open end of said inner casing, said battery having a second pole facing said grid, a resistance element carried by said grid and having one end thereof connected to said second pole of the battery, an open-ended outer casing of electrically conductive material enclosing said insulating sleeve and said grid, the other end of said resistance element being connected to said outer casing, and a combined closure cap and switch means for said resistance element, said cap being formed from electrically conductive material and including an end wall with a marginal flange, said cap being positionable selectively on the opposite end portions of said outer casing and having a first position on the end portion of the outer casing adjacent said grid wherein the end wall of the cap covers the grid and said resistance element while the latter is inactive, and a second position on the end portion of the outer casing adjacent the closed end of the inner casing wherein the marginal flange of the cap is telescoped on and in electrical contact with the outer casing while the end wall of the cap abuts and electrically contacts the closed end of the inner casing to complete the circuit to and energize said resistance element.

3,125,662

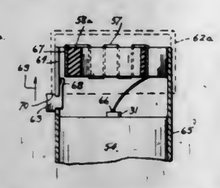
PORTABLE ELECTRIC CIGARETTE, CIGAR AND PIPE LIGHTER

Belarmino Alvarez, Estado Bolivar, Venezuela (135 Pinelynn Road, Glen Rock, N.J.), and William H. Kroll, % Orinoco Mining Co., Puerto Ordaz, Estado Bolivar, Venezuela

Original application Oct. 21, 1960, Ser. No. 64,101. Divided and this application Aug. 2, 1961, Ser. No. 132,524
2 Claims. (Cl. 219—32)

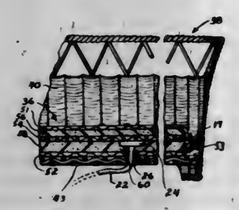
2. In a portable electric lighter, the combination of a tubular casing having an epen end and formed from electrically conductive material, a grid of insulating material mounted in the open end portion of said casing, a lighter

element supported by said grid, a battery provided in the casing and having one pole thereof in circuit therewith, the other pole of said battery being in circuit with one end of said lighter element, a contact member provided on on said grid in spaced relation from said casing and having the other end of said lighter element connected thereto, said open end portion of said casing having movable contact means engageable with said contact member to complete the circuit through said lighter element when said contact means are moved to the circuit closing position, and a closure cap for said lighter element slidably and removably positioned on the open end portion of said



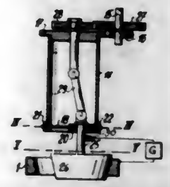
casing, said cap when positioned on the casing engaging said movable contact means so as to prevent the contact means from being moved to the circuit closing position until the cap is removed from the casing, the open end portion of said casing being provided with a longitudinal slot, said movable contact means comprising an electrically conductive finger piece slidable in said slot and engageable with said contact member when slid toward the open end of the casing, said cap when positioned on the casing abutting said finger piece in a position where it is slid away from the open end of the casing, whereby to prevent sliding of the finger piece to the contact member engaging position until the cap is removed.

3,125,663
HEATED PET BED
Roy D. Hoffman, 325 S. Richard St., Bedford, Pa.
Filed Dec. 23, 1960, Ser. No. 77,946
3 Claims. (Cl. 219—46)



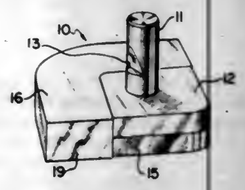
1. A pet bed including a bottom, a heating pad having peripheral edges and extending across the bottom and on which a pet lies, the heating pad having electric resistance units therein supplied with current from a power source, the bottom of the bed having an opening thereto at a location spaced inward from all of the peripheral edges of the heating pad, a conductor from the heating pad and entering the heating pad and connecting therewith at a region spaced inward from said peripheral edges, the conductor extending through the opening and being held against transverse displacement by sides of said opening and extending under said bottom whereby the conductor is inaccessible to a pet lying on the bed, and in which the bed is a basket having a wall that extends along both ends of the bed and across the back thereof, but with an interruption in the front of the wall for a pet to enter the basket, at least part of the wall extending below the bottom of the basket and holding part of the basket spaced above a support on which the basket rests, and the heating pad rests on a top surface of the bottom of the basket, and the conductor extends through the bottom of the basket and then rearwardly under a part of the bottom that is spaced above the support and then beyond the basket at the back thereof and behind said wall.

3,125,664
MACHINING PROCESS BY ELECTRO-EROSION
Jean Pfau, Geneva, Switzerland, assignor to Ateliers des Charmilles S.A., Geneva, Switzerland, a corporation of Switzerland
Filed Apr. 3, 1961, Ser. No. 100,338
Claims priority, application Switzerland Apr. 6, 1960
12 Claims. (Cl. 219—69)



1. A process of machining by electro-erosion, consisting in removing material from an electrically conductive workpiece, which material is generally difficult to machine, such as tungsten carbide, by causing sparks to explode between said workpiece and an electrode, said electrode being in the form of a body of revolution mounted on a support in such a manner as to be capable of turning about its axis and causing a relative displacement between said support of said electrode and said workpiece, causing said electrode to turn in such a manner that, on the one hand, each portion of said electrode which has been brought opposite a part of said workpiece, cannot return a second time into said machining position with said workpiece, whilst peripheral displacement of each point of the active portion of said electrode relatively to a reference system connected to said support of said electrode, is at least equal to the displacement of the support of the electrode relatively to said workpiece multiplied by the coefficient of wear of said electrode relatively to said workpiece.

3,125,665
ELECTRODE TOOL
Robert E. Snider, Blacklick, Ohio, assignor to North American Aviation, Inc.
Filed May 3, 1962, Ser. No. 192,277
4 Claims. (Cl. 219—69)



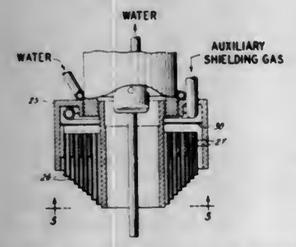
1. In an electrode tool which conducts electrical energy to a dielectric gap of given depth positioned intermediate the tool and a workpiece surface to remove metal from the workpiece surface by electrical discharge machining, in combination:

(*a*) An electrical energy-conducting face member which has a substantially flat bottom surface that partially defines said dielectric gap when said electrode tool cooperates with said workpiece surface,

(*b*) A guide member which is electrically non-conducting in comparison to said face member and which has a substantially flat bottom surface which supports said electrode tool when said electrode tool cooperates with said workpiece surface, and

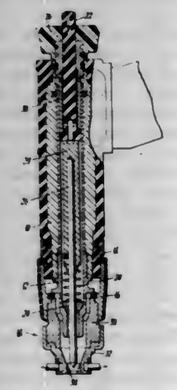
(*c*) Means securing said guide member to said face member whereby said guide member bottom surface is positioned parallel to said face member bottom surface and is offset downwardly with respect to said face member bottom surface by a distance equal to said dielectric gap given depth.

3,125,666
SECONDARY SHIELDING SYSTEM
Eugene F. Gorman, Morris Plains, and Robert J. Nelson, Elizabeth, N.J., assignors to Union Carbide Corporation, a corporation of New York
Filed Jan. 9, 1962, Ser. No. 165,196
8 Claims. (Cl. 219—74)



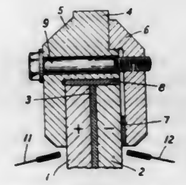
1. Gas stream shielded arc working which comprises maintaining an electric arc between an electrode and a workpiece while advancing said arc along a path, passing a stream of primary shielding gas along the electrode to shield the moving arc, passing an auxiliary stream of shielding gas along a multiplicity of partitions the major wall surfaces of which are parallel to the direction of flow of such gas to sub-divide the gas into a multiplicity of branches, directing said branches against the workpiece, and advancing said branches along said path in trailing relation to said moving arc.

3,125,667
ARC TORCH PUSH STARTING
Glenn W. Oyler, Springfield, N.J., assignor to Union Carbide Corporation, a corporation of New York
Filed Sept. 4, 1957, Ser. No. 682,025
6 Claims. (Cl. 219—75)



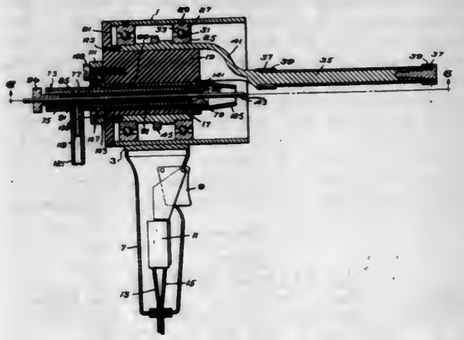
1. Apparatus for starting an arc torch having an arc constricting nozzle and a central electrode insulated from said nozzle and having an arcing tip normally retracted from said nozzle, which comprises plunger means for rapidly advancing said central electrode axially from such retracted position toward said arc constricting nozzle to bring the arcing end of said central electrode into starting relationship with the interior of said arc constricting nozzle and strike an arc therebetween, and spring means for then rapidly retracting said central electrode from said starting relationship.

3,125,668
MULTIPLE SPOT WELDING MACHINE
Kuno Eisenburger, Wels-Thalheim, Gut Hummelberg, and Josef Ritter, Graz-Kroisbach, Austria, assignors to EVG Entwicklungs- u. Verwertungs-Gesellschaft m.b.H., Graz, Styria, Austria
Filed June 12, 1962, Ser. No. 201,861
12 Claims. (Cl. 219—87)



1. A welding electrode assembly which comprises two busbars extending parallel one beside the other and electrically insulated from each other, said two busbars defining a gap between them, an insulating interlayer filling said gap, a plurality of pairs of clamping jaws, each of which pairs is releasably clamped to both said busbars and electrically insulated from one of said busbars and comprises a jaw in electrically insulated engagement with said one busbar and another jaw in electrically conductive contact with the other busbar of said pair, different pairs of said clamping jaws being electrically insulated from different ones of said busbars, and a plurality of welding electrodes, each of which is carried by one of said pairs of clamping jaws, each said pairs of clamping jaws being adapted to be clamped to said busbars in different positions.

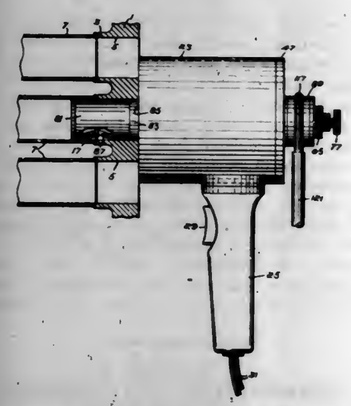
3,125,669
WELDING TUBES TO TUBE SHEETS AND THE LIKE
Lowell H. Hawthorne, Verona, N.Y., assignor to Revere Copper and Brass Incorporated, Rome, N.Y., a corporation of Maryland
Filed Oct. 30, 1956, Ser. No. 619,308
25 Claims. (Cl. 219—125)



1. A welding gun, for arc welding a tube to a tube sheet or the like having an opening to which the end

portion of the tube is presented, comprising a support, a body mounted on said support for axial rotation, an electrode holder carried by said body, an electrode carried by said holder, the gun also comprising means for so positioning it with relation to the tube sheet and tube that the axis of rotation of said body is in registry with the axial line of the tube and the tip of the electrode is positioned in welding relation to the joint between the tube and tube sheet so that upon rotation of said body said tip will travel circumferentially about the joint while so presented, the electrode being in the form of a rod and the electrode holder comprising a sleeve through which said rod extends, a second sleeve carrying the first mentioned sleeve and through which said first mentioned sleeve extends with the axis of said rod in eccentric relation to the axis of said second sleeve, and means rotatably mounting said second sleeve on said body for angular adjustment relative thereto for laterally adjusting the rod radially of said body.

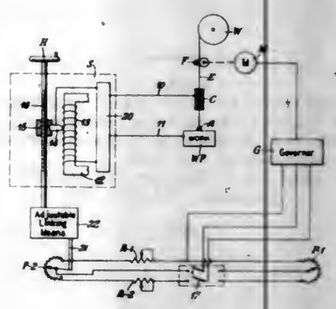
3,125,670
WELDING GUNS
Lowell H. Hawthorne, Verona, N.Y., assignor to Revere Copper and Brass Incorporated, Rome, N.Y., a corporation of Maryland
Filed Aug. 15, 1957, Ser. No. 678,330
8 Claims. (Cl. 219—125)



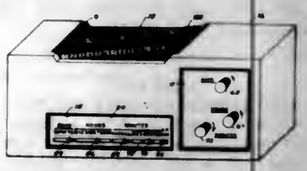
1. A welding gun for arc welding from one side of a tube sheet or the like the joint between the opposite side of said sheet and the end of a tube which contacts said sheet at said opposite side about the edge of a through opening in said sheet, which gun comprises a rotary part adapted to be inserted through said opening from the first mentioned side of said sheet, an electrode carried by and rotatable with said part for striking the arc against said joint, a mandrel formed with a longitudinally extending bore receiving said part, which mandrel is adapted to be inserted with said part in said opening for registering the axis of rotation of said part with the axis of the tube, and a support for said part and mandrel adapted to be positioned at said first mentioned side of said sheet and to contact that side for registering the plane of rotation of the tip of the electrode with the plane of such joint.

3,125,671
ARC WELDING SYSTEMS
August F. Manz, Newark, N.J., assignor to Union Carbide Corporation, a corporation of New York
Filed May 3, 1962, Ser. No. 192,209
6 Claims. (Cl. 219—131)

1. In a consumable electrode work-in-circuit arc welding system, the combination of an arc welding power supply provided with control means comprising means for adjusting the output characteristic thereof, a consumable electrode feed motor provided with control means comprising means for adjusting the electrode feed speed, and means mechanically linking said adjusting means, said linking means comprising means which automatically correlates the selected electrode feed speed with the proper power supply output characteristic in response to adjustment of said linking means to produce satisfactory welding conditions over the entire preselected useful range of the system through the single adjustment of said linking means.



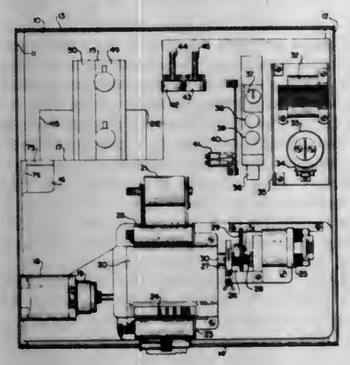
3,125,672
CARD CONTROLLED PROGRAM DEVICE
Leo Kull, 2 Washburn Place, Jersey City, N.J.
Filed Nov. 10, 1961, Ser. No. 152,134
14 Claims. (Cl. 235—61.11)



3. In a card controlled program device, a mechanism providing a time cycle divided into a number of time divisions, each again divided into time units, each having its own time sub-cycle, a pack of program cards each containing program information along one edge thereof, time bars each controlling a time sub-cycle, said time bars reaching a different relative position in respect to each other and said time divisions during each of the consecutive time divisions in excess of said time cycle, said time bars moving in straight lines parallel and close to said programmed edge of said program cards, said edge containing a time scale corresponding to the positions of said time bars, said program information being made effective by providing recesses in said programmed edge of said program cards on desired time divisions with at least one division per each said time unit, said program cards having actuating means keeping them normally clear from the path of said time bars during a fraction of said time division and letting them move toward the time bars once during each of said time division, each of said time bars being able to stop the movement of said program cards, said movement being completed only in case of registration between all of said time bars and said recessed time

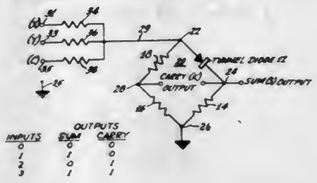
divisions in said program card, said completed movement of one of said program cards rendering that card effective for giving an output effect.

3,125,673
ELECTROCHEMICAL DATA STORAGE AND COUNTING SYSTEMS
William H. Puterbaugh, Waynesville, Richard M. Clinehens, Dayton, Roger W. Morin, Waynesville, Hans Schroeder, Bellbrook, and Herman E. Austen, Trotwood, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland (incorporated in 1926)
Filed June 10, 1960, Ser. No. 35,265
27 Claims. (Cl. 235—92)



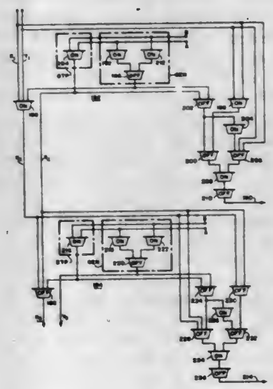
1. An electrochemical data storage and counting system for accounting for units of data of different classifications comprising: a storage device comprising a plurality of cathode electrodes of one material, an anode electrode of another material, and an electroplating bath for said electrodes, each of said plurality of cathode electrodes being capable of having stored thereon an amount of the anode electrode material representing a number of units of data of a certain classification; first means for causing a plating current pulse to flow between said anode electrode and a selected one of said cathode electrodes, said plating current pulse having a substantially fixed current-time integral for each unit of data of a certain classification to be accounted for, whereby the plated anode electrode material on said selected one of said cathode electrodes represents in amount a selected number of said units of data of said certain classification; second means for causing a deplating current, having a substantially fixed amplitude, to flow between a selected one of said cathode electrodes and said anode electrode, a change in potential in said second means indicating that said selected one of said cathode electrodes has been completely deplated; means responsive to said change in potential for controlling said second means to terminate said deplating current; a motor-driven counter for determining the time duration of said deplating current and for translating said time duration into a reading representing said selected number of said units of data of said certain classification previously represented on said selected cathode electrode, said motor-driven counter being operable while said deplating current is caused to flow between said selected one of said cathode electrodes and said anode electrode, and being rendered inoperable after termination of said deplating current; a printer operable to print on a receiving medium an indication corresponding to said reading of said motor-driven counter; and means for causing said printer to operate following termination of said deplating current.

3,125,674
FULL BINARY ADDER INCLUDING NEGATIVE RESISTANCE DIODE
Benjamin Rabinovici, Rego Park, and Charles A. Renton, New York, N.Y., assignors to Radio Corporation of America, a corporation of Delaware
Filed Oct. 10, 1960, Ser. No. 61,550
9 Claims. (Cl. 235—172)



4. An adder comprising a bridge circuit having four terminals and four arms, one of said arms comprising a negative resistance diode, the other three of said arms comprising resistive elements, means for applying addend, augend, and carry signals to one of said terminals, and means for obtaining a sum output and a carry output from the other three of said four terminals.

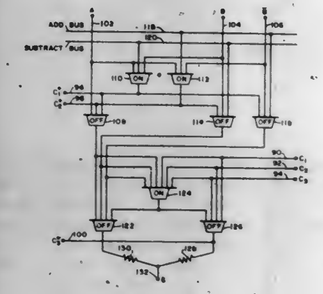
3,125,675
COMPUTER CARRY CIRCUITS
Terry A. Jeeves, Verona, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 21, 1961, Ser. No. 153,845
3 Claims. (Cl. 235—175)



1. In a binary computer having a plurality of stages connected in cascade, carry propagation circuitry including means in each of said stages for producing a pair of carry output signals which are applied to the next successive stage as carry input signals, the carry output signals at every other stage of the computer being adapted to produce a carry input to the next successive stage when they are both of the same binary state, the carry output signals of the remaining stages in the computer being such that they will produce a carry input to the next suceeding stage when they are of opposite binary states,

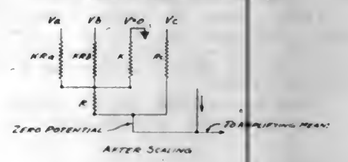
and single NOR elements interposed between the input and output carry signals for each stage.

3,125,676
NOR ELEMENT PARALLEL DYNAMIC ADDER-SUBTRACTOR
Terry A. Jeeves, Penn Hills, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 30, 1961, Ser. No. 156,025
1 Claim. (Cl. 235—175)



In a stage for a NOR element adder-subtractor responsive to a first input binary signal representing a bit in a binary number, a second input binary signal representing a bit in another binary number, and three input carry signals which may be of the same or different binnary states, the combination of first and second normally ON NOR circuit elements, means for applying said first and second binary input signals to the first NOR element, means for applying the first binary input signal and the complement of the second binary input signal to the second NOR element, a third normally OFF NOR circuit element, means for applying said first binary input signal and the outputs of said first and second NOR elements to the third NOR element, fourth and fifth normally OFF NOR circuit elements, means for applying said second binary input signal and the output of the second NOR element to the fourth NOR element, means for applying the complement of the second binary input signal and the output of the first NOR element to the fifth NOR element, a sixth normally ON NOR circuit element, means for applying the outputs of said third, fourth and fifth NOR elements as well as said carry input signals to the sixth NOR element, a seventh normally OFF NOR circuit element having the outputs of said third, fourth, fifth and sixth NOR elements applied thereto, an eighth normally OFF NOR circuit element having said three carry input signals as well as the output of the sixth NOR element applied thereto, a pair of impedance elements connected in series between the outputs of said seventh and eighth NOR circuit elements whereby an output binary signal representing a sum bit will be derived at the juncture of said impedance elements, means for applying an ON signal to the inputs of said second and fifth NOR elements whereby they will be switched OFF regardless of the condition of said input binary signals applied thereto when it is desired to add two binary numbers, means for applying an ON binary signal to the inputs of said first and fourth NOR elements whereby they will be switched OFF regardless of the condition of said input binary signals applied thereto when it is desired to subtract two binary numbers, and means for deriving three output carry signals from the outputs of said first, second and eighth NOR circuit elements.

3,125,677
ADDING NETWORKS
William H. Newell, Mount Vernon, N.Y. (% Ford Instrument Co., 31—10 Thomson Ave., Long Island City 1, N.Y.)
Original application July 20, 1953, Ser. No. 369,073. Divided and this application Mar. 1, 1960, Ser. No. 12,235
2 Claims. (Cl. 235—193)

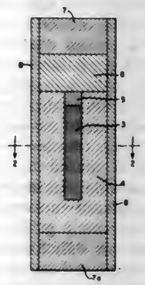


2. An input network adapted to be associated with an output circuit functioning therewith as a computing network for adding algebraic input voltages applied to said input network, said input network comprising a plurality of input circuits in parallel having a common output connection and being equivalent to a corresponding plurality of input resistors joined at a common output junction, said input circuits being adapted to have applied thereto said voltage respectively, n number of said input circuits greater than one consisting of a voltage divider replacing a corresponding n number of equivalent input resistors having resistance values $Ra, \ldots Rn$ respectively, and connected to a common output junction, said voltage divider comprising n number of input resistors connected to a common output connection and having resistance values $KRa, \ldots KRn$ respectively in which K represents a reducing factor, said voltage divider also comprising a resistor connection between the common output connection of the resistors $KRa, \ldots KRn$ and the common output connection of said input circuits and having the resistance value R, the relationship between said resistance values being represented by the equation

$$R = \frac{1-K}{\frac{1}{Ra} + \cdots \frac{1}{Rn}} + 1$$

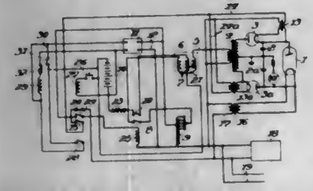
said network including an additional resistance having a resistance value K from a point of zero potential to the common output connection of said voltage divider input resistors.

3,125,678
FAST NEUTRON DOSIMETER FOR HIGH TEMPERATURE OPERATION BY MEASUREMENT OF THE AMOUNT OF CESIUM 137 FORMED FROM A THORIUM WIRE
Donald A. McCune, Scotia, N.Y., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Sept. 7, 1962, Ser. No. 222,243
3 Claims. (Cl. 250—83.1)



1. A fast neutron dosimeter comprising a thermal neutron attenuator cylinder having an axial bore extending a portion of the length of said cylinder, a thorium wire disposed in said bore, a thermal neutron attenuator spacer plug disposed at the bored end of said cylinder, a heat resistant plug disposed adjacent to said spacer plug, a second heat resistant plug disposed adjacent to unbored end of said cylinder, and a cylindrical heat resistant sheathing disposed about said cylinder and said plugs.

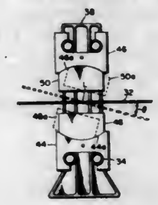
3,125,679
TRANSPORTABLE X-RAY APPARATUS UTILIZING AN AUTOMOTIVE STORAGE BATTERY AS POWER SOURCE
Ryohei Ohde and Iwao Yamane, Tokyo-to, Japan, assignors to Kabushiki Kaisha Hitachi Seisakusho, Tokyo-to, Japan, a joint-stock company of Japan
Filed Aug. 21, 1961, Ser. No. 132,856
2 Claims. (Cl. 250—98)



1. In a transportable X-ray apparatus operatable on a storage battery as its power source, the improved combination comprising an inverter connected to the storage battery for converting a direct current into an alternating current, a transformer having its primary connected to the inverter output for boosting the output alternating voltage of said inverter, capacitive means for storing a high voltage electric charge, an electric circuit for connecting said capacitive means to the secondary side of said high voltage transformer, heated filament rectifying tube means inserted in said electric circuit for supplying charging current into said capacitive means, a filament-heating circuit for said rectifying tube means, an X-ray tube in the discharge path of the capacitive means, a filament-heating circuit for said X-ray tube, a circuit-switching means for alternately supplying the alternating-current output of said inverter to the primary circuit of said high voltage transformer and the filament-heating circuit of said rectifying tube means and to said filament-heating circuit of said X-ray tube, thereby causing the charging of said capacitive and the emission of X-rays due to the discharging of said capacitive means through the X-ray tube to take place alternately, an electrical impedance in the primary circuit of said high voltage transformer for limiting the initial charging current for the capacitive means flowing in said primary circuit, and means for decreasing the impedance value of said variable impedance element during the charging of the capacitive means.

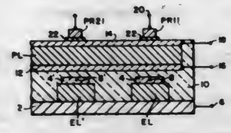
3,125,680
SHEET GAUGING HEAD STRUCTURE HAVING UNIVERSAL PASS LINE ANGLE ADJUSTMENT
John H. Schlaechter, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Dec. 18, 1959, Ser. No. 860,522
4 Claims. (Cl. 250—106)

1. A radiation device including a source of penetrating radiation and a radiation detector for measuring a physical property of a laterally-extended sheet of material that may be inclined with respect to the horizontal, said source and detector defining a beam of radiation, apparatus comprising vertical support means at opposite edges of said sheet, upper and lower horizontal support means extending adjacent opposite surfaces of said sheet and connected between said vertical support means, individual housings for mounting said source and said detector, each of said housings having a circular convex member integral therewith, carriage means connected to each of said horizontal support means for independently supporting each of said housings between said horizontal support means and said sheet, each of said carriage means having a circular concave surface adjacent said sheet



for receiving said convex member of said housing, means providing for the relative movement of each of said convex members in said associated concave surface whereby the axis of said radiation beam is maintained perpendicular to said sheet regardless of the inclination of said sheet relative said vertical support means, and means for releasably securing each of said convex members in the concave surface associated therewith.

3,125,681
ELECTROLUMINESCENT-PHOTOLUMINESCENT-PHOTORESPONSIVE APPARATUS
Joseph E. Johnson, Churchill Boro, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 22, 1962, Ser. No. 181,597
9 Claims. (Cl. 250—213)



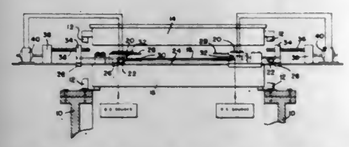
7. In a coincidence switching matrix of rows and columns forming active areas and operative with exciting signals and biasing signals, the combination of: a plurality of strips of electroluminescent material disposed in a plane to form the columns of said matrix; a plurality of strips of photoluminescent material disposed in a plane with respect to said strips of electroluminescent material to form the rows of said matrix, with the overlapping sections of said strips forming the active areas of said matrix, said electroluminescent material being responsive to emit light of a first wavelength from the associated active area in response to said exciting signals being applied across the active area of said electroluminescent material, said photoluminescent material being responsive at the associated active area to emit light of a second wavelength upon reception of light of said first wavelength from the associated active area of said electroluminescent material, said photoluminescent material further being operative not to emit light if said biasing signals are applied to the associated active area; and a plurality of photoresponsive elements disposed at each active area adjacent said strips of photoresponsive material so that said elements may receive light of said second wavelength from said photoresponsive material and are responsive thereto but are unresponsive to light of said first wavelength from said electroluminescent material, said photoresponsive elements being operative to provide a switching action at a desired active area of said matrix by changing from a

low to a high conducting state in response to the coincidence of exciting signals being applied across the associated active area of said electroluminescent material and no biasing signals being applied across the associated active area of said photoluminescent material.

3,125,682
AUTOMATICALLY POSITIONED LIGHT SHIELD FOR PHOTOSENSITIVE PINHOLE DETECTOR

Garrett B. Linderman, Washington, D.C., and Harry T. Gibson, Silver Spring, Md., assignors to Linderman Engineering Company, Inc., a corporation of Maryland

Filed Nov. 15, 1962, Ser. No. 237,878
6 Claims. (Cl. 250—219)

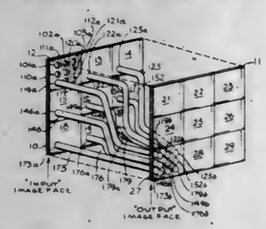


1. In combination with a pinhole detector having a frame providing a path to be traversed by a strip of metal and having a light source and a light sensitive device substantially aligned on opposite sides of said path; a light shield transversely movably mounted with respect to said path, a reversible motor carried by said frame, means connecting said motor in driving relationship with said shield to impart movement to said shield, an electrical circuit including said motor, and a variable source of energy, magnetic flux producing and sensing means carried by said shield proximate to an edge of said strip, and a circuit including said sensing means controlling said source of energy to produce movement of said shield transversely of said path as a function of variations in flux produced by variations in the position and structure of said strip.

3,125,683
PHOTOSENSITIVE DATA CORRELATION APPARATUS

Robert M. Stewart, Encino, and Frank W. Lehan, Glendale, Calif., assignors, by mesne assignments, to Space-General Corporation, Glendale, Calif., a corporation of California

Filed May 4, 1959, Ser. No. 810,855
6 Claims. (Cl. 250—227)

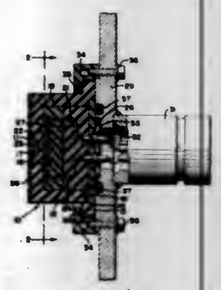


1. A data correlation system wherein an unknown bit of data is identified by comparison with known bits of data, said system comprising: image multiplier means including a bundle of optical fibres whose ends form input and output image faces, said input and output image faces respectively being divided into first and second number of areas, said bundle of fibres including a plurality of groups of fibres equal in number to said second number of areas, each group of fibres including a plurality of fibres equal in number to said first number of areas, each group of fibres intercoupling an area in said output face with every area in said input face, the position of a fibre end in an area in said output face in relation to the other fibre ends in said area corresponding to the position of the associated intercoupled area in relation to the other areas of said input face, said image multiplier means being operable in response to a light pattern projected thereupon to simultaneously produce a predetermined number of light patterns analogous to said projected pattern, said predetermined number being equal to the number of known bits of data and wherein a light pattern projected upon said input face and transmitted therefrom by said group of fibres to said output face is reproduced on each area thereon; means for projecting a light pattern representing an unknown bit of data upon said last named means; a photographic film memory upon which the known bits of data are recorded in the form of transparencies, said film memory being positioned in such a manner that said predetermined number of light patterns are simultaneously and respectively superimposed upon said transparencies, whereby light flux of varying amounts pass through said transparencies, the maximum amount of light flux being passed whereat the transparency and the pattern superimposed thereupon are substantially identical; and output apparatus receptive of said light flux, said apparatus including means for detecting the transparency whereat the maximum amount of light flux is passed.

3,125,684
SEALED STANDARDIZED LIGHT TRANSDUCER

Milton J. Borgoyn, Glen Burnie, and James T. Wasdyke, Chevy Chase, Md., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Mar. 12, 1962, Ser. No. 179,261
1 Claim. (Cl. 250—239)

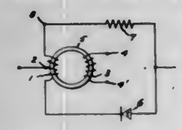


A standardized hermetically sealed light measuring transducer comprising a cylindrical U-shaped housing having a flat cylindrical transparent window polished until optically clear and undistorted, a hollow cylindrical side wall integrally formed along the outer circumference of said window, said side wall having an enlarged rim portion at the end most remote from said window, a light sensitive element, a cell support disc having a recess on one surface for receiving said light sensitive element, said cell support disc being positioned within said cylindrical side wall with said light sensitive element adjacent to said window, a circular terminal plate sealed to the enlarged rim portion of said side wall to form a closed container for said light sensitive element, encapsulating material completely filling the space between said terminal plate and said cell support disc to hermetically seal from the surrounding medium said light sensitive element, a pair of electrical current conducting means connected to said light sensitive element and passing through said terminal board adapted to be electrically connected to an external circuit, and a milky white translucent plastic disc attached to the external surface of said flat cylindrical transparent window having a thickness dependent upon the electrical output of said light sensitive transducer when subjected to a predetermined standard quantity of illumination.

3,125,685
NONLINEAR SENSING CIRCUIT

Jerome J. Tiemann, Burnt Hills, N.Y., assignor to General Electric Company, a corporation of New York

Filed Dec. 31, 1959, Ser. No. 863,142
7 Claims. (Cl. 307—88)

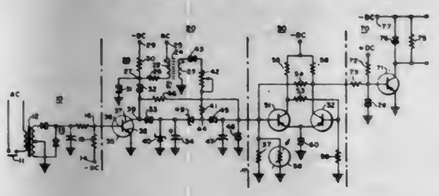


1. A sensing circuit responsive to a predetermined electrical condition in a circuit to be sensed comprising: a circuit loop including a narrow junction degenerate semiconductor diode having a characteristic peak current, first and second stable impedance conditions, and exhibiting a negative resistance region in the low forward voltage range of its current-voltage characteristic; a resistance; and a first inductance element: a second inductance element inductively coupled with said first inductance element and adapted to provide an electrical output: and means for connecting a circuit, an electrical characteristic of which is to be sensed, between the juncture of said diode and said resistance on one hand and an intermediate portion on said first inductance element on the other hand, said resistance having a value so that at diode voltages below the voltage corresponding to the peak current of said diode on its current-voltage characteristic the diode exhibits a lower impedance to current flow than said resistance but at diode voltages higher than the voltage corresponding to said peak current the impedance of said diode is large as compared with that of said resistance element whereby upon the occurrence of a current through said diode equal to the peak current thereof the device abruptly switches from a first stable low impedance condition to a second stable high impedance condition causing a change of current in said first inductance element and an output at said second inductance element.

3,125,686
DELAY CIRCUIT

Leonard P. Vitt, Pittsburgh, and Frank J. Prines, Penn Hills Township, Allegheny County, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Mar. 29, 1960, Ser. No. 18,350
5 Claims. (Cl. 307—88)

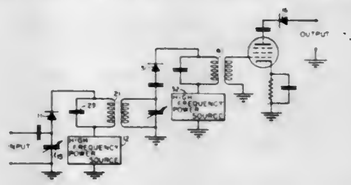


1. In a timing circuit, in combination; saturable reactor means including a saturable core; means for energizing said saturable reactor means with a supply voltage to saturate said core at a predetermined phase angle of the supply voltage; capacitive means connected to be charged through said saturable reactor means when the supply voltage is of a predetermined polarity and to discharge through said saturable reactor means when the supply voltage is of opposite polarity; input means for removing the charging voltage from said capacitive means in response to an input signal; adjustable resistance means connected in circuit relation with said reactor means and said capacitive means for varying the discharge rate of the capacitive means, and output means for providing an output upon discharge of said capacitive means below a predetermined magnitude of stored energy.

3,125,687
PARAMETRIC AMPLIFIER

Blair J. Zajac, Washington, D.C., and Henry Shenker, Alexandria, Va., assignors to the United States of America as represented by the Secretary of the Navy

Filed Jan. 31, 1962, Ser. No. 170,291
4 Claims. (Cl. 307—88)
(Granted under Title 35, U.S. Code (1952), sec. 266)

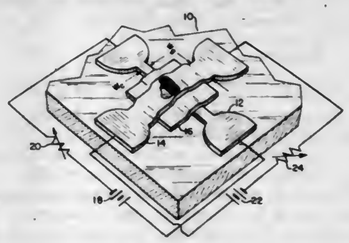


1. An improved parametric amplifier for amplification of a modulated wave energy signal within a selected operational frequency range comprising, solid state means of the variety which embodies a power gain to an input signal when said solid state means is subjected to energization at a selected frequency level, said solid state means including signal input means for applying a modulated wave energy signal thereto; energization means for energizing said solid state means at said selected frequency level; demodulation means adapted for utilization of modulation information in said modulated wave energy; transformer means having at least an input winding and an output winding with the impedance of said output winding substantially greater than the impedance of said input winding; capacitance means electrically connected across said input winding of said transformer means to form a tuned circuit therewith which is tuned to the frequency of the output of said energization means; means connecting said input winding of said transformer means and said energization means in series across said solid state means; and means connecting said output winding of said transformer means across said demodulation means.

3,125,688
SUPERCONDUCTIVE DEVICE UTILIZING A FERROMAGNETIC SUPERCONDUCTIVE ELEMENT

John L. Rogers, Hermosa Beach, Calif., assignor to Space Technology Laboratories, Inc., Los Angeles, Calif., a corporation of Delaware

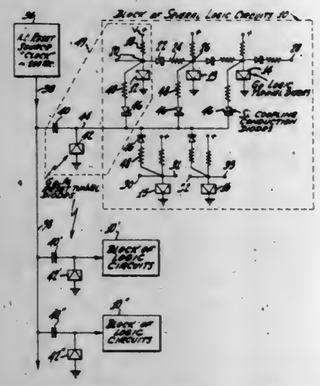
Filed Jan. 11, 1960, Ser. No. 1,458
15 Claims. (Cl. 307—88.5)



1. A superconductive gating device comprising two superconductive elements mounted adjacent to each other

and having different critical transition temperature and magnetic field characteristics, the element having the lower transition temperature characteristic being formed from a single homogeneous body of material that is both superconductive and ferromagnetic at its superconductive operating temperature, and means for causing current to flow through the other element to develop a magnetic field for changing the state of said ferromagnetic superconductive element from a superconducting unmagnetized condition to a resistive magnetized condition.

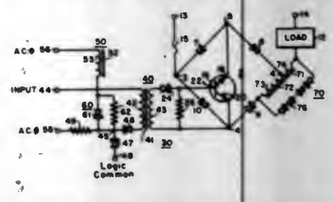
3,125,689
TUNNEL DIODE LOGIC CIRCUITS EMPLOYING A SINGLE TUNNEL DIODE FOR RESET
James C. Miller, Hamilton Square, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Sept. 14, 1960, Ser. No. 55,876
15 Claims. (Cl. 307—88.5)



1. A logic system for use in a computer or the like comprising a plurality of logic circuit blocks, each of said blocks including several logic circuits, each of said logic circuits including a negative resistance element arranged to be biased by a direct current source to operate in a bistable manner and switch from one state to another in response to a switching signal, and means to periodically reset said negative resistance elements to an initial one of said states, said means including a reset diode associated with each of said blocks, all of said reset diodes being arranged to receive an alternating current reset wave from a source, and coupling diodes coupled from each reset diode to respective ones of said negative resistance elements in the associated block.

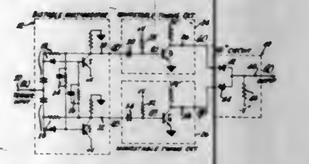
3,125,690
STATIC SWITCHING CIRCUITS UTILIZING A HYPERCONDUCTIVE DEVICE IN A DIODE BRIDGE CIRCUIT
Andress Kernick, Lima, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 21, 1960, Ser. No. 70,551
3 Claims. (Cl. 307—88.5)

1. In combination, a load circuit adapted to be connected to a single phase power source; rectifier means for blocking current in either direction through said load circuit; a hyperconductive negative resistance adjustable breakover device connected across the rectifier means to permit current in either direction through said load circuit when the device is conductive; the breakover voltage of said device being greater than the magnitude of potential across the device from the power source; means for receiving a selected half wave input signal during one half cycle of said power supply; first saturable reactor means for pulsing said device during a portion of said half wave input to a breakover voltage level less than said magnitude of potential, and second saturable reactor means for blocking the remaining portion of said half wave input as determined by a present firing angle chosen to block spurious signals to said first saturable reactor means; said device



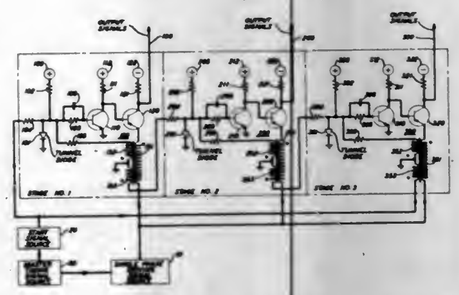
having a minimum holding current level necessary to sustain conduction through said device; and energy storage means for storing energy during said half cycle and discharging thereafter to exceed said minimum holding current level through said device for a desired time length.

3,125,691
PULSE STRETCHER EMPLOYING ALTERNATELY ACTUATED MONOSTABLE CIRCUITS FEEDING COMBINING CIRCUIT TO EFFECT STRETCHING
Walter Astheimer, Camden, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Mar. 9, 1961, Ser. No. 94,514
6 Claims. (Cl. 307—88.5)



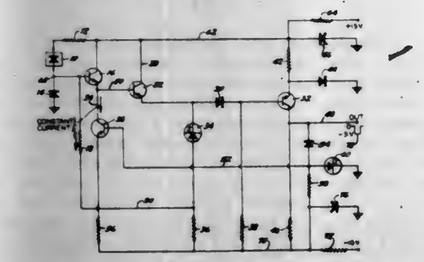
1. A timing system comprising an input terminal for receiving input pulses, two monostable timing circuits, switch means for alternately energizing said timing circuits respectively in response to alternate input pulses applied to said input terminal, and a combining circuit coupled to the outputs of said timing circuits.

3,125,692
STEPPING SWITCH CIRCUIT
John H. Fennick, Plainfield, and Reginald A. Kaenel, Murray Hill, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 20, 1961, Ser. No. 153,363
6 Claims. (Cl. 307—88.5)



1. In combination in a stepping switch circuit, a plurality of stages each including a switching device and a bistable element for controlling the condition of said device, each of said elements being characterized by set and reset conditions, each stage also including a differentiating transformer having a primary winding, a one-phase source for supplying driving signals each characterized by a trailing edge, said source being connected to the switching device of each stage via the primary winding of the differentiating transformer thereof, a start pulse source for setting the bistable element of the first stage to enable the switching device of said first stage, and means responsive to the appearance of the trailing edge of a driving pulse across the differentiating transformer of a stage whose bistable element is in a set condition for resetting the bistable element in said stage and for setting the bistable element of the next following stage.

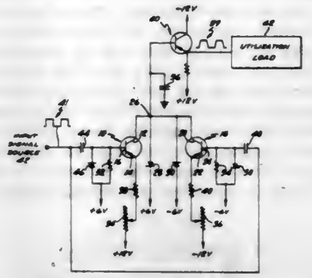
3,125,693
HIGH DYNAMIC INPUT IMPEDANCE AMPLIFIER
Joseph L. DeClue, Medfield, Mass., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Dec. 1, 1961, Ser. No. 156,202
9 Claims. (Cl. 307—88.5)



4. An amplifier circuit having a high input impedance for a photodiode sensing element comprising a photodiode connected between a source of biasing potential and a unilateral impedance element, said unilateral impedance element being further coupled to a reference point, a first preamplifier stage having its input connected to the junction of said photodiode and said unilateral impedance element, means coupling the output of said first preamplifier stage to the output of said amplifier circuit, a first constant current path including a constant current source coupled between the output of said first preamplifier stage and said reference point such that any change in current flow through said first preamplifier stage due to light energy upon said photodiode causes a current change at the output of said amplifier circuit, and a second constant current path comprising a resistor having one terminal connected to said junction and its other terminal coupled to the output of said amplifier circuit by way of a voltage regulating element.

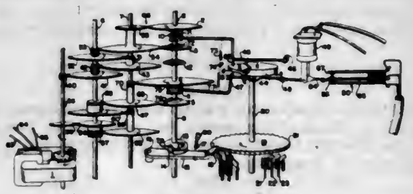
3,125,694
SIGNAL WAVEFORM GENERATOR EMPLOYING STORAGE CAPACITOR CHARGED AND DISCHARGED THROUGH TRANSISTORS OF OPPOSITE CONDUCTIVITY
Richard W. Palthe, San Carlos, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed Jan. 29, 1962, Ser. No. 169,421
8 Claims. (Cl. 307—88.5)

1. A signal waveform generator for providing an output signal having sloping portions comprising:
a pair of transistors of opposite polarity each having base, collector, and emitter electrodes with the collectors being connected at a junction;
means for simultaneously applying a square wave signal between the base and emitter electrodes of the transistors to make the transistors conduct alternately;



means coupled to the collectors of the transistors to control the amplitude of the output signal;
an output circuit including a storage capacitor coupled between the junction of the collectors and a reference potential level;
means coupled to the emitters of the transistors to control the slopes of the output signal; and
a source of operating potentials coupled to said transistors.

3,125,695
MECHANICAL STEPPING TIMER
Walter W. R. Searle, Ickenham, England, assignor to The Hoover Company, North Canton, Ohio, a corporation of Ohio
Filed Dec. 23, 1960, Ser. No. 78,112
Claims priority, application Great Britain Jan. 19, 1960
16 Claims. (Cl. 307—141.8)

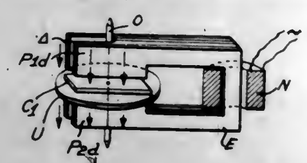


1. A timer for controlling the operation of a washing machine comprising, a set of program cams constructed to operate program switches connected in circuit with the various operational instrumentalities of a washing machine, means including a motor and mechanical change speed gearing having at least three speed ratios for advancing said cams step by step at at least three different time intervals and means operated according to the stepped position of said cams for selecting the speed ratio of said advancing means and thus determining the time duration between the steps of said cams.

3,125,696
ELECTRIC TIMEPIECE REGULATING MECHANISM
Simon Serge Held, Paris, France, assignor to Societe Anonyme Etablissements Ed. Jaeger, Levallois-Perret, Seine, France
Filed Nov. 23, 1960, Ser. No. 71,343
Claims priority, application France Sept. 2, 1954
15 Claims. (Cl. 310—36)

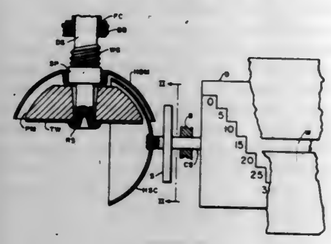
1. In a movement for electric time pieces, such as clocks and watches, of the type in which a pivoted driving spindle, connected to a spiral spring and carrying a balance wheel and a frame-coil movable in a magnetic

field so that its winding cuts across the flux thereof, is caused to oscillate by impulses of electric current in the winding generated by the periodic closing of a supply circuit for said winding, the movement of said spindle being changed to an intermittent motion of constant direction in the time piece by any known means; the improvement which comprises, in combination, a frame-coil consisting of a single flat coil of elongated rectangular configuration, the winding of which is disposed in a plane perpendicular to the driving spindle while its center of symmetry and of gravity is located on the axis of said spindle, and a non metallic frame secured on said spindle and carrying said winding; an electric current source, means for connecting the two ends of said winding respectively to the same pole of said electric current



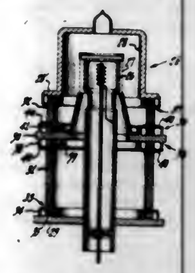
source during a short fraction of the oscillation period of said winding in both directions of oscillation very close in advance to the time when the greater axis of said rectangular winding coincides with the axis of static equilibrium of said balance wheel for which no torsional moment is impressed to the spiral spring; and a stationary closed magnetic circuit the outline of which reproduces at least in one of its parts the rectangular outline of said winding and through the gap of which said winding oscillates within its proper plane, the magnetic flux of said circuit presenting relative maximum and minimum values respectively through said axis of static equilibrium and through an axis perpendicular to the latter and to the spindle, the direction of said magnetic flux through said static equilibrium axis being opposite to that of the electromagnetic flux generated by the energized winding.

3,125,697
PERMANENT MAGNET EDDY CURRENT DEVICE
Carroll D. Sloan, Murrysville, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 28, 1960, Ser. No. 72,141
5 Claims. (Cl. 310—97)



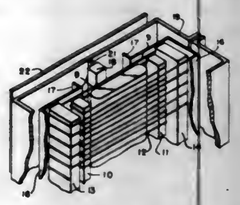
1. In a force transmitting device operating on an eddy current principle, in combination, a first rotatable member comprising a permanent magnet in the form of a segment of a sphere, a fixed member comprising a cup of magnetic material in the form of a segment of a spherical shell fixedly disposed about said magnet in concentric spaced relation, a second member comprising a drag cup of high electrical conductivity in the form of a segment of a spherical shell disposed in spaced mating arrangement concentrically about said magnet and in spaced mating arrangement concentrically within said fixed member, whereby rotation of said first member about its axis with respect to said second member induces a similar rotational tendency in said second member, the rotational axis of said second member with respect to said first member comprising the magnet being displaced approximately, but not necessarily, 90° apart.

3,125,698
CERAMIC TO METAL SEAL
Karl-Birger Persson, Boston, Mass., assignor to Radio Corporation of America, a corporation of Delaware
Filed June 8, 1953, Ser. No. 360,193
36 Claims. (Cl. 313—220)



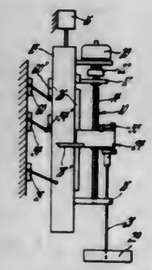
1. An electron tube, comprising an envelope, an electrode within said envelope, a metallic terminal member having portions thereof extending within and outside said envelope and connected to said electrode, an annular ceramic member forming part of said envelope and having a substantially planar annular surface, rigid spacing means extending from said terminal member and having an annular substantially planar surface presented toward said ceramic member surface, an annular thin walled metallic member interposed between said mutually presented surfaces and sealed along one surface intermediate its peripheries to said ceramic member surface, one peripheral portion of said thin walled metallic member forming a part of said envelope and being sealed to said terminal member, another peripheral portion of said thin walled member extending inside said envelope and being sealed to said terminal member, and said surface of said rigid spacing means abutting the surface of said thin walled member opposite the surface portion thereof sealed to said ceramic member.

3,125,699
VACUUM TUBE WITH LINEAR DYNAMIC CHARACTERISTICS
Philip K. Georgies, 3202 8th St. NE., Washington 17, D.C.
Filed Dec. 11, 1961, Ser. No. 158,426
3 Claims. (Cl. 313—299)



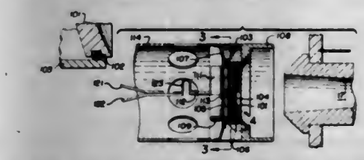
1. A vacuum tube having a central cathode; at least one control grid surrounding said cathode and adjacent it; a screen grid surrounding said control grid; a beam confining plate surrounding and electrically connected to said control grid; said beam confining plate having two beam apertures respectively on diametrically opposite sides of said cathode; a beam dividing electrode centrally located in each of said beam apertures and electrically connected to said cathode; main plate means located beyond said beam confining plate and said beam dividing electrode in the beam path of said beam apertures, said main plate means having apertures also in the path of said beam apertures, said main plate apertures being shaped to pass a varying portion of an electron beam emerging through said beam apertures as the electron beam is deflected; and secondary plate means located beyond and in line with the main plate apertures for disposing of said portions of the beam passing through said main plate apertures.

3,125,700
AUTOMATIC ELECTRODE WEAR COMPENSATOR
Robert F. Bentley, Pontiac, Roger A. Hack, Birmingham, and Thomas T. Stapleton, Clawson, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 10, 1960, Ser. No. 48,766
7 Claims. (Cl. 314—69)



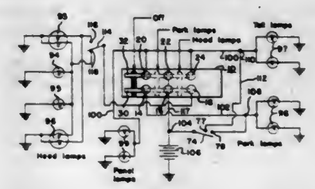
7. An electrode wear compensating means comprising an electrode carrier means, an electrode holder movably mounted on said carrier means, first servo means for advancing said carrier means for maintaining a constant electrode gap, and second servo means secured to said carrier means and connected to said electrode holder for advancing said holder when said first servo means advances the carrier means through a predetermined range of travel.

3,125,701
THERMIONIC EMITTER FOR HIGH FREQUENCY TUBE APPARATUS
Joseph K. Mann, Palo Alto, Calif., assignor to Varian Associates, Palo Alto, Calif., a corporation of California
Original application July 17, 1958, Ser. No. 749,225, now Patent No. 2,994,009, dated July 25, 1961. Divided and this application May 4, 1960, Ser. No. 26,870
7 Claims. (Cl. 315—5)



6. A high frequency tube apparatus including; means for forming and projecting a beam of electrons over an elongated beam path; a collecting structure disposed at the terminal end of the beam path for collecting electrons of the beam; means disposed along said beam path intermediate said beam forming means and said beam collecting means in wave energy exchanging relationship with the beam; an output terminal for extracting wave energy from said wave energy exchanging means; said beam forming means including, a thermionic particle emitter for supplying electrons, a filamentary uncoated heater element for radiantly heating said particle emitter, a refractory insulating base plate member, a refractory rod, said uncoated filamentary heater element being held to said base plate via the intermediary of said refractory rod, and said heater element disposed at the back side of said particle emitter remote from the beam side of said particle emitter to provide radiant heat for said particle emitter, and said refractory rod being disposed inbetween said particle emitter and said heater element for holding said heater element apart at spaced locations to prevent shorting of said heater element while minimizing loss of heat from said heating element through said refractory rod.

3,125,702
VEHICLE LIGHT CONTROL
William G. Herridge, Jr., and Robert G. Taylor, Flint, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 17, 1959, Ser. No. 820,915
4 Claims. (Cl. 315—77)

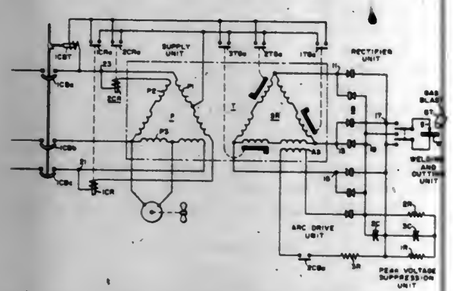


1. In combination, a motor vehicle having an engine, an illuminating lamp, a voltage source, electrical switch means including a movable member for controlling the connection of said illuminating lamp with said voltage source, biasing means constantly urging said movable member to a position wherein said lamp and voltage source are disconnected, manually operable means for shifting said movable member against the force of said biasing means, shiftable detent means at times engageable with said movable member to hold it in a position wherein said lamp and voltage source are connected once said movable member has been manually shifted, means normally urging said detent means out of engagement with said movable member, and means operating in response to a running condition of said engine for shifting said detent means into engagement with said movable member.

3,125,703
ARC WELDING AND CUTTING APPARATUS UTILIZING POLYPHASE A.C. SUPPLIED THROUGH SILICON-DIOXIDE RECTIFIER
Martin Rebuffoni and Emil F. Steinert, Williamsville, N.Y., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 5, 1960, Ser. No. 20,137
5 Claims. (Cl. 315—201)

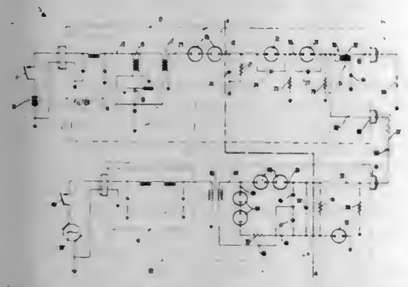
1. Arc welding and cutting apparatus for arc welding and cutting work with an electrode, by means of an arc between said work and said electrode, which arc produces a molten pool at said work, and particularly for cutting said work with a blast of gas directed against said molten pool, said apparatus comprising conductors for supplying polyphase alternating current, electrode and work conductors to be connected to said electrode and work respectively, rectifier means of the silicon-diode type connected in rectifying relationship between said supplying conductors and said electrode and work conductors for supplying direct current to said electrode and work conductors, said rectifier means being dimensioned to supply direct current having a magnitude of the order of 200 to 1000 amperes between said electrode and work,

and capacitive means having a capacitance of the order of 2000 microfarads connected in a symmetrically con-



ductive shunt circuit between said electrode and work conductors.

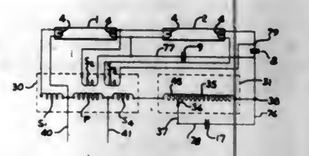
3,125,704
IGNITION SYSTEM
Paul A. Blackington and Maurice W. Burgher, Sidney, N.Y., assignors to The Bendix Corporation, Sidney, N.Y., a corporation of Delaware
Continuation of application Ser. No. 29,280, May 16, 1960. This application Feb. 2, 1962, Ser. No. 172,375
15 Claims. (Cl. 315—209)



1. An ignition system for a combustion engine, comprising an igniter gap having electrodes, a first ignition unit, a first delivery circuit for applying the energy of said first unit to one of the electrodes of said igniter gap, said first delivery circuit including a control gap interposed between the first ignition unit and the igniter gap, a first storage condenser connected between the delivery circuit in advance of the control gap and another of the electrodes of the igniter gap, and a second condenser connected in shunt with the control gap, a second ignition unit, and a second delivery circuit for applying the energy of the second unit to said igniter gap, the first and second delivery circuits being connected between the control gap and the igniter gap, the first and second condensers forming a voltage divider which prevents the voltage applied to the control gap from reaching the breakdown voltage of the control gap when the igniter gap is supplied with discharge energy from the second ignition unit.

3,125,705
GAS DISCHARGE LAMP CIRCUITS EMPLOYING SATURABLE TYPE TRANSFORMER
Albert E. Feinberg and Paul Berger, both of 2950 N. Western Ave., Chicago, Ill.
Filed Mar. 3, 1959, Ser. No. 796,802
63 Claims. (Cl. 315—278)

1. A device for converting substantially sinusoidal A.C. of a given frequency and voltage to A.C. of the same frequency but with a substantial superposed odd harmonic above the third, said device comprising a reactor and means for accentuating in said reactor said harmonic over all the other harmonics of said frequency, said means for accentuating said harmonic comprising a condenser and inductive means in circuit with one another,



the inductive means being at least a part of said reactor, said reactor including an iron core having a high reluctance gap with a saturating magnetic bridge thereacross with the bridge located in the magnetic circuit of the inductive means, and said condenser and inductive means being substantially tuned to said harmonic.

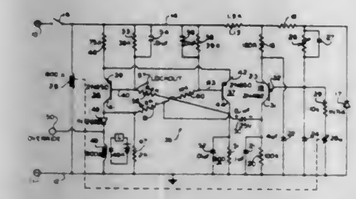
3,125,706
MULTIPLE ELECTRICAL CONNECTOR CONTROL ELEMENTS
James G. Long, Fairfield, Conn., assignor to Burndy Corporation, a corporation of New York
Filed Dec. 14, 1959, Ser. No. 859,289
2 Claims. (Cl. 317—101)



2. An article of manufacture, comprising:
a longitudinally elongated common conductor;
a plurality of transversely spaced apart electronic control elements, each having a first and a second conductor extending therefrom;
one of each of said first conductors secured to said common conductor;
a plurality of transversely spaced apart electrical connector contacts, each having a conductor receiving portion and a mating contact engaging portion, one of each of said contact conductor receiving portions connected to a respective said second conductor;
and an insulation housing having a plurality of internal recesses substantially congruent with, enclosing individually and interlocking with said common first and second conductors, and said conductor reconductor, each said control element and its said ceiving portion of each said contact; said mating contact engaging portion of each said contact extending beyond said housing.

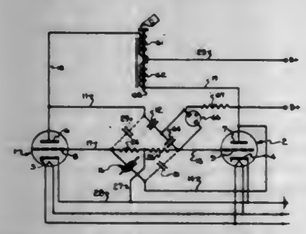
3,125,707
TIME DELAY CIRCUIT
George T. Culbertson, Gardena, Calif., assignor to Theodore W. Hallerberg, Los Angeles, Calif.
Filed Aug. 24, 1960, Ser. No. 51,550
10 Claims. (Cl. 317—142)

1. A time delay circuit comprising a flip-flop having a first and a second energy translating device each with an input, output and control electrode, input switching means, means causing said first rather than said second energy translating device to conduct upon operation of said input switching means, coupling means from the output electrode of said first to the control electrode of said second energy translating device for maintaining said second device non-conducting, output circuit means responsive to the respective conduction states of said first and second devices, a timing capacitor, means for charging said timing capacitor responsive to the operation of said input switching means, a double-base diode having a first and second base electrode and an emitter electrode, means causing conduction between said emitter electrode and said first base electrode only when said timing capacitor reaches a predetermined voltage thereby causing said double-base diode to instantly enter a negative resistance region, and triggering means connected to said flip-flop



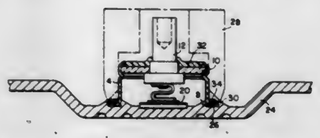
and responsive to such instantaneous entry of said double-base diode into its negative resistance region causing said first and second energy translating devices to reverse their conduction states when said double-base diode conducts, said triggering means including a triggering capacitor connected to the control electrode of said first device, means charging said triggering capacitor to a voltage level below the threshold required to render said first device non-conducting, and a further voltage added in circuit with said triggering capacitor when said double-base diode conducts to exceed said threshold and control said output circuit means.

3,125,708
OSCILLATOR CONTROLLED RELAY SYSTEM
Otto Hans Schutte, Delft, Netherlands, assignor to De Nederlandse Organisatie voor Toegepast-Natuur-Wetenschappelijk Onderzoek ten Behoeve van Nijverheid, Handel en Verkeer, The Hague, Netherlands, a corporation of the Netherlands
Filed Mar. 2, 1959, Ser. No. 796,481
Claims priority, application Netherlands Mar. 6, 1958
4 Claims. (Cl. 317—146)



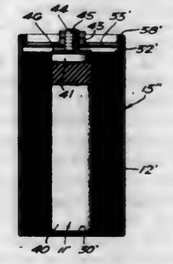
1. A control system for yarn clearing apparatus comprising, in combination, an oscillator circuit comprising a pair of electron tubes and a pair of feedback paths for interconnecting the input of each tube to the output of the other tube, a capacitor in each of said feedback paths one of said capacitors forming a yarn measuring capacitor in one of said feedback paths between the plates of which said yarn is advanced, said yarn measuring capacitor having a value which varies proportionally with the mass of said yarn, an impedance associated with the other feedback path, imbalance responsive means connected to the output of both of said tubes for performing a control function, said feedback path impedance being arranged to change substantially in value when a slub of predetermined mass is present in said yarn measuring capacitor and to produce an imbalance in said imbalance responsive means for performing said control function, a second capacitor in said other feedback path, said impedance comprising a discharge tube connected in parallel relationship with said second capacitor, and said discharge tube being arranged to conduct and substantially change its impedance value when the value of said yarn measuring capacitor reaches said predetermined magnitude corresponding to a slub of predetermined mass in said yarn.

3,125,709
SEMICONDUCTOR COMPONENT AND HOUSING ASSEMBLY
Howard A. Wagner, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 17, 1960, Ser. No. 63,202
3 Claims. (Cl. 317—234)



1. A semiconductor device comprising an open ended cylindrical shell having an outer peripheral flange at the extreme lower end thereof and an inner peripheral lip near the extreme upper end thereof; an insulating washer having an electrical conductor passing therethrough, disposed on the inner peripheral lip of the shell and joined to the inner periphery of the shell, a section of the shell being swaged onto the top surface of the washer; an electrically conductive member joined at one end to the lower end of the electrical conductor passing through the insulating washer, the other end being soldered to a semiconductor member which is disposed within the shell; a shaped heat dissipating and support plate having a circular groove within which the peripheral flange of the cylindrical shell is disposed and closely fits therein, the semiconductor member being soldered to the top surface of the plate, and the outer circumferential edge of the groove being staked onto the upper surface of the flange thereby affixing the flange in the groove and providing a hermetic enclosure for the semiconductor member.

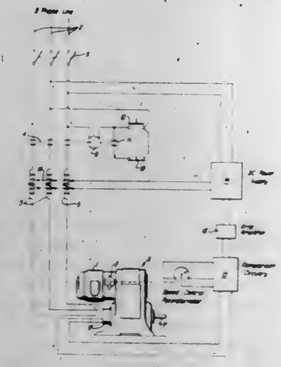
3,125,710
HIGH PRECISION CAPACITOR
Leo I. Kaplan, 11042 Mount Gleason, Sunland, Calif.
Filed Oct. 28, 1958, Ser. No. 770,053
2 Claims. (Cl. 317—249)



1. A hermetically sealed capacitor comprising multiple convolutions of spirally wound pairs of superimposed strips of conductive and non-conductive material, a cylindrical housing, an imperforate flexible diaphragm between one end wall of said housing and an expandable core extending axially through the center of said spirally wound strips, and means carried by said housing operable from the exterior thereof for applying axial pressure

to said expandable core through said flexible diaphragm in a manner to place all portions of said strips under substantially uniformly distributed pressure to adjust the capacity of said conductive strip.

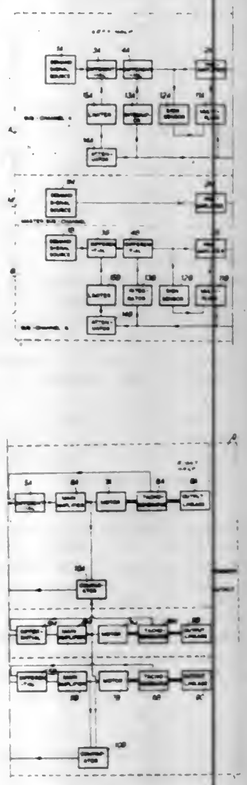
3,125,711
SPEED CONTROLLER FOR INDUCTION MOTOR
Robert J. Carlson, Milford, Conn., assignor, by mesne assignments, to The Emerson Electric Manufacturing Company, St. Louis, Mo., a corporation of Missouri
Filed June 27, 1960, Ser. No. 38,813
15 Claims. (Cl. 318—11)



1. In a control system for adjusting the speed of a power drive: an alternating current motor the speed of which depends upon the voltage applied to the motor; a variable ratio transmission mechanism driven by the motor and having a rotary power output; movable means for determining the ratio of the mechanism between limits from a low output to input ratio to a high output to input ratio, and in accordance with the position of the movable means; and means correlated with the position of the movable means for reducing the voltage applied to the motor below line voltage when the ratio is set at a low value for producing low motor speed in combination with low transmission ratio to achieve a low output speed.

3,125,712
PLURAL CHANNEL POSITIONAL SERVO SYSTEMS
Dennis Lello Meredith, Cheltenham, England, assignor to S. Smith & Sons (England) Limited, London, England, a British company
Filed Dec. 12, 1961, Ser. No. 158,842
Claims priority, application Great Britain Dec. 21, 1960
4 Claims. (Cl. 318—19)

1. A servo system of the kind having a plurality of independent sub-channels which are arranged to actuate a common output in dependence upon a common demand quantity, the system comprising a master sub-channel and a plurality of further sub-channels; the master sub-channel including an amplifier, means for applying a signal representing the common demand quantity to the amplifier, a servo motor energized by the amplifier, and means coupling the motor to actuate the common output; and each further sub-channel including a servo amplifier comprising a variable gain pre-amplifier and a main amplifier coupled in cascade in the order specified, means for applying a signal representing the common demand quantity to the input of the pre-amplifier, a servo motor, means for applying the output of the main amplifier to energize the servo motor, means coupling the servo motor to actuate the common output, a signal comparator responsive to the outputs of the main amplifier and the amplifier of the master sub-channel to derive a signal representing the discrepancy between the two outputs, sign-sensor means responsive to the sign of the signal applied to the input of the pre-amplifier to derive a signal dependent upon said sign, means for varying the gain of the pre-amplifier in response to an applied signal, multiplier means responsive to the signal derived by the comparator and the signal derived by the sign-sensor means

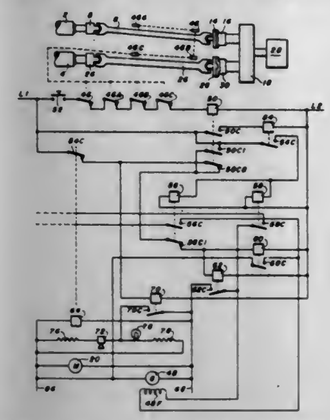


to supply the signal derived by the comparator means to the gain-varying means in a sense dependent upon the signal derived by the sign-sensor means so as to tend to reduce the discrepancy towards zero, first feedback means for feeding back degeneratively to the pre-amplifier at least part of the discrepancy signal, and further means including an integrator for feeding back degeneratively to the pre-amplifier a signal derived as the integral with respect to time of the discrepancy signal.

3,125,713
WARD LEONARD EMERGENCY STOP APPARATUS FOR STEEL MILLS
Carl J. Degenhardt, Pittsburgh, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Jan. 15, 1962, Ser. No. 166,298
6 Claims. (Cl. 318—158)

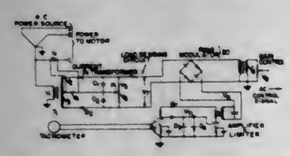
1. In apparatus including a driven member, a D.C. motor, a drive spindle between said member and motor, and a D.C. generator for supplying power to said motor, said generator having a field; the improvement comprising a switch mounted adjacent said spindle and operable by movement of said spindle out of its normal path, and

means operable by actuation of said switch by said spindle to first remove power from the said generator field



and then to apply reverse power voltage to said generator field whereby said motor is rapidly brought to a stop.

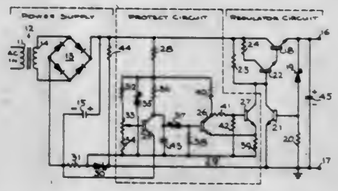
3,125,714
SPEED CONTROL SYSTEM FOR ELECTRICALLY POWERED MECHANISM
Robert H. Eisengrein, Skaneateles, N.Y., assignor to Seneca Falls Machine Company, Seneca Falls, N.Y., a corporation of Massachusetts
Filed June 19, 1959, Ser. No. 821,417
6 Claims. (Cl. 318—454)



1. In a system for controlling the speed of a reversible drive powered by an A.-C. motor, first circuit means operatively connected to the energizing circuit of said motor for generating a first signal having a magnitude corresponding to the real load on said motor, second circuit means operatively connected to said reversible drive for generating a second signal having a polarity corresponding to the direction of rotation of said drive, and means combining said first and second signals to provide a control signal having a magnitude corresponding to the real load on said motor and a polarity corresponding to the direction of rotation of said drive.

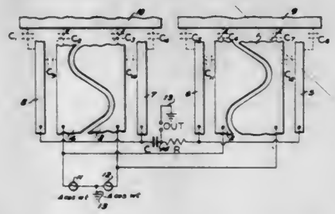
3,125,715
REGULATED POWER SUPPLY CIRCUITS
William O. Brooks, Los Angeles, Calif., assignor to Thompson Ramo Wooldridge Inc., Los Angeles, Calif., a corporation of Ohio
Filed Apr. 22, 1959, Ser. No. 808,028
4 Claims. (Cl. 323—22)

4. In a controlled power supply system for delivering power at a predetermined desired value of output voltage to all electrical loads the conductance values of which do not exceed a predetermined maximum value, said system including a source of electrical power serially coupled by means of a controllable impedance to a set of power supply output terminals, the voltage provided by and current supplying capabilities of said source, being of values such that the maximum safe average power dissipation rating characterizing said controllable impedance tends to be exceeded for values of load conductance substantially above said predetermined maximum, the combination of: voltage control means operative responsive to power supply system output voltage and coupled to the controllable impedance for producing a signal for controlling the value of the impedance as a function of the desired power supply system output voltage to be supplied to all electrical loads the conductance values of which do not exceed said predetermined maximum; normally disabled means operatively included in said power supply system and connected to said controllable impedance for regulating the value of average power dissipation within the controllable impedance, said normally disabled means having input means for determining the conductance value of loads connected in power accepting relation to the power supply system by measuring the



voltage across the controllable impedance, said normally disabled means also having output means responsive to the input means for providing a signal for all load conductance values in excess of said predetermined maximum value of load conductance to limit the average power dissipation within the impedance to substantially constant and at a value below said predetermined safe maximum value of average power dissipation; and means operatively coupled to said voltage control means and said last named means for measuring the current flow from the source of electrical power and concurrently disabling said voltage control means and enabling said normally disabled means only during the connection to said power supply terminals of electrical loads, the conductance values of which substantially exceed said predetermined maximum value of load conductance.

3,125,716
ANALOG MEASURING SYSTEM
Jerome Machlis, Granada Hills, Calif., assignor to Telecomputing Corporation, Hollywood, Calif., a corporation of California
Filed July 5, 1961, Ser. No. 121,852
6 Claims. (Cl. 323—122)



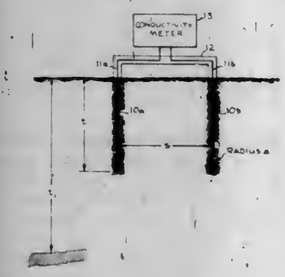
1. An electrostatic phase shifter comprising a pair of intermeshed sinusoidal conductors mounted on a relatively fixed dielectric substrate, a pair of output conductors adjacent corresponding ones of said sinusoidal conductors and mounted on said substrate, coupler conductors means parallel with and spaced apart from said sinusoidal conductors and said output conductors, said coupler conductors being carried on a relatively movable insulating member, a first source of alternating current connected to one of said sinusoidal conductors and a

second source of alternating current connected to the other of said sinusoidal conductors, said second source being 180 degrees out of phase with said first source, and phase-shifting network means connected with said output conductors for combining the signal coupled thereto, to provide an output alternating current which is a function of the relative displacement between said substrate and said movable member.

3,125,717
GEOPHYSICAL APPARATUS INCLUDING A TWO-WIRE OPEN-ENDED TRANSMISSION LINE EMBEDDED IN THE EARTH FOR MEASURING IMPEDANCE CHARACTERISTICS OF THE EARTH

Rabindra N. Ghose, Los Angeles, Calif., assignor, by mesne assignments, to Space-General Corporation, Glendale, Calif., a corporation of California

Filed Jan. 5, 1960, Ser. No. 531
2 Claims. (Cl. 324—1)

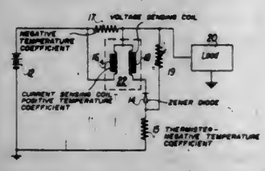


1. Geophysical aparatus comprising: a two-wire open-ended transmission line sunk into the earth to a predetermined depth; and means coupled to said transmission line at the input end thereof for measuring the input impedance of said line over a range of frequencies, said means including a variable oscillator for applying signals to said transmission line over said range of frequencies; and first and second circuit arrangements connected between said variable oscillator and said transmission line, said first and second circuit arrangements respectively being adapted to measure the resistive and reactive components of the input impedance of said transmission line over said range of frequencies.

3,125,718
BATTERY CHARGE INDICATOR

Richard T. Race, Chicago, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois

Filed May 26, 1961, Ser. No. 112,975
7 Claims. (Cl. 324—29.5)

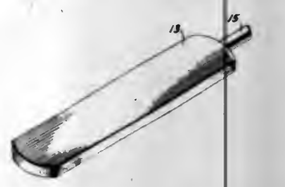


1. A circuit for indicating the condition of a storage battery which provides current to a load connected thereto including in combination, a meter including first and second sensing coils, a zener diode and a resistor connected in series with said first coil across the storage battery, said resistor having a negative temperature coefficient to compensate for variation of the zener diode voltage with temperature, and a second resistor series connected between the battery and the load, said second coil of said meter being connected across said second resistor to compensate the meter indication for the current flow from the battery.

3,125,719
GAUSSMETER PROBES AND HOUSING STRUCTURE FOR SUPPORTING THE PROBES IN DIFFERENT OPERATIVE ARRANGEMENTS

Richard W. Seabury, Jr., Towaco, N.J., assignor to Radio Frequency Laboratories, Inc., Boonton, N.J., a corporation of New Jersey

Filed Oct. 10, 1961, Ser. No. 144,239
2 Claims. (Cl. 324—34)

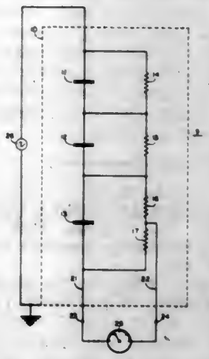


1. In combination, a pair of relatively flat similar gaussmeter probes and a device for retaining said probes comprising two identical probe housing units, each having a plurality of spaced fins extending in parallel planes from a base section, with the fins of each unit extending from their base section a distance substantially equal to one-half the difference between the width and thickness of a probe, with the spacing between adjacent fins substantially equal to the thickness of each of said probes, and removable means retaining said housing units in fixed position with the fins of each unit coplanar with and extending toward the counterpart fins of the other unit, with the probes individually positioned between adjacent fins of each of said units.

3,125,720
CAPACITOR FAULT INDICATOR INCLUDING RESISTANCE VOLTAGE DIVIDER

Hallock F. Swift, 302 Livingston Terrace SE., Washington, D.C.

Filed July 28, 1960, Ser. No. 46,038
1 Claim. (Cl. 324—51)
(Granted under Title 35, U.S. Code (1952), sec. 266)

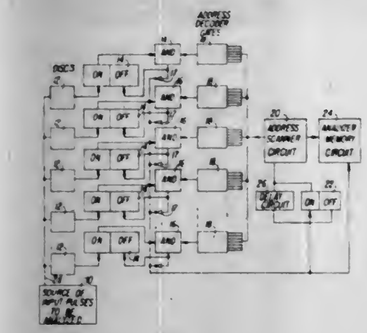


1. A faulty-capacitor monitor connected in parallel with a plurality of capacitors connected in series in an electrical circuit which comprises:
(*a*) a voltage divider,
(*b*) said voltage divider comprising a plurality of resistors connected in series,
(*c*) said plurality of resistors connected in series including first and second adjacent series connected resistors of different resistance value located at one end of said plurality of resistors connected in series,
(*d*) said first and second adjacent series connected resistors having a total combined resistance value which total resistance is equal to the resistance value of each separate remaining resistor of said plurality of resistors connected in series,
(*e*) said second resistor having a resistance value of about 1/100 the value of said first resistor of said first and second adjacent series connected resistors,
(*f*) said first and second adjacent series connected resistors connected electrically in parallel with an end capacitor of said plurality of capacitors connected in series in said electrical circuit,
(*g*) each of said separate remaining resistors of said plurality of resistors connected in series being connected electrically in parallel with one each of said plurality of capacitors connected in series,
(*h*) and a detector connected electrically across said second resistor whereby said detector detects any voltage change across said capacitors to indicate a faulty capacitor.

3,125,721
PULSE HEIGHT ANALYZER INCLUDING DIGITAL STORAGE MEANS AND METHOD OF CLASSIFYING AND COUNTING PULSES

Robert W. Schumann, Madison, Wis., assignor to Nuclear Data, Inc., Madison, Wis., a corporation of Illinois

Filed Aug. 29, 1961, Ser. No. 134,690
7 Claims. (Cl. 324—103)

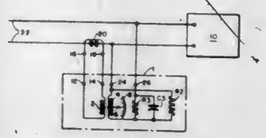


7. A method of classifying input pulses by amplitude and of counting the pulses classified in each of a multitude of predetermined amplitude ranges, including the steps of placing a register circuit in a condition to indicate when a pulse is received within a predetermined amplitude range, there being a multitude of register circuits, one for each amplitude range, sequentially electrically energizing each register circuit and recording a count in the channel of a multichannel memory corresponding to a particular register circuit if that register circuit has been placed in a condition indicating the reception of a pulse within a predetermined amplitude range, the electrical energization of a register circuit being effective to place said circuit in a condition to indicate the receipt of the next pulse within that predetermined amplitude range, and delaying said sequential electrical energization upon reaching a register circuit in a condition indicating the receipt of a pulse within a predetermined amplitude range, a sufficient period of time to complete recording in the memory channel.

3,125,722
FREQUENCY COMPENSATION FOR ALTERNATING CURRENT INSTRUMENTS

Bernard E. Lenehan, Bloomfield, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Nov. 21, 1960, Ser. No. 70,566
8 Claims. (Cl. 324—142)

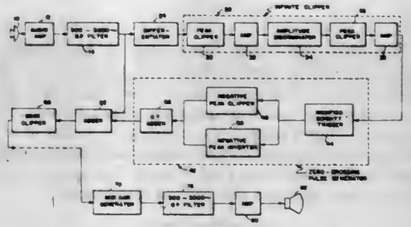


1. In an electrical instrument for use in measuring electrical quantities in alternating potential networks, means providing an alternating electromagnetic field, an electrical coil having multiple turns of a conductor and having end terminals, means pivotally supporting said coil in said field for movement as a consequence of current flow through said coil, said coil having resistance and inductance and capacitance, a first resistor connected in shunt with said coil, a second resistor having end terminals, means connecting together one of said end terminals of said coil and said second resistor whereby said second resistor is connected in series with said coil, means including a source of alternating potential completing a circuit between the other of said end terminals of said coil and said second resistor for causing a first current to flow, and a capacitor connected in shunt with said second resistor, the values of said capacitor and said first resistor being such that current circulating in said coil due to said alternating field is phase displaced 90 degrees from said first current.

3,125,723
SELECTIVE AMPLITUDE SAMPLING METHOD AND SYSTEM FOR PROCESSING SPEECH SIGNALS

Leo R. Spogen, Jr., Harry N. Shaver, and David E. Baker, Tucson, Ariz., assignors to Arizona Research Foundation, Inc., a corporation of Arizona

Filed Dec. 5, 1960, Ser. No. 73,828
5 Claims. (Cl. 325—38)

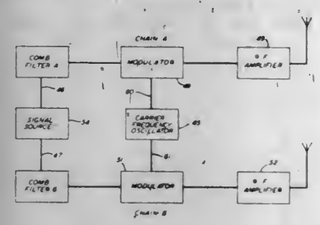


2. A speech processing system comprising means for producing a transduced voice signal, said transduced signal having substantially the same wave form as the original speech means for differentiating said signal, means for generating a pulse of predetermined magnitude each time the signal from said differentiating means passes through zero, means for combining said pulses with said transduced signal, and means for detecting the signal from said combining means.

3,125,724
SINGLE SIDEBAND SPACE-FREQUENCY DIVERSITY TRANSMISSION SYSTEM

John D. Foulkes, Mountain Lakes, Willard D. Lewis, Little Silver, and Neal D. Newby, Leonia, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 29, 1961, Ser. No. 163,236
9 Claims. (Cl. 325—154)

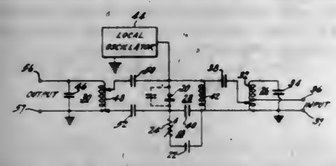


1. In a space diversity radio communication system comprising a plurality of transmission means for the transmission of signal energy, first means for generating a carrier signal, a plurality of amplitude modulators, means connecting respective ones of said plurality of amplitude modulators to individual ones of said plurality of transmission means, means connecting said first means to each of said amplitude modulators, a second means for generating signal information, a plurality of filter means for passing discrete portions of the frequency spectrum of said information signal, each of said filter means passing different portions and the sum of the portion passed by each containing sufficient frequencies in the spectrum to produce an intelligible signal, means connecting respective ones of said plurality of filter means individually to respective ones of said plurality of amplitude modulators and to said second signal generating means.

3,125,725
FREQUENCY CONVERTER

Kern K. N. Chang, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed July 20, 1959, Ser. No. 828,342
32 Claims. (Cl. 325—449)



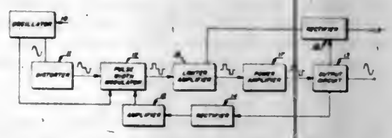
1. An electrical circuit comprising in combination, a negative resistance diode, means for loading said diode to prevent self-oscillations, means providing a first source of wave signal at a first frequency coupled to said diode, means providing a second source of wave signal at a second frequency coupled to said diode, and means coupled to said diode for deriving a third signal having a frequency different from said first and second frequencies.

3,125,726
APPARATUS FOR CONVERTING D.-C. POWER TO A.-C. POWER

James Bernard McCarthy Clifton, Red Bank, N.J., assignor to The Bendix Corporation, Eatontown, N.J., a corporation of Delaware

Filed Aug. 7, 1958, Ser. No. 753,737
Claims priority, application Great Britain Aug. 12, 1957
24 Claims. (Cl. 328—22)

1. In an electronic apparatus, a source of D.-C. voltage, a transformer having a center-tapped primary winding and a secondary winding, a pair of semi-conductor devices each having a base, emitter and collector electrode, means connecting the ends of the primary transformer winding to the collector electrodes of the semiconductor devices, means connecting the emitters together, means connecting the source of D.-C. voltage across the center tap on the primary transformer winding and the emitter electrodes, a variable source of D.-C. bias voltage connected between the base and emitter electrodes of each of the semi-conductor devices, an

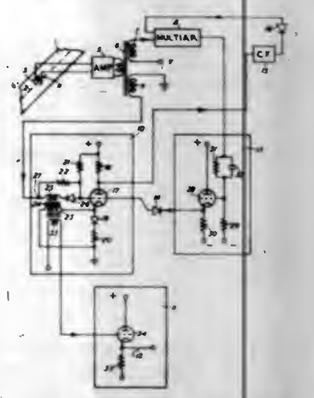


alternating current source and means connecting the said alternating current source between both of the base electrodes of the semi-conductor devices and the emitters thereof whereby an output signal is developed in the transformer secondary winding comprising alternate negative and positive going pulses smoothly controllable in width by the variable source of D.-C. bias voltage, the said positive and negative going pulses increasing in width with a change of bias voltage in one direction and decreasing in width with a change of bias voltage in the other direction.

3,125,727
VOLTAGE AMPLITUDE DETECTION APPARATUS

John Joshua Sharp, Woodley, near Romsey, England, assignor to International Computers and Tabulators Limited, London, England

Filed Apr. 13, 1960, Ser. No. 21,993
Claims priority, application Great Britain Apr. 24, 1959
6 Claims. (Cl. 328—116)

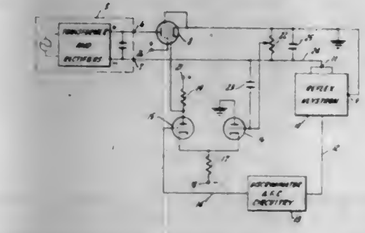


1. Voltage amplitude detection apparatus including a source of input signals; sources of first and second fixed reference voltage levels; a first amplitude detection circuit connected to said input signal source and to said first reference voltage level source; a second amplitude detection circuit connected to said input signal source and to said second reference voltage level source; control means connected between said first and second amplitude detection circuits operable to render the detection circuits effective each in response to an output signal produced by the other, said control means initially being conditioned to render said first detection circuit effective to produce a first output signal when an input signal passes through said first reference voltage level, and said second amplitude detection circuit being rendered effective by said control means only after the occurrence of said first output signal to produce a second output signal when said input signal passes through said second reference voltage level; and means connected to said second amplitude detection circuit operative to produce a final output signal in response to the occurrence of said second output signal.

3,125,728
AUTOMATIC FREQUENCY CONTROL CIRCUITRY FOR HIGH VOLTAGE KLYSTRON TUBES

Joseph L. Fasulo, Baltimore, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Aug. 23, 1962, Ser. No. 219,087
2 Claims. (Cl. 331—6)



1. An electrical circuit for controlling the frequency of oscillation of a klystron tube comprising:

a source of high potential direct current voltage having a positive and a negative terminal means;

a reflex klystron oscillator tube having a reflector electrode terminal coupled to said negative terminal means of said source of direct current voltage, and having a resonant cavity coupled to ground potential;

a pentode electron tube having an anode, a cathode, and a control grid, said anode being coupled to said positive terminal means of said source of direct current voltage and said cathode being coupled to ground potential;

a frequency sensing and discriminating means having an input and an output terminal means, said input terminal means thereof being coupled to said oscillator tube for constantly receiving energy samples therefrom; and

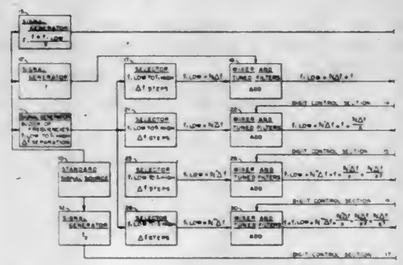
an electronic control means having an input terminal coupled to said output terminal means of said frequency sensing and discriminating means for receiving a voltage proportional to the frequency deviation of said oscillator tube, and having an output means coupled to said control grid of said pentode electron tube for providing a control voltage thereto for varying the potential applied to said reflector electrode in such a manner as to cause the frequency generated by said klystron tube to remain constant.

3,125,729
DIGIT CONTROL FREQUENCY SYNTHESIZER

Robert R. Stone, Jr., 55 Belfast Drive, Rosecroft Park 22, Md., and Harris F. Hastings, 3017 Park Drive SE., Washington, D.C.

Filed Dec. 31, 1958, Ser. No. 784,405
8 Claims. (Cl. 331—39)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A frequency synthesizer for providing output signals at selected frequencies within a selected frequency band, as desired, comprising first signal generating means having an output at a selected frequency f_1; second signal generating means having a multifrequency output at a selected frequency f_2 and at selected constant frequency intervals Δf within the frequency range f_2 to $f_2+N\Delta f$ where n is an integer representative of the number of frequency intervals; third signal generating means having an output at a selected frequency f_3; a frequency standard source; means connecting said frequency standard source to each of said first, second and third signal generating means such that the outputs thereof are stabilized in phase with the output of said frequency standard source; a plurality of digit control sections, each of said digit control sections in said plurality thereof comprising at least a first mixer, a divider for dividing an input signal by a selected base factor x, where x is an integer and a second mixer connected in cascade; means connecting said plurality of digit control sections in cascade; means



connecting the output of said first signal generating means to said first mixer of the digit control section in said cascade connection thereof; a plurality of selector means connected to the output of said second generating means and adapted for the selection of frequencies at said selected intervals Δf within the frequency range f_2 to $f_2+n\Delta f$, where f_2 is a fraction of f_1, such that f_1+f_2 is an exponential function of said base factor, x; means connecting different selector means in said plurality thereof to one of said first and second mixers in each of said digit control sections; means connecting the output of said third signal generating means, f_3, to the other of said first and second mixers in each of said digit control sections in said plurality thereof, said f_3 being equal to

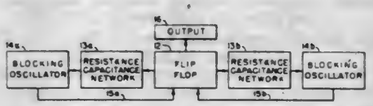
$$f_1-\frac{f_1+f_2}{x}$$

output means; and means connecting said output means to the output of the last digit control section in said cascade connected plurality thereof.

3,125,730
ASYMMETRIC FREE RUNNING OSCILLATOR

Harold H. Levy, East Columbia Park, Landover, and John M. Hovey, Oxon Hill, Md., assignors to the United States of America as represented by the Secretary of the Navy

Filed Nov. 30, 1959, Ser. No. 856,314
1 Claim. (Cl. 331—55)
(Granted under Title 35, U.S. Code (1952), sec. 266)



In an asymmetric free running oscillator, a transistorized Eccles-Jordan multivibrator including first and second input means connected respectively to separate transistor base terminals thereof and first and second output means connected respectively to separate transistor collector terminals thereof, first and second variable resistance-capacitance networks having third and fourth input

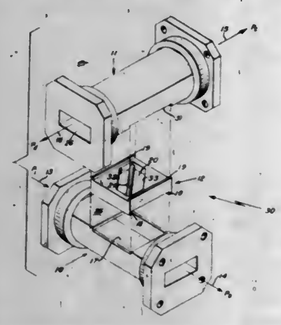
means, respectively, and third and fourth output means, respectively, said first output means connected to said third input means and said second output means connected to said fourth input means, and first and second blocking oscillator circuits having fifth and sixth input means, respectively, and fifth and sixth output means, respectively, said third output means connected to said fifth input means, said fourth output means connected to said sixth input means, said fifth output means connected to said first input means and said sixth output means connected to said second input means.

3,125,731

CROSS GUIDE COUPLER HAVING A COUPLING APERTURE BRIDGED BY A DIAGONAL COUPLING BAR

Robert H. Anderson, Cambridge, Mass., assignor to Raytheon Company, Lexington, Mass., a corporation of Delaware

Filed July 21, 1961, Ser. No. 125,787
8 Claims. (Cl. 333—10)



1. In combination, a first means for propagating electromagnetic wave energy; a second means for propagating electromagnetic wave energy in a direction transverse to the direction of propagation in said first means; means for coupling at least a portion of an electromagnetic energy wave in said first propagating means to said second propagating means, said coupling means having an opening therein common to both of said propagating means; a conductive member extending across said common opening at a selected angle with respect to the direction of propagation of said electromagnetic energy wave in said first propagating means.

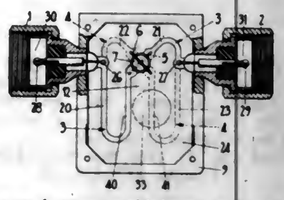
3,125,732

RESONANT ISOLATOR COMPOSED OF A BIASED GYROMAGNETIC ELEMENT BETWEEN CROSSED CONDUCTORS DIFFERING IN LENGTH BY AN ODD NUMBER OF QUARTER WAVELENGTHS TO COMMON JUNCTION

John Mears Sidwell, Middlesborough, and John Francis Werner, Wembley, England, assignors to The General Electric Company Limited, London, England

Filed Nov. 17, 1959, Ser. No. 853,639
Claims priority, application Great Britain Nov. 20, 1958
4 Claims. (Cl. 333—24.2)

1. A resonance isolator comprising two elongated conductors, means to mount the two conductors so that a portion of one conductor and a portion of the other conductor cross one another generally at right angles, a conductive member insulated from said conductors and forming therewith two two-conductor transmission structures each arranged to support and propagate electromagnetic energy waves, an input termination comprising two terminal portions of which one is connected to said conductive member and the other is connected to said conductors so that the electrical distances between said input termination and said portions of said conductors at their cross-over differ by substantially an odd number of quarter wavelengths for wave energy supplied to said isolator, an output termination comprising two terminal portions of which one is connected to said conductive member and the other is connected to said conductors so that the electrical distances between said input and output terminations through said two transmission structures are substantially equal, an element of magnetically polarizable material exhibiting the gyromagnetic effect at the frequency of said wave energy and supported between said crossing portions of said conductors, and means for applying a steady magnetizing field to said element.

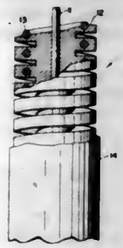


3,125,733

TRANSMISSION LINE HAVING HIGH ATTENUATION FOR RADIANT ENERGY INDUCED HIGH FREQUENCY CURRENTS, USEFUL IN DETONATION CIRCUITS

Dale G. Holinbeck, Madison, Wis., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Nov. 17, 1960, Ser. No. 69,987
4 Claims. (Cl. 333—79)



1. In electrical transmission lines for attenuating high frequency currents without appreciable loss at low frequencies, the combination of a centrally disposed linear metal conductor, a conductive high frequency dissipative material surrounding said central conductor, a helically-formed conductor disposed substantially symmetrically about said central conductor and extending longitudinally along the length thereof, said helically-formed conductor adding inductive reactance to the circuit and being embedded in said dissipative material, said dissipative material having a helically configured slot in the outer periphery thereof extending between successive turns of said helically-formed conductor thereby providing a dielectric gap between turns of said helically-formed conductor said slot being filled with dielectric material.

3,125,734

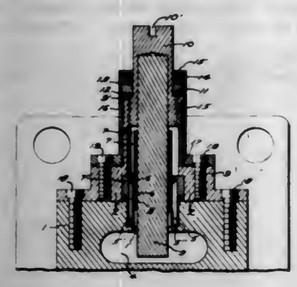
TUNING SCREW HAVING A DOUBLE CHOKE

Curtis E. Ward, Los Altos, Calif., assignor to Varian Associates, Palo Alto, Calif., a corporation of California

Filed Apr. 6, 1960, Ser. No. 20,330
7 Claims. (Cl. 333—83)

1. A high frequency tuning apparatus for varying the electrical characteristics of a wave propagating structure

comprising a tuning rod movably extending into the wave propagating structure through an aperture in the wall thereof without contacting the wall to effect tuning therein and support means for supporting said tuning rod on said wave propagating structure, said support means including a lower bearing formed by a dielectric sleeve and an upper bearing formed by a tuner mounting sleeve threadably mating with screw threads on said tuning rod



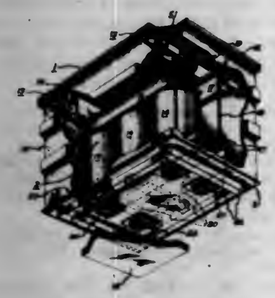
whereby a frictional bearing is obtained between the mating threaded portions of the upper bearing and a sliding bearing is obtained at said lower bearing, a resilient choke member encircling said rod and serving to form a choke for said tuning rod and also serving to hold said dielectric sleeve in position around said tuning rod, and a second choke member encircling said rod and serving to form a second choke along said tuning rod and between the first choke and the upper bearing.

3,125,735

SOUND REDUCING MEANS FOR INTERNALLY SUPPORTED TRANSFORMER

Thomas J. Twomey, Rome, Ga., assignor to General Electric Company, a corporation of New York

Filed Mar. 31, 1960, Ser. No. 19,080
22 Claims. (Cl. 336—92)



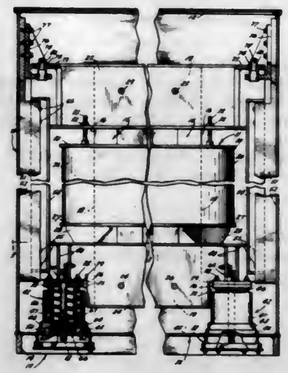
4. Apparatus that produces inherent mechanical vibrations during normal operation comprising a vibrating device, a fluid-tight resonant enclosure containing said device, a fluid occupying said enclosure, said device being vertically movable within said enclosure from a non-operating position where it contacts said enclosure to an operating position where it is free from contact with said enclosure, means operable from the exterior of said enclosure communicating through a side of said enclosure for clamping said device against said enclosure in said non-operating position, there being an opening in said enclosure, resilient means maintaining a fluid-tight seal across said opening, and means passing through said opening independently supporting said device on a massive relatively immobile foundation in the operating position.

3,125,736

STATIONARY INDUCTION APPARATUS HAVING MEANS FOR REDUCING AUDIBLE SOUND

Morton M. Aronson, Upper St. Clair Township, Bridgeville, and John F. Koepke, Bethel Park, Pa., assignors to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware

Filed Aug. 11, 1961, Ser. No. 130,920
14 Claims. (Cl. 336—100)



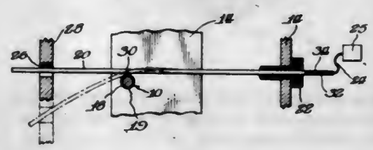
7. In combination, a hermetically sealed tank, a transformer core and coil assembly within said tank, a frame affixed to said assembly, spring means between the bottom wall of said tank and said frame for resiliently mounting said core and coil assembly in an operating position wherein it is mechanically de-coupled from said tank, and means engaging said frame and having a member extending through a wall of said tank and being accessible from the exterior of said tank for moving said core and coil assembly down relative to said tank against the force of said spring means until said frame is rigidly supported from said tank bottom wall, said member being detachable from said tank wall, whereby movement of said core and coil assembly relative to said tank may be restricted during shipment of said transformer and said core and coil released to said operating position at the operating site without opening the seal of said tank and exposing the interior of said tank to the atmosphere, and means for hermetically sealing between said member and said tank wall.

3,125,737

ELECTRONIC ORGAN KEY

Richard W. McKee, Lake Forest, and Charles M. Rich, Chicago, Ill., assignors to Welding Service, Inc., Franklin Park, Ill., a corporation of California

Filed Dec. 16, 1959, Ser. No. 860,022
3 Claims. (Cl. 338—69)



1. A contact assembly for an electronic organ comprising a flexible, elongated, generally cylindrical first contact member one end of which is connected to an electronic circuit, means for selectively moving said contact member, a second electronic circuit, and a second contact member connected to said second electronic circuit and supported in the path of movement of and at right angles to said first contact member so that said first contact

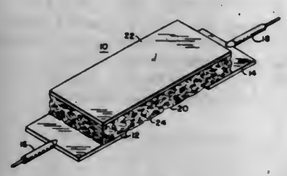
member is selectively pressed against and partially wrapped around said second contact member at an area of contact, each of said contact members including a wire of conductive material, and a coating of synthetic, organic, non-elastomeric, conductive plastic disposed on said wire, whereby a controllable resistance is provided between said contact members which is controlled by the first contact member being pressed against and partially wrapped around said second contact member.

3,125,738
ELECTRONIC ORGAN KEY
Chester W. McKee, Flossmoor, Richard W. McKee, Lake Forest, and Charles M. Rich, Chicago, Ill., assignors to Welding Service, Inc., Franklin Park, Ill., a corporation of California
Filed Dec. 16, 1959, Ser. No. 860,023
3 Claims. (Cl. 338—69)



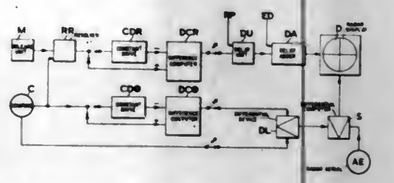
1. A contact assembly for an electronic organ comprising an elongated contact member supported only at one end, a first electronic circuit, means for selectively connecting said first electronic circuit to said contact member at a point spaced at a substantially fixed distance from said one end thereof, said contact member including means for providing a resistance between said connecting means and said one end, said resistance means including a coating on said contact member of synthetic, organic, non-elastomeric conductive plastic having a relatively high resistance per unit length and extending between said connecting means and said one end, and a second electronic circuit connected to said conductive plastic coating only at said one end whereby a predetermined resistance is provided between said point of contact and said second electronic circuit.

3,125,739
ELECTRIC CONTROLLER
Charles Deibel, Pittsburgh, Joseph Evanicsko, Jr., Jeannette, and Ernest H. Halpern, Monroeville, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 31, 1961, Ser. No. 149,092
9 Claims. (Cl. 338—99)



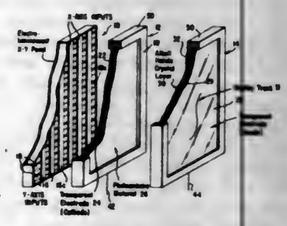
1. An arrangement for controlling the continuity of an electric circuit, said arrangement comprising a pair of spaced suitably supported terminal members between which circuit continuity is to be controlled, compressible insulating means positioned against each of said members, a plurality of conductive metallic elements each normally having an oxide film and being enmassed within said insulating means, means for compressing said insulating means so as to enable conductive engagements to be established among numerous ones of said elements, said terminal members being substantially continuous electrically through said elements and the films thereof when said insulating means are compressed, and said terminal members being substantially discontinuous electrically because of the element films when said elements are actively depressurized by the resilient release force of said insulating means.

3,125,740
PLAN POSITION INDICATING APPARATUS
Edward Spence Calvert, Camberley, England, assignor to National Research Development Corporation, London, England
Filed Aug. 1, 1960, Ser. No. 46,774
Claims priority, application Great Britain Aug. 5, 1959
9 Claims. (Cl. 343—10)



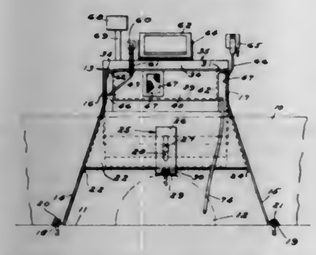
2. In plan position indicating apparatus for marine or air craft use, means for indicating in the display own craft in which the apparatus is installed, means for producing and imparting at will to the indication of own craft a velocity in accordance with the vectorial difference between own craft's velocity when own craft is maintaining an initial, straight constant-speed course and own craft's velocity when off said initial course, means for adding at will the said difference velocity vectorially to the velocity, when own craft is maintaining said initial course, of the indication of any other craft, and means for imparting at will to the own craft indication and to the indication of any other craft heading stabilizing angular motion in accordance with heading change of own craft but of opposite sense thereto, whereby the display remains unchanged with the own craft indication at the center so long as own craft maintains the said initial course and the indication of own craft as well as the indication of any other craft show at any instant when own craft is off the said initial course the ranges and bearings of the corresponding craft relative to the position which own craft would have occupied at that instant had it not departed from the said initial course.

3,125,741
PERMANENT RECORDING ELECTRON RESPONSIVE CHEMICAL DISPLAY PANEL CONTROLLED BY AN ELECTROLUMINESCENT MATRIX
William J. Kenneally, Baltimore, Md., assignor to Martin-Marietta Corporation, Baltimore, Md., a corporation of Maryland
Filed Jan. 12, 1962, Ser. No. 165,893
14 Claims. (Cl. 340—24)



1. A solid state situation display apparatus comprising; a selectively operable electroluminescent element for creating a momentary optical image, a photoemissive element positioned to receive said optical image for transforming said optical image into electron form and an electron responsive chemical display element positioned to receive said electron image for converting said electron image into a visible form and retaining the visible image for a substantial period of time after removal of said momentary optical image from said electroluminescent element.

3,125,742
PATROL VEHICLE ACCESSORY CONTROL DESK
Russell A. Plowick, 38802 Hilldale, Mount Clemens, Mich.
Filed Oct. 24, 1961, Ser. No. 147,267
4 Claims. (Cl. 340—74)



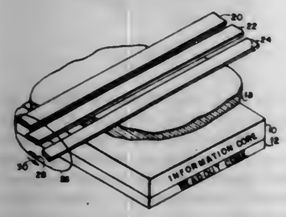
1. In a patrol vehicle provided with accessories such as a siren, beacon light, hood light, and a horn, and having a front seat and a floor adjacent said seat, an accessory control desk comprising:

(*a*) a body portion disposed on the front seat,

(*b*) supporting means connected at one end thereof to the body portion and provided with means at the other end thereof for connection to the vehicle floor, and

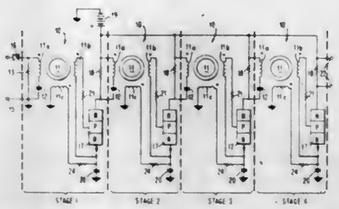
(*c*) an electric control system, including switch means and signal indicators, mounted in said body portion for connection to said accessories for controlling the operation thereof.

3,125,743
NON-DESTRUCTIVE READOUT OF MAGNETIC CORES
Arthur V. Pohm, White Bear Lake, Thomas D. Rossing, Northfield, and Earl N. Mitchell, St. Paul, Minn., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Mar. 19, 1958, Ser. No. 722,584
28 Claims. (Cl. 340—174)



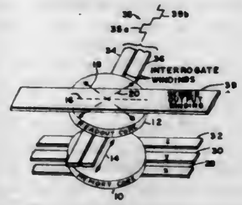
18. A magnetic device comprising two open flux path planar type multistable state magnetic elements having respective easy magnetization axes and being adjacently disposed in magnetically interacting relationship with said axes substantially parallel and with each element only partially closing the otherwise open flux path of the other element, one of said elements itself creating a magnetic field external to itself and sufficient to bias the other element in a direction along a said easy axis of said other element.

3,125,744
MAGNETIC CORE LOGICAL CIRCUIT
George E. Olson, Wappingers Falls, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Apr. 29, 1959, Ser. No. 809,772
7 Claims. (Cl. 340—174)



1. An electrical circuit comprising a magnetic core having alternate states of magnetic stability, input means coupled to said core for altering the magnetic state of said core, an output winding magnetically coupled to said core wherein voltage is induced upon change of the core from one stable state to the other, switching means coupled to said input winding for producing a manifestation in response to voltage of a predetermined polarity induced in said output winding, a control winding magnetically coupled to said core for affecting the magnetic state of the core, and storage means coupled to said switching means and to said control winding operably responsive to said manifestation for applying current to said control winding whereby to affect the magnetic state of said magnetic core in response to operation of said switching means.

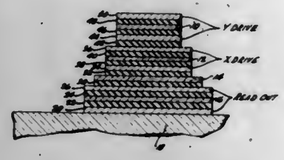
3,125,745
NON-DESTRUCTIVE BISTABLE MAGNETIC CORE SENSING
Lewis J. Oakland, North St. Paul, Minn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed May 29, 1959, Ser. No. 816,842
27 Claims. (Cl. 340—174)



1. Apparatus for non-destructively sensing the remanent state of a core comprising at least two magnetic cores each having a preferred axis of magnetization and two stable states of magnetic remanence oriented in opposite directions along its said axis, said cores being arranged adjacent one another with their said axes being transversely oriented in respective parallel planes, and means including means for producing a magnetic field along the preferred magnetization axis of only one of said cores, for causing in that core in-plane rotation of the remanent magnetization in one direction or another in accordance with whether the other core is in one or the other of its

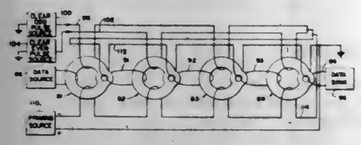
states so as to indicate by the direction of said rotation the state of said other core without changing the state thereof.

3,125,746
THIN FILM MAGNETIC DEVICE
Kent D. Broadbent, San Pedro, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Aug. 3, 1959, Ser. No. 831,314
18 Claims. (Cl. 340—174)



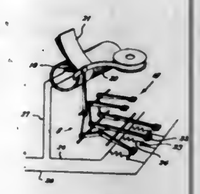
1. A multiple path magnetic element comprising a plurality of magnetically coupled superimposed layers of magnetizable material, said layers of magnetizable material defining respective magnetic flux paths of differing lengths, first conductor means magnetically coupled to a first of said layers, second conductor means magnetically coupled to a second of said layers, and third conductor means magnetically coupled to a third of said layers.

3,125,747
SHIFT REGISTER
David R. Bennion, Loma Mar, Calif., assignor to AMP Incorporated, Harrisburg, Pa., a corporation of New Jersey
Filed Nov. 25, 1959, Ser. No. 855,335
3 Claims. (Cl. 340—174)



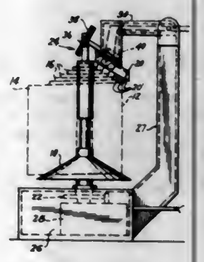
1. An improved shift register comprising a plurality of magnetic cores arranged in a sequence and being successively designated as odd and even cores in said sequence, each of said cores having a clear and a set state of magnetic remanence and being drivable therebetween, each of said cores having a main aperture, a receive aperture, and a transmit aperture, a plurality of closed-loop transfer windings a different one of which inductively couples a different pair of cores, each transfer winding being wound through the transmit aperture of one core and then through the main aperture of the immediately following core in said sequence, means for driving said plurality of cores to their clear state of magnetic remanence including a first clear winding inductively coupled to all the odd cores in said sequence by their main apertures, a second clear winding inductively coupled to all the even cores in said sequence by their main apertures, a data-advance winding inductively coupled to all the cores by their transmit apertures, means connecting one end of said first and second clear windings together and to one end of said data-advance winding, a priming winding inductively coupled to all said plurality of cores, and means coupling one end of said priming winding to said means connecting together one end of said first and second clear windings.

3,125,748
METHOD AND SYSTEM OF WRITING AND READING VISIBLE AND MAGNETIC CHARACTERS OF DIFFERENT MAGNETIC FLUX DENSITIES
Donald T. MacRoberts, Edwin D. Nuttall, and Leonard E. Savory, Shreveport, La., assignors to United Gas Corporation, Shreveport, La., a corporation of Delaware
Filed July 13, 1959, Ser. No. 826,699
11 Claims. (Cl. 340—174.1)



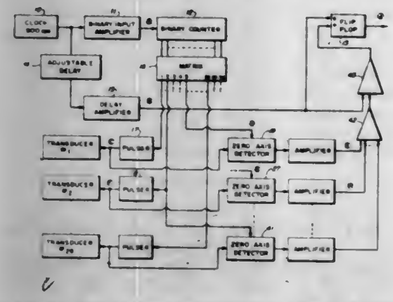
2. A character writing and reading system comprising, a carrier member, means for depositing visible magnetic material at spaced points to provide discrete characters on the carrier member, means for magnetizing the deposited magnetic material to selected different magnetic flux densities for different characters on the carrier member, and character identifying means for scanning the carrier member and generating electrical signals of magnitudes proportional to each magnetic flux density sensed for identifying the character by the respective signal magnitude.

3,125,749
INFORMATION LOCATING MEANS FOR MATERIAL STORED ON FILM ROLLS
Roger E. Graves, 3554 Military Road, Arlington, Va.
Filed Aug. 1, 1961, Ser. No. 134,064
3 Claims. (Cl. 340—174.1)



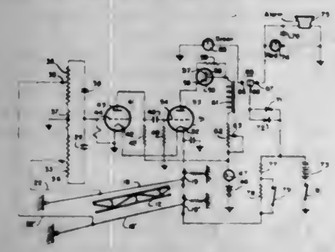
1. A magnetic tape roll scanning device for quickly locating desired portions of information stored thereon, comprising a tape having a main information track and an edge track on the surface of said tape, a conic ended reel conically supporting a roll of said tape so as to expose the successive convolutions of said edge track on the outer conical surface of said roll, said edge track having a serial coding thereon for identifying said portions in accordance with the information contained on the tape, and an adjustable magnetic pick-up device movable along an element of said outer conical surface formed by the convolutions of said exposed edge track, said device having a plurality of reading heads spaced along said element for cooperation with corresponding portions of said exposed edge track.

3,125,750
MULTICHANNEL DATA ACQUISITION AND TRANSMISSION SYSTEM
Gene R. Bussey, Albuquerque, N. Mex., assignor to Consolidated Controls Corporation, Bethel, Conn., a corporation of New York
Filed Apr. 30, 1962, Ser. No. 191,224
12 Claims. (Cl. 340—183)



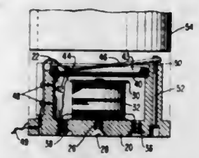
1. In a time analog data transmission system having a plurality of resonant circuits whose resonant frequencies are controlled by applied stimuli and are equal and maximum when the applied stimuli have a known relationship to each other, means for generating a plurality of output pulses whose time durations are related to the resonant frequencies of the respective resonant circuits, minimum duration corresponding to the maximum resonant frequency, comprising: means for momentarily supplying a D.C. voltage successively to the resonant circuits at a frequency which is n integral times the maximum resonant frequency; and means for gating from the resonant circuits oscillatory signals generated by a change in D.C. voltage, each gate for a particular circuit starting $n+1$ cycles after the circuit receives D.C. voltage, and ending at a selected point in the oscillatory signal.

3,125,751
PROXIMITY ALARM
Daniel R. Winters, Hawthorne, Calif., assignor to Crane Products Manufacturing Company, Inc., Las Vegas, Nev.
Filed July 21, 1961, Ser. No. 125,732
8 Claims. (Cl. 340—258)



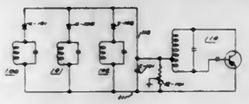
1. A system for indicating the presence of an energized electrical circuit, said system comprising a first antenna means for sensing the presence of the flow of electric current, a second antenna means for sensing the presence of the flow of electric current, means for electrically shielding said first antenna means from said second antenna means, a normally energized relay, an alarm, energizing means connected to said relay and alarm for energizing said alarm when said relay is deenergized, and control means connected to said first antenna and second antenna means and to said relay for deenergizing said relay when said first antenna means detects the presence of an electric current flow and for deenergizing said relay when said second antenna means detects the presence of an electric current flow.

3,125,752
SOUND GENERATING DEVICE FOR CODE PRACTICE
William E. Burns, 123 Dolly Lane, Chalfont, Pa.
Filed Feb. 2, 1961, Ser. No. 86,717
1 Claim. (Cl. 340—388)



A sound generating device for code practice adapted to produce a variety of sound signals comprising a cup shaped base member of non-metallic material, an electromagnet suitably mounted within the cup shaped member, a disc member having a natural frequency of the order of several hundreds of cycles per second, said disc member being positioned adjacent to the said magnet, means for limiting longitudinal movement of the disc member with respect to the base member, said disc member including a contact which is electrically connected to the electromagnet, a cantilever member including a contact which normally mates with the contact of the disc member, said cantilever member also including a tapped hole at the unsecured end thereof, a bolt member which engages the tapped hole of the cantilever member to adjust the pressure of the mating cantilever and disc contact, means for connecting a supply of current through the electromagnet and the mating cantilever and disc contacts so that the disc is attracted toward the electromagnet and returned to engagement with the cantilever contact to produce a pitch which approximates the frequency of the disc member, and a cover member which encloses the base member and controllably traps air above the disc member to improve the quality and vary the frequency of the pitch generated by the vibrating disc member.

3,125,753
SIGNALLING SYSTEM
Clarence S. Jones, Los Altos, Calif., assignor to General Precision, Inc., a corporation of Delaware
Filed Feb. 18, 1958, Ser. No. 715,899
51 Claims. (Cl. 343—6.5)

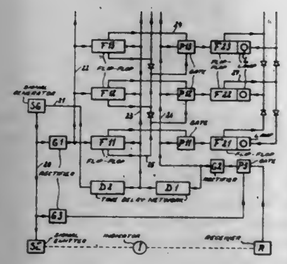


17. Interrogator-responder apparatus comprising in combination, interrogator means for transmitting a plurality of electromagnetic interrogation signals of different frequencies, and a passive responder operable to provide an electromagnetic response signal on a further frequency upon receipt of selected ones of said different frequencies; said responder comprising a plurality of tuned circuits each resonant at a different frequency, each of said circuits being connected to provide an output voltage upon receipt of a signal from said interrogator which corresponds in frequency to its individual resonance frequency, each of said circuits being connected to apply its output voltage to a pair of supply conductors, and response oscillator means connected to said conductors to be powered by said output voltages and thereby to provide said response signal.

ERRATUM

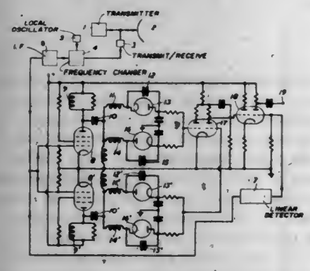
For Class 343—10 see:
Patent No. 3,125,740

3,125,754
AIRCRAFT ALTIMETERS
Theodorus Reumerman, Zandvoortselaan 12, Zandvoort, Netherlands, and Willem H. Th. Helmig, Van Slingelandtlaan 9, Leiden, Netherlands
Filed Feb. 26, 1959, Ser. No. 795,756
4 Claims. (Cl. 343—13)



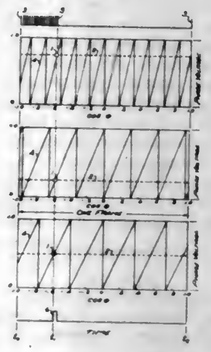
1. A recurrent pulse reflection distance finding system comprising a recurrent pulse transmitter, a pulse receiver, a plurality of primary voltage generator means operative responsively to pulse transmission to supply output voltages of predetermined different time durations, a plurality of gate means each responsive to the output voltage of one of the said voltage generator means to transmit a signal applied thereto, means supplying each gate means with the received pulse output from the pulse receiver for controlled transmission therethrough, a plurality of secondary voltage generator means each connected to receive the receiver pulse output through one of the gate means and operative to generate a voltage of predetermined duration in response thereto, and a plurality of visual indicating means each responsive to operation of one of said secondary voltage generator means.

3,125,755
SYSTEM TO REDUCE INTERFERENCE IN RADAR PULSE RECEIVERS
Peter Lionel Williams, Essex, England, assignor to The Marconi Company Limited
Filed Dec. 2, 1958, Ser. No. 777,795
Claims priority, application Great Britain Dec. 9, 1957
3 Claims. (Cl. 343—17.1)



1. A radar station the receiver portion of which comprises a normal envelope detector fed with a frequency band derived from received signals, said normal envelope detector having an output amplitude-freqency characteristic which rises from outer band limiting frequencies f_1, f_2, to a maximum amplitude at a mid-band frequency f_0, a frequency discriminating detector fed with the same frequency band, said frequency discriminating detector having an amplitude-frequency characteristic which has maxima at frequencies f_1 and f_2 and falls sharply from one limiting frequency f_1 to mid-band frequency f_0 and from the other limiting frequency f_2 to frequency f_0, giving substantially zero amplitude at frequency f_0, a cathode coupled pair of valves connected as a difference amplifier, the output from said normal envelope detector being applied as input to one of said cathode coupled valves and the output from said frequency discriminating detector being fed as input to the other, thereby to provide an output for utilization from said cathode coupled pair of valves substantially representative of the difference between the inputs of each of said pair of valves.

3,125,756
SATELLITE TRACKING BY SIMULATOR COMPARISON
Maxime G. Kaufman, 5706 Joyce Drive, Washington 22, D.C., and Leonard O. Hayden, Rte. 1, Box 158, Accokeek, Md.
Filed Nov. 19, 1959, Ser. No. 854,072
16 Claims. (Cl. 343—113)



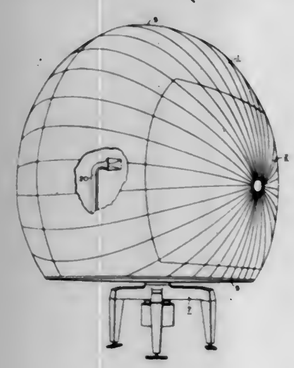
6. In an interferometer system the method of resolving the angle of arrival of waves comprising the steps of generating a plurality of varying voltages, the combination periodically varying to include the range of signal voltages to be expected from the interferometer system and arranged so that any unique combination of voltages occurs only once during a period, and comparing the said generated voltages with the output signal voltages of the interferometer system.

3,125,757
CORONA ROD FOR ANTENNAS
Marvel W. Scheldorf, Western Springs, Ill., assignor to Andrew Corporation, Orland Park, Ill., a corporation of Illinois
Filed Aug. 25, 1960, Ser. No. 51,887
14 Claims. (Cl. 343—720)

10. An antenna construction comprising a vertically extending radiator and a corona rod adjacent thereto and parallel therewith and having its upper end extending beyond the upper end of the radiator and its lower end grounded, the corona rod comprising a plurality of coaxial choke assemblies each electrically of a quarter-wavelength at the operating frequency of the radiator, and each having an outer conductor having the physical length thereof less than one-eighth wavelength exposed to the radiator, and all having a common axial conductor effectively grounding currents of frequencies other than the operating frequency, all portions of the common axial conductor of greater than one-eighth wavelength being shielded from the radiator.

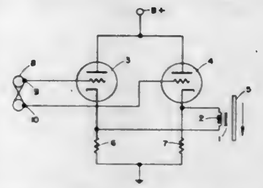


3.125,758
INFLATED ANTENNA
Richard J. Koehler, Ellicott City, Md., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 17, 1960, Ser. No. 63,110
3 Claims. (Cl. 343—872)



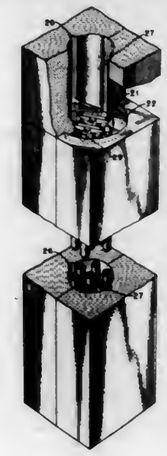
3. In an inflated oblate antenna assemblage, a pair of paraboloidal walls of flexible stretch-resistant material curving outwardly, at least a portion of one of which walls is wave-energy-reflective; and a joining portion of flexible stretch-resistant material interposed between in continuous surface juncture with said paraboloidal walls, said joining portion being shaped as a surface generated by revolution of a curve about an axis concentric with said paraboloidal walls, and each elemental segment of said joining portion having a ratio of R_ϕ/R_θ less than the numerical value 2 and greater than the numerical value of 1.6, where R_ϕ is the radius of curvature of a given segment in a parallel circle direction, measured as the distance extending normally from said given segment to said axis, and R_θ is the radius of curvature of said given segment in the meridian direction.

3,125,759
MAGNETIC RECORDING DEVICE
Martin L. Klein, Woodland Hills, and John S. Sutton, San Jose, Calif., assignors to North American Aviation, Inc.
Filed Mar. 28, 1958, Ser. No. 724,608
4 Claims. (Cl. 346—74)



1. In a magnetic recording system with a magnetic head having one winding, means for reversibly magnetizing said magnetic head comprising a pair of electronic valves, each said valve having an anode, a control, and a cathode electrode, said anodes connected in common to the positive terminal of a direct-current supply source, each said cathode connected through a respective resistor to the minus terminal of said direct-current source, the control electrodes of said valves being connected to be responsive to a trigger signal whereby conductivity is limited to one of said valves at a given time, one terminal of the winding of said magnetic head being connected to one of said cathodes and the other terminal of said winding being connected to the other said cathode, whereby conduction in one of said valves according to said direct-current source produces current flow in said winding in one direction and conduction in the other said valve produces current flow in said winding in a reverse direction.

3,125,760
FUEL LOCATING AND SUSPENDING SYSTEM FOR NEUTRONIC REACTOR CORE
Julius Foster, Oak Ridge, Arthur P. Fraas, Knoxville, and Alfred M. Perry, Oak Ridge, Tenn., assignors to the United States of America as represented by the United States Atomic Energy Commission
Original application Mar. 31, 1958, Ser. No. 725,458. Divided and this application Feb. 19, 1960, Ser. No. 10,536
2 Claims. (Cl. 176—41)



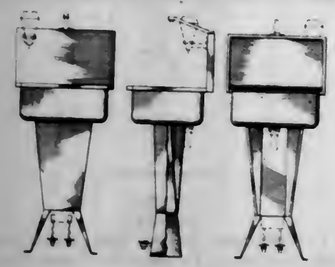
1. A neutronic reactor core and system for locating and suspending fuel elements therein comprising a sub-

stantial mass of a solid neutron moderant having a multiplicity of channels passing vertically therethrough, each of said channels being provided with at least two longitudinal recesses equally spaced about its periphery, said recesses extending along the entire length of said channels, each of said longitudinal recesses being provided at at least one location along its length with an intersecting, partially circumferential groove, said groove being inclined downwardly away from said recess, each of said recesses having said grooves at corresponding horizontal positions, said grooves being displaced from said recesses in the same angular direction with respect to the vertical axis of said channels, and a multiplicity of rigid fuel hangers, each of said hangers being provided with at least two radially protruding members for slidably engaging said longitudinal recesses and said grooves.

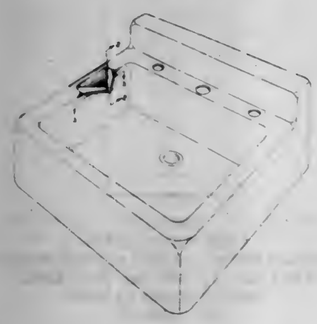
DESIGNS

MARCH 17, 1964

197,691
WASH STAND
Jack L. Hetzler, Whittier, and John L. Carpenter San Gabriel, Calif., assignors to Columbia Sanitary Products, Inc., Los Angeles, Calif., a corporation of California
Filed Sept. 14, 1962, Ser. No. 71,698
Term of patent 14 years
(Cl. D4—2)



197,692
LAVATORY
Mary Mildred Wessel, 2810 Meadow Drive, Louisville, Ky.
Filed Jan. 21, 1963, Ser. No. 73,248
Term of patent 14 years
(Cl. D4—2)



197,693
SOAP HOLDER
Mary Mildred Wessel, 2810 Meadow Drive, Louisville, Ky.
Filed Jan. 14, 1963, Ser. No. 73,149
Term of patent 14 years
(Cl. D4—3)



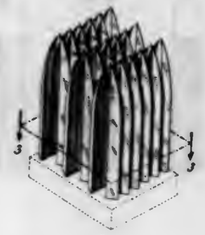
197,694
COMBINATION TILE AND SOAP HOLDER
Mary Mildred Wessel, 2810 Meadow Drive, and Marietta Bowling, 1618 Trevilian Way, both of Louisville, Ky.
Filed Jan. 14, 1963, Ser. No. 73,150
Term of patent 14 years
(Cl. D4—3)



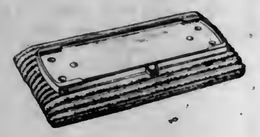
197,695
COMBINATION TILE AND SOAP HOLDER
Mary Mildred Wessel, 2810 Meadow Drive, and Marietta Bowling, 1618 Trevilian Way, both of Louisville, Ky.
Filed Jan. 14, 1963, Ser. No. 73,151
Term of patent 14 years
(Cl. D4—3)



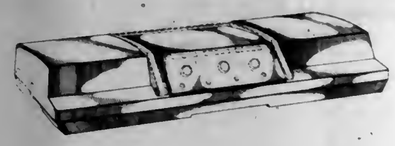
197,696
BRUSH
Joseph Vallis, 448 Spadina Road, Toronto, Ontario, Canada
Filed Sept. 9, 1960, Ser. No. 62,088
Term of patent 14 years
(Cl. D9—2)



197,697
MOP HEAD UNIT
Hugh Murphy, Hockering, Woking, Surrey, England, assignor to The Prestige Group Limited, London, England, a company of Great Britain
Filed Apr. 20, 1962, Ser. No. 69,786
Term of patent 14 years
(Cl. D9—2)



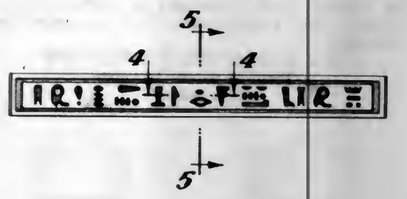
197,698
BUFFING MACHINE OR THE LIKE
Robert C. Kelley, Muskegon, Mich., assignor to Brunswick Corporation, Chicago, Ill., a corporation of Delaware
Filed Jan. 14, 1963, Ser. No. 73,162
Term of patent 14 years
(Cl. D9—2)



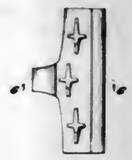
197,699
HANDLE FOR ELECTRICALLY OPERATED TOOTHBRUSH OR THE LIKE
Richard B. Hall, Cincinnati, Ohio, assignor to Dominion Electric Corporation, a corporation of Ohio
Filed July 31, 1963, Ser. No. 76,054
Term of patent 14 years
(Cl. D9—2)



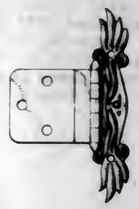
197,700
CABINET PULL OR SIMILAR ARTICLE
Dean W. Myers, Newport Beach, Calif., assignor to Jaybee Manufacturing Corp., Los Angeles, Calif., a corporation of California
Filed May 20, 1963, Ser. No. 74,966
Term of patent 14 years
(Cl. D10—8)



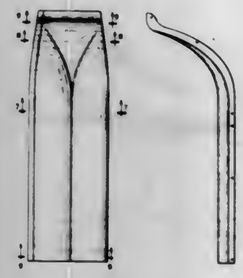
197,701
HANDLE
Harry M. Riegelman, Rolling Hills, Calif., assignor to Security Aluminum Corporation, Compton, Calif., a corporation of California
Filed Aug. 12, 1963, Ser. No. 76,179
Term of patent 14 years
(Cl. D10—8)



197,702
CABINET HINGE
Morris Loeb, 697 West End Ave., New York, N.Y.
Filed Aug. 1, 1963, Ser. No. 76,082
Term of patent 14 years
(Cl. D10—9)



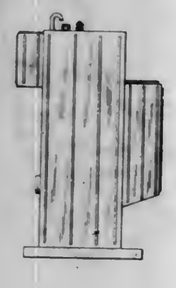
197,703
ACOUSTICAL PANEL
John Christopher Jaffe, 2 Stonecrop Road, Norwalk, Conn., and Paul Kleinman, 19 Wilshire Drive, White Plains, N.Y.
Filed Aug. 20, 1962, Ser. No. 71,370
Term of patent 3½ years
(Cl. D13—1)



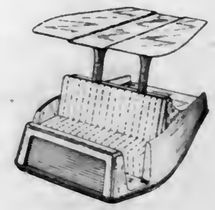
197,704
MODULAR HOUSE
Emil A. Tessin II, Cuyahoga Falls, Ohio, assignor to Alside Homes Corporation, a corporation of Ohio
Filed Oct. 22, 1962, Ser. No. 72,208
Term of patent 14 years
(Cl. D13—1)



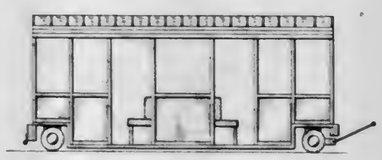
197,705
SEWAGE LIFT STATION HOUSING
David S. Ross, Lorain, Ohio, assignor to The Amcodyne Corporation, Lorain, Ohio, a corportion of Delaware
Filed May 15, 1963, Ser. No. 74,895
Term of patent 14 years
(Cl. D13—1)



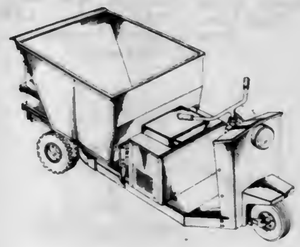
197,706
SELF-PROPELLED PASSENGER VEHICLE
Dominic A. Saporito, Birmingham, Mich., assignor to Kalamazoo Manufacturing Company, Kalamazoo, Mich., a corporation of Michigan
Filed Mar. 7, 1963, Ser. No. 73,853
Term of patent 7 years
(Cl. D14—3)



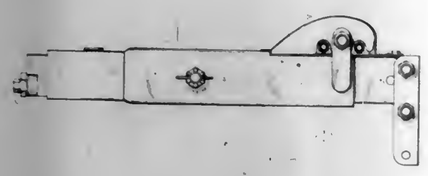
197,707
SIGHT-SEEING TOW CART
William Allen, Southfield, and Hubert D. Lewis, Detroit, Mich., assignors to Lewis Industries, Inc., Detroit, Mich., a corporation of Michigan
Filed Apr. 30, 1963, Ser. No. 74,670
Term of patent 14 years
(Cl. D14—3)



197,708
DUMP TRUCK FOR TRASH
Gordon L. Stith, 970 Leadora Ave., Glendora, Calif.
Filed June 26, 1963, Ser. No. 75,524
Term of patent 14 years
(Cl. D14—3)



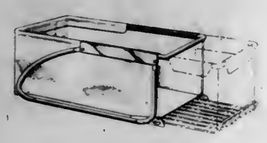
197,709
TRAILER HITCH BAR
Roger C. Silver and Frank A. De Puydt, Des Moines, Iowa, assignors to Dico Corporation, Des Moines, Iowa, a corporation of Iowa
Filed July 19, 1962, Ser. No. 70,982
Term of patent 14 years
(Cl. D14—6)



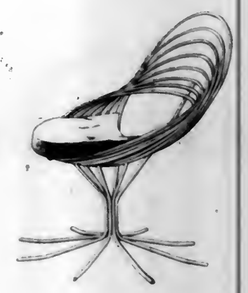
197,710
BABY CARRIAGE
Charles V. Kenney, Box 248, R.R. 2, Rockford, Ill.
Filed Aug. 10, 1960, Ser. No. 61,686
Term of patent 14 years
(Cl. D14—14)



197,711
CARRIAGE BODY
Alban M. Boudreau, Gardner, Mass., assignor to Hedstrom Union Company, Fitchburg, Mass.
Filed Mar. 6, 1963, Ser. No. 73,850
Term of patent 7 years
(Cl. D14—14)



197,712
CHAIR
Howard Edwin Fischer, Jr., 3540 Brotherton Road, Cincinnati, Ohio
Filed Jan. 25, 1963, Ser. No. 73,306
Term of patent 7 years
(Cl. D15—1)



197,713
CHAIR
Richard W. Bedser, 212 Henry Clay Road, Ashland, Va.
Filed Mar. 18, 1963, Ser. No. 74,021
Term of patent 14 years
(Cl. D15—1)



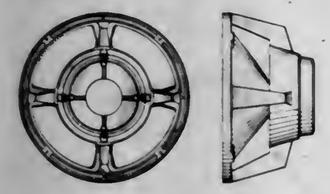
197,714
ROCKING CHAIR
Joseph Rodd, 703 E. 11th St., New York, N.Y.
Filed Nov. 28, 1962, Ser. No. 72,634
Term of patent 3½ years
(Cl. D15—6)



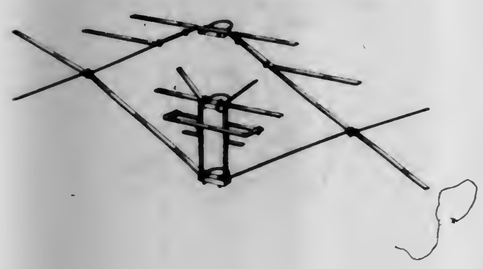
197,715
ELECTRIC KNIFE HANDLE
Isadore Leyden, Shrub Oak, N.Y., assignor to Riviera Appliance Corp., Brooklyn, N.Y., a corporation of New York
Filed July 5, 1963, Ser. No. 75,676
Term of patent 14 years
(Cl. D22—3)



197,716
LOUD-SPEAKER
Melvin H. Boldt, Glenview, and Thurber H. Morrison, Evanston, Ill., assignors to Electro-Voice, Incorporated, Buchanan, Mich., a corporation of Indiana
Filed Apr. 4, 1962, Ser. No. 69,853
Term of patent 14 years
(Cl. D26—14)



197,717
TELEVISION ANTENNA
Thomas Vitanza, 242 Capen Blvd., Buffalo, N.Y.
Filed Oct. 14, 1963, Ser. No. 76,967
Term of patent 14 years
(Cl. D26—14)



197,718
MEDALLION OR THE LIKE
Charles A. Reynolds, Washington, D.C., assignor to the United States of America as represented by the Secretary of the Army
Filed May 4, 1962, Ser. No. 69,986
Term of patent 14 years
(Cl. D29—19)
(Granted under Title 35, U.S. Code (1952), sec. 266)



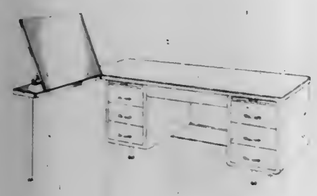
197,719
VASE
Orville C. Hamon, Cedars, Okla. (P.O. Box 813, Fort Smith, Okla.)
Filed May 3, 1963, Ser. No. 74,743
Term of patent 14 years
(Cl. D29—28)



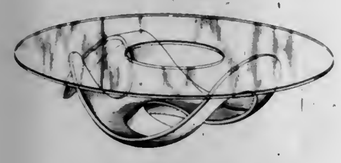
197,720
HOLDER FOR PHONOGRAPH RECORD JACKETS
Richard D. Gamble, 8910 Wonderland Ave., Los Angeles, Calif.
Filed May 6, 1963, Ser. No. 74,763
Term of patent 14 years
(Cl. D33—3)



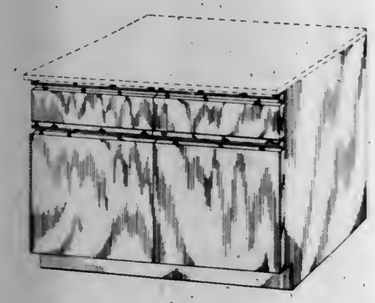
197,721
DESK
Richard A. Wallace, Norristown, Pa., assignor to Bridge Incorporated, Philadelphia, Pa., a corporation of Pennsylvania
Filed Sept. 12, 1962, Ser. No. 71,659
Term of patent 14 years
(Cl. D33—7)



197,722
TABLE
Hubert H. Crawford, 231 Humboldt Parkway, Buffalo, N.Y.
Filed July 26, 1963, Ser. No. 75,990
Term of patent 3½ years
(Cl. D33—14)



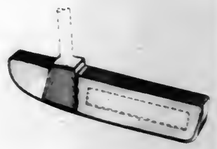
197,723
CABINET
Robert G. Mager, Ann Arbor, Mich., assignor to Robert Mager Associates, Inc., Ann Arbor, Mich.
Continuation of design applications Ser. Nos. 67,575 and 67,576, Nov. 17, 1961. This application July 9, 1963, Ser. No. 75,760
Term of patent 14 years
(Cl. D33—19)



197,724
BICYCLE-TYPE EXERCISER
William Haddad, 1209 Cambria Ave., Windber, Pa.
Filed Nov. 26, 1962, Ser. No. 72,610
Term of patent 7 years
(Cl. D34—5)



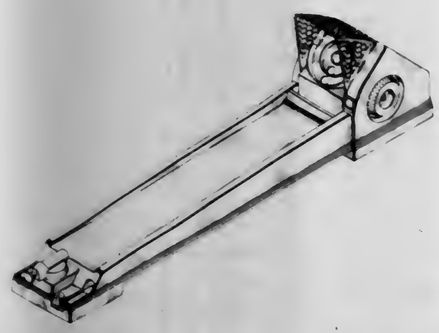
197,725
GOLF PUTTER HEAD
Emilio Miartuz, 237 Springs Ave., Miami Springs, Fla.
Filed June 11, 1963, Ser. No. 75,302
Term of patent 14 years
(Cl. D34—5)



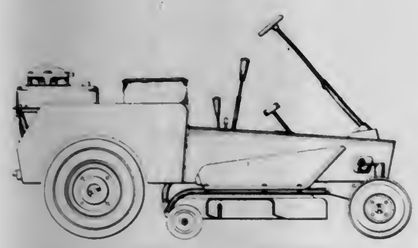
197,726
WEIGHT FOR BARBELL
Forrest H. James, Jr., Opelika, Ala., assignor to Diversified Products Corporation, Opelika, Ala., a corporation of Alabama
Filed Sept. 16, 1963, Ser. No. 76,608
Term of patent 14 years
(Cl. D34—5)



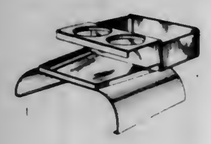
197,727
SKEE BALL GAME TABLE
John W. Jamison, Inglewood, Calif., assignor to Eldon Industries, Inc., Hawthorne, Calif., a corporation of California
Filed Nov. 12, 1963, Ser. No. 77,339
Term of patent 14 years
(Cl. D34—5)



197,728
RIDING MOWER
Donald E. Dailey, Vanderburgh County, Ind., assignor to Hahn, Inc., Evansville, Ind., a corporation of Indiana
Filed Mar. 23, 1962, Ser. No. 69,390
Term of patent 14 years
(Cl. D40—1)



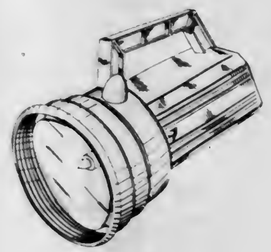
197,729
CAR TRAY
Samuel Beychok, 5411 Spring Meadow, Dallas, Tex.
Filed Oct. 31, 1963, Ser. No. 77,226
Term of patent 14 years
(Cl. D44—10)



197,730
FINGER RING
Adolph Katz, Providence, R.I., assignor to Coro, Inc., of Rhode Island, Providence, R.I., a corporation of Rhode Island
Filed Sept. 3, 1963, Ser. No. 76,444
Term of patent 3½ years
(Cl. D45—10)



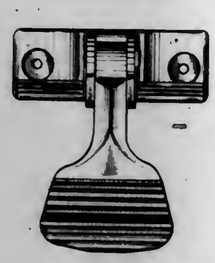
197,731
ELECTRIC LANTERN
Herbert J. Ashe, Stamford, Conn., assignor to The H. J. Ashe Co., Inc., Glenbrook, Conn., a corporation of New York
Filed May 23, 1963, Ser. No. 75,028
Term of patent 14 years
(Cl. D48—24)



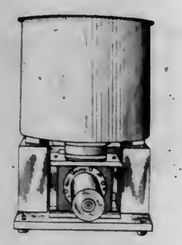
197,732
KEY BLANK
Walter Edwin Best, Seattle, Wash., assignor to Best Lock Corporation, Indianapolis, Ind., a corporation of Delaware
Filed May 1, 1963, Ser. No. 74,689
Term of patent 14 years
(Cl. D50—4)



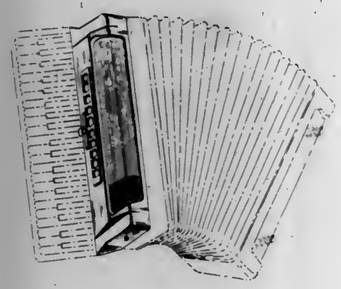
197,733
DOOR LATCH
Hy Orenstein, 520 E. 21st St., Brooklyn, N.Y.
Filed June 14, 1962, Ser. No. 70,554
Term of patent 14 years
(Cl. D50—5)



197,734
FEEDER FOR GRANULAR MATERIALS
Eugene A. Wahl, 294 Forest Ave., Glen Ridge, N.J.
Filed Oct. 19, 1961, Ser. No. 67,161
Term of patent 14 years
(Cl. D55—1)



197,735
ACCORDION GRILL
Mario Pancotti, 4 Chalford Road, Scarsdale, N.Y.
Filed Feb. 5, 1963, Ser. No. 73,455
Term of patent 7 years
(Cl. D56—1)



197,736
SPECTACLE CASE OR SIMILAR ARTICLE
Harry A. Tawil, 977 E. 7th St., Brooklyn, N.Y.
Filed July 9, 1963, Ser. No. 75,716
Term of patent 14 years
(Cl. D57—1)



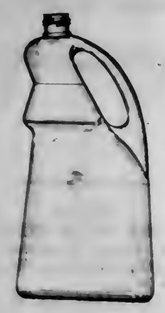
197,737
DISPLAY PACKAGE FOR TOOTHBRUSH OR SIMILAR ARTICLE
Achim Peter Schultheiss, Iowa City, Iowa, assignor to Chemway Corporation, Wayne, N.J., a corporation of Delaware
Filed Sept. 16, 1963, Ser. No. 76,600
Term of patent 14 years
(Cl. D58—2)



197,738
JUG OR SIMILAR ARTICLE
Livingston C. Douglas, Leonia, N.J., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware
Filed Jan. 22, 1962, Ser. No. 68,416
Term of patent 14 years
(Cl. D58—5)



197,739
JUG OR SIMILAR ARTICLE
Livingston C. Douglas, Leonia, N.J., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware
Original design application Jan. 22, 1962, Ser. No. 68,416. Divided and this application Aug. 19, 1963, Ser. No. 76,263
Term of patent 14 years
(Cl. D58—5)



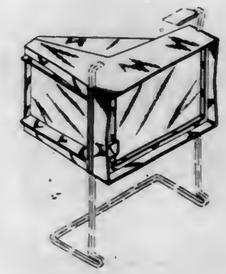
197,740
JEWELRY BOX
Jerome Shiffman, 128 Carthage Road, Scarsdale, N.Y.
Filed Jan. 21, 1963, Ser. No. 73,259
Term of patent 7 years
(Cl. D58—12.7)



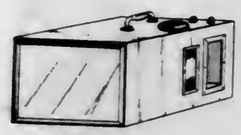
197,741
DISPENSER TOP FOR A PRESSURE CAN OR SIMILAR ARTICLE
Livingston C. Douglas, Leonia, N.J., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware
Filed Sept. 9, 1963, Ser. No. 76,514
Term of patent 14 years
(Cl. D58—26)



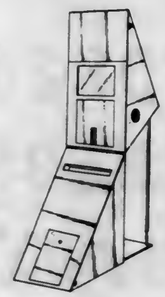
197,742
PROJECTED IMAGE VIEWER OR SIMILAR ARTICLE
Eugene Martinez, Irvington on Hudson, and Marvin Kapilow, Croton on Hudson, N.Y., assignors of one-third to Robert H. Reibel, Croton on Hudson, N.Y.
Filed Aug. 16, 1962, Ser. No. 71,307
Term of patent 14 years
(Cl. D61—1)



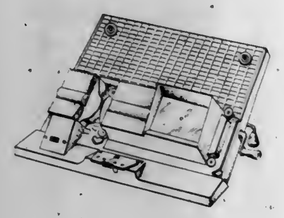
197,743
PROJECTION CABINET
Guy Zwahlen and Horace W. Nickerson, Dade County, Fla., assignors to Zwahlen, Inc., Miami Beach, Fla., a corporation of Florida
Filed Feb. 13, 1963, Ser. No. 73,578
Term of patent 14 years
(Cl. D61—1)



197,744
PROJECTION CABINET
Guy Zwahlen, Hialeah, and William S. Bodenhamer, Miami, Fla., assignors to Zwahlen, Inc., Miami Beach, Fla., a corporation of Florida
Filed Feb. 13, 1963, Ser. No. 73,579
Term of patent 14 years
(Cl. D61—1)



197,745
COMBINED VIEWER AND EDITOR FOR MOTION PICTURE FILM
Frank Beckman, Plainville, Conn. (141 Chapman, New Britain, Conn.), and Gordon Florian, 300 Burr St., Fairfield, Conn.
Filed July 23, 1963, Ser. No. 75,941
Term of patent 14 years
(Cl. D61—1)



197,746
TYPEWRITER
Giovanni Pintori, Milan, Italy, assignor to Ing. C. Olivetti & C., S.p.A., Ivrea, Italy, a corporation of Italy
Filed Apr. 12, 1962, Ser. No. 69,690
Claims priority, application Italy Oct. 18, 1961
Term of patent 14 years
(Cl. D64—11)



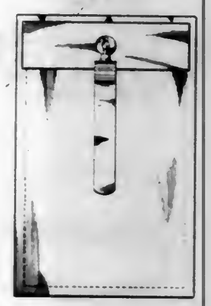
197,747
FONT OF TYPE
Adolph Katz, Providence, R.I., assignor to Coro, Inc., of Rhode Island, Providence, R.I., a corporation of Rhode Island
Filed July 22, 1963, Ser. No. 75,925
Term of patent 3½ years
(Cl. D64—12)



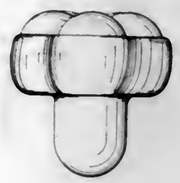
197,748
AERO SPACE SHIP
Stefan Apostolescu Postelson, 415 W. 35th St., New York, N.Y.
Filed June 20, 1962, Ser. No. 70,627
Term of patent 14 years
(Cl. D71—1)



197,749
DESK PAD HOLDER WITH MEMORANDUM CLIP
Richard McFadyen, Upper Montclair, N.J., assignor to Ketcham and McDougall, Inc., Roseland, N.J., a corporation of New Jersey
Filed Sept. 6, 1962, Ser. No. 71,579
Term of patent 14 years
(Cl. D74—1)



197,750
BODY MASSAGER
Simon Rosenberg, 3721 Menlo Road, Shaker Heights, Ohio
Filed Jan. 29, 1963, Ser. No. 73,365
Term of patent 14 years
(Cl. D83—1)



197,751
VAGINAL APPLICATOR
William R. Rigney, Watchung, and Bernard F. Major, Somerville, N.J., assignors to Ortho Pharmaceutical Corporation, a corporation of New Jersey
Filed July 24, 1963, Ser. No. 75,949
Term of patent 14 years
(Cl. D83—12)



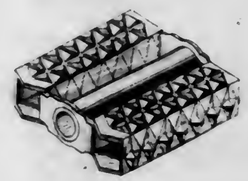
197,752
LUGGAGE CASE OR SIMILAR ARTICLE
Samuel J. Holtzman, 8201 Symphony Drive, Baltimore, Md.
Filed July 11, 1962, Ser. No. 70,906
Term of patent 14 years
(Cl. D87—5)



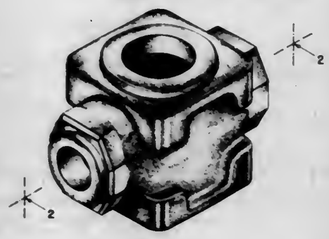
197,753
WIG CARRYING CASE
Josephine Kosi, 8944 S. Stony Island Ave., Chicago, Ill.
Filed Feb. 25, 1963, Ser. No. 73,691
Term of patent 14 years
(Cl. D87—5)



197,754
BICYCLE PEDAL
Harry Golden, 250 W. 57th St., New York, N.Y.
Filed July 30, 1963, Ser. No. 76,038
Term of patent 7 years
(Cl. D90—14)



197,755
VALVE BODY
Edward B. Myers, Oreland, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Sept. 27, 1962, Ser. No. 71,887
Term of patent 14 years
(Cl. D91—3)



197,756
VALVE BODY
Edward B. Myers, Oreland, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Sept. 27, 1962, Ser. No. 71,893
Term of patent 14 years
(Cl. D91—3)



197,757
ILLUMINABLE HANDLE FOR A SCREWDRIVER OR THE LIKE
Tadayuki Nagamori, 851 Yukigaya-cho, Tokyo, Japan
Filed Oct. 31, 1961, Ser. No. 67,315
Term of patent 14 years
(Cl. D93—4)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 17TH DAY OF MARCH, 1964

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Larkin, Daniel C. Seat cover. Re. 25,537, 3–17–64, Cl. 297—219.
Soyland, Ingebret and K. Arrangement in mobile excavators. Re. 25,538, 3–17–64, Cl. 214—138.
Soyland, Kristian: *See*—
Soyland, Ingebret and K. Re. 25,538.

LIST OF PLANT PATENTEES

Anderson, Frederic W., to I. M. Burchell d.b.a. The Burchell Nursery. Almond tree. 2,379, 3–17–64, Cl. 30.
Anderson, Frederic W., to Fowler Nurseries, Inc. Almond tree. 2,380, 3–17–64, Cl. 30.
Burchell, Irvin M.: *See*—
Anderson, Frederic W. 2,379.
Burchell Nursery, The: *See*—
Anderson, Frederic W. 2,379.
Camprubi, Carlos, to The Conard-Pyle Co. Rose plant. 2,376, 3–17–64, Cl. 23.
Conard-Pyle Co., The: *See*—
Camprubi, Carlos. 2,376.
Meilland, Alain. 2,378.
Fowler Nurseries, Inc.: *See*—
Anderson, Frederic W. 2,380.
McGill, Wayne E.: *See*—
McIntyre, John. 2,377.
McIntyre, John, to W. E. McGill. Maple tree. 2,377, 3–17–64, Cl. 51.
Meilland, Alain, to The Conard-Pyle Co. Rose plant. 2,378, 3–17–64, Cl. 11.

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Baker, William R., to United States of America, Atomic Energy Commission. Plasma heating and confining system. 3,125,492, 3–17–64, Cl. 176—2.

Bale, Alton G., Jr., and G. F. Turner, to Wisconsin Electrical Mfg. Co., Inc. Automatic control for cumulative delivery of materials. 3,125,176, 3–17–64, Cl. 177—80.

Ballin, Gene, to Dosamatic Dropper Corp. Metering dispenser for collapsible containers. 3,125,250, 3–17–64, Cl. 222—96.

Ballou, Nathan E., and E. M. Scadden. Method of solvent extraction. 3,125,410, 3–17–64, Cl. 23—14.5.

Bannister, Brain: *See*—
Schroeder, William, Lewis, Hoeksema, Eble, and Bannister. 3,125,567.

Barber, Alan G., D. L. Kayser, and P. H. Lahr, to Union Carbide Corp. Applicator device having gas permeable liquid impermeable vent. 3,124,828, 3–17–64, Cl. 15—569.

Barber-Colman Co.: *See*—
Johnson, Royce E. 3,124,952.

Barber Machinery Ltd.: *See*—
Brennan, Edward H. 3,125,190.

Barnhart, Carlton L. Bottled drink dispenser. 3,125,246, 3–17–64, Cl. 221—116.

Barns, Fred K., and R. F. Cooper, to The B. F. Goodrich Co. Tire piercing apparatus. 3,124,978, 3–17–64, Cl. 77—23.

Barogenics, Inc.: *See*—
Gerard, George, and Brayman. 3,125,240.

Bartelt Engineering Co., Inc.: *See*—
Johnson, Kenneth R. 3,125,134.

Bartholomay, Robert P., to Eastman Kodak Co. Web inverter arrangement. 3,125,268, 3–17–64, Cl. 226—97.

Bartok, William, and P. J. Lucchesi, to Esso Research and Engineering Co. Method of upgrading light hydrocarbons. 3,125,498, 3–17–64, Cl. 204—154.

Baudhuin, Francis J.: *See*—
Heiss, Frederick H., Rolin, and Baudhuin. 3,125,252.

Bauer, Arlene. Monstrances. 3,125,384, 3–17–64, Cl. 312—33.

Bauer, Ralph L.: *See*—
Mork, George W., Bauer, and Wolff. 3,125,226.

Baumann, Gilbert M.: *See*—
Gold, Allan R., and Baumann. 3,125,296.

Baxter, J. H., & Co.: *See*—
Best, Charles W., and Napier. 3,125,141.

Becker, Johannes, to Optische Industrie "De Oude Delft," N.V. Optical imagery system. 3,125,627, 3–17–64, Cl. 88—57.

Becker, Otto A. Filing device. 3,125,041, 3–17–64, Cl. 108—60.

Becker, Ralph W. Webbing system using preprinted tape. 3,125,335, 3–17–64, Cl. 270—5.

Beckley, Maurice S.: *See*—
Smith, Francis F., and Beckley. 3,125,066.

Bedford, Leslie H., to The English Electric Co. Ltd. Accelerometers. 3,124,961, 3–17–64, Cl. 73—497.

Beebe, Herbert E., to American Doll & Toy Corp. Ball joint between doll head and body. 3,124,901, 3–17–64, Cl. 46—161.

Beffa, Fabio, and G. Schetty, to J. R. Geigy, A.-G. Heavy metal-containing monoazo dyes. 3,125,561, 3–17–64, Cl. 260—146.

Behnke, Robert C., and A. B. Walker, to General Motors Corp. Valve lifter. 3,124,869, 3–17–64, Cl. 29—156.7.

Bell Aerospace Corp.: *See*—
Singelmann, Dietrich E. 3,125,029.

Bell Telephone Laboratories, Inc.: *See*—
Anderson, Lynn T., and Kress. 3,125,642.
Arnold, Sydney M. 3,125,654.
Ellwood, Walter B. 3,126,650.
Fennick, John H., and Kaenel. 3,125,692.
Foulkes, John D., Lewis, and Newby. 3,125,724.

Bender, Richard B. Combination insulating guard and wire suspended anode. 3,125,499, 3–17–64, Cl. 204—197.

Bendix Corp., The: *See*—
Blackington, Paul A., and Burgher. 3,125,704.
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Clifton, James B. M. 3,125,726.
Cripe, Maxwell L. 3,125,001.
Hoekstra, Herman M. 3,125,003.
Kasten, Walter. 3,125,005.
McCombs, Howard L., Jr. 3,125,002.
Mock, Frank C. 3,124,931.
Raupp, Ray J., and Whiting. 3,125,002.
Rothfuss, Neal B., and Troeger. 3,124,942.
Swanson, George J. 3,125,395.
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Bendix-Westinghouse Automotive Air Brake Co.: *See*—
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Benjamin, Charles E., to Westinghouse Electric Corp. Alloy double-diffused semiconductor device. 3,124,862, 3–17–64, Cl. 29—25.3.

Bennion, David R. to AMP Inc. Shift register. 3,125,747, 3–17–64, Cl. 340—174.

Bentley, Robert F., R. A. Hack, and T. T. Stapleton, to General Motors Corp. Automatic electrode wear compensator. 3,125,700, Cl. 314—69.

Berger, Paul: *See*—
Feinberg, Albert E., and Berger. 3,125,705.

Bermingham, John R., to Leslie Co. Throttling valve. 3,125,122, 3–17–64, Cl. 137—625.3.

Berry, Melvin D., to Radio Corp. of America. Device for cleaning internal tubular surface. 3,124,820, 3–17–64, Cl. 15—104.09.

Bertram, Joseph J., to Burndy Corp. Releasable locking connector. 3,125,396, 3–17–64, Cl. 339—217.

Bertrand, Georges. Control system for electric sewing machines. 3,125,050, 3–17–64, Cl. 112—219.

Best, Charles W., and J. T. Napier, to J. H. Baxter & Co. Timber incising apparatus. 3,125,141, 3–17–64, Cl. 144—2.

Bethlehem Steel Co.: *See*—
Mulquin, William R., and Molvig. 3,125,220.

Beveridge, Thomas R.: *See*—
Stoltman, Donald D., and Beveridge. 3,125,178.

Biel, John H., to Lakeside Laboratories, Inc. Method of inducing analgesia by 4-(p-chlorophenyl)-1,2,3,6-tetrahydropyridine. 3,125,488, 3–17–64, Cl. 167—65.

Biel, John H., to Lakeside Laboratories, Inc. Piperazinoalkyl glycolates. 3,125,575, 3–17–64, Cl. 260—268.

Biel, John H., to Lakeside Laboratories, Inc. 6-(piperazinoalkyl) 10,11-dihydro-5H-dibens (B,F) azepines, processes of producing same and uses thereof. 3,125,576, 3–17–64, Cl. 260—268.

Biel, John H.) to Lakeside Laboratories, Inc. N-substituted piperazinoalkyl glycolates. 3,125,577, 3–17–64, Cl. 260—268.

Bingham, Robert E., to General Tire & Rubber Co. Continuous polymerization process for vinyl monomers. 3,125,553, 3–17–64, Cl. 260—87.1.

Bird, George L., and R. A. Brown, to Hickok Mfg. Co., Inc. Safety seat harness for vehicle. 3,125,375, 3–17–64, Cl. 297—389.

Birlec-Efco (Melting) Ltd.: *See*—
Leigh, Francis S. J., and May. 3,125,622.

Bissell, James J. Retractable safety belts. 3,125,374, 3–17–64, Cl. 297—388.

Black, Harold. Bore hole inclination recorder. 3,124,882, 3–17–64, Cl. 33—205.5.

Blackington, Paul A., and M. W. Burgher, to The Bendix Corp. Ignition system. 3,125,704, 3–17–64, Cl. 315—209.

Blake, Edwin A., and J. J. Dahl, to The Dow Chemical Co. Stabilized chloroethylenic polymer latexes. 3,125,543, 3–17–64, Cl. 260—23.

Blatz, Philip S., to E. I. du Pont de Nemours and Co. Extrudable composition consisting of a polyolefin and a fluorocarbon polymer. 3,125,547, 3–17–64, Cl. 260—45.5.

Blommers, Elizabeth A.: *See*—
Loshaek, Samuel, and Blommers. 3,125,552.

Blondé Guy, to Outimond. Societe Anonyme. Molds. 3,124,858, 3–17–64, Cl. 25—131.

Boardman, Leland J. Oscillating mirror photometer. 3,125,625, 3–17–64, Cl. 88—14.

Boatman, Mary E. Safety garment. 3,125,373, 3–17–64, Cl. 297—384.

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Gowland, Douglas K., and Bobinette. 3,124,902.

Bochman, Harry L., Jr.: *See*—
Wing, George S., and Bochman. 3,124,908.

Bodine, Albert G., Jr. and E. A. von Seggern; said von Seggern assor. to said Bodine. Sonic dental tool. 3,124,878, 3–17–64, Cl. 32—26.

Boeing Co., The: *See*—
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Bogue, Brian F., and S. S. Laifman, to North American Aviation, Inc. Pyrotechnic igniter. 3,125,025, 3–17–64, Cl. 102—28.

Bolenbach, Adolf. Gang saw for improved tongue and groove joints for flooring. 3,125,138, 3–17–64, Cl. 143—38.

Bond, Milton, E. Stotter, and J. Weitz, to Scott & Williams, Inc. Circular knitting machine for knitting pile fabrics. 3,124,944, 3–17–64, Cl. 66—9.

Bonnelly, Rafael D. Combined bumper and bottle opener. 3,125,368, 3–17–64, Cl. 293—69.

Boone, Stephen E., to United States of America, Navy. Vibra-pen scriber assembly. 3,125,401, 3–17–64, Cl. 346—140.

Boots Pure Drug Co. Ltd.: *See*—
Macey, Peter E., and Oxley. 3,125,588.

Borden Co., The: *See*—
Karo, Wolf, and Halpern. 3,125,480.
Loshaek, Samuel, and Blommers. 3,125,552.
Lukman, John C., Gordon, and Dean. 3,125,556.
Simonds, Milton R. 3,126,453.
Wingerd, Winston H., and Saperstein. 3,125,451.

Borg, Hans W. A. High and low temperature joint sealing assembly. 3,125,362, 3–17–64, Cl. 285—340.

Borgard, Glenn E., to Wagner Electric Corp. Check valve assembly. 3,125,117, 3–17–64, Cl. 137—493.4.

Borgoyn, Milton J., and J. T. Wasdyke, to United States of America, Navy. Sealed standardized light transducer. 3,125,684, 3–17–64, Cl. 250—239.

Bossard, Werner: *See*—
Ammann, Jurg, and Bossard. 3,125,562.

Boudreaux, Gene A., and J. J. Aguilliard. Rotary lawn mower edging attachment. 3,125,165, 3–17–64, Cl. 172—14.

Bower, Clyde S., to Sheup Toll Collecting Devices, Inc. Coin singling apparatus. 3,125,102, 3–17–64, Cl. 133—3.

Boyer, Ralph K., H. W. Krohn, Jr., and E. F. Tobold, to Eaton Mfg. Co. Filling device with detachable flow coupling means. 3,125,135, 3–17–64, Cl. 141—290.

Bradshaw, Thomas A.: *See*—
Stansfield, Frank M., Glasspoole, Morland and Bradshaw. 3,125,082.

Brady, William T., and B. R. Hauk, to Eastman Kodak Co. Process for removing iron contaminants from cobalt oxo catalyst. 3,125,595, 3–17–64, Cl. 260—465.1.

Brandt, Harry, and J. F. Chittum, to California Research Corp. Method and apparatus for heating liquid for hot water flooding. 3,125,072, 3–17–64, Cl. 122—4.

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Brayman, Jacob: *See*—
Gerard, George, and Brayman. 3,125,240.

Brengman, Wayne S., and J. A. Rogus, to Rubbermaid Inc. Combined tiering frame and tray. 3,125,225, 3–17–64, Cl. 211—126.

Brennan, Edward H., to Barber Machinery Ltd. Nut cover assembly. 3,125,190, 3–17–64, Cl. 189—29.

Brewin, Grant H., to Proctor Hydro-Set Co. Textile-treating system and method of dispensing. 3,125,248, 3–17–64, Cl. 222—1.

Bridger, Grover L.: *See*—
Alfrey, Norval K., and Bridger. 3,125,435.

Bridger, Grover L., and N. K. Alfrey, to W. R. Grace & Co. Process for production of non-burning fertiliser. 3,125,411, 3–17–64, Cl. 23—105.

Bridges, Billie R. Ottoman with changeable cushioning means therein. 3,125,377, 3–17–64, Cl. 297—462.

Briggs, George E., Jr., and B. Adamson, Jr., to Halliburton Co. Hydrostatic setting tool. 3,125,162, 3–17–64, Cl. 166—123.

Brinkman, Harold L., and O. J. Saari, to American Machine & Foundry Co. Transfer device. 3,125,232, 3–17–64, Cl. 214—17.

British Petroleum Co., Ltd., The: *See*—
Adlington, Dennis G., and Tupman. 3,125,508.
Laine, Bernard, and Vernet. 3,125,509.
Tupman, Kenneth, and Irving. 3,125,505.
Tupman, Kenneth, and White. 3,125,510.
Tupman, Kenneth, and White. 3,125,511.
Tupman, Kenneth, and Willoughby. 3,125,507.

Broadbent, Kent D., to Hughes Aircraft Co. Thin film magnetic device. 3,125,746, 3–17–64, Cl. 340—174.

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Milton, William F., and Brockenshaw. 3,124,812.

Brooks, William O., to Thompson Ramo Wooldridge Inc. Regulated power supply circuits. 3,125,715, 3–17–64, Cl. 323—22.

Brouse, Shirley B., and J. J. Dalton, to United States Steel Corp. Carriage support for automatic strapping machine. 3,125,018, 3–17–64, Cl. 100—26.

Brown Brothers & Co. Ltd.: *See*—
Mitchell, Colin C. 3,125,057.

Brown, Donald A., and L. R. Downing, Jr., to Donn Products Inc. Movable partition systems. 3,125,193, 3–17–64, Cl. 189—34.

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Glenn, John H., and Brown. 3,124,934.

Brown Mud Co.: *See*—
Glenn, John H., and Brown. 3,124,934.

Brown, Robert A.: *See*—
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Brucken, Byron L., and V. A. Williamitis, to General Motors Corp. Solvent reclaiming dry cleaning apparatus. 3,125,106, 3–17–64, Cl. 134—113.

Brumbach, Joseph F., to Victor Comptometer Corp. Paper feed means. 3,125,638, 3–17–64, Cl. 178—18.

Brumbach, Joseph F., to Victor Comptometer Corp. Recording devices. 3,125,639, 3–17–64, Cl. 178—19.

Brumfield, John C., to I-T-E Circuit Breaker Co. Magnetic trip means. 3,125,651, 3–17–64, Cl. 200—88.

Brüne, Herbert, ½ to Plaswin Corp. Stoppers for bottles and the like. 3,125,238, 3–17–64, Cl. 215—45.

Brunet, Louis, to Society Zuccolo, Rochet & Cie "Z.R.C." Indicating means for so-called diving-watches. 3,124,928, 3–17–64, Cl. 58—57.

Buccino, Gaetano S.: *See*—
Kaufman, David, Buccino, and Glick. 3,125,095.

Büchner, Karl, J. Meis, and O. Boelen, to Ruhrchemie Aktiengesellschaft. Process for the production of alcohols. 3,125,605, 3–17–64, Cl. 260—635.

Buck, William B.: *See*—
Daniels, Charles A., Schul, and Buck. 3,125,124.

Bucyrus-Erie Co.: *See*—
Mork, George W., Bauer, and Wolf. 3,125,226.

Budd Co., The: *See*—
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Budzyna, Joseph M., and A. A. Laferte, to Draper Corp. Feeler mechanism for looms. 3,125,131, 3–17–64, Cl. 139—273.

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Buralli Ettore, to Remital Societa per Azioni Studio e Realizzazioni Elettromeccaniche. Machine for winding coils in grooves of stator rings. 3,125,307, 3–17–64, Cl. 242—4.

Buralli Ettore, to Remital Societa per Azioni Studio e Realizzazioni Elettromeccaniche. Apparatus for winding a coil on a toroidal core. 3,125,308, 3–17–64, Cl. 242—4.

Burdett, John T., to Harper-Wyman Co. Thermostatic gas valve. 3,125,293, 3–17–64, Cl. 236—99.

Burger, Emmett E.: *See*—
Lafferty, James M., Cobine, and Burger. 3,125,441.

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Foerster, George S., and Burkett. 3,125,444.

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McGrath, Thomas J. 3,125,397.

Burns, William E. Sound generating device for code practice. 3,125,752, 3–17–64, Cl. 340—388.

Burnside, Harvey E. W., to Esso Research and Engineering Co. Iron ore magnetic roast process. 3,125,436, 3–17–64, Cl. 75—1.

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Butler, Jack B. Wheel alignment testing apparatus. 3,124,881, 3–17–64, Cl. 33—169.

Butler, William S., P. J. Fontaine, and R. F. Lo Presti, to Goodman Mfg. Co. Stacker conveyor and method of conveying. 3,125,209, 3–17–64, Cl. 198—36.

Byland, Henry L., to General Binding Corp. Automatic binding machine. 3,124,818, 3–17–64, Cl. 11—1.

Cabasso, Victor J., H. R. Cox, A. W. Moyer, and M. Roca-Garcia, to American Cyanamid Co. Suckling rodent and chick embryo attenuated MEF—1 Polio virus and the production thereof. 3,125,489, 3–17–64, Cl. 167—78.

Calbert, Edward S., to National Research Development Corp. Plant position indicating apparatus. 3,125,740, 3–17–64, Cl. 343—10.

California Research Corp.: *See*—
Brandt, Harry, and Chittum. 3,125,072.
Kohn, Gustave K. 3,125,433.
Scott, John W., Jr., and Raats. 3,125,502.

Campbell, Roderick D., and S. K. Herbets. Golf training devices. 3,124,806, 3–17–64, Cl. 2—160.

Canada Iron Foundries, Ltd.: *See*—
Delisle, Alexandre. 3,124,857.

Canada Rice Mills Co.: *See*—
Gravel, Jean J. O. 3,125,043.

Canadian Safety Fuse Co. Ltd.: *See*—
Hicks, Mervyn A., and Mann. 3,125,024.

Cantarutti, Armindo: *See*—
Mallory, Edwin E., and Cantarutti. 3,125,481.

Capecelatro, Achille, W. J. Spaven, and R. Baker, to Madison Associates, Inc. Method and apparatus for demonstrating wave motion phenomena. 3,124,884, 3–17–64, Cl. 35—19.

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Carlson, Robert J., to The Emerson Electric Mfg. Co. Speed controller for induction motor. 3,125,711, 3–17–64, Cl. 318—11.
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Carrington, Jason P. Stationary bicycle attachment for physical conditioning. 3,125,341, 3–17–64, Cl. 272—73.
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Cech, Karl, to K. Vockenhuber. Miniature sound tape recorder or the like. 3,125,645, 3–17–64, Cl. 179—100.2.
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Celano, Peter J., and E. G. Marcmann, to United Foam & Plastics Industries. Laminating apparatus. 3,124,835, 3–17–64, Cl. 18—4.
Cetrone, Vincent B., and G. H. Kreske; said Kreske assor. to said Cetrone. Latch mechanism. 3,125,366, 3–17–64, Cl. 292—169.
Chang, Kern K. N., to Radio Corp. of America. Frequency converter. 3,125,725, 3–17–64, Cl. 325—449.
Chantiers Navals Franco-Belges, Societe Anonyme des: *See*—
Verneaux, Jean E. P., and Melchior. 3,125,059.
Charles, Maynard G., to Aeroquip Corp. Push-pull breakaway coupling. 3,125,359, 3–17–64, Cl. 285—62.
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Chechak, Albert J., and C. D. Robeson, to Eastman Kodak Co. Thiapyrans and their use in preparing polyenes. 3,125,571, 3–17–64, Cl. 260—240.
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Miles, John R. 3,125,626.
Child, Edward T., M. L. Hambo, and J. T. Nolan, Jr., to Texaco Inc. Method for the production of polyisobutylene. 3,125,612, 3–17–64, Cl. 260—683.15.
Childers, Eugene, C. W. Ellis, and D. J. Ryan, to E. I. du Pont de Nemours and Co. Method of removing nitrogen oxides from gases. 3,125,408, 3–17–64, Cl. 23—2.
Chittum, Joseph F.: *See*—
Brandt, Harry, and Chittum. 3,125,072.
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Christensen, Edward R.: *See*—
Kerr, Edwin R., Christensen, Franz, and Vermillion. 3,125,503.
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Jessup, Wilbur F. 3,124,912.
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Clark, Earl C., and H. J. Harless, to General Motors Corp. Tool holders. 3,124,865, 3–17–64, Cl. 29—96.
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Hasbany, Woodrow A. 3,125,120.
Loomis, Jack E. 3,125,035.
Clark, Henry C., H. W. Easterling, L. E. McKean, and J. C. Secord, to American Machine & Foundry Co. Bowling ball retarding mechanism. 3,125,342, 3–17–64, Cl. 273—47.
Clark, Wendall J., to Texaco Experiment Inc. Pressure responsive motor. 3,124,960, 3–17–64, Cl. 73—410.
Clark, Willard L. Hair-cutting guide. 3,125,101, 3–17–64, Cl. 132—45.
Clay, Robert A., to American Shotpeening Corp. Drill pipe peening. 3,124,863, 3–17–64, Cl. 29—90.
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Cline, Robert C., to F. L. Russell Corp. Heavy binder easel construction. 3,125,356, 3–17–64, Cl. 281—33.
Clinehens, Richard M.: *See*—
Puterbaugh, William H., Clinehens, Morin, Schroeder, and Austen. 3,125,673.
Coats Co., Inc., The: *See*—
Foster, James R. 3,125,152.
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Cobler, Homer H., to Cast Aluminum and Brass Corp. Toilet with waste disposing apparatus. 3,124,810, 3–17–64, Cl. 4—90.
Cochrane, Harry R., and J. A. Danieli. Wall mounted telephone box rack. 3,125,224, 3–17–64, Cl. 211—106.
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Cohen, Milton J., to Pharmedical, Inc. Infusion flask. 3,125,092, 3–17–64, Cl. 128—272.
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Cole, Thomas M., and A. E. Maier, to Federal Pacific Electric Co. Multiple automatic circuit breaker. 3,125,653, 3–17–64, Cl. 200—116.
Colten, Jerrold L., to Empire Electric Corp. Defrosting unit. 3,125,637, 3–17–64, Cl. 219—19.
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Conner, Jesse R., Jr., to Allegheny Ludlum Steel Corp. Colored stainless steels. 3,125,471, 3–17–64, Cl. 148—31.5.
Connerat, Edwin B. Connector guard for semi-trailer chassis. 3,125,354, 3–17–64, Cl. 280—422.
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Consolidated General Products, Inc.: *See*—
Lawler, James R. 3,125,284.
Consolidated Mining and Smelting Co. of Canada Ltd., The: *See*—
Coon, Benjamin T., and Wiltshire. 3,125,420.
Constantine, Thomas T., and R. D. Wells, to Crompton & Knowles Corp. Means to process fibers in a tow or sheet-like material. 3,124,844, 3–17–64, Cl. 19—155.
Constantine, Thomas T., and R. D. Wells, to Crompton & Knowles Corp. Nonwoven web. 3,125,485, 3–17–64, Cl. 161—169.
Continental Aviation and Engineering Corp.: *See*—
Stram, Le Roy, Jr., Genden, and Mankey. 3,124,933.
Continental Can Co., Inc.: *See*—
Hughes, Robert G. 3,125,278.
Continental Gummi-Werke Aktiengesellschaft: *See*—
Nicias, Walter, Menel, and Johannes. 3,125,482.
Continental Motors Corp.: *See*—
Adler, Herman G. 3,124,963.
Cook, Robert M. Stage for puppets. 3,124,896, 3–17–64, Cl. 46—13.
Cook, Robert M. Puppet movable on a wheel to simulate walking. 3,124,900, 3–17–64, Cl. 46—105.
Cook, William A., and S. S. Feinstein, to E. I. du Pont de Nemours and Co. Process for the production of thermoplastic polymeric film. 3,125,616, 3–17–64, Cl. 264—40.
Coon, Benjamin T., and E. G. Wiltshire, to The Consolidated Mining and Smelting Co. of Canada Ltd. Compact reactor for production of fertilizer solids. 3,125,420, 3–17–64, Cl. 23—259.1.
Cooper, Glenn D., and A. R. Gilbert, to General Electric Co. Interpolymers of alkenyl silanes and olefinic hydrocarbons. 3,125,554, 3–17–64, Cl. 260—88.1.
Cooper, Ralph F.: *See*—
Barna, Fred K., and Cooper. 3,124,978.
Copeland, Jesse J., and J. H. Coe, to Hitchcock Transportation Co. Rotary spray head. 3,125,297, 3–17–64, Cl. 239—261.
Copes, Joseph P.: *See*—
Mayhew, Raymond L., and Copes. 3,126,530.
Coppick, Sydney, to Scott Paper Co. Modified aminoplast resin foams and process of manufacture thereof. 3,125,621, 3–17–64, Cl. 264—321.
Copping, Bruce G., to Atkron, Inc. Bottle grippers. 3,125,369, 3–17–64, Cl. 294—87.24.
Corbiere, Paul J., and P. J. Terra, to Societe Rhodiaceta. Yarn drawing apparatus. 3,124,859, 3–17–64, Cl. 28—59.5.
Costantini, Anthony R., and A. Di Angelus, to Victory Metal Mfg. Co., d.b.a. Victory Metal Mfg. Corp. Floor-loading cabinet construction. 3,125,388, 3–17–64, Cl. 312—214.
Costen, Donald W., to Gibson, Inc. Vibrato tuning device for stringed musical instruments. 3,124,991, 3–17–64, Cl. 84—267.
Cote, Mary C. J.: *See*—
Rydberg, George E., and A. J. and P. C. Jacobs. 3,125,031.
Courtaulds, Ltd.: *See*—
Kenyon, Robert S., and Taylor. 3,124,860.
Cousseran, Pierre: *See*—
Roche, Roland, Hassig, and Cousseran. 3,125,123.
Cox, Herald R.: *See*—
Cabasso, Victor J., Cox, Moyer, and Rora-Garcia. 3,125,489.
Crane Products Mfg. Co., Inc.: *See*—
Winters, Daniel R. 3,125,751.
Crawley, William P., to The Carborundum Co. Heat resistant fibrous products and method of making the same. 3,125,404, 3–17–64, Cl. 8—115.7.
Creative Metal Products, Inc.: *See*—
Kagan, Arthur. 3,125,407.
Creedle, Fred W., N. N. Dobrn, and J. R. Wilhelm, to American Brake Shoe Co. Railroad car retarders. 3,125,185, 3–17–64, Cl. 188—62.
Cripe, Maxwell L., to The Bendix Corp. Multi-position vacuum motor. 3,125,001, 3–17–64, Cl. 91—357.
Crompton & Knowles Corp.: *See*—
Constantine, Thomas T., and Wells. 3,124,844.
Constantine, Thomas T., and Wells. 3,125,485.
Cropp, David L., C. C. Jordan, and R. W. Lingo, to Saegertown Glasseals, Inc. Bead loader for an assembly machine. 3,124,861, 3–17–64, Cl. 29—25.3.
Crusen, Larry L., to Burroughs Corp. Stack height control apparatus for a sheet feeder. 3,125,337, 3–17–64, Cl. 271—62.
Culbertson, George T., to T. W. Hallerberg. Time delay circuit. 3,125,707, 3–17–64, Cl. 317—142.
Cummins Engine Co., Inc.: *See*—
Reiners, Neville M. 3,125,078.
Curtis, Charles H.: *See*—
McCarty, James P., and Curtis. 3,125,303.
Curtis, Myron S., and H. Schoepe, to The Warner & Swasey Co. Machine tool. 3,124,985, 3–17–64, Cl. 82—2.

Cutlas Tool and Mfg. Co.: *See*—
Kapusta, John M. 3,125,863.
Dacons, Joseph C.: *See*—
Glover, Donald J., Dacons, Sickman, Hill, and Kamlet. 3,125,606.
Daendliker, Gustav, and W. Scheller, to Ciba Ltd. Process for the preparation of aromatic compounds from acetylenically unsaturated hydrocarbons. 3,125,610, 3–17–64, Cl. 260—673.
Dahl, James J.: *See*—
Blake, Edwin A., and Dahl. 3,125,543.
Daimler-Benz Aktiengesellschaft: *See*—
Bader, Alfred E., and Umgelter. 3,124,986.
Hoffmann, Heinrich. 3,125,079.
Hoffmann, Heinrich. 3,125,080.
Müller, Alfred H. 3,125,179.
Nallinger, Friedrich K. H. 3,124,950.
Dairy Equipment Testing Co., Inc.: *See*—
Smith, Francis F., and Beckley. 3,125,066.
Dalton, Harold R., to Timefax Corp. Electro-responsive facsimile recording and planographic plate. 3,125,021, 3–17–64, Cl. 101—149.2.
Dalton, Harold R. Pressure and heat sensitive coating compositions and recording blanks coated therewith. 3,125,458, 3–17–64, Cl. 117—36.7.
Dalton, Jack J.: *See*—
Brouse, Shirley B., and Dalton. 3,125,018.
Daly, James U., to Ranco Inc. Vacuum regulator. 3,125,111, 3–17–64, Cl. 137—102.
D'Amore, Mead, to Westinghouse Electric Corp. Fuel element for a nuclear reactor. 3,125,493, 3–17–64, Cl. 176—76.
Danfoss ved ing. M. Clausen: *See*—
Valbjorn, Knud V. 3,125,184.
Danieli, John A.: *See*—
Cochrane, Harry R., and Danieli. 3,125,224.
Daniels, Charles A., W. M. Schul, and W. B. Buck, to Phillips Petroleum Co. Conduit with corrosion resistant liner. 3,125,124, 3–17–64, Cl. 138—141.
David, Edward J.: *See*—
Arcudi, Joseph L., and David. 3,124,913.
Davidson, James R.: *See*—
Straight, Edward R., and Davidson. 3,124,851.
Davidson, Thomas G.: *See*—
Davidson, Wilbur L. and T. G., and Shiker. 3,125,103.
Davidson, Wilbur L. and T. G., and R. W. Shiker; said T. G. Davidson, and said Shiker, assors. to said W. L. Davidson. Vending machine change dispenser. 3,125,103, 3–17–64, Cl. 133—5.
Davis, John H., Jr.: *See*—
Rusell, Charles R., Fowler, Davis, Klein, and MacDougall. 3,125,439.
Davis, Lynn T., to Puritan Compressed Gas Corp. Sanitary sealing apparatus for ports of medical gas cylinder valves. 3,125,242, 3–17–64, Cl. 220—85.
Day, Alan R. A., to Armstrong Patents Co., Ltd. Adjustable hydraulic shock absorbers. 3,125,186, 3–17–64, Cl. 188—88.
Day, Luther F., to Atlantic Research Corp. Multiple repertory dialing telephone system. 3,125,643, 3–17–64, Cl. 179—90.
Dayton Steel Foundry Co., The: *See*—
Dotto, Gianni A. 3,125,187.
Dean, Donald E.: *See*—
Lukman, John C., Gordon and Dean. 3,125,556.
Dean, Walter A.: *See*—
Adams, Cecil S., Dean, and Martin. 3,124,843.
DeClue, Joseph L., to Minneapolis-Honeywell Regulator Co. High dynamic input impedance amplifier. 3,125,693, 3–17–64, Cl. 307—88.5.
De Frees, Joseph H. Gusher emergency valve. 3,125,320, 3–17–64, Cl. 251—62.
De Ganahl, Carl. Apparatus for making glass fiber reinforced plastic pipe. 3,125,483, 3–17–64, Cl. 156—432.
Degenhardt, Carl J., to United States Steel Corp. Ward Leonard emergency stop apparatus for steel mills. 3,125,713, 3–17–64, Cl. 318—158.
Deibel, Charles, J. Evanicsko, Jr., and E. H. Halpern, to Westinghouse Electric Corp. Electric controller. 3,125,739, 3–17–64, Cl. 338—99.
Deitz, Louis S., Jr.: *See*—
Leavenworth, Edgar K., and Deitz. 3,125,413.
Delisle, Alexandre, to Canada Iron Foundries, Ltd. Spigot groove former for concrete pipe. 3,124,857, 3–17–64, Cl. 25—39.
De Luca, Paul V.: *See*—
Peters, Pete J., and De Luca. 3,124,971.
De Moude, Adrian J. Relatively rotatable face seal with flexible backing member. 3,125,347, 3–17–64, Cl. 277—92.
De Nederlandse Organisatie voor Toegepast-Natuur-Wetenschappelijk Onderzoek Ten Behoeve Van Nijerheid, Handel en Verkeer: *See*—
Schutte, Otto H. 3,125,708.
Dengler, Herbert P., to Esso Research and Engineering Co. Hydrofining process. 3,125,504, 3–17–64, Cl. 208—89.
Denny, William, & Brothers Ltd.: *See*—
Mitchell, Colin C. 3,125,057.
Detweiler, William K., W. E. Lifson, and F. L. Jonach, to Esso Research and Engineering Co. Calcium mixed-salt lubricant stabilized against water contamination. 3,125,521, 3–17–64, Cl. 252—32.7.
Deutsche Werft Aktiengesellschaft: *See*—
Mitchell, Colin C. 3,125,057.
Dever, Lewis A., and H. E. Luebkemann, to The Cincinnati Milling Machine Co. Hydraulic system for controlled movement of machine tool member. 3,124,910, 3–17–64, Cl. 51—165.
Devine, Francis P., to Avco Corp. Motion transmitting means. 3,124,966, 3–17–64, Cl. 74—136.
De Vito, Angelo R., to Atwood Vacuum Machine Co. Hinge embodying hold-open means. 3,124,829, 3–17–64, Cl. 16—140.
Di Angelus, Anthony: *See*—
Costantini, Anthony R., and Di Angelus. 3,125,388.
Dickey, Joseph B.: *See*—
Towne, Edmund B., Moore, and Dickey. 3,125,563.
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Krug, Albert E. 3,125,094.
Disney, Bobby K.: *See*—
Lawson, Herbert E., Disney, and Accountius. 3,125,467.
Distillers Co. Ltd., The: *See*—
Hargrave, Kenneth R., and Gasser. 3,125,593.
Dobbins, Walter J., to American Can Co. Can sealing machine. 3,124,917, 3–17–64, Cl. 53—88.
Dodge Mfg. Corp.: *See*—
Macy, John M. 3,125,211.
Dobrn, Nicholas N.: *See*—
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Dolph, James L., and A. L. Renkey, to Harbison-Walker Refractories Co. Insulating compositions. 3,125,454, 3–17–64, Cl. 106—64.
Donn Products Inc.: *See*—
Brown, Donald A., and Downing. 3,125,193.
Doppstadt, Adolf: *See*—
Siemer, Harm, and Doppstadt. 3,125,572.
Dore, James E., to Kaiser Aluminum & Chemical Corp. Refractory stopper for aluminum casting apparatus and method of casting. 3,124,854, 3–17–64, Cl. 22—84.
Dosamatic Dropper Corp.: *See*—
Ballin, Gene. 3,125,250.
Dotto, Gianni A., to The Dayton Steel Foundry Co. Fluid operated, brake applying and retracting cylinder and piston unit including fluid operated automatic slack adjuster. 3,125,187, 3–17–64, Cl. 188—152.
Dover Corp.: *See*—
Arbogast, Duane J., and Jaseph. 3,125,319.
Dow Chemical Co., The: *See*—
Blake, Edwin A., and Dahl. 3,125,543.
Foerster, George S., and Johnson. 3,125,222.
Foerster, George S., and Burkett. 3,125,443.
Foerster, George S., and Burkett. 3,125,444.
Morris, Leo R. 3,125,582.
Downing, Lucien R., Jr.: *See*—
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Budsyna, Joseph M., and Laferte. 3,125,131.
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Moore, James E., and Marlin. 3,125,437.
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Dubuque Awning & Tent Co.: *See*—
Frommelt, Cyril P. and S. J. 3,125,155.
Dudley, William A.: *See*—
Lamb, Charles P., and Dudley. 3,125,113.
Duecy, George P.: *See*—
Knisely, James D. 3,125,132.
Duesler, Paul W. Interlocking truss. 3,124,846, 3–17–64, Cl. 20—.5.
Du Pont de Nemours, E. I., and Co.: *See*—
Anderson, Edwin L. 3,125,548.
Arnold, Charles, Jr., and Kruse. 3,125,538.
Blatz, Philip S. 3,125,547.
Childers, Eugene, Ellis, and Ryan. 3,125,408.
Coffman, Donald D., and Harris. 3,125,581.
Cook, William A., and Feinstein. 3,125,616.
Farmer, James O. 3,124,947.
Fuchs, Julius J. 3,125,600.
Goebel, Max T. 3,125,601.
Kittle, Richard S. 3,125,431.
Monroe, George C., Jr. 3,125,611.
Punderson, John O. 3,125,551.
Richmond, Adah B. 3,125,425.
Robbins, Gordon B. 3,125,604.
Todd, Charles W. 3,125,432.
Warnell, Joseph L. 3,125,599.
Weis, Claus D. 3,125,584.
Weiss, Victor H. 3,125,484.
Wood, Stanley D. 3,125,107.
Woodell, Rudolph. 3,124,926.
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EVG Entwicklungs- u. Verwertungs-Gesellschaft m.b.H.: *See*—
Eisenburger, Kuno, and Ritter. 3,125,668.
Earley, Robert W., to Westinghouse Electric Corp. Muffler. 3,125,182, 3–17–64, Cl. 181—53.
Easterling, Herbert W.: *See*—
Clark, Henry C., Easterling, McKean, and Secord. 3,125,342.
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Bartholomay, Robert P. 3,125,268.
Brady, William T., and Hauk. 3,125,595.
Chechak, Albert J., and Robeson. 3,125,571.
Hagemeyer, Hugh J., Jr., and Edwards. 3,125,558.
Heseltine, Donald W., and Lincoln. 3,125,448.
Jeffreys, Roy A. 3,125,449.
Laakso, Thomas M., Williams, and Garbor. 3,125,550.
Martin, James C., and Elam. 3,125,569.
Pribus, Clarence W. 3,125,012.
Stewart, Paul H. 3,125,447.
Towne, Edmund B., Moore, and Dickey. 3,125,563.
Warren, Horace G., and Myers. 3,125,265.
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Eberl, Frans R. Compound beam structure. 3,125,009, 3–17–64, Cl. 94—4.

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Eckerman, Albert O.: *See*—
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Edmunds, Ivor, and J. A. Halliwell, to Vickers-Armstrongs (South Marston) Ltd. Machines for sorting articles. 3,125,230, 3–17–64, Cl. 214—11.

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Ringold, Howard J., Rosenkranz, and Edwards. 3,125,591.

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Egbert, Earl L., to General Motors Corp. Hydrodynamic torque transmitting device. 3,124,973, 3–17–64, Cl. 74—731.

Ehe, Albert L. Plural receptacle container. 3,125,275, 3–17–64, Cl. 229—15.

Eigelbach, Ray C., to General Electric Co. Door latch mechanism. 3,125,365, 3–17–64, Cl. 292—7.

Einbinder, Albert: *See*—
Weicher, Sidney, and Einbinder. 3,125,006.

Eisenburger, Kuno, and J. Ritter, to E V G Entwicklungs-u. Verwertungs-Gesellschaft m.b.H. Multiple spot welding machine. 3,125,668, 3–17–64, Cl. 219—87.

Eisengrein, Robert H., to Seneca Falls Machine Co. Speed control system for electrically powered mechanism. 3,125,714, 3–17–64, Cl. 318—454.

Eisenmann, Oswald E., and H. G. Krohne, to American Machine & Foundry Co. Carton forming and filling apparatus and method. 3,124,914, 3–17–64, Cl. 53—26.

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Martin, James C., and Elam. 3,125,569.

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Pawlowski, Robert J. 3,125,181.

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Ellis, John H., to Pyramid Truck Attachments, Inc. Dump truck unloading and spreading mechanism. 3,125,345, 3–17–64, Cl. 275—8.

Ellwood, Walter B., to Bell Telephone Laboratories, Inc. Sealed Reed switch. 3,125,630, 3–17–64, Cl. 200—87.

Elowe, Louis N., and G. J. Jackson, Jr., to American Cyanamid Co. Chewable hematinic vitamin tablet. 3,125,491, 3–17–64, Cl. 167—82.

Elpern, Bill, to Sterling Drug Inc. 1-tertiary-amino-1-(monocarbocydic aryl)-a-tertiary-amino-2-aza-1-alkenes and their preparation. 3,125,573, 3–17–64, Cl. 260—247.5.

Emerson Electric Mfg. Co., The: *See*—
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Emerzian, Manuel K. Hand wrench with cable and spool drive means. 3,124,983, 3–17–64, Cl. 81—54.

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Bartok, William, and Lucchesi. 3,125,498.
Burnside, Harvey E. W. 3,125,436.
Dengler, Herbert P. 3,125,504.
Detweiler, William K., Lifson, and Jonach. 3,125,521.
Gallagher, James A., La Motta, and Van Nostrand. 3,125,549.
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FMC Corp.: *See*—
Fits Maurice, Richard W. 3,125,112.
Lill, Etchison G. 3,125,294.
McRobert, Leon R. 3,125,097.
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Kruckenberg, Winfried, and Weis. 3,125,402.
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Farmer, James O., to E. I. du Pont de Nemours and Co. Positive type feeding apparatus. 3,124,947, 3–17–64, Cl. 66—132.

Fasulo, Joseph L., to United States of America, Navy. Automatic frequency control circuitry for high voltage klystron tubes. 3,125,728, 3–17–64, Cl. 331—6.

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Knox, John A., Featherston, and Lasater. 3,125,518.

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Federal Pacific Electric Co.: *See*—
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Fegles, Donald B., to Fegles Construction Co., Inc. Storage bin arrangement for grain elevators and the like. 3,124,906, 3–17–64, Cl. 50—113.

Feinberg, Albert E., and P. Berger. Gas discharge lamp circuits employing saturable type transformer. 3,125,705, 3–17–64, Cl. 315—278.

Feinstein, Sumner S.: *See*—
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Fennick, John H., and R. A. Kaenel, to Bell Telephone Laboratories, Inc. Stepping switch circuit. 3,125,692, 3–17–64, Cl. 307—88.5.

Ferguson, Harry, Research Ltd.: *See*—
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Finan, James A., to Allied Chemical Corp. Method of preparing a built-up roof. 3,125,479, 3–17–64, Cl. 156—300.

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Fisher, Harry M. Bottom stop applicator. 3,124,805, 3–17–64, Cl. 1—106.

Fisher, Lawrence E., to General Electric Co. Ventilated busway and housing arrangement. 3,125,628, 3–17–64, Cl. 174—16.

Fisher, Mark E., to General Motors Corp. Transmission. 3,125,201, 3–17–64, Cl. 192—4.

Fits Maurice, Richard W., to FMC Corp. Sequence irrigation valve. 3,125,112, 3–17–64, Cl. 137—119.

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Smith, Edwin E. 3,125,032.

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Foerster, George S., and F. L. Burkett, to The Dow Chemical Co. Magnesium base casting alloy. 3,125,444, 3–17–64, Cl. 75—168.

Foerster, George S., and R. J. Johnson, to The Dow Chemical Co. Method of making high strength magnesium extrudes. 3,125,222, 3–17–64, Cl. 207—10.

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Butler, William S., Fontaine, and Lo Presti. 3,125,209.

Fosnes, Kenneth E. Milking machine manifold. 3,125,067, 3–17–64, Cl. 119—14.55.

Foster, Christopher J. Graving docks. 3,124,935, 3–17–64, Cl. 61—64.

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Foster, James R., to The Coats Co., Inc. Tire mounting apparatus. 3,125,152, 3–17–64, Cl. 157—1.22.

Foster, Julius, A. P. Fraas, and A. M. Perry, to United States of America, Atomic Energy Commission. Fuel locating and suspending system for neutronic reactor core. 3,125,760, 3–17–64, Cl. 176—41.

Foulkes, John D., W. D. Lewis, and N. D. Newby, to Bell Telephone Laboratories, Inc. Single sideband space-frequency diversity transmission system. 3,125,724, 3–17–64, Cl. 325—154.

Fowler, Bruce D. Hummingbird feeding device. 3,125,069, 3–17–64, Cl. 119—51.

Fowler, Morris G.: *See*—
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Fox, Fred K. Tubular drill string members. 3,125,173, 3–17–64, Cl. 175—323.

Fox, Richard J. Anti-skid traction device. 3,125,148, 3–17–64, Cl. 152—221.

Fox, William R., R. J. Hames, F. Schwartz, and K. Zaruba, to General Motors Corp. Control mechanism for pressure charged internal combustion engine. 3,125,086, 3–17–64, Cl. 123—140.

Foye, Allen B., to W. R. Grace & Co. Method of producing elastomeric polymer gasket for container closures. 3,125,459, 3–17–64, Cl. 117—43.

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Franklin, Richard L., J. R. Guseman, and E. A. Pelczarski, to United States Steel Corp. Method and composition for making carbonate-bonded agglomerates. 3,125,436, 3–17–64, Cl. 75—3.

Franz, Raymond A., and R. N. Moore, to Monsanto Chemical Co. Preparation of carbonyl sulfide. 3,125,417, 3–17–64, Cl. 23—203.

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Friedman, Emerson J., to U.S. Industries, Inc. Stocking display bar. 3,125,365, 3–17–64, Cl. 312—107.

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Frommelt, Cyril P. and S. J., to Dubuque Awning & Tent Co. Portable screen structures. 3,125,155, 3–17–64, Cl. 160—230.

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Fuchs, Julius J., to E. I. du Pont de Nemours and Co. Process for the production of adipic acid. 3,125,600, 3–17–64, Cl. 260—537.

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Medlock, James D., Galle, and Atkinson. 3,125,175.

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Katz, Leon, and Turetsky. 3,125,586.
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Murray, James G., Holub, and Smith. 3,125,635.
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Secunda, Kenneth. 3,125,208.
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Kendall, Hugh C., and Auer. 3,125,315.

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Georgiev, Philip K. Vacuum tube with linear dynamic characteristics. 3,125,699, 3–17–64, Cl. 313—299.

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Gerber, William C., to Rubbermaid Inc. Automobile door-hung waste receptacle. 3,125 212, 3–17–64, Cl. 206—19.5.

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Gilbert, Everett E., and H. R. Nychka, to Allied Chemical Corp. Production of sulfamic acid. 3,125,414, 3–17–64, Cl. 23—166.

Gill, Warren E., and A. O. Eckerman, to Muskegon Tool Industries, Inc. Boring cutter. 3,124,980, 3–17–64, Cl. 77—58.

Gionet, Edmond R., to General Motors Corp. Hinge and hold open. 3,124,830, 3–17–64, Cl. 16—140.

Glaser, Peter E., A. Pastuhov, and L. R. B. Hervey, to Arthur D. Little, Inc. Process for forming insulation and resulting product. 3,124,853, 3–17–64, Cl. 20—101.

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Glenn, Lester W. Method of dispersing fluid beneath slab floors. 3,124,893, 3–17–64, Cl. 43—124.

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Glover, Donald J., J. C. Dacons, D. V. Sickman, M. E. Hill, and M. J. Kamlet, to United States of America, Navy. Process for the manufacture of nitroform and its salts. 3,125,606, 3–17–64, Cl. 260—644.

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Göhmann, Karl. Transport container with removable undercarriage or truck. 3,125,353, 3–17–64. Cl. 280—179.

Gold, Allan R., and G. M. Baumann, to Ziff-Davis Publishing Co. Attenuator spraying device. 3,125,296, 3–17–64, Cl. 239—216.

Goldfarb, Erwin J.: *See*—
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Gouin, Paulette, (nee Gouin). Collapsible strut. 3,125,352, 3–17–64, Cl. 280—150.5.

Gowland, Douglas K., and C. W. Bobinette. Toy vehicle chassis and electric motor. 3,124,902, 3–17–64, Cl. 46—243.

Grabowski, Leonard R., and G. A. Widmoyer, to General Motors Corp. Preloaded ball bearing screw assembly. 3,124,969, 3–17–64, Cl. 74—441.

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Graef, Wilbur C. Boat construction. 3,124,814, 3–17–64, Cl. 9—6.

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Grassman, Wolfgang, and K. Hannig. Device for the execution of the carrier free continuous electrophoresis. 3,125,500, 3–17–64, Cl. 204—299.

Graue, Georg, and W. Lückerath, to Phoenix-Rheinrohr Aktiengesellschaft Vereinigte Hutten- und Rohrenwerke. Lubricants. 3,125,519, 3–17–64, Cl. 252—11.

Gravel, Jean J. O., to Mount Royal Rice Mills Ltd. and Canada Rice Mills Co. Method of removing volatile constituents and carbon from rice hulls. 3,125,043, 3–17–64, Cl. 110—28.

Graves, Roger E. Information locating means for material stored on film rolls. 3,125,749, 3–17–64, Cl. 340—174.1.

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Gruner, Frederick R., and J. D. Abeles, to Purolator Products, Inc. Filter. 3,125,615, 3–17–64, Cl. 210—493.

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Gusemann, James R.: *See*—
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Hagemeyer, Hugh J., Jr., and M. B. Edwards, to Eastman Kodak Co. Organoaluminum-transition metal halide-alkali metal fluoride for olefin polymerization. 3,125,558, 3–17–64, Cl. 260—93.7.

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Haines, Richard M., to Owens-Corning Fiberglas Corp. Method for leaching a polyurethane foam. 3,125,542, 3–17–64, Cl. 260—2.5.

Hakka, Ernest J., to L. Hakka. Anti-skid device. 3,125,147, 3–17–64, Cl. 152—210.

Hall, Leon H., to Simmonds Precision Products, Inc. Fuel injection system. 3,125,084, 3–17–64, Cl. 123—119.

Hall, Quentin W., and A. T. Solomon, to Burlington Industries, Inc. Industrial apparatus. 3,124,918, 3–17–64, Cl. 53—125.

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Hart, Oliver M. Electrical connector assembly. 3,125,391, 3–17–64, Cl. 339—60.

Hartman, Thomas L., to H_2O International, Inc. Method of producing refrigeration employing bicarbonate solutions. 3,124,939, 3–17–64, Cl. 62—112.

Harvey, Leslie A. Swimming training apparatus. 3,124,815, 3–17–64, Cl. 9—311.

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Hasbany, Woodrow A., to Clark Equipment Co. Control valve. 3,125,120, 3–17–64, Cl. 137—596.12.

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Hawthorne, Lowell H., to Revere Copper and Brass Inc. Welding guns. 3,125,670, 3–17–64, Cl. 219—125.

Hayden, Kenneth F., and R. N. Lovett, to Socony Mobil Oil Co. Chelate sweetening. 3,125,506, 3–17–64, Cl. 208—204.

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Heiss, Frederick H., K. C. Rolin, and F. J. Baudhuin, to Valspar Corp. Dispensing machine with nozzle cleaner. 3,125,252, 3–17–64, Cl. 222—135.

Held, Simon S., to Societe Anonyme Etablissements Ed. Jaeger. Electric timepiece regulating mechanism. 3,125,696, 3–17–64, Cl. 310—36.

Hellstrom, Douglas R., to Smith and Wesson, Inc. Revolver gate. 3,124,889, 3–17–64, Cl. 42—59.

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Hennessey, Raymond G., and K. Li Donnicl, to Fairchild Camera and Instrument Corp. Flexible strip guide. 3,125,272, 3–17–64, Cl. 226—196.

Hennig, Fridolin, to Agfa Aktiengesellschaft. Automatic or manually operable camera. 3,125,011, 3–17–64, Cl. 95—10.

Henrichsen, William. Flying toy. 3,124,898, 3–17–64, Cl. 46—82.

Henricot, Paul E. E. A. A. Liners for ball and tube mills. 3,125,302, 3–17–64, Cl. 241—183.

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Siegart, William R., Henry, Odell, and Toettcher. 3,125,525.

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Herdina, Robert, to Hamac-Hansella Aktiengesellschaft. Apparatus for converting a web into tubular form. 3,125,008, 3–17–64, Cl. 93—82.

Herman, John J., to Rohm & Haas Co. Crease-proofed cellulosic fabrics and process for making them. 3,125,406, 3–17–64, Cl. 8—116.3.

Herndon, Luther J., Jr., and J. B. Queen, to Halliburton Co. Well tools. 3,125,382, 3–17–64, Cl. 308—4.

Herrick, Clifford E., Jr., and J. W. Weigl, to General Aniline & Film Corp. Apparatus for reflex copying by the use of fiber optical devices. 3,125,013, 3–17–64, Cl. 95—75.

Herridge, William G., Jr., and R. G. Taylor, to General Motors Corp. Vehicle light control. 3,125,702, 3–17–64, Cl. 315—77.

Hershberg, Emanuel B., to Schering Corp. Tablet with contrasting indicia and method. 3,125,490, 3–17–64, Cl. 167—82.

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Heslop, Robert N., and W. E. Stephen, to Imperial Chemical Industries Ltd. Dihalo-triazinylamino-azo and anthraquinone dyestuff compositions stabilized with mixtures of alkali phosphates. 3,125,564, 3–17–64, Cl. 260—153.

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Hickok Mfg. Co., Inc.: *See*—
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Hicks, Mervyn A., and W. Mann, to Canadian Safety Fuse Co. Ltd. Explosive connecting cord. 3,125,024, 3–17–64, Cl. 102—27.

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Higuchi, Kozo, T. Osa, and T. Takeuchi, to Hokkaido Tanko Kisen Kabushiki Kaisha. Process for the extractive separation selectively of aromatic hydrocarbons from hydrocarbons containing both aromatic and non-aromatic hydrocarbons. 3,125,512, 3–17–64, Cl. 208—323.

Hill, Claude, to Harry Ferguson Research Ltd. Clutch for differential control. 3,125,202, 3–17–64, Cl. 192—47.

Hill, Henry A., and W. P. ter Horst, to National Polychemicals, Inc. N-alkyl-N-nitroso alkyl sulfonamides. 3,125,602, 3–17–64, Cl. 260—556.

Hill, Marion E.: *See*—
Glover, Donald J., Dacons, Sickman, Hill, and Kamlet. 3,125,606.

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Hines, Lloyd Q., Sr. Rotary tilling implement. 3,125,166, 3–17–64, Cl. 172—120.

Hiromatsu, Hideaki, to Silver Knitting Machine Mfg. Co., Inc. Knitting machine. 3,124,946, 3–17–64, Cl. 66—60.

Hirtreiter, Walter J. Accelerometer apparatus. 3,124,962, 3–17–64, Cl. 73—516.

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Hoekstra, Herman M., to The Bendix Corp. Diaphragm plate construction. 3,125,003, 3–17–64, Cl. 91—376.

Hoffman, Donald O., to American Optical Co. Optical filters and method of making same. 3,125,535, 3–17–64, Cl. 252—300.

Hoffman, Roy D. Heated pet bed. 3,125,663, 3–17–64, Cl. 219—46.

Hoffmann, Gilbert F., to Sand-In Corp. Method of preparing wood and particle board surfaces for finishing. 3,125,461, 3–17–64, Cl. 117—65.2.

Hoffmann, Heinrich, to Daimler-Benz Aktiengesellschaft. Multi-purpose internal combustion engine. 3,125,079, 3–17–64, Cl. 123—32.

Hoffmann, Heinrich, to Daimler-Benz Aktiengesellschaft. Internal combustion engine. 3,125,080, 3–17–64, Cl. 123—32.

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Hollnbeck, Dale G., to United States of America, Navy. Transmission line having high attenuation for radiant energy induced high frequency currents, useful in detonation circuits. 3,125,733, 3–17–64, Cl. 333—79.

Hollingsworth, Donald H., Jr., A. S. Johnson, L. M. Litz, and R. W. Oliver, to Union Carbide Corp. Cerium monosulfide articles. 3,126,421, 3–17–64, Cl. 29—183.5.

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Murray, James G., Holub, and Smith. 3,125,635.

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Medlock, James D., Galle, and Atkinson. 3,125,175.

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Rydberg, George E., A. J. and P. C. Jacobs. 3,125,031.

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Janssen, Paul A. J., to Research Laboratorium Dr. C. Janssen N.V. 1-aroylpropyl-4-acyl-4-amino-piperidines. 3,125,574, 3–17–64, Cl. 260—247.5.

Janssen, Paul A. J., to Research Laboratorium Dr. C. Janssen N.V. N-(3,3-diphenyl-3-alkanoyl)propylspiro(tetralin-1,4'-piperidines) and related compounds. 3,125,580, 3–17–64, Cl. 260—293.

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Kennedy, Harry R., C. J. Andersen, and C. V. Jones, Sr., to Southern Machinery Co. Automatic control system for spinning frames. 3,124,925, 3–17–64, Cl. 57—64.

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Klebe, Johann F., to General Electric Co. Composition and apparatus used in the same. 3,125,637, 3–17–64, Cl. 178—7.5.

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Knickerbocker, Karl. Dispensing apparatus. 3,125,247, 3–17–64, Cl. 221—279.

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Krug, Robert H., R. B. Tierney, E. C. Knowles, and E. L. Kay, to Texaco Inc. Synergistic combination of extreme pressure additives for lubricating oils. 3,125,527, 3–17–64, Cl. 252—46.3.

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Kulka, Thomas S., Combined housing and retaining means for reels of tape. 3,125,215, 3–17–64, Cl. 206—52.

Kulka, Thomas S. Combined reel housing and tape retaining means. 3,125,216, 3–17–64, Cl. 206—52.

Kulka, Thomas S. Retaining means for tape wound on reels. 3,125,219, 3–17–64, Cl. 206—59.

Kulka, Thomas S. Combined reel chest and tape retaining means. 3,125,220, 3–17–64, Cl. 206—59.

Kull, Albert R., to The Ajax Mfg. Co. Forging machine die mechanism with additional blank gripping means. 3,124,816, 3–17–64, Cl. 10—12.

Kull, Leo. Incremental servo mechanism. 3,124,967, 3–17–64, Cl. 74—157.

Kull, Leo. Card controlled program device. 3,125,672, 3–17–64, Cl. 235—61.11.

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Laakso, Thomas M., J. L. R. Williams, and C. S. Garber, to Eastman Kodak Co. Quaternary salts of C-vinylpyridine polymers with compounds containing a haloacetyl group. 3,125,550, 3–17–64, Cl. 260—65.

Labbé, Francis A. M., to Molins Machine Co. Ltd. Tobacco-manipulating machines. 3,125,099, 3–17–64, Cl. 131—84.

Lach, Walter, and G. J. Novak, to Western Electric Co., Inc. Clamping apparatus. 3,125,054, 3–17–64, Cl. 113—99.

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Biel, John H. 3,125,576.
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Lamb, Frank G. to Lamb-Weston, Inc. Potato cellar loader. 3,125,233, 3–17–64, Cl. 214—152.

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Larsson, Nils E. B., to Stal Refrigeration Aktiebolag. Safety device for refrigeration compressors. 3,125,285, 3–17–64, Cl. 230—230.

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Leonard, Louis H., Jr., to Carrier Corp. Absorption refrigeration systems and method of operation. 3,124,938, 3–17–64, Cl. 62—103.

Leonard, Stewart J. Water ski starting device. 3,125,060, 3–17–64, Cl. 115—6.1.

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Levinson, Solomon, to Vitramon Inc. Method of molding and a ceramic binder formulation. 3,125,618, 3–17–64, Cl. 264—63.

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Linderman, Garrett B., and H. T. Gibson, to Linderman Engineering Co., Inc. Automatically positioned light shield for photosensitive pinhole detector. 3,125,682, 3–17–64, Cl. 250—219.

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Lohr, Thomas E., and H. P. Selleck, to General Motors Corp. Four-way power seat adjuster. 3,125,318, 3–17–64, Cl. 248—419.

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Lund, John A. H., and T. Krants, to Sherritt Gordon Mines Ltd. Apparatus for compacting metal and metal coated particles. 3,124,838, 3–17–64, Cl. 18—9.

Lundell, Arnold W. Locking means for meat chopper. 3,125,144, 3–17–64, Cl. 146—182.

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Kravetz, John J., and MacAlonan. 3,124,832.

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Macks, Elmer F. Tool support and drive. 3,124,979, 3–17–64, Cl. 77—33.5.

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Maczka, Romwald W. Method for coating silica rods. 3,125,428, 3–17–64, Cl. 65—3.

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Mayfield, Franklin D., and J. H. Mayes, to Foster Grant Co., Inc. Distillation column. 3,125,614, 3–17–64, Cl. 261—114.

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McBrien, Edward F., and R. A. Sommer, to The Ohio Crankshaft Co. Induction heating coil. 3,125,655, 3–17–64, Cl. 219—10.49.

McCartney, Charles. Smoke eliminator. 3,125,613, 3–17–64, Cl. 261—17.

McCarty, James P., and C. H. Curtis, to Duval Sulphur & Potash Co. Indicating and control apparatus for cone type ore crushers. 3,125,303, 3–17–64, Cl. 241—213.

McClure, Louis C., Sr., ½ to C. P. Humphrey. Organ stop selector. 3,124,992, 3–17–64, Cl. 84—345.

McCombs, Howard L., Jr., to The Bendix Corp. Fluid servo. 3,125,002, 3–17–64, Cl. 91—365.

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McDonald, David W., to Monsanto Chemical Co. Purification of vinyl chloride. 3,125,608, 3–17–64, Cl. 260—656.

McDonnell, Thomas M. Golf stroke measuring device. 3,124,958, 3–17–64, Cl. 73—380.

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McDowell, Earl E. Combination barbecue grill and steam actuated rotisserie. 3,125,016, 3–17–64, Cl. 99—421.

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McFadden, Norman E., to Johns-Manville Corporation. Apparatus for producing glass fibers. 3,125,329, 3–17–64, Cl. 263—47.

McGill, Robert W., to Atkron, Inc. Self-centering article grippers. 3,125,370. 3–17–64, Cl. 294—115.

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McKee, Richard W., and C. M. Rich, to Welding Service, Inc. Electronic organ key. 3,125,737, 3–17–64, Cl. 338—69.

McLarty, Frank W. Cotton harvesting machines. 3,124,920, 3–17–64, Cl. 56—12.

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McRobert, Leon R., to FMC Corp. Root crop harvester having a specific crop separating means. 3,125,097, 3–17–64, Cl. 130—30.

Medlock, James D., E. M. Galle, and G. O. Atkinson, to Hughes Tool Co. Rock bit with replaceable air course. 3,125,174, 3–17–64, Cl. 175—337.

Medlock, James D., E. M. Galle, and G. O. Atkinson, to Hughes Tool Co. Rock bit with replaceable air course. 3,125,175, 3–17–64, Cl. 175—337.

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Mendell, Stanley, to Management Studies, Inc. Graphical chart display. 3,124,885, 3–17–64, Cl. 35—24.

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Meredith, Dennis L., to S. Smith & Sons (England) Ltd. Plural channel positional servo systems. 3,125,712, 3–17–64, Cl. 318—19.

Merila, John B. Article dispensing utility box. 3,125,214, 3–17–64, Cl. 206—42.

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Middlebrooks, Bryce L., to Thiokol Chemical Corp. Applicator for applying a bonding agent to inert slivers that are to be used in solid propellant rocket motors. 3,124,826, 3–17–64, Cl. 15—513.

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Miles Laboratories, Inc.: *See*—
Snell, Raymond L., and Lowery. 3,125,494.

Miller, Jack M., L. F. Alley, M. Long, and C. F. Rapp, to Marlen Equipment Co. Can filling machine. 3,125,136, 3–17–64, Cl. 141—369.

Miller, James C., to Radio Corp. of America. Tunnel diode logic circuits employing a single tunnel diode for reset. 3,125,689, 3–17–64, Cl. 307—88.5.

Miller, John G., to Owens-Illinois Glass Co. Forming plastic containers. 3,125,619, 3–17–64, Cl. 264—98.

Milton, William F., and H. Brockenshaw, to Price Brothers and Co. Ltd. Pillows. 3,124,812, 3–17–64, Cl. 5—338.

Minerals & Chemicals Philipp Corp.: *See*—
Smith, Homer A., and Sawyer. 3,125,434.

Minneapolis-Honeywell Regulator Co.: *See*—
DeClue, Joseph L. 3,125,693.

Miskovich, James: *See*—
Nerheim, Arvie G., and Miskovich. 3,124,953.

Mission Mfg. Co.: *See*—
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Mitchell, Charles L., to The Cincinnati Milling Machine Co. Pressure regulating mechanism for hydraulic press and method of programming cam therefor. 3,125,053, 3–17–64, Cl. 113—45.

Mitchell, Colin C., ¼ to Brown Brothers & Co. Ltd., ¼ to William Denny & Brothers Ltd., and ¼ to Allegemeine Elektricitats Gesellschaft Schiffbau, and ¼ to Deutsche Werft Aktiengesellschaft. Stabilising apparatus for ships. 3,125,057. 3–17–64, Cl. 114—126.

Mitchell, Earl N.: *See*—
Pohm, Arthur V., Rossing, and Mitchell. 3,125,743.

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Mock, Frank C., to The Bendix Corp. Motive fluid control for a re-expansion gas turbine engine. 3,124,931, 3–17–64, Cl. 60—39.25.

Moeller & Neumann G.m.b.H.: *See*—
Neumann, Karl. 3,124,982.

Moffa, Emil: *See*—
Kollberg, Eric, Moffa, Larsen, and Johansen. 3,125,306.

Moise, Lester, to The Joseph L. Schlesinger Co. Needle turret. 3,125 045, 3–17–64, Cl. 112—83.

Molins Machine Co. Ltd.: *See*—
Labbé, Francis A. M. 3,125,099.

Molvig, Ludwig, Jr.: *See*—
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Monnot, George, R. Vichnievsky, J. Ollier, and G. Grosshans, to Institut Francais du Petrole, des Carburants et Lubrifiants. Process for improving the operating conditions of compression ignition engines, the work cycle of which comprises a scavenging phase. 3,125,077, 3–17–64, Cl. 123—32.

Monroe, George C., Jr., to E. I. du Pont de Nemours and Co. Process for the separation of olefinic hydrocarbons using a silver salt modified by pentavalent vanadium ions. 3,125,611, 3–17–64, Cl. 260—677.

Monsanto Chemical Co.: *See*—
Frans, Raymond A., and Moore. 3,125,417.
Harris, Alva F. 3,125,557.
Keating, Harry M., and Montgomery. 3,125,607.
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Montgomery, Phillip D.: *See*—
Keating, Harry M., and Montgomery. 3,125,607.
Montgomery, Phillip D., to Monsanto Chemical Co. Purification of vinyl chloride. 3,125,609, 3–17–64, Cl. 260—656.
Moore, James E., and D. H. Marlin, to Dravo Corp. Method of briquetting iron ores. 3,125,437, 3–17–64, Cl. 75—3.
Moore, Richard N.: *See*—
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Moore, William H.: *See*—
Towne, Edmund B., Moore, and Dickey. 3,125,563.
Moormann, Helmuth, to Ideal Toy Corp. Method and apparatus for molding a doll's head. 3,124,842, 3–17–64, Cl. 18—34.
Moretta, Giuseppe. Two feed circular knitting machine and method. 3,124,945, 3–17–64, Cl. 66—42.
Morin, Roger W.: *See*—
Puterbaugh, William H., Clinehens, Morin, Schroeder, and Austen. 3,125,673.
Mork, George W., R. L. Bauer, and M. D. Wolff, to Bucyrus-Erie Co. Disconnect means. 3,125,226, 3–17–64, Cl. 212—38.
Morland, George W.: *See*—
Stansfield, Frank M., Glasspoole, Morland, and Bradshaw. 3,125,082.
Morris, Leo R., to The Dow Chemical Co. Phenylvinylene cyclic carbonates. 3,125,582, 3–17–64, Cl. 260—340.2.
Mortland, Sheldon L., to AMF Overseas Corp. Apparatus for admixing strip tobaccos. 3,125,231, 3–17–64, Cl. 214—17.
Morton, Henry J. Photograph cropping and enlargement guide. 3,124,997, 3–17–64, Cl. 88—24.
Mosier, Kenneth C. Rotary tool spindle having rapid traverse movements followed by slower feed rate. 3,124,817, 3–17–64, Cl. 10—128.
Moss, Gerald, and P. O. Rogers, to Esso Research and Engineering Co. Ultrasonic atomizer. 3,125,295, 3–17–64, Cl. 239—102.
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Mount Royal Rice Mills Ltd.: *See*—
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Moyano, Ernesto A., to Thermo Electric Co., Inc. Chart drive mechanism. 3,125,309, 3–17–64, Cl. 242—55.
Moyano, Ernesto A., to Thermo Electric Co., Inc. Recording instrument. 3,125,400, 3–17–64, Cl. 346—34.
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Cabasso, Victor J., Cox, Moyer, and Roca-Garcia. 3,125,489.
Muhr, Alfred: *See*—
Schmitz Adolf, and Muhr. 3,125,486.
Mullaney George J., to General Electric Co. Constant pressure combustion antoignition engine. 3,125,076, 3–17–64, Cl. 123—32.
Müller, Alfred H., to Daimler-Benz Aktiengesellschaft. Seat construction for motor vehicles. 3,125,179, 3–17–64, Cl. 180—89.
Müller, Ernst, and A. Hertl., to Hydraulik G.m.b.H. Stretching machine for stretching metal sheets and the like. 3,125,151, 3–17–64, Cl. 153—35.
Muller, John T., to Leslie Co. Throttling valve. 3,125,121, 3–17–64, Cl. 137—614.11.
Mullins, Dennis H.: *See*—
Van Cleve, Russell, and Mullins. 3,125,545.
Mulquin, William R., and L. Molvig, Jr., to Bethlehem Steel Co. Apparatus for handling sheets. 3,125,229, 3–17–64, Cl. 214—8.5.
Munch, John D. Cigarette carton transfer and conveying machine. 3,125,206, 3–17–64, Cl. 198—24.
Munters, Carl G., and P. G. Norback. Combined heat and moisture exchanger. 3,125,157, 3–17–64, Cl. 165—7.
Murphy, Emmet J., to General Precision, Inc. Interstage explosively operated hydraulic line separation device. 3,125,108, 3–17–64, Cl. 137—68.
Murray, James G., F. F. Holub, and M. J. Smith, to General Electric Co. Compositions of matter and uses of said compositions in a projection system. 3,125,634, 3–17–64, Cl. 178—7.5.
Murray, James G., F. F. Holub, and M. J. Smith, to General Electric Co. Projection system. 3,125,635, 3–17–64, Cl. 178—7.5.
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Warren, Horace G., and Myers. 3,125,265.
NSM-Apparatebau, G.m.b.H., Kommanditgesellschaft: *See*—
Immendorf, Karl. 3,125,344.
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Yamamoto, Takaaki, Nakamura, and Nagashima. 3,125,472.
Nakada, Tozaburo. Ball pen attachable to usual penholder. 3,125,071, 3–17–64, Cl. 120—42.4.
Nakamura, Yutaka: *See*—
Yamamoto, Takaaki, Nakamura, and Nagashima. 3,125,472.
Nallinger, Friedrich K. H., to Daimler-Benz Aktiengesellschaft. Locking mechanism for vehicles. 3,124,950, 3–17–64, Cl. 70—264.
Napier, Joe T.: *See*—
Best, Charles W., and Napier. 3,125,141.
Naslund, Glen E., and B. O. Hallberg, to Weyerhauser Co. Method and means for determining adherence of a coating bonded to a surface. 3,124,955, 3–17–64, Cl. 73—150.
National Beryllia Corp.: *See*—
Ryshkewitch, Eugene I., and Sheets. 3,125,416.
National Cash Register Co., The: *See*—
Puterbaugh, William H., Clinehens, Morin, Schroeder, and Austen. 3,125,673.
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National Polychemicals, Inc.: *See*—
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National-Precision Corp.: *See*—
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National Research Development Corp.: *See*—
Calbert, Edward S. 3,125,740.
National Rubber Machinery Co.: *See*—
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Nelson, Robert E., to General Motors Corp. Turbine air inlet temperature fuel control for a gas turbine engine. 3,124,932, 3–17–64, Cl. 60—39.28.
Nelson, Robert J.: *See*—
Gorman, Eugene F., and Nelson. 3,125,666.
Nerheim, Arvie G., and J. Miskovich, to Standard Oil Co. Gas density balance. 3,124,953, 3–17–64, Cl. 73—30.
Neseth, Carl R.: *See*—
Kindseth, Pommer, and Neseth. 3,123,266.
Neumann, Karl., to Moeller & Neumann G.m.b.H. Rolling mill and control system. 3,124,982, 3–17–64, Cl. 80—56.
Nevin, Charles S., to A. E. Staley Mfg. Co. Preparation of polymerizable vinylated compounds. 3,125,592, 3–17–64, Cl. 260—405.
Newberry, Meigs W., to Westinghouse Electric Corp. Article dispensing mechanism. 3,125,245, 3–17–64, Cl. 221—114.
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Foulkes, John D., Lewis, and Newby. 3,025,724.
Newell, William H. Adding networks. 3,125,677, 3–17–64, Cl. 235—193.
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Niclas, Walter, H. Menel, and G. Johannes, to Continental Gummi-Werke Aktiengesellschaft. Tire building machine. 3,125,482, 3–17–64, Cl. 156—414.
Nielsen, Carl C. Recreational and training apparatus for water skiers. 3,125,339, 3–17–64, Cl. 272—32.
Nielsen, Morris L., to Monsanto Chemical Co. Process for the manufacture of alkali imidodiphosphates. 3,125,412, 3–17–64, Cl. 23—107.
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North American Aviation, Inc.: *See*—
Boggs, Brian F., and Laifman. 3,125,025.
Klein, Martin L., and Sutton. 3,125,759.
Snider, Robert E. 3,125,665.
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Johnson, Walter G. 3,125,087.
Teague, Ernest D. 3,125,539.
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Novkov, Raymond E. Adjustable chip breaker. 3,124,866, 3–17–64, Cl. 29—96.
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McRae, Duncan. 3,125,183.
Nuclear Data, Inc.: *See*—
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Nuttall, Edwin D.: *See*—
MacRoberts, Donald T., Nuttall, and Savory. 3,125,748.
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Gilbert, Everett E., and Nychka. 3,125,414.
Nylund, John A., and F. J. Miehe, to Tidland Machine Co. Combination drum and belt sanding surfacing machines. 3,124,909, 3–17–64, Cl. 51—141.
Oakland, Lewis J., to Sperry Rand Corp. Non-destructive bistable magnetic core sensing. 3,125,745, 3–17–64, Cl. 340—174.
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Kifer, David E. 3,125,357.
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O'Brien, William J., to The Seamless Rubber Co. Vinyl products and process. 3,125,536, 3–17–64, Cl. 252—301.3.
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Siegart, William R., Henry, Odell, and Toettcher. 3,125,525.
Odell, Norman R.: *See*—
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Siegart, William R., Odell, Toettcher, and Kay. 3,125,524.
Oediger, Hermann, and K. Elter, to Farbenfabriken Bayer Aktiengesellschaft. Process for the production of d,β-unsaturated acids of the vitamin A series. 3,125,596, 3–17–64, Cl. 260—468.
Ohde, Ryohei, and I.Yamane, to Kabushiki Kaisha Hitachi Seisakusho. Transportable X-ray apparatus utilizing an automotive storage battery as power source. 3,125,679, 3–17–64, Cl. 250—98.
Ohio Crankshaft Co., The: *See*—
McBrien, Edward F., and Sommer. 3,125,655.
Olin Mathieson Chemical Corp.: *See*—
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Olson, George E., to International Business Machines Corp. Magnetic core logical circuit. 3,125,744, 3–17–64, Cl. 340—174.
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Higuchi, Kozo, Osa, and Takeuchi. 3,125,512.
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Osborne, Robert J., to American Machine & Foundry Co. Tobacco sheet manufacture. 3,125,098, 3–17–64, Cl. 131—17.
Osten, Fred C., Sr. Spring-balance-mounted removable sash window. 3,124,849, 3–17–64, Cl. 20—52.2.
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Hwa, Charles C. L., and McNeil. 3,125,541.
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Lauck, Albert G., Spix, and Walter. 3,125,429.
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Pall Corp.: *See*—
Pall, David B., and Siebel. 3,124,959.
Pall, David B., and M. P. L. Siebel, to Pall Corp. Primary differential pressure sensing elements and transducers. 3,124,959, 3–17–64, Cl. 73—407.
Paller, Frederick C., to Superior Industries, Inc. Battery clamping device. 3,125,177, 3–17–64, Cl. 180—68.5.
Palthe, Richard W., to Ampex Corp. Signal waveform generator employing storage capacitor charged and discharged through transistors of opposite conductivity. 3,125,694, 3–17–64, Cl. 307—88.5.
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Paré, Philip J., and M. Hauser, to American Cyanamid Co. Vinoxycarbonylmethyltrialkylphosphonium halides and polymers thereof. 3,125,555, 3–17–64, Cl. 260—89.1.
Parodi, Federico A., to Stabil Internacional S.A. Process for stabilising vegetable juices. 3,125,452, 3–17–64, Cl. 99—182.
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Winter, Paul H. 3,125,392.
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Foster, Julius, Fraas, and Perry. 3,125,760.
Persson, Karl-Birger, to Radio Corp. of America. Ceramic to metal seal. 3,125,698, 3–17–64, Cl. 313—220.
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Petrushkin, M., Ltd.: *See*—
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Pfarrwaller, Erwin, to Sulzer Freres, S.A. Warp tension control in weaving machines. 3,125,128, 3–17–64, Cl. 139—115.
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Pfizer, Chas., & Co., Inc.: *See*—
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Young, William H., Jr. 3,125,259.
Pharmedical, Inc.: *See*—
Cohen, Milton J. 3,125,092.
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Kuzell, Charles R., Fowler, Davis, Klein, and MacDougall. 3,125,439.
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Trupp, Hermann A., and Kownurko. 3,124,968.
Phillips, Benjamin A., and J. Roeder, Jr., to Whirlpool Corp. Generator for an absorption system. 3,124,941, 3–17–64, Cl. 62—487.
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Plowick, Russell A. Patrol vehicle accessory control desk. 3,125,742, 3–17–64, Cl. 340—74.
Pneumo Dynamics Corp.: *See*—
Van Domelen, Carl H. 3,125,321.
Pohm, Arthur V., T. D. Rossing, and E. N. Mitchell, to Sperry Rand Corp. Non-destructive readout of magnetic cores. 3,125,743, 3–17–64, Cl. 340—174.
Poitras, Edward J., to Highland Laboratories. Multiple fluid measuring and dispensing apparatus. 3,125,251, 3–17–64, Cl. 222—135.
Poltorak, Emil J., to Johns-Manville Corp. Method of sealing the space between the wall of a storage tank and a floating roof. 3,125,846, 3–17–64, Cl. 277—1.
Polyco, Inc.: *See*—
Kindseth, Harold V., Pommer, and Neseth. 3,125,266.
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Kindseth, Harold V., Pommer, and Neseth. 3,125,266.
Postal, Robert: *See*—
Jaroff, David B., and Postal. 3,125,007.
Potter Instrument Co., Inc.: *See*—
Marshall, Charles E. 3,125,271.
Power Control Products, Inc.: *See*—
Ronfeldt, Howard W. 3,125,270.
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Singer, Max E., and Strout. 3,125,191.
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Pratt, Robert C., to Babbitt Pipe Co., Inc. Method of making plastic tubular members of resin reinforced sheet material. 3,125,478, 3–17–64, Cl. 156—184.
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Milton, William F., and Brockenshaw. 3,124,812.
Price, Stanley J., Jr., and G. Raynovich, Jr. Barricade means to be struck by a golf club when an improper golf swing is executed. 3,125,343, 3–17–64, Cl. 273—186.
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Vitt, Leonard P., and Prines. 3,125,686.
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Profos, Paul, to Sulzer Freres, S.A. Method and apparatus for controlling feedwater supply to a forced flow steam generator. 3,125,073, 3–17–64, Cl. 122—379.
Progil S.A.: *See*—
Thizy, Andre. 3,125,496.
Punderson, John O., to E. I. du Pont de Nemours and Co. Process for esterifying polyoxymethylene glycol with vapors of an organic carboxylic acid anhydride. 3,125,551, 3–17–64, Cl. 260—67.
Puretic, Mario J. Conveyor apparatus for fishing boats. 3,124,890, 3–17–64, Cl. 43—6.6.
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Davis, Lynn T. 3,125,242.
Purolator Products, Inc.: *See*—
Gruner, Frederick R., and Abeles. 3,125,515.
Hultgren, William H. 3,125,063.
Puterbaugh, William H., R. M. Clinehens, R. W. Morin, H. Schroeder, and H. E. Austen, to The National Cash Register Co. Electrochemical data storage and counting systems. 3,125,673, 3–17–64, Cl. 235—92.
Putetti, Anthony M., to Textron Inc. Method of forming cupped articles. 3,124,876, 3–17–64, Cl. 29—534.
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Ellis, John H. 3,125,345.
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Rabinovici, Benjamin, and C. A. Renton, to Radio Corp. of America. Full binary adder including negative resistance diode. 3,125,674, 3–17–64, Cl. 235—172.

Race, Richard T., to Motorola, Inc. Battery charge indicator. 3,125,718, 3–17–64, Cl. 324—29.5.

Rachinsky, Michael R., to Hercules Powder Co. Textile fabrics treated with ethylene propylene copolymers. 3,125,462, 3–17–64, Cl. 117—139.5.

Radio Corp. of America: *See*—
Aathelmer Walter. 3,125,691.
Berry, Melvin D. 3,124,820.
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Miller, James C. 3,125,689.
Persson, Karl-Birger. 3,125,698.
Rabinovici, Benjamin, and Renton. 3,125,674.

Radio Frequency Laboratories, Inc.: *See*—
Seabury, Richard W., Jr. 3,125,719.
Zacaroli, Alexander R. 3,124,868.

Rados, Márta: *See*—
Vargha, László, Rados, Kasztreiner, and Szporny. 3,125,570.

Raehrs, Emery C., to The Cincinnati Milling Machine Co. Transmission mechanism. 3,124,998, 3–17–64, Cl. 90—11.

Rambo, Marvin L.: *See*—
Child, Edward T., Rambo, and Nolan. 3,125,612.

Ramm, Herbert E., to Anken Chemical & Film Corp. Photographic solution pouch. 3,125,273, 3–17–64, Cl. 229—3.5.

Rameeur, Vardry D., Jr. Panel connector assembly. 3,125,192, 3–17–64, Cl. 189—34.

Ranco Inc.: *See*—
Daly, James U. 3,125,111.

Rantsch, Kurt, to M. Hensoldt & Sohme Optische Werke AG. Measuring device with a guide way adapted to measure the displacement of a slidable carriage therein. 3,124,880, 3–17–64, Cl. 33—143.

Rapp, Charles F.: *See*—
Miller, Jack M., Alley, Long and Rapp. 3,125,136.

Raupp, Ray J., and J. C. Whiting, to The Bendix Corp. Differential pressure responsive device. 3,125,062, 3–17–64, Cl. 116—70.

Ravensberg G.m.b.H., Chemische Fabrik: *See*—
Siemer, Harm, and Doppstadt. 3,125,572.

Raynovich, George, Jr.: *See*—
Price, Stanley J., Jr., and Raynovich. 3,125,343.

Raytheon Co.: *See*—
Anderson, Robert H. 3,125,731.
Zneimer, Joel E., and Sirvets. 3,125,534.

Rebuffoni, Martin, and E. F. Steinert, to Westinghouse Electric Corp. Arc welding and cutting apparatus utilizing polyphase A.C. supplied through silicon-dioxide rectifier. 3,125,703, 3–17–64, Cl. 315—201.

Redman, Howard E., to United Mattress Machinery Co., Inc. Sewing machine. 3,125,049, 3–17–64, Cl. 112—184.

Redner, Salomon, to The Budd Co. Methods for the manufacture of photoelastic devices. 3,125,615, 3–17–64, Cl. 264—1.

Regie Nationale des Usines Renault: *See*—
Peras, Lucien. 3,125,332.

Reinarts, Robert, and H. Fischer, to Maschinenfabrik Augsburg-Nürnberg A.G. Registering adjustment for multi-color printing. 3,125,022, 3–17–64, Cl. 101—183.

Reiners, Neville M., to Cummins Engine Co., Inc. Fuel supply system. 3,125,078, 3–17–64, Cl. 123—32.

Remital Societa per Azioni Studio e Realizzazioni Elettromeccaniche: *See*—
Buralli, Ettore. 3,125,307.
Buralli, Ettore. 3,125,308.

Renkey, Albert L.: *See*—
Dolph, James L., and Renkey. 3,125,454.

Renton, Charles A.: *See*—
Rabinovici, Benjamin, and Renton. 3,125,674.

Research Laboratorium Dr. C. Janssen N. V.: *See*—
Janssen, Paul A. J. 3,125,574.
Janssen, Paul A. J. 3,125,578.
Janssen, Paul A. J. 3,125,580.

Ressler, Hugh C., J. W. Smith, and G. M. Stamps, to Hogan Faximile Corp. Communications recording system. 3,125,633, 3–17–64, Cl. 178—6.6.

Reudink, Hendrik L., to Shell Oil Co. Metal rope lubricant. 3,125,522, 3–17–64, Cl. 252—33.4.

Reumerman, Theodorus, and W. H. T. Helmig. Aircraft altimeters. 3,125,754, 3–17–64, Cl. 343—13.

Reuter, Peter G., to General Electric Co. Airfoil controlling actuator. 3,125,000, 3–17–64, Cl. 91—186.

Revere Copper and Brass Inc.: *See*—
Hawthorne, Lowell H. 3,125,669.
Hawthorne, Lowell H. 3,125,670.

Reynolds, James B., to The Youngstown Steel Door Co. Lading band anchor. 3,125,036, 3–17–64, Cl. 105—369.

Reynolds Metals Co.: *See*—
Moore, Roger N. 3,125,195.
Watts, Richard M. 3,125,258.

Rich, Charles M.: *See*—
McKee, Chester W. McKee and Rich. 3,125,738.

Richardson, Ronald E., to Pittsburgh Plate Glass Co. Glass tempering method and apparatus. 3,125,430, 3–17–64, Cl. 65—114.

Richert, Walter J., to American Machine & Foundry Co. Multiple coil electromagnetic relays. 3,125,652, 3–17–64, Cl. 200—102.

Richgels, Harry J., to Lakeside Machine Shop, Inc. Slurry agitator valve. 3,125,119, 3–17–64, Cl. 137—538.

Richieu S. A.: *See*—
Vivier, Claude. 3,125,324.

Richmond, Adah B., to E. I. du Pont de Nemours and Co. Separation of gaseous fluorides. 3,125,425, 3–17–64, Cl. 55—22.

Richter Gedeon Vegyeszeti Gyar RT.: *See*—
Vargha, László, Rados, Kasztreiner, and Szporny. 3,125,570.

Ringold, Howard J., to Syntex Corp. 6-methyl Δ4,6,9(11)-pregnatrienes and derivatives thereof. 3,125,590, 3–17–64, Cl. 260—397.45.

Ringold, Howard J., G. Rosenkranz, and J. Edwards, to Syntex Corp. 4-Chloro-9 α-fluoro-pregnenes and derivatives thereof. 3,125,591, 3–17–64, Cl. 260—397.45.

Ritter, Josef: *See*—
Eisenburger, Kuno, and Ritter. 3,125,668.

Robbins, Gordon B., to E. I. du Pont de Nemours and Co. Production of diaryl sulfones. 3,125,604, 3–17–64, Cl. 260—607.

Roberson, Albert O. Car tray. 3,125,040, 3–17–64, Cl. 108—18.

Robertshaw Controls Co.: *See*—
Kreuter, Kenneth G. 3,125,109.

Robertson Photo-Mechanix, Inc.: *See*—
Wanlelista, Walter. 3,125,336.

Robeson, Charles D.: *See*—
Chechak, Albert J., and Robeson. 3,125,571.

Robson, William G.: *See*—
Skinner, Charles H., and Robson. 3,125,023.

Roca-Garcia, Manuel: *See*—
Cabasso, Victor J., Cox, Moyer, and Roca-Garcia. 3,125,489.

Roche, Roland, J.-M. Hässig, and P. Cousseran, to Commissariat a l'Energie Atomique. Device for anchoring and extracting plugs in and from fuel channel of nuclear reactors. 3,125,123, 3–17–64, Cl. 138—89.

Roche, Thomas F. Safety lantern. 3,125,300, 3–17–64, Cl. 240—37.1.

Rockwell Mfg. Co.: *See*—
Schaberg, Burt P. 3,125,116.

Roeder, John, Jr.: *See*—
Phillips, Benjamin A., and Roeder. 3,124,941.

Roehm, Frederick E. Projecting device. 3,125,287, 3–17–64, Cl. 231—2.

Roelen, Otto: *See*—
Büchner, Karl, Mels, and Roelen. 3,125,605.

Rogers, John L., to Space Technology Laboratories, Inc. Superconductive device utilizing a ferromagnetic superconductive element. 3,125,688, 3–17–64, Cl. 307—88.5.

Rogers, Peter O.: *See*—
Moss, Gerald, and Rogers. 3,125,295.

Rogus, Joseph A.: *See*—
Brengman, Wayne S., and Rogus. 3,125,225.

Rohde, Robert P., to General Motors Corp. Pump. 3,125,028, 3–17–64, Cl. 103—42.

Rohm & Haas Co.: *See*—
Gardon, John L. 3,125,405.
Herman, John J. 3,125,406.

Rolin, Kenneth C.: *See*—
Heise, Frederick H., Rolin, and Baudhuin. 3,125,252.

Romanos, Nicholas D., to Combustion Engineering, Inc. Tube manifold for a steam generator. 3,125,161, 3–17–64, Cl. 165—159.

Ronfeldt, Howard W., to Power Control Products, Inc. Press feed mechanism. 3,125,270, 3–17–64, Cl. 226—141.

Rosan Engineering Corp.: *See*—
Rosán, Joseph. 3,125,146.

Rosán, Joseph, to Rosan Engineering Corp. Sheet metal fasteners, driving tools, and method of driving. 3,125,146, 3–17–64, Cl. 151—41.73.

Rose, Fred G., to American Seating Co. Chair book box and connector accessory. 3,125,372, 3–17–64, Cl. 297—188.

Rose, John B., to Imperial Chemical Industries Ltd. Purification of polymers. 3,125,560, 3–17–64, Cl. 260—93.7.

Rose, Kaye L. Photographic corners. 3,125,460, 3–17–64, Cl. 117—44.

Rosenkranz, George: *See*—
Ringold, Howard J., Rosenkranz, and Edwards. 3,125,591.

Rosenvold, Leo. Detachably mounted cultivator tooth apparatus. 3,125,170, 3–17–64, Cl. 172—762.

Rossing, Thomas D.: *See*—
Pohm, Arthur V., Rossing, and Mitchell. 3,125,743.

Rothfuss, Neal B., and H. Troeger, to The Bendix Corp. Flexible coupling. 3,124,942, 3–17–64, Cl. 64—13.

Rouy, Auguste L. M. A. Electro-acoustic transducer. 3,125,647, 3–17–64, Cl. 179—115.5.

Rubbermaid Inc.: *See*—
Brengman, Wayne S., and Rogus. 3,125,225.
Gerber, William C. 3,125,212.

Ruhrchemie Aktiengesellschaft: *See*—
Büchner, Karl, Mels, and Roelen. 3,125,605.

Russell, F. L., Corp.: *See*—
Cline, Robert C. 3,125,356.

Ruston & Hornsby Ltd.: *See*—
Stansfield, Frank M., Glasspoole, Morland, and Bradshaw. 3,125,082.

Ruti Machinery Works Ltd.: *See*—
Zollinger, Hans. 3,125,130.

Ryan, Donald J.: *See*—
Childers, Eugene, Ellis, and Ryan. 3,125,408.

Rydberg, George E., deceased (M. C. J. Cote, executrix), and A. J. and P. C. Jacobs. Multi-chamber rotary pump. 3,125,031, 3–17–64, Cl. 103—131.

Ryser, Ernst, ½ to B. Vonmard. Method of making covered slide fasteners. 3,124,871, 3–17–64, Cl. 29—410.

Ryshkewitch, Eugene I., and A. R. Sheets, to National Beryllia Corp. Method for producing high purity monocrystalline beryllia fibers and platelets. 3,125,416, 3–17–64, Cl. 23—183.

Saari, Oliver J.: *See*—
Brinkman, Harold L., and Saari. 3,125,232.

Saco-Lowell Shops: *See*—
Stiepel, Erhard E., and Aurich. 3,124,845.

Saegertown Glasseals, Inc.: *See*—
Cropp, David I., Jordan, and Lingo. 3,124,861.

St. Cyr, Joseph A. Combined electrical and fluid rotatable connector. 3,125,649, 3–17–64, Cl. 200—82.

Sammarco, Peter, to International Harvester Co. Reversible single wheel ratchet drive mechanism for conveyors. 3,124,965, 3–17–64, Cl. 74—118.

Sanders, Guy J., to Industrial Acoustics Co., Inc. Silent ventilator system. 3,125,286, 3–17–64, Cl. 230—238.

Sand-In Corp.: *See*—
Hoffmann, Gilbert F. 3,125,461.

Sandoz Ltd.: *See*—
Jucker, Ernst, Lindenmann, and Gmünder. 3,125,568.

Saperstein, Sidney: *See*—
Wingerd, Winston H., and Saperstein. 3,125,451.

Saunders, Guy L., to Nordberg Mfg. Co. Hydraulic release for crushers. 3,125,304, 3–17–64, Cl. 241—231.

Savory, Leonard E.: *See*—
MacRoberts, Donald T., Nuttall, and Savory. 3,125,748.

Sawyer, Edgar W., Jr.: *See*—
Smith, Homer A., and Sawyer. 3,125,434.

Scadden, Edith M.: *See*—
Balloo, Nathan E., and Scadden. 3,125,410.

Schaberg, Burt P., to Rockwell Mfg. Co. Apparatus for launching and extracting spheroids in pipelines. 3,125,116, 3–17–64, Cl. 137—268.

Schechter, Edward, to Stressteel Corp. Method of processing stressed steel members. 3,125,469, 3–17–64, Cl. 148—12.

Scheldorf, Marvel W., to Andrew Corp. Corona rod for antennas. 3,125,757, 3–17–64, Cl. 343—720.

Scheller, Walter: *See*—
Daendliker, Gustav, and Scheller. 3,125,610.

Schering Corp.: *See*—
Hershberg, Emanuel B. 3,125,490.

Schetty, Guido: *See*—
Bella, Fabio, and Schetty. 3,125,561.

Schick, Frederick A., to Allis-Chalmers Mfg. Co. Method of machining a bearing cage. 3,124,867, 3–17–64, Cl. 29—148.4.

Schlaechter, John H., to Industrial Nucleonics Corp. Sheet gauging head structure having universal pass line angle adjustment. 3,125,680, 3–17–64, Cl. 250—106.

Schlaegel, Gene A. Rotisserie wheel. 3,125,015, 3–17–64, Cl. 99—421.

Schlesinger, Joseph L., Co., The: *See*—
Moise, Lester. 3,125,045.

Schluderberg, Donald C., to The Babcock & Wilcox Co. Gas-solids heat transport system. 3,125,158, 3–17–64, Cl. 165—39.

Schlueter, Ernest. Quarter turn fastener having camming head. 3,124,993, 3–17–64, Cl. 85—1.

Schmid, John H. Flushing arrangement backflow preventer and water closet combination. 3,124,809, 3–17–64, Cl. 4—26.

Schmidt, Clayton E., to Schmidt Mfg. Co. Loom picker. 3,125,129, 3–17–64, Cl. 139—160.

Schmidt Mfg. Co.: *See*—
Schmidt, Clayton E. 3,125,129.

Schmitter, A. Louise: *See*—
Schmitter, Walter P., and Abendroth. 3,124,943.

Schmitter, Walter P., deceased; by A. L. Schmitter and R. V. Abendroth, co-executors, to The Falk Corp. Coupling. 3,124,943, 3–17–64, Cl. 64—15.

Schmitz, Adolf, and A. Muhr, to Th. Goldschmidt, A.G. Method for preventing the growth of algae in swimming pools, tanks, and the like. 3,125,466, 3–17–64, Cl. 167—22.

Schneider, Henry C., H. F. Shannon, and E. B. Stanley, to United States Steel Corp. Method of producing grain-oriented silicon steel. 3,125,473, 3–17–64, Cl. 148—111.

Schneider, LeRoy J.: *See*—
Mathews, Lewis E. 3,124,821.

Schoepe, Harry: *See*—
Curtis, Myron S., and Schoepe. 3,124,985.

Schroeder, Hans: *See*—
Puterbaugh, William H., Clinehens, Morin, Schroeder, and Austen. 3,125,673.

Schroeder, William, C. Lewis, H. Hoeksema, T. E. Eble, and B. Bannister, to The Upjohn Co. 6-amino-9-D-psicofuranosylpurine derivatives and process therefor. 3,125,567, 3–17–64, Cl. 260—211.5.

Schuette, Roland J., Jr., to Triangle Mfg. Co., Inc. Hopper and closure gate. 3,125,254, 3–17–64, Cl. 222—185.

Schul, William M.: *See*—
Daniels, Charles A., Schul, and Buck. 3,125,124.

Schumann, Robert W., to Nuclear Data, Inc. Pulse height analyzer including digital storage means and method of classifying and counting pulses. 3,125,721, 3–17–64, Cl. 324—103.

Schutte, Otto H., to De Nederlandse Organisatie voor Toegepast-Natuur-Wetenschappelijk Onderzoek Ten Behoeve Van Nijerheid, Handel en Verkeer. Oscillator controlled relay system. 3,126,708, 3–17–64, Cl. 317—146.

Schwartz, Karl: *See*—
Fox, William R., Hames, Schwartz, and Zaruba. 3,125,086.

Schweiser, Gottfried, to Wiener Metallwaren- und Schnallenfabrik-Schar-Smolka. Safety heel ski binding. 3,125,340, 3–17–64, Cl. 280—11.35.

Scott, H. H., Inc.: *See*—
von Recklinghausen, Daniel R. 3,125,640.

Scott, John W., Jr., and W. A. Raats, to California Research Corp. Staged catalytic conversion of petroleum distillates. 3,125,502, 3–17–64, Cl. 208—59.

Scott Paper Co.: *See*—
Coppick, Sydney. 3,125,621.

Scott & Williams, Inc.: *See*—
Bond, Milton, Stotter, and Weitz. 3,124,944.

Scott, Robert C. Hardness testers. 3,124,954, 3–17–64, Cl. 73—88.

Scott, Samuel T. Rotary internal combustion engine. 3,125,074, 3–17–64, Cl. 123—17.

Scribner, Willard W. Device for preventing contamination of crank case oil. 3,125,083, 3–17–64, Cl. 123—119.

Seabury, Richard W., Jr., to Radio Frequency Laboratories, Inc. Gaussemeter probes and housing structure for supporting the probes in different operative arrangements. 3,125,719, 3–17–64, Cl. 324—34.

Seamless Rubber Co., The: *See*—
O'Brien, William J. 3,125,536.

Searle, G. D. & Co.: *See*—
Goldkamp, Arthur H. 3,125,589.

Searle, Walter W. R., to The Hoover Co. Mechanical stepping timer. 3,125,695, 3–17–64, Cl. 307—141.8.

Secord, James C.: *See*—
Clark, Henry C., Easterling, McKean, and Secord. 3,125,342.

Secunda, Kenneth, to General Motors Corp. Multiple bowl vibratory feeding apparatus. 3,125,208, 3–17–64, Cl. 198—33.

Security Aluminum Co.: *See*—
Olsen, Allen J., and Baker. 3,125,333.

Seguenot, Gabriel J., to Societe d'Etudes et de Recherches Techniques Sertec. Tractor hitch control devices. 3,125,168, 3–17–64, Cl. 172—465.

Selas Corp. of America: *See*—
Williams, John R. 3,125,327.

Seliger, James M.: *See*—
Seliger, James M., and Hegar. 3,124,972.

Seliger, James M., and H. J. Hegar, to J. M. Seliger. Differential mechanism. 3,124,972, 3–17–64, Cl. 74—650.

Selleck, Harold P.: *See*—
Lohr, Thomas E., and Selleck. 3,125,618.

Selven, Rudolph D.: *See*—
Hedden, Harry L., and Selven. 3,124,981.

Seneca Falls Machine Co.: *See*—
Eisengrein, Robert H. 3,125,714.

Senger, Norbert G. B., to Imperial Chemical Industries Ltd. New colouration process. 3,125,403, 3–17–64, Cl. 8—65.

Shannon, Harry F.: *See*—
Schneider, Henry C., Shannon, and Stanley. 3,125,473.

Shapiro, William J. Whirling toy with propeller. 3,124,897, 3–17–64, Cl. 46—51.

Shapland, John S., and E. J. Goldfarb, to Koehring Co. Granular material having an internal vapor extracting means. 3,125,423, 3–17–64, Cl. 34—92.

Sharp, John J., to International Computers and Tabulators Ltd. Voltage amplitude detection apparatus. 3,125,727, 3–17–64, Cl. 328—116.

Shavel, John, Jr., and H. Zinnes, to Warner-Lambert Pharmaceutical Co. 18-substituted yohimbone derivatives and process therefor. 3,125,579, 3–17–64, Cl. 260—288.

Shaver, Harry N.: *See*—
Spogen, Leo R., Jr., Shaver, and Baker. 3,125,728, 3–17–64, Cl. 325—36.

Sheets, Allen R.: *See*—
Ryshkewitch, Eugene I., and Sheets. 3,125,416.

Sheetz, Charles E., to FMC Corp. Rotary fruit handling apparatus. 3,125,210, 3–17–64, Cl. 198—209.

Shell Oil Co.: *See*—
Reudink, Hendrik L. 3,125,522.
Shokal, Edward C., and Short. 3,125,559.

Shenker, Henry: *See*—
Zajac, Blair J., and Shenker. 3,125,687.

Sherbrook, Victor A. Wrap-around goodyear welt seam construction. 3,124,886, 3–17–64, Cl. 36—17.

Sherritt Gordon Mines Ltd.: *See*—
Lund, John A. H., and Krantz. 3,124,838.

Shiker, Robert W.: *See*—
Davidson, Wilbur L., and T. G., and Shiker. 3,125,103.

Shokal, Edward C., and G. A. Short, to Shell Oil Co. Process for polymerizing unsaturated monomers with a catalyst containing a metal salt plated on a metal. 3,125,559, 3–17–64, Cl. 260—93.7.

Short, Glen A.: *See*—
Shokal, Edward C., and Short. 3,125,559.

Shoup Toll Collecting Devices, Inc.: *See*—
Bower, Clyde S. 3,125,102.

Shrimplin, Ray E. Door assembly for self-feeder structure. 3,125,070, 3–17–64, Cl. 119—53.5.

Sickman, Darrell V.: *See*—
Glover, Donald J., Dacons, Sickman, Hill, and Kamlet. 3,125,606.

Sidwell, John M., and J. F. Werner, to The General Electric Co. Ltd. Resonant isolator composed of a biased gyromagnetic element between crossed conductors differing in length by an odd number of quarter wavelengths to common junction. 3,125,732, 3–17–64, Cl. 333—24.2.

Siebel, Mathias P. L.: *See*—
Pall, David B., and Siebel. 3,124,959.

Siegart, William R., and C. J. Henry, to Texaco Inc. Lubricating greases containing borate ester compounds. 3,125,526, 3–17–64, Cl. 252—40.7.

Siegart, William R., C. J. Henry, N. R. Odell, and F. C. Toettcher, to Texaco Inc. Lubricating greases containing borate ester-amine complexes. 3,125,525, 3–17–64, Cl. 252—33.6.

Siegart, William R., N. R. Odell, F. C. Toettcher, and E. L. Kay, to Texaco Inc. Lubricating greases containing salts of diboro acids with amines. 3,125,523, 3–17–64, Cl. 252—33.6.

Siegart, William R., N. R. Odell, F. C. Toettcher, and E. L. Kay, to Texaco Inc. Lubricating greases containing salts of boro acids with amines. 3,125,524, 3–17–64, Cl. 252—33.6.

Siemens-Schuckertwerke Aktiengesellschaft: *See*—
Keller, Wolfgang. 3,125,532.

Siemer, Harm, and A. Doppstadt, to Ravensberg G.m.b.H., Chemische Fabrik. Morpholine compounds substituted in 2,3-positions and 2,3,6-positions respectively, and process for preparing the same. 3,125,572, 3–17–64, Cl. 260—247.

Sievers, Howard F.: *See*—
Knisely, James D. 3,125,132.

Signode Steel Strapping Co.: *See*—
Ericsson, Arvid I. 3,125,326.

Silver Knitting Machine Mfg. Co., Inc.: *See*—
Hiromatsu, Hideaki. 3,124,946.

Simmonds Precision Products, Inc.: *See*—
Hall, Leon H. 3,125,084.

Simmons, Daniel F., and H. V. Wainright, to Celanese Corp. of America. Mixed aryl phosphate esters having unusual kinematic viscosities. 3,125,529, 3–17–64, Cl. 252—49.8.

Simonds, Milton R., to The Borden Co. Wax polish containing hexamethylene tetramine. 3,125,453, 3–17–64, Cl. 106—10.

Sinclair Research Inc.: *See*—
Matson, Howard J. 3,125,531.

Singelmann, Dietrich E., to Bell Aerospace Corp. High speed pump. 3,125,029, 3–17–64, Cl. 103—106.

Singer Co., The: *See*—
Fritts, Russell A. 3,125,051.
Hofgesang, William. 3,124,895.

Singer, Max E., and K. L. Strout, to J. F. Power. Partition panel assembly. 3,125,191, 3–17–64, Cl. 189—34.

Sirvetz, Marshall H.: *See*—
Zneimer, Joel E., and Sirvetz. 3,125,534.

Skinner, Charles H., and W. G. Robson, to Vickers-Armstrongs (Engineers) Ltd. Blanket tensioning means for the impression cylinders of rotary printing presses. 3,125,023, 3–17–64, Cl. 101—415.1.

Skinner, Stanley J., to Monsanto Chemicals Ltd. Process for providing improved surface gloss articles producing by extruding thermoplastic synthetic resins. 3,125,620, 3–17–64, Cl. 264—176.

Sleeper, Harvey P., Jr. Inflatable solar energy collector. 3,125,091, 3–17–64, Cl. 126—271.

Sloan, Carroll D., to Westinghouse Electric Corp. Permanent magnet eddy current device. 3,125,697, 3–17–64, Cl. 310—97.

Smith, Edwin E., to Fluid Dynamics Corp. Rotary pump. 3,125,032, 3–17–64, Cl. 103—131.

Smith Filter Corp.: *See*—
Smith, Glenn O. and R. O. 3,125,427.

Smith, Francis F., and M. S. Beckley, to Dairy Equipment Testing Co., Inc. Milking machine analyser. 3,125,066, 3–17–64, Cl. 119—14.14.

Smith, Glenn O. and R. O., to Smith Filter Corp. Filter. 3,125,427, 3–17–64, Cl. 55—500.

Smith, Homer A., and E. W. Sawyer, Jr., to Minerals & Chemicals Philipp Corp. Conditioned ammonia derivative composition. 3,125,434, 3–17–64, Cl. 71—28.

Smith, John W.: *See*—
Ressler, Hugh C., Smith, and Stampe. 3,125,633.

Smith, Keith L.: *See*—
Winslow, Alfred E., and Smith. 3,125,544.

Smith, Matthew J.: *See*—
Murray, James G., Holub, and Smith. 3,125,634.
Murray, James G., Holub, and Smith. 3,125,635.

Smith, Richard A., and J. R. Infantino, to American Machine & Foundry Co. Resinous adhesive composition. 3,125,456, 3–17–64, Cl. 106—189.

Smith, Robert D. Safety equipment for aircraft of all types. 3,125,314, 3–17–64, Cl. 244—107.

Smith, Robert R.: *See*—
Pinner, Solomon H., Smith, Pettit, and Atkinson. 3,125,546.

Smith, Roger O.: *See*—
Smith, Glenn O. and R. O. 3,125,427.

Smith, S., & Sons (England) Ltd.: *See*—
Meredith, Dennis L. 3,125,712.

Smith, Spencer B. Order quantity calculator. 3,125,290, 3–17–64, Cl. 235—89.

Smith, Walter G. Inflatable expansion plug. 3,125,163, 3–17–64, Cl. 166—187.

Smith and Wesson, Inc.: *See*—
Hellstrom, Douglas R. 3,124,889.

Smith, Wilbert D., to Parayarn Elastic Co. System and apparatus for making elastic yarn. 3,124,924, 3–17–64, Cl. 57—18.

Snell, Raymond L., and C. E. Lowery, Jr., to Miles Laboratories, Inc. Calcium L (+) lactate and L (+) lactic acid production. 3,125,494, 3–17–64, Cl. 195—36.

Snider, Robert E., to North American Aviation, Inc. Electrode tool. 3,125,665, 3–17–64, Cl. 219—69.

Snuggins, George K. Chain anchor. 3,125,355, 3–17–64, Cl. 280—457.

Snyder, Harry A.: *See*—
McGraw, Robert P., and Snyder. 3,125,269.

Societe a Responsabilite Limitee: Recherches Etudes Production R.E.P.: *See*—
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Societe d'Etudes et de Recherches Techniques Sertec: *See*—
Seguenot, Gabriel J. 3,125,168.

Societe Rhodiaceta: *See*—
Corbiere, Paul J., and Terra. 3,124,859.

Society Zuccolo, Rochet & Cie "Z.R.C.": *See*—
Brunet, Louis. 3,124,928.

Socony Mobile Oil Co., Inc.: *See*—
Hayden, Kenneth F., and Lovett. 3,125,506.
Myers, Herbert. 3,125,520.

Soderberg, Laurence R., to Martin-Marietta Corp. Aircraft control means. 3,125,313, 3–17–64, Cl. 244—87.

Solomon, Anthony T.: *See*—
Hall, Quentin W., and Solomon. 3,124,918.

Sommer, Richard A.: *See*—
McBrien, Edward F., and Sommer. 3,125,655.

Sorensen, Robert P.: *See*—
Andersen, Ralph F., and Sorensen. 3,124,916.

Sornsen, Wallace V., to Paul E. Hawkins Co. Pneumatic tire spreader. 3,125,325, 3–17–64, Cl. 254—50.4.

Soundscriber Corp., The: *See*—
Lyon, William H. 3,125,644.

Southern Machinery Co.: *See*—
Engels, Walter. 3,125,126.
Kennedy, Harry R., Andersen, and Jones. 3,124,925.

Space-General Corp.: *See*—
Ghose, Rabindra N. 3,125,717.
Stewart, Robert M., and Lehan. 3,125,683.

Space Technology Laboratories, Inc.: *See*—
Rogers, John L. 3,125,688.

Spash, David L., and C. E. M. Tibbs. High frequency heating apparatus. 3,125,656, 3–17–64, Cl. 219—10.67.

Spaven, William J.: *See*—
Capecelatro, Achille, Spaven, and Baker. 3,124,884.

Speight, Francis R.: *See*—
Letarski, Stephen P., and Speight. 3,124,819.

Speight, Herbert W.: *See*—
Klingensmith, John A., Speight, and Gale. 3,125,133.

Sperry Rand Corp.: *See*—
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McDuffie, James W. 3,125,312.
Oakland, Lewis J. 3,125,745.
Pohm, Arthur V., Rossing, and Mitchell. 3,125,743.

Spivey, Warren R. Thread-chain cutter for sewing machines. 3,125,052, 3–17–64, Cl. 112—252.

Spivey, Warren R. Electric chain clippers. 3,125,458, 3–17–64, Cl. 219—19.

Spix, William L.: *See*—
Lauck, Albert G., Spix, and Walter. 3,125,429.

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Springer, Raymond W. Ball and socket joint. 3,125,364, 3–17–64, Cl. 287—90.

Sproull, Wayne T.: *See*—
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Square D Co.: *See*—
Wolf, Clement W. 3,125,398.

Stabil Internacional S.A.: *See*—
Parodi, Federico A. 3,125,452.

Stahlecker, Wilhelm, and S. Kemmler. Top roller mounting in a spinning machine. 3,125,383, 3–17–64, Cl. 308—174.

Stal Refrigeration Aktiebolag: *See*—
Larsson, Nils E. B. 3,125,285.

Staley, A. E., Mfg. Co.: *See*—
Nevin, Charles S. 3,125,592.

Stalwart Rubber Co., The: *See*—
Kravetz, John J., and MacAlonan. 3,124,832.

Stamps, George M.: *See*—
Ressler, Hugh C., Smith, and Stamps. 3,125,633.

Standard Change-Makers, Inc.: *See*—
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Standard Oil Co. (Indiana): *See*—
Nerheim, Arvie G., and Miskovich. 3,124,953.

Standard Packaging Corp.: *See*—
Albert, Marcel O. 3,124,988.
Henry, James W. 3,125,280.

Stanley, Edward B.: *See*—
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Stansell, Charles E., to Trolex Corp. Dispensing devices. 3,125,267, 3–17–64, Cl. 226—83.

Stansfield, Frank M., A. J. Glasspoole, G. W. Morland, and T. A. Bradshaw, to Ruston & Hornsby Ltd. Internal combustion engine cylinder heads. 3,125,082, 3–17–64, Cl. 123—41.77.

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Stark, Clarence J. Traveling case with adjustable shelves. 3,125,196, 3–17–64, Cl. 190—51.

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Leits, Ernst, and Stein. 3,125,623.

Steinert, Emil F.: *See*—
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Stephen, William E.: *See*—
Heslop, Robert N., and Stephen. 3,125,564.

Sterling Drug Inc.: *See*—
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Stewart, Paul H., to Eastman Kodak Co. Sensitized photoconductive compositions comprising zinc oxide. 3,125,447, 3–17–64, Cl. 96—1.

Stewart, Robert M., and F. W. Lehan, to Space-General Corp. Photosensitive data correlation apparatus. 3,125,683, 3–17–64, Cl. 250—227.

Stewart, William N., III, to Zapata Off-Shore Co. Offshore drilling equipment. 3,125,171, 3–17–64, Cl. 175—5.

Stiepel, Erhard E., and C. W. Aurich, to Saco-Lowell Shops. Magnetic top roll support guide. 3,124,845, 3–17–64, Cl. 19—295.

Stier, Kurt L. Swim pool wall panel structure. 3,124,905, 3–17–64, Cl. 50—100.

Stohldrier, Oliver H., to National Lead Co. Purgeless flow meter. 3,124,956, 3–17–64, Cl. 73—211.

Stoltman, Donald D., and T. R. Beveridge, to General Motors Corp. Vehicle road speed control system. 3,125,178, 3–17–64, Cl. 180—82.1.

Stone, Robert R., Jr., and H. F. Hastings. Digit control frequency synthesizer. 3,125,729, 3–17–64, Cl. 331—39.

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Bond, Milton, Stotter, and Weitz. 3,124,944.

Stotter, Ernest. Reflector attachment for fluorescent lighting fixtures. 3,125,301, 3–17–64, Cl. 240—51.11.

Straight, Edward R., and J. R. Davidson, to Vogt Mfg. Corp. Windlace structure. 3,124,851, 3–17–64, Cl. 20—69.

Stram, Le Roy, Jr., S. A. Genden, and H. C. Maskey, to Continental Aviation and Engineering Corp. Starting system. 3,124,933, 3–17–64, Cl. 60—39.82.

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Schechter, Edward. 3,125,469.

Strid, Carl J., to Stratovalve & Engineering Co. Quick release pneumatic control valve. 3,125,380, 3–17–64, Cl. 303—69.

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Stroller, Marian M.: *See*—
Stroller, Hugh M. 3,125,027.

Strout, Kendall L.: *See*—
Singer, Max E., and Strout. 3,125,191.

Studiengesellschaft Kohle m.b.H.: *See*—
Köster, Roland. 3,125,603.

Stüdlein, Max.: *See*—
Haug, Friedrich, Stüdlein, and Wolff. 3,125,039.

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Pfarrwaller, Erwin. 3,125,128.
Profos, Paul. 3,125,073.

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Frykhult, Rune H. 3,125,514.

Superior Industries, Inc.: *See*—
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Surina, Robert L., to Western Electric Co., Inc. Apparatus for sequentially compressing resilient articles. 3,125,020, 3–17–64, Cl. 100—215.

Sutton, John S.: *See*—
Klein, Martin L., and Sutton. 3,125,759.

Svenska Relafabriken Abn Ab.: *See*—
Eklov, David. 3,125,648.

Swaneck, Anthony J., Jr., to Westinghouse Electric Corp. Magnetic door gasket. 3,125,389, 3–17–64, Cl. 312—296.

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Sweet, Cary L. Tape splicing apparatus and method. 3,125,632, 3–17–64, Cl. 178—5.8.

Swift, Hallock F. Capacitor fault indicator including resistance voltage divider. 3,125,720, 3–17–64, Cl. 324—51.

Swimquip, Inc.: *See*—
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Sylvania-Thorn Colour Television Laboratories Ltd.: *See*—
Oxenham, John K., and Graham. 3,125,631.

Syntex Corp.: *See*—
Ringold, Howard J. 3,125,590.
Ringold, Howard J., Rosenkranz, and Edwards. 3,125,591.

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Takeuchi, Takao: *See*—
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Tauber, Francis W., and R. N. Olson, to Union Carbide Corp. Rapid processing of frankfurters. 3,125,017, 3–17–64, Cl. 99—443.

Taubman, Julius P., to Fallout Assemblies Corp. Parachute discharged from multistaged projectile. 3,124,899, 3–17–64, Cl. 46—86.

Taylor, Arthur S. and W. P. Konasewski, to American Cyanamid Co. Capsule forming die roll with guard rings. 3,124,840, 3–17–64, Cl. 18—21.

Taylor, Owen L., to Westinghouse Electric Corp. Wiring device and securing means therefor. 3,125,629, 3–17–64, Cl. 174—53.

Taylor, Robert G.: *See*—
Herridge, William G., Jr., and Taylor. 3,125,702.

Taylor, William F.: *See*—
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Taylor, William H. Space heater and cooler. 3,125,089, 3–17–64, Cl. 126—110.

Teague, Ernest D., to Norton Co. Ceramic catalyst having a flame sprayed coating of a platinum family metal. 3,125,539, 3–17–64, Cl. 252—455.

Techmation Corp.: *See*—
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Telecomputing Corp.: *See*—
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Telex Corp., The: *See*—
Lewis, Frederick W. 3,125,646.

Ter Horst, William P.: *See*—
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Texaco Experiment Inc.: *See*—
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Texaco Inc.: *See*—
Child, Edward T., Rambo, and Nolan. 3,125,612.
Kay, Edward L., Tierney, Krug, and Henry. 3,125,528.
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Krug, Robert H., Tierney, Knowles, and Kay. 3,125,527.
Siegart, William R., and Henry. 3,125,526.
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Siegart, William R., Odell, Toettcher, and Kay. 3,125,524.

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Thermo Electric Co., Inc.: *See*—
Moyano, Ernesto A. 3,125,309.
Moyano, Ernesto A. 3,125,400.

Thiermann, William E. Multi-purpose collapsible dolly. 3,125,350, 3–17–64, Cl. 280—34.

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Thompson Ramo Wooldridge Inc.: *See*—
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Thor Power Tool Co.: *See*—
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Thizy, Andre, to Progil S.A. Recovery of a-naphthol from mixtures of naphthol, tetralon and tetralol. 3,125,496, 3–17–64, Cl. 202—42.

Thompson, Bernard, to Tube Products Ltd. Slotted coaxial line having slidable tap for transmission of electrical power at high frequencies. 3,125,199, 3–17–64, Cl. 191—23.

Thompson, Charles E., and J. M. Kelley, Jr., to Esso Research and Engineering Co. Coated electrodes. 3,125,468, 3–17–64, Cl. 136—86.

Thompson, George W. Heel support for horses. 3,124,919, 3–17–64, Cl. 54—82.

Thumim, Carl, to Miehle-Goss-Dexter, Inc. Knife changing controls for paper cutting machines. 3,124,989, 3–17–64, Cl. 83—399.

Thunander, Hans T., to Westinghouse Electric Corp. Comparator control for a tumbling drier. 3,125,422, 3–17–64, Cl. 34—45.

Tibbs, Christopher E. M.: *See*—
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Kay, Edward L., Tierney, Krug, and Henry. 3,125,528.

Tilden, Carl V. Portable drilling apparatus. 3,125,172, 3–17–64, Cl. 175—114.

Tiller, James A., to American Radiator & Standard Sanitary Corp. Lavatory and water closet bathroom fixture. 3,124,808, 3–17–64, Cl. 4—3.

Timefax Corp.: *See*—
Dalton, Harold R. 3,125,021.

Tobold, Ewald F.: *See*—
Boyer, Ralph K., Krohn, and Tobold. 3,125,135.

Todd, Charles W., to E. I. du Pont de Nemours and Co. Herbicidal method employing cyanophenyl methyl ureas. 3,125,432, 3–17–64, Cl. 71—2.6.

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Siegart, William R., Odell, Toettcher, and Kay. 3,125,524.
Siegart, William R., Henry, Odell, and Toettcher. 3,125,525.

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Towne, Edmund B., W. H. Moore, and J. B. Dickey, to Eastman Kodak Co. Azo dyes containing a benzothiazepin-one-ring. 3,125,563, 3–17–64, Cl. 260—152.

Treacy, Cyril S. Safety tread for bath equipment floor. 3,124,811, 3–17–64, Cl. 4—178.

Triangle Mfg. Co., Inc.: *See*—
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Troeger, Henry: *See*—
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Troeger, Henry, to The Bendix Corp. Method of making a flexural pivot. 3,124,873, 3–17–64, Cl. 29—416.

Trolex Corp.: *See*—
Stansell, Charles E. 3,125,267.

Truhan, Andrew. Controlled environment room system. 3,124,903, 3–17–64, Cl. 47—17.

Trupp, Hermann A., and L. I. Kownurko, to Philco Corp. Two-speed transmission mechanism for washing machine. 3,124,968, 3–17–64, Cl. 74—217.

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Tupman, Kenneth: *See*—
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Tupman, Kenneth, and D. R. Irving, to The British Petroleum Co. Ltd. Treatment of petroleum fractions to lower the pour point. 3,125,506, 3–17–64, Cl. 208—143.

Tupman, Kenneth, and P. T. White, to The British Petroleum Co. Ltd. Treatment of hydrocarbon fractions. 3,125,510, 3–17–64, Cl. 208—264.

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Tupman, Kenneth, and R. W. Willoughby, to The British Petroleum Co. Ltd. Hydrofining hydrocarbon fractions. 3,125,507, 3–17–64, Cl. 208—216.

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Ulrich, Raymond M., to Ulrich Foundation, Inc. Fluid conduit coupler. 3,125,360, 3–17–64, Cl. 285—137.

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Union Carbide Corp.: *See*—
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Hubel, Karl W., and Braye. 3,125,594.
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Glover, Donald J., Dacons, Sickman, Hill, and Kamlet. 3,125,606.
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Van der Lely, Cornelis and A. 3,124,921.

Van der Lely, Cornelis and A., to C. van der Lely, N.V. Device for the lateral displacement of crop lying on the ground. 3,124,921, 3–17–64, Cl. 56—377.

Van Domelen, Carl H., to Pneumo Dynamics Corp. Solenoid activated flow valve. 3,125,321, 3–17–64, Cl. 251—139.

Van Duijvendijk, Tonny, and G. van Essen. Safety belt. 3,125,376, 3–17–64, Cl. 297—389.

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Van Duijvendijk, Toany, and Van Essen. 3,125,376.

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Van Sant, Robert H. Lure for game fish. 3,124,891, 3–17–64 Cl. 43—26.2.

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Vargha, László, M. Rados, E. Kasztreiner, and L. Ssporny, to Richter Gedeon Vegyeszeti Gyar RT. 3,16-diamino-3,5-pregnadienes and process for preparing same. 3,125,570, 3–17–64, Cl. 260—239.5.

Varian Associates: *See*—
Mann, Joseph K. 3,125,701.
Ward, Curtis E. 3,125,734.
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Vassar, Charles C. Height increasing devices for shoes. 3,124,887, 3–17–64, Cl. 36—81.

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Via, Fred H. and L. C. Dolly stretcher. 3,124,894, 3–17–64, Cl. 45—24.

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Vichnievsky, Rostislav: *See*—
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Brumbach, Joseph F. 3,125,639.

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TRADEMARKS

NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 134,105 (TT), The Traub Manufacturing Company, Finger rings; **Reg. No. 146,380** (ORANGE BLOSSOM), same; **Des. 189,757**, J. L. Hazelquist, Finger ring, **filed** Oct. 26, 1963, D.C. Conn. (New Haven), Doc. 10111, *Traub Manufacturing Co. v. Vanderkruik Jewelers.*

Reg. No. 146,380. (See Reg. No. 134,105.)

Reg. No. 222,073 (PONTIAC), General Motors Corporation, Automobiles; **Reg. No. 293,706** (REPRESENTATION OF INDIAN HEAD WITHIN CIRCLE DESIGN), same, Motor driven vehicles—namely, automobiles, trucks, and commercial vehicles, and structural parts thereof; **Reg. No. 647,239** (PONTIAC), same, Maintenance and repair service for automotive vehicles, parts, and accessories; **Reg. No. 647,240** (DESIGN OF INDIAN HEAD), same **filed** Sept. 19, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63–1113, *General Motors Corporation v. Village Motors et al.* Consent decree; defendants enjoined Sept. 26, 1963.

Reg. No. 293,706. (See Reg. No. 222,073.)

Reg. No. 465,714 (A–MP), Aircraft-Marine Products, Inc., Electrical terminals and wiring devices; **Reg. No. 515,577** (A–MP AND DESIGN), same, Electrical connectors and connector forming blanks sold as such and which are applied to conductors, terminals and the like to produce a solderless electrical connection; **Reg. No. 550,403** (A–MP), same, Hand tools of the pliers type and of the compound leverage type, and pneumatically and hydraulically operated portable tools and power operated machine tools for pressure application of electrical connectors and the like for cutting wire, for stripping insulation from wire, etc.; **Reg. No. 567,972** (AMP–SULATION), same, Insulated electrical connectors and leads; **Reg. No. 570,591** (CH (in script) A–MP), same, Combination hand tool for cutting wire, stripping insulation from insulated wire, measuring wire gauge, etc.; **Reg. No. 616,427** (A–MP), same, Plastic conduit tubing; **Reg. No. 624,890**, same, Electrical insulating plastic film and molded plastic electrical insulating parts; **Reg. No. 631,084**, same, Extruded plastic tubing for further fabrication and cast film for further fabrication; **Reg. No. 644,586**, same, Thermo-plastic synthetic resins and molding powder composed of synthetic resin and a refractory filler; **Reg. No. 649,914** (AMPLASTIC), same, Plastic tubing; **Reg. No. 677,615** (AMP), AMP, Incorporated, Condensers, capacitors, transformers, pulse forming networks, rectifiers, etc.; **Reg. No. 690,489** (A–MP), same, Electrical connectors; **Reg. No. 693,115**, same, Wiring circuits for electrical equipment; **Reg. No. 700,442** (AMP EDGE), same, Electrical connectors; **Reg. No. 717,821** (AMP), same, Patchcord programming systems, patchcords, patchboards, etc.; **Reg. No. 717,823**, same, Electronic module circuit assemblies; **Reg. No. 717,870**, same, Multiaperture devices, employing magnetic memory elements, which are adaptable to uses in computing and control equipment, **filed** June 20, 1963, D.C., W.D. Ky. (Bowling Green), Doc. 945, *AMP, Incorporated v. Hi Amp Tape Company.*

Reg. No. 510,519 (HOOVER), the Hoover Company, Electrical, domestic, and commercial suction cleaners and parts

CONDITION OF TRADEMARK APPLICATIONS AS OF JANUARY 31, 1964

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	14,580
Date of oldest new application	June 26, 1963
Date of oldest amended application	June 21, 1963

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 2, 4, 5, 8, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 39, 41, 43, 43, 44	7-1-63	7-2-63
(II) H. E. KASCHUB, Classes 1, 3, 6, 7, 9, 10, 18, 22, 27, 38, 40, 45, 46, 47, 48, 49, 50, 51, 52; Service Marks, Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	6-26-63	6-21-63
Renewals (All Classes)	1-13-64	1-2-64
Sec. 12 (c) Publications (All Classes)	1-3-64	

Applications filed during the month of January 1964— 2,056

Registrations Issued 407—No. 766,521 to No. 766,927
Renewals Issued 50

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington, D. C., 20402 to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

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therefor; **Reg. No. 604,676,** same, Dirt collecting bags; **Reg. No. 652,995** (HOOVER AND DESIGN), same, Suction cleaners and parts therefor, irons and parts therefor, floor polishers and parts therefor, foodmixers and parts therefor, and coffee pots and parts therefor; **Reg. No. 668,176,** same, Dirt collecting and filtering bags, **filed** May 3, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63–513–TC, *Hoover Company v. San Marino Vacuum Co.* Consent judgment; trademark infringed; defendant enjoined Sept. 19, 1963.

Reg. No. 515,577. (See Reg. No. 405,714.)

Reg. No. 540,179 (POLAROID), Polaroid Corporation, Light-polarizing organic plastic in sheet form for further manufacture and photographic cameras, photographic camera shutters, photographic exposure meters, etc.; **Reg. No. 607,263,** same, Camera cases, exposure meter cases, master compartment cases, etc.; **Des. 189,868,** Casselman and Stoller, Carrying case, **filed** Oct. 30, 1963, D.C.N.J. (Trenton), Doc. 907–63, *Polaroid Corporation v. Louis Lefkowitz & Bro., Inc.*

Reg. No. 559,403. (See Reg. No. 405,714.)

Reg. No. 567,972. (See Reg. No. 405,714.)

Reg. No. 570,591. (See Reg. No. 405,714.)

Reg. No. 604,676. (See Reg. No. 510,519.)

Reg. No. 607,263. (See Reg. No. 540,179.)

Reg. No. 616,427. (See Reg. No. 405,714.)

Reg. No. 624,890. (See Reg. No. 405,714.)

Reg. No. 631,664. (See Reg. No. 405,714.)

Reg. No. 634,671 (LANE WELLS COMPANY AND DESIGN), Lane-Wells Company, Technical services in the oil fields, comprising: well casing perforation by means of gun type perforators; electrical, temperature and radio activity well logging; water locating, etc., **filed** Oct. 28, 1963, D.C., S.D. Tex. (Houston), Doc. 63–H–564, *Dresser Industries, Inc. v. The Layne Well Services, Inc.*

Reg. No. 639,688 (DRIVE-IN-VELOPE), Curtis 1000, Incorporated, Banking envelopes of paper; **2,944,728,** H. M. Whitman, Envelope for banking use; **2,967,225,** same, Banking envelope, **filed** Sept. 4, 1963, D.C.N.J. (Newark), Doc. 728–63, *Curtis 1000, Incorporated v. Pavey Envelope and Tag Corporation.* Consent judgment; injunction issued Nov. 1, 1963.

Reg. No. 644,586. (See Reg. No. 405,714.)

Reg. No. 647,239. (See Reg. No. 222,073.)

Reg. No. 647,240. (See Reg. No. 222,073.)

Reg. No. 649,914. (See Reg. No. 405,714.)

Reg. No. 652,995. (See Reg. No. 510,519.)

Reg. No. 668,176. (See Reg. No. 510,519.)

Reg. No. 677,615. (See Reg. No. 405,714.)

Reg. No. 689,055 (BARBIE), Mattel, Incorporated, Doll; **Reg. No. 726,935** (KEN), same Boy doll; **Reg. No. 741,266** (BARBIE), same, Accessories for doll clothes, **filed** Aug. 23, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63–1023–TC, *Mattel, Inc. v. Me-Too Sales Corp.*

Reg. No. 690,489. (See Reg. No. 405,714.)

Reg. No. 693,115. (See Reg. No. 405,714.)

Reg. No. 700,442. (See Reg. No. 405,714.)

Reg. No. 717,821. (See Reg. No. 405,714.)

Reg. No. 717,823. (See Reg. No. 405,714.)

Reg. No. 717,870. (See Reg. No. 405,714.)

Reg. No. 726,935. (See Reg. No. 689,055.)

Reg. No. 741,266. (See Reg. No. 689,055.)

Reg. No. 750,614 (LOCK-LINED), Lock-Lined, Inc., Laminated fabric for use in conjunction with the fabrication of clothing such as dresses, suits, blouses and the like, and for the fabrication of upholstery, slip covers, draperies, or the like, **filed** Oct. 10, 1963, D.C., S.D.N.Y., Doc. 63/3183, *Lock-Lined, Inc. v. Gimbel Bros., Inc.*

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 169,523. Curlator Corporation, East Rochester, N.Y. Filed May 23, 1963.

RANDO

Owner of Reg. Nos. 558,770, 730,043, and others.
For Non-Woven Webs Made From Textile Fibers and the Like, and for Roves Made From Such Webs.
First use July 8, 1955.

Class 2—Receptacles

SN 164,952. Container Development Corporation, Watertown, Wis. Filed 3–19–63.

POLYLEWTON

For Molded Plastic Boxes, Trays, and Similar Packaging Containers for Handling, Transporting, and Storing a Wide Variety of Products and Materials.
First use June 6, 1960.

SN 167,913. King-Seeley Thermos Co., Ann Arbor, Mich. Filed May 1, 1963.

LITTLE BROWN KEG

Applicant disclaims the word "Keg" apart from the mark as shown.
For Thermally Insulated Containers—Namely, Kegs.
First use on or about Jan. 14, 1963.

SN 171,004. Fusion, Incorporated, Statesville, N.C. Filed June 14, 1963.

SHOULDER HOLDSTER

For Refuse Containers—Namely, Trash Cans Having a Size of the Order of Two Feet in Diameter and Two to Three Feet in Height.
First use Aug. 1, 1962.

SN 173,956. Plastronics Corporation, Asheboro, N.C. Filed July 29, 1963.

SAV-A-PASTE

For Outer Shield To Be Used at the Top End of a Toothpaste Tube.
First use July 1, 1963.

SN 175,149. Meal Caddy, Inc., Secaucus, N.J. Filed Aug. 15, 1963.



For Plastic Plate-Warming Dishes or Dish Holders.
First use July 3, 1963.

SN 176,710. Chase Bag Company, New York, N.Y. Filed Sept. 11, 1963.

CELLO-PLY

For Paper Bags.
First use Dec. 24, 1962.

SN 178,313. West Virginia Pulp and Paper Company, New York, N.Y. Filed Oct. 3, 1963.

JOHNNY JUMP-UP

For Corrugated Paperboard Display Stands.
First use Aug. 28, 1963.

SN 178,411. Daniel B. Blum, d.b.a. D & H Products, Oakland, Calif. Filed Oct. 7, 1963.

FEED ME

For Laundry Bags.
First use Aug. 23, 1963.

SN 178,480. Pullen Molded Products, Inc., New Iberia, La. Filed Oct. 7, 1963.

PULLEN

For Horticultural Products—Namely, Transplanter Pots.
First use Sept. 16, 1963.

SN 178,516. Wolff Appliance Corp., Long Island City, N.Y. Filed Oct. 7, 1963.

COLOR DUET

For Tissue Dispensing Boxes, Toilet Brush Holders, Waste Baskets and Plastic Tumblers.
First use June 4, 1963.

SN 178,831. Steele Canvas Basket Company, Inc., Cambridge, Mass. Filed Oct. 11, 1963.

STEELENE

Owner of Reg. No. 757,549.
For Molded Polyethylene Baskets.
First use Apr. 29, 1963.

SN 179,031. Essex Wire Corporation, Fort Wayne, Ind. Filed Oct. 15, 1963.

DIANETIC

For Plastic Spools for Storing Wire.
First use Sept. 2, 1963.

SN 179,510. Albeni Corporation, Tarpon Springs, Fla. Filed Oct. 22, 1963.

LITTLE GIANT

For Outdoor Elevated Base Holder for Garbage Cans or the Like.
First use May 15, 1962.

SN 180,665. KVP Sutherland Paper Company, Kalamazoo, Mich. Filed Nov. 7, 1963.

ZIPAROUND

For Cartons With Special Opening Devices.
First use Oct. 29, 1963.

Class 4 — Abrasives and Polishing Materials

SN 177,114. United States Borax & Chemical Corporation, Los Angeles, Calif., Filed Sept. 16, 1963.



Owner of Reg. Nos. 50,555, 327,549, and 588,361.
For Floor Wax for All Types of Floors; Floor Polish for All Types of Floors, Floor Finish in the Nature of Wax for All Types of Floors; Furniture Polish; and Glass Polish.
First use July 30, 1963.

Class 5 — Adhesives

SN 173,764. Johnson & Johnson, d.b.a. Permacel, New Brunswick, N.J. Filed July 25, 1963.

PERMACEL

Owner of Reg. Nos. 388,238, 724,991, and others.
For Adhesives and Pressure-Sensitive Adhesive Tapes.
First use Jan. 10, 1963.

SN 176,004. Kasen Industries, Newark, N.J. Filed Aug. 29, 1963.

CIRCLE K

For Pressure-Sensitive Adhesive Tape.
First use June 1, 1963.

SN 176,313. The Niobia Company, Inc., Winthrop, Mass. Filed Sept. 4, 1963.

NIO-STICK

For Sealing, Bonding or Soldering Material Comprising Thermoplastic Polyamide Resin.
First use on or about Aug. 8, 1963.

SN 176,376. Kleen-Stik Products, Inc., Chicago, Ill. Filed Sept. 5, 1963.

DUBL-STIK

For Tissue Saturated Pressure-Sensitive Adhesive Interwound With Double Release Coated Carrier.
First use Nov. 2, 1956.

SN 176,867. Alexander & Langenhagen, d.b.a. Allaco Products, Cambridge, Mass. Filed Sept. 13, 1963.

ALLBOND

For Epoxy Adhesive.
First use December 1961.

Class 6 — Chemicals and Chemical Compositions

SN 139,476. Fairfax Photo Products, Inc., Fort Lee, N.J. Filed Mar. 9, 1962.

FAIRFAX GEM

For Photographic Materials—Namely, Chemicals and Developers for Business Photocopy Equipment.
First use as early as Oct. 27, 1961.

SN 162,925. Eastman Kodak Company, Rochester, N.Y. Filed Feb. 18, 1963.

EKTALINE

Owner of Reg. Nos. 699,652, 699,793, and 745,819.
For Photographic Processing Chemicals.
First use June 21, 1962.

SN 164,766. Foseco International Limited, Birmingham, England. Filed Mar. 12, 1963.

ZENDOX

For Furnace-Cleaning Fluxes.
First use Aug. 31, 1961; in commerce Aug. 31, 1961.

SN 171,379. Prolabo, Paris, France. Filed June 19, 1963.

PROLABO

Owner of French Reg. No. 509,921, dated Dec. 14, 1962 (Paris); Natl. Inst. No. 196,354.
For Chemical Compositions for Use in Laboratory Chemical Analysis.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

SN 176,286. Diamond National Corporation, New York, N.Y. Filed Sept. 4, 1963.

DIAMOND

Owner of Reg. Nos. 167,348, 421,352, and others.
For Matches.
First use in 1883.

Class 11 — Inks and Inking Materials

SN 176,160. Columbia Ribbon & Carbon Manufacturing Co., Inc., Glen Cove, N.Y. Filed Sept. 3, 1963.

DRION

For Carbon Paper.
First use Nov. 20, 1962.

SN 177,526. Interchemical Corporation, New York, N.Y. Filed Sept. 23, 1963.

AQUA-GLO

For Printing Inks.
First use on or about Aug. 23, 1963.

Class 12 — Construction Materials

SN 142,369. Chester B. Stem, Inc., New Albany, Ind. Filed Apr. 16, 1962.

COACHWOOD

For Veneer.
First use Mar. 27, 1962.

SN 157,262. Sterling Products Co. Inc., St. Paul, Minn. Filed Nov. 14, 1962.

Perma-Pleat

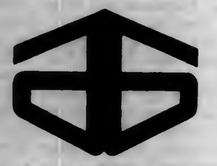
For Folding Doors.
First use July 18, 1957.

SN 159,614. Silver Top Manufacturing Co., Inc., White Marsh, Md. Filed Dec. 21, 1962.

Silver-top

Owner of Reg. No. 585,997.
For Aluminum Awnings for Homes and Mobile Homes, Patios, Ranch Rooms, Screen Rooms, Utility Storerooms, Jalousie Rooms, Carports, and Windows.
First use July 1948.

SN 159,938. Alsco, Inc., Akron, Ohio. Filed Dec. 31, 1962.



For Storm Doors, Storm Windows, Aluminum Gutters and Downspouts, and Aluminum Siding.
First use Nov. 14, 1962.

SN 159,999. National Engineering Products, Incorporated, Washington, D.C. Filed Dec. 31, 1962.

CASTIPLAST

For Two-Component Epoxy Resin Compound.
First use June 1, 1955.

SN 160,873. Mengel Wood Industries, Inc., Louisville, Ky. Filed Jan. 17, 1963.



Owner of Reg. Nos. 431,008, 735,861, and others.
For Doors.
First use December 1949.

SN 161,192. Northern Indiana Fence Co., Inc., Tippecanoe, Ind. Filed Jan. 22, 1963.

NORTHERN INDIANA FENCE COMPANY NIFCO

WARD'S Louver-Vent

Under reservation of all common-law rights, applicant disclaims the words "Louver-Vent" and "Northern Indiana Fence Company" apart from the mark as shown.
For Roof Ridge Ventilators of the Louver Type.
First use June 11, 1962.

SN 161,295. Alsco, Inc., Akron, Ohio. Filed Jan. 24, 1963.

EGS

For Aluminum Siding To Be Used With an Electrical Grounding System Incorporated Therein.
First use Aug. 30, 1962.

SN 164,953. Coralux Perlite Corporation of New Jersey, Metuchen, N.J. Filed Mar. 19, 1963.

Schundler

The drawing is lined for the color blue.
For Perlite Plaster, Perlite Concrete Aggregates and Acoustical Plaster.
First use April 1952.

SN 168,583. H. K. Porter Company, Inc., Pittsburgh, Pa. Filed May 9, 1963.

SLAGMAG

Owner of Reg. No. 538,517.
For Dry, Sized, Granular Refractory Products Consisting of Seawater Periclase of a High Magnesia Content.
First use Apr. 8, 1963.

SN 169,224. Copperloy Corporation, Cleveland, Ohio. Filed May 20, 1963.

lite LL line

For Portable Bridges.
First use Jan. 1, 1957.

SN 170,065. Harbison-Walker Refractories Company, Pittsburgh, Pa. Filed May 31, 1963.

XXP

For Metal Cased Refractory Shapes With Internal Metal Plates.
First use in or about May 1955.

SN 171,741. Baker-Aldor-Jones Corporation, Hialeah, Fla. Filed June 25, 1963.

HURRICLOSE

For Metal Storm Panels Applied Over Building Openings for Protection During Storms.
First use Aug. 9, 1960.

SN 172,250. Shell Oil Company, New York, N.Y. Filed July 1, 1963.

SHELLFORM

Owner of Reg. No. 752,763.
For Concrete Form Coating.
First use June 13, 1963.

SN 173,678. Penn Crete Products Company, Inc., Philadelphia, Pa. Filed July 24, 1963.

PENN-KOTE

For Filling and Leveling Plastic-Like Coating for Masonry Block Walls.
First use during April 1962.

SN 175,765. Lamex, Inc., Norcross, Ga. Filed Aug. 26, 1963.

LAMABOND

For Reinforced Polyethylene Sheet Material.
First use May 16, 1962.

SN 176,090. A. P. Green Fire Brick Company, Mexico, Mo. Filed Aug. 30, 1963.

GREENCLAD

Owner of Reg. Nos. 600,884, 603,200, and others.
For Chemically Bonded or Burned Basic Refractory Brick Having External Metal Casings With or Without Internal Metal Plates.
First use Aug. 2, 1960.

176,868. Griffin Pipe Products Co., Wheaton, Ill. Filed Sept. 5, 1963.



For Clay Pipe and Clay Wall Coping.
First use Apr. 23, 1962.

SN 176,382. Merco Overhead Door Company, Inc., Kansas City, Mo. Filed Sept. 5, 1963.

MERCO-MAGIC

For Garage Door Side Sealer—Namely, a Self-Sealing Door Frame.
First use Nov. 1, 1960.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 155,874. American Beauti Pleat, Inc., Whittier, Calif. Filed Oct. 25, 1962.

SLIMLINE

For Drapery Hardware.
First use on or about Apr. 4, 1961.

SN 161,715. Kar Products, Inc., Chicago, Ill. Filed Jan. 30, 1963.



The mark is lined for green and yellow; however, the mark is not limited as to color.
For Automotive Parts and Supplies—Namely, Assorted Mounting Brackets; Bolts and Nuts; Cotter Pins; Machine Screws; Wood Screws; Studs; Rivets; Metal Washers; Assorted Frictional Fasteners and Clips; Pivot Pins and Clevis Pins; Clamps Used as Fasteners; Connector Fittings for Tubing, Hose and Piping; Drain Plugs and Drain Cocks; Safety Expansion Plugs; Grease and Oil Line Fittings, Such as Elbows, T's, Couplings, Unions; Valves for Hot Water Heaters; Copper Tubing; Body Bolts and Nuts and Screws; Speed Nuts; Body Washers; Tire Valve Caps; Cap Screws; Carriage Bolts; Drive Nails; Dust Plugs; Hinge Pins; Lock Washers; Self-Tapping Screws; Sheet Metal Screws; Spring Center-Bolts; and Toggle Bolts.
First use Jan. 19, 1958.

SN 163,467. The Deutsch Company, Los Angeles, Calif. Filed Feb. 26, 1963.

EXOBRAZE

For Packaged Heat-Activated Fittings for Joining Tubing or Similar Objects by the Application of Exothermic Heat.
First use on or about July 1, 1962.

SN 163,471. The Deutsch Company, Los Angeles, Calif. Filed Feb. 26, 1963.

PYROBRAZE

For Packaged Heat-Activated Fittings for Joining Tubing or Similar Objects by the Application of Exothermic Heat.
First use on or about July 1, 1962.

SN 167,885. Dixon Corporation, Bristol, R.I. Filed May 1, 1963.

RULON

Owner of Reg. No. 655,024.
For Seats, Seals and Washers for Fluid Valves; Rotary Joints for Vapor, Liquid and Gas.
First use at least as early as 1955.

SN 168,397. Dorman Products, Inc., Cincinnati, Ohio. Filed May 8, 1963.



For Automotive Parts—Namely, Cap Screws, Hex Nuts, Flat Washers, Lock Washers, Cotter Pins, Stove Bolts, Machine Bolts, Carriage Bolts, Square Nuts, License Plate Bolts, Machine Screws, Sheet Metal Screws, Track Bolts and Nuts, Blade Bolts, Allen Set Screws, Shakeproof Washers, Battery Bolts, Finishing Washers, Fibre Washers, Shim Washers, Studs, Hub Bolts, Bumper Bolts, Axle Nuts, Acorn Nuts, Wing Nuts, Expansion Plugs, Copper Tubing, Brass Fittings, Fuel Lines, Yokes, Clevis Pins, Radiator Caps, Gas Caps, Oil Caps, Brake Springs, Brake Shoe Parts, Pull Springs, Choke Controls, Mechanics' Wire, Drain Plugs, Woodruff Keys, Axle Keys, Throttle Ball Joints, Straight Pins, Taper Pins, Valve Keys, Valve Spring Seats, Hose Clamps, and Molding Clips.
First use February 1937.

SN 170,526. Dresser Industries, Inc., Dallas, Tex. Filed June 7, 1963.

KWIKFLANGE

Owner of Reg. Nos. 668,307 and 746,453.
For Vacuum Fittings.
First use June 3, 1963.

SN 170,577. Weaver Shear Washer, Inc., Costa Mesa, Calif. Filed June 7, 1963.

PARFIT

For Shear Washers Employed in the Supporting of Wooden Beams in Building Constructions.
First use on or about May 24, 1962.

SN 173,056. Swingline Inc., Long Island City, N.Y. Filed July 15, 1963.

800-9LT

For Staples.
First use June 3, 1963.

SN 174,170. Crucible Steel Company of America, Pittsburgh, Pa. Filed Aug. 1, 1963.



The drawing is lined for the color red. Owner of Reg. Nos. 435,444, 436,791, and 671,710.
For Metal Tubing.
First use June 1949.

SN 174,820. John C. Applegarth, d.b.a. Associated Metal Industries, Cambridge, Md. Filed Aug. 12, 1963.

MESH-GRIP

For Metal Mesh Lifting Slings.
First use May 22, 1963.

SN 175,671. Parks-Cramer Company, Fitchburg, Mass. Filed Aug. 23, 1963.

DENSIMATIC

For Apparatus and System for the Control of the Flow of Fluid in Lines in Accordance With the Density of the Fluid.
First use June 26, 1963.

SN 175,789. Price-Pfister Brass Mfg. Co., Los Angeles, Calif. Filed Aug. 26, 1963.

SOFT JET

For Aerators for Faucets.
First use April 1962.

SN 175,942. Rock Island Oil & Refining Co., Inc., Wichita, Kans. Filed Aug. 28, 1963.

ROCK ISLAND

For Reinforced Plastic Pipe and Fittings Therefor, Including Nipples, Pup Joints, Insulators, T's and Elbows.
First use Nov. 29, 1960.

SN 176,060. Samuel Moore & Company, Mantua, Ohio. Filed Aug. 29, 1963.

STEAM-PAC

For Plastic Tubing Composed of a Single Tube or a Plurality of Tubes Encased or Housed in a Plastic Sheath for the Transmission of Fluid.
First use Mar. 1, 1963.

SN 176,375. The Kendall Company, Walpole, Mass. Filed Sept. 5, 1963.

HERCULOX

Owner of Reg. No. 411,812.
For Grommets.
First use Jan. 11, 1944.

SN 176,392. Parker-Hannifin Corporation, Cleveland, Ohio. Filed Sept. 5, 1963.

AQR

For Couplings for Metal Tubes.
First use January 1958.

SN 176,873. Arnt Enterprises, Inc., Villa Park, Ill. Filed Sept. 13, 1963.

PORT-O-FOUNTAIN

For Movable Lawn Fountains.
First use May 28, 1963.

SN 179,286. G. F. Wright Steel & Wire Company, Worcester, Mass. Filed Oct. 17, 1963.

SPARROW

For Wire Netting.
First use Sept. 13, 1963.

Class 14—Metals and Metal Castings and Forgings

SN 159,079. Stran-Steel Corporation, Houston, Tex., assignee of National Steel Corporation, Pittsburgh, Pa. Filed Dec. 13, 1962.

STRAN-CLAD

Owner of Reg. Nos. 367,793, 716,715, and others.
For Plastic-Coated Ferrous Sheets and Strip.
First use on or about Nov. 20, 1962.

SN 168,989. Percy Allan Charlesworth, Old Bosham, Chichester, Sussex, England. Filed May 13, 1963.



The term "Digger" is disclaimed apart from the mark as shown. Owner of British Reg. No. 780,898, dated Aug. 16, 1958.
For Ship Anchors.

SN 171,898. Markem Machine Company, Keene, N.H. Filed June 26, 1963.

MARKEM

Owner of Reg. Nos. 161,548, 501,235, and 504,703.
For Printing Type and Printing Type Wheels.
First use June 12, 1963.

SN 175,274. Gim Metal Products, Inc., Glendale, N.Y. Filed Aug. 19, 1963.

GIM

For Metal Castings Used for Lamps and Lamp Stands.
First use Sept. 10, 1952.

SN 175,709. Aluminum Company of America, Pittsburgh, Pa. Filed Aug. 26, 1963.

ALUMAHUME

For Aluminum Foil for Cigarette Packages.
First use Aug. 6, 1963.

SN 175,724. The Carpenter Steel Company, Reading, Pa. Filed Aug. 26, 1963.

MANIFLEX

For Free-Machining Chrome-Nickel Alloy in the Form of Wire, Strips, Bars, Billets, and Other Shapes.
First use Aug. 7, 1963.

Class 15—Oils and Greases

SN 148,909. The Ridge Tool Company, Elyria, Ohio. Filed July 12, 1962.

RIDGID

Owner of Reg. Nos. 301,511, 419,190, and 633,970.
For Thread Cutting Oils and Lubricants.
First use June 8, 1932.

SN 161,471. Cities Service Oil Company (Delaware corporation—new corporation), New York, N.Y., by merger and change of name from Cities Service Oil Company (Delaware corporation), New York, N.Y. Filed Jan. 28, 1963.



The representation of the gasoline pump is disclaimed apart from the mark as shown.
For Gasoline.
First use in or about April 1961.

SN 178,416. A. W. Chesterton Company, Everett, Mass. Filed Oct. 7, 1963.

SPRA-FLEX

For Chain Drive, Open Gear and Wire Rope Lubricant.
First use at least as early as Apr. 30, 1963.

SN 178,617. Lubrigraph of Canada Co., Westmount, Montreal, Quebec, Canada. Filed Oct. 9, 1963.

Graph-Speed

For Industrial and Automotive Lubricants, Comprising Concentrates of Graphite in Mineral Oils and Other Carriers.
First use Aug. 3, 1963; in commerce Aug. 3, 1963.

SN 178,981. Sea-Way Marketing Company, Crown Point, Ind. Filed Oct. 14, 1963.

KAR-KRAFT

For Automotive Oils.
First use Aug. 10, 1963.

SN 179,158. The Pep Boys, Manny, Moe & Jack, d.b.a. Varsity Products Company, Philadelphia, Pa. Filed Oct. 16, 1963.



For Penetrating Oil.
First use Aug. 22, 1963.

SN 179,867. Shell Oil Company, New York, N.Y. Filed Oct. 18, 1963.

TELP

For Gasoline Additive.
First use June 13, 1963.

Class 16—Protective and Decorative Coatings

SN 155,344. Red Spot Paint & Varnish Co., Inc., Evansville, Ind. Filed Oct. 17, 1962.

Sign-Rez

Owner of Reg. No. 518,360.
For Paints Used in Silk Screen Processes and as a Spraying Lacquer on Plastic Coatings.
First use Oct. 11, 1962.

SN 161,845. The Alumeramic Corporation, Oceanside, N.Y. Filed Feb. 1, 1963.

PLEXAGLAZE

For Paint.
First use July 1, 1962.

SN 167,791. Aquavar, Inc., San Carlos, Calif. Filed Apr. 30, 1963.

AQUAVAR

For Water-Soluble Synthetic Resin Varnish for Use in Coating Freshly Lithographed Materials.
First use Apr. 15, 1963.

SN 168,805. California Products Corporation, Cambridge, Mass. Filed May 14, 1963.

NEW MASTERS

For Artists' Paints, Illustrators' Colors, Matte and Gloss Mediums and Gesso.
First use Mar. 28, 1963.

SN 168,806. California Products Corporation, Cambridge, Mass. Filed May 14, 1963.

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For Artists' Paints, Illustrators' Colors, Matte and Gloss Mediums and Gesso.
First use Mar. 28, 1963.

Class 17—Tobacco Products

SN 161,336. Wally Frank, Ltd., New York, N.Y. Filed Jan. 24, 1963.

CONSTANTINOPLE

For Tobacco Products—Namely, Pipe Tobacco.
First use on or about Jan. 1, 1942.

SN 165,657. Palomino Bros. Tobacco Co. Ltd., Kingston, Jamaica. Filed Mar. 28, 1963.

Mario Palomino

The mark "Mario Palomino" is the name of living individuals, whose consents are of record.
For Cigars.
First use June 1, 1959; in commerce Apr. 21, 1962.

SN 172,372. Consolidated Cigar Corporation, New York, N.Y. Filed July 3, 1963.

BEN FRANKLIN

The mark refers to the great American historical patriot and philosopher and to no particular living individual.
For Cigars.
First use June 21, 1963.

Class 19—Vehicles

SN 161,715. Kar Products, Inc., Chicago, Ill. Filed Jan. 30, 1963.



The mark is lined for green and yellow; however, the mark is not limited as to color.
For Automotive Parts and Supplies—Namely, Bushings for Front End; Wheel Brake Parts, Consisting of Shoe Guides, Drum Gaskets, Rollers, Shoe Guide Springs, Roller Pins and Guide Pins; Brake Cylinders and Parts Thereof; Brake Cables and Casings Therefor; Closure Caps for Radiator and Fuel Tank Openings; Drag Link Assembly Parts; Door and Deck Handle Assemblies and Parts Thereof; Fender Welts; Rubber Bumpers and Side-View Mirrors; Steering Assembly Parts; Shackle Assembly Parts; Tie Rod Assembly Parts; Wheel Weights; Accelerator Assembly Parts; Axle Assembly Parts; Choke Assembly Parts; Hood Latch Assembly Parts; Check Links and Parts Thereof; Door Latch Assembly Parts; Dust Plugs; Wheel Suspension Assembly Parts; Knobs for Control Rods and Levers; and Stabilizer Assembly Parts.
First use Jan. 19, 1958.

SN 165,597. Hercules Gallon Products, Inc., Gallon, Ohio. Filed Mar. 28, 1963.



For Dump Bodies, Refuse and Garbage Bodies, Van Bodies, Bulk Material Bodies, Pick-Up Bodies, Platform and Stake Bodies, Frame Type and Frameless Dump Trailers and Semi-Trailers, Stabilizers and Tilt Warning Devices for Truck and Trailer Axles; and Accessories for Vehicle Bodies—Namely, Coal Chutes, Cab Skirts, Screened Windows, Gate Locks, Side Boards, Batch Partitions, Frame Fillers, Wear Plates, Cement Spreaders and Spreader Arms.
First use Feb. 25, 1963.

SN 171,306. Grant W. Bauer and Co., Bay Head, N.J. Filed June 19, 1963.

BAY HEAD SKIFF

Applicant disclaims the word "Skiff" apart from the mark as shown.
For Boats.
First use May 1, 1956.

SN 174,081. Caterpillar Tractor Co., East Peoria, Ill. Filed July 31, 1963.

CAT

Owner of Reg. Nos. 564,272 and 742,294.
For Motor Trucks, Dump Wagons, Wheel Tractor-Dump Wagon Combinations, Wheel Tractors, and Parts Therefor.
First use Feb. 17, 1949, on dump wagons.

SN 174,192. King Richards, Inc., Compton, Calif. Filed Aug. 1, 1963.

LOWBOY

The drawing is lined for red and blue.
For Camping Trailers.
First use January 1963.

SN 174,785. Montclair Mobile Homes, Inc., Montclair, Calif. Filed Aug. 9, 1963.

BONANZA

For House Trailers.
First use Nov. 12, 1961.

SN 177,082. Pan American World Airways, Inc., New York, N.Y. Filed Sept. 16, 1963.

FLEETSTER

For Aircraft and Parts Therefor.
First use Sept. 4, 1963.

SN 177,388. Turtle Wax, Inc., Chicago, Ill. Filed Sept. 19, 1963.

RHINO-VYNO

For Floor Mats for Automobiles.
First use Aug. 9, 1963.

SN 177,397. L. S. Brown Company, Atlanta, Ga. Filed Sept. 20, 1963.

SPORTS-MASTER

Owner of Reg. No. 680,331.
For Canvas Boat Covers and Canvas Boat Tops.
First use on or about Oct. 16, 1957.

SN 177,487. E. F. Brewer Company, Butler, Wis. Filed Sept. 23, 1963.

SAN-X

For Caster Wheels.
First use on or about Aug. 22, 1963.

SN 177,494. Christ-Craft Corporation, Pompano Beach, Fla. Filed Sept. 23, 1963.

CAVALIER

Owner of Reg. No. 644,088.
For Boats.
First use Jan. 18, 1955.

Class 20 — Linoleum and Oiled Cloth

SN 164,811. Congoleum-Nairn Inc., Kearny, N.J. Filed Mar. 18, 1963.

Congoleum-Nairn
FINE FLOORS

Applicant disclaims the words "Fine Floors" apart from the mark as shown. The drawing is lined for blue. Owner of Reg. Nos. 78,472, 123,332, and 269,684.
For Plastic Coverings of the Smooth Surface, Resilient Type for Surfaces Such as Floors, Walls, Countertops, and the Like in the Form of Rolls, Rugs and Tiles.
First use Nov. 18, 1960.

Class 21 — Electrical Apparatus, Machines, and Supplies

SN 145,573. MSI Electronics Inc., Richmond Hill, N.Y. Filed May 28, 1962.

BOLOMISTOR

For Semiconductor Devices.
First use Nov. 10, 1961.

SN 148,909. The Ridge Tool Company, Elyria, Ohio. Filed July 12, 1962.

RIDGID

Owner of Reg. Nos. 301,511, 419,190, and 633,970.
For Electric Motors, for Use in Power Drives and Threading Machines.
First use June 13, 1945.

SN 152,123. Ebauches S.A., Neuchatel, Switzerland. Filed Aug. 29, 1962.

Applicant disclaims the transistor symbol apart from the mark as shown on the drawing. Owner of Swiss Reg. No. 190,602, dated Feb. 21, 1962.
For Semiconductor Devices Including Transistors, Phototransistors, Diodes, Photodiodes, Tunnel Diodes, Rectifiers, Controlled Rectifiers, Building Blocks for Industrial Electronics Including Printed Circuit Boards for Digital Applications, Amplifiers, Servomechanisms, Transducers, Micromodules, and Regulated Power Supplies.

SN 153,684. Sears, Roebuck and Co., Chicago, Ill. Filed Sept. 21, 1962.

CLASSIC

For Electric Cooking Stoves.
First use on or about Dec. 26, 1960.

SN 155,110. W. M. Still & Sons, Limited, London, England. Filed Oct. 12, 1962.

ELECTROMATIC

For Automatic Beverage Dispensing Machines and Parts Thereof.
First use November 1961; in commerce November 1961.

SN 160,436. Mosebach Manufacturing Company, Pittsburgh, Pa. Filed Jan. 9, 1963.

MANCO

The drawing is lined for shading only.
For Heavy and Light Duty Industrial and Railroad Equipment Resistors, Power and Signal Rail Bonds, Trolley, Crane and Mine Locomotive Overhead Line Equipment, and Electronic Systems and Controls.
First use Jan. 4, 1960.

SN 160,645. Seymour H. Levy, Chicago, Ill. Filed Jan. 14, 1963.

HER MAJESTY

For Electrical Appliances—Namely, Small Electrical Appliances for the Home, Including Electric Coffeemakers, Steam Irons, Toasters, and Blenders.
First use Jan. 3, 1963.

SN 161,686. Correlated Data Systems Corporation, Glendale, Calif. Filed Jan. 30, 1963.

For Signal Simulator, PCM Bit Synchronizer, Notch Filter.
First use July 21, 1961.

SN 162,183. National Semiconductor Corporation, Danbury, Conn. Filed Feb. 6, 1963.

INCH

For Semiconductor Devices—Namely, Transistors Useable as Integrated Chopper Elements.
First use Feb. 2, 1962.

SN 162,439. Brad Harrison Company, Hillside, Ill. Filed Feb. 11, 1963.

PLUG-SAVER

For Auxiliary Electrical Connectors.
First use Mar. 14, 1962.

SN 164,677. Electrochimica Corporation, Menlo Park, Calif. Filed Mar. 4, 1963.

ELCA

For Electrochemical Fuel Cells and Batteries, Both Primary and Secondary—Namely, Silver Oxide-Zinc Batteries, Silver Oxide-Cadmium Batteries, Mercuric Oxide-Zinc Batteries, and Mercuric Oxide-Cadmium Batteries.
First use Nov. 1, 1961.

SN 165,364. The Ohio Crankshaft Company, Cleveland, Ohio. Filed Mar. 25, 1963.

MELTMASTER

For Control of Electrical Induction Heating Equipment for Melting.
First use Dec. 19, 1962.

SN 166,193. Industrial Electronic Hardware Corp., New York, N.Y. Filed Apr. 5, 1963.

IEH

The mark consists of the letters "IEH" and design.
For Components Used in Electrical and Electronic Circuitry—Namely, Vacuum Tube Sockets, With or Without Collapsible Tube Shields, Retainer Clips, or Shield Base; Sockets for Nuvistor, for Transistor and Other Semiconductor Components, for Kinescope, for Speaker, and for Crystal; Battery Connector, Multiple Pin Connector, Interlock Connector, A.C. Connector, Antenna Connector, and Phonograph Connector; Terminal Strips, Terminal Boards, Terminal Lugs, and Terminal Brackets; Panel Connector, Edgeboard Connector, Angle Connector, and Tape Cable Connector; Transistorized Line Amplifier, Printed Circuit Board Amplifier, Fuse Holder, Capacitor Mounting Board; Radiation Detection Devices, Dosimeter, Computer Indicator for Dosimeter, Self-Indicating Dosimeter, and Dosimeter Charger; Transformers, Coil Assemblies, and Chokes.
First use Mar. 1, 1963.

SN 167,651. Ransburg Electro-Coating Corp., Indianapolis, Ind. Filed Apr. 26, 1963.

RANSPREP

For Chemical Compounds, Mixtures or Substances Capable of Rendering Surfaces of Electrically Insulating Materials Electrically Conductive.
First use on or about June 26, 1962.

SN 169,146. William J. Locklin, d.b.a. Loran, Redlands, Calif. Filed May 17, 1963.

NIGHTSCAPING

For Electrical Fixtures and Parts Employed in Illuminating Landscaped Areas—Namely, Illuminating Fixtures, Cables and Transformers.
First use July 10, 1962.

SN 173,123. N.V. Philips' Gloeilampenfabrieken, Eindhoven, Netherlands. Filed July 16, 1963.

PLUMBICON

Owner of Dutch Reg. No. 138,469, dated Sept. 7, 1960.
For Television Camera Tubes.
First use on or about Mar. 20, 1963; in commerce on or about Mar. 20, 1963.

SN 174,770. Industrial Condenser Corp., Chicago, Ill. Filed Aug. 9, 1963.

SYNTHAR

For Capacitors.
First use June 28, 1963.

SN 175,132. Russell & Stoll Company, Inc., New York, N.Y. Filed Aug. 15, 1963.

DUALEVEL

For Floor Boxes.
First use July 9, 1963.

SN 175,165. Channel Master Corporation, Ellenville, N.Y. Filed Aug. 16, 1963.

TELE VISTA

For Antenna Boosters, and Parts Thereof.
First use May 14, 1963.

SN 175,166. Channel Master Corporation, Ellenville, N.Y. Filed Aug. 16, 1963.

ULTRA-BEAM

For Rechargeable Flashlights, Parts Thereof and Accessories Therefor.
First use May 14, 1963.

SN 175,658. The I-T-E Circuit Breaker Company, Philadelphia, Pa. Filed Aug. 23, 1963.

Tru-Blu

For High Voltage Insulators.
First use April 1963.

SN 176,118. Sequoia Wire Company, Redwood City, Calif. Filed Aug. 30, 1963.

HYRAD

For Plastic Insulated Wire and Cable Using Irradiated Polyethylene Formulation.
First use Jan. 6, 1956.

SN 176,133. Westinghouse Electric Corporation, Metuchen, N.J. Filed Aug. 30, 1963.

the Attaché

For Television Sets.
First use in or about August 1959.

SN 176,217. Minneapolis Scientific Controls Corp., Minneapolis, Minn. Filed Sept. 3, 1963.

COLD-START

For Electric Battery Chargers.
First use February 1961.

SN 176,218. Minneapolis Scientific Controls Corp., Minneapolis, Minn. Filed Sept. 3, 1963.

ELECTRO-BOOST

For Electric Battery Chargers.
First use February 1960.

SN 176,236. A. L. Rogers Development Corp., Seaford, N.Y. Filed Sept. 3, 1963.

MARINE GARD

For Electric Switches.
First use Apr. 10, 1952.

SN 176,246. Sprague Electric Company, North Adams, Mass. Filed Sept. 3, 1963.

CEROD

For Electrical Capacitors.
First use Oct. 12, 1956.

SN 178,431. Electro-Matic Products Co., Chicago, Ill. Filed Oct. 7, 1963.

BRAKE-MATIC

For Electrical Braking Controls for Three-Phase Induction Motors.
First use Aug. 8, 1963.

SN 178,432. Electrolier Corporation, Montreal, Quebec, Canada. Filed Oct. 7, 1963.

ELECTROLIER

Owner of Canadian Reg. No. 132,209, dated Aug. 9, 1963.
For Fluorescent and Incandescent Luminaries.

SN 178,607. W. R. Grace & Co., Cambridge, Mass. Filed Oct. 9, 1963.

ARMORCOAT

For Battery Separators.
First use July 17, 1963.

SN 178,689. Electronized Chemicals Corporation, Burlington, Mass. Filed Oct. 10, 1963.

POLYGUIDE

For Microwave Transmission Line.
First use Aug. 12, 1963.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 140,126. Hauni-Werke Korber & Co. K.G., Hamburg-Bergedorf, Germany. Filed Mar. 19, 1962.

Cascade

Priority claimed under Sec. 44(d) on German application filed Oct. 28, 1961; Reg. No. 772,825, dated Apr. 8, 1963.
For Cigarette Making Machines, Filter Tip Making Machines, Cigarette Packing Machines, Cigarette Collecting and Stacking Machines.

SN 142,231. Toro Manufacturing Corporation, Minneapolis, Minn. Filed Apr. 18, 1962.

WIND-TUNNEL

For Housings for Rotary Power Mowers.
First use on or about Nov. 1, 1958.

SN 148,909. The Ridge Tool Company, Elyria, Ohio. Filed July 12, 1962.

RIDGID

Owner of Reg. Nos. 301,511, 419,190, and 633,970.
For Benders for Conduit and Tubing; Brackets, Adapters for Geared Threaders; Carriages for Holding Pipe and Bolt Threaders on Power Drives; Carriers for Pipe and Nipple Threading Dies; Carrying Cases for Tools; Chasers for Threading Dies; Chucks for Power Drives and Pipe Threading Machines; Chucks for Nipples and Adapters Therefor; Cutters, Pipe and Tubing and Blades Therefor; Dies, Threading, Beveling, Grooving and Sizing Dies; Die Head Adapters for Lathes and Drill Presses; Die Stocks, Plain and Ratchet; Drills, Twist; Drill Guides; Drives, Power for Rotating Pipe and Rods; Drive Bars for transmitting Power; Drive Shafts With Universal Joints Therein; Extractors for Screws, Bolts and Nipples; Extractor Kits; Flaring Tools for Tubes; Handles, Plain and Ratchet Type for Dies and Reamers; Loops for Geared Threaders; Machines, Pipe and Bolt Threading; Machines, Motor Driven Tube Brushing; Oilers, Hand Operated Squirt Type; Racks for Holding Die Heads; Reamers, Spiral and Straight Flute for Pipe; Stands, Display Stands, Vise Holding Stands for Pipe Threading Machines and Power Drive; Supports for Supporting Pipe During Threading Operation; Support Arms for Supporting Threaders on Power Drives; Taps for Threading Pipe; Threaders for Pipes and Bolts, Hand and Geared; Tool Trays; Transporters for Transporting Vise Stands; Tube Soldering Clips; Vises, Chain Pipe Holding, Bench, Kit, Post and Yoke; Wrenches, Pipe and Monkey, Compound Leverage, Chain Pipe, Extractor, Strap, Hex and Spud.
First use June 18, 1923.

SN 149,088. Industrial Machinery, Inc., Birmingham, Ala. Filed July 16, 1962.

IMI

For Industrial Machinery, Such as Custom Designed and Precision Built Machinery for Processing Various Materials, Such as Pulp, Wood, Metals and the Like.
First use June 12, 1962.

SN 149,639. Charlescraft Corporation, Elk Grove, Ill. Filed July 24, 1962.

SHAVEX

Owner of Reg. No. 666,682.
For Electric Shavers.
First use Apr. 16, 1962.

SN 151,396. Charlescraft Corporation, Elk Grove, Ill. Filed Aug. 17, 1962.

SHAVEX XL Sixty Three

Owner of Reg. No. 666,682.
For Electric Shavers.
First use Apr. 16, 1962.

SN 151,397. Charlescraft Corporation, Elk Grove, Ill. Filed Aug. 17, 1962.

SHAVEX Classic

Owner of Reg. No. 666,682.
For Electric Shavers.
First use Apr. 16, 1962.

SN 158,016. Numerical Control Corporation, San Diego, Calif. Filed Sept. 12, 1962.

N/C

The drawing is lined for red.
For Mechanical Control Apparatus for a Satellite Specifically a Self-Erecting Boom for Orienting the Satellite Axis, and for Controllable Feed Drives for Machine Tools.
First use July 8, 1962.

SN 157,021. Symons Brothers Company, North Hollywood, Calif. Filed Nov. 9, 1962.

SYMONS

Applicant claims use for the area comprising the States of California, Washington, Oregon, Idaho, Arizona, Utah and Nevada.
For Screening and Separating Equipment—Namely, Vibrating and Gyrating Screens and Grizzlies for Dry and Wet Sizing of Coal, Stone, Ores, Sand and Gravel.
First use 1930.

SN 157,696. The Harris-Renwick Company Limited, Ottawa, Ontario, Canada. Filed Jan. 13, 1964.

SULTRA

Owner of Canadian Reg. No. 134,059, dated Jan. 3, 1964.
For Hair Shapers and Hair Shaper Blades.

SN 157,851. Milton Roy Company, Philadelphia, Pa. Filed Nov. 23, 1962.

mRoy

Owner of Reg. Nos. 655,033, 668,331, and 693,059.
For Controlled Volume Pumps, Particularly for Metering Fluid or Slurry Flows in Chemical Processing Equipment.
First use Oct. 1, 1962.

SN 157,852. Milton Roy Company, Philadelphia, Pa. Filed Nov. 23, 1962.

MILROYAL

Owner of Reg. Nos. 655,033, 668,331, and 693,059.
For Liquid Chemical Pumps.
First use Aug. 23, 1962.

SN 158,131. J. C. Bamford (Excavators) Limited, Rocester, Stafford, England. Filed Oct. 15, 1963.

JCB

Owner of British Reg. No. 773,566, dated Jan. 25, 1958.
For Power Operated Excavators and Loaders All for Handling, Transporting and Loading Earth, Minerals and Similar Materials and Parts and Fittings Therefor.

SN 158,519. Fairbanks, Morse & Co., Yonkers, N.Y. Filed Dec. 5, 1962.

khemline

For Centrifugal Pumps.
First use on or about Sept. 26, 1962.

SN 159,146. Automation Devices, Inc., Erie, Pa. Filed Dec. 14, 1962.

DYNA-MITE

For Feeding Equipment Vibrators for Use With Feeder Tracks, Hoppers, Chutes, and Similar Devices.
First use Apr. 30, 1962.

SN 159,534. Spang & Company, Butler, Pa. Filed Dec. 20, 1962.

DTH

For Drilling Tools.
First use Nov. 20, 1962.

SN 159,576. General Mills, Inc., Minneapolis, Minn. Filed Dec. 21, 1962.

MY ROSE

The word "Rose" is disclaimed apart from the mark as shown.
For Stainless Steel Flatware.
First use Nov. 2, 1962.

SN 159,742. Koehring Company, Milwaukee, Wis. Filed Dec. 26, 1962.

TURBOFLO

For Concrete Mixers.
First use on or about May 5, 1962.

SN 159,852. Spang & Company, Butler, Pa. Filed Dec. 27, 1962.

DTH

For Drilling Tools.
First use Nov. 20, 1962.

SN 161,551. Parker-Hannifin Corporation, Cleveland, Ohio. Filed Jan. 28, 1963.

IN-EX

For Tube Burring Tool.
First use January 1955.

SN 161,715. Kar Products, Inc., Chicago, Ill. Filed Jan. 30, 1963.

KAR

The mark is lined for green and yellow; however, the mark is not limited as to color.
For Automotive Parts and Supplies—Namely, Bushings for Motors; Brackets for Mounting Mufflers and Tail Pipes; Bearing Sleeve, Ball and Roller; Carburetors and Parts Thereof; Clutch Assembly Parts, Camshaft Assembly Parts; Safety Expansion Plugs; Hack Saw Blades; Parts Thereof; Gear Shift Assembly Parts; Retainers for Valve Springs, Valve Guides, Transmission Assembly Parts; Universal Joint Assembly Parts; Wheel Bearings and Cones; and Cylinder Head Assembly Parts; Differential Assembly Parts; Manifold Assembly Parts, and Oil Pan Assembly Parts.
First use Jan. 19, 1956.

SN 161,853. Societe Francaise de Coussinets Minces, St. Jean de la Ruelle, Loiret, France. Filed Feb. 1, 1963.

CF

For Bushings; Bearings—Namely, Ball Bearings, Roller Bearings and Needle Bearings.
First use Nov. 25, 1957; in commerce Dec. 12, 1958.

SN 164,223. The Joseph Dixon Crucible Company, Jersey City, N.J. Filed Mar. 8, 1963.

DIXON

Owner of Reg. Nos. 62,784 and 512,222.
For Sprayers for Powdered Graphite.
First use Mar. 1, 1961.

SN 164,917. Tensiometers, Inc., Barrington, R.I. Filed Mar. 18, 1963.

TENS-PAC

For Hydraulic Brakes for Providing a Drag to Material Wound on a Rotating Member.
First use Feb. 12, 1963.

SN 165,324. Goerlich's, Inc., Toledo, Ohio. Filed Mar. 25, 1963.

CHAMPION

For Exhaust Mufflers for Motor Vehicles.
First use Apr. 26, 1954.

SN 165,597. Hercules Galion Products, Inc., Galion, Ohio. Filed Mar. 28, 1963.

HG

For Vehicle-Mounted Hoists, Under Body Hoists, Telescoping Hydraulic Cylinder Mechanisms, Side, Rear End and Front End Loaders for Vehicles, Power Actuated End Gates for Vehicle Bodies.
First use Feb. 25, 1963.

SN 169,119. DO Company, Oakland, Calif. Filed May 17, 1963.

LUBRILINER

For Center Plate Lubricating Liners for Railroad Locomotive and Car Trucks.
First use in June 1961.

SN 169,224. Copperloy Corporation, Cleveland, Ohio. Filed May 20, 1963.

lite LL live

For Construction Materials for Work Stands.
First use Jan. 1, 1957.

SN 169,472. Nashoba Engineering Corp., West Concord, Mass. Filed May 22, 1963.

RAPIDRIL

For Electrically Powered Drilling Machines for Manufacturing Plant Use.
First use Nov. 30, 1961.
Subj. to Intf. with SN 161,774.

SN 169,802. Garret H. Vandermolen, d.b.a. Vandermolen Export Co., North Caldwell, N.J. Filed May 27, 1963.

PORTA-BLO

For Machinery (for Blowing, Spraying, Dusting Granular Application).
First use Sept. 27, 1962.

SN 170,534. Loren Hale, d.b.a. Refract-All Manufacturing Company, Tulsa, Okla. Filed June 7, 1963.

UNIGUN

For Nozzles for Use in the Application of Wet-Mix Refractories, Insulations, Asphalts, Mortars and the Like.
First use on or about May 22, 1963.

SN 170,652. Lithos, Incorporated, Chicago, Ill. Filed June 10, 1963.

SIGNALSTRIP

For Visual Printing Guide in the Nature of a Device Used To Indicate Tone and Image Qualities in Printing Plates and in Printing.
First use May 27, 1963.

SN 171,825. Yorke Scientific Corporation, Woodbridge, N.J. Filed June 25, 1963.

PORTO-PULL

For Device Used for Growing Crystals From a Seed Crystal Attached to a Rod Rotated and Progressively Moved Relative to a Mother Liquid.
First use Nov. 19, 1962.

SN 171,898. Markem Machine Company, Keene, N.H. Filed June 26, 1963.

MARKEM

Owner of Reg. Nos. 161,548, 501,235, and 504,703.
For Rotogravure Cylinders and Silk Screens.
First use June 12, 1963.

SN 171,921. The Ruthman Machinery Company, Cincinnati, Ohio. Filed June 26, 1963.

Gusher

Owner of Reg. No. 401,842.
For Pumps, Specifically Motor Driven and Belt Driven Centrifugal Pumps.
First use Aug. 1, 1924.

SN 172,234. Polytype AG, Freiburg, Switzerland. Filed July 1, 1963.

POLMASTER

Priority claimed under Sec. 44(d) on Swiss Reg. No. 196,101, dated Jan. 26, 1963.
For Rotary Gravure Printing Machines for Packaging Material.

SN 172,255. Standard-Thomson Corporation, Waltham, Mass. Filed July 1, 1963.

ELAC

For Power Actuators for Use in Automotive Apparatus, Such as Thermostative Valves, and for Use in Industrial Equipment.
First use June 12, 1963.

SN 172,529. Swingline Inc., Long Island City, N.Y. Filed July 5, 1963.

800

For Tackers.
First use June 3, 1963.

SN 173,057. Swingline Inc., Long Island City, N.Y. Filed July 15, 1963.

Swingline

800

Owner of Reg. Nos. 665,038, 672,768, and 699,384.
For Tackers.
First use June 3, 1963.

SN 173,139. Van Brode Milling Co., Inc., Clinton, Mass. Filed July 16, 1963.

ROYAL

For Molded Articles of Plastic Composition—Namely, Knives, Forks and Spoons.
First use Feb. 8, 1956.

SN 173,465. Jet-Speed, Inc., Springfield, Mo. Filed July 22, 1963.

JET-SPEED

For Electrically Operated Domestic Dishwashers.
First use Apr. 1, 1963.

SN 173,551. Ansul Chemical Company, Marinette, Wis. Filed July 23, 1963.

PUMPAK

For Portable Spraying Apparatus—Namely, Tank Sprayers for Spraying Insecticides, Herbicides, Etc., and for Use as Fire Extinguishers, and Component Parts of Said Sprayers and Fire Extinguishers.
First use Apr. 10, 1963.

SN 173,554. Sheldon M. Booth, d.b.a. Diamond Tool Company, South Haven, Mich. Filed July 23, 1963.

LOC-KEY-SET

For Diamond Dressing Tools—i.e., a Tool Containing a Diamond Nib Used for Dressing Emery Wheels and the Like.
First use Aug. 1, 1941.

SN 175,526. The Valspar Corporation, Rockford, Ill. Filed Aug. 21, 1963.

Valco

For Putty Knives, Taping Knives, Paint Scrapers and Wall Scrapers.
First use on about Apr. 4, 1962.

SN 175,646. Eagle Iron Works, Des Moines, Iowa. Filed Aug. 23, 1963.

DIALSPLIT

For Water Scalping and Sand Classifying Equipment and Control Systems Therefor.
First use June 25, 1962.

SN 175,983. Easy-Way Products, Inc., Ponca City, Okla. Filed Aug. 29, 1963.

KEN-DO

For Electric Material Conveyors.
First use July 13, 1963.

SN 176,110. National Engineering Company, Chicago, Ill. Filed Aug. 30, 1963.

PULSE JET

For Air Conveyor Systems for Granular Material, and Component Parts Used in Such Systems.
First use on or about Mar. 22, 1963.

SN 176,114. The Rollside Corporation, Columbus, Ohio. Filed Aug. 30, 1963.

ROLLSIDE

For Machine for Fabricating and Processing Sheet Metal Siding.
First use Aug. 23, 1963.

SN 176,153. Brother International Corporation, New York, N.Y. Filed Sept. 3, 1963.

Cambridge

For Sewing Machines and Typewriters.
First use November 1960.

SN 176,642. Diamond National Corporation, New York, N.Y. Filed Sept. 10, 1963.

DN

For Wooden Spoons, Forks and Stirrers.
First use Jan. 13, 1961, on wooden forks.

SN 176,865. Aldens, Inc., Chicago, Ill. Filed Sept. 13, 1963.

ALDENS Powercraft

For Electric Hair Clippers and Parts Thereof.
First use July 1, 1963.

SN 177,417. Globe Hoist Company, Philadelphia, Pa. Filed Sept. 20, 1963.

GLOBE

Owner of Reg. Nos. 566,187, 631,263, and 647,056.
For Lifting, Elevating, Lowering, Positioning, and Leveling Apparatus Including: Vehicle Hoists and Lifts, Particularly Automobile and Truck Hoists and Lifts; Elevators, Particularly of the Industrial and Material Handling Type; Leveling Ramps, Particularly Hydraulically and Mechanically Operated for Loading Docks; Special Purpose Lifts; Special Purpose Material Lifting and Handling Apparatus; Power Equipment for Lifts and Elevators, Particularly of the Hydraulic Type and Controls Therefor; and Parts and Accessories Therefor.
First use August 1928 on lifting, elevating, lowering, positioning, and leveling apparatus including: vehicle hoists and lifts.

SN 178,281. Hupp Corporation, Cleveland, Ohio. Filed Oct. 3, 1963.

SMITHERM

For Thread Winding Apparatus.
First use Dec. 28, 1961.

SN 178,369. Questron America, Inc., Ellenville, N.Y. Filed Oct. 4, 1963.

CAROUSEL

For Machines for Printing Cylindrical Articles.
First use Apr. 26, 1963.

SN 178,378. Textron, Inc., Providence, R.I. Filed Oct. 4, 1963.

HOMELITE

For Outboard Engines.
First use Nov. 2, 1961.

SN 178,380. Tydeman Machine Works, Inc., Redwood City, Calif. Filed Oct. 4, 1963.

TYMAC

For Hydraulic Tracers for Machine Tools and Hydraulic Pumps.
First use Aug. 1, 1963.

SN 178,394. Algas Industries, Los Angeles, Calif. Filed Oct. 7, 1963.

For Apparatus for Use in Connection With Internal Combustion Engines, Said Apparatus Comprising Carburetors, Liquid-To-Gas Converters, Pressure Regulators, Air and Gas Mixers, Vaporizers, and Heat Exchangers.
First use Mar. 20, 1963.

SN 178,713. Erwin Muller, Lingen (Ems), Germany. Filed Oct. 10, 1963.

NOVUS

For Staplers, Stapling Pliers, Staples and Staple Removers for Office and Industry Use.
First use Dec. 5, 1952; in commerce June 1, 1957.

SN 178,806. Industrial Tectonics, Inc., Ann Arbor, Mich. Filed Oct. 11, 1963.

iTi

Owner of Reg. No. 583,392.
For Precision Machined Balls for Use as Bearings and Other Machine Purposes, Bearings, Including Spherical Plain and Rod End Bearings, Fluid Film Bearings, Anti-Friction Bearings and Ball Bearings and Ball Plug Gages.
First use 1960.

SN 179,147. McCrosky Tool Corporation, Meadville, Pa. Filed Oct. 16, 1963.

ZIP

For Milling Cutters.
First use May 1, 1963.

SN 179,644. Massey-Ferguson Limited, Toronto, Ontario, Canada. Filed Oct. 23, 1963.

FERGUSON SYSTEM

As to the portion of the mark comprising the tractor emblem, applicant makes no claim to a representation of goods apart from the distinctive silhouette shown. Owner of Reg. Nos. 393,026 and 693,470.
For Farm Tractors, and Parts and Accessories Therefor.
First use 1947; in commerce 1947.

SN 179,687. American Machine & Foundry Company, New York, N.Y. Filed Oct. 24, 1963.

UNIMATIC

For Bowling Lane Conditioning Machines and Parts and Adjuncts Therefor.
First use approximately Jan. 7, 1962.

SN 179,692. Brother International Corporation, New York, N.Y. Filed Oct. 24, 1963.

PRESTIGE

For Sewing Machines, Typewriters and Knitting Machines.
First use June 1963.

SN 180,061. Barber-Greene Company, Aurora, Ill. Filed Oct. 30, 1963.

DRYERPAC

For Aggregate Rotary Dryers and Dust Collectors.
First use Oct. 10, 1963.

SN 180,154. Hanson Equipment Company, South Beloit, Ill. Filed Oct. 28, 1963.

SWATH-O-MATIC

For Power Operated Sprayers and Accessories Therefor.
First use October 1955.

SN 180,155. Hanson Equipment Company, South Beloit, Ill. Filed Oct. 28, 1963.

HANSON

For Power Operated Sprayers, Accessories Therefor, and Snow Blowers.
First use July 1949 on power operated sprayers.

Class 24 — Laundry Appliances and Machines

SN 176,287. Diamond National Corporation, New York, N.Y. Filed Sept. 4, 1963.

DIAMOND

Owner of Reg. No. 270,580.
For Clothespins.
First use in June 1921.

SN 176,290. Diamond National Corporation, New York, N.Y. Filed Sept. 4, 1963.

diamond

Owner of Reg. No. 270,580.
For Clothespins.
First use Feb. 1, 1953.

Class 25 — Locks and Safes

SN 175,539. The American Hardware Corporation, New Britain, Conn. Filed Aug. 22, 1963.

TROY

For Locksets, Latchsets and Component Parts Thereof.
First use July 31, 1963.

Class 26 — Measuring and Scientific Appliances

SN 103,016. General Atronics Corporation, Bala-Cynwyd, Pa. Filed Aug. 19, 1960.

T/W TRANSFORMER

The word "Transformer" is disclaimed apart from the mark as shown.
For Spectrum Analyzers and Delay Line Spectrum.
First use July 18, 1960.

SN 114,297. Zeiss Ikon A.G., Stuttgart, Germany. Filed Feb. 23, 1961.

IKOFLEX

Owner of U.S. Reg. No. 323,118.
For Twin-Lens Reflex Cameras.
First use Jan. 26, 1934; in commerce 1935.

SN 148,169. Johnson Service Company, Dallas, Tex., assignee of Fischbach and Moore, Incorporated, Dallas, Tex. Filed July 2, 1962.

CYBERTRONIC

For Temperature and/or Humidity Control System for Controlling Atmospheric Conditions in a Multi-Unit Building and the Like.
First use June 15, 1962.

SN 150,101. Ray Data Corporation, Columbus, Ohio. Filed July 30, 1962.

PREDICTIVE

For Sensors for Determining and Analyzing the Frequency and Amplitude of Vibration of a Machine Being Monitored for Excessive Conditions, Monitoring Instrumentation for Comparing Specific Machine Information With Given Standards, and Data Storage Systems.
First use July 23, 1962.

SN 152,123. Ebauches S.A., Neuchatel, Switzerland. Filed Aug. 29, 1962.



Applicant disclaims the transistor symbol apart from the mark as shown on the drawing. Owner of Swiss Reg. No. 190,602, dated Feb. 21, 1962.
For Laboratory Instrumentation for Semiconductor Devices.

SN 152,185. Zeiter-Zeitstudien-Geräte G.m.b.H., Mannheim-Gartenstadt, Germany. Filed Aug. 29, 1962.

REPORTIME

Priority claimed under Sec. 44(d) on German application filed Mar. 2, 1962; Reg. No. 765,244, dated Sept. 11, 1962.
For Electrical Data Recording and Evaluating Devices for Making Time and Work Studies.

SN 152,370. American Radiator & Standard Sanitary Corporation, New York, N.Y. Filed Sept. 4, 1962.

SHIFTOMATIC

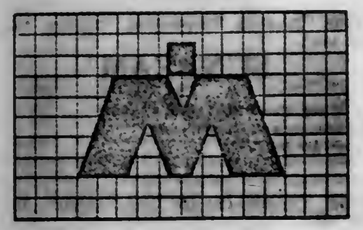
For Thermostatically Operated Control Devices Used in Combination With Air Heating and Air Cooling Equipment.
First use July 31, 1962.

SN 153,704. United Systems Corporation, Dayton, Ohio. Filed Sept. 21, 1962.

DIGITEC

For Portable Voltmeters and Other Electrical Characteristic Measuring Apparatus for the Digital Readout of any Parameter Which Can Be Represented by a Voltage.
First use on or about Mar. 1, 1962.

SN 154,422. Mears Controls, Inc., Beaverton, Oreg. Filed Oct. 3, 1962.



Owner of Reg. No. 741,879.
For Electric Thermostats.
First use May 1, 1961.

SN 156,343. Tracor, Inc., Austin, Tex. Filed Oct. 31, 1962.



For VLF Time Synchronization Systems and Modular Components Thereof.
First use at least as early as Mar. 12, 1957.

SN 157,249. Sanders Associates, Inc., Nashua, N.H. Filed Nov. 14, 1962.



The drawing is lined for the color red, for which no claim is made.
For Phase Comparators, Gyroscopes and Gyroscopic Instruments.
First use Oct. 26, 1962.

SN 157,690. Fisher Scientific Company, Pittsburgh, Pa. Filed Nov. 21, 1962.

DILUMAT

For Sampling, Diluting and Dispensing Apparatus for Measuring and Dispensing Pre-Set Volumes of Solutions by Means of Micrometer-Controlled Metering Pumps.
First use June 1, 1962.

SN 158,193. Taylor Instrument Companies, Rochester, N.Y. Filed Nov. 29, 1962.

PANELMATION

For Fluid Process Control Panels Upon Which Are Mounted Pneumatically Actuated Instruments of the Type Which Indicate, Record, and/or Control the Value of Fluid Process Conditions.
First use September 1962.

SN 158,693. Electronics Corporation of America, Cambridge, Mass. Filed Dec. 7, 1962.

UV-eye

Owner of Reg. No. 402,580.
For Electrical Apparatus for Sensing Radiation, and Control Equipment for Use With Such Radiation Sensors.
First use Nov. 8, 1962.

SN 158,955. B-D Laboratories, Inc., East Rutherford, N.J. Filed Dec. 12, 1962.

FIBROMETER

For Device for Determining Coagulation Time and Parts Thereof.
First use on or about June 29, 1962.

SN 158,977. International Telephone and Telegraph Corporation, New York, N.Y. Filed Dec. 12, 1962.

MMP

For Data Processing Systems and Apparatus Therefor.
First use June 8, 1962.

SN 159,014. Pall Corporation, Glen Cove, N.Y., assignee of Trinity Equipment Corporation, Cortland, N.Y. Filed Dec. 12, 1962.

TRINOX

For Thermocouple Elements and Assemblies.
First use Oct. 11, 1957.

SN 159,815. Craig Instrument Corporation, Long Branch, N.J. Filed Dec. 27, 1962.

MORRIS TRAVERSOMETER

For Measuring Instruments for Measuring Length of Cut to Shoulder, Depth of Bores, Length of Cut-Off Pieces for Lathes, and Depth of Drill or Bore Holes on Vertical Mills and Drill Presses.
First use Jan. 16, 1962.

SN 159,869. Branson Instruments, Incorporated, Stamford, Conn. Filed Dec. 28, 1962.

SONOMAX

For Electrical Generator of Sonic and Ultrasonic Frequencies for the Actuation of Piezoelectric Devices.
First use Dec. 12, 1962.

SN 159,978. Elmwood Sensors, Inc., Providence, R.I. Filed Dec. 31, 1962.

ELSEN

For Thermostatic Controls.
First use on or about Dec. 18, 1962.

SN 160,129. Photostat Corporation, Rochester, N.Y. Filed Jan. 3, 1963.

PLATEMASTER

For Photographic Platemaking Equipment—Namely, Photographic Camera, Developing and Drying Equipment.
First use on or about Dec. 18, 1962.

SN 160,358. Bell Aerospace Corporation, Wheatfield, N.Y. Filed Jan. 8, 1963.



The drawing is lined for shading purposes only, and is not intended to depict any particular color.
For Aircraft and Missile Control Instruments—Namely, Accelerometers, Gyroscopes, Radio Coders and Decoders, and Components Thereof.
First use on or about Sept. 1, 1960.

SN 160,911. Whaledent, Inc., Brooklyn, N.Y. Filed Jan. 17, 1963.

PIN·MATES

For Dowels for Denture Dies.
First use Dec. 29, 1961.

SN 161,006. Coleman Instruments, Inc., Maywood, Ill. Filed Jan. 21, 1963.

AUTOSET

For Chemical Analytical Instruments—Namely, Spectrophotometers and Accessories Therefor.
First use February 1962.

SN 161,030. Enna-Werk Optische Anstalt Dr. Appelt K.G., Munich, Germany. Filed Jan. 21, 1963.

ENNA

Owner of German Reg. No. 709,860, dated Jan. 13, 1958.
For Photographic Objectives and Lenses, and Projectors.
First use October 1951; in commerce October 1951.

SN 161,155. Clary Corporation, San Gabriel, Calif. Filed Jan. 22, 1963.



For Cameras, Contact Printers, Darkroom Safe Lights, Vacuum Frames, Plate Makers and Layout Tables.
First use Nov. 9, 1962.

SN 161,220. Wayne-George Corporation, Newton, Mass. Filed Jan. 22, 1963.

WAYNE-GEORGE

For Data Processing Apparatus, Particularly, Optical Shaft Angle Encoding Apparatus.
First use Dec. 14, 1963.

SN 161,484. Eastman Kodak Company, Rochester, N.Y. Filed Jan. 28, 1963.

MAGNAPRINT

For Film Readers and Printers.
First use Dec. 18, 1962.

SN 161,568. Sunbeam Corporation, Chicago, Ill. Filed Jan. 28, 1963.

SUNBEAM

Owner of Reg. Nos. 673,511 and 674,957.
For Barometers and Hygrometers.
First use July 18, 1962.

SN 161,593. Cummins-Chicago Corp., Chicago, Ill. Filed Jan. 29, 1963.

DAT-A-READ

For Business Machines—Namely, Data Processing Apparatus Components Intended Primarily for Converting Record Media Indicia to Electrical Signals.
First use Jan. 7, 1960.

SN 162,006. Mojonnier Bros. Co., Chicago, Ill. Filed Feb. 4, 1963.

FLO-MIX

For Equipment for Proportioning and Mixing Flavors, Including Syrups and Fruit Juices, and Water Without Mechanical Agitation.
First use Jan. 3, 1957.

SN 162,151. Electronics for Education, Inc., Kensington, Md. Filed Feb. 6, 1963.

Grade Master

For Test Paper Grading Apparatus.
First use Dec. 28, 1962.

SN 162,926. Eastman Kodak Company, Rochester, N.Y. Filed Feb. 18, 1963.

EKTALINE

Owner of Reg. Nos. 699,652, 699,793, and 745,819.
For Photographic Paper and Processing Apparatus.
First use June 21, 1962.

SN 163,584. Rite Autotronics Corporation, Los Angeles, Calif. Filed Feb. 27, 1963.



For Alternator Diode Testers, Ammeters, Battery Testers, Camdwell Angle Testers for Use in Checking Distributors, Compression Testers, Electrical Meters, Generator Testers, Ignition Output Testers, Ohmmeters, Oil Gauges, Pressure Gauges, Starter Switches, Tachometers, Temperature Instruments, Timing Lights, Vacuum and Fuel Pump Testers, Vacuum Gauges, Voltage Regulator Testers, and Voltmeters.
First use Feb. 19, 1962, on timing lights.

SN 164,251. Keithley Instruments, Inc., Cleveland, Ohio. Filed Mar. 8, 1963.



For Electrical and Electronic Apparatus Including Signal Dividers, Amplifiers, Voltage Supplies, Relays, and Measuring Instruments Including Ammeters, Voltmeters, Ohmmeters, Electrometers, Static Meters, and Electrical Bridges and Accessories Thereof.
First use November 1959 on electrometers.

SN 164,818. Da-Lite Screen Company, Inc., Warsaw, Ind. Filed Mar. 18, 1963.

VIDIO

For Portable Projection Screens.
First use Mar. 8, 1961.

SN 165,490. Beckman Instruments, Inc., Fullerton, Calif. Filed Mar. 27, 1963.

SPIRADEL

For Electrical Time-Delay Lines.
First use Oct. 26, 1962.

SN 165,801. Earl Mawson, d.b.a. Ancyclo Company of America, Philadelphia, Pa. Filed Apr. 1, 1963.

ANCYCLO

For Lenses.
First use June 1, 1962.

SN 166,142. Tecnifax Corporation, Holyoke, Mass. Filed Apr. 4, 1963.



Owner of Reg. No. 587,587.
For Facsimile Equipment and Associated Materials—Namely, Diazo Printing and Developing Machines and Units for Making Diazotype Prints, Both Negative and Positive and for the Developing of the Prints, Projection and Polarizing Apparatus and Associated Apparatus and Materials, Sensitized Paper, Film and Fabric for Diazo Reproduction, and Materials for Making Slide Transparencies.
First use Apr. 15, 1949.

SN 166,582. J. Roach Sons, Inc., Plainfield, Iowa. Filed Apr. 11, 1963.



The drawing is lined for red, but color is not claimed as a feature of this mark. The words "Speed Sacker" are disclaimed apart from the mark as shown.
For Sacking and Weighing Machines.
First use Aug. 25, 1962.

SN 167,288. The May Department Stores Company, St. Louis, Mo. Filed Apr. 22, 1963.

FOTOCREST

For Photographic Film and Photographic Accessories—Namely, Flash Bulbs, Movie Screens and Camera and Gadget Bags.
First use November 1961.

SN 168,733. Gaydell, Inc., Pacific Palisades, Calif. Filed May 13, 1963.

TEMPSTIR

For Combination Thermometer and Spoon for Cooking Purposes.
First use Jan. 31, 1963.

SN 168,813. Ex-Cell-O Corporation, Detroit, Mich. Filed May 14, 1963.

AUTO-LIFT

For Data Storage and Computing Apparatus—Namely, Magnetic Drums.
First use on or about Jan. 1, 1963.

SN 170,237. The Superior Electric Company, Bristol, Conn. Filed June 3, 1963.

LUMISTAT

For Combined Variable Illumination Control Equipment for Electric Lighting and Light Value Indicator.
First use Sept. 26, 1960.

SN 170,366. Aero Service Corporation, Philadelphia, Pa. Filed June 5, 1963.

AERO/VIEW

For Photographic Equipment and Supplies—Namely, Cameras and Transparencies.
First use on or about Apr. 19, 1963, on transparencies.

SN 170,440. Van-Kel Industries, Inc., Livingston, N.J. Filed June 5, 1963.

VANDERKAMP

For Tablet Disintegration Tester.
First use Jan. 18, 1950.

SN 170,674. Rand Manufacturing Company, Flint, Mich. Filed June 10, 1963.

HOME-FINDER

For Pocket Magnetic Compass.
First use May 20, 1963.

SN 171,203. University Research Glassware Corporation, Carrboro, N.C. Filed June 17, 1963.



The words "Research" and "Glassware" are disclaimed apart from the mark as shown.
For Laboratory Glassware Apparatus.
First use Sept. 3, 1962.

SN 171,381. Prolabo, Paris, France. Filed June 19, 1963.

PROLABO

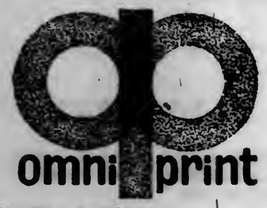
Owner of French Reg. No. 509,921, dated Dec. 14, 1962 (Paris); Natl. Inst. No. 196,354.
For Laboratory Apparatus and Instruments, Including Measuring Instruments for Determining the Density of Air and Points of Fusion.

SN 171,850. Central Laboratories, Inc., Lincoln, Nebr. Filed June 26, 1963.

PROJECT-ALL

For Projection Equipment and Accessories for Eye Testing.
First use on or about June 3, 1963.

SN 172,608. Omniprint Corporation, New York, N.Y. Filed July 8, 1963.



For Photo-Sensitive Copy Paper.
First use Nov. 26, 1962.

SN 172,752. McDonald's System, Inc., Chicago, Ill. Filed July 10, 1963.

PORTION-ALL

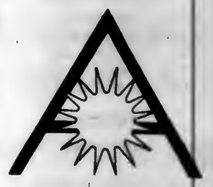
For Devices for Dispensing Measured Amounts of Fluids and Semi-Fluids.
First use May 15, 1963.

SN 173,332. Babson Bros. Co., Chicago, Ill. Filed July 19, 1963.

LEVOGRAPH

For Vacuum System Analyzer.
First use July 6, 1961.

SN 173,617. American Speedlight Corporation, Middle Village, N.Y. Filed July 24, 1963.



For Photographic Lighting Equipment; Electronic Flash Apparatus in Which a Capacitor Is Charged and Thereafter Discharged Through a Gas-Filled Tube To Produce a Flash of Light; High Intensity Light Source for Graphic Arts, Camera Photo Template, Duplication of Microfilm, Among Other Purposes; Control Units for Electronic Flash; Electronic Photoflash Equipment for Photographic Use; Xenon-Mercury Lamps Adapted for Photographic Use and Optical Instrument Use and for Microscope Illuminators; Xenon-Arc Lamps Primarily Adapted for Photographic Purposes and Associated Power Supplies Which Are Capable of Being Pulsed To Give High Light Output for Short-Time Durations; Light Sources Primarily Adapted for Photographic Purposes and Associated Power Supplies Using Xenon-Arc Lamps.
First use January 1963 on portrait photographic lighting equipment.

SN 173,988. Varian Associates, Palo Alto, Calif. Filed July 29, 1963.

VARACTOGRAPH

For Electrical Slide Rules.
First use Mar. 25, 1963.

SN 174,131. Toledo Scale Corporation, Toledo, Ohio. Filed July 31, 1963.

VERILUX

For Indication Systems for Weighing Scales.
First use Mar. 15, 1963.

SN 174,132. Toledo Scale Corporation, Toledo, Ohio. Filed July 31, 1963.

SENTINEL

For Weighing Scales.
First use in 1937.

SN 174,428. Oceanic Instruments, Inc., Houghton, Wash. Filed Aug. 5, 1963.

OCEANIC

For Scientific Marine and Limnology Instruments—Namely, Water Pollution Measuring and Controlling Instruments, Fish Collection and Tagging Equipment, Oceanographic Research Instruments, Geological Instruments, Underwater Sound Detection Instruments, Data Acquisition and Processing Equipment and Scientific Industrial Equipment—Namely, Electro-Chemical Monitoring Instruments and Equipment.
First use on or about Dec. 28, 1961.

SN 174,601. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Aug. 7, 1963.

DIGITELE

For Instrument for Measuring the Flow of a Liquid Through a Conduit.
First use Feb. 26, 1963.

SN 174,841. Dayco Corporation, Dayton, Ohio. Filed Aug. 12, 1963.

DAYCOLOG

For Calculators.
First use Aug. 5, 1963.

SN 175,059. M. H. Rhodes, Inc., Hartford, Conn. Filed Aug. 14, 1963.

Sentinel

For Parking Meters.
First use in July 1961.

SN 175,063. Sigma Instruments, Inc., South Braintree, Mass. Filed Aug. 14, 1963.

LOGITRON

For Optical Electronic Logic Devices.
First use Apr. 29, 1963.

SN 175,264. Edgerton, Germeshausen & Grier, Inc., Boston, Mass. Filed Aug. 19, 1963.

lite-mike

For Light Measuring Equipment, Pulse Measuring Equipment, Infrared Measuring Equipment, Light Detectors, Infrared Detectors, Pulse Detectors, Associated Power Supplies, Light Indicators, Infrared Indicators, and Pulse Indicators.
First use in or about March 1963.

SN 175,299. Luckey Laboratories, Inc., San Bernardino, Calif. Filed Aug. 19, 1963.

SOBER-METER

For Devices for Detecting the Presence of Alcohol.
First use May 10, 1963.

SN 175,328. Logan Smith and Associates, Harbor City, Calif. Filed Aug. 19, 1963.

GRAB CAMERA

The word "Camera" is disclaimed apart from the mark as shown.
For Camera Apparatus for Underwater Exploitation.
First use Nov. 15, 1962.

SN 175,597. Monroe Calculating Machine Company, Orange, N.J. Filed Aug. 22, 1963.

IQ

Owner of Reg. No. 754,123.
For Data Handling Office Machines, Including Calculating Machines.
First use on or about Apr. 9, 1963.

Class 27 — Horological Instruments

SN 174,952. General Time Corporation, New York, N.Y. Filed Aug. 13, 1963.

EASTCLOX

For Clocks and Watches.
First use July 12, 1963.

SN 175,400. General Time Corporation, New York, N.Y. Filed Aug. 20, 1963.



Owner of Reg. No. 109,232.
For Clocks and Watches.
First use March 1963.

SN 175,401. General Time Corporation, New York, N.Y. Filed Aug. 20, 1963.



For Clocks and Watches.
First use January 1960.

Class 28 — Jewelry and Precious-Metal Ware

SN 155,790. Carlos Espino, Los Angeles, Calif. Filed Oct. 24, 1962.



Applicant disclaims the term "Change-A-Link" apart from the mark.
For Jewelry.
First use October 1961.

SN 174,615. Shields Inc. of Attleboro, Mass., Attleboro, Mass. Filed Aug. 7, 1963.

WRAP-LINK

For Men's Jewelry.
First use July 22, 1963.

SN 177,612. Coro, Inc., New York, N.Y. Filed Sept. 24, 1963.

FRENCH TAXI HORN

For Necklaces, Bracelets, Earrings, Jewelry Clips, Brooches, Lockets, Finger Rings, Charm Bracelets, Charms, Pendants, All Pearls for Personal Wear and the Following Goods Made in Whole or in Part of Precious Metal or Plated With Same: Beads, Pins and Jewelry Initials.
First use June 12, 1963.

SN 178,819. Ripley and Gowen Company Incorporated, Attleboro, Mass. Filed Oct. 11, 1963.

STYLIST

Owner of Reg. No. 669,274.
For Men's Jewelry Consisting of Tie Slides, Collar Pins, Cuff Buttons, Dress Sets Which Consist of a Pair of Cuff Links and Three Studs for Men's Dress Shirts, Watch Chains, Belt Buckles, Cuff Links, Tie Bars, Tie Tacks, and Key Chains.
First use Jan. 1, 1933.

SN 179,454. Oneida Ltd., Oneida, N.Y. Filed Oct. 21, 1963.

OCEAN CREST

For Silverplated Flat Tableware.
First use Sept. 10, 1963.

SN 179,650. Vincent Orlando, d.b.a. Vorland Sales Co., Kearney, N.J. Filed Oct. 23, 1963.

VOR

For Jewelry.
First use June 18, 1963.

SN 180,079. Empire Crafts Corporation, Newark, N.Y. Filed Oct. 30, 1963.

LADY EMPIRE

Owner of Reg. No. 644,716.
For Silver Plated Flatware.
First use Sept. 6, 1963.

Class 29 — Brooms, Brushes, and Dusters

SN 176,351. Phillips Brush Corporation, Cleveland, Ohio. Filed Sept. 5, 1963.

Stagger-Tuft

For Hairbrushes.
First use June 10, 1963.

Class 30 — Crockery, Earthenware, and Porcelain

SN 156,567. Corning Glass Works, Corning, N.Y. Filed Nov. 5, 1962.

CENTURA

For China Dinnerware.
First use on or about Aug. 28, 1962.

Class 31 — Filters and Refrigerators

SN 141,818. Cory Corporation, Chicago, Ill. Filed Apr. 9, 1962.

C-QUESTER

For Water Conditioning Devices.
First use Oct. 25, 1961.

SN 152,422. Min-I-Soft Company, Golden, Colo. Filed Sept. 4, 1962.

MIN-I-SOFT

For Water Softening Apparatus.
First use Apr. 12, 1962.

SN 162,197. Sternco Industries, Inc., Allendale, N.J. Filed Feb. 6, 1963.

LONGLIFE

Owner of Reg. Nos. 360,987 and 674,270.
For Aquarium Filters Made of Glass Wool and of Activated Carbon.
First use Nov. 12, 1956.

Class 32 — Furniture and Upholstery

SN 159,445. Wembley, Inc., New Orleans, La. Filed Dec. 19, 1962.

WEMBLEY

Owner of Reg. Nos. 349,654, 729,779, and others.
For Necktie Racks and Supports, and Hangers for Men's Clothing, Known as Floor Valets.
First use Apr. 3, 1962, on necktie racks and supports.

SN 160,875. Mengel Wood Industries, Inc., Louisville, Ky. Filed Jan. 17, 1963.



Owner of Reg. Nos. 431,008, 735,861, and others.
For Kitchen Cabinets and Vanitories.
First use December 1950.

SN 178,401. American Seating Company, Grand Rapids, Mich. Filed Oct. 7, 1963.

STELLAR

For Chairs of the Theater Type for Use in Theaters, Auditoriums, Churches, Chapels, Waiting Rooms, Shoe Stores, Courtrooms and the Like.
First use July 18, 1963.

SN 179,406. Drexel Enterprises, Inc., Drexel, N.C. Filed Oct. 21, 1963.

EASTREND

For Bedroom, Dining Room, Living Room and Occasional Furniture.
First use Oct. 8, 1963.

Class 33 — Glassware

SN 156,881. Corning Glass Works, Corning, N.Y. Filed Nov. 1, 1962.

CENTURA

For Kitchenware, Ovenware and Tableware Formed of Crystalline Material Produced From Glass by Heat Treatment Thereof.
First use on or about Aug. 28, 1962.

SN 164,458. The New York Air Brake Company, New York, N.Y. Filed Mar. 12, 1963.

DUOVUE

For Plate Glass Having a Semi-Transparent, Reflecting Coating Thereon.
First use June 22, 1962.

SN 172,476. Empire Crafts Corp., Village of Newark, N.Y. Filed July 5, 1963.

PRINCESS

Owner of Reg. Nos. 614,339 and 702,916.
For Crystal Tableware.
First use on or about Apr. 25, 1963.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 124,936. New Castle Products, Inc., New Castle, Ind. Filed July 28, 1961.

AIRPAC

For Air Curtains.
First use July 17, 1961.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 161,605. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Jan. 29, 1963.

TRAIL-RIB

For Tires Particularly Adapted for Use as Rolling Containers for the Storage and Transport of Fluids.
First use Dec. 21, 1962.

SN 161,715. Kar Products, Inc., Chicago, Ill. Filed Jan. 30, 1963.



The mark is lined for green and yellow; however, the mark is not limited as to color.
For Automotive Parts and Supplies: Namely, Gaskets—Namely, Axle Gaskets, Cowl Vent Gaskets, Cylinder Head Gaskets, Differential Assembly Gaskets, Muffler and Tail Pipe Gaskets, Fuel Pump Gaskets, Manifold Gaskets, Oil Pan Gaskets; Rubber Hose and Tubing; Oil and Grease Retainer Seals and Shims.
First use Jan. 19, 1958.

SN 175,184. The B. F. Goodrich Company, Akron, Ohio. Filed Aug. 16, 1963.

MD-5

Owner of Reg. No. 747,871.
For Pneumatic Tires.
First use July 30, 1963.

Class 36 — Musical Instruments and Supplies

SN 100,787. Sterone Corporation, New York, N.Y., assignee of Samuel Josefowitz, New York, N.Y. Filed July 13, 1960.



For Phonograph Records of the Circular Disk Type.
First use June 22, 1960.

SN 100,788. Sterone Corporation, New York, N.Y., assignee of Samuel Josefowitz, New York, N.Y. Filed July 13, 1960.



Applicant, without waiving any common-law rights, hereby disclaims the words "Musical Masterpiece Society" apart from the mark as shown.
For Phonograph Records of the Circular Disk Type.
First use June 22, 1960.

SN 100,789. Sterone Corporation, New York, N.Y. assignee of Samuel Josefowitz, New York, N.Y. Filed July 13, 1960.



For Phonograph Records of the Circular Disk Type.
First use June 22, 1960.

SN 166,821. Glenn T. Mann, d.b.a. Central Records and Recording Co., Flint, Mich. Filed Apr. 16, 1963.

CENTRAL

For Phonograph Records.
First use Apr. 10, 1963.

Class 37 — Paper and Stationery

SN 92,474. Lindy Pen Co., Inc., Culver City, Calif. Filed Mar. 9, 1960.

AUDITOR'S

Owner of Reg. No. 687,244.
For Ballpoint Pens.
First use during the month of October 1955.

SN 124,071. Dri Mark Products, Inc., Mount Vernon, N.Y. Filed July 17, 1961.

DRI MARK

Owner of Reg. Nos. 729,143, 738,238, and 759,232.
For Ink Marker for Applying a Transparent Mark to a Surface.
First use May 15, 1961.

SN 138,550. Standard Packaging Corporation, New York, N.Y. Filed Feb. 23, 1962.

FIESTA

Owner of Reg. No. 553,879.
For Shelf Lining Paper.
First use Oct. 7, 1961.

SN 147,785. Arvey Corporation, Chicago, Ill. Filed June 27, 1962.

TRANSO FLIP N' SEAL

Owner of Reg. Nos. 228,598, 694,933, and others.
For Mailing Envelopes.
First use May 24, 1962.

SN 150,862. Ekonomik, Inc., Tacoma, Wash. Filed Aug. 9, 1962.

TREASURER

For Financial Registers for Indicating Credits, Debits and Balances of Various Accounts.
First use July 30, 1962.

SN 150,976. Sperry Rand Corporation, New York, N.Y. Filed Aug. 10, 1962.

KOMPAKT

For Paper Fasteners.
First use July 15, 1936.

SN 151,481. A. J. Fagard & Cie, Paris, France. Filed Aug. 20, 1962.

pantabille

Owner of French Reg. No. 455,610, dated Feb. 2, 1956 (Seine); Natl. Inst. No. 68,404.
For Multiple-Color Ball Point Pens.
First use Apr. 20, 1956; in commerce Dec. 8, 1958.

SN 153,700. Sturgis Business Forms, Incorporated, Sturgis, Mich. Filed Sept. 21, 1962.

SN

For Business Forms and Stationery.
First use Mar. 15, 1962.

SN 155,450. Universal Paper Goods Co., Los Angeles, Calif. Filed Oct. 18, 1962.

TRAVEX

Owner of Reg. No. 664,730.
For File Folders.
First use 1956.

SN 156,764. Plymouth Wholesale Corporation, New York, N.Y. Filed Nov. 6, 1962.

TOPPS

For School Supplies—Namely, Writing Paper, Typewriting Paper, Note Paper, Pads, Loose-Leaf Binders and Refills Therefor.
First use July 15, 1962.

SN 158,782. Bradner Smith & Company, Chicago, Ill. Filed Dec. 10, 1962.

PROGRESS

Owner of Reg. No. 329,102.
For Writing Tablets, Note Books, Composition Books, Blank Spelling Books, Music Books, Drawing Books, Stenographic Notebooks, Memorandum Books, Fillers, Filler Pads for Use With Loose Leaf Books, Typewriter Paper and Second Sheets, Both Padded and Not Padded, Scratch Pads, Index Cards, Index Guides, Art Paper, Packages of Note Sheets and/or Envelopes and Boxed Stationery Containing Writing Paper and Envelopes.
First use Nov. 26, 1962.

SN 159,387. A. T. Cross Company, Providence, R.I. Filed Dec. 19, 1962.



The mark consists of a frusto-conical black band near the tip opposite the writing end. Owner of Reg. No. 543,934.
For Pens and Pencils.
First use July 1951.

SN 159,408. Manifold Supplies Company, Brooklyn, N.N.Y. Filed Dec. 19, 1962.

panafax

For Copy Paper for Thermo-Copying Machines.
First use Dec. 8, 1962.

SN 159,687. Bon Clare, Decator, Ill. Filed Dec. 26, 1962.

MEMORIUM

For Partially Printed Forms Usable as Checks To Honor or in Memory of Other Persons or Things.
First use Dec. 3, 1962.

SN 160,081. Union Bag-Camp Paper Corporation, New York, N.Y. Filed Jan. 2, 1963.

VULCAN

Owner of Reg. No. 61,120.
For Foil Laminated Paper for Insulation for Plumbing, Building Construction, Packaging and Other Uses Requiring High Vapor Resistance.
First use Nov. 9, 1962.

SN 160,156. Awtco Corporation, Portland, Oreg. Filed Jan. 4, 1963.

CAL-LESS

For Finger Protector Rings in the Form of Elastic Bands.
First use Dec. 15, 1962.

SN 160,854. East Texas Pulp and Paper Company, Silsbee, Tex. Filed Jan. 17, 1963.

TEXSHEEN

For Printing Paper Boards for Use in Making Greeting Cards, Postcards, Brochures, Pocket Book Covers, Folding Cartons and Other Uses Where a High Quality Material Is Required.
First use Dec. 29, 1962.

SN 166,367. Crown Zellerbach Corporation, San Francisco, Calif. Filed Apr. 9, 1963.

CROWN DRI

Owner of Reg. Nos. 633,664, 744,083, and others.
For Polyethylene Coated Barrier Paper.
First use Aug. 24, 1962.

SN 173,281. Oxford Paper Company, New York, N.Y. Filed July 18, 1963.

NORTH STAR

For Coated Papers.
First use in or about June 1933.

SN 176,709. Business Envelope Mfrs., Inc., Pearl River, N.Y. Filed Sept. 11, 1963.

Post-Kwik

For Stationary in the Nature of Snap-Out Carbon Message and Purchase Order Forms.
First use Dec. 1, 1962.

SN 176,796. David Roy Herzog, d.b.a. Topic-Craft Covers, Minneapolis, Minn. Filed Sept. 12, 1963.

TOPIC-CRAFT

For Envelopes.
First use Sept. 10, 1963.

SN 178,399. American Artists Group, Inc., New York, N.Y. Filed Oct. 7, 1963.

American Artists Group



Art in Correspondence

Owner of Reg. Nos. 643,278 and 731,158.
For Notes, Note Paper and Letter Paper, and Box Assortments Thereof.
First use Feb. 20, 1963.

SN 179,635. Allen Hollander Company, Inc., New York, N.Y. Filed Oct. 23, 1963.

ABLE-STIK

For Labels Having a Pressure Sensitive Adhesive Coating on Their Backs.
First use February 1953.

SN 179,636. Allen Hollander Company, Inc., New York, N.Y. Filed Oct. 23, 1963.

ABLE LABEL

For Labels Having a Pressure Sensitive Adhesive Coating on Their Backs.
First use June 1948.

SN 179,637. Allen Hollander Company, Inc., New York, N.Y. Filed Oct. 23, 1963.



For Labels Having a Pressure Sensitive Adhesive Coating on Their Backs.
First use June 1948.

Class 38 — Prints and Publications

SN 159,380. C-E-I-R, Inc., Washington, D.C. Filed Dec. 19, 1962.

LP/90

For Instruction and Coding Manuals Which Enable the Obtaining of Optimum Solutions to Mathematical Simulations of Scientific and Business Problems Through Employment of Computers and the Like.
First use May 9, 1960.

Class 39 — Clothing

SN 106,135. Plasticsmith, Inc., Pittsburg, Calif. Filed Oct. 10, 1960.

FOOTGARD

For Disposable Polyethylene Overshoes for Sanitary and Industrial Purposes.
First use Aug. 4, 1959.

SN 118,453. The Lackawanna Pants Mfg. Company, Scranton, Pa. Filed Apr. 24, 1961.

GOLDEN TIARA

For Men's and Young Men's Trousers.
First use Apr. 5, 1961.

SN 127,158. Tot Lines, Inc., Kirkland, Wash. Filed Sept. 1, 1961.

TOT LINES

For Children's Clothing—Namely, Bibs, Sleepers, Sweaters, Underpants and Waterproof Pants.
First use July 1946.

SN 129,926. Lydia de Crescenzo, Rome, Italy. Filed Oct. 16, 1961.



Applicant disclaims the words "de Roma" apart from the mark as a whole.
For Ladies' Coats, Dresses, Skirts, Blouses, Slacks, Bathing Suits, Beach Pajamas and Beach Dresses, Nightgowns, Dressing Gowns, and Suits.
First use Feb. 1, 1961; in commerce on or about Feb. 1, 1961.

SN 139,468. Robert E'Milio Canestrari, East Lyme, Conn. Filed Mar. 9, 1962.



Applicant disclaims any right to the words "Niantic, Conn."
For Topcoats, Three-Quarter Length Coats, Shirts, Sweaters, Rainwear, Slacks, Sport Coats, and Ties.
First use Mar. 5, 1957.

SN 140,382. Prim Products, Inc., Newark, N.J. Filed Mar. 21, 1962.

PRIM

For Hair Bands, Shower Caps, Rain Caps, Hair Nets, Make-Up Capes, and Bibs.
First use June 1955.

SN 141,077. The Juvenile Mfg. Co. Inc., San Antonio, Tex. Filed Mar. 29, 1962.

JUVENELLE

For Girls' Blouses, Shirts, Shorts, Pedal Pushers, Slacks, Shirt and Short Sets, and Outerwear Jackets.
First use Feb. 28, 1962.

SN 141,702. Cambridge Rubber Company, Cambridge, Mass. Filed Apr. 6, 1962.



For Shoes.
First use Mar. 27, 1962.

SN 141,751. The Pink Pussy Cat of Hollywood, Hollywood, Calif. Filed Apr. 6, 1962.



For Ladies' Garters.
First use Jan. 25, 1962.

SN 144,014. Sulray, Inc., Tuckahoe, N.Y. Filed May 7, 1962.

SPANETTE

For Hair Nets.
First use Jan. 15, 1962.

SN 144,111. Shelby Manufacturing Co. Inc., Shelbyville, Ind. Filed May 8, 1962.



For Ladies' Dresses.
First use June 23, 1941.

SN 145,240. Brown Shoe Company, Inc., St. Louis, Mo. Filed May 23, 1962.

CORDOSHEEN

For Shoes.
First use July 1, 1955.

SN 150,635. Serbin, Inc., Miami, Fla. Filed Aug. 6, 1962.

GLENDALE

For Misses' and Juniors' Dresses and Sportswear—Namely, Blouses, Shorts, Pants and Pedal Pushers.
First use July 9, 1962.

SN 150,818. Service Heel Company, Inc., Lawrence, Mass. Filed Aug. 8, 1962.

"ALADDIN FASHION HEELS"

For Plastic Heels for Women's Shoes.
First use May 28, 1962.

SN 151,325. Ideal Shoe Company, Philadelphia, Pa. Filed Aug. 16, 1962.



For Shoes.
First use Jan. 15, 1962.

SN 152,507. Flexnit Company, Inc. (Delaware corporation), New York, N.Y., by merger of, and change of name from Flexnit Company, Inc. (New Jersey corporation), New York, N.Y. Filed Sept. 5, 1962.

TRICO TREAT

The word "Trico" is disclaimed apart from the mark as shown.
For Girdles.
First use Aug. 2, 1962.

SN 153,175. The House of Perfection, Inc., New York, N.Y. Filed Sept. 14, 1962.



For Dresses.
First use May 20, 1962.

SN 155,845. Schwartz & Benjamin, Inc., New York, N.Y. Filed Oct. 24, 1962.

AN AMERICAN COLLECTION

For Shoes.
First use Sept. 27, 1962.

SN 156,013. New Era Shirt Company, St. Louis, Mo. Filed Oct. 26, 1962.



For Ladies' Dresses.
First use Oct. 10, 1962.

SN 156,161. Perfect Bloomer Co., Brooklyn, N.Y. Filed Oct. 29, 1962.

BABY-DRI

For Children's Panties.
First use Feb. 1, 1950.

SN 156,884. Jay-Thomas, Inc., Milwaukee, Wis. Filed Nov. 8, 1962.



For Slippers.
First use Oct. 5, 1962.

SN 158,945. A & R Shoes, Inc., High Point, N.C. Filed Dec. 12, 1962.

VILLA-JUNS

For Shoes.
First use Sept. 10, 1962.

SN 159,446. Wembley, Inc., New Orleans, La. Filed Dec. 19, 1962.

WEMBLEY

Owner of Reg. Nos. 349,654, 729,779, and others.
For Cummerbund and Necktie Sets, Cummervest and Necktie Sets, Necktie and Socks Sets, Necktie and Handkerchief Sets, and Necktie, Handkerchief and Jewelry Sets.
First use January 1950.

SN 160,284. Genesco, Inc., Nashville, Tenn. Filed Jan. 7, 1963.

John Hardy

"John Hardy" is a purely fictitious name.
For Shoes for Men, Women and Children.
First use January 1938.

SN 160,465. Aktiebolaget K. W. Karlsson, Gallstad, Sweden. Filed Jan. 10, 1963.



The lines appearing on the drawing serve to indicate shading only.
For Socks, Mittens, Caps, Jumpers, Sweaters, Skirts and Trousers.
First use September 1956; in commerce September 1956.

SN 160,719. Puritan Fashions Corporation, New York, N.Y. Filed Jan. 15, 1963.

JUNIOR BOUTIQUE

For Women's and Misses' Wearing Apparel—Namely, Shirts, Dresses, Blouses, Skirts, Jackets, Coats, Slacks, Slack Suits, Shorts, Robes, Pajamas and Bathing Suits.
First use Dec. 3, 1962.

SN 160,870. Mary Jane Inc., New York, N.Y. Filed Jan. 17, 1963.

SLEEPY JANE

For Sleepingwear for Infants, Women and Children.
First use Apr. 3, 1961.

SN 162,413. Chadbourn Gotham, Inc., Charlotte, N.C. Filed Feb. 11, 1963.

Relaxers

CARWOOD TAILORED

No claim is made to the word "Tailored" apart from the mark as shown. Owner of Reg. Nos. 429,337 and 548,086.
For Men's and Boys' Slacks and Walk Shorts.
First use September 1961.

SN 162,590. Redbee Hosiery Company, Inc., New York, N.Y. Filed Feb. 12, 1963.

MARATHON

Owner of Reg. No. 175,002.
For Hosiery.
First use May 16, 1957.

SN 162,707. Joseph F. Corcoran Shoe Co. Inc., Stoughton, Mass. Filed Feb. 14, 1963.

UNEXUS

For Shoes, Shoe Soles and Sole Units.
First use Jan. 7, 1963.

SN 163,364. Maurice Holman, Inc., d.b.a. Holman of California, Los Angeles, Calif. Filed Feb. 25, 1963.



For Men's and Boys' Jackets.
First use October 1962.

SN 164,941. British Footwear Ltd., Lachine, Quebec, Canada. Filed Mar. 19, 1963.

ARCH-BAR

Priority claimed under Sec. 44(d) on Canadian application filed Nov. 23, 1962; Reg. No. 133,092, dated Oct. 11, 1963.
For Shoes for Men, Women, and Children.
First use Feb. 22, 1963; in commerce Feb. 22, 1963.

SN 167,547. George P. Hall, Inc., New York, N.Y. Filed Apr. 25, 1963.



The drawing is lined for red. The word "Sox" is disclaimed apart from the mark as shown.
For Men's Heavy Thick Cushion Socks.
First use on or about Feb. 15, 1960.

SN 168,581. Capital-Mercury Shirt Corp., New York, N.Y. Filed May 10, 1963.



The word "Shirt" is disclaimed apart from the mark.
For Men's and Boys' Dress and Sport Shirts.
First use Mar. 13, 1963.

SN 169,131. Gerber Products Company, Fremont, Mich. Filed May 17, 1963.

BABIES ARE OUR BUSINESS . . . OUR ONLY BUSINESS!

Owner of Reg. Nos. 552,904, 652,484, and others.
For Baby Pants and Baby Bibs.
First use February 1960.

SN 169,448. Louis Goldsmith, Inc., Philadelphia, Pa. Filed May 22, 1963.

SPORT DUO

Applicant hereby disclaims the word "Sport" separate and apart from the mark as shown.
For Men's Coats, Vests, and Trousers.
First use June 30, 1952.

SN 169,578. Suitime Inc., New York, N.Y. Filed May 23, 1963.

GRAND TOUR

For Ladies', Misses' and Juniors' Sportswear—Namely, Coats and Suits.
First use Apr. 30, 1963.

SN 169,858. Lazy U Incorporated, New York, N.Y. Filed May 28, 1963.

RENAISSANCE

For Ladies' Negligees and Lounge Robes.
First use May 9, 1963.

SN 170,476. Hudson Hosiery Company, Charlotte, N.C. Filed June 6, 1963.

KNEE FLEX

For Hosiery.
First use May 24, 1963.

SN 170,638. Georgia Shoe Manufacturing Company, Inc., Flowery Branch, Ga. Filed June 10, 1963.



For Shoes.
First use Mar. 8, 1963.

SN 170,984. Burlington Industries, Inc., d.b.a. Pacific Mills, New York, N.Y. Filed June 14, 1963.

MOHARA

Owner of Reg. No. 408,848.
For Men's Suits, Coats, Slacks, and "Twosomes," the Latter Item Comprising Jackets and Trousers of Harmonizing but Not Matching Fabric.
First use at least as far back as 1945.

SN 171,375. David L. Pransky & Sons, Philadelphia, Pa. Filed June 19, 1963.

PRO-FASHION

For Caps and Hats, Handkerchiefs and Belts.
First use June 11, 1963.

SN 171,689. The Moon-Star Rubber Ltd., Kurume, Japan. Filed June 24, 1963.

NIKKA

"Nikka" means "flower of Japan." Owner of Japanese Reg. No. 376,780, dated July 2, 1949.
For Footwear for Men, Women and Children—Namely, Shoes, Boots, Rubbers, Galoshes, Overshoes, Sport Shoes, Boots and Shoes for Arctics, Slippers, Sandals and Insoles.
First use 1949; in commerce 1949.

SN 171,883. Janie Originals, Inc., Brooklyn, N.Y. Filed June 26, 1963.

Jancara

For Infants', Children's, Boys', Girls', Women's and Men's Sweaters.
First use Apr. 17, 1963.

SN 171,958. Bon Dana Sportswear Co., Inc., New York, N.Y. Filed June 27, 1963.

JUMPERT

For Ladies' Wear—Namely, Skirts, Sweaters, Dresses, and Slacks.
First use June 10, 1963.

SN 172,040. Beautee-Fit Company, Los Angeles, Calif. Filed June 28, 1963.

WAIT'N COMFORT

For Brassieres, Foundation Garments, Girdles and Garter Belts.
First use June 1, 1963.

SN 172,052. Fairfield Knitwear, Inc., New York, N.Y. Filed June 28, 1963.

SHE SHELLS

For Sweaters.
First use May 17, 1963.

SN 172,153. Carlette Juniors, Inc., New York, N.Y. Filed July 1, 1963.

SHIFTS-VILLE

For Ladies' Dresses.
First use June 3, 1963.

SN 172,809. Crescendoe Gloves, Inc., Johnstown, N.Y. Filed July 11, 1963.

RUGBY GLOVES

The word "Gloves" is disclaimed apart from the mark as shown. Owner of Reg. No. 351,911.
For Men's, Ladies', Boys', and Girls' Gloves.
First use Feb. 1, 1935.

SN 172,828. Liberty Hosiery Mills, Inc., Gibsonville, N.C. Filed July 11, 1963.

SCREEN TEST

For Hosiery, Panti-Hose, Tights and Lingerie for Ladies and Children.
First use July 10, 1963.

SN 172,829. Liberty Hosiery Mills, Inc., Gibsonville, N.C. Filed July 11, 1963.

SCENE TEST

For Hosiery, Panti-Hose, Tights and Lingerie for Ladies and Children.
First use July 10, 1963.

SN 173,127. Palm Beach Company, Portland, Maine. Filed July 16, 1963.

FACULTY CLUB

For Men's and Boys' Suits, Slacks, and Sportcoats.
First use Apr. 29, 1963.

SN 173,164. The B. F. Goodrich Company, Akron, Ohio. Filed July 17, 1963.

PEEK-A-BOOTS

For Boots and Shoes Made Wholly or Partly of Rubber or Plastic.
First use at least as early as April 1952.

SN 173,231. Continental Gummi-Werke Aktiengesellschaft, Hannover, Germany. Filed July 18, 1963.

Contipor

Owner of German Reg. No. 695,772, dated Oct. 9, 1956.
For Footwear and Parts Thereof—Viz., Soles, Sole-Plates, Heels, Corners, Hard Patches, Frame Strips, and Arch Supports.

SN 173,331. Amos Hosiery Mills, Inc., High Point, N.C. Filed July 19, 1963.

SOFT DOGS

For Men's, Boys', Girls', and Misses' Hosiery.
First use Dec. 11, 1962.

SN 173,602. Ronick, Inc., New York, N.Y. Filed July 23, 1963.

VELVETITE

For Ladies' Stockings.
First use June 14, 1963.

SN 173,638. Dorby Frocks, Ltd., New York, N.Y. Filed July 24, 1963.

COUNTRY TAILOR

For Ladies' Dresses.
First use Apr. 24, 1963.

SN 173,898. Cluett, Peabody & Co., Inc., New York, N.Y. Filed July 29, 1963.

DECTOLENE

Owner of Reg. Nos. 702,303 and 728,353.
For Pajamas.
First use July 10, 1963.

SN 174,524. Michaels Stern & Company Incorporated, Rochester, N.Y. Filed Aug. 6, 1963.

HEATHERCHROME

For Men's Topcoats and Sport Coats.
First use March 1954.

SN 175,456. George P. Hall, Inc., New York, N.Y. Filed Aug. 19, 1963.

BOWLER

For Men's Heavy Thick Cushion Socks.
First use on or about Feb. 15, 1960.

SN 175,577. Hickey-Freeman Company, Rochester, N.Y. Filed Aug. 22, 1963.

TROPILANO

For Men's Suits.
First use on or about July 31, 1963.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 173,296. The Stearns & Foster Co., Lockland, Cincinnati, Ohio. Filed July 18, 1963.

IRONTITE

For Nonwoven Fabric Impregnated With Fusible Material To Enable It To Be Fused to Other Fabrics by Application of a Heated Iron Used Principally as an Interlining and Interfacing Material in Garments.
First use June 5, 1963.

SN 173,469. Klopman Mills, Inc., New York, N.Y. Filed July 22, 1963.



For Greige and Finished Fabrics in the Piece of All Types for Use in Men's, Women's, and Children's Apparel, in Home Furnishings, and in the Industrial Field.
First use Apr. 1, 1959.

Class 44—Dental, Medical, and Surgical Appliances

SN 127,828. American Sterilizer Company, Erie, Pa. Filed Sept. 14, 1961.

VACAMATICONTROL

For Medical, Dental and Surgical Steam Sterilizers.
First use June 1, 1961.

SN 145,435. Arnco Manufacturing Corp., d.b.a. Arnold Health Equipment Co., Knox, Ind. Filed May 25, 1962.

REJUVENATOR

For Exercise Equipment—Namely, Inclined Table-Board.
First use September 1961.

SN 164,970. The Haeger Potteries, Inc., Dundee, Ill. Filed Mar. 19, 1963.

CEROSIUM

For Prosthetic Parts—Namely, Hip Prostheses and Knee Prostheses and Bone Substitutes, and Materials for Making Prosthetic Parts—Namely, Porous Ceramic Impregnated With Plastic.
First use Sept. 12, 1962.

SN 171,850. Central Laboratories, Inc., Lincoln, Nebr. Filed June 26, 1963.

PROJECT-ALL

For Projection Equipment and Accessories for Eye Exercising.
First use on or about June 3, 1963.

SN 176,288. Diamond National Corporation, New York, N.Y. Filed Sept. 4, 1963.

DIAMOND

Owner of Reg. No. 535,047.
For Toothpicks.
First use in June 1921.

SN 176,291. Diamond National Corporation, New York, N.Y. Filed Sept. 4, 1963.

diamond

Owner of Reg. No. 535,047.
For Toothpicks.
First use Jan. 1, 1953.

SN 177,123. John O. Virtanen, d.b.a. Sauna Industries Co., Portland, Oreg. Filed Sept. 16, 1963.

AMBASSADOR SAUNA

The word "Sauna" is disclaimed apart from the composite trademark.
For Electric Stone Heater and Container for Finnish Sauna Bath.
First use about Nov. 1, 1962.

SN 179,465. Sales Affiliates, Inc., New York, N.Y. Filed Oct. 21, 1963.

ZOTOS

Owner of Reg. Nos. 295,481, 745,901, and others.
For Paper Wraps Used When Winding Hair in the Process of Cold Permanent Hair Waving.
First use Jan. 18, 1955.

SN 179,871. Mrs. Mary F. Cooley, Dr. Denton A. Cooley and Ralph C. Cooley, Jr. (joint owners), Houston, Tex. Filed Oct. 28, 1963.

OVR-COTE

For Dental Preparation for Protecting Silicate Porcelain and Silicate Cement While Setting Against the Destructive Action of the Fluid of the Mouth.
First use about Nov. 12, 1934.

SN 180,199. The R. D. Grant Company, Cleveland, Ohio. Filed Oct. 31, 1963.

G-SPLINT

For Plastic Inflatable Splint and Banadage.
First use Feb. 14, 1963.

SN 180,914. Latex Industries, Inc., Akron, Ohio. Filed Nov. 12, 1963.

AKRONEX

For Catheters.
First use Sept. 26, 1963.

SN 181,221. Becton Dickinson and Company, East Rutherford, N.J. Filed Nov. 15, 1963.

UNOPETTE

For Disposable Blood Diluting Pipette.
First use in or about January 1962.

SN 181,237. Howe Sound Company, New York, N.Y. Filed Nov. 15, 1963.

UNIBASE

For Dentures and Denture Resins.
First use Oct. 16, 1963.

Class 50—Merchandise Not Otherwise Classified

SN 169,224. Copperloy Corporation, Cleveland, Ohio. Filed May 20, 1963.

lite LL live

For Ramps, Pallet Dollies and Wheel Chocks.
First use Jan. 1, 1957.

SN 171,898. Markem Machine Company, Keene, N.H. Filed June 26, 1963.

MARKEM

Owner of Reg. Nos. 161,548, 501,235, and 504,703.
For Printing Plates Made of Metal or Combination of Metal and Rubber.
First use June 12, 1963.

SN 176,643. Diamond National Corporation, New York, N.Y. Filed Sept. 10, 1963.



For Floral Sticks.
First use Mar. 28, 1961.

SN 177,601. American Felt Company, Glenville, Conn. Filed Sept. 24, 1963.

MYSTO-GRIP

For Microporous Rubber in the Piece for Use for Opening Jars and for Pads and for Felt in the Piece for Pads.
First use July 17, 1962, on microporous rubber.

Class 51 — Cosmetics and Toilet Preparations

SN 175,609. Revlon, Inc., New York, N.Y. Filed Aug. 22, 1963.

'LA PARISIENNE'

For Filled Compacts of Powder for the Skin.
First use Aug. 13, 1963.

TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

766,521. MONOCAST. The Polymer Corporation. SN 152,626. Pub. 3–26–63. Filed 9–6–62.

766,522. THYLEX. Thiokol Chemical Corporation. SN 155,209. Pub. 12–31–63. Filed 10–15–62.

766,523. YELLOSPUR. May Nursery Company. SN 156,421. Pub. 12–31–63. Filed 11–1–62.

766,524. UGI. Societe Anonyme: Societe d'Electro-Chimie d'Electro-Metallurgie et des Acieries Electriques d'Ugine. SN 159,294. Pub. 12–31–63. Filed 6–5–63.

766,525. ZUMBRO. S. B. Foot Tanning Company. SN 161,784. Pub. 12–31–63. Filed 1–31–63.

766,526. GENERAL TIRE AND LETTER G. The General Tire & Rubber Company. SN 164,342. Pub. 12–31–63. Filed 3–11–63.

766,527. WONDURA. Joanna Western Mills Company. SN 164,848. Pub. 12–31–63. Filed 3–18–63.

766,528. P AND DESIGN. Container Corporation of America. SN 165,120. Pub. 12–31–63. Filed 3–21–63.

766,529. FIRM-O-FOAM. Allen Industries, Inc. SN 166,680. Pub. 12–31–63. Filed 4–15–63.

766,530. STEPFOAM. Allen Industries, Inc. SN 166,681. Pub. 12–31–63. Filed 4–15–63.

766,531. NATUR-SEAL. Natur-Seal Products Co. SN 169,750. Pub. 12–31–63. Filed 5–27–63.

766,532. PHARMACEL. FMC Corporation, assignee of American Viscose Corporation. SN 171,836. Pub. 12–31–63. Filed 6–26–63.

Class 2 — Receptacles

766,533. UNI-MATIC. United Steel & Wire Company. SN 152,359. Pub. 12–31–63. Filed 8–31–62.

766,534. EVERMOND. Baralan International Inc. SN 154,946. Pub. 12–31–63. Filed 10–11–62.

766,535. CORAY. R. & R. Metal Products, Inc. SN 162,178. Pub. 12–31–63. Filed 2–6–63.

766,536. LIFECEL. Ideal Fishing Float Company, Inc. MULTIPLE CLASS (Classes 2 and 22). SN 163,147. Pub. 12–31–63. Filed 2–20–63.

766,537. PATTERN-GLAZE. The Lord Baltimore Press, Incorporated. SN 163,738. Pub. 12–31–63. Filed 3–1–63.

766,538. SUPER WALL. International Paper Company. SN 164,247. Pub. 12–31–63. Filed 3–8–63.

766,539. TOPCO. Topco Associates, Inc. SN 170,358. Pub. 12–31–63. Filed 6–4–63.

766,540. WILBERT CONTEMPORARY. Wilbert W. Haase Co. SN 171,350. Pub. 12–31–63. Filed 6–19–63.

766,541. MONOSTRESS. Grotnes Machine Works, Inc. SN 171,446. Pub. 12–31–63. Filed 6–20–63.

766,542. DUST DC CARE AND DESIGN. The Buckeye Vacuum Cleaner Supply Co. SN 178,672. Pub. 12–31–63. Filed 10–10–63.

766,543. DURACUP. KVP Sutherland Paper Company. SN 178,705. Pub. 12–31–63. Filed 10–10–63.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

766,544. CARD-O-MATIC. C. F. Rumpp & Sons, Inc., assignee of I. Smallman & Sons Co. SN 140,995. Pub. 12–31–63. Filed 3–28–62.

766,545. AVANTE. Reliable Luggage, Inc. SN 153,515. Pub. 12–31–63. Filed 9–19–62.

766,546. ALLEGRO. Travel Wise, Inc. SN 168,875. Pub. 12–31–63. Filed 5–14–63.

766,547. 'H. Hickok Manufacturing Co., Inc. SN 168,925. Pub. 12–31–63. Filed 5–15–63.

766,548. FLIP-FLAPPER. Originals by Claire, Inc. SN 169,866. Pub. 12–31–63. Filed 5–28–63.

Class 4 — Abrasives and Polishing Materials

766,549. POLY-GRIT. Metals Development Co., d.b.a. MDC Industries. SN 171,156. Pub. 12–31–63. Filed 6–17–63.

766,550. ALTEST. Allied Stores Corporation. SN 173,408. Pub. 12–31–63. Filed 7–22–63.

766,551. S.O.ETTES. General Foods Corporation. SN 173,754. Pub. 12–31–63. Filed 7–25–63.

Class 5 — Adhesives

766,552. ATECH MI-T-BOND. Atech, Inc. SN 164,792. Pub. 12–31–63. Filed 3–18–63.

Class 6 — Chemicals and Chemical Compositions

766,553. RHODAZOL. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, assignee of Carbic-Hoechst Corporation. SN 127,320. Pub. 12–31–63. Filed 9–5–61.

766,554. TEXAS ISAF. Sid Richardson Carbon Co. SN 138,323. Pub. 12–31–63. Filed 2–20–62.

766,555. PHENAZO. General Aniline & Film Corporation. SN 152,574. Pub. 12–31–63. Filed 9–6–62.

766,556. BARELEAF. Armour and Company. SN 155,882. Pub. 12–31–63. Filed 10–25–62.

766,557. JET. Best Feeds & Farm Supplies, Inc. SN 156,361. Pub. 12–31–63. Filed 11–1–62.

766,558. MIRACARE. Texize Chemicals, Inc. SN 156,451. Pub. 12–31–63. Filed 11–1–62.

766,559. QUATRASID. R. O. Hull & Company, Inc. SN 156,738. Pub. 12–31–63. Filed 11–6–62.

766,560. ALMATE. R. O. Hull & Company, Inc. SN 156,741. Pub. 12–31–63. Filed 11–6–62.

766,561. OXYGLO. Stepan Chemical Company. SN 156,835. Pub. 12–31–63. Filed 11–7–62.

766,562. CARDOX. Chemetron Corporation. SN 157,065. Pub. 12–31–63. Filed 11–13–62.

766,563. SPECTRO-LINE. United States Testing Company Incorporated. SN 157,420. Pub. 12–31–63. Filed 11–16–62.

766,564. WITCOMIL. Witco Chemical Company, Inc. SN 157,952. Pub. 12–31–63. Filed 11–26–62.

766,565. JOY-MELT. Best Feeds & Farm Supplies, Inc. SN 158,220. Pub. 12–31–63. Filed 11–30–62.

766,566. STEROBANE. Halby Products Company, Inc. SN 160,937. Pub. 12–31–63. Filed 1–18–63.

766,567. PREGNA-TEST. Bioanalytical Products Laboratory, Inc., d.b.a. Bioanalytical Products Laboratory. SN 161,676. Pub. 12–31–63. Filed 1–30–63.

766,568. TENCELL PANEL. Spectra Biologicals, Incorporated. SN 161,841. Pub. 12–31–63. Filed 1–29–63.

766,569. SUR PHOBE AND DESIGN. William Louden, d.b.a. Tinicum Research Company. SN 163,566. Pub. 12–31–63. Filed 2–27–63.

766,570. PARKERIZING. Hooker Chemical Corporation. SN 165,781. Pub. 12–31–63. Filed 4–1–63.

766,571. GOLF PAL AND DESIGN. The Verkamp Corporation. SN 169,996. Pub. 12–31–63. Filed 5–29–63.

766,572. DEPLASTOL. Debygag Deutsche Hydrierwerke G.m.b.H. SN 170,260. Pub. 12–31–63. Filed 11–5–62.

766,573. STARLENE. Wyandotte Chemicals Corporation. SN 170,443. Pub. 12–31–63. Filed 6–5–63.

766,574. BARBARA LANE. United Whelan Corporation. SN 170,570. Pub. 12–31–63. Filed 6–7–63.

766,575. SMITE. E. I. du Pont de Nemours and Company. SN 170,996. Pub. 12–31–63. Filed 6–14–63.

766,576. NEOSAPON. Diamond Alkali Company. SN 171,104. Pub. 12–31–63. Filed 6–17–63.

766,577. ALTEST. Allied Stores Corporation. SN 173,407. Pub. 12–31–63. Filed 7–22–63.

Class 7 — Cordage

766,578. DOVE. Wm. E. Wright & Sons Co. SN 169,812. Pub. 12–31–63. Filed 5–27–63.

Class 10 — Fertilizers

766,579. DESIGN TEST TUBE SURROUNDED BY LEAVES. Bet-R-Growth Products Co. SN 164,313. Pub. 12–31–63. Filed 3–11–63.

766,580. FIGURE OF GIRL IN GARDENING COSTUME (DESIGN). Bet-R-Growth Products Co. SN 164,314. Pub. 12–31–63. Filed 3–11–63.

Class 12 — Construction Materials

766,581. MONOFRAX. Harbison-Carborundum Corporation. SN 156,875. Pub. 12–31–63. Filed 11–8–62.

766,582. WOODCLAW AND DESIGN. Foley & Lavish Engineering Co. SN 164,031. Pub. 12–31–63. Filed 3–6–63.

766,583. GRAY-FLEX. Old-North Manufacturing Company, Inc. SN 169,650. Pub. 12–31–63. Filed 5–24–63.

766,584. CREZON. Crown Zellerbach Corporation. SN 170,177. Pub. 12–31–63. Filed 6–3–63.

766,585. TENSTEEL AND DESIGN. Whiteway Manufacturing Company. SN 170,255. Pub. 12–31–63. Filed 6–3–63.

766,586. CONGOLITE. C-C Chemicals, Inc. SN 170,292. Pub. 12–31–63. Filed 6–4–63.

766,587. WOVENMASTER. New Castle Products, Inc. SN 170,488. Pub. 12–31–63. Filed 6–6–63.

766,588. ROL-A-WALK. Montclair Marketers, Inc. SN 170,546. Pub. 12–31–63. Filed 6–7–63.

766,589. EB AND DESIGN. Elliott Bay Mill Co. SN 170,824. Pub. 12–31–63. Filed 6–12–63.

766,590. ALGER-BOARD. Alger-Sullivan Sawmill Company. SN 170,970. Pub. 12–31–63. Filed 6–14–63.

766,591. ALGER-DECK. Alger-Sullivan Sawmill Company. SN 170,971. Pub. 12–31–63. Filed 6–14–63.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

766,592. SPEED FASTENER. Speedfast Corporation. SN 156,674. Pub. 12–31–63. Filed 11–5–62.

766,593. WATER WATCHERS. Fred W. Marlman. SN 160,647. Pub. 12–31–63. Filed 1–14–63.

766,594. AQUA-PURGE. Bird Machine Company. SN 168,793. Pub. 12–31–63. Filed 5–10–63.

766,595. COUPLEX. Norco, Inc. SN 168,841. Pub. 12–31–63. Filed 5–14–63.

Class 14 — Metals and Metal Castings and Forgings

766,596. MISCELLANEOUS DESIGN. Titan Eisenwarenfabrik G.m.b.H. SN 154,783. Pub. 12–31–63. Filed 10–8–62.

766,597. PENN CAST. Pennsylvania Steel Corporation. SN 162,014. Pub. 12–31–63. Filed 2–4–63.

766,598. D.Q. Union Carbide Corporation. SN 169,405. Pub. 12–31–63. Filed 5–21–63.

766,599. VAPO-MET. Howe Sound Company. SN 169,506. Pub. 12–31–63. Filed 5–21–63.

Class 15 — Oils and Greases

766,600. IRCO LUBE. The Lubrizol Corporation. SN 140,366. Pub. 12–31–63. Filed 3–21–62.

766,601. THERMIDENE AND DESIGN. Thermidaire Corporation of America. SN 155,115. Pub. 12–31–63. Filed 10–12–62.

766,602. CELCO. Celanese Corporation of America. SN 158,791. Pub. 12–31–63. Filed 12–10–62.

766,603. STEROTEX. The Capital City Products Company. SN 171,089. Pub. 12–31–63. Filed 6–17–63.

766,604. GROIL. HRL, Inc. SN 171,349. Pub. 12–31–63. Filed 6–19–63.

Class 18 — Medicines and Pharmaceutical Preparations

766,605. BACTINE 4 IN 1. Miles Laboratories, Inc. SN 145,835. Pub. 12–31–63. Filed 5–31–62.

766,606. D DAIICHI AND DESIGN. Daiichi Seiyaku Kabushiki Kaisha, d.b.a. Daiichi Seiyaku Co., Ltd. SN 146,029. Pub. 12–31–63. Filed 6–4–62.

766,607. AEROLATE. Fleming and Company, Pharmaceuticals. SN 146,480. Pub. 12–31–63. Filed 6–8–62.

766,608. L AND DESIGN. Armour Pharmaceutical Company. SN 150,312. Pub. 12–31–63. Filed 8–2–62.

766,609. PER-FEC-TO. Mrs. Flora Lucile Draper, d.b.a. The AKJ Co. SN 152,387. Pub. 12–31–63. Filed 9–4–62.

766,610. ASUPENTAN. C. H. Boehringer Sohn. SN 152,877. Pub. 12–31–63. Filed 9–11–62.

766,611. PIONEER AND DESIGN. Hales & Hunter Co. SN 155,503. Pub. 12–31–63. Filed 10–19–62.

766,612. DUVALEPT. N.V. Philips-Duphar. SN 155,735. Pub. 12–31–63. Filed 10–23–62.

766,613. T-FOAM. The Wander Company. SN 157,422. Pub. 12–31–63. Filed 11–16–62.

766,614. MAST. The Dietene Company. SN 158,609. Pub. 12–31–63. Filed 12–6–62.

766,615. ASPIR-AND. Sterling Drug Inc. SN 159,622. Pub. 12–31–63. Filed 12–21–62.

766,616. PHARMADENT. Louis Cherney, d.b.a. Pharmadent Laboratories. SN 162,414. Pub. 12–31–63. Filed 2–11–63.

766,617. PRECICARB. Olin Mathieson Chemical Corporation. SN 164,372. Pub. 12–31–63. Filed 3–11–63.

766,618. SUPPONERYL. Chimie et Atomistique. SN 165,747. Pub. 12–31–63. Filed 4–1–63.

766,619. PROCYPRIN. Lakeside Laboratories, Inc. SN 166,291. Pub. 12–31–63. Filed 4–8–63.

766,620. DURAMENS. Charles A. Crete, d.b.a. Pharmaceutical Associates. SN 169,225. Pub. 12–31–63. Filed 5–20–63.

766,621. COVITOL. Collett-Week Corporation. SN 169,427. Pub. 12–31–63. Filed 5–22–63.

766,622. COMPASSION. Innovators Marketing Corporation. SN 169,635. Pub. 12–31–63. Filed 5–24–63.

766,623. FERRO-CHINA-BISLERI AND DESIGN. S. A. Felice Bisleri & Cia. SN 172,054. Pub. 12–31–63. Filed 6–28–63.

Class 19 — Vehicles

766,624. VIBRONIC. Callaway Mills Company. SN 160,690. Pub. 12–31–63. Filed 1–15–63.

Class 20 — Linoleum and Oiled Cloth

766,625. MAYFLOWER. Formica Corporation. SN 141,519. Pub. 12–31–63. Filed 4–4–62.

Class 21 — Electrical Apparatus, Machines, and Supplies

766,626. POLARAD. Polarad Electronics Corporation. SN 656,924. Pub. 8–16–55. Filed 11–5–53.

766,627. DYNACEL. The Electric Storage Battery Company. SN 144,705. Pub. 12–31–63. Filed 5–16–62.

766,628. C-L-P. Simplex Wire & Cable Co. SN 144,894. Pub. 12–31–63. Filed 5–17–62.

766,629. SILVERMAT. Gene E. O'Brien and Verna M. O'Brien, d.b.a. Gene and Verna O'Brien, assignee of Precious Metals, Inc. SN 149,596. Pub. 12–31–63. Filed 7–23–62.

766,630. CABELOK CRIMPIT. Burndy Corporation. SN 153,250. Pub. 12–31–63. Filed 9–17–62.

766,631. TUNER-VERTER. Telesystem Services Corporation. SN 159,923. Pub. 12–31–63. Filed 12–28–62.

766,632. ADL AND DESIGN. Advanced Development Laboratories, Inc. SN 160,821. Pub. 12–31–63. Filed 1–17–63.

766,633. SUNRAY AND DESIGN. El-Tronics, Inc. SN 161,752. Pub. 12–31–63. Filed 1–30–63.

766,634. VC AND DESIGN. Victor Comptometer Corporation. SN 164,286. Pub. 12–31–63. Filed 3–8–63.

766,635. GEOMETRIC DESIGN. Alpha Microwave, Inc. SN 168,663. Pub. 12–31–63. Filed 5–13–63.

766,636. WATERCOM. The Bendix Corporation, assignee of Celestronics, Inc. SN 168,696. Pub. 12–17–63. Filed 5–13–63.

766,637. TREXILOY. Habitat, Inc. SN 168,737. Pub. 12–31–63. Filed 5–13–63.

766,638. VULCAN. Essex Wire Corporation. SN 169,622. Pub. 12–31–63. Filed 5–24–63.

766,639. PANLOC. McIntosh Laboratory, Inc. SN 169,676. Pub. 12–31–63. Filed 4–15–63.

766,640. MAJORETTE AND DESIGN. Major Electronics Corp. SN 170,655. Pub. 12–31–63. Filed 6–10–63.

766,641. FIRE CROWN. General Battery and Ceramic Corp. SN 171,768. Pub. 12–31–63. Filed 6–25–63.

766,642. ANACOTE. Anaconda Wire and Cable Company. SN 171,839. Pub. 12–31–63. Filed 6–26–63.

766,643. TEL-A-DEX. Tel-A-Dex Corporation, assignee of International Commodities, Inc. SN 171,992. Pub. 12–24–63. Filed 6–27–63.

766,644. RECORDORAMA. Record Automaten Aktiengesellschaft. SN 172,126. Pub. 12–31–63. Filed 1–8–63.

766,645. JETOMIC. JFD Electronics Corporation. SN 172,197. Pub. 12–31–63. Filed 7–1–63.

766,646. DYNAVOLT. General Motors Corporation. SN 173,351. Pub. 12–31–63. Filed 7–19–63.

766,647. N AND DESIGN. National Connector Corporation. SN 174,042. Pub. 12–31–63. Filed 7–30–63.

Class 22 — Games, Toys, and Sporting Goods

766,536. (See Class 2 for this trademark.)

766,648. BLAZER AND DESIGN. Paul S. Giovagnoli, d.b.a. Commercial Mechanisms. SN 138,199. Pub. 12–31–63. Filed 2–19–62.

766,649. ALASKO. Fuller Seth Thompson, d.b.a. Alasko Bait. SN 142,230. Pub. 12–31–63. Filed 4–13–62.

766,650. PAYTON. Payton Products, Inc. SN 145,592. Pub. 12–31–63. Filed 5–28–62.

766,651. PIPER LOLLI-PUPPET. Piper Toys, Inc. SN 149,595. Pub. 12–31–63. Filed 7–23–62.

766,652. SPOCKS INC., ETC. AND DESIGN. Spocks, Inc. SN 159,538. Pub. 12–31–63. Filed 12–20–62.

766,653. SUNDOWNER. Mattel, Inc. SN 162,468. Pub. 12–31–63. Filed 2–11–63.

766,654. VICTORY. The Fish Net and Twine Co. SN 163,622. Pub. 12–31–63. Filed 2–28–63.

766,655. JIMMY JET. De Luxe Reading Corporation. SN 163,818. Pub. 12–31–63. Filed 3–4–63.

766,656. CANDY FASHION. De Luxe Reading Corporation. SN 163,822. Pub. 12–31–63. Filed 3–4–63.

766,657. YOGI. Tigrett Industries, Inc. SN 163,902. Pub. 12–31–63. Filed 3–4–63.

766,658. DALON. Mercantile Sales Company. SN 164,362. Pub. 12–31–63. Filed 3–11–63.

766,659. WIL-GUARD. Awtco Corporation. SN 165,734. Pub. 12–31–63. Filed 4–1–63.

766,660. LITTLE MISS CLAIROL. Clairol Incorporated. SN 169,213. Pub. 12–31–63. Filed 5–20–63.

766,661. ACROSS THE U.S.A. Hassenfeld Bros. Inc. SN 169,255. Pub. 12–31–63. Filed 5–20–63.

766,662. APPLE NOCK-ER. Yakima Bait Company, Inc. SN 169,503. Pub. 12–31–63. Filed 5–22–63.

766,663. NUTTY KNOTTER. Barry Coe. SN 169,686. Pub. 12–31–63. Filed 5–27–63.

766,664. LIL'BEECHY. Andy Gard Corporation. SN 169,723. Pub. 12–31–63. Filed 5–27–63.

766,665. SKYLINE. The General Tire & Rubber Company. SN 169,724. Pub. 12–31–63. Filed 5–27–63.

766,666. BAG O'BONES. Items Incorporated. SN 170,075. Pub. 12–31–63. Filed 5–31–63.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

766,667. ASTROSPRAY. Astrosonics, Incorporated. SN 158,953. Pub. 12–31–63. Filed 12–12–62.

766,668. BRUSH BEAVER AND DESIGN. E. L. Caldwell & Sons, Inc. SN 161,436. Pub. 12–31–63. Filed 1–25–63.

766,669. SHADOWPOINT. Fraser's, Inc. SN 162,155. Pub. 12–31–63. Filed 2–6–63.

766,670. SURCON AND DESIGN. Aero-Test Equipment Company, Inc. SN 163,205. Pub. 12–31–63. Filed 2–21–63.

766,671. EDJER. Andis Clipper Co. SN 163,785. Pub. 12–31–63. Filed 3–4–63.

766,672. REDI-FIL. E. B. & A. C. Whiting Company. SN 165,725. Pub. 12–31–63. Filed 3–29–63.

766,673. ULTRA BOND. Cherry-Burrell Corporation, assignee of Arthur Colton Company. SN 168,481. Pub. 12–24–63. Filed 5–9–63.

766,674. OMEGA. The New York Air Brake Company. SN 169,158. Pub. 12–31–63. Filed 5–17–63.

766,675. MONOSTRESS. Grotnes Machine Works, Inc. SN 171,445. Pub. 12–31–63. Filed 6–20–63.

766,676. ZIP-CUT AND DESIGN. Waber Tool & Engineering Co. SN 173,989. Pub. 12–31–63. Filed 7–29–63.

Class 24 — Laundry Appliances and Machines

766,677. CLEANAMATION. Cleanamation, Incorporated. SN 159,384. Pub. 12–31–63. Filed 12–19–62.

Class 26 — Measuring and Scientific Appliances

766,678. SPORLAN AND DESIGN. Sporlan Valve Company. SN 157,158. Pub. 12–31–63. Filed 11–13–62.

766,679. S.I.U. SUDORIMETER. Southern Illinois University Foundation. SN 158,105. Pub. 12–31–63. Filed 11–28–62.

766,680. SIERRA SUE. Sierra Engineering Co. SN 158,387. Pub. 12–31–63. Filed 12–3–62.

766,681. ADL AND DESIGN. Advanced Development Laboratories, Inc. SN 160,822. Pub. 12–31–63. Filed 1–17–63.

766,682. ROBCO. Robert James Cooke. SN 160,923. Pub. 12–31–63. Filed 1–18–63.

766,683. VC AND DESIGN. Victor Comptometer Corporation. SN 164,287. Pub. 12–31–63. Filed 3–8–63.

766,684. P AND DESIGN. Peerless Photo Products, Inc. SN 168,529. Pub. 12–31–63. Filed 5–9–63.

766,685. BB AND DESIGN. N. P. Benson Optical Company. SN 168,680. Pub. 12–31–63. Filed 5–13–63.

766,686. SAFE-T-LARM. Cortland Industries, Inc. SN 168,705. Pub. 12–31–63. Filed 5–13–63.

766,687. SAVAGE. The American Hardware Corporation, by merger from Savage Arms Corporation. SN 170,684. Pub. 12–31–63. Filed 6–10–63.

766,688. INDIAN HEAD (DESIGN). The American Hardware Corporation, by merger from Savage Arms Corporation. SN 170,685. Pub. 12–31–63. Filed 6–10–63.

766,689. SPEEDRING. Speedring Corporation. SN 170,698. Pub. 12–31–63. Filed 6–10–63.

766,690. SYMBOL DESIGN. Keuffel & Esser Company. SN 170,754. Pub. 12–31–63. Filed 6–11–63.

766,691. MAI. Management Assistance, Inc. SN 171,466. Pub. 12–31–63. Filed 6–20–63.

766,692. IGC AND DESIGN. Indiana General Corporation. SN 172,494. Pub. 12–31–63. Filed 7–5–63.

Class 28 — Jewelry and Precious-Metal Ware

766,693. A46. Anchor Jewelry Manufacturing Corp. SN 154,194. Pub. 12–31–63. Filed 10–1–62.

766,694. BELLAIRE. J. R. Wood & Sons, Inc. SN 157,745. Pub. 12–10–63. Filed 11–21–62.

766,695. JL. John M. Lewis, d.b.a. John Lewis Jewelry or J. M. Lewis or John M. Lewis. SN 161,062. Pub. 12–31–63. Filed 1–21–63.

766,696. BALL. Mildred L. Ball. SN 166,859. Pub. 12–31–63. Filed 4–11–63.

766,697. BBC AND DESIGN. Bernard Blum Corporation. SN 166,886. Pub. 12–31–63. Filed 4–17–63.

766,698. DATE-MATES. Howard H. Dismeier, d.b.a. Howard Dismeier Company. SN 168,075. Pub. 12–31–63. Filed 5–3–63.

766,699. SM. Sol Marcus. SN 171,677. Pub. 12–31–63. Filed 6–24–63.

Class 30 — Crockery, Earthenware, and Porcelain

766,700. WINFIELD. Thomas F. Hamilton. SN 162,341. Pub. 12–31–63. Filed 2–8–63.

Class 31 — Filters and Refrigerators

766,701. PURESOFT. Everpure, Inc. SN 172,888. Pub. 12–31–63. Filed 7–12–63.

766,702. AERALATER. General Filter Company. SN 173,449. Pub. 12–31–63. Filed 7–22–63.

Class 32 — Furniture and Upholstery

766,703. SEAT-A-BABE. Tremax Industries, Inc. SN 150,899. Pub. 12–31–63. Filed 8–9–62.

766,704. TUCK-A-WAY. Edson, Incorporated. SN 159,881. Pub. 12–31–63. Filed 12–28–62.

766,705. NESTLE DOWN. Eddie Bauer. SN 160,357. Pub. 12–31–63. Filed 1–8–63.

766,706. ELEGANCE. Dougherty Bedding Company. SN 160,613. Pub. 12–31–63. Filed 1–14–63.

766,707. COLORPLATE. Hapman Corporation. SN 162,260. Pub. 12–31–63. Filed 2–7–63.

766,708. BOOK BUTLER. Guardian Products Company, Inc. SN 166,189. Pub. 12–31–63. Filed 5–6–63.

766,709. PURALIZED. Eclipse Sleep Products, Inc. SN 171,857. Pub. 12–31–63. Filed 6–26–63.

Class 34 — Heating, Lighting, and Ventilating Apparatus

766,710. CERCOR. Corning Glass Works. SN 151,205. Pub. 12–31–63. Filed 8–15–62.

766,711. HEEM-AIR. Van der Heem NV, Elektrotechnische Industrie. SN 165,097. Pub. 12–31–63. Filed 3–20–63.

766,712. HEAT-PAK. Breese Illinois Incorporated. SN 169,418. Pub. 12–31–63. Filed 5–22–63.

766,713. CENTAUR 360. Full Vision, Inc., d.b.a. Centaur Air Conditioning. SN 173,838. Pub. 12–31–63. Filed 7–26–63.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

766,714. KWIK-PAK. United States Rubber Company. SN 154,536. Pub. 12–31–63. Filed 10–4–62.

766,715. MOLY-DUOLUBE. Hercules Packing Corporation. SN 157,302. Pub. 12–31–63. Filed 11–15–62.

Class 36 — Musical Instruments and Supplies

766,716. VIDEOCORDER. Sony Corporation. SN 155,751. Pub. 12–31–63. Filed 10–23–62.

766,717. ARCHIVE. Deutsche Grammophon Gesellschaft m.b.H. SN 155,894. Pub. 12–31–63. Filed 10–25–62.

Class 37 — Paper and Stationery

766,718. MUSEUM MASTERPIECES. Aristocrat Leather Products, Inc. SN 115,032. Pub. 12–31–63. Filed 3–7–61.

766,719. BAND-IT. Caldwell Packaging Company, Inc. SN 152,489. Pub. 12–31–63. Filed 9–5–62.

766,720. CLEARVIEW. Kimberly-Clark Corporation. SN 154,122. Pub. 12–31–63. Filed 9–28–62.

766,721. MARINER. Paper Service Co. SN 164,159. Pub. 12–31–63. Filed 3–7–63.

766,722. STAR. Eberhard Faber Inc. SN 164,515. Pub. 12–31–63. Filed 3–13–63.

766,723. PAPER PANTRY. Morgan Paper Company, Inc. SN 170,939. Pub. 12–31–63. Filed 6–13–63.

766,724. DATA-LOPE. American Business Systems, Inc. SN 173,616. Pub. 12–31–63. Filed 7–24–63.

766,725. REPRESENTATION OF A PEN POINT. Castle, Ltd. SN 173,628. Pub. 12–31–63. Filed 7–24–63.

766,726. LUMINART. Guyco, Inc. SN 173,651. Pub. 12–31–63. Filed 7–24–63.

766,727. THRIFTISAVE. Thrifticheck Service Corporation. SN 174,456. Pub. 12–31–63. Filed 8–5–63.

Class 38 — Prints and Publications

766,728. INTERCHANGE. Bekins Van & Storage Co. SN 155,884. Pub. 12–31–63. Filed 10–25–62.

766,729. HAPPY MOTORING NEWS. Humble Oil & Refining Company. SN 160,709. Pub. 12–31–63. Filed 1–15–63.

766,730. THE AB METAL DIGEST. Buehler Ltd. SN 162,406. Pub. 12–31–63. Filed 2–11–63.

766,731. AB METAL ANALYST. Buehler Ltd. SN 162,411. Pub. 12–31–63. Filed 2–11–63.

766,732. THE STEREOPHILE. J. Gordon Holt. SN 163,839. Pub. 12–31–63. Filed 3–4–63.

766,733. ON RECORD. Keynote Publications, Inc. SN 164,252. Pub. 12–31–63. Filed 3–8–63.

766,734. LAUREL-LEAF LIBRARY. Dell Publishing Co., Inc. SN 164,613. Pub. 12–31–63. Filed 3–14–63.

766,735. JN & P AND DESIGN. Jobber News & Products Publishing Corp. SN 164,849. Pub. 12–31–63. Filed 3–18–63.

Class 39 — Clothing

766,736. VANGUARD. Welsh Manufacturing Company. SN 108,727. Pub. 12–31–63. Filed 11–18–60.

766,737. CASHMIRS THE SOFT-STEP SHOE. Andrew Geller, Inc. SN 119,693. Pub. 12–31–63. Filed 5–10–61.

766,738. SHAPE-UP. I. B. Kleinert Rubber Company. SN 121,832. Pub. 12–31–63. Filed 6–12–61.

766,739. FED-THRIFT. Federated Department Stores, Inc. SN 129,130. Pub. 12–31–63. Filed 10–3–61.

766,740. CUSTOMIZED OVALS. Pantke-Harpke Co. SN 130,941. Pub. 12–31–63. Filed 10–30–61.

766,741. JEAN DESSES. S.A.R.L. Societe Nouvelle Jean Desses. SN 139,141. Pub. 12–31–63. Filed 3–5–62.

766,742. HARD HAT. Ro-Search, Inc. SN 144,276. Pub. 12–31–63. Filed 5–10–62.

766,743. CONDUCTIVATORS. Jack Meltzer. SN 146,912. Pub. 12–31–63. Filed 6–14–62.

766,744. FUMI ORIGINAL. F. Hayashi. SN 150,247. Pub. 12–31–63. Filed 7–31–62.

766,745. CISCO. Cisco, Inc. MULTIPLE CLASS (Classes 39 and 42). SN 152,494. Pub. 12–31–63. Filed 9–5–62.

766,746. CHALLA. Cisco, Inc. MULTIPLE CLASS (Classes 39 and 42). SN 152,495. Pub. 12–31–63. Filed 9–5–62.

766,747. RIDGELY HALL. Rob Roy Company, Inc. SN 153,119. Pub. 12–31–63. Filed 9–13–62.

766,748. MR. STORK. Joyce Uniforms, Inc. SN 153,410. Pub. 12–31–63. Filed 9–18–62.

766,749. PUTT-ABOUTS AND DESIGN. David H. Smith, Inc. SN 153,601. Pub. 12–31–63. Filed 9–20–62.

766,750. BONE DRY. Daniel T. Cronin, Inc. SN 154,014. Pub. 12–31–63. Filed 9–27–62.

766,751. CAROL RODGERS JUNIORS, IMPORTED FROM NEW YORK WITH GLOBE AND STAND DESIGN. D. F. Rodgers Mfg. Co., Inc. SN 154,291. Pub. 12–31–63. Filed 10–1–62.

766,752. SPORT IMPORTS AND DESIGN. Sport Imports Inc. SN 159,296. Pub. 12–31–63. Filed 12–17–62.

766,753. GOODYEAR DELUXE. Goodyear Rubber Company. SN 160,935. Pub. 12–31–63. Filed 1–18–63.

766,754. MISS JACKIE AND DESIGN. Neuville, Inc. SN 160,961. Pub. 12–31–63. Filed 1–18–63.

766,755. FEMINA. Associated Dry Goods Corporation. SN 161,584. Pub. 12–31–63. Filed 1–29–63.

766,756. ETONIC. Charles A. Eaton Company. SN 162,542. Pub. 12–31–63. Filed 2–12–63.

766,757. DEMAR. Stockton Manufacturing Company, Inc. SN 164,480. Pub. 12–31–63. Filed 3–12–63.

766,758. MARTY K AND DESIGN. Rocky Mount Dry Goods Company, Incorporated. SN 165,707. Pub. 12–31–63. Filed 3–29–63.

766,759. CLARISSA. Leo Popper. SN 165,884. Pub. 12–31–63. Filed 3–29–63.

766,760. WEATHER TOPPER DRY WALL AND DESIGN. Botany GMR Corp. SN 166,612. Pub. 12–31–63. Filed 4–12–63.

766,761. SUSAN CLARK. Clark Knitting Mills, Inc. SN 167,610. Pub. 12–31–63. Filed 4–26–63.

766,762. RAG IN A BAG. David H. Smith, Inc. SN 167,843. Pub. 12–31–63. Filed 4–30–63.

766,763. V-MATIC. The Manhattan Shirt Company. SN 167,921. Pub. 12–31–63. Filed 5–1–63.

766,764. THE YAR ETC. AND DESIGN. Rugby Knitting Mills, Inc. SN 167,941. Pub. 12–31–63. Filed 5–1–63.

766,765. WOMAN'S WORLD. Stylecraft Frocks, Inc. SN 168,544. Pub. 12–31–63. Filed 5–9–63.

766,766. DESIGN DOG. Wolverine Shoe and Tanning Corporation. SN 168,787. Pub. 12–31–63. Filed 5–13–63.

766,767. BULL OF THE WOODS. Garland P. Dockery, d.b.a. G. P. Dockery Co. SN 168,911. Pub. 12–31–63. Filed 5–15–63.

766,768. H. Hickok Manufacturing Co., Inc. SN 168,926. Pub. 12–31–63. Filed 5–15–63.

766,769. SANDUCO. Caleb V. Smith & Son, Inc. SN 168,964. Pub. 12–31–63. Filed 5–15–63.

766,770. ROYLE HOUSE. Mid-States Shoe Co. SN 169,047. Pub. 12–31–63. Filed 5–16–63.

766,771. SLIP 'N SLEEP. Slip 'n Sleep, Inc. SN 169,081. Pub. 12–31–63. Filed 5–16–63.

766,772. BECOPA. Erich J. Aschkenasy, Inc. SN 169,360. Pub. 12–31–63. Filed 5–21–63.

766,773. TRU-SLIM. The Strouse, Adler Company. SN 169,400. Pub. 12–31–63. Filed 5–21–63.

766,774. REGAL ROAMER. Rough Rider, Inc. SN 169,766. Pub. 12–31–63. Filed 5–27–63.

766,775. SOUTHWICK. Grieco Bros., Inc. SN 169,851. Pub. 12–31–63. Filed 5–28–63.

766,776. DUREVER TWENTY. Robinson Manufacturing Company. SN 170,678. Pub. 12–31–63. Filed 6–10–63.

766,777. KOLORBLEND. Shelby Seamless Hosiery Mills, Inc. SN 170,691. Pub. 12–31–63. Filed 6–10–63.

Class 40 — Fancy Goods, Furnishings, and Notions

766,778. MUR SEW AND DESIGN. G. C. Murphy Company. SN 163,642. Pub. 12–31–63. Filed 2–28–63.

766,779. SEA-BRITE. Rochester Button Company. SN 164,892. Pub. 12–31–63. Filed 3–18–63.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

766,745. (See Class 39 for this trademark.)

766,746. (See Class 39 for this trademark.)

766,780. VELUDUR. Strachman Associates, Inc. SN 139,897. Pub. 12–31–63. Filed 3–14–62.

766,781. BATES AND DESIGN. Bates Manufacturing Company. SN 155,771. Pub. 12–31–63. Filed 10–24–62.

766,782. CADDO. Chicopee Mills, Inc. SN 157,068. Pub. 12–31–63. Filed 11–13–62.

766,783. KNIT-SET. Romak Underwear Company, Inc. SN 165,955. Pub. 12–31–63. Filed 4–2–63.

766,784. CYNTHIA. Shirley Fabrics Corporation. SN 166,138. Pub. 12–31–63. Filed 4–4–63.

766,785. LACE SPAN. Thomas Wilson & Co. Inc. SN 167,509. Pub. 12–31–63. Filed 4–24–63.

766,786. CHARMELLE. J. P. Stevens & Co., Inc. SN 167,956. Pub. 12–31–63. Filed 5–1–63.

766,787. NEW DOMINION. Dan River Mills, Incorporated. SN 170,524. Pub. 12–31–63. Filed 6–7–63.

766,788. DECOOL. Cooley, Incorporated. SN 170,612. Pub. 12–31–63. Filed 6–10–63.

766,789. ARISTOLON. Cooley, Incorporated. SN 170,613. Pub. 12–31–63. Filed 6–10–63.

766,790. DORANE. Soptra Fabrics Corporation. SN 170,695. Pub. 12–31–63. Filed 6–10–63.

766,791. APSCO. A. P. Silk Co., Inc. SN 170,717. Pub. 12–31–63. Filed 6–11–63.

766,792. PRESS-MATE. Huyck Corporation. SN 170,749. Pub. 12–31–63. Filed 6–11–63.

766,793. MILK 'N' HONEY. Klopman Mills, Inc. SN 170,841. Pub. 12–31–63. Filed 6–11–63.

Class 43 — Thread and Yarn

766,794. BONBON. Angora Corporation of America. SN 160,260. Pub. 12–31–63. Filed 1–7–63.

766,795. SUPERSET. Leon-Ferenbach Incorporated. SN 167,555. Pub. 12–31–63. Filed 4–25–63.

Class 44 — Dental, Medical, and Surgical Appliances

766,796. SANI-JET. Wilmot Castle Company. SN 151,110. Pub. 12–31–63. Filed 8–13–62.

766,797. VISUMATIC. Ritter Company, Inc. SN 157,646. Pub. 12–31–63. Filed 11–20–62.

766,798. CALF-PULL. The American Gage & Mfg. Company. SN 158,041. Pub. 12–31–63. Filed 11–28–62.

766,799. EVERSOFT. Acralite Co. Inc. SN 158,206. Pub. 12–31–63. Filed 11–30–62.

766,800. TAG. Telephone Antiseptic Guard, Inc. SN 158,664. Pub. 12–31–63. Filed 12–6–62.

766,801. VALUE-PAK. Guardian Products Co., Inc. SN 164,832. Pub. 12–31–63. Filed 3–18–63.

766,802. PACEMAKER. Guardian Products Co., Inc. SN 164,833. Pub. 12–31–63. Filed 3–18–63.

766,803. SCOOT-ABOUT. Everest & Jennings, Inc. SN 174,850. Pub. 12–31–63. Filed 8–12–63.

766,804. MEDICAL BLUE. The Vollrath Co. SN 175,146. Pub. 12–31–63. Filed 8–15–63.

766,805. BROWETTES. Clarita R. Anderson, d.b.a. Browette Company. SN 175,238. Pub. 12–31–63. Filed 8–19–63.

766,806. CORECTO. Corecto Corporation. SN 175,254. Pub. 12–31–63. Filed 8–19–63.

766,807. TRU-BLU. Mayhew & Rosell, Inc. SN 175,303. Pub. 12–31–63. Filed 8–19–63.

Class 45 — Soft Drinks and Carbonated Waters

766,808. SAVOR. Terlin Sales Company, Inc., d.b.a. Terlin Sales Company. SN 141,224. Pub. 12–31–63. Filed 3–30–62.

Class 46 — Foods and Ingredients of Foods

766,809. TOP TASTE. National Tea Co., d.b.a. National Food Stores. SN 131,861. Pub. 12–31–63. Filed 11–13–61.

766,810. TASTY MATES. Tasty Baking Company. SN 134,053. Pub. 12–31–63. Filed 12–14–61.

766,811. BOB FORD'S. Rose M. Ford, d.b.a. Canteen Restaurant. SN 135,269. Pub. 12–31–63. Filed 1–5–62.

766,812. PARADE. Blue Goose Growers, Inc., assignee of Buenaventura Lemon Co. Inc. SN 139,028. Pub. 12–31–63. Filed 3–5–62.

766,813. EL RANCHO ETC. AND DESIGN. Berge Kirkorian, d.b.a. El Rancho Farms. SN 142,829. Pub. 12–31–63. Filed 4–23–62.

766,814. ALFRED GLUCK'S KREUTER BREAD AND DESIGN. Alfred Gluck, d.b.a. Alfred Gluck's Krenter Bread and/or Gluck's Kreuter Bread. SN 143,525. Pub. 12–31–63. Filed 5–1–62.

766,815. SAFFOLA AND DESIGN. Pacific Vegetable Oil Corporation. SN 144,411. Pub. 12–31–63. Filed 5–11–62.

766,816. CORTLAND. Cortland Produce Company, Inc. SN 146,363. Pub. 12–31–63. Filed 6–7–62.

766,817. LOCO. Bowey's, Inc. SN 147,349. Pub. 12–31–63. Filed 6–21–62.

766,818. SELECTO AND DESIGN. Rice Growers Association of California. SN 147,631. Pub. 12–31–63. Filed 6–25–62.

766,819. GUSTO. Ferro Bros. SN 148,884. Pub. 12–31–63. Filed 7–12–62.

766,820. AMERICANA AND DESIGN. Tisch Hotels, Inc. SN 152,728. Pub. 12–31–63. Filed 9–7–62.

766,821. REPRESENTATION OF AN EASTER BUNNY. Schoener Candies, Inc., d.b.a. Schoener's. SN 153,023. Pub. 12–31–63. Filed 9–12–62.

766,822. EL VIGILANTE AND DESIGN. Justo Lopez Valcarcel, S.A. SN 153,768. Pub. 12–31–63. Filed 9–24–62.

766,823. PUM. Justo Lopez Valcarcel, S.A. SN 154,538. Pub. 12–31–63. Filed 10–4–62.

766,824. LAN-YAP. Farmers Exchange, Inc. SN 154,893. Pub. 12–31–63. Filed 10–10–62.

766,825. PIONEER AND DESIGN. Hales & Hunter Co. SN 155,504. Pub. 12–31–63. Filed 10–19–62.

766,826. GO STEADY WITH KOESTER'S FLAVOR RINGS AND DESIGN. The E. H. Koester Bakery Co. SN 157,708. Pub. 12–31–63. Filed 11–21–62.

766,827. KOESTER'S RING A'ROUND AND DESIGN. The E. H. Koester Bakery Co. SN 157,910. Pub. 12–31–63. Filed 11–26–62.

766,828. "LEAVEN MAGIC" AND DESIGN. Cleveland Milling Company. SN 158,819. Pub. 12–31–63. Filed 12–3–62.

766,829. GOLD MEDAL AND DESIGN. General Mills, Inc. SN 158,818. Pub. 12–31–63. Filed 12–10–62.

766,830. SELECT AND DESIGN. Select Fruit & Juice Concentrates, Inc. SN 161,286. Pub. 12–31–63. Filed 1–23–63.

766,831. SPICE-A-MATIC. Leipzig & Lippe, Inc. SN 161,997. Pub. 12–31–63. Filed 2–4–63.

766,832. DON ROTH'S BLACKHAWK. Roth, Incorporated, d.b.a. The Blackhawk Restaurant. SN 162,027. Pub. 12–31–63. Filed 2–4–63.

766,833. CORN COBBLERS. Filler Products, Inc. SN 162,936. Pub. 12–31–63. Filed 2–18–63.

766,834. PESQUERA DEL PACIFICO S. DEL R.L. AND DESIGN. Pesquera del Pacifico, S.A. SN 163,997. Pub. 12–31–63. Filed 3–4–63.

766,835. V AND DESIGN. Vienna Sausage Manufacturing Company. SN 164,673. Pub. 12–31–63. Filed 3–14–63.

766,836. JU-LIM AND DESIGN. Pulverizadora de Jugos, S.A. SN 165,454. Pub. 12–31–63. Filed 3–26–63.

766,837. SUGAR-FOOT. Paul F. Beich Company. SN 170,451. Pub. 12–31–63. Filed 6–6–63.

766,838. BUTTER-BEE. Ben Hughes, d.b.a. Honey Boy Honey Co. SN 172,493. Pub. 12–31–63. Filed 7–5–63.

766,839. RICE-D-LITE. Pacific International Rice Mills, Inc. SN 172,678. Pub. 12–31–63. Filed 7–9–63.

766,840. GOLDEN MAID. The Miami Margarine Company. SN 172,755. Pub. 12–31–63. Filed 7–10–63.

766,841. HULAPINE. Heggblade-Margueleas Co. SN 172,820. Pub. 12–31–63. Filed 7–11–63.

766,842. DEMI. Carter Products, Inc. SN 173,558. Pub. 12–31–63. Filed 7–23–63.

766,843. BETTER HALF. Carter Products, Inc. SN 173,559. Pub. 12–31–63. Filed 7–23–63.

766,844. TRACK-N-TRAIL. Leslie Salt Co. SN 174,200. Pub. 12–31–63. Filed 8–1–63.

766,845. VITRAFERM UGF. Leslie Salt Co. SN 174,202. Pub. 12–31–63. Filed 8–1–63.

766,846. SORBIACE. Hostachem Corporation. SN 174,273. Pub. 12–31–63. Filed 8–2–63.

766,847. DESIGN OF A PROFESSOR. Educator Biscuit Company, Incorporated. SN 174,656. Pub. 12–31–63. Filed 8–8–63.

766,848. BILLOW. Stinson Canning Company. SN 175,064. Pub. 12–31–63. Filed 8–14–63.

766,849. ICY CAPE. Kadiak Fisheries Company. SN 175,195. Pub. 12–31–63. Filed 8–16–63.

Class 47 — Wines

766,850. PASTENE. Pastene Wine & Spirits Co., Inc. SN 169,968. Pub. 12–31–63. Filed 5–29–63.

Class 49 — Distilled Alcoholic Liquors

766,851. WHITE OAK. The Viking Distillery, Inc. SN 155,852. Pub. 12–31–63. Filed 10–24–62.

766,852. CUTLASS. Canadian Park & Tilford Ltd. SN 169,822. Pub. 12–31–63. Filed 5–28–63.

766,853. WINDJAMMER. Schenley Distillers, Inc. SN 169,982. Pub. 12–31–63. Filed 5–29–63.

Class 50 — Merchandise Not Otherwise Classified

766,854. A SANTA APPROVED ETC. AND DESIGN. S. R. Oresman & Co., Inc. SN 134,263. Pub. 12–31–63. Filed 12–18–61.

766,855. PHOTORITE. Fairchild Camera and Instrument Corporation. SN 165,506. Pub. 12–31–63. Filed 3–27–63.

766,856. CELESTE. Wilton Products, Inc. SN 165,552. Pub. 12–31–63. Filed 3–27–63.

Class 51 — Cosmetics and Toilet Preparations

766,857. MIDNIGHT MOOD. Lehn & Fink Products Corporation, assignee of The Fuller Brush Company. SN 110,841. Pub. 9–26–61. Filed 12–27–60.

766,858. FLIPSTICK. Lehn & Fink Products Corporation, d.b.a. Tussy Cosmetics. SN 137,638. Pub. 12–31–63. Filed 2–9–62.

766,859. FOAM PUFF. Avon Products, Inc. SN 139,916. Pub. 12–31–63. Filed 3–15–62.

766,860. NAIL FASHION. Helena Rubenstein, Inc. SN 150,816. Pub. 12–31–63. Filed 8–8–62.

766,861. F. MILLOT. Societe Technique de Parfumerie F. Millot. SN 151,584. Pub. 12–17–63. Filed 8–20–62.

766,862. ENTREE. International Equity Corporation. SN 153,290. Pub. 12–31–63. Filed 9–17–62.

766,863. THE GIFTS OF THE THREE WISE MEN. Carolina Company, Inc., d.b.a. The Carolina Soap & Candle Makers. MULTIPLE CLASS (Classes 51 and 52). SN 153,381. Pub. 12–31–63. Filed 9–18–62.

766,864. MAN-POWER. Shulton, Inc. SN 155,281. Pub. 12–31–63. Filed 10–16–62.

766,865. EVANS. The Hilsinger Corporation, d.b.a. Evans Case Co. SN 156,296. Pub. 12–31–63. Filed 10–31–62.

766,866. DOGWOOD. Roger & Gallet S.A., assignee of Roger & Gallet. SN 162,115. Pub. 12–31–63. Filed 2–5–63.

766,867. INNER CIRCLE. Rilling Dermetics Company. SN 163,769. Pub. 12–31–63. Filed 3–1–63.

766,868. CHARMIS. Colgate-Palmolive Company. SN 164,015. Pub. 12–31–63. Filed 3–6–63.

766,869. STRAW HAT. Faberge, Inc., assignee of Fabergé, Inc. SN 168,913. Pub. 12–31–63. Filed 5–15–63.

766,870. TIGRESS. Faberge, Inc., assignee of Fabergé, Inc. SN 168,914. Pub. 12–31–63. Filed 5–15–63.

766,871. EAU DE COGNAC. Marly Toiletries, Inc. SN 168,937. Pub. 12–31–63. Filed 5–15–63.

766,872. SUE CORY. Helene Curtis Industries, Inc. MULTIPLE CLASS (Classes 51 and 52). SN 170,454. Pub. 12–31–63. Filed 6–6–63.

Class 52 — Detergents and Soaps

766,863. (See Class 51 for this trademark.)

766,872. (See Class 51 for this trademark.)

766,873. "HASN'T SCRATCHED YET." The Bon Ami Company. SN 139,726. Pub. 12–31–63. Filed 3–13–62.

766,874. SILVER KING. Vernon A. Brooks and Phillip A. Brooks (joint venture). SN 155,297. Pub. 12–31–63. Filed 10–17–62.

766,875. DIC-A-DOO. Patent Cereals Company, Inc. SN 155,636. Pub. 12–31–63. Filed 10–22–62.

766,876. ALUMINUM MAGIC. Household Products Corp. SN 159,730. Pub. 12–31–63. Filed 12–26–62.

766,877. 180. S. C. Johnson & Son, Inc. SN 169,137. Pub. 12–31–63. Filed 5–17–63.

766,878. RAZE. Peck's Products Company. SN 169,163. Pub. 12–31–63. Filed 5–17–63.

766,879. TWIN MAGIC. Bristol-Myers Company. SN 169,420. Pub. 12–31–63. Filed 5–22–63.

766,880. GRL. The Cello Chemical Company. SN 169,830. Pub. 12–31–63. Filed 5–28–63.

766,881. ELF. The Drackett Company. SN 169,836. Pub. 12–31–63. Filed 5–28–63.

766,882. ALTEST. Allied Stores Corporation. SN 173,406. Pub. 12–31–63. Filed 7–22–63.

Service Marks

Class 100 — Miscellaneous

766,883. PASQUALE'S AND DESIGN. Pasquale Foods, Inc. SN 121,420. Pub. 12–31–63. Filed 6–5–61.

766,884. PASQUALE'S. Pasquale Foods, Inc. SN 121,422. Pub. 12–31–63. Filed 6–5–61.

766,885. MR. SERVICEMASTER. Wade, Wenger Servicemaster Co. MULTIPLE CLASS (Classes 100 and 103). SN 159,631. Pub. 12–31–63. Filed 12–21–62.

Class 101 — Advertising and Business

766,886. CON QUIP AND DESIGN. SMC Industries, Inc. SN 159,118. Pub. 12–31–63. Filed 12–13–62.

Class 102 — Insurance and Financial

766,887. S AND DESIGN. Safeco Insurance Company of America. SN 138,232. Pub. 12–31–63. Filed 2–19–62.

766,888. EQUALITY SAVINGS & LOAN 1884 AND DESIGN. Equality Savings and Loan Association. SN 159,882. Pub. 12–31–63. Filed 12–28–62.

Class 103 — Construction and Repair

766,885. (See Class 100 for this trademark.)

Class 104 — Communication

766,889. TT AND DESIGN. Mankato Citizens Telephone Company. SN 164,144. Pub. 12–31–63. Filed 8–7–63.

Class 105 — Transportation and Storage

766,890. DIAL-A-CAR AND DESIGN. Dial A Car Rental Systems, Inc. SN 153,466. Pub. 12–31–63. Filed 9–19–62.

766,891. . . . AND LEAVE THE DRIVING TO US. The Greyhound Corporation. SN 154,241. Pub. 12–31–63. Filed 10–1–62.

Class 106 — Material Treatment

766,892. F-S AND DESIGN. Federal Steel Corporation. SN 111,399. Pub. 12–31–63. Filed 1–6–61.

766,893. WONDERCOLOR AND DESIGN. Crown-Bremson Industries, Inc. SN 149,544. Pub. 12–31–63. Filed 7–23–62.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 6 — Chemicals and Chemical Compositions

766,894. Coastal Chemical Corp., Garfield, N.J. SN 174,842. Filed 8–5–63.

COASTAL PH MINUS

For Powder Compound Used To Reduce Alkalinity in Swimming Pool Water.
First use Apr. 6, 1959.

Class 12 — Construction Materials

766,895. Cold River Sand and Gravel Corp., North Walpole, N.H. SN 161,591. Filed P.R. 1–29–63; Am. S.R. 12–11–63.

WHITE BLEND

For Crushed Quarried Screened Stone Used for Oranmental Purposes as on Roofs, Gardens, Driveways and the Like.
First use on or about Oct. 1, 1961.

766,896. Anchor Concrete Products, Inc., Buffalo, N.Y. SN 162,132. Filed P.R. 2–6–63; Am. S.R. 12–12–63.

"MARYLAND STONE"

For Building Bricks.
First use May 1, 1960.

Class 15 — Oils and Greases

766,897. Sprayon Products, Inc., Cleveland, Ohio. SN 137,666. Filed P.R. 2–9–62; Am. S.R. 1–6–64.

SPRAYON

For Open Gear and Wire Rope Lubricant, Light Oil Lubricant, Penetrating Oil, Graphite Lubricant, Silicone Lubricant and Anti-Rust Spray.
First use Feb. 16, 1959, on silicone lubricant.

Class 16 — Protective and Decorative Coatings

766,898. McCloskey Varnish Co., Philadelphia, Pa. SN 159,833. Filed P.R. 12–27–62; Am. S.R. 1–6–64.

BOAT-KOAT

For Varnishes.
First use Dec. 14, 1962.

Class 18 — Medicines and Pharmaceutical Preparations

766,899. Colgate-Palmolive Company, New York, N.Y. SN 121,705. Filed P.R. 6–9–61; Am. S.R. 1–17–64.

PANSORB

For Activated Attapulgite Incorporated in a Medicinal Preparation.
First use May 10, 1961.

Class 19 — Vehicles

766,900. The Bendix Corporation, Detroit, Mich. SN 128,351. Filed P.R. 8–4–61; Am. S.R. 7–17–63.

BRAKE RESTORATION

For Automotive Brake Parts.
First use Feb. 18, 1961.

Class 21 — Electrical Apparatus, Machines, and Supplies

766,901. The Smith-Gates Corporation, Farmington, Conn. SN 148,239. Filed P.R. 7–2–62; Am. S.R. 12–5–63.

SNOW-MAT

For Electric Heating Units Adapted To Be Imbedded in Concrete or the Like.
First use at least as early as June 25, 1962.

766,902. McGraw-Edison Company, Elgin, Ill. SN 178,464. Filed 10–7–63.

Pad-Mount

For Ground Level Electrical Transformers.
First use prior to Oct. 1, 1959.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

766,903. American Can Company, New York, N.Y. SN 161,141. Filed P.R. 1–22–63; Am. S.R. 1–16–64.

FORM-N-FILL

For Machinery for Erecting, Filling and Sealing Fiber Containers and Parts Therefor.
First use Sept. 29, 1962.

Class 26 — Measuring and Scientific Appliances

766,904. Patrick J. McGarvey, Lindenhurst, N.Y. SN 128,553. Filed P.R. 7–7–61; Am. S.R. 12–19–63.

GROGAGE

For Equipment Used in Measuring Children of All Ages.
First use Apr. 3, 1961.

766,905. The Procter & Gamble Company, Cincinnati, Ohio. SN 150,363. Filed P.R. 8–2–62; Am. S.R. 12–4–63.

BULGE METER

For Apparatus for Determining the Flexural Resistance of Packaging Materials.
First use Mar. 16, 1962.

Class 27 — Horological Instruments

766,906. General Time Corporation, New York, N.Y. SN 161,496. Filed P.R. 1–28–63; Am. S.R. 1–17–64.

STANTON

For Clocks.
First use August 1962.

766,907. General Time Corporation, New York, N.Y. SN 161,497. Filed P.R. 1–28–63; Am. S.R. 1–17–64.

WAKEFIELD

For Clocks.
First use August 1962.

766,908. General Time Corporation, New York, N.Y. SN 161,504. Filed P.R. 1–28–63; Am. S.R. 1–17–64.

MEREDITH

For Clocks.
First use August 1962.

Class 31 — Filters and Refrigerators

766,909. Dean Products, Inc., Brooklyn, N.Y. SN 135,776. Filed P.R. 1–15–62; Am. S.R. 12–10–63.

CRYOPANEL

For Evaporator Plates, Refrigerator Shelves and Partitions, Refrigerated Emersion Coolers, Refrigerated Compartments, Refrigerator Baffles, Refrigerated Storage Cabinets, Refrigerator Tanks, Refrigerator Bins and Refrigerated Counters and Refrigerated Serving and Storage Cabinets.
First use Jan. 31, 1961.

Class 32 — Furniture and Upholstery

766,910. Standard Dayton Corporation, Dayton, Ohio. SN 147,641. Filed P.R. 6–25–62; Am. S.R. 1–10–64.

SWINGSHELF

For Shelving Structures for Displaying Merchandise Offered for Sale in Retail Merchandising.
First use May 31, 1962.

Class 34 — Heating, Lighting, and Ventilating Apparatus

766,911. Dean Products, Inc., Brooklyn, N.Y. SN 135,775. Filed P.R. 1–15–62; Am. S.R. 12–10–63.

CRYOPANEL

For Heat Exchangers for Industrial Heating and Cooling Systems.
First use Jan. 31, 1961.

766,912. Bilrus Co., Inc., Los Angeles, Calif. SN 147,077. Filed P.R. 6–18–62; Am. S.R. 6–10–63.

AIR DRAPE

For Air Curtains.
First use Oct. 14, 1961.

Class 36 — Musical Instruments and Supplies

766,913. Juan Morales, New York, N.Y. SN 167,925. Filed P.R. 5–1–63; Am. S.R. 1–17–64.

MORALES

For Phonograph Records.
First use Jan. 15, 1963.

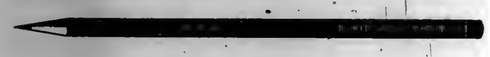
766,914. Autostereo Music, Inc., Beverly Hills, Calif. SN 168,140. Filed P.R. 5–6–63; Am. S.R. 1–13–64.

AUTOSTEREO

For Stereophonic Tape Players and Accessories Therefor.
First use June 28, 1962.

Class 37 — Paper and Stationery

766,915. A. W. Faber-Castell Pencil Co., Inc., Newark, N.J. SN 128,809. Filed P.R. 9–28–61; Am. S.R. 1–16–63.



The drawing is lined for gold and blue. No claim is made to the representation of a pencil per se.
For Pencils and Pens.
First use Nov. 22, 1938.

766,916. Topco Associates, Inc., Skokie, Ill. SN 149,496. Filed P.R. 7–20–62; Am. S.R. 1–7–64.



For Gift Wrap.
First use Apr. 13, 1961.

Class 39 — Clothing

766,917. Herman Lichtman, d.b.a. Artex Hosiery Mills, Boyertown, Pa. SN 139,308. Filed P.R. 3–7–62; Am. S.R. 12–9–63.

COMFORT WEAR

For Ladies' Hosiery.
First use Feb. 27, 1962.

66,918. Spun-Lo Elderlon, Inc., New York, N.Y. SN 141,761. Filed 4–6–62.

KNIT WITH THE FIT WHERE YOU SIT

For Ladies' and Children's Knitted Underwear.
First use Mar. 5, 1953.

766,919. White Swan Hosiery Corp., New York, N.Y. SN 142,234. Filed P.R. 4–18–62; Am. S.R. 12–17–63.

LEG COMFORT

For Women's Elastic Nylon Stockings.
First use Sept. 23, 1959.

766,920. Richard Couture, Inc., New York, N.Y. SN 145,337. Filed P.R. 5–24–62; Am. S.R. 1–20–64.

JEUNESSE

For Dresses.
First use Feb. 6, 1962.

766,921. Jack Kreiss Hosiery, Inc., New York, N.Y. SN 158,832. Filed P.R. 12–10–62; Am. S.R. 1–6–64.

A STEP FORWARD

For Ladies' Slippers and Hosiery.
First use Nov. 1, 1962.

766,922. Stay-Well Mfg. Company, Inc., Chicago, Ill. SN 160,559. Filed P.R. 1–11–63; Am. S.R. 1–6–64.

KANT-KRACK

For Uniform Caps and Visors.
First use Dec. 7, 1962.

Class 40 — Fancy Goods, Furnishings, and Notions

766,923. Hugo Ketels Nachf., Bremen, Germany. SN 152,819. Filed P.R. 9–10–62; Am. S.R. 12–4–63.



Owner of German Reg. No. 706,161, dated Sept. 10, 1957.
For Human Hair, Wigs, Toupees, Eye-Lashes, and Beards.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

766,924. Spun-Lo Elderlon, Inc., New York, N.Y. SN 141,762. Filed 4–6–62.

IT'S THE KNIT WITH THE FIT WHERE YOU SIT

For Knitted Fabrics for Ladies' and Children's Underwear.
First use Mar. 5, 1953.

Class 44 — Dental, Medical, and Surgical Appliances

766,925. Howard D. Wolfe, Richmond, Va. SN 121,955. Filed P.R. 6–13–61; Am. S.R. 1–31–64.

Health-Tan SUN LAMP

For Sun Lamp and Filter Therefor for Therapeutic Purposes.
First use Dec. 1, 1958.

766,926. Hudson Oxygen Therapy Sales Company, Inc., Los Angeles, Calif. SN 144,960. Filed P.R. 5–18–62; Am. S.R. 1–10–64.

Smooth Flo

For Medical Yoke Type Oxygen Regulator.
First use Apr. 6, 1962.

Class 46 — Foods and Ingredients of Foods

766,927. A. Giuriani & Bro., San Francisco, Calif. SN 178,277. Filed 10–3–63.



The mark consists of the conformation of a decanter used as the container for the goods.
For Wine Vinegar.
First use 1959.

TRADEMARK REGISTRATIONS RENEWED

24,007. SNOWFLAKE. Cl. 46. 1–9–1894.
173,890. WITCHING HOUR. Cl. 46. 10–2–23.
175,035. SUPERIOR. Cl. 23. 10–30–23.
175,331. BLUE BAY. Cl. 46. 11–6–23.
178,766. VITAVIM. Cl. 46. 1–22–24.
178,804. BLACKHAWK. Cl. 46. 1–29–24.
178,838. SUDORAL. Cl. 51. 1–29–24.
178,845. RAISIN TREAT. Cl. 46. 1–29–24.
178,866. EMPERATRIZ. Cl. 46. 1–29–24.
179,108. CELLAL. Cl. 16. 2–5–24.
179,484. ESSO BOND. Cl. 12. 2–12–24.
179,489. RED STAR AND DESIGN. Cl. 42. 2–12–24.
179,965. MODOC. Cl. 23. 2–19–24.
180,818. GULISTAN. Cl. 42. 2–26–24.
180,907. HAPPY MAID. Cl. 46. 3–11–24.
181,259. VAPEX. Cl. 18. 3–18–24.
181,403. IDEAL. Cl. 23. 3–18–24.
181,607. BUDDIBOY. Cl. 39. 3–25–24.
182,311. MILL ON THE FLOSS. Cl. 46. 4–8–24.
183,369. INTERNATIONAL STERLING AND DESIGN. Cl. 28. 4–29–24.
183,411. DIXIE SPLIT. Cl. 46. 4–29–24.
183,441. DURAMETALLIC. Cl. 35. 4–29–24.
183,825. HANSON. Cl. 26. 5–6–24.
183,945. BLUE STAR. Cl. 46. 5–13–24.
184,157. INNER-CLEAN. Cl. 18. 5–20–24.
185,619. H–A (SYMBOL). Cl. 33. 6–24–24.
186,178. STAMCO. Cl. 23. 7–1–24.
404,438. BARILLA. Cl. 1. 11–23–43.
404,683. BROOKS BROTHERS AND DESIGN. Cl. 3. 12–14–43.
404,944. TOWNCLIFFE. Cl. 39. 12–28–43.
405,066. TIMELESS TWEEDS. Cl. 39. 1–4–44.
405,355. TOWNTREE. Cl. 39. 1–25–44.
405,594. ABC AND DESIGN. Cl. 23. 2–8–44.
405,678. QUINTERRA. Cl. 21. 2–15–44.
405,692. AMERICANA. Cl. 26. 2–15–44.
405,784. BUTAC. Cl. 6. 2–22–44.
406,199. PLEXIGLAS. Cl. 1. 3–14–44.
406,227. TG. Cl. 35. 3–14–44.
406,358. BADGER. Cl. 2. 3–28–44.
406,437. TRADE WIND. Cl. 49. 4–4–44.
407,198. TS. Cl. 21. 5–23–44.
407,236. AUTO-MATRON. Cl. 23. 5–23–44.
407,411. TRITON. Cl. 46. 6–6–44.
407,495. DEVASTATING. Cl. 51. 6–6–44.
407,605. NEPS VENDOR. Cl. 23. 6–13–44.
407,687. CO.K.O. Cl. 23. 6–20–44.
407,688. O-KNI-CO. Cl. 23. 6–20–44.
407,750. ENO, Cl. 45. 6–27–44.
407,884. WESTON PAPER & DESIGN. Cl. 37. 7–4–44.
408,083. PITCHSHOULDER. Cl. 39. 7–18–44.

TRADEMARK REGISTRATIONS CANCELED

Section 7(d)

760,588. CORDWOOD. Cl. 21. 11–26–63.

Section 8

645,821. BURNZALL. Cl. 15. 5–14–57.

The following registrations issued Jan. 28, 1958

657,582. BARB-Q-DISKS. Cl. 1.
657,585. FLOWER FAIR. Cl. 1.
657,586. BOLTONIA BARK STREET. Cl. 1.
657,587. RULL. Cl. 1.
657,590. EVERFULL. Cl. 2.
657,591. TOUCH 'N GO! Cl. 3.
657,592. BRUSHLESS SCUFF-KOTE. Cl. 4.
657,593. DESIGN OF SHIELD AND BANDS. Cl. 6.
657,600. REV O CON. Cl. 6.
657,601. AEH. Cl. 6.
657,616. BENOIT'S SHUR-WAK. Cl. 9.
657,618. HUNTSMAN. Cl. 9.
657,619. LIQUILIZER AND DESIGN. Cl. 10.
657,621. WEED-NIX ETC. AND DESIGN. Cl. 10.
657,622. HYCON. Cl. 10.
657,624. MORGANIC. Cl. 10.
657,633. FORESTWALL AND DESIGN. Cl. 12.

657,634. SURFTONE. Cl. 12.
657,635. F FORESTER AND DESIGN. Cl. 12.
657,636. LAN-SLIDE. Cl. 12.
657,638. PROSUL. Cl. 12.
657,645. RIVESTIMENTO DALMINE. Cl. 14.
657,646. "S" NICKEL. Cl. 14.
657,647. INCO S AND DESIGN. Cl. 14.
657,648. BOURGES KLEERSPRAY. Cl. 16.
657,652. SILEXINE AND DESIGN. Cl. 16.
657,654. APPECURB. Cl. 18.
657,657. ANDERIN. Cl. 18.
657,660. COLD SNAP. Cl. 18.
657,665. SUROMATE. Cl. 18.
657,666. VELMOL. Cl. 18.
657,672. LEDAMOX. Cl. 18.
657,680. KL-8. Cl. 18.
657,682. FEOTRIL. Cl. 18.
657,685. CONCERT. Cl. 20.
657,686. FOSTORIA AND DESIGN. Cl. 21.
657,699. TRU-NOTE AND DESIGN. Cl. 21.
657,701. MATTEL-O-MATIC. Cl. 22.
657,704. SKI RITE AND DESIGN. Cl. 22.
657,705. MODEL 'N MOLD AND DESIGN. Cl. 22.
657,712. LOK-A-SKI. Cl. 22.
657,718. KWIKSTRIP 2. Cl. 23.
657,718. WASHINGTON SQUARE. Cl. 23.
657,724. SWEETHEART. Cl. 23.
657,728. UJS. Cl. 23.
657,729. NE. Cl. 23.
657,734. DOG BAR. Cl. 23.
657,745. FILTONE. Cl. 26.
657,763. FAMILY TREE. Cl. 28.
657,764. COLUMBINE. Cl. 28.
657,765. PELTANIUM. Cl. 28.
657,768. NOBILITY PERMAWARE. Cl. 30.
657,784. INCIN-O-GRILL. Cl. 34.
657,791. DOWNBEAT. Cl. 36.
657,792. "JET-TONE." Cl. 36.
657,793. PAR AND DESIGN. Cl. 36.
657,796. SONG CRAZE. Cl. 38.
657,799. DELL BASKETBALL. Cl. 38.
657,802. BRIANTI. Cl. 39.
657,803. VARSITY CLUB. Cl. 39.
657,806. LADY JANET. Cl. 39.
657,810. HILTON PARK. Cl. 39.
657,811. HANGOVER. Cl. 39.
657,812. DANNY BOY AND DESIGN. Cl. 39.
657,813. OJAYS' PLYMOUTH. Cl. 42.
657,816. LAN-O-STRETCH. Cl. 42.
657,819. LUXURELLA. Cl. 42.
657,820. ESCALON. Cl. 43.
657,829. FARM FOLKS. Cl. 46.
657,830. CHEF ALEX'S AND DESIGN. Cl. 46.
657,832. WILSMOR FROZEN DONUTS AND DESIGN. Cl. 46.
657,837. SOAVE. Cl. 46.
657,838. CLINTEX. Cl. 46.
657,841. MING CHA. Cl. 46.
657,848. INSTOMELT. Cl. 46.
657,850. SWEET ALICE. Cl. 46.
657,863. KOOL-STRAWS. Cl. 50.
657,874. LEODENT. Cl. 52.
657,875. GRIMARVEL AND DESIGN. Cl. 52.
657,877. SOLIJENT. Cl. 52.
657,878. PARAGON. Cl. 52.
657,882. WIMPY. Cl. 100.
657,887. PORTA-VALT ETC. AND DESIGN. Cl. 105.
657,890. MOLD-O-MIZE. Cl. 106.
657,895. PANOGENIZED ETC. AND DESIGN. Cl. A.
657,897. TUFTED AND DESIGN. Cl. 12.
657,900. TACK-E-TAPE. Cl. 21.
657,903. SPIN-IT. Cl. 22.
657,904. PUSH PULL POWER. Cl. 23.
657,906. KUSHON KLIP. Cl. 28.
657,907. THE DAY DATE. Cl. 28.
657,910. WEBSTER AND DESIGN. Cl. 39.
657,913. MINNESOTA WILD RICE AND DESIGN. Cl. 46.
657,915. WALLDECOR. Cl. 50.
657,916. DUFY RED. Cl. 51.
657,917. DA VINCI ROSE. Cl. 51.
657,918. MANET MAUVE. Cl. 51.

Section 18

81,003. EUREKA. Cl. 40. 2-21-11.

Erratum

In the OFFICIAL GAZETTE of December 11, 1962, p. TM 96, under Trademark Registrations Canceled, "636,249. PERMAPONTIC. Cl. 44." should be deleted.

TRADEMARK REGISTRATIONS—NEW CERTIFICATES

New Certificates issued under sections 7(c), 7(f), 7(g) of the Trademark Act of 1946 for the unexpired term of the original registrations.

297,435. DESIGN OF TWIN FIGURES. Cl. 14. J. A. Henckels. 9–13–32. New Cert. Sec. 7(c) to J. A. Henckels Zwillingswerk Aktiengesellschaft, Solingen, Germany.

297,436. TWIN WORKS. Cl. 14. J. A. Henckels. 9–13–32. New Cert. Sec. 7(c) to J. A. Henckels Zwillingswerk Aktiengesellschaft, Solingen, Germany.

580,656. AJI-NO-MOTO. Cl. 46. Attorney General of the United States. 10–6–53. New Cert. Sec. 7(c) to Ajinomoto Co., Inc., Tokyo, Japan.

597,783. COLORFLYTE. Cl. 2. Hellmich Plastic Company. 11–9–54. New Cert. Sec. 7(c) to Lenox Incorporated, Trenton, N.J.

608,056. LA BELLE FERMIERE ETC. AND DESIGN. Cl. 46. Noe Bourassa Limited. 6–28–55. New Cert. Sec. 7(c) to N. Bourassa Ltee., Montreal, Canada.

617,562. CHEER UP AND DESIGN. Cl. 45. Orange Smile Sirup Company. 12–13–55. New Cert. Sec. 7(c) to The Seven-Up Company, St. Louis, Mo.

656,964. BRANCHELL. Cl. 2 and 23. Hellmich Manufacturing Company. 1–14–58. New Cert. Sec. 7(c) to Lenox Incorporated, Trenton, N.J.

739,888. DORCO AND DESIGN. Cl. 10. Dorchester Fertilizer Co. 10–30–62. New Cert. Sec. 7(c) to The Baugh and Sons Company, Baltimore, Md.

INDEX OF REGISTRANTS

MARCH 17, 1964

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

AKJ Co., The: *See*—
Draper, Flora L., Mrs.
A.P. Silk Co., Inc., New York, N.Y. 766,791, pub. 12–31–63. Cl. 42.
Absorene Mfg. Co., The, d.b.a. *Model* 'N Mold, St. Louis, Mo. 657,705, canc. Cl. 22.
Accurate Bushing Co.: *See*—
Accurate Bushing Co., The.
Accurate Bushing Co., The, to Accurate Bushing Co., Garwood, N.J. 405,594, ren. 3–17–64. Cl. 23.
Acralite Co. Inc., Brooklyn, N.Y. 766,799, pub. 12–31–63. Cl. 44.
Advanced Development Laboratories, Inc., Nashua, N.H. 766,681, pub. 12–31–63. Cl. 26.
Advanced Development Laboratories, Inc., Nashua, N.H. 766,632, pub. 12–31–63. Cl. 21.
Aero-Test Equipment Co., Inc., Dallas, Tex. 766,670, pub. 12–31–63. Cl. 23.
Aetna-Standard Engineering Co., The, Pittsburgh, Pa. 657,729, canc. Cl. 23.
Alaska Bait: *See*—
Thompson, Fuller S.
Alger-Sullivan Sawmill Co., Century, Fla. 766,590–1, pub. 12–31–63. Cl. 12.
Allen Industries, Inc., Detroit, Mich. 766,529–30, pub. 12–31–63. Cl. 1.
Allied Stores Corp., New York, N.Y. 766,550, pub. 12–31–63. Cl. 4.
Allied Stores Corp., New York, N.Y. 766,577, pub. 12–31–63. Cl. 6.
Allied Stores Corp., New York, N.Y. 766,882, pub. 12–31–63. Cl. 52.
Alpha Microwave, Inc., Newton Upper Falls, Mass. 766,635, pub. 12–31–63. Cl. 21.
American Business Systems, Inc., Philadelphia, Pa. 766,724, pub. 12–31–63. Cl. 37.
American Can Co., New York, N.Y. 766,903. Cl. 23.
American Cyanamid Co., New York, N.Y. 657,672, canc. Cl. 18.
American Gage & Mfg. Co., The, Dayton, Ohio. 766,798, pub. 12–31–63. Cl. 44.
American Hardware Corp., The, New Britain, Conn., from Savage Arms Corp., Westfield, Mass. 766,687–8, pub. 12–31–63. Cl. 26.
American Seeding Machine Co., The, Springfield, Ohio, to Oliver Corp., Chicago, Ill. 175,035, ren. 3–17–64. Cl. 23.
American Viscose Corp.: *See*—
FMC Corp.
Anaconda Wire and Cable Co., Hastings-On-Hudson, N.Y. 766,642, pub. 12–31–63. Cl. 21.
Anchor Jewelry Mfg. Corp., New York, N.Y. 766,693, pub. 12–31–63. Cl. 28.
Anchor Concrete Products, Inc., Buffalo, N.Y. 766,896. Cl. 12.
Anderson, Clarita R., d.b.a. Browette Co., San Francisco, Calif. 766,805, pub. 12–31–63. Cl. 44.
Andis Clipper Co., Racine, Wis. 766,671, pub. 12–31–63. Cl. 23.
Angora Corp. of America, New York, N.Y. 766,794, pub. 12–31–63. Cl. 43.
Aristocrat Leather Products, Inc., New York, N.Y. 766,718, pub. 12–31–63. Cl. 37.
Armour and Co., Chicago, Ill. 766,556, pub. 12–31–63. Cl. 6.
Armour Pharmaceutical Co., Chicago, Ill. 766,608, pub. 12–31–63. Cl. 18.
Artex Hosiery Mills: *See*—
Lichtman, Herman.
Artflex Fabrics, Brooklyn, N.Y. 657,816, canc. Cl. 42.
Aschkenasy, Erich J., Inc., New York, N.Y. 766,772, pub. 12–31–63. Cl. 39.
Associated Dry Goods Corp., New York, N.Y. 766,755, pub. 12–31–63. Cl. 39.
Associated Fuels Ltd., Vancouver, British Columbia, Canada. 657,582, canc. Cl. 1.
Astrosonics, Inc., Syosset, N.Y. 766,667, pub. 12–31–63. Cl. 23.
Atech, Inc., Toledo, Ohio. 766,552, pub. 12–31–63. Cl. 5.
Autostereo Music, Inc., Beverly Hills, Calif. 766,914. Cl. 36.
Avon Products, Inc., New York, N.Y. 766,859, pub. 12–31–63. Cl. 51.
Awtco Corp., Portland, Oreg. 766,659, pub. 12–31–63. Cl. 22.
Ball, Mildred L., Winston-Salem, N.C. 766,696, pub. 12–31–63. Cl. 28.
Baralan International Inc., New York, N.Y. 766,534, pub. 12–31–63. Cl. 2.
Barclay Co., Providence, R.I. 657,765, canc. Cl. 28.
Bates Mfg. Co., Lewiston, Maine. 766,781, pub. 12–31–63. Cl. 42.
Bauer, Eddie, Seattle, Wash. 766,705, pub. 12–31–63. Cl. 32.
Beck, John P., Co., Colorado Springs, Colo. 657,600, canc. Cl. 6.
Beecham Products Inc.: *See*—
Eno, J. C., (U.S.) Ltd.
Beich, Paul F., Co., Bloomington, Ill. 766,837, pub. 12–31–63. Cl. 46.
Bekins Van & Storage Co., Los Angeles, Calif. 766,728, pub. 12–31–63. Cl. 38.
Bendix Corp., The, North Hollywood, Calif., from Celestronics, Inc., Torrance, Calif. 766,636, pub. 12–17–63. Cl. 21.
Bendix Corp., The, Detroit, Mich. 766,900. Cl. 19.
Benoit, Peter, Alexandria, Ontario, Canada. 657,616, canc. Cl. 9.
Benson, N. P., Optical Co., Minneapolis, Minn. 766,685, pub. 12–31–63. Cl. 26.
Best Feeds & Farm Supplies, Inc., Oakdale, Pa. 766,557, pub. 12–31–63. Cl. 6.
Best Feeds & Farm Supplies, Inc., Oakdale, Pa. 766,565, pub. 12–31–63. Cl. 6.
Bet-R-Growth Products Co., Houston, Tex. 766,579–80, pub. 12–31–63. Cl. 10.
Bilrus Co., Inc., Los Angeles, Calif. 766,912. Cl. 34.
Bioanalytical Products Laboratory: *See*—
Bioanalytical Products Laboratory, Inc.
Bioanalytical Products Laboratory, Inc., d.b.a. Bioanalytical Products Laboratory, Suitland, Md. 766,567, pub. 12–31–63. Cl. 6.
Bird Machine Co., South Walpole, Mass. 766,594, pub. 12–31–63. Cl. 13.
Bisleri, S.A. Felice, & Cia., Milan, Italy. 766,623, pub. 12–31–63. Cl. 18.
Blackhawk Restaurant, The: *See*—
Roth, Inc.
Blue Goose Growers, Inc., Fullerton, from Buenaventura Lemon Co. Inc., Saticoy, Calif. 766,812, pub. 12–31–63. Cl. 46.
Blue Star Growers, Inc.: *See*—
Cashmere Fruit Growers Union.
Blum, Bernard, Corp., New York, N.Y. 766,697, pub. 12–31–63. Cl. 28.
Blum Trouser Co., Inc., Baltimore, Md. 657,810, canc. Cl. 39.
Boehringer, C. H., Sohn, Ltd., Ingelheim (Rhine), Germany. 766,610, pub. 12–31–63. Cl. 18.
Bolton Leathers Ltd., Bolton, England. 657,587, canc. Cl. 1.
Bolton Leathers Ltd., Bolton, England. 657,586, canc. Cl. 1.
Bon Ami Co., The, New York, N.Y. 766,873, pub. 12–31–63. Cl. 52.
Botany GMR Corp., New York, N.Y. 766,760, pub. 12–31–63. Cl. 39.
Bourges Color Corp., New York, N.Y. 657,648, canc. Cl. 16.
Bowey's Inc., Chicago, Ill. 766,817, pub. 12–31–63. Cl. 46.
Brandt Millinery Co., Inc., New York, N.Y. 657,802, canc. Cl. 39.
Breeze Illinois Inc., Wyoming, Ill. 766,712, pub. 12–31–63. Cl. 34.
Brilliant Brothers Co., Boston, Mass. 657,910, canc. Cl. 39.
Bristol-Myers Co., New York, N.Y. 766,879, pub. 12–31–63. Cl. 52.
Brooks Brothers, New York, N.Y., to Julius Garfinckel & Co., Washington, D.C. 404,683, ren. 3–17–64. Cl. 3.
Brooks, Vernon A., and Phillip A. Brooks, Chicago, Ill. 766,874, pub. 12–31–63. Cl. 52.
Browette Co.: *See*—
Anderson, Clarita R.
Buckeye Vacuum Cleaner Supply Co., The, Cleveland Heights, Ohio. 766,542, pub. 12–31–63. Cl. 2.
Budd & Votaw, San Francisco, Calif. 657,811, canc. Cl. 39.
Buehler Ltd., Evanston, Ill. 766,730–1, pub. 12–31–63. Cl. 38.
Buenaventura Lemon Co. Inc.: *See*—
Blue Goose Growers, Inc.
Burndy Corp., Norwalk, Conn. 766,630, pub. 12–31–63. Cl. 21.
Caldwell Packaging Co., Inc., Atlanta, Ga. 766,719, pub. 12–31–63. Cl. 37.
Caldwell, E. L., & Sons, Inc., Corpus Christi, Tex. 766,668, pub. 12–31–63. Cl. 23.
Callaway Mills Co., La Grange, Ga. 766,624, pub. 12–31–63. Cl. 19.
Campana Sales Co., Batavia, Ill., to Purex Corp., Ltd., Lakewood, Calif. 407,495, ren. 3–17–64. Cl. 51.
Canadian Park & Tilford Ltd., Vancouver, British Columbia, Canada. 766,852, pub. 12–31–63. Cl. 49.
Canteen Restaurant: *See*—
Ford, Rose M.
Capital City Products Co., The, Columbus, Ohio. 766,603, pub. 12–31–63. Cl. 15.
Carac Corp., The, Mountain View, N.J. 657,622, canc. Cl. 10.
Carbic-Hoechst Corp.: *See*—
Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning.
Carolina Co., Inc., d.b.a. The Carolina Soap & Candle Makers, Southern Pines, N.C. 766,863, pub. 12–31–63. Multiple Class (Classes 51 and 52).
Carolina Soap & Candle Makers, The: *See*—
Carolina Co., Inc.
Carter Products, Inc., New York, N.Y. 766,842–3, pub. 12–31–63. Cl. 46.
Cashmere Fruit Growers Union, to Blue Star Growers, Inc., Cashmere, Wash. 183,945, ren. 3–17–64. Cl. 46.
Castle, Ltd., Los Angles, Calif. 766,725, pub. 12–31–63. Cl. 37.

C-C Chemicals, Inc., Boston, Mass. 766,586, pub. 12–31–63. Cl. 12.
Celanese Corp. of America, New York, N.Y. 657,601, canc. Cl. 6.
Celanese Corp. of America, New York, N.Y. 766,602, pub. 12–31–63. Cl. 15.
Celestronics, Inc.: *See*—
Bendix Corp., The.
Cello Chemical Co., The, Baltimore, Md. 766,880, pub. 12–31–63. Cl. 52.
Celotex Corp., The, Chicago, Ill. 657,634, canc. Cl. 21.
Centaur Air Conditioning: *See*—
Full Vision, Inc.
Chemetron Corp., Chicago, Ill. 766,562, pub. 12–31–63. Cl. 6.
Cherney, Louis, d.b.a. Pharmadent Laboratories, Washington, D.C. 766,616, pub. 12–31–63. Cl. 18.
Cherry-Burrell Corp., Cedar Rapids, Iowa, from Arthur Colton Co., Detroit, Mich. 766,673, pub. 12–24–63. Cl. 23.
Chicopee Mills, Inc., New York, N.Y. 766,782, pub. 12–31–63. Cl. 42.
Chimie et Atomistique, Paris, France. 766,618, pub. 12–31–63. Cl. 18.
Cisco, Inc., New York, N.Y. 766,745–6, pub. 12–31–63. Multiple Class (Classes 39 and 42).
Clairol Inc., New York, N.Y. 766,660, pub. 12–31–63. Cl. 22.
Clark Knitting Mills, Inc., Union City, N.J. 766,761, pub. 12–31–63. Cl. 39.
Cleanamation, Inc., Anderson, Ind. 766,677, pub. 12–31–63. Cl. 24.
Cleveland Milling Co., Cleveland, Tenn. 766,828, pub. 12–31–63. Cl. 46.
Coastal Chemical Corp., Garfield, N.J. 766,894. Cl. 6.
Coe, Barry, Los Angeles, Calif. 766,663, pub. 12–31–63. Cl. 22.
Cold River Sand and Gravel Corp., North Walpole, N.H. 766,895. Cl. 12.
Colgate-Palmolive Co., New York, N.Y. 766,868, pub. 12–31–63. Cl. 51.
Colgate-Palmolive Co., New York, N.Y. 766,899. Cl. 18.
Collett-Week Corp., Ossining, N.Y. 766,621, pub. 12–31–63. Cl. 18.
Commercial Mechanisms: *See*—
Giovagnoli, Paul S.
Container Corp. of America, Chicago, Ill. 766,528, pub. 12–31–63. Cl. 1.
Continental Can Co., Inc.: *See*—
Hazel-Atlas Glass Co.
Cooke, Robert J., Bayside, N.Y. 766,682, pub. 12–31–63. Cl. 26.
Colton, Arthur, Co.: *See*—
Cherry-Burrell Corp.
Cooley, Inc., Pawtucket, R.I. 766,788–9, pub. 12–31–63. Cl. 42.
Corecto Corp., Greensboro, Ga. 766,806, pub. 12–31–63. Cl. 44.
Corning Glass Works, Corning, N.Y. 766,710, pub. 12–31–63. Cl. 34.
Cortland Industries, Inc., Cortland, N.Y. 766,686, pub. 12–31–63. Cl. 26.
Cortland Produce Co., Inc., Toledo, Ohio. 766,816, pub. 12–31–63. Cl. 46.
Cotter, R. E., Co., to Monterey Canning Co., San Francisco, Calif. 175,331, ren. 3–17–64. Cl. 46.
Couture, Richard, Inc., New York, N.Y. 766,920. Cl. 39.
Cresman, S. R., & Co., Inc., West Warwick, R.I. 766,854, pub. 12–31–63. Cl. 50.
Crete, Charles A., d.b.a. Pharmaceutical Associates, San Francisco, Calif. 766,620, pub. 12–31–63. Cl. 18.
Cronin, Daniel T., Inc., Neosho, Mo. 766,750, pub. 12–31–63. Cl. 39.
Crown-Bremson Industries, Inc., Kansas City, Mo. 766,893, pub. 12–31–63. Cl. 106.
Crown Zellerbach Corp., San Francisco, Calif. 766,584, pub. 12–31–63. Cl. 12.
Crystalline Salt Co., Boston, Mass., to Morton Salt Co., Chicago, Ill. 24,007, ren. 3–17–64. Cl. 46.
Curtis, Helene, Industries, Inc., Chicago, Ill. 766,872, pub. 12–31–63. Multiple Class (Classes 51 and 52.)
Daiichi Seiyaku Kabushiki Kaisha, d.b.a. Daiichi Seiyaku Co., Ltd., Chuo-ku, Tokyo-to, Japan. 766,606, pub. 12–31–63. Cl. 18.
Daiichi Seiyaku Co., Ltd.: *See*—
Daiichi Seiyaku Kabushiki Kaisha.
Dalmine S.p.A., Milan, Italy. 657,645, canc. Cl. 14.
Danecraft Inc., Providence, R.I. 657,763, canc. Cl. 28.
Dan River Mills, Inc., Danville, Va. 766,787, pub. 12–31–63. Cl. 42.
Date Watchband Co., Inc., The, Omaha, Nebr. 657,907, canc. Cl. 28.
Davidow Suits, Inc.: *See*—
Davidow Inc. Sportsware.
Davidow Inc. Sportsware, to Davidow Suits, Inc., New York, N.Y. 405,066, ren. 3–17–64. Cl. 39.
Dean Products, Inc., Brooklyn, N.Y. 766,911. Cl. 34.
Dean Products, Inc., Brooklyn, N.Y. 766,909. Cl. 31.
Debygag Deutsche Hydrierwerk G.m.b.H., Dusseldorf, Germany. 766,572, pub. 12–31–63. Cl. 6.
Dell Publishing Co., Inc., New York, N.Y. 657,799, canc. Cl. 38.
Dell Publishing Co., Inc., New York, N.Y. 766,734, pub. 12–31–63. Cl. 38.
De Luxe Reading Corp., Elizabeth, N.J. 766,655–6, pub. 12–31–63. Cl. 22.
Desses, Jean, S.A.R.L. Societe Nouvelle, Paris, France. 766,741, pub. 12–31–63. Cl. 39.
Deutsche Grammophon Gesellschaft m.b.H., Hamburg, Germany. 766,717, pub. 12–31–63. Cl. 36.
Dial A Car Rental Systems, Inc., Garden City, N.Y. 766,890, pub. 12–31–63. Cl. 105.
Diamond Alkali Co., Cleveland, Ohio. 766,576, pub. 12–31–63. Cl. 6.
Dietene Co., The, Minneapolis, Minn. 766,614, pub. 12–31–63. Cl. 18.
Dismeier, Howard H., d.b.a. Howard Dismeier Co., Chicago, Ill. 766,698, pub. 12–31–63. Cl. 28.
Dismeier, Howard, Co.: *See*—
Dismeier, Howard H.
Dockery, Garland P., d.b.a. G. P. Dockery Co., Winston-Salem, N.C. 766,767, pub. 12–31–63. Cl. 39.
Dockery, G. P., Co.: *See*—
Dockery, Garland P.
Dougherty Bedding Co., Philadelphia, Pa. 766,706, pub. 12–31–63. Cl. 32.
Downbeat Record Co.: *See*—
Langham, Raymond D.
Drackett Co., The, Cincinnati, Ohio. 766,881, pub. 12–31–63. Cl. 52.
Draper, Flora L., Mrs., d.b.a. The Akj Co., Rockwood, Tenn. 766,609, pub. 12–31–63. Cl. 18.
Du Pont de Nemours, E. I., and Co., Wilmington, Del. 766,575, pub. 12–31–63. Cl. 6.
Durametallic Corp., Kalamazoo, Mich. 183,441, ren. 3–17–64. Cl. 35.
Eaton, Charles A., Co., Brockton, Mass. 766,756, pub. 12–31–63. Cl. 39.
Eclipse Sleep Products, Inc., Brooklyn, N.Y. 766,709, pub. 12–31–63. Cl. 32.
Edson, Inc., Chicago, Ill. 766,704, pub. 12–31–63. Cl. 32.
Educator Biscuit Co., Inc., Lowell, Mass. 766,847, pub. 12–31–63. Cl. 46.
Ekco Products Co., Chicago, Ill. 657,890, canc. Cl. 106.
Electric Storage Battery Co., The, Philadelphia, Pa. 766,627, pub. 12–31–63. Cl. 21.
Elliott Bay Mill Co., Seattle, Wash. 766,589, pub. 12–31–63. Cl. 12.
El-Tronics, Inc., West Warrent, Pa. 766,633, pub. 12–31–63. Cl. 21.
El Rancho Farms: *See*—
Kirkorian, Berge.
Empire Crafts Corp., Newark, N.Y. 657,768, canc. Cl. 30.
Eno, J. C., (U.S.) Ltd., Bloomfield, N.J., to Beecham Products Inc., Clifton, N.J. 407,750, ren. 3–17–64. Cl. 45.
Epstein, Harry, & Co.: *See*—
Epstein, Harry.
Epstein, Harry, d.b.a. Harry Epstein & Co., Baltimore, Md. 657,803, canc. Cl. 39.
Equality Savings and Loan Association, St. Louis, Mo. 766,888, pub. 12–31–63. Cl. 102.
Essex Wire Corp., Fort Wayne, Ind. 766,638, pub. 12–31–63. Cl. 21.
Evans Case Co.: *See*—
Hilsinger Corp., The.
Everest & Jennings, Inc., Los Angeles, Calif. 766,803, pub. 12–31–63. Cl. 44.
Everpure, Inc., Oak Brook, Ill. 766,701, pub. 12–31–63. Cl. 31.
FMC Corp., San Jose, Calif., from American Viscose Corp., Philadelphia, Pa. 766,532, pub. 12–31–63. Cl. 1.
Faber-Castell, A. W., Pencil Co., Inc., Newark, N.J. 766,915. Cl. 37.
Faber, Eberhard, Inc., Wilkes-Barre, Pa. 766,722, pub. 12–31–63. Cl. 37.
Fairchild Camera and Instrument Corp., Syosset, N.Y. 766,855, pub. 12–31–63. Cl. 50.
Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, from Carbic-Hoechst Corp., Mountainside, N.J. 766,553, pub. 12–31–63. Cl. 6.
Farmers Exchange, Inc., Franklinton, La. 766,824, pub. 12–31–63. Cl. 46.
Feberge, Inc., from Faberge, Inc., New York, N.Y. 766,869–70, pub. 12–31–63. Cl. 51.
Federal Steel Corp., Dayton, Ohio. 766,892, pub. 12–31–63. Cl. 106.
Federated Department Stores, Inc., Cincinnati, Ohio. 766,739, pub. 12–31–63. Cl. 39.
Ferro Bros., Ventura, Calif. 766,819, pub. 12–31–63. Cl. 46.
Fibreboard Paper Products Corp., San Francisco, Calif. 657,685, canc. Cl. 20.
Filler Products, Inc., Atlanta, Ga. 766,833, pub. 12–31–63. Cl. 46.
Fish Net and Twine Co., The, Menominee, Mich. 766,654, pub. 12–31–63. Cl. 22.
Fleming and Co., Pharmaceuticals, St. Louis, Mo. 766,607, pub. 12–31–63. Cl. 18.
Foley & Lavish Engineering Co., Chicago, Ill. 766,582, pub. 12–31–63. Cl. 12.
Foot, S. B., Tanning Co., Red Wing, Minn. 766,525, pub. 12–31–63. Cl. 1.
Ford, Rose M., d.b.a. Canteen Restaurant, Kansas City, Mo. 766,811, pub. 12–31–63. Cl. 46.
Formica Corp., Cincinnati, Ohio. 766,625, pub. 12–31–63. Cl. 20.
Fostoria Pressed Steel Corp., The, Fostoria, Ohio. 657,686, canc. Cl. 21.
Fraser's, Inc., New York, N.Y. 766,869, pub. 12–31–63. Cl. 23.
Fuller Brush Co., The: *See*—
Lehn & Fink Products Corp.
Full Vision, Inc., d.b.a. Centaur Air Conditioning, Newton, Kans. 766,713, pub. 12–31–63. Cl. 34.
Gard, Andy, Corp., Leetsdale, Pa. 766,664, pub. 12–31–63. Cl. 22.
Garfinckel, Julius, & Co., Inc.: *See*—
Brooks Brothers.
Gates Rubber Co., The, Denver, Colo. 406,227, ren. 3–17–64. Cl. 35.
Gedney, M. A., Co., Chaska, Minn. 183,411, ren. 3–17–64. Cl. 46.

Geller, Andrew, Inc., Brooklyn, N.Y. 766,737, pub. 12–31–63. Cl. 39.
General Aniline & Film Corp., New York, N.Y. 766,555, pub. 12–31–63. Cl. 6.
General Battery and Ceramic Corp., Reading, Pa. 766,641, pub. 12–31–63. Cl. 21.
General Capsule Corp., Fraser, Mich. 657,848, canc. Cl. 46.
General Filter Co., Ames, Iowa. 766,702, pub. 12–31–63. Cl. 31.
General Foods Corp.: *See*—
Perkins Products Co.
General Mills, Inc., Minneapolis, Minn. 766,829, pub. 12–31–63. Cl. 46.
General Foods Corp., White Plains, N.Y. 766,551, pub. 12–31–63. Cl. 4.
General Motors Corp., Detroit, Mich. 766,646, pub. 12–31–63. Cl. 21.
General Time Corp., New York, N.Y. 766,906–8. Cl. 27.
General Tire & Rubber Co., The, Akron, Ohio. 766,526, pub. 12–31–63. Cl. 1.
General Tire & Rubber Co., The, Akron, Ohio. 766,665, pub. 12–31–63. Cl. 22.
Gibrich, Leo, Co., Chicago, Ill. 657,728, canc. Cl. 23.
Giovagnoli, Paul S., d.b.a. Commercial Mechanisms, Kansas City, Mo. 766,648, pub. 12–31–63. Cl. 22.
Giuriani, A., & Bro., San Francisco, Calif. 766,927. Cl. 46.
Gluck, Alfred, d.b.a. Alfred Gluck's Kreuter Bread and/or Gluck's Kreuter Bread, Philadelphia, Pa. 766,814, pub. 12–31–63. Cl. 46.
Gluck's, Alfred, Kreuter Bread: *See*—
Gluck, Alfred.
Gluck's Kreuter Bread: *See*—
Gluck, Alfred.
Goodyear Rubber Co., Middletown, Conn. 766,753, pub. 12–31–63. Cl. 39.
Greyhound Corp., The, Chicago, Ill. 766,891, pub. 12–31–63. Cl. 105.
Grieco Bros., Inc., Lawrence, Mass. 766,775, pub. 12–31–63. Cl. 39.
Grotnes Machine Works, Inc., Chicago, Ill. 766,675, pub. 12–31–63. Cl. 23.
Grotnes Machine Works, Inc., Chicago, Ill. 766,541, pub. 12–31–63. Cl. 2.
Guardian Products Co., Inc., North Hollywood, Calif. 766,801–2, pub. 12–31–63. Cl. 44.
Guardian Products Co., Inc., North Hollywood, Calif. 766,708, pub. 12–31–63. Cl. 32.
Guyco, Inc., Chicago, Ill. 766,726, pub. 12–31–63. Cl. 37.
HRL, Inc., Los Angeles, Calif. 766,604, pub. 12–31–63. Cl. 15.
Haase, Wilbert W., Co., Forest Park, Ill. 766,540, pub. 12–31–63. Cl. 2.
Habitat, Inc., New York, N.Y. 766,637, pub. 12–31–63. Cl. 21.
Haecker, Earnest, d.b.a. Haecker Industries, Philadelphia, Pa. 657,903, canc. Cl. 22.
Haecker Industries: *See*—
Haecker, Earnest.
Hagan Chemicals & Controls, Inc., Pittsburgh, Pa. 657,877–8, canc. Cl. 52.
Halby Products Co., Inc., Wilmington, Del. 766,566, pub. 12–31–63. Cl. 6.
Hales & Hunter Co., Chicago, Ill. 766,825, pub. 12–31–63. Cl. 46.
Hales & Hunter Co., Chicago, Ill. 766,611, pub. 12–31–63. Cl. 18.
Hamilton, Thomas F., Santa Monica, Calif. 766,700, pub. 12–31–63. Cl. 30.
Hanos, Alex, Craig, Colo. 657,830, canc. Cl. 46.
Hanson Brothers Scale Co., Chicago, Ill., to Hanson Scale Co., Northbrook, Ill. 183,825, ren. 3–17–64. Cl. 26.
Hanson Scale Co.: *See*—
Hanson Brothers Scale Co.
Hapman Corp., Kalamazoo, Mich. 766,707, pub. 12–31–63. Cl. 32.
Harbison-Carborundum Corp., Falconer, N.Y. 766,581, pub. 12–31–63. Cl. 12.
Harrington & Richardson, Inc., Worcester, Mass. 657,618, canc. Cl. 9.
Hassenfeld Bros. Inc., Central Falls, R.I. 766,661, pub. 12–31–63. Cl. 22.
Hayashi, F., Baltimore, Md. 766,744, pub. 12–31–63. Cl. 39.
Hazel-Atlas Glass Co., Wheeling, W. Va., to Continental Can Co., Inc., New York, N.Y. 185,619, ren. 3–17–64. Cl. 33.
Heggblade-Marguleas Co., San Francisco, Calif. 766,841, pub. 12–31–63. Cl. 46.
Hercules Packing Corp., Alden, N.Y. 766,715, pub. 12–31–63. Cl. 35.
Heublein, Inc., d.b.a. The Ming Tea Co., Hartford, Conn. 657,841, canc. Cl. 46.
Hickok Mfg. Co., Inc., Rochester, N.Y. 766,547, pub. 12–31–63. Cl. 3.
Hickok Mfg. Co., Inc., Rochester, N.Y. 766,768, pub. 12–31–63. Cl. 39.
Higgins, John G., Chattanooga, Tenn. 81,003, canc. Cl. 40.
Hilsinger Corp., The, d.b.a. Evans Case Co., Plainville, Mass. 766,865, pub. 12–31–63. Cl. 51.
Hirsch, Fred S., d.b.a. Inner Clean Mfg. Co., Los Angeles, Calif., to Fred S. Hirsch, d.b.a. Innerclean Co., Beaumont, Calif. 184,157, ren. 3–17–64. Cl. 18.
Holmes, Matt E., d.b.a. M. E. Holmes Co., Virginia, Minn. 657,913, canc. Cl. 46.
Holmes, M. E., Co.: *See*—
Holmes, Matt E.
Holt, J. Gordon, Wallingford, Pa. 766,732, pub. 12–31–63. Cl. 38.
Holyoke, Edgar W., El Monte, Calif. 645,321, canc. Cl. 15.
Honey Boy Honey Co.: *See*—
Hughes, Ben.
Hooker Chemical Corp., New York, N.Y. 766,570, pub. 12–31–63. Cl. 6.
Hospital Specialty Co., The, to Hospital Specialty Co., Cleveland, Ohio. 407,236, ren. 3–17–64. Cl. 23.
Hospital Specialty Co., The, to Hospital Specialty Co., Cleveland, Ohio. 407,605, ren. 3–17–64. Cl. 23.
Hostachem Corp., Mountainside, N.J. 766,846, pub. 12–31–63. Cl. 46.
Household Products Corp., Denver, Colo. 766,876, pub. 12–31–63. Cl. 52.
Howe Sound Co., New York, N.Y. 766,599, pub. 12–31–63. Cl. 14.
Huber, J. M., Inc., to J. M. Huber Corp., New York, N.Y. 405,784, ren. 3–17–64. Cl. 6.
Huber, J. M., Corp.: *See*—
Huber, J. M., Inc.
Hudson, H. D. Mfg. Co.: *See*—
Hudson Mfg. Co., The.
Hudson Mfg. Co., The, Minneapolis, Minn., to H. D. Hudson Mfg. Co., Chicago, Ill. 181,403, ren. 3–17–64. Cl. 23.
Hudson Mfg. Co., The, Minneapolis, Minn., to H. D. Hudson Mfg. Co., Chicago, Ill. 179,965, ren. 3–17–64. Cl. 23.
Hudson Oxygen Therapy Sales Co., Inc., Los Angeles, Calif. 766,926. Cl. 44.
Hughes, Ben, d.b.a. Honey Boy Honey Co., St. Joseph, Mo. 766,838, pub. 12–31–63. Cl. 46.
Hugo Ketels Nachf., Bremen, Germany. 766,923. Cl. 40.
Hull, R. O., & Co., Inc., Cleveland, Ohio. 766,559–60, pub. 12–31–63. Cl. 6.
Humble Oil & Refining Co., Houston, Tex. 766,729, pub. 12–31–63. Cl. 38.
Huyck Corp., Rensselaer, N.Y. 766,792, pub. 12–31–63. Cl. 42.
Ideal Fishing Float Co., Inc., Richmond, Va. 766,536, pub. 12–31–63. Multiple Classes (Classes 2 and 22.)
Incin-O-Grill, Inc., Freehold, N.J. 657,784, canc. Cl. 34.
Indiana General Corp., Valparaiso, Ind. 766,692, pub. 12–31–63. Cl. 26.
Inner Clean Mfg. Co.: *See*—
Hirsch, Fred S.
Innerclean Co.: *See*—
Hirsch, Fred S.
Innovators Marketing Corp., Chicago, Ill. 766,622, pub. 12–31–63. Cl. 18.
International Commodities, Inc.: *See*—
Tel-A-Dex Corp.
International Equity Corp., Bala-Cynwyd, Pa. 766,862, pub. 12–31–63. Cl. 51.
International Milling Co., to International Milling Co. Inc., Minneapolis, Minn. 178,804, ren. 3–17–64. Cl. 46.
International Milling Co. Inc.: *See*—
International Milling Co.
Midland Flour Milling Co., The.
International Nickel Co., Inc., The, New York, N.Y. 657,646–7, canc. Cl. 14.
International Paper Co., New York, N.Y. 766,538, pub. 12–31–63. Cl. 2.
International Silver Co., Meriden and Wallingford, Conn., to The International Silver Co., Meriden, Conn. 183,369, ren. 3–17–64. Cl. 26.
International Silver Co., The: *See*—
International Silver Co.
Items Inc., St. Louis, Mo. 766,666, pub. 12–31–63. Cl. 22.
JFD Electronics Corp., Brooklyn, N.Y. 766,645, pub. 12–31–63. Cl. 21.
J & J Landscaping, Inc., Great Neck, N.Y. 657,585, canc. Cl. 1.
Jacob, Julius C., Sr., Freeport, N.Y. 657,734, canc. Cl. 23.
Jet-tone Musical Products: *See*—
Ratzenberger, Bill.
Joanna Western Mills Co., Chicago, Ill. 766,527, pub. 12–31–63. Cl. 1.
Jobber News & Products Publishing Corp., Chicago, Ill. 766,735, pub. 12–31–63. Cl. 38.
Johns-Manville Corp., New York, N.Y. 405,678, ren. 3–17–64. Cl. 21.
Johnson, S. C., & Son, Inc., Racine, Wis. 766,877, pub. 12–31–63. Cl. 52.
Joyce Uniforms, Inc., Boston, Mass. 766,748, pub. 12–31–63. Cl. 39.
KVP Sutherland Paper Co., Kalamazoo, Mich. 766,543, pub. 12–31–63. Cl. 2.
Kadiak Fisheries Co., Seattle, Wash. 766,849, pub. 12–31–63. Cl. 46.
Karagheusian, A. & M., Inc., New York, N.Y. 180,318, ren. 3–17–64. Cl. 42.
Kendall Co., The: *See*—
Millville Mfg. Co., The.
Kerfoot, Thomas, & Co., Ltd., Bardsley, England. 181,259, ren. 3–17–64. Cl. 18.
Keuffel & Esser Co., Hoboken, N.J. 766,690, pub. 12–31–63. Cl. 26.
Keynote Publications, Inc., New York, N.Y. 766,733, pub. 12–31–63. Cl. 38.
Kimberly-Clark Corp., Neenah, Wis. 766,720, pub. 12–31–63. Cl. 37.
Kirkorian, Berge, d.b.a. El Rancho Farms, Fresno, Calif. 766 813, pub. 12–31–63. Cl. 46.
Kleinert, I. B., Rubber Co., New York, N.Y. 766,738, pub. 12–31–63. Cl. 39.
Klopman Mills, Inc., New York, N.Y. 766,793, pub. 12–31–63. Cl. 42.
Knomark Mfg. Co., Inc., Brooklyn, N.Y. 657,592, canc. Cl. 4.
Koester, E. H., Bakery Co., The, Baltimore, Md. 766,826–7, pub. 12–31–63. Cl. 46.
Kraemer Textiles Inc., Nazareth, Pa. 657,820, canc. Cl. 43.
Kreiss, Jack, Hosiery, Inc., New York, N.Y. 766,921. Cl. 39.

Lakeside Laboratories, Inc., Milwaukee, Wis. 766,619, pub. 12–31–63. Cl. 18.
Lamm Brothers, Inc., Baltimore, Md. 408,083, ren. 3–17–64. Cl. 39.
Langham, Raymond D., d.b.a. Downbeat Record Co., Los Angeles, Calif. 657,791, canc. Cl. 36.
Lansdale Forest Products Corp., Lansdale, Pa. 657,635–6, canc. Cl. 12.
Lansdale Pharmaceutical Co., Inc., Kansas City, Mo. 657,680, canc. Cl. 18.
Larx Pharmatetic Corp., New York, N.Y. 657,657, canc. Cl. 18.
Lawrence, A. C., Leather Co., Peabody, Mass., to Swift & Co., Chicago, Ill. 404,438, ren. 3–17–64. Cl. 1.
Lehn & Fink Products Corp., Bloomfield, N.J., from The Fuller Brush Co., East Hartford, Conn. 766,857, pub. 9–26–61. Cl. 51.
Lehn & Fink Products Corp., d.b.a. Tussy Cosmetics, Bloomfield, N.J. 766,856, pub. 12–31–63. Cl. 51.
Leipzig & Lippe, Inc., New York, N.Y. 766,831, pub. 12–31–63. Cl. 46.
Leon-Ferenbach Inc., New York, N.Y. 766,795, pub. 12–31–63. Cl. 43.
Leo-werke G.m.b.H., Frankfurt am Main, Germany. 657,874, canc. Cl. 52.
Leslie Salt Co., San Francisco, Calif. 766,844–5, pub. 12–31–63. Cl. 46.
Lewis, John, Jewelry: *See*— Lewis, John M.
Lewis, J. M.: *See*— Lewis, John M.
Lewis, John M., d.b.a. John Lewis Jewelry, J. M. Lewis, or John M. Lewis, Boston, Mass. 766,695, pub. 12–31–63. Cl. 28.
Lichtman, Herman, d.b.a. Artex Hosiery Mills, Boyertown, Pa. 766,917. Cl. 39.
Liquifilzer Corp., Indianapolis, Ind. 657,619, canc. Cl. 10.
Lord Baltimore Press, Inc., The, New York, N.Y. 766,537, pub. 12–31–63. Cl. 2.
Louden, William, d.b.a. Tinicum Research Co., Erwinna, Pa. 766,569, pub. 12–31–63. Cl. 6.
Lowenstein, M., & Sons, Inc., New York, N.Y. 657,819, canc. Cl. 42.
Lubrizol Corp., The, Wickliffe, Ohio. 766,600, pub. 12–31–63. Cl. 15.
MDC Industries: *See*— Metals Development Co.
Magnet Litho Supply Corp., New York, N.Y. 657,875, canc. Cl. 52.
Mahew & Rosell, Inc., Albany, N.Y. 766,807, pub. 12–31–63. Cl. 44.
Major Electronics Corp., Brooklyn, N.Y. 766,640, pub. 12–31–63. Cl. 21.
Management Assistance, Inc., New York, N.Y. 766,691, pub. 12–31–63. Cl. 26.
Manhattan Shirt Co., The, New York, N.Y. 766,763, pub. 12–31–63. Cl. 39.
Mankato Citizens Telephone Co., Mankato, Minn. 766,889, pub. 12–31–63. Cl. 104.
Marcus, Sol, Buffalo, N.Y. 766,699, pub. 12–31–63. Cl. 28.
Margien, Juliette, Inc., to Juliette Margien, Inc., Ridgefield, N.J. 657,916–18, canc. Cl. 51.
Mariman, Fred W., Pueblo, Colo. 766,593, pub. 12–31–63. Cl. 13.
Marly Toiletries, Inc., Brooklyn, N.Y. 766,871, pub. 12–31–63. Cl. 51.
Marvella Pearls, Inc., New York, N.Y. 657,906, canc. Cl. 28.
Mattel, Inc., Hawthorne, Calif. 766,653, pub. 12–31–63. Cl. 22.
Mattel, Inc., Los Angeles, Calif. 657,701, canc. Cl. 22.
May Nursery Co., Yakima, Wash. 766,523, pub. 12–31–63. Cl. 1.
McCloskey Varnish Co., Philadelphia, Pa. 766,898. Cl. 16.
McGarvey, Patrick J., Linden, N.Y. 766,904. Cl. 26.
McGraw-Edison Co., Elgin, Ill. 766,902. Cl. 21.
McIntosh Laboratory, Inc., Binghamton, N.Y. 766,639, pub. 12–31–63. Cl. 21.
Meltzer, Jack, Hollywood, Calif. 766,743, pub. 12–31–63. Cl. 39.
Mercantile Sales Co., St. Louis, Mo. 766,658, pub. 12–31–63. Cl. 22.
Metals Development Co., d.b.a. MDC Industries, Philadelphia, Pa. 766,549, pub. 12–31–63. Cl. 4.
Miami Margarine Co., The, Cincinnati, Ohio. 766,840, pub. 12–31–63. Cl. 46.
Midland Flour Milling Co., The, Kansas City, Mo., to International Milling Co. Inc., Minneapolis, Minn. 178,866, ren. 3–17–64. Cl. 46.
Mid-States Shoe Co., Milwaukee, Wis. 766,770, pub. 12–31–63. Cl. 39.
Miles Laboratories, Inc., Elkhart, Ind. 766,605, pub. 12–31–63. Cl. 18.
Miller & Paine, Lincoln, Nebr. 173,890, ren. 3–17–64. Cl. 46.
Millot, F., Societe Technique de Parfumerie, Paris, France. 766,861, pub. 12–17–63. Cl. 51.
Mills, James, Orchards Co.: *See*— Mills, James, Orchards Corp.
Mills, James, Orchards Corp., to James Mills Orchards Co., Hamilton City, Calif. 182,311, ren. 3–17–64. Cl. 46.
Millville Mfg. Co., The, Philadelphia, Pa., to The Kendall Co., Walpole, Mass. 178,489, ren. 3–17–64. Cl. 42.
Ming Tea Co., The: *See*— Heublein, Inc.
Model 'N Mold: *See*— Absorene Mfg. Co., The.
Modern Music Publications, Inc., New York, N.Y. 657,796, canc. Cl. 38.
Montclair Marketers, Inc., Montclair, N.J. 766,588, pub. 12–31–63. Cl. 12.
Monterey Canning Co.: *See*— Cotter, R. E., Co.
Morales, Juan, New York, N.Y. 766,913. Cl. 36.
Morgan Paper Co., Inc., Lititz, Pa. 766,723, pub. 12–31–63. Cl. 37.
Morton Salt Co.: *See*— Crystaline Salt Co.
Mosaic Tile Co., The, Zanesville, Ohio. 657,897, canc. Cl. 12.
Murphy, G. C., Co., McKeesport, Pa. 766,778, pub. 12–31–63. Cl. 40.
Nash Inc., Jersey City, N.J. 657,591, canc. Cl. 3.
National Connector Corp., Minneapolis, Minn. 766,647, pub. 12–31–63. Cl. 21.
National Food Stores: *See*— National Tea Co.
National Tea Co., d.b.a. National Food Stores, Chicago, Ill. 766,809, pub. 12–31–63. Cl. 46.
Natur-seal Products Co., Russell, Kans. 766,531, pub. 12–31–63. Cl. 1.
Neuville, Inc., New York, N.Y. 766,754, pub. 12–31–63. Cl. 39.
Newaygo Engineering Co., Newaygo, Mich. 657,713, canc. Cl. 23.
New Castle Products, Inc., New Castle, Ind. 766,587, pub. 12–31–63. Cl. 12.
New England Tape Co., Inc., Hudson, Mass. 657,900, canc. Cl. 21.
New York Air Brake Co., The, New York, N.Y. 766,674, pub. 12–31–63. Cl. 23.
Norco, Inc., Georgetown, Conn. 766,595, pub. 12–31–63. Cl. 13.
Obermayer, S., Co., The, Chicago, Ill. 179,484, ren. 3–17–64. Cl. 12.
O'Brien, Gene and Verna: *See*— O'Brien, Gene F., and Verna M. O'Brien.
O'Brien, Gene E., and Verna M. O'Brien, d.b.a. Gene and Verna O'Brien, from Precious Metals, Inc., St. Louis, Mo. 766,629, pub. 12–31–63. Cl. 21.
O'Brien, Verna M.: *See*— O'Brien, Gene E., and Verna M. O'Brien.
Ohio Knife Co., The, Cincinnati, Ohio. 407,687–8, ren. 3–17–64. Cl. 23.
Old-North Mfg. Co., Inc., Lenoir, N.C. 766,583, pub. 12–31–63. Cl. 12.
Olin Mathieson Chemical Corp., New York, N.Y. 766,617, pub. 12–31–63. Cl. 18.
Oliver Corp.: *See*— American Seeding Machine Co., The.
Omaha Cartage & Warehousing Co., Omaha, Nebr. 657,887, canc. Cl. 105.
Originals by Claire, Inc., New York, N.Y. 766,548, pub. 12–31–63. Cl. 3.
Ostow & Jacobs, Inc., New York, N.Y. 657,813, canc. Cl. 42.
Outlet Co., The: *See*— Samuels, J., and Brother, Inc.
Pacific International Rice Mills, Inc., San Francisco, Calif. 766,839, pub. 12–31–63. Cl. 46.
Pacific Vegetable Oil Corp., San Francisco, Calif. 766,815, pub. 12–31–63. Cl. 46.
Panogen, Inc., Ringwood, Ill. 657,895, canc. Cl. A.
Pantke-Harpke Co., Milwaukee, Wis. 766,740, pub. 12–31–63. Cl. 39.
Paper Service Co., Inc., Kansas City, Kans. 766,721, pub. 12–31–63. Cl. 37.
Par Records, Inc., Hollywood, Calif. 657,793, canc. Cl. 36.
Patent Cereals Co., Inc., Geneva, N.Y. 766,875, pub. 12–31–63. Cl. 52.
Pasquale Foods, Inc., Cincinnati, Ohio. 766,883–4, pub. 12–31–63. Cl. 100.
Pastene Wine & Spirits Co., Inc., Boston, Mass. 766,850, pub. 12–31–63. Cl. 47.
Patch, E. L., Co., The, Stoneham, Mass. 657,665–6, canc. Cl. 18.
Payton Products, Inc., New York, N.Y. 766,650, pub. 12–31–63. Cl. 22.
Peck's Products Co., St. Louis, Mo. 766,878, pub. 12–31–63. Cl. 52.
Peerless Photo Products, Inc., Shoreham, N.Y. 766,684, pub. 12–31–63. Cl. 26.
Pennsylvania Steel Corp., Detroit, Mich. 766,597, pub. 12–31–63. Cl. 14.
Perfumeria Floralia, S.A., Madrid, Spain. 178,838, ren. 3–17–64. Cl. 51.
Perkins Products Co., Chicago, Ill., to General Foods Corp., White Plains, N.Y. 657,863, canc. Cl. 50.
Pesquera Del Pacifico, S. de R. L., Ensenada, Mexico. 766,834, pub. 12–31–63. Cl. 46.
Pharmaceutical Associates: *See*— Crete, Charles A.
Pharmadent Laboratories: *See*— Cherney, Louis.
Philips-Duphar, N.V., Amsterdam, Netherlands. 766,612, pub. 12–31–63. Cl. 18.
Piper Toys, Inc., Mount Vernon, N.Y. 766,651, pub. 12–31–63. Cl. 22.
Plastic Metal Mfg. Co., Chicago, Ill. 657,590, canc. Cl. 2.
Polarad Electronics Corp., Brooklyn, N.Y. 766,626, pub. 8–16–55. Cl. 21.
Polymer Corp., The, Reading, Pa. 766,721, pub. 3–26–63. Cl. 1.
Poor & Co., Chicago, Ill. 657,638, canc. Cl. 12.
Popper, Leo, New York, N.Y. 766,758, pub. 12–31–63. Cl. 39.
Precious Metals, Inc.: *See*— O'Brien, Gene E., and Verna M. O'Brien.
Procter & Gamble Co., The, Cincinnati, Ohio. 766,905. Cl. 26.
Pulverizadora de Jugos, S.A., Mixcoac, Mexico City, Mexico. 766,836, pub. 12–31–63. Cl. 46.

Purex Corp., Ltd.: *See*— Campana Sales Co.
R. & R. Metal Products, Inc., Garden City, N.Y. 766,535, pub. 12–31–63. Cl. 2.
Raftis, Andrew J., and Harry J. Raftis, Chicago, Ill. 657,699, canc. Cl. 21.
Raftis, Harry J.: *See*— Raftis, Andrew J., and Harry J. Raftis.
Rankin, Simond, New York, N.Y. 657,915, canc. Cl. 50.
Ratzenberger, Bill, d.b.a. Jet-tone Musical Products, Bridgeport, Conn. 657,792, canc. Cl. 36.
Reck, H., Co., Elgin, Ill. 657,829, canc. Cl. 46.
Record Automaten Aktiengesellschaft Liechtenstein Corp., Vaduz, Liechtenstein. 766,644, pub. 12–31–63. Cl. 21.
Reliable Luggage, Inc., West Pittsburg, Pa. 766,545, pub. 12–31–63. Cl. 3.
Rice Growers Association of California, Sacramento, Calif. 766,818, pub. 12–31–63. Cl. 46.
Richardson, Sid, Carbon Co., Fort Worth, Tex. 766,554, pub. 12–31–63. Cl. 6.
Rilling Dermetics Co., Bridgeport, Conn. 766,867, pub. 12–31–63. Cl. 51.
Ritter Co., Inc., Rochester, N.Y. 766,797, pub. 12–31–63. Cl. 44.
Robinson Mfg. Co., Elizabeth City, N.C. 766,776, pub. 12–31–63. Cl. 39.
Rochester Button Co., Rochester, N.Y. 766,779, pub. 12–31–63. Cl. 40.
Rochester Mfg. Co., Inc., Rochester, N.Y. 657,745, canc. Cl. 26.
Rocky Mount Dry Goods Co., Inc., Rocky Mount, N.C. 766,758, pub. 12–31–63. Cl. 39.
Rodgers, D. F., Mfg. Co., Inc., New York, N.Y. 766,751, pub. 12–31–63. Cl. 39.
Roger & Gallet: *See*— Roger & Gallet S.A.
Roger & Gallet S.A., Paris, France, from Roger & Gallet, New York, N.Y. 766,866, pub. 12–31–63. Cl. 51.
Röhm & Haas Co., to Rohm & Haas Co., Philadelphia, Pa. 406,199, ren. 3–17–64. Cl. 1.
Romak Underwear Co., Inc., New York, N.Y. 766,783, pub. 12–31–63. Cl. 42.
Ro-Search, Inc., Waynesville, N.C. 766,742, pub. 12–31–63. Cl. 39.
Roth, Inc., d.b.a. The Blackhawk Restaurant, Chicago, Ill. 766,832, pub. 12–31–63. Cl. 46.
Rothman Stores, Inc., St. Louis, Mo. 657,806, canc. Cl. 39.
Rough Rider, Inc., Napa, Calif. 766,774, pub. 12–31–63. Cl. 39.
Roy, Rob, Co., Inc., New York, N.Y. 766,747, pub. 12–31–63. Cl. 39.
Rubinstein, Helena, Inc., New York, N.Y. 657,654, canc. Cl. 18.
Rubinstein, Helena, Inc., New York, N.Y. 766,860, pub. 12–31–63. Cl. 51.
Rugby Knitting Mills, Inc., Buffalo, N.Y. 766,764, pub. 12–31–63. Cl. 39.
Rumpp, C. F., & Sons, Inc., Philadelphia, Pa., from I. Smallman & Sons Co., New York, N.Y. 766,544, pub. 12–31–63. Cl. 3.
SMC Industries, Inc., Chattanooga, Tenn. 766,886, pub. 12–31–63. Cl. 101.
Safeco Insurance Co. of America, Seattle, Wash. 766,887, pub. 12–31–63. Cl. 102.
Samuels, J., and Brother, Inc., to The Outlet Co., Providence, R.I. 181,607, ren. 3–17–64. Cl. 39.
San Fernando Electric Mfg. Co., San Fernando, Calif. 766,588, canc. Cl. 21.
Savage Arms Corp.: *See*— American Hardware Corp., The.
Schenley Distillers, Inc., New York, N.Y. 766,853, pub. 12–31–63. Cl. 40.
Schering Aktiengesellschaft, Berlin, Germany. 657,593, canc. Cl. 6.
Schoener Candies, Inc., d.b.a. Schoener's, Reading, Pa. 766,821, pub. 12–31–63. Cl. 46.
Schoener's: *See*— Schoener Candies, Inc.
Schwartz, A. J., Son Mfg. Corp., New York, N.Y. 657,812, canc. Cl. 39.
Select Fruit & Juice Concentrates, Inc., New York, N.Y. 766,830, pub. 12–31–63. Cl. 46.
Shawnee Mfg. Co., Inc., Topeka, Kans. 657,904, canc. Cl. 23.
Shelby Seamless Hosiery Mills, Inc., Shelby, N.C. 766,777, pub. 12–31–63. Cl. 39.
Shirley Fabrics Corp., New York, N.Y. 766,784, pub. 12–31–63. Cl. 42.
Shulton, Inc., Clifton, N.J. 766,864, pub. 12–31–63. Cl. 51.
Sierra Engineering Co., Sierra Madre, Calif. 766,680, pub. 12–31–63. Cl. 26.
Simplex Wire & Cable Co., Cambridge, Mass. 766,628, pub. 12–31–63. Cl. 21.
Simplicity Pattern Co. Inc., New York, N.Y. 405,692, ren. 3–17–64. Cl. 26.
Slip 'N Sleep, Inc., New York, N.Y. 766,771, pub. 12–31–63. Cl. 39.
Smallman, I., & Sons Co.: *See*— Rumpp, C. F., & Sons, Inc.
Smith, Alva T., Co., The, Milwaukee, Wis. 657,704, canc. Cl. 22.
Smith, Caleb V., & Son, Inc., New York, N.Y. 766,769, pub. 12–31–63. Cl. 39.
Smith, David H., Inc., Lynn, Mass. 766,749, pub. 12–31–63. Cl. 39.
Smith, David H., Inc., Lynn, Mass. 766,762, pub. 12–31–63. Cl. 39.
Smith-Gates Corp., The, Farmington, Conn. 766,901. Cl. 21.
Smith Kline & French Laboratories, Philadelphia, Pa. 657,682, canc. Cl. 18.
Smith-Macaulay Co., Syracuse, N.Y. 657,660, canc. Cl. 18.
Sno-Cat Corp. of New Hampshire, Nashua, N.H. 657,712, canc. Cl. 22.
Societe Anonyme: Societe d'Electro-Chimie d'Electro-Metallurgie et des Acieries Electroiques d'Ugine, Paris, France. 766,524, pub. 12–31–63. Cl. 1.
Sony Corp., Shinagawa-ku, Tokyo, Japan. 766,716, pub. 12–31–63. Cl. 36.
Soptra Fabrics Corp., New York, N.Y. 766,790, pub. 12–31–63. Cl. 42.
Southern Illinois University Foundation, Carbondale, Ill. 766,679, pub. 12–31–63. Cl. 26.
Spectra Biologicals, Inc., East Brunswick, N.J. 766,568, pub. 12–31–63. Cl. 6.
Speedfast Corp., Long Island City, N.Y. 766,592, pub. 12–31–63. Cl. 13.
Speedring Corp., Warren, Mich. 766,689, pub. 12–31–63. Cl. 26.
Spocks, Inc., Wichita Falls, Tex. 766,652, pub. 12–31–63. Cl. 22.
Sporlan Valve Co., St. Louis, Mo. 766,678, pub. 12–31–63. Cl. 26.
Sport Imports Inc., New York, N.Y. 766,752, pub. 12–31–63. Cl. 39.
Sprayon Products, Inc., Cleveland, Ohio. 766,897. Cl. 15.
Spun-Lo Elderlon, Inc., New York, N.Y. 766,918. Cl. 39.
Spun-Lo Elderlon, Inc., New York, N.Y. 766,924. Cl. 42.
Stamco, Inc.: *See*— Streine Tool & Mfg. Co., The.
Standard Brands Inc., New York, N.Y. 657,837–8, canc. Cl. 46.
Standard Dayton Corp., Dayton, Ohio. 766,910. Cl. 32.
Stay-well Mfg. Co., Inc., Chicago, Ill. 766,922. Cl. 39.
Stepan Chemical Co., Maywood, N.J. 766,561, pub. 12–31–63. Cl. 6.
Sterling Drug Inc., New York, N.Y. 766,615, pub. 12–31–63. Cl. 18.
Stevens, J. P., & Co., Inc., New York, N.Y. 766,786, pub. 12–31–63. Cl. 42.
Stinson Canning Co., Prospect Harbor, Maine. 766,848, pub. 12–31–63. Cl. 46.
Stockton Mfg. Co., Inc., Dallas, Tex. 766,757, pub. 12–31–63. Cl. 39.
Strachman Associates, Inc., New York, N.Y. 766,780, pub. 12–31–63. Cl. 42.
Streine Tool & Mfg. Co., The, to Stamco, Inc., New Bremen, Ohio. 186,178, ren. 3–17–64. Cl. 23.
Strouse, Adler, Co., The, New Haven, Conn. 766,773, pub. 12–31–63. Cl. 39.
Stylecraft Frocks, Inc., Philadelphia, Pa. 766,765, pub. 12–31–63. Cl. 39.
Surrey Biscuit Co. Ltd., The, Windermere, England. 657,850, canc. Cl. 46.
Swift & Co.: *See*— Lawrence, A. C., Leather Co.
Tasty Baking Co., Philadelphia, Pa. 766,810, pub. 12–31–63. Cl. 46.
Taylor, W. A., & Co., New York, N.Y. 406,437, ren. 3–17–64. Cl. 49.
Tel-A-Dex Corp., Monrovia, Calif., from International Commodities, Inc., Pasadena, Calif. 766,643, pub. 12–24–63. Cl. 21.
Telephone Antiseptic Guard, Inc., Oceanside, N.Y. 766,800, pub. 12–31–63. Cl. 44.
Telesystem Services Corp., Glenside, Pa. 766,631, pub. 12–31–63. Cl. 21.
Terlin Sales Co.: *See*— Terlin Sales Co., Inc.
Terlin Sales Co., Inc., d b.a. Terlin Sales Co., Stockton, Calif. 766,808, pub. 12–31–63. Cl. 45.
Texize Chemicals, Inc., Greenville, S.C. 766,558, pub. 12–31–63. Cl. 6.
Thermidaire Corp. of America, Syracuse, N.Y. 766,601, pub. 12–31–63. Cl. 15.
Thiokol Chemical Corp., Bristol, Pa. 766,522, pub. 12–31–63. Cl. 1.
Thompson, Fuller S., d.b.a. Alasko Bait, Hope, via Moose-Pass, Alaska. 766,649, pub. 12–31–63. Cl. 22.
Thriftcheck Service Corp., New York, N.Y. 766,727, pub. 12–31–63. Cl. 37.
Tigrett Industries, Inc., Jackson, Tenn. 766,657, pub. 12–31–63. Cl. 22.
Tinicum Research Co.: *See*— Louden, William.
Tisch Hotels, Inc., Atlantic City, N.J. 766,820, pub. 12–31–63. Cl. 46.
Titan Eisenwarenfabrik G.m.b.H., Schwelm, Westphalia, Germany. 766,596, pub. 12–31–63. Cl. 14.
Topco Associates, Inc., Skokie, Ill. 766,539, pub. 12–31–63. Cl. 2.
Topco Associates, Inc., Skokie, Ill. 766,916. Cl. 37.
Towle Mfg. Co., Newburyport, Mass. 657,764, canc. Cl. 28.
Towncliffe, Inc., New York, N.Y. 404,944, ren. 3–17–64. Cl. 39.
Towncliffe, Inc., New York, N.Y. 405,355, ren. 3–17–64. Cl. 39.
Travel Wise, Inc., New York, N.Y. 766,546, pub. 12–31–63. Cl. 3.
Tremax Industries, Inc., Chicago, Ill. 766,703, pub. 12–31–63. Cl. 32.
Tung-Sol Electric Inc.: *See*— Tung-Sol Lamp Works, Inc.
Tung-Sol Lamp Works, Inc., to Tung-Sol Electric Inc., Newark, N.J. 407,198, ren. 3–17–64. Cl. 21.
Tussy Cosmetics: *See*— Lehn & Fink Products Corp.
Union Carbide Corp., New York, N.Y. 766,598, pub. 12–31–63. Cl. 14.
United States Rubber Co., New York, N.Y. 766,714, pub. 12–31–63. Cl. 35.

United States Testing Co. Inc., Hoboken, N.J. 766,563, pub. 12–31–63. Cl. 6.
United Steel & Wire Co., Battle Creek, Mich. 766,533, pub. 12–31–63. Cl. 2.
United Whelan Corp., Brooklyn, N.Y. 766,574, pub. 12–31–63. Cl. 6.
Valcarcel, Justó Lopez, S.A., Vigo, Spain. 766,822–3, pub. 12–31–63. Cl. 46.
Valley Evaporating Co., Yakima, Wash. 407,411, ren. 3–17–64. Cl. 46.
Van der Heem NV, Elektrotechnische Industrie, The Hague, The Netherlands. 766,711, pub. 12–31–63. Cl. 34.
Van Malderen, L., Societe Anonyme dite: Etablissements, Paris, France. 657,652, canc. Cl. 16.
Vaughn Millwork Co., Reno, Nev. 657,633, canc. Cl. 12.
Verkamp Corp., The, Cincinnati, Ohio. 766,571, pub. 12–31–63. Cl. 6.
Victor Comptometer Corp., Chicago, Ill. 766,634, pub. 12–31–63. Cl. 21.
Victor Comptometer Corp., Chicago, Ill. 766,683, pub. 12–31–63. Cl. 26.
Vienna Sausage Mfg. Co., Chicago, Ill. 766,835, pub. 12–31–63. Cl. 46.
Viking Distillery, Inc., The, Albany, Ga. 766,851, pub. 12–31–63. Cl. 49.
Vollrath Co., The, Sheboygan, Wis. 766,804, pub. 12–13–63. Cl. 44.
Waber Tool & Engineering Co., Kalmazoo, Mich. 766,676, pub. 12–31–63. Cl. 23.
Wade, Wenger Servicemaster Co., Chicago, Ill. 766 885, pub. 12–31–63. Multiple Class (Classes 100 and 103).
Wallace Silversmiths, Inc., Wallingford, Conn. 657,724, canc. Cl. 23.
Wander Co., The, Chicago, Ill. 766,613, pub. 12–31–63. Cl. 18.
Ward Baking Co., New York, N.Y. 178,766, ren. 3–17–64. Cl. 46.
Ward Baking Co., New York, N.Y. 178,845, ren. 3–17–64. Cl. 46.
Ward Baking Co., New York, N.Y. 180,907, ren. 3–17–64. Cl. 46.
Washington Organic Fertilizers, Inc., Wapato, Wash. 657,624, canc. Cl. 10.
Welling Ware, Inc., New York, N.Y. 657,718, canc. Cl. 23.
Welsh Mfg. Co., Providence, R.I. 766,736, pub. 12–31–63. Cl. 39.
Weston, Byron, Co., Dalton, Mass. 407,884, ren. 3–17–64. Cl. 37.
White Swan Hosiery Corp., New York, N.Y. 766,919. Cl. 39.
Whiteway Mfg. Co., Cincinnati, Ohio. 766,585, pub. 12–31–63. Cl. 12.
Whiting, E. B. & A. C., Co., Burlington, Vt. 766,672, pub. 12–31–63. Cl. 23.
Wilmot Castle Co., Rochester, N.Y. 766,796, pub. 12–31–63. Cl. 44.
Wilson, Thomas, & Co. Inc., New York, N.Y. 766,785, pub. 12–31–63. Cl. 42.
Wilsmor Co., Memphis, Tenn. 657,832, canc. Cl. 46.
Wilton Products, Inc., Wilton, Conn. 766,856, pub. 12–31–63. Cl. 50.
Wimpy International Inc., Jersey City, N.J. 657,882, canc. Cl. 100.
Wisconsin Foundry & Machine Co., to Wisconsin Foundry and Machine Co., Madison, Wis. 406,358, ren. 3–17–64. Cl. 2.
Witco Chemical Co., Inc., New York, N.Y. 766,564, pub. 12–31–63. Cl. 6.
Wolfe, Howard D., Richmond, Va. 766,925. Cl. 44.
Wolverine Shoe and Tanning Corp., Rockford, Mich. 766,766, pub. 12–31–63. Cl. 39.
Wood, J. R., & Sons, Inc., New York, N.Y. 766,694, pub. 12–10–63. Cl. 28.
Woodruff, F. H., & Sons, Inc., Milford, Conn. 657,621, canc. Cl. 10.
Woolsey, C. A., Paint & Color Co. Inc. *See*— Woolsey, C. A., Paint & Color Co.
Woolsey, C. A., Paint & Color Co., Jersey City, N.J. 179,108, ren. 3–17–64. Cl. 16.
Wright, Wm. E., & Sons Co., West Warren, Mass. 766,578, pub. 12–31–63. Cl. 7.
Wyandotte Chemicals Corp., Wyandotte, Mich. 766,573, pub. 12–31–63. Cl. 6.
Yakima Bait Co., Inc., Granger, Wash. 766,662, pub. 12–31–63. Cl. 22.

U.S. GOVERNMENT PRINTING OFFICE: 0—1964

U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

March 24, 1964 Volume 800 Number 4

PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of February 1964

Examiner affirmed	286
Examiner affirmed in part	63
Examiner reversed	93
Total	442

Patents Available for Licensing or Sale

3,097,722. Lubricating System. George F. Asire, P.O. Box 495, Worland, Wyo.

3,116,777. Traction Pad for a Vehicle Wheel. Wilbur F. Heuser, Forest View Evergreen Nursery, Germania, Pa.

3,120,347. Spray Gun. Charles S. Duke, Jr., 1524 W. Cherry St., Milwaukee, Wis. 53205.

3,030,604. Apparatus for Connecting a Plurality of Conductors. Robert E. Breidenthal, 612 Brown Bldg., Wichita, Kans. 67202.

The following 3 patents are offered by: C. Q. Linville, % Face-Pak, 1311 E. Balboa Blvd., Balbao, Calif.

2,887,389. Carton.

2,889,978. Self-locking Carton.

3,102,721. Pantagraph Equilibrium Spring Mechanism.

General Electric Company is prepared to grant non-exclusive licenses under the following 16 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following 3 patents may be addressed to: General Electric Company, Motor and Generator Division, 3001 E. Lake Road, Erie, Pa., Attn: Patent Counsel.

3,017,562. Alternator Control System.

3,032,698. Control Network.

3,038,831. Insulated Electrical Conductors and Coils.

Applications for license under the following 13 patents may be addressed to: Patent Counsel, Major Appliance Division, General Electric Company, Appliance Park, Louisville 1, Ky.

2,836,047. Washing Machine Hose.

2,990,706. Combination Washer and Dryer.

3,003,097. Sequence Control System for Timing Motor.

3,106,832. Combination Washer Dryer With Forced Air Drying System.

3,108,465. Clothes Washing Machine Having Vibration Isolating Means.

3,108,613. Three-Way Valve.

3,108,774. Mounting Arrangement for Built-In Appliances.

3,109,076. Rotation Sensing Device.

3,112,187. Control System for Clothes Dryers.

3,116,123. Clothes Conditioning Machine.

3,116,644. Variable Speed Belt Drive.

3,116,983. Electric Dryer Control Circuit.

3,118,468. Resilient Material Check Valve.

Foreign Patents Received in the Scientific Library as of Feb. 29, 1964

Source	Date received	Highest number
Australia:		
(*Australia*)	Feb. 11, 1964	37,161
(*Patents*)	Jan. 27, 1964	246,452
Austria	Feb. 17, 1964	230,900
Belgium	Oct. 16, 1962	573,100
Canada	Feb. 20, 1964	680,581
Czechoslovakia	Feb. 27, 1963	103,500
Denmark	Feb. 10, 1964	96,875
East Germany	Jan. 30, 1964	27,251
Egypt	Jan. 30, 1964	4,326
Finland	Jan. 27, 1964	33,254
France:		
(*Patents*)	Feb. 27, 1964	1,340,600
(*Additions*)	Feb. 24, 1964	81,550
(*Medicaments*)	Dec. 6, 1963	1,650 M
(*Additions*)	May 13, 1963	15 CAM
Germany:		
(*Auslegeschriften*)	Jan. 13, 1964	1,157,170
(*Patents*)	Jan. 13, 1964	1,148,255
Great Britain	Feb. 24, 1964	948,150
India	Feb. 12, 1964	85,044
Ireland	Sept. 24, 1963	23,700
Italy	Apr. 25, 1963	616,900
Japan	Feb. 28, 1964	850/64
Netherlands	Feb. 10, 1964	107,304
Norway	Jan. 27, 1964	103,166
Pakistan	Feb. 3, 1964	112,446
Philippine Republic	Apr. 13, 1962	458
Poland	Feb. 4, 1964	47,829
Rumania	Jan. 22, 1964	42 333
Sweden	Feb. 6, 1964	186,806
Switzerland	Feb. 26, 1964	374,042
U.S.S.R.	Jan. 22, 1964	158,830

Australia: First 2,000 incomplete
Belgium: First printed 493,079/1950
Canada: First printed 445,931/1948
Czechoslovakia: Not received between 81,300/1952 and 91,901/1959
Finland: First printed 19,428/1941
First 500 incomplete
Hungary: First received 5,792/1896
Latest 140,582/1951
Ireland: Missing 1–10,000
Italy: First 243,000 incomplete
Rumania: First received 40,380/1957
U.S.S.R.: Not received between 2,496/1928 and 116,000/1958
Yugoslavia: First received 10,001/1933
Latest 16,461/1941

New Applications Received During January 1964

Patents	6,858
Plant Patents	10
Reissues	7
Designs	472
Total	7,347

Issue—March 24, 1964

Patents	788	—No. 3,125,761 to No. 3,126,548, incl.
Designs	77	—No. 197,758 to No. 197,834, incl.
Plant Patents	7	—No. 2,381 to No. 2,387, incl.
Reissues	4	—No. 25,539 to No. 25,542, incl.
Total	876	

PATENT EXAMINING CORPS

H. B. WHITMORE, Superintendent

PATENT EXAMINING OPERATIONS AND GROUPS	Oldest Application	
	New	Amended
CHEMICAL EXAMINING OPERATION—P. E. MANGAN, Director.		
GENERAL CHEMISTRY, GROUP 110—R. L. CAMPBELL, Supervisory Examiner Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries.	3-16-62	3-20-62
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Supervisory Examiner Heterocyclic; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids.	6-1-62	7-3-62
PETROLEUM CHEMISTRY, GROUP 130—J. R. LIBERMAN, Supervisory Examiner Hydrocarbons; Halogenated Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices; Organic Chemistry (Part) e.g.: Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhydrides; Acid Halides.	7-10-62	7-23-62
HIGH POLYMER CHEMISTRY, GROUP 140—M. STERMAN, Supervisory Examiner Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins: Reclaiming; Pore-Forming.	3-16-62	3-9-62
COMPOSITIONS AND MOLDING, GROUP 150—L. H. GASTON, Supervisory Examiner Compositions (Part) e.g.: Coating; Molding; Adhesive Compositions; Abrading; Liquid Purification or Separation; Gas Separation; Special Utility; Molding Processes.	5-1-62	4-2-62
COATING AND LAMINATING, GROUP 160—J. REBOLD, Supervisory Examiner Coating: Processes, Apparatus and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Ornamentation; Adhesive Bonding; Special Manufactures.	3-1-62	3-8-62
SPECIALIZED CHEMICAL ARTS AND INDUSTRIES, GROUP 170—W. B. KNIGHT, Supervisory Examiner Bleaching and Dyeing; Fertilizers; Foods; Fermentation; Photography; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Metallurgical Apparatus; Gas, Heating and Illuminating; Cleaning Processes; Liquid Purification; Thermolytic Distillation; Preserving.	3-30-62	4-16-62
CHEMICAL ENGINEERING, GROUP 180—G. D. MITCHELL, Supervisory Examiner Gas, Liquid and Solid Separation; Centrifugal Bowl Separators; Gas and Liquid Contact Apparatus; Distillation; Drying; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	6-19-62	6-20-62
ELECTRICAL EXAMINING OPERATION—N. H. EVANS, Director.		
POWER, GROUP 210—M. L. LEVY, Supervisory Examiner Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art.	5-21-62	5-2-62
SECURITY, GROUP 220—S. BOYD, Supervisory Examiner Ordnance, Firearms and Ammunition; Radar, Sonar, Directional Radio, Torpedoes, Seismic Exploring, Radio-Active Batteries; Nuclear Reactors, Powder Metallurgy, Rocket Fuels; Radio-Active Material.	8-1-62	4-23-62
INFORMATION TRANSMISSION, GROUP 230—S. W. CAPELLI, Supervisory Examiner Communications; Multiplexing Techniques; Facsimile and Related Art.	8-29-62	7-31-62
INFORMATION STORAGE AND RETRIEVAL, GROUP 240—W. W. BURNS, Supervisory Examiner Data Processing, Computation and Conversion; Storage Devices and Related Art.	3-13-62	2-2-62
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—B. G. MILLER, Supervisory Examiner Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks.	5-1-62	5-7-62
RADIATION AND INSTRUMENTS, GROUP 260—F. M. STRADER, Supervisory Examiner Optics; Radiant Energy; Measuring.	5-10-62	5-9-62
ELEMENTS, GROUP 270—E. J. SAX, Supervisory Examiner Conductors; Switches; Miscellaneous.	7-31-62	8-17-62

CONDITION OF PATENT APPLICATIONS AS OF JANUARY 31, 1964

Total number of pending applications (excluding Designs)	204, 383
Total number of Design applications pending	5,782
Total number of applications awaiting action (excluding Designs)	124, 799
Total number of Design applications awaiting action	2, 083
Date of oldest new application awaiting action	Mar. 1, 1962
Date of oldest amended application awaiting action	Feb. 2, 1962

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during March 1964, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*

Patents	Numbers 2,416,665 to 2,418,108, inclusive
Plant Patents	Numbers 723 to 732, inclusive

PATENT EXAMINING OPERATIONS AND GROUPS (Continued)	Oldest Application	
	New	Amended
MECHANICAL ENGINEERING EXAMINING OPERATION—R. A. WAHL, Director.		
MATERIAL OR ARTICLE HANDLING AND DISPENSING, GROUP 310—A. BERLIN, Supervisory Examiner Material or Article Handling and Dispensing; Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Fluid Sprinkling and Fire Extinguishers; Coin Handling and Check Controlled Apparatus; Classifying and Assorting Solids.	1-2-63	12-24-62
METAL AND PLASTICS WORKING, GROUP 320—N. BERGER, Supervisory Examiner Metal Bending, Drawing, Extruding, Forging, Rolling; Sheet Metal Working; Wireworking; Chain, Staple, Horseshoe Making; Metal Founding; Wire Fabrics; Plastic Working Apparatus; Plastic Block, Earthenware Apparatus.	9-21-62	9-14-62
MANUFACTURING AND ASSEMBLING MISCELLANEOUS ARTICLES, GROUP 330—A. M. HORTON, Supervisory Examiner Special Article Making; Assembling, Tool and Implement Making; and Metal Working.	7-12-62	7-2-62
MACHINE TOOLS, MECHANISMS AND ELEMENTS, GROUP 340—F. H. BRONAUGH, Supervisory Examiner Machine Tools for Shaping or Dividing Involving Cutting or Breaking; Machine Elements Including Power Transmission Components, Work and Tool Holders.	10-4-62	6-14-62
HARDWARE, TOOLS AND JOINTS, GROUP 350—T. J. HICKEY, Supervisory Examiner Miscellaneous Hardware; Tools; Joints; Cutlery; Locks; Fasteners; Rod Pipe and Electrical Connectors; Buckles; Buttons, Clasps, Etc.; Pushing and Pulling.	6-4-62	6-7-62
FLUID HANDLING, GROUP 360—E. PAUL, Supervisory Examiner Fluid Handling; Valves; Pipes and Tubular Conduits; Fluent Material Handling; Lubrication; Baths, Closets and Sinks; Joint Packing.	9-4-62	11-13-62
POWER PLANTS, MOTORS AND PUMPS, GROUP 370—C. F. GAREAU, Supervisory Examiner Power Plants, Combustion Power Plants, Expansible Chamber Motors, Rotary Motors and Rotary Expansible Chamber Motors, Expansible Chamber Devices and Internal Combustion Engines, Pumps and Pump Regulation.	8-27-62	11-19-62
HEATING, COOLING AND VENTILATING, GROUP 380—P. L. PATRICK, Supervisory Examiner Furnaces, Liquid Heaters and Vaporizers, Burners, Heat Exchange, Automatic Temperature and Humidity Regulation, Refrigeration, Ventilation, and Illumination.	10-16-62	9-10-62
GENERAL ENGINEERING AND INDUSTRIAL ARTS EXAMINING OPERATION—J. A. MANIAN, Director.		
AGRICULTURE, GROUP 410—A. RUEGG, Supervisory Examiner Animal Husbandry; Butchering; Fishing, Trapping and Vermin Destroying; Plant Husbandry; Tobacco, Earth Working.	12-21-62	12-24-62
CIVIL ENGINEERING, GROUP 420—B. BENDETT, Supervisory Examiner Building Structures; Bridges, Closures; Closure Operators; Safes; Earth Engineering; Drilling; Mining.	9-13-62	9-18-62
PHYSICS, GROUP 430—R. L. EVANS, Supervisory Examiner Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.	8-7-62	8-9-62
TEXTILES AND APPAREL, GROUP 440—R. C. MADER, Supervisory Examiner Textiles; Winding and Reeling; Tying Strands; Apparel; Boot and Shoe Making; Sewing Machines.	10-22-62	11-6-62
TRANSPORTATION, GROUP 450—P. ARNOLD, Supervisory Examiner Railways and Rolling Stock; Brakes; Land Vehicles; Aeronautics; Ships.	10-3-62	11-8-62
FURNITURE AND RECEPTACLES, GROUP 460—W. S. COLE, Supervisory Examiner Furniture; Supports; Cabinet Structures; Receptacles; Baggage.	10-31-62	12-18-62
PRINTING, STATIONERY AND MATERIAL TREATMENT, GROUP 470—L. W. VARNER, Supervisory Examiner Printing; Typewriters; Stationery; Material Treatment.	10-4-62	9-10-62
PERSONAL TREATMENT, ADORNMENT AND AMUSEMENTS, GROUP 480—L. R. PRINCE, Supervisory Examiner Surgery; Dentistry; Artificial Body Members; Toiletry; Amusement Devices; Jewelry; Mechanical Guns; Projectors.	11-1-62	11-9-62
DESIGNS, GROUP 490—J. A. MANIAN, Supervisory Examiner Industrial Arts; Household, Personal and Fine Arts.	8-12-63	8-9-63

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE EDWARD C. RANKIN

No. 7013. Decided December 12, 1963

[51 CCPA —; 324 F.2d 990; 139 USPQ 490]

1. PATENTABILITY—PARTICULAR SUBJECT MATTER—LOOSE-LEAF BINDER.

The decision of the Board of Appeals, refusing claims to a loose-leaf binder as unpatentable over the prior art, is reversed.

APPEAL from the Patent Office. Serial No. 811,494.

REVERSED.

Callard Livingston (*J. William Pike* of counsel) for appellant.

Clarence W. Moore (*Jere W. Sears* of counsel) for the Commissioner of Patents.

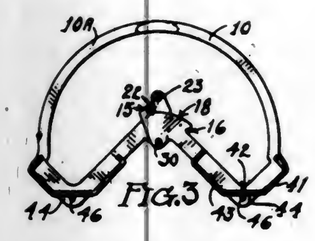
Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, JR., *Associate Judges*

ALMOND, JR., *J.*, delivered the opinion of the court.

This is an appeal from the decision of the Board of Appeals holding that appellant's claims 1–4 and 8 are unpatentable over prior art. No claims were allowed.

The invention relates to a latch means for a loose-leaf binder. The binder is adapted to be opened to one of two different positions. In the first, or "reading" position, the binder is partly open to permit observation of the pages but the prongs are still closed to retain the pages in the binder. The second position is fully open to permit insertion and removal of the pages. The disclosed latch means prevents the binder from opening from either the fully-closed position or the reading position unless a latch rod is released.

FIGURE 3 of the drawing illustrates the binder in the reading position without the covers attached.



This figure shows one of a plurality of prong units comprising two half ring sections 10 and 10A which are hinged about a common pintle 30 running the length of the binder. A latch rod 22 is pivotally secured to the left ring half as indicated at 23 and is spring-urged towards the pintle 30. The opposite coordinating ring half has cam surfaces 15 and 18, and latch engaging stops at 16 and, in the figure shown, where latch 22 is engaged. The stops operate with latch 22 to hold the rings in the fully-closed or in the partly-open reading position. To remove the latch from the stop, a finger release lifts the latch rod. The covers of the binder are attached to the generally C-shaped channel members 41 which, in turn, are attached to the heel

portion of the prong units at 44 by retaining rods 46. When the binder is fully closed, latch rod 22 engages stop 16 to lock the binder shut. It is noted that the prong units and associated latching means are independent of the covers and channel members insofar as binding the loose-leaf pages is concerned.

Claim 1 is illustrative and reads:

1. In a loose-leaf binder having sets of juxtaposed opposite acting arcuate prong units each having a diametrically-directed foot part which is joined to a common central hinge axis at a point on the said foot parts which is concentric of the respective prong arcs, latching means comprising, namely: a long latch member rockably supported by and between the foot parts of two or more of said supporting prong units which are all disposed on one particular side of said hinge axis so that the rocking axis of the latch member is substantially parallel to said hinge axis, said latch member having a portion offset radially of its own rocking axis to move in a direction approximately radially toward and away from said hinge axis; and a latch formation on an endwise foot portion of at least one companion prong to one of said supporting prongs and providing at least one latching stop formation removably engageable by said latching member in movement of the latter a predetermined amount toward said hinge axis, whereby to prevent pivotal movement of said prongs in a given direction beyond a predetermined angular relation; and spring means acting on said radially offset portion of the latch member yieldingly urging the same in a direction to engage and latch in said latch formation.

The issue is whether the binder structure claimed would be obvious to one having ordinary skill in the art in view of two prior art patents:

Dawson, 2,528,866, November 7, 1950.

Chevalerias (French), 431,410, September 11, 1911.

The Dawson patent discloses a loose-leaf binder comprising two metal body members hinged together and having spaced prongs welded to the body members for holding the pages. A locking mechanism is incorporated in the end plates of the body members. The end plate of one of the body members is shaped to provide two shoulders for engaging a latch member attached to the opposite body member. The latch member terminates on one end in a detent for engaging the shoulder of the end plate and on the other end in a finger means for releasing the detent from the spring-urged latching relationship. The binder may be latched in a reading position or a fully-closed position, depending on which shoulder is engaged by the detent. The binder may also be fully opened for removal of pages.

The Chevalerias reference discloses a loose-leaf binder in which seven hinges are employed to provide a flat and smooth back for the binder to obviate the problems of a "broken back" arising from having a central hinge encased in the back of the binder, as in the prior art. As does Dawson, Chevalerias employs two body members hinged together and bearing spaced prongs for holding the pages. The latching means comprises a shoulder formed in the end plates of one of the body members which is engaged by a spring-urged bail which runs the length of the binder and is attached to the opposite body member.

In affirming the Examiner's rejection predicated on the prior art, the Board of Appeals said:

The appellant argues that the Chevalerias rings must be used with the bed plates whereas his device operates as a unit separate from the bed plates. The appellant states that the claimed structure provides a latch means which can lock up each pair of prongs individually.

We are not impressed by appellant's argument since there appears to be no reason for actuating the rings independently. Furthermore, appellant discloses his rings as being pinned by means of rods 46 to the bed plates so that the

rings of a unit will act in unison. We cannot see that such structure is unobviously different from the Chevalerias structure wherein the prongs are secured to the bed plates adjacent to the end plates. Such end plates in the Chevalerias device are used in the same general manner as the leg and chord members of appellant's device.

We agree with the Examiner that it would be obvious to use multiple latches of the Dawson type on the Chevalerias end pieces. It is pointed out that the Dawson latch provides for a closed position, a reading position and an open position. Also, the Dawson latch specifically provides for closing the binder without manually actuating the pawl member.

Appellant argues that his unitary, foot-pivoted prong units which may be locked up are new in the art; that latching of the prongs by a rod supported by and between the foot parts of the prongs is a new concept; that latch and prong stresses are distributed throughout the assembly instead of being concentrated at the end wall latches and welds of the prongs to the metal halves or "cradles"; and that the "cradle" type construction is eliminated.

The Solicitor contends that appellant's claim 1 is so broad as to embrace a construction where only a single prong set has a stop formation cooperable with the latch rod, although he concedes that the claims "have not been rejected as unduly broad, incomplete or lacking in utility." It is the Solicitor's position that the prongs attached to the metal body members, considered with the end plates having the stop formation and the pivot point for the bail or latch rod, are equivalent to the claimed latch means on prong units.

We are of the opinion that the differences between the claimed construction and the references of record are not such that the subject matter would be obvious to one having ordinary skill in the art. The Board, in seeking "reasons for actuating the rings independently," overlooked the possible accidental independent movement of the prong units. If the binder is dropped and one prong unit of appellant's device becomes unlatched, the other units are not necessarily unlatched. On the other hand, if the body members of the prior art devices become unlatched, all of the prongs would necessarily be unlatched because the latching function is carried out at a different point than the page binding function. By latching and binding the pages in the same prong unit, twisting or warping of the backing of the binder will not have the same effect as in prior art binders.

Both of the prior art references relate to a different type of construction from appellant's wherein light-weight channel members may be attached to the prong units. The claims do not recite channel members or a backing, but only the prong units with the specific latching means joined to a common hinge axis.

We are not prepared to equate the prongs attached to the hinged metal cradles having latching means in the end walls, as in the prior art, to the prong units of the claims to which light-weight channels may be attached. The prior art shows no "foot parts" to "prong units," or a latch rod "supported by and between the foot parts," or a latching stop formation on one *foot part* with a latching formation on the companion *foot part*, all of which are claimed. While the latching means of Dawson is similar to that disclosed by applicant in that it has two stop formations, neither reference has any disclosure of the latching means with a long latch rod in what appellant calls a "floating ring" binder as embraced by the claims. We think the claims, read in the light of the specifiction and drawing, are drawn to a structure where the prong units "float" about a common hinge axis. [1] Since the type of binder claimed is not taught by the prior art, the decision of the Board is reversed.

REVERSED.

U.S. Court of Customs and Patent Appeals

IN RE ROBERT R. CITRON

No. 7042. Decided December 12, 1963

[51 CCPA —; 325 F.2d 248; 139 USPQ 516]

1. APPLICATION—DISCLOSURE—UTILITY.

"* * * we cannot take seriously the opening statement in appellant's brief: 'There is no claim here to a cure for cancer, as indicated by the Board of Appeals in its rejection on the ground of utility.' If by this statement appellant means that he is not claiming, in the patent claim sense, the *method* of curing cancer but only the compositions, we would observe that it makes no difference. What we are here concerned with is the assertions of utility made with respect to those compositions. As to what claims are made in this respect we look to the specification, which speaks for itself, not to the brief."

2. PATENTABILITY—UTILITY—MEDICAL UTILITY—UTILITY INCREDIBLE OR MISLEADING—EVIDENCE—ACCEPTABLE PROOF OF UTILITY REQUIRED—35 U.S.C. 101.

"We approve the Board's decision affirming the rejection based on section 101 and the rationale that where claimed compounds are alleged in the specification to have a utility of as much public importance as is the effective treatment of cancer, which alleged utility appears to be incredible in the light of the knowledge of the art, or factually misleading, applicant must establish the asserted utility by acceptable proof."

3. APPLICATION—DISCLOSURE—UTILITY—MEDICAL UTILITY—INCREDIBLE OR MISLEADING STATEMENTS REGARDING UTILITY MUST BE REMOVED OR PROVED.

"The Board's opinion in *Ex parte Moore et al.* [128 USPQ 8], contains some points which we think worthy of mention and approval. One is that a rejection, as here, for the purpose of enforcing compliance with the requirement that statements of utility deemed incredible or misleading must be either removed or proved is proper notwithstanding there may also be present in the application other proper and acceptable assertions of utility. Another is that the reason behind the requirement, as pointed out by the Examiner in the *Moore* case, is that it is against public policy to place the oblique imprimatur of the Government via the patent grant on incredible or misleading unproven assertions in view of the possibility of exploitation of such statements in issued patents by unscrupulous persons. This does not mean, however, as is sometimes implied from the dictum in *Isenstead* v. *Watson*, 115 USPQ 408, 410, that there should be a reluctance to grant patents on new chemical compounds just because they may eventually find use in the treatment of human disease."

4. PATENTABILITY—UTILITY—MEDICAL UTILITY—EVIDENCE.

"The defect here is that in spite of the somewhat grandiose claims of appellant's specification, purportedly based on actual tests or experiments, not one iota of evidence has been produced tending even to show that tests were actually conducted. We also note that the specification does not contain a single *specific* experiment, of which the details are supplied, wherein any animal was actually benefited by treatment with the claimed precipitate or serum, or wherein an existing tumor was caused to grow more rapidly."

APPEAL from the Patent Office. Serial No. 419,683.

AFFIRMED.

James H. Littlepage (*Herman Hersh, Ooms, McDougall & Hersh*, of counsel) for appellant.

Clarence W. Moore (*Raymond E. Martin* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, SMITH, and ALMOND, JR., *Associate Judges*

RICH, *J.*, delivered the opinion of the court.

This appeal is from the decision of the Patent Office Board of Appeals affirming the rejection of all claims of application Serial No. 419,683, filed March 30, 1954, entitled "Compositions and Methods for Producing Same." The application is described as a continuation-in-part of applications Serial No. 74,488, filed February 3, 1949, No. 163,787, filed May 23, 1950, and No. 194,393, filed November 6, 1950.

The claims remaining are 13–16 and 20. Claims 13–16 are directed to a composition which is a precipitate and claim 20 is directed to a serum. Claim 13 reads:

13. A composition consisting of the precipitate formed by the dilution with benzene of the extract of cancer tissue with acetone and water present in the ratio of 3–15 parts by weight of the water phase to 97–85 parts by weight acetone and in which the materials are present in the ratio of more than 4 parts by volume of benzene to 1 part by volume of the water and acetone solution.

Claims 14, 15, and 16 specify the "cancer tissue" of claim 13 to be human, rat, and rabbit carcinoma respectively and omit the final limitation of claim 13 as to the 4:1 minimum ratio of benzene to water and acetone solution.

Claim 20 reads:

20. A serum containing antibodies comprising the blood extracted from a cancer-free animal into which injections of the compositions of claim 13 have been periodically made in small amounts until the same antibody is present in concentrations detectable in a dilution of at least 1/2560.

The following publications have been cited as references and relied on in support of the rejection:

Lumsden, Am. J. Cancer, vol. 15, April 1931, pages 608–609.
Maver, J. Natl. Cancer Inst., June 1944, pages 571–572.
Chambers, et al., The British J. of Experimental Pathology, vol. 15, 1924, pages 1–12.

There are two remaining grounds of rejection of all claims. First, they are rejected on the references "as unpatentable over Lumsden, or Lumsden combined with Chambers et al. and Maver." Second, the Board affirmed "the Examiner's rejection of all the claims as being based upon a disclosure containing allegations of utility, which cannot be accepted as operative absent clear and convincing proof thereof."

Since we dispose of the case on the latter rejection—failure to support challenged assertions with respect to utility of claimed compositions—we find it unnecessary to discuss the rejection on prior art. *In re Novak et al.*, 49 CCPA 1283, 306 F.2d 924, 134 USPQ 335.

To understand the rejection to be discussed it is necessary to have in mind the general nature of the invention and the assertions with respect to its utility contained in appellant's specification, which is rather long, occupies 23 printed pages of the record and contains 13 so-called "Examples," many of which, we note, do not exemplify anything in the nature of a specific test, experiment, or operation. To explain the invention defined in claim 13, supra, we shall paraphrase "Example 4."

Human "cancer tissue" (of unspecified type) either fresh or freshly frozen, is extracted with a solvent consisting of acetone containing from 3 to 15 percent by weight of water, which is said to remove from the tissue a "lipid antigen." One volume of the acetone-water extract solution is mixed with from 4 to 8 volumes of benzene which is said to result in the throwing down of a "white precipitate" which is separated in any suitable manner such as decantation, centrifuging, or

filtration. The precipitate is further washed with benzene. The specification then says:

This white precipitate has been identified as the hormone or hormone-like material which is *the active constituent* in the extracts of Example 1. [Emphasis ours.]

The precipitate that is formed appears as a crystalline material to the naked eye but is actually an emulsoid suspension and resembles miniature snowflakes in appearance and in the manner in which the particles form and settle out in benzene. When the white precipitate is dried, a gummy residue of a dark greyish-brown to black color is obtained.

"Example 1," referred to above, describes the making of extracts as follows: 25 grams of ground Brown-Pearce cancer tissue from a rabbit are extracted with 250 ml. of ethyl ether with agitation for an hour. The solvent phase "together with any lipid sediment or suspended material is separated from the residue by decantation. The solvent contains the ether soluble constituents of the original cancer tissue." The specification then contains the following:

The composition of the materials extracted by the ethyl ether solvent has not been broken down into its individual components and it is doubtful that such fractionation or separation can be effected without destroying or without interfering with the activity of the ingredients or ingredient in the extract *which supply the effect for stimulating cancerous growth* under some conditions *or* the ingredient or ingredients which *cause the development of an antiserum which is antagonistic to the growth of cancer.* To establish the differences in composition in the environment in which it is effective, I have resorted to analysis by infrared ray absorption of the deposit made from acetone solution. Such infrared ray analysis is effective to establish groupings that are new in this composition and not present in similar extracts from *normal* tissue. These differences in groupings and arrangements evident from the analysis of the *acetone deposit of the ether extract* secured by Example 1, as set forth by infrared ray analysis, FIGURE 4, are believed representative of the compounds present in the environment in which they are contained that impart the *activity* either in *stimulating cancerous growth* or in *building up antiserums* in cancer-free bodies since comparable reactions are not available with the extracts from *normal* tissue having the composition illustrated in FIGURE 3. [Emphasis ours.]

The figures of the drawings above referred to consist of six infrared absorption spectra of "the acetone deposit from [or of] an ether extract of" the following: 1. normal human skin tissue, 2. human carcinoma, 3. normal rabbit tissue, 4. Brown-Pearce rabbit carcinoma, 5. normal male rat skin, and 6. Walker rat carcinoma. As can be seen, 1, 3, and 5 are spectra of extract from normal tissue and 2, 4, and 6 are apparently spectra of the acetone-soluble composition of the invention.

Up to the time of filing his brief in this court appellant had in his application claims 1–9 to compositions and sera which depended for identification solely on the infrared spectra of the drawings. These claims were under rejection as indefinite on the ground that an infrared spectrum alone is not sufficient to describe a chemical compound and is particularly inadequate to define a composition which appears to be a mixture. Appellant abandoned his appeal with respect to claims 1–9.

From the specification as a whole and as indicated by the foregoing, it appears that appellant wishes to patent a certain precipitate extracted and precipitated from "cancer tissue" by solvents used in a certain sequence and admixture and also wishes to patent a serum allegedly produced by injecting his precipitate into a cancer-free

animal which produces antibodies in response to some antigen contained in the precipitate. It is clear that the chemical composition of the precipitate is unknown to appellant.

It is next necessary to take note of the assertions of utility or usefulness of the composition of this invention which the specification contains. We will first quote the opening and closing statements, respectively:

While the discussion herein will relate to the use of these compounds and compositions or intermediates as materials employed in the *cure* of cancer, it will be understood that the invention being *claimed* is to the intermediates and compounds per se and to the methods for manufacturing same as distinguished from the cure of any disease or ailment, such as cancer.

* * * * * * *

Although specific description has been made of the use of these compounds in the *cure* of cancer, invention described and *claimed* herein will be limited for the present to such *compositions* and *compounds* as distinguished from their use as in the following claims. [Emphasis ours.]

As above indicated, it is true that the claims are all directed to compositions. There are no method claims notwithstanding the title of the application, not even to the method of manufacture of the compositions. Therefore, whatever statements the specification contains about utility are necessarily directed to the use and usefulness of the compositions. We quote some of them (all emphasis being ours):

I have discovered that cancer tissue in general, whether taken from humans, rats or rabbits, or other mammals, contains a liquid [lipid?] antigen compound identified by infrared ray studies as a lipid fraction of a protein complex containing haptens *which are specific immunologically*. These extracts containing the lipid fractions have been further identified as having the properties of a hormone in that they exhibit marked endocrine effects on the ovaries of the respective animal. Upon repeated injection in a rabbit with the Brown-Pearce lipid antigen extract or in a rat with the Walker lipid antigen extract or in adult females with human lipid antigen, the ovaries show changes characteristic of pregnancy. These extracts exhibit generalized luteinization which is characteristic of large dosages of progesterone * * *.

These hormone substances derived from cancer tissue are not species specific from the experimental evidence to date which clearly indicates activity and *clinical effectiveness* of both the Brown-Pearce and Walker lipids in the human. * * *

While the extracts produced in accordance with this invention from the lipid antigen of the Brown-Pearce carcinoma or Walker carcinoma or from human carcinoma are growth stimulating in the presence of cancer tissue, they have been found to be *effective in producing antiserums* in cancer-free bodies *which are highly antagonistic to the growth of cancer.*

* * * * * * *

The precipitates of Examples 4–8 or the extracts of Examples 1–3 of the cancerous tissue having the compositions set forth in FIGURES 2, 4 and 6 are *effective for use in the manufacture of a new antiserum composition which may be used effectively to combat the growth of cancer and which are highly antagonistic to the conditions for cancerous formation and growth.*

Speaking in "Example 11," of the production of serum in rabbits injected with the ether extract prepared from human cancer tissue or the white precipitate prepared in various ways from various cancer tissues, the example concludes:

Such serum has been found to exert a powerful antagonistic [sic] to the inception and to the growth of certain types of cancer.

"Example 13" opens with reference to "The blood serum of an animal treated with the white precipitate, or its evaporated residue, or with the ether extract prepared in accordance with the previous examples" and contains the following statements about the serum:

Such serum exerts a powerful action antagonistic to the inception and growth of at least certain types of cancer and may be employed in the *treatment of human cancer* in the manner described. * * *

Administration of the serum to rats suffering from Walker carcinoma is extremely effective causing necrosis and regression of the cancerous tissue. * * *

* * * * * * *

Blood serum obtained as previously described containing antibodies has been found *effective in the treatment of at least some human cancer* when administered two to three times weekly, or oftener, over a considerable length of time. * * * In cases where the patient shows good tolerance, massive doses may be administered intravenously or intraperitoneally to secure accelerated action. [Emphasis ours.]

In the next paragraph, which is the last paragraph of the specification purporting to describe the invention, is the following:

Relief from pain and other acute symptoms, sometimes quite striking and dramatic, is one reliable indication of effectiveness of the serum in some patients. *Another evidence of effectiveness is the sloughing of cancer tissue, which has been observed to take place* to an extent corresponding to that resulting from strong X-ray treatments but without any of the undesirable side effects of radiation therapy. Such *effectiveness of the serum* in the antibodies produced in accordance with this invention *has been demonstrated in human beings suffering from various cancers.* [Emphasis ours.]

[1] In view of the foregoing, we cannot take seriously the opening statement in appellant's brief: "There is no claim here to a cure for cancer, as indicated by the Board of Appeals in its rejection on the ground of utility." If by this statement appellant means that he is not claiming, in the patent claim sense, the *method* of curing cancer but only the compositions, we would observe that it makes no difference. What we are here concerned with is the assertions of utility made with respect to those compositions. As to what claims are made in this respect we look to the specification, which speaks for itself, not to the brief.

The Examiner's final rejection included as one ground: "All claims are again rejected as for the lack of utility. * * * proof of the alleged utilities, i.e. curing cancer, is necessary." After appeal was taken to the Board, the Examiner's answer reiterated his position, saying:

All claims are rejected as lacking utility since applicant has not proven the allegation on page 1, last paragraph of the specification, that applicant's products are a cancer cure. There has been no clinical data submitted to prove this allegation. Applicant's allegation that the products are intermediates is not convincing since this allegation is vague and there is no indication for what the compound is an intermediate. If applicant considers antigens as intermediates for forming antisera therefrom applicant still has not proven that product is useful as an antigen. * * * the burden [is] on applicant to prove the allegations of utility * * *.

In affirming, the Board said:

We are also in agreement with the Examiner's rejection of all the claims as being based upon a disclosure containing allegations of utility, which *cannot be accepted as operative absent clear and convincing proof thereof.* The compositions have been alleged to be cures for cancer, including human cancer, and *in view of the art knowledge of the lack of a cure for cancer and the absence of any clinical data to substantiate the allegation,* the claims include compositions directed to an apparently inoperative utility. The compositions claimed are not, therefore, useful within the meaning of 35 U.S.C. 101. Reference is also made to our similar previous holdings in Appeal No. 314–15 and 393–86 in parent applications of this application. [Emphasis ours.]

* * * * * * *

Since the disclosure of the cure of human cancer as a field of utility is incredible and misleading unless proven by statistically significant evidence, the rejection is deemed to be sound whether or not other stated utilities are valid.

The Board concluded its discussion of this rejection by observing that there is "no verified proof in the record before us of operativeness of appellant's invention as applied to animals or to humans." *Ex parte Moore et al.*, 128 USPQ 8, was cited. That was a Board decision in a case also containing a statement of utility suggesting possible use of claimed compounds in the treatment of cancerous diseases.

[2] We approve the Board's decision affirming the rejection based on section 101 and the rationale that where claimed compounds are alleged in the specification to have a utility of as much public importance as is the effective treatment of cancer, which alleged utility appears to be incredible in the light of the knowledge of the art, or factually misleading, applicant must establish the asserted utility by acceptable proof. *In re Novak et al.*, supra, was another case which came before us recently in which an alleged utility as a drug or medicament was questioned by the Patent Office and the applicant failed to support it by evidence. We said:

> In our opinion, when an applicant bases utility for a claimed invention on allegations of the sort made by appellants here, unless one with ordinary skill in the art would accept those allegations as obviously valid and correct, it is proper for the Examiner to ask for evidence which substantiates them.

No evidence was forthcoming in that case and we affirmed the rejection on the ground of *lack of proof of utility*. We do the same here.

[3] The Board's opinion in *Ex parte Moore et al.*, supra, contains some points which we think worthy of mention and approval. One is that a rejection, as here, for the purpose of enforcing compliance with the requirement that statements of utility deemed incredible or misleading must be either removed or proved is proper notwithstanding there may also be present in the application other proper and acceptable assertions of utility. Another is that the reason behind the requirement, as pointed out by the Examiner in the *Moore* case, is that it is against public policy to place the oblique imprimatur of the Goverment via the patent grant on incredible or misleading unproven assertions in view of the possibility of exploitation of such statements in issued patents by unscrupulous persons. This does not mean, however, as is sometimes implied from the dictum in *Isenstead* v. *Watson*, 115 USPQ 408, 410, that there should be a reluctance to grant patents on new chemical compounds just because they may eventually find use in the treatment of human disease. We are here concerned only with what assertions are made about the utility of compounds or compositions.

[4] Appellant attempts to find support for allowance of his application in our decisions in the cases of *In re Krimmel*, 48 CCPA 1116, 292 F.2d 948, 130 USPQ 215; *In re Dodson*, 48 CCPA 1125, 292 F.2d 943, 130 USPQ 224 and *In re Johnson*, 48 CCPA 733, 282 F.2d 370, 127 USPQ 216. They are clearly distinguishable. The *Krimmel* and *Dodson* cases were decided on the basis of utilities established by credible evidence. The *Johnson* case did not involve the issue we have here but the question whether a parent application contained a *disclosure* of utility. The defect here is that in spite of the somewhat grandiose claims of appellant's specification, purportedly based on actual tests or experiments, not one iota of evidence has been produced tending even to show that tests were actually conducted. We also note that the specification does not contain a single *specific* experiment, of which the details are supplied, wherein any animal was

actually benefited by treatment with the claimed precipitate or serum, or wherein an existing tumor was caused to grow more rapidly.

One ground of rejection of all claims having been found sufficient, the other ground based on prior art is not considered.

The decision of the Board is affirmed.

AFFIRMED.

MARTIN, *J.*, did not sit or participate in decision.

SMITH, *J.* (concurring):

The determinative issue in this appeal concerns the failure of appellant to supply proofs of asserted utility as requested by the Examiner. The rejected claims cover a composition (cl. 13–16) and a serum (cl. 20). The application contains assertions of utility for such composition and serum but these were not accepted by the Examiner in the absence of proofs. Appellant neither filed proofs nor challenged the Examiner's demand for proofs as being unreasonable in this case. Such a record requires affirmance on these grounds alone and does not require us to attempt an analysis of the utility asserted nor to consider any other issue.

I therefore concur with the result, solely on the basis of this issue.

REISSUES

MARCH 24, 1964

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,539

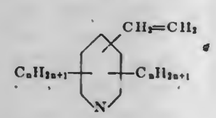
POLYMERS PREPARED BY REACTING ACRYLONITRILE AND AN UNSATURATED MONOMER IN THE PRESENCE OF A PREFORMED INTERPOLYMER OF A VINYL PYRIDINE AND A COMONOMER

Harry W. Coover, Jr., Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Original No. 3,014,008, dated Dec. 19, 1961, Ser. No. 738,947, June 2, 1958. Application for reissue Oct. 28, 1963, Ser. No. 319,937

4 Claims. (Cl. 260—45.5)

1. [A graft copolymer] *The product of the polymerization* of [(1)] from 60 to 95 parts by weight of a monomer mixture consisting of from 85.0 to 99.5% by weight of acrylonitrile and from 15.0 to 0.5% by weight of at least one compound selected from the group consisting of a vinyl ester of a saturated monobasic fatty acid containing from 2–4 carbon atoms, an unsubstituted vinylpyridine, a vinylpyridine having at least one alkyl group substituent on the nucleus, said alkyl group containing from 1–4 carbon atoms, and an alkyl acrylate wherein the alkyl group contains from 1–4 carbon atoms, [and (2)] *in the presence of* from 40 to 5 parts by weight of a preformed copolymer derived by the polymerization of a mixture comprising from 5–95% by weight of a compound represented by the general formula:



wherein n represents an integer of from 0–4, and from 95–5% by weight of at least one compound selected from the group consisting of acrylonitrile, a vinyl ester of a saturated monobasic fatty acid containing from 2–4 carbon atoms, an N-alkyl acrylamide wherein the alkyl group contains from 1–4 carbon atoms, and an N,N-dialkyl acrylamide wherein each alkyl group contains from 1–4 carbon atoms, the said [graft copolymer] *product* having a different composition than said preformed copolymer.

25,540

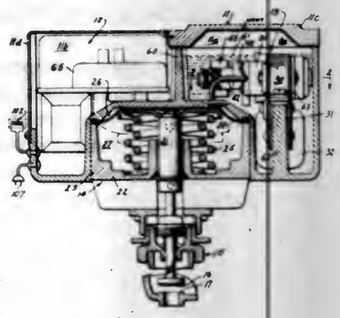
MEANS FOR OPERATING A VALVE OR THE LIKE IN ACCORDANCE WITH A CONTROLLED CONDITION

Russell P. Sweger and Alfred A. Horton, Rockford, and William G. Young, Loves Park, Ill., assignors to Barber-Colman Company, Rockford, Ill., a corporation of Illinois

Original No. 3,050,257, dated Aug. 21, 1962, Ser. No. 799,274, Mar. 13, 1959. Application for reissue Dec. 11, 1962, Ser. No. 244,547

7 Claims. (Cl. 236—74)

1. An automatic valve operator comprising in combination a cylindrical actuator having a plunger, a diaphragm in said actuator, a spring for pressing against said diaphragm, an outer enclosure secured to said actuator and therewith defining first and second compartments of L-shaped cross section, a motor assembly including a motor having an integral gear pump and a fluid relay secured thereto extending at right angles to the motor in L-shaped relation, said motor assembly being nestingly fitted in said first L-shaped compartment, said fluid relay having a coil and armature and having an escape orifice with a direct connection to said fluid pump, said armature being arranged to block said orifice in accordance with



the variable current flowing through said coil to produce a variable back pressure, a conduit for connecting the output of said gear pump to said fluid actuator so that the variations in said back pressure produce corresponding variations in the position of said plunger, and an amplifier for supplying said coil totally contained in said second L-shaped compartment.

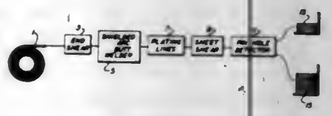
25,541

DETECTING WELDS

Lucien A. Fugassi, Jr., Pittsburgh, Pa., assignor to National Steel Corporation, a corporation of Delaware

Original No. 2,995,239, dated Aug. 8, 1961, Ser. No. 740,888, June 9, 1958. Application for reissue Jan. 24, 1963, Ser. No. 256,494

8 Claims. (Cl. 209—72)



3. A method of producing a plurality of metal sheets from a pair of elongated metal strips each having a straight end edge, comprising the steps of butt-welding said end edges together with a hole through the butt-welded joint intermediate the ends of the joint, cutting the joined strips transversely of their length into a plurality of sheets one of which contains the joint, and separating the sheet containing the joint from the remaining sheets by means automatically responsive to the presence of the hole thereby to obtain a plurality of sheets all of which are free from joints.

25,542

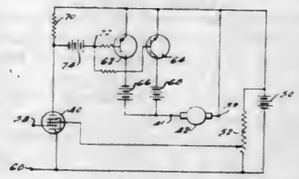
POWER FEED SYSTEM

Robert S. Webb, Bloomfield Hills, Mich., assignor to Elox Corporation of Michigan, Royal Oak, Mich., a corporation of Michigan

Original No. 2,996,638, dated Aug. 15, 1961, Ser. No. 805,607, Apr. 10, 1959. Application for reissue Sept. 4, 1962, Ser. No. 222,759

16 Claims. (Cl. 314—61)

1. In combination with electrical-discharge-machining apparatus having means for causing intermittent erosive electrical discharge across a gap between an electrode and a workpiece in the presence of suitable coolant, an electrode power feed means automatically operable to [advance and retract] *provide relative movement between* the electrode [relatively to] *and* the workpiece [in response to change in voltage conditions across the gap], means for rendering the power feed means operably responsive to gap striking voltage comprising *a* [an energy storage] network connected across the gap, *said network including a low impedance unidirectional conductive device poled to conduct power from said gap and a condenser for*



storing gap striking voltages [means for causing said network to store gap striking voltages], and means for causing said power feed means to operate in response to said stored voltage.

PLANT PATENTS

GRANTED MARCH 24, 1964

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing

2,381

ROSE

Ralph S. Moore, 2519 E. Mineral King, Visalia, Calif.

Filed Dec. 18, 1961, Ser. No. 160,378

1 Claim. (Cl. Plt.—11)

A new and distinct variety of hybrid tea rose plant, substantially as herein shown and described, of the tall, bush-type, outdoor variety characterized by vigorous growth habits with budding eyes which are plump and easily handled for propagation, by healthy foliage minimizing the care necessary to properly raise the plant, by large leathery petals arranged regularly and being buttercup yellow at the base, blending into marigold orange, said flower resembling Mojave in form and color with a plant habit and foliage resembling Sutter's Gold.

2,382

ROSE PLANT

Ralph S. Moore, 2519 E. Mineral King, Visalia, Calif.

Filed Jan. 12, 1962, Ser. No. 165,973

1 Claim. (Cl. Plt.—24)

A new and distinct variety of floribunda rose plant, substantially as herein shown and described, of the dwarf-bush-type, outdoor variety characterized by its sprawling and full growth habit which places as many as ten to twenty blooms on a stem and which full growth extends to the ground, and by its medium-sized, satiny petals arranged regularly with newly opened flowers of ivory or creamy white and with flowers open for three days blending into white, said growth habit resembling Pinkie and said color resembling Moonsprite.

2,383

ROSE

Ralph S. Moore, 2519 E. Mineral King, Visalia, Calif.

Filed Jan. 12, 1962, Ser. No. 165,974

1 Claim. (Cl. Plt.—15)

A new and distinct variety of hybrid tea rose plant, substantially as herein shown and described of the tall, bush-type, outdoor or greenhouse variety characterized by its upright stature, by its vigorous growth habit which resembles its seed parent, Sister Therese, by its hard, mildew-resistant foliage, by large, thick, pointed, leathery petals arranged irregularly, being bright yellow when first opened and a softer yellow after being open for three days, its intense yellow color holding well in all types of weather.

2,384

ROSE

Ralph S. Moore, 2519 E. Mineral King, Visalia, Calif.

Filed Jan. 12, 1962, Ser. No. 165,975

1 Claim. (Cl. Plt.—6)

A new and distinct variety of climbing floribunda rose plant, substantially as herein shown and described, of the tall, pillar, outdoor variety distinguished by its active growth and its bright red color, said active growth being characterized by most shoots terminating in flowers and young plants tending to flower in their first season, said growth habit resembling Wilhelm (Skyrocket), and said color being characterized by a bright red with an orange fluorescent undertone in newly opened flowers and bright rose or pink-red in flowers open for three days, said color resembling Floradora, said variety being capable of blooming even when pruned to bush form, flower buds being hybrid tea in shape, and with the blooms of the said variety arranged irregularly in loosely rounded clusters in a minimum quantity of three to five and a maximum quantity of twenty or more on each stem.

2,385

ROSE

Ralph S. Moore, 2519 E. Mineral King, Visalia, Calif.

Filed Jan. 12, 1962, Ser. No. 165,976

1 Claim. (Cl. Plt.—28)

A new and distinct variety of floribunda rose plant, substantially as herein shown and described, of the bush-type, outdoor variety and which may be utilized as a garden rose or a hedge rose, characterized by its hardy, vigorous growth habit, its glossy foliage, and the deep red color of its abundant flowers, which flowers are borne upright on wiry, stiff stems, the open flowers looking somewhat like carnations of the broad petaled type and the nearly heart-shaped petals of the flowers being somewhat waved to give the flowers a more double appearance, the medium-sized, moderately thick, satiny petals being arranged regularly, with the newly opened flower a bright red color and the flower opened for three days shading from bright rose red in cool weather to deep pink in warm weather.

2,386
ROSE
Ralph S. Moore, 2519 E. Mineral King, Visalia, Calif.
Filed Jan. 12, 1962, Ser. No. 165,977
1 Claim. (Cl. Plt.—5)

A new and distinct variety of climbing hybrid tea rose plant, substantially as herein shown and described, of the hardy, outdoor variety characterized by its recurrent, everblooming growth habit which resembles its grandparent *Rosa bracteata*, and by its exceedingly large and double flowers which resemble its grandparent Guinee, said flowers borne several to a stem in a rounded cluster, with the thin, satiny petals of said flowers arranged regularly in quantities of 100 or more to each flower, with newly opened flowers of a soft cotton candy pink shade and flowers opened three days of a softer pink shade.

2,387
ROSE
Ralph S. Moore, 2519 E. Mineral King, Visalia, Calif.
Filed Jan. 12, 1962, Ser. No. 165,978
1 Claim. (Cl. Plt.—22)

A new and distinct variety of floribunda rose plant, substantially as herein shown and described, of the dwarf, bush-type, outdoor variety characterized by its rich, green, glossy foliage and free, vigorous growth habits, by medium sized, satiny petals arranged regularly with newly opened flowers of bright orange pink with a yellow base and with flowers open for three days blending into medium pink, said flower resembling Condesa de Sastago in color combinations and flower shape, but with flowers somewhat smaller and more abundant.

PATENTS

GRANTED MARCH 24, 1964

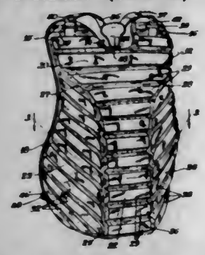
GENERAL AND MECHANICAL

3,125,761
STAPLING MECHANISM
George J. Adams, 2718 Lillie St., Fort Wayne, Ind.
Filed Oct. 6, 1961, Ser. No. 143,339
3 Claims. (Cl. 1—49)



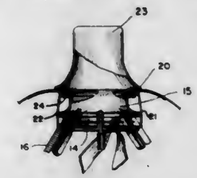
1. A stapling device comprising a stapling mechanism having a staple-ejecting head and an elongated base member which is flat on its underside, an elongated bar member having opposite parallel sides secured to said underside to extend parallel to said base member, one of said parallel sides abutting against said underside, the other of said parallel sides having two spaced apart abutment blocks secured thereto, said abutment blocks being spaced rearwardly from the staple-ejecting head, said blocks being spaced apart a distance corresponding to the separation between weather edges of courses of shingles, said head being positioned to eject staples in a direction normal to said parallel sides.

3,125,762
CHEST PROTECTOR
Frederick W. Glahe, La Grange, Ill., assignor to Wilson Athletic Goods Mfg. Co., Inc., River Grove, Ill., a corporation of Delaware
Filed Oct. 4, 1962, Ser. No. 228,480
8 Claims. (Cl. 2—2)



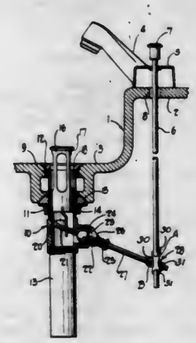
1. A padded chest protector for use in playing baseball and the like and comprising, in combination, front and back parts of flexible sheet material having edge contours shaped to conform generally to the front of a wearer's body by having a neck receiving recess at the mid-region of the top and portions of externally concave curvature along the upper regions of opposite sides with portions of externally convex curvature adjoined to opposite ends of the neck receiving recess and to adjacent ends of said portions of externally concave curvature, additional adjoined portions of externally convex curvature adjoining the other ends of said portions of externally concave curvature, means peripherally binding the front and back parts together, said protector being divided into a full width upper region, a lower mid-region narrower than the upper region, and oppositely disposed lower side regions by dividing seams passing through adjacent surfaces of the front and back parts and extending upwardly from the bottom on opposite sides of the lateral mid-region and diverging outwardly at their upper ends to the upper regions of said portions of externally concave curvature, said upper region and said lower mid-region being divided into segments by seams extending laterally thereof, said oppositely disposed lower side regions being divided into segments by seams extending thereacross and upwardly toward the outside in directions oblique to said lateral seams of the lower mid-region, and said segments being padded between said seams and within said means peripherally binding the front and back parts together.

3,125,763
PROTECTIVE HEAD COVERING
Russell A. Baker, 419 E. 33rd St., Kansas City, Mo.
Filed Mar. 9, 1962, Ser. No. 178,717
4 Claims. (Cl. 2—177)



4. A head covering comprising
a frame having a central annulus and ribs pivotally attached thereto in spaced relation,
a cover over said ribs, said cover having tips at its periphery for receiving the ends of said ribs,
and cord means attached to the central portion of said cover and adapted to be attached to said annulus to attach the central portion of said frame to said cover,
said central portion and said cover being unattached except for said cord means.

3,125,764
BALL LEVER AND LIFT ROD CONNECTION
Stephen A. Young, R.R. 4, Monticello, Ind.
Filed July 10, 1961, Ser. No. 122,897
7 Claims. (Cl. 4—204)



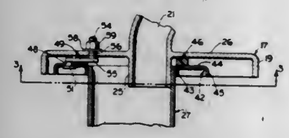
1. In drain construction of the class described, in combination, a movable drain plug, an actuating lever con-

nected to said plug for raising and lowering the plug, a lift rod to operate the actuating lever, and means to connect the lever and rod comprising a spring-like strap member engaging the lift rod above and below the lever and forming a closed loop in conjunction with said rod, said loop being of substantially greater area than the lever enclosed thereby, to facilitate pivotal movement of the lever and rod with respect to one another.

3,125,765
TOILET BOWL ATTACHMENT MEANS

Allyn C. Fay, 9 3rd St., Springfield Gardens, N.Y.

Filed May 23, 1962, Ser. No. 197,112
5 Claims. (Cl. 4—252)



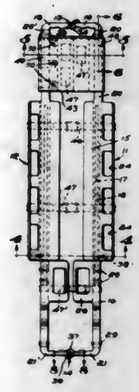
4. In combination with a toilet bowl having a discharge trapway integral with one end thereof, the discharge end of said trapway, at the lower end of the toilet bowl being of substantially tubular cross-section, a toilet bowl support flange integral with the tubular discharge end of the trapway, a discharge tube located adjacent the lower end of the toilet bowl, said discharge tube surrounding the tubular discharge end of the trapway, the maximum outer dimension of the tubular discharge end of the trapway being less than one-half the inner diameter of the discharge tube, a mounting flange fixedly attached to the discharge tube, adjacent the open end thereof, the mounting flange being substantially parallel to and located near the support flange, the toilet bowl support flange having a first flat wall integral therewith, the first flat wall being substantially perpendicular to the longitudinal axis of the discharge tube, the mounting flange having a second flat wall integral therewith, the second flat wall being substantially parallel to the first flat wall, a narrow annular compressible seal member inserted between the first wall and the second flat wall, and means operative to adjustably fixedly attach the support flange to the mounting flange, including a substantially cylindrical body section, a spacer section integral with one end of the body section, said spacer section being elongated, of substantially rectangular cross-section and substantially perpendicular to the longitudinal axis of the body section, a substantially cylindrical externally threaded section integral with the end of the spacer section opposite the body section, and extending outward from the spacer section, in a direction opposite the body section, the cylindrical externally threaded section being substantially parallel to the cylindrical body section.

3,125,766
SPLINT-STRETCHER

Abraham E. Halperin, Brookline, Mass., assignor to A. E. Halperin Co., Inc., Boston, Mass., a corporation of Massachusetts

Filed Jan. 28, 1963, Ser. No. 254,186
3 Claims. (Cl. 5—82)

1. A splint-stretcher comprising a body-supporting frame having a pair of complemental side members, means for pivotally connecting said side members at the head end and at the foot end of the frame, and at least one of said connecting means being readily separable so that the side members may be swung angularly with respect to each other on one of said pivotal connections; each side member comprising a main frame section having a relatively wide, transversely inclined, torso-supporting plate providing a smooth top surface, an integral, longitudinal, relatively narrow bottom rib, and a relatively narrow, integral, tubular extension projecting toward the head end of the frame, and an extendable leg-supporting section; said rib having a tubular channel therethrough, and said leg-supporting section having a rod slideable in said channel; clamping means for holding said rod in adjusted postion in said channel; said side

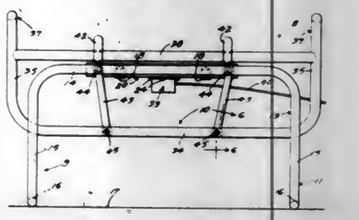


members being disposed in spaced parallel relation, when connected at both ends of the closed frame; and a head rest of flexible material bridging the space between said tubular extensions of the main frame sections; said ribs projecting downwardly below said plates, said tubular extensions and said leg-supporting sections, whereby the stretcher is supported in elevated position when rested on a supporting surface.

3,125,767
MOTOR DRIVEN OSCILLATING BASSINET SUPPORT

John J. Griggs, 4951 W. Imperial Highway, Inglewood, Calif., and Ralph C. Scott, 11250 Franklin Ave., Culver City, Calif.

Filed Apr. 20, 1962, Ser. No. 189,143
2 Claims. (Cl. 5—109)

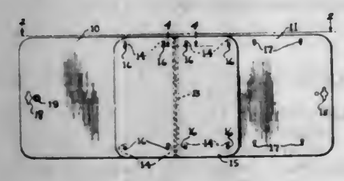


1. A bassinet support comprising an elongated base structure including a frame having arch shaped sides and bottom end members extending between and integrally joined to complementary ends of said sides, said end members constituting coplanar bottom portions of the frame adapted to rest on a supporting surface, a bassinet supporting structure including transversely disposed arch shaped end portions and side portions extending between and connected to said end portions, said side portions each including a bottom bar and a top bar, said bassinet supporting structure being of a width such that said side portions thereof are disposed between and spaced from said arch shaped sides, a pair of hanger bars swingably connected to and extending downwardly from upper portions of each of the arch shaped sides and having lower ends pivotally connected to said bottom bars for suspending the bassinet supporting structure in the base structure for oscillating movement longitudinally thereof, said hanger bars being of a length to support the top bars above the level of said arch shaped sides, a supporting structure supported by and extending between the upper portions of the arch shaped sides, a power source having a rotatively driven crank, said power source being supported by said supporting structure, longitudinally spaced metal strap members extending between and secured to said top bars, said strap members having portions extending between the top bars and disposed substantially coplanar with upper surfaces thereof, a pair of contractile coil springs having adjacent ends connected to the crankpin, means connecting remote ends of said springs to said strap members for converting rotary motion of the crank to impart an oscillating movement to the bassinet supporting structure, said top bars and the portions of the strap members extending therebetween being adapted to support a bassinet on said bassinet supporting structure, and said strap members having yieldable end portions extending upwardly from outer sides of the top bars and between which the sides of the bassinet are adapted to be yieldably clamped.

3,125,768
POSTURE BOARDS

Edward Rickert, 1240 Greenwood, Blue Island, Ill.

Filed Sept. 15, 1961, Ser. No. 138,457
5 Claims. (Cl. 5—317)

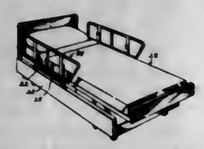


1. A posture board comprising two board sections adapted when in use to be arranged in substantial alignment with respect to each other with adjacent edge portions in abutting relation, a hinge connecting the abutting edge portions of said board sections together, a retaining board of substantially the same width as the width of the board sections and adapted when said board sections are in use to be positioned upon said board sections in overlapping relation with respect thereto over and on opposite sides of the long axis of said hinge, and bayonet slot and stud means for detachably connecting said retaining board to said board sections.

3,125,769
HOSPITAL BED HAVING A REMOVABLE SIDE GUARD STRUCTURE

Warren R. Black, Irving C. Folger, and Robert L. Knapp, Grand Rapids, Mich., assignors to American Seating Company, Grand Rapids, Mich., a corporation of New Jersey

Filed July 5, 1962, Ser. No. 207,632
5 Claims. (Cl. 5—331)



1. In a hospital bed having a removable side guard structure:

a bed side rail having a pair of longitudinally spaced, vertically extending, upwardly opening, cylindrical socket members;

a mounting frame comprising a length of metal tubing bent to form a horizontally extending upper portion, and leg portions depending from the opposite ends of said upper portion and removably receivable in the socket members of said bed side rail;

front and rear mounting brackets secured to the mounting frame at the upper front and rear corners thereof;

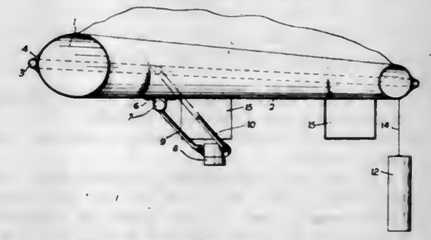
front and rear supporting links having their lower or rearward ends pivotally mounted on said front and rear mounting brackets respectively, said links being swingable in parallelism between upright positions and forwardly extending positions; and

a side guard having horizontally extending upper and lower stretches connected by spaced vertical bars, said bars having the upper or forward ends of the front and rear supporting links pivotally connected thereto respectively, whereby the side guard may be swung on the supporting links between a downwardly and forwardly moved position of non-use and an upwardly and rearwardly moved position of use.

3,125,770
INFLATABLE DINGHY

Brian Richard Arnold Reffell, Hemel Hemstead, England, assignor to The Walter Kidde Company Limited, Middlesex, England, a British company

Continuation of application Ser. No. 766,471, Oct. 10, 1958. This application Feb. 28, 1962, Ser. No. 179,271
4 Claims. (Cl. 9—11)



1. An inflatable dinghy adapted to be stored in folded condition comprising a generally annular buoyancy tube, a second tube of smaller cross section than said buoyancy tube adapted to withstand high gaseous pressure secured to said buoyancy tube along the peripheral wall thereof, and means for introducing gas under high pressure into said second tube to flow therein in a single peripheral direction from a point therein, said tubes having cooperating restricted fluid flow connecting means therebetween located at a point adjacent the point where the gas is introduced but spaced in the direction opposite to the direction in which the gas is introduced, whereby the high pressure gas entering said second tube will inflate the same to unfold and straighten out the dinghy and the gas having completed its flow through said second tube will pass through said fluid flow connecting means and enter said buoyancy tube at a lower pressure to inflate the same.

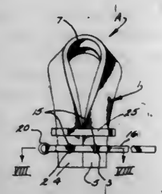
3,125,771
LIFE PRESERVER AND METHOD OF MAKING SAME

John K. Coolidge, Grand Rapids, Mich., assignor to The Gunn Company, Incorporated, Grand Rapids, Mich., a corporation of Michigan

Filed Mar. 2, 1962, Ser. No. 177,083
15 Claims. (Cl. 9—337)

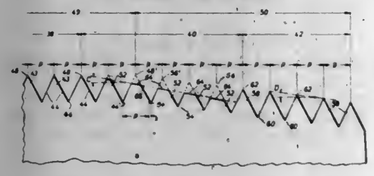
7. A life preserver, comprising: an elongated strip of flexible foam material; at least two openings extending

through said strip; an elongated strap for securing the life preserver to a person's body; a ring positioned in each



of said openings; said strap extending around said strip and passing through said rings; and said strap tightly affixed in said position.

3,125,772
CYLINDRICAL THREAD CUTTING TOOL HAVING A CHAMFERED REAR SECTION ON THE FORWARD CONICAL THREAD CUTTING PORTION
Alfred Beck, Hompeschstrasse 8, Dusseldorf, Germany
Filed Dec. 15, 1959, Ser. No. 859,799
2 Claims. (Cl. 10—111)



1. A threading tool namely a tap or die for cutting cylindrical V-shaped screw threads comprising in combination

(*a*) an initial conical rough cutting section composed of a forward and a rearward portion;

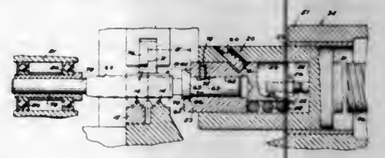
(*b*) an inwardly thereof continuing cylindrical finish cutting section;

(*c*) a plurality of longitudinally extending flutes forming a plurality of V-shaped teeth in said two sections, the distance betwen any two points of neighboring V-shaped teeth, when measured in axial direction of the tool, being equal to the pitch of the thread to be cut;

(*d*) the teeth in the forward portion of said rough cutting section being of substantially full thread depth and the teeth in the rearward portion of said rough cutting section being chamfered along a conical surface tapering away from said cylindrical finish cutting section at a larger angle than that of the conical rough cutting section, so that the said chamfered teeth cut with continuously increasing depth into the thread precut by the fully profiled teeth of the forward portion of the rough cutting section thereby preparing and lessening the labor of the immediately following finish cutting section.

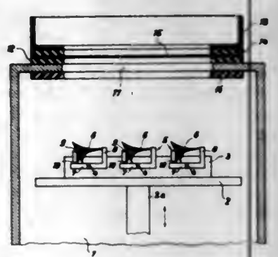
3,125,773
THREAD TAPPING MECHANISM WITH MEANS TO HOLD TAP IN PREDETERMINED ANGULAR AND AXIAL RELATIONSHIP TO WORKHOLDER
Michael Zajac, Inkster Village, Mich., assignor to Buhr Machine Tool Company, Ann Arbor, Mich., a corporation of Michigan
Filed Dec. 26, 1962, Ser. No. 246,900
7 Claims. (Cl. 10—139)

1. A mechanism of the type described, comprising a work holder, a rotary spindle having chuck means for receiving and driving a tool in forming engagement with a workpiece held by said work holder, and means for threadedly driving said spindle axially and rotatively while insuring precise forming engagement of said tool with the workpiece in a working stroke in engagement with the latter, comprising a screw to feed said spindle and a nut threadedly engaging said screw, said chuck means comprising a chuck head in fixed axial and angular relation to said screw, said chuck head and nut being in a precisely predetermined axial and angular relation to said work holder at the commencement of working engagement of said tool with the workpiece, an adapter mounted on said head, said adapter fixedly mounting



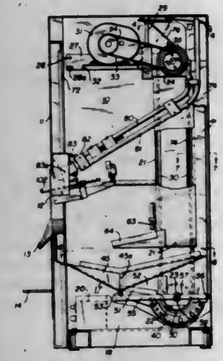
said tool, and means to adjust precisely the axial relationship of the adapter and head to one another, thus to adjust precisely the axial spacing of said adapter from said work holder at the commencement of a working stroke of the tool in engagement with the workpiece, said adapter having means holding the same in predetermined fixed angular relation to said chuck head in a precisely adjusted axial relation of said adapter and head to one another, said adapter and tool having means to hold the same in a fixed axial and angular relationship to one another and to said chuck head and screw.

3,125,774
METHOD OF APPLYING A COATING TO THE SURFACES OF A HEEL
Alois Schmitt, 126 Aschaffenburger Strasse, Goldbach uber Aschaffenburg, Germany
Filed Sept. 6, 1961, Ser. No. 136,233
Claims priority, application Germany Sept. 9, 1960
9 Claims. (Cl. 12—147)



1. A method of covering a shoe heel made of a material other than leather with plastic sheet material, and comprising the steps of positioning the heel horizontally upon an upwardly movable platform with the rear surface of the heel being directed upwardly, stretching an adhesive coated plastic sheet above the heel with the adhesive coating directed towards the heel, heating the plastic sheet material to a temperature of about 100° C., moving platform and the heel upwardly to bring the heel against the plastic sheet so that the sheet engages a portion of the rear surface of the heel, exhausting the atmosphere between the sheet and the platform to produce a subatmospheric pressure under the sheet so that the plastic sheet will be closely drawn around the entire rear surface of the heel and the edges of the top and front faces of the heel to form a wrinkle-free covering thereon, and cutting away the portions of the sheet beyond the top and front faces of the heel.

3,125,775
APPARATUS FOR WASHING AND DISPENSING GOLF BALLS AND THE LIKE
Chester C. Clifton, Denver, Colo., assignor to Ball-O-Matic, Inc., Denver, Colo., a corporation of Colorado
Filed May 7, 1962, Ser. No. 192,626
10 Claims. (Cl. 15—97)



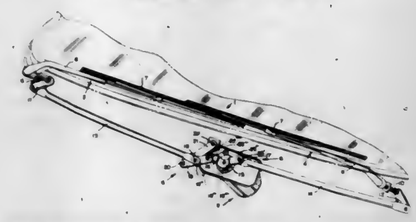
1. An apparatus for washing and dispensing golf balls or the like comprising a casing, means in said casing for holding a quantity of balls to be washed, a ball washing means, means for retaining washed balls in position for dispensing, means for moving balls from said holding means to said ball washing means, means for delivering balls to said retaining means, conveyor means including a flexible driving element and a guide track adjacent thereto for moving the balls in a single line toward said delivering means and constituting a portion of said washing means for moving the balls from said washing means to said ball delivering means, and means providing an enlarged chamber for accumulating a mass of balls in frictional engagement with one another between said track and said delivering means for holding some of the accumulated balls in engagement with said driving element whereby the average rate of movement of the individual balls is slowed and further cleaning is effected by rotation of the accumulated balls.

3,125,776
MOULDED QUILLS
John David Lilley, Hertford, England, assignor to Addis Limited, Hertford, England, a company of Great Britain
Filed Dec. 7, 1960, Ser. No. 74,285
15 Claims. (Cl. 15—159)



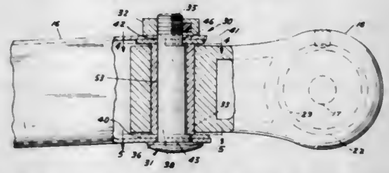
1. A quill having its end split to form two feathered tips extending in opposite directions from one plane and having flat surfaces in a common plane at right angles to said one plane.

3,125,777
WINDSHIELD WIPER MECHANISM
Alfred E. Leininger, Ypsilanti, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Dec. 22, 1961, Ser. No. 161,479
7 Claims. (Cl. 15—250.14)



2. In an automobile windshield wiper, the combination of at least two wiper means having overlapping blade portions, said wiper means attached to be moved over the windshield to clean areas thereof, at least two shafts having said wiper means attached thereto, a linkage means connected to said shafts, a motor having a driving shaft connected to said linkage means for driving said linkage means, said motor having a reciprocating movement, said linkage means comprising a four-bar linkage to drive one of said wiper means and a variable acceleration linkage to drive said other wiper means, said four-bar linkage having a first rocker link which is directly connected to said driving shaft, a first reciprocal link connected to said first rocker link and a driven arm connected to one of said shafts and said reciprocal link, said variable acceleration linkage having a second rocker link connected directly to said driving shaft of said motor, a first variable acceleration link connected to said second rocker link, a second reciprocal link connected to said variable acceleration link and a second driven arm connected to said second reciprocal link and another of said shafts.

3,125,778
ADJUSTABLE WINDSHIELD WIPER
Charles E. Schutte, Pigeon, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Jan. 7, 1963, Ser. No. 249,881
7 Claims. (Cl. 15—250.35)



1. In a windshield wiper organization, the combination comprising a pivot shaft having a knurled surface, a head section having a knurled surface which mates with said knurled surface on said pivot shaft, a windshield wiper arm, and a connection means for connecting said windshield wiper arm to said head section, said connection means having an eccentric means thereon for rotating said wiper arm to a desired angle when said connection means is rotated.

3,125,779
STUFFING RETAINER
Irene M. Abess, 6721 SW. 69th Terrace, South Miami, Fla.
Filed Sept. 11, 1962, Ser. No. 222,882
11 Claims. (Cl. 17—11)

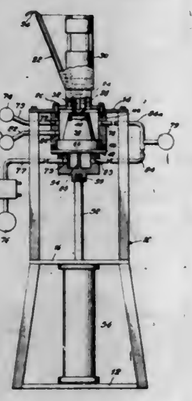
1. A device for closing an opening in a fowl and adapted to be compressed and inserted therethrough and

then expanded, comprising a pair of plate members, means cooperating with said plate members for coupling the same together for slidable movement relative to one



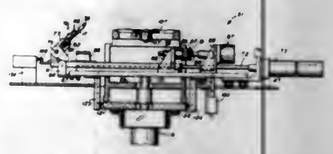
another from a compressed position to an expanded position, and means for normally urging said members into said expanded position.

3,125,780
APPARATUS AND METHOD FOR MAKING PLASTIC CONTAINERS
James M. Harrison, Fort Worth, Tex., and Robert E. Smucker, Miami, Fla., assignors to Crown Machine and Tool Company, Inc., Fort Worth, Tex., a corporation of Texas
Original application Oct. 30, 1956, Ser. No. 619,259. Divided and this application Apr. 19, 1962, Ser. No. 191,662
4 Claims. (Cl. 18—5)



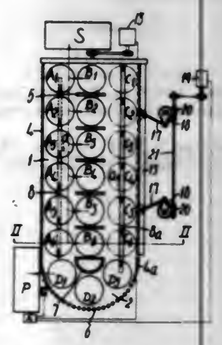
1. In a molding mechanism for forming plastic articles, such as drinking cups and the like, from foamable plastic material, a base, a frame supported on the base, mold parts thereon defining a cup-shaped molding cavity including a cavity element and a core element, a source of supply on the frame adapted to supply foamable plastic material to the cavity, a supply passage between the source of supply and the cavity communicating with the cavity generally in the center of the small end of the cup as defined by the cavity, a valve for controlling the supply passage including a movable plunger generally aligned with the axis of the cavity and having a diameter less than the diameter of the bottom of the cup, the plunger being movable between a withdrawn position to allow foamable material to flow through the supply passage into the cavity and an extended position in which the plunger closes the supply passage and the face of the plunger completes the bottom of the cup as defined by the cavity, means for creating an air pressure differential through the cavity to convey the beads from the supply passage to the top edge of the cup as defined by the cavity, including means for applying a positive air pressure to the supply passage for blowing the prefoamed beads into the molding cavity, and means for heating the cavity to foam and unite the foamable material into a finished article.

3,125,781
APPARATUS FOR INJECTION MOLDING OF PLUGS
Mieczyslaw Budzich, Dundalk, and Leon J. Rozankowski, Towson, Md., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed July 19, 1962, Ser. No. 210,983
5 Claims. (Cl. 18—5)



1. Apparatus for clamping and positioning a preassembled unit having a mold clamped to one end of a plurality of plug elements and a core pin protruding from the other end of the unit for subsequent injection of an insulation material from an injector into the mold and between the plug elements, which comprises:
a nest for receiving the mold end of the preassembled unit,
means for normally urging and supporting the nested unit for subsequent injection of material therein,
means spaced from and aligned with the nested unit for receiving the protruding core pin,
means for relatively moving the nest and the receiving means with the protruding core pin inserted into the receiving means,
means within the receiving means for clamping the preassembled unit between the nest and the receiving means to positively position the core pin, and
means for moving the clamped unit into engagement with the injector for injection of the insulation material into the mold and between the plug elements.

3,125,782
AUTOMATIC CAN REPLACING APPARATUS FOR A DRAWING FRAME
Ichisaburo Kaino, Neyagawa, and Masahiko Ariga, Amagasaki, Japan, assignors to O-M Ltd., Osaka, Japan, and Nitto Boseki Co., Ltd., Fukushima, Japan
Filed Oct. 13, 1961, Ser. No. 145,029
3 Claims. (Cl. 19—159)



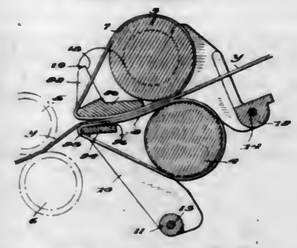
1. An automatic can replacing apparatus for use with drawing frames, comprising a bed having a plurality of at least three side by side rows of can positions thereon, two outside rows and at least one central row between said outside rows, a guide passageway on the surface of said bed and extending from the end of one outside row to the corresponding end of the other outside row for guiding cans from said one outside row to the other outside row across the surface of the bed, can transfer means extending along said each outside row of can positions and adapted to engage cans at each of the can positions in the outside rows, can transfer driving means coupled to said can transfer means along said one outside row of can positions for moving cans in said row along said row toward said guide passageway a distance equal to the pitch of the can positions, and coupled to said can transfer means along said other outside row of can positions for moving cans in said last-mentioned row along the row away from said guide passageway a distance equal to the pitch of the can positions, a movable plate along the outside of said other outside row of can positions, plate moving means on which said plate is mounted for moving said plate transversely of said other outside row toward the said one outside row a distance equal to the transverse dimension of the row, and actuating means coupled to said can transfer driving means and to said plate moving means for actuating said can transfer driving means periodically and for actuating said plate moving means each time said can transfer driving means has been actuated a number of times equal to the number of can positions in said rows.

3,125,783
RECTILINEAR COMBERS FOR TEXTILE FIBERS
Roger Gauvain, Buhl Haut-Rhin, France, assignor to Societe Alsacienne de Constructions Mecaniques Mulhouse-Haut-Rhin, France, a company of France
Filed Sept. 6, 1960, Ser. No. 54,087
Claims priority, application France Sept. 11, 1959
6 Claims. (Cl. 19—225)



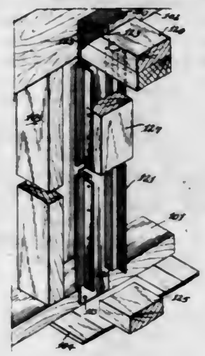
1. In a rectilinear combing machine, in combination, a circular comb, a detaching mechanism comprising opposed upper and lower rolls with the lower roll being of greater diameter than the upper roll and a forwardly and backwardly swinging nipper arrangement co-operating with said detaching mechanism, said nipper arrangement including a suspension rod having upper and lower ends, means pivotally securing the upper end of the suspension rod about a fixed point of the machine located above the axis of said circular comb, two substantially horizontal nipper levers, each lever having arms, said levers being fulcrumed in substantially stable equilibrium on a common pivotal point at the lower end of said suspension rod, one of said nipper levers comprising an upper nipper jaw and the other nipper lever a lower nipper jaw, one arm of one of said levers carrying the upper jaw and one arm of the other lever carrying the lower jaw of said nipper arrangement, means to impart swinging motion to said suspension rod about said fixed point to thus move the nipper levers relatively to the periphery of the circular comb, and means to guide the other arms of said two levers each along one of two distinct arcuate paths respectively, one of said two paths being designed so that said lower jaw reciprocates substantially tangentially to the periphery of said circular comb from and towards a predetermined tangent point thereof and further describes an arc substantially concentric to said lower roll and the other path being designed so as to produce opening and closing movement, respectively of said upper jaw relatively to the lower jaw as the latter reciprocates from and towards said tangent point.

3,125,784
LONG DRAFT CRADLE
Walter Macdonald, Seekonk, Mass., assignor to Macdonald and Sons, Inc., Seekonk, Mass., a corporation of Rhode Island
Filed Apr. 19, 1962, Ser. No. 188,807
8 Claims. (Cl. 19—255)



1. A textile drafting apparatus comprising a pair of cooperating upper and lower aprons adapted to be applied to drawing rolls, a pair of front upper and lower apron supporting tensors having the aprons extending thereover in guided relation, unitary cradle structure including side plates for supporting the tensors, said side plates having recesses therein, the lower tensor having a body portion and lands at opposite ends thereof detachably mounted in the recesses, said body portion being offset vertically asymmetrically of the lands.

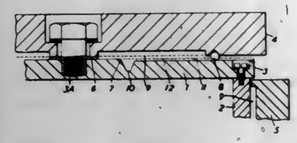
3,125,785
WALL PARTITION FITTING
John Conville, Box 753, Antioch, Ill.
Filed Aug. 9, 1960, Ser. No. 48,441
3 Claims. (Cl. 20—4)



1. A wall joint construction for joining first and second walls at an angle to each other comprising, a one-piece wall partition fitting having a sheet-like body with opposite ends, a pair of integral relatively narrow co-planar channels extending lengthwise of said body and opening outwardly to the sides of the body, wall forming material for the first wall fitted within and extending from each of said channels in co-planar relation therewith, each of said channels being of a generally U-shaped with first and second sides, the first side being parallel and overlying said body in closely adjacent relation and the second side being parallel to said body and at a distance from said body greater than said first side, a pair of flanges extending normal to said body and outwardly from the outer extremity of said channel second sides whereby the flanges and channel second sides define a stud receiving space with said second sides defining the bottom of said space, a stud for the second wall positioned against the channel

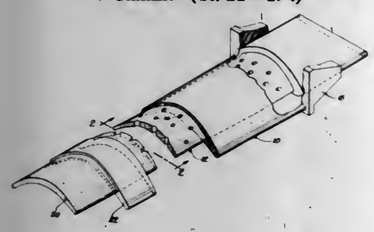
second sides and between said flanges and attached to said flanges and wall forming material for the second wall positioned against the exterior of said flanges and adjacent the wall forming material for the first wall disposed in said channels and completely enclosing said fitting said second wall forming material being secured to said stud.

3,125,786
CONSTRUCTION OF MOULDS USED FOR THE CONTINUOUS CASTING OF METALS
John Savage, Addlestone, Surrey, England, assignor to Continuous Casting Company Limited, Sheffield, England, a company of Great Britain
Filed Apr. 2, 1963, Ser. No. 269,918
Claims priority, application Great Britain Apr. 2, 1962
12 Claims. (Cl. 22—144)



1. A continuous casting mould which comprises four mould plates of rectangular profile held in contact at their edges to form an open-ended mould space of rectangular cross-section, the mould plates being rigidly secured to rigid external backing plates and water-cooling passages being formed between the mould plates and their associated backing plates, and in which the marginal portions of each of at least one pair of opposite mould plates located adjacent to the corners of the mould and outside the connections of the mould plate to its backing plate are relieved on their rear surfaces in such a way as to increase the lateral flexibility of the said marginal portions under lateral stresses imposed by thermal expansion of the adjacent mould plates in contact with them, and clearances are provided between the relieved marginal portions and the associated backing plates.

3,125,787
METHOD OF PRODUCING LARGE METAL-CASTING CORES
Nick G. Lirones, North Muskegon, and Theodore Operhall, Whitehall, Mich., assignors to Howe Sound Company, New York, N.Y., a corporation of Delaware
Filed Feb. 14, 1961, Ser. No. 89,230
7 Claims. (Cl. 22—194)

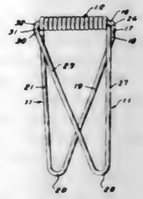


1. A method for the production of cores which comprises the steps of forming an expendable pattern which has the general shape of the core sought to be produced, coating said pattern with molybdenum, providing an additional coating of a high melting point, difficultly oxidizable metal, which has a boiling point above the casting temperature of the metal to be cast with said cores, said difficultly oxidizable metal being selected from the group consisting of chromium, platinum, tungsten, columbium and tantalum, said coatings being of sufficient thickness to be self-supporting, removing the expandable pattern from the coatings and filling the interior thereof with a solid substance which is capable of remaining in a solid state at temperatures in excess of 1000° F.

3,125,788
ETCHING PLATE AND METHOD
Erich Pelzel, Stolberg, Rhineland, Germany, assignor to Stolberger Zink Aktiengesellschaft fuer Bergbau und Huettenbetriebe, Aachen, Germany
No Drawing. Filed July 16, 1959, Ser. No. 827,425
Claims priority, application Germany Jan. 24, 1959
7 Claims. (Cl. 22—212)

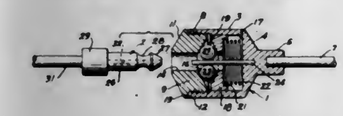
1. A process for producing an etched plate which comprises pouring a melt made up of pure zinc, aluminum and magnesium into a shallow mold, the total amount of magnesium and aluminum being between 0.003% and less than 1% of the zinc and the ratio of magnesium to aluminum being within the range of about 1:1 to 1:3; allowing the melt to cool down to a temperature somewhat above the melting point of zinc; cooling the lower portion of the melt so as to cause ingot segregation, part of the zinc solidifying in the lower portion of said shallow mold in the form of a layer of coarse, dendritic crystals; heating the residual melt located above said dendritic layer so as to slow down its solidification, thereby causing the residual melt to form a layer of unoriented fine crystals coextensive with and located above said dendritic layer; processing the ingot thus made having a finely crystalline upper section and a dendritic lower section so as to form a plate adapted to be etched and having two opposite surface portions, one of said opposite surface portions being composed of said fine unoriented crystals and the other of said surface portions having a dendritic structure; and etching said one of said opposite surface portions.

3,125,789
SPRING CLIPS
William H. Parker, 3930 Aspen St., Philadelphia 4, Pa.
Filed May 8, 1962, Ser. No. 193,210
3 Claims. (Cl. 24—66)



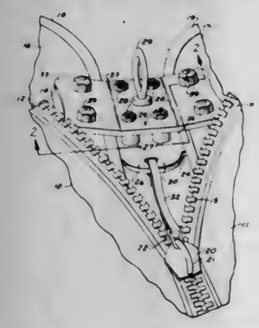
1. A spring clip of a single piece of wire bent to provide a pair of legs and a multiple turn helical hinge coil therebetween comprising a terminal end extending into one end of said coil, said terminal end being connected by a first leg offsetting portion to a first leg portion, a second leg portion connected to said first leg portion by a return bend and connected by a second leg offsetting portion to the other end of the coil, said first and second leg portions constituting one of said pairs of legs, said one leg being offset in one direction from said coil by said leg offsetting portions, said one end of the coil being connected by a third leg offsetting portion to a third leg portion, a fourth leg portion connected to said third leg portion by a return bend, said third and fourth leg portions constituting the other of said pairs of legs, said fourth leg being connected by a fourth leg offsetting portion to a second terminal end, said second terminal end extending into said other end of the coil, said other leg being offset in the other direction from said coil by said leg offsetting portions, the terminus of said terminal ends being in spaced relation in said coil.

3,125,790
RELEASABLE COUPLING
John A. Gaylord, San Rafael, Calif., assignor to H. Koch & Sons, Corte Madera, Calif., a corporation of California
Filed June 12, 1961, Ser. No. 116,339
6 Claims. (Cl. 24—201)



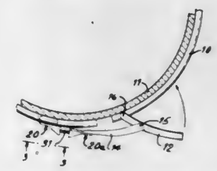
1. In a coupling device of the character described, a female coupling member, a male coupling member insertable into the female coupling member, a pair of relatively slidable bearing members in the female coupling member, resiliently yieldable means in said female member to urge said bearing members together, a plurality of balls between said bearing members engaging said male coupling member, means on said male coupling member co-acting with said balls to lock said male coupling member to said balls, an element on said male coupling member adjacent said means to move said balls away from said male coupling member when said male coupling member is pulled out of said female coupling member, coacting faces on said bearing members holding said balls in engagement with said means and converting the force applied to said balls by the pulling of said male coupling member into axial force to push said bearing members apart against the action of said resiliently yieldable means for releasing said male coupling member upon a predetermined relative pull on said coupling members, means on said male coupling member to limit the insertion of said male coupling member into the female coupling member to a position where said balls are interlocked with said locking means, and means in said female coupling member to space said balls apart in the loose position and to guide said male coupling member substantially centrally between said balls.

3,125,791
SLIDER PULLER
Ernest W. Downs, Natick, Mass., assignor to the United States of America as represented by the Secretary of the Army
Filed Nov. 15, 1962, Ser. No. 238,060
12 Claims. (Cl. 24—205.15)
(Granted under Title 35, U.S. Code (1952), sec. 266)



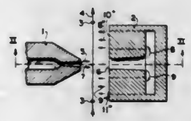
1. The combination with the slide of zipper tapes having opposed rows of interlocking teeth, sheets of flexible material mounting said tapes and including free edges, said tapes and teeth extending toward each other beyond said free edges of said sheets of flexible material mounting said tapes, longitudinally extending beads formed on said free edges of said sheets in laterally spaced parallel relation of a pilot puller for said slide, said puller comprising an element movable along said beads, said element having bead-engaging means carried thereby to draw said beads and said tapes toward each other as said element moves along said beads, said bead-engaging means comprising upper and lower elements engaging each bead simultaneously from above and below the same rearwardly thereof, and connecting means connecting said puller to said slide immediately in front of the same.

3,125,792
SPLIT RING CLAMP
Martin Hoffinger, 382 Garfield Ave., West Hempstead, N.Y.
Filed June 28, 1961, Ser. No. 120,401
1 Claim. (Cl. 24—271)



A split clamping ring closure, having a lever and a link, a first rotatable pin pivotally connecting one end of said link to a point centrally located of said lever, a second rotatable pin pivotally connecting one end of said lever to one end of said split clamping ring, and a first locking adapter integrally fastened to said other end of said split ring, said first locking adapter having an apertured surface disposed perpendicularly to said split ring, and a second locking adapter integrally fastened to said link, said second locking adapter having an apertured surface extending perpendicularly of said link, and a straight bolt removably extending through said aperture of said surface of said second locking adapter whereby said first locking adapter and said second locking adapter may be urged toward each other by said bolt after said split clamping ring closure is closed, said first and said second locking adapters being each fabricated from a single strip of relatively rigid material, each of said locking adapters having side flanges and overlying double front flanges supported by said side flanges and comprising said apertured surface.

3,125,793
INTERLACED YARN BY MULTIPLE UTILIZATION OF PRESSURIZED GAS
Conrad Joseph Gonsalves, Arnhem, Netherlands, assignor to American Enka Corporation, Enka, N.C., a corporation of Delaware
Filed Aug. 20, 1962, Ser. No. 217,847
Claims priority, application Netherlands Sept. 28, 1961
15 Claims. (Cl. 28—1)



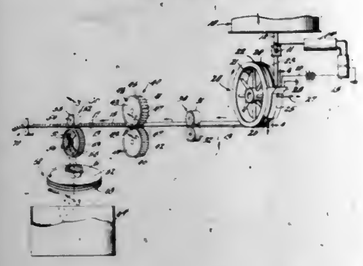
10. An apparatus for treating multifilament artificial threads having substantially no twist comprising means for guiding thread along a rectilinear path under a tension of between 0.03 and 0.3 gram per denier, a nozzle aligned with said rectilinear path for directing a high velocity primary gas jet against the traveling thread, means defining a chamber for collecting gas from the nozzle in an

enclosed space on the opposite side of the traveling thread, and means for receiving gas from said enclosed space and redirecting the same onto the traveling thread at a point displaced from the nozzle.

3,125,794
MANUFACTURE OF PELLETS FROM A CAST STRIP

Carl E. Reynolds, St. Petersburg, Fla., assignor to Florida Fishing Tackle Mfg. Co., Inc., a corporation of Florida

Filed Oct. 3, 1962, Ser. No. 228,173
3 Claims. (Cl. 29—1.22)



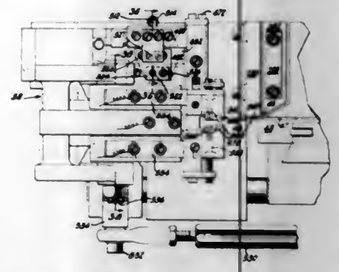
1. An apparatus for forming pellets, comprising: a supply container; means for casting a flat ribbon including a rotatably mounted wheel having a peripheral circumferential rectangular channel, a stationary shoe fitted over a portion of the circumferential periphery of said wheel in sliding engagement therewith to form a casting cavity between said shoe and said channel, and means for cooling said shoe; means for conducting a flow of molten material from said supply container to said cavity, and means for controlling the rate of flow of said molten material; said molten material being solidified in said cavity by said cooling means, and rotation of said wheel causing the issuance of a continuous flat ribbon of said material from said cavity; means for sizing said ribbon into a desired uniform thickness, including a pair of pressure rolls between which said ribbon is passed; means for molding pellets from said ribbon, including a pair of compression molding rolls between which the sized ribbon is passed, said molding rolls having cavities formed over the periphery thereof, whereby said ribbon is compressed therebetween causing the ribbon material to flow into said cavities to produce a plurality of molded protuberances projecting from the surface of said ribbon; and means for pressing said molded protuberances from said ribbon, including a pair of pressure rolls between which the molded ribbon is passed, one of said pressure rolls having a plurality of perforations of a size to correspond approximately with said protuberances, the other of said pressure rolls having a continuous cushioned surface, whereby said molded protuberances are pushed by said other pressure roll from said ribbon and through the perforations in said one pressure roll to form pellets from said ribbon.

3,125,795
FILAMENT TABBING MACHINE

Dale L. Chubb, Williamsport, and Robert S. Hutchison, Montoursville, Pa., assignors to Sylvania Electric Products Inc., a corporation of Delaware

Filed Dec. 4, 1959, Ser. No. 857,467
21 Claims. (Cl. 29—25.2)

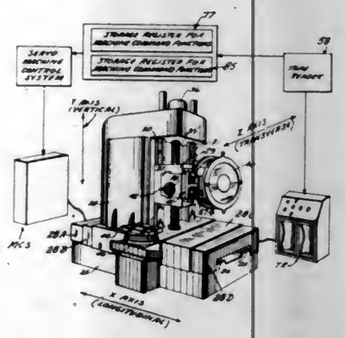
4. A filament tabbing machine comprising a ribbon centering device, a ribbon former, a ribbon feed device and a ribbon cutting device arranged in the order named along a longitudinal axis of the machine, means for longitudinally reciprocating the ribbon feed device to pull the ribbon through the ribbon centering device and the ribbon former and to thrust a ribbon into the ribbon cutting device, ribbon transfer jaws arranged next to the cutting device between which the ribbon is thrust by operation of the feed device, means adapted to guide a filament so as to move in a path laterally of the path of travel of the ribbon and parallel thereto, mechanism to move the transfer jaws transversely of the machine and to move the jaws toward each other to crimp the formed cut off ribbon section carried by the jaws about the filament, ribbon holding jaws straddling the transfer jaws in the position where the formed and crimped ribbon section overlies and underlies the filament, and welding electrodes positionable to engage the ribbon section between the holding jaws, when the transfer jaws have been retracted, means to shift the electrodes into and out of said position, means to control the application of welding current to said electrodes when in said position, a cutter for the ribboned filament in line with said filament to cut through the ribbon section and filament to make a tab on the filament, pulling jaws for grasping and pulling longitudinally of the machine a just cut tab and the following string of filaments with welded on ribbon sections, a tabbed filament transfer device adjacent the cutter, and having tabbed filament receiving portions positionable beneath the path of movement of the pulling jaws, means for operating the pulling jaws, and means for operating the tabbed filament transfer device.



3,125,796
MACHINE TOOL CONTROL SYSTEM

Wallace E. Brainard, Milwaukee, Wis., assignor to Kearney & Trecker Corporation, West Allis, Wis., a corporation of Wisconsin

Filed May 13, 1960, Ser. No. 29,011
20 Claims. (Cl. 29—26)

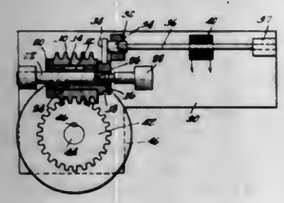


1. In an automatic control system for a machine tool having a plurality of movable members, a source of reference voltage comprising energized position control transformers, a pair of selectively actuatable crossbar switches respectively comprising storage registers adapted to be individually preset for storing digitized input control information in the form of predetermined reference command voltages from said source of reference voltage, a source of digitized input data comprising serial input information for directing a predetermined sequence of positionally controlled machine movements, a reader connected to be actuated by said digitized input data, control means operative to connect one of said crossbar switches to be actuated by said reader for storing predetermined reference control voltages from said source and to disconnect the other of said crossbar switches from said reader, said control means being simultaneously operative to connect whichever crossbar switch is disconnected from said reader to transmit output command voltage signals previously stored therein, a plurality of motion translators connected to be activated by command voltage signals transmitted from whichever of said crossbar switches that is disconnected from said reader, and means for actuating said control means to interchange the operation of said crossbar switches whereby each of said crossbar switches is alternately connected to store command voltage signals and to transmit output command voltage signals previously and respectively stored in one of said switches.

3,125,797
GEAR FINISHING MACHINE AND METHOD

Herbert O. Olson, 624 Dawson Ave., Rockford, Ill.

Original application May 26, 1954, Ser. No. 432,529, now Patent No. 2,952,067, dated Sept. 13, 1960. Divided and this application Aug. 11, 1960, Ser. No. 48,914
2 Claims. (Cl. 29—90)

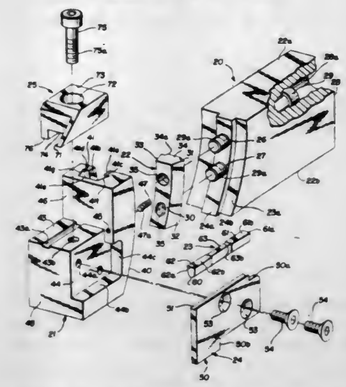


1. Apparatus for finishing gears comprising base means, first support means on said base means adapted to hold a toothed gear in position to be finished, said first support means having an axis, second support means on said base means spaced from the first support means and having an axis spaced from and disposed perpendicular to the first axis, said second support means being adapted to hold an elongated member appearing as a rack in axial section and having transverse projecting means in alignment with said second mentioned axis for meshing of a toothed gear and an elongated member, said first mentioned support being supported on said base means for rotation about said first mentioned axis to rotate a gear thereon about the support means axis of rotation, and oscillatory means acting between said base means and said second support means along said second mentioned axis to oscillate said second support means and an elongated member carried thereby while said first support means is being rotated about said axis of rotation whereby to hammer against one another the working surfaces of the teeth of a gear carried by said first support means and the projecting means of an elongated member carried by said second support means to produce a fine finish on at least some of said working surfaces.

3,125,798
ADJUSTABLE CUTOFF TOOL

William B. Stein, Barberton, Ohio, assignor to Manchester Machine & Tool Company, Akron, Ohio, a corporation of Ohio

Filed Mar. 6, 1961, Ser. No. 93,501
9 Claims. (Cl. 29—98)



1. An adjustable cutoff tool of the character described, comprising:
(A) an elongate tool body having a forward end;
(B) a cutting head
(1) longitudinally aligned with said forward end end of tool body in shiftable relationship therewith,
(2) and projecting forwardly thereof;
(C) an elongate tool releasably carried by said cutting head and having a cutting edge presented forwardly of said head;
(D) arcuate guide means, including
(1) mating arcuate faces supported with respect to said body and said head and interconnecting the same,
(2) having a common axis of rotation,
(3) mechanically locking said head against transverse shifting relatively of said body and further guiding said head through shifting movement relatively of said body around said axis of rotation;
(E) and locking means moving said head longitudinally of said body into and out of locked engagement with said forward end of said tool body.

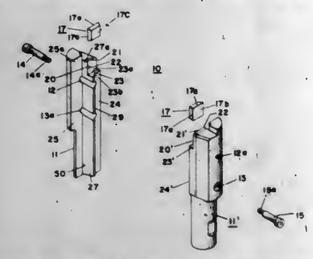
3,125,799
TOOL HOLDER FOR INDEXABLE CUTTING INSERTS

John T. Bennett, R.D. 2, Millstream Drive, Malvern, Pa., assignor of one-half to Frank Di Ferdlando, West Chester, Pa.

Filed Sept. 4, 1962, Ser. No. 221,241
8 Claims. (Cl. 29—105)

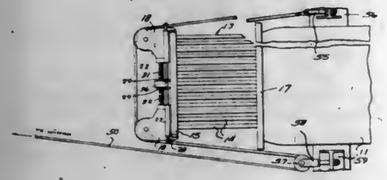
1. A tool holder for cutting inserts, said tool holder comprising an elongated body constructed by two substantially identical members which when assembled in face to face relation are symmetrically opposite about the longitudinal axis thereof, each of said members having on its face a first plane surface extending along the radial center line of said body for engagement with the anvil surface of one of the inserts, said first plane surface extending along said longitudinal axis a distance corresponding to the corresponding dimension of one of the sides of the inserts and terminating at the end in a shoulder, said shoulder extending at an angle to said longitudinal axis corresponding to that of a corresponding end of the inserts and having a depth slightly less than

the thickness of the inserts, said shoulder having an outer edge comprising the end of a second plane surface extending parallel to said first plane surface for substantially the remaining length of the said member, a third plane surface spaced to the other side of said first plane surface and parallel to said first and second plane surfaces said third plane surface extending substantially the entire length of said member for engagement with



the clamping surface of one of the inserts, and a fourth plane surface extending longitudinally of said member and intersecting the planes of said first and third surfaces, said second surface of each member engaging said third surface of the other said member when assembled and said first surface and said shoulder of each member cooperating with said third surface and said fourth surface of said other member to provide pockets for receiving the inserts.

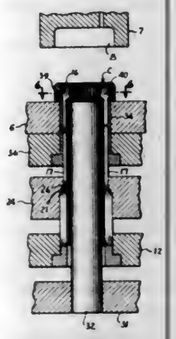
3,125,800
APPARATUS FOR REMOVING AND REPLACING HEAT EXCHANGER TUBE ASSEMBLIES
George J. Klima, Houston, Tex.
(2909 28th Ave. N., Texas City, Tex.)
Filed July 21, 1961, Ser. No. 125,823
7 Claims. (Cl. 29—202)



1. A device for exerting a pushing force on the circular rim of a heat exchanger tube assembly, whereby to move the tube assembly relative to its shell, comprising a pair of substantially aligned plate members, lug means on said plate members engageable with diametrically opposite portions of the circular rim of a heat exchanger tube assembly, means to exert inward pulling force on the plate members, whereby to clamp same to the rim, respective cable sheaves journaled on said plate members in alignment with each other, and a cable engaging said sheaves and adapted to be secured at one end to a portion of the heat exchanger shell and adapted to be connected at its other end to means for developing tension in said cable and for transmitting said tension to said sheaves to produce a pushing force on the tube assembly rim.

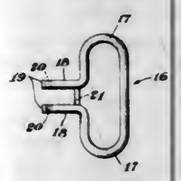
3,125,801
METHOD AND APPARATUS FOR MAKING A THREADED PLASTIC MOLD CAP
Mack R. Fields, Chicago, Ill.
(321 Ames St., Libertyville, Ill.)
Filed May 1, 1961, Ser. No. 106,790
9 Claims. (Cl. 29—421)

9. A method of making a plastic coated metal article having a cavity, said method comprising providing a radially contractable die that has a plurality of circumferentially spaced sections that provide a radial deformation that extends around the longitudinal axis of said die and is interrupted at the spaces between the adjacent sections, telescoping over the die a hollow metal member, thereafter applying plastic under sufficient pressure to the exterior of the member to deform the member and force it into said radial deformation to form on said member substantially a counterpart radial deformation and at the same time coat the member with the



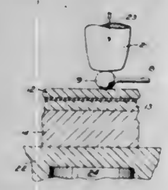
plastic, the wall thickness and ductility of the metal in relation to the spacing of the sections being such that said counterpart deformation is substantially continuous from one section to the next adjacent section, and prior to relative axial separation of any of said spaced die sections and member, radially contracting the die an amount sufficient for the die deformation to clear said counterpart deformation to enable the member to be separated from the die by axially shifting of one without rotation of either.

3,125,802
METHOD OF REMOVING A DISC-LIKE CLOSURE FROM A CORE
Russell S. Kenin, Midland, and Robert Woody, Bay City, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Nov. 27, 1961, Ser. No. 154,996
1 Claim. (Cl. 29—427)



In a method of disassembling a package having a core and a disc-like closure frictioned fitted at each end of said core, each said closure having a centrally disposed aperture whereby the effective inner diameter of said core is reduced sufficiently to accommodate but not to restrain rotation about a spindle, the improvement which comprises (*a*) providing each disc-like closure with a pair of extraction apertures positioned along a diameter of the disc, said extraction apertures disposed on opposite sides of the centrally disposed aperture and having axes generally parallel to and substantially equidistant from the longitudinal axis of the disc; (*b*) providing an insert remover having a handle from which project two spaced prongs, said prongs being in a single plane, the terminal portion of each prong remote from said handle being so constructed and arranged as to define a hook-like notch, said notch in one of said prongs facing on one side of said single plane and said notch in the other prong facing on the other side of said single plane; (*c*) passing the prongs of said insert remover into the pair of extraction apertures; (*d*) rotating the insert remover, thereby to engage the hook-like notch in each prong with the wall of each extraction aperture in the disc; and (*e*) exerting a pulling force on said insert remover thereby to remove and disassemble said disc-like closure from the package core.

3,125,803
MANUFACTURE OF SEMICONDUCTOR DEVICES
Joseph F. Rich, Stoneham, Mass., assignor to Solid State Products, Inc., Salem, Mass., a corporation of Massachusetts
Filed Oct. 24, 1960, Ser. No. 64,533
4 Claims. (Cl. 29—482)



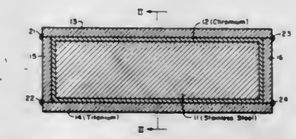
1. The method of making an electrical semiconductor device of the type having a wafer including semiconductor material and an electrode electrically and mechanically connected therewith, which comprises forming at the end of a linear conductor and from the material thereof a relatively large and substantially spherical mass of electrode material which is softer than the material of the wafer to which it is to be bonded, positioning said conductor substantially parallel with a surface of the wafer and with the substantially spherical mass extending therefrom abutting the surface of the wafer and making substantially a point contact therewith, heating the wafer and electrode material and simultaneously compressing the substantially spherical mass of electrode material against the surface of the wafer in direction substantially perpendicular therewith until the softer mass of electrode material is flattened to a thickness which is substantially the thickness of the conductor extending therefrom and until the softer electrode material spreads substantially radially outwardly from the point contact and covers a relatively larger substantially circular area of the surface of the wafer, and thereafter cooling and relieving pressure between the electrode and wafer materials.

3,125,804
WELDING PROCESS AND EQUIPMENT
Paul Thomé, Saint-Cloud, France, assignor to Commissariat a l'Energie Atomique, a society of France
Filed Feb. 24, 1961, Ser. No. 91,395
Claims priority, application France Feb. 25, 1960
6 Claims. (Cl. 29—487)



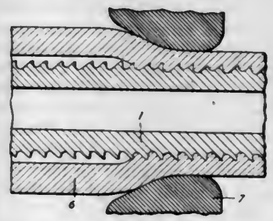
1. In a welding process, the steps of completely covering continuous areas on one side of the work along the seam to be welded with electric heater pads in direct contact engagement with the work surface, energizing said heater pads to preheat the work, progressively uncovering successive regions of the work along the path of the welded seam to be formed, forming successive portions of a welded seam in the uncovered region and progressively recovering said region after the formation of the seam portion therein.

3,125,805
CLADDING FERROUS-BASE ALLOYS WITH TITANIUM
Walter L. Horigan, Jr., Monroeville, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 22, 1959, Ser. No. 828,912
4 Claims. (Cl. 29—492)



1. A process for making a strong, corrosion resistant composite member comprising an austenitic stainless steel base plate and a titanium cladding plate integrally and continuously metallurgically bonded together in face-to-face arrangement, including the steps of, applying to said ferrous base plate at least 0.0005 inch of chromium to form a continuous barrier layer thereon, applying to the surface of said ferrous base plate a titanium cladding plate, annealing the composite assembly at about 900° C. in an inert atmosphere to remove oxide from the bonding surface of said titanium plate, heating said assembly rapidly to a temperature of approximately 1150° C., hot rolling said assembly to provide a reduction in thickness of at least 70% and thereafter, cooling the resulting composite member.

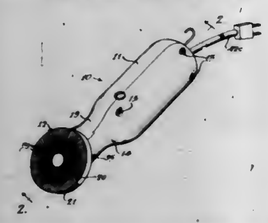
3,125,806
MANUFACTURE OF COMPOSITE METAL TUBES
Graham Murray Cameron, Ashgate, Chesterfield, England, assignor to Howell and Company Limited, Yorkshire, England, a company of Great Britain
Filed Jan. 30, 1961, Ser. No. 85,609
Claims priority, application Great Britain Jan. 30, 1960
7 Claims. (Cl. 29—520)



1. A method of forming a composite metal tube built up of at least two concentric layers, said method comprising a first step of acting on the outer surface of an inner tube with a tool that forms in it a groove extending helically around the tube and extending substantially the entire length of said inner tube, said groove being formed by deformation of the material of the tube by said tool in such a manner as to produce at least one ridge adjacent said groove, a second step of applying to said ridge a tool that tilts said ridge in a direction towards one end of said inner tube, said groove remaining open after tilting of the ridge, a third step comprising placing over said inner tube an outer tube, said outer tube being of softer

material than said inner tube, and a fourth step comprising the passing of said outer tube containing said inner tube axially through a die of diameter less than the diameter of said outer tube, said passage being caused in a direction such that said end of said inner tube enters said die first, thereby drawing said outer tube down onto said inner tube, causing said outer tube to form an intimate mechanically interlocked bond with said inner tube, free from voids.

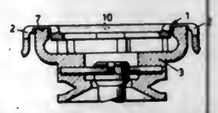
3,125,807
ROTARY CUTTER HAVING MULTIPLE CUTTING SURFACES
Thomas J. Bayard, Evanston, Ill. (% E. Randolph St., Chicago 1, Ill.)
Filed Dec. 21, 1961, Ser. No. 161,203
2 Claims. (Cl. 30—34)



1. A hair cutting device comprising: a casing defining a handle at one end and having an opposite end; a shaft rotatably journalled on said casing; a rigid radial blade at said casing opposite end, said blade being mounted on said shaft for rotation about an axis inclined with respect to the handle, said blade having opposed radially extending arms with fingers extending transversely from outer ends of the arms and toward said handle; motor means mounted on said casing and connected with said shaft for driving said blade; a generally dish-shaped guard releasably held on said casing and enclosing said blade, said guard having a broad, generally circular front wall concentric with the axis of said blade, and a narrow, generally cylindrical side wall extending transversely from the periphery of the front wall toward said handle and in the same general direction as said blade fingers, said front and side walls having series of openings adjacent the blade arms and fingers, respectively, for the pasasge of hair into the path of movement of said blade, the series of side wall openings spanning only about a third of the circumference of the guard at the portion of said guard outermost from said handle; cutting edges on said blade arms and fingers cooperating with said guard cutting edges for cutting hair extending through said openings; cooperating means comprising an outwardly extending shoulder on said casing and an inwardly rolled lip on said guard side wall adjacent said series of openings and interlocked with said shoulder, and latch means on said guard and casing spaced from said lip for releasably holding the guard on the casing; cooperating stop means including prongs on the inner surface of the guard side wall and cooperating stops on the casing to limit movement of the guard toward the blade; and resilient means urging said blade toward said guard front wall.

3,125,808
HEAD CONSTRUCTION FOR A DRY SHAVER
Gerrit Starre, Drachten, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed May 17, 1960, Ser. No. 29,657
Claims priority, application Netherlands May 19, 1959
1 Claim. (Cl. 30—43)

A rotatable cutter for a dry shaver and operable with an apertured shear plate, said cutter comprising of plurality of cutting teeth projectingn from and circumferentially spaced around the cutter, said teeth including flat outer faces lying in a plane perpendicular to the axis of rotation of the cutter and providing top running surfaces, said teeth also including flat leading surfaces joining the flat outer faces at acute angles thereby providing



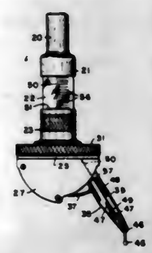
cutting edges, at least one tooth having a bevelled leading surface between the outer face and flat leading surface, said bevelled surface extending at an obtuse angle relative to the outer face whereby the face skin oil penetrating through the apertures of said shear plate is scraped off the skin by said bevelled surface and deposited on the inner surface of said shear plate for lubrication purposes.

3,125,809
VALVE CONTROL FOR DENTAL HANDPIECE
Raymond A. White, San Pedro, Calif., assignor to The Dentists' Supply Company of New York, York, Pa., a corporation of New York
Filed Nov. 7, 1960, Ser. No. 67,758
10 Claims. (Cl. 32—27)



1. A fluid-operated handpiece including, an elongated body, an annular inclined cam fixed to and encircling the body, a fluid-operated head at the forward end of the body, an operator sleeve reciprocally carried on and surrounding the exterior of the body, a manually depressible element on the body to actuate the operator reciprocally and in the form of a collar surrounding the body and one end of said collar having slidable engagement with said annular inclined cam, and a fluid-controlling valve element positioned relative to said body by the operator and controlling operation of the head.

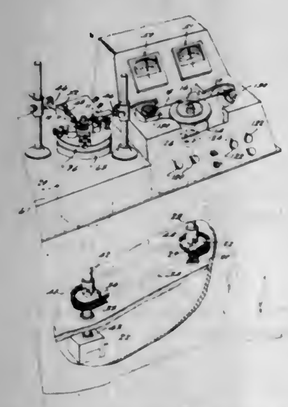
3,125,810
TEST INDICATOR
Ruben J. Hartmeister, 1034 6th St., Golden, Colo.
Filed Feb. 7, 1961, Ser. No. 98,731
8 Claims. (Cl. 33—172)



1. A test indicator comprising a spindle shank adapted to be mounted in a rotated tool chuck, a housing connected to the shank, a scale between the housing and spindle, an indicator movable relatively to the scale, a swivel arm assembly in the housing having an arm protruding from the housing, means pivotally connecting

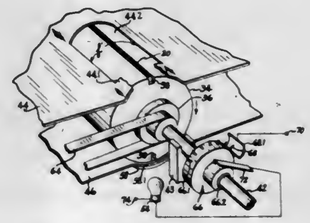
the assembly to the housing, a work contacting pointer pivotally mounted in the arm, means operatively connecting the pointer and indicator, and means automatically adjusting the position of the swivel arm assembly relatively to the housing while the test indicator is being rotated by the tool chuck in which the shank is mounted, said adjusting means comprising an adjustment cap loosely mounted on the housing for relative rotative movement and adapted to be grasped manually and held stationarily while the rest of the test indicator is being rotated, means on the adjustment cap and means on the swivel arm assembly engaging each other whereby rotation of the housing relatively to the adjustment cap while the latter is held stationarily automatically moves the swivel arm assembly about its pivotal connection to the housing.

3,125,811
MACHINE FOR MEASURING ROUNDNESS, CONCENTRICITY, AND SQUARENESS
Frank L. Pierce, Boston, and Edward E. West, Jr., Dorchester, Mass. (both of 3105 SW. 2nd Ave., Fort Lauderdale, Fla.)
Filed Apr. 13, 1959, Ser. No. 806,070
6 Claims. (Cl. 33—174)



1. In a machine for measuring the variations in roundness and concentricity of cylindrical or conical surfaces of a part as well as their squareness in relation to an annular surface on said part, a first electronic displacement indicator provided with a contact tip adapted to contact the moving cylindrical surface of a part to be measured, a polar coordinate chart recorder including a rotary chart disc adapted to have a recording chart positioned thereon and a recorder pen responsive to the signal from the indicator generated by the contact of such tip with such moving surface and adapted to trace a graph of such cylindrical surface on said recording chart, a rotary high precision spindle, radial and axial thrust anti-friction precision bearings supporting said spindle for rotation about a fixed vertical axis while preventing axial movement of said spindle, means for rotating said spindle about its axis, said chart disc being synchronized with the rotation of said spindle, a chuck carried by the spindle and arranged to hold and support the part to be measured for rotation therewith in fixed relation to said spindle, adjustable means supporting said chuck in fixed relation on said spindle for rotation therewith whereby said chuck can be adjusted so that an annular surface on the part to be measured and held by the chuck will be perpendicular to the spindle axis, a second indicator provided with a contact tip adapted to contact such annular surface on such part as said spindle rotates, a second polar coordinate chart recorder having a recorder pen responsive to the signal from said second indicator generated by the contact of the tip of said second indicator with said annular surface and adapted to trace a graph of said annular surface on said recording chart simultaneously with the recording of the graph of the cylindrical surface of the part, said machine being characterized in that said indicators and the contact tips thereof are free of the load of the part to be measured and in that said part is supported by said chuck so as to be rotated by said spindle and at the same speed thereof.

3,125,812
APPARATUS FOR DECODING AN ENCODED LIGHT IMAGE
George R. Simpson, South Woodstock, Conn., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts
Filed Mar. 3, 1961, Ser. No. 93,167
4 Claims. (Cl. 35—3)



1. Apparatus for decoding encoded material where the encoded material consists of transverse segments of an original image arranged in inverted succession and in inverted relation to each other, said apparatus comprising means supporting said encoded material with said succession of encoded image segments disposed along a first arc, a fiber optical image-transfer device adapted to be aligned at one end with an encoded image segment for receiving light therefrom and for displaying said image segment to view upon the opposite end of said device, means mounting said image-transfer device for movement about a selected axis located intermediate said device ends to dispose said one device end in a position of alignment with each encoded image segment in sequence along said first arc and to dispose said opposite device end in a series of corresponding positions along a second arc to display said image segments to view in reoriented relation to each other, means moving said image-transfer device about said axis for moving said device ends through said sequences of positions along respective arcs within approximately one-eighth second, and means intermittently illuminating each encoded image segment as said one device end is aligned therewith for displaying said image segments clearly to view in reoriented relation to each other within said one-eighth second, whereby said image segments appear to be viewed substantially simultaneously as a result of the natural visual retention of the human eye for permitting recognition of said original image in decoded form.

3,125,813
MASKING PANEL CONSTRUCTION FOR "PROGRAM TEACHING" USE
Frank Stanley Schade, Holyoke, Mass., assignor to National Blank Book Company, Holyoke, Mass., a corporation of Massachusetts
Filed Nov. 30, 1961, Ser. No. 156,007
12 Claims. (Cl. 35—9)

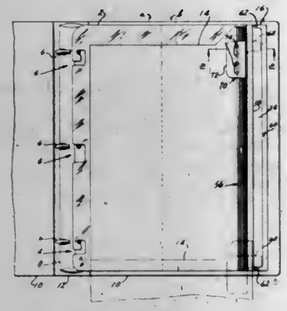
1. "Program teaching" mask apparatus for pages prepared with a series of sequentially arranged questions and

answers in adjacent columnar areas on said pages comprising,

a support member,

a masking member vertically slidable relative to said support,

means holding said masking member in a predetermined positional relation transversely of said support member, said means including an elongated slide,



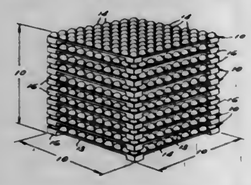
a pocket-like channel extending in fixed relation from the top to the bottom of said support,

and an abutment blocking off at least one end of said channel

means associated with said masking slide member extending into said channel

said abutment being engageable by the last-named means and limiting travel of the masking member relative to said support member.

3,125,814
EDUCATIONAL DEVICE
Sophie Mary Walcuk, 6804 Lansing Ave., Cleveland 5, Ohio
Filed Mar. 2, 1961, Ser. No. 92,999
1 Claim. (Cl. 35—32)



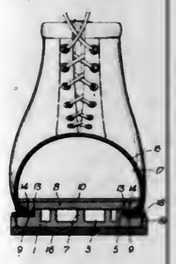
A visual aid for teaching the basic concepts of numbers and arithmetic procedures comprising a plurality of separate single unit elements each having a rectangular flat base and a single hemispheric integral projection extending from the upper face thereof, a plurality of elongated decade elements each having a rectangular flat base and ten hemispheric integral projections identical to said single hemispheric projection arranged in a row projecting from the upper face thereof, and a plurality of century elements each having a rectangular flat base and one-hundred hemispheric integral projections identical to said single hemispheric projection extending from the upper face thereof arranged in ten rows each containing ten projections, all of said projections being substantially the same size, a leg depending from each corner of the base of each century element, said century elements being adapted to be arranged in a vertical stack, each of said legs being formed to fit over the corresponding projection of the century element upon which it rests maintaining said stack of said century elements in vertical alignment.

3,125,815
FABRIC DISPLAY
Henry Dressler, Hialeah, Fla.
(% J. Jerome Oiltt, 32 Broadway, New York, N.Y.)
Filed Dec. 21, 1961, Ser. No. 160,993
5 Claims. (Cl. 35—56)



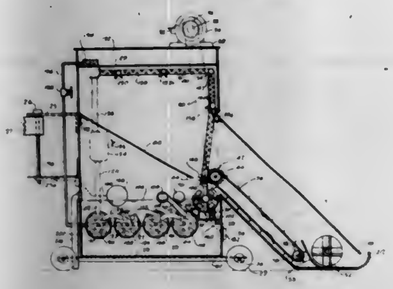
1. A fabric display comprising a length of fabric sufficient to make a dress, said fabric being folded to bring the ends thereof together to form a half-length fabric, the longitudinal side edges of said half-length fabric being further folded inwardly toward one another, means for gathering in the mid-section of said further folded half-length fabric to simulate a waist for said dress, a formed sheet-like element positioned within the folds of said further folded half-length fabric above said waist to shape the front of said dress to simulate a woman's bust, and means extending over the upper end of said further folded half-length fabric to secure said sheet-like element in position and to retain the fabric in the shape of said dress.

3,125,816
SKIING BOOT
Kurt Gärtner, Koflach, Styria, Austria, assignor to Schuhfabrik Koflach F. Herunter OHG., Vienna, Austria
Filed Feb. 16, 1962, Ser. No. 173,782
Claims priority, application Austria Feb. 22, 1961
5 Claims. (Cl. 36—2.5)



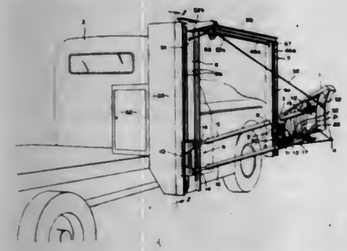
1. A skiing boot comprising at least one upper, and a sole member defined by an insole of deformation-resisting plastic material, an intermediate sole of deformation-resisting plastic material and an outsole, spaced vertical members projecting upwardly from said intermediate sole and being integral therewith to form cavities therein, a vertical rib member extending downwardly from said insole adjacent the periphery thereof, and said vertical members and vertical rib member extending substantially the same distance above and below said intermediate sole and insole, respectively, to provide a filler for said boot.

3,125,817
SNOW-MELTING APPARATUS
Anthony F. Spinelli, 21 Sheridan Drive, Milton, Mass.
Filed Feb. 6, 1961, Ser. No. 87,332
2 Claims. (Cl. 37—12)



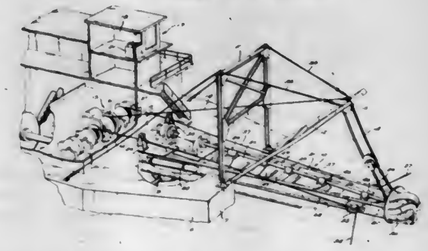
1. Snow melting apparatus comprising a chassis, means to gather and melt snow supported by said chassis embodying a tank, snow feeding mechanism including an upwardly inclined conveyor belt having its upper end arranged to deliver snow into the tank adjacent the front wall thereof, an upwardly inclined stationary screen in said tank arranged substantially coextensive with said inclined conveyer belt, a rotary member disposed in front of said conveyer belt arranged to gather the snow and throw a major portion thereof upwardly above said conveyer onto said screen, any snow not reaching the screen falling on said conveyer to be carried into said tank, means disposed above said stationary inclined screen to distribute a medium to melt the snow thrown onto said screen, and a disposal device in said tank adjacent said front wall arranged to receive the snow delivered by said belt and to also receive any unmelted snow from said inclined screen.

3,125,818
MEANS FOR ADJUSTING THE ELEVATION OF SNOW PLOW WING BLADES
Frank B. Kraft, Kitchener, Ontario, and George Rodger, Galt, Ontario, Canada, assignors to Hamsteil Corporation Limited, Toronto, Ontario, Canada
Filed Oct. 29, 1962, Ser. No. 233,527
Claims priority, application Canada Oct. 28, 1961
7 Claims. (Cl. 37—42)



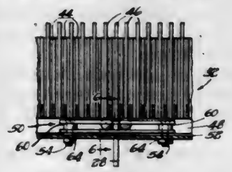
1. In a snow plowing device having a wing blade, a rear end support for the blade comprising a frame providing at one side an upright guideway, a blade elevating member reciprocable upwardly and downwardly on the guideway, an upper sheave rotatably mounted on the upper part of the frame, a lower sheave rotatably mounted on the lower part of the frame, a fluid operated ram mounted on the opposite side of the frame from the guideway and having a part reciprocable downwardly and upwardly, a first and a second sheave rotatably mounted on the reciprocable part of the ram, a first cable length fixed to the elevating member and passing therefrom upwardly around the upper sheave and thence downwardly around the first sheave and thence to a point of securement, and a second cable length fixed to the elevating member and passing therefrom downwardly around the lower sheave and thence upwardly around the second sheave and thence to a point of securement, downward and upward movement of the reciprocable part of the ram thus causing the first and second cable lengths respectively to raise and lower the elevating member by equal amounts greater than the distance of movement of said reciprocable part.

3,125,819
CONTROL ARRANGEMENT FOR DREDGE LADDER
Carl P. Kaufmann, Baltimore, Md., assignor to Ellicott Machine Corporation, Baltimore, Md., a corporation of Maryland
Filed Mar. 19, 1962, Ser. No. 180,673
12 Claims. (Cl. 37—54)



9. In combination a dredge, a ladder pivoted on said dredge for raising and lowering movement, hoist means connected to raise and lower said ladder, a brake connected to said hoist means normally applying sufficient braking force to prevent lowering of said ladder, power means connected to release said brake to a degree producing a braking force which is an inverse function of a control signal, separate manual and automatic means connected in series with said power means providing said control signal, said manual means producing a control signal having a value manually controlled, said automatic means being responsive to the rate of lowering movement of said ladder and reducing the value of said control signal when the rate of lowering movement of said ladder exceeds a predetermined rate.

3,125,820
SLIDE TRAY INDEXING ARRANGEMENT
Karl Malershofer, Park Ridge, Ill., assignor to G-M Laboratories Inc., Chicago, Ill., a corporation of Illinois
Filed July 17, 1961, Ser. No. 124,472
5 Claims. (Cl. 40—79)



1. In photographic slide projection apparatus, the combination comprising: means defining a slide tray tunnel; slide tray means slidably receivable in said tunnel, including a plurality of partitions disposed in parallel spaced-apart relationship defining individual slide stalls; means for feeding said tray incrementally through said tunnel;

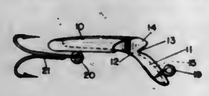
pusher arm means arranged to be extended and retracted transversely of said tunnel for transporting a slide relative to a said stall and having a predetermined thickness longitudinally of said tunnel; and a pair of spaced rollers, each defining a curved surface for contacting adjacent partitions of said tray, so constructed and arranged as releasably to position said tray in said roller tunnel, said curved surfaces being further disposed on opposite sides of said pusher arm means and spaced apart substantially by said predetermined thickness whereby to guide said arm means into a said stall.

3,125,821
REPEATING GUN WITH CARTRIDGE LIFTER AND CARTRIDGE STOP MEMBER
William B. Ruger and Harry H. Sefried II, Southport, Conn., assignors to Sturm, Ruger and Company, Inc., Southport, Conn., a corporation of Connecticut
Filed Apr. 2, 1962, Ser. No. 184,195
10 Claims. (Cl. 42—17)



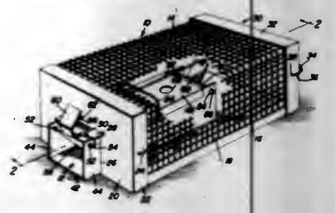
1. In a repeating gun having a receiver, an attached barrel, a trigger housing attached to the receiver, a tubular magazine secured at the rear to the receiver and located below the barrel, a bolt in the receiver, slide means engaging the bolt and reciprocable therewith, means for moving the slide and bolt rearward and forward in the firing cycle, a cartridge lifter arranged to receive a cartridge from the magazine and raise it to a position to be fed into the barrel, a cartridge stop member which moves into the path of the leading cartridge in the magazine and stops its rearward travel when the gun is in position for firing, means operated by the slide for disengaging the cartridge stop member, and means operated by said cartridge to reengage the cartridge stop member and hold the next cartridge in the magazine.

3,125,822
FISH LURES
Charles W. Burback, 318 S. Exchange, St. Paul 2, Minn.
Filed Aug. 26, 1960, Ser. No. 52,119
1 Claim. (Cl. 43—42.48)



A fishing lure including,
a generally flat one piece body portion which is widest near its rear extremity and which tapers slightly inwardly and forwardly,
the undersurface of said body including a central longitudinal groove defined between a pair of elongated side portions having substantially flat under surfaces,
a neck portion which is narrower than said body portion connected to the forward end of said body portion thereof and terminating in a forward end which is approximately the same width as the neck portion,
an angular forward portion extending at an obtuse angle to said flat body portion and which is wider than said neck portion and integrally connected thereto rearwardly of said forward end of said neck portion,
a line attaching means on the forward surface of said angular forward portion, and
hook means attached to the undersurface of the body portion near the rear end thereof.

3,125,823
ANIMAL TRAP
Russell Smith, Gosport, Ind., assignor of thirty percent to John M. King, Gosport, Ind.
Filed July 3, 1961, Ser. No. 121,556
4 Claims. (Cl. 43—76)

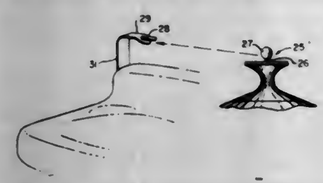


1. An animal trap which may be initially set by hand and which thereafter functions automatically until the user is again called upon to resort to the handsetting step comprising an outer cage having top, bottom and side walls, and front and rear end walls, said rear end wall being readily applicable and removable and permitting access to be had to the imprisoning space in the cage, said front end wall being likewise readily applicable and removable and provided with an entrance opening the lower margin of which is in a plane with the plane of said bottom wall, a door-equipped chute having a major portion in the space of the cage and having an end portion aligned and cooperable with the entrance opening in said front end wall, said chute comprising an open ended tube having top, bottom and side walls, a pivoted gravity lowered entrance door mounted in one, the entrance end, of said tube, a pivoted gravity lowered exit door mounted in the other, the exit end, of the tube, a pivoted plate in a median portion of the chute between the respective doors, said plate being counterbalanced in a counterclockwise direction and provided at one side thereof with an offset L-shaped trip, said trip having a vertical member positioned beneath and releasably engageable with a free cooperable edge portion of the entrance door, the upper portions of the respective doors being provided with upstanding fingers, said fingers being aligned with each other, a reset rod arranged exteriorly of and above the plane of the top wall of said tube and having one end hingedly connected with the finger of the exit door, said front wall having a rod opening, the adjacent end of said rod projecting outwardly through and beyond said opening and being engageable with the finger at the upper end of the entrance door.

3,125,824
SUPPORT FOR CAKE OF MATERIAL
Robert B. Staver, Los Altos, Calif., assignor to National Products Corporation, a corporation of California
Filed Aug. 5, 1960, Ser. No. 47,766
14 Claims. (Cl. 45—28)

1. In combination, a body of material of a size to be grasped by the hand and manipulated thereby, said body having an upper surface portion; and means for holding said body of material including a slender stem portion, extending upwardly from the upper surface portion of said body, said stem being sufficiently slender to be positioned in the crotch of and squeezed between two adjacent fingers of a hand without spreading said fingers to an uncomfortable degree, a head provided at the upper end of said stem, said head extending laterally therefrom, the under

surface of said head and the opposed surface beneath the same being spaced apart a distance sufficient to accommodate the said adjacent fingers of said hand and generally converging inwardly towards said stem whereby to fit snugly on fingers of different sizes; a support means; and intermediate support means disposed generally at the upper end of said holding means adapted to cooperate with said support means to support the combination excluding said support means therefrom, these two means of support, when in and while being placed in and removed from cooperation, leaving said stem portion, and the space lying generally outwardly from said stem, substantially unobstructed thereby enabling said intermediate support



means to be engaged with and removed from said support means conveniently and with substantially no interference therefrom while said holding means is engaged in the crotch between said fingers, the portions of the holding means that cooperate with the two adjacent engaging fingers being substantially surfaces of revolution about the longitudinal axis passing through the stem thereby enabling said holding means to be positioned in any orientation about said axis while held within the crotch formed by said fingers; and wherein the intermediate support means and the support means are of such cooperating configuration that the combination less the support means may be supported by the support means in any orientation about said longitudinal axis.

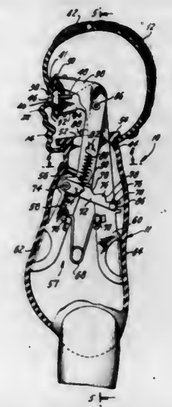
3,125,825
PORTABLE TABLE
Charles H. Gaudette, 14690 Archdale, Detroit 27, Mich.
Filed Nov. 14, 1961, Ser. No. 152,197
4 Claims. (Cl. 45—59)



1. A portable table comprising a first substantially flat surface, and a second surface extending from one end of said first surface at an angle thereto and being contoured to fit a person's torso with said second surface being adapted to be inserted inside a portion of person's clothing for supporting said first surface within arms reach of the supporting person.

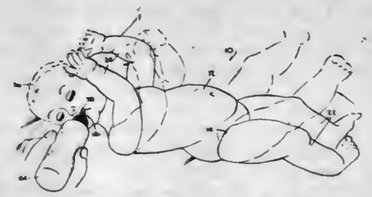
3,125,826
ANIMATED DOLL WITH SOUNDING MEANS
Robert K. Ostrander, 497 Prospect St., Maplewood, N.J.
Filed June 21, 1961, Ser. No. 118,564
7 Claims. (Cl. 46—118)

1. A doll including a hollow deformable bellows which can be manually squeezed and which will regain its shape when released whereby when the bellows is squeezed the air pressure therein will be raised, a sounding means connected to provide between the bellows and the ambient air a passageway that is uninterrupted except by the sounding means so that the actuation of the sounding means will be a function solely of the air pressure generated within the bellows, means intermittently opposing greater and lesser frictional resistance to squeezing of the bellows so as to variegate the sound issuing from the sounding means, a face of resilient flexible material having lineaments comprising a nose, eye openings, eyelids above and below the openings, cheeks and a mouth, and further including eye sockets behind the face and integrated with the face at the fronts thereof around the edges of the eye openings, the eye openings being uptilted and the corners of the mouth being upturned with the face unstressed, and the



face being arranged at such time to present an expression of happiness, a different pair of clamping elements associated with each eye socket, means holding each pair of clamping elements in engagement with the back surface of the doll's face behind the upper and lower edges of the associated eye opening, and means to manually manipulate said clamping elements when the bellows is squeezed so as to urge together the upper and lower portions of the eye sockets where they are joined to the edges of the eye openings so as to at least partially close the eye openings and concurrently therewith raise the cheekbones and through the skin of the face raise the upper corners of the mouth so as to heighten the expression of happiness while the variegated sound is issuing from the sounding means.

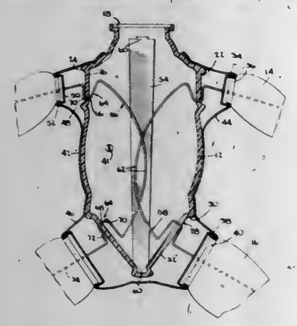
3,125,827
AIR ACTUATED ANIMATED DOLL
Robert K. Ostrander, 497 Prospect St., Maplewood, N.J.
Filed Apr. 17, 1961, Ser. No. 103,556
2 Claims. (Cl. 46—120)



1. An animated doll comprising a hollow body, a leg having a closed end within the body, means journalling said leg to said body for rotation about an inclined axis, said closed end having a slot therein, a socket exposed to the exterior of the body, an air actuatable prime mover located within the body, a conduit pneumatically connecting the prime mover to the socket, a

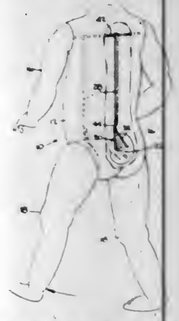
kinematic linkage mechanically energized by the prime mover, said kinematic linkage terminating in a rotatable flat end freely slidably disposed in the slot, the length of the slot being appreciably in excess of the width of the flat end, a deformable flexible resilient vessel having a plug with an opening therein, said plug being shaped for sealing detachable coupling with said socket whereby when the plug is coupled to the socket and the vessel is squeezed the air actuated prime mover will be energized to rotate the leg.

3,125,828
ANIMATED ARTICULATED DOLL
Robert K. Ostrander, 497 Prospect Ave., Maplewood, N.J.
Filed May 10, 1962, Ser. No. 193,749
7 Claims. (Cl. 46—120)



1. A doll with animated articulated limbs, said doll comprising
(*a*) a hollow semi-stiff resilient torso having shoulders and hips and provided with a wall at each shoulder and with a wall at each hip, said walls being in one-piece with the torso,
(*b*) each of said shoulder walls and hip walls having a through aperture,
(*c*) two arms,
(*d*) two legs,
(*e*) each arm being associated with a different shoulder and shoulder wall,
(*f*) each leg being associated with a different hip and hip wall,
(*g*) each arm having a proximal end adjacent a different end associated shoulder wall,
(*h*) each leg having a proximal end adjacent a different associated hip wall,
(*i*) a different loose joint articulately connecting the proximal end of each arm to its associated shoulder,
(*j*) a different loose joint articulately connecting the proximal end of each leg to its associated hip,
(*k*) and a mechanism for animating the arm and the leg on one side of the torso concurrently with one another and for separately animating the arm and the leg on the other side of the torso concurrently with one another, said mechanism comprising
(1) two self-form-maintaining elongated wire forms,
(2) one wire form being associated only with an arm, a leg, a hip wall and a shoulder wall at one side of the torso,
(3) the other wire form being associated only with the arm, the leg, the hip wall and the shoulder wall at the other side of the torso,
(4) each wire form having a central portion and end portions in one piece with one another,
(5) the central portion of each wire form being shaped and disposed to contact the interior surface of the frontal portion of the torso,
(6) the end portions of each wire form extending through said apertures in the walls at the shoulder and hip of the torso at one different side only of the torso so that each wire form is rotatable with respect to the torso at said apertures about an axis passing through said apertures in the shoulder wall and the hip wall on the same side of the torso, this being a different side for each wire form,
(7) the end portions of one of the wire forms being provided with limb activators that extend into the arm and the leg on one side only of the torso,
(8) and the end portions of the other wire form being provided with limb activators that extend into the arm and the leg on the other side only of the torso,
(9) whereby when the central portions of the wire forms are pressed rearwardly the arm and the leg on one side of the torso are swung jointly toward over the center of the torso and the arm and leg on the other side of the torso are swung jointly toward over the center of the torso,
(10) the arms and legs being thereby mutually swung toward one another.

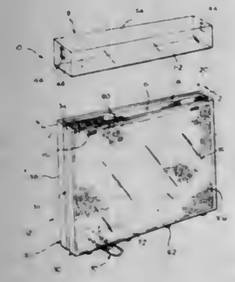
3,125,829
WALKING DOLL
Robert K. Ostrander, 497 Prospect St., Maplewood, N.J.
Filed Apr. 6, 1962, Ser. No. 185,671
11 Claims. (Cl. 46—149)



1. In combination with a doll having a hollow torso, a pair of hip openings and a pair of legs each of which is rotatably secured at its hip end to an associated hip opening, a different wishbone associated with each different leg, each wishbone being secured to the hip end of its leg and being located within the hollow interior of the torso, each wishbone including a pair of reaches connected by a bend and extending upwardly toward the bend when the leg is vertical, the bend being below the distal end of the then uppermost reach when the leg is horizontal, an elongated resilient strand, and means anchoring one portion of the strand at an upper portion of the torso, another portion of the strand being slidably connected to the wishbone, the strand being under tension between said portions.

3,125,830
SEED STARTER DEVICE
Arne Knutsson, 322 Arbor Ave., West Chicago, Ill.
Filed Oct. 17, 1961, Ser. No. 145,703
5 Claims. (Cl. 47—37)

1. A device for germinating a single row of garden seeds, said device comprising:
a flat planar, sheet-like parallelepiped container defining a bottom wall on which said container rests, a front wall, a rear wall, opposed side walls separating said front and rear walls, and an open top,
said front, rear, and side walls being upright when said container rests on said bottom wall.
said side and bottom walls spacing said front and rear walls from each other a distance that does not exceed approximately one-half inch,
said front, rear and side walls being of uniform thickness and having a height that exceeds said distance by a factor that is at least equal to approximately two,
said front and rear walls having a dimension longitudinally of said bottom wall that at least approximates the dimension of said height,
whereby said front and rear walls form the wide sides of the container,
and said side walls form the narrow sides of the container,
said container thereby defining a planar, upright, elongate sheet-like pocket having a depth that substantially exceeds the pocket dimension that is defined by said distance,



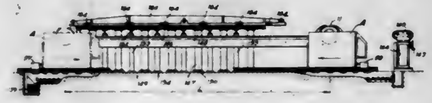
said container comprising a pair of separable pan-like portions releasably secured together along said side walls,
one of said wide sides being transparent,
said pocket being substantially filled with a growing media,
said bottom wall being formed with openings therethrough for watering said growing media from the bottom thereof,
and a cover for closing said container top,
said cover comprising:
a transparent parallelepipedly shaped element proportioned to frictionally receive the upper end of said container and defining an imperforate cover top wall, and imperforate cover end walls, an imperforate cover front wall and an imperforate cover rear wall proportioned to complementarily overlie the respective front, rear, and side walls of said container,
said cover side walls each defining a vent opening spaced from the bottom of said cover and adjacent the top wall thereof,
whereby, said cover may be pressed downwardly onto said container in closing said container top to close said vents by disposing said container side walls across same,
and whereby said cover may be disposed on said top with said vents opened by positioning said container top within the portion of said cover below said vents to provide ventilation for a row of seeds when placed in said container on top of said growing media.

3,125,831
TILE ASSEMBLY
Robert W. Marsch, Collingdale, and Fred H. Deckman, Coatesville, Pa., assignors to Quartz Mosaic, Inc., Yorklyn, Del., a corporation of Delaware
Filed Feb. 24, 1960, Ser. No. 10,638
7 Claims. (Cl. 50—268)



1. A tile assembly comprising a sheet of relatively nonseparable ply imperforate strong paper, a number of tiles incorporating a hardened mixture of a pulverized sand filler and a polyester binder attached to one surface of said paper in a decorative array, said binder penetrating only a partial distance into the thickness of said paper toward the other surface thereof and thereby permanently attaching said tiles to said paper, and said paper being dense enough that its other surface is free of penetration by said binder to maintain the other surface of said paper clear of said tile binder thereby preventing said tile binder from interfering with attachment of an adhering agent to said other surface.

3,125,832
MACHINERY FOR CUTTING PLATES
Eugène Fouquet, 63-bis Rue Jean Jaures, Bois-Colombes, France
Filed July 25, 1960, Ser. No. 45,058
Claims priority, application France July 27, 1959
11 Claims. (Cl. 51—33)

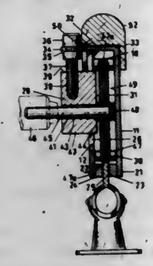


1. Machine for cutting plates, particularly plates of hard metal, said machine comprising, in combination, at least one grinding wheel having a central rotation spindle, a rotating mechanism rotating said grinding wheel about said central rotation spindle, an oscillating mechanism oscillating said grinding wheel about an axis parallel to said central spindle, driving means driving simultaneously said rotating mechanism and said oscillating mechanism, a reciprocating mechanism moving jointly said grinding wheel, said rotating mechanism and oscillating mechanism longitudinally along a line of cut formed by said grinding wheel upon a plate, reversing means automatically reversing the direction of the longitudinal movement, a shaping device continuously shaping said grinding wheel, a lubricating device continuously lubricating said grinding wheel, first shifting means shifting step by step said grinding wheel jointly with said shaping device and said lubricating device towards said plate at the end of each longitudinal movement along said line of cut, and second shifting means shifting said shaping device and said lubricating device toward said grinding wheel at the end of each longitudinal movement thereof to compensate for the peripheral reduction of said grinding wheel.

3,125,833
SKATE SHARPENING DEVICE
James W. Wilde, Verdun, Quebec, Canada (% Canadian Research & Development Foundation, 1437 Van Horne Ave., Montreal, Quebec, Canada)
Filed Feb. 19, 1962, Ser. No. 173,921
5 Claims. (Cl. 51—102)

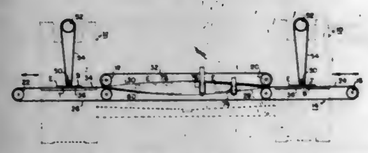
1. A portable skate sharpening device for use in combination with an external portable detachably attachable, rotary power source comprising: a body, a guide on the body for abutting a skate blade so that the body traverses

the running edge of said blade in a constant relationship, a bearing block slidably mounted upon said body for movement toward and away from said guide, adjustable means operatively linking the said bearing block and the body, a spindle rotatably carried in said bearing block



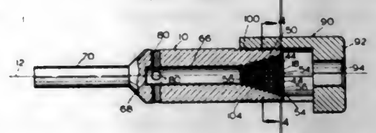
and adapted for connection to said power source, an abrasive wheel mounted upon said spindle for rotation within said body, and a longitudinal member having a substantially U-shaped section fixedly secured to said body in a parallel, spaced-apart relation to said guide, thereby providing a hand grip means.

3,125,834
SURFACE TREATING APPARATUS WITH TURNOVER DEVICE
Richard D. Rutt, Wilson, N.Y., assignor to The Carborundum Company, Niagara Falls, N.Y., a corporation of Delaware
Filed May 16, 1962, Ser. No. 195,130
9 Claims. (Cl. 51—138)



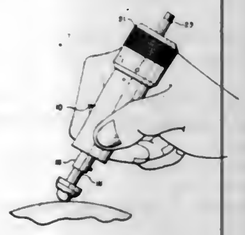
1. Apparatus for treating surfaces of an element comprising a first surface treating machine, a second surface treating machine spaced apart from said first surface treating machine, a conveying device positioned between said first and second surface treating machines, said conveying device having an upper conveying reach and a lower return reach and being operable to convey elements from said first surface treating machine to said second surface treating machine and to invert said elements so that an untreated surface is positioned for treatment by said second surface treating machine, said first and second surface treating machines each comprising an abrasive element positioned above said upper conveying reach of said conveying device, said abrasive element and said conveying device being arranged to abrade a surface of an element positioned between said upper conveying reach and said abrasive element, said conveying device including a flat endless conveyor belt, a head pulley, a tail pulley and a pair of spaced turnaround pulleys, said endless conveyor belt being threaded around said respective pulleys to form said upper conveying reach and said lower return reach and providing two engaged sections between said pair of spaced turnaround pulleys, said engaged sections of said endless belt moving in the same direction from said tail pulley toward said head pulley, said engaged sections rotating 180° about the longitudinal axis of said belt and said two engaged sections being operable to receive an element therebetween and invert said element for treatment of an untreated surface by said second surface treating machine.

3,125,835
ELECTRICAL CABLE INSULATION TAPERING TOOL
Ralph E. Crowl, 3412 S. 81st Ave., and Dwayne W. Brown, 3408 S. 81st Ave., both of Omaha, Nebr.
Filed Sept. 18, 1961, Ser. No. 138,677
9 Claims. (Cl. 51—194)



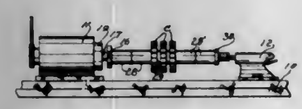
8. An electrical cable insulation tapering tool comprising: a body portion having an axis, a substantially frustro-conical recess extending inwardly from one end of said body portion generally symmetrically about said axis, said frustro-conical recess having a larger diametered wall surface disposed outwardly for first engagement with an insulation coating to which the tool is applied, the inner portion of the wall of said frustro-conical recess being constricted so as to cause a tapering of the insulation, means forming teeth on the wall of said frustro-conical recess for tapering insulation to a frustro-conical shape, and means attached to said body portion and provided with a bore having a cylindrical wall for slidably receiving and guiding a portion of a cable, said wall of said bore being in axial alignment with the axis of said frustro-conical recess, said bore being of a diameter substantially the same as the diameter of the constricted end of said recess wall.

3,125,836
GEM CUTTERS' DOP
Hillard A. Printz, 201 E. Park Ave., New Castle, Pa.
Filed Oct. 13, 1961, Ser. No. 144,965
9 Claims. (Cl. 51—229)



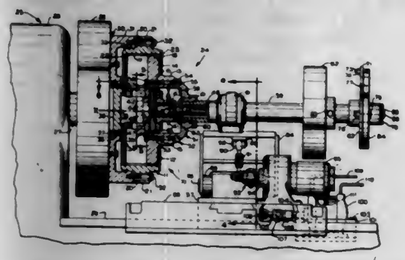
3. A gem cutters' hand dop assembly comprising:
(*a*) a slender elongated handle, said handle sized to be grasped and facilely manipulated by the fingers of a single human hand;
(*b*) said handle having a bore extending longitudinally from one end;
(*c*) a dop stick having a gem mounting pad portion and a stem portion projecting axially from the pad portion; and,
(*d*) said stem portion being rotatably journaled in said handle bore with said pad portion outside said handle, said pad portion being adapted to support a gem on the side opposite said stem portion, said pad portion being disposed axially spaced from said handle and being free and clear of all dop assembly structure so that a gem secured to said pad portion may be placed against an abrasive surface whereby that a gem secured to said pad portion spins freely when placed against a moving abrasive surface.

3,125,837
SELF ALIGNING ARBOR
August A. Lebermann, Gardena, Calif. (29001 Hogan Drive, Sun City, Calif.)
Filed Nov. 7, 1961, Ser. No. 150,751
1 Claim. (Cl. 51—237)



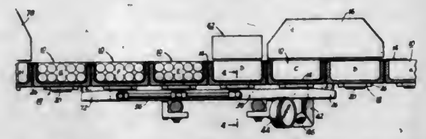
A self aligning arbor comprising a main cylindrical body adapted to be operatively engaged between a spring loaded tail stock center and a chuck, said cylindrical body having means for securing work to be rotated, the end of the arbor engaged in the chuck being of less diameter than the main cylindrical body and having an enlarged annular collar integral with the arbor and positioned inwardly of the reduced end adapted to be gripped by said chuck, and said collar having a radial peripheral surface whereby a universal movement between the chuck and said surface is attained insuring true alignment with said tail stock to lessen strain thereon.

3,125,838
METHOD FOR FINISHING TOOTH SURFACES OF MISALIGNMENT COUPLINGS
John H. Crankshaw, Erie, Pa., and Robert A. Lasley, Hamilton, Ohio, assignors to Baldwin-Lima-Hamilton Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Original application Jan. 5, 1961, Ser. No. 80,898, now Patent No. 3,102,369, dated Sept. 3, 1963. Divided and this application Aug. 9, 1962, Ser. No. 215,879
2 Claims. (Cl. 51—281)



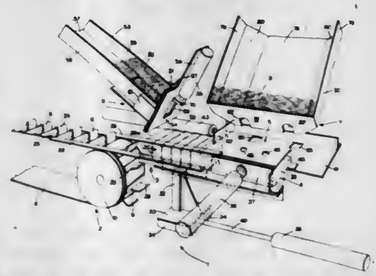
1. A method for simultaneously finishing the contacting surfaces of internal and external teeth in a misalignment coupling of the type comprising a tubular sleeve having internal teeth formed thereon and a substantially co-axial mating hub having external teeth formed thereon, said method comprising the steps of rotating said sleeve around its axis, transmitting the rotation to said hub independently of the teeth, applying a circumferential loading between the internal and external teeth independently of the rotating movement, moving the hub axially of the sleeve in a reciprocating motion, simultaneously oscillating the hub in a random motion around a point located generally in a plane passing through the points of gear teeth engagement, and applying a lapping compound between the teeth during movement of the hub.

3,125,839
VACUUM PACKAGING APPARATUS AND METHOD
Reid A. Mahaffy, 105 Clinton Ave., Montclair, N.J., and John R. Harder, 101 Cedar Grove Parkway, Cedar Grove, N.J.
Filed May 3, 1962, Ser. No. 192,188
19 Claims. (Cl. 53—30)



5. In the art of making packages from flexible and stretchable packaging material, the method of vacuum-forming the packaging material in the cavity of a package carrier comprising the steps of: applying the film across the top of the cavity; drawing the film down towards the interior surfaces of the cavity by evacuating the interior of the cavity with vacuum applied to an evacuation port while the package carrier is at a first operating station; trapping the vacuum in said cavity; moving said package carrier to a second operating station while maintaining the entrapment of the vacuum in the cavity so as to prevent any substantial movement of the film; reapplying vacuum to said evacuation port while said package carrier is in said second station; and depositing in said cavity a product to be packaged.

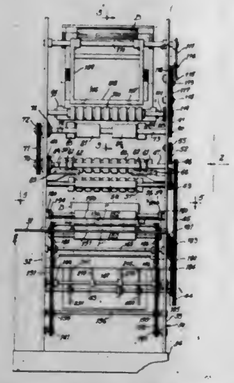
3,125,840
BRICK PACKAGING APPARATUS
Charles D. Cross, Jasper, Ala., assignor to Natco Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 23, 1962, Ser. No. 181,853
4 Claims. (Cl. 53—157)



1. A brick packaging apparatus for packaging bricks having glazed surfaces, the apparatus including an assembly station, an intermediate station, and a container-loading station; a continuous conveyor belt having a plurality of spaced flights and having a brick unloading end; the assembly station including a pair of spaced brick skid bars extending from and overlapping the unloading end of the belt; the spacing between the skid bars being substantially equal to the length of the flights and permitting movement of the flights therebetween; means for inserting brick separator cards between the bricks as they move together into an assembled unit at the assembly station and including an inclined card magazine and a card ejector at the lower end of the magazine; the assembly station including an elevator platform disposed between the spaced skid bars and mounted on pneumatic cylinder means; second pneumatic cylinder means connected to the elevator cylinder means for moving the platform between the assembly station and the intermediate station; third pneumatic cylinder means for moving the assembled

brick unit from the intermediate station into a brick container at the loading station; and fourth pneumatic cylinder means for moving the brick loaded container out of the loading station; a container magazine inclined above the loading station and having a container withdrawal slot; suction cup means for engaging and moving a container through the slot and onto the loading station; means for mounting and moving the suction cup means between the position of engagement with a card in the magazine and a retracted position below the loading station; air jet means for initially opening a collapsed container on the loading station; a pneumatic system including a source of air pressure and control valves connected to the several pneumatic cylinders, suction cup means, and air jet means; and an electric circuit including limit switches for controlling the sequential operation of the several parts of the apparatus; whereby separate bricks placed on the conveyor belt between the flights are conveyed by the belt to the assembly station where the bricks are moved together and from which the assembled unit is conveyed longitudinally to the intermediate station from which the bricks are then moved laterally into a brick-receiving container.

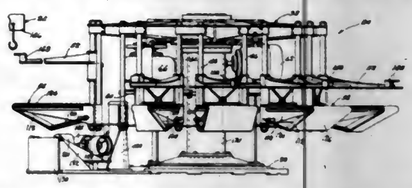
3,125,841
PACKAGE BOXING MECHANISM
Andrew W. Anderson, West Caldwell, N.J., assignor to Scandia Packaging Machinery Company, North Arlington, N.J., a corporation of New Jersey
Filed May 29, 1961, Ser. No. 113,231
7 Claims. (Cl. 53—228)



1. In a package boxing machine, a slotted table, means for feeding a box blank partially through the slot in the table so that part of the blank is disposed above and part of the blank is disposed below the table, means for feeding packages to be boxed across the table substantially at right angles to the blank, and rollers movable independently of the feeding movement of the packages and operatable prior to the engagement of the packages with the blank for bending the blank along fold lines to enclose the advance end of the packages and to position the blank beneath and above the packages.

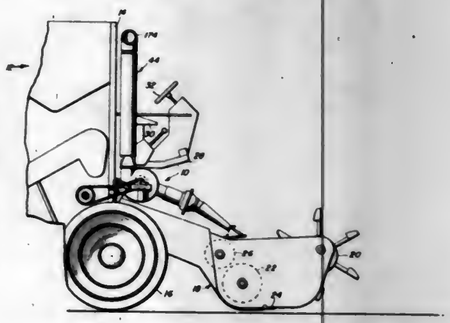
3,125,842
COMPRESSION APPARATUS
John L. Ferguson, Jr., Downers Grove, Ill., assignor, by mesne assignments, to Textile Machine Works, a corporation of Pennsylvania
Filed May 23, 1960, Ser. No. 31,175
15 Claims. (Cl. 53—387)

1. A compression apparatus for receiving cartons from a carton sealer, for maintaining the carton flaps under compression for a predetermined period of time and for subsequently discharging the cartons to a conveyor, said apparatus including a base having a shaft, a support member mounted on said shaft for rotation about the axis of said shaft, a plurality of individual compressing platen pairs mounted on said support member in an annulus about said shaft, one platen in each pair being mounted in fixed position with respect to said support member and the other platen of each pair being relatively movable toward and away from said fixed platen, said movable platen being urged toward said fixed platen to effect compression of the flaps of the carton disposed therebetween, said fixed platen having conveyor means thereon movable in one direction to receive a carton and in the opposite direction to discharge a carton, means for sequentially indexing said support member and said platen



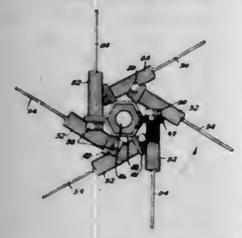
pairs about the axis of said shaft through a plurality of predetermined angular positions, one of said predetermined positions being a loading position wherein a carton may be received from the carton sealer and at least one other of said predetermined positions being a discharge position wherein a carton may be discharged to the conveyor, means for effecting movement of said movable platen away from said fixed platen when the platen pair is presented in the loading position and again when the platen pair is presented in a discharge position, and means for effecting movement of said conveyor means on a fixed platen of a platen pair in said opposite direction to discharge a carton therefrom after said platen pair has been presented in a discharge position and the platens have been separated.

3,125,843
DUST ELIMINATOR FOR COMBINES
Isidoal D. Nodini, Crawfordsville, Ark., assignor of one-half to Borden E. Bell, West Memphis, Ark.
Filed Mar. 23, 1962, Ser. No. 182,042
2 Claims. (Cl. 56—20)



1. In combination with a conventional combine for harvesting and threshing grain crops including a body having an elongated transversely extending head supported from and spaced forwardly of its forward end, said head including means for cutting, conveying and processing grain crops against which said combine is advanced, a dust eliminator including a downwardly opening and transversely enlarged air scoop, means mounting said air scoop on said head above said cutting conveying and processing means, a fan assembly mounted on said body including an outlet and an inlet opening transversely of said combine, articulated conduit means generally L-shaped in plan sealingly communicating the outlet of said air scoop with the inlet of said fan assembly, an operator's platform mounted on the front of said combine body above said head and said scoop, articulated exhaust conduit means having its inlet end communicated with the outlet of said fan assembly and its outlet end opening outwardly to the ambient atmosphere above and in a direction away from said operator's platform, said L-shaped conduit means including first and second legs extending transversely and longitudinally of said combine respectively, the free end of said first leg including a swivel connection with said fan assembly inlet for rotation of said first leg about its longitudinal axis relative to said fan assembly, said second leg including a first section extending forwardly from and secured at its rear end to said first leg and a second section axially aligned with and slidably and rotatably telescopingly engaged with said forward end of said first section, the free forward end of said second section including a universal connection with the outlet of said air scoop whereby should it become necessary to raise said head relative to the ground by which said combine is supported in order to clear ground objects or for transportation purposes, said articulated inlet conduit means will be capable of maintaining communication between the outlet of said scoop and the inlet of said fan assembly.

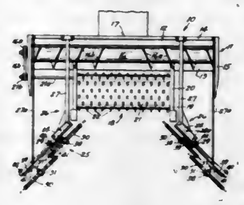
3,125,844
POWER OPERATED GRASS RAKER
Irwin R. Beyer, 537 Nelson Ave., Morton, Ill.
Filed Oct. 30, 1961, Ser. No. 148,347
7 Claims. (Cl. 56—27)



1. A power operated lawn rake comprising a housing, a shaft rotatably supported in said housing and having a plurality of flat faces, a plurality of brackets each having a flat face for engaging one of said shaft faces and having an ear transverse to said flat face for engagement against an ear of another bracket whose flat face is engaged against another shaft face, a plurality of raking means, each comprising a coiled spring, and fastening means passing through each pair of engaged ears and engaging a coiled spring for connecting a coiled spring to said engaged ears of said brackets.

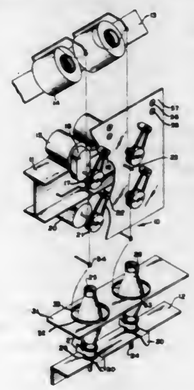
3,125,845
SWATH GATHERING MECHANISM
Mancel A. Lee, Ellendale, N. Dak.
Filed Feb. 24, 1961, Ser. No. 91,391
2 Claims. (Cl. 56—364)

1. In combination with a harvesting combine of the type having a pick-up mechanism mounted at the front end thereof for pick-up of cut granular crops and rearward delivery thereof to the conventional transversely disposed platform conveyor mechanism, swath gathering mechanism for engaging and directing cut granular crops inwardly towards the pick-up mechanism and including a pair of elongate mounting elements rigidly mounted at opposite sides of the combine and projecting forwardly and laterally outwardly therefrom, a pair of axle members each being pivotally connected to one of said mounting elements for pivotal movement about a horizontal axis and in a vertical plane relative thereto, each of said axle members including an intermediate offset portion extending substantially parallel with its associated mounting element and terminating in an outer free end portion



projecting forwardly of said intermediate portion, a pair of ground-engaging crop directing wheel members each being freely revolvable on the outer end portion of one of said axle members for free revolving movement relative thereto so that the axes of rotation of said wheel members converge forwardly whereby forward movement of the harvesting combine will cause said wheel members to rotate and thereby engage and direct the cut granular crops rearwardly and inwardly towards the pick-up mechanism.

3,125,846
YARN PROCESSING APPARATUS AND METHOD OF THREADING SAME
Pieter Klaas Noordenbos, Ede, Netherlands, assignor to American Enka Corporation, Enka, N.C., a corporation of Delaware
Filed Oct. 14, 1959, Ser. No. 846,472
Claims priority, application Netherlands Oct. 24, 1958
2 Claims. (Cl. 57—55.5)

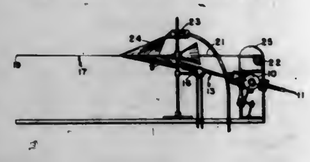


1. A method of threading in a yarn processing apparatus having at least one yarn supply roller, at least one yarn drawing roller and at least one take-up, said method comprising the steps of discontinuing rotation of said supply roller, drawing roller and take-up by disconnecting the same from the respective drives therefor, passing yarn from a supply package around the supply roller, drawing roller and take-up while the same are disconnected, imparting simultaneous rotation to said drawing roller and take-up by simultaneously connecting the same

to the respective drives therefor while permitting free rotation of the supply roller at a speed substantially equal to that of the drawing roller, reducing the speed of rotation of said supply roller by connecting the same to the drive therefor to complete the thread-in, whereupon subsequent operation will produce and collect drawn yarn.

2. A yarn processing apparatus comprising a plurality of yarn supply rollers, a plurality of yarn drawing rollers, a plurality of yarn take-up means, drive means for imparting rotation to each of said yarn take-up means, a separate electrical motor for imparting rotation to each of said yarn supply and yarn drawing rollers, a first generator for supplying energy to said electrical yarn supply motors, a second generator for supplying energy to said electrical yarn drawing motors, means coupling said generators one to the other in a predetermined mechanical ratio, drive motor means for supplying energy to said first generator, and means for de-energizing each motor and said take-up drive means independently of the others and for permitting free rotation of said yarn supply rollers in disconnected condition.

3,125,847
MEANS FOR AND METHOD OF COLLECTING STAPLE FIBERS
Bernd Linder, Belmont, and Edward L. Ahlstrom, Reading, Mass., assignors to Avco Manufacturing Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed Feb. 18, 1959, Ser. No. 794,026
20 Claims. (Cl. 57—58.89)



13. A method of making and collecting silica fibers as a roving comprising: melting silica and attenuating the molten silica into staple fibers by the interaction of the molten silica and a high velocity, nonrotational fluid stream, the fibers formed thereby being suspended within said fluid stream; directing auxiliary streams of fluid on said fiber stream for preventing the dispersion of the fibers, said fiber stream and said auxiliary stream of fluid merging into a composite stream of fluid; inserting means in the composite stream of fluid for intercepting the silica fibers, causing them to adhere to the means and to one another; withdrawing the collecting medium from the composite stream of fluid at a rate which permits newly formed fibers to be intercepted by the previously collected fibers to form an accumulation suspended by and stabilized in position by said composite stream of fluid; continuously withdrawing a portion of the accumulation from the composite stream of fluid in a direction opposite to the direction of flow of the composite stream of fluid while the remaining portion of the accumulation in the composite stream of fluid continues to collect newly formed fibers; and winding the accumulation on a collection spool.

3,125,848
YARN AND FABRIC PRODUCT AND PROCESS
Marijan Baebler, Wattwil, Switzerland, assignor to Heberlein Patent Corporation, New York, N.Y., a corporation of New York
Continuation of applications Ser. Nos. 620,957 and 620,958, Nov. 7, 1956. This application Dec. 27, 1962, Ser. No. 248,841
24 Claims. (Cl. 57—140)

12. A false twisted substantially uniform permanently crimped continuous filament stretchable single-end yarn of the synthetic resinous type having an actual unidirectional torque and a latent torque which develops on



wetting and is in the opposite direction to said actual torque.

3,125,849
TIMING DEVICE
Jack S. Wachtel, 48 Franklin Road, Scarsdale, N.Y.
Filed Apr. 10, 1961, Ser. No. 101,696
3 Claims. (Cl. 58—144)

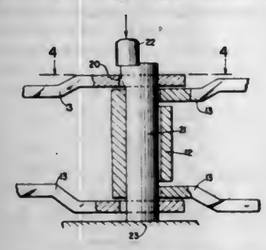


1. An adjustable timer comprising a housing having a pair of chambers connected by passage means communicating from one chamber to the other, said chambers being adapted to contain a flowable medium movable from one chamber to the other through said passage means, adjustable valve means in said passage means for selectively permitting comparatively free or comparatively restricted flow of said medium through said passage means from either chamber to the other, said valve means having a plurality of separate through openings therein, one independent of the other, one through opening being comparatively of narrow size and the other through opening being comparatively of wide size, and means to adjust the said valve means between first and second operative positions to selectively bring the narrow through opening to the first valve position into communication between the pair of chambers to permit the comparatively restricted flow between the chambers from either chamber to the other or to bring the wide through opening to the second valve position into communication between the pair of chambers to permit the comparatively free flow between the chambers from either chamber to the other.

3,125,850
CHAIN
Eugene W. Onulak and Arpad Balazs, Huntington, Ind., assignors to The Locke Steel Chain Company, Huntington, Ind., a corporation of Connecticut
Filed Mar. 22, 1961, Ser. No. 97,600
2 Claims. (Cl. 59—2)

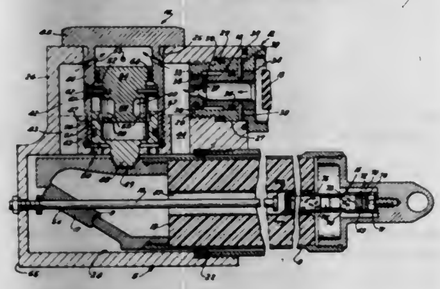
1. The method of forming a chain from a plurality of chain links each having a cylindrically shaped bearing and a pair of substantially parallel legs extending therefrom, said legs having a non-circular aperture adjacent their ends, comprising the steps of inserting a cylindrical hinge pin in each aligned bearing and corresponding leg apertures of adjacent links, substantially filling the non-

circular contour of the corresponding leg apertures with a portion of their hinge pin by deforming a portion of an extreme end of said hinge pins, thereby preventing



relative rotation between the corresponding pins and apertured legs, and finally plastically deforming the deformed end of each hinge pin to provide head means on the pins of larger size than the corresponding apertures.

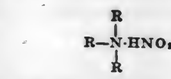
3,125,851
FLOW CONTROL DEVICE
Martin A. Rubinstein, Morrisville, and Kenneth E. Werner, Langhorne, Pa., assignors to Thiokol Chemical Corporation, Bristol, Pa., a corporation of Delaware
Filed Apr. 16, 1962, Ser. No. 187,880
6 Claims. (Cl. 60—26.1)



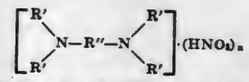
1. In an apparatus of the type in which high-pressure gas is produced at a rate functionally related to pressure by burning a gas-producing material in a generating chamber and in which the gas is utilized to operate a device, the combination with said apparatus of a conduit between the gas generating chamber and device, and flow control mechanism in said conduit to regulate the rate of generation of gas in said chamber and the pressure of said gas supplied to said device comprising a piston mounted to slide in said conduit and having a plurality of outlet ports therein, structure in said conduit cooperating with said piston to initially close all except a single port through which the generated gas flows from the generating chamber to the device, and means for holding said piston in its initial position and operable at a predetermined pressure to release said piston for movement by said gas to uncover at least one additional outlet port whereby to maintain more uniform burning rate of the gas producing material and a more uniform pressure of the gas delivered from the generating chamber.

3,125,852
MONOPROPELLANTS
Jenning P. Blackwell and Richard C. Doss, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Aug. 12, 1959, Ser. No. 833,353
18 Claims. (Cl. 60—35.4)

13. In the method for development of thrust by the combustion of a monopropellant in the combustion chamber of a reaction motor, the step comprising injecting into said combustion chamber a mixture of (1) a nitric acid oxidant containing at least 70 weight percent HNO_3, (2) an amine nitrate selected from the group consisting of pyridine nitrate, piperidine nitrate, and amine nitrates characterized by a formula selected from the group consisting of



and



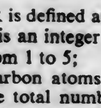
wherein: each R and each R′ is selected from the group consisting of acyclic, alicyclic, and aromatic hydrocarbon radicals containing from 1 to 8 carbon atoms, and hydrogen, at least one R being one of said hydrocarbon radicals; and R″ is selected from the group consisting of

(*a*) alkylene, alkenylene, and alkynylene hydrocarbon radicals containing from 2 to 8 carbon atoms wherein the carbon atoms attached to the nitrogen atoms are attached to adjoining carbon atoms by single valence bonds, and

(*b*) $+R'''-X+_y R'''-$ radicals wherein each R‴ is an alkylene radical containing from 2 to 4 carbon atoms, and each X is selected from the group consisting of oxygen, sulfur, and



and



radicals wherein R is defined as above, *y* is an integer of from 1 to 3, *z* is an integer of from 1 to 3, and *n* is an integer of from 1 to 5;

the total number of carbon atoms in the molecule does not exceed 40, and the total number of amino nitrogen atoms in the molecule does not exceed 10, and (3) a stabilizing agent selected from the group consisting of ammonium nitrate, the alkali metal nitrates, ammonium perchlorate, the alkali metal perchlorates, and mixtures thereof; the ratio of said amine nitrate to said nitric acid oxidant in said mixture being within the range of 0.75 to 1.25 times that of the stoichiometric amounts, and said stabilizing agent being present in an amount within the range of 0.01 to 15 weight percent of said mixture.

3,125,853
INTERNAL BURNING ENGINE CONFIGURATION
Roy A. McKinnon, Cleveland, Ohio, assignor to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed May 26, 1959, Ser. No. 815,855
4 Claims. (Cl. 60—35.6)

1. A rocket engine comprising,

a generally cylindrically gelatinous monopropellant fuel storage tank,

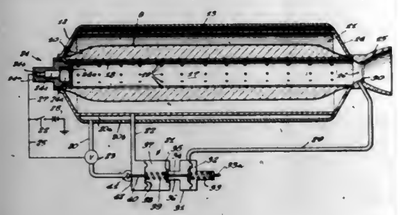
a generally cylindrical combustion chamber wall member,

said combustion chamber wall member being coaxially mounted inside said fuel tank and extending axially the full length thereof,

said combustion chamber wall member defining a plurality of apertures along the entire axial length thereof arranged and communicating with the interior of said fuel storage tank,

a resilient deformable impervious extrusion member within said fuel storage tank,

said extrusion member surrounding said combustion chamber wall member and extending the entire axial length of the fuel storage tank to confine therein the gelatinous monopropellant fuel and said extrusion member spaced radially from the fuel storage tank wall and positioned between said fuel tank wall and the combustion chamber wall,

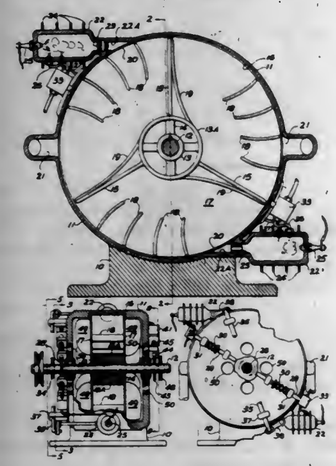


means comprising an annular pressurized gas chamber surrounding and forming a double wall with said fuel storage tank wall and having a controlled passage effecting communication with the tank to exert pressure in said space between the fuel tank wall and said extrusion member to extrude fuel from said fuel tank through said apertures and into said combustion chamber along the entire axial length of said combustion chamber,

means to ignite said fuel in said combustion chamber to generate gases,

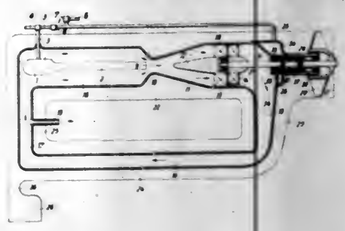
one end of said combustion chamber being closed and the other end of said combustion chamber being in open communication with a nozzle positioned to receive said gases, said nozzle having its other end open to the ambient to discharge said gases of combustion to produce thrust.

3,125,854
ROTARY ENGINE
Joseph J. Skowron, Sr., 565 W. Chalmers Ave., Youngstown, Ohio
Filed Oct. 31, 1961, Ser. No. 148,940
3 Claims. (Cl. 60—39.38)



1. A rotary engine comprising a housing and a rotor defining an annular chamber, an annular channel formed in said housing, a shaft positioned transversely of said chamber, a turbine having a plurality of radial blades mounted on said shaft within said chamber and having the ends of said blades located in said annular channel, discs on said shaft at either side of said turbine the peripheral edges of said discs located in said annular channel, at least one secondary housing defining a firing chamber mounted exteriorly of said housing and having a passageway communicating with said annular channel, valve means in said passageway and means for introducing compressed air and fuel charges into said firing chamber and for igniting the same therein, timing means on said shaft controlling said air, fuel and ignition means and said valve in said passageway, and at least one exhaust port in said housing in spaced relation to said firing chamber passageway.

3,125,855
TURBINE UNIT, IN PARTICULAR HEATING MEANS WITH A VIBRATION BURNER
Siegfried Kofink, Zell (Neckar), Ludwig Huber, Stuttgart-Degerloch, Ewald Schubert, Esslingen (Neckar), Wolfgang Mayer, Esslingen-Hegensberg, and Max Munzenmaier, Wernau, Germany, assignors to J. Eberspacher, Esslingen, Germany, a firm of Germany
Filed Apr. 4, 1960, Ser. No. 19,864
Claims priority, application Germany Apr. 4, 1959
2 Claims. (Cl. 60—39.52)



1. A turbine heater comprising inner and outer tubes one within the other, the outer tube extending beyond the ends of the inner tube and being closed at both ends, thus forming a substantially endless conduit, said conduit having an exhaust outlet, an automatically operating vibration burner with in the inner tube having a flame tube, a pipe-like casing surrounding the outer tube and spaced therefrom, turbine means in the conduit adjacent the discharge end of the inner tube, downstream of the burner, and means driven by said turbine connected with the space within said casing outside the outer tube to pass a fluid therethrough in heat exchange relation with the fluid in said conduit, said vibration burner producing a continuous, substantially resonance-free flow of a mixture of hot combustion gas issuing from said flame tube and of gas sucked along thereby through the conduit.

3,125,856
VARIABLE-PRESSURE HYDRAULIC CONTROL SYSTEM
Orland D. Branson, Sunland, and Philip H. Bush, North Hollywood, Calif., assignors to The Bendix Corporation, North Hollywood, Calif., a corporation of Delaware
Filed June 4, 1962, Ser. No. 199,801
4 Claims. (Cl. 60—52)

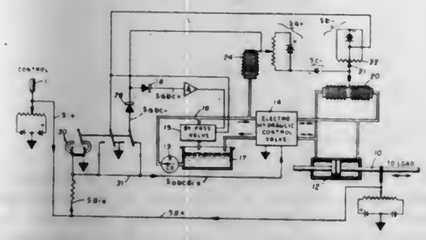
1. A hydraulic system for moving a load member in response to electrical input signals, said system comprising:

a reversible hydraulic motor connected to said load member;

a source of pressure fluid and connecting means including an electrically-actuated control valve for providing a variable-flow resistance path between said source and motor;

an electrically-actuated bypass valve connected to said source for controllably bypassing fluid to vary the output pressure of the pump;

pump-pressure signal means connected to said pump for producing an electrical pump-pressure signal proportional to the pump output presssure;

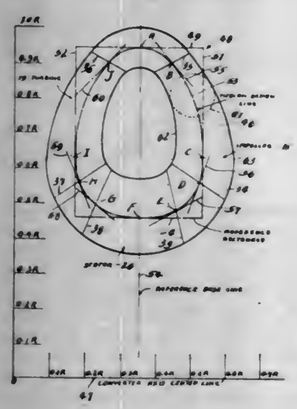


motor-pressure signal means connected to said motor for producing an electrical motor-pressure signal proportional to the absolute value of the pressure drop across the motor;

means for applying said input signal to said control valve to reduce the flow resistance from said pump to said motor; and

means for applying pump-pressure signals exceeding said motor-pressure signals by a predetermined margin to said bypass valve to reduce said pump output pressure.

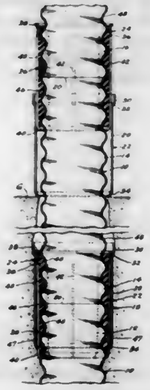
3,125,857
HYDRAULIC TORQUE CONVERTER
Raymond C. Schneider, Rockford, Ill., assignor to Twin Disc Clutch Company, Racine, Wis., a corporation of Wisconsin
Filed July 11, 1962, Ser. No. 209,097
6 Claims. (Cl. 60—54)



1. An hydraulic torque converter having a generally pear-shaped torus provided with a bladed outflow impeller, a bladed inflow turbine and a substantially axial flow, bladed stator, the portion of the torus between the impeller outlet and turbine inlet being unbladed, the shape of the torus being related by reference to an endless, pear-shaped and construction, median design line which is bounded by a construction rectangle whose shorter sides are parallel to the axis of the converter and tangent to the outermost and innermost points of the design line at approximate distances of .95R and .46R, respectively, from the converter axis and whose longer sides are normal to the converter axis with a spacing of approximately .36R and tangent, respectively, to axially outermost points of the design line wherein R is the outer radius of the torus, the design line passing through a series of design points A to J, inclusive, determined by a system of X- and Y-coordinates beginning with the radially outermost design point A of tangency of the rectangle with the design line and proceeding in succession through the other design points in a direction opposite to that of the toroidal flow, the coordinate system being related to the converter axis and a reference, construction base line perpendicular thereto and passing midway between the longer sides of the rectangle as X- and Y-axes, respectively, the coordinates having values for design point A of 0R and .95R, for design point B of +.09R and .91R, for design point C of +.18R and .63R, for design point D of +.17R and .56R, for design point E of +.10R and .48R, for design point F of 0R and .46R, for design point G of —.12R and .50R, for design point H of —.17R and .56R, for design point I of —.18R and .63R, and for design point J of —.09R and .91R, positive and negative values being measured in opposite directions, respectively, from the base line, and the inner and outer walls of the torus being tangent to an infinite number of circles whose centers lie on the median design line with the diameter D of each circle being expressed as follows:

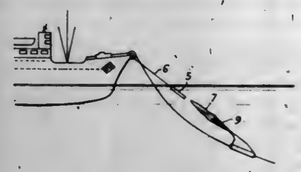
$$D=\frac{(20\%\pm 3\%)\pi R^2}{2\pi\times\text{distance of circle center from converter axis}}$$

3,125,858
JOINT FOR PILE SHELL SECTIONS
Jack R. Baittinger, 2 Wheatley Court, Scotch Plains, N.J., assignor of one-half to John J. Dougherty, Cedar Grove, N.J.
Filed Apr. 7, 1961, Ser. No. 101,515
9 Claims. (Cl. 61—53)



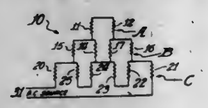
1. A joint for connecting pile shell sections having helical threads, comprising an outer steel sleeve, an inner steel sleeve with a rubber liner therein having helical threads on its inner surface, said inner steel sleeve having elongated spaced slots intersecting one end thereof, said outer steel sleeve having an annular bulged out portion at one end thereof forming a shoulder, said inner steel sleeve having an annular radial flange seated on the shoulder of said bulged out portion of the outer steel sleeve, said outer sleeve closely fitted over said inner sleeve, the slotted end of said inner sleeve protruding outwardly of the other end of the outer sleeve, said other end of the outer steel sleeve inwardly of the slotted end of the inner steel sleeve being inwardly bent pressing the portions of the inner sleeve between the slots inwardly.

3,125,859
CABLE LAYING APPARATUS
Geoffrey William Dilbey, Woking, Surrey, England, assignor to G. Q. Parachute Company Limited, Woking, Surrey, England, a British company
Filed Mar. 15, 1962, Ser. No. 179,917
Claims priority, application Great Britain Mar. 20, 1961
6 Claims. (Cl. 61—72.3)



1. Apparatus comprising support means which will float on a body of water, elongated flexible cable means having a specific gravity greater than the water comprising said body of water and adapted to be laid on the bottom of said body of water, cable dispensing means supported on said support means and connected to said cable means so as to feed said cable means from said support means into said body of water, a parachute adapted to operate in water connected to a central portion of said cable means, holding means on said parachute retaining it closed, operating means connected to said holding means so as to automatically release said parachute after said portion of cable has been dispensed into said body of water and separated from said support means a predetermined distance, said parachute automatically opening after being released so as to limit the rate of descent of said cable means toward said bottom of said body of water.

3,125,860
THERMOELECTRIC COOLING SYSTEM
Allen D. Reich, Des Plaines, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed July 12, 1962, Ser. No. 209,328
4 Claims. (Cl. 62—3)



1. In a thermoelectric cooling system having a plurality of cooling stages and a plurality of thermoelectric cooling elements or arms in each stage and thermally connected to a heat sink and adapted to satisfy a given heat pumping requirement for a given electrical power input, the combination of a plurality of successive cooling stages wherein the cold junction temperature of each stage is made to satisfy the following relationships

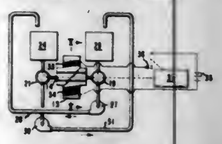
$$\frac{\Delta T_a}{T_{ca}^2} = \text{Const.}$$

and that

$$T_{ca} = \frac{T_h}{1+\left[\frac{\Delta T_t}{N T_c}\right]\times(a)}$$

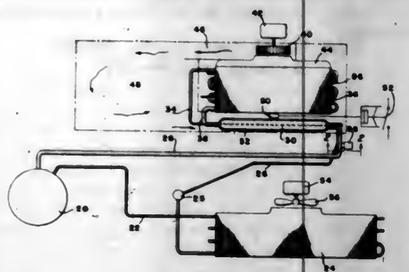
where T_{ca} is the cold junction temperature of the a stage, a is the number of the stage, ΔT_a is the temperature differential across the a stage, T_h is the heat sink temperature, T_c is the system cold junction temperature, $\Delta T_t = T_h - T_c$, and N is the total number of stages, whereby the operational efficiency of the system is maximized, and from which the pumping capacities, arm voltages, and temperature differentials of the stages are established.

3,125,861
METHOD AND APPARATUS FOR HEAT TRANSFER
William Frederick Jaep, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Aug. 5, 1963, Ser. No. 301,934
21 Claims. (Cl. 62—3)



1. A method of effecting heat transfer utilizing a substance which displays a first-order solid-phase-to-solid-phase transition with accompanying relatively large change in internal energy content under the influence of a magnetic field comprising exposing said substance to a magnetic field preselected so as to induce said substance to traverse said transition from a first solid state phase to a second solid state phase, and thereafter effecting heat transfer with respect to said substance as a consequence of conversion to said second state.

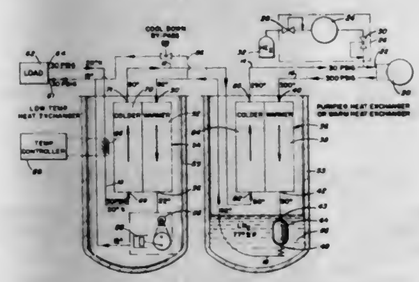
3,125,862
REFRIGERATING APPARATUS WITH DEFROST CONTROL MEANS
Ira L. Gould, Hamilton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 22, 1961, Ser. No. 139,998
5 Claims. (Cl. 62—156)



1. A refrigerating system including liquefying means and evaporating means, supply and return conduit means having a portion in heat interchanging relation operatively connecting said liquefying and evaporating means, means for operating said liquefying means to coincidentally accumulate frost upon the evaporating means, means for defrosting said evaporating means, and temperature responsive means responsive to the temperature of an intermediate portion of the return conduit means located between said portion in heat interchanging relation and said liquefying means for initiating the functioning of said defrosting means.

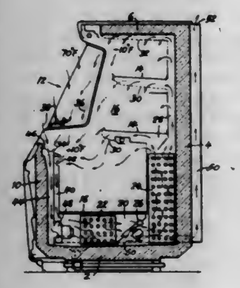
3,125,863
DENSE GAS HELIUM REFRIGERATOR
Charles B. Hood, Jr., Columbus, Ohio, assignor to Cryovac, Inc., Columbus, Ohio, a corporation of Ohio
Filed Aug. 10, 1962, Ser. No. 216,195
7 Claims. (Cl. 62—175)

4. In a cryogenic refrigerator the combination of a warm heat exchanger including a warmer path and a colder path; a cold heat exchanger including a warmer path in series with said warmer path of said warm heat exchanger and a colder path in series with said colder path of said warm heat exchanger; means containing an evaporating bath of liquified cryogenic gas; and a gas purifier in said bath and including an inlet connected to the outlet of the warmer path of said warm heat exchanger and an outlet connected to the inlet of the warmer path of said cold heat exchanger, the temperature difference between the two paths of the cold heat exchanger being



less than the temperature difference between the two paths of the hot heat exchanger; a compressor having an outlet connected to said warmer path of said warm heat exchanger; expansion means including an inlet connected to said warmer path of said cold heat exchanger and an outlet connected to said load to be refrigerated; and conduit means connecting said load to be refrigerated with said colder path of said cold heat exchanger.

3,125,864
SELF-SERVICE REFRIGERATED DISPLAY CASE
William E. Ural, Yardley, Pa., assignor, by mesne assignments, to The American Hardware Corporation, a corporation of Connecticut
Filed Oct. 16, 1962, Ser. No. 230,852
15 Claims. (Cl. 62—256)



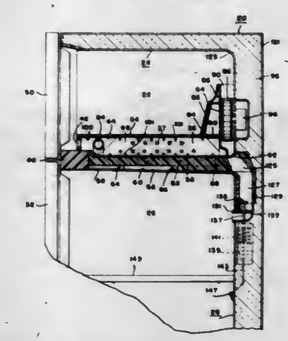
1. A self-service refrigerated display case having a top, a bottom, end members and front and back walls extending about a display space, the front of the case having an access opening therein and the upper edge of the front wall being positioned below said access opening, means for circulating refrigerated air forwardly and downwardly within the display space and adjacent said access opening, duct means located adjacent the front wall of the case in position to receive air moving forwardly and downwardly adjacent said access opening, refrigerating means within said case, means for conducting one portion of the air received by said duct means to said refrigerating means for recirculation through said display space, and means for directing another portion of the air received by said duct means to the exterior of said display space.

3,125,865
COOLING CLOTHING
Wilhelmus Adrianus Bemelman, Finsenstraat 18', Amsterdam, Netherlands
Filed Jan. 29, 1963, Ser. No. 254,752
3 Claims. (Cl. 62—259)



1. A cooling device comprising a garment, said garment being constructed of a moisture permeable fabric, a reservoir affixed to said garment, and a plurality of spaced capillary fibers terminating in said reservoir and distributed over an outer surface of said garment, said fibers being individually bonded to said fabric by a water resistant and highly heat conductive substance.

3,125,866
REFRIGERATOR WITH WATER REPELLENT WALL
Leonard J. Mann, Dayton, and Robert S. Hanson, Kettering, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 23, 1961, Ser. No. 146,725
2 Claims. (Cl. 62—272)

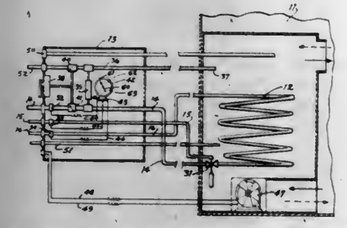


1. Refrigerating apparatus including a cabinet having insulated walls and an insulated door enclosing a compartment to be refrigerated, means associated with said insulated walls including a metal wall forming an evaporator compartment separate from said compartment to be refrigerated, a refrigerant evaporating means in said evaporator compartment, means for circulating humid air from said compartment to be refrigerated through said evaporator compartment back to said compartment to be refrigerated, said metal wall having a downwardly turned face exposed to said evaporator compartment provided with a surface of water repelling material to prevent the formation from the humid air of icicles depending from said downwardly turned face.

3,125,867
REFRIGERATION SYSTEM CONNECTOR APPARATUS
Eric Rath, Miami, Fla., assignor to The Rath Company, Miami, Fla., a corporation of Florida
Filed Aug. 23, 1961, Ser. No. 133,418
2 Claims. (Cl. 62—299)

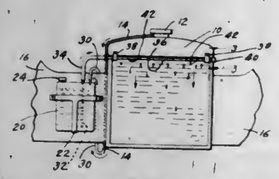
1. A closed mechanical refrigeration system utilizing a refrigerant wherein the compressor and condenser units thereof may be disconnected from the evaporator unit without substantial loss of refrigerant or substantial

initial rise in the temperature of the refrigerated material comprising a refrigerated container, a normally interconnected mechanically operated compressor condenser and evaporator unit having instantaneous disconnection means therebetween operatively connected with said refrigerated container, water inlet means carried by said refrigerated container, first electrically actuated valve means and thermostat means between the condenser and the evaporator, second electrically actuated valve means between the compressor and the evaporator, reversible elec-



trically actuated fan means within said refrigerated container, and electrical timing means first actuating said thermostat means so as to reduce the temperature of the refrigerated container at least 4° F. below its normal level, thence closing said first valve means but continuing to actuate said compressor means until substantially all of the refrigerant has been evacuated from the evaporator unit, thence closing said second valve means and shutting off said compressor means, and thence reversing the direction of rotation of said fan.

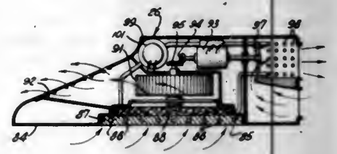
3,125,868
AUTOMATIC AUTOMOBILE RADIATOR COOLER
Salvador J. Guarino, 4917 Elton St., Baldwin Park, Calif.
Filed Aug. 11, 1958, Ser. No. 754,263
1 Claim. (Cl. 62—316)



In auxiliary cooling means for a motor vehicle cooling system of the type which includes an engine, a radiator, an overflow pipe for said radiator, and a radiator cap having a spring pressed valve and connections between the engine and the radiator for circulation of a cooling fluid, the combination of: a perforated pipe mounted in front of the radiator at the upper end thereof, a sealed container on the vehicle for additional cooling fluid, a first conduit connecting said container and said perforated pipe, and a second conduit connecting said container and the overflow pipe of the radiator, whereby a rise in pressure in said radiator to a predetermined level is communicated to said container by said second conduit to force cooling fluid from said container through said first conduit and into said perforated pipe for discharge therefrom.

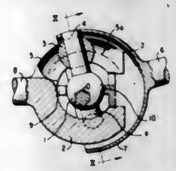
3,125,869
VENTILATING APPARATUS
Sidney V. Winton, 5572 Netherland Ave., New York, N.Y.
Filed May 2, 1961, Ser. No. 107,087
3 Claims. (Cl. 62—317)

3. A ventilating hood comprising a sheet metal enclosure, an intake aperture and an outlet aperture, a grill positioned across said intake aperture, cooling coils in said grill, means for causing air to pass through said cooling



coils and through said intake aperture and passing said air through said outlet aperture, and means for cooling said cooling coils.

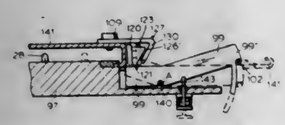
3,125,870
UNIVERSAL JOINT FOR TRANSMISSION OF ROTATIONAL MOVEMENTS
Michel Orain, Courbevoie, Seine, France, assignor to Glaenzer Spicer Societe Anonyme, Poissy, France, a corporation of France
Filed June 19, 1961, Ser. No. 118,050
Claims priority, application France July 4, 1960
18 Claims. (Cl. 64—7)



1. A universal joint for the transmission of rotational movements between two shafts, comprising a first driving member coupled to one of said two shafts; three pivot means rigidly fixed to said first driving member, each of said pivot means having a longitudinal axis and said one shaft having a longitudial axis, the longitudinal axis of each of said pivot means and said longitudinal axis of said one shaft being in a common plane, the three planes containing said longitudinal axis of said one shaft and the respective longitudinal axes of said pivot means forming three substantially equal included angles; a substantially spherical coupling member rotatively and slidably mounted on each of said pivot means; a second driving member rigidly associated with the other of said two shafts, said second member including three pairs of grooves, for engaging respective ones of said coupling members for rolling and sliding movement therein; each pair of grooves having two oppositely disposed wall surfaces, each wall surface in cross section being substantially an arc of a circle, and defining first and second open segments, one of said two segments receiving a respective one of said pivot means and the second of said segments communicating with a spacing, said two segments being oppositely disposed and extending along at least a substantial portion of the length of each of said pairs of grooves, said first segment facing outwardly and said second segment facing the interior of said joint.

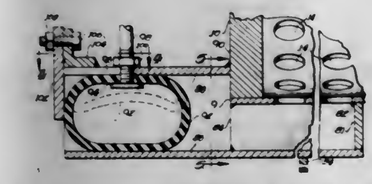
3,125,871
SLIDING CARRIAGE FOR HAND KNITTING MACHINE
Herbert Schurich, Rudesheimer Strasse 20, Berlin-Frohnau, Germany, and Horst Dehling, Glasgower Strasse 16, Berlin N 65, Germany
Filed July 9, 1962, Ser. No. 208,206
9 Claims. (Cl. 66—60)

1. A slidable carriage for a hand knitting machine with a needle bed having a track for the substantially horizontal reciprocation of said carriage, a bank of needles independently movable transversely to said track, and a series of stitch sinkers with hooked extremities interposed between said needles for pivotal movement about a common axis parallel to said track; said carriage comprising a plate-shaped support, a thread guide fixedly secured to said support and projecting therebeyond transversely to said track, first and second cam means respectively positioned on said support on opposite sides of said thread guide for withdrawing successive needles from a normal position in operative alignment with said thread guide and subsequently restoring the withdrawn needles to said normal position



upon displacement of said support along said track in a respective direction, a sinker-actuating cam member displaceable on said support in operative alignment with said stitch sinkers, guide means on said support retaining said cam member thereon with freedom of relative motion in a direction paralleling said track, and a pair of fixed abutments on said support for arresting said cam member in either of two limiting positions of said thread guide, said cam member having an exposed camming surface engageable with an aligned stitch sinker for raising the hooked extremity thereof upon the arresting of said cam member by either of said abutments.

3,125,872
FLOW CONTROL MEANS FOR ANNULAR PASSAGES
William C. Latzen, 1407 N. 123rd St., Wauwatosa, Wis.
Filed Jan. 24, 1963, Ser. No. 253,597
21 Claims. (Cl. 68—144)



7. In a laundry machine having a rotatably supported drum with one end having a peripheral perforate region disposed between two axially extending rings supported on said drum said two rings defining an annular space therebetween; a means for controlling flow through said annular space comprising an elastomeric toroid inflatable into sealing engagement with both said rings.

3,125,873
LOCKING MECHANISM
Merritt A. Robinson, Marin County, Calif., assignor to Kimball Manufacturing Corporation, San Rafael, Calif., a corporation of California
Filed Sept. 10, 1962, Ser. No. 222,600
9 Claims. (Cl. 70—63)

2. Locking mechanism for locking two members together, comprising:

one of said members having a plurality of locking apertures therethrough, said locking apertures each having a locking shoulder and another shoulder opposite thereto;

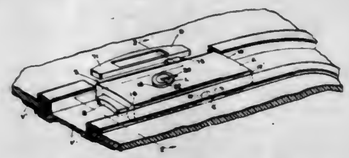
a plurality of flexible tumblers on the other of said members, each tumbler being associated and in alignment with one of sad locking apertures, each tumbler having a portion thereof projecting through its associated locking aperture when said members are closed, which portion has a locking shoulder thereon normally hooking over the locking shoulder of the locking aperture when said tumblers are unflexed, the tumbler portions each having an over-all width less than the distance between the opposed shoulders of the associated locking aperture, said tumblers each



being flexible to an unlocking position wherein the locking shoulders of said tumbler and locking aperture are out of hooked engagement, said locking apertures and tumblers being arranged so that at least two of said tumblers flex in different directions to their unlocking positions;

a key, interengageable cam means on said key and tumblers for flexing all of said tumblers simultaneously to their unlocking positions.

3,125,874
LATCHING AND LOCKING MEANS FOR LUGGAGE CASES AND LIKE RECEPTACLES
Charles S. Gehrie, Montclair, N.J., assignor to Presto Lock Co., Garfield, N.J., a limited partnership
Filed Jan. 21, 1963, Ser. No. 252,799
13 Claims. (Cl. 70—75)

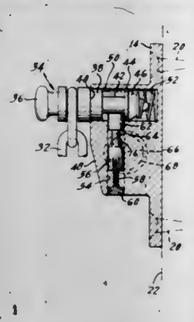


1. A latching device for a luggage case or like receptacle comprising a housing, an opening in the side of the housing to allow a hasp to be received in the housing, a latch member slidably mounted in the housing, resilient means positioned in the housing and cooperating with the latch member to urge the latch member toward latching position, said latch member having a portion thereof extending exteriorly of the housing for manual engagement and retraction against the force exerted by said resilient means, hasp-engaging means provided by the assembly of said housing and resiliently biased latch member located at said opening, a mounting plate for attaching the latching device to a luggage case, means hinging one end of the mounting plate to the end of said assembly opposite the end thereof having the manually engageable portion of the latch member, latch-engaging means upstanding from the mounting plate for coaction with said latch member, and resilient means cooperable with said assembly and said mounting plate to urge the mounting plate and the assembly apart about their hinged connection.

3,125,875
CHAIN DOOR LOCK
George J. Friedman, Brooklyn, N.Y., assignor, by mesne assignments, to Iris Friedman, New York, N.Y.
Filed Sept. 25, 1961, Ser. No. 140,359
5 Claims. (Cl. 70—93)

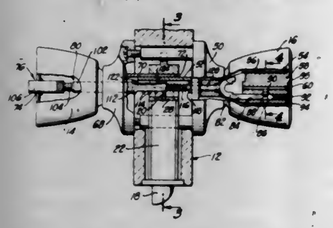
1. In a chain door lock having a slide plate, a slot in said slide plate, a slide movable into and out of said slot for engagement with and disengagement from said slide

plate, a chain connected at its one end with said slide; a lock mechanism comprising a housing having a first hole with a blind end defined therein, a latch bolt connected with said slide at the other end of said chain and movable into and out of said first hole, a movable keeper in a second hole in said housing transverse to said first hole, spring



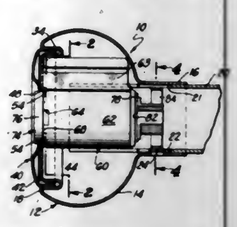
means normally moving said keeper toward engagement with said latch bolt when said latch bolt is in said first hole, means cooperable with said keeper to move said keeper out of engagement with said latch bolt, and spring means wholly within said first hole to eject said latch bolt from said first hole when said keeper is moved out of engagement therewith.

3,125,876
LOCKOUT MECHANISM FOR LOCK SETS
Abraham Kuchler, Anaheim, Calif., assignor to The American Hardware Corporation, New Britain, Conn., a corporation of Connecticut
Filed Apr. 6, 1960, Ser. No. 20,374
7 Claims. (Cl. 70—146)



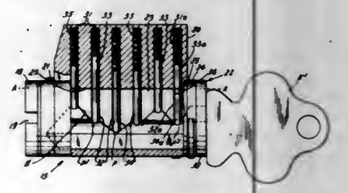
4. In a lock set having a locking mechanism, the combination of: an exterior knob; an exterior spindle connected to said exterior knob; an interior knob; an interior spindle connected to said interior knob; a cylinder lock mounted in said exterior knob and including a housing and a plug rotatable in said housing for unlocking the locking mechanism of the lockset, said plug including a keyway for receiving a key to rotate said plug; lockout means operative to obstruct said keyway and including a push rod, an actuating element located in said interior knob and operative to axially move said push rod to render said lockout means operative, and bias means tending to axially move said push rod to render said lockout means inoperative; a latching mechanism; first dogging means having cooperating portions on said latching mechanism and on said push rod, respectively, said portions being engageable, upon operation of said lockout means, to overcome the bias of said bias means and maintain said push rod in a position rendering said lockout means operative; and second dogging means having cooperating portions, respectively, on said push rod and on one of said exterior and interior spindles, said portions of said second dogging means being normally disengaged to permit said bias means to axially move said push rod, said push rod being rotatable to effect engagement of said portions of said second dogging means to prevent axial movement of said push rod by said bias means.

3,125,877
CYLINDER LOCK MOUNTING CONSTRUCTION
Kenneth F. Fryer, Anaheim, Calif., assignor to The American Hardware Corporation, New Britain, Conn., a corporation of Connecticut
Filed Aug. 24, 1961, Ser. No. 133,596
10 Claims. (Cl. 70—224)



1. In a cylinder lock mounting construction, the combination of: a cylinder lock including a housing, a tumbler chamber formed integrally with said housing and a plug mounted for rotation in said housing, said housing having detents on its forward extremity and said plug having a forward extremity overlying said detents; a face plate mounted on said lock at its forward extremity and rearwardly of the forward extremity of said plug, said face plate having detent openings engageable by said detents on said forward extremity of said housing; and a hollow knob body having a front face with an opening therein corresponding to the cross-sectional configuration of said cylinder lock housing, said front face having a stop thereupon engageable by said cylinder lock housing when said cylinder lock housing is rotated within said knob with respect to said opening.

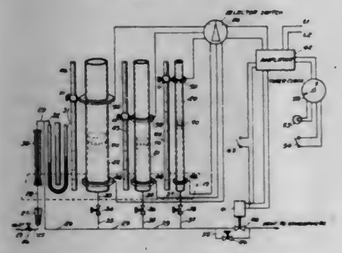
3,125,878
CONSTRUCTION KEY DEVICE
Louis Gutman, Fitchburg, Mass., assignor to Independent Lock Company, Fitchburg, Mass., a corporation of Massachusetts
Filed Feb. 13, 1961, Ser. No. 88,707
4 Claims. (Cl. 70—383)



1. A pin tumbler lock comprising a casing having a main bore, a plug having a longitudinally extending keyway slot rotatably mounted in said bore, first and second parallel cross-bores extending radially from said keyway and into said casing, a driver and a follower pin reciprocably mounted in each said cross-bore, an auxiliary pin interposed between the driver and follower of said second cross-bore, a key member insertable into said keyway and having a bitted edge portion, cam means on said bitted portion lying, in the inserted position of said key, adjacent said second cross-bore, a passage formed in said casing and opening onto said main bore, said passage being positioned to register with said second cross-bore of said plug upon partial rotation of said plug, said first bore of said plug in said partially rotated

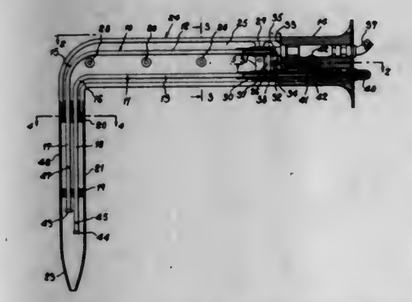
position being in registry with a portion of said casing defining said main bore, said key member being shiftable longitudinally in said keyway over a limited range of movement when said passage is in registry with said second cross-bore portion of said plug, said cam means and the follower pin in said second cross bore cooperating, upon longitudinal movement of said key in said registered position of said passage and cross bore, to shift said auxiliary pin radially into said passage.

3,125,879
FLOW RATE CALIBRATION
George K. Porter, Jr., Sellersville, Pa. (Grissom Place, Maple Glen, Pa.)
Filed Mar. 7, 1960, Ser. No. 13,109
18 Claims. (Cl. 73—3)



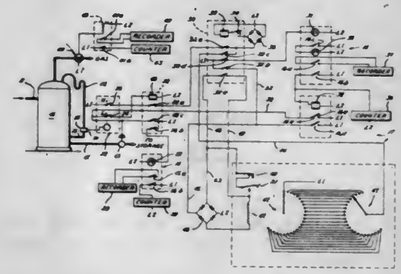
1. Apparatus for calibrating a gas flow meter comprising a linear cylinder one end of which communicates with the atmosphere, a free piston slidable in the cylinder below said end, means external of said cylinder measuring the time of travel of said piston from a datum to a predetermined point as a function of rate of flow of gas incident on said piston in said cylinder, and means conducting gas and in communication with such flow meter and said cylinder only on the side of said piston.

3,125,880
PITOT TUBE ASSEMBLY
John V. Olivesu, Greenwich, Conn., assignor to Aerotec Industries, Inc., Greenwich, Conn., a corporation of Connecticut
Filed Aug. 17, 1960, Ser. No. 50,236
4 Claims. (Cl. 73—212)



1. A Pitot tube assembly for determining dynamic and static pressures of an air stream which comprises a pair of tubes each tube being bent to provide a support length at one end of said bend and a free length at the other end of the bend transverse to said support length, said tubes being in a common plane spaced side by side, a shell enclosing said free lengths and extending beyond the free ends thereof, a pair of bushings in said shell spaced lengthwise of said lengths of tubes therein and sealed to said lengths and to said shell to hold said lengths rigidly in position, a housing enclosing said support lengths and said bends and overlapped by the adjacent end of said shell, said housing comprising two complementary parts joined at the plane of said support lengths of said tubes and having complementary partition elements near the ends of said lengths to engage said tube lengths and hold them in position, and means to hold said housing parts together and in which one of said tubes is open to the interior of said shell in advance of said bushings and the other tube is open to the space in said shell between said bushings and said space is open to the outside of said shell.

3,125,881
RATE OF FLOW METER
Clifford M. Peters, Vernon B. Scott, and Charles R. Kemp, Longview, Tex., assignors to U.S. Industries, Inc., New York, N.Y., a corporation of Delaware
Filed Mar. 9, 1960, Ser. No. 13,780
13 Claims. (Cl. 73—223)



1. A rate of flow meter comprising a vessel having an inlet connected to introduce a continuous stream of liquid into the upper part of the vessel, and an outlet; a valve in the outlet; means to open the valve when a predetermined volume of liquid accumulates in the vessel; means for causing the liquid to flow through the outlet faster than it enters through the inlet; means for closing the valve when the volume of liquid in the vessel drops to a predetermined amount thereby causing the vessel to accumulate a predetermined volume of liquid each time the outlet valve is closed; and means for measuring the total amount of time the valve is closed and the number of times the valve is opened thereby providing the rate of flow of liquid into the vessel.

3,125,882
SIGHT GLASS ASSEMBLY
Jerry R. Johnson, 904 Wildwood Road, Aiken, S.C., and Lawton L. Johnston, P.O. Box 104, Graniteville, S.C.
Filed Mar. 20, 1962, Ser. No. 180,969
8 Claims. (Cl. 73—331)

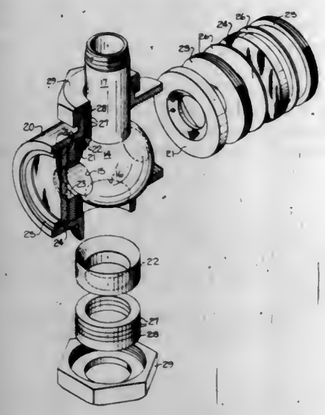
1. A sight glass assembly for viewing liquid in a closed pipe system and wherein a sight glass in said assembly may be readily removed without disturbing the liquid in the system, said assembly comprising

a core member having a bore communicatively connectable to said pipe system and adapted to receive liquid therein, said core member having a second bore transversely disposed relative to and communicating with said first recited bore,

a housing surrounding said core member, said housing having at least one opening therein normally communicating with said second bore in said core member,

a sight glass carried by the housing and positioned in said opening and serving for viewing the liquid,

said core member and said housing being relatively movable with respect to each other to position said second bore in the core member and said opening in



the housing out of communication with each other, thus to permit removal of the sight glass from said opening without disturbing the liquid in the pipe system.

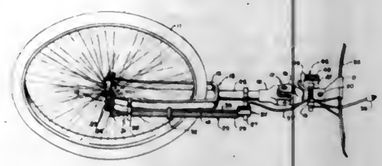
3,125,883
CORING TOOL
Herbert J. Wollner, Belmont, Mass., assignor to ACH Fiber Service, Inc., Boston, Mass., a corporation of Massachusetts
Filed Mar. 1, 1961, Ser. No. 92,486
2 Claims. (Cl. 73—425)



1. A coring tool for sampling batches of fibrous material and the like comprising a tubular cutter having a helical cutting edge and means for attaching it to a rotor, characterized in that said cutting edge has a helical shape which progresses forwardly in the direction opposite to the direction of rotation from a low point to a high point, the edge having a generally axial shoulder facing in said direction at said low point and the helix progressing continuously throughout its length.

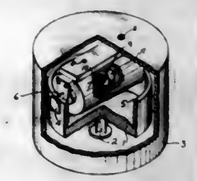
3,125,884
TESTING APPARATUS
Harold G. Davies, 208 E. North St., Plano, Ill.
Filed May 17, 1962, Ser. No. 195,632
3 Claims. (Cl. 73—514)

1. An elapsed-time testing apparatus for association with a vehicle, said apparatus comprising a road engaging wheel other than a wheel of the vehicle and provided with means for ready attachment to and detachment from the vehicle, traversal responsive means comprising a screw shaft and means for communicating motion from said wheel to said shaft, traveling nut means operably associated with said shaft and traversable therealong between predetermined limits, a normally closed swtich cooperating with said traveling nut means, a normally open second switch carried on said apparatus, said second switch balanced to readily respond to the inertial force exerted by said vehicle from a standing start, an electrically controlled time indicating instrument, and an electrical circuit including said instrument and said



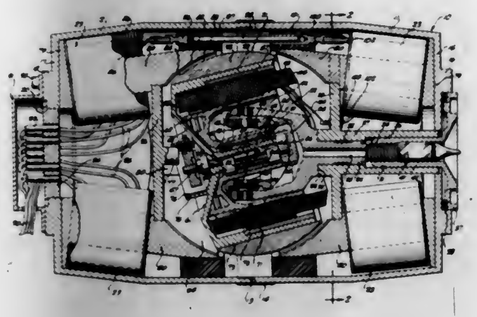
switches in series, whereby in response to the initial forward lurch of said vehicle from a standing start said second switch will be operated to its circuit closing position to cause the operation of said time indicating instrument until said first recited switch is operated to its open circuit position by said traveling nut means to terminate operation of said time indicating instrument to indicate the elapsed time of traversal of said vehicle over a measured course.

3,125,885
MECHANICAL ACCELERATION RETARDER
Erle W. Malone, Seattle, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed Jan. 3, 1961, Ser. No. 80,422
5 Claims. (Cl. 73—517)



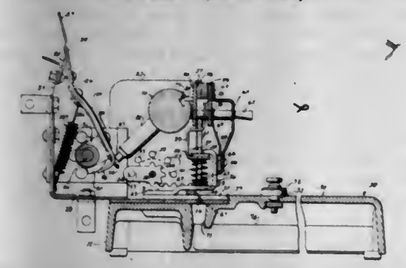
2. A mechanically retarded inertia mass and support combination, comprising relatively rotatable weight disk and support components relatively displaceable by inertia upon being subjected to an acceleration and resiliently urged toward their initial relationship, said weight disk component having a flange projecting axially therefrom, torsion spring means connecting said components and operable to effect relative movement of said components for restoring them to an initial relationship following relative displacement thereof, and retarding means for checking acceleration of such relative movement between said weight disk and support components effected by the restorative force of said torsion spring means and including a finger engageable with said weight disk flange, leaf spring means connected to said support component and supporting said finger resiliently, a solenoid mounted on said support component and disposed diametrally of said weight disk component adjacent to its flange and a plunger reciprocable by said solenoid and carrying said leaf spring means for supporting said finger in a position for engagement with said weight disk flange, said solenoid being rapidly energizable periodically to move said plunger alternately to engage said finger with and to release it from said support component for checking relative movement of said components.

3,125,886
MAGNETICALLY PRECESSIBLE FREE GYROSCOPE
Herbert A. Lassen, Los Angeles, and Reynold L. Saari, Venice, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Dec. 11, 1959, Ser. No. 858,984
12 Claims. (Cl. 74—5.6)



1. In a gyroscope device: a supporting structure; a gimbal system carried by said supporting structure; a wheel rotatably carried by said gimbal system; wheel rotating means also carried by said gimbal system, said wheel having a peripheral portion of ferrite material; electromagnetic torque applying means disposed on said structure and positioned for direct application of torquing forces to said wheel; and wheel position sensing means operatively associated with said torque applying means.

3,125,887
BOOK BINDING MACHINE MECHANISM
Ward A. Bouvier, Wauconda, and William M. Bassett, Highland Park, Ill., assignors to General Binding Corporation, Northbrook, Ill., a corporation of Illinois
Filed July 21, 1960, Ser. No. 44,387
3 Claims. (Cl. 74—20)



1. In a mechanism for simultaneously operating a plurality of elements to perform work operations, such as a punching operation and a binding ring opening operation, a frame, a horizontal rock shaft pivotally mounted on said frame, an element on one side of said rock shaft guided for vertical linear movement, a second element on the opposite side of said rock shaft mounted on said frame for axial movement in a direction parallel to the axis of said rock shaft and for rockable movement toward and from said rock shaft, a pin and slot interengaging camming connection between said rock shaft and said vertically movable element, a camming lever extending radially from said rock shaft in a direction away from said vertically movable element, a camming slot extending along said second element, and an interengaging camming connection between said radially extending camming lever and said camming slot, for effecting axial movement of said second mentioned element along its axis of rocking movement and then rocking said element toward said rock shaft upon operation of said rock shaft to vertically move said first mentioned element to effect a work operation.

3,125,888
RESONANT OSCILLATING ANTENNA DRIVE
Sheldon Fox, Cold Spring Harbor, N.Y., and Jacob Rabinow, Rockville, Md., assignors to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Mar. 22, 1962, Ser. No. 181,568
7 Claims. (Cl. 74—98)



5. An oscillating antenna drive comprising
(*a*) a frame,
(*b*) an antenna structure and a counterweight structure mounted on said frame for rotational oscillation about substantially parallel axes of rotation,
(*c*) a pair of substantially parallel torsion bars fixedly secured to the antenna and counterweight structures respectively and extending along the axes of rotation thereof respectively,
(*d*) a coupling plate fixedly secured to the pair of torsion bars at the ends thereof away from the antenna and counterweight structures,
(*e*) the moments of inertia of the antenna and counterweight structures and the torsional spring constants of the torsion bars being predetermined to establish a resonant frequency of oscillation with the antenna and counterweight structures oscillating in counter directions and the coupling plate at substantially a node,
(*f*) driving means for oscillating the antenna substantially at said resonant frequency,
(*g*) said driving means including a driving member oscillating with a predetermined amplitude of oscillation and a slip clutch coupling said driving member with one of said antenna and counterweight structures,
(*h*) the slip clutch being designed and adapted for driving said one structure at an oscillation amplitude corresponding to that of said driving member with substantially no slippage in normal operation but allowing slippage for substantially smaller oscillation amplitudes of said one structure.

3,125,889
SPRING CLUTCH AND CONTROL MEANS

John S. Perryman, Fayson Lakes, N.J., assignor to Curtiss-Wright Corporation, a corporation of Delaware

Filed Sept. 29, 1961, Ser. No. 141,896
5 Claims. (Cl. 74—111)

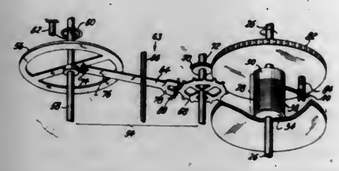


1. A power transmitting device comprising an input and an output shaft; a spring concentric with the input and output shafts having end portions which have an interference fit with the shafts, the spring being so wound that upon rotation of the input shaft in a predetermined direction relative to the output shaft, the one spring end in interference with the input shaft is moved by the input shaft in said predetermined direction relative to the opposite end thereof to tighten the coils of the spring against the input and output shafts whereupon driving torque is imparted by the input shaft through the spring to the output shaft; an actuator; and means for rotating the actuator in the direction of rotation of the input shaft at less speed than the input shaft; said actuator including a portion which extends into the path of said one spring end for engagement thereby and which when engaged relaxes the spring to interrupt the transmission of driving torque to the output shaft such that output shaft speed may drop below the speed of the actuator and the actuator move out of engagement with said one spring end to permit the coils of the spring to tighten against the shafts and again transmit torque from the input shaft to the output shaft.

3,125,890
DRIVE MECHANISM

Oscar W. Dillon and Robert J. Spooner, Old Saybrook, Conn., assignors to Vocaline Company of America, Inc., Old Saybrook, Conn., a corporation of Connecticut

Filed Oct. 2, 1961, Ser. No. 142,274
9 Claims. (Cl. 74—125.5)

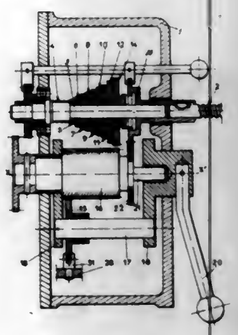


1. A timing mechanism comprising a spring-grip clutch which includes an input hub, an output hub, and a coiled spring adaptable for selectively drivably interconnecting said input and output hubs; continuously-rotatable input drive means drivably connected to said input hub; and oscillatable timing member; and means for connecting said spring of said spring-grip clutch to said timing member whereby the oscillations of said timing member control the selective interconnection of said input and output hubs and said spring periodically imparts impulses to said timing member in order to maintain its oscillations at a constant rate.

3,125,891
OPERATION OF FEED AND THREAD BOXES IN MACHINE-TOOLS

Henri René Bruet, Paris, France, assignor to Etablissements A. Cazeneuve, La Plaine-Saint-Denis, France, a French company

Filed Jan. 9, 1961, Ser. No. 81,486
Claims priority, application France Jan. 12, 1960
9 Claims. (Cl. 74—348)



1. In a machine-tool provided with a feed-control box including a casing, a driving shaft, a driven shaft, an intermediary shaft, all said shafts being parallel and located in said casing, a sliding pinion adapted to slide along said intermediary shaft, a carrier journaled in said box to be capable of being swung about the axis of said driving shaft and by which said intermediary shaft is rotatably carried, an elongated pinion secured onto said driving shaft and remaining engaged with said sliding pinion in a plurality of positions of this latter along its shaft, a plurality of toothed wheels having different diameters secured on said driven shaft and with which said sliding pinion can be brought selectively into engagement, a control member by means of which said carrier can be swung and locking means whereby said sliding pinion can be retained selectively in any one of the aforesaid plurality of positions, a device for shifting said sliding pinion along said intermediary shaft and comprising motion transmitting means from said carrier to said sliding pinion, so as to impart to the latter a shifting motion along its shaft in response to a swinging motion imparted by said control member to said carrier and in dependance on the swinging stroke of the latter so that the position of the sliding pinion on its shaft will depend on the position of said control member and therefore on the position occupied by said intermediary shaft on the circular path which the said shaft is made to describe as a result of the swinging motion of the said carrier, so that the axial shifting of the sliding pinion into any desired position for engagement with any one of the driven wheels will be carried out by a single and continuous movement imparted to said control member in one given direction.

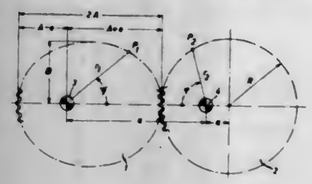
3,125,892
GEAR MECHANISM FOR REPRESENTING PLANETARY MOTION IN A PLANETARIUM APPARATUS

Gerhard Schwesinger, Heidenheim (Brenz), Wurttemberg, Germany, assignor to Carl Zeiss, Heidenheim (Brenz), Wurttemberg, Germany

Filed Jan. 8, 1962, Ser. No. 164,913
Claims priority, application Germany Jan. 7, 1961
9 Claims. (Cl. 74—393)

1. A gear mechanism for representing a planetary motion in a planetarium apparatus, in a sun system projector, or the like, said gear mechanism comprising a pair

of meshing gear wheels which are non-circular with respect to their respective axes of rotation, said axes being fixedly spaced from each other, one of said gear wheels being driven by the other and comprising an eccentrically journaled circular gear wheel, said one gear wheel which



1	2	3	4	5	6	7
Pinion	$\frac{A}{a}$	1	$\frac{a}{a}$	$\frac{A}{B}$	$\frac{A}{B}$	$\frac{B}{B}$
Wörber	0,2050	0,20775	0,871290	0,87155	0,871293	0,870453
Hurb	0,88334	0,89354	0,894364	0,894377	0,894364	0,895543

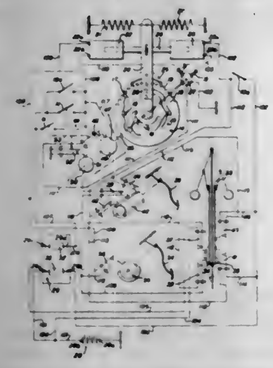
forms the driving gear wheel and said driven circular gear wheel are eccentrically journaled by the same amount $e=K\cdot R$, whereby R is the radius of the driven circular gear wheel and K is a constant obtainable from the eccentricity e of the planetary orbit to be represented, and satisfying the relation

$$K^6+160K^4-208eK^3+64K^2+64Ke-128e^2=0$$

3,125,893
SHIFTING ARRANGEMENT FOR CHANGE-SPEED TRANSMISSIONS, PARTICULARLY IN MOTOR VEHICLES

Wolf-Dieter Bensinger, Stuttgart-Unterturkheim, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany

Filed Nov. 18, 1957, Ser. No. 697,215
Claims priority, application Germany Nov. 24, 1956
45 Claims. (Cl. 74—472)

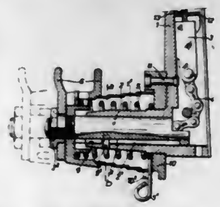


1. A shifting arrangement for shifting a motor vehicle change-speed transmission provided with actuating means operatively connected thereto for engaging the individual speeds thereof and with an automatically actuated main clutch means in series with said change-speed transmission comprising a step-by-step shifting mechanism including guide means in the form of a guide disk provided with surface means and constituting itself the step-by-step shifting wheel adapted to rotate in either direction of rotation, a control system forming effectively a driving means for said guide disk to selectively rotate said guide disk in either direction including a swingable shifting lever having entrainment means adapted to engage directly with said guide disk to thereby directly rotate said guide disk upon swinging movements of said shifting lever during such engagement, and two solenoid means, one solenoid means for each direction of rotation of said guide disk operatively connected with said shifting lever and operative to selectively swing said shifting lever in either direction of rotation and therewith directly rotate said guide disk by said shifting lever in dependence on said control system.

3,125,894
DERAILER CHANGE-SPEED FOR MECHANISMS FOR CYCLES

Lucien Charles Hippolyte Juy, 75 Rue General-Fauconnet, Dijon (Cote d'Or), France

Filed June 22, 1960, Ser. No. 38,015
Claims priority, application France July 2, 1959
4 Claims. (Cl. 74—473)

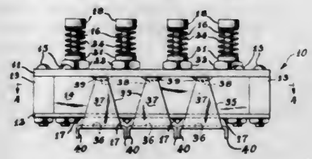


1. A change-speed gear mechanism of the type which is operable by chain displacement, said gear mechanism comprising: a carrier lever, said carrier lever including a sleeve bearing which is provided with a longitudinal opening, a reciprocating spindle slidably mounted in said sleeve bearing and means coupling said spindle and sleeve bearing enabling axial movement of said spindle in said sleeve bearing and independently controlling relative angular movement therebetween.

3,125,895
SWITCH INTERLOCK AND LOCKOUT UNIT

Philip C. Ross, Costa Mesa, Calif., assignor to Patent License Corporation, Chicago, Ill., a corporation of Illinois

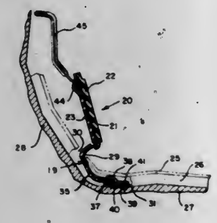
Filed Jan. 15, 1962, Ser. No. 166,071
8 Claims. (Cl. 74—483)



1. A combination interlock and lockout unit for use with multiple electrical switching assemblies, said unit comprising a housing, a plurality of push rods mounted in said housing for reciprocal movement through said housing, an interlock plate transversely of said housing, spaced openings formed in said plate and in alignment with said push rods, means mounting said interlock plate for limited transverse movement in said housing, plate camming means forming a part of each push rod and aligned for engagement with an edge portion of a plate opening to move said plate, said camming means including an inclined plane surface portion and a radial shoulder portion, spring return means engaging said push rods to urge the same away from said plate, the camming means of one of said push rods upon actuation thereof towards

said plate engaging an edge portion of one of said plate openings to move said plate and pass through said opening, the radial shoulder portion engaging the opposite face of said plate to hold said push rod in locked position, and lockout means in the form of a series of plates pivotally mounted in said unit in side-by-side relation along the opposite side of said interlock plate with adjacent edges overlying said openings, said lockout plates being spaced relative to one another to be pivoted to their fullest extent and to be placed in relatively tight engagement with one another upon the insertion of a portion of said push rod between a pair of said lockout plates when said push rod is actuated through said opening.

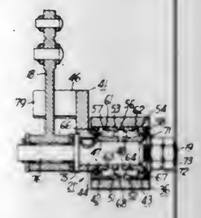
3,125,896
ACCELERATOR PEDAL
Donald H. Beisel, Royal Oak, and Henry J. Kozicki, Orchard Lake, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Jan. 11, 1962, Ser. No. 165,541
5 Claims. (Cl. 74—513)



1. In an automobile having a horizontal floor member, a toe plate at an angle to the horizontal floor member and a carpet and pad disposed over said horizontal floor member and said toe plate, the combination comprising:
(*a*) a depressable pedal having;
(1) a support member that is attached to said horizontal floor member,
(*a*) said support member having an elongated configuration,
(*b*) a stop portion connected to said support member and located adjacent said toe plate and extending above said toe plate, said stop portion protruding through said carpet and pad disposed over said toe plate, and said stop portion extending beyond said carpet and pad covering said toe plate,
(2) a foot support portion at an angle to said stop portion and operatively coupled to said stop portion, said foot support member being adapted to receive the foot of the operator of the automotive vehicle, and disposed above said toe plate to hide said stop portion of said support member protruding through said carpet and pad, and
(*b*) a controllable member adapted to be actuated by said foot support portion and operatively coupled to said foot support portion.

3,125,897
CONTROL DEVICE
Bernard L. Zeman, Springfield, Ill., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Dec. 28, 1961, Ser. No. 162,731
6 Claims. (Cl. 74—531)

1. A control device comprising:
a manually operated rotary control member,
a support member,
means rotatably securing said control member to said support member for movement between a plurality of rotatively adjusted positions including
a pair of axial and radial load carrying and axially spaced antifriction bearings between said control member and support member having
a first pair of axially spaced raceway surfaces on one of said members in axially fixed relation to one another,
a raceway mounted on the other of said members in axially shiftable relation thereto,



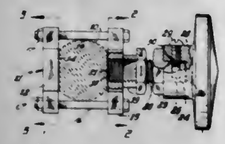
a second pair of axially spaced raceway surfaces on said other member and raceway, respectively, and
antifriction bodies between and in axial and radial load carrying contact with said first and second pair of raceway surfaces
and axial thrust transmitting means between and in axial thrust transmitting relation to said other member and raceway forcing said other pair of raceway surfaces axially relative to one another to increase the rolling resistance of said bodies sufficiently to releasably maintain said control member in any of said positions to which it is adjusted.

3,125,898
PORTABLE BRAKE LOCK
Frederick M. Maples, 519 Rock Creek Church Road NW.; Sumner P. Rhodes, 5027 E. Capitol St.; and John F. Wynn, Jr., Box 361, Station 40, all of Washington, D.C.
Filed Feb. 8, 1961, Ser. No. 87,792
6 Claims. (Cl. 74—532)



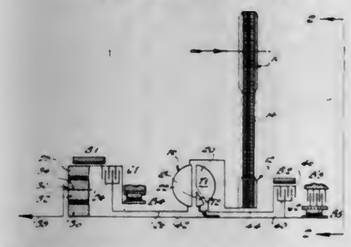
1. A brake lock for maintaining a foot pedal brake actuator of a vehicle in depressed operative position comprising a pair of tubular members of substantially equal length disposed in end-to-end relation, means interconnecting the adjacent ends of the tubular members for retaining the tubular members in alignment, means on the outer ends of one of said tubular members for engagement with the foot pedal, means longitudinally slidably mounted on the outer end of the other tubular member for engagement with a floor-board and the lower edge portion of a front seat of a vehicle, and spring means biasing said last named means longitudinally outwardly of the tubular member for continuously exerting pressure on the foot pedal, said means retaining the tubular members in aligned condition including a threaded portion on each of said tubular members, an internally threaded sleeve engaging the threaded portions for retaining them in alignment, hinge means interconnecting the adjacent edges of the tubular members thus hingedly interconnecting the tubular members, and a foot pedal on one of said tubular members adjacent said hinge means and in diametrically opposed relation to the hinge means whereby foot pressure may be exerted on the adjacent ends of the tubular members for forcing them into aligned condition and at the same time exerting pressure on the foot pedal brake actuator.

3,125,899
SPINNER HANDLE FOR VALVE WHEELS AND THE LIKE
Thomas S. Hallett, Sub. P.O. 28, Calgary, Alberta, Canada
Filed Nov. 13, 1961, Ser. No. 151,946
1 Claim. (Cl. 74—557)



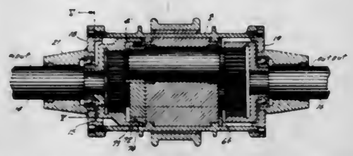
A spinning attachment for hand-manipulated wheels, said attachment comprising in combination a pair of spaced apart clamping plates adapted to receive a wheel rim therebetween, a pair of clamping bolts extending through said plates, said plates having opposing surfaces each provided with a plurality of concentric serrations for securely gripping the stated wheel rim when said bolts are tightened, a post provided on and projecting outwardly from one of said plates in coaxial relation to said concentric serrations, and a handle rotatably mounted on said post, said one of said plates being provided with a screw-threaded aperture concentric with said serrations, said post having a screw-threaded inner end portion disposed in said aperture, and the inner end surface of the post being formed with a set of concentric serrations for securely gripping the stated wheel rim when said post is tightened in said aperture.

3,125,900
POWER TRANSMISSION MECHANISM
Victor C. Moore, Plymouth, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Dec. 29, 1961, Ser. No. 163,150
8 Claims. (Cl. 74—688)



1. A power transmission mechanism comprising a hydrodynamic unit and a simple planetary gear unit, said hydrodynamic unit comprising an impeller, a primary turbine and a secondary turbine disposed in toroidal fluid flow relationship, said gear unit comprising a sun gear, a ring gear, a carrier and planet gears journaled on said carrier in meshing engagement with said sun and ring gears, first friction clutch means for coupling together said primary turbine and said sun gear, a releasable reaction brake, first overrunning brake means for anchoring said sun gear against said reaction brake while accommodating rotation of said sun gear in the opposite direction, second friction clutch means for coupling together said impeller and said ring gear, means for drivably connecting said impeller to a prime mover, said carrier being connected to a driven member, second overrunning brake means for inhibiting rotation of said ring gear in one direction while accommodating rotation thereof in the opposite direction, said secondary turbine being drivably connected to said sun gear, and means for selectively braking said primary turbine and said ring gear to accommodate reverse torque delivery from said secondary turbine to said sun gear.

3,125,901
TWO-SPEED MECHANICAL TRANSMISSION
Charles E. Norton, Chicago, Ill., assignor to National Castings Company, Cleveland, Ohio, a corporation of Ohio
Filed Oct. 12, 1962, Ser. No. 230,069
10 Claims. (Cl. 74—789)

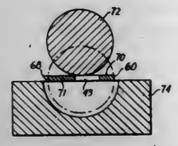


1. A planetary speed-changing power transmission comprising:
(A) an input gear and an output gear having a common axis of rotation;
(B) a housing in concentric enclosing relation with said gears;
(C) brake means for restraining rotation of the housing operably interposed between the housing and a base fixed externally of the transmission;
(D) means connecting the housing and gears in journal-bearing relationship;
(E) a rotor carried within the housing concentrically with said axis;
(F) a spindle supported by the rotor for free rotation relative thereto and comprising gear means meshing with both of said gears to connect them in driving relationship;
one of said gears and said rotor having axially-overlapping surfaces spaced at different radii from said common axis to dispose them in opposed radially-spaced relationship, one of said surfaces being arcuate and concentric to said axis and the other being convergent toward the other relative to the direction of its circumference to form a tapered region between said surfaces;
(G) lug means fixed to said housing extending in an axial direction into said tapered region, the lug means being spaced in a circumferential direction to provide a gap therebetween within said region;
(H) a chock loosely supported in said gap having a dimension in a radial direction relative to said axis less than the maximum spacing and greater than the minimum spacing between said overlapping portions within said tapered region; and
(I) means for urging a chock to a circumferentially intermediate position within said gap.

3,125,902
METHOD OF MANUFACTURING KNIVES
Allison W. Blanshine, Lititz, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed May 29, 1961, Ser. No. 113,376
1 Claim. (Cl. 76—104)

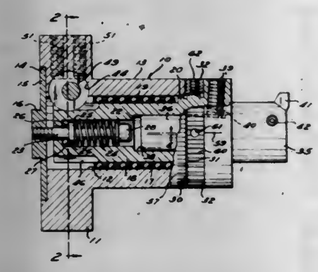
A method of making knives for a rotary cutter wherein the knives are adapted to be mounted diagonally relative

to the axis of the cutter comprising providing a die plate having a die surface which is a segment of a true cylinder, then placing a flat elongate metal workpiece on said die plate and extending diagonally relative to the axis of



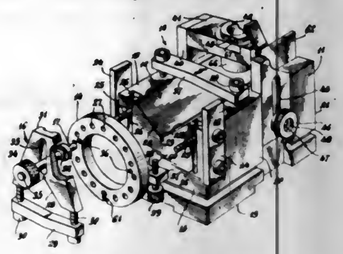
said cylinder, then forming said workpiece to conform to said die surface wherein the workpiece assumes an arcuate form concentric with said cylinder axis, then removing the workpiece from the die and forming along one longitudinal edge thereof a cutting edge.

3,125,903
ECCENTRIC BORING HEAD
Ottis R. Briney, Jr., and James W. Briney, Pontiac, Mich., assignors to Briney Manufacturing Company, Pontiac, Mich., a corporation of Michigan
Filed Oct. 26, 1960, Ser. No. 65,078
5 Claims. (Cl. 77—58)



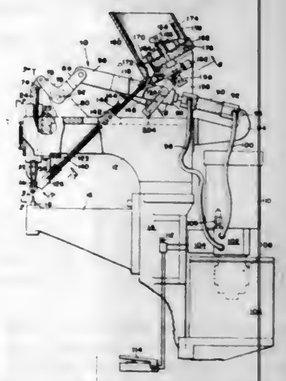
1. A metal working tool comprising, a hub member having a through bore extending from a work end to a mounting end, said hub member having a radially projecting mounting flange at said mounting end, said hub member having a counterbore at said mounting end, a pilot flange disposed in said counterbore and including locating means projecting rearwardly therefrom and disposed eccentrically with respect to said bore, a boring bar support member having an outer support end and a shank portion disposed in the bore and terminating at an inner adjustment end, said shank portion having a plurality of longitudinally disposed gear teeth grooves extending from the inner adjustment end forwardly toward the support end and defining a plurality of gear teeth therebetween, a worm journaled in the hub member and in longitudinally slidable engagement with the gear teeth, an antifriction bearing interposed between said shank portion and said bore and disposed forwardly of said worm, one of said members including an annular sealing shoulder between said bearing and said outer end and overlying the bearing in sealing, sliding abutment with the other member, said members being first and second members, a retention shaft secured to the first member and having an enlarged head, annular thrust means disposed around said shaft, biasing means interposed between the thrust means and the head and urging the thrust means into engagement wtih the second member, and a boring bar carried by the boring bar support member.

3,125,904
INDEXING FIXTURE
Elio J. Olivieri, 330 Welton St., Hamden, Conn.
Filed Mar. 7, 1962, Ser. No. 178,135
5 Claims. (Cl. 77—64)



1. In an indexing fixture for containing substantially cylindrical work, a work support comprising a V-block for holding such work along the external surface of such work; an indexing dial having a concentric opening for receiving a portion of such work and indexing stations arranged circumferentially on said dial; said dial mounted on one end of said support vertically slidable to align said central opening concentrically with the axis of such work reposing in said support, means for detachably clamping said dial to said support against relative movement therebetween; an indexing crank having clamping means to detachably secure said crank to the outside surface of a portion of such work adjacent to and concentrically aligned in said central opening and having retaining means on the arm of said crank to hold said crank at one of said stations to maintain such work in the desired indexed angular position thereof relative to such work axis.

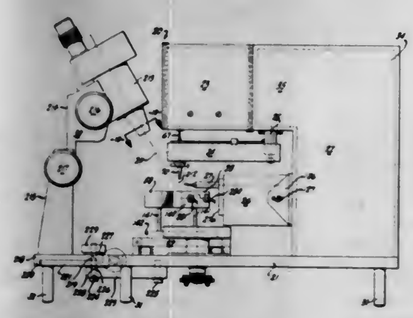
3,125,905
RIVET SETTING MACHINE
Raphael Stein, 1363 Meetinghouse Road, Huntingdon Valley, Pa.
Filed Sept. 28, 1961, Ser. No. 141,398
13 Claims. (Cl. 78—48)



1. A rivet setting machine comprising a frame supporting a reciprocably mounted driver mechanism, a stationary anvil in line with said mechanism, a pair of jaws, spring members on diametrically opposite sides of said mechanism, said members supporting said jaws for movement toward and away from one end of said driver mechanism, a hopper, a rotor rotatably mounted within said hopper, said rotor having peripheral recesses, and a hydraulic means for selectively reciprocating said driver

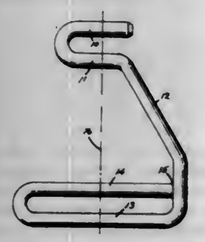
mechanism toward and away from said anvil, said hydraulic means including a closed circuit having a liquid reservoir of motive liquid adapted to be pumped into opposite sides of a piston in a power cylinder, and linkage means connecting said piston to said rotor and said driver mechanism.

3,125,906
LEAD BONDING MACHINE
Walter G. Johnson, Santa Clara, Calif., assignor to Diotran Pacific, Palo Alto, Calif., a corporation of California
Filed Apr. 4, 1962, Ser. No. 185,108
19 Claims. (Cl. 78—82)



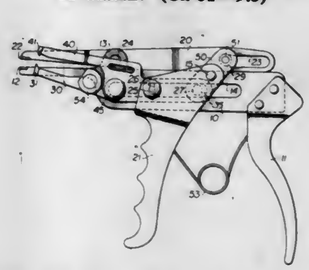
1. A lead bonding machine comprising: a base plate; a body frame mounted upon said base plate; a reel housing detachably secured to said body frame; a reel of fine lead rotatably supported within said reel housing, said reel housing including an opening for dispensing said lead; a reciprocative compression stage carried by said body frame and including a retractable spring loaded capillary tube having a fine bore for receiving said lead; a reciprocative torch carried by said body frame for motion in a direction substantially perpendicular to the direction of motion of said compression stage; and a micromanipulator including a workpiece holder carried by said base plate for manipulating a workpiece in a plane perpendicular to the direction of motion of said compression stage.

3,125,907
STRAP TENSIONING TOOL
Michael O. Derrickson, Norwood, Pa., assignor, by mesne assignments, to FMC Corporation, San Jose, Calif., a corporation of Delaware
Filed May 18, 1962, Ser. No. 195,914
1 Claim. (Cl. 81—3)



A tool for exerting a pull on a strap to tighten the strap about an article, said tool being formed of a single piece of bar stock, said stock being bent to provide first and second parallel arms adapted to be snubbingly engaged with a strap, said first arm having a free end adapted to be inserted through a loop of the strap, the bar stock extending in the plane of said arms angularly from one end of said second arm in the direction away from said first arm and terminating in a flat loop, said flat loop constituting an operating device by means of which the tool may be employed for exerting a pull on a strap engaged with said arms, said flat loop having a major axis extending parallel to said arms, the major axis of said flat loop being removed from said second arm a distance greater than the distance between said arms, and said flat loop having a minor axis aligned with the transverse center line of said arms.

3,125,908
WIRE STRIPPER
Walter J. Rozmus, Whitesboro, N.Y., assignor to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware
Filed Oct. 24, 1960, Ser. No. 64,648
11 Claims. (Cl. 81—9.5)

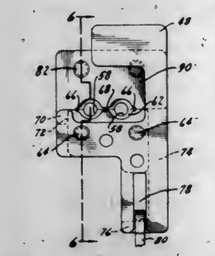


1. A wire stripping tool comprising, wire gripping means, first and second wire insulation cutting blades, means mounting said blades for relative movement between an open position and a closed mating position, each of said blades having a reference face an an inclined face, said inclined face of said first blade forming the same angle with the reference face of said first blade as said inclined face of said second blade forms with said reference face of said second blade, said first and second blades being mated such that the reference faces of each lie in a substantially planar, predetermined path of closing contact, said mated blades and said wire gripping means together at least partially defining a natural path of relative wire travel in angular position with respect to the faces of said blades, said path of travel being inclined to the normal of the plane on which said reference faces lie by an amount equal to approximately one-half the angle of each inclined face with its reference face, said wire gripping means being positioned to maintain a wire to be stripped on said path of travel, and means to cause relative movement on said path of travel between said blades and a wire maintained on said path of travel.

3,125,909
PRECISION STRIPPER BLADES
Eugene D. Hindenburg, Sycamore, Ill., assignor to Ideal Industries, Inc., Sycamore, Ill., a corporation of Delaware
Filed Mar. 14, 1961, Ser. No. 95,658
3 Claims. (Cl. 81—9.5)

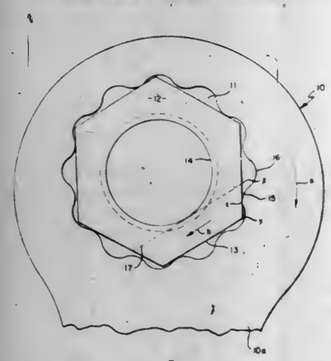
1. A blade structure for use in a wire stripper, a pair of opposed blades, at least one being movable toward the other to define an opening and closing action between them, the opposed portion of each blade having two areas, the first being a generally semi-cylindrical collet, and the second being an insulation cutting knife with a wire hole formed in the edge thereof having a diameter substantially less than the diameter of the collet and generally concentric therewith, the diameter of the collet being slightly less than the diameter of the insulation on the

wire to be stripped, and further including relief areas laterally on each side of the collet so that when the



insulation on the wire is compressed by the blades coming together, it may flow into the relief areas.

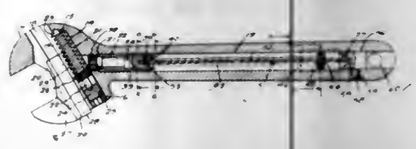
3,125,910
WRENCH
Alfred Kavalar, Detroit, Mich., assignor to Kelsey-Hayes Company, Romulus, Mich., a corporation of Delaware
Filed Oct. 18, 1961, Ser. No. 145,836
3 Claims. (Cl. 81—121)



1. A wrench for nuts, bolts, fittings and like members of hexagonal cross-section, comprising a body portion having at least ten integral substantially equal size cylindrical lobes each defining a member-engaging surface of arcuate cross-section, the centers of curvature of all of said surfaces lying along the same circle and positioned at points thereon spaced apart one-twelfth the entire circumference of said circle, each of said surfaces facing generally toward the center of said circle and diametrically opposed surfaces being spaced apart a distance greater than the distance between the opposite flats of the member and a distance less than the diameter of the member between its opposite corners by an amount sufficient to enable each of said surfaces to engage a flat side of the member along a line spaced from the corner thereof.

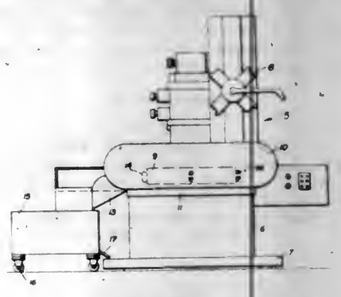
3,125,911
SLIDABLE JAW END WRENCH WITH SPIRAL ACTUATOR
Guido F. Schlote, 5908 Hudson St., Dallas, Tex.
Filed Oct. 17, 1962, Ser. No. 231,127
6 Claims. (Cl. 81—165)

1. In an end wrench having an elongated handle, a recessed head formed on one end of the handle and provided with a fixed jaw, a slidable jaw having a shank slidably engaging in and guided by the recess of the head for movement toward and away from the fixed jaw, said handle having a bore extending longitudinally therethrough and opening into the recess of the head, a slide having a first part disposed for sliding movement in said bore, said handle having a longitudinally extending slot opening outwardly thereof and into the bore in which a second part of the slide is slidably received, a spiral disposed longitudinally in the bore and threadedly engaging through said first part of the slide, means forming a driving connection between the slidable jaw and spiral whereby rotation of the spiral will effect movement of the slidable jaw toward and away from the fixed jaw, said means including a drive unit disposed for rotation in the forward end of said bore and including an elongated



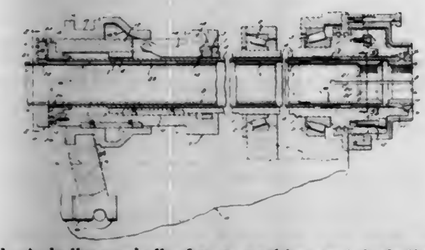
member having a restricted forward end, a gear fixed to and supported by said restricted forward end, said elongated member having a head defining the rear end thereof and provided with a rearwardly opening frusto-conical socket to receive a forward end of the spiral, said socket having opposed grooves, said forward end of the spiral being flat to engage in said grooves for keying the spiral to said elongated member, and a thrust bearing adjustably mounted in the rear end of said bore and having a forwardly opening socket in which the rear end of the spiral is supported and journaled.

3,125,912
CHIP COLLECTOR FOR VERTICAL LATHES
Harold L. Lawalin, % Productive Service Co. Inc., Box 22063 Rainbow Station, Indianapolis, Ind., assignor of twenty-eight percent to William G. Gerald and twenty-one percent to Harley J. Campbell, both of Indianapolis, Ind.
Filed Dec. 11, 1961, Ser. No. 158,376
4 Claims. (Cl. 82—2)



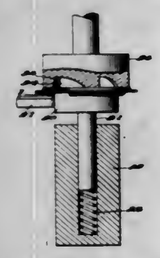
1. In combination with a vertical lathe including a cylindrical base, a square coolant pan encircling the lower portion thereof and a chuck rotatable in a horizontal plane on said base, a chip collector comprising a generally circular, inwardly opening trough of substantially U-shaped cross-section removably mounted on the base and enclosing the chuck in spaced, opposed relation thereto for receiving chips and a coolant therefrom, an integral, depending ring on the lower portion of the trough telescopically receiving the upper portion of the base and detachably secured thereto for removably mounting said trough thereon, a substantially tangential chute integral with the trough and communicating therewith for the discharge of the chips and coolant therefrom, and means for delivering the coolant to the pan from the chute.

3,125,913
ADJUSTABLE FEED FINGER AND COLLET ALIGNMENT DEVICE
Larry F. Smrekar, Solon, Ohio, assignor to Balas Collet Manufacturing Co., Cleveland, Ohio, a corporation of Ohio
Filed July 27, 1962, Ser. No. 212,843
3 Claims. (Cl. 82—28)



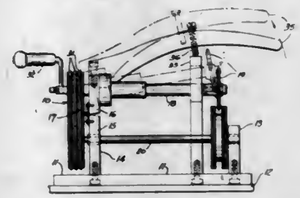
1. A hollow spindle for a machine tool including a rotatably supported tubular outer spindle, a collet operating tube supported within said outer spindle for rotation therewith, a collet at one end of said collet operating tube, a feed finger tube within said collet operating tube, a feed finger secured to one end of said feed finger tube, a radially outwardly extending flange rotatable with said collet operating tube at the other end thereof from said collet, a feed finger adjusting flange member supported for rotational movement relative to said radially outwardly extending flange and adjacent thereto, releasable means for securing said feed finger adjusting flange member to said outwardly extending flange to secure said flanges against relative movement, keying means carried by said feed finger adjusting flange member, and coacting keying means carried by said feed finger tube, said keying means being effective to permit longitudinal movement of said feed finger tube relative to said collet operating tube while its angular position relative to said collet operating tube is maintained unchanged.

3,125,914
METHOD AND APPARATUS FOR TRIMMING BEARING SEALS
Arthur J. Wasley, Bristol, Conn., assignor to Wasley Products, Incorporated, Plainville, Conn., a corporation of Connecticut
Filed Oct. 30, 1957, Ser. No. 693,408
1 Claim. (Cl. 82—47)



A method for trimming a portion of a reinforcing member from a bearing seal comprising the steps of clamping the bearing seal between a pair of jaws with the portion of the reinforcing member to be trimmed disposed outwardly of the periphery of the jaws, rotating the pair of jaws with the bearing seal clamped therebetween, moving the pair of jaws with the bearing seal clamped therebetween along the axis of rotation of the jaws to engage a cutter head with the portion of the reinforcing member to be trimmed, and reciprocating the cutter head toward and away from the center of the bearing seal while maintaining the cutter in engagement with the portion of the reinforcing member to be trimmed to remove burrs from the edge of the reinforcing member.

3,125,915
DEVICE FOR CUTTING ELECTRIC CABLE COVERINGS
Daniel A. Ahearn, 26 W. 30th St., Bayonne, N.J.
Filed Dec. 28, 1960, Ser. No. 87,733
1 Claim. (Cl. 82—86)

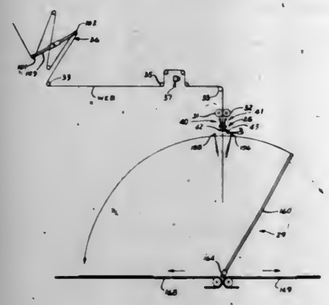


A cutter device for cutting the outer protective covering and sheathing on an electric cable and the like, said cutter device comprising an elongated base plate, a support block carried at one end of said base plate and extending upwardly therefrom, said support block having a lower portion rigidly connected to said base plate and an upper portion hingedly connected to said lower portion, another support block rigidly connected to said base plate at the other end and extending upwardly therefrom to a lesser height than the first-mentioned support block, a cutter shaft supported rotatably at one end in the upper portion of the first-mentioned support block, said cutter shaft in an operative position extending in the direction of said other support block and substantially parallel to said base plate, a rotary cutter rigidly connected to said cutter shaft at its other end, a pair of shafts supported rotatably in and extending between the lower portion of the first-mentioned support block and said other support block and under said cutter shaft, said pair of shafts extending parallel to each other and to said base plate, and being symmetrically disposed with respect to said cutter shaft, a wheel firmly connected to each shaft of said pair of shafts at one end, radially directed flanges upon the peripheral face of each wheel, the flanges of each wheel being spaced apart to form a slot therebetween, the flanges of one of said wheels extending into the slot of the other of said wheels, whereby said wheels cooperate to form a cradle for supporting the cable being cut, a guide bracket rigidly connected to said base plate and extending upwardly therefrom, said guide bracket having a slotted portion enclosing said cutter shaft, whereby said cutter shaft is guided when said cutter is moved into contact with said cable, means connected to each of the aforesaid shafts for driving the shafts, and a lever rigidly connected at one end to the upper portion of said first-mentioned support block and extending in the direction of said other support block for swinging said upper portion relatively to the lower portion whereby said cutter may be moved into and out of contact with said cable.

3,125,916
BAG STACKING APPARATUS
Richard D. Hayes, Pittsford, and Dwight E. Clark, Canandaigua, N.Y., assignors, by mesne assignments, to National Distillers and Chemical Corporation, a corporation of Virginia
Original application June 25, 1957, Ser. No. 667,771, now Patent No. 3,008,865, dated Nov. 14, 1961. Divided and this application Feb. 20, 1961, Ser. No. 92,435
4 Claims. (Cl. 83—96)

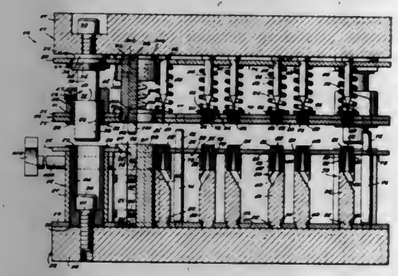
1. A stacking apparatus for bags of flexible, limp, film material, said bags being delivered to the stacking ap-

paratus in a flat condition and lying in a substantially vertical plane, horizontal bag stack receiving platforms on each side of the plane of delivery of the bags, a fly stacker including a large mesh screen mounted between said platform, and means for oscillating said fly stacker



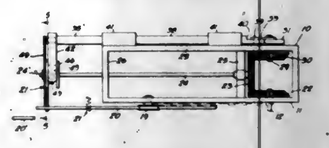
to take said bags in the vertical position upon delivery and lay them flat alternately on said platforms, said screen being movable through the vertical plane of delivery of the bags to substantially horizontal position in engagement with the top of a stack of bags on one of said platforms.

3,125,917
PUNCH AND DIE ASSEMBLY HAVING SPACED TOOL POSITIONING PLATES
Gerard G. F. Smeets, Brampton, Ontario, Canada, assignor to Houdaille Industries, Inc., Buffalo, N.Y., a corporation of Michigan
Filed Dec. 24, 1958, Ser. No. 782,872
12 Claims. (Cl. 83—140)



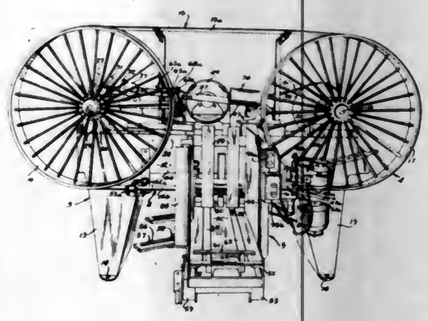
1. In a punch and die assembly, the combination comprising: a lower shoe means having a recess coaxially aligned with the punch; an intermediate sheetmetal plate means having an opening; means remote from each die releasably supporting said intermediate plate means in fixed spaced relation to said lower shoe means and with said opening coaxially aligned with the punch; a die button axially slidably extending through said intermediate plate means opening remotely from said supporting means and aligned directly thereby; and a die support disposed between said shoe means and said intermediate plate means remotely from said supporting means, said support having a lower end corresponding in size to said recess and slidably extending into said recess in endwise engagement with said lower shoe means and aligned thereby, said support being adapted at its upper end to receive and support said die button, and intermediate plate means and said die support being freely slidably removable upon release only of said supporting means.

3,125,918
APPARATUS FOR FEEDING AND CUTTING ELONGATED WORKPIECES
Samuel N. Small, Valley Stream, N.Y., assignor to Julius Duberstein, New York, N.Y.
Filed Feb. 13, 1959, Ser. No. 793,191
4 Claims. (Cl. 83—150)



1. An apparatus of the character described comprising a casing, means on the casing for engaging and continuously feeding an elongated workpiece in a feed path alined with the workpiece, a cutter head movably mounted in connection with the casing, said head comprising fixed and rotatable cutters having portions in constant engagement, the rotatable cutter having a circumferentially long large diameter product moving portion, the rotatable cutter having a cutting surface at the leading edge of the product moving portion, which cutting surface cooperates with the fixed cutter, means on the casing for rotating said rotatable cutter in timed relation to said workpiece feed means, means on the casing for actuating the head along said feed path, first, in one direction in synchronism with the feed of the workpiece simultaneously with operation of the rotatable cutter to shear the workpiece in forming a product which is fed by the product moving portion of the rotatable cutter through the major portion of said first feed stroke of the head, said third named means then actuating the head in a reverse direction to said first directional movement preparatory to the next shearing and product moving operation, said rotatable cutter having a circumferentially long portion clearing the workpiece in the second named directional movement of the head, and the rotatable cutter being mounted on an axis axially fixed with respect to the path of feed of the workpiece.

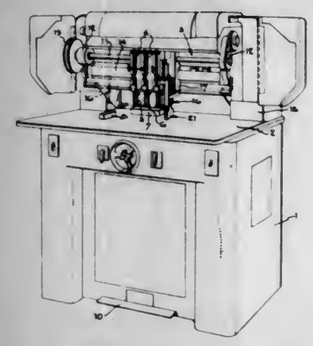
3,125,919
MATERIAL FABRICATING MACHINE
Frank S. Barker, Pompano Beach, Fla., assignor to Shakertown Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Jan. 7, 1959, Ser. No. 785,418
5 Claims. (Cl. 83—201)



1. In a machine of the class described, a frame, bin means for supporting a plurality of sheets of fibrous

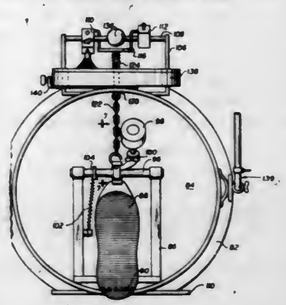
material on said frame, means forming conveyor means and including pneumatically actuatable feeding means for sequentially feeding said sheets of material longitudinally along said frame, fabricating means supported on said frame in position to intercept and fabricate a sheet of material as the same is carried through said frame, at least one of said fabricating means including an endless bandlike knife having a horizontal cutting run positioned for splitting said sheet of material into two board sections of equal thickness, said conveyor means having upper and lower conveying runs for moving each of said board sections through said frame, and said fabricating means including knife means adjacent each of said conveying runs to simultaneously form a continuous groove in each of said board sections longitudinally along the same closely adjacent its one edge.

3,125,920
CORNER ROUNDING APPARATUS
Charles E. Smith, New Richmond, Ohio, assignor to Bock Machine Company, Cincinnati, Ohio, a corporation of Ohio
Filed Mar. 1, 1961, Ser. No. 92,650
6 Claims. (Cl. 83—454)



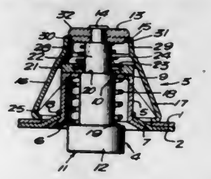
1. A machine for rounding the corner of a stack of sheets comprising, a support structure having a stack-supporting surface, a rail mounted above said surface, means adapted to reciprocate the rail relative to said surface, a corner-rounding head mounted on the rail, a bit holder mounted on said head, said bit holder being movable in a plane generally parallel to the stack-supporting surface, a corner rounding bit mounted on said bit holder and having a cutting edge projecting toward said supporting surface, a spring-loaded presser foot mounted on said head and adapted to engage the top of a stack resting on said stack-supporting surface, a sensing element projecting from the movable bit holder beyond said cutting edge and movable with said bit holder and bit in said plane, spring biasing means normally urging the bit holder toward the side of the stack, and actuating means interconnecting said spring-loaded presser foot and movable bit holder, said spring-loaded presser foot adapted to shift the movable bit holder normally to a retracted position counter to said spring biasing means, whereby upon downward movement of the rail, the presser foot engages the top of the stack and shifts relative to the rounding head, adapting said spring biasing means to shift said movable bit holder toward the side of the stack before the said cutting edge reaches the top of the stack, adapting the sensing element to shift to a gauging position relative to the side of the stack and to locate the movable bit before the cutting edge reaches the top of the stack to round the corner thereof.

3,125,921
PEDAL-OPERATED DRUM SET
Charles Korosh, Westbury, N.Y.
Filed Sept. 6, 1963, Ser. No. 308,298
2 Claims. (Cl. 84—422)



1. A pedal-operated drum set, comprising a base, a drum having a cylindrical body mounted on said base with its longitudinal axis extending generally horizontally, said drum having only a single membrane which extends in a generally vertical plane across the front end of said cylindrical body, the back end thereof being open, a frame supported within said cylindrical body, a pedal pivotally mounted on said frame and being accessible to the operator of the drum through the open end of said cylindrical body, a bellcrank mounted on said frame, a hammer secured to said bellcrank, said bellcrank being pivotable in one direction to bring said hammer into percussive engagement with said membrane and being pivotable in the opposite direction to disengage said hammer from said membrane, spring means biasing said bellcrank in said second direction, and a strap connecting said pedal to said bellcrank, whereby depressing the pedal causes the bellcrank to pivot in the first-mentioned direction in opposition to the spring action, thereby bringing the hammer into percussive engagement with the drum and whereby releasing the pedal enables the spring means to pivot the bellcrank in said second-mentioned direction and thereby to disengage the hammer from the membrane.

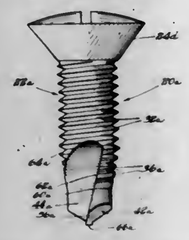
3,125,922
PUSH FASTENER WITH INWARDLY DIRECTED LIMITING MEANS
Bobbie S. Sauter, Woodland Hills, Calif., assignor to Dentsch Fastener Corp., Los Angeles, Calif., a corporation of California
Filed Sept. 18, 1961, Ser. No. 138,995
9 Claims. (Cl. 85—5)



1. A fastener comprising a support member, a plunger reciprocative relative to said support member, a first shoulder means at one end of said plunger, a second shoulder means inwardly of said end, a retainer, said retainer including leaf spring means having an end portion inwardly biased against said first shoulder means for retaining said plunger against movement in one direction, resilient means urging the plunger in said one direction, and a release member movable relative to said plunger between said first and second shoulder means,

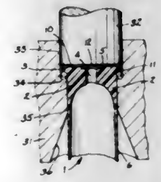
said release member being movable by said second shoulder means in response to movement of said plunger in the opposite direction to a position of engagement with said leaf spring remote from said plunger, said leaf spring means frictionally retaining said release member for permitting said resilient means to move said plunger in said one direction for releasing said plunger from said retainer, said leaf spring means having abutment means limiting the amount of said movement of said release member for preventing said release member from moving beyond said end portion of said leaf spring means.

3,125,923
SCREW
Walter M. Hanneman, Wheaton, Ill., assignor to Illinois Tool Works Inc., Chicago, Ill., a corporation of Delaware
Filed Nov. 26, 1962, Ser. No. 240,181
5 Claims. (Cl. 85—47)



4. A drilling and thread cutting screw of the type described comprising an elongated shank, and means at one end of said shank cooperable with a tool for turning the screw, said shank including an entering end portion having a first predetermined diameter, said entering end portion having a centered tip about the longitudinal axis of the screw and comprising a terminal ridge edge intersecting and substantially perpendicular to the longitudinal axis of the shank with symmetrically disposed substantially flat side surfaces on each side of said terminal ridge edge each diverging angularly outwardly and each intersecting said shank intermediate the terminal ridge edge and said means for turning the screw, said shank including a trailing portion having a plurality of integral and complete thread convolutions with the greatest diameter of the threads being greater than the diameter of the predetermined diameter at the entering end portion, said shank including an intermediate threaded portion joining said entering end and trailing portions and having a progressively increasing diameter from said entering end portion to said trailing portion, said entering end portion, said intermediate portion and part of said trailing portion of the shank having a pair of oppositely disposed substantially longitudinally extending slots therein respectively defined by first and second side surfaces disposed substantially at right angles to each other and having intermediate uninterrupted shank portions between them to provide opposed bearing surfaces which afford strength to the slotted screw shank and assure sufficient bearing surface for efficient drilling and thread cutting action, said first side surfaces of said slots respectively being inclined at an angle with respect to a plane containing the longitudinal axis of the shank with the angular inclination of said first side surfaces being such that the portion of the first side surface of each of said slots located in the trailing portion of the shank lies on a line traversing the said plane at an acute angle intermediate the tip portion of the screw and the means provided at the other end of the shank for turning the screw, cutting edges located at the intersections of said first side surfaces of said slots and said symmetrically disposed substantially flat divergent side surfaces in the vicinity of said pointed tip, the cutting edges so provided being disposed at an angle of less than 45° to said terminal ridge edge thereby providing a relief behind said cutting edges to assure their aggressive exposure as they are exposed to a workpiece, each of said first surfaces of said slots extending from the threaded shank periphery radially into and beyond said terminal ridge edge and intersecting both of the symmetrically disposed flat side surfaces at opposite sides of said terminal ridge edge, said pointed tip presenting a small centrally located axially extending projection including the aforementioned terminal edge together with portions of said flat side surfaces on either side thereof for initially engaging and removing material from a workpiece, and said first side surfaces of said slots providing the cutting edges radially outwardly of said point portion to the first predetermined diameter of the entering end portion of the screw as well as the edges along the intermediate and trailing threaded shank portions to effect cutting of a thread in the complementary workpiece aperture previously drilled.

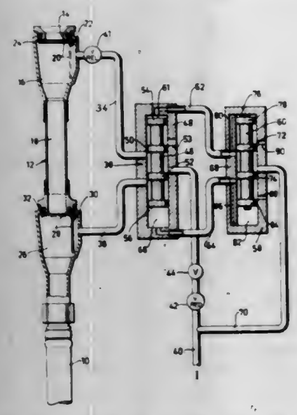
3,125,924
METAL RIMMED PLASTIC CARTRIDGE CASE
Alfred A. Mayer, West Haven, and Charles E. Miller and Charles O. Williams, Hamden, Conn., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed July 16, 1963, Ser. No. 209,968
3 Claims. (Cl. 86—1)



1. The method of fixing a metallic base to an ammunition cartridge case, said case comprising a tubular side wall extending from a plastic head and a plastic rim extending outwardly from said head, said base comprising a cup-shaped metallic member having a peripheral skirt terminating in an edge and adapted to be placed over said case at said rim, said method comprising forcing said case with said member into a die so that a radial compressive force is applied to the case in the region of said head, deforming said skirt inwardly around said rim so that said edge extends toward said head, releasing said force so that said case expands outwardly against said edge and said edge is partially imbedded in said case, and driving said edge further into said case while simultaneously shaping and sizing said metallic member about said rim so that said plastic at the head outwardly overlaps and completely surrounds said edge to prevent cutting and peeling of said base from said case.

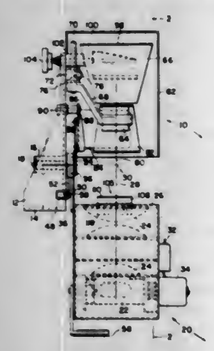
3,125,925
APPARATUS FOR LOADING BORE-HOLES IN BED-ROCK WITH CARTRIDGES OF EXPLOSIVE
Sten Herman Ljungberg, Stockholm, Sweden, assignor to Nitroglycerin Aktiebolaget, Gyttorp, Sweden, a corporation of Sweden
Filed Mar. 20, 1961, Ser. No. 96,821
Claims priority, application Sweden Mar. 22, 1960
5 Claims. (Cl. 86—20)

1. Apparatus for loading a bore-hole in bed-rock with cartridges of explosive comprising a tube received within said bore-hole, a breech-piece connected to one end of said tube, said breech-piece having a first chamber and a second chamber disposed substantially in axial alignment, conduits connecting each of said chambers to a source of fluid pressure, a feed opening connected to said first chamber, a first valve member interposed between said first chamber and said feed opening, a second valve member interposed between said first and second chambers, a reversing valve interposed in said conduits between said chambers and the source of fluid pressure, said valve including a casing, a slide member reciprocably mounted



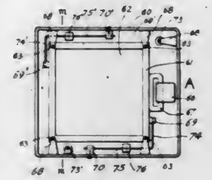
in said casing, and means for axially moving said slide member to create alternating communication between the source of fluid pressure and said conduits to cause said valve members to alternately close by force of said fluid pressure and open by gravity or by a cartridge passing through the valve opening to sluice the cartridges of explosive through said chambers and advance the cartridges to the remote end of the tube in the bore-hole.

3,125,926
CONSTANT FOCUS ADJUSTABLE PROJECTOR
Alfred Simmon, Garden City, N.Y., assignor to Laboratory Furniture Co., Inc., Mineola, N.Y., a corporation of New York
Filed Mar. 10, 1960, Ser. No. 14,026
15 Claims. (Cl. 88—24)



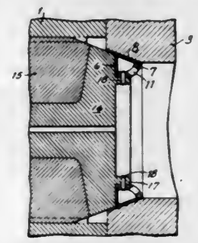
1. In an apparatus for projecting images from a plurality of positions, a frame, a housing including means aiding in projecting images, means connecting said frame and housing for relative movement into a plurality of predetermined image-projecting positions, means movable into the path of the projected images to reflect the same in response to the relative movement of said frame and housing into a predetermined one of said plurality of positions and out of the path of the projected images in response to the relative movement of said frame and housing into another of said plurality of predetermined positions, means responsive to the relative movements of said frame and housing to move said movable means into said plurality of predetermined positions, lens means to receive the reflected images in said predetermined one position and to receive the projected images directly from said projecting means in said other predetermined position, and means between said frame and housing to retain the same in their plurality of positions.

3,125,927
PROJECTION SCREEN
Richard T. Erban, 145—38 Bayside Ave., Flushing, N.Y.
Filed Apr. 28, 1960, Ser. No. 25,478
21 Claims. (Cl. 88—28.9)



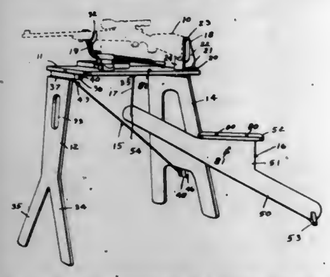
1. In combination with a projection screen, a free oscillating system having a primary inertia mass which includes the mass of said projection screen, a vibrating power device and secondary inertia masses supported for free vibration in all directions parallel to the surface of said screen, said primary system being tuned to a frequency within 25% of the frequency of said vibrating power device.

3,125,928
PACKING RING FOR FIREARMS
Erich Bartels, Ratingen, near Dusseldorf, Germany, assignor to Firma Rheinmetall G.m.b.H., a firm of Germany
Original application Sept. 26, 1960, Ser. No. 58,439, now Patent No. 3,099,937, dated Aug. 6, 1963. Divided and this application June 15, 1962, Ser. No. 202,806
Claims priority, application Germany Sept. 26, 1959
2 Claims. (Cl. 89—26)



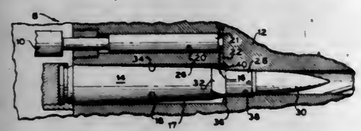
1. A firearm comprising a barrel, a closing bolt having a head, a hollow ring composed of two individual rings, each having peripheral edges with the edges of one individual ring contacting the edges of the other ring to form a hollow ring space, one ring being a sealing ring and having a two-sided angular configuration in cross section and the other ring being a supporting ring and having a plurality of bores therein to admit into the hollow ring the propellant gases upon firing the firearm, one side of the two-sided angular configuration of the sealing ring abutting against the head of the closing bolt, and a plurality of pins projecting into the head and the hollow ring in one of the two individual rings thereof in order to support the packing ring.

3,125,929
SHOOTING REST
Howard Peasley, Portville, N.Y.
(423 Wygant Road, Horseheads, N.Y.)
Filed Mar. 30, 1961, Ser. No. 99,611
14 Claims. (Cl. 89—37)



1. A shooting rest comprising a table having legs thereon and means to support a rifle thereon, and a seat, an elongated flexible member attached to said table at one end and to said seat at the other end, said seat having one end thereof resting on the ground and the other end being suspended from said table adjacent an intermediate part of said rifle support means by means of said elongated flexible member.

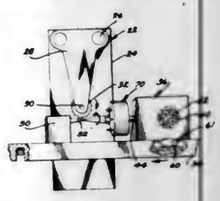
3,125,930
GAS SYSTEM FOR GUN OPERATION
Earl C. Gilbert, Troy, N.Y., assignor to the United States of America as represented by the Secretary of the Army
Filed Nov. 7, 1962, Ser. No. 236,170
4 Claims. (Cl. 89—191)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a gun having a barrel for discharge of a cartridge and a reciprocal operating rod, a gas system including a gas cylinder, a piston mounted in said gas cylinder for actuation against the operating rod when energized, an air chamber formed in the barrel so as to be isolated from the bore thereof when the cartridge is chambered in the barrel for discharge, means providing communication between said air chamber and said gas cylinder, and means for compressing the air in said gas chamber to energize said piston when the cartridge is discharged in the barrel.

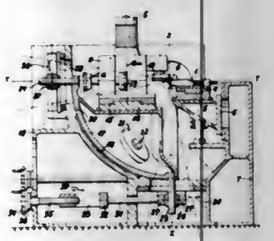
3,125,931
METHOD FOR FORMING HELICAL FLUTES
Kenneth P. Stanaback, 3640 Breton Road SE., Grand Rapids, Mich.
Filed Mar. 16, 1961, Ser. No. 96,276
4 Claims. (Cl. 90—11.42)

1. A method of forming helical flutes on a frusto-conical blank comprising the steps of, providing an elongated, solid, frusto-conical work piece blank, any transverse section to the axis thereof of which is circular, positioning a toothed milling cutter adjacent one end of a frusto-conical blank and at an acute angle with respect to the axial center line thereof; forceably rotating said blank with a driving force; simultaneously climb milling said blank at said angle over a small portion to initiate a groove and an adjacent flute edge with a wall surface, then allowing said blank to rotate free of said driving force while continuing said climb milling with said blank providing its own rotational speed regulation and angle guide by the constant contact of the edge of cutter teeth



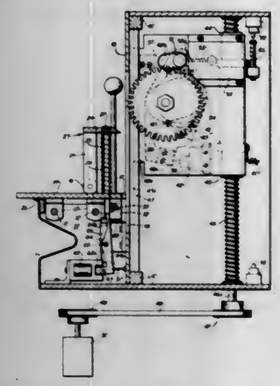
with said wall surface as the climb milling progresses; and repeating this sequence a plurality of times to obtain the desired number of flutes.

3,125,932
MACHINE FOR THE MANUFACTURE OF METAL CUTTING TOOLS
Jenó Katona, Budapest, Hungary, assignor to Csepel Vas-es Femmuvek, Csepel, Hungary, a firm
Filed Sept. 27, 1961, Ser. No. 141,574
Claims priority, application Hungary Sept. 30, 1960
6 Claims. (Cl. 90—15)



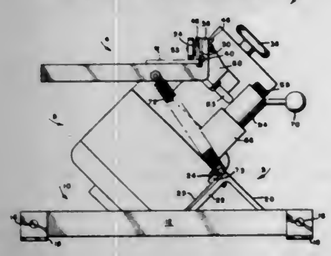
1. A machine for making a single point tool having three angularly interrelated surfaces intersecting in such single point, said machine comprising, in combination, a locating device for locating and holding a workpiece from which said tool is to be made; first means mounting said locating device for angular adjustment about an axis passing through said single point of said tool; second means mounting said locating device for adjustment longitudinally of each of three mutually perpendicular axes intersecting in said single point, one of said mutually perpendicular axes being identical with the axis about which said locating device is angularly adjustable; a machining unit including at least two tools each having a point of application and each being selectively movable into operative relation with said workpiece, said machining unit being angular adjustable about a fourth axis; the application points of said tools being located on a circle concentric with said fourth axis, and said machining unit being adjustable about three mutually perpendicular axes respectively identical with said first-mentioned mutually perpendicular axes; a relatively fixed bearing for said machine unit having a spherical bearing surface; a support for said machining unit having a spherical bearing surface cooperable with and supported by said first-mentioned spherical bearing surface, the centers of said spherical bearing surfaces being at said single point; clamping means effective to clamp said bearing surfaces in relatively adjusted relation; and slide means supporting said machining unit on said support means and constructed and arranged for adjustment of said machining unit longitudinally of at least two of said first three axes.

3,125,933
DATA CARD NOTCHING MACHINE
Richard E. Cone, Athens, Ohio, assignor to Royal McBee Corporation, New York, N.Y., a corporation of New York
Filed Feb. 1, 1963, Ser. No. 255,576
10 Claims. (Cl. 90—15.1)



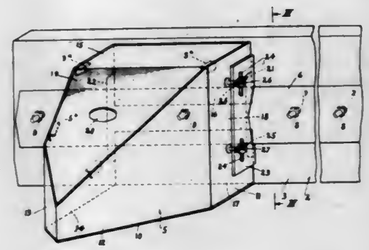
1. In a machine for marginally notching a stack of data cards, the combination of,
a support,
horizontal and vertical card locating and supporting members mounted on said support,
pressure means associated with said members and operable to hold a stack of cards to be notched in vertical registry against said members, one of said members having a vertical slot formed therein,
a power driven rotatable cutting element movably mounted on said support adjacent said slotted member,
and means for moving said element outwardly through said slot thence downwardly past said horizontal member thereby to notch a stack of cards supported by said members.

3,125,934
DEBURRING AND CHAMFERING MACHINE
Tage Persson, 224 Glenwood Ave., Bloomfield, N.J.
Filed Dec. 6, 1960, Ser. No. 74,039
5 Claims. (Cl. 90—18)



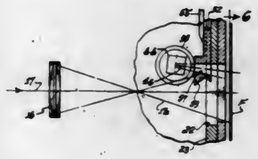
2. In a corner cutter, a cutting tool mounted for rotation about a predetermined angular path, a planar support having a guide adjacent one side edge thereof and adjacent said path to support a workpiece in a direction intersecting said path, said support and said guide having an opening to permit said cutting tool to intersect the path of movement of the workpiece, power means to rotate said cutting tool, said power means having cam means integral therewith for effectuating the angularization of said planar support relative to said cutting tool, and having adjustment means integral therewith for effectuating relative vertical movement of said planar support relative to said cutting tool.

3,125,935
SCREED WITH WING ATTACHMENT
Ira Loyal McCandless and Floyd James McMahon, Mattoon, Ill., assignors to Blaw-Knox Company, Pittsburgh, Pa., a corporation of Delaware
Filed Mar. 13, 1961, Ser. No. 95,261
7 Claims. (Cl. 94—45)



1. A screed for paving machines comprising a screed member having a vertical front face, a clamping strip secured to the front face of the screed extending longitudinally of the screed and intermediate the top and bottom edges of the screed, means on the clamping strip along its longitudinal center for attaching it to the face of the screed and adjusting it in a direction normal to the face of the screed, a wing member for the screed extending forwardly from the front face of the screed and having a rear face abutting against the face of the screed, said rear face of the wing comprising spaced upper and lower plates engaged between the front face of the screed and said clamping strip above and below the center line of said strip, the wing member being narrower than the length of the clamping strip whereby it may be adjustably positioned along the front face of the screed upon moving the clamping strip toward or away from the front face of the screed to clamp or release the wing, the wing member having spaced vertical side plates shaped at their inner edges to clear the clamping strip.

3,125,936
MOVABLE MASK FOR A CAMERA
Frank Abell, 631 Augusta St., Inglewood, Calif.
Filed May 2, 1960, Ser. No. 26,369
9 Claims. (Cl. 95—1.1)

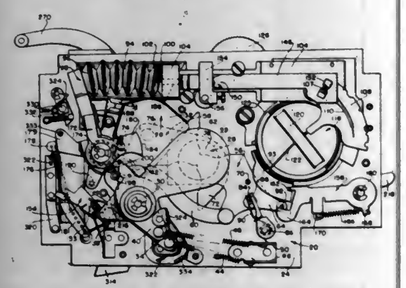


1. A motion-picture type camera, the combination comprising:
a light sensitive film.
a primary optical system and a secondary optical system occupying fixed positions within the camera and relative to the position of the film with both systems simultaneously projecting separate images toward the film to produce thereon a composite image;

and apertured masking means movably mounted within the camera near the film and movable between a first position in which said means projects into the light from the primary optical system to mask a portion of the image therefrom and passes light from the secondary system whereby light from the two separate systems simultaneously reaches the film to produce a composite picture;

and a second position in which said means blocks the light from the secondary system and presents substantially no obstacle to light from the first system.

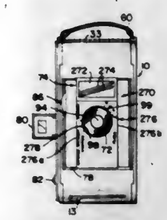
3,125,937
PHOTOGRAPHIC APPARATUS
Herbert A. Bing, Wellesley, and Milton S. Dietz, Cambridge, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed Sept. 8, 1960, Ser. No. 54,766
9 Claims. (Cl. 95—10)



4. In an exposure control mechanism comprising photoelectric means for producing electrical signals in accordance with ambient illumination, an electrodynamic device for translating said signals into mechanical displacements, means coupled with said electrodynamic device for controlling the setting of exposure values of said mechanism in accordance with a predetermined relation to said mechanical displacements, and means for actuating said exposure control mechanism to effect an exposure, the combination including manually engageable means releasably coupled with said electrodynamic device for moving the latter for varying the relation of said mechanical displacements to said means for controlling the setting of exposure values so as to vary said values, and means connecting said actuating means with said manually engageable means for uncoupling the latter from said electrodynamic device upon operation of said actuating means.

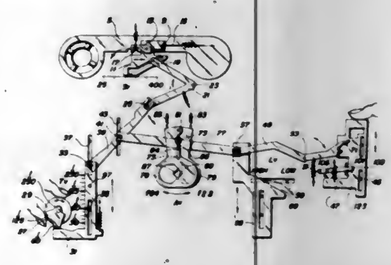
3,125,938
CAMERA APPARATUS FOR EXPOSING AND PROCESSING PHOTOGRAPHIC FILM
Edwin H. Land, Cambridge, Richard J. Chen, Brockton, John W. Lothrop, Westwood, and Richard R. Wareham, Marblehead, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed Aug. 8, 1962, Ser. No. 215,655
8 Claims. (Cl. 95—10)

1. In a camera adapted to use both a fast black-and-white film and a comparatively slow color film and including an objective, a photocell, a shutter speed mechanism automatically responsive to current variations in the circuit of said photocell as provided by variations in the prevailing illumination, and manually actuated diaphragm adjusting means, the combination of shutter automatic speed control and diaphragm setting means for said fast film comprising frame means forming a window of relatively large area admitting a relatively large amount of light to said photocell so as to permit a wide range of shutter speeds, and a scale of indicia for setting said diaphragm adjusting means in relation to said wide range of shutter speeds, with shutter automatic speed control and diaphragm setting means for said slow film comprising a window of relatively small area formed in plate means which is positionable in front of said first-named window, and a scale of indicia inscribed on plate means which is positionable in front of said first-named indicia,



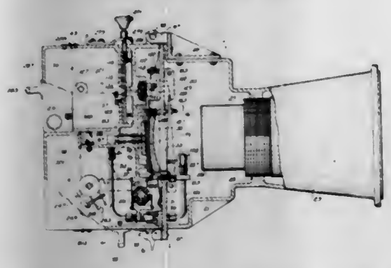
said window of relatively small area admitting lesser amounts of light to said photocell so as to permit a smaller range of shutter speeds and an appreciably slower maximum speed under comparable illumination conditions than said large window, and said second-named scale of indicia enabling the correct positioning of said adjustable diaphragm means in relation to said smaller range of shutter speeds.

3,125,939
PHOTOGRAPHIC EXPOSURE COMPUTER
John J. Bundschuh, William T. Hochreiter, and Richard J. Bresson, all of Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Feb. 28, 1963, Ser. No. 261,904
4 Claims. (Cl. 95—10)



1. In an exposure control system for a photographic camera, the combination comprising: photo-responsive means including a member positionable in accordance with scene brightness; variable speed shutter means; a first control mechanism including a shutter speed setting member; a film sensitivity compensation member adjustable according to the sensitivity of film inserted into said camera; first differential bar means connecting said compensation member and said first control mechanism; a second control mechanism including a variable lens diaphragm; movable sensing means; means biasing said sensing means toward sensing engagement with said positionable member; second differential bar means connecting said sensing means and said second control mechanism; coupling means interconnecting said first and second differential means; and manually operable drive means normally biased to a rest position holding said sensing means out of engagement with said positionable member and movable through a position releasing said sensing means, the release of said sensing means into engagement with said positionable member causing the movement of said first and second control mechanisms and thereby automatically adjusting said shutter speed setting member and setting said lens diaphragm in accordance with scene brightness and film sensitivity.

3,125,940
PHOTOGRAPHIC CAMERA
Ernest P. Taubes, Rochester, N.Y., assignor, by mesne assignments, to Picker X-Ray Corporation, Waite Manufacturing Division, Inc., Cleveland, Ohio, a corporation of Ohio, and Ideax Corporation, New York, N.Y., a corporation of New York
Filed Mar. 30, 1960, Ser. No. 18,566
12 Claims. (Cl. 95—34)



1. A photographic camera comprising a body having an aperture member defining a focal plane, a film supply magazine detachably mounted on said body for holding a supply of photographic film, pressure means mounted in said supply magazine for pressing successive portions of said film against said aperture member, and a film take-up magazine detachably mounted on said supply magazine and removable as a unit therewith from said camera body and also separately removable from said supply magazine so that said take-up magazine may be separately taken to a darkroom for processing film therein, while leaving the film in the supply magazine undisturbed.

3,125,941
VENTILATOR
Russell A. Grout, Royal Oak, and Charles E. Ayotte, Livonia, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Mar. 13, 1961, Ser. No. 95,053
8 Claims. (Cl. 98—18)



1. A ventilator adapted to be mounted in a vehicle body in a position to receive intake air through the ram effect of vehicle movement,

said ventilator comprising:

a shell having front, rear, top, bottom and side walls with the front and rear walls having apertures therein,

said front wall aperture comprising an air inlet opening and said rear wall aperture an air outlet opening when in vehicle body mounted position of said ventilator;

a water separation baffle extending between said top and bottom walls,

said baffle being substantially V-shaped with the apex of the V in juxtaposition to said front wall and substantially vertically bisecting said air inlet opening,

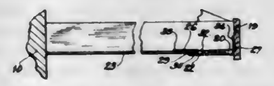
each leg of said V-shaped baffle extending at an acute angle to said front wall and terminating in spaced relationship to a respective side wall of said shell to form an air passageway around the terminal end of each leg,

the extent of each leg being such that said baffle prevents straight line air flow from said air inlet opening to said air outlet opening,

the abrupt change of direction resulting from the impingement of an air stream on said baffle causing air-water separation and air flow diversion to said side walls and the further change of direction resulting from air flow around said baffle to said air outlet providing further air-water separation,

and a water outlet located in said bottom wall within the bight of said V-shaped baffle providing for drainage of water from said shell.

3,125,942
SOFFIT VENTILATOR
Lester L. Smith, Peoria, Ill.
(P.O. Box 68, Princeville, Ill.)
Filed Oct. 26, 1960, Ser. No. 65,115
3 Claims. (Cl. 98—37)

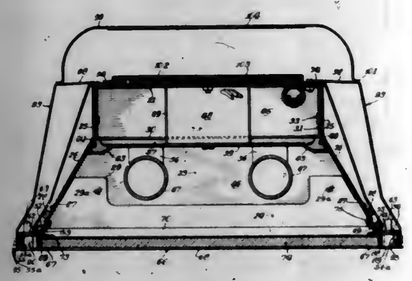


1. In combination with a soffit structure of a building which includes a horizontally disposed soffit panel extending outwardly from a side wall of the building in angular relationship thereto and having a slot-type opening therethrough from the exterior to the interior of the structure and which slot-type opening extends longitudinally of the soffit structure, a unitary strip-type ventilator providing a weather protective ventilating cover for said slot which extends longitudinally along said soffit panel and comprises a long and relatively narrow sheet metal strip of a width greater than that of said slot and having integrally formed flanges extending in substantially parallel and opposed relationship to one another along opposite longitudinal sides of a generally planar mid-region, said flanges having portions extending into the soffit structure in angular relationship to said mid-region of the strip and being engaged with and secured to portions of said soffit structure with at least one of said flanges engaging and secured to said soffit panel, said mid-region of the strip having a width substantially equal to that of said slot and being in parallel and generally flush relationship to the exterior of said soffit panel, said mid-region of the strip also having series of vent openings therein arranged in rows which extend laterally of said mid-region between said flanges, said vent openings having louvers thereover which extend angularly from the surface of the mid-region of the strip toward the interior of said soffit structure and one of said flanges and away from said side wall of the building, and said rows of vent openings being in spaced relationship to one another longitudinally of the strip, the one of said flanges which engages and is secured to the soffit panel having a generally C-shaped section with integral parts including spaced and parallel gripping parts connected by a web and wherein said C-shaped section opens away from the mid-region of the strip and in which a marginal portion of said soffit panel is received.

3,125,943
COMBINED LIGHTING AND VENTILATING FIXTURE

Robert S. Geocaris, Broadview, and William C. Agrell, Forest Park, Ill., assignors to Thomas Industries Inc., Louisville, Ky., a corporation of Delaware

Filed Apr. 3, 1961, Ser. No. 100,262
1 Claim. (Cl. 98—40)

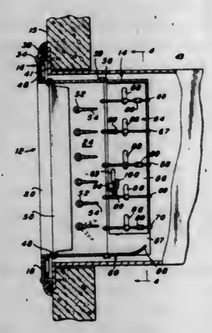


In a combined lighting and ventilating fixture, a downwardly opening housing substantially rectangular in plan comprising a top and side and end walls, said side walls having outwardly extending shoulders at their lower edges provided with air flow openings and flanges extending downward from said outwardly extending shoulders, a door closing the bottom of said housing having side rails of channel cross section underlying said outwardly extending shoulders and having upper openings in substantial register with said air flow openings and lower openings offset relative to said upper openings, and means for supplying air under pressure to said air flow openings.

3,125,944
SUPPLY GRILLE AND/OR REGISTER

Alan L. Radcliff, Miami, Fla., assignor to Air Guide Corporation, Miami, Fla., a corporation of Florida

Filed Feb. 8, 1962, Ser. No. 171,865
8 Claims. (Cl. 98—110)

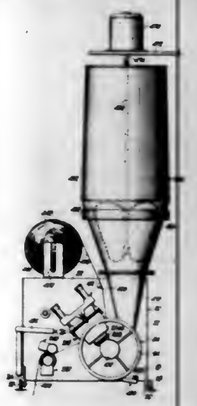


1. Apparatus comprising a register, said register including a grille and a damper, said grille having corners reinforced and mechanically interconnected by an L-shaped corner lock, said grille having a T-shaped slot on a rear surface thereof, a seal having a T-shaped portion disposed within said groove, spring clip means securing said damper to said grille, said grille including vanes, the ends of said vanes being rotatably mounted in bushings, said bushings being made from a self-lubricating material, said grille being provided with a seat defined by a peripherally disposed flange, said damper having a portion within said flange in abutting contact with said seat, and said spring clip means extending across said flange.

3,125,945
COFFEE VENDING MACHINE HAVING SINGLE CUP BREWING MECHANISM

Theodore L. Hanson, Kansas City, George C. Bell, Independence, and Charley Ward Hunter, Raytown, Mo., assignors to The Vendo Company, Kansas City, Mo., a corporation of Missouri

Filed Oct. 28, 1960, Ser. No. 65,808
20 Claims. (Cl. 99—289)



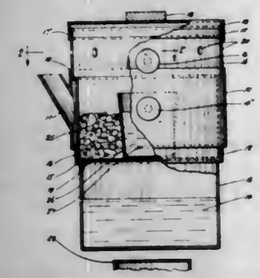
1. In beverage brewing apparatus, the combination of: beverage material dispensing means; brewing liquid supply means; rotatable structure having recess means therein disposed to receive said material and said liquid from said dispensing means and said supply means respectively when said structure is in different angular positions of rotation thereof relative to said dispensing means and said supply means; power means operably coupled to said structure for rotating the latter successively into said positions thereof; a material support element shiftably mounted in said recess means for movement axially of the structure and provided with a liquid passage therethrough for conveying liquid from the dispensing means to the outwardly facing portion of said recess means, manually operable adjustment means on the structure and engaging the element for shifting the element axially of the structure within said recess means in response to manual actuation of the adjustment means to permit selective variation of the amount of said material which may be received in said recess means; and control means operably coupled with said power means and said liquid supply means for controlling the operation thereof in cooperative relationship.

3,125,946
FOOD AND BEVERAGE COOKER

Fernando Falla, 59 Elm St., Millburn, N.J.

Filed May 23, 1960, Ser. No. 30,870
6 Claims. (Cl. 99—342)

1. A cooking utensil for food comprising; an open top vessel having three different internal diameters, these diameters defined by two outwardly directed inner supporting flanges located intermediate its height, the lower portion of the vessel having the smallest diameter, a short height central portion having an intermediate internal diameter and the upper portion having the largest internal diameter; a removable cylindrical cooking unit with perforated bottom having three internal diameters defined by two outwardly directed inner supporting flanges, one flange intermediate its height and the other at its top, the lower section outside diameter of the cooking unit corresponding to the inner diameter of the intermediate portion of the open top vessel, the upper portion outside diameter of the cooking unit corresponding to upper portion internal diameter of the open top vessel and the top

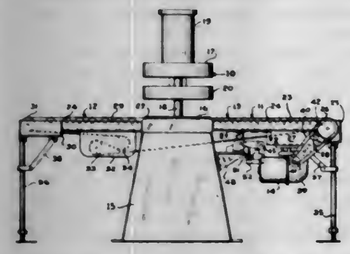


internal diameter defining a supporting flange for a cover or a cylindrical cup shaped vessel; said cooking unit resting, by its bottom, on the lower flange of the open top vessel; the lower portion of the cylindrical cooking unit and the upper portion of the open top vessel defining a closed insulating air space surrounding the cooking portion of the cooking unit.

3,125,947
RECIPROCATING PRESS

Anthony S. Hubin, Appleton, Wis., assignor to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware

Filed Jan. 3, 1962, Ser. No. 164,028
5 Claims. (Cl. 100—53)

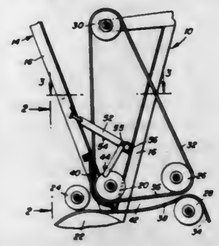


2. In mechanism for compressing articles of yieldable material, the combination of a platen, a pressure plate, a motor for moving said pressure plate toward said platen so as to compress the yieldable material articles between the pressure plate and platen, an endless belt having a plurality of spaced openings therethrough and passing over said platen and arranged to receive the yieldable material articles at a loading station and move them a predetermined distance to a station between said pressure plate and platen for compression, a motor for driving said belt, a manual control for said belt driving motor to initiate movement of said belt to bring the yieldable material articles loaded on the belt between said platen and pressure plate, first control mechanism to render said belt motor inoperative, second control mechanism to render said pressure plate motor operable to cause the pressure plate to move toward the platen, a control device connected to both of said control mechanisms and including a follower riding on said belt and movable into said belt openings to cause said first control mechanism to de-energize said belt motor to stop said belt and to cause the second control mechanism to energize said pressure plate motor to move said pressure plate toward said platen for compressing the yieldable material articles, and means for moving said pressure plate away from said platen after such compression.

3,125,948
CLEANER BAR FOR UPPER BALER DRIVE ROLLER

Keith Redding, Hamilton, Kans.

Filed Mar. 8, 1963, Ser. No. 263,900
2 Claims. (Cl. 100—88)

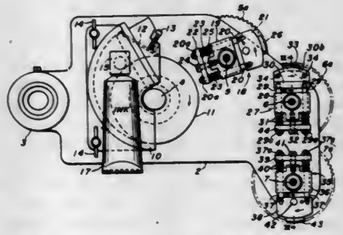


1. In combination with a roll-type baling machine having a frame and upper and lower spaced apart and opposing drive rolls journaled from said frame and having upper and lower endless bands entrained thereabout and projecting rearwardly of said rolls in generally paralleling upper and lower reaches moving in opposite directions, said frame including frame portions at opposite ends of said rolls, a cleaner bar attachment for preventing bale material from wrapping around said upper roll, said cleaner bar attachment comprising a pair of generally parallel arm members interconnected at one pair of corresponding end portions by means of an elongated bar member, means securing said other pair of corresponding end portions of said arm members to said frame portions with said elongated bar member disposed above and closely overlying the upper peripheral portion of said upper roll and generally paralleling the latter, said elongated bar member being spaced from the free ends of said one pair of end portions of said arm members and the portions of the free end portions of said arm members projecting beyond said bar member loosely embrace the opposite ends of said upper roll.

3,125,949
OFFSET PRINTER FOR MARKING SMALL OBJECTS

John S. Ayers, Scott Township, Allegheny County, Pa., assignor to Jas. H. Matthews & Co., Pittsburgh, Pa., a corporation of Pennsylvania

Filed Jan. 15, 1962, Ser. No. 166,122
8 Claims. (Cl. 101—38)



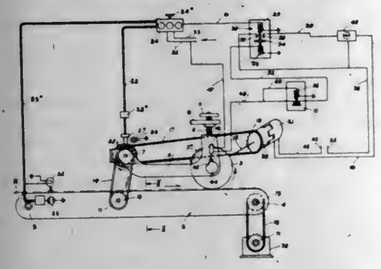
1. An offset printer comprising a supporting frame, a plurality of parallel rotatable shafts mounted in the frame, a gear on each of the several shafts with the several gears intermeshing to form a gear train for rotating the several shafts in unison, means for driving one of the shafts, an ink fountain, a dip roll on one of the shafts rotatable in

the ink fountain, an ink transfer pad assembly on the second shaft having a segmental pad element at its periphery, a type holding assembly on the third shaft having a segmental type element at its periphery of substantially the same radius of curvature as the pad, an offset blanket element assembly on a fourth shaft having a segmental printing blanket element at its periphery also of substantially the same radius of curvature as the pad and type elements, the several assemblies being so positioned on their respective shafts that the pad element rolls first against the dip roll and then against the type element of the assembly on the third shaft, and the segmental type element moves first against the pad element and then against the offset blanket segment, which last-named segment rotates from its position of contact with the printing element to a printing station, said gears for rotating the second, third and fourth shafts being in meshing relation with one another and each being of the same pitch diameter as the other whereby they rotate in isochronism.

3,125,950
APPARATUS FOR PRINTING SUCCESSIVE SHEETS AT PRE-SELECTED POSITIONS

John S. Ayers, Scott Township, Allegheny County, Pa., assignor to Jas. H. Matthews & Co., Pittsburgh, Pa., a corporation of Pennsylvania

Filed Aug. 21, 1961, Ser. No. 132,812
5 Claims. (Cl. 101—212)

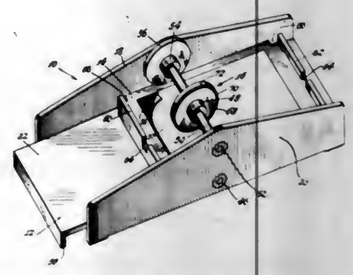


2. Spot printing apparatus of the class described comprising a conveyor for moving sheets to be printed upon beneath a printing cylinder, a printing cylinder positioned over the conveyor for printing on sheets being so transported by the conveyor, driving means for the conveyor, means connected with the conveyor for driving the printing cylinder to co-relate the peripheral speed of the printing cylinder to the linear speed of the sheets being transported by the conveyor, a combined electromagnetically-operated clutch and brake mechanism operatively interposed between the printing cylinder and its driving means for holding the cylinder from rotation and holding the clutch disengaged and operative to engage the clutch and release the brake to cause the cylinder to be rotated, an electric circuit for the electromagnetically-operated clutch and brake mechanism including an electromagnetically-operated switch having two positions, in the first of which it effects the release of the brake and engagement of the clutch to rotate the drum and in the other of which it effects setting of the brake and disengagement of the clutch, means controlled by rotation of the cylinder effective to move the switch to the second position after a single rotation of the cylinder, and measuring means driven by the conveyor and responsive to any speed variation thereof controlled by the movement of the sheet to be printed upon effective for moving the switch to the first position, said last-named means comprising a sensing head responsive to the passage of the leading edge of a sheet to be printed upon and a selectively adjustable electronic impulse counter which is energized by the passage of the leading edge of a sheet past the sensing means, an impulse generator driven by the conveyor for generating impulses that are registered by the counter only when it is so energized, said counter being connected with said switch to move it to the first position after a selected number of impulses has been counted, and means for de-energizing the counter when the switch is so moved whereby the printing cylinder is revolved but once for each sheet.

3,125,951
PRINTING DEVICE

Brooks Lyman, Pound Ridge, and Newton C. Coleman, Hartsdale, N.Y., assignors to Pitney-Bowes, Inc., Stamford, Conn., a corporation of Delaware

Filed Apr. 14, 1961, Ser. No. 103,043
1 Claim. (Cl. 101—250)



A device for printing data on documents; said device comprising:

a base providing a bed having an upper surface;

a carriage adapted to be supported by said base and having a flat lower surface for movement along the upper surface of said bed and through a fixed straight path;

a back-up roller supported by said base intermediate the ends of the bed for rotation about a first fixed axis extending below and transversely of said straight path;

the uppermost extremity of the outer peripheral surface of said back-up roller lying at a location extending slightly above said upper surface of the bed to provide line rolling contact with said flat lower surface of the carriage at said location as the sole back-up pressure for the carriage;

a shaft;

a first platen roller and a second platen roller mounted on said shaft for rotation about a second axis above and parallel to said first axis;

bearing means mounting said shaft on said base against yielding movement away from said back-up roller;

a plurality of type bars supported by said carriage;

each of said type bars carrying a row of type faces and being settable along a path extending perpendicular to said fixed straight path to bring one of said settable type faces of each of said rows into alignment with said first platen roller;

a plurality of additional type faces supported by said carriage;

said second platen roller being aligned with said additional type faces and with a portion of the path along which the type faces of each of said rows is settable;

whereby when a document and a carbon sheet are placed over said aligned type faces, and the carriage is moved between and past said back-up roller and said platen rollers, an impression of the type faces respectively aligned with said platen rollers is printed on the document;

the radius of said first platen roller being greater than the radius of said second platen roller and the height of said additional type faces being greater than the height of said settable type faces, thereby preventing the printing of an impression on the document of any of the settable type faces then aligned with said second platen roller; and

the radius of said first platen roller being greater than the radius of said second platen roller by an amount slightly greater than that by which the height of said additional type faces is greater than the height of said settable type faces, thereby favoring printing of impressions of the settable type faces then aligned with said first platen roller over printing of impressions of the additional type faces aligned with said second platen roller.

3,125,952
METHOD FOR FORMING COMPOSITE PRINTING PLATES

George Waldemar Bungay, New York, N.Y., assignor to Electrographic Corporation, New York, N.Y., a corporation of Delaware

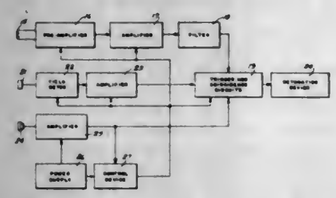
Filed Feb. 14, 1961, Ser. No. 89,280
2 Claims. (Cl. 101—401.1)

1. The method of producing curved printing members comprising positioning an arcuate printing plate with a printing face on its convex surface between a pair of spaced cooperating arcuate dies, filling the area between the dies and against the concave surface of said plate with a fluid plastic material of a first given thickness, enclosing said dies, plate and resin material with a housing, pressurizing the interior of said housing to subject the plastic material to air pressure as it hardens, venting any air trapped by said fluid plastic from said area to effect complete distribution of the plastic material therefrom, interrupting said air pressure before said plastic material has achieved its full hardness, and applying a backing member by pressure directly to said plastic material remote from said printing plate prior to complete hardening of said plastic material to form a composite printing member whereby said plastic material assumes a second smaller given thickness such that the composite printing plate formed thereby is free from irregularities and is within pre-selected tolerance limits.

3,125,953
SYSTEM FOR TRIGGERING DETONATION BODIES

Friedrich M. O. Foerster, Grathwohlstrasse 4, Reutlingen, Germany

Filed Aug. 23, 1960, Ser. No. 51,459
1 Claim. (Cl. 102—18)

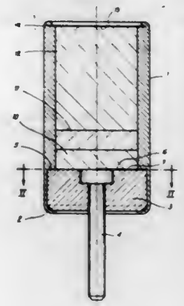


In a mine detonation system, means for sensing A.C. magnetic fields to produce an A.C. voltage signal, first amplifier means having an input connected to said sensing means to respond to said A.C. voltage signal and to develop a first amplified signal, second amplifier means responsive to said first amplified signal to develop a second amplified signal of higher intensity, a detonation device, triggering means connected to said second amplifier means to respond to said second amplified signal and connected to said detonation device to trigger said device when the amplitude of said second amplified signal exceeds a certain value, a power supply, a control device connecting said power supply to said first and second amplifier means, an electro-acoustical device, third amplifier means having an input connected to sad electro-acoustical device and having an output connected to said control device to control said control device and to apply power from said power supply to said first and second amplifier means when the output of said electro-acoustical device exceeds a certain value.

3,125,954
ELECTRIC DETONATORS

Jean Vilbajo, Burcht, Antwerp, Belgium, assignor to "A.V.R.," Achat, Ventes, Representations, Société Anonyme, Brussels, Belgium

Filed July 14, 1959, Ser. No. 826,957
Claims priority, application Belgium July 28, 1958
2 Claims. (Cl. 102—28)



2. An electrical detonator, comprising two separated electrodes, a line-shaped electrical conductor extending between said electrodes and adapted to constitute an electrical connection therebetween, said conductor having a gap separating it into a portion connected with one of said electrodes and another portion connected with the other one of said electrodes, and at least one explosive substance in contact with said conductor, said conductor being chemically neutral with respect to said substance, said gap having slanting edges.

3,125,955
TOY ROCKET MOTOR

Vernon D. Estes, 5505 Tejon, Denver 11, Colo.

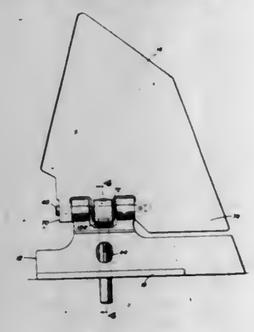
Filed July 24, 1959, Ser. No. 829,261
2 Claims. (Cl. 102—34.2)



1. In a toy rocket, the combination of an elongated rocket body, a multiple stage unit motor charge means, and aerodynamic guide means carried by said rocket body for causing said rocket body to tip from one position to

another position during a delay in propulsion thereof, said motor charge means being disposed within said rocket body and having one open end forming a discharge orifice, said motor charge means comprising ignition means at said discharge orifice, rapid burning propulsive first charge means for moving said rocket body along a first path in a first position with the longitudinal axis thereof extending in a first general direction, slow burning delay second charge means for providing a delay in propulsion of said rocket sufficient to permit said aerodynamic means to cause said rocket body to tip to a substantially different second position with the longitudinal axis thereof extending in a second general direction at least substantially transverse to said first general direction, and rapid burning propulsive third charge means for moving said rocket body along a second path in said second general direction, said first, second and third charge means being a compressed tubular cylindrical body with said first, second and third charge means in longitudinal alignment and abutting contacting successive burning transfer relation, said first charge means being disposed adjacent said discharge orifice, said first charge means forming a substantial portion of said compressed cylindrical body.

3,125,956
FOLDABLE FIN
Sverre Kongelbeck, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Oct. 10, 1961, Ser. No. 144,272
4 Claims. (Cl. 102—50)



1. A foldable fin for an aerial vehicle, including a base portion having a plurality of upwardly extending, spaced projections thereon, a body portion having a plurality of downwardly extending, spaced projections thereon, said projections on said base and said body portions being interleaved and having aligned bores extending therethrough, a pin disposed within said bores for hingedly connecting said two portions, a generally arcuate convex cam surface on at least one of said projections on said body portion, said cam surface being disposed normally to said body portion and said base portion and having a pair of spaced grooves therein, one of said grooves being defined by rounded surfaces and being disposed near the top of said cam surface and the other of said grooves having a wedge shape and being disposed at the bottom of said cam surface, and a spring-biased detent means for each cam surface, said detent means being disposed within said base portion and positioned to engage said cam surface, said detent means being engageable with said one of said grooves for retaining said body portion in a folded position against relatively small erecting forces, and being engageable with said other of said grooves for securing said body portion in position after it has been erected.

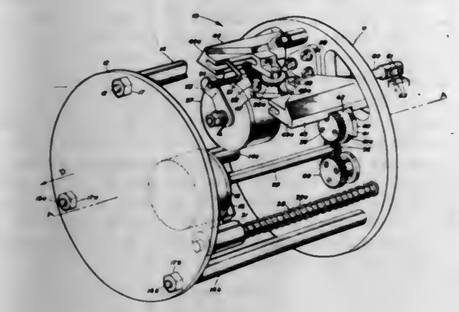
3,125,957
SLIDING FIN PROJECTILE
Henry S. Lipinski, Philadelphia, Pa., assignor to the United States of America as represented by the Secretary of the Army
Filed Feb. 23, 1962, Ser. No. 175,373
5 Claims. (Cl. 102—50)
(Granted under Title 35, U.S. Code (1952), sec. 266)



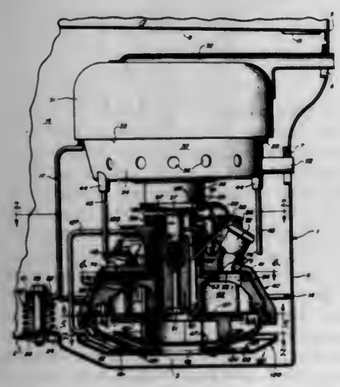
1. In a fin stabilized projectile of the type having a penetrator body portion at least about 5 calibers in length and a sabot by means of which the muzzle velocity of said projectile may be raised, the combination therewith of the improvement for reducing balloting and erosion and heating of fin surfaces by hot products of combustion when said sabot is located in front of said fins, said improvement including, fins for stabilizing said projectile in flight, a sabot located contiguous to a rear end of said fins, said sabot being constructed of plural segments adapted to fall from said projectile during flight and in response to air pressure, a first abutment to transmit a forward thrust to said projectile from said sabot during forward movement in the gun, and a second abutment against which the fins impinge on being slid rearward by air pressure during an early portion of the projectile flight after leaving said gun and after said sabot segments have fallen away, the center of gravity of said fins and sabot as a unit being substantially coincident with the center of gravity of the projectile within the gun.

3,125,958
SAFETY AND ARMING SYSTEM
Harvey A. Foure, Landover, Md., assignor to the United States of America as represented by the Secretary of the Army
Filed Mar. 29, 1961, Ser. No. 99,325
1 Claim. (Cl. 102—78)
(Granted under Title 35, U.S. Code (1952), sec. 266)

In a safety and arming system for use in a missile, a first clock and a G weight locking said clock against rotative movement, said G weight being aligned in said system in such a manner that acceleration of the system produces movement of said G weight a sufficient amount to unlock said clock for rotative movement, a pair of butterfly weights, said weights being pivotally mounted approximately centrally thereof and having free ends which approach each other in response to deceleration forces produced by missile re-entry, a gear connected to each weight at the point of pivot, each gear meshing so that the force components which are substantially perpendicular to the missile's longitudinal axis are effectively canceled, while those parallel to the longitudinal axis cause said inward movement of the weights, a cam driven by said first clock positioned to engage and lock said pair of butterfly weights from pivotal movement, said pair of weights being unlocked when said first clock rotates the cam away from locking said pair of butterfly weights, a second clock means, an arm extending from said second clock means and normally engaging one of said pair of weights and locking said second clock against rotational movement until said butterfly weights are moved a predetermined distance inward in response to deceleration of said missile, said second clock arming the missile warhead.

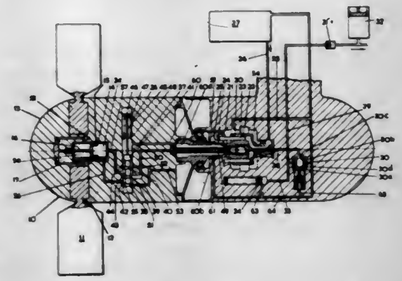


3,125,959
PUMPING APPARATUS
Edgar S. Stoddard and Frederick E. Mergen, Oak Park, Ill., assignors to General Electric Company, a corporation of New York
Filed Dec. 26, 1962, Ser. No. 246,939
14 Claims. (Cl. 103—2)



1. Pumping apparatus, comprising a casing having an intake and a plurality of discharge passages, said discharge passages being angularly displaced one from the other on equal radii;
a valve structure within said casing upstream of said discharge passages, said structure including a body portion and a cylindrical hub portion supporting said body portion within said casing for rotation relative thereto;
said body portion having a passage selectively registrable with any one of said discharge passages;
means engaging with said said hub portion to rotate said valve structure;
fixed stop means for limiting rotation of said valve structure to bring the said body portion passage into registration with one of said casing discharge passages;
movable stop means for limiting rotation of said valve structure to bring the said passage thereof optionally into registry with another of said discharge passages;
means for selectively actuating said movable stop means between operating and non-operating positions;
means for energizing said rotation means;
and means for effecting translation of fluid from said intake through said body portion passage and the casing passage in registry therewith.

3,125,960
PUMPING DEVICES
John A. Chilman, Clatter Grove, Painswick, England, assignor to Dowty Rotol Limited, Cheltenham, England, a British company
Filed Jan. 8, 1962, Ser. No. 164,909
Claims priority, application Great Britain Jan. 12, 1961
4 Claims. (Cl. 103—35)

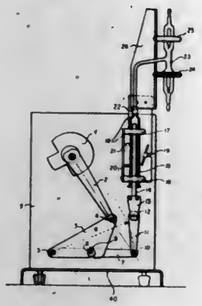


1. A pumping device comprising a wind motor having blades, a fluid-pressure pump connected to be driven by the wind motor, a fluid pressure motor connected to the blades of the wind motor for adjusting their pitch, a rotational governor including a fluid valve for controlling the supply of fluid from the pump to the fluid pressure motor and hence the pitch of the blades, the fluid valve having a first datum position corresponding to a first constant speed of rotation of the wind motor and to a pump-on load conditions, and means responsive to a delivery condition of the fluid-pressure pump so that when the delivery condition has a predetermined value, the fluid valve is displaced from its first datum position to a second datum position corresponding to a second constant speed of rotation of the wind motor, and to a pump off-load condition.

3,125,961
DRIVING MECHANISM PARTICULARLY FOR MICROPUMPS
Jiri Hrdina, Prague, Czechoslovakia, assignor to Ceskoslovenska Akademie Ved, Prague, Czechoslovakia
Filed Sept. 4, 1962, Ser. No. 221,110
1 Claim. (Cl. 103—38)

In a micropump particularly for use in chromatography the improvement comprising in combination
(*a*) a vertical frame plate,
(*b*) a horizontal drive shaft rotatably mounted in said frame plate;
(*c*) a substantially vertical pump cylinder with a pistonlike member reciprocable therein, and operating means for said pistonlike member actuated by said drive shaft, said cylinder and said operating means mounted on one side of the frame plate;

(*d*) the said operating means including an eccentric mounted on said shaft, a pair of levers in angular relation rotatably mounted at their coinciding ends upon said frame plate, means adapted to adjustably couple said levers in different angular relationship, a pitman operatively connecting said eccentric and the outer end of one of said levers, a connecting rod articulately connecting the outer end of the other



lever with the pistonlike member, the longitudinal axis of said connecting rod in its intermediate position coinciding with the axis of the pistonlike member, and the extended longitudinal axis of the pitman in its intermediate position passing through the articulated outer end of said other lever;

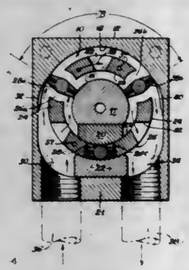
(*e*) an electric driving means for said drive shaft mounted on the other side of the frame plate.

3,125,962

ROTARY FLUID DISPLACEMENT DEVICE

Reginald S. Lanier, Minneapolis, Minn., and Wolf F. Muller, New York, N.Y., assignors to Washington Scientific Industries, Inc., Minneapolis, Minn., a corporation of Minnesota

Filed June 6, 1961, Ser. No. 115,146
8 Claims. (Cl. 103—140)



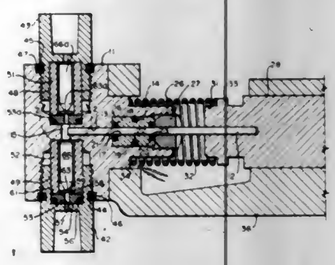
1. A fluid displacement device comprising in combination: a housing defining an annular cavity having an axis and inner and outer cylindrical faces of predetermined annular spacing, said housing further defining angularly spaced fluid inlet and outlet passages to the cavity and forming extensions of tangents to diametrically opposed points on the cavity to define a U-shaped flow path through substantially one-half of the cavity; a sleeve-like rotor disposed within the cavity, extending the axial length thereof, having its axis coaxial with the axis of the cavity, and rotatably supported in relation to the housing; a pair of complementary shoes affixed to the inner and outer faces of the cavity, respectively, and extending to fluid tight spacing in relation to the rotor, the shoes being located between the inlet and outlet passages and defining fluid sealing surfaces spaced circumferentially by distance at least equal to the annular spacing of said faces, the rotor having at least three windows extending the axial length of the cavity and located at predetermined equal angular spacings; vanes located in the windows, respectively, and swingable about axes parallel to the axis of the rotor, each vane being adapted in a radial position to establish a fluid seal across the cavity and in a circumferential position to nest within the confines of the rotor; the rotor further having windows intermediate said first windows for fluid entrance to and exit from the inner space formed by the cavity and rotor; and means operative to hold each vane in fixed radial position for rotor rotation at least encompassing said predetermined angular spacing opposite to the shoes to effect working stroke, to orient the vanes in circumferential nesting position in relation to the rotor to pass between the shoes and to rotate the vanes between said positions during intermediate travel thereof, the circumferential length of the shoes being substantially less than the circumferential spacings of the vanes.

3,125,963

FLUID FEED PUMP

Ernest M. Whitley and Florindo Viti, Palo Alto, Calif., assignors to Beckman Instruments, Inc., a corporation of California

Filed Oct. 31, 1960, Ser. No. 66,085
2 Claims. (Cl. 103—153)



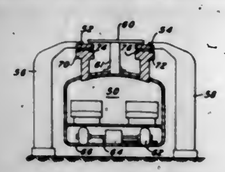
1. In a fluid pump having a body, a pumping chamber in the body, a piston projecting into said chamber and operable for reciprocating movement in said chamber, a threaded fluid passage formed in said body and communicating with said chamber, said passage including a shoulder in a plane transversely of said passage, a valve assembly comprising a fluid coupling member in said passage and having a cylindrically formed interior open at one end, said coupling member having a transversely extending abutment portion in said interior disposed a predetermined axial distance remote from said open end, a seat member having an opening therethrough to communicate with said passage, said seat member including spaced, concentric inner and outer raised rims, one surface of both said rims lying in a plane common to each, said outer rim forming a support surface and said inner rim forming a seat surface, a cylindrical guide member received by said coupling member and having a predetermined axial extent greater than said predetermined axial distance, said guide member being disposed coaxially of said seat member and arranged to bear upon said seat member, said guide member and said seat member being interposed between said shoulder and said abutment, threads formed in said coupling member to engage said threaded passage to force said guide member against the outer rim of said seat member, and a disk having a planar surface adapted to rest on said inner rim to selectively seal said opening, said disk being loaded against said inner rim.

3,125,964

TRANSPORTATION APPARATUS

Jerry S. Silverman, 2112 N. 58th St., Philadelphia 31, Pa.

Filed Mar. 22, 1962, Ser. No. 181,757
3 Claims. (Cl. 104—89)



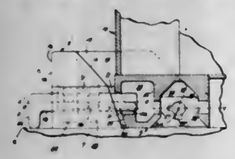
1. A transportation apparatus comprising an overhead rail means, a vehicle below and extending along said rail means, magnetic means on top of said vehicle cooperating with said rail means to bias said vehicle away from ground level, the magnetic force of said magnetic means being sufficient to offset the effect of gravity on said vehicle, control means, said control means including gap sensing means sensitive to the gap between said magnetic means and said rail means, said control means maintaining the gap between said magnetic means and said rail means constant by control of said magnetic means in accordance with signals received from said gap sensing means, and means for propelling said vehicle with said vehicle being guided by said rail means.

3,125,965

CONTAINER-TO-CARRIER FASTENING SYSTEM

Kenneth L. De Penti, Mayfield Heights, Edward Kozak, Cleveland, and David J. Wyrough, Maple Heights, Ohio, assignors to National Castings Company, a corporation of Ohio

Filed May 4, 1959, Ser. No. 810,894
10 Claims. (Cl. 105—366)



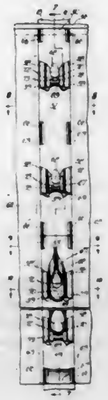
1. A system for fastening a container to an upwardly facing surface of a support comprising: a member of the container fixedly included in the structure thereof as a substantially square bottom corner portion having an undersurface and two side walls substantially in the planes of outer corner-forming sides of a container; said member having a cavity and a recess separated by an inner vertical wall and located horizontally inwardly in the order named from one of said outer lateral walls; the recess forming an opening in said undersurface and extending upwardly therefrom; said container member having horizontal openings extending inwardly from the exterior of both of said side walls along generally horizontal axes crossing at substantially right angles centrally within the recess; one of the axes extending centrally through both the cavity and the recess; an anchor member secured to the support and projecting thereabove, at the normal position of the container on said support, into adjacent vertically overlapping relation with the container member to dispose a horizontal opening therethrough in registry with one of said horizontal openings in the container member said opening of the anchor member and said one opening of the container member constituting a passageway along one of said axes; and key means comprising a shaft portion insertable through said openings of the members in registry to a position substantially occupying said passageway.

3,125,966

CAR CONSTRUCTION

Malcolm S. Johnson, Flossmoor, Ill., assignor to Illinois Railway Equipment Company, Chicago, Ill., a corporation of Illinois

Filed Feb. 27, 1959, Ser. No. 796,129
2 Claims. (Cl. 105—369)



1. A lading tie anchor adapted to be secured to a vertical metallic structural post of a railway freight car comprising an anchor member provided with a cavity having aligned upper and lower posts extending vertically from its upper and lower sides respectively the juxtaposed ends of which are in spaced relation for receiving a lading tie therebetween for placing therearound, the upper end portion of said lower post having a concave surface inclined upwardly toward the interior of said cavity and the lower end portion of said upper post having a convex surface facing downwardly to facilitate entrance of said lading tie into said cavity, said concave surface at said upper end portion of said lower post and said convex surface at said lower end portion of said upper post being directly opposite and closely adjacent each other, the rear surfaces of said upper and lower posts being coplanar and the upper portion of the rear surface of said upper post being inclined downwardly and toward the entrance side of said cavity for directing a lading tie applied only to said upper post to engage both of said upper and lower posts when tension is applied to the lading tie, said anchor member having means associated therewith for securement to said structural post.

3,125,967

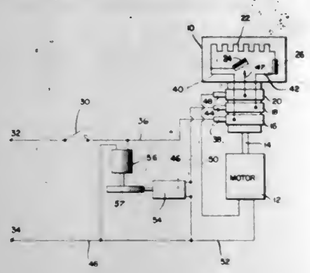
CONTROLS FOR CANDY COTTON MACHINE

John Bowe, 29 Maple St., Salisbury, Mass.

Filed Aug. 16, 1961, Ser. No. 131,783
3 Claims. (Cl. 107—8)

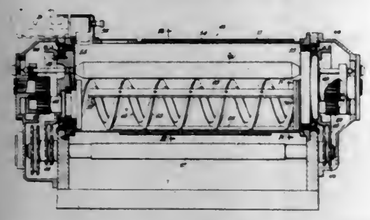
1. In a candy cotton machine including a spinner head, a heating unit within said head, and a motor for driving said head; a circuit connecting said heating unit in series with a source of electric power, a parallel circuit connecting said motor to said source of electric power, a main switch controlling both said circuits, a thermostat in said head near to said heating unit, an auxiliary switch connected in said parallel circuit with said motor and controlled by said thermostat to open when the temperature of the thermostat is lower than a predetermined value and to close when the temperature of the thermostat exceeds said value, a second thermostat in said head, and a switch in series with said heating unit controlled by said

second thermostat to open when the temperature of the second thermostat exceeds a predetermined value and to



close when the temperature of said second thermostat falls below the said predetermined value.

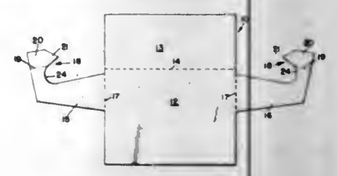
3,125,968
MANUFACTURE OF BREAD DOUGH
David King Baker, Wansford, Peterborough, England, assignor to Baker Perkins Holdings Limited, Peterborough, England, a British company
Filed Oct. 24, 1960, Ser. No. 64,409
Claims priority, application Great Britain Oct. 27, 1959
5 Claims. (Cl. 107—30)



1. Apparatus for the continuous production of developed bread dough, which includes an elongated cylindrical mixing chamber having at one end an inlet for dough ingredients and at the other end an outlet for developed dough, means for supplying dough ingredients continuously to said inlets, a mixing worm within said chamber which extends longitudinally of the chamber with its axis offset from the axis of said chamber and has a helical blade positioned close to the inner wall of the chamber, at least one mixing bar extending longitudinally of the chamber and attached to the exterior of said mixing worm, means imparting rotation to said mixing worm about its own axis and also about the axis of said chamber, a rod extending longitudinally within said chamber and situated close to the periphery of said mixing worm and means for rotating said rod about the axis of said chamber, said rod and said mixing bar cooperating to exert a stretching action on the dough and thereby develop the dough without the dough anywhere filling the mixing chamber.

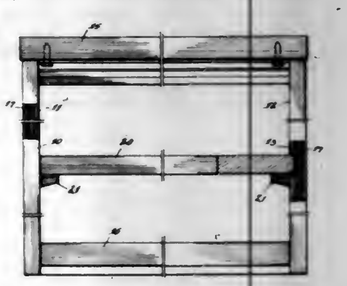
3,125,969
DISPOSABLE FOLDABLE BLANK TRAY FOR VEHICLE WINDOWS
Garland M. Tallent, 100 Padgett St., Corbin, Ky.
Filed Oct. 22, 1962, Ser. No. 232,035
2 Claims. (Cl. 108—46)

1. A tray for mounting adjacent a vehicle window or the like, comprising: a tray panel, a back splasher panel integrally connected to the rear edge of said tray panel along a fold line, a flat support arm integrally connected at each side of said tray panel along a fold line, said support arms each having hook-like ends adapted to engage over the sill of a vehicle window or like structure, an ear integrally connected to each hook-like end along a fold line, said ears being bendable through approximately 90° into a common vertically disposed plane and having downwardly extending tips adapted to extend



between a window pane and an adjacent window sill to fasten said tray to and depending from said window sill, and means for preventing undesired forward swinging of said back splasher panel, said means comprising the provision of sufficient width to said back splasher panel to extend the same behind said support arms.

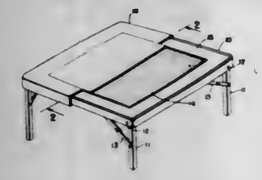
3,125,970
SHELF STRUCTURE
Charles W. Schneider, Kalamazoo, Mich., assignor to Brunswick Corporation, a corporation of Delaware
Filed Dec. 5, 1961, Ser. No. 157,128
4 Claims. (Cl. 108—109)



1. A shelf structure, comprising, upright posts respectively at four corners of a rectangular shelf area, means connecting the posts for maintaining the latter in fixed relationship to each other, each post including a laterally inwardly opening, vertically elongate channel portion of C-shaped cross section; a shelf supporting clip for each channel portion, each clip including a body of resilient material of generally U-shape in plan view, said body having an upper shelf supporting surface and parallel legs with free ends which normally together define a span having a greater width than the width of the channel opening and which are resiliently compressible toward each other to a width less than the width of the channel opening, the free ends of the legs of each clip projecting into the associated channel opening, having upper oppositely outwardly turned portions positioned at generally right angles to the length of said legs and disposed in face abutting relation with the channel portions at opposite sides of the channel opening to releasably latch the clip within the channel, and having lower portions terminating respectively in pointed lower ends adapted to dig into the channel back opposite the opening when a load is placed on the shelf supporting surface, thereby to retain the clip in place, the clip being retained in position in the channel by the resilient engagement of the clip legs with the sides of the channel opening when the shelf

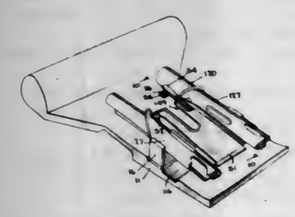
structure is not loaded, being vertically adjustable in the channel upon manual compression of the free ends of the legs thereof toward each other reducing the retentive effect, and being removable from the channel opening upon compression of the free ends to clear the opening; and a shelf member having four corner portions resting respectively on the shelf supporting surfaces of the clips.

3,125,971
CARD TABLE
William C. Wetherill, 1673 E. Willow Grove, Cheltenham Township, Pa.
Filed Sept. 14, 1961, Ser. No. 138,012
1 Claim. (Cl. 108—125)



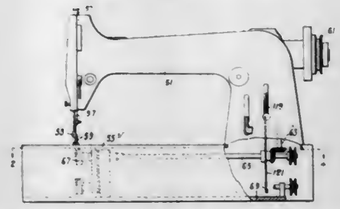
A card table having in combination;
(*a*) a rigid unitary top with a depressed central portion,
(*b*) said central portion being filled with a yieldable material selected from the group consisting of sponge rubber and synthetic plastic foam,
(*c*) a cloth cover attached to said rigid portion and covering said yieldable portion,
(*d*) and foldable legs to support said top portion.

3,125,972
SEWING MACHINE ATTACHMENTS
Max Blumenkrantz, New York, N.Y., and Edwin L. Jones, Englewood, N.J., assignors to Apex Sewing Machine Co., Inc., New York, N.Y., a corporation of New York
Filed Aug. 1, 1960, Ser. No. 46,568
2 Claims. (Cl. 112—139)



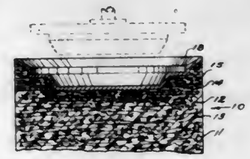
1. In a folder for the formation of welting or the like, a base, a pair of spaced means for guiding a pair of spaced cords, a wall structure operatively connected to each of said guiding means, said base and wall structures together forming a casing-like structure defining a graded passage wherein the borders of a fabric web being passed therethrough are folded around a pair of cords passed through said guiding means and adapted to be delivered to double stitching means which simultaneously forms a row of stitches in each of said borders of said web adjacent to each of said cords, said folder including means connecting at least one of said guiding means and its wall structure to said base in a manner permitting displacement relative to the other of said guiding means and its wall structure, whereby said folder can be adjusted to vary the spacing between said cords, a pin on each of said wall structures, a tongue pivotally supported on said pins between said wall structures, means projecting from at least one of said wall structures, and spring means extending between said tongue and said projecting means and resiliently urging said tongue against a fabric web passed therebelow.

3,125,973
ARRANGEMENT IN SEWING MACHINES FOR EXCHANGING BOBBINS
David Natanael Bernérus, Gardesgatan 11, Mariestad, Sweden, and Erik Lennart Johansson, Hertig Karls Allee 71, Orebro, Sweden
Filed May 23, 1961, Ser. No. 112,000
Claims priority, application Sweden May 28, 1960
22 Claims. (Cl. 112—186)



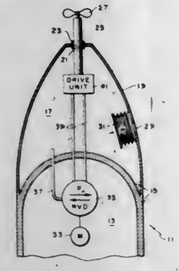
2. In a sewing machine having a reciprocating needle adapted to sew with a top thread and a bottom thread at a needle working position, means for supplying bottom thread to said working position, said means comprising a rotatable member positioned below said needle, at least two spaced hooks on said member for carrying a supply of said bottom thread, said hooks being spaced from each other so that when one is in the working position, the other is in a non-working, thread replenishing position, and means for rotating said member so that said spaced hooks are sequentially brought into said working position from the non-working position.

3,125,974
PUNCH AND DIE CONSTRUCTION
Harry A. Toulmin, Jr., Dayton, Ohio, assignor to The Commonwealth Engineering Company of Ohio, Dayton, Ohio
Filed Mar. 31, 1958, Ser. No. 724,951
3 Claims. (Cl. 113—49)



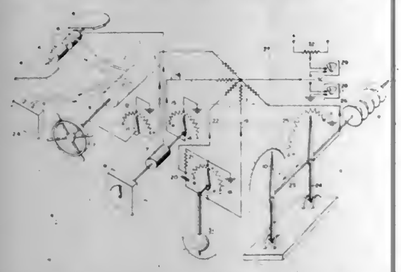
1. As an article of manufacture, a die composed of resin reinforced with metallized glass fibers, a metal working surface on said die consisting of a metal layer of uniform thickness composed of substantially pure metal, said glass fibers each having an outer shell of metal, said shell of metal being a few thousands of an inch thick and providing a yieldable working metal layer, said die having an impact resistant body portion arranged beneath and united to said metal working surface metal layer, said impact-resistant body comprising closely packed woven strands of said glass fibers as staple glass fibers which are uniformly dispersed in epoxy resin and which are embedded into and bonded with said resin providing a tough, abrasion resistant metal working die.

3,125,975
SUBMERGIBLE HULL PROPULSION AND CONTROL SYSTEMS
Leslie E. Alsager, Falls Church, Va., and Robert A. Brand, Bethesda, Md., assignors to the United States of America as represented by the Secretary of the Navy
Filed Apr. 25, 1962, Ser. No. 190,183
5 Claims. (Cl. 114—16)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A submergible vessel comprising:
(*a*) a substantially fixed pressure chamber having walls of sufficient strength to withstand all differential pressures to which the chamber may be subjected;
(*b*) a variable pressure chamber having walls capable of withstanding a differential in pressure lower than those to which the vessel is to be subjected;
(*c*) said fixed and variable pressure chambers being connected to form a unitary body;
(*d*) powerplant means located in said fixed pressure chamber;
(*e*) propeller shaft means located in said variable pressure chamber and responsive to said powerplant means for driving said vessel through water;
(*f*) a pool of liquid substantially entirely filling said variable pressure chamber;
(*g*) said variable pressure chamber having aperture means in the walls thereof; and
(*h*) volume changing means watertightly surrounding said aperture and disposed in the interior of said variable pressure chamber for varying the pressure in said variable pressure chamber in response to the sea water pressure acting through said aperture means on said volume changing means.

3,125,976
MOBILE UNIT CONTROL SYSTEM
Henry P. Birmingham, 2505 Branch Ave. SE., Washington 20, D.C.
Filed June 6, 1957, Ser. No. 664,144
15 Claims. (Cl. 114—23)
(Granted under Title 35, U.S. Code (1952), sec. 266)



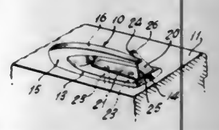
1. In a system for controlling a mobile unit, force exerting means for controlling direction of movement of said mobile unit in a selected plane, means for providing a first signal in dependency on displacement of said first mentioned means from a reference position, differentiating means for providing a second signal in dependency on rate of change of mobile unit angle, means for providing a third signal in dependency on mobile unit angle, means for combining the first signal, the second signal and the third signal to derive a resultant signal, an indicating device, and means for applying said resultant signal to said indicating device.

3,125,977
APPARATUS FOR REDUCING THE WAVE MAKING RESISTANCE FOR BOATS
Michinori Kurihara, 2297 Miyaji, Tsuyazaki-machi, Fukuoka Prefecture, Japan
Filed Nov. 23, 1960, Ser. No. 71,225
Claims priority, application Japan Dec. 1, 1959
3 Claims. (Cl. 114—67)



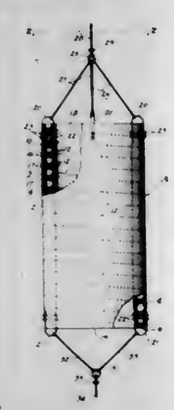
1. An apparatus for reducing the wave making resistance for boats comprising
a hull having an intake on both sides of its bottom,
a first guide pipe extending into said hull from each of said intakes,
a pump disposed in said hull and receiving the inner end of said guide pipe,
said pump being adapted to be driven and to draw seawater into said intakes,
an outlet pipe connected to the output end of said pump,
said hull including an ejection chamber,
the free end of said outlet pipe opening into said ejection chamber,
a plurality of guide walls disposed in said ejection chamber and guiding a water stream emerging from said pump through said ejection chamber,
the latter having a plurality of slits at its rear end for ejection of said seawater from said ejection chamber,
a plurality of branch pipes and a transverse pipe disposed above said ejection chamber and communicating with said slits,
said branch pipes communicating with said transverse pipe,
an air compressor disposed in said hull,
a second guide pipe connecting said air compressor with said branch pipes, and
said branch pipes having guide vanes of substantially U-shaped for guiding air emerging from said air compressor towards said slits.

3,125,978
SELF-ALIGNING CHOCK
Thomas L. Faul, Skaneateles, N.Y., assignor to Aqua-Marine Mfg. Ltd., Toronto, Ontario, Canada, a corporation of Canada
Filed May 8, 1962, Ser. No. 193,255
3 Claims. (Cl. 114—218)



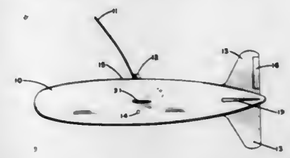
1. A line chock comprising a relatively elongated substantially flat base of plastic composition material including a first arm integral therewith and extending from its upper surface, adjacent one end, toward the other end of said base, the undersurface of said arm diverging, relative to the upper surface of said base, toward the free end of said arm to form a space between the undersurface of said arm and the upper surface of said base to receive a line, in an operative position, extending transversely of said space; said first arm being resiliently deflectable relative to said base to frictionally grip the line between said undersurface and said upper surface as the line moves inwardly along said first arm; and a metal anchor plate including a plate portion overlying the flat upper surface of said base and chock fastener elements projecting from said plate portions through apertures in said base for anchoring of said chock; said anchor plate having a second arm extending integrally upwardly from said plate portion adjacent said other end of said base and diverging from said plate portion toward said one end of said base, the inner side edges of said first and second arms being laterally spaced to define an opening for entry of a line therebetween in an intermediate position in which the line extends longitudinally of said first arm for entry into and removal from said space.

3,125,979
SHIP FENDER
James P. Darling, Mogadore, Ohio, assignor to The General Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed June 20, 1961, Ser. No. 118,372
10 Claims. (Cl. 114—219)



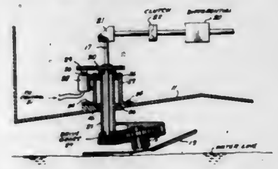
1. A submersible fender for ships, wharves or the like comprising an elastic rubber cushioning annulus having an axial length several times its diameter and a radius several times its radial thickness, said annulus having a multiplicity of continuous circumferential hollow portions which are closely spaced in axial cross section, the cavities of said annulus being spaced radially from the internal and external surfaces of said annulus, a thin outer wall of fabric-reinforced rubber vulcanized to the outer surface of said annulus throughout the length and circumference thereof, and a thin inner wall of fabric-reinforced rubber vulcanized to the inner surface of said annulus throughout the length and circumference thereof, said annulus being formed by winding a hollow vulcanizable rubber strip of uniform externally square cross section around a wire-fabric-reinforced vulcanizable rubber layer to form a helix around said inner wall, and thereafter vulcanizing the fender at elevated temperature, said hollow portions being formed by the turns of said helix.

3,125,980
AZIMUTH CONTROL SYSTEM FOR TOWED SUBMERSIBLE BODIES
Raymond J. Anderson, Poulsbo, Wash., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Mar. 8, 1957, Ser. No. 644,960
6 Claims. (Cl. 114—235)



1. In a towed submersible body having a control surface disposed for horizontal steering and adapted to be towed from a point about the center of gravity and lying in a longitudinal plane passing through the center of gravity and the center portion of the body an azimuth control system comprising: a source of current; an electric motor operably associated wth said control surface; and a field winding circuit connected to said source of current for actuating said electric motor, said field winding circuit comprising a motor field winding and means sensitive to a change of position about the longitudinal axis of said body connected to said field winding whereby a change in position of said body about its longitudinal axis will cause actuation of said motor.

3,125,981
HYDROROTOR CRAFT
Francis D. Reynolds, Redmond, Wash., assignor to The Boeing Company, Seattle, Wash., a corporation of Delaware
Filed June 4, 1963, Ser. No. 285,388
19 Claims. (Cl. 115—50)

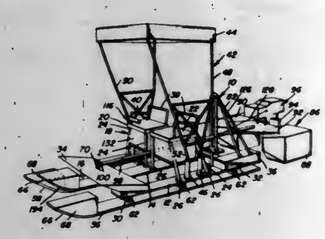


1. Propelling and supporting means for a water craft including at least one rotor having a hub portion and a plurality of blade-like members extending from said hub portion and at an angle thereto, driving means for said rotor, said rotor having an axis positioned at an angle with respect to the axis of said driving means, and means for rotating the rotor axis about the axis of said driving means, whereby less than one-half of said blade-like members are in contact with the water during planing operation of the craft.

3,125,982
SKI MOUNTED BENCH
Ernest R. Mullenax, 510 Jackson, Jefferson City, Mo.
Filed June 4, 1962, Ser. No. 199,682
9 Claims. (Cl. 115—70)

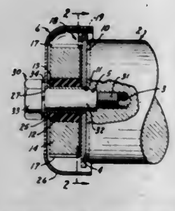
1. A ski mounted bench construction comprising a plurality of generally parallel skis, an elongated bench extending transversely of and secured between said skis intermediate their opposite ends, fore and aft transverse brace members disposed above and secured between said skis and disposed in fore and aft spaced relation to said bench respectively, means attached to said bench construction adapted to be connected to a thrust member for

propelling said construction over the surface of a body of water, said transverse brace members each including



generally planar forwardly and upwardly inclined under surfaces disposed above the lower surfaces of said skis.

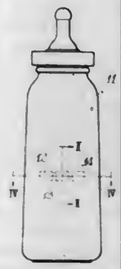
3,125,983
TORSIONAL VIBRATION ALARM
James K. Valus, Milwaukee, Wis., assignor to Nordberg Manufacturing Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Sept. 19, 1960, Ser. No. 57,016
6 Claims. (Cl. 116—74)



1. An alarm system for detecting impending destructive forced torsional vibrations in a rotating crankshaft and signaling the pendency thereof comprising flywheel means having a natural frequency of vibration equal to a predetermined natural frequency of vibration of the crankshaft, said predetermined natural frequency of vibration being coincidental with a predetermined critical speed of said crankshaft, a support member extending from said crankshaft and fixed thereto for rotation and vibration therewith, spring damping means mounted on said support member, said flywheel means being carried by said spring means such that the vibrations of said flywheel are damped, said spring means having a damping coefficient calculated to produce a characteristic difference in amplitude of vibration between said flywheel means and said crankshaft at said critical speed and signal means extending between said crankshaft and said flywheel for indicating a characteristic difference in amplitude of vibration between said crankshaft and said flywheel at said critical speed.

3,125,984
FEEDING BOTTLE CAPABLE OF INDICATING TEMPERATURE OF THEREIN CONTAINED MILK FOR THE UNWEANED CHILD
Hiroshi Okuyama, 21 Hisamatsu-cho, Nihonbashi, Chuo-Ward, Tokyo, Japan
Filed Mar. 20, 1962, Ser. No. 181,126
Claims priority, application Japan Apr. 19, 1961
1 Claim. (Cl. 116—114)

A baby feeding bottle comprising an elongated hollow cylindrical vessel constituted by a side wall and an end wall and being open at the other end, a closure for the open end, said side wall having a plurality of series of spaced recesses in the outer surface thereof arranged in a line perpendicularly to the axis of the vessel, heat response and indicating markers in said recesses, each marker including a strip of paraffin similar in shape to its respective recess and seated therein, another strip of a shape similar to the shape of the paraffin strip juxtaposed outwardly of the paraffin strip, and a third strip of sealing material juxtaposed outwardly of the other

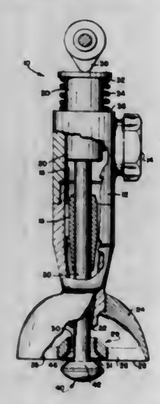


strip sealing the paraffin and other strip in the recess, the paraffin strips having different melting points, said other strips having colors of contrasting color whereby coacting with the paraffin strips the temperature of milk contained in the vessel is indicated.

3,125,985
SPEED INDICATOR
Friedrich K. H. Nallinger, Stuttgart, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Oct. 17, 1960, Ser. No. 63,942
Claims priority, application Germany Oct. 28, 1959
9 Claims. (Cl. 116—116)

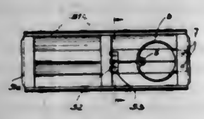
1. A speed measuring device for vehicles having a windshield and an enclosure means for a rim thereof in which the speed measuring device is adapted to be arranged on the windshield in any desired location within the direct field of vision of the driver of the vehicle, comprising rectilinear speed indicating means forming a movable speed indicator mark, guide means effectively cooperating with said speed indicating means and forming with said speed indicating means a relatively small column secured to the interior surface of said windshield in said desired location within the direct field of vision of the driver of the vehicle, and drive means for said speed indicating means for effectively moving said speed indicator mark in dependence on the speed of the vehicle, said driving means being arranged within said enclosure means invisible to the driver to thereby reduce to a minimum the loss in the field of vision on the part of the driver.

3,125,986
SONIC SIGNALING DEVICE
William K. Fortman, 186 Cold Spring Road, Syosset, N.Y., and Norman C. Pickering, Sag Harbor, N.Y.
Filed Nov. 15, 1962, Ser. No. 237,927
13 Claims. (Cl. 116—137)



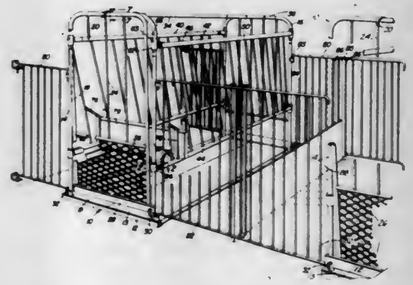
1. A sonic signaling device comprising:
(*a*) a conduit adapted to carry gas under pressure, said conduit terminating in a nozzle;
(*b*) a cylindrical hollow member disposed coaxially in spaced relationship to said nozzle, whereby said gas can be continuously discharged into said cylinder by said nozzle;
(*c*) a closure member disposed transversely to said cylinder and proximate thereto at a point remote from said nozzle; and
(*d*) actuating means to selectively displace said closure member and said cylinder relative to each other whereby said closure member in a first position is in a gas-tight, abutting relation to said cylinder to define an acoustically tuned cavity, said closure member in a second position being axially displaced from said cylinder, whereby in said first position a sonic wave is generated by said device.

3,125,987
CHIMING TIMEPIECE WITH SOUND RADIATING DIAPHRAGM COUPLED WITH THE SOUND PRODUCER
Helmut Junghans, Schramberg-Sulgen, Eckenhof, Germany, and Paul Jahn, Parzelle Schlangenbuhl 20, Schramberg, Wurttemberg, Germany
Filed May 18, 1959, Ser. No. 813,885
Claims priority, application Germany May 19, 1958
3 Claims. (Cl. 116—169)



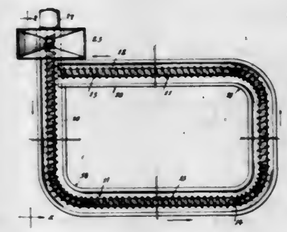
1. Sounding mechanism for striking clocks comprising a gong block carrying gong rods, a diaphragm, a common holding frame to which the diaphragm and the gong block are secured so that the frame with the diaphragm and the gong block form a single unitary structure, a leaf spring to secure the gong block to the frame at one face thereof and overlying said face, a lever arm rigidly secured to the gong block, an actuating rod connecting the lever arm and the diaphragm, the diaphragm consisting of a folded diaphragm of W-shape in cross section protruding at the other face of the frame, the length of the diaphragm fold at the central meeting edge being a multiple of the width of its base, and means to secure the rod to the diaphragm at the fold thereof.

3,125,988
FARROWING STALL
Ronald D. King, Winfield, Iowa (Rte. 5, Mount Pleasant, Iowa)
Filed Oct. 1, 1959, Ser. No. 843,840
6 Claims. (Cl. 119—20)



1. A farrowing stall for a sow comprising the combination of a front frame and a rear frame, a door separably connected with said front frame, rigid means operatively connecting said front and rear frame to reinforce said frames, a floor connected to said front and rear frames and having planks thereon to accept the weight of the sow whereby the frame is anchored by friction between the planking and the ground, a pair of sides, means adjustably securing said sides to said front and rear frames comprising sleeves on the ends of said sides slidable on vertically extending frame members and pins slidably extending through selected apertures in said sleeves and members so that the spacing between the lower edges of said sides from said floor is rapidly adjustable, said sides being easily separable from said front and rear frames, a bumper board having notches below each end, and open ended saddle means connected with said sides for supporting said bumper board transversely across said sides, said notches receiving the bottom portion of said saddle.

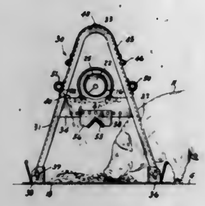
3,125,989
AUGER-TYPE ANIMAL FEEDER
Nat Cordis, Crown Farms, Silver Lake, Wis.
Filed Apr. 4, 1960, Ser. No. 19,556
15 Claims. (Cl. 119—52)



1. In a stock feeder including a trough and a conveyor operating therein, the improved feed conveyor comprising an elongated flexible member adapted to transmit a turning torque, a floating helical conveying member loosely

wound about said elongated member, said helical conveying member only being secured to said elongated member at spaced points for rotation therewith.

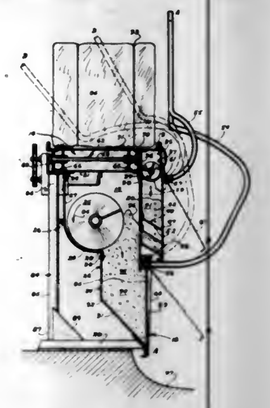
3,125,990
STOCK FEEDER
Marvin D. Van Peursem and Albert M. Best, New Holland, Pa., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Oct. 9, 1962, Ser. No. 229,380
3 Claims. (Cl. 119—52)



1. Apparatus for feeding stock animals comprising an elongated ground supported rectilinear feeding station, an elongated generally horizontal container located above and coextensive with said feeding station, a feed supply hopper communicating with said container to supply feed thereto, conveying means operative in said container to receive feed from said hopper and distribute the feed along the length of the container, said container having a longitudinal slot which extends along a major portion of the length of the container, a plurality of relatively spaced supports for said container, each of said supports being generally in the form of an A-frame extending in a vertical plane transverse to the container and comprising a pair of inclined ground supported legs spaced at their lower ends and converging upwardly to a crossbar which connects the legs intermediate their ends and then to a top section which connects the legs at their upper ends, said container being located between the legs and over the crossbars of the supports, means on the crossbars supporting said container for rotatable movement whereby the container slot may be moved from an upper fill position to a lower dump position, a cover for said container extending the length of the container, means connecting said cover to said spaced supports, the cover extending across the top section of each A-frame and having depending side portions extending along the A-frame legs, said cover being vertically spaced from said container and in register with said slot whereby the slot is protected from the weather from above.

3,125,991
STANCHION FEEDING AND BEDDING APPARATUS
Frederick E. Van Dusen, Wayzata, Minn., assignor to Van Dusen & Co., Inc., Wayzata, Minn., a corporation of Minnesota
Filed Oct. 6, 1961, Ser. No. 143,331
18 Claims. (Cl. 119—56)

1. A livestock feeding and bedding conveyance apparatus comprising, a housing divided into a pair of parallel longitudinal chambers laterally offset from each other, a conveyance means positioned in each of said longitudinal chambers and adapted for conveyance of animal food products, first discharge means at a particular elevation associated with one of said chambers for discharging the food therein into a given area, second discharge means at a lower elevation associated with the other of said chambers for discharging the food contained therein to said same area, an open conveyance means positioned on the top of said housing in an overlying relation with said other chamber and adapted for conveyance of bedding and the



like, and drive means for driving each of said conveyance means.

3,125,992
ANIMAL RETRIEVER
Charles Edward King, R.R. 8, Greensburg, Ind.
Filed Oct. 22, 1962, Ser. No. 232,072
1 Claim. (Cl. 119—154)

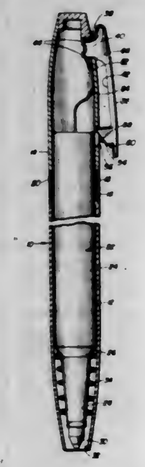


An animal retriever comprising;
an elongate handle having a longitudinal axis;
a first curved member affixed to said handle adjacent an end thereof;
a second curved member; pivot means pivotally mounting said second member to said handle for closing said second member with said first curved member to form a ring substantially symmetrical with respect to a plane normal to said axis;
an elongate hand grip said grip being in the form of a cylindrical sleeve coaxial with said handle and axially movable on said handle;
and a rod having a connection to said grip and a connection to said second member for connecting said grip to said second member for pivoting said second member by axial movement of said sleeve,
said connections and said pivot means all being located on one side of said handle axis, and said hand grip being of a length sufficient to receive the hand of an operator to facilitate manual support of said handle in a direction transverse of the length thereof and simultaneously to facilitate the manual production of axial movement of said grip to pivot said second member.

3,125,993
WRITING IMPLEMENT
Nathan Alter Zepell, Fort Madison, Iowa, assignor to W. A. Sheaffer Pen Company, Fort Madison, Iowa, a corporation of Delaware
Filed July 3, 1961, Ser. No. 121,711
1 Claim. (Cl. 120—42.03)

A writing instrument of the character described, including a generally cylindrical barrel having an aperture

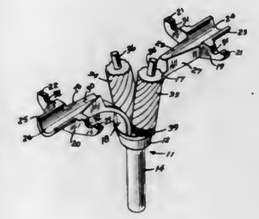
in a side wall thereof and an open forward end, a writing unit comprising a cylindrical reservoir section and a forwardly disposed point, said reservoir section being slightly smaller in diameter than and slidingly engaging the interior wall of said barrel, said reservoir section terminating on its rearward end in a transverse surface defining a circular contact edge, said unit being axially displaced within said barrel between a concealed position and an exposed writing position with said point projecting through said open forward end, a resilient spring element urging said unit toward said concealed position, a clip arm disposed externally of said barrel substantially longitudinally thereof, said clip arm having a forward end portion disposed in an overlying relationship with said aperture, a mounting section formed integral with said clip arm adjacent its rearward end, said mounting section being shiftably mounted on said barrel to permit movement of said forward end portion substantially transversely relative to said barrel between inward and out-



ward positions, a resilient stop member within said barrel depending from said mounting section, said stop member abutting the rearward end of said reservoir section to limit the movement of said unit under the influence of said resilient spring element whereby said contact edge is positioned in the region of said aperture, actuating means formed integral with said clip arm adjacent said forward end portion, said actuating means being movable with said forward end portion and through said aperture from a position disposed externally of said barrel, and an inclined surface terminating in a forwardly facing locking offset provided on said actuating means, said inclined surface and said locking offset successively engaging said contact edge and moving said unit to and releasably locking said unit in said exposed position in response to movement of said forward end portion from said outward to said inward position and conjoint movement of said actuating means through said aperture transversely toward said reservoir section.

3,125,994
CUTTER CARRIER FOR PENCIL SHARPENER AND METHOD OF ASSEMBLY OF CUTTERS
Henry Ruskin, Bayside, N.Y., assignor to Swingline, Inc., Long Island City, N.Y., a corporation of New York
Filed Nov. 21, 1958, Ser. No. 775,595
4 Claims. (Cl. 120—96)

4. A cutter and carrier assembly for a pencil sharpener comprising a rotatable support member having a pair of spaced primary cutter bearings thereupon, a pair of cutters upon said support member each having an end portion operatively connected to one of said primary cutter bearings and a projecting secondary bearing axle at an opposite end portion thereof; a main shaft bearing member secured to and projecting from said rotatable support member, a pair of normally divergent deformable but resilient spaced arm members each secured at an end portion thereof to said rotatable support member, each of said arm members having a flange section at its opposite end provided with a pair of spaced semi-circular secondary bearing recesses thereupon; a projecting substantially semi-circular pencil holding member section secured to said flange section and provided with a substantially semi-circular recess therewithin, each of the

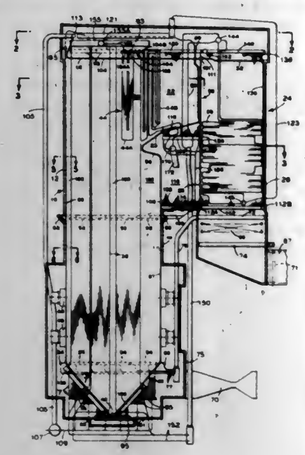


flange sections and the sections disposed thereupon being complementary to the corresponding section upon the other arm member, each of said cutters being adapted to be operatively connected to one of said primary cutter bearings, its secondary bearing axle placed into alignment with a pair of complementary secondary bearing recesses, and said flange sections, secondary cutter bearing recesses and pencil holding member sections being thence brought into abutting relationship with one another so that each of said secondary bearing axles is within a secondary bearing recess; and an external holding member surrounding said pencil holding member sections when said sections are in such abutting relationship, said pencil member sections being retained in such abutting relationship by said external holding member.

3,125,995
FORCED FLOW VAPOR GENERATING UNIT
Paul H. Koch, Akron, Ohio, assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed July 27, 1960, Ser. No. 45,649
9 Claims. (Cl. 122—406)

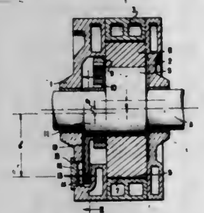
1. In a forced circulation fluid heating unit, walls defining a furnace chamber for the flow of heating gases, burner means supplying high temperature heating gases to said chamber, a row of upwardly extending laterally spaced initial upflow tubes disposed in said furnace and arranged for parallel flow of fluid therethrough, a row of upwardly extending laterally spaced second upflow tubes disposed in said furnace and arranged for parallel flow of fluid therethrough, means for supplying a vaporizable fluid of substantially the same enthalpy in parallel flow relation directly from a common source to the lower inlet ends of said initial upflow tubes, and means connecting said initial upflow tubes for series flow of fluid to said second upflow tubes and effecting a substantially uniform distribution of the fluid discharging from said initial upflow tubes to said second upflow tubes at a substantially uniform enthalpy, said last named means comprising a spherical vessel, downflow tubular means disposed ex-

ternally of said furnace and connected for series flow of fluid from said initial upflow tubes and to said vessel, and



means connecting said vessel for flow of fluid to the lower inlet ends of said second upflow tubes.

3,125,996
ROTARY PISTON ENGINE
Wolfgang Höschele, Gerlingen, Kreis Leonberg, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed June 12, 1962, Ser. No. 202,017
Claims priority, application Germany June 15, 1961
18 Claims. (Cl. 123—8)



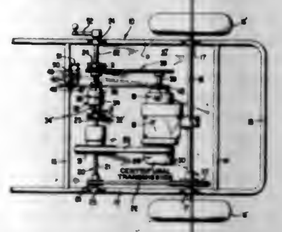
18. In a rotary piston internal combustion engine in which a polygonally-shaped piston is eccentrically supported on an eccentric of the output shaft within a housing having an internal boundary provided with two zones approaching the axis, and in which the piston slides with the corners thereof along the internal boundary during movement thereof relative to the housing and controlled by a transmission, and in which the piston during such movement valves the gas exchange channels provided within the housing, the improvement essentially consisting of means in said transmission for imparting to said externally toothed gear a movement about the axis thereof substantially following the law of

$$\omega_k = \frac{\omega_e}{3} + \gamma_0 \cdot \omega_e \cdot f(\alpha_e)$$

to thereby enable attainment of favorable compression conditions with combustion space means arranged within the piston for diesel operation wherein:

ω_k=angular velocity of piston on the eccentric,
ω_e=angular velocity of eccentric,
γ_0=constant angle,
α_e=angle of rotation of eccentric, and
$f(\alpha_e)=2\pi$-periodic function.

3,125,997
STARTER MECHANISM FOR ENGINES
Clifton Corley, 232 Brazilian Ave., Palm Beach, Fla.
Filed Jan. 22, 1962, Ser. No. 167,647
18 Claims. (Cl. 123—179)



1. Engine starter control mechanism for use with an internal combustion engine having a crankshaft and an impulse starter having energy storing means and drivingly connected with said engine crankshaft for starting the engine upon release of the stored energy, comprising a countershaft having first and second shaft sections, means for connecting the engine crankshaft with said first shaft section to drive the latter, means for connecting the second shaft section to the energy storing means of the starter to drive the latter and restore energy to the starter upon rotation of the second shaft section, automatically disengageable clutch means for coupling said first and second shaft sections, and resilient manually operable means engaging said clutch means to activate the same and yielding to permit disengagement of said clutch means automatically when the energy of the storing means is restored and resists further rotation.

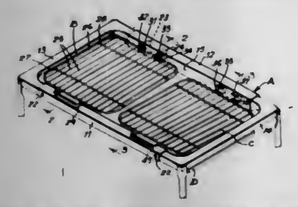
3,125,998
CROSSBOWS
George M. Stevens, Box 72, Huntsville, Ark.
Filed Feb. 6, 1961, Ser. No. 87,297
7 Claims. (Cl. 124—25)



1. A crossbow of the repeating type wherein the string operates in a slot and is drawn into engagement with the crossbow release mechanism by a retractor slidably mounted on the stock, a missile positioner comprising, a sliding member operating in contact with the missile to be fired, a means to move the said sliding member rearwardly when the string is being drawn, and means to return the said sliding member to its forward position after discharge, a frictional contact surface on the said sliding member, the said surface in contact with the said missile when the bow is being drawn, a stop member at a desired distance in front of the release mechanism, whereby the said missile and each succeeding missile will be moved rearwardly to the said stop member at an exact distance from the string for firing.

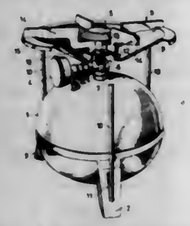
3,125,999
BARBECUE WITH ADJUSTABLY SUPPORTABLE GRID
Richard Kates, Park Lane, Madison, N.J.
Filed May 29, 1963, Ser. No. 284,068
5 Claims. (Cl. 126—25)

1. A barbecue grill comprising a substantially rectangular frame portion including end members and first and second side members, said first side member including a top flange and a downwardly extending flange disposed on the inner portion of said first side member, means defining an opening in the top flange of said first side member extending downwardly into said downwardly extending flange and terminating at a point beneath the bottom surface of the top flange of said first side member and above the lowermost extremity of said downwardly extending flange, said second side member including a downwardly extending flange disposed on the innermost portion thereof, said flange on said second side member having relatively greater depth than said downwardly extending



flange on said first side member, means defining a plurality of vertically spaced slots in said flange on said second side member, a wire grid including a peripheral frame element and a plurality of cross members, first and second grid support means disposed on opposite side portions of said peripheral grid frame, said first support means supportingly disposed within said opening in said first side member of said barbecue frame and selectively removable therefrom and said second grid support means disposed in selected slot defining means in said flange of said second side element.

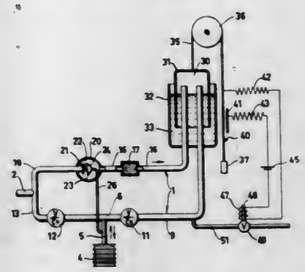
3,126,000
STOVE FOR BURNING GASEOUS FUEL
Carl-Anker Mejyr, Flen, Sweden, assignor to Aktiebolaget Bahco, Stockholm, Sweden, a corporation of Sweden
Filed Sept. 10, 1962, Ser. No. 222,578
2 Claims. (Cl. 126—95)



1. A gaseous fuel burning stove, comprising a tank for said fuel, a burner head having a fuel-supply stem connected to said tank, a horizontally positioned vessel support having a central sleeve through which said fuel-supply stem extends and which acts as centering means for said vessel support, a boil-over bowl positioned horizontally below and supporting said vessel support and having a central opening co-axial with said fuel supply stem, means for supporting said boil-over bowl in said position, and means on said vessel support which project downwardly into said central opening and act to center said boil-over bowl in relation to said burner head and vessel support.

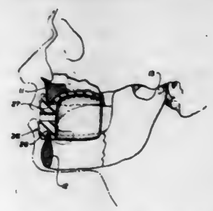
3,126,001
ARRANGEMENT IN RESPIRATORS
Carl-Gunnar Daniel Engström, Aluddsvagen 3, Stockholm, Sweden
Filed Sept. 12, 1960, Ser. No. 55,432
Claims priority, application Sweden Sept. 16, 1959
11 Claims. (Cl. 128—29)

1. A respirator for artificial respiration or narcosis comprising a system of conduits including an attachment adapted to be connected with a patient's lungs, said system comprising a high pressure portion and a low pressure portion, said attachment being adapted alternately to establish connection of said high pressure portion and said low pressure portion with the lungs of the patient, an inlet for respiratory gas fitted to and opening into a conduit of said system, a control member controlling flow of gas into said inlet, a propelling member adapted intermittently to press a portion of the gas in said high pressure portion through said attachment thereby creating an inhalation phase, valve means arranged to close communication between said attachment and said low pressure portion of said system of conduits during said inhalation phase and to permit opening of said communica-



tion to the low pressure portion during the exhalation phase following said inhalation phase thus permitting the expiration gas to enter said low pressure portion, valve means controlling one way gas flow from the low pressure portion to the high pressure portion, said propelling member causing respiration gas to circulate in a pulsating manner, and an enclosure comprising a gas space connected to said low pressure portion, walls defining said enclosure of an extendible character rendering the size of said enclosure responsive to variations of the gas quantity in said low pressure portion, an impulse member operatively connected to an extensible portion of said walls, said impulse member being connected to said control member to actuate it and thus govern the supply of gas through said inlet.

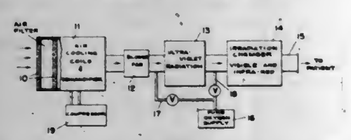
3,126,002
EDENTULOUS MOUTHPIECE AND/OR MOUTH PROTECTOR
Herbert E. Owens, 424 Acacia Ave., San Bruno, Calif.
Filed Oct. 3, 1961, Ser. No. 142,723
1 Claim. (Cl. 128—136)



In a mouthpiece for placement between the upper and lower ridges of the mouth of a user for use for substantial periods of time wherein at least one of the ridges is edentulous, a body of soft resilient material, the body having a configuration which is substantially U-shaped and conforming in cross-section and length to the general configuration of the upper and lower ridges of the user, the body being formed with relatively smooth outer and inner planar and substantially vertical peripheral surfaces, said body being formed with upper and lower elongated recesses substantially U-shaped in cross section in

the upper and lower portions thereof, the recesses having substantially the same U-shaped configuration as the body, the innermost extremities of the recesses being spaced one above the other in vertical alignment, at least one of the upper and lower recesses being relatively shallow and contoured to receive an edentulous ridge of the user and being dimensioned to permit the edentulous ridge of the user to engage the innermost portions of the recess in the body, the portions of the body forming the side walls of said one recess forming substantially vertical low flanges so that the edentulous ridge can seat in said one recess to apply a clamping pressure to the body without the flanges injuring the mouth of the user, the body and the recesses being formed so that with respect to the bite plane with normal interdental spacing, the vertical distance from said plane to the innermost extremity of at least one of said recesses is equal to the distance from said plane to the corresponding edentulous ridge to thereby maintain the normal interdental spacing between the upper and lower ridges of the user to thereby prevent trauma to the temporo mandibular joint, the body being formed with an open passage extending through the anterior portion thereof to facilitate breathing of the user, one end of said passage terminating adjacent said inner peripheral surface of said body so that the region in the vicinity of the tongue of the user is unobstructed, the body also being formed with a palatal extension extending between the inner peripheral surface of the body to provide a roof-like structure to seat against the pallet of the user to help to inhibit sidewise movement of the body during use.

3,126,003
METHOD FOR CREATING ENERGY CARRIER STATES OF OXYGEN IN INSPIRED AIR
Van H. Steel, 440 Walnut St., San Carlos, Calif.
Filed July 2, 1962, Ser. No. 208,183
5 Claims. (Cl. 128—172)

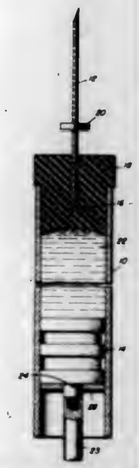


1. The method of generating oxygen metastables of three differing energy levels in a filtered and low humidity or dehumidified stream of air for respiratory purposes, which comprises applying to said stream of air high intensity radiation of wavelengths from about 2500 Angstrom units to about 3000 Angstrom units within the band of the ultraviolet for producing high energy oxygen metastables within said stream, applying to said stream of air a band of high intensity radiant energy with wavelengths coextensive with those of visible light for producing oxygen metastables having intermediate energy levels, and concurrently applying to said stream of air a band of high intensity radiant energy corresponding with the infrared for producing oxygen metastables having lower energy levels as compared with said high energy and intermediate energy metastables, the intensity of said radiant energy including said visible light and said infrared respectively being of the order of 30,000 foot candles and above and including substantially all wavelengths between about 3,000 Angstrom units and about 13,000 Angstrom units.

3,126,004
CARTRIDGE WITH ANTIPILFERING PISTON
Stanley J. Sarnoff, 3 Pooks Hill Road, Bethesda 14, Md.
Filed Mar. 12, 1962, Ser. No. 179,086
7 Claims. (Cl. 128—218)

1. A cartridge with an antipilfering piston comprising:
a tube adapted to contain a medicament,
a piston at one end of the tube having a sealing compound thereon covering the whole area thereof,
said sealing compound being brittle at normal temperatures in order to function as a means indicative of the pilfering of the contents of the cartridge through the piston or displacement of the piston, and
a coupling stud affixed to the piston and extending through the sealing compound.

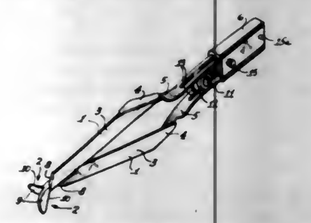
5. A cartridge with an antipilfering piston comprising:
a tube adapted to contain medication,
a closure for the tube,



a liquid dye on that face of the closure which is not in contact with the medication, and
a resin coating on the dye sealing the dye in the space between the inner walls of the tube, resin, and closure.

6. A cartridge with an antipilfering piston comprising:
a tube adapted to contain medication,
a closure for the tube, and
a dye-impregnated wax on that face of the closure which is not in contact with the medication, said dye being of a character to change color permanently when heated above the flow temperature of the wax.

3,126,005
HAEMOSTATIC CLAMP
Antoni J. Smialowski, Ottawa, Ontario, Canada, assignor to National Research Council, Ottawa, Ontario, Canada, a corporation of Canada
Continuation of application Ser. No. 165,436, Jan. 10, 1962. This application Apr. 25, 1963, Ser. No. 276,135
4 Claims. (Cl. 128—325)



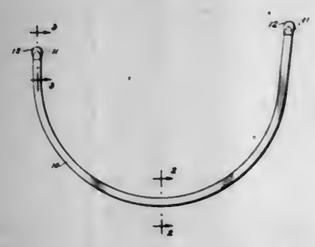
1. A haemostatic clamp comprising a pair of arms having engaging surfaces, means securing adjacent ends of said arms together for swinging movement of said arms relative to each other, each said arm having a free end and a jaw on said free end, each said jaw having a pair of contiguous straight surfaces inclined with respect to each other, each said jaw surface being disposed in substantially parallel and in directly opposed relation to one of said jaw surfaces of the other of said jaws, one of said surfaces of each jaw being laterally offset with respect to the other of said surfaces.

3,126,006
FISHBONE EXTRACTOR
Alvis Yates Dowell, 3026 Newark St., Washington 4, D.C.
Filed Aug. 14, 1961, Ser. No. 131,172
1 Claim. (Cl. 128—356)



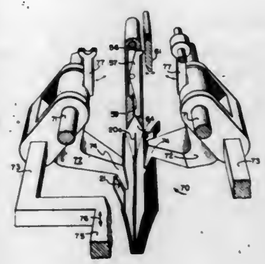
A device for removing fish bones from the throat of human beings comprising an elongated handle of a length and thickness to be readily held between the palms of the hands, said handle having means to facilitate the rotation thereof, a head removably mounted on one end of said handle, said head including a first portion at one end with a plurality of projections thereon, a mass of soft fibrous material mounted on said first portion and secured thereon by said projections, said fibrous material being of a size substantially to fill the throat when in use and thereby engage substantially the entire throat surface so that the fishbones become entangled therein when the head is rotated thereby dislodging the fishbones, said head having a handle-engaging portion at the other end, said handle-engaging portion including non-positive friction means slidably interfitted with said handle for maintaining said head and said handle in assembled relationship and preventing relative rotation therebetween.

3,126,007
WIRE FRAMES FOR BRASSIERES AND THE LIKE
Walter M. Jonas, Easton, Pa., assignor to Sobel Metal Products, Inc., Easton, Pa., a corporation of Pennsylvania
Filed June 30, 1961, Ser. No. 121,160
2 Claims. (Cl. 128—476)



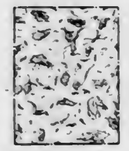
1. An arcuate brassiere frame of a non-ferrous cold-rolled, nickel-copper alloy wire containing approximately 10% to 35% nickel which wire is heat treated at a temperature of 450 to 600° F. and has a tensile strength of 150,000 to 180,000 p.s.i. and a flattened cross-section with its major dimension extending radially with respect to the curvature of the arcuate frame and being from 4 to 5 times greater than the minor dimension of said flattened cross-section so as to be easily flexible out of the plane of said curvature while avoiding excessive permanent deformation by reason of such flexing.

3,126,008
DATA STORAGE ACCESS MECHANISM
Jay R. Geddes, Campbell, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Feb. 16, 1959, Ser. No. 793,542
5 Claims. (Cl. 129—16.1)



1. A tape storage arrangement including:
a plurality of short lengths of tape stored in a group in face-to-face relation wherein the tapes are each provided with a tab portion extending therefrom and sequentially offset from the tab portions of the other tapes from the first to the last tape of said group; and
means for displacing tapes on both sides of a selected tape away from said selected tape to expose a substantial surface area of the selected tape, said means including:
a pair of members arranged to move in opposite directions toward and away from each other in a direction perpendicular to the planes of said tapes, said members being spaced apart in a direction normal to their direction of movement to provide a gap therebetween, the width of said gap being greater than the width of the tab portion of any one tape and less than the spacing between the tab portions of the tapes on each side of said one tape, thereby providing clearance for the tab portion of any selected tape;
means for positioning said members to align said gap with the one of said tab portions belonging to said selected tape; and
means for moving said members in opposite directions into contact with the tab portions on either side of the selected tab portion to displace the tapes on both sides of said selected tape away from said selected tape.

3,126,009
FILTER-TIPS
William R. Mahoney, Gulf Breeze, Fla., and Joseph L. Barach, Charlotte, N.C., assignors to Celanese Corporation of America, New York, N.Y., a corporation of Delaware
Filed July 19, 1960, Ser. No. 43,863
2 Claims. (Cl. 131—10)



1. A cigarette filter tip comprising a porous rod of plasticizer-containing cellulose acetate flake having an

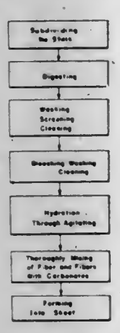
acetyl value in excess of about 52% by weight calculated as combined acetic acid, having a bulk density less than about 20 pounds per cubic foot and a particle size of about 5 to 20 mesh, a substantial proportion of the particles having a particle size of about 5 to 10 mesh, the flake particles being cohered at points of contact.

3,126,010

CIGARETTE PAPER AND METHOD OF MAKING SAME

Alexander Makovka, Sea Cliff, N.Y., assignor to Wims Research Laboratories Inc., Sea Cliff, N.Y., a corporation of New York

Filed July 21, 1959, Ser. No. 828,448
2 Claims. (Cl. 131—15)



1. The process of making a cigarette paper whose fiber content consists exclusively of tobacco stalk fibers, comprising the steps of field drying the stalks from 90 to 180 days before harvesting the stalks, next digesting the stalks, at an elevated temperature for 1 to 3 hours under pressure above the atmosphere in a cooking liquor consisting of 12 to 23 kg. of sodium hydroxide, 5 to 12 kg. of sodium sulphide, 4 to 10 kg. of sodium carbonate, for every 100 kg. of stalks in a ratio of said cooking liquor to stalk within the range of 2:1 to 8:1; resulting in a pulp, followed by washing, screening and cleaning of said pulp; followed by the step of bleaching said pulp; wherein the resulting pulp fiber has a content within the range to 20 to 50% of said original tobacco stalk; then cleaning, washing and screening said pulp; followed by agitation of said pulp; said fibers being in their original lengths and transverse structure and whose structural integrity is substantially preserved; then passing said pulp through a refining machine for thorough mixing of said fibers without substantially cutting or fibrillating thereof; and then forming said pulp into matted sheets.

3,126,011

TOBACCO COMPOSITION AND SMOKING UNIT CONTAINING MATERIAL FOR ELIMINATING DELETERIOUS MATTER

Walter Linwood Haden, Jr., Metuchen, N.J., assignor to Minerals & Chemicals Philipp Corporation, a corporation of Maryland

No Drawing. Filed Nov. 14, 1957, Ser. No. 696,314
9 Claims. (Cl. 131—17)

1. A smoking mixture consisting essentially of tobacco shreds having mixed therewith from 3% to 10% by weight of finely-divided solid particles of an alkali metal salt of an acid selected from the group consisting of silicates, phosphates and borates, and which has a melting point within the range of 450° C. to 1000° C., said tobacco shreds consisting essentially of naturally occurring tobacco.

3,126,012

SMOKING TOBACCO ADDITIVES IN THE FORM OF MENTHYL ACETALS

Charles H. Jarboe and John G. Esterle, Louisville, Ky., assignors to Brown & Williamson Tobacco Corporation, Louisville, Ky., a corporation of Delaware

No Drawing. Filed Oct. 29, 1962, Ser. No. 233,954
7 Claims. (Cl. 131—17)

1. A smoking tobacco product with improved flavor and aroma characteristics having added thereto a menthyl acetal.

3,126,013

DEVICES FOR COMPRESSING CIGAR BUNCHES

Josephus Vermolen and Johannes M. van de Goor, Eindhoven, Netherlands, assignors to Koninklijke Vereenigde Tabaksindustrieën Mignot & De Block N.V., Eindhoven, Netherlands, a company of the Netherlands

Filed July 25, 1962, Ser. No. 212,417
Claims priority, application Netherlands Aug. 4, 1961
2 Claims. (Cl. 131—87)



1. In a device for compressing cigar bunches of the type having a step wise moving endless conveyor and holders secured to said conveyor, each carrying a lower mold part against which an upper mold part is periodically pressed for compressing tobacco in said mold parts, the improvements comprising said holders each having a U-shaped cross-sectional profile formed by a bottom wall and a pair of upstanding walls and extending with its longitudinal axis transverse to the conveyor, said lower mold parts each being formed as a thin walled trough having outwardly directed rim flanges near its top and a recess formed in one flange, interengaging means on each trough and the upstanding walls of each holder for removably mounting the trough for slideable movement in a direction longitudinal of the holder, a pair of spaced projections on the inner surface of one upstanding wall of each holder, and a U-shaped spring having upstanding leg portions and an oblique bottom portion connecting said leg portions and seated on the bottom wall of a holder within the space defined by the holder and the trough carried by said holder, one leg portion of said spring extending upwardly toward the lower surface of a flange of the trough and the other leg portion of said spring starting from a point spaced above the bottom wall of said holder and extending upwardly between and engaging said two projections into said flange recess to lock the trough against axial movement with respect to the holder until said last named leg is pressed downwardly through the recess for releasing the trough for longitudinal, sliding removal from the holder.

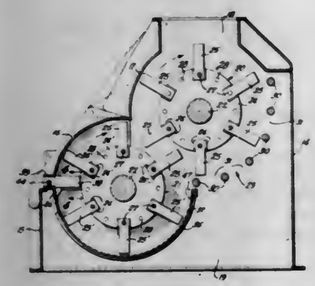
3,126,014

TOBACCO THRESHING MACHINE

Charles W. Bonner, Jr., and Curtis T. Houck, both of Richmond, Va., assignors to The Cardwell Machine Company, Richmond, Va., a corporation of Virginia

Filed Nov. 9, 1961, Ser. No. 151,296
4 Claims. (Cl. 131—145)

1. A tobacco threshing machine comprising a casing having a charging opening and a discharge opening, a pair of spaced parallel transverse shafts journaled in said casing, first and second serially arranged threshing rotors mounted on said shafts, said second rotor being located below and to one side of said first rotor, each of said threshing rotors having radially projecting leaf cutting knives axially and circumferentially disposed thereon, said first rotor being arranged to receive tobacco leaves from said charging opening and convey the leaves toward said second rotor, drive means rotating said rotors in the same direction, a plurality of circumferentially spaced rotatable grid rods extending transversely in the casing along a concave path substantially concentric with the first rotor shaft adjacent the periphery of said first rotor to provide a grid formation between said first rotor and the discharge opening, the knives of said first rotor and said grid rods being spaced to act on the tobacco leaves to rip clean the leaf lamina therefrom and pass the same through said grid formation to said discharge opening, and a concave



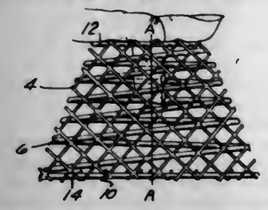
grid disposed in said casing substantially concentric with the second rotor shaft adjacent the periphery of said second rotor between said second rotor and said discharge opening and having a plurality of openings for passing pieces of lamina and pieces of stems to said discharge opening, said knives of said second rotor and said concave grid acting to further rip leaf lamina from pieces of mixed lamina and stem conveyed thereto from said first rotor, the knives of said second rotor being spaced relative to the knives of said first rotor to intermesh and form a counterrotational zone for transfer of tobacco from said first rotor to said second rotor.

3,126,015

HAIR FOUNDATION FRAME AND METHOD OF USING

Abraham Sidelman, Jamaica, N.Y., assignor to H. Goodman & Sons, Inc., New York, N.Y., a corporation of Delaware

Filed Oct. 28, 1960, Ser. No. 65,845
8 Claims. (Cl. 132—7)



1. The method of styling human hair strands on the top portion of the head comprising positioning on the top portion of said head a self-supporting substantially conically shaped hair foundation with its longitudinal axis substantially perpendicular to the top portion of the head and having its center of gravity on said longitudinal axis, said foundation being compressible along its longitudinal axis, compressing said foundation along its longitudinal axis to a predetermined height, and forming said hair strands around said so-compressed foundation until said foundation is covered by said hair strands in the substantial shape of said so-compressed foundation.

3,126,016

HAIR CURLER

Donald D. Maurer, 154 Marks Road, Danville, Calif.

Filed July 31, 1962, Ser. No. 213,659
4 Claims. (Cl. 132—37)



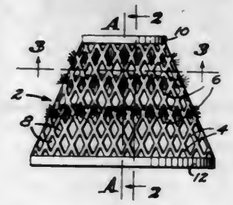
1. In a hair curler including a horizontally disposed elongated base member of U-shaped cross sectional configuration, a flat finger arranged longitudinally of and in superimposed spaced relation with respect to said member and having one end connected to said member intermediate the ends of said member and having the other end free and contiguous to one end of said member, a tongue disposed in the space between said member and said finger and having one end connected to said member adjacent the other end of said member, said tongue normally being engaged with the underside of said finger and being shiftable into said member and away from said finger responsive to finger pressure applied to the portion of said tongue between said finger and said member other end, and spring means operatively connected to said tongue biasing said tongue to the position engaging said finger, the improvement of a wedge element slidably mounted on said tongue and being operable to hold said tongue in the away position upon being inserted between said finger and said tongue when said tongue has been shifted to the away position.

3,126,017

HAIR FOUNDATION INCLUDING BRUSH MEANS

Abraham Sidelman, Jamaica, N.Y., assignor to H. Goodman & Sons, Inc., New York, N.Y., a corporation of Delaware

Filed Oct. 28, 1960, Ser. No. 65,842
2 Claims. (Cl. 132—54)



1. A self-supporting substantially conically shaped hair foundation for shaping and supporting a substantially conically shaped hairdo on the top portion of the human head comprising, in combination, a substantially conically shaped hollow member of relatively stiff, resilient open mesh material, and brush means positioned within said hollow member and extending through said open mesh material, for at least a portion thereof, for simultaneously gripping the hair while being formed therearound, for holding the so-formed hair in position thereabout and for reinforcing said hollow member, the center of gravity of said hair foundation being on the longitudinal axis of said hollow member, said hollow member and said brush means being symmetrical about said longitudinal axis.

3,126,018

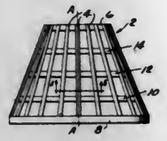
HAIR FOUNDATION

Abraham Sidelman, Jamaica, N.Y., assignor to H. Goodman & Sons, Inc., New York, N.Y., a corporation of Delaware

Filed Oct. 28, 1960, Ser. No. 65,843
8 Claims. (Cl. 132—54)

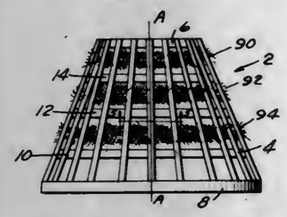
1. A self-supporting substantially conically shaped hair foundation for shaping and supporting a substantially

conically shaped hairdo on the top portion of the human head, said foundation being a self-supporting hollow substantially conically shaped member of relatively stiff, resilient, separable open mesh material, said member having a base and a top and including a plurality of spaced-apart, substantially parallel unitary ring members, means



for operatively associating said ring members with and positioned between the base and top thereof, said ring members being parallel to said base and defining removable portions, said foundation having its center of gravity on its longitudinal axis, whereby said foundation can be reduced in height by removing portions thereof.

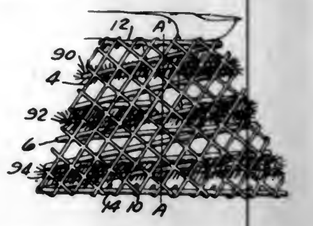
3,126,019
HAIR FOUNDATION INCLUDING BRUSH MEANS
Abraham Sidelman, Jamaica, N.Y., assignor to H. Goodman & Sons, Inc., New York, N.Y., a corporation of Delaware
Filed Oct. 28, 1960, Ser. No. 65,844
5 Claims. (Cl. 132—54)



1. A self-supporting substantially conically shaped hair foundation for shaping and supporting a substantially conically shaped hairdo on the top portion of the human head, said foundation comprising, in combination, a hollow substantially conically shaped member of relatively stiff, resilient, separable open mesh material, said member having a base and a top and including a plurality of spaced-apart substantially parallel unitary ring members, means for operatively associating said ring members with and positioned between the base and top thereof, said ring members being parallel to said base and defining removable portions, whereby said foundation can be reduced in height by removing portions thereof, and brush means positioned within said hollow member and extending through said open mesh material at at least one removable portion thereof for simultaneously gripping the hair while being formed therearound, for holding the so-formed hair in position thereabout and for reinforcing said hollow member, said foundation having its center of gravity on its longitudinal axis.

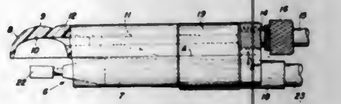
3,126,020
HAIR FOUNDATION INCLUDING BRUSH MEANS
Abraham Sidelman, Jamaica, N.Y., assignor to H. Goodman & Sons, Inc., New York, N.Y., a corporation of Delaware
Filed Oct. 28, 1960, Ser. No. 65,846
6 Claims. (Cl. 132—54)

3. A self-supporting substantially conically shaped hair foundation for shaping and supporting a substantially conically shaped hairdo on the top portion of the human head comprising a substantially conically shaped hollow member of relatively stiff, resilient open mesh material, said foundation being resiliently compressible along its longitudinal axis and substantially stationary with respect to its longitudinal axis, the center of gravity of said foun-



dation being on said longitudinal axis, and brush means positioned within said hollow member and extending through said open mesh material member for simultaneously gripping the hair while being formed therearound, for holding the so-formed hair in position thereabout and for reinforcing the foundation, said foundation being symmetrical about said longitudinal axis.

3,126,021
GRINDING DEVICE
Robert George May, 75 Panorama Trail, Webster, N.Y.
Filed Nov. 25, 1960, Ser. No. 71,486
4 Claims. (Cl. 132—76.4)

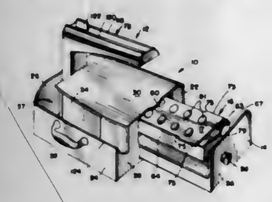


2. In a grinding device connectable to suitable power and vacuum sources, the combination comprising:
grinding means including a burr connectable to a power source and adapted to be driven thereby; and
support means for supporting said grinding means, said support means comprising:
a substantially cylindrical unitary member having its outer periphery at one end forming a handle, and having a transparent suction hood at the opposite end overlying the burr and through which the operator can observe the grinding action, said member having an axially extending longitudinal groove for receiving said grinding means with the root of said groove being inclined with respect to the axis of said member so that the depth of said groove at the end of said member having said suction hood is greater than the depth of said groove at the opposite end of said member; and
said support means further having passage means connecting the underside of said hood to a vacuum source whereby any dust particles produced during the grinding operation are caught by said hood and drawn to said vacuum source through said passage means.

3,126,022
PORTABLE MANICURE CABINET
Arnold M. Thompson, Wheaton, Ill., assignor to Thompson Designs, Inc., Franklin Park, Ill., a corporation of Illinois
Filed Mar. 30, 1961, Ser. No. 99,468
18 Claims. (Cl. 132—79)

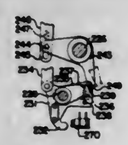
1. In a manicure cabinet of the character described, in combination, a cabinet shell including a generally rec-

tangular box-like structure having a bottom wall, upstanding side walls, upstanding front and rear walls respectively, and a partial top wall, the material of said partial top wall being relieved along two adjacent edges thereof to provide a generally L-shaped relief void embracing one corner of the partial top wall, and a lamp-supporting bracket of generally L-shape configuration and having a fill-in surface area conformable in size and shape to the size and shape of said relief void, a heat lamp operatively mounted on said bracket, and means



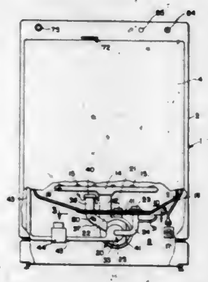
movably mounting said bracket on said shell for movement between a retracted position wherein said fill-in surface area substantially fills said relief void and completes the continuity of said partial top wall of the shell and said heat lamp is disposed wholly within the confines of the shell, and an extended position wherein the heat lamp overlies the outer surface of said partial top wall so that when the heat lamp is energized heat rays emanating therefrom will be directed downwardly onto said outer surface of the top wall.

3,126,023
AUTOMATIC CHANGE DISPENSING ACCOUNTING MACHINES
Charles S. Nagy, Miamisburg, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed Mar. 17, 1961, Ser. No. 96,595
10 Claims. (Cl. 133—2)



1. In a machine of the class described constructed and arranged to perform non-change-dispensing machine operations and change-dispensing machine operations, the combination of
(*a*) a plurality of differentially-settable members;
(*b*) a plurality of keys for controlling the extent of movement of the settable members during each machine operation;
(*c*) a change-dispensing apparatus;
(*d*) electrical circuit means for initiating, when activated, an operation of said change-dispensing apparatus, said circuit means including a switch for activating, when operated, said circuit means;
(*e*) a switch-operating member movable to a position operating said switch;
(*f*) means mounted adjacent said switch-operating member and normally positioned to block said member from moving to a switch-operating position;
(*g*) first operating means controlled by the movement of said differentially-settable members to move said blocking means to a non-blocking position during a first non-change-dispensing machine operation;
(*h*) and second operating means controlled by the movement of said differentially-settable members to move said switch operating member to a position operating said switch during a subsequent change-dispensing machine operation whereby said electrical circuit means initiates an operation of said change-dispensing apparatus.

3,126,024
DISHWASHING APPARATUS
David A. Jellies, Oconomowoc, Wis., assignor to General Electric Company, a corporation of New York
Filed Dec. 8, 1961, Ser. No. 158,063
12 Claims. (Cl. 134—57)

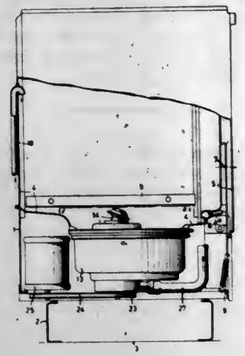


11. Dishwashing apparatus comprising:
a single tub to contain articles to be washed and dried;
means for introducing water into said tub;
means for circulating water within the tub for washing articles contained therein;
a motor directly connected thereto for energizing said water circulation means;
means for concurrently introducing water into said tub and energizing said motor;
means independent of the operation of said motor for delaying operation of said water circulation means until after a substantial accumulation of water in said tub;
means for heating air by abstraction of heat from said motor during operation thereof; and
fan means powered by said motor and communicating between said air heating means and said tub for discharging said heated air into said tub continuously during the operation of said motor.

3,126,025
ROTATABLE AND OSCILLATING WATER SPRAY HEAD FOR A DISHWASHING MACHINE
Michel Aubert and James Frank Belaieff, Geneva, Switzerland, assignors to Frame S.A., Fribourg, Switzerland
Filed Aug. 7, 1962, Ser. No. 215,341
Claims priority, application Switzerland Sept. 8, 1961
4 Claims. (Cl. 134—176)

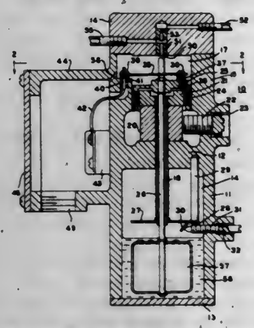
1. In a dishwashing machine, a washing chamber for retaining the articles to be cleaned, a water spraying device having a spray head arranged in said washing chamber in a manner whereby said spraying device rotates about its axis and oscillates according to the generatrix of a cone, a first centrifugal pump for supplying water under pressure to said water spraying device, a second centrifugal pump for draining said chamber of said water, an auxiliary chamber located under said washing chamber and housing said centrifugal pumps, said auxiliary chamber having an aperture through which a common shaft for said pumps is passed in a water-tight manner, an external drain pipe to which said draining pump is oper-

atively connected, a bearing being supported by said auxiliary chamber, said shaft being journalled therein,



and a motor provided externally of said chambers and operatively connected to said shaft for driving the same.

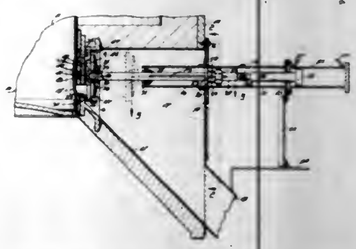
3,126,026
TRANSDUCERS
Coleman B. Moore, Uwchland, Pa., assignor to Moore Products Co., Philadelphia, Pa., a corporation of Pennsylvania
Filed Sept. 18, 1961, Ser. No. 138,971
6 Claims. (Cl. 137—85)



1. In a transducer, a housing, a partition in said housing providing a chamber, a movable member having portions inside and outside said chamber, resilient mounting members for said movable member restraining movement of said member transverse to its longitudinal axis, means outside said chamber for applying to said movable member a force responsive to an input condition, a source of fluid pressure, a fluid pressure transmitter member connected to said source and having an output controlled by said movable member, a buoyant member in said chamber and connected to said movable member, and a liquid in said chamber in which said buoyant member is immersed, said buoyant member overcoming the weight of said movable member and said resilient mounting members.

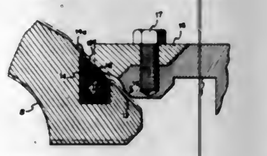
3,126,027
FLUID OPERATED KETTLE DISCHARGE VALVE ASSEMBLY
Robert C. Blair, Winnipeg, Manitoba, Canada, assignor to Western Gypsum Products Limited, Winnipeg, Manitoba, Canada
Filed Sept. 1, 1961, Ser. No. 135,544
2 Claims. (Cl. 137—243.6)

1. In a fluid operated valve assembly, the combination of a valve seat, a tubular support member coaxial with but spaced from said seat, a reciprocable rod slidable in said support member and projecting outwardly therefrom, a valve head mounted on the projecting end of said rod, said valve head being engageable with and disengageable from said seat upon sliding of said rod toward and away from the seat respectively, a fluid operator secured coaxially to said support member and including a reciprocable piston rod connected to said first mentioned rod for reciprocating the same, a portion of said first mentioned rod in said support member being provided with a longitudinally extending open-sided slot, a sleeve rotatably but non-slidably positioned in said support mem-



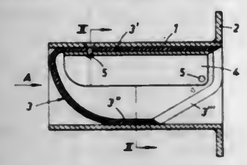
ber and having said first mentioned rod extending slidably therethrough, a transverse key carried by said sleeve and extending through said slot in said first mentioned rod whereby the latter may be turned about its axis by rotation of said sleeve in said support member, a crank secured to said sleeve and projecting radially outwardly through a recess formed in the lateral wall of the support member, a support plate secured to said support member in a plane transverse to the axis of the support member, and a fluid operator pivotally mounted on said plate and including a reciprocable piston rod connected to said crank whereby to impart turning movement to said first mentioned rod.

3,126,028
SEAL FOR BLEEDER VALVES
Neal T. Kurfiss, Middletown, Ohio, assignor to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio
Filed Apr. 13, 1961, Ser. No. 102,832
7 Claims. (Cl. 137—329.01)



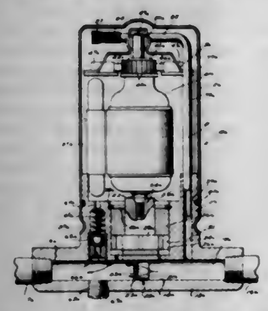
1. In a bleeder valve construction, a body, relatively movable metallic members serving respectively as a valve seat and a valve tappet, one of said members having a substantially conical surface with an annular recess located intermediate the edges thereof and adapted to contain a renewable valve seat structure, a body of resilient substance within said annular recess, the other of said members being configured to provide a first nose positioned for valving coaction with the surface of said first mentioned member, and a second nose coacting with the surface of said resilient substance, the said second nose being formed on a metallic body removably mounted upon the valve member having said first nose, the parts being so related that when said metallic body is removed from said valve members, the said annular recess in the first mentioned valve member will be uncovered for removal and replacement of the body of resilient substance therein.

3,126,029
FLUID FLOW CHECK VALVES
Sixten Englesson, Djursholm, Sweden, assignor of one-half to Aktiebolaget Flygts Pumpar, Stockholm, Sweden
Filed Dec. 4, 1961, Ser. No. 157,326
2 Claims. (Cl. 137—525.3)



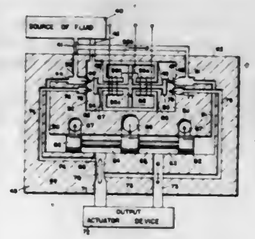
1. A fluid flow check valve comprising the combination with a tube of a bag-shaped element of flexible material inserted in said tube and being rigidly secured to the inner wall of the same along a portion of its peripheral area extending about one-half of its periphery and from the opening of the bag to its bottom, said bottom being rounded and said opening being obliquely cut from that edge of said opening secured to the tube wall towards said bottom of the bag.

3,126,030
LIQUID COOLED AUXILIARY FUEL PUMP
William F. Stoermer, Grafton, Ohio, assignor to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Apr. 24, 1961, Ser. No. 105,213
3 Claims. (Cl. 137—569)



1. A pump comprising
a casing having a generally cylindrical body portion and having laterally extending boss portions at one end thereof, a conduit means defining a straight line passage extending through said body portion and said boss portions and having an inlet and an outlet disposed in coaxial line with one another at opposite ends of said passage and including means to receive conduit members in coupled connection therewith,
a check valve in said passage between said inlet and said outlet,
whereby through flow through said passage may be accommodated when the pump is out of operation,
said body portion of said casing having formed therein a pumping chamber spaced adjacent said conduit means and having means communicating said pumping chamber with said passage on opposite sides of said check valve,
positive displacement rotary pumping means in said pumping chamber for moving fluid from said inlet at increased pressure to said outlet,
a can-shaped motor cover having circumferential side walls connected to said casing and forming therewith a motor compartment,
a direct current motor in said compartment having a commutator and brush means for electrically energizing the motor from a source of direct current,
said motor having a rotatable shaft and a direct seal-less coupling connection to said pumping means,
a passage formed in said casing extending from the interior of said motor compartment and intersecting said straight line passage on the outlet side of said check valve,
said passage being counterbored to form a spring bottoming shoulder therein,
a control spring in said passage having one end bottomed against said spring bottoming shoulder,
a movable valve element in said passage bottomed against the other end of said spring, an apertured bushing having a valve seat formed therein,
said bushing and the walls of said passage having screw threads for adjustably threading said bushing against the spring biased valve element, thereby to form a regulating valve in said passage,
said boss means having formed therein an access opening in register with said passage but on the opposite side of said straight line passage,
a removable plug in said access opening,
whereby access to said bushing for adjustment of the bypass flow rate is facilitated,
said valve operating to regulate the pressure of the pump by directing excess flow into said motor cover,
and means forming a return passage extending from said motor compartment and intersecting said straight line passage on the inlet side of said check valve,
whereby fluid bypassing through said motor compartment will cool the motor,
and flame-arresting means in said return passage.

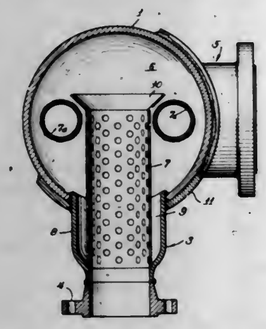
3,126,031
ELECTRO HYDRAULIC SERVO VALVE
Paul F. Hayner, Nashua, N.H., assignor to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware
Filed Apr. 1, 1960, Ser. No. 19,266
5 Claims. (Cl. 137—625.62)



5. A flow-control, hydraulic, servo valve having feedback, comprising: a source of fluid under pressure; pilot-valve means including a variable pressure chamber coupled to said source of fluid, said chamber having a nozzle to produce a fluid jet-stream along an axis, and a movable pilot-valve member adapted to move along said axis in opposition to said jet-stream to vary the pressure in said chamber in accordance with an input signal; control valve means coupled to said chamber and having an output control outlet, said control valve means being adapted to control the application of fluid under pressure through said outlet in accordance with variations in pressure from said chamber; a restricted-orifice means coupled to said outlet for developing a differential-pressure across said orifice varying in accordance with the velocity of flow

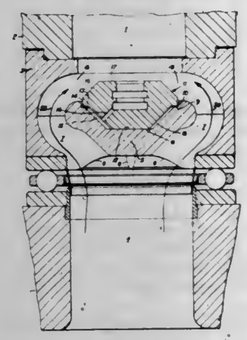
of said fluid; and feedback-pressure means coupling said differential-pressure and said movable pilot-valve member to vary its position in accordance with said differential pressure and provide said feedback to produce an output fluid velocity varying only with said input signal.

3,126,032
NONREACTIVE CONNECTION FOR PULSATION ABSORBER
Edmund J. Halter, Irving, Tex., assignor to Burgess-Manning Company, Dallas, Tex., a corporation of Illinois
Filed Oct. 14, 1963, Ser. No. 315,965
2 Claims. (Cl. 138—26)



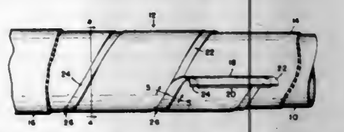
1. Means for connecting a pulsation absorber with a port of a pulsation-generating apparatus such as a reciprocating compresser, comprising an outer pipe (8) having a reduced diameter at one end thereof and being rigidly fastened to and opening into the interior of the pulsation absorber at the other end thereof, a perforated inner tube (7) having substantially the same diameter as the reduced diameter of said outer pipe and extending through said pipe coaxially therewith and into the interior of the pulsation absorber, said inner tube and outer pipe defining an expansion space (9) therebetween, and means adapted to proximately connect the reduced end of said pipe with a port of a pulsation-generating apparatus.

3,126,033
NUCLEAR REACTORS
Philip Cloudesley Warner, Earls Court, London, England, assignor to United Kingdom Atomic Energy Authority, London, England, a British Authority
Filed July 22, 1960, Ser. No. 44,682
Claims priority application Great Britain July 31, 1959
4 Claims. (Cl. 138—43)



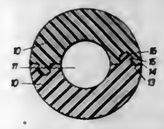
1. A restrictor element for a vertical channel comprising in combination, a fixed location member in said channel, an upper face on said location member, a recessed seating formed in said upper face, an annular ledge formed round said seating, a channel restrictor element located in said seating, said element having a peripheral shoulder which fits said ledge with a small clearance and a portion extending into the recessed seating and spaced from a portion thereof by a cavity, and a passageway joining said cavity to the downstream side of the restrictor element.

3,126,034
PIPE WRAPPING
Ted Kennedy, Jr., Ann Arbor, Mich., assignor to The Trenton Corporation, Ann Arbor, Mich., a corporation of Michigan
Filed Dec. 5, 1960, Ser. No. 73,808
7 Claims. (Cl. 138—144)



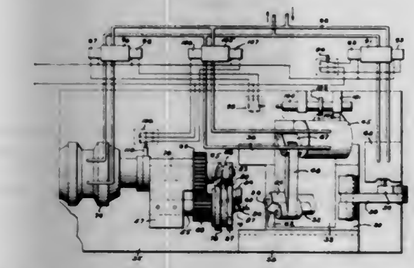
1. In combination, a conduit, a covering for said conduit comprising an elongated flexible sheet-like carrier board of a strong abrasion-resistant heat-insulating material, an elongated flexible synthetic resinous plastic film coextensive with and permanently bonded in surface-to-surface relation to one side of said carrier board to provide an elongated composite wrapper consisting only of said carrier board and plastic film and sufficiently flexible to be readily wound about the conduit, said film extending laterally outwardly beyond one longitudinal edge of said carrier board to provide a continuous plastic lap surface, said composite wrapper being wound helically about said conduit with the plastic film toward said conduit and with a lead such that the lap surface of the underlying convolution is overlapped and sealingly engaged by the inner surface of the plastic film of the overlapping convolution in a continuous overlap joint, the plastic film of said helical composite wrapper providing a dielectric moisture proof, continuous inner plastic barrier which is resistant to soil chemicals and bacteria and is completely sealed at said continuous overlap joint, the carrier board of said helical composite wrapper providing an outer cover for said plastic film protecting the same against mechanical damage, said carrier board preventing said plastic film from shrinking by reason of its heat-insulating character and by reason of its being bonded in surface-to-surface relation to said plastic film.

3,126,035
SHEATHINGS FOR PIPES AND SIMILAR TUBULAR MEMBERS FOR PROTECTING SAME
Randolf Espetvedt, 16, Hans Tankegate, Bergen, Norway
Filed Oct. 20, 1959, Ser. No. 847,584
Claims priority, application Norway Nov. 3, 1958
1 Claim. (Cl. 138—162)



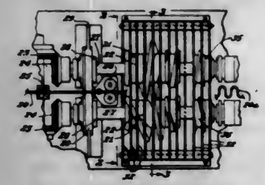
A pipe insulating covering comprising substantially identical hollow semi-cylindrical sections of a substantially rigid cellular plastic material, said sections being oriented to cooperatively define a hollow cylindrical element having an axis, said element being adapted for accommodating a pipe therein with said sections in contact with said pipe, each of said sections having two radial surfaces, and an undercut tongue extending continuously along one of said surfaces of each section in a direction parallel to said axis, the other of said radial surfaces being provided with an undercut groove adapted to receive the tongue of the other section in interengaging relationship whereby said sections constitute the cylindrical element and in which the interengagement between the undercut tongues and grooves connects the sections securely together and defines a tortuous path for the escape of heat to minimize loss of the latter, said cellular material having a coefficient of friction adapted to supplement cooperation between said tongues and grooves.

3,126,036
APPARATUS FOR FORMING EYE BOLTS
William C. Kent, Gahanna, Ohio, assignor to Western Electric Company, Incorporated, a corporation of New York
Filed Aug. 29, 1960, Ser. No. 52,689
4 Claims. (Cl. 140—104)



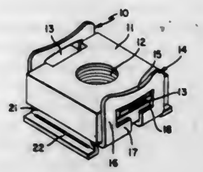
1. An apparatus for forming an eye bolt from a straight rod comprising an arbor, means for fixedly supporting said arbor, a slide on said supporting means movable parallel to the axis of said arbor, a holder mounted on said slide for pivotal movement and having a recess for receiving one end of the rod for supporting the rod obliquely and adjacent to the axis of said arbor, means for moving said slide from a normal retracted position permitting the loading of a rod into said holder to a forward winding position with the rod in engagement with said arbor, a roller, means for revolving said roller about the axis of said arbor to bend the rod into a helical loop about said arbor, and means for pivoting said holder to bend said one end of the rod from a tangential to a radial relation with respect to said helical loop.

3,126,037
SIMPLIFIED MEANS FOR PRODUCING CONVOLUTIONS IN WIRE
Kalman Z. Huszar, Foster, Ohio
Filed Aug. 6, 1959, Ser. No. 832,118
5 Claims. (Cl. 140—105)



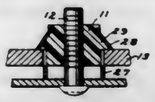
1. In a machine for bending wire and including a pair of parallel worms having meshing flights and means to rotate said worms in opposite directions, the improvement which comprises supporting elements for the wire, said supporting elements being located in slots provided in said worms at right angles to the axis of said worms and extending through a portion, at least, of said flights, said supporting elements being fixed against movement axially of said worms.

3,126,038
CAGE NUT
Leonard S. Jaworski, Toledo, Ohio, assignor to The Bishop and Babcock Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Sept. 2, 1960, Ser. No. 53,769
1 Claim. (Cl. 151—41.75)



A fastener comprising a polygonal nut body having opposite parallel sides and a top surface and a central screw threaded hole and pair of integral centrally disposed extensions projecting laterally from said opposite sides of said body, said extensions being formed with flat upper faces, a spring metal cage for said nut body, said cage having a pair of laterally spaced upright arms extending along and engaging said opposite sides of said nut and spaced radially outwardly from said top surface, said arms being free at their outer ends each of said upright arms being outwardly bowed from said nut body to facilitate flexing of the cage, a pair of laterally spaced strips integrally connecting the opposite ends of said upright arms respectively and extending across the under face of said nut body on opposite sides of the screw threaded hole, oppositely extending integral hooks on the outer edges of said strips respectively for engagement in a panel aperture, said hook portions extending in a direction substantially parallel to the nut body, each upright arm having a centrally disposed, longitudinally elongate opening into which said nut body extensions project respectively, said opening defining an upper edge which overlies said flat surface, there being a slot extending midway of said elongate opening and being of less width than said elongate opening to extend to the inner edges of said strips respectively, whereby portions of each upright arm can be flexed toward each other for enabling corresponding movement of said hooks when same are applied to the sides of a panel opening.

3,126,039
NUT COMBINATION
Theodore E. Fiddler, 1200 Cedar Ave., Birmingham, Mich.
Filed Oct. 30, 1961, Ser. No. 148,422
3 Claims. (Cl. 151—41.75)



1. In combination, a self attaching, bolt locking, and axially two-way bolt tension resisting and holding nut assembly comprising a workpiece having spaced walls defining a receiving aperture, a first side, and an opposite

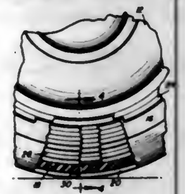
side; a plastic core having opposite sides, a neck surmounting said core, and a hollow bolt receiving bore through said core and neck; a cage having a collar surrounding said core neck, shoulders overlying said core, arms depending from said cage shoulders on opposite sides of said core terminating in projecting ends, laterally extending fingers on said arms projecting ends engaging one side of said workpiece, and tangs lanced out of said cage angling sidewise downwardly outwardly from said cage shoulders engaging the opposite side of a workpiece in opposition to said fingers; a head on said core neck overlying said cage collar holding said core in said cage; said tangs being springwise resiliently depressible to bypass said workpiece walls defining said workpiece aperture in inserting said assembly in a workpiece and to spring outwardly to overlie said workpiece side after passing through said workpiece aperture; and a bolt disposed in said core aperture; said core being blocked against axial movement relative to said cage in one direction by said core head abutting said cage collar and from axial movement in the other direction by said core abutting said cage shoulders; said cage being blocked against axial movement relative to said workpiece by said fingers in one axial direction and by said tangs in the other axial direction; said cage having at least one angular side lying in said workpiece aperture with said workpiece walls defining said aperture having at least one mating angular side preventing relative rotational movement therebetween; said bolt preventing plastic flow of said core inwardly and said cage collar preventing plastic flow of said core neck and head outwardly thereby insuring bolt and core engagement and core head and cage collar engagement; relative rotational movement between said core and cage being prevented by engagement between said core and said cage arms; and at least one grip wedge on said core body side angling downwardly outwardly from said core body adapted to compressibly deform with said body in insertion in a workpiece, to expand in interlocking relation to a workpiece side after insertion, and to be blocked against deforming said body to move out of interlocking relation with said workpiece side by said bolt inserted in said body bore; said core locking said bolt against reverse rotation preventing loosening of said bolt even under high vibrational conditions.

3,126,040
PNEUMATIC TIRES AND ANTI-SKID ELEMENTS THEREFOR
Carlo Barassi and Giulio Cappa, Milan, Italy, assignors to Pirelli, S.p.A., Milan, Italy
Filed Sept. 4, 1962, Ser. No. 221,001
Claims priority, application Italy Sept. 8, 1961
6 Claims. (Cl. 152—184)



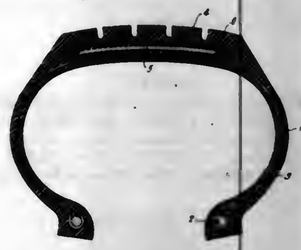
1. A pneumatic tire designed for travel on ice, said tire having a tread portion in which are formed at least two parallel and longitudinal grooves, said tread portion also having therein a plurality of circumferentially spaced recesses located between said grooves, a plurality of anti-skid elements received in said recesses, each anti-skid element being provided with a point projecting outwardly beyond the periphery of the tread portion and capable of penetrating into the ice, each anti-skid element having a pair of oppositely disposed lateral projections extending into the longitudinal grooves, at least two inextensible rings received in the longitudinal grooves and overlying the lateral projections of said anti-skid elements to hold the latter in position, each of said anti-skid elements being provided with a longitudinal channel on the inner portion thereof with at least one transversal diaphragm in said channel, each recess of said tread portion being provided with suitable projections extending into and received within the longitudinal channel of the corresponding anti-skid element.

3,126,041
TIRE CONSTRUCTION
Gordon E. Williams, 113 Goddard St., Athol, Mass.
Filed Mar. 13, 1963, Ser. No. 264,969
5 Claims. (Cl. 152—315)



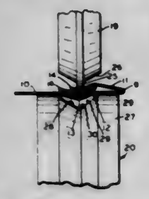
1. A tire construction comprising a casing including a pair of generally parallel annular side wall members interconnected at their outer peripheries by means of an integral crown portion and defining an air chamber therebetween, and a plurality of condition continuous solid strands of rubber-like material each being of a diameter a small fraction of the distance between said side wall members disposed in side-by-side closely grouped convolutions extending about said casing forming a filter for said air chamber of a cross-sectional shape corresponding to the cross-sectional shape of said air chamber and substantially entirely filling the latter.

3,126,042
PNEUMATIC TIRES
Arrigo Cegnar, Milan, Italy, assignor to Pirelli S.p.A., Milan, Italy
Filed Oct. 11, 1960, Ser. No. 61,859
Claims priority, application Italy Oct. 15, 1959
3 Claims. (Cl. 152—361)



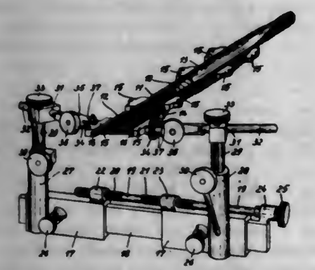
1. A pneumatic tire of the type having an outer tread portion, a carcass in which the cords of the carcass plies are disposed substantially radially of the tire, and an inextensible circumferential reinforcement between the carcass and the tread portion, wherein said reinforcement is formed of metallic cords inclined at equal and opposite angles with respect to the mid-circumferential plane of the tire, said metallic cords extending back and forth from one side edge of said reinforcement to the other side thereof in zig-zag fashion, each metallic cord, as it extends from one side to the other of said reinforcement, passing from one layer into the other layer, the improvement which comprises a band having cords of textile material, which material during rotation of the tire is capable of absorbing the deformations and resultant stresses of said reinforcement whereby to prevent corresponding deformations of said tread portion, said band being located between said tread portion and said reinforcement, and said band being composed of an assembly of two layers of textile cords parallel to one another in each layer and directed along crossed and symmetrical directions with respect to the mid-circumferential plane of the tire.

3,126,043
METHOD AND MACHINE FOR FORMING BENT EYE TAPE
Jack Simon, Rye, N.Y., assignor to L. M. Rabinowitz & Co., Inc., New York, N.Y., a corporation of New York
Filed Aug. 9, 1960, Ser. No. 48,536
3 Claims. (Cl. 153—1)



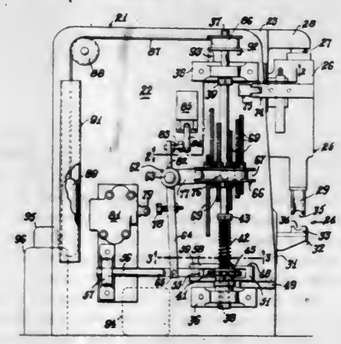
1. The method of bending the eyelets in a fabric fastener strip formed with a lower layer and an upper layer of lesser width and in which the eyelets are secured in position between the layers and along a line parallel to one of the edges of said strip by a longitudinally arranged line of stitching passing through both layers and across the transversely arranged legs of the eyelets between the ends of the legs, bending the legs of said eyelets sequentially along a line coinciding with said line of stitching upwardly at an angle of substantially 20°, by running the tape between two driven juxtaposed rollers, one having a flat V-shaped slot and the other having an annular rib which may project a predetermined distance into the slot, the upper and lower fabric layers forming a cushioning element between the eyelets and the meeting portions of the rollers.

3,126,044
GUIDING DEVICE FOR CABLE-JACKETING METAL STRIPS
Hans Riso, Berlin-Charlottenburg, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt, Germany, a corporation of Germany
Filed Apr. 4, 1961, Ser. No. 100,669
Claims priority, application Germany Apr. 8, 1960
7 Claims. (Cl. 153—1)



1. In apparatus for jacketing an electric cable equipped with feeding means for supplying a cable core and with strip supply means for passing a metal strip alongside the cable core, a strip guiding device for guiding the travelling strip in fixed and straight alignment longitudinally of the core, means for causing progressive deformation of the strip into tubular shape about the core, said strip guiding device comprising normally stationary glide shoes disposed in a plurality of pairs, the shoes of each pair having respective guide means engageable with the respective edges of the strip for guiding the travel path of said strip over the entire range of said deformation into mutually overlapping and parallel position of said edges, supporting structure on which the two guide shoes of each pair are mounted, said two shoes being jointly displaceable horizontally on said structure and being also individually displaceable horizontally relative to said structure, and adjusting means on said structure for individually adjusting said two glide shoes in the vertical direction for guiding the strip during said deformation into said tubular shape about the core.

3,126,045
INDEXING MECHANISM FOR RECIPROCATING DEVICES
Clarence T. Streit, Aurora, Ill., assignor to Pines Engineering Co., Inc., Aurora, Ill., a corporation of Illinois
Filed May 31, 1960, Ser. No. 32,774
18 Claims. (Cl. 153—21)

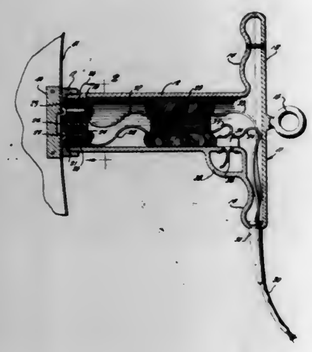


1. In a machine for performing a multiple of bends in a length of tubing, a pair of spaced tube bending devices, a reciprocal ram mounting one of said devices, means operable to move the ram for carrying the devices toward and away from one another during a tube bending operation, an axially displaceable rotatable turret, a plurality of stop elements seated loosely in said turret, means on the ram engageable with a selected one of said stop elements when the ram is moved in one direction to move the turret axially in said direction, means operable when the turret reaches a predetermined position axially to reverse the operating stroke of the ram, means to return the turret to its initial position, indexing means for said turret, and lever means connecting the turret with said indexing means operable during the return movement of the turret to positively actuate the indexing means and to rotate the turret to position another one of said stop elements for engagement by the means on the ram during a succeeding operating stroke.

3,126,046
ELECTRO-MAGNETIC DENT PULLER
William H. Richey, London, Ohio
(446 E. Church St., Marion, Ohio)
Filed July 18, 1961, Ser. No. 124,833
1 Claim. (Cl. 153—32)

An electro-magnetic dent puller comprising an elongated main housing having a transverse hollow handle

at one end, a transverse partition wall in the main housing adjacent to and spaced inwardly from its other end, a longitudinal partition wall in said main housing secured to said transverse partition wall and extending to said other end defining a pair of side-by-side compartments at said other end of the main housing, respective electromagnets disposed in said compartments and having hollow longitudinally extending cores, respective bolts in said cores extending axially therethrough and through said transverse partition wall and securing the electromagnets thereto, said bolts having heads exposed at said other end of the main housing and flush with the end



faces of the electro-magnets at said other end, means connecting said electro-magnets in series and so that the end faces of the electro-magnets adjacent the bolt heads will have opposite magnetic polarity when the electro-magnets are energized, a step-down transformer mounted in the housing, means connecting the secondary of the transformer to the series-connected electro-magnets, a control switch mounted in the housing and having an externally projecting operating element located adjacent the handle, and a line cord extending through the handle and connected to the primary of the transformer through said control switch.

3,126,047

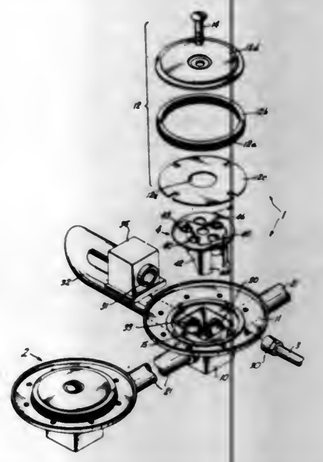
MULTIPLE GAS BURNER AND INTERNAL DIVERTER

Alfred Green, Maple Valley, Wash. (8036 11th Ave. NE., Seattle, Wash.)

Continuation of application Ser. No. 711,365, Jan. 27, 1958. This application Oct. 24, 1960, Ser. No. 65,559

10 Claims. (Cl. 158—104)

1. In combination with a gas burning device including casing means defining a gas distributing chamber having a top opening to supply a first burner means, and said casing means having spaced gas inlet and outlet ports formed in its side walls, a second burner means connected for supply to said outlet port, gas diverter means inserted within the gas distributing chamber and including a ribbon of metal disposed in an upright plane and having a leg extending substantially entirely across the chamber and from the top opening downwardly, from a location adjacent the mouth of the inlet port to a location on the opposite side of the outlet port from said inlet port, said ribbon leg being so spaced from the adjacent portions of the chamber side wall between said locations as to divide the chamber into two subchambers at least one of which communicates with the top opening and the other of which interconnects the inlet and outlet ports to divert gas therebetween and to the second burner means, and



means overlying said top opening for creating back pressure in the subchambers.

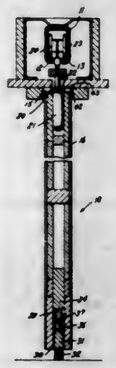
3,126,048

FOLDING PARTITION SEAL

George Hollands, Franklin Square, N.Y., assignor to Torjesen, Inc., Brooklyn, N.Y., a corporation of New York

Filed Sept. 7, 1961, Ser. No. 136,554

3 Claims. (Cl. 160—40)



1. A folding partition assembly having a plurality of hingedly connected, generally rectangular panel members slideably hung from an overhead support track and shiftable therealong from an edge to edge extended condition to a side by side stacked condition, an extended guideway member paralleling said track and including a horizontally disposed leg portion and vertically disposed leg portion, said leg portions in the extended condition of said panels, lying in proximate spaced relation, respectively, to portions of the upper edges and sides of said panels, said guideway portion defining with the upper edges of said panels a generally rectilinear channel portion having a vertically disposed, open-mouth portion, a horizontally extending inflatable seal member secured to said guideway within said channel portion and lying adjacent the uppermost portion thereof, said seal member being formed of resilient distensible material said seal member including wall portions elastically drawn to a first, relatively closely adjacent position with respect to each other in the uninflated condition of said seal, said wall portions becoming more widely separated when said seal is inflated, vertically shiftable floor seals carried by said panels, and pneumatic means interposed between said floor seals and said panels for shifting said seals into floor engaging position, said pneumatic means and said inflatable seal member being connectible to a common inflation source.

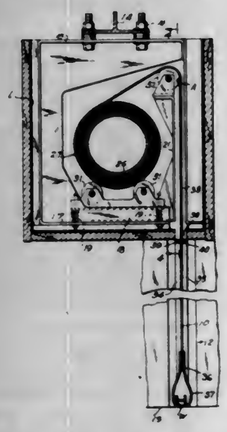
3,126,049

CURTAIN PARTITION

George Hollands, Franklin Square, N.Y., assignor to Torjesen, Inc., New York, N.Y., a corporation of New York

Filed Jan. 3, 1962, Ser. No. 164,092

1 Claim. (Cl. 160—40)



As a new article, a room partition acoustical curtain comprising a pliable, relatively limp, flexible sheet of fused plastic having uniformly distributed therethrough 25 to 45% by volume powdered lead, characterized by a sound transmission class number of from 18 to 34 in sheets of from one half to three pounds per square foot, convoluted in a roll about a core, a horizontally disposed guide roll laterally spaced from said core, said curtain passing over said guide roll and hanging in a vertical plane tangent to a side edge of said guide roll, means for rotating said core about a horizontal axis to raise and lower said curtain, vertically disposed side wall strips having spaced guides sealingly engaged with portions of said curtain in the lowered position thereof, said curtain, at its lower edge, having heavy ballast means, said ballast means being flexible in a vertical plane but not in a horizontal plane whereby said lower edge is enabled to conform to vertical irregularities of the floor but stiffens the lower edge of said curtain against flexure in a horizontal plane.

3,126,050

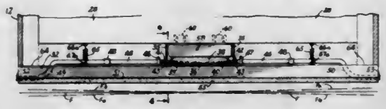
FOLDING PARTITIONS AND SEAL THEREFOR

Ray Lapof, Lake Success, N.Y., assignor to Torjesen, Inc., New York, N.Y., a corporation of New York

Continuation of abandoned application Ser. No. 6,963, Feb. 5, 1960. This application July 16, 1962, Ser No. 212,185

2 Claims. (Cl. 160—40)

1. A folding partition assembly comprising a plurality of hingedly connected door panels slidably mounted on a fixed overhead support, with the lower edges of said panels disposed above the floor level, said panels being slidable along said support from a stacked condition, to an extended condition, the combination having vertically extended recess portions in the panels open at the lower edges of said panels, vertically movable floor seals carried within said recess portions of the panels, spring means urging said seals upwardly to a normal position clear of said floor and a pneumatically actuated expansion member interposed between said panels and said seals, said expansion member including an open ended canister disposed between the side edges of the panel, the lengthwise dimension of said canister being substantially less



than the length of said panel, the width of said canister being less than the thickness of said panel, a plunger member of cross section corresponding substantially to the cross section of said canister loosely telescoped within said canister, the ends of said plunger being spaced from the adjacent sides of said canister to permit a considerable relative tilting of said plunger and said canister in the plane of said panel, and a pliable, air-tight, deformable bladder disposed between said plunger and said canister adapted, upon inflation, to shift said plunger outwardly of said canister, the combination including means for inflating said bladders.

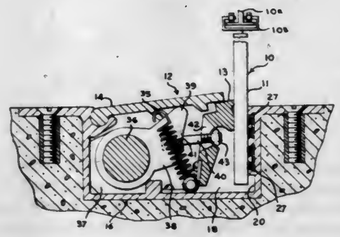
3,126,051

FLOOR SEAL FOR ROOM DIVIDER PARTITION

Victor Sussin, Elmhurst, Ill., assignor to Brunswick Corporation, a corporation of Delaware

Filed Sept. 6, 1962, Ser. No. 221,751

11 Claims. (Cl. 160—40)



8. A seal assembly operable between open and seated positions, comprising a body having a trough defined in part by a wall, a sealing member in said trough and mounted for movement between an open position spaced from said wall, and a seated position seated against said wall, a cover mounted for movement on said body into and out of seated position covering said trough, and means for simultaneously operating said cover and shoe into and out of seated position.

3,126,052

FRAMED SHADE SCREENS FOR WINDOWS AND VARIOUS MEANS FOR ATTACHING SAME

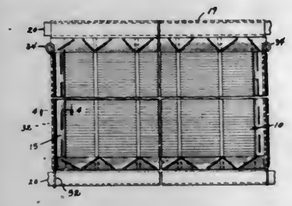
Vincent F. Tonnon, 1538 Brentwood, Corpus Christi, Tex.

Filed Mar. 9, 1961, Ser. No. 94,612

1 Claim. (Cl. 160—90)

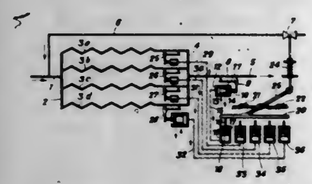
A shade screen for attachment to vehicle windows which are adapted to be raised and lowered into a door panel and are provided with a channel member receiving the window pane, said screen comprising a foraminous louvered member, a frame secured to the edges of

said member, said frame having a longitudinally extending passage within each of its side edges, means for attaching the screen to the window, said means comprising a rod rotatably disposed within each of said passages, the lower end of each rod bent to provide a hook disposed below the lower edge of said foraminous louvered member, said hook adapted to be disposed parallel to



said pane when the rod is lowered into said panel and rotatable 90° to engage the lower edge of said window pane channel, means at the upper end of each rod to prevent unintentional withdrawal thereof from said passages, and adhesive means secured to the top edge of said frame and adapted to be removably secured to the top edge of said window pane channel member.

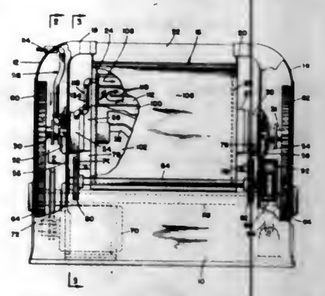
3,126,053
CONTROL SYSTEM FOR HEAT EXCHANGER
Alfred Brunner, Winterthur, Switzerland, assignor to Sulzer Freres, Societe Anonyme, Winterthur, Switzerland
Filed Jan. 29, 1960, Ser. No. 5,518
Claims priority, application Switzerland Feb. 2, 1959
6 Claims. (Cl. 165—40)



1. A heat exchanger comprising a heat-exchange surface, separate means to develop signals representative of the temperature of each of a plurality of locations on said surface, means to develop a signal representative of a mean temperature of said surface, temperature control means for influencing the temperature of said surface, means coupling said separate and mean temperature-representative signal developing means to said temperature control means, said coupling means having an input from each of said signal developing means and an output to said temperature control means, said coupling means connecting to said output the input signal thereto of extreme value, and means to introduce a differential between the signal from said mean temperature signal generating means on the one hand and the signals from said separate temperature representative signal developing means on the other hand.

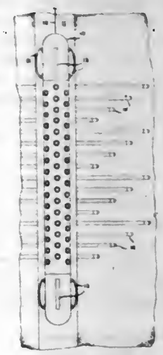
3,126,054
JACKETED DOUGH MIXER
Clair E. Paules, Red Lion, Pa., assignor, by mesne assignments, to Baker Perkins Inc., New York, N.Y., a corporation of New York
Filed July 14, 1961, Ser. No. 124,208
5 Claims. (Cl. 165—109)

1. In a dough mixer, a pair of spaced hollow upright standards, a trough shaped mixing bowl between and in spaced relation with respect to said standards, a coolant fluid circulating jacket encompassing the side and bottom walls of said mixing bowl, means for tiltably mounting said mixing bowl including a trunnion rigidly secured to an end wall of said mixing bowl and rotatably mounted in the adjacent standard, coolant fluid supply and return lines for said jacket including supply and return passages in said trunnion opening at one end into said standard and at the other end into the space between said standard



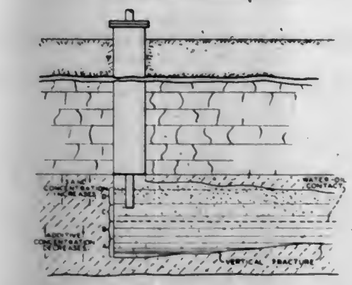
and said mixing bowl, flexible extensible supply and return conduit sections disposed wholly within said standard, each having at one end a connection with and opening through an exterior wall of said standard and having at the other end a connection with a respective trunnion passage, and inextensible supply and return conduit sections disposed wholly in the space between said standard and said mixing bowl end wall connecting said trunnion passages with said coolant fluid circulating jacket.

3,126,055
NUCLEAR FISSION HEATING OF OIL BEARING FORMATIONS
George H. Hanson, Idaho Falls, Idaho, assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed May 4, 1959, Ser. No. 810,814
9 Claims. (Cl. 166—39)



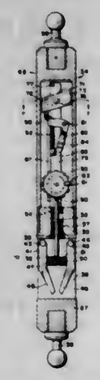
1. The method of increasing oil production from an oil bearing formation intersected by a well which comprises positioning a plurality of particles of fissionable material in the formation adjacent the well, the number of particles so positioned being sufficient to maintain a fission chain reaction in the formation when fissions in the particles are initiated, and positioning a nuclear reactor in the well adjacent the formation to liberate neutrons so as to initiate fissions in the particles, thereby producing heat directly in the formation.

3,126,056
HYDRAULIC FRACTURING OF EARTH FORMATIONS
James A. Harrell, Hobbs, N. Mex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Apr. 11, 1962, Ser. No. 186,730
4 Claims. (Cl. 166—42)



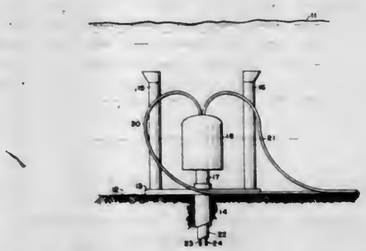
1. A method of propping and at the same time sealing an earth formation fracture from which petroleum can be produced which comprises passing into said fracture as it is being propped an admixture of propping and sealing materials, initially passing into the formation an admixture as described in which the proportion of sealing material is selected so as to seal the propped formation, at lower levels at which water is apt to be found or to collect, when water is present, then as the formation is being propped reducing the proportion of sealing material and increasing the proportion of propping material in a manner such that the relative quantities of sealing and propping materials deposited at higher and higher levels in the formation will be such that the fracture from at about the expected petroleum-water interface to a higher level will now be primarily propped and not sealed so that water flowing at levels higher than said expected interface will be produced in lieu of causing a sealing of the formation.

3,126,057
POSITION SELECTOR DEVICE FOR WELLS
William J. Hayes, Houston, Tex., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed Sept. 19, 1960, Ser. No. 56,855
10 Claims. (Cl. 166—64)



1. Apparatus for selectively limiting the downward travel of a well device through a pipe string depending vertically within a well, said apparatus comprising a vertical pipe string, a plurality of recessed stop means of equal diametrical dimensions formed within the pipe string at axially spaced locations therealong and adapted to be selectively engaged by a stepwise-actuatable position selector device passing through said pipe string, position-indicating and actuating marker means of equal diametrical dimensions carried by said pipe string each at a point intermediate adjacent stop means for stepwise actuation of a position selector device passing said marker means, a pumpable well device including a stepwise-actuatable position selector device of a diameter sufficient to pass through said pipe string and by said marker means therein to stop selectively at one of said stop means, latching means carried by said position selector device, latch actuating means carried by said position selector device and operatively connected to said latching means and responsive to movement past each of said marker means, a portion of said latch actuating means being adjustable timing and release means operatively connected to said latch actuating means for delaying the operation of said latch actuating means until said position selector device is in a preselected portion of said pipe string.

3,126,058
POSITION SELECTOR DEVICE FOR WELLS
Edward D. Yetman and William E. Baier, Jr., Houston, Tex., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed June 22, 1961, Ser. No. 118,916
8 Claims. (Cl. 166—66.5)

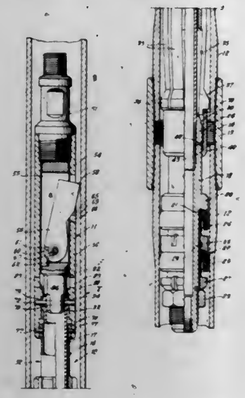


1. A position-selector device of a size adapted to pass through a magnetic pipe string in a well to a selected recessed portion thereof, said selector device comprising an elongated body member, radially-extensible latching means carried within said body member, a counter mechanism operatively connected to said latching means for actuating said latching means on arrival at a preselected position in a pipe string, and magnetic-type counter-actuating means carried by said body member and operatively connected to said counter mechanism for stepwise actuation of said counter mechanism, said counter-actuating means being responsive to movement past non-magnetic marker means spaced along the pipe string through which said selector device moves.

3,126,059
ANCHORING DEVICE
John V. Fredd, Dallas, Tex., assignor to Otis Engineering Corporation, Dallas, Tex., a corporation of Delaware
Filed Apr. 21, 1959, Ser. No. 807,886
18 Claims. (Cl. 166—125)

1. A device for releasably anchoring well tools at a selected level within a well flow conductor comprising: a mandrel; outwardly biased locating means expansibly and longitudinally movably mounted upon the mandrel, said locating means having an upper surface inclined outwardly downwardly of the longitudinal axis of the mandrel and a stop surface disposed below the upper surface and substantially normal to the longitudinal axis of the mandrel; retractor means longitudinally slidably mounted on the mandrel below the locating means and engageable with the locating means when in an upper position on said

mandrel; said mandrel having means thereon engageable with said retractor means for moving said retractor means downwardly relative to said locating means; said retractor means freeing the locating means for outward movement upon downward movement of said retractor means relative to said locating means; and locking means rigid with



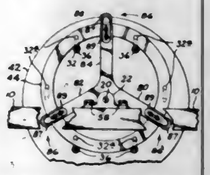
the mandrel disposed below the locating means and movable into engagement with the locating means upon subsequent upward movement of the mandrel after the locating means are moved to said expanded position to prevent movement of the locating means inwardly from said expanded positions.

3,126,060
WELL COMPLETION TOOL AND CEMENTING PLUG
Leo L. Loiacano, Weatherford, Tex., assignor to Evans O. Le Blanc, Sulphur, La.
Filed Mar. 4, 1959, Ser. No. 797,270
4 Claims. (Cl. 166—224)



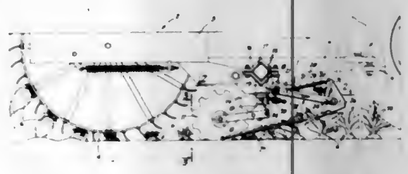
1. A well completion tool adapted to be connected with a well casing disposed in a well hole, said well completion tool comprising a body, normally open valve means mounted in said body having a resilient valve element movably mounted relative to a valve seat mounted in the body, means for normally holding said valve means open, said valve seat having at least one passage that is opened and closed by said valve element, a valve stem operatively connected to said valve element, said valve seat having an opening through which said valve stem is passed and having a valve seat surface through which said passage opens, said valve element having a thickened center part and a reduced thickness peripheral part, said thickened center part adapted to be disposed on said valve seat surface when said valve is closed, and said body having a cylindrical wall engageable by the peripheral part of said valve element to limit movement thereof.

3,126,061
FEATHERED PADDLE MECHANISM WITH GUIDED ECCENTRIC
Clinton D. Town, 5305 SE. Bush St., Portland 6, Oreg.
Filed July 17, 1961, Ser. No. 124,401
1 Claim. (Cl. 170—151)



In rotatable paddle mechanism for a boat having spindles with paddles thereon circumferentially spaced and movable about an axis extending transversely of the boat, mechanism for feathering the paddles on their movement into and out of the water comprising an eccentric disc disposed to one side of said paddle mechanism with its axis parallel to and offset laterally from the axis about which the paddle spindles move, means rotatably supporting said disc comprising at least a pair of arms with ends spaced equally circumferentially about the perimeter of said disc, and guide means on said ends engaging the perimeter of said disc, said guide means including shoes of bearing material slidable on the outer perimeter of said disc, said shoes having channels therein receiving the perimeter of said disc, a mounting for said shoes accommodating shifting of the shoes radially of the axis of said disc to various adjusted positions, and means laterally offset from the axes of the paddle spindles connecting the spindles to said disc.

3,126,062
FOLIAGE DEFLECTING UNIT
Lewis Wallace Schmidt, 130 N. 6th St., Rio Vista, Calif., assignor to Lloyd K. Schmidt, Albert M. Jongeneel, Lewis W. Schmidt, and Claude A. Loucks, each sixteen percent; George C. Gordon and Ernest F. Blackwelder, each ten percent; Mrs. Jessie Newell, eight percent; Pliny G. Holt, Frank H. Holt, Richard E. Holt, Harriet H. Shelton, Frank A. Guernsey, and Darius A. Guernsey, each one and one-third percent
Filed Jan. 7, 1963, Ser. No. 249,620
9 Claims. (Cl. 171—42)



1. A foliage deflecting unit for a row crop harvester which includes a harvesting mechanism positioned to run on the row, and transversely spaced foliage cutters positioned to work along the sides of the row ahead of such mechanism; said foliage deflecting unit comprising

a longitudinally extending member ahead of the cutters and above the row,

means transversely pivoting said member at its rear end on the harvester for up and down floating motion,

a pair of foliage deflector rods beneath said member and extending in downwardly and rearwardly diverging relation to lower end termination at the sides of the row and laterally outwardly of corresponding cutters,

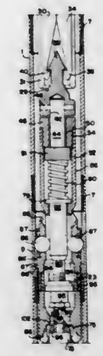
and means securing the deflector rods at their upper ends to the front end of said member.

3,126 063
EARTH BORING EQUIPMENT
Angus R. Pitt and Sidney W. H. Wood, Cheltenham, England, assignors to Dowty Rotol Limited, Cheltenham, England
Filed June 15, 1960, Ser. No. 36,390
Claims priority, application Great Britain June 17, 1959
7 Claims. (Cl. 173—152)



1. Apparatus for lowering a string of pipe lengths along a vertical axis while rotating the same, comprising vertical guide means which are disposed adjacent the axis, at least two horizontally disposed lift platforms which are mounted one above the other in the guide means for independent movement along the axis and which moreover each define an opening on said axis for purposes of accommodating the pipe lengths, means which are operable to cause the platforms to move along the axis through vertically offset strokes that overlap one another for purposes of moving the platforms over a portion of their respective strokes in adjoining relationship with one another, power swivel means which are operable to support and rotate the string of pipe lengths on the aforesaid axis and which moreover are located initially for the lowering operation in the opening defined by the upper of the two platforms, means which are operable to interlock the power swivel means with the upper platform for purposes of supporting and lowering the power swivel means on and with the latter during that portion of its stroke which does not overlap the stroke of the lower of the two platforms, said upper platform opening being sized to pass the power swivel means therethrough and said interlock means being retractable for purposes of disengaging the power swivel means from the upper platform and transferring the same to the lower platform as the two platforms move in adjoining relationship with one another, and means which are disposed on the lower platform about the opening therein for purposes of receiving the power swivel means and locating and supporting the same on the lower platform during at least that portion of its stroke which does not overlap the stroke of the upper platform.

3,126,064
WIRE LINE CORING TOOL
Robert A. Miller, Culver, Ind., assignor to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed June 13, 1960, Ser. No. 35,662
8 Claims. (Cl. 175—246)



1. A device connectable to a core barrel for controlling the movement of such a core barrel in a drill string comprising, an elongated member of a lateral configuration throughout the length thereof to be slidably received within such a drill string and having one end connectable to a core barrel, said elongated member having an axially extending hollow portion with at least one open ended passageway extending laterally through the side thereof, said passageway being spaced axially from said one end of said elongated member, a stem means supported by said elongated member to extend axially within said hollow portion and laterally inwardly of the internal surface of said hollow portion, valve means supported by said stem means within said hollow portion with the peripheral surface thereof located adjacent a portion of said internal surface, said valve means being axially intermediate said one end and said passageway, at least one of said means having means cooperable with the other of said means to secure said valve means in any one of a plurality of relative positions on said stem means to vary the opening between said surfaces, said elongated member having an open ended passageway extending between said hollow portion and the exterior of said elongated member, and said last mentioned passageway being spaced from said valve means toward said one end.

3,126,065
WELL TOOLS HAVING HYDRAULICALLY EXPANSIBLE CUTTER ELEMENTS
Jack Chadderdon, Houston, Tex., assignor to A-Z International Tool Company, Houston, Tex., a corporation of Texas
Filed Feb. 5, 1960, Ser. No. 7,041
1 Claim. (Cl. 175—269)

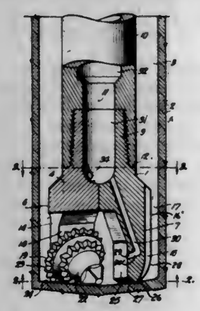
An underreamer cutting tool including, a main tubular body, a cutter supporting element having its upper end pivotally mounted on the body and having a rotatable cutter carried by its lower end, said cutter being located within the confines of the body when the supporting element is in retracted position, a tubular actuator slideable within the body and initially in a lower position in the body with its lower end above the cutter of the supporting element, an expander means on the exterior of the actuator adapted to co-act with the cutter supporting element when the actuator moves upwardly relative to said element to swing the element radially outwardly of the body and thereby move the cutter to expanded position, a cylinder formed in the upper portion of the

main body and having an upwardly facing internal shoulder at its lower end, a seal between the actuator and the bore of the main body below said shoulder, a second seal between said actuator and body at the upper end of the cylinder, an annular piston surrounding and secured to said tubular actuator and slideable within the cylinder, downward movement of said piston being limited by said upwardly facing internal shoulder, said actuator having a port in its wall establishing communication between the bore of the actuator and that area of the cylinder below the annular piston whereby fluid pressure from the bore of the actuator may be directed into the cylinder



below said piston, means restricting the bore of the tubular actuator below said communication port whereby pumping of pressure fluid at a predetermined rate downwardly through the actuator builds up a sufficient back pressure in the lower end of the cylinder to move the piston and actuator upwardly to thereby swing the cutter supporting element outwardly and expand said cutter, and fluid diverting means in the form of an annular element having a curved upper surface within the main body below the actuator and contiguous to the cutter for directing fluid flowing from the lower end of said actuator outwardly against said cutter.

3,126,066
ROTARY DRILL BIT WITH WIPER BLADE
Edward B. Williams, Jr., Greenville, Tex., assignor of one-third to Edward B. Williams III, one-third to Joseph W. Williams, and one-third to David B. Williams, Greenville, Tex.
Filed Dec. 5, 1960, Ser. No. 73,898
2 Claims. (Cl. 175—336)



1. A rotary drill bit for drilling a bore hole in earth formations and the like, including

a body member having a drill stem connection by which the drill bit is connected with the drill stem when the bit is in use and which connection is provided with a bore through which drilling fluid is supplied from the drill stem to said body member during rotation of the drill bit,

spaced apart arms depending from said body member at one side thereof,

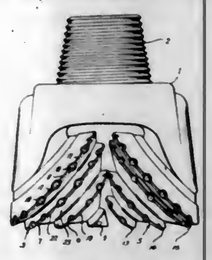
spindles having axes in planes substantially 120° apart and extending inwardly and downwardly from said arms toward the axis of rotation,

conical cutters rotatable on said spindles and of a size to provide a space between said cutters, and

a wiper blade extending downwardly from the opposite side of the body member and having a leading face substantially parallel with a plane containing the axis of the cutter following the wiper blade and at an angle to the direction of rotation to scrape up cuttings made by the cutter in advance of said wiper blade,

said wiper blade having a duct extending downwardly from said bore and having a terminal portion in registry with said space between the cutters for discharging a jet of drilling fluid across said axis of rotation and through said space between the cutters for discharging said cuttings gathered by the face of said wiper blade together with the cuttings produced by the cutter which follows the wiper blade.

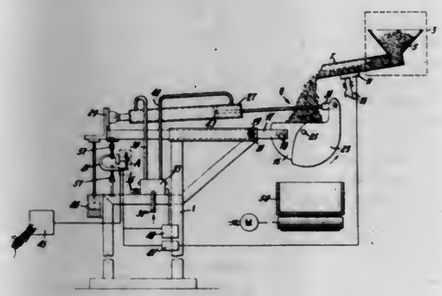
3,126,067
ROLLER BIT WITH INSERTS
Percy W. Schumacher, Jr., Houston, Tex., assignor to Reed Roller Bit Company, Houston, Tex., a corporation of Texas
Filed Mar. 12, 1959, Ser. No. 799,041
4 Claims. (Cl. 175—374)



2. A roller cutter comprising a body, circumferential rows of teeth on the said body, each of the said rows comprising spaced teeth having circumferentially extending crests, and cylindrical hard metal inserts in said body between said spaced teeth, the said spaced teeth extending radially beyond the outer ends of the said hard metal inserts.

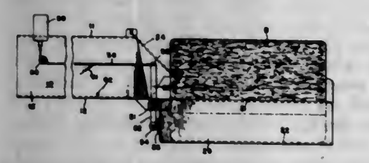
3,126,068
AUTOMATIC WEIGHING AND FLOW CONTROL APPARATUS FOR SOLID MATERIALS
Alan H. Richardson, Kingsville, and John H. Carroll, Ashtabula, Ohio, assignors to Union Carbide Corporation, a corporation of New York
Filed Apr. 3, 1961, Ser. No. 100,459
4 Claims. (Cl. 177—108)

1. An apparatus for controlling and measuring the amount of solid granular material withdrawn from a structure containing such material which comprises, in combination, gating means operably connected to said structure for providing continuous passage of granular solid material therefrom and being adjustable to be deactuated whereby the solid material is caused to be retained in the structure while said gating means is deactuated; a receptacle disposed to receive the solid material as it is withdrawn having a movably mounted member normally closing said receptacle, said member being adjustable to open the receptacle and thereby cause any solid material contained in the receptacle to be emptied therefrom; a base member; a lever arm pivotally mounted on the base member and supporting said receptacle at a predetermined distance from the axis of rotation of said lever arm; a deformable member coupled between said lever arm and said base member at a fixed distance from the axis of rotation of said lever arm and on the opposite side of the lever arm pivot from the receptacle, said deformable member being deformable in proportion to the weight of lime in said receptacle and arranged to maintain the lever arm in a substantially horizontal position; force transmitting means located on the opposite side of the lever arm pivot from said receptacle, operably coupled



to said movable receptacle member through an actuating arm and normally closing said receptacle by exertion of a positive force on said movable receptacle member through said actuating arm, said force transmitting means being adapted to be actuated to cause movement of said movable receptacle member by virtue of a positive force exerted thereon through said actuating arm to provide opening and subsequent re-closing of the receptacle; and means engaged to said deformable member and located on the same side of the lever arm pivot therewith, said last mentioned means being responsive to a predetermined deformation of said deformable member for temporarily deactuating said gating member when said deformable member experiences said predetermined deformation and for actuating said force transmitting means to cause emptying and re-closing of said receptacle while said gating means is deactuated.

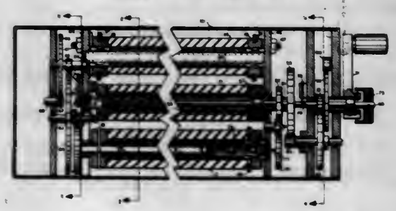
3,126,069
BALER ATTACHMENT
John H. Shepley, Lancaster, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Apr. 16, 1963, Ser. No. 273,502
8 Claims. (Cl. 177—136)



1. Bale weighing apparatus attachable to the bale case of a baler to receive bales progressively discharged therefrom and hold each bale temporarily so that each bale may be weighed before being deposited onto the ground, comprising a first chute section and a second chute section

extending generally parallel to each other and in different horizontal planes, means connecting said first section to said bale case as an extension thereof and along one side of the bale case, means pivotally connecting said second section to said bale case along the opposite side thereof and spaced below said first section, said first section being of such narrow width that each bale on being deposited thereon free of the bale case topples laterally onto said second section for support thereby, said second section pivoting relative to said bale case responsive to the weight of a bale thereon, weight indicator means, means connecting said weight indicator means to said second section and actuated responsive to pivoting of the second section, each bale when supported on said second section projecting above said first section and in the path of the next bale to be discharged from the bale case whereby the next bale progressively pushes the bale on said second section longitudinally for discharge rearwardly onto the ground.

3,126,070
RUBBER STORAGE ENERGY DEVICE
Arthur F. Hayek, Pleasantville, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Filed June 26, 1962, Ser. No. 205,257
6 Claims. (Cl. 185—37)



1. A rubber spring device for storing energy comprising,

a plurality of cylindrical rubber members,

means supporting each of said plurality of cylindrical rubber members to maintain the cylindrical shape thereof,

antifriction means interposed between said last-named means and each of said rubber members,

means gearing the ends of said rubber members together, said means including a rotatable input and a rotatable output,

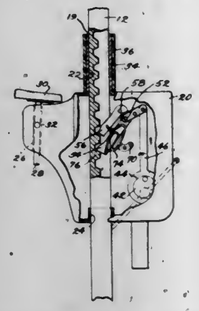
means applying torque to rotate said input thereby tensing said rubber members equally in torsion and storing energy therein equally in the form of shear strain, and

rotatable means connected to said rotatable output for abstracting said shear strain energy equally from all of said plurality of cylindrical rubber members.

3,126,071
MONOPOLE ELEVATOR
Harry S. Basset, Waco, Tex., assignor to Susan Basset, Waco, Tex.
Filed July 26, 1961, Ser. No. 127,047
5 Claims. (Cl. 187—19)

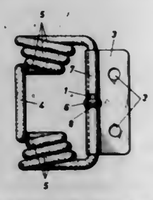
1. An amusement device comprising: a substantially vertical post having a plurality of teeth formed in its surface; a housing mounted for slidable movement on said post; an upstanding member fixedly attached to said housing surrounding said post for a substantial distance thereabove; a seat member secured to said housing; an axle mounted in said housing; eccentric means mounted on said axle; lever means pivotally mounted on said housing; means connecting said eccentric means and one end of said lever means; a first pawl member pivotally

mounted at the other end of said lever means; a second pawl member adjacent said first pawl member and mating therewith pivotally mounted on said housing; spring means to normally engage the free ends of said pawl members with said teeth; and means to rotate said axle,



whereby said connecting means is reciprocated substantially vertically to pivot said lever means thereby alternately engaging and disengaging each of said pawl members with succesive teeth to move said housing in a given direction along said post.

3,126,072
ENERGY ABSORBING DEVICES FOR USE WITH A SAFETY BELT OR THE LIKE
Ebbe Anders Israel Johansson, 6 Kaptensgaten, Halmstad, Sweden
Filed June 11, 1962, Ser. No. 201,377
Claims priority, application Sweden June 20, 1961
3 Claims. (Cl. 188—1)



1. An energy absorbing device for use with a safety belt comprising a metal rod having an intermediate portion for being secured to the safety belt, a pair of coiled portions contiguous with said intermediate portion and end portions connected together and an attachment member connected to said end portions.

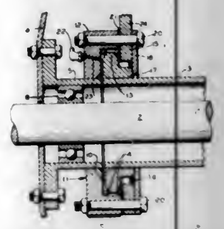
3,126,073
BRAKE SYSTEM FOR WHEEL SUPPORTED VEHICLES
Christian H. Sauer, 828 Wall St., Chico, Calif., assignor of one-half to G. W. Stiefvater, Chico, Calif.
Filed Nov. 19, 1962, Ser. No. 238,633
6 Claims. (Cl. 188—2)

1. In a vehicle that includes a horizontally elongated axle housing having opposite end portions and a part intermediate said end portions with a horizontal axle rotatably supported therein projecting from said opposite end portions and with ground wheels rigid on the projecting ends of said axle supporting said vehicle for forward movement on the ground, and a body sprung on said housing at points adjacent to its said end portions, and which wheel includes brake engageable means rigid therewith:

(*a*) brake means carried by said end portions of said housing rotatable therewith and movable into and out of engagement with said brake engageable means;

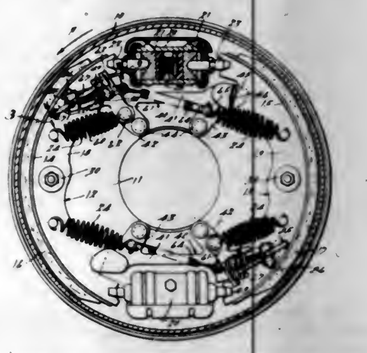
(*b*) bearings between said end portions of said axle housing and said axle supporting said axle for rotation,

(*c*) means supporting said end portions for rotation on said bearings together with said brake means and relative to the part of said axle housing on which said body is sprung upon movement of said brake means into engagement with said brake engageable means,



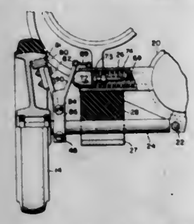
(*d*) a flexible connection between said end portions and said brake means connecting them at a point eccentric to the axis of said housing connecting them for transmitting the braking torque of said brake means to said body in a downward direction upon moving said brake means into engagement with said brake engageable means when said vehicle is moving in a forward direction whereby said body will be drawn downwardly.

3,126,074
AUTOMATIC BRAKE ADJUSTING MECHANISM
Harvey C. Swift, Birmingham, Mich., assignor to Kelsey-Hayes Company, Romulus, Mich., a corporation of Delaware
Filed Nov. 23, 1962, Ser. No. 239,630
10 Claims. (Cl. 188—79.5)



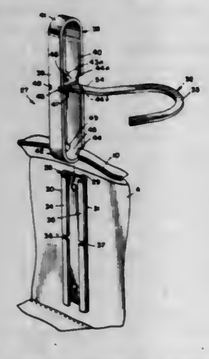
1. In a vehicle brake comprising a brake shoe, a brake drum, a torque-resisting member, means for moving said brake shoe into engagement with said brake drum, and an adjustable anchor carried by said torque-resisting member adapted for engagement by said brake shoe, that improvement which comprises, means mounted on the brake shoe normally locking said anchor to prevent adjustment thereof, an adjusting member for adjusting said anchor, a link directly connecting said adjusting member to said brake shoe whereupon movement of said brake shoe in a forward direction will move said adjusting member to an operative position with respect to said anchor, and a lost motion connection between said brake shoe and locking means actuated by excessive movement of said brake shoe in the same direction for releasing said locking means to permit adjustment of said anchor.

3,126,075
BRAKE MECHANISM FOR A MISSILE DOLLY
Clyde C. Cole, 5298 Harvard, Ventura, Calif.
Original application Jan. 16, 1958, Ser. No. 709,427, now Patent No. 3,005,640, dated Oct. 24, 1961. Divided and this application Aug. 21, 1961, Ser. No. 132,991
3 Claims. (Cl. 188—119)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In combination with a vehicle frame, a plurality of wheels, at least two of said wheels each having an axle pivotally supported on said frame for vertical movement relative thereto, each of said wheels having a brake drum, a brake mechanism for braking each of said wheels in any position throughout said vertical movement, comprising extendable linkage, said linkage for each of said wheels including a vertically extending support lever pivotally mounted on a respective axle at its lower end adjacent the respective wheel, said support lever having an upper end, an arm pivotally mounted at one end to the lever at a point intermediate the ends of the support lever, another end of the arm supporting a brake shoe for engagement with the respective brake drum, said arm forming an obtuse angle with respect to its support lever, said arm being pivotable relative to the lever to vary the angular relation therebetween and the combined length of the lever and the arm, horizontally movable means supported on the frame adjacent the support lever and slidably engaging the upper end of the support lever for applying a force to said linkage to engage the respective brake shoe and drum, said upper end of the support lever extending a length greater than the vertical movement of the wheel whereby said movable means can apply a force on the upper end of the support lever throughout the vertical movement of the wheel to extend the combined length of the support lever and the arm to apply a braking force to the respective wheel.

3,126,076
LUGGAGE
Sol Koffler, 600 Blackstone Blvd., Providence, R.I.
Filed July 20, 1960, Ser. No. 44,127
6 Claims. (Cl. 190—43)



1. An article of luggage wherein clothes hangers are to be hung from a portion thereof comprising:

(*a*) a supporting member attached to said portion,

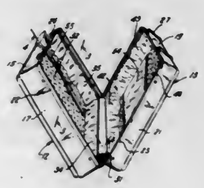
(*b*) a hanger supporting device engageable with and demountable from said supporting member, said hanger supporting device being elongated, having an upper side engaging said supporting member and a lower side adapted to receive the hook portions of said clothes hangers, said upper side having a relatively narrow opening approximately midway of its length,

(*c*) a hook member on said hanger supporting device adapted to be used for hanging said hanger supporting device after it has been demounted and removed from said luggage, said hook member having a hook portion and a shank portion, said shank portion being a flat sheet metal piece the thickness of which is approximately the same as the size of said opening,

(*d*) a pair of members in spaced parallel relation to each other extending perpendicularly from said upper side into substantial abutment with said lower side of said hanger supporting device on opposite sides of said opening in said upper side, and

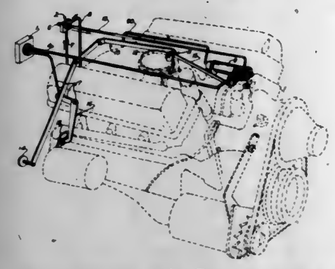
(*e*) means pivotally connecting the shank of said hook member to said perpendicularly extending members with the plane of the shank of the hook member parallel to the planes of said pair of members whereby said hook member can be rotated with respect to said hanger supporting device and the shank of said hook member can be moved through said opening in said upper side of said hanger supporting device when said hanger supporting device is demounted from said supporting member.

3,126 077
HAND LUGGAGE AND LINING CONSTRUCTION THEREFOR
Louis Marshall, New York, N.Y. (% General Utility Bag Corp., 350 Warren St., Jersey City, N.J.)
Filed Dec. 13, 1962, Ser. No. 244,374
4 Claims. (Cl. 190—53)



1. In a luggage case consisting of hingedly connected case sections each including a main wall and peripheral side walls, the combination therewith of a prefabricated lining construction therefor consisting of lining sections each including a main wall and peripheral side walls, a backing sheet, means securing said backing sheet and the peripheral walls and the main wall together adjacent the periphery of the backing sheet, a backing strip extending about said peripheral side walls, means securing said backing strip to said peripheral walls at the upper edges thereof, a hinge member connecting the peripheral walls of said lining sections along confronting side walls thereof to thereby constitute with said lining sections a prefabricated complete lining unit, and said backing sheet and backing strip of one of the lining sections having adhesive coatings securing the same respectively to the main wall and the peripheral walls of one of said case sections, and the backing sheet and backing strip of the other lining sections having adhesive coatings securing the same respectively to the main wall and peripheral walls of the other case section with the hinge member overlying the hinge connection of said case sections.

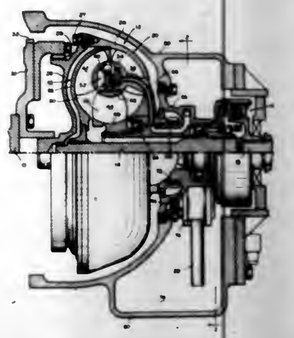
3,126,078
SPEED CONTROL AND REMINDER MECHANISM
Rudolph J. Novotny, New Boston, and Richard C. Schubert, Inkster, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Jan. 17, 1962, Ser. No. 166,858
11 Claims. (Cl. 192—3)



1. A control system for a vehicle comprising: a controllable means for controlling a variable of vehicle operation by movement to various positions, said controllable means adapted to be automatically controlled; an automatic control means for adjusting said position of said controllable means, said automatic control means generating an output signal proportional to the actual value of said variable of vehicle operation being controlled, a first input means generating a first signal representative of said variable of vehicle operation being controlled by said controllable means, a second input means generating a second signal representative of a selected value of said variable of vehicle operation being controlled by said controllable means, said first and second input means operatively coupled to said automatic control means, said output signal of said automatic control means generated to oppose any deviation of said first input signal from said second input signal when said automatic control means is controlling said controllable means, a comparing means for enabling the output signal of said automatic control means to be connected to said controllable means, said comparing means operatively coupled to said controllable means and to said automatic control means; a warning means for manifesting a signal when said first signal is equal to said second signal, said warning means operatively coupled to said first input means and said second input means; and selection means for selectively engaging said controllable means to said automatic control means, said selection means operatively coupled to said automatic control means and said controllable means, whereby said controllable means may be controlled automatically by said automatic control means.

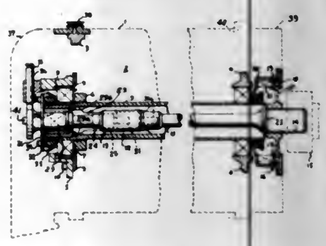
3,126,079
HYDRODYNAMIC DEVICE WITH LOCK-UP CLUTCH
Wayne R. Howard, Jackson, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Filed Aug. 27, 1958, Ser. No. 757,526
7 Claims. (Cl. 192—3.2)

1. In a hydrodynamic device including a rotatable bladed impeller wheel having an annular recess therein and a rotatable bladed turbine wheel in confronting relation to the impeller wheel, the device being adapted to contain fluid for transmitting torque between the impeller wheel and the turbine wheel and the two wheels providing an annular space between bladed portions thereof, a fluid pressure operated friction clutch located in the said annular space providing additional torque transmitting means between said impeller wheel and said turbine wheel, said clutch comprising a pair of internally toothed friction disks operatively connected to the impeller wheel, an externally toothed friction disk located between said first-mentioned pair of friction disks and operatively connected to the turbine wheel and an annular piston positioned in the said annular recess, a conduit in one of said



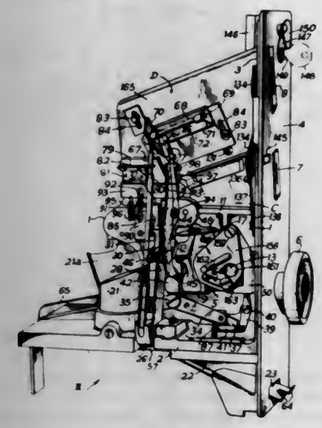
wheels, and means for connecting said conduit with a source of fluid under pressure for selectively engaging said friction clutch.

3,126,080
COUPLING AND DECOUPLING DRIVE UNIT
Clifford F. Travis and Charles F. Renner, Erie, Pa., assignors to General Electric Company, a corporation of New York
Filed Oct. 10, 1960, Ser. No. 61,776
5 Claims. (Cl. 192—94)



2. Apparatus incorporated within a driven auxiliary unit for coupling and decoupling an engine from said driven auxiliary unit comprising: a hollow driven shaft for supporting the rotative portion of said auxiliary unit; a torque rod disposed coaxially within said hollow driven shaft and adapted for axial movement therein, said torque rod being adapted for engagement at one end with said engine and at the other end with said hollow driven shaft for driving said auxiliary unit, said torque rod further including an internally threaded region at said other end; a disconnect shaft coaxial with said hollow driven shaft and including thread means at one end partially engaging the internally threaded region of said torque rod; means operatively associated with said torque rod and said disconnect shaft tending to maintain the initial partially threaded position of said torque rod and disconnect shaft and provide for rotation of said torque rod and disconnect shaft in unison; means adapted for selective engagement with the other end of said disconnect shaft operative when engaged to prevent rotation of said disconnect shaft so that said torque rod is threaded onto said disconnect shaft and caused to slide axially of said hollow driven shaft a sufficient distance to effect disengagement of said torque rod from said engine; and means for rotating said disconnect shaft to effect re-engagement of said torque rod with said engine.

3,126,081
LUGGAGE LOCKERS AND THE LIKE
Henry James Dolman, 72 Church Road, Staple Hill, Bristol, England
Filed Nov. 17, 1960, Ser. No. 69,982
Claims priority, application Great Britain Nov. 20, 1959
18 Claims. (Cl. 194—4)



1. A lock mechanism for a door comprising a framework having fixed abutments thereon, a disc magazine on said framework, a coin selector on said framework, a disc selector on said framework, a turnshaft rockable on said framework, a quadrant on said turnshaft, circumferentially spaced pivoted pawls on said quadrant engageable alternately with said fixed abutments unless tripped by a coin accepted by said coin selector or a disc accepted by said disc selector, and supported by said quadrant, disc extracting means operable by said turnshaft, a projectable door bolt reciprocatable in required direction by said turnshaft for locking and unlocking when said quadrant is released as the appropriate pawl is tripped by a coin or disc, and an exteriorly accessible user operating member for rocking said released quadrant and turnshaft to extract a disc and move said door bolt, said disc selector comprising separate setting devices having movement-multiplying levers adapted for precise dimensional conditioning movement according to the thickness and diameter of said extracted disc during delivery to the user, a disc of identical thickness and diameter being required for the subsequent successive acceptance of said disc by said conditioned setting devices of said disc selector.

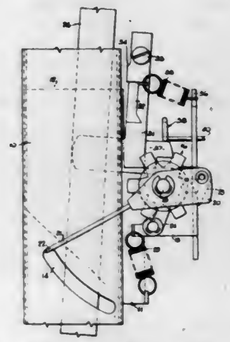
3,126,082
COIN-FREED MECHANISM
Stewart Alfred Maxwell, Walsall, England, assignor to Fisher & Ludlow Limited, Birmingham, England, a company of England
Filed Mar. 26, 1962, Ser. No. 182,489
2 Claims. (Cl. 194—94)

1. A coin freed mechanism, in or for a coin freed vending machine, which includes:

(*a*) a release member adapted for movement between a first position and a second position, a vending operation of the machine being permitted when the release member is in its first position and prevented when the release member is in its second position,

(*b*) a toothed wheel, a first ratchet wheel and a second ratchet wheel mounted on a common shaft, the toothed wheel being adapted for rotation together with the ratchet wheels between a first angular position, in which the teeth of the toothed wheel are clear of the path of travel of the release member so as to permit movement of the release member into the space between two adjacent teeth of the toothed wheel and into its second position, and a second angular position in which a tooth of the toothed wheel extends into the path of travel of the release member so as to prevent movement of the release member from its first to its second position,

(*c*) a first pawl adapted, in response to the insertion of the appropriate coinage into the machine, to engage the first ratchet wheel and to rotate the toothed wheel together with the ratchet wheels from the first angular position to the second angular position in a forward direction,

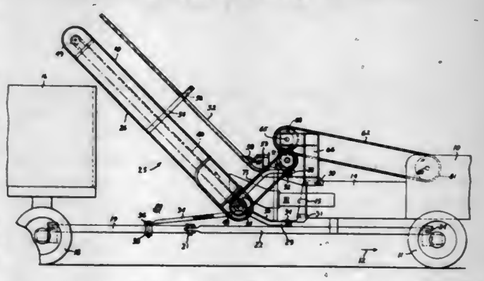


(*d*) a second pawl adapted to engage the first ratchet wheel so as to prevent rotation of the toothed wheel together with the ratchet wheels in the reverse direction,

(*e*) a finger adapted, in response to a vending operation of the machine to engage the second ratchet wheel and to rotate the toothed wheel together with the ratchet wheels from the second angular position to the first angular position, again in a forward direction, and

(*f*) a ledge, adapted for movement with said finger, adapted when the machine is in an inoperative position to support the release member in its first position and adapted upon a vending operation of the machine to move so as to permit movement of the release member from its first position towards its second position.

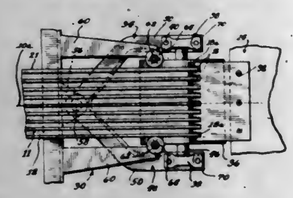
3,126,083
ELEVATOR
James H. Hollyday, New Holland, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed June 11, 1962, Ser. No. 201,634
5 Claims. (Cl. 198—7)



1. An elevator for receiving succesive bales discharged from the bale case of a field hay baler and for conveying the bales for deposit in a wagon trailing behind the baler

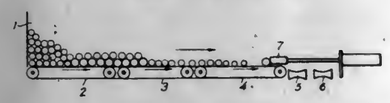
comprising a frame, means pivotally mounting said frame on the bale case for lateral swinging movement about a vertical axis and to each side of a normal neutral position, link means on said frame and connectable to the wagon for swinging the frame responsive to changes in the direction of travel of the baler, conveying means on said frame having a lower receiving end adjacent the bale case and a higher discharge end above the wagon, a pair of friction wheels offset relative to said vertical axis and normally having peripheral engagement with each other, one of said wheels being a drive wheel supported on the baler and rotatable about a fixed axis, the other of said wheels being a driven wheel supported on said frame and rotatable about an axis fixed relative to the frame and shiftable relative to the bale case responsive to lateral swinging of the elevator frame, said other wheel being drivingly disengaged from said one wheel when shifted beyond a given amount, power means rotating said drive wheel, and means connecting said driven wheel to said conveying means.

3,126,084
SELF CENTERING END PULLEY ARRANGEMENT FOR BELT CONVEYORS
Alfred D. Sinden, Aurora, Ill., assignor to Stephens-Adamson Mfg. Co., a corporation of Illinois
Filed July 21, 1960, Ser. No. 44,373
10 Claims. (Cl. 198—16)



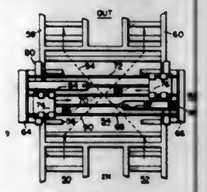
1. In conveyor apparatus of the type including an endless type conveyor element trained over spaced end pulleys, the improvement wherein one of the end pulleys is journalled on a frame that is mounted with freedom of movement pivotally about a vertical axis aligned with the longitudinal center of the apparatus and that is positioned inwardly of said one end pulley, and including fixed guide means acting on said conveyor element adjacent said one pulley for preventing lateral movement of said element.

3,126,085
CONVEYING DEVICE
Per Harald Collin, Herrgarden, Skutskar, and Georg Jansson, Gavle, Sweden, assignors to Stora Kopparbergs Bergslags AB, Falun, Sweden, a corporation of Sweden
Filed Sept. 11, 1961, Ser. No. 137,242
Claims priority, application Sweden Sept. 23, 1960
4 Claims. (Cl. 198—20)



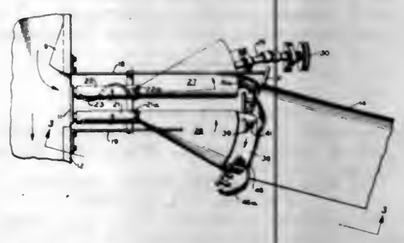
1. A conveying device for long-shaped objects of substantially equal lengths, comprising a first conveyor for moving the objects transversely of themselves and having a discharge end, a second conveyor located at the discharge of the first conveyor for moving the long-shaped objects longitudinally of themselves one by one in succession end to end, and a movable gripping device at the discharge end of said first conveyor for gripping the objects endwise one at a time at both ends and for transferring the objects to the second conveyor to be moved longitudinally thereby, said gripping device including spaced adjustable gripping members and two spaced contact sensitive members and means responsive to actuation of both of said contact sensitive members by the ends of a long-shaped object to move said gripping members into engagement with the ends of the long-shaped object.

3,126,086
TRANSFER MECHANISM FOR AUTOMATIC ROUTING CONVEYORS
Bernard C. Holben, Dublin, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Apr. 20, 1961, Ser. No. 104,455
4 Claims. (Cl. 198—24)



1. An article transfer station comprising:
two parallel coplanar conveyors bearing articles to be transferred from either conveyor to the other,
a wide-roll section bridging said conveyors,
a deflector bar positioned along the outside of each of said conveyors at opposite sides of said wide-roll section and extending in the direction of travel of said articles,
separate linear drive means for moving each of said bars across said wide-roll section, and
means for selectively energizing one or the other of said drive means to move said associated deflector bar from a first position along the outside of one of said conveyors to a second position defining a path for said article with the outside of said other conveyor.

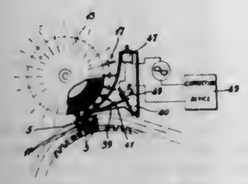
3,126,087
METHOD AND APPARATUS FOR SPACED FEED OF ARTICLES
Earl R. Anderson, Campbell, Calif., assignor, by mesne assignments, to Filper Corporation
Filed Feb. 29, 1960, Ser. No. 11,916
23 Claims. (Cl. 198—34)



1. The method of receiving a single file of abutting articles with an occasional article supported on the file as a second layer and resolving it to a single file of abutting articles without a second layer and thereafter changing said abutting file to a timed article-by-article feed in spaced apart relation, which comprises feeding articles from a bulk supply as a single file of normally abutting articles moving along a downwardly inclined path, applying a rotating effect to the articles in a direction to produce article rotation about an axis substantially parallel to said path, progressively increasing the speed of said effect along at least the portion of said path adjacent and

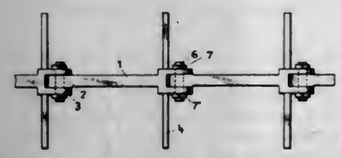
leading to the discharge end thereof, whereby a second layer article will move down between the articles supporting it, and at equal intervals lifting each successive endmost article from said path to provide said spaced apart timed feed thereof.

3,126,088
ERROR DETECTOR AND ACTUATOR
Rudolf Dudas, 65 58th Ave., Laval des Rapides, Quebec, Canada
Filed Feb. 18, 1963, Ser. No. 259,259
6 Claims. (Cl. 198—40)



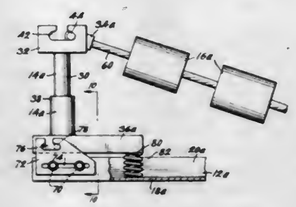
1. An error detector comprising:
(*a*) a body rotatable about a central axis;
(*b*) at least one sensing element projecting radially away from the periphery of said body;
(*c*) means allowing said sensing element to move from a radially inward inoperative position to a radially outward operative position;
(*d*) an abutment member on said sensing element, at the radial inner end thereof;
(*e*) resilient means forcing said sensing element into said operative position;
(*f*) abutment means, separate from and fixed in relation to said body and of limited extent, cooperable with said abutment member to drive said sensing element toward inoperative position against said resilient means and suddenly release said element when the latter has rotated past said abutment means.

3,126,089
DETACHABLE CONNECTION FOR DRAG CONVEYOR CHAINS
Ernst Hügli, Steinacker, Uzwil, Switzerland, assignor to Gebrueder Buehler, Uzwil, Switzerland, a firm of Switzerland
Filed Aug. 22, 1961, Ser. No. 133,113
Claims priority, application Switzerland Aug. 30, 1960
6 Claims. (Cl. 198—171)



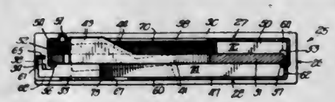
1. A detachable connection for pivotally coupling two apertured members comprising: a pivot pin including a central portion inserted through said apertured members, one extremity of said pin including locking means of a diameter larger than the diameter of said apertures in said members, the opposite extremity of said pin extending beyond said member, said extending portion of said pin having a groove formed therein intermediate the extreme end portion of said pin and said central portion thereof, the diameter of said central portion being greater than the diameter of said extreme end portion, and a retaining ring, including a central aperture therethrough, made of soft steel adaptable of being slid over said extreme end portion of said pin and deformable to bear circumferentially against the outer surface of said groove, said retaining ring's central aperture before deformation having a diameter smaller than the diameter of said central portion of said pin.

3,126,090
ADJUSTABLE IDLER SUPPORT BRACKET FOR BELT CONVEYOR ASSEMBLIES
Edmund C. Bitzer, 1118 18th St., Golden, Colo.
Filed May 10, 1961, Ser. No. 109,098
5 Claims. (Cl. 198—192)



1. A support assembly for flexible belt conveyor idlers which comprises, an elongate rigid cross frame element of a belt conveyor frame and a pair of upright post support units attached at opposite ends of the cross frame element for independent adjustable movement in the direction of the length thereof to vary the spacing therebetween while maintaining substantially the same angular relation thereto, each of said post support units including a bracket element, a post element and a clevis, the bracket having a base portion supported on the cross frame element and a socket-forming portion projecting upwardly from said base portion which receives the post element telescopically in axial alignment therewith, the clevis being mounted on top of the post element and adapted to releasably receive the connector on the end of a flexible idler unit suspended between the post support units for pivotal movement, the cross frame element being generally channel-shaped having a web and upstanding flanges bordering the side margins of the latter, a pair of sideplates attached to the upstanding flanges of the cross frame element in transversely aligned relation on each end thereof for longitudinal non-tiltable movement relative thereto, said sideplates each having an inwardly undercut upwardly opening slot in the top edge thereof, a transverse pivot pin carried by the base of each post-support unit and mounted within the undercut portion of the slot in the sideplates providing a longitudinally adjustable pivotal connection between the cross frame element and said post support units, and a compression spring positioned between the web of the cross frame element and the base of each post support unit spaced inwardly from the pivotal connection therebetween providing a shock-absorbent mounting for the idler unit.

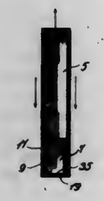
3,126,091
RAZOR BLADE DISPENSER
Leopold Karl Kuhnl, Stratford, Conn., assignor to Eversharp, Inc., Milford, Conn., a corporation of Delaware
Filed Mar. 22, 1962, Ser. No. 181,767
18 Claims. (Cl. 206—16)



1. In a razor blade dispenser for use in dispensing double edge blades of the centrally slotted type, a body

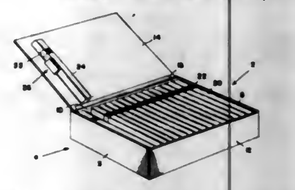
member characterized by upstanding side walls and a horizontally disposed bottom wall upon which is supported a stack of new centrally slotted blades, a cover plate which is supported on the uppermost blade in said stack of new blades between said upstanding side walls of said body member and which is mounted on said body member in a manner whereby said cover plate is progressively movable downwardly toward said bottom wall of said body member as each blade is ejected from the dispenser, said cover plate having a depending front end portion provided with a forwardly directed transversely extending exit slot in its upper edge in alignment with the underside of the cover plate whereby said exit slot is at all times aligned with the uppermost blade in the stack of new blades regardless of the number of blades in the stack, a longitudinally extending centrally located finger-like portion attached at its rear end to said bottom wall and provided forwardly of its rear end with a resiliently depressible upstanding guide rib, which rib projects upwardly through the centrally slotted portions of the blades in the stack of new blades, and means provided in said cover plate facilitating ejection of the uppermost blade in the stack through said exit slot with said cover plate being movable progressively toward said bottom wall of said body member as the blades are ejected, said guide rib being resiliently yieldable in a downward direction to permit movement of the unslotted rear end portion of the uppermost blade in the stack over and past said guide rib during ejection of the uppermost blade from the dispenser.

3,126,092
CIGARETTE PACKAGE WITH ASHTRAY
Arthur Mortimer Maron, 200 Kensington Ave., Westmount, Quebec, Canada
Filed Oct. 24, 1960, Ser. No. 64,531
3 Claims. (Cl. 206—41)



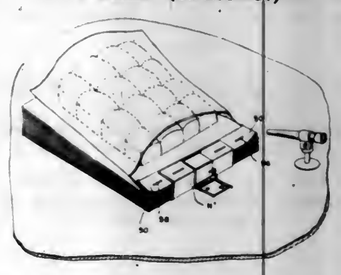
1. A cigarette package comprising: an inner body formed with a cigarette compartment and an ash receptacle in juxtaposed relationship; said inner body being telescopically received into an outer body; said inner body having a back wall provided with an extension in one direction adapted to form the ash receptacle; said extension being folded continuously at substantially right angles to successively form a bottom cover; a forward wall projecting parallel to and over said back wall; said forward wall having an aperture therethrough; a top wall parallel to said bottom cover; a rear wall parallel to said forward wall and in abutting relationship with said bottom cover; a doubled-up wall located between said rear wall and said back wall in abutting relationship therewith; a bottom wall normal to said back wall and in abutting relation over said top wall; said rear wall, bottom cover, forward wall and top wall forming the ash receptacle; said outer body having a front wall parallel to the back wall of said inner body and a slot therethrough; said slot being in alignment with the aperture in the forward wall of said ash receptacle and coming into registry therewith upon opening of said package.

3,126,093
CIGAR BOX
Fred L. Bradley, York, and Morris L. Wurman, Melrose Park, Pa., assignors to Bayuk Cigars Incorporated, Philadelphia, Pa., a corporation of Maryland
Filed Oct. 25, 1962, Ser. No. 233,080
3 Claims. (Cl. 206—45.13)



3. In combination with a cigar box containing cigars and having a body portion and a lid hingedly connected to the body portion by a hinge having an axis lying transversely to the length of the cigars as they are accommodated in the box; a substantially U-shaped clip secured to the inner face of the lid, said clip having a pair of arms extending away from the inner face of the lid and lying in planes respectively perpendicular to the hinge of the lid, said arms being spaced apart a distance substantially equal to the distance between alternate cigars, the arms passing between a cigar and the cigars adjacent the first-mentioned cigar on the closing of the lid to engage the first-mentioned cigar and withdrawing the said first-mentioned cigar on the reopening of the lid to provide a display of the cigar attached to the interior of the lid.

3,126,094
FLEXIBLE BAG PACKET
Julian R. Arnold and George W. Turner, Miami, Fla., assignors to Arnold Cellophane Corporation, Miami, Fla., a corporation of Florida
Filed Aug. 3, 1960, Ser. No. 47,253
1 Claim. (Cl. 206—57)



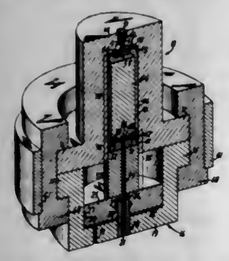
Article retaining packet comprising a plurality of thin, flexible, plastic bags each bag being closed at one end and open at the other and having an upper wall and a lower wall extending past the upper wall of the bag to define a panel, said upper and lower walls being joined to one another along their opposed sides and said bags being stacked in coextensive relationship, a hood mounted about said bag panels over the central portion of said panels to provide a lateral extension of said bags beyond the opposite sides of said hood, metal staples joining the opposite legs of said hood to rigidly secure the panels of said bags and other metal staples joined to said lateral extensions, whereby said lateral extensions are flexible but said hood retains the central portion of said bag panels substantially rigid, score-lines across the bottom walls of said bags adjacent the openings therein whereby the lateral extensions of said panels may flex upwardly when each bag is being filled, thereby augmenting the areas of the opening of each bag during filling.

3,126,095
DEBUNDLIZED TOW
James F. Caines, Richard F. Dyer, and James Knox Pannill, Jr., Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Jan. 9, 1961, Ser. No. 81,222
4 Claims. (Cl. 206—83.5)



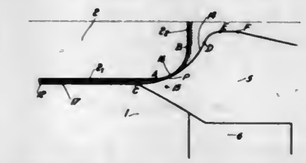
1. As a new article a bale of debundlized tow adapted for the manufacture of tobacco smoke filters therefrom, the bale of tow consisting of an expandable ribbon of more than 5,000 crimped continuous filaments of a denier per filament not greater than 16, the filaments being generally parallel and crimped to greater than 10 crimps per inch and debundlized to put at least a substantial number of the crimps out of registry and impart internal coherency to said ribbon, the average angle of retained crimp in the filaments is at most 100°, the ribbon of tow being traversed into the bale in two directions in a horizontal plane and a substantial plane and a substantial amount of any randomly protruding filaments are tucked into the tow ribbon and entangled with filaments in the same area of the same ribbon, the bale being further characterized in that it is compacted to the density of at least 15 lbs. per cubic foot and the debundlized tow readily withdraws from the bale due to the aforesaid entangling of the filaments in the same area of the same ribbon without pulling out of the bale adjacent tow ribbons.

3,126,096
HYDROSTATIC EXTRUSION SYSTEM
George Gerard, Yonkers, and Jacob Brayman, Staten Island, N.Y., assignors to Barogenics, Inc., a corporation of New York
Filed May 4, 1961, Ser. No. 107,836
11 Claims. (Cl. 207—6)



1. Apparatus comprising, a pressure containing vessel with an interior bore operably open only at one end of said vessel, a single inwardly movable ram projecting into said bore to have a sliding fit therewith and to plug the open end thereof so as to form with the part of said bore inwards of said ram a chamber adapted to contain a billet in abutting relation with said ram and in spaced relation from the wall surface of said bore, and adapted to contain also a hydrostatic pressure transmitting medium filling the interspace between said wall surface and billet, said ram having extending lengthwise therethrough a passageway characterized at its chamber end by an orifice over which said billet is adapted to be seated, means to drive said ram into said bore so as to develop in said medium a hydrostatic pressure producing extrusion through said passageway of billet material, die means forming part of said ram and disposed around said passageway to shape the extruded billet material, and annular sealing means disposed around said ram in the interspace between the exterior circumferential surface of said ram and the surrounding wall of said bore to provide in said interspace a seal obstructing leakage of said medium past said ram out of the open end of said bore.

3,126,097
METHOD AND APPARATUS FOR HOT EXTRUDING METALS AND ALLOYS
Jacques Sejournet, Paris, France, assignor to Societe Anonyme Compagnie du Filage des Metaux et des Joints Curty CEFILAC, Paris, France, a corporation of France
Filed July 27, 1962, Ser. No. 212,935
Claims priority, application France Mar. 20, 1962
5 Claims. (Cl. 207—10)

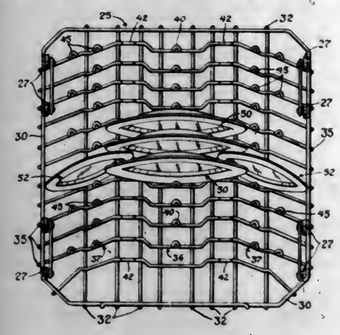


1. In a method of hot extruding metals and alloys, the invention comprising forming a billet to be extruded so that at least a portion of its leading end face has a substantially toric shaped surface extending substantially completely around said portion, heating said billet to hot extrusion temperature and introducing it into a container provided with a die at one end thereof, said die having an entrance face extending axially towards the orifice thereof, said introducing being such that said toric shaped surface engages said entrance face in a substantially tangential line of contact extending substantially completely around said toric face surface of said billet, said line of contact being between the periphery portion of said billet and the orifice of said die, said introducing being such that a space is formed between the lateral peripheral surface of said billet and the interior walls of said container and rearwardly of said line of contact, said space having a volume defined by a difference in diameters between said billet and said interior wall of said container of substantially about 3%–8%, providing in said space an intermediate protective material substantially all of which is one of liquid and of non-gasifiable viscous liquid at said hot extrusion temperature, thereafter extruding said billet through said die so that during said extruding said material passes between said billet and said die and covers the product extruded with a continuous protective coating.

3,126,098
RACK CONSTRUCTION FOR DISHWASHING MACHINE
Russell C. Geiger and Charles M. Allen, both of Troy, Ohio, assignors to The Hobart Manufacturing Company, Troy, Ohio, a corporation of Ohio
Filed Nov. 21, 1961, Ser. No. 153,868
2 Claims. (Cl. 211—41)

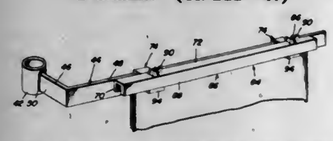
2. For use in a dishwashing machine of the type described; a rack for supporting articles comprising a generally rectangular frame piece forming a front and a back and opposite sides, a plurality of bottom pieces connected to said frame piece at said front and said back forming a bottom on which articles are supported and defining openings of substantial size through which a cleansing spray

can pass onto and between the articles, and a plurality of divider pieces arranged across said rack over said bottom pieces at spaced intervals from said front entirely to said back defining a number of main pockets in which plates and like articles are received and supported on edge and



also defining a number of side pockets extending at an angle into said main pockets providing for substantially parallel arrangement in overlapping relation of the beveled lips of plates and the like placed on edge in associated main and side pockets.

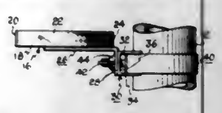
3,126,099
SHEET MATERIAL RACK
Jack L. Powell, 212 24th St., NW., Minot, N. Dak.
Filed Aug. 2, 1961, Ser. No. 128,796
2 Claims. (Cl. 211—47)



1. A rack structure comprising, in combination, a housing having an open front and closure means therefor permitting access to be had to the interior of the housing, a pair of upper and lower aligned brackets mounted in said housing and secured to one wall thereof one above the other, a vertical support member fixed between the respective brackets and circular in cross-section, at least one sleeve mounted for free turning movement on said support member, a support arm substantially L-shaped in plan and embodying long and short limbs, the short limb having an end thereof attached to and extending radially from said sleeve, the long limb being supported in a horizontal plane at right angles to the lengthwise axis of said support member, an elongated member substantially channel-shaped in cross-section and opposed to and generally parallel with said long limb of said support arm and provided with clips detachably and adjustably mounted on said long limb, said channel being adapted for reception of a stack of blueprints or the like, at least a pair of wedge-shaped blocks fitting into the channel portion of said channel member and detachably and adjustably bolted in place therein in a manner to cooperatively engage and retain coacting edge portions of the blueprints in said channel.

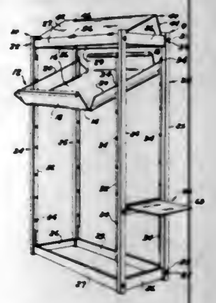
3,126,100
UTILITY TRAY
Antone M. Christensen, 7033 Earl NW., Seattle 7, Wash.
Filed Sept. 20, 1962, Ser. No. 225,031
6 Claims. (Cl. 211—126)

1. A device for supporting accessories within easy reach of a machine tool, said machine tool having a column thereon, said device comprising a rectangular bottom tray having a front edge, a rear edge and two side edges, an elongated band having two ends in overlapping relationship forming a circle adapted to circumscribe said column, means connecting said tray to said elongated band including a member integral with the underside of the bottom and possessing a downwardly directed flange positioned below the side edge of the tray nearer the band, said member extending from one side edge more than half way to the other side edge, said downwardly directed flange being flat and vertical, a U-shaped bracket having a horizontal upper leg and a horizontal lower leg, and a flat and vertical connecting portion therebetween, the overlapping ends of said elongated band fitting vertically



between said legs and in juxtaposition to said connecting portion, means defining an aperture adjacent one end of said band, means defining a plurality of apertures each at a different distance from the other end of the band means defining a horizontal row of apertures in said vertical depending flange and means defining an aperture in said vertical connecting portion of said bracket, non-rotatable headed bolt means inserted through two overlapping band apertures, through said bracket aperture and through a selected one of the flange apertures, the threaded portion of the bolt being adjacent the depending flange and the head of the bolt being adjacent the overlapping apertured ends of the band, and nut means fastened on the exposed threaded end of said bolt means, and in use contacting a side face of said flat and vertical flange.

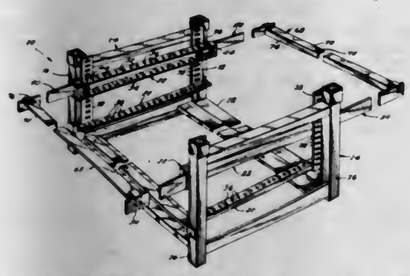
3,126,101
DISPLAY APPARATUS
Charles M. Katterjohn, P.O. Box 463, Henderson, Ky.
Filed Feb. 3, 1961, Ser. No. 86,909
5 Claims. (Cl. 211—176)



1. A display apparatus comprising an open-centered frame structure including two pairs of upright corner members disposed in laterally-spaced relationship at the corners of a central space of approximately rectangular cross section and including vertically-spaced approximately horizontal upper and lower cross members interconnecting the upper and lower portions respectively of said upright members, said corner members along their inner sides having a plurality of vertically-spaced notches therein with entrance openings facing inwardly into said space, and a plurality of approximately rectangular trays disposed in said space, each tray having upstanding article-retaining elements secured thereto at opposite ends thereof, each tray having suspension elements pivotally connected thereto on opposite sides thereof and extending

upwardly therefrom and swingable outward relatively thereto into suspended engagement with said notches.

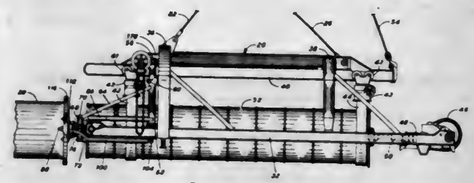
3,126,102
HORIZONTALLY AND VERTICALLY ADJUSTABLE RACK
Raymond M. Krokos, Detroit, Mich., assignor to Evans Products Company, Plymouth, Mich., a corporation of Delaware
Filed May 2, 1961, Ser. No. 107,157
5 Claims. (Cl. 211—176)



1. A rack adapted to support loads of widely differing shapes and sizes, said rack comprising a base, an end frame extending upwardly from each end of said base, a pair of substantially horizontally disposed channel-shaped support members having vertically spaced parallel flanges having a plurality of pairs of longitudinally spaced vertically aligned apertures, means mounting one of said support members on each of said end frames, at least one pair of extension members, means mounting one of said extension members on each of said support members to extend longitudinally beyond one end thereof and for adjustment longitudinally thereof to selectively vary the amount of extension of said extension member longitudinally beyond the end of the support member upon which it is mounted, each said extension member fitting between said flanges of the one of said support members upon which it is mounted and cooperating therewith to substantially prevent downward movement of its outer end relative to such support member, said means comprising means on each of said extension members defining an aperture selectively alignable with selected pairs of said apertures in the flanges of the one of said support members upon which such extension member is mounted, a pin extending through said aperture of each of said extension members and through an aligned one of said pairs of apertures, and co-operating means on said members holding each of said extension members against pivoting relative to the said support member about the axis of the one of said pins connecting it to such support member, an attachment means at the outer end of each of said extension members, and a rack side member extending between and attached to said attachment means of said pair of extension members.

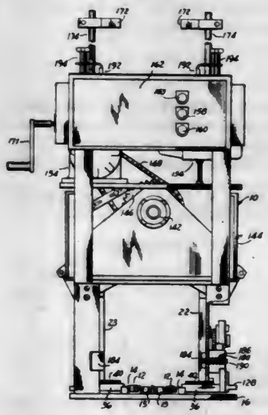
3,126,103
CONNECTOR FOR TUBE BUNDLE EXTRACTOR
William R. Postlewaite, Menlo Park, and Charles A. Rowe, Corte Madera, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Filed July 18, 1961, Ser. No. 124,976
6 Claims. (Cl. 214—1)

1. In a tube bundle extractor wherein an elongated frame is connected at one end to and in alignment with a heat exchanger shell containing a separable tube bundle and a force-exerting means is engaged between the tube bundle and the frame to exert a force on the tube bundle to move it relative to its shell along the frame, means for connecting a frame of a tube bundle extractor to a heat exchanger shell containing a separable tube bundle comprising a pair of vertically disposed pintle elements mounted on one end of said frame in spaced-apart parallel relationship and symmetrically disposed on opposite sides of the longitudinal axis of said frame, a respective rigid arm structure connected to each of said pintle elements and extending longitudinally from said end of said frame, a respective universal joint mounted on the free end of each said arm structure, a respective connector pin secured at one end to each said universal joint and extending longitudinally outwardly therefrom in alignment with said frame, a respective parallel motion linkage pivotally



connected at one end to each said universal joint and at the other end to said frame and operative to maintain each said connector pin in parallel alignment with the longitudinal axis of said frame as the respective said pintle element is rotated to swing in a horizontal arc the respective said rigid arm structure connected to said pintle element, means for rotating simultaneously each of said pintle elements toward and away from the other to displace each said connector pin laterally a like amount relative to the longitudinal axis of said frame, respective means complementary to each said connector pin and secured to said shell on diametrically opposite sides thereof and receiving the said connector pin in interlocking relationship to secure said frame to said shell.

3,126,104
MACHINE FOR STACKING CASES OR BOXES AND THE LIKE
William M. Haselton and John C. Walsh, Cedar Rapids, Iowa, assignors to Cherry-Burrell Corporation, Cedar Rapids, Iowa, a corporation of Delaware
Filed Nov. 8, 1960, Ser. No. 67,960
10 Claims. (Cl. 214—6)



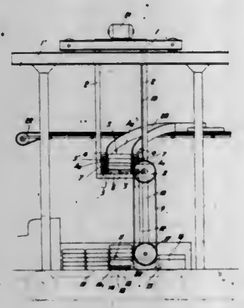
1. In a case stacking apparatus having a case stacking station and a case receiving station with a continuously operating case conveyor running through said stations and an elevator movable up and down in said case stacking station, means in said case receiving station for in-

termittently stopping cases being carried on the conveyor, said means comprising a case stop movable into and out of the path of a case being carried on said conveyor, means holdnig said stop out of the path of a case, means engageable by a case entering the stacking station to release said holding means and thereby stop additional cases from entering said stacking station, and means carried by said elevator to move said case stop out of the path of a case and to provide for re-engagement of said holding means.

3,126,105
APPARATUS FOR MECHANICALLY HANDLING BAGS AND SIMILAR PACKAGES

René Paul Louis Marguet, Versailles, France, assignor to Ciments Lafarge, Paris, France, a corporation of France

Filed Jan. 9, 1961, Ser. No. 81,575
Claims priority, application France Jan. 11, 1960
4 Claims. (Cl. 214—6)

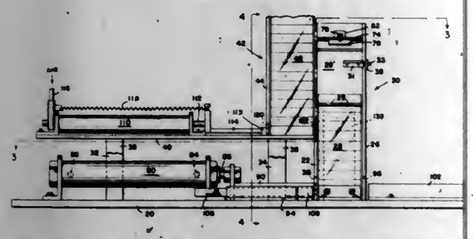


1. Apparatus for stacking bundles on a receiving plane, comprising conveying means for conveying bundles and disposed adjacent to a stacking station that is disposed above and is substantially unsupported by a receiving plane, a loading ramp leading to the stacking station, deflector means for deflecting bundles onto the loading ramp from the conveying means, means for discharging bundles from the stacking station onto the receiving plane, and horizontally displaceable support means supporting the stacking station and the loading ramp and the deflector means for movement adjacent to the conveyor means, thereby varying the locations of the stacks of bundles formed on the receiving plane.

3,126,106
PACKAGE HANDLING MACHINE

James F. Cain, Marvin H. Grabo ky, and Walter D. Gurdack, Philadelphia, Pa., assignors to Bayuk Cigars Incorporated, Philadelphia, Pa., a corporation of Maryland

Filed Mar. 8, 1963, Ser. No. 263,819
11 Claims. (Cl. 214—6)

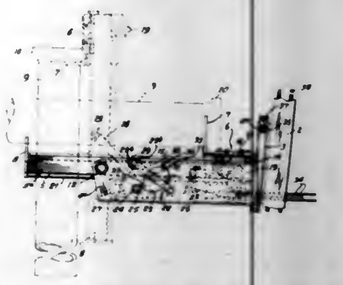


1. An article handling machine comprising a first accumulator for retaining a first plurality of articles, a second accumulator for retaining a second plurality of articles, means for releasably holding some of said first recited articles near one end of said first accumulator, means for discharging articles from the opposite end of said first accumulator, and means for intermittently transferring articles from said second accumulator to a portion of said first accumulator intermediate said holding and discharge means whereby said discharge means discharge articles from both of said accumulators.

3,126,107
PIPE HANDLING DEVICE

Luther Waddy, Mineral Wells, Tex., assignor to Can-Tex Industries, Inc., Mineral Wells, Tex., a corporation of Texas

Filed Sept. 5, 1961, Ser. No. 135,994
15 Claims. (Cl. 214—7)

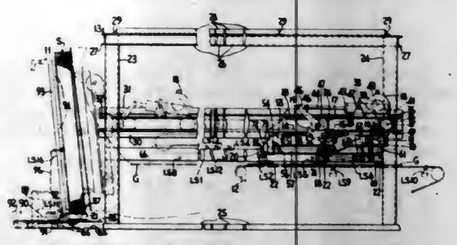


1. In a device of the class described, a fixed horizontal frame; a tiltable frame pivotally attached to the fixed frame at the outer end of the fixed frame; said tiltable frame having a portion at the outer end thereof extending beyond the outer end of the fixed frame when disposed in horizontal position thereon; means to lift the tiltable frame from a horizontal to a vertical position relative to the horizontal frame; a carriage mounted on the tiltable frame movable longitudinally thereon from the inner end thereof to the outer end thereof; means to move the carriage longitudinally of the tiltable frame; means mounted on the carriage engageable with an article to be pulled upon the tiltable frame when the said means is moved on the carriage beyond the outer end of the fixed frame; and means mounted on the outer end of the tiltable frame engageable with the article to support same thereon.

3,126,108
GLASS HANDLING APPARATUS

Victor K. Langhart, Pittsburgh, Pa., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Sept. 13, 1960, Ser. No. 55,663
9 Claims. (Cl. 214—8.5)

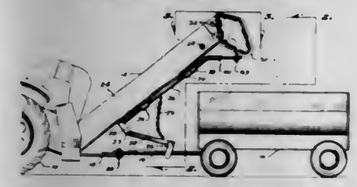


9. An apparatus for removing glass sheets from a stack of glass sheets which comprises a table with an inclined side adapted to support said stack with the bottom of each glass sheet forward of its top, a supporting structure, a carriage mounted on said structure for horizontal movement, means to move said carriage horizontally between a first position and other positions closer to said table than the first position, a tilting frame mounted on said carriage for pivotal movement about a horizontal axis, means to pivot said tilting frame between a horizontal position and an inclined position, a vacuum frame, means to support said vacuum frame on said tilting frame, means to move said vacuum frame relative to said tilting frame simultaneously in a vertical direction and about an axis parallel to the axis of pivotal movement of said tilting frame, vacuum heads mounted on said vacuum frame and having their sheet-engaging surfaces in a common plane, and means to move said vacuum frame with said relative movement between a first position and a second position, said common plane being parallel to said inclined side in the first position and inclined to a greater degree than said inclined side in the second position.

3,126,109
DEFLECTOR ATTACHMENT FOR CONVEYER OF CORN PICKING MACHINES

John Loschen, Van Meter, Iowa

Filed Mar. 2, 1961, Ser. No. 92,984
3 Claims. (Cl. 214—42)



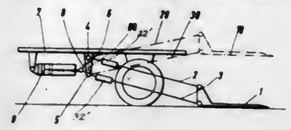
1. In a device of the class described, a conveyer, said conveyer adapted to be secured to a tractor or like and extend rearwardly and upwardly therefrom in an inclined position, said conveyer having two opposite side walls and a bottom wall; belt means on said conveyer for moving picked ears of corn upwardly and rearwardly between the walls of said conveyer for discharge from the upper end thereof in a rearwardly direction, the upper ends of said walls terminating in a vertical plane beyond the upper end of said belt, deflector elements pivotally secured to the upper vertical ends of each wall of said conveyer, said deflector elements normally extending rearwardly in parallel fashion from said conveyer, an elongated shaft secured to the bottom wall of said conveyer and being adapted to rotate about its longitudinal axis, a connecting rod having one end secured to the lower end of said shaft and adapted to pivot in the plane of said shaft the other end of said rod adapted to detachably engage the tongue of a wagon whereby movement of said rod in a horizontal plane will impart rotational movement to said shaft, and link means connecting the other end of said shaft and said deflector elements, to pivot said deflector elements when said shaft is rotated.

3,126,110
LOADING DEVICES FOR VEHICLES

Walter Dinkloh, Obernau, near Aschaffenburg, Germany, assignor to Gesellschaft für Linde's Eismaschinen Aktiengesellschaft, Hollviegelskreuth, near Munich, Germany, a company of Germany

Filed Apr. 7, 1960, Ser. No. 20,760
Claims priority, application Germany Apr. 7, 1959
1 Claim. (Cl. 214—77)

A device, arranged on a vehicle having a generally horizontal frame supporting a load-bearing floor, for lifting loads onto the floor of the vehicle, said device comprising two pairs of lifting arms articulated at both sides of the frame in a substantially vertical plane one above the other of which lifting arms at least one on each side is adjustable in length and at least one is attached to and articulatable by means of a driving mechanism carried by said frame, and a load-receiving means to which said two pairs of lifting arms are pivotally attached one pair on each side at pivots spaced in a substantially vertical direction, the pivotal attachments being

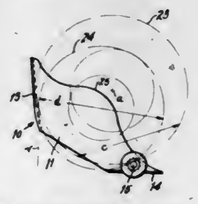


readily detachable to effect lifting movement of the load-receiving means parallel to the floor when the two lifting arms on each side are of substantially even length and are attached in parallelogram form to a load-receiving lifting platform and to effect simultaneous lifting and tipping movements when the two lifting arms on each side are of unequal length and are attached in crossed relationship to each other to a load-receiving means to be tilted with respect to said floor.

3,126,111
TIRE DOLLY

Samuel Lewis, East Elmhurst, N.Y.
(670 Riverside Drive, New York 31, N.Y.)

Filed Aug. 2, 1961, Ser. No. 128,730
5 Claims. (Cl. 214—334)



1. A dolly for transporting a tire non-mounted or mounted on a car wheel, comprising two side members spaced from each other approximately but not less than the width of the largest tire to be transported with said dolly, a front tire-supporting member and a rear tire-supporting member, said two supporting members connecting said side members, and being spaced from each other a distance defining the chord of a quadrant of a circle equal in diameter to the largest tire to be transported with said dolly, said side members extending from said supporting members substantially to the center of said circle, a hand grip on said rear supporting member, a pair of stub axles projecting laterally outwards from said side members, respectively, close to said front supporting member, and a pair of rollers rotatably mounted on said stub axles, respectively.

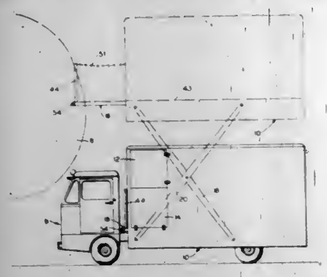
3,126,112
AIRPLANE CARGO AND SERVICE VEHICLE

Hugh H. Shaw and Harold G. Bradshaw, Salinas, Calif., assignors to Cochran Equipment Company, Salinas, Calif., a corporation of California

Filed Dec. 30, 1958, Ser. No. 783,906
7 Claims. (Cl. 214—512)

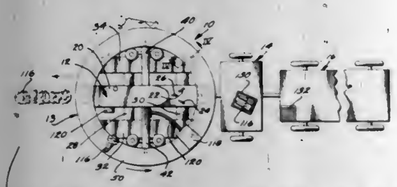
7. In an airplane loading and servicing vehicle, a cargo carrying body having a floor and a supporting sub-frame including a pair of elongated channel members of generally U-shaped cross-section mounted parallel to each other on the underside of said floor with their open sides facing inwardly toward each other, a load supporting ramp having an upper tread surface and opposite side edges

with a pair of wheels mounted on each of said side edges and having hub portions received in closely fitting engagement in said open sides of said channel members and peripheral flanges surrounding said hub portions and positioned in closely fitting relation against said channel



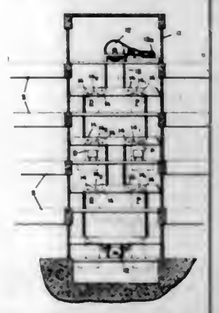
members adjacent to said open sides, and means for propelling said ramp between a discharge position projecting outwardly from said body and a retracted position with said upper tread surface closely underlying the floor of said body between said channel members.

3,126,113
HARVESTING MACHINE
John Kaper, Rte. 1, Hamilton, Mich.
Filed May 4, 1961, Ser. No. 107,859
1 Claim. (Cl. 214—519)



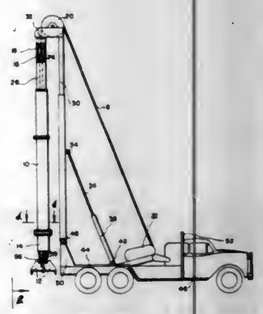
A crop harvesting machine comprising: a self-propelled tractor including power drive means for driving said tractor, control means, and power take-off means; an annular horizontal crop-recirculating tray means supported above and on said tractor; said tray means being composed of an upper crop receiving tray and a lower crop unloading tray for the crop elements after finishing operations are performed thereon, the area above both of said upper and lower trays being free from obstructions causing the crop elements to recirculate on each until removed; said tray means protruding beyond the front of said tractor to allow easy placement of harvested crop elements on said crop receiving tray before any portion of the tractor passes thereover; said tray means protruding beyond the sides of said tractor to allow sorting and finishing operations to be performed on the crop elements as they are recirculated; said tray means protruding beyond the rear of said tractor to allow easy and rapid removal of the recirculating crop elements from said crop unloading tray; vertically rotatable wheel support means mounted on horizontal axles attached to and extending out from said tractor and positioned at the front of, at the back of, and on both sides of said tractor to vertically support said tray means and allow it to freely rotate; a plurality of horizontally rotatable wheel-type guide members on vertical axles mounted to said tractor and engaging the periphery of said annular tray means for laterally positioning said tray means with respect to said tractor; and the vertically rotatable wheel support means at the back of said tractor being operatively connected to said power take-off means to continuously rotate said tray means.

3,126,114
CART ATTACHING AND DETACHING APPARATUS IN A LIFT CHAIN FOR A BUILDING
Toshio Nakahara, Wakayama City, Japan, assignor to Izumi Chain Kabushiki Kaisha, Nankai-cho, Sennan-gun, Osaka Prefecture, Japan
Filed Aug. 31, 1961, Ser. No. 135,291
Claims priority, application Japan May 20, 1961
4 Claims. (Cl. 214—624)



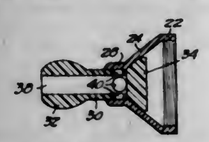
1. A lift chain apparatus comprising a lift chain having two parallel chain portions, said chain traveling in a closed vertically elongated path with the chain running upwardly on one side of the path and downwardly on the other side of the path, said chain having a plurality of vertically spaced downwardly inclined cart discharge portions on the upwardly running side of the path and a plurality of upwardly inclined cart pick-up portions on the downwardly running side of the path, cart carrying hooks on said chain at spaced intervals therealong, a cart supporting table beneath each cart pick-up portion and each cart discharge portion of said chain, and raising and lowering means for each cart supporting table on which said cart supporting tables are mounted to position the car within the path of movement of the cart carrying hooks to selectively pick-up and discharge the same.

3,126,115
CABLE OPERATED HYDRAULIC ACTUATOR
Richard W. Schuff, 5026 E. Cherry Lynn Road, Phoenix, Ariz.
Filed Jan. 17, 1963, Ser. No. 252,144
12 Claims. (Cl. 214—656)



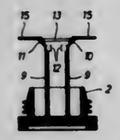
1. In a cable operated hydraulic actuator the combination of: a casing; digging clams mounted on a lower end of said casing and movably disposed to open and close; a first hydraulic cylinder means having a plunger, said first hydraulic cylinder means coupled to said casing and said clams and disposed to open and close said clams; a second hydraulic cylinder means having relatively movable plunger and cylinder parts, one of said parts coupled to said casing; a pressure fluid actuator in said casing; conduit means communicating with said accumulator and with said first and second hydraulic cylinder means; a cable coupled to the other of said relatively movable parts of said second hydraulic cylinder means, said cable suspending said casing and said clams; stop means forming an abutment disposed to limit upward movement of said casing during elevation thereof by said cable; means for forcefully retracting said cable when said casing is abutted by said stop means, whereby said cable exerts charging force to cause relative movement of the plunger and cylinder of said second hydraulic cylinder means; a conduit means communicating with the interiors of said first and second hydraulic cylinder means and said accumulator whereby action of said cable when exerting said charging force tends to cause charging of pressure fluid into said accumulator; and valve means operable to conduct pressure fluid from said accumulator into said first hydraulic cylinder means tending to close said digging clams.

3,126,116
CHECK VALVED NIPPLE
Elmo D. Clinehens, 60501 Dogwood Road, Mishawaka, Ind.
Filed Oct. 26, 1961, Ser. No. 147,934
5 Claims. (Cl. 215—11)



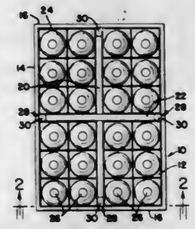
1. A nursing nipple adapted to be mounted on the neck of a nursing bottle, comprising
a cap adapted for detachable connection with said bottle neck,
said cap including a tubular neck portion,
a rigid nipple having a tubular shank slidable in said cap neck and having an aperture adjacent its inner end, and
a valve member carried by the inner end of said nipple and having sealing abutting engagement with said cap in one position thereof,
said nipple and valve being slidable by gravity to said sealing position from an open position in which said nipple shank aperture is clear of said cap neck.

3,126,117
RESILIENT CLOSURE FOR CONTAINERS
Peter Mundt, Munchener Str. 12, Garmisch-Partenkirchen, Germany
Filed Dec. 3, 1962, Ser. No. 241,916
Claims priority, application Germany Dec. 5, 1961
10 Claims. (Cl. 215—37)



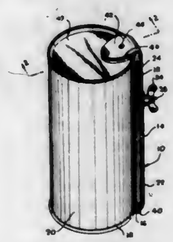
1. A closure for containers and particularly tablet tubes, pill bottles and the like, said closure comprising a cap portion adapted to engage the mouth of a container, and a plurality of spacing elements having one end thereof extending from said cap portion toward the direction of the interior of the container when said cap portion engages the mouth thereof, said plurality of spacing elements disposed opposite each other and staggered with respect to each other so that they are elongated in an unloaded condition and moved past each other toward the inside of the container when in a loaded condition wherein the other ends of the plurality of spacing elements resiliently engage with the contents of the container, each of said plurality of spacing elements comprising a flat strip having an integral ridge extending along one surface.

3,126,118
ADJUSTABLE CASE
Walter J. Walstad, 821 W. 2nd St., and Roy R. Hamady, 1715 Detroit St., both of Flint, Mich.
Filed Feb. 15, 1963, Ser. No. 258,860
5 Claims. (Cl. 217—7)



1. An adjustable case comprising, a receptacle having a bottom, two end walls and two sidewalls, a longitudinal cross member rotatably supported midway between the ends of said end walls and bearing at each end a pair of arms arranged at a right angle to said longitudinal cross member and within a plane passing therethrough, a transverse cross member rotatably supported midway between the ends of said sidewalls and bearing at each end a second pair of arms arranged at a right angle to said transverse cross member and within a plane passing therethrough, said cross members each having identical cross sections which present a uniform width in the horizontal plane thereof in each of two rotational positions 90° apart, to divide the interior of said receptacle into four compartments each disposed to retain a rectangular carton having relatively larger horizontal dimensions when said arms are disposed within vertical planes, and to retain a rectangular carton having relatively smaller horizontal dimensions when said arms are disposed within horizontal planes, each contiguous, non-cornering pair of cartons being spaced a uniform distance apart.

3,126,119
CAN SEAL
Louis G. Callegari, 34—06 45th St., Long Island City, N.Y.
Filed Nov. 29, 1961, Ser. No. 155,739
3 Claims. (Cl. 220—24)



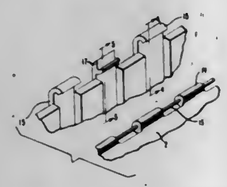
1. A closure device for an irregularly shaped opening in one flat end of a cylindrical can having a bead at the

other flat end thereof, comprising two channel-shaped parts slidably and telescopically interfitted one within the other, the one of said parts having a head extending outwardly thereof, a pad at the underside of said head for disposition on said one flat end of the can to cover said opening, the other of said parts having a curved flange at one end thereof extending outwardly to engage under the bead at the other end of the can, a coil spring attached at one end to the one part and at the other end to the other part for retracting the parts into each other for pressing the pad down on said one end of the can to seal said opening, said other part having a slot therein, a bolt passing through said slot and having a head engaged inside of said other part at edges of the slot, and a wing nut on said bolt for detachably locking the parts together.

3,126,120
HINGED COVER CONTAINER

James Harvey Crate, Newtown Square, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Dec. 18, 1962, Ser. No. 245,533
7 Claims. (Cl. 220—31)



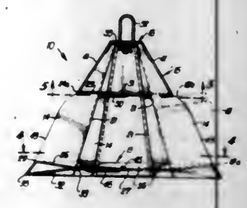
1. A snap hinge construction comprising a first portion of said hinge comprising a plurality of axially aligned pivot shaft segments supported on a series of support means mounted on a single supporting member, and a second portion of said hinge comprising a series of two types of pivot shaft engaging members on a single supporting member, the first of said types of pivot shaft engaging members comprising a portion which extends from said supporting member and wraps around the pivot shaft to form an opening of about 180 degrees facing in the direction of and substantially parallel to said supporting member, and has the wrap-around portion terminate in a plane disposed at from 105 to 135 degrees from the plane of the support, the second of said types of pivot shaft engaging members comprising an extension of the support substantially parallel with the support and a protruding member terminating in a plane disposed at from 45 to 75 degrees from the plane of said supporting member, said supporting member being corrugated adjacent said pivot shaft engaging means, the corrugations being of the same width as and coextensive with said pivot shaft engaging means.

3,126,121
CONTAINER RACK

Edward J. Feser, 8862 Arcadia Ave., San Gabriel, Calif.

Filed Dec. 5, 1961, Ser. No. 157,082
7 Claims. (Cl. 220—102)

1. A container rack of pyramidal form having a base, a plurality of supports rising from said base, and a crown spaced above said base on said supports, said supports radially defining a plurality of container receiving sections, said rack being formed from a blank of substantially polygonal marginal edge configuration, said blank being divided by fold lines into equal segments, each segment including a cutout portion defining a first and second tab in end to end radial alignment and each tab provided with a fold line generally parallel with an adjacent marginal edge section of said segment, a brace tab projecting outwardly from said marginal edge section of each of said segments and provided with a fold line along said marginal edge section, vertical support spacer sections defined between said tabs and each of said segmental fold lines, a vertical support spacer section being folded in face to face relationship with an adjacent vertical support spacer section thus forming said support, whereby said blank is drawn to a pyramidal shape, said second tab and said brace tab folded inwardly of said drawn shape

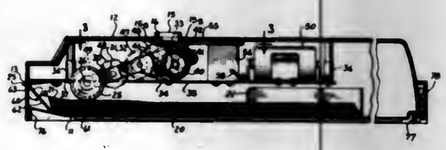


in face to face relation thus forming said base, said first tab folded inwardly of said drawn shape spaced from said base and forming a bottom of said crown, a crown panel being defined by said vertical support spacer sections of each segment and said first tab, said panels forming said crown when said supports are drawn to said pyramidal shape, said panels reposing in abutting relationship radially around said crown base, and fastening means for holding said formed blank in said pyramidal form.

3,126,122
PAPER DISPENSER FOR USE WITH PHOTOCOPY MACHINE OR THE LIKE

Leo D. Sacre, Prospect Heights, Ill., assignor to American Photocopy Equipment Company, Evanston, Ill., a corporation of Illinois

Filed July 10, 1961, Ser. No. 122,829
6 Claims. (Cl. 221—41)



1. In a paper dispenser for use with a photocopy machine or the like, the combination comprising a light-tight housing having a base and a cover with a discharge slot along the front edge thereof, means in said base for supporting a stack of sheets, a vertically swingable arm fixedly mounted in said cover for swinging about a stationary transverse pivot axis and having a rubber roller at the end remote from said pivot axis for engaging the stack of sheets, driving means mounted for rotation about the stationary transverse pivot axis together with a drive connection on the arm for connecting the drive means to the roller so that the roller is driven independently of the angular position of the arm, and means for inhibiting the forward movement of the sheets, the pivot axis being substantially offset from the center of gravity of the arm so that the arm is gravity biased downwardly for engagement of said roller with the topmost one of the sheets for driving the same through said discharge slot when the driving means is actuated, said driving means being mounted on said arm adjacent said axis for providing a limited counterbalancing effect.

3,126,123
MACHINE FOR VENDING PACKAGED PRODUCTS

Lenox K. Pickering, Port Washington, N.Y., assignor to The Vendo Company, Kansas City, Mo., a corporation of Missouri

Filed Feb. 6, 1961, Ser. No. 87,221
12 Claims. (Cl. 221—75)



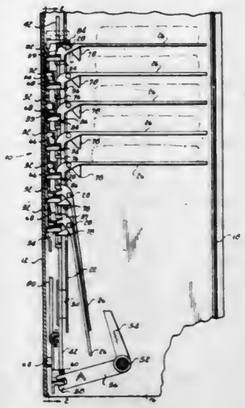
1. A machine for vending packaged products comprising a plurality of rotatable, horizontally disposed members positioned in vertically spaced relationship; product support means on each of the members and disposed in substantially radially extending relationship thereto, every fourth support means extending in the same direction and adjacent support means being at substantially right angles with respect to each other; and means operably coupled to said members for rotating each of the same through substantially a 90° arc during each vending cycle, said product support means being disposed in positions causing each of the support means extending in a direction to support corresponding products, to move out of supporting relationship to respective products during each vend cycle and with the support means next below the support means initially supporting said products, moving into locations receiving said products in supporting relationship thereto whereby products are vended consecutively and repetitively from the lowermost support means of the vertically aligned stack thereof, which is disposed in article supporting disposition at commencement of the vend cycle.

3,126,124
SELF-RELEASED CANDY SHELF ASSEMBLY

Peter Katz, Livingston, and Lester M. Walden, Chatham, N.J., assignors, by mesne assignments, to Automatic Canteen Company of America, Chicago, Ill., a corporation of Delaware

Filed Feb. 16, 1961, Ser. No. 89,819
7 Claims. (Cl. 221—90)

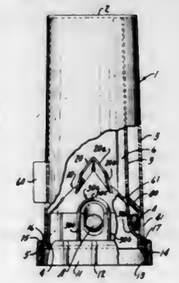
1. A merchandising machine including in combination a frame, a plurality of shelves, respective means mounting said shelves for movement from a raised position to a dropped position, respective releasable latching means for normally holding said shelves in their raised positions, an operating member, means mounting said member for movement on said frame, respective shelf tripping elements associated wtih said shelves, means mounting said shelf tripping elements for movement relative to said member, means responsive to movement of an element relative to said member for releasing the latching means associated with the lowermost of the raised shelves, means for moving said member on each operation of said machine, means responsive to movement of said member on the initial operation of said machine for dropping the lowermost shelf and means carried by a dropped shelf responsive to movement of said member on a succeeding operation of said machine for moving an element to release the latching means associated with said lowermost raised shelf.



3,126,125
DEVICE ADAPTED TO DISPENSE EITHER ARTICLES OR FLUENT MATERIAL

Paul J. Eggers, 9600 N. Karlov, Skokie, Ill.

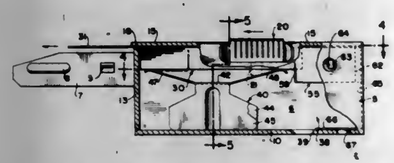
Filed June 1, 1961, Ser. No. 114,111
4 Claims. (Cl. 221—96)



4. A dispenser comprising a circumferential housing adapted to contain a supply of items to be dispensed, said housing having an open lower end, a dispenser member rotatably mounted in said open end, agitating means comprising vanes mounted on said dispenser member and positioned for agitating contact with said supply of items to be dispensed within said housing in response to rotation of said dispenser member, at least one item-receiving pocket formed in said dispenser member, an aperture in the wall of said housing, said aperture and pocket being positioned for alignment one with the other in response to rotation of said dispenser member, and means on said dispenser member for maintaining a sealing engagement between said dispenser member and the interior of said housing at all positions of said dispenser member, said sealing means including a radially extending rib element bordering said pocket, said pocket having an inwardly extending, upwardly open portion, said rib element also bordering said open portion, a fixed arcuate wall member extending inwardly from a substantial portion of the circumferential wall of said housing and cooperating with said vanes to enhance agitation of the contents of the housing, said fixed wall member having an arcuate extent greater than the width of said pocket and extending inwardly a distance sufficient to contact said rib element

portion bordering the upwardly opened portion of said pocket when said pocket is aligned with said housing aperture, the remaining portions of said rib element being in contact with the inner circumferential surface of said housing, a plurality of apertures formed in an upper wall of said dispenser member adjacent said vanes and positioned to permit the passage of granular materials into said dispenser member from the area within said housing above said dispenser member, a bottom plate on said dispenser member and having at least one aperture therein, a closure plate rotatably supported on said dispenser member, a plurality of apertures formed in said closure plate, said closure plate being rotatable into one position wherein said closure plate apertures are not aligned with said bottom plate aperture, to prevent the passage of granular material through said dispenser member and into another position wherein said closure plate apertures are aligned with said bottom plate aperture to permit the passage of granular materials therethrough.

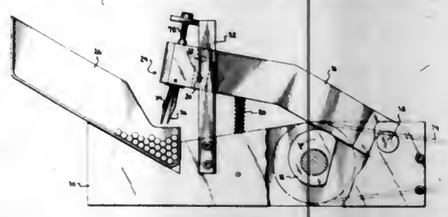
3,126,126
INJECTOR MAGAZINE FOR INJECTOR RAZOR BLADES
James B. Kruger and Robert L. Bordeau, Staunton, Va., assignors to Philip Morris Incorporated, New York, N.Y., a corporation of Virginia
Filed Jan. 3, 1962, Ser. No. 164,103
3 Claims. (Cl. 221—102)



1. An injector magazine comprising a casing having side walls defining an upper portion containing a stack of razor blades and a lower portion providing a used-blade compartment, a top wall formed with a longitudinally-extending slot, a bottom wall formed with a used-blade entrance slot, and a front wall; a forwardly-extending injector key carried by said casing; means defining a blade exit slot in the upper forward end of said casing; a slider riding in said longitudinal slot for ejecting the uppermost blade of said stack through said exit slot; a spring for urging said stack of blades upwardly; and supporting means for said spring and integral therewith and comprising uprights disposed forwardly of said used-blade entrance slot and resting on said bottom wall and disposed at the sides of said used-blade compartment interiorly of said side walls; wherein there is provided at the rear of said blade stack a spring clip comprising a generally U-shaped portion closed at its forward end and provided with rearwardly-extending outwardly-resilient spaced arms and disposed in the rear of said upper portion of the casing with said arms resiliently engaging the side walls of the casing and with said forward end engaging and alining said stack of blades and an integral rearward portion extending from the rear of one of said arms across the rear of said casing at the rear of and downwardly below said U-shaped portion to close the entire rear of said casing and to provide a rear wall for said used blade compartment.

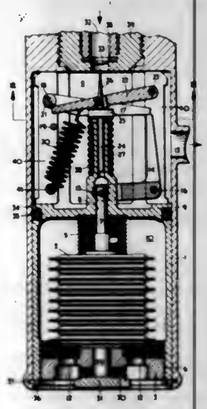
3,126,127
WIRE SELECTING DEVICE
Charles M. Lovendusky, Enola, Pa., assignor to AMP Incorporated, Harrisburg, Pa.
Filed Oct. 10, 1960, Ser. No. 61,763
5 Claims. (Cl. 221—210)

1. A wire-selecting apparatus including container means for guiding wires to be selected to a central point, jaw means for selecting wires and driving means for driving said jaw means toward and away from said central point in a constant length stroke; the said jaw means including jaw members held in bearing contact at one end thereof by spring members and held apart at the other end by wedge means disposed therebetween; means on said jaw members cooperable with the wedge means for opening the other end of the jaw members, whereby the driving of



said jaw means by said driving means to said central point forces said wedge surfaces about a wire to be selected against the force of said spring members to cause said wedge means to actuate said jaw members to grasp a wire, and the driving of said jaw means away from said central point removes said jaw members and said wire from said container means; means responsive to the latter motion to force said jaw members against said wedge means and release the selected wire.

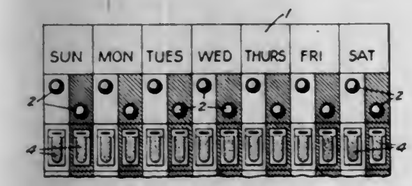
3,126,128
GAS PRESSURE RELEASE DEVICE
Nathaniel Borsack, Hackney, London, and Henry L. Horner, Yeovil, England, assignors to Normalair, Ltd., Yeovil, England, a corporation of England
Filed Nov. 27, 1959, Ser. No. 855,686
Claims priority, application Great Britain Dec. 2, 1958
9 Claims. (Cl. 222—5)



1. A gas release device in conjunction with a pressure source provided with a frangible cap comprising a cut-away piercing point adapted to pierce said cap, an extending spring co-acting with said point and housed within a container having inlet and exhaust ports and provided with a cup shaped insert below said ports, the inside of said insert forming a chamber for an actuation device, and the outside of the base of said insert forming a platform provided with a centrally disposed hollow boss and a mounting frame, said hollow boss forming a location for said extending spring and a guide for a member carrying said piercing point, a rod passing through the base of said insert into said hollow boss pivotally connecting said actuation device to one arm of a

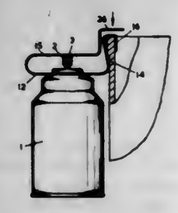
bell crank having its pivot at a point on said frame in line with the base of said boss, the other arm of said bell crank extending longitudinally within said container to a point almost in line with the end of said boss, a latch member defining an aperture which surrounds said piercing point having its pivot at a point on said frame in line with the end of said other arm of said bell crank and extending transversely so that when the extending spring is compressed it can be latched beneath a cam integral with the pivoted end of a lever member extending transversely to meet the end of said other arm for support thereby, the pivots of said bell crank, said latch member and said lever member forming an angle approaching that of a right angle.

3,126,129
RECORDING AND DISPENSING DEVICE
Edward M. Weinberg, Minneapolis, Minn. (900 Bush Ave., St. Paul 6, Minn.)
Filed Jan. 8, 1962, Ser. No. 164,726
10 Claims. (Cl. 222—94)



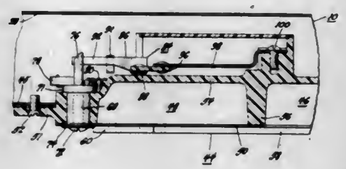
1. A recording and dispensing device for providing predetermined quantities of a dentrifrice and for providing a visual record and reminder of the periodic and regular use thereof which comprises a backing, one side of which is divided into areas corresponding to a plurality of weeks, each week being further divided into sections corresponding to the individual days thereof, and openable containers detachably affixed to said backing in a time sequence, at least one container being affixed to each of said daily sections, each of said containers having a measured quantity of dentrifrice therein corresponding to the requirements of a single tooth brushing operation.

3,126,130
ATTACHING MEANS CARRYING A CONTAINER CONTAINING A DISINFECTING AND AIR-PURIFYING MEDIUM THAT IS TO BE ATOMIZED
Johannes Hendrik Willem Vandeberg, Maastricht, Netherlands, assignor to Naamloze Vennootschap: Echfa, voorheen Enschedesche Chemotechnische Handelsonderneming en Fabriek N.V., Haven, Enschede, Netherlands, a corporation of Netherlands
Filed Feb. 2, 1961, Ser. No. 86,692
5 Claims. (Cl. 222—180)



1. An attaching and actuating device for attaching an aerosol container having a dispensing valve actuated by a dispensing member from a support and for actuating the dispensing member, said device comprising a U-shaped clip of spring material, one leg of said clip having an aperture therein adapted to receive the top of the container and hold the container, said one leg of said clip having an attaching means on the free end thereof remote from the end which is joined to the other leg of the clip, said attaching means extending perpendicularly to said one leg for attaching the clip to a support, the other leg of said clip being adapted to be positioned immediately above the dispensing member of said container when the container is held by the one leg of said clip, and an actuating means on said other leg of said clip at least part of which extends perpendicularly to said other leg of said clip for moving the other leg of said clip toward said one leg of said clip to depress said dispensing member when a force is exerted on said actuating means.

3,126,131
DOMESTIC APPLIANCE
Daniel J. Barbulesco, West Carrollton, and Ralph S. Braden, Bellbrook, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 19, 1962, Ser. No. 238,519
4 Claims. (Cl. 222—185)



2. In combination with a washing apparatus door movable between a vertical position and a horizontal position, a dispenser body in fixed relationship to said door and defining a compartment having an opening in a plane parallel with said door, a shutter plate having a closed position for covering said opening and an open position for uncovering said opening, means journaled in said dispenser body at right angles to said shutter plate for pivotally mounting said shutter plate for movement in the plane of said opening between said open and closed positions, means interposed between said pivotally mounting means and said dispenser body for biasing said shutter plate to said open position, and means for selectively latching said shutter plate in said closed position, said latching means including a latch bolt supported as a coaxial extension on the end of said pivotally mounting means for movement therewith, a yieldable latch bolt keeper on said dispenser body selectively engageable with said latch bolt and having a first position in continuously twistingly biasing engagement with said latch bolt when said shutter plate is in said closed position to retain said shutter plate in said closed position and a second position out of biasing engagement with said latch bolt for releasing said shutter plate for movement to said open position in response to said biasing means and bimetal means connected to said latch bolt keeper and energizable for moving said latch bolt keeper from said first position to said second position thereby to release said shutter plate for movement to said open position, said bimetal means being deenergizable for returning said latch bolt keeper to said first position after said shutter plate moves to said open position, thereby to condition said latch bolt keeper for yieldably grippingly reengaging said latch bolt to retain said shutter plate in said closed position when said shutter plate is again moved to said closed position.

3,126,132
PRESSURIZED DISPENSER HAVING A VALVE WITH A MEASURING CHAMBER

John K. Lyon, 1176 Afton, Pasadena 3, Calif., and Gennady Potapenko, 1718 Oakdale St., Pasadena, Calif.

Filed Nov. 15, 1960, Ser. No. 69,523
3 Claims. (Cl. 222—355)

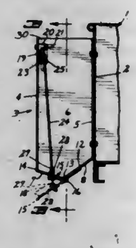


1. A dispenser for pressurized material, including: a container for receiving a pressurized material; a valve assembly including a cylindrical base member having an upper face and a cylindrical handle member having an inner face, the base member being in sealing engagement with the container and the handle member being mounted on the base member for rotational movement relative thereto with said faces in opposed relationship; a discharge port in the base member having the inner end thereof at said upper face; a charging passageway extending through the base member from said upper face to the interior of the container; a metering chamber in the handle member extending from the inner face thereof and movable with said member to a charging position in which the metering chamber is in communication with the upper end of the charging passageway and a discharging position in which it is in communication with the inner end of the discharge port; and means associated with the handle member limiting movement thereof between the charging position and the discharging position, said last named means including a groove in the base member, a filling passageway in the handle member adapted to be positioned in alignment with the charging passageway when it is open and the handle member is moved to a filling position and to be positioned in alignment with the groove when said member is in the charging and discharging positions, and a rod positioned in said filling passageway in sealing engagement therewith and having an end which projects into said groove.

3,126,133
DISTRIBUTING DEVICE FOR COTTONSEED CAKE AND THE LIKE

Theodore M. Richardson, Murdo, S. Dak.

Filed Aug. 23, 1962, Ser. No. 218,908
1 Claim. (Cl. 222—505)



A distributing device for cottonseed cake and the like, said distributing device comprising:

(*a*) a bin structure having side walls and front and back walls, said bin structure being adapted for securement to a rigid supporting structure, and one of said walls having an aperture therein,

(*b*) said bin structure having a bottom wall portion which extends generally angularly downwardly from the back wall of said bin structure toward the direction of the front wall of said bin structure and terminates with an edge portion thereof disposed generally intermediate the front and back walls of said bin structure and below the bottom of said front wall,

(*c*) a distributing door hingedly connected to the edge portion of said bottom wall portion and movable between a closed position wherein the same extends generally angularly upwardly from said bottom wall portion to meet with said front wall and an open deflecting and distributing position wherein the same extends generally angularly downwardly in general planar alignment with said bottom wall portion, and

(*d*) actuating mechanism for opening and closing said distributing door whereby to control the distribution of said cottonseed cake, said actuating mechanism comprising:

(1) a lever equipped with a handle at its one portion, said handle projecting through said aperture in said one of the bin walls,

(2) means within said bin structure for pivotally securing said lever intermediate its opposite end portions to said bin structure,

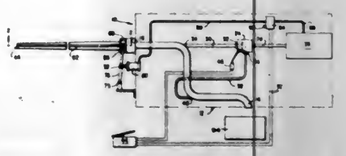
(3) an elongated connecting link located within said bin structure and pivotally secured to the other end portion of said lever and also to said distributing door, and

(4) a retractable stop element for releasably holding said lever in a position corresponding to a closed position of said distributing door.

3,126,134
HOSE SEAM FLATTENING DEVICE

Carl G. McAnally, Paducah, Ky., assignor to Marvel Specialty Company, Inc., Paducah, Ky., a corporation of Kentucky

Filed Oct. 25, 1962, Ser. No. 233,506
5 Claims. (Cl. 223—43)



2. A hosiery inspection apparatus comprising;

a hollow tubular inspection form having an open end,

means to selectively direct a flow of air through said form in either direction,

toe expanding and seam flattening means disposed within said form and movable axially thereof between a retracted position near said open end and an extended position projecting from said open end,

means defining an axial extension of a segment of said form at said open end,

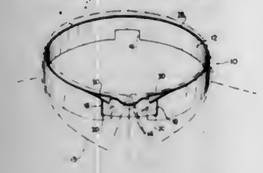
said axial extension being substantially complementary to said toe expanding and seam flattening means when said toe expanding and seam flattening means is in said advanced position,

and means for moving said toe expanding and seam flattening means between said advanced and retracted positions to uniformly stretch and flatten the toe seam of a stocking positioned on said tubular inspection form.

3,126,135
COLLAR STAY FOR SHIRTS

Eleanor Wachtel, Far Rockaway, N.Y., assignor to Solomon Brothers Co., Thomasville, Ala., a firm

Filed May 1, 1961, Ser. No. 106,877
1 Claim. (Cl. 223—83)

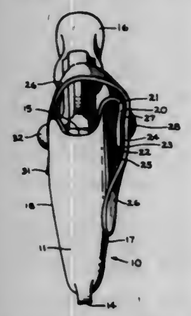


A collar stay comprising a sectional body including a thin annular split band of cardboard material with straight end edges forming one section and a thin curved trapezoidal shaped piece of transparent plastic material between the ends of the band forming the other section of the body, the ends of the band having closed slits disposed parallel to the end edges of the band and inwardly of the end edges, with a plurality of slits adjacent one end edge, said slits terminating in short extensions extending at right angles to the slits and extending toward the end edges, said other section having ends with downwardly tapered blunted points and with notches along the lower long edge thereof inwardly of the blunted ends, said blunted ends insertable through the slit at one end edge and a selected slit at the other end edge and said notches interlockable with the extensions at the ends of the slits, the top long edge of said trapezoidal piece being centrally concaved downwardly to provide two upstanding end portions adjacent the upper sides of said downwardly tapered blunted points, the bottom edge of the band being cut away midway its ends to make clearance for a collar button or the like and radial tapered substantially triangular flanges along the top edge of the band at and adjacent its ends, said flanges terminating in wide straight ends aligned with the straight end edges of said flanges, said flanges lying normally in yieldable perpendicular relation to said band, the upstanding end portions of said trapezoidal piece underlying the juncture of said flanges with said band to support the inner edges of the flanges but allow the wide straight ends thereof to yield downwardly to the pressure of a shirt collar positioned thereover.

3,126,136
HOLSTERS

Albert J. Kippen, Rte. 5, Frederick County, Md.

Filed Jan. 11, 1961, Ser. No. 81,965
2 Claims. (Cl. 224—2)

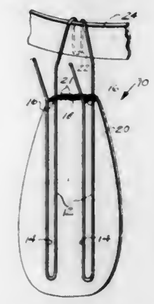


1. A gun holster comprising a pocket having a closed end and an open end, a belt flap integral with one side of the pocket at the open end thereof, said belt flap extending toward the closed end of the pocket on the outside thereof and terminating in a free end, said belt flap having a belt engaging surface on one side and an exposed surface on the opposite side, said belt engaging surface being adjacent said pocket, a closure flap connected to the exterior of said one side of the pocket closer to the closed end of the pocket than the free end of said belt flap, said closure flap extending toward the open end of said pocket and having a portion engaging the exposed surface of said flap, and releasable fastener means on the exposed surface of said flap and on said portion of the closure flap whereby the belt flap is releasably connected to the closure flap in order to mount the pocket on a belt, said closure flap passing across the open end of said pocket into releasable engagement with the opposite side of the pocket for retaining a gun in the holster.

3,126,137
SMALL GAME HANGER FOR HUNTERS

James G. Head, Start, La.

Filed June 26, 1962, Ser. No. 205,391
6 Claims. (Cl. 224—7)

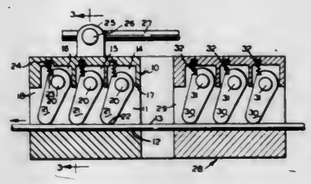


1. A game hanger comprising in combination a metal frame of substantially elongated configuration, a substantially U-shaped hook integral of said frame providing a means for securing said hanger to a belt of the hunter, a pair of U-shaped openings carried by said frame for receiving the heads of game, said U-shaped hook being located higher than said U-shaped openings, a substantially oval-shaped leather disc secured to a cross bar secured between the main arms of said frames of said hanger providing protection against soiling of the hunter's clothing.

3,126,138
FEED

Eugene W. Onulak, Huntington, Ind., assignor to The Locke Steel Chain Company, Huntington, Ind., a corporation of Connecticut

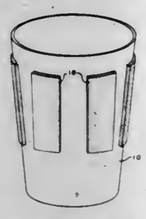
Filed Apr. 7, 1961, Ser. No. 101,555
2 Claims. (Cl. 226—151)



1. In a stock feeding device, a reciprocable body member having four walls forming a passage extending therethrough for the reception of stock to be fed, the bottom wall of said member forming a flat internal passage surface for slidingly receiving stock to be fed; a plurality of

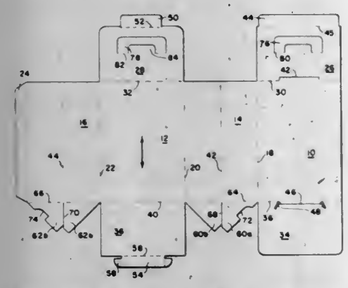
parallel and longitudinally spaced pockets formed in the top wall of said members; an element independently pivotally mounted within each of said pockets and having a curved surface for engaging said stock; and resilient means within each pocket biasing each of said curved surfaces about the pivotal axis of the respective element toward a stock engaging position, each pivotable element dependently mounted to extend across said passage to engage the stock at a slight angle from the vertical, with each element assuming its own angle depending upon the thickness of such stock at the particular line of contact.

3,126,139
PARTIALLY INSULATED PLASTIC CONTAINER
Alfred Schechter, New Rochelle, N.Y., assignor, by mesne assignments, to Phillips Petroleum Company, a corporation of Delaware
Filed Nov. 7, 1960, Ser. No. 67,832
13 Claims. (Cl. 229—1.5)



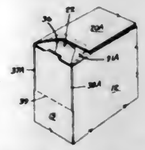
10. A drinking cup of the class described for hot and cold liquids having an upright continuous circular wall and flat bottom consisting of unfoamed polyolefin and having fused into the exterior of said wall longitudinally thereof for contacting the fingers of the user to hold same off said wall a plurality of spaced-apart strips of foamed polyolefin extending outwardly from said wall and symmetrically placed thereon.

3,126,140
COMBINED CARTON AND SEAT
Irwin S. Lizan, Valley Stream, and Edwin V. Grecious, Yonkers, N.Y., assignors to Skyway Container Corp., Hicksville, Long Island, N.Y.
Filed Sept. 9, 1963, Ser. No. 307,478
8 Claims. (Cl. 229—16)



1. A portable and collapsible combined carton and seat, of the character described, comprising a first pair of upright wall sections; a bottom wall section; and a top wall section, said top and bottom wall sections each comprising a pair of overlapping panels, each said panel hingedly connected by one edge to an edge of one of said first pair of upright wall sections; means releasably interengaging said top and bottom wall section forming panels in overlapping relation; and a second pair of upright wall sections, each of said second pair of upright wall sections comprising a pair of upright wall portions disposed at an angle to one another and extending inwardly into the space between said top and bottom wall sections, each of said upright wall portions hingedly connected by one upright edge to an upright edge of the adjacent wall portion and hingedly connected by its other upright edge to the adjacent upright edge of one of said first-named pair of upright wall sections, each said upright wall portion being of a width not exceeding one half the width of a wall section of said first pair of upright wall sections; said top wall section panels and said bottom wall section panels each of a length less than the width of one of said second pair of wall sections; and handle means provided on said top wall section and foldable thereagainst.

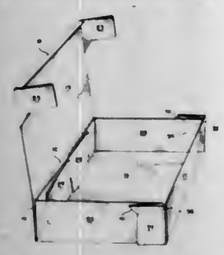
3,126,141
PACKAGE HAVING TUCK CLOSURE
John F. Walter, Minneapolis, Minn.
(Box 732, Lakeland, Minn.)
Filed Jan. 22, 1960, Ser. No. 4,134
14 Claims. (Cl. 229—17)



1. A package having a tuck closure, said package comprising a bottom wall, a pair of spaced apart face walls extending upwardly from opposite sides of said bottom wall and attached thereto, a pair of spaced apart end walls extending upwardly from said bottom wall between the edges of said face walls, and a top wall extending between the upper edges of said face walls and the first of said end walls, said top wall being cut away at one end only adjacent the upper edge of the second of said end walls to provide a single dispensing opening in said top wall which has one end thereof terminating at the upper edge of the second end wall, a tuck-in closure flap integral with the upper edge of said second end wall, said closure flap being an extension of said second end wall, and having a length greater than the distance by which the farthest edge of the cut away portion of said top wall is spaced from the upper edge of said second end wall, whereby the free end of said closure flap may be tucked under the edge of the cut away portion of said top wall, the said greater length of said closure flap being substantially less than the length of said top wall, whereby the said tucked under edge may be readily freed, said closure flap thereby being long enough to close said dispensing opening but short enough to permit said flap to be readily freed to expose that opening, a first fold line between said second end wall and said closure flap, a second fold line extending across the upper portion of said second end wall substantially parallel to said first fold line and spaced therefrom, and means between said fold lines permitting the upper portion of said second end wall to be separated from the adjacent face walls and folded back along said second fold line to release said tuck closure.

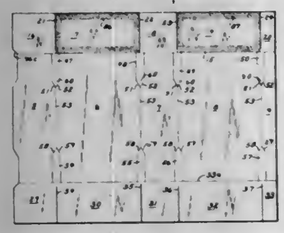
3,126,142
CORNER LOCK FIBREBOARD CONTAINER
Robert L. Goetz, Dallas, Tex., assignor to Inland Container Corporation, Indianapolis, Ind., a corporation of Indiana
Filed July 5, 1962, Ser. No. 207,646
1 Claim. (Cl. 229—36)

A reinforced corner lock carton including a top panel adapted to be closed in spaced overlying relation to a base panel, tabs extending outwardly from each side margin of said top panel and adapted to be folded along their lines of junction with the top panel into planes normal to the plane of said top panel, said tabs having a generally rectangular shape the free edge of which is aligned with said base panel, end panels extending outwardly from each side margin of said base panel, a front panel extending outwardly from one end margin of said base panel, said end and front panels being adapted for folding into planes normal to the plane of said base panel, a transverse score line extending across said front panel adjacent each of its ends and substantially aligned with the junction of said end panels and base panel, an L-shaped cut formed in each of said end panels, one leg of said cut being substantially aligned with the junction of said front and base panels and terminating short of the outer margin of said end panels, the other leg of said cut



extending normal to said one leg and terminating short of the outer margin of said front panel, further score lines extending from the extremity of said one leg of said cut to the outer margin of said end panels, said transverse score lines, said further score lines and said one leg of said cut defining locking flaps, and a diagonal score line extending from the extremity of said other leg of said cuts to the adjacent corner of said locking flaps, whereby when said end panels and front panel are folded normal to said base panel said locking flaps may be folded upon themselves along said transverse score lines, said further score lines and said diagonal score lines to provide a generally rectangular configuration for said locking flaps and disposing them in overlying relation to the adjacent end panels.

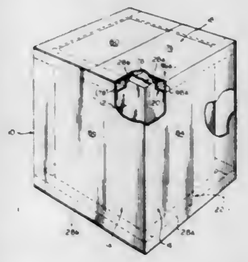
3,126,143
CARTON
Albert W. Hagan, Stratford, Conn., assignor to Roy S. Sanford & Company, Oxford, Conn., a partnership
Original application Oct. 7, 1957, Ser. No. 688,576, now Patent No. 3,040,958, dated June 26, 1962. Divided and this application Feb. 9, 1962, Ser. No. 179,833
6 Claims. (Cl. 229—37)



2. A flat blank for a tubular sift-proof carton of generally rectangular cross section, said blank including four flat main vertical sidewall panels, and a vertical glue flap panel at one side of the blank, the adjacent sidewall panels and the outer sidewall panel and glue flap panel at said one side of the blank being connected, at least at the upper end portion of the blank, by flat narrow vertical corner panels along separate spaced apart vertical

score lines, foldable end flaps at the upper ends of said sidewall panels and glue flap panel connected thereto along a common horizontal score line, cut lines separating the adjacent foldable end flaps, each cut line terminating at a point adjacent to but spaced above said horizontal score line, each of said cut lines being substantially in alignment with the vertical center line of the corresponding flat corner panel, the inner end of each cut line and the ends of the horizontal score line at the upper end of said corresponding flat corner panel forming the apices of a small flat triangular panel, each said small triangular panel being integral with a pair of adjacent foldable end flaps and with the adjacent flat corner panel, and the other side of said blank, at least at said upper portion thereof, having a vertical edge on the other outer sidewall panel, adapted when the blank is folded to form a tube having the adjacent sidewall panels at right angles to each other, to register with the score line between the glue flap panel and the adjacent corner panel, and to terminate at the junction of said last named score line and said common score line, an edge on the end flap at the end of said other outer sidewall panel extending angularly outward and upward from said junction and having a length and being at an angle to said common horizontal score line such that the lower end of said angularly extending edge is substantially in register with the junction of said common horizontal score line and the upper end of the score line between the glue flap and adjacent flat corner panel and the other end of said angularly disposed edge is substantially in register with the lower end of the cut line separating the foldable end flaps at the upper ends of the glue flap panel and the adjacent sidewall panel, and a vertical edge on the side of the end flap at the upper end of said other sidewall panel extending upward from the upper end of said angularly disposed edge and adapted to register through at least a portion of its length with the edge of the foldable flap at the upper end of said glue flap formed by the cut line between said last named flap and the adjacent foldable end flap, the adjacent sidewall panels and said outer sidewall panel and glue flap in the region below said upper end portion of the blank being connected along single fold lines substantially in alignment with the vertical center lines of the corresponding corner panels, and the upper ends of said single fold lines and the lower ends of the corresponding corner panel fold lines defining the corners of small triangular panels at the lower ends of the corner panels.

3,126,144
LOAD ISOLATING CONTAINER AND MANUFACTURE THEREOF
Roger L. McCulloch, 308 S. Clinton Ave., Oak Park, Ill.
Filed Oct. 16, 1961, Ser. No. 145,287
6 Claims. (Cl. 229—49)



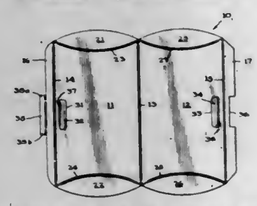
1. A load isolating container which comprises a rectangular container body including four side walls joined together for enclosing a load,

and two opposite end closure walls each including four flaps respectively adjoining said side walls integrally along fold lines;
and two spacers respectively secured to said end walls and to each of said side walls around the inner periphery of said container body,
said spacers each including four portions respectively secured to the flaps of one said end wall and to the respective side walls adjoining the flaps,
said spacer portions each including two marginal elongated strips respectively secured on the inner surfaces of the corresponding flap and of the side wall adjoining the flap and said strips being spaced from the fold line along which the flap and side wall adjoin,
each of said spacer portions also including two elongated strips respectively adjoining said marginal strips integrally along fold lines and extending inwardly of said container body normal to said corresponding flap and adjoining side wall respectively,
said inwardly extending strips being normal to each other and integrally joined together along a reverse fold line,
alternate said spacer portions of each spacer being shortened whereby recesses are provided at their opposite ends,
the adjacent ends of the remaining spacer portions being received in said recess,
said spacers thereby providing inwardly extending peripheral right angular load isolating corner constructions at opposite ends of said container body for enclosing a load.

3,126,145
ARTICLE CARRIER

Glenn E. Struble, Hamilton, Ohio, assignor to Diamond National Corporation, New York, N.Y., a corporation of Delaware

Filed Mar. 25, 1963, Ser. No. 267,426
2 Claims. (Cl. 229—52)



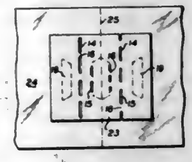
1. A blank for an article carrier comprising a first main panel, a second main panel hingedly connected to said first main panel, first and second end panels hingedly connected to said first and second main panels respectively, a locking flap hingedly connected to said first end panel, said second end panel having a cutout slot therein, and first and second cutout flaps cut from said first and second main panels respectively and hingedly connected thereto, said locking flap of greater length than the length of said second cutout flap, said slot of greater length than either of said cutout flaps whereby said locking flap, said first and second cutout flaps, and the slot in said second end panel are in operative alignment to close the article carrier and form a handle for ease of transporting the article carrier.

3,126,146
CARRIER BAGS

David Victor Bonsor, Aldbury, near Tring, England, assignor to Interstate Bag Company, Inc., Walden, N.Y., a corporation of Virginia

Filed Nov. 14, 1961, Ser. No. 152,234
2 Claims. (Cl. 229—54)

1. In a carrier bag construction in which each side wall is foldable on a fold line (*a*) adjacent the mouth of the bag to constitute a foldover closure flap, said closure flaps each enclosing a locking flap cut out of the same which is foldable on fold line (*b*) to engage in aligned hand apertures in the adjacent sides of the bag and thus to keep the folded top of the bag in the closed position and to cooperate with the folded top of the bag to form

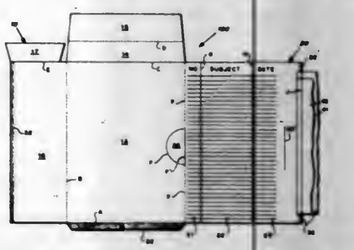


a hand grip, the improvement which consists in making at least one of the pairs of the superimposed paired fold lines (*a*) and (*b*) of a series of perforations or slits which are staggered with respect to one another, whereby to reduce the radii of curvature of the folds and to facilitate bending.

3,126,147
PACKAGING AND FILM STORAGE DEVICE

Max R. Froehlich, Philadelphia, Pa., assignor to Wolf Brothers, Inc., Philadelphia, Pa., a corporation of Pennsylvania

Filed June 22, 1960, Ser. No. 38,037
4 Claims. (Cl. 229—72)



1. An envelope adapted for the transport of unfinished photographic films, transport of finished photographic negatives and prints, and permanent filing of finished photographic negatives, successively, comprising sheet material folded and secured to form a front and back of the envelope and a finisher's sleeve connected to the front in side to side relationship and folded within the envelope with its inner edge secured to the front, a closing flap at one end of said front, a bottom tab at the other end of said front overlying and secured to the back, said back having a negative index printed theeron and having a foldable permanent negative pocket affixed thereto, said back being separable from the reminder of said envelope by tearable lines and comprising a permanent negative file when separated and said envelope, said sleeve and said pocket all being open at the same side of the envelope.

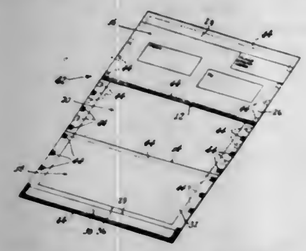
3,126,148
COMBINATION LETTER-ENVELOPE

Walter J. Hanson, Old Greenwich, Conn., assignor to Pitney-Bowes, Inc., Stamford, Conn., a corporation of Delaware

Original application Aug. 30, 1961, Ser. No. 135,070. Divided and this application July 3, 1962, Ser. No. 207,292
1 Claim. (Cl. 229—92.1)

A combination letter-envelope blank comprising:
a sheet of foldable material having two substantially parallel fold lines extending across the sheet to divide the latter into a top section, a bottom section and an intermediate section;

said top section having a fold line extending across the sheet substantially parallel to the above-named fold lines to divide the top section into a top end flap and a top segment foldably connected to each other;
said bottom section having a fold line extending across the sheet substantially parallel to the above-named fold lines to divide the bottom section into a bottom end flap and a bottom segment foldably connected to each other;
cohesive material carried by the sheet for affixing the upper and lower surfaces of the side margins of the intermediate section, the lower surfaces of the side margins of the top segment, the upper surfaces of the side margins of the bottom segment, the lower surface of the free end margin of the top end flap and the upper surface of the free end margin of the bottom end flap, each to a respectively coextensive surface of the sheet;



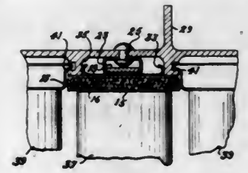
the dimension of each of the top and bottom segments, in the direction perpendicular to said fold lines, being greater than that of the intermediate section by a respective amount;
the dimension of each of said end flaps, in said direction, being greater than said respective amount for the segment foldably connected thereto;
said cohesive material being carried by the sheet at said side margins of the intermediate section in the form of spots spaced from each other and alternating between the upper and lower surfaces along the length of the respective side margins;
said cohesive material being carried by the sheet at the lower surface of the top section and at the upper surface of the bottom section in the form of spots located to be coextensive with and cohere to the spots carried by the next adjacent surface of the intermediate section when the sheet is accordian-folded along said first-named fold lines with said upper surface of the top section outermost;
whereby said sheet, when stacked unfolded with other identical sheets, has no cohesive material next adjacent cohesive material carried by the next adjacent sheets of the stack.

3,126,149
FOAMED ALUMINUM HONEYCOMB ROTOR RUB-IN SHROUD

Grady W. Bowers, Jr., El Cajon, Calif., Le Var C. Jensen, Cincinnati, Ohio, and William A. Harris, Topsfield, Mass., assignors to the United States of America as represented by the Secretary of the Air Force

Filed May 8, 1961, Ser. No. 108,977
2 Claims. (Cl. 230—133)

1. An axial-flow compressor for use in a turbojet engine, said compressor comprising, a rotor assembly having a plurality of circumferentially extending rows of blades thereon, an outer casing surrounding said rotor assembly, said outer casing being provided with a plurality of annular shroud sections on the inner wall thereof, each of said shroud sections forming a lining in axial alignment with a corresponding row of rotor blades, said lining having a skeletal framework of honeycomb configuration on the inner face thereof, a foamed material consisting of a mixture of sodium silicate and aluminum insertable into openings in said honeycomb lining to form an abrading surface thereon, said foamed material having a melting point higher than the temperatures generated during operation of said turbojet engine, each of said annular shroud sections being comprised of a series of arcuate members joined together at their terminal ends, each of said arcuate members having an upstanding open rectangular cross section bracket fixedly attached to one

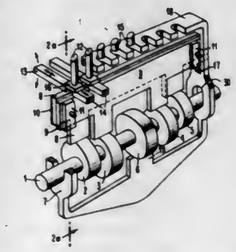


terminal end thereof for interlocking engagement with a flat projecting mating bracket fixedly attached to the opposite terminal end of the next adjacent arcuate member for mutually supporting said members to form said annular shroud, and means for attaching said arcuate members to the inner wall of said compressor outer casing such that a negative clearance exists between the outermost peripheral portion of said circumferentially extending rotor blades and the inner surface of said arcuate members during initial operation of said compressor and substantially zero clearance exists under normal operating conditions of the turbojet engine.

3,126,150
HIGH-SPEED PUNCHING MECHANISM

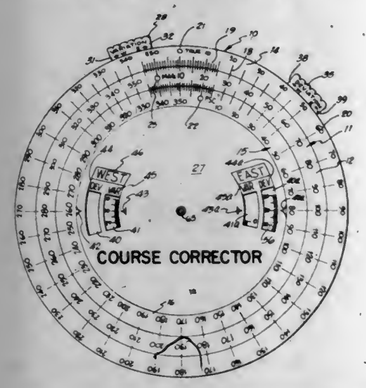
George E. Lyons, Hyde Park, and Raymond A. Barbeau, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 20, 1961, Ser. No. 160,778
10 Claims. (Cl. 234—115)



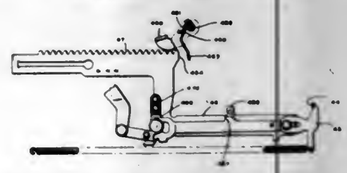
1. A punch mechanism comprising:
a set of punches movable between punch and non-punch positions;
a pair of single element multiple punch drivers, slidably disposed to move between punch and non-punch positions each driver being capable of moving all of said punches;
multilobe cyclic cam means for alternatively reciprocating said drivers during a single cycle;
and a plurality of interposer means insertable between chosen ones of the punches of said set and said moved one of said drivers to transmit said driver movement to said chosen punches causing said chosen punches to be extended to the punch position.

3,126,151
COURSE CORRECTOR
Alexander Barry, 21—55 71st St., East Elmhurst, N.Y.
Filed Aug. 17, 1960, Ser. No. 50,197
10 Claims. (Cl. 235—78)



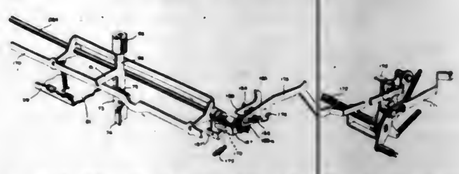
1. A course corrector comprising a relatively thin flat outer dial ring, an intermediate dial ring concentric with the outer dial ring and rotatably fitted to the inner diameter of the outer dial ring, an inner dial ring having a central opening therethrough, concentric with the outer dial ring, and rotatably fitted to the inner diameter of the intermediate dial ring, an angularly positioned control tab fixedly attached to the inner dial ring, each of said dial rings having angle graduations ranging from 0 to 360 degrees reproduced thereon, a flat base disc attached to the outer dial ring adapted to rotatably support the intermediate and inner dial rings, a central disc concentric with the inner dial ring, means fixedly attaching the intermediate dial ring to the central disc, the central disc being rotatably supported by the base disc attached to the outer dial ring, a pair of stops adapted to limit the rotational angular movement of the intermediate dial ring, through a limited angular range in both directions, relative to the zero angular designation on the outer dial ring, a second pair of radially positioned stops adapted to limit the rotational angular movement of the inner dial ring, through a limited angular range, relative to the zero angular marker on the intermediate dial ring in both directions, means visible on said central disc, adapted to indicate the rotational angular movement of the intermediate dial ring, from the zero angular marker on the outer dial ring, in both directions, within the angular range established by the stops limiting the movement of the intermediate dial ring, and means visible on said central disc adapted to indicate the rotational angular movement of the inner dial ring from the zero angular marker on the intermediate dial ring, in both directions, within the angular range of the stops limiting the movement of the inner dial ring, the support means attached to the outer dial ring being a thin substantially circular disc, the outer diameter of the support disc being substantially equal to the outer diameter of the outer dial ring, a thin separator ring mounted between the outer dial ring and the support disc, the separator ring extending around a portion of the circumference of the outer dial ring, the separator ring being fixedly attached to the outer dial ring and the support disc, the area of the outer dial ring extending between the ends of the separator ring being relatively free of the outer dial ring, the means fixedly attaching the central disc to the intermediate dial ring being adapted to fit into the free area between the support disc and the outer dial ring, to retain the intermediate dial ring in its relation to the outer dial ring, said retaining means being adapted to engage the first end of the separator ring to limit the rotational angular movement of the intermediate dial ring in one direction, control means attached to the inner dial ring adapted to extend through the free area between the support disc and the outer dial ring, to limit the rotational angular movement of the inner dial ring in both directions, said control means being adapted to engage the end of the separator ring, opposite the first and thereof, to limit the rotational angular movement of the inner dial ring in one direction.

3,126,152
TENS TRANSFER NORMALIZING MECHANISM FOR CALCULATING MACHINE
Bruce Harrison Tingley, Pine City, N.Y., assignor, by mesne assignments, to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Application Sept. 27, 1960 Ser. No. 58,814, which is a division of application Ser. No. 429,277, May 12, 1954, now Patent No. 2,984,411, dated May 16, 1961. Divided and this application Nov. 13, 1962, Ser. No. 241,457
2 Claims. (Cl. 235—137)



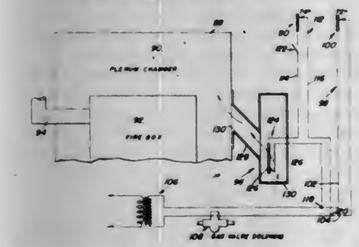
1. In a machine of the class described having an accumulator rack movable longitudinally from an initial position to a carry position, a slide associated with said rack, latching means provided on said rack and said slide and operable to latch said rack with said slide, first spring means for said slide yieldably connecting said slide to said rack and biasing said slide into latching engagement with said rack under conditions where said slide is moved longitudinally with respect to said rack in a direction away from said carry position, and means camming said slide out of said latching engagement with said associated rack under conditions where said rack and slide are moved in unison to said carry position, a cyclically rockable shaft, and second spring means carried by said shaft for engaging said rack under conditions where said rack is moved to said carry position, said second spring means, under conditions where said shaft is rocked, urging said rack to said initial position.

3,126,153
KEY LOCKING AND RESTORING MECHANISM FOR CALCULATING MACHINE
Bruce Harrison Tingley, Pine City, N.Y., assignor, by mesne assignments, to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Application Sept. 27, 1960, Ser. No. 58,814, which is a division of application Ser. No. 429,277, May 12, 1954, now Patent No. 2,984,411, dated May 16, 1961. Divided and this application Nov. 13, 1962, Ser. No. 241,461
3 Claims. (Cl. 235—145)



1. In a machine of the class described, a multiplier digit key, said key being depressable into an operated condition from a normally unoperated raised position, a key return bar pivotably mounted for actuation into engagement with said digit key to raise said key from said depressed position back to said raised position, a rockable member, a spring yieldably connecting said rockable member to said return bar and biasing said return bar to a position of non-engagement with said digit key, a cyclically operable linkage, an actuatable blank stroke bail, and means responsive to actuation of said blank stroke bail to mechanically interconnect said linkage and said rockable member, movement of said linkage rocking said rockable member and, in turn through said spring, actuating said return bar into key engaging position to actuate yieldably said multiplier key back to raised condition.

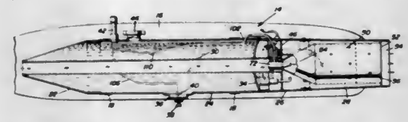
3,126,154
FURNACE HEATING UNIT AND BLOWER CONTROL
Richard L. Shoalts, 347 Hastings St., South Williamsport, Pa.
Filed Dec. 29, 1960, Ser. No. 79,402
2 Claims. (Cl. 236—9)



1. In combination with a conventional hot air heating system of the type including a furnace having separate heater and blower units provided with separate electrical control circuits controlled by space and plenum thermostats respectively disposed in said circuits, a plenum chamber and an exhaust pipe, supplemental control means including a supplemental control circuit connected to said heater control circuit, supplemental space thermostat means connected in series to said supplemental control circuit for cycling said heater unit during operation of said furnace, said conventional space thermostat being set to actuate said heater control at a given temperature and said supplemental space thermostat servicing generally the same area as said conventional space thermostat and being set to actuate said heater control at a temperature slightly above the setting of said conventional space thermostat, said supplemental control including an outwardly and downwardly inclined passage communicating the interior of said plenum with the exterior of said furnace, a thermostat connected in series in said supplemental control circuit, disposed in said passage to open said supplemental control circuit in response to warm air passing downwardly and outwardly through said passage.

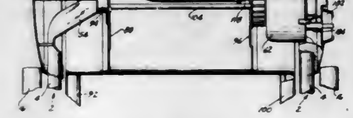
3,126,155
SILVER IODIDE CLOUD SEEDING GENERATOR
Orn F. Lohse, P.O. Box 356, Valier, Mont.
Filed May 24, 1960, Ser. No. 31,322
9 Claims. (Cl. 239—14)

5. A silver iodide cloud seeding generator comprising a housing secured to the exterior surface of an aircraft on a wing tip thereof, a burner in said housing having an exhaust pipe opening through the rear of said housing, a storage tank in said housing for a corrosive silver iodide solution as a burner fuel, an air tube opening through the forward end of said housing and discharging into said burner, a mixing venturi in said air tube, means for feeding fuel from said storage tank into said venturi for mixing with air flowing therethrough whereby to provide a combustible mixture for said burner, corrosion impervious means for controlling flow of said fuel from said storage tank to said venturi, means for effecting ignition



of said combustible mixture in said burner, means connected with said control means for purging said burner and fuel supply means of corrosive fuel when flow of fuel from said tank to said burner is cut off.

3,126,156
TRAVELLING SPRINKLER
Isaac Rinkewich, Hasbrouck Heights, N.J., assignor to International Patent Research Corp., New York, N.Y., a corporation of New York
Filed Nov. 28, 1961, Ser. No. 155,352
10 Claims. (Cl. 239—183)

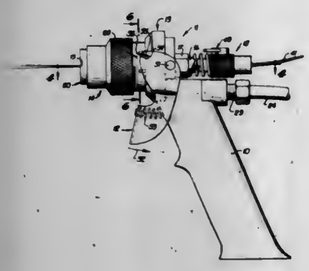


1. A travelling sprinkler comprising an elongated supporting member, ground-engaging means on said member at longitudinally spaced points thereon and supporting at least a portion of said member spaced above the ground, and an assembly comprising a nozzle, a reel on which an elongated element is adapted to be wound, and motive means operatively connected to said reel for rotating the latter, said assembly being mounted on said member, said reel having a recessed end, a gear fixed to said reel, said assembly comprising a section fixedly mounted on said supporting member independently of said ground-engaging means, a transmission mounted on said fixed section which is at least partially received in said recessed end of said reel, and an output gear driven by said transmission and drivingly engaging said gear fixed to said reel, said motive means being drivingly operatively connected to said transmission.

3,126,157
RESIN AND GLASS FIBER APPLICATOR GUN
Delbert J. Dickerson, P.O. Box 6, Agoura, Calif., assignor of one-half to Jon Hall, Malibu, Calif.
Filed July 23, 1962, Ser. No. 211,486
11 Claims. (Cl. 239—415)

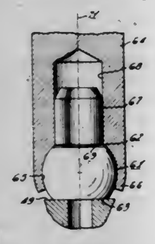
1. Apparatus of the character described, comprising a head structure having terminally opening passages including a first located for delivering a multiple glass fiber type strand in a generally forward direction, a second located for delivering pressurized gas to fragment the strand terminal and entrain the fiber fragments

openly carrying them in a generally forward direction and a third for delivering fluidized resin in a generally forward direction to mix with the gas entrained forwardly travelling glass fragments, said head structure including relatively rotatable units each containing portions of said gas and resin passages, and control means for effecting relative rotation between said units simultaneously to rotate the gas and resin passage portions



in one unit relative to the gas and resin passage portions in the other unit, and between a shut-off position in which the gas and resin passage portions in said one unit are out of communication respectively with the gas and resin passage portions in the other unit, and an operating position in which the gas and resin passage portions in said one unit are in communication respectively with the gas and resin passage portions in said other unit.

3,126,158
FUEL INJECTION NOZZLE
Alexander Dreisin, Olympia Fields, Ill., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Aug. 23, 1962, Ser. No. 220,121
12 Claims. (Cl. 239—533)



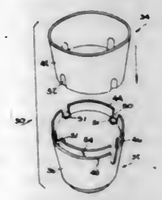
10. In a fuel injection nozzle assembly of the type including a nozzle holder, a spindle mounted in said holder for reciprocal movement on its axis and a nozzle secured to the lower end of said nozzle holder, the combination comprising: a flat sealing surface formed on said nozzle in right angle relationship to said axis of said spindle, a truncated ball swivelly secured to the lower end of said spindle, a flat sealing surface formed on said ball in complementary sealing relation with a said flat sealing surface presented by said nozzle, means biasing said spindle toward a fuel shutoff position wherein said flat sealing surfaces are in fluid sealing engagement, and motion restraining means associated with said spindle and ball for maintaining said flat sealing surfaces in substantially parallel relation to one another including spaced abutment surfaces on said ball and spindle brought into abutting engagement with one another by slight rotary movement of said ball in a direction causing tipping of said sealing surface on said ball relative to said sealing surface on said nozzle.

3,126,159
PULL-DOWN NIGHT LIGHT
Louis Verrone, Pearl River, N.Y., assignor to Swivelier Company, Inc., Nanuet, N.Y.
Filed June 7, 1962, Ser. No. 200,807
2 Claims. (Cl. 240—73)



1. A pull-down night light comprising a supporting canopy suitable for wall mounting having a keyed aperture therein, a lamp assembly receivable in said aperture, said assembly including an elongated bracket and a lamp socket and lens mounted in spaced relation on said bracket, an annular flange member secured to the lens having a plurality of tabs struck therefrom, at least one of said tabs being inwardly bent and secured to said bracket and a plurality of said tabs being outwardly biased toward the walls of said keyed aperture and removably engaging the peripheral edges of said aperture to retain the lamp assembly within said canopy, and at least one tongue lanced out of the sides of said bracket, which tongue engages the edges of said aperture when the lamp assembly is partially withdrawn from the canopy to facilitate removal and replacement of the lamp bulb therein, the tongue thereby preventing separation of the lamp assembly from the canopy.

3,126,160
SOCKET SHELLS
Kornel Berger, Kew Gardens, N.Y. (% Berger Machine Products Inc., 74—16 Grand Ave., Maspeth, N.Y.)
Filed Sept. 25, 1957, Ser. No. 686,084
2 Claims. (Cl. 240—153)

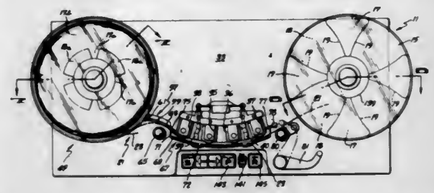


1. An electric socket shell of the character described, consisting of:
two tubular parts having central axes,
one of said parts constituting a one-piece cup-shaped base part with an apertured bottom wall for connection to an electric lighting device as a permanent part thereof and for permanent association with a socket interior in axial alignment with the base part,
said base part being shorter than the socket interior whereby the base part cannot completely conceal the socket interior,
the other of said parts constituting a one-piece sleeve-shaped upper part rotatably couplable in partially telescoping end-to-end relationship with said base part,

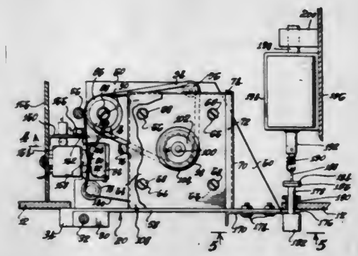
said two parts solely cooperating to jointly provide a complete cover for the socket interior, and
rapid-acting detachable means engageable upon the partial telescoping of the two parts and relative rotation of said parts about their central axes for axially compressively securing said two parts to one another,
said means including
a radially outwardly overhanging external annular cam surface forming an integral element of one of said parts and sloping longitudinally of said one part,
said cam surface including a substantially longitudinal cut-out entry slot leading from an open end of said one part,
a radially inwardly directed protuberance comprising a follower forming an integral element of the other of said parts and adapted to be moved longitudinally through the entry slot to engage the cam surface when the two parts are coupled and relatively rotated,
said cam and follower cooperating upon said coupling and relative rotation to relatively move the two parts into further telescoping relationship,
and a pair of abutment members one of which is formed integrally with one of the parts and the other of which is formed integrally with the other parts,
at least one of said abutment members being annular and being positioned in a plane perpendicular to said central axes,
said abutment members being positioned with respect to the cam and follower to longitudinally abut one another when the cooperation between the follower and cam upon coupling and relative rotation of the two parts causes said two parts to move further into telescoping relationship, whereby to couple the two parts to one another under pressure in said longitudinal direction, the base part being of frusto-conical configuration with a wide upper open end, said upper end including a frusto-conical portion of reduced diameter terminating in a step, said portion constituting the cam surface and said step constituting the annular abutment member, said portion being provided with slots extending to the upper edge thereof and which constitute the entry slots, the upper part including protuberances which constitute the followers and which are adapted to be slid through the entry slots to reach the lower end of the frusto-conical portion, said protuberances and frusto-conical portion being dimensioned and contoured for the frusto-conical portion to cam the protubrances so as to press the lower edge of the upper portion against the step, said lower edge constituting the other abutment member.

3,126,161
SELF-THREADING DEVICE
Albert O. Bemiss, Burlingame, and George D. Rehklau, Menlo Park, Calif., assignors to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed July 21, 1960, Ser. No. 44,312
15 Claims. (Cl. 242—55.12)

4. In a tape transport having rotating supply and take-up reels and a tape coiled on said supply reel, the improvement comprising: means formed on the leading end of said tape for engaging said take-up reel; and means immovably fixed on and cooperating with the rotation of said take-up reel for receiving said first-named means at the periphery of said take-up reel and for automatically conducting said leading end of said tape to a position of retention adjacent the hub of said take-up reel, said last-named means being formed on said takeup reel in such a way that the peripheral portions of said takeup reel remain circumferentially continuous and intact.



3,126,162
ACTUATING MECHANISM FOR ENDLESS TAPE CARTRIDGES
Louis G. MacKenzie, 920 N. Inglewood Ave., Inglewood, Calif.
Filed Dec. 24, 1958, Ser. No. 782,836
4 Claims. (Cl. 242—55.19)

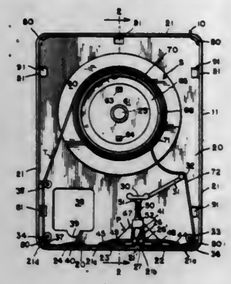


1. In apparatus for actuating an endless tape cartridge, the combination comprising; a housing; a continuously rotating annular drive member mounted in said housing; a magnetic head mounted in said housing; hinge means mounted on said housing; a movable support mounted on said hinge means for movement relative to said housing; said movable support supporting said endless tape cartridge and having an idler roller mounted thereon, the tape of said tape cartridge engaging said idler roller; said movable support being movable from a first position at least partially without said housing to a second position within said housing; said idler roller and tape being out of engagement with said drive member when said support is in said first position, said idler roller causing said tape to operatively engage said drive member when said support is in said second position whereby said tape is driven past said magnetic head; and electromagnetic means coupled to said support and operable to move said support from said first position to said second position.

3,126,163
ENDLESS RECORDER TAPE CARTRIDGE
Austin A. Knox, Kensington, Md., assignor to Audio Devices, Inc., New York, N.Y., a corporation of New York
Filed Jan. 13, 1961, Ser. No. 82,425
3 Claims. (Cl. 242—55.19)

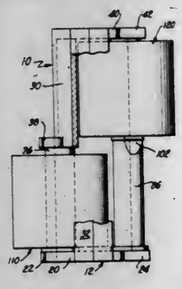
1. A magazine for an endless recording tape comprising a casing and a removable top therefor, said casing having a bottom and side walls, a perpendicular spindle integral with said bottom, a spool for an endless recording

tape loosely journaled on the spindle, one of said side walls having a plurality of spaced apertures, a tensioning rib on said side wall between two adjacent apertures, a perpendicular guide lug on the casing bottom intermediate said two adjacent apertures, an abutment on the bottom in



rear of the lug, a tensioning member slidable on the lug and overlying said apertures and the tensioning rib and a compression spring between said abutment and the tensioning member, another of said apertures being adapted to receive tape advancing means.

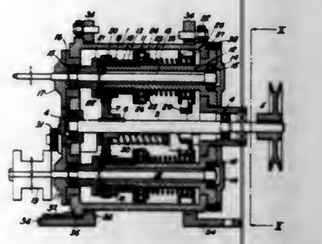
3,126,164
MULTIPLE ROLL DISPENSER
Jack L. Perrin, Los Angeles, Calif., assignor to Towlsaver, Inc., Los Angeles, Calif., a corporation of California
Filed Sept. 17, 1962, Ser. No. 225,406
9 Claims. (Cl. 242—55.53)



5. In a dispenser for a multiplicity of rolls of material which is adapted to permit the successive dispensing of said rolls, the combination of: a housing, said housing having a first dispensing location and a second reserve location therein; a first support on said housing at said first location adapted to receive a first roll of material; and a second support in said housing extending through said first and second locations whereby a second reserve roll may be disposed and maintained in said second location until the consumption of said first roll permits the movement of said second roll into the dispensing location underlying said first support.

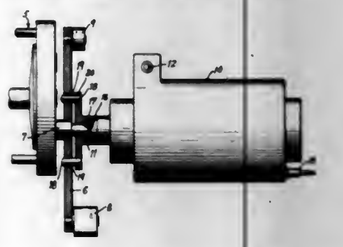
3,126,165
WIRE WINDING DEVICE
Herman Jan van Eijk, Venlo, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Apr. 20, 1961, Ser. No. 104,361
Claims priority, application Netherlands Jan. 31, 1961
3 Claims. (Cl. 242—80)

1. Improved wire winding apparatus comprising:
a rotatable housing member,
a plurality of spindles rotatably supported by said member and each adapted to receive a reel means, drive shaft means concentric within said member,
a first sleeve means secured at one end to said member and surrounding a portion of the associated spindle in spaced relation,
bearing means at said one end of said sleeve for supporting an associated spindle,
another bearing means secured to said housing member for supporting the other end at each said spindle,



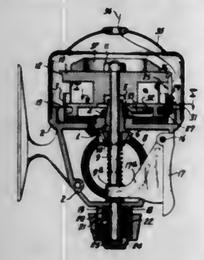
a driven gear wheel axially and rotatably movable relative to said first sleeve means and operatively associated with said drive shaft means,
a second sleeve member secured on said first sleeve at the other end thereof for supporting said driven gear wheel,
clutch means operatively connecting the spindle and said driven gear wheel,
and means for varying the friction forces of said clutch means.

3,126,166
ELECTRIC MOTOR DRIVE FOR A FISHING REEL
Bernard D. Weinberg, 235 W. Merrick Road, Freeport, N.Y.
Filed Dec. 11, 1962, Ser. No. 243,868
1 Claim. (Cl. 242—84.1)



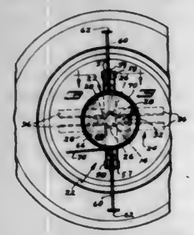
An electric motor drive for a fishing reel, comprising the combination of
a fishing reel having hand operating means including a spool winding shaft and a hand crank in exposed position on the end of said reel shaft,
said hand operating means having driven abutments spaced equal distances to opposite sides of the shaft center,
a small portable electric motor of size and shape to be held in one hand and having a control member positioned for actuation by a finger of the hand holding the motor, said motor having a drive shaft exposed for end-to-end alignment with said reel shaft,
driving abutments carried by said motor shaft spaced equal distances to opposite sides of said motor shaft and corresponding in spacing to said abutments on said reel shaft,
said driving and driven abutments of the motor and reel respectively extending longitudinally of and parallel with the shafts by which they are carried and thereby engageable and disengageable by direct shaft aligning movements of the motor with respect to the reel and whereby said reel may be manipulated by its hand crank in the usual way with the motor separated from the reel or for retrieving a long line by power operation by simply positioning the motor with the drive shaft in line with the reel shaft and operating the control member to temporarily effect the power operation of the reel.

3,126,167
SPINNING REEL
Kiyomi Ide, 22 5-chome, Sanocho, Yokosuka City, Japan
Filed Apr. 16, 1962, Ser. No. 187,666
Claims priority, application Japan Dec. 5, 1961
3 Claims. (Cl. 242—84.2)



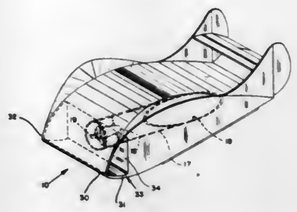
1. A fishing reel comprising a support, a hollow shaft rotatably mounted in said support, a spool shaft rotatably and slidably mounted within said hollow shaft, a spool fixed to said spool shaft, means for sliding said spool shaft axially within said hollow shaft, means for rotating said hollow shaft independently of said spool shaft, a line pick-up pivotally carried by said hollow shaft for swinging movement across the line carrying surface of said spool between a line engaging and a line release position, and cooperating means carried by said line pick-up and spool for swinging said line pick-up between said two positions as said spool shaft moves axially of said hollow shaft, said cooperating means comprising a circumferential groove on said spool and a hook on said line pick-up which projects radially inward into said groove.

3,126,168
WINDLASS ATTACHMENT FOR TRACTORS
Edgar W. Huwe, Rte. 2, Benson, Minn.
Filed May 21, 1962, Ser. No. 196,078
2 Claims. (Cl. 242—86.5)



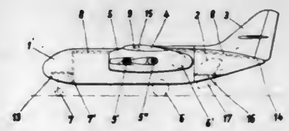
1. A windlass attachment for tractors comprising:
(*a*) a pair of V-shaped elements;
(*b*) means for clamping said V-shaped elements against opposite sides of a tractor axle;
(*c*) oppositely issuing arms secured to said V-shaped elements; and
(*d*) threaded elements supported at the free ends of said arms for acting against the closed end of a container,
(*e*) whereby rotation of said axle will cause wire, rope, and the like to be wound on said container.

3,126,169
AIRCRAFT
Andrew A. Kucher, Dearborn, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Apr. 2, 1962, Ser. No. 186,295
8 Claims. (Cl. 244—12)



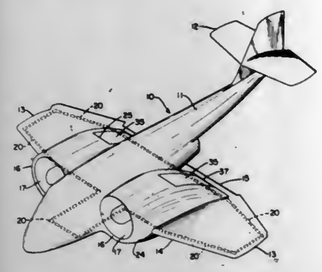
1. An aircraft comprising a substantially closed body shaped to the configuration of an airfoil, openings in the body of the airfoil surface for the admission to the body of substantially all of the air comprising a lifting and propulsive air stream, a duct for the expulsion of said air stream from the lower surface of the airfoil in a direction having a rearward and downward component, said duct extending a substantial portion of the length of the body and being inclined downwardly towards the aft portion of the body and a prime mover and propeller located within said duct for the propulsion of said lifting and propulsive stream of air, said stream of air entering the body at the openings in the airfoil surface and flowing rearwardly through said duct past the prime mover and propeller and out of the body.

3,126,170
AIRCRAFT FOR SELECTIVE FORWARD AND VERTICAL START
Peter Dornier, Friedrichshafen, Germany, assignor to Dornier-Werke G.m.b.H., Friedrichshafen, Germany, a firm of Germany
Filed July 10, 1962, Ser. No. 208,694
7 Claims. (Cl. 244—12)



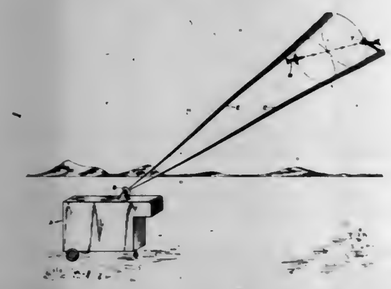
2. An airplane suitable for vertical and horizontal take-off, comprising, in combination:
a fuselage,
wings mounted to substantially the center of the upper portion of the fuselage and extending laterally thereof,
a jet engine placed substantially in the middle of the span of each wing, and
a plurality of nozzles for producing gas jets placed on each side of each of said engines,
all nozzles of each engine having a constant flow area and being tiltable for continuously varying the direction of the gas jets issuing from said nozzles between a vertical downward and a horizontal direction,
the resultant of the thrust producing gas jets of each of said engines at any position of said nozzles extending substantially through the axis of gravity which is parallel to the transverse axis of the airplane.

3,126,171
INTEGRATED LIFT AND PROPULSIVE SYSTEM FOR AIRCRAFT
Wieslaw Z. Stepniewski, Springfield, and Francis J. McHugh, Prospect Park, Pa., assignors to The Boeing Company, Seattle, Wash., a corporation of Delaware
Filed Oct. 15, 1962, Ser. No. 230,459
10 Claims. (Cl. 244—12)



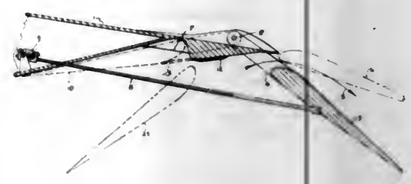
1. In an aircraft having a body, a propulsion unit, and an air discharge duct defining a discharge flow passage for said propulsion unit, the combination of an adjustable airfoil section traversing the outlet end of the flow passage and being mounted for angular movement across the flow passage to control the capacity of air flow therethrough, said airfoil section having an outer control surface extending rearwardly and outwardly to aid in controlling the direction of thrust by providing a lifting force through the action of the discharged gases across the airfoil, the portion of said outer control surface providing the effective lifting force extending rearwardly of the upper portion of the discharge duct, and said airfoil section including means for adjustably controlling the angular disposition of said airfoil section in the flow passage.

3,126,172
AIRBORNE VEHICLE REMOTE CONTROL DEVICE
William C. Parkinson, Ann Arbor, Mich., Harold E. Ober, Silver Spring, Md., and Richard B. Roberts, Washington, D.C., assignors to the United States of America as represented by the Secretary of the Navy
Filed May 19, 1950, Ser. No. 162,902
24 Claims. (Cl. 244—14)



1. A control guidance system for an airborne vehicle, comprising, means for establishing a nutating beam describing a cone of revolution of electromagnetic energy in space, said beam having vehicle control intelligence modulated thereon, and receiving means mounted in said vehicle for automatically detecting and utilizing said controlling intelligence to maneuver said vehicle within said beam of electromagnetic energy.

3,126,173
AREA INCREASING SLOTTED FLAPS AND APPARATUS THEREOF
Alberto Alvarez-Calderón, Palo Alto, Calif. (Ave. Salaverry 3465, Orrantia del Mar, Lima, Peru)
Filed May 21, 1962, Ser. No. 196,164
18 Claims. (Cl. 244—42)



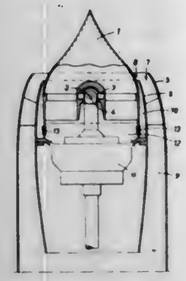
1. An airfoil-shaped primary wing member having an upper surface and a trailing edge portion with a generally spanwise trailing edge and an undersurface adjacent to said trailing edge, and a secondary airfoil-shaped wing member trailing said primary wing member and having a first spanwise edge portion with a rounded surface adjacent and substantially parallel to said trailing edge and a second spanwise edge portion to the rear of said first edge portion and means provided to move said secondary airfoil-shaped wing member with respect to said primary wing member between a trailing position in which the undersurface of said trailing edge portion and said rounded surface of said first edge portion define contracting walls of a principal high lift slot between said primary and secondary wing members for rearward fluid flow therethrough from below said primary wing member to on top of said secondary wing member and a retracted position in which said secondary wing member is positioned faired with and adjacent to said primary wing member below said upper surface in an inverted disposition in which said secondary wing member is approximately parallel to said primary wing member with said first edge portion adjacent to said trailing edge of said primary member and said second edge portion forward from said first edge portion and adjacent to said undersurface of said primary wing member.

18. An aircraft wing with a trailing edge portion and a trailing edge and a movable airfoil shaped trailing edge flap with a rounded spanwise edge portion, with said flap mounted on said trailing edge portion of said wing for movement between a high-lift flap position in which said flap is to the rear of said trailing edge portion and inclined downwardly with respect to said wing with said rounded spanwise edge portion adjacent to said wing trailing edge and defining, together with the undersurface of said trailing edge portion, converging walls of a high lift slot therebetween to direct fluid flow from below said wing smoothly across said slot and downwardly on top of said flap, and a low drag position in which said flap is faired with said wing nested in said trailing edge portion in an inverted flap position with said flap rounded edge adjacent to said wing trailing edge.

3,126,174
AIR INLET MECHANISM FOR SUPERSONIC AIRCRAFTS
Karl-Axel Zetterström, Onderlaleggatan 30, Trollhattan, and Per-Olof Wennergren, Barkarby, near Stockholm, Sweden
Filed May 29, 1961, Ser. No. 113,344
9 Claims. (Cl. 244—53)

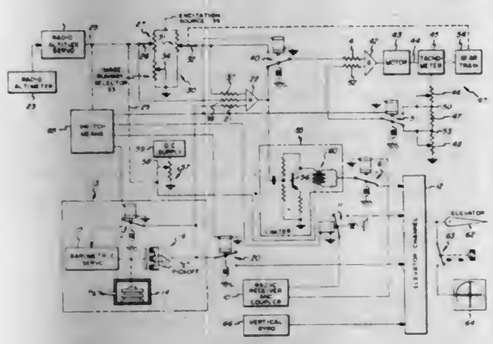
1. In an adjustable air inlet device for supersonic aircraft, the combination with the fuselage of the aircraft

of a conical nose member and an air inlet guide member, each of which is mounted to turn about an axis with relation to the fuselage, an annular chamber including a movable wall member coaxial with said nose member and rigidly connected thereto, and a passage leading from the rammed air inlet to said chamber for passing rammed air of different speeds to various points of the circumference of said chamber according to the position of the



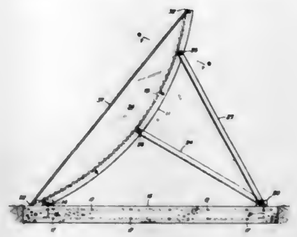
longitudinal axis of said nose member with relation to the direction of the flow of the air in the atmosphere surrounding the aircraft, so as thereby to subject the movable wall member to different dynamic pressures at different points of its circumference with a view to cause it to turn said nose member about its axis until the dynamic pressure is equalized around the entire circumference of the chamber.

3,126,175
LANDING SYSTEM FOR AIRCRAFT
Norman Lowell, Massapequa, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Feb. 26, 1963, Ser. No. 261,050
11 Claims. (Cl. 244—77)



10. In apparatus for guiding an aircraft to a landing,
(*a*) means for providing a signal representative of the instantaneous altitude of said aircraft above ground level,
(*b*) variable limiting means responsive to the altitude signal for limiting the output thereof in excess of a predetermined value, and
(*c*) biasing means responsive to said altitude signal for varying the bias on said limiting means to vary the limit thereof as a function of said altitude signal.

3,126,176
BLAST FENCE
Bernard Stanley Lynn, 19451 Black Road, Los Gatos, Calif.
Filed Sept. 11, 1962, Ser. No. 222,863
11 Claims. (Cl. 244—114)

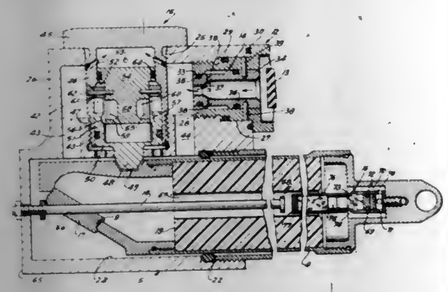


1. In a blast fence adapted to be installed on a ground area to receive and deflect the blast from an aircraft power unit of the jet type with afterburner, means forming a substantially impervious blast deflecting surface smoothly curved to be concave as viewed from the source of the blast, the curvature of said surface being such that a jet blast directed against the surface is directed upward from the upper edge of the fence, and a deflecting surface supporting structure; said means being of corrugated material with the ribs and valleys of the corrugations in horizontal planes and having a leading edge proximate the ground and an upper discharge edge in rear of the leading edge; said supporting structure comprising a series of uniformly curved, substantially parallel, rolled steel structural members to which are secured at closely spaced intervals along their lengths, said corrugated material; each rolled steel structural member being secured to the ground at its forward leading end, and being secured to the ground at a single point behind said leading end through a portion of said supporting structure comprising at least one sloping shoring strut fastened to the rolled steel member, whereby the pressure of the blast is transmitted uniformly to the ground at two spaced points per each rolled steel structural member, that is, one point at the front of each rolled steel structural member and the other point at the rear of each sloping shoring strut, and said horizontal arrangement of the valleys of the corrugations produces a vortex generator effect which eliminates vibration.

3,126,177
IGNITION SYSTEM FOR ROCKET ENGINE
Leonard Markowitz, Trevose, Pa., assignor to Thiokol Chemical Corporation, Bristol, Pa., a corporation of Delaware
Filed Apr. 16, 1962, Ser. No. 187,534
11 Claims. (Cl. 244—122)

1. Ejecting apparatus comprising a frame from which an object is to be ejected, a catapult casing on the frame, a rocket engine in the catapult casing and connected to the object to be ejected, said rocket engine containing a propellant and having a nozzle at one end and a pressure responsive ignition means therein, a removable closure in the nozzle which together with the end of the rocket engine constitutes a piston in the catapult casing, locking means in the casing for locking engagement directly with the rocket engine, means connecting the removable nozzle closure and the casing for stripping the closure from the nozzle upon movement of the rocket engine a predetermined distance along the catapult casing, a gas generator for producing gas under pressure, means connected to said gas generator to deliver gas to the locking means and catapult casing at the exterior of the rocket engine to operate

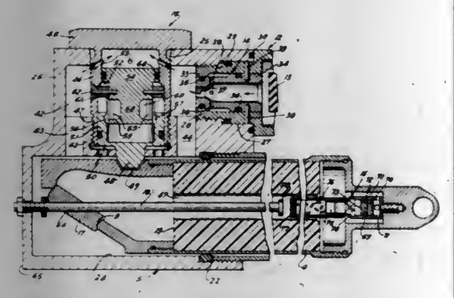
the locking means and propel the rocket engine along the catapult casing until the closure is stripped, said gas entering the interior of the rocket engine through the nozzle when the closure is stripped therefrom to produce a pressure therein and initiate the pressure responsive ignition means in the rocket engine, and means responsive to the pressure in the gas generator for controlling the generation of gas.



3,126,178
CATAPULT LOCKING MECHANISM FOR EJECTION SEAT

Ralph H. Hamilton, Sr., Cornwell Heights, and Martin A. Rubinstein, Morrisville, Pa., assignors to Thiokol Chemical Corporation, Bristol, Pa., a corporation of Delaware

Filed Apr. 16, 1962, Ser. No. 187,881
6 Claims. (Cl. 244—122)

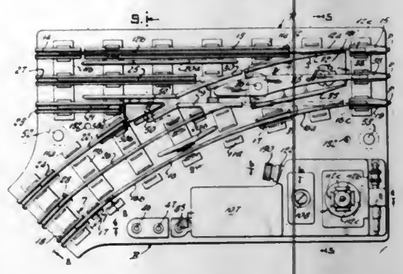


1. In a catapult for ejecting an object, a frame, a catapult casing attached to the frame, said object to be ejected extending at least in part into the casing and having a locking notch therein, a chamber in the casing having an open side adjacent the object to be ejected, a cylindrical wall in said chamber having an open end adjacent said object to the ejected, a piston in cylindrical wall and having a bolt projecting into the locking notch in the object to be released and ejected, locking mechanism in said cylinder wall and including a frangible element acting on the piston to hold the bolt in locking position, a gas generator for generating gas at high pressure and connected to deliver said gas to said chamber, and means in said cylindrical wall connected to deliver said high pressure gas to the locking mechanism to break the frangible element and thereby release the locking mechanism, and said gas in said chamber acting on and operating the piston to withdraw the bolt and passing through the open side of the chamber into said casing to act on the object and eject it from the frame.

3,126,179
TOY RAILROAD TRACK SWITCHES

Joseph L. Bonanno, South Orange, N.J., assignor, by mesne assignments, to Walter E. Heller & Company, Inc., New York, N.Y., a corporation of Delaware

Filed Sept. 17, 1958, Ser. No. 761,618
10 Claims. (Cl. 246—231)



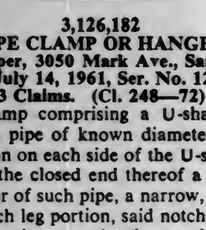
1. A toy railroad track switch section for guiding a toy electric train having trucks with conductively connected wheels and a current collector, from a common track, to and from a main line track or a branch line track and supplying power to the train, said section having an insulating base, a conductive shiftable switch tongue above the base, a metal bottom plate secured to the insulating base, the insulating base having a relatively long, straight, main line rib extending past the tongue, a relatively long curved branch line rib extending past the tongue, relatively short converging straight and curved, main and branch line ribs parallel with the first ribs, relatively short conductive wheel bearing rail elements mounted about the ends of the long ribs and about the short ribs and having prongs which pass through the base and are secured to the metal plate, relatively long conductive rail elements mounted about the long ribs and secured to the insulating base to form an insulated length of conductive wheel bearing rail in each line, a length of the long ribs opposite the switch tongue being bare, the base having curved and straight ribs midway between the ribs which carry the wheel bearing elements, conducting power rails mounted about the said midway rails, a conducting frog secured to the insulating base, a V-shaped plate under the insulating base and connected to the power rails and the frog, a conducting frog point carried on top of the insulating base in a position to provide wheel supporting surfaces beyond the near ends of the short converging wheel bearing rails of the main and branch lines, means securing the conducting frog in place and conductively connecting it to the bottom plate, the insulated base also having short straight and curved ribs aligned with the frog point and switch tongue and adapted to guide the wheels.

3,126,180
FISH ROD HOLDER AND FOOT TRIP

Dominick A. Mandolare, 2 Lawnview Ave., Fort Edward, N.Y.

Filed Dec. 4, 1962, Ser. No. 242,165
9 Claims. (Cl. 248—41)

1. A fish rod holder and foot trip device removably mountable in a boat, said fish rod holder and foot trip device comprising a pedal bracket, a foot pedal, a boat clamp, a plate and a fish rod holder; said pedal bracket having upstanding sides, a transversely disposed shaft mounted by said upstanding sides, said foot pedal being carried by said shaft, said foot pedal carrying L-shaped stops, said stops having rubber sleeves, said stops as arranged and disposed relative to said upstanding sides being adapted to limit the degree of backward and forward movement of said foot pedal upon cushioned abutment of rubber sleeves of said stops with said upstanding sides, said boat clamp being secured to one of said upstanding sides, said boat clamp including a clamp screw, said boat clamp being adapted to be secured to a side of said boat by engagement therewith of said clamp screw, said plate carrying said fish rod holder, said fish rod holder being adapted to removably receive and retain therein a fish rod, an arcuate slot formed in said foot pedal, securing means to secure said plate to said foot pedal, said plate being adapted to be angularly disposed relative to said foot pedal by said arcuate slot and said securing means.



3,126,181
SELF-LOCKING GUTTER HANGER BRACKET

Paul Steeg, 835 Broad, Cuyahoga Falls, Ohio

Filed July 18, 1961, Ser. No. 124,897
3 Claims. (Cl. 248—48.2)

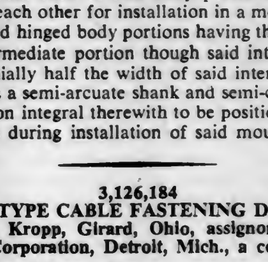
1. A self-locking hanger bracket for a gutter having front and back walls with an overhanging lip projecting inwardly from said front wall and terminating in a folded-under return flange, comprising duo-sidewall members for extending between and abutting said walls, a bridging portion between said members, and a notch within said bridging portion and said duo-sidewall members forming an inwardly projecting tongue adapted to interlock under said return flange by tilting the rear end of the bracket upwardly.

3,126,182
PIPE CLAMP OR HANGER

George F. Stamper, 3050 Mark Ave., Santa Clara, Calif.

Filed July 14, 1961, Ser. No. 124,081
3 Claims. (Cl. 248—72)

1. A pipe clamp comprising a U-shaped body of a size to receive a pipe of known diameter freely therein, a wide leg portion on each side of the U-shaped body and extending from the closed end thereof a distance greater than the diameter of such pipe, a narrow, elongated notch in an edge of each leg portion, said notches being similar, and laterally opposite, to each other, each of said notches being of a width to receive, with slight clearance, a flange of known thickness edgewise therein, said notches being of a depth to receive a substantial width of such flange therein, and spaced from the closed end of the U-shaped body by substantially the diameter of such pipe, and a set screw threadedly inserted in the closed end of said U-shaped body with the axis of said screw on a longitudinal mid-plane of the U-shaped body, the upper and lower edges of each of said notches being arcuately curved and their centers of curvature offset longitudinal of the body from the axis of the set screw, whereby, upon screwing in the set screw against said pipe fitted into the closed end of said U-shaped body, and with such flange inserted fully into said notches, the clamp is rocked to thereby cause both edges of both notches to grip such inserted flange therebetween.



3,126,183
MOUNTING MEANS

Joseph H. Hopkins, Warren, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Oct. 16, 1961, Ser. No. 145,303
3 Claims. (Cl. 248—73)

1. A one-piece mounting means of moldable plastic material, comprising, a pair of opposite though complementary body portions initially extending in opposite directions, an intermediate portion integral between said body portions, a pair of reduced thickness hinges integrally to join said intermediate portion to said body portions, complementary interlock means integral with each of said body portions and engageable with each other to maintain embracing positioning of the complementary body portions and intermediate portion around longitudinally extending articles such as conduits, conductors and the like, and barbed semi-arcuate lug means projecting from each of said body portions positionable adjacent to each other for installation in a mounting panel aperture, said hinged body portions having the same width as said intermediate portion though said interlock means has substantially half the width of said intermediate portion and has a semi-arcuate shank and semi-conical shoulder projection integral therewith to be positioned laterally face to face during installation of said mounting means.

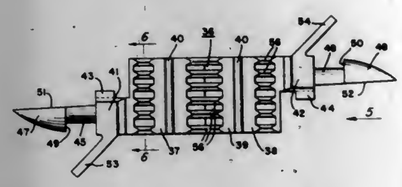
3,126,184
CLIP TYPE CABLE FASTENING DEVICE

Richard G. Kropp, Girard, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Oct. 16, 1961, Ser. No. 145,396
5 Claims. (Cl. 248—73)

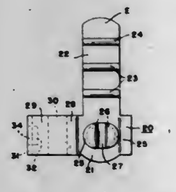
1. For use in installation of motor vehicle conduits, conductors and the like adjacent to an apertured panel, a clip means, comprising, a unitary body of moldable plastic material including a pair of opposite though complementary body portions initially extending in opposite

directions in open condition, an intermediate portion integral between said pair of body portions, a pair of reduced thickness transverse hinges integrally to join said intermediate portion to said pair of body portions, complementary interlock means integral only with each of said body portions and engageable with each other to maintain tightly a particular embracing positioning of the complementary body portions and intermediate portion around longitudinally extending conduits, conductors and the like, barbed semi-arcuate lug means projecting from each of said body portions positionable adjacent to



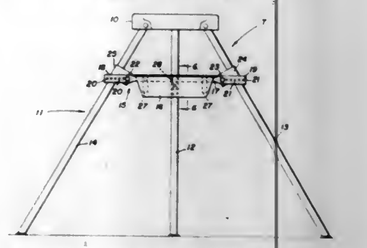
each other for installation in an apertured panel, arcuate gripping means provided along curved periphery of said pair of body portions as well as said intermediate portion for prevention of axial sliding of said clip means along the conduits, conductors and the like, and an angularly extending flange means of resilient insulating material integral with each of said pair of body portions, said flange means both enhancing engagement of said semi-arcuate lug means as installed in an apertured panel as well as facilitating application of force for engagement and disengagement of said interlock means integral with said body portions.

3,126,185
CABLE CLIP MEANS
Charles P. Christman, Warren, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 16, 1961, Ser. No. 145,358
6 Claims. (Cl. 248—74)



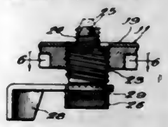
1. A wire clip means of moldable plastic material, comprising, a primary body portion recessed to have a longitudinally extending concave surface on one side to receive wiring substantially complementary thereto, a handling extension integral though located predominantly to one side of said primary body portion and also recessed to have a longitudinally extending concave surface in alignment with that of said primary body portion, a secondary body portion adapted to complement only said primary body portion and to form a passage therebetween, hinge means of reduced thickness of plastic material integrally interconnecting said primary and secondary body portions, a barbed lug means integral with said primary body portion in a location laterally remote from said secondary body portion and adapted to fit a mounting panel aperture, and latching means integrally extending from said body portions laterally thereof for interlock therebetween.

3,126,186
TRIPOD AND BRACKET MEANS THEREFOR
Eugene P. Halligan, Glen Ellyn, Ill., assignor, by mesne assignments, to Lectrolite Corporation, a corporation of Maryland
Filed Feb. 20, 1962, Ser. No. 174,445
5 Claims. (Cl. 248—122)



1. In a multi-legged support: a head member; support means including a pair of downwardly diverging legs supporting said head member; a hanger bar between said legs; a pivoted hook at each end of said hanger bar, each hook embracing one of the downwardly diverging legs; hanger means swingably engaging the bar for supporting thereon a device secured to said hanger means; and a stabilizing abutment member secured on the hanger bar, said abutment member including a downwardly extending arm providing a rear stabilizing abutment that cooperates with the hanger means to support the device on the bar in cantilever fashion; and means for adjusting the angle of said arm with respect to the ends of the hanger bar so that the arm may stabilize devices of different configurations at any desired angle.

3,126,187
CAMERA TIGHTENING ARRANGEMENT FOR TRIPODS
Paul C. Mooney, Northbrook, Ill., assignor to Quick-Set, Incorporated, a corporation of Illinois
Filed Apr. 28, 1961, Ser. No. 106,341
5 Claims. (Cl. 248—187)

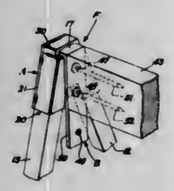


1. A device for tightly securing a camera to a supporting base plate, comprising: a manually actuated screw extending through a base plate and having threads for engaging a complementary threaded bore in a camera, said screw having a length to permit manual securing of the camera against the base plate, a bushing about the screw having internal threads threadably receiving said screw and an external thread threadably supporting said bushing in said base plate, said bushing comprising the sole support for said screw in said plate, said bushing external thread being of opposite hand and of greater pitch than said internal thread in said bushing for drawing the screw and camera toward said base plate when the bushing is turned in relation to said base plate, and means for manually turning said bushing relative to said base plate.

3,126,188
REMOVABLE SUPPORT LEG MOUNTING FITTINGS
Marion T. Dieas, 1092 Monroe St., Santa Clara, Calif.
Filed Oct. 23, 1961, Ser. No. 146,877
2 Claims. (Cl. 248—188)

1. A two part fitting for mounting a pair of support legs on an upright surface of any of a wide variety of objects, said fitting comprising

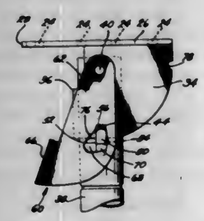
(*a*) a leg receiving member having a flat top surface and a pair of downwardly diverging leg receiving sockets therein, the center lines of said sockets defining a plane,
(*b*) a shallow, inverted U-shaped member secured transversely across the top of the leg receiving member to form therebetween a transverse socket extending substantially perpendicularly to the plane defined by the center lines of the leg receiving sockets,
(*c*) a stop member in each leg receiving socket to limit the insertion of a support leg therein,
(*d*) and an angle bracket of a cross sectional size and shape to fit snugly into the transverse socket in the leg receiving fitting,



(*e*) said angle bracket having two legs thereof disposed at right angles to each other,
(*f*) a first leg thereof being of a size and shape to fit snugly for a substantial distance into the transverse socket of the leg receiving fitting.
(*g*) the second leg thereof being of substantial length
(*h*) and means for securely connecting the second leg of the angle bracket firmly to an upright surface of such object,

whereby, when the second leg of the angle bracket is so connected to such object, with a pair of support legs inserted one in each of the leg sockets of the leg receiving fitting, and the first leg of the angle bracket is inserted firmly in the transverse socket in the leg receiving fitting, the support legs will be thereby firmly attached to such object.

3,126,189
LATCH
Auburn G. Van Syoc, Sr., Belding, Mich., assignor to Rem Corporation, Belding, Mich., a corporation of Michigan
Filed Mar. 1, 1962, Ser. No. 176,715
6 Claims. (Cl. 248—188)



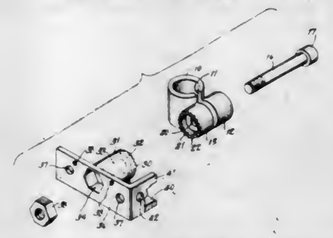
1. A latch mechanism for a collapsible furniture leg, comprising: hinge means for pivotally supporting said leg, resiliently biased latch means carried by said leg and engageable with a stationary keeper, and grip means hinged generally coaxially with said leg and having a wedge surface formed thereon, said wedge surface engaging said latch means to force said latch means out of said keeper when said grip is squeezed against said leg.

3,126,190
MAGNETIC LICENSE BRACKET
Roy M. Miller, Colorado Springs, Colo., assignor, by mesne assignments, to Emil Clark, El Paso County, Colo.
Filed June 19, 1961, Ser. No. 118,173
3 Claims. (Cl. 248—206)



1. A bracket for supporting and mounting a license plate to an automobile comprising in combination:
a channeled frame member;
a plurality of permanent magnets mounted to the said channeled frame member;
a pair of S-hooks depending from the two ends of the channeled frame member; and
an S-hook attached to the top edge portion of the channeled frame member at the mid-point thereof.

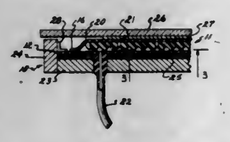
3,126,191
MOUNTING DEVICES
Lawrence T. Holden, Southern Blvd., Chatham, N.J.
Filed Jan. 19, 1960, Ser. No. 3,460
12 Claims. (Cl. 248—286)



1. A mounting device comprising a junction unit, a support unit, and a fastening unit comprising a bolt, said junction unit and said support unit each comprising a support element having a configuration enabling it to removably connect the unit of which it forms a part to another object, and each comprising a tubularly-shaped connector element fixedly connected to said support element thereof and having a bolt receiving bore extending therethrough, said connector element of each of said junction and support units having at one end thereof a rim which encircles said bolt extending through such bore and which has formed thereon a plurality of longitudinally extending identical locking members of substantial length engaging in interlocking relation with the plurality of locking members on the other connector element to lock said engaged connector elements and therefore said junction and support units in given fixed relation until said locking members are longitudinally disengaged, the support element of at least one of said junction and support units including means to enclosed an object and for forming on such object a tubularly-shaped, longitudinally split clamp portion, and the other support element including a plate having an object supporting surface and being provided with means to enable another object to be secured to said supporting surface, the connector element of said one unit having said split clamp portion bisected to form a pair of aligned tubularly-shaped portions having a common longitudinal axis disposed at right angles to the longitudinal axis of said clamp portion, said connector element portions being connected to the split edges

of said clamp portion and said connector portion on which said locking elements are provided having an axial length greater than one half the cross-sectional dimension of said clamp portion in the direction of the axis of such connector portion, said aligned connector element portions having substantially similar outside diameters and the longitudinal dimension of said clamp portion being substantially greater than the length of one of said diameters, said connector element portions being integrally connected to the split edges of said clamp portion and spaced from one end edge of said clamp portion, and the combined length of one of said diameters and width of the space between said connector element portions and said one end edge being equal to the width of said plate in said other support element so that said one end edge of the clamp portion may be placed flush with a side edge of said plate to enable said junction and support elements through such edges to cooperate with a supporting surface in the support of an object, and said fastening unit comprising a bolt extended through both said connector elements and the latter being relatively movable angularly on said bolt, said bolt having a part engaged with one of said connector elements and having a part engageable with the other of said connector elements, and one of said bolt parts being adjustable to cause said bolt simultaneously to lock the locking members of said connector elements together in interlocked relation, thereby fixing the position of one of such connector elements relative to the other, and to reduce the width of the split in said clamp portion, thereby causing said clamp portion to securely grip a bar on which it may be mounted, whereby said bolt constituting said fastening unit both locks said junction and support units together and secures such latter units to the bar.

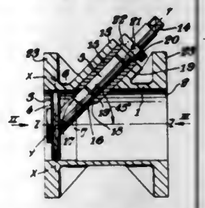
3,126,192
VACUUM HOLDER
Harold M. Stein, Troy, Ohio, assignor to Clary Corporation, San Gabriel, Calif., a corporation of California
Filed Nov. 13, 1962, Ser. No. 236,865
5 Claims. (Cl. 248—362)



5. A vacuum holder comprising an envelope having two side members, a portion of one of said members having a plurality of pyramidal projections on the inside surface thereof, said projections engaging the inside surface of the other of said members, said projections forming intersecting air channels therebetween, said one member having an outside surface against which a sheet or the like is to be held, openings in said one member connecting said outside surface thereof with said air channels, said portion of said one member being of sufficient strength to resist collapsing of said one member upon conveying air from between said members, and means for conveying air from between said members, at least said other side member being flexible.

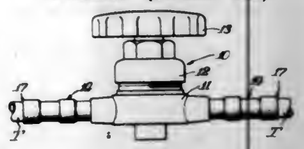
3,126,193
DISC VALVES
Lionel George Atherton, deceased, late of Ranmore, Dorking, Surrey, England, by Julia Cecilia Atherton, executrix, Ranmore, Dorking, Surrey, England
Filed Nov. 13, 1961, Ser. No. 152,099
1 Claim. (Cl. 251—88)

A valve device comprising a body having a cylindrical passageway for fluid, a valve disc within the passageway, said disc being coupled to an operating spindle mounted to rotate in the body with its axis set at an angle inclined to the disc face, whereby the periphery of the disc wipes along the wall of the passageway as the disc is rotated by the spindle, the inner end of the operating spindle being bevelled to correspond with the angle between the face of the disc and spindle axis, the disc abutting the bevel and being coupled to the spindle by a fix-



ing screw formed with a bearing ring, said screw passing through a center hole in the disc having a diameter sufficient to permit rotation of the disc on said bearing ring the latter being longer than said center hole, said screw then passing into a tapping in the said bevelled end to secure the disc face against the bevel, said fixing screw providing a pivot about which the valve disc can rotate about its center axis.

3,126,194
VALVE WITH ANTI-TORREFYING COUPLING MEANS
George E. Franck, Morton Grove, Ill., assignor to Imperial-Eastman Corporation, a corporation of Illinois
Filed Sept. 15, 1960, Ser. No. 56,299
4 Claims. (Cl. 251—148)

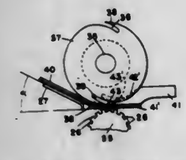


1. A valve for controlling fluid flow through a conduit, comprising: a body member defining a fluid flow passage and formed of a material having high thermal conductivity; a valve movable in said flow passage for controlling fluid flow therethrough, said valve including a portion formed of a material susceptible to damage by heat such as generated during a fluxless soldered connection of the valve; a tubular element formed of a material having a thermal conductivity substantially lower than that of the body member and having an inner end sealingly connected to the body member to define an outward extension of said flow passage, said tubular element further having an outer end; and means on said outer end of said tubular element arranged for fluxless soldered connection thereof to a conduit, the spacing of said outer end of the tubular element from the inner end being preselected with respect to the thermal conductivity of the tubular element to preclude passage from said connection means during a soldered connection thereof to a conduit of sufficient heat to said valve portion to damage said valve portion.

3,126,195
STAPLE REMOVING DEVICE
Clarence R. Taylor, Rochester, N.Y.
(28 Woodside Drive, Penfield, N.Y.)
Filed Feb. 6, 1961, Ser. No. 87,175
13 Claims. (Cl. 254—28)

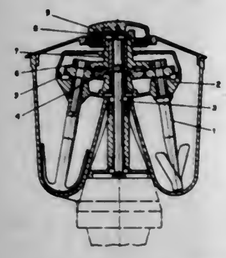
1. In a device for removing staples from stapled papers fed therein, the combination comprising:
a rotatably mounted staple-removing member having a claw;

means for rotatably driving said staple-removing member;
a fixed member having an upper surface intersecting the path of rotation of said claw of said staple-removing member; and



means for urging stapled papers fed into said device against said members so that said claw upon rotation of said staple-removing member is moved underneath a staple of said stapled papers and urges said staple slidably along said upper surface for removing said staple from said stapled papers.

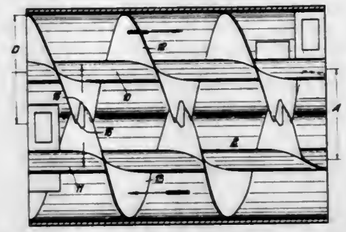
3,126,196
STIRRER FOR HOUSEHOLD APPLIANCE
Rudolf Staeger, Alsterdorferstrasse 155, Hamburg 39, Germany
Filed Apr. 4, 1961, Ser. No. 100,713
Claims priority, application Germany June 15, 1960
7 Claims. (Cl. 259—102)



1. A device adapted for stirring materials of different consistencies, the device comprising a vessel, a drive shaft in said vessel adapted for being driven in rotation, a cross member mounted around said drive shaft, a stirrer including a shaft rotatably supported in said cross member, a pair of gears rigidly supported on said shaft of said stirrer in coaxial arrangement, a drive gear rigid with said drive shaft and in meshing engagement with one of the gears on the shaft of the stirrer for driving said one gear and the stirrer therewith, a further gear loosely supported on said drive shaft and in meshing engagement with the other of the gears on the shaft of the stirrer and braking means operatively associated with the further gear for exerting a force thereon to control rotation thereof and thereby control rotation of said stirrer.

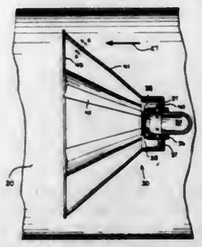
3,126,197
TRANSPORT MIXER FOR CONCRETE AND OTHER BUILDING MATERIAL
Gisela H. Maurer and Maximilian Brandmeier, both of Hannover, and Gerhard Kurt Lichtner, Berlin-Spandau, Germany, assignors to Marg Maschinenbau G.m.b.H., Hannover, Germany
Filed Dec. 30, 1960, Ser. No. 79,867
Claims priority, application Germany Dec. 30, 1959
10 Claims. Cl. 259—161)

1. In a transport mixer for concrete and other building material, a mixing trough having an open upper and a rear end, an outlet closing device at said rear end, two adjacent parallel shafts driven at the same speed and extending in a longitudinal direction inside said trough, a worm screw secured to each of said shafts, said worm screws having the same diameter and the threads thereof having over the major portion of their length the same pitch of less than 45° in the same direction, the distance between the axes of the two shafts being less than the to-



tal outer semidiameters of the two worm screws, each of said worm screws being provided at its periphery with incisions which taper towards the shaft, screw sections being left between said incisions, said worm screws engaging each other with said incisions when the said shafts are rotated in opposite directions.

3,126,198
HEATING DEVICE
Walter G. Wise, 230 W. Bakemeyer St., Indianapolis, Ind.
Filed Mar. 3, 1961, Ser. No. 93,156
4 Claims. (Cl. 263—19)

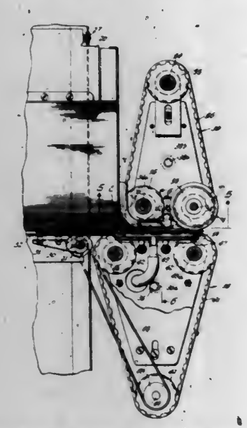


1. A heating device comprising a cylindrical conduit, a power operated fan mounted in said conduit for moving air linearly therealong, fuel-air mixture supply duct means mounted centrally of said conduit, a cup-shaped shield for said duct means, said shield fixed coaxially to and surrounding said duct means and having its concavity facing downstream and receiving said duct means, a plurality of vanes secured to the free end of said cup-shaped shield and extending with a radial component and a downstream component relative to said duct means, said duct means being provided with ports the axes of which are directed at the downstream surface of respective ones of said vanes, each of said vanes having a greater lateral dimension at its distal end than at its proximal end, the area between said vanes being greater than the area blocked by said vanes.

3,126,199
DOCUMENT FEEDING APPARATUS
Stanley Rosoff, Bridgeport, Conn., assignor to Pitney-Bowes, Inc., Stamford, Conn., a corporation of Delaware
Filed Oct. 5, 1960, Ser. No. 60,623
3 Claims. (Cl. 271—12)

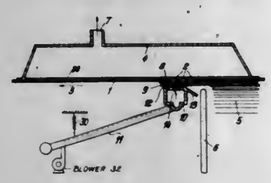
1. An apparatus for feeding documents forwardly along a feed path in one-by-one succession from a stack; said apparatus comprising: an advancing member providing a first endless peripheral friction surface having a portion thereof disposed at a location to one side of and contiguous

with said feed path; means operatively connected to drive said first endless peripheral surface of the advancing member about a closed path in the direction to move forwardly at said location; a reversely-acting member providing a second endless peripheral friction surface having a portion thereof disposed at a location to the opposite side of said feed path and spaced from said first-mentioned portion a distance greater than twice the thickness of the documents to be fed; means operatively connected to drive said second endless peripheral surface of said reversely-acting member about a closed path in the direction to move rearwardly at said location; means providing



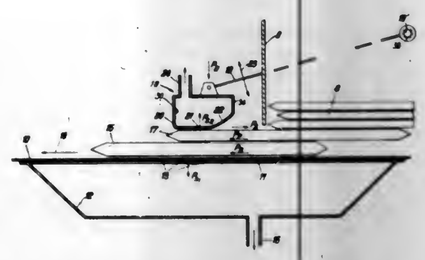
periodic forceful attachment of said first peripheral surface to the respective foremost document of the stack to advance the respective foremost document forwardly along said feed path in contact with said first peripheral surface; and continuously operable vacuum means providing a vacuum port exposed to and facing said feed path from said opposite side of the feed path at a distance from said first endless peripheral surface greater than said first-mentioned distance to urge, into frictional engagement with said second peripheral frictional surface, any document overlapping a respective document being forwardly advanced in contact with said first peripheral surface.

3,126,200
SEPARATING DEVICE
Karl Rehm, Konstanz (Bodensee), Germany, assignor to Telefunken Patentverwertungs—G.m.b.H., Ulm (Danube), Germany
Filed July 26, 1961, Ser. No. 127,061
Claims priority, application Germany July 30, 1960
19 Claims. (Cl. 271—26)



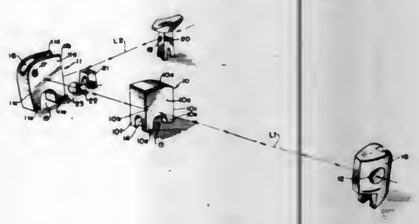
1. A device for removing the mutual adhesive effect of shipments drawn tightly to one another in a suction belt separating unit for flat material to be conveyed, especially mail shipments, comprising at least one yieldably supported shoe facing and slightly spaced from a suction belt, the shoe surface facing the shipments defining at least one port provided with a gas at superatmospheric pressure so that shipments adhering to one another or drawn tightly to one another are lifted from one another by the action of the outflowing gas.

3,126,201
STRIPPING DEVICE
Karl Rehm, Konstanz (Bodensee), Germany, assignor to Telefunken Patentverwertungs—G.m.b.H., Ulm (Danube), Germany
Filed July 10, 1961, Ser. No. 123,000
Claims priority, application Germany July 14, 1960
8 Claims. (Cl. 271—32)



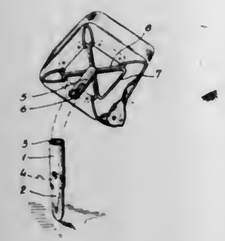
1. A device for assuring that flat shipments are separated from each other, especially mail shipments or the like, comprising an endless conveying device carrying the shipments by adhesion; at least one yieldably supported stripping means permanently urged against the conveying side of the conveying device by a relatively small displacing force, and having on its active surface facing this side of the conveying device at least one suction port in communication with a vacuum pressure chamber.

3,126,202
ILLUSIONS
Oliver O'Connor Barrett, 4205 Washington Road, West Palm Beach, Fla.
Filed Aug. 9, 1962, Ser. No. 215,896
3 Claims. (Cl. 272—8)



1. An optical illusion which comprises a plurality of fixedly positioned elements supported in spaced relationship at distances from one another and each formed to define an aperture through which a line of sight passes, the lines of sight through the apertures lying at an angle to one another, and a plurality of means for producing images of recognizable objects, each image lying at a distance from a related element and being visible through the aperture in that element, and each such means including a group of components disposed at different distances along a line of sight from the aperture for that line, at least one component being common to at least two groups and having different faces visible when viewed along the lines of sight along which the components of the two groups are disposed.

3,126,203
BASEBALL BASE
Lucien Bourret, 1480 De l'Eglise St., Ville St.-Laurent, Quebec, Canada
Filed Dec. 22, 1961, Ser. No. 161,636
4 Claims. (Cl. 273—25)



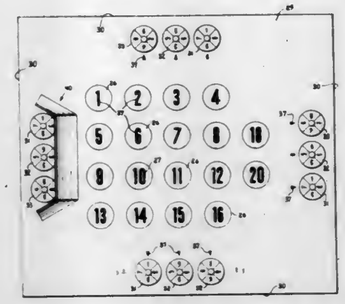
1. A baseball base comprising a cushion having a top, side faces and a bottom, a flexible envelope covering the top and side faces of said cushion, and extended by flaps partially covering the bottom of said cushion, a rigid quadrilateral frame disposed underneath said cushion and having its sides parallel to the side faces of said cushion but spaced inwardly and centrally of said cushion with respect to said side faces, said flaps of said envelope being folded around the sides of said rigid frame, means for retaining said flaps in folded position and means for anchoring said frame to the ground including a stem at right angles to the plane of said frame and protruding from the center of said frame and adapted to be set in the ground, and radial arms disposed within said frame and rigidly connecting one end of said stem with the four corners of said frame.

3,126,204
CUP AND BALL GAME APPARATUS
Terrence Devlin, 7760 Memorial, Detroit 28, Mich.
Filed Oct. 6, 1961, Ser. No. 143,409
5 Claims. (Cl. 273—98)



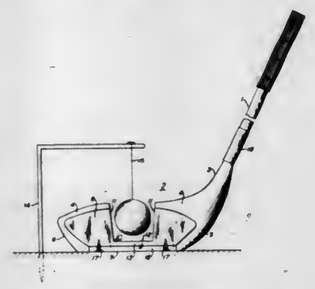
1. A cup and ball toy, comprising a receptacle having a sidewall and first and second open ends, said sidewall being formed with at least one opening, an elastic cord secured at one end to the receptacle sidewall at a location spaced around the sidewall from the opening, and having a ball secured to its other end, the sidewall opening being smaller than the open ends of the receptacle, and the ball being smaller in diameter than the sidewall opening, one end of the receptacle being smaller than the other end.

3,126,205
GAME BOARD WITH SHIELDED PLAYER STATIONS
Donald D. Jordan, 1321 N. Oxford St., Indianapolis 1, Ind.
Filed Apr. 27, 1960, Ser. No. 25,133
3 Claims. (Cl. 273—130)



3. A game structure comprising a playing board provided with a number of marked-off separate areas on the central portion thereof, each of said areas having one of a series of different numbers therein, a plurality of player stations on said board adjacent the edge thereof, a plurality of elements rotatably mounted at each of said stations, each of said elements carrying a plurality of radially arranged numbers, a plurality of indicators provided on said board for each of said elements whereby each of said elements may be rotated to indicate one of the numbers thereon, and a plurality of guards removably resting on said board, each of said guards being formed to shield all of the elements at a particular station from the view of players at other stations.

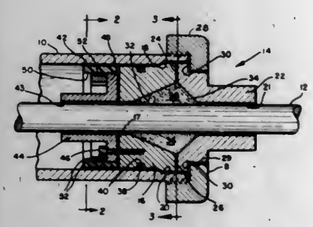
3,126,206
PRACTICE GOLF CLUB AND TETHERED BALL
Danial Joseph Sabia, 46 Mechanic St., New Rochelle, N.Y., assignor of twenty-five percent to Leo Isacson and twenty-five percent to Richard A. Levy
Filed Feb. 20, 1962, Ser. No. 174,431
4 Claims. (Cl. 273—186),



1. A golf club adapted to indicate the quality of a practice swing comprising; in combination; a shaft; a club head; said club head including a substantially planar face surface, a body which extends rearwardly therefrom to an arcuate rear surface, a top surface, and a substantially planar bottom surface positioned with respect to said shaft for striking engagement with the ground during said practice swing; and means for coupling said shaft to said club head such that the axis of said shaft both lies in a plane substantially parallel to the plane of said face surface and is angular to the plane of said bottom

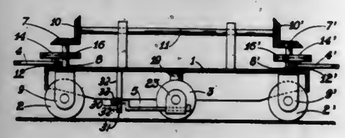
surface; said club head integrally including a depression in said top surface thereof in the form of a straight, hollow, open-ended channel commencing at said face surface and extending rearwardly therefrom through said rear surface; said depression descending downward from said top surface toward said bottom surface such that the depth of said channel is substantially coextensive with the vertical dimension of said club head, and only a thin bridge exists between the bottom of said channel and said bottom surface; the width of said channel throughout its entire length being of sufficient dimension to admit passage of a golf ball therethrough.

3,126,207
PACKING BLOCK
Fred S. Eikelberner, R.F.D. 1, Logansport, Ind.; Verna L. Eikelberner, sole heir of Fred S. Eikelberner, deceased
Filed Mar. 15, 1962, Ser. No. 179,997
2 Claims. (Cl. 277—64)



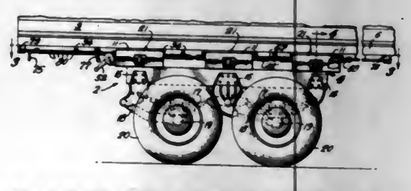
1. In a packing nut assembly, a sealing unit comprising:
a member having a hub portion with an annular skirt extending outwardly therefrom;
a resilient bushing having a portion snugly fitting over the periphery of said annular skirt;
another portion of said bushing extending around and being spaced from said hub;
a plurality of shoulders extending from said skirt into the space bounded by said another portion of said bushing and said hub with said shoulders being spaced from said bushing;
a plurality of leaf springs captured between said shoulders and bushing so that said springs are flexed and exert an outwardly expansive force on said bushing to provide a seal with a cylinder wherein said sealing unit is placed.

3,126,208
STEERING ARRANGEMENT FOR A TRUCK
Raymond Jean Marie Joseph de Voghel, Marcinelle, Belgium, assignor to S.A. Glaverbel, Brussels, Belgium, a company of Belgium
Filed Jan. 23, 1962, Ser. No. 168,144
Claims priority, application Belgium Jan. 25, 1961
15 Claims. (Cl. 280—47.11)



1. A truck adapted to be moved in all directions in a small area comprising a platform for supporting a load and having longitudinal side edges and end edges, a wheel set composed of three wheel units each comprising a wheel and a swivel fitting for such wheel connected to said platform for free rotatable movement of such unit about a vertical axis, said units being arranged relative to said platform so that such axes thereof define the points of an isosceles triangle, two of said wheel units being situated in spaced relation longitudinally of said platform near one of the longitudinal side edges thereof and defining the base of such triangle, and the third wheel unit being situated near the other longitudinal side edge of said platform so that it is at the apex of such triangle, steering means for said two longitudinally spaced wheel units including longitudinal means connected to the fittings of said two units and coupling said two units together for simultaneous, similar rotational movements about their vertical axes, and a hand steering member connected to the fitting of each of said two units so that when either of said steering members is operated both of said units are simultaneously rotated, and a third steering member connected to the fitting of said third wheel unit and operable to rotate such third wheel unit independently of said other two units.

3,126,209
MEANS FOR ADJUSTABLY INTERCONNECTING A VEHICLE RUNNING GEAR AND BODY
Robert A. Jewell and Charles B. Lemacks, Jr., Savannah, Ga.; said Jewell assignor to Great Dane Trailers, Inc., Savannah, Ga., a corporation of Georgia
Filed May 7, 1962, Ser. No. 192,664
12 Claims. (Cl. 280—81)

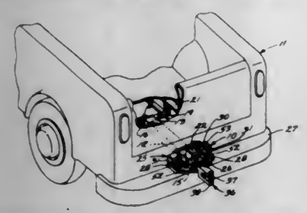


1. In a vehicle having a body and running gear, means mounting the running gear for adjustment longitudinally of the body to a plurality of preselected positions comprising, slide rails carried by the vehicle body and extending longitudinally of the body adjacent either side, slide members carried by the running gear upon which the slide rails are slidably supported, the body and running gear carrying companion means for locking the running gear to the body at each of the preselected positions including a retractable pin and a plurality of longitudinally spaced openings into which the pin can seat, means to retract the pin from the openings, releaseable means to hold the pin retracted including a movable trigger, preselector bars arranged in side by side relation with one bar being fixed and the other being slidable relative to the fixed bar, one bar having a plurality of recesses into which the trigger may seat to release the pin, and the other bar having means to occlude all recesses of the one bar except a selected recess to prevent seating of the trigger in any but the selected recess, the recesses in the said one bar being spaced from one another a distance equal to the spacing between the openings of the companion locking means, the preselector bars and trigger being mounted so that the trigger will move over the bars when the running gear is shifted relative to the body to drop into the selected recess to permit the pin to seat in a selected opening to lock the running gear to the body.

3,126,210
TRAILER HITCH
Wayland W. Hill, P.O. Box 168, Earlimart, Calif.
Filed Aug. 14, 1961, Ser. No. 131,219
4 Claims. (Cl. 280—478)

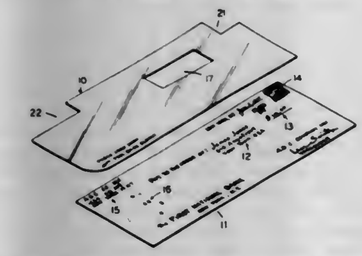
3. A vehicle drawbar for connection between draft and trailing vehicles comprising an elongated rectangular outer

sleeve member having opposite ends, one of said ends being closed by an angle strap pivotally mounting said outer sleeve member on the draft vehicle for transverse horizontal swinging movement of the opposite end thereof; an elongated drawbar having an outer end adapted for connection to the trailing vehicle slidably mounted in said opposite end of the sleeve member; a bracket mounted on the draft vehicle defining an elongated transverse opening through which said opposite end of the outer sleeve member extends whereby the bracket limits said transverse swinging movement, said bracket providing therein a centrally disposed vertical bore, said outer sleeve member providing therein aligned vertical bores adjacent to said open end, said drawbar having therein a vertically disposed bore adjacent to said outer end, said drawbar having an elongated longitudinally disposed slot having opposite ends spaced from opposite ends of the drawbar; a bolt mounted intermediate the ends of the outer sleeve member and extended through said slot in the drawbar for



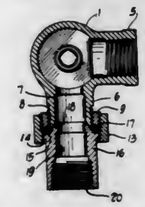
limiting longitudinally sliding of the drawbar within the outer sleeve member, said bolt abutting the end of the slot nearest said bore in the drawbar whereby said bore is aligned with the bores in the outer sleeve member; a substantially U-shaped member mounted on said outer sleeve member and extended upwardly therefrom in adjacent straddling relation to said bores in the outer sleeve member; a lock pin vertically slidably mounted in said U-shaped member in alignment with said bores in the outer sleeve box member; and resilient means mounted in the U-shaped member urging the pin downwardly through said bores in the outer sleeve member in sliding engagement with said drawbar, said pin being automatically engageable in said bore in the drawbar when the end of the slot therein nearest the bore abuts said bolt in the outer sleeve member, and said pin slidably engaging said bracket during said swinging movement of the outer sleeve member whereby the pin is automatically engageable in said bore in the bracket when the outer sleeve member is disposed centrally of the bracket.

3,126,211
INFORMATION TRANSMISSION
Harvey Hieken, University City, Mo., and Melvyn M. Marcus, 8321 Kingsbury Blvd., Clayton 5, Mo.; said Hieken assignor to said Marcus
Filed Apr. 14, 1959, Ser. No. 806,277
1 Claim. (Cl. 283—6)



A check assembly adapted to be mailed as a unit comprising a top sheet strippably secured to an underlying rectangular check comprised of a relatively stiff sheet material, said check containing a centrally located address section and a return address section located at the upper left hand corner of the check, said top sheet being comprised of a relatively thin lightweight opaque sheet material and being of a rectangular shape generally congruent with the check and being strippably secured at its marginal edges upon the check in registry therewith, said top sheet being further provided with a centrally located cutout section in registry with the aforementioned address section of the check and a cutout corner at the upper left hand corner of the top sheet in registry with the aforementioned return address section of the check whereby said address and return address of the check may be viewed while maintaining the remainder of the check underlying the top sheet obscured until the top sheet is stripped therefrom and said top sheet having a rounded lower corner to expose a bottom corner of the check to facilitate the stripping of the top sheet from the check.

3,126,212
COMBINATION GROUND JOINT AND SWEAT CONNECTION
Stephen A. Young, Flora, Ind.
Filed Nov. 9, 1960, Ser. No. 68,292
1 Claim. (Cl. 285—12)

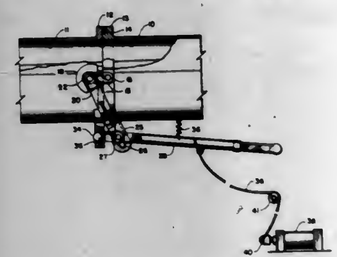


In a plumbing fixture selectively fuseably and separably connectable to a supply conduit, the combination comprising, a conduit, said conduit including an externally tapered pipe threaded portion having a bore therethrough, an internally counterbored portion of a sufficient size to accommodate a sweat connection and an inwardly beveled mouth portion, a ground joint including a coupling having a substantially tubular body including an internally threaded portion at one end thereof, the opposite end terminating in a face beveled complementary to said mouth, a bore and a counterbore in said coupling, said counterbore having sufficient size to accommodate a sweat connection with a pipe of a capacity substantially equal to the capacity of a pipe threadedly connected to said externally threaded portion, means selectively interconnecting fuseably and separably said ground joint coupling and said conduit including an internally and externally threaded adapter selectively connectable with said externally tapered pipe threaded portion of said conduit, a ground joint nut selectively connectable with said adapter and a sweat joint fitting in the form of a counterbore of sufficient size to accommodate a sweat connection with a pipe of a capacity substantially equal to the capacity of a pipe connected to said internally threaded portion whereby said coupling may be selectively fuseably and separably attached to said conduit.

3,126,213
SELF-ADJUSTING, QUICK DISCONNECT CONNECTOR
Donald A. Lewis, Littleton, Colo., assignor to Martin-Marietta Corporation, a corporation of Maryland
Filed Aug. 8, 1961, Ser. No. 130,011
4 Claims. (Cl. 285—61)

1. An apparatus for detachably coupling first and second tubular members having mating end faces compris-

ing first and second mounting pins each rigidly attached externally to said first member near the said end face thereof and extending in a generally radial direction from substantially diametrically opposed points, first and second link connections each having one end thereof rotatably mounted on said first and second mounting pins respectively, a yoke arrangement including first and second connecting arms and a shaft all converging at a common juncture, first and second means for coupling each of said connecting arms to the other end of a respective one of said link connections, a clevis rigidly mounted in a radial direction externally to said first member in a generally quadrant location with respect to said mounting pins and having a groove therein for slidably retaining said common juncture for allowing movement thereof only in a direction that will impart rotational motion to said link connections, first and second generally C-shaped camming devices mounted externally on said second tubular member near the said end face thereof and at generally diametrically opposed locations, the planes of said C-shaped members being generally parallel



with respect to one another and with respect to the axis of said second member, first and second roller means coupled to said first and second link connections respectively, the grooves defined by said first and second C-shaped members being designed to receive said first and second rollers respectively, the grooves in said C-shaped members each having a first shoulder for coacting with said roller means for imparting a closing force to said members whenever said link connections are forced in a direction tending to cause rotation thereof generally away from said clevis, the grooves in said C-shaped members each having a second shoulder for coacting with said roller means for imparting a break-away force to said members whenever said link connection rotates in a direction generally toward said clevis, and an actuator pivotably mounted so as to be independent of motion of said first member at the pivot point, said actuator being connected to said shaft for selectably positioning said common juncture within said groove of said clevis thereby selectably supplying forces between said roller means and said C-shaped members.

3,126,214
DIVERGENT METAL THREADED AND SHRUNK FIT PIPE COUPLING

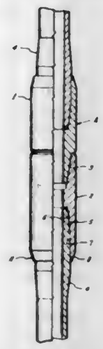
Lip Fou Wong, Henrico County, and Louis E. Pennington, Chesterfield County, Va., and Elvin G. Boice and Elmer J. Volmert, Houston, Tex.; said Wong and said Pennington assignors to Reynolds Metals Company, Richmond, Va., a corporation of Delaware, and said Boice and said Volmert assignors to Reed Roller Bit Company, Houston, Tex., a corporation of Texas

Filed May 16, 1960, Ser. No. 29,199
7 Claims. (Cl. 285—173)

1. A drill pipe threaded coupling comprising a lightweight per unit length non-ferrous alloy pipe member of a given wall thickness in the body having an end portion whose wall is thicker than said body portion,

external threads on said thickened end portion,

a circumferential land having a work-altered external surface on said thickened end portion between the threads and said body portion and extending to an area adjacent said external threads,



a ferrous metal tool joint member having an internal threaded portion in engagement with the external threads of said pipe member and an internal circumferential land adjacent the outer end of the said tool joint member and overlapping a portion of the work-altered section on said pipe member,

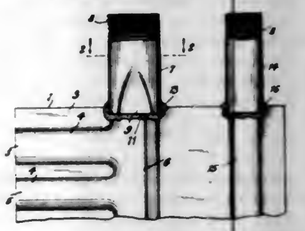
said work-altered portion extending toward the body beyond said tool joint land, the outside diameter of the said work-altered pipe land being slightly greater initially than the inside diameter of said tool joint land,

said pipe and tool joint member being secured together in such manner that hoop stress is developed between said lands.

3,126,215
COUPLINGS OR CONNECTORS FOR HEAT EXCHANGE PLATES

Walter Raskin, 922 Ave. B, Brooklyn, N.Y.

Filed Oct. 21, 1959, Ser. No. 847,713
1 Claim. (Cl. 285—176)



A heat exchanger device comprising in combination a pair of substantially flat heat exchanger plates facially attached together at a substantially flat peripheral margin, said plates including intermediate corrugations forming internal passages, at least one of said passages being polygonal in cross-section and extending to and opening at a marginal edge of said plates, said plate edges extending diametrically on opposite sides of said opening, a tubular fitting including a lower open end substantially conforming to the polygonal shape of said corrugation and extending over opposite sides thereof below said peripheral edge, said sleeve including diametrically opposed slots receiving the peripheral edge of said plates at said opposite sides of said opening and orienting and maintaining the sleeve thereat, and a weld extending about the lower edge of said sleeve below the peripheral edge exteriorly of said one passage and overlying said slots for integrating said sleeve with said plates without any physical distortion of said plates.

3,126,216
MEANS FOR ATTACHING A WIPER ARM TO A SHAFT

Fred A. Krohm, Hobart, Ind., assignor to The Anderson Company, a corporation of Indiana

Application May 31, 1955, Ser. No. 511,935, now Patent No. 2,964,775, dated Dec. 20, 1960, which is a division of application Ser. No. 329,366, Jan. 2, 1953, now Patent No. 2,860,364, dated Nov. 18, 1958. Divided and this application Mar. 21, 1960, Ser. No. 16,367
7 Claims. (Cl. 287—53)

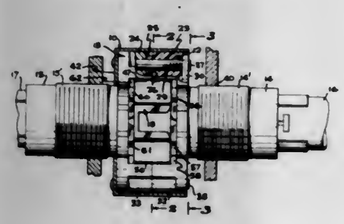


1. A head section of a windshield wiper arm, locking means carried by the section for detachably connecting the section to a shaft provided with abutment means, said locking means comprising a member movably supported on the section, a latch carried by the member for engaging the abutment means and a lever carried by the member for actuating the latch, and abutment means on the section, said lever being engageable with the abutment means on the section to maintain the locking means in a predetermined position.

3,126,217
LOW-FRICTION FRAME FOR LOCKING DEVICES

Fred J. Russell, 3800 Don Felipe Drive, Los Angeles, Calif., and George B. Solovieff, South Gate, Calif.; said Solovieff assignor to said Russell

Filed Jan. 2, 1962, Ser. No. 163,478
3 Claims. (Cl. 292—1)

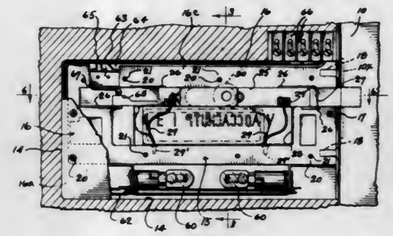


1. In a door lock device a frame assembly only including two complementary integrally molded and axially separable parts of non-metallic low friction material, said parts each having a portion of a chamber therein, said parts each comprising a transverse wall having on the interior a portion of said chamber complementary to the chamber portion of the other part, and means securing said parts together in interlocked, abutting relationship, a spindle rotatably mounted on each part, retractor means forming part of each spindle having a rotationally facing driving area, a retractor slide for operating a latch bolt, said slide having a transversely reciprocatable mounting in the chamber, a bearing sleeve of non-metallic low friction material extending outwardly from each part in alignment with each other and forming mountings for the respective spindles, and diametrically spaced parallel walls on each axially separable part forming walls of the chamber in sliding engagement with the retractor slide.

3,126,218
DOOR LATCH

Weldon R. Andrews, Seattle, Wash., assignor to Sealth Aero-Marine Co., Seattle, Wash., a corporation of Washington

Filed Mar. 13, 1961, Ser. No. 95,054
2 Claims. (Cl. 292—175)



1. The door latch mechanism of the character described comprising a housing, a bolt mounting frame retained in fixed position between opposite sidewalls of said housing, a bolt slidably mounted in frame between opposite sidewalls of said housing for endwise shifting between locking and unlocking positions, a spring mounting block secured to said bolt on one side thereof, said bolt and mounting block having aligned holes formed therethrough, said housing having a slot formed in a sidewall thereof with which said bolt opening registers in the endwise movement of the bolt, a bolt actuating knob having a mounting shank, a channel formed in said shank, said mounting block having longitudinal channels formed in opposite sides thereof, said channels intersecting said hole in said mounting block, a U-shaped spring clip movably mounted on said mounting block with the legs thereof positioned in said longitudinal channel whereby the leg portions of said clip intersecting said hole in the mounting block are removably seatable in the channel formed in said mounting shank.

3,126,219
COMBINATION DOOR CHECK AND LOCK

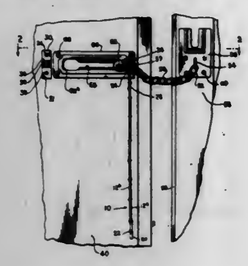
Valentine Engesser, 8805 171st St., Jamaica, N.Y., and Daniel R. Berness, 112—12 111th Ave., Ozone Park, N.Y.

Filed Oct. 9, 1962, Ser. No. 229,312
5 Claims. (Cl. 292—262)



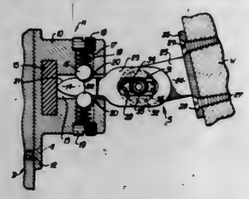
1. A door check and night latch, comprising a first plate having a first flat plate portion for securing the first plate to one side of a door, and a second flat plate portion extending at an angle to the first plate portion; a second plate having a third flat plate portion for securing the second plate to an inner edge of a door frame, and a fourth flat plate portion extending at an angle to the third plate portion, said second and fourth plate portions abutting each other when the door is closed, each of the second and fourth plate portions having a hole for receiving a locking bar, the holes of the second and fourth plate portions being in registration when the door is closed, and a locking bar for locking the plates together, said bar having a straight bar body with a hook at one end for engaging in the registering holes to lock the second and fourth plate portions together and having an arm at its other end disposed in a plane at right angles to the plane of the body of the bar.

3,126,220
EXTENSION ROD FOR DOOR CHAINS
Louis G. Callegari, 34—06 45th St., Long Island City, N.Y.
Filed Nov. 21, 1962, Ser. No. 239,214
10 Claims. (Cl. 292—264)



1. In an extension device for a short door chain, a jointed rod comprising a plurality of pivotally attached straight cylindrical links, said rod terminating at one end in a stop link having laterally extending stop elements aligned with each other on opposite sides of the stop link, said rod terminating at its other end in an anchor link engageable with a link in the door chain, and a key link in said rod connected between the anchor link and one of the cylindrical links for engaging on door anchor means.

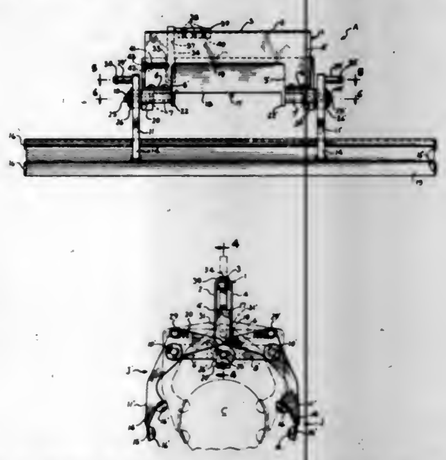
3,126,221
ADJUSTABLE DOOR STRIKE
John S. Grossman, 418 N. Bundy Drive, Los Angeles, Calif.
Filed Mar. 5, 1962, Ser. No. 177,338
9 Claims. (Cl. 292—341.18)



1. In a door strike adapted to be coupled to a companion holder: a fixed member adapted to be attached to a wall, or the like; a movable member having a dog portion adapted to be coupled to the holder; one of said members having an elongate slot; a lock washer between said members; and fastening means extending through said slot and washer and threaded to said other of said members to locate said movable member on said fixed member for angular and longitudinal adjustment relative thereto, said fastening means engaging said one member when tightened to clamp said members together in various relative angular and longitudinal positions with said members in locked engagement with said washer.

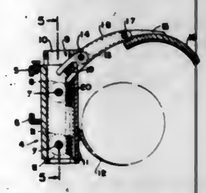
3,126,222
TONGS FOR CAN ENDS
Robert Stuart, Chicago, Ill., assignor to National Can Corporation, Chicago, Ill., a corporation of Delaware
Filed May 18, 1960, Ser. No. 30,014
4 Claims. (Cl. 294—16)

1. Tongs for handling a stack of can ends, said tongs comprising a handle-forming frame open on one side, two similar jaws pivotally mounted on each end of the frame and secured to can-end gripping portions spaced from and substantially parallel to said frame and of a length substantially in excess of the length of said frame, said jaws being movble to and from open and closed position, said can end gripping portions including at their ends cut-off plates that extend perpendicular to the pivot axes of the jaws and prevent endwise movement of the stack of can ends when the jaws are closed, spring means normally holding said jaws in one of said positions, jaw-operating means slidably mounted in said frame and having a part thereof projecting outwardly through said open



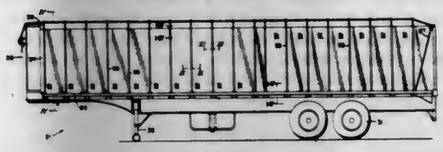
side to permit gripping thereof by the fingers of the hand of the operator when the latter's hand is placed over the frame, said jaw-operating means being operable to shift the jaws from said one position to the other position when said jaw operating means is shifted by the fingers of the operator in a direction retracting the jaw-operating means into the frame, and releasable latch means for locking the jaw-operating means and frame together when the jaws are in said other position.

3,126,223
ATTACHMENTS FOR LIFT TRUCKS
Edwin R. Kughler, 115–117 E. 129th St., New York, N.Y.
Filed Nov. 4, 1957, Ser. No. 694,211
3 Claims. (Cl. 294—103)



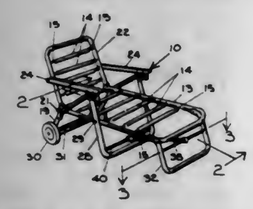
1. In an attachment for lift trucks and the like, the combination of a supporting member to be attached to the lifting member of the truck, a carriage, means mounting said carriage for movement relative to said supporting member, vertically spaced upper and lower load gripping parts mounted on said carriage, one of said parts being movable relative to said carriage, the lowermost portion of said lower gripping part being shaped to project under a load upon forward movement of said truck, said parts being relatively movable toward and from each other to grasp a load resting on said lower gripping part, and motion transmitting connections between the two parts and the supporting member, whereby an upward movement of the supporting member with respect to the lower load grasping part causes the upper load grasping part to move downwardly toward the first named grasping member.

3,126,224
CONVERTIBLE TRAILER
Nathan A. Carter, Jr., and Roy S. Johnson, Memphis, Tenn., assignors to Arrow Equipment Company, Inc., Memphis, Tenn., a corporation of Tennessee
Filed Jan. 22, 1962, Ser. No. 167,814
5 Claims. (Cl. 296—28)



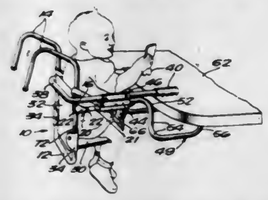
1. In a trailer structure convertible to and from platform condition, from and to enclosed condition, a platform trailer bed having a peripheral frame, a plurality of spaced apart, post receiving pockets rigidly secured to said frame and being upwardly open, each said pocket adjacent its lower end including an inwardly extending seat flange disposed below the upper level of said bed, said pockets being disposed so that pairs of said pockets on opposite sides of said frame are transversely substantially alined; a plurality of posts in enclosed condition of said trailer removably seated in said pockets and on said seats, said posts being of substantially H-shape in cross section and including thereby a pair of laterally open vertical grooves extending substantially from end to end of said posts, panel means having their lateral edges removably mounted in and retained by said grooves; support brackets secured to said frame spanning between said pockets adjacent the upper level of said bed, the lower edges of said panel means resting in and supported by said brackets; said posts outwardly of said grooves including a hollow leg, a plug fitted into the upper end of each said hollow leg, said plugs having a socket, a plurality of tarpaulin supporting bows having opposite, reduced downwardly extending ends fitted into said sockets, said bows respectively spanning from side to side of said bed and engaging the sockets of transversely alined pairs of posts; means enclosing said bed fore and aft, ridge cable means secured to said fore and aft, ridge cable means secured to said fore and aft enclosure means, each said bow including a central substantially V-shaped portion, said cable extending longitudinally of said trailer through said V-shaped portions.

3,126,225
CHAISE LOUNGE
Victor Reiter, 1275 Mariola Court, Coral Gables, Fla., and Sam Richman, 7517 Buccaneer Ave., Treasure Island, Miami Beach, Fla.
Filed Nov. 15, 1962, Ser. No. 238,330
1 Claim. (Cl. 297—28)



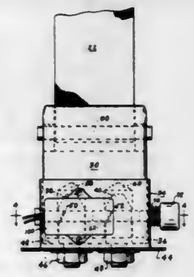
A collapsible chaise lounge comprising a seat portion, a back rest portion, pivot means pivotally securing a lower end of said back rest portion to one end of said seat portion, a pair of arm rests pivotally mounted at one end to said back rest portion above said lower end, a pair of rear leg members, a pair of links, second pivot means pivotally securing one end of each of said links to said rear legs, third pivot means pivotally securing the other end of said links to said seat portion, a pair of front leg members pivotally secured to said seat portion, adjusting bracket means secured to the other end of each of said arm rests and extending below said arm rests, fourth pivot means pivotally securing said front and rear leg members at their upper end, said fourth pivot means being slidably positioned in said adjusting bracket means, seat support members having arcuate upper end portions, fifth pivot means pivotally securing said upper end portions to said seat portion, a rod extending between said front leg members and between said seat support members, a link having bores at each end, said rods being received by said bores and extending between said front leg members and said seat support members and means mounted on said rods for maintaining said link in substantially the midportion of said rods whereby said seat support members can only be swung simultaneously with the pivoting of said front leg members.

3,126,226
BABY SEAT
Robert J. Johnson, 6591 Carthage St., San Diego, Calif.
Filed Oct. 27, 1961, Ser. No. 148,178
10 Claims. (Cl. 297—174)



1. A seat for an infant comprising: a frame for frictionally engaging the upper surface of table, a member attached to said frame frictionally engaging the undersurface of a table, an arm rest frame, brackets on said first mentioned frame for receiving and supporting said arm rest frame, a back rest frame pivotally secured to said arm rest frame having a pair of legs terminating adjacent said arm rest frame, an engaging hook pivotally connected to each leg, a seat suspended from said arm rest frame, means limiting pivoting of said hooks from a position overlying one another to a position substantially parallel to one another, and means limiting pivoting of said back rest from a position substantially parallel to said arm rest to a position substantially normal thereto.

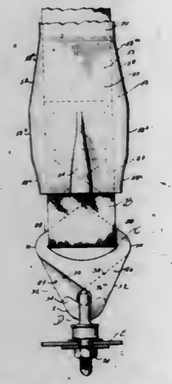
3,126,227
SAFETY SEAT BELT DEVICE
Daniel H. Bollinger, Jr., 524 W. Plymouth St., Bremen, Ind.
Filed Mar. 8, 1962, Ser. No. 178,404
4 Claims. (Cl. 297—385)



3. A safety device for the occupants of a vehicle, comprising a strap having at one end an anchor means to

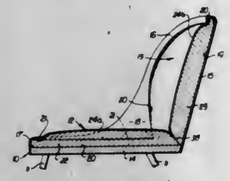
secure the respective end to the vehicle and at the other end a releasable securing means including an upstanding post having a notch therein, a buckle with a hole therein for receiving said post and a slot intersecting said hole, a slide in said slot having an edge portion for seating in the notch in said post, a spring urging said slide in the direction to seat in said notch, and a means for moving said slide in the direction to disengage said slide from said post.

3,126,228
TWIN HOOK TYPE VEHICLE SAFETY BELT AND GUARD BOOT THEREFOR
Charles E. Greene, Milford, Mich., and Charles H. Pulley, Lexington, Ky., assignors to Irving Air Chute Company, Inc., Lexington, Ky., a corporation of New York
Filed May 7, 1962, Ser. No. 192,832
4 Claims. (Cl. 297—385)



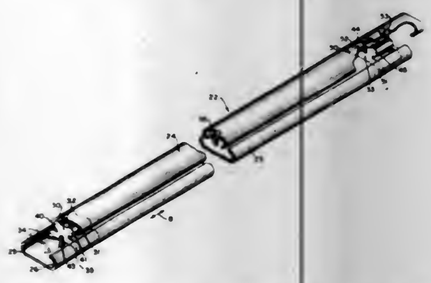
1. In combination with a flexible flat type vehicle safety belt, a twin-hook type connector including relatively movable portions connected to an end of the belt, a frame attachable bolt having an eye therein adapted to receive the twin hooks in releasable engagement therethrough, and a resilient type flexible boot having an upper portion slidably receiving in snug relation therein the lower portion of the belt and having a lower portion laterally enlarged in the plane of the lower portion and removably receiving the twin hooks therein in firm engagement with the opposite side edges of the twin hooks for holding both of them in closed locked relation in the eye of the bolt.

3,126,229
FURNITURE UPHOLSTERING
Delbert J. Dickerson, P.O. Box 6, Agoura, Calif., assignor of one-half to Jon Hall, Malibu, Calif.
Filed Feb. 20, 1962, Ser. No. 174,557
9 Claims. (Cl. 297—455)



1. Seating furniture comprising:
(A) A frame structure containing a recessed cushion area peripherally defined by a flange turned inwardly of and into said area, said flange defining the inner side of a channel space open to said area and presenting thereto a cushion retaining edge;
(B) a cushion of elastically compressible material in said recess and extending beneath and beyond said flange into said channel space;
(C) and a covering applied to said cushion and also extending beneath and beyond said flange in engagement therewith;
the normal cushion thickness beneath the flange being greater than the spacing of said flange edge from the base of said recessed cushion area so that when the cushion and covering are inserted beneath said edge, the cushion is compressed to releasably retain the covering smoothly tensioned against and bulging from the flange edge.

3,126,230
EXTENDIBLE SLIDES
John J. Spicer, Jr., Philadelphia, Pa., assignor to Novo Industrial Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Oct. 3, 1960, Ser. No. 60,144
2 Claims. (Cl. 308—3.6)

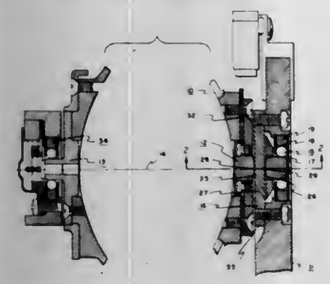


1. An extendible slide comprising: a first elongated member formed with a pair of facing channels; a second elongated member formed with a pair of facing channels; a support adjacent one end of said first member and mounted to be movable with the first member if the same is moved but non-rotatable with respect to the first member, the support having a pair of shoulders extending into the channels of the first member and a pair of shoulders extending into and making sliding contact with the channels of said second member, the support connecting the two members together and providing for relative motion of the members along an axis; and a second support of the same cross sectional shape as the first said support, the second support being disposed adjacent one end of said second member and mounted to be movable with the second member if the same is moved but non-rotatable with respect to the second member, the second support having a pair of shoulders extending into the facing channels of said second member and a pair of shoulders extending into and making sliding contact with the channels of said first member, the second support connecting the two members together and providing for relative motion of the members along said axis.

3,126,231
AXIAL-RADIAL BEARING FOR GYROSCOPE TRUNNIONS
Frederick W. Herr, Grand Rapids, Mich., assignor to Lear Siegler, Inc., Santa Monica, Calif., a corporation of Delaware
Continuation of application Ser. No. 667,810, June 25, 1957. This application Dec. 26, 1961, Ser. No. 162,157
1 Claim. (Cl. 308—35)

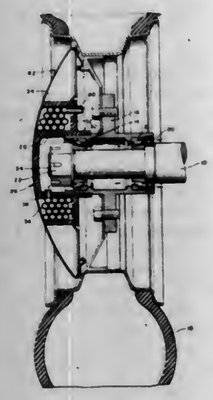
In cooperative combination:
a supporting member;
a supported member rotatably supported relative to said supporting member for rotation about a predetermined axis of rotation,

said supported member being radially supported between a pair of concentrically aligned right circular cylindrical surfaces, radially spaced apart and facing each other,
said cylindrical surfaces having a plurality of balls in bearing contact therewith,
said cylindrical surfaces having guide means axially spaced apart and having planar surfaces perpendicular to said axis and positioned upon opposing sides of said balls but spaced therefrom for guiding said balls for annular movement, said balls being permitted limited axial rolling motion,



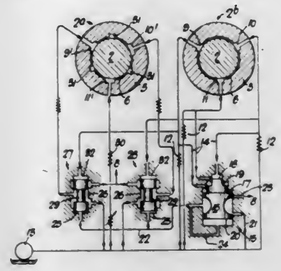
means integral with said supported member for axially supporting said supported member relative to said supporting member, said axially supporting means having a passage therethrough defined by a plurality of internal surfaces of said axially supporting means including first and second surfaces normal to and bisecting said predetermined axis of rotation, said first and second surfaces being convex in shape,
a thrust bar passing through said passage and attached at both ends to said supporting member and wherein said thrust bar contacts said convex surfaces, said thrust bar having parallel flat surfaces at the axially bearing contact points with said convex surfaces to carry the axial thrust of said supported member relative to said supporting member.

3,126,232
PROTECTIVE HUB CLOSURE
Kenneth W. Reilly, 7827 Dunbarton Ave., Los Angeles 45, Calif.
Filed Apr. 16, 1962, Ser. No. 187,791
3 Claims. (Cl. 308—36.3)



1. A protective device for isolating a wheel hub and its axle from water when submerged comprising: a protective hub adapted to fit upon the wheel hub and enclose same and its axle to form a seal with said wheel hub, a tubing communicating the outside of said protective hub, with the interior thereof and coiled about said protective hub whereby water will not enter said protective hub when same is submerged.

3,126,233
BEARINGS
Joseph Kenneth Royle, Heaton Moor, Stockport, England, assignor to National Research Development Corporation, London, England, a British corporation
Filed June 13, 1961, Ser. No. 116,744
Claims priority, application Great Britain June 13, 1960
5 Claims. (Cl. 308—122)

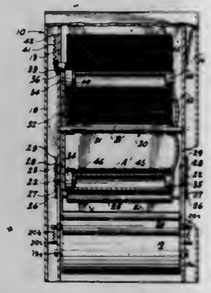


1. A bearing for supporting a movable member in a predetermined position within an enclosing structure, clear of the walls of that structure, by means of fluid under pressure, comprising a plurality of fluid supply systems formed in the structure, each system comprising a main fluid supply orifice and a pilot fluid supply orifice, the systems being so supported that when the member moves away from one orifice of one system it moves towards the corresponding orifice in another system, means for permitting the escape, from the clearance space between the movable member and the structure, of fluid supplied to the main and pilot orifices of the bearing, in which the fluid in one of the main orifices is maintained at a fixed pressure, the other main orifices being each related with their corresponding pilot orifice so that as the clearance between a pilot orifice and the movable member rises or falls the fluid pressure at the corresponding main orifice varies in the opposite sense, in which there is a device for deriving the mean pressure of all the pressures acting at the individual pilot orifices and control valves are fitted in the fluid lines leading to such of the main orifices as are maintained at variable pressure, each of said control valves having obturating members urged to move in one direction by fluid at the said mean pressure and in the other direction by fluid at the pressure of the fluid in the corresponding pilot orifice.

3,126,234
ROLLS OF PAPER TOWELING AND DISPENSERS THEREFOR
George X. Batlas, 21—47 35th St., Astoria, N.Y., and Stephen Baranski, 31 Norfolk St., New York, N.Y.
Filed Mar. 2, 1961, Ser. No. 92,795
3 Claims. (Cl. 312—39)

1. The combination of a dispenser comprising a cabinet having a downwardly opening discharge slot at the front thereof, a dispensing roller rotatably mounted in said cabinet above said slot, a pressure roller rotatably mounted in said cabinet above said dispensing roller, means urging said pressure roller against said dispensing roller, two rolls each including a spirally wound web of sheet material, support means rotatably supporting said two rolls in said cabinet in upper and lower positions,

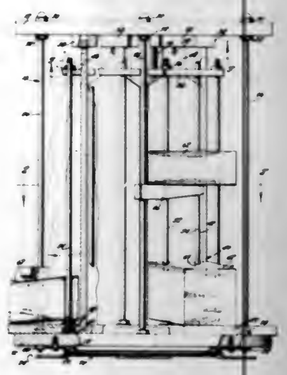
respectively, and having means cooperating with said rolls to permit the mounting of the latter in said cabinet only in the direction permitting withdrawal of each web downwardly from the respective roll at the front of the latter, the web from said lower roll passing downwardly between said pressure and dispensing rollers for withdrawal through said slot, a control roller in said cabinet adjacent the portion of the circumference of said pressure roller facing away from said dispensing roller and being movable toward and away from said pressure roller so that, when the web from said upper roller is passed between said control and pressure rollers, the spacing of said control roller from said pressure roller permits the web therebetween to remain immobile as said pressure and dispensing rollers are rotated, while the movement of said control roller against said pressure roller causes the



rotation of the latter to move the sheet material from the upper roll rearwardly over the pressure roller into frictional engagement between said pressure roller and the web from said lower roll for movement with the latter web between the dispensing and pressure rollers and out of said slot when said web from the upper roll is then exposed for withdrawal from the cabinet, and actuating means for said control roller acting in response to the diameter of said lower roll to space said control roller from said pressure roller so long as the diameter of said lower roll exceeds a predetermined value and to move said control roller against said pressure roller when the diameter of said lower roll decreases below said predetermined value, thereby to automatically expose the web of said upper roll for withdrawal from the cabinet prior to complete exhaustion of said lower roll.

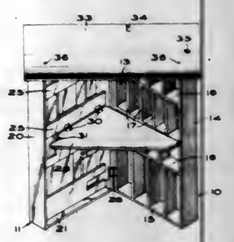
3,126,235
REVOLVING FILE
Mike W. Grey, Box 217, and Weldon L. Ewert, Box 694, both of Hooker, Okla.
Filed Aug. 15, 1962, Ser. No. 217,128
1 Claim. (Cl. 312—189)

In a revolving file including a rotatable turntable adapted to rest upon a supporting surface, a drum having spaced parallel discs and a hub connecting said discs together, said drum being disposed with said discs in vertical spaced relation and with one of said discs connected to said turntable for rotation therewith, a plurality of card holding file units each comprising an elongated base, an upright first abutment secured to one end of said base, an upright second abutment disposed inwardly of and adjacent the other end of said base and removably secured thereto, said first and second abutments being laterally extending, at least one guide rod extending between said first and second abutments, a plurality of cards each having a hole therethrough disposed in stacked relation on said base with said rod extending through the holes of said cards, said drum one disc having on the upper face thereof a plurality of spaced opened ended recesses each of a size to receive therein the first abutment of one of said file units when upended and inserted between said discs with the underface of the base of said unit facing said hub, and means operatively connected to said drum and adapted to hold a selected card or group of cards of a file unit above and spaced from said first abut-



ment when said file unit is upended and inserted between said discs, said means including a rod extending between said discs and a lug freely slidable on said rod, said lug wedgingly engaging said rod when supporting a card or group of cards on a file unit when said file unit is upended and inserted between said discs.

3,126,236
COMBINED STORAGE LOCKER AND TABLE
James I. Buchan, 1 Florence St., and Thomas Simpson, 33 Norfolk St., both of Hamilton, Ontario, Canada
Filed Mar. 27, 1962, Ser. No. 182,733
1 Claim. (Cl. 312—201)



A combined storage cabinet and table comprising a first cabinet section, shelving and dividers in said first section having their outer faces in the same plane as the inner face of said first section, a second cabinet section having shelving and dividers, the upper portion of said last-mentioned shelving and dividers having its outer face in a plane lying inwardly of the plane of the inner face of said second section and the lower portion thereof lying in a plane inwardly of the plane of the outer faces of the shelving and dividers of the upper portion thereof, a shelf hingedly connected to the bottom portion of said upper shelving, a support for said shelf affixed to said first section and extending outwardly therefrom, a single piece table top normally snugly receivable within the sides, top and bottom of said section outwardly of said shelving and shelf, and a stud extending upwardly from each section, said table top having a pair of openings for receiving said studs when said table top is positioned horizontally upon said sections, said shelf being cut away at one corner said table top being provided with

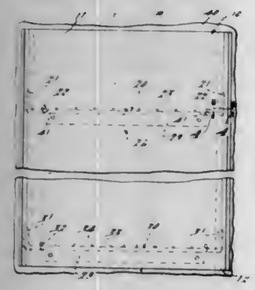
a slot, whereby said support is receivable in said cut away and slot when the sections are brought together.

3,126,237
STAND FOR CHILDREN'S CLOTHING
Josephine M. Kirk, 8200 S. Orange Blossom Trail, Orlando, Fla.
Filed Jan. 10, 1962, Ser. No. 165,449
8 Claims. (Cl. 312—204)



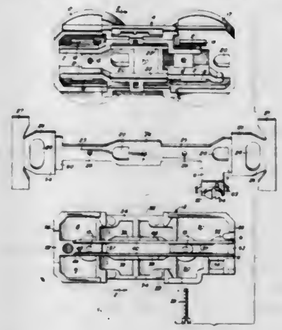
1. A portable ornamental clothes stand for use in a small child's nursery or bedroom comprising: a toy-like figure imitative of a given character or thing, support means for maintaining the figure in a self-standing position, said figure being provided with clothes racking means at the back thereof, with a pocket on the front, and a sack serving as a "hamper" for soiled things, said sack being located and suspended from the back side of the figure and marginal portions of the figure adjacent to and at the front of said sack being cut away and uniquely and expressly delineated so that a major portion of the suspended sack is exposed and viewable from the front side of said figure, the mouth of the sack being constantly open and accessible by way of a registering entrance opening in the figure.

3,126,238
WALL WARDROBE
Hugh C. Acton, 588 Brookside Drive, Birmingham, Mich.
Filed July 21, 1961, Ser. No. 125,799
8 Claims. (Cl. 312—245)



1. An article of furniture adapted to be cantilever supported on a wall or similar structure comprising an arched, flexible, vertically extending cover panel, grooved formations extending lengthwise of a pair of vertically extending opposite side edges of said cover panel, a pair of vertically spaced horizontally extending shelf members projecting from the rear side of said cover panel, said shelf members having front edge portions latchingly seated in the cover panel side edge grooved formations, and means on the rear edge portions of said shelf members for detachable connection to a wall or similar supporting structure; said arched, flexible cover panel exerting expansion forces that latchingly retain the shelf portions in assembled seated engagement with the grooved edge portions of the cover panel.

3,126,239
THIRD PRONG CONTACT AND GROUNDING MEANS FOR OUTLETS OF THREE-WIRE TYPE
Paul A. Winter and David C. Amsler, both of Syracuse, N.Y., assignors to Pass & Seymour, Inc., Syracuse, N.Y., a corporation of New York
Filed May 23, 1961, Ser. No. 112,054
6 Claims. (Cl. 339—14)

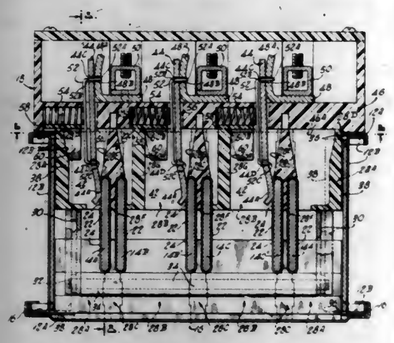


1. In an electric outlet for receiving an attachment plug having a grounding prong in combination, a body formed of insulating material, an insulating cover for said body having a grounding prong passage therethrough, a metal mounting strap extending between said body and cover, projecting beyond the ends thereof, having an opening registering with said passage and having a grounding terminal, a straight, cylindrical resilient metal rod supported by said body and extending longitudinally under one face of and separate from said strap, in electrical contact therewith and positioned to be engaged and deflected laterally by a prong entering said passage, and abutments on said body part laterally engaging and positioning said rod remote from the passage whereby the rod may flex for prong entry.

3,126,240
PLUG-IN BUS DUCT
Paul M. Christensen, West Orange, N.J., and Thomas M. Cole, Harrison, N.Y., assignors to Federal Pacific Electric Company, a corporation of Delaware
Filed Dec. 4, 1956, Ser. No. 626,133
19 Claims. (Cl. 339—22)

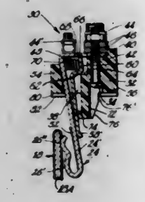
19. A unit-length of plug-in bus duct including an enclosing rectangular metal duct, a series of relatively broad and thin bus bars having their broad faces in successive parallel planes parallel to an opposed pair of walls of said rectangular metal duct, at least one of the remaining walls of the enclosing rectangular metal duct extending across the edges of said bus bars and having access openings at points distributed between the ends of the duct suitably proportioned for admitting projecting plug-in contacts of a plug-in unit, the series of bus bars opposite each of said openings being arranged in closely spaced pairs of bus bars providing a low-impedance characteristic, each pair of bus bars being spaced relatively far from the adjacent pair or pairs of bars, one bar of each pair of bus bars being completely covered by insulation in the region adjacent each opening in the enclosing duct and the companion bus bar of each pair having insulation-covering across the broad face thereof confronting said

one insulation-covered bus bar of its pair, the broad face of said companion bus bar remote from said one insulation-covered bus bar being at least in part bare and ex-



posed for engagement by a projecting contact of a plug-in unit, said completely covered bus bars and said companion bus bars occurring alternately in said series of bus bars.

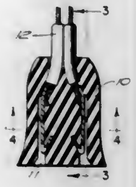
3,126,241
BUS DUCT PLUG-IN DEVICE
Nicholas B. Papalas, Westfield, N.J., assignor to Federal Pacific Electric Company, a corporation of Delaware
Filed Sept. 15, 1958, Ser. No. 760,974
14 Claims. (Cl. 339—22)



2. A plug-in device for a bus duct of the type having a series of relatively thin and broad bus bars wherein the broad faces of the bus bars are disposed in successive parallel planes and the edges of the bus bars are disposed in a pair of planes substantially perpendicular to said successive parallel planes, said plug-in device having a series of projecting laterally yieldable contacts extending from the device in the direction of insertion into the duct, means for biasing said contacts in the direction perpendicular thereto in the inserted condition of the device for establishing lateral pressure engagement with a side face of the engaged bus bar, said means comprising spring biased levers fulcrumed intermediate the ends thereof and having one end in engaged relation with their respective contacts, each of said contacts having a bus engaging portion thereof bent back on itself to define laterally adjacent contact portions, the latter being subjected to a separating force under abnormal circuit conditions to thereby increase said lateral pressure engagement.

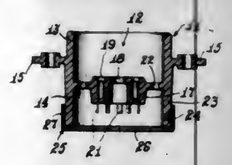
3,126,242
MOLDED FEMALE CONNECTOR
William P. Herman, Providence, R.I., assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 21, 1959, Ser. No. 860,766
1 Claim. (Cl. 339—62)

A molded female connector comprising a one piece body of molded resilient dielectric material having a pair of slots terminating within said body and adapted to receive a pair of male contact pins, a pair of contact blades within said body, each said contact blade having an elongated rectangular central portion coextensive with a substantial portion of the inner wall of the associated slot, each said contact blade having a reentrant bend at one end, said bend forming an acute angle with said central portion, an opening in said reentrant bend extending partly into said central portion for accurately securing and locating said blade during the molding operation forming said connector body having said slots, the reentrant portion of said bend being embedded in said body



member adjacent the longitudinal center line thereof and extending rearwardly of said body member for anchoring each said contact blade within said body member, the other end of each said blade having a pair of opposed triangularly shaped offset lugs adapted to be bent over the lead wire of a conductor, said central portion of each said blade having a reduced section adjacent said lugs and a detent on said central portion extending into said slot at the innermost end thereof, said reduced section being bent inwardly toward the longitudinal axis of said body member, said reduced portion and said lugs being embedded in said body member for further anchoring each said contact blade within said body member.

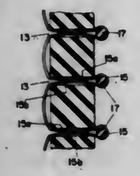
3,126,243
SOCKET CUP AND CLOSURE THEREFOR
Fred P. Manetti, 1442 William St., River Forest, Ill., and Mario J. Manetti, 1114 N. Kenilworth Ave., Oak Park, Ill.
Continuation of application Ser. No. 811,911, May 8, 1959. This application July 26, 1961, Ser. No. 131,045
5 Claims. (Cl. 339—111)



3. A dielectric socket cup for high voltage tubes comprising a tube receiving cup including a bottom wall carrying prong receiving terminals, said terminals extending through said wall, an annular skirt on said cup depending from the bottom wall and surrounding the terminals, said skirt being of a length to locate its free peripheral edge below the plane of the terminals surrounded thereby, external threads on the lower margin of said skirt and extending over a substantial area thereof, a flanged cap on the bottom of said skirt, the flange thereof having a depth responding substantially to the area of the skirt and bearing the threads, internal threads in said flanged cap engageable with the threads on the skirt to retain the cap in place thereon, said cap having thin-wall construction throughout and being fabricated from heat resistant plastic material whereby at least the cap flange is resiliently yieldable to permit the cap to be snap-fitted in place on the skirt by hand, said threads

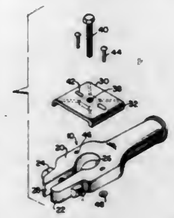
thereafter securing the cap to the skirt against unintended and/or accidental removal, affording a long path of resistance to leakage of electric current from the interior of said socket cup.

3,126,244
ELECTRICAL CONNECTOR
Paul O. Raygor, Irwin, and Juris A. Asars, Monroeville, Pa., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Nov. 6, 1962, Ser. No. 235,899
6 Claims. (Cl. 339—192)



1. An electrical connector for receiving an electrical component having spaced prong connections projecting therefrom, said connector comprising a plate of insulating material having apertures therein forming a pattern, a strip of conducting material having folds which form a pattern corresponding to the pattern of the apertures and extend into corresponding apertures from one face of the plate, each fold having its strands closely spaced for receiving a prong connection in contacting relation therewith and terminating in a loop which is disposed adjacent the other face of the plate and means extending through the loops to maintain the folds within the apertures.

3,126,245
BATTERY TERMINAL CLAMP
Frank A. Kelton, 150 S. Pleasant Ave., Bloomingdale, Ill.
Filed Nov. 30, 1961, Ser. No. 155,998
3 Claims. (Cl. 339—226)



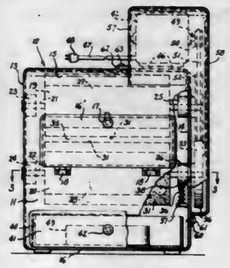
1. A battery terminal post clamp comprising, in combination, a body having means for connection with a conductor cable, a laterally spreadable split clamp portion receiving the post, a bridge extending across the top of the clamp portion, a threaded member threadedly carried by said bridge extending through said bridge for engagement with the top of the post for withdrawing the bridge and clamp from the terminal post in response to rotation of said threaded member into abutment with the post, said bridge comprising a plate having downturned lateral side edges and reinforcing ribs, said side edges limiting the extent of spreading of said clamp portions relative thereto, said plate having a pair of laterally extending slot-like holes, a pair of rivets extending through said holes of said plate and secured to said body for securing said plate thereto, said slot-like holes accommodating lateral movement of said rivets in opposite directions in response to spreading and closing of said split clamp portion.

CHEMICAL

3,126,246
PREPARATION OF DYE-RECEPTIVE POLYOLEFIN FIBERS
Vittorio Cappuccio and Ubaldo Riboni, Terni, Italy, assignors to Montecatini Societa Generale per l'Industria Mineraria e Chimica, a corporation of Italy
No Drawing. Filed Jan. 14, 1960, Ser. No. 2,333
Claims priority, application Italy Jan. 15, 1959
8 Claims. (Cl. 8—115.5)

1. A process for preparing dye-receptive fibers of polyolefin fibers of polypropylene consisting prevailingly of isotactic macromolecules comprising the steps of: mixing said polypropylene with a halogenated compound in a ratio from about 99:1 to 5:1, in parts by weight, said halogenated compound being selected from the group consisting of: dichloroethylene, 1,2-dichloropropane, 1,2,3-trichloropropane, dichlorobutanes, trichlorobutanes, dichloropentanes, trichloropentanes, dichlorohexanes and trichlorohexanes, and mixtures thereof; extruding said mixture at a temperature between about 155° C. and 170° C. to obtain fibers; treating said fibers for a time varying from about 30 seconds to about 3 hours, and at a temperature of from 50° C. to 120° C. with an aqueous solution of from about 5% to about 65% of a nitrogen-containing compound selected from the group consisting of: ethylendiamine, trimethylendiamine, diethylentriamine, tetraethylenpentamine, ethylenimine and polyethylenimine, and mixtures thereof; whereby dye-receptive properties of the resulting fiber are enhanced.

3,126,247
ELECTRIC CLIPPER CLEANER AND STERILIZER
Thomas M. Miller, Dallas, Tex.
Filed Feb. 26, 1962, Ser. No. 175,660
1 Claim. (Cl. 21—83)



A clipper cleaner and sterilizer comprising, in combination, a housing including front, back, side, top and bottom walls defining a substantially closed chamber, upper and lower, vertically spaced, axles extending transversely between said side walls, one end of each axle extending through one side wall, a rotary brush on each axle, an access door in said front wall permitting insertion of clip-

pers into said chamber to be cleaned between said brushes, said front wall having an opening beneath said brushes, a drawer normally closing said opening and slidable in said opening, said drawer receiving foreign matter removed from the clippers, a central open topped receptacle in said drawer for the reception of sterilizing tablets, sterilizing tablets exuding a sterilizing gas in said receptacle, said gas rising from said open topped receptacle to permeate said chamber in said housing, an electric motor mounted on said top wall, a drive pulley driven by said motor, a first driven pulley on the extending end of said upper axle, a second driven pulley on the extending end of said lower axle, a drive belt connecting said drive pulley and said first driven pulley, a rubber tire surrounding said second driven pulley and contacting said drive belt on said first pulley to drive said lower axle, bearings carried interiorly of said side walls journalling said axles, one of said side walls having a vertical slot through which said extending end of said lower axle protrudes, an inwardly extending lug on said one of said side walls beneath said lower axle, a compression spring mounted on said lug and abutting the bearing carrying the adjacent end of said lower axle biasing said adjacent end upwardly to insure frictional engagement of said tire with said drive belt and a removable supplemental housing surrounding said motor and said drive and driven pulleys.

3,126,248
PROCESS FOR PRODUCING PURIFIED CHLORINATED SILANES
Franz Arthur Pohl and Toni Hauskrecht, Belecke (Mohne), Germany, assignors to Licentia Patent-Verwaltungs-G.m.b.H., Hamburg, Germany
No Drawing. Filed Nov. 25, 1958, Ser. No. 776,207
Claims priority, application Germany Nov. 27, 1957
8 Claims. (Cl. 23—14)

1. A process for producing an at least partially chlorinated silane substantially free of impurities of borane, chlorinated borane and boron trichloride comprising the steps of: adding to an at least partially chlorinated silane containing at least one of the boron-containing impurities, an excess of a purifying agent being an organic compound selected from the group consisting of dioxane, benzaldehyde, methyl ethyl ketone, dimethyl glyoxime and valerolactone; reacting said boron-containing impurities present in the at least partially chlorinated silane with a portion of said organic compound to form an addition compound; and separating from the reaction mixture containing said at least partially chlorinated silane, said addition compound and said excess of organic compound, an at least partially chlorinated silane substantially free from borane, chlorinated borane, and boron trichloride.

3,126,249
LEACHED ZONE PHOSPHATES MINERAL RECOVERY
Sydney Atkin, Springfield, N.J., assignor to Chemical Construction Corporation, New York, N.Y., a corporation of Delaware
Filed Mar. 12, 1959, Ser. No. 799,011
5 Claims. (Cl. 23—14.5)

1. A process for recovering mineral values from leached zone material derived from phosphate rock overburden and containing significant amounts of aluminum mineral values which comprises heat treating said material at a temperature above about 700 deg. C. and below about 1000 deg. C., reacting the heat treated material with sulfuric acid and an aqueous recycle solution, adding to the resulting acidic aqueous slurry flocculating amounts of a polyelectrolyte linear carbon chain resin selected from the group consisting of partially hydrolyzed polyacrylamides having molecular weights above 50,000 and containing 70% to 98% of amide groups, partially hydrolyzed polyacrylonitriles having molecular weights within the range of about 50,000 to 500,000, partially hydrolyzed copolymers of acrylamide with vinyl esters having molecular weights above about 50,000, and partially hydrolyzed copolymers of acrylonitrile with vinyl esters having molecular weights above about 50,000, filtering solid material from the aqueous slurry, adding ammonium sulfate and sulfuric acid to the filtrate solution and thereby crystallizing a double salt of ammonium and aluminum sulfate, filtering said crystals from the solution, recycling a portion of the residual solution as the aforementioned aqueous recycle solution, dissolving a soluble calcium salt into the balance of the residual solution and thereby precipitating calcium sulfate, filtering said calcium sulfate from the solution, adding calcium hydroxide to the solution and thereby precipitating phosphorus values as dicalcium phosphate, and filtering said dicalcium phosphate from the solution.

4. Process of claim 1, in which the calcium hydroxide is added in a two stage process comprising adding sufficient calcium hydroxide to raise the solution pH to a value between 2.8 and 3.0 thereby precipitating an impure fertilizer grade dicalcium phosphate containing mineral constituents, filtering said fertilizer grade dicalcium phosphate from the solution, adding further calcium hydroxide thereby raising the pH to a value between 5.0 and 6.0 and precipitating a relatively pure feed grade dicalcium phosphate, and filtering said feed grade dicalcium phosphate from the solution.

5. Process of claim 4, in which uranium values are precipitated from the solution by the addition of sodium hydrosulfite and separately recovered by filtration, subsequent to recovery of fertilizer grade dicalcium phosphate and prior to addition of further calcium hydroxide.

3,126,250
PROCESS FOR THE DIRECT PREPARATION OF PRACTICALLY SPHERICAL, GRANULAR, AMMONIUM URANYL SULFATE OF UNIFORM PARTICLE SIZE
Marie E. A. Hermans and Theo van der Plas, Arnhem, Netherlands, assignors to Stichting Reactor Centrum Nederland, The Hague, Netherlands
No Drawing. Filed Sept. 16, 1960, Ser. No. 56,336
Claims priority, application Netherlands Sept. 18, 1959
8 Claims. (Cl. 23—14.5)

1. A process for the direct preparation of practically spherical, granular uraniferous material of uniform particle size comprising adding ammonia to a solution of an uranyl salt up to the point of incipient precipitation, dissolving while stirring a relatively great amount of ammonium sulphate into the solution thus obtained, stirring the mixture until termination of the precipitation, maintaining the pH at the termination of the precipitation at a critical value lying between 2 and 3, and separating the complex ammonium uranyl sulfate precipitate in the form of substantially uniform spheres.

3,126,251
PLUTONIUM RECOVERY FROM NEUTRON-BOMBARDED URANIUM FUEL
Raymond H. Moore, Kennewick, Wash., assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Filed Oct. 10, 1962, Ser. No. 229,769
9 Claims. (Cl. 23—14.5)

1. A process of recovering plutonium from a chlorinatable fuel material containing said plutonium together with uranium, comprising immersing said fuel material in a molten about equimolar double salt mixture of aluminum chloride and potassium chloride, whereby uranium and plutonium are dissolved as plutonium tetrachloride, uranium tetrachloride and uranyl chloride; adding molten lithium chloride and stannous chloride to the reaction mass, whereby uranyl chloride is reduced to uranium tetrachloride, the plutonium tetrachloride is reduced to plutonium trichloride, the uranium tetrachloride is dissolved in the double salt and the plutonium trichloride is dissolved in a separate lithium chloride phase; and separating the lithium chloride phase from the double salt.

3,126,252
AMMONIUM OXYFLUOTANTALATE AND ITS METHOD OF PREPARATION
John R. Ruhoff, Webster Groves, and Charles O. Gerfen, Frontenac, Mo., assignors to Mallinckrodt Chemical Works, St. Louis, Mo., a corporation of Missouri
Filed July 20, 1960, Ser. No. 44,034
3 Claims. (Cl. 23—51)

1. A crystalline ammonium oxyfluotantalate, having a characteristic X-ray diffraction pattern, in which the molar ratio NH_4^+:Ta is approximately 1:1 and the molar ratio F^-:Ta is approximately 2.5:1, the empirical composition of said ammonium oxyfluotantalate corresponding to the formula $NH_4TaO(OH)_{1.5}F_{2.5}$.

3. The method of preparing a crystalline ammonium oxyfluotantalate having a characteristic X-ray diffraction pattern and having the empirical formula

$$NH_4Ta(OH)_{1.5}F_{2.5}$$

which comprises adding ammonia to a solution of $(NH_4)_2TaF_7$, the amount of ammonia added being not substantially less thaan 1.75 and not substantially greater than 3.5 moles of ammonia for each mole of $(NH_4)_2TaF_7$ in the solution.

3,126,253
PROCESS FOR THE MANUFACTURE OF FINELY DIVIDED CALCIUM CARBONATE
Ernst Podschus, Leverkusen-Bayerwerk, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Continuation of application Ser. No. 60,569, Oct. 5, 1960. This application Sept. 10, 1962, Ser. No. 222,705
5 Claims. (Cl. 23—66)

1. In a process for the manufacture of finely divided calcium carbonate by reacting an aqueous suspension of calcium hydroxide with a gas containing carbon dioxide at a temperature between about 0 and about 50° C., the improvement which comprises effecting the reaction in the presence of a salt of nitrilotriacetic acid selected from the group consisting of the alkali metal and alkaline earth metal salts of the said acid.

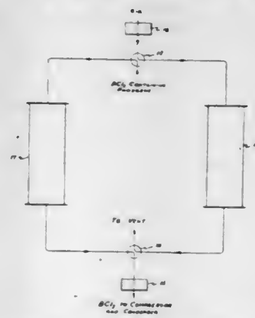
3,126,254
PROCESS FOR PREPARING METAL AMMONIUM PHOSPHATES
Murrell L. Salutsky, Silver Spring, Frederick S. Lee, Owings Mills, and Grover L. Bridger, Baltimore, Md., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut
No Drawing. Filed Aug. 24, 1960, Ser. No. 51,541
1 Claim. (Cl. 23—105)

Process for preparing metal ammonium phosphates which comprises digesting phosphoric acid and a substantially stoichiometric quantity of a phosphoric acid-soluble metallic compound selected from the group consisting of oxides, carbonates, hydroxides, chlorides, sulfates, nitrates, and naturally-occurring silicates of a bivalent metal selected from the group consisting of iron, manganese, copper, zinc, cobalt, and nickel in an aqueous medium containing sufficient water to form an intermediate trihydrate of the resulting dimetal properties, at about 175–220° F. for about 10 minutes to about 4 hours, thereby bringing the pH of the reaction mixture to about 4.0–6.0, and subsequently adding ammonia to said mixture to raise the pH of said mixture to about 7–9, digesting the thus treated mixture at about 75–225° F. for about one hour to several days, recovering the resulting metal ammonium phosphate, washing said phosphate with water, and drying said washed phosphate at about 150–225° F.

3,126,255
METHOD OF PREVENTING CAKING OF AMMONIUM SULPHATE AND POTASSIUM SULPHATE
Edward Graham Cooke, Bunbury, Tarporley, England, and Leslie Phoenix, Llay, Wrexham, Wales, assignors to Imperial Chemical Industries Limited, Millbank, London, England, a corporation of Great Britain
No Drawing. Filed July 3, 1961, Ser. No. 121,361
Claims priority, application Great Britain July 15, 1960
6 Claims. (Cl. 23—119)

4. A process for the preparation of a substantially non-caking crystalline composition containing salt selected from the group consisting of ammonium sulphate, potassium sulphate, and mixtures thereof, which comprises incorporating therein in a mixing zone an amount of from 0.0001% to 0.1% by total weight of salt of an additive selected from the group consisting of ceric sulphate, ceric oxide, ceric hydroxide, cerous nitrate, ammonium ceric sulphate and ammonium ceric nitrate.

3,126,256
REMOVAL OF PHOSGENE FROM BCl_3
Jerome N. Haimsohn, Ardsley, Lawrence A. Smalheiser, Spring Valley, and Benjamin J. Luberoff, Monsey, N.Y., assignors to Stauffer Chemical Company, a corporation of Delaware
Filed Feb. 2, 1960, Ser. No. 6,291
8 Claims. (Cl. 23—205)



1. A process for purifying a stream consisting primarily of boron trichloride and containing phosgene as an impurity comprising: passing a stream containing boron trichloride and phosgene as an impurity over a catalyst consisting of carbon maintained at a temperature of between about 300° C. and 700° C. whereby said phosgene is cracked to carbon monoxide and free chlorine and removing the carbon monoxide and chlorine so produced from the boron trichloride stream whereby to produce substantially pure boron trichloride.

3,126,257
PROCESS FOR PREPARING HYDROGEN PEROXIDE
Hans Kunowski and Gerhard Fix, both of Bad Hanningen (Rhine), Germany, assignors to Kali Chemie Aktiengesellschaft, Hannover, Germany
No Drawing. Filed Aug. 2, 1961, Ser. No. 139,027
Claims priority, application Germany Aug. 5, 1960
1 Claim. (Cl. 23—207)

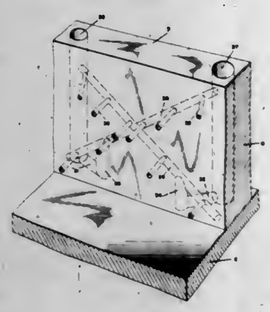
In a process for producing hydrogen peroxide by hydrogenation of a quinone in solution to the corresponding hydroquinone and subsequent recovery of the quinone

with oxygen with simultaneous formation of hydrogen peroxide which is recovered by extraction of the hydrogen peroxide containing solution with acidified, demineralized water, the improvement in which the acidified, demineralized water used for extraction has a pH value in the range between 2 and 4.

3,126,258
LIQUID-LIQUID CONTACTING APPARATUS

Donald Hebden, Thurso, Caithness, Scotland, assignor to United Kingdom Atomic Energy Authority, London, England

Filed Sept. 22, 1959, Ser. No. 841,520
Claims priority, application Great Britain Sept. 25, 1958
2 Claims. (Cl. 23—270.5)



1. In a mixer-settler apparatus for mixing liquids of differing density and having means defining a series of interconnected and horizontally disposed mixer compartments and settler compartments, the said defining means including upright side walls for each mixer compartment and each settler compartment for holding the liquids, the improvement of mixing means comprising:

(*a*) duct means wherein an upright side wall for each mixer compartment internally defines a pair of elongate non-intersecting passageways at angles to each other, both of the passageways extending from an upper portion of the said upright sidewall to a lower portion of the said upright sidewall; and a plurality of separate jet orifices for each passageway disposed along the length of the respective passageway and connecting the respective passageway to the mixer compartment at various levels of the mixer compartment from the upper portion to the lower portion of the said upright sidewall;

(*b*) first means for alternately decreasing and increasing the fluid pressure in one of the passageways in the direction of the jet orifices and mixer compartment to cause liquid in the mixer compartment to be respectively drawn into and expelled from the one passageway via the jet orifices, and second means for correspondingly alternately increasing and decreasing the fluid pressure in the other of the passageways to cause the liquid to be respectively expelled from and drawn into the said other passageway, such that the liquid is drawn into the one passageway as it is expelled from the other passageway and is expelled from the one passageway as it is drawn into the other passageway; and

(*c*) a pair of passage ducts, one of the passage ducts connecting the one of said passageway to the first means for alternately decreasing and increasing the fluid pressure, and the other of the passage ducts connecting the other of the passageways to the second means for alternately increasing and decreasing the fluid pressure.

3,126,259
INCENDIARY MATERIAL

Frank N. Vannucci, 168 Shotwell St., San Francisco, Calif.

No Drawing. Filed Nov. 6, 1959, Ser. No. 851,228
6 Claims. (Cl. 44—7)

4. An incendiary material consisting essentially of a gel of an inflammable liquid hydrocarbon and a water wetted powder composed of equal parts of silica and magnesium oxide, the relative proportions of said oxides, water and hydrocarbon being the amount of water wetted oxide powder retained by the hydrocarbon when a mixture of about one part of hydrocarbon to two parts of oxide material is agitated in an excess of water.

3,126,260
ORGANIC LIQUID COMPOSITION

Johan L. Van der Minne, Pieter H. J. Hermanie, and Cornelis Douwes, all of Amsterdam, Netherlands, assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed May 23, 1960, Ser. No. 30,755
Claims priority, application Netherlands May 28, 1959
10 Claims. (Cl. 44—62)

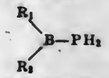
1. An organic liquid composition having increased electrical conductivity consisting essentially of an organic liquid normally having a dielectric constant of not more than 8 and a conductivity additive composition consisting essentially of (1) a salt of a polyvalent metal and an alkylated salicylic acid containing at least one alkyl substituent having eight or more carbon atoms and (2) an organic liquid-soluble nitrogen-free copolymer of an unsaturated aliphatic carboxylic compound, selected from the group consisting of acids, acid anhydrides and alkaline earth metal salts, and from one to three organic comonomers selected from the group consisting of alpha-olefins having at least 10 carbon atoms, esters of unsaturated organic carboxylic acids and unsaturated alcohols and esters of saturated organic carboxylic acids and unsaturated alcohols, said esters containing a saturated aliphatic chain of at least 8 carbon atoms, and said copolymer having a molecular weight of from 1×10^4 to 2×10^6, the amount of the additive composition being such as to provide at least 1×10^{-8} gram atoms of polyvalent metal per liter and from 0.00001 to 0.02% by weight of polymeric material, basis the organic liquid.

3,126,261
GASOLINE COMPOSITIONS

Patrick J. Friel, Broomall, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Mar. 28, 1958, Ser. No. 724,517
4 Claims. (Cl. 44—69)

1. Spark ignition internal combustion engine fuel composition consisting essentially of mainly petroleum hydrocarbons boiling within the gasoline range; an anti-knock amount of an organo-lead anti-knock compound, and a small amount, sufficient to suppress engine surface ignition and octane requirement increase of an additive material having the general formula:



wherein R_1 and R_2 are alkyl radicals containing not more than 6 carbon atoms each.

3,126,262
BONDED ABRASIVE ARTICLE

Ralph H. Rushmer, Lewiston, N.Y., assignor to The Carborundum Company, Niagara Falls, N.Y., a corporation of Delaware

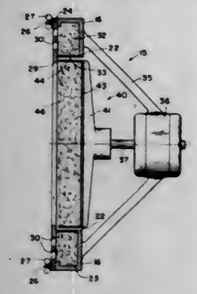
Filed Dec. 27, 1960, Ser. No. 78,666
4 Claims. (Cl. 51—298)

3. A non-hygroscopic bonded abrasive article consisting essentially of abrasive grain and a bond for said grain, said bond comprising about 25–35% by weight of said article and consisting essentially of 9–27% phenolic resin, 10–21% cryolite filler, and 1–3% granular perchloropentacyclo-(5.2.1.$0^{2,6}$.$0^{3,9}$.$0^{5,8}$) decane ($C_{10}Cl_{12}$), the percentages of said bond ingredients being percentages by weight based upon said article.

3,126,263
GAS DEFLECTING AND FILTERING

Louis Schwab, 2000 W. Lee Road, Orlando, Fla.

Filed Nov. 16, 1959, Ser. No. 853,292
12 Claims. (Cl. 55—317)

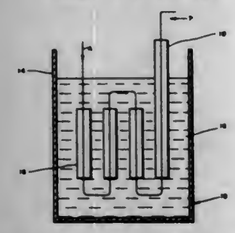


1. Air treatment apparatus comprising, in combination, a frame having an opening directing a stream of air therethrough, a trap supported around said opening, a gas permeable centrifugal separator supported within said opening directing air entrained particles toward said trap out of a stream of air passing through said opening, said frame comprising a housing, said trap comprising a mesh screen surrounding said opening, filter means substantially filling said housing around said mesh screen, a cover plate substantially enclosing said filter material within said housing, said cover plate having ports extending therethrough for maintaining the interior of said housing at atmospheric pressure, said centrifugal separator comprising a motor having a drive shaft concentric with said opening, a spider secured to said drive shaft, and a perforate plate carried by said spider with said opening having peripheral portions adjacent to said mesh screen surrounding said opening, further comprising filter material carried by one side of said perforate plate facing the inward flow of air through said opening, and wherein said perforate plate is substantially flat.

3,126,264
APPARATUS FOR THE SEMI-ISOTHERMAL ADSORPTION OF GASEOUS IMPURITIES IN THE CRYOGENIC TEMPERATURE RANGE

Jerzy Damsz, Crestwood, Tuckahoe, N.Y., assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Oct. 26, 1960, Ser. No. 65,099
1 Claim. (Cl. 55—387)

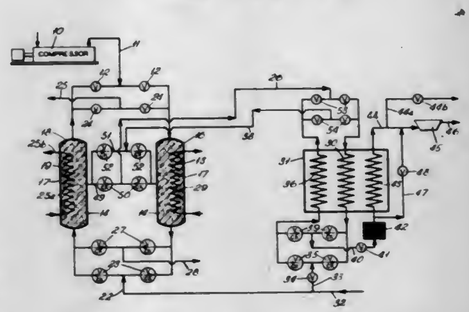


An adsorber for the semi-isothermal adsorption of gaseous impurities in the cryogenic temperature range comprising a container having an adsorber bed submerged in liquid gas and provided with a portion representing between 10% and 20% of the volume of said adsorber bed projecting out of said liquid gas dependent upon mass flow and pressure relative to the length and volume of said adsorber bed, said projecting portion being the end part of said adsorber bed taken in the direction of the adsorption flow.

3,126,265
PROCESS AND APPARATUS FOR SEPARATING CONDENSABLES FROM COMPRESSED GAS

Edward F. Yendall, Kenmore, Carl P. Andersen, Tonawanda, Reagan Houston, Williamsville, and William F. Mesinger, Tuckahoe, N.Y., assignors to Union Carbide Corporation, a corporation of New York

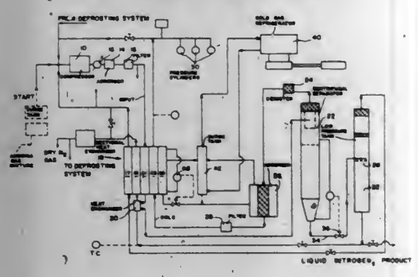
Filed Jan. 27, 1959, Ser. No. 789,285
23 Claims. (Cl. 62—14)



1. A process for the low-temperature separation of low-boiling condensables from a compressed gas stream including the steps of providing such stream at an inlet pressure below about 150 p.s.i.g.; passing at least most of such stream to a first main reversible heat exchange zone; partially cooling the stream to a temperature slightly warmer than the saturation point of said low-boiling condensables; dividing the partially cooled stream into major and minor portions; further cooling the major portion to a low temperature in the first exchange zone and simultaneously depositing at least most of its low-boiling condensables in such zone; discharging the further cooled and cleaned major portion of said compressed gas stream from the cold end of the first heat exchange zone; diverting the partially cooled minor portion of said compressed gas stream from the first heat exchange zone and conducting such minor portion at about said inlet pressure to a first reversing passageway in a second auxiliary reversible heat exchange zone, said second auxiliary reversible heat exchange zone being in parallel flow relationship with said first main reversible heat exchange zone; providing a cold purge gas stream at about said low temperature at the cold end of a second reversing passageway of said second auxiliary heat exchange zone; providing a second cold gas stream at about said low temperature at the cold end of a first non-reversing passageway of such second heat exchange zone; further cooling the partially cooled minor portion in the second heat exchange zone by heat exchange with the purge gas stream in said second reversing passageway and with the second cold gas stream in said first non-reversing passageway to a sufficiently low temperature for deposition of at least most of the low-boiling condensables of the minor portion in said first reversing passageway; discharging the further cooled and cleaned minor portion of said compressed gas stream from the cold end of said first reversing passageway; discharging the partially rewarmed second gas stream from the warm end of said first non-reversing passageway of second auxiliary heat exchange zone at an

intermediate temperature; periodically reversing the partially cooled minor portion and the purge gas stream between said first and second reversing passageways for evaporation of the previously deposited condensables into the purge gas stream; and discharging the partially warmed condensable-laden purge gas stream from the warm end of said second auxiliary reversible heat exchange zone.

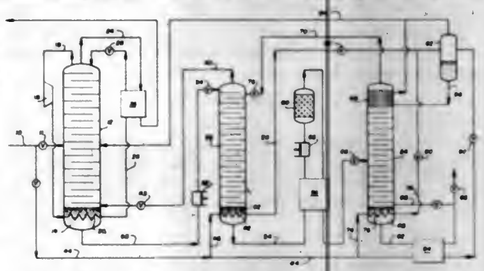
3,126,266
HYDROGEN AND HELIUM SEPARATION AND PURIFICATION
Joseph Meisler, New York, N.Y., assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Aug. 18, 1959, Ser. No. 834,595
3 Claims. (Cl. 62—18)



1. A method of separating out pure liquid nitrogen from a binary hydrogen-nitrogen gas mixture constituted of the products of the catalytic dissociation of ammonia at an elevated pressure in which the second component has a normal boiling temperature of not less than 140° R. comprising compressing said gas mixture, passing said compressed gas mixture through a heat exchanger and in contact with cold produced by an ultra low temperature cold gas refrigerator, passing said gas mixture through a centrifugal separator, passing the non-condensible hydrogen off-gas through a gas demister to separate the liquid nitrogen condensate from said non-condensible hydrogen off-gas, condensing out said second nitrogen component and decontaminating the residual, non-condensible hydrogen from traces of said component by contact with a preferential type absorbant, said liquid nitrogen being separated from the gaseous hydrogen by reducing the head pressure in the system and removing the resulting flash gas through separation passages, atomizing the liquid mixture into small liquid droplets to provide a consequent large disintrainment surface to thereby separate out a liquid nitrogen product in a substantially pure state, and removing the resultant liquid nitrogen as bottoms liquid nitrogen.

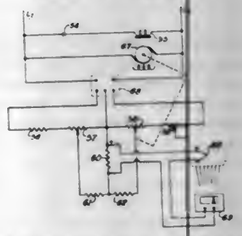
3,126,267
SEPARATING ISOTOPES OF HYDROGEN
Peter C. Vander Arend, Allentown, Pa., assignor, by mesne assignments, to Air Products and Chemicals, Inc., Trexlertown, Pa., a corporation of Delaware
Filed July 24, 1959, Ser. No. 829,275
8 Claims. (Cl. 62—27)

1. A method of separating isotopes of hydrogen, comprising feeding into a fractionation zone at condensation temperature hydrogen having a small proportion of deuterium to produce overhead and a pool of liquid in said zone, withdrawing overhead from said zone at a first temperature, introducing thus-withdrawn overhead at said first temperature into a compressor, compressing the introduced overhead at most several pounds per square inch, discharging compressed overhead from the compressor at a second temperature, introducing thus-compressed overhead at said second temperature into heat exchange with liquid of said pool of liquid to liquefy thus-compressed overhead, and returning thus-liquefied



overhead to said zone above the feed and substantially at the pressure existing in said zone.

3,126,268
APPARATUS FOR PRODUCING UNIFORM CONTINUOUS FIBERS
Cletis L. Roberson, Newark, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Filed Aug. 2, 1962, Ser. No. 214,218
7 Claims. (Cl. 65—11)

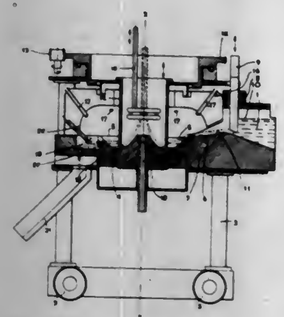


7. Fiber producing apparatus comprising in combination a container for a molten body of thermoplastic material, an electrically heated feeder associated with said container for forming a plurality of streams of said material, an electrical power circuit for said feeder having current limiting means therein and an associated control circuit, a rotary winder for attenuating said streams into continuous fibers and for winding said fibers into a package, a gathering device between said feeder and winder for grouping said fibers into a strand before being wound into said package, a temperature measuring device included in said control circuit arranged to supply signals to regulate said current limiting means for maintenance of current flow to said feeder for a given feeder temperature, and electrical timing means for supplying programmed auxiliary signals to regulate said current limiting means, said auxiliary signal means being arranged to supply signals to said current limiting means for variation of the temperature of the feeder at a rate matched to variations in the rate of attenuation of said streams due to package build up.

3,126,269
GLASS FEEDER INTENDED FOR A CONTINUOUS, UPWARD SUPPLY OF GLASS TO A SYSTEM FOR DRAWING GLASS TUBES OR RODS
Pieter van Zonneveld and Fredrik Berend Jan Wiegman, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed June 4, 1958, Ser. No. 739,773
Claims priority, application Netherlands June 8, 1957
4 Claims. (Cl. 65—191)

1. In a drawing apparatus for glass tubes or rods a glass feeder device comprising a tube having a lower rim

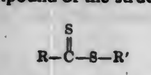
surrounding the drawing zone, a stationary melting pot having an upper rim, means supporting said melting pot whereby the upper rim thereof is located on a higher plane than the lower rim of said tube, a plurality of heating elements for the molten glass surrounding said tube and about the central axis of said melting pot, a recess in said



upper rim of the melting pot at a selected location, a glass drainage opening located at a level below said recess, overflow means connecting said recess and glass drainage opening, and a heating device mounted adjacent to said glass drainage opening whereby said glass conducted from the melting pot through the recess and the drainage opening is maintained in a fluid state.

3,126,270
CONTROLLING VEGETATION WITH CYCLOHEXENYL DITHIOCARBAMATES
Marion W. Harman, Nitro, and John J. D'Amico, Charleston, W. Va., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Original application Aug. 10, 1959, Ser. No. 832,435, now Patent No. 3,078,273, dated Feb. 19, 1963. Divided and this application June 30, 1960, Ser. No. 42,742
8 Claims. (Cl. 71—2.5)

1. The method of controlling vegetation which comprises applying to the soil medium a toxic concentration of a phytotoxic compound of the structure



where R represents a secondary amino radical selected from the group consisting of

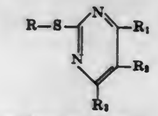
di(lower alkyl)amino,
di(lower alkenyl)amino,
di(middle halogen substituted lower alkyl)amino,
di(middle halogen substituted lower alkenyl)amino,
N-lower alkyl N-propargylamino,
N-alkyl-N-lower alkylamino,
N-lower alkyl-N-tetrahydrofurfurylamino,
N-lower alkenyl-N-tetrahydrofurfurylamino,
N-lower alkyl N-lower alkenylamino,
N-lower alkyl N-middle halogen substituted lower alkenylamino,
N-lower alkyl N-beta-cyanoethylamino,
N-lower alkenyl N-lower alkoxy lower alkylamino,
N-middle halogen substituted lower alkenyl N-lower alkoxy lower alkylamino,
di(lower alkoxy lower alkyl)amino,
di(phenoxy lower alkyl)amino,
di(benzyloxy lower alkyl)amino,
N(phenoxy lower alkyl)N-lower alkylamino,
N-cyclohexyl N-lower alkylamino,
N-(benzyloxy lower alkyl) N-lower alkylamino,
N-cyclohexenyl N-lower alkylamino,
N-furfuryl N-lower alkenylamino,
N-benzyl N-lower alkylamino,
N-furfuryl N-lower alkylamino,
morpholinyl,
pyrrolidinyl,
piperidinyl,
lower alkyl substituted piperidinyl, and
1,2,3,6-tetrahydropyridyl

and R' represents an alicyclic unsaturated radical selected from the group consisting of 2-cyclohexenyl, 3-cyclohexenyl, lower alkyl substituted 2-cyclohexenyl, middle halogen substituted 2-cyclohexenyl and middle halogen substituted 3-cyclohexenyl.

7. The method of controlling vegetation which comprises applying to the soil medium a toxic concentration of 2-cyclohexenyl 1-piperidinecarbodithioate.

3,126,271
METHOD OF CONTROLLING WEEDS
Arthur C. Thomson, San Antonio, Tex., and Chester L. Dewald, Cupertino, Stassen Y. C. Soong, Mountain View, and Mervin E. Brokke, Richmond, Calif., assignors to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Jan. 8, 1962, Ser. No. 164,977
6 Claims. (Cl. 71—2.5)

1. A method of controlling weeds comprising applying to a weed habitat a phytotoxic amount of a compound of the formula:



wherein R is selected from the group consisting of phenyl, substituted phenyl, phenyl alkyl, substituted phenyl alkyl, phenyl alkenyl and substituted phenyl alkenyl, said substituents being selected from the group consisting of halogen, lower alkyl and lower alkoxy, and R_1, R_2, and R_3 are selected from the group consisting of hydrogen, methyl, trifluoromethyl, and methoxy radicals.

3,126,272
METHOD FOR CONTROLLING PLANT GROWTH
Adolf Fischer, Mutterstadt, Pfalz, Horst Pommer and Guenter Scheuerer, Ludwigshafen (Rhine), and Herbert Stummeyer, Mannheim, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany
No Drawing. Filed Mar. 16, 1961, Ser. No. 96,088
Claims priority, application Germany Mar. 25, 1960
1 Claim. (Cl. 71—2.7)

A method for controlling plant growth comprising contacting the plant with a phytotoxic amount of 1,3'-methylbutyl-3,3-dimethylurea.

3,126,273
PROCESS FOR PRODUCING A BRITTLE RANEY-SILVER ALLOY
Eduard Justi, Braunschweig, and Karl-Hermann Friese, Stuttgart-Feuerbach, Germany, assignors, by mesne assignments, to Varta Aktiengesellschaft, a corporation of Germany, and Siemens-Schuckert-Werke Aktiengesellschaft, Erlangen, Germany, a corporation of Germany
No Drawing. Filed Apr. 24, 1961, Ser. No. 104,799
10 Claims. (Cl. 75—.5)

1. Process for producing a brittle easily grindable Raney-silver alloy which consists essentially of rapidly chilling a silver-aluminum alloy melt containing from 85–40% by weight of silver and 15–60% by weight of aluminum from an elevated temperature to a temperature below 100 degrees C. during a period of only a few seconds to change said alloy from melt phase to brittle, easily grindable solid phase.

3,126,274

PROCESS FOR REDUCTION SMELTING OF SILICEOUS ORES AND SLAGS BY USE OF CALCIUM CARBIDE

Olav C. Aamot, deceased, late of Lewiston, N.Y., by Richard O. Aamot, administrator, Niagara Falls, N.Y., assignor, by mesne assignments, to Independence Foundation, Philadelphia, Pa., and Koppers Company, Inc., Pittsburgh, Pa., both corporations of Delaware

No Drawing. Filed Mar. 16, 1961, Ser. No. 96,637
2 Claims. (Cl. 75—24)

1. In a process for the reduction smelting of siliceous ores and slags employing a calcium carbide reductant, the improvements that comprise,

(*a*) establishing a bath of calcium carbide within a smelting vessel;

(*b*) charging said ore or slag in a molten condition directly onto the surface of said calcium carbide, thereby rapidly reducing said ore or slag and resulting in the formation of a metallic phase and a waste slag phase; and

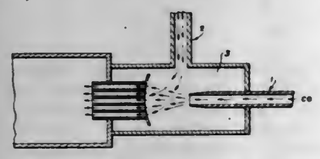
(*c*) removing and separating said metallic phase and said slag phase.

3,126,275

PROCESS FOR EXTRACTION OF METAL POWDERS, MAINLY IRON POWDER, FROM ORES

Stefan Tudja, Rua Sao Klemente 107,
Rio de Janeiro, Brazil

Filed May 24, 1960, Ser. No. 31,425
Claims priority, application Yugoslavia June 4, 1959
8 Claims. (Cl. 75—26)



1. The process for extracting a metal powder from its ore comprising simultaneously passing preheated ore and preheated CO-containing gas into a heated reaction nozzle, said heated nozzle being at a temperature above the temperature of said preheated ore and the temperature of said preheated CO-containing gas and below the melting point temperature of the metal and its gangue, thereby obtaining the metal powder and its gangue, said nozzle being maintained at a temperature at which the metal in the ore is reduced to its metallic state, and passing the so-formed metal powder and its gangue into a cooled separating chamber, and simultaneously separating said metal powder from its gangue by projecting said gangue at a shorter distance from the heated nozzle than the distance of said metal powder from said heated nozzle and cooling said powder and gangue.

3,126,276

METHOD OF REDUCING FINE IRON ORE IN A FLUIDIZED-SOLIDS REACTOR

William E. Marshall, Middletown, and Arthur P. Kerschbaum, Butler County, Ohio, assignors to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio

Filed Aug. 9, 1960, Ser. No. 48,445
4 Claims. (Cl. 75—26)

1. In a process of reducing finely divided iron ore by fluidized-solids reduction, the steps of:

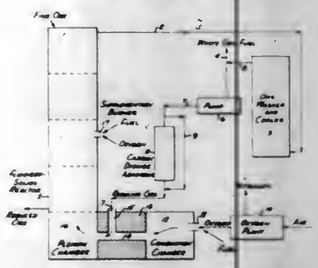
(*a*) reducing fluidized finely divided iron ore by means of a reducing gaseous mixture at elevated temperature,

(*b*) withdrawing and introducing into a circulatory system all of the gases derived from said reduction step,

(*c*) subjecting said withdrawn gases in said circulatory system to cooling for the lowering of the moisture content of said gases, whereby to increase their reducing potential,

(*d*) bleeding out of said closed system an amount of the said withdrawn gases therein substantially equal to the amount of gases produced by the combustion of fuel as hereinafter set forth,

(*e*) burning a mobile fuel with oxygen in the substantial absence of inert gases so as to produce products



of combustion consisting essentially of carbon monoxide, carbon dioxide, hydrogen and moisture, said products of combustion as formed being at a temperature of substantially 2000° to substantially 3500° F.,

(*f*) mixing the cooled and dried gases in said circulating system with said products of combustion in such quantity as to form said gaseous mixture having a temperature of substantially 1500° to 1700° F., said gaseous mixture having a diminished moisture content as respects said products of combustion and having strongly reducing characteristics at said temperatures, and

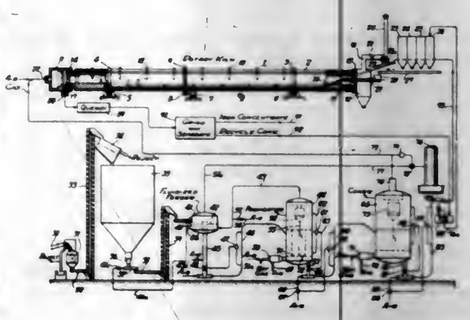
(*g*) employing the said gaseous mixture so formed in the said fluidized-solids reduction step.

3,126,277

ORE REDUCTION PROCESS

Rollin P. Smith, New Canaan, Conn., assignor to R-N Corporation, New York, N.Y., a corporation of Delaware

Filed Dec. 6, 1960, Ser. No. 74,185
4 Claims. (Cl. 75—36)



1. An integrated ore reduction and charring process, which comprises: reducing a metallic oxide ore in the presence of a low volatile, solid carbonaceous reductant and in the presence of hot combustible gases and a controlled amount of an oxygen-containing gas to provide a metallized ore reduction product admixed with an excess, unconsumed portion of said solid reductant, and concurrently therewith, subjecting a high volatile, solid carbonaceous raw material to a charring operation, by partial combustion thereof, to provide a low volatile, hot char with evolution of hot combustible gases, utilizing the hot gases thus obtained in the reduction of said ore, water quenching the said admixture of said ore reduction product and excess solid reductant, and separating, and admixing the hot char from said charring operation with said quenched and separated excess reductant.

3,126,278

LEAD BASE ALLOY

Willis G. MacLelland, Hastings on Hudson, N.Y., assignor to Anaconda Wire and Cable Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 30, 1960, Ser. No. 79,495
6 Claims. (Cl. 75—166)

1. A lead base alloy consisting essentially of from about 0.05% to 0.1% tellurium, from about 0.001% to 0.04% of at least one metal of the group consisting of nickel and silver and the balance lead, the ratio of tellurium to the metal of said group being about 25 to 1.

3,126,279

POWDER-METALLURGICAL PRODUCTION OF BODIES INTENDED FOR FURTHER WORKING

Sven Sigvard Bergh, Vargon, Sweden, assignor to Wargöns Aktiebolag, Vargon, Sweden, a company of Sweden

No Drawing. Filed May 7, 1962, Ser. No. 192,952
Claims priority, application Sweden May 19, 1961
4 Claims. (Cl. 75—200)

1. Method for the powder metallurgical manufacture of bodies adapted for further working which comprises sintering a loose, substantially uncompressed, powder mixture comprising at least 20% by weight of a first metallic component consisting of a chromium-containing ferrous alloy at least 50% of which is sigma phase and a second metallic component selected from the group consisting of iron, cobalt and nickel and mixtures thereof, said second metallic component being capable under the sintering conditions of alloying with said first metallic component and being present in quantity sufficient to destroy said sigma phase, the sintering being carried out at a temperature within the range from 1050 to 1350° C. and being continued until the mixture has a porosity of not more than about 10%.

3,126,280

NOVEL PHOTOGRAPHIC PRODUCTS, PROCESSES AND COMPOSITIONS EMPLOYING ANTHRAPYRIDONE DEVELOPERS

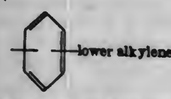
Elkan R. Blout, Belmont, Sidney Kasman, Arlington, and Myron S. Simon, Newton Center, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

No Drawing. Filed Nov. 7, 1961, Ser. No. 150,657
30 Claims. (Cl. 96—29)

15. In a process of forming photographic images in color, the steps which comprise developing an exposed silver halide emulsion with an aqueous alkaline solution of an anthrapyridone dye, at least one of the 3 and 6 position nuclear carbon atoms of the anthrapyridone nucleus having linked thereto a substituent having a group of the formula:

—Y—Z

wherein: Y is a divalent organic linking group selected from the group consisting of lower alkylene, phenylene and



radicals; and Z is an aryl nucleus selected from the group consisting of benzene and naphthalene nuclei substituted by at least two groups selected from the group consisting of hydroxyl and amino groups, at least one of said groups being substituted in one of the ortho and para positions with respect to the other of said groups, so as to be capable of developing an exposed silver halide emulsion; thereby providing in said emulsion a predetermined distribution of unoxidized anthrapyridone dye, and transferring at least part of said distribution of unoxidized dye by imbibition from said emulsion to an image-receiving element in superposed relationship with said emulsion to impart to said image-receiving element a positive dye image of the developed image.

3,126,281

REPRODUCTION LAYERS CONTAINING ORTHOQUINONE DIAZIDES

Oskar Süs and Karl Möller, Weisbaden-Biebrich, Germany, assignors, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J.

No Drawing. Filed Jan. 27, 1960, Ser. No. 4,889
Claims priority, application Germany Feb. 4, 1959
8 Claims. (Cl. 96—33)

5. A process for developing a printing plate which comprises exposing a supported light-sensitive layer to light under a master, the layer comprising an orthoquinone diazide compound and, in admixture therewith, a solid aromatic primary amine in proportions such that at least one amino group is present for at least one of the orthoquinone diazide groups, the amine upon exposure of the plate to light reacting to form an acid amide having a relatively high molecular weight and a low degree of solubility in a developer solution, and removing the layer in those areas not affected by the light by treatment of the layer with a developer solution.

3,126,282

REVERSAL PROCESS OF PHOTOGRAPHY

Heman Dowd Hunt, Eatontown, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 23, 1960, Ser. No. 30,749
4 Claims. (Cl. 96—59)

1. A reversal process of photography in which an exposed photographic element having at least one light-sensitive silver halide emulsion layer containing a non-diffusing color former

(*a*) is given a first development in an aqueous alkaline developer solution containing a developing agent to form silver images only,

(*b*) re-exposed to light

(*c*) given a second development in an aqueous developer solution containing a primary aromatic amino color developing agent to form both silver and dye images in the reverse areas of said emulsion layer; said process being characterized in that the first development is carried out in a developer solution containing about 0.005 to about 0.1 mole of imidazole per liter of solution.

3,126,283

SWEETENED CONDENSED PRODUCT

Peter P. Noznick, Robert H. Bundus, and Ingmar B. Eggen, Chicago, Ill., assignors to Beatrice Foods Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Dec. 5, 1962, Ser. No. 242,369
19 Claims. (Cl. 99—55)

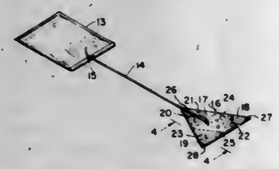
1. The process of preparing a sweetened condensed milk product from dry ingredients which comprises dispersing dry milk solids not fat in amount of 20.880% to 21.5% dry weight in water in amount of about 28% to 31.9% by weight having a temperature of about 40° F. to 100° F., heating the dispersion to a tempera-

ture of about 80° F. to 140° F. and adding an edible fat selected from the group consisting of vegetable fat in amount of about 7.99% to 8.5% by dry weight, animal fat and mixtures thereof, and cane sugar in amount of 39.680% to 42% by dry weight within that temperature range, finely dispersing the fat in the mixture having a temperature of about 80° F. to 140° F., sterilizing the mixture at a temperature between about 180° F. and 200° F. for about 10 to 20 minutes, cooling the mixture to about 90° F. to 110° F. and seeding the mixture with lactose crystals at a temperature of about 76° F. and 110° F., and cooling to about 70° F.

16. A product according to claim 1 wherein sugar-water solution is present in about 60% concentration in the final product.

3,126,284
INFUSION BAG WITH CONNECTED CARRIER IMPREGNATED WITH DIFFERENT FLAVOR MODIFYING AGENTS

Charles R. Howerin, Orlando, Fla.
Filed Sept. 4, 1962, Ser. No. 221,070
2 Claims. (Cl. 99—77.1)



1. An infusion unit for addition to water to prepare a beverage selected from the group consisting of coffee and tea, said unit comprising an infusion container with the product enclosed therein and a connected carrier for taste modifying agents, said connected carrier having porous areas individually impregnated with different taste modifying agents whereby a consumer may use such modifying agents selectively by the introduction thereof as desired into the formed beverage, said connected carrier having weakened portions in the areas individually impregnated with said modifying agents whereby when a small amount of any of said modifying ingredient is desired an appropriate amount of the connected carrier can be detached and the remainder of the connected carrier introduced into the formed beverage.

3,126,285
METHOD OF DESOLVENTIZING AND TOASTING SOYBEAN MEAL

George L. Lippold, St. Joseph, Mo., assignor to Dannen Mills, Inc., St. Joseph, Mo., a corporation of Missouri
Filed Aug. 31, 1959, Ser. No. 837,221
5 Claims. (Cl. 99—98)

1. A continuous method of desolventizing and toasting soybean meal that has been extracted with a solvent having a boiling point below that of water, said method comprising the steps of:

(*a*) introducing the meal into the uppermost of a series of stacked compartments in direct intercommunication through a series of passages therebetween;

(*b*) passing the meal successively through the compartments in a continuous stream via said passages and in flow configuration defining meal-free areas in each compartment above the level of the meal therein;

(*c*) heating the meal with steam in said uppermost compartment to a first temperature above the volatilization temperature of the solvent but below the boiling point of water;

(*d*) raising the water content of the meal in said uppermost compartment to a level within the range of about 14 percent to approximately 30 percent;

(*e*) removing solvent vapor from said area of the uppermost compartment, the meal being maintained in said uppermost compartment for a period sufficient to effect removal of a substantial proportion of the solvent therefrom;

(*f*) maintaining the meal in a second compartment below said uppermost compartment substantially at said first temperature, the meal passing through said second compartment being maintained therein for a period sufficient to effect substantial destruction of the urease activity thereof;

(*g*) providing vapor communication between said area of the second compartment and the first compartment;

(*h*) heating the meal in a third compartment below



said second compartment to a second temperature above said first temperature sufficient to effect toasting of the meal without burning thereof;

(*i*) maintaining the temperature of the meal in a fourth compartment below said third compartment at a level to dry the meal without burning thereof;

(*j*) providing vapor communication between the second and fourth compartments in by-passing relationship to said third compartment, the pressure on the meal in said third compartment being maintained at a level above the pressure in the other compartments to enhance toasting of the meal but below a pressure sufficient to cause blow-back of meal from the third compartment; and

(*k*) discharging desolventized and toasted meal from said fourth compartment.

3,126,286
PROCESS FOR TREATING SOYBEAN FLOUR

Raymond J. Moshy, Westport, Conn., assignor to General Foods Corporation, White Plains, N.Y., a corporation of Delaware
No Drawing. Filed Aug. 22, 1962, Ser. No. 218,555
6 Claims. (Cl. 99—99)

1. A process for treating a soybean flour characterized by its undesirable flavor, odor and color to produce a bland, odorless, substantially color-free soybean flour which comprises mixing soybean flour with an aqueous solution to form a slurry, adjusting the pH of said slurry to pH 4–6, digesting said slurry at a temperature of 70°–212° F. for 1–30 minutes, the time and temperature of said digesting step being in inverse relationship to each other, separating digested soybean flour from the acidified aqueous solution, washing said digested soybean flour for 5 to 60 minutes with water at a temperature of 70°–212° F. while maintaining the pH of the soybean flour

at 4–6, maintaining the temperature of at least one of the steps of digesting and washing at above 167° F., and separating from said slurry of washed, digested soybean flour and water a soybean flour characterized by its blandness and freedom from odor and color.

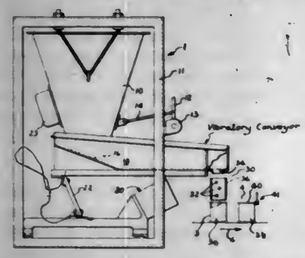
3,126,287
TREATMENT OF PLANT TISSUE TO PREVENT BROWNING

Bernard J. Finkle, Berkeley, Calif., assignor to the United States of America as represented by the Secretary of Agriculture
No Drawing. Filed May 16, 1962, Ser. No. 195,345
4 Claims. (Cl. 99—154)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A process for preserving the natural color of plant material which comprises immersing fresh edible plant material in an aqueous solution containing an alkaline material in a concentration to provide a pH about from 7 to 9, said solution further containing the enzyme O-methyltransferase in the event that said plant material is lacking in enzymes capable of blocking the reactive groups of browning precursors, holding the plant material in said solution under anaerobic conditions at a temperature about from 20° to 40° C. for a period in the range from 5 minutes to 3 hours until its color is stabilized, separating the plant material from the aqueous solution, and removing residual aqueous solution from the surface of the plant material.

3,126,288
METHOD OF DISPENSING PARTICLES OF MEAT TO CONTAINERS IN A CANNING LINE

Le Roy V. Strasburger and Leonard F. Gieseker, Baltimore, Md., assignors to National Can Corporation, Chicago, Ill., a corporation of Delaware
Filed Feb. 3, 1958, Ser. No. 712,705
2 Claims. (Cl. 99—187)

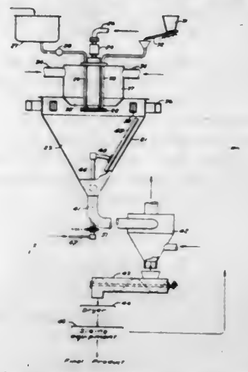


1. In the art of canning, the method of delivering edible ingredient material to containers in a canning line wherein the containers are displaced successively and at a controlled frequency to and past an ingredient receiving station in the canning line, which comprises providing the desired ingredient material as discrete particles of predetermined substantially uniform volume, localizing a supply of such discrete particles, and continuously removing particles from the localized supply by vibrational displacement of the particles at a rate preselected relative to the frequency of container displacement to and past the station, and conveying the removed particles to said station and into successive containers.

3,126,289
DRY MILK PROCESS OF MANUFACTURE

Herbert A. Spilman, Belvedere, and Louis J. Nava, Redwood City, Calif., assignors to Foremost Dairies, Inc., San Francisco, Calif., a corporation of New York
Filed Sept. 1, 1960, Ser. No. 53,498
4 Claims. (Cl. 99—203)

1. In a method for making dry fat-containing milk having instant properties in that when introduced into a quantity of water the product quickly wets and readily disperses upon simple stirring to form a stable reconstituted milk, the steps of continuously supplying fat-containing liquid milk to a region of atomization, separately and continuously supplying extraneous lecithin in liquid form to said region, the amount of lecithin so supplied being such as to provide from about 0.17 to 0.6% lecithin

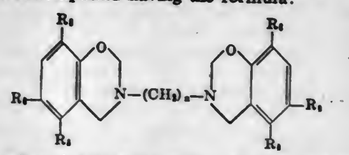


in the final product, simultaneously effecting atomization of both the liquid milk and lecithin in said region without substantial dispersion of the lecithin in the fat, contacting the atomized droplets with a drying gas to produce discrete particles, causing the discrete particles in moist condition to contact and adhere together to form moist porous aggregates, and then removing excess moisture from the aggregates to form a dry product.

3,126,290
METHOD FOR IMPROVING PHYSICAL PROPERTIES OF CLAYS AND CLAY-CONTAINING SOILS AND COMPOSITIONS RESULTING THEREFROM (3,3'-ABB)

John B. Hemwall, Long Beach, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Apr. 25, 1961, Ser. No. 105,264
13 Claims. (Cl. 106—84)

2. A composition of a clay material of the group consisting of clays and clay-containing soils and in admixture therewith at least 0.0025 and up to about 2 weight percent of a compound having the formula:



in which n is an integer from 2 through 6; R_5 is a member of the group consisting of H and Cl; R_6 is a member of the group consisting of Cl, Br, alkyl containing up to 16 carbon atoms; cycloalkyl, aryl and alkaryl containing up to 12 carbon atoms; and R_8 is a member of the group consisting of H, Cl and CH_3.

3,126,291
HYDRAULIC CEMENT COMPOSITION

Ellis Gray King and Carl Adolphson, Bellingham, Wash., assignors, by mesne assignments, to Georgia-Pacific Corporation, a corporation of Georgia
No Drawing. Filed Apr. 22, 1960, Ser. No. 23,922
24 Claims. (Cl. 106—90)

1. A cement composition comprising a hydraulic cement and at least 0.01%, by weight of the cement, of an additive consisting essentially of a water soluble salt

of a sulfonated lignin-containing material, said salt having a cation selected from the group consisting of iron, aluminum, chromium, copper and mixtures thereof.

3,126,292
HYDROCARBON BINDER COMPOSITIONS
Jacques Bottero, Marseille, and Charles Gaestel, Notre-Dame-de-Gravenchon, France, assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed June 16, 1961, Ser. No. 117,517
Claims priority, application France June 25, 1960
5 Claims. (Cl. 106—277)

1. A hydrocarbon binder composition consisting essentially of a bitumen binder, and from 0.1 to 10% by weight, based on the binder, of an adhesivity improving compound selected from the class of amino acids represented by the general formulas:

$$R.(NH.R')_nCOOH$$

and

$$R.CH.NH_2.R'.COOH$$

wherein n is an integer between 1 and 5, R is an alkyl radical having C_{14} to C_{18} carbon atoms and R' is an alkyl radical having C_2 to C_3 carbon atoms.

3,126,293
MILLING PROCESS
Justin A. McSheehy, Somerville, and Herbert Soffer, Fanwood, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Jan. 30, 1961, Ser. No. 85,477
6 Claims. (Cl. 106—309)

1. In a method of aggregate milling insoluble coloring materials to reduce the particle size of said coloring material, the improvement which comprises milling an aqueous slurry of the coloring material in the presence of about 0.25 to about 5% of a water-insoluble grinding medium having a particle size between about 40 and 400 mesh and a Moh hardness of at least about 7.

3,126,294
MOLD RELEASE MATERIAL
Richard J. Pichler, Chicago, Ill., assignor to Wilson & Co., Inc., a corporation of Delaware
No Drawing. Filed Mar. 28, 1960, Ser. No. 17,777
4 Claims. (Cl. 117—5.3)

1. The method of preparing a mold made of copper to accept molten copper for solidification without adherence to said mold which comprises slurrying precipitated alumina hydrate which has been calcined at a temperature in the range between 1800° F. and 2200° F. in a liquid medium substantially completely volatilizable at temperatures between 212° F. and 287° F. at atmospheric pressure, said calcined hydrate consisting essentially of

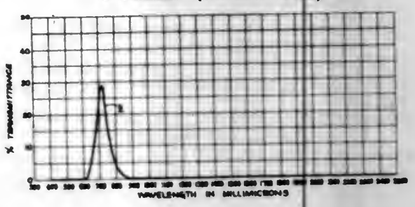
	Percent
Al_2O_3	98–99.6
Na_2O	0.05–0.75
SiO_2	0.01–0.15
Fe_2O_3	0.03–0.2

and having a specific gravity in the range between 3.6 and 3.9 and a particle size such that 100% will pass through a 200 mesh screen and showing

	Percent
H_2O by sorption and ignition test	0.1–2.5
Loss on ignition	0.2–1.0

heating the mold to a temperature in the range between about 25° F. and 75° F. above the boiling temperature of said liquid medium, applying a smooth coating of said slurry to the interior surface of the mold, and volatilizing said liquid medium whereby a substantially liquid medium-free coating of said alumina remains adhered to the surface of said mold.

3,126,295
ABSORPTIVE GLASS AND METHOD OF MAKING THE SAME
Robert W. Young, Woodstock, Conn., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts
Filed Aug. 31, 1961, Ser. No. 135,225
8 Claims. (Cl. 117—33.3)



1. A glass material having a calculated oxide composition comprising:

	Percent by weight
Aluminum oxide, Al_2O_3	15 to 20
Phosphorus pentoxide, P_2O_5	65 to 80
Ferric oxide, Fe_2O_3	1.5 to 4
Nickelic oxide, Ni_2O_3	3 to 5
Ceric oxide, CeO_2	2 to 9

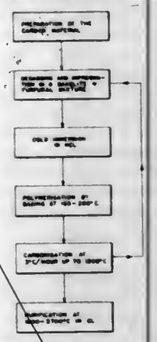
a 2 millimeter thickness of said glass composition having properties for peak transmission of light of wavelengths between 670 and 740 millimicrons and for substantially complete absorption of light of wavelengths shorter than 600 millimicrons and longer than 860 millimicrons.

2. A glass composition resulting from the combining of:

	Parts by weight
Aluminum metaphosphate, $Al(PO_3)_3$	400
Ferric oxide, Fe_2O_3	12
Nickelic oxide, Ni_2O_3	20
Ceric oxide, CeO_2	30

a 2 millimeter thickness of said glass composition having properties for peak transmission of light of wavelengths between 670 and 740 millimicrons and for substantially complete absorption of light of wavelengths shorter than 600 millimicrons and longer than 860 millimicrons.

3,126,296
METHODS OF IMPREGNATING CARBONS
Gilberte Moutaud, Neuilly, France, assignor to Societe le Carbone-Lorraine, Paris, France, a corporation of France
Filed Aug. 1, 1960, Ser. No. 46,329
Claims priority, application France Aug. 5, 1959
10 Claims. (Cl. 117—46)



1. A method of treating carbon and industrial graphite materials for the chemical industry, comprising the steps of impregnating the said material in a bath of a formophenolic resin together with furfuryl of a phenolformaldehyde resin whose resistance to chemical agents alcohol, and slowly carbonising the materials so treated at a temperature which progressively increases at a rate of approximately 3° C. per hour or less up to a maximum temperature of the order of 1200° C.

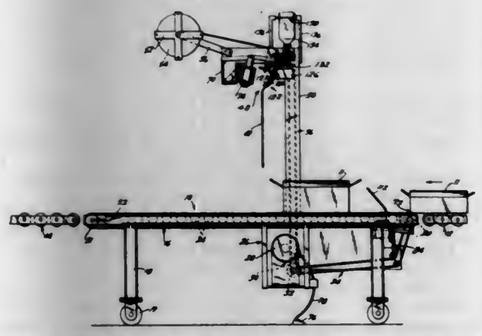
3,126,297
TREATMENT OF NONWOVEN FABRIC WITH ATACTIC POLYPROPYLENE
Michael P. Diamantopoulos, North Plainfield, Walter B. Armour, Plainfield, and Gerald Brown, Bound Brook, N.J., assignors to National Starch and Chemical Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed May 22, 1962, Ser. No. 196,589
2 Claims. (Cl. 117—140)

1. The process of making a bonded nonwoven fabric characterized by great softness, flexibility, and strength which comprises applying to a web of fibers a binding agent comprising atactic polypropylene dispersed in a liquid medium, and drying the same.

3,126,298
METHOD OF COATING WITH A COMPOSITION COMPRISING A POLYEPOXIDE AND A PARTIAL FATTY ESTER OF A POLYOL
Charles T. Patrick, Jr., and Charles W. McGary, Jr., South Charleston, and Paul S. Starcher and Benjamin Phillips, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed June 3, 1959, Ser. No. 817,718
2 Claims. (Cl. 117—161)

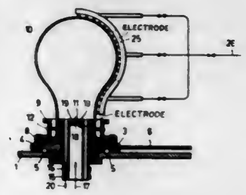
1. A method of protecting a surface for exposure to outdoor weather conditions which comprises applying to the surface as a coating a polymerizable composition dissolved in an inert solvent said polymerizable composition comprising (1) a polyepoxide containing between two and about eight cyclohexene oxide groups, and (2) a partial fatty ester of pentaerythritol having at least two free hydroxyl groups, said ester being present in an amount providing between about 0.8 and 1.5 hydroxyl equivalents per epoxy equivalent of said polyepoxide; and drying the coating at a temperature between 20° C. and 200° C. for a period of time sufficient to produce a hard tough flexible film on said surface.

3,126,299
CARTON LENGTH CONTROLLED TAPE SERVER
Clifford D. Keely, West Englewood, N.J., and Raymond J. Baisley, Hempstead, N.Y., assignors to General Corrugated Machinery Company, Inc., Palisades Park, N.J., a corporation of New Jersey
Filed Dec. 6, 1960, Ser. No. 74,128
6 Claims. (Cl. 118—4)



1. A tape serving mechanism comprising, in combination, a tape feed controller having a carton engageable portion of definite span and mounted for displacement by the carton from a normal inactive condition to a tape feeding condition, means for relatively moving the controller and a carton to be taped in the direction of the length of the carton and in engagement with one another for a distance equal substantially to the length of the carton plus the span of the carton engageable portion of the controller, tape feeding means responsive to the displacement of the controller by the carton to tape feeding condition, to feed out tape at a speed which coincides substantially with the speed of relative movement of the carton and the controller but rendered inactive by the return of the controller to the normal, inactive condition upon disengagement thereof by the carton, tape severing means operable in response to the return of the controller to normal condition, and means for terminating the relative movement of the carton and the controller in response to the return of the controller to normal condition.

3,126,300
DEVICE FOR COATING THE INNER SURFACES OF BULBS FOR INCANDESCENT LAMPS AND DISCHARGE TUBES WITH A POWDER
Jacobus Blenefelt and Henricus Antonius van Bakel, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Aug. 30, 1961, Ser. No. 134,880
Claims priority, application Netherlands Sept. 2, 1960
3 Claims. (Cl. 118—49.1)

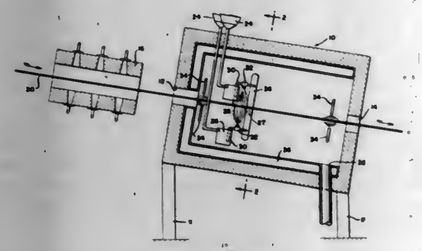


1. In a device for coating the inner surfaces of bulbs for incandescent lamps and discharge tubes with a powder, having members for holding a bulb which is to be coated, a nozzle having at least two channels adapted to be connected to a fine powder supply in a gas above atmospheric pressure which nozzle is provided with a first electrode adapted to be introduced into the neck of a bulb, and a second electrode arranged externally along the outer surface of the bulb and exhibiting a potential difference relative to the first electrode for coating the inner surfaces of said bulbs, means also for heating the bulb to be coated, the combination comprising at least a number of the channels in the nozzle each having an outflow aperture for said fine powder, the main directions of at least those parts of the channels which lie near the outflow apertures for the powder being convergent in the direction of spraying.

3,126,301
MOLTEN SALT SPRAY PROCESS FOR DESCALING STAINLESS STEEL
John A. Faler, Detroit, Mich., assignor to Kolene Corporation, Detroit, Mich.
Filed Sept. 11, 1961, Ser. No. 137,319
4 Claims. (Cl. 134—29)

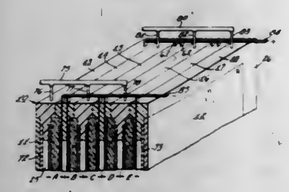
1. Process for descaling hot scaled metal strip comprising continuously passing said hot scaled metal strip into, through and out of a confined molten salt spray descaling zone filled with hot inert gas under pressure,

said zone having metal strip entrance and outward openings sealed by evolution of the inert gas under pressure, thereby inhibiting entrance of outside air, maintaining the surfaces of said strip out of contact with handling equipment while the hot strip is being cleaned in said zone, continuously spraying said strip with a hot molten



descaling salt atomized and propelled as a spray by a hot inert carrier gas against the surface of said metal strip, said hot carrier gas being applied at a substantially raised pressure sufficient to propel said molten salt against the metallic surface as a spray and to supply a positive air inhibiting pressure within said zone around the strip as it enters and as it leaves said zone.

3,126,302
FUEL CELL AND MODULE
Richard D. Drushella, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Apr. 6, 1960, Ser. No. 20,393
5 Claims. (Cl. 136—86)



1. A frame member for use in assembling a fuel cell module having an opening therethrough defined by an inner peripheral flange portion, said frame member also including an outer peripheral border portion and an intermediate body portion uniting said flange and border portions, said flange portion presenting an innermost surface and a pair of oppositely facing generally similar side surfaces, said side surfaces each being joined at its outer end with an innermost surface of said body portion which innermost surface extends away from said flange so as to form a first pair of laterally projecting seats, said body portion also presenting a pair of side surfaces each being joined at its outer end with an innermost surface of said border portion which innermost surface extends away from said body portion so as to form a second pair of laterally projecting seats disposed in outwardly and laterally spaced relation with respect to the first pair of seats, and said frame member also having a pair of gas passages communicating with said opening through a pair of areas of said innermost flange surface which are disposed across from each other on generally opposite sides of said opening, said pair of gas passages each extending from said opening outwardly through said flange and body portions and toward the outer periphery of the border portion of said frame member.

3,126,303
STEEL ALLOY
Charles H. Armitage, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Mar. 24, 1961, Ser. No. 98,214
1 Claim. (Cl. 148—36)



A cast ball mill screen plate, of a martensitic alloy steel consisting (by weight) of from about 0.25 to not more than 0.35 percent carbon, from about 1.40 to about 2.25 percent silicon, from about 0.80 to about 1.10 percent molybdenum, from about 0.1 to not more than 2.25 percent manganese; nil to not more than 0.03 percent sulfur; nil to not more than 0.03 percent phosphorus; and a remainder essentially of iron.

3,126,304
AMMONIUM NITRATE GAS GENERATOR COMPOSITION
Keith G. Penner and William G. Stanley, Seymour, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
No Drawing. Filed Aug. 27, 1962, Ser. No. 219,735
4 Claims. (Cl. 149—19)

1. A solid composition consisting of cellulose acetate, about 6–7%; acetyl triethyl citrate, about 8–9.4%; dinitrophenoxyethanol, about 7.1–8.4%; alkali metal barbiturate catalyst, about 0.8–1.5%; finely divided carbon, about 4.5–6.4%; ammonium oxalate, about 0.2–0.3%; aromatic hydrocarbon amine gassing inhibitor, about 0.5–1.5%; N-phenylmorpholine, about 0.2–0.5%; and the remainder of said composition being essentially ammonium nitrate.

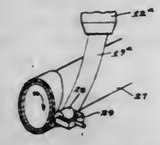
3,126,305
IGNITION COMPOSITIONS COMPRISING BORON CONTAINING SALTS
Robert K. Armstrong, Glassboro, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Jan. 12, 1962, Ser. No. 166,469
7 Claims. (Cl. 149—77)

1. An ignition composition comprising an intimate physical mixture of (*a*) a metal salt of a boron-containing acid selected from the group consisting of decahydrodecaboric acid and dodecahydrodecaboric acid, and (*b*) a solid inorganic oxidizing agent.

3,126,306
FABRICATING OBJECTS FROM PLASTIC MATERIALS IN SHEET OR STRIP FORM
Orville B. Sherman, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Original application Sept. 2, 1955, Ser. No. 532,165, now Patent No. 2,960,425. Divided and this application Feb. 25, 1960, Ser. No. 15,014
9 Claims. (Cl. 156—187)

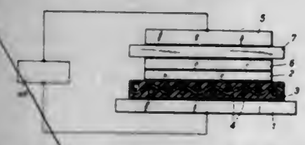
1. The method which comprises freely extruding heat-softened plastic material from an extruder continuously in ribbon or strip form, advancing said heat-softened strip with an edge surface thereof in abutting non-overlapping contact with an edge surface of another strip

of heat-softened extruded plastic material and simultaneously pressing the edge surfaces into contact, thereby



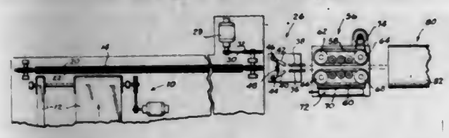
welding said edges together and, integrally uniting said strip edge surfaces.

3,126,307
METHOD OF SEALING THERMOPLASTIC MATERIALS BY DIELECTRIC HEATING
Jakob Jonathan Drittenbass, Burgstrasse 47, Sankt Gallen, Switzerland
Filed Mar. 10, 1958, Ser. No. 720,112
6 Claims. (Cl. 156—273)



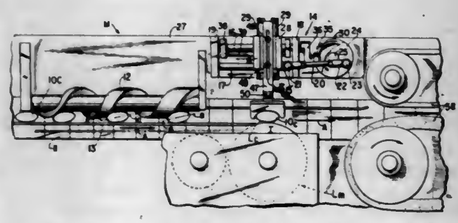
1. A method of joining two portions of a thermoplastic material having a low dielectric loss factor including the steps of placing said portions together; placing a buffer material between an electrode and the portions and in contact therewith, said buffer material being a reinforced plastic material with a dielectric loss factor of at least 0.1 and a softening point not above a temperature substantially equal to the softening point of the material to be sealed so that the buffer material and the thermoplastic material both soften to about the same degree when the two materials are pressed together and a given high frequency electric field is impressed across them, said buffer material having the property of not sticking to said thermoplastic material when said materials are pressed together and said buffer material is heated to the softening point of the thermoplastic material; placing a heat resistant insulating material between the counter-electrode and said portions and in contact therewith, said insulating material having a relatively low dielectric loss factor; pressing an area of the buffer material, the insulating material and said portions against each other, and impressing a high frequency electric field across said area; removing the high frequency electric field after the buffer material and the thermoplastic material have softened, and subsequently discontinuing pressing the said area after the thermoplastic material has become self-sustaining.

3,126,308
RADIO FREQUENCY LUMBER END-GLUE CURING MACHINE
Lawrence Brockerman and Russell G. Brant, Portland, Oreg., assignors to E. V. Prentice Co., Portland, Oreg., a partnership
Filed Aug. 29, 1960, Ser. No. 52,520
15 Claims. (Cl. 156—380)



5. Apparatus for manufacturing composite relatively long boards from a series of shorter boards having glue applied along at least one set of ends, said apparatus comprising mechanism having an outfeed end constructed to align the shorter boards lengthwise with the sides of the boards upright and with their bottom set of edges also aligned, power-driven advancing mechanism in front of said outfeed end for receiving such boards and engageable with opposite sides of the boards and constructed to urge such boards forwardly while maintaining the boards in their aligned position, and radio frequency operated dryer structure in front of said advancing mechanism fed by the advancing mechanism for drying glue along the ends of the boards, said dryer structure having a relatively smooth elongated and conductive transfer surface defining a course for boards and slidably supporting their bottom set of aligned edges, said transfer surface constituting one of a pair of electrodes in the dryer structure, said dryer structure also having carriage structure disposed over and extending along the length of said transfer surface, and plural electrode components mounted on said carriage structure extending in a line spaced above and paralleling said transfer surface, each of said components having a contacting surface portion for engaging the other set of edges of boards and constructed yieldably and resiliently to press against said other set of edges, said contacting surface portions being yieldable independently of each other, said surface portions together inhibiting free movement of boards through the dryer structure under the urging of said advancing mechanism whereby the boards tend to be crowded end to end in the dryer structure, said electrode components constituting the other of the pair of electrodes in the dryer structure.

3,126,309
LABEL MACHINE REGISTERING MEANS
Herman D. Manas, Roslyn Estates, and Roy J. Manas, Jericho, N.Y., assignors to M.R.M. Company, Inc., Plainview, N.Y., a corporation of New York
Filed Dec. 22, 1961, Ser. No. 161,484
3 Claims. (Cl. 156—566)



1. In a continuous motion labeling machine having a labeling station and means thereat to apply labels to successive containers moved thereto, a continuously movable conveyor for the containers, spacing means to impart approximately uniform spacing to the containers on the conveyor in advance of said labeling station, a guide for spaced containers on the conveyor extending parallel with the direction of conveyor motion, a jaw movable toward said guide and away therefrom for engaging in its toward motion successively the spaced container on said conveyor and pressing each against said guide for orienting each and placing it in an accurate position on said conveyor in advance of its arrival at said label-applying station to insure application thereto at the label-applying station of a label in a precise selected location on a surface of the container, a slide block for supporting said jaw, support means for said slide block to permit sliding movement thereof reciprocally and transversely of the direction of motion of said conveyor, a carriage for said support means movable slidably and reciprocally in a path parallel with the direction of motion of said con-

veyor, crank means for reciprocally moving said carriage, a pin member depending from said slide block, a compression spring mounted in said carriage and engaging said pin member to bias said slide block on its support means in a direction toward said guide, a roller depending from said slide block, a swingable bar engaging said roller, and cam means for swinging said bar to move the roller and with it said slide block in a direction away from such guide.

3,126,310
ARTIFICIAL CHRISTMAS TREES

Gertraud Elisabeth Hirschmann, Innere Laufer Gasse 8, Nurnberg, Germany

Filed May 11, 1960, Ser. No. 28,312
Claims priority, application Germany May 14, 1959
1 Claim. (Cl. 161—24)

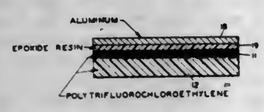


An artificial Christmas tree comprising: a trunk consisting of a plurality of thin-walled tubular sections disposed coaxially of one another, each of said sections having an enlarged end portion and an unenlarged end thereto, said enlarged end portion being adapted to telescopically receive the unenlarged end of the adjacent section therein in such a manner as to provide an annular space therebetween, said enlarged end portion having a plurality of radially disposed holes through the wall adjacent the end of said enlarged portion and distributed about the perimeter thereof; a plurality of artificial branches having deformable stems, said branches having the stub ends of their stems passing through said holes and extending into said annular space, the telescoping wall portions of adjacent trunk sections forming said annular space serving to frictionally clamp the ends of said branch stems within said annular space to effectively retain said ends within said space and to effectively clamp adjacent trunk sections together, whereby said stem end portions within said annular space comprise the sole means for connecting adjacent trunk sections together.

3,126,311
LAMINATED PLASTIC ARTICLE AND METHOD WHEREIN LAYERS ARE INTERLOCKED BY FUSED PLASTIC PARTICLES

Leo J. FitzHarris, Dayton, Ohio, assignor, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Original application Apr. 4, 1955, Ser. No. 499,071, now Patent No. 3,093,264, dated June 11, 1963. Divided and this application May 7, 1956, Ser. No. 583,268
9 Claims. (Cl. 161—46)

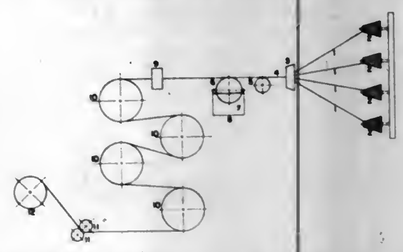


1. A new article of manufacture which comprises a layer of a thermo-setting resin as a settable material, a film of a thermoplastic polymer having a thickness in the range of 0.005 to 0.025 inch and interposed between said layer and said film a plurality of thermoplastic polymer particles having a particle size in the range of 0.005 to 0.94 inch, said polymer particles being fused to 25 to 90% of the surface of said thermoplastic polymer film and embedded in a surface of said settable material.

3,126,312
WEFTLESS PAPER TAPE

Ralph F. Nickerson, West Springfield, Mass., assignor to Shawinigan Resins Corporation, Springfield, Mass., a corporation of Massachusetts

Filed May 12, 1960, Ser. No. 28,783
6 Claims. (Cl. 161—144)



1. A pliable, twist-free, non-tacky, weftless tape capable of withstanding repeated 180° longitudinal flexures without separation of its component strands, said tape consisting of twisted paper strands bonded together in parallel position with 5 to 20% by weight, based on the total paper weight, of an adhesive residue yielded by the in situ drying of an aqueous dispersion comprising 20 to 75% by weight of a polyvinyl acetal characterized by a residual polyvinyl ester content of 1 to 35% by weight and a residual polyvinyl alcohol content of 3 to 25% by weight, and 35 to 50% of plasticizer, based on the polyvinyl acetal weight content of the dispersion.

6. A process for preparing the weftless tape of claim 1 comprising the juxtaposition in longitudinal parallel position of a plurality of twisted paper strands, the application of a coating to one side of the juxtaposed strands by contact with a roller having thereon the polyvinyl acetal dispersion, and the subsequent drying of the coated juxtaposed strands by contact with a drum heated to a temperature of at least 50° C.

3,126,313
TREATMENT OF METAL SURFACES TO PLACE FINELY DIVIDED SULFUR THEREON

Carl E. Johnson, Glen Ellyn, Ill., assignor to Nalco Chemical Company, a corporation of Delaware

No Drawing. Filed Mar. 9, 1959, Ser. No. 797,873
2 Claims. (Cl. 167—29)

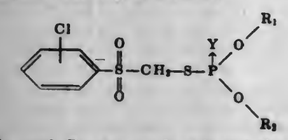
1. In a method of depositing finely-divided sulfur upon a solid surface wherein said solid surface is treated with a polyamine-sulfur complex and an amount of water at least sufficient to release finely-divided sulfur from said complex, the improvement which comprises stabilizing said polyamine-sulfur complex prior to application thereof to said surface to provide a delayed release of said sulfur upon contact of said complex with said amount of water by heating a mixture of sulfur and a polyamine selected from the group consisting of alkylene diamines, polyalkylene polyamines, hydroxyalkyl alkylene diamines and hydroxyalkyl polyalkylene polyamines at a temperature in the range of about 83° C. up to the boiling point of said polyamine for a period of time ranging from about 15 minutes up to about 8 hours and sufficient to form a polyamine-sulfur complex which is stable enough so that it will release finely divided sulfur slowly upon contact of said complex with water, said complex being rendered more stable against said release of sulfur with increasing temperatures and times of said heating of said sulfur and said polyamine, said sulfur in said complex constituting 1–50% by weight based on the total weight of said complex.

3,126,314
S-CHLOROPHENYLSULFONYLMETHYL - O, O - DIALKYLPHOSPHORODITHIOATE PESTICIDES

Llewellyn W. Fancher, Lafayette, and Gilbert G. Patchett, Oakland, Calif., assignors to Stauffer Chemical Company, a corporation of Delaware

No Drawing. Filed Oct. 24, 1960, Ser. No. 64,269
15 Claims. (Cl. 167—30)

1. A compound having the formula



wherein R_1 and R_2 are each selected from the class consisting of methyl, ethyl, propyl, butyl and pentyl, and Y is selected from oxygen and sulfur.

3,126,315
ANTIFERTILITY COMPOSITION FOR INSECTS

Charles W. Woods, University Park, and Morton Beroza, Silver Spring, Md., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed July 3, 1962, Ser. No. 207,438
10 Claims. (Cl. 167—33)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A method of causing sexual sterility in insects which comprises administering to the insect an N-substituted aziridinyl compound selected from the group consisting of tris[1-(2-methyl)aziridinyl]phosphine oxide, tris[1-(2-methyl)aziridinyl]phosphine sulfide, 2,4,6-tris[1-(2-methyl)aziridinyl]-s-triazine, phenyl bis[1-(2-methyl)aziridinyl]phosphine oxide, 2,5-bis[1-(2-methyl)aziridinyl]benzoquinone, tris[1-aziridinyl]phosphine oxide, and tris[1-(2,-2-dimethyl)aziridinyl]-phosphine oxide.

3,126,316
PROCESS OF INCREASING CHOLEPOIESIS WITH NICOTINIC ACID ESTER OF METHYL-p-TOLYL CARBINOL AND ALPHA-NAPHTHYL ACETIC ACID

Hugo Zellner, Linz (Danube), Austria, assignor to Danube-Pharmazie Gesellschaft m.b.H., Landwiedstr., Linz (Danube), Austria, a corporation of Austria

No Drawing. Filed Mar. 25, 1959, Ser. No. 801,732
Claims priority, application Austria Mar. 28, 1958
4 Claims. (Cl. 167—55)

1. A choleretic and cholepoietic composition comprising a pharmaceutical excipient and, as choleretic and cholepoietic agent, the nicotinic acid ester of methyl-p-tolyl carbinol and a compound selected from the group consisting of α-naphthyl acetic acid and its sodium salt.

3,126,317
AMPHOMYCIN AND ITS PRODUCTION AND RECOVERY

Bernard Heinemann, De Witt, Irving R. Hooper, Fayetteville, and Murray A. Kaplan, Syracuse, N.Y., assignors, by mesne assignments, to Bristol-Myers Company, New York, N.Y., a corporation of Delaware

Filed Nov. 20, 1958, Ser. No. 775,188
14 Claims. (Cl. 167—65)

10. A substance selected from the group consisting of a polypeptide, its metal salts and its acid additional salts, said polypeptide being colorless, amphoteric, highly surface-active, exhibiting potent activity against Gram-positive bacteria and substantially no activity against Gram-negative bacterial, having an isoelectric point of 3.4–3.6, a molecular weight of about 1400 to 1500 and a maximum optical rotation $[\alpha]_D^{25}$ of +7.5° (c.=1 in water) at pH 6, containing the elements carbon, hydrogen, nitrogen and oxygen in substantially the following proportions:

carbon 54.4%
hydrogen 7.2%
nitrogen 14.2% and
oxygen 24.2% (by difference)

containing a single free amino group with a pK of 9.0, exhibiting only end absorption of ultraviolet light, exhibiting a positive biuret test and negative ninhydrin, Sakaguchi, Molisch and Ehrlich-Pauly tests, being stable in aqueous solutions from pH 2 to 10 for at least 10 days at room temperature, extracting readily from water into n-butanol at pH 2 to 4 and extracting readily from n-butanol to water at pH 7 to 9 and exhibiting, in the form of its calcium salt pelletized in potassium bromide, characteristics infrared absorption spectra as shown in FIGURE 1 including the characteristic absorption maxima in the infra-red region of the spectrum at the following wave lengths expressed in microns: 3.0, 3.25, 3.4, 5.8 (shoulder), 6.05, 6.13, 6.35, 6.45, 6.53, 6.58, 6.90, 7.07, 7.13, 7.63, 7.90, 8.10, 8.70–9.10 (broad), 9.84, 10.1, 10.92, 11.12 and 11.35–11.70 (broad).

3,126,318
SYNERGISTIC ANTIBIOTIC COMPOSITIONS AND PREPARATION THEREOF

Marvin Legator, Modesto, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed May 31, 1961, Ser. No. 113,598
4 Claims. (Cl. 167—65)

1. An antibiotic composition comprising (*a*) an antibiotic of the group consisting of chloramphenicol, streptomycin and erythromycin and (*b*) N^6-benzyladenine in the proportion of from about 0.2 to about 10 parts by weight of said adenine per part by weight of said antibiotic.

3,126,319
METHOD FOR THE POTENTIATION OF ANTIHISTAMINES: 2 - [p - CHLORO - α(2 - DIMETHYLAMINOETHOXY)BENZYL]PYRIDINE AND 5-(N - METHYL-4-PIPERIDYLIDENE)DIBENZO[a,e]CYCLOHEPTATRIENE

Irving Tabachnick, North Caldwell, and Franklin E. Roth, Livingston, N.J., assignors to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey

No Drawing. Filed Apr. 30, 1962, Ser. No. 191,285
21 Claims. (Cl. 167—65)

1. A pharmaceutical preparation comprising nicotinamide in admixture with an antihistamine selected from the group consisting of chlorpheniramine, d-chlorpheniramine, cyproheptadine, and the pharmaceutically acceptable acid addition salts thereof, said nicotinamide being present in an amount, by weight, of at least about 250 times greater than said antihistamine.

3,126,320
ENTERIC-COATED TABLETS OF DEXTRAN SULFATE ESTER AND METHOD OF PREPARATION THEREOF

Eiji Morii, Chigusa-ku, Nagoya, Koichi Iwata, Nishi-ku, Nagoya, and Masatsugu Shamoto, Nakagawa-ku, Nagoya, Japan, assignors to Meito Sangyo Kabushiki Kaisha, Nagoya, Japan, a corporation of Japan

No Drawing. Filed Apr. 23, 1962, Ser. No. 189,305
Claims priority, application Japan Apr. 25, 1961
9 Claims. (Cl. 167—82)

1. An enteric-coated tablet of dextran sulfate ester comprising a water-soluble salt of dextran sulfate ester

coated uniformly with an enteric coating material which is insoluble in a simulated gastric fluid having a pH below 3.0 but dissolves or disintegrates in a simulated intestinal fluid having a pH ranging between 5.0 and 8.0.

8. A method of regulating the lipolytic activity of the liver, comprising orally administering a tablet provided with an enteric coating and containing a water-soluble salt of dextran sulfate, said coating being selected to prevent release of said water-soluble salt of dextran sulfate until said tablet is contacted by intestinal fluid.

3,126,321
SOFT GELATIN CAPSULES

Walter M. Kurtz, Kalamazoo, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

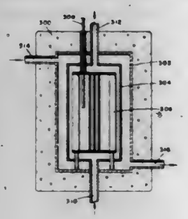
No Drawing. Filed Jan. 26, 1962, Ser. No. 169,093
4 Claims. (Cl. 167—83)

1. A filled soft gelatin capsule wherein the fill comprises a fluid oleaginous vehicle and powdered ingestible cellulose.

3,126,322
CONSERVATION OF THERMAL ENERGY

Andrew D. Suttle, Jr., Jackson, Miss., and Hermann E. von Rosenberg, Baytown, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

Continuation of application Ser. No. 655,404, Apr. 26, 1957. This application July 14, 1960, Ser. No. 42,849
2 Claims. (Cl. 176—51)



1. In the operation of a shielded nuclear reactor of the hydrocarbon coolant type containing a core of a critical amount of fissionable nuclear material in a core zone, the improved method of operation to maintain the core zone at a desired temperature and to utilize the thermal energy generated in the core zone which comprises the steps of circulating a first fluent hydrocarbon coolant through said core zone, simultaneously circulating a second fluent hydrocarbon coolant through a moderating zone annular to the core zone in indirect countercurrent heat exchange contact with the first fluent hydrocarbon coolant in said core zone and flowing said fluent hydrocarbon coolants through an unshielded heat utilization zone exterior of said shielded nuclear reactor and extracting heat from said fluent hydrocarbon coolants in said heat utilization zone, said first fluent hydrocarbon coolant being a low sulfur content extract of catalytic cycle stock, said second fluent hydrocarbon coolant being a mixture of virgin gas oil with catalytic cycle stock, said fluent hydrocarbon coolant being flowed through said nuclear reactor at a flow rate sufficient to maintain said core zone at a desired temperature and to prevent thermal conversion of more than about 5 percent of said fluent hydrocarbon coolant, said fluent hydrocarbon coolants boiling within the range of about 220° to 650° C. and comprising a mixture of hydrocarbons, said fluent hydrocarbon coolants containing not more than about 5 volume percent of extraneous materials having neutron cross-sections of more than about 10 barns, said fluent hydrocarbon coolants being exposed to a total radiation dosage within the range of about 10^7 to about 10^{10} rads.

3,126,323
NUCLEAR REACTOR FUEL MEMBERS

Robert D. Leggett, Robert K. McGeary, and Eber K. Halteman, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Apr. 19, 1956, Ser. No. 579,325
6 Claims. (Cl. 176—70)

3. A clad member suitable for use as a fuel element in a nuclear reactor and highly resistant to corrosion when subjected to high temperature water and steam, the clad member comprising a core comprising an alloy composed of from 3% to 18% by weight of at least one element selected from the group consisting of molybdenum and niobium, from 0.3% to 5% by weight of platinum and the balance being uranium, the alloy being substantially all of gamma phase structure, and a cladding layer metallurgically bonded to the core, comprising an alloy consisting essentially of from 0.1% to 2.5% by weight of tin, from 0.1% to 2% by weight of at least one element selected from the group consisting of iron, nickel and chromium, and the balance being zirconium, with less than 0.5% of incidental impurities, the thickness of the cladding layer being at least 3% of the thickness of the core.

3,126,324
CATALASE COMPOSITIONS

Milton A. Mitz, Chicago, Ill., and Sam Satomi Yanari, St. Paul, Minn., assignors, by mesne assignments, to Armour-Pharmaceutical, a corporation of Delaware

No Drawing. Filed Dec. 23, 1957, Ser. No. 704,238
6 Claims. (Cl. 195—63)

1. An active catalase composition, comprising a water-insoluble salt having a catalase component and a cellulose component containing bonded anion exchange groups, said water-insoluble salt being characterized analytically by hydrolyzing hydrogen peroxide to evolve oxygen gas.

3,126,325
ASSAY METHOD FOR ANTIMICROBIAL SUBSTANCES

George M. Poole, Greenfield, Ind., assignor to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana

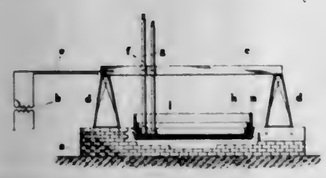
No Drawing. Filed Dec. 15, 1961, Ser. No. 159,769
4 Claims. (Cl. 195—103.5)

1. An assay method for antimicrobial substances, employing assay means which comprise an inert, absorbent carrier having deposited thereon spores of a microorganism of the family Bacillaceae, a culture medium for said microorganism containing an oxidizable substrate, a buffering composition effective to produce a pH between about 5.5 and about 9, and an indicator substance in oxidized form which changes color upon being reduced, said indicator substance being present in a proportion nontoxic to said microorganism under growth conditions, and said assay means initially containing an insufficient proportion of water to permit vegetative growth of said microorganism, said method comprising the steps of moistening a series of said assay means with serial dilutions of an aqueous solution of an antimicrobial substance, and incubating the moistened assay means in shallow, individual containers under growth conditions for the microorganism contained therein, while maintaining said assay means in moistened condition, for a time sufficient to cause a color change in said assay means in the absence of antimicrobial substances.

3,126,326
METHOD AND APPARATUS FOR BAKING SOEDERBERG ANODES FOR ELECTROLYSIS CELLS

Edmondo Frerotti and Gualtiero Landucci, Bolzano, Italy, assignors to Montecatini, Società Generale per l'Industria Mineraria e Chimica, Milan, Italy, a corporation of Italy

Filed June 26, 1961, Ser. No. 119,464
Claims priority, application Italy June 28, 1960
3 Claims. (Cl. 204—67)

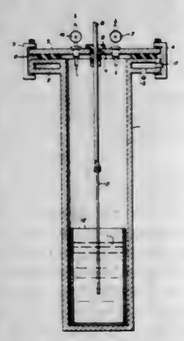


1. A method for baking carbonaceous electrodes for Soederberg electrolytic cells outside of the electrolytic cell, which comprises the steps of arranging on an electrically non-conducting refractory base a metal tray having a horizontal cross section corresponding to the section of the electrode to be produced, positioning on the inner bottom surface of said tray a layer of electrical insulating material, positioning within said tray and against the upper side of said layer insulating material a plurality of electrical conducting members, placing within said tray in electrical contact with said members and in electrical contact with a portion of said tray a Soederberg-type carbonaceous paste, passing an electric current through said conducting members and through said tray and through said paste so that the paste itself forms a current-carrying path to produce a resistance-heating effect, gradually increasing said electric current from a relatively low value to a higher value until said paste acquires a hard baked layer, and transferring the paste mass thus baked to an electrolytic cell and connecting said mass as the anode thereof.

3,126,327
ELECTROLYTIC METHOD FOR EXTRACTING THE CHROMIUM VALUES FROM CHROMIUM OXIDE BEARING ORES

Delbert C. Fleck, Reno, and Morton M. Wong, Boulder City, Nev., assignors to the United States of America as represented by the Secretary of the Interior

Filed Dec. 4, 1962, Ser. No. 242,331
7 Claims. (Cl. 204—71)
(Granted under Title 35, U.S. Code (1952), sec. 266)

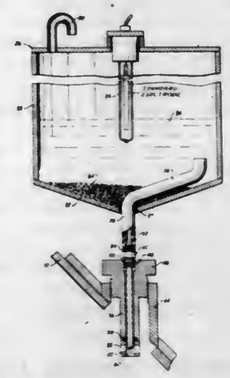


1. A method for electrowinning ferrochrome from chromium ores comprising fusing in a graphite container a mixture of (1) the chromium ore and (2) an electrolyte composition from the group consisting of (*a*) a mixture of sodium pyrophosphate, sodium metaphosphate and sodium chloride, and (*b*) a mixture of sodium carbonate and sodium tetraborate, allowing the fused mixture to stand for a period of time sufficient to dissolve out at least a portion of the metallic oxides from the ore, and subsequently electrolyzing the molten electrolyte-ore mixture, with the graphite container as anode, to deposit ferrochrome at the cathode.

3,126,328
ELECTROLYTIC BRIDGE ASSEMBLY FOR THE ANODIC PASSIVATION OF METALS

Merle Hutchison, Olen L. Riggs, Jr., and John D. Sudbury, Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

Filed Mar. 9, 1959, Ser. No. 797,986
1 Claim. (Cl. 204—196)



In combination with a metallic vessel adapted to contain a corrosive electrolyte, an article of manufacture for protecting the vessel from attack by said corrosive electrolyte comprising:

(*a*) an inert electrode positioned in said vessel for contact with the corrosive electrolyte;
(*b*) a source of direct current connected to said inert electrode and vessel to polarize the vessel with respect to the inert electrode;
(*c*) a reservoir having at least side walls and a bottom;
(*d*) a non-corrosive electrolyte contained within said reservoir;
(*e*) means supporting said reservoir on said vessel at a vertically higher level than the top of said vessel;
(*f*) means associated with said reservoir for venting the reservoir to the atmosphere;
(*g*) a standard electrode removably positioned in said reservoir for contact with the non-corrosive electrolyte therein;
(*h*) control means connected between said standard electrode and said vessel and responsive to changes in the potential difference between said standard electrode and said vessel for controlling the flow of current between said inert electrode and said vessel; and
(*i*) an electrolytic bridge between said reservoir and said vessel for placing the removable standard electrode in electrical communication with the corrosive electrolyte in said vessel, said electrolytic bridge comprising:

(1) a weeping glass bridge positioned in said vessel for immersion in the corrosive electrolyte therein, said weeping glass bridge having a restricted opening in the lower end therefor for

permitting non-corrosive electrolyte to pass from the weeping glass bridge into the corrosive electrolyte under the influence of hydrostatic pressure;

(2) rigid tubular shield means surrounding said weeping glass bridge and protecting the bridge from mechanical vibration and from agitation of the corrosive electrolyte;

(3) means for mounting the shield means to said vessel; and

(4) a conduit having one of its ends attached to said weeping glass bridge and the remaining end inserted through the bottom of said reservoir, the terminus of said conduit within said reservoir being positioned at a level sufficiently high within said reservoir that foreign matter and free crystals of salt will not enter said conduit terminus.

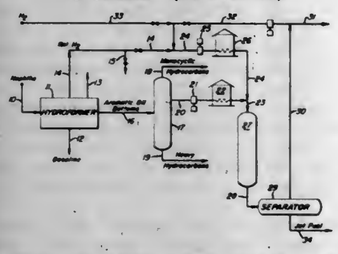
3,126,329
BLOWN BITUMENS AND A PROCESS FOR MAKING THEM
Jean Fort, Paris, France, assignor to The British Petroleum Company Limited, London, England, a joint-stock corporation of Great Britain
No Drawing. Filed Apr. 25, 1961, Ser. No. 105,306
Claims priority, application France May 12, 1960
7 Claims. (Cl. 208—4)

1. A method of preparing a blown bitumen, in which an oxidising gas selected from the group consisting of oxygen and a mixture of oxygen and an inert gas, is blown through a residual petroleum fraction which is maintained at a temperature within the range 150° C. to 300° C. in the presence of a fluid catalyst consisting of an anhydrous solution of 50% to 80% by weight phosphorus pentoxide in 50% to 20% by weight of phosphoric acid having the general formula:

$$H_mR_nPO_4$$

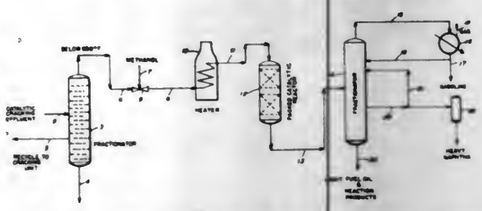
in which R represents a monovalent hydrocarbon radical having 1 to 20 carbon atoms selected from the group of hydrocarbon radicals consisting of alkyl, cycloalkyl and aromatic radicals, and in which m is 1 to 3 and $m+n=3$, said catalyst being present in an amount between about 0.1% and 5%, by weight, based on the total feedstock.

3,126,330
JET FUEL PRODUCTION
Wilford J. Zimmerschied, Crown Point, Ind., and Marvin J. Den Herder, Olympia Fields, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Filed Apr. 6, 1959, Ser. No. 804,437
3 Claims. (Cl. 208—15)



3. A thermally stable highly decalinic hydrocarbon jet fuel having a heat of combustion of about 18,400 B.t.u. per pound and 134,000 B.t.u. per gallon, an aromatics content not substantially higher than about 0.5 volume percent, having a freezing point in the vicinity of −100° F. and having a viscosity at −30° F. of approximately 12 to 15 centistokes.

3,126,331
PURIFYING HYDROCARBONS
Phillip S. Landis and Henry D. Norris, Woodbury, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York
Filed Oct. 5, 1961, Ser. No. 143,206
11 Claims. (Cl. 208—240)



1. A process comprising mixing an impure hydrocarbon having at least one impurity which in storage tends to cause a harmful change in the properties of said hydrocarbon, with an amount of a paraffinic alcohol having fewer than five carbon atoms in excess of that required to completely react with all of the above-described impurity present in the hydrocarbon, and passing the mixture of alcohol and hydrocarbon over a solid, acid-type catalyst at a temperature of 500 to 1100° F.

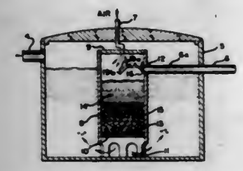
3,126,332
SIFTING FRAME
Felipe Salete, Mexico City, Mexico, assignor to Refaccionaria de Molinos, S.A., Mexico City, Mexico
Filed May 19, 1961, Ser. No. 111,296
1 Claim. (Cl. 209—408)



A sifting device for sifters and classifiers comprising a rectangular frame having a U-shaped part in cross-section in one end thereof, a U-shaped channel member positioned adjacent and being slidable along a long side of the frame and into a pocket of the U-shaped part, a rectangular bar adapted to be inserted into the U-shaped channel member to clamp and hold a fabric cloth stretched over the frame, and means in the form of a threaded plug member connected to the other end of the frame and a screw in threaded engagement with the threaded plug member and rotatably mounted in the U-shaped channel member to force the channel member and its bar with the fabric clamped therein into the pocket of the U-shaped part of the frame to stretch the fabric over the frame and hold it in tight stretched condition.

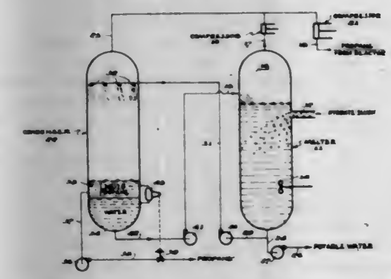
3,126,333
SEWAGE TANK AND METHOD OF SEWAGE TREATMENT
Frederick P. Williams, 612 Wedgewood Ave., Dayton, Ohio
Filed Aug. 28, 1959, Ser. No. 836,796
3 Claims. (Cl. 210—15)

1. In the art of treating sewage contained in a plurality of compartments in connection with one another, the step of causing the sewage to pass through a mechanical filter in one of said compartments, the further step of intermittently introducing an oxygen-containing gas in and around the filter to activate the bacteria contained in the sewage in the said compartment, the additional step of employing the pressure of the gas to drive the liquid content of the sewage out of the filter and into another of said compartments to a level higher than the level of the remaining sewage in the said one compartment and the final step of discontinuing the gas pressure in order to permit the liquid to return from said other of the compartments and to flow through the filter in a



direction reverse of the direction in which said gas had driven the sewage until it attains its normal level whereby the filter is automatically cleansed of foreign particles during the expulsion and return of the liquid in the said one compartment.

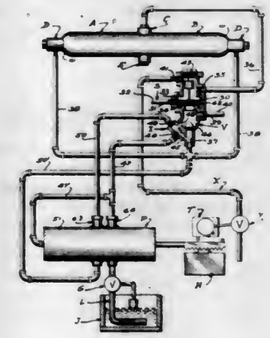
3,126,334
PROCESS AND APPARATUS FOR MELTING HYDRATE CRYSTALS
Earl V. Harlow, Pittsburgh, Pa., assignor to Koppers Company, Inc., a corporation of Delaware
Filed Dec. 18, 1961, Ser. No. 159,899
3 Claims. (Cl. 210—60)



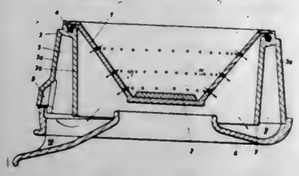
1. A process for melting the solid hydrate of a hydrate-forming material gaseous at room temperature and atmospheric pressure and very slightly soluble in water comprising dispersing the solid hydrate in potable water in a first vessel at a temperature and pressure promoting decomposition of the hydrate into potable water and gaseous hydrate-forming material, removing potable water from said first vessel, conducting part of the removed potable water into a second vessel, dispersing the water so conducted in fine droplets, removing gaseous hydrate-forming material from said first vessel, increasing the pressure of said gaseous hydrate-forming material to form compressed gas, introducing said compressed gas into said second vessel, said compressed gas and fine droplets being in intimate contact resulting in condensation of the hydrate-forming material and in an increase in the temperature of the fine droplets and recirculating the warmed potable water to said first vessel for effecting additional hydrate decomposition.

3,126,335
WATER SOFTENER
Wesley E. Stipe, 1600 Industrial Road, Las Vegas, Nev., assignor of one-third to Walter H. Bell and one-third to Jack C. Wollenzien, Las Vegas, Nev.
Filed Oct. 28, 1960, Ser. No. 65,786
4 Claims. (Cl. 210—126)

1. A water softener of the character referred to including, an elongate horizontally disposed tubular body, an inlet fitting in the body intermediate its ends, like outlet fittings at the opposite ends of the body and a sodium ion charged filler in the body, a flow control valve having inlet and outlet ports connected with supply and delivery pipes of a water system, outlet and return ports and a drain port, an outlet pipe extending between and connected with the outlet port and the inlet fitting, return pipes extending between and connected with the return port and the outlet fittings, a drain pipe connected with the drain port, said outlet and drain ports and said delivery and return ports being in communication, a shiftable valve member in the valve normally establishing communication between the inlet port and the outlet and drain ports and shutting off communication between the inlet port and the delivery and return ports and shiftable to shut off communication between the inlet port and the outlet and drain ports and establish communication between the inlet port and the return and delivery ports, and a normally closed drain valve in the drain pipe, timing means operatively connected with the drain valve to intermittently open and close the said drain valve and effect operation of the control valve and reversal of flow through the softener, and means for first introducing brine into the softener and subsequently introducing rinse water through the softener when the flow control valve is actuated including, an injector related to the flow control valve, a brine tank, and a pilot valve, said injector including a check valve related to the return port to check reverse flow through said port, a venturi nozzle communicating with the return port upstream of the check valve, a suction port communicating with the nozzle, a flow passage between the control valve and the nozzle, and a rinse port communicating with the flow passage, said pilot valve including an elongate barrel with front and rear ends, a ported head closing the front end and longitudinally spaced front and rear pairs of laterally opening ports, a longitudinally shiftable valve member in the barrel normally positioned in the rear portion of the barrel and closing the lateral ports and having an annular flow channel adapted to establish communication between the ports of each pair of ports upon forward longitudinal movement of the valve member in the barrel, a suction line extending between the suction port and one of the rear ports, a brine pipe extending between the other rear port and the brine tank and having a normally open float control valve therein responsive to the level of brine in the tank, and a suction branch pipe connected with and extending between the forward end of the barrel and the suction line, whereby minus pressure is established in the forward end of the barrel to urge the valve member therein forwardly, a rinse pipe connected with and extending between the rinse port and one of the front ports and a rinse line extending between and connected with the other front port and the return pipes.

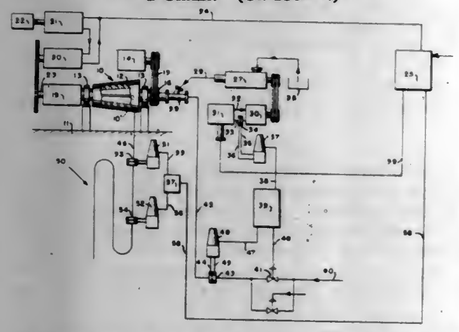


3,126,336
DOMESTIC JUICE CENTRIFUGES
Paul Gloor, Olten, Switzerland, assignor to Rotel A.G., Aarburg, Switzerland, a Swiss corporation
Filed Sept. 6, 1960, Ser. No. 54,190
3 Claims. (Cl. 210—369)



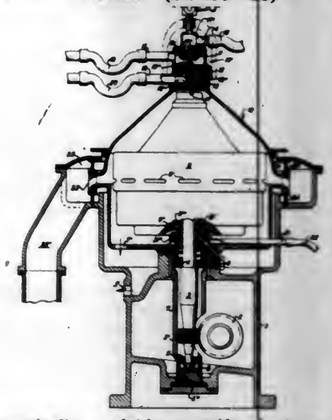
1. Domestic centrifuge for extracting juice, comprising a rotatable basket having a perforate screening wall, a double-walled stationary housing supporting said basket and having an inner and outer wall joined at their upper portions and defining between said walls a downwardly open annular air space extending around the entire periphery of said basket, a juice receiving pan having a bottom below and spaced from said inner wall, said pan forming a juice collecting chamber communicating with said downwardly open annular air space, said outer housing wall being supported on said juice pan, and means forming at least one restricted outlet in said outer housing wall above said juice pan for passage of air by centrifugal force outwardly, whereby extracted juice passing through said basket screening wall collects free of entrained air in said pan.

3,126,337
SYSTEM FOR SEPARATING AND CLASSIFYING SOLIDS
William C. Smith, Moline, Ill., assignor to Ametek, Inc., a corporation of Delaware
Filed Oct. 11, 1960, Ser. No. 61,935
1 Claim. (Cl. 233—4)



A system for separating and classifying solids, comprising in combination a separator including a rotatable beach and a rotatable conveyor therein; means for driving said beach; a hydraulic pump and motor system for driving said conveyor in a predetermined relation relative to said beach; a pump for feeding material to be treated to said separator; a hydraulic variable displacement pump and motor system for driving said feeding material pump; means for measuring the density of the effluent discharging from said separator; a controller responsive to the pressure of liquid in said conveyor driving system and the density of said effluent for varying the displacement of said variable displacement pump and thereby the amount of separation; and adjustable means responsive to the flow of liquid in said variable displacement pump and motor system and the flow of liquid to said separator for maintaining substantially constant a predetermined ratio of liquid to material to be treated being fed to said separator.

3,126,338
HERMETICALLY SEALABLE MOUNTING MEANS FOR A CENTRIFUGAL DRUM
Peter Steinacker, Oelde, Westphalia, Germany, assignor to Westfalia Separator A.G., Oelde, Westphalia, Germany, a German corporation
Filed Nov. 29, 1960, Ser. No. 72,404
Claims priority, application Germany Nov. 30, 1959
7 Claims. (Cl. 233—23)



1. Hermetically sealable centrifugal drum arrangement which comprises a centrifugal drum having at the top end portion thereof drum inlet means and outlet means for the material treated within the drum, mounting means rotatably receiving and completely enclosing the drum, stationary base means, said mounting means being pivotally positioned on said base means for displacement together with the drum out of the normal rotational path of the drum and including chamber means outwardly resiliently enclosing in hermetically sealed rotatable condition the drum inlet and outlet means for the material treated in the drum, inlet source flexible conduit means and outlet recovery flexible conduit means, said chamber means flow communicating said inlet and outlet means with said inlet source and outlet recovery means, respectively, for the material treated within the drum, and said chamber means being displaceable together with the drum inlet and outlet means out of said normal path.

3,126,339
COMPOSITION OF NYLON AND POLYTETRAFLUOROETHYLENE
Louis L. Stott, Wyomissing, Pa., assignor, by mesne assignments, to Polymer Processes, Inc., Reading, Pa., a corporation of Pennsylvania
No Drawing. Filed Mar. 10, 1961, Ser. No. 94,670
2 Claims. (Cl. 252—12)

1. A process for the preparation of shaped articles having low coefficient of friction comprising the steps of adding at least ¼% by weight of finely divided polytetrafluoroethylene to a monomeric lactam, uniformly dispersing said polytetrafluoroethylene throughout such lactam, polymerizing said lactam below the melting point of the resulting polylactam while said polytetrafluoroethylene is uniformly held in suspension therein.

3,126,340
METHOD OF INCREASING ALKALINITY OF COMPOSITIONS BY INCORPORATING ALKALINE EARTH METAL CARBONATES THEREIN
Albert Sabol, Munster, Eli W. Blaha, Highland, and George S. Curosh, Whiting, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
No Drawing. Filed Nov. 21, 1961, Ser. No. 154,070
10 Claims. (Cl. 252—18)

1. A method of increasing the alkalinity of a composition which is permeable to gases and which is miscible with alkaline earth metal oxides, which comprises:

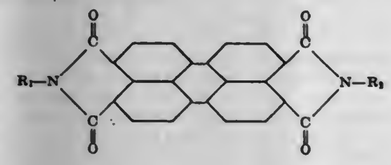
admixing said composition with a member of the group consisting of alkaline earth metal oxides and hydroxides,

introducing gaseous carbon dioxide and ammonia into said admixture at a temperature below the decomposition temperature of ammonium carbamate,

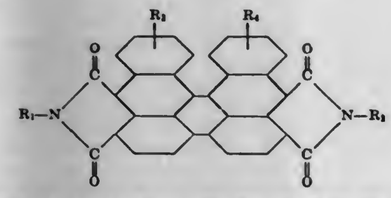
and heating the resulting mixture in the presence of water to a temperature sufficient to convert the ammonium carbamate to an alkaline earth metal carbamate, and thence to convert the alkaline earth metal carbamate to the alkaline earth metal carbonate.

3,126,341
PERYLIMID GREASE
Jacques L. Zakin, Hewlett, N.Y., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
No Drawing. Filed July 29, 1960, Ser. No. 46,113
12 Claims. (Cl. 252—28)

1. A grease capable of functioning at temperatures as high as about 600° F. and consisting essentially of an oil of lubricating viscosity and from about 5 to about 50 percent by weight of a perylimid compound represented by the general formulae:



and



wherein R_1, R_2, R_3 and R_4 are selected from the group consisting of hydrogen, alkyl, cycloalkyl, aryl, alkaryl, anthraquinyl, alkoxyaryl, haloaryl and aminoaryl.

8. A grease defined by claim 1 wherein there is also present up to about 10 percent by weight of the grease, of a colloidal silica.

3,126,342
LUBRICATION OF THE MOVING PARTS OF INTERNAL COMBUSTION ENGINES OPERATING ON SULFUR AND OXYGEN OR OXYGEN-CONTAINING GASES
Gerhard Schacheumaier and Klaus Starke, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany
No Drawing. Filed Feb. 2, 1961, Ser. No. 86,573
Claims priority, application Germany Feb. 5, 1960
3 Claims. (Cl. 252—31)

1. In the lubrication of moving parts of internal combustion engines operating on sulfur and a gas selected from the group consisting of O_2 and O_2-containing gases, a method of inhibiting the formation of viscous substances and the corrosion of the moving parts which comprises using a lubricating oil which contains from 0.05 to 10% by weight of sulfur and maintaining the inner surface of the cylinder of the internal combustion engine at a temperature above the dew point of sulfuric acid and below 165° C. by means of a coolant.

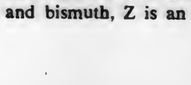
3,126,343
LUBRICANT CONTAINING PHOSPHITE ADDITIVE
Glenn R. Wilson, Cambridge, Mass. (24 Concord, Boston, Mass.)
No Drawing. Original application May 26, 1958, Ser. No. 737,490. Divided and this application Sept. 16, 1960, Ser. No. 56,361
2 Claims. (Cl. 252—49.8)

1. A lubricant composition consisting essentially of a base oil to which has been added about 0.1% of 2,6-di-tertiary-butyl-4-methyl-phenyl phosphite.

3,126,344
SYNTHETIC ESTER LUBRICATING OIL COMPOSITION
Alfred H. Matuszak, Westfield, and Stephen J. Metro, Scotch Plains, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Jan. 3, 1961, Ser. No. 80,008
6 Claims. (Cl. 252—51.5)

1. A lubricating base oil composition comprising:

(*a*) about 40 to 70 volume percent of triester of the general formula:



wherein R is C_1 to C_8 alkly group and R′ is C_3 to C_{11} alkyl group, and

(*b*) about 60 to 30 volume percent of a complex ester material, said complex ester material consisting essentially of:

(I) About 60 to 100 weight percent of complex ester of the general formula:

$$R_1—OOCR_2COO—(R_3—OOCR_4COO)_n—R_5$$

wherein R_1 and R_5 are alkyl radicals of neo alcohol having 6 to 13 carbon atoms; R_2 and R_4 are hydrocarbon radicals of 4 to 10 carbons; R_3 is a hydrocarbon radical of a 1,3-glycol having no beta hydrogen and containing at least 5 carbon atoms; *n* is from 1 to about 6; and wherein said complex ester contains 40 to 65 carbon atoms per molecule, and

(II) the remainder of said complex ester material being diester of the formula:

$$R_1—OOCR_2COO—R_5$$

wherein R_1 and R_5 are alkyl radicals of neo alcohol having 6 to 13 carbon atoms, and R_2 is a hydrocarbon radical containing from 4 to 10 carbon atoms.

3,126,345
FERROMAGNETIC COMPOSITIONS AND THEIR PREPARATION
Thomas J. Swoboda, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Oct. 31, 1960, Ser. No. 66,194
17 Claims. (Cl. 252—62.5)

1. A ferromagnetic composition exhibiting a tetragonal crystal structure of the Cu_2Sb-type having the formula

$$M_xMn_{3-x}Q_yZ_z$$

wherein M is a metal selected from the class consisting of iron, cobalt, nickel, copper and zinc, Q represents at least one element selected from the class consisting of arsenic, antimony, and bismuth, Z is an element of the

class consisting of the elements of groups III–IV of the periodic table, x is 0.03–1.0, y is 1.0–2.0, and a is 0–1.0.

3,126,346
FERROMAGNETIC COMPOSITIONS AND THEIR PREPARATION

Tom A. Bither, Jr., Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Oct. 31, 1960, Ser. No. 66,195
8 Claims. (Cl. 252—62.5)

1. A ferromagnetic composition having a tetragonal crystal structure and comprising as the sole transition metal component from 61 to 75 atom percent of a single metal selected from the class consisting of chromium, manganese, iron, cobalt, and nickel, and from 25 to 39 atom percent of at least two elements selected from the class consisting of gallium, germanium, selenium, tellurium, arsenic, antimony and bismuth, of which at least 12½ atom percent is an element selected from the class consisting of arsenic, antimony, and bismuth.

3,126,347
MAGNETIC ANTIMONIDES AND ARSENIDES AND THEIR PREPARATION

Thomas J. Swoboda, Chester, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Mar. 22, 1962, Ser. No. 181,744
17 Claims. (Cl. 252—62.5)

2. A ferromagnetic composition consisting essentially of at least two transition elements selected from the class consisting of vanadium, chromium, manganese, niobium, molybdenum, tantalum, tungsten and rhenium, of which at least one such transition element is selected from the class consisting of vanadium, chromium and manganese, said transition elements being present in a total amount of from 35 to 95 atom percent, each of said transition elements being present in an amount of at least 0.1 atom percent, based on the total composition, at least one element selected from the class consisting of arsenic and antimony in an amount of from 5 to 40 atom percent and from zero up to and including 30 atom percent of at least one element selected from the group consisting of bismuth, cadmium, gallium, indium, lead, thallium, tin, zirconium, scandium, yttrium, magnesium and zinc.

3,126,348
GASEOUS MEDIUM FOR A HOT-GAS RECIPROCATING APPARATUS

Roelf Jan Meijer, Emmasingel, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Feb. 2, 1959, Ser. No. 790,434
Claims priority, application Netherlands Feb. 15, 1958
2 Claims. (Cl. 252—67)

1. A gaseous medium for a hot-gas reciprocating apparatus consisting of from 3% to 20% by weight of hydrogen, the remainder and major part of said medium consisting essentially of helium, and said medium being substantially oxygen-free.

3,126,349
LOW EXPANSION CERAMIC ARTICLE

Henry P. Kirchner, Williamsville, N.Y., assignor to Cornell Aeronautical Laboratory, Inc., Buffalo, N.Y., a corporation of New York

Filed Apr. 24, 1961, Ser. No. 105,206
4 Claims. (Cl. 252—301.1)

4. A ceramic article having a low thermal expansion coefficient, consisting essentially of a sintered mixture of uranium dioxide and uranium phosphate.

3,126,350
CATIONIC BITUMINOUS EMULSIONS

Merton J. Borgfeldt, San Francisco, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed Mar. 1, 1961, Ser. No. 92,476
5 Claims. (Cl. 252—311.5)

1. An oil-in-water type cationic bituminous emulsion of improved mechanical stability, comprising from about 30 to about 75% by weght of bitumen, as the dispersed phase; from about 0.2 to about 2.0% by weight of a water-soluble salt of lignin amine product of reaction of lignin with an amine selected from the group consisting of primary and secondary amines and with a carbonylic compound selected from the group consisting of aldehydes and ketones, as the cation-active emulsifier for dispersing said bitumen in water; and water to make up 100% by weight, as the continuous phase, the pH of the emulsion being adjusted to a value in the range from about 1.0 to about 4.5.

3,126,351
HYDRATED LEAD BORATE PRODUCTS

Laurence R. Blair, Gillette, and Karlis L. Jaunarajs, Somerville, N.J., assignors to Johns-Manville Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Dec. 31, 1958, Ser. No. 784,080
12 Claims. (Cl. 252—478)

1. The method of preparing a structural borate neutron shielding material consisting essentially of self-bonding, water insoluble hydrated borate gel, which comprises forming a water insoluble hydrated borate gel precipitate by combining, in aqueous solution, borax and water soluble lead salts of an acid selected from the group consisting of nitric and acetic, and mixtures thereof, in an approximate ratio, on an oxide basis, of about 1–2 mols of B_2O_3 for each mol of lead oxide and at a temperature within the range of approximately 60–200° F.

9. A structural borate neutron shielding material consisting essentially of the self-bonding, water insoluble borate gel precipitate reaction product of combining, in aqueous solution, borax and water soluble lead salts of an acid selected from the group consisting of nitric and acetic, and mixtures thereof, in an approximate ratio, on an oxide basis, of about 1–2 mols of B_2O_3 for each mol of divalent metal oxide and at a temperature within the range of approximately 60–200° F.

3,126,352
HYDRATED BORATE PRODUCTS

Laurence R. Blair, Gillette, and Karlis L. Jaunarajs, Somerville, N.J., assignors to Johns-Manville Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Dec. 31, 1958, Ser. No. 784,081
14 Claims. (Cl. 252—478)

1. The method of preparing structural borate neutron shielding material consisting essentially of self-bonding, water insoluble hydrated borate gel, which comprises forming a water insoluble hydrated borate gel precipitate by combining, in aqueous solution, borax and water soluble acid salts of a group II divalent metal selected from the group consisting of calcium, barium, magnesium, cadmium, and zinc, and mixtures thereof, in an approximate ratio, on an oxide basis, of about 1–2 mols of B_2O_3 for each mol of divalent metal oxide and at temperatures within the range of approximately 60–200° F.

11. A structural borate neutron shielding material consisting essentially of the self-bonding, water insoluble borate gel precipitate reaction product of combining, in aqueous solution, borax and water soluble acid salts of a group II divalent metal selected from the group consisting of calcium, barium, magnesium, cadmium, and zinc, and mixtures thereof, in an approximate ratio, on an oxide basis, of about 1–2 mols of B_2O_3 for each mol of divalent metal oxide and at temperatures within the range of approximately 60–200° F.

3,126,353
PRODUCTION OF AMIDE-LIKE POLYCONDENSATION PRODUCTS FROM HYDROXYNITRILES

Hans Lautenschlager, Ludwigshafen (Rhine), Germany, assignor to Badische Anilin- and Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Nov. 30, 1959, Ser. No. 855,988
Claims priority, application Germany Nov. 28, 1958
5 Claims. (Cl. 260—2)

1. A process for the production of amide-like polycondensation products which are insoluble in methanol and have melting points between 180° C. and 350° C. which comprises polycondensing a hydroxynitrile of the formula HO—R—CN, wherein R represents a saturated aliphatic hydrocarbon chain of from 2 to 11 carbon atoms, by heating said hydroxynitrile at temperatures between 50° C. and 300° C. and at pressures of from 30 to 250 atmospheres in the absence of water and of solvents containing hydroxy groups and in the presence of an inert gas.

3,126,354
METHOD OF IMPREGNATING POLYSTYRENE BEADS WITH BUTANE IN A NON-AQUEOUS ENVIRONMENT TO RENDER SAID BEADS FOAMABLE

Stewart T. Day, Fort Worth, Tex., assignor to Crown Machine & Tool Company, Inc., Fort Worth, Tex., a corporation of Texas

No Drawing. Filed Jan. 2, 1963, Ser. No. 248,907
8 Claims. (Cl. 260—2.5)

1. A method of making a foamable polystyrene bead material for use as a molding medium which includes the steps of placing a selected charge of polystyrene bead material in a substantially gas-tight container, providing a substantially non-aqueous environment in the container, adding to the container a predetermined amount by weight of dry butane under positive pressure so that the bead material will be impregnated to a selected level and agitating the container to commingle the bead material and the butane in the substantially non-aqueous environment.

3,126,355
PROCESS OF PREPARING DRY POWDERED VINYL ESTER POLYMER COMPOSITIONS AND RESULTING PRODUCT

Vera M. Birten, Bernard M. Brill, and Herbert Terry, Springfield, Mass., assignors to Shawinigan Resins Corporation, Springfield, Mass., a corporation of Massachusetts

No Drawing. Filed Mar. 16, 1959, Ser. No. 799,478
7 Claims. (Cl. 260—8)

1. A process for the manufacture of dry, free-flowing, water redispersible powders, comprisng (A) the thorough blending, by means of a dough mixer, of (1) 40 to 1000 parts by weight of an insoluble water dispersible inorganic particulate solid selected from the group consisting of pigments, pigment extenders, Portland cements, plaster of Paris, lime, silicates and mixtures thereof; (2) 0.1 to 5 parts of a surface active agent selected from the group consisting of tertiary amines, sodium salts of sulfosuccinic acids, alkyl aryl sulfonic acids and condensed sulfonic acids, condensates of fatty acids with ethylene oxide, polyethoxylated alkyl and aryl alcohols, and polyoxyalkelene glycols; (3) up to 30% of the particulate inorganic solid weight of a high boiling water dispersible organic liquid selected from the group consisting of glycols, glycol ethers, esters of glycol ethers, phthalate esters, phosphate esters, citrate esters, chlorinated biphenyls, polyesters and mixtures thereof; (4) 0.4 to 25 parts of a hydrophilic colloid thickener selected from the group consisting of borated alginates, methyl cellulose, carboxymethyl cellulose, hydroxyethyl cellulose, guar gum, methylated guar gum and polyvinyl alcohol; and (B) sifting in and thoroughly blending with the resultant mixture, 100 parts of a dried particulate water redispersible polyvinyl ester emulsion wherein the polyvinyl ester is selected from the group consisting of polymers of vinyl esters of organic acids containing from 2 to 7 carbon atoms and copolymers of vinyl acetate with compatible monoethylenically unsaturated monomers.

3,126,356
PENTAERYTHRITOL CONDENSATION PRODUCTS AND THEIR PREPARATION

William M. Kraft, Verona, N.J., assignor to Heyden Newport Chemical Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 19, 1958, Ser. No. 755,857
6 Claims. (Cl. 260—22)

5. In the process of producing light-colored alkyd resins the steps comprising heating pentaerythritol with approximately 1 to 8% of a nuclear sulfonated styrene-divinylbenzene copolymer cation exchange resin in the hydrogen cycle at 190° to 240° C. to evolve approximately 0.25 to 0.75 mole of water per mole of pentaerythritol thereby forming a polyhydric alcohol composition which is a mixture of pentaerythritol and pentaerythritol dehydration products, said mixture containing 20 to 75% of said pentaerythritol dehydration products and having a hydroxyl content in the range of 35 to 41%, heating said polyhydric alcohol composition with a monocarboxylic acid selected from the group consisting of fatty acids containing 4 to 20 carbon atoms, mononuclear aromatic acids, and mixtures thereof and a polycarboxylic acid to form an alkyd resin containing said cation exchange resin, and thereafter separating the cation exchange resin from the alkyd resin.

3,126,357
HIGH TEMPERATURE CEMENT INCLUDING THERMOSETTING SILICONE RESIN AND CRISTOBALITE SILICA

Edward O. Liebig, Chatham, N.J., assignor, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware

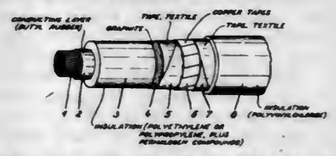
No Drawing. Filed Jan. 2, 1959, Ser. No. 784,426
7 Claims. (Cl. 260—37)

5. A cement comprising a mixture of 25 to 75 percent by weight of a thermosetting silicone resin and 25 to 75 percent by weight of refractory oxide filler material, the cement including at least 10 percent of cristobalite silica forming at least part of the refractory oxide filler material.

3,126,358
METHOD FOR IMPROVING THE BREAKDOWN STRENGTH AND CORONA RESISTANCE OF OLEFIN POLYMERS WITH PERHALOGENIZED HYDROCARBONS

Jost Lemmerich, Berlin-Siemensstadt, Germany, assignor to Siemens Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt, Germany, a corporation of Germany

Filed Oct. 12, 1959, Ser. No. 846,022
26 Claims. (Cl. 260—45.7)



1. A method for improving the breakdown strength and corona resistivity of a solid olefin polymer, taken from

the group consisting of polyethylene and polypropylene, characterized in that there is mixed with the polymer 0.5 to 20% by weight thereof of a perhalogenized hydrocarbon compound, the compound having a melting point below 20° C., a boiling point above 150° C., and a molecular weight smaller than 1,000, the halogen of said compound being taken from the group consisting of chlorine and fluorine, the compound having at least three carbon atoms, said mixing being carried out by milling at a temperature above the softening point of the polymer, the mixture being solid at 20° C.

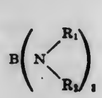
3,126,359

PROCESS FOR THE POLYMERIZATION OF FORMALDEHYDE

Klaus Weissermel and Hans Dieter Hermann, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Nov. 30, 1959, Ser. No. 855,974
Claims priority, application Germany Dec. 2, 1958
7 Claims. (Cl. 260—67)

1. A process for the polymerization of formaldehyde, which comprises the step of polymerizing pure, monomeric, gaseous formaldehyde at a temperature within the range of about —20° C. to about 60° C. in admixture with an inert organic solvent and 0.0001 to 0.1 mole percent per mole of monomeric formaldehyde, of a member selected from the group consisting of boric acid tris pyrrolidide, boric acid tris N-carbazolidide and a boric acid trisamide of the general formula



wherein the radicals R_1 and R_2 represent members selected from the group consisting of unsubstituted, nitro-substituted and alkoxy-substituted aliphatic, cycloaliphatic and aromatic hydrocarbon radicals containing up to 20 carbon atoms.

3,126,360

POLYCONDENSATION CATALYSTS FOR IMPROVED PROCESS IN THE PRODUCTION OF POLYETHYLENE TEREPHTHALATE

Lothar Riehl, Obernburg (Main), Germany, assignor to Vereinigte Glanzstoff-Fabriken Aktiengesellschaft, Wuppertal-Elberfeld, Germany

No Drawing. Filed Sept. 20, 1960, Ser. No. 57,135
Claims priority, application Germany Sept. 23, 1959
15 Claims. (Cl. 260—75)

1. A process for the production of polyethylene terephthalate which comprises: carrying out an ester interchange between dimethyl terephthalate and ethylene glycol; and polycondensing the resulting diglycol terephthalate in the presence of a polycondensation catalyst selected from the group consisting of benzil, furil, benzfuril, anisil, benzvanillil, biacetyl, benzoin, furoin, salicoin, benzfuroin, benzildioxime and its alkali metal salts, biacetyl dioxime and its alkali metal salts, benzsalicil, acetophenone, benzophenone, fluorenone, methyl-isobutylketone, 4-methylcyclohexanone, dimedone, ninhydrin, α-cyclopentanone carboxylic acid and its ethyl ester, α-cyclohexanone carboxylic acid and its alkali metal salts, 2-butylcyclohexanone benzilic acid and its alkali metal salts, mandelic acid and its alkali metal salts, and acetylsalicylic acid and its alkali metal salts.

3,126,361

PROCESS FOR THE PRODUCTION OF THERMOSTABLE ACRYLONITRILE POLYMERS HAVING AN IMPROVED DYEING CAPACITY

Dietrich Glabisch, Leverkusen, Wilhelm Becker, Cologne-Stammheim, and Ingofroh Dennstedt, Cologne-Buchforst, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Aug. 25, 1959, Ser. No. 835,845
Claims priority, application Germany Aug. 30, 1958
6 Claims. (Cl. 260—78)

1. A film-forming copolymer consisting essentially of a major amount of acrylonitrile and 0.5–10% by weight, based on the weight of the polymer, of an acid selected from the group consisting of N-methacryloyl-ε-aminocaproic acid, N-(N-methacryloyl-ε-aminocaproyl)-ε-aminocaproic acid, and N-(N-methacryloyl-ε-aminocaproyl) glycine.

3,126,362

SYNTHETIC LINEAR POLYAMIDES FROM 2,5-DIMETHYL-p-PHENYLENE DIACETIC ACID

Jan Bussink, Arnhem, Netherlands, assignor to American Enka Corporation, Enka, N.C., a corporation of Delaware

No Drawing. Filed May 9, 1960, Ser. No. 27,519
Claims priority, application Netherlands June 2, 1959
5 Claims. (Cl. 260—78)

4. Poly(nonamethylene-2,5-dimethyl-p-phenylene diacetamide) having a melting point of about 238° C. and a moisture absorption of not more than 1.2% by weight.

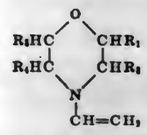
3,126,363

NEW COMPOUNDS, POLYMERS AND COPOLYMERS

Norman Blumenkopf, North Merrick, N.Y., and Otto F. Hecht, Easton, Pa., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 28, 1959, Ser. No. 862,055
9 Claims. (Cl. 260—85.5)

8. Copolymer of an N-vinyl morpholine of the formula:



wherein R_1, R_2, R_3 and R_4 are selected from the group consisting of hydrogen, lower alkyl, lower alkoxy, phenyl, halophenyl, lower alkyl phenyl and lower alkoxy phenyl, and acrylonitrile.

3,126,364

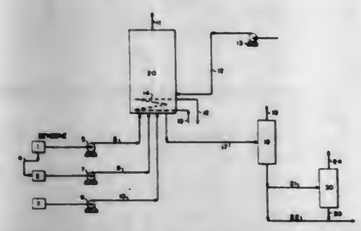
PROCESS FOR THE MANUFACTURE OF POUR DEPRESSANT

Stephan Ilnyckyj, Sarnia, Ontario, Canada, assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed May 16, 1961, Ser. No. 110,423
10 Claims. (Cl. 260—87.3)

1. Improved process for the manufacture of a pour depressant comprising a copolymer of ethylene and vinyl acetate which comprises reacting ethylene and vinyl acetate in a benzene solvent saturated with water at a temperature in the range of from about 280° to 340° F., and at a pressure in the range of from about 700 to 2,000 pounds for a time period of from about 2 to 16 hours under conditions wherein the concentration of the vinyl acetate in the benzene solution varies from about 0.2 to 10.0% and wherein the pressure is maintained within the

desired range by the further addition of ethylene, whereby a polymer having a molecular weight in the range from



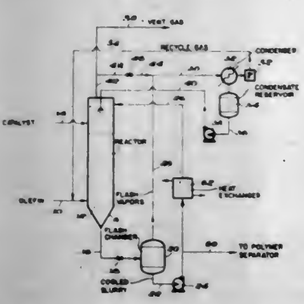
about 1,000 to 3,500 is secured wherein the concentration of the vinyl acetate in the product will vary from about 1 to 40% by weight.

3,126,365

POLYMERIZATION

George W. Hooker, New Brighton, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

Filed Aug. 11, 1958, Ser. No. 754,429
10 Claims. (Cl. 260—94.9)



1. In a process wherein ethylene contacted with a catalyst produced by admixing .2 to 2 mols of an aluminum alkyl having the general formula R_2AlX in which R is selected from the group consisting of lower alkyl radicals and X is selected from the group consisting of hydrogen, halide and lower alkyl radicals with a mol of titanium tetrachloride so that the ethylene polymerizes exothermally, the improvement for removing the exothermic heat so as to carry out said polymerization at a predetermined temperature and for increasing polymerization capacity, reducing catalyst requirements, maintaining vent lines free from plugging, increasing absorption efficiency and minimizing polymer build-up in the reactor system, said improvement producing a solid polymer of polyethylene having decreased corrosion tendencies, improved color characteristics and improved bulk density which improvement comprises the steps of contacting ethylene with said catalyst in a reaction zone under a pressure of between 1 to 10 atmospheres absolute in the presence of an inert liquid medium which is selected from the class consisting of the hydrocarbon of the paraffin, cycloparaffin, and aromatic series that, when suddenly subjected to a pressure of 1:2 atmospheres absolute at a temperature of 50–95° C. vaporize to the extent of at least 3%, whereby the ethylene polymerizes to solid particles of polymer and a slurry forms in said reaction zone, feeding a portion of the slurry from said reaction zone to a flashing zone of lower pressure whereby a portion of said liquid medium vaporizes to cool said slurry to an equilibrium temperature at said lower pressure, and returning the slurry so cooled to said reaction zone.

3,126,366

REACTION OF PERFLUOROPROPYLENE AND DISULFUR DECAFLUORIDE

James W. Dale, Winchester, Mass., assignor to Monsanto Research Corporation, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Apr. 24, 1962, Ser. No. 190,850
4 Claims. (Cl. 260—125)

1. The method of providing a thermally stable, high-boiling compound of carbon, sulfur and fluorine which comprises heating perfluoropropylene with disulfur decafluoride under pressure.

4. The product of the process of claim 1.

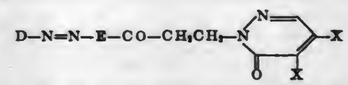
3,126,367

METAL-COMPLEX DYES WITH HALOGEN-PYRIDAZONE RADICALS

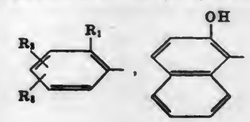
Hans Ruprecht Hensel, Heidelberg, Hans Baumann, Ludwigshafen (Rhine), Arnold Tartter, Lambsheim, Pfalz, and Hermann Weissauer, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed May 2, 1962, Ser. No. 191,750
Claims priority, application Germany Jan. 29, 1960
5 Claims. (Cl. 260—146)

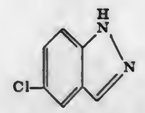
1. A water-soluble metal complex dye selected from the group consisting of copper complexes, chromium complexes and cobalt complexes which contain attached to said metal atoms 1-2 complex-forming azo dyes of the formula



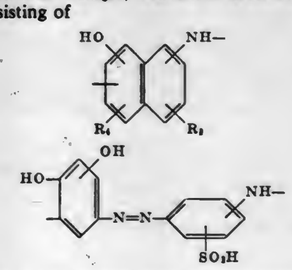
wherein D is selected from the group consisting of



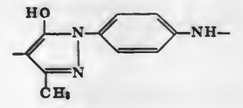
and



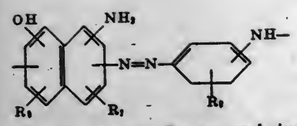
wherein R_1 is selected from the group consisting of —OH and —COOH, R_2 is selected from the group consisting of hydrogen, $—SO_3H$, —Cl, $—NO_2$, and $—SO_2NH_2$, and R_3 is selected from the group consisting of hydrogen and $—SO_3H$; wherein E is selected from the group consisting of



wherein the —OH groups stand in meta-position to each other,



and



wherein R_4, R_6, R_6, R_7 and R_8 are each independently selected from the group consisting of hydrogen and $-SO_3H$, wherein at least one of R_4 and R_5 and at least one of R_6, R_7 and R_8 is $-SO_3H$, wherein the valence bond and an —OH group of the naphthalene rings in the foregoing formulae are located on contiguous carbons of the naphthalene ring, and wherein the —NH— groups are attached to the —CO— group attached to E; and wherein X represents a member selected from the group consisting of chlorine and bromine, said metal complex dye containing one molecule of said complex-forming azo dyes attached to copper and two molecules of said complex-forming azo dyes attached to chromium and cobalt.

3,126,368

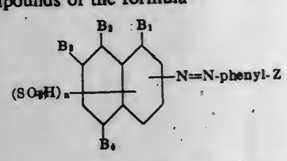
AZODYESTUFFS CONTAINING A β-CHLORO-CROTONYL RADICAL

Werner Bossard, Riehen, near Basel, and Herbert Seiler, Basel, Switzerland, Paul Dussy, St.-Louis, France, Marcel Reding and André Pugin, Riehen, near Basel, and Hans Peter Kölliker, Munchenstein, Basel-Land, Switzerland, assignors to J. R. Geigy A.-G., Basel, Switzerland

No Drawing. Filed Oct. 16, 1959, Ser. No. 846,800
Claims priority, application Switzerland Oct. 21, 1958
5 Claims. (Cl. 260—151)

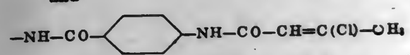
1. Monoazo dyestuff selected from the group consisting of

(*a*) compounds of the formula



wherein

Z is a member selected from the group consisting of —NH—CO—CH=C(Cl)—CH_3, —$N(C_2H_5)$—CO—CH=C(Cl)—CH_3 and



Z being in p-position to the azo group,

B_1 is a member selected from the group consisting of hydrogen and hydroxy,

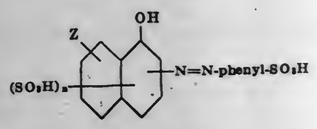
B_2 is a member selected from the group consisting of hydrogen, benzylamino and Z,

B_3 being a member selected from the group consisting of hydrogen, amino, N-methylamino and Z,

B_4 being a member selected from the group consisting of hydrogen and Z, not more than one of B_2, B_3 and B_4 being Z, and

n is an integer of 1 to 2;

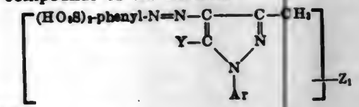
(*b*) compounds of the formula



wherein

Z and *n* are as aforedefined;

(*c*) compounds of the formula



wherein

Z_1 is —NHCOCH=C(Cl)CH_3 and is linked to phenylene,

Y is a member selected from the group consisting of hydroxyl and amino,

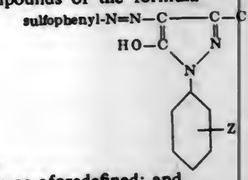
Ar is a member selected from the group consisting of phenyl, chlorophenyl and naphthyl, and being substituted with one to two $-SO_3H$ groups;

(*d*) disulfopyrene-N=N-phenyl-Z dyestuff wherein Z is as aforedefined;

(*e*) o,o'-dihydroxyphenyl-N=N-naphthyl dyestuff with one Z group, as aforedefined, linked to the azo-free naphthyl ring;

(*f*) o,o' - dihydroxynaphthyl-N=N-naphthyl dyestuff having from 2 to 4 $-SO_3H$ groups, not more than two of which are linked to each component of the said dyestuff, the naphthyl moiety being substituted with Z group, as aforedefined, at the azo-free ring;

(*g*) compounds of the formula



wherein

Z is as aforedefined; and

(*h*) copper, chromium and cobalt metal complex compounds of dyestuffs defined in (*e*), (*f*) and (*g*).

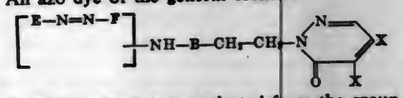
3,126,369

DYES WITH HALOGENPYRIDAZONE RADICALS

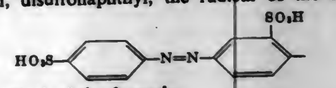
Hans Ruprecht Hensel, Heidelberg, Hans Baumann, Ludwigshafen (Rhine), Arnold Tartter, Lambsheim, Pfalz, and Hermann Weissauer, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Jan. 24, 1961, Ser. No. 84,524
Claims priority, application Germany Jan. 29, 1960
6 Claims. (Cl. 260—154)

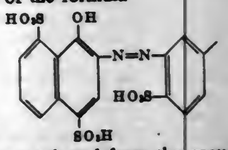
1. An azo dye of the general formula



in which E denotes a group selected from the group consisting of phenyl, monosulfophenyl, disulfophenyl, methoxyphenyl, disulfonaphthyl, the radical of the formula

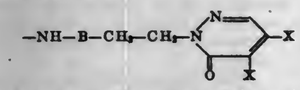


and the radical of the formula



F denotes a group selected from the group consisting of methylphenyl, 1-phenyl-3-methylpyrazolon-(5)-yl-(4), 1-sulfophenyl)-3-methylpyrazolon(5)-yl-(4), 1-(chloro-sulfophenyl) - 3 - methylpyrazolon(5)-yl(4), hydroxymonosulfonaphthyl, hydroxydisulfonaphthyl; B denotes a divalent group selected from the group consisting of —CO— and $—SO_2—$; X denotes a member selected from the

group consisting of a bromine atom and a chlorine atom; and in which the grouping



is attached to an aromatic nucleus of the moiety

E—N=N—F

and wherein the dye molecule contains at least one sulfonic acid group.

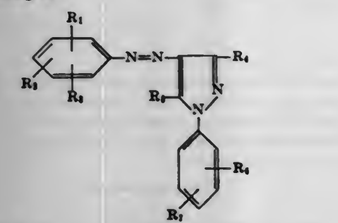
3,126,370

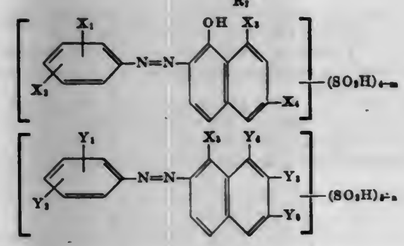
AZO DYESTUFFS CONTAINING DIHALOGEN-PYRIDAZONE GROUPS

Hans Ruprecht Hensel, Heidelberg, Hans Baumann and Karl Dury, Ludwigshafen (Rhine), and Wilhelm Federkiel, Frankenthal, Pfalz, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Original application June 23, 1960, Ser. No. 38,107. Divided and this application Apr. 25, 1963, Ser. No. 275,531
Claims priority, application Germany June 25, 1959
14 Claims. (Cl. 260—154)

1. An azo dye having the formula selected from the group consisting of



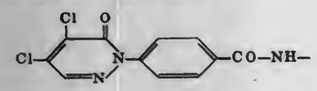


in which

R_1 represents a group selected from the class consisting of

4,5-dichloropyridazonyl-(1)-
4,5-dibromopyridazonyl-(1)

and the radical of the formula



R_2 represents a group selected from the class consisting of hydrogen, sulfonic acid and methyl,

R_3 represents a group selected from the class consisting of hydrogen and methoxy,

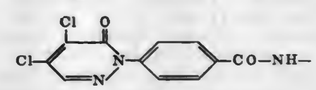
R_4 represents a group selected from the class consisting of methyl and aminocarbonyl,

R_5 represents a group selected from the class consisting of hydroxy and amino,

R_6 represents a group selected from the class consisting of hydrogen, chlorine, sulfonic acid and sulfonic acid amide, and

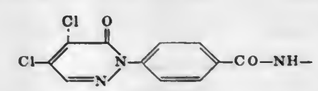
R_7 represents a group selected from the class consisting of hydrogen, methyl and chlorine,

X_1 represents a group selected from the class consisting of hydrogen, chlorine, acetylamino, nitro and the group of the formula

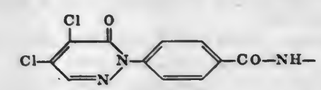


X_2 represents a group selected from the class consisting of hydrogen, methyl, hydroxy, chlorine and methoxy,

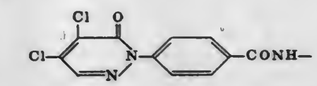
X_3 represents a group selected from the class consisting of hydrogen, amino, acetylamino, benzoylamino and the group of the formula



X_4 represents a group selected from the class consisting of hydrogen, amino and the group of the formula



m represents an integer from 1 to 3, and in which only one of the groups X_1, X_3 and X_4 represents the group of the formula

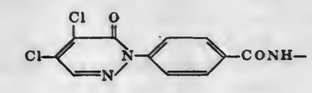


Y_1 represents a group selected from the class consisting of 4,5-dichloropyridazonyl-(1) and 4,5-dibromopyridazonyl-(1) said group being attached to one of the positions meta and para,

Y_2 represents a group selected from the class consisting of hydrogen, methyl and methoxy,

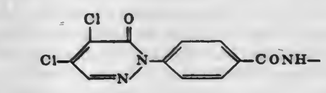
Y_3 represents a group selected from the class consisting of hydroxy and amino,

Y_4 represents a group selected from the class consisting of hydrogen, amino, acetylamino, benzoylamino, dichlorobenzoylamino and a group of the formula



Y_5 represents a group selected from the class consisting of hydrogen and 4-nitro-2-sulfophenylazo,

Y_6 represents a group selected from the class consisting of hydrogen, acetylamino and the group of the formula



and *n* represents an integer from 1 to 4.

3,126,371
BIFIDUS-ACTIVE GALACTOSIDOMANNITE

Friedrich Petuely, Graz, Austria, assignor to N.V. Tervalon (Maatschappij voor voedingsmiddelen op wetenschappelijke basis), Amsterdam, Netherlands

Filed May 15, 1961, Ser. No. 110,186
Claims priority, application Netherlands May 30, 1960
4 Claims. (Cl. 260—210)

1. A method of producing a mixture of β-galactosidosorbite and β-galactosidomannite comprising hydrogenating lactulose.

3,126,372
9-D-PSICOFURANOSYLPURINE DERIVATIVES

Brian Bannister, Kalamazoo Township, Kalamazoo County, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Filed Jan. 26, 1959, Ser. No. 788,747
1 Claim. (Cl. 260—211.5)

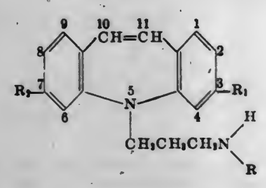
6 - tritylamino - 9-D-psicofuranosylpurine 1',6'-ditrityl ether.

3,126,373
5-MONOALKYLAMINOPROPYL-5H-DIBENZ-[b,f]-AZEPINES

Paul N. Craig, Roslyn, Pa., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Feb. 2, 1962, Ser. No. 170,806
1 Claim. (Cl. 260—239)

A chemical compound selected from the group consisting of a free base and the nontoxic acid addition salts thereof, the free base having the formula:



in which:

R_1 and R_2 are members selected from the group consisting of hydrogen and chlorine; and

R is lower alkyl of from 1 to 4 carbon atoms.

3,126,374
7β-METHYL PROGESTERONE DERIVATIVES

Howard J. Ringold and John A. Zderic, Mexico City, Mexico, assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed Oct. 13, 1958, Ser. No. 766,706
Claims priority, application Mexico Oct. 15, 1957
7 Claims. (Cl. 260—239.55)

1. A method for the production of 7β-methyl progesterone derivatives comprising brominating a 3,20-biscycloethyleneketal of a corresponding progesterone derivative to form a corresponding 7-bromo compound, reacting the bromo compound with alumina to form the corresponding 7-hydroxy derivative, oxidizing the 7-hydroxy derivative to a 7-keto compound, reacting the 7-keto compound with a methyl magnesium halide to form the corresponding 7-methyl-7-hydroxy derivative, hydrolyzing and dehydrating the 7-methyl-7-hydroxy derivative with an acid to form a 7-methyl-$\Delta^{4,6}$-compound and selectively hydrogenating the 6-double bond of the last mentioned compound.

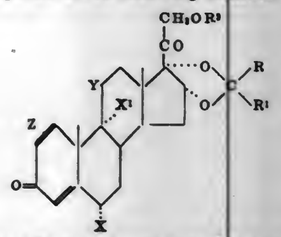
7. 7-methyl-3,20-bis-ethylenedioxy-Δ^5-pregnen - 7,17α-diol.

3,126,375
CYCLIC KETALS OF 6 HALO CORTICOIDS

Howard J. Ringold, John A. Zderic, Carl Djerassi, and Albert Bowers, all of Mexico City, Mexico, assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed June 11, 1959, Ser. No. 819,545
Claims priority, application Mexico June 13, 1958
35 Claims. (Cl. 260—239.55)

1. A compound of the following formula:



wherein R and R^1 are selected from the group consisting of hydrogen and hydrocarbon of up to 8 carbon atoms, X is selected from the group consisting of fluorine and chlorine, X^1 is selected from the group consisting of hydrogen, fluorine and chlorine, Y is selected from the group consisting of =O and



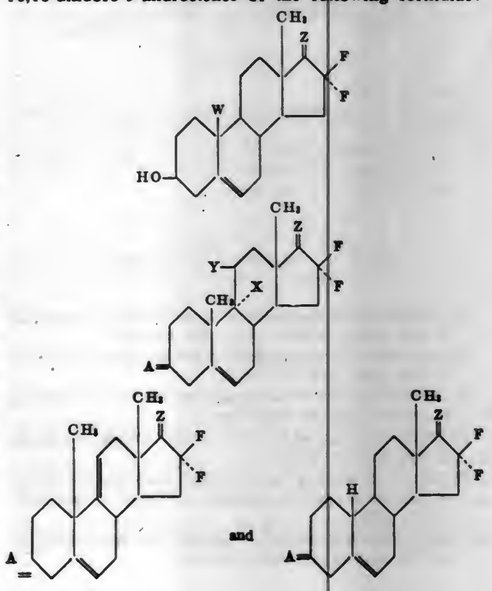
Z is selected from the group consisting of a double bond between C–1 and C–2 and a saturated linkage between C–1 and C–2, and R^2 is selected from the group consisting of hydrogen and a hydrocarbon carboxylic acyl group of up to 12 carbon atoms.

3,126,376
FLUORINATED ANDROSTENES AND INTERMEDIATES RELATING THERETO

Cecil H. Robinson, Cedar Grove, N.J., assignor to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey

No Drawing. Filed Feb. 5, 1962, Ser. No. 171,274
5 Claims. (Cl. 260—239.55)

2. A compound selected from the group consisting of 16,16-difluoro-5-androstenes of the following formulae:



wherein W is a member of the group consisting of hydrogen and methyl; Z is a member selected from the group consisting of O,(H,βOH), (α-lower alkyl,βOH) and (α-lower alkynyl,βOH); X and Y are halogen; and A is ethylenedioxy.

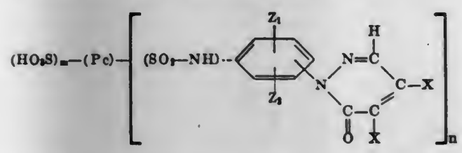
4. 3-ethylenedioxy - 16 - (1' - hydroxy-1'-carbethoxy) methylene-5,9(11)-androstadiene-17-one.

3,126,377
PYRIDAZONYL-PHTHALOCYANINES

Arnold Tartter, Lambsheim, Pfalz, Hans Ruprecht Hensel, Heidelberg, and Hans Baumann, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Aug. 9, 1960, Ser. No. 48,365
Claims priority, application Germany Aug. 17, 1959
1 Claim. (Cl. 260—242)

A phthalocyanine dye of the formula:



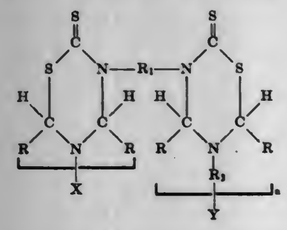
in which Pc represents the radical of a member selected from the class consisting of copper phthalocyanine, mono-, di-, tri- and tetrachloro copper phthalocyanine, mono-, di-, tri- and tetraphenyl copper phthalocyanine and nickel phthalocyanine, X is a member selected from the class consisting of a chlorine atom and a bromine atom, Z_1 is a member selected from the class consisting of a hydrogen atom, a chlorine atom, a methyl group and a methoxy group, Z_2 is a member selected from the class consisting of a hydrogen atom and a sulfonic acid radical, *m* is one of the numbers 0, 1, 2, 3, 4 and 5, *n* is one of the whole numbers 1 to 4 and the sum of *m* and *n* is one of the whole numbers 1 to 6.

3,126,378
NOVEL POLYMERIC THIADIAZINETHIONES

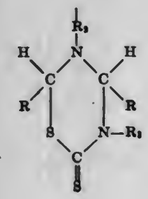
Earl W. Cummins, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 2, 1960, Ser. No. 25,856
1 Claim. (Cl. 260—243)

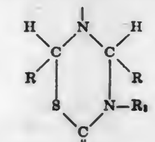
A compound represented by the formula



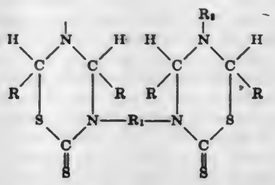
where X is selected from the group consisting of R_3 and



Y is selected from the group consisting of



and



R is selected from the group consisting of hydrogen, alkyl of 1–3 carbons, and alkenyl of 1–3 carbons; R_1 and R_2 are selected from the group consisting of alkylene of 2–6 carbons; R_3 is selected from the group consisting of hydrogen alkyl of 1–18 carbons and alkenyl of 1–18 carbons; and *n* is a positive whole number.

3,126,379
ESTER OF 1-METHYL-3-(HYDROXYETHOXY) PIPERIDINE

Martin A. Davis, Montreal, Quebec, Canada, assignor to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 2, 1961, Ser. No. 141,997
4 Claims. (Cl. 260—243)

1. A compound selected from the group which consists of 2-[3-(1-methylpiperidinoxy)]ethyl phenothiazine-10-carboxylate and its hydrochloride and methobromide salts.

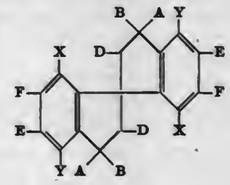
3,126,380
BASIC ETHERS OF 1,1'-BIS-SPIRO-INDANE COMPOUNDS AND PROCESS OF MAKING SAME

Leonhard Schuler, Heidelberg, Germany, assignor to Knoll A.-G. Chemische Fabriken, Ludwigshafen (Rhine), Germany, a corporation of Germany

No Drawing. Filed Aug. 22, 1961, Ser. No. 133,063
9 Claims. (Cl. 260—247.5)

4. 5,6,5',6' - tetra - (N - morpholino ethoxy)3,3,3',3'-tetramethyl-1,1'-bis-spiro-indane.

9. The bis-spiro-indane compound selected from the group consisting of the basic ether of the 1,1'-bis-spiro-indane compound of the formula



wherein

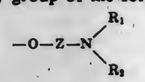
A and B are lower alkyl,

X and Y are members selected from the group consisting of hydrogen, chlorine, and bromine;

D is a member selected from the group consisting of hydrogen and lower alkyl; and

E and F are members selected from the group consisting of lower alkyl, hydroxyl, lower alkoxy, and at least one pair of the E and F substituents in each

indane half of the bis-spiro-indane molecule being an amino alkoxy group of the formula



wherein

Z is a lower alkylene; and

R_1 and R_2 are members selected from the group consisting of lower alkyl and R_1 and R_2, together with the nitrogen atom to which they are attached, forming a mononuclear heterocyclic ring selected from the group consisting of the pyrrolidine, piperidine, piperazine, morpholine ring, and such lower alkyl substituted rings,

the corresponding members A, B, X, Y, E, and F in each indane half of the bis-spiro-indane molecule being identical,

its acid addition salts with pharmaceutically acceptable acids, and its quaternary ammonium compounds with a member selected from the group consisting of benzyl halogenide, lower alkyl halogenide, dimethyl sulfate, and p-toluene sulfonic acid lower alkyl ester.

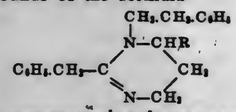
3,126,381

2-BENZYL-3-PHENETHYLTETRAHYDRO-PYRIMIDINES

André L. Langis, St. Laurent, Quebec, and Cedric A. Pi kington, Dorval, Quebec, Canada, assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 1, 1962, Ser. No. 176,790
Claims priority, application Canada Mar. 2, 1961
4 Claims. (Cl. 260—251)

1. A compound selected from the group which consists of compounds of the formula



wherein C_6H_5 represents phenyl group and R is selected from the group consisting of hydrogen and methyl, and acid addition salts of said compounds with pharmacologically acceptable acids.

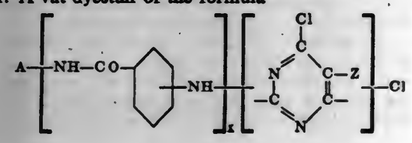
3,126,382

VAT DYESTUFFS CONTAINING HALOPYRIMIDINE SUBSTITUENTS

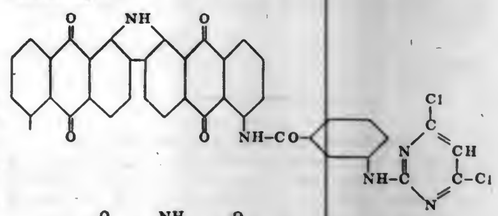
Max Staeuble, Basel, Switzerland, assignor to Ciba Corporation, a corporation of Delaware

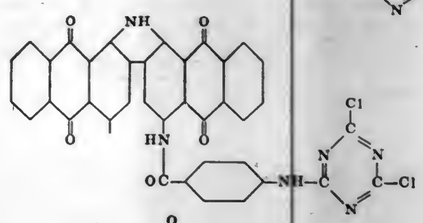
No Drawing. Filed Nov. 16, 1960, Ser. No. 69,553
Claims priority, application Switzerland Nov. 20, 1959
7 Claims. (Cl. 260—256.4)

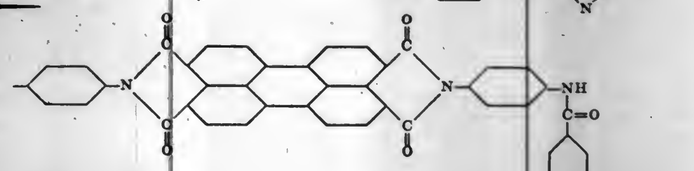
1. A vat dyestuff of the formula

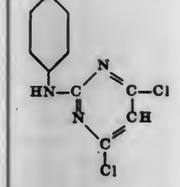


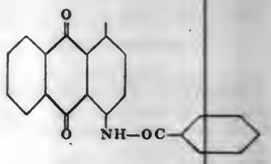
wherein Z is a member selected from the group consisting of H and Cl, and A is a member selected from the group consisting of

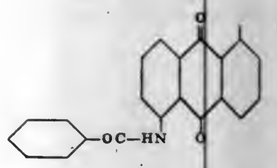


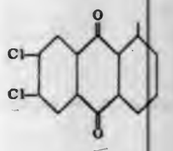


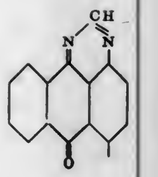


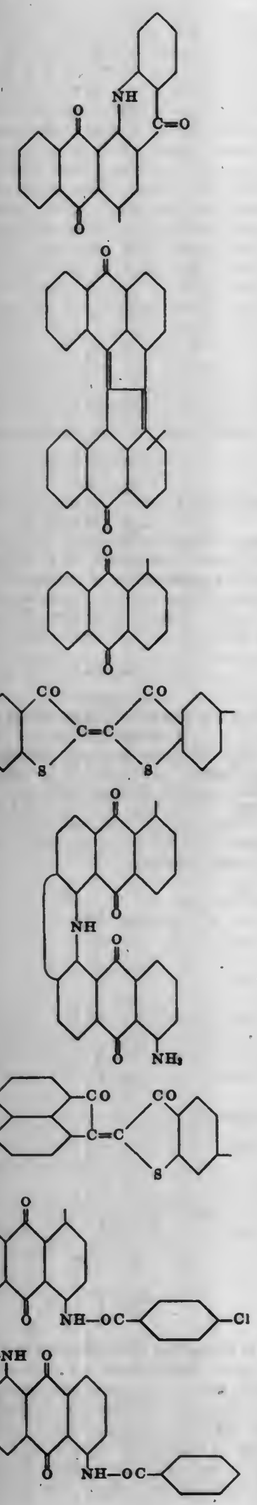


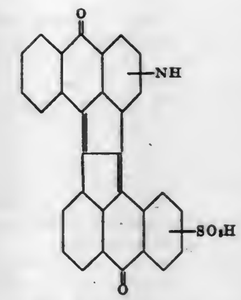












x being a whole number from zero to one and being zero when A is one of the last two mentioned members.

3,126,383

METHOD FOR RECOVERING ALKYLAMINE-FREE ETHYLENEDIAMINE AND PIPERAZINE

Justin F. Cooper, Austin, Tex., assignor to Jefferson Chemical Company, Inc., Houston, Tex., a corporation of Delaware

No Drawing. Filed Nov. 3, 1958, Ser. No. 771,219
3 Claims. (Cl. 260—268)

1. In a method for the preparation of piperazine by the catalytic reductive amination of a feed material selected from the group consisting of monoethanolamine and ethylene glycol, and wherein a liquid reaction product is formed containing piperazine, ethylenediamine, water and N-alkylamine by-products comprising a mixture of N-methylethylenediamine, N-ethylethylenediamine, N-methylpiperazine and N-ethylpiperazine, the improvement which comprises fractionally distilling said reaction product in a first distillation zone into a first distillate fraction containing ethylenediamine, said N-alkylamine by-products and a reduced amount of piperazine and a first bottoms fraction consisting essentially of piperazine, fractionally distilling said first distillate fraction in a second distillation zone at a head temperature within the range of about 100° to 120° C. in the presence of an amount of water sufficient to steam strip said N-alkylamine impurities from the piperazine in said first distillate fraction and to thereby provide a second distillate fraction comprising ethylenediamine, said N-alkylamine by-products and water and a second bottoms fraction comprising piperazine, water and ethylenediamine, and fractionally distilling said second bottoms fraction to obtain purified piperazine.

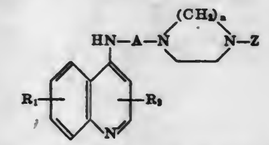
3,126,384

4-QUINOLYL-AMINOALKYLAMINO DERIVATIVES

Paul Gailliot, Paris, and Jean Gaston Baget, Sceaux, France, assignors to Rhone-Poulenc S.A., Paris, France, a corporation of France

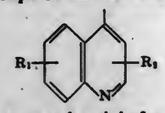
No Drawing. Filed May 23, 1962, Ser. No. 196,925
Claims priority, application France May 26, 1961
10 Claims. (Cl. 260—268)

1. A 4-aminoquinoline derivative selected from the class consisting of compounds of the formula:



wherein A represents a saturated aliphatic hydrocarbon group containing 2 to 6 carbon atoms, R_1 represents a member of the class consisting of hydrogen and halogen

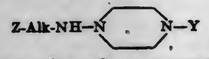
atoms and amino, acetamido, dimethylsulphamoyl, trifluoroethyl and alkoxy containing up to 3 carbon atom groups in the 5-, 6-, 7-, or 8-position of the quinoline ring, R_2 represents a member of the class consisting of hydrogen atoms and alkyl groups containing up to 3 carbon atoms in the 2- or 3-position of the quinoline ring, Z represents a member selected from the class consisting of a 2-pyridyl, a 4-pyridyl, a 2-phenyl-4-pyridyl, a 2-pyrimidyl, a 2-amino-4-pyrimidyl, a 2-amino-4-ethyl-5-(p-chlorophenyl) - 6 - pyrimidyl, a 2-(p-chlorophenylamino) - 4 - methyl-6-pyrimidyl, a 2-methoxy-6-chloro-9-acridyl, and the groups of the formula:



where R_1 and R_3 are as hereinbefore defined, *n* represents an integer selected from 2 and 3 and non-toxic acid addition salts of any of the said compounds.

3,126,385
1-PHENETHYLAMINO-4-HYDROXYMETHYL-PIPERAZINE AND RELATED COMPOUNDS
Calvin H. Lovell, Morton Grove, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed Dec. 31, 1962, Ser. No. 248,285
5 Claims. (Cl. 260—268)

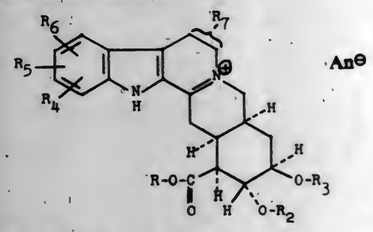
1. A compound of the formula



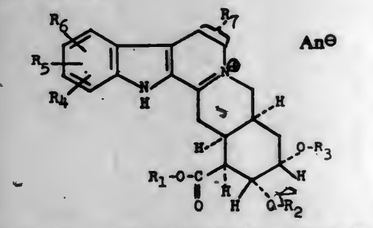
wherein Z is selected from the group consisting of phenyl and cyclohexyl; Alk is lower alkylene separating the groups attached thereto by at least two carbon atoms; Y is hydroxy lower alkyl.

3,126,386
LOWER ALKYL-18-O-ALIPHATIC DESERPIDATES AND INTERMEDIATES THEREFOR
Michael Mullen Robison, Berkeley Heights, and Robert Armistead Lucas, Mendham, N.J., assignors to Ciba Corporation, a corporation of Delaware
No Drawing. Filed Dec. 5, 1960, Ser. No. 73,494
15 Claims. (Cl. 260—286)

1. A member selected from the group consisting of a compound of the formula



and of the formula:



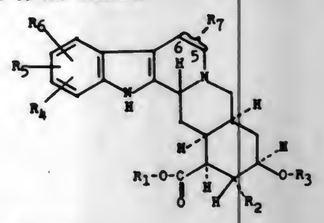
in which R_1 is a member selected from the group consisting of lower alkyl, phenyl-lower alkyl, lower alkoxy-lower alkyl and N,N-di-lower alkyl-amino-lower alkyl, R_2 stands for a member selected from the group consisting of lower alkoxy and cyano, R_3 is a member selected from the group consisting of lower alkyl, lower alkenyl, lower alkynyl, cycloalkyl having from three to eight carbon atoms, cycloalkenyl having from five to six carbon atoms, cycloalkyl-lower alkyl, in which cycloalkyl has from three to eight carbon atoms, phenyl-lower alkyl, hydroxy-lower alkyl, lower alkoxy-lower alkyl, lower alkoxy-carbonyloxy-lower alkyl, lower alkanoyloxy-lower alkyl, halogeno-lower alkyl, lower alkanoyl-lower alkyl, lower alkyl-mercapto-lower alkyl and N,N-di-lower alkyl-amino-lower alkyl, each of the radicals R_4, R_5, and R_6 stands for a member selected from the group consisting of hydrogen, lower alkyl, lower alkoxy, halogeno and lower alkyl-mercapto, and for lower alkylenedioxy representing two of the groups R_4, R_5 and R_6 attached to two adjacent positions and taken together, and R_7, attached to one of the position 5 and 6, stands for a member selected from the group consisting of hydrogen and lower alkyl, and in which $An^{\ominus}$ stands for the anion of an acid.

3,126,387
18-O-ARYL-SULFONYL-DESERPIDATES AND ANALOGS THEREOF
Michael Mullen Robison, Berkeley Heights, and Robert Armistead Lucas, Mendham, N.J., assignors to Ciba Corporation, a corporation of Delaware
No Drawing. Filed May 16, 1961, Ser. No. 110,320
15 Claims. (Cl. 260—287)

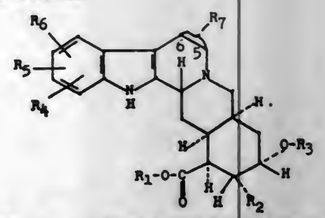
1. Lower alkyl 18 - O - (bromo-phenyl) - sulfonyl-reserpate.

3,126,388
18-O-ALKYL-DESERPIDATES AND RELATED COMPOUNDS
Michael Mullen Robison, Berkeley Heights, and Robert Armistead Lucas, Mendham, N.J., assignors to Ciba Corporation, a corporation of Delaware
No Drawing. Filed May 16, 1961, Ser. No. 110,321
23 Claims. (Cl. 260—287)

1. A member selected from the group consisting of a compound of the formula:



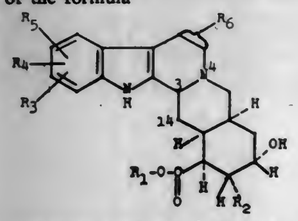
and of the formula:



in which R_1 is a member selected from the group consisting of lower alkyl, phenyl-lower alkyl, lower alkoxy-lower alkyl, in which lower alkyl separates lower alkoxy from the carboxyl group by at least two carbon atoms, and N,N-di-lower alkyl-amino-lower alkyl, in which lower alkyl separates N,N-di-lower alkyl-amino from the carboxyl group by at least two carbon atoms, R_2 stands for a member selected from the group consisting of lower alkoxy and cyano, R_3 is a member selected from the group consisting of lower alkyl, lower alkenyl, lower alkynyl, cycloalkyl having from three to eight ring carbon atoms, cycloalkenyl having from five to eight ring carbon atoms, cycloalkyl-lower alkyl, in which cycloalkyl has from three to eight ring carbon atoms, cyclo-alkenyl-lower alkyl, in which cycloalkenyl has from five to eight ring members, phenyl-lower alkyl, phenyl-lower alkenyl, hydroxy-lower alkyl, in which lower-alkyl separates hydroxy from the oxygen atom by at least two carbon atoms, lower alkoxy-lower alkyl, in which lower alkyl separates lower alkoxy by at least two carbon atoms from the oxygen atom, lower alkoxy-lower alkoxy-lower alkyl, in which lower alkyl separates lower alkoxy-lower alkoxy from the oxygen atom by at least two carbon atoms, lower alkonoyloxy-lower alkyl, in which lower alkyl separates lower alkanoyloxy by at least two carbon atoms from the oxygen atom, benzoyloxy-lower alkyl, in which lower alkyl separates benzoyloxy from the oxygen atom by at least two carbon atoms, (lower alkoxy)-benzoyl-oxy-lower alkyl in which lower alkyl separates (lower alkoxy)-benzoyloxy from the oxygen atom by at least two carbon atoms, (halogeno)-benzoyloxy-lower alkyl, in which lower-alkyl separates (halogeno)-benzoyloxy from the oxygen atom by at least two carbon atoms, lower alkanoyl-lower alkyl, lower alkyl-mercapto-lower alkyl, in which lower alkyl separates lower alkyl-mercapto from the oxygen atom by at least two carbon atoms, N,N-di-lower alkyl-amino-lower alkyl, in which lower alkyl separates N,N-di-lower alkyl-amino from the oxygen atom by at least two carbon atoms, N,N-alkylene-imino-lower alkyl, in which alkylene has from four to seven carbon atoms, and lower alkyl separates N,N-alkylene-imino from the oxygen atom by at least two carbon atoms, and tetrahydrofuranyl-lower alkyl, each of the radicals R_4, R_5 and R_6 stands for a member selected from the group consisting of hydrogen, lower alkyl, lower alkoxy, phenyl-lower alkoxy, halogeno, lower alkyl-mercapto, and, whenever two of the groups R_4, R_5 and R_6 are attached to two adjacent positions and are taken together, for lower alkylenedioxy, and R_7, attached to one of the positions selected from the group consisting of position 5 and position 6, stands for a member selected from the group consisting of hydrogen and lower alkyl, a pharmacologically acceptable, non-toxic acid addition salt thereof, an N-oxide thereof and a pharmaceutically acceptable non-toxic acid addition salt of such N-oxide.

3,126,389
ALKOXY-ALKYL-18-EPI-RESERPATES AND RELATED COMPOUNDS
Michael Mullen Robison, Berkeley Heights, and Robert Armistead Lucas, Mendham, N.J., assignors to Ciba Corporation, a corporation of Delaware
No Drawing. Filed Sept. 22, 1961, Ser. No. 139,883
6 Claims. (Cl. 260—287)

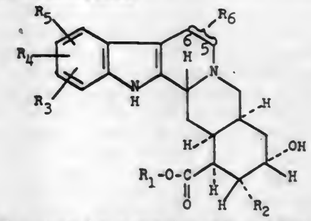
1. A member selected from the group consisting of a compound of the formula



in which R_1 represents lower alkoxy-lower alkyl, in which lower alkyl separates lower alkoxy from the 16β-carboxyl group by at least two carbon atoms, R_2 stands for a member selected from the group consisting of lower alkoxy and cyano, each of the groups R_3, R_4 and R_5 stands for a member selected from the group consisting of hydrogen, lower alkyl, lower alkoxy, halogeno, lower alkyl-mercapto, and whenever two of the groups R_3, R_4 and R_5 are taken together, lower alkylenedioxy, and R_6, attached to one of the positions 5 and 6, is a member selected from the group consisting of hydrogen and lower alkyl, and in which a double bond extends from the 3-position to the 14-position, and a salt thereof, in which a double bond extends from the 3-position to the 4-position, and in which the anion is that of a pharmaceutically acceptable acid.

3,126,390
18-EPI-DESERPIDATES AND DERIVATIVES
Michael Mullen Robison, Berkeley Heights, and Robert Armistead Lucas, Mendham, N.J., assignors to Ciba Corporation, a corporation of Delaware
No Drawing. Filed Sept. 22, 1961, Ser. No. 139,896
21 Claims. (Cl. 260—287)

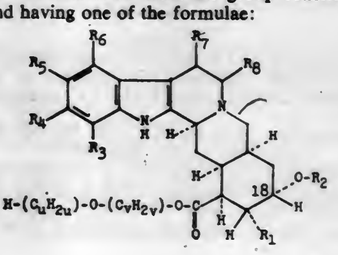
1. A member selected from the group consisting of a compound of the formula:



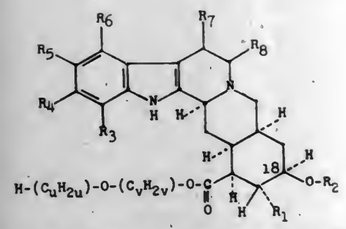
in which R_1 stands for a member selected from the group consisting of lower alkyl, phenyl-lower alkyl, lower alkoxy-lower alkyl, in which lower alkyl separates lower alkoxy from the carboxyl group by at least two carbon atoms, and N,N-di-lower alkyl-amino-lower alkyl, in which lower alkyl separates N,N-di-lower alkyl-amino from the carboxyl group by at least two carbon atoms, R_2 stands for a member selected from the group consisting of lower alkoxy and cyano, each of the radicals R_3, R_4 and R_5 is a member selected from the group consisting of hydrogen, lower alkyl, trifluoromethyl, lower alkoxy, halogeno, lower alkylmercapto, nitro, amino, and, whenever two of the substituents R_3, R_4 and R_5 are attached to adjacent positions and taken together, lower alkylenedioxy, and R_6, attached to one of the positions selected from the group consisting of the 5-position and the 6-position, stands for a member selected from the group consisting of hydrogen and lower alkyl, an acid addition salt thereof, an N-oxide thereof and an acid addition salt of an N-oxide thereof.

3,126,391
ALKOXYALKYL 18-O-ALKOXYALKYL - 3 - ISO-DESERPIDATES, AND ANALOGS AND 18-EPIMERS THEREOF
Michael Mullen Robison, Berkeley Heights, and Robert Armistead Lucas, Mendham, N.J., assignors to Ciba Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Jan. 31, 1962, Ser. No. 170,248
14 Claims. (Cl. 260—287)

1. A member selected from the group consisting of a compound having one of the formulae:



and



in which the letter *u* stands for an integer from 1 to 4, the letter *v* stands for an integer from 2 to 4, the group of the formula —(C_vH_{2v})— separates the two oxygen atoms attached to this radical by at least two carbon atoms, R_1 stands for a member selected from the group consisting of lower alkoxy, cyano and N-lower alkanoyl-N-lower alkyl-amino, R_2 is a member selected from the group consisting of lower alkyl and lower alkoxy-lower alkyl in which lower alkyl, having from two to four carbon atoms, separates lower alkoxy from the 18-oxygen atom by at least two carbon atoms, each of the groups R_3, R_4, R_5 and R_6 stands for a member selected from the group consisting of hydrogen, lower alkyl, lower alkoxy, halogeno, lower alkyl-mercapto, and, when two adjacent groups R_3, R_4, R_5 and R_6 are taken together, for lower alkylenedioxy, and each of the groups R_7 and R_8 stands for a member selected from the group consisting of hydrogen and lower alkyl, a pharmaceutically acceptable, non-toxic acid addition salt thereof, an N-oxide thereof and a pharmaceutically acceptable, non-toxic acid addition salt of such N-oxide.

3,126,392
ESTERS OF NORTROPANE AND NORGRANATANE COMPOUNDS, AND PROCESS OF MAKING SAME

Otto Dold, Lampertheim, Hesse, Kurt Stach, Mannheim, and Wolfgang Schaumann, Mannheim-Waldhof, Germany, assignors to C. F. Boehringer & Soehne G.m.b.H., Mannheim-Waldhof, Germany, a company of Germany

No Drawing. Filed Nov. 24, 1961, Ser. No. 154,876
Claims priority, application Germany Nov. 26, 1960
7 Claims. (Cl. 260—292)

1. The benzilic acid ester of N-(β-hydroxy ethyl) norgranatane.

3,126,393
4-GAMMA-DIETHYLAMINOPROPYLAMINO-2:2:6:6-TETRAMETHYLPIPERIDINE

Edwin Harry Paterson Young, Manchester, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Feb. 3, 1958, Ser. No. 712,624
Claims priority, application Great Britain Feb. 13, 1957
1 Claim. (Cl. 260—293)

A piperidine selected from the group consisting of 4 - gamma-diethylaminopropylamino-2:2:6:6-tetramethylpiperidine and the non-toxic pharmaceutically-acceptable acid addition salts thereof.

3,126,394
CRYSTALLIZING 2,2'-DITHIOBISBENZOTHIAZOLE

Daniel H. Gold, Plainfield, N.J., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Feb. 27, 1961, Ser. No. 91,640
9 Claims. (Cl. 260—306.5)

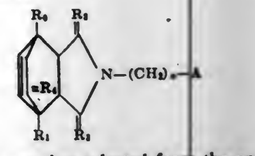
1. A process for improving the dispersibility in rubber of 2,2'-dithiobisbenzothiazole having a particle size range substantially wholly below 20 microns which comprises suspending said 2,2-dithiobisbenzothiazole in an aqueous slurry; combining said slurry with an inert, water-immiscible organic solvent 2,2'-dithiobisbenzothiazole, the amount of solvent used being at least sufficient to dissolve substantially all said 2,2'-dithiobisbenzothiazole; agitating the resultant mixture until dissolution of said 2,2'-dithiobisbenzothiazole substantially ceases; removing the solvent by distillation, whereby 2,2'-dithiobisbenzothiazole precipitates and separating resultant precipitate from the residual aqueous liquor.

3,126,395
NOVEL BICYCLO(2,2,2)OCTANE COMPOUNDS

Keizo Kitahonoki, 848 Nabata, Ikoma-machi, Ikoma-gun, Japan, and Michiko Kakehi, 41 2-chome, Morikoji, Asahi-ku, Osaka-shi, Japan

No Drawing. Filed Sept. 7, 1961, Ser. No. 136,433
Claims priority, application Japan Oct. 16, 1958
32 Claims. (Cl. 260—319)

1. A compound selected from the group consisting of a free base, a therapeutically acceptable quaternary ammonium salt of the free base and a therapeutically acceptable acid addition salt of the free base, said free base having the formula



wherein R_9 is a member selected from the group consisting of a hydrogen atom and a lower alkyl group having 1 to 3 carbon atoms; R_1 is a member selected from the group consisting of a hydrogen atom and a lower alkyl group having from 1 to 3 carbon atoms; R_2 is a member selected from the group consisting of =O and



R_4 is a member selected from the group consisting of =O and



A is a member selected from the group consisting of -N-di(lower) alkyl, =N=di(lower)alkenyl, morpholino, piperidino, pyrrolidino, piperazino, N-methylpiperazino and pyrazolidino, each of said alkyl and alkenyl groups having at most 5 carbon atoms; and *n* is an integer from 2 to 5.

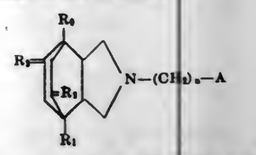
9. 1' - (ω - pyrrolidinoethyl)-bicyclo(2,2,2)octano(2,3:3',4')pyrrolidin-7-ene dimethodide.

3,126,396
NOVEL BICYCLO(2,2,2)OCTANE DERIVATIVES

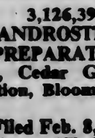
Keizo Kitahonoki, 848 Nabata, Ikoma-machi, Ikoma-gun, Japan, and Akiko Irie, 5-3 Senriyama, Suita-shi, Osaka, Japan

No Drawing. Filed Sept. 7, 1961, Ser. No. 136,434
Claims priority, application Japan June 9, 1958
20 Claims. (Cl. 260—319)

1. A compound of the formula

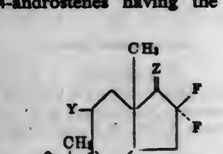


wherein A is a member selected from the group consisting of —N=di(lower)alkyl, —N=di(lower)alkenyl, morpholino, piperidino, pyrrolidino, piperazino and N-methyl piperazino, the lower alkyl having from 1 to 5 carbon atoms and the lower alkenyl having from 2 to 5 carbon atoms; R_9 is a member selected from the group consisting of a hydrogen atom and lower alkyl of at most 3 carbon atoms; R_1 is a member selected from the group consisting of a hydrogen atom and lower alkyl of at most 3 carbon atoms; R_2 is a member selected from the group consisting of



and =O; and *n* is an integer from 2 to 5.

12. A compound of the formula



wherein A is a member selected from the group consisting of —N=di(lower)alkyl, —N=di(lower)alkenyl, morpholino, piperidino, pyrrolidino, piperazino and N-methyl piperazino, the lower alkyl having from 1 to 5 carbon atoms and the lower alkenyl having from 2 to 5 carbon atoms; each of R_9 and R_1 is independently a member selected from the group consisting of a hydrogen atom and lower alkyl of at most 3 carbon atoms; and *n* is an integer from 2 to 5.

3,126,397
PROCESS FOR PREPARING TROPYLIUM PERCHLORATE

Arne P. ter Borg, Robert van Helden, and Albert F. Bickel, all of Amsterdam, Netherlands, assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed June 8, 1960, Ser. No. 34,607
Claims priority, application Netherlands July 20, 1959
2 Claims. (Cl. 260—350)

1. A process for the production of tropylium perchlorate which comprises oxidizing cycloheptatriene in substantially anhydrous acidic medium, said acidic medium selected from the group consisting of acetic acid, halogenated acetic acid and a mixture of acetic acid and halogenated acetic acid, with molecular oxygen at a temperature from about 0° C. to about 100° C. in the presence of from 0.1 to 0.5 mole of perchloric acid per mole of cycloheptatriene.

3,126,398
FLUORINATED ANDROSTENES AND PROCESS FOR THE PREPARATION THEREOF

Cecil H. Robinson, Cedar Grove, N.J., assignor to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey

No Drawing. Filed Feb. 8, 1960, Ser. No. 7,107
20 Claims. (Cl. 260—397.4)

1. A compound selected from the group consisting of 16,16-difluoro-4-androstenes having the following formula:

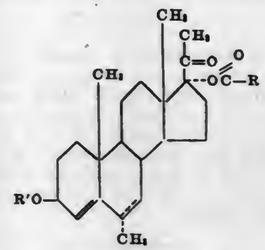
the 19-nor and 1-dehydro analogs thereof; wherein X is a member of the group consisting of hydrogen and halogen; Y is a member of the group consisting of halogen, hydrogen, hydroxy, and ketone; and when Y is hydrogen, X is hydrogen; Z is a member of the group consisting of O, (H,βOR), (α-lower alkyl,βOR) and (α-lower alkynyl,-βOR) wherein R is a member of the group consisting of hydrogen and an acyl radical of a hydrocarbon carboxylic acid containing up to eight carbon atoms.

3,126,399
17α-(LOWER ALKANOYL)OXY - 3 - HYDROXY - 6α-METHYLPREGN-4-EN-20-ONES, ESTERS THEREOF, AND 6-DEHYDRO DERIVATIVES CORRESPONDING

Paul B. Sollman, Wilmette, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Jan. 16, 1962, Ser. No. 166,689
7 Claims. (Cl. 260—397.4)

1. A compound of the structural formula



wherein R is a lower alkyl radical, R' is selected from the group consisting of hydrogen and lower alkanoyl radicals, and the dotted line indicates the optional presence of a double bond between carbon atoms 6 and 7.

3,126,400
ORGANIC TIN COMPOUNDS CONTAINING SULPHUR

Charles Robert Cramer, Vaduz, Liechtenstein, and Willem F. L. de Bruijn, Buchs, Switzerland

No Drawing. Filed Nov. 30, 1959, Ser. No. 855,990
Claims priority, application Switzerland Dec. 2, 1958
1 Claim. (Cl. 260—429.7)

Heat- and light stabilizers for chlorine-containing high-molecular compounds, consisting of compounds having a structure selected from the group consisting of

$$R_m—Sn—(OOC—COSR'')_n$$

and

$$R_m—Sn—(OOC—R'—COSR'')_n$$

wherein R is a radical selected from the group consisting of alkyl radicals having 4 and 8 carbon atoms; R' is selected from the group consisting of an aliphatic hydrocarbon of 2 to 4 carbon atoms and phenylene; and SR'' is selected from the group consisting of thioglycolic-, thiopropionic- and thiomalic acid alkyl and allyl ester radicals; and *m* and *n* are whole numbers from 1 to 3 whose total is 4.

3,126,401
IRON TRICARBONYL COMPLEXES OF 1,3-BUTADIENE CARBOXY COMPOUNDS

George G. Ecke, Penn Hills Township, Allegheny County, Pa., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Mar. 7, 1961, Ser. No. 93,845
17 Claims. (Cl. 260—439)

1. Conjugated diene iron-subgroup metal tricarbonyl compounds wherein the conjugated diene is selected from the class consisting of

(A) the 1,3-butadiene carboxy and dicarboxy acids and lower alkyl esters thereof; and

(B) the alkyl substituted 1,3-butadiene carboxy and dicarboxy acids having up to 16 carbon atoms and the lower alkyl esters thereof.

3,126,402

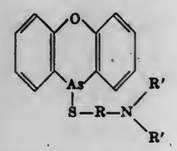
(10-PHENOXARSINYLTHIO)AMINES

Stanley J. Strycker, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Sept. 4, 1962, Ser. No. 221,320

9 Claims. (Cl. 260—440)

1. The compounds of the formula



wherein R is a divalent radical selected from the group consisting of alkylene being of from 2 to 12 carbon atoms, alkenylene being of from 4 to 12 carbon atoms, phenylene and substituted phenylene wherein any substituent is selected from the group consisting of alkyl, alkoxy, alkylthio, amino, and halo; and wherein each R′ is independently selected from the group consisting of hydrogen and lower alkyl being of from 1 to 4 carbon atoms, and the strong acid salts thereof.

3,126,403

SYNTHETIC LUBRICATING OIL

Alfred H. Matuszak, Westfield, and Stephen J. Metro, Scotch Plains, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Original application Nov. 26, 1958, Ser. No. 776,440, now Patent No. 3,058,911, dated Oct. 16, 1962. Divided and this application Feb. 1, 1962, Ser. No. 170,520

9 Claims. (Cl. 260—448.2)

1. A material useful as a synthetic lubricating oil and having good load-carrying ability which is the reaction product of a synthetic ester lubricating oil and a silicon material having the general formula: R_3SiX, wherein X is selected from the group consisting of halogen and hydroxyl groups and R is selected from the group consisting of X and C_1 to C_{18} hydrocarbon radicals, said reaction between said synthetic ester oil and said silicon material being conducted at a temperature in the range of about 40° C. to 165° C. for from 1 to 16 hours, in the ratio of 0.5 to 20 moles of ester per mole of silicon material, said synthetic ester being selected from the group consisting of alcohol diesters of saturated aliphatic dicarboxylic acids, complex esters formed by reaction of dicarboxylic acids with glycols and monohydric alcohols, and complex esters formed by reaction of dicarboxylic acids with glycols and with monocarboxylic acids, said diesters having a total of from 20 to 36 carbon atoms per molecule and said complex esters having a total of 20 to 60 carbon atoms per molecule.

3,126,404

BIGUANIDE ADDUCTS OF PHENYL ISOCYANATE

Kenneth G. Flynn, Bridgeport, Conn., and Dalia R. Nenortas, Richmond Hill, N.Y., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Filed May 28, 1962, Ser. No. 197,903

5 Claims. (Cl. 260—453)

1. An adduct of phenyl isocyanate and a polymethyl substituted biguanide selected from the class consisting of tetramethylbiguanide, pentamethylbiguanide and hexamethylbiguanide.

3,126,405

PROCESS FOR PREPARING ORGANIC SULFUR ESTER COMPOUNDS

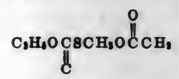
Giuseppe Losco and Giorgio Rossi, Milan, Italy, assignors to Montecatini Societa Generale per l'Industria Mineraria e Chimica, Milan, Italy

No Drawing. Filed July 17, 1959, Ser. No. 827,692

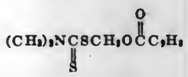
Claims priority, application Italy July 21, 1958

6 Claims. (Cl. 260—455)

1. Ethylxanthoylcarbinol acetate, of the formula:



3. Dimethyldithiocarbamylcarbinol benzoate, of the formula:



3,126,406

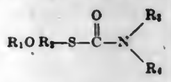
ALKOXYALKYL ESTERS OF THIOLCARBAMATES

Harry Tilles, El Cerrito, and Joe Antognini, Mountain View, Calif., assignors to Stauffer Chemical Company, a corporation of Delaware

No Drawing. Original application Nov. 24, 1958, Ser. No. 775,740, now Patent No. 3,055,751, dated Sept. 25, 1962. Divided and this application Oct. 18, 1961, Ser. No. 148,790

6 Claims. (Cl. 260—455)

1. Compounds of the general formula



wherein R_1 and R_2 are lower alkyl and R_3 and R_4 are selected from the group consisting of lower alkyl, lower alkenyl, lower cycloalkyl, and chloro-substituted analogs thereof.

3,126,407

PROCESS FOR MAKING ALIPHATIC NITRILES

Delmer L. Cottle, Highland Park, and Leon S. Minckler, Jr., Metuchen, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Dec. 30, 1960, Ser. No. 79,557

6 Claims. (Cl. 260—465.3)

1. In a process for making an aliphatic nitrile by reacting an olefin selected from the group consisting of propylene, isobutylene and 2-butene with a mixture of ammonia and oxygen, the improvement comprising carrying out said reaction in the presence of a catalyst selected from the group consisting of cupric orthophosphate, cupric metaphosphate, cupric tripolyphosphate, cupric acid phosphate and cupric pyrophosphate at about 250 to 550° C. under approximately atmospheric pressure for up to 15 seconds, the respective molar ratio of oxygen and ammonia to monoolefin being 0.3 to 5 and 0.1 to 5.

3,126,408

PURIFICATION OF ACRYLONITRILE

John C. Eck, Convent, N.J., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York

Filed Feb. 1, 1961, Ser. No. 86,468

4 Claims. (Cl. 260—465.9)

1. The method of purifying crude acrylonitrile containing as a contaminant a compound having an internal acetylenic group, which comprises removing the major proportion of impurities by distilling the acrylonitrile therefrom in the presence of a stabilizer selected from the group consisting of soluble cuprous salts and solubilized cuprous salts, mixing the acrylonitrile distillate with anhydrous aluminum chloride to cause reaction of residual impurities, thereafter adding cuprous chloride, ammonium chloride, ammonium hydroxide and water to form an aqueous solution of cuprous ammonium complex, and separating by azeotropic distillation the acrylonitrile from the aqueous solution whereby said contaminant is removed from said acrylonitrile.

3,126,409

P-t-OCTYLPHENYL β-RESORCYLATE

Frank J. Arthen, South Bound Brook, N.J., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Oct. 25, 1961, Ser. No. 147,470

1 Claim. (Cl. 260—473)

The compound p-t-octylphenyl β-resorcylate.

3,126,410

MIXED STEREOISOMERS OF NORCAMPHORIC ACID

Samuel C. Temin, Pittsburgh, and Melvin E. Baum, Monroeville, Pa., assignors to Koppers Company, Inc., a corporation of Delaware

No Drawing. Filed Feb. 21, 1961, Ser. No. 90,642

5 Claims. (Cl. 260—514)

1. Method of making a stereoisomeric mixture of cis and trans norcamphoric acid comprising providing an aqueous medium capable of retaining norbornylene in suspension and containing water as the sole participating solvent, simultaneously adding thereto norbornylene and ozone, the amount of ozone being at least a stoichiometric amount based on the amount of norbornylene, permitting the ozone and norbornylene to react to form a water-soluble low molecular weight ozonation product, heating the solution containing the ozonation product to an elevated temperature below the boiling point of the solution, oxidizing the ozonation product with a gas stream containing oxygen and recovering from the reaction mixture norcamphoric acid in the form of a mixture of cis and trans isomers.

3,126,411

PROCESSES AND INTERMEDIATES FOR PREPARING BASIC TRICYCLIC COMPOUNDS

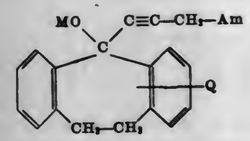
Gérald Rey-Bellet, Reinhard Schläpfer, and Hans Spiegelberg, Basel, Switzerland, and Karl Doebel, Ossining, N.Y., assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Original application Feb. 5, 1960, Ser. No. 6,841, now Patent No. 3,073,847, dated Jan. 15, 1963. Divided and this application Apr. 30, 1962, Ser. No. 191,317

Claims priority, application Switzerland Feb. 12, 1959

5 Claims. (Cl. 260—570.8)

1. A compound represented by the formula



wherein M represents an alkali metal; Q represents a member selected from the group consisting of hydrogen, chlorine, bromine, lower alkyl, and lower alkoxy; and Am represents a tertiary amino radical selected from the group consisting of di-lower alkylamino, piperidino, morpholino, piperazino, N-methylpiperazino, and pyrrolidyl.

3,126,412

COMPOUND N,N′-DI-(3,5,5-TRIMETHYLCYCLOHEXYL)-p-PHENYLENEDIAMINE

Eldon E. Stahly, Grosse Pointe, Mich., assignor, by direct and mesne assignments, of three-fourths to Oliver W. Burke, Jr., Grosse Pointe, Mich., and one-fourth to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Nov. 22, 1954, Ser. No. 470,401

1 Claim. (Cl. 260—577)

The compound N,N′-di-(3,5,5-trimethylcyclohexyl)-p-phenylenediamine.

3,126,413

REMOVAL OF CALCIUM AND MAGNESIUM IMPURITIES FROM AND CATALYTIC REDUCTIVE ALKYLATION OF NITROANILINE

Robert P. Zimmerman, Downers Grove, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Sept. 14, 1959, Ser. No. 839,591

8 Claims. (Cl. 260—577)

3. In the catalytic reductive alkylation of nitroaniline containing calcium and magnesium impurities with a carbonyl compound selected from the group consisting of ketones and aldehydes, the improvement which comprises forming a solution of said nitroaniline in said carbonyl compound, treating said solution with a cation exchange resin to remove calcium and magnesium impurities originally contained in said nitroaniline, withdrawing treated solution of nitroaniline in said carbonyl compound reduced in impurities, and subjecting the same with hydrogen to catalytic reductive alkylation in the presence of a platinum-containing catalyst at a temperature of from about 110° to about 250° C. and a pressure of from about 100 to 3000 p.s.i.g.

3,126,414

4-ALKOXY-5-HALO-2-HYDROXY-BENZOPHENONES

Sydney M. Spatz, Buffalo, and Russell I. Steiner, Williamsville, N.Y., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed May 7, 1958, Ser. No. 733,474

4 Claims. (Cl. 260—591)

1. 4-alkoxy-5-bromo-2-hydroxy-benzophenone.

3,126,415

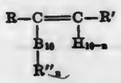
ORGANOBORON COMPOUNDS AND METHOD OF PREPARATION

Joseph Green, Dover, Marvin M. Fein, Westfield, and Nathan Mayes, Dover, N.J., assignors to Thiokol Chemical Corporation, Bristol, Pa., a corporation of Delaware

No Drawing. Filed Nov. 29, 1960, Ser. No. 72,528

11 Claims. (Cl. 260—606.5)

1. A method for the preparation of organoboron compounds which comprises reacting an alkali metal with a compound of the class



wherein R and R′ are each selected from the class consisting of hydrogen, alkyl radicals and alkenyl radicals, the total number of carbon atoms in R and R′ being from 2 to 8, R″ is a lower alkyl radical, and *n* varies from 0 to 4, while the reactants are in admixture with a solvent for the alkali metal.

9. The products produced by the method of claim 1.

3,126,416
PURIFICATION OF ARYL SECONDARY PHOSPHINE OXIDES

James Leonard Willans, Abingdon, England, assignor to United Kingdom Atomic Energy Authority, London, England

No Drawing. Filed Feb. 5, 1962, Ser. No. 171,306
Claims priority, application Great Britain Feb. 9, 1961
2 Claims. (Cl. 260—606.5)

1. A method of purification of a crude diarylphosphine oxide which comprises the steps of reacting the said phosphine oxide with a lower alkyl ketone, isolating the diaryl (hydroxyisoalkyl) phosphine oxide so formed and heating the said diaryl (hydroxyisoalkyl) phosphine oxide in the absence of oxygen and moisture to regenerate the pure diarylphosphine oxide.

3,126,417
NITRATION OF TOLUENE WITH ALKYL NITRATES AND POLYPHOSPHORIC ACID

Sien Moo Tsang, Bound Brook, N.J., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Dec. 21, 1961, Ser. No. 161,244
4 Claims. (Cl. 260—645)

1. The nitration process comprising reacting a lower alkylbenzene in the presence of an open-chain polyphosphoric acid having a phosphoric acid anhydride equivalency between about 76% and about 88% and at a temperature in the range from about 0° C. to about 80° C. with a lower alkyl nitrate having at least two carbon atoms.

3,126,418
PURIFICATION OF NITROCYCLOHEXANE

John H. Bonfield, East Aurora, N.Y., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York

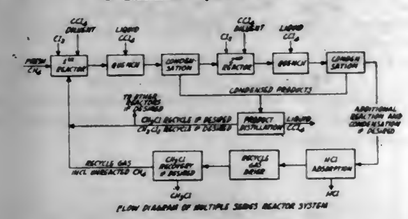
No Drawing. Filed Aug. 13, 1962, Ser. No. 216,313
5 Claims. (Cl. 260—644)

1. The process for purifying nitrocyclohexane which comprises dissolving nitrocyclohexane in a liquid ammonia medium, allowing time for the precipitation of the ammonium salt of aci-nitrocyclohexane, separating the salt phase from the liquid ammonia phase, and allowing the salt to decompose thereby regenerating nitrocyclohexane which is recovered.

3,126,419
CHLORINATION OF METHANE

William M. Burks, Jr., Louisville, Ky., and Robert P. Obrecht, Orinda, Calif., assignors to Stauffer Chemical Company, a corporation of Delaware

Filed Sept. 26, 1960, Ser. No. 58,367
6 Claims. (Cl. 260—662)



1. A process for the partial chlorination of methane comprising: feeding gaseous chlorine, methane and carbon tetrachloride diluent to a first reaction zone maintained at a temperature between about 350° C. and 550° C. whereby to form a gaseous product stream containing unreacted methane, hydrogen chloride, carbon tetrachloride and partially chlorinated hydrocarbons including chloroform and methylene chloride; cooling said product stream to a temperature no greater than about −25° C. whereby to condense carbon tetrachloride, chloroform and methylene chloride out of said product stream; passing the remaining gaseous material including substantially all of said hydrogen chloride so produced to a second reaction zone maintained at a temperature between about 350° C. and 550° C. and admixing additional chlorine and carbon tetrachloride diluent therewith whereby to form a gaseous product stream containing unreacted methane, hydrogen chloride, carbon tetrachloride and partially chlorinated hydrocarbons including chloroform and methylene chloride; cooling said gaseous product stream to a temperature no greater than about −25° C. whereby to condense carbon tetrachloride, chloroform and methylene chloride from said product stream; removing the hydrogen chloride from the remaining portions of said product stream; drying and recycling through at least one of said reaction zones the remaining gaseous materials; and admixing additional diluent and chlorine with the said gaseous materials being recycled through the said last-mentioned reaction zone.

3,126,420
PREPARATION OF JET FUELS

Herman S. Bloch, Skokie, and William K. T. Gleim, Island Lake, Ill., assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

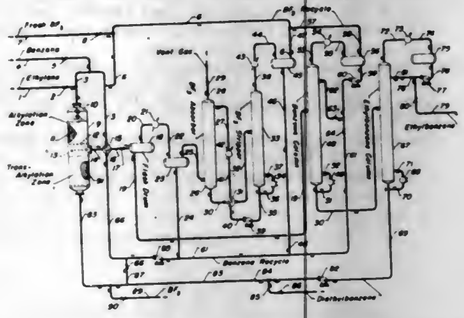
No Drawing. Filed July 5, 1960, Ser. No. 40,569
2 Claims. (Cl. 260—666)

1. A process for producing jet fuel which comprises catalytically polymerizing a normally gaseous olefinic hydrocarbon in the presence of solid phosphoric acid catalyst at a temperature of from about 450° F. to about 650° F. and a pressure of from about 600 to about 1200 p.s.i., thereby forming polycyclic naphthenes of at least 15 carbon atoms per molecule, separating the resultant polymerization product into a light aliphatic polymer boiling below about 500° F. and a heavy polymer boiling above about 500° F. and containing said polycyclic naphthenes, and catalytically hydrogenating said heavy polymer to form a stable, high density, high heat content fuel.

3,126,421
MEANS FOR EFFECTING A COMBINED ALKYLATION-TRANSALKYLATION PROCESS

Edwin K. Jones, Kenilworth, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed Nov. 21, 1960, Ser. No. 70,654
9 Claims. (Cl. 260—671)

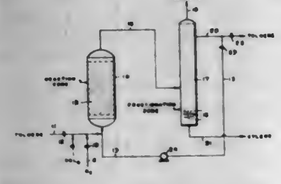


1. A process for producing a monoalkylated aromatic compound which comprises introducing to the upper end of a vertically disposed reaction zone an unalkylated aromatic compound and an alkylating agent, the aromatic compound being in molar excess of the alkylating agent, passing the mixture at alkylating conditions downwardly through a bed of alkylation catalyst in the upper portion of said zone to an intermediate portion of the reaction zone, simultaneously introducing to the lower end of the reaction zone unreacted aromatic compound and polyalkylated aromatic compound obtained as hereinafter set forth, passing the mixture upwardly through a second bed of alkylation catalyst in the lower portion of the reaction zone and therein reacting a portion of said unreacted aromatic compound with polyalkylated aromatic compound, discharging the effluent from said second bed into said intermediate portion of the reaction zone to commingle therein with the effluent from the first-mentioned catalyst bed, thereby increasing the molar ratio of unalkylated aromatic compound to alkylating agent in the lower portion of the first-mentioned bed and in said intermediate portion of the reaction zone, removing the commingled effluents from the intermediate portion of said zone and separating therefrom a monoalkylated aromatic compound, unreacted aromatic compound and polyalkylated aromatic compound, introducing thus separated unreacted aromatic compound and polyalkylated aromatic compound to the lower end of the reaction zone as aforesaid, and recovering said monoalkylated aromatic compound.

3,126,422
VAPOR PHASE DISPROPORTIONATION OF AROMATICS

Jerome A. Planchard, Jr., Baytown, Tex., assignor, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

Filed Mar. 16, 1961, Ser. No. 96,264
7 Claims. (Cl. 260—671)



1. A method which comprises introducing into a disproportionation zone an aromatic hydrocarbon consisting essentially of a single alkyl benzene to contact a silica-alumina catalyst in the presence of a halogen selected from the group consisting of chlorine and chlorine-providing compounds at a temperature within the range from about 650° F. to about 1000° F. under a pressure within the range from about 200 to about 600 pounds per square inch and in the presence of a sufficient amount of free hydrogen to provide a ratio of hydrogen to feed within the range from about 0.5:1 to about 5:1 for a sufficient length of time to form a disproportionated product, said alkyl benzene being selected from the group consisting of toluene, ethylbenzene, and alkyl benzenes having 2 to 6 alkyl groups on the ring, said alkyl groups containing from 1 to 6 carbon atoms, and recovering said product.

3,126,423
PROCESS FOR THE ALKYLATION AND TRANSALKYLATION OF BENZENE-HYDROCARBONS

Walter Krönig and Karl-Heinz Vöpel, both of Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Nov. 15, 1961, Ser. No. 152,626
Claims priority, application Germany Nov. 26, 1960
14 Claims. (Cl. 260—671)

1. In the process for the alkylation and transalkylation of benzene hydrocarbons, the improvement which comprises using as catalyst for the alkylation a material comprising tungsten oxide, metal oxide of the 2–8 groups of the periodic systems, and a compound selected from the group consisting of phosphoric acid and silicic acid.

3,126,424
PRODUCTION OF BENZENE AND ITS TRISUBSTITUTED AND HEXASUBSTITUTED DERIVATIVES

Herbert Mueller, Ludwigshafen (Rhine)-Gartenstadt, and Herbert Friederich, Worms, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Oct. 17, 1960, Ser. No. 62,883
Claims priority, application Germany Oct. 21, 1959
9 Claims. (Cl. 260—673)

1. In a process for the production of benzene and trisubstituted and hexasubstituted benzene derivatives by catalytic trimerization of acetylene, monosubstituted and disubstituted acetylenes, the improvement which comprises trimerizing the acetylene reactant with a catalyst system obtained by the interaction of the components:

(*a*) a compound selected from the group consisting of titanic (IV) acid esters, titanium trihalides, titanium tetrahalides, titanium ester halides, iron (III) chloride, iron (III) bromide, nickel (II) salts of inorganic and organic acids and chelate complexes of divalent nickel;

(*b*) a metal selected from the group consisting of lithium, sodium, potassium, beryllium, magnesium, calcium, strontium, barium, aluminum, gallium, indium, zinc and cerium; and

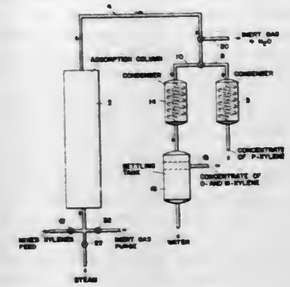
(*c*) a halide of an element selected from the group consisting of boron, aluminum, gallium, indium, thallium, silicon, tin, zinc, phosphorous, antimony and bismuth;

with the proviso that at least one of the components (*b*) and (*c*) contains aluminum.

3,126,425
SEPARATION OF PARA-XYLENE

Paul Earl Eberly, Jr., and William Floyd Arey, Jr., Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Nov. 5, 1957, Ser. No. 694,606
24 Claims. (Cl. 260—674)



1. An improved process for concentrating a para-xylene containing stream, which stream further contains at least one other isomeric xylene, which comprises passing said stream as a vapor into an adsorption zone, maintaining in said zone a bed of crystalline metallic alumino-silicate zeolite having uniform pore openings of 10–13 Angstrom units, adsorbing said isomer in said pores and withdrawing and recovering a stream substantially richer in para-xylene.

3,126,426
BUTANE DEHYDROGENATION

Byron W. Turnquest, Chicago, and William P. Hettinger, Jr., Dolton, Ill., assignors, by mesne assignments, to Sinclair Research, Inc., New York, N.Y., a corporation of Delaware

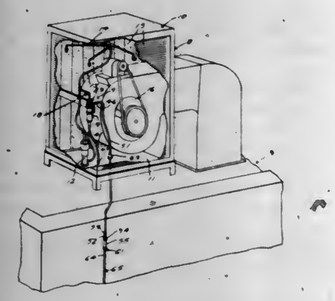
No Drawing. Filed May 11, 1960, Ser. No. 28,240
3 Claims. (Cl. 260—683.3)

1. A method for the dehydrogenation of butane to selective yields of butene which comprises contacting the butane in the presence of added hydrogen at a temperature of about 900 to 1200° F. with a calcined catalyst consisting essentially of a minor catalytic amount of a platinum metal and over 5 up to 20% of a 3 to 55 atomic number alkali metal on an essentially alumina base.

3,126,427
CHEMICAL FEEDER AND BLEED-OFF ATTACHMENT FOR EVAPORATIVE COOLER

Leland W. Broughton, 2320 Pittsburg St., El Paso, Tex.

Filed Mar. 28, 1962, Ser. No. 183,092
6 Claims. (Cl. 261—2)

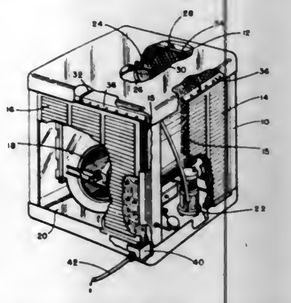


1. In combination with an evaporative-type air cooler including a casing having a bottom portion forming a sump containing water, porous cooling pads supported by peripheral portions of the casing above the sump, a conduit extending upwardly from below the liquid level in the sump and having an upper discharge end disposed adjacent said pads, means for recirculating the water from the sump through said conduit to the pads, and means to supply make-up water of a predetermined hardness to the sump; a chemical feeder and bleed-off attachment comprising a bypass conduit having an upper inlet end connected to and receiving water from said first mentioned conduit and a lower discharge end opening into the sump for bypassing a part of the water passing upwardly through the first mentioned conduit directly back to the sump, a container interposed in and forming a part of the bypass conduit, a water softening chemical partially filling the container, a first regulator means disposed in the lower portion of said container for regulating the amount and concentration of the water and chemical mixture discharged from said bypass conduit into the sump and for restricting the flow from said container to cause filling of the remainder of the container with the bypassed water, a bleed-off conduit communicating with and leading from an upper part of said container above the level of the chemical therein and discharging to waste externally of the cooler for bleeding off water from the sump having a hardness greater than the hardness of the make-up water, and a second regulator means interposed in said bleed-off conduit for restricting the flow therethrough whereby the quantity of the water discharged to waste is substantially less than the quantity of the make-up water supplied to the sump and constitutes only a small proportion of the liquid passing through the bypass conduit.

3,126,428
BACTERIA PROOF EVAPORATIVE COOLER

Robert S. Ash, Phoenix, Ariz., assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware

Filed Jan. 11, 1960, Ser. No. 1,750
4 Claims. (Cl. 261—97)



1. In an evaporative cooler the combination of: evaporative cooler pads having hygroscopic material therein said hygroscopic material impregnated with a composition comprising propyleneglycol, boric acid, ethyl hexanol, phenyl mercuric borate, dimethyl benzyl borate, ammonium borate, and phenyl mercuric chloride, said hygroscopic material adapted to be operated with a moisture content above 75% relative humidity.

3,126,429
METHOD OF CASTING TEETH HAVING DIFFERENTLY COLORED LAYERS

Jacob A. Saffir, Los Angeles, Calif., assignor to The Dentists' Supply Company of New York, York, Pa., a corporation of New York

Original application Oct. 21, 1960, Ser. No. 64,177. Divided and this application Apr. 5, 1962, Ser. No. 185,363
2 Claims. (Cl. 264—20)

1. A method of casting artificial teeth having differently colored layers from liquid epoxy resins suitably colored and comprising the steps of pouring into a mold a first measured amount of liquid epoxy resin of a predetermined color and less than the volumetric capacity of the mold cavity to form one layer of a tooth, permitting said first measured amount to partially polymerize to gel consistency, then pouring a second amount of a differently colored liquid epoxy resin into the mold cavity to fill the same and bond to the gel of said one layer of resin incident to complete curing of said second amount of plastic and the entire composite plastic tooth, and removing the completed cast epoxy resin tooth from the mold cavity.

3,126,430
PRODUCTION OF CARBON MASSES

Michael Stuart Thomas Price, Wantage, England, assignor to United Kingdom Atomic Energy Authority, London, England

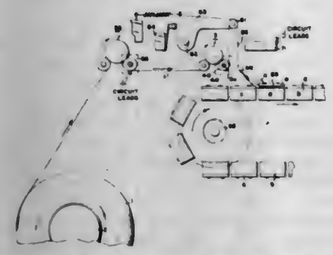
No Drawing. Filed Sept. 24, 1958, Ser. No. 762,903
Claims priority, application Great Britain Sept. 24, 1957
5 Claims. (Cl. 264—29)

1. A method of producing a baked carbon mass of high density, which comprises the steps of forming a shaped plastic mass of powdered carbon and a fusible cokable binder, supporting the plastic mass in the unbaked condition in a container, supplying a non-oxidizing gas to the container under a super-atmospheric pressure of at least 100 p.s.i.g., and heating the plastic mass in the container to bake said mass by coking said binder, the pressure of said gas being maintained substantially constant throughout the said heating step.

3,126,431
METHOD OF REGISTRATION OF INDICIA

John R. Harder, 101 Cedar Grove Parkway, Cedar Grove, N.J.; Reid A. Mahaffy, 105 Clinton Ave., Montclair, N.J.; and William E. Young, 46 Cooper Ave., Roseland, N.J.

Filed Aug. 23, 1960, Ser. No. 51,342
5 Claims. (Cl. 264—40)

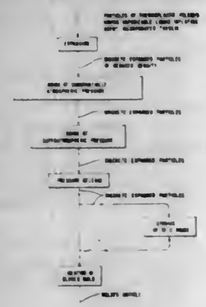


1. The method of registering indicia on a web of material with elements to which said material is to be applied, comprising the steps of advancing said material towards said elements, stretching said material in the longitudinal direction with a predetermined tension, maintaining a desired registration of said indicia by altering said predetermined tension in the appropriate direction in response to changes in the positioning of said indica with respect to a position providing the desired registration with said elements, and applying said material to said elements under a tension less than said predetermined tension.

3,126,432
PROCESS FOR PRODUCTION OF SUPER-LOW DENSITY THERMOPLASTIC FOAM

Gerrit Schuur, Delft, Netherlands, assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed Apr. 26, 1962, Ser. No. 190,243
Claims priority, application Netherlands May 18, 1961
3 Claims. (Cl. 264—53)



1. A process for producing a gas-expanded, cellular polystyrene body having closed cells, comprising expanding particles of polystyrene having a vaporizable liquid C_4 to C_5 paraffin hydrocarbon inflating agent incorporated therein, whereby discrete expanded particles of reduced density are formed, aging said particles at substantially atmospheric pressure and ambient temperature for about 1 to 3 hours, subjecting the aged pre-expanded particles to superatmospheric air pressure of about 2 to 8 atmospheres for from 2 to 8 hours while maintaining the particulate state of the particles, releasing said superatmospheric pressure, and within five hours thereof converting said particles into said cellular polystyrene articles by heating in a closed mold.

3,126,433
BENZOIC ACID TREATMENT OF COLLAGEN FIBERS AND CHROME TANNAGE THEREOF

Jerome Cohen, Chicago, Ill., assignor to Armour and Company, Chicago, Ill., a corporation of Delaware

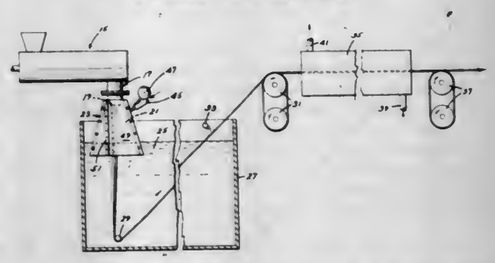
No Drawing. Filed Aug. 28, 1961, Ser. No. 134,132
5 Claims. (Cl. 264—176)

1. In the processing of collagen fibers to produce a formed leather, the steps comprising dispersing native collagen fibers in an aqueous solution of benzoic acid, said solution having a benzoic acid concentration of about .1 to 1% by weight, and heating the dispersion at a temperature within the range of from 30 to 65° C., said heating being continued until at least 5% by weight of the collagen in said dispersion has been converted to reconstitutable, solubilized collagen.

3,126,434
DAMPING OF SURFACE MOVEMENT OF QUENCH BATH IN MELT SPINNING PROCESS

Joseph C. Berger, Jr., Folsom, Pa., assignor to Avisun Corporation, Philadelphia, Pa., a corporation of Delaware

Filed July 24, 1961, Ser. No. 126,042
6 Claims. (Cl. 264—178)

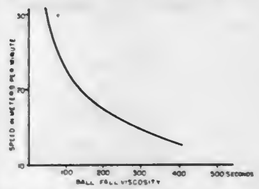


1. Process for the production of shaped articles, which comprises shaping a molten polymeric material into the form of a continuous filamentary stream, passing the shaped stream through a contained quiescent gaseous atmosphere and into a liquid quench bath to provide a continuous filament and maintaining the quiescent gaseous atmosphere under pressure to dampen movement of the surface of that portion of the liquid bath adjacent to the quiescent gaseous atmosphere.

3,126,435
PRODUCTION OF REGENERATED CELLULOSE FILAMENTS

Ernest Edward Tallis and David Nicholson Tyler, Coventry, England, assignors to Courtaulds Limited, London, England, a British company

Filed Dec. 20, 1956, Ser. No. 629,512
Claims priority, application Great Britain Dec. 23, 1955
13 Claims. (Cl. 264—191)



1. A process for producing regenerated cellulose filaments having a substantially all skin structure, comprising extruding viscose having a ball fall viscosity of between about 44 and about 410 seconds, the cellulose of which has an average degree of polymerisation of at least

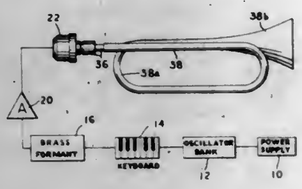
400 at a salt point between 6 and 15, into an aqueous coagulating bath containing sulphuric acid together with zinc sulphate and sodium sulphate in the presence of between 0.5 and 10 percent by weight of the weight of the cellulose of a polyethylene oxide of average molecular weight between 300 and 10,000 at an extrusion ratio of between about 0.4 and about 1.1 and at a draw-off speed not substantially greater than the draw-off speed determined by applying the ball fall viscosity of the viscose to the curve shown in FIGURE 1.

ELECTRICAL

3,126,436
BRASS VOICE FORMANT SYSTEM FOR ELECTRONIC ORGAN

Irwin F. Hyden, 408 Trenton Road, Norman, Okla.

Filed Aug. 28, 1961, Ser. No. 134,398
2 Claims. (Cl. 84—1.01)



1. An electronic organ formant system for producing a simulated brass sound comprising in combination:

a plurality of oscillator means for producing a plurality of electrical signals of frequency corresponding to that of various musical notes;

a power source for driving the oscillator means;

keying means for selectively producing the various electrical signals;

electronic circuit formant means receiving the various electrical signals for shaping the signals to form voicing signals having frequency content simulating that of sound waves produced by a brass instrument;

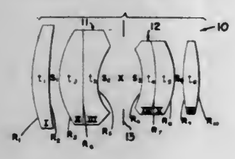
a diaphragm audio driver means connected to receive the voicing signal from the formant means for producing an audio signal; and

a horn having a long tubular portion of substantially constant diameter at the first end thereof and a short bell flare at the other end thereof, the horn being coupled at the first end thereof to the audio driver means for receiving the audio signal therefrom whereby a simulated brass sound will be produced as a result of the combination of the electrical voicing signal producing a corresponding audio signal and the mechanical forming of the audio signal by the horn.

3,126,437
GAUSSIAN PHOTOGRAPHIC OBJECTIVE

Lena M. Hudson, Brighton, and John M. Schwartz, Irondequoit, N.Y., assignors to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York

Filed Dec. 27, 1960, Ser. No. 78,594
2 Claims. (Cl. 88—57)



1. A Gauss type of photographic objective which is well corrected for spherical and chromatic aberrations, astigmatism, coma, flatness of field and distortion and having a long back focus of substantially .62F where F denotes the focal length of said objectives, a field angle of at least 45°, and a short overall length of less than .8F, said objective comprising two negative meniscus lens members which are located in optical alignment and in spaced relation to each other and between two outer collective single lens members, said meniscus members being concave towards an interposed diaphragm and each said meniscus member being composed of a negative and a positive lens element with the negative elements being closest to each other, the constructional data for said objective being given in the statements of inequalities herebelow wherein R_1 to R_{10} denote the radii of the lens surfaces, t_1 to t_6 denote the axial thicknesses of the successive lens elements numbering from the front of the objective, S_1 to S_4 denote the axial air spaces between the lens members, n_D denotes the refractive index, and ν denotes the Abbe number of the glass from which the various lens elements are made,

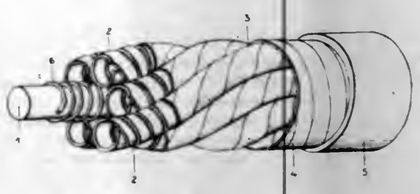
[E.F.=100. B.F.=61.56. F.A.=45°. f/1.8]

Lens	Radii	Thicknesses	Spacings	n_D	ν
I	R_1=75.20	t_1=9.00		1.720	47.5
	R_2=271.65		S_1=4.03		
II	R_3=42.71	t_2=10.59		1.720	42.0
	R_4=∞				
III	R_5=27.56	t_3=7.91		1.720	29.3
			S_2=11.01		
			S_3=11.01		
	R_6=−28.72	t_4=7.00		1.605	38.0
IV	R_7=−1,023.62	t_5=8.97		1.657	57.2
V	R_8=−39.66		S_4=0.10		
	R_9=220.67	t_6=7.97		1.691	54.8
VI	R_{10}=−93.18				

3,126,438
COAXIAL CABLES WITH SLIT TUBULAR INSULATION

Jean Lorrin, Lyons, France, assignor to Compagnie Generale d'Electricite, Paris, France, a French corporation

Filed Dec. 2, 1960, Ser. No. 73,458
Claims priority, application France June 8, 1956
9 Claims. (Cl. 174—29)

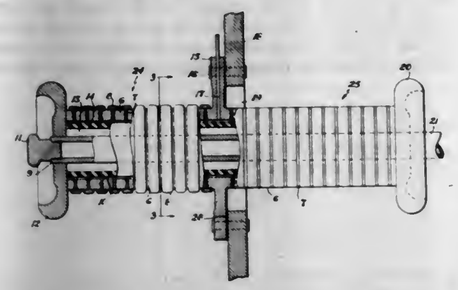


6. High frequency coaxial cable comprising an inner central conductor, an outer conductor concentric to said inner conductor and an insulating tubular element slitted along at least two parallel helices, wound helically between said two conductors and pressed between them.

3,126,439
HIGH-VOLTAGE ELECTRICAL INSULATING BUSHING

Alec S. Denholm and Alfred J. Gale, Lexington, Mass., assignors to Goodrich-High Voltage Astronautics, Inc., Burlington, Mass., a corporation of Delaware

Filed May 16, 1962, Ser. No. 195,153
10 Claims. (Cl. 174—31)



5. A high voltage standoff insulator suitable for maintaining high electrical potentials within a vacuum comprising a high voltage terminal, an insulating member adapted to position said terminal a fixed distance from a ground plane, said insulating member consisting of a plurality of annular insulating elements and a plurality of electrically conducting ring shaped elements alternately arranged in contiguous relationship and cooperating with said high voltage terminal to hermetically enclose a volume therein, means for securing said insulating member to said ground plane, resistance means comprising a tube of insulating material having a resistivity of not more than 10^{12} ohm cm. disposed within said insulating member, said resistance means being in electrical contact with said plurality of electrically conductive ring shaped elements and adapted to provide a uniform voltage gradient therealong, and means for maintaining a pressurized insulating fluid within said enclosed volume.

3,126,440
SHIELDING AND SEALING GASKET MATERIAL

Alfred M. Goodloe, 105 Duncan Hill Apts., 1000 Central Ave., Westfield, N.J.

Filed June 27, 1961, Ser. No. 120,074
7 Claims. (Cl. 174—35)

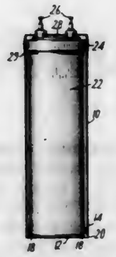


1. A gasket for the purposes described comprising a flat strip of resilient plastic substance having contained therein at least one sheet of woven material perpendicular to the flat sides of said strip, the woof threads of the said woven material running approximately perpendicular to the said flat sides and being of a metallic electrically conducting material and the warp threads of said material running approximately parallel to the surfaces of said strip and being of a non-metallic, non-conducting material.

3,126,441
HOUSING FOR ELECTRICAL CAPACITOR

Anthony Nichols, North Leominster, Mass., assignor to Celluplastic Corporation, a corporation of New Jersey

Filed June 30, 1960, Ser. No. 39,894
4 Claims. (Cl. 174—52)

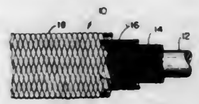


1. An electrical capacitor-plastic housing assembly which comprises a cylindrical capacitor having an annular collar adjacent one end and leads extending from such end, a resilient plastic tube having one closed end, the inside diameter of the tube being greater than the outside diameter of the body of the capacitor to provide an insulating air space between the body of the capacitor and body of the tube, said tube being in contact with the said collar, and the inside diameter of the tube in that area where it contacts the collar being greater than the inside diameter of the remainder of the tube, said tube being long enough to have a portion adjacent the open mouth thereof which extends beyond the top of the said collar, said portion of the wall at the top of the tube being curled inwardly to overlie the rim at the top of the capacitor to lock the capacitor in place in the housing.

3,126,442
EXTENSIBLE ELECTRIC CABLE

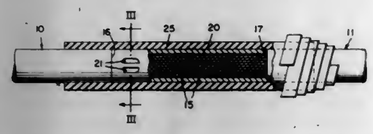
Frank B. Roberts, Marblehead, Mass., assignor to National Company, Inc., Malden, Mass., a corporation of Massachusetts

Filed Oct. 14, 1960, Ser. No. 62,697
6 Claims. (Cl. 174—69)



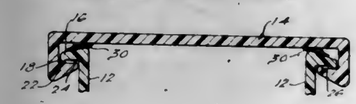
2. In an extensible electrical cable, a plurality of concentrically arranged radially spaced members each being elongatable an amount determined by the permitted reduction in diameter of the member during elongation thereof, and a loose braid of relaxed diameter-building material; said material being a plurality of threads which in a relaxed state tend to bunch up and are fluffy and which under tension tend to pull tight and have the appearance and structure of ordinary threads filling each space between said spaced members whereby the permitted diameter reduction of the outer one of each pair of spaced members on opposite sides of a braid of diameter-building material is increased thereby providing increased elongation of the cable.

3,126,443
CABLE SPLICE ASSEMBLY
Charles H. Stevens, Jr., Cornwall Bridge, Conn., assignor to Empire Products Inc., Cincinnati, Ohio, a corporation of Ohio
Continuation of application Ser. No. 722,518, Mar. 19, 1958, which is a division of application Ser. No. 461,505, Oct. 11, 1954. This application Aug. 18, 1960, Ser. No. 52,005
2 Claims. (Cl. 174—84)



1. A cable splice assembly which consists only of a pair of cable members having outer insulated portions and bared end portions, a hollow electrically conductive connector means, said end portions of the cable members abutting one another and being electrically connected to opposite end portions of said electrical connector means for electrically connecting said cables, an integral insulating sleeve surrounding said electrical connector means and overlapping and engaging the insulated portion of said cables at opposite ends of said connector means, and a body of sealing material associated only with the opposite end portions of said insulating sleeve, each sealing body completely surrounding and sealing the joint between the asosciated end portion of the insulating sleeve and the insulated portion of the cable, said body of insulating material being larger in diameter than said insulating sleeve and vulcanized only to the adjacent end portion of the insulating sleeve and to the adjacent insulating portion of the cable to provide a fluid-tight connection between the cable ends.

3,126,444
WIRING DUCT
Philip W. Taylor, Howell, Mich., assignor to Taylor Plastics, Incorporated, Howell, Mich., a corporation of Michigan
Filed Aug. 15, 1962, Ser. No. 217,147
6 Claims. (Cl. 174—101)



1. A wiring duct comprising, in combination, a body of flexible material having a channel shape, the top edge of each of the sides of said body having an outwardly extending flange terminating in a downwardly extending lip, a removable cover of flexible material adapted to close the open side of said body, said cover having downwardly extending side portions with inwardly extending flanges thereon, said flanges each terminating in an upwardly extending lip, the disposition of the juxtaposed lips on said body sides and on said cover being such that they are laterally spaced when said cover is in place and are adapted to interlock in response to bulging of said cover or said body thereby to resist removal of said cover.

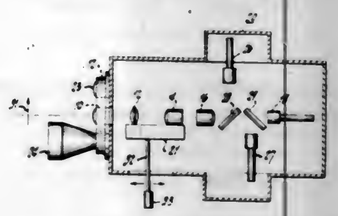
3,126,445
POP-IN HERMETIC ELECTRIC TERMINAL
Richard U. Clark, 4 Orchard Drive, West Acton, Mass.
Filed Mar. 26, 1962, Ser. No. 182,486
1 Claim. (Cl. 174—153)

A pop-in hermetic electric terminal assembly for mounting in a hole in a panel comprising in combination, a resilient tubular insert member having a major diameter tubular section, a minor diameter tubular section, a flared tubular section, said minor diameter section diverging into said major diameter section by means of said flared section, a convex conical termination at each end of said insert member, a pliable compressible cap of non-conducting material, said cap having an axial through-hole, said hole being counterbored at one end of said cap and said counterbore fitting over the minor diameter section of the resilient tubular insert up to the flared section of same, said cap having a concave conical portion within said counterbore to receive the convex conical termination of said minor diameter insert section,



an electrode pin having a stem section, a flange adjacent one end of said stem and a peripheral positioning groove on said stem adjacent the other end, the said electrode pin being positioned axially within said insert and said cap and the flange on said pin located so as to bear against said cap, the said groove on said stem extending beyond the conical termination of the major diameter insert section, a push-on nut, said nut riding within said groove in said electrode stem and abutting the said major diameter and termination of said resilient insert, the said terminal assembly being held securely within the hole in the previously mentioned panel upon the forced insertion of the compressible cap therethrough.

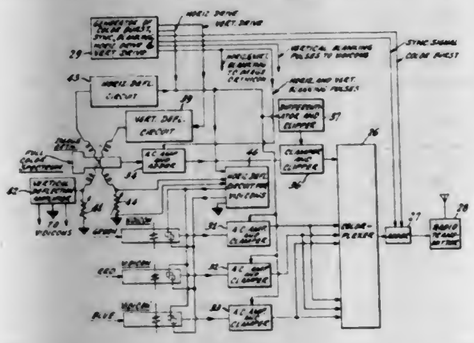
3,126,446
MEANS FOR OPTICAL FOCUSING
Felix C. Blancha, Moorestown, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Dec. 5, 1961, Ser. No. 157,093
8 Claims. (Cl. 178—5.4)



1. An optical system comprising an objective lens in fixed longitudinal position with respect to an image plane, two image relay lenses located in the light path between said objective lens and said image plane, a field lens located in said path between said objective and relay lenses, and means for simultaneously moving said field lens and the one of said relay lenses nearest said field lens axially in like direction and magnitude along said path to focus said system.

3,126,447
TELEVISION BLACK LEVEL SETTING
Sidney L. Bendell, Haddon Heights, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Mar. 27, 1962, Ser. No. 182,810
7 Claims. (Cl. 178—5.4)

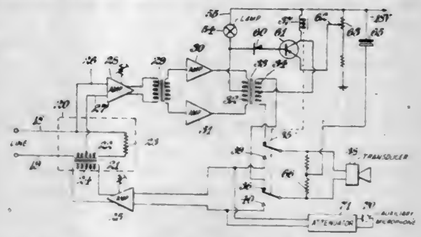
1. A television camera comprising a pickup tube having a target or screen that is to be scanned by an electron beam, said tube having a deflection coil through which a deflection current is to flow for deflecting said beam horizontally at a comparatively fast rate to scan said target, said camera further comprising at least one pickup tube of the type having a photoconductive target or screen that is to be scanned by an electron beam and having deflection means to which a deflection wave is to be applied for deflecting the associated electron beam horizontally at said comparatively fast rate to scan the photoconductive target, horizontal deflection circuit means for producing a repetitive horizontal deflection current which flows through said deflection coil, said deflection current having a waveform that includes a forward sweep portion and a return time portion, further horizontal deflection circuit means for producing a repetitive horizontal deflection wave which is applied to said horizontal deflect-



ing means, said deflection wave having a waveform that includes a forward sweep portion part of which occurs during the return time of said deflection current and having a comparatively short return time portion, means for producing an optical black strip along one side of said photoconductive target, said strip being substantially at right angles to the direction of horizontal scan, optical means for imaging the scene to be transmitted on the targets of said pickup tubes, the horizontal deflection wave applied to said horizontal deflecting means being made to deflect the associated electron beam across both the picture image and the optical black strip, whereby the output of said pickup tube having the photoconductive target comprises the picture signal obtained by each horizontal scan followed by a black level pedestal having a peak level that always is representative of picture black.

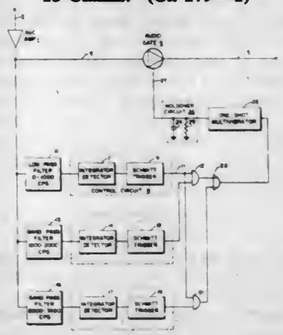
3,126,448
INTERCOMMUNICATION TELEPHONE SYSTEMS
Michael Millett, London, England, assignor to Modern Telephones (Great Britain) Limited, London, England, a company of Great Britain
Filed Oct. 7, 1959, Ser. No. 844,999
Claims priority, application Great Britain Oct. 8, 1958
4 Claims. (Cl. 179—1)

1. In an intercommunication telephone system having at least one station with a transducer arranged to act as a loudspeaker and also to serve as a microphone, the combination at said one station of first and second separate amplifiers, each with an input and an output, for amplifying speech signals in the incoming and outgoing directions of communication respectively, circuit means which switchably connect said transducer alternatively to the output of said first amplifier or the input of said second amplifier, and a relay operatively coupled to circuit means to connect said transducer alternatively to one or other of said two amplifiers, wherein the first amplifier has at least one stage operating as a class B amplifier, said one stage having a load impedance, and wherein means operatively connected to said relay are provided, which means are responsive to the direct po-



tential across said load impedance due to speech signals to control the operation of said relay.

3,126,449
NOISE DISCRIMINATOR
Jack Shirman, Penfield, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Sept. 15, 1960, Ser. No. 56,169
13 Claims. (Cl. 179—1)

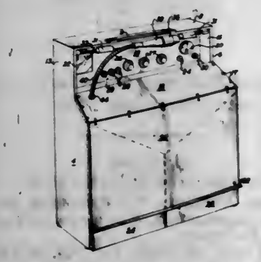


9. In combination, an input circuit, an output circuit, first means coupled to said input circuit for producing an output circuit when a fluctuating signal having a first frequency lying within a first bandwidth and having a first minimum energy content is present in said input circuit, second means coupled to said input circuit for producing an output signal when a fluctuating signal having a second frequency lying within a second bandwidth and having a second minimum energy content which is less than said first minimum energy content is present in said input circuit, third means coupled to said input circuit for producing an output signal when a fluctuating signal having a third frequency lying within a third bandwidth and having a minimum energy content is present in said input circuit, and fourth means coupled to the output circuits of said first, second, and third means for giving an indication when said first means produces an output signal and either said second means produces an output signal or said third means produces an output signal.

3,126,450
PORTABLE ELECTRONIC PUBLIC ADDRESS APPARATUS
Hugh G. Neil and Curtis L. Gladson, Knoxville, Tenn., and Edgard R. Wiklund, Atlanta, Ga., assignors to Special Instruments Laboratory, Incorporated, Knoxville, Tenn., a corporation of Tennessee
Filed May 4, 1962, Ser. No. 192,571
8 Claims. (Cl. 179—1)

4. A portable lectern comprising top, bottom and side walls forming a loudspeaker enclosure, the rear edge of

each of said side walls including a lower vertical portion and a forwardly and upwardly sloping portion at the upper end of said lower vertical portion, an inclined panel connected to said sloping edge portions, a pair of rear doors pivotally connected to said lower vertical portions for swinging movements between closed positions in which they extend approximately at right angles to said side walls and open positions in which they extend approximately in the same planes as said side walls, the upper



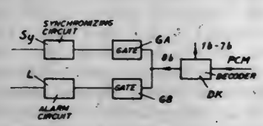
edge of each of said doors being inclined downwardly toward the free end thereof so as to lie in substantially the same plane as said sloping edge portions of said side walls when said doors are in said open positions, a panel pivotally mounted for swinging movement about a horizontal axis at the rear edge of said inclined panel between a closed position in which it may cover substantially the closed doors and an open position in which it may rest upon the inclined upper edges of said doors.

3,126,451

RECEIVING SYSTEM FOR RECEIVING SIGNAL INFORMATION USED IN A TIME DIVISION MULTIPLEX SYSTEM

Henry Scheftelowitz, Hagersten, Sweden, assignor to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden

Filed Feb. 21, 1961, Ser. No. 90,719
Claims priority, application Sweden Apr. 25, 1960
1 Claim. (Cl. 179—15)



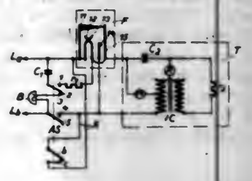
In a receiving system for receiving signal information pertaining to receiving messages and for receiving synchronizing information pertaining to synchronizing the receiving system with a transmitting system in a time division multiplex system with *n* channels displaced in time in reference one to another and with *m* pulse positions in each channel, a first gating circuit for transmitting the synchronizing information, said gating circuit being connected and arranged to be open during the entire periods of time for similarly positioned pulse positions in some of the channels every second time said channels appear in the chain of time division multiplex cycles formed by said channels, and a second gating circuit for checking the pulse position of the synchronizing information, said second gating circuit being connected to the input side of the first gating circuit and arranged to be opened during the entire period of time for the remaining channels of the time division multiplex cycles every second time said remaining channels appear.

3,126,452

ARRANGEMENT IN TELEPHONE INSTRUMENTS

Gustaf Adolf Pettersson, Stockholm, Sweden, assignor to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden

Filed Mar. 14, 1961, Ser. No. 95,721
Claims priority, application Sweden Mar. 18, 1960
7 Claims. (Cl. 179—81)



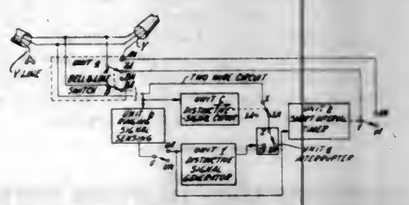
1. A telephone substation circuit comprising a pair of subscriber line conductors, a talking circuit including a receiver and a transmitter, a dialing circuit including an impulse sender, a cradle switch capable of taking a first position for local signalling and a second position for conversing, at least two contact springs controlled by said cradle switch position so as to respond to said first position by disengaging to disconnect said talking circuit and dialing circuit from said lines and to respond to said second position by engaging to bridge said talking circuit and dialing circuit across said lines, short-circuit conductor means across both said talking and dialing circuits and including at least two contact springs controlled by said cradle switch position so as to respond to said first position by engaging and to respond to said second position by disengaging.

3,126,453

MEANS FOR ALTERING TELEPHONE OPERATION

Carl O. Friend, 606 W. Wisconsin Ave., Milwaukee 3, Wis., and Robert R. Bell, 3073 S. Chase Ave., Milwaukee 1, Wis.

Filed Feb. 25, 1959, Ser. No. 799,833
4 Claims. (Cl. 179—89)



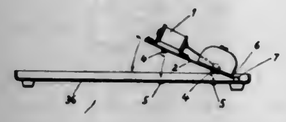
4. In a telephone system having a call initiating station and a primary signaling circuit at a substation, said primary signaling circuit including a line, first means for alternately making and breaking the primary signaling circuit by connecting and disconnecting a line in the primary signaling circuit from the substation, means for generating an incoming ringing signal, an incoming ringing signal sensing device operable to sense an incoming ringing signal when the first means has disconnected the primary signaling circuit from the substation, a distinctive tone signal generating means operable to generate a distinctive tone signal in response to an incoming ringing signal as sensed by the incoming ringing signal sensing means, means for transmitting the distinctive tone signal to the call initiating station only while incoming ringing signals continue to be received and means for disconnecting the distinctive tone signal during that time interval during which the standard ringing signal pulse is received.

3,126,454

TELEPHONE INSTRUMENT

Ernst Gunno Waldemar Freak, Stockholm, Oskar Edvin Rudolf Nordström, Hagersten, and Per Olof Ragnar Persson, Sundbyberg, Sweden, assignors to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden

Filed Aug. 25, 1960, Ser. No. 51,979
Claims priority, application Sweden Aug. 31, 1959
9 Claims. (Cl. 179—100)



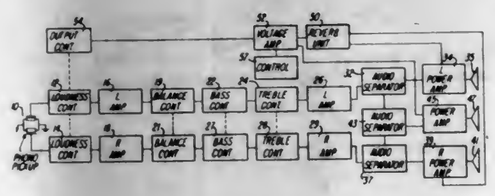
1. A telephone instrument comprising a signal assembly including signaling components, a transmission assembly including transmitting components and a pulse-sending assembly including pulse-sending components, a support structure for each of said assemblies, each of said support structures mounting the components of the respective assembly, a base plate for mounting thereupon said support structures, a first one of said structures and the base having engageable locking means for keying said structure to the base, said first structure being releasable upon displacement in a predetermined direction with reference to the base, a second one of said structures, the base, and the first structure having engageable locking means for keying the second structure to the base and to the first structure to lock the first structure in its position, said second structure being releasable from the base and the first structure upon displacement in a predetermined direction with reference to the base, and the third one of said structures having displaceable locking means engageable with the base and the second structure for keying the third structure to the base and blocking displacement of the second structure in said predetermined direction, whereby keying of said third structure locks are three structures to the base, said third structure being releasable from the base by displacement of the locking means of the third structure with reference to the base.

3,126,455

STEREO REPRODUCTION SYSTEM WITH COMMON REVERBERATION AND BASS CENTER CHANNEL

Leslie P. Golonski and Rudolph Staral, Chicago, Ill., assignors to Motorola, Inc., Chicago, Ill., a corporation of Illinois

Filed Nov. 14, 1960, Ser. No. 68,874
6 Claims. (Cl. 179—100.1)



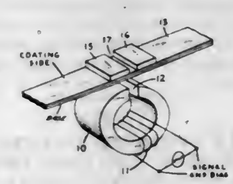
3. Stereophonic sound reproducing apparatus for utilizing right and left stereo signal components, said apparatus including in combination, means for deriving first and second stereophonic signal components, first and second amplifier channels respectively for the first and second signals and including associated loudspeakers for separately reproducing the stereo signal components, a further amplifier channel including a loudspeaker, filter means for deriving low frequency signal components from said first and second amplifier channels and for coupling such low frequency signal components to said further amplifier channel, a reverberation device producing a delayed signal of decaying amplitude coupled from said right and left amplifier channels to said further amplifier channel for amplifying the delayed signal of decaying amplitude, so that said further amplifier channel may reproduce both the low frequency signal components and reverberated signal components for a stereophonic and reverberation effect in the overall sound pattern produced by said loudspeakers.

3,126,456

MAGNETIC RECORDING HEAD

Walter Guckenburg, Stamford, Conn., assignor to Minnesota Mining & Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed Sept. 30, 1959, Ser. No. 843,573
6 Claims. (Cl. 179—100.2)



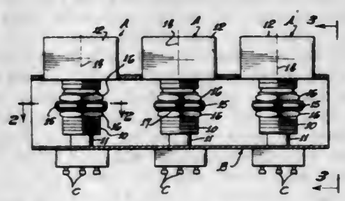
1. Magnetic recording apparatus comprising means defining a tape transport path for tape having a magnetic coating on at least one surface, separate, side by side magnetic members having short surfaces disposed adjacent and generally parallel to a portion of said tape transport path on the side adjacent to the coated tape surface parallel to the plane of said coated tape surface and in contact therewith and having opposed edges defining a gap transverse and normal to said path, core means on the other side of said path having a pole piece portion in close proximity to said gap and other portions all spaced farther away from said gap, and winding means on said core means constituting the sole source of magnetomotive force for establishing a recording magnetic field in said tape transport path in the environs of said gap in which both the rate of fall of field strength in a direction away from the plane of said short surfaces, and the field component normal to the plane of said surfaces are reduced.

3,126,457

MULTIPLE SWITCHING ASSEMBLY

Edward A. Jones, 11251 Bromont Ave., Pacoima, Calif.

Filed July 1, 1960, Ser. No. 40,362
3 Claims. (Cl. 200—5)



1. A multiple electric switch assembly comprising: a plurality of switches, each of said switches including a

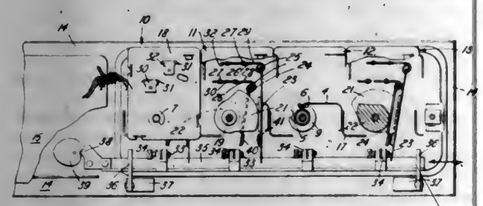
plunger section movable along the axis of said switch from a non-actuated to a depressed actuated position of said switch; a housing, said switches positioned upon said housing with the axes thereof substantially parallel; a radially extending actuating arm affixed to said plunger for movement therewith; a track assembly affixed to said housing, said track assembly including means for restraining the direction of travel of said actuating arms linearly from a non-actuated to a depressed position, a locking slide member and a plurality of interlocking members, said slide member comprising an elongate plate having an upper edge proximate said arms in the non-actuated position thereof, said slide member being longitudinally movable from a first to a second position transversely to the direction of movement of said arms, said slide member defining a plurality of indentations extending from said upper edge, each of said indentations being aligned with a respective one of said arms, said arm being mateable therewith and movable therein to the depressed position, said indentation defining a downwardly facing shoulder above said arm in the depressed position of said arm when said slide member is in the second position thereof; said interlocking members being movable transverse to the direction of movement of said arms, said interlocking members being longitudinally separable to define a space therebetween aligned with one of said indentations only and movable to define said space in alignment with each of said indentations selectively.

3,126,458

PERIODICALLY OPERATED ELECTRIC SWITCHES FOR REGULATING THE RATE OF SUPPLY OF POWER TO DIFFERENT CIRCUITS

Tom Bowen, Hove, England; assignor to Smiths America Corporation, Lakeland, Fla.

Filed Aug. 22, 1960, Ser. No. 51,007
Claims priority, application Great Britain Aug. 21, 1959
3 Claims. (Cl. 200—27)



1. An electric power regulator for a number of electric circuits, comprising a number of pairs of contacts, one pair for each circuit, a continuously running motor, an actuating member, means coupling said motor to said actuating member for imparting continuous cyclic movement to said actuating member, said actuating member being positioned to engage a first contact of each pair of contacts and to impart regularly repeated movement thereto, first adjusting means for adjusting the position of the other contact of each pair thereby to vary the times during which the contacts of a pair remain together and during which they are separated for each cycle of movement of said actuating member, and second adjusting means for selectively moving at least the first said contact of each said pair clear of said actuating member, said first adjusting means for each said pair of contacts comprising a first cam surface engageable with said other contact of said pair, said second adjusting means for each said pair of contacts comprising a second differently contoured cam surface engageable with the first said contact of said pair, and means for selectively varying the positions of said first and second cam surfaces in unison.

3,126,459

CLOCKWORK-CONTROLLED ELECTRIC SWITCH

Arthur Leonard Leeson, Camberley, Surrey, England, assignor to Gillone Electric Limited, Camberley, Surrey, England

Filed May 28, 1962, Ser. No. 199,220
Claims priority, application Great Britain June 5, 1961
4 Claims. (Cl. 200—39)



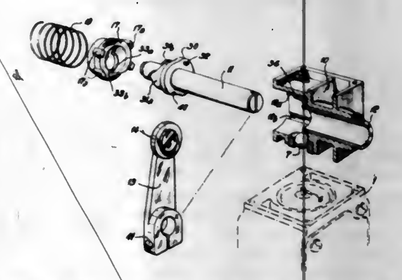
1. A clockwork-controlled electric switch, comprising a support plate, a clockwork-rotated central spindle extending through said support plate, a first radial arm and a second radial arm both mounted on and adjustably securable to said spindle and spaced from said support plate, a fixed contact secured on said support plate, a spring-loaded catch plate pivotally mounted on said support plate and having substantially the form of a hollow rectangle with a gap, an internal tooth on said catch plate, a pawl pivotally mounted on said support plate within said catch plate and spring-loaded towards said tooth, a snap-action moving contact pivotally mounted on said support plate within said catch plate and extending through said gap, a projection on said first radial arm, and a projection on said second radial arm, the arrangement being such that during operation said catch plate is turned against its spring-loading by said projection on said first radial arm and moves said moving contact until said moving contact snaps into a rest position in engagement with said fixed contact, said pawl engages said tooth and retains said catch plate against movement, and said projection on said second radial arm turns said pawl against its spring-loading for releasing said catch plate whereupon said catch plate turns under its spring-loading and moves said moving contact until said moving contact snaps into a rest position remote from said fixed contact.

3,126,460

LIMIT SWITCH CONTROL MECHANISM

Robert J. P. Dufour, Houilles, Seine-et-Oise, France, assignor to La Telemecanique Electrique, Nanterre, Seine, France, a company of France

Filed Mar. 19, 1962, Ser. No. 180,537
Claims priority, application France Apr. 5, 1961
9 Claims. (Cl. 200—47)



1. An arrangement for controlling the condition of an electric circuit under control of a moving part and in accordance with either of two different programmed sequences, comprising a switch having an actuating element displaceable to actuate the switch and thereby control the condition of said circuit; a casing; a shaft rotatable in the casing and having an arm projecting therefrom for engagement by said moving part to rotate said shaft; a first cam carried by the shaft and having a first peripheral contour portion presentable towards said switch-actuating element so as to actuate the switch on rotation of the shaft in accordance with a first programmed sequence as determined by the configuration of said first cam contour portion; a second cam non-rotatably mounted in said casing for axial sliding displacement relatively to said shaft coaxially therewith; complementary camming surfaces on said second cam and shaft respectively and spring means biassing said camming surfaces into mutual engagement thereby to urge said shaft to rotate to at least one stable angular position in the casing on disengagement of the arm by said part; disable stop means for limiting the angular range of shaft rotation to a portion of a full circumference; and means for momentarily disabling said stop means to permit shaft rotation beyond said angular range and thereby to present a different contour portion of said first cam towards said element.

3,126,461

ELECTRICAL SNAP SWITCH ARRANGEMENT

Werner Schneck, Stuttgart, and Otto Herrmann, Stuttgart-Botnang, Germany, assignors to Robert Bosch G.m.b.H., Stuttgart, Germany

Filed June 1, 1959, Ser. No. 817,368
Claims priority, application Germany, June 4, 1958
8 Claims. (Cl. 200—67)

3. In a switch arrangement, in combination, an elongated spring contact-carrying switch blade having a switch-open position and a switch-closed position; lever means acting on one face of said blade for moving the latter from one to the other of said positions thereof; and leaf spring means pressing against the opposite face of said switch blade at least when the latter is in said other position thereof, said leaf spring means including an elongated leaf spring and an electrically non-conductive pin carried by said leaf spring and having a head directly engaging said switch blade at said opposite face thereof when said blade is in said other position thereof.

3,126,462

MULTI-POSITION SWITCH FOR ELECTRIC APPLIANCES

Clifford E. Schrader, Racine, Wis., assignor to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut

Filed June 27, 1962, Ser. No. 205,706
8 Claims. (Cl. 200—77)

1. A multi-position snap action switch for motor operated electrical appliances comprising

(*a*) a carriage track,

(*b*) a carriage movable longitudinally on the track,

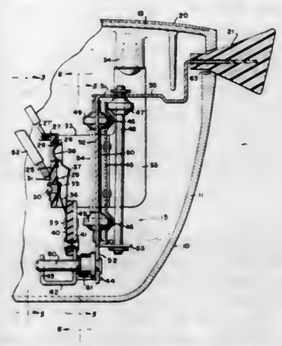
(*c*) an actuating handle connected to the carriage,

(*d*) a stationary insulating support parallel to the track,

(*e*) an electrically connected common contact member,

(*f*) a plurality of fixed spaced apart electrical contacts mounted in a row on the insulating support,

(*g*) a pivotally mounted contact arm carried by the carriage successively contacting said fixed contacts when the carriage is moved longitudinally on the track, and



(*h*) means associated with the contact arm slidingly engaging said common contact member,

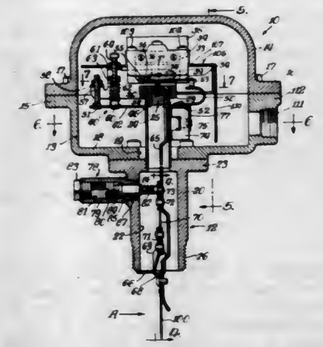
(*i*) movement of said carriage imparting simultaneous pivotal and bodily movement to said contact arm for passing from one fixed contact to another.

3,126,463

FLUID RESPONSIVE CONTROL DEVICES

Leopold J. Kmiecik, Lincolnwood, Ill., assignor to McDonnell & Miller, Inc., Chicago, Ill., a corporation of Delaware

Filed Feb. 16, 1961, Ser. No. 89,851
12 Claims. (Cl. 200—81.9)



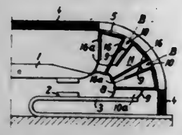
1. In a device for association with a liquid receptacle the combination of a housing comprising a main body part and a removable cover part, said main body part having an opening in the wall thereof, and a base assembly comprising a base member and a non-magnetic tubular member open at one end and closed at its other end, said base assembly being mounted on said wall of said main body part to close the opening therein and with the closed end of said tubular member extending into said housing, said base member being adapted to provide for mounting of said housing on said receptacle to prevent liquid in said receptacle from entering said main body part, switch means mounted in said housing, switch actuating means for actuating said switch means comprising an armature extending lengthwise of said tubular member with its inner end adjacent the closed end of said tubular member and its outer end extending outwardly of the

open end of said tubular member, a switch tripping member pivotally mounted intermediate its ends in said housing, and a magnet carried at one end of said switch tripping member and disposed externally of the closed end of said tubular member and opposite the inner end of said armature, means pivotally connecting said armature to said base assembly to provide for movement of said inner end of said armature transversely of the lengthwise axis of said tubular member, means engaging the other end of said switch tripping member for normally biasing the same in a direction to move said magnet away from the inner end of said armature, and said last named means upon movement of the inner end of said armature in a direction away from said magnet effecting movement of said switch tripping member to trip said switch means.

3,126,464
ARC EXTINGUISHING MEANS

Hubert Stettner, Neumunster, Germany, assignor to Licentia Patent-Verwaltungs-G.m.b.H., Frankfurt am Main, Germany

Filed June 12, 1961, Ser. No. 116,313
Claims priority, application Germany June 16, 1960
8 Claims. (Cl. 200—144)



1. A circuit breaker comprising, in combination: an electric switch having contact means upon the opening of which an arc is formed; and means forming an arc extinguishing chamber and comprising a plurality of arc extinguishing baffles arranged transversely to the arc to be extinguished, sets of two consecutive spaced-apart baffles being electrically connected together at but one end to form a baffle pair with the two baffles of each pair being of different lengths and having their opposite free ends directed toward the contact means such that the free ends of the two baffles of each baffle pair are spaced different distances from the place whereat the arc to be extinguished is formed in consequence of which there, where the arc enters the baffle arrangement, said baffles are spaced further apart than there, to whence the arc moves upon propagation into the baffle arrangement.

3,126,465
THREE-PHASE A.C. ELECTRIC CIRCUIT-BREAKER

Jan C. Clason and Geert C. Damstra, Hengelo, Netherlands, assignors to N.V. Fabriek Van Electrische Apparaten Voorheen F. Hazemeijer & Co., Hengelo, Netherlands, a corporation of the Netherlands

Filed June 23, 1960, Ser. No. 38,158
Claims priority, application Netherlands June 30, 1959
5 Claims. (Cl. 200—145)



1. A three-phase A.C. electric circuit-breaker in which in three parallel planes lie three current loops with substantially parallel legs and each of these loops is provided with at least one arc-control device—each incorporated in one of the parallel legs—with lateral gas outlets, each of said arc-control devices containing a stationary contact and cooperating with a longitudinally movable switching member, characterized in that in the central loop and gas outlet of each arc-control device lies in the plane through the two legs of said loop; that in each of the two outer loops the gas outlet of each arc-control device diverges relative to the gas outlet of the corresponding arc-control device of the central loop to a value α, determined by the formula

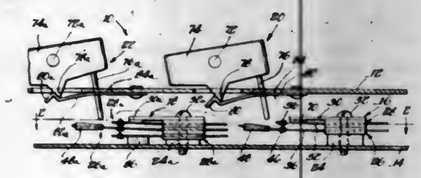
$$\alpha = \alpha_0 \left(\frac{a}{b}\right)^n$$

in which α_0 has a value of 25°, n is 2.8, a is the distance between the two legs of each of the loops, and b is the distance between the planes of adjacent loops; and that the ratio a/b is in the range between 0.75 and 0.45.

3,126,466
MODULAR LEAF SWITCH

Harold O. Schwartz, North Tonawanda, N.Y., assignor to The Wurlitzer Company, Chicago, Ill., a corporation of Ohio

Filed Feb. 26, 1962, Ser. No. 175,475
2 Claims. (Cl. 200—166)



1. An electric switch comprising: a first module including a resilient leaf of electrically conductive material adapted to flex in a path transverse to its principal plane, an electric contact on said leaf, a first body of electrically insulating material encompassing a portion of said leaf and defining male and female elements respectively on opposite faces transverse to the principal plane of said leaf, and a second body of electrically insulating material encompassing a portion of said leaf spaced-apart from said first body to define an actuator member, said second body of insulating material being wedge-shaped whereby to cooperate with an operator movable in an arcuate path intersecting the plane of one face of said wedge-shaped body; and a second module including a leaf of electrically conductive material, an electric contact on said last mentioned leaf and a body of electrically insulating material encompassing a portion of said last mentioned leaf and defining male and female elements respectively on opposite faces, said last mentioned body being stacked with said first mentioned body aligning said contacts in confronting relationship, the male elements of one body interfitting with the female elements of the other body positively to position said modules with respect to each other.

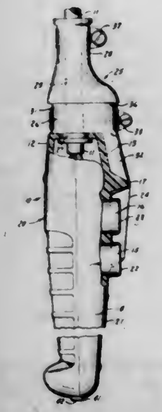
3,126,467
WEATHERPROOFED CONTROL STATION FOR ELECTRICALLY-DRIVEN DEVICES

Howard C. Stevens, Jr., Muskegon, Mich., assignor to Manning, Maxwell & Moore, Incorporated, Muskegon, Mich., a corporation of New Jersey

Filed June 21, 1960, Ser. No. 37,620
5 Claims. (Cl. 200—168)

1. A weatherproofed control station assembly comprising, in combination, a station housing secured to one end of a control cable, an operator protruding from said housing for manual manipulation, a grommet surrounding said cable and being anchored to said housing, said grommet having a sealing portion adjacent said housing

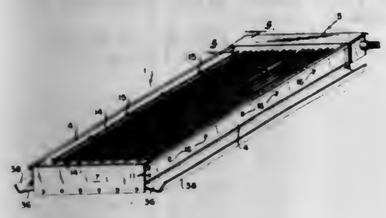
of approximately the same cross section as the widest part of said station assembly, a sleeve of flexible material closely enveloping said housing and the protruding operator, said sleeve having an open topped skirt portion closely surrounding said sealing portion of the grommet, and means for drawing said open top portion tightly against said grommet sealing portion.



3,126,468
RADIANT HEATING PANEL

David A. Aitken, Euclid, David A. Aitken, Jr., South Euclid, and Calvin M. Aitken, Mayfield Heights, Ohio, assignors to Aitken Products, Inc., Cleveland, Ohio, a corporation of Ohio

Filed Oct. 11, 1962, Ser. No. 229,803
13 Claims. (Cl. 219—34)



1. Radiant heating panel means for thawing ice or the like from superimposed objects, comprising

an open-topped horizontal rectangular frame including a pair of longitudinal side walls and a vertical end wall having a vertical first portion;

a plurality of generally coplanar horizontally-arranged vertically upwardly exposed electrical heating elements supported in said frame;

means supplying electrical energy to said heating elements including a completely enclosed terminal box having a vertical side wall adjacent and spaced from the external surface of said end wall first portion, and conductor means in said terminal box;

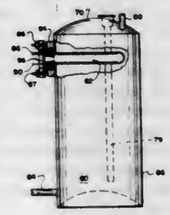
spacer means intermediate said end wall and said terminal box side wall, said spacer means extending horizontally along said terminal box vertical side wall and being arranged substantially coplanar with said heating elements;

and means rigidly connecting said terminal box with said end wall, each of said heating elements including at least one terminal portion extending into said terminal box through aligned openings in said vertical first wall portion, said spacer means and said terminal box side wall for connection with said conductor means, the end wall of said frame including at its upper edge a horizontal second portion extending completely across said terminal box, and a downwardly inclined lip portion connected with the free edge of said second portion, whereby the end wall of said frame constitutes a baffle plate and drip shield for protecting said terminal box against radiant heat and falling particles and liquids.

3,126,469
WATER HEATER WITH RESISTANCE FILM HEATING ELEMENT

Herman F. Feldmann and Robert J. Sutton, Chicago, Ill., assignors to General Electric Company, a corporation of New York

Filed Dec. 29, 1960, Ser. No. 79,441
2 Claims. (Cl. 219—38)



1. A water heater comprising an imperforate tank for storing water therein, an inlet path for feeding cool water to said tank, an outlet path for feeding out heated water from said tank, means interposed between said paths for heating water stored in said tank, said interposed means comprising an electrically insulating hollow cylinder extending horizontally into said tank, a closed-off end integrally formed at one end of said cylinder to provide an imperforate watertight structural member within said tank, a conductive film adhered uniformly about the inner wall of said cylinder, means for sealing the opposite end of said cylinder about said tank wall to provide a water impervious seal about said opposite end of said cylinder, said seal comprising a frusto-conical section integrally formed to said opposite end of said cylinder, flange gaskets externally of said section for protecting said section, means for connecting said film with a source of electric current including a frusto-conical insulator adapted to fit within said section, slots in said insulator, terminal members mating within said slots, conductive strips extending in spaced parallel relation along said cylinder sidewall in contact with said film and in electrical connection therewith to conduct heating current to said film, said cylinder transmittive of said generated heat from said film through said insulating cylinder to heat the water adjoining said cylinder within said tank.

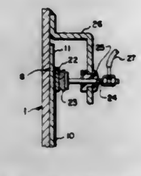
3,126,470
ELECTRIC WATER HEATING APPARATUS

Eugene Francis Dillon, Chicago, Ill., assignor to General Electric Company, a corporation of New York

Filed Dec. 30, 1960, Ser. No. 79,694
1 Claim. (Cl. 219—38)

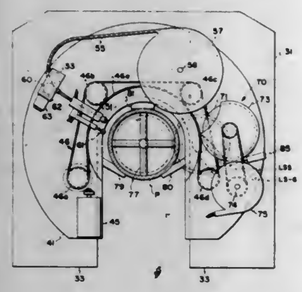
A water heater of the storage tank resistance heated type, comprising a cylindrical metallic pressure vessel; a

layer of vitreous electrically insulating and thermally conducting material fused to the exterior surface of said vessel to provide a continuous band extending about the periphery thereof; a plurality of strips of electrically conductive resistance material disposed on said band in good heat transfer relation therewith, said strips comprising a film essentially of tin oxide and of about 5 microns thickness, each strip terminating short of the respective marginal edges of said insulating band and there being an electrically insulating gap insulating each said strip from its adjacent strip; first and second terminal bands of electrically conductive material extending continuously about said vessel inwardly of the respective marginal edges of



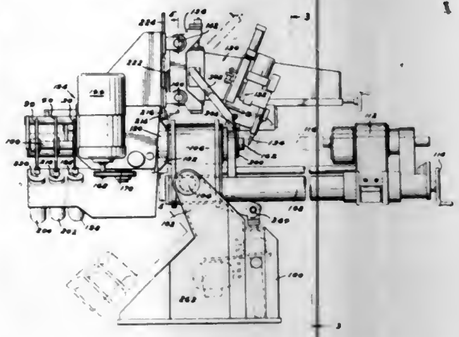
said insulating band in electrical contact with each of said strips; first and second terminal supporting brackets fixed relative to said vessel adjacent the respective first and second terminal bands; an electric terminal including a rod-like conductor mounted in each of said brackets; annular resilient electric insulation means affixed to each said rod-like conductor and associated bracket and biased to urge said terminal resiliently into contact with the associated terminal band; means for connecting each said terminal to a source of electric energy; and a mass of thermally and electrically insulating material enclosing said pressure vessel and the above-named electrically conductive components thereof.

3,126,471
CONTROL SYSTEM FOR WELDING MACHINERY
Jerome W. Nelson, Columbus, Ohio, assignor, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware
Filed Aug. 15, 1961, Ser. No. 131,594
13 Claims. (Cl. 219—60)



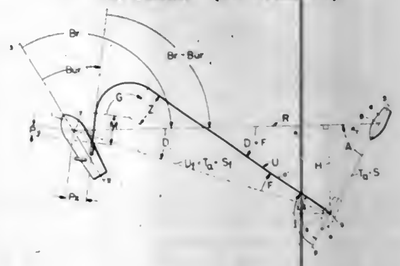
1. In a welding system of the character described, the combination of manual control circuit for control of sequential welding operations, an automatic control circuit for said operations, means for changing a plurality of final controls directly from one of said circuits to the other, traveling operative means including a welding head to perform a plurality of operations under control of said final controls, and means controlled by the position of the operative means for automatically initiating subsequent operations in continued sequence as long as the automatic circuit is functioning.

3,126,472
CONTOUR WELDING MACHINE
John H. Brems, 18478 Westhampton, Southfield, Mich.
Filed June 22, 1961, Ser. No. 118,823
19 Claims. (Cl. 219—124)



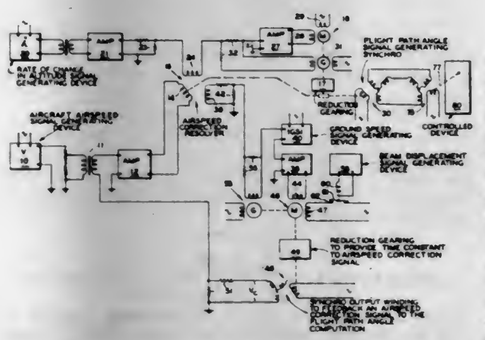
1. A welding machine comprising a rotatable work mount, a welding torch, means to mount said torch adjacent said work mount to maintain a constant attitude toward a work piece in said mount, power means to rotate said work mount and means to control the speed of said work mount to maintain a constant weld speed as said work rotates comprising a planetary gear set interposed between said power means and said work mount, translatable means to vary the position of an element in said planetary gear set to control the output of said set, a shaft driven by said power means, a cam driven by said shaft, and a follower responsive to said cam contour connected to said translatable means, said cam being designed to rotate said work to maintain a constant welding speed at torch contact.

3,126,473
CONTROL APPARATUS FOR PROJECTILE LAUNCHING
Chester Brandon, La Canada, and Alvin R. Platt, Burbank, Calif., assignors to General Precision Inc., a corporation of Delaware
Filed Sept. 16, 1954, Ser. No. 456,520
28 Claims. (Cl. 235—61.5)



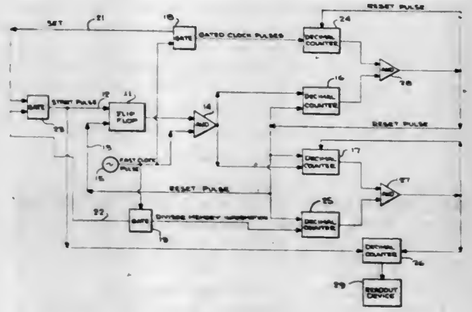
1. In a computer, target table means mounted for reciprocal angular movement about an axis representing a first apex of a triangle, an angular value-registering device rotatably mounted on an axis representing a second apex of said triangle, and adjustable with reference to said first axis for registering a value proportional to a hypothetical first side of said triangle extending between said first and second axes, means for representing a path from a point referable directly to said second apex to a point intersecting said first apex of said triangle, comprising a longitudinally extending flexible, but non-extensible path-simulating cable connected at one end to said angular value-registering device, and cam means engaging said cable and compelling it to conform to a known curved path for a portion of its length, said cable extending normally for the remaining portion of its length along a line intersecting said first apex of a triangle, and being secured retractably relative thereto by means adapted to maintain said element under tension, and to register the length thereof between said second and first apices, means for measuring and registering values proportional to a second side of said triangle extending from said first apex to a third apex, means for registering values representing a third side of said triangle and extending between said third apex and said second apex, means for registering values proportional to a known angle between said second and third sides, means for determining when said path-simulating cable does not intersect said first axis exactly, and for utilizing positional differences therebetween to initiate error signals, means for utilizing said error signals to correct the values used in computing said first and second sides of said triangle, and means for utilizing said corrected values to re-compute the factors involved in determining a correct path.

3,126,474
FLIGHT PATH ANGLE COMPUTER
Joseph Zweibel, Glen Rock, and Jerry Doniger, Montvale, N.J., and Siegfried Knemeyer, Dayton, Ohio, assignors to The Bendix Corporation, Teterboro, N.J., a corporation of Delaware
Filed Dec. 19, 1960, Ser. No. 76,552
9 Claims. (Cl. 235—151)



1. Apparatus for computing the flight path angle of an aircraft comprising means for supplying a first signal responsive to the rate of change in altitude of the aircraft, means for supplying a second signal responsive to the airspeed of the aircraft, means for differentially coupling the first and second signals to effect a first resultant error signal, a main servo motor means controlled by said first resultant error signal, means for supplying a third signal proportional to the absolute magnitude of the speed of travel of the aircraft relative to ground, means for differentially coupling the second and third signals to effect a second resultant error signal, an auxiliary servo motor means controlled by said second resultant error signal, means for supplying a variable airspeed correction signal, means for applying said airspeed correction signal to said second signal, means to operatively connect said auxiliary servo motor means to said variable airspeed correction signal supply means in such a manner that said auxiliary servo motor means may vary said airspeed correction signal in a sense tending to diminish said second resultant error signal, means to operatively connect said main servo motor means to said first and second mentioned coupling means so as to adjust in opposite senses the differential coupling of the first and second signals and the differential coupling of the second and third signals in a sense tending to diminish the first and second resultant error signals to zero, and other control means simultaneously driven by said main servo motor means to a position corresponding to the computed flight path angle of the aircraft.

3,126,475
DECIMAL COMPUTER EMPLOYING COINCIDENT GATE RESPONSIVE TO A PAIR OF COUNTERS
John L. Coddington, Cincinnati, and Franklyn D. Diller, Loveland, Ohio, assignors to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed Feb. 1, 1962, Ser. No. 170,604
4 Claims. (Cl. 235—160)

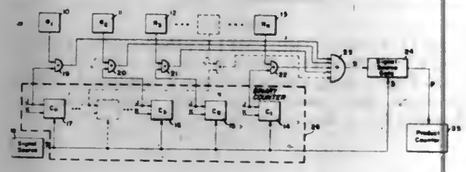


4. A system for performing an arithmetical operation involving the decimal numbers N1 and N2 comprising a first decimal register for storing a signal representing N1, a second register for storing a signal representing N2, first pulse generator means, first and second decimal counters, said first and second counters and said first and second registers all being separate devices, an output decimal counter, two of asid counters being responsive to said first generator means, second pulse generator means responsive to the signal stored in said second register and the count achieved by said second counter for deriving a pulse when the count achieved by said second counter reaches N2, means for controlling the count of one of said counters in response to the derivation of said pulse by said second generator means, third pulse generator means responsive to the count stored in said first register and the count achieved by said first counter for deriving a pulse for decoupling said two counters from said source and for resetting both of said registers and said first and second counters to zero when the first counter reaches N1, and means for coupling the pulses derived by one of said generator means to said output counter, said output counter being advanced by one place each time the generator means to which it is responsive derives a pulse.

3,126,476
BINARY RATE MULTIPLIER
Jack J. Pariser, Anaheim, and Andrew M. Jusko, Beverly Hills, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Mar. 31, 1959, Ser. No. 803,171
6 Claims. (Cl. 235—164)

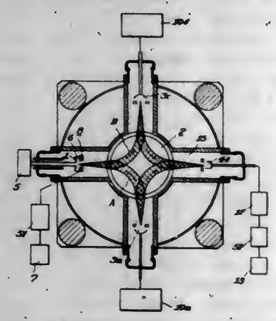
2. A rate multiplier comprising a first plurality of bistable elements providing a register for receiving and storing binary signals representative of a number designated the multiplier and for developing register signals indicative of the multiplier, a source of electrical pulses, the number of said pulses being representative of a number designated the multiplicand, a second plurality of bistable elements interconnected to provide a binary counter and

coupled to said pulse source for receiving said pulses and for developing a unique set of electrical voltages for each quantity of pulses received, a plurality of "and" gates coupled to said first plurality of bistable elements and to said second plurality of bistable elements and responsive to said voltage sets and register signals, an "or" gate coupled to said "and" gates for providing control



signals representative of a function of said register signals and said pulses, gating means coupled to said "or" gate and to said pulse source and responsive to said control signals and to said pulses for passing selected ones of said pulses in accordance with said control signals, whereby the number of pulses so passed is representative of the product of said multiplier and said multiplicand.

3,126,477
MULTIPLE DISPERSION MASS SPECTROMETER
Tamotsu Noda, Taga-cho, Hitachi-shi, and Nozomu Morito, Tokyo, Japan, assignors to Kabushiki Kaisha Hitachi Seisakusho, Tokyo-to, Japan, a joint-stock company of Japan
Filed Jan. 3, 1961, Ser. No. 80,231
Claims priority, application Japan Jan. 12, 1960
8 Claims. (Cl. 250—41.9)



1. A multiple dispersion mass spectrometer comprising a uniform magnetic field of circular cross-section, an ion source for emitting an ion beam into the field radially thereof, for dispersion therein, an ion mirror adjacent to the field upon which at least a part of the dispersd beam impinges after passing through the field for reflecting it radially into the magnetic field, and an ion beam collector adjacent to the magnetic field for receiving at least a part of the dispersed beam after passing through the field from the mirror, said ion source, mirror and collector being peripherally spaced about the magnetic field.

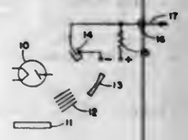
3,126,478
CRYSTAL HOLDER FOR X-RAY MONOCHROMATORS
Wolfgang Götz and Helmut Günther, Jena, Germany, assignors to VEB Carl Zeiss Jena, Jena, Germany
Filed Feb. 20, 1961, Ser. No. 90,579
4 Claims. (Cl. 250—51)

1. Crystal-plate holder for X-ray monochromators, comprising a body of U-shaped cross-section, each of the two legs of said body having at its free end a curved bearing surface for the crystal plate, and two strips lying in the direction of the greatest dimension of said two bearing surfaces, said crystal plate being supported between



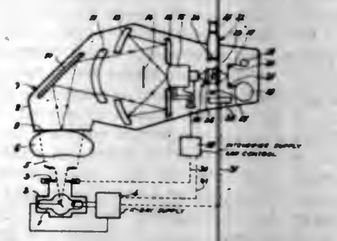
said legs and said strips, the ends of said strips being all connected to said body, and the breadth of said strips being such that they act only on the parts of the crystal plate which come to lie on the bearing surfaces.

3,126,479
X-RAY ANALYZER SYSTEM WITH IONIZATION DETECTOR CONTAINING NITROGEN, HELIUM AND A LOW ATOMIC NUMBER OF QUENCHING GAS
Rodney A. Mattson, New Berlin, Wis., assignor to General Electric Company, a corporation of New York
Filed Mar. 1, 1962, Ser. No. 176,595
6 Claims. (Cl. 250—51.5)



1. An X-ray emission analyzer comprising an X-ray source providing a primary beam in which a sample may be disposed for exciting characteristic radiation from an element of interest in the sample and incidental to which other radiation is yielded by the sample, an X-ray detector receiving a part of both radiations, said detector having a gas fill comprising a mixture of nitrogen, helium and quenching gas in such proportions as to be more sensitive to ionization by characteristic radiation than to the other radiation.

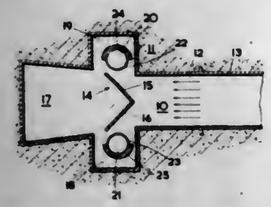
3,126,480
APPARATUS FOR X-RAY FLUOROSCOPY OR PHOTOFLUOROGRAPHY
Albert Bouwers, The Hague, Netherlands, assignor to N.V. Optische Industrie "De Oude Delft," Delft, Netherlands
Filed Apr. 25, 1960, Ser. No. 24,432
Claims priority, application Netherlands Apr. 29, 1959
4 Claims. (Cl. 250—65)



1. A device for X-ray fluoroscopy or X-ray photofluorography, comprising a substantially point-shaped source of X-rays, a fluorescent screen to receive an X-ray image of an area of an object irradiated by said X-rays, an X-ray diaphragm between said source and said object having an aperture of variable size for controlling said area being irradiated, an image intensifier tube having a

photo-emissive cathode, an electron-optical lens system and an anode screen, said tube being positioned to receive a light image from said fluorescent screen on said photo-emissive cathode, said electron-optical lens system producing on said anode-screen sharp electron replica images at variable magnification of said light image on said photo-emissive cathode, means for varying the size of said aperture and so the size of the light image on said photo-emissive cathode, and means for varying the magnification of said electron-optical system to maintain the electron image on said anode screen substantially of the same predetermined size when the size of said aperture is varied, and gang control means controlling said means for varying the size of said aperture and said means for varying the magnification of said electron-optical system.

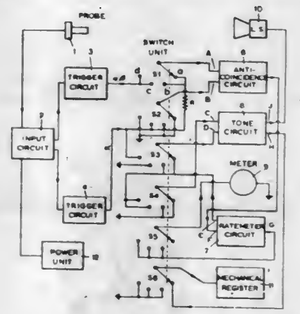
3,126,481
THERMAL NEUTRON MEASURING DEVICE FOR MEASURING REACTOR POWER
Angus Charles Whittier, Peterborough, Ontario, Canada assignor to Atomic Energy of Canada Limited, Ottawa, Ontario, Canada, a corporation
Filed Apr. 15, 1960, Ser. No. 22,626
3 Claims. (Cl. 250—83.1)



1. Apparatus for measuring the thermal neutron flux of a nuclear reactor comprising means forming a path for radiation from the active lattice of said nuclear reactor to a thermal neutron detector, said path including a thin hydrogenous scattering substance adapted to scatter thermal neutrons to be detected by the detector and said detector being positioned in relation to said scatterer to receive thermal neutrons scattered by said scatterer and substantially no other radiations.

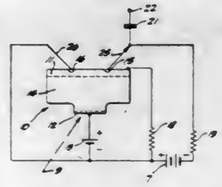
3,126,482
RADIO-ACTIVITY CONTAMINATION MONITOR WITH DISCRIMINATION MEANS FOR ALPHA AND BETA RADIATION
James Robert Brown, Ashford, and Jack Sharpe, Oxhey, England, assignors to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain
Filed Oct. 3, 1960, Ser. No. 59,889
Claims priority, application Great Britain Oct. 6, 1959
2 Claims. (Cl. 250—83.3)

1. A radio-activity monitor comprising a radiation sensitive detector for producing pulses in one amplitude range in response to alpha radiations and for producing pulses in another amplitude range in response to beta radiations, means for producing a pulse in a first channel in response to pulses in both said amplitude ranges and for producing a pulse in a second channel in response only to impulses in said one amplitude range, anti-coincidence circuit having first and second input terminals and an output terminal, said anti-coincidence circuit being arranged to produce output pulses only in response to input pulses applied to the first input terminal when no simultaneous pulse is applied to said second input terminal, a tone circuit having first and second input terminals and an output terminal and arranged to a produce a pulse in response to a pulse applied to its first input terminal, and to produce a burst of audio frequency oscillation in response to a pulse applied to its second input terminal, a sound transducer connected to the output terminal of said tone circuit, a switch having one condition in which said first and second channels are connected respectively to said first and second input channels of said anti-coincidence circuit and the output terminal of said anti-coincidence



circuit is connected to one input terminal of said tone circuit, no signal being applied to the other input terminal of said tone circuit in said first condition of said switch, and said switch having a second condition in which said first and second channels are connected respectively to the first and second input terminals of said tone circuit.

3,126,483
COMBINATION RADIATION DETECTOR AND AMPLIFIER
Kay M. Hoalst, Torrance, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Nov. 22, 1960, Ser. No. 71,066
6 Claims. (Cl. 250—83.3)

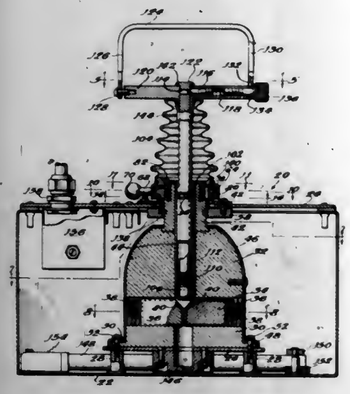


1. A radiation detector semiconductor device having a relatively thick central intrinsic particle radiation energy receiving zone under electrical bias; first and second conductivity type boundary zones forming opposed bounds of said intrinsic zone; ohmic contacts to each of the boundary zones for applying bias thereto; and first and second rectifying contacts to the other of said boundary zones for connection to an amplifying circuit.

3,126,484
RADIOACTIVE SOURCE SHIELDING DEVICE WITH SAFETY LATCHING MEANS
Raymond L. Meeder, Palos Heights, and Charles E. Mielke, Elmwood Park, Ill., assignors to Nuclear-Chicago Corporation, Des Plaines, Ill., a corporation of Delaware
Filed Jan. 5, 1960, Ser. No. 617
13 Claims. (Cl. 250—106)

1. In a radioactivity device having a shield, a source within the shield, means to expose the source outside the shield in the operating condition of the device, a handle,

means responsive to upward motion of the handle to encase the source in the shield, and a permanently affixed manually operable latch securing the handle in the raised position, the improved construction characterized by a protective cover receiving the handle in all positions of the handle and having closed and opened positions, the

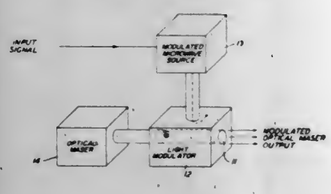


cover having thereon an abutment portion in the path of motion of the latch and blocking release of the latch in the closed position of the cover, and means responsive to insertion of the source in the shield to move the latch from a position blocking closing of the cover to a position unblocking closing of the cover.

3,126,485
MODULATOR FOR OPTICAL MASERS

Arthur Ashkin, Bernardsville, and Amnon Yariv, Chatham, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Oct. 2, 1961, Ser. No. 142,243
6 Claims. (Cl. 250—199)

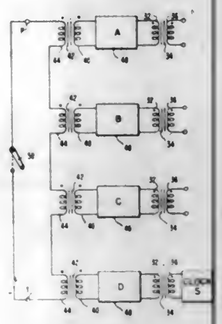


1. Apparatus for modulating a coherent monochromatic light beam comprising a transparent modulating medium characterized by first, second and third successively higher electron energy levels, said first and third levels having a separation corresponding to a frequency distinct from but close to that of the light to be modulated whereby the refractive index of said medium is characterized by an extreme at substantially the frequency of said light, said extreme being removed from the center of the absorption line corresponding to the separation of said first and third levels, said first and second levels having a separation corresponding to a frequency in the microwave range, means defining a light beam path through said medium, and means for varying the refractive index of said medium in accordance with signal information comprising means for applying to said medium modulated microwave energy having a frequency corresponding to the separation between said first and second energy levels.

3,126,486
PHASE STABLE SWITCHING CIRCUITS

William L. McMillan, Little Rock, Ark., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed May 29, 1959, Ser. No. 816,763
16 Claims. (Cl. 307—88)

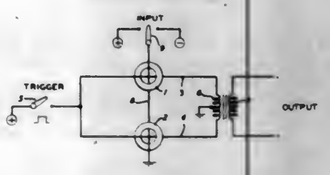


1. In a carrier system, a plurality of devices each capable of assuming different phase stable operating states, control means coupled to each said device, and further means intercoupling the control means of said devices for interdependently relating the operating states which said devices assume.

3,126,487
LOGIC DEVICE

Otto A. Jorgensen, Pittsford, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Filed Dec. 11, 1959, Ser. No. 858,932
9 Claims. (Cl. 307—88)

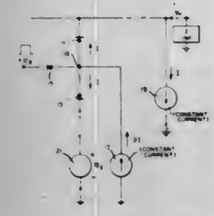


5. In combination, first and second variable parameter reactors, first circuit means for setting a selected one of said reactors to one impedance state and the other of said reactors to a different impedance state, a source of readout signals, an output circuit, second circuit means for coupling a readout signal from said source of readout signals to said output circuit, said second circuit means comprising two parallel branches with one terminal of each branch connected to said source of readout signals and the other terminal of each branch connected to said output circuit and with each branch including one of said variable parameter reactors, and said output circuit including means responsive to an unbalance of current through the parallel branches of said second circuit for causing said output circuit to generate an output signal indicative of the one of said parallel branches of said second circuit which had the larger current when a readout signal is coupled to said second circuit from said source of readout signals.

3,126,488
DIODE SWITCHING CIRCUIT FOR DELIVERING SUBSTANTIALLY UNDISTORTED SIGNALS EMPLOYING TWO CONSTANT CURRENT SOURCES

Walter C. Johnson, Princeton, N.J., assignor to General Devices, Inc., Princeton, N.J., a corporation of New Jersey

Filed Nov. 2, 1959, Ser. No. 850,416
6 Claims. (Cl. 307—88.5)



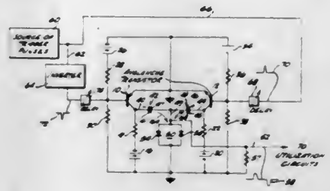
1. In a circuit arrangements for switching the signals of a plurality of input circuits in sequence to a common output circuit the combination of an output circuit, a timing circuit, and a plurality of like input circuits controlled by said timing circuit, each input circuit comprising a source of input signals, first and second rectifiers having similar operating characteristics and having a pair of like terminals thereof connected together at a junction, said first rectifier having the other terminal thereof connected to said source of input signals and said second rectifier having the other terminal thereof connected to said common output circuit, a source of constant current connected to said junction, and a further connection to said junction from said timing circuit, said timing circuit supplying thereby to said junctions in the several input circuits for predetermined periods and in selected sequence a voltage permitting current conduction by said rectifiers and at other times supplying a voltage inhibiting conduction, together with means causing the two rectifiers of each input circuit during their conducting periods to pass equal constant currents including a further source of constant current connected across the common output circuit and designed to draw through said second rectifier of each input circuit, when conducting, one-half of the total current supplied to said junction between the two rectifiers by the constant current source connected thereto, whereby equal and opposite voltage drops at a constant current are established across the two rectifiers of an input circuit which annul one another and allow the true voltage of a switched signal to be transmitted to the common output circuit independently of the value of the voltage, within an operating range.

3,126,489
PULSE FORMING CIRCUIT UTILIZING TRANSISTOR AVALANCHE CHARACTERISTICS

Johann G. Dill, Costa Mesa, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Filed June 21, 1960, Ser. No. 37,610
4 Claims. (Cl. 307—88.5)

2. A pulse forming circuit comprising: first and second transistors each having avalanche multiplication characteristics and each having a current path and a control electrode, an impedance element having first and second terminals, the current path of said first transistor and a first capacitor being coupled in series between said first and second terminals, the current path of said second transistor and a second capacitor being coupled in series between said first and second terminals with the direction of avalanche breakdown current flow through the current path of said second transistor being opposite to the direction of avalanche breakdown current flow through the current path of said first transistor as measured between said first and second terminals, means for normally biasing said first and second transistors in a stable avalanche condition of operation, and means coupled to the control electrodes of said first and second

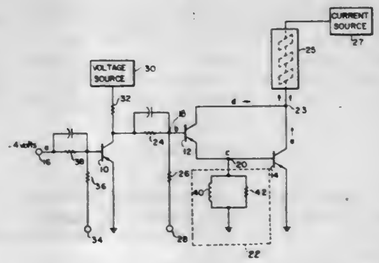


transistors for triggering one of said transistors to an unstable avalanche condition during which avalanche breakdown occurs in the current path of said one transistor to provide current flow through said impedance element in a first direction and after a preselected time interval for triggering the other of said transistors to an unstable avalanche condition during which avalanche breakdown occurs in the current path of said other transistor to provide current flow through said impedance element in a second direction opposite to said first direction to substantially cancel the current flowing through said impedance element in said first direction, whereby an output pulse is provided during said preselected time interval.

3,126,490
HIGH CURRENT PULSE DRIVER USING DARLINGTON CIRCUIT

Michael M. Stern, Brookline, Mass., assignor to Sylvania Electric Products Inc., a corporation of Delaware

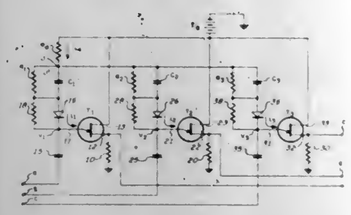
Filed May 3, 1961, Ser. No. 107,551
2 Claims. (Cl. 307—88.5)



1. A high speed, high current, pulse driving circuit comprising: a current source; first and second transistors each having collector, base and emitter electrodes; an output terminal connected to said current source and said collectors of said first and second transistors; means connecting the emitter of said first to the base of said second transistor; a source of reference potential; means connecting the emitter of said second transistor to said source of reference potential; an input circuit connected to the base

of said first transistor; and, an inductive circuit connected between said source of reference potential and said emitter-base connection, said inductive circuit consisting solely of a resistor by-passed by an inductor.

3,126,491
EXCLUSIVE-SELECTOR GATING CIRCUIT
Ronald K. Rockwell, Old Bethpage, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Dec. 12, 1961, Ser. No. 158,749
5 Claims. (Cl. 307—88.5)

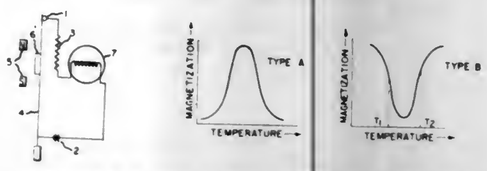


1. An exclusive-selector gating circuit comprising,
a plurality of three terminal devices each having a negative resistance characteristic over a predetermined range of potentials applied between the first and second ones of its terminals,
a plurality of input lines each one respectively coupled to the first terminal of one of said devices,
a source of positive potential coupled between the third and second terminals of each of said devices,
voltage dividing means having series connected higher and lower voltage portions coupled between the positive terminal of said source and the first terminal of each device,
isolating means between said first terminal of each device and said voltage dividing means for preventing input pulses from coupling between said devices,
a plurality of coupling capacitors each coupled between a respective isolating means and the junction of said higher and lower voltage portions of said voltage divider means,
and a plurality of load resistors and associated output terminals respectively coupled between said source and one of the latter two terminals of each of said devices,
the circuit parameters of said gating circuit being chosen with respect to the operating characteristics of said device to establish a given load line on the composite emitter characteristic curves representing all possible conducting combinations of said devices,
said load line intersecting only one of said curves to the right of its valley point.

3,126,492
FERROMAGNETIC ENERGY DEVICES
Thomas J. Swoboda, Chester County, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Mar. 22, 1962, Ser. No. 181,629
8 Claims. (Cl. 310—4)

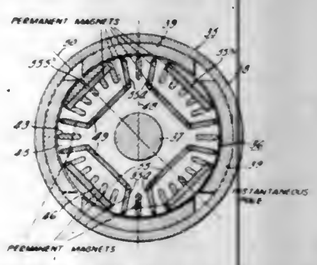
1. The method of producing useful work from at least one of applied heat energy, mechanical energy, electrical energy and magnetic energy which comprises varying the magnitude of application of at least one of said energies to a structure while its temperature is within that narrow range in which at least one of its energy-transforming components undergoes below its Curie point a reversible first order solid-phase to solid-phase transition with maintenance of crystal symmetry,

developing concurrently with said transition as a result of said application of said energy in one of said forms to said component a sharp and substantial change in at least one of (*a*) the magnetic saturation induction, (*b*) the electrical resistivity, and (*c*) a dimension, and upon decrease in the application of said energy in one of said forms producing an opposite change in each of (*a*) said magnetic saturation induction, (*b*) said resistivity, and (*c*) said dimension, and



converting as a result of said changes in (*a*) said magnetic saturation induction, (*b*) said resistivity, and (*c*) said dimension the energy applied in one of said forms into a work-developing effect in the form of energy in a form differing from that of the applied energy and whose magnitude changes with the magnitude of said applied energy.

3,126,493
PERMANENT MAGNET MOTOR
Vernon B. Honsinger, Cincinnati, Ohio, assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Sept. 13, 1960, Ser. No. 55,621
9 Claims. (Cl. 310—156)

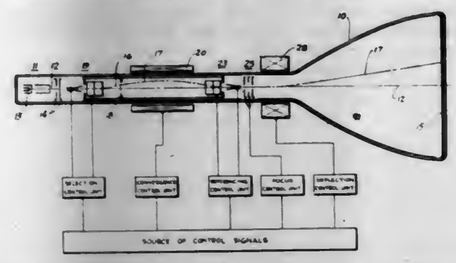


1. A synchronous induction motor comprising a stator, said stator having windings disposed therein to provide a rotating set of magnetic field poles, a rotor mounted for rotation within said stator, said rotor comprising a magnetic core, flux barriers positioned in said core and being arcuately spaced in said core to oppose some of the flux induced in the rotor by said stator windings, and form by consequence, magnetic salient poles in said core, and permanent magnets in said core orientated to oppose quadrature axis flux in said rotor.

3,126,494
CATHODE RAY TUBE APPARATUS
Lothar Frenkel, Beaverton, Oreg., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Mar. 6, 1957, Ser. No. 644,330
5 Claims. (Cl. 313—86)

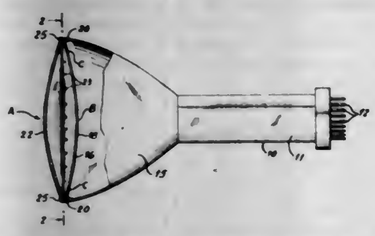
1. In a shaped beam tube including beam generating and projecting means at one end thereof for projecting an electron beam along a tube axis, and a target responsive to said beam at the other end thereof, a beam shaping member positioned along the axis intermediate the target and the beam generating means for selectively shaping the electron beam, a selection deflection means positioned intermediate the generating means and the

shaping member along the axis for selectively deflecting the electron beam to illuminate at least a selected portion of the shaping member, a reference deflection means positioned intermediate the shaping member and the target for referencing the electron beam to axis, convergence means positioned intermediate the shaping mem-



ber and the reference deflection means for substantially simultaneously converging and focusing the electron beam, and, an electron focusing lens positioned intermediate the reference deflection means and the target, said focusing lens being adapted to cause independent focus conditions upon the shaped beam adjacent the target.

3,126,495
CATHODE RAY TUBE WITH A CONCAVE VIEWING SCREEN
Stephen Kurtin, 594 Cumberland Ave., Teaneck, N.J.
Filed Sept. 11, 1959, Ser. No. 839,505
3 Claims. (Cl. 313—89)



1. A cathode ray tube envelope having a neck portion with electron gun means therewithin, a flaring portion integrally connected at one end to said neck, a screen of transparent material covering the other end of said flaring portion, said screen being arched inward towards said neck and being coated with a fluorescent material whereby an image moving across said screen will move towards or away from an observer, said screen material having perforations completely therethrough whereby there can be no differential pressure, and a shield attached in a leakproof manner to said flaring portion completely enclosing said screen, said shield being arched outward.

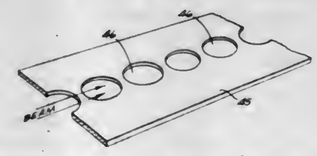
3,126,496
FORMED STRAP FRAME GRID
Frederick C. Reid, Emporium, Pa., assignor to Sylvania Electric Products Inc., Emporium, Pa., a corporation of Delaware
Filed Dec. 21, 1961, Ser. No. 161,169
3 Claims. (Cl. 313—348)

3. A frame grid having a given lateral wire minor dimension comprising a pair of similar side members held in spaced relationship by spaced cross members attached thereto, said side members having a cross-sectional area defining opposed end portion surfaces and opposed outwardly convex shaped portion surfaces located intermediate said end portion surfaces, said opposed shaped portion surfaces having a maximum distance therebetween equal to the distance between said opposed end portion surfaces, and a helix of lateral wire wrapped around said



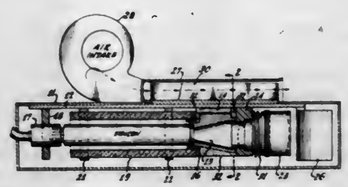
side members and engaging the shaped portion surfaces thereof, said convex shaped surfaces having a radius of curvature substantially equal to one-half the grid minor dimension.

3,126,497
HIGH FREQUENCY ENERGY INTERCHANGE APPARATUS
Richard M. White, Los Altos, Calif., assignor to General Electric Company, a corporation of New York
Filed May 15, 1961, Ser. No. 110,209
3 Claims. (Cl. 315—3.5)



1. In a high frequency energy interchange device, the combination of: an evacuated envelope; a slow wave transmission line positioned within said envelope; electron stream producing means for directing a stream of electrons along said transmission line and in close proximity thereto, said transmission line comprising an elongated planar conductive member, said member having formed therein a series of spaced substantially circular apertures, said circular apertures having their centers in a single longitudinal substantially straight line along said member.

3,126,498
THERMOELECTRIC COOLING OF VIDICONS
Sidney L. Bendell, Haddon Heights, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Mar. 27, 1962, Ser. No. 182,860
5 Claims. (Cl. 315—8)



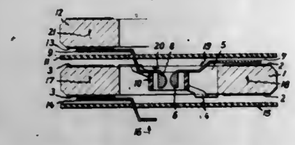
1. A picture pickup tube of the type having a photoconductive target close to the end or face plate of the tube; means for cooling said target, said means comprising a metal cooling block in contact with said face plate, said cooling block having an opening therethrough which is coaxial with said tube for providing an optical path through which an image may be formed on said target, a thermoelectric cooling unit in contact with said cooling block; a magnetic field balancing coil positioned opposite the face plate of said tube and positioned coaxially with said tube, and means connecting said coil and said cooling unit in

series, said coil being wound in the direction to provide a field that opposes the axial component of the magnetic field caused by the current flow through the cooling unit, said coil also having a number of turns such that its field balances out said axial component.

3,126,499
LIGHTNING ARRESTER WITH PLURAL GAPS

Willy Rabus, Stuttgart-Unterturkheim, Germany, assignor to Licentia Patent-Verwaltungs-G.m.b.H., Frankfurt am Main, Germany

Filed Dec. 27, 1960, Ser. No. 78,722
Claims priority, application Germany Dec. 28, 1959
11 Claims. (Cl. 315—36)

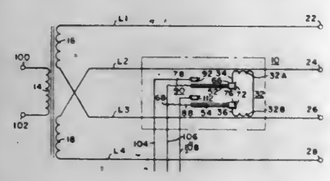


1. In a spark arrester, the combination which comprises: a disk formed with a central bore and made wholly of homongeneous resistance material; spaced apart metallic coatings on opposite faces of said disk and dividing the same into two partial resistances separated by two webs of said homogeneous resistance material; means connecting said partial resistances in series-circuit with each other; and spark gap means arranged within said central bore and connected to said series-circuit.

3,126,500
THERMALLY RESPONSIVE DEVICE

John J. Astleford, Jr., Hickory Township, Mercer County, Pa., and Thomas P. Henry, Brookfield Township, Trumbull County, and Merrill G. Leonard, Fowler, Ohio, assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed May 12, 1959, Ser. No. 812,632
10 Claims. (Cl. 317—14)

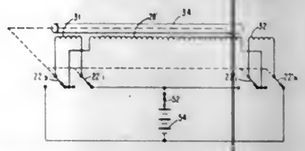


1. A thermally responsive device for sensing the thermal condition of an associated electrical apparatus including windings substantially immersed in an insulating fluid and leads through which electric current flows to and from said windings in instantaneously opposite directions comprising a base member disposed adjacent to at least two of said leads and substantially immersed in said fluid, a current pick-up coil disposed on said base member for obtaining an output current which varies with the sum of the currents in said leads, the longitudinal axis of said out being substantially parallel to and closely positioned to the leads of the associated apparatus, said base member including a recess, one or more bimetallic elements disposed in said recess and connected in series circuit relation with said coil to be heated in response to said output current and the temperature of said fluid, movable contact means disposed in said recess, one end of each bimetallic element being fixed to said base member and the other end being free to move as the thermal condition of said apparatus changes and to actuate said movable contact, and stationary contact means disposed to be engaged by each movable contact for a predetermined thermal condition of said apparatus.

3,126,501
MAGNETIC ACTUATORS

James Flora, Santa Clara, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 23, 1960, Ser. No. 85,172
8 Claims. (Cl. 317—154)



1. A magnetic actuator including an elongated armature of material of high magnetic retentivity arranged for movement in two directions,

holding members of material of low magnetic retentivity arranged at either end of said armature in the path of movement thereof,

an electromagnetic winding disposed about said armature and centrally of said holding members for moving said armature into contact alternately with said holding members,

said armature having residual magnetism attracting it to the one of said holding members with which it is in contact,

further electromagnetic windings disposed about said armature adjacent said holding members,

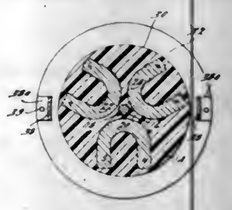
means connecting said moving winding and said further windings for current flows at which the magnetic flux emanating from the one of said further windings adjacent the holding member with which the armature is in contact is in opposition to the magnetic flux emanating from said moving winding and the other of said further windings is connected for current flow at which the magnetic flux emanating therefrom is aiding the magnetic flux emanating from said moving winding, and

means to apply unidirectional potential to said windings to release said armature from the holding member with which it is in contact and move it into contact with the other holding member.

3,126,502
DEMAGNETIZER DEVICE USING PERMANENT MAGNETS

Joseph Frederick St. Denis, 16136 Evergreen, East Detroit, Mich.

Filed Nov. 14, 1960, Ser. No. 68,762
2 Claims. (Cl. 317—203)

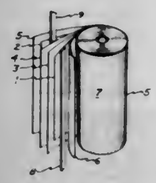


1. A demagnetizer including a body, means for supporting said body for rotation about a given axis, a plurality of permanent U-shaped magnets carried by said body and arranged circularly about said axis with the poles thereof extending away from said axis, said magnets having the north and south poles thereof in alternately disposed arrangement, whereby an object held in juxtaposition to the ends of said poles will be subjected to a magnetic field of alternating direction upon rotation of said body.

3,126,503
ELECTRICAL CAPACITOR AND ELECTRODE MATERIAL THEREFOR

Allen N. Salomon, Hudson Falls, N.Y., assignor to General Electric Company, a corporation of New York

Filed Dec. 5, 1960, Ser. No. 73,755
6 Claims. (Cl. 317—230)



1. An electrical capacitor comprising spaced electrodes, at least one of said electrodes comprising an alloy of approximately 73% titanium, 13% vanadium, 11% chromium, and 3% aluminum, at least said one electrode having formed thereon an anodic dielectric oxide film.

3,126,504
ELECTRODES FOR LOGARITHMIC DETECTOR UNITS

William G. Darland, Jr., Parma, and Robert A. Powers, Lakewood, Ohio, assignors to Union Carbide Corporation, a corporation of New York

Filed July 13, 1959, Ser. No. 826,567
5 Claims. (Cl. 317—231)



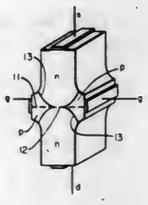
1. An electrode for a logarithmic detector comprising a sheet of tantalum-clad platinum having an orifice therein and a coating of an oxide of tantalum on the tantalum surfaces of said sheet, the peripheral walls of said orifice being composed of platinum.

3,126,505
FIELD EFFECT TRANSISTOR HAVING GRAIN BOUNDARY THEREIN

William Shockley, Los Altos, Calif., assignor to Clevite Corporation, Cleveland, Ohio, a corporation of Ohio

Filed Nov. 18, 1959, Ser. No. 853,905
4 Claims. (Cl. 317—235)

1. A field effect transistor comprising a body of semiconductive material of one conductivity type having a grain boundary therein, and gate regions of opposite conductivity type diffused into said body to form a junction therewith and extending deeper into the body at the grain boundary, the portion of said gate regions extending towards one another along the grain boundary defining a relatively short channel of said one conductivity type, in the body of semiconductive material, source and drain

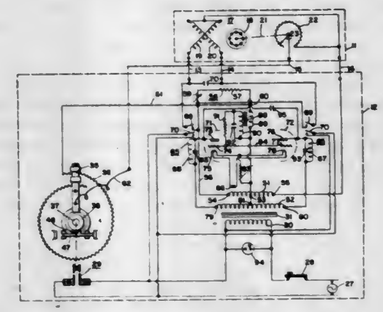


connections made to the body on opposite ends of said channel and diffused gate connections made to the gate regions.

3,126,506
REMOTE CONTROL SYSTEM FOR POSITIONING A MOTOR DRIVEN LOAD

Emmor V. Schneider, Alliance, Ohio, assignor to Consolidated Electronics Industries Corp., a corporation of Delaware

Filed Apr. 3, 1961, Ser. No. 100,152
16 Claims. (Cl. 318—28)

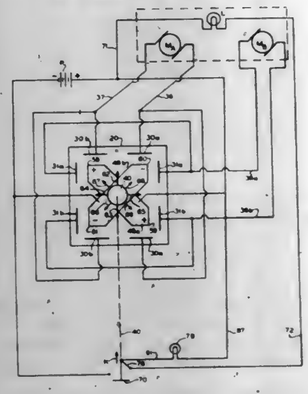


1. A remote control device for a power unit to drive an output shaft with the device and power unit interconnected by a plurality of electrical conductors, comprising in combination, an electric motor in said power unit, a variable impedance in said power unit driven in accordance with rotation of said motor to vary the impedance thereof in accordance with rotation of said motor; said control device including a manual knob rotatable to effect energization of said motor, an indicator moved with said knob to provide indication of the desired position of the output shaft, a lost motion connection between said knob and said indicator, switch means connected to be actuated in accordance with said lost motion connection, transformer means having secondary winding means, a bridge circuit, means to energize said bridge circuit from said secondary winding means in accordance with actuation of said switch means, a second variable impedance, means including said plurality of conductors to connect said first and second variable impedances as part of said bridge circuit, output terminals on said bridge circuit, amplifier means connected to the output terminals of said bridge circuit so that when said bridge circuit is unbalanced the amplifier means is effective, and means including said plurality of conductors connecting said amplifier means in circuit with said secondary winding means and said electric motor to effect rotation of said motor.

3,126,507
SWITCH ASSEMBLY FOR REMOTE CONTROL DEVICE

Douglas R. Cleminshaw, Syracuse, N.Y., assignor to R. E. Dietz Company, Syracuse, N.Y., a corporation of New York

Filed Feb. 25, 1960, Ser. No. 10,976
10 Claims. (Cl. 318—293)



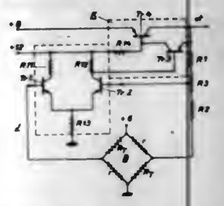
9. In a switch assembly for the remote operation of a plurality of electrically operated instrumentalities including a pair of reversible electric drive motors: a rectangular housing having an open end, a first and a second pair of U-shaped contact fingers mounted in said housing adjacent the side and end walls thereof, the side arms of said first pair of fingers being disposed along two opposite side walls and the side arms of said second pair of fingers being disposed along the adjacent opposite side walls, said fingers being insulated from one another, each pair of fingers being adapted to be connected through one of said drive motors, an elongated actuator projecting axially into said housing through the open end thereof, a pair of contact plates transversely mounted on said actuator adjacent the inner end thereof, said plates being insulated from said actuator and from one another, each plate having a portion projecting toward one finger of each pair on one side and toward the other finger of said pair on the diametrically opposite side, means connecting said plates through a source of electric current, and a flexible support for said actuator to normally support said plates in said housing spaced from said contact fingers, said actuator being thereby adapted for movement of said plates from side to side for selective engagement with said contact fingers, whereby said plates may be moved in one direction into contact with one pair of fingers to actuate the connected motor and moved in the opposite direction to contact said pair and actuate said motor in the reverse direction.

3,126,508
ARRANGEMENT FOR TEMPERATURE DEPENDENT CONTROL OF THE OUTPUT VOLTAGE OF AN ENERGY SOURCE

Elof Erik Eriksson and Øyvind Gjessvåg, Bandhagen, and Jöns Kurt Alvar Olsson, Tullinge, Sweden, assignors to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden

Filed Dec. 22, 1960, Ser. No. 77,557
Claims priority, application Sweden Nov. 1, 1960
1 Claim. (Cl. 323—69)

A circuit system for controlling the output voltage of a source of energy in accordance with temperature, said circuit system comprising, in combination, a four-arm bridge having a first, a second, a third and a fourth diagonal point, said bridge including temperature-responsive impedance means in two opposite arms defined by the first and the second point and the third and the fourth point respectively of the bridge, a source of current connected to the first and the third point, comparison circuit means connectable to a source of power and having two inputs, one of said inputs being connected to the second point of the bridge and the other input being connected to the output of said source of energy, and a variable voltage divider having a variable first part included in the connection between said other input of the comparison circuit

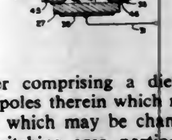


means and the output of the source of energy and a variable second part connected between said other input and the fourth point of the bridge, said comparison circuit means, said bridge and said voltage divider being correlated so that the current across the bridge is substantially higher than the current across the voltage divider and the current across the voltage divider is substantially higher than the current through the connection leading from said first part of the voltage divider to said other input of the comparison circuit means.

3,126,509
ELECTRICAL CONDENSER HAVING TWO ELECTRICALLY OPPOSITE ONE-WAY POTENTIAL BARRIERS

Charles Ferencz Pulvari, 2014 Taylor St. NE., Washington, D.C.

Filed July 27, 1956, Ser. No. 600,588
7 Claims. (Cl. 323—74)



1. A condenser comprising a dielectric of material having electric dipoles therein which may be aligned and the alignment of which may be changed, said dielectric having a thin switching area portion surrounded by a thicker dielectric portion, a pair of condenser terminals, and an electrical potential barrier layer electrically interposed between each terminal and said thicker dielectric portion, said barrier layers being in electrically opposed relation to each other and being in non-contacting relation to said thin switching area portion whereby a gap exists between each barrier layer and said thin switching area portion.

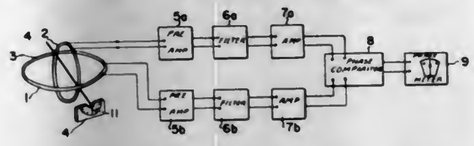
3,126,510
METHOD AND MEANS FOR GEOPHYSICAL PROSPECTING UTILIZING THE EARTH'S MAGNETIC TIME TRANSIENTS

George H. McLaughlin, Herbert A. Harvey, William O. Cartier, and William A. Robinson, all of Toronto, Ontario, Canada, assignors, by mesne assignments, to Crossland Licensing Corporation Limited, Toronto, Ontario, Canada

Filed May 5, 1958, Ser. No. 733,150
17 Claims. (Cl. 324—7)

1. A method of geophysical prospecting comprising utilizing as an exploring energy source time transients of

the earth's magnetic field, and orienting a detector coil responsive to said magnetic time transients in space through the detection of any reversals in phase of signals generated in said coil under spacial coil movement to locate the turns of the coil in a plane movement out of

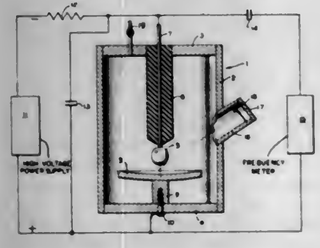


which in opposite directions effects a reversal of phase of said signals generated in said coil by said magnetic time transients, and noting the spacial disposition of said plane as an indication of the presence of an influencing geophysical body.

3,126,511
ELECTRONIC DEVICE

Ralph F. Redemske and James M. Brady, Santa Barbara, Calif., assignors to Servomechanisms, Inc., Hawthorne, Calif., a corporation of New York

Filed July 19, 1956, Ser. No. 598,880
15 Claims. (Cl. 324—33)



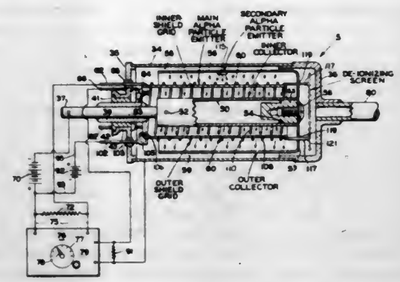
2. A gaseous discharge device comprising a housing; a negative electrode within said housing being electrically insulated from said housing; a positive electrode within said housing being electrically connected to said housing; said negative electrode being constructed in the form of a polished metal sphere and said positive electrode being constructed in the form of a polished metal concave disk; and ionizing means for sustaining an ionized condition of the atmosphere within said gaseous discharge device.

3,126,512
ION AIR DENSITY SENSOR INCLUDING DARK CURRENT CORRECTION MEANS

George V. Zito, Northvale, N.J., assignor to The Bendix Corporation, a corporation of Delaware

Filed Apr. 25, 1960, Ser. No. 24,474
9 Claims. (Cl. 324—33)

1. In an air density sensor device of a type including spaced anode and cathode elements for providing a sampling zone therebetween, means for supplying air under prevailing atmospheric pressure to said sampling zone, radioactive material carried by the anode element to provide a source of alpha particles emitted therefrom to ionize the air in the sampling zone, and means operatively connected between said anode and cathode elements to provide an output signal proportional to the density of the air in the sampling zone; the improvement comprising a shielding member positioned in spaced proximity to the radioactive material, and a source of electrical energy to maintain the shielding member at a potential sufficiently more positive than the anode element so that delta electrons emitted from the radioactive material may be collected by the shielding member and

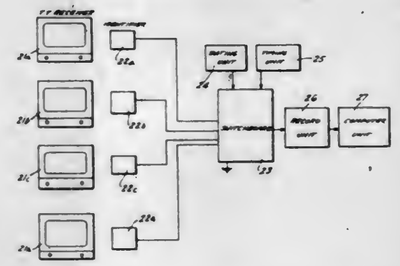


prevented from traversing the sampling zone between the anode and cathode elements.

3,126,513
AUDIENCE SURVEY INTERROGATING SYSTEM FOR A PLURALITY OF TELEVISION RECEIVERS

Ira Kamen, New York, N.Y., assignor to Teleglobe Pay-TV-System, Inc., New York, N.Y.

Filed Dec. 21, 1961, Ser. No. 161,197
6 Claims. (Cl. 325—31)



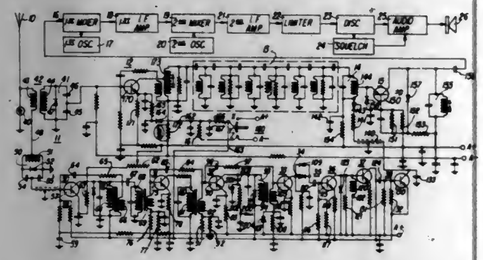
1. An interrogating system for interrogating selected ones of a plurality of television receivers each adapted to receive and reproduce a plurality of different channels, each of said channels having a frequency different from the others of said channels, each of said receivers radiating a plurality of different spurious signals, each of said spurious signals having a frequency different from the others of said spurious signals, the frequency of the spurious signal radiated by a receiver corresponding to the frequency of the channel reproduced by said receiver, said interrogating system comprising, in combination, a plurality of identifying means each positioned in operative proximity with a different one of said receivers for receiving the spurious signals and for identifying the frequency of the spurious signal radiated by the proximate receiver, each of said identifying means comprising a plurality of RF resonant circuits, each of said RF resonant circuits being adapted to resonate at a different frequency of said spurious signals, a plurality of indicating circuits each associated with a different RF resonant circuit, each of said indicating circuits being adapted to indicate energization thereof, and activating means controlled by said RF resonant circuits for permitting the energization of the indicating circuit associated with the RF resonant circuit which is resonating; interrogating means coupled to the indicating circuits of said identifying means for energizing in selected ones of said identifying means the indicating

circuit activated by the resonating RF resonant circuit of each of said selected ones of said identifying means to indicate the frequency of the spurious signal received by said selected ones of said identifying means thereby determining the channel received and reproduced by each of the receivers proximate to said selected ones of said identifying means; switchboard means connected to said indicating circuits for selecting and permitting energization of determined ones of said identifying means and for indicating each of the receivers proximate to said selected ones of said identifying means and the channel received and reproduced by each of said last-mentioned receivers; electrically conductive wire means connected from said switchboard means to the proximity of each of said receivers; and a line switching unit for each of said plurality of receivers, each said line switching unit comprising a plurality of switching branches connected between said conductive wire means and a point at ground potential and each being adapted to provide a conductive path to ground which is electrically distinguishable from the conductive path to ground provided by the others of said switching branches.

3,126,514
NOISE REDUCING SYSTEM

Jack Germain, Chicago, John W. Battin, Addison, and John F. Mitchell, Elmhurst, Ill., assignors to Motorola, Inc., Chicago, Ill., a corporation of Illinois

Filed Oct. 13, 1961, Ser. No. 144,936
14 Claims. (Cl. 325—479)

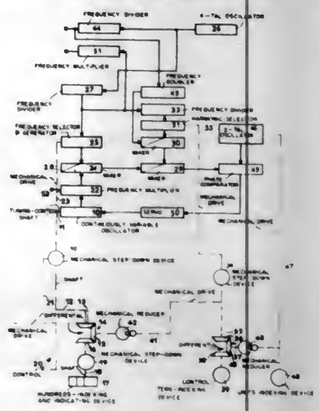


1. In a frequency modulation receiver including a radio frequency amplifier stage for translating a desired carrier wave signal which may be accompanied by impulse noise disturbances and which stage is adapted to be interrupted by the application of blanking pulses thereto, and which receiver includes input circuit means for applying signals to said radio frequency amplifier stage; an impulse noise blanking system including in combination, radio frequency amplifier circuit means coupled to said input circuit means for amplifying signals of a given frequency, pulse detection means connected to said radio frequency amplifier circuit means for detecting noise pulses superimposed on said carrier wave signal, gate means connected to said pulse detector for passing detected noise pulses above a predetermined level of amplitude, high pass filter means connected to said gate means for rejecting signals within the pass band range of the receiver, said high pass filter means causing a foreshortening of said detected noise pulses, pulse amplifier means connected to said high pass filter means, means coupled to said pulse amplifier means for stretching said foreshortened noise pulses to form blanking pulses of a predetermined time duration, means for applying said blanking pulses to said radio frequency amplifier stage to interrupt the same, and means responsive to said blanking pulses coupled to the output of said radio frequency amplifier stage to clamp the same at a reference potential during the blanking action.

3,126,515
FREQUENCY-STABILIZED OSCILLATION GENERATOR SYSTEM

Léon Berman, Paris, France, assignor to Radio A.I.R. Applications Industrielles Radioelectriques, a corporation of France

Filed Nov. 7, 1960, Ser. No. 67,746
Claims priority, application France Nov. 6, 1959
6 Claims. (Cl. 331—22)



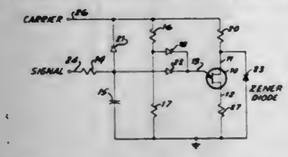
1. A system for generating a spectrum of stabilized output frequencies which are separated from each other by a predetermined unit of frequency over a wide frequency band, said system comprising a variable oscillator having a continuously variable frequency over a band having a width which is a sub-multiple of said wide frequency band and having a low-frequency limit which is substantially equal to that of said wide frequency band; frequency-selector means operatively coupled with said variable oscillator; means for driving said frequency-selector means and consisting of operating means for manually actuating said frequency-selector means and a mechanical transmission system interposed between said operating means and said frequency-selector means; mechanical divider means having an adjustable division factor interposed in said transmission system; adjustable frequency-multiplier means connected with said oscillator for receiving the oscillations supplied by said oscillator and having two outputs at one of which the generated oscillations are collected, said multiplier means having an adjustable electronic multiplication factor; means for adjusting to the same value the electronic multiplication factor of said frequency-multiplier means and the division factor of said mechanical divider; and a frequency-stabilizing device connected to a second output of said frequency-multiplier means, said device comprising means for producing reference frequencies which can be regulated from said frequency-selector means, and frequency-comparison means for regulating the frequency of said adjustable oscillator in dependence upon comparison of said reference frequences with the frequency derived from said frequency-multiplier means.

3,126,516
ELECTRONIC SWITCHING CIRCUIT

Lawrence R. Peaslee, Waynesboro, Va., assignor to General Electric Company, a corporation of New York

Filed Apr. 3, 1961, Ser. No. 100,246
11 Claims. (Cl. 332—9)

4. A switching circuit comprising switching means operative to conduct current upon application of at least a predetermined voltage thereacross and to thereafter sustain said conduction upon application of a lower magnitude voltage, a voltage source supplying voltages of at least said predetermined value, energy storage means connected between said voltage source and said switching means and operative to discharge through said switching means when the voltage thereon attains said predetermined value, sustaining means supplying sufficient voltage

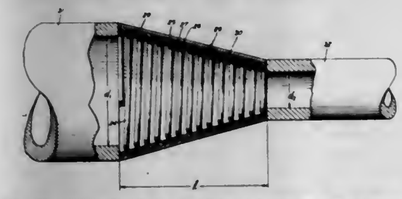


to maintain said switching means in high current conduction once established, and unidirectional current conduction means interconnecting said sustaining means and said switching means effective to supply current thereto when said energy storage means discharge below a preselected voltage level.

3,126,517
TAPERED WAVEGUIDE TRANSITION SECTIONS

Stewart E. Miller, Middletown, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Sept. 16, 1957, Ser. No. 683,990
5 Claims. (Cl. 333—34)

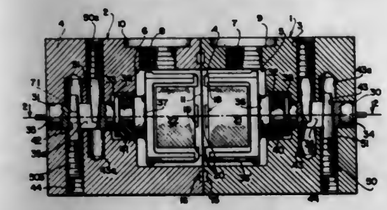


1. In an electromagnetic wave transmission system for transmitting the TE_{01} circular electric mode, means for coupling said mode from a first section of uniform circular waveguide supportive of said circular electric mode having a first diameter to a second section of uniform circular waveguide supportive of said circular electric mode having a second diameter, said means comprising a conical tapered section formed by winding an elongated member of conducting material in a substantially helical form, and a jacket of electrically dissipative material surrounding said tapered section, said helix having the space between adjacent turns thereof exposed to electrically dissipative material.

3,126,518
ADJUSTABLE TEMPERATURE COMPENSATED TRANSDUCER

James W. Johannson, Panorama City, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.

Filed Apr. 18, 1960, Ser. No. 23,096
5 Claims. (Cl. 336—30)

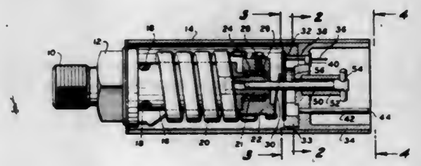


1. An adjustable transducer comprising a first and second housing each having a sealed pressure chamber therein, said housings being positioned so that the pressure chamber in one is substantially aligned with the pressure chamber of the other, an interchangeable flexible metal diaphragm positioned between said housings and hermetically sealed to each, said diaphragm constituting a common dividing wall between said pressure chambers, a pressure inlet port associated with each of said chambers, an E-core electrical coil within each of said chambers, said E-core having a plurality of poles and positioned with its poles in spaced relation to said diaphragm, means for adjustably mounting said coils within said housings for moving said coils toward and away from said diaphragm, said mounting means including bracket means fixed to the poles of said E-core near the outer ends thereof and adjacent said diaphragm whereby thermal expansion of said E-core takes place opposite to said diaphragm from said ends, thereby having no effect on the air gap between said poles and said diaphragm.

3,126,519
ELECTRICAL TRANSDUCER

Charles W. Burley, Costa Mesa, Calif., assignor to Servonic Instruments, Inc., Costa Mesa, Calif., a corporation of California

Filed Sept. 19, 1961, Ser. No. 139,145
2 Claims. (Cl. 338—40)



2. In a pressure indicating instrument of the type described, and which includes a hermetically sealed casing, a pressure responsive element supported in the casing and movable in accordance with pressure variations to be indicated by the instrument, an electrical element consisting of a potentiometer resistance supported in the casing by an insulating member which is rotatably mounted with respect to said casing, a wiper arm coupled to said pressure responsive element and extending into arcuately movable electrical contact with said electrical element, the combination of: an adjustment shaft extending through the casing and through the electrical element, means including a pin extending radially from said adjustment shaft into said insulating member supporting said electrical element for mechanically coupling said adjustment shaft to said electrical element for imparting limited rotational motion to the electrical element with respect to said wiper arm upon rotation of said adjustment shaft, and a conformable sealing shroud tube mounted externally of said casing and surrounding said shaft and hermetically sealed at one end to said shaft and at the other end to said casing to permit limited rotational adjustment of said shaft.

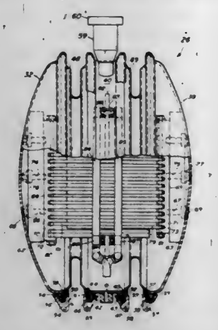
3,126,520
TRANSDUCER

Frank R. Abbott, 3953 Wildwood Road, San Diego 7, Calif.

Filed July 26, 1960, Ser. No. 45,513
9 Claims. (Cl. 340—8)
(Granted under Title 35, U.S. Code (1952), sec. 266)

5. An electrodynamic energy convertor comprising in combination, a pair of movable pistons spacially disposed from each other along a common axis of revolution, a plurality of plates respectively connected to said pistons for movement therewith, each of said plurality of plates

consisting of means simultaneously conducting electrical energy and a cooling fluid to and fro along a predetermined path for generating a magnetic field thereat while being cooled thereby, core means disposed between said



conducting means for increasing the magnetic flux within said magnetic field, and nonmagnetic means interconnecting said conducting means and said core means for electrically insulating and structurally supporting same in a fixed relationship.

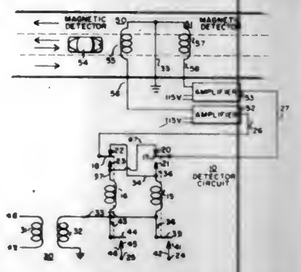
3,126,521
VISIBILITY MEASUREMENT
Frank B. Brady, Washington, D.C., assignor to Link Division of General Precision, Inc., Binghamton, N.Y., a corporation of Delaware
Filed Sept. 27, 1960, Ser. No. 58,797
5 Claims. (Cl. 340—26)



1. In an aircraft landing system the combination of: an array of sequentially flashing landing lights; light-sensitive means positioned near one end of said array and arranged to produce an output signal in response to each flash of each one of said lights during conditions of optimum visibility; indicator means located remotely from said light-sensitive means; counter circuit means adapted to count said output signals corresponding to each sequence of flashes of said lights, and means responsive to said counter circuit means to actuate said indicator means, whereby said indicator means indicates, in both conditions of optimum and less-than-optimum visibility, the visibility along said array.

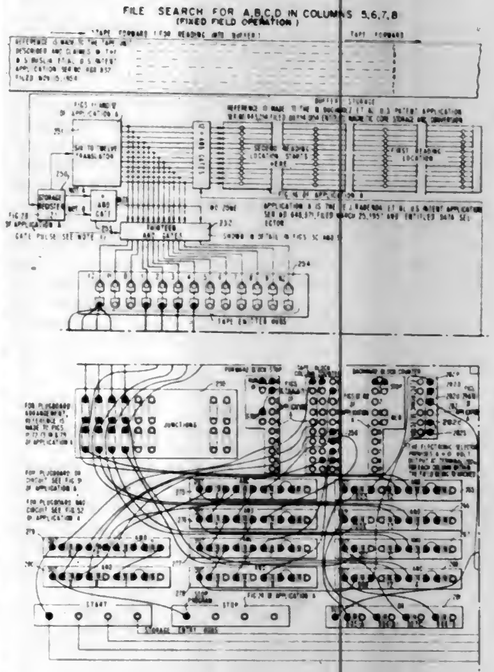
3,126,522
DIRECTIONALLY SELECTIVE TRAFFIC LANE CONTROL DEVICE
Garland E. Fieser, East Moline, Ill., assignor, by mesne assignments, to The Gamewell Company, Newton, Mass., a corporation of Delaware
Filed Mar. 21, 1958, Ser. No. 723,038
6 Claims. (Cl. 340—39)

3. In a master traffic control system, a highway comprised of lanes; a traffic detector in each highway lane, first and second traffic counters, said first counter connected to all of said detectors over which traffic is moving in one direction for counting such traffic per unit of time, said second counter connected to all of said detectors over which traffic is moving in the other direction for counting such traffic per unit of time, discriminator means for comparing the totals on said first and second counters at the end of each time unit and for allocating the center lane or lanes to the heavier direction of traffic flow, timed reset means to remove the totals



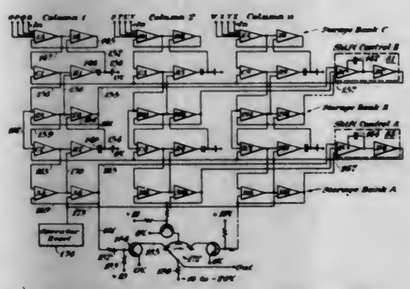
from said counters at the end of said time unit, and electric switching means to connect said detector in the allocated lanes to the counter for the same direction of traffic flow.

3,126,523
FILE SEARCH DATA SELECTOR
Edward J. Rabenda, Poughkeepsie, Wayne D. Brodd, Wappingers Falls, and Eugene E. Marquardt, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed May 5, 1958, Ser. No. 733,188
3 Claims. (Cl. 340—172.5)



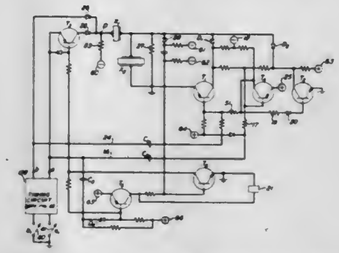
1. A File Search Data Selector consisting in combination of: magnetic reading means for reading information from a moving magnetizable medium having information magnetically stored thereon in accordance with a predetermined code and in randomly arranged records of variable length; controllable means, cooperating with said reading means, for selectively effecting forward and backward movement of said medium; logical ciricuit means, cooperating with said reading means and controlling said controllable means, for file searching the information stored on said medium to locate and read out for data processing the entire information stored in each record found to contain anywhere therein, in accordance with said predetermined code, in immediate sequence, in the order recited, the alphabetic characters N_1, N_2, N_3 and N_4 and wherein N_1, N_2, N_3 and N_4 are respectively any alphabetic characters; said logical circuit means including counter means and AND and OR circuit means; said logical circuit means including first means, responsive to said reading means reading the character N_1, for rendering a first discrete electrical manifestation; said logical circuit means including second means conditioned by said first discrete electrical manifestation for rendering a second discrete electrical manifestation in response to said reading means reading the character N_2, immediately subsequent to the reading of the character N_1; said logical circuit means including third means conditioned by said second discrete electrical manifestation for rendering a third discrete electrical manifestation in response to said reading means reading the character N_3, immediately subsequent to the reading of the character N_2; said logical circuit means including fourth means conditioned by said third discrete electrical manifestation for rendering a fourth discrete electrical manifestation in response to said reading means reading the character N_4, immediately subsequent to the reading of the character N_3; additional means, cooperating with said controllable means, said reading means, and said counter means, and responsive to said fourth discrete electrical manifestation for first causing limited backward movement of said medium and then a forward movement of said medium; and read out means, cooperating with said additional means and said reading means, whereby only the record of information stored in said medium and containing therein the alphabetic characters N_1, N_2, N_3 and N_4, in the immediate sequence and order recited, is made available for data processing.

3,126,524
DATA STORAGE SYSTEM
Thomas J. Blocher, Jr., Monroeville, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed July 31, 1959, Ser. No. 830,759
5 Claims. (Cl. 340—173)



1. A storage system for storing a binary data comprising, in combination, a plurality of storage banks each of said banks including a plurality of storage registers, each of said storage registers comprising a multivibrator biased to have bi-stable conducting conditions, means connecting binary data input signals to each of said multivibrators for controlling its conducting condition, means connecting a feedback voltage from the output to the input of each of said multivibrators for maintaining a multivibrator in the conducting condition to which it has been controlled and thereby storing data, transfer means for said storage registers for transferring data from storage registers in one storage bank to storage registers in a succeeding storage bank, a plurality of control means having bi-stable conducting conditions, means biasing said control means to an initial conducting condition, one control means connected in parallel to the transfer means associated with a storage bank, the output of each storage register in each bank being connected in parallel to said control means, a storage register having data stored therein providing an output to shift said control means to its second conducting condition, and said control means when in its second conducting condition providing an output to said transfer means to inhibit the transfer of additional data to any storage register in a storage bank having a storage register in which data is stored.

3,126,525
FERROELECTRIC DEVICE FOR COUNTING MESSAGES BETWEEN CODE RECORDER AND TRANSMITTER
Edward E. Schwenzfeger, Bayside, N.Y., and Irmfried M. Vogt, East Orange, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 16, 1958, Ser. No. 780,763
30 Claims. (Cl. 340—173.2)



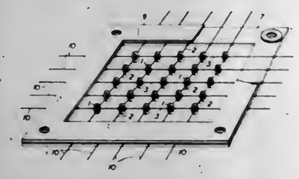
11. A ferroelectric counting circuit including first ferroelectric capacitor means, second ferroelectric capacitor means having a larger electrode area than said first capacitor means, means for interconnecting said capacitor means, first pulsing means connectable to said first capacitor means, second pulsing means connected to said first capacitor means, a first asymmetrically conducting device and a second asymmetrically conducting device connectable in shunt with said second capacitor means, said devices being oppositely polarized, a utilization circuit connected in shunt with said second capacitor means, means responsive to an initial pulse from said first pulsing means for absorbing said pulse before transmission to said first capacitor means and for connecting said first pulsing means to said first capacitor means, means responsive to subsequent pulses from said first pulsing means for connecting said first asymmetrically conducting device in shunt with said second capacitor means, said capacitor means being effective to serially switch in orientation in response to said subsequent pulses thereby to store unitary charges in said second capacitor means, means effective on the termination of said subsequent pulses from said first pulsing means for switching back said first capacitor means in series with said first asymmetrically conducting device, means responsive to pulses from said second pulsing means for connecting said second asymmetrically conducting device in shunt with said second capacitor means, said first capacitor means being adapted to switch state in series with said second asymmetrically conducting device in response to said pulses

from said second pulsing means, and means responsive to the termination of said pulses from said second pulsing means for switching back the state of said first capacitor means in series with said second capacitor means thereby to remove unitary charges from said second capacitor means.

3,126,526
MEMORY MATRIX FRAMES

Frank J. Wood, Northampton, England, assignor to The Plessey Company Limited, Ilford, England, a British company

Filed Feb. 20, 1958, Ser. No. 716,496
Claims priority, application Great Britain Feb. 23, 1957
2 Claims. (Cl. 340—174)



1. A magnetic memory matrix with closely spaced terminals comprising

a quadrilateral matrix frame,

a network of at least two sets of substantially parallel, flexible, electric-conductor wires, extending in substantially different directions with each set extending between two sides of said quadrilateral frame,

and a plurality of individual toroidal cores of magnetizable material held by said sets of wires, one core at each of the intersections of the wires of said sets,

said quadrilateral matrix frame comprising two frame laminae with a layer of cement therebetween securing the laminae together,

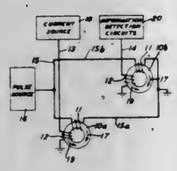
each of the two end portions of each of said wires passing through said layer of cement and extending to and being anchored in and held taut by the outside of the two sides of the frame between which the particular wire extends to form the terminals of said matrix,

said wires being continuous and being embedded in the cement layer whereby the inner network of wires is tautly held within said frame while electrical connection may be made directly to the terminal ends of said wires from outside of said frame.

3,126,527
MAGNETIC CORE MEMORY CIRCUITS

John H. McGuigan, Berkeley Heights, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Mar. 3, 1958, Ser. No. 718,585
16 Claims. (Cl. 340—174)

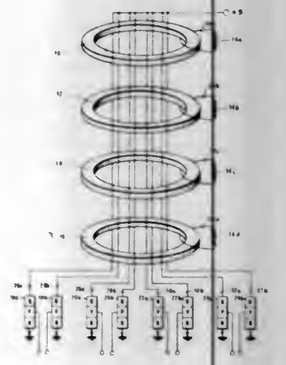


1. A magnetic information storage circuit comprising a first and a second magnetic element, each having a substantially rectangular hysteresis characteristic thereby being capable of assuming two opposite conditions of remanent magnetization, a first and a second winding inductively coupled to each of said elements, circuit means having a pair of parallel branches, each of said branches including one of said first windings, write means for setting said first and said second elements to the same and opposite conditions of remanent magnetization representative of information to be stored comprising means for applying current pulses to said circuit means and means for applying biasing current to the second winding of said first element concurrently with said current pulses; read-out means comprising means for applying other current pulses of alternating polarity to said circuit means and output means comprising the second winding of said second element.

3,126,528
MAGNETIC SWITCHING DEVICES

Gregory Constantine, Jr., Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed June 30, 1958, Ser. No. 745,395
7 Claims. (Cl. 340—174)



1. A noiseless load sharing magnetic switch having exactly M magnetic elements, output means coupled to said magnetic elements, and N input coupling units, each input coupling unit including drive means and connected windings coupled to each of said magnetic elements in accordance with a predetermined combinatorial code, said N input coupling units being operable to supply currents for said magnetic elements selectively according to a chosen one of a group of individual selection current patterns, one selection current pattern being related to each of said M magnetic elements, characterized by—

the physical configuration of said N input coupling units consisting of, for each selection current pattern of said group of individual selection current patterns, a switching portion affecting only the individual magnetic element uniquely related to that selection current pattern, and a noiseless portion affecting each of the remaining $M-1$ magnetic elements of the switch,

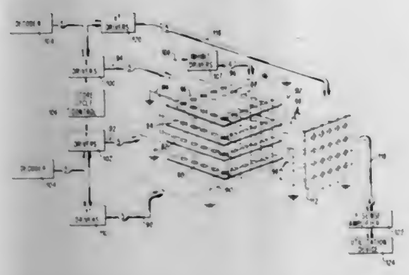
said switching portion including couplings to only said single magnetic element in such sense that, for the currents produced by said N input coupling units for the related selection pattern, the magnetic effects of the currents and to produce full excitation of said single magnetic element, and

said noiseless portion including couplings to each of the remainder $M-1$ of said magnetic elements of the switch in such numbers of each sense that, for the currents produced by said N input coupling units for the related selection current pattern, the magnetic effects of the currents add algebraically to produce a zero net magnetic effect, at each of said $M-1$ remaining magnetic elements.

3,126,529
NON-DESTRUCTIVE READ-OUT

Herman P. Hempel, Red Hook, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 31, 1958, Ser. No. 784,367
1 Claim. (Cl. 340—174)



A three-dimensional binary information storage system comprising a multiplicity of thin film magnetic elements arranged in a plurality of planes,

each said plane including a plurality of magnetic elements arranged in rows and columns to provide a coordinate addressable system,

each said magnetic element having uniaxial anisotropic characteristics such that it is provided with an axis of easy magnetization and each said magnetic element having two distinct magnetic remanence states,

coordinate means associated with said system including two conductors disposed immediately adjacent each said thin film magnetic element, parallel to the plane of that element and perpendicular to the axis of easy magnetization of that element,

means to energize said coordinate means to produce magnetic fields in an element to store binary coded information in that element by placing that magnetic element in one of said two distinct magnetic remanence states,

sense conductor means associated with each plane disposed immediately adjacent each magnetic element, parallel to the plane of that element and perpendicular to the axis of easy magnetization of that element,

means associated with said system to non-destructively read out said stored information consisting of read out conductor means disposed immediately adjacent each magnetic element, parallel to the plane of that element and parallel to the axis of easy magnetization of that element,

and means to pass electric current through said read out conductor means to generate a magnetic field of a magnitude in the order of 0.1 to 0.4 oersted acting perpendicular to said axis of easy magnetization to cause domain rotation in an immediately adjacent magnetic element sufficient to induce a detectable signal in said sense conductor means representative of the information stored in the magnetic elements associated with the energized read out conductor means but insufficient to switch those magnetic elements from the magnetic remanence state in which they were in to the other magnetic remanence state so that those magnetic elements return to their original magnetic remanence state upon termination of electric current flow in said read out conductor means,

a plane of saturable cores arranged in rows and columns,

each of said sense conductors being inductively coupled to a corresponding saturable core,

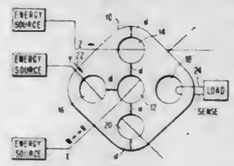
an amplifier conductor inductively coupled with each row of said saturable cores for transferring information applied to said saturable cores by said sense conductors,

and means to selectively saturate columns of said saturable cores to inhibit said transfer of information.

3,126,530
MAGNETIC CORE DEVICE

Frederick L. Post, Poughkeepsie, N.Y., and Samuel K. Raker, Washington, D.C., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Feb. 20, 1959, Ser. No. 794,712
16 Claims. (Cl. 340—174)

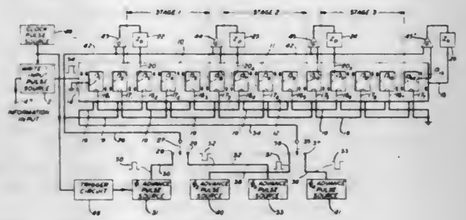


1. A magnetic device comprising a magnetic core capable of attaining a plurality of stable states of flux density and having a plurality of apertures and a centrally disposed aperture therein, a plurality of winding means coupled to said core with only one winding threading any one of said apertures, means including said winding means threading said centrally disposed aperture for alternately switching said core from one to another of said stable states, and a further one of said winding means being adapted as sense winding means along which an output signal is induced whenever said core is switched from one to another of said stable states.

3,126,531
MAGNETIC CONTROL CIRCUITS

Thomas H. Crowley, Madison, and Umberto F. Gianola, Florham Park, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

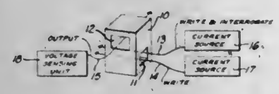
Filed Aug. 18, 1959, Ser. No. 834,587
12 Claims. (Cl. 340—174)



1. An electrical circuit comprising a plurality of magnetic elements each having substantially rectangular hysteresis characteristics, an input winding inductively coupled to a first of said elements, a plurality of advance

windings inductively coupled respectively to said plurality of elements, a first advance circuit means for serially connecting successive first ones of said advance windings in alternating senses, a second advance circuit means for serially connecting successive second ones of said advance windings in alternating senses, said first ones of said advance windings alternating with said second ones of said advance windings, magnetic means for completing flux paths between each of said elements and its adjacent elements, means including an input pulse source for applying an input pulse to said input winding for inducing a particular flux pattern in adjacent first ones of said plurality of elements, and means for shifting said flux pattern along said plurality of elements comprising means for alternately applying first advance pulses of one and the opposite polarity to said first advance circuit means, and means for alternately applying second advance pulses of one and the opposite polarity to said second advance circuit means alternately with said first advance pulses applied to said first advance circuit means.

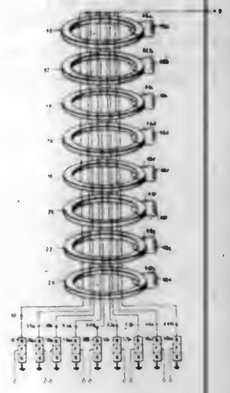
3,126,532
WRITE-INTERROGATE MEMORY SYSTEM
Elvin L. Woods, Tustin, Calif., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Oct. 10, 1960, Ser. No. 61,722
7 Claims. (Cl. 340—174)



1. In a magnetic memory device, the combination of: a block of magnetic material having two residual flux states and first and second openings therethrough perpendicular to each other, with a first flux path about said first opening and a second flux path about said second opening intersecting and perpendicular to said first flux path in a zone of said block between said openings; means for generating a current in said first opening of either polarity and of a magnitude and duration to produce a magnetizing force sufficient to switch the residual flux about said first opening from one of said states to the other, and for generating a current in said first opening of a magnitude and duration to produce a magnetizing force only sufficient to shuttle the residual flux about said first opening without switching the residual flux state; and output means for determining flux changes occurring about said second opening during said flux shuttling with flux shuttling from either residual flux state in said first path providing an output pulse in said output means and with the polarity of said output pulse being a function of the polarity of the residual flux state in said first path.

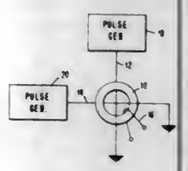
3,126,533
MAGNETIC SWITCHING DEVICE
Gregory Constantine, Jr., Arlington, Mass., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Continuation of application Ser. No. 745,662, June 30, 1958. This application Dec. 8, 1960, Ser. No. 74,547
10 Claims. (Cl. 340—174)

1. A magnetic switch consisting of a plurality of magnetic elements, a plurality of windings coupled to each of said elements in accordance with a predetermined combinatorial code and means for applying current coincidently to selected ones of said windings, said selected windings being wound on one of said elements in such a manner that the magnetic effect generated by the current in said selected windings is effective to produce excitation of said one element, said selected windings being wound on all of the remaining elements of the switch



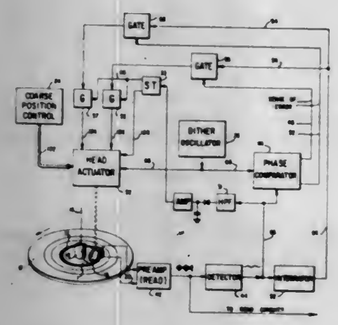
except one in such a manner that the magnetic effect generated by the current in said selected windings is cancelled to produce no excitation of said remaining elements except one.

3,126,534
AUTOMATIC REGENERATION MEMORY
William T. Siegle, Troy, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Oct. 31, 1961, Ser. No. 149,042
9 Claims. (Cl. 340—174)



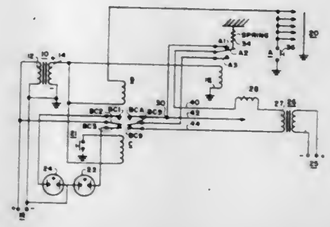
1. A combinational input switching circuit comprising: (*a*) a bistable magnetic core having two limiting remanence states and a plurality of intermediate remanence states and having a static switching threshold associated with each said remanence state which must be exceeded by a magnetizing field before the core can be switched from the said state, said core having the characteristic that a sensitizing magnetizing field sufficient in magnitude to drive the core from an occupied remanence state produces a transitory sensitized condition which exists for a finite time after termination of the sensitizing field and during which the switching threshold is reduced to a minor fraction of the static value to which it returns upon termination of the sensitized condition; (*b*) sensitizing means for applying a sensitizing field of one polarity to said core sufficient to drive it in one direction from a first remanence state to a different remanence state and to produce the transitory sensitized condition; and (*c*) means effective during existence of said sensitized condition for applying a magnetizing field of opposite polarity to the core of magnitude less than the static switching threshold value to which the core would return upon termination of the sensitizing field but greater than the reduced threshold, to drive the core back toward the first remanence state.

3,126,535
TRANSDUCER POSITIONING SYSTEM
Donald N. Streeter, Cochituate, Mass., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 27, 1961, Ser. No. 162,407
5 Claims. (Cl. 340—174.1)



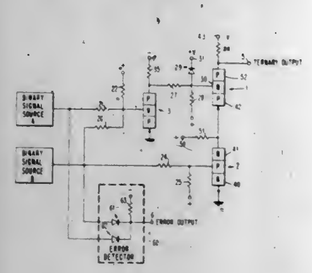
4. In a magnetic memory, the combination comprising:
a continuously rotating magnetic record member having a plurality of continuous data tracks wherein data representations are recorded;
an arm having a portion composed of a magnetostrictive material;
a coil wound around said magnetostrictive portion;
a magnetic head mounted at one extremity of said arm and adapted to sense said data representations, and to generate data signals indicative thereof;
positioning means associated with the opposite extremity of said arm and operable in response to coarse positioning signals to position said magnetic head at a selected data track on said magnetic record and further operative in response to a first vernier positioning signal to move said arm and said magnetic head in a first direction transverse to the selected track, and to a second positioning signal to move said arm and said magnetic head in a direction opposite to said first direction;
a sinusoidal oscillation generator connected to said coil, said coil inducing oscillations into said magnetostrictive portion of said arm thereby resulting in a transverse oscillatory movement of said magnetic head across the selected data track, whereby said generated data signals attain a periodic amplitude modulation envelope;
comparing means having inputs connected to said sinusoidal oscillation generator and said magnetic head, and vernier signal outputs connected to said positioning means, said comparing means generating a signal on a first vernier signal output when the output of said sinusoidal oscillation generator and said periodic amplitude modulation envelope are in phase and a signal on a second vernier signal output when the output of said sinusoidal oscillation generator and said modulation envelope are opposed in phase;
whereby said positioning means, in response to said vernier output signal, is caused to move said arm and said magnetic head to compensate for undesired deviations of said magnetic head from the optimum sensing position for said selected data track.

3,126,536
AUTOMATIC EQUIPMENT CONTROL
Solomon S. Schnell, 225—20 Mentone Ave., Laurelton 13, N.Y.
Filed May 11, 1961, Ser. No. 109,301
4 Claims. (Cl. 340—213)



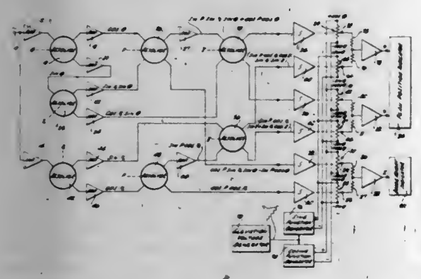
1. An arrangement for controlling a machine, said machine including a solenoid capable of being in an electrically energized or de-energized state, said solenoid being adapted to be in one of said states to enable operation of said machine, comprising means for applying alternating current power to said arrangement, a first relay in circuit with said power applying means and a reference potential, said first relay being energized upon application of said power, a plurality of probes, a second electromagnetic relay in circuit with said power applying means and said probes, a malfunctioning of said machine causing a probe to make contact with said reference potential to complete an electrical circuit through said second relay to energize said second relay, a third relay mechanically associated with said second relay in circuit with said power applying means, first contact means associated in common with said second and third relays and normally in a first predetermined state, second contact means associated with and responsive to the energization of said first relay to electrically connect said solenoid to said arrangement when it is adapted to be in the energized state and to maintain solenoid electrically disconnected when it is adapted to be in the de-energized state, indicating means, said first contact means switching to a second state in response to the energization of said second electromagnetic relay to disconnect said solenoid when said solenoid is in the energized state and to connect said solenoid when said solenoid is in the de-energized state and to electrically connect said indicating means in circuit with said power applying means and said reference potential to actuate said indicating means, said first, second and third relays being of the alternating current operated type, said solenoid being adapted to be actuated by a second power source, said first contact means comprising two sets of first, second, and third contacts respectively, each of said first, second, and third contacts of a set being respectively in contact with each other during said first predetermined state, said second contact means comprising fourth, fifth and sixth contacts, said fifth and sixth contacts being in contact with each other when said first electromagnetic relay is in the energized state, a first, and second contact of one set of said first contact means being respectively connected to said fourth and sixth contacts of said second contact means, said fifth contact being connected to said solenoid, said solenoid being coupled to one terminal of said second power source, said third contact of said set being coupled to the other terminal of said second source.

3,126,537
BINARY TO TERNARY CONVERTER
Kurt M. Trampel, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 29, 1961, Ser. No. 163,322
6 Claims. (Cl. 340—347)



1. A switching circuit for converting two binary input signals into a ternary output signal comprising:
first and second switches each having control electrode means for controlling the conduction of signals therethrough and for accepting respective ones of said two binary input signals;
first, second and third potential sources corresponding to the levels of the ternary output signal, said first and second switches being serially connected between said first and second sources;
an output terminal connected at a point intermediate the first switch and the source connected thereto;
unilateral conducting means connecting the third source to the control electrode means of the first switch; and
means included in the control means of said first switch for clamping the signal on the output terminal when the first switch is conducting and the second switch is not conducting.

3,126,538
SPACE STABILIZATION COMPUTER
Coy M. Byerly, Fullerton, and Edward J. Rhoad, Anaheim, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Sept. 30, 1958, Ser. No. 765,701
6 Claims. (Cl. 343—7)



1. Apparatus adapted to provide a space-stabilized presentation of data obtained from a radar system mounted on a ship, said apparatus comprising means responsive to analogue signals representative of slowly changing variables defined as the azimuth angle, θ, of the antenna beam of the radar system and the pitch, P, roll, r, and course, γ, of the ship for generating analogue quantities representative of

$$(\cos r \sin \theta \sin \gamma + \sin P \sin r \sin \theta \cos \gamma + \cos P \cos \theta \cos \gamma)$$

$$(\sin P \cos r \cos \gamma - \sin r \sin \gamma)$$

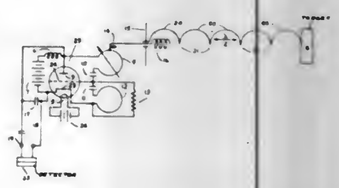
$$(\cos r \sin \theta \cos \gamma - \sin P \sin r \sin \theta \sin \gamma - \cos P \cos \theta \sin \gamma)$$

$$-(\sin P \cos r \sin \gamma + \sin r \cos \gamma)$$

$$(\cos P \sin r \sin \theta - \sin P \cos \theta) \text{ and } (\cos P \cos r)$$

electronic multiplication and adding means responsive to said analogue quantities and to a signal representative of the instantaneous elevation of the antenna beam of said radar system for producing first, second and third signals representative of the space stabilization relations of said data obtained from said radar system; a first indicator responsive to said first and second signals for providing a space-stabilized plan-position presentation of said data; and a second indicator responsive to said third signal for providing a space-stabilized range-height presentation of said data.

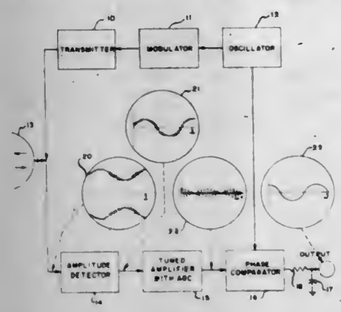
3,126,539
MOTION DETECTOR
Louis B. Mulvey, Main St., Bolton, Mass.
Filed Sept. 18, 1956, Ser. No. 610,526
9 Claims. (Cl. 343—8)



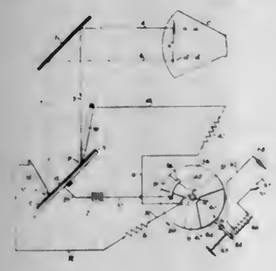
1. A device for detecting relative movement between a target and said device comprising a superregenerative radio frequency oscillator adapted to generate a microwave frequency signal at a self-quenching frequency rate lower than the frequency of said signal, a radiator coupled to said oscillator adapted to radiate said signal and intercept said radiated signal return from said target and deliver said returned signal to said oscillator, and a detector electrically coupled to said oscillator for detecting the rate of change of said self-quenching frequency rate.

3,126,540
CONTINUOUS WAVE RADAR SYSTEM
Ole K. Nilssen, Inkster, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed June 25, 1958, Ser. No. 744,382
6 Claims. (Cl. 343—9)

1. A radar system for measuring range and range rate between the system and a target comprising a transmitting means, modulating means connected to said transmitting means for modulating said transmitting means with a modulating signal at a repetition rate substantially higher than the maximum Doppler frequency expected to be received, first means connected to said transmitting means for receiving and combining a signal transmitted by said transmitting means and a signal reflected from the target, second means connected to said first means for producing a signal containing a component due to the modulation and a Doppler component, third means connected to said second means for rejecting the Doppler component and for passing the component due to the modulation, and fourth means connected to said third means and to said modulating means for producing a signal having an amplitude which is a measure of range and a frequency which is a measure of range rate.



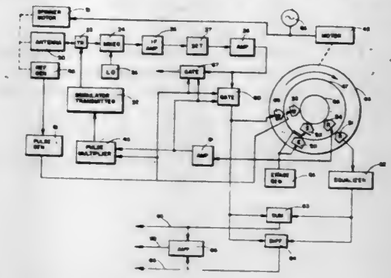
3,126,541
RADIO LOCATIONS SYSTEMS
Arthur Korn, deceased, late of Newark, N.J., by Elizabeth P. Korn, administratrix, Hoboken, N.J., Joseph W. Hess, deceased, late of Hoboken, N.J., by Adele Hess, administratrix, Los Altos, Calif., and Simon L. Ruskin, New York, N.Y., assignors to Union Carbide Corporation, a corporation of New York
Application May 31, 1952, Ser. No. 292,756, now Patent No. 2,894,259, dated July 7, 1959, which is a continuation of application Ser. No. 760,588, July 12, 1947, and application Ser. No. 408,944, Aug. 30, 1941. Divided and this application July 2, 1959, Ser. No. 78,797
26 Claims. (Cl. 343—10)



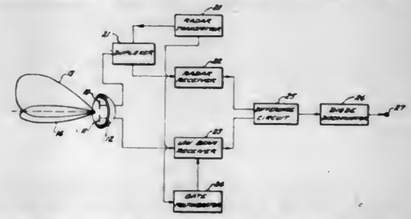
1. In a radio location system, at least one cathode ray tube, means for controlling the cathode ray to produce at least one fluorescent screen spot corresponding to the object to be located in space, means moving about the screen to follow said spot, a source of electrical energy, and means for varying said energy under control of said following movement for translating the position of said spot into electrical signals of varying amplitude.

3,126,542
CONICAL SCANNING RADAR DATA PROCESSING SYSTEM
Roy George Knutson, Santa Ana, and James C. Elms, Newport Beach, Calif., assignors to North American Aviation, Inc.
Filed Jan. 23, 1962, Ser. No. 168,279
9 Claims. (Cl. 343—16)

1. In an energy transmitting and receiving system having an energy transducer with a conically scanning radiation pattern, means for receiving signals from said transducer at first and second points in the scan which are mutually spaced by 180 degrees, means for effecting a relative delay of signals received at said first and second points substantially equal to half the scan period, and means for combining said relatively delayed signals.



3,126,543
METHOD AND RADAR SYSTEM FOR ELIMINATING INTERFERING GROUND SIGNALS
John C. Reed, Santa Barbara, Calif., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Mar. 17, 1961, Ser. No. 96,617
5 Claims. (Cl. 343—17.1)
(Granted under Title 35, U.S. Code (1952), sec. 266)



5. A radar system for eliminating ground interference signals from radar signals comprising first means to receive said radar signals within a first preselected area, second means to receive said ground interference signals within a preselected second area, said first area having a predetermined crossover with said second area, means to compare the output signal of said first receiving means to the output signal of said second receiving means during periods of said ground interference signals to obtain a difference signal, and diode discriminator means passing said difference signal.

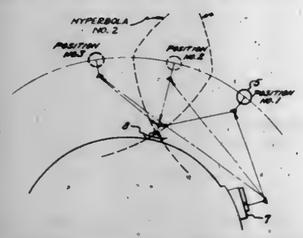
3,126,544
METHOD OF DECEPTION FOR AN AIRCRAFT
William H. Greatbatch, Jr., 7344 N. Shadeland Ave., Indianapolis 26, Ind.
Filed Mar. 17, 1961, Ser. No. 96,616
10 Claims. (Cl. 343—18)
(Granted under Title 35, U.S. Code (1952), sec. 266)



2. A method of deceiving an interceptor during flight comprising: launching from an aircraft a decoy target in a forward direction relative to said aircraft, and then directing radio frequency energy from an antenna on said

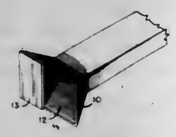
aircraft to said decoy target whereby said interceptor is deceived into following said decoy target.

3,126,545
SATELLITE HYPERBOLIC NAVIGATION SYSTEM
Ira D. Smith, Jr., Rome, N.Y., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Nov. 23, 1960, Ser. No. 71,371
6 Claims. (Cl. 343—103)
(Granted under Title 35, U.S. Code (1952), sec. 266)



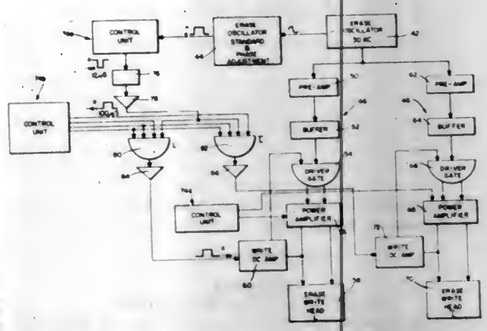
1. The method of utilizing an orbiting satellite as an aid to navigating a moving craft in accordance with the principles of hyperbolic navigation comprising the steps of transmitting to said craft at least three satellite time-position messages, determining from the time difference of arrival of a first pair of messages a hyperbola upon whose locus said craft resides, determining from the time difference of arrival of a second pair of messages a second hyperbola upon whose locus said craft resides, simultaneously solving the equations of said hyperbolas and directing the course of said craft in accordance with said solution.

3,126,546
FAST SCANNING ANTENNA WITH DIRECTIVITY CORRECTIVE GASEOUS CELL AT MOUTH OF HORN
Toru Noji, Huntington Station, N.Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Filed Dec. 7, 1955, Ser. No. 551,708
4 Claims. (Cl. 343—701)



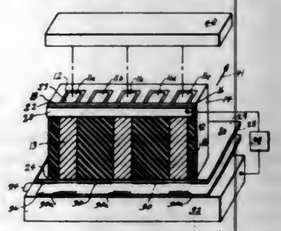
4. A high-frequency wave-signal antenna system comprising: a rotatable high-frequency wave-signal directive antenna horn and reflector for radiating high-frequency wave signals of high power and for intercepting returned high-frequency wave signals of low power; means for rotating said horn and reflector; and impedance means comprising a gaseous medium disposed in said horn and appearing as a short-circuited element partially obstructing said path to radiated signals having power values above a predetermined value and appearing as an open-circuited element to intercepted signals having power values below a predetermined value for altering the opening of said horn in accordance with alterations of said impedance values for shifting in the direction of rotation the directivity characteristic of the antenna system for signals of high power substantially to align the directivity characteristic of the antenna system for intercepted signals returned from the maximum range of the system with the directivity characteristic of the system for corresponding radiated signals thereby minimizing scanning loss.

3,126,547
MAGNETIC RECORDING
Harvey Rosenberg, Drexel Hill, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Aug. 31, 1959, Ser. No. 837,080
10 Claims. (Cl. 346—74)



1. The method of digital recording on a magnetic medium comprising the steps of applying a high frequency erase current to an electromagnetic erase-write head member, the high frequency erase current having a recorded wavelength on said magnetic median equal to or smaller than the air gap in a readback electromagnetic head member, and then applying a D.C. write signal to the erase-write head member in synchronized relationship with the erase current while simultaneously blocking the passage of said high frequency erase current, said synchronized relationship occurring at the instant in time when the sine wave of high frequency current has passed through the interval from 90 to 270 electrical degrees.

3,126,548
ELECTROSTATIC DATA RECORDING APPARATUS
Joseph T. McNaney, 8548 Boulder Drive, La Mesa, Calif.
Filed Dec. 18, 1961, Ser. No. 160,705
18 Claims. (Cl. 346—74)



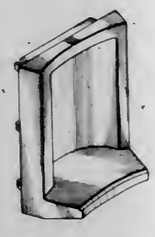
1. In an apparatus for selectively repelling electrostatically charged particles from an electrostatically charged surface in response to light information,
(*a*) a source of potential,
(*b*) first and second conductors,
(*c*) means for connecting said conductors to opposite terminals of said source,
(*d*) light responsive switch means including
a plurality of light conducting fibers each having a predetermined index of refraction, a longitudinal dimension exceeding its cross sectional dimension and an outer surface generally along its longitudinal dimension,

each of said fibers being provided with a light conducting jacket having an index of refraction less than said predetermined index and coating part of the outer surface of said fiber and intimately joined therewith,
each of said fibers being provided with a longitudinally extending layer of photoconductive material disposed upon and intimately joined with an uncoated part of the outer surface of said fiber and having first and second ends,
(*e*) the first end of said layers being operatively connected to said first conductor,
(*f*) the second end of said layers being spaced apart from said second conductor,
(*g*) said electrostatically charged surface being adjacent said second ends of said layers and adapted to support a layer of said electrostatically charged particles,
(*h*) said jacket of each said fibers being adapted to control the reflection of light information to said photoconductive material whereby a potential influence from said source will be extended to the layer of charged particles thereby said particles will be reflected from said charged surface.

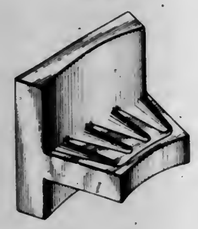
DESIGNS

MARCH 24, 1964

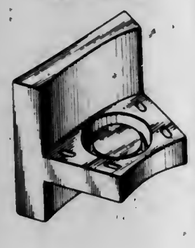
197,758
TUMBLER HOLDER
Don Schreckengost, East Liverpool, Ohio, assignor to Federal Ceramics Corporation, Mineral City, Ohio, a corporation of Ohio
Filed Apr. 16, 1962, Ser. No. 69,720
Term of patent 14 years
(Cl. D4—3)



197,759
SOAP HOLDER
Don Schreckengost, East Liverpool, Ohio, assignor to Federal Ceramics Corporation, Mineral City, Ohio, a corporation of Ohio
Filed Apr. 16, 1962, Ser. No. 69,726
Term of patent 14 years
(Cl. D4—3)



197,760
COMBINATION TOOTHBRUSH AND TUMBLER HOLDER
Don Schreckengost, East Liverpool, Ohio, assignor to Federal Ceramics Corporation, Mineral City, Ohio, a corporation of Ohio
Filed Apr. 16, 1962, Ser. No. 69,727
Term of patent 14 years
(Cl. D4—3)

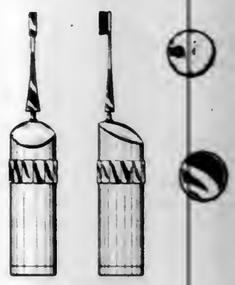


197,761
SHOE
Harry H. Gould, University City, Mo., assignor to Shuko Shoe Corp., Meadville, Pa., a corporation of Pennsylvania
Filed Jan. 16, 1963, Ser. No. 73,192
Term of patent 14 years
(Cl. D7—7)



197,762
FOUNTAIN BRUSH
Leon E. Lussier and Oscar E. Lussier, Woonsocket, and James B. Swett, Barrington, R.I., assignors to Rexall Drug and Chemical Company, Los Angeles, Calif., a corporation of Delaware
Filed Mar. 8, 1962, Ser. No. 69,137
Term of patent 14 years
(Cl. D9—2)

197,763
COMBINED TOOTHBRUSH AND TOOTHBRUSH HANDLE
Julian Robert Aymar, 2018 E. 67th St., Brooklyn, N.N.Y.
Filed Apr. 23, 1963, Ser. No. 74,589
Term of patent 3½ years
(Cl. D9—2)



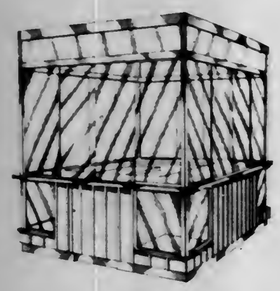
197,764
PULL
La Verne E. Clayton, Rockford, Ill., assignor to Amerock Corporation, Rockford, Ill., a corporation of Illinois
Filed June 5, 1963, Ser. No. 75,225
Term of patent 14 years
(Cl. D10—8)



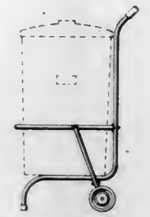
197,765
TOWER
Chancy M. Lott, 5834 Keokuk Ave., Woodland Hills, Calif., and Christopher G. Taylor, 9612 Haskell, Sepulveda, Calif.
Filed Dec. 3, 1962, Ser. No. 72,695
Term of patent 14 years
(Cl. D13—1)



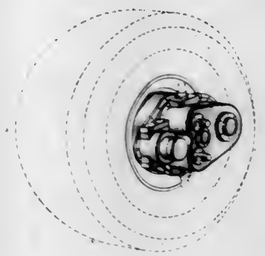
197,766
SALES BOOTH
Dale F. Roxburgh, 5615 Northwest Drive, Omaha, Nebr.
Filed Sept. 25, 1963, Ser. No. 76,717
Term of patent 14 years
(Cl. D13—1)



197,767
GARBAGE CONTAINER CART
James W. Land, 2112 Patou Drive, Jacksonville, Fla.
Filed May 20, 1963, Ser. No. 74,953
Term of patent 3½ years
(Cl. D14—3)



197,768
COMBINED WHEEL AND DRIVE OR THE LIKE
Frank A. Glomb, Park Forest, and Victor Wasynczuk, Chicago, Ill., assignors to Barnes & Reinecke, Inc., Chicago, Ill., a corporation of Delaware
Filed Apr. 28, 1961, Ser. No. 64,937
Term of patent 14 years
(Cl. D14—30)



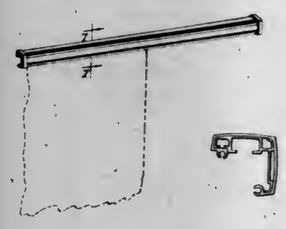
197,769
COMBINED CUSHION AND HEAD REST
John Malouf, 420 N. Lee St., Altus, Okla., assignor of one-half to Philip Malouf, Santa Monica, Calif.
Filed Apr. 18, 1962, Ser. No. 69,761
Term of patent 7 years
(Cl. D15—8)



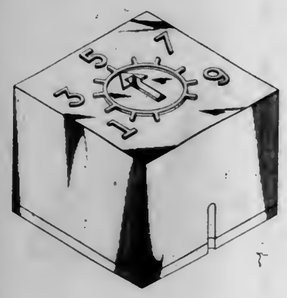
197,770
COMBINED WALL MOUNTED ROOM AIR FRESHENER AND DEODORIZER
Morris Friedman, 210 E. 36th St., New York 16, N.Y., and Andrey V. Mackey, 42 Lawrence Lane, Ambler, Pa.
Filed Apr. 17, 1963, Ser. No. 74,487
Term of patent 14 years
(Cl. D16—2)



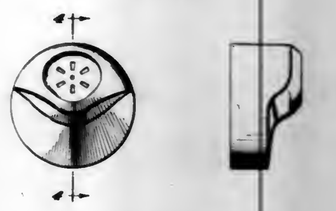
197,771
CURTAIN ROD OR THE LIKE
Roy L. Brenner, Deerfield, Ill., assignor to Kinkead Industries Incorporated, Chicago, Ill., a corporation of Illinois
Filed Jan. 21, 1963, Ser. No. 73,262
Term of patent 14 years
(Cl. D21—1)



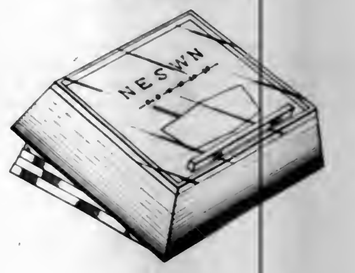
197,772
ELECTRICAL POTENTIOMETER
George T. Brent, Clearwater, Fla., assignor to International Resistance Company, Philadelphia, Pa.
Filed May 21, 1963, Ser. No. 74,987
Term of patent 14 years
(Cl. D26—1)



197,773
TELEPHONE HANDSET EARPIECE
William Ugartechea, 4062 Daines Drive, Arcadia, Calif.
Filed Oct. 29, 1962, Ser. No. 72,303
Term of patent 14 years
(Cl. D26—14)



197,774
ANTENNA ROTATOR CONTROL HOUSING
Paul A. Dicke, New Bremen, Ohio, assignor to Crown Controls Corporation, New Bremen, Ohio, a corporation of Ohio
Filed June 20, 1963, Ser. No. 75,440
Term of patent 14 years
(Cl. D26—14)



197,775
FISHHOOK DISGORGER
Harold O. Edgington, 214 Carter St., Corpus Christi, Tex.
Filed Feb. 8, 1963, Ser. No. 73,491
Term of patent 14 years
(Cl. D31—4)



197,776
TABLE OR THE LIKE
Herbert Ritts, P.O. Box 64336, Los Angeles, Calif.
Filed Jan. 21, 1963, Ser. No. 73,242
Term of patent 7 years
(Cl. D33—14)



197,777
TABLE OR THE LIKE
Herbert Ritts, P.O. Box 64336, Los Angeles, Calif.
Filed Jan. 21, 1963, Ser. No. 73,245
Term of patent 7 years
(Cl. D33—14)



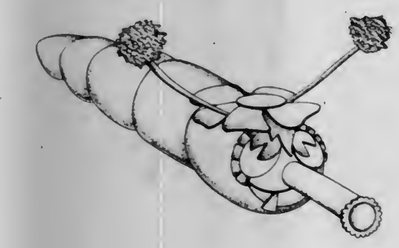
197,778
TABLE OR THE LIKE
Herbert Ritts, P.O. Box 64336, Los Angeles, Calif.
Filed Jan. 21, 1963, Ser. No. 73,265
Term of patent 7 years
(Cl. D33—14)



197,779
COMBINED TABLE AND SHELF UNIT
William J. Hannon, Jr., Dorchester, Mass., assignor to The Macbick Company, Cambridge, Mass., a corporation of Massachusetts
Original design application Ser. No. 69,110, Mar. 6, 1962. Divided and this application Apr. 12, 1963, Ser. No. 74,411
Term of patent 14 years
(Cl. D33—14)



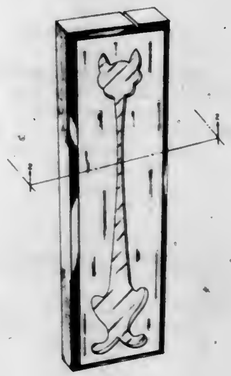
197,780
STUFFED ANIMAL TOY
Rose M. Sexton, 21167 Gribben Ave., Hayward, Calif.
Filed Oct. 7, 1963, Ser. No. 76,894
Term of patent 3½ years
(Cl. D34—2)



197,781
HANDLE FOR AN EXERCISER
Joe Bonomo, 1841 Broadway, New York, N.Y.
Filed Nov. 4, 1963, Ser. No. 77,257
Term of patent 14 years
(Cl. D34—5)



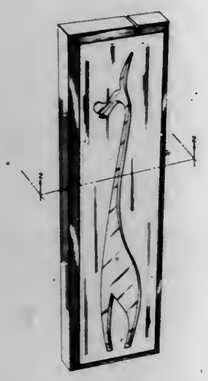
197,782
CHILD'S SAVINGS BANK
James Donald Johnson, 5015 Bear Ave. NE., Cannonsburg, Mich.
Filed May 25, 1962, Ser. No. 70,285
Term of patent 14 years
(Cl. D34—11)



197,783
CHILD'S SAVINGS BANK
James Donald Johnson, 5015 Bear Ave. NE., Cannonsburg, Mich.
Filed May 25, 1962, Ser. No. 70,286
Term of patent 14 years
(Cl. D34—11)



197,784
CHILD'S SAVINGS BANK
James Donald Johnson, 5015 Bear Ave. NE., Cannonsburg, Mich.
Filed May 25, 1962, Ser. No. 70,287
Term of patent 14 years
(Cl. D34—11)



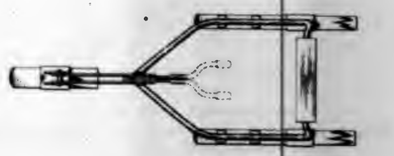
197,785
CHILD'S SAVINGS BANK
James Donald Johnson, 5015 Bear Ave. NE., Cannonsburg, Mich.
Filed May 25, 1962, Ser. No. 70,288
Term of patent 14 years
(Cl. D34—11)



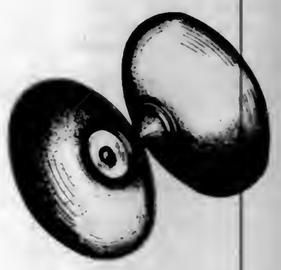
197,786
SAVINGS BANK
Don C. Pierce, Jr., 115 Moore St., Bellevue, Ohio
Filed July 10, 1963, Ser. No. 75,729
Term of patent 14 years
(Cl. D34—11)



197,787
DIRIGIBLE SKI SLED
Charles G. Van Tress, 4830 Fauna St., Montclair, Calif., and Jerald B. Wilken, 755 Lasena Court, Pomona, Calif.
Filed Oct. 9, 1962, Ser. No. 72,253
Term of patent 14 years
(Cl. D34—15)



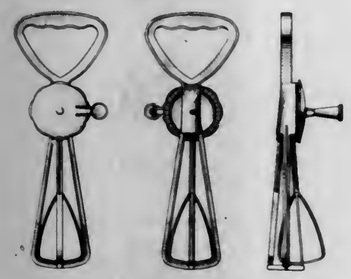
197,788
DIABOLO TOP
Julius Fox, 805 Bedford Ave., Rego Park, N.Y.
Filed Nov. 21, 1963, Ser. No. 77,530
Term of patent 7 years
(Cl. D34—15)



197,789
TRANSPORTABLE INVALID LIFTER
Edwin L. Fischer, 22035 W. Carbon Mesa Road, Malibu, Calif.
Filed May 22, 1963, Ser. No. 75,012
Term of patent 14 years
(Cl. D41—1)



197,790
CULINARY MIXER OR SIMILAR ARTICLE
Charles O. Bliss, P.O. Box 47607, Los Angeles, Calif.
Filed July 2, 1963, Ser. No. 75,621
Term of patent 14 years
(Cl. D44—1)

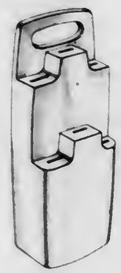


197,791
EGG CUP
Morris Friedman, New York, N.Y., and Andrey V. Mackey, Ambler, Pa., assignors to Minerware, Inc., New York, N.Y., a corporation of New York, and H.M.S. Associates Co., Willow Grove, Pa., a corporation of Pennsylvania, jointly
Filed Nov. 14, 1963, Ser. No. 77,423
Term of patent 14 years
(Cl. D44—9)

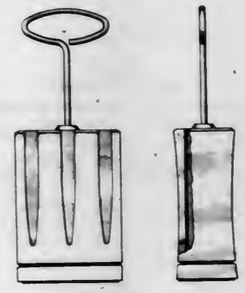
197,792
HOLDER FOR CUTLERY
Austin H. Munson, Arlington Heights, Ill., assignor to Ekco Products Company, Chicago, Ill., a corporation of Delaware
Filed Oct. 22, 1963, Ser. No. 77,094
Term of patent 14 years
(Cl. D44—29)



197,793
HOLDER FOR CUTLERY
Austin H. Munson, Arlington Heights, Ill., assignor to Ekco Products Company, Chicago, Ill., a corporation of Delaware
Filed Oct. 23, 1963, Ser. No. 77,105
Term of patent 14 years
(Cl. D44—29)



197,794
HOLDER FOR CUTLERY
Austin H. Munson, Arlington Heights, Ill., assignor to Ekco Products Company, Chicago, Ill., a corporation of Delaware
Filed Nov. 13, 1963, Ser. No. 77,388
Term of patent 14 years
(Cl. D44—29)



197,795
BASTING SYRINGE
Morris Friedman, New York, N.Y., and Andrey V. Mackey, Ambler, Pa., assignors to Minerware, Inc., New York, N.Y., a corporation of New York and H.M.S. Associates Co., Willow Grove, Pa., a corporation of Pennsylvania, jointly
Filed Nov. 14, 1963, Ser. No. 77,416
Term of patent 14 years
(Cl. D44—29)



197,796
FINGER RING
Joseph Nolen, Kaneohe, Hawaii
(1139A E. Wilson, Glendale, Calif.)
Filed Oct. 23, 1962, Ser. No. 72,222
Term of patent 14 years
(Cl. D45—10)



197,797
FINGER RING
Joseph Nolen, Kaneohe, Hawaii
(1139A E. Wilson, Glendale, Calif.)
Filed Oct. 23, 1962, Ser. No. 72,223
Term of patent 14 years
(Cl. D45—10)



197,798
FINGER RING
Joseph Nolen, Kaneohe, Hawaii
(1139A E. Wilson, Glendale, Calif.)
Filed Oct. 23, 1962, Ser. No. 72,224
Term of patent 14 years
(Cl. D45—10)



197,799
FINGER RING
Joseph Nolen, Kaneohe, Hawaii
(1139A E. Wilson, Glendale, Calif.)
Filed Oct. 23, 1962, Ser. No. 72,225
Term of patent 14 years
(Cl. D45—10)



197,800
FINGER RING
Joseph Nolen, Kaneohe, Hawaii
(1139A E. Wilson, Glendale, Calif.)
Filed Oct. 23, 1962, Ser. No. 72,226
Term of patent 14 years
(Cl. D45—10)



197,801
FINGER RING
Joseph Nolen, Kaneohe, Hawaii
(1139A E. Wilson, Glendale, Calif.)
Filed Oct. 23, 1962, Ser. No. 72,227
Term of patent 14 years
(Cl. D45—10)



197,802
FINGER RING
Joseph Nolen, Kaneohe, Hawaii
(1139A E. Wilson, Glendale, Calif.)
Filed Oct. 23, 1962, Ser. No. 72,228
Term of patent 14 years
(Cl. D45—10)



197,803
FINGER RING
Joseph Nolen, Kaneohe, Hawaii
(1139A E. Wilson, Glendale, Calif.)
Filed Oct. 23, 1962, Ser. No. 72,229
Term of patent 14 years
(Cl. D45—10)



197,804
FINGER RING
Joseph Nolen, Kaneohe, Hawaii
(1139A E. Wilson, Glendale, Calif.)
Filed Oct. 23, 1962, Ser. No. 72,230
Term of patent 14 years
(Cl. D45—10)



197,805
FINGER RING
Joseph Nolen, Kaneohe, Hawaii
(1139A E. Wilson, Glendale, Calif.)
Filed Oct. 23, 1962, Ser. No. 72,231
Term of patent 14 years
(Cl. D45—10)



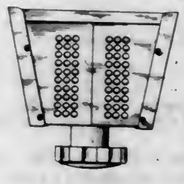
197,806
FINGER RING
Joseph Nolen, Kaneohe, Hawaii
(1139A E. Wilson, Glendale, Calif.)
Filed Oct. 23, 1962, Ser. No. 72,232
Term of patent 14 years
(Cl. D45—10)



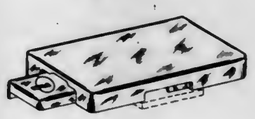
197,807
FINGER RING
Joseph Nolen, Kaneohe, Hawaii
(1139A E. Wilson, Glendale, Calif.)
Filed Oct. 23, 1962, Ser. No. 72,233
Term of patent 14 years
(Cl. D45—10)



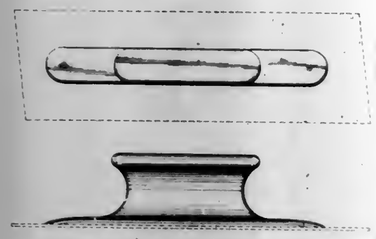
197,808
FLOODLIGHT HOUSING OR SIMILAR ARTICLE
Lawrence M. Rheingold, Baldwin, N.Y., assignor to Templet Industries, Inc., Brooklyn, N.Y., a corporation of New York
Filed Apr. 2, 1962, Ser. No. 69,557
Term of patent 3½ years
(Cl. D48—20)



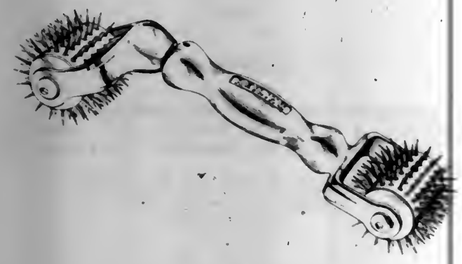
197,809
LUGGAGE LOCK OR SIMILAR ARTICLE
Charles S. Gehrie, Montclair, N.J., assignor to Presto Lock Co., Garfield, N.J., a limited partnership
Filed May 25, 1962, Ser. No. 70,277
Term of patent 14 years
(Cl. D50—7)



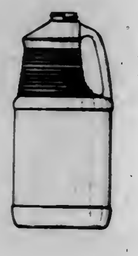
197,810
HANDLE FOR TROWEL OR THE LIKE
George E. Snyder, Sun Prairie, Wis.
Original design application Feb. 12, 1960, Ser. No. 59,384. Divided and this application Mar. 9, 1962, Ser. No. 69,349
Term of patent 14 years
(Cl. D51—1)



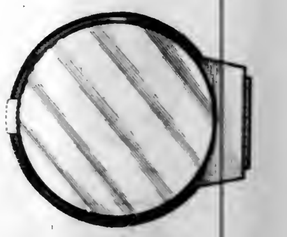
197,811
TOOL FOR USE IN TAPING FRESHLY CEMENTED CARPET SEAMS AND THE LIKE
Joseph W. Reiling, 112 Miller St., Battle Creek, Mich.
Filed Jan. 21, 1963, Ser. No. 73,250
Term of patent 14 years
(Cl. D54—13)



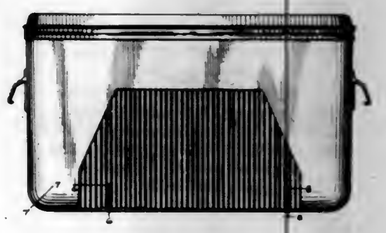
197,812
JUG
George W. Worthington, Castro Valley, Calif., assignor to Owens-Illinois Glass Company, Toledo, Ohio, a corporation of Ohio
Filed Jan. 9, 1963, Ser. No. 73,099
Term of patent 14 years
(Cl. D58—5)



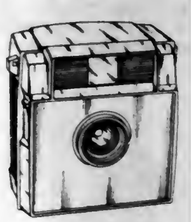
197,813
BOX FOR A PORTABLE MOTOR OR THE LIKE
Arnold M. Thompson, Wheaton, Ill., assignor to Thompson Designs, Inc., Franklin Park, Ill., a corporation of Illinois
Filed Oct. 11, 1962, Ser. No. 72,068
Term of patent 14 years
(Cl. D58—11)



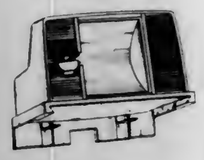
197,814
INSULATED PORTABLE CHEST
Herbert M. Piker, Wyoming, Ohio, assignor to The Hamilton-Skotch Corporation, Hamilton, Ohio, a corporation of Ohio
Filed Apr. 17, 1963, Ser. No. 74,483
Term of patent 14 years
(Cl. D58—17)



197,815
CAMERA
Richard J. Olson, Lima, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Apr. 9, 1962, Ser. No. 69,620
Term of patent 7 years
(Cl. D61—1)

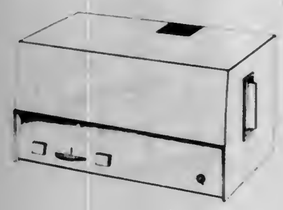


197,816
FLASH HOLDER
Jack K. Hockenberry, Vestal, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Apr. 9, 1962, Ser. No. 69,621
Term of patent 7 years
(Cl. D61—1)

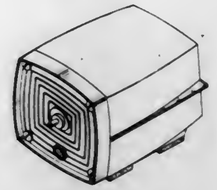


197,817
LABEL MAKING TOOL
Ray S. Avery, Bradbury, Calif., assignor to Avery Adhesive Products, Inc., San Marino, Calif., a corporation of California
Filed Oct. 8, 1963, Ser. No. 76,902
Term of patent 14 years
(Cl. D64—10)

197,818
CARD-TO-CARD COPIER
Jack K. Hockenberry, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Mar. 25, 1963, Ser. No. 74,119
Term of patent 14 years
(D64—11)



197,819
AQUARIUM AIR PUMP
Allan H. Willinger, New Rochelle, N.Y., assignor to Aquariums Incorporated, Maywood, N.J., a corporation of Delaware
Filed May 17, 1963, Ser. No. 74,928
Term of patent 14 years
(Cl. D65—1)



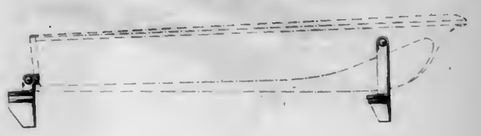
197,820
BUOYANT BELT
Edgar G. Baker, Carbondale, Pa., assignor to Gentex Corporation, New York, N.Y., a corporation of Delaware
Filed Jan. 8, 1962, Ser. No. 68,230
Term of patent 14 years
(Cl. D71—1)



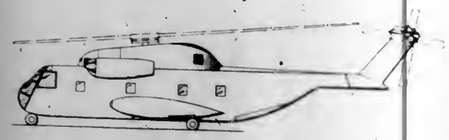
197,821
HELICOPTER
Raymond L. Chaney, Palo Alto, and Edward H. Jacobsen, Menlo Park, Calif., assignors, by mesne assignments, to Eltra Corporation, Brooklyn, N.Y., a corporation of New York
Filed Mar. 30, 1962, Ser. No. 69,504
Term of patent 14 years
(Cl. D71—1)



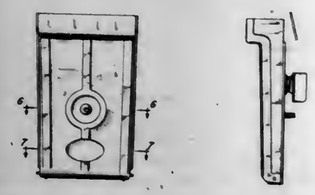
197,822
BOAT HULL AND HYDROFOIL COMBINATION
Sighard F. Hoerner, Midland Park, and Malcolm Dick, Morristown, N.J., assignors to Hydro-Marine, Inc., Kirkland, Wash., a corporation of Washington
Filed Sept. 17, 1962, Ser. No. 71,723
Term of patent 14 years
(Cl. D71—1)



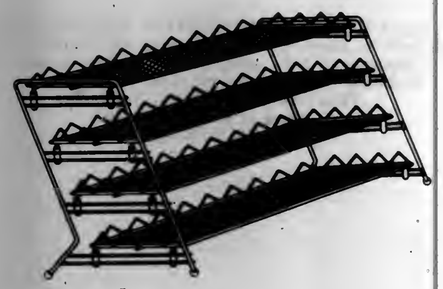
197,823
HELICOPTER
Ernest Stuckal, Stratford, and Lewis G. Knapp and Edward F. Katzenberger, Westport, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed June 4, 1963, Ser. No. 75,215
Term of patent 14 years
(Cl. D71—1)



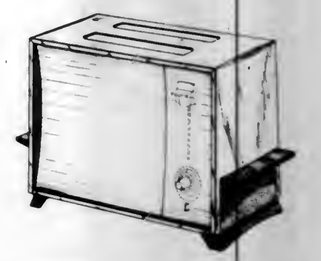
197,824
FIRE ALARM BOX
Nathan Verger, Brooklyn, N.Y., assignor, by mesne assignments, to Pittsburgh Railways Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed June 28, 1962, Ser. No. 70,726
Term of patent 14 years
(Cl. D72—1)



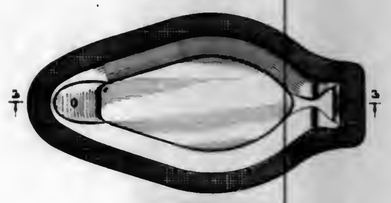
197,825
COMBINED STORAGE AND DISPLAY RACK FOR SHOES OR THE LIKE
William E. Mitchell, 162 W. 5th St., New York, N.Y.
Filed Oct. 25, 1962, Ser. No. 72,257
Term of patent 3½ years
(Cl. D80—10)



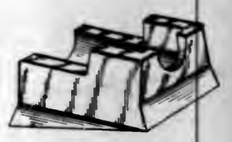
197,826
TOASTER
Dominic J. De Fano, River Grove, Ill., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Continuation of design applications Ser. No. 69,351, Mar. 21, 1962 and Ser. No. 69,352, Mar. 21, 1962. This application Oct. 30, 1962, Ser. No. 72,368
Term of patent 14 years
(Cl. D81—10)



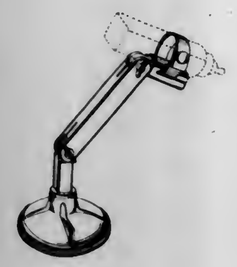
197,827
URINE SPECIMEN RECEPTACLE OR SIMILAR ARTICLE
Louis Guss, 59 Achem St., Norwich, Conn.
Filed Aug. 7, 1962, Ser. No. 71,202
Term of patent 14 years
(Cl. D83—1)



197,828
BABY BOTTLE HOLDER
John C. Reis, 2129 W. 72nd Place, Chicago, Ill.
Filed Apr. 3, 1963, Ser. No. 74,278
Term of patent 14 years
(Cl. D83—8)



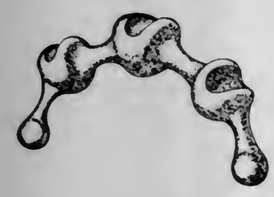
197,829
BOTTLE HOLDER OR SIMILAR ARTICLE
Nicholas S. Demos and Robert T. Irwin, El Paso County, Colo. (both of P.O. Box 3082, Colorado Springs, Colo.)
Filed Apr. 15, 1963, Ser. No. 74,416
Term of patent 3½ years
(Cl. D83—8)



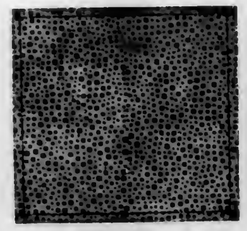
197,830
COMB OR THE LIKE
Joseph Vallis, Toronto, Ontario, Canada, assignor to Valden Company, Toronto, Ontario, Canada
Filed May 28, 1962, Ser. No. 70,305
Term of patent 14 years
(Cl. D86—8)



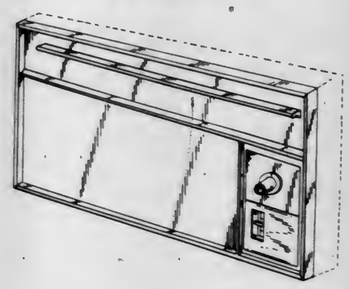
197,831
LUGGAGE HANDLE
Edith Finkelstein, 6635 McCallum St., Philadelphia, Pa., and Martha Jacobson Meltz, Art School Road, Chester Springs, Pa.
Filed Dec. 4, 1962, Ser. No. 72,709
Term of patent 3½ years
(Cl. D87—2)



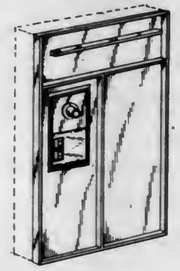
197,832
PLASTIC COATED SHEET MATERIAL
Richard A. Mazur, Verona, and Robert L. Giddley, Stoughton, Wis., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed Dec. 28, 1962, Ser. No. 72,973
Term of patent 14 years
(Cl. D87—3)



197,833
REGENERATING LIQUID CONTAINER FOR WATER CONDITIONER
James E. Hiers, Ramsey County, and Leo F. Wildgen, Hennepen County, Minn., assignors to Union Tank Car Company, a corporation of New Jersey
Filed Apr. 17, 1962, Ser. No. 69,746
Term of patent 14 years
(Cl. D91—1)



197,834
REGENERATING LIQUID CONTAINER FOR WATER CONDITIONER
James E. Hiers, Ramsey County, and Leo F. Wildgen, Hennepen County, Minn., assignors to Union Tank Car Company, a corporation of New Jersey
Filed Apr. 17, 1962, Ser. No. 69,747
Term of patent 14 years
(Cl. D91—1)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 24TH DAY OF MARCH, 1964

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Barber-Colman Co.: *See*—
Sweger, Russell P., Horton, and Young. Re. 25,540.

Coover, Harry W., Jr., to Eastman Kodak Co. Polymers prepared my reacting acrylonitrile and an unsaturated monomer in the presence of a preformed interpolymer of a vinyl pyridine and a comonomer. Re. 25,539, 3–24–64, Cl. 260—45.5.

Eastman Kodak Co.: *See*—
Coover, Harry W., Jr. Re. 25,539.

Elox Corp. of Michigan: *See*—
Webb, Robert S. Re. 25,542.

Fugassi, Lucien A., Jr., to National Steel Corporation. Detecting welds. Re. 25,541, 3–24–64, Cl. 209—72.

Horton, Alfred A.: *See*—
Sweger, Russell P., Horton, and Young. Re. 25,540.

National Steel Corp.: *See*—
Fugassi, Lucien A., Jr. Re. 25,541.

Sweger, Russell P., A. A. Horton, and W. G. Young, to Barber-Colman Co. Means for operating a valve or the like in accordance with a controlled condition. Re. 25,540, 3–24–64, Cl. 236—74.

Webb, Robert S., to Elox Corp. of Michigan. Power feed system. Re. 25,542, 3–24–64, Cl. 314—61.

Young, William G.: *See*—
Sweger, Russell P., Horton, and Young. Re. 25,540.

LIST OF PLANT PATENTEES

Moore, Ralph S. Rose. 2,381, 3–24–64, Cl. 11.
Moore, Ralph S. Rose plant. 2,382, 3–24–64, Cl. 24.
Moore, Ralph S. Rose. 2,383, 3–24–64, Cl. 15.
Moore, Ralph S. Rose. 2,384, 3–24–64, Cl. 6.
Moore, Ralph S. Rose. 2,385, 3–24–64, Cl. 28.
Moore, Ralph S. Rose. 2,386, 3–24–64, Cl. 5.
Moore, Ralph S. Rose. 2,387, 3–24–64, Cl. 22.

LIST OF DESIGN PATENTEES

Amerock Corp.: *See*—
Clayton, La Verne E. 197,764.

Aquariums Inc.: *See*—
Willinger, Allan H. 197,819.

Avery Adhesive Products, Inc.: *See*—
Avery, Ray S. 197,817.

Avery, Ray S., to Avery Adhesive Products, Inc. Label making tool. 197,817, 3–24–64, Cl. D64—10.

Aymar, Julian R. Combined toothbrush and toothbrush handle. 197,763, 3–24–64, Cl. D9—2.

Baker, Edgar G., to Gentex Corp. Buoyant belt. 197,820, 3–24–64, Cl. D71—1.

Barnes & Reinecke, Inc.: *See*—
Glomb, Frank A., and Wasynczuk. 197,768.

Bliss, Charles O. Culinary mixer or similar article. 197,790, 3–24–64, Cl. D44—1.

Bonomo, Joe. Handle for an exerciser. 197,781, 3–24–64, Cl. D34—5.

Brenner, Roy L., to Kinkead Industries Inc. Curtain rod or the like. 197,771, 3–24–64, Cl. D21—1.

Brent, George T., to International Resistance Co. Electrical potentiometer. 197,772, 3–24–64, Cl. D26—1.

Chaney, Raymond L., and E. H. Jacobsen, to Eltra Corp. Helicopter. 197,821, 3–24–64, Cl. D71—1.

Clayton, La Verne E., to Amerock Corp. Pull. 197,764, 3–24–64, Cl. D10—8.

Crown Controls Corp.: *See*—
Dicke, Paul A. 197,774.

De Fano, Dominic J., to McGraw-Edison Co. Toaster. 197,826, 3–24–64, Cl. D81—10.

Demos, Nicholas S., and R. T. Irwin. Bottle holder or similar article. 197,829, 3–24–64, Cl. D83—8.

Dick, Malcolm: *See*—
Hoerner, Sighard F., and Dick. 197,822.

Dicke, Paul A., to Crown Controls Corp. Antenna rotator control housing. 197,774, 3–24–64, Cl. D26—14.

Eastman Kodak Co.: *See*—
Hockenberry, Jack K. 197,816.
Olson, Richard J. 197,815.

Edgington, Harold O. Fishhook disgorger. 197,775, 3–24–64, Cl. D31—4.

Ekco Products Co.: *See*—
Munson, Austin H. 197,792.
Munson, Austin H. 197,793.
Munson, Austin H. 197,794.

Eltra Corp.: *See*—
Chaney, Raymond L., and Jacobsen. 197,821.

Federal Ceramics Corp.: *See*—
Schreckengost, Don. 197,758.
Schreckengost, Don. 197,759.
Schreckengost, Don. 197,760.

Finkelstein, Edith, and M. J. Meltz. Luggage handle. 197,831, 3–24–64, Cl. D87—2.

Fischer, Edwin L. Transportable invalid lifter. 197,789, 3–24–64, Cl. D41—1.

Fox, Julius. Diabolo top. 197,788, 3–24–64, Cl. D34—15.

Friedman, Morris, and A. V. Mackey. Combined wall mounted room air freshener and deodorizer. 197,770, 3–24–64, Cl. D16—2.

Friedman, Morris, and A. V. Mackey, to Minerware, Inc., and H.M.S. Associates Co. Egg cup. 197,791, 3–24–64, Cl. D44—9.

Friedman, Morris, and A. V. Mackey, to Minerware, Inc., and H.M.S. Associates Co. Basting syringe. 197,795, 3–24–64, Cl. D44—29.

Gehrle, Charles S., to Presto Lock Co. Luggage lock or similar article. 197,809, 3–24–64, Cl. D50—7.

Gentex Corp.: *See*—
Baker, Edgar G. 197,820.

Giddley, Robert L.: *See*—
Mazur, Richard A., and Giddley. 197,832.

Glomb, Frank A., and V. Wasynczuk, to Barnes & Reinecke, Inc. Combined wheel and drive or the like. 197,768, 3–24–64, Cl. D14—30.

Gould, Harry H., to Shuko Shoe Corp. Shoe. 197,761, 3–24–64, Cl. D7—7.

Guss, Louis. Urine specimen receptacle, or similar article. 197,827, 3–24–64, Cl. D83—1.

H.M.S. Associates Co.: *See*—
Friedman, Morris, and Mackey. 197,791.
Friedman, Morris, and Mackey. 197,795.

Hamilton Skotch-Corp.: *See*—
Piker, Herbert M. 197,814.

Hannon, William J., Jr., to The Macbick Co. Combined table and shelf unit. 197,779, 3–24–64, Cl. D33—14.

Hiers, James E., and L. F. Wildgen, to Union Tank Car Co. Regenerating liquid container for water conditioner. 197,833, 3–24–64, Cl. D91—1.

Hiers, James E., and L. F. Wildgen, to Union Tank Car Co. Regenerating liquid container for water conditioner. 197,834, 3–24–64, Cl. D91—1.

Hockenberry, Jack K., to Eastman Kodak Co. Flash holder. 197,816, 3–24–64, Cl. D61—1.

Hockenberry, Jack K., to International Business Machines Corp. Card-to-card copier. 197,818, 3–24–64, Cl. D64—11.

Hoerner, Sighard F., and M. Dick, to Hydro-Marine, Inc. Boat hull and hydrofoil combination. 197,822, 3–24–64, Cl. D71—1.

Hydro-Marine, Inc.: *See*—
Hoerner, Sighard F., and Dick. 197,822.

International Business Machines Corp.: *See*—
Hockenberry, Jack K. 197,818.

International Resistance Co.: *See*—
Brent, George T. 197,772.

Irwin, Robert T.: *See*—
Demos, Nicholas S., and Irwin. 197,829.

Jacobsen, Edward H.: *See*—
Chaney, Raymond L., and Jacobsen. 197,821.

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Schreckengost, Don, to Federal Ceramics Corp. Soap holder. 197,759, 3–24–64, Cl. D4—3.
Schreckengost, Don, to Federal Ceramics Corp. Combination toothbrush and tumbler holder. 197,760, 3–24–64, Cl. D4—3.
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Abess, Irene M. Stuffing retainer. 3,125,779, 3–24–64, Cl. 17—11.
Acton, Hugh C. Wall wardrobe. 3,126,238, 3–24–64, Cl. 312—245.
Adams, George J. Stapling mechanism. 3,125,761, 3–24–64, Cl. 1—49.
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Alsager, Leslie E., and R. A. Brand, to United States of America, Navy. Submergible hull propulsion and control systems. 3,125,975, 3–24–64, Cl. 114—16.
Alvarez-Calderon, Alberto. Area increasing slotted flaps and apparatus thereof. 3,126,173, 3–24–64, Cl. 244—42.
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American Optical Co.: *See*—
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Ashkin, Arthur, and A. Yariv, to Bell Telephone Laboratories, Inc. Modulator for optical masers. 3,126,485, 3–24–64, Cl. 250—199.

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Atherton, Lionel G., deceased; by J. C. Atherton, executrix. Disc valves. 3,126,193, 3–24–64, Cl. 251—88.

Atkin, Sydney, to Chemical Construction Corp. Leached zone phosphates mineral recovery. 3,126,249, 3–24–64, Cl. 23—14.5.

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Aubert, Michel, and J. F. Belaieff, to Frame S.A. Rotatable and oscillating water spray head for a dishwashing machine. 3,126,025, 3–24–64, Cl. 134—176.

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Ayers, John S., to Jas. H. Matthews & Co. Apparatus for printing successive sheets at preselected positions. 3,125,950, 3–24–64, Cl. 101—212.

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Barassi, Carlo, and G. Cappa, to Pirelli, S.p.A. Pneumatic tires and anti-skid elements therefor. 3,126,040, 3–24–64, Cl. 152—184.

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Berger, Joseph C., Jr., to Airsun Corp. Damping of surface movement of quench bath in melt spinning process. 3,126,434, 3–24–64, Cl. 264—178.

Berger, Kornel. Socket shells. 3,126,160, 3–24–64, Cl. 240—153.

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Berman, Leon, to Radio A.I.R. Applications Industrielles Radioelectriques. Frequency-stabilized oscillation generator system. 3,126,515, 3–24–64, Cl. 331—22.

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Blair, Laurence R., and K. L. Jaunaraja, to Johns-Manville Corp. Hydrated borate products. 3,126,352, 3–24–64, Cl. 252—478.

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Constantine, Gregory, Jr., to International Business Machines Corp. Magnetic switching device. 3,126,533, 3–24–64, Cl. 340—174.
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Guadette, Charles H. Portable table. 3,125,825, 3–24–64, Cl. 45—59.

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Green, Joseph, M. M. Fein, and N. Mayes, to Thiokol Chemical Corp. Organoboron compounds and method of preparation. 3,126,415, 3–24–64, Cl. 260—606.5.

Greene, Charles E., and C. H. Pulley, to Irving Air Chute Co., Inc. Twin hook type vehicle safety belt and guard boot therefor. 3,126,228, 3–24–64, Cl. 297—385.

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Guarino, Salvador J. Automatic automobile radiator cooler. 3,125,868, 3–24–64, Cl. 62—316.

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Korn, Arthur, deceased; by E. P. Korn, administratrix; and J. W. Hess, deceased; by A. Hess, administratrix, and S. L. Ruskin, to Union Carbide Corp. Radio locations systems. 3,126,541, 3–24–64, Cl. 343—10.

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Kraft, William M., to Heyden Newport Chemical Corp. Pentaerythritol condensation products and their preparation. 3,126,356, 3–24–64, Cl. 260—22.

Krohm, Fred A., to The Anderson Co. Means for attaching a wiper arm to a shaft. 3,126,216, 3–24–64, Cl. 287—53.

Krokos, Raymond M., to Evans Products Co. Horizontally and vertically adjustable rack. 3,126,102, 3–24–64, Cl. 211—176.

Kronig, Walter, and K. Vopel, to Farbenfabriken Bayer Aktiengesellschaft. Process for the alkylation and transalkylation of benzene-hydrocarbons. 3,126,423, 3–24–64, Cl. 260—671.

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Kucher, Andrew A., to Ford Motor Co. Aircraft. 3,126,169, 3–24–64, Cl. 244—12.

Kuchler, Abraham, to The American Hardware Corp. Lockout mechanism for lock sets. 3,125,876, 3–24–64, Cl. 70—146.

Kughler, Edwin R. Attachments for lift trucks. 3,126,223, 3–24–64, Cl. 294—103.

Kuhnl, Leopold K., to Eversharp, Inc. Razor blade dispenser. 3,126,091, 3–24–64, Cl. 206—16.

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Kurtin, Stephen. Cathode ray tube with a concave viewing screen. 3,126,495, 3–24–64, Cl. 313—89.

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Matuszak, Alfred H., and S. J. Metro, to Esso Research and Engineering Co. Synthetic lubricating oil. 3,126,403, 3–24–64, Cl. 260—448.2.

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Salomon, Allen N., to General Electric Co. Electrical capacitor and electrode material therefor. 3,126,503, 3–24–64, Cl. 317—230.

Salutsky, Murrell L., F. S. Lee, and G. L. Bridger, to W. R. Grace & Co. Process for preparing metal ammonium phosphates. 3,126,254, 3–24–64, Cl. 23—105.

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Schmidt, Lewis W., 16⅔ each to L. E. Schmidt, A. M. Jongeneel, L. W. Schmidt, C. A. Loucks, assignee; 10% each to G. C. Gordon, and E. F. Blackwelder, 8% to J. Newell, and 1⅓% each to P., F. H. and R. E. Holt, H. H. Shelton, F. A. and D. A. Guernsey. Foliage deflecting unit. 3,126,062, 3–24–64, Cl. 171—42.

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U.S. DEPARTMENT OF COMMERCE
OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE
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TRADEMARKS
NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 75,148 (FIFTH AVENUE), A. B. Andrews Company, Hosiery, **filed** Oct. 30, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c1946, *City Products Corporation* v. *E. J. Korvette, Inc. et al.*

Reg. No. 178,253 (TOKHEIM), Tokheim Oil Tank & Pump Co., Oil and gasoline measuring pumps; **Reg. No. 416,030**, same, Liquid fuel tanks; **Reg. No. 428,055**, same, Oil, liquid, and fuel measuring and dispensing pumps, and parts thereof, and oil, liquid, and fuel meters, and parts thereof; **Reg. No. 515,859**, same, Liquid fuel tanks used for storage purposes; **Reg. No. 573,140**, same, Measuring pumps, meters, computers, registers, and combination pump and measuring apparatus, for gasoline, oil, fuel, and other liquids, and parts thereof; **Reg. No. 599,612**, same, Air compressors, separately and in combination with motors or engines, parts thereof, and accessories therefor—namely, spray guns, grease guns, etc.; **Reg. No. 608,989**, same, Tokheim Corporation, Valves and nozzles, **filed** Oct. 31, 1963, D.C. Oreg. (Portland), Doc. 63–521, *Tokheim Corporation* v. *Chester A. Dillinger.*

Reg. No. 328,594 (STE PIERRE SMIRNOFF AND DESIGN OF CROWN AND SHIELD), Ste. Pierre Smirnoff Fils., Incorporated, Vodka; **Reg. No. 330,899** (STE PIERRE SMIRNOFF AND DESIGN OF CROWN), same; **Reg. No. 513,428** (SMIRNOFF), same, Vodka and kummel, **filed** Sept. 22, 1960, D.C., E.D. Mo. (St. Louis), Doc. 63C–287(2), *Ste. Pierre Smirnoff Fils.* v. *The Smirnoff Co.* Trademarks held valid and infringed; counterclaim dismissed; defendant enjoined Nov. 1, 1963.

Reg. No. 330,899. (See Reg. No. 328,594.)

Reg. No. 334,868 (HABERDASHER), Peck & Peck, Women's dresses and blouses, **filed** Aug. 16, 1962, D.C., S.D.N.Y., Doc. 62/2841, *Peck & Peck* v. *Albert Rosenblatt & Sons, Inc.* Consent judgment; defendants enjoined Oct. 30, 1963.

Reg. No. 339,329 (DO-ALL), Continental Machine Specialties, Inc., Combination band sawing and filing machine; **Reg. No. 390,078** (DOALL), The DoAll Company, Grinders of the machine tool type suitable for precision surface grinding and machine tool cutter grinding, milling machines and special milling machines known as duplicators and adapted for duplicating a pattern; **Reg. No. 394,883**, same, Files, file segments, file bands, saws and saw band; **Reg. No. 424,899** (DOALLOY), same, Metal working and forming dies, molding dies for molding powdered metal, and cutting tools for turning, milling, drilling, boring, threading and planing machines and parts of such tools; **Reg. No. 429,124**, same, Powdered metal, carbonides, and unfinished and partly finished parts made of or with said materials; **Reg. No. 585,424** (DOALL AND DESIGN), same, Steel ink, lubricant and coolant used in grinding, and a lubricating wax product in stick form for lubricating the edges of cutting tools, electrical apparatus—namely, butt welders, magnetic chucks, etc., machine tools—namely, band saws, sawing machines, etc., gaging instruments and attachments therefor—namely, gage blocks, gage block holders, etc., and supply cabinets; **Reg. No. 600,333**, same, Desk

CONDITION OF TRADEMARK APPLICATIONS AS OF JANUARY 31, 1964

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	14,580
Date of oldest new application	June 26, 1963
Date of oldest amended application	June 21, 1963

J. H. MERCHANT, Director, Trademark Examining Operation TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application	
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Registrations Issued	386—No. 766,928 to No. 767,313
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type staplers, pocket knives; **Reg. No. 610,668**, same, Saw pitching gages used for gaging the pitch of saw teeth, and steel rules; **Reg. No. 679,956** (DOALL), same, Taps, reamers, end mills, cutters, counter bores, tool bits, and slicing and dicing machines; **Reg. No. 679,957** (DOALL AND DESIGN), same, Tool bits and lathe centers, slicing and dicing machines, and precision lapping machines, **filed** May 23, 1963, D.C., N.D. Ill. (Freeport), Doc. 63c24, *The DoAll Company* v. *DuAll DeBurring Company*. Defendant enjoined (notice Oct. 25, 1963).

Reg. No. 390,078. (See Reg. No. 339,329.)

Reg. No. 394,883. (See Reg. No. 339,329.)

Reg. No. 416,030. (See Reg. No. 178,253.)

Reg. No. 424,829. (See Reg. No. 339,329.)

Reg. No. 428,055. (See Reg. No. 178,253.)

Reg. No. 429,124. (See Reg. No. 339,329.)

Reg. No. 513,428. (See Reg. No. 328,594.)

Reg. No. 515,859. (See Reg. No. 178,253.)

Reg. No. 573,140. (See Reg. No. 178,253.)

Reg. No. 582,921 (SUPER NUFOS), National Cleanser Products Co., Inc., Alkali cleanser in briquet form, for use in dishwashing machines and for cleaning and washing machinery, bottles, milkcans and utensils in the food, beverage and dairy industries, **filed** July 12, 1963, D.C., S.D.N.Y., Doc. 63/2077, *National Cleanser Products Co., Inc.* v. *Norman E. Lubin*. Stipulation and order of discontinuance Oct. 30, 1963.

Reg. No. 585,424. (See Reg. No. 339,329.)

Reg. No. 599,612. (See Reg. No. 178,253.)

Reg. No. 600,333. (See Reg. No. 339,329.)

Reg. No. 606,989. (See Reg. No. 178,253.)

Reg. No. 610,668. (See Reg. No. 339,329.)

Reg. No. 613,699 (EMBA), Mutation Mink Breeders Association, Mink fur pelts, **filed** Oct. 28, 1963, D.C., W.D. Wis. (Madison), Doc. 3681, *Emba Mink Breeders Association* v. *United Mink Producers Association*.

Reg. No. 679,956. (See Reg. No. 339,329.)

Reg. No. 679,957. (See Reg. No. 339,329.)

Reg. No. 750,099 (SCULLY JONES), Scully-Jones and Company, Small machine tools, tool holders and adapters, work holders, jigs and fixtures, etc., **filed** Oct. 29, 1963, D.C., E.D. Mich. (Detroit), Doc. 24537, *Scully-Jones and Company* v. *Gordon N. Cameron Company*.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.. As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 151,289. Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany. Filed Aug. 16, 1962.

VINOFLEX

For Chemical Products for Industrial Purposes—Namely, Vinyl Polymers and Copolymers.
First use Oct. 18, 1932; in commerce May 10, 1960.

SN 163,521. Basic Incorporated, Cleveland, Ohio. Filed Feb. 27, 1963.



Owner of Reg. No. 746,780.
For Agricultural Limestone.
First use June 26, 1961.

SN 167,868. Central Soya Company, Inc., Fort Wayne, Ind. Filed Apr. 23, 1963.

PROSEIN

For Soybean Flour Sold for Use in Making Adhesives, Plastics, Paints, Insecticides, and Sizings and Coatings for Paper.
First use July 28, 1941.

SN 167,401. National Polychemicals, Inc., Wilmington, Mass. Filed Apr. 23, 1963.

TETRA-RESIN

For Synthetic Resins.
First use Feb. 13, 1963.

SN 168,830. Marblehead Lime Company, Chicago, Ill. Filed May 14, 1963.



For Lime.
First use Nov. 20, 1962.

SN 170,383. Dreher Leather Mfg. Corp., New York, N.Y. Filed June 5, 1963.

LHASA CALF

The word "Calf" is disclaimed apart from the mark as shown.
For Leather.
First use May 14, 1963.

SN 171,837. Druid Hill Park Seed Corp., Baltimore, Md. Filed June 19, 1963.

STATE PARK

For Grass Seed.
First use Mar. 1, 1937.

SN 171,410. The Georgia Marble Company, Tate, Ga. Filed June 19, 1963.

GOBLE

For Chips or Flakes of Marble for Use in Manufacture of Terrazzo, and Use in Exterior and Interior Precast Construction.
First use Jan. 1, 1958.

SN 171,450. J. M. Huber Corporation, Borger, Tex. Filed June 20, 1963.

HYDRAFLO

For Clay.
First use May 20, 1963.

SN 171,771. Jonathan Green & Sons, Kearny, N.J. Filed June 25, 1963.

SHOW LAWN

The word "Lawn" is disclaimed apart from the mark as shown without waiving common-law rights therein.
For Mixed Grass Seed.
First use Feb. 26, 1959.

SN 172,059. The General Tire & Rubber Company, Akron, Ohio. Filed June 28, 1963.

TELAGEN

For Synthetic Polymeric Material for Further Use in the Industrial Arts.
First use Aug. 2, 1962.

SN 173,179. The Nazar Rubber Company, Toledo, Ohio. Filed July 17, 1963.

NAZARTHANE

For Synthetic Elastomeric Material, Usable as a Substitute for Rubber and Other Rubber-Like Materials.
First use Mar. 22, 1963.

SN 173,238. L. A. Dreyfus Company, South Plainfield, N.J. Filed July 18, 1963.

LADCO

Owner of Reg. Nos. 640,836 and 742,787.
For Chewing Gum Base.
First use Aug. 12, 1930.

SN 173,283. Polymers, Inc., Middlebury, Vt. Filed July 18, 1963.

LONEX

For Packaged Form of Extruded Synthetic Fibres, Particularly Adapted for Use as Brush Bristles.
First use Aug. 2, 1961.

SN 173,484. Nello Chemicals, Inc., Jacksonville, Fla. Filed July 22, 1963.

VBR

For Natural and Synthetic Gums and Resins.
First use June 26, 1945.

SN 173,685. Physical Sciences Corporation, Arcadia, Calif. Filed July 24, 1963.

PSC

Owner of Reg. No. 716,789.
For Ceramic Materials.
First use Jan. 6, 1961.

SN 173,795. Albert Trostel & Sons Company, Milwaukee, Wis. Filed July 25, 1963.

TUMBLETAN

For Leather.
First use July 19, 1962.

SN 173,796. Albert Trostel & Sons Company, Milwaukee, Wis. Filed July 25, 1963.

FULLDRESS

For Leather.
First use Oct. 31, 1960.

SN 173,951. Pfister & Vogel Tanning Co., Inc., Milwaukee, Wis. Filed July 29, 1963.

DYNASHU

For Leather.
First use Apr. 1, 1963.

SN 174,135. Albert Trostel & Sons Company, Milwaukee, Wis. Filed July 31, 1963.

VULCALITE

For Leather.
First use Aug. 21, 1961.

SN 174,174. Dayco Corporation, Dayton, Ohio. Filed Aug. 1, 1963.

CADCON

Owner of Reg. Nos. 599,236, 602,585, and 686,786.
For Plastic Sheets, Rods, Tubes and Film.
First use June 7, 1962.

SN 174,177. Earlybird Bedding & Bait Co., Boise, Idaho. Filed Aug. 1, 1963.

EARLYBIRD

For Worm Bedding.
First use Mar. 16, 1963.

SN 174,286. Pioneer Hi-Bred Corn Company, Des Moines, Iowa. Filed Aug. 2, 1963.

PIONEER

The drawing is lined for red and blue. Owner of Reg. Nos. 84,443 and 726,844.
For Alfalfa Seed.
First use Feb. 23, 1963.

SN 174,490. Berry's Farm & Home, Inc., Clarinda, Iowa. Filed Aug. 6, 1963.

HONEST JOHN

For Alfalfa Seed.
First use Jan. 14, 1963.

SN 174,678. Martin and Bolton Leathers Limited, Bolton, England. Filed Aug. 8, 1963.

BOLTONIA

Owner of British Reg. No. 610,046, dated Dec. 12, 1939; and U.S. Reg. No. 657,586.
For Leather.
First use 1939; in commerce 1943.

SN 174,679. Martin and Bolton Leathers Limited, Bolton, England. Filed Aug. 8, 1963.

FLORANA

Owner of British Reg. No. 613,224, dated Nov. 6, 1940; and U.S. Reg. Nos. 549,974 and 553,022.
For Leather.
First use 1940; in commerce 1943.

SN 175,183. Glen-Gery Shale Brick Corporation, Reading, Pa. Filed Aug. 16, 1963.

GLEN FLUX

Owner of Reg. No. 725,181.
For Fluorspar Briquettes.
First use Apr. 5, 1963.

SN 175,316. Rayonier Incorporated, New York, N.Y. Filed Aug. 19, 1963.

SILVANIER

Owner of Reg. No. 322,480.
For Wood Pulp.
First use June 17, 1963.

SN 175,551. Celanese Corporation of America, New York, N.Y. Filed Aug. 22, 1963.

STELLACLOUD

For Man-Made Fibers.
First use July 31, 1963.

SN 175,617. Southern Coal & Coke Company, Incorporated, Tazewell, Va. Filed Aug. 22, 1963.

DIXIE GEM

For Coal.
First use in 1908.

SN 175,890. York Feather & Down Corp., Brooklyn, N.Y. Filed Aug. 27, 1963.

TANOLIZED

For Down and Feathers.
First use on or about Dec. 18, 1962.

Class 2 — Receptacles

SN 150,173. International Paper Company, New York, N.Y. Filed July 31, 1962.

MILE-LONG BAG

The word "Bag" is hereby disclaimed apart from the mark as shown.
For Multi-Wall Shipping Tubes Formed at Least in Part of Paper and Bags Formed Therefrom.
First use Mar. 29, 1962.

SN 163,944. Hub Floral Manufacturing Company, Boston, Mass. Filed Mar. 5, 1963.

BANNER

For Planters.
First use 1954.

SN 166,677. John Wood Company, St. Paul, Minn. Filed Apr. 12, 1963.

"509"

For Waste Cans and Waste Baskets.
First use Feb. 15, 1963.

SN 167,741. Menasha Corporation, Anaheim, Calif. Filed Apr. 29, 1963.

IRON WALL

Applicant disclaims the representation of the goods apart from the mark.
For Reinforced, Corrugated, Fiberboard Cartons.
First use Feb. 15, 1963.

SN 168,244. Stoffel Seals Corporation, Tuckahoe, N.Y. Filed May 6, 1963.



For Tin Cans of Varying Sizes Up to a Maximum Diameter of 12 Inches and Height of 20 Inches for Food.
First use August 1961.

SN 168,714. Consolidated Thermoplastics Company, Los Angeles, Calif., assignee of James C. Deshazor, Jr., d.b.a. Combi-Clip Co., North Hollywood, Calif. Filed May 13, 1963.

COMBI-PACK

For Carrier for Connecting and Holding a Plurality of Cans in a Merchandisable Unit.
First use Mar. 28, 1963.

SN 169,592. Molded Fiber Glass Body Company, Linesville, Pa. Filed May 17, 1963.

Fibrilla

For Plastic Serving Trays and Dishes—Namely, Trays, Bowls, Cups, Saucers, and Plates.
First use Dec. 1, 1962.

Class 5 — Adhesives

SN 160,382. Henkel & Cie, GmbH, Dusseldorf-Holthausen, Germany. Filed Jan. 8, 1963.

RELATIN

Owner of German Reg. No. 634,390, dated Feb. 19, 1953.
For Adhesives, Especially Glutens, Dextrins, Sizing Pastes, Glue, Starch and Cementing Compositions.

SN 172,233. Pittsburgh Plate Glass Company, Pittsburgh, Pa. Filed July 1, 1963.

STRATOSEAL

Owner of Reg. No. 402,351.
For Adhesives for General Use in the Industrial Arts and Adhesive Tape.
First use Dec. 30, 1942, on adhesive tapes.

SN 173,762. Johnson & Johnson, d.b.a. Permacel, New Brunswick, N.J. Filed July 25, 1963.



The mark consists of a fanciful design of the letter "P."
Owner of Reg. Nos. 388,238, 724,991, and others.
For Adhesives and Pressure-Sensitive Adhesive Tapes.
First use Jan. 10, 1963.

SN 177,793. Johns-Manville Corporation, New York, N.Y. Filed Sept. 26, 1963.

DEFENDER

For Adhesive Tape Applied as a Protective Cover Material to Articles for Shipment and for Other General Protective Purposes.
First use on or about July 31, 1963.

Class 6—Chemicals and Chemical Compositions

SN 134,328. Lea-Ronal, Inc., Jamaica, N.Y. Filed Dec. 19, 1961.

AURALL

For Mixture of Salts for Gold Electroplating.
First use Apr. 21, 1961.

SN 134,329. Lea-Ronal, Inc., Jamaica, N.Y. Filed Dec. 19, 1961.

AURO-GLO

For Mixture of Salts for Gold Electroplating.
First use Nov. 28, 1961.

SN 141,738. Micro-Biological Laboratories, Inc., New York, N.Y. Filed Apr. 6, 1962.

MICROGARD

For Germicide and Fungicide Concentrate.
First use Aug. 1, 1961.

SN 158,897. Archer-Daniels-Midland Company, Minneapolis, Minn. Filed Dec. 11, 1962.

STARFOL

For Saturated Fatty Acids, Esters, and Fatty Derivatives.
First use on or about Nov. 23, 1962.

SN 162,719. Roseco International Limited, Birmingham, England. Filed Feb. 14, 1963.

BRIXIL

Owner of British Reg. No. 784,591, dated Nov. 28, 1958.
For Chemical Compositions Comprising Alloying and Cleansing Additives for Addition to Molten Cast Iron.
First use June 12, 1961; in commerce Feb. 6, 1962.

SN 162,993. The Stamford Chemical Company, Stamford, Conn. Filed Feb. 18, 1963.

SATINTEX

For Chemical Preparation for Use as a Water Repellent for Incorporation Into Synthetic Solvent Systems in Dry-Cleaning Operations.
First use Jan. 23, 1963.

SN 163,543. Geigy Chemical Corporation, Ardsley, N.Y. Filed Feb. 27, 1963.

LANEL

For Stiffening Agent for Textiles.
First use Feb. 11, 1963.

SN 164,215. Corn Products Company, New York, N.Y. Filed Mar. 8, 1963.

MILO-FILM

For Starch for Industrial Purposes.
First use at least as early as July 30, 1958.

SN 166,738. Monsanto Research Corporation, St. Louis, Mo. Filed Apr. 15, 1963.

EPIC

For Exothermic Metallurgical Preparations.
First use Nov. 27, 1962.

SN 169,050. Oh-Dear Laboratories, Inc., St. Paul, Minn. Filed May 16, 1963.

OH DEAR!

For Vomit Deodorant.
First use Aug. 13, 1962.

SN 171,209. Western Chemical Company, Kansas City, Mo. Filed June 17, 1963.

MULTIONIC

For Chemical Formulas, Components and Inhibitors for the Prevention of Scale and Corrosion in Cooling Water Systems.
First use Sept. 1, 1961.

SN 171,370. Morton Salt Company, Chicago, Ill. Filed June 19, 1963.

PANODRIN

For Fungicidal and Insecticidal Compositions Used in the Treatment of Seeds.
First use on or about Mar. 9, 1955.

SN 171,985. J. M. Huber Corporation, Borger, Tex. Filed June 27, 1963.

ZEOTHIX

Owner of Reg. Nos. 547,223, 727,645, and 750,864.
For Chemical Pigments and Powders.
First use June 19, 1963.

SN 171,986. J. M. Huber Corporation, Borger, Tex. Filed June 27, 1963.

ZEOFREE

Owner of Reg. Nos. 547,223, 727,645, and 750,864.
For Chemical Pigments and Powders.
First use June 19, 1963.

SN 171,987. J. M. Huber Corporation, Borger, Tex. Filed June 27, 1963.

ZEOCEL

Owner of Reg. Nos. 547,223, 727,645, and 750,864.
For Chemical Pigments and Powders.
First use June 19, 1963.

SN 171,988. J. M. Huber Corporation, Borger, Tex. Filed June 27, 1963.

ZEOSYL

Owner of Reg. Nos. 547,223, 727,645, and 750,864.
For Chemical Pigments and Powders.
First use June 19, 1963.

SN 171,989. J. M. Huber Corporation, Borger, Tex. Filed June 27, 1963.

ZEOPOL

Owner of Reg. Nos. 547,223, 727,645, and 750,864.
For Chemical Pigments and Powders.
First use June 19, 1963.

SN 172,287. Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany. Filed July 2, 1963.

BASOLAN

Owner of U.S. Reg. No. 675,841.
For Auxiliaries for the Textile Industry—Namely, Anti-Felting Agents for Wool.
First use Aug. 16, 1962; in commerce Apr. 26, 1963.

SN 172,694. Sternco Industries, Inc., Allendale, N.J. Filed July 9, 1963.

AQUA-AGE

For Chemical Agent for Removing Chlorine From Water and for Serving as a Buffering Agent Between Acidity and Alkalinity in Aquarium Tank Water.
First use Nov. 14, 1960.

SN 174,734. Zymak Biochemical Co., Long Beach, Calif. Filed Aug. 8, 1963.

KOMPAK!

For Chemical Compositions Used in the Compaction and Stabilization of Soil.
First use Mar. 18, 1963.

SN 175,249. Clay-Adams, Inc., New York, N.Y. Filed Aug. 19, 1963.

CL ADAMS Y!

Owner of Reg. No. 759,088.
For Antiseptic Germicide for Industrial Use.
First use Mar. 26, 1957.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 147,856. Redfield Gun Sight Company, Denver, Colo. Filed June 27, 1962.

REDFIELD R PRECISION

The drawing is lined for the color red. The word "Precision" is disclaimed apart from the mark as shown.
For Sighting Devices Including Both Iron and Telescopic Riflesights, Mounts, Clamps and Accessories Therefor.
First use Jan. 10, 1962.

SN 176,289. Diamond National Corporation, New York, N.Y. Filed Sept. 4, 1963.

diamond

Owner of Reg. Nos. 167,348, 421,352 and others.
For Matches.
First use Jan. 1, 1953.

Class 10—Fertilizers

SN 158,874. Texas Crushed Stone Company, Austin, Tex. Filed Dec. 10, 1962.

Mag-lime

For Agricultural Lime.
First use Mar. 1, 1962.

SN 175,840. Columbia Nitrogen Corporation, Augusta, Ga. Filed Aug. 27, 1963.

COLUMBIA

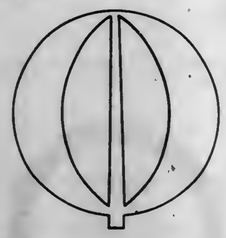
For Fertilizers.
First use Apr. 11, 1963.

SN 175,841. Columbia Nitrogen Corporation, Augusta, Ga. Filed Aug. 27, 1963.

CNC

For Fertilizers.
First use July 9, 1963.

SN 175,842. Columbia Nitrogen Corporation, Augusta, Ga. Filed Aug. 27, 1963.



For Fertilizers.
First use Jan. 29, 1963.

Class 12—Construction Materials

SN 171,945. American Cement Corporation, Los Angeles, Calif. Filed June 27, 1963.

LACESTONE

For Decorative Concrete Screen Wall Sections.
First use at least as early as April 1958.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 151,487. The Hansen Manufacturing Company, Cleveland, Ohio. Filed Aug. 20, 1962.

GAS-MATE

For Valved Couplings.
First use June 29, 1962.

SN 152,621. Orfevrerie Christofle, Paris, France. Filed Sept. 6, 1962.

CHRISTINOX

Owner of French Reg. No. 483,019, dated Oct. 1, 1959 (Paris); Natl. Inst. No. 132,170.
For Dishes, Egg Cups, Plates, Cups, Soup Dishes, Sugar Bowls, Sauce Boats, Tea and Coffee Sets, Compote Dishes, Butter Dishes, Oil and Vinegar Cruets, Radish Dishes, Chafing Dishes, Preserve Dishes, Finger Bowls, Cocktail Shakers, Napkin Rings, Nut Crackers and Spits All Made of Stainless Steel.

SN 156,292. Amsted Industries Incorporated, Chicago, Ill., assignee of Griffin Pipe Products Co., Wheaton, Ill. Filed Oct. 31, 1962.

Amsted

For Cast Metal Pipe.
First use Sept. 12, 1962.

SN 156,418. Link-Belt Company, Chicago, Ill. Filed Nov. 1, 1962.

ADJUSTAIR

For Valves for Introducing and Diffusing Air Into a Body of Liquid Sewage or Industrial Waste.
First use Feb. 16, 1962.

SN 156,649. Punch-Lok Company, Chicago, Ill. Filed Nov. 5, 1962.

P

For Clamps Made of Strip Steel for Hoses and Conduits and the Like.
First use Sept. 11, 1962.

SN 174,957. Paul Churchill Hutton, d.b.a. P. C. Hutton & Associates, Charlottesville, Va. Filed Aug. 13, 1963.

JUS-TIK-IT-ON

For Footscraper.
First use July 23, 1963.

SN 176,431. Crane Co., Chicago, Ill. Filed Sept. 6, 1963.

LINEGUARD

For Valves.
First use July 1963.

SN 176,681. Spraying Systems Co., Bellwood, Ill. Filed Sept. 10, 1963.

ROTO-CLEAN

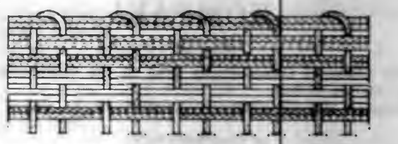
For Spray Nozzles.
First use Aug. 9, 1963.

SN 176,799. Illinois Coil Spring Company, Chicago, Ill. Filed Sept. 12, 1963.

Thermobrator

For Coil Springs.
First use Mar. 4, 1961.

SN 179,114. Chicopee Mills, Inc., New York, N.Y. Filed Oct. 16, 1963.



The trademark consists of six relatively densely spaced strands near the margin of the goods, followed by four relatively densely spaced white strands followed by two densely spaced gray strands at the very margin of the goods.
Owner of Reg. Nos. 610,558 and 751,519.
For Plastic or Glass Screens.
First use Apr. 18, 1963.

Class 14—Metals and Metal Castings and Forgings

SN 151,207. Corning Glass Works, Corning, N.Y. Filed Aug. 15, 1962.

CORMET

For Inorganic Metallic and Metal-Containing Material—Namely, Substantially Pure Corrosion-Resistant Porous Nickel, for Use as Raw Material in the Industrial Arts.
First use in or about December 1959.

SN 156,053. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany. Filed Oct. 18, 1962.



Owner of German Reg. No. 633,916, dated Feb. 10, 1953; and U.S. Reg. Nos. 542,319, 746,155, and others.
For Leaf Metals.

Class 15—Oils and Greases

SN 162,428. Dura Commodities Corporation, New York, N.Y. Filed Feb. 11, 1963.

R-21

For Mineral Wax.
First use on or about July 22, 1954.

SN 175,782. Pacific Candle Company, Hayward, Calif. Filed Aug. 26, 1963.

CRYING CANDLES

The word "Candles" is disclaimed apart from the mark as shown.
For Candles.
First use July 23, 1963.

Class 16—Protective and Decorative Coatings

SN 152,354. The Testor Corporation, Rockford, Ill. Filed Aug. 31, 1962.

spray
pla

The word "Spray" is disclaimed apart from the mark as a whole. Owner of Reg. No. 589,196.
For Protective and Decorative Coatings—Namely, Enamels.
First use June 15, 1962.

SN 173,832. The Joseph Dixon Crucible Company, Jersey City, N.J. Filed July 26, 1963.

DXN

Owner of Reg. No. 573,159.
For Primers, Silica Graphite Coatings for All Exposed Metal and Wood Surfaces, Aluminum Exterior Protective Coatings, Gloss and Semi-Gloss Maintenance Coatings for Indoor and Outdoor Use, Flat and Semi-Gloss Interior Coatings, Heat Resistant Coatings, Vinyl Tank Coatings, and Chemical Resistant Coatings for Metal, Wood, Concrete and Masonry Surfaces.
First use March 1941.

Class 17—Tobacco Products

SN 165,440. Lupo Cigar Co., Inc., New York, N.Y. Filed Mar. 26, 1963.



The English equivalent of the Italian word "Lupo" is "wolf." No claim is made to the word "Sigari," which when translated means "cigar."
For Cigars.
First use Oct. 1, 1938.

SN 167,451. F. J. Burrus & Cie, Boncourt, Switzerland. Filed Apr. 24, 1963.



Owner of Swiss Reg. No. 184,317, dated Jan. 5, 1961.
For Tobacco Products—Namely, Cigars, Cigarettes and Pipe Tobacco Mixtures.

SN 171,745. The Bloch Brothers Tobacco Co., d.b.a. Mail Pouch Tobacco Co., Wheeling, W. Va. Filed June 25, 1963.

PIPETELLA

For Cigars.
First use May 9, 1963.

SN 171,746. The Bloch Brothers Tobacco Co., d.b.a. Mail Pouch Tobacco Co., Wheeling, W. Va. Filed June 25, 1963.

PIPEROMA

For Cigars.
First use May 9, 1963.

SN 171,747. The Bloch Brothers Tobacco Co., d.b.a. Mail Pouch Tobacco Co., Wheeling, W. Va. Filed June 25, 1963.

PIPERETTE

For Cigars.
First use May 9, 1963.

SN 171,748. The Bloch Brothers Tobacco Co., d.b.a. Mail Pouch Tobacco Co., Wheeling, W. Va. Filed June 25, 1963.

CIGA PIPE

For Cigars.
First use May 9, 1963.

SN 178,459. Kriswork Briar Pipe Trading v. K. R. Kris, Kolding, Denmark. Filed Oct. 7, 1963.

KRISWILL

Owner of U.S. Reg. No. 730,639.
For Tobacco Products, Specifically Pipe Tobacco Mixtures.
First use Apr. 1, 1963; in commerce June 21, 1963.

Class 18—Medicines and Pharmaceutical Preparations

SN 128,568. Laboratori Myl S.p.A., Rome, Italy. Filed Sept. 25, 1961.

PROPERMYL

Owner of Italian Reg. No. 144,304, dated July 14, 1958.
For Intravenous Preparation for Use as Coadjuvant in the Treatment of Infectious Diseases, and for Use in the Treatment of Ray-Diseases and in Hypoergic States Wherein the Normal Rate of Properdine in the Blood Is Affected, as Well as in Plaque-Sclerosys and Antiplastic Actinic Treatments.

SN 140,346. A. Gazzoni & C., Bologna, Italy. Filed Mar. 21, 1962.



The words "Marca di Fabbrica" mean "trademark" in the Italian language and are disclaimed apart from the mark as shown. Priority claimed under Sec. 44(d) on Italian application filed Jan. 4, 1962; Reg. No. 158,906, dated Apr. 16, 1962.
For Medicines and Pharmaceutical Preparations—Namely, Oral Analgesics, Nutrient and Vitamin Compounds, and Medicines for the Relief of Liver Disorders, Nerve Tonics, Antacid Tablets, Cold Tablets, Throat Lozenges, Lozenges for Freshening Breath, Oral Antiseptics and Anesthetics, and Laxative Compounds.

SN 140,602. The Upjohn Company, Kalamazoo, Mich. Filed Mar. 23, 1962.

PARINASE

Owner of Reg. No. 644,071.
For Antidiabetic Agent.
First use Dec. 18, 1961.

SN 151,262. Riker Laboratories, Inc., Northridge, Calif. Filed Aug. 15, 1962.

NORGESIC

For Medicinal Preparation for the Relief of Pain and/or Muscle Spasm.
First use July 26, 1962.

SN 156,200. Vet-A-Mix, Inc., Shenandoah, Iowa. Filed Oct. 29, 1962.

VET A MIX

Owner of Reg. No. 741,835.
For Vitamin and Antibiotic Drug Supplement for Stock Feed and Veterinary Pharmaceuticals.
First use on or about Nov. 1, 1960.

SN 156,327. Planta Laboratories, Inc., New York, N.Y. Filed Oct. 31, 1962.

PLANTASAN

For Ointment for the Treatment of Lesions of the Epidermis.
First use June 1, 1962.

SN 156,328. Planta Laboratories, Inc., New York, N.Y. Filed Oct. 31, 1962.

ARTOLIN

For Medicinal Capsule To Be Taken Internally for Treatment of the Gastro-Intestinal Tract.
First use June 1, 1962.

SN 166,966. Anheuser-Busch, Incorporated, St. Louis, Mo. Filed Apr. 18, 1963.

BASATONE

For Yeast Extract Primarily for Use in Connection With Drug Products.
First use Feb. 25, 1963.

SN 168,536. Safeway Stores, Incorporated, Oakland, Calif. Filed May 9, 1963.



Owner of Reg. No. 743,295.
For Food Supplement Containing Vitamins in Tablet Form.
First use Apr. 1, 1963.

SN 170,079. Lever Brothers Company, New York, N.Y. Filed May 31, 1963.

DRYSONEX

For Preparation for the Alleviation of the Discomfort of Colds.
First use Apr. 30, 1963.

SN 170,334. The Reducine Company Limited, Dublin, Ireland. Filed June 4, 1963.

REDUCINE

Owner of U.S. Reg. Nos. 696,313 and 709,549.
For Veterinary Preparations—Namely, Liniments and Salves for External Use on Dogs, Horses and Cattle.
First use 1906; in commerce 1908.

SN 172,260. U.S. Ethicals, Inc., Long Island City, N.Y. Filed July 1, 1963.

NITRONG

Owner of Reg. No. 718,144.
For Pharmaceutical Preparation for Cardiovascular Indications.
First use July 2, 1959.

SN 175,138. Tobacco Control Program, Inc., New York, N.Y. Filed Aug. 15, 1963.

BIO-NICATROL

For Medicinal Preparation for Controlling, Reducing and Discontinuing Cigarette Smoking.
First use July 8, 1963.

SN 175,457. Allergan Pharmaceuticals, Inc., Santa Ana, Calif. Filed Aug. 21, 1963.

TENDRAN

For Medical Preparation for Treatment of Headache.
First use Aug. 2, 1963.

SN 175,772. Merck & Co., Inc., Rahway, N.J. Filed Aug. 26, 1963.

MINTEZOL

For Anthelmintic Preparation.
First use Aug. 6, 1963.

SN 175,795. Riker Laboratories, Inc., Northridge, Calif. Filed Aug. 26, 1963.

EPIHALER

For Pharmaceutical Preparations for Use in Inhalation Therapy.
First use Aug. 15, 1963.

SN 176,143. American Home Products Corporation, New York, N.Y. Filed Sept. 3, 1963.

DISARM

For Antiseptic Analgesic First Aid Preparation.
First use July 16, 1963.

SN 176,321. Savage Laboratories, Inc., Houston, Tex. Filed Sept. 4, 1963.

ALPHA-RUVITE

For Vitamin B12 Pharmaceutical Preparation.
First use Aug. 19, 1963.

SN 176,335. The Upjohn Company, Kalamazoo, Mich. Filed Sept. 4, 1963.

CITROCARBONATE

For Effervescent Salt.
First use Apr. 7, 1921.

SN 176,422. The Borden Company, New York, N.Y. Filed Sept. 6, 1963.

METAPHOR

Owner of Reg. No. 714,937.
For Medicinal Cream for Relief of Irritation, Pain and Itching in Minor Skin Disorders.
First use June 30, 1961.

SN 176,424. The Borden Company, New York, N.Y. Filed Sept. 6, 1963.

METHATAR

Owner of Reg. No. 714,937.
For Dermatological Cream Used as an Aid for Temporary Relief of Minor Skin Irritations and Relief of Itching.
First use June 30, 1961.

SN 176,861. Knoll A.-G. Chemische Fabriken, Ludwigshafen (Rhine), Germany. Filed Sept. 11, 1963.

ISOPTIN

Owner of German Reg. No. 565,299, dated July 27, 1944.
For Pharmaceutical Preparation—Namely, a Coronary Dilating Agent.

SN 177,186. The Purdue Frederick Company, Yonkers, N.Y. Filed Sept. 17, 1963.

SARGENOR

For Alerting Agent.
First use July 24, 1963.

SN 177,216. Allergan Pharmaceuticals, Inc., Santa Ana, Calif. Filed Sept. 18, 1963.

LIQUIWRAP

For Film Forming Preparations for the External Treatment of Skin Disorders.
First use Aug. 16, 1963.

SN 177,329. American Home Products Corporation, New York, N.Y. Filed Sept. 19, 1963.

PNEUMABORT

For Vaccine for Veterinary Use.
First use Aug. 19, 1963.

SN 177,495. Community Drug Store, Inc., Midland, Mich. Filed Sept. 23, 1963.

TEMPOKOF

For Compound for Relieving Colds and Allergies.
First use Aug. 1, 1963.

SN 177,595. American Cyanamid Company, Wayne, N.J. Filed Sept. 24, 1963.

A.F.

For Vaccine.
First use Sept. 11, 1963.

SN 177,596. American Cyanamid Company, Wayne, N.J. Filed Sept. 24, 1963.

PAROVAX

For Vaccine.
First use Sept. 11, 1963.

SN 177,598. American Cyanamid Company, Wayne, N.J. Filed Sept. 24, 1963.

M-VAC

For Vaccine.
First use Sept. 11, 1963.

SN 177,745. American Cyanamid Company, Wayne, N.J. Filed Sept. 26, 1963.

PENTIMUNE

For Vaccine.
First use Sept. 11, 1963.

SN 178,242. John B. Aitchison, d.b.a. The Chex Company and Chex Company, Philadelphia, Pa. Filed Oct. 3, 1963.

Mr. PEP

For Medicine To Be Taken Internally for the Relief of Fatigue.
First use on or about July 15, 1963.

SN 178,248. B. F. Ascher & Company, Inc., Kansas City, Mo. Filed Oct. 3, 1963.

PHORM

For Ointment for the Treatment of Skin Conditions.
First use July 22, 1963.

Class 19—Vehicles

SN 126,302. The William L. Bonnell Company, Inc., Newnan, Ga. Filed Aug. 21, 1961.

Alumarine

For Finish Applied by Applicant to Its Various Products Sold to the Boating Trade—Namely, Boat Windows, Screens, and Portholes; Extruded Aluminum Shapes Used as Rub Rails, Deck Channels and Moldings, Gunwales, Gutter Moldings, Boat Ends Both Cast and Finished, Transom Covers and Trim, Upholstery Rails and Windshield Moldings; and Aluminum Parts for Making Same.
First use late in the year 1958.

SN 150,338. Amsted Industries Incorporated, Chicago, Ill., assignee of Griffin Wheel Company, Chicago, Ill. Filed Aug. 2, 1962.

Amsted

For Railway Car Wheels.
First use May 15, 1962.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 58,499. The Chase-Shawmut Company, Newburyport, Mass. Filed Sept. 8, 1958.

Amp-trap

Owner of Reg. No. 534,033.
For Protective Devices Against Excessive Electric Currents—Namely, Fuses, Current-Limiting Fuses, Fuse Clips and Other Fuse Holders.
First use Aug. 21, 1958.

SN 143,687. James Black, assignee, by mesne assignments, of Stereotronics Corporation, Los Angeles, Calif. Filed May 2, 1962.

STEREO-CAPTOR

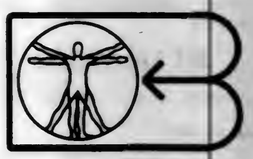
For Device for Attachment to a Television Camera or the Like in Connection With Taking Films Susceptible of Three-Dimensional Viewing.
First use Mar. 22, 1961.

SN 164,747. Soundolier, Inc., St. Louis, Mo. Filed Mar. 15, 1963.

SOUNDOLIER

For Loud Speakers and Speaker Baffles for Sound Projection Systems.
First use Feb. 15, 1956.

SN 164,797. Biometrics Instrument Corporation, Dallas, Tex. Filed Mar. 18, 1963.



For Telemetering Equipment—Namely, Transmitters, Receivers, Line Amplifiers, Oscillators, Switch Panels and Rack Assemblies, Discriminators, Power Supplies, Bridge Amplifiers, Differential Amplifiers, Pre-Amplifiers, Sub-Carrier Oscillators and Time Correlation Generators.
First use July 31, 1962.

SN 173,079. Matsuo Electric Company, Limited, Osaka, Japan. Filed July 15, 1963.

NCC

For Electronic Capacitors or Condensers.
First use 1938; in commerce 1957.

SN 173,137. Tessier Industries, Incorporated, Cleveland, Ohio. Filed July 16, 1963.

HILTON

Owner of Reg. No. 721,155.
For Transistor Radio Receiving Sets, Portable Radio Transmitter-Receivers, and Vacuum Cleaners.
First use Dec. 1, 1959.

SN 177,588. Astra Trading Corporation, New York, N.Y. Filed Sept. 23, 1963.



For Batteries, Battery Powered Flashlights and Battery Powered Lanterns.
First use Aug. 14, 1963.

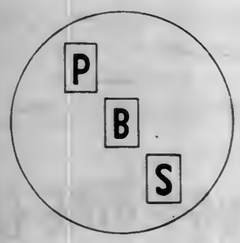
SN 179,388. American Motors Corporation, Detroit, Mich. Filed Oct. 21, 1963.

KELVINATOR

Owner of Reg. No. 142,652.
For Dishwashers.
First use in or before 1956.

Class 22—Games, Toys, and Sporting Goods

SN 145,606. Randolph F. Rasler and Lillian H. Rasler, d.b.a. Peninsula Bowler's Supplies, Redwood City, Calif. Filed May 28, 1962.



For Chemical Composition for Plugging the Thumb and Finger Holes of Bowling Balls.
First use Apr. 20, 1961.

SN 150,246. Hausemann & Hötte N.V., Amsterdam, Netherlands. Filed Aug. 1, 1962.



Owner of Dutch Reg. Nos. 70,530, dated Dec. 9, 1936, and 121,112, dated Mar. 12, 1955.
For Various Type Board, Card and Parlor-Games, and Equipment or Apparatus Sold as Units for Playing Such Games; Picture Puzzles, Toy Looms and Weaving Sets, Toy Modeling Clay Sets and Bead Sets; Toy Hammering Sets in the Nature of Peg Boards; Toy Plastic Figures and Plastic Chain Sets; Paper Dolls and Cut-Outs for Pasting in Books.

SN 155,614. Paul Jenisch, d.b.a. Paul Jenisch Creations, Mount Vernon, N.Y. Filed Oct. 22, 1962.

TOP-FIVE

For Equipment Including a Deck of Cards, a Panel, a Tray and Plastic Chips Sold as a Unit for Playing a Game.
First use Oct. 2, 1962.

SN 159,039. Brunswick-Union, Inc., Torrington, Conn. Filed Dec. 13, 1962.

UNION UNION HARDWARE

Owner of Reg. No. 205,743.
For Roller Skates, Roller Shoe Skates, Roller Skate Keys and Spare Parts.
First use in March 1959; in June 1924 in a different form.

SN 159,142. All-Fun Co., Denver, Colo. Filed Dec. 14, 1962.

TABLE-SOK

For Equipment Sold as a Unit for Playing a Table Soccer Game.
First use Nov. 16, 1962.

SN 159,228. Go-Go Research and Development, Inc., St. Louis, Mo. Filed Dec. 17, 1962.

GO-GO BALLS

In this application, applicant makes no claim to the word "Balls" apart from the mark as shown.
For Toy Consisting of Bouncing Balls Suspended From a Wand or the Like.
First use Sept. 28, 1962.

SN 159,486. Gillespie & Company of New York, Inc., New York, N.Y. Filed Dec. 20, 1962.

PRO 100

For Golf Clubs.
First use on or about Oct. 11, 1962.

SN 160,060. Knickerbocker Toy Co. Inc., Brooklyn, N.Y. Filed Jan. 2, 1963.

KNICKERBOCKER

Owner of Reg. No. 674,123.
For Stuffed Dolls, Stuffed Animals, Stuffed Toy Puppets, Marionettes and Mechanical Toys.
First use 1922.

SN 161,320. Field Enterprises, Inc., Chicago, Ill. Filed Jan. 24, 1963.

Macaroni Pony

No claim is made to the exclusive right to use "Pony."
For Stuffed Toy Animals.
First use Dec. 3, 1962.

SN 161,522. Morgan Ackley Johnson, d.b.a. Chipput Mfg. Co., Linwood, N.J. Filed Jan. 28, 1963.

Chipput

For Inflatable Golf Practice Target Ring.
First use Jan. 7, 1963.

SN 166,901. Hoover Ball and Bearing Company, Saline, Mich. Filed Apr. 17, 1963.



For Plastic Toy Ball and Bat Sets.
First use Feb. 27, 1963.

SN 167,875. Crisloid Plastics, Inc., Providence, R.I. Filed May 1, 1963.

HOLIDAY

For Apparatus Sold as a Unit for Playing a Roulette-Type Parlor Game.
First use Mar. 1, 1963.

SN 167,876. Crisloid Plastics Inc., Providence, R.I. Filed May 1, 1963.

GOLDEN NUGGET

For Apparatus Sold as a Unit for Playing a Roulette-Type Parlor Game.
First use Mar. 1, 1963.

SN 167,877. Crisloid Plastics Inc., Providence, R.I. Filed May 1, 1963.

SILVER DOLLAR

For Apparatus Sold as a Unit for Playing a Roulette-Type Parlor Game.
First use Mar. 1, 1963.

SN 167,878. Crisloid Plastics Inc., Providence, R.I. Filed May 1, 1963.

DIAMOND HORSESHOE

For Apparatus Sold as a Unit for Playing a Roulette-Type Parlor Game.
First use Mar. 1, 1963.

SN 167,879. Crisloid Plastics Inc., Providence, R.I. Filed May 1, 1963.

MR. LUCKY

For Apparatus Sold as a Unit for Playing a Roulette-Type Parlor Game.
First use Mar. 1, 1963.

SN 169,997. Stephen J. Vranes, Salt Lake City, Utah. Filed May 29, 1963.

MY LUCKY STAR

For Wooden Blocks for Children.
First use Nov. 15, 1962.

SN 171,167. J. J. Newberry Co., New York, N.Y. Filed June 17, 1963.

MARSHMALLOW BABY

No claim of exclusive right is made to "Baby" for dolls.
For Dolls.
First use May 27, 1963.

SN 171,183. Sifo Company, St. Paul, Minn. Filed June 17, 1963.

STRING A RING CONE

For Child's Toy Comprising a Series of Rings Removably Supported on a Base.
First use Jan. 1, 1960.

SN 171,184. Sifo Company, St. Paul, Minn. Filed June 17, 1963.

PEG TIME

For Educational Toy Clock Board for Teaching Children To Tell Time.
First use Jan. 1, 1962.

SN 171,807. Boone Bait Company, Incorporated, Winter Park, Fla. Filed June 19, 1963.

SAV-A-PAC

For Receptacles and Boxes Containing Fishing Lures, Lines, Leaders, Hooks, and Similar Fishing Gear Articles.
First use May 31, 1963.

SN 171,872. Hassenfeld Bros., Inc., Central Falls, R.I. Filed June 25, 1963.

COMMAND CANNON

No claim of exclusive right is made to "Cannon" for the goods recited.
For Toy Cannon and Target.
First use on or about Mar. 2, 1963.

SN 175,150. The Pioneer Rubber Company, Willard, Ohio. Filed Aug. 13, 1963.

QUALATEX

For Toy Balloons.
First use Dec. 1, 1955.

SN 175,255. Creme Lure Co., Akron, Ohio. Filed Aug. 19, 1963.

COIL DANCER

For Fishing Lures.
First use Aug. 2, 1963.

SN 175,298. Richard G. Krueger, Inc., New York, N.Y. Filed Aug. 19, 1963.

SKEETS

For Toys—Namely, a Plush Animal Toy.
First use Apr. 15, 1962.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

SN 142,477. H. Nielsen og Son Maskinfabrik A/S, Copenhagen, Denmark. Filed Mar. 15, 1962.

VIANOVA

For Cranes and Magnetic Type Lifting and Handling Apparatus.
First use Dec. 5, 1961; in commerce Dec. 5, 1961.

SN 155,205. Stamicarbon, N.V., Heerlen, Netherlands. Filed Oct. 15, 1962.

BOKO

Owner of Dutch Reg. No. 139,852, dated Feb. 3, 1961.
For Mechanical Apparatus for Separating Solid Materials Such as Ores, Coal and Minerals.

SN 163,211. Antares S.p.A., Milan, Italy. Filed Feb. 21, 1963.

antares

Priority claimed under Sec. 44(d) on Italian application filed Aug. 27, 1962; Reg. No. 161,953, dated July 19, 1963.
For Typewriters and Parts Thereof.
Subj. to Intf. with SN 179,724.

SN 163,944. Hub Floral Manufacturing Company, Boston, Mass. Filed Mar. 5, 1963.

BANNER

For Florists' Knives.
First use about 1959.

SN 165,515. Nicholson Manufacturing Company, Auburn, Wash. Filed Apr. 1, 1963.

HANSEL

For Wood Chippers and Log Barkers.
First use in July 1952.

SN 168,401. Dyna-Therm Corporation, Houston, Tex. Filed May 8, 1963.



The drawing is lined for the color red or pink.
For Entrainment Separators for Gases and Vapors.
First use Oct. 25, 1962.

SN 169,151. Mechanical Enterprises, Inc., Alexandria, Va. Filed May 17, 1963.

DOUBLEBOLD

For Typewriter Attachment for Producing Boldface Type.
First use Mar. 13, 1963.

SN 173,280. Outboard Marine Corporation, Waukegan, Ill. Filed July 18, 1963.

SKI-TWIN

Owner of Reg. No. 747,216.
For Outboard Motors.
First use June 15, 1963.

SN 173,748. Economics Laboratory, Inc., St. Paul, Minn. Filed July 25, 1963.

KLENZ-JECT

Owner of Reg. No. 747,959.
For Lubricant Dispenser.
First use May 23, 1963.

SN 176,166. Crown Cork & Seal Company, Inc., Philadelphia, Pa. Filed Sept. 3, 1963.



Owner of Reg. Nos. 366,927 and 526,397.
For Machinery—Namely, Bottle Filler-Crowners, Flat Top Can Fillers, Conveyors, Electronic Bottle Inspection Equipment, Milk Filler Cappers, Paper Carton Fillers, Vacuum Lug Cappers, Cap Tightening Machines, Rotary Nitrogen Purging Machines, Syruper-Filler-Crowners, Saturators, Syrup Coolers, Tumbler and Vibrating Mixers, Palletizers, Loaders and Unloaders, Blender-Cooler-Carbonators and Water Coolers.
First use May 12, 1961.

SN 176,513. Formed Container Corporation, Orangeburg, N.Y. Filed Sept. 9, 1963.

FORMLINE

For Plastic Film Sealing Machine.
First use on or about May 16, 1961.

SN 176,514. Formed Container Corporation, Orangeburg, N.Y. Filed Sept. 9, 1963.



Owner of Reg. No. 713,326.
For Plastic Film Sealing Machine.
First use on or about May 16, 1961.

SN 176,655. R. A. Hanson Co., Inc., Palouse, Wash. Filed Sept. 10, 1963.

RAHCO

For Canal and Highway Construction Machinery—Namely, Grading and Trimming Machines, Concrete Lining Machines.
First use in March 1961.

SN 176,863. Diamond National Corporation, New York, N.Y. Filed Sept. 10, 1963.

DIAMOND

For Tableware, Made of Plastic, Including Knives, Forks and Spoons.
First use Feb. 5, 1963.

SN 176,864. Aldens, Inc., Chicago, Ill. Filed Sept. 13, 1963.

ALDENS Taper craft

For Electric Hair Clippers and Parts Thereof.
First use July 1, 1963.

SN 177,519. Fraser's, Inc., New York, N.Y. Filed Sept. 23, 1963.

MOTION

For Stainless Steel Flatware—Namely, Knives, Forks and Spoons.
First use in or about May 1955.

SN 177,714. Marson Corporation, Revere, Mass. Filed Sept. 25, 1963.

BIG DADDY

For Hand Tools—Namely, Adjustable File Holders.
First use June 3, 1963.

SN 178,567. Seneca Falls Machine Company, Seneca Falls, N.Y. Filed Oct. 8, 1963.

SFM

Owner of Reg. No. 668,311.
For Lathes, Including Automatic, Semi-Automatic and Tracer Lathes, Centering Machines, Boring Machines; and Electronic Devices and Automation Equipment—Namely, Tracer and Tape Control Systems, for Machines and Components Thereof.
First use March 1962 on lathes.

SN 178,857. Allied Steel & Tractor Products, Inc., Cleveland, Ohio. Filed Oct. 14, 1963.

TREN-SHORE

For Adjustable Aluminum Hydraulic Assembly for Trench Shoring and Bracing.
First use Mar. 17, 1963.

Class 26—Measuring and Scientific Appliances

SN 148,408. John Fluke Manufacturing Co., Inc., Mountlake Terrace, Wash., assignee of Montronics, Inc., Bozeman, Mont. Filed July 5, 1962.

MONTRONICS

For Measuring and Communications Equipment—Namely, Frequency Standards, Frequency Comparators, Frequency Synthesizers and Distribution Amplifiers.
First use Jan. 25, 1962.

Class 27—Horological Instruments

SN 172,105. S. & D. Jewelry Manufacturing Co. Inc., d.b.a. SD Watch Case Co., New York, N.Y. Filed June 28, 1963.

SD W. CASE CO.

The term "Case" is disclaimed apart from the mark as shown.
For Watches and Watchcases.
First use Jan. 5, 1928.

Class 28—Jewelry and Precious-Metal Ware

SN 171,581. Samuel C. Steinmann, d.b.a. Interstate Jewelry Manufacturing Company, New York, N.Y. Filed June 21, 1963.

·IS·

For Wedding Rings.
First use January 1947.

SN 175,716. Janet M. Boyd, d.b.a. Janet E. Boyd, Walpole, Mass. Filed Aug. 26, 1963.

CITRUS GROVE

For Jewelry.
First use Jan. 24, 1958.

SN 175,717. Janet M. Boyd, d.b.a. Janet E. Boyd, Walpole, Mass. Filed Aug. 26, 1963.

BLUEBERRY

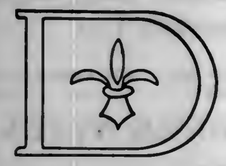
For Jewelry.
First use July 31, 1957.

SN 175,718. Janet M. Boyd, d.b.a. Janet E. Boyd, Walpole, Mass. Filed Aug. 26, 1963.

CRANBERRY

For Jewelry.
First use May 30, 1956.

SN 176,241. Shields Inc. of Attleboro, Mass., Attleboro, Mass. Filed Sept. 3, 1963.



For Men's Jewelry.
First use Jan. 23, 1963.

SN 179,341. The International Silver Company, Meriden, Conn. Filed Oct. 18, 1963.



Owner of Reg. No. 183,369.
For Sterling Silver Hollowware, Such as Candelabra, Tea and Coffee Sets, Trays, Chalices, and Vases.
First use Mar. 1, 1949.

SN 179,791. Maurice Harris, d.b.a. I. Harris & Son, Chicago, Ill. Filed Oct. 25, 1963.



For Jewelry for Personal Use.
First use Apr. 30, 1963.

SN 180,122. Cecile M. Roach, d.b.a. Rosecraft Studios, Chicago, Ill. Filed Oct. 30, 1963.

ROSECRAFT

For Rosaries.
First use May 31, 1963.

SN 180,123. Cecile M. Roach, d.b.a. Rosecraft Studios, Chicago, Ill. Filed Oct. 30, 1963.



For Rosaries.
First use May 31, 1963.

SN 180,164. American Bracelet & Chain Co., Inc., New York, N.Y. Filed Oct. 31, 1963.

ABC

For Jewelry Bracelets and Chains.
First use August 1946.

SN 180,202. Artur Hermann, d.b.a. Firma Artur Hermann, Pforzheim, Germany. Filed Oct. 31, 1963.

AHa

For Genuine and Imitation Jewelry—Namely, Bracelets, Bangles, Necklaces, Pins, Brooches, Ear Clips, Finger Rings, Cuff Links, and Key Chains of Precious Metal.
First use Nov. 18, 1956; in commerce July 1, 1957, on bangles, brooches, and pins.

Class 31 — Filters and Refrigerators

SN 163,290. Union Tank Car Company, Chicago, Ill. Filed Feb. 21, 1963.

POWDEX

For Ion Exchange Resins.
First use Apr. 27, 1962.

Class 32 — Furniture and Upholstery

SN 155,107. W. & J. Sloane, Inc., New York, N.Y. Filed Oct. 12, 1962.

Fredericksburg

For Tables, Chairs, Beds, Sofas, Buffets, China Cabinets, Servers, Dressers, Chests and Night Tables.
First use Mar. 25, 1962.

Class 33 — Glassware

SN 120,498. Continental Air Lines, Inc., Denver, Colo. Filed May 22, 1961.

CONTINENTAL AIRLINES

Owner of Reg. No. 562,047.
For Glassware—Namely, Glass Tumblers, Brandy Snifters and Champagne Glasses.
First use on or about Aug. 25, 1941.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 159,585. Special Chemicals Corporation, Ossining, N.Y. Filed Dec. 20, 1962.

KWIK FLUX

The suffix "Flux" is disclaimed apart from the mark as shown, but without disclaiming any common-law rights in any part of the mark as a whole.
For Soldering and Brazing Fluxes.
First use October 1937.

SN 179,333. Eutectic Welding Alloys Corporation, Flushing, N.Y. Filed Oct. 18, 1963.

EUTECALOY

For Gas Torches Used for Spray Depositing of Metal Coatings, Parts and Accessories Therefor, and Metal Powders for Use Therewith.
First use Sept. 30, 1963.

SN 179,389. American Motors Corporation, Detroit, Mich. Filed Oct. 21, 1963.

KELVINATOR

Owner of Reg. No. 142,652.
For Dehumdifiers.
First use in or before 1950.

SN 179,507. Liberty Distributors, Philadelphia, Pa. Filed Oct. 21, 1963. COLLECTIVE MARK.

FANMASTER

Owner of Reg. No. 681,748.
For Air Conditioning Units, Air Humidifiers, Air De-Humidifiers, Air Purifying Devices, Cooking Equipment, Dampers and Louvers, Exhaust Fans, Fans and Blowers and Fire Place Equipment.
First use Sept. 10, 1963.

SN 179,536. Humble Oil & Refining Company, Houston, Tex. Filed Oct. 22, 1963.

MAGIC-GRID

For Oil Burner Flame Regulator.
First use Dec. 22, 1961.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 157,408. Seiberling Rubber Company, Barberton, Ohio. Filed Nov. 16, 1962.

SUPREME NYTEX 150

No claim is made to the word "Supreme" apart from the mark as shown. Owner of Reg. No. 722,584.
For Pneumatic Rubber Tires.
First use Oct. 18, 1962; Jan. 13, 1961, as to "Nytex."

Class 37 — Paper and Stationery

SN 121,801. The Mead Corporation, Dayton, Ohio. Filed June 2, 1961.

SUPER SIX

For Advertising Folders Containing Samples of Paper.
First use Oct. 4, 1960.

SN 157,344. S. D. Warren Company, Boston, Mass. Filed Nov. 15, 1962.

THINTEXT

Owner of Reg. No. 155,114.
For Printing Paper.
First use on or before Nov. 25, 1920.

SN 171,809. S. E. Rykoff & Co., Los Angeles, Calif. Filed June 25, 1963.

SILVER REY

Owner of Reg. No. 669,678.
For Paper Napkins.
First use July 14, 1961.

Class 38 — Prints and Publications

SN 96,052. True Temper Corporation, Cleveland, Ohio. Filed Apr. 28, 1960.

TT

For Printed Material—Namely, Catalogues and Catalogue Inserts.
First use May 3, 1954.

SN 153,604. Lew Svendsgaard, Berkeley, Calif. Filed Sept. 20, 1962.

MR. MOPPS'

For Children's Books and Catalogues of Children's Books.
First use on or about May 15, 1962.

SN 154,064. Show Window, Inc., New York, N.Y. Filed Sept. 27, 1962.

SHOW WINDOW

For Printed Advertising and Merchandising Leaflets (Direct Mail Pieces) and Catalogs.
First use Aug. 20, 1962.

SN 158,878. Henry Reichman, New York, N.Y., assignee of Henry Reichman, Inc., New York, N.Y. Filed Dec. 3, 1962.

HIT 100

For Printed Coupons or Tokens for Promotional Use by Others To Encourage, Facilitate and Stimulate the Sale of Their Goods.
First use May 31, 1962.

SN 158,879. Henry Reichman, New York, N.Y., assignee of Henry Reichman, Inc., New York, N.Y. Filed Dec. 3, 1962.

SPLIT THE DOLLAR

For Printed Coupons or Tokens for Promotional Use by Others To Encourage, Facilitate and Stimulate the Sale of Their Goods.
First use Aug. 8, 1962.

SN 160,073. Rust Craft Greeting Cards, Inc., Dedham, Mass. Filed Jan. 2, 1963.

RUST CRAFT

Owner of Reg. Nos. 341,828, 513,684, and 514,475.
For Greeting Cards and Valentines.
First use Dec. 19, 1962.

SN 161,722. Modern Displays, Inc., Detroit, Mich. Filed Jan. 30, 1963.

ULTRA-GLO

For Printed Advertising Posters Which Fluoresce When Illuminated by Ultraviolet Black Light.
First use Dec. 15, 1962.

SN 167,693. Barker Greeting Card Company, Cincinnati, Ohio. Filed Apr. 29, 1963.

BARKER

For Greeting Cards and Valentines.
First use August 1947.

SN 167,963. Gustav Wohl, Providence, R.I. Filed May 1, 1963.

COLOROID

For Photographic Prints Made by Copying Photographs, Drawings and Paintings of People, Animals, Scenery, Architecture and Sculptured Articles.
First use May 20, 1957, on photographic prints.

SN 172,809. Green & Green, Inc., Houston, Tex. Filed July 2, 1963.

DARIGRAM

For Printed Newsletters and Printed Advertisements.
First use June 27, 1963.

SN 172,763. Norcross, Inc., New York, N.Y. Filed July 10, 1963.

SHAGGYDOG

For Greeting Cards.
First use Aug. 8, 1962.

SN 172,800. The Board of Christian Education of the Presbyterian Church in the United States, d.b.a. The CLC Press, Richmond, Va. Filed July 11, 1963.



For Books and Booklets.
First use June 6, 1963.

SN 172,810. The D-P Corporation, Bethesda, Md. Filed July 11, 1963.

COAL—TODAY AND TOMORROW

For Periodical Published Monthly.
First use June 1963.

SN 172,923. The Magnesium Association, Detroit, Mich. Filed July 12, 1963.



For Periodical Publications.
First use December 1944.

SN 173,228. Color Corporation of America, Tampa, Fla. Filed July 18, 1963.

c|c|a dyescan

Owner of Reg. No. 733,805.
For Photographic Color Prints and Transparencies.
First use March 1959.

SN 173,229. Color Corporation of America, Tampa, Fla. Filed July 18, 1963.

Col-Cor-a -GRAMS

Owner of Reg. No. 704,976.
For Photographic Color Prints and Transparencies.
First use March 1959.

SN 173,595. Popular Library, Inc., New York, N.Y. Filed July 23, 1963.

SCREENLAND

For Magazine.
First use January 1953.

SN 173,596. Popular Library, Inc., New York, N.Y. Filed July 23, 1963.

SILVER SCREEN

For Magazine.
First use January 1953.

SN 173,827. The Congressional Digest Corporation, Washington, D.C. Filed July 26, 1963.

CONGRESSIONAL DIGEST

Owner of Reg. No. 407,564.
For Monthly Publication.
First use Feb. 1, 1922.

SN 173,984. The Tribune Company, Chicago, Ill. Filed July 29, 1963.

CHICAGO TRIBUNE

Owner of Reg. Nos. 172,059 and 173,669.
For Newspaper and Newspaper Supplements.
First use Jan. 1, 1963; June 1847 in another display.

Class 39—Clothing

SN 162,840. Karaway, Inc., New York, N.Y. Filed Feb. 15, 1963.

BREEZETTE

For Ladies' Hair Bonnets.
First use April 1960.

SN 163,958. Patrick Industries, Inc., New York, N.Y. Filed Mar. 5, 1963.

Elizabeth Ann

"Elizabeth Ann" is fanciful and does not refer to any living person known to applicant.
For Children's, Misses' and Women's Hosiery, Tights, Foot Socks, and Lounging Slippers.
First use in May 1961.

SN 170,306. Genesco Inc., Nashville, Tenn. Filed June 4, 1963.

LIFE TOUCH

Owner of Reg. Nos. 382,708, 575,012, and 634,896.
For Brassieres and Girdles.
First use Apr. 30, 1963.

SN 170,650. M.K.M. Knitting Mills, Inc., Manchester, N.H. Filed June 10, 1963.

HAPPINESS IS A DARLENE SWEATER

The word "Sweater" is disclaimed except as used with the rest of the mark. Owner of Reg. Nos. 515,362, 675,033, and others.
For Ladies' Sweaters.
First use Apr. 19, 1963.

Class 40—Fancy Goods, Furnishings, and Notions

SN 164,041. Hero Manufacturing Company, Inc., Middleboro, Mass. Filed Mar. 6, 1963.

"FORGET-ME-NOT"

For Counting and Measuring Devices Employed in the Process of Hand Knitting—Namely, Cards Having a Ruled Edge, a Stitch Length Check and a Plurality of Finger Actuatable Numbered Discs for Use in Keeping a Stitch Count.
First use on or about Feb. 8, 1963.

SN 177,807. Pro-phy-lac-tic Brush Company, Florence, Mass. Filed Sept. 26, 1963.

PRO

Owner of Reg. Nos. 349,120, 562,333, and others.
For Combs.
First use Dec. 5, 1961.

Class 44—Dental, Medical, and Surgical Appliances

SN 172,833. The Meditron Company, El Monte, Calif. Filed July 11, 1963.

MEDITRON

Owner of Reg. No. 535,665.
For Electromyographs, Muscle Trainers, Nerve Locator-Stimulators, Chronaximeters, Surgical Stimulators, Internal Cardiac Defibrillators, and Items—Namely, Needle Electrodes, Surface Electrodes, Electrical Cables Connecting the Patient to the Instrument, Camera and Tape Recorder Accessories, Handbooks and Operating Manuals.
First use September 1945 on chronaximeters and cables.

Class 46—Foods and Ingredients of Foods

SN 104,639. Rockwood Chocolate Co., Inc., Brooklyn, N.Y. Filed Sept. 16, 1960.

PLAY MONEY

For Candy.
First use on or about Jan. 27, 1950.

SN 139,641. Langis Laboratories Limited, Vancouver, British Columbia, Canada. Filed Mar. 12, 1962.

CHICKEN-IN-A-MUG

Applicant disclaims any exclusive use of the word "Chicken" apart from the mark as shown. Owner of Canadian Reg. No. 117,419, dated Apr. 1, 1960.
For Instantly Soluble Dehydrated Chicken Broth.
First use January 1948; in commerce Feb. 12, 1962.

SN 140,346. A. Gazzoni & C., Bologna, Italy. Filed Mar. 21, 1962.



The words "Marca di Fabbrica" mean "trademark" in the Italian language and are disclaimed apart from the mark as shown. Priority claimed under Sec. 44(d) on Italian application filed Jan. 4, 1962; Reg. No. 158,906, dated Apr. 16, 1962.
For Infants' and Invalids' Foods—Namely, Canned and Bottled Strained, Mashed and Cooked Fruits, Vegetables, Meats, and Combinations Thereof, Tablets Containing Flavorings and Sweeteners and Powders Consisting of Flavorings and Sweeteners Both Used for Flavoring and Sweetening Food and Drinking Water.

SN 146,498. The W. E. Long Co. Independent Bakers' Cooperative, Chicago, Ill. Filed June 8, 1962. COLLECTIVE MARK.

CALICO

For Baked Goods—Namely, Bread, Buns, Rolls, Donuts, Muffins, Pies, Cakes, Bread Crumbs, Croutons-Stuffing, Cookies, Crackers, Biscuits, French Toast, Melba Toast, Bread Sticks, Turn-Overs, Patty Shells, Pretzels; Puddings; and Mixes for Bread, Rolls, Cake, Pastry, Donuts, Biscuits and Muffins.
First use June 6, 1962.

SN 148,312. Israel Kosher Sausage Co., Philadelphia, Pa. Filed July 3, 1962.

ISRAEL KOSHER

Applicant disclaims the word "Kosher" alone and apart from the word "Israel."
For Cured and Processed Meats—Namely, Beef Bologna, Beef Salami, and Kosher Pastrami.
First use on or about Jan. 27, 1950.

SN 149,242. Atlantor h.f., Reykjavik, Iceland. Filed July 12, 1962.



Priority claimed under Sec. 44(d) on Iceland application filed June 6, 1962; Reg. No. 161/1962, dated Nov. 10, 1962.
For Quick-Frozen Fish Fillets in the Form of Blocks, Lobster Tails in the Shell, Lobster Tails, Peeled Whole Herring, Herring Fillets, Peeled Shrimp and Clam Meat.

SN 149,361. The Coca-Cola Company, Atlanta, Ga. Filed July 19, 1962.

CHIME

For Frozen Concentrated Orange Juice and Frozen Concentrated Tangerine Juice.
First use June 28, 1962.

SN 150,483. Aaron Weiser, d.b.a. Colombia Philadelphia Coffee Co., Philadelphia, Pa. Filed Aug. 3, 1962.

COLOMBIA C-P PHILADELPHIA

Applicant disclaims any exclusive rights in the name "Colombia" and in the name "Philadelphia" apart from the mark as shown.
For Coffee.
First use May 29, 1962.

SN 153,840. United Biscuit Company of America, Melrose Park, Ill. Filed Sept. 24, 1962.

CLUB

For Crackers.
First use Dec. 15, 1932.

SN 155,828. Needham Packing Company, Inc., Sioux City, Iowa. Filed Oct. 24, 1962.

FLAVORLAND

For Fresh and Frozen Meats.
First use Oct. 4, 1962.

SN 156,378. Community Shops Inc., d.b.a. Grand Bakeries, Chicago, Ill. Filed Nov. 1, 1962.

HOLIDAY HOUSE

For Fruit Cakes and Other Cakes.
First use Sept. 4, 1962.

SN 158,490. Yamasa Shoyu Kabushiki Kaisha, d.b.a. Yamasa Shoyu Co., Ltd., Choshi-shi, Chiba-ken, Japan. Filed Mar. 6, 1963.

FLAVE

Owner of Japanese Reg. No. 595,619, dated Aug. 24, 1962.
For All-Purpose Food Seasonings and Spices.

SN 159,196. Bonda's Veevoederfabriek "Provimi" N.V., Rotterdam, Netherlands. Filed July 24, 1963.

PROVIKALF

Owner of Dutch Reg. No. 141,306, dated July 10, 1961; and U.S. Reg. No. 735,018.
For Foodstuffs for Animals, Cattle Fodder, Poultry Food, and Vitamin Preparations for Mixing With These Foodstuffs.

SN 159,197. Bonda's Veevoederfabriek "Provimi" N.V., Rotterdam, Netherlands. Filed July 24, 1963.

PROVILAT

Owner of Dutch Reg. No. 141,484, dated July 27, 1961; and U.S. Reg. No. 735,018.
For Foodstuffs for Animals, Cattle Fodder, and Poultry Food.

SN 160,245. Mendes Bros., San Antonio, Tex. Filed Jan. 4, 1963.

BLUE QUAIL

For Fresh Onions.
First use at least as early as Dec. 31, 1958.

SN 160,778. Hain Pure Food Company, Inc., Los Angeles, Calif. Filed Jan. 16, 1963.

HAIN Pure FOODS

No claim is made to the wording "Pure Foods" except in the association shown.
For Nut Butters; Raw Sesame Butter; Canned Fruit Juices; Canned Vegetable Juices; Vinegar; Almond Oil; Avocado Oil; Cocoanut Oil; Corn Oil; Garlic Oil; Olive Oil for Culinary Purposes; Peanut Oil; Rice Bran Oil; Safflower Seed Oil; Sesame Seed Oil; Soy Oil; Sunflower Seed Oil; Wheat Germ Oil; Banana Flakes; Sea Salt; Vegetable Seasoned Salt; Margarine; Mayonnaise; and Agar; Food Supplements in Capsule Form—Namely, Wheat Germ Capsules and Oil of Garlic Capsules.
First use as early as 1938 on carrot juice.

SN 160,858. Foremost Dairies, Inc., San Francisco, Calif. Filed Jan. 17, 1963.

AUTUMN HARVEST

Owner of Reg. No. 741,701.
For Creamed Cottage Cheese.
First use Oct. 18, 1962.

SN 163,057. La Vie Products, Inc., New York, N.Y. Filed Feb. 19, 1963.

la Vie

A translation of the French words "La Vie" is "the life."
For Sour Dough Bread.
First use Nov. 30, 1962.

SN 164,412. Nappanee Milling Company, Inc., Nappanee, Ind. Filed Mar. 8, 1963.

NAPIANA

For Livestock and Poultry Feeds; Domestic Animal, Specifically Horse, Rabbit and Guinea Pig, Feeds; and Domestic Bird Pet, Specifically Pigeon Feeds.
First use Apr. 14, 1941.

SN 166,974. Cargill, Incorporated (Delaware corporation—new corporation), Minneapolis, Minn., assignee of Cargill, Incorporated (Delaware corporation), Minneapolis, Minn. Filed Apr. 18, 1963.

SOW-15

Owner of Reg. No. 618,346.
For Feed for Female Swine Enriched With Vitamins and Antibiotics.
First use Jan. 9, 1962.

SN 167,696. R. C. Bigelow, Inc., Norwalk, Conn. Filed Apr. 29, 1963.

Lemon Lift

The word "Lemon" is disclaimed apart from the mark as shown.
For Tea.
First use Apr. 17, 1963.

SN 167,967. Wilson & Co. Inc., Chicago, Ill. Filed May 1, 1963.

POPS

For Fried Bacon Rinds and Fried Pork Rinds.
First use March 1954.

SN 169,177. Mimi L. Schuelein, d.b.a. Vegex Company, New York, N.Y. Filed May 17, 1963.

BONANZA

For Meat Additive—Namely, Enzyme Tenderiser.
First use Sept. 25, 1962.

SN 170,446. American Home Products Corporation, New York, N.Y. Filed June 6, 1963.

PEANUT POP

Applicant disclaims the word "Peanut" apart from the mark as a whole.
For Puffed Peanuts.
First use May 23, 1963.

SN 170,758. Nappanee Milling Company, Inc., Nappanee, Ind. Filed June 11, 1963.

NAPIANA

The drawing is lined for the color green, but no claim to color is made.
For Livestock and Poultry Feeds; Domestic Animals, Specifically Horse, Rabbit and Guinea Pig, Feeds; and Domestic Birds, Specifically Pigeon Feeds.
First use Apr. 14, 1941.

SN 171,138. Horne's Enterprises, Inc., d.b.a. Horne's, Bayard, Fla. Filed June 17, 1963.

HORNE'S

Owner of Reg. Nos. 724,295 and 782,262.
For Fruit Marmalades, Fruit Jellies, Fruit Conserves, Nut Conserves, Toasted and Salted Nuts, Candies, Cookies, and Sandwiches.
First use January 1960; Dec. 19, 1947, as to "Horne's."

SN 171,814. Colorado Potato Growers' Exchange, Denver, Colo. Filed June 19, 1963.

MONOGRAM CPG

For Potatoes in Their Natural State.
First use on or about June 1, 1950.

SN 172,632. Barr Packing Company, Sanger, Calif. Filed July 9, 1963.

DAISY

Owner of Reg. No. 326,864.
For Fresh Deciduous Fruits, Pomegranates, Persimmons, and Grapes.
First use May 1, 1912.

SN 172,665. Japan Food Corporation, San Francisco, Calif. Filed July 9, 1963.

MISONNAISE

For Salad Dressing.
First use Mar. 31, 1963.

SN 172,982. Evans Honey & Olive Co., Inc., d.b.a. Evans Honey Co., Inc., Los Angeles, Calif. Filed July 15, 1963.

DELI-PAK

For Bottled Pickled Olives, Pearl Onions, Celery, Peppers, and Combination Vegetables and Olives Condiment.
First use June 19, 1963.

SN 173,184. Emmet J. Purcell, d.b.a. Island Sun Company, San Francisco, Calif. Filed July 17, 1963.

GREEN ISLAND FARMS

For Canned Vegetables.
First use on or about Jan. 17, 1963.

SN 173,232. Corn Products Company, New York, N.Y. Filed July 18, 1963.

AMIGOLD

Owner of Reg. No. 408,490.
For Corn Gluten for Food Purposes.
First use at least as early as June 1, 1962.

SN 174,816. American Sugar Company, New York, N.Y. Filed Aug. 12, 1963.

BROWNULATED

For Sugar.
First use June 28, 1963.

SN 175,393. Daitch Crystal Dairies, Inc., New York, N.Y. Filed Aug. 20, 1963.

shop·mor

Owner of Reg. Nos. 634,423 and 634,424.
For Canned Tomatoes.
First use June 5, 1963.

SN 175,407. Geo. A. Hormel & Company, Austin, Minn. Filed Aug. 20, 1963.

RANGE BRAND

For Bacon.
First use Aug. 1, 1955.

SN 175,415. The Kroger Co., Cincinnati, Ohio. Filed Aug. 20, 1963.

GOLD CREST

For Candy.
First use July 5, 1963.

SN 176,140. Alexander Marketing Company, San Benito, Tex. Filed Sept. 3, 1963.

ALEXANDER'S

Owner of Reg. No. 226,096.
For Fresh Vegetables and Melons.
First use May 7, 1926.

SN 176,184. Fruit Products Corporation, New York, N.Y. Filed Sept. 3, 1963.

JET MISSLE

Owner of Reg. No. 657,234.
For Frozen Confections on Sticks and Liquid Concentrates for Making the Same.
First use May 17, 1963.

SN 176,248. Russell Street, Whitefish, Mont. Filed Sept. 3, 1963.

THE BIG mountain Touch O' Magic

For Dry Granular All-Purpose Food Seasoning.
First use Dec. 5, 1962.

SN 176,249. Sunshine Biscuits, Inc., Long Island City, N.Y. Filed Sept. 3, 1963.

Krun·chee

Owner of Reg. No. 717,649.
For Potato Chips, Corn Chips, and Pretzels.
First use Mar. 18, 1963.

SN 176,609. Armour and Company, Chicago, Ill. Filed Sept. 10, 1963.

GOLDEN STAR

Owner of Reg. No. 713,925.
For Cooked Ham.
First use Sept. 3, 1963.

SN 176,610. Armour and Company, Chicago, Ill. Filed Sept. 10, 1963.



Owner of Reg. Nos. 513,558, 617,944, and 713,925.
For Cooked Ham.
First use Sept. 3, 1963.

SN 178,404. Baxter Laboratories, Inc., Morton Grove, Ill. Filed Oct. 7, 1963.

RE-TAIN

For Enzyme Preparations for Use in the Food Industry.
First use Sept. 26, 1963.

SN 178,445. Gooch Food Products Company, Lincoln, Nebr. Filed Oct. 7, 1963.



The drawing is lined for the color red. The name "Martha Gooch" is fictitious.
For Macaroni and Cheese Dinners, Macaroni, Noodles.
First use Sept. 25, 1963.

SN 178,451. Hygrade Food Products Corporation, Detroit, Mich. Filed Oct. 7, 1963.

HOTCAKE

For Sliced Bacon, Pork Sausage, Canadian Bacon and Smoked Ham.
First use Sept. 5, 1963.

SN 178,452. Hygrade Food Products Corporation, Detroit, Mich. Filed Oct. 7, 1963.

PANCAKE

For Sliced Bacon, Pork Sausage, Canadian Bacon and Smoked Ham.
First use Sept. 5, 1963.

SN 178,467. Mr. Twisters Bretzel Co., Inc., North White Plains, N.Y. Filed Oct. 7, 1963.

BEER BARRELS

For Pretzels.
First use June 27, 1962.

SN 178,629. The Nestle Company, Inc., White Plains, N.Y. Filed Oct. 9, 1963.

TOLL HOUSE

Owner of Reg. Nos. 378,301, 734,286, and others.
For Prepared Edible Chocolate.
First use Sept. 23, 1963.

SN 178,706. Kadiak Fisheries Company, Seattle, Wash. Filed Oct. 10, 1963.

ZEST

For Canned Salmon.
First use May 5, 1928.

SN 178,716. Nebraska Consolidated Mills Company, Omaha, Nebr. Filed Oct. 10, 1963.



For Flour.
First use April 1962.

SN 178,814. Phoenix Candy Co., Inc., Brooklyn, N.Y. Filed Oct. 11, 1963.

VIGNETTES

For Candy.
First use Oct. 1, 1963.

SN 179,020. Bowman Dairy Company, Chicago, Ill. Filed Oct. 15, 1963.

LO-HI

For Liquid Milk.
First use Oct. 1, 1963.

SN 179,216. Farmers Co-Operative Commission Co., Hutchinson, Kans. Filed Oct. 17, 1963.

FCC

For Cereal Grains.
First use Aug. 20, 1963.

SN 179,321. Thomas A. Creager, d.b.a. Central Michigan Foods, Owosso, Mich. Filed Oct. 18, 1963.

SCOT PRIDE

For Instant Mashed Potatoes.
First use Feb. 26, 1963.

SN 179,390. Atkinson Candy Company, Lufkin, Tex. Filed Oct. 21, 1963.



For Candy.
First use 1953.

SN 179,391. Atkinson Candy Company, Lufkin, Tex. Filed Oct. 21, 1963.

CHICK-O-STICK

For Candy.
First use 1953.

Class 47 — Wines

SN 122,286. Di Giorgio Fruit Corporation, d.b.a. Santa Fe Wine Company, San Francisco, Calif. Filed June 19, 1961.

VINO ROYAL

"Vino" is the Italian word for "wine." Applicant claims no exclusive rights in "Vino" as the name of the goods identified herein.
For Wines.
First use Jan. 3, 1961.

SN 165,654. Giovanni Cappelli, d.b.a. Montagliari e Castellinuzza, Panzano Chianti, Italy. Filed Mar. 28, 1963.

CAPPELLI

For Wine.
First use Aug. 22, 1940; in commerce Aug. 22, 1940.

SN 174,243. Schenley Industries, Inc., d.b.a. Weston Winery, New York, N.Y. Filed Aug. 1, 1963.

COVENANT

For Wines.
First use July 2, 1963.

Class 49 — Distilled Alcoholic Liquors

SN 160,790. Licoreria Roses Inc., Arecibo, Puerto Rico. Filed Jan. 16, 1963.



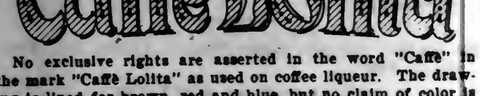
The words "Ron Rey" may be translated in English as "king rum." Reserving all common law rights, applicant disclaims exclusive right to the word "Ron" and to the word "Rums" apart from the mark as shown.
First use Dec. 1, 1962; May 1936 as to "Ron Rey"; and July 23, 1937, as to "Ron Rey" and "The King of Rums."

SN 170,598. Barton Distilling Company, Chicago, Ill. Filed June 10, 1963.

MONTEZUMA

For Tequila.
First use May 23, 1963.

SN 172,471. Continental Distilling Corporation, Philadelphia, Pa. Filed July 5, 1963.



No exclusive rights are asserted in the word "Caffè" in the mark "Caffè Lolita" as used on coffee liqueur. The drawing is lined for brown, red and blue, but no claim of color is asserted.
For Coffee Liqueur.
First use June 12, 1963.

SN 182,327. Gilmore & Co., South San Francisco, Calif. Filed Dec. 4, 1963.

BOLSHOI

For Vodka.
First use September 1959.
Subj. to Intf. with SN 164,643.

Class 50 — Merchandise Not Otherwise Classified

SN 144,796. Aladdin Industries, Incorporated, Nashville, Tenn. Filed May 17, 1962.

LOX-ON

Owner of Reg. No. 553,706.
For Closures and Stoppers for Vacuum Bottles.
First use on or about Jan. 1, 1957.

SN 158,993. Floyd L. Neidlinger, d.b.a. East Akron Tarpaulin & Awning Co., Akron, Ohio. Filed Dec. 12, 1962.

FLEX-A-BACK

For Tarpaulins for Use on Trucks.
First use Apr. 7, 1962.

SN 163,944. Hub Floral Manufacturing Company, Boston, Mass. Filed Mar. 5, 1963.

BANNER

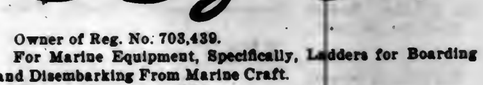
For Corsage Pins, Artificial Floral Ornaments Including Wreaths, and Artificial Flowers.
First use 1954.

SN 166,033. The Pear Tree, Inc., Bryn Mawr, Pa. Filed Apr. 3, 1963.



For Ornaments—Namely, Articles Made of China, Glass, Porcelain, Wood and Wrought Iron Comprising Any Article That Has Primarily or Essentially an Ornamental Purpose or Effect.
First use in October 1960.

SN 166,546. Garelick Mfg. Co., St. Paul Park, Minn. Filed Apr. 11, 1963.



Owner of Reg. No. 703,439.
For Marine Equipment, Specifically, Ladders for Boarding and Disembarking From Marine Craft.
First use September 1952.

SN 170,762. Cedric N. Pursifull, d.b.a. Cedric Pursifull Sales and Service, Huntington, Ind. Filed June 11, 1963.

PURS-FULL

For Mobile House for Rearing Livestock Such as Swine and the Like.
First use on or about July 23, 1962.

SN 175,761. Max Kats Bag Co., Inc., Indianapolis, Ind. Filed Aug. 26, 1963.

BURCO

For Concrete Curing Mats.
First use Aug. 14, 1963.

SN 175,933. Pawling Rubber Corporation, Pawling, N.Y. Filed Aug. 28, 1963.

PARCO-LINK

Owner of Reg. No. 553,435.
For Door Mats and Floor Mats, Door and Floor Mat Frames, and Dock Bumpers.
First use May 15, 1949.

Class 51 — Cosmetics and Toilet Preparations

SN 120,114. Patrick M. Moore, d.b.a. Moore's Laboratories, Hollywood, Calif. Filed May 16, 1961.



For Sun Tan Lotion.
First use Mar. 28, 1961.

SN 148,154. Frances Denney, Inc., Philadelphia, Pa. Filed July 2, 1962.

INTERLUDE

For Bath and Body Perfumes.
First use May 3, 1962.

SN 159,989. Louis J. Kieran, d.b.a. Tru-Lee Yours Cosmetics Company, New York, N.Y. Filed Dec. 31, 1962.

BLENDYNE

For Mascara, Skin Lotion, Cleansing Cream, Night Cream, Liquid Cream Make Up, Liquid Cream Lipstick, Eye Shadow, Cream Rouge, Eyebrow Pencil Refills, Cream Make Up Base, Pressed Powder, and Nail Polish.
First use June 16, 1962.

SN 160,138. J. D. Francis Regensburger, d.b.a. The Francis Company, Stratford, Conn. Filed Jan. 3, 1963.

JOSET

For Hair Setting Lotion.
First use Dec. 19, 1962.

SN 165,792. Lehn & Fink Products Corporation, Bloomfield, N.J. Filed Apr. 1, 1963.

SHADES OF YOUTH

No claim is made to the exclusive right to the use of the term "Shades," apart from the mark as shown.
For Hair Coloring Preparation.
First use September 1962.

SN 167,476. L'Oreal, Paris, France. Filed Apr. 24, 1963.

SAPPHIRE & SNOW

Owner of French Reg. No. 507,239, dated Aug. 9, 1962 (Seine): Natl. Inst. No. 192,730.
For Perfumes, Cosmetics, Cologne Waters, Make-Ups, Make-Up Removers, Creams and Lotions for the Hands, for the Face and for the Skin, Dyes, Coloring Agents, Rinses and Lotions for Hair and Beards, Preparations for Bleaching of Hair, Preparations for Care and Beuaty of the Hair and Preparations for Waving and Setting of Hair.

SN 168,513. Maradel Products, Inc., New York, N.Y. Filed May 9, 1963.

HAIR LUXURY

The word "Hair" is disclaimed apart from the mark as shown.
For Hair Dressing.
First use Jan. 7, 1949.
Subj. to Intf. with SN 171,041.

SN 168,872. Texas Pharmacal Company, San Antonio, Tex. Filed May 14, 1963.



Applicant disclaims the wording "for men" apart from the mark as shown.
For Men's Toilet Preparations.
First use Apr. 3, 1963.

SN 171,041. Jakob Recktenwald, Pinoxolfabrik, Bad Kreuznach, Rheinland-Pfalz, Germany. Filed June 14, 1963.

LUXURY HAIR BATH

No claim is made to the words "Hair Bath" apart from the mark as shown.
For Hair Rinse (Cream Rinse).
First use June 20, 1962; in commerce Dec. 20, 1962.
Subj. to Intf. with SN 168,513.

SN 171,165. Natone Company, Santa Monica, Calif. Filed June 17, 1963.

FIRMANENT

For Hair Spray.
First use June 4, 1963.
Subj. to Intf. with SN 172,977.

SN 172,628. Alberto-Culver Company, Melrose Park, Ill. Filed July 9, 1963.

NEW DAWN

Owner of Reg. No. 699,536.
For Hair Coloring Preparation.
First use June 16, 1963.

SN 174,533. Stephen Riley Company, Los Angeles, Calif. Filed Aug. 6, 1963.

PATTI-KATE

For Bubble Bath Liquid.
First use June 13, 1963.

SN 174,564. Avon Products, Inc., New York, N.Y. Filed Aug. 7, 1963.

TRIBUTE

For Men's Toiletries—Namely, After Shave Lotion, Foam Shave Cream Regular, Foam Shave Cream Mentholated, Electric Pre-Shave Lotion, After Shave-After Shower Spray, Talc, Aerosol Deodorant and Cream Hair Dress.
First use July 23, 1963.

SN 174,965. Lander Co. Inc., d.b.a. Lander, New York, N.Y. Filed Aug. 13, 1963.

WHITE PETALS

For Cosmetic Skin Lotions.
First use Aug. 15, 1953.

SN 174,966. Lander Co. Inc., d.b.a. Lander, New York, N.Y. Filed Aug. 13, 1963.

BLUE PETALS

For Cosmetic Skin Lotions.
First use Nov. 17, 1952.

SN 174,978. Patricia Reach Corporation, Westfield, Mass. Filed Aug. 13, 1963.

REACH FOR ME

For Perfume.
First use September 1962.

SN 175,016. Colgate-Palmolive Company, New York, N.Y. Filed Aug. 14, 1963.

UNIFOAM

For Shaving Cream.
First use May 15, 1963.
Subj. to Intf. with SN 183,265.

SN 175,044. F. W. Kipper, Arosa, Switzerland. Filed Aug. 14, 1963.



Owner of Swiss Reg. No. 157,804, dated Aug. 16, 1955.
For Cosmetic Preparations.

Class 52—Detergents and Soaps

SN 156,566. Conversion Chemical Corporation, Rockville, Conn. Filed Nov. 5, 1962.

KENVERT

Owner of Reg. No. 643,837.
For Chemical Compositions for Use on Metals—Namely, Inhibited Acid in Liquid and Dry Form for Removing Iron and Rust Stains, and for Dissolving Cyanide and Lime Deposits and Scale; Buffing Compound Removers; Desmutting Compositions; Compositions for Pickling Metals; Compositions for Removing Burrs on the Surface of Metallic Workpieces; Compositions for Stripping Metal Deposits; Compositions for Addition to Pickling Baths To Reduce Fuming; and Compositions for Removing Pitting and Anodized Surfaces.
First use on or before Nov. 13, 1957, on dry powder acid additives.

SN 160,760. Economics Laboratory, Inc., St. Paul, Minn. Filed Jan. 16, 1963.

TRUMP

Owner of Reg. No. 723,969.
For Detergent for Industrial Mechanical Washing.
First use Sept. 15, 1958.

SN 161,276. Redium Research Corporation, Redlands, Calif. Filed Jan. 23, 1963.

KSR

For Spot Remover.
First use Aug. 10, 1962.

SN 162,829. The Diversey Corporation, Chicago, Ill. Filed Feb. 15, 1963.

KEY

For Liquid Detergent Cleaner for Industrial Use.
First use Jan. 15, 1963.
Subj. to Intf. with SN 163,370 and SN 163,373.

SN 163,370. Keystone Lubricating Company, Calumet City, Ill. Filed Feb. 25, 1963.

KEYKLEEN

For Liquid Cleaning Compound Used as a Substitute for Naphtha and Other Low Flash Volatile Solvents for Cleaning Machine Parts.
First use Dec. 21, 1962.
Subj. to Intf. with SN 162,829.

SN 163,373. Keystone Lubricating Company, Calumet City, Ill. Filed Feb. 25, 1963.

KEYSTRIP

For Stripper Compound for Removal of Paint, Either Hot or Cold.
First use Dec. 21, 1962.
Subj. to Intf. with SN 162,829.

SN 164,360. Merchandise Presentation, Inc., New York, N.Y. Filed Mar. 11, 1963.



Owner of Reg. No. 617,994.
For Cleaning, Degreasing and Anti-Static Coating Preparation.
First use Aug. 1, 1949.

SN 165,161. Roger & Gallet S.A., Paris, France, assignee of Roger & Gallet, New York, N.Y. Filed Mar. 21, 1963.

FLEURS D'AMOUR

"Fleurs d'Amour" is the French equivalent of "flowers of love." Owner of Reg. Nos. 161,581, 173,109 and 173,817.
For Toilet Soap.
First use November 1903; in commerce November 1910.

SN 167,514. Alberto-Culver Company, Melrose Park, Ill. Filed Apr. 25, 1963.



Owner of Reg. Nos. 653,526 and 753,458.
For Shampoo for the Hair.
First use Apr. 19, 1963.

SN 172,370. Colgate-Palmolive Company, New York, N.Y. Filed July 3, 1963.

GODDESS

Owner of Reg. Nos. 430,977, 745,229, and others.
For Toilet Soap.
First use Oct. 27, 1962.

SN 172,659. Dean I. Grauer, Jr., d.b.a. Nutergent Products Company, Allen Park, Mich. Filed July 9, 1963.

NŪTERGENT

For Laundry Powder.
First use Feb. 23, 1963.

SN 174,742. Block Drug Company, Inc., Jersey City, N.J. Filed Aug. 9, 1963.

TOP KNOT

For Hair Cleaning Preparation.
First use on or about Aug. 1, 1963.

SN 174,844. Edward Don & Company, Chicago, Ill. Filed Aug. 12, 1963.

OVEN-NU

For Paste-Type Cleaner for Ovens, Griddles, Fryers, Etc.
First use June 21, 1955.

SN 175,498. S. C. Johnson & Son, Inc., Racine, Wis. Filed Aug. 21, 1963.

GO-GETTER

For Toilet Bowl Cleaner.
First use on or about Aug. 2, 1963.

SN 175,758. Jerclaydon, Inc., Clifton, N.J. Filed Aug. 26, 1963.

PDQ

Owner of Reg. No. 692,201.
For Liquid Composition for Opening Drain Pipes.
First use Aug. 1, 1963.

SN 183,265. R. M. Hollingshead Corporation, Camden, N.J. Filed Dec. 19, 1963.

UNIFOAM

For Soap Used for General Washing and Cleaning Purposes.
First use Nov. 8, 1930.
Subj. to Intf. with SN 175,016.

SERVICE MARKS

Class 100—Miscellaneous

SN 150,531. Cutler-Hammer, Inc., Milwaukee, Wis. Filed Aug. 6, 1962.

FLARESCAN

For Research, Development, Engineering, Design, Production and Consultant Services in Connection With the Installation and Maintenance of Landing Systems and Equipment Therefor.
First use on or about July 17, 1961.

SN 168,224. The Rapids-Standard Company, Inc., Grand Rapids, Mich. Filed May 6, 1963.

RAPISTAN

Owner of Reg. Nos. 528,069, 726,161, and others.
For Advisory Services for Materials Handling.
First use May 18, 1959.

SN 171,139. Horne's Enterprises, Inc., d.b.a. Horne's, Bayard, Fla. Filed June 17, 1963.



Owner of Reg. Nos. 724,295 and 732,262.
For Restaurant Services.
First use May 1960; Dec. 19, 1947, as to "Horne's."

Class 101 — Advertising and Business

SN 137,391. The Southwest Milk Producers Association, Wichita, Kans. Filed Feb. 6, 1962.

ALL WE HAVE WE OWE TO UDDERS

For Furnishing Technical and Other Assistance to Members and Customers in the Production and Sale of Milk.
First use 1952.

SN 152,866. American Football League, Dallas, Tex. Filed Sept. 4, 1962.



For Performing All Services Normally Necessary to the Operation of a Professional Football League, Said Services Including Such Activities as Press and Public Relations for the League, Handling All Officiating, Keeping All Official Records and Handling Broadcasting Arrangements.
First use Mar. 22, 1960.

SN 152,867. American Football League, Dallas, Tex. Filed Sept. 4, 1962.

AMERICAN FOOTBALL LEAGUE

For Performing All Services Normally Necessary to the Operation of a Professional Football League, Said Services Including Such Activities as Press and Public Relations for the League, Handling All Officiating, Keeping All Official Records and Handling Broadcasting Arrangements.
First use Feb. 10, 1960.

SN 152,868. American Football League, Dallas, Tex. Filed Sept. 4, 1962.



For Performing All Services Normally Necessary to the Operation of a Professional Football League, Said Services Including Such Activities as Press and Public Relations for the League, Handling All Officiating, Keeping All Official Records and Handling Broadcasting Arrangements.
First use Mar. 22, 1960.

SN 158,871. Patricia Stevens, Inc., Chicago, Ill. Filed Dec. 10, 1962.

PATRICIA STEVENS

The mark consists of the name of the founder of applicant corporation, "Patricia Stevens," now deceased.
For Services Comprising Consultation, Advice and Placement With Respect to Employment in the Stenographic, Secretarial, Business, Professional Stewardess, Fashion Merchandising, Styling, and Professional Modeling Fields.
First use in or about 1942.

SN 161,247. Electronics Corporation of America, Las Vegas, Nev. Filed Jan. 28, 1963.

LAWSTAFF

For Law Searching Services, Utilizing Electronic Equipment.
First use Mar. 1, 1962.

SN 161,730. Phi, Incorporated, d.b.a. James S. Heaton Company, Redwood City, Calif. Filed Jan. 30, 1963.



The mark is a representation of the Greek letter "phi."
For Manufacturers' Representative Services.
First use about March 1962.

SN 165,560. Answer-America, Inc., Chicago, Ill. Filed Mar. 28, 1963.



For Telephone Answering Services.
First use July 12, 1957.

SN 166,393. Malone & Hyde, Inc., Memphis, Tenn. Filed Apr. 9, 1963.

M & H

For Services to Retail Grocery Store Owners and Prospective Owners—Namely, Marketing Research Services and Furnishing to the Store Owners Advice Concerning the Type and Quantity of Merchandise To Be Stocked and Prices Charged Therefor by Competitive Enterprises, Store Location Analyses, and Store and Counter Layout Analysis and Advice; Advertising Services—Namely, Designing and Furnishing Advertising Circulars and Materials, Radio and Television Broadcasting, and Newspaper Advertising; and Management Services—Namely, Furnishing Accounting Systems and Advice.
First use July 11, 1945.

SN 169,346. Eugene D. Brown, d.b.a. Eugene D. Brown Realty Company, Kansas City, Mo. Filed May 21, 1963.



The drawing is lined for the color brown.
For Real Estate Brokerage Services.
First use April 1960.

Class 102 — Insurance and Financial

SN 143,602. Edward E. D'Ambrisi, Cheshire, Conn. Filed May 2, 1962.

ESTATOR

For Real Estate Brokerage Services.
First use Apr. 1, 1962.

SN 156,163. Physicians Planning Service Corp., New York, N.Y. Filed Oct. 29, 1962.

THE DOCTOR'S LIFEGUARD

The word "Doctor's" is disclaimed apart from the mark.
For Administering a Disability Insurance Policy Specifically Provided for Medical Doctors.
First use Sept. 5, 1962.

SN 169,610. The Continental Insurance Company, New York, N.Y. Filed May 24, 1963.



The words "Insurance Companies" are disclaimed apart from the mark as shown. Owner of Reg. No. 659,153.
For Underwriting of Property and Casualty Insurance.
First use on or about Jan. 7, 1963.

SN 169,655. Russell S. Proctor, Inc., Bloomington, Ill. Filed May 24, 1963.



For Real Estate and Insurance Agency Services and Commercial Loan Services.
First use July 1, 1955.

Class 103 — Construction and Repair

SN 108,085. Rosson Richards Processing Co., Inc., Houston, Tex. Filed Nov. 8, 1960.



Owner of Reg. No. 564,795.
For Coating the Exterior Surface of Pipe and Cleansing and Coating the Internal Surface of Pipe for Others.
First use at least as early as Feb. 11, 1950.

SN 149,045. Butler Manufacturing Company, Kansas City, Mo. Filed July 16, 1962.



Owner of Reg. Nos. 528,706 and 560,737.
For Construction of Fabricated Metal Buildings and Shelters, and Fabricated Metal Bins and Tanks for the Storage of Bulk Commodities.
First use June 5, 1962; May 1930 as to "Butler"; November 1960 as to "Agri-Builder."

SN 149,046. Butler Manufacturing Company, Kansas City, Mo. Filed July 16, 1962.

AGRI-BUILDER

For Construction of Fabricated Metal Buildings and Shelters, and Fabricated Metal Bins and Tanks for the Storage of Bulk Commodities.
First use November 1960.

SN 157,129. Perma-Line Manufacturing Corporation of America, Chicago, Ill. Filed Nov. 13, 1962.

PERMA-LINE

Owner of Reg. Nos. 715,657 and 735,208.
For Installing Lane Markings on Pavement.
First use May 29, 1950.

SN 168,195. Humble Oil & Refining Company, Houston, Tex. Filed May 6, 1963.

WATCHDOG

Owner of Reg. No. 713,181.
For Long Term Scheduling of Fuel Oil Deliveries To Assure Customers That Their Oil Supply Will Be Maintained at a Proper Level; and Servicing of Building Heating Systems.
First use at least as early as July 1952.

SN 168,354. Prontour Company, Cleveland, Ohio. Filed May 7, 1963.

PRONTOUR

For Forming of Metal and Fabricating of Metal Products to the Individual Specifications of Others.
First use Aug. 29, 1960.

Class 104 — Communication

SN 148,011. Communatron Inc., New York, N.Y. Filed June 29, 1962.

COMMUNITRON

For Monitoring Service for Users of Teletype Equipment by Which the Latter Are Furnished With Data Relative to the Pattern and Varying Intensities of Use of Said Equipment.
First use Feb. 12, 1960.

Class 105 — Transportation and Storage

SN 156,917. Viking Freight Company, St. Louis, Mo. Filed Nov. 8, 1962.

KINGTAINER

For Transporting the Goods of Others by Motor Truck.
First use Oct. 23, 1962.

SN 159,937. Allstate Enterprises, Inc., Skokie, Ill. Filed Dec. 31, 1962.

ALLSTATE MOTOR CLUB TOURS

Without waiver of applicant's common-law rights with respect to the combination of words constituting applicant's service mark, applicant disclaims any right to the words "Motor Club Tours," except as a part of the mark as shown.
For Travel Agency Services.
First use on or about July 31, 1961.

SN 161,087. Northeast Airlines, Inc., East Boston, Mass. Filed Jan. 21, 1963.

FIESTAVAL

For Air Transportation of Persons.
First use Nov. 15, 1962.

SN 167,089. Caroline Hurley, Seattle, Wash. Filed Apr. 15, 1963.

TRANQUIL TRAVELS

For Travel Agency Services—Namely, Providing Accompanied Tours for the Physically Handicapped.
First use June 23, 1957.

SN 168,368. T.E.K. Van Lines, Inc., South El Monte, Calif. Filed May 7, 1963.



Applicant disclaims, apart from the mark as shown, any claim to the words "World Wide Moving" and the representation of a globe.
For Transportation of Household Goods by Motor Vehicles in Interstate Commerce.
First use May 1962.

SN 170,914. Isbrandtsen Company, Inc., New York, N.Y. Filed June 13, 1963.



For Transportation by Water of Cargo and Persons.
First use November 1938.

Class 106 — Material Treatment

SN 133,526. S. Boyes Rug Cleaning Company Inc., South Amboy, N.J. Filed Dec. 7, 1961.



The drawing is lined for red.
For Rug Cleaning Services.
First use Oct. 21, 1960.

SN 143,857. Amsted Industries Incorporated, Chicago, Ill., assignee of Pipe Line Service Corporation, Franklin Park, Ill. Filed May 4, 1962.

Amsted

For Commercial Application of Protective Coating Material to Metal Pipes of Others.
First use Mar. 20, 1962.

SN 145,953. Motion Picture Laboratories, Inc., Memphis, Tenn. Filed June 1, 1962.



The drawing is lined for red.
For Development and Printing of 16 mm. Motion Picture Film.
First use April 1957.

SN 153,074. Econo-Color of Dallas, Inc., Dallas, Tex. Filed Sept. 13, 1962.

ECONO-COLOR

For Processing and Developing of Color Photographs.
First use June 28, 1961.

SN 160,159. Central Rubber Company, Belvidere, Ill. Filed Jan. 4, 1963.



For Plastic Material Molding Service.
First use on or about Apr. 3, 1961.

Class 107 — Education and Entertainment

SN 158,871. Patricia Stevens, Inc., Chicago, Ill. Filed Dec. 10, 1962.

PATRICIA STEVENS

The mark consists of the name of the founder of applicant corporation, "Patricia Stevens," now deceased.
For Services Comprising Teaching, Instructing, Training and Advising With Respect to Professional Modeling, Figure Control, Voice, Diction, Finishing and Self Improvement Skills, Secretarial and Stenographic Skills, Business, Stewardess Careers, Fashion Merchandising, and Styling.
First use in or about 1942.

SN 161,799. Mark Century Corporation, New York, N.Y. Filed Jan. 31, 1963.

RADIO A LA CARTE

The word "Radio" is disclaimed apart from the mark as shown.
For Title of a Radio Program—Namely, Variety and Music.
First use Sept. 21, 1962.

SN 167,912. KTVB, Inc., Boise, Idaho. Filed May 1, 1963.

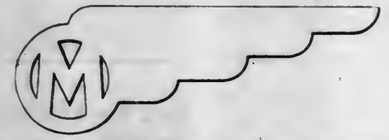
MISTER TIM, THE OLD TIMER

For Title of Entertainment Services Rendered Through the Medium of a Children's Television Program.
First use at least as early as Mar. 25, 1963.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 151,504. Mercury Class Yacht Racing Association, Fresno, Calif. Filed Aug. 20, 1962.



For Indicating Membership in the Applicant Association.
First use June 1, 1938.

CERTIFICATION MARKS

Class A — Goods

SN 129,639. The State of Nebraska, Lincoln, Nebr. Filed Oct. 10, 1961.

NEBRASKIT

The mark certifies that the goods on which it appears have been prepared and manufactured in accordance with secret formulas, developed, controlled and owned by applicant and meet the standards of quality established for such goods by the applicant.
For Survival Ration Wheat Bars.
First use Aug. 19, 1961.

SN 180,262. Air Conditioning and Refrigeration Institute, Washington, D.C. Filed Nov. 1, 1963.



The mark certifies that air conditioning units bearing the trademark comply with standards of workmanship, performance and quality established by applicant. Owner of Reg. No. 680,573.
For Air Conditioning Units.
First use July 1, 1963.

TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

766,928. OLEFLO. Avisun Corporation. SN 166,526. Pub. 1–7–64. Filed 4–11–63.

766,929. REVELATION. Western Auto Supply Company. SN 166,768. Pub. 1–7–64. Filed 4–15–63.

766,930. SCOTCHTINT. Minnesota Mining and Manufacturing Company. SN 166,827. Pub. 1–7–64. Filed 4–16–63.

766,931. AQUAFIRM. Staymark, Inc. SN 167,500. Pub. 1–7–64. Filed 4–24–63.

766,932. SNAP FIRE. Consumer Specialties Corporation. SN 167,533. Pub. 1–7–64. Filed 4–25–63.

766,933. OROFIL. Rohm & Haas Company. SN 168,226. Pub. 1–7–64. Filed 5–6–63.

766,934. WL. The Georgia Marble Company. SN 168,257. Pub. 1–7–64. Filed 5–6–63.

766,935. 3 VEES. American Bird Food Manufacturing Corp. SN 168,463. Pub. 1–7–64. Filed 5–9–63.

766,936. PINE-CEL. East Texas Pulp and Paper Company. SN 168,488. Pub. 1–7–64. Filed 5–9–63.

766,937. CB. Goodrich-Gulf Chemicals, Inc. SN 168,497. Pub. 1–7–64. Filed 5–9–63.

766,938. PLUME. Polymers, Inc. SN 168,532. Pub. 1–7–64. Filed 5–9–63.

766,939. THERMALENE. Sweetheart Plastics, Inc. SN 168,777. Pub. 1–7–64. Filed 5–13–63.

766,940. KITTY FAIR. Vulcan Fusee Company. SN 168,780. Pub. 1–7–64. Filed 5–13–63.

766,941. TIMBERLAND AND DESIGN. Timberland Products Co., Inc. SN 168,968. Pub. 1–7–64. Filed 5–15–63.

766,942. ACCO. Anderson, Clayton & Co. SN 169,099. Pub. 1–7–64. Filed 5–17–63.

766,943. STRANGLAS. Fiberfil, Inc. SN 169,241. Pub. 1–7–64. Filed 5–20–63.

766,944. SUPRON. Charter Industries, Inc. MULTIPLE CLASS (Classes 1 and 39). SN 169,514. Pub. 1–7–64. Filed 5–23–63.

Class 2 — Receptacles

766,945. SELF-LOCKING. Diamond National Corporation. SN 122,684. Pub. 1–7–64. Filed 6–23–61.

766,946. GEOMETRIC DESIGN. Consumer Bag and Packaging Corporation. SN 142,278. Pub. 1–7–64. Filed 4–16–62.

766,947. CLARETTE. Sierra Plastics, Inc., d.b.a. The Clarette Company. MULTIPLE CLASS (Classes 2, 39, and 50). SN 149,604. Pub. 1–7–64. Filed 7–23–62.

766,948. ROTO-BAG AND DESIGN. Rodeffer Industries, Inc. SN 150,620. Pub. 1–7–64. Filed 8–6–62.

766,949. DELAWARE AND DESIGN. Delaware Barrel and Drum Company, Inc. SN 153,629. Pub. 1–7–64. Filed 9–21–62.

766,950. FUSION. Fusion, Incorporated. SN 160,282. Pub. 1–7–64. Filed 1–7–63.

766,951. COL ZONE. International Paper Company. SN 163,052. Pub. 1–7–64. Filed 2–19–63.

766,952. QA. Questron America, Inc. SN 166,925. Pub. 1–7–64. Filed 4–17–63.

766,953. HARTZ MOUNTAIN. Hartz Mountain Products Corp. SN 176,913. Pub. 1–7–64. Filed 9–13–63.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

766,954. HARTZ MOUNTAIN. Hartz Mountain Products Corp. SN 176,914. Pub. 1–7–64. Filed 9–13–63.

Class 4 — Abrasives and Polishing Materials

766,955. MIN-MUM. Purex Corporation, Ltd. SN 168,887. Pub. 1–7–64. Filed 5–10–63.

766,956. FLEXFILE. George Davies, d.b.a. Davies & Werth. SN 174,173. Pub. 1–7–64. Filed 8–1–63.

Class 5 — Adhesives

766,957. RUG-SEALZ. United States Rubber Company. MULTIPLE CLASS (Classes 5 and 40). SN 171,728. Pub. 1–7–64. Filed 6–24–63.

Class 6 — Chemicals and Chemical Compositions

766,958. VERSAMAT. Eastman Kodak Company. SN 156,962. Pub. 1–7–64. Filed 11–9–62.

766,959. LUMIERE. Ciba Limited. SN 157,465. Pub. 1–7–64. Filed 11–19–62.

766,960. CHEVRON. Standard Oil Company of California. SN 165,715. Pub. 1–7–64. Filed 3–29–63.

766,961. FIXANAL. Riedel-De Haen Aktiengesellschaft. SN 165,839. Pub. 1–7–64. Filed 4–1–63.

766,962. TRICON. The Deytron Company. SN 166,792. Pub. 1–7–64. Filed 4–16–63.

766,963. ALBEGAL. Ciba Limited. SN 167,968. Pub. 1–7–64. Filed 5–1–63.

766,964. MODITONE AND DESIGN. Visual Graphics Corp. SN 168,551. Pub. 1–7–64. Filed 5–9–63.

766,965. SILVEX AND DESIGN. H. E. Butt Grocery Company, d.b.a. H.E.B. Food Stores. SN 168,579. Pub. 1–7–64. Filed 5–10–63.

766,966. CHEM-PEST. Royster Chemical Company. SN 174,477. Pub. 1–7–64. Filed 7–29–63.

766,967. ALL-SPORTS. All-Sports Medications, Inc., d.b.a. All Sports Medications. SN 175,366. Pub. 1–7–64. Filed 8–20–63.

766,968. HARTZ MOUNTAIN. Hartz Mountain Products Corp. SN 176,915. Pub. 1–7–64. Filed 9–13–63.

Class 7 — Cordage

766,969. SAPPHIRE. American Greetings Corporation. SN 168,267. Pub. 1–7–64. Filed 5–7–63.

Class 8 — Smokers' Articles, Not Including Tobacco Products

766,970. EB AND DESIGN. Emil Brenk and Walter Brenk, d.b.a. Emil Brenk. SN 153,730. Pub. 1–7–64. Filed 9–24–62.

766,971. VALET. Pak-Liter Company. SN 167,833. Pub. 1–7–64. Filed 4–30–63.

766,972. CLASSIC. Standard Industrial Products Company of Illinois. SN 169,665. Pub. 1–7–64. Filed 5–24–63.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

766,973. HAWKEYE. Sturm, Ruger & Co., Inc. SN 167,771. Pub. 1–7–64. Filed 4–29–63.

Class 10 — Fertilizers

766,974. DEERFIELD. The Hubbard-Hall Chemical Company. SN 166,097. Pub. 1–7–64. Filed 4–4–63.

766,975. ARBOR GREEN. The Davey Tree Expert Company. SN 166,450. Pub. 1–7–64. Filed 4–10–63.

766,976. MH–30. United States Rubber Company. SN 166,955. Pub. 1–7–64. Filed 4–17–63.

766,977. GRO-TONE. Plymouth Cordage Company. SN 167,162. Pub. 1–7–64. Filed 4–19–63.

766,978. GIBRELATE. Merck & Co. Inc. SN 167,292. Pub. 1–7–64. Filed 4–22–63.

Class 12 — Construction Materials

766,979. PERMAKAST. Great Lakes Carbon Corporation. SN 128,670. Pub. 4–24–62. Filed 9–26–61.

766,980. PAX-BRIX. Pax-Products. SN 138,528. Pub. 1–7–64. Filed 2–23–62.

766,981. THERMOBAN. Porta-Panel Products, Inc. SN 150,969. Pub. 1–7–64. Filed 8–10–62.

766,982. DEMCO KWIKRETE. Des Moines Concrete Products Co. SN 153,464. Pub. 8–27–63. Filed 9–19–62.

766,983. FYRETECH 100. Technoply Corporation. SN 155,027. Pub. 1–7–64. Filed 10–11–62.

766,984. FIBERLIGHT STONE SO LIGHT IT FLOATS! AND DESIGN. Ben Duggan. SN 155,898. Pub. 1–7–64. Filed 10–25–62.

766,985. MONOFRAX. Harbison-Carborundum Corporation. SN 156,676. Pub. 1–7–64. Filed 11–8–62.

766,986. GUARDIAN. Simpson Timber Company. SN 171,187. Pub. 1–7–64. Filed 6–17–63.

766,987. TWINSERT. Simpson Timber Company. SN 171,188. Pub. 1–7–64. Filed 6–17–63.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

766,988. USM AND DESIGN. United Shoe Machinery Corporation. SN 150,474. Pub. 1–7–64. Filed 8–3–62.

766,989. CERCOR. Corning Glass Works. SN 151,208. Pub. 1–7–64. Filed 8–15–62.

766,990. HOOKY. Elgen Manufacturing Corp. SN 157,481. Pub. 1–7–64. Filed 11–19–62.

766,991. STERLING METALWARE COMPANY ETC. AND DESIGN. Sterling Metalware Company. SN 162,364. Pub. 1–7–64. Filed 2–8–63.

766,992. AQUA MASTER. Master Industries, Inc., d.b.a. Master Supply Co. SN 163,850. Pub. 1–7–64. Filed 3–4–63.

766,993. FORDILLA. The Ford Meter Box Company, Inc. SN 164,517. Pub. 1–7–64. Filed 3–13–63.

766,994. TORQ-TROL. Tex-Tube, Inc. SN 173,063. Pub. 12–24–63. Filed 7–15–63.

Class 14 — Metals and Metal Castings and Forgings

766,995. ISOTHERMAL. Roger Waindle, d.b.a. Technometallurgical Company. SN 146,534. Pub. 1–7–64. Filed 6–8–62.

766,996. CCC. Alpha Metals, Inc. SN 168,999. Pub. 1–7–64. Filed 5–16–63.

766,997. AMPCOLOY. Ampco Metal, Inc. SN 169,098. Pub. 1–7–64. Filed 5–17–63.

766,998. SPHERALLOY. E. W. Bliss Company. SN 170,023. Pub. 1–7–64. Filed 5–31–63.

766,999. ADAMANT. Magnolia Metal Company, Inc. SN 170,084. Pub. 1–7–64. Filed 5–31–63.

Class 15 — Oils and Greases

767,000. MYVAKUT. Eastman Kodak Company. SN 152,289. Pub. 1–7–64. Filed 8–31–62.

767,001. UAP AND DESIGN. United Aircraft Products, Inc. SN 165,094. Pub. 1–7–64. Filed 3–20–63.

767,002. MOR-SEAL. United Aircraft Products, Inc. SN 165,095. Pub. 1–7–64. Filed 3–20–63.

767,003. NO-STIK. Ellen Products Company Inc. SN 165,587. Pub. 1–7–64. Filed 3–28–63.

767,004. ELECTRO-GRAPH. Electrofilm, Inc. SN 166,372. Pub. 1–7–64. Filed 4–9–63.

767,005. ELECTRO-MOLY. Electrofilm, Inc. SN 166,373. Pub. 1–7–64. Filed 4–9–63.

767,006. NALBASE. Nalco Chemical Company. SN 168,945. Pub. 1–7–64. Filed 5–15–63.

767,007. JT–6. Cato Oil and Grease Company. SN 171,968. Pub. 1–7–64. Filed 6–27–63.

767,008. PHIL-AD. Phillips Petroleum Company. SN 172,612. Pub. 1–7–64. Filed 7–8–63.

Class 16 — Protective and Decorative Coatings

767,009. METALESCENT. Mulholland-Harper Company. SN 136,063. Pub. 1–7–64. Filed 1–18–62.

767,010. IOWALL. Iowa Paint Manufacturing Company, Inc. SN 136,767. Pub. 1–7–64. Filed 1–29–62.

767,011. PYDRATEK. Monsanto Chemical Company. SN 157,532. Pub. 1–7–64. Filed 11–19–62.

767,012. PENAMARK. Phillips Industrial Products, Inc. SN 158,018. Pub. 1–7–64. Filed 11–27–62.

767,013. A AMSPRO AND DESIGN. Acorn Chemical Company. SN 166,239. Pub. 1–7–64. Filed 4–8–63.

767,014. AMSPRO. Acorn Chemical Company. SN 166,240. Pub. 1–7–64. Filed 4–8–63.

767,015. STAR-MIST. Rinshed-Mason Company. SN 166,489. Pub. 1–7–64. Filed 4–10–63.

Class 18 — Medicines and Pharmaceutical Preparations

767,016. P·A·K. Medi-Synth, Incorporated. SN 164,359. Pub. 1–7–64. Filed 3–11–63.

767,017. COLCARE. Charles A. Crete, d.b.a. Pharmaceutical Associates. SN 166,488. Pub. 1–7–64. Filed 4–10–63.

767,018. L–SE. H. C. Burns Company, Inc. SN 166,780. Pub. 1–7–64. Filed 4–16–63.

767,019. FETAMIN. Mission Pharmacal Company. SN 166,828. Pub. 1–7–64. Filed 4–16–63.

767,020. SUDINE. Warren-Teed Pharmaceuticals Inc., assignee of The Warren-Teed Products Company. SN 167,779. Pub. 1–7–64. Filed 4–29–63.

767,021. RIDAMITE. Parlam Corporation. SN 167,927. Pub. 1–7–64. Filed 5–1–63.

767,022. METRULEN-M. G. D. Searle & Co. SN 168,233. Pub. 1–7–64. Filed 5–6–63.

767,023. METRULEN. G. D. Searle & Co. SN 168,234. Pub. 1–7–64. Filed 5–6–63.

767,024. I-O-X. The Upjohn Company. SN 169,086. Pub. 1–7–64. Filed 5–16–63.

767,025. HARTZ MOUNTAIN. Hartz Mountain Products Corp. SN 176,916. Pub. 1–7–64. Filed 9–13–63.

Class 19—Vehides

767,026. NU-VALU. Peterson Tractor Co. MULTIPLE CLASS (Classes 19 and 23). SN 155,835. Pub. 1–7–64. Filed 10–24–62.

767,027. ALIM. Alim Association, Inc. SN 157,667. Pub. 1–7–64. Filed 11–21–62.

767,028. WANDER WAGON. Fred B. Wohlfert, d.b.a. Wander Wagon Trailers. SN 158,295. Pub. 1–7–64. Filed 11–30–62.

767,029. POLARIS. Polaris Industries, Inc. SN 158,998. Pub. 1–7–64. Filed 12–12–62.

767,030. SPACE-CRAFT AND DESIGN. Space-Craft Trailer Manufacturers, Inc. SN 161,635. Pub. 1–7–64. Filed 1–29–63.

767,031. NODWELL. Van-Wilson Limited. SN 165,006. Pub. 1–7–64. Filed 3–19–63.

767,032. TRAIL MAKER. Abe W. Mathews Engineering Co. SN 169,288. Pub. 1–7–64. Filed 5–20–63.

767,033. FOREMOST. J. C. Penney Company. SN 169,970. Pub. 1–7–64. Filed 5–29–63.

767,034. CAVEMAN (DESIGN). Caveman Camper, Inc. SN 170,813. Pub. 1–7–64. Filed 6–12–63.

767,035. THE CAVEMAN AND DESIGN. Caveman Camper, Inc. SN 170,814. Pub. 1–7–64. Filed 6–12–63.

767,036. LEVELIFT. Maremont Corporation, assignee of The Gabriel Company. SN 171,346. Pub. 1–7–64. Filed 6–19–63.

767,037. SABELT. Ratsey Safety Belts, Inc. SN 171,484. Pub. 1–7–64. Filed 6–20–63.

767,038. GLARE TRAP. Port Caddo Trading Company. SN 174,287. Pub. 1–7–64. Filed 8–2–63.

767,039. DEL REY. Del-Rey Industries, Inc. SN 174,350. Pub. 1–7–64. Filed 8–5–63.

Class 21—Electrical Apparatus, Machines, and Supplies

767,040. UNI-LUX. Luxo Lamp Corporation. SN 121,572. Pub. 1–7–64. Filed 6–7–61.

767,041. ROYAL PATIO URN. Robeson Rochester Corporation. SN 138,982. Pub. 1–7–64. Filed 3–2–62.

767,042. THERMOWELD. Thor Power Tool Company. SN 144,203. Pub. 6–4–63. Filed 5–9–62.

767,043. MICRO-PLANAR. Microelectron, Inc. SN 148,989. Pub. 1–7–64. Filed 7–13–62.

767,044. MCS AND DESIGN. Eldima Weber & Co. AG. SN 155,676. Pub. 1–7–64. Filed 9–18–62.

767,045. M.E. AND DESIGN. Machinery Electrification, Inc. SN 158,547. Pub. 1–7–64. Filed 12–5–62.

767,046. ELECTRESTEEM. Landers, Frary & Clark. SN 159,074. Pub. 1–7–64. Filed 12–13–62.

767,047. MARCOSWITCHLIGHT. Marco Industries Company. SN 161,535. Pub. 1–7–64. Filed 1–28–63.

767,048. ILO AND DESIGN. Pacific Industries, Inc., d.b.a. Midland Manufacturing Company. SN 163,396. Pub. 1–7–64. Filed 2–25–63.

767,049. AMMO PAK. International Resistance Company. SN 163,842. Pub. 1–7–64. Filed 3–4–63.

767,050. TEL BUTLER. Orbit Industries, Inc. SN 164,676. Pub. 1–7–64. Filed 3–14–63.

767,051. FASCO. Fasco Industries, Inc. SN 168,175. Pub. 1–7–64. Filed 5–6–63.

767,052. GDI AND DESIGN. General Devices, Inc. SN 170,830. Pub. 1–7–64. Filed 6–12–63.

767,053. MERLUX. Pfaff and Kendall. SN 172,937. Pub. 1–7–64. Filed 7–12–63.

767,054. CUBETRIM. International Resistance Company. SN 173,003. Pub. 1–7–64. Filed 7–15–63.

767,055. THERMORAD. Raychem Corporation. SN 173,185. Pub. 1–7–64. Filed 7–17–63.

767,056. NOVATHENE. Raychem Corporation. SN 173,186. Pub. 1–7–64. Filed 7–17–63.

767,057. GEN-E-REC. Carter Machinery Company, Incorporated. SN 173,557. Pub. 1–7–64. Filed 7–23–63.

Class 22—Games, Toys, and Sporting Goods

767,058. SHOOT-A-LOOP. Wolverine Toy Company. SN 163,989. Pub. 1–7–64. Filed 3–5–63.

767,059. "DOUBLE BUILT." Harnell, Inc. SN 165,921. Pub. 1–7–64. Filed 4–2–63.

767,060. COSMO. Grace E. Kinnee, d.b.a. H. E. Kinnee Company. SN 166,725. Pub. 1–7–64. Filed 4–15–63.

767,061. WORD POWER. The Avalon Hill Company. SN 167,105. Pub. 1–7–64. Filed 4–19–63.

767,062. AIRFIX. Airfix Industries Inc. SN 167,440. Pub. 1–7–64. Filed 4–24–63.

767,063. NANCY NURSE. De Luxe Reading Corporation. SN 169,229. Pub. 1–7–64. Filed 5–20–63.

767,064. TRENT. Sampo, Inc. SN 169,481. Pub. 1–7–64. Filed 5–22–63.

767,065. ROSCO. Sampo, Inc. SN 169,482. Pub. 1–7–64. Filed 5–22–63.

767,066. TRIDENT. B. F. Gladding & Company, Inc. SN 170,061. Pub. 1–7–64. Filed 5–31–63.

767,067. HUNK O' HIDE. Items Incorporated. SN 170,076. Pub. 1–7–64. Filed 5–31–63.

767,068. THE WIZARD OF ODDS. Kamen Enterprises, Inc. SN 170,078. Pub. 1–7–64. Filed 5–31–63.

767,069. MARINER. Gentex Corporation. SN 170,465. Pub. 1–7–64. Filed 6–6–63.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

767,026. (See Class 19 for this trademark.)

767,070. B. Houdaille Industries, Inc., assignee of Wales-Strippit Corporation. SN 1,641. Pub. 3–4–58. Filed 1–27–56.

767,071. C. Houdaille Industries, Inc., assignee of Wales-Strippit Corporation. SN 1,642. Pub. 3–4–58. Filed 1–27–56.

767,072. BL. Houdaille Industries, Inc., assignee of Wales-Strippit Corporation. SN 1,643. Pub. 3–4–58. Filed 1–27–56.

767,073. H. Houdaille Industries, Inc., assignee of Wales-Strippit Corporation. SN 1,644. Pub. 3–4–58. Filed 1–27–56.

767,074. CJ. Houdaille Industries, Inc., assignee of Wales-Strippit Corporation. SN 1,645. Pub. 3–4–58. Filed 1–27–56.

767,075. SCJ. Houdaille Industries, Inc., assignee of Wales-Strippit Corporation. SN 1,646. Pub. 3–4–58. Filed 1–27–56.

767,076. HS. Houdaille Industries, Inc., assignee of Wales-Strippit Corporation. SN 1,647. Pub. 3–4–58. Filed 1–27–56.

767,077. NA. Houdaille Industries, Inc., assignee of Wales-Strippit Corporation. SN 1,920. Pub. 3–4–58. Filed 2–1–56.

767,078. CD. Houdaille Industries, Inc., assignee of Wales-Strippit Corporation. SN 1,921. Pub. 3–4–58. Filed 2–1–56.

767,079. JD. Houdaille Industries, Inc., assignee of Wales-Strippit Corporation. SN 1,922. Pub. 3–4–58. Filed 2–1–56.

767,080. NJ. Houdaille Industries, Inc., assignee of Wales-Strippit Corporation. SN 1,923. Pub. 3–4–58. Filed 2–1–56.

767,081. 3-WAY JET. Jensen Brothers Manufacturing Company Incorporated, assignee of Clayton Mark & Company. SN 131,936. Pub. 4–30–63. Filed 11–14–61.

767,082. TORQ-TENDER. Helland, Inc. SN 137,912. Pub. 1–1–63. Filed 2–14–62.

767,083. FARRELOY. Farrel Corporation, by change of name from Farrel-Birmingham Company, Incorporated. SN 141,718. Pub. 4–16–63. Filed 4–6–62.

767,084. BURR-BAN. Louis A. Kubicek, d.b.a. Burr-Ban Tool Service. SN 142,323. Pub. 11–27–62. Filed 4–16–62.

767,085. CHAFFSAVER. Burgard's, Inc. SN 148,949. Pub. 1–7–64. Filed 7–13–62.

767,086. PHILLIPSBURG. Bell & Howell Company. SN 149,912. Pub. 1–7–64. Filed 7–27–62.

767,087. H AND DESIGN. B.S.A. Harford Pumps, Limited, by change of name from Harford Pumps Limited. SN 153,280. Pub. 1–7–64. Filed 9–17–62.

767,088. S AND DESIGN. Soderhamns Verkstader Aktiebolag. SN 154,444. Pub. 1–7–64. Filed 10–3–62.

767,089. LUMBERCRAFT. Clary Corporation. SN 155,891. Pub. 1–7–64. Filed 10–25–62.

767,090. ZIPAWAY. C & W Company. SN 156,557. Pub. 1–7–64. Filed 11–5–62.

767,091. CUPMASTER. Kenneth C. Bradford, d.b.a. Bradford & Co. SN 156,938. Pub. 1–7–64. Filed 11–9–62.

767,092. CUSHIONEER. Deschner Co. SN 157,477. Pub. 1–7–64. Filed 11–19–62.

767,093. PRONTO-POWER. Hydraulic & Air Equipment Co. SN 157,509. Pub. 1–7–64. Filed 11–19–62.

767,094. MEDIAMATIC. Roto-Finish Company. SN 157,564. Pub. 1–7–64. Filed 11–19–62.

767,095. REGISTRATOR AND DESIGN. Dorr Sales & Engineering Co. Inc. SN 157,685. Pub. 1–7–64. Filed 11–21–62.

767,096. OCRIM. Ocrim S.p.A., Cremona, Italia Societe per l'Industria Meccanica. SN 157,924. Pub. 1–7–64. Filed 11–26–62.

767,097. STOCKLUBE. Graymills Corporation. SN 158,249. Pub. 1–7–64. Filed 11–30–62.

767,098. SCRAPER-CUSHIN'. Rockwell Manufacturing Company. SN 158,567. Pub. 1–7–64. Filed 12–5–62.

767,099. SHOCK-SORBER. Neapco Products Inc. SN 159,417. Pub. 1–7–64. Filed 12–19–62.

767,100. SPLIT CIRCLE (DESIGN). General Motors Corporation. SN 160,176. Pub. 1–7–64. Filed 1–4–63.

767,101. CLINTON AND DESIGN. Clinton Engines Corporation. SN 161,156. Pub. 1–7–64. Filed 1–22–63.

767,102. INVERFORM. St. Anne's Board Mill Company, Limited. SN 164,911. Pub. 1–7–64. Filed 3–18–63.

767,103. KELL-DOT AND DESIGN. Kell-Dot Industries, Inc. SN 165,337. Pub. 1–7–64. Filed 3–25–63.

767,104. MADE ON THE THIRD PLANET FROM THE SUN. William E. Bounds, d.b.a. W. E. Bounds Associates. SN 166,775. Pub. 1–7–64. Filed 4–12–63.

767,105. SHAKE 'N' TWIST. William E. Bounds, d.b.a. W. E. Bounds. SN 166,776. Pub. 1–7–64. Filed 4–12–63.

767,106. QA. Questron America, Inc. SN 166,924. Pub. 1–7–64. Filed 4–17–63.

767,107. MOLD-A-RAMA. Mold-A-Rama, Inc. SN 167,296. Pub. 1–7–64. Filed 4–22–63.

767,108. VACUUM MASTER. Lapine Scientific Company. SN 167,734. Pub. 1–7–64. Filed 4–29–63.

767,109. COBRA. Rychlik Enterprises Inc. SN 167,942. Pub. 1–7–64. Filed 5–1–63.

767,110. ALDO. Aldo Controls & Mfg. Inc. SN 168,266. Pub. 1–7–64. Filed 5–7–63.

767,111. TWISTYPE AND DESIGN. Visual Graphics Corp. SN 168,552. Pub. 1–7–64. Filed 5–9–63.

767,112. EHT AND DESIGN. Erinac Equipment Corp. SN 169,536. Pub. 1–7–64. Filed 5–23–63.

767,113. LATHER-LUBE. Robert L. Batchelor, d.b.a. Lather-Lube Co. SN 169,687. Pub. 1–7–64. Filed 5–27–63.

767,114. LOKTIP. Nielsen Saw & Manufacturing Co., d.b.a. Nielsen Corp. SN 170,097. Pub. 1–7–64. Filed 5–31–63.

767,115. PRINT-A-PLY. Minnesota Mining and Manufacturing Company. SN 170,542. Pub. 1–7–64. Filed 6–7–63.

767,116. DISPENS-A-PLY. Minnesota Mining and Manufacturing Company. SN 170,543. Pub. 1–7–64. Filed 6–7–63.

767,117. GRIP-A-TAB. Minnesota Mining and Manufacturing Company. SN 170,545. Pub. 1–7–64. Filed 6–7–63.

767,118. HANDEE-ANDEE. Valk Manufacturing Company. SN 170,571. Pub. 1–7–64. Filed 6–7–63.

767,119. K. Stuart P. Kessler, d.b.a. Stuart P. Kessler Company. SN 171,357. Pub. 1–7–64. Filed 6–19–63.

767,120. JETGAS AND DESIGN. Apex Management, Inc. SN 171,949. Pub. 1–7–64. Filed 6–27–63.

767,121. COMMUNITY. Miehle-Goss-Dexter, Incorporated. SN 172,395. Pub. 1–7–64. Filed 7–3–63.

767,122. FOX AND DESIGN. Fox River Tractor Company. SN 173,163. Pub. 1–7–64. Filed 7–17–63.

767,123. BALDIDE. Baldwin-Lima-Hamilton Corporation. SN 174,005. Pub. 1–7–64. Filed 7–30–63.

767,124. FLEXOLAP. Nibot Corporation. SN 174,221. Pub. 1–7–64. Filed 8–1–63.

Class 25—Locks and Safes

767,125. HANA. Falcon Lock Co. SN 161,689. Pub. 1–7–64. Filed 1–30–63.

767,126. KIM. Falcon Lock Co. SN 161,690. Pub. 1–7–64. Filed 1–30–63.

Class 26—Measuring and Scientific Appliances

767,127. ZERO-ONE. Reeves Instrument Corporation. SN 127,873. Pub. 1–7–64. Filed 9–14–61.

767,128. SUNSET. Interphoto Corporation, assignee of Intercontinental Marketing Corporation. SN 134,985. Pub. 1–7–64. Filed 1–2–62.

767,129. LUMA-RAC. The Rolor Corporation. SN 144,191. Pub. 1–7–64. Filed 5–9–62.

767,130. POLYPETTE. Schuco Scientific Corporation. SN 156,034. Pub. 1–7–64. Filed 10–26–62.

767,131. VERSAMAT. Eastman Kodak Company. SN 156,963. Pub. 1–7–64. Filed 11–9–62.

767,132. LUMIERE. Ciba Limited. SN 157,466. Pub. 1–7–64. Filed 11–19–62.

767,133. TELOPTIK. Earl F. Seymour. SN 157,649. Pub. 1–7–64. Filed 11–20–62.

767,134. TIME-LOG. Globe-Union Inc. SN 157,995. Pub. 1–7–64. Filed 11–27–62.

767,135. McCORKLE CONTROLS AND DESIGN. Dura-Bond Bearing Company. SN 160,041. Pub. 1–7–64. Filed 1–2–63.

767,136. LIFETIME. John Dritz & Sons, Inc. SN 160,168. Pub. 1–7–64. Filed 1–4–63.

767,137. VELOCITRONIC. The Velocitronics Co. SN 160,910. Pub. 1–7–64. Filed 1–17–63.

767,138. ALBEROX. Alberox Corporation. SN 161,758. Pub. 1–7–64. Filed 1–31–63.

767,139. KELLERT. International Telephone and Telegraph Corporation. SN 161,885. Pub. 1-7-64. Filed 2-1-63.

767,140. PORTA-SCRIBE. Charles Beseler Company. SN 163,114. Pub. 1-7-64. Filed 2-20-63.

767,141. TRAVELGRAPH. Projection Optics Co. Inc. SN 163,171. Pub. 1-7-64. Filed 2-20-63.

767,142. TELIKON. Carl Zeiss-Stiftung, d.b.a. Carl Zeiss. SN 165,655. Pub. 1-7-64. Filed 3-28-63.

767,143. JELCO. Petri-Kine Camera Company, Inc. SN 166,482. Pub. 1-7-64. Filed 4-10-63.

767,144. INDI-TRACE. Cleveland Instrument Company SN 168,808. Pub. 1-7-64. Filed 5-14-63.

767,145. UNI-JUST. Ex-Cell-O Corporation. SN 168,814. Pub. 1-7-64. Filed 5-14-63.

767,146. OMEGA. The New York Air Brake Company. SN 169,155. Pub. 1-7-64. Filed 5-17-63.

767,147. PEK. The Plastic Contact Lens Company. SN 169,304. Pub. 11-12-63. Filed 5-20-63.

767,148. TAPE TENNA. Dura Business Machines, Inc. SN 170,304. Pub. 1-7-64. Filed 6-4-63.

767,149. DIAL.A.TORQUE. Hamilton Manufacturing Company. SN 170,470. Pub. 1-7-64. Filed 6-6-63.

767,150. MILLAFLOW AND DESIGN. National Welding Equipment Co. SN 170,547. Pub. 1-7-64. Filed 6-7-63.

767,151. POLYSTAT. Poly Repro International, Ltd. SN 170,668. Pub. 1-7-64. Filed 6-10-63.

767,152. MAGNETEL. Rochester Gauges, Inc. of Texas. SN 171,486. Pub. 1-7-64. Filed 6-20-63.

767,153. MICREX. Crosfield Electronics Limited. SN 172,473. Pub. 1-7-64. Filed 7-5-63.

767,154. GASTRON. Barton Instrument Corporation. SN 172,633. Pub. 1-7-64. Filed 7-9-63.

767,155. DATASCRIBE. Research Specialties Co. SN 172,776. Pub. 1-7-64. Filed 7-10-63.

Class 27 — Horological Instruments

767,156. REPRESENTATION OF MALE FIGURE. Sheffield Watch, Inc. SN 158,184. Pub. 1-7-64. Filed 11-29-62.

767,157. KINGSTON. World Wide Watch Co., Inc. SN 162,604. Pub. 1-7-64. Filed 2-12-63.

767,158. FAVRE-LEUBA. Compagnie des Montres, Favre-Leuba S.A. SN 166,067. Pub. 1-7-64. Filed 4-4-63.

767,159. SLUMBERWOOD. Sunbeam Corporation. SN 170,770. Pub. 1-7-64. Filed 6-11-63.

767,160. STARGAZER. Sunbeam Corporation. SN 171,814. Pub. 1-7-64. Filed 6-25-63.

767,161. EAST WIND. Sunbeam Corporation. SN 171,816. Pub. 1-7-64. Filed 6-25-63.

Class 28 — Jewelry and Precious-Metal Ware

767,162. MJK. Morris J. Kraut. SN 145,088. Pub. 11-20-62. Filed 5-21-62.

767,163. K AND DESIGN. J. P. Knight. SN 166,564. Pub. 1-7-64. Filed 4-11-63.

767,164. BEAUZAL. Zayre Corp. SN 169,407. Pub. 1-7-64. Filed 5-21-63.

767,165. CLAIROL. Clairol Incorporated. SN 170,817. Pub. 1-7-64. Filed 6-12-63.

767,166. FB. Franz Breuning OHG. SN 172,969. Pub. 1-7-64. Filed 7-15-63.

Class 29 — Brooms, Brushes, and Dusters

767,167. SALON. Walter Sporn Co. SN 166,141. Pub. 1-7-64. Filed 4-4-63.

Class 31 — Filters and Refrigerators

767,168. KING-AIR KURTAIN. The King Company. SN 151,235. Pub. 1-7-64. Filed 8-15-62.

767,169. AQUA-ZON. Harry Shindell, d.b.a. Hygiene Aire Laboratories. SN 168,540. Pub. 1-7-64. Filed 5-9-63.

767,170. MARINAIRE AND DESIGN. Marinaire Corporation. MULTIPLE CLASS (Classes 31 and 34). SN 169,287. Pub. 1-7-64. Filed 5-20-63.

Class 32 — Furniture and Upholstery

767,171. SELF-A-JUST. Dayco Corporation. SN 155,061. Pub. 1-7-64. Filed 10-12-62.

767,172. REFLECTIONS. The Widdicomb Furniture Company. SN 165,877. Pub. 1-7-64. Filed 4-1-63.

Class 33 — Glassware

767,173. SCOTCH-ROK. Minnesota Mining and Manufacturing Company. SN 166,573. Pub. 1-7-64. Filed 4-11-63.

Class 34 — Heating, Lighting, and Ventilating Apparatus

767,170. (See Class 31 for this trademark.)

767,174. ECONOMY. International Heater Company. SN 150,348. Pub. 1-7-64. Filed 8-2-62.

767,175. WHITE-ROOMETTE. Ultrasonic Industries, Inc. SN 150,651. Pub. 1-7-64. Filed 8-6-62.

767,176. COR-PAK. Combustion Engineering, Inc. SN 157,752. Pub. 1-7-64. Filed 11-7-63.

767,177. SEASONVENT. McQuay, Inc. SN 158,357. Pub. 1-7-64. Filed 12-3-62.

767,178. RACCO. Republic-Transcon Industries, Inc., d.b.a. Republic Air Conditioning Co. SN 159,775. Pub. 1-7-64. Filed 12-26-62.

767,179. ROPER. Geo. D. Roper Corporation. SN 160,219. Pub. 1-7-64. Filed 1-4-63.

767,180. AMMOCARB. Joe Martin Industries, Inc. SN 164,864. Pub. 1-7-64. Filed 3-18-63.

767,181. THIRD HAND. Invention Development Company. SN 165,518. Pub. 1-7-64. Filed 3-27-63.

767,182. RING-SPOT. Sonobond Corporation. SN 166,943. Pub. 1-7-64. Filed 4-17-63.

767,183. PARAGON. American Electrical Heater Company. SN 167,684. Pub. 1-7-64. Filed 4-29-63.

767,184. AQUA-TROL. L & F Heating and Air Conditioning Company. SN 169,552. Pub. 1-7-64. Filed 5-23-63.

767,185. REHEAT-LOADER. Kramer Trenton Co. SN 169,856. Pub. 1-7-64. Filed 5-28-63.

767,186. HARTILE KXD. Harbison-Walker Refractories Company. SN 169,930. Pub. 1-7-64. Filed 5-29-63.

767,187. CONDIFIL. Gebrueder Sulzer Aktiengesellschaft. SN 172,543. Pub. 1-7-64. Filed 7-3-63.

767,188. AM-FINN. Am-Finn Sauna, Inc., assignee of Paul H. Fleck. SN 172,734. Pub. 12-3-63. Filed 7-10-63.

Class 36 — Musical Instruments and Supplies

767,189. CHATTY-RING. Mattel, Inc. SN 154,361. Pub. 1-7-64. Filed 10-2-62.

Class 37 — Paper and Stationery

767,190. DURABLE. National Vulcanized Fibre Co. SN 133,979. Pub. 1-7-64. Filed 12-18-61.

767,191. PETRO-SEAL. Venus Pen & Pencil Corporation. SN 152,477. Pub. 1-7-64. Filed 9-4-62.

767,192. QUIK-STRIP AND DESIGN. Chesley F. Carlson Company. SN 155,567. Pub. 11-26-63. Filed 10-22-62.

767,193. SHIELD-TIP. Originalities of New York, Inc. SN 163,658. Pub. 1-7-64. Filed 2-28-63.

767,194. HI-WIRE. Peninsular Paper Company. SN 168,851. Pub. 1-7-64. Filed 5-14-63.

767,195. NEETRACE. Lakeside Central Company. SN 168,933. Pub. 1-7-64. Filed 5-15-63.

767,196. TEXMARK. East Texas Pulp and Paper Company. SN 169,030. Pub. 1-7-64. Filed 5-16-63.

767,197. LINDY. Lindy Pen Co., Inc. SN 169,263. Pub. 1-7-64. Filed 5-20-63.

767,198. BRIGHTEN GLO AND DESIGN. Griffin, Campbell, Hayes, Walsh, Inc. SN 171,130. Pub. 1-7-64. Filed 6-17-63.

767,199. MONTICELLO COLLECTION. De Soto Chemical Coatings, Inc. SN 173,744. Pub. 1-7-64. Filed 7-25-63.

767,200. REDI-NOTE. Moore Business Forms, Inc. SN 173,943. Pub. 1-7-64. Filed 7-29-63.

Class 38 — Prints and Publications

767,201. PAR-T-SING. Joseph S. Bianchi, d.b.a. Bianchi Music Company. SN 167,114. Pub. 1-7-64. Filed 4-19-63.

767,202. LITHOTALK. Peerless Lithographing Co. SN 167,303. Pub. 1-7-64. Filed 4-22-63.

767,203. CLINICAL GEMS. Armour Pharmaceutical Company. SN 167,360. Pub. 1-7-64. Filed 4-23-63.

767,204. THE VOICE OF STAINLESS. Chicago Steel Service Company. SN 167,529. Pub. 1-7-64. Filed 4-25-63.

767,205. WINGS. Mills Publications, Inc. SN 167,565. Pub. 1-7-64. Filed 4-25-63.

767,206. HOME APPLIANCE BUILDER. Institute of Appliance Manufacturers. SN 167,634. Pub. 1-7-64. Filed 4-26-63.

767,207. PHARMASCOPE. Transpharma, Inc. SN 167,664. Pub. 1-7-64. Filed 4-26-63.

Class 39 — Clothing

766,944. (See Class 1 for this trademark.)

766,947. (See Class 2 for this trademark.)

767,208. MR. J.K. Louis Walter & Co., Inc. SN 117,070. Pub. 1-7-64. Filed 4-3-61.

767,209. BOOTMAKER GUILD CRADLE HEEL. Freeman Shoe Corporation. SN 117,100. Pub. 1-7-64. Filed 4-4-61.

767,210. SLACKEAZE. The Biltwell Company, Inc. SN 124,385. Pub. 3-12-63. Filed 7-20-61.

767,211. YVES SAINT LAURENT. Yves Saint Laurent A.G. (S.A.) (Ltd.). SN 140,895. Pub. 1-7-64. Filed 3-27-62.

767,212. GLAD HATTER AND DESIGN. Glad Hatter, Inc. SN 141,613. Pub. 1-7-64. Filed 4-5-62.

767,213. DEER EASE. Cushionized-Bellaire Shoe Co. SN 144,237. Pub. 1-7-64. Filed 5-10-62.

767,214. FOREVA. Chadbourn Gotham, Inc. SN 146,577. Pub. 1-7-64. Filed 6-11-62.

767,215. CASSANDRA. Cassandra, Inc., assignee of Laurie J. Phillips, d.b.a. Cassandra. SN 148,526. Pub. 1-7-64. Filed 7-6-62.

767,216. LADY VAN HEUSEN. Phillips-Van Heusen, assignee of Lady Van Heusen, Inc. SN 149,852. Pub. 1-7-64. Filed 7-26-62.

767,217. SCOTCLAN. Scott & Hunsicker, Inc. SN 150,627. Pub. 1-7-64. Filed 8-6-62.

767,218. RONNA. Ronna Knitwear and Sunny Sportswear, Incorporated. SN 152,440. Pub. 1-7-64. Filed 9-4-62.

767,219. EVER-STA. Sears, Roebuck and Co. SN 153,690. Pub. 1-7-64. Filed 9-21-62.

767,220. PARIS PRIDE-MARK AND DESIGN. A. Stein & Company, Inc. SN 154,645. Pub. 1-7-64. Filed 10-5-62.

767,221. ASTRO-FOAM. Windbreaker-Danville Co. SN 154,657. Pub. 1-7-64. Filed 10-5-62.

767,222. THE PURIST. Sero of New Haven, Inc. SN 156,035. Pub. 1-7-64. Filed 10-26-62.

767,223. HI-SHIELD. Adams-Mills Corporation, assignee of Granite Hosiery Corporation. SN 157,366. Pub. 1-7-64. Filed 11-16-62.

767,224. MILO DA VINCI. Caprini Shoe Corp. SN 160,270. Pub. 1-7-64. Filed 1-7-63.

767,225. LITTLE CHARMERS. Beau Peep Products, Inc., d.b.a. Charm Shoe Co. SN 160,688. Pub. 1-7-64. Filed 1-15-63.

767,226. WHITE LEVI'S. Levi Strauss & Co. SN 162,563. Pub. 1-7-64. Filed 2-12-63.

767,227. THE COMMODORE'S LADY. Kathi Originals Inc. SN 164,140. Pub. 1-7-64. Filed 3-7-63.

767,228. BEAUMIST. Aris Gloves, Incorporated. SN 164,303. Pub. 1-7-64. Filed 3-11-63.

767,229. 3M. Minnesota Mining and Manufacturing Company. SN 164,547. Pub. 1-7-64. Filed 3-13-63.

767,230. GOAL TENDER. Cherberg Company, Inc. SN 164,599. Pub. 1-7-64. Filed 3-14-63.

767,231. WHIRL-A-WAY. Lester Pincus Shoe Corporation. SN 164,764. Pub. 1-7-64. Filed 3-11-63.

767,232. KIKI KONTROL. Kiki Undies Corporation. SN 167,147. Pub. 1-7-64. Filed 4-19-63.

767,233. JR. SCENE. Glenhaven Ltd. SN 167,251. Pub. 1-7-64. Filed 4-22-63.

767,234. RE-LAX-OR. George P. Hall, Inc. SN 167,546. Pub. 1-7-64. Filed 4-25-63.

767,235. "WEATHER WINNER" AND DESIGN. Sherman Bros., Inc. SN 169,179. Pub. 1-7-64. Filed 5-17-63.

767,236. VOLLA. Sam Vermut and Sons. SN 169,189. Pub. 1-7-64. Filed 5-17-63.

767,237. GERBER AND DESIGN. Gerber Products Company. SN 169,630. Pub. 1-7-64. Filed 5-24-63.

767,238. TRACK & FIELD. Childers Hosiery Mill, Inc. SN 169,699. Pub. 1-7-64. Filed 5-27-63.

767,239. FUN KICKS. Edison Brothers Stores Inc. SN 171,242. Pub. 1-7-64. Filed 6-18-63.

767,240. WAISTWATCHER. Greenhall Bros., Inc. SN 171,251. Pub. 1-7-64. Filed 6-18-63.

767,241. ORMOND. The Ormond Shops, Inc. SN 171,563. Pub. 1-7-64. Filed 6-21-63.

767,242. KIKI MAGIC. Kiki Undies Corporation. SN 171,887. Pub. 1-7-64. Filed 6-26-63.

767,243. COT'N-FLEX. Alba-Waldensian, Inc. SN 172,863. Pub. 12-24-63. Filed 7-12-63.

767,244. "THE YOUNG INNOCENT." Arpeja Petite Juniors, Inc. SN 173,884. Pub. 1-7-64. Filed 7-29-63.

767,245. FURCHIEF. Philip R. Leeds. SN 173,929. Pub. 1-7-64. Filed 7-29-63.

Class 40 — Fancy Goods, Furnishings, and Notions

766,957. (See Class 5 for this trademark.)

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

767,246. PILE PURR. Collins & Aikman Corporation. SN 163,030. Pub. 1-7-64. Filed 2-19-63.

767,247. "SHIFT FOR YOURSELF." M. Lowenstein & Sons, Inc. SN 167,828. Pub. 1-7-64. Filed 4-30-63.

Class 44 — Dental, Medical, and Surgical Appliances

767,248. SKA-PAK. Scott Aviation Corporation. SN 164,900. Pub. 1-7-64. Filed 3-18-63.

767,249. TIP-EZ. La-Deana Laboratories, Inc. SN 171,359. Pub. 1-7-64. Filed 6-19-63.

767,250. AMIRA. Hyko Hygiene-Vertrieb GmbH. SN 172,134. Pub. 1-7-64. Filed 6-21-63.

767,251. STATS. Amedico, Inc. SN 172,553. Pub. 1-7-64. Filed 7-8-63.

767,252. DJ. Durallium Products Corporation. SN 174,091. Pub. 1-7-64. Filed 7-31-63.

767,253. MEEK. Medical Specialties, Inc. SN 175,668. Pub. 1-7-64. Filed 8-23-63.

767,254. GRAND PRIX. Samuel Bonat & Bro. Inc. SN 175,968. Pub. 1-7-64. Filed 8-29-63.

Class 45 — Soft Drinks and Carbonated Waters

767,255. A-TREAT. A-Treat Bottling Company. SN 167,101. Pub. 1-7-64. Filed 4-19-63.

767,256. TOPP. The Topp-Cola Co. SN 167,585. Pub. 1-7-64. Filed 4-25-63.

Class 46 — Foods and Ingredients of Foods

767,257. PLUS 2. Mutual Products Company of Minnesota, Inc., d.b.a. Mutual Products Co. SN 164,873. Pub. 1-7-64. Filed 3-18-63.

767,258. KNI-CEST. The Whipple Company, d.b.a. A. A. Knights Division. SN 165,195. Pub. 1-7-64. Filed 3-21-63.

767,259. CROWN ETC. AND DESIGN. Crown Nut Company, Inc. SN 166,977. Pub. 1-7-64. Filed 4-18-63.

767,260. BILLY STONE AND DESIGN. M & E Nut Company, Inc., assignee of Edward C. Cazel, d.b.a. M & E Nut Co. and M & E Nuts. SN 167,868. Pub. 1-7-64. Filed 5-1-63.

767,261. DIXIE. Bushman Bros. SN 168,386. Pub. 1-7-64. Filed 5-8-63.

767,262. HI-BRAND AND DESIGN. Dixie Frozen Foods, Inc. SN 168,487. Pub. 1-7-64. Filed 5-9-63.

767,263. AH-SO. Harvey Edlin Sales Corporation. SN 168,489. Pub. 1-7-64. Filed 5-9-63.

767,264. DISCO. Super Valu Stores, Inc. SN 168,645. Pub. 1-7-64. Filed 5-10-63.

767,265. LOIS LANE. Eelbeck Milling Company, Inc., d.b.a. Juniper Milling Company. SN 169,123. Pub. 1-7-64. Filed 5-17-63.

767,266. PARLEH. Sub-Tropic Fruit Co., Inc. SN 172,347. Pub. 1-7-64. Filed 7-2-63.

767,267. ARDEL. Sub-Tropic Fruit Co., Inc. SN 172,348. Pub. 1-7-64. Filed 7-2-63.

767,268. SAN-JAC. Ray Peay, d.b.a. Terry Farms. SN 172,610. Pub. 1-7-64. Filed 7-5-63.

767,269. TASTY PINE. Heggblade-Margueleas Co. SN 172,821. Pub. 1-7-64. Filed 7-11-63.

767,270. DEBCO. De Bruyn Texas Produce Co. SN 173,343. Pub. 1-7-64. Filed 7-19-63.

767,271. PICNIC AND DESIGN. Gold Seal Products Company, Inc., d.b.a. Southern Chicken Products Co. SN 174,661. Pub. 1-7-64. Filed 8-8-63.

767,272. HARTZ MOUNTAIN. Hartz Mountain Products Corp. SN 176,918. Pub. 1-7-64. Filed 9-13-63.

Class 47 — Wines

767,273. OPICI AND DESIGN. American B. D. Company, d.b.a. Opici Wine Co. SN 163,513. Pub. 1-7-64. Filed 2-27-63.

767,274. WIDMER. Widmer's Wine Cellars, Inc. SN 164,289. Pub. 1-7-64. Filed 3-8-63.

767,275. RENEE FRANCE. Standard Wine & Liquor Co. Inc. SN 168,243. Pub. 1-7-64. Filed 5-6-63.

Class 49 — Distilled Alcoholic Liquors

767,276. DOCH-AN-DORRIS. Arrow Liqueurs Corporation, d.b.a. McMaster Import Company. SN 167,603. Pub. 1-7-64. Filed 4-26-63.

Class 50 — Merchandise Not Otherwise Classified

766,947. (See Class 2 for this trademark.)

767,277. MULTI-PAN. Spanjer Brothers, Inc. SN 162,991. Pub. 1-7-64. Filed 2-18-63.

767,278. PAD-A-MATIC. Matmakers, Inc. SN 169,093. Pub. 1-7-64. Filed 5-16-63.

767,279. STICK-STACKS. Matmakers, Inc. SN 169,094. Pub. 1-7-64. Filed 5-16-63.

767,280. J-KNIT. Jomac, Inc. SN 169,855. Pub. 1-7-64. Filed 5-28-63.

767,281. THE STONE-AGERS. Arthur F. Bregila. SN 169,906. Pub. 1-7-64. Filed 5-29-63.

767,282. DRINKITS. American Sugar Company. SN 170,269. Pub. 1-7-64. Filed 6-4-63.

Class 51 — Cosmetics and Toilet Preparations

767,283. ROLL 'N GO. The Gillette Company. SN 163,628. Pub. 1-7-64. Filed 2-28-63.

767,284. JANUS MANN AND DESIGN. J. Laurent Corp. SN 164,055. Pub. 1-7-64. Filed 3-6-63.

767,285. LE JADE. Roger & Gallet S.A., assignee of Roger & Gallet. SN 165,172. Pub. 1-7-64. Filed 3-21-63.

767,286. TERRI. Fleetwood Company. SN 165,763. Pub. 1-7-64. Filed 4-1-63.

767,287. IMPERIAL IMAGE. Imperial Toiletries, Ltd. SN 166,012. Pub. 1-7-64. Filed 4-3-63.

767,288. EYE-CICLES. American Hygienic Laboratories, Inc. SN 167,598. Pub. 1-7-64. Filed 4-26-63.

767,289. TENDER LIP. Maradel Products, Inc. SN 167,642. Pub. 1-7-64. Filed 4-26-63.

767,290. 'EGBERT.' Cort Cosmetics, Inc. SN 168,302. Pub. 1-7-64. Filed 5-7-63.

767,291. BLUE PEARL. Hawaiian Perfumers, Inc., d.b.a. Liana of Waikiki. SN 168,608. Pub. 1-7-64. Filed 5-10-63.

767,292. FLIPPANT. Fifth Avenue Cosmetics, Inc. SN 168,917. Pub. 1-7-64. Filed 5-15-63.

Class 52 — Detergents and Soaps

767,293. DRI-BATH. Virginia Chemicals & Smelting Company. SN 143,894. Pub. 1-7-64. Filed 5-4-62.

767,294. AERO DEW. American Home Products Corporation. SN 162,893. Pub. 1-7-64. Filed 2-18-63.

767,295. LARAY. Laray Cosmetics, Inc. SN 166,201. Pub. 1-7-64. Filed 4-5-63.

767,296. COLOR-BAK. Turtle Wax, Inc. SN 166,224. Pub. 1-7-64. Filed 4-5-63.

767,297. ANGEL RINSE. Turtle Wax, Inc. SN 166,225. Pub. 1-7-64. Filed 4-5-63.

767,298. LESGERM. Lestoil Products, Inc. SN 166,389. Pub. 1-7-64. Filed 4-9-63.

767,299. OGILVIE. Lehn & Fink Products Corporation. SN 167,013. Pub. 1-7-64. Filed 4-18-63.

767,300. REVIVA. Michael Industries, Inc., d.b.a. Jackson of London Products. SN 167,023. Pub. 1-7-64. Filed 4-18-63.

767,301. SUREX. Purex Corporation, Ltd., d.b.a. Wrisley. SN 167,319. Pub. 1-7-64. Filed 4-22-63.

767,302. SPRAY GEST. Baxter Laboratories, Inc. SN 168,679. Pub. 1-7-64. Filed 5-13-63.

Service Marks

Class 100 — Miscellaneous

767,303. DPMA AND DESIGN. Data Processing Management Association. SN 165,754. Pub. 1-7-64. Filed 4-1-63.

Class 101 — Advertising and Business

767,304. MEMA AND DESIGN. Motor and Equipment Manufacturers Association. SN 166,027. Pub. 1-7-64. Filed 4-3-63.

767,305. O.J. ETC. AND DESIGN. Florida Citrus Commission. SN 176,648. Pub. 1-7-64. Filed 9-10-63.

767,306. O.J. Florida Citrus Commission. SN 176,649. Pub. 1-7-64. Filed 9-10-63.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 2 — Receptacles

767,307. The Herald Corporation, El Paso, Tex. SN 179,792. Filed 10-25-63.

KOOL KUP
COOL CUPS FOR HOT BEVERAGES

For Plastic Drinking Cups.
First use Feb. 28, 1962.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

767,308. Tolco Corporation, Toledo, Ohio. SN 165,867. Filed P.R. 4-1-63; Am. S.R. 1-7-64.

SPRAY MIST

For Spray Heads or Nozzles of the Trigger Actuated Type.
First use Nov. 27, 1961.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

767,309. Achille Decarli, Milan, Italy. SN 170,582. Filed P.R. 6-3-63; Am. S.R. 12-10-63.

La Romana
automatica

Applicant does not claim any exclusive right in the Italian word "Automatica" meaning automatic. Owner of Italian Reg. No. 154,101, dated Mar. 21, 1961.

For Automatic Machines for Preparing Coffee for Home or Restaurant Use.

Class 39 — Clothing

767,310. Garan, Incorporated, New York, N.Y. SN 161,698. Filed P.R. 1-30-63; Am. S.R. 1-29-64.

RHODES

For Men's and Boys' Sportshirts.
First use Nov. 15, 1962.

Class 50 — Merchandise Not Otherwise Classified

767,311. United States Crown Corporation, Saddle Brook, N.J. SN 158,583. Filed P.R. 12-5-62; Am. S.R. 1-29-64.

CUSHION SEAL

For Bottle Caps With Sealing Liners.
First use Oct. 1, 1962.

Class 51 — Cosmetics and Toilet Preparations

767,312. Merle Norman Cosmetics, Inc., Los Angeles, Calif. SN 120,654. Filed P.R. 5-23-61; Am. S.R. 2-3-64.

SUN DRENCHED

For Nail Enamel.
First use Apr. 1, 1961.

767,313. Merle Norman Cosmetics, Inc., Los Angeles, Calif. SN 120,655. Filed P.R. 5-23-61; Am. S.R. 2-3-64.

PINK IMP

For Nail Enamel.
First use Apr. 11, 1961.

TRADEMARK REGISTRATIONS RENEWED

177,890. KALO-CHROME. Cl. 15. 1-1-24.
177,894. POLLY CHROME. Cl. 15. 1-1-24.
177,895. TUDOR. Cl. 15. 1-1-24.
178,124. SALT OF THE EARTH AND DESIGN. Cl. 46. 1-8-24.
178,422. CELANESE. Cl. 43. 1-8-24.
178,562. VERILITE. Cl. 37. 1-15-24.
178,664. BEATRICE. Cl. 46. 1-15-24.
178,858. SANITOL. Cl. 51. 1-20-24.
178,859. SANITOL. Cl. 52. 1-20-24.
179,338. DESIGN OF 3 WHITE PLUGS. Cl. 39. 2-5-24.
179,374. ATOPHANYL. Cl. 18. 2-5-24.
179,526. KAUSTINE. Cl. 2. 2-12-24.
179,898. HYDRO. Cl. 35. 2-19-24.
179,902. DESIGN OF MAN CARRYING A GASKET. Cl. 35. 2-19-24.
181,069. SILVER CLOUD. Cl. 46. 3-11-24.
181,463. SUPER-CEL. Cl. 6. 3-18-24.
182,354. OVERLAND. Cl. 46. 4-8-24.
182,661. PHENOID. Cl. 52. 4-15-24.
183,114. ORENO. Cl. 22. 4-22-24.
183,168. DESIGN OF HUMAN MALE POURING COFFEE. Cl. 46. 4-22-24.
184,694. MINUTE. Cl. 46. 5-27-24.
184,814. CINDERELLA NU-WAY FROCK AND DESIGN. Cl. 39. 6-3-24.
186,188. JIM DANDY. Cl. 46. 7-1-24.
404,753. BRAKE SHOE AND DESIGN. Cl. 23. 12-21-43.
404,755. BRAKE SHOE AND DESIGN. Cl. 35. 12-21-43.
404,884. PENN-CRAFT. Cl. 35. 12-28-43.
405,005. THE PILOT. Cl. 38. 1-4-44.
405,073. PENN-CRAFT. Cl. 5. 1-4-44.
405,282. BROOKS BROTHERS AND DESIGN. Cl. 8. 1-18-44.
405,459. TREATEX. Cl. 18. 2-1-44.
405,498. WA. Cl. 26. 2-1-44.
405,510. PROKAR. Cl. 21. 2-1-44.
405,580. ALCO EFFICIENT TOOLS. Cl. 23. 2-8-44.
405,691. GROTESQUE FIGURE EMERGING FROM ELECTRIC WALL OUTLET. Cl. 38. 2-15-44.
405,695. GROTESQUE FIGURE AND ELECTRIC WALL SWITCH. Cl. 38. 2-15-44.
405,700. VIBRO-TOOL. Cl. 21. 2-15-44.
405,926. RECTOPOWER. Cl. 21. 2-29-44.
406,012. SPERRY-SUN. Cl. 26. 3-7-44.
406,182. 7 UP AND DESIGN. Cl. 45. 3-14-44.
406,430. ALUBRO-WELD. Cl. 26. 4-4-44.
406,455. CHEERFUL. Cl. 46. 4-4-44.
406,900. KOOLPORE. Cl. 4. 5-9-44.
407,055. METAVIS. Cl. 6. 5-16-44.
407,266. WAG. Cl. 46. 5-23-44.
407,413. GREEN THUMB AND DESIGN. Cl. 1. 6-6-44.
407,440. METASAP. Cl. 6. 6-6-44.
407,506. NBP AND DESIGN. Cl. 38. 6-6-44.
407,798. TATTOO. Cl. 51. 6-27-44.
407,804. RODEO. Cl. 8. 6-27-44.
407,913. CHITON. Cl. 51. 7-4-44.

TRADEMARK REGISTRATIONS CANCELED

Section 8

117,812. BAXTER'S. Cl. 46. 8-7-17.
142,268. MELLO CUP. Cl. 46. 5-10-21.
343,762. PLAINSMAN. Cl. 42. 3-2-37.
356,042. WEATHERCAP AND DESIGN. Cl. 12. 4-12-38.

The following registrations issued Feb. 4, 1958

657,921. CAMELINE AND DESIGN. Cl. 1.
657,925. WONDERFILL. Cl. 1.
657,926. RICH-FIELD. Cl. 1.
657,929. E-Z-E FILTER. Cl. 1.
657,931. ASGROW IN OVAL. Cl. 1.
657,935. ESQUIRE SHOE RE-FRESHER. Cl. 6.
657,937. FYR PAK. Cl. 6.
657,940. P.m.P. Cl. 6.
657,953. LFP AND DESIGN. Cl. 12.
657,954. D'PELCO. Cl. 12.
657,956. E-Z-PLY. Cl. 12.
657,961. WEATHERPANE. Cl. 12.
657,963. ROOF-ALUM. Cl. 12.
657,966. KASSWAY AND DESIGN. Cl. 13.
657,970. PRIDE & JOY SET. Cl. 13.
657,977. PLASTI-BAR. Cl. 16.
657,978. MICASHELL. Cl. 16.
657,984. METICILLIN. Cl. 18.
657,987. SUPER CAL. Cl. 18.
657,988. HEXAMID. Cl. 18.
657,991. SEROCICLINA. Cl. 18.
657,998. FX. Cl. 18.
658,011. SCAN-TENNA. Cl. 21.
658,012. ASTROL-O-PHONE. Cl. 21.
658,033. STAR GLASDRIL. Cl. 23.
658,034. CARDKNIT. Cl. 23.
658,066. UNARCO WEATHER CONDITIONING. Cl. 34.
658,069. AEROTROL. Cl. 34.
658,070. TRI-FAB. Cl. 34.
658,074. VOICE CAMERA. Cl. 36.
658,079. TOWNCRAFT-TANDEM. Cl. 37.
658,086. GUANTO. Cl. 39.
658,090. ROGERS CAMPUS KICKS. Cl. 39.
658,092. SWITCHEROO AND DESIGN. Cl. 39.
658,094. FANNY PANTY. Cl. 39.
658,096. RAINLARK. Cl. 39.
658,099. KUMFYPANTS. Cl. 39.
658,102. THE F.O.B. SLIP "FIT-OVER BRA." Cl. 39.
658,103. HIDE 'M. Cl. 40.
658,108. GLOFORT. Cl. 42.
658,109. COOLA CLOTH. Cl. 42.
658,111. OBOE. Cl. 42.
658,112. "FACE 'N FANNY." Cl. 42.
658,113. GOLDEN KEY. Cl. 42.
658,125. WHITE SWAN. Cl. 46.
658,126. WHITE SWAN. Cl. 46.
658,127. CHEF ARMAND'S. Cl. 46.
658,133. FFV CHEF'S. Cl. 46.
658,141. VAN SUPRA. Cl. 46.
658,142. BEEFLICIOUS. Cl. 46.
658,143. IVY. Cl. 46.
658,146. AMAZON. Cl. 46.
658,148. TOM THUMB. Cl. 46.
658,153. TERAISE. Cl. 50.
658,154. CRAGSTAN. Cl. 50.
658,156. SOGAI. Cl. 51.
658,161. SAVE-O-RAMA. Cl. 102.
658,162. NBC AND DESIGN. Cl. 104.
658,164. ANDEER GREEN. Cl. 12.
658,165. FERRERA GREEN. Cl. 12.
658,171. POE. Cl. 39.

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MARCH 24, 1964

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

Acorn Chemical Co., Cleveland, Ohio. 767,013-14, pub. 1-7-64. Cl. 16.
Adams-Mills Corp., High Point, N.C., from Granite Hosiery Corp., Mount Airy, N.C. 767,223, pub. 1-7-64. Cl. 39.
Aeroquip Corp.: *See*—
Republic Rubber Co., The.
Aerotrol, Inc., New York, N.Y. 658,069, canc. Cl. 34.
Airfix Industries, Inc., New York, N.Y. 767,062, pub. 1-7-64. Cl. 22.
Alba-Waldensian, Inc., Valdese, N.C. 767,243, pub. 12-24-63. Cl. 39.
Alberox Corp., New Bedford, Mass. 767,138, pub. 1-7-64. Cl. 26.
Alco Tool Co., The, Bridgeport, Conn. 405,580, ren. 3-24-64. Cl. 23.
Aldo Controls & Mfg. Inc., Crystal Lake, Ill. 767,110, pub. 1-7-64. Cl. 23.
Alim Association, Inc., Miami, Fla. 767,027, pub. 1-7-64. Cl. 19.
All Sports Medications: *See*—
All Sports Medications, Inc.
All Sports Medications, Inc., d.b.a. All Sports Medications, Tupelo, Miss. 766,967, pub. 1-7-64. Cl. 6.
Alpha Metals, Inc., Jersey City, N.J. 766,996, pub. 1-7-64. Cl. 14.
Amazon Coffee & Tea Co., Inc., New York, N.Y. 658,146, canc. Cl. 46.
Amedico, Inc., Parma, Ohio. 767,251, pub. 1-7-64. Cl. 44.
American B.D. Co., d.b.a. Opici Wine Co., Hawthorne, N.J. 767,273, pub. 1-7-64. Cl. 47.
American Biltrite Rubber Co., Inc.: *See*—
Panther Rubber Mfg. Co.
American Bird Food Mfg. Corp., Chicago, Ill. 766,935, pub. 1-7-64. Cl. 1.
American Brake Shoe Co., New York, N.Y. 404,753, ren. 3-24-64. Cl. 23.
American Brake Shoe Co., New York, N.Y. 404,755, ren. 3-24-64. Cl. 35.
American Electrical Heater Co., Detroit, Mich. 767,183, pub. 1-7-64. Cl. 34.
American Greetings Corp., Cleveland, Ohio. 766,969, pub. 1-7-64. Cl. 7.
American Home Products Corp., New York, N.Y. 767,294, pub. 1-7-64. Cl. 52.
American Hygienic Laboratories, Inc., Miami Beach, Fla. 767,288, pub. 1-7-64. Cl. 51.
American Sugar Co., New York, N.Y. 767,282, pub. 1-7-64. Cl. 50.
Am-Finn Sauna, Inc., Camden, N.J., from Paul H. Fleck, Jenkintown, Pa. 767,188, pub. 12-3-63. Cl. 34.
Ampco Metal, Inc., Milwaukee, Wis. 766,997, pub. 1-7-64. Cl. 14.
Anderson, Clayton & Co., Houston, Tex. 766,942, pub. 1-7-64. Cl. 1.
Anthony Mills: *See*—
Flour Mills of America, Inc.
Apex Management, Inc., Cromwell, Ind. 767,120, pub. 1-7-64. Cl. 23.
Aris Gloves, Inc., New York, N.Y. 767,228, pub. 1-7-64. Cl. 39.
Armour Pharmaceutical Co., Chicago, Ill. 767,203, pub. 1-7-64. Cl. 38.
Arpeja Petite Juniors, Inc., Los Angeles, Calif. 767,244, pub. 1-7-64. Cl. 39.
Arrow Liqueurs Corp., d.b.a. McMaster Import Co., Detroit, Mich. 767,276, pub. 1-7-64. Cl. 49.
Associated Distributors, Chicago, Ill., to Tattoo, Inc., New York, N.Y. 407,798, ren. 3-24-64. Cl. 51.
Associated Seed Growers, Inc., New Haven, Conn. 657,931, canc. Cl. 1.
A-Treat Bottling Co., Allentown, Pa. 767,255, pub. 1-7-64. Cl. 45.
Avalon Hill Co., The, Baltimore, Md. 767,061, pub. 1-7-64. Cl. 22.
Avisun Corp., Philadelphia, Pa. 766,928, pub. 1-7-64. Cl. 1.
Bahr, Bernard, d.b.a. Rodeo Leather Goods Co., Los Angeles, Calif. 407,804, ren. 3-24-64. Cl. 3.
Baldwin-Lima-Hamilton Corp., Philadelphia, Pa. 767,123, pub. 1-7-64. Cl. 23.
Barton Instrument Corp., Monterey Park, Calif. 767,154, pub. 1-7-64. Cl. 26.
Batchelor, Robert L., d.b.a. Lather-Lube Co., Tenafly, N.J. 767,113, pub. 1-7-64. Cl. 23.
Baxter, H. C., & Bro., Brunswick, Maine. 117,812, canc. Cl. 46.
Baxter Laboratories, Inc., Morton Grove, Ill. 767,302, pub. 1-7-64. Cl. 52.
Bay State Abrasive Products Co., Westboro, Mass. 406,900, ren. 3-24-64. Cl. 4.
Beatrice Creamery Co., to Beatrice Foods Co., Chicago, Ill. 178,664, ren. 3-24-64. Cl. 46.
Beatrice Foods Co.: *See*—
Beatrice Creamery Co.
Beau Peep Products, Inc., d.b.a. Charm Shoe Co., Danvers, Mass. 767,225, pub. 1-7-64. Cl. 39.
Bell & Howell Co., Chicago, Ill. 767,086, pub. 1-7-64. Cl. 23.
Beseler, Charles, Co., East Orange, N.J. 767,140, pub. 1-7-64. Cl. 26.
Bianchi, Joseph S., d.b.a. Bianchi Music Co., Fullerton, Calif. 767,201, pub. 1-7-64. Cl. 38.
Bianchi Music Co.: *See*—
Bianchi, Joseph S.
Biltwell Co., Inc., The, St. Louis, Mo. 767,210, pub. 3-12-63. Cl. 39.
Bliss, E. W., Co., Pittsburgh, Pa. 766,998, pub. 1-7-64. Cl. 14.
Blocks, Inc., Leominster, Mass. 657,954, canc. Cl. 12.
Bonat, Samuel, & Bro. Inc., West Paterson, N.J. 767,254, pub. 1-7-64. Cl. 44.
Bounds, W. E., Associates: *See*—
Bounds, William E.
Bounds, William E., d.b.a. W. E. Bounds Associates, Manhattan Beach, Calif. 767,104-5, pub. 1-7-64. Cl. 23.
Bradford & Co.: *See*—
Bradford, Kenneth C.
Bradford, Kenneth C., d.b.a. Bradford & Co., Anaheim, Calif. 767,091, pub. 1-7-64. Cl. 23.
Brand & Oppenheimer, Inc., New York, N.Y. 658,109, canc. Cl. 42.
Breglia, Arthur F., New York, N.Y. 767,281, pub. 1-7-64. Cl. 50.
Brenk, Emil: *See*—
Brenk, Emil, and Walter Brenk.
Brenk, Emil, and Walter Brenk, d.b.a. Emil Brenk, Pforzheim, Germany. 766,970, pub. 1-7-64. Cl. 8.
Brenk, Walter: *See*—
Brenk, Emil, and Walter Brenk.
Breuning, Franz, OHG, Pforzheim, Germany. 767,166, pub. 1-7-64. Cl. 28.
Bridgeport Brass Co., Bridgeport, Conn. 657,970, canc. Cl. 13.
British Celanese Ltd.: *See*—
British Cellulose and Chemical Mfg. Co. Ltd.
British Cellulose and Chemical Mfg. Co. Ltd., to British Celanese Ltd., London, England, to Celanese Corp. of America, New York, N.Y. 178,422, ren. 3-24-64. Cl. 43.
Brooks Brothers, New York, N.Y., to Julius Garfinckel & Co., Inc., Washington, D.C. 405,282, ren. 3-24-64. Cl. 8.
Burgard's, Inc., Jamestown, N. Dak. 767,085, pub. 1-7-64. Cl. 23.
Burgess Battery Co., Chicago, to Burgess Vibrocrafters, Inc., Grayslake, Ill. 405,700, ren. 3-24-64. Cl. 21.
Burgess Vibrocrafters, Inc.: *See*—
Burgess Battery Co.
Burns, Everett C., Oakland, N.J. 658,156, canc. Cl. 51.
Burns, H. C., Co., Inc., Oakland, Calif. 767,018, pub. 1-7-64. Cl. 18.
Burr-Ban Tool Service: *See*—
Kubicek, Louis A.
Bushman Bros., Galloway, Wis. 767,261, pub. 1-7-64. Cl. 46.
Butt, H. E., Grocery Co., d.b.a. H.E.B. Food Stores, Corpus Christi, Tex. 766,965, pub. 1-7-64. Cl. 6.
C & W Co., Akron, Ohio. 767,090, pub. 1-7-64. Cl. 23.
Campbell, Harry T., Sons' Corp., Towson, Md. 657,921, canc. Cl. 1.
Candle-Lite, Inc.: *See*—
Standard Oil Co.
Caprini Shoe Corp., New York, N.Y. 767,224, pub. 1-7-64. Cl. 39.
Carlson, Chesley F., Co., Minneapolis, Minn. 767,192, pub. 11-26-63. Cl. 37.
Carter Machinery Co., Inc., Salem, Va. 767,057, pub. 1-7-64. Cl. 21.
Carter Products, Inc., New York, N.Y. 407,913, ren. 3-24-64. Cl. 51.
Carthage Mills Inc., Cincinnati, Ohio. 657,977-8, canc. Cl. 16.
Cassandra: *See*—
Cassandra, Inc.
Cato Oil and Grease Co., Oklahoma City, Okla. 767,007, pub. 1-7-64. Cl. 15.
Caveman Camper, Inc., Grants Pagg, Oreg. 767,034-5, pub. 1-7-64. Cl. 19.
Cazel, Edward C.: *See*—
M & E Nut Co., Inc.
Celanese Corp. of America: *See*—
British Cellulose and Chemical Mfg. Co. Ltd.
Celite Products Co., Los Angeles, Calif., to Johns-Manville Corp., New York, N.Y. 181,463, ren. 3-24-64. Cl. 6.
Chadbourn Gotham, Inc., Charlotte, N.C. 767,214, pub. 1-7-64. Cl. 39.
Chalmers Chemical Co., Newark, N.J. 182,661, ren. 3-24-64. Cl. 52.
Charm Shoe Co.: *See*—
Beau Peep Products, Inc.
Charter Industries, Inc., New Brunswick, N.J. 766,944, pub. 1-7-64. Multiple Class (Classes 1 and 39).
Chef Armand Food Co.: *See*—
Tomai, Armand.
Cherberg Co., Inc., Philadelphia, Pa. 767,230, pub. 1-7-64. Cl. 39.

Chicago Steel Service Co., Chicago, Ill. 767,204, pub. 1-7-64. Cl. 38.
Childers Hosiery Mill, Inc., Hildebran, N.C. 767,238, pub. 1-7-64. Cl. 39.
Ciba Ltd., Basel, Switzerland. 766,959, pub. 1-7-64. Cl. 6.
Ciba Ltd., Basel, Switzerland. 766,963, pub. 1-7-64. Cl. 6.
Ciba Ltd., Basel, Switzerland. 767,132, pub. 1-7-64. Cl. 26.
Clairol Inc., New York, N.Y. 767,165, pub. 1-7-64. Cl. 28.
Clarette Co., The: *See*—
Sierra Plastics, Inc.
Clary Corp., Fort Worth, Tex. 767,089, pub. 1-7-64. Cl. 23.
Cleveland Instrument Co., Cleveland, Ohio. 767,144, pub. 1-7-64. Cl. 26.
Clinton Engines Corp., Maquoketa, Iowa. 767,101, pub. 1-7-64. Cl. 23.
Cluett, Peabody & Co., Inc., Troy, N.Y. 658,171, canc. Cl. 39.
Coffee Products Corp., New York, to General Foods Corp., White Plains, N.Y. 183,168, ren. 3-24-64. Cl. 46.
Collins & Aikman Corp., New York, N.Y. 767,246, pub. 1-7-64. Cl. 42.
Collins, Ashton B., d.b.a. Reddy Kilowatt, Short Hills, N.J., and New York, N.Y., to Reddy Kilowatt, Inc., New York, N.Y. 405,691, ren. 3-24-64. Cl. 38.
Collins, Ashton B., d.b.a. Reddy Kilowatt, Short Hills, N.J., and New York, N.Y., to Reddy Kilowatt, Inc., New York, N.Y. 405,695, ren. 3-24-64. Cl. 38.
Combustion Engineering, Inc., Wellesville, N.Y. 767,176, pub. 1-7-64. Cl. 34.
Compagnie des Montres, Favre-Leuba S.A., Geneva, Switzerland. 767,158, pub. 1-7-64. Cl. 27.
Consumer Bag and Packaging Corp., Richmond, Va. 766,946, pub. 1-7-64. Cl. 2.
Consumer Specialties Corp., Atlanta, Ga. 766,932, pub. 1-7-64. Cl. 1.
Copco Steel & Engineering Co., Detroit, Mich. 657,961, canc. Cl. 12.
Corning Glass Works, Corning, N.Y. 766,989, pub. 1-7-64. Cl. 13.
Cort Cosmetics, Inc., Stamford, Conn. 767,290, pub. 1-7-64. Cl. 51.
Cragstan Corp., New York, N.Y. 658,154, canc. Cl. 50.
Crete, Charles A., d.b.a. Pharmaceutical Associates, San Francisco, Calif. 767,017, pub. 1-7-64. Cl. 18.
Crosfield Electronics Ltd., London, England. 767,153, pub. 1-7-64. Cl. 26.
Crown Nut Co., Inc., Kingston, Pa. 767,259, pub. 1-7-64. Cl. 46.
Cushionized-Bellaire Shoe Co., Portland, Maine. 767,213, pub. 1-7-64. Cl. 39.
Data Processing Management Association, Park Ridge, Ill. 767,303, pub. 1-7-64. Cl. 100.
Davey Tree Expert Co., The, Kent, Ohio. 766,975, pub. 1-7-64. Cl. 10.
Davies, George, d.b.a. Davies & Werth, Jersey, Channel Islands, England. 766,956, pub. 1-7-64. Cl. 4.
Davies & Werth: *See*—
Davies, George.
Dayco Corp., Dayton, Ohio. 767,171, pub. 1-7-64. Cl. 32.
De Bruyn Texas Produce Co., Zeeland, Mich. 767,270, pub. 1-7-64. Cl. 46.
Achille Decarli, Milan, Italy. 767,309. Cl. 23.
Del-Ray Industries, Inc., Elkhart, Ind. 767,039, pub. 1-7-64. Cl. 19.
Delaware Barrel and Drum Co., Inc., Wilmington, Del. 766,949, pub. 1-7-64. Cl. 2.
De Luxe Reading Corp., Elizabeth, N.J. 767,063, pub. 1-7-64. Cl. 22.
Deschner Co., Los Angeles, Calif. 767,092, pub. 1-7-64. Cl. 23.
Deseghers: *See*—
Fay, Kenneth C.
Des Moines Concrete Products Co., West Des Moines, Iowa. 766,982, pub. 8-27-63. Cl. 12.
De Soto Chemical Coatings, Inc., Chicago, Ill. 767,199, pub. 1-7-64. Cl. 37.
Deytron Co., The, Odessa, Tex. 766,962, pub. 1-7-64. Cl. 6.
Diamond National Corp., New York, N.Y. 766,945, pub. 1-7-64. Cl. 2.
Dixie Frozen Foods, Inc., Senoia, Ga. 767,262, pub. 1-7-64. Cl. 46.
Donco, Inc., Englewood, Colo. 657,940, canc. Cl. 6.
Dorr Sales & Engineering Co. Inc., Milwaukee, Wis. 767,095, pub. 1-7-64. Cl. 23.
Dritz, John, & Sons, Inc., Spartanburg, S.C. 767,136, pub. 1-7-64. Cl. 26.
Duggan, Ben, Breckinridge, Okla. 766,984, pub. 1-7-64. Cl. 12.
Dura Business Machines, Inc., Oak Park, Mich. 767,148, pub. 1-7-64. Cl. 26.
Dura-Bond Bearing Co., Palo Alto, Calif. 767,135, pub. 1-7-64. Cl. 26.
Durallium Products Corp., Chicago, Ill. 767,252, pub. 1-7-64. Cl. 44.
Dutchess Underwear Corp., New York, N.Y. 658,099, canc. Cl. 39.
East Texas Pulp and Paper Co., Silsbee, Tex. 766,936, pub. 1-7-64. Cl. 1.
East Texas Pulp and Paper Co., Silsbee, Tex. 767,196, pub. 1-7-64. Cl. 37.
Eastman Kodak Co., Rochester, N.Y. 766,958, pub. 1-7-64. Cl. 6.
Eastman Kodak Co., Rochester, N.Y. 767,000, pub. 1-7-64. Cl. 15.
Eastman Kodak Co., Rochester, N.Y. 767,131, pub. 1-7-64. Cl. 26.
Eckhart, B. A., Milling Co., Chicago, Ill. 658,125, canc. Cl. 46.
Edison Brothers Stores Inc., St. Louis, Mo. 767,239, pub. 1-7-64. Cl. 39.
Edlin, Harvey, Sales Corp., Newton Upper Falls, Mass. 767,263, pub. 1-7-64. Cl. 46.
Eelbeck Milling Co., Inc., d.b.a. Juniper Milling Co., Columbus, Ga. 767,265, pub. 1-7-64. Cl. 46.
Electric Storage Battery Co., The: *See*—
Willson Products, Inc.
Electrofilm, Inc., North Hollywood, Calif. 767,004-5, pub. 1-7-64. Cl. 15.
Elgen Mfg. Corp., Long Island City, N.Y. 766,990, pub. 1-7-64. Cl. 13.
Ellen Products Co. Inc., Stony Point, N.Y. 767,003, pub. 1-7-64. Cl. 15.
Erinac Equipment Corp., New York, N.Y. 767,112, pub. 1-7-64. Cl. 23.
Erwin, C. W.: *See*—
Erwin & Treat.
Erwin, C. W., & Son: *See*—
Erwin & Treat.
Erwin & Treat, to C. W. Erwin, d.b.a. C. W. Erwin & Son, Chicago, Ill. 405,459, ren. 3-24-64. Cl. 18.
Esleeck Mfg. Co., Turners Falls, Mass. 178,562, ren. 3-24-64. Cl. 37.
Ex-Cell-O Corp., Detroit, Mich. 767,145, pub. 1-7-64. Cl. 26.
Falcon Lock Co., South Gate, Calif. 767,125-6, pub. 1-7-64. Cl. 25.
Farrel-Birmingham Co., Inc.: *See*—
Farrel Corp.
Farrel Corp., from Farrel-Birmingham Co., Inc., Ansonia, Conn. 767,083, pub. 4-16-63. Cl. 23.
Fasco Industries, Inc., Rochester, N.Y. 767,051, pub. 1-7-64. Cl. 21.
Fay, Kenneth C., d.b.a. Deseghers, New York, N.Y. 657,998, canc. Cl. 18.
Fiberfil, Inc., Warsaw, Ind. 766,943, pub. 1-7-64. Cl. 1.
Fifth Avenue Cosmetics, Inc., New York, N.Y. 767,292, pub. 1-7-64. Cl. 51.
Fleck, Paul H.: *See*—
Am-Finn Sauna, Inc.
Fleetwood Co., Chicago, Ill. 767,286, pub. 1-7-64. Cl. 51.
Fletcher, H. E., Co., West Chelmsford, Mass. 658,164-5, canc. Cl. 12.
Florida Citrus Commission, Lakeland, Fla. 767,305-6, pub. 1-7-64. Cl. 101.
Flour Mills of America, Inc., d.b.a. Anthony Mills, Alva, Okla. 658,126, canc. Cl. 46.
Ford Meter Box Co., Inc., The, Wabash, Ind. 766,993, pub. 1-7-64. Cl. 13.
Fox River Tractor Co., Appleton, Wis. 767,122, pub. 1-7-64. Cl. 23.
Freeman Shoe Corp., Beloit, Wis. 767,209, pub. 1-7-64. Cl. 39.
Fuller, D. B., & Co. Inc., New York, N.Y. 658,111, canc. Cl. 42.
Fusion, Inc., Statesville, N.C. 766,950, pub. 1-7-64. Cl. 2.
Gabriel Co., The: *See*—
Maremont Corp.
Garan, Inc., New York, N.Y. 767,310. Cl. 39.
Cassandra, Inc., Pasadena, from L. J. Phillips, d.b.a. Cassandra, San Marino, Calif. 767,215, pub. 1-7-64. Cl. 39.
Gebrueder Sulzer Aktiengesellschaft, Winterthur, Switzerland. 767,187, pub. 1-7-64. Cl. 34.
General Devices, Inc., Princeton, N.J. 767,052, pub. 1-7-64. Cl. 21.
General Foods Corp.: *See*—
Coffee Products Corp.
Minute Tapioca Co.
General Motors Corp., Detroit, Mich. 767,100, pub. 1-7-64. Cl. 23.
Gentex Corp., New York, N.Y. 767,069, pub. 1-7-64. Cl. 22.
Georgia Marble Co., The, Tate, Ga. 766,934, pub. 1-7-64. Cl. 1.
Gerber Products Co., Fremont, Mich. 767,237, pub. 1-7-64. Cl. 39.
Gibson, Frank H., Omaha, Nebr. 142,268, canc. Cl. 46.
Gillette Co., The, Boston, Mass. 767,283, pub. 1-7-64. Cl. 51.
Glad Hatter, Inc., New York, N.Y. 767,212, pub. 1-7-64. Cl. 39.
Gladding, B. F., & Co., Inc., South Otselic, N.Y. 767,066, pub. 1-7-64. Cl. 22.
Glenhaven Ltd., New York, N.Y. 767,233, pub. 1-7-64. Cl. 39.
Globe-Union Inc., Milwaukee, Wis. 767,134, pub. 1-7-64. Cl. 26.
Goetze, Frederick, New Brunswick, N.J., to Johns-Manville Corp., New York, N.Y. 179,902, ren. 3-24-64. Cl. 35.
Gold Seal Products Co., Inc., d.b.a. Southern Chicken Products Co., Birmingham, Ala. 767,271, pub. 1-7-64. Cl. 46.
Golf-Bent, La Velle, Newton, British Columbia, Canada. 658,012, canc. Cl. 21.
Goodrich, B. F., Co., The, Akron, Ohio. 658,096, canc. Cl. 39.
Goodrich-Gulf Chemicals, Inc., Cleveland, Ohio. 766,937, pub. 1-7-64. Cl. 1.
Granite Hosiery Corp.: *See*—
Adams-Mills Corp.
Graymills Corp., Chicago, Ill. 767,097, pub. 1-7-64. Cl. 23.
Great Lakes Carbon Corp., New York, N.Y. 766,979, pub. 4-24-62. Cl. 12.
Green Thumb Gardens, Arcanum, to Green Thumb Products, Toledo, Ohio. 407,413, ren. 3-24-64. Cl. 1.
Green Thumb Products: *See*—
Green Thumb Gardens.
Greenhall Bros., Inc., New York, N.Y. 767,240, pub. 1-7-64. Cl. 39.
Griffin, Campbell, Hayes, Walsh, Inc., New York, N.Y. 767,198, pub. 1-7-64. Cl. 37.
H.E.B. Food Stores: *See*—
Butt, H. E., Grocery Co.

Hall, George P., Inc., New York, N.Y. 767,234, pub. 1-7-64. Cl. 39.
Hamilton Mfg. Co., Two Rivers, Wis. 767,149, pub. 1-7-64. Cl. 26.
Happy Mills, Memphis, Tenn., to Rex Milling Co., Inc., New Iberia, La. 406,455, ren. 3-24-64. Cl. 46.
Harbison-Carborundum Corp., Falconer, N.Y. 766,985, pub. 1-7-64. Cl. 12.
Harbison-Walker Refractories Co., Pittsburgh, Pa. 767,186, pub. 1-7-64. Cl. 34.
Harford, B. S. A., Pumps Ltd., from Harford Pumps Ltd., Loudon, England. 767,087, pub. 1-7-64. Cl. 23.
Harford Pumps Ltd.: *See*—
Harford, B. S. A., Pumps Ltd.
Harnell, Inc., Venice, Calif. 767,059, pub. 1-7-64. Cl. 22.
Hartz Mountain Products Corp., New York, N.Y. 766,953-4, pub. 1-7-64. Cl. 2.
Hartz Mountain Products Corp., New York, N.Y. 766,968, pub. 1-7-64. Cl. 6.
Hartz Mountain Products Corp., New York, N.Y. 767,025, pub. 1-7-64. Cl. 18.
Hartz Mountain Products Corp., New York, N.Y. 767,272, pub. 1-7-64. Cl. 46.
Hawaiian Perfumers, Inc., d.b.a. Liana of Waikiki, Honolulu, Hawaii. 767,291, pub. 1-7-64. Cl. 51.
Heggblade-Margulcas Co., San Francisco, Calif. 767,269, pub. 1-7-64. Cl. 46.
Helland, Inc., Navarre, Minn. 767,082, pub. 1-1-63. Cl. 23.
Herald Corp., The, El Paso, Tex. 767,307. Cl. 2.
Heyman, Louis, Plainfield, N.J. 658,103, canc. Cl. 40.
Hibbil, Inc., Stonington, Conn. 657,937, canc. Cl. 6.
Houdaille Industries, Inc., Buffalo, from Wales-Strippit Corp., North Tonawanda, N.Y. 767,070-80, pub. 3-4-58. Cl. 23.
Hubbard-Hall Chemical Co., The, Waterbury, Conn. 766,974, pub. 1-7-64. Cl. 10.
Hydraulic & Air Equipment Co., Seattle, Wash. 767,093, pub. 1-7-64. Cl. 23.
Hygiene Aire Laboratories: *See*—
Shindell, Harry.
Hykö Hygiene-Vertrieb G.m.b.H., Dusseldorf, Germany. 767,250, pub. 1-7-64. Cl. 44.
Imperial Toiletries, Ltd., New York, N.Y. 767,287, pub. 1-7-64. Cl. 51.
Institute of Appliance Manufacturers, Washington, D.C. 767,206, pub. 1-7-64. Cl. 38.
Intercontinental Marketing Corp.: *See*—
Interphoto Corp.
International Heater Co., Utica, N.Y. 767,174, pub. 1-7-64. Cl. 34.
International Paper Co., New York, N.Y. 766,951, pub. 1-7-64. Cl. 2.
International Resistance Co., Philadelphia, Pa. 767,049, pub. 1-7-64. Cl. 21.
International Resistance Co., Philadelphia, Pa. 767,054, pub. 1-7-64. Cl. 21.
International Telephone and Telegraph Corp., Chicago, Ill. 767,139, pub. 1-7-64. Cl. 26.
Interphoto Corp., from Intercontinental Marketing Corp., Long Island City, N.Y. 767,128, pub. 1-7-64. Cl. 26.
Invention Development Co., Santa Fe, N. Mex. 767,181, pub. 1-7-64. Cl. 34.
Iowa Paint Mfg. Co., Inc., Des Moines, Iowa. 767,010, pub. 1-7-64. Cl. 16.
Items Inc., St. Louis Mo. 767,067, pub. 1-7-64. Cl. 22.
Jackson of London Products: *See*—
Michael Industries, Inc.
Jensen Brothers Mfg. Co., Inc., Coffeyville, Kans., from Clayton Mark & Co., Evanston, Ill. 767,081, pub. 4-30-63. Cl. 23.
Johns-Manville Corp.: *See*—
Celite Products Co.
Goetze, Frederick.
Jomac, Inc., Philadelphia, Pa. 767,280, pub. 1-7-64. Cl. 50.
Julius Garfinckel & Co., Inc.: *See*—
Brooks Brothers.
Juniper Milling Co.: *See*—
Eelbeck Milling Co., Inc.
Kamen Enterprises, Inc., Miami, Fla. 767,068, pub. 1-7-64. Cl. 22.
Kass Hardware: *See*—
Kass, Samuel M.
Kass, Samuel M., d.b.a. Kass Hardware, Philadelphia, Pa. 657,966, canc. Cl. 13.
Kathi Originals Inc., New York, N.Y. 767,227, pub. 1-7-64. Cl. 39.
Kaustine Co., Inc., Buffalo, N.Y., to Kaustine Furnace & Tank Corp., Perry, N.Y. 179,526, ren. 3-24-64. Cl. 2.
Kaustine Furnace & Tank Corp.: *See*—
Kaustine Co., Inc.
Kell-Dot Industries, Inc., Wichita, Kans. 767,103, pub. 1-7-64. Cl. 23.
Kessler, Stuart P., d.b.a. Stuart P. Kessler Co., Mukwonago, Wis. 767,119, pub. 1-7-64. Cl. 23.
Kessler, Stuart P., Co.: *See*—
Kessler, Stuart P.
Kiki Undies Corp., New York, N.Y. 767,232, pub. 1-7-64. Cl. 39.
Kiki Undies Corp., New York, N.Y. 767,242, pub. 1-7-64. Cl. 39.
King Co., The, Owatonna, Minn. 767,168, pub. 1-7-64. Cl. 31.
Kingsboro Mills, Inc., Chattanooga, Tenn. 658,090, canc. Cl. 39.
Kinnee Grace E., d.b.a. H. E. Kinnee Co., Detroit, Mich. 767,060, pub. 1-7-64. Cl. 22.
Kinnee, H. E., Co.: *See*—
Kinnee, Grace E.
Knights, A. A., Division: *See*—
Whipple Co., The.
Knight, J. P., Cincinnati, Ohio. 767,163, pub. 1-7-64. Cl. 28.
Knomark Mfg. Co., Inc., Brooklyn, N.Y. 657,935, canc. Cl. 6.
Kramer Trenton Co., Trenton, N.J. 767,185, pub. 1-7-64. Cl. 34.
Kraut, Morris J., Forest Hills, N.Y. 767,162, pub. 11-20-62. Cl. 28.
Kubicek, Louis A., d.b.a. Burr-Ban Tool Service, Detroit, Mich. 767,084, pub. 11-27-62. Cl. 23.
L & F Heating and Air Conditioning Co., Pittsburgh, Pa. 767,184, pub. 1-7-64. Cl. 34.
La-Deana Laboratories Inc., Fort Wayne, Ind. 767,249, pub. 1-7-64. Cl. 44.
Lady Van Heusen, Inc.: *See*—
Phillips-Van Heusen Corp.
Lakeside Central Co., Chicago, Ill. 767,195, pub. 1-7-64. Cl. 37.
Landers, Frary & Clark, New Britain, Conn. 767,046, pub. 1-7-64. Cl. 21.
Lansdale Forest Products Corp., Lansdale, Pa. 657,953, canc. Cl. 12.
Lapine Scientific Co., Chicago, Ill. 767,108, pub. 1-7-64. Cl. 23.
Laray Cosmetics, Inc., New York, N.J. 767,295, pub. 1-7-64. Cl. 52.
La Salle National Bank, Chicago, Ill. 658,161, canc. Cl. 102.
Lather-Lube Co.: *See*—
Batchelor, Robert L.
Laurent, J., Corp., New York, N.Y. 767,284, pub. 1-7-64. Cl. 51.
Leeds, Philip R., New York, N.Y. 767,245, pub. 1-7-64. Cl. 39.
Lehn & Fink Products Corp., Bloomfield, N.J. 767,299, pub. 1-7-64. Cl. 52.
Lestoil Products, Inc., Holyoke, Mass. 767,298, pub. 1-7-64. Cl. 52.
Liana of Waikiki: *See*—
Hawaiian Perfumers, Inc.
Lilly, Eli, and Co., Indianapolis, Ind. 657,991, canc. Cl. 18.
Lindy Pen Co., Inc., Culver City, Calif. 767,197, pub. 1-7-64. Cl. 37.
Lowenstein, M., & Sons, Inc., New York, N.Y. 767,247, pub. 1-7-64. Cl. 42.
Luxo Lamp Corp., Port Chester, N.Y. 767,040, pub. 1-7-64. Cl. 21.
M & E Nut Co., Inc., from Edward C. Cazel, d.b.a. M & E Nuts Co. and M & E Nuts, St. Joseph, Mo. 767,260, pub. 1-7-64. Cl. 46.
M & E Nuts Co.: *See*—
M & E Nut Co., Inc.
Machinery Electrification, Inc., Northboro, Mass. 767,045, pub. 1-7-64. Cl. 21.
Magnolia Metal Co., Inc., Auburn, Nebr. 766,999, pub. 1-7-64. Cl. 14.
Mallory, P. R., & Co., Inc., Indianapolis, Ind. 405,926, ren. 3-24-64. Cl. 21.
Mansfield Tire & Rubber Co., The: *See*—
Pennsylvania Rubber Co.
Maradel Products, Inc., New York, N.Y. 767,289, pub. 1-7-64. Cl. 51.
Marble, James E., Delawanna, N.J. 356,042, canc. Cl. 12.
Marco Industries Co., Anaheim, Calif. 767,047, pub. 1-7-64. Cl. 21.
Maremont Corp., Chicago, Ill., from The Gabriel Co., Cleveland, Ohio. 767,036, pub. 1-7-64. Cl. 19.
Marinaire Corp., Fort Lauderdale, Fla. 767,170, pub. 1-7-64. Multiple Class (Classes 31 and 34.)
Mark, Clayton, & Co.: *See*—
Jensen Brothers Mfg. Co., Inc.
Martin, Joe, Industries, Inc., Detroit, Mich. 767,180, pub. 1-7-64 Cl. 34.
Master Industries, Inc., d.b.a. Master Supply Co., Philadelphia, Pa. 766,992, pub. 1-7-64. Cl. 13.
Master Supply Co.: *See*—
Master Industries, Inc.
Mathews, Abe W., Engineering Co., Hibbing, Minn. 767,032, pub. 1-7-64. Cl. 19.
Matmakers, Inc., New York, N.Y. 767,279, pub. 1-7-64. Cl. 50.
Matmakers, Inc., New York, N.Y. 767,278, pub. 1-7-64. Cl. 50.
Mattel, Inc., Hawthorne, Calif. 767,189, pub. 1-7-64. Cl. 36.
McMaster Import Co.: *See*—
Arrow Liqueurs Corp.
McQuay, Inc., Minneapolis, Minn. 767,177, pub. 1-7-64. Cl. 34.
Medical Specialties, Inc., Charlotte, N.C. 767,253, pub. 1-7-64. Cl. 44.
Medi-Synth, Inc., Los Angeles, Calif. 767,016, pub. 1-7-64. Cl. 18.
Merck & Co. Inc., Rahway, N.J. 766,978, pub. 1-7-64. Cl. 10.
Metasap Chemical Co., Harrison, to Nopco Chemical Co., Newark, N.J. 407,055, ren. 3-24-64. Cl. 6.
Metasap Chemical Co., Harrison, to Nopco Chemical Co., Newark, N.J. 407,440, ren. 3-24-64. Cl. 6.
Michael Industries, Inc., d.b.a. Jackson of London Products, Garfield, N.J. 767 300, pub. 1-7-64. Cl. 52.
Microlectron, Inc., Santa Monica, Calif. 767,043, pub. 1-7-64. Cl. 21.
Midland Mfg. Co.: *See*—
Pacific Industries, Inc.
Miehle-Goss-Dexter, Inc., Chicago, Ill. 767,121, pub. 1-7-64. Cl. 23.
Mills Publications, Inc., Hoopeston, Ill. 767,205, pub. 1-7-64. Cl. 38.

Minnesota Mining and Mfg. Co., St. Paul, Minn. 766,830, pub. 1–7–64. Cl. 1.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 767,115–17, pub. 1–7–64. Cl. 23.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 767,173, pub. 1–7–64. Cl. 33.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 767,229, pub. 1–7–64. Cl. 39.
Minute Tapioca Co., Orange, Mass., to General Foods Corp., White Plains, N.Y. 184,694, ren. 3–24–64. Cl. 46.
Mission Pharmacal Co., San Antonio, Tex. 767,019, pub. 1–7–64. Cl. 18.
Miss Stephanie, Inc., New York, N.Y. 658,092, canc. Cl. 39.
Mold-A-Rama, Inc., Los Angeles, Calif. 767,107, pub. 1–7–64. Cl. 23.
Monsanto Chemical Co., St. Louis, Mo. 767,011, pub. 1–7–64. Cl. 16.
Monsanto Chemical Co., St. Louis, Mo. 658,153, canc. Cl. 50.
Moody-Wonderfill Products, Inc., Ballardvale, Mass. 657,925, canc. Cl. 1.
Moore Business Forms, Inc., Niagara Falls, N.Y. 767,200, pub. 1–7–64. Cl. 37.
Morton Salt Co.: *See*—
Remington Salt Co.
Motor and Equipment Manufacturers Association, New York, N.Y. 767,304, pub. 1–7–64. Cl. 101.
Mulholland-Harper Co., Philadelphia, Pa. 767,009, pub. 1–7–64. Cl. 16.
Mutual Products Co.: *See*—
Mutual Products Co. of Minnesota, Inc.
Mutual Products Co. of Minnesota, Inc., d.b.a. Mutual Products Co., Minneapolis, Minn. 767,267, pub. 1–7–64. Cl. 46.
Nalco Chemical Co., Chicago, Ill. 767,006, pub. 1–7–64. Cl. 15.
National Biscuit Co.: *See*—
Pacific Coast Biscuit Co.
National Broadcasting Co., Inc., New York, N.Y. 658,182, canc. Cl. 104.
National Maritime Union of America, New York, N.Y. 405,005, ren. 3–24–64. Cl. 38.
National Publishing Co., Philadelphia, Pa. 407,506, ren. 3–24–64. Cl. 38.
National Welding Equipment Co., Richmond, Calif. 767,150, pub. 1–7–64. Cl. 26.
National Vulcanized Fibre Co., Wilmington, Del. 767,190, pub. 1–7–64. Cl. 37.
Neapco Products Inc., Pottstown, Pa. 767,099, pub. 1–7–64. Cl. 23.
New York Air Brake Co., The, New York, N.Y. 767,146, pub. 1–7–64. Cl. 26.
Nibot Corp., Chicago, Ill. 767,124, pub. 1–7–64. Cl. 23.
Nielsen Corp.: *See*—
Nielsen Saw & Mfg. Co.
Nielsen Saw & Mfg. Co., d.b.a. Nielsen Corp., Eugene, Oreg. 767,114, pub. 1–7–64. Cl. 23.
Nopco Chemical Co.: *See*—
Metasap Chemical Co.
Nordmark-Werke Gesellschaft mit beschraenkter Haftung, Hamburg, Germany. 657,988, canc. Cl. 18.
Norman, Merle, Cosmetics, Inc., Los Angeles, Calif. 767,312–13. Cl. 51.
Ocrim S.p.A., Cremona, Italia Societe per l'Industria Meccanica, Cremona, Italy. 767,096, pub. 1–7–64. Cl. 23.
Opici Wine Co.: *See*—
American B.D. Co.
Orbit Industries, Inc., Vienna, Va. 767,050, pub. 1–7–64. Cl. 21.
Originalities of New York, Inc., New York, N.Y. 767,193, pub. 1–7–64. Cl. 37.
Ormond Shops, Inc., The, New York, N.Y. 767,241, pub. 1–7–64. Cl. 39.
Pacific Coast Biscuit Co., Seattle, Wash., to National Biscuit Co., New York, N.Y. 186,188, ren. 3–24–64. Cl. 46.
Pacific Industries, Inc., d.b.a. Midland Mfg. Co., San Francisco, Calif. 767,048, pub. 1–7–64. Cl. 21.
Pak-Liter Co., San Francisco, Calif. 766,971, pub. 1–7–64. Cl. 8.
Panther Rubber Mfg. Co. Stoughton, Mass., to American Biltrite Rubber Co., Inc., Chelsea, Mass. 179,338, ren. 3–24–64. Cl. 39.
Parlam Corp., Englewood, N.J. 767,021, pub. 1–7–64. Cl. 18.
Paterson Tractor Co., San Leandro, Calif. 767,026, pub. 1–7–64. Multiple Class (Classes 19 and 23.)
Pax-Products, Des Moines, Iowa. 766,980. Cl. 12.
Peay, Ray, d.b.a. Terry Farms, Indio, Calif. 767,268, pub. 1–7–64. Cl. 46.
Peerless Lithographing Co., Chicago, Ill. 767,202, pub. 1–7–64. Cl. 38.
Peninsular Paper Co., Ypsilanti, Mich. 767,194, pub. 1–7–64. Cl. 37.
Penney, J. C., Co., New York, N.Y. 767,033, pub. 1–7–64. Cl. 19.
Pennsylvania Rubber Co., Jeannette, Pa., to The Mansfield Tire & Rubber Co., Mansfield, Ohio. 405,073, ren. 3–24–64. Cl. 5.
Pennsylvania Rubber Co., Jeannette, Pa., to The Mansfield Tire & Rubber Co., Mansfield, Ohio. 404,884, ren. 3–24–64. Cl. 35.
Pepperell Mfg. Co., Boston, Mass. 343,762, canc. Cl. 42.
Perlite Corp. of America, New York, N.Y. 657,929, canc. Cl. 1.
Peterson, E. K., & Son Inc., d.b.a. E. K. Peterson & Sons, Inc., Minneapolis, Minn. 657,926, canc. Cl. 1.
Petri-Kine Camera Co., Inc., New York, N.Y. 767,143, pub. 1–7–64. Cl. 26.
Pfaff and Kendall, Newark, N.J. 767,053, pub. 1–7–64. Cl. 21.
Pharmaceutical Associates: *See*—
Crete, Charles A.
Philco Corp., Philadelphia, Pa. 658,011, canc. Cl. 21.
Phillips Industrial Products, Inc., Cleveland, Ohio. 767,012, pub. 1–7–64. Cl. 16.
Phillips, Lauris J.: *See*—
Gassandra, Inc.
Phillips Petroleum Co., Bartlesville, Okla. 767,008, pub. 1–7–64. Cl. 15.
Phillips-Van Heusen Corp., New York, N.Y., from Lady Van Heusen, Inc., Philadelphia, Pa. 767,216, pub. 1–7–64. Cl. 39.
Pierce, S. S., Co., Boston, Mass. 182,354, ren. 3–24–64. Cl. 46.
Pincus, Lester, Shoe Corp., New York, N.Y. 767,231, pub. 1–7–64. Cl. 39.
Plastic Contact Lens Co., The, Chicago, Ill. 767,147, pub. 11–12–63. Cl. 26.
Plymouth Cordage Co., Plymouth, Mass. 766,977, pub. 1–7–64. Cl. 10.
Polaris Industries, Inc., Roseau, Minn. 767,029, pub. 1–7–64. Cl. 19.
Poly, Repro, International, Ltd., Garden City, N.Y. 767,151, pub. 1–7–64. Cl. 26.
Polymers, Inc., Middlebury, Vt. 766,938, pub. 1–7–64. Cl. 1.
Porta-Panel Products, Inc., Greenville, S.C. 766,981, pub. 1–7–64. Cl. 12.
Port Caddo Trading Co., Marshall, Tex. 767,038, pub. 1–7–64. Cl. 19.
Prior's Foods, Ltd., Hamilton, Ontario, Canada. 658,143, canc. Cl. 46.
Projection Optics Co. Inc., Rochester, N.Y. 767,141, pub. 1–7–64. Cl. 26.
Purex Corp., Ltd., Wilmington, Calif. 766,955, pub. 1–7–64. Cl. 4.
Purex Corp., Ltd., d.b.a. Wrisley, Lakewood, Calif. 767,301, pub. 1–7–64. Cl. 52.
Questron America, Inc., Ellenville, N.Y. 766,952, pub. 1–7–64. Cl. 2.
Questron America, Inc., Ellenville, N.Y. 767,106, pub. 1–7–64. Cl. 23.
Republic Air Conditioning Co.: *See*—
Republic-Transcon Industries, Inc.
Republic Rubber Co., The, to Aeroquip Corp., d.b.a. Republic Rubber Division, Youngstown, Ohio. 179,898, ren. 3–24–64. Cl. 35.
Republic Rubber Division: *See*—
Republic Rubber Co., The.
Republic-Transcon Industries, Inc., d.b.a. Republic Air Conditioning Co., Beverly Hills, Calif. 767,178, pub. 1–7–64. Cl. 34.
Research Specialties Co., Richmond, Calif. 767,155, pub. 1–7–64. Cl. 26.
Rex Milling Co., Inc.: *See*—
Happy Mills.
Riedel-De Haen Aktiengesellschaft, Seelze, near Hanover, Germany. 766,961, pub. 1–7–64. Cl. 6.
Rinshed-Mason Co., Detroit, Mich. 767,015, pub. 1–7–64. Cl. 16.
Rober, Geo. D., Corp., Kankakee, Ill. 767,179, pub. 1–7–64. Cl. 34.
Robeson Rochester Corp., Rochester, N.Y. 767,041, pub. 1–7–64. Cl. 21.
Rochester Gauges, Inc. of Texas, Dallas, Tex. 767,152, pub. 1–7–64. Cl. 26.
Rockwell Mfg. Co., Pittsburgh, Pa. 767,098, pub. 1–7–64. Cl. 28.
Rodeffer Industries, Inc., Pasadena, Calif. 766,948, pub. 1–7–64. Cl. 2.
Rodeo Leather Goods Co.: *See*—
Bahr, Bernard.
Roger & Gallet: *See*—
Roger & Gallet S.A.
Roger & Gallet S.A., Paris, France, from Roger & Gallet, New York, N.Y. 767,285, pub. 1–7–64. Cl. 51.
Rohm & Haas Co., Philadelphia, Pa. 764,933, pub. 1–7–64. Cl. 1.
Rolor Corp., Syosset, N.Y. 767,129, pub. 1–7–64. Cl. 26.
Romay, Inc., Lavonia, Ga. 658,094, canc. Cl. 39.
Ronna Knitwear and Sunny Sportswear, Inc., Nashville, Tenn. 767,218, pub. 1–7–64. Cl. 39.
Roof-Alum Industries: *See*—
Volpert, Milton H.
Rosenau Bros., Inc., to Rosenau Brothers, Inc., Philadelphia, Pa. 184,814, ren. 3–24–64. Cl. 39.
Roto-Finish Co., Kalamazoo, Mich. 767,094, pub. 1–7–64. Cl. 23.
Royster Chemical Co., Farmville, N.C. 766,966, pub. 1–7–64. Cl. 6.
Rychlik Enterprises Inc., Chicago, Ill. 767,109, pub. 1–7–64. Cl. 23.
Ratsey Safety Belts, Inc., New York, N.Y. 767,037, pub. 1–7–64. Cl. 19.
Raychem Corp., Redwood City, Calif. 767,055–6, pub. 1–7–64. Cl. 21.
Reddy Kilowatt, Inc.: *See*—
Collins, Ashton B.
Reeves Instrument Corp., Garden City, N.Y. 767,127, pub. 1–7–64. Cl. 26.
Remington Salt Co., Ithaca, N.Y., to Morton Salt Co., Chicago, Ill. 178,124, ren. 3–24–64. Cl. 46.
Safeway Stores, Inc., Oakland, Calif. 658,142, canc. Cl. 46.
St. Anne's Board Mill Co., Ltd., Bristol, England. 767,102, pub. 1–7–64. Cl. 23.
Samette Mfg. Co., Inc., Allentown, Pa. 658,102, canc. Cl. 39.
Sampo, Inc., Barneveld, N.Y. 767,064–5, pub. 1–7–64. Cl. 22.

Sanitol Chemical Laboratory Co., to The Sanitol Co., St. Louis, Mo., and New York, N.Y., to Standard Laboratories, Inc., Morris Plains, N.J. 178,858–9, ren. 3–24–64. Cl. 51.
Sanitol Co., The: *See*—
Sanitol Chemical Laboratory Co.
Schering Corp., Bloomfield, N.J. 657,984, canc. Cl. 18.
Schering & Glatz, Inc., New York, N.Y., to Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 179,374, ren. 3–24–64. Cl. 18.
Schuco Scientific Corp., New York, N.Y. 767,130, pub. 1–7–64. Cl. 26.
Scott & Hunsicker, Inc., Philadelphia, Pa. 767,217, pub. 1–7–64. Cl. 39.
Scott Aviation Corp., Lancaster, N.Y. 767,248, pub. 1–7–64. Cl. 44.
Searle, G. D., & Co., Skokie, Ill. 767,022–3, pub. 1–7–64. Cl. 18.
Sears, Roebuck and Co., Chicago, Ill. 767,219, pub. 1–7–64. Cl. 39.
Sero of New Haven, Inc., New Haven, Conn. 767,222, pub. 1–7–64. Cl. 39.
Seven Up Co., The, St. Louis, Mo. 406,182, ren. 3–24–64. Cl. 45.
Seymour, Earl F., New York, N.Y. 767,133, pub. 1–7–64. Cl. 26.
Sheffield Watch, Inc., New York, N.Y. 767,156, pub. 1–7–64. Cl. 27.
Sherman Bros., Inc., New York, N.Y. 767,235, pub. 1–7–64. Cl. 39.
Shindell, Harry, d.b.a. Hygiene Aire Laboratories, Toledo, Ohio. 767,169, pub. 1–7–64. Cl. 31.
Sierra Plastics, Inc., d.b.a. The Clarette Co., Los Angeles, Calif. 766,947, pub. 1–7–64. Multiple Class (Classes 2, 39, and 50.)
Simpson Timber Co., Seattle, Wash. 766,986–7, pub. 1–7–64. Cl. 12.
Skinner, William, & Sons, New York, N.Y. 658,113, canc. Cl. 42.
Smyth, James W., d.b.a. J. W. Smyth Co., Milwaukee, Wis. 658,112, canc. Cl. 42.
Smyth, J. W., Co.: *See*—
Smyth, James W.
Societa Accomandita Semplice Calzaturificio Vibelsport Di Vibelli & C., Nerviano, Milan, Italy. 658,086, canc. Cl. 39.
Soderhamns Verkstader Aktiebolag, Soderhamn, Sweden. 767,088, pub. 1–7–64. Cl. 28.
Sonobond Corp., West Chester, Pa. 767,182, pub. 1–7–64. Cl. 34.
South Bend Bait Co., to South Bend Tackle Co. Inc., South Bend, Ind. 183,114, ren. 3–24–64. Cl. 22.
South Bend Tackle Co. Inc.: *See*—
South Bend Bait Co.
Southern Biscuit Co.: *See*—
Weston Biscuit Co., Inc.
Southern Chicken Products Co.: *See*—
Gold Seal Products Co., Inc.
Southern Distributors, Inc., Fort Lauderdale, Fla. 658,074, canc. Cl. 36.
Space-Craft Trailer Manufacturers, Inc., Kansas City, Mo. 767,080, pub. 1–7–64. Cl. 19.
Spanjer Brothers, Inc., Chicago, Ill. 767,277, pub. 1–7–64. Cl. 50.
Sperry-Sun Well Surveying Co., Houston, Tex. 406,012, ren. 3–24–64. Cl. 26.
Sporn, Walter, Co., Chicago, Ill. 767,167, pub. 1–7–64. Cl. 29.
Sprague Electric Co.: *See*—
Sprague Specialties Co.
Sprague Specialties Co., to Sprague Electric Co., North Adams, Mass. 405,510, ren. 3–24–64. Cl. 21.
Standard Industrial Products Co. of Illinois, Peoria, Ill. 766,972, pub. 1–7–64. Cl. 8.
Standard Laboratories, Inc.: *See*—
Sanitol Chemical Laboratory Co.
Standard Merchandising Co., Inc., Hillside, N.J. 657,987, canc. Cl. 18.
Standard Oil Co. of California, San Francisco, Calif. 766,960, pub. 1–7–64. Cl. 6.
Standard Oil Co. of California, San Francisco, Calif. 406,343, ren. 3–31–64. Cl. 4.
Standard Oil Co., Whiting, Ind., and Chicago, Ill., to Candle-Lite, Inc., Cincinnati, Ohio. 178,102, ren. 3–31–64. Cl. 15.
Standard Oil Co., Whiting, Ind., and Chicago, Ill., to Candle-Lite, Inc., Cincinnati, Ohio. 177,894–5, ren. 3–24–64. Cl. 15.
Standard Oil Co., Whiting, Ind., and Chicago, Ill., to Candle-Lite, Inc., Cincinnati, Ohio. 177,890, ren. 3–24–64. Cl. 15.
Standard Wine & Liquor Co. Inc., Long Island City, N.Y. 767,275, pub. 1–7–64. Cl. 47.
Stanley Home Products, Inc., Westfield, Mass. 658,034, canc. Cl. 23.
Star Expansion N.Y., Inc., New York, N.Y. 658,033, canc. Cl. 23.
Staymark, Inc., New York, N.Y. 766,931, pub. 1–7–64. Cl. 1.
Stein, A., & Co., Inc., Chicago, Ill. 767,220, pub. 1–7–64. Cl. 39.
Sterling Metalware Co., Philadelphia, Pa. 766,991, pub. 1–7–64. Cl. 13.
Strauss, Levi, & Co., San Francisco, Calif. 767,226, pub. 1–7–64. Cl. 39.
Sturm, Ruger & Co., Inc., Southport, Conn. 766,973, pub. 1–7–64. Cl. 9.
Sub-Tropic Fruit Co., Inc., Goulds, Fla. 767,266–7, pub. 1–7–64. Cl. 46.
Sunbeam Corp., Chicago, Ill. 767,159–61, pub. 1–7–64. Cl. 27.
Super Valu Stores, Inc., Hopkins, Minn. 767,264, pub. 1–7–64. Cl. 46.
Sweetheart Plastics, Inc., Wilmington, Mass. 766,939, pub. 1–7–64. Cl. 1.
Tattoo, Inc.: *See*—
Associated Distributors.
Technometallurgical Co.: *See*—
Waindle, Roger.
Technoply Corp., Jamaica, N.Y. 766,983, pub. 1–7–64. Cl. 12.
Terry Farms: *See*—
Peay, Ray.
Tex-Tube, Inc., Houston, Tex. 766,994, pub. 12–24–63. Cl. 13.
Theobald, Harry J., d.b.a. The Theobald Industries, to The Theobald Industries, Kearney, N.J. 407,266, ren. 3–24–64. Cl. 46.
Theobald Industries, The: *See*—
Theobald, Harry J.
Thor Power Tool Co., Aurora, Ill. 767,042, pub. 6–4–63. Cl. 21.
Timberland Products Co., Inc., Stamford, N.Y. 766,941, pub. 1–7–64. Cl. 1.
Tobin Packing Co., Inc., Rochester, N.Y. 658,148, canc. Cl. 46.
Toco Corp., Toledo, Ohio. 767,308. Cl. 13.
Tomai, Armand, d.b.a. Chef Armand Food Co., Rochester, N.Y. 656,127, canc. Cl. 46
Topp-Cola Co., The, Savannah, Ga. 767,256, pub. 1–7–64. Cl. 45.
Transpharma, Inc., New York, N.Y. 767,207, pub. 1–7–64. Cl. 38.
Trenton Corp., The, Ann Arbor, Mich. 657,956, canc. Cl. 12.
Triangle Mfg. Co., Baltimore, Md. 658,070, canc. Cl. 34.
Turtle Wax, Inc., Chicago, Ill. 767,296–7, pub. 1–7–64. Cl. 52.
United Aircraft Products, Inc., Dayton, Ohio. 767,001, pub. 1–7–64. Cl. 15.
United Aircraft Products, Inc., Dayton, Ohio. 767,002, pub. 1–7–64. Cl. 15.
Union Asbestos & Rubber Co., Chicago, Ill. 658,066, canc. Cl. 34.
Ultrasonic Industries, Inc., Plainview, N.Y. 767,175, pub. 1–7–64. Cl. 34.
United Merchants and Manufacturers, Inc., New York, N.Y. 658,105, canc. Cl. 42.
United Shoe Machinery Corp., Boston, Mass. 766,988, pub. 1–7–64. Cl. 13.
U.S. Cocoa Corp., The, Camden, N.J. 658,141, canc. Cl. 46.
United States Crown Corp., Saddle Brook, N.J. 767,311. Cl. 50.
United States Rubber Co., New York, N.Y. 766,957, pub. 1–7–64. Multiple Class (Classes 5 and 40.)
United States Rubber Co., New York, N.Y. 766,976, pub. 1–7–64. Cl. 10.
Upjohn Co., The, Kalamazoo, Mich. 767,024, pub. 1–7–64. Cl. 18.
Valk Mfg. Co., Carlisle, Pa. 767,116, pub. 1–7–64. Cl. 23.
Van-Wilson Ltd., Burlington, Ontario, Canada. 767,081, pub. 1–7–64. Cl. 19.
Velocitronics Co., The, Monmouth, Ill. 767,137, pub. 1–7–64. Cl. 26.
Venus Pen & Pencil Corp., New York, N.Y. 767,191, pub. 1–7–64. Cl. 37.
Vermut, Sam, and Sons, Brooklyn, N.Y. 767,236, pub. 1–7–64. Cl. 39.
Virginia Chemicals & Smelting Co., West Norfolk, Va. 767,293, pub. 1–7–64. Cl. 52.
Visual Graphics Corp., New York, N.Y. 766,964, pub. 1–7–64. Cl. 6.
Visual Graphics Corp., New York, N.Y. 767,111, pub. 1–7–64. Cl. 23.
Volpert, Milton H., d.b.a. Roof-Alum Industries, Youngstown, Ohio. 657,963, canc. Cl. 12.
Vulcan Fusee Co., Los Angeles, Calif. 766,940, pub. 1–7–64. Cl. 1.
Waindle, Roger, d.b.a. Technometallurgical Co., Detroit, Mich. 766,995, pub. 1–7–64. Cl. 14.
Wales-Strippit Corp.: *See*—
Houdaille Industries, Inc.
Walter, Louis, & Co., Inc., Kansas City, Mo. 767,208, pub. 1–7–64. Cl. 39.
Wander Wagon Trailers: *See*—
Wohlfert, Fred B.
Ward Baking Co., New York, N.Y. 181,069, ren. 3–24–64. Cl. 46.
Warner-Lambert Pharmaceutical Co.: *See*—
Schering & Glatz, Inc.
Warren-Teed Pharmaceuticals Inc., from The Warren-Teed Products Co., Columbus, Ohio. 767,020, pub. 1–7–64. Cl. 18.
Warren-Teed Products Co., The: *See*—
Warren-Teed Pharmaceuticals Inc.
Weber, Eldima, & Co. AG, Zurich, Zurich, Switzerland. 767,044, pub. 1–7–64. Cl. 21.
Western Auto Supply Co., Kansas City, Mo. 766,929, pub. 1–7–64. Cl. 1.
Weston Biscuit Co., Inc., d.b.a. Southern Biscuit Co., Richmond, Va. 658,133, canc. Cl. 46.
Whipple Co., The, d.b.a. A. A. Knights Division, Natick, Mass. 767,258, pub. 1–7–64. Cl. 46.
Widdicomb Furniture Co., The, Grand Rapids, Mich. 767,172, pub. 1–7–64. Cl. 32.

Widmer's Wine Cellars, Inc., Naples, N.Y. 767,274, pub. 1-7-64. Cl. 47.
Willson Products, Inc., Reading, Pa., to The Electric Storage Battery Co., Philadelphia, Pa. 405,498, ren. 3-24-64. Cl. 26.
Willson Products, Inc., Reading, Pa., to The Electric Storage Battery Co., Philadelphia, Pa. 406,430, ren. 3-24-64. Cl. 26.
Windbreaker-Danville Co., Danville, Ill. 767,221, pub. 1-7-64. Cl. 39.
Windsor Pen Corp., New York, N.Y. 658,079, canc. Cl. 37.
Wohlfert, Fred B., d.b.a. Wander Wagon Trailers, North Canaan, Conn. 767,028, pub. 1-7-64. Cl. 19.
Wolverine Toy Co., Pittsburgh, Pa. 767,058, pub. 1-7-64. Cl. 22.
World Wide Watch Co., Inc., New York, N.Y. 767,157, pub. 1-7-64. Cl. 27.
Wrisley: *See*—
Purex Corp., Ltd.
Yves Saint Laurent A.G. (S.A.) (Ltd.), Zug, Switzerland. 767,211, pub. 1-7-64. Cl. 39.
Zayre Corp., Natick, Mass. 767,164, pub. 1-7-64. Cl. 28.
Zeiss, Carl: *See*—
Zeiss-Stiftung, Carl.
Zeiss-Stiftung, Carl, d.b.a. Carl Zeiss, Wurttemberg, Germany. 767,142, pub. 1-7-64. Cl. 26.

U.S. GOVERNMENT PRINTING OFFICE 0—1964

U.S. DEPARTMENT OF COMMERCE
OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE
March 31, 1964 Volume 800 Number 5

PATENTS
NOTICES

Board of Appeals Decisions Rendered in the Month of February 1964

Examiner affirmed	286
Examiner affirmed in part	63
Examiner reversed	93
Total	442

Disclaimer

3,001,698.—*Raymond W. Warren, McLean, Va.* FLUID PULSE CONVERTER. Patent dated Sept. 26, 1961. Disclaimer filed Jan. 17, 1964, by the assignee, *the United States of America as represented by the Secretary of the Army.*

Hereby enters this disclaimer to claim 3 of said patent.

Notice of Tentative Recordation of a Trade Name

[T.D. 56122]

Tentative recordation of trade name under section 42, Trademark Act of 1946, and section 11.16, Customs Regulations

TREASURY DEPARTMENT,
OFFICE OF THE COMMISSIONER OF CUSTOMS,
Washington, D.C.

To Collectors of Customs and Others Concerned:

An application has been filed in the Treasury Department for the recordation of the following described trade name under the provisions of section 42, Trademark Act of 1946, and section 11.16, Customs Regulations:

"BARBAN CREATIONS," owned by Herman Pecker and Co., Inc., a corporation organized under the laws of the State of New York, located and doing business at 28 West 36th Street, New York City, which trade name is used in connection with stuffed animals and dolls, Christmas novelties, casual slippers, shoe backs, luggage and general merchandise manufactured in Japan, Hong Kong, and the United States.

Any person who desires to file an opposition to the recordation of this trade name shall notify the Commissioner of Customs, Bureau of Customs, Washington, D.C., before the expiration of 30 days after April 15, 1964, of his intent to oppose the recordation. If a notice of opposition is filed, the opposer will be furnished with a copy of the application for recordation of the trade name, together with its supporting documents, and instructions as to the procedure to be followed. The customs officers concerned will be given notice within 45 days after April 15, 1964, of any opposition proceeding.

Until 45 days after April 15, 1964, all articles of foreign manufacture bearing names or marks which copy or simulate the above-mentioned trade name shall be detained, but not seized, and thereafter, shall receive the treatment provided for in section 11.17, Customs Regulations, unless a notice is received that an opposition has been filed, in which case such articles shall continue to be detained until a final determination is made concerning the right of the applicant to the trade name.

(Signed) PHILIP NICHOLS, JR.,
Commissioner of Customs.

March 4, 1964.

Patents Available for Licensing or Sale

2,903,905. Speed Control Device. Edward C. Rhode, 1164 Mattox Road, Hayward, Calif.

2,909,739. Transducing Devices. Geo. S. Cherniak, 522 Andros Lane, Harbour Isles, Indian Harbour Beach, Fla. 32937.

The Ohio Brass Company is willing to grant licenses on reasonable terms under the following patent.

2,879,686. Anchor Bolt With Test Rod To Indicate Tension Changes.

Applications for license may be addressed to: K. W. Miller, Patent Department, The Ohio Brass Company, 380 N. Main St., Mansfield, Ohio. 44902.

General Electric Company is prepared to grant non-exclusive licenses under the following 24 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following patent may be addressed to: General Patent Counsel, General Electric Company, 570 Lexington Ave., New York, N.Y. 10022.

3,078,553. Sintered Aluminum Composition.

Applications for license under the following patent may be addressed to General Electric Company, Motor and Generator Division, 3001 E. Lake Road, Erie, Pa., Attn: Patent Counsel.

3,103,737. Coil End Turn Support Arrangement.

Applications for license under the following 9 patents may be addressed to: General Electric Company, Power Distribution Division, 100 Woodlawn Ave., Pittsfield, Mass. Attn: Division Patent Counsel.

2,492,746. Voltage Doubler.
2,769,739. Shellac-Ethoxyline Resin Indulating Compositions.
2,977,554. Dielectric Liquid and Apparatus Utilizing Same.
3,001,108. Electrolytic Capacitor and Electrolyte Therefor.
3,113,995. Isolation Device for Mounting Screws in Electrical Connection Box.
3,114,085. Sealed Electrolytic Device.
3,114,087. Terminal Lead Structure for Electrical Capacitors and Method of Making the Same.
3,114,900. Automatic Incremental Metering.
3,117,003. Titanium Zirconium Containing Brazing Material.

Applications for license under the following 13 patents may be addressed to: General Electric Company, Flight Propulsion Division, 1000 Western Ave., West Lynn, Mass. 01905. Attn: Patent Counsel.

New Applications Received During January 1964

Patents	6,858
Plant Patents	10
Reissues	7
Designs	472
Total	7,347

Issue—March 31, 1964

Patents	1065	No. 3,126,549 to No.	3,127,613, incl.
Designs	44	No. 197,835 to No.	197,878, incl.
Plant Patents	1	No. 2,388	
Reissues	4	No. 25,543 to No.	25,546, incl.
Total	1114		

2,971,333. Gas Impingement Starter.
2,998,958. Cooling Structure for Turbine Wheels.
3,026,851. Servo Mechanism.
3,049,869. High Temperature Jet Propulsion Apparatus.
3,068,701. Pressure Ratio Sensor.
3,085,588. Valve With Sealing Means.
3,085,838. Lubrication Means.
3,098,352. Adjustable Jet Propulsion Nozzle With Secondary Air Flow Control.
3,106,493. Thermocouple.
3,110,793. Brazing Tool.
3,111,912. A Roller Assembly for Operation on a Rail.
3,112,386. Coupling Removing Tool.
3,112,865. Blade Platform Structure.

PATENT EXAMINING CORPS

H. B. WHITMORE, Superintendent

PATENT EXAMINING OPERATIONS AND GROUPS	Oldest Application	
	New	Amended
CHEMICAL EXAMINING OPERATION—P. E. MANGAN, Director.		
GENERAL CHEMISTRY, GROUP 110—R. L. CAMPBELL, Supervisory Examiner. Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries.	3-16-62	3-20-62
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Supervisory Examiner. Heterocyclic; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids.	6-1-62	7-3-62
PETROLEUM CHEMISTRY, GROUP 130—J. R. LIBERMAN, Supervisory Examiner. Hydrocarbons; Halogenated Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices; Organic Chemistry (Part) e.g.: Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhydrides; Acid Halides.	7-10-62	7-23-62
HIGH POLYMER CHEMISTRY, GROUP 140—M. STERMAN, Supervisory Examiner. Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins: Reclaiming; Pore-Forming.	3-16-62	3-9-62
COMPOSITIONS AND MOLDING, GROUP 150—L. H. GASTON, Supervisory Examiner. Compositions (Part) e.g.: Coating; Molding; Adhesive Compositions; Abrading; Liquid Purification or Separation; Gas Separation; Special Utility; Molding Processes.	5-1-62	4-2-62
COATING AND LAMINATING, GROUP 160—J. REBOLD, Supervisory Examiner. Coating: Processes, Apparatus and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Ornamentation; Adhesive Bonding; Special Manufactures.	3-1-62	3-8-62
SPECIALIZED CHEMICAL ARTS AND INDUSTRIES, GROUP 170—W. B. KNIGHT, Supervisory Examiner. Bleaching and Dyeing; Fertilizers; Foods; Fermentation; Photography; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Metallurgical Apparatus; Gas, Heating and Illuminating; Cleaning Processes; Liquid Purification; Thermolytic Distillation; Preserving.	3-30-62	4-16-62
CHEMICAL ENGINEERING, GROUP 180—G. D. MITCHELL, Supervisory Examiner. Gas, Liquid and Solid Separation; Centrifugal Bowl Separators; Gas and Liquid Contact Apparatus; Distillation; Drying; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	6-19-62	6-20-62
ELECTRICAL EXAMINING OPERATION—N. H. EVANS, Director.		
POWER, GROUP 210—M. L. LEVY, Supervisory Examiner. Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art.	5-21-62	5-2-62
SECURITY, GROUP 220—S. BOYD, Supervisory Examiner. Ordnance, Firearms and Ammunition; Radar, Sonar, Directional Radio, Torpedoes, Seismic Exploring, Radio-Active Batteries; Nuclear Reactors, Powder Metallurgy, Rocket Fuels; Radio-Active Material.	8-1-62	4-23-62
INFORMATION TRANSMISSION, GROUP 230—S. W. CAPELLI, Supervisory Examiner. Communications; Multiplexing Techniques; Facsimile and Related Art.	8-29-62	7-31-62
INFORMATION STORAGE AND RETRIEVAL, GROUP 240—W. W. BURNS, Supervisory Examiner. Data Processing, Computation and Conversion; Storage Devices and Related Art.	3-13-62	2-2-62
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—B. G. MILLER, Supervisory Examiner. Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks.	5-1-62	5-7-62
RADIATION AND INSTRUMENTS, GROUP 260—F. M. STRADER, Supervisory Examiner. Optics; Radiant Energy; Measuring.	5-10-62	5-9-62
ELEMENTS, GROUP 270—E. J. SAX, Supervisory Examiner. Conductors; Switches; Miscellaneous.	7-31-62	8-17-62

CONDITION OF PATENT APPLICATIONS AS OF JANUARY 31, 1964

Total number of pending applications (excluding Designs)	204, 383
Total number of Design applications pending	5, 782
Total number of applications awaiting action (excluding Designs)	124, 799
Total number of Design applications awaiting action	2, 083
Date of oldest new application awaiting action	Mar. 1, 1962
Date of oldest amended application awaiting action	Feb. 2, 1962

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during March 1964, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*

Patents ..... Numbers 2,416,665 to 2,418,108, inclusive
Plant Patents ..... Numbers 723 to 732, inclusive

PATENT EXAMINING OPERATIONS AND GROUPS (Continued)	Oldest Application	
	New	Amended
MECHANICAL ENGINEERING EXAMINING OPERATION—R. A. WAHL, Director.		
MATERIAL OR ARTICLE HANDLING AND DISPENSING, GROUP 310—A. BERLIN, Supervisory Examiner Material or Article Handling and Dispensing; Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Fluid Sprinkling and Fire Extinguishers; Coin Handling and Check Controlled Apparatus; Classifying and Assorting Solids.	1-2-63	12-24-62
METAL AND PLASTICS WORKING, GROUP 320—N. BERGER, Supervisory Examiner Metal Bending, Drawing, Extruding, Forging, Rolling; Sheet Metal Working; Wireworking; Chain, Staple, Horseshoe Making; Metal Founding; Wire Fabrics; Plastic Working Apparatus; Plastic Block, Earthenware Apparatus.	9-21-62	9-14-62
MANUFACTURING AND ASSEMBLING MISCELLANEOUS ARTICLES, GROUP 330—A. M. HORTON, Supervisory Examiner Special Article Making; Assembling, Tool and Implement Making; and Metal Working.	7-12-62	7-2-62
MACHINE TOOLS, MECHANISMS AND ELEMENTS, GROUP 340—F. H. BRONAUGH, Supervisory Examiner Machine Tools for Shaping or Dividing Involving Cutting or Breaking; Machine Elements Including Power Transmission Components, Work and Tool Holders.	10-4-62	6-14-62
HARDWARE, TOOLS AND JOINTS, GROUP 350—T. J. HICKEY, Supervisory Examiner Miscellaneous Hardware; Tools; Joints; Cutlery; Locks; Fasteners, Rod Pipe and Electrical Connectors; Buckles; Buttons, Clasps, Etc.; Pushing and Pulling.	6-4-62	6-7-62
FLUID HANDLING, GROUP 360—E. PAUL, Supervisory Examiner Fluid Handling; Valves; Pipes and Tubular Conduits; Fluent Material Handling; Lubrication; Baths, Closets and Sinks; Joint Packing.	9-4-62	11-13-62
POWER PLANTS, MOTORS AND PUMPS, GROUP 370—C. F. GAREAU, Supervisory Examiner Power Plants, Combustion Power Plants, Expansible Chamber Motors, Rotary Motors and Rotary Expansible Chamber Motors, Expansible Chamber Devices and Internal Combustion Engines, Pumps and Pump Regulation.	8-27-62	11-19-62
HEATING, COOLING AND VENTILATING, GROUP 380—P. L. PATRICK, Supervisory Examiner Furnaces, Liquid Heaters and Vaporizers; Burners, Heat Exchange, Automatic Temperature and Humidity Regulation, Refrigeration, Ventilation, and Illumination.	10-16-62	9-10-62
GENERAL ENGINEERING AND INDUSTRIAL ARTS EXAMINING OPERATION—J. A. MANIAN, Director.		
AGRICULTURE, GROUP 410—A. RUEGG, Supervisory Examiner Animal Husbandry; Butchering; Fishing, Trapping and Vermin Destroying; Plant Husbandry; Tobacco, Earth Working.	12-21-62	12-24-62
CIVIL ENGINEERING, GROUP 420—B. BENDETT, Supervisory Examiner Building Structures; Bridges, Closures; Closure Operators; Safes; Earth Engineering; Drilling; Mining.	9-13-62	9-18-62
PHYSICS, GROUP 430—R. L. EVANS, Supervisory Examiner Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.	8-7-62	8-9-62
TEXTILES AND APPAREL, GROUP 440—R. C. MADER, Supervisory Examiner Textiles; Winding and Reeling; Tying Strands; Apparel; Boot and Shoe Making; Sewing Machines.	10-22-62	11-6-62
TRANSPORTATION, GROUP 450—P. ARNOLD, Supervisory Examiner Railways and Rolling Stock; Brakes; Land Vehicles; Aeronautics; Ships.	10-3-62	11-8-62
FURNITURE AND RECEPTACLES, GROUP 460—W. S. COLE, Supervisory Examiner Furniture; Supports; Cabinet Structures; Receptacles; Baggage.	10-31-62	12-18-62
PRINTING, STATIONERY AND MATERIAL TREATMENT, GROUP 470—L. W. VARNER, Supervisory Examiner Printing; Typewriters; Stationery; Material Treatment.	10-4-62	9-10-62
PERSONAL TREATMENT, ADORNMENT AND AMUSEMENTS, GROUP 480—L. R. PRINCE, Supervisory Examiner Surgery; Dentistry; Artificial Body Members; Toiletry; Amusement Devices; Jewelry; Mechanical Guns; Projectors.	11-1-62	11-9-62
DESIGNS, GROUP 490—J. A. MANIAN, Supervisory Examiner Industrial Arts; Household, Personal and Fine Arts.	8-12-63	8-9-63

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE LABS RINGDAL

No. 7002. Decided December 12, 1963

[51 CCPA —; 324 F.2d 985; 139 USPQ 486]

1. PATENTABILITY—OBVIOUSNESS—USE OF "PREFERRED" MATERIAL.

"The alleged advantages of polyethylene relied upon by appellant to support his position that it is unobvious to use polyethylene are not supported by the record. The record does not establish that a polyethylene shell has greater strength than an impregnated paper shell. Nor has it been shown that the problem of using plastics in the manufacture of shells actually existed in the art a long time without being solved or that it exists when either a superpolyamide (Société) or a cellulose acetate (Haut-Rhin, Laborey) plastic is used. We are unwilling to reverse the Board of Appeals and predicate patentability here on a mere disclosure that one material in a group of disclosed materials is 'preferred' without the record also containing further disclosures from which to determine that the use of such a 'preferred' material would have been unobvious to a person of ordinary skill in this art. We are unwilling to accept appellant's unsupported arguments relating to the advantages of polyethylene as used in this particular device, since these arguments are based on the properties of polyethylene which were well known to persons of ordinary skill in this art prior to appellant's invention."

2. SAME—PARTICULAR SUBJECT MATTER—"AMMUNITION."

The decision of the Board of Appeals, refusing certain claims in an application entitled "Ammunition" as unpatentable over the prior art, is affirmed.

APPEAL from the Patent Office. Serial No. 438,169.

AFFIRMED.

Wenderoth, Lind & Ponack (*John E. Lind* of counsel) for appellant.

Clarence W. Moore (*L. F. Parker* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, JR., *Associate Judges*

SMITH, *J.*, delivered the opinion of the court.

The Board of Appeals affirmed the final rejection by the Examiner of claims 22, 23 and 26 to 29, inclusive, of appellant's application for Letters Patent, Serial No. 438,169, filed June 21, 1954, for Ammunition. Presumably this rejection was intended to be a rejection for "obviousness" under 35 U.S.C. 103, and we shall so treat it.

The rejected claims relate to ammunition which may be used in rifles, shotguns, automatic guns, or other types of firearms. Appellant asserts advantages for this ammunition when used either as blank ammunition or as live ammunition. The ammunition comprises a cartridge head of plastic or metal having a pocket to receive a conventional percussion cap assembly. A front piece of tubular form, which is closed or fitted to a projectile at the front end and has an open base which is provided with an inner annular bead, telescopes over and is retained to the head by engagement of the annular bead with a mating annular groove in the head. In the blank ammunition the closed forward end of the front piece (which appellant calls the "meplat") is provided with cross scored lines so that upon firing the "meplat" will open without parts thereof being detached from the front piece and discharged from the gun. When the ammunition is in the form of a shotgun shell, the front piece is closed by a

transverse web located inwardly from the front end, and the shot and the charge (which appellant refers to as a "bursting" charge) are carried in the front piece.

While the application discloses various embodiments of the asserted invention, all the appealed claims have in common the requirement that the front piece of the ammunition be formed of polyethylene. Claims 22 and 29 call for the score lines which are provided at the closed end of the front piece in one form of blank ammunition.

The specification discloses various "elastic materials" as being suitable for forming the front piece of the ammunition. These materials include polyethylene, polyvinylchloride, or polyamides. The specification also states:

> • • • Also caoutchouc may be used provided this is prepared in a suitable manner so as to secure the requisite elasticity. Various high styrene-butadiene copolymers containing more than 75% of styrene may be used and also superpolyamides. However, various other plastics may be used providing they have the physical characteristics desired similar to polyethylene.

Polyethylene is disclosed as being a "preferred" material and the specification points out that it begins to soften at about 100° C. but has a melting point at which the mass becomes fluid "at about 140–160°."

Appellant's brief stresses the advantages of the claimed ammunition and points out, as does the specification, that:

> There is an important distinction between the cartridge having a brass case and the cartridge of the invention having a plastic case in that upon firing cartridges having brass cases the firing itself will heat such brass case so that a considerable amount of heat will be transmitted to the chamber walls. However, polyethylene and similar plastics have a strong heat insulating power and therefore upon firing, any heat transmission from the cartridge itself to the chamber walls may be disregarded. During tests where a series of bursts are carried out ejected brass cases become so warm that they can not be held by hand while the cases of the above invention are only slightly heated probably not above 40° C. The heating of the chamber will therefore only take place backwardly from the muzzle of the barrel and it appears that the muzzle in order to affect the chamber walls would have to reach such a temperature as would damage the weapon itself before the conducted heat would affect the cartridge in the chamber.
>
> Polyethylene also has the property that it does not become viscid. Therefore, should the plastic element become soft, nevertheless the cartridge would not jam and should it even happen that the plastic became fluid in such case it would not damage the barrel. In any case, there is no danger of polyethylene sticking to the chamber walls.

The rejection is stated variously as "no invention," "not inventive" and "unpatentable over" the following references:

Perrin et al., 2,188,465, January 30, 1940.
Behrens (Germany), 91,591, April 30, 1897.
Laborey (France), 919,583, March 12, 1947.
Haut-Rhin (France), 973,692, February 13, 1951.
Société (France), 999,458, January 31, 1952.

The Board agreed that the invention claimed by appellant was "unpatentable over" various combinations of the above references. This ground of rejection thus stated is here considered to be a rejection for obviousness under section 103.

The specific language of section 103 requires an analysis of the invention claimed and of the prior art to ascertain the *differences* between them. *In re Pieroh & Werres*, 50 CCPA 1471, 319 F.2d 248, 138 USPQ 238. In the present case the rejection, although it compares the disclosures of the prior art with the invention claimed,

does not clearly set forth the differences. Appellant's brief has pointed out these differences which for the purposes of this opinion we summarize as follows:

1. Behrens discloses a blank cartridge of paper.
2. Laborey relates to a shotgun shell wherein the shell is made of cellulose acetate.
3. Haut-Rhin relates to a shotgun shell constructed in two parts which are screwed or glued together.
4. Société relates to hunting ammunition wherein the shell and base plate are constructed from a plastic, a special polyamide.
5. Perrin et al. is directed to a process for rapidly polymerizing ethylene to semi-solid and solid polymers. It contains a disclosure that shotgun shells can be covered with a protective coating of polyethylene.

Having these differences in mind, we are next required under section 103 to determine whether they are of such nature and scope that the claimed subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in this art. Appealed claims 22 and 23 are illustrative and read as follows:

> 22. A blank cartridge comprising a base member having a tubular extension, a percussion cap in the base member, and a front piece member which is closed at its front end and *is integrally moulded from polyethylene*, said members being connected by a tight fit between the same, and said *tubular front piece having at its front end score lines which form a cross at the tip of said end.*
>
> 23. A cartridge comprising a base member having a tubular extension thereon, a percussion cap in said base member, a separate front piece member of *polyethylene*, said members being secured together by *one of said members having a circumferential groove and the other member a correspondingly shaped bead in engagement with said groove.*

We have emphasized in the above claims the significant portions which state the differences which appellant asserts render the claimed subject matter as a whole unobvious under the conditions specified in section 103.

We are of the opinin that the *differences* between the invention *as claimed* in the appealed claims and the prior art do not support appellant's position. The appealed claims do not therefore define a patentable invention.

We think weakening the "meplat" of the ammunition by the use of score lines as claimed in claims 22 and 29 would have been obvious in view of Behrens, despite appellant's argument in his brief that:

> A polyethylene shell has naturally a greater strength than the impregnated paper shell according to Behrens, so that in applicant's construction it is necessary to provide the cross shaped weakening lines for opening in order to securely carry out the *opening* of the blank cartridge point. When the front end of the point of the cartridge tears, naturally pieces thereof will be blown out which is contrary to the action in applicant's construction wherein the cross shaped weakening lines provided an opening and not a single piece of the cartridge is torn away.

It is clear to us that Behrens discloses appellant's general combination of a tubular cartridge case secured to a metal base by a constricted portion which rests in a corresponding groove in the case to secure the head and the front piece. The case has a weakened portion at its tip. Behrens indicates his awareness of the problem of accidents resulting from expelled fragments. Moreover, Behrens states that on ignition of the powder charge contained in his cartridge case, "a small slit is produced by the compressed air in the weakened area (see dotted line, FIG. 1) of the tip, through which gasses and air escape with a loud report." In the light of this disclosure of Behrens we believe that the Board correctly expressed the opinion that the weakened portion of Behrens is the "full equivalent" of the score

lines set forth in claims 22 and 29 and correctly found nothing unobvious about appellant's score lines in view of the fact that the use of such lines to facilitate tearing is a common expedient and old in many arts.

Rejected claims 23 and 26–29, inclusive, call for a separate front piece member constructed of polyethylene and the securing of such front piece member to a base member by means of a bead and circumferential groove. It seems to us, as it did to the Board, that "with the teachings of Société, Laborey et al. and Haut-Rhin to make the member under question wholly out of a plastic material, it is obvious to one skilled in the art to make the member wholly out of polyethylene, particularly since this material has been suggested to the art, namely by Perrin et al., as a material for use on the same member in question."

[1] The alleged advantages of polyethylene relied upon by appellant to support his position that it is unobvious to use polyethylene are not supported by the record. The record does not establish that a polyethylene shell has greater strength than an impregnated paper shell. Nor has it been shown that the problem of using plastics in the manufacture of shells actually existed in the art a long time without being solved or that it exists when either a superpolyamide (Société) or a cellulose acetate (Haut-Rhin, Laborey) plastic is used. We are unwilling to reverse the Board of Appeals and predicate patentability here on a mere disclosure that one material in a group of disclosed materials is "preferred" without the record also containing further disclosures from which to determine that the use of such a "preferred" material would have been unobvious to a person of ordinary skill in this art. We are unwilling to accept appellant's unsupported arguments relating to the advantages of polyethylene as used in this particular device, since these arguments are based on the properties of polyethylene which were well known to persons of ordinary skill in this art prior to appellant's invention.

While none of the references except Perrin refers to polyethylene, the references clearly disclose other plastics which correspond to the plastics which appellant discloses as suitable for use in carrying out his invention.[1] Thus, Laborey discloses the advantages of a plastic cartridge case and states:

> Plastic materials which are almost completely elastic are known. A cartridge case tube made of such materials will not tear when subjected to relatively moderate pressures. It can safely withstand the limited expansion which forces it against the wall of the cartridge chamber and then revert to its exact original diameter. On the other hand, plastic material cannot resist the higher and more disruptive pressure applied to the bottom of the base. The invention therefore provides either an all metal base firmly attached to the tube, or a plastic base integral with said tube and provided with a metal reinforcement.

Appellant criticizes the use of the Laborey reference in part on the basis that "The particular plastic material indicated is cellulose acetate." We do not agree. Laborey's specific statement refers to "*plastic materials derived* from cellulose acetate," as an example.

[1] See Société French Patent #999,458 which discloses, inter alia: Finally, the applicant obtain cases which behaved perfectly during firing and had a high resistance to the most varied temperatures, as recorded under different climates, whether hot or cold, by utilizing as plastic materials products of the superpolyamide or superpolyurethane class, or the like, for example, products formed by the condensation into chains of aminoacids, diamines with diacids, diisocyanates with glycols, diurethanes with diamines, etc. These plasticizable products are sufficiently transparent. They are very easily molded by injection and present the advantage that they practically do not contract during molding. The applicant found that a large variety of these products exist and that those with the greatest flexibility and resiliency must be selected. These products also have the highest degree of resistance. The product designated in the trade as igamid B is more especially suitable.

[Emphasis added.] We think a fair reading of the Laborey disclosure as a whole requires us to relate appellant's claimed polyethylene not to cellulose acetate but to "plastic materials which are almost completely elastic." The claimed difference over Laborey then comes down to (1) the use of polyethylene as the plastic and (2) the selection of a specific type of joint between the metal base and plastic front piece. As to the first difference, a person skilled in this art would know, it seems to us, that the selection of a particular plastic for the front piece is to be governed by its physical characteristics and its reaction to the environment in which it is to be used. The selection of polyethylene for use as the front piece in Laborey's cartridge would, it seems to us, have been obvious under all the conditions specified in section 103. As to the second asserted difference, we think Laborey discloses connections between the plastic front piece and the metal bases (see FIGS. 3 and 4 of Laborey) from which it would have been similarly obvious to provide the claimed bead and groove attachment called for in claims 23 and 26–29 of appellant's application.

[2] We therefore affirm the decision of the Board of Appeals.

AFFIRMED.

PATENT SUITS

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Des. 167,443. (See 2,731,925.)

Des. 176,011. (See 2,820,359.)

Des. 185,540. (See 2,461,345.)

REISSUES

MARCH 31, 1964

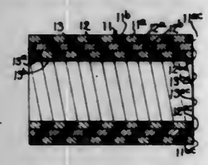
Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,543
FLEXIBLE COUPLING MEMBER

Hans Ruegg and Richard Keller, Ruti-Zurich, Switzerland, and Albert Klopfer, Stuttgart, Germany, assignors, by mesne assignments, to Allpatent Aktiengesellschaft, Vaduz, Liechtenstein, a corporation of Liechtenstein

Original No. 3,000,197, dated Sept. 19, 1961, Ser. No. 1,477, Jan. 11, 1960. Application for reissue Dec. 31, 1962, Ser. No. 250,732

10 Claims. (Cl. 64—15)



1. A flexible coupling member for transmitting torque between a pair of shafts, comprising a plurality of concentric helical springs forming a set, each of said springs being composed of closely spaced helically wound wire of substantially rectangular cross section, the adjacent concentric springs being in close contact with each other and having windings of opposite pitch, and means including a radial flange rigidly fixed to each of said shafts and having a radial surface contacting and permanently bonded to the surfaces of the end convolutions of each of said springs for thereby rigidly securing all of said springs to said shafts.

25,544
1,1,1-TRIFLUORO-2-BROMO-2-CHLOROETHANE AND A PROCESS OF MAKING IT

Charles Walter Suckling, Widnes, and James Raventos, Blackley, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Original No. 2,849,502, dated Aug. 26, 1958, Ser. No. 539,689, Oct. 10, 1955. Application for reissue Oct. 26, 1959, Ser. No. 850,012

Claims priority, application Great Britain Oct. 20, 1954

5 Claims. (Cl. 167—52)

4. A respirable gaseous anaesthetic mixture comprising 1:1:1-trifluro-2-bromo-2-chloroethane in admixture with oxygen as the essential active ingredients, said oxygen being present in a proportional amount proper for respiratory purposes.

5. In a method for inducing anaesthesia in a living mammal, the improvement which comprises administering to said living mammal an anaesthetizing amount of 1:1:1-trifluoro-2-bromo-2-chloroethane.

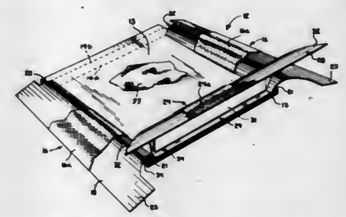
25,545
CASKET INTERIOR STRUCTURE

John L. White, Knightstown, Ind., assignor, by direct and mesne assignments, of sixty percent to Jacwill Mfrs., Knightstown, Ind., a partnership, and forty percent to Bruce Elder, Ferndale, Mich.

Original No. 3,077,016, dated Feb. 12, 1963, Ser. No. 30,834, May 23, 1960. Application for reissue Nov. 29, 1963, Ser. No. 289,151

8 Claims. (Cl. 27—19)

1. In a casket top an interior unit inserted therein comprising a flat generally rectangular base member formed of sheet material, a plurality of side frame members respectively disposed along at least three sides of said rectangular base member, said frame members being formed of sheet material formed to a cross sectional concavo-convex configuration curving outwardly from said base member, said sheet material forming said frame members being bent along the inner margin of said frame members and fastened to said rectangular base member, each of said frame members abutting the frame members disposed along adjacent sides of said rectangular base member to form a plurality of corner assemblies, one of said frame members in each of said corner assemblies nor-



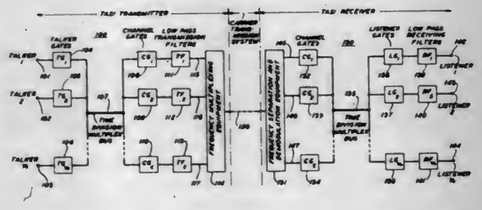
mally extending materially beyond the line of juncture with the other frame member comprising said corner assembly, said other frame member terminating at its abutting end along a line conforming to the convex surface of said one frame member so that said other frame member overlaps said one frame member, said other frame member being adjustable along the length of said one frame member whereby said abutting end may be located to adjust to the specific dimensions of the casket top in which said interior unit is inserted, the convex sides of said frame members being disposed outwardly, the outer margins of said frame members being adapted to be fastened to said casket top.

25,546
TIME ASSIGNMENT SPEECH INTERPOLATION SYSTEM

Frederick A. Saal, Plainfield, and Irwin Welber, New Providence, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Original No. 2,935,569, dated May 3, 1960, Ser. No. 686,468, Sept. 26, 1957. Application for reissue Apr. 27, 1962, Ser. No. 193,047

24 Claims. (Cl. 179—15)



24. Apparatus for controlling the connections in a switching system comprising means for assigning to each

said connection a time slot in a recurring cycle of time solts, circulating memory means the operation of which is likewise divided into recurring cycles of time slots, means for storing in said memory means a coded identification of each said connection in the time slot assigned to that connection, separate means for storing in said memory means a coded representation of the status of each said connection in a time slot also assigned to that connection, and means responsive to said coded identifications, and controlled by said coded representations for establishing, maintaining and terminating each of said connections.

PLANT PATENTS

GRANTED MARCH 31, 1964

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,388
CHRYSANTHEMUM PLANT
Orville O. Dunham, Rte. 4, Niles, Mich.
Filed Sept. 7, 1962, Ser. No. 222,251
1 Claim. (Cl. Plt.—81)

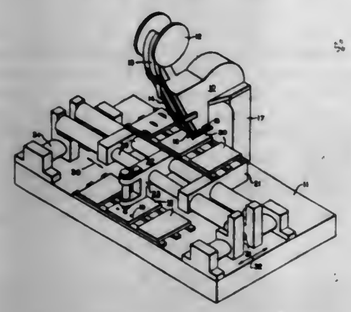
A new and distinct variety of chrysanthemum plant substantially as herein disclosed, characterized as to novelty by the deep pink tinted with strong purplish pink color of its blooms, the natural dwarf cushion mound form of growth, simultaneous bursting into flower of its blooms to cover substantially all the foliage, the attractive color of the foliage during growth and its midseason, profuse and continuous blooming habit.

PATENTS

GRANTED MARCH 31, 1964

GENERAL AND MECHANICAL

3,126,549
RAPID COMPONENT INSERTION APPARATUS
C A Crawford, Hicksville, N.Y., assignor to Hazeltine Research, Inc., a corporation of Illinois
Filed Sept. 28, 1960, Ser. No. 59,051
3 Claims. (Cl. 1—321)



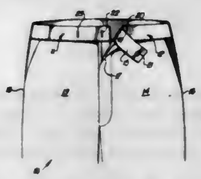
1. A rapid component insertion apparatus for inserting components in printed circuit boards comprising: means for mechanically inserting a component into holes in a printed circuit board; indexing means fixed relative to said component insertion means for indicating where components are to be inserted in said board; movable support means for holding said printed circuit board and positioning it relative to said insertion means; and sensing and activating means for activating said insertion means only when said support means is correctly positioned with respect to said indexing means.

3,126,550
LIP SHIELD
Joseph C. Price, 136 E. Club Drive, Pittsburgh 36, Pa.
Filed July 25, 1962, Ser. No. 212,366
1 Claim. (Cl. 2—174)



A shield for the lips to prevent lipstick from rubbing onto clothing as it is passed over the head of a wearer, comprising an outer plastic shield shaped to conform with the contour of the lips, said shield being of generally curved cross-sectional outline with edge portions extending toward the wearer's face to effectively cover the lips and to preclude catching of garment parts on said shield, a plurality of openings in said shield to permit a limited amount of air behind the shield and thereby impede perspiration around the lips of the user, a central opening in said shield, plastic tabs integrally formed with said shield and projecting inwardly from the upper and lower edges of said opening, said tabs having forward converging substantially flat planar portions and rearward juxtaposed flat planar portions, the juxtaposed portions forming a flat element adapted to be grasped by the teeth of a user, and the converging portions of the tabs forming generally triangularly-shaped openings at the sides of the central opening in the shield, said triangularly-shaped openings permitting breathing through the mouth of the user with the air passing in and out through said triangularly-shaped openings and said central opening in the shield.

3,126,551
WAISTBAND CONSTRUCTION PROCESS
Tobias Kotzin, 1300 Santee St., Los Angeles, Calif.
Filed Sept. 12, 1960, Ser. No. 55,523
1 Claim. (Cl. 2—236)

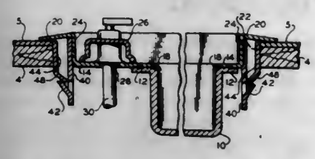


The process of forming trouser sections with faced waistbands from trouser parts, two continuous strips of webbing and pieces of material, which comprises: feeding the webbing to a double needle sewing machine so that corresponding inner edges of the webbing strip pass beneath the needles and with the said inner edges spaced from each other a distance corresponding to the combined width of the webbing strips while feeding material to the machine with its side edges respectively passing beneath the needles; inwardly folding one webbing strip at a subsequent stage to form a first edge at the inwardly facing panel of the waistband; stitching the upper edges of trouser parts at a subsequent stage along the said edge and on that side of the panel that the webbing strip extends and inwardly folding the other webbing strip to form a second edge at the outwardly facing panel of the waistband; reversely folding the waistband at its center, to position the webbing outwardly at a subsequently stage; transversely stitching and cutting the waistband between consecutive attached trouser parts at a subsequent stage to separate them; individually turning the waistband panels to form a corner at the said transverse line of stitching and so that the said first and second edges embrace the upper edge of the trouser part; and finally stitching the panels together and to the trouser part by a line of stitching along the said first and second edges.

3,126,552
SINK, DRAINBOARD AND RIM CONSTRUCTION
George Alexander Scharmer, Waldwick, N.J.
(83 Oliver Place, Ringwood, N.J.)
Continuation of application Ser. No. 841,241, Sept. 21, 1959. This application May 18, 1962, Ser. No. 198,400
8 Claims. (Cl. 4—187)

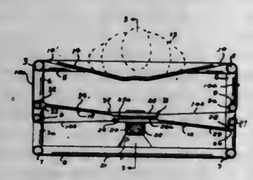
1. A sink adapted to be installed by being lowered downwardly into an opening in a counter top from above comprising a substantially rectangular stainless metal sheet having a stainless metal sink bowl positioned therein away from the edges of said sheet whereby a margin of said sheet surrounds the opening into said bowl, a surrounding

wall integral with and extending steeply upwardly from the outer edges of said margin, said wall being narrow relative to the depth of said sink bowl, a substantially flat flange consisting of a single thickness of said stainless sheet metal free from perforations for fastening means extending outwardly from and integral with the upper edge of said wall at an angle from zero to a few degrees downwardly from the horizontal entirely around the same, said



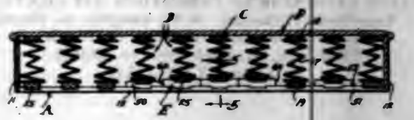
flange being adapted to support the sink in said opening by resting on the counter top and forming the finished imperforate rim for the sink in said opening, and means wholly below said flange for securing it tightly against said counter top, said flange at the back of the sink being much wider than the flanges on the front and two ends and having openings provided therein back from said imperforate rim for faucet connections.

3,126,553
AUTO-CONTOURING SUPPORT ELEMENT
Rudolph J. Zastera, 160 Main St., Glen Ellyn, Ill.; William R. Weir, 2608 Grouse Lane, Rolling Meadows, Ill.; and Henry M. Pernini, 1670 Farwell Ave., Chicago, Ill.
Filed Apr. 29, 1963, Ser. No. 276,674
6 Claims. (Cl. 5—233)



1. A body contour conforming bed-like structure comprising an elongated rectangular frame, means for supporting said frame horizontally above a supporting surface, said frame comprising horizontally-spaced pairs of vertically-spaced round side rails and connecting end frame members, a plurality of closely uniformly-spaced nonstretchable strands disposed transversely across the top of said frame in parallel relation, extending over the uppermost round side rails of each pair, and downwardly, and around the lowermost side rails of the pairs with the opposite extremities of the strands extending toward each other, a pair of superimposed locking bars for each strand intermediate the extremities of said strands having interlocking edges facing each other in vertically-spaced relation intermediate said pairs of side rails, one of said bars in each pair having one extremity connected to one extremity of each of said strands and the other locking bar of the pair having its opposite extremity connected to the other extremity of the same strand, horizontally-spaced pairs of elastic tensioning members connected to the opposite sides of the frame and extending toward each other below the plane of the upper side rails of the pairs of side rails with their opposite ends connected under tension to the ends of the locking bars opposite from their strand connected ends, for yieldably tensioning said strands individually across the top of the frame to form a yieldable body contour conforming supporting surface, and means for moving said locking bars into interlocking relation to render said elastic tensioning means inoperative to tension said strands.

3,126,554
PRESCRIPTION BEDDING HAVING INDIVIDUALLY ADJUSTABLE SPRING UNITS
Melvin N. Janapol, Los Angeles, Calif., assignor to Wortso Corporation, Los Angeles, Calif., a corporation of California
Filed Oct. 27, 1961, Ser. No. 148,206
8 Claims. (Cl. 5—243)

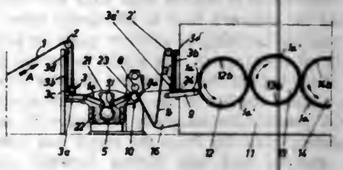


1. A spring unit including, a frame with side rails having flanges, a single row of springs arranged transversely between the side rails, padding overlying said springs, a support underlying said springs and shiftably extending between the side rails, and insertable blocks of prescribed height to be engaged on the flanges for carrying the support, there being a notch at each opposite end portion of the support to form a step to engage opposite blocks and hold them in fixed spaced relationship.

3,126,555
PROCESS FOR CLEANING TEXTILE FABRICS
Leo P. Curtin, Cranbury, Middlesex County, N.J.; Leo Vincent Curtin, executor of Leo P. Curtin, deceased
Filed Oct. 23, 1959, Ser. No. 848,255
4 Claims. (Cl. 8—149.1)

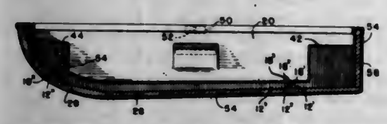
1. In a process for cleaning textile materials, the following sequence of steps, (1) placing the soiled material in a container which is then tightly closed, (2) building up within the container and within the textile material an intermediate gaseous pressure higher than the pressure against which the gas will later be released, (3) without reducing said intermediate gaseous pressure, introducing a cleaning liquid into the fabric and the container at a still higher final pressure, thus compressing the gas within the textile material into still smaller volume with entry of the cleaning liquid into the interstices and capillaries of the textile material, (4) expelling most of the soil-bearing cleaning liquid from the recesses of the fabric and from the container solely by means of the compressed gas within the fabric and container by permitting said gas to expand against a lower pressure external to the container, and (5) repeating the cycle at least once with fresh cleaning liquid.

3,126,556
PROCESS FOR TREATING AND PROCESSING OF ELONGATED FLEXIBLE ELEMENTS
Heinz Fleissner, Egelsbach, Germany, assignor to Fleissner & Co. G.m.b.H., Egelsbach, Germany
Filed June 3, 1959, Ser. No. 817,949
Claims priority, application Germany May 7, 1958
6 Claims. (Cl. 8—151.2)



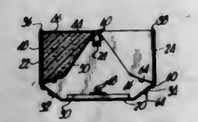
1. In a process of transporting an elongated flexible element having a small transversal dimension during treatment thereof, the steps of bending said element at spaced intervals in substantially opposite directions so as to form a structure consisting of to and fro bent sections with said structure located in a predetermined plane and being substantially wider and substantially shorter than said element in unbent state, moving said bent structure formed by said elongated flexible element along a curved path defined by a fluid permeable surface having its axis of curvature extending substantially parallel to said plane of said bent structure and transversal to the longitudinal extension thereof, and drawing by suction a stream of fluid through said bent structure and said surface so that the stream of fluid prevents changes in the mutual position of said sections by holding the bent structure against said surface.

3,126,557
BOAT CONSTRUCTION
John H. Stevens, 7518 Locust Ave., Gary, Ind.
Filed Sept. 5, 1961, Ser. No. 135,839
4 Claims. (Cl. 9—6)



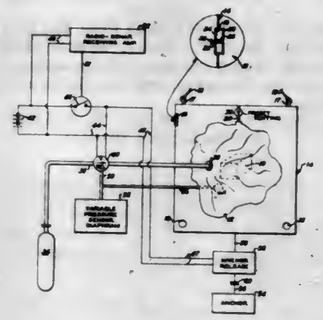
1. A boat hull comprising a plurality of corrugated cardboard hull sections, each of said corrugated cardboard hull sections comprising at least one planar panel member bonded to at least one corrugated panel member having parallel ridges and furrows, all of said hull sections being consecutively bonded together in contiguous face-to-face alignment forming the longitudinal contour of said boat hull, the shape of each of said hull sections being a transverse section of said boat hull, the parallel ridges and furrows of the corrugated panel member of each hull section being angularly displaced with respect to the parallel ridges and furrows of the corrugated panel member of an adjacent hull section, the collective edges of said consecutively and contiguously bonded hull sections forming the exterior and interior surfaces of said boat hull, and a water-seal covering adhering to said collective edges of said hull sections.

3,126,558
COLLAPSIBLE, SECTIONALIZED BOAT
Roger S. Nolan, 7817 Walmer, Overland Park, Kans., and Eugene E. Soule, 6108 Buena Vista, Mission, Kans.
Filed Oct. 23, 1961, Ser. No. 147,000
2 Claims. (Cl. 9—2)



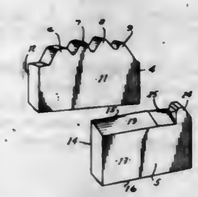
1. A collapsible boat comprising a number of elongated, buoyant hull sections each having a bottom and a pair of opposed sides secured to and extending upwardly from the bottom; means on said hull sections for interconnecting the latter in end-to-end relationship; a pair of buoyant outrigger members for each of said hull sections and hingedly interconnected therewith on the sides thereof for movement from first positions extending outwardly from the sides and above said bottom in buoyancy-producing relationship with the hull section to second positions extending into the hull section in stored relationship thereto; and releasable fastening means carried by said outrigger members for securing the latter to the corresponding hull sections when said outrigger members are in said first positions.

3,126,559
UNDERWATER CONTAINER ASSEMBLY
David Ord Alexander, 2017 Que St. NW., Washington 7, D.C., assignor of twenty-five percent to Sol B. Wiczer, Washington, D.C.
Filed Feb. 26, 1962, Ser. No. 178,524
18 Claims. (Cl. 9—10)



14. The combination of a container, fluid transfer vents in said container providing communication through its walls of the interior with the exterior, a commodity fitted within said container, a gas and water tight membrane within the said container protectively enclosing said commodity, means for controllably inflating the membrane with a gas sufficient to provide buoyancy to the combination.

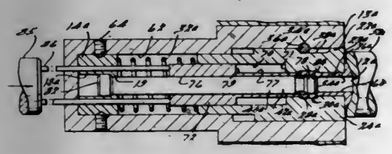
3,126,560
THREAD CHASER AND CHIP BREAKER AND DEFLECTOR COMBINATION
Edward E. Jennings, Cleveland, Ohio, assignor to The Pipe Machinery Company, Wickliffe, Ohio, a corporation of Ohio
Filed Feb. 8, 1961, Ser. No. 87,926
4 Claims. (Cl. 10—111)



1. In a thread chaser and chip-breaker combination, a breaker comprising a metal body having forward and rear faces with a leading end and a trailing end, and top and bottom edges, a forward face portion of the body being bevelled back toward the rear face, beginning at a location spaced from the top edge, to the top edge for a distance from the leading end part way toward the trailing end, said body having a deflecting wall portion at the relatively trailing end of the bevelled face portion extending at an abrupt angle forwardly from the bevelled face portion and facing toward said leading end of the body, a thread chaser having a forward face, said body being clamped in an operating position, relative to the thread chaser, wherein the rear face of the body is juxtaposed against, and substantially parallel to, said forward face of the chaser, the top edge of the body is spaced from the cutting edge of the chaser in a direction edgewise of the chaser toward the opposite edge of the chaser, the

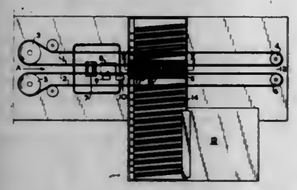
leading end of the body is adjacent the leading end of the chaser, and the deflecting wall portion of the body is positioned near to, but beyond, in the trailing direction, the last complete forming tooth of the chaser, and said angle of said deflecting wall portion being sufficiently abrupt so as to be able to deflect chips striking the deflecting wall portion forwardly and then back toward the leading end of the breaker and away from the trailing ends of the breaker and chaser.

3,126,561
APPARATUS AND METHOD FOR SELECTIVELY WORK HARDENING A WORKPIECE
John F. Orloff, Mount Clemens, Mich., assignor to Huck Manufacturing Company, Detroit, Mich., a corporation of Michigan
Filed June 13, 1961, Ser. No. 116,835
9 Claims. (Cl. 10—11)



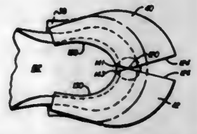
1. Apparatus for work hardening a hollow workpiece comprising a movable die member having a bore for receiving the workpiece, said bore having an annular groove therein, a pin member terminating at one end in a head portion and being movable relative to said movable die member in said bore, means for applying an axial force to the workpiece and to said movable die member for moving said movable die member axially inwardly relative to said pin member causing insertion of said head portion into the workpiece for flowing the material of the workpiece into said annular groove, and ejection means independent of said pin member for moving the workpiece axially outwardly from said bore in said movable die member causing the material in said annular groove to flow back to substantially the configuration as defined by said bore.

3,126,562
PRESSER MECHANISM FOR A MACHINE FOR COMBINING TWO MEMBERS, SUCH AS A BOOK AND A COVER
Jørgen Valdemar Carstens, 22 Anettevej, Brabrand, Denmark
Filed May 23, 1961, Ser. No. 112,011
Claims priority, application Denmark May 24, 1960
5 Claims. (Cl. 11—4)



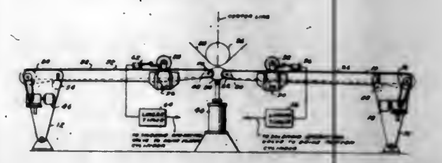
1. A presser mechanism for a machine for applying a cover onto a booklike object said presser mechanism comprising an at least vertically movable presser member for controlling the application of a horizontally disposed cover to the downwards facing spine of a book fed edgewise over and along the presser mechanism, means for automatically moving said presser member, and means for clamping and feeding said book over and along said presser mechanism, said presser member having a contact surface the friction of which against the cover is less than the friction between the cover and the spine of the book to which the cover has been applied so that the presser member loses control over the cover when said cover registers with the book.

3,126,563
WIPERS WITH GAP COVERING BRIDGE
Jacob S. Kamborian, 133 Forest Ave., West Newton, Mass.
Filed Oct. 22, 1962, Ser. No. 232,138
1 Claim. (Cl. 12—12.5)



In an end lasting machine having a shoe support for supporting bottom-up a last having a shoe upper and insole mounted thereon: a pair of symmetrically disposed wipers having coplanar undersurfaces; a vertex located on the line of symmetry of the wipers; a rear side surface on each of the wipers extending rearwardly from the vertex, the rear side surfaces being in opposed relation; an intermediate side surface on each of the wipers, the intermediate side surfaces extending forwardly and divergently from the vertex; a front side surface on each of the wipers, the front side surfaces extending forwardly and divergently from the intermediate side surfaces to embrace the last; a recess in the undersurfaces of each of the wipers extending in an arc from its rear side surface to its intermediate side surface whose center of curvature is at the vertex; a disc secured in the recess of one of the wipers and extending into the recess of the other of the wipers, the periphery of the disc being on a circle whose center of curvature is at said vertex and whose radius of curvature is substantially equal to the radii of curvature of the recesses, and the undersurface of the disc being substantially coplanar with the undersurfaces of the wipers; and means connected to the wipers to translate them forwardly and to swing the front side surfaces toward each other and the rear side surfaces away from each other about said vertex.

3,126,564
AUTOMATIC SHEET POLISHING MACHINE
Albert M. Elliott, Linthicum Heights, Md., assignor to Eastern Stainless Steel Corporation, Baltimore, Md., a corporation of Maryland
Filed Mar. 27, 1963, Ser. No. 268,322
5 Claims. (Cl. 15—102)



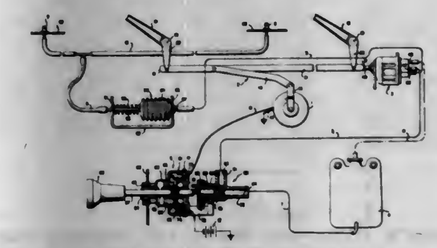
1. An automatic sheet polishing machine for polishing a sheet of material comprising: a polishing device, a first conveyor means for transporting said sheet to said polishing device, a second conveyor means for transporting said sheet away from said polishing device, a platen between said first and second conveyor means over which the sheet passes during transport, said platen positioned adjacent to and spaced from said polishing means; said first conveyor means including a conveyor belt frame, a support member, one end of said conveyor belt frame being pivotally connected to said support member and the other end of said frame being pivotally connected to said platen, a roll at each end of said conveyor belt frame, drive means for one of said rolls, and a conveyor belt mounted on said rolls; means responsive to the presence of the sheet on said first conveyor means to move said platen to clamp said sheet of material between the platen and said polishing device, means responsive to the presence of the sheet on said second conveyor means to move said platen to release the sheet of material from contact with said polishing device, and means associated with said conveyor belt frame and said support member for permitting displacement of the pivotal connection between said support member and the frame on movement of said platen.

3,126,565
SHOE CLEANER
Albert George Miller, 25 E. Cedar St., Chicago, Ill.
Filed May 23, 1962, Ser. No. 197,007
6 Claims. (Cl. 15—210)



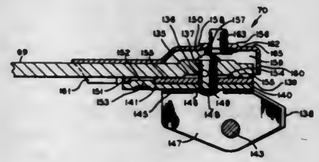
1. A shoe cleaner comprising a vertically elongated frame, a generally rectangular wiper pad, link means pivotally connecting the lower end of the wiper pad to the frame at the lower end thereof, and guide means connecting the upper end of the wiper pad to the frame above the link means, the link means and the guide means guiding the wiper pad for movement from a generally vertical position adjacent to the frame to a position extending downwardly and outwardly from the frame at an acute angle to vertical, the wiper pad in its generally vertical position swinging slightly beyond vertical to move the link means to an over-center self-latching position.

3,126,566
WINDSHIELD WASHER AND WIPER COMBINATION
Robert R. Mandy, Detroit, Mich., assignor to The Delman Company, Cookeville, Tenn., a corporation of Tennessee
Filed July 11, 1962, Ser. No. 209,203
10 Claims. (Cl. 15—250.02)



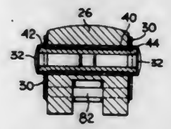
4. A windshield cleaning system comprising, a washer unit including pump means having a reciprocating member to displace liquid onto an associated windshield, a wiper unit including selectively operable motor means, pivoted wiper members, linkage means for transferring the drive from said motor to said wiper members, said linkage means including a reciprocating connecting bar having a cam surface thereon and contacting said reciprocating member to operate said pump means concurrently with said wiper unit, and manually operated means for selectively closing off the suction side of said pump to provide a vacuum holding force, whereby said reciprocating member is held out of contact with said reciprocating bar and said cam surface.

3,126,567
WIPER ARM ASSEMBLY
Fred A. Krohm, Hobart, Ind., assignor to The Anderson Company, a corporation of Indiana
Original application Nov. 19, 1958, Ser. No. 774,955, now Patent No. 3,064,297, dated Nov. 20, 1962. Divided and this application Feb. 27, 1961, Ser. No. 91,881
7 Claims. (Cl. 15—250.32)



1. A windshield wiper arm part constructed from bar stock having an offset portion forming a recess, a resiliently flexible member provided with an opening, a channel fitting for attachment to a wiper blade and provided with a projection disposed in said opening; and pivot means extending through the offset portion, member and fitting for firmly securing them together so that a portion of the member will be flexed into the recess and the fitting and member as a unit may be manually pivoted with respect to the arm part to any desired position and automatically held in such position.

3,126,568
WINDSHIELD WIPER ARM PIVOT JOINT
Leo J. Wubbe, Beverly Shores, Ind., assignor to The Anderson Company, a corporation of Indiana
Filed June 15, 1961, Ser. No. 117,359
1 Claim. (Cl. 15—250.35)



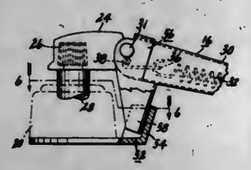
Windshield wiper structure comprising a head member for operative connection to an oscillating drive shaft, said head member provided with spaced-apart substantially parallel outer wall surfaces having a cylindrical bushing normally disposed between said surfaces, an arm member adapted for pivotal connection to said head member, said arm member having a pair of depending substantially parallel side walls provided with aligned transverse apertures therethrough, said parallel depending side walls of the second member positioned astride the head member and having offset tubular formations axially aligned with said cylindrical bushing, an elongate cylindrical sleeve pivotally received within the bushing and having ends projecting into said formations of said side walls, means received in each end of said sleeve for uniting the sleeve with said walls, each of said means having an inner cylindrical portion adapted to be freely axially received within said sleeve and having a radially enlarged surface at its outer end adapted to be forcibly axially received within a respective outer end of said sleeve to radially expand said sleeve at its outer end into

fixed mating contact with a formation thereby defining a pivotal connection between the elongate cylindrical sleeve of said arm member and the cylindrical bushing of said head member.

3,126,569
WINDOW CLEANING MECHANISM

Thomas Scott, Royal Oak, and Dick H. Williams, Oak Park, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Oct. 15, 1962, Ser. No. 230,418
6 Claims. (Cl. 15—250.35)

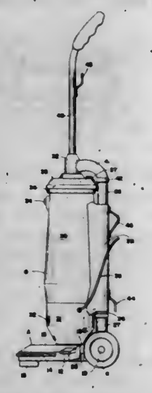


1. Window cleaning mechanism including, a transmission housing, a rockshaft rotatably supported in said housing, a wiper arm having a mounting section drivingly connected to said rockshaft and a blade carrying section spring hinged to said mounting section, and coacting abutment means attached to said housing and said blade carrying section for precluding outward pivotal movement of said blade carrying section at a predetermined angular position of said wiper arm relative to said housing, said abutment means being spaced from each other and nonengageable during oscillatory movement of said rockshaft.

3,126,570
CONVERTIBLE UPRIGHT AND TANK TYPE VACUUM CLEANER

Robert A. Green, Lake Oswego, Oreg., assignor to Labbe-Green Corporation, Portland, Oreg., a corporation of Nevada

Filed Mar. 29, 1962, Ser. No. 183,631
3 Claims. (Cl. 15—331)



1. A vacuum cleaner comprising a base unit, a pair of wheels on the rear end of said base unit, a suction head flexibly mounted in the front end of said base unit, a rigid suction tube pivotally connected to said base unit on the axis of said wheels, a flexible suction tube connecting said suction head and said rigid suction tube, a tank and motor unit mounted on the front side of said rigid suction tube, a cover on said tank having a suction opening, a handle for operating the cleaner as an upright type cleaner, said handle having a detachable connection with said suction opening, said handle having a hollow portion in said opening communicating with said tank, and a suction connection extending from said hollow portion for engagement with said rigid tube to operatively connect said suction head with said tank, said suction opening being available to receive a flexible suction hose for use of the cleaner as a tank type cleaner when said handle is removed.

3,126,571
VACUUM LAWN SWEEPER

Lovell J. Abbott, Hesperia, Mich.
(P.O. Box 3, Fremont, Mich.)

Filed July 10, 1962, Ser. No. 208,724
2 Claims. (Cl. 15—350)



1. A vacuum lawn sweeper comprising a main frame including a pair of rearwardly directed handles and a depending tripod leg assembly having a pair of depending front legs and at least one depending rear leg assembly, a pair of support wheels rotatably supported at the lower end portions of said front legs and a single caster wheel rotatably supported at the lower end portion of said rear leg assembly, said rear leg assembly comprising a pair of rearwardly convergent legs pivotally secured at their forward ends to said main frame for rotation about generally aligned horizontally disposed axes extending transversely of said main frame and a depending brace pivotally secured at its lower end to the rear ends of said convergent legs and having a plurality of longitudinally spaced bores formed transversely through its upper end, said rearwardly directed handles, at points spaced rearwardly of said main frame, being disposed closely adjacent each other and interconnected by means of a shank-type fastener secured through the adjacent portions of said handles, the upper end of said depending brace passing between said adjacent portions of said handles with said fastener passing through a selected one of said bores and thereby serving the dual function of interconnecting said handles and adjustably supporting said depending brace, a blower assembly supported from said main frame and including an inlet and an outlet, motor means drivingly connected to said blower assembly, said blower assembly inlet including a depending inlet snout which is flared at its lower end forming an elongated inlet head generally paralleling said axes of rotation of said pair of support wheels and disposed slightly forwardly of the latter, a collection bag having an inlet secured to said blower assembly outlet, said bag, remote from its inlet being suspended from at least one of said handles adjacent the rear end thereof.

3,126,572
WIPING CLOTH

Orville A. Franey, 8560 Wolven Ave., Rockford, Mich.

Filed Dec. 31, 1962, Ser. No. 248,347
4 Claims. (Cl. 15—506)

1. A cleaning cloth comprising: a porous fabric; a plurality of open string loops having ends stitched to a surface of said fabric in a pattern arrangement and extending along and somewhat away from said surface in a general direction toward one edge of said fabric; said loops having considerable body to prevent their being

flattened; said loops including open large loops to pick up particles and including open smaller loops inside said



larger loops to receive the particles from said larger loops and transfer them to the pores of said fabric.

3,126,573
WAXERS AND POLISHERS

Peter S. Vosbikian, Melrose, and Thomas S. Vosbikian, Philadelphia, Pa. (both of 20th and Oxford Sts., Philadelphia, Pa.)

Filed Apr. 10, 1962, Ser. No. 186,424
1 Claim. (Cl. 15—546)



A waxer and polisher, comprising a handle, a head having a fixed portion secured to the lower end of the handle and having a replaceable applicator pad means secured to the fixed portion, a tank adapted to contain the wax and having a longitudinal groove at one side to receive the handle, means to clamp the tank to the handle, said tank having a discharge passage at its bottom, a valve rod in the tank having its lower end extending through said discharge passage, a valve mounted on said rod and having a conical portion adapted to seal the discharge passage and having an upwardly extending portion provided on one side thereof with a cut-out communicating with the interior of the tank when the valve is closed and adapted to receive a metered quantity of wax and communicating with the space outside the tank when the valve is opened so as to be adapted to dispense said metered amount of wax to the work surface near said applicator pad, a bushing having a frictional fit located in the upper end of the tank, said valve rod having a flattened portion extending through the bushing with a frictional fit, a spring operatively connecting the upper end of the bushing and the valve rod normally biasing said valve to said closed position, and a cap fixed to the upper end of the valve rod, said cap when rotated being operable through said flattened rod portion to rotate said bushing so as to control the angular dispensing position of the valve cutout to selectively control the direction in which said wax is dispensed, said cap when depressed opening said valve.

3,126,574
PLOW TYPE GLUE GUN

John P. Fox, Monrovia, Calif., assignor to The Aro Corporation, Bryan, Ohio, a corporation of Ohio

Filed Mar. 21, 1963, Ser. No. 266,890
6 Claims. (Cl. 15—580)

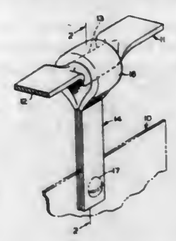


1. In a plow type glue gun, a body member having an elongated surface provided with a plurality of spaced-apart glue discharge ports, said body member having a glue distributing passageway with which said glue discharge ports connect for receiving glue therefrom, and a glue supply passageway communicating with said glue distributing passageway at substantially the center thereof, said glue supply passageway meeting said glue distributing passageway at one side thereof, the opposite side of said glue distributing passageway having a spherical depression against which the stream of glue from said glue supply passageway impinges, said depression being thereby effective to deflect the glue and distribute it substantially equally throughout the length of said glue distributing passageway.

3,126,575
PANEL HANGER

Carl W. Schoeneberg, Kirkwood, Mo., assignor to Automatic Devices, Incorporated, St. Louis, Mo., a corporation of Missouri

Filed Dec. 27, 1960, Ser. No. 78,588
7 Claims. (Cl. 16—87)



1. A support bar including an elongate horizontal sheet strip, said strip having an arcuate portion extending downwardly at opposite sides of the strip to provide an arcuate bearing, and a strap provided with a rounded eye that receives said bar and swivels on said arcuate bearing, the width of said strip at each end of the arcuate portion being greater than the inside dimension of said strap eye and thereby abuttingly prevents axial removal of the strap eye from the arcuate bearing.

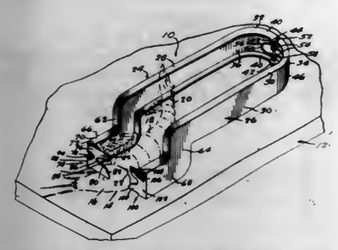
3,126,576
SHRIMP HEAD AND VEIN REMOVING TOOL

Bjarne Johannesen, 3349 Drexel Ave., Port Arthur, Tex.

Filed Mar. 8, 1963, Ser. No. 263,953
8 Claims. (Cl. 17—7)

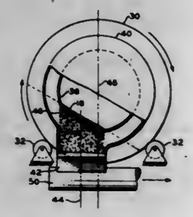
8. A shrimp head and vein removing tool comprising a pair of elongated handles connected together at their rear ends for movement of said handles toward and away from each other, a vertically-pivoted blade on and extending laterally inwardly from one handle at its forward end, a fixed blade on and extending laterally inwardly

from the other handle at the forward end thereof, and means on the fixed blade adapted to be engaged by the



pivoted blade as the blades approach each other when the handles are moved toward each other.

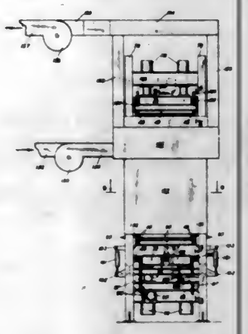
3,126,577
APPARATUS FOR HANDLING PELLETS OF POWDERED MATERIAL
Bruno F. Loewen, Borger, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed May 26, 1961, Ser. No. 112,961
5 Claims. (Cl. 18—1)



1. Apparatus for handling pellets of powdered material, such as carbon black, comprising in combination a cylindrical drum having an inlet for said material at one end and an axial outlet at the other end thereof, said outlet leading over a ring coaxial with said drum; means for supporting and rotating said drum with its axis in substantially horizontal position; a stationary hood adjacent said outlet and communicating therewith, whereby the rotation of said drum when delivering pellets into said hood forms a curtain of gravitating pellets offset in the direction of rotation from a perpendicular plane along said axis; a delivery conduit depending from said hood for receiving said pellets, said conduit being offset in the direction of offset of said curtain of pellets so as to allow same to gravitate directly into said conduit and avoid impinging on said hood.

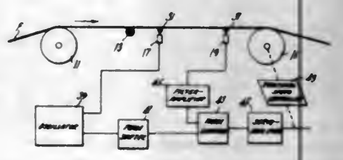
3,126,578
BOARD FORMING PRESS AND METHOD OF MAKING BOARD SUBSTITUTES
Ralph Chapman, Corvallis, Oreg., assignor to Wood Processes (Oregon) Ltd., Corvallis, Oreg., a limited partnership of Oregon
Continuation of application Ser. No. 664,314, June 7, 1957. This application Aug. 1, 1960, Ser. No. 46,554
11 Claims. (Cl. 18—4)

1. A hot press for fabricating artificial boards from preformed mats of board-making constituents capable of being consolidated under heat and pressure with attendant release of steam comprising an upright press frame, a plurality of separate platens each comprising means providing an upper plane surface and a lower plane, steam-impervious surface fixedly held in spaced-apart, parallel relation to each other with open spaces therebetween for the passage of a heating medium, a plurality of separate caul plates having steam-impervious surfaces and each of a size to support a preformed mat of board-making constituents and to rest upon one of said upper platen surfaces entirely within the boundaries thereof, said frame being adapted for holding a stack of alternately superimposed platens and caul plates with mats of board-making constituents therebetween in progressive stages of consolidation, steam-impervious surfaces of said platens and caul plates being directly in contact with the board-making constituents and steam escape from said constituents being permitted only at the edges of the



mats of board-making constituents, means to maintain said stack under pressure within said frame, means within said frame for directing heating medium through said open spaces of said platens, and means to progress said stack through said frame by successively adding platens each bearing a caul plate and mat to the bottom of the stack and removing platens each bearing a caul plate and a consolidated board from the top of the stack, the space between adjacent platens being open to atmosphere throughout the entire path of travel of said platens from the bottom to the top of the press for permitting steam escape.

3,126,579
APPARATUS FOR THE MEASUREMENT AND CONTROL OF THE MODULUS OF ELASTICITY IN FILAR STRUCTURES
Arthur A. Janszen, Belmont, Mass., assignor to KLH Research and Development Corporation, Cambridge, Mass., a corporation of Massachusetts
Filed Jan. 2, 1962, Ser. No. 163,905
5 Claims. (Cl. 18—8)



1. In apparatus for producing a synthetic elongated filar structure which includes means for drawing such structure while it is in longitudinal transporting motion, that improvement comprising

a transmitter element introducing mechanical longitudinal vibratory signals onto the moving structure,

a receiver element sensing said signals from said moving structure at a fixedly spaced distance therealong from said transmitter,

said transmitter and receiver elements each including a rotatable circular contact journaled about its center on the element and adapted to bear against said filar structure for rotative movement in the direction of the longitudinal vibratory signals on the structure and of longitudinal transporting movement of said structure,

means for comparing said transmitted and received signals, and

means varying the action of said means for drawing said structure, said means varying in response to differences between said compared transmitted and received signals,

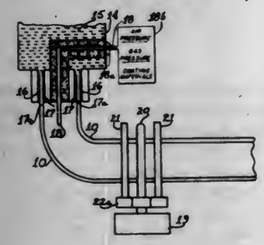
whereby said means for drawing the filar structure is governed by the signals on the moving structure between said transmitter and said receiver.

3,126,580
APPARATUS FOR CONTINUOUSLY DEFORMING THERMOPLASTIC FOILS
Heinrich Paschke, Dusseldorf, Germany, assignor to Firma Rheinmetall G.m.b.H., Dusseldorf, Germany
Filed July 25, 1961, Ser. No. 126,633
Claims priority, application Germany July 27, 1960
8 Claims. (Cl. 18—16)



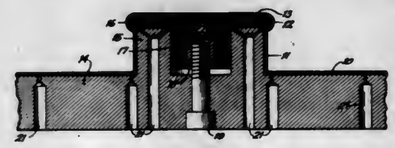
1. Apparatus for continuously deforming, backing and the like treatment of thermoplastic foils, comprising a rotating hollow cylinder adapted to be evacuated internally and perforated with openings at the periphery and having at least one interchangeable mould disposed thereon, a pair of spaced rolls over which the foil is guided to and from the mould, and an internally arranged seal sealing the openings in the hollow cylinder which are free from the mould approximately between the rolls at any given time from the inside, the seal consisting of an elastic inflatable body capable of changing its shape when inflated.

3,126,581
SECTIONAL SEALED-OFF INFLATED LINEAR TUBING AND EXTRUDING AND SEALING MEANS FOR MANUFACTURING PURPOSES
R. Lee Hollingsworth, Massapequa, N.Y.
(514 Hempstead Ave., West Hempstead, N.Y.)
Filed Jan. 18, 1961, Ser. No. 83,500
1 Claim. (Cl. 18—14)



An apparatus for extruding, cooling, inflating and sectionally sealing tubing which comprises a tank which contains the material to be used in a molten state, said tank having a circular portion extending downward from the bottom thereof, a circle unit disposed within said portion defining a circular die between the unit and the portion for extrusion of the material, a pipe one end of which is attached to a source which provides cooled air under pressure, the pipe extending through said molten material and downward through said die so that the opposite end extends into the interior of the extruded tubing, the portion of said pipe which passes through said molten material being insulated so that the cooled air and molten material have a minimal effect on one another, and heat sealing means which comprises a plate over which the extruded tubing to be heat-sealed passes, a heat source, a heater element longer in length than the diameter of the tubing attached to said heat source and extending over said plate, the longitudinal axis of said element being perpendicular to the longitudinal axis of the tubing, and holder units positioned on either side of said heater element and connected to said heater element at the end opposite that which contacts the tubing, said heater element and said holder units being attached to said heat source to provide unitary movement into and out of contact with said tubing at predetermined intervals.

3,126,582
VACUUM MOLDING APPARATUS
Lester Scott, Evansville, Ind., assignor to Kent Plastics Corporation, Evansville, Ind., a corporation of Indiana
Filed Sept. 25, 1961, Ser. No. 140,355
2 Claims. (Cl. 18—19)

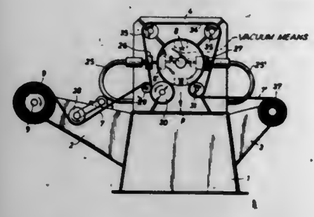


2. Vacuum molding apparatus comprising a male mold part terminating in a cylindrical outer end portion, a disc of resilient material overlying the outer end of the cylindrical portion and projecting beyond the periphery thereof, and means securing the central part only of the disc to the central part of the cylindrical portion while leaving the outer portions of the disc free to deflect away from the mold part, and the mold part and disc being formed with vacuum passages therein opening at the outer surfaces thereof to draw a sheet of plastic material closely therearound.

3,126,583
APPARATUS FOR THE MANUFACTURE OF CONTAINERS OBTAINED BY DEEP DRAWING FROM A THERMOPLASTIC SYNTHETIC SHEETING
Willi Häberle, Kalbsberg, Germany, assignor to Dahpe A.G., Lenzerheide, Switzerland
Filed Jan. 30, 1961, Ser. No. 85,647
Claims priority, application Germany Feb. 3, 1960
4 Claims. (Cl. 18—19)

1. An apparatus for manufacturing containers by deep drawing from a synthetic thermoplastic sheet, comprising a rotatable drum having a plurality of cavities in the periphery thereof having the shape of the containers to be formed and adapted to serve as dies for the formation of the containers, a drive connected to said drum and having a Geneva gear for intermittently driving said drum, means for feeding sheeting over the surface of said drum, draw completing vacuum means connected to said drum for forming a vacuum in at least one cavity in one position of said drum, a deep draw initiating piston

adjacent said drum at said one position and having a stroke only long enough such that the piston extends only part way into the cavity at said one position, said draw initiating piston initiating the deep draw and the



vacuum produced by said vacuum means completing the deep draw, and at least one punching tool adjacent said drum at a position 180° from said deep drawing piston for punching out the containers from the sheeting.

3,126,584
MACHINE FOR CONVERTING A TOW INTO A FIBROUS WEB
Lincoln E. Pearson, Worcester, Mass., assignor to Crompton & Knowles Corporation, Worcester, Mass., a corporation of Massachusetts
Original application Jan. 30, 1961, Ser. No. 85,593, now Patent No. 3,087,203, dated Apr. 30, 1963. Divided and this application Nov. 21, 1961, Ser. No. 153,999
1 Claim. (Cl. 19—155)



In a machine for converting tows of filaments to a fibrous web

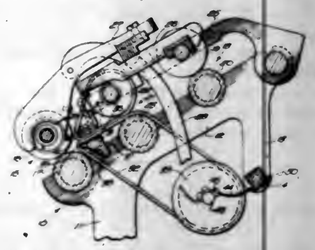
(*a*) two sets of blades to rotate about spaced parallel horizontal axes, one disposed diagonally below the other at a first operating station to act on opposite sides of a tow and flex the latter alternately first in one direction and then in the opposite direction,

(*b*) a third set of blades in spaced intersecting relationship with the lower one of said two sets of blades to rotate about a horizontal axis parallel to and disposed diagonally below the axis of said lower one of said two sets of blades at a second operating station at which said tow is broken into fibers, the third set of blades mounted on the same side of a vertical plane passing through the axis of the lower one of said two sets of blades as the other sets of blades cooperating therewith,

(*c*) means to feed a first tow to said first station to condition the tow for breakage, after which the tow passes to said second station where it is broken into fibers, and

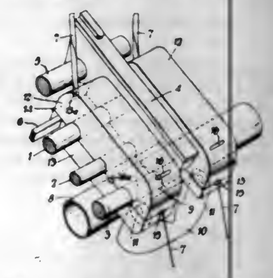
(*d*) means to feed a second tow to said second station to be broken into fibers to be blended with the fibers of the first tow operated upon at both stations.

3,126,585
APRON CONTROL MEANS FOR DRAWING APPARATUS
Warner H. Tabor and Albert Cavallaro, Bristol, R.I., assignors, by mesne assignments, to Dixie Machine & Tool Company, Greensboro, N.C., a corporation of North Carolina
Filed Dec. 31, 1959, Ser. No. 863,304
6 Claims. (Cl. 19—244)



1. In spinning, roving and like machines, a first set of upper and lower front rolls, a second set of upper and lower rolls back of the front rolls, an upper apron embracing the upper roll and a lower apron embracing the lower roll of the second set, an upper bar between the upper rolls of said sets about which said upper apron moves in a curved path, a fixed lower bar between the lower rolls of said sets embraced by said lower apron, said lower bar being provided with a nose projecting toward the lower roll of the first set and also projected upwardly with a rounded extremity over which said apron extends, said nose being so shaped as to project the path of travel of said apron close to said lower front roll and arcuately upwardly about the curved path of the upper apron at its forward extremity and means to tension said lower apron, said upper bar being positioned to depress the upper apron into the upwardly extending arc of the lower apron.

3,126,586
TEXTILE FIBRE ROLLER DRAFTING APPARATUS
Joseph Noguera, London, England, assignor to Casablancas High Draft Company Limited, Salford, England, a British company
Filed Sept. 28, 1961, Ser. No. 141,446
Claims priority, application Great Britain Oct. 10, 1960
11 Claims. (Cl. 19—263)



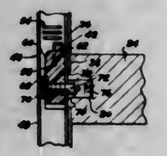
1. For use with a textile fibre roller drafting apparatus having a roller drafting mechanism, pneumatic means for cleaning said mechanism and collecting broken ends of fibre strands comprising a casing adapted to enclose the drafting mechanism and having a fibre strand inlet and a fibre strand outlet for the said mechanism, and suction means including a suction orifice opening into said casing, to draw-in broken ends of the fibre strands emerging from the drafting mechanism, said casing being operative to increase the suction effect while protecting the drafting mechanism from accumulations of dust and fly and being provided with at least one air inlet connected to said suction means and adapted to direct blasts of air, indrawn by the suction means, on to the enclosed drafting mechanism for cleaning the mechanism.

3,126,587
MEANS FOR WEIGHTING THE ROLLS OF A DRAFTING APPARATUS OR THE LIKE
Robert Rulon-Miller and Warner H. Tabor, Bristol, R.I., assignors, by mesne assignments, to Dixie Machine & Tool Company, Greensboro, N.C., a corporation of North Carolina
Filed Sept. 22, 1960, Ser. No. 57,852
2 Claims. (Cl. 19—274)



2. In a strand handling apparatus, a plurality of pairs of rolls between which the strand travels, a frame for supporting said rolls, an elastically resilient single piece bar, a bracket mounting one end of said bar on said frame, a saddle engaging said rolls, a stirrup engaging said saddle and engaging said bar at a point spaced from its mounting on said frame and adjacent its other end whereby flexing of the bar with its inherent tendency to return to normal applies pressure on said saddle, said bracket having a slot therein providing relatively movable portions connected by a hinge with one portion fixed to the frame and the other mounting said bar and means to relatively move said bracket portions to flex the bar comprising a screw threadedly connected to the bar mounting portion and held against axial movement in the portion fixed to the frame.

3,126,588
AUTOMATICALLY-LOCKING RESILIENTLY-BALANCED SASH GUIDE UNIT
Fred C. Osten, Sr., 14500 Abingdon Ave., Detroit, Mich.
Filed Dec. 4, 1961, Ser. No. 156,710
10 Claims. (Cl. 20—42)



1. An automatically-locking resiliently-balanced sash guide unit for tiltable sash windows, comprising

an elongated sash guide including a hollow sash balance housing portion with vertical walls,

one of said walls having an elongated aperture extending longitudinally therealong and defining flange-like elongated vertical wall portions disposed on opposite sides of said aperture,

a resilient sash-balancing member mounted within said housing portion and having one end anchored thereto,

a lock carrier slidably mounted in said housing portion and connected to the opposite end portion of said sash balancing member,

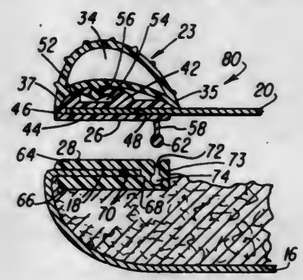
said lock carrier having an approximately horizontal threaded bore therein aligned with said aperture,

a threaded pivotal locking member threadedly engaging said bore in rotatable relationship therewith for motion axially relatively thereto and,

said locking member having a coupling portion projecting outwardly through said aperture and adapted to engage said sash for rotation thereby in response to tilting of said sash,

and contact means connected to said locking member for motion relatively to said lock carrier into and out of locking engagement with another of said walls in response to rotation of said locking member.

3,126,589
REFRIGERATOR GASKET AND THE LIKE
Angelo Monti, Chicago, Ill., assignor to Jarrow Products, Inc., Chicago, Ill.
Filed July 12, 1960, Ser. No. 42,422
14 Claims. (Cl. 20—69)

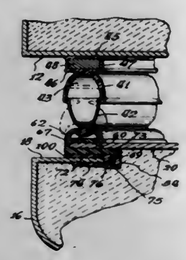


7. A gasket assembly adapted for attachment to a refrigerator door or the like wherein said door includes a shell portion having a reverse bent lip at the periphery thereof and a rigid pan portion adapted to be secured to said lip, said gasket assembly comprising, a soft compressible multilayer strip formation of rubber like material, said formation having a depending longitudinal flange integral therewith, an enlarged portion integral with said flange at the edge thereof, a first rigid member having an opening along one edge thereof and having a longitudinal channel formed therein for accommodating said flexible flange, the opening of said first rigid member engageable with said pan, a second rigid member having a second opening at the opposite side relative said first member and adapted to receive said reverse bent lip portion of the shell portion of said door, and means securing said first and second rigid members one to the other during engagement thereof with said door portions.

3,126,590
REFRIGERATOR GASKET
Angelo Monti, Chicago, Ill., assignor to Jarrow Products, Inc., Chicago, Ill., a corporation of Illinois
Filed Jan. 30, 1961, Ser. No. 85,719
10 Claims. (Cl. 20—69)

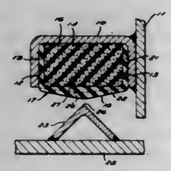
1. A gasket assembly for a refrigerator having a cabinet body and a door comprising, an assemblage of at least two elongate members, one being formed of rubber-like flexible material and serving as a gasket, the second being of relatively rigid material and serving as a gasket retainer, cooperating coupling means operatively associated with said members for removably securing one to

the other, said first member comprising a pair of superposed arcuate walls of differing radii of curvature having common edges, one of said walls being readily deformable and the other one of said walls having a hollow extension integral therewith along the length thereof and a magnet disposed within said extension, said coupling means comprising a depending tongue having an enlarged end formed integral with said one of said walls and a channel formed



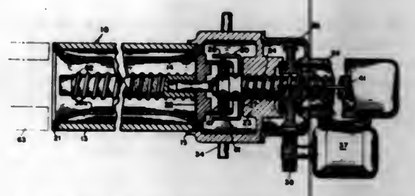
in the second member, said channel opening toward said depending tongue, the opening of the channel being restricted and the said enlarged end engageable within said channel through said restricted opening thereby coupling the gasket to the holder, the depth of the channel and the width of the opening being of sufficient size to permit limited transverse movement of said tongue within said channel, and means securing the second member to the refrigerator door.

3,126,591
HATCH COVER SEAL
Wallace Hamilton, Chagrin Falls, Ohio, assignor to Pneumo Dynamics Corporation, Cleveland, Ohio, a corporation of Delaware
Filed July 13, 1961, Ser. No. 123,734
4 Claims. (Cl. 20—69)



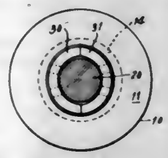
1. A sealing assembly for providing a fluid tight joint between two members comprising a channel having a lateral wall and oppositely disposed side wall portions extending in the same direction from one side of said lateral wall to define a confining space, a cellular compressible core disposed in said space, a shield element of substantially solid incompressible elastomer material having oppositely disposed leg portions extending into said space between said core and the side wall portions of the channel, and an outer lateral section extending between said leg portions and joined thereto, said outer lateral section of the shield element being disposed adjacent the outer edges of said side wall portions of the channel, a portion of said outer lateral section of the shield element having a length substantially greater than the distance between the inner surface of said side wall portions of the channel whereby flexing of said lateral section of the shield element toward said outer lateral wall of the channel causes the opposite ends of the outer lateral section of the shield element to bulge outwardly and overlap the outer edges of said side wall portions of the channel.

3,126,592
MACHINE FOR MAKING THREADED MOLDS
Russell W. Taccone, Erie, Pa., assignor to Taccone Corporation, Erie, Pa., a corporation of Pennsylvania
Filed May 23, 1960, Ser. No. 30,986
4 Claims. (Cl. 22—14)



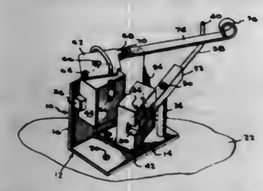
4. A machine for making molds comprising a hollow member open at one end, a tubular diaphragm disposed in said hollow member and having its ends attached to said hollow member to form an enclosure to receive a fluid between said diaphragm and said hollow member, a cylindrical pattern having a spiral groove in the outside surface thereof within said tubular diaphragm, said diaphragm being adapted to receive sand around said pattern, means to move said pattern with sand packed therearound into a flask, means to withdraw said pattern from said sand in said flask, and means to simultaneously rotate said pattern as it is being withdrawn from said sand and to the end of said hollow member remote from said first mentioned end whereby an internally threaded mold is produced.

3,126,593
STOPPER ROD ASSEMBLIES
Russell F. Leinhos, Valley Stream, N.Y., assignor to The Joseph Dixon Crucible Company, Jersey City, N.J., a corporation of New Jersey
Filed July 21, 1961, Ser. No. 125,772
1 Claim. (Cl. 22—85)



In a stopper rod assembly, a solid stopper having a flat upper surface, said stopper having a substantially cylindrical axial recess extending downwardly thereinto from said upper surface, said recess having an annular indentation adjacent the lower end of the recess, a stopper rod having a bottom flange seated in the bottom of the recess, a pair of semi-cylindrical locking sections having a maximum dimension less than the cross section of the stopper recess, said sections having laterally projecting portions arranged to extend into the annular indentation in the recess wall, said locking sections extending upwardly for only a portion of the depth of the recess and having spaced-apart tapering edges, and a pair of expansion sleeve members dimensioned to fit around the stopper rod and within the recess, said sections having flanges at their upper ends disposed above the flat upper surface of the stopper and being dimensioned to extend downwardly and to rest on the upper surface of the locking sections within the recess, said sleeve members having tapered projections extending downwardly between and engaging the tapering edges of the locking sections to spread the locking sections and thereby to extend the laterally projecting portions into the annular indentation in the recess wall of the stopper whereby said locking sections are locked to the stopper.

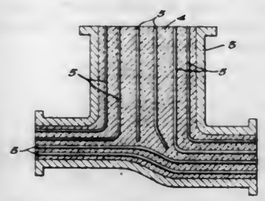
3,126,594
BULLET MOLD STAND
Benjamin James Galloway, Rte. 2, Baldwin Lake, Pleasant Hill, Mo.
Filed July 5, 1961, Ser. No. 122,004
2 Claims. (Cl. 22—90)



1. In combination with a pair of substantially rectangular mold-carrying heads each having normally juxtaposed complementing bullet-forming cavities formed therein and opening in adjacent ends thereof, said adjacent ends being disposed in a common plane, a substantially flat rectangular cut-off plate pivotally mounted on said end of one of said mold-carrying heads, said cut-off plate having that side thereof disposed adjacent said mold-carrying heads disposed coincident with respect to said common plane, said cut-off plate having a funnel opening extending transversely therethrough normally aligned with said opening into said cavities, said mold-carrying heads each having elongated recesses formed in the remotely-disposed sides thereof, and a bullet mold stand for said mold-carrying heads; said stand comprising an angle member having an elongated substantially rectangular base and an elongated substantially rectangular flange projecting laterally therefrom along a longitudinally-extending marginal edge thereof, said flange having a laterally-projecting rib extending from a side thereof and overhanging said base, said rib being adapted to be received within said recess formed in said one of said mold-carrying heads, means for securing said one of said mold-carrying heads to said rib, a standard mounted on said base and projecting laterally therefrom, a handle having one end thereof pivotally connected on said standard, said handle being disposed within said recess formed in the other of said mold-carrying heads, means releasably securing said last-named mold-carrying head with said handle, resilient means extending between and connected with one end of said flange and said handle intermediate the ends of the latter, said resilient means constantly biasing said handle for pivotal movement in the direction of said one of said mold-carrying heads, an elongated substantially L-shaped lever having an end of the leg portion thereof fixedly secured to said one end of said handle and the foot portion thereof projecting vertically upwardly, and an elongated lever having an end thereof fixedly secured to said cut-off plate and projecting in the path of movement of said foot portion, said last-named lever being operable to engage against said foot portion as said cut-off plate is pivoted to move said funnel away from said opening and to cause the other of said mold-carrying heads to pivot away from said one of said mold-carrying heads.

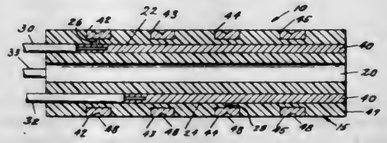
3,126,595
METHOD OF REINFORCING GREEN SAND CORES AND MOLDS WITH FOAM POLYMER COATED METAL ELEMENTS
John L. Dewey, Pleasant Hill, and Roy C. Simon, Walnut Creek, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Feb. 20, 1961, Ser. No. 90,532
6 Claims. (Cl. 22—194)

1. In a method for making sand cores for the casting and molding of molten metals wherein the green sand core contains reinforcing metal elements embedded therein to strengthen the core prior to curing the same, the improvement which comprises coating the reinforcing



metal with an adherent layer of from about 1 to 20 millimeters thick of a foamed organic polymer and embedding the foam coated reinforcing metal in the green sand core and thereafter curing said core.

3,126,596
CAST SLIP-RING ASSEMBLY
Jacob L. Rector, 27 Palisades Road, Linden, N.J.
Filed Mar. 2, 1960, Ser. No. 12,419
4 Claims. (Cl. 22—202)



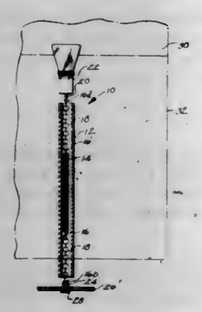
1. A method of forming a slip-ring assembly comprising the step of constructing a cylindrical insulating core having a plurality of longitudinally spaced concentric peripheral ring grooves, a plurality of longitudinal passages extending therethrough, one for each of said grooves, and a connecting passage between each of said grooves and its associated longitudinal passage; inserting a conductor into each of said longitudinal passages through first ends thereof: placing said core in a suitable mold for confining material introduced into said grooves; introducing molten conducting material into said longitudinal passages through second ends thereof in a quantity sufficient to occupy said connecting passages, said grooves and portions of said longitudinal passages not occupied by said conductors; cooling said molten conducting material until it solidifies.

3,126,597
METHOD OF CONTROLLING COOLING AND DECARBURIZATION IN CASTING OF STEEL IN SHELL MOLDS
Theodore Operhall, Whitehall, and Charles Yaker, North Muskegon, Mich., assignors to Howe Sound Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Apr. 7, 1961, Ser. No. 101,339
6 Claims. (Cl. 22—215)

1. In a metal casting process which includes the steps of building up stucco and dip coats of finely divided ceramic material onto the surface of a pattern which is disposable at elevated temperatures whereby the said pattern is enclosed within a shell of the ceramic material except for an opening for introduction of casting metal, and firing the assembly to dispose of the pattern and leave a corresponding cavity within the shell and to mature the ceramic materials in the shell, the improvement comprising pouring metal in a molten state through said opening into the cavity to produce a metal casting, surrounding the shell with a mass of solid particulate carbon containing material immediately after pouring of

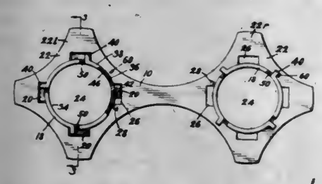
said metal to bring said material into contacting relationship with the outer surfaces of the shell to extract heat rapidly from the metal poured into the shell to chill the surface whereby the surface portions are not subjected to carburization while the poured metal is rapidly solidified to avoid grain growth and permitting the metal to solidify while so surrounded.

3,126,598
WALLET PROTECTOR
Michael Gottschalk, 1113 Monmouth Ave., Linden, N.J.
Filed July 29, 1963, Ser. No. 298,296
6 Claims. (Cl. 24—3)



1. A wallet protector comprising, in combination, an elongated metal tube, an elongated coil spring and a pair of chains carried by said tube providing a springing reaction to pulling of a wallet; a spring clip carried by said tube providing gripping means for securing said wallet protector to one of the pockets of a folded wallet, and rubber disc of circular configuration carried by said tube providing frictional resistance within a garment pocket.

3,126,599
CLAMP-TYPE RIMMED CAN HOLDER
Theron M. Holland, 390 Colorado Blvd., Denver, Colo.
Filed Apr. 3, 1963, Ser. No. 270,406
17 Claims. (Cl. 24—81)



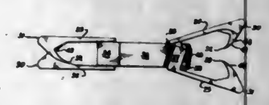
1. A device for releasably fastening two or more rimmed cans together in assembled relation comprising: a rigid frame having the underside thereof provided with at least two arcuate non-intersecting rim-receiving grooves, said frame also including an opening located between the grooves shaped to receive a rotatable latch element; a latch element mounted within the opening in the frame for rotational movement relative thereto between a released and locked position, said latch element having locking tabs projecting from the lower edge thereof positioned to simultaneously move across each groove in the frame and lock in underneath the chimes of cans retained therein upon rotation of said latch into locked position, and said latch element also including supporting tabs projecting from the upper edge thereof in position to overlie the frame when said latch is rotated toward its locked position, said supporting tabs cooperating with the locking tabs to carry the weight of the cans suspended from the underside of the frame; and, fracturable connectors integrally fastening the frame and latch element together in released position to form a one-piece unit, said connectors forming means whereby the frame can be mounted atop the cans before the latch element is separated therefrom by fracturing said connectors preparatory to rotation of said latch into locked position.

3,126,600
FASTENER
John M. De Marre, 7940 Seward Park Ave., Seattle, Wash.
Filed June 5, 1961, Ser. No. 114,859
1 Claim. (Cl. 24—87)



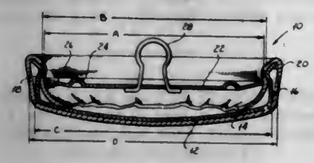
A fastener for piercing and holding together materials, comprising an elongated, expandable, resilient connector having at each end a formed resilient distortable receiving structure, and paired arms, each having a piercing hook at the outer end, said hooks adapted to overlap when the fastener is not in use, each of said arms having a lug at its inner end tightly imbedded in said receiving structure, the lugs of each pair of arms being pivoted to each other centrally of the said receiving structure, whereby when the hooks of each pair are separated the resilient receiving structure is distorted and when the elongated resilient connector is stretched and the hooks at each end thereof are secured to material, both a resistive distortive force of the distortable receiving structure and a tensile force of the stretched resilient connector combine to maintain the hooks in a holding position.

3,126,601
FASTENER
John M. De Marre, 7940 Seward Park S., Seattle, Wash.
Filed Aug. 19, 1963, Ser. No. 302,895
11 Claims. (Cl. 24—87)



1. A fastener for piercing and holding together materials, comprising an elongated, expandable, resilient connector having at each end a formed resilient distortable receiving structure, and paired arms, each having a piercing hook at the outer end, said hooks adapted to overlap when the fastener is not in use, each of the paired arms having a hinge-like hook offset leg with a bent over tab at its inner end complementarily fitting in the receiving structure, the tabs of the hinge-like hook offset legs of each pair of arms being confined to each other centrally of the receiving structure, whereby when the hooks of each pair are separated the resilient receiving structure is distorted and when the elongated resilient connector is stretched and the hooks at each end thereof are secured to material, both a resistive distortive force of the distortable receiving structure and a tensile force of the stretched resilient connector combine to maintain the hooks in a holding position.

3,126,602
FABRIC COVERED BUTTON CONSTRUCTION
Michael F. Adinolfi, Brooklyn, and Irving Budd, Lawrence, Long Island, N.Y., assignors to Empire State Metal Products, Inc., New York, N.Y., a corporation of New York
Filed Mar. 16, 1962, Ser. No. 180,103
2 Claims. (Cl. 24—113)



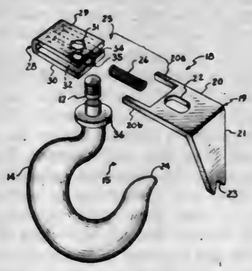
1. A button assembly for holding a piece of facing including in combination a generally circular shell having a facing supporting surface and a peripheral wall, said facing adapted to be extended over said surface with the edge of said facing folded over the wall and within the shell, a clamping disk adapted to be inserted within said shell, means on said wall for retaining said disk within said shell to clamp the facing between the disk and the wall and a peripheral flange forming a mouth on said wall extending outwardly from said wall, said mouth having a diameter greater than said disk and greater than said retaining means to facilitate entry of said disk into said shell, said mouth having a diameter greater than the diameter of said wall, said retaining means holding a portion of said facing in engagement with the inner surface of said flange more securely to hold said facing on said shell.

3,126,603
SELF-LOCKING KEY RING HOOK
Victor E. Cedarstaff, P.O. Box 81, Ames St. Station, Omaha, Nebr.
Continuation of application Ser. No. 489,341, Feb. 21, 1955. This application Oct. 2, 1958, Ser. No. 765,271
2 Claims. (Cl. 24—241)



1. In a key ring hook, the combination which comprises an elongated main body portion having a forward end with a belt loop receiving eye extended transversely therethrough and having a point formation on the upper surface, the main body portion having a depending shank, said shank having a cavity extending inwardly from one side, the lower part of the main body portion on one side of the eye thereof being separated from the main body portion and forming an outwardly-opening latch and having a tongue extended into the cavity of the shank, a pin extended through said shank and tongue and pivotally mounting said latch, said latch pivot pin being a substantial distance behind the end of the latch when the latch is in a closed position to cause the outer end of the latch to be farther away from the longitudinal center line of the said elongated main body portion than the terminal end of the main body portion to cause the outer end of the latch to project outwardly when in open position far enough to assist in catching a belt loop when the said forward end is passed under a belt loop, the lower end of the latch being concave and having inner and outer shoulders at each end and a projection substantially midway between the shoulders at the ends, a trigger positioned in the lower part of the cavity of the shank, and a pin extended through the shank and trigger pivotally mounting the trigger in the shank, the pin pivotally mounting the trigger in the shank being positioned whereby a projection on the upper end of the trigger alternately engages the shoulder at the inner end of the latch for holding the latch in an open position for catching a belt loop as the pointed end is passed under the belt loop, and engages the shoulder on the outer end of the latch for retaining the latch in a closed position to prevent accidental separation of the hook from a belt or belt loop or the like, said shoulders being shaped for retaining said projection on the upper end of said trigger from outward movement past said outer shoulder and inward movement past said inner shoulder, and a spring positioned in said cavity and urging said trigger outwardly, the trigger having a protruding portion projecting beyond the adjacent surfaces of said shank so as to be engageable by the operator's thumb whereby it is readily accessible, and those portions of said shank which form walls of said cavity closely fitting adjacent portions of said trigger so as to make possible a hook of compact width in the shank portion for closely fitting against the body of the user, the lower end of the shank having an eye extending therethrough for holding a key ring, said key ring eye having walls extending generally normal to the walls of the belt loop receiving eye to hold a key ring in a plane generally parallel to the adjacent portion of the body of the user for compact appearance at times when the hook is disposed on a belt loop, that portion of said shank which is disposed adjacent said key ring eye being of a thickness, when seen looking at it in a direction generally through said key ring eye, not substantially greater than the thickness of the same lower portion of said shank as seen looking at it in a direction generally normal to the wall of said key ring eye so that the lower end of said shank is compact for lying close to the wearer's body.

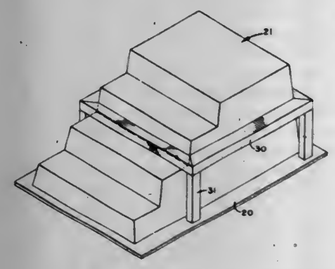
3,126,604
HOOK WITH SAFETY LOCK
Ralph E. Smith, Spring Lake, Mich., assignor to Manning, Maxwell & Moore, Incorporated, Muskegon, Mich., a corporation of New Jersey
Filed Sept. 21, 1962, Ser. No. 225,226
4 Claims. (Cl. 24—241)



1. In a load engaging hook construction the combination comprising a shank having a cylindrical portion, a curved bill rigid with said shank for defining a hook throat and having a bill tip, a U-shaped retainer including parallel walls having alined apertures for reception of the shank, a generally L-shaped latch having a first

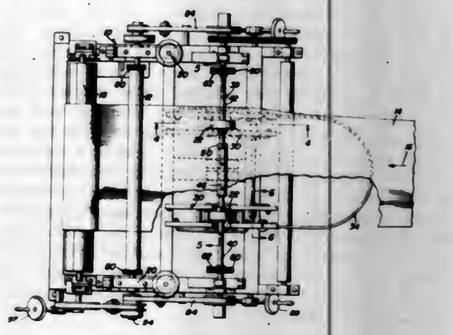
flat leg which is snugly received between the walls of the retainer for in and out sliding movement with respect thereto and having a second flat leg terminating in a bifurcated tip, biasing means interposed between the retainer and the latch for forcing the latter outwardly with respect to the retainer so that the tip of the bill is normally engaged by the bifurcated tip on the second leg of the latch, the second leg of the latch being sufficiently elongated and arranged at such an obtuse angle with respect to the first leg so that any attempt to wedge a cable or the like between the bifurcated tip and the tip of the bill free of intentional inward force alined with the direction of latch movement results in binding between the first leg of the latch and the retainer.

3,126,605
MOLD FOR CASTING A CONCRETE STEP UNIT
Louis H. Davis, Columbus, Ohio, assignor to Concrete Steps, Inc., Columbus, Ohio, a corporation of Ohio
Filed Nov. 10, 1961, Ser. No. 151,505
1 Claim. (Cl. 25—118)



A mold for casting a concrete step unit comprising an inner core including upstanding back and side walls, a substantially horizontally disposed rectangular top wall and a plurality of relatively adjoining tread and riser-forming surfaces stepped downwardly from one end of said top wall, the tread-forming surfaces of said core being substantially horizontally disposed and being separated from one another by an adjoining, relatively upstanding riser-forming surface, each of the riser-forming surfaces of said core being arranged in obtuse angular relation to the tread-forming surfaces of said core; a generally rectangular, horizontally disposed bottom wall member carried by and extending laterally outwardly beyond the lower marginal edges of said core; a pair of opposed, relatively parallel, upstanding outer side wall members carried by said bottom wall member in outwardly spaced relation to the side walls of said core; an upstanding outer back wall member detachably connected with said outer side wall members and extending upwardly from said bottom wall member in outwardly spaced relation to the back wall of said core, said outer side wall members and said outer back wall member having upper edge portions extending a distance above the top wall of said core and said outer side wall members being formed with forward stepped edges disposed generally forwardly and above the riser and tread-forming surfaces of said core; a plurality of outer tread plates detachably secured to and extending between the stepped edges of said outer side wall members and disposed in upwardly spaced parallel relation to the tread-forming surfaces of said core; a plurality of outer riser plates detachably secured to and extending between said outer side wall members and disposed in forwardly spaced, acutely angular relation to the riser-forming surfaces of said core, said outer side wall members, said outer back wall member, said bottom wall member and said outer tread and riser plates defining with said core an integral step and platform molding cavity having a substantially enclosed, downwardly stepped tread and riser section opening adjacent the top wall of said core only; and a generally rectangular, horizontally disposed cavity-dividing frame removably positioned in said molding cavity in encircling relation to said core and at a position substantially below the level of the top wall of said core, said frame closing said molding cavity at a horizontal level substantially above said bottom wall member.

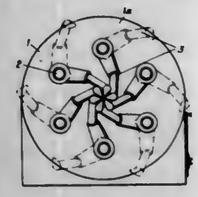
3,126,606
FEEDER FOR TUBULAR KNIT FABRICS
Edward S. Beard, Box 22, Spring City, Pa.
Filed Sept. 22, 1961, Ser. No. 140,023
6 Claims. (Cl. 26—55)



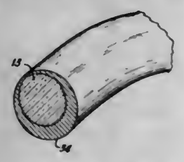
1. A feeder assembly for tubular knit fabric feeders comprising a feeder support frame having a longitudinal axis, a plurality of drive feed rollers rotatably mounted on said frame, said feed rollers being disposed in cooperating pairs of upper and lower rollers positioned for gripping and imparting longitudinal travel to a tubular knit fabric passing longitudinally of said frame and between the rollers of each pair, said pairs being spaced transversely of said frame and with two marginal pairs of rollers adapted to each engage and longitudinally tension the top and bottom surfaces of a marginal side of a tubular knit fabric passing therebetween, driving means connected to each marginal pair of rollers for adjustably varying the longitudinal tension imparted by the marginal pairs of rollers to the opposite marginal sides of a tubular knit fabric, said feeder assembly including a pair of upper and lower power driven presser rolls disposed for pressingly engaging a tubular knit fabric passing therebetween, said driving means comprising independent driving connections between said presser rolls and each of said marginal pair of rollers, one of said independent driving connections including a speed varying means.

3,126,607
DEVICE FOR OPENING YARN HANKS
Rudolf Jenny, Thalwil, Switzerland, assignor to Maschinenfabrik Schweiter AG, Horgen, Switzerland, a corporation of Switzerland
Filed Apr. 27, 1962, Ser. No. 190,600
Claims priority, application Switzerland May 3, 1961
11 Claims. (Cl. 28—58)

1. A hank-opening device comprising a number of support members adapted to be moved from a closed position in which they conjointly form a guide to receive a yarn hank into an open position in which said support members expand the hank into position for receiving a carrying reel, drive means operatively connected with said support members for moving the latter individually between their opened and closed positions, said drive means including coupling means for each support member including yielding means disposed to yield in the closing direction to obstruction to closure of said support members.

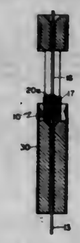


3,126,608
PERMANENTLY CURLED METAL COATED GLASS FIBERS AND METHOD OF COATING THE SAME
Harry B. Whitehurst, Tempe, Ariz., assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Filed Apr. 3, 1961, Ser. No. 100,407
6 Claims. (Cl. 28—75)



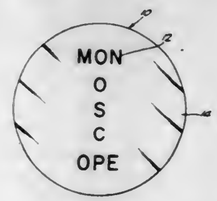
2. The method of producing a curly, permanently coated fiber which comprises applying a coating material in liquid form over the length of a glass fiber and to its periphery in a non-uniform manner so that the coating is thicker on one side than on the opposite, the thickness being sufficient to prevent deformation of said material during transformation thereof from its state at its point of adhesion to a solid state at ambient temperature, said material contracting more than the glass from the state of the material at its point of adhesion to a solid state at ambient temperature, and subsequently transforming the material from its state at its point of adhesion to a solid state at room temperature, whereby said material contracts more than said fiber and causes the fiber to curl in the direction in which the material is thicker.

3,126,609
METHOD OF FABRICATING ELECTRONIC COMPONENTS
William C. Woods, Lynn, Mass., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed Sept. 7, 1960, Ser. No. 54,489
4 Claims. (Cl. 29—25.3)



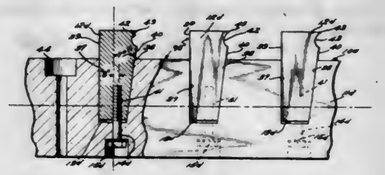
1. The method of assembling an axial lead electrical component including a subassembly comprising the active elements of the component and a first lead attached to the active elements, the active elements including an electrode; a second lead for contacting the electrode of the active elements; a shell open at one end and having a wall at the opposite end with an opening therethrough; and a preform of an uncured plastic material having an axial bore therethrough; said method including the steps of positioning the shell in a holder adapted to receive the shell with the one open end of the shell upward and the wall downward, positioning the preform in the shell with the preform supported by said wall, positioning the subassembly on the preform with the first lead extending downward through the bore in the preform and the opening in the wall of the shell and with the active elements supported by the preform, positioning the second lead in axial alignment with the first lead with the lowermost end thereof in contact with and supported by the electrode of the active elements, applying heat in the region of contact of the second lead and the electrode to fuse the lead to the electrode, melting the preform to permit the active elements to be advanced into the shell and to be embedded in the material of the preform, and subsequently curing the material of the preform.

3,126,610
METHOD OF MAKING A MONOSCOPE TUBE TARGET
Louis J. Kabell and Earle D. Jones, Palo Alto, Calif., assignors to A. B. Dick Company
Filed May 6, 1960, Ser. No. 27,334
2 Claims. (Cl. 29—25.17)



1. The method of making a monoscope tube target comprising evaporating a thin layer of metallic aluminum onto an insulating substrate, printing with ink a predetermined pattern on said aluminum layer, evaporating the volatile materials in said ink, and exposing said aluminum layer to the atmosphere to be oxidized.

3,126,611
BROACH INSERT WITH REMOVABLE TEETH
James P. Wiles, Cleveland, Ohio, assignor to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Sept. 25, 1961, Ser. No. 140,481
2 Claims. (Cl. 29—95.1)



1. A broach insert structure comprising,
an elongated broach insert body extending on a longitudinal axis and having a pair of flat parallel longitudinal extending faces,

a plurality of transverse recesses formed in said body opening toward one longitudinal face of the body, each of said recesses having a transverse side extending substantially perpendicularly to said axis of the body and an opposite side extending inwardly and downwardly to form a wedge surface,

a plurality of teeth formed complementarily to the recesses and each having a side adapted to abut the perpendicularly extending side of a recess and a side opposite thereto inclined complementarily to the wedge surface of the recess, and

bolt means threadedly securing each of the teeth in said recesses from a face of the body insert opposite the first mentioned face to cause the inclined surfaces of the teeth to wedge against the wedge surfaces of the recess,

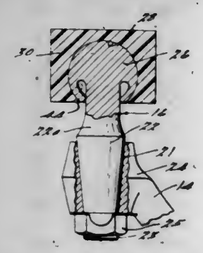
said bolt means extending into the teeth in offset relation to a line midway between the transverse sides of the recesses at the bottom of the recesses and in the direction of said wedge surfaces.

3,126,612

METHOD OF MAKING A BALL HEAD BEARING

Robert E. Poirier, Ferndale, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

Filed Mar. 3, 1961, Ser. No. 93,118
5 Claims. (Cl. 29—149.5)



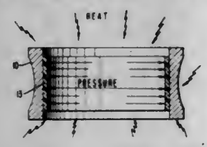
1. In the process of fabricating a ball head on the end of a shaft, the steps of providing a shaft of malleable material, mushrooming one end of said shaft to effect an integral spherical dome having a flared annular base extending radially from said shaft to an annular edge, and deforming said base around said shaft and lengthwise thereof in the direction from said one end toward the opposite end of said shaft to effect a spherical continuation of said dome with the material adjacent said annular edge in close proximity to said shaft.

3,126,613

METHOD OF MAKING SELF-ALIGNING BEARINGS

Leonard A. Litsky, New Britain, Conn., assignor to The Fafnir Bearing Company, New Britain, Conn., a corporation of Connecticut

Filed Mar. 15, 1961, Ser. No. 96,006
8 Claims. (Cl. 29—149.5)



1. A method of producing an antifriction bearing having an outer ring and an antifriction liner bonded therein, comprising the steps of placing the antifriction liner within the outer ring, bonding the assembled ring and liner to each other under conditions of heat and pressure, assembling an inner ring within said liner and outer ring, deforming said outer ring and liner into radially stressed engagement with said inner ring, whereby excessive torque is required for relative rotation of the inner ring and of the lined outer ring with respect to each other, said liner and said inner ring being of different materials at least one of which will undergo plastic deformation in the presence of sufficient heat and pressure, and heating the assembled bearing to a predetermined temperature for a predetermined length of time to relieve said stress and thereby obtain a preselected degree of looseness.

3,126,614

METHOD OF BEARING ALIGNMENT

Frank J. Gross, York, Pa., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Filed Aug. 29, 1961, Ser. No. 134,756
2 Claims. (Cl. 29—149.5)



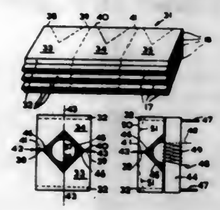
1. A method of pivotally connecting a gate structure having a multiple of spaced gate supporting flanges to support members by means of pivot pins and bearing pads comprising: rigidly connecting said support members to a gate support at spaced intervals equal to the spacing of said flanges so as to accurately align pin receiving orifices in each support member; providing roughly aligned through holes in said flanges, said through holes having a diameter larger than the diameter of said pins; positioning said gate so that each through hole is in rough alignment with and adjacent a support member orifice; positioning a bearing pad having a pin receiving opening therethrough adjacent to each of said flanges in rough alignment with said through holes; inserting a pivot pin through each of said support member orifices and the associated bearing pad opening to thereby align said bearing pad openings with said support member orifices; and rigidly connecting said bearing pads to said flanges when said pins are in place.

3,126,615

METHOD OF MANUFACTURING MULTIPLE MAGNETIC HEADS

Simon Duinker, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed July 29, 1958, Ser. No. 751,666
Claims priority, application Netherlands Aug. 28, 1957
9 Claims. (Cl. 29—155.5)



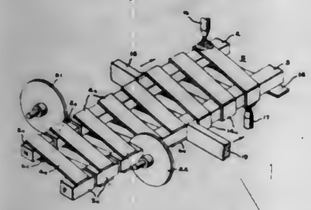
1. A method of manufacturing a multiple magnetic head for recording, reproducing or erasing signals in a plurality of parallel tracks, each head including a gap portion and a closure piece, comprising the steps of adhering to each other in the form of a block a solid plurality of magnetic strips of magnetic material and a plurality of spacing strips of non-magnetic material by applying an adhesive layer between every two strips and compressing said strips against each other, each pair of magnetic strips being separated from each other by a spacing strip, sawing the resultant block into pieces having a desired gap portion form and at least one gap surface, forming a gap by placing two of said pieces adjacent each other with a gap-filling material interposed between two gap surfaces, and attaching to each pair of said pieces comprising a gap a closure piece composed of alternate layers of magnetic and non-magnetic material the magnetic and non-magnetic layers of each closure piece being aligned with the magnetic and non-magnetic strips, respectively, of the associated gap portion pieces.

3,126,616

METHOD OF MANUFACTURING A THERMOELECTRIC ASSEMBLY

Joseph A. Pietsch, Louisville, Ky., assignor to General Electric Company, a corporation of New York

Filed Oct. 12, 1961, Ser. No. 144,695
1 Claim. (Cl. 29—155.5)



In a method of making a thermoelectric assembly for a heating and cooling device utilizing the Peltier effect, the steps comprising providing a longitudinal thermoelectric bar of P-type semi-conductor material, providing a longitudinal thermoelectric bar of N-type semi-conductor material, placing said bars in substantially parallel alignment with a short space therebetween, helically wrapping a strip of electrically and thermally conductive material around said thermoelectric bars leaving a short gap between adjacent wraps of said strip of material, soldering said strip to opposite sides of each of said bars, removing the portion of each wrap of said strip deformed about the outwardly disposed sides of said bars, severing said bars along said gaps between adjacent wraps of conductive material to form two rows of relatively short thermoelectric elements each having connected to opposite sides thereof a segment of said conductor strip extending across said space between said elements thereby to form a series connected thermal assembly of alternately connected thermoelectric elements having cold junctions arranged on one side of said assembly and having hot junctions arranged on the other side of said assembly.

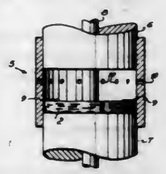
3,126,617

METHOD OF PRODUCING PERMANENT MAGNETS

Walter S. Blume, Cincinnati, Ohio, assignor to Leyman Corporation, Cincinnati, Ohio, a corporation of Ohio

Filed July 27, 1961, Ser. No. 127,254
7 Claims. (Cl. 29—155.6)

1. The method of making a permanent magnet which comprises, disposing a sintered aligned fine particle magnet in a die, said die being slightly larger in size than said sintered magnet, subjecting the magnet in said die to crushing force whereby said sintered magnet is crushed into small bits much smaller than the original magnet but larger than domain size, said magnet after crushing occupying a volume slightly larger than its volume prior to crushing and corresponding to the available volume of the die and conforming in overall shape to the shape of said die, holding said bits immobile in said die to preserve alignment of said particles while introducing a hardenable



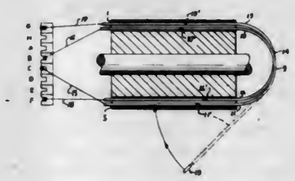
liquid binder into the voids between said bits in said die, and hardening said binder whereby said binder coheres said bits into a solid durable body having the dimensions of said die.

3,126,618

METHOD OF MANUFACTURING ARMATURES

Robert F. Sharrow, Erie, and Burdean D. Gubi, North East, Pa., assignors to General Electric Company, a corporation of New York

Filed Oct. 13, 1959, Ser. No. 846,096
3 Claims. (Cl. 29—155.53)



1. A method of random winding coils in the longitudinally extending slots of a dynamoelectric machine armature so that the coil leads required to be connected to the bottom of the risers of the armature commutator extend from the lower portion of the armature slots and the coil leads required to be connected to the top of the commutator risers extend from the top of the armature slots which method comprises:

(*a*) providing an electrical conductor adapted for random winding about an armature core adapted to have a commutator mounted on one end;

(*b*) placing a portion of said conductor in a first armature slot and winding said conductor longitudinally about said armature core in a first slot and a first complementary slot to form a first random wound coil lying in the lower portion of said first and complementary armature slots and having coil leads extending therefrom toward the commutator end of said armature;

(*c*) repeating the foregoing procedure with an electrical conductor in each pair of complementary slots until all armature slots have a similar coil side lying in the lower portion thereof;

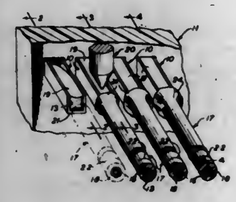
(*d*) removing from the first complementary slot only the coil half-turn whose end provides the coil lead extending therefrom;

(*e*) winding a second conductor in the first complementary slot and said first armature slot on top of the conductors making up the coil sides already lying therein to form a second random wound coil having coil leads extending toward the commutator end of said armature core from the lower portion of said complementary slot and the top of said first armature slot;

(*f*) replacing the removed coil half-turn on top of the coil side lying in the upper portion of said complementary slot so that the end thereof which provides the coil lead for the coil side in the lower portion of such slot extends from the top of said complementary slot toward the commutator end of said armature core;

(*g*) repeating the last-mentioned winding procedure recited in steps *d*, *e* and *f* for each remaining pair of complementary slots until each armature core slot has two coil sides lying therein.

3,126,619
METHODS OF MAKING IMPROVED SOLDERED CONNECTIONS
Herbert E. Brent, Baltimore, Md., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 1, 1960, Ser. No. 19,351
6 Claims. (Cl. 29—155.55)



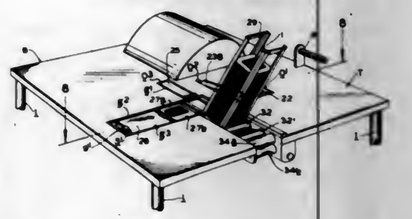
1. The method of soldering an end portion of a thermoplastic insulated conductor to a metal terminal, which comprises the steps of placing metal solder on the surface of a terminal onto which an end portion of a thermoplastic insulated conductor is to be soldered, heating the solder and the terminal to at least the eutectic temperature of the solder, and causing relative axial sliding movement of the insulated conductor with respect to the terminal while simultaneously holding the end of the thermoplastic insulation against an edge of the terminal and holding the conductor against the surface of the terminal onto which the solder was placed so that heat from the solder and terminal softens the thermoplastic insulation and the relative sliding movement between the conductor and the terminal results in forces which urge the end of the thermoplastic insulation on the conductor to recede from the end of the conductor to expose the surface of the end portion of the conductor as the exposed end portion of the conductor is inserted into the solder to form a soldered connection between the end portion of the conductor and the terminal, whereby an enlarged, compressed, radially projecting, annular insulating barrier is formed in the end portion of the insulation.

3,126,620
METHOD OF FORMING WOUND MAGNETIC CORES
Bernard G. Kubisiak, Pittsburgh, Pa., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Feb. 4, 1960, Ser. No. 6,702
2 Claims. (Cl. 29—155.57)

1. In a method for making an electrical induction apparatus having a noncircular wound core linked with an electrical winding the steps comprising: providing transverse ridges in the surface of a strip of magnetic sheet material across the entire width of the strip, forming said strip into a coil whereby said ridges are dispersed throughout said coil, substantially flattening said ridges and thus uniformly lengthening said strip to provide spacing between layers of said coil through the sole application of a force limited to compressing the layers together, annealing said coil, cutting said core into a plurality of segments, and reassembling said coil about a leg of said electrical winding.



3,126,621
MEANS FOR FRAMING FILM-TRANSPARENCIES
Peter Thieme and Werner Schwarz, both of Paderborn, Germany, assignors to Colorclip Photo oHG. Thieme u. Co., Paderborn, Germany, a corporation of Germany
Filed May 10, 1961, Ser. No. 109,056
14 Claims. (Cl. 29—211)

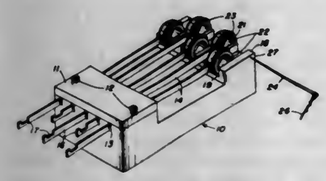


1. A machine for framing film-transparencies in a two-part frame having a main frame provided with a pocket and a retainer-member adapted to fit within the pocket and interlock with the main frame whereby to hold the film-transparency in the pocket; said machine comprising a first magazine for holding a supply of retainer-members, a second magazine for holding a supply of main frames, means for holding a supply of film-transparencies, means for feeding a retainer-member from the first magazine, means for placing a single film-transparency upon the retainer-member, means for feeding the retainer-member and film-transparency as a unit along a predetermined path, means for removing a main frame from the second magazine in overlying relation upon the retainer-member and film-transparency, assembling means including a pair of juxtaposed rollers operatively mounted in relation to each other for gripping an overlying retainer-member and main frame and transporting them as a unit along said predetermined path, said rollers respectively having interfitting surface shapes adapted to produce flexure of the retainer-member and main frame as they are transported along said path while at the same maintaining them in said overlying position and thereby interlocking the retainer-member with the main frame, and a base-forming means for supporting all of the aforementioned means in cooperative relationship.

3,126,622
WIRING TECHNIQUES FOR CORES
James C. Hathaway, Corona del Mar, Calif., assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Apr. 16, 1962, Ser. No. 187,546
1 Claim. (Cl. 29—241)

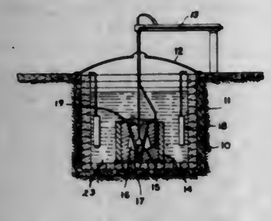
A winding jig comprising a body portion formed with a pair of upwardly-extending portions, a plurality of core supporting arms extending through the first of said upwardly-extending portions and slidably movable relative thereto, slots formed through the first upwardly extending

portion and receiving the arms therethrough for such slidable movement, a plurality of grooves formed in the other upwardly-extending portion, core engaging means at the



end of each arm adapted to receive cores therein slidably engaging its associated groove whereby the cores may be moved relative to the grooves formed in the second upwardly-extending portion.

3,126,623
PROCESS AND MEANS FOR HOT METAL FORMING
Gerald L. Merrill, Detroit, Mich., assignor to Smith-Morris Corporation, Ferndale, Mich., a corporation of Michigan
Filed Aug. 21, 1961, Ser. No. 132,916
4 Claims. (Cl. 29—421)



1. A method of forming metal comprising

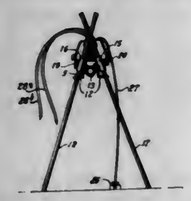
(*a*) providing a receptacle for retaining a fluid bath,

(*b*) heating said fluid bath to a temperature higher than ambient temperature,

(*c*) submerging a forming die, a metal forming blank and an explosive charge in said heated fluid bath, and

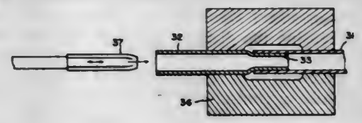
(*d*) detonating said explosive charge to form said metal blank in said die.

3,126,624
METHOD OF APPLYING PIPE PROTECTORS
Monroe Mirsky, Houston, and John W. Tinning, Dallas, Tex., assignors, by mesne assignments, to Dresser Industries, Inc., Dallas County, Tex., a corporation of Delaware
Filed Jan. 3, 1961, Ser. No. 80,343
3 Claims. (Cl. 29—450)



1. A method of placing protector sleeves on two sections of upset tubing each having a bell end and a pin end comprising the steps of: Coupling the bell end of one tubing section to the pin end of the other tubing section pulling an elastic protector sleeve over the pin end of said one tubing section until the elastic sleeve covers said one tubing section; cutting off the elastic sleeve adjacent the said pin end, allowing it to retract away from the pin end; uncoupling the bell end of said one tubing section from the pin end of the other tubing section; coupling the pin end of said one tubing section to the bell end of said other tubing section; pulling an elastic sleeve over the pin end of the other tubing section until it overlaps the coupling between the two sections and the end of the first named elastic sleeve; and cutting off the end of the second named elastic sleeve adjacent the coupling so that the ends of the respective elastic sleeves are in overlapping relationship adjacent the joint between the tubing sections.

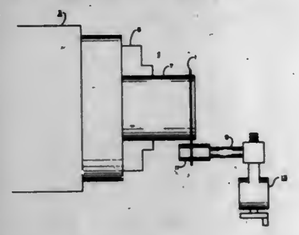
3,126,625
METHOD OF JOINING AND BONDING TOGETHER SIMILAR OR DISSIMILAR METALS
David D. Laing, Detroit, Mich., assignor to Calumet & Hecla, Inc., Allen Park, Mich., a corporation of Michigan
Filed May 15, 1961, Ser. No. 110,225
5 Claims. (Cl. 29—470.3)



1. The method of forming a weld joint between two metal tubes which comprises inserting an end portion of one tube within an end portion of the other tube to provide an overlapped weld zone thereof, supporting both of said tubes against rotation at points adjacent but spaced longitudinally from said weld zone to provide an inner exposed surface of the inner tube and an outer exposed surface of the outer tube within said weld zone, rotating a tube expanding tool within the inner tube portion in said weld zone to provide radially outward pressure to expand the portion of the inner tube radially outward to establish welding pressure between the inner surface of the outer tube and the outer surface of the inner tube, controlling the rate and duration of the rotation of said tool to bring the engaged tube surfaces within the weld zone by friction to welding temperature at the applied pressure, and maintaining the outer surface of the outer tube portion within the weld zone free and unsupported until the weld is established.

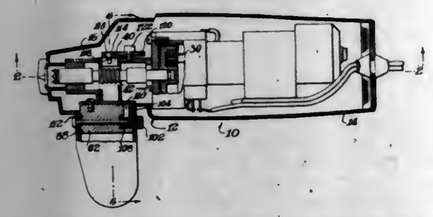
4. The method of forming a weld joint between two metal tubes which comprises inserting an end portion of one tube within an end portion of the other tube to provide an overlapped weld zone thereof, supporting both of said tubes against rotation at points adjacent but spaced longitudinally from said weld zone to provide an inner exposed surface of the inner tube and an outer exposed surface of the outer tube within said weld zone, rotating a tube reducing tool having a tube reducing surface engaging the outer surface of the outer tube portion in the weld zone to provide radial inward pressure to reduce the outer tube end portion in the weld zone to establish welding pressure between the inner surface of the outer tube and the outer surface of the inner tube, controlling the rate and duration of the rotation of said tool to bring the engaged tube surfaces within the weld zone by friction to welding temperature at the applied pressure, and maintaining the inner surface of the inner tube portion within the weld zone free and unsupported until the weld is established.

3,126,626
METHOD OF MANUFACTURING A DRIVE BELT
John P. Woods and Henry R. Barta, Dallas, Tex., assignors to The Atlantic Refining Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Oct. 21, 1958, Ser. No. 768,673
5 Claims. (Cl. 29—531)



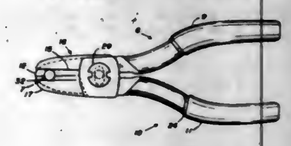
1. A method of manufacturing a thin, continuous metallic belt comprising
(*a*) forming an annular, substantially washer-shaped blank from a thin, flat sheet of metal, said blank having an outside circumference not greater than the predetermined finished length of said blank,
(*b*) rotating said blank over at least two members of generally circular cross sections, at least one of which is driven, and
(*c*) increasing the distance between said two circular members thereby stretching the inner circumference of said blank by an amount at least sufficient to make the inner circumference of said blank substantially equal to the outside circumference thereof.

3,126,627
MULTI-USE PORTABLE APPLIANCE
Lawrence I. Freedman, John W. Tone, and Ernest S. Erickson, Wilmington, and Gustave A. Oberg, Claymont, Del., assignors to Ronson Corporation, Woodbridge, N.J., a corporation of New Jersey
Filed Mar. 21, 1962, Ser. No. 181,383
6 Claims. (Cl. 30—4)



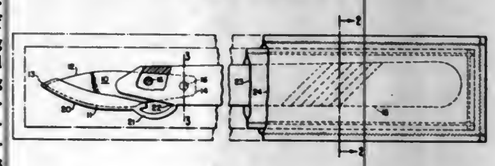
1. A multi-use portable appliance comprising an elongated casing of a size convenient for being held in the hand, the cross section of the rear end of said casing being small enough to provide a convenient handle, an electric motor mounted within said rear end of said casing, a geared transmission mounted in the front end of said casing and connected to said motor, a can driving wheel mounted upon the side of the front end of said hand, the cross section of the rear end of said casing connecting said can driving wheel with said geared transmission, a driving shaft extending from said geared transmission through the front end of said casing having coupling means providing a means for connecting various attachments to said appliance, an operating lever mounted upon the top of said appliance, pivot means connecting the front end of said operating lever to the front end of said casing forward of said can driving wheel, a mounting block secured to the side of said lever above said wheel, cutting means mounted upon said block for cooperating with said wheel to sever the lid of a can when said lever is moved toward said casing, a wing mounted to swing upon said mounting block upon an axis disposed substantially parallel to the length of said casing that permits said wing to flap up and down from a substantially vertical folded to a horizontally extended position, a magnet mounted upon the lower surface of said wing for holding a severed lid when said wing is horizontally disposed, said wing being of sufficient length and width to shield said wheel when it is rotated to said substantially vertical folded position adjacent the side of said casing whereby said appliance is rendered safe for operating attachments engaged with said coupling means, and a switch upon the upper surface of said casing which is contacted by said lever to actuate said appliance when said lever is moved toward said casing.

3,126,628
CUTTING PLIERS
William P. Popek, 1016 Staub Court NE., Cedar Rapids, Iowa
Filed Feb. 27, 1961, Ser. No. 91,769
6 Claims. (Cl. 30—134)



1. Pliers for cutting wire and the like, comprising in combination, a pair of cutting members, each of said members having a jaw portion and a handle portion, one of said jaws being offset from the horizontal axis of said handle portion to cooperate with the other cutting member, a pivot passing through each of said members intermediate said jaw portion and said handle portion, and a pair of flexible holding clips pivotally mounted on said pivot, each of said clips having a transverse aperture therein to permit transverse shifting of said clip with respect to said pivot, one end of each clip being secured to a handle portion of one of said cutting members, and the other end of each clip lying adjacent the jaw portion of the same cutting member to which its said one end is secured, a portion of one of said clips being offset for cooperation with the other clip to retain a wire cut by closing said cutting members.

3,126,629
SURGICAL KNIFE
Arnold James Claisse, Purbeck, Shiplake-on-Thames, Oxon, and Edward Denbigh Collett, Upper Basildon, England, assignors to Gillette Industries Ltd., Isleworth, Middlesex, England, a corporation of Great Britain
Filed July 1, 1960, Ser. No. 40,347
3 Claims. (Cl. 30—151)



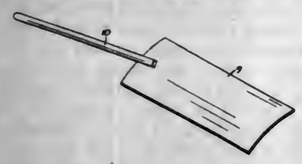
1. A cutting instrument comprising a blade, a handle therefor, said blade having an edge and terminating in a tip at one end, the other end of said blade being positioned within and secured to said handle, at least a portion of said blade extending outwardly from said handle being sharpened, and a protective sheath engaging and enclosing the sharpened portion of said blade including the tip thereof, said sheath being attached to said handle solely by a readily frangible connection formed integrally with and extending from the end of said sheath remote from said tip, said connection having at least a portion thereof spaced from and overlying a portion of said edge to provide a tab for easy removal of the sheath after said connection has been broken.

3,126,630
EXPLOSIVELY ACTUATED HOLE PUNCHING AND SHAPING TOOL
Robert T. Catlin, Trumbull, and Arthur J. Landa, Shelton, Conn., Robert J. Service, Middleville, N.Y., and Robert O. Swain, Trumbull, Conn., assignors to Remington Arms Company, Inc., Bridgeport, Conn., a corporation of Delaware
Filed Aug. 10, 1960, Ser. No. 48,764
21 Claims. (Cl. 30—358)



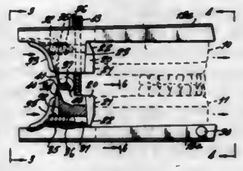
1. An explosively actuated punching tool for punching a metal workpiece, comprising: a barrel having a breech end and a muzzle end, barrel closure means including a cartridge receiving chamber at said breech end of the barrel, an apertured abutment member at said muzzle end of the barrel, a piston slidable within said barrel and including an abutment surface facing towards said muzzle end of the barrel, an elongated rigid member attached to said piston to project from said piston abutment surface towards and in alignment with the aperture of said apertured abutment member for passage therethrough, said elongated rigid member terminating in a workpiece punching instrumentality, buffer means comprising a stacked assembly of elastically deformable buffer rings of thick rubber-like material interleaved with rigid impact rings, said buffer means slidably interposed on said elongated rigid member and extending substantially the length of said barrel and engaging said piston abutment surface and said apertured abutment member, and means for firing a cartridge within said cartridge receiving chamber, whereby said buffer means substantially determines the length of stroke of said piston and elongated rigid member in response to the firing of such cartridge, and substantially instantaneously restores said piston and elongated rigid member to their initial positions upon completion of said stroke.

3,126,631
ARTICULATING PAPER APPARATUS
Earl D. McCarthy, W. 720 Boone Ave., and Kenneth E. McVey, 1160 Paulsen Bldg., both of Spokane 1, Wash.
Filed May 19, 1960, Ser. No. 30,246
3 Claims. (Cl. 32—19)



1. An articulating paper apparatus comprising a rectangular piece of heavy gauge paper having a carbon surface on both sides thereof, said paper being formed with a longitudinal bend to provide stiffness, and a handle secured to one end of said paper.

3,126,632
DENTAL ARTICULATOR
Bernard Weissman, 3406 Poplar St., Oceanside, N.Y.
Filed Oct. 11, 1960, Ser. No. 61,920
9 Claims. (Cl. 32—32)



1. In an articulator having an upper and lower holder and means for securing them in relatively pivotable relation, the combination comprising a movable ejector plate provided on at least one of said holders, said ejector plate being characterized by an undercut portion contactable with a dental cast formed in said holder, said undercut portion opposing removal of said cast from said holder, said ejector plate being disposed within the articulator in position for engagement by an inner portion of the cast.

3,126,633
METHOD AND APPARATUS FOR MEASURING THE HEIGHT OF THE ARC OF A CURVED TRACK SECTION
Franz Plasser and Josef Theurer, both of Johannesgasse 3, and Egon Schubert, Sturzgasse 17, all of Vienna, Austria
Filed May 31, 1960, Ser. No. 32,831
2 Claims. (Cl. 33—1)



1. An apparatus for measuring the height of the arc of a track section, comprising a plurality of spaced axles with wheels for mobility on the track, means for coupling the axles to each other, a reference point on each of said axles, straight connecting elements between reference points of adjacent ones of said axles constituting chordal elements, and means for measuring the angles enclosed by adjacent ones of said chordal elements.

3,126,634
FOOT MEASURING DEVICE
Theodore O. Fournier, 68 Lyndale Ave., Ottawa 3, Ontario, Canada
Filed July 9, 1962, Ser. No. 208,317
4 Claims. (Cl. 33—3)
1. In an automatic foot measuring device operable by

downward pressure of a foot to indicate length and width sizes of the foot,

a base,

a foot receiving platform mounted to the base for limited vertical movement with respect to the base,

said platform being provided with a longitudinally extending slot and a transversely extending slot,

first spring means biasing said platform upwards,

a first slide mounted for longitudinal slidable movement below said platform,

said first slide being provided with an oblique slot,

actuating means connecting the platform and the first slide moving said first slide longitudinally in response to vertical movement of said platform,

a second slide comprising a first part and a second part mounted for transverse slidable movement in the same path below said platform,

second spring means connected to said first and second parts biasing them together,



a pin on the first part of the second slide engaging said oblique slot for transverse movement of said first part in response to longitudinal movement of said first slide,

a first arm secured to the first slide projecting through said longitudinally extending slot,

a heel block above the platform secured to said first arm for longitudinal movement with said first slide,

a toe block fixed to the upper surface of the platform longitudinally spaced from the heel block and substantially longitudinally aligned therewith,

a second arm secured to the second part of the second slide and projecting through said transversely extending slot,

a first side block above the platform secured to said second arm for transverse movement with said second part,

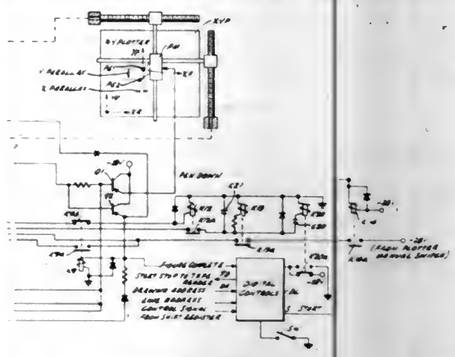
a second side block fixed to the upper surface of the platform transversely spaced from the first side block and substantially transversely aligned therewith,

a length size indicator coupled to said first slide and indicating length size responsive to longitudinal movement of said first slide, and

a width size indicator coupled to said first and second parts and indicating width size responsive to relative movement of said first and second parts.

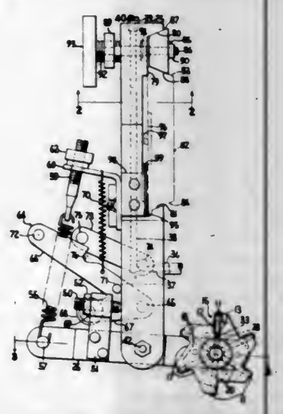
3,126,635
LINE TERMINATING SYSTEM
William J. Muldoon, Palos Verdes, and Robert W. Peterson, Sepulveda, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Dec. 29, 1961, Ser. No. 163,157
8 Claims. (Cl. 33—18)

1. In a drafting machine having a source of control signals, a function generator coupled to said source of control signals for developing fixed amplitude time varying signals, X and Y pen control circuits responsive to said source of control signals and to said function generator for controlling a pen to draw lines, a line terminating system comprising first and second amplitude modulation means coupled to said function generator and to said source of control signals, summing means coupled to said first and second amplitude modulation means for providing a time varying signal changing from a predetermined polarity to the other polarity when a desired length of line is drawn as determined by said source of control signals, and pen control means coupled to said pen and to said summing means for holding said pen on the drawing



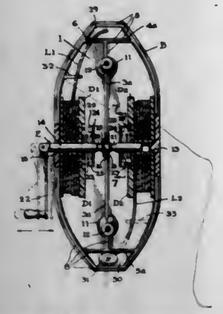
surface for drawing a line and for responding to the time varying voltage developed by said summing means changing from said predetermined polarity to the other polarity to lift said pen and terminate the drawing of a line.

3,126,636
GLASS CUTTER ASSEMBLY
Jay J. Brand, Whitehall, Pa., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 26, 1960, Ser. No. 45,428
13 Claims. (Cl. 33—32)



1. A glass cutter assembly comprising a support including a cylindrical pin having a longitudinal bore open only at one end and a bore communicating the longitudinal bore with the cylindrical surface of said pin, a turret holder having a central aperture and a peripheral portion and rotatably mounted on said pin in the central aperture, said turret holder having bores extending from said central aperture to said peripheral portion, glass cutter wheels mounted on support means for free rotation, said support means having a portion thereof located within said last named bores with the axes of rotation of said cutter wheels being parallel and with said cutter wheels extending beyond the periphery of said means to index said turret holder at several positions of its rotation whereby at each position one of the bores extending from the central aperture communicates with the bore in said pin communicating with the longitudinal bore for the introduction of lubricating fluid through the longitudinal bore of said pin directly to one of said cutter wheels.

3,126,637
DUAL LINE CHALK BOX
Acree Edward Short, Hurt, Va.
(118 Elmar Drive SE., Vienna, Va.)
Filed Nov. 15, 1962, Ser. No. 237,975
10 Claims. (Cl. 33—87)



1. A chalk box of the class described comprising:

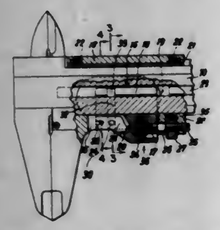
(*a*) a housing having two separate chalk-line chambers formed therein and having a small aperture formed near opposite ends of the housing;

(*b*) single axial shaft means disposed substantially centrally of and extending within both chambers of said housing;

(*c*) a freely rotatable reel disposed on said single shaft means within each of said chambers and adaptable to the wound with a chalkable line having one end attachable to said reel and the other end being free for single passage through one of said apertures in the end of said housing; and

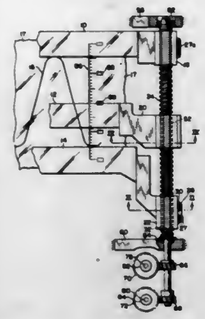
(*d*) means for selectively effecting predeterminable rotation of either reel together with said single shaft means.

3,126,638
SLIDE CALIPER
Herbert Wickert, Konig-Wilhelmstrasse 21, and Edgar Kusch, Mauserstrasse 5, both of Oberndorf (Neckar), Germany
Filed Jan. 29, 1960, Ser. No. 5,554
Claims priority, application Germany Feb. 5, 1959
1 Claim. (Cl. 33—143)



Slide calipers comprising a measuring slide provided with parallax-free vernier scales, a measuring bar cooperating with the measuring slide, a fine adjustment slide provided in a slot in the measuring slide, a screw spindle mounted on the fine adjustment slide and having an adjustment nut to adjust the slide upon the rotation of the nut, a clamping jaw mounted on a shaft, a clamping lever pivotally mounted on the fine adjustment slide connected to actuate the shaft and the clamping jaw and the latter normally contacting the measuring bar to release the latter for rough setting of the measuring slide, said fine adjustment slide having a vertical groove in a back wall of the fine adjustment slide, a guide rail on the top of the fine adjustment slide, and the clamping jaw being guided in the guide rail on top of the fine adjustment slide which slides in a longitudinal groove on the measuring bar.

3,126,639
DEVICE FOR DETERMINING THE MEAN HEIGHT OF A WAVEFORM
Gustav A. Larson and Thomas F. West, Jr., Baltimore, and William A. Hanson, Severna Park, Md., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Apr. 4, 1962, Ser. No. 185,783
5 Claims. (Cl. 33—143)

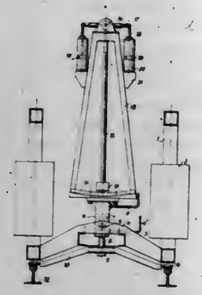


3. An apparatus for automatically indicating the mean height of a waveform presented in a particular plane, said apparatus comprising a base, a pair of elongate worms rotatably mounted on said base with their axes in parallel relationship with respect to each other and to the said plane, a top indicator, a bottom indicator and a center pointer positioned midway between the top and bottom indicators, means meshing with the threads of one of said worms and supporting said top indicator for moving the latter along a path parallel to the worm upon rotation thereof, further means meshing with the threads of the other worm and supporting the bottom indicator for moving the latter along a path parallel to the other worm upon rotation thereof, and means, including a worm gear meshing with the threads of both worms and supporting the center pointer, for moving the latter along a path parallel to the worms at half of the speed of the movement of either of the top or bottom indicators upon a selective rotation of one of the worms, whereby, upon respectively aligning the top and bottom indicators with the top and bottom of the waveform, the center pointer will be aligned with the mean height of the waveform.

3,126,640
MEANS FOR MEASURING THE TRANSVERSE INCLINATION OF A TRACK
Franz Plasser and Josef Theurer, both of Johannesgasse 3, Vienna, Austria
Filed Oct. 25, 1960, Ser. No. 64,939
Claims priority, application Austria Nov. 13, 1959
5 Claims. (Cl. 33—145)

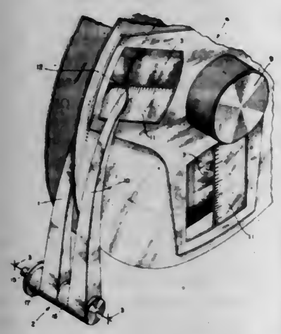
1. In the combination of a track tamping machine including a car frame with front and rear trucks movable on the track rails and a pendulum means for measuring the transverse inclination of the track, and wherein a frame supports said pendulum means for pivotal movement in a vertical plane perpendicular to the track: a

support means for said pendulum supporting frame, means pivotally mounting the support means on the car frame forwardly of the front truck for pivotal movement in said plane and in respect of said car frame, a carrier extending transversely of said track and mounted on said pendulum supporting frame supporting means for pivotal



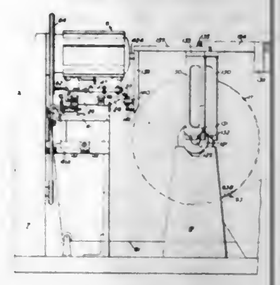
movement in unison therewith in said plane, sensing elements mounted on said carrier for engagement with said track rails, and means for vertically adjusting the carrier in a fixed vertical position in relation to the car frame whereby the sensing elements may be moved into, and out of, engagement with the rails.

3,126,641
INDICATORS
Robert D. Hawn, Silver Spring, Md., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Sept. 29, 1960, Ser. No. 59,435
2 Claims. (Cl. 33—172)



1. A footage indicator for reeled material comprising a reel, a footage scale mounted on an outside face of said reel, a first arm having a first end and a second end, said first end being arranged to contact said reeled material, a first pivot means attached to said second end for pivotally supporting said second end at a point beyond the outer radius of said reel, a second arm having a first end and a second end, said first end being arranged adjacent to an outside face of said reel in an indicating relationship with said scale, a second pivot means for pivotally supporting said second end of said second arm to support said second arm in substantially parallel relationship with said first arm and a shaft means for rotatably supporting said first and said second pivot means in a predetermined fixed relationship with respect to each other.

3,126,642
GAUGING LINEAR DIMENSIONS
Leonard Wilfred Nickols, Hampton Hill, England, assignor to Power Jets (Research & Development) Limited, London, England, a British company
Filed Feb. 11, 1958, Ser. No. 714,517
Claims priority, application Great Britain Feb. 20, 1957
9 Claims. (Cl. 33—174)

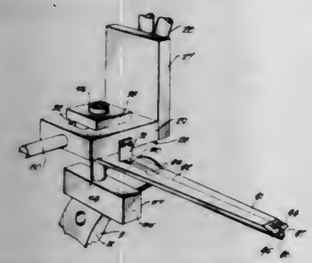


1. Measuring apparatus for measuring the distance between a datum surface of a set of surfaces and each of the remaining surfaces of the set, there being a plurality of such sets on a rigid rotatable assembly, comprising a support structure capable of supporting the said assembly; an indexing mechanism adjacent the support structure to move the assembly from a position for measuring one set of surfaces to a position for measuring another set of surfaces including a disc mounted coaxially and fast with the rigid rotatable assembly and having a plurality of notches corresponding in number and spacing to the sets of surfaces, and an indexing finger which engages each of the said notches in succession to hold the rigid assembly in a measuring position, a locking lever which engages a notch of the disc whenever the indexing finger is disengaged from the disc, lever means operable to move the locking lever and a linkage operable by the lever means to effect disengagement of the indexing finger; measuring equipment including a datum surface engaging member, a number of surface engaging members corresponding to the remaining surfaces of each set, means to bring each of the surface engaging members into successive engagement with the corresponding surface, means to measure the displacement of each of the surface engaging members in succession relatively to the datum surface engaging member, and driving means to actuate the measuring equipment; means to actuate the indexing mechanism; and means to synchronise operation of the measuring equipment and the indexing mechanism whereby on completion of the measurement of one set of surfaces by the measuring equipment, the operation of the measuring equipment is stopped and on completion of the indexing movement of the rigid rotatable assembly by the indexing mechanism the operation of the measuring equipment is recommenced.

3,126,643
PLOW BEAM LOCATING AND ALIGNMENT GAGE
Fred W. Barbknecht, Palos Heights, and John S. Svitoris, New Lenox, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Dec. 19, 1960, Ser. No. 76,904
4 Claims. (Cl. 33—180)

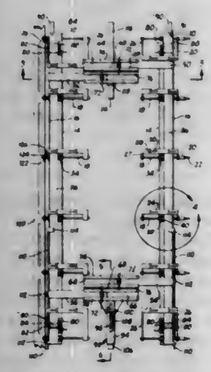
4. A locating device for locating a flat-sided upright member relative to a horizontal member prior to the interconnection of said members, comprising a gage fixedly supported above said horizontal member, said gage including a gage support having an indicating element denoting the proper position of said upright member with respect to a vertical plane perpendicular to said horizontal member, a movable gage member on said gage support

and being adapted to be moved horizontally and transversely relative to said indicating element, a parallelism block on said gage member, said block having a flat side, said block being movable with said gage member against a flat side of said upright member, means biasing said gage member transversely to move the flat side of said block into engagement with a flat side of said upright member, an indicator arm associated with said block and extending horizontally and perpendicular with respect to the line of movement of said gage member and including



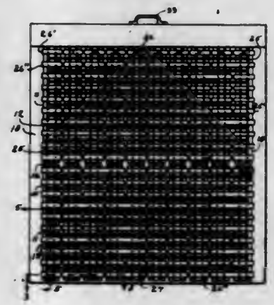
means registering with said indicating element at one position of said gage member, parallelism indicating means on said arm, means pivotally connecting said block to said gage member about a vertical axis whereby the face of said block may be pivoted in and out of parallel with respect to said vertical plane, and a parallelism pointer associated with said block and pivotal therewith for swinging movement in a horizontal plane, and adapted to register with said parallelism indicating means when said face of said block and flat side of said upright member are parallel with said vertical plane.

3,126,644
DOOR TEMPLATE OR JIG
William F. Dale, 72 Rockford Ave., Daly City, Calif.
Filed June 5, 1963, Ser. No. 285,668
7 Claims. (Cl. 33—194)



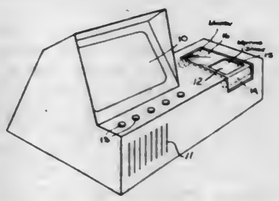
1. In a template for determining the width and contour of the upright portions of a door jamb, the improvements comprising:
(*a*) a pair of parallel, elongated frame members;
(*b*) means connecting said frame members for holding said frame members in a spaced, parallel relationship;
(*c*) a plurality of laterally slideable rods mounted transversely on each of said parallel, elongated frame members, said rods having tips normally extending beyond the outermost edges of each of said elongated frame members;
(*d*) means operatively associated with each of said rods for determining the extent to which each of said rods has been moved laterally relative to the said elongated frame members supporting the said rods; said means comprising a bar secured to each of said rods, each of said bars partially bridging one of said elongated frame members; and
(*e*) a pair of reels, one at either end of each of the said elongated frame members, each of said reels being adapted for holding paper tape in roll form whereby to provide means for extending a length of paper tape between the said reels and adjacent the said transverse rods whereby to provide a surface upon which the position of each of said rods relative to the said elongated frame members may be noted.

3,126,645
SCHEDULE ARRANGER
Allen H. Lloyd, 306 Rugby Ave., Terrace Park, Ohio
Filed July 20, 1961, Ser. No. 126,803
4 Claims. (Cl. 35—7)



1. In a device of the class described the combination of a baseboard having height and width, a plurality of supporting members each formed of non-magnetizable material extending in the direction of the baseboard height and in spaced parallel relation in the direction of the baseboard width, a pair of spaced bars formed of magnetizable material carried by each support in the direction of its length and parallel with one another, means associated with each support for magnetizing said magnetizable bars, and means cooperating with said magnetized bars in each support to be arranged in rows across said supports.

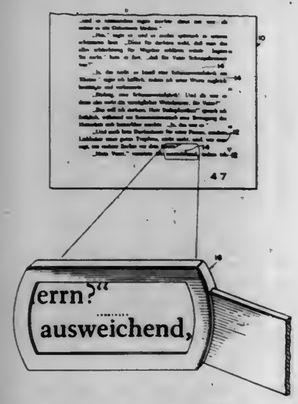
3,126,646
AUDIO-VISUAL TEACHING MACHINE
Jaap Penraat, New York, N.Y., and Wallace C. Vogt, Upper Saddle River, N.J., assignors to Jaap Penraat Associates, Inc., New York, N.Y., a corporation of New York
Filed Nov. 14, 1961, Ser. No. 152,185
5 Claims. (Cl. 35—9)



1. A teaching device comprising a projector for presenting a film containing a succession of instructive units each

of which is constituted by a series of information slides, the next to the last slide in each series containing questions and the final slide containing answers thereto, a sound reproducer having a sound track carrying a succession of narrations appropriate to the series of slides in each of the corresponding instructive units and including control signals, a control system responsive to said signals to cause the step-wise presentation of the slides in each of said series and to arrest said presentation and said sound track when said question slide is presented, and means responsive to a student action to cause said film to step to said answering slide.

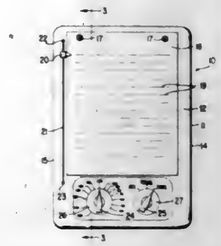
3,126,647
EDUCATIONAL MATERIALS AND METHODS
Richard Hazelett, Malletts Bay, Winooski, Vt.
Filed Oct. 26, 1959, Ser. No. 848,599
9 Claims. (Cl. 35—35)



1. Educational material for use in studying and learning foreign languages, mathematical propositions and the like, comprising a printed text consisting of a first series of symbols of one character, said first series of symbols having a height of between .5 and 18 points in printing measure and being fully legible to the normal unaided eye at proper reading distance, and a second series of symbols printed adjacent said first series of symbols, said second series of symbols being related to said first series of symbols in ideational content, said second series of symbols being so small as to be absolutely illegible to the unaided eye at a distance of 90 centimeters when printed on white paper and viewed in white light.

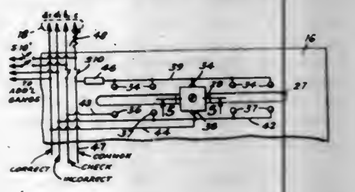
3,126,648
AUTOMATIC PACER
Earl P. Strong, 1337 S. Garner St., State College, Pa., and James W. Bruce, State College, Pa.; said Bruce assignor to said Strong
Filed June 12, 1961, Ser. No. 116,443
11 Claims. (Cl. 35—35)

1. An automatic pacer for pacing a student during a typing or reading drill comprising a casing, sheet attaching means provided upon the exterior of said casing to facilitate the attachment of a drill sheet to the exterior surface thereof, indicator means on said casing adjacent said sheet attaching means and adapted to move along the periphery of an attached drill sheet at a predetermined speed, timed drive means for said indicator means mounted within said casing, timing control means extending from said casing, and electronic timing means mounted within said casing and connected to control said timed mechanical drive means, said electronic timing means including input means for connection to receive electrical energy from a suitable power supply, an electronic tube electrically connected to said drive means, said tube including a plate, a cathode and a control electrode, means to supply power from said input means to said plate, a variable resistance means connected between said input means and the control electrode of said electronic tube to control the amplitude of the energy from said power source, said variable resistance means being operatively



connected to said timing control means, and a timing circuit connected between said variable resistance and said tube across the cathode-control electrode circuit of said tube, said timing circuit providing D.C. pulses, the repetition rate of which is determined by the amplitude of the energy received from said variable resistance means to said control electrode to cause the periodic energization of said tube, whereby timed energization pulses are directed to said drive means to cause the periodic actuation thereof.

3,126,649
EDUCATIONAL SCORING DEVICE
Charles J. Sullivan, 40 Albemarle Place, Yonkers, N.Y.
Filed Mar. 8, 1962, Ser. No. 178,426
5 Claims. (Cl. 35—48)



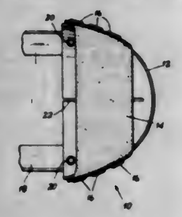
1. An educational scoring device comprising a register board, a plurality of multiple position register switches secured to said board, a resistor for each switch, a first, second, third and fourth terminal, each switch having a first position connecting a corresponding one of said resistors, in parallel relation to said first terminal and said second terminal, each switch having a second position connecting its resistor across said first and said third terminal, each switch having a third position connecting its resistor across said first and said fourth terminal, a voltmeter, a first load resistor, a second load resistor, first circuit means connecting said voltmeter with said first and second load resistors in series connection, a first adjustable source of potential, second circuit means connecting said first and second terminals, said first source of potential and said first load resistor being in series relations and third circuit means connecting said first and third terminals, said second source of potential and said second load resistor being in series relation, and switch means to alter said second circuit means to connect said first and fourth terminals with said first load resistor and said first potential source in series connections.

3,126,650
INSOLE UNITS FOR SHOES
Alan H. Goldstein, Brookline, Mass.
(176 Rangeley Road, Chestnut Hill 67, Mass.)
Filed June 26, 1961, Ser. No. 119,491
5 Claims. (Cl. 36—22)



1. In a shoe, an insole unit comprising an insole base including a full length insole layer characterized by its flexibility and a stiffening insole layer extending from the heel area of the first named layer forwardly and terminating in a transverse, forwardly tapered, break-line shoulder, a layer of cushioning material secured marginally to the upper surface of said base and extending from the toe rearwardly through said break-line and dimensioned to have its edge spaced inwardly of the edge of said insole layers to provide a border, and a cover layer freely overlying said layer of cushioning material and marginally secured to said base along said border, the size and shape of said base being at least squal to the size and shape of said cover layer.

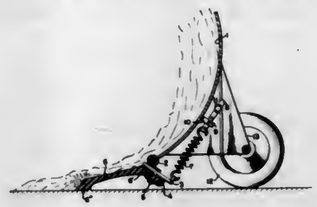
3,126,651
TOE PROTECTOR ATTACHMENT
Samuel Bown, 5900 Annex Court, Ferguson 35, Mo., and William F. Elcks, 2822 E St., La Porte, Tex.
Filed Feb. 4, 1963, Ser. No. 255,814
2 Claims. (Cl. 36—72)



1. In combination, a toe protector attachment for the toe cap of a shoe comprising a cap member of hard, resilient material adapted to resist and deflect the blow of the rotary blade of a lawnmower, said cap member being formed to cover the top cap of a shoe, said cap member being split from the rear edge forwardly for a distance greater than halfway from the rear edge to the front edge, the edges of said split being in opposed relation, said split permitting said cap member to snugly engage a range of sizes of shoes wider than said cap member, the edges of said split being moved apart as said toe protector is forced onto toe caps of larger sizes, said split thereby providing a gap which widens as a V as the cap member is forced onto toe caps of greater width than the cap member.

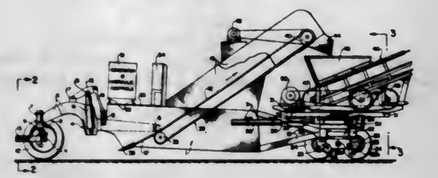
3,126,652
ROAD CLEARING APPLIANCE
Gottfried Reissinger, Seeshaupt (Starnberger See), Bavaria, Germany
Filed Feb. 20, 1962, Ser. No. 174,560
Claims priority, application Germany Feb. 24, 1961
3 Claims. (Cl. 37—41)

1. In a road clearing implement, a mold board having a lower edge, a resilient deformable ledge member of rubber-like material pivotally mounted transversely of said mold board lower edge and extending along said lower mold board edge, said ledge member including a free-upwardly deformable portion extending downwardly and forwardly below the pivot axis of said ledge member and continuing in a portion depending forwardly of said upwardly deformable portion for engaging a surface to be scraped, said ledge member including a portion projecting rearwardly of said pivot axis at the lower edge of said



mold board, and tension means secured to said portion of said ledge member projecting rearwardly and said tension means being secured to said mold board and normally pivoting said depending portion of said ledge member about said pivot axis into engagement with a surface to be scraped.

3,126,653
MEANS OF AUTOMATIC GRADE CONTROL
Clarence Banks Bourgeous, % Garth Nelson, P.O. Box 5, Yuma, Ariz.
Filed Sept. 18, 1961, Ser. No. 138,789
10 Claims. (Cl. 37—108)



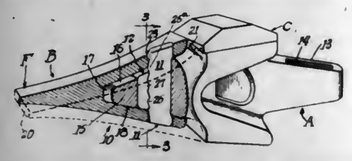
4. A machine for grading a strip of earth, comprising: spaced side frames; a cutter blade disposed transversely between said side frames; a forward wheel assembly; means pivotally connecting said forward wheel assembly with said side frames for relative movement about a transverse axis to move said cutter blade vertically; longitudinal grade control means for operating said connecting means to effect vertical movement of said cutter blade; a rear wheel assembly disposed in the path cut by said cutter blade; a pivotal connection between said rear wheel assembly and said side frames for relative pivotal movement about a longitudinal axis to tilt said cutter blade with respect to said rear wheel assembly; and transverse grade control means for operating the last named pivotal connection to effect tilting movement of said cutter blade, said transverse control means including a gravity-sensing element to determine the vertical axis, and hydraulic force-applying means to maintain said cutter blade in predetermined angular relation to said vertical axis.

3,126,654
LOCKING DEVICE FOR EXCAVATING TOOTH
Paul Eyolfson and Norval T. Grubb, Portland, Oreg., and John P. Meece, Denver, Colo., assignors to Esco Corporation, Portland, Oreg., a corporation of Oregon
Filed July 18, 1961, Ser. No. 124,852
9 Claims. (Cl. 37—142)

4. In combination with a base nose and socket-equipped, wedge-shaped point releasably engaging said nose, said point and nose being provided with aligned key-receiving openings, said point having a digging edge and said aligned openings extending generally transversely to the point midplane passing through said edge,

an elongated key extending through said openings and provided with forward and rear surfaces, one of which is a corrugated surface providing at least two identical transversely-extending, successive projections and recesses,

said corrugated surface being located in the portion of said key positioned within said nose opening,

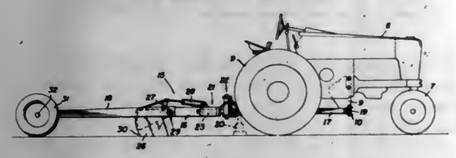


a key lock member within said nose opening and provided with a corrugated surface mating with the corrugated surface of said key, said member corrugated surface comprising a plurality of identical projections, each projection being equipped with a rigid insert,

said key being free of projections and recesses in the end portions thereof positioned in said point openings,

the common tangent to the key projections being parallel to the central longitudinal portion of the other of said key surfaces, whereby said key is insertable and removable through either of said point openings.

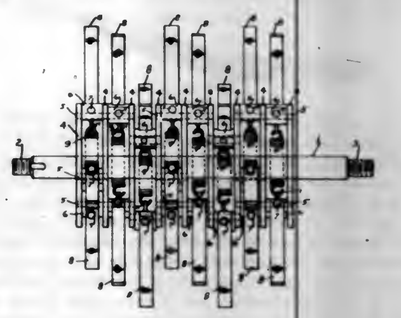
3,126,655
LAND FORMING EQUIPMENT
Raymond C. Fischer, Hinsdale, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Mar. 26, 1962, Ser. No. 182,344
3 Claims. (Cl. 37—169)



1. In a land leveling device of the type having an elongated frame, wheels secured to the rear end of said frame on an axis transverse to said frame, a transverse blade secured to said frame and spaced from said rear end, first coupling means on the forward end of said frame, a two axle power drive unit, second coupling means on said power drive unit between said axles cooperating with said first coupling means to connect said frame to said power drive unit in such a manner as to reduce the amount of vertical travel of the blade as a result of rises and falls in the terrain, said frame including a joint means located between the blade and said forward end to facilitate turning of the levelling device, and wherein said joint means will permit movement only about a vertical axis and about a horizontal axis parallel to the longitudinal axis of said elongated frame.

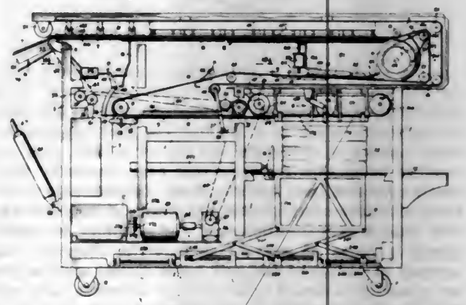
3,126,656
DIGGING CRIBBING HEAD DEVICE
George T. Blackwell, Jr., P.O. Box 278, Oneonta, Ala.
Filed Nov. 16, 1961, Ser. No. 152,757
2 Claims. (Cl. 37—189)

1. A digging cribbing head device comprising, a main supporting round metal shaft, said shaft being adapted to be revolved by an independent source of power, a plurality of round metal flat plates, these plates being mounted in fixed positions upon said shaft with equal spaces between each two of said plates, a plurality of short metal brackets, each pair of said plates having three of said short brackets supported between them, a plurality of similar comparatively long and bent metal parts with their ends formed as diggers, each of said short brackets having three holes therethrough, said digger parts having



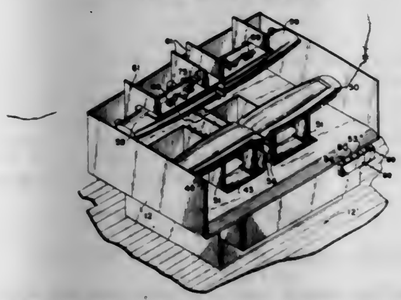
their inner ends connected to said short brackets by bolts, a plurality of similar pivot pins, said three short brackets being mounted partly revolvable on said pins; three similar springs, these springs having connecting means as eyes integral in their ends, these springs being set in contracting tension with their connecting means inserted in holes in the end portions of said brackets to which the said digger parts are bolted.

3,126,657
FOLDING AND STACKING MACHINE FOR ARTICLES OF LINEN
Eugene Hajos, Fort Lee, N.J., assignor to Premier Laundry, Inc., New York, N.Y., a corporation of New York
Filed May 12, 1953, Ser. No. 354,510
22 Claims. (Cl. 38—2)



2. A stacking device for articles of linen and the like comprising a frame, a pair of rails having operating faces, means mounting said rails laterally spaced on the frame for movement about respective longitudinal pivots by said means from a normal position with their operating faces substantially located in a common horizontal plane and inward from said pivots to a downturned position in which articles of linen are free to drop between the rails, upper and lower limit switches mounted on the frame, the upper switch being adapted to be held closed by the said mounting means only when the rails are in their normal position, the lower limit switch being adapted to be actuated to a return condition when the rails are in their downturned position, and actuating means for pivoting said rails including an actuating switch adapted to be operated by an article of linen moving on the rails and thereby cause the rails to turn from their normal position, said actuating means also being adapted to return the rails toward their normal position after the lower limit switch is actuated to its return condition in combination with means including the upper limit switch active during the return of the rails to the normal position thereof for preventing accidental closing of the actuating switch from causing movement of the rails downward, and conveyor means on the frame above the operating faces of the rails adapted to frictionally engage the articles along their upper faces and draw them into position on the operating faces of the rails, thereby causing operation of the actuating switch.

3,126,658
TROUSER LEG PRESSING MACHINE
Thomas W. Carskadon, 99 E. Kanawha Ave., Columbus, Ohio
Filed Jan. 9, 1962, Ser. No. 165,992
4 Claims. (Cl. 38—5)



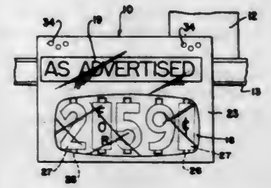
1. A machine for simultaneously independently pressing the leg portions of a pair of trousers comprising a base, a pair of bucks mounted on said base and adapted to support the trousers, each buck supporting one leg of the trousers substantially to the crotch portion thereof, the top surfaces of said bucks being substantially planar, said bucks having closely spaced contiguous ends separated sufficiently to accommodate the thickness of the material of the waist portion of the trousers, a pair of pressing heads mounted on said base, one head adapted selectively to pressingly engage one buck and the other head adapted simultaneously to pressingly engage the other buck, said bucks having initial aligned positions adjacent to one side of said machine, said pressing heads normally being spaced from said bucks and at a higher elevation thereto, automatic operating means for moving said bucks simultaneously into pressing engagement with said heads, and subsequently returning said bucks to their initial positions.

3,126,659
CHANGEABLE PRICE INDICATORS
Robert J. Slavsky, Detroit, Mich., assignor to Shaw & Slavsky, Inc., Detroit, Mich.
Filed Apr. 6, 1962, Ser. No. 185,640
1 Claim. (Cl. 40—5)

A price indicator sign formed of a flat stiff panel of two registering thin transparent plastic sheets, laminated together, which is capable of withstanding repeated bending on a fold line without breaking; said sign being of V-form, bent on a fold line to provide a longer front part and a shorter rear part;

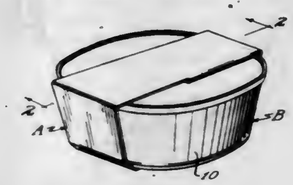
said sign having an inner surface and an outer surface; the inner surface of the longer front part having an opaque coating at its upper end only with the lower end of such surface being left transparent to form a window;

the front part having indicia on the upper end of the outer surface above the window and backed by the opaque coating; a price card inside the sign removably and interchangeably mounted in the sign by tabs



of the inner surface of the shorter rear part of the sign and visible from the front through the window; and a spring metal wire bracket in back of the front part of the sign and riveted to the upper end of such front part.

3,126,660
RECEPTACLE ENCIRCLING BAND
Harold S. Meyers, Minneapolis, Minn., assignor to Waldorf Paper Products Company, St. Paul, Minn., a corporation of Minnesota
Filed July 16, 1962, Ser. No. 210,063
8 Claims. (Cl. 40—312)



1. A container including, in combination,

a receptacle having a wall spaced from an end thereof to provide a recessed end,

a band of paperboard encircling said receptacle and overlying said recessed end, and

a pair of tabs foldably connected to the portion of the band overlying said recessed end and folded between said portion of said band and into said recessed end to engage the wall of said recessed end.

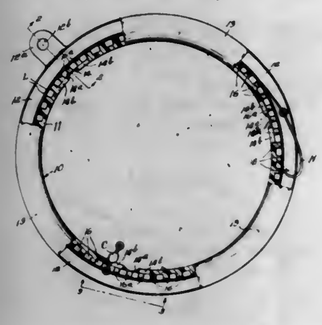
3,126,661
LURE WITH BALANCING WEIGHTS
Howard N. Phillips, 410 Park St., New Madrid, Mo.
Filed Nov. 29, 1962, Ser. No. 240,860
3 Claims. (Cl. 43—42.39)



1. A fishing lure comprising a one-piece elongated buoyant body ovate in plan, longitudinally bowed, having parallel planar upper and lower sides, one end of said body being rounded constituting the trailing end, the opposite progressively narrowing end constituting the leading end, said leading end having an upwardly directed terminal portion terminating in a plane above the plane of the upwardly directed trailing end and having means thereon for attaching a fishline thereto, the rearward end portion of said body having a groove in the upper side, a fishhook comprising a shank having a barbed hook at its rearward end and an eye at its forward end, a portion of the shank

proximal to said hook being seated in said keeper seat with the barbed hook vertical to and in a plane above said upper side, the eye of said shank being secured by a fastener to the median rearward portion of said upper side, a shank-bridling cleat disposed at right angles to said shank and having a median bent portion saddled over the shank in alignment with said groove and having end portions secured to said upper side inwardly of the encompassing marginal edges of the body, and weight means embodied in said body and cooperating therewith and also with the hook and cleat in a manner to balance the overall lure and to cooperate therewith in causing the lure to behave in a predetermined manner in water laden with moss, lily pads, and lake weeds without fouling.

3,126,662
LEADER HOLDER
Harry M. White, 240 Oriole Drive, Sarasota, Fla.
Filed Apr. 14, 1960, Ser. No. 22,240
2 Claims. (Cl. 43—57.5)



1. A fish line leader holder including an annular member comprising means forming two oppositely disposed spaced annular side walls lying in planes extending generally radially thereof and interconnected by a yoke wall disposed inwardly from the outer edges of said side walls to provide a circular channel open about its outer side, said yoke wall comprising a multiplicity of uniform ridges interconnecting said side walls and spaced relatively close to one another about said annular member to receive a fish leader received between said side walls and wound about said yoke wall and to provide closely spaced shoulders against which the point of a hook or the like on a leader may rest, and said yoke wall having an opening therethrough which opening includes a slot formation the opposite edges of which slot formation are spaced for closely receiving an end portion of the leader to attach one end of a leader to said annular member.

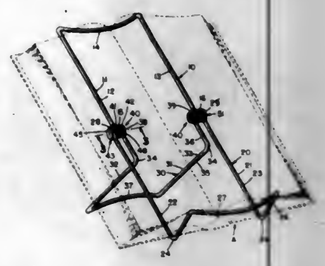
3,126,663
CARPET STRETCHING APPARATUS
John H. Trew, McCandless Township, Allegheny County, Pa. (8151 Edwood Road, Pittsburgh 37, Pa.)
Filed Oct. 8, 1962, Ser. No. 229,779
7 Claims. (Cl. 45—24)

1. In a carpet stretcher for stretching carpet material and maintaining it stretched to a desired length while the material drys, a pair of generally planar frame members adapted to have the carpet stretched thereover substantially in the plane of the frame members, each frame member having a generally rectangular ou line and each having one edge generally offset from the plane of the frame members, hinge means hingedly connecting the offset extremities of the frame members, and carpet end gripping means affixed to each frame member and extending generally parallel to the offset edge of said frame member and substantially in the frame of the frame member whereby the distance between said carpet gripping



means along said planar frame members is greater when said frame members are folded than when they are flattened.

3,126,664
DISPLAY EASEL
Galen G. Gibson, 5121 13th Ave. S., Minneapolis, Minn.
Filed Dec. 26, 1962, Ser. No. 246,887
4 Claims. (Cl. 45—57)



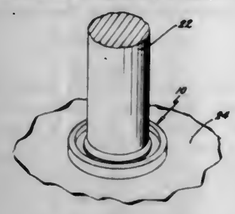
1. A display easel comprising three supports each including a U-shaped frame having spaced legs with a connecting portion between the outer ends of said legs, hinge means at the inner ends of said legs which hingedly connect said frames together for relative swinging movement about a common axis, bends in the legs of two of said frames intermediate the ends thereof forming in said frames inner portions adjoining said hinge means and angular portions extending angularly outwardly from said inner portions, said other frame being planiform and means for restraining relative movement between said supports.

3,126,665
SEPARABLE EDGING FOR A DOILY
Raymond R. Ciprotti, Leominster, Mass., assignor to Plasticraft of Leominster, Inc., Leominster, Mass., a corporation of Massachusetts
Filed May 11, 1962, Ser. No. 193,947
4 Claims. (Cl. 45—68.3)



1. A plastic doily construction comprising a flexible generally flat lace-like member having a foraminous ornamental peripheral edge portion, and a separate generally flat ornamental plastic lace-like foraminous rim in annular form having a size and configuration similar to that of the ornamental edge portion of the doily, and interengaging holding means between the edge portion of the lace-like member and the separate rim whereby the rim is applicable to and removable from the edge portion of the doily, the rim overlying the doily edge when applied thereto.

3,126,666
FURNITURE ANCHORING CUP
Kars Petersen, 57 W. 21st St., Holland, Mich.
Filed Jan. 31, 1963, Ser. No. 255,231
4 Claims. (Cl. 45—137)



1. A cup for anchoring furniture to the floor, comprising: a cup having a flat bottom and a peripheral, upstanding retention ridge around the top defining a cavity to receive the foot of a leg of an article of furniture; a pressure sensitive adhesive coating adhered to said flat bottom, and being adhesive on both sides to enable said cup to be anchored to the floor; a protective cover sheet normally retained on said coating to prevent contact of said coating with other objects; and said sheet being removable to expose the adhesive coating, enabling said cup to be adhesively anchored to the floor under the weight of an article of furniture.

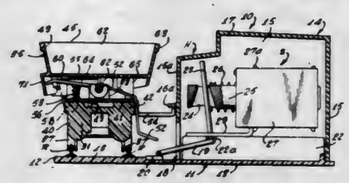
3,126,667
PLAY SET FOR MAKING SPACE CRAFT FIGURETTES
David Rabinow, Cheshire, Conn., assignor to The A. C. Gilbert Company, New Haven, Conn., a corporation of Maryland
Filed Sept. 14, 1959, Ser. No. 839,710
3 Claims. (Cl. 46—17)



1. In a set of model making sectional parts for knockdown assemblage in selective relationships to construct and reconstruct various quiescent figurettes simulating the overall appearance of different space vehicles, a sectional part of tubular nature comprising a one-piece hollow body of the same continuous material forming a circumferentially complete tubular wall undulated to form a series of circumferentially spaced inwardly projecting ridges and to form a corresponding series of circumferentially spaced grooves paralleling the axis of said tubular body and occupying said ridges respectively, said grooves opening outward of said wall and the radially innermost crests of said ridges being wholly separated from one another by a common space thereby providing a core socket receptive to other parts of said set.

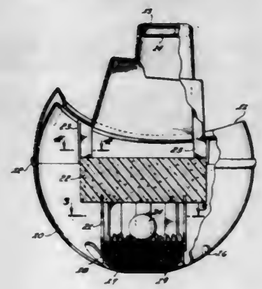
3,126,668
TOY RAILWAY DUMP CAR AND ACTUATOR
Joseph L. Bonanno, South Orange, and Dorland L. Crosman, Bloomfield, N.J., assignors, by mesne assignments, to Walter E. Heller & Company, Inc., New York, N.Y., a corporation of Delaware
Filed May 3, 1961, Ser. No. 107,357
8 Claims. (Cl. 46—40)

8. In a lightweight toy railway system, a car, stabilizer and actuator elements mounted externally of said car, said car comprising an underframe, a car body mounted on said underframe, means extending laterally past the lateral width of said car body for engaging said stabilizer element externally of said car, means intermediate said underframe and said car body for performing simulated car operating movements and extending laterally for engaging said actuator externally of said car and for being



actuated thereby, said means intermediate said underframe and said car body including longitudinally pivoted laterally rotatable lever means, said actuator including vertically rotatable lever means for engagement with said lever means intermediate said underframe and said car body, said stabilizer and actuator elements extending from and forming parts of a simulated trackside platform.

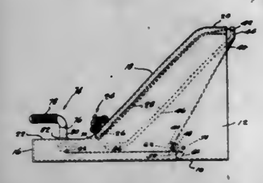
3,126,669
WHISTLING FLOATING ROLY-POLY TOY
Richard L. Gausewitz, Orange, Calif. (11592 Forum Way, Santa Ana, Calif.)
Filed May 8, 1959, Ser. No. 812,039
8 Claims. (Cl. 46—91)



1. A combination roly-poly and floating toy for children, which comprises light-weight wall means to define a substantially sealed chamber, said wall means having an upper portion and a rounded lower portion shaped to cause the toy to have a roly-poly action, said lower portion being substantially continuous except for lower opening means formed therein for inflow of water into said chamber and outflow of water therefrom, said lower opening means being shaped and located to prevent interference with roly-poly operation of said lower portion on land, means to effect floating of said wall means, child-entertaining whistle means responsive to air flow and mounted on said upper portion, upper opening means formed in said upper portion to admit air into said chamber and permit expulsion of air therefrom, said upper opening means and said child-entertaining whistle means being so related that substantially all air passing in at least one direction between said chamber and the ambient atmosphere while said wall means is in floating condition must flow through said child-entertaining whistle means, and weight means provided in said lower portion to cause floating of the toy in upright position and to effect a roly-poly action while the toy is employed on land, said weight means and the exterior contour of said lower portion being so related to the shape and weight

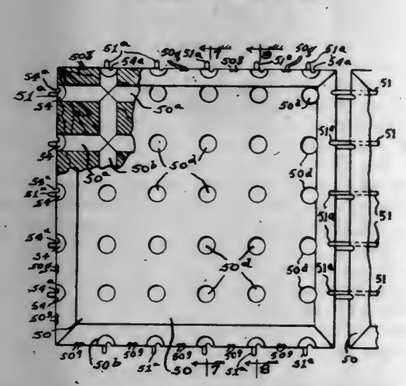
of said wall means that the toy will operate effectively on land as a roly-poly.

3,126,670
TOY
John M. Smith, 108 Broad St., Phillipsburg, N.J.
Filed Feb. 23, 1962, Ser. No. 175,193
10 Claims. (Cl. 46—240)



8. A toy simulating an inclined vehicle course comprising an enclosure having a top wall with an inclined section, and a partition defining a passage beneath said section, magnetic means freely movable within said passage, a winch in said enclosure, having a tow line connected to said magnetic means, a boom in said enclosure mounted for swinging movement about a vertical axis and having guide means for said tow line, control means for said boom having a handling portion outwardly of said enclosure, a drive motor for said winch, clutch means between said motor and said winch, and control means for said clutch means carried by said boom control means.

3,126,671
CONSTRUCTION OF REINFORCED BUILDING BLOCKS AND METHOD OF PREFABRICATING THE BLOCK
Carl E. Nagel, 1057 E. 33rd St., Oakland, Calif.
Filed Aug. 14, 1958, Ser. No. 754,951
5 Claims. (Cl. 50—128)



1. A construction of reinforced building blocks each having a body portion for use in building constructions comprising:

(*a*) continuous loop-shaped prestressed reinforcing elements for each block body portion and having a plurality of aligned loop-ends extending from the opposite ends of the body portion and holding the blocks in predetermined relation,

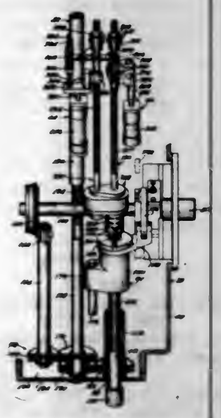
(*b*) the loop-ends extending from each body portion a substantially uniform distance and of a substantially uniform size,

(*c*) the loop-shaped reinforcing elements having prestressed conditions for the block used,

(*d*) pins of a cylindrical shape having tapered ends, each pin disposed in and contacting with a plurality of loop-ends of one of the blocks and a plurality of loop-ends of an adjacent block, said pins engaging the opposed edges of adjacent body portions and with the loops acting to maintain adjacent blocks in edge-to-edge relation and

(*e*) the body portion of each block having a cementitious material embedding the reinforcing elements.

3,126,672
VERTICAL HONING MACHINE
Glen M. Calvert, Boca Raton, Fla., and Frank J. Jeschke, Detroit, and Charles P. Smith, Grosse Pointe, Mich., assignors to National Automatic Tool Company, Inc., Richmond, Ind., a corporation of Indiana
Filed Apr. 13, 1961, Ser. No. 102,797
17 Claims. (Cl. 51—34)

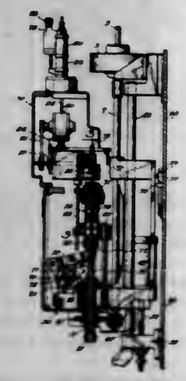


1. In a honing machine, the combination comprising, a tubular spindle mounted for reciprocation and rotation, means connected to said spindle for reciprocating and rotating the latter, a push rod slidably mounted within said spindle and adapted to coact with a push rod in a honing tool to expand honing elements carried by the tool into engagement with a workpiece bore to be honed, a movable shaft acting on said first named push rod to move the latter in the direction of honing element expansion, a tubular guide into which said shaft projects for axial and rotational movement therein, a hollow nut within said guide and into which said shaft is threaded, said nut having an arm projecting through a longitudinal slot in said tubular guide whereby said nut is restrained against rotation, a gear case mounted on said tubular guide for axial movement thereon, and resilient means interposed between said gear case and said arm and adapted to exert pressure on said push rods and the honing elements and to compensate for variations in the initial tolerances of the bore to be honed.

3,126,673
VERTICAL HONING MACHINE
Kenneth D. Marker and Robert C. Muhl, Richmond, Ind., assignors to National Automatic Tool Company, Richmond, Ind., a corporation of Indiana
Filed Jan. 21, 1963, Ser. No. 252,974
14 Claims. (Cl. 51—34)

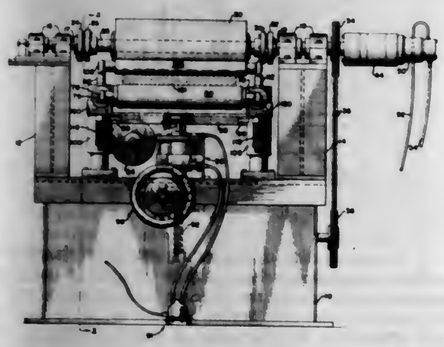
1. In a honing machine of the character disclosed, a spindle for rotating a honing tool and a rod slidable therethrough for effecting expansion and contraction of the stones of the tool, means for rotating and reciprocating said spindle, and means for moving said rod longitudinally

of said spindle, said last means comprising a threaded shaft operatively connected to said rod, a sleeve threaded on said shaft, a gear threaded on said sleeve and a pair of means to rotate said rotatable shaft and said gear, one of said pair of means comprising feed mechanism to compensate for wear during a honing cycle and the other of said pair of means comprising a stone expansion and



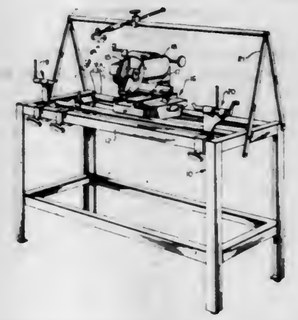
contraction-compensation mechanism to compensate for wear from work piece to work piece, said feed mechanism being pneumatically powered and including a hydraulic check means to determine the rate of feed, and said stone expansion and contraction-compensation mechanism comprising an air motor which stalls upon contact of the stones with the surface to be honed.

3,126,674
FINISHING MACHINE
William C. Burt, Olean, N.Y., assignor to Clair Manufacturing Co., Inc., Olean, N.Y.
Filed Feb. 13, 1963, Ser. No. 258,279
10 Claims. (Cl. 51—39)



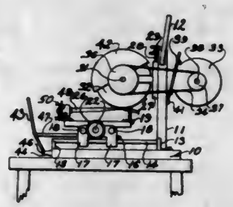
6. Finishing apparatus comprising a base, a work shaft rotatably carried upon said base and mounting a processing roll, a workpiece support table disposed beneath said roll, pneumatic piston-cylinder means providing vertical support for said table and operable to vertically bias and displace the latter, guide means operable to guide and stabilize said table in horizontal attitude while moving vertically, an endless conveyor having a portion resting upon and sliding over the top surface of said table, power means driving said processing roll and said conveyor whereby a workpiece may be disposed upon said conveyor to be carried thereby in bearing relation against said processing roll, workpiece hold-down means including an idler roller disposed above said conveyor transversely thereof and spring means resiliently operable to maintain a substantially uniform prescribed hold-down pressure on said roller.

3,126,675
LAWN MOWER SHARPENER
James McEwan, 138 Stockton, San Jose, Calif.
Original application Jan. 2, 1959, Ser. No. 784,782. Divided and this application Feb. 19, 1962, Ser. No. 173,923
4 Claims. (Cl. 51—48)



1. In a lawn mower sharpener having a pair of parallel cross bars, and a carriage for a grinding wheel mounted thereon, mounting means for said carriage comprising a rectangular frame carrying roller means for engagement with each of said cross bars, the roller means positioned toward the grinding wheel of said lawn mower sharpener having a fixed journal means on said frame, and another of said roller means having journal means resiliently connected to said frame, one of said roller means engaging the associated cross bar below the center line of the bar to lock the carriage in place yieldably.

3,126,676
COTTON PICKER SPINDLE SHARPENER
Arthur C. West, P.O. Drawer 752, Cleveland, Miss.
Filed June 24, 1963, Ser. No. 290,047
9 Claims. (Cl. 51—92)



1. In a sharpener for a cotton picker spindle having a driving gear adjacent one end thereof with longitudinally extending barb portions adjacent the other end thereof,

(*a*) a rotatable support member adapted to receive said one end of the spindle and hold said spindle against rotation relative to said rotatable support member,

(*b*) a second support member adapted to receive said other end of the spindle,

(*c*) releasable means to hold said rotatable support member at selected angular positions whereby the spindle is locked in selected positions,

(*d*) a common frame for supporting said rotatable support member and said second support member,
(*e*) a rotary sharpening tool disposed to make a longitudinally extending cut in a spindle to be sharpened while the spindle is held between said rotatable support member and said second support member,
(*f*) means holding said sharpening tool and said frame at selected positions relative to each other to place said sharpening tool in alignment with a spindle supported between said rotatable support member and said second support member, and
(*g*) means to impart relative movement between said frame and said sharpening tool to thereby make said longitudinally extending cut in a spindle to be sharpened.

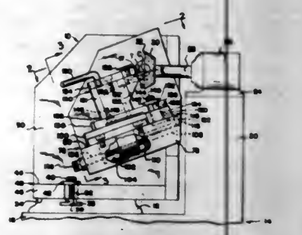
3,126,677
PIANO HAMMER SANDER
William L. Herrmann, 3650 Myrtle Road, Rte. 1, Port Huron, Mich.
Filed Aug. 29, 1960, Ser. No. 52,616
1 Claim. (Cl. 51—185)



A sanding device for sanding the felt striking end of a piano hammer square with relation to the vertical sides of the hammer, comprising: a horizontal base portion; a pair of laterally spaced apart parallel surfaced guide members mounted on said base portion and extended upwardly vertically therefrom; each of said guide members being provided with a longitudinally extended recess on the lower inner edge thereof and over the entire length thereof; a strip of sanding material slidably mounted along the upper surface of the horizontal base portion for longitudinal movement thereover between the pair of spaced apart guide members and having the side edges thereof slidably mounted in said recesses and having an upper surface disposed at right angles to the inner sides of said guide members for sanding the lower edge of the felt striking end of a piano hammer square with the vertical sides of the hammer when a piano hammer is moved between said guide members with the felt striking and engaging said sanding means; and, the upper edges of said guide members being formed in a half circular shape.

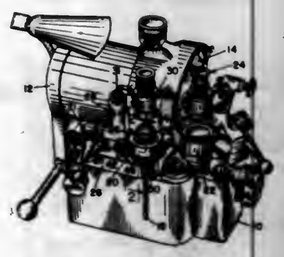
3,126,678
GRINDING MACHINE
Henry L. Terwilliger, Southfield, Mich., assignor to Gorham Tool Company, Detroit, Mich., a corporation of Michigan
Filed Oct. 16, 1961, Ser. No. 145,389
5 Claims. (Cl. 51—218)

5. A machine for grinding an arcuate top edge and an inclined curved end surface upon a workpiece, said machine including
a stationary structure having an upright portion containing substantially horizontal primary pivot means having a substantially horizontal primary pivot axis,
a tiltable structure pivotally mounted on said primary pivot means for tilting adjustment around said substantially horizontal primary pivot axis relatively to said stationary structure,
means for locking said tiltable structure in its tilted position of adjustment relatively to said stationary structure,



a workpiece holder carrier mounted on said tiltable structure at a location spaced radially away from said primary pivot axis and disposed substantially tangential to a circular arc of swing lying in a plane perpendicular to said primary pivot axis with its center on said primary pivot axis,
secondary pivot means on said carrier having a secondary pivot axis disposed transverse to said primary pivot axis,
a workpiece holder pivotally mounted on said secondary pivot means for swinging motion around said secondary pivot axis,
and means for removably securing a workpiece to said workpiece holder.

3,126,679
DEVICE FOR POINT THINNING OF DRILLS
Ivan V. Abadjieff, Worcester, Mass., assignor to Leland-Gifford Company, Worcester, Mass., a corporation of Massachusetts
Filed Oct. 20, 1961, Ser. No. 146,613
6 Claims. (Cl. 51—219)



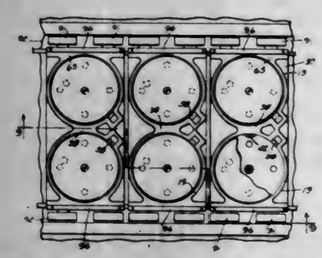
1. A combination drill grinding and point thinning apparatus comprising a base, a pair of separate and independent receivers on the base, a drill grinding tool on the base, a collet drill holder adapted to be received and held selectively in either one of said receivers, a collet in the holder, a drill in the collet, said tool providing for sharpening the drill while the drill collet holder, collet and drill are held in one receiver, said tool also providing for thinning of the point of the drill while the drill collet holder, collet and drill are held in the second of said receivers, and means on said second receiver for angularly adjusting the collet drill holder, collet and drill together as a unit about the axis thereof in said receiver, said adjusting means including an element to clamp said collet drill holder, collet and drill in angularly adjusted position with respect to said second-named receiver and said tool without changing the relative radial relation between the drill, the collet, and the collet holder.

3,126,680
METHOD OF TREATING PLASTICS
William G. Baird, Jr., Winchester, Carl A. Lindstrom, Jr., Arlington, Arthur L. Besse, Jr., Weston, and Donald J. d'Entremont, East Boston, Mass., assignors to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut
Original application Feb. 7, 1958, Ser. No. 713,848, now Patent No. 3,022,543, dated Feb. 27, 1962. Divided and this application Apr. 6, 1961, Ser. No. 131,697
2 Claims. (Cl. 53—3)



1. A process of preparing a package comprising the steps of (1) loosely wrapping a band of a polymer selected from the group consisting of biaxially oriented polyethylene and biaxially oriented polypropylene around a multiplicity of articles, the ends of the articles extending beyond the wrapped portion, (2) heat sealing the band to form a sleeve and (3) heat shrinking the sleeve of polymer to tightly retain the articles in their mid portion.

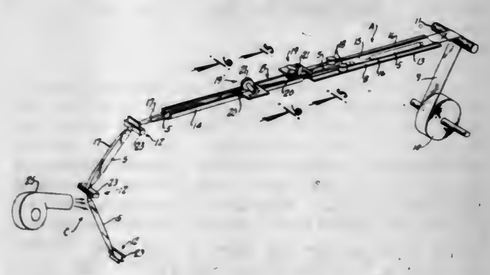
3,126,681
STRAIGHT-LINE VACUUM PACKING
Charles E. Cloud, 150 Prairie, Wilmette, Ill.
Filed Dec. 28, 1960, Ser. No. 78,893
22 Claims. (Cl. 53—28)



1. Packaging apparatus including in combination:
a plurality of mold cups linked together in the form of an endless chain, each having a suction passage extending from deep in the cup to an opening exposed externally of the cup;
means for moving the cups with step-by-step movement to pass around spaced parallel generally horizontal axes;
means for guiding the upper run of cups along a generally straight and horizontal path passing a filling station;
means for applying a web of stretchable material across the cups as they approach said station;
said apparatus including means for restraining the sides of the web against lateral movement while stretched into said cups;
means including a succession of thrust-applied separable couplers for connecting a suction pump to the suction passages of successive cups in successive positions as they successively stop along said path for drawing air from the cups, thereby forming pockets in the web;
valves carried by the cups associated with the suction passages for preventing the return of air to the pockets when said last named means is separated from the cups during movement of the cups;
means for applying a second web across the cups after they have passed the filling station;
a carriage moveable downwardly toward and upwardly from said cups along a part of said path beyond the point of applying the second web thereto;
a succession of operating devices carried by said carriage at positions to cooperate with successive cups at successive stopped positions thereof as the carriage moves downwardly; and
means to move the carriage downwardly to cause said devices to cooperate successively with the cups in successive positions.

22. The method of handling nontacky sheetlike material which includes the steps of pressing an adhesive-free surface of said material against an adhesive-free smooth surface with firm pressure to cause the material to cling by pressure-induced surface clinging action, moving said surface, performing an operation with said material which tends to forcefully slide the material along the surface, effectively resisting said sliding movement by said pressure-induced surface clinging action and removing the material from said surface by stripping it away from the surface, thereby overcoming the substantially unchanged surface clinging action.

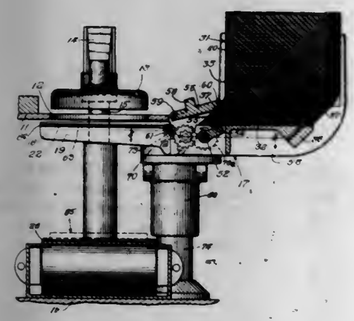
3,126,682
METHOD OF WRAPPING CANDLES
Casimir Krance, Oshkosh, Wis., assignor to Victrylite Candle Co., Oshkosh, Wis., a corporation of Wisconsin
Filed Apr. 8, 1963, Ser. No. 271,409
2 Claims. (Cl. 53—30)



1. A method of wrapping candles an similar articles which are likely to be damaged by heat, which comprises the steps of:
(A) moving a web of heat shrinkable film material which has the property of clinging to itself when lapped, lengthwise along a defined path which leads successively past a loading station and a forming station;
(B) at the loading station depositing a candle on the moving web with the candle disposed lengthwise of the web;
(C) at the forming station shaping the traveling web into a tube loosely enclosing the candle, and bringing the longitudinal side edge portions of the web into overlapping contiguity to thereby cause the same to cling to one another by the inherent tendency of the material to cling to itself;
(D) gripping the tube a short distance beyond each end of the candle therein;
(E) by said grips on the tube maintaining longitudinal tension thereon to thereby at all times resist any tendency of the longitudinal edge portions to pull apart;

(F) solely by said grips and with the tube longitudinally tensioned and its longitudinal edges clinging to one another, carrying the tube with the candle therein through a shrink zone;
(G) as the tube with the candle therein is thus carried through the shrink zone applying heat there to without physically contacting any portion of the tube with the heat source, to shrink the tube transversely in intimate contact with the surface of the candle and without pulling apart the overlapped and clinging longitudinal edge portions of the tube; and
(H) severing the enwrapped candle from the web.

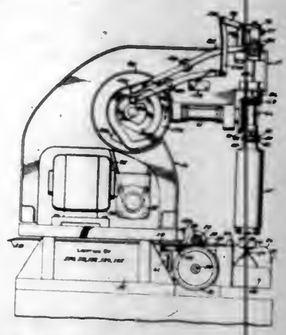
3,126,683
SEPARATOR FEEDER
Louis R. Richards, Mokena, and Harry H. Holly, Olympia Fields, Ill., assignors to Hollymatic Corporation, a corporation of Illinois
Filed June 9, 1961, Ser. No. 116,141
12 Claims. (Cl. 53—122)



1. In an article shaping device in which an article is shaped, apparatus comprising: means for propelling said shaped article from said apparatus in a free falling path through space, said path having a preselected direction and destination; means including a frame defining an opening in said path through which said free falling shaped article passes from said propelling means, said frame having means for engaging the opposite edges of a flexible sheet to retain the sheet in said frame to span said opening in article intercepting position, the article thereby picking up the sheet and carrying it to said destination without substantially changing said path; and means for moving said sheet from exteriorly of said path into said frame engaging position prior to said article passing through said opening.

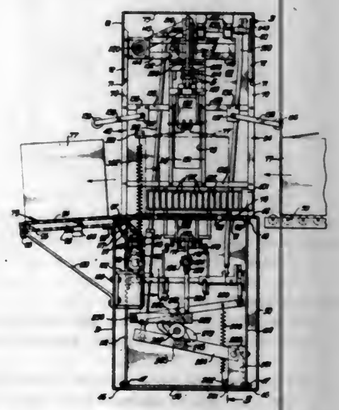
3,126,684
BAG CLOSING MACHINE
Gerald C. Bower, Santa Ana, Calif., assignor to Royal Industries, Inc., Pasadena, Calif., a corporation of California
Continuation of application Ser. No. 694,154, Nov. 4, 1957. This application Nov. 13, 1961, Ser. No. 153,778
3 Claims. (Cl. 53—135)

1. In a machine for closing a bag with a pliable tape:
a saddle;
means for supplying said tape in a path across said saddle;
a groove in said saddle, transverse to said path, over which said tape may pass;
an axis upon which said saddle tilts in response to pressure;
means for restoring said saddle to its original position when pressure is removed from said saddle;
means responsive to position-restoring motion of said saddle for advancing said tape so as to cause said tape to pass over said groove;
means further responsive to position restoring motion of said saddle for shearing from said tape the portion of said tape then overlying said saddle;



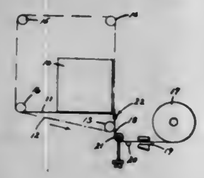
said groove having shoulders adapted to force convergently upright the end parts of said sheared portion of said tape when the part of said sheared portion overlying said groove is forced by pressure into said groove; and
means responsive to tilting of said saddle under said pressure for grasping and twisting said end parts of said sheared portion of said tape.

3,126,685
MACHINE FOR SIMULTANEOUSLY CLOSING TOP AND BOTTOM OF CARDBOARD CARTON
Stanley K. Paxton, Kenneth P. Paxton, and Elmer E. Evans, Yakima, Wash., assignors to Paxton Sales Corporation, Yakima, Wash., a corporation of Washington
Filed Sept. 21, 1960, Ser. No. 58,595
14 Claims. (Cl. 53—138)



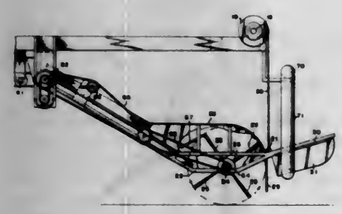
1. In an automatic cyclic stapling machine for simultaneously stapling lower and upper side flaps of a carton fed into said machine, after said carton has been filled with a product to be packaged, to lower and upper end flaps respectively of said carton, while said carton is halted in a given position in said machine, the combination of: means for supporting a carton in said position on its bottom end and side flaps with said flaps folded together in flat overlapping relation, and with the top end and side flaps of said carton folded together in flat overlapping relation over said product; a lower stapling mechanism disposed under said carton when the latter is so supported for driving staples upwardly into the bottom of said carton; an upper stapling mechanism disposed above said carton when the latter is so supported, for driving staples downwardly into the top of said carton; and power means for successively locating said carton in the aforesaid position in said machine and then simultaneously actuating said stapling mechanisms to staple together the overlapping bottom end and side flaps of said carton and to staple together the overlapping top end and side flaps of said carton.

3,126,686
AUTOMATIC STRAPPING MACHINE
Anthony J. Kobylanski, Montreal, Quebec, and Paul Emile Fontaine, Verdun, Quebec, Canada, assignors, by mesne assignments, to FMC Corporation, San Jose, Calif., a corporation of Delaware
Filed Dec. 6, 1961, Ser. No. 157,405
19 Claims. (Cl. 53—198)



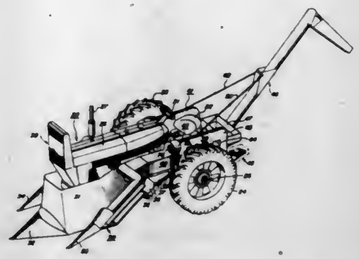
1. In an automatic binding machine, a carrier for gripping an end of a flexible binding material extending from a supply, means for moving said carrier in a first direction from a starting position through a circuit of more than 360° which encompasses an article to be bound whereby the binding material is looped about the article with the end engaged by said carrier lapping that portion of the binding material extending toward the supply, means for securing the lapping portions of the binding material together, means for disengaging said carrier from the binding material, means for moving said carrier in the direction opposite to the first direction to restore said carrier to starting position, and means for re-engaging said carrier with the binding material when said carrier is restored to starting position.

3,126,687
METHOD FOR SALVAGING WASTE COTTON
James E. Tieman, 548 S. Horne St., Mesa, Ariz.
Orig'nal application Apr. 19, 1961, Ser. No. 104,126, now Patent No. 3,092,948, dated June 11, 1963. Divided and this application Nov. 8, 1962, Ser. No. 236,371
6 Claims. (Cl. 56—1)



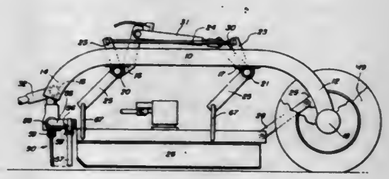
1. A method of salvaging waste cotton comprising blowing cotton from a pair of harvested cotton rows into the furrow between said rows after which the cotton is mechanically picked from said furrow.

3,126,688
CROP PICKING AND TREATING APPARATUS
Elof K. Karlsson, East Moline, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Jan. 31, 1962, Ser. No. 170,075
6 Claims. (Cl. 56—18)



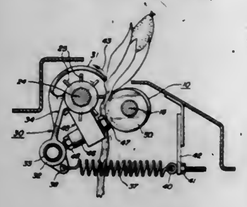
1. In an agricultural apparatus for picking and shelling corn, the combination of:
a picker unit positioned to pick ears of corn and forward the picked ears to a reference location;
a sheller unit mounted with at least a portion thereof adjacent said reference location to receive the picked ears and effect a corn shelling operation;
a positive feed means positioned adjacent said reference location to assist in forwarding the picked ears from said picker unit to said sheller unit;
fan means including a duct disposed to direct an air current toward and into said one portion of the sheller unit to thereby force any loose kernels of corn into said sheller unit, and means for driving said fan means to produce an air stream through said duct of a velocity sufficient to save any kernels of corn which would otherwise be lost at the juncture of the picker and sheller units.

3,126,689
PROTECTIVE DEVICE FOR FARM IMPLEMENTS
William H. Walker, Clarendon Hills, and Joseph A. Jelinek, Chicago, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Mar. 29, 1962, Ser. No. 183,545
1 Claim. (Cl. 56—25.4)



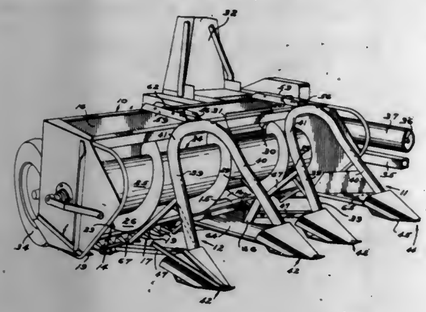
A protective shield for farm implements comprising a bar having mounting means thereon, a resilient shield mounted on said bar, said resilient shield comprises a plurality of individual resilient elastomer strips having a laterally extending enlarged mounting portion located at one end thereof that functions to reinforce said strips and also to space the strips from each other, a mounting aperture formed centrally of said mounting portion, a plurality of bands carried by said bar, and means extending through said apertures for pivotally connecting said elastomer strips to said bands.

3,126,690
CORN PICKING AUXILIARY EAR DETACHING APPARATUS
Arthur H. Keller, Western Springs, and Elof K. Karlsson, East Moline, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Feb. 26, 1962, Ser. No. 175,547
5 Claims. (Cl. 56—107)



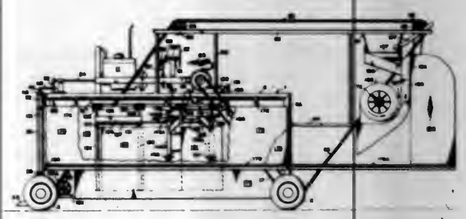
1. In a corn picking apparatus, the combination of:
a first generally cylindrical corn feeding roll;
means, including a second generally cylindrical corn feeding roll positioned adjacent said first roll, for defining with said first roll a stalk feeding slot of given lateral extent;
aggressive means affixed to at least a portion of one of said rolls to assist in snapping the ears from the stalks as fed through said slot;
means for effecting concomitant rotation of said first and second rolls to snap the ears from the stalks;
a stripper plate, positioned adjacent one of said rolls, mounted for oscillating movement about an axis proximate the axis of one of the rolls to vary the effective lateral extent of said material feeding slot;
and means for effecting a cyclical variation of the position of said movable stripper plate to vary the aggressive exposure during the snapping process.

3,126,691
ROW CROP FORAGE HARVESTER
Vincent F. Krahn and Douglas S. Lock, Birmingham, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Sept. 11, 1961, Ser. No. 137,268
2 Claims. (Cl. 56—119)



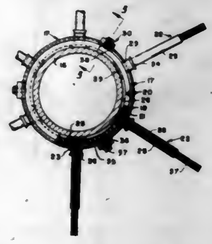
1. A row crop forage harvester for corn and the like, comprising a transversely extending feed platform having a shelf-like bottom portion and an upwardly extending rear wall, a cutter bar of the sickle bar type extending along the forward edge of the platform and including a plurality of spaced, forwardly extending guards, a feed auger extending along the feed platform immediately above the cutter bar and having a radially extending spiral flight extending for at least a portion of the length of the auger to move material therealong, the spiral flight extending forwardly of the cutter bar, an opening in the rear wall of the feed platform, and a row crop guide comprising a pair of laterally spaced gathering points projecting forwardly from the guards, the space therebetween leading rearwardly to the cutter bar and forming an opening for reception of a standing crop, the gathering point on the side of the opening to which the auger feeds including a generally horizontal shelf extending forwardly from the cutter bar, the flight of the auger projecting above the shelf-like portion of the gathering point to displace the lower end of a stalk as it is cut and deposit the stalk on the adjacent shelf-like portion.

3,126,692
MACHINE FOR HARVESTING BERRIES AND SIMILAR PRODUCE FROM THEIR PLANTS
Raymond M. Weygandt and Raymond A. Weygandt, both of Rte. 1, Box 308, Canby, Oreg.
Filed May 28, 1962, Ser. No. 201,037
12 Claims. (Cl. 56—330)



4. A harvesting machine for row crops comprising an ambulatory supporting frame adapted for longitudinal movement along a row of plants, a pair of vertically disposed generally longitudinally extending shaker elements supported from said frame in transversely spaced relation for transverse oscillation about axes substantially coincident with their respective forward edges, and for movement on opposite sides of and in longitudinal sliding relation with the foliage of said plants, and means for transversely oscillating the said shaker elements substantially in phase with each other about their said axes, while maintaining their relative spacing and general longitudinal disposition during the entire operation of the machine, whereby to transversely vibrate the plants received between them for dislodging the produce from said plants.

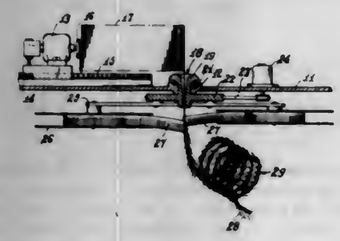
3,126,693
FLEXIBLE GRAIN PICKUP ELEMENTS AND MOUNTING THEREFOR FOR HARVESTERS AND THE LIKE
Reynold John Renn, 443 Riverdale Ave., Calgary, Alberta, Canada
Filed Oct. 8, 1962, Ser. No. 229,015
4 Claims. (Cl. 56—364)



1. In a grain harvester and the like including a rotatable element carrying member located transversely

thereof; a plurality of grain pickup element assemblies surrounding and supported by said member in spaced and parallel relationship therealong, each of said assemblies including a circumferential resilient element anchor surrounding said member, means to detachably secure said anchor around said member, and a plurality of flexible pickup elements detachably secured to and extending radially from said resilient anchor in spaced relationship therearound, said means to detachably secure said anchor around said member comprising an annular half retaining ring secured to said member, a corresponding detachable annular half retainer ring surrounding said member, each of said half retainer rings including an annular flange adapted to partially enclose said anchor, and at least one detachable clamp means adapted to engage said halves on the periphery thereof, thereby holding said second half ring in position relative to said first half ring.

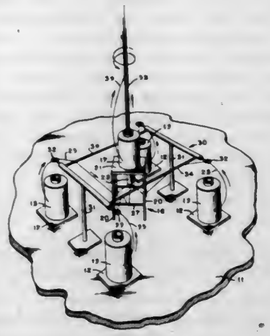
3,126,694
APPARATUS FOR MAKING TINSEL GARLANDS
Malcolm Logan, Palatine, Ill., assignor to Holi-Gay Mfg. Co., Chicago, Ill., a corporation of Illinois
Filed Sept. 13, 1962, Ser. No. 223,317
3 Claims. (Cl. 57—13)



1. In a machine of the character described, the combination of, a support, a motor mounted on said support and having a shaft, a chuck carried by the motor shaft adapted to have one end of a helical coil of stiff wire-like material secured thereto for rotating the helical coil therewith, said support having an opening therein spaced from said motor and through which the other end of the stiff wire-like material of the coil is adapted to be fed during motor operation, means to advance the motor and coil toward the opening during motor operation, at least one spool carrying a rolled strip of tinsel material having its free end connected to said wire-like strand mounted beneath said support outwardly radially of said opening, and means to advance said spool in a circular path around said opening.

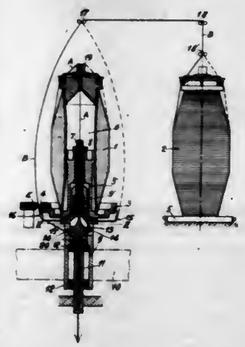
3,126,695
YARN CREEL
Charles H. McGill, Decatur, Ala., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
Filed Oct. 8, 1962, Ser. No. 229,239
1 Claim. (Cl. 57—18)

A creel, comprising a base for supporting a plurality of spaced first yarn warps, a frame mounted on the base, a plurality of eyelet guides secured to the frame at positions above said warps for controlling the ballooning of yarns drawn from said first warps, said frame having therein a plurality of first guide rods, a raised stand mounted on the base for supporting a central warp at an elevation above said first warps, said central warp having therein a central opening, a tube secured to the stand for directing yarns from said first warps through said central opening, and a plurality of second guide rods mounted on the stand below the tube, said second rods being lower than the first rods so that yarns from the warps pass over



the first rods and downward and under the second rods before passing to the tube.

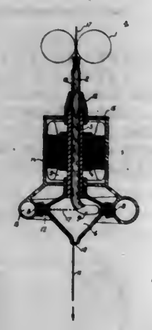
3,126,696
PROCESS AND APPARATUS FOR CONTAINING A FOLDED YARN
Michele Ratti, Luino, Varese, Italy, assignor to Michele Ratti S.p.A.
Filed Mar. 19, 1962, Ser. No. 180,905
Claims priority, application Italy May 12, 1961
3 Claims. (Cl. 57—58.3)



1. Apparatus for producing a folded yarn formed by at least two fine threads, which upon being doubled retain their original twist or absence of twist unchanged comprising: a first fixed bobbin having a hollow central cavity passing therethrough from one end to the other; a second fixed bobbin; first fixed threadguide means located coaxially above said first bobbin; second fixed threadguide means positioned coaxially above said second bobbin; a coaxial, driven whorl sleeve; third rotatable threadguide means for forming a balloon and presenting a friction resistance to the yarn which decreases due to centrifugal forces when its rotational speed increases in order to wind the thread or threads originating at the second bobbin around the thread or threads originating at the first bobbin; means mounting said third threadguide means for rotation with said whorl sleeve and about said first bobbin; first rotating tube means carried by said whorl sleeve for transporting the thread or threads coming from said first bobbin centrally along the latter's axis; a deflector located coaxially at the end of the

first bobbin opposite to said first threadguide means; fourth threadguide means mounted for rotation with said whorl sleeve and adjacent said deflector for guiding the thread or threads emerging from said first tube means to said deflector and then to a doubling point where such thread or threads encounter the other thread or threads from the balloon, said fourth threadguide means presenting a friction resistance which decreases due to centrifugal forces when its rotational speed increases; and second, freely-rotatable tube means mounted on the whorl sleeve coaxially with said first tube means for receiving the threads doubled to one another and leading away the folded yarn thus produced.

3,126,697
APPARATUS FOR CONTINUOUS SPINNING OF FIBROUS TEXTILE MATERIALS
Leopold Čížek, Erik Jirásek, František Bučil, and Josef Ripka, all of Usti nad Orlici, Czechoslovakia, assignors to Vyzkumny ustav bavlvarsky, Usti nad Orlici, Czechoslovakia
Filed Dec. 20, 1962, Ser. No. 246,105
10 Claims. (Cl. 57—58.89)



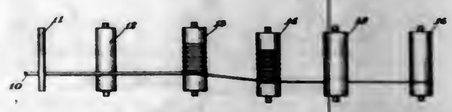
1. In a spinning arrangement, in combination,
a rotary spinning chamber rotating about its axis, said rotary spinning chamber having an inwardly directed annular collecting surface facing said axis and formed with a plurality of suction holes therein communicating with suction channels passing through the wall of said spinning chamber, and said rotary spinning chamber having an inlet opening and an outlet opening formed therethrough and communicating with the outer space;
a spinning tube extending through said inlet opening into said rotary spinning chamber and facing said collecting surface;
means for feeding fibrous material into said spinning tube;
said suction channels being dimensioned so as to create a reduced pressure in the spinning tube while the spinning chamber is rotating so as to draw said fibrous material fed into said spinning tube through said tube into said spinning chamber and into contact with said collecting surface;
means for creating relative rotation between said rotary spinning chamber and said spinning tube thereby spinning said fibrous material after it has been drawn into said spinning chamber; and
means for removing said thus-spun fibrous material in the form of yarn from said collecting surface and through said outlet opening of said rotary spinning chamber.

3,126,698
METALLIZED YARN FOR USE IN LAMÉ FABRICS
Walter G. Scharf, Ridgewood, N.J., assignor to Metal Film Company, Inc., New York, N.Y., a corporation of New York
Filed Dec. 2, 1960, Ser. No. 73,406
5 Claims. (Cl. 57—144)



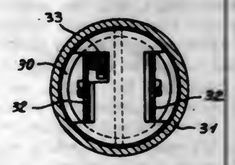
1. A filé comprising a non-metallic filamentary core having spiralled thereabout a coil of non-laminated metallized yarn having a thickness of less than one mil and formed by a base layer of transparent synthetic material having a metal deposit thereon coated by a plastic film.

3,126,699
PROCESS FOR PREPARING FILAMENTARY ARTICLES OF INVOLUTE CROSS SECTION
Lloyd E. Lefevre, Bay City, and Floyd E. Romesberg and Gerald M. Hart, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed July 21, 1960, Ser. No. 44,390
13 Claims. (Cl. 57—160)



1. A process for the preparation of rolled filamentary articles comprising the passage of a continuous, coherent, unoriented, flexible ribbon of an organic, thermoplastic, resinous material in flat, undistorted form into first guide means, removal of said ribbon from said first guide means so that a plane through the longitudinal axis of said ribbon and perpendicular to the width of said ribbon is at an acute angle to an extension of said plane of said ribbon entering said first guide means, the passage of said ribbon through a second guide means disposed parallel to said first guide means so as to divert or to deflect said ribbon into a direction of travel substantially parallel to and finitely displaced from said plane of said ribbon entering said first guide means while imparting a torque to said ribbon between said first and second guide means to cause said ribbon to roll into a filament of an involute cross section having the original edges of said ribbon essentially parallel to the longitudinal axis of the filament and while maintaining sufficient tension on said filament throughout the process to impart thereto orientation parallel to the longitudinal axis of said filament.

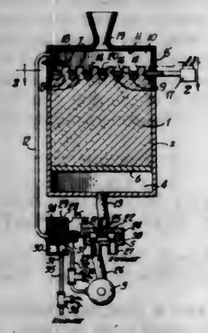
3,126,700
TIME METER
René-Philippe Jaccard, Petit-Lancy, Geneva, Switzerland, assignor to Samuel Jack Kaufman, New York, N.Y.
Filed Sept. 29, 1961, Ser. No. 141,756
2 Claims. (Cl. 58—21.13)



1. A time-meter, chiefly for indicating the duration of telephone calls, comprising an elongated tubular casing

including a main tube, two secondary tubes adapted to move longitudinally of the main tube near the corresponding ends thereof, a rack extending longitudinally of and rigid with each secondary tube, two trains of gears carried by the main tube and including each a gear wheel operatively connected with the corresponding rack and a spindle on which said gear wheel is fitted with slight friction, a pair of driving springs carried by the main tube and adapted to be stressed by the shifting of said corresponding secondary tube over the main tube, a regulator operatively connected with the spindle of one train of gears, an alarm hammer controlled by the other train of gears, a first bolt holding normally the hammer fast, a second bolt secured to the secondary tube carrying the rack corresponding to said one train of gears and adapted to release the first bolt for the maximum spacing of the two secondary tubes to allow operation of the hammer by the corresponding train of gears, the expansion of the springs upon release of the secondary tubes urging the racks and secondary tubes away from the main tube and actuating the train of gears respectively against the action of the regulator upon release of the first bolt, and means by which the shifting of the secondary tube carrying the rack cooperating with said one train of gears with reference to the main tube upon expansion of the corresponding spring indicates the time elapsed during said expansion.

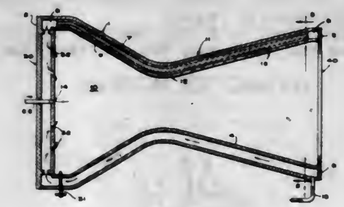
3,126,701
PROCESS FOR GENERATING GASES
Charles B. Henderson, Alexandria, and Joe M. Burton, Springfield, Va., assignors to Atlantic Research Corporation, Alexandria, Va., a corporation of Virginia
Filed Feb. 5, 1959, Ser. No. 791,487
22 Claims. (Cl. 60—35.4)



1. The process for generating gases which comprises feeding a continuous mass of plastic monopropellant composition which burns to produce gaseous combustion products through a shaping orifice into a combustion chamber at a rate at least as high as the linear burning rate of the propellant material, said composition having sufficient cohesive strength to retain a formed shape, requiring a finite stress to produce flow, being capable of continuous flow at ambient temperature under a maximum shear stress at a wall of about 10 p.s.i., and having a minimum tensile strength of about .01 p.s.i., said orifice being bounded by a solid material having a low maximum thermal conductivity of about 3 B.t.u./hr./sq./ft./° F./ft. and burning the leading face of the advancing, continuous, shaped mass within said combustion chamber, said leading face forming the burning surface of the extruding propellant, the low thermal conductivity of the solid material bounding the orifice serving to inhibit burn-back of the extruding propellant burning in the combustion chamber.

18. The process of claim 1 in which the monopropellant consists essentially of a stable dispersion of a finely divided, insoluble, solid, inorganic oxidizer in a continuous matrix of an oxidizable, organic liquid fuel, all components of which have a maximum vapor pressure of about 25 mm. Hg at 100° C., said liquid fuel comprising at least about 8% by weight of said composition and consisting essentially of at least about 50% of an inert organic liquid compound containing molecularly combined carbon and hydrogen and requiring an external oxidizer for combustion, and from 0 to about 50% of an active organic liquid compound containing combined oxygen available for oxidization of other components of said active compound, said active compound containing a radical selected from the group consisting of nitroso, nitro, nitrite, and nitrate, said oxidizer being present in sufficient amount to maintain active combustion of the inert fuel in the absence of any oxidizer external to said monopropellant composition.

3,126,702
ROCKET NOZZLE DESIGN
Philip P. Newcomb, Manchester, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed May 23, 1960, Ser. No. 31,118
7 Claims. (Cl. 60—35.6)

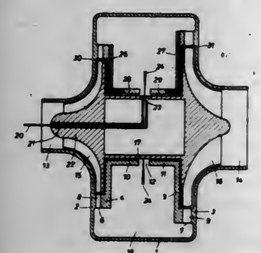


1. A thrust nozzle construction including a load carrying annular outer shell, a high heat resistant refractory inner liner, and circumferentially spaced, generally axially extending spacer members having a thermal insulating coating in substantially line contact with said shell and liner holding them in radially spaced concentric relationship and providing continuous support therebetween to define a fluid jacket between said shell and liner.

3,126,703
GAS TURBINE POWER PLANT WITH ROTARY FUEL ATOMIZATION AND ANNULAR COMBUSTION CHAMBER
Ulrich Oprecht, Wittenbach, St. Gall, Switzerland, assignor to Adolph Saurer Ltd., Arbon, Switzerland
Filed Dec. 19, 1960, Ser. No. 76,814
Claims priority, application Switzerland Dec. 24, 1959
3 Claims. (Cl. 60—39.36)

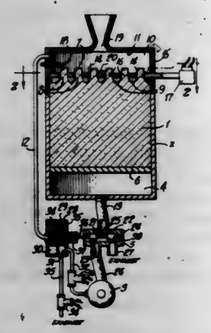
1. A gas turbine power plant of the annular combustion chamber, rotary fuel atomization type, comprising in combination, a housing, a bearing split once in axial direction, mounted in this housing, an air lubricated shaft arranged for rotation in said bearing, compressor and turbine rotors arranged in overhung relationship on said shaft so as to have free floating ends, a compressor exit, means for supplying lubricating air from the compressor exit to the shaft, said annular combustion chamber being disposed in concentric relationship to said shaft, between the said compressor and turbine rotors, an axial

bore and at least one radial bore communicating with said axial bore provided in said shaft, the parts of said split bearing being spaced from one another in axial direction to define an annular slot therebetween, the axis



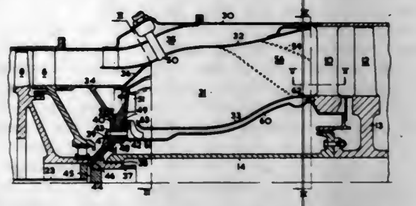
of said radial bore in said shaft coinciding with the center line of the said annular slot, and means for feeding fuel through said axial bore, said radial bore and said annular slot into said combustion chamber.

3,126,704
PROCESS FOR GENERATING GASES AND APPARATUS THEREFOR
Charles B. Henderson and Joe M. Burton, Alexandria, Va., assignors to Atlantic Research Corporation, Alexandria, Va., a corporation of Virginia
Original application Feb. 5, 1959, Ser. No. 791,487. Divided and this application Oct. 20, 1959, Ser. No. 847,659
13 Claims. (Cl. 60—39.47)



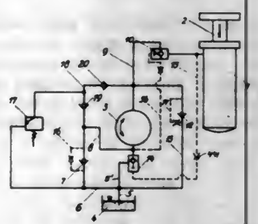
1. A gas generating apparatus for using a plastic, shape-retaining extrudable monopropellant, which comprises housing means for defining a combustion chamber and a storage chamber for plastic monopropellant, partition means, made of a material having a maximum thermal conductivity of about 3 B.t.u./hour/sq. ft./° F./ft., separating said chambers, said partition means having a passage therethrough bounded by said material, means for selectively loading monopropellant in the storage chamber sufficiently for extruding a continuous shaped mass of the monopropellant through said passage in said partition means into said combustion chamber, means for controlling said loading means to maintain a rate of extrusion at least equal to the linear burning rate of the nonopropellant and to vary the rate thereabove, and an igniter for the extruded shape in the combustion chamber.

3,126,705
COMBUSTION SYSTEM
Rhys Price Probert, Farnborough, Peter Martin, Farnham, and Edward Langford Hartley, Farnborough, England, assignors, by mesne assignments, to Power Jets (Research and Development) Limited, London, England, a British company
Filed Mar. 22, 1957, Ser. No. 647,918
Claims priority, application Great Britain Mar. 26, 1956
3 Claims. (Cl. 60—39.74)



1. A gas turbine comprising a compressor including a rotor; a turbine mounted coaxially with and axially spaced from the compressor and including a rotor; an annular combustion chamber lying between the compressor and turbine and comprising coaxial inner and outer generally axially extending walls defining between them a flow path from the compressor to the turbine; a shaft drivingly connecting the compressor and turbine rotors and extending coaxially within said inner wall; a disc mounted on the shaft for rotation therewith at the compressor end of the combustion chamber, said disc having a periphery spaced outwardly from said inner wall but spaced inwardly from said outer wall to define with the latter a generally axially facing inlet to the combustion chamber, said disc also having a side surface extending generally transversely to the axial direction; means defining a substantially constant velocity passage connecting said compressor to said combustion chamber inlet; and means for introducing liquid fuel onto said side surface of the disc at a position spaced inwardly from the periphery at such a rate in relation to the speed of rotation of the disc that the fuel is thrown off the periphery of the disc across the inlet as a sheet of fuel.

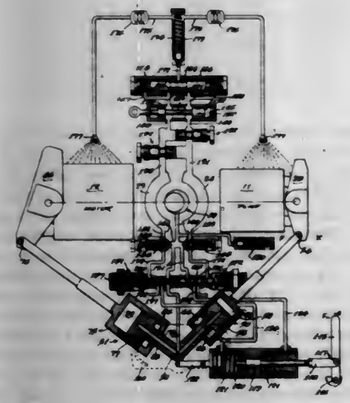
3,126,706
HYDRAULICALLY OPERATED UNIT, PARTICULARLY FOR ELEVATING PLATFORMS AND LIFTS
Willi Dettinger, Urach, Wurttemberg, Germany, assignor to Pumpenfabrik Urach, Urach, Wurttemberg, Germany, a firm
Filed Oct. 4, 1960, Ser. No. 60,508
Claims priority, application Germany Oct. 5, 1959
10 Claims. (Cl. 60—52)



1. A hydraulically operated unit for use with elevating platform lifts, said unit comprising a vertical single acting cylinder, a hollow plunger piston longitudinally movable within said cylinder, a lower head mounted on said piston, said hollow piston comprising a fluid reservoir for operating fluid, a fluid pump arranged between said cylinder and the reservoir in said piston, a motor

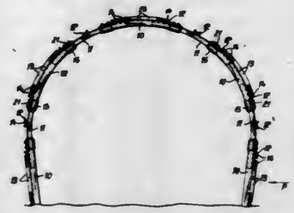
for driving said pump, said motor being reversible so as to drive said pump in each of two opposite directions, said pump having a first port and a second port, one of said first and second ports serving as an inlet and the other as an outlet in a first direction of operation of said pump and the one port serving as an outlet and the other as an inlet in the second direction of operation of said pump, an inlet passage connecting each of said ports with the interior of said piston, a check valve in each of said inlet passages to permit the flow of fluid toward the pump only, each of said check valves having a restricted bleed passage therearound, an outlet passage connected to each of said ports, a controllable check valve in each of said outlet passages, one of said outlet passages communicating with the interior of said cylinder, the other of said outlet passages communicating with the interior of said piston, said controllable check valve in said other outlet passage being controlled to close during a lift operation by the pressure of said piston operating in a first control passage leading thereto from said one outlet passage downstream of said controllable check valve in said outlet passage, the controllable check valve in said one outlet passage being maintained open during the descent of said lift unit by pressure in a second control passage leading thereto from said other outlet passage containing a controllable check valve and upstream thereof, and safety pressure release means connected to each of said ports to release excessive fluid pressure.

3,126,707
HYDROSTATIC TRANSMISSION
Melvin M. Hann and Harry C. Moon, Jr., Rockford, Ill., assignors to Sundstrand Corporation, a corporation of Illinois
Filed Mar. 13, 1961, Ser. No. 95,078
47 Claims. (Cl. 60—53)



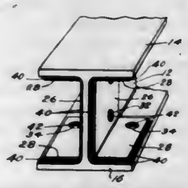
1. In a hydaulic transmission, a pump, a motor, conduit means connecting the pump outlet to the motor inlet, means for varying the displacement of the pump, means for varying the displacement of the motor, selectively operable means for placing the displacement varying means of the pump in a maximum displacement position and the displacement varying means of the motor in a minimum displacement position thereby to operate the transmission at full speed, and means responsive to increased load on the transmission and controlling both displacement varying means to first increase the displacement of the motor to increase the torque and then, if the increased load is not overcome, reduce displacement of the pump.

3,126,708
COMPOUND SUPPORTING STRUCTURE FOR UNDERGROUND ROADS IN MINES
Karl-Theodor Jasper, 38 Grunstrasse, Hagen, Westphalia, Germany
Filed Nov. 18, 1959, Ser. No. 853,751
Claims priority, application Germany Dec. 27, 1958
7 Claims. (Cl. 61—45)



1. A compound structure for supporting the inner surfaces of mine galleries comprising a plurality of compound elements, each of said elements composed of a pair of relatively closely spaced elongate sections, transverse members interconnecting opposed sections of each of said elements to form an open lattice construction, said transverse members having portions extending outwardly of said sections, the ends of said spaced sections of each of said compound elements being nestably interconnected with adjacent ends of the sections of at least one adjacent compound element and forming an arched support, and means clamping said ends in yieldable relation to one another to form a support over a transverse area of the inner surface of a mine gallery.

3,126,709
H-BEAM PILE POINT
John J. Dougherty, Cedar Grove, N.J. (262 Rutherford Blvd., Clifton, N.J.)
Filed Oct. 13, 1960, Ser. No. 62,430
1 Claim. (Cl. 61—53)

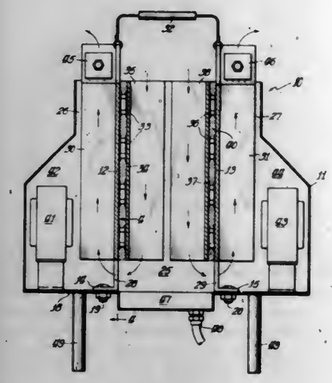


A reinforced pile point construction comprising an elongated H-shaped body having an elongated rectangular-shaped web portion, flanges across the long edges of the web portion extending the length thereof on both sides thereof, said web portion and flanges defining channels on both sides of the web portion and a relatively short channel-shaped fitting in each channel adjacent one end of the body, said fitting being substantially shorter than the pile body, the pile body embracing the channel fitting with the surfaces of the pile body and fitting in snug intimate contact and with the corners of the channel fitting tightly fitting in the corners of the pile body, the edges of the flanges of the channel fitting being welded to the web portion and to the flanges of the pile body, the web portion of the fitting having spaced holes across one end thereof, the flanges of the fitting each having a hole at the same end thereof, the outer end of the channel fitting being spaced inwardly away from the adjacent peripheries of the web and flanges a distance at least equal to the thickness of the material of the body of the channel fitting to provide an unobstructed end.

3,126,710
THERMOELECTRIC DEHUMIDIFIER AND REHEATER

Andrew P. Boehmer, Des Plaines, and Boubene M. Jaremus, Barrington, Ill., assignors to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois

Filed June 19, 1962, Ser. No. 203,644
2 Claims. (Cl. 62—3)



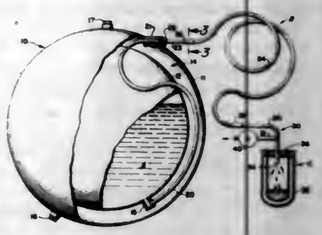
1. A dehumidifier comprising:
a casing;
a first thermoelectric panel, having a first surface which is heated and a second surface which is cooled as electrical energy is supplied to the panel, a plurality of heat-dissipating fins affixed to the heated surface and a plurality of heat-absorbing fin segments affixed to the cooled surface;
a second thermoelectric panel, having a first surface which is heated and a second surface which is cooled as electrical energy is supplied to the panel, a plurality of heat-absorbing fin segments affixed to the cooled surface of said second panel and extending toward the heat-absorbing fin segments of the first panel, and a plurality of heat-dissipating fins affixed to the heated surface of the second panel,
said casing and panels defining a vertically extending cooling channel around the heat-absorbing fin segments, including an upper inlet where the direction of the incoming air is the same on each side of the inlet to provide maximum cooling, and a pair of connecting apertures at the lower portion of the cooling channel,
said casing and panels further defining a pair of vertically extending air heating channels around the heat-dissipating fins, each heating channel receiving cooled air from one of said connecting apertures and having an upper outlet where the direction of the outgoing air is the same on each side of the outlet;
and means for supplying electrical energy to said panels to operate the dehumidifier.

3,126,711
METHOD AND APPARATUS FOR TRANSFER OF CRYOGENIC LIQUID

Lamon E. Miller, Reseda, Calif., assignor to The Garrett Corporation, Los Angeles, Calif., a corporation of California

Filed Apr. 29, 1960, Ser. No. 25,700
4 Claims. (Cl. 62—52)

3. A liquid transfer system comprising:
a liquid transfer line defining a liquid transfer passage;
means connected to one end of said line for delivering a liquid under pressure to the adjacent end of said passage;
means adjacent said one end of said transfer line for heating said liquid to flash the latter to a vapor containing entrained droplets of liquid;
a liquid receiver connected to the other end of said line having a chamber communicating to the adjacent end of said passage for receiving said droplets; and

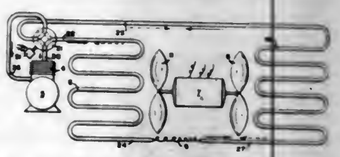


a vent line extending transversely from said transfer line immediately upstream of said receiver and communicating with a pressure less than the vapor pressure in said transfer line, whereby vapor is vented from said passage through said vent line while the momentum of said droplets carries the later past said vent line into said receiver.

3,126,712
DEFROST CONTROL FOR REFRIGERATION SYSTEMS

Gregory G. Gebert, Woodstock, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware

Filed Sept. 6, 1962, Ser. No. 221,756
6 Claims. (Cl. 62—81)



5. In the method of operating an air conditioning apparatus including an indoor coil, an outdoor coil, a compressor, and a reversing valve interconnected in refrigerant flow relationship to condition an enclosure, the steps which consist in energizing the compressor in response to a first enclosure temperature to cool, energizing the compressor and reversing valve in response to a second enclosure temperature to heat, periodically readying the reversing valve for deenergization, deenergizing the reversing valve in response to a predetermined first outside coil temperature during said ready period to defrost the outdoor coil while simultaneously ceasing the periodic readying of the reversing valve, and energizing the reversing valve in response to a predetermined second outside coil temperature to terminate defrost while simultaneously resuming periodic readying of the reversing valve for deenergization.

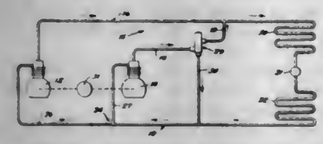
3,126,713
APPARATUS AND METHOD FOR PREVENTING REFRIGERANT CONDENSING IN MULTIPLE COMPRESSOR ARRANGEMENTS

Sidney A. Parker, Fort Worth, Tex., assignor to Lennox Industries Inc., Marshalltown, Iowa, a corporation of Iowa

Filed Apr. 16, 1962, Ser. No. 187,804
5 Claims. (Cl. 62—117)

1. A method of operating a multiple compressor refrigeration system comprising a first reciprocating compressor, a second reciprocating compressor, discharge line

means, a condenser, expansion means, an evaporator and suction line means interconnected in refrigerant flow relationship, said method comprising the steps of actuating the reciprocating compressors in response to a predetermined load condition, deenergizing one compressor in response to a reduced load condition, preventing the flow of re-

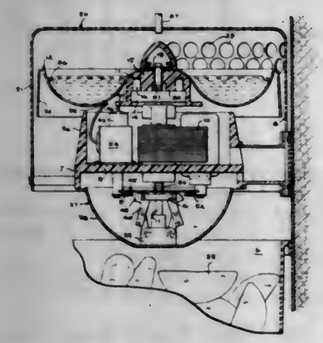


frigerant from the other operative compressor to said one idle compressor, and communicating the discharge side of said one idle compressor to the suction line means only when said idle compressor is stopped to prevent refrigerant liquid accumulation in the cylinder of said idle compressor.

3,126,714
AUTOMATIC ICE MAKER

Edward A. Zuercher, Jr., Fern Creek, Ky., assignor to General Electric Company, a corporation of New York

Filed May 10, 1962, Ser. No. 193,746
3 Claims. (Cl. 62—137)



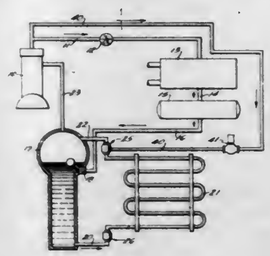
3. An automatic ice maker comprising;
a horizontally disposed ice mold from which ice pieces formed therein are centrifugally discharged upon rotation of said mold about a vertical axis,
a receptacle for receiving ice pieces discharged from said mold,
drive means for rotating said mold,
ice level sensing means including a member movable between a normal position extending into said receptacle and an elevated position and adapted to stop operation of said ice maker when the accumulation of ice in said receptacle maintains said member in an elevated position,
and centrifugal means driven by said drive means for raising said member during rotation of said ice mold.

3,126,715
DEFROSTING OF REFRIGERATION SYSTEMS

Erich J. Kocher, Milwaukee, Wis., assignor to Vilter Manufacturing Corporation, Milwaukee, Wis., a corporation of Wisconsin

Filed June 18, 1962, Ser. No. 203,338
5 Claims. (Cl. 62—151)

1. A refrigerating system comprising, a compressor, a condenser, conduit means for conducting refrigerant gas under compression from said compressor to said condenser, an evaporator having an inlet end and an outlet end provided with a coaxial tubular valve body, conduit means for delivering liquid refrigerant from said condenser to the inlet end of said evaporator, an expansion device in said conduit, other conduit means from said tubular valve body to said compressor, a reciprocable disk-shaped valve housed within said valve body and peripherally spaced therefrom for controlling flow of refrigerant through said evaporator, resilient means acting on one face of said valve in opposition to the normal flow of refrigerant through said evaporator for normally maintaining said valve in open condition for the re-

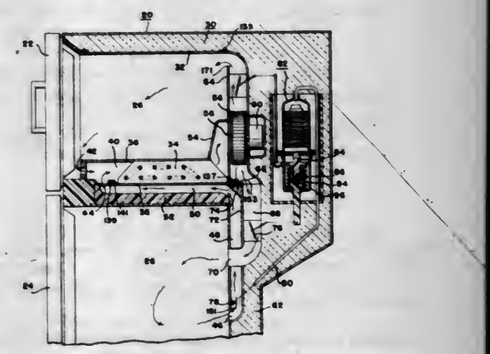


frigerating cycle, separate conduit means extending from the discharge side of said compressor into said valve body coaxially thereof and terminatnig therein immediately adjacent the opposite face of said valve to provide a seat therefor when said valve is in open condition, and flow control means in said separate conduit for periodically delivering gas under compression therethrough and directly against said valve in opposition to said resilient means to close the same in response to the velocity of said gas delivered thereto and thereby interrupt normal flow of refrigerant through said evaporator to cause defrosting thereof.

3,126,716
DEFROSTING WITH CIRCULATING AIR

John T. De Witte, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

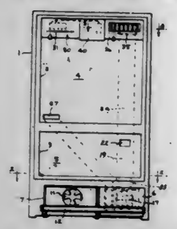
Filed Aug. 31, 1962, Ser. No. 220,710
9 Claims. (Cl. 62—156)



1. Refrigerating apparatus including an evaporator in heat transfer with air for cooling the air and coincidentally condensing moisture from the air, an air duct extending to said evaporator, a screen having capillary properties extending across said air duct, means for collecting condensed moisture from said evaporator and conducting said condensed moisture to said screen, and refrigerant evaporation conduit means extending into intimate heat transfer relation with said screen for freezing

the condensed moisture upon said screen to close said air duct.

3,126,717
FORCED AIR COOLED REFRIGERATOR
Frank A. Schumacher, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Dec. 12, 1962, Ser. No. 244,077
3 Claims. (Cl. 62—186)



1. A refrigerator including an above freezing compartment, a below freezing compartment and an evaporator compartment including an evaporator separate from said above and below freezing compartments,

a refrigerating system including a compressor and said evaporator,

means including a fan and a first supply duct connecting said evaporator compartment with said freezer compartment for circulating air in a first air flow path from said evaporator through said supply duct to said freezer compartment and back to said evaporator,

means including a second supply duct connected to said first supply duct having an outlet opening into said above freezing compartment for circulating a portion of the air flowing through said first supply duct to said above freezing compartment and back to said evaporator,

compressor and fan control means responsive only to a temperature in the above freezing compartment for controlling the operation of said compressor and fan to maintain a predetermined temperature in said above freezing compartment,

variable air flow control means associated with said outlet opening for varying the amount of air flowing from said second supply duct and thereby controlling the proportion of air circulated through said below freezing storage compartment to vary the temperature of said below freezing compartment,

said temperature sensing means being arranged to sense the temperature of a wall area of said above freezing compartment adjacent said opening,

and means for directing a portion of the air passing through said opening over said wall area.

3,126,718
SUPERSONIC AIRFRAME STRUCTURE
Claude Flamand, Chatenay-Malabry, France, assignor to Nord-Aviation Societe Nationale de Constructions Aeronautiques, Paris, Seine, France, a joint-stock company of France
Filed Mar. 3, 1961, Ser. No. 93,056
Claims priority, application France Mar. 29, 1960
3 Claims. (Cl. 62—219)

1. Supersonic aerodyne airframe structure comprising

(*a*) an external wall having mechanical resistance up to a predetermined temperature and providing heat and sound insulation in the direction outside to inside of the airframe,

(*b*) an internal member defining the boundary of an accommodation compartment of the aerodyne capable of adsorbing any heat which passes through said external wall from outside the aerodyne,

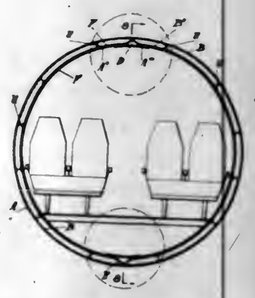
(*c*) an evacuating system for evacuating said heat absorbed by said internal member to the outside of the airframe, and

(*d*) structural members located between said external wall and said internal members for rigidly maintaining the relative spacing of said wall and said internal members, thereby forming an intermediate chamber to receive any meteorites which may penetrate said external wall and thereby protect the aerodyne as a whole,

(*e*) said internal member and external wall being tube-shaped and coaxial with one another, said internal member comprising

(*f*) an inner smooth sheet material and an outer corrugated sheet material in mutual contact,

(*g*) the crests of the corrugations of said corrugated sheet material in contact with said smooth sheet material being spot welded to said smooth sheet material,



(*h*) the plane of each crest being perpendicular to the axis of said internal member and wall,

(*i*) a pair of collectors located against the external surface of said internal member in positions diametrically opposed to each other,

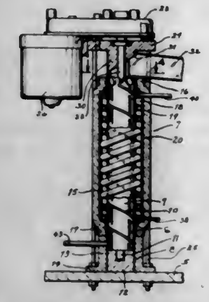
(*j*) the axes of said collectors being parallel to the common axis of said internal member and external wall,

(*k*) the compartments formed between the corrugations of said outer sheet material and said inner smooth sheet material communicating directly with each said collector.

(*l*) a cooling liquid circulated through said compartments and said collectors whereby the lowermost collector when said aerodyne is in a position for normal horizontal flight constitutes the collector for admission of said cooling liquid and the uppermost collector when said aerodyne is in a position for normal horizontal flight constitutes the discharge collector for said cooling liquid.

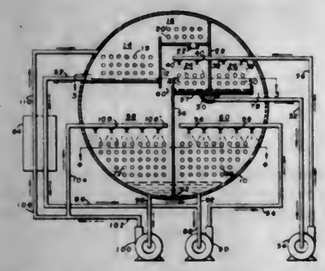
3,126,719
ICE CHIP MAKING MACHINE
Michael J. Swatsick, 1900 Nebraska Ave., St. Louis 4, Mo.
Filed Oct. 6, 1961, Ser. No. 143,417
4 Claims. (Cl. 62—320)

1. An ice chip making machine comprising means defining a freezing chamber for ice formation, means defining a ice discharge compartment communicating with said freezing chamber, means for introducing water to be frozen into said freezing chamber, a shaft mounted in said freezing chamber, means for rotating said shaft, a helical auger blade provided on said shaft for conveying the mass of freezing water through said chamber and into said ice discharge compartment, and a plurality of ice compressing and crushing members mounted in spaced-apart relation on the peripheral face of said shaft, for rotation therewith, adjacent the said ice discharge compart-



ment, each of said members being pivotally mounted, and means for maintaining said members in their individually selected adjusted position.

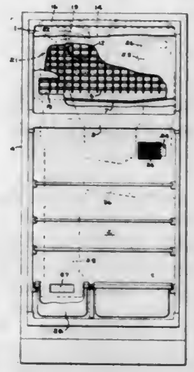
3,126,720
ABSORPTION REFRIGERATING MACHINE
Edward M. Stubblefield, La Crosse, Wis., assignor to The Trane Company, La Crosse, Wis., a corporation of Wisconsin
Filed Feb. 15, 1962, Ser. No. 173,484
11 Claims. (Cl. 62—335)



1. An absorption refrigerating machine comprising a first chamber operating at high pressure, a generator in said first chamber, a condenser in said first chamber, said condenser being in refrigerant flow communication with said generator to condense refrigerant from said generator, a second chamber operating at an intermediate pressure, a first evaporator in said second chamber, a first absorber in said second chamber, said first evaporator being in fluid flow communication with said first absorber, a third chamber operating at low pressure, a second evaporator in said third chamber, a second absorber in said third chamber, said second evaporator being in fluid flow communication with said second absorber, means for conducting refrigerant from said condenser to said first and said second evaporators, means for conducting absorbent solution from said generator to said second absorber, means for conducting absorbent solution from said second absorber to said first absorber and means for conducting absorbent solution from said first absorber to said generator.

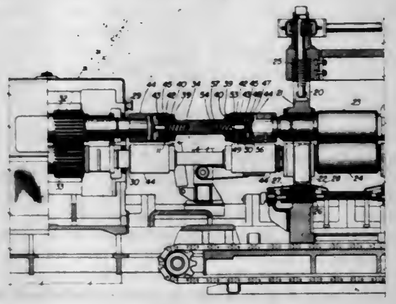
3,126,721
FORCED AIR COOLED REFRIGERATOR
Henry L. Shove, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Oct. 26, 1961, Ser. No. 147,816
4 Claims. (Cl. 62—408)

1. A refrigerator comprising a storage compartment, an evaporator housing, an evaporator mounted in said evaporator housing, a duct defining an air flow path outside said storage compartment for the flow of air from said evaporator housing, through said duct and back to said evaporator housing, means for providing forced circulation of air through said duct, a continuously open inlet port connecting said duct with said storage compartment, an



outlet port connecting said storage compartment with said duct as a point downstream from said inlet port, and a flow control means for said outlet port movable between a port closing position and port opening position, said means progressively blocking said duct upstream from said outlet port during movement to said port opening position.

3,126,722
COUPLING
Walter Krämer, Dahlbruch, Westphalia, and Werner Müller, Eisern, Kreis Siegen, Germany, assignors to Siemag Siegener Maschinenbau G.m.b.H., Dahlbruch, Westphalia, Germany, a corporation of Germany
Filed Feb. 19, 1962, Ser. No. 173,927
Claims priority, application Germany Feb. 20, 1961
4 Claims. (Cl. 64—8)



1. A coupling for the spindle of a rolling mill or the like, comprising

(*a*) a coupling box having a bore formed with an internal gear,

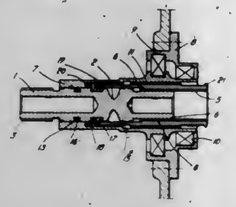
(*b*) an external gear adapted to engage the said internal gear and to be mounted on the spindle,

(*c*) a centering pin mounted in the coupling box and extending into a bore in the spindle,

(*d*) a spring located in the bore in the spindle and engaging a free end of the centering pin, and

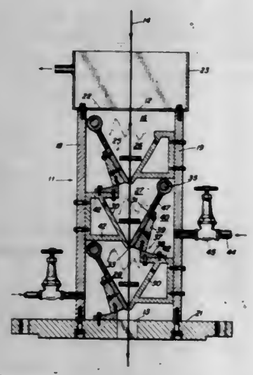
(*e*) a self-aligning bearing mounted on the external gear and slidable over the pin, the pin and bearing serving to restrict lateral movement between the coupling box and the spindle.

3,126,723
DRIVING DEVICES WITH SHEAR SECTION
Pierre Dugay, Asnieres, France, assignor to D.B.A., Paris, France, a French company
Filed Dec. 10, 1962, Ser. No. 243,341
Claims priority, application France Dec. 14, 1961
7 Claims. (Cl. 64—28)



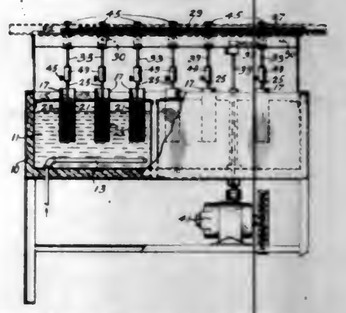
1. A driving device of the type comprising a shaft having a shear section to be broken when submitted to an overcouple, a driving end adapted to be coupled with a driving member and a driven end adapted to be coupled with a driven member, and a sleeve surrounding said shaft for centering the same, said shaft comprising coupling means located between said shear section and said driving end and said sleeve comprising coupling means in engagement with said coupling means of said shaft to be driven in rotation by said shaft.

3,126,724
PRESSURE SEAL
Frank Joseph Kolonits, Gulf Breeze, Fla., assignor to American Cyanamid Company, Stamford, Conn., a corporation of Maine
Filed Jan. 21, 1963, Ser. No. 252,804
9 Claims. (Cl. 68—5)



1. A pressure-sealing device adapted to permit the continuous passage therethrough along a defined pathway of a continuous length of elongated material from a first zone maintained at one pressure to a second zone maintained at a second pressure, said device comprising:
(*a*) a hollow chamber surrounding said defined pathway and having openings therein communicating with said two zones, said hollow chamber being adapted to contain liquid therein;
(*b*) gate means within said hollow chamber subdividing it into a plurality of regions, such gate means comprising a movable baffle and mating baffle canted in the direction of movement of said elongated material along said defined pathway and, at their proximate ends, defining an opening through which said elongated material passes;
(*c*) support means for supporting at least said movable baffle for movement of its proximate end toward and away from said defined pathway and the proximate end of said mating baffle to vary the size of said opening;
(*d*) closure means for sealing the space between the proximate end of said movable baffle and said hollow chamber on the side thereof remote from said defined pathway;
(*e*) means for resiliently urging the proximate end of said movable baffle toward said defined pathway to constrict said opening; and
(*f*) means for introducing fluid under equal pressure to both sides of said movable baffle.

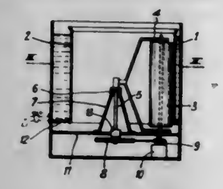
3,126,725
MACHINE FOR SAMPLE DYEING
Frank Allen Parker and Fred Martin, Drummondville, Quebec, Canada, assignors to Canadian Celanese Limited, Montreal, Quebec, Canada
Filed Mar. 6, 1961, Ser. No. 93,414
Claims priority, application Canada Jan. 24, 1961
2 Claims. (Cl. 68—27)



1. An apparatus for dyeing textile samples, consisting of a vat provided with a cover for holding a temperature regulating medium, said cover being provided with a plurality of openings arranged in rows, an elongated dye-pot for holding a quantity of dye-liquor mounted in each opening, means for retaining said dye-pot in said opening, an elongated cylindrical fabric-retaining basket within each dye-pot, means for suspending said fabric-retaining basket within said dye-pot comprising a shaft concentric with and extending from said basket and secured to the bottom thereof, said shaft being connected to a transmission means and extending thereabove for rotation of the shaft in either direction, said transmission means including a rod disconnectably connected to said shaft, a pinion on said rod, a common rack engageable with each pinion, and means for reciprocating said rack first in one direction and then in the other whereby a fabric sample when rolled around said shaft is alternatively tightened and loosened while being held by said basket from unwinding to cause diffusion of the liquid in the dye-pot therethrough, the fabric roll being entirely free but supported by the floor of the basket and limited in its outward movement by the walls thereof.

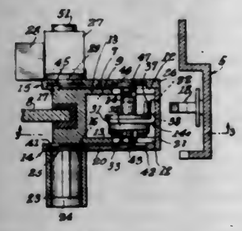
3,126,726
WASHING AND DYEING MACHINE FOR FABRICS OPERATING THROUGH FULLING
Lazare Halaumbrenner, 17–19 Blvd. Edgar Quinet, Colombes, Seine, France
Filed Mar. 26, 1962, Ser. No. 182,307
Claims priority, application France Mar. 29, 1961
1 Claim. (Cl. 68—96)

A machine for dyeing and washing pieces of fabric comprising a container for pieces of fabric and a treating liquid, said container including an outer rigid cylindrical wall having a vertical axis, an inner wall assuming normally a cylindrical shape coaxial with the outer wall and made of a deformable material and a deformable bottom connecting the lower ends of the two walls, and at least one revolvable cylindrical roller having a vertical axis and extending inside the inner deformable wall of the



container in contact therewith to urge said deformable wall towards the outer wall, a vertical shaft coaxial with the container walls, a radial member rigid with said shaft and revolvably carrying said vertical roller in contacting relationship with the inner wall of the container to deform same upon rotary movement thereof along the inner periphery of the inner wall and a motor driving said shaft and radial member into rotation.

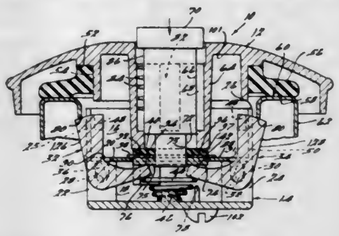
3,126,727
SLIDING DOOR LOCK
Doyle M. Dillard, 1908 Poplar St., and Robert A. Berntsen, 720 S. 2nd St., both of Las Vegas, Nev.
Filed Apr. 9, 1962, Ser. No. 185,985
6 Claims. (Cl. 70—97)



3. In a sliding door lock,
(*a*) a first handle part moving a side plate and a plate normal thereto,
(*b*) a block extending in an outward direction from the side plate,
(*c*) a second handle part comprising a side plate,
(*d*) bolt means to connect said handle parts in U form with the side plates parallel and to connect the same to the hollow stile of a sliding door,
(*e*) a catch unit carried by the normal plate of the first handle part and residing within the hollow of said stile,
(*f*) key-operated means interconnecting the first handle part and the catch unit to actuate the latter, and
(*g*) manual means interconnecting the second handle part and the catch unit to actuate the same.

3,126,728
LOCKING CLOSURE
Edward J. Nehls, 333 Waldman Drive, Park Forest, Ill.
Filed June 28, 1961, Ser. No. 120,300
15 Claims. (Cl. 70—169)

1. In a lockable closure construction including a body having a top and having a smaller lower body portion adapted to penetrate an opening to be closed, said body having a cavity therein, locking mechanism in the cavity operable accessible from the top and extending downwardly into said lower body portion, and angular bell crank-type bolt means rockably supported by said lower



body portion and including an actuating arm operably interconnectible with the locking mechanism and extending in an outward direction therefrom and a latching arm extending upwardly toward the top.

3,126,729
KEY HOLDER
Norbert Leopoldi, 4180 Marine Drive, Chicago, Ill.
Filed Apr. 4, 1961, Ser. No. 104,496
1 Claim. (Cl. 70—459)

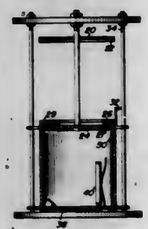


A key holder comprising an elongate substantially planar resilient key receiving member bent into a loop with the end portions thereof positioned adjacent each other and extending generally in the same direction, said end portions each being formed to define orthogonal corner portions projecting outwardly of said member in the plane thereof, and a keeper element cooperating with said key receiving member end portions to retain the keys on said key receiving member, said keeper element comprising a coin like body having an opening extending therethrough along a diameter thereof, said opening being defined by wall structures that are formed to complement the shape of said key receiving member end portions, and compress said end portions toward each other when they are inserted together into said opening, whereby said keeper element defines opposed internal orthogonal corner portions that resiliently receive said key receiving member end portions to retain said keeper element on said key receiving member, the ends of said opening being symmetrically arranged with respect to each other.

3,126,730
AEROSOL CATCHER
Albert Pfeiffer, Joppatown, Md., assignor to the United States of America as represented by the Secretary of the Army
Filed Jan. 18, 1963, Ser. No. 252,532
2 Claims. (Cl. 73—28)
(Granted under Title 35, U.S. Code (1952), sec. 266)

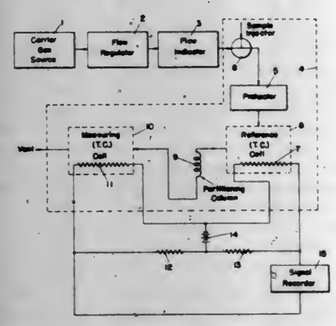
1. An aerosol catcher comprising a top member and a bottom member with a plurality of supports between and connected to said members, a center bar attached to said top member, said center bar extending downwardly approximately one-half the distance to said bottom mem-

ber, an upper closure plate and a lower closure plate attached to said center bar, a plurality of sealing and cushioning means attached to said closure plates, a container means slidably connected to said supports, said container having openings at its upper end and its lower end, said center bar extending through said upper end opening, said upper closure plate being positionined above said container for the effective sealing of the upper end opening, and said lower closure plate positioned within the container for effective sealing of the lower end opening when



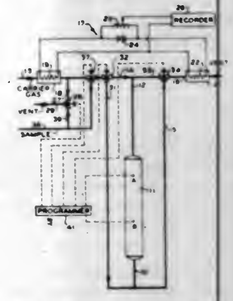
said container is in the upper position and for effective sealing of the upper opening when the container is in the lower position, releasable means to hold said container in the upper position, additional sealing and cushioning means attached to the upper side of said bottom member, a settling slide supported by said bottom member and surrounded by said additional sealing and cushioning means, a cover positioned over said settling slide, means attached to said cover and to said bottom member which when engaged by the falling container raises said cover in order to expose said settling slide.

3,126,731
COMPENSATED GAS CHROMATOGRAPH
Charles R. Armstrong, Broomall, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed Oct. 16, 1958, Ser. No. 767,591
6 Claims. (Cl. 73—23)



1. In gas chromatography apparatus, a reference cell comprising a heated wire arranged to be contacted by gases fed thereto; means for feeding a discrete quantity of the gas mixture to be analyzed to said reference cell along with a substantially continuous stream of carrier gas, the thermal conductivities of the components of said mixture being similar, means coupled to the output side of said reference cell for separating said mixture into its various components, a measuring cell comprising a heated wire arranged to be contacted by gases fed thereto; means for feeding the separated components of said mixture, along with said stream of carrier gas, from said separating means to said measuring cell, and means connecting both of said wires into a four-arm bridge network as two differentially-arranged arms thereof.

3,126,732
GAS CHROMATOGRAPHIC ANALYSIS OF TRACE MATERIALS
Richard A. Sanford, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed May 9, 1960, Ser. No. 27,678
10 Claims. (Cl. 73—23)

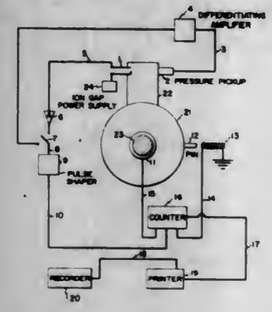


2. A method of chromatographically analyzing a gaseous mixture by means of a packed chromatographic column, comprising detecting changes in the temperature of said column at least at one point therein intermediate the inlet and outlet ends of said column, flowing a stream consisting of said gaseous mixture onto said column via the inlet end thereof until a predetermined amount of said gaseous mixture has been concentrated in said column in an adsorption zone the front of which is located in said column at a point remote from the outlet end of said column, terminating said flow of gaseous mixture when said amount has been thus concentrated in said column, flowing an eluting gas into said column via the inlet end thereof to elute and separate at least one trace component from the front of said adsorption zone, detecting the presence of said separated trace component in the effluent of said column, flowing purge gas into the outlet end of said column to substantially purge the balance of the gaseous mixture from said column, terminating said flow of purge gas when said balance of gaseous material has been thus purged from said column, and automatically in accordance with said detected changes in temperature controlling at least one of said steps of flowing said gaseous mixture onto said column and flowing purge gas into said column so as to terminate the former step when said predetermined amount of said gaseous mixture has been concentrated in said column and terminate the latter step when said column has been sufficiently purged.

3,126,733
FUEL COMBUSTION CHARACTERISTIC INDICATOR
John J. Heigl, Short Hills, Victor F. Massa, Berkeley Heights, and James A. Wilson, Stanhope, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Oct. 30, 1961, Ser. No. 149,155
4 Claims. (Cl. 73—35)

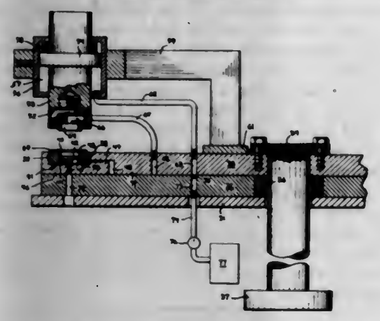
1. An apparatus for timing the occurrence of peak pressure in a cylinder of an internal combustion engine, said apparatus comprising (1) a pressure pickup in a cylinder of said engine, said pressure pickup generating an electric current representing the pressure in said cylinder, (2) a pulse shaper adapted to emit a sharp electrical signal at the occurrence of peak pressure in said cylinder, (3) electrical conductor means connecting said pressure pickup with said pulse shaper, (4) an electronic pulse generator

driven by said engine and emitting a succession of electrical impulses related to the revolutions of said engine, (5) an electronic counter responsive to said electrical impulses of said pulse generator upon being actuated by said sharp electrical signal from said pulse shaper, (6) electrical conductor means connecting said pulse shaper with said electronic counter, (7) electrical conductor means connecting said electronic pulse generator with said electronic counter, (8) a paramagnetic armature pin secured



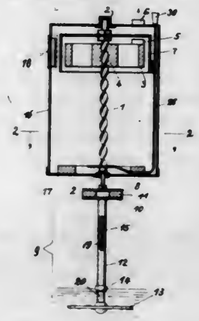
to a part of said engine moving cyclically in synchronism with the crankshaft, (9) a magnetic pickup disposed to be bypassed by said armature pin at a predetermined crank angle in the course of operation of said engine and have an electric current induced in it, said induced current being capable of actuating said counter to be unresponsive to said electrical impulses from said pulse generator, and (10) electrical conductor means connecting said magnetic pickup with said electronic counter.

3,126,734
HIGH SPEED HIGH SENSITIVITY LEAK DETECTOR
Guy R. Stutzman, P.O. Box 55, Greenwood, Ind.
Filed Sept. 30, 1960, Ser. No. 59,701
18 Claims. (Cl. 73—40)



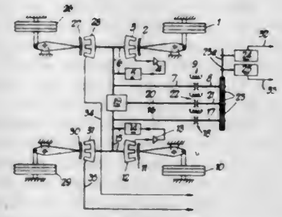
1. A testing apparatus comprising: test part accommodating means in a first member; operation stations in a second member in communicable relation with accommodating means in said first member; means coupled to one of said members for moving test part accommodating means to communication with selected stations in said second member; fluid handling means coupled to stations and including a pump coupled to at least one station for supplying a fluid to accommodating means communicating with that station, said pump being coupled to at least one other station for withdrawing fluid from accommodating means communicating with said other station simultaneously with the supplying to said accommodating means communicating with said one station.

3,126,735
DEVICE FOR MEASURING THE VISCOSITY OF LIQUIDS
Friedrich Vögtle, Gottfried Vögtle, and Fritz Vögtle, all of 88 Winkelhoferstrasse, Ehingen (Danube), Germany
Filed May 2, 1962, Ser. No. 191,842
Claims priority, application Germany May 2, 1961
8 Claims. (Cl. 73—59)



1. A device for measuring the viscosity of liquids, wherein a rotatably arranged threaded spindle co-axially connected with one end of a measuring part, adapted to be dipped with the other end into a liquid the viscosity of which is to be measured, and provided with a graduated drum for reading the viscosity index numbers, and a falling body with a threaded hub is arranged to run on the threaded spindle between an upper and a lower end position.

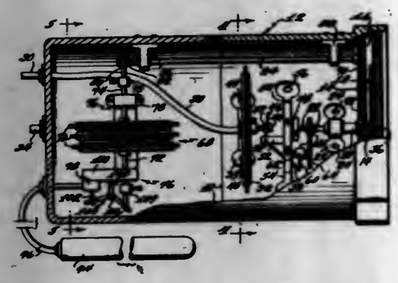
3,126,736
AIRCRAFT INSTRUMENT SYSTEMS
Ronald Walter Howard and Richard Kenneth Baritrop, Radlett, England, assignors to Elliott Brothers (London) Limited, London, England, a company of Great Britain
Filed Feb. 9, 1962, Ser. No. 172,135
Claims priority, application Great Britain Feb. 10, 1961
6 Claims. (Cl. 73—178)



1. A monitored air data sensor comprising a static pressure capsule, means associated with this capsule for angularly positioning a first shaft in accordance with the value of a function of the barometric height sensed by the capsule, a Pitot-static capsule, means associated with this capsule for angularly positioning a second shaft in accordance with the value of a function of the indicated air speed sensed by the capsule, mechanical means interconnecting the first and second shafts with a third shaft in such manner that the angular position of the third shaft will be representative of the value of a function of the Mach number and means whereby each of the three shafts may be selectively coupled to a pair of electrical pick-off devices to operate these in unison and produce respective electrical signals which are isolated from each other characterised by the provision of a monitoring static pressure capsule, first transducer means adapted to be actuated by this monitoring capsule to produce a first electrical signal proportional to the movement of the

capsule, means operated mechanically from the means for positioning the first shaft and adapted to actuate the first transducer means in the sense normally for reducing this signal proportionally to the angular displacement of this shaft, a monitoring Pitot-static pressure capsule, second transducer means adapted to be actuated by this monitoring capsule to produce a second electrical signal proportional to the movement of this capsule, and means operated mechanically from the means for positioning the second shaft and adapted to actuate the second transducer means in the sense normally for reducing the second signal proportionally to the angular displacement of the second shaft whereby the first and second signals become representative of the differences in the functioning of the static capsule and monitoring static capsule and of the Pitot-static capsule and monitoring Pitot-static capsule, respectively.

3,126,737
AIRSPEED INDICATOR
Richard H. Gibbs, P.O. Box 470, Somerset, Pa.
Filed Dec. 29, 1961, Ser. No. 163,165
4 Claims. (Cl. 73—181)



1. An air speed indicator comprising an air-tight casing having a front viewing face, a first circular dial with indicated air speed markings thereon and disposed securely to said casing behind said face, said dial having an aperture substantially concentric with the periphery of said dial, a second dial disposed in said aperture and having scale markings for indicating true air speed, a pointer mounted for movement about an axis co-axial with each of said dials for indicating an instantly aligned set of scale markings on said dials respectively, diaphragm means, means for subjecting the diaphragm means internally to ram air pressure and externally to static air pressure, means coupled between said diaphragm and pointer for causing the pointer to move adjacent the scale markings on said indicated air speed dial in conformity with the difference between said static and ram pressures as effected by said diaphragm means to give an indicated air speed reading, said true air speed dial being positioned to have its corresponding scale markings aligned with those of the indicated air speed dial when said indicator is disposed to the temperature and pressure conditions existing substantially at sea level, and means for rotating said true air speed dial in conformance with the instant static air pressure and external temperature for any altitude of said casing above sea level to compensate for any difference between the respective static pressures and temperatures in the instant altitude of said casing relative to sea level, said compensating means including second diaphragm means evacuated and disposed to be externally subjected to static air pressure, turning means operatively connected between said true air speed dial and one side of said second diaphragm means, means external to said causing for measuring the ambient temperature, and means coupled between said temperature measuring means and the other end of said second diaphragm means for translating the amount of a measured temperature change into a rectilinear movement for bodily moving said second diaphragm means and said turning means accordingly and in conjunction with any effect on said second diaphragm means by said static air pressure.

3,126,738
MARINE SPEEDOMETER
Howard S. Taylor, Fox River Grove, Ill., assignor to Airguide Instrument Company, a corporation of Illinois
Original application Feb. 23, 1956, Ser. No. 567,132, now Patent No. 2,977,794, dated Apr. 4, 1961. Divided and this application Oct. 27, 1960, Ser. No. 65,528
1 Claim. (Cl. 73—182)

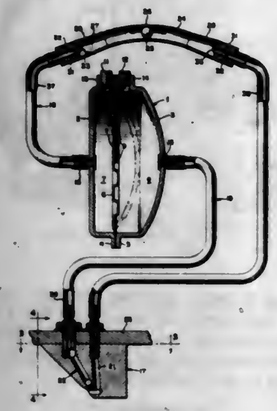


A marine speedometer, comprising, a mounting bracket adapted to be mounted on a boat, a speedometer case including an indicating device having a movable part for indicating velocity, a pressure sensitive mechanism housed in the case for transmitting motion to the movable part, tubular means supported on said bracket including a tubular element connected at one end with said pressure sensitive mechanism and having at the other end a flat exterior surface parallel to the axis of the tubular element and provided with an inlet opening, a Pitot tube having a hollow head secured thereon at the outlet end, said hollow head communicating with the passage in the Pitot tube and having a flat exterior surface adapted to abut against the flat exterior surface on the tubular element and having an outlet opening adapted to register with the inlet opening in the tubular element, and means for pivotally securing the hollow head to the tubular element in pressure tight relation for movement about an axis normal to the axis of said tubular element with said outlet opening and said inlet opening in register, so that the Pitot tube is thereby mounted to yield by pivotal movement on striking objects in the water during movement of the boat.

3,126,739
PRESSURE RESPONSIVE INDICATING APPARATUS
Joseph Whitehill, Easton, Md.,
Filed June 13, 1960, Ser. No. 35,751
25 Claims. (Cl. 73—205)

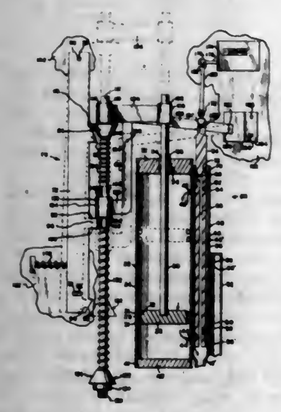
1. An apparatus for indicating change in the relative velocity between said apparatus and a fluid medium which comprises conduit means, resiliently yieldable wall means extending across said conduit means to provide a fluid seal, said conduit means being connectable on one side of said wall means to a source of fluid under a first pressure, means responsive to said relative velocity and connected to said conduit means on the other side of said wall means to expose said other side to a second fluid

pressure varying from said first pressure in proportion to said relative velocity thereby causing said wall means to resiliently yield and fluid to flow in said conduit when said relative velocity changes and said wall means to come to rest and the fluid flow in said conduit to cease when said relative velocity becomes constant, indicator



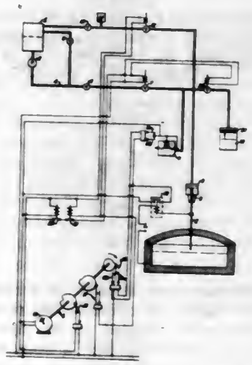
means including a moveable element positioned in said conduit means, and responsive to fluid flow to indicate a change in said relative velocity, and means to maintain said element at a predetermined location along said conduit means in the absence of fluid flow to indicate constant relative velocity regardless of the position of said wall means.

3,126,740
METERING VALVE
Edmund H. Blakeman, 1185 Fairfax, Pontiac, Mich.
Filed May 8, 1961, Ser. No. 108,590
3 Claims. (Cl. 73—251)



1. In a fluid meter,
a cylinder,
first and second axially spaced ports in said cylinder,
a piston movable in said cylinder between said ports,
a piston rod connected to said piston and extending out of one end of said cylinder,
a valve having a body and an inlet port alternately connectable in fluid communication with said cylinder ports,
a source of pressurized fluid,
a fluid inlet conduit connecting said inlet port to said source of fluid,
a slidable valve stem in said valve body forming two exhaust ports each alternately alignable with only one of said cylinder ports,
a stop rod carried by said extending piston rod,
said rod having a movable stop thereon and means biasing said stop between first and second positions,
means connecting said stop to said slidable valve stem,
and a pivoted stop lever engageable by said slidable stop of said stop rod.

3,126,741
APPARATUS FOR INDICATING AND PERMITTING THE REGULATION OF THE LEVEL OF MOLTEN GLASS IN MELTING TANKS
Paul Weber-Klein, Mainz, Germany, assignor to Jenaer Glaswerk Schott & Gen., Mainz, Germany, a corporation of Germany
Filed Aug. 21, 1959, Ser. No. 835,202
Claims priority, application Germany Aug. 26, 1958
15 Claims. (Cl. 73—290)



1. An arrangement for indicating the height of the level of molten glass being fed into a melting tank which comprises an electrode movable into and out of contact with the surface of molten glass in a melting tank, circuit means including said glass and said electrode, one circuit of said circuit means being closed upon contact of said electrode with the surface of said glass, means including pressure means for moving said electrode into and out of contact with the surface of said glass, and pressure responsive indicator means responsive to movement of said electrode for indicating the level of the glass in said tank upon the closing of said one circuit of said circuit means.

3,126,742
LIQUID LEVEL INDICATING TOOL
Ralph R. Jarboe, Jr., Tulsa, Okla., and Don C. Hennigan, Madison, Kans.; said Hennigan assignor to Cities Service Research and Development Company, New York, N.Y., a corporation of New Jersey
Filed Mar. 14, 1960, Ser. No. 26,391
(Filed under Rule 47(a) and 35 U.S.C. 116)
18 Claims. (Cl. 73—290)

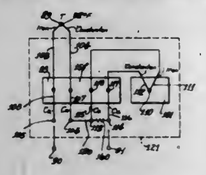
1. A down hole liquid level indicating tool adapted to be lowered down a conduit containing a body of liquid, said tool comprising a fluid pressure chamber, means for pro-

viding pressure in said fluid pressure chamber in response to penetration of said body of liquid by said tool, and



means operable by said fluid pressure for engaging the wall of said conduit.

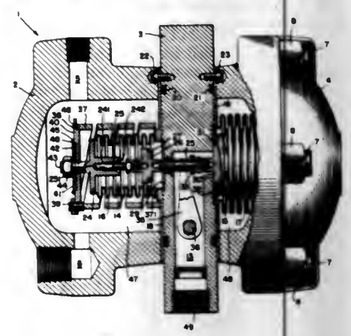
3,126,743
THERMOCOUPLE REFERENCE JUNCTION
Saul Epstein, 5015 Varna Ave., Sherman Oaks, Calif.
Filed Sept. 18, 1958, Ser. No. 761,760
2 Claims. (Cl. 73—359)



1. In a thermocouple system for measuring the temperature of a body, the combination comprising an external thermocouple adapted to be placed in intimate heat exchange relationship with a body the temperature of which is to be measured, reference temperature means consisting of first and second thermocouple junctions, means for maintaining said first and second thermocouple junctions at predetermined different temperatures so that said junctions generate potentials, means connecting said first and second thermocouple junctions together so that the potentials generated thereby are in opposed relationship, a pair of terminals and means consisting of leads electrically connecting said external thermocouple and said first and second thermocouple junctions in series between said terminals, whereby the potential of said system may be measured to determine the temperature of a body.

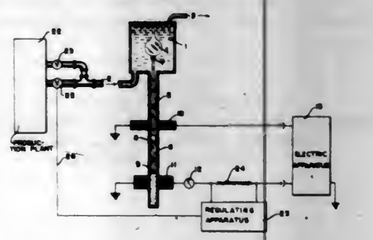
3,126,744
MEASURING APPARATUS
Henry M. Hermanns, Ardsley, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Nov. 28, 1960, Ser. No. 72,147
4 Claims. (Cl. 73—407)

3. A device responsive to the difference between two pressures, including, a rigid case having a pair of inlet connections passing through the wall thereof, an active element secured at its rim to said case and located between said inlet connections so as to move in response to any difference between the pressures applied by said inlet connections, and a range spring device connected at one end to said case and connected at its other end to said active element, said range spring device comprising, a helical spring secured at one end to said case, a disc secured to the free end of said spring, means for rendering a portion of the free end of said helical spring inoperative, a flat leaf



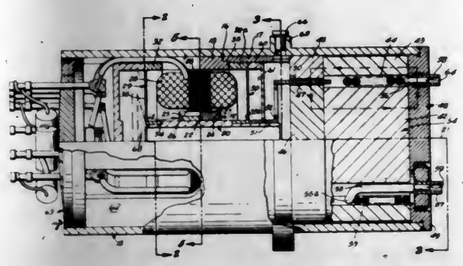
spring located between said disc and said active element and adapted to transmit the force from said helical spring to said active element, and means for rendering said leaf spring inoperative to vary the force transmitted from said helical spring to said active element.

3,126,745
DENSIMETERS
Klaus Lütke, Leuna, Germany, assignor to VEB Leuna-Werke "Walter Ulbricht," Leuna, Germany
Filed Nov. 12, 1959, Ser. No. 852,283
11 Claims. (Cl. 73—453)



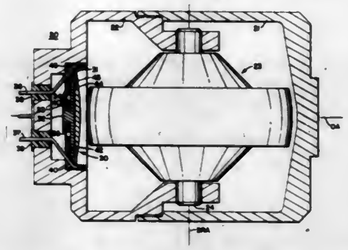
8. An apparatus for continually measuring the density of a fluid, comprising a container for said fluid having an elongated, substantially vertical portion, a fluid intake port and a fluid discharge port on said container, float means within said container and at least partly within said elongated portion, a temporarily magnetizable core and a permanent magnet secured to said float means in spaced-apart relation within said elongated portion, electronic sensing means positioned at a first location outside of said elongated portion and responsive to the relative movement of said core for producing a signal proportional to said density, additional means positioned at a second location outside of said elongated portion and having a magnetic field adapted to be varied by said signal for repelling said magnet and moving said float means toward a median position within said container, said sensing means and said additional means being vertically displaced at said locations in a laterally spaced-apart relation from the substantially vertical axis of relative movement of said float means, oscillator means adapted to be influenced by the varying inductance of said sensing means, rectifier means connected to said oscillator means, and meter means connected in series with said additional means and said rectifier means and being responsive to said signal for producing a direct density indication.

3,126,746
LINEAR ACCELEROMETER, PICK-OFF MECHANISM AND VARIABLE DAMPING MECHANISM COMBINATION
Stanford D. Blitzer, Newton Lower Falls, and Dante V. Consalvo, 37 Pearl St., Everett, Mass.; said Blitzer assignor to General Precision Inc., Little Falls, N.J., a corporation of Delaware
Filed June 26, 1961, Ser. No. 130,707
9 Claims. (Cl. 73—497)



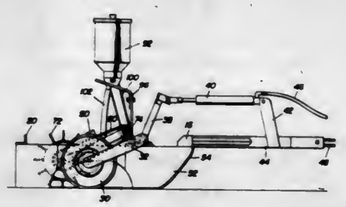
1. A linear accelerometer comprising a sealed tubular housing, a proof mass fitted to the tubular housing coaxially therewith, a plurality of spring means fixedly attached to the housing supporting the proof mass to permit longitudinal movement for the proof mass, coacting means partially supported by the tubular housing and partially fixedly attached to the proof mass, adapted to pick off as an electrical signal and transmit to an external point, the longitudinal displacement of the proof mass, initially electrically controllable permanent magnet restraining means mounted at one end of the tubular housing, and means fixedly attached to the proof mass adapted to co-act with the electrically controlled permanent magnet means to restrain the longitudinal movement of the proof mass, the permanent magnet restraining means including a permanent magnet formed in two sections, with an annular gap between the two sections of the permanent magnet, an electrically energizable coil fitted to the annular air gap between the two permanent magnet sections, means adapted to control the voltage transmitted to the electrically energizable coil, prior to normal operation of the accelerometer, the voltage transmitted through said electrically energizable coil being adapted to initially regulate the magnetic lines of force between the two sections of the permanent magnet, each spring means supporting the proof mass including a tubular outer ring, the circumferential outer surface of the tubular outer ring being fixedly attached in shear to the tubular housing, a tubular inner ring, the circumferential inner surface of which is fixedly attached in shear to the proof mass, concentrically with the outer ring, and a relatively thin spring diaphragm integral with and connecting the inner and outer rings, said spring diaphragm having a plurality of unconnected cutouts therethrough, said cutouts providing a plurality of individual spring arms connecting the inner ring with the outer ring, said spring arms allowing flexure of the spring diaphragm along the longitudinal axis of the inner and outer rings and restraining rotational angular displacement of the inner ring relative to the outer ring, the pick-off stator including a plurality of radially positioned poles, a plurality of stator coil windings surrounding pairs of poles of the stator, the armature being formed in two tubular sections, each tubular section of the armature having a plurality of radially positioned poles integral therewith, the number of poles in each tubular armature section being substantially equal to one-half the number of poles in the stator, the poles of one tubular section of the armature being rotationally angularly offset relative to the poles of the second tubular section thereof, individual poles of both sections of the tubular armature being nominally radially aligned with the corresponding poles of the stator, the stator coil windings being adapted to co-act with the poles of the armature to determine and transmit as an electrical signal the longitudinal displacement of the poles of the tubular armature sections relative to the poles of the stator.

3,126,747
CONTROL APPARATUS
James R. Desjardin, Columbia Heights, Frederick Huber, St. Louis Park, and James W. Tinkham, Minneapolis, Minn., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed May 26, 1961, Ser. No. 112,996
10 Claims. (Cl. 74—5)



1. In a sensitive instrument: an element supported for rotation about an axis; means for adjusting the static balance of said element about said axis comprising a member having an axis of symmetry rigidly attached to said element so that said axis of symmetry is aligned with said axis, said member having a planar treated surface; thermoresponsive means, said thermoresponsive means adhering only to said treated surface of said member, said thermoresponsive means normally maintaining a fixed relationship with respect to said member; and means for temporarily rendering said thermoresponsive means plastic so as to permit a shift in the center of mass of said thermoresponsive means while said thermoresponsive means remains in engagement with said surface of said member.

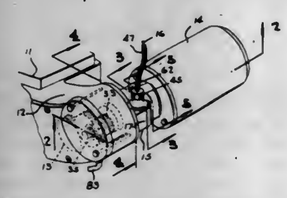
3,126,748
GROUND DRIVE ASSEMBLY FOR DRAG SLED
Casey M. Mostrong, P.O. Box 1011, El Centro, Calif.
Continuation of application Ser. No. 794,392, Feb. 19, 1959. This application Oct. 16, 1962, Ser. No. 231,880
9 Claims. (Cl. 74—13)



1. The combination of a drag sled including a set of spaced parallel ground engaging runners, an implement driving shaft extending transversely of and rotatably mounted on said sled at a fixed height above the ground, a pair of transversely spaced parallel arms rotatably mounted at one end thereof on said driving shaft for raising and lowering movement, a rigid member extending between and secured to intermediate portions of said arms, a transverse sleeve rotatably mounted between said arms at the other end thereof, a ground engaging

wheel and a sprocket carried by and rotatable with said sleeve between said arms, a second sprocket secured to said driving shaft, an endless chain passing over the first and second mentioned sprockets whereby said driving shaft may be rotated by rotation of said wheel, a tension spring connected at one end thereof to one of said arms and anchored at its other end to said sled for urging said arms and said wheel downwardly, and means for limiting the extent of downward movement of said arms under the action of said spring, one of said runners having an opening, said sleeve extending freely therethrough, said arms being disposed at opposite sides of said one runner and said rigid member extending between said arms above said one runner, said rigid member being engageable with said one runner when said arms are lowered, whereby to provide said means for limiting the extent of downward movement of said arms.

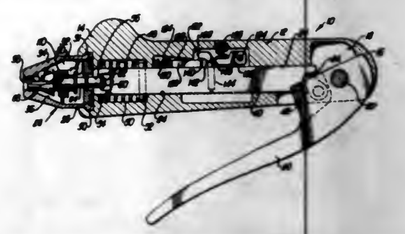
3,126,749
MOTORCYCLE TACHOMETER DRIVE UNIT
Herbert L. Babcock, Canton, Ill.
(1318 Main, Davenport, Iowa)
Filed Jan. 19, 1962, Ser. No. 167,338
6 Claims. (Cl. 74—15.2)



1. In combination, an engine crankcase, an outwardly projecting housing segment on said crankcase, an engine-driven rotating element in said crankcase, a shaft journaled in said housing segment, means gearingly coupling said shaft to said rotating element, a worm slidably and non-rotatably mounted on said shaft, a worm gear journaled in said housing segment and meshing with said worm, means for drivingly connecting said worm gear continuously to a tachometer, a generator connected to said housing segment, said generator having a driving shaft aligned with said first-named shaft, a toothed clutch collar secured on said driving shaft and facing said worm, a toothed clutch element on the end of said worm adjacent said clutch collar and being meshingly engageable therewith, and means to slide the worm toward and away from said clutch collar to selectively couple and uncouple the worm to and from said toothed clutch collar, whereby to selectively connect and disconnect said generator to and from said first-named shaft without disturbing the connection of the worm gear to the tachometer.

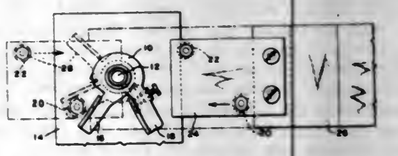
3,126,750
CRIMPING TOOL WITH FULL STROKE COMPELLING MECHANISM
Grant N. Willis, Bristol, Conn., assignor to Cannon Electric Company, Los Angeles, Calif., a corporation of California
Filed Oct. 3, 1960, Ser. No. 60,070
6 Claims. (Cl. 74—17.5)

1. A full stroke compelling mechanism which comprises: a housing; an actuator member movably mounted in the housing so as to move between an unactuated position and an actuated position; and means requiring completion of movement of the actuator member to said actuated position before the actuator member can be returned toward said unactuated position; said means including a wedge member normally engageable between the housing and the actuator member to prevent movement of the actuator member toward the unactuated position but permitting the actuator member to move toward said actuated position; shoulder means on the actuator member engageable with the wedge member when the actuator member reaches said actuated position so as to shift the wedge member to an inoperative position permitting return movement of the actuator member toward said unactuated position; means operative



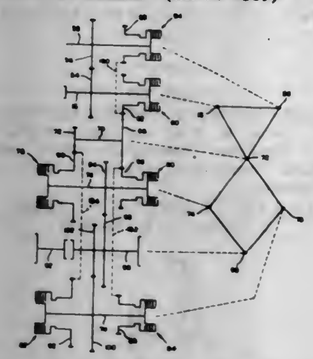
to hold said wedge means in said inoperative position to permit said actuator member to return to said unactuated position; and wherein said last mentioned means includes latch means automatically engageable between the housing and the wedge member when the wedge member is shifted to said inoperative position by said shoulder means, so as to hold the wedge member in said inoperative position during return movement of the actuator member from said actuated position to said unactuated position.

3,126,751
SHAFT POSITIONING DEVICE
Louis Eickhoff, % Robco Corp., 235 W. Main St., Patchogue, N.Y.
Filed June 20, 1961, Ser. No. 118,324
2 Claims. (Cl. 74—129)



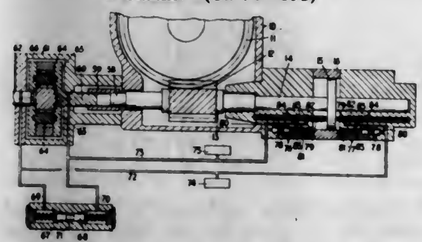
1. In a coin-operated timing mechanism, means for driving the shaft of a timing device, comprising a coin slide which is mounted for linear movement adjacent the end of said shaft, perpendicular to the longitudinal axis thereof, said coin slide having a pair of rollers mounted thereon on opposite sides of said shaft, one of said rollers being forward of the other, a collar secured to said shaft, a pin connected to said collar and projecting radially therefrom, a plate rotatably mounted on said collar, the axis of rotation of said plate coinciding with the longitudinal axis of the shaft, a pair of angularly spaced arms projecting radially from said plate, an adjustable screw mounted on one of said arms for engagement with said pin, a spring mounted between said collar and said plate and biased to urge said screw and said pin into and maintain them in engagement with each other, said arms being so positioned on said collar as to be engageable by said rollers on the coin slide, in such sequence that when the coin slide is moved in one direction across the end of said shaft one of said rollers engages one of said arms and drives it angularly about the axis of the shaft, thereby driving said shaft in the same angular direction by reason of the engagement of said screw with said pin on said collar, and when the coin slide is then moved in the opposite direction across the end of said shaft the second roller engages the second arm and drives it angularly about the axis of said shaft, in the same angular direction as the first arm was driven by the first roller, thereby further rotating the shaft through said screw, pin and collar, to a pre-determined angular position relative to its starting position.

3,126,752
TRANSMISSION
Ronald H. Bolster, Jackson, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Filed Dec. 29, 1960, Ser. No. 79,365
20 Claims. (Cl. 74—359)



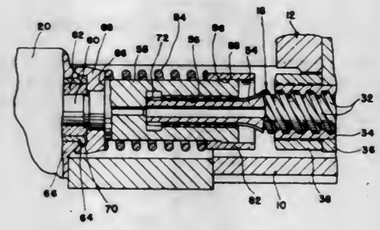
1. A multi-ratio transmission comprising, a plurality of rotatable shafts arranged in parallel relation including an input shaft, an output shaft and a pair of intermediate shafts, means for driving the said intermediate shafts selectively from the said input shaft comprising four clutches located respectively at the ends of intermediate shafts, each of the said clutches including at least one friction member mounted on the respective shaft end for rotation therewith and a rotatable drum surrounding the shaft end and arranged to be selectively clutched to its respective friction member, the said rotatable drums being selectively connectable in driving relation with the said input shaft, first and second gears secured to the said output shaft for the rotation thereof, a third gear secured to one of the said intermediate shafts and in constant mesh with said first gear, and a fourth gear secured to the other said intermediate shaft and in constant mesh with the said second gear.

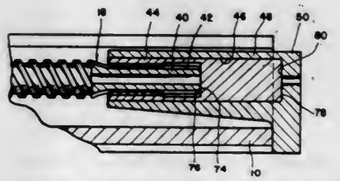
3,126,753
MEANS FOR EFFECTING ROTATION OF A WORM WHEEL OR WORM WHEEL SEGMENT
Edward Blackwell Leach, Compton, England, assignor to Audley Engineering Company Limited, Newport, England
Filed Oct. 17, 1960, Ser. No. 62,927
Claims priority, application Great Britain Oct. 27, 1959
2 Claims. (Cl. 74—393)



1. Mechanism for effecting rotary motion of a toothed worm gear member, comprising in combination with said toothed worm gear member, an axially movable and rotatable worm in continuous engagement with said toothed worm gear member so that said worm can serve to impart rotary motion to said toothed worm gear member when said worm is moved axially without being rotated, and also when said worm is rotated without being moved axially, a rotatable and axially movable shaft on which said worm is secured, a fluid pressure producing means operably connected to said shaft for imparting rotary motion thereto, a fluid pressure responsive means also operably connected to said shaft for imparting axial motion thereto, valve means responsive to the pressure produced by the fluid pressure producing means for controlling fluid flow to and from the fluid pressure producing means and the fluid pressure responsive means, and additional means responsive at the terminal positions of the worm whereby the worm is returned to its initial position for subsequent axial movement.

3,126,754
DRILL MOUNTING
Ewald H. Kurt, Phillipsburg, N.J., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey
Filed Oct. 13, 1960, Ser. No. 62,360
3 Claims. (Cl. 74—424.8)



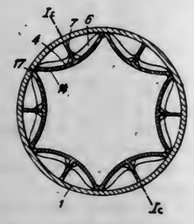


1. A rock drill apparatus comprising: a guide shell; a drill slidably mounted on said guide shell and adapted to be advanced along it; a rotary feed motor mounted on one end of said guide shell; a bearing mounted on the other end of said guide shell; a feed screw mounted on and between said feed motor and said bearing and threadably engaging said drill for advancing it along said guide shell; and means for removably and alternately connecting either end of said feed screw in driven relationship to said feed motor, whereby said feed screw can be reversed end-for-end in its mountings on said guide shell to extend the wear life of said feed screw.

3,126,755
ROTARY PISTON ENGINE
Friedrich W. Lück, Berlin-Tegel, Germany, assignor to Borsig Aktiengesellschaft, Berlin-Tegel, Germany, and Wankel G.m.b.H., Lindau (Bodensee), Germany
Filed July 27, 1960, Ser. No. 45,690
Claims priority, application Germany Aug. 6, 1959
6 Claims. (Cl. 74—457)

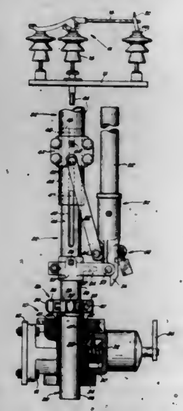
5. A method of manufacturing an outer rotary toothed piston having a cylindrical wall and individual tooth segments mounted circumferentially in abutting relation in said wall each formed with a convex guiding surface facing radially inwardly, the steps of grinding the abutting

and guiding surfaces of said teeth by profile disks and of inserting said segments into said cylindrical wall under



sufficiently high circumferential prestress so that said segments will be maintained in a condition of stress during rotation of said piston.

3,126,756
SWITCH OPERATING MEANS
Ronald J. Bertling, South Milwaukee, Wis., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed Jan. 17, 1961, Ser. No. 83,334
6 Claims. (Cl. 74—479)



1. An operating mechanism for a disconnect switch having open and closed positions, including an operating shaft connected to said disconnect switch and effective upon rotation to actuate said disconnect switch, gear means and a separable coupling connection having a first member connected to said gear means and a second member connected to said operating shaft and being movably mounted thereon for displacement into and out of engagement with said first member, said first and second members normally being in engagement so that rotation of said gear means will actuate said disconnect switch, and means coupled to said second member and said shaft and operable independently of the position of said switch means for engaging and disengaging said first and second members and for rotating said operating shaft independently of said gear means when said first and second members are disengaged.

3,126,757
REMOTE CONTROL APPARATUS
Alvin A. Cadwallader, Hatboro, Pa., assignor to Teleflex Incorporated, North Wales, Pa., a corporation of Delaware
Filed Nov. 3, 1960, Ser. No. 66,973
9 Claims. (Cl. 74—501)

2. Remote control apparatus comprising: a shape-retentive ribbon having axially aligned tunnels upstanding from at least one side thereof; a flexible, force transmitting member received in said tunnels; and an anti-friction



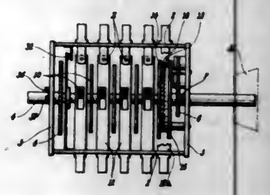
sheath snugly fitting over said ribbon, said sheath protecting said ribbon and said member and providing a bearing surface for said member.

3,126,758
OBSTACLE TYPE SWITCH DETENT
Donald W. Martin, St. Paul, and James S. Warwick and Robert F. Ubelhoer, Minneapolis, Minn., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 19, 1960, Ser. No. 76,801
5 Claims. (Cl. 74—565)



1. In a switch controller, detent means for correlation with a plurality of switch positions, an axially movable and rotatable shaft, an outwardly extending member attached to said shaft, said detent means comprising an annular sleeve disposed about said shaft and having a circumferentially-extending inwardly-opening recess slidably engaging the outwardly extending member, said recess having a sinuous angular configuration in an axial direction and the recess being shaped such that as the shaft is rotated in a first direction there is an interengagement of the wall of said recess with the extending member so as to require a reversal of rotation with a concurrent axial movement for permitting further rotation in said first direction.

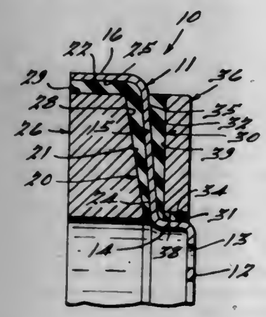
3,126,759
TIMING MECHANISM FOR WASHING MACHINES AND LIKE EQUIPMENT
Geoffrey Alfred Cook, Bentleigh, Victoria, Australia, assignor, by mesne assignments, to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 15, 1960, Ser. No. 43,243
Claims priority, application Australia July 15, 1959
12 Claims. (Cl. 74—568)



1. Improved timing mechanism for clothes washing machines and like equipment comprising in combination, a rotatable, longitudinally shiftable shaft having cams thereon, cam followers arranged to engage said cams so as to be actuated thereby, electrical contacts movable

in response to movement of said cam followers, means whereby one or more of said cams is or are manually adjustable so as to vary the time during which the associated electrical contacts are closed by the related cam follower, each said adjustable cam including a fast disc connected to said shaft and a loose disc thereon and which are spring coupled in such a manner that they are normally urged apart whilst relative rotary movement therebetween is yieldingly opposed, said fast and loose discs being provided with disengageable driving connections and means for limiting relative rotary movement therebetween, said fast and loose discs also having opposed shoulders one on each of said discs which are relatively movable circumferentially and adapted to provide an adjustable time gap therebetween which is traversed by a cam follower, and means including said shaft for manually effecting relative rotary movement between said fast and loose discs and thereupon engaging their driving connections.

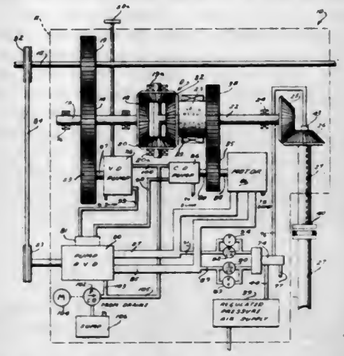
3,126,760
DYNAMIC DAMPER
Thomas H. Peirce, 16725 Shaftsbury, Detroit, Mich.
Filed Aug. 17, 1959, Ser. No. 834,311
2 Claims. (Cl. 74—574)



1. A dynamic damper for dampening torsional vibrations of a shaft occurring at a first and second natural frequency of torsional vibration of the shaft comprising a one-piece retainer having first and second axially and radially spaced axially extending flanges thereon and a radially extending plate therebetween, a first resilient membrane bonded to the inner peripheral surface of said first flange and to one side of said plate, an annular mass bonded to said first resilient member, a second resilient membrane bonded to the outer peripheral surface of said second flange and to the other side of said plate, a second annular mass bonded to said second resilient membrane, and means for securing said damper to a shaft for rotation concentrically therewith.

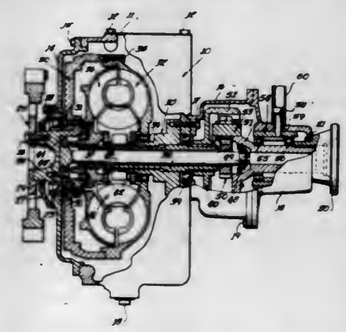
3,126,761
TORQUE LIMIT CONTROL
Edgar J. Justus and Edward D. Beachler, Beloit, Wis., assignors to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin
Filed Jan. 21, 1958, Ser. No. 710,324
21 Claims. (Cl. 74—687)

1. In a gear-type drive mechanism having a clutch operative therewith, the improvement of a clutch control, said control comprising: a pair of engaging helical gears comprising an intermediate part of said mechanism; a pair of shafts rigidly supporting said gears, one of said shafts being free to shift axially in opposite directions as a function of torque transmitted thereby; means responsive to the axial position of said one shaft for proportionately converting said axial shift into a variable fluid pressure signal which increases in response to a torque increase;



and means for directing said fluid pressure signal to said clutch for varying its torque transmitting capacity as an inverse function of the torque.

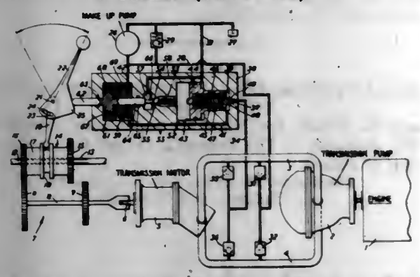
3,126,762
DUAL PERFORMANCE TORQUE CONVERTER TRANSMISSION
Harry R. Wilson and Horst G. Steinhagen, Libertyville, Ill., assignors to The Frank G. Hough Co., a corporation of Illinois
Filed Apr. 28, 1961, Ser. No. 106,408
3 Claims. (Cl. 74—688)



1. In a transmission, a drive shaft, a hydrodynamic torque converter comprising a fluid filled casing and vaned impeller drivingly connected to said drive shaft, and relatively rotatable, vaned, turbine and reaction members mounted in said casing to provide a closed toroidal fluid circuit, a planetary set of a sun gear, a ring gear, and a plurality of planet pinion gears engaging said sun gear and ring gear and supported by a planet pinion gear carrier, a cylindrical shaft extending into said casing along the axis of rotation of said impeller and terminating adjacent to said drive shaft, means connecting said cylindrical shaft to be driven by said turbine member, means connecting said ring gear of said planetary set to be driven by said cylindrical shaft, means slidably carrying said planet pinion gear carrier along the axis of rotation thereof, said ring gear being formed to have teeth of a width sufficient to engage said planet pinion gears in any longitudinal position of said planet pinion gear carrier relative to said ring gear, an output shaft connected to be driven by said planet pinion gear carrier, a sliding shaft carried through said cylindrical shaft and drivingly carrying said sun gear of said planetary set, means carrying

one end of said sliding shaft on said planet pinion gear carrier for longitudinal movement of said sliding shaft by said carrier and for relative rotation therebetween, means on said turbine member and said drive shaft formed to respectively drivingly engage the other end of said sliding shaft when said sliding shaft is positioned in cooperation therewith, and manual means for sliding said planet pinion gear carrier to longitudinally move said sliding shaft to one position wherein said drive shaft drivingly engages said sliding shaft to rotate independently of said cylindrical shaft and to a second position wherein said turbine member drivingly engages said sliding shaft, and said sliding shaft and said cylinder shaft are locked together with said planetary set for rotation.

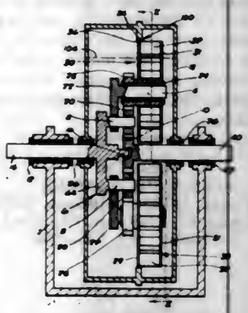
3,126,763
HYDRAULIC APPARATUS
Eric H. Bowers, Southbourne, near Emsworth, England, assignor to Dowty Hydraulic Units Limited, Ashchurch, England
Filed Nov. 2, 1961, Ser. No. 149,562
Claims priority, application Great Britain Nov. 10, 1960
9 Claims. (Cl. 74—733)



1. A power transmission for transmitting power from a power source to a load comprising a hydrostatic transmission formed by a positive displacement hydraulic pump driven by the power source, a positive displacement hydraulic motor, and a pair of hydraulic passages interconnecting the pump and motor to form flow and return passages, a mechanical change speed gear in power transmitting relation with the hydrostatic transmission, a selector to select any of a plurality of fixed speed ratios for the mechanical gear, a first pair of non-return valves extending one from each of the flow and return passages, a high pressure passage to which the first pair of non-return valves are both connected to transmit thereto the higher pressure existing in the flow and return passages, a spring loaded valve connected to the high pressure passage, a low pressure passage extending from the spring loaded valve, a second pair of non-return valves extending to the flow and return passages from the low pressure passage to transmit liquid from the low pressure passage into the passage of the flow and return passages at lower pressure and means operable by the selector during selection of a speed ratio of the mechanical gear to cause the spring loaded valve to vent the hydraulic liquid between flow and return passage in excess of a predetermined pressure through a first and a second non-return valve.

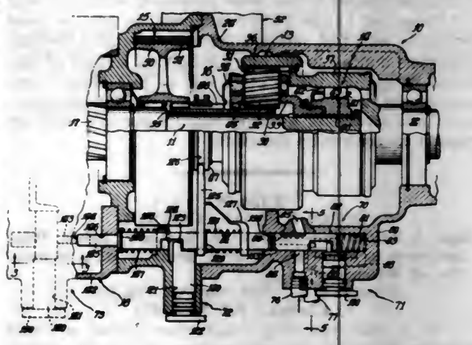
3,126,764
INERTIA FLUID TORQUE TRANSMITTER
Hendrik Cancrinus, Hazendal, Cape Town, Cape Province, Republic of South Africa, assignor to Inpower Works (Proprietary) Limited
Filed Nov. 29, 1961, Ser. No. 155,772
Claims priority, application Republic of South Africa Mar. 10, 1961
15 Claims. (Cl. 74—752)

1. A torque transmitter which includes a drum disposed about an axis and having means whereby it can be supported for rotation about its axis, a carrier inside the drum and co-axial with it and mounted to rotate within the drum about its axis, at least one planet wheel mounted on the carrier to rotate about its own axis and relatively to the carrier, a sun wheel within the drum and co-axial with the carrier, connecting means connected to the sun wheel for connecting the sun wheel to a load to absorb rotary power, intermediate drum means drivingly connecting the planet wheel to the sun wheel, a plurality of liquid-entrapping means fast with the planet wheel and defining recesses spaced circumferentially away from and around the planet wheel axis, and engaging means acting



between the drum and the planet wheel and adapted to transmit torque between the drum and the planet wheel; whereby when a quantity of liquid is placed in the drum and the carrier and the drum rotate about the carrier axis, the liquid is flung out in an annular layer against the inner peripheral surface of the drum under the action of centrifugal force, to permit the liquid-entrapping means to dip into the layer of liquid to receive liquid during rotation of the carrier, and whereby when the planet wheel rotates relatively to the carrier, the liquid-entrapping means brings liquid from the outer layer and rejects it in the region of the carrier axis in a direction outwardly towards the annular layer.

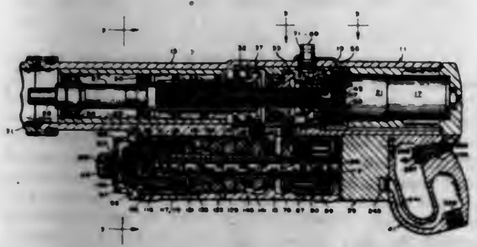
3,126,765
POWER SHIFTED OVERDRIVE
Carl J. Conkle, Muncie, Ind., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Feb. 2, 1961, Ser. No. 86,635
4 Claims. (Cl. 74—781)



1. In a control system for an overdrive transmission having an input shaft and an output shaft, and a planetary gear set and an overrunning clutch interconnecting said shafts, the combination of brake means including a fluid pressure servomotor for rendering an overdrive power

train effective between said shafts, a source of fluid pressure connected to actuate said servomotor, a movable valve effective in one position to apply fluid pressure from one source to said servomotor and effective in a second position to release fluid pressure from said servomotor, manual means effective to move said valve to either position, mechanical lock-up means effective to lock up said gear set for completing a direct drive power train between said shafts, actuating means for operating said lock-up means and interconnected with said valve, said actuating means constituting an additional means to move said valve thereby releasing fluid pressure from said servomotor when said lock-up means is engaged.

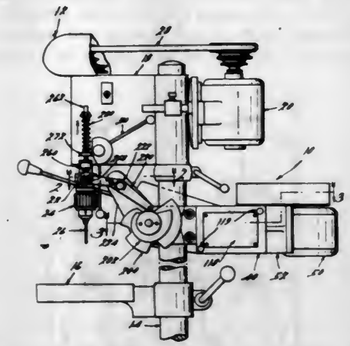
3,126,766
FLUID PRESSURE ACTUATED POSITIVE FEED TOOL
John H. Bent, Fullerton, Calif., assignor to Gardner-Denver Company, a corporation of Delaware
Filed May 16, 1960, Ser. No. 30,046
7 Claims. (Cl. 77—32.7)



1. A power operated positive feed tool comprising, in combination: a housing; a drive shaft rotatable in said housing; a screw drivingly connected to said drive shaft for rotation thereby and for axial movement relative thereto; a spindle for mounting a cutting element drivingly connected to said screw; a threaded sleeve rotatably mounted in said housing for threaded engagement with said screw; a drive mechanism connected between said drive shaft and said sleeve for controlling the rotation of said sleeve relative to said screw to effect the extension and retraction of said spindle relative to said housing; first, second, and third air operated means selectively actuable to control said drive mechanism; each of said operated means being actuated when communicated with pressurized air, while the other of said air operated means are vented; a first control valve for alternatively directing air to, and venting air from, said first and second air operated means respectively; a second control valve for alternatively directing air to, and venting air from, said first control valve and said third air operated means respectively; and control means associated with said spindle for actuating said control valves in response to axial movement of said spindle.

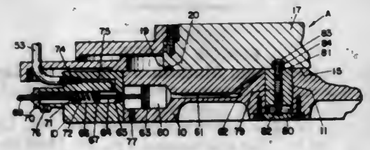
3,126,767
TOOL FEED MECHANISM
William F. Sawyer, Brighton, Mich., assignor to King-Seeley Thermos Co., Ann Arbor, Mich., a corporation of Michigan
Filed July 23, 1962, Ser. No. 211,578
4 Claims. (Cl. 77—33.4)

1. A tool feed mechanism for a machine tool having a fixed member and a movable tool-supporting spindle, said tool feed mechanism comprising
a housing attachable to the fixed member of the machine tool,
a timing gear shaft having
a first timing gear,
means for driving said timing gear,
a timing gear countershaft having
a second timing gear thereon complementary to the first timing gear,
a cam shaft journaled in said housing having
a cam thereon,



a cam follower supported by said housing and engageable with said cam and with the spindle of the machine tool for controlling movement of the spindle relative to a workpiece,
means for releasably connecting said timing gear countershaft and cam shaft, and
a single manual control for said releasable means movable to condition said feed mechanism for automatic operation, single cycle operation, start, and stop, selectively.

3,126,768
WORK POSITIONING TABLES
John T. Gondek, 2206 Roosevelt St. NE., Minneapolis, Minn.
Filed July 1, 1960, Ser. No. 40,382
15 Claims. (Cl. 77—64)

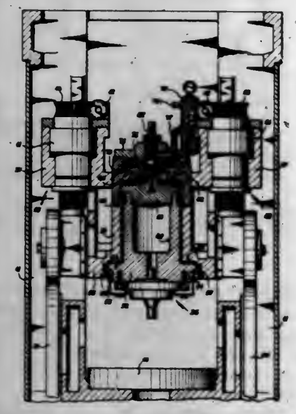


15. A work positioning table including a base having a horizontal upper surface, a fixture plate having a horizontal under surface slidably supported for movement in any direction on said base and having sockets in the under surface thereof, a locating pin slidably supported for vertical movement in said base, means for sliding said pin from a retracted to a projected position, said pin when projected being engageable in a socket in said fixture plate, a sealing ring on said horizontal under surface of said fixture plate near the periphery thereof and continuously engaged with the horizontal upper surface of said base, and means for subjecting the area of said fixture plate inwardly of said ring to hydraulic fluid under pressure, and means for adjusting said fluid pressure to float said fixture plate on said base.

3,126,769
MECHANICAL PRESS
Helmut Hecht, Goppingen, Germany, assignor to MAY-Pressenbau Ltd., Schwabisch Gmund, Germany
Filed May 15, 1961, Ser. No. 110,200
3 Claims. (Cl. 78—39)

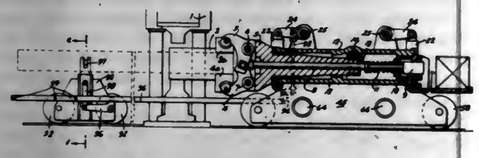
1. A mechanical press comprising a press ram having a recess, means for reciprocating said press ram in an

axial direction, a piston located in said recess axially movable relative to said press ram from an inoperative to an operating position leaving exposed a partial volume of said recess, a first stop means limiting the movement of said piston in said recess when in inoperative position, a second stop means limiting the movement of said piston in said recess when in operating position, said ram having a cavity containing a liquid under pressure, a passage connecting said partial volume and said cavity in said inoperative position of said piston, said passage in-



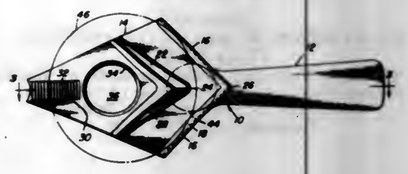
cluding a part extending in said axial direction, the width of said part gradually diminishing in the direction of movement of said piston from said inoperative position to said operating position, throttling means rigidly fixed to said piston and in said inoperative position of said piston extending with lateral clearance into said part of said passage, said clearance being gradually reduced upon movement of said piston from said inoperative position to said operating position to increase the action of said throttling means.

3,126,770
FORGE TONGS
Theodor Wuppermann, Mulheimer Strasse 14, Leverkusen-Schlebusch, Germany, and Ernst Müller, Ziegler Strasse 57, Duisburg, Germany
Continuation of abandoned application Ser. No. 238,202, July 24, 1951. This application Apr. 26, 1960, Ser. No. 24,810. In Germany Mar. 17, 1949
Public Law 619, Aug. 23, 1954
Patent expires Mar. 17, 1969
14 Claims. (Cl. 78—96)



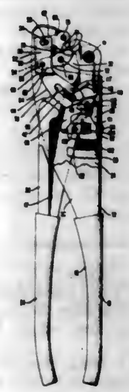
1. A travelling manipulator including a carriage mounted on wheels, two shafts rotatably mounted on said carriage, a cylinder at each end of each of the two shafts, a fixedly mounted ram projecting into each of said cylinders, a lever rigidly mounted on each of said shafts, a piston rod pivoted on each of said levers and integral with a piston mounted within its own cylinders, a pair of arms rigidly mounted on said shafts respectively, resilient suspension means depending from each arm of said pairs of arms, a holder carried in the said suspension means, a shank mounted to rotate in the holder, co-acting jaws pivoted on the shank, a rod connected to said jaws, a piston integral with said rod and mounted in a cylinder, a pressure accumulator mounted on said carriage, a motor and a pump geared to said motor for charging the pressure accumulator, both pump and motor being mounted on the carriage, and valved conduits from the pressure accumulator to each of said cylinders.

3,126,771
TOOL FOR LIFTING BOTTLE CAPS AND LIDS
Robert A. Feller, 1002 E. St. Germain St., St. Cloud, Minn.
Filed July 30, 1962, Ser. No. 213,244
5 Claims. (Cl. 81—3.46)



1. A combination tool for lifting various sizes of caps and lids from containers comprising a longitudinal handle lever, a laterally widened head portion at the forward end of said handle lever, said head portion having at each of two sides of its longitudinal axis a downwardly extending flange and a forwardly extending cap and lid edge engaging ledge, said two flanges being substantially at right angles to each other, a somewhat V-shaped primary fulcrum depending ridge with its apex extending toward the apex between said flanges, and a secondary fulcrum area in said head portion along its longitudinal axis and spaced from said primary fulcrum.

3,126,772
OPEN END CONNECTOR DEFORMING TOOL
Paul A. Haucke, Rahway, N.J., assignor to Buchanan Electrical Products Corporation, Hillside, N.J., a corporation of New Jersey
Continuation of application Ser. No. 21,385, Apr. 11, 1960. This application July 27, 1961, Ser. No. 127,400
16 Claims. (Cl. 81—15)



1. In a workpiece deforming tool, a terminal portion shaped to define an open sided workpiece receiving bore and a workpiece entry channel thereto, a first workpiece deforming element selectively displaceable between a first

location remote from said entry channel, an intermediate location adjacent said workpiece receiving bore and closing said entry channel and a third location occupying a predetermined portion of said workpiece receiving bore, second and third workpiece deforming elements displaceable from a first location adjacent said workpiece receiving bore to a second location occupying predetermined portions of said workpiece receiving bore, and means for effecting the selective displacement of said first workpiece deforming element from its first location to its intermediate location substantially independent of displacement of said second and third workpiece deforming elements and subsequent simultaneous displacement of said first, second and third workpiece deforming elements from the intermediate and first locations to their third and second locations respectively wherein each occupies a predetermined portion of said workpiece receiving bore with consequent deformation of a workpiece insertable therein.

3,126,773
TUBE BENDING TOOL ASSEMBLY
William W. Taylor, Jr., 5977 Cyrus Ave., Baton Rouge, La., and John T. Cooper, 4668 Windside Drive, Baker, La.
Filed Sept. 7, 1962, Ser. No. 230,306
5 Claims. (Cl. 81—15)



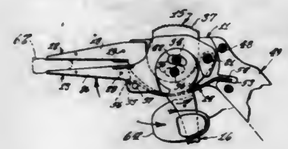
1. A tube bending tool assembly including body means defining a coiled groove opening radially outwardly of and extending circumferentially about the center axis of said body means defined by and centrally located relative to said groove, means carried by said body means adapted to engage the outer surface of a section of pipe seated in one end of said groove and to prevent movement of the adjacent portions of said pipe section radially outwardly of said groove, abutment means swingably mounted on said body means for rotation about said axis, in alignment with and outwardly of said groove and including means adapted to slidingly engage the outer surface of said pipe section and to cam said section into said groove as said abutment means is swung about said axis, a first handle fixed relative to said body means and a second handle fixed relative to said abutment means, said handles being disposed in generally parallel planes extending transversely of and spaced along said axis, a pivot shaft rotatably journaled through said body means for rotation about said axis, said abutment means being carried by the free end of a lever arm whose other end is pivotally secured to an end of said pivot shaft projecting outwardly of one end of said body means, said pivot shaft being slidably journaled for axial shifting and said one end of said shaft including means defining a circumferential groove, said other end of said lever arm including a recess snugly and rotatably receiving said shaft at said circumferential groove, said one end of said body means including spiral cam means generally paralleling said lever arm for axially displacing the latter as it is swung about said axis whereby said abutment means will be maintained in registry with the coiled groove, the end of said shaft projecting outwardly of the other end of said body means including an abutment, a compression spring disposed about said shaft between said abutment and said body means normally biasing said shaft outwardly of said body means and thereby said lever arm into frictional engagement with said cam means.

3,126,774
SOCKET WRENCH
Cleatues A. Carr, 1502 Harris, and Eldon L. Mardock, 1814 A St., both of Eureka, Calif.
Filed Mar. 13, 1962, Ser. No. 179,355
3 Claims. (Cl. 81—125)



1. A socket wrench comprising an elongated hollow body, means on one end of said body adapted to engage the head of a bolt, a handle carried on the other end of said body, said handle having a threaded bore therein disposed in longitudinal alignment with the interior of said body and connected in communication therewith, a rod having the portion adjacent one end exteriorly of said handle and having the other end inwardly of and spaced from said one end of said body, said rod being provided with threads on the portion within said handle threadably engaging the threads of said bore, a magnet carried on the other end of said rod, and handle means on said one end of said rod for the application of rotative force to said rod whereby said magnet is moved toward or away from the bolt head engaging means responsive to execution of rotary movement of said handle in one or the other direction.

3,126,775
GRIP HOLD PLIER FOR SMALL ASSEMBLIES
John Ramge, R.F.D. 2, Pound Ridge, N.Y.
Filed Apr. 16, 1962, Ser. No. 187,792
4 Claims. (Cl. 81—318)



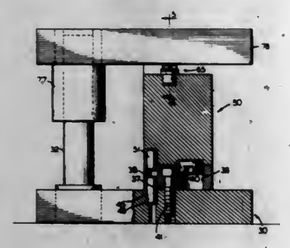
1. In a grip hold plier the combination of a pair of spaced apart cover plates forming a housing, and a working mechanism therebetween, said mechanism comprising an upper jaw element, a lower jaw element, a first cam for moving said upper jaw element toward a closed position with said lower jaw element, a second cam for moving said lower jaw element toward a closed position with said upper jaw element, said first cam including a portion adapted to be actuated by the thumb of an operator's hand, actuating means for said second cam including a finger receiving portion extending therefrom, each of said cams being mounted pivotally free on a pin extending transversely through each of said cams, each of said pins being supported at each end in one of said cover plates and each of said cams having a relatively

circular periphery, the center of said periphery being relatively close to the center of said pivot pin.

3,126,776
METHOD AND APPARATUS FOR ALIGNING PUNCH AND DIE RETAINERS

Lawrence V. Whistler, Sr., 259 Doncaster Road, and Lawrence V. Whistler, Jr., 251 Doncaster Road, both of Kenmore, N.Y.

Filed Feb. 19, 1962, Ser. No. 174,203
10 Claims. (Cl. 83—13)

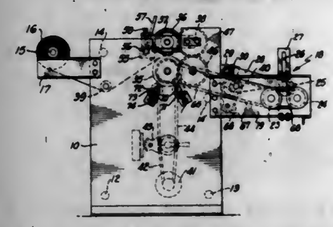


1. The method of aligning the punch and die retainers of a die set comprising fixedly mounting a first retainer upon an associated shoe in the proper position, mounting a spotting fixture on said first retainer so as to prevent relative rotation therebetween, bringing a supporting shoe into contact with an upper portion of said spotting fixture to provide an indication on the under surface of the supporting shoe of the proper position of mounting holes, removing said supporting shoe from contact with said spotting fixture and forming mounting holes in the supporting shoe, loosely mounting a second retainer on said supporting shoe by inserting attaching means in said mounting holes, then accurately aligning the first and second retainers, and then securing said second retainer in final fixed position on said supporting shoe.

3,126,777
FILM-PIERCING APPARATUS

Lyle F. Shabram, Danville, Calif., assignor to Consolidated Thermoplastic Company, Stamford, Conn., a corporation of Delaware

Filed Nov. 21, 1960, Ser. No. 70,469
2 Claims. (Cl. 83—174)

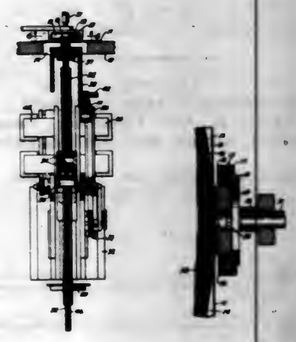


1. In a high speed apparatus for piercing film and sheet material, the combination of: a rotatable drum, peripheral radially extending flanges integral with each axial end of said drum, a layer of resilient silicone putty forming a surface on said drum between said flanges, said putty being maintained axially immovable off from said surface by said flanges; said putty being a kneadable cold-flowing material, readily and permanently deformed by steady application of pressure and resiliently resistant to deformation by a sharp impact; a member having a plurality of piercing devices; means operatively relating and relatively moving said drum and member to cause said devices to pierce the sheet material and enter said putty to form an opening in the putty; and means operatively related to said drum to reestablish a continuous planar surface on said putty layer free from any openings formed by the piercing device, said means normally exerting a pressure on the putty to cause axial movement of the putty.

3,126,778
APPARATUS FOR PUNCHING OR EMBOSSING TRAVELING WEBS BY USE OF AN ELECTRIC SPARK

Harold C. Early, Ann Arbor, Mich., assignor to Meredith Publishing Company, Des Moines, Iowa, a corporation of Iowa

Filed May 29, 1961, Ser. No. 113,536
8 Claims. (Cl. 83—177)

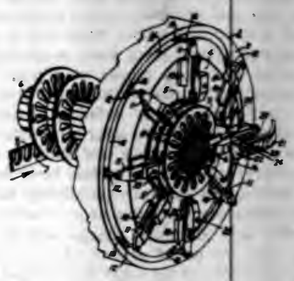


1. In apparatus for punching holes in moving webs comprising a die over which the web moves, an anvil having a surface overlying the web on the side thereof opposite to the die and in registration with the die and electrodes at opposite sides of the anvil in registration with the die to produce a spark discharge between the anvil and the web, the improvement which comprises a series of projections on the surface of the anvil between the electrodes to cause the spark discharge to follow a tortuous path between the electrodes.

3,126,779
APPARATUS FOR PIERCING A MOVING HELICAL STRIP

Jerold L. Welch, Schenectady, and Joseph W. Gernon, Burnt Hills, N.Y., assignors to General Electric Company, a corporation of New York

Filed Aug. 23, 1960, Ser. No. 51,924
5 Claims. (Cl. 83—330)



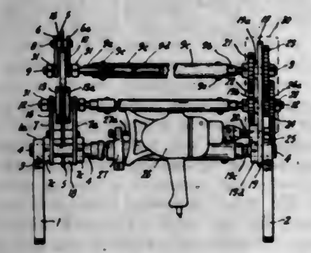
1. In an apparatus for piercing successive turns of a preformed helical strip wound edgewise, the combination of means including an arbor for rotating the turns edgewise about an axis; an annular cam track spaced

outwardly from said arbor comprising first and second arcuate sections, with said second arcuate section being disposed nearer said axis than said first section and having a center of revolution generally at said axis; a rotor arranged to rotate between said annular cam track and said arbor and having a central opening to permit the strip turns to pass therethrough; a tool assembly having means engaging said track and being guided thereby; means carried by said rotor for guiding said tool assembly radially toward and away from said axis in response to movement of the tool assembly along said track for driving said rotor, tool assembly, and an individual strip turn concurrently through a predetermined arcuate path at substantially the same speed and in the same direction when said tool assembly is moved along said second arcuate section; said tool assembly including a pair of cooperating piercing members movably mounted relative to each other, said cooperating piercing members straddling the individual strip turn at a preselected location during travel of said tool assembly along said second arcuate section; operating means disposed along said arcuate path for urging said cooperating members axially into cutting engagement at the preselected location on the strip turn side to perforate the strip axially therethrough; and means effective to retract said cooperating piercing members from cutting engagement before said tool assembly travels beyond said second arcuate section.

3,126,780
SHEET METAL CUTTING MACHINES

Benjamin Edward Booth, Christian Road, Henderson R.D., Swanson, Auckland, New Zealand

Filed Nov. 21, 1960, Ser. No. 70,800
Claims priority, application New Zealand Dec. 15, 1959
7 Claims. (Cl. 83—500)

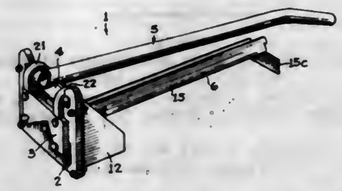


1. An apparatus for cutting sheet metal and sheet metal containing corrugations comprising an expansible base member, a head comprising a main plate having one end connected at one end of said base member, pairs of cheek plates secured to opposite sides of said plate in upper and lower positions thereon and extending towards each other, a first shaft and a second shaft rotatably mounted at the free ends of the cheek plates, said shafts being spaced apart and parallel to each other, a pair of disc cutters operatively mounted on said first shaft, a single disc cutter mounted on said second shaft, said single cutter being disposed between said pair of cutters so that a portion thereof extends therebetween, a bearing plate having one end connected at the other end of said base member, gear means mounted on said bearing plate and operatively connected to said shafts, expansible members connected between said first and second shafts and said gear means to adjustably support said pair of cutters and said single cutter to operate said pair of cutters and said single cutter in counter-rotation, drive means operatively connected to said gear means to drive said gear means, and means disposed in said main plate to divert a strip of metal cut by said cutters to one side as a sheet of metal is being cut thereby.

3,126,781
SHEAR

Marchand B. Hall, Olympia Fields, Ill., assignor to Acme Steel Company, Chicago, Ill., a corporation of Illinois

Filed May 1, 1961, Ser. No. 106,642
1 Claim. (Cl. 83—628)

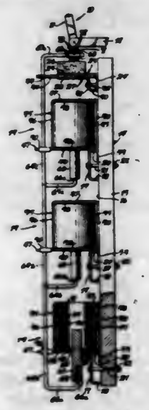


A shear comprising a work piece support, a fixed shear blade and a movable shear blade, said work piece support being connected to said fixed shear blade, said fixed shear blade being in the form of a flat U-shaped plate having two opposite side arm portions connected together by a connecting portion to impart said U-shape to it, said fixed shear blade having an integral cutting edge along said connecting portion and having one of two opposed recesses in each of the two side arm portions, said movable shear blade being attached to two spaced carriers which are each provided with flanges extending parallel to and spaced from the movable shear blade so that the movable shear blade and the flanges are positioned to be guided by opposite surfaces of the side arm portions, a shaft, said carriers being journalled on the central portion of said shaft, said shaft having ends connected eccentrically to the central portion, which ends are positioned in the recesses in the side arm portions so that upon rotation of the shaft the eccentricity of its ends with respect to its central portion causes movement of the carriers, the flanges and the movable shear blade relative to the fixed shear blade, the recesses in the fixed shear blade being unconfined in a transverse direction relative to the plane of movement of the movable shear blade whereby the ends of the shaft are free to shift in the recesses in said transverse direction upon rotation of said shaft.

3,126,782
SOLENOID ASSEMBLY MEANS FOR ACTUATING PIANO PLAYING MEANS

Richard F. Fauser, Kenmore, N.Y., assignor to Aurora Corporation of Illinois, Buffalo, N.Y., a corporation of Illinois

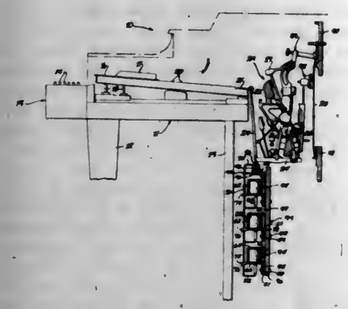
Filed Feb. 3, 1961, Ser. No. 86,910
17 Claims. (Cl. 84—246)



1. A solenoid assembly for actuating piano playing means, comprising movable armature rod means, and

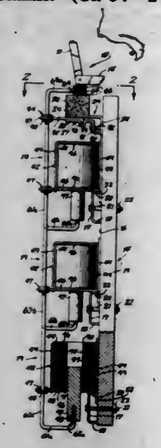
generally rectangular casing means including front and rear walls connected by end walls, said casing means having guide means receiving said armature rod means, one of said walls having a recess, and another of said walls adjacent to said one of said walls having lug means receiving in said recess.

3,126,783
SOLENOID MEANS AND SOLENOID MOUNTING MEANS FOR PIANOS
Lee L. Von Gunten, Kenmore, N.Y., assignor to Aurora Corporation of Illinois, Buffalo, N.Y., a corporation of Illinois
Filed Feb. 3, 1961, Ser. No. 86,916
17 Claims. (Cl. 84—246)



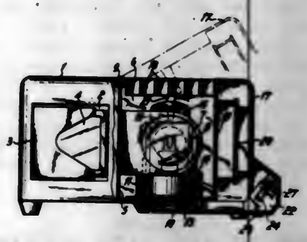
1. In a piano, the combination comprising an action having a movable element, support means, solenoid means operatively associated with said element, said solenoid means including casing means having tongue means engaging said support means, and bar means adjustably clamping said tongue means to said support means.

3,126,784
SOLENOID MOUNTING MEANS FOR PIANOS
Charles H. Wood, Buffalo, N.Y., assignor to Aurora Corporation of Illinois, Buffalo, N.Y., a corporation of Illinois
Filed Feb. 3, 1961, Ser. No. 86,917
10 Claims. (Cl. 84—246)



1. In a piano having note playing means, the combination therewith of support means, guide means engaging said support means and having flange means, bar means adjustably clamping said guide means to said support means and having a recess arranged transversely of said playing means and receiving said flange means to locate said guide means longitudinally of said playing means, and solenoid means for actuating said playing means and including movable armature rod means passing through said guide means, whereby upon adjustment of said bar means, said guide means and armature rod means may be moved transversely of said playing means while maintaining their location longitudinally of said playing means.

3,126,785
SLIDE PROJECTOR WITH INTERCHANGEABLE LAMP HOUSING COMPONENTS
Erich Zillmer, Braunschweig, Germany, assignor to Voigtlander A.G., Braunschweig, Germany, a corporation of Germany
Filed Dec. 22, 1960, Ser. No. 77,601
Claims priority, application Germany Dec. 23, 1959
7 Claims. (Cl. 88—24)

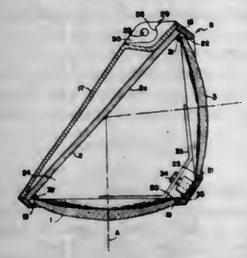


1. In a slide projector having an objective and slide shifting means, and arranged to be used with projector lamps at different ratings, a casing having means defining a slide storage compartment and partly defining a lamp compartment separated from said slide storage compartment by a partition, and including a base, side, end and top walls forming a cover; said top wall and one side wall being cut away, in the area of said lamp compartment, to form a continuous opening extending laterally in said top wall and substantially vertically in said one side wall; a projector lamp socket adjustably positioned in said lamp compartment; a cover component having a top wall section and a side wall section conforming to the cut away portion of said top wall and said one side wall, respectively, and arranged to seat in said opening to complete the cover enclosure, said cover component being designed for use with a projector lamp of a respective rating; cooperating means on said casing and on said cover component operable to disengageably releasably latch said cover component in cover-completing position on said casing; a ventilating grid opening through one section of said cover component; and inwardly projecting abutment means on said cover component engaged with said lamp socket, upon positioning of said cover component in cover enclosure completing position, to adjust the latter for proper alignment of the respective lamp associated therewith with said objective; the effective length of said abutment means being coordinated with the constants of the associated lamp.

3,126,786
OVERHEAD PROJECTION SYSTEM
Roger H. Appeldorn, White Bear Lake, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed July 20, 1962, Ser. No. 211,230
9 Claims. (Cl. 88—24)

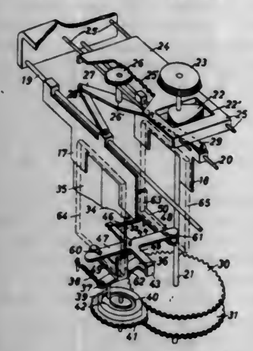
1. An overhead projector suitable for use in the front of a classroom to project on a vertical screen a light image of a horizontally held transparency and, when in position for said projecting, comprising:
a box-like case;
a light source mounted in said case;

a transparent member mounted on said case to provide a substantially horizontal projection stage;
a condensing lens positioned beneath and adjacent said transparent member and above said light source for collecting light from said source and directing the same upwardly through said transparent member in a cone of light having an incident axial ray;



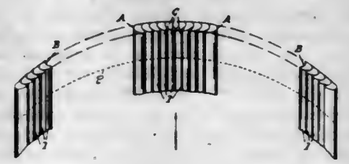
a projection head consisting essentially of
a pair of converging meniscus lenses which are small relative to said condensing lens, and
a reflecting means affording a single flat reflecting surface positioned between and in triangular arrangement with said meniscus lenses, the concave surfaces of which face said reflecting surface; and
means positioning said projection head above said projection stage such that said incident axial ray passes through one of said meniscus lenses generally radial to the mean curvature thereof and directly to said reflecting surface to be reflected thereby directly toward and substantially through the center of the other of said meniscus lenses, and at a height such that the real image of said light source produced by said condensing lens is substantially between said pair of meniscus lenses.

3,126,787
PHOTOGRAPHIC SLIDE PROJECTOR
Richard Weiss, Braunschweig, Germany, assignor to Franke & Heidecke, Fabrik Photographischer Präzisions-Apparate, Braunschweig, Germany, a firm of Germany
Filed Dec. 18, 1961, Ser. No. 160,135
Claims priority, application Germany Dec. 22, 1960
3 Claims. (Cl. 88—28)



1. A picture slide projector of the type having means for holding a picture slide of one size at a first projection position alined with an optical projection axis and means for holding a picture slide of a different size at a second projection position alined with the projection axis and spaced axially from the first projection position, characterized by the provision of two pivots laterally spaced from each other on opposite sides of the projection axis, two masking members respectively mounted for swinging movement on the respective pivots from closed positions interrupting projection of light along said axis to open positions allowing projection of light along said axis, cam means for moving said masking members from their open positions to their closed positions, spring means tending to move said masking members from their closed positions to their open positions, latch means including a two-armed lever for maintaining said masking members in their closed positions against the force of said spring means, a first latch-releasing member operatively connected to one arm of said two-armed lever and movable in the direction of movement of a picture slide of the first size and engageable by an advancing edge of such picture slide to be displaced thereby as the picture slide of the first size closely approaches its projection position, thereby to move said first latch-releasing member to release said latch, and a second latch-releasing member operatively connected to the other arm of said two-armed lever and movable in the direction of movement of a picture slide of the second size and engageable by an advancing edge of such picture slide to be displaced thereby as the picture slide of the second size closely approaches its projection position, thereby to move said second latch-releasing member to release said latch.

3,126,788
PROJECTION SCREENS, IN PARTICULAR FOR MOVING PICTURES
Jules Hourdiaux, 96 Ave. de Versailles, Paris, France
Filed Dec. 14, 1961, Ser. No. 159,311
Claims priority, application France Dec. 22, 1960
2 Claims. (Cl. 88—28.9)



1. A projection screen comprising a multiplicity of identical elongated elements extending all in the same direction and juxtaposed to one another, each of said elements comprising a convex and a concave cylindrical surface for guiding two elements adjoining the element considered on opposite sides thereof so that said two elements are pivotable with respect to said first mentioned element about two respective axes parallel to said direction and fixed with respect to said first mentioned element, said convex and concave surfaces having their generatrices parallel to said direction and having as respective directrices two circular arcs of the same radius, said circular arcs having their respective centers located on said axes and a convex cylindrical projection surface joined tangentially with said convex surface, said projection surface having generatrices parallel to said direction and the limit generatrices of which are located in a plane making, with the plane passing through said axes, an angle ranging from 15 to 30°.

3,126,789
HYPERVELOCITY PROPULSION ARRANGEMENT
Rudolf X. Meyer, Pacific Palisades, Calif., assignor to The Aerospace Corporation, Los Angeles, Calif., a corporation of California
Filed May 17, 1962, Ser. No. 195,513
14 Claims. (Cl. 89—8)

1. A hypervelocity gun arrangement comprising:
a gun barrel defining a bore;

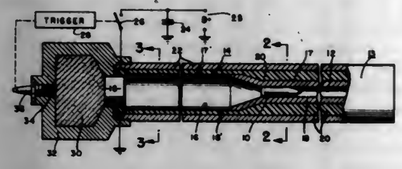
a first conductor within said barrel defining a first arcuate surface of the bore throughout the length thereof;

a second conductor defining a second arcuate surface of the bore diametrically opposed to said first arcuate surface;

an enlarged breech secured to said barrel at one end thereof and defining an enlarged breech chamber;

said first and second conductors each having extensions extending along diametrically opposed arcuate surfaces of the breech chamber;

a projectile positionable in the bore adjacent to said breech and of a diameter sufficient to electrically engage both of said conductors throughout the length of the bore;



a piston positionable adjacent to the end of said extensions in the breech chamber and of a diameter sufficient to engage both of said extensions throughout the length of the breech chamber;

means for inducing electric current flow of the order of thousands of amperes through said extensions and said projectile to create a magnetic force for accelerating said projectile through the bore;

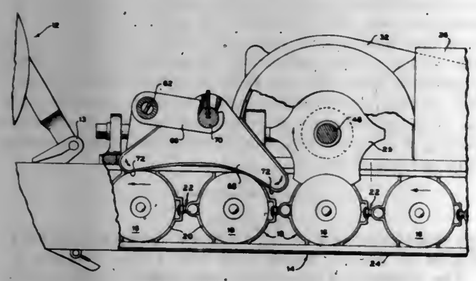
and means for driving said piston through the breech chamber toward said projectile so that it will engage said extensions at an instant when the current flow is maximum, whereby said piston initially short-circuits the current flow in the loop circuit established thereby and sequentially increases the magnetic flux thereof to increase rapidly the magnetic force on said projectile, the relative diameter of the breech chamber and the bore being such that said projectile must move a greater distance than said piston to maintain the area of said loop circuit constant.

3,126,790

FEED BELT BOOSTER WITH DEMAND CONTROL

Douglas P. Tassie, St. George, and Lewis K. Wetzel, South Burlington, Vt., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Army

Filed Nov. 15, 1962, Ser. No. 238,062
4 Claims. (Cl. 89—33)



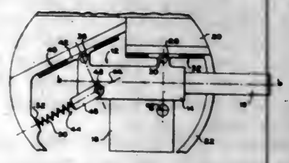
1. In combination, a gun, an ammunition belt including a plurality of links each retaining a cartridge and connectors for joining pairs of said links so as to permit relative displacement thereof between a minimum and a maximum pitch relationship, a feeding device in said gun for drawing said ammunition belt thereinto, and in a booster for assisting said feeding device in moving said ammunition belt to said gun, a drive motor, a pair of sprockets engageable with said belt, and means for transferring the torque of said drive motor to said sprockets when the pitch distances between not more than three adjoining ones of said cartridges between said feeding device and said sprockets are at their maximum pitch relationship and for interrupting the transfer of torque when the pitch distances between not more than three of said cartridges between said feeding device and said sprockets are at their minimum pitch relationship.

3,126,791

GUN RECOIL TORQUE ELIMINATOR

Robert E. Chiabrandy, Burlington, Vt., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army

Filed Nov. 15, 1962, Ser. No. 238,063
5 Claims. (Cl. 89—42)



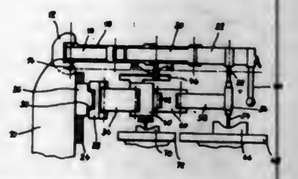
1. In combination, a gun having a center of gravity and a bore line, a turret rotatable in an elevation and an azimuth plane, and means for mounting said gun in said turret for recoil reciprocation relative thereto between an at-rest and a recoil position and so that torque is not produced in said turret by discharge of said gun when the center of gravity thereof is located away from the bore line in either the elevation or the azimuth plane of said turret.

3,126,792

ENGRAVING AND COPYING MACHINE

Kurt Zwick, Munich, Germany, assignor to Hans Deckel, Munich, Germany, and Friedrich Wilhelm Deckel, Zug, Switzerland

Filed Sept. 5, 1961, Ser. No. 135,975
Claims priority, application Germany Sept. 7, 1960
1 Claim. (Cl. 90—13.1)



An engraving and copying machine comprising, a machine frame, a substantially vertical guideway on said frame, a first slide member connected for upward and downward movement along said vertical guideway, a substantially horizontal guideway on said first slide member longer than the working range of the copying machine in the direction parallel to said horizontal guideway, a second slide member movable along said horizontal guideway and provided with pivot connectors at each of its ends such that a line passing through the axes of the pivot connectors is disposed substantially parallel to said horizontal guideway, a pair of rigid lever arms, one end of each lever arm pivotally connected to opposite ends of said second slide member by said pivot connectors, a holder beam provided with pivot connectors adjacent each of its ends, the opposite ends of said rigid lever arms pivotally connected to said holder beam by said pivot connectors, said rigid lever arms forming a parallelogram with said second slide member and said holder beam, a rotary cutting tool connected to one end of said holder beam outwardly of the pivot connector, a pantograph pivotally mounted on said frame and carrying a recording point connected to said holder beam outwardly of one of its pivot connectors, and a tracing stylus connected to one end of said holder beam intermediate the recording point connection and the adjacent pivot connector for guidance by said pantograph whereby the working range of the rotary cutting tool in the direction parallel to said horizontal guideway is shorter than the length of said horizontal guideway, and the masses of said first and second slide members are disposed in close proximity to said machine frame.

3,126,793

ROTARY TOOL

William L. Jennings, Pittsburgh, and Robert E. Baker, Washington, Pa., assignors to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware

Filed Aug. 1, 1960, Ser. No. 46,549
6 Claims. (Cl. 90—62)



1. A rotary tool, adapted to machine a groove of uniform depth in a workpiece, comprising, in combination, a rotatable body, a tool holder connected to said body for rotation therewith and being movable axially relative thereto, a cutting tool adjustably connected to and rotatable with said tool holder, a gage ring surrounding a portion of said cutting tool and engaging the surface of said workpiece for sensing irregularities therein, means for connecting said gage ring to said tool holder and operative to hold said gage ring in fixed axial relation with said cutting tool while permitting rotation of said tool holder relative to said gage ring, said cutting tool extending beyond said gage ring a distance equal to said groove depth, and a spring seated between said body and said tool holder and biasing said gage ring and said cutting tool toward engagement with said workpiece, whereby said gage ring displaces said cutting tool relative to said body and the surface of said workpiece in accordance with irregularities in said surface to maintain a uniform groove depth.

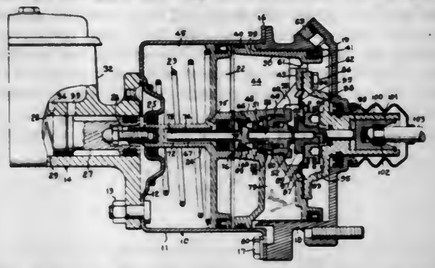
3,126,794

FLUID PRESSURE MOTOR MECHANISM

David T. Ayers, Jr., Birmingham, Mich., assignor to Kelsey-Hayes Company, Romulus, Mich., a corporation of Delaware

Filed Jan. 3, 1963, Ser. No. 249,294
16 Claims. (Cl. 91—391)

1. A fluid pressure motor mechanism comprising a motor having a housing and a pressure responsive unit therein provided at one side with a first chamber, an axially movable structure in said housing in the end thereof opposite said first chamber and forming with said pressure responsive unit a second chamber, said structure forming with the end of said housing opposite said pressure responsive unit a third chamber communicating with said second chamber to balance pressures therein, a pressure source, a manually operable mechanism, a valve mechanism normally balancing pressures in said first and second chambers and being movable to unbalance pres-



sures in such chambers to move said pressure responsive unit, said pressure source communicating with said third chamber, said structure having a larger area communicating with said second chamber than with said third chamber to provide a net pressure tending to hold said structure in a normal position, and means for transmitting forces from said manually operable mechanism to said pressure responsive unit to move the latter upon a drop in pressure in said source below a predetermined point.

3,126,795

MULTIPLE PURPOSE SPEED CONTROL VALVE CONSTRUCTION

Walter C. Kesselring, Detroit, Mich., assignor to Ross Operating Valve Company, Detroit, Mich., a corporation of Michigan

Filed Nov. 17, 1961, Ser. No. 153,166
2 Claims. (Cl. 91—443)



2. In a speed control valve unit for use in conjunction with a fluid motor piston having a cylinder of predetermined outside end diameter, a body of substantially the same outside diameter as the cylinder outside end diameter and having oppositely disposed flat parallel surfaces, a passage connecting said surfaces, a check valve mounted in said passage and permitting unrestricted fluid flow in one direction while preventing fluid flow in the opposite direction, a metering valve comprising a stem adjustably mounted in said body and extending parallel to and between said surfaces, passages connecting opposite sides of said metering valve to said opposite surfaces, and a volume element comprising a body having substantially the same outside diameter as said cylinder and unit and oppositely disposed parallel surfaces with a chamber connecting said surfaces, said volume element and unit being disposable in stacked relation on said cylinder.

3,126,796

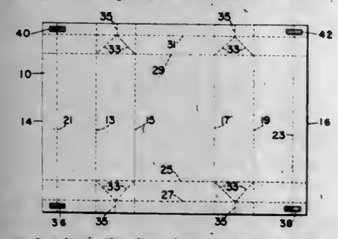
METHOD OF MAKING A PACKAGE

John G. Vergobbi, Quincy, Mass., assignor to Pneumatic Scale Corporation, Limited, Quincy, Mass., a corporation of Massachusetts

Original application Sept. 10, 1957, Ser. No. 683,184, now Patent No. 2,944,715, dated July 12, 1960. Divided and this application Apr. 25, 1960, Ser. No. 24,462
3 Claims. (Cl. 93—35)

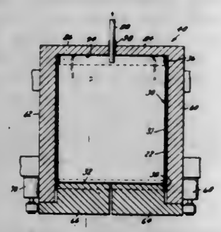
1. The method of forming a liner bag from a generally rectangular sheet of bag forming material having a thin

coating of thermoplastic adhesive on one side thereof, which comprises: providing the adhesive side of the sheet with auxiliary strips of thermoplastic adhesive at locations near the ends of the sheet at one side margin thereof so that when the end portions of the sheet are folded with the adhesive side thereof in face-to-face relation to form a tubular body having a longitudinal seam, the auxiliary strips will be intersected by the fold lines, thus dividing said auxiliary strips into inner and outer portions disposed inwardly and outwardly of said fold lines, respectively; folding the sheet on fold lines intersecting said auxiliary strips so that the adhesive side of said end portions of said sheet are in face-to-face relation and the outer portions of said auxiliary strips are in contact; applying heat and pressure to said end portions of said sheet to activate



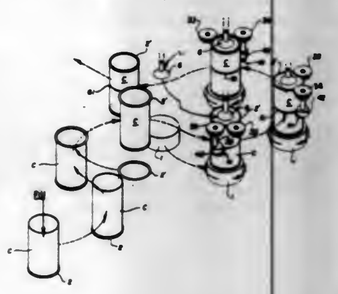
the thermoplastic adhesive interposed therebetween to form a tubular body having a longitudinal seam and simultaneously activating the outer portions of said auxiliary strips to melt the same and cause the material thereof to flow and partially fill a channel opening that is formed during folding at the inner edge of said seam; bringing together in face-to-face relation portions of the tubular body to form an end closure, with the inner portions of said auxiliary strips engaging the adhesive surface of the confronting portion of the tubular body; and applying heat and pressure to said end closure-forming portions to activate the thermoplastic adhesive interposed therebetween and to simultaneously melt the inner portions of said auxiliary strips to cause the material thereof to flow and fill said channel, whereby to provide an impervious sealed end closure on said tubular body.

3,126,797
PLASTIC LINED FIBER CONTAINERS
Herbert L. Carpenter, Amityville, and Herbert L. Carpenter, Jr., Lindenhurst, N.Y., assignors to The Greif-Bros. Cooperage Corporation, Delaware, Ohio, a corporation of Delaware
Filed Aug. 30, 1961, Ser. No. 134,953
9 Claims. (Cl. 93—36.01)



1. In the method of manufacturing plastic lined drums the steps of: initially forming a tubular shell having top and bottom open ends; confining said shell such that a passageway is provided into the shell interior; extruding a tubular plastic parison into said passageway; sealing the parison bottom end and top end while maintaining an air inlet opening exposed to the interior of the parison; introducing air under pressure through said air inlet opening into the interior of said parison to blow the parison outwardly and expand it into engagement with the interior of the shell; and then completing the bottom and top closures selected for said shell.

3,126,798
METHOD AND APPARATUS FOR SCORING CONTAINERS
Edwin Bradley Fairchild, 910 Espinosa Drive, Woodside, Calif.
Filed Aug. 29, 1961, Ser. No. 134,636
9 Claims. (Cl. 93—55.1)

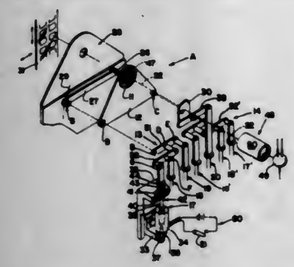


1. A method of simultaneously capping and peripherally scoring a hollow preformed paperboard container intermediate opposite ends thereof to impart resilience thereto, said container being defined by a thin fibrous wall of right circular cylindrical configuration, comprising positioning a closure disc in engagement with an end of said container, supporting said container on its other end and only externally thereof for rotation, rotating said container about its longitudinal axis while maintaining said container hollow and free of supporting devices therein, pressing said disc against said container end so that axial pressure is applied to said container as the same is rotating to preclude separation of said disc from said container and to place said container wall under compression, as said container is rotating with the interior thereof hollow deforming said disc into crimped engagement with said container wall while simultaneously applying inward pressure to a predetermined peripheral portion of said wall spaced from and intermediate said opposite container ends and only externally of said wall, and continuing rotation of said container through at least one revolution whereby said disc is crimped securely to said container end and said container wall is deformed inwardly and a peripherally continuous indentation is provided in said wall intermediate said opposite ends.

3,126,799
BINARY ADDER MATRIX POSITIONER
Fred S. Stauffer, Saratoga, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 29, 1962, Ser. No. 206,269
12 Claims. (Cl. 95—4.5)

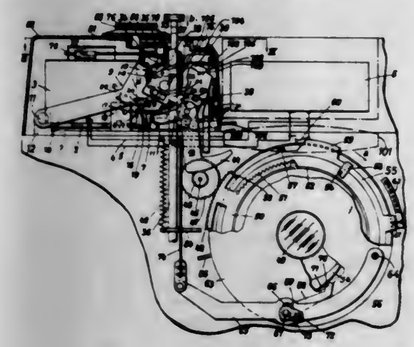
1. Matrix positioning mechanism comprising:
(*a*) a matrix,
(*b*) two sets of arcuate lines described thereon,
(*c*) the lines of each set thereof being concentric,
(*d*) radially spaced apart, and
(*e*) intersecting the lines of the other set thereof,
(*f*) a matrix element located at each intersection of said lines,
(*g*) a support for the matrix,
(*h*) a pivot on the matrix support located concentrically of each set of lines,

(*i*) a fixed work axis directed transversely of the matrix and through a matrix element at the intersection of two of said arcuate lines, and



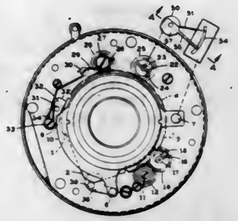
(*j*) means for moving each of the matrix support pivots in selected increments,
thereby to position matrix elements located at selected intersections of such arcuate lines on such work axis.

3,126,800
AUTOMATIC CAMERA WITH SCANNING
Dieter Maas, Munich, Germany, assignor to Agfa Aktiengesellschaft in Leverkusen-Bayerwerk, Munich, Germany
Filed Sept. 14, 1961, Ser. No. 138,052
Claims priority, application Germany Sept. 23, 1960
34 Claims. (Cl. 95—10)



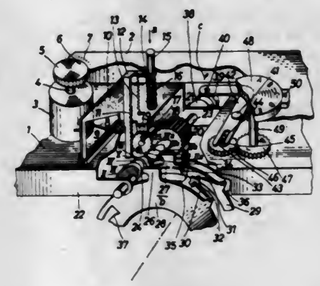
5. In a camera, in combination, a light meter having a movable pointer; scanning means movable from a predetermined rest position to scan said pointer; spring means urging said scanning means from said rest position thereof to a position scanning said pointer; first stop means positioned by said scanning means in a position indicative of the lighting conditions; setting means for setting at least part of the structure of the camera which determines the exposure made thereby; drive means cooperating with said setting means for driving the same from one end position toward an opposed end position; and second stop means driven by said drive means, when the latter drives said setting means from said one toward said other end position thereof, into engagement with said first stop means, whereby said first stop means cooperates with said second stop means to limit the extent to which said drive means drives said setting means in accordance with the lighting conditions, said drive means driving said setting means through substantially its entire range of movement and said second stop means through a relatively large distance when said first stop means is moved by said scanning means through a relatively small distance upon movement of said scanning means from said rest position thereof.

3,126,801
AUTOMATIC SHUTTER MECHANISM
Tatsuo Kobayashi, Osaka, Japan, assignor to Minolta Camera Co. Ltd., Osaka, Japan, a corporation of Japan
Filed Oct. 17, 1962, Ser. No. 231,119
6 Claims. (Cl. 95—10)



1. The combination comprising a camera shutter mechanism including shutter blades movable upon release from a cocked position sequentially to successively relatively open and closed position, means for adjusting the closed overlap position of said blades whereby to vary the degree and time of opening thereof, means including a cam rockable between an advanced and a retracted position and urged to a retracted position upon cocking of said shutter and spring urged to an advanced position upon release of said shutter, light responsive means for limiting the advance movement of said cam in accordance with the light incident on said light responsive means, said overlap adjusting means including a follower engaging said cam.

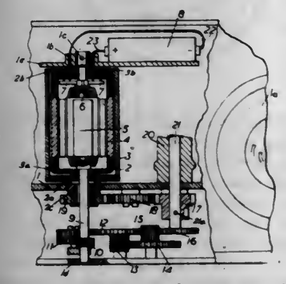
3,126,802
ADJUSTABLE AUTOMATIC EXPOSURE CONTROL STRUCTURE FOR CAMERAS
Franz Jakob and Friedrich Ostertag, Unterhaching, near Munich, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen, Germany
Filed Nov. 23, 1962, Ser. No. 239,574
Claims priority, application Germany Nov. 25, 1961
10 Claims. (Cl. 95—10)



1. In a camera, in combination, a pair of three-dimensional cam means; exposure time-setting means actuated by one of said cam means for setting the exposure time; aperture-setting means actuated by the other of said cam means for setting the exposure aperture; automatic light-responsive means operatively connected to said pair of cam means for moving said pair of cam means automatically in one direction respectively to positions determined by the lighting conditions; and manually operable selecting means operatively connected to said pair of cam means for moving the same in another direction to a selected position in accordance with a selected program of exposure times and exposure apertures, whereby with said manually operable means it is possible to select one of a plurality of programs of exposure time and aperture

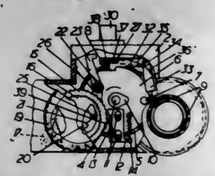
while the automatic light-responsive means will automatically provide a combination of exposure time and aperture from the selected program which will provide a proper exposure for the prevailing lighting conditions.

3,126,803
FILM WINDING APPARATUS FOR A PHOTOGRAPHIC CAMERA
Klaus Hintze, Dresden, Germany, assignor to VEB Kamera- und Kinowerke Dresden, Dresden, Germany
Filed Nov. 30, 1960, Ser. No. 72,651
3 Claims. (Cl. 95—31)



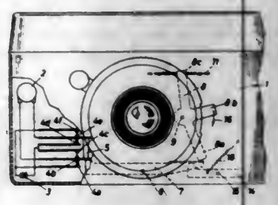
1. A film winding apparatus for a photographic camera comprising a support member for mounting within the camera an electric motor having a stator fixed to said support member, and a rotor mounted on said member so as to be rotatable within said stator, a magnet yoke forming a film take-up cylinder rotatably mounted on the support member and surrounding said stator, a gear-train drivably connected between the rotor and the film take-up cylinder, a shaft drivably connected to one of the gear wheels of said train, and a film winding sprocket supported on said shaft to be driven simultaneously with said film take-up cylinder on operation of the electric motor.

3,126,804
ATTACHABLE MOTOR-WINDING APPARATUS FOR PHOTOGRAPHIC CAMERAS
Manfred Wiesner, Dresden, and Heinrich Skolaude, Freital, Saxony, Germany, assignors to VEB Kamera- und Kinowerke Dresden, Dresden, Germany
Filed May 4, 1961, Ser. No. 107,803
5 Claims. (Cl. 95—31)



1. In a photographic camera having a housing, a shutter device mounted in the housing, a depressable shutter release member operatively connected with the shutter device, and film winding mechanism within the housing, the provision of a first spindle mounted in the housing, a driving wheel mounted on said first spindle to rotate therewith and operatively connected to said film winding mechanism, a blocking disc rigidly mounted on said first spindle, windable spring means within said housing and connected to said first spindle for driving the latter, a catch member pivotally mounted within the housing and releasably engageable with said blocking disc to prevent rotation of the latter, a release lever pivotally mounted in the housing and connected to the release member, so as to be pivoted on the depression of said release member, said lever being cooperable with said catch member to effect rotation of the latter to release said blocking disc, a second spindle rotatable within the housing, a counting disc rotatably mounted on said second spindle and settable to a desired rotational position according to the length of film used, a toothed element connected with said counting disc, step-by-step driving means operatively connected between said first spindle and the counting disc for step-by-step rotation of the latter, a locking arm pivotally mounted in the housing and operatively couplable with the release member to prevent actuation thereof, and a control element connected with said counting disc for pivoting said locking arm to effect locking of the release member when the counting disc has reached a preselected rotational position, said toothed element having a gap where there are no teeth, whereby on rotation of said counting disc to a set position according to the use of long lengths of film, the gap is brought adjacent the step-by-step driving means and the counting disc remains stationary on continued actuation of said step-by-step driving means.

3,126,805
CONTROLS FOR A REVERSIBLE ELECTRIC MOTOR OF A CAMERA
Rolf Schröder and Alfred Winkler, Munich, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen, Germany
Filed Mar. 4, 1963, Ser. No. 262,659
Claims priority, application Germany Mar. 2, 1962
10 Claims. (Cl. 95—31)

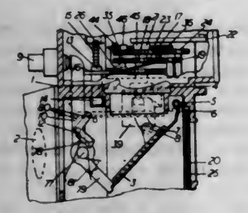


1. In a camera, in combination, a camera housing having a movable wall portion movable with respect to the remainder of the camera housing away from a closed position closing the camera housing for the purpose of removing exposed film from the interior of said housing and introducing unexposed film into said housing and then movable back to said closed position for closing said housing; reversible electric motor means carried by said housing for advancing film therein when said motor means runs in a forward direction and for rewinding exposed film when said motor means runs in a reverse direction; switch means connected electrically with said motor means and having a forward position for running said motor in said forward direction and a reverse position for running said motor in said reverse direction; and automatic means operatively engaging said switch means and said wall portion of said housing for automatically moving said switch means from said reverse to said forward position thereof when said wall portion is moved away from and back to said closed position thereof.

3,126,806
MIRROR CONTROL ARRANGEMENT FOR REFLEX CAMERAS
Manfred Wiesner and Gunter Heerklotz, Dresden, and Heinrich Skolaude, Freital, Saxony, Germany, assignors to VEB Kamera- und Kinowerke Dresden, Dresden, Germany
Filed Feb. 21, 1961, Ser. No. 90,674
8 Claims. (Cl. 95—42)

1. In a photographic monocular mirror reflex camera having a housing, an objective lens and view-finder device

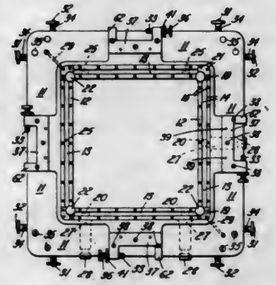
arranged in the housing, a shutter device, roll-film support means, cocking and film winding mechanism in the housing operatively connected to said shutter device and said support means for simultaneous cocking of said shutter device and film-winding, a reflex mirror pivotally mounted in the housing and movable between a first position where it lies in the optical path between the lens and the film in order to reflect the image into the view-finder device and a second position where the mirror is clear of said optical path during picture-taking, first spring means for biasing said mirror towards its second position, said shutter device including a shutter, a driving wheel, transmission means connected between said driving wheel and said shutter, and shutter release mechanism, the provision of a blocking disc in the housing arranged coaxially with said driving wheel, a cam disc coupled with said blocking disc, a cam surface on said disc, a cam follower provided on said mirror and capable of engagement with said cam surface to be driven thereby on the rotation of the cam disc to effect movement of said mirror



into the first position thereof, a blocking lever pivotally mounted in the housing and releasably engageable with said blocking disc to prevent movement of the blocking disc and the cam disc, means provided on said shutter device capable of engaging said blocking lever to release the blocking disc on the actuation of said shutter device, second spring means connected to said cam disc for effecting drive of the latter when the blocking lever is disengaged from the blocking disc, which second spring means as capable of being loaded by said driving wheel during cocking of the shutter device whilst the blocking lever is in engagement with the blocking disc, a further blocking lever pivotally mounted in the housing and movable into one position where it engages the mirror to arrest the latter against the action of said first spring means in the first position thereof and into a second position where it is disengaged from said mirror to effect release thereof, and means operatively connected between said release mechanism and said further blocking member for moving the latter into its second position.

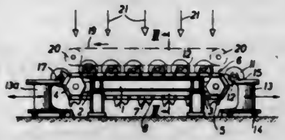
3,126,807
HOLDERS FOR PHOTOGRAPHIC NEGATIVES AND THE LIKE
Cecil Bragg, Langley Green, Crawley, and Brian Stanley Pounds, Beechfield, Wadhurst, England, assignors to Pictorial Machinery Limited, Crawley, Sussex, England, a British company
Filed Sept. 7, 1960, Ser. No. 54,525
Claims priority, application Great Britain Sept. 25, 1959
2 Claims. (Cl. 95—73)

1. A plate holder for a step-and-repeat photocomposing machine, which holder comprises a frame, a plate mounted in said frame in fixed co-planar relationship thereto, two locating members projecting from each side of said frame at spaced positions therealong, each of said locating members being lengthwise adjustable with respect to said frame and having a locating face directed outwardly thereof, whereby each of said locating faces can be set in predetermined relationship to said plate carried by said frame, and a third locating member carried by said frame on each side thereof at a position adjacent to each of said sides, each of said third locating members having a third locating face directed transversely to the direction in which each of said two locating faces are directed, whereby each of said third locating faces can be set in predetermined relationship to said plate, said



locating members adjusting the position of each side of said frame thereby adjusting the position of the plate with respect to each of said sides without moving the plate with respect to the frame, whereby said holder may be rotatably positioned on said photocomposing machine through 90, 180 or 270 degrees.

3,126,808
CONTINUOUS EXPOSURE OF PRINTING BLOCKS OR CYLINDERS FOR INTAGLIO PRINTING OR THE LIKE
Robert Kaulen, Lovenich, Bezirk Cologne, Germany, assignor to Dr. Bekk & Kaulen Chemische Fabrik G.m.b.H., Cologne, Germany, a firm
Filed Nov. 25, 1960, Ser. No. 71,629
Claims priority, application Germany Nov. 28, 1959
11 Claims. (Cl. 95—75)

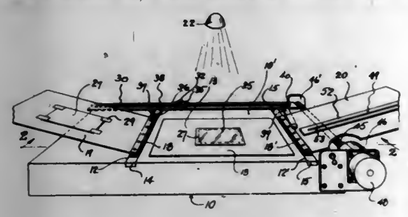


1. An exposure device for printing blocks such as printing cylinders for intaglio printing comprising a stationary light source, conveyor means disposed below said light source for moving printing blocks beneath said light source and thus exposing the printing blocks, and drive means for engaging and rotating the printing blocks during the movement thereof below said light source, whereby all of the periphery of each printing block will be equally exposed.

3,126,809
PHOTOGRAPHIC DISTORTION APPARATUS
John E. Adams, 11015 Dayton Ave., and James J. Bradshaw, 9833 45th SW., both of Seattle, Wash.
Filed Jan. 19, 1961, Ser. No. 99,651
11 Claims. (Cl. 95—75)

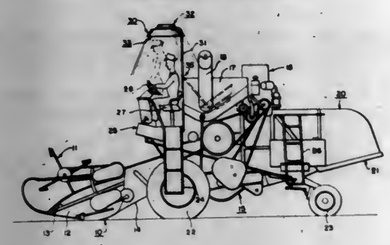
1. A distortion apparatus comprising a base providing a top surface formed with a pair of bar guide channels, a photo-sensitive medium disposed for printing on said surface, a bar slidably contained for endwise shifting in each of said channels, a transparent sheet fixed to one bar to extend therefrom across said photo-sensitive medium as disposed on said top surface, a negative removably applied to said transparent sheet at a location registered with and flat upon said photo-sensitive medium, a light impervious mask fixed to the other of said bars to extend therefrom across and flat upon said transparent

sheet and negative; said mask being formed with a slit for the passing of exposure light therethrough, means for moving one of said bars to cause relative movement of said negative and said photo-sensitive medium and means



for moving the other bar to shift the mask to cause the light passing slit therein to traverse the negative during the period of relative movement of negative and photo-sensitive medium.

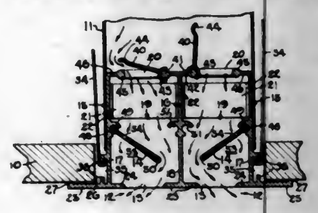
3,126,810
DUST DISPERSAL APPARATUS
Elof K. Karlsson, Moline, and Ernest M. Van Buskirk, East Moline, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Nov. 20, 1961, Ser. No. 154,393
1 Claim. (Cl. 98—36)



In an agricultural machine having an operator's position situated thereon, a fan unit comprising a hood having an air inlet and forming a downwardly opening concavity, means for supporting said hood on an agricultural machine such that the downwardly opening concavity overlies an operator's position, a fan mounted on said hood internally of said concavity and adapted to force air toward an operator's position, a deflector secured to said hood about its lower edge, said deflector being in the form of a conical member and being spaced inwardly from the hood's lower edge and providing means for directing an annular curtain of high velocity air around an operator's position, said deflector having a plurality of apertures formed therein providing means for directing a flow of low velocity air downwardly over an operator's position.

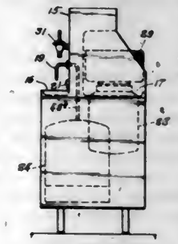
3,126,811
AIR DISTRIBUTION OUTLET
Walter W. Kennedy, Rockford, Ill., assignor to Barber-Colman Company, Rockford, Ill., a corporation of Illinois
Filed Mar. 6, 1961, Ser. No. 93,740
10 Claims. (Cl. 98—40)

1. An air distributor having, in combination, parallel walls laterally spaced apart and defining the sides of an elongated passage adapted for the flow of air edgewise therethrough in one direction, right angular flanges rigid with and extending along the downstream edges of said walls and turned inwardly in a common plane to define between their opposed edges a slot-like outlet disposed between said walls, a deflector vane disposed in and extending along said passage, means on a first one of said walls supporting said vane from one of its edges to swing about an axis extending along such wall and spaced inwardly from the flange thereof, said vane when extending diagonally of said passage and in a direction toward said slot-like outlet coacting with the other of said walls and the flange thereof to deflect the air flowing through said passage in an arcuate path around the free edge of the vane and through said outlet diagonally of said plane, said supporting means being spaced inwardly from said outlet and pivotally connecting one edge of said vane to said one



wall and including first and second hinge elements extending along and respectively secured to such wall and vane edge and detachably interengageable to provide for swinging of the vane from a position alongside such wall to a position diagonally of said passage, and a hinge element duplicating said first element and secured to the other of said walls for alternative detachable interengagement with said second element of said vane whereby to support the vane on said other wall for extension diagonally of said passage in the opposite direction.

3,126,812
COFFEE PREPARING AND DISPENSING APPARATUS
David H. Nau, 616 Central Ave. SE., Albuquerque, N. Mex.
Filed Apr. 20, 1961, Ser. No. 104,320
7 Claims. (Cl. 99—283)

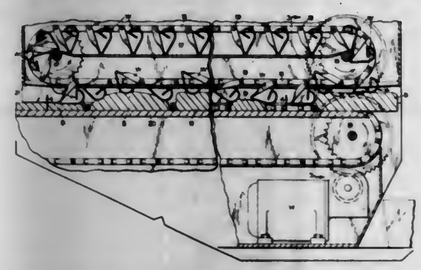


7. A beverage dispensing apparatus, comprising: a plurality of prepared beverage containers; a dispensing point; conduit means connecting said containers with said dispensing point; a common control means for dispensing beverage from each of said containers and including a selector portion for determining from which container to dispense; a float in each of said containers; a magnet carried by each of said floats; an electrical switch outside each container for actuation by said magnets, said switches being connected in the selector portion of said dispensing control means.

3,126,813
SELF-ADJUSTING WEIGHTS FOR TOASTING MACHINE
Sherman G. Marriott, 3800 NE. Alameda, Portland, Oreg.
Filed Feb. 14, 1963, Ser. No. 258,526
5 Claims. (Cl. 99—349)

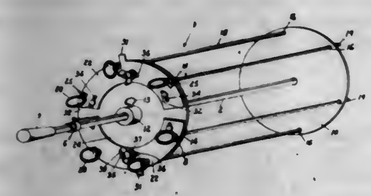
1. In a toasting machine wherein the articles being toasted are moved along on a toasting plate, improved means for holding the articles pressed down against the

toasting plate during their toasting including an endless conveyor positioned above the toasting plate and moving in unison with the articles being toasted, transversely extending hinge shafts in said conveyor, a plurality of identical weights carried by each shaft, each of said weights having a substantially flat bottom wall portion, a curved front wall extending upwardly from said bottom wall, a



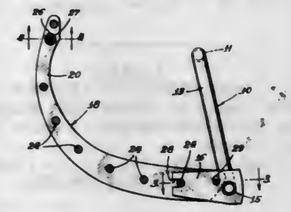
rear wall extending upwardly and inwardly from the rear of said bottom wall, and hinge means at the top of said rear wall for hingedly mounting the weight on the hinge shaft, said conveyor so positioned with respect to said toasting plate that said bottom wall portions of said weights will be spaced only a slight distance above said toasting plate when said weights are in lowest position.

3,126,814
ROTISSERIE
Justin L. Brown, 1487 Lakeland Ave., Lakewood, Ohio
Filed Oct. 3, 1962, Ser. No. 228,179
1 Claim. (Cl. 99—421)



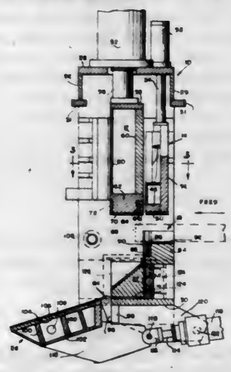
A rotisserie comprising a rotatable shaft, a pair of oppositely disposed skewer support discs mounted for rotation with said shaft, a plurality of skewers detachably mounted on said support discs for moving food items impaled thereon about the horizontal axis of said shaft, one of said support discs having a plurality of symmetrically spaced, radially disposed apertures adjacent the periphery thereof for securing one end of said skewers, the other of said support discs having a plurality of radially extending slots opening onto the periphery thereof and in axial alignment with said apertures for receiving the other end of said skewers, said last mentioned support disc resiliently mounting a plurality of selectively operable generally arcuate slide plates, said slide plates being circumferentially mounted for friction sliding coaction on said support discs, each of said slide plates having a plurality of generally L-shaped retaining slots opening onto the periphery thereof for registration with the radially extending slots in said one of said support discs for simultaneously interlocking the ends of said skewers upon rotational movement of said slide plates relative to said support disc, and wherein the resilient mounting of each of said slide plates on said supporting disc includes a threaded member extending from said support disc and disposed through a generally arcuate slot in the respective of said slide plates, and a coiled compression spring disposed on said threaded member between said slide plate and an adjustable means threadably disposed on said threaded member, said resilient mounting being operable to maintain a predetermined resilient biased engagement of said slide plate on said supporting disc.

3,126,815
FABRICATED BALER NEEDLE
Patrick L. May and Ralph E. Beyer, Memphis, Tenn., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Oct. 25, 1961, Ser. No. 147,685
9 Claims. (Cl. 100—24)



1. A strand-carrying needle assembly for balers, comprising; a plate having a transverse opening therethrough and an open end notch spaced from said opening, the sides of said notch being substantially normal to the sides of said transverse opening, a needle having parallel arms, spacers located at equal intervals between said parallel arms to hold said arms in parallel relationship, the distance between the center of said transverse opening and the center of the bottom of said notch being substantially equal to one of said equal intervals, said arms having aligned apertures at one end thereof, said spacers having a width slightly greater than the thickness of said plate, one of said spacers removably engaging said open end notch, said aligned apertures arranged for alignment with said transverse opening when said one spacer is in engagement with the open end notch and the parallel arms flank the plate, and removable fastener means for passing through said aligned apertures and said transverse opening to hold said assembly together.

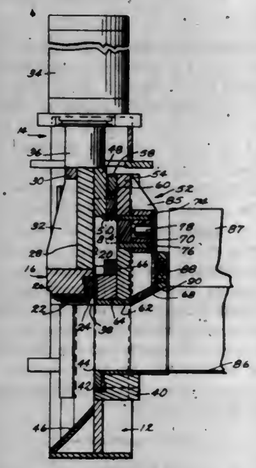
3,126,816
COMBINATION SHEAR AND BALER
Wallace M. Thompson, Cordele, Ga., assignor to Harris Foundry & Machine Co., Cordele, Ga., a corporation of Georgia
Filed Sept. 26, 1960, Ser. No. 58,247
2 Claims. (Cl. 100—98)



1. Apparatus for working scrap metal comprising: a vertically movable shear head having a shear blade along a lower edge thereof; a horizontal feed bed terminating

in a fixed shear blade cooperating with said movable shear blade; means including said shear head defining a baling chamber beneath said head for receiving scrap metal sheared by said blades; a baling ram movable inwardly of said chamber transversely of said bed for compacting scrap metal therein; and a gate movable between an operative closed baling position wherein it defines the wall of said chamber opposite said fixed shear blade and an open position wherein said apparatus serves only as a shear, said ram, rearwardly of its front face, having an inclined upper surface defining, when said ram is advanced and said gate is in said open position, at least a portion of a chute for scrap metal sheared by said blades.

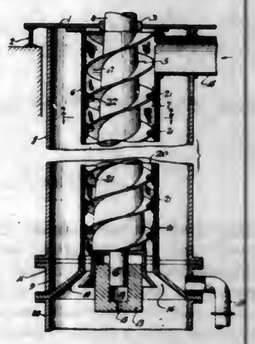
3,126,817
SHEARING APPARATUS
Wallace M. Thompson, Cordele, Ga., assignor to Harris Foundry & Machine Company, Cordele, Ga., a corporation of Georgia
Filed May 29, 1962, Ser. No. 198,580
6 Claims. (Cl. 100—98)



1. A shearing machine comprising: a frame; a fixed blade mounted to said frame; a movable shearing blade structure carried by said frame for movement toward and away from said fixed blade to shear work therebetween; motor means operatively joined to said structure for moving the same; a movable hold-down clamp structure freely carried by said frame for movement toward and away from said fixed blade, said clamp structure being carried by said shearing blade structure for movement therewith away from said fixed blade; means providing a lost-motion connection between said shearing blade structure and said clamp structure; and means for selectively locking said structures together to prevent relative movement therebetween, whereby said structures locked together are movable in unison towards said fixed blade to compress the work, and when said structures are unlocked said shearing blade structure is movable relative to said clamp structure the distance of said lost-motion connection to thereby shear the work.

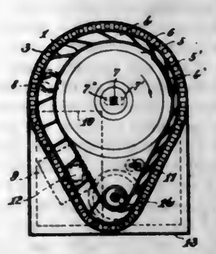
3,126,818
PULP PRESS
Lester M. Koelsch, Beloit, Wis., assignor to Beloit Corporation, a corporation of Wisconsin
Filed Jan. 24, 1963, Ser. No. 253,579
8 Claims. (Cl. 100—112)

5. A pulp press comprising a perforated shell, having an inlet adjacent one end thereof and a discharge end adjacent the opposite end thereof, a conically tapered spindle co-axially mounted in spaced relationship within said shell and having the convergent end thereof disposed adjacent the said inlet of said press with the peripheral surface of said spindle longitudinally defining an angle with the inner wall of said shell, a helical flight arrangement fixedly mounted along said spindle with the threads of said flight arrangement extending radially into close proximity with said inner wall of said shell, a plurality of wiper blades swingably mounted on the said threads



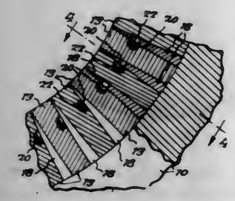
of said flight arrangement adjacent the periphery thereof, each of said blades being elongated in longitudinal extension along said inner wall and adapted for swinging movement into yieldable contact with said inner wall for removal of material lodged on said inner wall, motor means for effecting relative rotary movement between said spindle and said shell to move material toward the said discharge end of said press, and liquid gathering means disposed externally of said shell for collecting liquid passing through said shell externally thereof.

3,126,819
DEWATERING APPARATUS
Albert Wehner, Gunring 70, Herne, Westphalia, Germany
Filed Mar. 15, 1962, Ser. No. 179,968
Claims priority, application Germany Mar. 17, 1961
10 Claims. (Cl. 100—121)



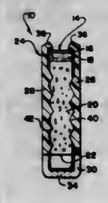
1. In a dewatering apparatus; a housing having at least spaced upper and lower walls and a side wall extending therebetween; a first drum mounted in said housing for rotation about a vertical axis; a second drum mounted in said housing for rotation about a vertical axis and spaced laterally from said first drum; a dewatering band fitting closely the upper and lower walls of said housing and extending over said drums, said band having a continuous inner member and an outwardly spaced continuous outer member, and a series of spaced partitions respectively connecting said inner and outer members; at least a portion of the peripheral surface of said first drum and an adjacent portion of the side wall of said housing defining a constricted region therebetween; said partitions being adapted to fold down progressively as said band is moved through the constricted region between said first drum and an adjacent portion of the side wall of said housing and continuously between the upper and lower walls of said housing in sealing contact therewith, whereby the compartments formed by the partitions are closed by the side walls of said housing which positively guide the folding down movement of the partitions so that closed intermediate spaces are formed.

3,126,820
SPACERS FOR CAGE PRESSES
Charles B. Upton, Piqua, Ohio, assignor to The French Oil Mill Machinery Company, Piqua, Ohio
Filed Feb. 12, 1962, Ser. No. 172,631
1 Claim. (Cl. 100—129)



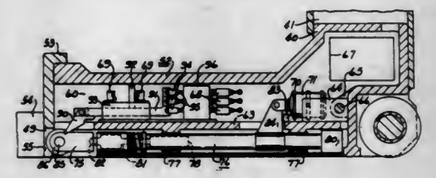
In a continuous screw press having circumferentially arranged cage bars each having an opening extending into one side thereof, the provision of spacer bars each adapted to be positioned between a pair of cage bars, said spacer bars each comprising a wedge-shaped body having flat converging faces and a laterally projecting stub extending from one of said faces a distance from said wedge-shaped body approximately equal to the width of said body at its juncture therewith and freely receivable in an adjacent opening in the cage bar when said bars are arranged to form a cylindrical cage.

3,126,821
DEVICE FOR SANITARILY HANDLING A HALF-SLICE OF CITRUS FRUIT AND CONTROLLING THE EXTRACTION OF JUICE THEREFROM
Rudolf H. Schildt and Fritz K. Paull, both of 3306 Panorama Drive SE., Huntsville, Ala.
Filed Dec. 20, 1960, Ser. No. 77,107
1 Claim. (Cl. 100—133)



A device for sanitarily handling a half-slice of citrus fruit and controlling the extraction of juice therefrom comprising a one-piece jacket shaped to receive a half-slice of a citrus fruit, said jacket providing opposed walls positioned to engage opposite sides of a half-slice of citrus fruit mounted within said jacket, said opposed walls being semicircular in shape and having opposed arcuate edges and opposed straight edges, an integral wall portion extending between said straight edges and integrally interconnecting the same, said opposed walls and said wall portions comprising a one piece body made of thin flexible material, said integral wall portion having opening means formed therein in positions disposed adjacent the peripheral surface defined by the pulp of a half-slice of citrus fruit disposed between said opposed walls, said integral wall portion comprising the bottom of said jacket and said opposed walls extending upwardly therefrom, said opening means including a centrally located slot extending transversely of said integral wall portion and upwardly into the adjacent marginal edge portions of said opposed walls for receiving the edge of a drinking glass so that the jacket and half-slice of citrus fruit mounted therein can be removably supported thereon, said opposed walls being movable toward each other by an exteriorly applied manual pinching action to compress the pulp of a half-slice of citrus fruit disposed therebetween and release the juice therefrom and being liquid-impervious to confine the juice thus released for passage through said opening means, said opposed walls having their interior citrus fruit engaging surfaces formed with ridge-like projections for irregularly piercing the pulp of the citrus fruit to facilitate compression thereof in response to said pinching action.

3,126,822
GAUGE STOP HOT METAL STAMP
Ralph A. Pannier, McCandless Township, Allegheny County, and George E. Martin, Pittsburgh, Pa., assignors to The Pannier Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 23, 1960, Ser. No. 51,332
13 Claims. (Cl. 101—4)

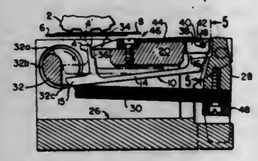


1. A hot rolled metal stamping machine consisting of a table over which the hot rolled metal passes, a stop having a chamber and adjustably supported to be inserted in the path of movement of the hot rolled metal on said table, a shoe on said stop having a face to be engaged by the end of the hot rolled metal on said table to gauge and stop the same, said shoe closing the front of said chamber, means defining an opening in the face of said shoe, stamp means supported in said stop chamber and having stamping characters framed in said opening but receded from the stop face of said shoe, power means to project said stamping characters through said opening and into engagement with the hot rolled metal engaging said shoe face to stamp the same and then retract said stamping characters from said opening and a slide plate demountable in said chamber to carry said stamping means and said power means.

3,126,823
PRINT HAMMER ASSEMBLY
Wilfred Y. Benson, Natick, Mass., assignor to Anelex Corporation, Boston, Mass., a corporation of New Hampshire
Filed May 24, 1962, Ser. No. 197,399
6 Claims. (Cl. 101—93)

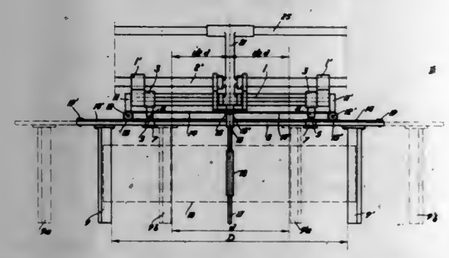
1. A print hammer assembly adopted for the instantaneous impression of a character on a moving web comprising a base member; a hammer having a shank portion and a generally transverse head portion which terminates in a striking face opposite said character and pivot

means mounting the shank portion to said base; a resilient stop extending outwardly from said base member toward said head portion into intercepting relation with said hammer and being positioned to limit the motion of said head portion with respect to said character and



to cause said hammer to rebound, a spring member extending from said base engaging said shank portion adjacent to said pivot means biasing said hammer away from said character, and means for driving said hammer by inertia against said character.

3,126,824
MOVEMENT TRANSMISSION SYSTEM FOR SILK-SCREEN PRINTING MACHINES AND THE LIKE
Louis Gilbert Dubuit, 60 Rue Vitruve, Paris, France
Filed Oct. 30, 1962, Ser. No. 234,200
Claims priority, application France June 1, 1962
3 Claims. (Cl. 101—124)

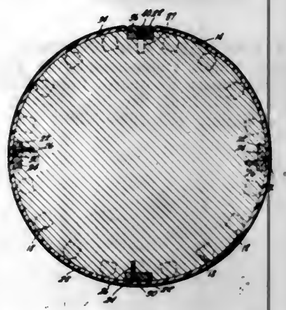


1. In a screen printing machine the improvement comprising

(*a*) a stationary machine frame, supporting means for the screen frame, and a guide rail attached longitudinally sidewise to said supporting means,

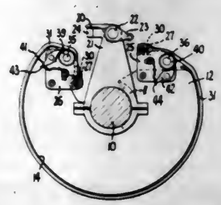
(*b*) and driving means for said supporting means to reciprocate the same relative to the machine frame in a substantially horizontal plane including a driving carriage reciprocable in the machine frame; two pairs of cooperating gripping rollers mounted in spaced relation on said driving carriage and piloting said guide rail in its reciprocating movement; pulley means mounted at least near each side end of the driving carriage; two flexible tow-lines each embracing in mutually reversed and outwardly closed U-formation one of said pulley means by which each tow-line is divided into a first and a second horizontal branch, the end of each first branch being attached to a stationary part of the machine located substantially opposite the central portion of the guide rail in its central position, and the end of each second branch attached to the guide rail at least near that end thereof which lies on the same side of the machine frame as the guide pulley for the other tow-line, whereby said guide rail together with said supporting means is reciprocated at an increased rate and in directional agreement with the movement of the driving carriage.

3,126,825
PLATE CYLINDER FOR WRAP-AROUND PRINTING PLATE AND METHOD OF CONVERTING SAME FROM CYLINDER EQUIPPED TO CARRY THICKER PRINTING PLATES
Frank J. Tofano, Bronx, N.Y., assignor to Dun & Bradstreet, Inc., New York, N.Y., a corporation of Delaware
Filed Aug. 2, 1962, Ser. No. 214,273
9 Claims. (Cl. 101—415.1)



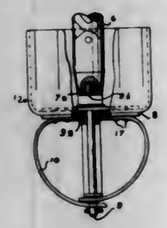
1. A printing plate cylinder converter from one equipped to carry relatively thick plates to one equipped to carry a thinner wrap-around plate comprising a recessed cylindrical plate-carrying surface, a continuous underlay of uniform thickness made of flexible, relatively uncompressible sheet material wrapped around the plate-carrying surface, the opposite edges of the underlay sheet being spaced apart to leave a longitudinally extending gap between, a plurality of longitudinally extending recesses in said plate-carrying surface spaced apart from each other around the cylinder beneath said underlay sheet, rigid inserts filling and anchored within said longitudinally extending recesses, said rigid inserts having outer surfaces curved to the same circumference as the plate-carrying surface, and plate-clamping means carried by the cylinder within the gap to grip opposite edges of a plate wrapped around the underlay sheet.

3,126,826
TRANSFER CYLINDER FOR ROTARY MULTI-COLOR PRINTING PRESSES
Herman Fischer, Augsburg, Germany, assignor to Maschinenfabrik Augsburg-Nurnberg, A.G., a corporation of Germany
Filed Dec. 12, 1960, Ser. No. 75,325
Claims priority, application Germany Dec. 28, 1959
9 Claims. (Cl. 101—420)



1. In a transfer cylinder for a multi-color rotary printing press for transferring a printed sheet of paper from a printing station without marring the printed surface of said sheet, the combination which comprises a substantially smooth working surface on said cylinder and extending around a major portion of the circumferences thereof, sheet gripping means on said cylinder for engaging a leading edge of said sheet and drawing it around said cylinder with said printed surface of said sheet facing said working surface of said cylinder, and a plurality of helical wire springs extending circumferentially around said cylinder forming discontinuous but relatively smooth spacing means for separating said printed surface of said sheet from contact with said working surface of said cylinder, said springs being spaced apart axially along said cylinder for contacting said printed surface of said sheet only in selected areas thereof and without embossing or marking said sheets.

3,126,827
BRIDGE PLUGS
Oliver B. McReynolds, Jr., P.O. Box 1235, Palestine, Tex.
Filed Jan. 16, 1961, Ser. No. 83,050
7 Claims. (Cl. 102—30)



1. A bridge plug for the bore hole of a well, which bridge plug comprises:

(*a*) a formable wall engaging element of impervious material, which element is of a diameter at least the diameter of the bore hole in which it is to be used,

(1) said formable wall engaging element being centrally apertured to receive a bridge plug moving means,

(*b*) resilient wall engaging tines secured to said formable wall engaging element, which resilient wall engaging tines normally extend outwardly and downwardly therefrom,

(*c*) bridge plug moving means attachably connected to said bridge plug to move said bridge plug into the bore hole of a well,

(*d*) means on the lower ends of said wall engaging tines to engage said bridge plug moving means to retain said tines out of engagement with the wall of said bore hole when said bridge plug moving means is in one position and to release said tines when said bridge plug moving means is moved upward relative to said formable wall engaging element so as to release said tines to engage the wall of the bore hole.

3,126,828
SAFETY-ARMING DEVICE
Robert E. Tafel, Riverside, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Mar. 20, 1962, Ser. No. 181,213
2 Claims. (Cl. 102—78)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. In a missile fuze safety-arming device, the combination comprising:

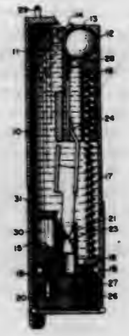
(*a*) a housing adapted to contain an incompressible fluid,

(*b*) a tube mounted parallel to the longitudinal axis of the missile within said housing having one end closed except for a knife edged orifice,

(*c*) an inertia weight mounted in said housing for longitudinal movement in said housing and said tube,

(*d*) an inertia ball positioned in said housing for longitudinal movement between the closed end of said tube and said inertia weight and being responsive to acceleration forces to move in a direction away from the closed end of said tube at a predetermined rate,

(*e*) resilient means engaging said inertia weight and urging said inertia weight into said tube for holding said ball against the closed end of said tube during the absence of sufficient acceleration forces applied to said device to overcome the force of said resilient means,



(*f*) a rotor mounted for limited rotation about a longitudinal axis within said housing,

(*g*) an explosive train consisting of a detonator and an explosive lead interrupted by said rotor,

(*h*) an opening extending through said rotor and adapted to be moved into alignment with said detonator and the exploding lead,

(*i*) and means responsive to movement of said ball out of said tube for mechanically coupling said rotor and said inertia weight for translating the longitudinal movement of said inertia weight into rotational movement of said rotor.

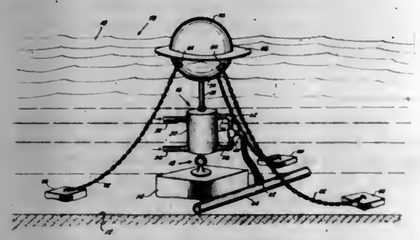
3,126,829
HYDRAULIC WELL PUMP ASSEMBLIES
Dixon T. Harbison and James A. Burns, Fort Worth, Tex., assignors to Harbison-Fischer Manufacturing Co., Fort Worth, Tex., a corporation of Texas
Filed Apr. 5, 1963, Ser. No. 270,904
8 Claims. (Cl. 103—46)



1. A hydraulic well pump assembly including a pump cylinder member, a pump plunger member in the pump cylinder member, one of the pump members being adapted to be anchored in a well tubing, downwardly-closing valve means in the pump cylinder member, downwardly-closing valve means in the pump plunger member, one of the

pump members being reciprocable with respect to the other, the reciprocable pump member having passage means from its valve means to the exterior of the pump, a motor cylinder above and connected to the pump member adapted to be anchored in a well tubing, a motor piston reciprocable in the motor cylinder, first means sealing the interior of the motor cylinder below the motor piston, reciprocating means connecting the motor piston to the reciprocable pump member and extending through the sealing means, a conductor extending upwardly from the motor cylinder, a tubular stem extending upwardly from the motor piston into the conductor and having its interior exposed to the interior of the motor cylinder below the motor piston, second sealing means in the conductor receiving the tubular stem in sliding sealing engagement, the conductor having an outlet opening exteriorly of the pump between the motor piston and the second sealing means, a reversing cylinder adapted to be mounted at the top of a well in which the pump cylinder member is disposed, a reversing piston in the reversing cylinder, the reversing cylinder having a produced liquid outlet intermediate its ends so positioned as to be covered by the reversing piston when the latter is at one end of its stroke in the reversing cylinder and to be exposed to the interior of the reversing cylinder when the reversing piston is at the other end of its stroke in the reversing cylinder, means exposing one end of the reversing piston to the exterior of the pump, and means for supplying motive liquid under pressure alternately to the opposite end of the reversing piston and to the interior of the conductor above the second sealing means.

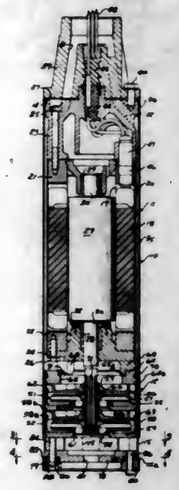
3,126,830
PUMP
Herman L. Dilliner, 1841 N. Western Ave., Chicago, Ill.
Filed Mar. 11, 1960, Ser. No. 14,371
2 Claims. (Cl. 103—68)



1. In a pump of the class having a reciprocating piston and a piston rod secured thereto, said pump adapted to be submerged in an undulating body of water, a float member on the surface of said body of water, means for anchoring said float so as to maintain it in a predetermined position relative to said pump, and means operably connecting said float member to said piston rod whereby the rise and fall of said float member with the undulations on the surface of said body of water will effect a reciprocation of said piston, and means carried by said float member solely to materially supplement the normal buoyancy thereof and to minimize the possibility of its becoming awash in turbulent water.

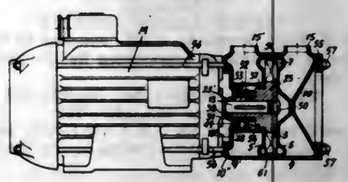
3,126,831
MOTOR-PUMP UNIT
Elmer M. Deters, Davenport, Iowa, assignor to Red Jacket Manufacturing Co., Davenport, Iowa, a corporation of Iowa
Filed Nov. 28, 1962, Ser. No. 240,588
12 Claims. (Cl. 103—87)

1. A submersible motor-pump unit comprising a one-piece tubular shell defining an enclosure for the motor and pump, a motor including a stator assembly in said shell dimensioned for axial insertion and removal therefrom and defining a flow passage between the stator and shell, a rotor in said stator and a shaft on said rotor, a pump including a pump casing in said shell dimensioned for axial insertion and removal therefrom and engageable with one end of the stator assembly, said casing having an inlet adjacent one end of the shell and an outlet communication with said flow passage between the shell and stator, impeller means on the rotor shaft for pumping liquid from said inlet to said pump outlet, means engaging the stator assembly for anchoring the stator assem-



bly against movement out of the shell, said shell having a plurality of circumferentially spaced inlet openings therein spaced axially from one end of the shell, a clamp member in said one end of said shell dimensioned for axial insertion and withdrawal therefrom and defining an inlet chamber in the shell at one end of the pump casing communicating the pump inlet with said inlet openings in the shell, key means engageable with said clamp member and extending into said inlet openings in said shell to limit movement of said clamp member out of said shell, and clamp means on said clamp member adjustable axially of said shell for pressing said pump casing against the stator assembly.

3,126,832
ROTARY PUMP
Enzo Mencarelli, Via Campestre 9, Bresso, Milan, Italy
Filed May 19, 1961, Ser. No. 126,365
Claims priority, application Italy June 1, 1960
6 Claims. (Cl. 103—96)



1. A rotary pump for liquids formed with pressed sheet metal pieces having solderless parts when forming said pieces as well as when assembling same into said pump comprising a shaft having mounted thereon a rotor member, disc members disposed on each side of said rotor member, one of said disc members having an aperture

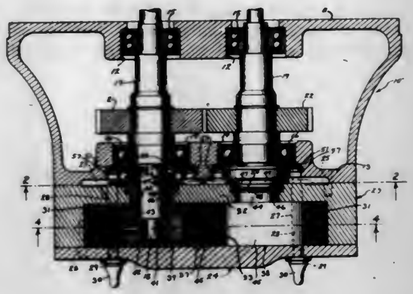
centrally thereof through which said shaft passes, the peripheries of said disc members having means therebetween to substantially encompass said rotor member, a casing member defining a chamber therein disposed about and in connection with each of said disc members, one of said casing members having an opening centrally thereof coaxial with said aperture of the disc member through which said shaft passes, the other of said disc members having a central portion defining a truncated cone, the casing member disposed about this disc member having the outer surface thereof tapered inwardly and abutting against said truncated cone thereby serving as reinforcing for the outer surface, each casing member having means connecting the chamber thereof to a suction or delivery line, each casing member and disc member being formed from stamped sheet metal defining surfaces of reduced friction when the liquid being pumped engages same, and connecting means for connecting said disc members and corresponding casing members in operative position around said rotor member so that these members can readily be disassembled for access thereto.

3,126,833
FLUID COMPRESSORS PARTICULARLY FOR REFRIGERATING SYSTEMS
Francis A. Hill, 420 Palm Circle E., Naples, Fla.
Filed Mar. 20, 1962, Ser. No. 181,069
15 Claims. (Cl. 103—126)



1. In a rotary mechanism for handling fluids, a casing including an outer gear and an inner gear, said outer gear surrounding and eccentric to said inner gear, a shaft member supporting said inner gear, a shaft and at least one end plate supporting said outer gear, said gears having intermeshing teeth forming chambers between them which open and close during rotation, said teeth having driving contours characterized by curves on the teeth of each gear described or outlined by the teeth of the other gear at relatively steady angular speeds, said driving contours maintaining fluid tight contacts with each other in the full mesh region between opening and closing chambers and travelling tooth engagements in the open mesh regions, said driving contours having instant centers of curvature far enough outside of the ratio or pitch circles to maintain said contacts and engagements, inlet and outlet ports, openings in the bottoms of the tooth spaces of at least one gear to connect said chambers directly to said ports, said openings being long enough axially and wide enough circumferentially for efficient ingress and egress of fluids entering and leaving said chambers, at least one full mesh abutment and at least one open mesh abutment between said ports, said full mesh abutment being at least half as wide circumferentially as said openings and at least as long axially as said openings, having tips of the teeth of at least one gear modified in shape from that of the true outlined or described curve by being reduced in height and shaped to have a close running fit with said full mesh abutment and at the same time expel all fluid from the closing chambers, said open mesh abutment being at least as wide circumferentially as said openings and at least as long axially as said openings to prevent fluid from escaping from one of said ports to the other of said ports, whereby said driving contours, said modified tooth tips and said abutment at full mesh cooperate to permit exit of fluid from the closing gear chambers as they rotate through the full mesh region without the jamming or trapping of fluid and consequent loss of power while said modified tooth tips also provide an empty crescent shaped space at open mesh of no tooth engagement.

3,126,834
ROTARY PUMP
George J. Bursak, 5601 W. Auer Ave., Milwaukee 16, Wis.
Filed Mar. 22, 1962, Ser. No. 181,582
2 Claims. (Cl. 103—126)

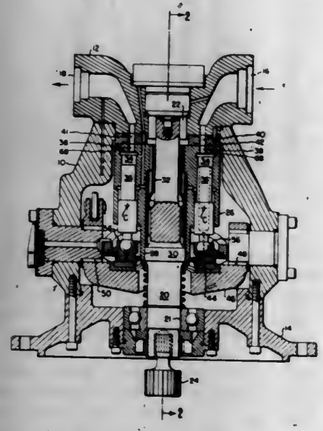


1. A rotary pump comprising: a gear housing having front and rear walls, a pump casing provided with a pair of intersecting pockets and inlet and outlet ports communicating with said pockets, said pump casing having uninterrupted interior surfaces and including an end wall releasably secured to the front wall of said gear housing, said end wall provided with a pair of spaced openings and a pair of counterbores in its exterior surface concentric with said openings to define annular shoulder portions, a closure plate releasably secured to said pump casing to define a pump chamber with said pockets, a pair of spaced, parallel shafts journaled for rotation in said gear housing walls and aligned with said openings, each of said shafts having a portion which projects into said pump chamber through one of said openings, intermeshing gearing on said shafts within said gear housing, a pair of impellers removably mounted on said shafts and each within one of said pockets, each of said impellers having a central axial bore which terminates short of one face of said impeller to define an end seal wall and a sleeve portion extending from an opposite face of said impeller providing a continuation of said axial bore, said central axial bores receiving the projecting portions of said shafts and said sleeve portions extending along said shafts through said openings, an annular sealing ring within each of said counterbores about a respective sleeve portion and sealing the peripheries of said sleeve portions from said pump chamber, an annular retaining member received within each of said counterbores against said sealing rings, and biasing means anchored on the front wall of said gear housing and urging said retaining members axially against said sealing rings to seat said sealing rings against said shoulder portions.

3,126,835
FLUID PUMP
William L. Kline, 10425 Redbank Road, Galena, Ohio
Filed Dec. 4, 1959, Ser. No. 857,284
2 Claims. (Cl. 103—162)

1. In a fluid pressure energy translating device of the type described, a housing, a rotatable barrel disposed in the housing in radially spaced relation thereto, a plurality of pistons slidably received in cylinders in the barrel and circularly arranged concentrically of the barrel for reciprocation parallel to the barrel axis, one end of each of the pistons projecting from the adjacent end of the bar-

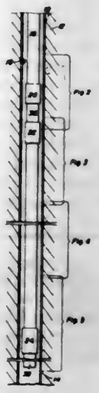
rel, a cam plate disposed adjacent one end of the barrel and mounted on the housing for inclination about an axis at right angles to the barrel axis, spherical ball and socket joints between the projecting ends of the pistons and said cam plate to provide for reciprocation of the pistons in said cylinders relative to the barrel in response to rotation of the barrel relative to the cam plate, said joints including shoes engaging said cam plate, a valve plate engaging the opposite end of the barrel for controlling the flow of fluid into and out of said cylinders, a coaxial cylindrical sleeve-like extension on said one end of the barrel, a drive shaft for the barrel extending coaxially through the barrel and said sleeve-like extension and rotatably supported by axially spaced bearings carried by said housing, a coaxial annular land intermediate the



said axially spaced bearings of the shaft and coaxially engaged within said sleeve-like extension to laterally support the barrel coaxially of the shaft, said land having a lateral center line spaced axially outwardly from the point of intersection of the shaft axis and general plane of the locus of the centers of the spherical balls at said projecting ends of the pistons and located in a plane between said plane of said centers and said cam plate, and a torque tube disposed coaxially over the shaft and within the barrel, said tube being splined at axially spaced positions axially inwardly of said shaft bearings to the shaft and barrel respectively and being splined at one end to the shaft adjacent said land and axially inwardly of said land and its opposite end to said barrel at the end of the barrel remote from the cam plate.

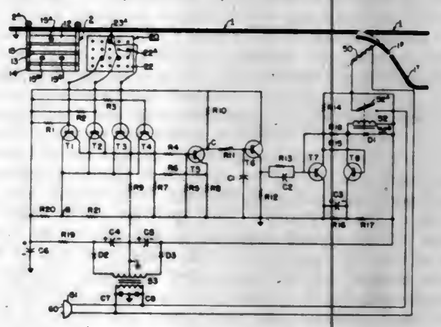
3,126,836
BOTTOM HOLE PUMP
Albert D. Larson, 3025 Chapel Hill Road, Oklahoma City, Okla.
Filed Mar. 29, 1961, Ser. No. 99,202
2 Claims. (Cl. 103—179)

1. A reciprocating bottom hole pump assembly comprising a tubing string opening at its lower end into the bottom of a well bore, a stationary pump barrel assembly in said tubing string and having its lower end opening into said well bore, sealing means establishing a fluid tight seal between the tubing string and said barrel assembly intermediate the ends of the latter, a tubular pump plunger assembly slidably disposed in and having a fluid tight seal with said barrel assembly, said plunger assembly including an upper plunger and a lower plunger of greater effective cross sectional area than that of the former, said upper plunger having continuous communication between its interior and the interior of said tubing string above said sealing means, a traveling valve assembly at the lower end of said lower plunger allowing flow of well fluid upwardly only into the interior of said plunger assembly, a standing valve assembly in said pump barrel assembly below said traveling valve assembly and allowing flow of well fluid from the interior of said pump barrel assembly upwardly only to said traveling valve assembly, means establishing continuous communication



between said interior of said barrel assembly below said standing valve assembly and the space between said barrel assembly and said tubing string below said sealing means and between the latter and said well bore, a connector, a pair of concentric sleeves secured to the upper end of said connector and forming said lower plunger, the inner of said concentric sleeves being secured to the lower end of said upper plunger.

3,126,837
CONVEYOR DISPATCH SYSTEM
Paul R. Noye, Tonawanda, William H. Devonshire, Williamsville, Humphrey F. Parker, Buffalo, and Charles N. Hubbell, Tonawanda, N.Y., assignors to Columbus McKinnon Corporation, Tonawanda, N.Y.
Original application Dec. 2, 1958, Ser. No. 777,758. Divided and this application June 5, 1961, Ser. No. 120,861
11 Claims. (Cl. 104—88)



11. A conveyor dispatch control system for routing a carrier on a conveyor to a preselected destination beyond conveyor switching means, comprising

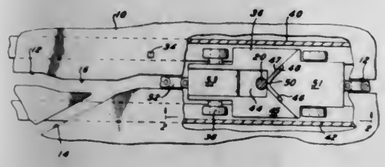
read-out means positionally fixed ahead of said switching means and including a plurality of sensor means,

a read-out circuit connected to said sensor means,

said read-out circuit including flip-flop means for actuating said switching means in response to grounding of all said sensor means and grounding of a selected one of said sensor means and less than all the other sensor means to operate said flip-flop means between its stable conditions,

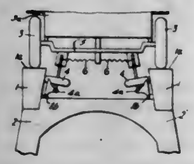
said read-out circuit being ineffective to alter the condition of said flip-flop means in response to all other conditions of said sensor means.

3,126,838
TOW TRUCK SYSTEM
Lynn Bradt, Easton, Pa., assignor to SI Handling Systems, Inc., Phillipsburg, Pa., a corporation of Pennsylvania
Filed June 6, 1962, Ser. No. 200,408
19 Claims. (Cl. 104—88)



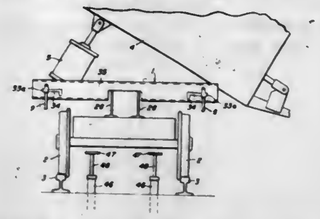
1. A tow truck system comprising a surface having a main slot, shunt slots in said surface intersecting said main slot at spaced points therealong, the intersection of said main and shunt slots being unobstructed, a tow truck having a tow pin extending into said main slot, conveyor means for propelling said tow pin along said main slot, said main slot being provided with a diverter means to cause said tow pin to enter one of said shunt slots when said tow pin has been moved out of contact with said conveyor means, said diverter means including an offset portion on said main slot in the area of the intersection of said main slot with said shunt slots.

3,126,839
RAILED TRANSPORT MEANS OR SYSTEMS
Verner William Hampton, Thomas Alfred Johnson, and Norman Henry Francis Renwick, Salisbury, Southern Rhodesia, Federation of Rhodesia and Nyasaland, and George Douglas Green, South Devon, England, assignors to Pneuways Development Company (Private) Limited, Salisbury, Southern Rhodesia, Federation of Rhodesia and Nyasaland
Filed July 23, 1962, Ser. No. 211,784
Claims priority, application Federation of Rhodesia and Nyasaland Feb. 22, 1962
9 Claims. (Cl. 104—247)



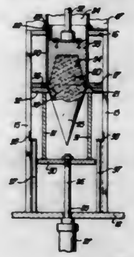
1. In a transport system a running track presented by upper surfaces of twin parallel track-forming beams in a mutually spaced relation on support means, said track being suitable for flangeless wheels and said beams having a cross-section presenting side surfaces inclined to the track-presenting upper surfaces and upwardly convergent therebetween; and a vehicle having load-carrying wheels to run on said track, a body supported by said wheels above said track and guide wheels oppositely mounted under said body for guiding and stabilizing the vehicle on the track by exerting outward resilient grip on said upwardly convergent side surfaces of the beams.

3,126,840
CONTROL APPARATUS FOR RAILWAY DUMP CARS
Ernest J. Anderson and Alvin O. Johnson, Duluth, Minn., assignors to United States Steel Corporation, a corporation of New Jersey
Filed Nov. 22, 1960, Ser. No. 71,028
10 Claims. (Cl. 105—273)



1. In apparatus for controlling the operation of side-dump railway cars of the type including a chassis movable over railway track rails, a body supported on said chassis for movement to and from a dumping position, a motor for actuating said body to its said dumping position, and means controlling the operation of said motor including a shaft movable between first and second operating positions, the combination with said shaft of a first actuating member having a rigid connection therewith, means controlled from a remote location for operating said first actuating member to move said shaft from said first position to said second position, a second actuating member arranged for manual operation, means including a spring connecting said second actuating member with said shaft and rendering said second actuating member effective upon manual operation thereof to move said shaft from said first position to said second position, and means for latching said second actuating member against movement, said spring being yieldable to permit operation of said shaft by said first actuating member without imparting movement to said second actuating member.

3,126,841
APPARATUS FOR MANUFACTURING SNOW CONES
Eugene R. Nay, Los Angeles, Calif.
(7803 Van Nuys Blvd., Panorama City, Calif.)
Filed July 8, 1960, Ser. No. 41,605
5 Claims. (Cl. 107—1)



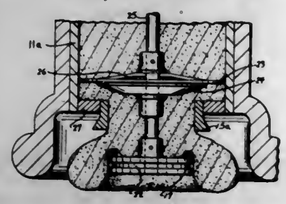
1. An apparatus for making snow cones comprising a tubular cylinder approximately fully open at both ends; a hopper associated with one end of said cylinder for delivering a charge of snow thereto; means for holding the mouth of a paper cup against the other open end of said cylinder; and a cylindrical plunger means having a pressure face and being mounted outside said one end of said cylinder for rectilinear axial reciprocation towards, into and out of said cylinder to press a charge of snow delivered from said hopper into said cylinder compactly

into said cup; said plunger means having a deep recess in said pressure face producing a correspondingly shaped mass of compacted snow extending outwardly from the mouth of said cup, and being integral with the compacted snow in said cup.

3,126,842
DOUGHNUT RING FORMING APPARATUS AND METHOD

Thomas E. Belshaw, 1772 22nd Ave. S., Seattle, Wash.

Filed Aug. 10, 1961, Ser. No. 130,576
1 Claim. (Cl. 107—14)

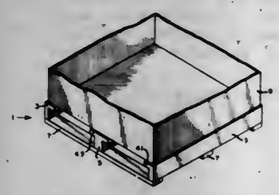


In combination, a dough hopper with a bottom outlet, a mandrel having a center rod extension at the top operatively associated with said hopper for up and down movement between a dough forming position wherein the mandrel cooperates with the rim of said outlet, said mandrel having a flat annular upper face opposing said outlet and regularly spaced rounded posts projecting upwardly from said face adjacent the periphery thereof in parallel relation to said rod, each of said posts projecting upwardly throughout the entire circumference of its base but only projecting upwardly a minor part of the distance from said upper face to said outlet when the mandrel is in dough forming position, and means operatively associated with said hopper for extruding dough from said outlet over said face and posts and around said mandrel while the mandrel is in dough forming position.

3,126,843
PALLET AND FORM FOR MAKING SAME

John P. De Laney, 800 Riverside Ave., Scotia 2, N.Y.

Filed July 9, 1962, Ser. No. 208,255
4 Claims. (Cl. 108—52)

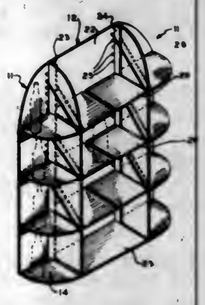


1. A pallet structure comprising runners and cross-slats; said runners being of plastic material, said cross-slats being of wood, said runners having areas of adhesive preapplied thereon and paper stripping covered over said adhesive areas; said runners and cross-slats being adapted for breakdown disassemblies for storing or shipping as a pallet unit; one of said disassemblies having one of said runners disposed and arranged on top, the remaining ones of said runners arranged and disposed on the bottom with said cross-slats arranged and disposed to be contained between said runners; the other of disassemblies having said runners arranged and disposed back to back with said cross-slats arranged and disposed on the sides of two of said runners; said runners and cross-slats being assembled a a pallet by the method of the following steps: the first step consisting of removing said paper stripping covering said adhesive areas on said runners, the second step consisting of arranging and disposing said cross-slats on said adhesive areas of said runners, and the third step consisting of joining and bonding said cross-slats to said adhesive areas of said runners by application of pressure.

3,126,844
DISPLAY UNIT

Martin J. Burne, 2212 Shore Drive, Sharke River Manor, N.J., and Arthur C. McAdams, 102 Lincoln Ave., Florham Park, N.J.

Filed Mar. 28, 1962, Ser. No. 183,088
8 Claims. (Cl. 108—111)

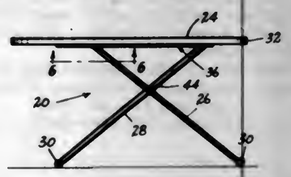


1. A display unit comprising,
(*a*) a self-supporting stand,
(*b*) a plurality of vertically foldable shelves secured to the stand, a single side of each shelf being secured to the stand, remaining sides being freely suspended,
(*c*) elastic means secured between the shelves and the stand normally urging the shelves to assume a generally vertical position.

3,126,845
IRONING BOARD CONSTRUCTION

Tony Ribaudo, 5727 W. Park Ave., St. Louis 10, Mo.

Filed Nov. 3, 1960, Ser. No. 67,051
1 Claim. (Cl. 108—117)



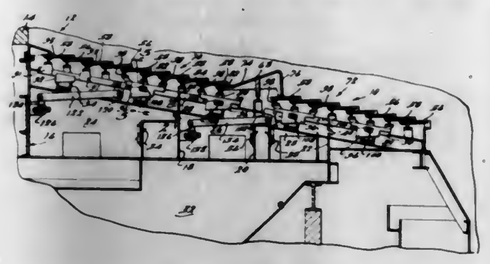
An ironing board comprising, in combination, an ironing platform, a channel member secured to the bottom of said platform having opposed inwardly directed flanges, a pair of pivotally connected collapsible legs mounted in said channel member, one leg being pivotally connected at one end to said channel member, the other leg being pivotally and reciprocably connected at one end to said channel member, said pivotal and reciprocal connection including a pin transversely disposed in said channel member for sliding and rotative movement, the upper end of said other leg being secured thereto, and latching mechanism for maintaining said legs in selected operative position including a lever pivotally mounted on said pin having a latch tip, aligned apertures in said channel member, said latch tip being adapted to freely slide over said apertures as the platform is raised vertically while held in horizontal position and to engage a selected hole when said platform is lowered after vertical movement,

and means for releasing the latch tip to lower the platform.

3,126,846
INCINERATOR GRATE

Herbert L. Wagner, Monroe, Mich., assignor to United Industrial Corporation, Los Angeles, Calif., a corporation of Delaware

Filed Apr. 7, 1960, Ser. No. 20,716
8 Claims. (Cl. 110—38)



1. In a grate assembly, a plurality of alternate stationary and movable grate members arranged in a stepped formation, a supporting frame disposed below said grate members, stationary support members on said frame for said stationary grate members, a carrier member for a plurality of said movable grate members guidably mounted on said frame for reciprocating movement, means connecting said carrier member to said movable grate members, a reciprocatable draw bar mounted adjacent said carrier, lost motion means connecting said draw bar and said carrier to provide for reciprocation of said carrier in response to reciprocation of said drawbar, and means for reciprocating said draw bar.

3,126,847
PLANTER

Charles W. Morris, Rte. 1, Paris, Tenn.

Filed Jan. 29, 1962, Ser. No. 169,445
6 Claims. (Cl. 111—4)

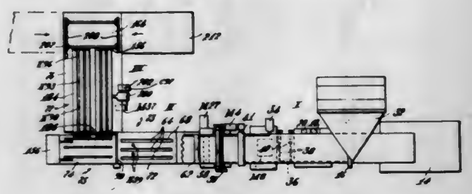


1. In a planter of the type described in combination, a straight tube having its lower end cut off substantially at right angles and sharpened, a dibble rod filling and slidable in said tube and having a pointed lower end, latch means on said tube, first means on said rod to be engaged by said latch to hold said dibble in said tube with its pointed end extending beyond the tubes lower end, said tube being longitudinally slotted from its lower end for a distance greater than the normal depth of insertion of the tube into the ground, and second means on said rod to be engaged by said latch to hold said dibble elevated with its point above the upper end of said slot whereby a portion of the slot is open above ground for plant insertion therethrough.

3,126,848
APPARATUS FOR MAKING PILLOW SLIPS

Joseph E. Gastonguay, Lewiston, Maine, assignor to Pepperell Manufacturing Company, Boston, Mass., a corporation of Massachusetts

Filed Dec. 5, 1960, Ser. No. 73,770
21 Claims. (Cl. 112—10)



1. In an apparatus for making pillow slips, a support having first and second supporting surfaces arranged end-to-end, a cutter bar disposed between the adjacent ends of the supporting surfaces, a first conveyor associated with the first supporting surface for advancing the leading end of tubular material therealong toward the cutter bar, a picker associated with the second supporting surface, a carriage mounting the picker for movement toward and from the cutter bar, said picker comprising a bar disposed transversely of the carriage and a plurality of transversely spaced fingers pivoted thereon, means normally holding the fingers engaged with the bar, and a cam operable to lift the fingers away from the bar, means for effecting reciprocation of the carriage, a cam-actuator disposed in the path of movement of the carriage, operable as the carriage moves toward the cutter bar, to intercept the cam and hence to raise the fingers from the bar, means fixed to the carriage and movable therewith, operable to effect forward movement of the first conveyor as the open fingers near the cutter bar, to advance the leading end of the tubular material between the fingers and the bar, said fingers closing on the leading end as the carriage commences to move away from the cutter bar, and means operable, at the forward extremity of the movement of the carriage, to effect operation of the cutter.

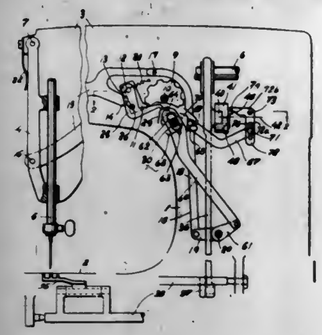
3,126,849
ZIGZAG STITCH SEWING MACHINES

Hanns Giesselmann and Bertil Karlsson, Huskvarna, Sweden, assignors to Husqvarna Vapenfabriks Aktiebolag, Huskvarna, Sweden

Filed Sept. 13, 1956, Ser. No. 609,769
Claims priority, application Sweden Sept. 14, 1955
12 Claims. (Cl. 112—158)

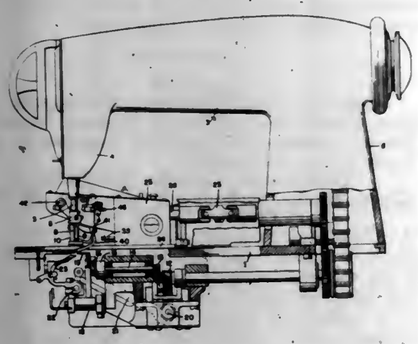
1. A zigzag stitch sewing machine comprising a work support, a hollow frame including an overhanging sewing arm disposed above the work support, a reciprocable work feeder operatively associated with said work support, a transversely movable needle bar guide carried by said sewing arm, a longitudinally reciprocable needle bar operatively associated with said guide, a drive shaft within said frame, adjustable motion transmitting means operatively inter-connected between said drive shaft and said needle bar guide for imparting lateral movement to said guide and thus to said needle bar, control means for adjusting said motion transmitting means, including a first regulating member movable to setting positions for adjusting the motion transmitting means to vary the amplitude of transverse movement of the guide so as to

regulate the width of stitch and a second regulating member for adjusting the motion transmitting means to vary the starting position of the transverse movement of the guide to determine the starting position of a zigzag seam, additional adjustable motion transmitting means operatively inter-connected between said shaft and said work feeder for imparting feed movements to the work feeder, control means for said additional adjustable motion transmitting means operative to vary the amplitude and direction of feed of the work feeder, said last named



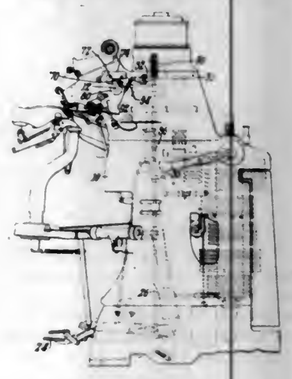
control means including a third regulating member, separate manually actuated means for imparting individual adjusting movement to each of said regulating members and additional adjusting movement imparting means operable by one of said separate manually actuated means and mechanically connected to the regulating members operated by the other manually actuated means, whereby upon operation of said one manually actuated means to at least certain positions thereof, adjusting movements will be imparted simultaneously to all of said regulating members.

3,126,850
SAFETY STITCH SEWING MACHINES
Victor J. Sigoda, Great Neck, N.Y., assignor to Man-Sew Corporation, New York, N.Y., a corporation of New York
Filed May 8, 1961, Ser. No. 108,562
1 Claim. (Cl. 112—162)



A sewing machine having a single main shaft rotating at a first rate; a single feed mechanism operated from said main shaft in a one-to-one ratio; stitchforming mechanism including a single reciprocating needle bar operated from said main shaft in a one-to-one ratio; a plurality of threaded needles carried by said needle bar; said needle bar operating at the first rate; complementary loop-taker means cooperating with one of the needle for forming join seam stitches at the first rate to unite two or more fabric plies; a housing on the sewing machine, a threaded underlooper supported by the housing and cooperating with another of said needles for overcasting the edges of the fabric plies; drive mechanism for the underlooper contained in the housing; an operating connection between the drive mechanism and the main shaft to operate the underlooper so that it coacts with the last mentioned needle only on certain of the reciprocations of said needle bar at a second rate which is a submultiple of the first rate.

3,126,851
ANTI-REBOUND DEVICE FOR SEWING MACHINES
James P. Carter, Beverly, Mass., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed Feb. 12, 1962, Ser. No. 172,550
6 Claims. (Cl. 112—219)

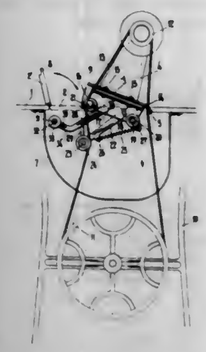


1. In a machine having a frame, a shaft rotated continuously in a forward direction during normal operation of the machine and brought to rest in a predetermined angular position during a stopping cycle by rotation in the reverse direction, control means shiftable between an operating position for causing forward rotation of the shaft and a stopping position for initiating the stopping cycle, a rotary stop member mounted on the shaft and a movable member on the frame and engageable by the rotary member for arresting rotation of the shaft in the predetermined angular position, an anti-rebound device comprising a latch on the frame, a latch engaging surface on the shaft, connecting means between the latch and the control means for disabling the latch while the control means is in operating position, and buffer means responsive to rotation of the shaft in the reverse direction after shifting of the control means to stopping position for permitting engagement of the latch with the surface only after the direction of rotation of the shaft has been reversed.

3,126,852
BELT-TENSIONING DEVICE FOR FOLDABLE SEWING MACHINES
Elmo Alfredo Fontana, Arguello, Cordoba, Argentina
Filed Nov. 24, 1961, Ser. No. 154,508
7 Claims. (Cl. 112—258)

1. In a foldable sewing machine comprising a table top, a hinge carried by said table top, a body adapted to swing about said hinge between a working and a folded position, a driving and a driven sheave, and a round, cord-like belt, having a fore and aft strand; a tensioning device for said belt adapted to keep said belt in tension while said body swings about said hinge, a guide sheave adapted

to retain said fore strand of said belt against said tensioning device for any position of said body, means adapted to retain said aft strand of said belt during said swinging of said body, a braking device operatively connected with said tensioning device and adapted to block said driving sheave when said sewing machine is in said folded position, a bracket fixed to said body adapted to swing therewith and to carry said guide sheave and said means, an



arm having an end pivotally mounted on said bracket and another free end, a loose sheave rotatably carried by said free end of said arm and adapted to bear against said fore-strand of said belt, and a spring tensioned between said arm and said bracket and adapted to push said loose sheave against said belt as to keep said belt in tension for any position of said body, while the latter is swinging about said hinge.

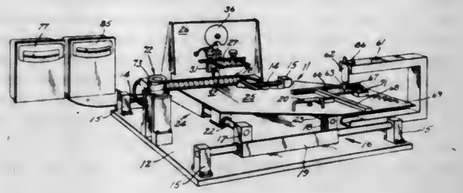
3,126,853
APPARATUS FOR AND METHOD OF APPLYING ORNAMENTAL STITCHING TO SHOES OR THE LIKE
Walter F. Maves, Edgerton, Wis., assignor to Nunn-Bush Shoe Company, Milwaukee, Wis., a corporation of Wisconsin
Filed July 26, 1961, Ser. No. 126,967
7 Claims. (Cl. 112—421)



4. A method of performing ornamental stitching inwardly of the edges of a piece of relatively thick leather having a grain side and a flesh side comprising bending the material substantially short of doubling to provide a curved ridge portion projecting from the grain side, and sewing longitudinally of the ridge from said grain side straight through said curved portion intermediate the thickness of the material while the material is so held that no bent portions on the flesh side are in contact whereby the stitching enters the surface at said grain side on one side of the ridge and emerges from the same side of the material on the other side of the ridge without passing through the flesh side of the material, and causing the stitching to be sufficiently close to said convex side as to produce and hold a curved ridge without doubling the material.

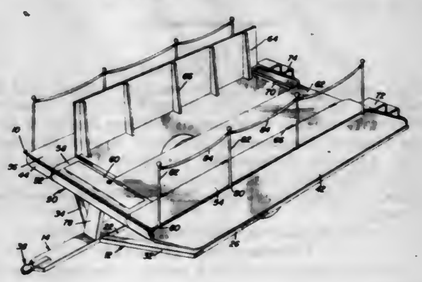
6. As a new article of manufacture a sheet of relatively thick flexible material such as leather displaced along a narrow line to provide an elongated low surface ridge of unbroken rounded cross section on one side which projects above the surface of the leather on said side a distance short of that which would double the displaced material, and there being a shallow groove of arcuate cross section on the opposite side, and ornamental stitching along each side of said ridge having connecting stitching passing intermediate the thickness of the material from one side of said ridge to the other without passing through the opposite side of the material and being sufficiently close to the side having the ridge to maintain said low ridge without doubling the material into two parallel thicknesses.

3,126,854
SOLDERING MACHINE
Emerson E. Nabal, Indianapolis, Ind., assignor to the United States of America as represented by the Secretary of the Navy
Filed June 16, 1961, Ser. No. 117,759
8 Claims. (Cl. 113—124)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A soldering machine for soldering joints on a printed circuitry board comprising: a base plate, a top plate slidably attached to said base plate and movable in two mutually perpendicular directions and in a plane parallel to said base plate, means on said top plate for holding said printed circuitry board to be soldered, means on said top plate for holding a pattern board in a predetermined position relative to the position of said printed circuitry board, said pattern board being a facsimile of said printed circuitry board, soldering means attached to said base plate and extending above said top plate, indexing means attached to said base plate and having a portion engageable with said pattern board whereby positioning a point on said pattern board relative to said indexing means causes a corresponding point on said printed circuitry board to be positioned relative to said soldering means, and means for lowering said printed circuitry board into contact with said soldering means.

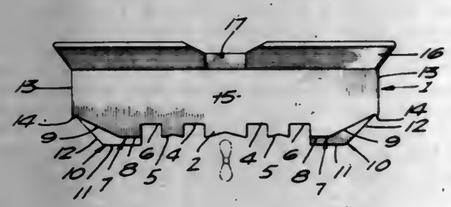
3,126,855
COMBINATION BOAT TRAILER AND FLOATING DRY DOCK
Lloyd A. Freeburg, % Flodin, Inc., Box 332, Sunnyside, Wash., assignor of fifty percent to Flodin Inc., Sunnyside, Wash., a corporation of Washington
Filed July 3, 1962, Ser. No. 207,248
4 Claims. (Cl. 114—45)



4. A boat trailer and floating dock combination comprising an elongated main frame having hitch means at

its forward end adapted for securement to a towing vehicle and dependingly supported ground engaging support wheels, said combination including a pair of elongated pontoons supported from and extending longiudinally of said main frame in laterally spaced relation and defining a rearwardly opening boat hull receiving slip therebetween, boat hull bottom supporting cradle means supported from said main frame and disposed between said pontoons adapted to support a boat hull from the bottom thereof in elevated position above the supporting surface for said support wheels, the rear end of said slip being free of obstructions for the reception of a boat hull in said slip, said pontoons being rigidly interconnected adjacent the upper edges of the forward ends thereof by means of a transverse brace member, said pontoons each including a partial cover panel, means pivotally securing one edge of each panel to the corresponding pontoon for rotation about an axis extending longitudinally along the inside upper edge thereof for swinging movement of the free edge portions of said panels between open upwardly projecting substantially vertically disposed positions and closed generally horizontally disposed positions with the forward edges of said panels supported from said transverse brace member, a removable transverse brace member secured between the rear ends of said pontoons, the rear edges of said panels being supported from said removable transverse brace member when said panels are in the closed positions.

3,126,856
MOTOR BOAT HULL
Harold L. Fuller, P.O. Box 566, Lake Isabella, Calif.
Filed July 3, 1962, Ser. No. 207,335
7 Claims. (Cl. 114—66.5)



1. A motor boat hull, comprising:

(*a*) a plurality of ski ribs of uniform width extending from the bow to the stern of the hull;

(*b*) each of said ribs having essentially vertical side walls and its underside having a cross section defining an obtuse inverted V;

(*c*) said ribs defining therebetween air duct channels also of uniform width and of sufficient depth to entrain air therein during movement of the hull over the surface of water.

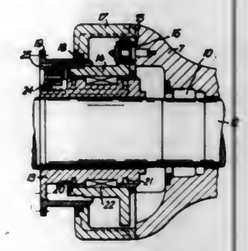
3,126,857
FIN ARRANGEMENT
Colin Campbell Mitchell, Edinburgh, Scotland, and Karl Hinsch, Hamburg, and Richard Gever, Hamburg-Rissen, Germany, assignors to William Denny & Brothers Limited, Dumbarton, Scotland, Brown Brothers & Co., Limited, Edinburgh, Scotland, Deutsche Werft A.G., Hamburg-Finkenwerder, Germany, and Allgemeine Elektricitats - Gesellschaft, Berlin-Grunewald, Germany
Filed June 18, 1962, Ser. No. 203,202
7 Claims. (Cl. 114—126)

1. A fin arrangement for a craft, comprising, in combination:

(*a*) pivot means arranged on the craft and turnable about a pivot axis;

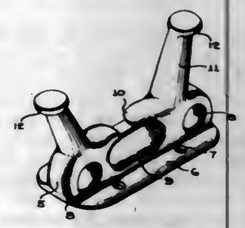
(*b*) a shaft fixedly connected to said pivot means and having a shaft axis which is transverse to said pivot axis, the latter being so oriented on the craft that said shaft may be swung between a position wherein said shaft extends through the medium in which the craft travels and another position in which said shaft is substantially out of the medium;

(*c*) a fin mounted on said shaft for rotation relative thereto about said shaft axis and having inboard and outboard ends, said inboard end being spaced from said pivot means; and



(*d*) a rotary vane drive for turning said fin about said shaft axis, said rotary vane drive having inner and outer components both of which are aligned with said shaft axis and both of said components being arranged in the space between said pivot means and said inboard end of said fin, said inner component being fixedly secured to said pivot means and there being means for detachably connecting said outer component to said inboard end of said fin, whereby transverse stresses to said inboard end of which said fin is subjected are taken up by said shaft and said pivot means but not by said rotary vane drive and whereby, upon detachment of said fin from said outer component of said rotary vane drive, said fin may be removed from said shaft without requiring disassembly of said rotary vane drive.

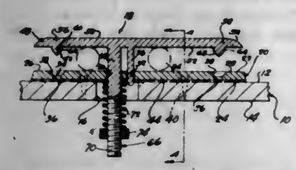
3,126,858
COMBINED CHOCK AND CLEAT
Roland J. Rosinski, P.O. Box 391, Balboa, Panama Canal Zone
Filed Sept. 20, 1961, Ser. No. 139,431
5 Claims. (Cl. 114—218)



1. A combined chock and cleat for mooring lines comprising an elongated bar having a recess midway its length opening through the top surface of said bar adapted to receive a mooring line, the ends of said recess being curved to form inwardly directed hooks with the free ends of the hooks in spaced apart relation for inserting the mooring line beneath said hooks, and horns extending vertically from the top surface of said bar at each end of said recess and in alinement with said recess, said horns extending in diverging relation away from one another to a height above said hooks so that when the mooring line is looped around both of said horns, the

folds in the line will extend over and cover the opening to said recess and retain the mooring line in the recess.

3,126,859
CLEAT
Charles E. Bigelow, 1221 Potter, Richland, Wash.
Filed Apr. 30, 1963, Ser. No. 276,860
2 Claims. (Cl. 114—218)



1. A retractable cleat for attachment to a deck having an upper side and a lower side and having a vertical opening formed therein, the cleat comprising:

(*a*) a base plate secured to the deck upper side, the plate being of elongate form having a pair of side-by-side, spaced apart openings formed therein along the longitudinal axis thereof;

(*b*) each of the base plate openings being of reduced diameter relative to the deck opening and both being positioned thereover;

(*c*) said base plate including leading and trailing ends and having upwardly opening sockets therein adjacent each of said ends;

(*d*) a top plate having leading and trailing ends, conforming in outline configuration to the base plate and overlying the same;

(*e*) a main connection rod, having a pair of ends, secured at one end to the top plate and having a threaded outer end portion, the rod being slidably positioned in one base plate opening and extending through the deck opening;

(*f*) a coil spring about the connection rod;

(*g*) an enlarged nut threadedly engaged on the threaded end portion of the connection rod, the nut engaging the spring;

(*h*) a guide rod depending from the top plate and extending through the other base plate opening; and

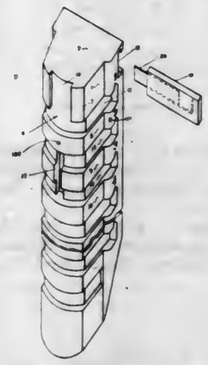
(*i*) studs depending from the top plate and engageable in the base plate sockets.

3,126,860
FLEXIBLE MOORING LINE
Stockton L. Sheppertou, 11 Wamsetta Ave., East Providence, R.I.
Filed July 11, 1962, Ser. No. 209,003
2 Claims. (Cl. 114—230)



1. In a mooring arrangement for a comparatively small boat for mooring to an off shore buoy, said boat being provided with a non-elastic line between the boat and an on shore dock, an elastic mooring line between said boat and said off shore buoy comprising a length of elastic material having a snap hook at each end, said elastic material comprising 50% natural rubber and 50% neoprene, and a fungicide in said mixture, said material extending to a minimum of 6½ times its length, said material having a tensile strength of a minimum of 2500 p.s.i., said material comprising a double thickness each being .065" in thickness and 1½" in width.

3,126,861
SURVEYING STAKE AND RELATED STRUCTURE
Benjamin S. Sheinwald, Brookline, Mass. (85 South St., Boston 11, Mass.)
Filed Mar. 24, 1961, Ser. No. 98,167
6 Claims. (Cl. 116—114)



1. A surveying stake having elongated side wall means forming an elongated channel portion adapted to permit a plurality of said stakes to be nested together,

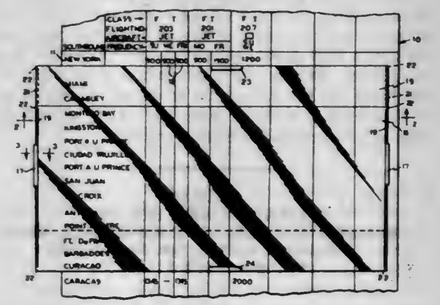
a first end of said stake being tapered whereby said stake may be easily driven into the ground,

said elongated sidewall means comprising a plurality of transversely extending spaced ridges adapted to prevent axial movement of the stake when it is positioned in the ground,

a second end of said stake comprising a top element extending transversely of said channel and joining said side sidewall means,

said top element comprising a grooved section adapted to receive a data containing means in a visible portion thereof.

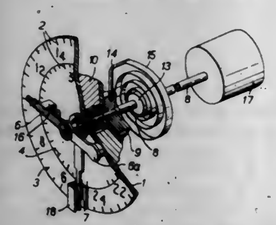
3,126,862
DESTINATION SELECTOR
Frank A. Hanley, 37 Dechert Road, Conshohocken, Pa.
Filed July 11, 1962, Ser. No. 209,153
1 Claim. (Cl. 116—119)



A destination selector for readily ascertaining the departure and arrival times of a public carrier between two places listed on a schedule of such carrier, comprising two sheets of colored transparent material superimposed on one another in sliding relation so that such sheets may be expanded and contracted in the direction of the list of places on the schedule to enable the opposite end edges of the devices to be positioned adjacent to two selected places spaced apart in such list a distance greater than

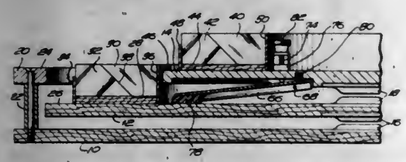
the dimension in such direction of the device in the contracted condition of such sheets and to block larger and smaller areas, respectively, of the schedule between any such two selected places of such list, the coloring of such sheets being such that the data on an area of the schedule blocked by such two sheets is sufficiently shade to make the two selected places in such schedule adjacent to said opposite end edges readily observable, but is not hidden to the extent that such blocked data cannot be read through both thicknesses of the sheets, and guide means connecting the side edges of said sheets in slidable relation without impairing the visibility of blocked data through such sheets.

3,126,863
INDICATING INSTRUMENTS
Alan Neville Du Feu, Cheltenham, England, assignor to S. Smith & Sons (England) Limited, London, England, a British company
Filed Feb. 2, 1962, Ser. No. 170,616
Claims priority, application Great Britain Feb. 3, 1961
7 Claims. (Cl. 116—129)



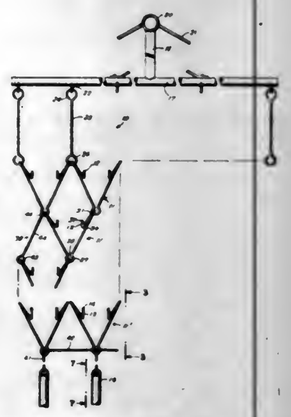
1. An indicating instrument, comprising a pointer assembly, a dial, means mounting the pointer assembly and the dial for relative rotation about a common axis normal to the plane of the dial, a scale on the dial circumscribing said common axis, and a driving mechanism for imparting relative rotation to the pointer assembly and the scale in dependence upon the magnitude of a variable quantity to be indicated, the said scale being divided into inner and outer parts of different radii, the inner scale part running from a first scale value to an intermediate scale value and the outer scale part from the intermediate scale value to the said second scale value, said pointer assembly having first and second pointers mounted for separate rotation about said axis, the length of the first and second pointers being substantially equal respectively to the radii of the inner and outer parts of the scale, spring means acting to hold the two pointers together, a stop positioned to prevent rotation of the second pointer through the intermediate scale value whilst permitting the first pointer so to do and screening means for obscuring at least the outer end of the second pointer when at the intermediate scale value.

3,126,864
ROTARY CARD HOLDER
Roland D. McIntosh, 136 Front St., Bath, Maine
Filed Dec. 4, 1962, Ser. No. 242,308
5 Claims. (Cl. 116—133)



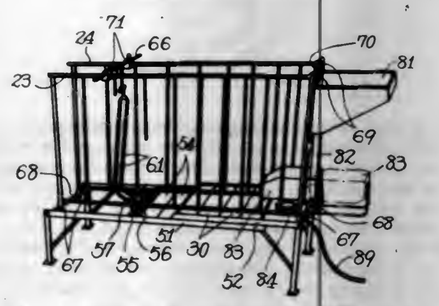
1. A rotatable card holder comprising a base, a lower disk rotatably mounted on said base, said disk having indicia on its peripheral margin, a series of radially extending partition elements on said disk forming compartments for holding cards on edge, clamping means on said base operable to clamp said disk against rotation, an upper card-carrying disk concentric with said lower disk and rotatable independently thereof, and means operable to clamp the two disks together for rotation as a unit.

3,126,865
OYSTER HARVESTING HARROW
John L. Wiegardt, Jr., Box 236, Ocean Park, Wash.
Filed Apr. 27, 1961, Ser. No. 106,004
4 Claims. (Cl. 119—4)



1. An oyster bed harrow comprising a series of rows of connecting links each formed to a V-shape in plan configuration with the throat of the V facing forwardly and formed from rod stock with a respective probing prong depending from the outer end of each of the two forwardly diverging branches of each link to produce a harrowing tooth, a draw-bar arranged to be engaged by a tow-boat's tow-line and extending transversely of the harrow in front of the foremost row of links, connection between said draw-bar and the front row of links, and weights attached in trailing relation to the rearmost row of links.

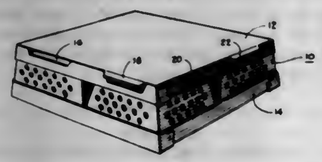
3,126,866
ANIMAL CAGE WITH FEED AND WATER SUPPLY MEANS
Shoshichi Kubota, 1349 Oaza Mameshima, Nagano-shi, Japan
Filed Jan. 5, 1961, Ser. No. 80,811
Claims priority, application Japan Jan. 8, 1960
8 Claims. (Cl. 119—18)



1. A pig raising cage comprising, in combination, a base frame; a pair of elongated side frames respectively

arranged on opposite sides of said base frame and projecting substantially parallel to each other upwardly therefrom, said side frames being spaced from each other so as to define between themselves an elongated narrow space preventing any substantial transverse movement of a pig placed in the cage; a front frame connected to and extending transversely between one of the ends of said side frames; escape preventing means connected to and extending transversely between said side frames in the region of the other ends thereof for preventing escape of the pig in direction away from said front frame; and feeding means mounted on said front frame of said cage, said feeding means including a food supply means and a water supply means arranged one above the other, the upper one of said means being displaceable in longitudinal direction of said cage through an opening in said front frame between a feeding position inside said cage at the inner side of the front frame and an inactive position substantially outside of said cage at the outer side of said front frame, said upper one of the feeding means preventing in said feeding position access to said lower of said supply means, whereby the pig is forced to move said upper supply means from said feeding position to said inactive position in order to get access to said lower supply means and to move said upper supply means again to said feeding position in order to have again access to said upper supply means.

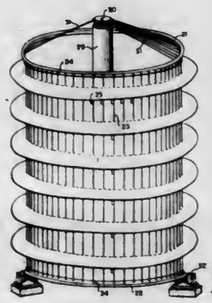
3,126,867
VENTILATING CONSTRUCTION FOR A CHICK BOX
Peter Kundikoff, Rte. 4, Box 437, Escondido, Calif.
Filed Jan. 2, 1963, Ser. No. 249,079
6 Claims. (Cl. 119—19)



1. A ventilating construction for a ventilatable container comprising an angular member presenting a first side and a second side each emanating at an area of angularity and projecting away therefrom, a first score formed at and along the area of angularity, and a second score spaced apart from the first score and formed upon that second side, a cutout flap formed through the angular member and extending from the first side through the area of angularity to the second score with a substantial portion of the flap lying in the first portion, said angular member presenting an opening therein formed by the cutout of the cutout flap for receiving transfer of the flap therethrough, whereby the flap may be extended to an open position of the opening and selectively transferred through the opening to a closed position of the opening.

3,126,868
PREFABRICATED REVOLVING CYLINDRICAL HEN-HOUSE
Akira Ishibashi, Fukuoka-shi, Japan, assignor to Nippon Reizo Kabushiki Kaisha, Tokyo, Japan
Filed Jan. 12, 1962, Ser. No. 165,892
5 Claims. (Cl. 119—21)

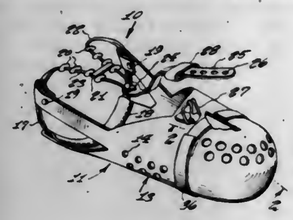
1. A prefabricated cylindrical and rotatable hen-house capable of shipment in the disassembled or knocked down condition and capable of on-site erection by unskilled labor without the use of special tools or equipment: said hen house comprising, in combination, a relatively elongated vertical central mast; a thrust bearing on the upper end of said mast including a lower fixed plate, an upper rotatable plate having perforations spaced substantially uniformly of its periphery, and bearing elements between said plates, a pair of substantially congruent relatively large diameter annular upper and lower metal members concentric with said mast, said members having perforations spaced uniformly of their peripheries; a plurality of radial spokes connected at opposite ends to said upper rotatable plate and to said upper member to suspend the latter for rotation about said mast; a plurality of relatively elongated rigid metal uprights having their ends connected to said upper and lower members and spaced substantially uniformly therearound, said uprights maintaining said upper and lower members in fixed axially spaced relation; said uprights having a plurality of apertures at corresponding vertically spaced locations therealong; guiding roller means arranged beneath said lower member and spaced peripherally thereof for guiding engagement therewith during rotation of the hen house about said mast; plural wooden beams mounted at uniformly vertically spaced locations on each upright, each beam being secured substantially mid-way of its ends to its associated upright and extending horizontally and radially; wire mesh radial partitions having vertical wires hooked at both ends, each beam having a partition hooked at its upper end into perforations in the beam for suspension from the latter to extend longitudinally of the beam; each partition terminating short of the next lower beam; plural annularly extending wires each supported in the hooked lower ends of correspondingly radially located vertical wires of the partitions; truncated sector-shaped hurdle floors each supported on said annular wires between a circumferentially adjacent pair of radial partitions; trapezoidal droppings boards each secured to a circumferentially adjacent pair of beams and spaced beneath a hurdle floor; and a plurality of wires extending horizontally through the vertically spaced perforations of said uprights and conjointly forming a vertically extending annular partition dividing the hen house into radially inner and outer sections; substantially all of the weight of the hen house being supported by said central mast, with said guiding roller means having substantially only guiding engagement with said lower annular member.



3,126,869
SCENT BREAKING UNIT
Bill Young and Francis W. Young, both of 5602 Persimmon Ave., Temple City, Calif.
Filed July 2, 1963, Ser. No. 293,572
4 Claims. (Cl. 119—29.5)

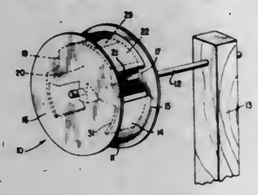
1. In a scent breaking device the combination of a

muzzle element and a scent pocket element, means for attaching said muzzle element to a dog's head, means for



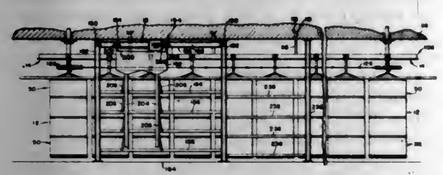
placing liquid scent into said scent pocket and means for attaching said scent pocket to said muzzle element.

3,126,870
SELECTIVE BIRD FEEDER
Morton P. Matthew, R.F.D. 2, Kreiner Lane, Norwalk, Conn.
Filed Oct. 23, 1961, Ser. No. 146,890
9 Claims. (Cl. 119—51)



1. A selective bird feeder comprising a support means, a feed material dispenser affixed to said support means, and an outer enclosure rotatably mounted to encase said feed material dispenser, said outer enclosure including access openings normally aligned to permit access to said feed material dispenser, said access openings being effectively closed by the rotation of said outer enclosure relative to said feed material dispenser.

3,126,871
FEED MEANS
Dennis W. Byrnes, 4565 S. 6th St., Tucson, Ariz.
Original application Jan. 30, 1958, Ser. No. 712,118, now Patent No. 3,045,612, dated July 24, 1962. Divided and this application Sept. 27, 1961, Ser. No. 146,676
1 Claim. (Cl. 119—52)



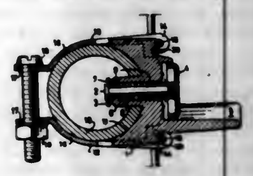
In an animal husbandry device in which a plurality of vertically spaced cages for housing animals are transported by an endless conveyor past a plurality of vertically spaced and horizontally disposed feed troughs, an automatic feeder comprising: an I-beam supported above and extending parallel to said feed troughs, said I-beam having abutments at either end; a feed bin having pairs of spaced rollers thereon suspended from said I-beam, said spaced rollers of each pair of rollers engaging opposite, lower flanges of said I-beam; a main feed outlet conduit extending downwardly from the bottom of said feed bin; a plurality of vertically spaced branch conduits extending from said main feed outlet conduit to discharge points above said feed troughs; a reversible electric motor mounted on said feed bin for moving said feed bin along said I-beam; a switch mounted on either end of said feed bin connected in electrical circuit with said motor and arranged to be actuated by said abutments when said feed bin reaches the ends of said I-beam whereby said motor is reversed and said feed bin traversed back and forth on said I-beam and said feed troughs are continuously and uniformly filled.

3,126,872
SILAGE FEEDING
Paul M. Mazur, Titusville, N.J.
(1 Williams St., New York 4, N.Y.)
Filed Nov. 17, 1961, Ser. No. 153,050
6 Claims. (Cl. 119—52)



1. In a silo, means for controlling the rate of movement of the silage, said means comprising: a vertically positioned wheel mounted on a horizontal axis adjacent to the walls of the silo with portions thereof extending inside and outside the silo wall, said wheel having radially extending silage penetrating curved fingers whereby the movement of the silage mass acts to displace said retaining means from a position permitting silage flow to a position supporting the silage mass.

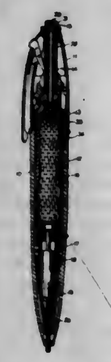
3,126,873
ANIMAL DRINKING DEVICE
Verner Mikaelsen, Hedensted, Denmark, assignor to Aktieselskabet Brdr. Michaelsen, Hedensted, Metalstoberi & Maskinfabrik, Hedensted, Denmark
Filed Oct. 11, 1962, Ser. No. 229,934
1 Claim. (Cl. 119—75)



An animal drinking device for attachment to a wire cage comprising a supply pipe with an opening therein, a valve housing with a cylindrical member projecting therefrom and extending through said opening, said housing having symmetrical curved surfaces disposed on opposite sides of the cylindrical member in contact with the outer surface of said pipe, the portion of said housing surface disposed opposite said curved surfaces consisting of spaced straight surfaces for bearing against the wires of a wire cage, clamping members consisting of a curved section for bearing against said pipe opposite the curved surfaces of said housing, said clamping members having apertured flaps extending from one end of said curved sections for receiving a bolt member therethrough, the other end of said curved sections extending into a straight section with a reverse hook on its end adapted to hook

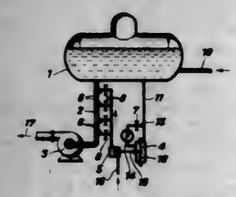
over the wires in a wire cage to clamp said housing straight surfaces against the wire cage, trough means projecting from said housing for receiving water from said pipe, and valve means disposed in said cylinder for discharging water from said pipe to said trough.

3,126,874
FOUNTAIN PEN WITH A FLEXIBLE CAPILLARY MATERIAL IN INK CONTAINER
Hellmuth A. A. Exner, Laprida 5141, Mar del Plata, Argentina
Filed May 1, 1962, Ser. No. 191,488
Claims priority, application Germany June 30, 1961
12 Claims. (Cl. 120—44)



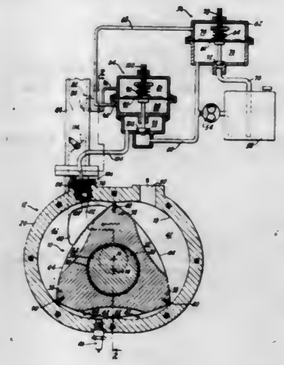
1. A fountain pen having a body and a cap removably secured to one end thereof and a writing point at the opposite end, an ink container within said body, a compressible cellular capillary material within said container, a plunger slidably disposed in the upper portion of said container, the capillary material secured at its upper end to said plunger and at its lower end to said container, a guide tube secured to the lower end of said container beneath said capillary material, a writing tube threadedly secured to said guide tube, ink inlet openings radially disposed in the side wall of said writing tube, means for opening and closing said openings, and breather openings in said ink container to compensate for variations in atmospheric pressures.

3,126,875
SUPPLY OF COLD WATER TO THE LOW-PRESSURE SIDE OF HOT WATER PUMPS
Hans Vogler, Winterthur, Switzerland, assignor to Sulzer Freres, Societe Anonyme, Winterthur, Switzerland
Filed Aug. 16, 1960, Ser. No. 50,006
Claims priority, application Switzerland Aug. 22, 1959
9 Claims. (Cl. 122—451)



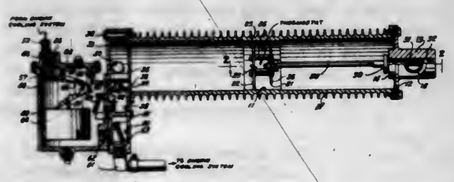
8. Apparatus for the supply of hot water comprising a hot water tank, a pump for pumping hot water from said tank to a point of use, a hot water feed line leading from said tank to the low pressure side of said pump, a cold water feed line communicating with said hot water feed line, a valve in said cold water feed line, means to measure the time rate of drop of pressure in said tank, and means to vary the opening of said valve directly with said time rate of drop of pressure.

3,126,876
FUEL INJECTION SYSTEMS FOR ROTARY COMBUSTION ENGINES
John A. Kimberley, Wayne, N.J., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed Jan. 16, 1962, Ser. No. 166,543
10 Claims. (Cl. 123—8)



1. A rotary combustion engine having a hollow outer body and an inner body rotatable relative to the outer body cooperating with the outer body to form a plurality of working chambers therebetween that rotate about the axis of the outer body and cyclically vary in volume as the inner body rotates relative to the outer body; air intake passage means for the chambers; fuel supply means for supplying fuel from a fuel source to the engine chambers; the fuel supply means including means for sensing air flow through said air intake and for controlling fuel flow proportionally to said air flow, a fuel pump for establishing a fuel pressure greater than atmospheric pressure, and a fuel injection nozzle for continuously injecting fuel directly into the engine chambers responsive to the flow of air through the air intake passage means, the fuel injection nozzle being located within the wall of the outer body and opening at the inner surface of the outer body adjacent to and downstream from the air intake passage means.

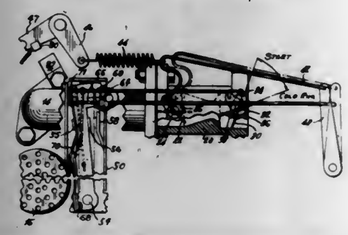
3,126,877
CONDENSING UNITS
William R. King, P.O. Box 2269, Longview, Tex.
Filed Feb. 27, 1961, Ser. No. 91,752
17 Claims. (Cl. 123—41.08)



1. A unit for condensing water vapor from engine exhaust gases for return to an engine cooling system including, a condensing chamber, means for admitting

engine exhaust gases to the condensing chamber, means for discharging engine exhaust gases from the condensing unit, a condensed water collection chamber, first check valve means opening from the condensing chamber to the collection chamber, means for establishing in the collection chamber a pressure less than the pressure existent in the engine cooling system, liquid level responsive means in the collection chamber responsive to a predetermined liquid level in the collection chamber to expose the collection chamber to the pressure existent in the engine cooling system and to render inoperative the means for establishing in the collection chamber a pressure less than the pressure existent in the engine cooling system, and second check valve means opening from the collection chamber to the engine cooling system.

3,126,878
AUTOMATIC CHOKE FOR SMALL ENGINES
Harold Eiler, Lapel, Ind., assignor to The Pierce Governor Company, Inc., Anderson, Ind., a corporation of Indiana
Filed Nov. 13, 1962, Ser. No. 236,860
14 Claims. (Cl. 123—119)



1. Automatic choke mechanism for an internal combusion engine having

a carburetor throttle valve, a choke valve, means biasing the throttle valve toward an open start position, and a governor including an element responsive to engine speed and connected to move the throttle valve, in opposition to said biasing means, to a partially-closed running position for governing the speed of the engine,

said choke mechanism comprising

linkage means actuated with the throttle valve and connected for actuating the choke valve toward closed position as the throttle valve is moved toward open position,

said linkage means including temperature-responsive means for varying the effective length of the linkage means in response to heat from the engine,

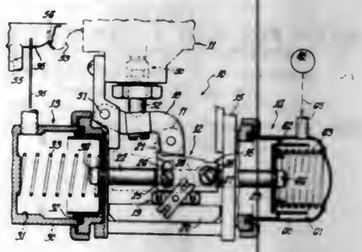
said temperature-responsive means having a cold condition in which it renders said linkage effective to move the choke valve to full-choke position when the throttle valve is moved to start position and to hold the choke valve in partial-choke position when the throttle valve is moved to running position,

said temperature-responsive means being operative, in response to heat from the engine, to progressively change the effective length of the linkage means in a direction to reduce the choking action produced,

said linkage means also including a lost-motion connection operative to transmit motion in a choke-closing direction and permitting lost motion in the opposite direction,

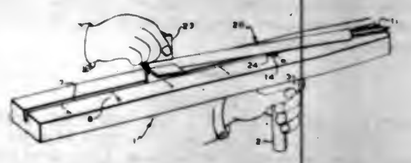
the response of said temperature-responsive means to engine heat at normal operating temperature being sufficient to change the effective length of the linkage means to one which permits the choke valve to remain in non-choking position at all running positions of the throttle valve.

3,126,879
FUEL INJECTION CONTROL MECHANISM
Carl R. Canfield, Jr., Decatur, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Mar. 27, 1961, Ser. No. 98,449
3 Claims. (Cl. 123—140)



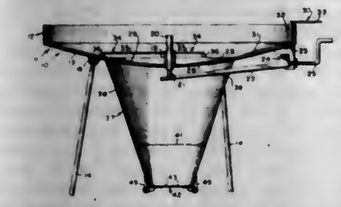
1. In a control system for a fuel metering device adapted to supply fuel to an internal combustion engine having an air-intake manifold, the combination of a movable cam follower connected to control the output of the device, a movable cam engaged by said cam follower, said movable cam having a cam surface including means defining a cut-out portion for completely cutting off the fuel supplied by said device when said cam follower is engaged with said cutout portion, a first servomotor connected to the air-intake manifold of the engine and to said cam for exerting a metering force thereon for moving said cam in accordance with changes in pressure within the air-intake manifold, a second reference pressure servomotor also connected to said cam for exerting a metering force thereon to adjust the position of said cam in accordance with changes in ambient pressure, a connecting shaft directly interconnecting both said servomotors whereby said cam is moved to an equilibrium position.

3,126,880
DART FIELD GAME
Earl E. Loe, Rte. 3, 1808 W. 2nd St., Bartlesville, Okla.
Filed Dec. 18, 1961, Ser. No. 160,371
1 Claim. (Cl. 124—22)



A recreational device comprising a dart having a stabilizer on one end of its shaft and with its forward end equipped with a cavity fitted with a loose fitting blunt plunger having a spring loaded bearing that positions in a groove around the inside periphery of said cavity to keep said plunger from falling out in flight, said plunger to be forced backward on impact and further into said cavity to bear against a spring attached to the bottom of said cavity, said plunger to expel the air and any marking powder through holes connecting said cavity with the outer surface of the sides of the forward end of said dart, and a thrust hook intermediate the approximate center of longitudinal balance and said forward end of said dart, a projector for said dart comprising a longitudinal member having one tapered end, a groove along its length in its topside to act as a guide for the stabilizer of said dart, a cylindrical handle extending from the bottom of said longitudinal member substantially intermediate its center and said tapered end, a directional hand stabilizer at the upper end of said handle and attached to the bottom of said longitudinal member, a dart thrust means attached to the tapered end of said longitudinal member, said thrust means comprising a resilient rubber member having one end attached to said tapered end, a cord attached to the other end of said rubber member with a bead affixed to the free end of said cord to engage said thrust hook of said dart.

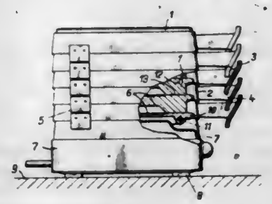
3,126,881
BARBECUE GRILL
Jacob Blotsky, Jr., 353 15th Ave. S., Fargo, N. Dak.
Filed Feb. 27, 1963, Ser. No. 261,369
2 Claims. (Cl. 126—25)



1. A barbecue grill comprising a bowl including an upstanding cylindrical side wall and a sloping bottom wall, legs connected to said bowl and depending therefrom, a vertically disposed bushing in the central portion of said bowl, a frame piece depending from said bowl and affixed thereto, a lever pivotally connected to said frame piece and engaging a vertically slidable member arranged within the bushing, a manually operable crank for moving said lever, said bottom wall having a plurality of spaced apart openings therein, slots in said bottom wall arranged adjacent to the openings therein, a plate of arcuate formation rotatably arranged contiguous to the upper surface of said bottom wall, said bushing being arranged just above the central portion of said plate, and said plate having a plurality of spaced apart openings therein which are mounted for movement into and out of alignment with the openings and slots in said bottom wall, a plurality of rods each including end portions affixed to the upper surfaces of said bottom wall at points spaced from the outer periphery of said plate, and said rods including horizontally disposed portions that are arranged above said plate and which are affixed to said bushing, a handle including a first portion affixed to said plate and said first portion being arranged contiguous to the upper surface of said bottom wall, said handle further including a second portion contiguous to the inner surface of the side wall of the bowl and an outwardly extending third portion, a removable frustro-conical body member arranged below said openings and slots and including a side portion having a slot therein for the projection therethrough of said lever, L-shaped bracket elements affixed to said body member, and a horizontally disposed screen mounted in said body member and said screen being interposed between the top and bottom of the body member.

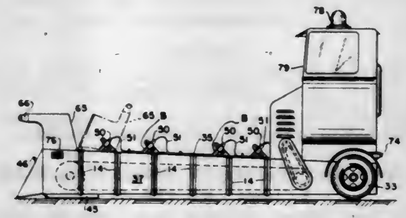
3,126,882
SET OF HEAT ACCUMULATING FOOD WARMING PLATES AND HEATING MEANS THEREFOR
Hans Hilfiker, Kilchberg, Zurich, Switzerland, assignor to "Therma" A.G., Schwanden, Switzerland
Filed Oct. 18, 1961, Ser. No. 145,861
Claims priority, application Switzerland Oct. 20, 1960
3 Claims. (Cl. 126—246)

1. A food warming device comprising a heating device having a heat plate thereon and heater means under said heat plate for heating said heat plate, and a plurality of identical imperforate food warming plates each having a heat accumulation body with a top face and a bottom face, each top face having a shape corresponding to and being adapted to contact the bottom face of the heat accumulaton body next above it and each bottom face having a shape corresponding to and being adapted to contact the top face of the heat accumulation body next below it, at least one of the said faces of said heat accumulating



bodies having a dish receiving recess therein which is surrounded by the said one face, said warming plates being stackable with the bottom face of the lowermost warming plate directly on the heat plate of said heating device and the respective top and bottom faces of the stacked warming plates in direct contact for transferring heat directly from each heat accumulation body to the next heat accumulation body by conduction.

3,126,883
SNOW MELTING MACHINE
Francis C. Smith, 242 Glen Road, Pasadena, Md.
Filed June 18, 1962, Ser. No. 203,692
2 Claims. (Cl. 126—343.5)



1. A snow machine for removing snow from roadways including means for collecting snow and heating means for melting the same comprising, in combination:

(*a*) a horizontal elongated rigid frame comprising two spaced vertical side walls having substantially horizontally parallel upper and lower edges and means for supporting the vertical frame members with their lower horizontal edges adjacent a roadway;

(*b*) a shallow pan including a horizontal bottom, two side wall members, a front wall member and a rear wall member, said pan extending substantially the full width of the frame and between the two sides from a point adjacent the front of the frame to a point adjacent the rear of the frame for carrying a layer of a predetermined amount of water from the melted snow;

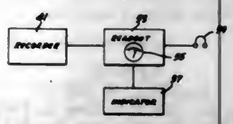
(*c*) a scoop attached to the forward end of the rigid frame and extending outwardly therefrom having its outer edge positioned downwardly from the front end of the frame and in a plane below the height of the pan and its inner edge extending over the upper edge of the front wall of the pan;

(*d*) a cover extending over the area between the side frames and supported upon the upper edges thereof;
(*e*) horizontal wall tie members extending at least between the upper edges of the side frame members;
(*f*) a rotatable shaft positioned at approximately each end and laterally of the frame and parallel with the bottom of the pan, and in a plane lying between the upper end lower edges of the side frames;
(*g*) corresponding sprockets carried at least adjacent each end of the two shafts and adjacent the inner side surfaces of the pan and adapted to extend downwardly into the pan;
(*h*) an endless link horizontal chain conveyor made up of at least two chains formed from individual link members extending around and between the corresponding sprockets of the two shafts to form upper and lower conveyor portions;
(*i*) cross bar members extending between corresponding opposite link members carried on each of the two chains, the lower portions of the conveyor being below the upper edges of the side walls of the pan and parallel with the bottom thereof;
(*j*) means for rotating the sprockets for moving the lower portions of the conveyor rearwardly through the pan carrying the snow;
(*k*) said heating means comprising a plurality of separate burners having at least their front ends positioned in the interior area of the machine formed by the cover, the side walls and the pan, said burners being spaced apart laterally from side to side of the machine and extending from a point adjacent the front of the machine to a point adjacent the rear thereof and adapted to direct their flames into the interior area of the machine and upon and around the cross bar members for storing heat therein;
whereby, the snow is melted by the heat from the flames emanating from the ends of the burners, the heated cross bar members, and the water as it is carried through the pan toward the rear of the machine.

3,126,884
METHOD OF PRESERVING ANIMAL TISSUE, SUCH AS BONE, INCLUDING METHOD OF MAKING BONE PASTE
Eli Jordan Tucker, Jr., 610 Medical Arts Bldg., Houston, Tex.
No Drawing. Filed Mar. 30, 1961, Ser. No. 99,584
5 Claims. (Cl. 128—1)

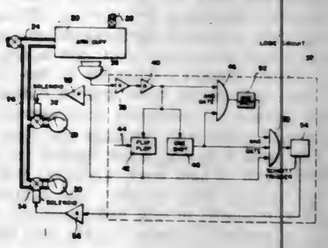
1. A bone mixture of dumb animal bone of reduced antigenicity, of increased universal compatibility with human bone, and of encouraged cell growth during preservation, and for use in humans as a graft bridging element, dental cavity filler, hemostatic agent, and the like, said mixture comprising a healthy, viable, dumb animal bone cultured in a normal saline blood component bath in refrigerated state in the presence of a sodium sulfonamide compound, said blood component being derived from the type of animal from which the bone has been removed, said preserved bone including muco-protein and muco-polysaccharides rendered extraordinarily permeable by said bath, said bone being excessively antigen depleted and denatured by reaction producing sodium salt linked tissue protein which is amide ring bonded by double sulphur bonds, said bone also including osteoblastic bone tissue and growth produced periosteum converted in the bath from peripheral osteoblasts and also including growing bone tissue cells, said bone being pulverized to particle size and said mixture including plasma clot as a retaining agent for said particles, said clot comprising fibrin formed by the plasma fibrinogen reacting with the resultant of bone calcium reaction with the plasma prothrombin and thromboplastin.

3,126,885
BLOOD PRESSURE MEASURING DEVICE
Allen T. Hinman, Ross, Calif., assignor to The Hypertension Research Foundation, San Francisco, Calif., a non-profit corporation of California
Filed May 18, 1961, Ser. No. 110,959
5 Claims. (Cl. 128—2.05)



1. A device for automatically measuring an individual's blood pressure and for recording systolic and diastolic blood pressure values, which device comprises means for selectively applying pressure to a selected artery of the individual to temporarily collapse the artery and occlude the flow of blood therein, means connected to said pressure applying means for gradually reducing the pressure applied to the artery to a pressure below the diastolic blood pressure value, means responsive to variation in the pressure applied to the artery for translating the pressure variation into a variation of an electrical characteristic, means responsive to the variation of the electrical characteristic for generating a frequency modulated signal having a frequency which varies in accordance with the variation in the pressure applied to the artery, each frequency of said frequency modulated signal representing a pre-selected blood pressure value, means responsive to each of a plurality of pressure pulses occurring at the artery between the systolic and diastolic pressure values for generating a signal in timed relation thereto, recording means, and means for transmitting said frequency modulated signal and said pressure pulse signals to said recording means for recording both the systolic and diastolic blood pressure values as represented by the frequency of said frequency modulated signal at the time the pressure pulse signals are initiated and terminated.

3,126,886
AUTOMATIC SPHYGMOMANOMETER
Herbert Karsh, Lexington, Mass., assignor to Epsco, Incorporated, Cambridge, Mass., a corporation of Massachusetts
Filed June 26, 1961, Ser. No. 119,492
6 Claims. (Cl. 128—2.05)



1. An automatic sphygmomanometer comprising, in combination, an inflatable and deflatable cuff adapted to be placed about an extremity of an individual, means for inflating and deflating said cuff through a pressure gradient including the systolic and diastolic pressures of said individual, a transducer responsive to the train of pulse sounds occurring concurrently with said pressure gradient between said systolic and diastolic pressures for producing electrical signals corresponding to each pulse sound, amplifier means for amplifying the electrical signals from said transducer, first bi-stable means responsive to the initial output signal from said amplifier means for producing an electrical pulse, first indicator means responsive to said electrical pulse from said first bi-stable means for indicating the pressure present in said cuff at the time of said initial pulse, second bi-stable means for producing an output signal, second indicator means responsive to said output signal of said second bi-stable means for indicating the pressure present in said cuff at the time of said output signal, gating means for controlling said second bi-stable means, and means connected to said amplifier means for generating a continuous sequence of signals for disabling said gating means for at least the total duration of said train.

3,126,887
SUPPOSITORY
Melvin G. Gordon, 1072 NE. 179th Terrace, North Miami Beach, Fla.
Filed Sept. 4, 1962, Ser. No. 221,211
1 Claim. (Cl. 128—271)



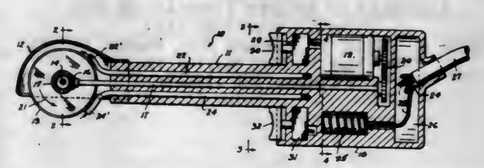
A suppository for fitment into the anal canal and whereby to apply a medicament to the walls of the canal during a predetermined time interval, the suppository comprising a molded body portion formed entirely of a material that will slowly dissolve by body temperature, the entire body portion of the suppository constituting a vehicle for a medication for the treatment of hemorrhoids or other disturbances of the anal canal, the body portion embodying an enlarged head portion, a stem portion and an enlarged tail portion, the stem portion being of constant diameter throughout its length and of less diameter than the diameter of the head and tail portions, and with the head and tail portions being of substantially the same diameter, the suppository being of such length as to position the head portion in the upper crypts of Morgagni in the canal to prevent disorgement of the suppository while the tail portion contacts the outer surface of the anal opening of the human body to prevent upward propulsion of the suppository, the medication being evenly dispersed throughout the entire length, width and depth of the substance of the suppository, the increased diameter of the head portion with respect to the diameter of the stem portion insuring retention of the inserted end of the suppository within the crypts of the Morgagni to prevent disgorgement of the suppository from the anus and the diameter of the tail portion being of such increased diameter with respect to the diameter of the stem portion as to insure melting of the stem portion in advance of the enlarged tail portion without a quick upward insertion of the suppository in the anal canal.

3,126,888
SANITARY APPLIANCE
Elinore R. Woldman, 13302 Cormere Ave., Cleveland, Ohio
Filed June 5, 1961, Ser. No. 114,953
6 Claims. (Cl. 128—287)



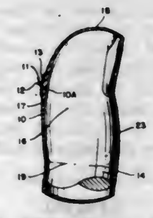
1. A sanitary appliance comprising a holder of moisture-proof material having a bottom and sides defining a cavity opening upwardly therein, said cavity being adapted to receive a moisture-absorbent pad therein, a transversely extending block of resilient material carried by the holder at each end of the cavity, said blocks operating to urge the holder into expanded position and also operating to limit movement of the pad within the holder lengthwise of the cavity, said sides being extensible and having longitudinally extending flanges for engaging the top of a pad within the cavity, a bridging strip attached to the respective sides and spaced from an end wall and operating to engage the top of a pad within the cavity and to position it therein, said holder having an extension on each end thereof adapted for attachment to a support.

3,126,889
SURGICAL INSTRUMENTS
Sylvan Blumenfeld, 627 Adams Ave., Scranton 10, Pa.
Filed Nov. 25, 1960, Ser. No. 71,587
7 Claims. (Cl. 128—303)



1. In a surgical knife, the combination of an elongated handle, a rotary cutter mounted at one end of the handle for rotation in a plane parallel to the longitudinal axis of the handle, means for rotating said cutter, a hood mounted at said one end of the handle and partially enclosing said cutter, conduit means extending through said handle and having an outlet disposed within said hood for discharging an anaesthetic agent into said hood, and additional conduit means extending through said handle and having an outlet disposed within said hood for discharging a medicating agent into said hood.

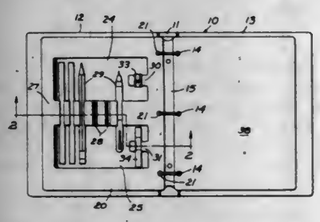
3,126,890
SURGICAL INSTRUMENT
John Edmund Deming, Sr., 1012 Medical Arts Bldg., Tacoma, Wash.
Filed Oct. 22, 1962, Ser. No. 232,039
2 Claims. (Cl. 128—361)



1. An obstetrical device for rupturing a membrane containing a fetus under conditions where there is a small dilation of an associated cervix, said device comprising a surgical glove composed of a thin, flexible material impervious to moisture and capable of withstanding sterilization by both heat and chemicals, said glove including a hand portion and five finger members connected thereto adapted to snugly fit around and enclose the hand of an operator during an obstetrical operation, each of said finger members including a palm portion that extends from the distal joint to the end of the operator's finger enclosed in the finger member, a rigid tooth including a substantially flat base and a tapered metal pin of one to three

millimeters in length terminating in a point so that said pin will penetrate said membrane a sufficient distance for rupturing same without injury to the fetus in the membrane, said tapered pin extending substantially normal to said base, means securing the base of said pin to the center of the base of the tooth, means fixedly securing the tooth base to the palm portion of one of the middle finger members at a point that is located substantially midway between the ends of said palm portion, a portion of said palm portion between said tooth and its outer end being sufficiently thin and flexible so that the operator may feel the membrane with the extreme end of said one middle finger, the thickness of said palm portion adjacent said tooth being thicker than the material forming the remainder of said glove so as to adequately support said tooth, and the palms of all said finger members other than said one middle finger member having smooth exterior surfaces.

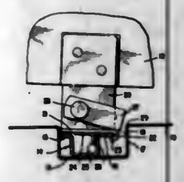
3,126,891
LOOSE-LEAF BINDER CONTAINER FOR PENCILS AND THE LIKE
Alfred A. Caputi, 71 Parkdale Ave., Buffalo 13, N.Y.
Filed May 31, 1962, Ser. No. 198,871
3 Claims. (Cl. 129—1)



1. In combination with a looseleaf notebook having a pair of covers hinged to opposite edges of a back, binder rings secured to said back, an article holder comprising a relatively thin sheet of moderately rigid material of substantially the same dimensions as said covers and having a base panel portion lying in a single plane, said sheet having undulating formations extending away from said plane to provide article receiving depressions, said panel portion having perforations along one edge engaged by said rings of the notebook, the depression portions closest to the panel edge bearing said perforations being substantially deeper than the depressions remote from said edge whereby the holder is substantially wedge-shaped as viewed from the end thereof, and a flat stiff panel likewise having perforations along one edge engaged by said rings of said notebook at the open side of said depressions and having substantially the same dimensions as said sheet to form a cover member for said article holder and a writing surface for pages of said notebook.

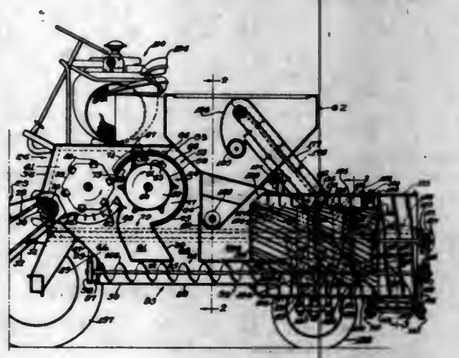
3,126,892
ADJUSTABLE PARTITION FOR FILES
William G. French, 110 Ivory St., Frewsburg, N.Y.
Filed Dec. 21, 1961, Ser. No. 161,014
1 Claim. (Cl. 129—31)

In a filing device, a file receiving body including a bottom wall having a longitudinally extending depressed channel formed therein, a guide rail secured within and below the top of said channel and extending longitudinally thereof, said rail having an upstanding side wall and a laterally projecting flange spaced from a side wall of the channel, a partition within said body transverse to said rail, a bracket carrying said partition and having a bottom portion resting slidably upon said flange of the guide rail, a hook shaped extension on said bottom portion of the bracket loosely embracing said rail flange and permitting tilting of the partition in its own plane transversely of the rail, a friction shoe element on the underside of said bracket bottom portion spaced laterally of said extension a distance equal to the width of said laterally projecting rail flange and frictionally engaging said rail side wall to clamp the rail flange between the shoe element and the hook shaped extension when the bracket bottom portion is approximately level to releasably lock the partition to the guide rail, said partition when slightly tilted in its plane about the rail flange as a fulcrum releasing said shoe element from frictional engagement with



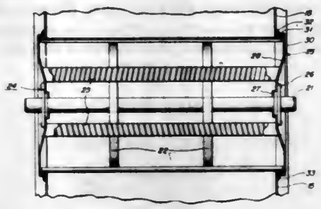
the rail so that the partition may be slidably moved longitudinally thereof, and a gravity influenced, manually liftable dog pivotally secured to said partition for vertical swinging movement above the bottom portion of the bracket, said dog when in a gravity lowered position being spaced from said channel wall sufficiently to permit slight tilting and longitudinal sliding movement of said partition but engaging said channel side wall above the guide rail upon further tilting of the partition to prevent separation of said bracket extension and partition from the rail, said dog when in a manually elevated position clearing the channel side wall and permitting increased tilting of the partition and complete separation thereof from the guide rail in a direction transverse to the rail.

3,126,893
COMBINATION CYLINDER TYPE THRESHING MACHINE AND ROTATING SEPARATING DRUM
John S. Palmer, Clarendon Hills, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Nov. 4, 1960, Ser. No. 67,403
18 Claims. (Cl. 130—27)



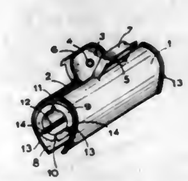
1. In a threshing machine or the like, the combination comprising means for threshing harvested crop, means for separating out stalk from the threshed crop received from the threshing means, means for receiving the threshed crop from which the stalk has been removed, substantially horizontally disposed rotatable drum means having a side wall which is imperforate along at least a substantial extent of the length of the side wall, the drum means having at least generally helical open passage means extending along the inner periphery of the side wall thereof along at least a substantial portion of the imperforate extent of the side wall, means interrupting and blocking the passage means intermediate the ends thereof, conveyor means for conveying the threshed crop from which stalk has been removed from the receiving means into the drum means through an open end thereof, means for confining the matter conveyed extending along the conveyor means at least outside of the receiving means into the drum means and providing a pathway for the matter conveyed, the conveyor means being constructed to push the conveyed matter along the pathway for the conveyance thereof, the conveyor means and confining means providing the pathway extending into the drum means at substantially the lowermost part of the aforesaid open end thereof and extending along within at least a portion of the drum means substantially longitudinally to the drum means and adjacent the side wall and passage means of the drum means rotating thereunder during rotation of the drum means, the confining means being interrupted within the drum means at least at the bottom portion of the confining means so that the conveyed matter can fall from the confining means during operation of the conveyor means into the passage means rotating thereunder during rotation of the drum means and between the means blocking the passage means and the aforesaid open end of the drum means, the confining means continuing beyond the interruption thereof, at least the continued portion of the confining means being open at the top and having two portions extending outwardly and upwardly along opposite sides of the open top respectively so as to provide an entrance to the open top and continued portion which continually widens towards the outer upper limits of the portions, said portions of the continued portion extending outwardly and upwardly from said open top of the continued portion relatively closely to the side wall and passage means of the drum means on each side of the continued portion with the outer upper limits of each of said portions extending along said side wall and passage means, means for creating and causing wind to blow through the drum means in the direction of and out of said open end thereof, the continued portion being of such length and so positioned within the drum means as to receive at least the majority of the at least partially cleaned crop which prior to at least partial cleaning thereof piles up against the passage blocking means of the drum means and is carried up along the side of the drum means, during rotation of the drum means, emptying from the passage means and falling through the center portion of the drum means to come under the cleaning influence of the wind produced by the wind creating means which blows at least part of the undesirable matter including chaff out said end of the drum means, at least the majority of the at least partially cleaned crop falling into the continued portion and through the open top thereof, the conveyor means continuing within the continued portion of the confining means and being effective to push the at least partially cleaned crop therealong, the continued portion of the confining means being interrupted at least at the bottom portion thereof so that the at least partially cleaned crop conveyed within the continued portion can fall therefrom during operation of the conveyor means into the passage means, the continued portion of the confining means being of such length and the interruption thereof being so located as to allow the crop to fall from the continued portion into the passage means beyond the means blocking the passage means from said open end of the drum means.

3,126,894
SPECIFIC THRESHING CYLINDER MOUNTING MEANS
James H. Bornzin, La Grange, and Arthur H. Keller, Western Springs, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Feb. 15, 1962, Ser. No. 173,434
2 Claims. (Cl. 130—27)



1. For use with a threshing cylinder comprising a center shaft and threshing bars defining a hollow interior, a mounting comprising: a pair of end closure members, each member having a central portion recessed within an end of said threshing cylinder, an intermediate portion affixed to and tapering outwardly from said central portion, an outer portion extending beyond the end of said cylinder, and a re-entrant flange portion overlapping said end of the cylinder in shielding relation thereto and spaced radially therefrom.

3,126,895
HEATER GRIP FOR PERMANENT WAVING
Jean Leclabart, 53 Ave. Raymond Poincare, Paris, France
Filed Apr. 17, 1961, Ser. No. 103,319
Claims priority, application France Apr. 20, 1960
1 Claim. (Cl. 132—36)



A heater grip for permanent waving comprising two half-shells of heat insulating material forming a tubular space, a hinge connecting said two half-shells for opening said tubular space, a tubular sleeve of heat storing material, said sleeve being slit along a generatrix, longitudinal grooves in the internal wall of said sleeve, detachable securing metal rod members mounted in said grooves and engaging said half-shells securing said sleeve within and to said half-shells, the slit in said sleeve being located away from and opposite said hinge and an internal groove in said sleeve adjacent said hinge.

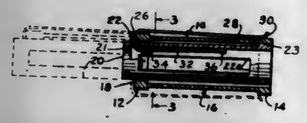
3,126,896
HAIR CURLER WITH WINDING MEANS
Bernard J. Lehn, Burbank, Calif. (14924 Oswald St., San Fernando, Calif.), and Richard T. Hailstone, 5300½ Vantage St., North Hollywood, Calif.
Filed Mar. 30, 1961, Ser. No. 99,543
4 Claims. (Cl. 132—41)

1. A hair curler comprising:

(*a*) an outer tubular mandrel provided with outer end flanges defining therebetween an outer cylindrical area on which a tress of hair is adapted to be wound, and an inner end flange opposite one of said outer flanges,

(*b*) an inner winder sleeve provided with an outer end flange rotationally and slidingly fitting the inner face of the tubular mandrel and larger than the inner flange of said mandrel, said outer flange of the sleeve and said inner flange of the mandrel constituting interengaging abutments to limit relative endwise movement of the mandrel and sleeve,

(*c*) an extension on the sleeve beyond the end of the mandrel on which the inner abutment flange is provided and provided with an inner flange constituting a finger grip by means of which the mentioned relative rotation of mandrel and sleeve is effected,

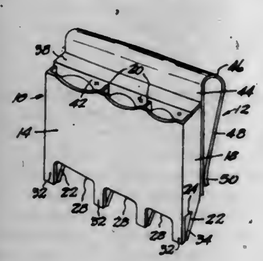


(*d*) a resilient tress clamp carried by said extension of the sleeve in overstanding relation with the outside of the mandrel and in contact with the outer end flange at the opposite end of the mandrel to thereby space said clamp away from the cylindrical area on which a tress is wound,

(*e*) the winder sleeve, in the extension thereof, being provided with a circumferential slot, and

(*f*) the clamp comprising a U-shaped member having a base leg extending through said slot, an inner leg extending from said base leg longitudinally along the inside of the sleeve with an end in resilient contact with the inner surface of the sleeve, and a longer outer leg extending from said base leg in the mentioned overstanding relation with the outside of the mandrel.

3,126,897
COIN HOLDER
John W. Sharpe, 343 Harrison St., Libertyville, Ill.
Filed Apr. 26, 1962, Ser. No. 190,323
3 Claims. (Cl. 133—6)



1. A coin holder comprising

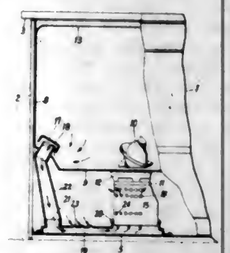
a receptacle having interconnected front, back and end walls and defining a compartment of a width greater than the diameter of a coin and a depth less than the diameter and greater than the thickness of a coin,

the lower part of said back wall extending obliquely in downwardly converging relation to said front wall in coin-confining relation,

the lower parts of said front and back walls being free of said end walls and contacting each other and being resilient and normally retaining their shape to confine the lowermost coin of a group of coins positioned obliquely in said compartment in partially lapped relation,

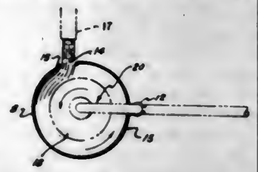
central portions of the free edges of said front and back walls having registering finger-receiving notches.

3,126,898
DISHWASHER VENTILATING SYSTEM
Thomas W. Duncan, Connersville, Ind., assignor to Design and Manufacturing Corporation, Connersville, Ind., a corporation of Indiana
Filed Dec. 24, 1962, Ser. No. 246,824
11 Claims. (Cl. 134—99)



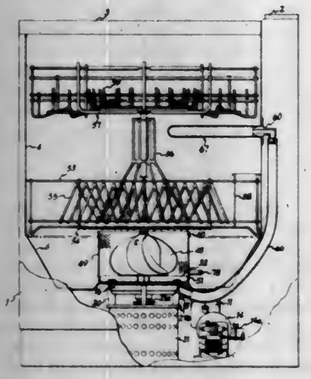
1. In a dishwashing machine of the type having sequential cycles of washing, rinsing and drying, and having an outer casing, a vat within said casing and terminating downwardly in a sump, there being an electrical motor located within said casing and below the said sump, the improvement which includes a ventilating system for the purpose described comprising a housing for said electrical motor, vanes on a moving part of said motor for producing a passage of gas through said housing, a gas downtake extending through a wall of said vat and terminating above the level of collected liquid in said sump, and a connection between said downtake and said motor housing so that operation of said motor will produce a continuous withdrawal of gas from said vat through said downtake, means for mixing with said gas a quantity of air outside said vat to minimize condensation of moisture in the gas withdrawn from said vat, and a means for admitting air to said vat to compensate for the gases withdrawn therefrom.

3,126,899
PAINT ROLLER CLEANER
Aubrey V. Caywood, 525 San Antonio Ave., Palo Alto, Calif.
Filed Mar. 8, 1963, Ser. No. 263,853
1 Claim. (Cl. 134—138)



A paint roller cleaner comprising a tubular member having one end plate that has the configuration of a circular ring sector and the other end plate having the configuration of a ring, the said tubular member being provided with an elongated opening extending the full length thereof; the front edge of the opening being curved upward, and the rear edge thereof being curved downward, thereby providing a guiding surface for any cleaning liquid flowing out of a nozzle into the said tubular member in which a cylindrical paint roller is inserted when it is desired to clean paint out of the same, and that end of the said paint roller cleaner that has the configuration of a ring being provided with a U-shaped clip in which a portion of the U-shaped member of the said paint roller is placed, while a like U-shaped clip is secured to the external surface of the said tubular member for the reception of that part of the paint roller member that is near the handle of the said paint roller, thereby providing a means of holding the said paint roller and paint roller cleaner while the liquid is forced through the said paint roller cleaner, and of cleaning the paint from the paint roller by both the washing action and centrifugal force of the rotating paint roller which is rotated by the action of the liquid.

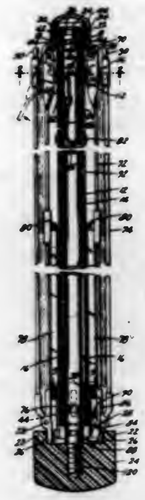
3,126,900
SPRAY-TUBE DISHWASHER
Victor H. Zane and Arnold R. Kaye, Connersville, Ind., assignors to Design and Manufacturing Corporation, Connersville, Ind., a corporation of Indiana
Filed May 28, 1962, Ser. No. 198,095
2 Claims. (Cl. 134—148)



1. In a dishwasher having a cabinet, a vat within said cabinet, said vat having walls and a bottom member, an access door in said cabinet to said vat, upper and lower tableware racks within said vat, at least said upper rack being pivotally mounted, and a reservoir drain and fluid discharge pump for said vat, an improved power driven washing and rinsing system comprising a pump housing affixed to the exterior of said bottom member, said bottom member having a perforation centrally located with respect to said pump housing, said pump housing having a perforation therein coaxial with said first mentioned perforation, an electric motor affixed to the bottom of said pump housing, an elongated shaft on said motor extending through said above mentioned perforations into said vat, an impeller means within said vat affixed to and driven by said motor shaft, a pump impeller affixed to said shaft within said pump housing, spray means affixed to the inside surface of one of said side walls between said upper and lower racks, a conduit connecting said pump housing to said spray means through said side wall, said spray means being horizontally oriented and extending less than half-way across said vat, said pump housing being of volute dishlike configuration, having an outlet at the outer edge of said housing tangentially oriented with respect to said housing and angled downwardly from the bottom thereof, said outlet being connected to said conduit, said housing further having an integrally cast bleed line, a means for connecting said bleed line to said reservoir drain whereby liquid is drained from said housing during the pump-out operation of the dishwasher to avoid noisy pump operation during the drying phase of the dishwashing cycle.

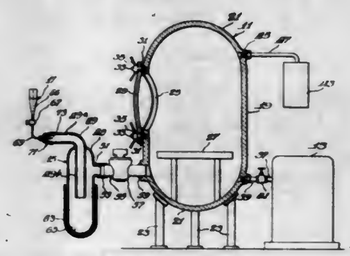
3,126,901
FOLDING UMBRELLA
Morris Norkin, New York, N.Y., assignor to Marvel Umbrella Frames, Inc., Middle Village, N.Y., a corporation of New York
Filed July 21, 1960, Ser. No. 44,396
11 Claims. (Cl. 135—25)

1. A folding umbrella having a telescopic umbrella stick, said stick comprising an outer tube and an inner tube which is slidable in the outer tube, the outer tube being indented to provide one or more fixed detents, and the inner tube carrying a yieldable ring made of a material which is so thick in axial direction that it does not



bend in axial direction, said ring having ample clearance inside so that the ring may be deformed in radial direction to pass the detents when moved forcibly in axial direction, said ring being a closed ring made of a plastics material.

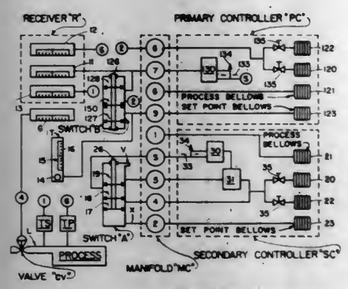
3,126,902
METHOD AND APPARATUS FOR PRODUCING HIGH VACUUM
Wade L. Fite, Encinitas, and Richard T. Brackmann, San Diego, Calif., assignors to General Dynamics Corporation, New York, N.Y., a corporation of Delaware
Filed Apr. 14, 1960, Ser. No. 22,203
6 Claims. (Cl. 137—1)



1. Apparatus for producing a high vacuum comprising means defining a gas-tight chamber, means for evacuating said chamber to a pressure of between about 5 millimeters of mercury and 1×10^{-2} millimeter of mercury, a first conduit connecting said evacuating means to said chamber, means on said first conduit for selectively isolating said evacuating means from said chamber, means defining a surface which is cooled below the freezing point of water so as to condense and freeze water vapor contacting said surface, a second conduit connecting said surface to said chamber, means on said second conduit for selectively isolating said chamber from said surface, and a water vapor source which provides sufficient water vapor in said chamber to afford over about 50 molecules of

water vapor for each molecule of non-condensible gas remaining in said chamber after said chamber is evacuated by said evacuating means.

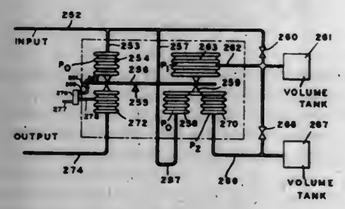
3,126,903
CASCADE CONTROL SYSTEM
John E. Hart, Newton, Mass., and Howard R. Jaquith and William J. Berk, Rochester, N.Y., assignors to Taylor Instrument Companies, Rochester, N.Y., a corporation of New York
Filed Feb. 20, 1959, Ser. No. 794,611
16 Claims. (Cl. 137—84)



AUTO/CASCADE

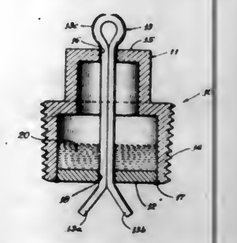
1. A master-slave controller system including a set point transmitter adjustable to provide a set point signal; a slave controller having a control signal output, a set point signal input and a slave process variable input; a master controller having a setting signal output, a set point signal input and a master process variable input; switching means operable to any one of several states, a first of said states being one in which said set point signal input of said slave controller is connected to said transmitter to receive said set point signal; a second of said states being one in which said set point input of said slave controller is connected to said setting signal output of said master controller and said set point input of said master controller is connected to said transmitter to receive said set point signal; and each of said controllers being of the type wherein its signal output is a function of the relation between signals applied to its inputs.

3,126,904
RESPONSE IN AUTOMATIC CONTROL
Thomas A. Ciarlariello, Evans City, Pa., assignor to M.S.A. Research Corp., Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 1, 1960, Ser. No. 53,464
9 Claims. (Cl. 137—85)



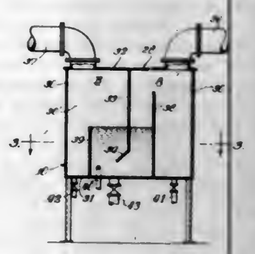
1. The combination with apparatus for regulating a variable including a controller for producing an output signal to secure controller action which follows proportionally the magnitude of an input signal from said variable to said controller, of means to provide different first and second lag analogues of at least a first order value of said input signal, and means to add said lag analogue having the larger time constant and subtract the other of said lag analogues from said input signal.

3,126,905
PRESSURE RELIEF ASSEMBLY
Bernard J. Norman, Fulton, and Donovan L. Johnson, Erie, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Nov. 6, 1961, Ser. No. 150,297
3 Claims. (Cl. 137—197)



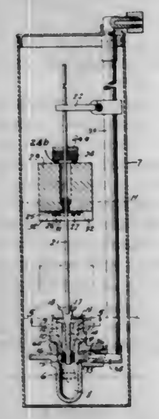
1. A pressure relief assembly comprising: a body portion defining a substantially enclosed chamber, said chamber including an upper wall portion defining a first aperture therein and a lower wall portion defining a second aperture therein; and an occluding member extending through said first and second apertures to form a restricted passageway through both apertures and, including a head portion positioned outwardly of said first aperture to restrain said member against displacement in a given direction, and a pair of abutting leg portions in abutting relation within said chamber and flared in opposite directions outwardly of said second aperture to provide a second retaining portion of said member, with the abutting portions of said member within said chamber affording a channel for the entry of lubricant by capillary action.

3,126,906
PRESSURE STABILIZING APPARATUS
Robert E. Touzalin, Aurora, and Melvin J. Greaves, Cleveland, Ohio, assignors, by mesne assignments, to Inland Steel Company, Chicago, Ill., a corporation of Delaware
Filed Sept. 12, 1960, Ser. No. 55,348
5 Claims. (Cl. 137—253)



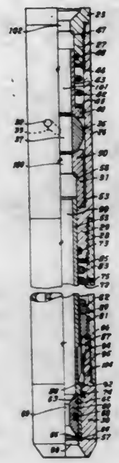
1. A pressure stabilizing apparatus for protecting a gas system against high or low pressure surges comprising a substantially closed chamber having top, bottom, and spaced lateral walls, a partition depending from said top wall between said lateral walls and dividing the chamber into two compartments in flow communication at their lower portions below said partition, a weir extending upwardly from said bottom wall into each of said compartments between said partition and an adjacent spaced lateral wall, said weirs extending above the lower end of said partition and defining a liquid seal zone therebetween, a liquid inlet for supplying a sealing liquid solely to said liquid seal zone of said chamber for providing a liquid seal above the lower end of said partition, a liquid outlet in each of said compartments between each of said weirs and the adjacent lateral wall for withdrawing liquid overflowing said weirs, gas conduit means communicating with one of said compartments for connecting said one compartment solely to the gas system being protected, and gas conduit means communicating with the other of said compartments for connecting said other compartment solely to an external atmosphere at substantially constant pressure, said liquid inlet constituting the sole liquid inlet connection to said chamber and said gas conduit means constituting the sole gas flow connections to said chamber, whereby gas flow through said chamber from one of said gas conduit means to the other is normally prevented by said liquid seal but is automatically permitted in response to a predetermined pressure increase or decrease in said gas system being protected.

3,126,907
FLOAT VALVE MECHANISM
Edward Joseph Thehler, St. Paul, and Thomas J. Schoenecker, North St. Paul, Minn., assignors to Union Tank Car Company, Chicago, Ill., a corporation of New Jersey
Filed June 8, 1961, Ser. No. 115,656
6 Claims. (Cl. 137—399)



2. In a float valve of the type adapted to be submerged in liquid in a container, a valve body having an internal chamber and an upwardly opening annular port communicating with said container, concentric annular seat portions disposed at the inner and outer peripheries of said annular port, a vertically elongated float guide extending above said seat portions in said container, and a float movable along said guide in response to changes in the level of liquid in said container, the improvements which comprise, an annular valve closure member carried by said float and having inner and outer concentric flexible resilient flanges disposed to close against said annular seat portions respectively, said outer flange projecting obliquely outwardly and downwardly and said inner flange projecting obliquely inwardly and downwardly and both of said flanges having thin feathered lower edge portions for closing said annular port when the liquid descends to a predetermined low level in said container.

3,126,908
WELL TOOLS
George C. Dickens, Dallas, Tex., assignor to Otis Engineering Corporation, Dallas, Tex., a corporation of Delaware
Filed Oct. 3, 1960, Ser. No. 60,035
16 Claims. (Cl. 137—460)

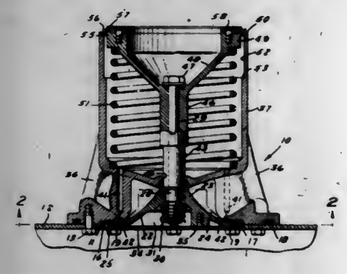


1. A valve assembly including: a housing having a longitudinal passage; a valve mounted in said longitudinal passage for movement longitudinally in said passage and rotationally about a transverse axis between open and closed positions, said valve having a flow passage; means operatively connecting said valve and said housing, whereby longitudinal movement of said valve relative to said housing causes rotational movement of said valve within said housing; an operator member for moving said valve longitudinally in said housing disposed in said longitudinal passage of said housing and having a flow passage communicating with the flow passage of the valve when said valve and said operator member are in one extreme longitudinal position in said longitudinal passage of said housing to permit flow through said valve assembly; means biasing said operator member toward said one extreme position in said housing; detent means engageable with said biasing means and said operator member for operatively connecting said biasing means and said operator member; relief means on said housing receiving said detent means upon longitudinal movement of said operator means in said housing a predetermined distance from said one extreme position toward said opposite extreme position in said housing to free the connection of said biasing means and said operator means provided by said detent means, whereby said biasing means is rendered ineffective to bias said operator member toward said one extreme position in said housing when said operator member is moved said predetermined distance from said one extreme position toward an opposite extreme position in said housing, said operator member moving said valve longitudinally in said housing to closed position to prevent flow through said valve assembly when said operator member is moved to said opposite extreme position in said housing wherein said flow passage of said operator member and said valve are not in communication, said operator member having means responsive to the flow of fluid through said flow passage of said operator member for moving said operator member from said one extreme position toward said opposite extreme position.

3,126,909
RELIEF VALVE

Albert E. Sweatt, West Covina, and Nicholas Baskevitch, Hollywood, Calif., assignors to Schulz Tool and Manufacturing Co., San Gabriel, Calif., a corporation of California

Filed Oct. 21, 1960, Ser. No. 64,029
11 Claims. (Cl. 137—471)

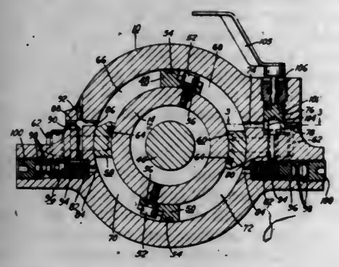


1. In a valve assembly: a valve member; a seat for said valve member; means applying force to hold said valve member in a closed position on said seat, said valve member being liftable to a cracked position off its seat by pressure thereon in excess of said force holding it closed; and suction means laterally inwardly of the periphery of said seat and terminating approximately on the seat level upstream of said valve member and said seat to aid in further opening said valve member beyond its cracked position, said suction means being responsive to flow out of and around the valve member in its cracked position.

3,126,910
BIDIRECTIONAL FLOW RESTRICTOR VALVE

James R. Reed, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed June 25, 1962, Ser. No. 204,919
1 Claim. (Cl. 137—493)

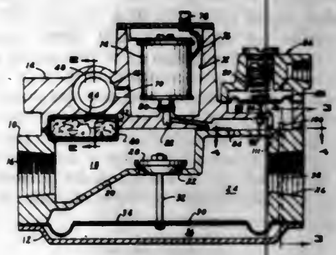


A bidirectional flow restrictor valve for controlling the rate of flow in both directions between expansible chambers of a hydraulic shock absorber, comprising a valve bore communicating with said chambers, a coil spring disposed in said valve bore having a plurality of helical convolutions, a piston engaging one end of said coil spring and having substantially equal areas exposed to said valve bore internally and externally of the convolutions of said coil spring, an adjusting screw spaced from said piston, and a plurality of spring washers disposed between said adjusting screw and said piston, the rate of flow between said chambers being controlled by the gaps between adjacent convolutions of said coil spring, said piston being movable under the urge of excessive pressure against said spring washers to relieve the compression of said coil spring and thus increase the rate of flow between said expansible chambers.

3,126,911
GAS VALVE

Fred C. Galley, Detroit, Mich., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware

Filed May 11, 1960, Ser. No. 28,452
12 Claims. (Cl. 137—495)



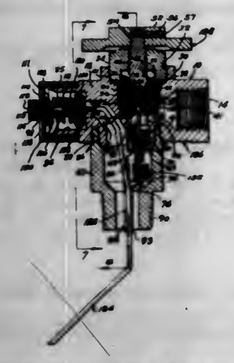
1. In a fluid pressure regulating valve,
a valve body defining a fluid inlet chamber and a fluid outlet chamber with a main valve port therebetween,
a main valve element controlling flow through said main valve port,
movable wall means responsive to variations in outlet chamber pressure for controlling operation of said main valve element,
means defining a pilot passageway for diverting partial load working fluid from said inlet chamber around said main valve port and into said outlet chamber, the size of said passageway being sufficient to establish a start-up flow,
electrically operated valve means for opening and closing said pilot passageway, means defining a control passageway for directing part of the fluid from said electrically operated valve means against said movable wall means to operate said main valve element,
pressure stabilizing means operable on fluid in said control passage to stabilize fluid pressure therein prior to application against said movable wall means,
and a restriction in said control passage for retarding initial application of stabilized pressure against said movable wall means to provide a time lag before opening of the main valve during which the only flow is that issuing through said pilot passageway.

3,126,912
DIAPHRAGM VALVE HAVING A SAFETY SHUT-OFF MEANS

James A. Clark, Butte, Mont., and John O. Morrison, Worland, Wyo., assignors to Western Instrument Corporation, Worland, Wyo., a corporation of Wyoming

Filed Sept. 12, 1961, Ser. No. 137,560
13 Claims. (Cl. 137—614.14)

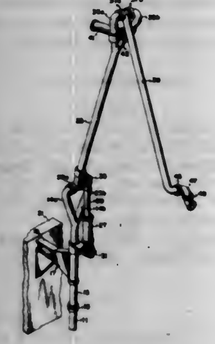
1. A valve comprising a hollow casing having a flow passage, shut-off valve means mounted in said casing to control flow through the passage, said means including a resiliently elongatable diaphragm affixed at one end to the casing, the other end of the diaphragm being disposed to prevent flow through the passage responsive to a predetermined resilient elongation of the diaphragm, a rigid retainer conformably shaped to fit within said diaphragm disposed within said diaphragm, a shut-off stem mounted for movement in a direction axially of the diaphragm and carrying said retainer, and a rigid retaining collar connecting said retainer to said stem, volume-control means mounted in said passage for movement between a normal flow-permitting position and a flow-preventing position, means on said shut-off valve means on which said volume-control means slides during its movements between said positions thereof, and hand-actuable means operatively connected to said stem for effective movement of said diaphragm in a direction to elongate the latter.



3,126,913
PISTON OPERATED FLUID TRANSFER APPARATUS

Paul R. Green, Cranford, and Theodore E. Druckenmiller, Chatham, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Mar. 15, 1960, Ser. No. 15,104
2 Claims. (Cl. 137—615)

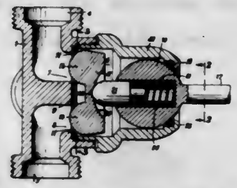


1. Apparatus for loading and unloading fluids in vessels, barges, and the like which comprises, in combination (1) a relatively non-rotatable riser firmly mounted in relatively fixed position, (2) a tubular standpipe swivelly mounted on the upper end of said riser for relative rotation about the standpipe axis, (3) a first connecting pipe section connected at one end to said standpipe for pivotal movement of said pipe section with respect to said standpipe in a plane substantially parallel to a plane containing said standpipe, (4) a rigid structure in fixed spatial relation to said standpipe, (5) a first fluid-actuated cylinder, piston and piston rod operating mechanism connected directly to said first connecting pipe section and connected to said structure for rotation with said standpipe and relative to said structure to cause and control the pivotal movement of said first pipe section, (6) a second connecting pipe section pivotally connected to the other end of said first connecting pipe section, and (7) a second fluid-actuated cylinder, piston and piston rod operating mechanism connected directly to and between said first connecting pipe section and said second connecting pipe section for causing and controlling pivotal movement of said second connecting pipe section with respect to said first connecting pipe section.

3,126,914
MIXING TAP

Pierre Dombre, 7 Ave. Theodore-Flournoy, Geneva, Switzerland, assignor of one-half to Paul Saffin, Geneva, Switzerland

Filed May 25, 1961, Ser. No. 112,603
Claims priority, application Switzerland June 2, 1960
8 Claims. (Cl. 137—625.4)



4. A mixing tap having at least two fluid inlets and at least one fluid outlet and movable flaps cooperating with stationary seats to control selectively the flow of the fluid at least through the inlets, to independently regulate the mixture ratio of the fluids and the output thereof from the tap, said tap comprising a flap support supporting the flaps and disposed freely in a mixing chamber provided in the tap, said flaps including portions cooperating with the seats to control fluid flow therethrough, said portions being of spherical shape, said spherical portions having a center which is stationary relative to the support, the seats being of such shape that they each cooperate with the corresponding flap along a contact circle having a radius smaller than that of the spherical portions of the flap, to permit free rocking of the flap support in all directions, about the center of spherical portion of any one of the flaps, with the said one flap remaining in contact with the corresponding seat, and control means operatively coupled to the said support to normally maintain the same in a closed position wherein all the flaps are seated in the corresponding seats and for actuating the support to regulate the position of the flaps relative to the seats thereof according to the desired mixture ratio and output.

3,126,915
FLUID CONTROL VALVE

Nathan C. Hunt, Ocean Ridge, Delray Beach, Fla., assignor to International Basic Economy Corporation, New York, N.Y.

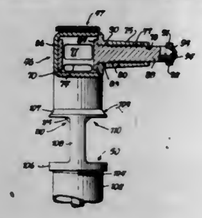
Filed Nov. 22, 1960, Ser. No. 71,103
6 Claims. (Cl. 137—625.5)



5. A poppet valve comprising a pair of spaced-apart valve seats, a reciprocable valve member having a peripheral annular groove adjacent respective seats, resilient O ring sealing members seated in respective valve member grooves and each providing a radially outwardly projecting annular shoulder movable with said valve member toward and away from engagement with respective seats, a pair of axially spaced, ring-like retaining members slidably carried by said valve member intermediate said grooves and each positioned adjacent a respective O

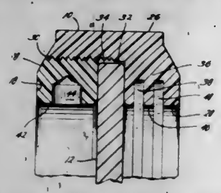
ring sealing member and engaging the outer periphery thereof to retain such member in its groove, and a resilient O ring spacer removably interposed between said retaining members and preventing movement thereof toward each other and away from respective O ring sealing members.

3,126,916
DIVERTER VALVE FOR A WATER CLOSET
James A. Ducey, Robinson, Ill., assignor to Ogden Corporation, New York, N.Y., a corporation of Delaware
Original application Jan. 19, 1960, Ser. No. 3,420. Divided and this application Feb. 8, 1961, Ser. No. 94,106
6 Claims. (Cl. 137—625.47)



1. A diverter valve assembly for the water supply system of a water closet including a water storage tank and a rim flush, said assembly comprising a body having a cylindrical chamber open at one end and provided with circumferentially spaced water supply inlet, tank discharge and rim flush ports, a cantilever bearing housing projecting outwardly from said open end of said chamber and having a cylindrical bore in axial alinement with said chamber, a water lubricated rotary diverter valve including a head rotatable in and spaced from the inner periphery of said chamber for opening and substantially closing said rim flush port and a spindle rotatable in said bore, means forming axially spaced bearing portions between said spindle and housing, and means forming a peripheral opening in said housing between said bearing portions and in communication with said bore for the escape of lubricating water from said housing.

3,126,917
ORIFICE PLATE SEAL RING ASSEMBLY
Herbert H. Hodgeman and Oliver F. Blehle, Houston, Tex., assignors to Daniel Orifice Fitting Company, Houston, Tex., a corporation of California
Filed Feb. 5, 1963, Ser. No. 256,340
8 Claims. (Cl. 138—44)



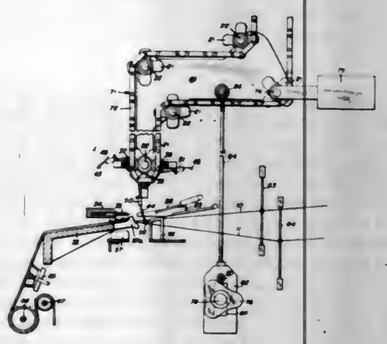
1. In a sealing ring for orifice plate assembles
(A) An annular band formed of a yieldable and flexible material,
(*a*) said band having an annular recess in the inner wall extending from a first side of said band to a point past the center of the axial length of said band, thereby forming a shoulder,
(*b*) said shoulder having at least two grooves therein,
(*c*) one of said grooves adjacent said shoulder,
(*d*) the other of said grooves adjacent a second side of said band,
(*e*) said recess including threads extending from said first side to substantially the center of the axial length of said band, and
(B) An annular ring formed of a yieldable and flexible material,
(*a*) said ring having external threads engageable with said recess threads.

3,126,918
SLIP RING SPACER FOR INSULATED CONDUIT SYSTEMS
Burton E. Eaton, Deerfield, Ill., assignor to Midwesco, Inc., a corporation of Illinois
Filed Mar. 5, 1962, Ser. No. 177,675
5 Claims. (Cl. 138—113)



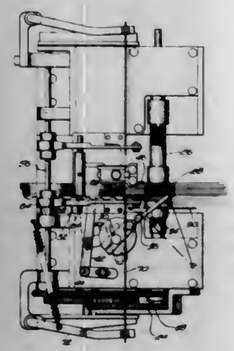
1. Improved spacer means for conduits of the type having an inner pipe for carrying a fluid and an outer casing through which said inner pipe extends in spaced relation with the outer casing; said spacer means including a ring-like axially elongated sheet metal lagging piece operatively secured to the inner pipe so as to move axially with the inner pipe in response to expansion or contraction of the inner pipe, and a sheet metal nodal-type spacer ring slidably arranged on said lagging piece and adapted to engage the inner surface of an outer casing to space the inner pipe from the outer casing, whereby the inner pipe and the lagging piece operatively secured thereto are slidable within the spacer ring when the inner pipe extends or contracts.

3,126,919
ONE-SHOT MODIFIED AXMINSTER WEAVE AND METHOD OF MAKING SAME
Russell R. Matthews, Cornwall, and John L. Hubbard, Cornwall on the Hudson, N.Y., assignors, by mesne assignments, to Mohasco Industries, Inc., Amsterdam, N.Y., a corporation of New York
Filed Oct. 17, 1960, Ser. No. 63,222
6 Claims. (Cl. 139—7)



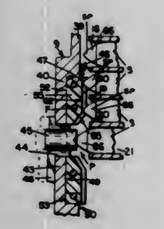
1. A method of weaving a one-shot Axminster pile fabric consisting of advancing stepwise a chain spool frame carrier on which are mounted tube frames through which pile yarn is threaded, forming a shed of warp ends, inserting a double weft shot in said shed, forming U-tufts of pile yarn around each double weft shot without removing the tube frames from the carrier, and cutting the thus formed U-tufts from the tube frames.

3,126,920
MECHANISM FOR MAKING A FANCY SELVAGE ON NARROW WEBBING
Carl F. Libby, Stoughton, Mass., assignor to John D. Riordan and Gertrude C. Libby, trustees of the Libby family trusts
Filed June 26, 1962, Ser. No. 205,298
6 Claims. (Cl. 139—118)



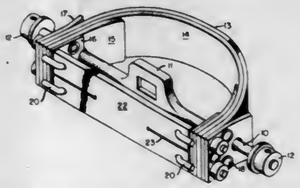
6. In a loom having means for forming a shed, means for projecting into said shed successive loops of weft yarn to weave a web, and a revolving reed comprising a shaft and a series of dents mounted on said shaft; an edge wire supported adjacent to one side of said shed, means for causing said edge wire to move in a closed curve path rearward and downward then forward and upward in timed relation to the rotation of said reed shaft, an extra dent on said shaft arranged to deflect forward the yarn leading from the fell of the web so as to be caught by the downward movement of said edge wire, and means driven in timed relation to the rotation of said reed shaft to move said edge wire gradually from and toward the web.

3,126,921
PROTECTOR MEANS FOR SHUTTLES
George S. Simmons, Jr., Worcester, Mass., assignor to Crompton & Knowles Corporation, Worcester, Mass., a corporation of Massachusetts
Filed Mar. 20, 1962, Ser. No. 181,090
14 Claims. (Cl. 139—155)



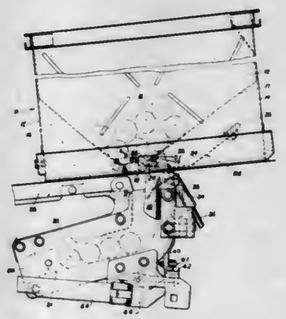
1. In a loom operating with a vertically shiftable shuttle box to raise and lower shuttles therein to a shuttle picking station during loom operation, the box being provided with inner and outer tongues, and the shuttles with tips each having a conical surface and a relatively sharp point,
(*a*) an inner shuttle box guide for the inner tongue of the shuttle box,
(*b*) an outer shuttle box guide for the outer tongue of the shuttle box and provided with vertically spaced projections each respectively having a recess above and below said picking station,
(*c*) notched protector means for and engaged by each surface in a manner to prevent engagement of said point with said means and said outer guide and removably attached to said outer shuttle box guide in said recess above said picking station, and
(*d*) second notched protector means for and engaged by each surface also in a manner to prevent engagement of said point with said means and said outer guide and removably attached to said outer shuttle box guide in said recess below said picking station and vertically spaced from the first protector means,
(*e*) each of said means being identical and interchangeable with respect to each other.

3,126,922
CHECK STRAP ASSEMBLY
Walter A. Randlett and Chester R. Messer, Concord, N.H., assignors to Page Belting Company, Concord, N.H., a corporation of New Hampshire
Filed June 15, 1962, Ser. No. 202,753
6 Claims. (Cl. 139—165)



1. A picker stick check strap assembly comprising a guide rod, a U-shaped loop composed of superposed straps perforated at both ends and bodily slidably upon the guide rod, and a tie strip connecting the ends of said loop, independently of said guide rod and being of substantially the full width of the superposed straps of which the loop is composed, the said tie strap being slitted inwardly and longitudinally from both ends thus providing sections capable of twisting to accommodate the angle of the picker stick contact.

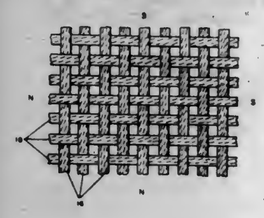
3,126,923
REPLENISHING MECHANISM FOR LOOMS
Harry William Thatcher, Mendon, Mass., assignor to Draper Corporation, Hopedale, Mass., a corporation of Maine
Filed Apr. 2, 1962, Ser. No. 184,151
5 Claims. (Cl. 139—245)



1. A filling bobbin container for automatic looms which comprises a pair of opposed side walls and a further

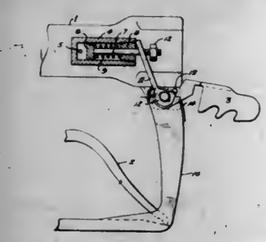
pair of opposed end walls interconnecting said side walls, a pair of inclined plate members extending between said side walls and defining a generally V-shaped hopper within said filling container, the lowermost edges of said plate members being spaced apart sufficiently to define an opening to allow a single bobbin to pass therethrough, a pair of opposed, angularly inclined slots in said side walls, a bobbin retaining rod slidable in said slots and effective to restrain bobbins in said hopper in its lowermost position in said slots, a bridge breaker door pivotally mounted between said side walls and below one of said plate members and having an effective end portion movable between a first position wherein a part at least of said end portion is substantially in alignment with said one plate member and a second position inwardly of said filling container.

3,126,924
TEXTILE YARN AND FABRIC
Martin Kirkpatrick, Swampscott, Mass. (84 State St., Boston 9, Mass.)
Filed Aug. 15, 1962, Ser. No. 217,109
8 Claims. (Cl. 139—425)



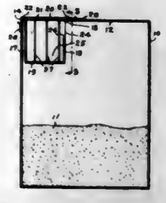
7. A permanently magnetic fabric having warp and filling sets of yarns, at least one of said sets of yarns including twisted staple yarns having a substantial proportion of permanently magnetic staple fibers with their like poles aligned in one direction together with non-magnetic fibers of textile material.

3,126,925
SAFETY CUT-OFF FOR AUTOMATIC DISPENSING VALVE
Wallace D. Boone, Cincinnati, Ohio, assignor to Dover Corporation, a corporation of Delaware
Filed Feb. 2, 1961, Ser. No. 86,775
7 Claims. (Cl. 141—209)



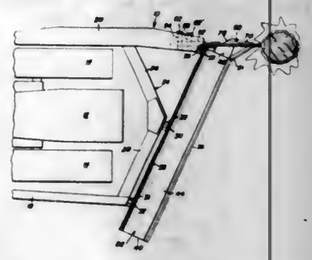
1. In a dispensing nozzle, a body with an inlet portion and a main valve together with means for actuating the valve comprising a lever and a latch to hold the lever in valve-opening position, fluid actuated means at said inlet portion having a connection with the inlet portion of said nozzle and a connection with said latch for releasing said latch upon failure of fluid pressure within said inlet portion.

3,126,926
MEASURING AND DISPENSING DEVICE
William W. Redfield and Claude W. Redfield, both of 22106 116th Ave. SE., Kent, Wash.
Filed Oct. 25, 1961, Ser. No. 147,565
2 Claims. (Cl. 141—322)



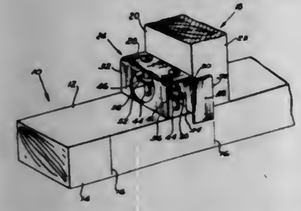
1. In combination, a receptacle for finely divided dry material, said receptacle having a top end wall provided with an opening; a measuring and dispensing device adapted to be removably inserted into said opening in the top wall of said receptacle; and outwardly projecting flat members flush with the top end of said measuring and dispensing device adapted to rest on the top end of said receptacle around the margin of the opening therein and suspend the measuring and dispensing device within said receptacle, said measuring and dispensing device having a material inlet and outlet opening in a side thereof adjacent its top wall and with the lower edge of said material inlet and outlet opening spaced a substantial distance above the bottom of said measuring and dispensing device providing a measuring compartment of predetermined substantial volume in the measuring and dispensing device below the lowermost level of said material inlet and outlet opening.

3,126,927
TREE CUTTING DEVICE
F. V. Swanson, Wauconda, Ill., Sidney G. Knight, Schofield, and Philip R. Pueschner and Ronald O. Erickson, Wausau, Wis., and William O. Beckman, Arlington Heights, Ill., assignors to Drott Manufacturing Corporation, Milwaukee, Wis., a corporation of Wisconsin
Filed Jan. 9, 1962, Ser. No. 165,115
4 Claims. (Cl. 144—34)



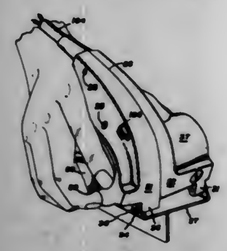
4. A cutting and splitting assembly mounted at one end of a bull dozer plate comprising a horizontally disposed substantially diamond-shaped plate including a forward apex defined by two sharpened edges and a trailing edge mating with said end, a vertically disposed stinger arm attached to the upper surface of said plate between said sharpened edges and extending through and beyond said apex, said arm terminating in an upper point, a sharpened leading edge extending from said point to said apex and means for mounting said arm at one end of a bulldozer plate projecting forwardly therefrom.

3,126,928
TOOL FOR POSITIONING A STUD FOR NAILING ON A SILL
Albert L. McMillan, 100 Foster Ave., Battle Creek, Mich.
Filed Dec. 26, 1961, Ser. No. 161,969
12 Claims. (Cl. 145—1)



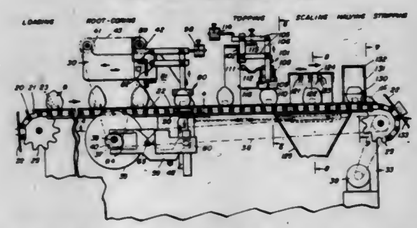
1. A tool for positioning and holding a pair of members in a predetermined relationship to each other while they are being nailed together, said tool comprising a main body portion, a pair of spaced support means projecting from the same side of said main body portion, and at least one nail slidably mounted through said main body portion between said support means, said support means being engageable with one of said members to support said main body portion of said tool in spaced relation thereto during driving of said nail into said one member to releasably lock said tool thereto, said other member being engageable with said tool and held thereby in position on said one member.

3,126,929
POWER-OPERATED, HAND MANIPULATED BLOCK PLANE
Dane H. Pedersen, Syracuse, N.Y., assignor, by mesne assignments, to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed June 19, 1961, Ser. No. 118,107
3 Claims. (Cl. 145—4)



3. A power-operated, hand-manipulated, block plane comprising a body formed at its forward end with a transversely extending motor compartment, said body being also formed in its medial portion with a cutter compartment extending transversely of the body below and adjacent the rear side of said motor compartment and being open at the bottom, a cutter journalled in said cutter compartment for rotation about an axis extending lengthwise of the cutter compartment, said body inclining upwardly from the rear end thereof and merging above said cutter compartment on a concave surface with a projection located intermediate the ends of said motor compartment, said projection being arranged substantially in the vertical plane of the center of gravity of the block plane and extending rearwardly and inclining upwardly from the top wall of said motor compartment, a transmission compartment extending laterally from the right side of the body and inclining upwardly from said cutter compartment to the central area of the right end of said motor compartment, said transmission compartment being located to the right laterally from said projection to provide a grip area encompassed by the second, third and fourth fingers of the right hand when said projection is straddled by the thumb and first finger, a motor mounted in said motor compartment and motion transmitting means in said transmission compartment operatively connecting said motor to said cutter.

3,126,930
ONION CORING, TOPPING, SCALING AND HALVING MACHINE
Albert P. Vesti, Herbert M. Edde, and Jose Juan Saavedra, Gilroy, Calif., assignors to Gentry Division, Consolidated Foods Corporation, a corporation of Maryland
Filed Oct. 6, 1959, Ser. No. 844,792
4 Claims. (Cl. 146—83)

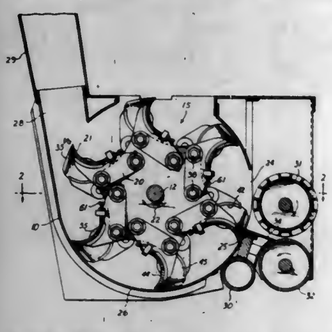


1. A machine for preparing and orienting onions for subsequent slicing perpendicularly to the onion axis comprising in combination a stationary frame; a horizontal continuously moving translatory conveyor means mounted on said frame, said conveyor means having spaced apart link chains with flights extending therebetween, said flights being provided with holes and impaling pins on the margins of said holes; means for root coring orientated onions held on said impaling pins comprising an independently reciprocative carriage carrying a plurality of individual coring means, the forward movement of said carriage being synchronized with the horizontal movement of said conveyor; means mounted on said frame over said conveyor flights for cutting the tops off impaled cored onions mounted on said impaling pins; means mounted on said frame for fluid impingement on said cored and topped onions mounted on said impaling pins for removing the loose leaves thereof; means mounted on said frame and disposed over said conveyor flights for cutting off the upper half of said orientated cored, topped, and skinned onions on said impaling pins; and stripper means disposed adjacent the end run of said conveyor for removing the impaled half onions from said impaling pins.

3,126,931
KNIFE SUPPORT STRUCTURE
Allison W. Blanshine, Lititz, and Gerhard Locker, New Holland, Pa., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed June 29, 1961, Ser. No. 120,578
6 Claims. (Cl. 146—107)

1. A device for chopping and throwing forage material comprising a housing having a forwardly located inlet, a rearwardly located outlet and a pair of vertical side walls at opposite sides respectively of the inlet and outlet, a shaft rotatably supported on said side walls and having an axis perpendicular to the walls, a plurality of discs carried on said shaft and spaced from each other along the axis of the shaft, said discs projecting radially from said shaft and parallel to said side walls, a plurality of knives angularly spaced around said shaft axis and supported on radial outer ends of said discs, said shaft being rotatable in such direction that the knives move past said inlet and then along said housing to said outlet, the portion of said housing between said inlet and outlet being

generally concentric to said shaft axis, each knife having a longitudinal axis diagonal to said shaft axis and being so curved about the longitudinal axis that each knife as a whole is in the form of a segment of a true cylinder, each knife having a concave face in the direction of travel of the knives and a convex face away from the travel direction, the space in front of each concave knife face from one knife to the convex face of the next being substantially unobstructed and each knife exerting a throwing action on material, and mounting means for each knife comprising a set of rigid supports, one on each of said discs, the supports in each set being angularly spaced relative to each other and all supports being the same, each support having a semi-cylindrical seat having a radial inner end and a radial outer end which engage radial inner and outer ends of the convex face of its associated knife, each support seat having a curvature which substantially matches the knife curvature and forms a segment of the same true cylinder, and means located between said radial inner and outer knife ends for fastening the knives to the supports.



3,126,932
METHOD OF DEHULLING SOYBEANS

Donald F. Moran, Chicago, and Frank A. Norris, La Grange, Ill., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois

No Drawing. Filed Sept. 10, 1959, Ser. No. 839,056
4 Claims. (Cl. 146—221.7)

1. A method of conditioning soybeans for easy and substantially complete removal of the hulls thereof which comprises: raising the average temperature of soybeans to more than about 160° F., by contacting said beans with dry heat, promptly thereafter lowering the temperature of said beans to a temperature of less than 100° F., and removing the hulls therefrom.

3,126,933
TRAVELLER'S CANINE CANTEEN

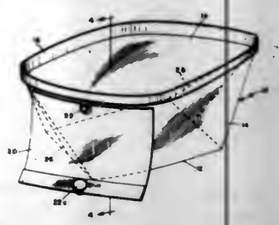
Hollis N. Mason, 3630 Louisiana St., and Thomas J. Lunsford, 2908 Canon St., both of San Diego, Calif.

Filed Sept. 18, 1961, Ser. No. 138,732
2 Claims. (Cl. 150—48)

1. A collapsible, portable vessel for feeding an animal, comprising:

a piece of flexible waterproof material folded and sealed to produce a vessel having a substantially flat bottom and substantially vertical self-supporting sides, the upper edge of said vessel being hemmed and enclosing a length of material that is manually deformable and capable of holding shape into which it is formed, whereby when said upper edge is opened it provides an opening large enough to permit an animal to insert its face into said vessel and obtain the food placed therein, and when said upper edge is folded, the flexible material forming said vessel may be rolled into a compact cylinder; and

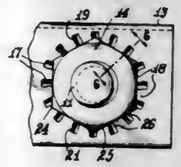
a wrapping flap having a width substantially equal to one-quarter the circumference of said edge of said vessel and having a length substantially equal to the circumference of said compact cylinder, said flap having one end thereof secured to said vessel adjacent the upper edge thereof, said flap further having one portion of a snap-type fastener mounted thru said flap adjacent the upper edge of said vessel, said flap having a complementary portion of a snap-type fastener mounted thru its other end, whereby said wrapping flap may enclose said vessel when rolled into said cylindrical form, and may be retained in said wrapped relation by means of the engaged snap fastener.



3,126,934
NUT LOCKING STRUCTURES

Joseph P. Marx and William L. Daubner, both of Hartford, Wis.; said Daubner assignor to said Marx

Filed May 22, 1961, Ser. No. 111,811
2 Claims. (Cl. 151—34)

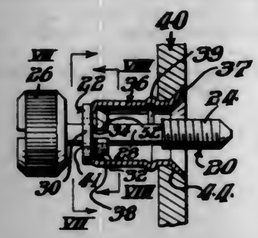


1. In an assembly of the character described, in combination, a fastened member having a planar surface, a threaded fastening bolt extending through a hole provided therefor in said member and which opens through said surface, a laterally extending, polygonally shaped compression means on the bolt and being drawn into tight engagement with said surface, and means on said surface for preventing said compression means from becoming unintentionally unloosened comprising a plurality of circumferentially spaced grooves in and opening onto said surface and which extend radially outwardly from said bolt hole and define radial ribs on said surface, said grooves being of uniform width and depth throughout their length whereby the width of the ribs increases progressively in accordance with their radial length, there being one such rib disposed between each two adjacent grooves and each said rib having spaced side faces and a flat top surface extending therebetween which is disposed in the plane of said planar surface, said ribs having radial length greater than the greatest diameter of said compression means, and the material of at least the ribs being more malleable than that of the compression means whereby tightening of said means against the surface as aforesaid effects compressive deformation of said ribs in vertical, circumferential and radial directions in a manner and to a degree such that they effectively resist turning of said compression means in unloosening direction.

3,126,935
RETRACTABLE SCREW FASTENER

Michael R. Tuozzo, Prospect Park, Pa., assignor to South Chester Corporation, Lester, Pa., a corporation of Delaware

Filed May 23, 1960, Ser. No. 30,944
1 Claim. (Cl. 151—69)



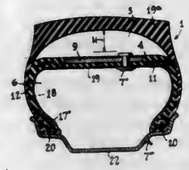
A vibration-tight, fluid-tight, retractable screw fastener comprising; a screw having a threaded portion at one end and a head at the other separated from said threaded portion by a shank of reduced diameter relative to both said head and threaded portion; a retainer of flexible resilient non-metallic material having a circumferentially continuous disk-like front portion, a frusto-conical rear portion and a recessed intermediate portion of circular periphery, the larger diameter end of said frusto-conical portion being adjacent said recessed portion, said retainer having a bore therethrough, said bore through said front and intermediate portions having a diameter as large as that of the threaded portion of said screw, said bore tapering in the frusto-conical portion from the intermediate portion to the end remote from the front portion to a diameter substantially smaller than that of said threaded portion of said screw, the frusto-conical and intermediate portions of said retainer being slotted radially at spaced circumferential intervals for permitting said slotted frusto-conical portion to be expanded circumferentially outwardly in response to an axial force exerted against the wall of said tapered bore, thereby to permit the threaded portion of said screw to be passed through said bore only in the direction from said disk-like front portion to said rear frusto-conical portion; and a stand-off bushing of general tubular configuration having at one end an annularly-flanged opening substantially equal in diameter to the outer diameter of said recessed portion of said retainer, said flanged opening in said standoff bushing being larger in diameter than the smaller outer diameter of the frusto-conical portion of said retainer but smaller than the larger outer diameter of said frusto-conical portion and substantially smaller than the outer diameter of the disk-like front portion of said retainer, said bushing having means at the other end for securing it to a workpiece, said bushing being shorter in length than said screw whereby the threaded portion of said screw can project from the bushing.

3,126,936
PNEUMATIC TIRE WITH ANNULAR REINFORCEMENT

Richard Beckadolph, Hannover, Germany, assignor to Continental Gummi-Werke Aktiengesellschaft, Hannover, Germany

Filed Dec. 19, 1960, Ser. No. 76,769
Claims priority, application Germany Dec. 21, 1959
7 Claims. (Cl. 152—341)

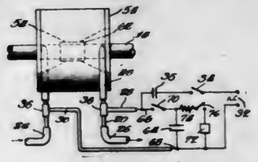
1. In a pneumatic tire construction having a tire body with a crown portion, side walls and beads and confining an annular chamber: a pneumatic tube arranged in said annular chamber and having its peripheral wall portion normally spaced from said crown portion to thereby confine therewith a ring chamber, and reinforcing means embedded in said peripheral wall portion of said pneumatic tube and normally extending approximately from one side wall to the other side wall of said tire.



3,126,937
FORMING METHOD AND APPARATUS THEREFOR

David F. Brower, San Diego, and Peter Fortescue, Rancho Sante Fe, Calif., assignors to General Dynamics Corporation, New York, N.Y., a corporation of Delaware

Filed Feb. 15, 1962, Ser. No. 173,479
10 Claims. (Cl. 153—10)

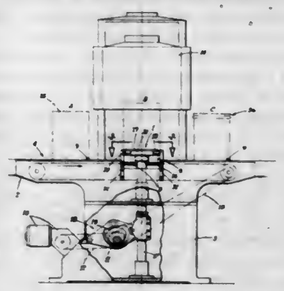


1. A method of forming a work piece comprising passing a current through the work piece to preheat without forming the same, and then establishing a varying magnetic field of predetermined intensity and shape at the surface of the work piece, said field being sufficient to form the work piece in a desired manner.

3,126,938
DRUM BODY ELEVATING PLATFORM UNIT

Thomas A. McCoy, Stockton, Calif., assignor to Carando Machine Works, Stockton, Calif., a partnership

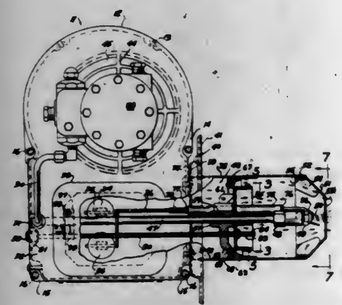
Filed July 30, 1962, Ser. No. 213,402
7 Claims. (Cl. 153—48)



1. In a machine which includes a longitudinal conveyor adapted to support and advance a vertically disposed cylindrical metallic drum body, the conveyor having a driven endless chain with a drum body-advancing upper run, an overhead die mechanism above the conveyor, and an elevating platform unit associated with the conveyor and in timed relation to the endless chain being vertically reciprocable between a lowered position and a raised position, the elevating platform unit upon movement to raised position lifting the drum body from the

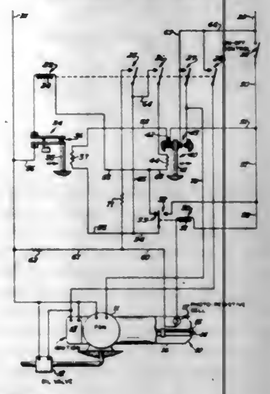
conveyor and projecting the upper end of said drum body into forming engagement with the overhead die mechanism and upon movement to lowered position returning the drum body to the conveyor; said elevating platform unit embodying a pair of transversely spaced platform sections, the upper run of the chain being disposed in the space between said platform sections when the elevating platform unit is in lowered position, and means to automatically bridge such space upon movement of the elevating platform unit to raised position, the platform sections and bridging means then providing a continuous surface having therein an upwardly opening full-circle die channel in which the lower end of the lifted drum body is received, and said die channel forming a flange on the lower end of the drum body when lifted and upon its upper end being projected into forming engagement with said overhead die mechanism.

3,126,939
AIR CONTROL FOR OIL BURNERS
Warren H. De Lancey, Zanesville, Ohio, assignor to Hardel Laboratories, Zanesville, Ohio, a co-partnership
Filed Dec. 13, 1961, Ser. No. 160,412
2 Claims. (Cl. 158—105)



1. In an oil burner, a housing, a power operated blower therein, a combustion tube projecting from said housing adapted to receive air under pressure from said blower, and having a converging outlet for delivering a combustible homogeneous mixture of atomized fuel and air under pressure, an oil delivery pipe within the housing and extending axially into said tube, a nozzle on the end of said tube spaced inwardly of the tube outlet; the improvement comprising an apertured air control ring transversely positioned and peripherally sealed within said tube intermediate its ends, said ring having a forwardly extending tapered annular flange on its outlet side with an internal wall of progressively increasing diameter, an air control cup slidably mounted over said oil pipe aligned longitudinally with said ring, normally spaced between said ring and said outlet and longitudinally adjustable towards and away from said ring, said control cup having a flat end wall terminating in an axial annular wall spaced radially inward of said annular flange and inwardly of the wall of said tube, defining a longitudinally extending annular passage of uniform cross-sectional area, so that the air passing between said ring and cup is maintained in a uniform torus, said cup being of such radial dimension as to variably regulate the air passing through said ring, and for maintaining a substantially constant static pressure upon said blower, said converging outlet being cone shaped, a series of spaced vanes secured to and projecting inwardly of said outlet inclined to its longitudinal axis for uniformly swirling the air delivered through said outlet, there being a series of centrally arranged slots formed through said cup, at all times passing limited quantities of air therethrough longitudinally of said nozzle to and through said outlet, and a manually movable means adjacent one end mounted on said housing and adjacent its other end operatively connected to said cup for moving the same relative to said ring.

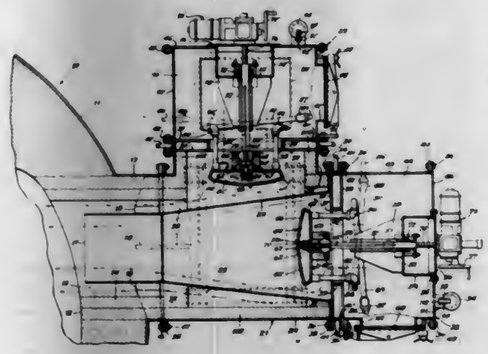
3,126,940
BURNER CONTROL APPARATUS
John E. Lundberg, Richfield, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Dec. 26, 1961, Ser. No. 162,135
10 Claims. (Cl. 158—28)



1. In combination,
a fuel burner unit having means adapted to provide a flame thereat,
first control means including an electrically energizable actuator and means operative when said actuator is energized to render said fuel burner unit operative,
safety cutout means having means connected in controlling relation to said first control means and having an electrically energizable actuator which is operative after a time period of operation thereof to render said first control means inoperative,
second control means including an electrically energizable actuator and normally open switch means controlled thereby,
electrically operable flame sensing means,
first circuit means, connecting said second control means actuator to a source of voltage and including in a series circuit, a first impedance, said flame sensing means, and said second control means actuator, to thereby apply an operating voltage to said flame sensing means,
second circuit means, including said safety cutout means actuator, connected to shunt a portion of said first circuit means including said flame sensing means,
and third circuit means including the normally open switch means of said second control means connected to shunt said safety cutout means actuator to thereby render the same inoperative and to lower the magnitude of said operating voltage applied to said flame sensing means.

3,126,941
INTEGRAL GAS BURNER AND VALVE
Louis E. Mohr, Ogden Dunes, Ind., and Rudolph V. Seaholm, Chicago, and Frank A. Berczynski, Willow Springs, Ill., assignors to John Mohr & Sons, Chicago, Ill., a corporation of Illinois
Filed Nov. 17, 1960, Ser. No. 69,988
8 Claims. (Cl. 158—109)

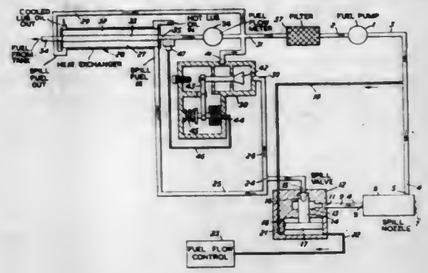
1. An improved valve construction comprising a valve housing with one wall thereof having an opening therethrough defining a valve seat, said wall having a coolant passage therein surrounding said seat; a valve closure member movable between a first position against said seat defining a valve closed position to a second position defining valve opened position wherein the closure member is axially spaced from said seat, said closure member having a coolant passage therein; a first pair of pipes having one end of each secured to the coolant passageway of said closure member and in fluid communication therewith, the other ends of each of said first pair of pipes extending into said valve housing; a second pair of pipes extending into said valve housing from the outside thereof, the housing ends of said second pair of pipes within said housing being at one side of said other ends of said first pipes, respectively, and in a position to be



about midway between the extreme positions defined by the said other ends of the first pipes when said closure member is in said first and second positions, respectively; a flexible hose connecting the other end of one of the first pipes with the housing end of a second pipe; a flexible hose connecting the other end of the other first pipe with the housing end of the other second pipe; a valve operating rod extending through said housing in co-axial relation to the axis of said opening in said wall, said rod being mounted for movement axially of said housing; a ball joint connecting the housing side of said closure member with the adjacent end of the rod; and means outside said housing and connected to said rod to move said rod axially to thereby move said closure member between said first and second positions.

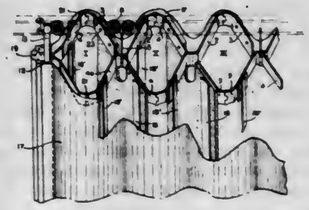
3,126,942
FUEL SUPPLY SYSTEMS FOR SPILL BURNER NOZZLES
Stanley Ralph Tyler, Cheltenham, England, assignor to Dowty Fuel Systems Limited, Cheltenham, England, a British company
Filed Apr. 18, 1960, Ser. No. 23,028
Claims priority, application Great Britain Apr. 20, 1959
5 Claims. (Cl. 158—36.3)

1. In combination with a fuel system having a source of fuel, a flow meter, a fuel pump, a spill nozzle, and duct means communicating with each of the source, meter, pump, and nozzle to form a circuit in which incoming fuel from the source is passed through the meter and then pumped into the nozzle, and spill flow from the nozzle is returned to the pump, means for preheating the incoming fuel comprising heat exchanger means having the portion of the circuit joining said fuel source and said meter passing therethrough, the portion of the circuit which returns spill flow to the pump being connected with said heat exchanger means to pass at least a portion of



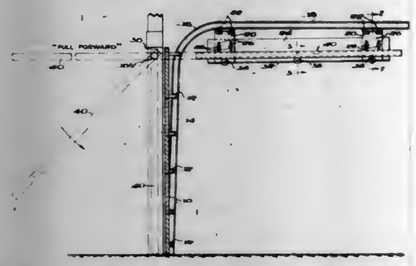
the spill return therethrough in heat transfer relation with the incoming fuel.

3,126,943
ACCORDION TYPE FOLDING CLOSURE
Carlo Giordani, Via de Gasperi Nr. 3/7, Genoa, Italy
Filed Jan. 4, 1961, Ser. No. 80,660
1 Claim. (Cl. 160—84)



In an accordion type foldable door structure:
a plurality of vertically extending panels;
means to support said panels for movement between a fully extended position in which said panels are disposed substantially in a single plane and a fully collapsed position in which said panels are disposed in side by side arrangement;
means to effect movement between said positions and to positions intermediate thereof, including:
a pantograph type of hinge structure consisting of a plurality of horizontally disposed S-shaped members arranged in a first series along the upper portion of said panels, and a second series of horizontally disposed S-shaped members arranged along the lower portion of said panels, and
a short extension member hingedly connected at one end of said S-shaped members and connected to one side of said panels adjacent to the top and bottom thereof,
and a somewhat longer extension member hingedly connected at the other end of each of said S-shaped members and to the opposite sides of said panels adjacent to the top and bottom thereof, each of said longer extension members being hingedly connected to the next adjacent of said S-shaped members at a point approximately midway between its ends, each of said panels being secured to a pair of adjacent longer and shorter extensions so as to cause said hinge members to operate in the manner of a pantograph;
and a flexible material extending continuously across the width of said structure and secured to said panels at spaced areas therealong.

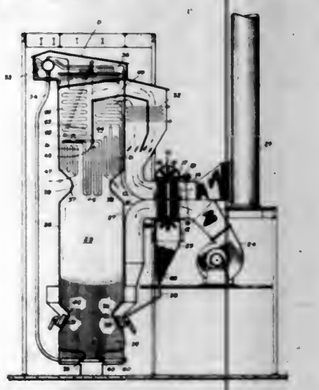
3,126,944
OVERHEAD SELF-STORING GARAGE SCREEN DOOR
Walter J. Kempinski, 2908 7th St., New Kensington, Pa.
Filed May 11, 1961, Ser. No. 109,295
4 Claims. (Cl. 160—90)



1. A combination door construction for garage door openings and the like having a pair of spaced vertical jambs, comprising a first hinged panel door having spaced vertical tracks which curve backwardly away from the door opening and extend into horizontally disposed lengths providing a storage for said first door, substantially horizontal storage means suspended from and located beneath the level of said horizontal track lengths and including a plurality of spaced antifriction bearing means, a second door having a rigid non-hinged peripheral frame, said second door being supported on said antifriction bearing means in its substantially horizontally stored position and movable on said antifriction bearing means from a position behind said vertical tracks to pass through the door opening, means forming a guideway along two of the opposite longitudinal edges of said second door and which are upright with said second door in its vertical closed position, means forming a single guide on each of the vertical jambs of the door opening at the tops thereof and proportioned to fit slideably within the respective guideways of said second door to guide the forward movement thereof from its stored position as it passes through said door opening, said guide means being positioned beyond the ends of the guideway means on the second door and separated therefrom when the second door is behind said vertical tracks, and abutment means disposed within each of said guideways and movable into engagement with its respective guide means to limit the forward movement of said second door out of the door opening and define a pivoting position of said second door which is swung about the guide means with the abutment means in engagement therewith into a vertical closing position within the door opening.

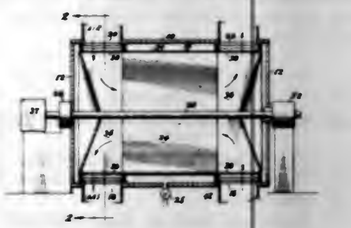
3,126,945
REGENERATIVE AIR HEATER
Max H. Kuhner, Oakham, Mass., assignor to Riley Stoker Corporation, Worcester, Mass., a corporation of Massachusetts
Filed Mar. 19, 1962, Ser. No. 180,611
3 Claims. (Cl. 165—6)

1. A regenerative air heater, comprising a housing having a gas inlet, a gas outlet, an air inlet and an air outlet, the gas inlet and the gas outlet being aligned, the air inlet and the air outlet being aligned and spaced from the gas inlet and outlet, an endless flexible member mounted in the housing and forming an elongated loop, the gas and air passing from the inlets to the outlets in paths perpendicular to the length of the loop, the flexible member consisting of a plurality of endless chains lying in spaced parallel planes, a plurality of mounting bars joining the chains and removable therefrom, each mounting bar extending at a right angle to the said planes, one portion of the loop passing between the gas inlet and the gas outlet, another portion of the loop passing between the air inlet and the air outlet, a heat absorptive member attached to each mounting bar and movable therewith, the chains extending around driven sprocket wheels at one end of the loop and around idler sprocket wheels at the other end of the loop, the sprocket wheels residing in portions of the housing outside of the projections of the inlets and outlets on the loop, resiliently-biased seals located on the housing and engaging the heat absorptive members to prevent flow of gas and air between the gas inlet and outlet



on the one hand and the air inlet and outlet on the other hand, the heat absorptive members being formed of a plurality of closely-spaced generally-parallel corrugated sheet metal elements adapted to trap dust, a dust hopper underlying one end of the loop in an area of reversal of movement of the heat absorptive members, and means forming an access door in the housing at a location on a projection of the path of movement of the members onto a portion of the housing extending parallel to the said planes, the access door being of a size permitting the removal of a heat-absorptive member.

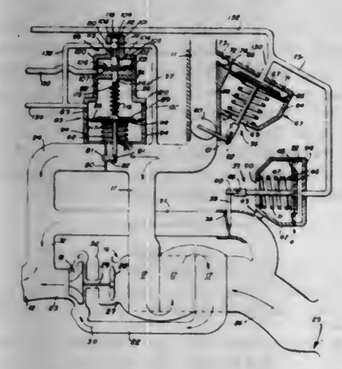
3,126,946
ROTARY REGENERATIVE HEAT EXCHANGER
Charles A. Lyle, Wellsville, N.Y., assignor, by mesne assignments, to Combustion Engineering, Inc., a stock corporation of Delaware
Filed Dec. 29, 1959, Ser. No. 862,636
9 Claims. (Cl. 165—7)



1. Rotary regenerative heat exchange apparatus having a rotor including a cylindrical rotor shell, a rotor post centrally located within said rotor shell, bearing means supporting the rotor for rotation about its axis, radial partitions extending between the rotor post and rotor shell to provide a series of sector-shaped compartments therebetween, axially spaced openings in the arcuate wall of each compartment for the passage of fluid therethrough, a mass of heat absorbent material carried by the compartments of the rotor, means for rotating the rotor about its axis, a cylindrical housing including end plates at opposite

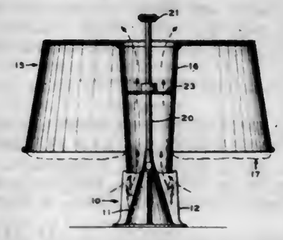
ends thereof enclosing the rotor in spaced relation to provide an annular plenum chamber therebetween, a pair of circumferentially spaced openings at each end of the housing axially aligned with the openings in the rotor shell and arranged to direct a heating fluid and a fluid to be heated through spaced compartments of the rotor, and sealing means carried by the rotor around a plurality of the openings therein and extending radially outward through the plenum chamber into a sealing relationship with the rotor housing whereby rotation of the rotor about its axis will sequentially place each compartment of the rotor in communication with the openings for the heating fluid and the fluid to be heated in said housing.

3,126,947
CABIN TEMPERATURE CONTROL SYSTEM
Raymond W. Jensen, Los Angeles, Calif., assignor to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Continuation of application Ser. No. 516,173, June 17, 1955. This application May 21, 1959, Ser. No. 814,766
27 Claims. (Cl. 165—26)



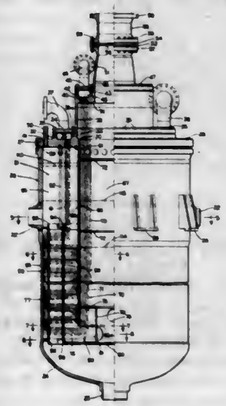
1. A controller for an air conditioning and temperature control system for enclosures having an inlet duct and a hot air conduit for conducting hot air to said inlet duct; a heat exchanger having an inlet connected with said conduit and having an outlet for said air; a cooling turbine having an inlet connected with the outlet of said heat exchanger and having an outlet connected with said enclosure; a hot air bypass about said heat exchanger and said turbine; means connected with said heat exchanger for supplying cooling air thereto; a cold air bypass about said heat exchanger, said bypass being connected to said hot air bypass; means, including pressure responsive means, for controlling the flow of air through said cold air bypass; means, including pressure responsive means, for controlling the flow of hot air through said hot air conduit; means, including pressure responsive means, for controlling the flow of air through the hot air bypass; pressure responsive regulating means for regulating the supply of air to the pressure responsive means of the hot air bypass control means; temperature responsive means for modulating the action of the hot air bypass control means; means operably associated with said temperature responsive means for limiting the rate of temperature change in the system; an operating pressure system including means for connecting to a source of operating pressure the various pressure responsive means for the control for the hot air conduit, the control means for the cold air bypass, the control means for the hot air bypass, and the pressure responsive regulating means, the improvement comprising: means for controlling the pressure in said operating pressure system including dump valve means; pressure responsive manual control means; pressure responsive automatic control means for controlling the escape of air from said operating pressure system; manually operable selective control means connected with said dump valve means, manual control means and automatic control means for selective activation and inactivation thereof; and means for controlling said automatic control means in accordance with temperature of a selected location, including an orifice controlling the flow of air from said operating pressure system to the pressure responsive automatic control means; and temperature responsive means controlling the flow of said air to a low pressure region.

3,126,948
CAKE PAN STAND
George Springer and Henrietta A. Springer, St. Charles, Mo. (both of 3413 Ashby Road, St. Ann, Mo.)
Filed Sept. 11, 1961, Ser. No. 137,167
6 Claims. (Cl. 165—67)



1. A cake pan and stand comprising an inverted cake pan having a hollow center element, a base supporting the hollow center element of said inverted cake pan, an elongate rod detachably connected to said base and extending upwardly into said center element, and a collar slidably mounted on and carried by said rod and wedging in said center element upon sliding freely under gravity down the rod into engagement with the center element.

3,126,949
HEAT EXCHANGER CONSTRUCTION
Frank Boni, Jr., Massillon, and Philip S. Otten and Donald L. Hummel, Canton, Ohio, assignors, by mesne assignments, to Baldwin-Lima-Hamilton Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed July 3, 1959, Ser. No. 824,861
11 Claims. (Cl. 165—158)



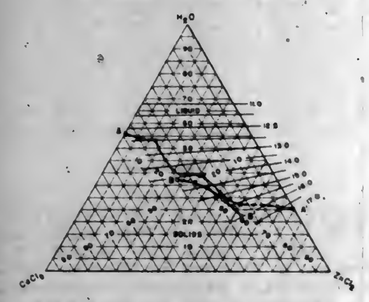
1. Heat exchanger construction including a heat exchanger shell forming a shell chamber and having fluid inlet means and fluid outlet means communicating with

said shell chamber, tube sheet means connected to the shell, a tube bundle connected to the tube sheet means and extending generally longitudinally within the shell chamber, the tube bundle having a series of substantially uniformly spaced tubes, the tubes extending from the tube sheet means substantially uniformly spaced generally longitudinally in a first bank of tube sections and then substantially uniformly spaced in involute paths laterally and then substantially uniformly spaced in combined involute lateral and serpentine paths forming at least a substantial part of a second bank of tube sections extending generally longitudinally back to the tube sheet means, the involute lateral and serpentine part of the second bank of tube sections extending progressively generally laterally in one general direction in involute paths and then generally longitudinally and then generally laterally in involute paths in a direction generally opposite from said one direction while the tubes in said second bank remain substantially uniformly spaced throughout said second bank, and all of the portions of the tube sections in at least the second bank which extend longitudinally being positioned in laterally involute rows.

3,126,950
METHOD EMPLOYING COMBINATION WELL COMPLETION-PACKER FLUIDS

Bobbie L. Carlberg, Charles M. Hudgins, Jr., and James E. Landers, Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

Filed Dec. 4, 1959, Ser. No. 857,354
8 Claims. (Cl. 166—1)



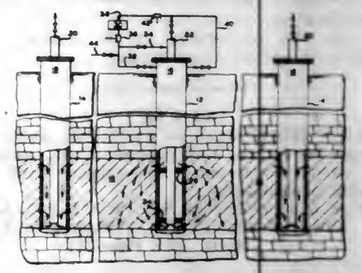
1. An article for use in a completion operation on a potentially hydrocarbon producing well comprising a tubular casing member disposed in a well traversing a formation, said casing member having perforations therein opposite said formation, said casing member being sealed at the bottom thereof, said casing member containing a solution consisting essentially of $CaCl_2$, $ZnCl_2$ and water having a density of about 11 to about 17 pounds per gallon in contact with the inner wall of said casing member, said solution being retained in said casing member by said formation.

3,126,951
MISCIBLE PHASE FLOODING IN OIL PRODUCTION

Melcon Santourian, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Apr. 2, 1962, Ser. No. 184,279
16 Claims. (Cl. 166—9)

1. A method of establishing a transition zone downhole around an injection well for use in a miscible fluid drive process in recovering oil from an oil-bearing stratum prior to injection of a driving fluid and forcing same thru said stratum from said injection well to at least one offset production well, which method comprises providing said injection well with a tubing extending to a lower level of said stratum to form an annulus with the wall of the well; positioning a first packer on said tubing adjacent the lower end thereof so as to leave a bottom section of said stratum below said first packer; positioning a second packer on said tubing subjacent the top of said stratum so as to leave a top section of said stratum above said second packer; injecting a light fluid miscible with the oil in said stratum thru one of said tubing and annulus and thru said stratum intermediate said top and bottom sec-



tions to produce a solution of said fluid and oil from said stratum thru the other of said tubing and annulus; recycling said solution thru said tubing and annulus so as to displace more oil from said stratum; and continuing the injection of said fluid and the recycling of said solution until a substantial section of said stratum around said injection well as filled with a solution of oil and said fluid miscible with in-place oil to form said transition zone preparatory to driving with a driving fluid.

3,126,952
WATERFLOODING METHOD

Loyd W. Jones, Tulsa, Okla., assignor to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware

No Drawing. Filed Nov. 26, 1962, Ser. No. 240,150
18 Claims. (Cl. 166—9)

1. A method for the recovery of oil from an oil-bearing earth formation penetrated by at least one injection well and at least one producing well comprising introducing into said at least one injection well and into said oil-bearing formation an oil solution containing an oil-soluble surface active agent capable of emulsifying water in oil and an oil-soluble, substantially water-insoluble, alcohol in an amount sufficient to modify the effects of said surface active agent, then injecting flooding water into said at least one injection well and into said formation to cause said oil solution to flow through said formation and recovering oil from said at least one producing well.

3,126,953
RECOVERY OF HYDROCARBON MATERIAL FROM A SUBTERRANEAN FORMATION BY IN-SITU COMBUSTION

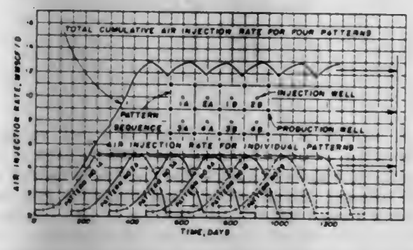
Theodore W. Nelson, Westfield, N.J., and James S. McNiel, Jr., Dallas, Tex., assignors to Socony Mobil Oil Company, Inc., a corporation of New York

Filed Nov. 20, 1959, Ser. No. 854,404
7 Claims. (Cl. 166—11)

1. In a process for the recovery of hydrocarbon material from a subterranean formation containing hydrocarbon material wherein said formation is penetrated by a plurality of wells, said wells forming a plurality of similar patterns and each of said patterns having input means including at least one input well and output means including at least one output well, and a fluid is injected under pressure from a compressor means into said formation through an input means of a pattern and said hydrocarbon material is thereby displaced from said formation and moved into the direction of said output means

of said pattern from which output means it is recovered, the steps for establishing and maintaining substantially constant the rate of injection of said fluid into said formation from said compressor means comprising

(1) injecting said fluid under pressure from said compressor means into said formation through the input means of a first pattern at a rate sufficiently high to displace said hydrocarbon material from said formation and move said hydrocarbon material in the direction of the output means of said first pattern,
(2) gradually increasing the rate of injection of said fluid through said input means of said first pattern,
(3) discontinuing increase in the rate of injection of said fluid before the rate at which said hydrocarbon material is displaced from said formation exceeds the rate at which the entire amount of said displaced hydrocarbon material from said first pattern can be recovered from said output means of said pattern,
(4) thereafter gradually decreasing the rate of injection of said fluid through said input means of said first pattern,



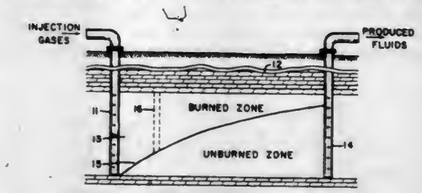
(5) at a time subsequent to step (1) but prior to step (3) injecting said fluid under pressure from said compressor means into said formation through the input means of a second pattern and displacing hydrocarbon material from said formation in the direction of the output means of said second pattern,
(6) gradually increasing the rate of injection of said fluid through said input means of said second pattern,
(7) discontinuing increase in the rate of injection of said fluid before the rate at which said hydrocarbon material is displaced from said formation exceeds the rate at which the entire amount of said displaced hydrocarbon material from said second pattern can be recovered from said output means of said pattern,
(8) thereafter gradually decreasing the rate of injection of said fluid through said input means of said second pattern, and
(9) thereafter in seriatim for each of the other patterns carrying out steps (5), (6), (7), and (8), the time interval in step (5) being such that step (5) is carried out for any one pattern coincidentally with step (6), for at least one other pattern until the cumulative rate of injection of said fluid from said compressor means into said formation through the input means of said plurality of well patterns has reached a maximum.

3,126,954
IN SITU COMBUSTION PROCESS

Francis E. Campion, Tulsa, Okla., assignor to Jersey Production Research Company, a corporation of Delaware

Filed Dec. 30, 1959, Ser. No. 862,943
8 Claims. (Cl. 166—11)

7. In an oil field secondary recovery operation wherein a combustion front is established in a subterranean oil-bearing reservoir in the vicinity of a first well and propagated through said reservoir toward a second well and wherein overburning and the formation of a burned-out zone near the upper boundary of said reservoir occur, the improvement which comprises injecting a combustible mixture of oxygen, a fuel gas and an inert gas into said reservoir after said combustion front reaches said second well and while the temperature of at least part of said burned-out zone is still above the ignition temperature of



said combustible mixture to establish a secondary combustion front within said burned-out zone, adjusting the composition of said combustible mixture to maintain said secondary combustion front essentially stationary within said burned-out zone, and recovering oil from said reservoir as a result of the generation of heat at said secondary combustion front.

3,126,955
OIL RECOVERY PROCESS

Joseph C. Trantham and Arthur R. Schleicher, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Filed Aug. 22, 1955, Ser. No. 529,916
21 Claims. (Cl. 166—11)



18. A method for carrying out an underground combustion in an oil-bearing formation which is penetrated by at least two wells for the purpose of producing fluids therefrom, the steps of establishing communication between the oil-bearing formation and the ground surface through at least one injection well and one production well, pumping an oxygen-containing gas into said formation through said injection well, initiating combustion of said oil-bearing formation in the production well to form a combustion front to heat the oil therein and drive a portion of the components of said oil from said formation, a part of the combustible material originally in said oil-bearing formation being burned as the combustion front moves from the production well toward the injection well, continuing the pumping of oxygen-containing gas into said injection well after the combustion front reaches the injection well to cause the combustion front to move in the opposite direction until it has reached the production well again, and withdrawing the volatile unburned components of the oil from said formation through the production well.

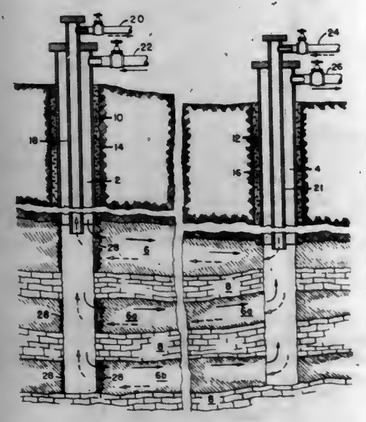
3,126,956
METHOD OF FORMING UNDERGROUND COMBUSTION FRONT

Virgil J. Berry, Jr., Tulsa, Okla., assignor to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware

Filed Mar. 17, 1960, Ser. No. 15,677
6 Claims. (Cl. 166—11)

1. In a process for forming a combustion front in an underground carbonaceous deposit penetrated by an

injection well and a producing well, the improvement which comprises heating a portion of said deposit at the face of said injection well to a combustion supporting temperature whereby carbonaceous material on the face of said well is vaporized, injecting into said deposit via said producing well a gas selected from the group consisting of air and oxygen-enriched air, forcing said gas through said deposit into said injection well to form a combustible mixture of said gas and said vaporized carbonaceous material in said injection well, allowing said

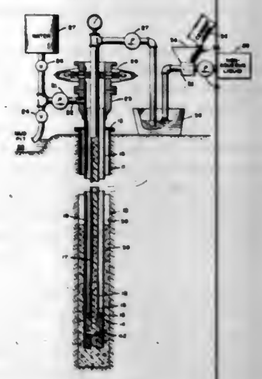


mixture to contact said heated portion whereby said mixture is ignited, continuing the injection of said gas into said producing well until the temperature of said injection well has passed through a maximum indicating a combustion front has been formed on the face of said injection well and is moving away therefrom, discontinuing injection of said gas into said producing well and thereafter introducing an additional quantity of said gas into said injection well whereby said gas and said front travel through said deposit in the same direction.

3,126,957
UNDERGROUND INITIATED MISCIBLE BANK FLOODING
John C. McKinnell, Taft, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
No Drawing. Filed Feb. 17, 1961, Ser. No. 89,918
8 Claims. (Cl. 166—11)

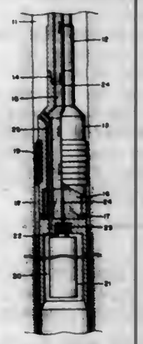
1. The method of assisting the recovery of petroleum products from an underground formation which is penetrated by at least one injection well and one recovery well which comprises injecting air into said formation through said injection well and initiating combustion in a localized portion of said formation adjacent said injection well, continuing the injection of air until at least a portion of the combustion front has been moved away from the said injection well, discontinuing said air injection, injecting crude oil into the heated portion of said formation to cause at least a partial cracking of said crude oil and the formation of a bank of light hydrocarbon end products on the perimeter of the heated portion of said formation, continuing the injection of crude oil into the formation until the occurrence of a predeterminable condition indicates that substantial cracking of the injected crude oil has stopped, and then injecting water into said formation through said heated portion to transport said bank of hydrocarbon end products substantially through said formation to said recovery well and recovering petroleum products at said recovery well.

3,126,958
CEMENTING CASING
William G. Bearden and George C. Howard, Tulsa, Okla., assignors to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware
Filed Mar. 2, 1959, Ser. No. 796,394
8 Claims. (Cl. 166—29)



1. A method of cementing casing in a well comprising the steps of injecting into said well through a first conduit a non-aqueous liquid slurry of finely divided hydraulic cement, simultaneously injecting into said well through a second conduit an aqueous liquid capable of hydrating said cement, the ratio of said cement to said aqueous liquid being sufficent to produce a settable cement composition, intimately mixing within said well at a point adjacent to the outlet of said casing said slurry and said aqueous liquid to produce a settable, readily-flowable, uniform mixture thereof, and as said slurry and said aqueous liquid are mixed, displacing the mixture thereof into the annular space behind said casing in said well to cement said casing in said well.

3,126,959
BOREHOLE CASING
John E. Ortloff, Tulsa, Okla., assignor to Jersey Production Research Company, a corporation of Delaware
Filed Feb. 26, 1960, Ser. No. 11,201
7 Claims. (Cl. 166—33)



1. A process for casing a borehole penetrating a subterranean formation which comprises lowering a conduit having a casing tool connected to the lower end thereof into said borehole, said casing tool forming a confined annular space adjacent the borehole wall; introducing a liquid polymer that can be solidified at elevated temperature into said borehole through said conduit; injecting said polymer from said conduit into said confined annular space between the borehole wall and said casing tool under sufficient pressure to force said polymer a substantial distance into the formation; and heating said casing tool to solidify said polymer while moving said conduit and tool axially within said borehole.

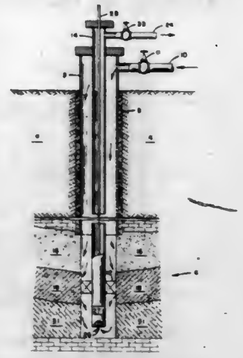
3,126,960
METHOD FOR THE COMPLETION OF A WELL BORE
Charles D. Woodward and Billy H. Towell, Houston, Tex., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 30, 1959, Ser. No. 863,044
5 Claims. (Cl. 166—39)



1. In the method of reducing the chance of a well bore explosion during the recovery of hydrocarbons from an underground hydrocarbon bearing formation via a well bore penetrating into said formation, the steps of setting imperforate casing in said well bore and a string of flow tubing within said casing, providing a fluid-tight seal between said imperforate casing and said string of flow tubing at a substantial distance down said well bore and upward of said formation, applying pressure to the upper surface of said seal and maintaining such pressure at substantially constant value by injecting a non-combustible fluid into the annulus defined by said flow tubing and said imperforate casing above said seal, and injecting a combustion supporting gas into said formation through said flow tubing.

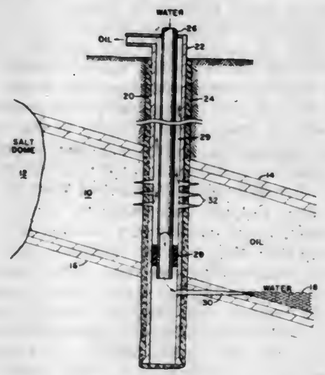
3,126,961
RECOVERY OF TARS AND HEAVY OILS BY GAS EXTRACTION
Forrest F. Craig, Jr., Howard Grekel, and Karol L. Hujsak, Tulsa, Okla., assignors to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware
Filed Nov. 23, 1959, Ser. No. 854,665
13 Claims. (Cl. 166—40)

1. In a method of recovering a heavy hydrocarbon oil from an underground deposit thereof penetrated by a well by injecting a hot gas into said well and then into said deposit, said gas being capabale of forming a liquid condensate under reservoir conditions that is substantially immiscible with said oil, the improvement which comprises forming upper and lower zones in said well by placing across the bore of said well at an intermediate level of said deposit a barrier forming a substantially fluid-tight seal with said well, introducing said hot gas into said upper zone and then into said deposit whereby the viscosity of said oil is substantially reduced and to produce a liquid condensate of said gas in said deposit so as to form a substantially gas-tight liquid seal at the level of said barrier, maintaining a pressure differential across said barrier of from about 15 to about 200 p.s.i. so as to direct the flow of oil into said lower zone, periodically adjusting



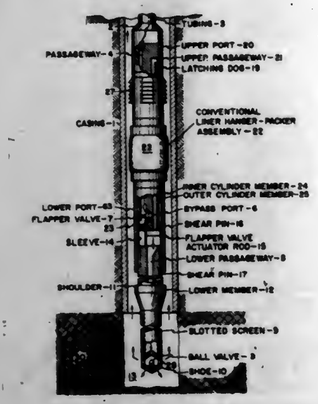
the level of said barrier so that the latter coincides with the level of said liquid condensate, the level of said seal moving downwardly with time as fluids are produced into said well from said lower zone, and producing from said well the fluids entering from said lower zone.

3,126,962
OIL RECOVERY METHOD
Robert H. Blood, Tulsa, Okla., assignor to Jersey Production Research Company, a corporation of Delaware
Filed Aug. 11, 1960, Ser. No. 49,021
9 Claims. (Cl. 166—42)



1. A method of producing oil from a dipping subterranean reservoir located between overlying and underlying relatively low permeability strata and penetrated by a well having first and second conduits therein, comprising the steps of providing first directional communication through said underlying strata in a down-dip direction from said well to at least said reservoir, providing second communication from said well opposite said reservoir, connecting said first conduit in said well with said first communication and connecting said second conduit in said well with said second communication, injecting a fluid of density greater than said oil into said reservoir through said first conduit and recovering oil through said second conduit.

3,126,963
WELL COMPLETION TOOL
Billy J. Graham, Midland, Tex., assignor to Jersey Production Research Company, a corporation of Delaware
Filed June 27, 1960, Ser. No. 38,781
5 Claims. (Cl. 166—51)



1. An improved dual purpose tool assembly for removing sand from and gravel packing a portion of a borehole which extends into the earth's substrata, said assembly being releasably attachable to the lower end of a tubing string extending downwardly in said borehole, which assembly comprises a lower cylindrical member and an outer cylindrical member positioned about said lower cylindrical member, said members being attached to each other in upper position by means of a shear pin, thereby initially preventing vertical movement with respect to each other, an inner cylindrical member within said outer cylindrical member, a first upper passageway within said inner member communicating from within said tubing to a by-pass port within said inner member, said by-pass port, in turn, communicating to the upper end of a lower passageway within said lower member, said lower passageway communicating to the lower end of said assembly, whereby fluid can be pumped downwardly within said tubing through said assembly, thereby washing sand upwardly in the annular area between said assembly and the borehole wall, a packer assembly positioned on said outer cylindrical member, said packer assembly being capable of expanding and sealing off the annular area between the borehole wall and said assembly, means for exerting a downward thrust on said outer cylindrical member to shear said pin, thereby allowing said outer cylindrical member to move vertically with respect to said lower cylindrical member to a lower position to expand said packer, a lower port in said outer cylindrical member below said packer designed to align itself with the lower end of said first upper passageway upon movement of said outer cylindrical member to its lower position, thereby permitting communication between the lower end of said upper passageway and the annular area without said assembly, whereby gravel can be pumped downwardly within said tubing through said first upper passageway, through said lower port into the annular area about said assembly and downwardly in the annular area without said assembly and whereby the liquid can be removed upwardly through said lower passageway, through a second upper passageway into the annular area about said assembly and above said expanded packer.

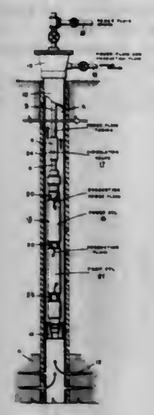
3,126,964
APPARATUS FOR SELECTIVELY DETONATING A PLURALITY OF EXPLOSIVE CHARGE MEANS
John D. La Rue, Andrews, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed June 18, 1962, Ser. No. 203,256
5 Claims. (Cl. 166—55.5)



1. Apparatus for selectively detonating from an operating location a plurality of electrically detonable explosive charge means located at a remote location, said apparatus comprising:
first and second electrically conductive leads extending from said operating location to said remote location;
first unidirectional conduction means connected to said first lead;
a stepping switch at said remote location including an actuating winding and switching means for individually connecting the explosive charge means between said first unidirectional conduction means and said second electrical lead in sequence, responsive to successive energizations of said actuating winding;
said first unidirectional conduction means being poled so that current will flow therethrough when said second lead is positive relative to said first lead;
second unidirectional conduction means connecting said actuating winding between said first and second leads, poled so that electrical current will flow therethrough when said first lead is positive with respect to said second lead; and
means at said operating location connected to said first and second leads for applying direct current voltages of opposite polarities to said first and second leads in alternation.

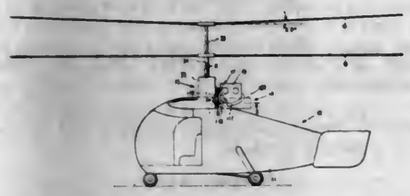
3,126,965
VALVE FOR WELL PIPE
William C. Lindsey, Houston, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Dec. 9, 1960, Ser. No. 74,835
1 Claim. (Cl. 166—68)

Apparatus for use in pumping fluids from a well comprising:
an hydraulically operated subsurface pump arranged in said well;
a tubing string connected at its lower end to said pump and at its upper end to a source of power fluid for supplying power fluid to said pump;
a circulating nipple having circulation ports and connected in said tubing string above and adjacent said pump, said nipple also having an inner annular shoulder below said ports providing upper and lower bore portions in said nipple of, respectively, larger and smaller diameters;
a hollow tubular mandrel removably arranged within said nipple and adapted to permit power fluid to circulate therethrough, said mandrel having an outer annular shoulder thereon intermediate the length thereof providing on said mandrel upper and lower



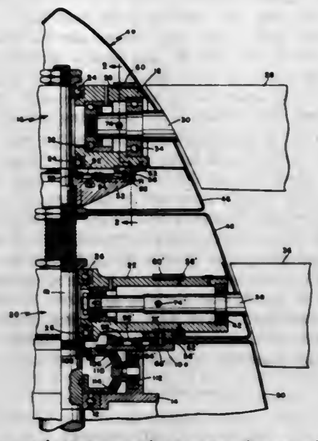
portions, of respectively, larger and smaller diameters, and adapted to seat on said nipple inner shoulders; and
upper and lower packers arranged, respectively, on the larger and smaller diameter portions of said mandrel adapted to seal off the space between said nipple and said mandrel above and below, respectively, said nipple ports when said mandrel outer shoulder is seated on said nipple inner shoulder.

3,126,966
HELICOPTER
Alexander Agamian, San Jose, Calif.
(475 Dover Way, Apt. 16, Campbell, Calif.)
Filed May 7, 1962, Ser. No. 192,675
11 Claims. (Cl. 170—135.24)



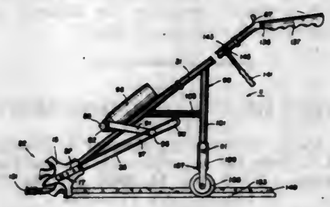
1. A helicopter comprising a first and second coaxial rotor, a first differential gear system connected to said first rotor and operatively controlled for optional driving engagement with said first rotor while said first differential gear system is in operation, a second differential gear system connected to said second rotor and operatively controlled for optional driving engagement with said second rotor while said second differential gear system is in operation, an engine connected to said first and second differential gear systems for transmitting driving power thereto, and means responsive to the operation of said engine for controlling the optional driving engagement between said differential gear systems and said rotors while said differential gear systems are in operation.

3,126,967
AUTOMATIC AUTO-ROTATING MEANS FOR AIRCRAFT SUSTAINING ROTOR
Lyle K. V. Sudrow, Los Angeles, Calif., assignor to Helipod, Inc., Oceanside, Calif.
Filed Jan. 15, 1962, Ser. No. 166,026
9 Claims. (Cl. 170—160.13)



1. Automatic auto-rotation means for an aircraft sustaining rotor, comprising:
a driven shaft;
a hub freely rotatably mounted on said shaft;
said hub having a plurality of rotor blades mounted thereon, and said blades being adjustable in pitch about axes extending substantially radially of said hub;
clutch means connected to and rotatable with said shaft;
drive means on said hub engageable with said clutch means in one direction of rotation;
and pitch shifting means on said clutch means and engaging said rotor blades to shift said blades to auto-rotation pitch when said clutch means is retarded.

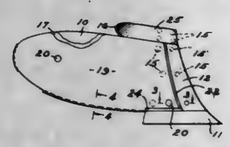
3,126,968
LAWN EDGER
Lendon W. Booth, 943 Semmes, Memphis, Tenn.
Filed May 24, 1962, Ser. No. 197,366
1 Claim. (Cl. 172—16)



A lawn edger comprising a first plate having a peripheral edge with at least a portion thereof being circular, a second plate in substantially flat face-to-face sliding engagement with said first plate, said second plate having a peripheral edge with at least a portion thereof being circular, means mounting said first and second plates for pivoting movement relative to one another, said first plate being provided with at least one substantially circular cutout portion in the circular peripheral edge portion thereof, said second plate being provided with at least one substantially circular cutout portion in the circular peripheral edge thereof, each of said cutout

portions in said first and second plates defining an area greater than half of a circle to provide at least one hooked portion of the plate adjacent each of said circular cutout portions, said first and second plates having sharpened edges adjacent said cutout portions adapted for cutting grass and the like and for simultaneously digging a trench, an elongated handle fixedly attached to said first plate, and motor driven means coupled to said second plate for pivoting said second plate back and forth relative to said first plate; said motor driven means comprising a motor mounted on said handle including a rotatably driven shaft, a lever having an inner end and an outer end, said lever being mounted on said shaft adjacent the inner end of said lever and being rotatably driven thereby about a point adjacent said inner end to carry said outer end of said lever in a circular path, a wheel rotatably mounted on the outer end of said lever, an elongated arm fixedly attached to said second plate, said arm being provided with a slot along the length thereof in which is carried said wheel for movement of said wheel in said slot along the length of said arm to movably couple said lever and said arm whereby movement of said lever in a circular path is effective to move said arm back and forth, and said slot being provided with an enlarged portion adjacent one end thereof for the removal and assembly of said wheel with said arm.

3,126,969
MOLDBOARD PLOWS
Walter W. Sewell, Washington, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Sept. 25, 1961, Ser. No. 140,396
3 Claims. (Cl. 172—719)



1. A moldboard plow having a moldboard surface formed of a moldboard, a shin and a share, the shin and share being mounted generally flush with the moldboard, a thin metal sheet conforming in general to the outline of and overlying the moldboard, the metal sheet having a thin, tightly adherent coating of polytetrafluoroethylene on its exposed face, and metal strips lying between the confronting edges of the moldboard, shin and share and having narrow flanges overlying the adjacent edges of the polytetrafluoroethylene-coated sheet.

3,126,970
METHOD OF RELEASING IMMOBILIZED DRILL PIPE
Ralph H. Rygg, Dallas, Tex., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
No Drawing. Filed Dec. 16, 1960, Ser. No. 76,130
10 Claims. (Cl. 175—57)

1. In the process of drilling a well borehole in the earth wherein a drill bit is rotated within said well by a drill string equipped with drill collars, a drilling fluid containing solid materials is circulated within said well, a drilling fluid filter cake forms along the wall of said well borehole and, upon cessation of rotation of said drill string said drill string becomes immobilized in said filter cake along said wall of said well borehole by differential pressure sticking, the steps for releasing said immobilized drill string comprising passing into said well borehole and into contact with said drill string and said filter cake at the point where said drill string is immobilized a unitary body of liquid comprising a mixture of a liquid hydrocarbon and an alkyl aryl polyethylene oxide having not less than 6 and not more than 10 carbon atoms in the alkyl group and on the average not less than 6 and not more than 11 ethylene oxide groups, maintaining contact of said unitary body of liquid with said drill string and said filter cake, and thereafter applying mechanical force to said drill string to move said drill string.

3,126,971
DRILL STRING STABILIZER
Jackson M. Kellner and James E. Reed, Tulsa, Okla., assignors to Jersey Production Research Company, a corporation of Delaware
Filed Oct. 26, 1960, Ser. No. 65,046
12 Claims. (Cl. 175—230)



1. A drill string stabilizer comprising in combination a tubular mandrel containing a lateral port; an outer sleeve on said mandrel within which the mandrel is free to rotate, said sleeve extending above and below said port; upper sealing means between said sleeve and mandrel above said port; lower sealing means between said sleeve and mandrel below said port; a plurality of hydraulically-extensible shoe assemblies mounted in recesses in the outer surface of said sleeve, said sleeve containing passageways extending from each of said recesses to the inner surface of the sleeve between said upper and lower sealing means; valves in said sleeve for controlling flow through each of said passageways individually; means for maintaining said valves in a normally closed position; and means for opening said valves individually in response to contact between said stabilizer and the lower side of a sloping borehole.

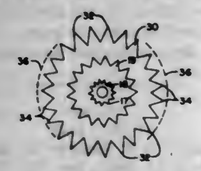
3,126,972
SAFETY JOINT
Wayne N. Sutliff, 2931 Pierce Road, Bakersfield, Calif.
Filed Jan. 11, 1961, Ser. No. 82,067
5 Claims. (Cl. 175—294)

1. In a safety joint for joining upper and lower drill stem sections, the combination of: an internal tubular member connected at its upper end to said upper stem section, said member having external spline means formed thereon, and being externally enlarged concentrically at its lower end to form a relatively short cylindrical head; a plurality of torque drive lugs formed externally from said head and equally spaced circumferentially by substantial distances; an external tubular member having internal threads provided in an upper end portion thereof and having an annular internal abutment shoulder provided in a lower portion thereof, and internal bore being provided between said internal threads and said abutment shoulder, said bore slidably accommodating said head and drive lugs, said lower external member portion being connected to said lower drill stem section; a stop collar slidably received on said internal tubular member and having external threads matching said internal threads and screwed thereinto, said collar also having internal spline means slidably receiving therein said external spline means; a plurality of torque driven lugs formed internally from said external tubular member just below said internal threads and of approximately the same axial dimension as said head, said driven lugs being equally spaced



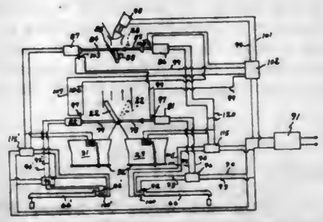
circumferentially and being dimensioned to allow said drive lugs to freely pass axially therebetween when said head slides in said bore, upper ends of said drive lugs and lower ends of said driven lugs having similarly pitched, oblique cam faces, the length of said bore being substantially in excess of the length of said head plus the axial overlap of said drive and driven torque lugs when said head is at the upper end of said bore, said annular abutment shoulder comprising an anvil and the annular bottom of said head a hammer for accomplishing a downward jarring action by suddenly lowering said upper drill stem section when said lower section is supported from beneath.

3,126,973
ROTARY DRILLING BIT
Othar M. Kiel, Tulsa, Okla., assignor to Jersey Production Research Company, a corporation of Delaware
Filed June 23, 1961, Ser. No. 119,105
7 Claims. (Cl. 175—378)



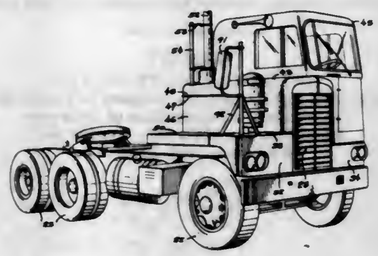
1. A drill bit for the rotary drilling of wells comprising a body; a multiplicity of conical cutters rotatably supported by said body, a plurality of rows of teeth integral with each said cutter, at least one of said rows having teeth of unequal length with teeth of equal length disposed about 180° apart to impart percussion motion to said bit during said drilling.

3,126,974
PROCESS AND APPARATUS FOR WEIGHING A PREDETERMINED AMOUNT OF MATERIALS
John J. Patton, 3111 Audubon Road, Montgomery, Ala.
Filed Apr. 27, 1960, Ser. No. 25,016
7 Claims. (Cl. 177—122)



1. Apparatus for weighing a predetermined amount of materials from separate sources comprising a first weight hopper, a second weight hopper, a first deflector disposed to deflect materials from one source into said first weight hopper when in one position and disposed to deflect said materials from said one source into said second weight hopper when in another position, means to move said first deflector selectively from said one position to said another position after a portion of said predetermined amount is added and before all of said predetermined amount has been added to said first weight hopper and said second weight hopper respectively, whereby the supply of materials from said one source to said first weight hopper and said second weight hopper is interrupted, a second deflector disposed to deflect materials from another source into said first weight hopper when in one position and disposed to deflect said materials from said another source into said second weight hopper when in another position, means to move said second deflector selectively from said one position to said another position after said predetermined amount of materials have been added to said first weight hopper and said second weight hopper respectively.

3,126,975
AUTOMOTIVE VEHICLE WITH TILTING HALF-CAB
Leslie R. Dafoe, Seattle, Wash., assignor to Pacific Car and Foundry Company, Seattle, Wash., a corporation of Washington
Filed Dec. 14, 1959, Ser. No. 859,440
4 Claims. (Cl. 180—89)



1. In a tilting-cab vehicle, in combination: a vehicle main frame, a vehicle engine supported by the frame to occupy a position central to the width of the vehicle at the front end thereof, a fixed enclosure for said engine having both of its sides open, a half-cab pivotally supported from the vehicle frame at one side of the enclosure for forward tilting movement from a normal lowered position in which the cab closes the adjacent side opening of said enclosure into a raised position exposing said open-

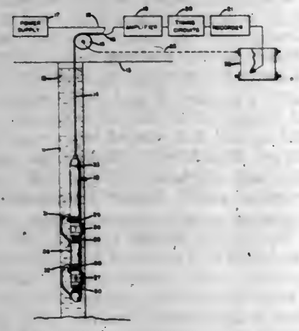
ing, a removable door normally closing the other side opening of the enclosure, a fixed exhaust stack for the engine located at the aft end of the engine with its upper end extending vertically through an opening therefor provided in the enclosure, said vertical portion of the stack being supported from an adjacent mast footing on the vehicle frame and fixedly secured by braces one of which extends laterally to a root attachment fixed to the vehicle frame and another of which extends forwardly to a root attachment fixed to the upper end of a radiator located to the front of the engine and itself braced from the vehicle frame.

3,126,976

SEISMIC VELOCITY LOGGING OF LOW-VELOCITY WELL FORMATIONS

Ralph L. Cordell and Julian F. Evans, Tulsa, Okla., assignors to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware

Filed Oct. 17, 1960, Ser. No. 63,192
9 Claims. (Cl. 181—.5)



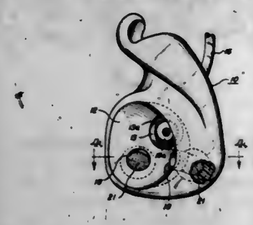
1. In seismic velocity logging of well formations which may have lower seismic wave-transmission velocities than the liquids in the well wherein impulses are transmitted from a transmitter to at least one receiver a short fixed distance away and an indication is recorded of the travel time of each first-arriving impulse at said receiver, the improvement which comprises the additional step of holding said transmitter and receiver separately in contact with the formations, in the presence of a large number of small seismic wave-scattering particles at least in the well-bore space between said transmitter and receiver.

3,126,977

HEARING AID APPARATUS

Paul J. McGee, Chicago, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware

Filed Jan. 31, 1962, Ser. No. 170,211
4 Claims. (Cl. 181—23)



1. Apparatus for use in conjunction with a hearing aid having an input transducer responsive to received acoustic energy having frequency components extending over a given frequency range, and an output transducer, mounted in close proximity to said input transducer, for developing amplified acoustic energy having frequency components extending over substantially said same given range, comprising:

an ear mold for acoustically sealed insertion in a human ear and having a sound passageway therethrough communicating with the auditory canal;

an acoustic connecting device coupled to said output transducer and to said ear mold for extending said sound passageway to said output transducer;

said ear mold having at least one aperture venting said sound passageway directly to the outside atmosphere effectively to attenuate the relatively low frequency components of said amplified acoustic energy within said frequency range, thereby to permit primarily the relatively high frequency components within said range to reach the auditory canal;

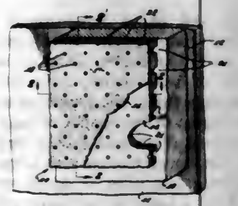
and a low-pass filter element insert disposed in said aperture for permitting the translation through said aperture of said low frequency components while preventing the translation of said high frequency components through said aperture in order to preclude acoustic feedback of said high frequency components from said output to said input transducer.

3,126,978

ACOUSTICAL AND THERMAL INSULATION

Carl V. Bergstrom, Long Beach, Calif., assignor of one-half to Peter C. Parfitt, Palos Verdes Estates, Calif., one-eighth each to Ethel B. Keithley, Evelyn B. Olson, and William N. Bergstrom, and one-sixteenth each to Richard J. Thurrell and Roger B. Thurrell

Filed Feb. 13, 1961, Ser. No. 88,728
6 Claims. (Cl. 181—33)



1. A sound absorbing structural material comprising: a sheet of acoustical insulating material having a plurality of sound wave absorbing perforations extending therethrough, said perforations being evenly spaced in rows with adjacent rows offset longitudinally a distance substantially equal to half the spacing between the individual perforations in the rows, said sheet having a plurality of channels in its back face interconnecting said perforations, one group of said channels extending in one direction and directly communicating with alternate rows of perforations, and a second group of said channels extending angularly to and intersecting said one group and directly communicating with the intermediate rows of perforations.

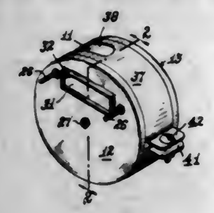
3,126,979

MUFFLERS

Joseph P. Marx, 775 E. Sumner St., Hartford, Wis.

Filed May 24, 1961, Ser. No. 112,280
9 Claims. (Cl. 181—55)

1. A muffler comprising a hollow cylindrical body including a cylindrical wall and capping end walls, one of said end walls having a radially offset inlet opening for exhaust gases and sound waves, an inner cylindrical partition bridging said end walls and defining an inner chamber into which exhaust gases and sound waves entering the inlet opening flow and an outer circumferential chamber, said inner cylindrical partition having circumferentially spaced openings therein through which gases and sound waves flow from the inner chamber to the outer circum-



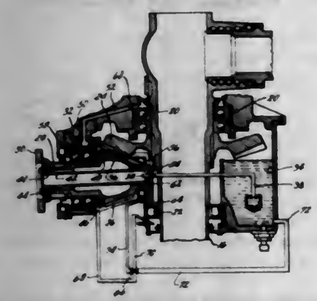
ferential chamber, and the circumferential wall of said body having an exhaust outlet.

3,126,980

SELF-CONTAINED LUBRICATION SYSTEM

Philip E. Barnes, North Granby, and Norman B. Newton, South Glastonbury, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Feb. 18, 1963, Ser. No. 259,306
5 Claims. (Cl. 184—6)



1. A self-contained lubrication system for a gear box having a rotating gear, comprising a lubricant reservoir in the gear box, a cavity portion centrally formed in the inner diameter of said gear for receiving fluid and imparting a centrifugal force thereto when said gear is rotated, means including a hollow tubular member extending through said cavity portion and terminating at one end in said gear box for leading lubricant from said lubricant reservoir, said means defining a flow path for successively passing lubricant through said tubular member to an opening formed on one end of said tubular member to an annular passage surrounding said tubular member and to said cavity portion, a plurality of fixed connecting passages for leading lubricant from said cavity portion to portions of the gear box intended to be lubricated, transfer bearing means between said plurality of fixed connecting passages and said cavity portion, and means connected to said cavity portion for returning lubricant in said gear box back to said lubricant reservoir.

3,126,981

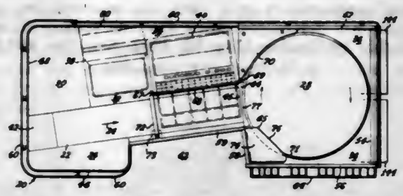
CHECK STAND

Wayland H. Crawford, San Gabriel, Calif., assignor to Modern Village Stores, Inc., El Monte, Calif., a corporation of California

Filed Dec. 17, 1959, Ser. No. 860,292
10 Claims. (Cl. 186—1)

1. A check stand having stationary top surface portions including a generally horizontal top area and providing a loading end and a delivery end, said top area having a circular recess adjacent said delivery end and a longitudinal recess extending between said loading end and said circular recess;

a rotary sacking platform mounted in said circular recess;



a longitudinal conveyor belt mounted in said longitudinal recess and having one end disposed adjacent said rotary platform to feed articles along a longitudinal path toward said rotary platform, the uppermost surfaces of said platform and belt being substantially coplanar with one another and with the stationary top surface portions of said check stand;

said stationary top surface portions of said check stand including a segment disposed between said belt and said rotary platform;

means defining a checking position between said loading and delivery ends and adjacent said belt; and

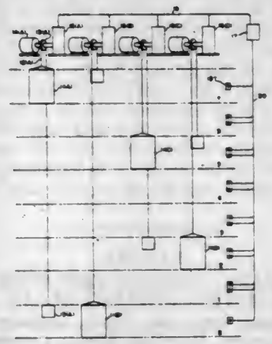
means extending across said path adjacent said checking position for impeding the feeding of articles.

3,126,982

DISPATCHING CONTROL FOR A GROUP OF ELEVATORS

Raymond A. Burgy, Maumee, Ohio, assignor to Toledo Scale Corporation, Toledo, Ohio, a corporation of Ohio

Original application Aug. 10, 1959, Ser. No. 832,772, now Patent No. 3,009,543, dated Nov. 21, 1961. Divided and this application Sept. 21, 1961, Ser. No. 141,564
20 Claims. (Cl. 187—29)

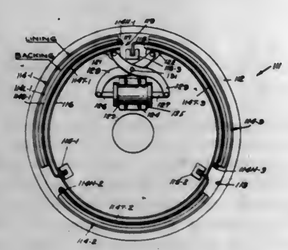


1. In an elevator system comprising a plurality of cars serving a plurality of floors including a dispatching floor, means for stopping cars when they travel to said dispatching floor, means to condition cars for loading while at said dispatching floor, means to start conditioned cars in a given direction from said dispatching floor, means to sense a predetermined condition in said system including the presence of a car stopped at the dispatching floor which has been conditioned for loading and the presence of a car stopped at the dispatching floor which has not been conditioned for loading, and means responsive to said predetermined condition for starting in said given direction a car stopped at the dispatching floor which has not been conditioned for loading.

3,126,983
FRICTION COUPLES

Howard B. Huntress, Suffern, N.Y., assignor to American Brake Shoe Company, New York, N.Y., a corporation of Delaware

Original application Aug. 7, 1959, Ser. No. 832,192, now Patent No. 3,066,765, dated Dec. 4, 1962. Divided and this application May 23, 1962, Ser. No. 197,098
6 Claims. (Cl. 188—78)



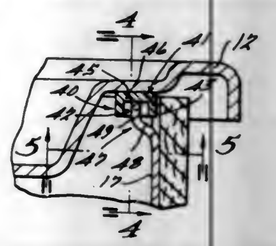
1. A friction couple comprising, a rotatable drum having a circumferential surface, a plurality of flexible arcuate shaped torque shoes arrayed along a circumferential surface of the drum in adjacent end-to-end relation and movable in radial and circumferential directions, each shoe having a first surface along the length of the shoe facing the circumferential surface of the drum and a second surface opposite said first surface, anchors for limiting movement of the torque shoes in a circumferential direction, each shoe having a flexible member connected at one end to an end of the torque shoe and connected at an opposite end to an anchor, said flexible member having a portion intermediate said ends disposed in adjacent relation to the second surface of the torque shoe to which the flexible member is connected so that the flexible member extends in folded-back relation along the length of the shoe, and actuating means for engaging each flexible member in pressure contact with the torque shoe to move the torque shoe into frictional contact with the circumferential surface of the drum, whereby the frictional contact of each torque shoe with the drum compresses the extension to bow the extension radially outwardly in one direction of rotation of the drum and tenses the extension to flex the extension radially inwardly with another direction of rotation of the drum to correspondingly vary the force transmitted to the torque shoe through the flexible extension.

3,126,984
SHOE BRAKE CONSTRUCTION WITH LOW-FRICTION BEARING MEANS

William T. Birge, Plymouth, Mich., assignor to Kelsey-Hayes Company, Romulus, Mich., a corporation of Delaware

Filed June 1, 1962, Ser. No. 199,522
2 Claims. (Cl. 188—78)

1. A brake comprising a backing plate, a pair of brake shoes each having a rim supported on said backing plate for movement relative thereto upon application of the brake, and a plurality of bearings between each brake shoe and the backing plate, each bearing comprising a disk-like bearing member formed of low-friction material, a tongue formed of the material of said rim and forming a recess in the rim and bent to extend in substantially parallel spaced relation thereto and having a free end, and a complementary recess in said bearing member engaging the free end of said tongue to position said bearing member for engagement with the backing plate to provide a substantially frictionless bearing between said brake shoe and backing plate, said bearing

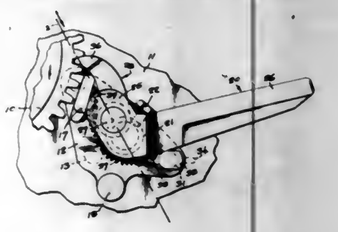


member being disposed within the recess in said rim to lock the same in place.

3,126,985
QUICK-RELEASE POSITIVE HOLD FOR USE WITH A TOWING WINCH HAVING A PIVOTED DOG

Ronald S. Selset, Seattle, Wash., assignor, by mesne assignments, to Beebe Bros., Inc., a corporation of Washington

Filed Mar. 1, 1962, Ser. No. 176,608
10 Claims. (Cl. 188—82.7)

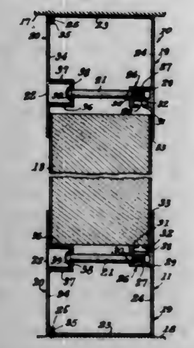


1. In a winch having a winding drum for a tow-cable and imposing a turning moment from said drum to a gear wheel in response to load-tensioning of the tow-cable, in combination with the gear wheel, and a rigid mounting member, a lever of the first order fulcrumed from said mounting member for rocker movement about an axis spaced beyond the perimeter of the gear wheel and paralleling the axis of rotation of the latter, the force arm and the power arm of said lever extending the former inwardly toward and the latter outwardly from the gear wheel, a holding pawl for the gear wheel pivoted directly to said force arm for pivotal motion about an axis offset from and paralleling the rocker axis of the lever, a stationary shoulder occupying an intervening position between the lever and the gear wheel, and stationary means engaged by the lever limiting the rocker motion of the lever to an approximate 90° turn in one direction of which the force arm swings toward the gear wheel and slides the pawl over said shoulder into ratcheting engagement with the teeth of the gear wheel and in the other direction of which the force arm moves from the gear wheel and slides the pawl over said shoulder out of engagement with the teeth of the gear wheel, said pivot axis of the pawl being so located that a force line reflecting a tow-loaded turning moment of the gear wheel and projected from the dogging end of the pawl through said pivot axis is caused, in course of moving the lever so as to engage the pawl, to traverse the rocker axis of the lever moving from a position to the outside to a position spaced only a moderate distance to the inside of said rocker axis, said lever being movable in its opposite direction of rocker travel, so as to free the gear wheel from the pawl, by sharply striking the power arm of the lever with a mallet.

3,126,986
REMOVABLE PARTITION

Joseph Madl, Jr., 990 Volante Drive, Arcadia, Calif.

Filed Sept. 19, 1960, Ser. No. 56,991
4 Claims. (Cl. 189—34)

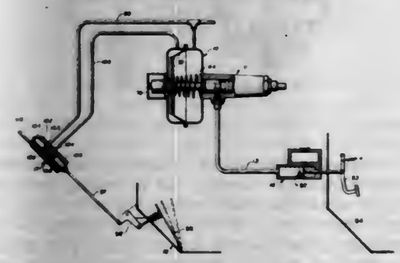


1. A partition structure comprising a longitudinal framing component including a first and second opposed vertical wall members, the first wall member comprising a vertical wall provided with an inwardly extending and recessed longitudinal channel disposed intermediate the top and bottom edges of said wall, and provided with a longitudinal channel along the bottom edge of said wall defining a bottom open slot, the second wall member comprising a vertical wall provided with inwardly directed longitudinal fastener-securing flanges opposite said recessed channel, a bottom plate integrally connected to the bottom edge of the second wall member and provided along the outer edge thereof with an upturned lip that extends into said slot in the first wall member to hold the first wall member against lateral displacement both toward and away from the second wall member, the space between the opposed portions of the two wall members above the mentioned recessed channel and fastener-receiving flanges being adapted to house an edge portion of a panel, and fastener means extending between said recessed channel and fastener-receiving flanges to clamp said panel edge portion between said opposed portions of the wall members.

3,126,987
DECELERATOR BRAKE FOR MOTOR VEHICLES

Joseph Stell and Albert M. Herzig, Los Angeles, Calif., assignors to Automatic Brake, Inc.

Filed Sept. 15, 1959, Ser. No. 840,159
6 Claims. (Cl. 192—3)

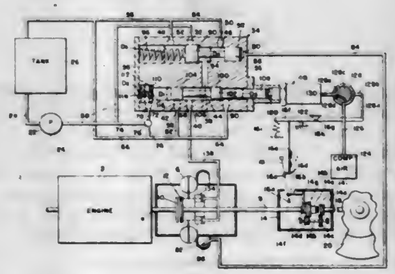


1. A vehicle having brakes; brake applying means connected to said brakes; a brake actuating power unit having a brake actuating member operatively connected to said brake applying means and driven by a movable pressure responsive member which is subject to differential pressure on opposite sides thereof; valve means operatively connected to said power unit for regulating the pressure difference on the opposite sides of said pressure responsive member; an accelerator having operative connection to said valve means to actuate the same; means defining a by-pass passageway between the opposite sides of said pressure responsive member; valve means normally closing said passageway; and means responsive to a predetermined pressure difference on said pressure responsive member for opening said second-named valve means whereby to limit the force applied to said brake actuating member.

3,126,988
POWER TRANSMISSION DEVICE

James A. Memmer, Washington, Ill., assignor to LeTourneau-Westinghouse Company, Peoria, Ill., a corporation of Illinois

Filed Mar. 23, 1961, Ser. No. 97,948
4 Claims. (Cl. 192—3.5)



1. In a vehicle having an engine, a change-speed gear box, a flexible drive between the engine and the gear box, and a clutch engageable to effect direct drive instead of flexible drive and operated by fluid pressure responsive mechanism, the invention consisting of means to disengage the clutch during shifting of gears and comprising: a valve body having a first passage to receive fluid under pressure, a second passage to deliver fluid under pressure to said mechanism, a third passage for spent fluid, and a stepped bore interconnecting the first, second, and third passages; a spool movable in the stepped bore and having a first operating position in which the first and second passages are connected and a second operating position in which the second and third passages are connected; means to supply fluid under pressure connected with the stepped bore to bias the spool into its first operating position; a check valve in the stepped bore to permit ready fluid flow from the stepped bore toward the fluid supply means and having a restricted passage to permit limited fluid flow from the fluid supply means toward the spool; and means operable during shifting of the gears to move the spool into its second operating position against the bias of said fluid supply means.

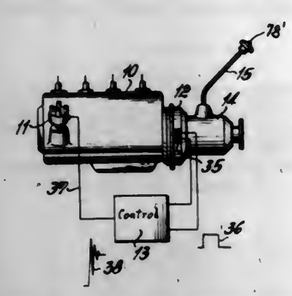
3,126,989
ELECTROMAGNETIC CLUTCH CONTROL ARRANGEMENT

Guenther Baumann, Stuttgart, Germany, assignor to Robert Bosch G.m.b.H., Stuttgart, Germany

Filed July 25, 1962, Ser. No. 212,285
Claims priority, application Germany July 28, 1961
9 Claims. (Cl. 192—3.5)

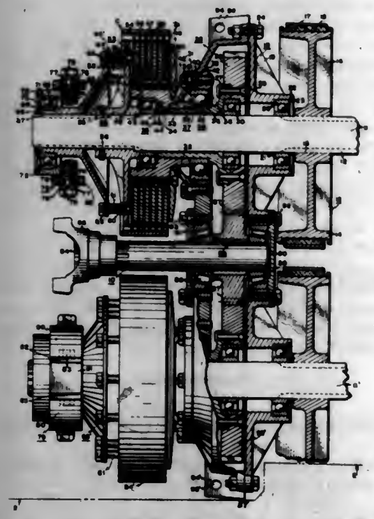
1. In an automotive vehicle having an engine and a gear shift control and electromagnetic clutch arrangement including electromagnetically activable clutching members, one thereof being connected with one, the other one being connected with another one of two rotatable members and adapted to transmit torque from one to the

other member upon application of pulsating electric energy to said electromagnetic clutch arrangement, in combination, a source of electric energy; electric pulse generator means co-operating with the engine for furnishing electric control pulses in rhythm with the operational cycles of the engine; electric oscillator means energized by said source and supplied with said control pulses and furnishing in accordance therewith energizing pulses of



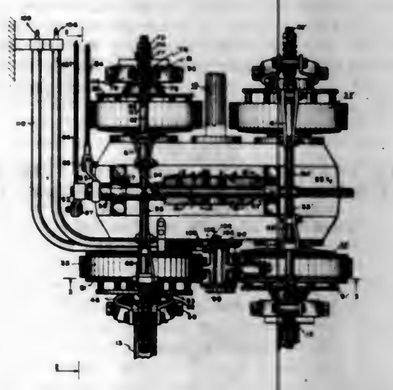
predetermined duration to the electromagnetic clutch arrangement for energizing the latter; and auxiliary circuit means operatively connected with the gear shift control for being controlled thereby and furnishing at the end of a gear shift operation a control pulse of a second predetermined duration to said electric oscillator means for causing the latter to furnish an energizing pulse of corresponding duration to said electromagnetic clutch.

3,126,990
CLUTCH AND BRAKE SYSTEM FOR TRACK LAYING VEHICLE TRANSMISSIONS
James A. Hardman, Logan, Utah, assignor to Utah Scientific Research Foundation, a corporation of Utah
Filed Mar. 12, 1962, Ser. No. 179,127
3 Claims. (Cl. 192—4)



1. A transmission including, in combination, a housing, an input shaft journaled within said housing and extending outwardly therefrom for coupling to a power source, a pair of output shafts journaled within and extending through and protruding beyond said housing on opposite sides thereof, drive gear means fixedly keyed to said input shaft and disposed within said housing, a pair of driven gear means each disposed in mesh with said drive gear means and also within said housing and revolvably journaled upon said output shafts, respectively, a pair of sleeve means respectively journaling said output shafts, said sleeve means being respectively integral with said pair of driven gear means, being journaled within said housing, and extending outwardly therefrom on at least one side thereof and terminating short of the respective extremities of their respective output shafts, a pair of clutch means respectively secured to and between said output shafts and their respective sleeve means for selectively coupling rotational energy of said sleeve means to their respective output shafts, said clutch means being disposed on said one side of said housing exterior thereto, a pair of brake means respectively secured to said output shafts on the remaining side of said housing exterior thereto, a pair of lever means pivotal about axes which are transverse with respect to their respective output shafts, and first and second linkage means respectively intercoupling said lever means with both the said clutch means and the said brake means of a respective one of said output shafts for respectively engaging said clutch means and simultaneously insuring the disengagement of said brake means, and for engaging said brake means and simultaneously insuring the disengagement of said clutch means, as desired, said first and second linkage means including over-toggling locking means for locking said brake means and said clutch means, as desired, associated with their respective output shafts, beyond infinite leverage points with respect thereto.

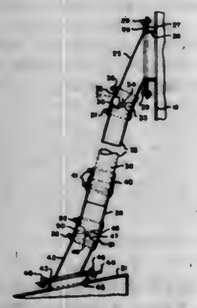
3,126,991
CONTROL MEANS INCLUDING PIVOT CONTROL FOR POWER SELECTORS OF TRACK LAYING VEHICLES
James A. Hardman, Logan, Utah, assignor to Utah Scientific Research Foundation, a corporation of Utah
Filed Mar. 12, 1962, Ser. No. 179,144
6 Claims. (Cl. 192—4)



5. A transmission including: a housing; an input shaft journaled within said housing and extending outwardly of one side thereof for coupling to a power source; a pair of output shafts journaled within and extending through said housing on the opposite side thereof; a pair of drive gear means fixed to said input shaft within said housing; a pair of driven gear means of differing speed ratios disposed in mesh with said drive gear means and surrounding each of said output shafts; a pair of concentric, end to end disposed sleeve means journaled about each of the output shafts and respectively integral with said driven gear means; a pair of clutch means for each output shaft,

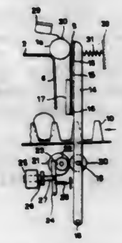
said respective pairs of clutch means serving to interconnect the sleeve means and the output shaft for unitary rotation, the speed of which is dependent upon the sleeve and integral driven gear means that is coupled to the clutch means; a control rod interconnecting the clutch means of each output shaft; bearing means fixedly disposed with respect to said housing; a pair of lever means each having a portion journaled in said bearing means; first and second control arms radially extending from said journaled portion of each of the lever means; first and second collars slidably disposed on each of said control rods at opposite ends thereon; link members, pivotally coupled to each of the first and second control arms and to said first and second collars, each of said control rods having a pair of abutments engageable by said collars, respectively, for effecting desired clutch engagement; a clutch drum fixed to one clutch of each output shaft; braking means proximate each of said clutch drums for selectively frictionally braking said clutch drums; control means comprising plural, concentrically journaled bell cranks individually provided with work arms; first and second linkage means respectively intercoupling the lever means with separate bell cranks at their work arms; third and fourth linkage means, respectively intercoupling each of the braking means with other bell cranks at their work arms; a pair of shifting levers, each of said shifting levers being engageable with one of the lever means connected to their pair of clutches for one output shaft and with the braking means associated with one of said pair of clutch means; and means normally biasing said shifting levers into engagement with its associated lever means and out of engagement with its associated braking means.

3,126,992
ADJUSTABLE CHUTE
Ray A. McCullough, Oakmont, Pa., assignor to Blaw-Knox Company, Pittsburgh, Pa., a corporation of Delaware
Filed Oct. 31, 1961, Ser. No. 149,113
6 Claims. (Cl. 193—16)



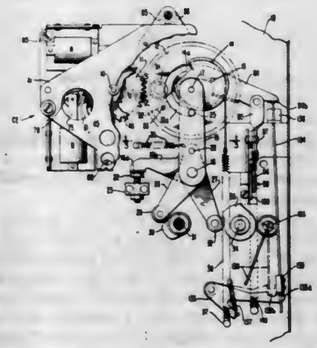
1. An adjustable chute device comprising, in combination, an entry conduit section, an exit conduit section and a run conduit section extending therebetween, longitudinally projecting and diametrally positioned overlapping ears at a hinge end of each said section adjoining another section and respectively in transverse registry, said overlapping ears being transversely spaced to avoid constricting the internal diameter of said sections, adjoining overlapping ears at each hinge end being pivotally and directly connected together to form a single-axis hinge, flexible boots covering said hinges with the edge portions of said boots respectively fastened to the adjacent ends of the respective sections forming said hinge, said run conduit section being hingedly connected at its respective end portions by said hinges to said two first-named sections respectively, said two first-named sections further having circular flanges at the outer ends thereof for attachment of the respective ends of said chute device, said run conduit section having coaxial portions capable of telescoping and of relative rotation, a flexible sleeve covering the joint between said telescoping portions with the edge portions of said sleeve respectively fastened to adjacent ends of said telescoping portions.

3,126,993
PROCESS AND APPARATUS FOR TURNING EGGS TIP-DOWN
Jelle van der Schoot, Aalten, Netherlands, assignor to Dirk van Katwijk, Velp, Netherlands
Filed Oct. 17, 1960, Ser. No. 62,994
Claims priority, application Netherlands Oct. 16, 1959
12 Claims. (Cl. 193—43)



1. Process for turning one or more eggs from an initial position in which the longitudinal axis is horizontal, into a position in which the longitudinal axis is vertical and the tip of the egg is directed downwards, characterized in that the egg is put with its longitudinal axis lying horizontal between two downward slightly converging plates, after which the plates are moved apart, so that the egg slides downward between them, turns tip-down under the influence of gravity, and is then received at the bottom of the plates in its tip-down position.

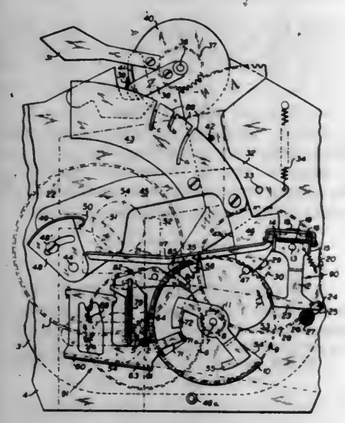
3,126,994
COIN CONTROLLED APPARATUS
Lincoln M. Keefe, Elmhurst, N.Y., assignor, by mesne assignments, to International Postal Supply Corporation, a corporation of Massachusetts
Filed June 30, 1960, Ser. No. 40,096
18 Claims. (Cl. 194—1)



1. In coin controlled apparatus, a rotative credit entry mechanism movable in credit increments through unlimited successive revolutions in one direction, means constantly engaging the entry mechanism to block its reverse turning, actuating means for the entry mechanism, and means responsive to applied coins for controlling said

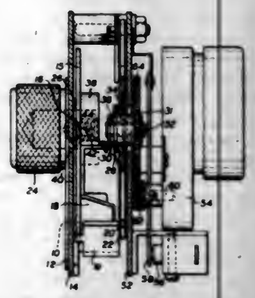
actuating means to turn the entry mechanism in said one direction from any random instant position through a number of credit increments dependent on the value of the coinage applied during a credit establishing interim, in combination with a totaling mechanism releasably mechanically drivably engaged during credit establishment with the entry mechanism for actuation thereby from a start position through a differential distance equivalent to the aggregate value of the applied coinage, means to disengage the totaling mechanism and the entry mechanism from each other after credit establishment, and means effective after the totaling mechanism has been disengaged from the entry mechanism for resetting the totaling mechanism to start position unimpeded by the unidirectionally rotative entry mechanism.

3,126,995
PARKING-METER
Heinrich Kissinger, Griesheim, Darmstadt, Friedrich Arzt, Frankfurt am Main Sud, and Albert Keck, Niederhochstadt, Frankfurt am Main, Germany, assignors to FA. VDO Tachometer Werke Adolf Schindling G.m.b.H., Frankfurt am Main, Germany, a corporation of Germany
Filed Jan. 2, 1962, Ser. No. 163,412
Claims priority, application Germany Jan. 3, 1961
15 Claims. (Cl. 194—19)



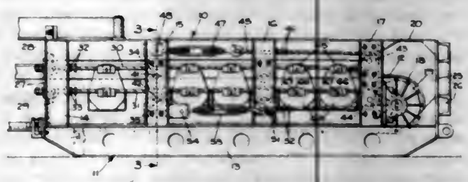
1. A parking meter comprising
a frame,
a power source mounted on said frame,
a gear train operatively connected with said power source,
means for locking the operation of said gear train,
means for rendering operative said gear train in response to the weight of coins to be inserted into said parking meter,
a coin selector comprising a control member having a plurality of slotted guides of different lengths, the length of each of said slotted guides being complementary to the value of the coin inserted into said parking meter and said slotted guides being spaced apart from each other for a distance amounting to a multiple of the diameter difference of said coins,
a time setting indicator rotatably mounted on said frame,
means including scanning means for turning said time setting indicator for an angle complementary to the different lengths of said slotted guides,
said scanning means cooperating with said slotted guides, and
a coin feeling means turnable, jointly with said coin selector, upon operation of said gear train, for engagement with the end face of said coin for an angle depending upon the diameter of said coin, in order to locate said scanning means relative to said slotted guides.

3,126,996
COIN ACTUATED TIMING CONTROL DEVICE
Louis Eickhoff, % Robco Corp., 235 W. Main St., Patchogue, N.Y.
Filed June 20, 1961, Ser. No. 118,326
6 Claims. (Cl. 194—34)



1. A timing control device comprising a timing motor having a rotatable shaft, a switch connected to operate said motor and shaft and control a utilization device, a coin actuated switch control means, an actuating lever connecting said switch control means to said switch, an internally threaded sleeve adjustably geared to said shaft, a threaded screw extending within and engaging said sleeve, said screw being connected to operate said lever, a rotatable wheel slidably engaging said screw to turn and move said screw in said sleeve away from said lever to operate said switch and start said motor, said shaft rotating said sleeve to return said screw towards said lever and stop said motor within a predetermined time, said wheel being adapted to be driven by a coin, and including means to receive and hold said coin in rotatable engagement with said wheel, said wheel comprising a detent cam having a plurality of slots to receive said coin and grooves to position said wheel, and said means to receive and hold said coin comprising a rotatable plate having a slot and a bracket for said coin and a handle for rotating said plate, said screw having longitudinal notches and said wheel having a hub with tongues slidably engaging said notches.

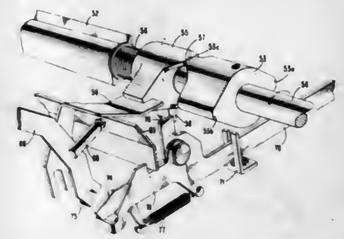
3,126,997
CONVEYOR BELT SUPPORTING STRUCTURE
Eber P. Corbin, Upper Arlington, Ohio, assignor, by mesne assignments, to Jeffrey Galion Manufacturing Company, a corporation of Ohio
Filed May 20, 1960, Ser. No. 30,584
1 Claim. (Cl. 198—184)



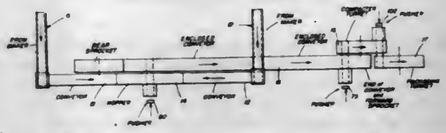
In a conveyor having a conveyor belt, a troughing idler assembly for supporting and guiding the conveying run of the conveyor belt, a pair of ropes at each side of the conveyor belt and substantially parallel thereto for supporting the idler assembly, the individual ropes of each pair of ropes being disposed one above the other, means for suspending and tensioning the ropes, the upper ropes of the respective pairs of ropes defining an upper laterally disposed plane, the lower ropes of the respective pairs of ropes defining a lower laterally disposed plane, the upper ropes and the lower ropes of the respective pairs of ropes being spaced from each other in an upright direction whereby the respective upper and lower laterally disposed planes are spaced from each other and there being an area between such upper and lower laterally disposed planes, said idler assembly being substantially disposed in the area between the pairs of ropes at each side of the conveyor belt and between the upper and lower laterally disposed planes, said idler assembly comprising a rigid frame extending transversely between the respective ropes at each side of the conveyor belt, a pair of brackets secured to said rigid frame at opposite sides thereof for engagement with the respective ropes at each side of the conveyor belt to support the idler assembly on the ropes, said ropes cooperating with the rigid frame of said idler assembly to yieldably support the idler assembly and the conveying run of the conveyor belt and to constrain the yielding movement thereof to substantially an up and down movement only, said respective ropes at each side of the conveyor belt being effectively connected to each other by the rigid frame of said idler assembly and thereby acting with substantially equal effect in yieldably supporting said idler assembly and the conveying run of the conveyor belt for up and down movement aforesaid, a center idler roll rotatably mounted on said rigid frame on a laterally disposed axis, a pair of outer idler rolls each rotatably mounted on said rigid frame, said outer idler rolls being disposed one at each side of the center idler roll on an axis which extends upwardly and outwardly from the center idler roll, said center idler roll and said outer idler rolls being thereby placed in troughing disposition to engage the conveyor belt for supporting and guiding the conveyor belt in a troughed configuration, the axis of the center idler roll and the axes of the pair of outer idler rolls being substantially disposed in the area between the respective ropes at each side of the conveyor belt and between said upper and lower laterally disposed planes, unbalanced forces due to an unevenly and haphazardly distributed loading on the conveyor belt acting on the idler rolls in the area between the upper and lower laterally disposed planes of the upper and lower ropes and any such unbalanced forces tending to twist, turn or skew the idler assemblies being opposed by oppositely acting forces in the ropes and thereby substantially maintaining the idler assembly in an upright position on the the ropes in proper supporting and guiding engagement with the conveyor belt.

3,126,998
ESCAPEMENT MECHANISM FOR TYPEWRITER
Leon E. Palmer, Lexington, Ky., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Oct. 17, 1961, Ser. No. 145,706
7 Claims. (Cl. 197—82)

1. In a typewriter, a movable carriage having a single element type head thereon, an escapement mechanism for said carriage, cyclically operable means for effecting a printing operation by said type head, means driven by said cyclically operable means for actuating said escapement mechanism, space-bar-operated means for actuating said escapement mechanism independently of said driven means, and means positioned by said cyclically operable means during a cycle of printing operation for obstructing movement of said space-bar-operated means until the cycle of printing operation has been completed.



3,126,999
COMBINED CIGARETTE MAKER AND PACKER
Stanley T. Motley, Louisville, Ky., assignor to Philip Morris Incorporated, New York, N.Y., a corporation of Virginia
Filed Apr. 25, 1961, Ser. No. 105,441
8 Claims. (Cl. 198—20)

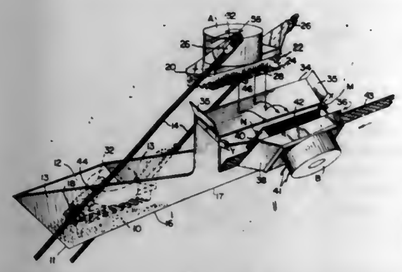


1. A flexible continuous conveyor system for automatically transferring articles said system having an article receiving station and an article delivery station with advancing and return runs of the conveyor between stations, said conveyor comprising a pair of laterally spaced chains with article pockets spaced therealong between the chains, sprocket means for supporting said chains, driving means for intermittently advancing said conveyor with an intervening period of dwell between advances, and means for adjusting the tension of the chains and the position of the corresponding pocket relative to one of said stations during the periods of dwell comprising a pair of laterally spaced sprockets engaging respectively the two chains in the advancing run, and a pair of laterally spaced sprockets engaging respectively the two chains in the return run, and supporting means of each of said pairs of sprockets including means for adjusting the positions of the sprockets toward or away from the respective chains.

3,127,000
ELECTRONIC COMPONENT BOAT LOADING METHOD AND APPARATUS
William L. Tack, 127 Shade St., Lexington, Mass.
Filed Jan. 11, 1962, Ser. No. 165,692
10 Claims. (Cl. 198—33)

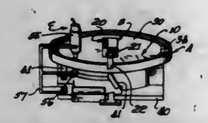
1. An apparatus for handling electronic components comprising a storage bin containing components having ferrous leads, a first electro-magnet having a screen on its lower surface slidably movable on support members, said support members secured to said bin and angularly disposed thereover, a baffle plate member in vertical alignment with a point of upper travel of said first magnet, a screened loading boat having an energized electro-magnet positioned adjacent thereto and laterally spaced from said baffle plate member, first means for energizing said first magnet at its lowest point of travel to attract components from said bin and hold them in engagement with said screen, drive means carrying said magnet to a second posi-

tion, said first means de-energizing said magnet at its highest point of travel, whereby said components will gravita-



tionally enter the magnetic field of said screened loading boat.

3,127,001
ARTICLE SEGREGATING AND COUNTING APPARATUS
Ernie A. Ferris, Westminster, Calif., assignor to TRW Semiconductors, Inc., Los Angeles, Calif., a corporation of Delaware
Filed Jan. 14, 1963, Ser. No. 251,305
3 Claims. (Cl. 198—33)



1. Apparatus for segregating individual small articles having an elongate longitudinally extending member of magnetic material from an intertwined plurality of said articles comprising:

(*a*) a generally rectangular receptacle defining a chamber bounded by sidewalls extending between a pair of end walls, a sidewall surface of said receptacle defining a plurality of holes therethrough communicating with said chamber, said holes being of a predetermined configuration to permit the selective individual passage therethrough of said articles;

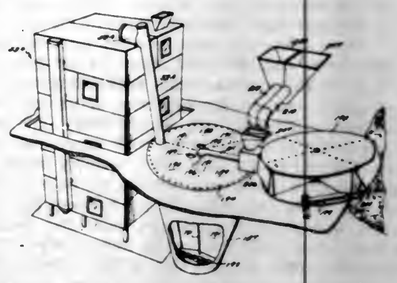
(*b*) means for selectively rotating said receptacle to thereby cause the tumbling agitation of a mass of said articles contained within said receptacle to separate individual articles from said mass and sift them through said holes;

(*c*) means for receiving said articles to retain them separate from one another, said last-named means being disposed beneath said receptacle, said receiving means including magnetic means for orienting said articles in a predetermined physical alignment, said receiving means being adapted for the individual discharge of said articles therefrom in said predetermined physical alignment for further handling; and,

(*d*) means for counting the number of said articles discharged from said receiving means.

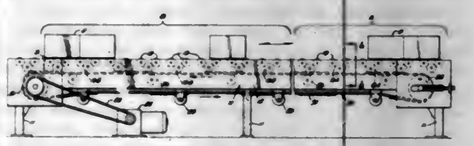
3,127,002
TRANSFER DEVICE
Andre Tempe, P.O. Box 407, Budd Lake, N.J.
Original application July 6, 1959, Ser. No. 825,145, now Patent No. 3,092,467, dated June 4, 1963. Divided and this application Sept. 14, 1962, Ser. No. 227,975
6 Claims. (Cl. 198—104)

1. A feed mechanism for digesters comprising a plurality of adjacent hoppers, a transfer chamber positioned adjacent said hoppers, a conveyor extending from said transfer chamber toward said hoppers for successively filling said hoppers, a compartmented wheel positioned adjacent said transfer chamber and adapted to discharge



the contents of each compartment into said transfer chamber upon rotation of said wheel, and a scraper blade mounted for reciprocation adjacent said wheel for filling the compartments of said wheel.

3,127,003
DRIVE FOR ROLLER-TYPE CONVEYOR
Donald I. Goepper, Cincinnati, Ohio, and Harold A. Wagner, Chicago, Ill., assignors to The Alvey-Ferguson Company, Cincinnati, Ohio, a corporation of Ohio
Filed Aug. 23, 1961, Ser. No. 133,377
4 Claims. (Cl. 198—127)



1. A conveyor comprising a supporting frame, a plurality of transversely extending article-conveying rollers rotatively carried at longitudinally spaced intervals on said frame, means for constantly driving certain of said rollers and for intermittently driving other of said rollers, said means comprising an endless driving belt having a continuous driving surface extending along its length and intermittent driving surfaces spaced longitudinally thereof, and sets of intermediate driving rollers disposed in driving contact with said conveying rollers, certain of said intermediate driving rollers being engaged with the continuous driving surface of said belt and others of said intermediate driving rollers being engageable with the intermittent driving surfaces of said belt.

3,127,004
POSITIONING DEVICE FOR THE ELEMENTS OF AN INTERMITTENTLY MOVING CONVEYOR
Jiří Richter and Karel Cernoch, Gottwaldov, Czechoslovakia, assignors to Svit, narodni podnik, Gottwaldov, Czechoslovakia
Filed Dec. 27, 1961, Ser. No. 162,515
Claims priority, application Czechoslovakia Dec. 29, 1960
4 Claims. (Cl. 198—135)

1. In a conveyor, in combination,

(*a*) a support;

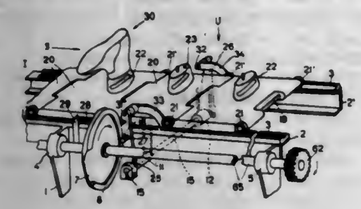
(*b*) elongated conveyor belt means on said support;

(*c*) resilient means on said support for tensioning said belt means in a predetermined longitudinal direction;

(*d*) indexing drive means intermittently operative for longitudinally moving said belt means;

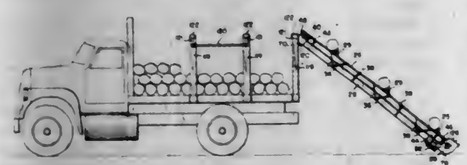
(*e*) first abutment means fixedly mounted on said belt means;

(*f*) second abutment means on said support and engageable with said first abutment means; and



(*g*) positioning drive means for moving said second abutment means longitudinally of said belt means toward and away from a predetermined position, said second abutment means during movement toward said position engaging said first abutment means for movement thereof in a direction opposite to said predetermined direction while said indexing drive means is inoperative.

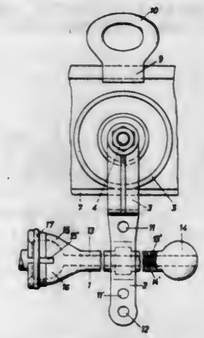
3,127,005
SELF-CONTAINED PORTABLE PULPWOOD LOADER
Iverson Lewis Twyman, 999 SW. 1st St., Miami, Fla.
Filed Jan. 15, 1962, Ser. No. 166,139
5 Claims. (Cl. 198—173)



1. A portable self-contained loader for pulpwood or like billets comprising a pair of side frame structures rigidly connected in spaced parallel relation, an endless driven member carried by each side frame structure and extending essentially from end to end thereof, a drive motor rigid with said side frame structures connected to drive said driven members in synchronism, a series of flights carried by each driven member, each flight comprising a central portion extending vertically away from said driven member and a portion extending along the length of said driven member forwardly of said central portion, means at one end of each of said side frame structures providing a rest for a billet deposited thereon, said rest being in a path of said flights, and upper and lower guide assemblies on each side frame structure, the upper guide assembly supporting the upper reach of said driven members and the lower guide assembly enclosing the lower reach of said driven members and the flights carried thereby.

3,127,006
CHAIN CONVEYOR WITH PLASTIC BALL AND SOCKET CHAIN
Walter Tochtermann, 24 Rosensteinweg, Ulm (Danube), Germany, and Alfred Richter, Offenbach (Main), Germany; said Richter assignor to C. S. Schmidt Gesellschaft für Fördertechnik m.b.H., Niederlahnstein, Germany, a corporation of Germany
Filed Jan. 19, 1961, Ser. No. 83,689
Claims priority, application Germany Jan. 26, 1960
4 Claims. (Cl. 198—177)

1. In an endless chain conveyor of the type comprising a rail formed by a plurality of lengths of suspension rail connected together, wherein a plurality of said lengths are provided with an upstanding lug whereby the rail assembly is provided with a series of spaced apart lugs by means of which the rail assembly can be suspended, a plurality of pairs of roller runners movable on and supported by the rail, and a hanger depending from each pair of the roller runners, the upper portion of each of the hangers being forked, the roller runners being mounted for rotation, inwardly of the hangers and on each arm of the hangers, the improvement comprising: a plurality of chain links of strong plastic material, each chain link comprising a necked central portion, a ball at one end of

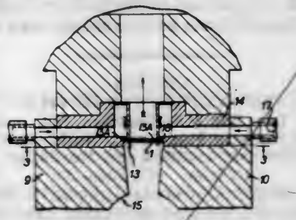


said central portion, and a spherical socket at its other end, the ball being seated for limited movement in the socket of an adjacent chain link and the socket embracing the ball of the other adjacent chain link, ring and groove means disposed on the peripheral portion of the socket to maintain the ball of the adjacent chain link secured in the socket, means on the hangers tightly embracing the necked central portions of the chain links, and means on the hangers for supporting load carriers, the ball and socket connections between the chain links permitting free angling in all directions of the hangers relative to each other.

ERRATUM

For Class 198—184 see:
Patent No. 3,126,997

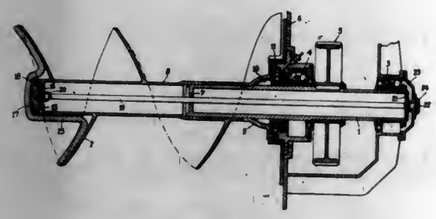
3,127,007
TOBACCO-MANIPULATING MACHINES
George Smith, London, England, assignor to Molins Machine Company Limited, London, England, a British company
Filed Nov. 20, 1961, Ser. No. 153,620
Claims priority, application Great Britain Dec. 1, 1960
3 Claims. (Cl. 198—193)



1. In a continuous-rod cigarette-making machine having an air-pervious conveyor band on which a continuous filler is conveyed and held thereto by airflow through the filler and the band, the improvement comprising guides for the air-pervious conveyor band, said guides being recessed to provide a track for the side margins of the

band, perforations in said recessed parts of the guides, and means for applying pressure air to said perforations to impinge on the side margins of the band and provide a counter pressure to the pressure resulting from the airflow which holds the filler to the band.

3,127,008
REFUSE COLLECTING CONTAINER WITH A FEED SCREW
Hilding Linde, Kalmar, Sweden, assignor to Maskinfabriks Aktiebolaget Norrbacken, Blomstermala, Sweden
Filed Apr. 24, 1961, Ser. No. 105,038
1 Claim. (Cl. 198—213)



A rotary conveyor screw for forcing refuse into a collecting container, comprising a wall constituting part of said container, a driving means; a hollow driving shaft drivingly coupled to said driving means and extending through said wall partly into said refuse collecting container; a tubular spindle arranged coaxially with respect to said driving shaft in said refuse collecting container, the outer end of said tubular spindle encasing the inner end of said driving shaft; a screw blade, spirally encircling the outer circumferential surface of said tubular spindle and rigidly secured thereto, said screw blade having an arcuate contour as seen in a longitudinal section along the axis of said tubular spindle and a concave surface facing the inner end of said tubular spindle; a cap which sealingly and non-rotatably abuts against the inner end of said tubular spindle and is provided with a threaded hole extending less than completely through said cap and opening outwards; a clamping bolt passing through said hollow driving shaft and said tubular spindle, threads upon the inner end of said clamping bolt in engagement with the threads of said sealing cap; fastening means associated with the outer ends of said hollow driving shaft and said clamping bolt for pressing said tubular spindle onto said driving shaft and for detachably interconnecting them; and a protecting cover of a material more wear-resistant than that of said tubular spindle and said sealing cap having a convex inner end surface and, covering both said cap and at least the inner portion of said screw blade.

3,127,009
COIN CONTAINER DEVICE
Michael J. Feis, Box 255, Metuchen, N.J., and Fred C. Philpitt, National Press Bldg., Washington, D.C.
Filed Oct. 25, 1960, Ser. No. 64,765
1 Claim. (Cl. 206—.8)

A multipart plastic container adapted to hold a plurality of coins in a grouped and aligned face-to-face relationship which comprises:

(*a*) two spaced apart end members,

(*b*) at least two longitudinal and generally parallel coin retaining members adapted to extend along opposed portions of the outer circumferential edges of any coins that are placed between said end members,

(*c*) at least one of said longitudinal coin retaining members functioning as a bottom member which has each of its opposite terminal ends integrally molded to said spaced apart end members,

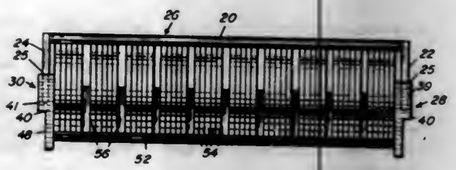
(*d*) at least one of said elongated coin retaining members functioning as a manually lockable top member,

(*e*) said manually lockable top member having two oppositely positioned terminal sections,

(*f*) each of said spaced apart end members being provided with a locking slot,

(*g*) each of said locking slots containing at least one locking cavity,

(*h*) each of said opposite terminal sections being

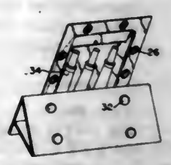


adapted to be inserted within each of said locking slots,

(*i*) said opposite terminal sections each having at least one locking projection thereon, each projection being adapted to fit within and to be permanently locked within a corresponding locking cavity in said locking slots,

(*j*) whereby once the desired number of coins have been placed on said bottom member and between said end members, said top member can be positioned along the circumferential edges of said coins at a spaced distance from said bottom member and then permanently engaged with said bottom member by inserting said terminal sections into said locking slots, so that the coins are secured between the top and bottom members so that they cannot be removed without breaking a portion of the container and the said locking projections and locking cavities are secured so that they cannot be disengaged without breaking a portion of the container.

3,127,010
DISPLAY PACKAGE
John P. Capezzuto, Cambridge, Mass., assignor to The Carter's Ink Company, Cambridge, Mass., a corporation of Massachusetts
Filed July 7, 1960, Ser. No. 41,316
4 Claims. (Cl. 206—45.2)



1. A combination display package and desk stand for writing instruments, comprising a generally flat card, said card being formed with a pair of parallel horizontal hinge lines dividing said card into upper, middle and lower sections, selected areas of said upper and middle sections being partially cut through to form circumscribed dies, a blister for enclosing said instruments, the lower marginal portion of said blister being completely bonded to the lower section of said card and the upper marginal portion being bonded only within surface areas of said card enclosed within said dies, whereby pulling of said card away from said blister causes said dies to become detached from said card and said package to be opened, but does not tear the remaining surface areas of said upper and middle sections, and means to secure the top of said card to the base of said card when said upper and middle sections are folded back upon themselves to form a support for said package.

3,127,011
CONTAINER FOR STORAGE AND TRANSPORTATION OF LONG STEM ROSES
Von C. Weddle, 2801 Charlestown Road, New Albany, Ind.
Filed July 3, 1962, Ser. No. 207,177
2 Claims. (Cl. 206—45.34)



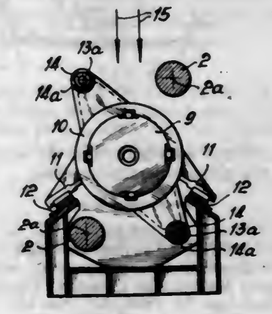
1. A container for the storing and transportation of long stem roses or the like which comprises an elongated cylindrical member and a removable watertight cap means slidably embracing an end thereof in continuous peripheral frictional fit, said cylindrical member and said cap means being composed of water impervious plastic material, said container being substantially airtight, said cylindrical member composed of thinner gage material than said cap means whereby the container may be vented by deformation of a portion of said cylindrical member beneath said cap means.

3,127,012
SOLDER DISPENSING PACKAGE
Van Smoot, 2101 S. Parton St., Santa Ana, Calif.
Filed May 22, 1961, Ser. No. 111,766
3 Claims. (Cl. 206—56)



1. A solder dispensing package of only two elements, the product and a cover: comprising a single strip of wire solder wound into an inner coil and an outer coil, the inner coil having an end for manual pulling of a portion of the strip from one end of the package, the coils being coaxial and each turn of the inner coil for its full length snugly engaging both proximate turns of the outer coil, and a constricting cover shrunk to fit each turn of the outer coil for at least 45° in radial angle whereby the engagement of the inner coil with its outer coil and the engagement of the outer coil with the cover will resist movement of the still coiled portion of the strip from the package as the free end of the solder wire is pulled out and prevent retrograde movement of the projecting portion of the solder wire as the extended working end of the strip is applied to the work.

3,127,013
TWO-COLUMN HYDRAULIC EXTRUSION PRESSES
Walter Dohrn, Dusseldorf, Germany, assignor to Schloemann Aktiengesellschaft, Dusseldorf, Germany
Filed Nov. 18, 1960, Ser. No. 70,237
Claims priority, application Germany Nov. 21, 1959
6 Claims. (Cl. 207—1)

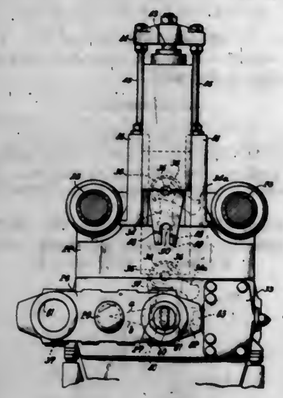


1. A horizontal hydraulic extrusion press, comprising: a bolster, a press-cylinder block, a main press cylinder in the press-cylinder block, an upper column and a lower column, both passing at one end through and secured to the bolster and at the other end passing through and secured to the main press cylinder, a container, two container-displacing cylinders arranged in the bolster, the axes of the columns and the axes of the container-displacing cylinders being parallel to the axis of the press, and these four axes, as seen in a cross-sectional view of the press, being located at the corners of an imaginary parallelogram, with the axes of the columns at diagonally opposite corners and the axes of the container-displacing cylinders at the other two diagonally opposite corners, the diagonals being at an inclination to the horizontal, so that the two columns are on opposite sides of a vertical plane containing the main axis of the press and also on opposite sides of a horizontal plane containing the main axis of the press, and the two container-displacing cylinders are also on opposite sides of the said vertical plane and also on opposite sides of the said horizontal plane.

3,127,014
HORIZONTAL METAL-TUBE AND EXTRUSION PRESSES
Walter Dohrn and Walter Jarausch, Dusseldorf, Germany, assignors to Schloemann Aktiengesellschaft, Dusseldorf, Germany
Filed Jan. 10, 1961, Ser. No. 81,837
Claims priority, application Germany Jan. 14, 1960
5 Claims. (Cl. 207—1)

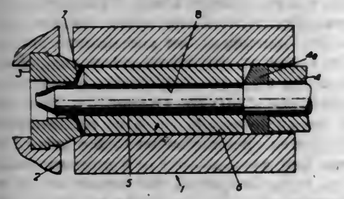
1. A horizontal metal-extrusion press, comprising: a retractable container, a holder arm capable of turning, about an axis parallel to the axis of the press, into and out of the extrusion position, a die-holder carried by the holder arm, a press rod, actuating means capable of bringing the press rod into a position directed towards

the holder arm, an abutment on the holder arm, the press rod being adapted to engage that abutment and turn the



holder arm through an angle when the actuating means for the press rod is in an operative position.

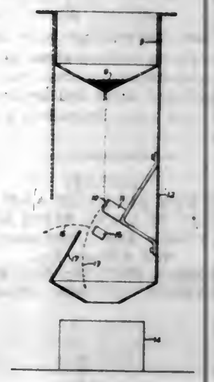
3,127,015
HOT DEFORMATION OF METALS
Karl Heinz Schleren, Duisburg, Germany, assignor to The Loewy Engineering Company Limited
Filed Apr. 29, 1960, Ser. No. 25,711
5 Claims. (Cl. 207—10)



1. In a method of producing a shaped metal body by subjecting a metal work-piece heated to a plastic condition to a metal shaping operation using shaping dies and pressure, the steps which comprise interposing between said heated work-piece and said shaping dies a lubricant layer consisting of a wholly solid organic material which becomes gaseous when under operating pressures between the hot metal work-piece and the shaping dies and applying pressure and vaporizing the wholly solid organic material whereby the vapor acts as the lubricant.

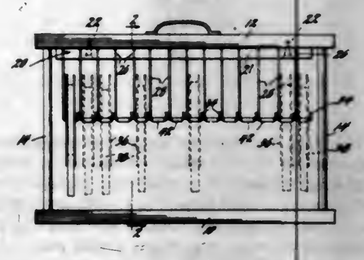
3,127,016
SORTING OF ARTICLES
George Mattey Baigent, 13–15 Broadwater Road, Welwyn Garden City, England
Filed Mar. 6, 1961, Ser. No. 93,598
Claims priority, application Great Britain Mar. 7, 1960
14 Claims. (Cl. 209—74)

1. Apparatus for sorting articles in accordance with a physical property thereof, comprising a target element, means for directing a stream of articles on to said target element, means for sensing the quality of impact of each article on said target element, and means for determining the path of movement of each article as it leaves said



target element in accordance with the response of said sensing means.

3,127,017
RACK FOR RIBBON ROLLS
Bud U. Dower, P.O. Box 158, Wheatland, Wyo.
Filed Nov. 2, 1961, Ser. No. 149,641
1 Claim. (Cl. 211—13)



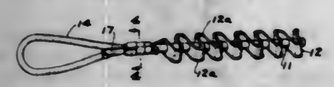
A dispensing rack of rolls of ribbon and the like, said rolls in substantially abutting relationship, said rolls having a central axial opening therein, said rack comprising a hanger-supporting beam and means for supporting said beam in face contact with the downwardly depending face of a parallel surface said beam having a channel throughout its length in its top face, and also having a series of evenly spaced, lateral slots opening through one side edge, and of sufficient depth to communicate with the said channel, hanger rods co-acting with said channel and slots, and each comprising a straight portion with transversely bent end legs, one of said legs being received in said channel, said straight portion swingable in one of said slots, about the axis of said one of said legs in a forwardly direction through substantially a quarter arc of movement from the vertical so as to prevent overrun of each of said rolls when said roll is subjected to movement about the other of said legs, said other leg having a transversely bent, outer end to prevent any roll from becoming detached from said other of said legs said transversely bent, outer end further serving as a spacer element preventing any roll from displacing an adjacent roll when said first mentioned roll is subjected to rotation, about the axis of said other of said legs and a sleeve of frictional material mounted on said other of said legs.

3,127,018
CARRIER FOR COILS OF STRAND MATERIAL
Robert A. McMasters, Birmingham, Ala., assignor to Southeastern Metals Company
Filed Dec. 6, 1963, Ser. No. 328,747
6 Claims. (Cl. 211—59)



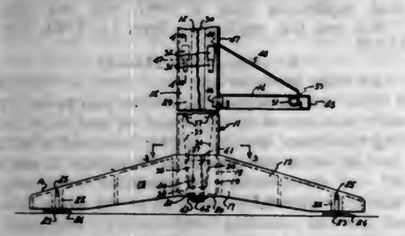
1. A carrier for coiled material comprising a plurality of identical elongated elements each having a straight medial portion, a laterally extending V-shaped lower end portion and a straight laterally extending upper end portion, each element having its V-shaped lower end portion partially extending alongside of and fixedly joined to a part of the V-shaped lower end portion of an adjacent element and each element having its upper end portion extending normal to and fixedly joined to the upper end portion of an adjacent element.

3,127,019
FLEXIBLE CLOTHESLINE
Walter G. Von Meyer, 1504 Port Jefferson Road, Sidney, Ohio
Filed Aug. 17, 1961, Ser. No. 132,205
10 Claims. (Cl. 211—119.13)



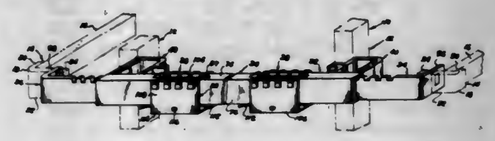
9. A flexible clothesline comprising a strand of elastic material having a circular cross section, a band of elastic material having lesser elasticity than said strand, said band having a width greater than its thickness and greater than the diameter of said strand of material, said band being normally serpentine and having a plurality of longitudinally spaced openings therein, said strand of elastic material passing through said openings.

3,127,020
FREESTANDING SHELVING APPARATUS
William M. Bibb, Palo Alto, Calif., assignor to W. R. Ames Company, Milpitas, Calif., a corporation of California
Filed Sept. 21, 1961, Ser. No. 139,649
2 Claims. (Cl. 211—148)



1. In a freestanding shelving apparatus of the type wherein vertical upright standards support horizontal shelves suspended therefrom, an improved knocked-down standard comprising: a base member having laterally extending end portions for engaging a flat floor surface, and a raised central portion including internal wall members and a bottom portion forming a pocket; a tubular column having a lower end inserted in said pocket, said lower end having yieldable side members and a cross-sectional shape similar to and slightly smaller than said pocket; fixed tapered members extending inwardly from said yieldable side members, said tapered members having edges converging toward the lower end of said columns; a tapered block member adapted to slide within the lower end of said column and having slots along its sides substantially parallel to said edges of said fixed tapered members; and bolt means extending through an opening in said bottom portion of said pocket and threaded to said tapered block member for drawing said block member downward in said column and into engagement with said edges of said fixed tapered members, thereby causing said yieldable side members of said column to press tightly against the internal walls of said pocket and thereby rigidly connecting said column to said base member.

3,127,021
ADJUSTABLE OUTRIGGER UNIT
Herbert Ira Nolen, 8095 Chalmers Ave., Warren, Mich.
Filed Dec. 4, 1961, Ser. No. 156,866
12 Claims. (Cl. 211—175)



1. An adjustable outrigger unit adapted for attachment to the corner posts of a portable stock rack, said unit comprising

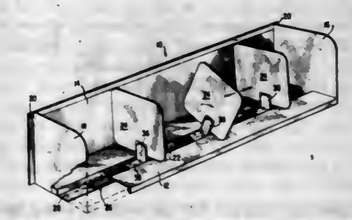
an elongated housing,

means on said housing for securing said housing to the corner posts,

an elongated outrigger member slidably mounted in said housing for adjustment motion therealong and projecting outwardly from one end thereof, said outrigger member having multiple longitudinally-spaced locking notches thereon,

and a locking device movably mounted on said housing and having a locking element thereon movable relatively thereto selectively into and out of locking engagement with said notches of said outrigger member.

3,127,022
ADJUSTABLE SHELF PARTITION
William G. French, 110 Ivory St., Frewsburg, N.Y.
Filed July 12, 1961, Ser. No. 123,541
14 Claims. (Cl. 211—184)



1. In a shelf assembly, a shelf having a longitudinally extending channel, a rail secured in said channel and having a pair of longitudinal flanges at opposite sides, one of

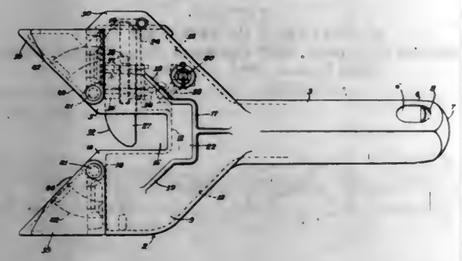
said flanges being a support and guide flange, the other flange being provided with a series of locking detents spaced longitudinally of the rail, a partition positioned transversely to said shelf and means for movably securing the partition to said rail including a first portion slidably and hingedly mounted on said first flange and a second portion removably engageable in said locking detents of the other flange upon transverse tilting of the partition in its own plane whereby said partition may be adjustably moved to and locked in another position by tilting the partition to unlock said second portion of the securing means, sliding the partition to the selected other position and releasing the partition to reengage and lock the second portion of said securing means.

3,127,023

RAILWAY CAR COUPLER

Frederick C. Kulieke, Jr., and Kenneth V. Livelsberger, Alliance, Ohio, assignors to American Steel Foundries, Chicago, Ill., a corporation of New Jersey

Filed Sept. 22, 1961, Ser. No. 139,955
15 Claims. (Cl. 213—103)



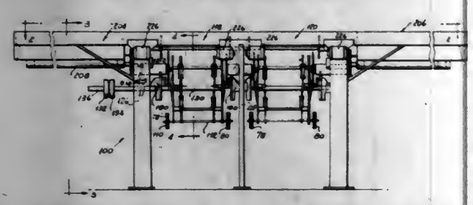
1. In a railway car coupler, a head having coplanar upper and lower sections defining a throat therebetween and inclined transversely at an angle of 45° from a horizontal plane, retractable wings pivotally mounted at their inner ends on the forward ends of their respective sections and having front faces converging toward said throat, a lock slidably mounted on said upper section for gravitational transverse movement into said throat for coupling engagement, and means to move said lock upwardly to an uncoupling position.

3,127,024

MANDREL STRIPPER FOR MAT WINDING MACHINE

Alexander L. McPherson, Prairie Village, Kans., and Harold G. Bailey, Akron, and Arthur D. Stevens, Cuyahoga Falls, Ohio, assignors to Gustin-Bacon Manufacturing Company, Kansas City, Mo., a corporation of Missouri

Filed Nov. 26, 1957, Ser. No. 698,971
5 Claims. (Cl. 214—1)



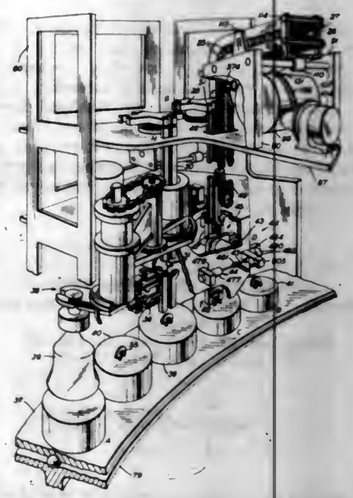
1. A mandrel stripper for use with an oven for curing tubes of insulating material carried by elongated mandrels having ends including in combination, means for engaging said mandrel ends to remove mandrels carrying tubes of insulation from said oven, means for gripping tubes of insulation carried by mandrels and for carrying said tubes to a stripping station, means for receiving mandrel ends from said mandrel removing means and for moving said mandrels and tubes of insulation to a position which said tube gripping means can act on said tubes and means at said stripping station for grasping the end of a mandrel and for pulling said mandrel out of the tube carried thereby while said tube is retained by said gripping means.

3,127,025

LOADING AND UNLOADING MECHANISM

Marion D. Clark and Albert R. Fairchild, Winston-Salem, N.C., and Frederick R. Neall, Brookline, Mass., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Jan. 25, 1961, Ser. No. 84,895
5 Claims. (Cl. 214—1)



1. In an apparatus for positioning an article within an enclosure, a conveyor for supporting the enclosure, means for advancing the conveyor, means actuated upon the advancing means stopping for lifting the enclosure from the conveyor, means rendered effective upon the lifting means lifting the enclosure from the conveyor for depositing the article on the conveyor, and means operated in sequence with the depositing means for actuating the lifting means to restore the enclosure to the conveyor.

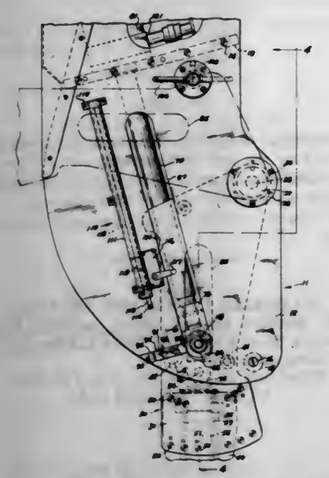
3,127,026

WORK EXTRACTOR ARM FOR A PRESS

Leland F. Blatt, Grosse Pointe Woods, Mich. (24121 Mound Road, Warren, Mich.)

Original application May 8, 1961, Ser. No. 108,649. Divided and this application Sept. 18, 1962, Ser. No. 224,455
8 Claims. (Cl. 214—1)

1. In a work extractor arm for a press; a body; means at its upper end for supporting it upon said press; a swing pivotally mounted at its upper end on said body and depending therefrom; an arm slidably mounted at its upper end on said swing and depending therefrom to move upwardly and downwardly; an elongated work engaging jaw assembly adjustably mounted at the lower free end of said arm and extending horizontally for reciprocal projection into said press; a motor mounted on the body including an upwardly and downwardly reciprocating rod pivotally connected at its lower free end to the upper end of said arm and to said swing; and means for guiding the swing and the arm as they are moved upwardly by the motor; said means comprising a cross pin connected to the upper end of the arm riding in a vertical slot in the swing and also riding in a nearly vertical slot of the body, at an acute angle to the slot of the swing; whereby upward movement of the reciprocating rod of the motor lifts the jaw assembly and rearwardly swings said swing on said body to produce in said jaw assembly successively rectilinear and rotary movements; said swing having a substantially vertical stop edge remote from its pivotal mounting; in combination with the foregoing, a lock for engaging such edge and thus holding the swing in its



extreme rearwardly swing position and holding the jaw assembly remote from the press; said lock comprising a cross shaft parallel to the axis of pivotal mounting of the swing and positioned well above it in a location such that rotation of said cross shaft on its axis alternatively can place a stop part of such shaft against an abutment part of the swing edge to hold the swing stopped in a desired locked position with the jaw assembly remote from the press; or remove said stop part from said abutment to release the swing edge so that the swing can move freely past the cross shaft and freely move the jaw assembly to and from the press.

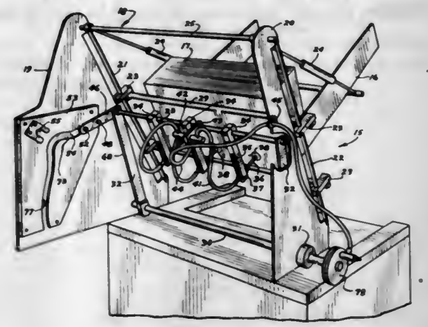
3,127,027

CAM FOR CARTON HANDLING MACHINE

Robert A. Roser, Hopkins, and Paul L. Anderson, Minneapolis, Minn., assignors to Thiele Engineering Company, Minneapolis, Minn., a corporation of Minnesota

Filed Dec. 14, 1962, Ser. No. 244,646
10 Claims. (Cl. 214—1)

1. A carton handling mechanism including:
a main frame,
a main cam block mounted on said frame, said main cam block being provided with a main cam track,
an actuator arm pivotally mounted on said main frame about an axis extending at right angles to the plane of said cam block, said actuator arm being movable back and forth between first and second positions,
means pivotally mounted on an outer end of said arm for receiving and holding a carton,
a cam lever mounted to control pivotal movement of said carton holding means,
a main cam roller rotatably mounted on said cam lever and adapted to move along said cam track upon movement of said arm between said first and second positions,
means to pivot said arm about its axis between said first and second position, and
cooperating auxiliary cam means on said main cam block and said lever,



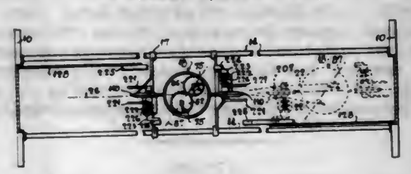
said main cam roller and main cam track being arranged so that said cam lever pivots about its axis as said arm moves so that the axis of said main cam roller passes through a reference plane defined by the axes of said lever and said arm as said arm moves back and forth between said first and second positions, said auxiliary cam means being positioned to control the angular direction of pivoting of said lever as the axis of said main cam roller approaches said reference plane, said main cam roller axis leading said reference plane in direction of movement of said arm before said main cam roller axis passes through said plane and trailing said reference plane after said main cam roller axis passes through said reference plane until movement of said arm is reversed in direction.

3,127,028

APPARATUS FOR STRINGING TOBACCO LEAVES AND THE LIKE

Robert Brown, Jr., Arlington, Va. (6712 Wilkins Drive, Falls Church, Va.)

Filed July 13, 1959, Ser. No. 826,549
21 Claims. (Cl. 214—5.5)

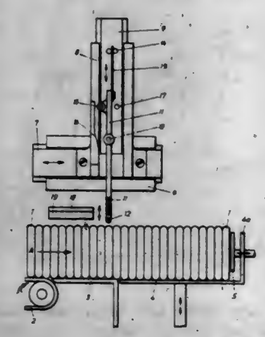


1. Apparatus for interlooping under a stick the butts of tobacco hands with strand material, comprising means for removably supporting said stick in substantially horizontal position, means for supporting two rows of said hand butts respectively on opposite sides of a supported stick, said butts being vertically disposed and projecting below the bottom of said stick, means movable longitudinally of said rows of hand butts for successively forming interconnected loops of the strand material around and between the projecting hand butts of the opposed rows, and means operable upon the completion of said loop forming operations for reversing the direction of travel of said loop forming means, and means operable during the reverse travel of said loop forming means for repeating said looping operations upon rows of hand butts similarly supported on opposite sides of a succeeding stick.

3,127,029
DEVICE FOR SEPARATING INDIVIDUAL GROUPS OF FLAT ARTICLES

Pierre Luginbühl, Neuhausen am Rheinfall, Switzerland, assignor to Schweizerische Industrie-Gesellschaft, Neuhausen am Rheinfall, Switzerland

Filed Nov. 28, 1961, Ser. No. 155,422
Claims priority, application Switzerland Dec. 2, 1960
4 Claims. (Cl. 214—8.5)



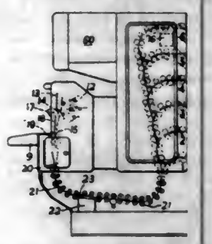
1. A device for separating flat articles into individual groups of substantially equal portions, comprising an endless conveyor for continuously moving said flat articles along a pathway toward one end of said conveyor with the articles arranged in side by side upright relation, a horizontal guide, a slide member positioned therein, a vertical guide connected to said horizontal guide, a carrier member slidably mounted in said vertical guide and positioned above said pathway adjacent said one end of said endless conveyor for vertical to and fro movement transversely of said pathway, a separating member pivotally mounted on said carrier and displaceable in either direction of movement along said pathway to engage between adjacent flat articles when said carrier member is moved downwardly, yielding spring means connected to said carrier and separating member to maintain said separating member in a normal vertical dead center rest position, and cooperating cam members positioned on said carrier and separating member operable when said separating member is in its lowered position to pivot said separating member and move the lower end thereof in a direction opposite to the direction of conveyor travel when the same is in position between two adjacent articles and a stop member positioned on said carrier, said cooperating cam members and said stop member being adapted to prevent movement of said separating member on said carrier member when the same is in its operative position.

3,127,030
LETTER-SORTING MACHINE

Howard Osborn and Bernard Elwyn Giles, Bristol, Robert Ernest Preen, Radlett, and Frederick Charles David Streeter, Bristol, England, assignors to The Thrissell Engineering Co. Ltd., a British company

Filed Aug. 2, 1960, Ser. No. 47,057
Claims priority, application Great Britain Aug. 4, 1959
9 Claims. (Cl. 214—11)

1. In a letter sorting machine of the kind in which letters are distributed according to a code and in which the letters are fed one at a time to a gate which opens to deliver each letter to a first conveyor arranged to carry letters singly in succession, and having means arranged selectively to feed each letter to one of at least two further conveyors, provided with diverters and operating means therefor to cause such letter to be discharged from a conveyor by a diverter at a position depending on the destination of such letter, the said operating means including a time-delay device set into operation at gate opening and arranged to delay diverter operation by a time equal to the transit time of the letter from the gate to such diverter, the improvement comprising common means for simultaneously operating as a group, each group of those diverters which are located on different

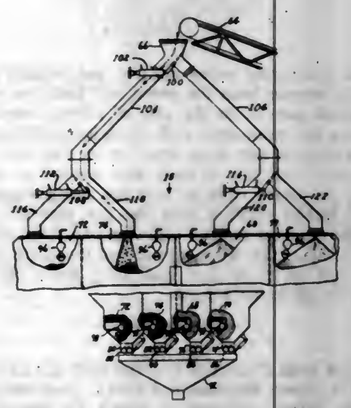


further conveyors but at the same distance from said gate, as measured by the transit time, whereby a letter on one of said further conveyors is discharged at its proper position by the approprite diverter on said one conveyor, while any diverter simultaneously operated makes an idle movement.

3,127,031
MATERIAL HANDLING SYSTEM

Warren E. Stauffer, Quincy, Mass., assignor to Eastern Engineering Sales Company, Quincy, Mass., a corporation of Massachusetts

Filed July 11, 1961, Ser. No. 123,296
1 Claim. (Cl. 214—16)

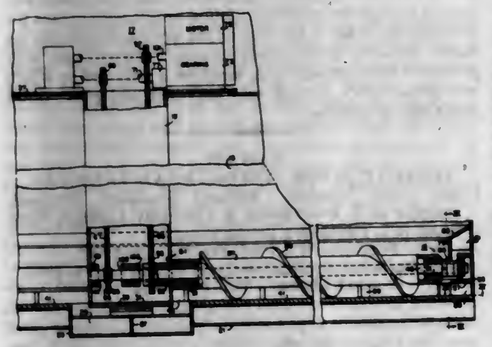


A materials handling system for handling particulate materials of various sizes comprising; means for classifying particulate materials by size; first means for conveying and depositing said classified particulate materials in a row of unconfined storage piles on the ground; first controllable discharge valve means associated with and located beneath said material storage piles for selectively discharging each said material storage pile, said first discharge means including vibratory means for facilitating rapid controlled discharge of fine-grained materials; a secondary storage bin positioned above the ground and having therein a row of bin compartments; an underground tunnel located beneath the row of material storage piles and rising to open at the ground surface; second conveying means moving through said underground tunnel and emerging at the surface opening and rising to said secondary storage bin, said second conveying means disposed directly beneath said first controllable discharge valve means to receive the discharge of particulate materials therefrom and disposed above said secondary storage bin to deposit materials thereinto; fixed receiving means at said secondary storage bin in position to receive the deposited materials from said second conveying means; fixed chutes connecting said receiving means to each of said bin compartments; second controllable valve means associated with said fixed chutes to direct the deposited materials to selected bin compartments; a collecting cone positioned beneath said bin compartments; and third controllable valve means associated with said bin compartments for selectively discharging particulate materials from each said bin compartment through said collecting cone into a waiting vehicle; said three controllable valve means being under the control of one operator near said secondary storage bin.

3,127,032
STORAGE APPARATUS

John A. Roberts, 2554 Lindenwood Drive, Bridgeville, Pa.

Filed July 12, 1962, Ser. No. 209,417
6 Claims. (Cl. 214—17)

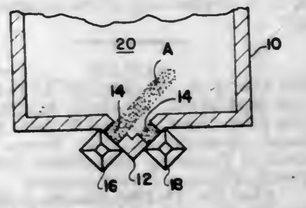


1. A storage apparatus comprising:
(*a*) A cylindrically shaped container having a substantially enclosed bottom at one thereof and being formed with at least one opening in said bottom in substantial alignment with the longitudinal axis of said container;
(*b*) A shaft member projecting into said container from its bottom in substantial alignment with said axis and being disposed to rotate;
(*c*) Means for supporting said rotatable shaft member;
(*d*) A perforated rail extending around the inside circumference of said cylindrical shaped container, said perforations being disposed to receive a drive sprocket;
(*e*) A radially extending drive shaft rotatably mounted at its inner end to said shaft member and having a drive sprocket rigidly fixed to its outer end and said sprocket being disposed to cooperate with said perforated rail so as to cause said shaft member to rotate and said radially extending drive shaft to pivotally rotate about the said axis on said shaft member when said drive shaft is caused to rotate;
(*f*) A worm conveyor disposed about said radially extending drive shaft and disposed to rotate independently of said drive shaft so as to transport particulate or granular materials radially inwardly toward said at least one opening so as to eject said material from said container through said at least one opening;
(*g*) Means for rotating said drive shaft, and
(*h*) Means for independently rotating said worm conveyor so as to transport particulate or granular materials inwardly toward said at least one opening.

3,127,033
GLASS FURNACE BATCH CHARGING APPARATUS AND CONTROL MEANS THEREFOR

Aaron K. Lyle, West Hartford, Conn., assignor to Emhart Manufacturing Company, Hartford, Conn., a corporation of Delaware

Filed Sept. 29, 1961, Ser. No. 141,852
6 Claims. (Cl. 214—18)

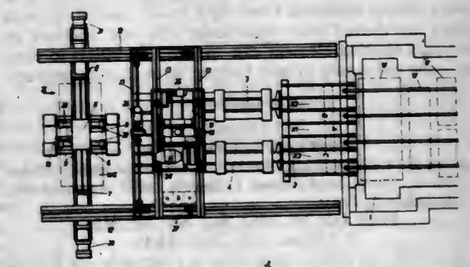


1. In a glass melting furnace having two openings to receive batch and having a charger in each opening driven by a variable speed electric motor to feed batch, the combination of means for controlling charger operation comprising a plurality of electrical circuits connectible with a source of energy and which include a first circuit having a first timer operable during its timed period to energize the motor for one charger, a second circuit having a second timer operable during its timed period to energize the motor for the second charger, a normally open third circuit having a third timer operable at the end of its timed period alternately to close said first or second circuits, means operable by either said first timer or said second timer at the end of their timed periods to close said third circuit for the period of operation of said third timer, and additional circuits including means effective to energize both of said motors and means effective to establish the speed of operation of said motors at substantially one-half the speed at which they operate by control of the first and second timers, said additional circuits being closed by said third timer during its timed period.

3,127,034
FURNACE FEED APPARATUS

Friedrich W. Busch, Dusseldorf, Germany, assignor to Siemag Siegener Maschinenbau G.m.b.H., Dahlbruch, Westphalia, Germany, a corporation of Germany

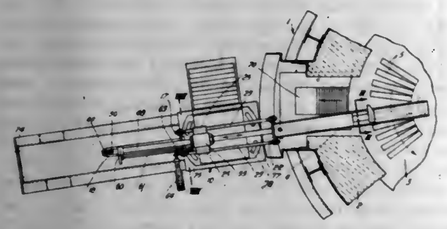
Filed Apr. 5, 1962, Ser. No. 185,786
Claims priority, application Germany Apr. 5, 1961
3 Claims. (Cl. 214—18)



1. Furnace feed apparatus, comprising
(*a*) a rectangular reheat furnace having an inlet and an outlet end, the furnace having a horizontally-elongated opening along the inlet end,
(*b*) a horizontal grate extending from the opening,

(*c*) a cross-pusher mounted adjacent and operative over the said grate,
(*d*) a platform located opposite the cross-pusher from the grate,
(*e*) a conveyor extending over the platform, cross-pusher, and grate and adapted to carry stock from the platform to the grate without interfering with the cross-pusher operation,
(*f*) said platform being provided with power-activated aligning members operative to adjust stock transversely of the center line of the furnace for properly relating the stock to the cross-pusher, and
(*g*) power-activated aligning members operative to adjust stock longitudinally of the centerline of the furnace.

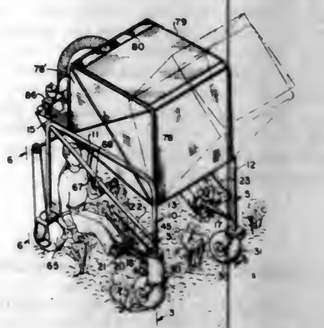
3,127,035
PROCESS FOR THE CHARGING AND DISCHARGING OF ROTATING HEARTH FURNACES, AND MEANS FOR CARRYING OUT THIS PROCESS
Jean Bourel, Montreuil-sous-Bois, France, assignor to Chaufferie et Fumisterie Industrielles, Montreuil-sous-Bois (Seine), France, a French company
Filed Feb. 19, 1960, Ser. No. 9,745
Claims priority, application France Feb. 23, 1959
2 Claims. (Cl. 214—23)



1. In an apparatus for charging and discharging billets into and out of a rotary hearth furnace having a rotary hearth and a furnace wall surrounding the hearth with there being an aperture in the furnace wall, means for charging billets into said furnace and positioning the billets radially on said rotary hearth, a guiding abutment radially disposed in said furnace above said rotary hearth in the path of the billets positioned on said hearth, said guiding abutment being positioned radially inwardly of said aperture and being rearwardly of said charging means with respect to the direction of hearth rotation, means extending into said furnace through said aperture for discharging billets outwardly of said furnace from said rotary hearth through said aperture, said discharging means having an ejecting element movable radially of said rotary hearth and parallel to said guiding abutment, said abutment radially repositioning any billets on said rotary hearth displaced from their radial position as such billets are moved into registration with said aperture so that said ejecting element can engage said billets to eject the same outwardly of said furnace through said aperture.

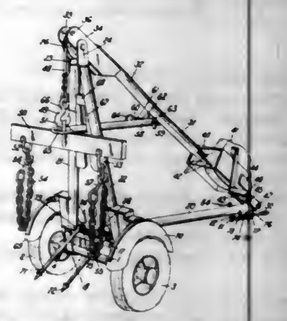
3,127,036
COTTON HARVESTER
Joseph E. Cunningham, 3062 E. Glengarry Road, Memphis 8, Tenn., and James L. Smith, 3832 Argonne St., Memphis 7, Tenn.
Filed July 10, 1962, Ser. No. 208,810
1 Claim. (Cl. 214—83.1)

A cotton harvester comprising a receptacle for picked cotton, said receptacle having a top opening, lightweight frame structure of near the same size as and pivotally mounting said receptacle adjacent the top thereof whereby cotton may be discharged through said top opening upon the pivoting of said receptacle, a prime mover mounted on said frame structure, means for propelling said frame structure from said prime mover, at least one seat for a workman carried by said frame structure below said receptacle, steering means carried by said frame structure in a position conveniently accessible to said workman, suction means on said harvester including a flexible con-



duit for conveying picked cotton into said receptacle and having at least one movable suction nozzle with means for securing the latter to the arm of the workman adjacent his hand, whereby a relatively compact lightweight self-propelled workman-carrying machine is provided by which one person may operate said harvester and pick cotton while riding thereon.

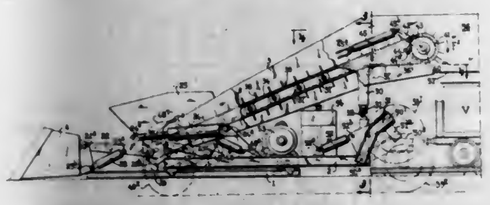
3,127,037
APPARATUS FOR TOWING ROAD VEHICLES
Leslie Cyril Newman, Bishop's Stortford, England, assignor to J. Brockhouse & Company Limited, West Bromwich, England, a British company
Filed Dec. 13, 1961, Ser. No. 158,978
Claims priority, application Great Britain June 6, 1961
11 Claims. (Cl. 214—86)



1. Apparatus for towing a road vehicle, comprising a frame work supported on road wheels and adapted to be attached to and towed behind a towing vehicle, a pulley supported by the framework in position to be spaced rearwardly and upwardly from the road wheels when the apparatus is in use, a flexible lifting member passing over the said pulley and depending therefrom, attachment means on the dependent portion of the said lifting member for attaching the lifting member to a vehicle to be towed, lifting means operable on the lifting member to raise the vehicle to be towed, a bar extending rearwardly of the framework and mounted thereon for pivoting movement about an axis extending transversely of the towing direction, means carried by the framework to limit movement of the bar transversely of the towing direction and means on the bar to engage the attachment means

and thus to prevent movement of the attachment means transversely of the towing direction while allowing the attachment means to pivot about an axis coincident with the dependent portion of the lifting member.

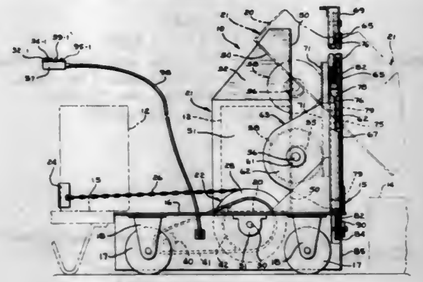
3,127,038
SHOVELLING AND LOADING MACHINE
Pierre Jean Marie Theodore Allard, 8 Ave. de Soisy, Esubonne, France
Original application May 21, 1957, Ser. No. 660,562. Divided and this application Nov. 27, 1959, Ser. No. 855,935
Claims priority, application France May 23, 1956
7 Claims. (Cl. 214—90)



1. A shovel loader comprising: a group of selectively raisable and lowerable highway wheels; an elongated chassis including a plurality of laterally spaced separately longitudinally reciprocable skid means simultaneously engageable with the ground when the highway wheels are raised and free of the ground when the highway wheels are lowered, said chassis being supported by said skid means when said wheels are raised and by said wheels when said wheels are lowered; a shovel member carried by said chassis and which may be raised and lowered at will; conveyor means having an inlet and an outlet, said shovel member being movable to discharge its contents into said conveyor inlet, the outlet of said conveyor being disposed to discharge said contents into receiving means for loading the same; a source of pressure fluid; means controllably actuated by said source of pressure fluid for causing discharging movement of said shovel, and further means controllably actuable by said source for selectively displacing all of said skid means simultaneously in one direction relative to said chassis with said wheels raised to advance said shovel into material to be loaded or in the opposite direction with said wheels lowered for advancing said skid means, at least two separate ones of said skid means being selectively displaceable simultaneously in opposite directions by said further means with said wheels raised for rotating said chassis about a vertical axis.

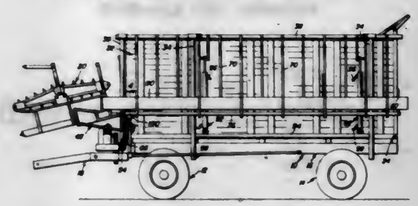
3,127,039
DEVICE FOR INVERTING CONTAINERS TO EMPTY CONTENTS THEREOF
Milton J. Christiansen, deceased, late of Brookfield, Ill., by Blanche E. Christiansen, executrix, Brookfield, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 16, 1962, Ser. No. 189,225
2 Claims. (Cl. 214—313)

1. A device for elevating and tilting containers which comprises a horizontal platform, roller means for supporting said platform, a pair of vertically disposed longitudinally slotted tubular guides fixedly supported on said platform, a vertically disposed tubular member for each of said tubular guides fixedly mounted on said platform in parallel and adjacent relation to said tubular guides, a transverse frame member interconnecting said tubular members and said tubular guides at the upper ends thereof, an elevator element slidably mounted within each of said tubular guides, elevator brackets extending laterally from said elevator elements for vertical movement therewith on said tubular guides, a chain secured to each of said elevator elements with portions of the chain directed therefrom in opposite directions, means for guiding portions of the chains vertically within said tubular guides and said tubular members, reversible drive means for actuating said chains to effect the raising and lowering of the elevator elements, a cradle for supporting a container, said cradle having a bottom normally resting on said platform for supporting the container thereon in upright position and having walls extending upwardly from said bottom for supporting the container for turning movement



and providing a side opening for horizontal movement of the container into said cradle, said upwardly extending walls being shaped to retain the container on the cradle in inverted position and to form a spout for directing the contents of the container from said cradle, means for connecting said cradle to said elevator brackets for vertical movement therewith and for rotation relative thereto about a horizontal axis, a gear fixedly connected to said cradle in concentric relation to said axis, a vertically disposed rack bar meshing with said gear and mounted in fixed relation to said platform, and means for selectively actuating said reversible drive means.

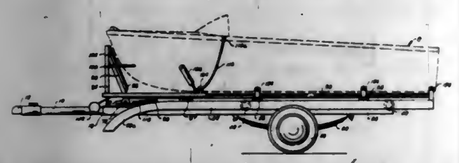
3,127,040
BALED HAY LOADER
Joe A. Nieto, Jr., Rte. 2, Box 49, Roswell, N. Mex.
Filed Oct. 5, 1961, Ser. No. 143,121
8 Claims. (Cl. 214—501)



1. A baled hay loader for receiving bales of hay from the outlet end of the discharge conveyor of a hay baler, said loader comprising an open top bin mounted on a wheeled main frame adapted to be towed behind a hay baler, a substantially horizontally disposed and longitudinally extending conveyor assembly disposed on one side of said main frame, means swingably mounting said conveyor assembly on said main frame for movement about a substantially horizontally disposed axis extending longitudinally of said frame between an upright lowermost bale receiving position extending alongside a lower portion of said bin and an upper inverted position above the top of said bin, said axis being disposed between upper and lower positions of said conveyor assembly, motor means operatively connected between said main

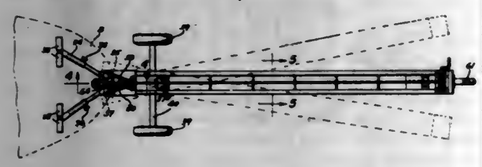
frame and said conveyor assembly for selectively oscillating the latter, said conveyor assembly including rotating drive means adapted to engage a bale of hay received on the forward end of said conveyor assembly and to move said bale toward the rear end of said conveyor assembly, said main frame including driven drive shaft means including means for automatic releasable driving engagement with said drive means when said conveyor assembly is in the lower position and releasable from engagement with said drive means upon movement of said conveyor assembly from said lower position toward said upper position.

3,127,041
VEHICLE LOAD BED
James P. Flynn, Rte. 1, Box 434, and Jim D. Nelson, 2600 NW. 14th, both of Oklahoma City, Okla.
Filed Dec. 27, 1960, Ser. No. 78,606
13 Claims. (Cl. 214—505)



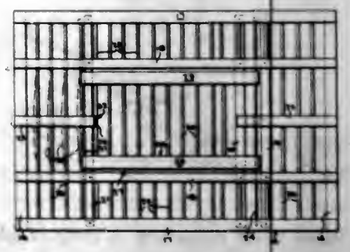
1. In combination with a vehicle having a chassis with front and rear ends defining the longitudinal length thereof, first and second bearing means spaced longitudinally on said chassis, load-carrying means having elongated track means extending longitudinally of said chassis and arranged to ride on said bearing means, said track means having a downwardly curved portion adjacent one end thereof, and means for moving the load-carrying means longitudinally of the chassis with said track means riding on said bearing means whereby said curved portion will cause said load-carrying means to tip as it is moved longitudinally.

3,127,042
BOAT TRAILER
Virgil E. Beckham, 1612 Crockett Ave., Victoria, Tex.
Filed Oct. 16, 1962, Ser. No. 230,942
4 Claims. (Cl. 214—505)



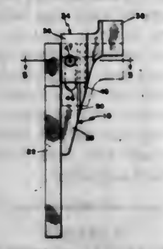
1. A boat trailer of the character described, comprising a bed embodying a pair of steel beams having the configuration of an inverted capital letter L when viewed from either end, the said steel beams being together in parallel spaced relation to each other, a plurality of angularly disposed rectangular steel plates in longitudinal spaced relation to each other extending between the said steel beams and having their ends secured to the steel beams, the said bed having a sled slidably mounted thereon, the said sled comprising a pair of inverted U-shaped members one nesting inside the other, the nested inverted U-shaped members having its vertical portions resting on the horizontal members of the said steel beam, thereby supporting the said sled on the said beams, and an L-shaped member secured on each side of the said sled with the lower portion of the L extending under said horizontal portion, thereby holding the sled on the said beams, the said sled supporting a mechanism for holding the bow of a boat and a manually operated winch, mounted on the front ends of the said bed, and a pair of wheels mounted on a spring loaded carriage supporting the rear end of the said bed.

3,127,043
TOP CONSTRUCTION FOR CHICKEN COOPS
George W. Shreckhise, P.O. Box 92, Weyers Cave, Va.
Filed May 18, 1962, Ser. No. 195,809
2 Claims. (Cl. 217—57)



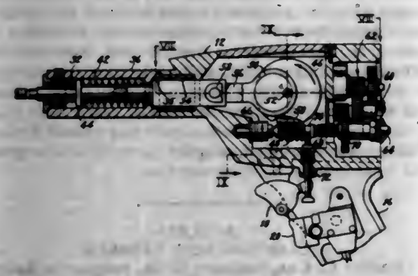
1. In a chicken coop, a top of rectangular formation and said top including a pair of horizontally disposed spaced parallel cross bars, a pair of spaced parallel horizontally disposed side rails arranged at right angles with respect to said cross bars and affixed thereto, said side rails being arranged above said cross bars, a pair of spaced parallel horizontally disposed stringers interposed between said side rails and arranged in the same plane as said side rails; first, second and third cross pieces arranged in coplanar relation with respect to said cross bars, and said cross pieces being affixed to said side rails and stringers; first and second aligned center rails interposed between said stringers and said center rails being arranged in coplanar relation with respect to said stringers and side rails, a horizontally disposed hinge rod extending through said first center rail and through said pair of stringers and side rails, said top further including a plurality of spaced parallel horizontally disposed dowels extending between the side rails and stringers and between the stringers and first center rail, spaced parallel horizontally disposed dowels extending between the stringers and rigidly connected to the second center rail, the dowels connected to the said second center rail being capable of being bowed allowing the said center rail to move slightly in a longitudinal direction, there being an opening defined in the intermediate portion of the top between the stringers and between the first and second aligned center rails, one of said dowels connected to the second center rail adjacent the opening forming a support dowel, a hingedly mounted closure mounted for movement into and out of open and closed relation with respect to said opening, the hinged end of the closure resting on one of the cross pieces and the other end of the closure resting on another of the cross pieces when the closure is in closed position, and said closure including a pair of spaced parallel side members hingedly connected to said hinge rod, and said side members of the closure each having an inclined end portion which rests on the support dowel when the closure is in the closed position, and said second center rail having an intermediate arcuate recess and a projecting lower portion which has a flat end surface providing a shoulder, said recess adapted to selectively receive therein the first dowel secured between the side members opposite the hinged end of the closure.

3,127,044
OFFSET LOWER ANVIL FOR AN AUTOMATIC RIVETTING MACHINE
Richard R. Brown, San Diego, Calif., assignor to Brown Tool Engineering Company, El Cajon, Calif.
Filed Nov. 20, 1962, Ser. No. 238,956
3 Claims. (Cl. 218—1)



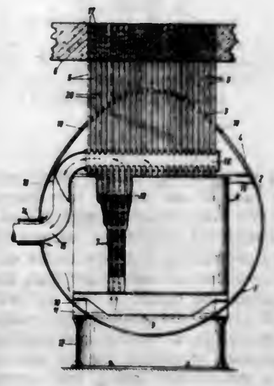
1. An offset lower anvil for use on a rivetting machine, comprising:
a back plate for attachment to the machine;
a forwardly extending anvil tongue on said back plate, said tongue having a socket in the upper face thereof to receive a rivet holding button;
a clamping yoke mounted on said anvil tongue, said clamping yoke having plates on opposite sides of said tongue with clamping jaws extending upwardly therefrom;
a vertical bore through said tongue;
elongated slots on both sides of said tongue coextensive with said bore;
a piston slidable in said bore;
a pin through said piston and said slots and interconnecting said plates;
said tongue having grooves parallel to the axis of said piston;
and said plates having ribs smoothly slidable in said grooves to guide and align said yoke.

3,127,045
BLIND RIVET SETTING TOOLS
Edward E. Tschantz, Woodbridge, Conn., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed Feb. 28, 1962, Ser. No. 176,314
8 Claims. (Cl. 218—42)



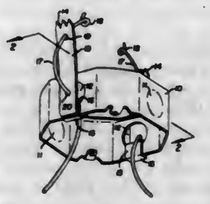
1. A blind rivet setting tool for gripping and tensioning the mandril stem portion of a rivet to set the rivet and to sever the mandril stem, comprising a pulling head provided with a retractable rivet engaging and gripping assembly; resilient means yieldably urging said assembly forwardly into its extended mandril stem receiving position; a crank for retracting said assembly beyond the position whereas the mandril stem becomes severed; a power operated member for thus operating the crank; and a pair of intermeshing gears, one of which is movable bodily and rotatively relatively to the other gear to connect said crank and the power operated member.

3,127,046
PRESSURE VESSELS
Jack Jones Griffiths, Culcheth, and Ronald Scott Challender, Warrington, England, assignors to United Kingdom Atomic Energy Authority, London, England
Filed July 6, 1960, Ser. No. 41,130
Claims priority, application Great Britain July 16, 1959
2 Claims. (Cl. 220—3)



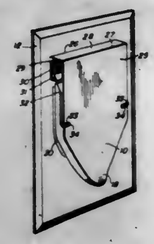
1. For a nuclear reactor, an improved pressure vessel of fundamentally spherical form defined by a basic section of spherical form greater than a hemisphere, a subsidiary section thicker than the basic section and of greater curvature than the basic section, a joining section joining the basic and subsidiary sections and access holes penetrating the subsidiary section.

3,127,047
MOUNTING CLAMP FOR CEILING OUTLET BOXES
Edward J. Bolchalk, 530 Homewood Ave., Hubbard, Ohio, assignor of one-half to Daniel G. Williams, Hubbard, Ohio
Filed Sept. 1, 1961, Ser. No. 135,610
2 Claims. (Cl. 220—3.6)



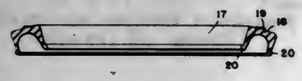
1. A mounting clamp and ceiling outlet box comprising in combination a box having an open bottom and vertical sides, said sides having removable sections to form openings therein and said clamp comprising a narrow section of strip steel positioned vertically alongside one side of said box, and having a flattened loop therein with said loop extending through one of said openings with the lower end of said section of strip steel positioned adjacent said bottom of said box, an outturned flange on said lower end and a wire secured to the upper end of said section of strip steel and extending downward and through an opening in said section of strip steel and through said opening with said loop.

3,127,048
INTEGRAL WEATHERPROOF PLASTIC LID AND HINGE FOR ELECTRICAL OUTLETS
Paul H. Winter, Syracuse, N.Y., assignor to Pass & Seymour, Inc., Syracuse, N.Y., a corporation of New York
Filed July 26, 1962, Ser. No. 212,660
5 Claims. (Cl. 220—35)



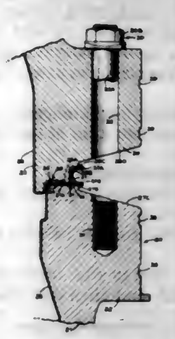
1. For use with the rigid, cover plate perforated for exposing the face of an electric convenience outlet, a one-piece lid and hinge structure moulded of a bendable plastic into a thick lid portion, an integral, thin, flexible gasket portion protruding from the under surface of the lid portion to enclose an area larger than the plate perforation exposing the outlet, a thin integral extension from one end of said lid portion, said extension being transversely necked-in at two spaced positions to form parallel hinge lines to elevate the lid portion from the cover plate, a coil closure spring, said extension having a perforation above the last hinge line, said spring having a looped end, a fastener means extending through said loop, said perforation, and a cover plate to hold them assembled together, and an arm on said spring extending to engage the front of the lid to urge it toward the cover plate.

3,127,049
SAFETY PRESSURE VESSEL FOR CARBONATED BEVERAGES AND THE LIKE
Frank Welty, 4962 Lockwood Blvd., and Raymond D. Welty, 4307 Lake Road, both of Youngstown, Ohio
Filed Sept. 7, 1961, Ser. No. 136,575
5 Claims. (Cl. 220—40)



1. A safety cap structure for a pressure vessel having a wide-mouthed opening defined by an annular projection of its wall and in which the free end portion of said projection is flared outwardly to provide an internal conical sealing surface comprising a flanged disc-like cap adapted to be received over said outwardly flared end of said annular projection with the flange thereof concentric with and radially outward of said annular projection, said cap having an inner annular sealing surface concentric with but radially inward of said conical sealing surface, a plurality of circumferentially extending and circumferentially spaced lugs carried by said annular projection and positioned on the outside thereof between the outer end of the flared portion thereof and the body of said container; each of said lugs having a flat portion extending generally parallel with the said end of said flared portion of said projection, an intermediate portion inclined steeply toward the body portion of said container, and an end portion slightly inclined toward said body portion of the container, a sealing ring which is of inverted U-shape in radial cross-section having side wall portions lying against said conical and annular sealing surfaces, the flange on said cap having radially inward directed detents to engage underneath said lugs and to compress said sealing ring upon rotation of said cap on said annular projection in one direction and the consequent movement of the cap toward the body portion of said container, the arrangement being such that said sealing ring is ineffectual when said detents are under the flat portions of said lugs but is operative to effect a self-sealing action when said detents are under the slightly inclined end portions of said lugs when said slightly inclined portions are in their normal positions with respect to said conical sealing surface, and said slightly inclined portions of said lugs being yieldable in an outward direction parallel with the axis of said annular projection whereby upon the appearance of excessive pressure within the container said cap can lift off slightly to render said sealing ring ineffectual and thus permit the release of excess pressure in said container.

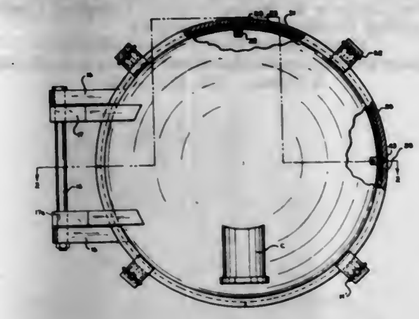
3,127,050
PRESSURE VESSEL CONSTRUCTION
John D. McDaniels, Jr., Lynchburg, Va., assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed Apr. 28, 1960, Ser. No. 25,402
7 Claims. (Cl. 220—46)



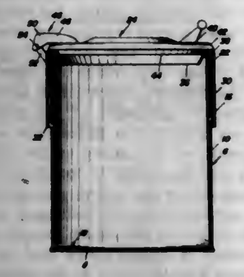
1. In a pressure vessel adapted to be opened and closed and having a body member provided with an opening therein, a removable closure member arranged in normal operative position to register with and close said opening, each of said members having a longitudinally extending outer surface, and a sealing membrane circumscribing the junction formed between said body and said closure members and welded thereto to form a fluid-tight seal therebetween, one of said members being formed with a circumferentially extending annular groove in the longitudinally extending outer surface thereof, said groove having a circumferential center line lying in a single plane and defining a trackway spaced from said sealing membrane and adapted to guide and support a seal weld cutting machine therein.

3,127,051
CLOSURE FOR VESSELS
Bradley G. Cox, Saginaw, Mich., assignor to Baker Perkins Inc., Saginaw, Mich.
Original application Dec. 14, 1959, Ser. No. 859,432, now Patent No. 3,092,285, dated June 4, 1963. Divided and this application Dec. 10, 1962, Ser. No. 243,334
5 Claims. (Cl. 220—55)

1. A closure for a vessel having an opening therein comprising: a door frame portion for said vessel opening; a door for said door frame hinged at one side of said vessel to swing to and from closed position; mating axial projections and recesses formed on said door frame portion and door around the perimeters thereof to move into meshed relation in a radial plane when the door is swung to closed position; said projections and recesses around the frame portion and door housing having substantially parallel intermeshing walls extending substantially perpendicularly to the axis of hinge of the door so that the clearances between the projections and recesses are unaffected by the arc of swing of the door; and means for holding said door in closed position.

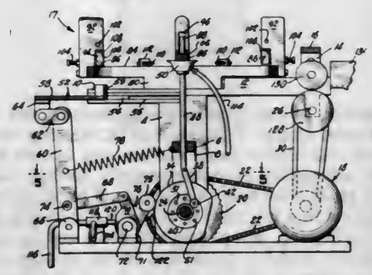


3,127,052
DISPOSABLE GARBAGE BAG AND CONTAINER
Dale M. Mayers, 3105 Broadway, West Palm Beach, Fla., assignor of fifty percent to Jack Dulgeroff, Ann Arbor, Mich.
Filed July 13, 1961, Ser. No. 123,746
4 Claims. (Cl. 220—65)



1. For use in the kitchen or elsewhere, a waste and garbage collecting and packaging device comprising, in combination, a pail embodying a receptacle portion open at its upper end, an upper portion of the wall of said pail having an endless outstanding collar guiding and spacing bead, said bead being located in a plane at a prescribed distance below the upper edge of the pail, a throwaway bag for accumulating, wrapping and disposing of waste and garbage which is placed therein, said bag being of a depth greater than the depth of the pail and fitting into the receptacle portion of the pail, said bag having a normally open mouth portion at its top and the lip portion of the mouth portion being folded over the upper edge of the open upper end of the pail and being then directed downwardly and encircling an exterior portion of the pail readily applicable and removable adapter means comprising a skirt portion exteriorly encircling and directly contacting said bead and spaced outwardly from that portion of said wall above the plane of said bead, said skirt portion having an upper edge portion with a turned in depending conical flange telescoping into the mouth of said receiver and constituting a bag loading funnel, said flange having its upper end joined to the upper edge of the skirt portion by way of a curved endless annular web, said web functioning to support the adapter means, an upper end of the aforementioned bag being folded over the upper edge of the wall of the receptacle portion of the pail and having an outwardly disposed depending lip portion interposed between the wall of the pail and inner periphery of said skirt portion and being clamped in place by the aforementioned web, a lid spanning the aforementioned funnel and upper end portions of the bag and pail and having an underneath marginal portion resting atop said web, and means hingedly connecting said lid to a cooperating peripheral surface of said skirt portion.

3,127,053
CAP FEEDING MACHINE
Lester Carr, Port Arthur, Tex., assignor to Texaco Inc., New York, N.Y., a corporation of Delaware
Filed Mar. 30, 1961, Ser. No. 99,497
3 Claims. (Cl. 221—13)

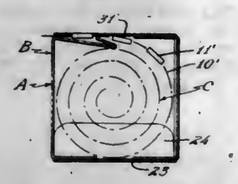


1. A machine for the automatic feeding of flat, resilient articles from magazine means holding a stack of said articles in proper alignment therein including a substantially horizontal supporting annulus having stop means thereon, said stop means comprising a plurality of stanchions disposed at spaced intervals around the periphery of said supporting annulus, each of said stanchions having a rigid finger hingedly supported thereby and extending inwardly with respect to said supporting annulus for retaining said articles in said magazine means in stack form, means supported by each of said stanchions for adjusting each finger inwardly with respect to said annulus to accommodate articles of different diameters within the range of said magazine means, each finger having a contact face provided with a plurality of serratures ending at a top shoulder portion on said face, said contact face with serratures engaging the edge of the lowermost article in said stack of articles, and projecting members on said supporting annulus extending radially inwardly from the periphery thereof from a level below that of said top shoulder portion of the fingers and spaced between said stanchions, said machine having means for removing the lowermost article axially of said stack downwardly past said fingers and said projecting members, said projecting members being adjustable to be substantially coterminous circumferentially with the contacting portions of the fingers of said stanchions thereby arresting the removal of any of said articles from said stack other than the lowermost article.

3,127,054
DISPENSING PACKAGE
Harold S. Meyers, Minneapolis, Minn., assignor to Waldorf Paper Products Company, Ramsey County, Minn., a corporation of Minnesota
Filed Oct. 23, 1961, Ser. No. 146,799
1 Claim. (Cl. 221—25)

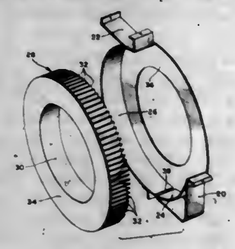
A carton in combination with a spiral roll of material to be dispensed, the roll including pellets sealed in spaced relation between strips of flexible material forming a

tape, the carton including a one piece enclosure comprising side and end walls forming a sleeve, the side walls being of dimensions slightly greater than the diameter of the roll and the end walls being of a width slightly greater than the width of the roll, a first end closure closing one end of said sleeve and a second end closure closing the opposite end thereof, said second end closure including a pair of closure flaps hinged to the end walls and folded inwardly therefrom, a closure panel hinged to one of said side walls and folded to overlie said first named closure flaps, a tuck flap on said closure panel folded inwardly of the other side wall, an aperture in



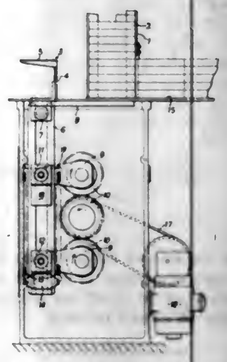
the portion of said closure panel overlying one of said first named closure flaps, the end of the strip extending between said closure panel and said one closure flap, the pellets sequentially extending partially through said aperture to resist movement of said tape in either direction, a flap hinged to a side edge of said one closure flap parallel to and adjoining, one of said side walls and in face contact thereto, said last named flap having an edge arranged at right angles to the line of fold connecting the same to said one closure flap and abutting against the end wall to which said one closure flap is secured to hold said one closure flap from flexing inwardly.

3,127,055
VENDING MACHINE
Donald C. Dew and Carl Stuewe, Whittier, Calif., assignors, by assignment and court order, to Stewart McDonald
Filed Oct. 16, 1961, Ser. No. 145,071
19 Claims. (Cl. 221—82)



1. A vending machine comprising a cylindrical rotary drum including a plurality of circumferentially spaced dividers extending outwardly from the periphery of said drum, the space between each of said dividers constituting a merchandise compartment, said dividers being at an acute angle to the radius of said drum with the outer ends of said dividers leading their inner ends in the direction of rotation of said drum, article-retaining means surrounding part of said drum and slidably supporting the drum on outer edges of its dividers, said retaining means having a cut-out portion near the lower portion thereof for registry successively with each of said merchandise compartments, and means for rotating said drum to bring successive merchandise compartments into registry with said cut-out portion for dispensing merchandise from said compartments.

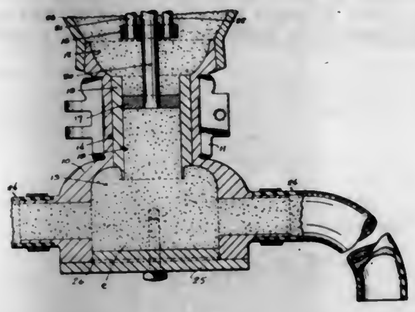
3,127,056
DEVICE FOR FEEDING ARTICLES FROM THE BOTTOM OF A STACK
Donald Richard Patrick Jackson, Deptford, London, England, assignor to Molins Machine Company Limited, London, England, a British company
Filed June 28, 1961, Ser. No. 120,381
Claims priority, application Great Britain Aug. 5, 1960
2 Claims. (Cl. 221—262)



1. A device for feeding articles from the base of a stack arranged in a magazine, comprising a reciprocating pusher having an operative or pushing face and a support face at right angles to the said pushing face, and adapted to support the articles remaining in the stack while those beneath said remaining articles are removed from the stack by the pushing face, a vertical support for the pusher, and driving means for the pusher including a pair of cranks geared together for rotary movement, and having slides at their free ends arranged to slide on the support, a spring connecting the upper slide to the lower part of the support, and a guide face positioned to restrict the upward movement of the support whereby during the crank motion the slides slide up the support against the tension of the spring as the support engages said guide face and the pusher is constrained to move in a horizontal direction on the pushing stroke and an abutment on the vertical support positioned to be engaged by one of said slides on the return motion of the cranks so that the pusher is pulled down and its support face moves downward with the stack as the latter moves down the magazine while the pusher moves backward out of the magazine.

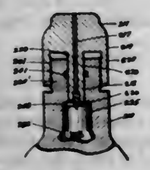
3,127,057
MACHINE AND METHOD FOR DISPENSING MEASURED CHARGES OF CONDIMENT
Thomas E. Belshaw, 1772 22nd Ave. S., Seattle, Wash.
Filed Dec. 4, 1961, Ser. No. 156,628
4 Claims. (Cl. 222—1)

1. A machine for dispensing measured quantities of a plastic substance, a hopper for said substance, comprising, a dispensing chamber separated from the hopper, a cylindrical magazine extending as a connecting conduit between said hopper and chamber and having a uniform cross section throughout its length less than the cross section of either the hopper or the dispensing chamber at the points of juncture therewith, a suction piston and an expulsion piston both fitting the magazine and each mounted for reciprocal slide motion the former from a position within the dispensing chamber into and out of magazine and the latter from a position within the hopper into and out of the magazine, said pistons being mounted to move with one leading and the other trailing in a spaced relationship, alternately, in oppositely directed strokes of reciprocation so that as the direction of motion is toward the chamber a charge of the plastic substance is first sucked into the magazine and then expelled into the chamber and as the direction of motion is toward the hopper a portion of the expelled charge less than the whole is sucked back into the magazine, the dispensing chamber having an ejection throat of restricted flow capacity exposed to the atmosphere and to which the plastic substance is forcefully delivered from the chamber as the



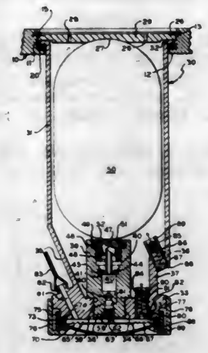
pistons move within the magazine directively toward the dispensing chamber, the dispensing chamber being otherwise closed to atmosphere, the suction pull exerted by the pistons as the same move within the magazine directively from the dispensing chamber causing the plastic substance to reverse its flow within the ejection throat and by the suck-back responsively obtain a sharp cut-off of the delivery to atmosphere.

3,127,058
OXYGEN DISPENSING DEVICE
William Derrick Johnston, 629 Kahkwa Blvd., Erie, Pa.
Filed Dec. 6, 1961, Ser. No. 157,486
2 Claims. (Cl. 222—5)



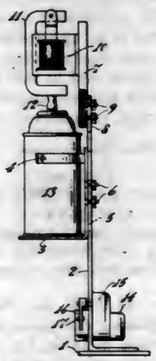
1. A device for dispensing oxygen and other medical gases comprising a hollow body, a bottle for containing gas under pressure disposed in said body, a rotatable breathing member, means attaching said breathing member to said body, said means comprising an extension member attached to said breathing member and extending into said body, a conical point on said extension member, and threaded means on said body cooperating with threaded means on said breathing member for moving said point into engagement with said bottle whereby an end of said bottle is punctured to provide an opening when said breathing member is rotated in a first direction and, at the same time, providing a seal with material around the opening thereby formed in said bottle, said breathing member being adapted to be rotated in a second direction, moving said point out of engagement with said bottle and allowing oxygen to flow therefrom, said breathing member and said extension member each having an opening therethrough communicating from the inside of said body to the distal end of said breathing member the opening in the breathing member and the extension member being in axial alignment.

3,127,059
FLUID DELIVERY SYSTEM
Joseph S. Lawrence, Jr., Murray Hill, and Harry T. Hutton, Jr., Franklin Park, N.J., assignors to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 14, 1961, Ser. No. 95,588
16 Claims. (Cl. 222—54)



1. A pressurizing unit to be mounted within a keg at an aperture therein, comprising a shell adapted to extend inwardly from the rim of the aperture into the keg, the confines of the shell being traversed by a passage; a valve, normally responsive to the pressure in the space within the keg, interposed in the passage; and a pressure reservoir within, and having a wall of which an external portion lies along but is spaced from the shell, the reservoir communicating through the passage and the valve with the space within the keg but being sealed against communication with the adjacent space external to it and within the shell.

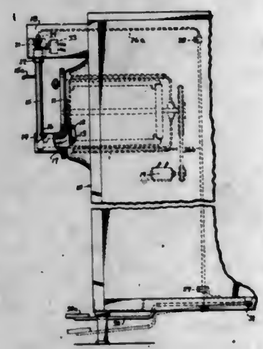
3,127,060
AUTOMATIC ACTUATOR FOR SPRAY CONTAINERS
Peter S. Vosbikian, Melrose, and Thomas S. Vosbikian, Philadelphia, Pa. (both of 1315 W. Cumberland St., Philadelphia, Pa.)
Filed Oct. 17, 1962, Ser. No. 231,234
2 Claims. (Cl. 222—70)



1. An automatic actuator for spray containers having a controlling valve, comprising, a base, a first plate extending upwardly from said base, a support on said plate for an aerosol spray container, an insulating plate adjustably mounted on said first plate, a solenoid carried by said insulating plate, a U shaped bracket having its upper end connected with the armature of said solenoid and having

its lower end laterally positioned to be positioned above the valve of the spray container to move the same valve actuating and valve non-actuating position with respect to the container and an electric circuit connected to said solenoid and adapted to be connected with a source of electric supply, said circuit including means to automatically close and open the circuit at predetermined intervals.

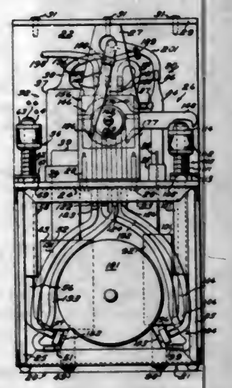
3,127,061
DISCHARGE GATE MECHANISM FOR DISPENSING FREEZERS
Robert S. Patch, Bainbridge Island, and Harvey F. Swenson, Seattle, Wash., assignors to Sweden Freezer Manufacturing Co., Seattle, Wash., a corporation of Washington
Filed Jan. 8, 1962, Ser. No. 164,791
5 Claims. (Cl. 222—74)



1. In combination, a dispensing freezer assembly having a freezing chamber with a discharge gate vertically slidable between a lowered closed position and a raised open position, an adapter detachably connected to the upper end of said gate, a return compression spring seated at its upper end against said freezer assembly and at its lower end against the top of said adapter for yieldingly resisting opening of said gate, a treadle swingably mounted at one of its ends on said freezer assembly adjacent the base thereof, conduit means anchored at upper and lower ends to said freezer assembly adjacent said return spring and treadle, respectively, said conduit means looping upwardly from its said anchored upper end and then depending downwardly to its said anchored lowered end, and a cable connected at an upper end to said adapter and extending through said return spring and conduit means and connected at a lower end to said treadle intermediate the ends of the treadle whereby depression of the treadle tensions said cable and responsively opens said gate.

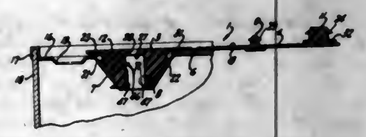
3,127,062
SEMI-AUTOMATIC SAMPLING AND DILUTING APPARATUS
Thomas V. Feichtmeir, San Francisco, and Kenneth D. Jenkins, Berkeley, Calif., assignors, by direct and mesne assignments, to Research Specialties Co., a corporation of California
Filed Nov. 21, 1960, Ser. No. 70,713
6 Claims. (Cl. 222—135)

1. Unitary apparatus suitable for analytic procedures for precisely measuring and delivering a first diluent fluid with a second sample fluid, comprising a second sample displacement chamber means for receiving and discharging a precise volume of said sample, a second powered motive means for changing the volume of said displacement chamber between fixed limits, means for precisely adjusting said fixed limits of the second sample displacement chamber, a pipette tip in fluid communication with said second sample displacement chamber means, a first diluent displacement chamber means for receiving and discharging a precise volume of diluent from a diluent supply source, a first powered motive means for changing the volume of said diluent displacement chamber between fixed limits, means for precisely adjusting said fixed limits of the diluent displacement chamber, a motive power source, and a control valve means controlling the application of power to the first and second powered means from the motive power source and the fluid communications to said pipette tip, whereby power is applied



to the second powered means to increase the volume in the second sample displacement chamber means to draw a precise quantity of sample fluid into the pipette tip, power is applied to the first powered means to increase the volume in the first diluent displacement chamber means and bring a fixed quantity of the first fluid therein, fluid communication is effected between the first displacement chamber means and the pipette, and power is applied to both the first and second powered means to decrease the volume in both the first and second displacement chambers to discharge the first and second fluids from the pipette.

3,127,063
CLOSURE CONSTRUCTION FOR CONTAINER
Edwin Bradley Fairchild, 1055 Boranda Ave., Mountain View, Calif.
Filed Apr. 19, 1961, Ser. No. 104,063
6 Claims. (Cl. 222—153)



1. In combination with a product container top which has two spaced apertures therethrough, a container closure operatively engaged with said top; said closure comprising a closure body defined by two sections hingedly connected with each other along a severable web; one of said body sections underlying the other body section and including a stopper plug received in one aperture through said container top; said plug having retaining lip structure on its outer periphery engaged with the underside of said container top whereby said plug is generally irremovably retained in said one aperture, said plug having a product dispensing opening extending therethrough; said second body section including a lock shank which is received in the other aperture through said container top, said lock shank having retaining lip structure on its outer periphery engaged with the underside of said top whereby said shank is generally irremovably retained in said another aperture and is thereby generally irremovably engaged with said top under normal conditions, and closure means between said lock shank and said web, said closure means overlying and contacting said stopper plug and blocking the dispensing opening therethrough; said closure means being positively retained in engagement with said stopper plug of said first body section by said lock shank in conjunction with said severable web while said web remains intact so that said closure is initially retained positively locked; said closure means being disengageable from said stopper plug when said web is severed so that said second body section may be pivoted about the axis of said lock shank to free said dispensing opening of restriction when said closure is initially opened.

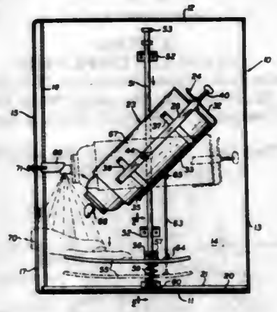
3,127,064
LOCKABLE CONTAINER CLOSURE
Edwin Bradley Fairchild, 1055 Boranda Ave., Mountain View, Calif.
Filed July 19, 1961, Ser. No. 125,246
10 Claims. (Cl. 222—153)



1. A lockable container closure to be positioned in operative engagement with an apertured top of a product container, comprising a one piece closure body defined by two hingedly connected integral sections which are foldable relative to each other along a hinge section positioned therebetween which interconnects said sections, one of said body sections including a stopper plug having a product dispensing opening therethrough, said plug being receivable in an aperture through said container top, said one body section including a lateral flange extension integral with and projecting laterally relative to said plug in a direction generally opposite from said hinge section, said lateral extension having a lock opening therein which is distinct from said product dispensing opening; the other of said body sections including closure structure for overlying an upper portion of said stopper plug for blocking said dispensing opening therethrough when said body sections are folded relative to each other, and lock means comprising a lock shank integral with and projecting from said other section and engageable in said lock opening of said lateral extension of said one body section when said other body section is folded to overlie said one section, said lock shank when said other section is so folded and when said lock shank is inserted in said opening normally positively precluding removal of said closure structure from blocking relationship relative to said stopper plug dispensing opening so long as said body sections remain intact and hingedly connected.

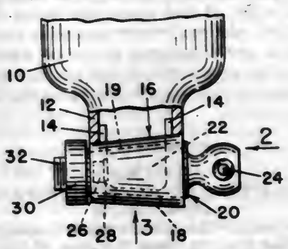
3,127,065
SPRAY-DISPENSING APPARATUS
Lincoln L. Stevenson, 27 Villa Road, Larchmont, N.Y.
Filed Apr. 25, 1961, Ser. No. 105,484
2 Claims. (Cl. 222—164)

1. Apparatus for spraying, comprising, in combination, a relatively elongated carrier arranged to support a container of pressurized fluid having a deflectable operator at its discharge end; means mounting said carrier for oscillation about an axis transverse thereof, for movement of the carrier between a non-operating position and an operating position; engaging means fixedly located for engagement with the operator of a container, supported on said carrier, in such carrier operating position to discharge the container contents in a selected direction; means biasing said carrier to said non-operating position; actuating means connected to said carrier and manually movable to oscillate said carrier to said operating position; the position of said actuating means, relative to said engaging means, being such that, when a user's hand is in contact with said actuating means to move the latter, the user's



hand is in the path of discharge of the container's contents; and a housing enclosing said carrier, said mounting means, said engaging means, and said actuating means; said housing having a front opening for access to said actuating means; said housing including an openable door affording access to said carrier for replacing a container thereon; said engaging means comprising a cam adjustably and replaceably mounted on said door for operating engagement with the deflectable operators of containers carried by said carrier; said cam being movable with said door, upon opening of the latter, out of the path of movement of a container operator to prevent operation of the container when said door is open.

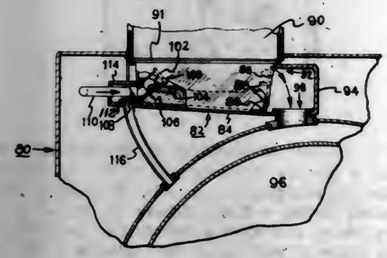
3,127,066
METERING DISPENSER FOR POWDERS AND THE LIKE
Solomon Reznek, Albany, N.Y., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 17, 1960, Ser. No. 69,909
7 Claims. (Cl. 222—190)



1. A metering dispenser for loose materials comprising a fixture adapted to be associated with the discharge opening of a container for the loose materials, said fixture comprising in general a hollow walled chamber having openings in opposite side walls thereof, a relatively rotatable valve member located in the chamber in the fixture, said valve member being provided with a recess therein which is selectively capable of being aligned with either of said openings in the wall of said fixture upon rotation

of the valve member for receiving the loose material in one position thereof when the recess therein is in loading position relative to the container, and discharging the material through the opposite opening when rotated to coincide therewith, means on said rotatable valve member for closing the container for the loose material when in the discharging position thereof, and means forming a secondary chamber associated with said relatively rotatable valve member, said chamber being adapted to contain a desiccant, said recess forming a passage for communication between the desiccant chamber and the interior of the container when said valve member is in position with the recess therein communicating with said container.

3,127,067
GRANULES DISPENSER
William Burke Hall, Upper Montclair, N.J., and Albert H. Torongo, Jr., Newtown, Pa., assignors to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
Filed Oct. 28, 1960, Ser. No. 65,736
2 Claims. (Cl. 222—193)



1. An automatic clothes washing machine detergent dispenser, comprising a detergent dispenser container having dry detergent granules therein, said dispenser container having a water inlet at one end and a discharge opening at the other end, a barrier at said discharge opening which acts as a dam to prevent the dry granules from escaping, a ball check valve mounted over said water inlet opening to close said water inlet opening when the container is being filled with detergent, said ball check valve being unseated when the water enters, and said ball check valve comprising a ball and means for holding said ball in the path of a stream of water entering through said water inlet to create a flushing action and wash detergent from said dispenser, a water pipe separated from said water inlet of said dispenser container by an air gap, the outlet of said water pipe being directed toward said water inlet, said water pipe being supplied from a water source and directing a stream of water into said water inlet at the proper time in the washing cycle whereby the detergent granules are washed over the barrier into the washing machine.

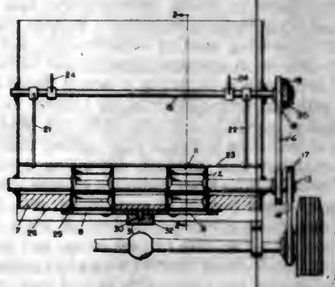
3,127,068
FLEXIBLE HOLLOW PLASTIC DISPENSING CONTAINER
Arturo Sutter, Viale Cembrano 2, Genoa, Italy
Filed Dec. 13, 1960, Ser. No. 75,519
1 Claim. (Cl. 222—209)

A one-piece molded resilient plastic container for storing and dispensing liquid products comprising a hollow body portion, a constricted neck for a nozzle at the upper end of said hollow body portion for dispensing the liquid products in said container, a hollow hand gripping portion at a side of said hollow body portion which defines, between its inner surface and the adjacent surface of said body portion, a space through which the fingers of the hand will embrace the sides of said gripping portion, said hollow hand gripping portion lying below said nozzle and neck portion and also below the lower end of a common straight wall of said container, said common straight wall merging with the upper end of the hand gripping portion at the lower end of the wall and merging with the constricted neck at the upper end of said wall, said neck having an axis within said body portion and extending substantially parallel with said wall, one end of said hollow hand gripping portion being in fluid communication with an upper portion of said hollow body



portion and the other end being in fluid communication with the lowermost portion of said hollow body portion whereby liquid may pass freely into and out of said hand gripping portion, said hand gripping portion having an inner surface which is formed with smoothly flowing indented portions to conform to the fingers of the hand, and attached to said container is a single dispensing nozzle at the uppermost end of said constricted neck, whereby upon squeezing said hand gripping portion and tilting the container, liquid is dispensed from said nozzle under hydrostatic pressure by said squeezing action.

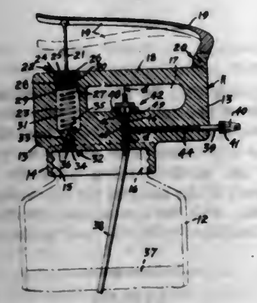
3,127,069
MEANS FOR ACCURATELY TREATING SOILS IN AGRICULTURAL USE
James C. Tygart, P.O. Box 398, Nashville, Ga.
Filed Apr. 14, 1961, Ser. No. 103,158
5 Claims. (Cl. 222—238)



1. A machine for dispensing either granular, free-flowing ground treating material or gummy compacting, ground-treating materials, said machine comprising a hopper for the reception of one or the other of such materials, said hopper having a relatively thick bottom, rotating feed wheels, wells formed in the hopper bottom and having arcuate walls within which wells said feed wheels are disposed for rotation in vertical planes, said feed wheels comprising a plurality of radial spokes, the spaces between which constitute cells within which the material to be dispensed is received from the hopper and carried to the bottoms of the wells, the tips of the spokes traveling in close proximity to the arcuate walls of said wells, said wells having openings formed through their bottoms, a movable feed plate disposed below the bottom of the hopper which feed plate has openings therethrough which are shaped to connect with the openings in the bottoms of the wells to determine the area of the outlet presented

for the passage of the dispensed material from said wells, a fixed support by which the feed plate is supported for movement in such close relation to the bottoms of the wells that the tips of the spokes move in such close relation to and over the bottom surfaces of the wells and over the upper surface of said feed plate as to wipe gummy materials delivered from said cells from these surfaces and push it, through the feed plate.

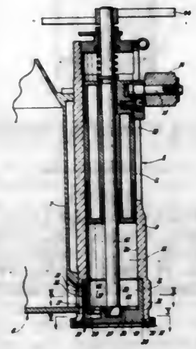
3,127,070
SPRAY GUN WITH A DISCHARGE CONTROLLER
Robert Brickman, 3212 Pauline Drive, Chevy Chase, Md.
Filed Aug. 25, 1961, Ser. No. 133,983
2 Claims. (Cl. 222—310)



1. A spray gun unit comprising: an elongated body having an integral grip portion and an integral cap portion adapted for quick detachable connection with an open topped portable reservoir, an air pump housed in said body and having an outlet discharging through said cap for filling the upper portion of said reservoir with compressed air, means for operating said air pump including a lever member movably attached to said body, a nozzle mounted on the front end of said body, a liquid conduit extending from said nozzle through said cap and downwardly therefrom so as to approach the bottom of said reservoir, and an adjustable valve in said liquid conduit having control means positioned for operation by the hand holding and manipulating said spray gun and pump, said adjustable valve comprising a metering pin movable in a bore in said body and said operating means for said valve including a wedge-shaped member mounted in said finger-receiving aperture and a cooperating disc fixed to said metering pin.

3,127,071
CAN FILLING APPARATUS
David William Bingham, Brighton, Victoria, Australia, assignor to D. W. Bingham & Company Proprietary Limited, Victoria, Australia, a corporation of Victoria
Filed June 11, 1962, Ser. No. 201,687
Claims priority, application Australia June 15, 1961
7 Claims. (Cl. 222—380)

1. A can filling apparatus for filling cans with liquid, paste or like material comprising a filling head having a cylinder with an upright axis and defining a measuring chamber, an associated removable piston axially reciprocable within said cylinder, a bulk storage vessel for storing the liquid, said filling head being capable of periodically receiving in its measuring chamber liquid from said bulk storage vessel, said liquid being subsequently expelled under pressure from said measuring chamber by said piston, said cylinder being open at its lower end and being provided with a detachable control valve assembly for controlling the admission of the liquid to said measuring chamber from said bulk storage vessel and the subsequent discharge thereof, said detachable control valve assembly including a fixed valve member of substantially cup-shaped formation having a base portion and an upstanding endless side wall having an internal diameter equal to that of the bore of said cylinder, means for detachably connecting said fixed valve member within the lower end of said cylinder to lengthen the bore thereof and form a part of said measuring chamber for receiving said piston, a transfer port comunicating at one end through the upper surface of said base portion with said measuring chamber and the other end through the base portion to deliver liquid to said measuring chamber from the bulk storage vessel, a discharge port extend-



ing through said base portion between the upper and lower surfaces thereof and through which said liquid is discharged from said measuring chamber, an oscillatable valve member of disc-like form rotatably mounted within the fixed valve member with its lower face and peripheral edge portion in close slidable engagement with the upper surface of said base portion and the inner surface of the upstanding side wall respectively, an inlet and an outlet port in said oscillatable valve member and extending between its upper and lower faces, and means for oscillating said oscillatable valve member so as to successively register said inlet and outlet ports with said transfer and discharge ports respectively in such a manner that when the transfer port is open the discharge port is closed and vice versa.

3,127,072
PRESSURE CONTAINER CLOSURE CONSTRUCTION WITH MEANS FOR ATTACHING A TAP CONNECTION THERETO
Milo E. Webster, Rochester, N.Y., assignor to Berar O Matic Corporation, a corporation of New York
Filed Feb. 28, 1961, Ser. No. 92,342
5 Claims. (Cl. 222—394)

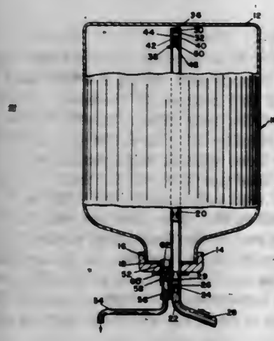
1. In a container for pressurized fluids having a discharge opening, the improvement which comprises a cap having a peripheral annular recess portion in sealing engagement with the portion of the container surrounding said opening, a discharge passage defined in said cap, a closure valve sealing said discharge passage, and a sleeve bushing of resilient deformable plastic material having threads for attachment of a tap connection thereto and extending externally of said container, said bushing being connected to said cap at its base coaxially with said discharge passage by being pressed into said recess, the connection between said bushing and said cap being of lesser strength than the connection of said cap to the

container whereby the bushing will break away from said cap when subjected to stress without detaching said cap



said bushing defining a lateral gas release passage therethrough.

3,127,073
DISPENSING DEVICE
Maurice H. Carleton, Tampa, Fla., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware
Filed Feb. 19, 1962, Ser. No. 173,946
9 Claims. (Cl. 222—400.7)



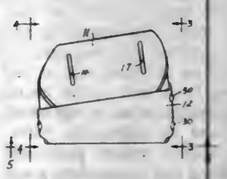
8. A dispenser for fluids comprising a storage container for the fluids normally in upright position, said container having a top opening, said container being inverted for the dispensing operation, a cap for the container opening, an elongated tube mounted on said cap and extending through the container close to the bottom thereof, means at the end of the tube close to the bottom of the container providing a seal guarding against entrance of the contents of the upright container into the tube, means providing for passage of air through said sealing means from the tube into the container, means providing air under pressure for the tube from a point exterior of the container, and a dispensing nozzle for the container, said nozzle being separate from the tube and including a normally closed valve yielding to open to dispense a charge of the contents of the container upon the application of air pressure through the tube and into the container, the tube serving to apply the pressure to a point at the bottom of the container which is at the top when the container is inverted.

3,127,074
COLLAPSIBLE TROUSER CREASER
Harry Higgins, Los Angeles, Calif., assignor to George T. Stacey, Riverside, Calif.
Filed June 6, 1960, Ser. No. 34,182
2 Claims. (Cl. 223—63)



1. A collapsible unit for creasing a trouser leg and including, a pair of like and relatively movable rectangular-shaped sections of spring wire having spaced substantially parallel inner and outer side members, the inner side members of the sections being pivotally joined intermediate the ends of the sections for movement from a collapsed condition with the one section overlying the other to a utility condition with the two sections divergently related.

3,127,075
GUN HOLSTER
Michael Yavello, 14 Woodward Heights, Pleasant Ridge, Mich.
Filed May 24, 1961, Ser. No. 112,316
4 Claims. (Cl. 224—2)



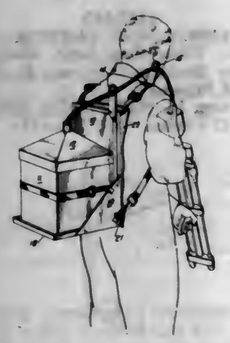
1. A gun holster, comprising: an inner vertical sidewall means for attaching the holster to the body of the wearer; a bottom wall having the inner edge hingedly connected to the lower end of said inner vertical side wall; an outer vertical side wall spaced apart outwardly from said inner vertical side wall and having the lower end thereof hingedly connected to the outer edge of said bottom wall; said outer and inner vertical side walls and said bottom wall each having a flap hingedly connected to the forward ends thereof and being folded sidewardly inwardly to form a front end wall for said holster to enclose the space between said side walls and the flaps on the outer and inner side walls overlapping each other with the flap on the bottom wall disposed therebetween; said outer and inner vertical side walls and said bottom wall each having a flap hingedly connected to the rear end thereof and being folded sidewardly inwardly to enclose the back end of the holster to form a back end wall and the flaps on the outer and inner side walls overlapping each other with the flap on the bottom wall disposed therebetween; and, means for fixedly connecting together the flaps forming the front end wall of the holster and the flaps forming the rear end wall of the holster.

3,127,076
RELEASIBLE POUCH
Charles B. Tebbs, 2434 Cottonwood Drive, Alexandria, Va.
Filed Mar. 23, 1962, Ser. No. 181,880
3 Claims. (Cl. 224—19)



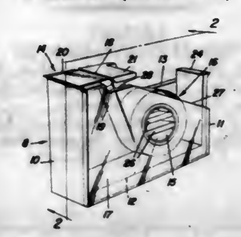
1. A quick-releasing pouch for releasably containing relatively heavy objects comprising a blank of inverted T-shaped configuration, having a vertical portion and an integrally joined base portion; said base portion having a center section and two wings in continuation of said center section, said wings being adapted to fold in overlapping relationship to each other and in spaced and opposed relation to said center section; the outer extremities of said wings respectively comprising integrally formed overlapping elements, said elements cooperating to define a chamber between said wings and said center section; said vertical portion being folded about said wings, leaving a space therebetween receiving a pouch bearer's belt and completing said chamber; and cooperating catches mounted respectively on the free end of said vertical portion and on a side of said base center section away from the folded wings, thereby forming a quick-releasing pouch.

3,127,077
BACK PACK
Charles Faro, Riverside, Calif., assignor, by mesne assignments, to The Flintkote Company, a corporation of Massachusetts
Filed Feb. 28, 1961, Ser. No. 92,280
3 Claims. (Cl. 224—26)



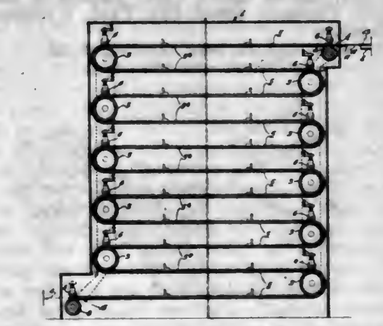
1. A pack for carrying a continuous roving of fiber strands on the back of an operator, said roving being adapted to travel from said pack to a device in the hands of the operator, comprising a supporting frame, a harness attached to said frame and being adapted to pass around the shoulders of the operator so as to hold said frame in position on the back of the operator, a container for said roving adapted to be secured to said frame to thereby hold said container on the back of the operator, said container having an opening therein for removal of said roving in an upward direction, and guide means for positively controlling the path of travel of said roving from said container to said device over the shoulder of the operator so that said roving is maintained out of the normal area of operation of the arms of the operator.

3,127,078
TAPE DISPENSER
Arnold J. Dubnick, 6921 21st St., Sacramento, Calif.
Filed Aug. 15, 1961, Ser. No. 131,659
2 Claims. (Cl. 225—33)



1. A tape dispenser comprising an upstanding housing including a pair of upstanding opposite side walls, journaling means in said housing adapted to journal a roll of tape for rotation about an axis extending between said side walls, means at the upper portion of the front end of said housing defining a generally horizontal surface extending transversely of said housing and including a front terminal end portion projecting forwardly beyond the front end of the adjacent end of said housing and defining a cutting edge extending transversely of said housing, the rear end of said surface curving downwardly toward said journaling means, abutment means extending transversely of said housing, and spaced slightly rearwardly of and in general horizontal alignment with said horizontal surface and including a forward rearwardly and downwardly beveled surface including an upper portion vertically overlying the rearmost extremity of the downwardly and curving rear end of said horizontal surface in spaced relation thereto, the space between said horizontal surface and said abutment means defining a slot through which tape to be dispensed may be threaded.

3,127,079
METHOD FOR THREADING THE LEADING END OF A WEBLIKE MATERIAL AND A DEVICE FOR CARRYING OUT THE METHOD
Claes Allander, Bromma, Sweden, assignor to Aktiebolaget Svenska Flaktfabriken, Stockholm, Sweden
Filed Feb. 6, 1962, Ser. No. 171,794
Claims priority, application Sweden Feb. 8, 1961
5 Claims. (Cl. 226—92)



1. Apparatus for threading the leading end of a web through drying apparatus having a plurality of web

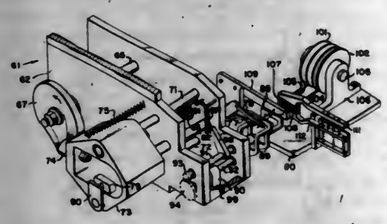
supporting rolls at the ends of web-drying passages, comprising in combination, a continuous tubular guide rail arranged at at least one end of said rolls and following the web path between and around said rolls, said tubular guide rail having a continuous slot on the side toward the web path, a flexible resilient leader strip movable along the tubular space of said guide rail, connecting means between said leader strip and an edge of said web, including means extending through the slot of said rail, and power drive means engaging said leader strip to feed it through the tubular guide rail.

3,127,080
WEB TURNING DEVICE
Claes Allander, Bromma, and Jan-Mats Eneroth, Jonkoping, Sweden, assignors to Aktiebolaget Svenska Flaktfabriken, Stockholm, Sweden
Filed Feb. 15, 1962, Ser. No. 173,582
Claims priority, application Sweden Feb. 18, 1961
1 Claim. (Cl. 226—97)



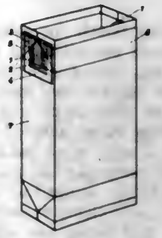
A web turning device, comprising in combination, a stationary substantially semi-cylindrical shell around which said web turns, the interior of said shell being supplied with air under pressure, the arcuate surface of said shell over which said web passes being provided with a plurality of small apertures opening through the shell beneath the web thereon, and said shell at the ends of the surface over which the web passes being provided with transverse slotted apertures extending across substantially the full width of the web, the pressure of air within said shell being sufficient to maintain an air layer between said web and shell which completely separates the web from the shell for substantially frictionless passage of the web over the arcuate web-supporting portion of the shell, said two end slots having an angular inclination toward the arcuate portion of said web which is supported above the arcuate supporting portion of said shell to assist in maintaining the supporting layer of air beneath said web by directing transverse air curtains from the end slots mutually toward each other in said arcuate supporting layer of air between the web and the shell.

3,127,081
WIRE FEED MECHANISM
Harry Stuy, Garden Grove, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Sept. 20, 1960, Ser. No. 57,305
16 Claims. (Cl. 226—165)



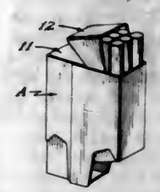
1. Wire feed mechanism for positioning a wire strand, which comprises: a wire holder comprising resilient means for restraining the pulling of wire from said holder; wire guide means for positioning said strand adjacent said holder; a pair of spacing elements; wire pulling means for pulling said strand from said holder through the pair of spacing elements; and means for contacting said wire strand with said spacing elements between said holder and said pulling means.

3,127,082
LIQUID-TIGHT CONTAINER OF PAPER, CARDBOARD AND LIKE CARTON-FORMING MATERIALS
Gunther Meyer-Jagenberg, Dusseldorf-Grafenberg, Germany, assignor to Jagenberg-Werke Akt.-Ges., Dusseldorf, Germany
Filed Jan. 22, 1962, Ser. No. 167,608
Claims priority, application Germany Oct. 18, 1961
6 Claims. (Cl. 229—7)



1. A liquid-tight container of paper, cardboard and like carton-forming material, comprising wall means defining a tubular body, a roof-shaped closure means including inwardly folded gable surfaces for at least one end of said wall means, one of said inwardly folded gable surfaces being provided with a pouring aperture therein, cover means secured to the outside of said inwardly folded gable surface for closing said aperture, said cover means including portions detachable outwardly from said inwardly folded gable surface for exposing said pouring aperture, said closure means including portions adapted to cover said aperture, and means detachably securing said portions together for protecting said aperture.

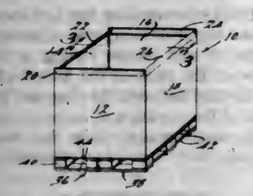
3,127,083
DISPENSING CARTON
Reynolds Guyer, White Bear Lake, Minn., assignor to Waldorf Paper Products Company, St. Paul, Minn., a corporation of Minnesota
Filed Aug. 27, 1962, Ser. No. 219,649
12 Claims. (Cl. 229—11)



1. A dispensing carton including,
an outer rectangular shell having face panels and side panels and a partition panel connecting said face panels and parallel to said side panels,
said partition panel being located at the upper end of said shell and terminating at a point spaced substantially from the lower end of the shell,
inner sleeves on opposite sides of said partition panel and slidable within said outer shell,

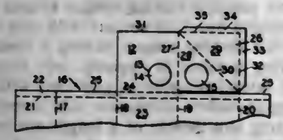
each inner sleeve including wall panels lying in face contact with said face panels and top and bottom panels connecting the upper and lower ends of said wall panels,
one wall panel of each inner sleeve having a hook-shaped projection extending beneath said partition,
the wall panels being notched above the level of said projection,
whereby upward movement of either inner sleeve will cause the projection on said one sleeve to engage said partition panel to tilt the sleeve toward the partition panel.

3,127,084
COLLAPSIBLE TOTE BOX AND SKID
Robert J. Williams, Birmingham, Mich., assignor to Cadillac Products, Inc., Warren, Mich., a corporation of Michigan
Filed Aug. 9, 1961, Ser. No. 130,335
5 Claims. (Cl. 229—14)



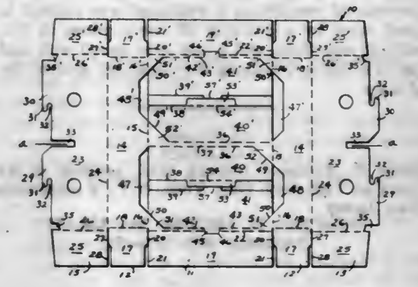
1. A container having bottom flaps flexibly connected to side portions thereof for swinging motion about respective hinge axes between positions opening and closing the bottom of said container, a skid segment connected to each of said flaps when said flaps are in both said open and closed positions, said container being collapsible when said flaps and skid segments are in their open position without having to disconnect said skid segments from said flaps, said skid segments defining a longitudinally extending passageway beneath each of said flaps, each of said passageways extending substantially parallel to the hinge axis of the flap beneath which it is positioned and being adapted to removably receive the tang of a fork lift type truck.

3,127,085
DISPENSING CONTAINER AND CLOSURE THEREFOR
Howard M. Hill, Hamilton, Va.
Filed Oct. 18, 1961, Ser. No. 145,875
6 Claims. (Cl. 229—17)



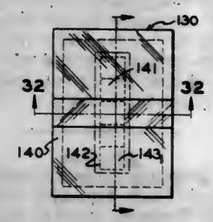
1. A dispensing container of rectangular cross-section having four side walls, three of said side walls terminating at their upper ends in a necked-in area and outwardly formed flanges, the fourth side wall terminating at its upper end in a necked-in area and an outwardly formed flange and integral therewith a flap of substantially the same size and configuration as a horizontal cross-section of said container, said flap adhesively attached to said outwardly formed flanges, and integral with said flap a second flap of substantially rectangular configuration articulated to one edge of said first flap and hinged thereabout to lie in a plane parallel with said first flap and adhesively attached thereto in a triangular area defined by said edge of articulation, an angular line of fold parallel to a diagonal of said first flap, and another edge of said second flap intersecting said angular line of fold and said edge of articulation; the remainder of said second flap folded back about said angular line of fold to lie in a plane above and parallel with said triangular area and having lips extending beyond said outwardly formed flanges of said container and folded thereunder; and a filling and dispensing opening perforated through said first flap and through said triangular area of said second flap, and a plug closing said filling and dispensing opening.

3,127,086
SHIPPING CONTAINER
Walton B. Crane, South Pasadena, Calif., assignor to Allied Plastics Company, Los Angeles, Calif., a corporation of California
Filed Apr. 18, 1963, Ser. No. 273,894
4 Claims. (Cl. 229—27)



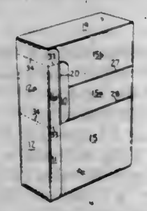
1. A tray-like container which is fabricated from paperboard material and which comprises when erected, a bottom wall, side walls hinged to the side edges of the bottom wall, end walls extending between opposite ends of the side walls, and a transverse partition intermediate the ends of the side walls, said end walls each comprising inner and outer end wall forming panels which are downwardly hinged from a relatively narrow top end wall strip extending in the plane of the top wall and between the top edges of the side walls, one of said end wall forming panels being connected to the side wall forming panels by triangular corner webs in the plane of the top wall which are hinged to the end wall and side wall panels on transverse and longitudinal creases, respectively, and end wall forming flaps which are hinged to the ends of the bottom wall and turned upwardly of said bottom wall between said downwardly hinged inner and outer end wall forming panels, means securing said end wall flaps in rigid relation with said outer end wall panels, and said transverse partition comprising a pair of panels integrally hinged to a top edge forming cross partition strip extending in the plane of the top wall and at right angles to said side wall panels and being hinged downwardly so as to form a cross strut of inverted V-shape, said cross partition panels being connected to the side wall forming panels by triangular webs in the plane of the top wall which are hinged to said cross partition panel and said side wall panels on transverse and longitudinal crease lines, said pair of cross partition panels having relatively narrow integral glue flaps of substantial length hinged to their free edges, said bottom wall having an elongate cross slot, said cross partition panels having edge portions adjoining said flaps abutting the inside surfaces of said bottom wall, said glue flaps extending through said cross slot and being folded over and adhesively secured in fixed relation on the outside surface of the bottom wall so as to rigidly connect the bottom of the cross partition and the bottom wall.

3,127,087
TEARABLE SHEET CONSTRUCTION
Arthur T. Spees, 2540 W. 7th St., Los Angeles 5, Calif.
Filed Sept. 7, 1960, Ser. No. 54,471
10 Claims. (Cl. 229—51)



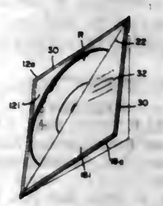
8. In a tearable construction for a laminate sheet having a first layer of stretchable material and a second layer of relatively nonstretchable material bonded thereto, the improvement comprising a weakened area formed in said second layer by a plurality of interruptions in the continuity of said sheet, and a tear strip united with said first layer in a region overlying the weakened area of the second layer.

3,127,088
CARTON
William P. Jacobson, Neenah, Wis., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Dec. 21, 1962, Ser. No. 246,497
2 Claims. (Cl. 229—51)



1. A tamperproof, reclosable and reducible carton formed of a single suitably cut and scored blank comprising a pair of opposed main panels hingedly connected to a pair of opposed side panels; a glue flap hingedly connected to one of said side panels and overlying and adhered to the exterior edge portion of the one of said main panels; a pair of spaced lines of weakness extending from the free edge of said glue flap opposite its hinge connection through the width of said glue flap and consecutively through the widths of said one side panel, the other main panel, and the other side panel to the hinge connection of said other side panel to said one main panel; a third line of weakness extending from one of said pair of weakness lines to an adjacent end of the carton along the common edge of said glue flap and one side panel; a fourth line of weakness extending from the other one of said pair of weakness lines to said adjacent end of the carton along the common edge of said other side panel and said one main panel; a pair of spaced score lines in said one main panel, one of which is aligned with the other one of said pair of weakness lines and the other of said pair of score lines being located between the said one of the pair of score lines and the said adjacent end of the carton; the distance between said other score line the other end of the carton being essentially equal to the width of a side panel plus the distance between said one score line and the said adjacent end of the carton, and the distance between said pair of score lines being essentially equal to the width of a side panel.

3,127,089
RECORD JACKET
Robert B. Freeman, San Francisco, Calif., assignor, by mesne assignments, to Center for the Gifted Child Inc., a corporation of California
Filed June 7, 1962, Ser. No. 200,826
3 Claims. (Cl. 229—68)



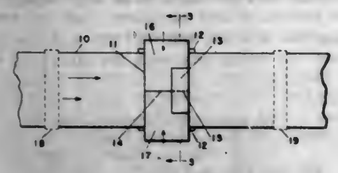
1. A record jacket comprising first and second rectangular panels joined together along two adjacent edges thereof, at least one of said panels having a diagonal hinge extending between the ends of the joined edges, whereby an opening is formed between the diagonal hinges and the unjoined edges of the panels, and strips of fastening velvet attached continuously around only the interior margins adjacent the unjoined edges for releasably closing the opening.

3,127,090
PRODUCT ENCIRCLING BAND
Raymond G. Scott, Jr., Edina, Minn., assignor to Waldorf Paper Products Company, Ramsey County, Minn., a corporation of Minnesota
Filed Oct. 23, 1961, Ser. No. 146,821
2 Claims. (Cl. 229—57)



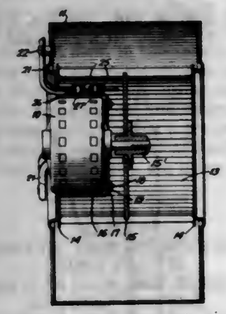
1. A product encircling band including a bottom panel, first and second side wall panels hinged to parallel opposite edges of said bottom panel and extending upwardly therefrom, a top panel hinged to the upper edge of said first side wall and foldable into parallel relation to said bottom panel, a locking tongue hinged to said top panel and foldable into face contact with said second side wall panel, said locking tongue having a rounded lower end and having notches in opposite side edges forming hook shaped lateral projections provided with upwardly facing locking shoulders thereupon, said second side wall having a locking slot therein of a length not substantially greater than the distance between the tips of said projections, said slot being inclined and having one end above the level of the other, whereby insertion of said locking tongue into said slot causes the rounded edges of the tongue to engage the higher end of the slot until the adjacent projection enters the slot while the other projection is above the lower end of the slot, and whereby upon further insertion of the tongue the rounded end of the tongue engages the lower end of the slot moving the said adjacent projection beneath the higher end of the slot until said other projection passes through the slot, the upwardly facing shoulder of said adjacent projection being above the level of the locking shoulder of the other projection.

3,127,091
SUCTION PUMP MEANS HAVING TRANSVERSELY DIVIDED SUCTION TUBES
Georg S. Mittelstaedt, 274 73rd St., Brooklyn, N.Y.
Filed Feb. 26, 1962, Ser. No. 175,595
9 Claims. (Cl. 230—92)



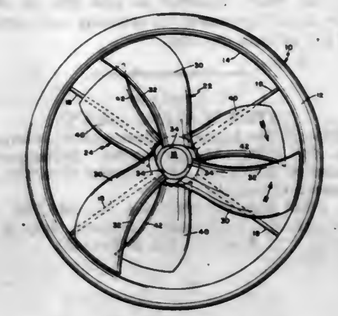
1. Suction pump means comprising a flow tube, an open-ended suction tube extending across the flow tube, the ends of the suction tube extending at least to the outside of the flow tube, said suction tube producing in the flow tube an increasing-decreasing constriction of flow, an opening in the wall of the suction tube downstream of the greatest constriction of flow, and partition means dividing the suction tube transversely and dividing said opening so as to provide longitudinally arranged peripheral openings in the suction tube, said partition means with the suction tube forming channels in the suction tube leading from separate peripheral openings to opposite ends of the suction tube; said constriction of flow producing a low pressure area, resulting in fluid being drawn through the suction tube into the flow tube.

3,127,092
MOTOR MOUNTING
Robert E. Shenberger, Park Forest, Ill., assignor to Rheem Manufacturing Company, Chicago, Ill., a corporation of California
Filed July 3, 1961, Ser. No. 121,654
6 Claims. (Cl. 230—117)



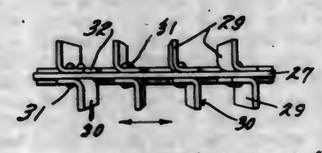
1. A motor mount comprising in combination with a motor having a shaft projecting from one end thereof a cup member having a cylindrical side wall and an annular end wall, the side wall being of a size to receive the motor loosely with said one end thereof engaging the end wall and with the motor shaft extending through the open central portion of the end wall, means securing said end of the motor to the end wall and constituting the sole mounting for the motor a plurality of angular rigid supporting arms having one end thereof extending along the side wall in angularly spaced relation and the other ends extending radially outwardly from the motor for connection to a support, and resilient means connecting the arms to the side wall.

3,127,093
DUCTED SUSTAINING ROTOR FOR AIRCRAFT
Lyle K. V. Sudrow, Los Angeles, Calif., assignor to Helipod, Inc., Oceanside, Calif.
Filed Sept. 29, 1961, Ser. No. 141,765
6 Claims. (Cl. 230—123)



1. An aircraft sustaining rotor system comprising:
a circular shielding duct;
a hub axially mounted in said duct;
a pair of driven, counter-rotating rotors operatively mounted on said hub in axially spaced relation, each rotor having a plurality of blades and being substantially shielded from transverse airflow by said duct;
each of said blades being of low aspect ratio and increasing in chord from root to tip;
the angle of incidence of each blade decreasing from root to tip, with the major outer portion of each blade having an angle of incidence of less than five degrees positive.

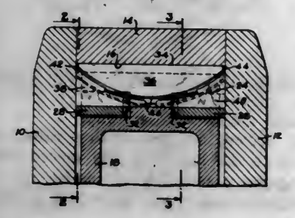
3,127,094
ROTOR WITH IMPELLER VANES
Lewis F. Smith, Schenectady, N.Y., assignor to Mechanical Technology Incorporated, Latham, N.Y., a corporation of New York
Filed Jan. 30, 1963, Ser. No. 254,937
1 Claim. (Cl. 230—134)



A rotor for compressors, turbines, pumps, fans and the like, comprising a pair of circular discs of sheet material, one of said discs including a plurality of integral identical vanes extending in the same direction outwardly from one face only and having been bent from said one of said discs, said vanes projecting parallel with respect to each other and disposed in a radial plane through said disc and extending radially only part way from the marginal edge of said disc toward the center thereof, said vanes forming strike-outs in said disc, all of said strike-outs of said disc being spaced an equal distance along a marginal band adjacent the outer periphery of said disc, and all of said strike-outs being positioned with respect to each other and with respect to each vane on the same side of their respective vanes, the other of said discs being an exact duplicate of said one of said discs, said pair of discs being connected in back-to-back relationship with the vanes of said one disc and the vanes of said other disc projecting outwardly in opposite directions, the vanes of said one disc when in back-to-back relationship being

radially offset approximately one half the distance between the vanes of the said other disc and bent in a direction reverse from the vanes of said other disc, said rotor including a central plate of sheet material located between said pair of discs having a continuous surface for closing over said strike-outs, said central plate being substantially the same diameter as said pair of discs, and said rotor including means for securing said central plate and said pair of discs together.

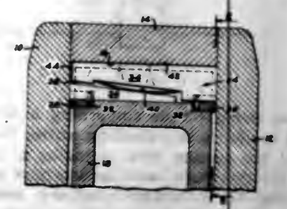
3,127,095
APEX SEALING MEANS
Walter Froede, Neckarsulm, Wurttemberg, Germany, assignor to NSU Motorenwerke Aktiengesellschaft, Neckarsulm, Germany, and Wankel G.m.b.H., Lindau (Bodensee), Germany
Filed June 27, 1962, Ser. No. 205,604
Claims priority, application Germany July 7, 1961
11 Claims. (Cl. 230—145)



1. A rotary mechanism comprising an outer body having spaced end walls and a peripheral wall forming a cavity therebetween; an inner body disposed within said outer body for rotation relative to said outer body; said inner body having a plurality of movable apex seal means circumferentially spaced about its periphery, each received within an outwardly-facing groove extending from one end face to the other of said inner body; each said seal means having an outer edge in sealing engagement with the inner surface of the peripheral wall to form a plurality of working chambers between said bodies which vary in volume upon rotation of said bodies; each said apex seal means having a multi-part construction comprising two end parts being spaced axially apart and a radially-movable middle part between said end parts with the middle part having its outer edge in sealing engagement with the inner surface of said peripheral wall, the surface of each end part which is adjacent to a middle part surface being complementary to such middle part surface; and means in engagement with each end part for constraining each end part to solely axial movement and to cause engagement of the end face of each end part with the adjacent end wall of said outer body.

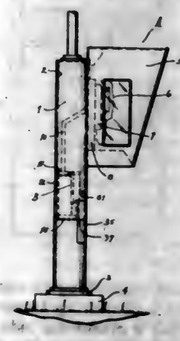
3,127,096
APEX SEALING MEANS
Walter Froede, Neckarsulm, Wurttemberg, Germany, assignor to NSU Motorenwerke Aktiengesellschaft, Neckarsulm, Germany, and Wankel G.m.b.H., Lindau (Bodensee), Germany
Filed June 27, 1962, Ser. No. 205,625
Claims priority, application Germany July 7, 1961
3 Claims. (Cl. 230—145)

1. A rotary mechanism comprising an outer body having spaced end walls and a peripheral wall forming a cavity therebetween; said outer body having an axis along which said end walls are spaced; and an inner body disposed within said outer body for rotation relative to said outer body; said inner body having an axis laterally spaced from but parallel to said outer body axis; said inner body having a plurality of radially-movable apex seal means circumferentially spaced about its periphery, each received within an outwardly-facing groove extending from one end face to the other of said inner body; each said apex seal means having an outer edge in sealing contact with the inner surface of the peripheral wall to form a plurality of working chambers between said bodies which vary in volume upon rotation of said bodies; each said apex seal means having a multi-part construction comprising a radially outer part and a radially inner part with the outer part having its outer edge engageable with the inner surface of said peripheral wall and having one end engageable with one end wall and with the inner part having one end engageable with the other end wall, the



facing surfaces of the inner and outer parts of each apex seal means being inclined to the inner body axis basically along a common plate of inclination, each radially outer part being provided with a pair of integral end legs with a separating recess therebetween running through in the peripheral direction, one end leg extending substantially to the bottom of the respective inner body groove and the other substantially to said plane of inclination, and spring means disposed in each separating recess for urging the two parts of the respective apex seal means axially and also radially apart for sealing engagement with the outer body end walls and peripheral wall.

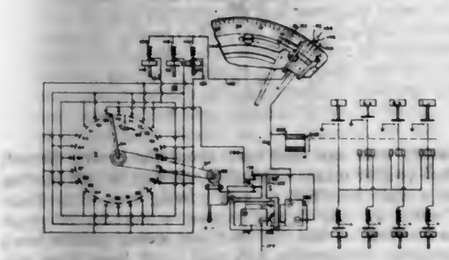
3,127,097
COIN DEPOSITORY FOR COIN-OPERATED DEVICES
Edward Fitzgerald O'Brien, Tupelo, Miss., and John C. Torbett, Wright City, Mo., assignors to M/T Mfg. & Supply Co., Inc., Warren County, Mo., a corporation of Missouri
Filed Aug. 10, 1962, Ser. No. 216,147
6 Claims. (Cl. 232—44)



1. For use in combination with a coin-operated device having a discharge passage for coins received, a coin depository comprising means defining an enclosure, said coin discharge passage extending downwardly within said enclosure, a housing structure rigidly disposed within said enclosure in downwardly spaced relationship to the coin-operated device, a shelf-forming support member detachably mountable in said housing for horizontal disposition when in operable condition, means for locking said support member in operable condition, a coin

receptacle for supported disposition upon said shelf-forming member and for reception within said housing, said coin receptacle receiving the lower end of said coin discharge passage, said enclosure having access means disposed downwardly of said shelf-forming member when the latter is in operative position whereby to effect removal of said coin receptacle, the said support member and receptacle must be withdrawn downwardly of said enclosure.

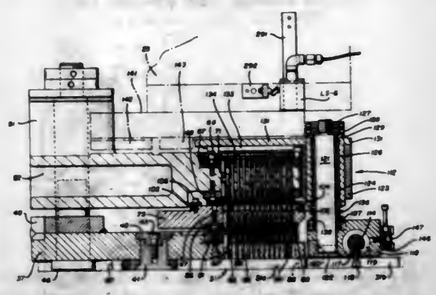
3,127,098
AUTOMATIC SEQUENTIAL LEADERING APPARATUS FOR TAPE PERFORATING MACHINES
Claire N. Brewer, Colorado Springs, Colo., assignor to International Typographical Union of North America, Colorado Springs, Colo.
Filed Dec. 6, 1962, Ser. No. 242,722
3 Claims. (Cl. 234—20)



1. Auxiliary apparatus for successively operating a leader key of the keyboard of a tape perforating machine to produce successively a plurality of identical leader tape perforations for a single line of printing, comprising a solenoid operatively associated with the leader key to depress the same when the solenoid is energized, an electrical circuit including a source of power and the winding of the solenoid, a switch device having a plurality of normally open switches all of which are in the circuit and any one of which completes the circuit when closed, a contact arm movable with respect to said switches to close and then open each of them in succession to thereby successively energize and then de-energize the solenoid, means for moving the contact arm into closing engagement with all of the switches in succession, and means other than the switches for opening said circuit at a pre-determined number of printing units from the end of the line of printing for which the tape perforations are being made.

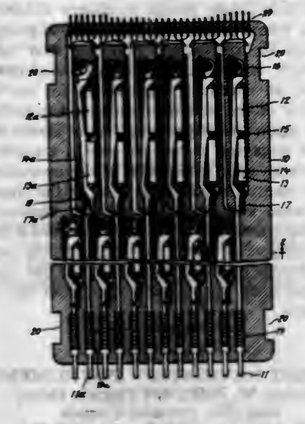
3,127,099
AUTOMATIC PROGRESSIVE MULTI-HOLE PUNCH
Lawrence J. La Barre, 2481 Richard Court, Mountain View, Calif.
Filed Oct. 3, 1962, Ser. No. 228,035
20 Claims. (Cl. 234—78)

1. In a punch for punching perforations in a sheet of material, a stationary die shoe, a punch holder, means for mounting the punch holder on the die shoe to permit vertical reciprocatory movement of the punch holder with respect to the die shoe, a plurality of punches mounted in the punch holder for vertical reciprocatory movement with respect to the punch holder, a stripper plate, means for mounting the stripper plate on the punch holder and permitting relative movement between the stripper plate and the punch holder, the stripper plate and the die shoe having holes therein in alignment with the punches and adapted to receive the punches, a sheet metal carriage, the sheet metal carriage being adapted to support a sheet of metal between the die shoe and the stripper plate, a template, means for supporting the template on the carriage in a fixed lateral position but permitting vertical reciprocatory movement of the template with respect to the carriage, means for moving the template into engagement with selected punches to move the tem-



plate, the punches and the punch holder towards the die shoe and to press the selected punches through the stripper plate, the sheet of material and into the die shoe, and means for automatically advancing the carriage in a direction at right angles to the axes of the punches as the means for moving the template is operated.

3,127,100
ACTUATOR BLOCK FOR PUNCH UNITS
Ludwig Michael Schmidt, Bad Vilbel, near Frankfurt am Main, Germany, assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed May 29, 1962, Ser. No. 198,520
8 Claims. (Cl. 234—115)

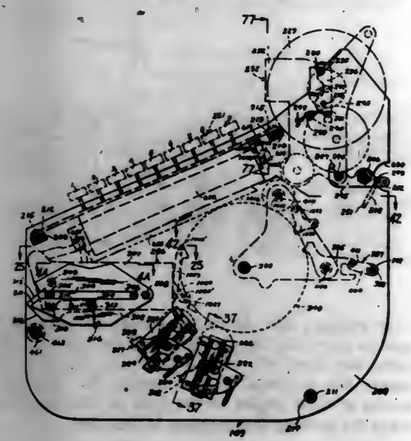


1. A punch block assembly for gang punching a record medium including a plurality of actuator plates, each of said plates supporting a plurality of punch units, each of said units including a resiliently supported punch, each of said plates defining an area for each punch into which said punch will be forced when urged against said record medium, an interposer associated with each of said areas, a first and a second magnet associated with each of said interposers, said punch unit further including a toggle spring associated with each interposer retaining its associated interposer in one of two stable positions, one of said positions blocking said associated area, the other of said positions unblocking said associated area.

3,127,101
COMBINED CASH REGISTER AND ADDING MACHINE

Ernesto Moreno-Bañuelos, Colego Salesiano 8, and Lorenzo B. Shelley, Patrarca 233, both of Mexico City, Mexico

Filed Apr. 1, 1960, Ser. No. 20,509
7 Claims. (Cl. 235—9)



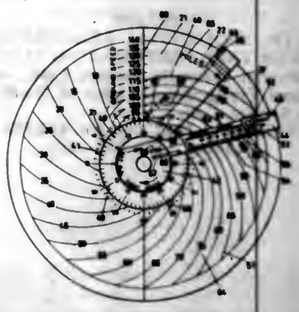
1. In a cash register, a supporting frame having spaced right and left side frame plates, a rotary transfer unit disposed within the supporting frame, a supporting pull rod extending through the transfer unit and supported on the end plates, said pull rod being removable to release the transfer unit from the supporting frame, an indicating mechanism unit detachably connected to the side frame plates and having engagement with the transfer unit to be operated thereby, totalizer guide plates fixed to the inner faces of the side frame plates, totalizers slidably carried by the guide frame plates and combined aligning and retaining means for removably retaining said totalizer in said guideways, said totalizers being biased toward said transfer unit, an operating mechanism for the to alizers carried on one of the side frame plates, key units removably carried upon the supporting frame above the transfer unit and engaging therewith, and a transfer release and keys lockout unit responsive to the operation of the key unit for controlling the operation of the transfer unit and said release and keys lockout unit disposed within the supporting frame under the key units and slidably and detachably removable from the front of the supporting frame, and power operated means on the one side frame plate for operating the transfer unit and the totalizer operating parts.

3,127,102
FLIGHT NAVIGATION INSTRUMENT

Robert M. Fallis, 466 Patricia Drive, Oakville, Ontario, Canada

Filed Mar. 1, 1963, Ser. No. 262,088
4 Claims. (Cl. 235—61)

1. A flight navigation instrument including a face plate; a dial card mounted on the upper surface of said face plate; a first arm extending radially over the upper surface of said dial card; a second, shorter arm extending radially over said upper surface of said dial card above said first arm; means retaining said first and second arms in position on said face plate; said retaining means permitting said first and second arm to be moved manually, independently of each other and of said dial card, and holding said first and second arms in their selected positions upon removal of manual pressure; first pointer means attached to the outer end of said second arm; a moving disc; the periphery of said moving disc being subdivided and said subdivisions registering successively with said first pointer; a moving arm extending radially over said face plate above said first arm and said moving disc; means retaining said moving arm and said moving disc centred over said dial card and permitting said moving arm and said moving disc to be moved manually, independently of each other; a drive means common to said moving arm and said moving disc causing them to rotate

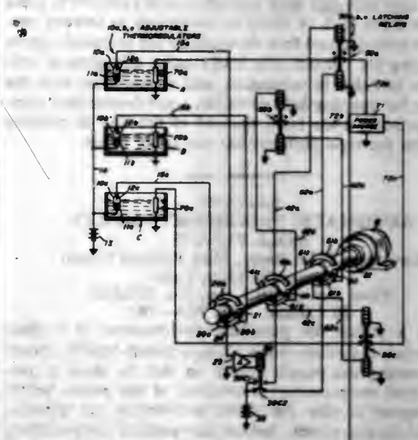


arcuately over said dial card about the centre thereof; second pointer means adjustably attached to said moving arm; a scale inscribed on said moving arm to facilitate the setting of said second pointer; a plurality of graph lines inscribed on said dial card; said second pointer being successively registerable with said graph lines upon said moving arm moving over the surface of said dial card; and a radially extending base line inscribed on the surface of said dial card.

3,127,103
CONTINUOUS SWITCHING FOR CONTROL SYSTEMS

Edward M. Grogan, Pittsburgh, Pa., assignor to United States Steel Corporation, a corporation of New Jersey

Filed Sept. 27, 1961, Ser. No. 141,170
2 Claims. (Cl. 236—1)



1. A system-condition control device for regulating a plurality of systems independently, comprising:

(*a*) independently operating system-condition signaling means, for each system under regulation, comprising individually adjustable system-condition sensing means for each system, on-off switch means responsively associated with said sensing means, and a source of signal current in circuit with said on-off switch means;

(*b*) one amplifier for the several signal currents;

(*c*) a first multiple contact switch capable of sequentially connecting each signaling means with said amplifier;

(*d*) individual, two position latching relays for on-off control of system-condition altering means for each system under regulation;

(*e*) a source of current for energizing coils of said latching relays;

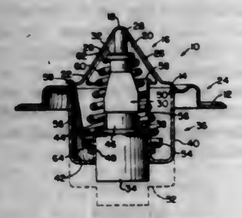
(*f*) a relay with coil responsive to current from said signal current amplifier, said relay having in circuit with said latching relay energizing current a normallly open set of contacts, which close in response to receipt of an amplified signal, and a normally closed set of contacts;

(*g*) a second multiple contact switch capable of sequentially connecting latching relay energizing current flowing through the said normally open set of contacts, when closed, to said individual latching relays to energize coils corresponding to appropriate contact positions thereof and a third multiple contact switch capable of sequentially connecting latching relay energizing current, flowing through the said normally closed set of contacts, to said individual latching relay to energize coils corresponding to opposite contact positions thereof, said first, second, and third multiple contact switches being adapted to maintain corresponding sequence relationship to individual systems under regulation.

3,127,104
REVERSE ACTING POPPET TYPE THERMOSTATIC VALVE CONSTRUCTION

Louis M. Puster, Knoxville, Tenn., assignor to Robertshaw Controls Company, a corporation of Delaware

Filed Oct. 2, 1961, Ser. No. 142,279
13 Claims. (Cl. 236—34)

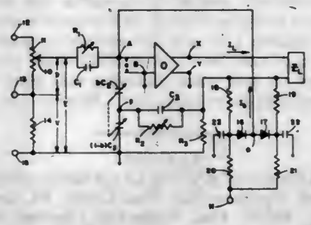


11. In combination: a unitary mounting body having an outer mounting flange, a frusto-conical valve seat, an upwardly directed fluid flow construction above said valve seat and a thrust seat centrally of said fluid flow construction; a power unit having an expansion piston engaging said thrust seat and having a main body extending downwardly past said valve seat with a heat sensitive element adjacent the bottom of said main body; upper spring end receiving means on said main body; a valve sealed and secured to said main body and having an upward circular edge guidably engageable with the under surface of said frusto-conical valve seat; a lower spring end supporting receiver below said valve seat and supported from said mounting body at a point spaced below said thrust seat of said mounting body by a fluid flow permitting part of said lower spring receiver that permits flow from said valve seat to pass through said fluid flow part to said flow construction; and a compression spring having its upper end engaging said upper spring end receiving means and having its lower end engaging said lower spring end supporting receiver.

3,127,105
CONTROLLER IMPROVEMENTS INCLUDING BUMPLESS GAIN ADJUSTMENT AND PREVENTION OF RESET WINDUP

Nathaniel B. Nichols, Rochester, N.Y., assignor to Taylor Instrument Companies, Rochester, N.Y., a corporation of New York

Filed Sept. 15, 1959, Ser. No. 840,157
18 Claims. (Cl. 236—78)

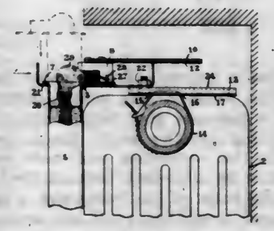


9. In combination, a voltage amplifier having an output circuit providing an output electrical signal, said amplifier having a voltage input for applying input voltage thereto such as to cause said amplifier to produce said electrical signal at said output; an input circuit including an impedance connected to said input for providing said input voltage at said input; feedback means connected to said output circuit for deriving therefrom a feedback voltage representative of said electrical signal and such, that if applied to said input the voltage at said input will be substantially zero, whereby said feedback means determines the effective gain of said amplifier in part, at least; a feedback voltage divider including a first variable capacitance of value bC wherein C is a given quantity of capacitance and b is a number not less than zero nor greater than 1, a second variable capacitance of value $(1-b)C$, adjusting means operable for simultaneous varying each capacitance over values corresponding to the range of b, said capacitances being connected together at one side of each and to said output circuit such as to receive said feedback voltage at such one sides, the other side of one of said capacitances being connected to a point of reference potential common to said input voltage and said feedback voltage, and the other side of the other of said capacitances being connected to said voltage input, whereby operation of said adjusting means constitutes gain control means for said amplifier.

3,127,106
HUMIDIFIERS

Henri Philibert Giroud, 87 Rue de la Republique, Montmorency, Seine et Oise, France

Filed Aug. 5, 1960, Ser. No. 47,756
Claims priority, application France Aug. 10, 1959
2 Claims. (Cl. 237—78)



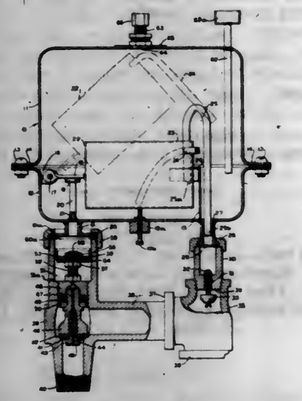
1. In combination with a radiator having a number of connected, upstanding spaced sections, a humidifier comprising, a container-carrier plate positionable in operation over said sections, said plate having a plurality of spaced slots disposed symmetrically with respect to the vertical median plane of said radiator sections in registry with the

spaces between successive radiator sections, a plurality of elongated containers for containing a liquid therein and suspendable in operation from said plate extending through respective ones of said slots downwardly from said plate between said radiator sections, each container having an upper flange for releasably suspending it from said plate extending through said respective slots, the upper flange of each of the containers being dimensioned so as not to completely overlie a respective slot thereby to permit upward airflow through the respective slots, a wick for each container having a part extending upwardly, outwardly of said container, a perforated cover positionable in operation on said plate overlying said plate and containers suspended therefrom, and a filter in said cover.

3,127,107
GENERATION OF ICE-NUCLEATING CRYSTALS
John Patrick Merryweather, New Castle, Pa., assignor to Canadian Safety Fuse Company Limited, Montreal, Quebec, Canada, a corporation of Canada
No Drawing. Filed May 29, 1961, Ser. No. 113,063
4 Claims. (Cl. 239—2)

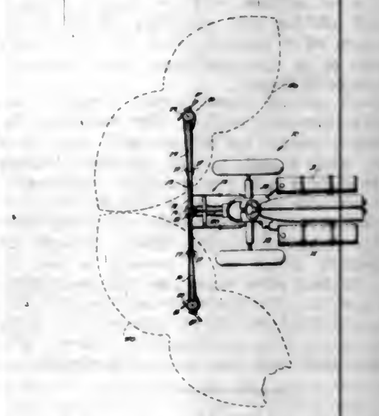
3. A process for generating crystals of ice-nucleating materials for introduction of the same into supercooled atmospheric clouds which comprises detonating contiguously to the clouds a detonating fuse which is an elongated, cord-like material having a core of desensitized pentaerythritol tetranitrate and a protective sheath about said core, said core also containing from about 3.5% to about 20% by weight of silver iodide.

3,127,108
SPRINKLER CONTROL SYSTEM
James A. Harris, 61 Gregary Place, Oakland 19, Calif.
Filed Apr. 17, 1958, Ser. No. 729,211
2 Claims. (Cl. 239—65)



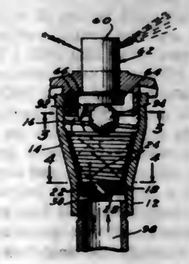
1. In a sprinkler system, a first sprinkler means and a second sprinkler means, a main tank, a piston-type pilot valve housed within said main tank, a main valve connected to said first sprinkler means, means controlled by said pilot valve for controlling said main valve, a discharge syphon in the main tank having a check valve and connected to the outlet of the main valve, a syphon float movably mounted in said main tank and connected to the piston of the pilot valve to be controlled thereby for movement between respective filling and emptying positions, and an evaporation control means for receiving water from said syphon float and including an outlet cup within the main tank and disposed to receive water from said syphon float, and an evaporation cup mounted exteriorly of the main tank and control means connected to said main tank for controlling the water supply to said second sprinkler means after said main valve is shut off.

3,127,109
MOBILE DUAL OVAL PATTERN FERTILIZER DISTRIBUTOR
Roland J. Frase, Palatine, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Jan. 2, 1963, Ser. No. 248,972
4 Claims. (Cl. 239—162)



1. In a sprayer adapted for connection to the rear of a tractor having laterally spaced rear wheels, a transverse frame connected to the tractor rearwardly of said rear wheels, downwardly directed spray distributors mounted at laterally spaced locations on said frame adjacent said rear wheels, conduits mounted on said frame connected to said distributors for directing spray material thereto, drive transmission means carried by the frame and operatively connected to said distributors for simultaneously rotating them to discharge spray material received from said conduits in horizontal planes, and means in said drive transmission means for varying the rotational speed of said distributors during each revolution thereof to discharge the spray material from each of said distributors in substantially oval patterns.

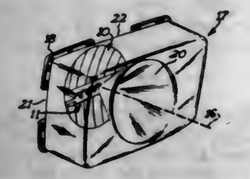
3,127,110
SPRINKLER HEAD
Elmer N. Reynolds, 16104 Lashburn St., Whittier, Calif.
Filed May 14, 1962, Ser. No. 194,443
9 Claims. (Cl. 239—204)



7. In a sprinkler head:
(A) a hollow body having its interior flaring upwardly and its top partially closed by an apertured cap;

(B) a nozzle having a cylindrical part with a chamber therein, closed at one end and having at least one discharge opening;
(C) an annularly outwardly extending flange on the end of said cylindrical part opposite the closed end of said chamber;
(D) a lug extending longitudinally from said flange and at one side thereof and having its inner side curved outwardly from the flange and toward the free end and also having a lateral curvature,
(E) said nozzle being rotatably mounted in said cap;
(F) a ball operably disposed within the body;
(G) and means for introducing fluid into the lower end of said body and effecting swirling of said fluid within said body to cause said ball to circulate upwardly for intermittent engagement with said lug.

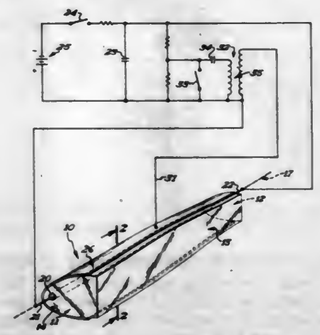
3,127,111
PHOTOGRAPHIC LIGHT UNIT
John A. Baring, Golden, Colo., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Aug. 17, 1961, Ser. No. 132,210
2 Claims. (Cl. 240—1.3)



1. In a photographic light unit adapted to provide illumination of a subject to be photographed, an electrically energizable source of illumination of the type which emits electromagnetic wave energy including heat wave energy, a reflector cooperating with said source of illumination to direct said energy forwardly along an axis directed toward the subject to be photographed, an open end box-like housing of transparent material, said housing having side walls and having a front surface which includes an inclined heat reflecting member, means including said side walls mounting said housing in front of said reflector with the open end thereof facing said reflector, and with said heat reflecting member inclined to said axis, said heat reflecting member being formed of a material which selectively reflects only the heat wave energy through the side walls of said housing away from said axis and away from both said source of illumination and the subject to be photographed, allowing the subject to be illuminated by the remainder of said wave energy to thereby prevent undue heating of the source and to prevent heating of the subject to be photographed.

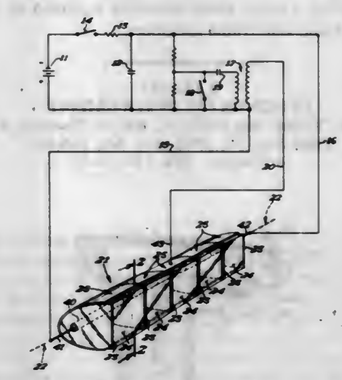
3,127,112
PHOTOGRAPHIC FLASH TUBE AND REFLECTOR
Robert F. McCammon and John G. Tomkinson, Denver, Colo., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Apr. 6, 1962, Ser. No. 185,720
6 Claims. (Cl. 240—1.3)

1. A unitary photographic flash tube and reflector, comprising;
a solid elongated member of light transmitting material having a surface thereof formed of a diverging curve, said surface having a focal line within said member,
flash tube means including an opening through said material coincident with the focal line and including electrode means mounted at spaced points, said electrode means being adapted to be connected to a source of voltage,



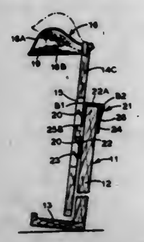
an electrically conductive reflective surface on said surface to define a divergent reflector,
and starting electrode means, including said reflective surface adapted to be connected to a source of starting voltage.

3,127,113
PHOTOGRAPHIC FLASH TUBE AND REFLECTOR
John G. Tomkinson, Denver, Colo., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Apr. 18, 1962, Ser. No. 188,448
4 Claims. (Cl. 240—1.3)



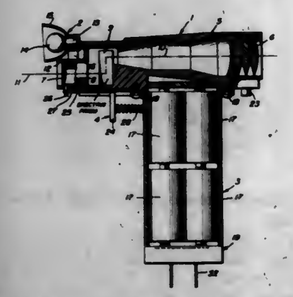
1. A combination photographic flash tube and reflector, comprising;
a plurality of individual sections formed of solid light transparent material placed end to end to form an elongated member, each section having a first surface thereof formed of a diverging curve having a focal line within that section, and having mating end surfaces,
electrically conductive reflector means on said first surface, a nonreflective coating on said end surfaces, said first surface and said end surfaces defining a closed reflector,
flash tube means including an opening formed in each of said sections along said focal line, and including main discharge electrodes between which an electrical discharge may take place along the focal line,
and electrical starting means including said reflector means adapted to initiate such a discharge.

3,127,114
LIGHT FIXTURE
George Shaw, 67—02A 186th Lane, Fresh Meadows 65, N.Y.
Filed Oct. 23, 1961, Ser. No. 146,956
4 Claims. (Cl. 240—4)



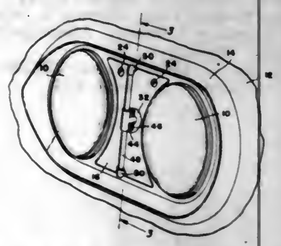
1. A music rack or the like comprising an open frame structure having connecting top, bottom and side frame members, a ledge connected to the bottom frame member for supporting thereon sheet music or the like, a central strut connected between said top and bottom frame members, said strut having a series of vertically spaced notches formed in the back thereof, each of said notches being inclined downwardly, a clip detachably connected with said strut for supporting said rack on a suitable support structure, said clip comprising a clip portion disposed contiguous with said strut, said clip portion terminating at its lower end in a forwardly and upwardly bent hook angled to be received in one of said notches in said strut, a U-shape brace connected to said clip portion intermediate its ends thereof, said brace having forwardly extending arm portions spaced to embrace the sides of said strut, means for connecting the other end of said clip portion to a supporting surface, a lamp assembly including a lamp shade pivotally mounted to the upper end of said side frame members.

3,127,115
DIAGNOSTIC INSTRUMENT
John I. Yellott and Byron C. Butler, Phoenix, Ariz.
Filed Jan. 16, 1962, Ser. No. 166,661
4 Claims. (Cl. 240—6.4)



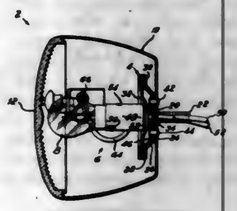
1. A medical examining instrument of the character described comprising, a telescope, said telescope including a housing having an offset portion at one end thereof, a magnifying eye-piece mounted in the opposite end of the housing, a tubular member slidably mounted within the housing in the vicinity of the offset portion, an objective lens mounted within the tubular member, an erecting prism mounted within the housing between the objective lens and the eye-piece, a handle member secured to the telescope housing in proximity to the magnifying eye-piece for hand-holding the instrument, means operatively connected between the handle and the tubular member for moving the objective lens relative to the magnifying eye-piece to thereby focus the telescope, a spotlight pivotally mounted on the offset portion of the housing in proximity to the objective lens whereby the beam of light from the spotlight passes directly to the area being examined without diminishing the illumination intensity, the source of power for illuminating the spotlight comprising a rechargeable dry cell mounted within the handle, means carried by the handle for recharging the dry cell and switch means connected between the spotlight and the dry cell for controlling illumination of the spotlight.

3,127,116
VEHICLE HEADLIGHT WASHER SYSTEM
Samuel C. Pollock, Rochester, and John W. Yee, Roseville, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 28, 1961, Ser. No. 141,493
6 Claims. (Cl. 240—7.1)



1. In a vehicle, a headlight mounted in said vehicle and having a lens, movable nozzle means for spraying liquid solvent under pressure onto the outer surface of said headlight lens for cleaning the same, and means for imparting conjoint linear and angular movement to said nozzle means from a retracted position to an extended position both forward and directly in front of said headlight lens.

3,127,117
STOP AND REAR LAMP ASSEMBLY
William L. Mappes, Cincinnati, Ohio, assignor to Duplan Corporation, Winston-Salem, N.C., a corporation of Delaware
Filed Feb. 5, 1962, Ser. No. 170,983
3 Claims. (Cl. 240—8.3)



1. A stop and rear lamp assembly comprising a housing, a lens mounted on said housing, an elastomeric shock absorber having a base portion and an upstanding side wall portion, said base portion being mounted upon said housing, said upstanding side wall portion having a socket unit mounting groove on the inner surface thereof, and a socket unit including a light bulb mounted on said shock absorber with a section of said socket unit extending into said groove whereby said socket unit is free for limited movement on said shock absorber, said shock absorber having a recess in the top surface thereof communicating with said groove and said light unit having a protrusion thereon seated within said recess to

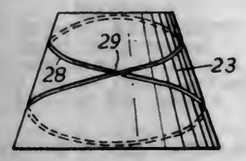
locate and hold the socket unit into a selected angular position within said housing.

3,127,118
LAMP HARP AND BASE CONSTRUCTION
Wilbur J. Urban, River Forest, Ill., assignor to Hub Stamping and Manufacturing Company, Chicago, Ill.
Filed July 5, 1960, Ser. No. 40,648
3 Claims. (Cl. 240—132)



1. A lamp harp and base construction comprising a cup-shaped base having an open upper end and an inner surface flaring outwardly and upwardly to the top of said base and adapted to support a socket therein, said base having a groove formed around the open end thereof at the widest part of said base and opening inwardly and lying outside of said inner surface of said base, a frame including a pair of legs extending upwardly from said base and having transversely extending engaging structure at the lower ends thereof adapted to be removably seated in said groove, said groove being sufficiently deep so that said engaging structure lies substantially entirely within said groove when seated therein, whereby the interior of said base is substantially unobstructed.

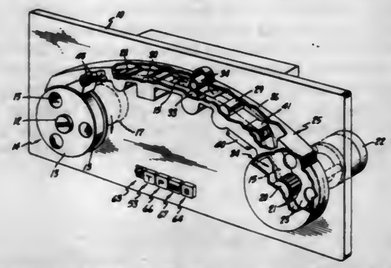
3,127,119
BOBBIN OR PIRN WINDING DEVICE
Jean Dautricourt, 40 Vyvnyn Straat, Zeebrugge, Belgium
Filed July 10, 1961, Ser. No. 122,945
4 Claims. (Cl. 242—31)



1. In a yarn winding device, a yarn guiding member comprising a substantially conical member rotatable about its axis, a yarn guiding groove extending helically around said member for guiding yarn from the smaller end of said member to the larger end of said member, and a second yarn guiding groove extending helically around said member for guiding yarn from the larger end to the smaller end of said member, said first and second groove being interconnected at each end of said member, and said second groove being at least partially interrupted at each place where it crosses said first groove, and a yarn stop disposed adjacent the smaller end of said grooved conical member to prevent yarn from running off the smaller end.

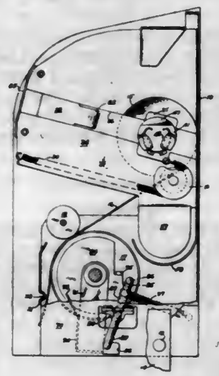
3,127,120
TAPE TRANSPORT MECHANISM
Walter T. Selsted, Redwood City, and Robert E. Heller, San Mateo, Calif., assignors to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed Mar. 13, 1961, Ser. No. 95,217
8 Claims. (Cl. 242—55.12)

1. A threading mechanism comprising: a length of pliant, substantially limp strip material, means providing a supply of said strip material, enclosure means defining a substantially enclosed strip material guide path initiating adjacent to the supply means, and strip material takeup means enclosed within the enclosure means and including pneumatic means for creating a pressure differential along



the enclosure means, with said pressure decreasing in value from said supply to said takeup means.

3,127,121
ROLL PAPER TOWEL DISPENSER
Alexander Babin, Walnut Creek, Calif., assignor to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada
Filed Oct. 12, 1959, Ser. No. 845,870
13 Claims. (Cl. 242—55.53)

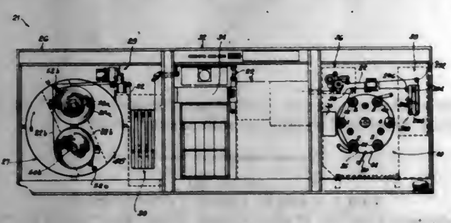


2. Mounting means for a supply roll of sheet material in a towel dispensing cabinet or the like, said cabinet including a coupler mechanism mounted for rotation about an axis and having spaced apart spring means thereon and a supporting cradle for said roll, a coupling device on said roll secured to an end portion thereof adjacent the axis of the roll, at least a pair of opposed camming faces on said coupling device projecting outwardly beyond said end of the roll and providing a wedge adapted to spread apart said spring means when said wedge is inserted downwardly between said spring means in a direction transverse to said axis of rotation, said camming faces terminating at the wide part of said wedge in abutments adapted to become dogged by said spring means after such insertion of said coupling device and support of said wedge on said cradle.

3,127,122
REWINDING MECHANISM FOR PRINTING MACHINES
Allan I. Roshkind, Glenview, Ill., assignor to A. B. Dick Company, Chicago, Ill., a corporation of Illinois
Filed Apr. 20, 1961, Ser. No. 104,467
3 Claims. (Cl. 242—56)

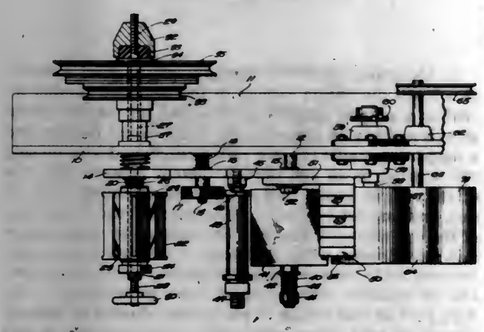
3. A mechanism for rewinding a web, said mechanism comprising an indexing wheel, a plurality of spindles rotat-

ably mounted on said wheel, indexing means for intermittently rotating said wheel to bring each spindle to a succession of positions, means for guiding the web over the spindle at the first of said positions and around the spindle at the second of said positions, said web being wound into a roll on the spindle at said second position, a severing device including a presser for selectively pressing the web against the spindle at said first position so that the web will cause said spindle at said first position to rotate, a cutter for severing the web just beyond the spindle at said first position, the roll on the spindle at said second position



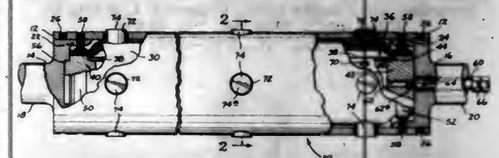
thereby being severed from the web, suction means for holding the severed leading end of the web on the spindle at said first position so that the leading end of the web will be carried around the spindle to start a new roll, said suction means including suction passages leading into each spindle at one side portion thereof, said suction passages being rotatable with said spindle, and means for actuating said cutter in timed relation to the rotation of said spindle at said first position about the axis of such spindle so that said cutter will be operated when said suction passages are opposite the web.

3,127,123
TAPE SLITTING MACHINE
Ervin Bowker, 37 Warren Ave., Tiverton, R.I., and Ervin Bowker, Jr., 31 Highland Road, Swansea, Mass.
Filed Sept. 14, 1962, Ser. No. 223,642
2 Claims. (Cl. 242—56.4)



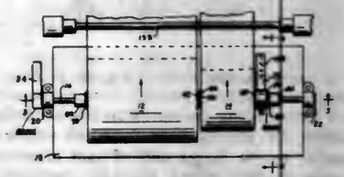
1. A tape slitting mechanism comprising a vertical support, a feeding roller on said support, a unit comprising a generally vertical plate mounted for lateral sliding movement with reference to said support and axially of the roller, said unit including slitting knives and idler drums over which a web of work passes and a supply drum for the work, all carried by said plate, and means for adjusting said plate axially of the roller comprising a spring urging said plate away from said support and a screw and nut acting against said spring to adjust said plate relative to said support.

3,127,124
EXPANSIBLE MANDREL
Charles R. Tidland, 2363 SE. 8th, Camas, Wash., and Gordon M. Ochs, Camas, Wash.; said Ochs assignor to Arthur T. Williams, Washougal, Wash.
Filed Aug. 15, 1961, Ser. No. 131,567
8 Claims. (Cl. 242—72)



2. An expansible mandrel comprising a hollow cylindrical perforate shell, and journal portions at the ends of said shell for mounting the mandrel, said journal portions defining the ends and said shell defining the sides of an elongated chamber within said mandrel, an elongated flexible hose member inside said chamber extending longitudinally of and within said shell for producing expansion of the mandrel, elongated and rigid tubular structure inside said chamber extending longitudinally of and within said hose member for limiting the extent of collapse of said hose member, said tubular structure comprising an elongated tube and concentric plugs at each end of said tube, said plugs having annular seating means, the ends of said tube being seated on said seating means, means securing the ends of said hose member to the ends of said tubular structure, means mounting the ends of said tubular structure in fixed position in said journal portions, means in said tubular structure accommodating the flow of fluid from the interior of said structure to the interior of said hose member, and means for introducing fluid under pressure to the interior of said tubular structure.

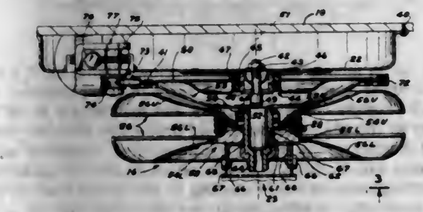
3,127,125
REEL WITH BRAKE FOR WEB SUPPLY TO PRINTING PRESS
Harry Jilbert, 118 E. 8th St., Rochester, Ind.
Filed Dec. 1, 1961, Ser. No. 156,325
1 Claim. (Cl. 242—75.4)



A multiple reel for use in conjunction with flat bed presses, comprising an elongated rotatable shaft for supporting a roll of standard unprinted paper and a roll of paper preprinted on one side and being half the width of the paper of said standard roll, each roll having a core on which the paper is wound, bearings adjacent each end of said shaft for receiving and rotatably supporting said shaft, a pair of spaced inserts mounted on said shaft and secured thereto for rotation therewith, each insert having a tapered portion for slipping into an end of the core of the roll of standard paper and longitudinal ribs on the surface of said portion for gripping the core and a radial flange at the external end thereof, a second pair of inserts mounted on said shaft for rotation thereon and relative thereto and being spaced from one another one half the distance between said first two inserts, one of said inserts being positioned in close proximity to the adjacent first mentioned inserts, each of said second inserts having a tapered portion for slipping into an end of the core of the roll of paper preprinted on one side and a radial flange at the larger end of said tapered portion,

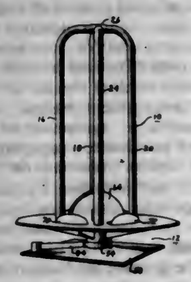
the second insert spaced farthest from said first mentioned inserts having a cylindrical portion forming a brake drum, an axially adjustable braking mechanism secured thereto for controlling the tension of the paper being unreeled from said preprinted roll, said braking mechanism consisting of two brake shoes for gripping said drum, a bolt interconnecting said shoes having a spring and nut thereon for controlling the pressure of said shoes on said drum, a radial torque arm connected to one of said shoes and at its outer end held against rotation, collars secured to said shaft at opposite ends of said rolls in close proximity to the respective inserts, and a brake mechanism connected to said shaft at one end thereof for controlling the tension of the paper being unreeled from said standard roll.

3,127,126
REELING AND UNREELING APPARATUS
John E. Hancock, 3733 Chestnut Ave., Long Beach, Calif.
Filed Mar. 6, 1961, Ser. No. 93,452
7 Claims. (Cl. 242—99)



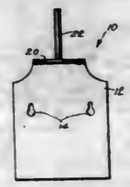
5. Boat anchoring apparatus, comprising: an anchor; a bi-directional anchor line reel operable to raise and lower said anchor; a handle drivingly engageable with said reel for manual operation thereof, said handle being drivingly disengageable from said reel when said anchor is to be lowered; power-operated means; first means interposed between said power-operated means and said reel and coupled to said power-operated means; and second means interposed between said handle and said reel and operative by said handle to drivingly connect said reel and said first means for driving said reel, said first means including a non-reversible one-way coupling member that restrains said reel from unreeling said line when said second means is operated.

3,127,127
WIRE CARRIER
Robert Kohn and Mortimer C. Winski, Michigan City, Ind., assignors to Northern Indiana Steel Supply Co., Inc., Michigan City, Ind., a corporation of Indiana
Filed Aug. 20, 1962, Ser. No. 218,011
4 Claims. (Cl. 242—129)



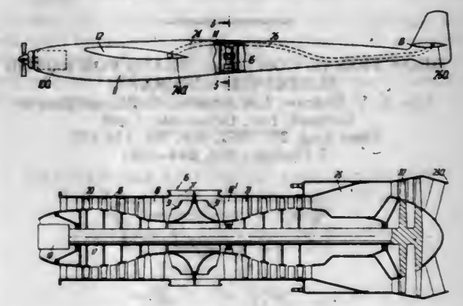
1. A wire carrier comprising a disc-shaped base plate having an opening in the center, four equally spaced lugs extending from said plate into said opening, four substantially vetrical tubular members secured at the bottom to said lugs and being joined to one another at the top, said members sloping inwardly from the bottom to the top and having a substantially horizontal portion extending inwardly at the top, two opposite of said members being formed as one piece and being thin in the horizontal direction to form a vertical flattened portion and the other opposite two of said members being joined by welding to opposite sides of said flattened portion, and the lower edge of said flattened portion extending below the lower surface of said other opposite two members.

3,127,128
STRING HOLDER
Lawrence L. Morin, P.O. Box 2164, Warren, Ariz.
Filed Oct. 25, 1960, Ser. No. 64,799
2 Claims. (Cl. 242—129.5)



2. A string holder for meat cutting blocks comprising a horizontal plate, a spindle mounted substantially centrally of said plate and extending upwardly therefrom, said plate having a portion thereof adapted to overlie the meat cutting block, a vertical plate mounted on the underside of said horizontal plate and lying in the vertical plane of the spindle, and means on said vertical plate for detachably securing said holder to a side of the meat block.

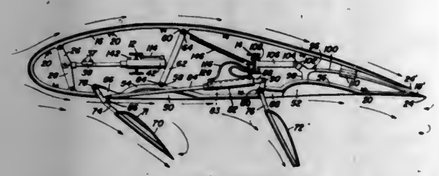
3,127,129
VTOL AIRCRAFT ENGINE
James Alexander Petrie, Littleover, Derby, England, assignor to Rolls-Royce Limited, Derby, England, a company of Great Britain
Filed Mar. 19, 1962, Ser. No. 180,719
Claims priority, application Great Britain Apr. 5, 1961
9 Claims. (Cl. 244—23)



9. An aircraft comprising at least one vertically mounted gas turbine engine in the aircraft, said gas turbine engine comprising two multi-stage axial flow compressors which are axially aligned and arranged with their inlets facing each other, combustion equipment and turbine means arranged in axial flow series, said turbine means being axially aligned with said compressors, substantially straight line flow ducting, including said combustion equipment connecting one of said compressors and said turbine means whereby compressed air from the one of said compressors is supplied in a substantially straight line

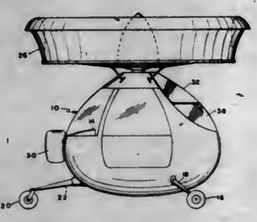
direction from the one of said compressors to the combustion equipment and exhaust gases from said combustion equipment is supplied in a substantially straight line direction to and through said turbine, the other of said compressors having an outlet for delivering compressed air to auxiliary equipment requiring compressed air, shafting connecting both said compressors to said turbine means, said turbine driving said compressors, and an air intake which is disposed between the two said inlets to the two compressors, said air intake having walls which respectively direct the air into the inlets to the two compressors.

3,127,130
VARIABLE SHAPED AIRFOIL
Donald G. Lyon, Dubuque, Iowa
(701 Avon Place, Alexandria, Va.)
Filed Feb. 26, 1962, Ser. No. 176,181
18 Claims. (Cl. 244—44)



1. A wing comprising longitudinally extending spar means extending through and operatively connected to a plurality of spaced flexible ribs variably deformable throughout in a plane transverse to said spar means, each of said ribs including flexible upper and lower portions joined at their leading edges, separate ends at the trailing edge thereof movable relative to one another, connecting means preventing substantial separation between said ends while permitting relative movement therebetween in a direction generally parallel to the chord of the rib for chord-wise deformation, expansion means displaceably mounted within said rib and connected to the upper and lower portions thereof operable to change camber spacing between the upper and lower portions, first power means operatively connected to said expansion means, dual flaps operatively connected in chordwise spaced relationship to the lower portions of the ribs and second power means operatively connected to said flaps.

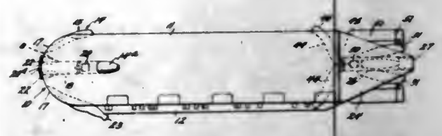
3,127,131
DIRECTIONAL CONTROL MEANS FOR ROTOR SUSTAINED AIRCRAFT
Lyle K. V. Sudrow, Los Angeles, Calif., assignor to Helipod, Inc., Oceanside, Calif.
Filed Aug. 25, 1961, Ser. No. 136,137
2 Claims. (Cl. 244—50)



1, The combination in an aircraft of a fuselage structure and a sustaining rotor mounted to provide a substantially downward slipstream around the fuselage structure; and directional control means, comprising at least one rudder continually exposed to the slipstream and pivotally mounted on said fuselage on an axis substantially radial to the axis of said rotor; actuating means operatively connected to said rudder for pivotal deflection thereof;

and trim setting means frictionally engageable with said actuating means to retain said rudder in a selected position against aerodynamic loads, while allowing over-riding of the frictional engagement by said actuating means.

3,127,132
JET-PROPELLED DIRIGIBLE AIRSHIPS
Joseph P. Grady, 3411 Tulip Drive, Falls Church, Va.
Filed July 31, 1961, Ser. No. 128,940
2 Claims. (Cl. 244—55)

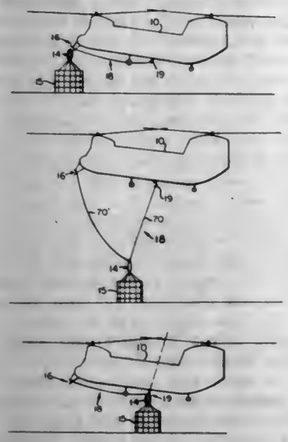


1. In an airship an elongated hollow tubular shell having a front semispherical nose through the periphery of which projects circumferentially and divergingly so as to point to the rear a series of jet propulsive nozzles, said shell having at its rear a frusto-conical extension surrounded externally by a circumferential series of coaxially extending steering vanes starting at the widest portion of extension and terminating at the discharge end of said shell, a second circumferentially and divergingly disposed series of jet propulsive units having nozzles projecting outside said extension between said vanes, a series of air-intake nozzles circumferentially projecting outside said shell and pointing towards the first named jet propulsive nozzles and originating in front of said extension and having conduit spreading portions connected to the second named jet propulsive nozzles, and air intakes for the first series of jet propulsive nozzles opening out of the nose of said shell.

3,127,133
PICKUP SYSTEM
Edward W. Glatfelter, Newtown Square, and Edward T. Keast, Jr., Drexel Hill, Pa., assignors to The Boeing Company, Seattle, Wash., a corporation of Delaware
Filed June 20, 1963, Ser. No. 289,180
31 Claims. (Cl. 244—77)

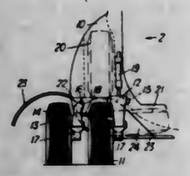
2. In combination with an aircraft, a pickup system comprising contact means mounted on said aircraft for contacting a load, engagement means mounted on said aircraft in spaced relation to said contact means, and movement means mounted on said aircraft having transitory means mounted thereon, said movement means being responsive to selected contact of said contact means with the load to move said transistory means into engagement with the load and for movement of said transitory means with respect to said aircraft between a first position adjacent said contact means and a second position adjacent said engagement means, said engagement means being responsive to movement of said transitory means to the second position for engaging the load.

21. A guidance system mounted on an aircraft for guiding an aircraft into juxtaposed relationship with a ground load comprising connecting means connecting said aircraft to the load, tension means mounted on said aircraft for receiving said connecting means as said aircraft approaches the ground load, control means including sensing means for sensing angular relationship of said aircraft with respect to said connecting means connected between said tension means and the ground load, and indicating means responsive to said sensing means for indicating the angular relationship of said aircraft with respect to said connecting means.



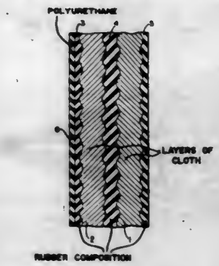
27. The method of grasping a ground load with a flying vehicle comprising the steps of flying said vehicle into contact with the ground load, grasping the ground load by flexible and extensible means mounted on said vehicle, gaining altitude to a position of predetermined relationship of said vehicle to the ground load, reapproaching the ground load with said vehicle along the length of said flexible and extensible means when said flexible and extensible means are maintained substantially taut between said vehicle and the ground load, and contacting and grasping the ground load with cargo-engagement means mounted on said vehicle for relocation of the ground load.

3,127,134
AIRCRAFT UNDERCARRIAGES
Peter Latham Sutcliffe, Oxshott, Surrey, England, assignor to Hawker Siddeley Aviation Limited, Surrey, England
Filed Mar. 27, 1962, Ser. No. 182,770
Claims priority, application Great Britain June 26, 1961
12 Claims. (Cl. 244—102)



1. An aircraft undercarriage comprising, in combination, a fuselage structure, a first undercarriage leg mounted at its upper end on said fuselage structure by means of a pivotal connection of which the pivot axis extends in the fore-and-aft direction of said structure, a first ground wheel carried at the lower end of said first undercarriage leg, a second undercarriage leg alongside said first leg and mounted at its upper end on said fuselage structure by means of a pivotal connection of which the pivot axis extends transversely of said structure substantially at right angles to said pivot axis of said first leg, a second groundwheel carried at the lower end of said second undercarriage leg, powered retraction means connected to one of said legs, and a link coupling the two legs to one another whereby, upon retraction, rising of said second wheel by turning of said second leg about the pivot axis thereof is accompanied by simultaneous rising and turning of said first wheel about the pivot axis of said first leg into a space under, and formerly occupied in part by, said second wheel.

3,127,135
AIRSHIP ENVELOPES
Warren W. Burr, West Richfield, William F. Durbin, Akron, Vito F. Giulitto, Ravenna, Nelson V. Seeger, Cuyahoga Falls, and Carl E. Snyder, Silver Lake, Ohio, assignors to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Apr. 27, 1956, Ser. No. 581,025
2 Claims. (Cl. 244—126)



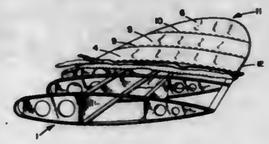
1. An airship envelope comprising a plurality of layers of fabric coated with a vulcanized rubber composition which is covered contiguously on its outermost surface with a reaction product of a polyisocyanate and an active-hydrogen-containing polymeric material selected from the group consisting of polyesters, polyethers and polyesteramides having an average molecular weight of from 1,000 to 5,000 and an acid number not greater than 5, said reaction product being in direct contact with said envelope, said vulcanized rubber composition comprises the elastomeric addition product of

(A) at least one aliphatic mono-mercaptan having from 1 to 6 carbon atoms and

(B) at least one synthetic rubber latex containing an emulsion polymerized polymer of at least one conjugated diolefin having from 4 to 6 carbon atoms with from none to an equal amount by weight of at least one monomer containing a reactive component selected from the group consisting of vinyl and vinylidene radicals which are polymerizable with said diolefin,

in which the double bonds present in the polymer are saturated by reaction with the mercaptan to the extent of at least 30% of the total double bonds present in said polymer, said addition product having a Mooney plasticity (large rotor) or not less than 35.

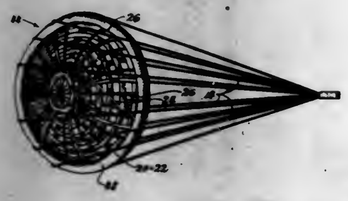
3,127,136
FRAMEWORK COVERING ARRANGEMENT
Daniel A. Cooper, 2524 Roscomare Road, Los Angeles 24, Calif.
Filed June 22, 1959, Ser. No. 821,958
6 Claims. (Cl. 244—133)



1. The method of covering an airframe comprising the steps of forming an envelope of cloth material shrinkable at an elevated temperature, placing said envelope over a portion of an airframe to be covered so that said airframe portion is received within said envelope, then

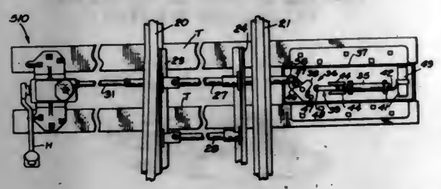
attaching said envelope to said air frame, then applying heat to localized areas of said envelope progressively throughout said envelope sufficient to cause said envelope to shrink and become taut on said airframe portion, and then applying a substance to said material to cause said envelope to become substantially fluid impervious.

3,127,137
PARACHUTE
James Robert Downing, Palos Verdes, Calif., assignor to Cook Electric Company, Chicago, Ill., a corporation of Delaware
Filed May 11, 1960, Ser. No. 28,418
2 Claims. (Cl. 244—145)



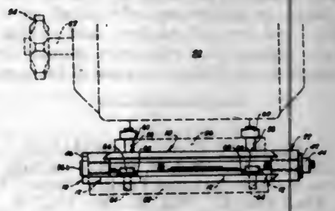
1. In a parachute, the combination comprising a circular generally dome-shaped canopy comprising a plurality of gores sewn together, each of said gores consisting of a pair of radial border ribbons extending between the crown and the edge of said canopy, a plurality of parallel lateral ribbons secured to and extending between said radial ribbons, and a central ribbon disposed midway between said radial ribbons and secured to said lateral ribbons, said ribbons having open spaces therebetween, said radial ribbons of each gore having upper portions converging toward the crown of said canopy, said radial ribbons having lower portions angling toward each other and toward the edge of said canopy, the lowermost lateral ribbon in each gore thereby being shorter than the second to the lowermost lateral ribbon, the edge portion of said canopy thereby being of a smaller circumference than the portion of said canopy immediately above said edge portion so as to minimize fluttering of the edge portion at supersonic speeds, said central ribbon being at right angles to all of said lateral ribbons, and a plurality of shroud lines connected to the lower ends of said radial ribbons while leaving said central ribbons free of said shroud lines.

3,127,138
RAILROAD SWITCH STANDS
Rosser L. Wilson, Mahwah, N.J., and Elmer Ellsworth Caton, Pearl River, N.Y., assignors to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Filed Apr. 28, 1960, Ser. No. 25,297
2 Claims. (Cl. 246—393)



1. Apparatus for shifting the switch points of a railroad switch between two limit positions and comprising: a manually operable switch stand including over-center linkage means connected to said switch points for shifting said switch points between the two limit positions, said over-center linkage members having a spring exerting a biasing force for maintaining said switch points in each of the limit positions; power means connected to said switch points and operable to move said over-center linkage means past dead center whereby said switch stand is operable to shift the switch points to a limit position and to exert a biasing force for maintaining the switch point in a limit position; said power means including cam means mounted for rotational movement about a pivot axis fixed in position with respect to the railway switch, link means interconnecting said cam means and said switch points and being rotatable with the switch points for moving the switch points in a direction dependent upon the direction of the rotation of the cam means, and remotely actuatable means including a push rod normally spaced from said cam means so that the switch points are shiftable by the manually operable switch stand without restriction by said push rod, said push rod being engageable with the cam means upon actuation of the remotely actuatable means to move said switch points through said link means short of each one of said limit positions and to move said over-center linkage means over the dead center position whereby said spring-biased over-center linkage means moves said switch points to a limit position and exerts a biasing force for maintaining the switch points in said limit position.

3,127,139
ADJUSTABLE ENGINE MOUNT
Dewey D. Bittle, 106 S. 10th, Tonkawa, Okla.
Filed Jan. 30, 1961, Ser. No. 85,825
2 Claims. (Cl. 248—23)

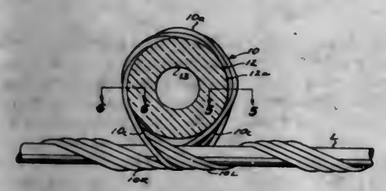


1. An adjustable engine mount comprising a base plate, an elongated first jaw member rigidly connected along one edge of the base plate and projecting above the upper surface of the base plate, a first channel way in the first jaw member facing the opposite edge of the base plate, the opposite edge of the base plate being parallel to the first channel way, an elongated second jaw member having second and third parallel channel ways in one face thereof, the second channel way being adapted to receive the opposite edge of the base plate, an engine support plate having two parallel edges, one edge being received in the first channel way and the other edge being received in the third channel way, and means disposed between the base plate and the motor support plate for pulling the first and second jaw members together to clamp the engine support plate therebetween.

3,127,140
PREFORMED LINE TIE
Jackson C. Quayle, 10225 Darrow Road, Twinsburg, Ohio
Filed Mar. 19, 1962, Ser. No. 180,648
4 Claims. (Cl. 248—63)

1. In combination with a support and a line, a preformed line tie and guard securing said line to the support and comprising a plurality of rods of hard drawn resilient material having a diameter less than that of the line formed into open helices with a pitch and applied to the line without permanent deformation thereof, said helices having an inner diameter for the helices, in less than that

of the line prior to installation on the line, in gripping engagement with the line, said rods being assembled into groups to provide a partial lay and being bent intermediate their ends to provide a bight portion, said bight being in surrounding relation to the support and being distorted at the apex of the bight to provide a close twisted portion in contact with the support for a substantial distance on opposite sides of the apex of the bight and partial lay portions on opposite sides of said close twisted portion with said partial lay portions having contact with the support on opposite sides of the twisted portion and said



portions beyond said last-mentioned portions extending tangentially away and free from said support and one of the partial lay portions extending over the line and the free end being wrapped around the line and extending in engagement therewith and in one direction and the other of said partial lay portions extending under the line and being wrapped around the line and extending in the other direction, said close twisted portion and said partial lay portions in contact with the support providing a resilient spring tension on the parts that extend free of the support and holding them away from the support.

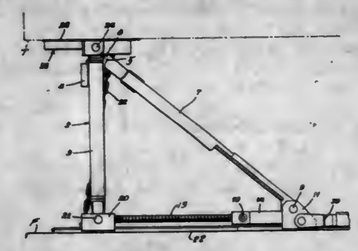
3,127,141
IRON SUPPORT
Edward E. Elliston, 2346 McLean, Chicago 47, Ill.
Filed Sept. 1, 1961, Ser. No. 135,529
3 Claims. (Cl. 248—117.6)



1. An iron support comprising a flat plate adapted to rest on an ironing board, means to clamp the plate to an ironing board, an upstanding flange at one end of the plate formed with a central notch therein, a hook member having a straight base portion and an upstanding support portion terminating in a hook to receive and support an iron, horizontal guide means on the plate aligned with the notch rotatably and slidably supporting the base portion, and a spring on the plate engaging the hook member and urging it toward the notch whereby when the hook member is at right angles to the plate the support portion thereof will be urged into the notch to latch it and can be moved out of the notch against the spring to fold parallel to the plane of the plate.

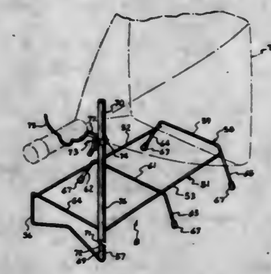
3,127,142
RETRACTABLE STANCHION
George E. Beck, Munster, Ind., assignor to Amsted Industries Incorporated, Chicago, Ill., a corporation of New Jersey
Filed Mar. 10, 1961, Ser. No. 94,899
5 Claims. (Cl. 248—119)

1. In a retractable stanchion, a pair of vertical legs, a cross beam connecting the upper ends of said legs, a shoe beam, side shoes fixed on said shoe beam and pivotally connected to the lower ends of their respective vertical legs, side rails slidably engaging said shoes, a diagonal leg having an upper end pivotally connected to said cross beam, a center shoe pivotally connected to the lower end of said diagonal leg, a center rail slidably engaging said



center shoe, a screw interconnecting said center shoe and said shoe beam, and a fifth wheel assembly mounted on said vertical legs.

3,127,143
PORTABLE PROP FOR TELEVISION TUBE
Sydney Terman, Chicago, Ill.
(4421 Estes Ave., Lincolnwood, Ill.)
Filed May 8, 1961, Ser. No. 108,464
3 Claims. (Cl. 248—125)



1. A prop for a cathode ray tube, said prop comprising a base having spaced parallel rods forming the sides thereof, a support rod joined to and extending transversely between the side rods and projecting downwardly therefrom to form a support for one end of the frame, additional support rods spaced from each other and the first mentioned support rod and extending transversely of the side rods, said additional support rods being connected to the sides and projecting beyond the side rods and being bent to form widely spaced feet to hold the prop in closely spaced relationship to a supporting surface, a standard mounted on the base at said one end thereof and projecting upwardly therefrom and a frame including a cradle mounted on the standard and cantilevered therefrom and lying above the base at said one end of the frame for supporting the neck of a cathode ray tube resting on the base.

3,127,144
MULTI-PURPOSE SUPPORT ELEMENT
Frederick S. Warner, 1639 S. Ridgeland Ave., Berwyn, Ill.
Filed Sept. 21, 1961, Ser. No. 141,238
1 Claim. (Cl. 248—216)

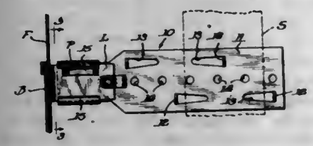
The combination of an upright member of fibrous material having first and second right angularly disposed and substantially plane faces of substantial width, a multipurpose support element as an article of manufacture and carried by said upright member, said support element comprising an integral heavy rod providing an article-supporting arm constituting one end portion of said rod, a generally U-form mounting portion constituting the other end of said rod and providing a bight portion, the major

part of said bight portion lying in a plane parallel to both that of said article-supporting arm and that of the first-mentioned plane face of said upright member, first and second laterally spaced and parallel leg portions provided by said generally U-form mounting portion of said support element, the article-supporting arm being carried by the outer end of the first leg extending outwardly away in an upward direction from the plane of the bight portion of said support element and at an obtuse angle to the plane of the latter, the second leg of said U-portion being of circular cross-section and rotatably projected into and retained in the first upright member face at a distance from the right angularly disposed second upright member face which is less than the distance between said



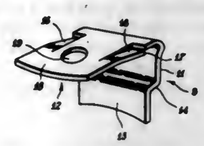
parallel U-member legs whereby to pivotally attach the support element to the upright member with the first leg of the U-member rockable to and from flat and substantially contiguous supporting engagement with the second support member face and with the article-supporting arm disposed substantially normal to the plane of the second support member face, the length of said second U-portion provided leg being at least as long as the first leg but of a length less than the thickness of said upright member, said second leg having a pointed free end for penetration into said fibrous upright member, and the bight portion of said support element constituting a plane or straight striking surface for a hammer or mallet to locate said support element in operative position.

3,127,145
RECESSED FIXTURE MOUNTING MEANS
William K. McGinty, Fort Atkinson, and Douglas L. Stamm, Whitewater, Wis., assignors to Thomas Industries Inc., Louisville, Ky., a corporation of Delaware
Filed Oct. 9, 1961, Ser. No. 143,922
8 Claims. (Cl. 248—216)



1. A recessed lighting fixture comprising a housing, a planar mounting projection extending from said housing, and a hanger strap formed of a substantially flat strip, said strip having a plurality of prongs struck therefrom in spaced relation to each other and extending substantially perpendicularly thereof, a pair of facing channels extending along opposed edges of the strip at an end portion thereof spaced from said prongs, having said fixture projection disposed in frictionally held engagement therein, said channels being defined by marginal portions of the strip bent to extend toward each other and being spaced and dimensioned for said frictional engagement with the projection, and a tongue struck from said strip adjacent the channels bent to extend toward said strip end portion in spaced relation to the strip receiving the end of the fixture projection, at least a portion of said tongue having a concave cross section providing relatively sharp edge portions biting into said projection.

3,127,146
SHELF SUPPORTS AND THE LIKE
Robert Fisher, 24 Burroughs Road, Balwyn, Victoria, Australia
Filed May 14, 1962, Ser. No. 195,670
6 Claims. (Cl. 248—250)



1. A shelf support including a supporting member of at least partly plate-like formation provided with at least one slot spaced from one edge thereof by a spacing web, an anchoring element composed of resilient material for detachable connection to said supporting member and provided with means for detachably connecting a shelf thereto, said anchoring element being of substantially L shape in cross-section so as to form a locating flange which bears on one face of said spacing web and an overhanging flange which overlies the free edge of the spacing web remote from said slot, means on said locating flange which passes through said slot and oppose tilting of the anchoring element in relation to said supporting member, and locking means on said overhanging flange for retaining said achoring element in the desired operative position by resiliently engaging the opposite faces of said spacing web.

3,127,147
SUSPENSION DEVICE FOR A CEILING CARRIER
Robbert Ernst Spangenberg, The Hague, Netherlands, assignor to Hunter Douglas International (Quebec) Limited, Montreal, Canada, a corporation of Quebec
Filed Oct. 29, 1962, Ser. No. 233,613
Claims priority, application Netherlands Nov. 3, 1961
4 Claims. (Cl. 248—327)



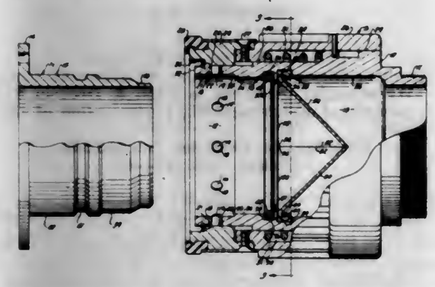
1. A suspension device for a ceiling carrier, said carrier being adapted to carry panels of a ceiling, in particular of an acoustic ceiling, said device comprising a strip-like element provided with two longitudinal rows of take-up means, said take-up means being located in spaced relation, a helical spring fitting in said take-up means and having a free end and means provided to fix the carrier to the free end of the helical spring, at least one of the windings of said helical spring having a smaller pitch than the pitch of the other windings, the pitch of said other windings substantially corresponding with the distance between two consecutive take-up means in the strip-like element.

3,127,148
VALVED COUPLING
Rolland W. Collar, Sun Valley, Calif., assignor to Lear Siegler, Inc., a corporation of Delaware
Filed Mar. 14, 1962, Ser. No. 179,554
2 Claims. (Cl. 251—149.2)

2. A valved coupling for pneumatic lines having separable nipple and socket portions each having an aligned

bore therethrough, said nipple having a cylindrical nose portion terminating in a plane perpendicular to the axis of the bore, said socket portion adapted to receive and connect with the nipple portion, and swinging clam shell type valving means within the socket portion adapted to be open when the coupling is connected for permitting substantially full flow through the socket and adapted to be closed when the two parts of the coupling are saparated for restricting flow through the socket, said valving means comprising

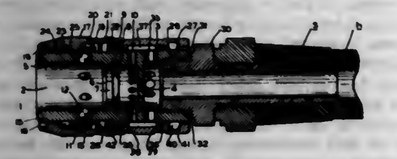
a plurality of concavo-convex, petal-shaped elements circumferentially spaced around the bore of the socket, each of said elements being generated from a cylindrical surface and bounded by an upstream and a downstream arcuate edge which meet together at their ends,



spring biased hinge means connecting a point on the downstream edge of each of said elements to the bore of the socket and located to position said elements within reach of the nose of the nipple portion for swinging movement of the elements toward and away from the bore surface,

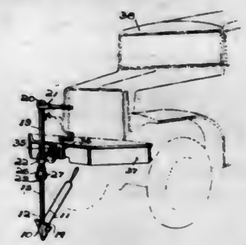
said elements upon connection of and axial alignment of the bores of the socket and nipple and at all positions of relative rotational alignment of the socket and the nipple being engaged by the nose of the nipple and urged to lie along and around the bore surface whereby the elements permit substantially full flow through the bore of the socket and upon separation of the socket and nipple being spring urged together with their upstream edges in approximately matching engagement throughout their lengths and the downstream edges in approximately matching engagement at their ends and together substantially comprising a circle whereby the elements substantially fill and restrict fluid flow through the bore of the socket.

3,127,149
VALVED HOSE COUPLINGS
Lee H. Cruse, Springfield, Mo., assignor to Foster Manufacturing Co., Inc., St. Louis, Mo., a corporation of Missouri
Filed Apr. 17, 1963, Ser. No. 273,753
10 Claims. (Cl. 251—149.9)



1. A quick-acting hose coupling for receptive engagement with a mating coupler element, said hose coupling comprising a tubular barrel having two bores separated by an imperforate wall, said bores being respectively in communication near their inner ends with the exterior of the barrel by means of fluid passages extending through the barrel on opposite sides of said wall, valve-forming means operatively mounted on the barrel and adapted for movement between two different positions one of said positions being an open position for establishing communication between said fluid passages on opposite sides of said wall across the exterior of the barrel, the other position being a closed position for interrupting communication between said fluid passages, locking means operatively mounted on the barrel for retentively holding the coupler element in retained engagement within one of said bores and being adapted, upon movement, to release said coupler element, said locking means including a sleeve separate from the valve-forming means whereby the valve-forming means can be moved optionally from closed position to open position and from open position to closed position independently of the locking means, said sleeve being in endwise abutment with the valve-forming means when the valve-forming means is in open position so that, when in such open position, the valve-forming means will prevent unlocking movement of the locking means, and stop-forming means associated with the barrel for optionally precluding unauthorized movement of the valve-forming means from open to closed position.

3,127,150
DEVICE FOR INSERTING GROUND ANCHOR
James M. Dunston, Natick, Mass., assignor to the United States of America as represented by the Secretary of the Army
Filed Sept. 22, 1961, Ser. No. 140,145
5 Claims. (Cl. 254—98)
(Granted under Title 35, U.S. Code (1952), sec. 266)

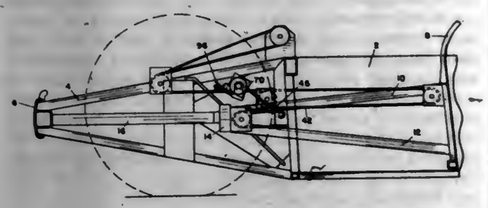


1. In a device for inserting a ground anchor in the earth comprising a drive rod adapted at its lower end to engage an anchor, a collar provided on said drive rod at the upper end thereof and integral therewith, a sleeve having an interior thread, a drive screw threaded through said sleeve, a second collar carried by said drive screw at the lower end thereof and integral therewith, a bearing disposed between said first and second mentioned collars, a housing enclosing said bearing and said first and second mentioned collars, supporting means secured to said sleeve holding said device upright, and reversible drive means turning said drive screw in one direction to insert said drive rod and anchor in the ground and in an opposite direction to withdraw said drive rod from the ground after the anchor has been positioned.

3,127,151
TENSION DEVICE
Delmar C. Klawitter, Peoria, Ill., assignor to LeTourneau-Westinghouse Company, Peoria, Ill., a corporation of Illinois
Filed Apr. 10, 1961, Ser. No. 101,963
12 Claims. (Cl. 254—164)

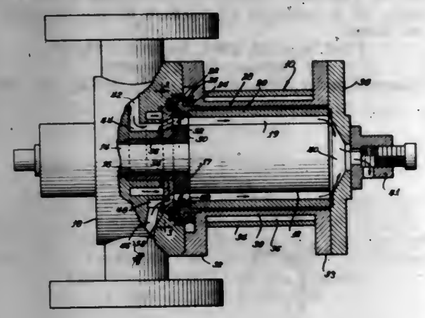
1. In a vehicle for a cable-operated mechanism and having a ground engaging element, a brake for the

ground engaging element, slack take-up means for the cable of the cable-operated mechanism, means to actuate



said brake, and means actuable in response to operation of the brake actuating means to operate the slack take-up means to take up slack in said cable.

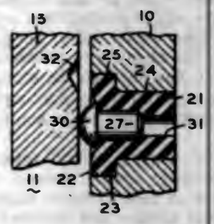
3,127,152
COUNTER-ROTATION CONTINUOUS SHEAR MIXER
Walter J. Schrenk, Bay City, and Kenneth J. Cleereman and Turner Alfrey, Jr., Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Mar. 24, 1961, Ser. No. 98,105
9 Claims. (Cl. 259—6)



1. A method for mixing a plurality of diverse miscible viscous liquids comprising the steps of, arranging said liquids in a ribbon-like pattern having an alternate repetitive sequence, and moving the liquids along a longitudinal path while applying a first liquid moving force along a first common boundary of the liquids, and a second liquid moving force along a second common boundary of the liquids, said first and second forces being applied in unlike directions.

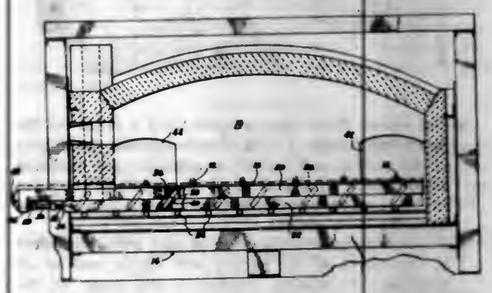
3,127,153
RESILIENT LOCKING MECHANISM FOR A CUTTING DEVICE
Gerald W. Elders, Christopher, Ill., assignor to E. & E. Mine Service Company, Christopher, Ill., a corporation of Delaware
Filed June 17, 1960, Ser. No. 36,916
4 Claims. (Cl. 262—33)

1. A locking mechanism for a cutting device comprising a holder provided with a socket, a bit having a shank interfitting said socket, said shank being provided with a lateral recess, the holder being provided with an aperture communicating with said socket, said aperture including a relatively enlarged portion adjacent the socket to provide a shoulder on the holder, a resilient block member plugged in said aperture and including a relatively enlarged portion engaging the holder shoulder, and a pin



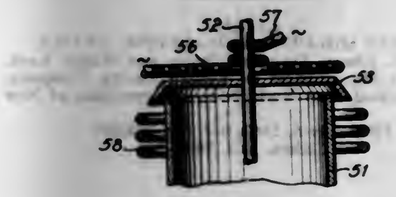
carried by said block member engaging said shank in said recess to retain the bit detachably in said holder.

3,127,154
FURNACE CONSTRUCTION
Guenther Hirschberg, Chicago, and Robert H. Ross, Wheaton, Ill., assignors to Flinn & Dreffein Engineering Co., Chicago, Ill., a corporation of Illinois
Filed Jan. 11, 1962, Ser. No. 165,549
5 Claims. (Cl. 263—6)



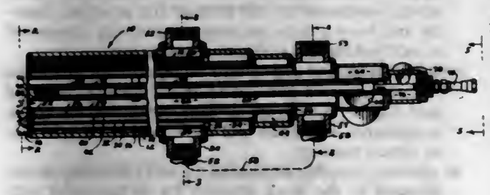
1. In a furnace construction having a closed bottom, upstanding supporting means provided for maintaining the work in the furnace in a horizontal plane, and channel means disposed between adjacent supporting means, the improvement comprising means for moving said work within said furnace from one location on said supporting means to another, said moving means including upper and lower beams horizontally disposed within at least one of said channel means, said beams defining open interior portions, substantially vertically disposed partition walls formed transversely of the length of said partitions in said interior portions to thereby define a plurality of bearing receiving compartments therein in spaced-apart relationship along the length of each of said beams, removable bearing inserts with concave seats disposed within said compartments and secured against lateral movement with respect to their associated beams by means of their engagement with said partition walls, linking bars having convex ends pivotally interfitting with said seats, said bearing inserts being held within said compartments by reason of their engagement with said linking bars, said linking bars having a length sufficient to maintain said beams in spaced apart relation when the bars and their respective seats are aligned in a vertical plane, means connected to said lower beam for horizontally shifting said beams relative to each other, said linking bars being adapted to hold the top of said upper beam above the top of said supporting means whenever the beams are disposed in said spaced apart relation, a roller bed made up of a plurality of rollers mounted for rotation in the bottom of said channel means, said roller bed supporting said lower beam, means connecting said upper and lower beams and means associated with said connecting means for horizontally moving the upper and lower beams over said roller bed.

3,127,155
APPARATUS FOR PREVENTING OR REDUCING THE CRYSTALLIZATION OF MOLTEN GLASS AND THE ESCAPE OF VAPORIZATION PRODUCTS FROM THE SURFACE THEREOF
Walter Geffcken, Mainz, Germany, assignor to Jenaer Glaswerk Schott & Gen., Mainz, Germany, a German corporation
Filed Feb. 16, 1960, Ser. No. 8,951
7 Claims. (Cl. 263—26)



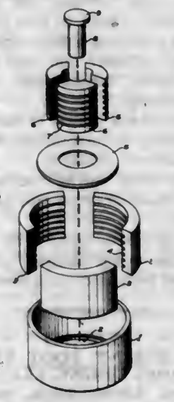
1. An apparatus for treating and for melting glass in a platinum crucible while at least substantially reducing the tendency of the molten glass to crystallize and while preventing the loss of vaporization products from the surface of the molten glass, which comprises a melting crucible for the glass, means for heating said crucible, a rotatable shaft extending into said crucible, means for rotating said shaft, at least one stirring element carried by said shaft, means carried by said shaft for heating said shaft and stirring element, a cover rigidly secured to said shaft and rotatable therewith arranged at a small distance from the upper edge of said crucible so as to substantially seal the same against the atmosphere, said cover being provided with a heating means.

3,127,156
COMBUSTION APPARATUS AND METHODS
Thomas L. Shepherd, Essex Fells, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
Filed June 21, 1961, Ser. No. 118,724
12 Claims. (Cl. 263—43)



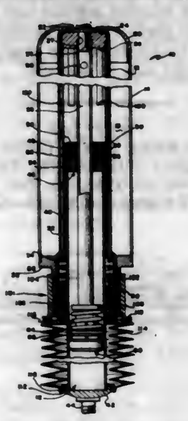
8. In an external-mixing burner wherein separate streams of oxygen and fuel gas are discharged through separate discharge outlet means in an end face of a burner, the improvement which comprises substantially parallel discharge passageway means for the oxygen and fuel streams terminating in said outlet means, and means for delaying the mixing of the oxygen and fuel streams including a discharge outlet means intermediate said outlet means for said oxygen and fuel gas streams in position to flow a stream of barrier gas between the other streams, and means for supplying and regulating the rate of discharge of the barrier gas stream.

3,127,157
MULTIPLE BELLEVILLE SPRING ASSEMBLY
James E. Webb, Administrator of the National Aeronautics and Space Administration, with respect to an invention of William F. MacGlashan, Jr.
Filed Mar. 29, 1963, Ser. No. 269,222
4 Claims. (Cl. 267—1)



1. A multiple Belleville spring assembly, comprising:
(*a*) a plurality of annular, conical, Belleville springs;
(*b*) a segmental outer retainer having annular inturned grooves receiving the outer peripheries of said springs;
(*c*) removable means securing the segments of said outer retainer against radial separation;
(*d*) a segmental inner retainer having annular external grooves receiving the inner peripheries of said springs;
(*e*) and removable means securing the segments of said inner retainer against radial contraction.

3,127,158
VEHICLE SUSPENSION STRUT ASSEMBLY
Robert J. Broadwell, Cleveland, Ohio, assignor, by mesne assignments, to Maremont Corporation, Chicago, Ill., a corporation of Illinois
Filed Apr. 25, 1962, Ser. No. 190,107
7 Claims. (Cl. 267—64)



1. A hydro-pneumatic strut for connection to the sprung and unsprung masses of a vehicle comprising:
(1) a pump damper assembly including:
(*a*) a cylinder,
(*b*) a piston rod extending through one end of said cylinder,

(c) a piston within said cylinder and joined to said piston rod, said piston having passage means communicating with opposed portions of said cylinder defined thereby,

(2) an outer casing having opposed closed and open ends positioned in surrounding, spaced apart relationship to said cylinder, the closed end thereof being operatively joined to said piston rod,

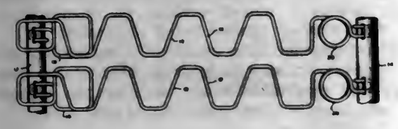
(3) and means providing a fluid-tight seal between said pump damper cylinder and said outer casing while allowing relative longitudinal movement therebetween including:

(a) barrel means joined to the open end of said outer casing in surrounding relationship to said pump damper cylinder,

(b) compression spring means carried by said barrel means adjacent said pump damper cylinder, and,

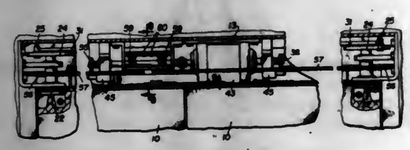
(c) packing means carried by said barrel means about said pump damper cylinder, and in engagement with said compression spring.

3,127,159
FRAME ATTACHMENT FOOT STRUCTURE FOR CUSHION SPRING ELEMENTS
John M. Caughey, Adrian, Mich., assignor to Stubnitz Greene Corporation, Adrian, Mich., a corporation of Michigan
Filed Apr. 9, 1962, Ser. No. 185,967
4 Claims. (Cl. 267—110)



1. In a seat or back construction for vehicles, furniture, and the like, the combination of a frame, a wire spring element having a terminal portion, an elongated slot defined in said frame, said terminal portion having a pair of parallel legs having a common return-bent portion angularly disposed to said legs and extending into said slot, said last portion defining a fulcrum portion and an abutment portion, said fulcrum portion being hooked over an edge of said slot and said abutment portion engaging with a surface of said frame to one side of said slot.

3,127,160
PUSH-FREE DOOR OPERATOR
George R. Wallmann, P.O. Box 526, Lake Oswego, Oreg.
Filed Feb. 23, 1962, Ser. No. 175,029
17 Claims. (Cl. 268—63)



17. In a swinging door construction including a door pivotal on a predetermined vertical axis between a closed position and an open position, the improvement comprising

variable resilient means urging the door toward a closed position with a predetermined force when in one condition of adjustment and the door is closed,

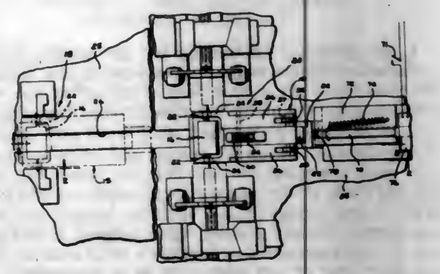
movable abutment means controlling the force of the resilient means,

and power means operable as the door is opened manually to move the abutment means in a direction decreasing the force of the resilient means and operable when the door is released to move the abutment means in a direction increasing the force of the resilient means to said predetermined force.

ERRATUM

For Class 268—327 see:
Patent No. 3,127,147

3,127,161
ARTICLE HOLDING AND MOVING DEVICE
Charles F. Kinser, Downers Grove, and Walter Lach, Chicago, Ill., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed July 6, 1962, Ser. No. 208,000
3 Claims. (Cl. 269—56)



1. In a device of the type described:

a holder having a seat for supporting an article thereon;

mounting means for supporting said holder for movement to and from a work position;

a jaw mounted on said holder for pivotal movement from an open position to a closed position to grip the article against said seat;

a plunger mounted on said holder for reciprocatory movement;

a toggle joint having an intermediate knee portion operatively connected to said plunger for actuation thereby and having outer extremities pivotally connected to said holder and said movable jaw;

resilient means for urging said plunger in one direction from a retracted position to effect the movement of said toggle joint from a bent condition toward a straightened condition and the actuation of said jaw to closed position;

an element movably supported on said mounting means adjacent to the work position for engagement with said plunger;

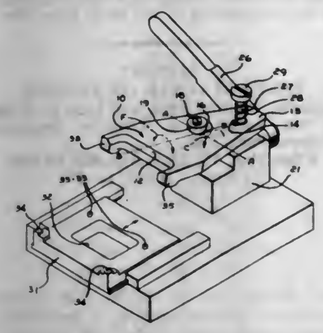
means for advancing said element to effect the movement of said plunger to retracted position and the actuation of said jaw to open position;

means on said holder operable in response to movement of said plunger to the retracted position for latching said plunger in such position;

means for actuating said latching means to effect the release of said plunger and the actuation of said movable jaw to closed position; and

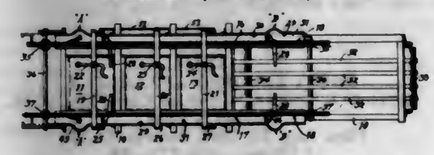
means on said mounting means operable in response to actuation of said element for latching said holder against movement during the movement of said plunger to retracted position.

3,127,162
APPARATUS FOR EXERTING EQUALIZED COMPRESSIVE FORCES
Glenn E. Miller, Rockbrook Heights, Nebr., assignor to Western Electric Company, Incorporated, a corporation of New York
Filed June 19, 1961, Ser. No. 118,118
6 Claims. (Cl. 269—157)



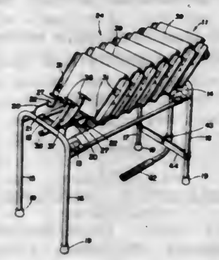
4. Apparatus for exerting equalized compressive forces on a stack of articles at two spaced points on the outer surface thereof, which comprises a base for supporting the stack of articles, a lever having a bifurcated end for engaging the surface at the two points laterally spaced equidistant from and on opposite sides of a longitudinal centerline of said lever, and having a hemispherical socket provided intermediate the ends and along the longitudinal centerline thereof; a ball member fixed to said base and received in the socket of said lever to form a fulcrum about which said lever may pivot both longitudinally of itself, to exert compressive forces on the stack of articles, and laterally of itself to equalize the compressive forces between the two points; resilient means for biasing said lever and said ball member together so that said ball member remains in constant contact with the socket; a cam follower mounted along the centerline at the end of said lever opposite the bifurcated end; a rotary cam, upon which said cam follower rides, for pivoting said lever about said ball member to exert compressive force on the stack of articles; and resilient means for biasing said lever so that said cam follower remains in constant contact with said cam so as to hold said lever open in a receiving position when no articles are being clamped.

3,127,163
NEWSPAPER COLLATOR
Wallace M. Chambers, 506 Jewel St., Capitola, Calif., and Lloyd W. Berlin, 429 San Juan Ave., Santa Cruz, Calif.
Filed Nov. 10, 1961, Ser. No. 145,195
8 Claims. (Cl. 270—57)



1. In a newspaper stuffing machine of the character described, the combination of an elongated supporting frame having a plurality of horizontally aligned hoppers into which folded sections of a newspaper are supported at a substantially uniform level, a pair of continuous link chains operating in vertical planes with their upper courses moving along opposite sides and adjacent said hoppers, newspaper section engaging arms carried by each of said link chains extending toward each other and over said hoppers for successive engagement with the folded sections of the newspaper as they are moved over said hoppers by said link chains, a vacuum cup lifting means disposed over each of said hoppers operating to open the folded sections of the newspaper in timed relation with the movement of said section engaging arms for engagement by the said arms as they move over said hoppers, said section engaging arms being pivotally mounted upon said link chains, spring means for biasing said arms toward an inoperative position in coextending relation with their supporting chains, a stationary cam means mounted upon said supporting frame disposed outwardly and extending along the upper course of said link chains for holding said arms in an operative position against the action of said spring means during their movement over said hoppers and releasing said arms for disengagement with said newspaper sections after passing over the final one of said aligned hoppers, chain supporting rails carried by said frame over which the upper course of said link chains travel, and means carried by said link chains cooperating with said chain supporting rails for maintaining said section engaging arms in cooperating relation with said stationary cam means.

3,127,164
COLLATING DEVICE
Wally Charles Hoff, Toronto, Ontario, Canada (65 Crockford Blvd., Scarborough 4, Ontario, Canada)
Filed Oct. 16, 1962, Ser. No. 230,934
5 Claims. (Cl. 270—58)

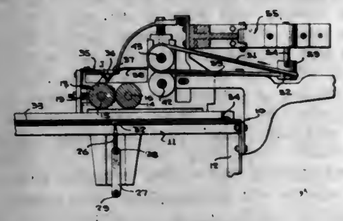


1. A collating device comprising: a supporting frame; a pair of rails secured to said frame in parallel relationship; a plurality of spaced cutouts in each said rails having projections at the edges of said cutouts; a plurality of paper trays each including a back plate; an upwardly formed lip on each said plate having a pair of notches, said notches cooperating with said projections to removably secure said trays to said rails; a bar mounted on said frame for reciprocal movement beneath said trays; resilient fingers secured to said bar and biased against said trays; and means for operation of said bar thereby to move said fingers over said trays.

3,127,165
FOLDING APPARATUS
Ralph B. St. Denny and Frank H. Brown, Norwich, N.Y., assignors, by mesne assignments, to W. Carroll Coyne, Fayetteville, N.Y., and Thomas M. Flanagan, Norwich, N.Y.
Filed Oct. 17, 1961, Ser. No. 145,556
2 Claims. (Cl. 270—66)

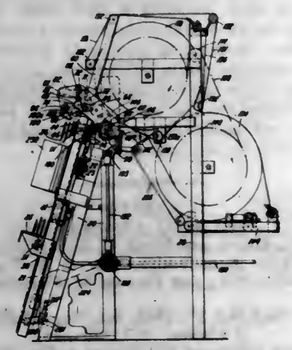
1. Folding apparatus for folding a flat sheet of material in two comprising complementary scoring rollers including a substantially cylindrical roller and a disc roller disposed below said cylindrical roller and each mounted for rotation about substantially horizontally extending axes for receiving a sheet of material therebetween to form a crease in the sheet of material which extends

substantially parallel with the direction of feed, means for feeding a sheet of material between said rollers in one direction of feed, a pair of endless belts, means supporting and mounting said belts for movement during operation so that each of said belts defines a substantially horizontally disposed run extending from a point closely adjacent the discharge side of said scoring rollers to a point remote from said rollers, said runs of said belts being spaced apart adjacent said rollers and converging toward one another in a direction away from said rollers to said remote point at which the runs are closely adjacent to one another, said runs being positioned to engage the upper surface of a sheet fed through said



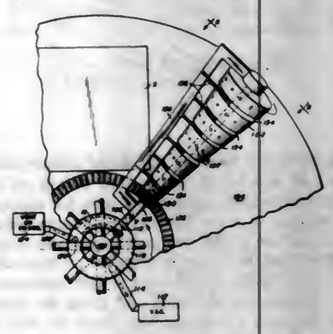
rollers at either side of the crease line formed therein as the sheet leaves said rollers and serving as the sole support for said sheet during its movement between said scoring rollers and said remote point, the portions of the sheet adjacent said crease line being progressively forced toward one another by the said runs of the belts as the sheet moves in the direction of feed, there being free spaces beneath said runs at opposite sides thereof to permit the lateral edges of the sheet to drop downwardly under the influence of gravity such that as the sheet passes between said runs at said remote point, only the upper portion of the sheet passes therebetween to form a perfect fold without any wrinkles therein.

3,127,166
SHEET SEPARATING AND FORWARDING MACHINE
Charles Frederick Fawdry, Ewell, England, assignor to Headley Townsend Backhouse, Corsy/Conversion, Vaud, Switzerland
Filed Feb. 21, 1961, Ser. No. 90,708
Claims priority, application Great Britain Mar. 16, 1960
8 Claims. (Cl. 271—11)



1. A machine for separating and initiating the forwarding of sheets individually from a stack of sheets comprising means for supporting the stack in an upwardly sloping attitude, means for gripping the lower face of each lowermost sheet of the stack in turn, jogging mechanism for giving to the stack an up and down jogging movement whereby pressure between the sheets due to the weight thereof is momentarily reduced, the operation of the jogging mechanism, for each sheet in turn, being stopped for a period during which engagement of the sheet by the gripping means is effected and means operative during a multiplicity of cycles of up and down jogging of the sheets to move the gripping means substantially in the plane of the lowermost sheet and while gripping that sheet to initiate the forwarding of the sheet from the stack.

3,127,167
SHEET STACKER OR FEEDER
Jacob Rabinow, Takoma Park, and John E. Waldo, Silver Spring, Md., assignors to Rabinow Engineering Co., Inc., Takoma Park, Md.
Filed Mar. 31, 1961, Ser. No. 99,840
7 Claims. (Cl. 271—27)

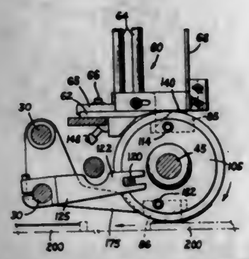


1. A sheet handling apparatus for a flexible sheet, said apparatus comprising a rotary structure having an axis of rotation substantially normal to the plane of the surface of the sheet, an outwardly extending roller connected with said rotary structure and having a rolling surface movable approximately in the plane of the flexible sheet, sheet holding and positive control means operative as the roller engages the leading corner portion of the sheet to attach said portion of the sheet to the surface of the roller and to exercise positive control of the sheet by holding the leading portion of the sheet attached until the leading area of the sheet has been curved approximately half way around the roller due to the movement of said rotary structure and the rolling action of said roller, thereby both curving the sheet and orienting the leading portion of the sheet in the same general direction as the remaining portion of the sheet not yet contacted by the roller while under said positive control, and sheet removal means gripping said leading portion of the sheet and pulling it around said roller and away in the same general direction as the motion of said roller as it continues to be moved by said rotary structure.

3,127,168
SHEET FEEDING APPARATUS
Lawrence I. Kramer, % McCall Corp., McCall St., Dayton 1, Ohio
Filed Aug. 24, 1960, Ser. No. 51,726
11 Claims. (Cl. 271—29)

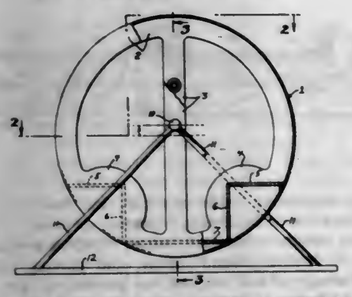
1. Apparatus for feeding sheets of material such as cards and like flexible material, comprising a hopper for receiving and supporting a stack of separate sheets to be fed singly, means at one end of said hopper defining an outlet through which single sheets are discharged, a movable pickup head having a knife edge mounted in fixed position thereon and projecting therefrom for a slight distance substantially less than the thickness of a sheet for non-perforating contact with each sheet along a

line generally transverse to the direction of movement of said head, vacuum conducting means in said head arranged to create a negative pressure at the surface of said head adjacent said knife edge to draw a single sheet into engaged relation with said knife edge, means mounting said head for driven movement in a circular path past said hopper outlet including a drum rotatable about an axis located beneath said hopper and extending gen-



erally parallel with respect to said outlet, means for rotating said drum at constant velocity to pass said head cyclically across said outlet, and rotary valve means adapted for connection to a source of vacuum and operative in timed relation to movement of said head past said outlet to connect said vacuum conducting means in said head to a source of vacuum when said head is adjacent said outlet and for a predetermined extent of travel of said head away from said outlet.

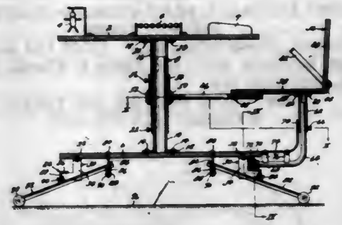
3,127,169
ROTATING SWING
William D. Gulhan, 3575 N. Patritti Ave., Baldwin Park, Calif.
Filed Feb. 7, 1961, Ser. No. 87,619
10 Claims. (Cl. 272—33)



10. A rotatable swing, comprising: a cylindrical shell having end walls partially closing the axial ends thereof and struts extending from said end walls to the central axis of said shell and defining with said end walls restricted ingress and egress openings; means utilizing said structs for supporting said shell in the vicinity of its central axis for rotation thereabout; and at least one seat fixed in said shell and disposed radially outward from said central axis whereby an occupant may rotate in said seat about said supporting means.

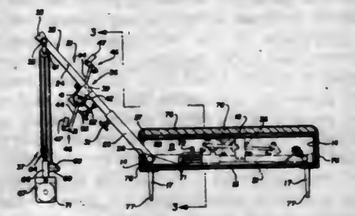
3,127,170
CHILDREN'S PLAY TABLE
Forrest F. Caster, 2723 S. 37th St., Kansas City, Kans.
Filed Oct. 17, 1962, Ser. No. 231,136
4 Claims. (Cl. 272—33)

1. A children's play table comprising:
a. a circular, generally planar base,
b. a standard secured centrally to said base and extending upwardly therefrom,
c. a circular table top secured to the upper end of said standard concentrically therewith,
d. a chair disposed adjacent the edge of said table top,
e. means supporting said chair adjacent the edge of said table top and mounted on said standard for free rotation about the axis thereof, whereby said chair may be rotated around the periphery of said table top,



f. a plurality of horizontally extending legs carried by said base, said legs being angularly spaced about the periphery of said base and extending substantially radially thereto, and being outwardly and downwardly inclined to engage the floor at their outer ends to support said base,
g. means pivotally connecting each of said legs to said base for pivotal movement in a vertical plane about a horizontal transverse axis intermediate its ends,
h. means connecting the inner end of each of said legs to said base for vertical movement relative thereto, and
i. resilient means yieldably resisting downward movement of the inner end of each of said legs relative to said base.

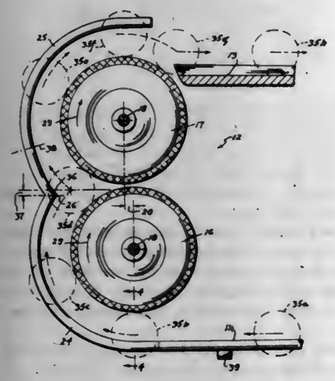
3,127,171
EXERCISE APPARATUS WITH STORAGE CONTAINER AND PEDALS AND WEIGHTS
Royce P. Noland, Santa Cruz, and Ferdinand Albert Kuckhoff, Castro Valley, Calif., assignors to Valiant Sporting Goods Corporation, Santa Cruz, Calif., a corporation of California
Filed Feb. 9, 1961, Ser. No. 88,044
4 Claims. (Cl. 272—58)



1. In an exercise apparatus, a box having side walls and a bottom wall forming a storage compartment with an open top side, one side wall being formed with an open ended recess in the upper portion thereof, lid means serving as a human body support and as a lid for the box, means tor mounting said lid means on said box for movement between open and closed positions so that said lid means in a closed position closes said opening and in an open position gives access to the storage compartment, said lid means in a closed position lying in a horizontal plane, and an exercise unit disposed within said storage compartment and movable between in-use and out-of-the-way positions, said exercise unit having one end pivotally secured to said box adjacent said side wall having the recess therein, said exercise unit being

movable in an arcuate path through the open top of the box and downwardly into the recess to said in-use position and to a position which permits said lid means to be closed, said exercise unit also being movable into an out-of-the-way position in the storage compartment which permits said lid to be closed.

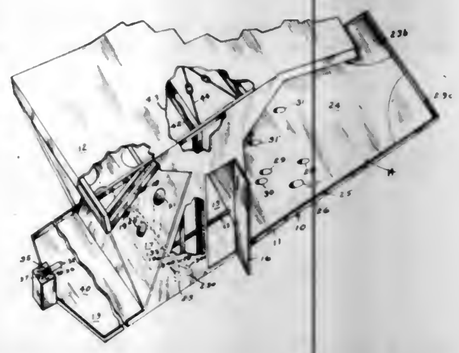
3,127,172
BOWLING BALL ELEVATOR AND RETURN MECHANISMS
Pat Troiano, Washington, D.C. (7649 Old Georgetown Road, Bethesda, Md.), and Philip F. Finelli, 4846 Park Ave., Bethesda, Md.
Filed Aug. 1, 1961, Ser. No. 128,411
6 Claims. (Cl. 273—49)



6. In a bowling ball elevator, the combination of a resiliently compressible lower elevator wheel, a curved lower ball guideway extending partly around said lower wheel to maintain a ball in engagement with the latter for propulsion of the ball upwardly along the lower guideway, said lower guideway including an upper portion spaced from said lower wheel by a distance to resiliently compress the lower wheel by a ball in said upper portion of the lower guideway, an upper elevator wheel, a curved upper ball guideway extending partly around said upper wheel to maintain a ball in engagement with the latter for propulsion of the ball upwardly along the upper guideway, said upper guideway including a lower portion adapted to receive a ball from said upper portion of said lower guideway, and means for rotating said wheels, said lower portion of the upper guideway being spaced from said upper wheel by a distance greater than the spacing of said upper portion of the lower guideway from the lower wheel whereby a ball in the upper portion of the lower guideway compressing the lower wheel may be resiliently ejected therefrom with a snap action into said lower portion of the upper guideway.

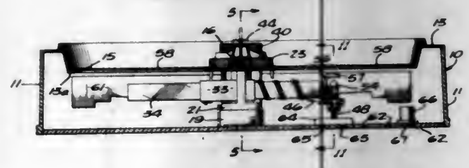
3,127,173
AMUSEMENT DEVICE WITH GUN AND APERTURED TARGET
Donald Siverling, 407 Connecticut Drive, Erie, Pa.
Filed Dec. 14, 1959, Ser. No. 859,377
7 Claims. (Cl. 273—101)

1. A game comprising a generally rectangular base, a first generally flat area on said base disposed in a horizontal plane, an inclined playing area joining said first flat area and supported on said base connected to an edge of said first flat area and extending upwardly and away from said first area, a second generally flat area on said base, said inclined area being between said first and second areas, a partition between said inclined area and said second area, holes in said inclined area, and holes in said second area spaced from each other providing space there-



between for balls to be played thereupon, and means communicating with said first mentioned holes and to said second area adapted to conduct balls from said inclined area to said second area.

3,127,174
BATTLE CONTEST GAME BOARD WITH ELECTRICALLY OPERABLE SIGNAL MEANS
John W. Ryan, Hawthorne, Calif. (11027 Cashmere, Bel Aire, Calif.)
Filed Mar. 20, 1962, Ser. No. 180,984
10 Claims. (Cl. 273—130)

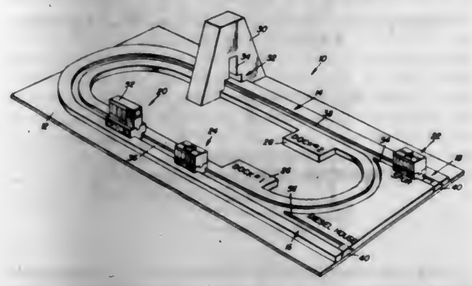


1. A submarine battle game as described comprising: a box-like frame including a playing field having an upstanding opaque transverse barrier dividing said field into a pair of "battle ground" areas, said playing field areas each having means adapted to position a plurality of "target" playing pieces in selected changeable deployment, a non-transparent screen overlying and spaced upwardly from said playing field areas whereby said playing pieces cannot be seen therethrough, a target sight under, adjacent and visible through said screen, a switch and lamp signal assembly carrying said target sight, and means mounting said assembly for movement to any part of said playing field areas, said switch assembly comprising means actuatable upon engagement with the top of one of said playing pieces to activate said lamp signal to indicate a target "hit."

3,127,175
RAILROAD PUZZLE GAME
Leo J. White, 400 7th St., Monett, Mo.
Filed July 27, 1962, Ser. No. 212,804
6 Claims. (Cl. 273—132)

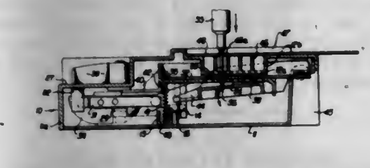
1. A railroad puzzle consisting of an endless area enclosing track, two extension tracks extending outwardly from the endless track, two boxcar members movable on the tracks, an engine member movable on the tracks, and

fixed means on said endless track for limiting movement of said two boxcar members, said fixed means



allowing for free passage of the engine member along said endless track.

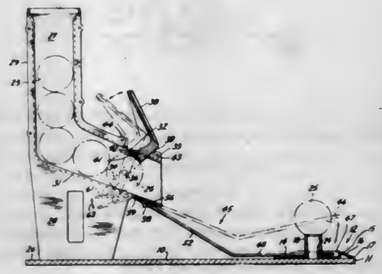
3,127,176
TOY LIE DETECTOR
John W. Ryan, 11027 Cashmere, Bel Aire, Calif.
Filed Mar. 13, 1962, Ser. No. 179,334
12 Claims. (Cl. 273—139)



10. A lie-detector toy comprising: a housing having a top wall with a plurality of apertures therethrough; a True-False indicator carried by said housing; first and second movable members in said housing below said apertures; said first member being constructed to define unobstructed passageways therethrough from each of said apertures to said second member; said second member being below said first member; means removably carried by said first member obstructing selected ones of said passageways; a probe insertable into any selected one of said passageways through said apertures whereby to move said first member when inserted in an obstructed passageway and to move said second member when inserted in an unobstructed passageway; and actuating means to actuate said indicator in response to movement of either of said members, movement of one member causing said indicator to indicate False and movement of the other member causing said indicator to indicate True.

3,127,177
GOLF BALL DISPENSING AND TEEING DEVICE
Erwin Benkoe, New Hyde Park, N.Y., assignor to Transogram Company, Inc., New York, N.Y., a corporation of Pennsylvania
Filed Oct. 12, 1962, Ser. No. 230,236
4 Claims. (Cl. 273—201)

1. A golf ball teeing device comprising, in combination, a support, a container for a supply of golf balls mounted on said support, said container having a downwardly inclined discharge end constructed and arranged to maintain therein a row of golf balls, a tee on said support spaced from said discharge end, the discharge end of said container having a slot in the upper wall thereof, an arm extending through said slot, an arcuate stop member on the end of said arm within the discharge end of said container movable from a position to engage the leading ball and prevent movement thereof from said discharge end of said container to a position to release said leading ball and act as a stop for the succeeding ball, an actuating member on the end of said arm positioned exteriorly of said discharge end of said container, lever means pivotally mounted on said discharge end, said actuating member being operatively connected to said lever means, a pivoted guide frame arranged to receive at one end thereof balls from the said discharge end, said guide frame having a ball discharge portion at the end thereof remote from the ball receiving end, said ball dis-

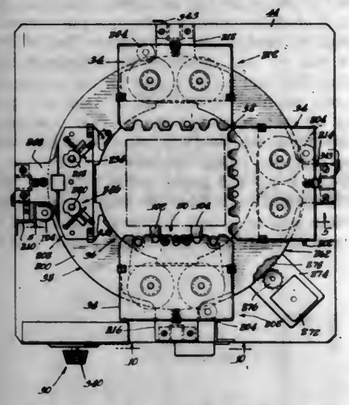


charge portion being movable from a lower position adjacent said support to an upper position in which said ball discharge portion effects the discharge of the ball onto said tee, said guide frame being actuated by said lever means, whereby upon actuation of said actuating member to actuate said arm, said arcuate stop is moved to release the leading ball and the guide frame is simultaneously moved to elevate the said ball discharge portion above the tee and provide a guide surface along which the leading ball rolls from said discharge end of said container to said ball discharge portion above the tee, and release of said actuating member returns said arcuate stop to its original position where it prevents discharge of the leading ball and simultaneously releases the guide frame for descent to its original position with the ball discharge portion adjacent said support.

3,127,178
TAPE PLAYING MACHINE
Fred H. Osborne, Snyder, and Howard M. Thomas, North Tonawanda, N.Y., assignors to The Wurlitzer Company, Chicago, Ill., a corporation of Ohio
Filed June 29, 1960, Ser. No. 39,493
9 Claims. (Cl. 274—11)

1. An automatic tape player for playing a plurality of tapes selectively in any desired order comprising, in combination, a stationary tape deck defining a path for tape to be played and including a pickup on one side of said path and tape moving means for moving tape through said path, a rotatable tape support carriage, a circumferential series of mounts on said carriage adapted to support individual tapes, said carriage having a normal tape playing position which supports said mounts at a tape playing level with respect to said tape deck, rotary transfer means including a plurality of cams coacting with said carriage to lift the latter from the normal playing level thereof to an elevated indexing level, said rotary transfer means including means for rotating said carriage at said indexing level to bring the successive mounts on the carriage into rotary alignment with said path for tape

on said tape deck, and means for operating said transfer means to lower said carriage to bring into tape playing



relation to said tape deck the tape mount on said carriage rotatably aligned with said deck.

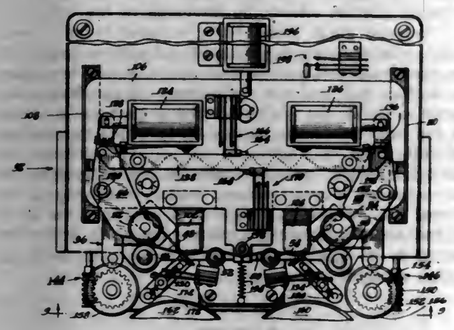
3,127,179

TAPE PLAYING MACHINE

Fred H. Osborne, Snyder, and Howard M. Thomas, North Tonawanda, N.Y., assignors to The Wurlitzer Company, Chicago, Ill., a corporation of Ohio

Original application June 29, 1960, Ser. No. 39,493. Divided and this application Apr. 15, 1963, Ser. No. 273,243

4 Claims. (Cl. 274—11)



1. An automatic tape deck for continuously playing substantially without interruption a tape supported in coacting relation to the tape deck, comprising, in combination, means defining a path for tape to be played, pickup means positioned alongside said path, two tape driving elements positioned alongside said path for moving tape in opposite directions therethrough, two retractable tape backup elements coacting with said respective driving elements to move tape into operative engagement therewith for driving thereby, means biasing said respective backup elements into inoperative positions, two direction control solenoids coacting with said respective backup elements to advance the latter into operative positions, holding means coacting with said respective backup elements to hold the latter in said operative positions, means for operating said holding means to effect automatically as an incident to movement of either of the backup elements into its operative position an automatic release of the other backup element from its operative position, and means for energizing said solenoids alternately to effect substantially continuous movement of tape through said path.

3,127,180

RECORD CHANGERS

Ruediger Lehmann, Sankt Georgen, Black Forest, Germany, assignor to Oskar Steidinger and Siegfried Steidinger, trading as the firm Gebrueder Steidinger Steidinger K.G.

Filed Dec. 2, 1960, Ser. No. 73,274

Claims priority, application Germany Dec. 15, 1959

9 Claims. (Cl. 274—15)



1. In a record-changing apparatus for a phonograph having a base, a turntable journaled on said base for rotation about a normally vertical axis, and a tone arm mounted on said base for pivoting about a second normally vertical axis, over and across said turntable, said tone arm having a stop fixed therewith in radially offset relation from said second axis, a sensing member mounted on said base for pivoting about a third vertical axis and engaged by and pivoted by the periphery of a record dropped onto said turntable, through an angle proportional to the radial dimension of said record, stepped abutment means movably mounted on said base and connected with said sensing member to be moved by pivoting thereof to a position wherein the step of said abutment means corresponding to the radial dimension of said record is moved into the path of said stop to thereby engage the same and limit the swing of said tone arm inwardly toward said first axis in accordance with said radial dimension.

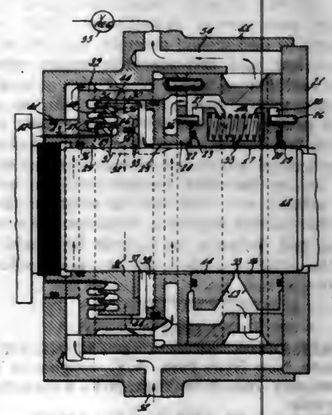
3,127,181

PRESSURE BALANCED SEAL

Donald F. Crego, Elm Grove, and Gerald Lesiecki, Greendale, Wis., assignors to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Filed Oct. 9, 1961, Ser. No. 143,727

5 Claims. (Cl. 277—3)



1. In combination with a housing surrounding a rotatable shaft, means for sealing a high pressure area from a low pressure area comprising: walls defining a restricted fluid passage between said shaft and said housing and including an opening for receiving sealing fluid, one end of said restricted fluid passage being in fluid communication with said low pressure area and the other end thereof being in fluid communication with one end of a radial clearance passage, said radial clearance being defined by a number of axially disposed radially spaced annular rotational flanges connected for rotation with said shaft and a number of axially disposed radially spaced annular stationary flanges connected in fluid sealing relation to said housing and interleafed with said rotational flanges; means connected to said housing and positioned in said sealing fluid flow path upstream from said one end of said clearance passage and including at least one noncircular surface defining a plane disposed at an angle with the direction of rotation of said sealing fluid; and outlet passage means connecting the other end of said clearance passage with said high pressure area.

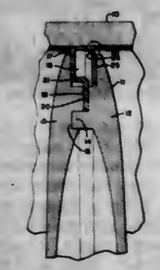
3,127,182

THERMALLY ACTUATED SEALING MEANS

Henry W. Wardleigh, Phoenix, Ariz., assignor to The Garrett Corporation, Los Angeles, Calif., a corporation of California

Filed Oct. 3, 1960, Ser. No. 60,064

8 Claims. (Cl. 277—26)



5. Seal means for sealing the space between inner and outer members of substantially circular cross section, comprising: a flexible annular sealing element clamped along one edge portion to one of said members, the other edge portion of said element projecting into engagement with the adjacent surface of the other member and extending generally longitudinally thereof; and an annular fulcrum element supported by said one of said members and having contact with said sealing element along a line spaced a predetermined distance from the edge engaging said other member, said fulcrum element being formed from a material having a different coefficient of expansion than the member to which the sealing element is clamped whereby movement of such latter member in response to temperature change will cause a portion of said sealing element to swing about said fulcrum element to maintain firm engagement of said sealing element with said other member.

3,127,183

ANNULAR CARTRIDGE FLUID SEAL DEVICE

John Talamonti, Chicago Heights, Ill., assignor, by mesne assignments, to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois

Filed Mar. 12, 1959, Ser. No. 798,880

3 Claims. (Cl. 277—40)

1. A fluid seal comprising an annular channel-shaped retainer having a substantially cylindrically extending exterior wall and a frusto-conical interior wall forming an annular channel between said exterior wall and said interior wall, a sealing washer mounted concentric with respect to said annular channel for axial movement toward and away from said annular channel, an annular diaphragm member having a hub portion fixed to said sealing washer and an outwardly directed annular lip bearing against said exterior wall forming a slidable fit therewith, a garter spring mounted on said frusto-conical interior wall in such manner that said garter spring is free to roll over a substantial portion of said frusto-conical interior wall, a ferrule ring positioned intermediate said garter spring and said hub portion, said garter spring, said



hub portion, said sealing washer and said ferrule ring being arranged such that said garter spring exerts an angularly directed force parallel to said frusto-conical wall on said ferrule ring and said ferrule ring translates said angularly directed force to an axially directed force and transmits said axially directed force to said sealing washer by way of said hub portion.

3,127,184

SELF-CONTAINED ANNULAR FLUID SEAL

John Talamonti, Chicago Heights, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois

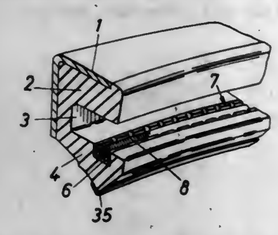
Filed Aug. 15, 1962, Ser. No. 217,066

2 Claims. (Cl. 277—42)



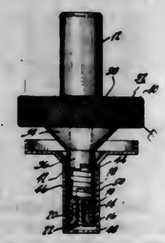
1. An annular fluid seal comprising a flexible boot member, a frusto conical tubular member, an annular sealing washer and an endless thrust transmitting helical spring, said tubular member telescoped within said flexible boot member and said sealing washer, said helical spring extending around that portion of said tubular member of smallest diameter, said flexible boot member and sealing washer detachably connected to each other by means of annular rib-like formations on the outer periphery of the forward end of said boot member, said thrust transmitting helical spring adapted to move rearwardly and upwardly on the sloping surface of said frusto conical tubular member when axial force is applied to the face of the said sealing washer, said sealing washer and said tubular member keyed to prevent relative rotation with respect to each other and to allow longitudinal or axial movement with respect to each other.

3,127,185
OIL SEALS
Cyril Charles Evans, 6 Shrubbery Road, Weston-Super-Mare, England
Filed Feb. 19, 1959, Ser. No. 794,333
18 Claims. (Cl. 277—146)



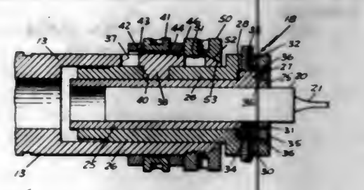
1. An oil seal of the kind comprising an annular sealing member of oil resisting resilient material such as synthetic rubber formed with an annular flexible sealing lip for engagement with a member to be sealed such as a shaft or housing, a spring encircling the sealing lip and applying radially inward pressure thereon for holding it in engagement with the member to be sealed, and a thin flexible and locally deformable strip-like intermediate means of material harder than that of the lip interposed continuously between the lip and the spring over the whole length of the spring and being free of and relatively movable with respect to the seal, the spring being in contact with and pressing radially inwardly upon the radially outer face of said intermediate means whose inner face is in contact with and transmits pressure from the spring radially inwardly upon the lip, the construction and arrangement of said intermediate means being such that it can flex with flexure of the spring and allows the spring to exert pressure on the lip while preventing it from becoming embedded in the material of the lip thereby enabling the spring to work more freely.

3,127,186
FRICTION DEVICE AND METHOD
Marinus Van Renssen, Lancaster, Pa., assignor to Radio Corporation of America, a corporation of Delaware
Filed June 28, 1961, Ser. No. 120,354
5 Claims. (Cl. 279—2)



1. A mandrel for holding a relatively fragile cylindrical metal workpiece during a machining of the outer surface of the workpiece, said mandrel comprising
(*a*) an elongated core,
(*b*) a helical spring telescoped over said core, the turns of said spring having opposite engaging edges each having a planar surface extending through a thickness dimension of the material of said spring, the turns of said spring being of uniform width throughout the length of the spring, and
(*c*) means for radially distending said spring while preserving said opposite edges in contact relation, for uniformally engaging the inner surface of said workpiece, said means comprising
(1) two sleeves mounted in axially-spaced relation on said core, adjacent ends of the sleeves having helical surfaces conforming to the helical end surfaces of the spring structure, said end surfaces engaging said helical surfaces, and stops for engaging the free ends of the terminal turns of said spring,
(2) means restraining axial separation of said sleeves, and
(3) means for axially rotating one of said sleeves with respect to the other.

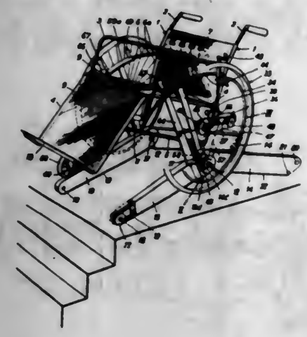
3,127,187
ADJUSTABLE SPINDLES
James R. Eisan, Natick, Mass., assignor to Raytheon Company, Lexington, Mass., a corporation of Delaware
Filed June 4, 1958, Ser. No. 739,746
2 Claims. (Cl. 279—83)



1. An adjustable spindle comprising inner and outer concentric sleeves with the inner sleeve dimensioned to receive a mandrel, locking means cooperative with said sleeves for maintaining said mandrel in a preselected stationary position with respect to said inner and outer sleeves, a shaft formed with an axial opening in one end dimensioned to receive the outer sleeve and having adjustable means for axial location of the sleeves within the opening without disturbing the preselected position of said mandrel comprising a slot in said shaft in the region of the opening and extending parallel with the longitudinal axis of the shaft, a hole in the outer sleeve radially aligned with said slot, a pin extending through said slot into the hole in the outer sleeve, and means to hold the pin in adjusted position within the slot, said means comprising a collet extending circumferentially of the shaft and over the pin, and ring members on either side of the collet removably fixed to the shaft for retaining the collet in position over the pin.

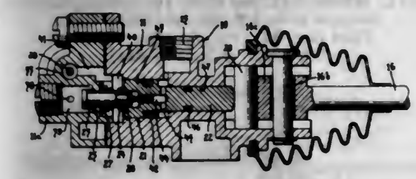
3,127,188
OCCUPANT-CONTROLLED, OBSTRUCTION-CLIMBING WHEEL CHAIR
Werner Greub, Rauracherstrasse 11, Riehen, Basel, Switzerland
Filed Apr. 23, 1962, Ser. No. 189,616
Claims priority, application Switzerland Apr. 23, 1961
6 Claims. (Cl. 280—5.22)

1. An occupant-controlled, obstruction-climbing wheel chair, comprising a chair framing and on both sides of this chair framing: support means rigidly connected to a bottom rear portion of said chair framing, axle means rotatably mounted on this support means, a first rigid member and a second rigid member pivotally mounted on said axle means, means for adjusting the relative angular position of said two rigid members with regard to each other and with regard to the chair framing, a first and a second endless track means movably mounted respectively on said first and said second rigid member and means for driving said first and second endless track means, said means for adjusting the relative angular positions of said two rigid members being capable of adjustment from a position wherein the lower sides of the first and second track means enclose a downwardly open obtuse



angle to a position in which said lower sides are located substantially in the same plane.

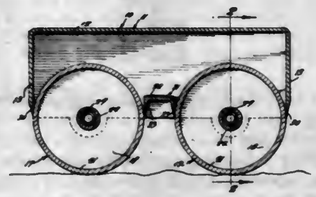
3,127,189
AUTOMATIC CONTROL FOR VEHICLE SUSPENSION
Forrest O. E. Schultz and John R. Almond, Detroit, Mich., assignors to Midland-Ross Corporation, a corporation of Ohio
Filed July 2, 1956, Ser. No. 595,475
4 Claims. (Cl. 280—6)



1. In a vehicle having pneumatic suspension means interposed between the load supporting structure and the wheeled undercarriage and having a source of fluid pressure for supplying said suspension means, the combination of, control means operatively connected to said structure and said undercarriage to respond to relative movement of the latter and said structure, valve means movable to control the supply of fluid to and from said suspension means, additional means fluid connected with said source and being operative in one position to permit and in another position to prevent the supply of fluid to and the exhaust of fluid from said valve means, said valve means being operable upon a supply of pressure fluid from said source to engage said control means for controlling movement thereby, and upon interruption of said supply to permit movement of said control means independent of said valve means; said additional means including a single seal means for maintaining fluid pressure in said suspension means independently of the movement of said valve means upon interruption of a supply of pressure fluid from said source.

3,127,190
GARDEN STOOL WITH SCRAPER EQUIPPED ROLLERS
Louis Haskell Theamar, P.O. Box 1031, Houma, La., assignor of fifty percent to Les Ryder, Houma, La.
Filed Oct. 11, 1961, Ser. No. 144,477
1 Claim. (Cl. 280—79.1)

A rolling stool comprising a support member including a horizontally disposed top wall, spaced parallel end walls and spaced parallel vertically disposed side walls, the lower edges of said end walls being tapered to provide scrapers, said side walls having diametrically opposed bearing portions provided with apertures therein, a pair of horizontally disposed cylindrical hollow rollers arranged in spaced parallel relation with respect to each other, longitudinally extending cylindrical hubs mounted in the central portions of said rollers, a base piece fixedly mounted in each of said hubs and each base piece having a trunnion on its outer end engaging an adjacent aperture, a plunger movably mounted in said hub and



said plunger including a shank for engaging a corresponding adjacent aperture, an enlarged head on the inner end of said plunger, a shoulder in said hub for engagement by said head, a coil spring interposed between said head and base piece, and a crosspiece interposed between said rollers and said crosspiece extending between the side walls of said support member and affixed to said side walls, said crosspiece including a horizontally disposed top portion and vertically disposed flange portions having tapered surfaces providing scrapers for engaging said rollers.

3,127,191
PERISCOPIC REAR VIEW APPARATUS FOR VEHICLES
Tibor Z. Goldman, Casimiro Ulloa 242, San Antonio, Lima, Peru
Filed Nov. 2, 1962, Ser. No. 235,036
1 Claim. (Cl. 280—87)



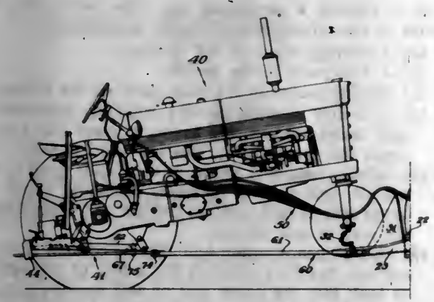
In a vehicle, a periscopic rear view device for the driver of the vehicle comprising, in combination,
(*a*) a steering wheel of the vehicle,
(*b*) a dash panel of the vehicle,
(*c*) bearing means in the dash panel of the vehicle,
(*d*) a hollow steering column rotatably mounted in said bearing means and having a lower end and an upper end to which said steering wheel is fixed,
(*e*) tubular members joined at their ends fixed to the vehicle, said tubular members extending about the lower end of said steering column and extending to the rear of said vehicle,
(*f*) optical means within said steering column and said tubular members enabling the driver of the vehicle to look into the upper end of said steering column through said steering column and said tubular members, said optical means comprising at least mirrors,
(*g*) a steering gear box of said vehicle having a steering rod projecting from it,
(*h*) sprockets mounted on said steering column and said steering rod, and
(*i*) a chain connecting said sprockets.

3,127,192
BALL JOINT ADJUSTER
Wilfred F. Traugott, West Point, Va., and William A. Scheublein, Jr., St. Louis, Mo., assignors to Moog Industries, Inc., St. Louis, Mo., a corporation of Missouri
Filed Feb. 19, 1962, Ser. No. 174,170
3 Claims. (Cl. 280—96.1)

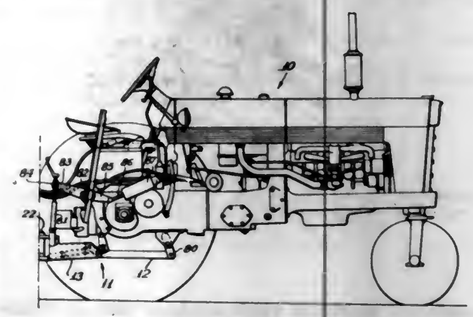


1. In a vehicle wheel suspension system having a wheel supporting arm connected to a suspension control arm by a rotatable and an angularly movable ball joint assembly including a housing carried by one of the arms and having an exposed external semi-spherical surface thereon and a stud shank extending therefrom for connection with the other one of the arms, the improvement of a non-yieldable adjuster for correcting for ball joint wear, said adjuster comprising a thrust member having a cupped surface engaging the ball joint housing at said semi-spherical surface for swivelling movement thereon and a threaded portion surrounding said stud shank, a wear take-up member threadedly engaging said threaded portion of said thrust member and bearing upon the other one of the arms about the shank connection with such arm, said wear take-up member being rotatable relative to the other one of the arms and said thrust member to cause movement of said thrust member toward the ball joint housing and separation of the arms to adjust for wear, and a combined turning and locking means engaging said wear take-up member about its periphery to effect adjustments thereof for moving said thrust member, said locking means having an element extending therefrom and movable into engagement with said thrust member to prevent relative movement between said members.

3,127,193
TANDEM TRACTOR HITCH
Arnold E. W. Johnson, Oak Park, and Robert L. Giddings, Downers Grove, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed July 10, 1962, Ser. No. 208,846
3 Claims. (Cl. 280—402)

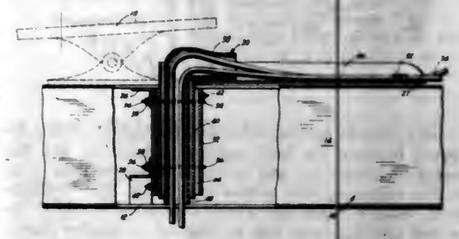


1. The combination of a front tractor, a rear tractor, and means for tandemly hitching said tractors; said means comprising a hitch pivotally mounted on said front tractor; hydraulic means for raising and lowering said hitch about its pivotal connection to the front tractor; a substantially flat pan, adapted to receive the front wheels of said rear tractor, secured to said hitch about a vertical pivot; connector means for joining said pan to said rear tractor, such that a load connected to said rear tractor will be distributed to both the front and rear tractors; and wherein said rear tractor is provided with a hitch,



and said connector means comprises a pair of elongated members secured to said opposite sides of said pan about horizontal pivots, said pair of elongated members extending rearwardly beneath the rear tractor and connected to said rear tractor hitch.

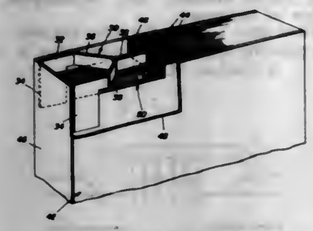
3,127,194
SAFETY DEVICE FOR FLUID CONDUITS EXTENDING BETWEEN VEHICLES
Joseph L. Jeffries, P.O. Box 5216, Tulsa, Okla., assignor of one-half to Jack S. Burden, Tulsa, Okla.
Filed Dec. 11, 1961, Ser. No. 158,353
3 Claims. (Cl. 280—421)



2. In combination with a vehicle having a plurality of fluid hoses carried thereby, a safety device for protection of the hoses and comprising mounting bracket means adapted to be secured to the vehicle, an outer housing carried by the mounting bracket means, an inner sleeve journalled in the outer housing for receiving the hoses therethrough, a liner disposed within the inner sleeve for protecting the hoses against abrasion, channel means secured to the inner sleeve for supporting the hoses, and means carried by the channel means for securing the hoses therein in spaced relation for reducing chafing therebetween.

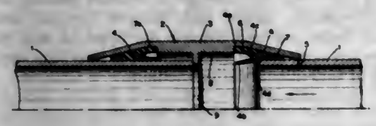
3,127,195
AUTOMATIC BOOK MARK
Ben K. Hawkins, Box 5097, 315 Woodlawn Drive, Woodlawn Addition, Greenville, Miss.
Filed Aug. 26, 1958, Ser. No. 757,373
1 Claim. (Cl. 281—42)

In combination, a book embodying front and back covers joined together by a back and with conventional leaves bound for use between the front and back covers, the top edges of said leaves having cooperating notches located adjacent to said back and conjointly forming a substantially shallow pocket for a built-in book mark, and a book mark comprising a yoke of resilient material secluded in said pocket and embodying a pair of companion arms having outer ends provided with integral attaching means and allowing the yoke to be attached to a cooperating portion of the book, said arms being flexibly resilient



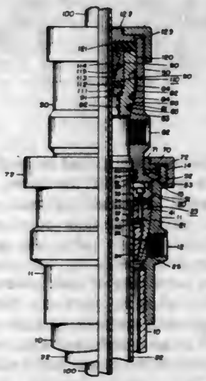
and permitting the yoke to flip back and forth within the limits of the enveloping pocket, inner end portions of the arms converging, being joined together and providing means which is cooperable with vertical edges of the notched portions of said leaves.

3,127,196
WEDGED GASKET COUPLING UTILIZING DIFFERENTIAL COEFFICIENTS OF FRICTION
Francis G. Fabian, Jr., and John P. Mann, Bradford, Pa., assignors to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed May 22, 1959, Ser. No. 815,078
5 Claims. (Cl. 285—111)



1. A pipe joint comprising a plain end pipe section having an end portion with a continuous cylindrical surface and a coaxial sleeve portion receiving the end portion of said pipe section and having a pipe-receiving aperture closely surrounding the pipe section and an annular gasket recess axially inwardly of said aperture, said recess having a zone of maximum diameter spaced axially inwardly from said aperture and a surface of revolution that tapers axially outwardly and radially inwardly from said zone of maximum diameter to said aperture at an angle of the order of ten to twenty degrees to the axis of said pipe section and of said sleeve portion, and a contractible gasket of firm elastomer material seated in said recess, said gasket being wedge shaped in cross-section and having an inner surface engaging the cylindrical surface of said pipe end portion, a tapered outer surface engaging said tapered surface of said gasket recess, an axially outer nose portion having an inside diameter greater than the outer diameter of said pipe section and an axially inner end portion which in free condition has a greater radial dimension than the radial distance between the pipe section and said zone of maximum diameter of the gasket recess so that when the pipe section is stabbed into said sleeve portion with the gasket seated in said recess said inner end portion of the gasket is compressed radially to provide an initial fluid seal between said pipe section, means within said sleeve engaging said gasket to limit the axially inward movement thereof, means providing a coefficient of friction between the inner surface of said gasket and the surface of said pipe section at least approximately four times as great as the coefficient of friction between the outer surface of said gasket and said tapered surface of said gasket recess so that an outward pull on said pipe section causes said gasket to undergo limited axially-outward sliding movement relatively to the surface of said recess in said sleeve portion while undergoing corresponding concurrent axially-outward movement with said pipe section, and said gasket is thereby caused to wedge tightly between said pipe section and said tapered surface of said gasket recess to lock said pipe section against withdrawal from said sleeve.

3,127,197
WELL HEAD HAVING SEAL MEANS ADJUSTABLE AND REPLACEABLE UNDER PRESSURE
Karl H. Kretzschmar, Calgary, Alberta, Canada, assignor to Socony Mobil Oil Company, Inc., a corporation of New York
Filed Jan. 25, 1960, Ser. No. 4,386
4 Claims. (Cl. 285—137)

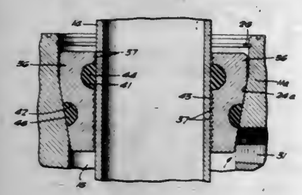


1. In a well head for supporting at least two tubes telescopically arranged one within the other the combination which comprises a casing head, casing supporting and sealing means within said casing head for supporting a string of casing and effecting an internal seal between said casing head and casing string, a tubing head, means securing said casing head to said tubing head, said means including an axially facing supporting surface at the upper portion of said casing head, said tubing head being provided with supporting means at the lower portion thereof supporting said tubing head on said axially facing supporting surface of said casing head, tubing supporting and sealing means within said tubing head for supporting a string of tubing within said casing string and effecting an internal seal between said tubing head and tubing, a first radially split-type packing positioned above said tubing head supporting means for sealing engagement with said casing head and tubing head, means for adjusting said first packing and being removable while said well head is under pressure to permit replacement of said first packing, second radially split-type packing means positioned above said tubing supporting and sealing means for sealing engagement with said tubing head and said tubing, and means for adjusting said second packing and being removable while said well head is under pressure to permit replacement of said second packing.

3,127,198
COMBINATION SLIP AND PACKING APPARATUS FOR OIL FIELD USE
Valdek J. Orund, Anaheim, Calif., assignor to Shaffer Tool Works, Brea, Calif., a corporation of California
Filed Oct. 2, 1959, Ser. No. 844,072
1 Claim. (Cl. 285—146)

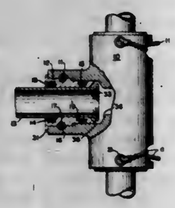
A combination slip and packer apparatus for use at the wellhead of an oil well, comprising a substantial num-

ber of metal slip segments each having wickers at their inner portions and tapered surfaces at their outer portions, said segments when disposed adjacent each other and occupying substantially less than 360 degrees whereby substantial reservoir spaces are formed between opposed surfaces of adjacent segments, first large-area groove means formed in said inner portions of said segments at a first elevation, second large-area groove means formed in said outer portions of said segments at a second elevation substantially different from said first elevation, first and second annular elements formed of elastomeric



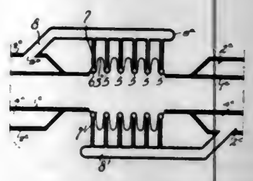
material and respectively disposed in said first and second groove means to at least fill the same, and masses of elastomeric material provided in said reservoir spaces between opposed surfaces of said segments, said reservoir spaces communicating freely with said groove means for flow of elastomeric material thereto, said opposed surfaces of adjacent segments at said reservoirs being cutback substantially, whereby gaps are formed above said reservoirs, the opposed surfaces of said segments at said gaps being spaced apart a sufficient distance to permit substantial compression of the elastomeric material in said reservoirs.

3,127,199
QUICK DISCONNECT FITTING
Homer Davis Roe, 8 Chapin Place, Huntington, N.Y.
Filed Sept. 16, 1960, Ser. No. 56,489
4 Claims. (Cl. 285—165)



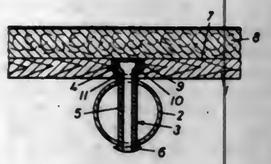
1. An assembled multi-part quick disconnect fitting for attaching two conduits together, comprising a body portion having a central chamber open at one end and in communication with a first conduit adjacent the opposite end, a sleeve having a portion dimensioned with respect to said one end of said chamber to permit axial insertion of said portion therein, means retaining said sleeve portion within said chamber so constructed and arranged to permit free relative rotation of and prevent axial separation of said sleeve with respect to said chamber, a tube for communication with a second conduit extending into said sleeve and freely rotatable and longitudinally slidably mounted therein, and means on said tube for engaging said sleeve to prevent the withdrawal of said tube from said sleeve while permitting said tube and said sleeve to be inserted in and withdrawn from said chamber as a unit.

3,127,200
EXPANSION JOINTS FOR PIPES
Andre Sayag, Paris, France, assignor, by mesne assignments, to Zallea Brothers, Inc., Wilmington, Del., a corporation of Delaware
Filed May 1, 1961, Ser. No. 106,660
Claims priority, application France May 6, 1960
6 Claims. (Cl. 285—226)



4. An expansion joint adapted for series connection into a conduit comprising, in combination, a corrugated bellows element formed with alternating peaks and hollows respectively disposed in axially spaced parallel relation orthogonally with respect to the axis of the bellows element, a plurality of discrete hollow rings respectively nested within the hollows of said bellows element in heat-transferring contact with the external surface of said element, conduit means communicative with and interconnecting said rings for passage of a fluent heating medium circumferentially about said bellows element unidirectionally from one end toward the opposite end thereof, and means connecting said conduit means to a source of supply of said fluent heating medium.

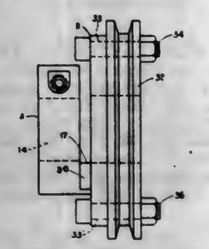
3,127,201
TUBULAR RIVET CONNECTION
Håkon Granlund, Uranienborgveien 25, Oslo, Norway
Filed Jan. 3, 1961, Ser. No. 80,328
Claims priority, application Norway Jan. 4, 1960
1 Claim. (Cl. 287—20.3)



An interconnected assembly, comprising a first member provided with a through bore, a second tubular member engaging the said first member and provided with diametrically opposed holes in alignment with the said hole in the said first member, a tubular rivet provided with a head, a stem portion and an expanded stem end portion, and a tubular bushing formed member made of a material which is harder than that of the rivet and provided with an end portion of decreasing diameter with an opening, the diameter of which is substantially equal to that of the stem portion of the rivet and an interior surface supporting the expanded stem end portion of the rivet, the said tubular rivet and the said bushing member being arranged in axial and concentric alignment through the aligned holes of the said first and second mentioned members.

3,127,202
PRESTRESSED SHAFT ENGAGING UNIT
Richard F. Koen, 127 Ridgefield Road, Lutherville, Md.
Filed May 7, 1962, Ser. No. 193,363
1 Claim. (Cl. 287—52)

A combination prestressed shaft gripping element and power take-off element comprising:



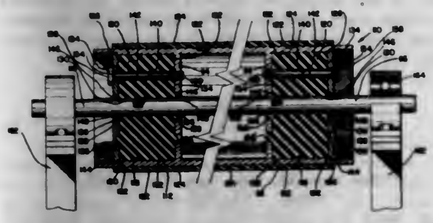
(*a*) a shaft gripping element having a concentric outer circumference and a circular hole through the center thereof slightly smaller than the diameter of the shaft and having a radial slot forming two opposing axially extending faces,

(*b*) means for moving the faces apart under stress for increasing the diameter of the said gripping element to a size to extend over the shaft, whereby the tendency of the gripping element to return to its original diameter will grip the shaft when the expanding means is released,

(*c*) a power take-off element having a concentric outer circumference and a central circular hole of slightly greatere diameter than the hole in the gripping element and adapted to slip snugly over the shaft without expanding the same,

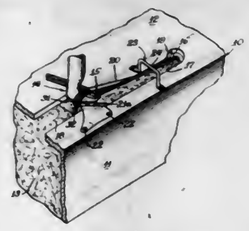
(*d*) the shaft gripping element and the power take-off element having the same rotating axis and having their sides positioned adjacent each other, the gripping element and power take-off element being integrally joined in a relatively small area of their adjacent sides at a spot which is diametrically opposite from said radial slot and entirely below said central circular hole, thereby leaving the remaining adjacent sides of the two elements unconnected.

3,127,203
SHEAVE AND ROLLER ASSEMBLIES
William N. Poundstone, Morgantown, W. Va., assignor to Consolidation Coal Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed June 30, 1960, Ser. No. 39,985
2 Claims. (Cl. 287—52.07)



1. A roller assembly comprising in combination a tubular roller member with an internal cylindrical surface and a pair of end wall portions extending radially inwardly from said internal cylindrical surface adjacent the ends of said roller member, said roller member having an adjacent annular shoulder formed axially outwardly of each end wall portion, a shaft having an external cylindrical surface with a diameter less than the diameter of said roller member cylindrical internal surface, a pair of cylindrical bushings of flexible resilient material each having a bore therethrough and an outer diameter substantially equal to the diameter of said roller member cylindrical internal surface and an inner diameter greater than the diameter of said shaft, each of said bushings having a pair of end walls and a longitudinal dimension greater than the longitudinal dimension from one of said roller member end wall portions to an adjacent axially outwardly located annular shoulder formed in said roller member, said bushing end walls each having a frusto-conical annular ring portion extending outwardly therefrom, said ring portions each having an inner cylindrical wall substantially the same diameter as said bushing inner diameter and an outer sloping wall increasing in diameter toward said respective bushing end wall, a pair of rigid annular end plates having an outer diameter greater than the diameter of said roller member cylindrical internal surface and an aperture forming an inner frusto-conical wall with a diameter greater than the diameter of said shaft, said end plates each having a plurality of slotted portions therethrough, each of said bushings being positioned within said roller member and each having an end wall abutting a roller member end wall and each with an end wall extending beyond a roller member annular shoulder, said shaft extending through each of said bushing bores, said end plates being positioned coaxially on said shaft, each of said end plates being in abutting relation with a bushing end wall extending beyond said roller member annular shoulders with said inner frusto-conical wall abutting said respective ring portion outer sloping wall, and means to urge said rigid end plates toward said respective roller member end wall portions to thereby exert an axial compressive force on said resilient bushings to distort said bushings and to frictionally engage said roller member to said shaft, said cylindrical bushing being adapted, upon distortion by said end plates, to have said ring portions extrude between each of said respective end plate inner frusto-conical walls and said shaft outer cylindrical surface, and portions of said bushing extrude into said respective end plate slotted portions.

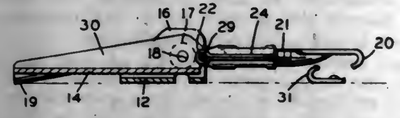
3,127,204
KNOT STRIPPER FOR BALERS
Herbert D. Sullivan, Memphis, Tenn., and Guy O. Tufts, Phoenix, Ariz., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Feb. 26, 1962, Ser. No. 175,543
9 Claims. (Cl. 289—15)



1. A knot stripper for balers comprising a bale forming chamber having an elongated slot therein extending in a generally longitudinal direction, said slot having a first relatively wide needle-passing end portion, a second relatively narrow knot stripping end portion laterally offset from the first portion, an intermediate portion of said slot joining said wide and narrow ends, a knot-forming bill hook disposed adjacent the wide end portion of said slot, and bridge guide means for guiding a knot being stripped

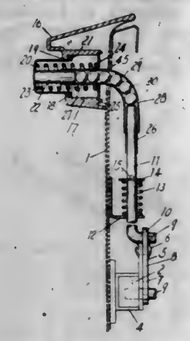
from said bill hook spanning said slot at a point removed from said bill hook in the direction of said knot-stripping end portion of said slot, whereby a knot formed on said bill hook is guided laterally through said bridge guide means for discharge through the narrow end portion of said slot.

3,127,205
UNDER-CENTER TOGGLE LATCH
Edward George Griffiths, Maywood, and Norman S. Johnson, New Milford, N.J., assignors to Camloc Fastener Corporation, Paramus, N.J., a corporation of New York
Filed Apr. 17, 1961, Ser. No. 115,276
5 Claims. (Cl. 292—113)



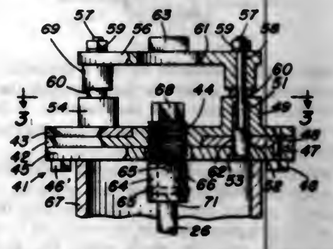
1. An under-center toggle latch for joining two members in assembled relationship including in combination an engageable element on one of said members, a bracket having a base carried by the other of said members, an operating lever, means comprising a fixed pivot for mounting said lever on said bracket at a location intermediate the lever ends and at a position on said bracket above said base, a drawbar having means thereon for engaging said element and means comprising a movable pivot connecting said drawbar to said lever adjacent one end thereof whereby the other lever end forms a handle, the shortest distance between said fixed pivot and said other member being greater than the distance between said fixed pivot and said movable pivot, said handle being adapted to be operated to swing said movable pivot through the space between said base and said fixed pivot to draw said bar into engagement with said element.

3,127,206
DOOR HANDLE
Gerald V. Jakeway, Grand Rapids, Mich., assignor to Keeler Brass Company, Grand Rapids, Mich.
Filed Jan. 18, 1960, Ser. No. 3,025
10 Claims. (Cl. 292—164)



8. The combination of a handle, an actuating member provided with a stem reciprocatingly mounted on said handle, an actuated member disposed in angular relation to said stem, a tubular way member having an outer portion into which said stem reciprocatingly projects and an inner portion into which said actuated member reciprocatingly projects, said way member having a curved intermediate portion merging into said outer and inner portions, said way member being supportedly mounted on said handle, said stem and actuated member coacting with said support to maintain said way member to prevent tilting of said way member on its support and a curvature conformable thrust unit disposed in said intermediate portion of the way member in thrust engagement with said stem and said actuated member.

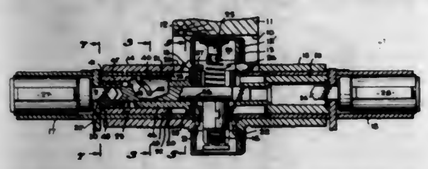
3,127,207
QUICK RELEASE FASTENING APPARATUS
Herbert J. Miller and Michael M. Behles, Baltimore, and James B. Clark, Lutherville, Md., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Original application July 30, 1959, Ser. No. 830,688, now Patent No. 3,054,633, dated Sept. 18, 1962. Divided and this application June 27, 1962, Ser. No. 205,807
2 Claims. (Cl. 292—300)



1. A quick release fastening apparatus for release of an escape chute door comprising an outer door mounted in the outer end of the chute, a connecting rod secured to said door, a supporting means mounted in the inner end of the chute and having an opening therethrough, the other end of said connecting rod being screw threaded and passing through said opening, a pair of fastening plates Z-shaped in cross-section pivotally mounted at diametrically opposed points on said supporting means, said fastening plates having corresponding mating faces with a screw threaded semi-circular groove formed in each of said faces, said screw threaded grooves forming an opening which engages and threadedly secures the screw threaded end of said connecting rod, an elongated boss having a slot therein positioned on one end of each of said Z-shaped plates opposite the end of the plates that are pivotally mounted to said support means, openings in the plates and the support means that are in alignment with each other and the slots in said bosses, an elongated pin extending through each of said slots in the bosses and aligned openings in the plates and supporting means, handle means connected to said pins whereby pulling of the handle upwardly, the pins pass upwardly and out of the aligned opening in the plates and supporting means and are positioned within the slot in the bosses, and a turning of the handle will thereby release the fastening plates from each other to allow the plates to pivotally separate from their mating position to release said connecting rod.

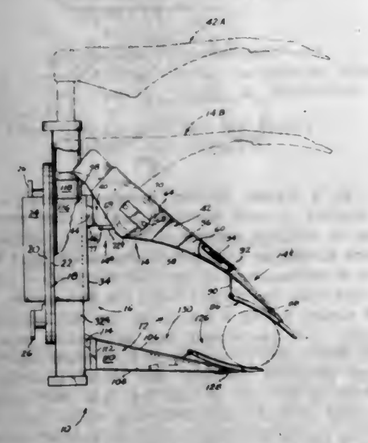
3,127,208
LOCKING RETRACTOR SLIDE
Fred J. Russell, 3800 Don Felipe Drive, Los Angeles, Calif.
Filed Mar. 24, 1961, Ser. No. 98,067
7 Claims. (Cl. 292—336.3)

4. A door lock comprising a relatively stationary frame having a bearing member on at least one side thereof, a tubular spindle rotatably mounted on the bearing member and having roll-back means thereon, a latch retractor slide member reciprocatably mounted in said frame for movement in a transverse direction between an extended locked position and a withdrawn position, a tail piece extending from a latchbolt, said tail piece being engageable in an outward direction only with said slide, and means on the slide member engageable with said roll-back means for operation thereby, and a blocker assembly for said slide member comprising a first cam element within said tubular spindle, a second cam element in operating engagement with the first cam element, actuating means extending axially through the spindle from one of the cam elements to the exterior, and a blocker in operating engagement with the other of said



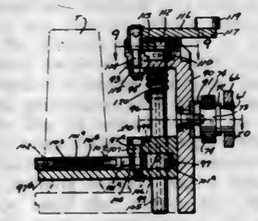
cam elements whereby said blocker is movable in response to actuation of said cam elements between blocking and unblocking positions, said retractor slide having a shoulder means on the exterior in alignment with the blocker when the retractor slide is in locked position and having a position of engagement with said blocker when the blocker is advanced to blocking position, said position of engagement being at a location removed from said tail piece whereby the retractor slide is held in said locked position while said tail piece remains free from engagement with said blocker.

3,127,209
CLAMPING MECHANISM
Donald M. Faust, Estacada, and Delano Wight, Gresham, Oreg., assignors to Cascade Manufacturing Company, Portland, Oreg., a corporation of Oregon
Filed Dec. 26, 1961, Ser. No. 161,977
5 Claims. (Cl. 294—88)



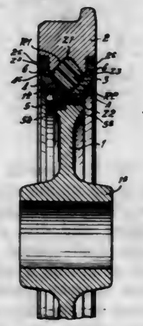
1. In a clamping device for lift trucks and the like, a frame, a first clamping arm, a second articulated clamping arm comprising inner and outer sections hinged together, means mounting said arms on said frame with the arms oppositely disposed and spaced apart and extending out to one side of said frame and each movable toward the other, said outer section of said second clamping arm having a portion that moves in a path adjacent said frame on movement of the second clamping arm, said first clamping arm having a portion that moves in a path adjacent said frame on movement of the first clamping arm and that is out of engagement with said portion of said second clamping arm, said portions of said arms engaging each other upon the two clamping arms being moved toward each other to a predetermined minimum spacing and producing pivotal movement of said outer section on movement of the arms to a closer spacing than said predetermined minimum spacing.

3,127,210
UNIVERSAL AUTOMATIC WARE LOADING MACHINE
Carl W. Schreiber, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Original application Oct. 8, 1959, Ser. No. 845,262. Divided and this application Aug. 6, 1962, Ser. No. 215,107
3 Claims. (Cl. 294—116)



1. An article holding device comprising a frame, a pair of opposed gripping jaws, a shaft mounting each said jaw on the frame for pivoting them toward and away from each other, means fastened on the frame and operatively connected to each said shaft normally forcing the jaws toward each other, a gear on each said shaft, the two gears being in meshing engagement, a drivable member on each shaft, a driver member, means pivotally mounting said drive member on the frame and arranged for engaging said member with one of said drivable members by rotation in either direction, and means connected to said driver member operable for rotating the latter for moving the jaws away from each other upon rotation of the driver member in either direction.

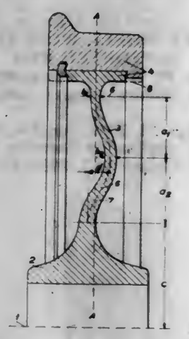
3,127,211
RAIL VEHICLE WHEEL WITH ELASTICALLY SUPPORTED RIM
Heinrich Kordes, 88 Augustenburgerstrasse, and Erich Schwietert, 78 Mindenerstrasse, both of Osnabruck, Germany
Filed Sept. 12, 1962, Ser. No. 223,031
Claims priority, application Germany Sept. 14, 1961
1 Claim. (Cl. 295—11)



A rail vehicle wheel comprising, in combination, a body including a hub and an outer annular edge, said outer

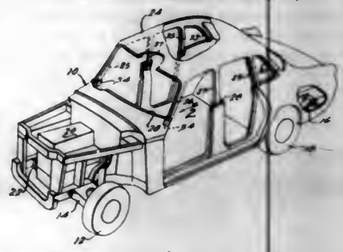
annular edge including a radial web lying in the plane of the body, a perpendicular shoulder at the inner periphery thereof, an angularly inclined offset face, said web having threaded bolt holes therein, a concentric shoulder at the outer extremity of said angularly offset portion and a lateral holding flange at the extremity of said concentric shoulder; an annular holding ring including a circular inner face seating on said perpendicular shoulder, a second radial web abutting said first-mentioned radial web, said second radial web having bolt holes therein aligned with said first-mentioned bolt holes, a second offset face inclined in a direction opposite said first-mentioned offset face, an outer shoulder concentric with said circular inner face and of a diameter equal to said concentric shoulder of said body and a second lateral holding flange at the extremity of said outer shoulder face, said offset faces defining a V-shaped groove having an arcuate apex; a rim including an inner edge of a thickness less than the space between said lateral holding flanges and a diameter slightly in excess of the outside diameter of said concentric and second shoulders to leave an annular space therebetween, said inner edge having a V-shaped groove having an arcuate apex therein conforming in size and configuration to the groove formed by said offset faces but opposed thereto forming a radial space of rhombic cross-section, an annular elastic body of normally circular cross-section seated in said opposed grooves; and bolts tightened through said aligned bolt holes compressing said elastic body to rhombic cross-section, the annular apices of said grooves and the space between said concentric second shoulders and said inner edge of said rim permitting limited deflection of the four edges of the prestressed deformed elastic body upon elastic movement of the wheel.

3,127,212
WHEELS FOR VEHICLES RUNNING ON RAIL TRACKS
Knut Eklund, Surahammar, Sweden, assignor to Allmänna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a Swedish corporation
Filed Feb. 14, 1962, Ser. No. 173,290
Claims priority, application Sweden Feb. 17, 1961
7 Claims. (Cl. 295—21)



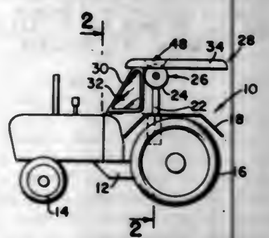
1. A wheel for vehicles running on rail tracks comprising one integral piece of material comprising a hub part, a wave formed disc part surrounding said hub part and a rim surrounding said disc part, the said wheel forming a body with similar axial sections, the centre line of said disc part extending a substantial distance to both sides of a plane at right angles to the axis of rotation of the wheel and passing through the centre of the disc part at the point where said disc part leaves said rim, the distance between said centre line and said plane being greater at a point between the said hub and rim than at the hub.

3,127,213
AUTOMOBILE ROOF MOUNTING
Gerald Klaasen, Detroit, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed Aug. 15, 1961, Ser. No. 131,626
4 Claims. (Cl. 296—28)



1. In a motor vehicle having a roof provided with depending supporting pillars and a lower body structure, a plurality of fastening means carried by said lower body structure and respectively gripping each of said pillars in load carrying relationship, each of said fastening means including a resilient separator interposed between one of said pillars and said lower body structure and forming the sole contact between such pillar and said lower body structure.

3,127,214
ROOF ATTACHMENT
Paul Erich Kettler, An der Autobahn, Ockstadt, Kreis Friedberg, Hesse, Germany
Filed Jan. 3, 1961, Ser. No. 81,915
17 Claims. (Cl. 296—102)

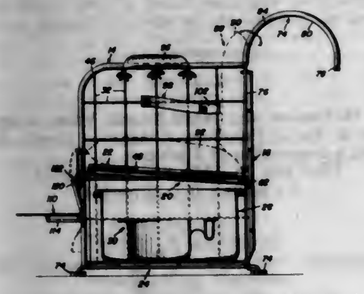


1. In a tractor vehicle, in combination, a plurality of fenders, a roof assembly having roof means overlying an operator portion of the tractor vehicle; support means having an L-shaped configuration fixed to the vehicle in displacement to the operator portion and extending upwardly therefrom toward the roof means, said support means having a leg at the top end extending horizontally and transversely and terminating near substantially the center of gravity of said room assembly, universal vibration damping and shock absorbing means secured to the end of said leg, said roof means being mounted on said shock absorbing means, said shock absorbing means including a resilient annular collar, means mounted at the end of said leg for releasably holding said collar whereby its axis is in a horizontal position, a metal ring enclosing said collar, mounting means securing said ring to said roof means.

3,127,215
INFANT'S SEAT AND BED
Mattie P. Hubbard, 205 N. Daugherty, Eastland, Tex.
Filed Oct. 31, 1961, Ser. No. 148,915
9 Claims. (Cl. 297—118)

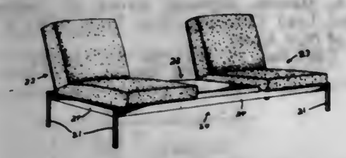
1. An infant's seat and bed comprising a pair of upstanding opposite sides interconnected at their rear edge

portions by means of an upstanding back and at their forward edge portions by means of suitable bracing means, a horizontally disposed main seat secured between said back and opposite sides spaced from the upper and lower ends of said sides, a horizontally disposed false seat receivable between said sides for support above and by said main seat, said sides being grill-like in nature and including crossed and interconnected generally parallel vertical members and generally parallel horizontal members and said false seat including a plurality of longitudinally spaced notches in each side edge thereof in



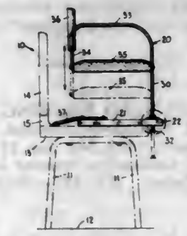
which the corresponding vertical members are receivable in alternately vertically spaced positions of said false seat above said main seat with the projections of said false seat defined between adjacent notches resting upon corresponding ones of said horizontal members whereby said seat may be alternatively supported in a position spaced above said main seat and defining a receptacle receiving shelf between said main and false seats, said false seat having a large opening formed therethrough with which a pot disposed between said main and false seats on said shelf may be registered.

3,127,216
MODULAR FURNITURE
George S. Clouse, Seattle, Wash., assignor to Triway Industries, Inc., Seattle, Wash., a corporation of Washington
Filed Mar. 13, 1961, Ser. No. 95,152
3 Claims. (Cl. 297—134)



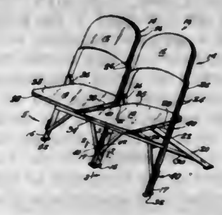
1. A modular chair and table structure comprising: a rectangular frame having connected front, back, and side beams outlining said rectangle and sustained at each of the four corners by a respective leg, said front and back beams being each metal and sectionally of such a shape as to present a vertical web from the top edge of which a horizontal flange points inwardly, the frame having a length which is a multiple of a predetermined module, each modular portion of said frame having respective metal tab means welded to and extending rearwardly from the top flange of the front beam flush with the upper face thereof and having respective metal brackets welded to and extending forwardly from the web of the rear beam to occupy a generally horizontal plane spaced well below the upper face of the rear beam, chair and table units carried by the frame each having a width the same as the predetermined module and arranged to collectively span the full width of the frame, the table unit having its front end resting upon the flange of the front beam and its rear end resting upon the flange of the rear beam, respective means detachably securing said front end of the table unit to the underlying tab means and the rear end of the table unit to the underlying flange, the chair unit having its front end resting upon the flange of the front beam and its rear end resting upon the related brackets, and respective means detachably securing said front end of the chair means to the underlying tab means and said rear end of the chair means to the underlying brackets.

3,127,217
ADJUSTABLE BOOSTER CHAIR
David Caplan, 37 Banbury Road, Rockville Centre, N.Y.
Filed Dec. 19, 1962, Ser. No. 245,831
4 Claims. (Cl. 297—232)



1. A children's booster chair for use on an elevated support, said chair comprising a base adapted to rest on said support having a forward portion extending forward beyond the forward edge of said support, a pair of vertically through-opening receivers on said forward base portion, a pair of standards extending slidably through said receivers clear of said support and adapted to bind in said receivers under applied moment, and a seat extending rearward from said standards and spaced over said base for supporting a child, whereby said seat is vertically adjustable upon sliding of said standards in said receivers and fixed at a selected elevation by the weight of a child on said seat exerting a moment on said standards.

3,127,218
CHAIR
Henry C. Banke, Chicago, Ill., assignor to Clarin Mfg. Co., Chicago, Ill., a corporation of Illinois
Filed Apr. 11, 1962, Ser. No. 186,796
2 Claims. (Cl. 297—248)



1. In combination, a folding chair of the type comprising a seat and front and rear downwardly extending legs, said front legs being disposed along the side margins of said seat in a forwardly inclined position, so that the right front leg of one chair will lie adjacent the left front leg of the adjacent chair when two of said chairs are placed together side-by-side, said front and rear legs being crossed and pivotally interconnected intermediate their ends, a pair of longitudinal brackets having plate portions fixed to the outer face of each of said front legs and

extending generally in the forwardly inclined direction of said legs, said bracket plate portions being spaced apart along said legs so as to be spaced both horizontally and vertically from each other and with one bracket plate portion below and one bracket plate portion above the pivotal connection between the front and rear legs and each pair of said bracket plate portions being similarly located on each of said front legs so as to contact a similar pair of bracket plate portions when a pair of said chairs are placed side-by-side, and interlocking means on said bracket plates comprising a stud extending outwardly from one bracket plate and having an enlarged head portion, and means defining an elongated slot formed in the other bracket plate having an enlarged upper portion for receiving said enlarged head portion of said stud and a reduced width lower portion, whereby relative vertical movement of adjoining chairs in the direction of said legs is effective to move said studs on one pair of bracket plate portions into the enlarged upper portion of said elongated slots in the adjoining bracket plate portions and then into interlocking relation with said reduced width lower portion of the slots.

3,127,219
SPRING MOUNTED ROCKING CHAIR
Kåre Stokke, Spjelkavik, Alesund, Norway
Filed June 4, 1962, Ser. No. 199,815
Claims priority, application Norway June 6, 1961
4 Claims. (Cl. 297—264)



1. A spring rocking chair of the type wherein the seat and the back rest are connected to the supporting structure by means of a spring connection, said chair comprising a frame supported on legs, curved track members secured to the frame, a flat spring comprising a rocker for each track member secured at one end to the seat and back and the other end secured on the track member at the front end, the track members abutting closely against the inner side of a front member of the frame, the flat spring being fastened to the front part of the track member and being provided with an extension shaped for connection to said frame.

3,127,220
SEAT CUSHION AND SPRING CONSTRUCTION
Glynn L. Stine, Detroit, Mich., assignor, by mesne assignments, to American Metal Products Company, Detroit, Mich., a corporation of Michigan
Filed Aug. 9, 1961, Ser. No. 130,336
2 Claims. (Cl. 297—452)

1. In a seat cushion construction, a resilient sheet of pervious material forming a load bearing section which has a reversed end portion of V shape at one end, the opposite end of said sheet being of oval shape and secured to the bottom side of the load bearing section.

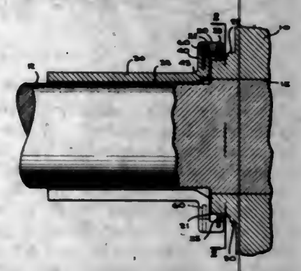


3,127,221
CHAIR
Robert H. Bennett, Jr., Grand Rapids, Mich., assignor to Stow & Davis Furniture Company, Grand Rapids, Mich., a corporation of Michigan
Filed July 16, 1962, Ser. No. 210,011
5 Claims. (Cl. 297—454)



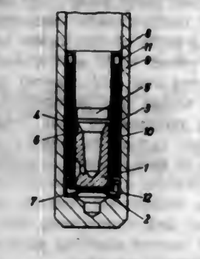
1. A chair shell comprising: a one piece shell having a seat and an upstanding back; said back including a lower compression portion at the juncture with said seat; and said compression portion being curved from side to side to form a forwardly facing concavity, all sections of said compression portion being at an obtuse angle with respect to the upper portion of said back, and said compression portion substantially resembling a section of a cone sliced on a plane parallel to the axis of the cone.

3,127,222
TRACTION MOTOR SUPPORT BEARING
Melvin A. Hanson, Downers Grove, Ill., assignor to National Lead Company, New York, N.Y., a corporation of New Jersey
Filed June 21, 1961, Ser. No. 118,553
2 Claims. (Cl. 308—36.1)



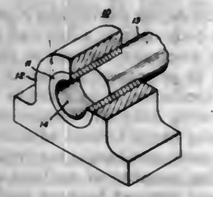
2. A traction motor support bearing comprising a pair of complementary bearing members having substantially semi-cylindrical sleeve portions and flange portions at one end thereof, said bearing members cooperating to form a generally cylindrical bearing means having a central bore therethrough and a radially extending flange at one end thereof, separate dust sealing means support means comprising a pair of complementary support members cooperating to define a substantially annular support means, said annular support means having a peripheral groove formed on the inner face thereof and directed radially inwardly, said groove being adapted to carry dust sealing means, each of said support members having at least two substantially radially extending openings formed therein, each of said bearing members having at least two substantially radially extending openings formed therein adapted to be aligned with the radially extending openings in the adjacent support members, and attaching means extending through the aligned opening formed in said support members and bearing members for rigidly attaching said support members to said bearing members, said attaching means comprising a plurality of dowels, each of said dowels having an interference fit with an opening in one of said bearing members and the adjacent aligned opening in one of said support members, each of said dowels being formed of anti-friction material to prevent scoring of a wheel face if the adjacent face of the flange on the associated bearing member should wear away.

3,127,223
SPINDLE BEARING
Fritz Stahlecker, Botzgensteige, Bad Uberkingen, Wurttemberg, Germany
Filed Sept. 28, 1961, Ser. No. 141,416
Claims priority, application Germany Oct. 10, 1960
18 Claims. (Cl. 308—152)



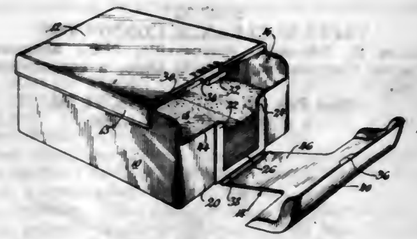
1. A foot bearing structure for a spindle of a spinning or twisting machine comprising a common housing, a foot bearing for said spindle mounted within said housing, a damping and centering socket within said housing surrounding said foot bearing with a small intermediate clearance, means for permitting said socket tilt relative to said housing comprising upper and lower tilting edges serving as centering means at the upper and bottom ends, respectively, of said socket, and further damping means within said housing and surrounding said socket.

3,127,224
BEARING
Robert S. Owens, Watervliet, and Robert V. Klist, Rexford, N.Y., assignors to General Electric Company, a corporation of New York
Filed Nov. 20, 1961, Ser. No. 153,424
9 Claims. (Cl. 308—240)



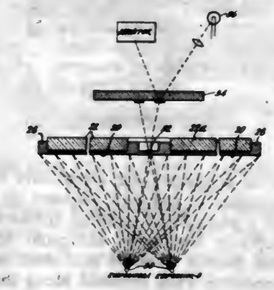
1. An article of manufacture comprising in combination, a composite body of a very hard metal including tungsten and a metallic binder, adapted to contact a further body and have relative motion therewith, said composite body being further characterized by having surface portions of said binder etched to leave irregular surface openings into said body, and a dry lubricant material in said openings to provide lubrication between said composite body and said further body.

3,127,225
ARTICLE DISPENSER
Willard J. Oehrlein, Milwaukee, Wis., assignor to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware
Filed Feb. 1, 1961, Ser. No. 86,351
9 Claims. (Cl. 312—50)



1. In an article dispenser of molded plastic material, a box-like base portion comprising a bottom wall, back and side walls of equal height, and a front wall of reduced height, said front wall being centrally provided with an upwardly open window-like aperture to facilitate removal of contents, a cover hinged to said back wall but terminating short of said front wall, to define, with said front wall aperture into which it leads, a dispenser opening of generally T configuration, and a closure member, integrally hinged at the base of said front wall and including a planar portion adapted, when hinged against the base portion, to close the T shaped front wall aperture, and a free end portion in substantial right angularity thereto adapted to close the top of the base portion forward of the cover, and pressure releasable means associated with the front margin of the cover and with the free end margin of the closure member for locking engagement therebetween when both cover and the closure member are hinged into nested engagement with said base portion.

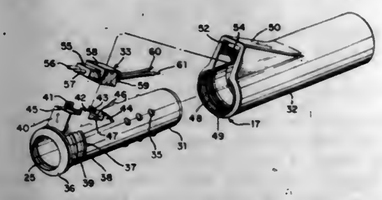
3,127,226
PIN-HOLE EVAPORATION CAMERA
Charles W. Rector, Baltimore, Md., assignor to Radio Corporation of America, a corporation of Delaware
Filed Oct. 4, 1960, Ser. No. 60,433
3 Claims. (Cl. 316—4)



1. The method of depositing a photosensitive surface layer on a support, comprising the steps of simultaneously evaporating on said support a photosensitive material

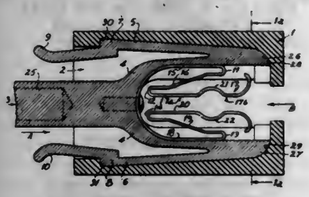
from a first evaporator with said first evaporator in a first position and evaporating photosensitive material from a second evaporator with said second evaporator in a second position, positioning a member for receiving material from both of said evaporators, positioning an apertured member for receiving material from both of said evaporators, positioning a monitoring plate on the opposite side of said apertured member from said evaporators for receiving photosensitive material from both said first and second evaporator and passing through the aperture in said apertured member so that said material will land at spaced apart areas on said monitoring surface, and monitoring the amount of photosensitive material deposited on said spaced apart areas.

3,127,227
VACUUM CLEANER CONNECTOR
Charles E. Edwards, Waynesville, N.C., assignor to Dayco Corporation, Dayton, Ohio, a corporation of Ohio
Filed Feb. 27, 1961, Ser. No. 91,785
4 Claims. (Cl. 339—15)



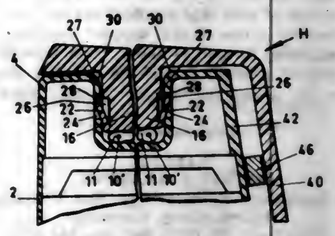
2. In a vacuum cleaner hose assembly including a vacuum hose having a plurality of electrical conductors incorporated therein, the improvement comprising a connector at one end of the hose consisting of an inner and an outer sleeve and an electrical fitting, said sleeves including lateral locking means jointly holding said fitting in place between said sleeves to provide a structural support therefor, said inner sleeve having a boss extending angularly outward from its periphery, said boss having a plurality of lips on its outer surface for gripping said fitting.

3,127,228
PRINTED CIRCUIT CONNECTOR
Peter F. Greco, Norwalk, and William R. Parsons, Southport, Conn., assignors to Burndy Corporation, a corporation of New York
Filed Mar. 17, 1960, Ser. No. 15,642
13 Claims. (Cl. 339—17)



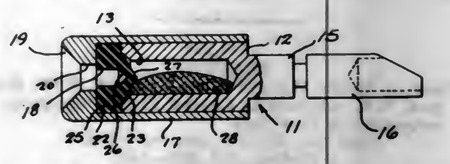
9. An electrical connector for electrically connecting a plurality of conductive elements disposed on a printed circuit board to a plurality of external conductors, comprising: a receptacle having an elongated aperture; a plurality of slots therein, each of said slots including a groove and supporting walls disposed along the sides of said grooves; a surface discontinuity in said grooves; an electrical contact assembly disposed in each of said slots; said contact assembly comprising an electrically conductive frame element for supporting a resilient contact element apart from said receptacle, and a resilient contact element mechanically and electrically secured to said frame and adapted to engage a printed circuit board inserted into said aperture; means on said frame element for electrically and mechanically securing at least one of said external conductors thereto; and resilient means on said frame to engage said groove surface discontinuity to releasably secure said frame element in said groove.

3,127,229
LIGHTING FIXTURE WITH SUPPORTING CLIP
Henry Thomas Beck, 430 Richview Ave., Toronto, Ontario, Canada
Filed Aug. 16, 1961, Ser. No. 131,874
9 Claims. (Cl. 339—99)



1. An electric light fixture including a body member having an interior lamp socket and an exterior channel rendering said body member incomplete and wherein current carrying parts of the socket are connected compressively to a power cord; a plug receivable within said channel, said plug and said channel having walls which are contiguous within said channel; co-operating formations including recesses on two contiguous walls and a resilient detent carried by one of said walls and receivable in one of said recesses to permit insertion of the plug into the channel and receivable in the other recess to prevent the withdrawal thereof, securing said plug in said channel and maintaining the compressive connection of said current carrying parts and said cord and completing said body member.

3,127,230
ELECTRICAL CONNECTOR DEVICE
Edgar E. Marquis, Brookfield, Conn. (Rte. 1, Flat Swamp Road, Newton, Conn.), and James A. Marquis, 6 Young Place, Danbury, Conn.
Filed May 1, 1962, Ser. No. 191,535
2 Claims. (Cl. 339—118)



1. A female connector comprising a generally tubular conductive main body open at a first end thereof, an axial connection stem integrally formed at the other end of said main body to permanently connect said other end to an electrical conductor, a rigid sleeve secured on said main body and being integrally formed with an inwardly projecting retaining flange located adjacent said open first end of the main body and having a cylindrical axial bore, an annular sealing member of resilient deformable material disposed and retained between said flange and the rim of said open first end of the main body, said sealing member having an inwardly tapering hollow end portion

which projects axially into the bore of said main body, said hollow end portion having a normally closed end slit which normally seals off the interior of said main body, and a mass of electrically conductive fluent material in the interior of said main body, said sealing member being adapted to yieldably receive a male connector tip and to admit said tip through said slit into said cavity and into conductive engagement with said fluent material.

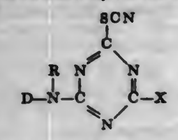
CHEMICAL

3,127,231
VAT DYEING OR DYE STRIPPING WITH ALKALINE BOROHYDRIDE AND HYDROSULFITE SOLUTION
Charles Eric Neale, Taylors, S.C., assignor to Southern Bleachery and Print Works, Inc., Taylors, S.C., a corporation of Delaware
No Drawing. Filed May 8, 1961, Ser. No. 108,271
9 Claims. (Cl. 8—34)

1. In the dyeing of a material with a vat dye involving contacting said material with vat dye pigment and thereafter contacting said material with a hydrosulfite vat dye reducing medium, the improvement comprising the step of providing in said hydrosulfite vat dye reducing medium an alkali metal borohydride and sufficient alkali metal hydroxide to provide a pH above 10 to provide the reduced vat dye in alkali leuco form, said vat dye reducing medium consisting essentially of said hydrosulfite, said alkali metal borohydride and said alkali metal hydroxide.

3,127,232
NEW AZO DYESTUFFS
Raymond Price and Cyril Eric Vellins, both of Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Filed June 23, 1961, Ser. No. 119,029
5 Claims. (Cl. 8—54)

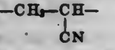
1. Process for the coloration of textile materials containing amino groups which comprises reacting said materials with a water-soluble dyestuff having the formula:



wherein X is selected from the group consisting of lower alkyl, aryl, chlorine, bromine, aryloxy, lower alkoxy, and thiocyanato groups; D stands for the radical of a water-soluble dyestuff selected from the class consisting of azo, anthraquinone, and phthalocyanine water-soluble dyestuffs; and R is selected from the group consisting of hydrogen and lower alkyl, in aqueous medium.

3,127,233
MILD ALKALINE OXIDATION TREATMENT OF ACRYLONITRILE POLYMER FIBERS OR FILMS, TO IMPROVE FLEXIBILITY AND DYEABILITY
Fred J. Lowes, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed May 29, 1961, Ser. No. 113,117
6 Claims. (Cl. 8—111)

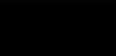
1. The method which comprises (1) immersing an article consisting essentially of a linear polymer of which at least 80 percent of the recurring units are



the remainder being at least one other ethylenic substance which is copolymerizable with acrylonitrile, and which article when dried is normally hydrophobic, in a bath of a liquid aqueous alkaline mild oxidizing agent composed essentially of (*a*) from about 0.2 to 10 percent of an alkali metal hydroxide and (*b*) from about 1.5 to 10 percent of hydrogen peroxide, said article being immersed in said bath for a time, inversely related to the temperature, varying from about 3 to 5 minutes near the boiling temperature to from 1 to about 4 hours at room temperature, but at least for a time sufficient to provide an article which when washed and dried exhibits swelling in water, and (2) washing the article to remove the alkaline agent.

3,127,234
METHOD OF PRODUCING POLYOLEFIN SHAPED ARTICLES CONTAINING A COMPATIBLE POLYMERIC SUBSTANCE HAVING ACID ANHYDRIDE OR ACID HALIDE GROUPS
William Alexander O'Neill, Harrogate, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Filed Apr. 14, 1961, Ser. No. 102,937
Claims priority, application Great Britain Apr. 22, 1960
9 Claims. (Cl. 8—115.5)

1. A method of producing a shaped article comprising shaping a mixture of a polyolefin selected from the group consisting of homopolymers and copolymers of ethylene and propylene and a phosphonitrile halide consisting essentially of the repeating structural units



wherein X and Y are halogens.

3,127,235
METHOD OF FORMING AND MAINTAINING FILMS ON SURFACES OF LIQUIDS
Wolfgang Benzel, Haan, Rhineland, Germany, assignor to Dehydag Deutsche Hydrierwerke G.m.b.H., Dusseldorf, Germany, a corporation of Germany
No Drawing. Filed Oct. 28, 1960, Ser. No. 65,571
Claims priority, application Germany Nov. 6, 1959
7 Claims. (Cl. 21—60.5)

1. In the method of forming thin films of difficultly-soluble, interface-active substances selected from the group consisting of anti-foaming agents, pesticides and evaporation reducing agents, the improvement which comprises distributing on the surface of the liquid to be covered buoyant porous bodies impregnated throughout with the active substance whereby a thin film of the active substance is formed on the surface of the liquid as it is released from the porous body and maintaining the said film of active substance by release of additional active substance from the porous body.

3,127,236
PROCESS FOR SEPARATING ZIRCONIUM AND HAFNIUM VALUES
Kurt Peters, Getreidemarkt 9, Vienna, Austria
No Drawing. Filed Apr. 23, 1957, Ser. No. 654,463
Claims priority, application Austria Apr. 27, 1956
16 Claims. (Cl. 23—23)

1. A process for separating zirconium and hafnium values which comprises treating a mixture of zirconium and hafnium insoluble compounds with sufficient oxalic acid solution to peptize said insoluble zirconium and haf-

nium compounds, said mixture of zirconium and hafnium insoluble compounds being selected from the group consisting of mixtures of zirconium and hafnium phosphates and mixtures of zirconium and hafnium hydroxides; digesting said peptized mixture at an elevated temperature not exceeding 100° C. with sufficient oxalic acid solution to convert the hafnium and zirconium values to oxalato complex ions; and fractionally precipitating the zirconium and hafnium values from the oxalato complex ion-containing solution by selectively adjusting gradually at least one of the process variables including temperature, pH and ion concentration in a direction favoring insolubility of the zirconium and hafnium values, any gradual adjustment of temperature being a decrease at a rate less than 0.1° C. per minute, any adjustment of pH being an increase at a maximum rate of 0.1 pH unit per hour and any adjustment of ion-concentration being at a maximum rate of 1 relative percent per hour, and continuing said gradual adjustment of at least one process variable until substantially all of the zirconium and hafnium values have been precipitated from solution, the precipitate so produced being removed from the precipitation system during the course of said precipitation in a plurality of portions, the earlier of said portions being substantially richer in hafnium and the latter of said portions being substantially richer in zirconium.

3,127,237

CONVERSION OF POTASSIUM SULPHATE TO POTASSIUM CARBONATE

Henry P. Markant, Alliance, Ohio, assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey

Filed Apr. 27, 1959, Ser. No. 809,288
3 Claims. (Cl. 23—63)

1. In a thermochemical reaction process for the conversion of potassium sulphate to potassium carbonate the steps comprising incinerating potassium sulphate in the presence of carbon and under reducing conditions to obtain a molten smelt including potassium sulphide and a hot gaseous product including carbon dioxide and sulphur dioxide, discharging the smelt into an aqueous solution containing zinc oxide to form insoluble zinc sulphide and a solution of potassium hydroxide and potassium carbonate, separating the insoluble zinc sulphide from said solution, passing the hot gaseous products of said incinerating step through a first liquid-gas contact zone to remove the entrained solid matter therefrom and to absorb the sulphur dioxide in said gases, returning the removed matter and absorbed SO_2 to said incinerating step, directing said gaseous products of incineration from said first contact zone through a second liquid-gas contact zone, passing said solution of potassium hydroxide and potassium carbonate in contact with said gaseous mixture containing carbon dioxide in said second contact zone to carbonate said potassium hydroxide to potassium carbonate, and separating said potassium carbonate from the gases leaving said second contact zone.

3,127,238

SODIUM PHOSPHATE GLASSES

Robert J. Fuchs, Clark, N.J., assignor to FMC Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Original application Oct. 5, 1961, Ser. No. 143,056. Divided and this application July 23, 1962, Ser. No. 211,822
2 Claims. (Cl. 23—106)

1. A glassy sodium polyphosphate having a mole ratio of $(Na_2O+H_2O)/P_2O_5$ of 1.10 to 1.065, a weight percent P_2O_5 of 68.5 to 69.7%, and possessing terminal groups on the polyphosphate chain having no less than 75 mole percent OH with the remainder being ONa groups.

3,127,239

METHOD OF SEPARATION

George W. Cook, Benton, Ark., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware

No Drawing. Filed June 14, 1960, Ser. No. 35,877
5 Claims. (Cl. 23—143)

1. Method for the separation of the alkali-insoluble constituents of aluminous ores of the bauxite type from alkaline bauxite digestion liquor in which they are suspended which comprises adding to the suspension a flocculant comprising a homogenized gelatinized starch, said starch having been first gelatinized and then homogenized by mechanical disruption of the starch structure by means of high speed shearing and tearing stresses to form a fine aqueous suspension of said starch corresponding to a starch loading between about 3 and about 20 pounds per ton of insoluble constituents, and then separating the sedimented insoluble constituents from the digestion liquor.

3,127,240

SULFAMIC ACID MANUFACTURE

Everett E. Gilbert and Alphonse W. Marsillo, Morris Township, Morris County, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

Filed Feb. 19, 1962, Ser. No. 174,022
4 Claims. (Cl. 23—166)

4. In a process for the production of sulfamic acid by reaction of urea, sulfuric acid and sulfur trioxide the improvement which comprises effecting said reaction in the presence of sulfuryl chloride as an inert solvent medium.

3,127,241

PREPARATION OF MAGNESIUM HYDROXIDE

John N. Periard and George W. Waldron, Bay City, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Feb. 16, 1961, Ser. No. 89,658
3 Claims. (Cl. 23—201)

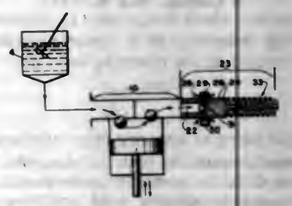
1. A process for the preparation of a readily filterable magnesium hydroxide which comprises admixing magnesium sulfate in aqueous solution, while maintaining continuous agitation, with sodium hydroxide, containing sodium chloride admixed therewith, in aqueous solution, at a temperature between about 15° C. and 75° C. for between about 0.25 and 2.0 hours, in proportions of each sufficient to provide a soluble alkalinity that requires between 0.5 and 5.0 milliliters of 0.1 N hydrochloric acid to neutralize 100 milliliters of the resulting mother liquor, to make magnesium hydroxide in suspension, and recovering the magnesium hydroxide so made from the suspension at said alkalinity.

3,127,242

METHOD OF TREATING MAGNESIA

Morris I. Cohn, Needham, and Roy D. Perdue, Tewksbury, Mass., assignors to Mineral Industries Corporation of America, Needham, Mass., a corporation of Massachusetts

Filed Mar. 12, 1963, Ser. No. 269,830
2 Claims. (Cl. 23—201)



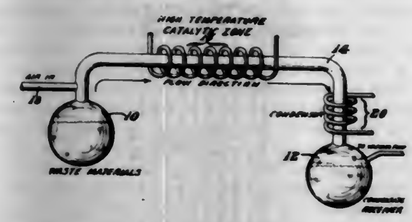
1. A method of hydrating magnesia to produce magnesium hydroxide comprising forcing an aqueous slurry of magnesia particles in the form of a film edgewise through a thin hard-surfaced gap under a high pressure of at least 100 pounds per square inch and at a high velocity by virtue of reduction of said pressure to a lower pressure against a hard impact surface.

3,127,243

RECOVERY OF POTABLE WATER FROM HUMAN METABOLIC WASTES BY DISTILLATION AND OXIDATION OF THE RESULTING VAPORS

John J. Konikoff, Philadelphia, Pa., assignor to General Electric Company, a corporation of New York

Filed Aug. 15, 1960, Ser. No. 49,491
7 Claims. (Cl. 23—204)



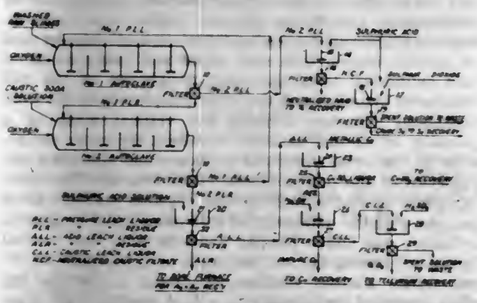
1. The method of extracting potable water from human natural biological wastes comprising the steps of first vaporizing the more volatile constituents of the wastes, then oxidizing the contaminants found in the vapor by passing a mixture of air and the vapor over a heated platinum containing catalyst, and finally cooling the vapor to the temperature at which water condenses.

3,127,244

PROCESS FOR SEPARATELY RECOVERING SELENIUM AND TELLURIUM

Eugene M. Elkin, Montreal, Quebec, and Philippe R. Tremblay, Repentigny, Quebec, Canada, assignors to Canadian Copper Refiners Limited, Toronto, Ontario, Canada, a corporation of Canada

Filed Feb. 2, 1961, Ser. No. 86,698
5 Claims. (Cl. 23—209)



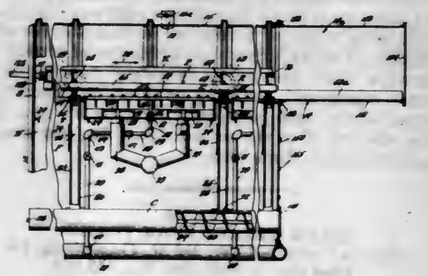
1. The process of recovering selenium from a starting material in which the selenium exists in at least one form having a valence between plus two and minus two, comprising the steps of subjecting finely divided and dispersed said starting material to an oxidative alkaline pressure leach as an aqueous slurry, in the presence of gaseous elemental oxygen at a partial pressure of about 200 to 350 p.s.i.g. and in the substantial absence of oxides of carbon, and wherein said aqueous slurry has dissolved therein an amount of an alkali metal hydroxide about 10% to 15% greater than the amount required stoichiometrically to react with all ingredients of said starting material capable of reacting with said alkali metal hydroxide, while holding the temperature during said leach within the range of about 275°–300° F., and wherein said leach is carried on for a total period of about one-half hour to about three hours, agitating said aqueous slurry during said leach sufficiently so as to keep the solid ingredients of said slurry in suspension in the aqueous liquid portion thereof, and thereby converting a major portion of the selenium present into the form of selenite ($SeO_3^=$), while keeping the conversion of selenium to selenate ($SeO_4^=$) to not over about 3% of the total selenum present; separating the aqueous liquid, now containing substantially all of the selenium in said starting material in the selenite form, resulting from said leach from the remaining solid material; and recovering elemental selenium from the selenite-selenium in said separated liquid, by adding sulphuric acid thereto in an amount sufficient to bring it to a substantially neutral condition and thereby precipitating a neutralized mud, separating this mud from the remaining liquid, and reducing the selenite-selenium in said remaining liquid to elemental selenium by passing sulphur dioxide therethrough and all in the substantial absence of any materials capable of supplying chloride ions to said remaining liquid.

3,127,245

APPARATUS AND METHOD FOR PRODUCTION OF CARBON BLACK

Thomas E. Robertson, 1933 Main St., Dallas, Tex.

Filed Feb. 15, 1962, Ser. No. 173,463
33 Claims. (Cl. 23—209.8)



11. An apparatus for the production of carbon black comprising an elongated housing, a plurality of longitudinally spaced apart burner boxes in said housing, each burner box comprising a gas burner manifold therein, a plurality of spaced apart risers mounted on said manifold, a horizontal burner pipe connected to each riser, the burner pipes extending longitudinally of the housing forming laterally spaced apart longitudinally extending rows of burner pipes, a plurality of spaced apart burner nozzles on the upper side of each burner pipe, means for supplying gas to said burner manifold, a plurality of vertically extending intersecting baffle plates in said burner box, said baffle plates being spaced above the bottom of said burner box, the space between the bottom of the baffles and the bottom of the burner box defining an air chamber, independent conduit means in communication with the exterior of the housing for introducing air at spaced apart locations into said air chamber, damper means in said conduit means, the baffle plates defining a plurality of passageways for conducting air in a substantially vertical direction from said air chamber to said burner nozzles, said passageways inhibiting horizontal movement of the air to the burner nozzles, there being generally a separate passageway for each burner nozzle, a plurality of hoppers in said housing alternating with said burner box, a longitudinally extending rail on the inside of each side of said housing, a collector plate

mounted on said rails above said hoppers and burner boxes for longitudinal reciprocation above said burner nozzles so that the carbon black formed by flames at the burner nozzles is deposited on said plate, means for removing carbon black from said collector plate including brush means mounted above each hopper, means for adjusting the height of said brush means, conveyor means below said hoppers for removing the carbon black from the hoppers to the exterior of said housing, and drive means for reciprocating said collector plate and for driving said conveyor means, said brush means including a brush having vertically extending bristles, a brush supporting bar to which said brush is secured, said brush supporting bar having hollow extensions at both ends thereof, a downwardly depending brace bar generally centrally of said brush supporting bar, a tension member extending through said hollow extensions and said brace bar, means for varying the tension of said tension member, said housing having slots therethrough near the lateral ends of each hopper, the brush supporting bar being positioned over the hopper with the hollow extensions extending through the slots in the housing, and means on the exterior of said housing adjacent said slots for adjusting the height of said brush supporting bar.

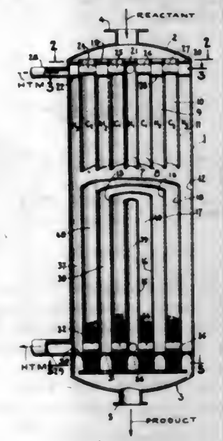
12. In a method for the production of carbon black wherein gas is burned in a chamber at a plurality of spaced apart burner nozzles, the space about each burner nozzle defining a flame zone, said gas being burned in air continually being introduced into said chamber to produce carbon black and the carbon black so formed is deposited on a collector member and recovered therefrom, the improvement comprising introducing substantially all of said air into said chamber from below said flame zones into said flame zones in the form of upwardly moving columns of air while inhibiting horizontal movement of the air by directing all of the air through a plurality of vertical passageways, each passageway extending from beneath a burner nozzle and extending upwardly to adjacent the burner nozzle, each passageway directing air to a flame zone whereby all of the air introduced into said chamber passes through a flame zone.

3,127,246
HEAD GASKET LEAK TESTER
Warren Carroll, 322 W. 3rd St., Greensburg, Pa.
Filed Oct. 2, 1961, Ser. No. 142,165
4 Claims. (Cl. 23—253)



1. A head gasket leak detector for an internal combustion engine having a liquid cooling system, which system includes a radiator and a filler neck for the radiator, said detector including a base, means on said base for securing it to a radiator filler neck, a rubber stopper secured to said base and extending into said neck to close the filler neck, a passageway extending through said base and stopper and leading to the interior of said radiator, a receptacle mounted on said base, said passageway also leading to said receptacle to convey gases introduced into the cooling system to said receptacle and means within the receptacle for holding material indicating the presence of carbon monoxide and the like, said means communicating with said passageway and with the interior of said receptacle.

3,127,247
ALTERNATE ANNULAR ISOTHERMAL REACTOR
Francis Earle Davis, Jr., Westville, N.J. (% Socony Mobil Oil Company, Inc., Research Laboratories, Paulsboro, N.J.)
Filed Apr. 22, 1960, Ser. No. 23,972
7 Claims. (Cl. 23—288)

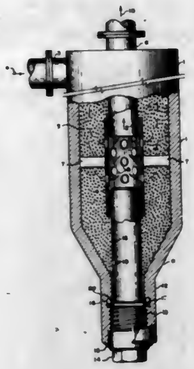


1. An isothermal or pseudo-isothermal reactor for catalytic conversion of fluid reactant comprising a vertical cylindrical tank having an upper head and a lower head, a first substantially impervious central cylinder rigidly mounted concentric with the vertical axis of said cylindrical tank in spaced relation with said upper and lower heads of said cylindrical tank, a plurality of substantially impervious cylinders rigidly mounted substantially concentric with said first central cylinder and in spaced relation with said upper and lower heads of said cylindrical tank, the outer peripheries of the odd numbered cylinders and the inner peripheries of the even numbered cylinders forming the vertical walls of a plurality of annular catalyst chambers, the outer peripheries of the even numbered cylinders and the inner peripheries of the odd numbered cylinders, and the inner periphery of said cylindrical tank together with the outer periphery of the outermost of said plurality of concentric cylinders and inner periphery of the said first central cylinder forming the vertical walls of a plurality of annular heat transfer medium chambers, a circular top plate mounted horizontally in a fluid reactant-tight manner in the region of the top of said first central cylinder, a first upper annular plate mounted horizontally in a fluid reactant-tight manner between the outer peripheries of the even numbered cylinders and the inner peripheries of the odd numbered cylinders and between the outer periphery of the cylinder adjacent the aforesaid cylindrical tank and the inner periphery of the aforesaid cylindrical tank in the region of the upper ends of the aforesaid cylinders, said circular plate and said annular plates being constructed and arranged to exclude fluid reactant from heat transfer medium chambers, a plurality of second upper perforated annular plates vertically spaced downwardly from the aforesaid first annular plates, at least

one top conduit mounted horizontally in a heat transfer medium-tight manner between the outer periphery of said first central cylinder and the inner periphery of the adjacent cylinder, between the outer peripheries of the odd numbered cylinders and the inner peripheries of the even numbered cylinders with the inner peripheries of the aforesaid conduits being in the plane of the lower surfaces of said circular plate and said first upper annular plates and in the plane of the upper surfaces of said second upper annular perforated plates, each of said plurality of cylinders having orifices for the receipt of said conduits, a circular bottom plate mounted horizontally in a fluid product-tight manner on the inner periphery of said first central cylinder in the region of the bottom thereof, a plurality of lower annular plates mounted horizontally in a fluid product-tight manner between outer peripheries of the even numbered cylinders and the inner peripheries of the odd numbered cylinders and between the outer periphery of the cylinder adjacent said cylindrical tank and the inner periphery of said cylindrical tank in the plane of the aforesaid circular bottom plate, at least one bottom conduit mounted in a heat transfer medium-tight manner between the outer periphery of said first central cylinder and the inner periphery of the adjacent cylinder and between the outer peripheries of the odd numbered cylinders and the inner peripheries of the even numbered cylinders, the inner peripheries of said conduits being in the planes of the upper surfaces of said lower annular plates, each of said plurality of cylinders having orifices for the receipt of said conduits, a foraminous plate movably mounted on the bottom of the walls of the annular catalyst chambers constructed and arranged to support beds of particle-form catalytic material and to provide for the efflux of fluid reactant from said annular catalyst chambers, said first upper annular plates, said second upper perforated annular plates, said top conduits, said annular heat transfer medium chambers, said circular bottom plate, said lower annular plates, and said bottom conduits being constructed and arranged to provide a heat transfer medium circuit for flow of heat transfer medium into said heat transfer medium chambers, and for parallel flow of heat transfer medium through said heat transfer medium chambers, means for introducing heat transfer medium into said heat transfer medium circuit, means for withdrawing heat transfer medium from said heat transfer medium circuit, means for introducing fluid reactant into said annular catalyst chambers, and means for withdrawing fluid product from said annular catalyst chambers.

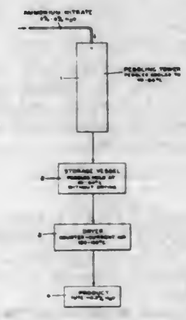
3,127,248
CATALYST TUBE ASSEMBLY
Paul Koniewiez, now by change of name Paul Korwin, 75—10 Kissena Blvd., Flushing 67, N.Y., and Herbert C. Morgenstern, 84 Rivervale Road, Westwood, N.J.
Filed June 29, 1961, Ser. No. 120,556
5 Claims. (Cl. 23—288)

1. Catalyst tube assembly with improved lower gas sealing closure for high temperature service, which comprises a vertically oriented cylindrical outer tube, a cylindrical inner tube coaxially aligned within said outer tube, solid catalyst particles disposed in the annular space between said inner tube and said outer tube, gas inlet means at the upper end of said outer tube for passage of process gas into the annular space between said inner tube and said outer tube, said inner tube terminating above the lower end of said outer tube and being provided with an opening at its lower end for inlet of catalytically converted process gas, the upper end of said inner tube terminating at an outlet for removal of converted process gas from the catalyst tube assembly, a closure neck at the lower end of said outer tube, said closure neck being provided with an internal straight thread section, a threaded plug, said plug being screwed into the threaded section of said neck, the threads of said plug being substantially free of compression, and an outer gas sealing



weld between said plug and said neck, said gas sealing weld being substantially free of stress and serving to provide sealing against fluid leakage between the threads of said plug and said neck.

3,127,249
PROCESS FOR DRYING PEBBLED AMMONIUM NITRATE
Charles H. Cuthbert, Petersburg, and Werlie R. Wright, Jr., Chester, Va., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
Filed Nov. 17, 1961, Ser. No. 153,126
3 Claims. (Cl. 23—302)



1. In a process for drying ammonium nitrate pebbles produced by spraying molten aqueous ammonium nitrate containing between about 3% and about 6% of water into the top of an elongated vertical pebbling tower, thereby forming droplets of ammonium nitrate, the steps which comprise, (1) cooling said droplets without substantial drying thereof, to temperatures within the range between about 60° C. and about 84° C., whereby solid ammonium nitrate pebbles are produced, (2) maintaining said pebbles under non-drying conditions at temperatures between about 60° C. and about 84° C. for a period sufficient to convert substantially all the ammonium nitrate of the pebbles to form III, (3) contacting said pebbles in a drier with a countercurrent stream of inert gas entering at temperatures between about 120° C. and about 150°

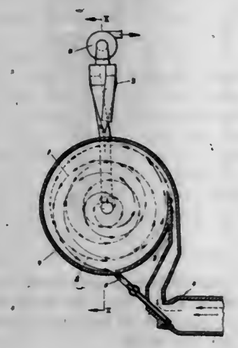
C., for a period sufficient to reduce the water content of the pebbles to not more than about 0.3%.

3,127,250

HEAT EXCHANGER AND CHEMICAL REACTOR

Otto Heinemann, Neubeckum, Westphalia, Germany, assignor to Polysius G.m.b.H., Neubeckum, Westphalia, Germany

Filed June 7, 1961, Ser. No. 115,419
Claims priority, application Germany June 8, 1960
1 Claim. (Cl. 34—57)



An apparatus for use as heat exchanger and also as chemical reactor, which comprises a housing having a substantially cylindrical chamber arranged with its axis horizontal and of an axial dimension or width amounting to a fraction of the diameter of said chamber, said housing being provided with tangential inlet means extending substantially over the width of said chamber and tangentially leading into said chamber for introducing a gaseous treating medium thereinto, said housing also being provided with additional inlet means arranged in the central portion of said housing to introduce a solid particulate medium to be treated into the central portion of said chamber, said additional inlet means including rotatable conveying means, outlet means arranged in the central portion of at least one of the end walls of said housing for withdrawing the treating medium from the central portion of said chamber, and discharge passage means arranged near the periphery of said chamber for discharging the treated medium.

3,127,251

FUEL COMPOSITION CONTAINING METHYLOL PHENOL DERIVATIVES

Melvin De Groote, St. Louis, and Kwan-ting Shen, Brentwood, Mo., assignors to Petrolite Corporation, a corporation of Delaware

No Drawing. Original application May 12, 1960, Ser. No. 28,514. Divided and this application Apr. 10, 1961, Ser. No. 101,631
20 Claims. (Cl. 44—66)

1. A distilled hydrocarbon boiling within the range from about 150° F. to 700° F. containing from about 0.00002% to about 1% by weight based upon the distilled hydrocarbon of a member selected from the group consisting of:

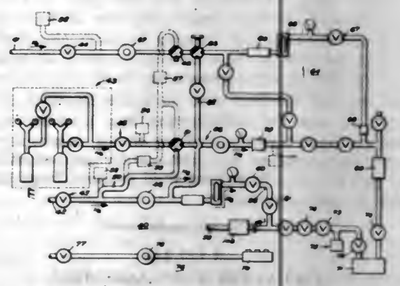
(1) acylated, (2) oxyalkylated, (3) acylated then oxyalkylated, (4) oxyalkylated then acylated, (5) acylated, then oxyalkylated and then acylated, monomeric polyaminomethyl phenols characterized by reacting a preformed methylol phenol having one to four methylol groups in the 2, 4, 6 position with a polyamine containing at least one secondary amine group in amounts of at least one mole of secondary polyamine per equivalent of methylol group on the phenol until one mole of water per equivalent of methylol group is removed, in the absence of an extraneous catalyst; and then reacting the thus formed monomeric polyaminomethyl phenol with a member selected from the group consisting of (1) an acylation agent, (2) an oxyalkylation agent, (3) an acylation then an oxyalkylation agent, (4) an oxyalkylation then an acylation agent, and (5) an acylation then an oxyalkylation and then an acylation agent, the preformed methylol phenol having only functional groups selected from the class consisting of methylol groups and phenolic hydroxyl groups, the polyamine having only functional groups selected from the class consisting of primary amino groups, secondary amino groups and hydroxyl groups, the acylation agent having up to 40 carbon atoms and being selected from the class consisting of unsubstituted carboxylic acids, unsubstituted hydroxy carboxylic acids, unsubstituted acylated hydroxy carboxylic acids, lower alkanol esters of unsubstituted carboxylic acids, glycerides of unsubstituted carboxylic acids, unsubstituted carboxylic acid chlorides and unsubstituted carboxylic acid anhydrides, and the oxyalkylation agent being selected from the class consisting of alpha-beta alkylene oxides and styrene oxide.

3,127,252

FAIL-SAFE EXPLOSIVE GAS DISTRIBUTION SYSTEM

Wesley F. Bennett, Reading, Pa., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Original application Oct. 28, 1959, Ser. No. 849,413. Divided and this application Mar. 31, 1960, Ser. No. 26,393
3 Claims. (Cl. 48—192)



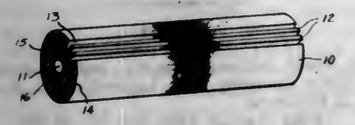
1. An electro-mechanical control circuit for an explosive gas fail-safe distribution system comprising in combination a main network having a plurality of serially connected pressure-operated electrical switches, a plurality of pressure-sensitive means located in the gas distribution system and connected to respective ones of the switches, each switch being opened by a deficiency of pressure at the location of the associated pressure-sensitive means, timer means serially connected with the switches, the timer means having first and second parallel branches, the first of said branches providing a delayed time reaction for closing contacts in the second branch, starting means serially connected with the second branch, said starting means having third and fourth parallel branches, said third branch having manually operated means operable when said switches and said timer second branch are electrically interconnected to actuate contacts in said fourth branch, said fourth branch being serially connected with electro-mechanical means operable upon closure of the contacts in said fourth branch to open the gas distribution system from a source of the explosive gas and to maintain closed a valve for providing inert purging gas to the distribution system.

3,127,253

METHOD OF MAKING A POLISHING WHEEL

Hugh E. Smith, Troy, N.Y., assignor to Norton Company, Troy, N.Y., a corporation of Massachusetts

Filed Jan. 23, 1963, Ser. No. 253,342
3 Claims. (Cl. 51—293)



1. A method for the manufacture of a polishing wheel which comprises:

(*a*) Forming a self-sustaining cylinder of lofty, nonwoven fibrous material;

(*b*) Providing a plurality of cuts extending the full length of said cylinder and spaced at substantially equal intervals from one another around the entire periphery of said cylinder;

(*c*) Terminating said cuts short of the depth of said fibrous material whereby a plurality of flexible flaps are produced having a common interconnecting unsevered mass of fibrous material integrally joined to each flap; and

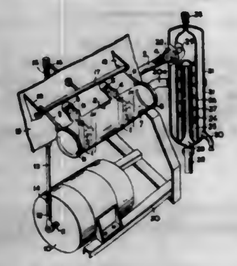
(*d*) Impregnating at least said interconnecting unsevered mass of fibrous material with an adhesive to reinforce said unsevered mass of fibrous material.

3,127,254

METHOD FOR THE EQUILIBRATION OF A SMALL AMOUNT OF LIQUID AND APPARATUS FOR CARRYING OUT THE METHOD

Poul Astrup, Holte, Ole Siggaard-Andersen, Copenhagen, Kjeld Jørgensen, Copenhagen-Bronshoj, and Knud Engel, Copenhagen, Denmark, assignors to Radiometer V.B. Aagaard Nielsen & C. Schroder, Copenhagen, Denmark, a firm

Filed June 27, 1960, Ser. No. 39,027
Claims priority, application Denmark July 4, 1959
15 Claims. (Cl. 55—68)



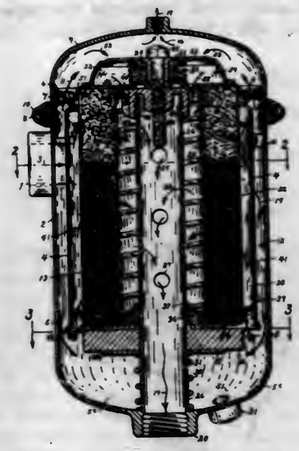
1. A method of equilibrating a liquid and a gas comprising introducing a small arbitrary amount of the liquid to be equilibrated into a container, maintaining said container at a predetermined temperature, vibrating said container so as to distribute at least a portion of the liquid therein as a thin film over the container wall, adjusting the temperature of the gas to the same temperature as said container, passing the gas through said container and along the exposed surface of said film of liquid so as to contact said film of liquid, and continuing the passing of said gas for a sufficient interval for the liquid to absorb a quantity of gas corresponding to the gas pressure, and then discontinuing said vibration.

3,127,255

COMBINED CENTRIFUGE AND FILTERING DEVICE

Charles A. Winslow, Oakland, Calif., assignor, by mesne assignments, to Norman E. Fuller and Clifford M. Farmer

Filed Nov. 24, 1958, Ser. No. 776,142
10 Claims. (Cl. 55—178)



1. An oil purifying apparatus for separating air and gas bubbles, heavy solids, magnetic solids, and other materials from oil while maintaining a flow of oil therethrough at substantially constant pressure, including in combination: a generally cylindrical closed housing with a generally vertical axis, a sump at its lower end, a tangential inlet near its upper end, and a hollow cap portion at its upper end having a restricted, pressure-producing air and gas outlet theerthrough; an axially extending clean-oil outlet tube leading from near the upper end of said housing down through a central bottom outlet through the lower end of said housing; a generally cylindrical filter cartridge surrounding said outlet tube and communicating with said outlet tube, for the radially inward passage of filtered oil from said cartridge into said tube, said cartridge having a lower low-flow-rate portion and an upper high-flow-rate portion; means for spacing said filter cartridge radially inwardly from said housing and axially above said sump and below the upper end of said housing; an axial cylindrical shell between and spaced from both said cartridge and said housing between said sump and said cap portion and having an upper portion above said inlet providing for restricted passage of fluids up into said hollow cap, whereby most of the oil entering said housing through said inet flows downwardly between said housing and said shell and then upwardly inside said shell into said filter cartridge; magnetic means supported beneath said cartridge and above said sump for catching ferro-magnetic particles from said oil as the oil flows around the lower end of said shell and up into said shell; and by-pass means for passing oil from the inside of said cap portion into said outlet tube when an excessive oil pressure is reached inside said housing.

3,127,256

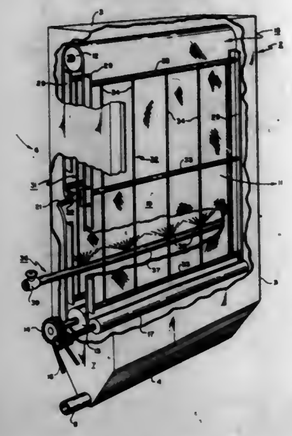
GAS CLEANING APPARATUS

Robert J. Boylan, Jeffersonville, Ind., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware

Filed Sept. 28, 1960, Ser. No. 58,929
4 Claims. (Cl. 55—233)

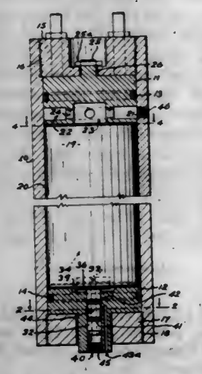
1. A gas cleaning apparatus comprising a pair of spaced support rolls positioned on opposite sides of a gas

stream to be treated, at least one of said support rolls having an adjacent squeeze roll cooperating therewith, a strip of filter medium disposed about said support rolls to pass between said support roll and said squeeze roll with opposite ends thereof placed in overlapping position, means for fastening said overlapping ends of said strip together to provide an endless filter belt, said fastening means including a first tape member fastened to one overlapping end of said filter strip, said first tape member being provided with a first series of fastener elements in



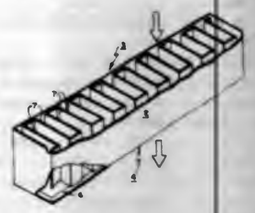
the form of interlockable pile threads, a second tape member fastened to the other overlapping end of said filter strip, said second tape member being provided with a second series of fastener elements in the form of interlockable pile threads engageable and disengageable with said first series of fastener elements to provide said filter belt, and means to move said filter belt through said gas stream to be treated and between said support-squeeze rolls to insure firm engagement of said first and second fastening elements.

3,127,257
DESICCANT CARTRIDGE
Charles W. Spurlock, 16901 Minnehaha St., Granada Hills, Los Angeles, Calif.
Filed Sept. 30, 1960, Ser. No. 59,703
3 Claims. (Cl. 55—309)



1. In a desiccator, a pressure cylinder having a pressure chamber and an inlet bore leading into said pressure chamber, a desiccant container within said pressure chamber having a desiccant chamber opening at one end thereof into said pressure chamber, a tubular plunger carried by said desiccant container extended into said inlet bore and establishing communication between said inlet bore and the other end of said desiccant chamber, the inlet bore of said pressure cylinder having an atmospheric vent between the ends of said plunger and a pair of spaced sealing rings externally of said plunger and positioned so that the atmospheric vent of said inlet bore is between the spaced sealing rings.

3,127,258
UNIT FILTER ASSEMBLY
Alan E. Revell, Jeffersontown, Ky., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed Mar. 28, 1960, Ser. No. 18,093
13 Claims. (Cl. 55—499)



1. A unit filter assembly comprising an open-ended frame, a filter medium disposed in said frame in pleated form across the fluid stream to be treated with the edges and ends of said filter medium being sealed to the inside walls of said frame, a plurality of spaced support members extending between the walls of said frame in parallel supporting relationship along the length of the crests of said pleats of said medium at least at one of the open ends of said frame and pleat contour means cooperating with said support members to extend in fixed manner therefrom in substantially line contact with the downstream face of the lateral sides of said pleats, said pleat contour means tapering outwardly from the crests of said pleats along the lateral sides thereof to maintain the lateral sides of said pleats adjacent the supported crests in preselected tapered contour form against the pressure of the fluid stream to be treated.

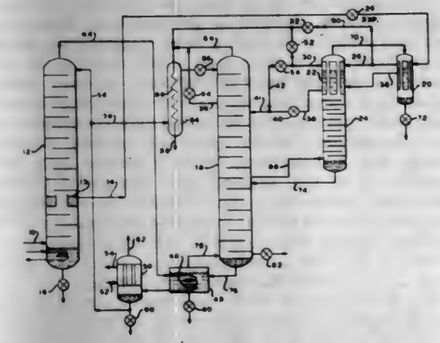
3,127,259
UNIT FILTER ASSEMBLY
Robert J. Boylan, Jeffersonville, Ind., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed Sept. 28, 1960, Ser. No. 58,978
1 Claim. (Cl. 55—511)



A filter assembly comprising a set of connected side wall members having side flanges extending normal thereto and along an edge thereof to define an open-ended border frame member having an upstream gas inlet and a downstream gas outlet, said side flanges extending inwardly from said side wall members and adjacent said downstream gas outlet, a pad of filter medium including an upstream and downstream face and sized to fit within said border frame member with the edges thereof extending substantially adjacent the inner face of said side wall members, a first tape member mounted to the inner face of said side flanges of said border frame member, said first tape member being provided with a first

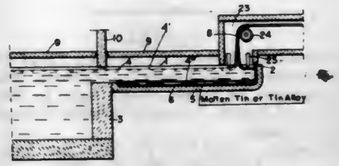
series of fastener elements mounted thereto and extending toward said upstream gas inlet, a second tape member mounted to said pad of filter medium along the periphery of said downstream face thereof, and a second series of fastener elements mounted to said second tape member and extending outwardly therefrom away from said downstream face of said pad of filter medium, said first and second series of fastener elements being in the form of interlockably engageable and disengageable pile threads, said pad of filter medium being located within said border frame member with said pile threads of said tape members interlockably engaged, said interlockably engageable and disengageable pile threads constituting means removably mounting said filter pad in said border frame member with said filter pad upstream of said side flanges whereby said tape members are urged into fast engagement with each other by the gas stream during gas treating operations to further retain said pad in said frame.

3,127,260
SEPARATION OF AIR INTO NITROGEN, OXYGEN AND ARGON
Donald L. Smith, Berkeley Heights, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 21, 1960, Ser. No. 77,343
8 Claims. (Cl. 62—22)



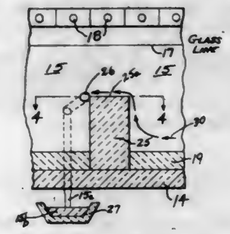
1. An air rectification process highly effective for the production of relatively high proportions of liquid nitrogen and high argon recovery, comprising the steps of separating an air feed stream in a first stage rectification column into a nitrogen-rich fraction, available as a relatively pure nitrogen liquid product and as liquid reflux for a second stage rectification column, and an oxygen-argon-rich liquid fraction, withdrawing said oxygen-argon-rich liquid fraction from said first column, at least partially vaporizing said withdrawn oxygen-argon-rich liquid fraction, delivering at least a portion of said partially vaporized oxygen-argon-rich fraction as feed to said second stage rectification at an intermediate point below the top of said second stage rectification column, withdrawing a portion of said nitrogen-rich fraction as liquid nitrogen product, and excluding a portion of the vapor phase of said partially vaporized oxygen-argon-rich feed from any contact in any of its phases with said liquid reflux in a zone of said second step rectification column above said delivery point of the said oxygen-argon-rich feed and below the input of a nitrogen-rich liquid fraction, thereby maintaining a desired balance of liquid reflux to rising vapor in said zone of the second stage rectification column, whereby a desired high recovery of argon is effected together with substantial production and withdrawal of liquid nitrogen, and removing an argon enriched fraction from said second stage rectification column for further purification.

3,127,261
PROCESS FOR MAKING SHEET GLASS
Bernard Long, Paris, France, assignor to G.B.D. societe anonyme Holding, a corporation of Luxembourg
Filed Mar. 3, 1960, Ser. No. 12,635
Claims priority, application France Mar. 23, 1959
2 Claims. (Cl. 65—83)



1. A process for making flat glass, comprising the steps of refining glass in a tank furnace, producing a substantially horizontal flow of molten glass from said tank furnace to a draw pot over a highly heat-conductive layer which is fluid at the temperature of said molten glass and consisting of an antifriction agent denser than the glass, immiscible therewith and chemically inert with respect thereto, cooling the top surface of said flow sufficiently to cause the formation of a more viscous vitreous first skin therealong, cooling the underside of said layer at a similar rate sufficient to cause the formation of a vitreous second skin of similar viscosity along the lower surface of said flow, continuously drawing said skins along with a more fluid intervening portion of said flow from said draw pot, and solidifying the drawn glass mass into a sheet, said rate of cooling being upwards of substantially 150° C. per meter.

3,127,262
METHOD AND APPARATUS FOR REFINING GLASS
Orin H. Allman, Toledo, Ohio, assignor, by mesne assignments, to Owens-Illinois Glass Company, Toledo, Ohio, a corporation of Ohio
Filed June 28, 1960, Ser. No. 39,394
7 Claims. (Cl. 65—134)



5. A forehearth for conveying and refining molten glass comprising a refractory channel having bottom and side walls for retaining and conducting the molten glass to a point of use, heating means for controlling the temperature of molten glass within said forehearth, at least one refractory dam mounted within an intermediate area of said forehearth in fully submerged transverse relation, said dam having a substantial height adapted to divert upwardly and outwardly objectionable bottom glass and provide accelerated flow of the entire stream thereover, and a pair of narrow passages having receiving openings disposed in close proximity to the outer extremities of said dam for separating said objectionable bottom glass from the main stream of said molten glass.

3,127,263
METHOD FOR THE CONTROL OF WEEDS
Rayner S. Johnson, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Oct. 20, 1961, Ser. No. 146,452
1 Claim. (Cl. 71—2.6)

A method for the control of weeds which comprises applying to a locus to be protected, in an amount sufficient to exert a herbicidal action, the compound 1-methoxy-1-methyl-3-phenylurea.

3,127,264
NON-FERROUS RECOVERY PROCESS
Henry J. Tschirner and Lester A. Williams, Kansas City, Mo., assignors, by mesne assignments, to Sherritt Gordon Mines Limited, Toronto, Ontario, Canada, a company of Canada
No Drawing. Filed Feb. 16, 1961, Ser. No. 89,670
6 Claims. (Cl. 75—108)

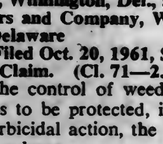
1. A process of treating an aqueous alkaline ammoniacal-ammonium salt solution containing a dissolved value of at least one metal selected from the class consisting of lead and tin to precipitate said metal from solution which comprises: adding finely divided, water insoluble strontium sulfate to said solution and agitating the resultant slurry whereby said one metal is precipitated from solution.

3,127,265
Ni-Cr-Co ALLOYS
Howard S. Avery, Mahwah, N.J., assignor to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Aug. 8, 1961, Ser. No. 130,000
3 Claims. (Cl. 75—171)

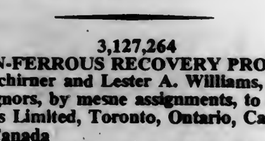
1. A heat and corrosion resistant alloy consisting essentially of: carbon, 0.3–0.95%; silicon, 0.5–2%; nickel, 26–42%; chromium, 22–32%; tungsten, 3–16%; cobalt, 9–26%; balance, if any, essentially iron.

3,127,266
MATERIAL FOR ELECTROPHOTOGRAPHIC REPRODUCTION
Oskar Süs, Wiesbaden-Biebrich, and Heinz Schlesinger, Wiesbaden, Germany, assignors, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J.
No Drawing. Filed Aug. 5, 1959, Ser. No. 831,725
Claims priority, application Germany Aug. 9, 1958
28 Claims. (Cl. 96—1)

1. An electrophotographic material comprising a conductive support layer and a photoconductive insulating layer, the latter comprising at least one compound corresponding to the formulas:

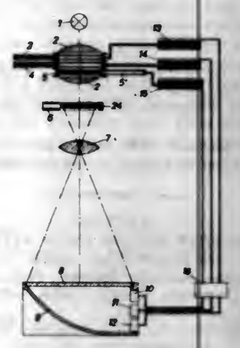


and



in which R is selected from the group consisting of hydrogen, alkyl, alkenyl, aralkyl, aralkenyl, aryl and heterocyclic groups, R_1 and R_2 are phenyl groups and X is selected from the group consisting of arylene, a heterocyclic group and a bis-arylamine group.

3,127,267
AUTOMATIC PHOTOGRAPHIC COLOR PRINTING
Paul Frost, Munich, Germany, assignor to Agfa Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
Filed Oct. 25, 1955, Ser. No. 542,691
10 Claims. (Cl. 96—23)



1. A method for controlling the exposure of color-sensitive printing material to printing light transmitted upon said material through a color transparency during the production of a color print which requires for said production printing light of the three primary colors, said method comprising the steps of projecting substantially white printing light including light components of the three primary colors upon said printing material through said transparency, taking a sample from substantially all of said printing light transmitted through said entire transparency, the quantities of said sample being fixed relative to that impinging upon said printing material, causing said sample to fall upon photoelectric cell means of three separate exposure controlling means which are adapted to be individually influenced by light of the three primary colors one each as said printing light is impinging upon said printing material for determining the quantities of the light of each of said three primary colors in said printing light which are impinging upon said printing material and for initiating individual signals when predetermined quantities of the light of each of said three primary colors have impinged upon said printing material, said predetermined quantities being precoordinated to reproduce said transparency by integrating to a substantially neutral gray independently of the content of any particular transparency, and utilizing said signals for individually and automatically terminating the projection of said light of said primary colors upon each printing material by interposing subtractive color filters into the path of said printing light impinging upon said printing material when said predetermined quantities of the light of primary colors to which said subtractive filter are respectively opaque have impinged upon said printing material.

3,127,268
TONE CORRECTION OF PHOTOGRAPHIC IMAGE
Ehrhard Hellmig, Leverkusen, Germany, assignor to Agfa Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
Filed Mar. 15, 1956, Ser. No. 571,793
Claims priority, application Germany Mar. 19, 1955
8 Claims. (Cl. 96—44)

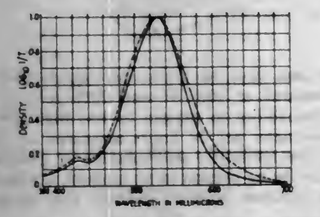
1. The process of producing tone-corrected photographic copies of an original which comprises providing

a normal monochrome photographic image of said original, which image is defective in that it has too short a range of gradation in the highlights of the original, providing a dyestuff image of essentially only the highlights of the original, having the same sign as the monochrome image, and having a spectral range in one color portion of the spectrum, which portion is different from that in which there is any maximum absorption of the mono-

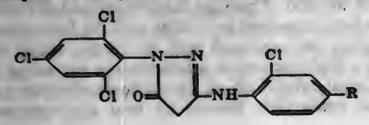


chrome image, combining the images, printing said combined images onto a light-sensitive silver halide layer by means of a printing light selected to be absorbed by both of the images, and adjusting the printing light to cause the monochrome image to be printed and to cause the dyestuff image to be printed to a predetermined degree along with the monochrome image and provide print highlights with a steeper gradation than from the monochrome image alone.

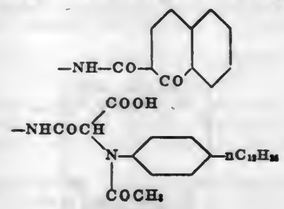
3,127,269
COLOUR PHOTOGRAPHY
Colin William Greenhalgh, Walkden, Manchester, and Kenneth Charles Stone, Heywood, England, assignors to Ilford Limited, Ilford, England, a British company
Filed Sept. 4, 1962, Ser. No. 221,278
Claims priority, application Great Britain Sept. 11, 1961
6 Claims. (Cl. 96—55)



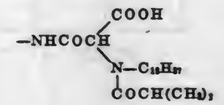
1. A process for the production of a magenta colour image as a step in a process of colour photography which comprises developing a reducible silver salt image in a photographic emulsion layer by means of a developer selected from the class consisting of N,N-di-substituted p-phenylene diamine derivatives in the presence of a colour coupler of the general formula



wherein R is a group selected from the class consisting of $-NO_2$, $-NHCOCH_3$, $-NHCOC_6H_5$



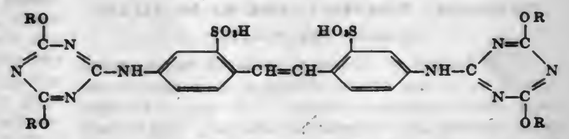
and



3,127,270
NEW STILBENE COMPOUNDS
Robert Hugh Wilson, Manchester, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Filed June 30, 1960, Ser. No. 39,759
Claims priority, application Great Britain July 31, 1959
9 Claims. (Cl. 96—94)

1. New water soluble whitening agents free from chromophoric and auxochromic groups selected from the group consisting of

(*a*) compounds having the formula



in which R is a member of the group consisting of β-hydroxyethyl and β-hydroxypropyl, and

(*b*) salts of said compounds (*a*).

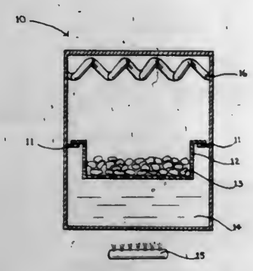
4. A composition of matter comprising a member of the group consisting of cellulosic and proteinaceous polymeric materials having intimately mixed therewith a water soluble whitening agent as set forth in claim 1.

8. A composition of matter as set forth in claim 4 in which the polymeric material is a gelatino-silver halide photographic emulsion.

3,127,271
PROCESS FOR PREPARING NON-GREASY FRIED COMESTIBLES
Arthur B. Goulston, Boston, Mass.
(922 Massachusetts Ave., Cambridge, Mass.)
Filed Apr. 17, 1962, Ser. No. 188,151
1 Claim. (Cl. 99—100)

The process of preparing a non-greasy fried sliced comestible of reduced oil content which comprises suspending a mass of fried sliced comestible of vegetable origin selected from the group consisting of potato, onion and corn in an enclosure above and out of contact with a low boiling organic solvent for said oil; heating said solvent to effect vaporization thereof; passing said vapors through and over said mass of fried sliced comestible; condensing said vapors at a point above said mass of comestible; dripping said condensed solvent down and through said comestible to extract at least a portion of the oil content therefrom; and continuing said vaporiza-

tion, condensing and extracting for a time sufficient to extract a predetermined amount of oil from said comestible and to provide a fried comestible of reduced oil content which is substantially free of surface oil.



3,127,272
METHOD FOR MAKING PEANUT SPREAD

Joseph S. Baker, Green Township, Edward E. Colby, Cincinnati, and Thomas W. Hurley, Colerain Township, Ohio, assignors to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio

No Drawing. Filed May 24, 1961, Ser. No. 112,236

4 Claims. (Cl. 99—128)

1. The method of making a packaged peanut spread suitable for storage without sticking to the packaging material which comprises the steps of forming a homogeneous mixture, at a temperature sufficiently high to melt all fatty materials present therein, said mixture comprising ground peanuts and a stabilizer, said stabilizer comprising, by weight of the spread, from about 0.3% to 3.5% of substantially completely hydrogenated fatty glyceride and from 0 to about 20% of a partially hydrogenated fatty glyceride having an SCI value at 50° F. of from about 17 to 28 and an SCI value at 92° F. of not more than about 6; rapidly cooling said mixture to a temperature of from about 35° F. to 85° F. and immediately packaging said mixture in a preformed flexible wrapping, the total elapsed time for said cooling and said packaging not exceeding about 1.25 minutes, wherein a minimum amount of crystallization of fatty material occurs prior to completion of packaging; and subsequently maintaining the packaged mixture, without agitation, until the fatty material therein is crystallized.

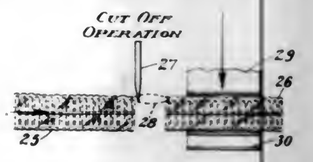
3,127,273
METHOD FOR CONTINUOUSLY WRAPPING BISCUITS

Edward J. Monahan, Oradell, N.J., assignor to National Biscuit Company, a corporation of New Jersey

Filed June 7, 1960, Ser. No. 34,560

7 Claims. (Cl. 99—171)

1. A continuous method of packaging an advancing column of stacked biscuits into unit packages comprising the steps of continuously wrapping the advancing end of said column with a heat shrinkable sheet material while said advancing end is part of said column, sealing the top edges of said sheet material, heat shrinking said sheet material, severing said advancing end into smaller units, and closing the ends of each unit.



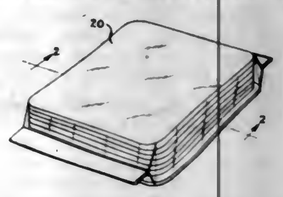
3,127,274
MEAT PACKAGE

Karl F. Weinke, Neenah, Wis., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

Filed Feb. 12, 1962, Ser. No. 174,349

8 Claims. (Cl. 99—174)

1. A food package comprising a moist, glucose-containing, cured meat product, a porous paper sheet on which said meat product is supported, a paperboard backing sheet coated with a thermoplastic water-repellant coating adhered in the peripheral areas on its coated side to said porous paper sheet, a dry, comminuted mixture comprising at least 1 milligram of glucose oxidase and catalase interposed between said porous paper sheet and said paperboard backing sheet, and a flexible packaging material wrapper hermetically sealed in enclosing relationship to said meat product and said supporting and backing sheets, said wrapper having a water vapor permeability of less than 10 grams per square meter per 24 hours measured at 100° F. and 90% relative humidity and a permeability to oxygen of less than 20 milliliters per square meter per 24 hours measured at 73° F. and 50% relative humidity, said mixture of glucose oxidase and catalase being present in an amount to effectively catalyze the reaction between glucose and oxygen in the package.



3,127,275
FLAVOR STABILIZATION OF MILK FAT

Stuart Patton, Boalsburg, Pa., assignor to Research Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Oct. 15, 1959, Ser. No. 846,550

3 Claims. (Cl. 99—203)

3. A method of making flavor-stabilized dry milk products which comprises separating milk fat from whole milk, subjecting the separated milk fat to the action of steam under a high vacuum at a temperature exceeding 100° C. until substantially all of the delta-decalactone and substances convertible thereto by heat are removed from the milk fat, emulsifying the steam treated milk fat with partially condensed fat-free milk and spray-drying the emulsified product.

3,127,276
OSMOTIC TRANSFER OF ORANGE ESSENCE

Jewell Allen Brent, Maitland, and Wesley A. Bucek, Winter Park, Fla., assignors to The Coca-Cola Company, Atlanta, Ga., a corporation of Delaware

Filed Oct. 16, 1961, Ser. No. 145,295

6 Claims. (Cl. 99—205)

1. The method of producing full flavored citrus concentrate comprising concentrating citrus juice by vacuum concentration whereby essence is removed therefrom and thereafter imparting essence to said concentrated juice by transfer from fresh juice by osmosis through a permeable membrane by placing the concentrate against said membrane and the fresh juice against the other side thereof whereby osmotic pressure will transfer essence from the fresh juice to the concentrated juice.

3,127,277
GLASS COMPOSITION

Ralph L. Tiede, Newark, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware

No Drawing. Filed Nov. 17, 1960, Ser. No. 69,812

22 Claims. (Cl. 106—50)

1. Glass composition consisting essentially by weight from 45–60% silica, 9–19% calcia, 6–10% magnesia, 7–12% beryllia, 1–3% zirconia, up to 4% lithia, 2–10% titania, and from 1–3% ceria.

11. Glass composition consisting essentially of 54% silica, 13% calcia, 9% magnesia, 8% beryllia, 2% zirconia, 8% titania, 3% lithia, and 3% copper oxide.

12. Glass composition consisting essentially of 54% silica, 13% calcia, 9% magnesia, 8% beryllia, 2% zirconia, 8% titania, 3% lithia, and 3% iron oxide.

22. Glass fibers consisting of the glass composition of claim 12.

3,127,278
LOW-MELTING GLASS SEALANT AND ARTICLE MADE THEREFROM

Josef Francel, Toledo, and Erwin C. Hagedorn, Oregon, Ohio, assignors to Owens-Illinois Glass Company, a corporation of Ohio

Filed Feb. 26, 1960, Ser. No. 12,243

10 Claims. (Cl. 106—53)

1. A sealing glass composition which consists essentially of the following:

	Percent by weight
Lead oxide (PbO)	70–72
Boric oxide (B_2O_3)	14–17
Zinc oxide (ZnO)	8–11
Copper oxide (CuO)	1.5–2.5
Silicon oxide (SiO_2)	1.5–3

said composition having a fiber softening point below 790° F.

3,127,279
AQUEOUS BLACK COATING COMPOSITION CONTAINING MOLYBDENUM IONS AND PROCESS OF BLACKENING A METAL SURFACE THEREWITH

Mirza L. Baig and Bruno Leonelli, Detroit, Mich., assignors to Allied Research Products, Incorporated, Baltimore, Md., a corporation of Maryland

No Drawing. Filed Sept. 27, 1960, Ser. No. 58,650

15 Claims. (Cl. 106—287)

1. A composition consisting essentially of 0.5 to 35 parts of a water soluble chloride, 0.5 to 20 parts of a molybdenum source selected from the group consisting of ammonium molybdate and molybdic acid and 0.01 to 10 parts acetate ions.

3,127,280
TREATMENT OF TITANIUM DIOXIDE

Walter R. Whately, Lynchburg, Va., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

Filed Dec. 16, 1960, Ser. No. 76,240

13 Claims. (Cl. 106—300)

1. Titanium dioxide pigment of improved chalk resistance resulting from the presence of at least about 0.1% of an insoluble hydrous titanic phosphate on the particles thereof.

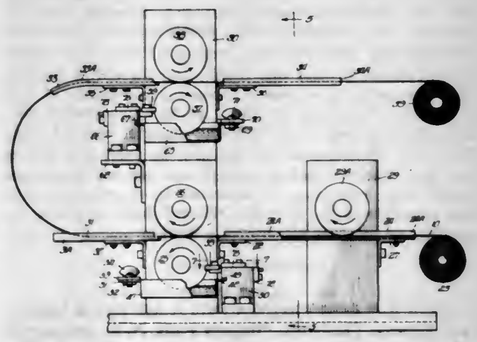
6. A process for the manufacture of titanium dioxide pigment of improved chalk resistance, which comprises forming a slurry of titanium dioxide pigment in aqueous medium having a dissolved content of a titanic salt, adding an aqueous solution of water-soluble phosphatic compound thereby precipitating a small amount of a hydrous titanic phosphate sufficient to provide a finished product containing about 0.1 to 5% of the same, neutralizing said slurry, and washing said pigment to remove soluble salts therefrom.

3,127,281
MEANS AND METHOD OF MAKING MULTI-TEST INDICATOR

Harold Frederick Meyer, Bristol, Ind., assignor to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana

Filed Mar. 12, 1959, Ser. No. 798,968

13 Claims. (Cl. 117—4)

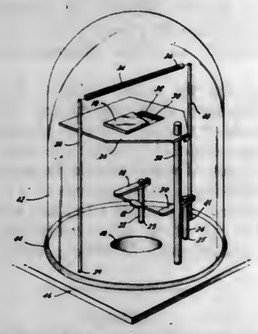


5. A method of making multi-test indicators comprising the steps of applying resin dissolved in a readily evaporable solvent to one surface of a strip of absorbent material in spaced parallel lines extending lengthwise of the strip and inwardly of its longitudinal edges, causing the resin solution to penetrate the strip while confined against side flow, then applying further of said resin solution in spaced parallel lines on the opposed side of said strip in coincidence with the lines applied to the first surface, causing said further resin solution to penetrate the strip to the first applied resin solution while confined against side flow to produce at least two confined areas extending lengthwise of the strip and which are isolated from each other by the lines of resin left in absorbent material on evaporation of the solvent which extend through the thickness of the strip, evaporating the solvent to form said resin lines and thereafter applying one solution of test reagent to one of said confined areas, applying a second solution test reagent to another confined area, and after drying cutting said strip transversely of said resin lines to divide it into a plurality of stick-like multi-test indicator members.

3,127,282
PROCESS FOR MAKING PHOSPHOR LAYERS

Lincoln W. Hershinger, Oreland, Pa., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware

Filed Apr. 25, 1961, Ser. No. 105,325
12 Claims. (Cl. 117—33.5)

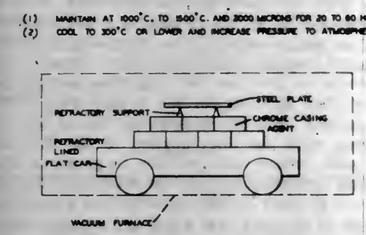


1. A process for producing on a stubstrate a phosphor film characterized by efficient light emission in response to incident ultraviolet radiation, said film comprising a substance selected from the class consisting of the sulfide, selenide, telluride, sulfoselenide, sulfotelluride, selenotelluride and sulfoselenotelluride of both zinc and cadmium, said process comprising the steps of depositing on said substrate a layer composed of a compound containing only one of the two metals zinc and cadmium, selected from the class consisting of the sulfide, selenide, telluride, sulfoselenide, sulfotelluride, selenotelluride and sulfoselenotelluride of said one metal, and thereafter heating said layer in an atmosphere consisting essentially of (1) at least one halide of the other of said two metals zinc and cadmium and (2) at least one material selected from the group consisting of air, oxygen, an inert gas and at least one halide of said one metal, said heating being continued until said layer is activated by interaction with said atmosphere to produce efficient light emission in response to incident ultraviolet radiation.

3,127,283
PROCESS FOR PRODUCING A METAL CASE

Cecil George Chadwick, Niagara Falls, N.Y., assignor to Union Carbide Corporation, a corporation of New York

Filed Oct. 2, 1959, Ser. No. 843,934
9 Claims. (Cl. 117—106)



1. A process for providing a metal containing substrate with a diffused and continuous casing of a material selected from the group consisting of chromium, silicon, boron, manganese, nickel, beryllium, titanium and palladium which comprises introducing into a casing zone the metal substrate to be treated; introducing into a vaporizing zone a source of casing material; said source of casing material being spaced away from said substrate; heating said source of casing material at a reduced pressure to an elevated temperature to produce vapor of said casing material, the atoms of which vapor have sufficient energy to traverse the distance between said substrate and said source of said casing material, the temperature of said vapor being at least that at which said substrate and said casing material exhibit substantial mutual affinity; heating said substrate in said casing zone under a reduced pressure not exceeding the pressure in said vaporizing zone at least to a temperature at which said substrate and said casing material exhibits substantial mutual affinity but below the temperature at which said substrate melts and below the temperature at which the vapor pressure of absorbed casing material at the surface of said substrate is equal to the vapor pressure of the casing material at the temperature of said vapor of said casing material; intimately contacting said substrate with said casing material vapor; and maintaining said substrate in intimate contact with said casing material vapor until the material vapor has diffused into said substrate to a predetermined depth.

3,127,284
UNIFIED PAPER BACKING FOR USE IN PRESSURE SENSITIVE TAPES

Moses M. Ballin, St. Laurent, Quebec, Canada, assignor to Canadian Technical Tape Ltd., St. Laurent, Quebec, Canada

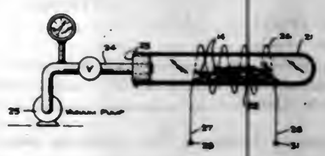
No Drawing. Filed Dec. 1, 1960, Ser. No. 72,860
11 Claims. (Cl. 117—155)

8. A process of producing a unified paper backing for use in pressure sensitive tapes, which comprises mixing together an anionic aqueous dispersion of a high molecular weight copolymer of isobutylene and a small amount of isoprene, and an anionic aqueous dispersion of a polymer consisting substantially of a high molecular weight addition product selected from the group consisting of a polymethyl acrylate, polyethyl acrylate and copolymers of methyl and ethyl acrylate, to form an intimate mixture of said two normally incompatible compounds, and impregnating a paper backing with said mixture.

3,127,285
VAPOR CONDENSATION DOPING METHOD

Mindaugas E. Gedgaudas, Santa Monica, and Ervin T. Klippenstein, Los Angeles, Calif., assignors to TRW Semiconductors, Inc., a corporation of Delaware

Filed Feb. 21, 1961, Ser. No. 90,684
7 Claims. (Cl. 117—230)



1. The method of depositing a uniform coating of an active impurity upon a gold surface of a metallic electrical contacting element, said method consisting of the steps of:

(*a*) placing a predetermined active impurity bearing substance and said metallic element into a container, said predetermined active impurity bearing substance having a vapor pressure, at a predetermined temperature not in excess of 900° C., at least one hundred times greater than a predetermined pressure, said predetermined pressure being not in excess of 100 microns Hg;

(*b*) evacuating said container to said predetermined pressure, and maintaining said predetermined pressure within said container;

(*c*) heating said active impurity bearing substance and said metallic element within said container to said predetermined temperature to create a homogeneous dopant-rich atmosphere within said container;

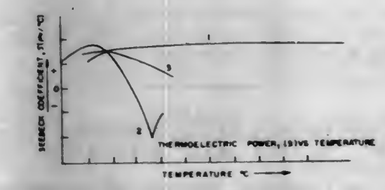
(*d*) cooling said active impurity and said metallic element within said container to cause the deposition of atoms of said active impurity upon the surface of said metallic element; and,

(*e*) releasing the vacuum to return the interior of said container to atmospheric pressure.

3,127,286
THERMOELECTRICITY

Courtland M. Henderson, Xenia, and Darrel M. Harris, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

Filed June 9, 1961, Ser. No. 116,148
13 Claims. (Cl. 136—4)

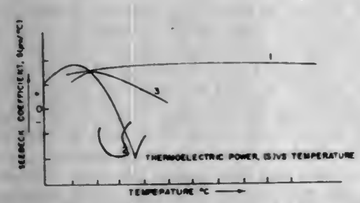


1. A thermoelectric power generating device which generates power at temperatures of from 110° C. to 1950° C. comprising a first element comprising boron in combination with from 0.05 to 35 weight percent of silicon, and a second element in electrical and thermal contact therewith, the second element being comprised of at least one member of the class consisting of carbon, copper, gold, silver, nickel, cobalt, iron, rhenium, vanadium, hafnium, niobium, titanium, tantalum, beryllium and the oxides, borides, carbides, silicides and nitrides of nickel, cobalt, iron, rhenium, vanadium, hafnium, niobium, titanium, tantalum and beryllium.

3,127,287
THERMOELECTRICITY

Courtland M. Henderson, Xenia, and Darrel M. Harris, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

Filed June 9, 1961, Ser. No. 116,149
13 Claims. (Cl. 136—4)



1. A thermoelectric power generating device which generates power at temperatures of from 110° C. to 1950° C. comprising a first element comprising boron in combination with from 0.05 to 40 weight percent of titanium, and a second element in electrical and thermal contact therewith, the second element being comprised of at least one member of the class consisting of carbon, copper, gold, silver, nickel, cobalt, iron, rhenium, vanadium, hafnium, niobium, silicon, tantalum, beryllium and the oxides, borides, carbides, silicides and nitrides of nickel, cobalt, iron, rhenium, vanadium, hafnium, niobium, titanium, tantalum and beryllium, and external leads connected to the respective elements.

3,127,288
PROCESS FOR COATING ZINC AND ZINC-IRON ALLOY SURFACES

William G. Hines, Willowdale, Ontario, and Ramon L. Addinall, Stoney Creek, Ontario, Canada, assignors to The Steel Company of Canada, Limited, Hamilton, Ontario, Canada, a company of Canada

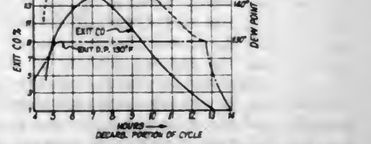
No Drawing. Filed May 26, 1960, Ser. No. 31,819
7 Claims. (Cl. 148—6.16)

1. The process of treating zinc and zinc-iron alloy surfaces which comprises treating said surfaces with an aqueous solution having a pH value within the range of from about pH 1.3 to about pH 3.8, said solution consisting essentially of water, phosphate ions in amount equivalent to from about 0.5% to about 3.0% by weight phosphoric acid and at least one compound selected from the group of compounds containing chromate ions in amount equivalent to from about 0.5 to about 3.0% by weight chromic acid and of compounds containing nitrite ions in amount equivalent to from about 0.1% to about 0.4% by weight sodium nitrite.

3,127,289
METHOD OF DECARBURIZING STEEL COIL

Francis W. Beall, deceased, late of Middletown, Ohio, by Edythe E. Beall, executrix, Middletown, Ohio, assignor to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio

Filed Dec. 4, 1961, Ser. No. 157,322
4 Claims. (Cl. 148—16)



1. The method of controlling the hydrogen/water vapor volume ratio of a hydrogen containing reducing atmosphere in an annealing furnace during the decarburization of steel coil, which method comprises maintaining the atmosphere in the furnace at a temperature of from about 1100° F. to 1500° F. during decarburization, and varying the dew point of the atmosphere as it is introduced into the furnace to the extent necessary to maintain the dew point of the effluent atmosphere at an essentially constant level, at which level the hydrogen/water vapor volume ratio of the effluent atmosphere is within the range of 2.0:1 to 3.5:1, the hydrogen/water vapor volume ratio at any given temperature being so chosen that the effluent atmosphere is at all times decarburizing and non-oxidizing to the steel coil being treated.

3,127,290
NON-CORROSIVE MODIFIED ROSIN FLUX

Otto Konig, Forest Hills, N.Y., assignor to National Lead Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Jan. 11, 1961, Ser. No. 81,946
3 Claims. (Cl. 148—23)

1. A non-corrosive solder flux composition, consisting essentially of rosin and 3-bromo-camphor, said 3-bromo-camphor being present from about 0.1% to about 5% by weight based on the rosin.

3,127,291

HERMETIC INSULATING STRUCTURES FOR ELECTRIC CABLE JOINTS AND TERMINATIONS

Paul L. Betz and Oscar W. Lusby, Baltimore, Md., assignors to Baltimore Gas and Electric Company, Baltimore, Md., a corporation of Maryland

Filed Feb. 6, 1959, Ser. No. 791,692
12 Claims. (Cl. 156—49)



8. A method of hermetically sealing and insulating a joint between insulated, sheathed electrical cables of the type wherein portions of the cable sheaths and insulation are removed to expose portions of said insulation and the cable conductors, respectively, and the exposed ends of said conductors are connected by a metallic connector, comprising the steps of coating a permeable synthetic fiber tape with a liquid polymerizable epoxy resin material, said tape being wettable by said epoxy resin material and being free of polymerized material prior to coating, wrapping the coated tape in a plurality of overlapped layers around the exposed portions of said cable insulation, conductors and connector, said epoxy resin material being applied to said tape immediately prior to the wrapping step and the wrapping being carried out before appreciable polymerization of said material occurs, extending the wrapping over the end portions of the cable sheaths, and sealing said wrapping to said sheaths through said resin.

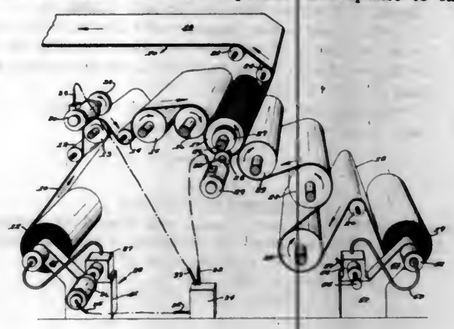
3,127,292

MEASURING AND CONTROLLING TAKE-UP RATIO OF PAPER IN PRODUCTION OF CORRUGATED BOARD

Richard L. Early, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio

Filed Sept. 22, 1961, Ser. No. 140,041
8 Claims. (Cl. 156—64)

1. In a corrugating machine including a set of corrugating rolls, gluing rolls and liner rolls wherein a corrugating medium and a liner paper are fed through said rolls, the improvement for maintaining the ratio of corrugating-medium paper to liner-medium paper at a preselected value comprising a supply stand for supporting a roll of corrugated-medium, a fluid-operated brake controlling the tension on the supply of said corrugated-medium paper, a first electrical generator, drive means for said generator operated in response to linear travel of said corrugated-medium paper, a second electrical generator, drive means for said second generator operating in response to the linear travel of said liner paper, a control circuit including means for producing a current corresponding to the ratio of voltages generated by said first generator compared to said second generator, a means connected to operate said brake, thereby regulating the tension on said corrugated-medium paper, and a control means in said circuit and operated in response to said



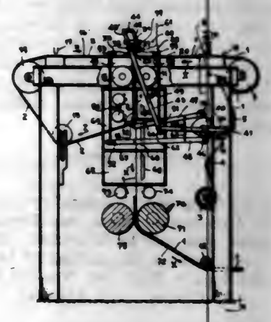
current for increasing brake tension by an increase in said ratio of voltages and decreasing brake tension by a decrease in said ratio of voltages.

3,127,293

METHOD OF PRODUCING UNWOVEN CLOTHS AND VELVETS AND APPARATUS USED THEREFOR

Albert Jean Trenteseaux, Mouscron, Belgium, assignor to Societe d'Etudes et Recherches et d'Exploitation d'Inventions Nouvelles Etablissement, Vaduz, Liechtenstein

Filed July 29, 1960, Ser. No. 46,150
Claims priority, application Belgium Aug. 4, 1959
4 Claims. (Cl. 156—72)



1. A method of producing unwoven cloths and velvets which comprises applying an adhesive layer to one side only of each of two backing strips, causing said strips to move through a zone in which they are disposed in spaced parallel relationship with the adhesive layer of one strip facing the adhesive layer of the other strip, feeding at least one chain of threads to said zone, alternately displacing said chain of threads against one adhesive layer and then against the other adhesive layer, just at the entrance of said zone while simultaneously deflecting said chain of threads alternately towards said adhesive layers to fold the chain of threads into loops having bent portions bound to said adhesive layers, setting at least one of said adhesive layers and subsequently separating one strip from the other.

2. Apparatus for producing unwoven cloths and velvets comprising means for applying an adhesive layer to one side only of each of two backing strips, means for guiding the backing strips into a zone in which they run parallel for a predetermined distance with the adhesive layers facing each other, means for feeding at least one

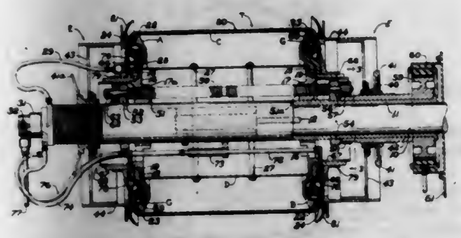
chain of threads to said zone, means for displacing said chain of threads against one adhesive layer and against the other adhesive layer and for deflecting said chain of threads towards one of the adhesive layers when displacing the chain towards the other of the adhesive layers to fold the chain into loops having bent portions bound to said adhesive layers, means for setting at least one of said adhesive layers and means for separating one strip from the other.

3,127,294

METHOD AND APPARATUS FOR BUILDING TIRES

Donald K. Porter, Cuyahoga Falls, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

Filed Feb. 19, 1958, Ser. No. 716,075
10 Claims. (Cl. 156—131)



1. Apparatus for building tires comprising support means, axially spaced axially movable flanges on said support means, a tire carcass support bladder bridging the peripheries of said flanges, means to cause relative axial motion of said flanges in order to selectively bring them together or separate them, an axially movable bead setting ring adjustably mounted at the outer side of each flange and having a shoulder for receiving a tire bead and flipper assembly, and means for turning up carcass plies after beads have been set thereon comprising a back up plate slidably mounted on said support means between each of said flanges and the associated bead setting ring with the radially outer edge of each back-up plate disposed radially inwardly of the shoulder on the adjacent bead setting ring and with a portion of each back up plate adapted to contact the adjacent bead setting ring to determine the axially outer position of the back up plate, a separate inflatable tube nested in the space provided between each of said back up plates and the associated flange, inflation of said tubes with said bead setting rings retracted from the flanges causing said tubes to engage said back up plates with the bead setting rings whereupon the tubes expand radially outwardly between said back up plates and flanges to turn up a tire carcass ply around tire beads set against the portions of the carcass ply which were turned down around the edges of said flanges.

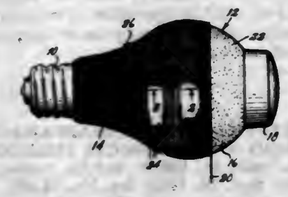
3,127,295

METHOD OF BONDING LIGHT TRANSMITTING YARN TO AN INCANDESCENT LAMP ENVELOPE

Luke Thorington, Berkeley Heights, N.J., assignor to Duro-Test Corporation, North Bergen, N.J., a corporation of New York

Filed Feb. 29, 1960, Ser. No. 11,902
4 Claims. (Cl. 156—172)

1. The method of providing the light transmitting envelope of an incandescent lamp with a light modifying surface, comprising the steps of coating the lamp envelope with a xylene solution of a silicone adhesive, evaporating the solvent to leave said coating tacky, and wrapping an extremely fine flexible light transmitting yarn onto the coated



surface of said coated envelope to form a light refracting layer of contiguous convolutions of said yarn.

3,127,296

PROCESS FOR BONDING A TERPOLYMER FILM TO A METAL SUBSTRATE

Leonard F. Guziak, Pittsburgh, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

No Drawing. Filed Dec. 22, 1959, Ser. No. 861,218
4 Claims. (Cl. 156—332)

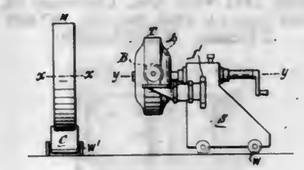
2. A process for forming a protective film coating which comprises applying a coating to a surface, said coating being an admixture of a diamino lower alkylether of lower alkylene glycols with a terpolymer, said terpolymer being formed by copolymerizing in an inert solvent from 50 to 70 parts styrene, from 10 to 30 parts of a lower alkyl ester of acrylic acid and from 10 to 30 parts of glycidyl methacrylate and said diamino lower alkylether of lower alkylene glycols being in said admixture in an amount equal to at least 10 percent by weight of said terpolymer, heating said coating on said surface to a temperature of from 50–125° C., removing said heated coating from said surface as a self-sustaining film, applying said self-sustaining film to a metal substrate and heating said self-sustaining film to a temperature of at least 150° C. whereupon the film adheres to the metal substrate to form a protective coating.

3,127,297

TYRE RE-TREADING EQUIPMENT

Jan Herbert Farquharson Kent, Jersey, Channel Islands, assignor to Kentredder Limited, Heller, Jersey, Channel Islands, a corporation of Jersey, Channel Islands

Filed Nov. 4, 1960, Ser. No. 67,327
Claims priority, application Great Britain Nov. 12, 1959
12 Claims. (Cl. 156—394)



1. Apparatus for use in retreading a tyre by attaching to the worn tread a new tread band, said apparatus comprising a ground stand having support means by which a tyre can be mounted for rotation about a substantially horizontal axis, said support means including a spreader device to enable the spreading of the walls of the outer cover to be adjusted as required, said spreader device including two members capable of relative axial displacement, each of said members having tyre engaging means, and means for operating the spreader device whereby, when a tyre is in position thereon, operation of the device enables the cross-section at the tread to be adjusted to produce a flat tread condition, and buffing means on the stand whereby the tread, when in a flat condition, can be

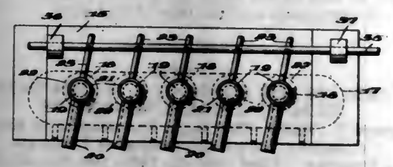
trimmed preparatory to receiving the new tread band, and to enable, by controlled contraction of the tread, the outer cover to be transferred directly from the support means to a matrix or mould, the operation of releasing the tyre from the spreader device bringing about interengagement of the tyre and the tread band.

3,127,298

PLASTIC NETTING EXTRUSION APPARATUS AND METHOD AND PRODUCTS THEREOF

George S. Nalle, Jr., 108 W. 2nd St., Austin, Tex.

Filed Sept. 26, 1960, Ser. No. 58,409
4 Claims. (Cl. 156—441)



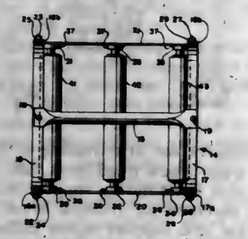
1. Apparatus for extruding in one operation a unitary netting of plastic material comprising, in combination, a source of pressurized plastic material; a hollow die head connected to said source to receive said plastic material on its interior; a plurality of spaced nozzles all of which are swingably mounted on the outside of the die head and are constructed and arranged to receive the plastic material from the interior of said die head, each of said nozzles being adapted to discharge the plastic material as a continuous extruded running length; power-actuated means to swing said nozzles simultaneously back and forth through a limited arc; the die head having a plurality of spaced stationary extrusion passages adapted to discharge the plastic material from the interior of the die head as a plurality of continuous extruded running lengths, each stationary extrusion passage being so spaced relative to the other stationary passages as to be coincident with a nozzle and be closely adjacent thereto at each end of the swing of each of said nozzles; each nozzle having an extrusion opening which registers with a stationary extrusion passage at the end of each swing so that the extrudates are welded together at the end of each swing of each nozzle, but without crossing.

3,127,299

SHEET LAMINATING HAND TOOL

Irvin Hecht, 2451 Nova Ave., Cincinnati 38, Ohio

Filed Apr. 12, 1962, Ser. No. 187,085
2 Claims. (Cl. 156—579)



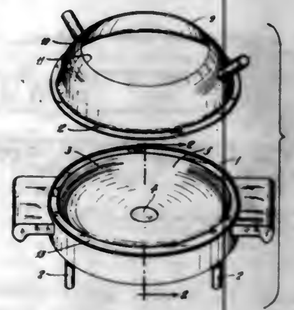
1. A hand tool for pressing a surfacing lamina into smooth intimate contact with an adhesive coated surface to which the lamina is to be adhered, said tool comprising in combination a pair of arched span members, a handle member joining the central portions of the span members and securing same in spaced parallel relation to each other, a pair of side members each respectively coupled to an end of each of said span members, and three resilient cylindrical rollers cooperating with and supported for rotation about respective parallel coplanar axes by said side members, each of said rollers being flexible to permit bowing of the axis thereof when said roll is subjected to substantial bowing force, whereby the tool may be held by said handle member extending transversely of the roller axes and pressingly rolled over a lamina to smoothly apply same and level the adhesive coat securing the lamina.

3,127,300

APPARATUS FOR CONCENTRATING AND CONFINING SOLUTES FROM SOLUTIONS

Ralph C. Maggio, Fort Lee, N.J., assignor to the United States of America as represented by the Secretary of the Navy

Filed Feb. 14, 1961, Ser. No. 89,329
5 Claims. (Cl. 159—32)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An apparatus for concentrating the solid unevaporable constituents of a liquid which comprises, a container open at one end for confining and holding a liquid therein having approximately spherical walls progressively sloped toward a small lowermost portion opposite said one end the inner surface of said walls except those defining said lowermost portion being of a material nonwettable by said liquid, means for heating said liquid while confined in said container whereby as said liquid is progressively evaporated substantially all the solid constituents will be compacted and deposited uniformly within said lowermost portion.

3,127,301

IMAGE-ENGRAVING PLATE

Harold Sigler, Brooklyn, N.Y., assignor to Fairchild Camera and Instrument Corporation, a corporation of Delaware

No Drawing. Filed Aug. 11, 1960, Ser. No. 48,825
9 Claims. (Cl. 161—4)

1. An engraving plate for reproducing images by either printing or photo-actinic ray-transmitting processes comprising: an uniformly finished-surface sheet of deformable transparent plastic material, only one face thereof having a surface portion impregnated with a material having a low transmittance to ultra-violet light, said surface material retaining substantially the original character of the finished surface.

3,127,302

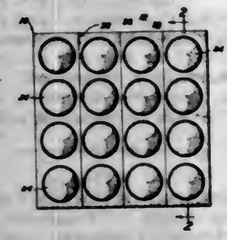
SEPARABLE ARTICLE-CONTAINING ASSEMBLY AND ORNAMENTAL STRUCTURE MADE THEREFROM

Allen G. Bunting, Detroit, Mich., assignor to Plasteel Corporation, Inkster, Mich., a corporation of Michigan

Filed June 19, 1961, Ser. No. 117,964
6 Claims. (Cl. 161—16)

5. A semi-finished blank for production of oppositely-convex articles and a base structure for mounting and supporting the same, said blank comprising

a block of fracturable material having spaced opposite faces and a multiplicity of pairs of oppositely-directed recesses disposed in spaced parallel rows and extending inwardly toward one another from said opposite faces into close proximity to one another with a relatively thin fracturable layer of material disposed between the bottom surfaces of each such pair of recesses,



said bottom surfaces of each such pair of recesses being outwardly convex,

each such pair of recesses collectively defining and bounding an article surrounded by the side walls of said recesses,

said fracturable layers extending from their respective articles to the side walls of their respective recesses and integral with said articles and body,

said block having a plurality of weakened severance grooves extending substantially from edge to edge thereof in laterally-spaced parallel relationship facilitating subdivision of said block into base bars constituting base structure components.

3,127,303

DUAL-ADHESIVE SPLICING SYSTEM

William J. Neuhauser, Jefferson County, Calvin L. Wilson, Louisville, and Earl M. Tiller, Jefferson County, Ky., assignors to Reynolds Metals Company, Richmond, Va., a corporation of Delaware

Filed Feb. 10, 1960, Ser. No. 7,802
6 Claims. (Cl. 161—39)



1. A tape for use in splicing metal foil strip comprising a layer of foil, a coating of adhesive which is tacky at room temperature disposed centrally on said foil layer and extending lengthwise of the tape, and spaced bands of a second adhesive on said layer of foil at either side of said central coating, said second adhesive being heat-responsive in the range of temperatures utilized for annealing the foil strip to form a strong bond between said tape and the foil strip being spliced.

3,127,304

BALANCED-STRESSED COMPOSITE STRUCTURE PANEL AND METHOD FOR SAME

Herbert H. Borup, Concord, Calif., assignor to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware

Filed Nov. 2, 1962, Ser. No. 234,989
17 Claims. (Cl. 161—56)

1. A panel including a force-responsive plywood core having opposed first and second major faces, a first metal covering member non-shiftably bonded by a thermo-reacted glue to said first face, a second metal covering member firmly and non-shiftably bonded by a thermo-reacted glue to said second major face, said first and second metal covering member being selected from the group consisting of aluminum and aluminum alloys, said core and both of said metal covering members being in a stressed condition with one of said metal covering members being stressed beyond its tensile yield strength, said second metal covering member having a higher tensile yield strength than said first metal covering member, and a thickness between 0.0017 inch and 0.024 inch, said first metal covering member being between three and six times as thick as said second metal covering member, said relationships of said metal covering members being such that the force applied to the core by the first metal covering member in the panel is substantially equivalent to and counterbalanced by the force applied to the core by the second metal covering member, and said core being of a sufficient strength in its stressed condition that it responds to and resist the forces applied thereto.

3,127,305

STABILIZED NAP FABRIC

Julian J. Hirshfeld, Decatur, Ala., assignor, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware

No Drawing. Filed Nov. 27, 1961, Ser. No. 155,171
9 Claims. (Cl. 161—64)

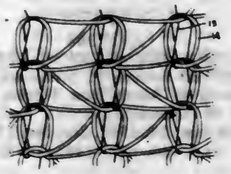
1. An article composed of the napped fabric of fibers of synthetic linear acrylonitrile and a stabilizing agent selected from the group consisting of aniline, aniline hydrochloride, aniline sulfate, aniline acetate and aniline hydrobromide.

3,127,306

STRETCH TYPE FABRICS HAVING TEMPORARY STABILITY

Walter Turton, Stamford, Conn., and Walter T. Reilly, Akron, Ohio, assignors, by direct and mesne assignments, to J. P. Stevens & Co., Inc., New York, N.Y., a corporation of Delaware

Filed Oct. 27, 1958, Ser. No. 769,937
4 Claims. (Cl. 161—89)



2. A laminated material comprising a layer of moldable plastic material and a reinforcing fabric structure bonded to said layer, said fabric structure comprising a stretchable ground fabric and breakable yarns interlinked therewith temporarily to stabilize the dimensions thereof, said breakable yarns being selected to rupture solely as a result of a predetermined elongation of the ground fabric which elongation is insufficient to cause rupture of the threads forming said ground fabric, whereby said breakable yarns are ruptured when said plastic material is molded to cause said ground fabric to elongate in conformance thereto.

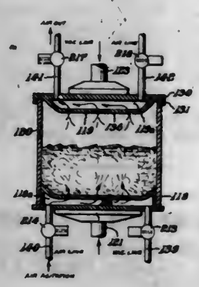
3,127,307

METHOD OF MOLDING SHAPED ARTICLES FROM FLUID FIBROUS SUSPENSIONS

Serenus H. A. Young, Karthaus, Pa., assignor, by direct and mesne assignments, of seventy-nine and three-tenths percent to J. J. Griffin, substitute trustee of the trust for the benefit of various assignees, as tenants in common, and twenty and seven-tenths percent to Pressurform Container Corporation, a corporation of Oklahoma

Original application Oct. 1, 1956, Ser. No. 613,139, now Patent No. 2,969,835, dated Jan. 31, 1961. Divided and this application Nov. 8, 1960, Ser. No. 67,971

5 Claims. (Cl. 162—145)



1. A process for the production of preforms, composed of organic and inorganic fibers and having all sections thereof, whether of uniform or non-uniform thickness, of uniform density and composition, by pressure forming means having slurry compressing elements comprising

(*a*) mixing a carrier fluid with organic fibers to provide a pulp,

(*b*) measuring out a quantity of said pulp,

(*c*) adding to the measured quantity of pulp a predetermined quantity of bundles of inorganic fibers to provide a batch of slurry sufficient for one preform,

(*d*) immediately thereafter compressing the batch of slurry by the pressure forming means to remove the carrier fluid and produce a preform and

(*e*) subjecting the batch of slurry, from its inception up to and including commencement of the slurry compressing operation, to mild agitation sufficient to maintain the organic fibers and the bundles of inorganic fibers uniformly dispersed throughout the slurry, without destroying the integrity of the bundles.

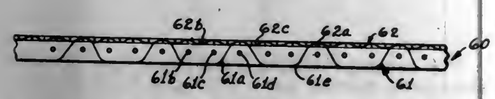
3,127,308

DUAL WIRE DEWATERING APPARATUS

Edgar J. Justus and Jerome P. Brezinski, both of Beloit, Wis., assignors to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin

Filed Aug. 18, 1961, Ser. No. 132,405

1 Claim. (Cl. 162—349)



A paper web dewatering apparatus comprising an endless looped Fourdrinier wire having an inner loop portion of relatively coarse construction and an outer loop portion of relatively finer mesh, said loop portions woven together, means for supporting the Fourdrinier wire with an upper run on which a paper web is supported, a suction box beneath the wire, and an endless elastomeric belt looped over the suction box and extending between the suction box top and said Fourdrinier wire with said belt having drain perforations so that a significantly greater resistance to drainage of the web on the Fourdrinier wire is provided so that a sheet of good appearance is obtained from the web.

3,127,309

COMPOSITION AND METHOD FOR TREATING DUTCH ELM DISEASE

Robert O. Zielinski, Rte. 2, Box 26, Delton, Mich.

No Drawing. Filed Nov. 29, 1961, Ser. No. 155,812

3 Claims. (Cl. 167—17)

1. The method of inhibiting Dutch elm disease in susceptible trees which comprises impregnating the earth adjacent the roots of the trees with a composition of matter consisting essentially of magnesium sulfate, sodium sesquicarbonate, magnesium carbonate, sodium lauryl sulfate, lithium chloride and potassium iodide.

3,127,310

NOVEL FEEDING-DETERRENT COMPOSITIONS

Donald Perry Wright, Jr., Pennington, N.J., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Sept. 15, 1961, Ser. No. 138,269

1 Claim. (Cl. 167—30)

A method for the protection of organic materials susceptible to attack by insects based on the desire for the organic materials as food, which comprises: applying to said organic material a preparation comprising a major amount of an inert carrier for a feeding-deterrent compound and a minor amount of that compound, said compound being 4,4'-methylenebis(N-methyl-N-nitrosoaniline).

3,127,311

FUNGICIDAL COMPOSITIONS

Otto Telle and Ferdinand Grewe, Cologne-Stammheim, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Mar. 8, 1960, Ser. No. 13,453

Claims priority, application Germany Mar. 10, 1959

4 Claims. (Cl. 167—42)

1. Fungicidal compositions containing an organic fungicide in an amount from 5 to 95% together with

(*a*) 2 to 10% of a member selected from the group consisting of phenyl hydroxy polyglycol ethers, fatty acid polyglycol esters and fatty alcohol polyglycol ethers, the fatty alcohols and acids having 8 to 25 carbon atoms and being esterified with up to 50 glycol residues, and

(*b*) 1 to 10% of fatty acid metal salts, the fatty acid having 8 to 25 carbon atoms and the metal being a member selected from the group consisting of calcium, magnesium, zinc and aluminium, and

(*c*) up to 10% of a solid organic acid, this acid being a member selected from the group consisting of a lower aliphatic dicarboxylic acid, a lower aliphatic hydroxy-carboxylic acid and salicylic acid,

(*d*) the balance being inert filler.

3,127,312

FUMIGANT-EXTENDED POLYURETHANE FOAMS AND THE PROCESS OF MAKING

Jackson S. Boyer, Ridley Park, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Aug. 17, 1961, Ser. No. 132,004

6 Claims. (Cl. 167—42)

1. A polyurethane foam extended with from 5 to 50 weight percent of a fumigant selected from the group consisting of naphthalene, paradichlorobenzene, hexachloroethane and camphor.

6. A process for the production of a fumigant extended polyurethane foam comprising the steps of reacting an aromatic diisocyanate with a liquid polyol having a molecular weight ranging from about 500 to about 10,000 and a fumigant selected from the group consisting of naphthalene, paradichlorobenzene, hexachloroethane and camphor in the presence of a blowing agent.

3,127,313

METHOD OF MAKING A RADIOACTIVE COMPOSITION

Howard James Glenn, Oak Ridge, Tenn., assignor to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois

No Drawing. Filed Oct. 19, 1960, Ser. No. 63,501

6 Claims. (Cl. 167—51)

1. A method of making a radioactive composition consisting of a substantially water-insoluble radioactive salt on a gelatin sponge which is absorbable in the physiological system which comprises the steps of dispensing a volatile alcohol solvent containing a reactant providing a cation and a volatile alcohol solvent containing a reactant providing an anion on a gelatin sponge segment, removing the volatile alcohol solvent and thereby obtaining a substantially water-insoluble salt consisting of said cation and said anion, one of said ions being radioactive.

3,127,314

METHOD OF REDUCING HYPERLIPEMIA BY 11β,17β - DIHYDROXY 17α - ETHYNYL - $\Delta^{1,4}$ - ANDROSTADIENE-3-ONE

Bernard Goffinet, Paris, Georges Muller, Nogent, Marne, Cyrille Piotka, Drancy, Robert Jequier, Saint-Maur, and Leon Velluz, Paris, France, assignors, by mesne assignments, to Roussel-UCLAF, S.A., Paris, France, a corporation of France

Continuation of abandoned application Ser. No. 596,292, July 6, 1956, and application Ser. No. 716,525, Feb. 21, 1958. This application Jan. 18, 1960, Ser. No. 3,168

Claims priority, application France Jan. 13, 1956

1 Claim. (Cl. 167—65)

The process of reducing hyperlipemia in the blood of humans and warm-blooded animals, said process comprising administering orally to humans and warm-blooded animals a composition containing as antilipemic agent, 11β,17β-dihydroxy-17α-ethynyl-$\Delta^{1,4}$-androstadiene - 3-one in a daily dose between about 10 mg. and about 200 mg.

3,127,315

HYPOCHOLESTEROLEMIC AGENT M–850 AND METHOD OF PREPARATION

Philip Leslie Tardrew, Waukegan, and Melvin Anton Nyman, Libertyville, Ill., assignors to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois

Filed Apr. 12, 1962, Ser. No. 186,924

5 Claims. (Cl. 167—65)

1. A hypocholesterolemic agent designated as M–850 which has the following properties:

(*a*) a molecular weight of 414

(*b*) a molecular formula of $C_{21}H_{28}O_7$

(*c*) an elemental analysis of 62.58% carbon, 9.09% hydrogen and 27.85% oxygen

(*d*) an absolute ethanol solution exhibits an ultraviolet absorption maximum at 288 millimicrons with an extinction coefficient

$E^{1\%}_{1cm}$ of 0.98

(*e*) a melting point of 228° C.

(*f*) is readily soluble in methanol, ethanol, acetone, cyclohexanone, diacetone alcohol, dioxane, tetrahydrofuran, formamide, dimethylformamide and pyridine but substantially insoluble in water, diethyl ketone, methylisobutyl ketone, ethyl acetate, methylene dichloride, trichloroethylene, hexane, isopropyl ether, acetonitrile and methyl cyclohexane

(*g*) an infrared spectrum as shown in the drawing and

(*h*) an X-ray diffraction pattern which exhibits *d*-spacings in angstroms at 10.3, 7.7, 7.3, 6.8, 5.8, 5.5, 5.2, 4.9, 4.5, 4.15, 4.05, 3.90, 3.75, 3.64, 3.58, 3.42, 3.22, 3.12, 3.01, 2.90, 2.76, 2.68, 2.62, 2.52, 2.46, 2.37, 2.29, 2.22, 2.14, 2.02, 1.94, 1.89, 1.79 and 1.74.

3,127,316

CARDIAC AURICULAR THERAPY WITH QUINIDINE ADENYLATE, QUINIDINE ADENOSINE DIPHOSPHATE OR QUINIDINE ADENOSINE TRIPHOSPHATE

Simon L. Ruskin, deceased, late of New York, N.Y., by Carol Farhi, New York, N.Y., Dan B. Ruskin, Miami Beach, Fla., and Milton Reder, New York, N.Y., executors, assignors to Union Carbide Corporation, New York, N.Y., a corporation of New York

No Drawing. Continuation of abandoned application Ser. No. 3,233, Jan. 19, 1960, which is a continuation of abandoned application Ser. No. 366,395, July 6, 1953. This application June 22, 1962, Ser. No. 204,646

5 Claims. (Cl. 167—65)

1. Process for the treatment of cardiac auricular fibrillation and auricular flutter that comprises, administering to the afflicted host at a unit dosage level of at least about 3 milligrams a substance selected from the group consisting of quinidine adenylate, quinidine adenosine diphosphate, and quinidine adenosine triphosphate.

3,127,317

PROCESS FOR TREATING ORGAN TISSUE AND PRODUCT OBTAINED THEREBY

Rudolf Kern, Neustadt an der Weinstrasse, Germany, assignor to Rhein-Chemie G.m.b.H., Mannheim-Rheinau, Germany

No Drawing. Filed Jan. 23, 1962, Ser. No. 168,226

7 Claims. (Cl. 167—74)

1. A process of preserving animal tissue which comprises freezing fresh animal tissue obtained from a donor animal to a temperature below −30° C., thereafter substantially uniformly raising the temperature of the tissue within about between one to ten minutes by at least 25° C. but not above 0° C. and immediately thereafter drying the animal tissue under vacuum, said process being carried out under sterile conditions.

3,127,318

SWINE TREATMENT

Russell A. Eversole, Excelsior, and Francis C. Wingert, Anoka, Minn., assignors to Cargill, Incorporated, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 19, 1962, Ser. No. 180,819

8 Claims. (Cl. 167—78)

1. A method of protecting the offspring of swine during and after nursing against microbial diseases, which method comprises injecting directly in the mammary tissue of a sow, during the period commencing about four days before the birth of offspring from said sow and terminating about 24 hours after said birth, antigen originating from organisms causing the disease to be protected against.

3,127,319

APPARATUS FOR HEATING AN UNDERGROUND FORMATION

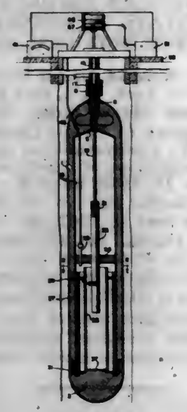
Manley L. Natland, Rolling Hills, Calif., assignor to Richfield Oil Corporation, Los Angeles, Calif., a corporation of Delaware

Filed Feb. 8, 1957, Ser. No. 639,001

5 Claims. (Cl. 176—17)

1. An apparatus for heating a subsurface oil-bearing stratum which comprises an unshielded nuclear reactor positioned in a well bore opposite to and in heat relationship to an oil-bearing stratum with said oil-bearing

stratum acting as a shield and coolant for the reactor and with the heat developed in said oil-bearing stratum being sufficient to cause the oil in said stratum to flow, said nuclear reactor including two separate portions of fissionable material, a first portion of which is below the critical mass needed to maintain a controlled, self-sustained nuclear reaction, a source of thermal neutrons in contact with a neutron moderating substance and



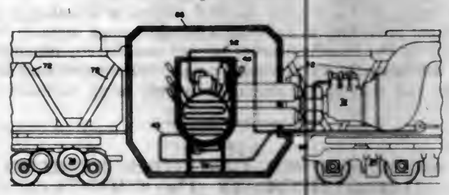
said first portion of fissionable material, means at the earth's surface for controlling the intensity of the fission reaction by varying the amount of a second portion of fissionable material in contact with moderated thermal neutrons and thereby controlling the heat of said stratum, the amount of said first and second portions of fissionable material in contact with the moderated thermal neutrons being sufficient to provide at least said critical mass.

3,127,320
CELL FOR VERTICAL CHANNEL NUCLEAR REACTOR
Jean Hainzelin, Paris, Léon Le Flem, Enghien-les-Bains, and Jacques Robert, Paris, France, assignors to Commissariat a l'Energie Atomique, Paris, France
Filed Apr. 28, 1959, Ser. No. 809,533
Claims priority, application France May 3, 1958
7 Claims. (Cl. 176—19)



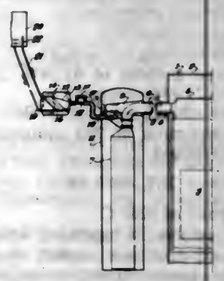
1. A vertical channel nuclear reactor, comprising: fixed upper and lower plate members; a cell having upper and lower portions, said upper cell portion including a sheathing tube; support means fixedly connected to the sheathing tube of said upper cell portion; clamp means for firmly clamping said support means to said fixed upper plate member to hold said upper cell portion against vertical and lateral movement, said upper cell portion being suspended therebelow; means for mounting cartridges of fissile material within said cell; means mounted at the bottom of said lower cell portion for engaging said lower plate member at a point in vertical alignment with said support means and for preventing lateral movement of said lower cell portion when so engaged; an extendable telescopic coupling connecting said upper and lower cell portions; and resilient means between said upper and lower cell portions to urge said lower cell portion into engagement with said lower plate member.

3,127,321
NUCLEAR REACTOR FOR A RAILWAY VEHICLE
Lyle B. Borst, Ossining, N.Y., assignor to University of Utah, Salt Lake City, Utah
Filed Apr. 7, 1955, Ser. No. 499,867
2 Claims. (Cl. 176—38)



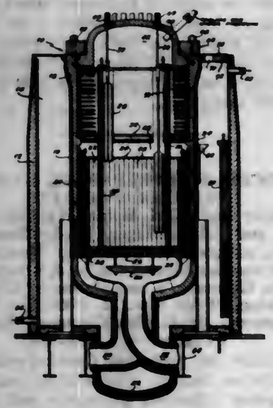
1. A radiation shielding arrangement for a high energy nuclear radiation source in a railway vehicle comprising a railcar underframe, said radiation source in the form of a right circular cylinder of a length to diameter ratio of less than one and arranged with its major axis in a plane coincidental with the longitudinal axis of said underframe, a radiation shield vessel enveloping said source and mounted on said underframe with the vertical external sides of said shield being in vertical alignment with the side edges of said underframe, a second fluid-tight radiation shield vessel closely surrounding said source internally of and spaced from said first named shield vessel, a high viscosity fluid filling the space between the shield vessels having the ability to decelerate any movement of said internal vessel, and a hydrogenous material placed in said high viscosity liquid to increase the shielding effect of the liquid.

3,127,322
NUCLEAR REACTORS
John Alan Dodd, Wallasey, England, assignor to United Kingdom Atomic Energy Authority, London, England
Filed Dec. 8, 1959, Ser. No. 858,215
Claims priority, application Great Britain Dec. 15, 1958
1 Claim. (Cl. 176—38)



In a nuclear reactor system comprising a reactor core, a main heat exchanger disposed alongside the core and of a capacity to accept the full load heat generation of the core, coolant connections connecting the core in closed circuit with the main heat exchanger and a coolant blower for circulating gas coolant through said closed circuit; an auxiliary heat exchanger of a capacity to accept the shut-down heat generation of the core disposed above and outwardly of both the core and the main heat exchanger, branched ducts connecting the auxiliary heat exchanger with the closed circuit at points upstream and downstream of the core, valve means in said branch ducts for controlling gas flow between the auxiliary heat exchanger and the core, a water storage tank disposed above and outwardly of the auxiliary heat exchanger, and pipe connections between said tank and auxiliary heat exchanger for the thermosyphon circulation of water in heat exchange with gas in the auxiliary heat exchanger.

3,127,323
SHIELDING FOR NUCLEAR REACTORS
Donald T. Bray, Rome, Italy, and Archie M. Larson, Jr., Richmond Heights, Melvin J. Kornfeld, St. Louis, and Carl F. Leyse, Manchester, Mo., assignors to Internuclear Company, Clayton, Mo., a corporation of Missouri
Filed Oct. 31, 1957, Ser. No. 693,678
5 Claims. (Cl. 176—59)

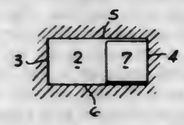


1. A gas-cooled nuclear reactor comprising a pressure vessel, said vessel having a primary opening, a pressure dome removably secured to said opening, a gas inlet to said dome, a reactor core within said vessel, a biological shield constructed to provide safe access by personnel to the top of said shield positioned interiorly of said vessel and filling a space therein between said core and said pressure dome, tubular means in said shield and in said core arranged to form aligned passages for containing fuel tubes with fuel elements inserted in said tubular means of said core, a plurality of removable plugs for insertion in said tubular openings formed in said biological shield, said plugs closing said tubular means therein and preventing access to the reactor fuel elements said plugs being removable so as to allow removal of said fuel elements from said passages, a gas passage through said shield, and support means in said vessel of the self-centering type having inwardly and downwardly circumferentially extending surfaces engageable with corresponding surfaces on said shield and on said core to maintain passage alignment so that said plugs and fuel elements may be removed, said seals confining the flow of gas to said gas passage.

4. In a gas-cooled nuclear reactor comprising a core of nuclear fuel within a pressure vessel which includes a housing enclosing said core of nuclear fuel, said housing having a side with a primary opening, the improvement comprising a biological shield of material constructed to provide safe access by personnel to the top of said shield and disposed to fill a space in said pressure vessel in spaced relation to said core and between said core and said primary opening and having a plurality of apertures extending therethrough from the primary opening side of said shield to the side of said shield adjacent said core, a gas circulating system including a gas outlet from said housing adjacent said core and a gas inlet means for introducing the principal portion of the coolant gas into said housing between said shield and said core, and means for conducting gas from said gas circulating system and introducing this portion of said gas into said housing between said primary opening and said shield at a greater pressure and lower temperature than on the core side of said shield so as to cause said portion introduced between said primary opening and said shield to flow inwardly toward said core through said apertures in said shield and cool said housing on the opposite side of said shield from said core.

5. The method of maintaining the primary opening of a vessel for a gas cooled type of power reactor at low temperatures to permit ready access thereto for servicing operating equipment thereon, which reactor vessel has a gas permeable biological shield disposed within and filling a space between the primary opening toward one side of said vessel and a core of nuclear fuel for the reactor toward the opposite side of said vessel, which method includes the steps of forcing a main stream of coolant gas which includes all but a small portion of the coolant gas under pressure into the reactor vessel between said shield and said core, cooling said small portion of gas, forcing said small portion of gas into said reactor vessel on the primary opening side of said biological shield at a lower temperature and at a higher pressure than said main stream of gas so as to cause the small portion of gas to isolate the primary opening side of said vessel from the heat in the core and to cause said small portion of gas to discharge through said biological shield and rejoin the main stream of coolant gas to provide circulation, and then exhausting said gas from said nuclear vessel from the core side of said biological shield.

3,127,324
NUCLEAR REACTORS
Ronald Parr, Urmston, and John Anthony Wynne Huggill, Heaton Moor, Stockport, England, assignors to A.E.I.-John Thompson Nuclear Energy Company Limited, London, England, a British company
Filed Nov. 1, 1957, Ser. No. 694,003
Claims priority, application Great Britain Nov. 1, 1956
6 Claims. (Cl. 176—59)



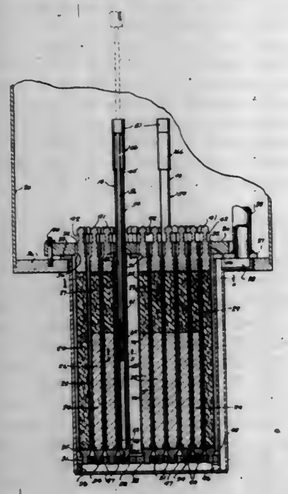
1. In a nuclear reactor having a moderator core defining a substantially vertical fuel channel through which fluid coolant is passed in a longitudinal direction, a stack of plate-like fuel elements disposed in sections in the fuel channel, the plates of each section being in substantially parallel spaced relationship to each other, said stack being spaced from opposing portions of the wall of the channel and extending transverse the longitudinal axis thereof, and means disposed in the channel for so directing the fluid coolant through a longitudinally extending zig zag flow path between the opposing wall portions as to traverse the stack of fuel elements in the spaces separating pairs thereof.

3,127,325

REACTOR WITH PROMPT NEGATIVE TEMPERATURE COEFFICIENT AND FUEL ELEMENT THEREFOR

Theodore Brewster Taylor and Andrew Wetherbee McReynolds, La Jolla, Calif., and Freeman John Dyson, Princeton, N.J., assignors to General Dynamics Corporation, New York, N.Y., a corporation of Delaware

Filed May 9, 1958, Ser. No. 732,415
6 Claims. (Cl. 176—62)



1. A neutronic reactor comprising a vertically extending reactor tank, a quantity of fluid coolant in said reactor tank, an inlet opening in said tank adjacent the bottom thereof for delivering coolant to said tank, an outlet opening in the side of said tank adjacent the upper end thereof for removing coolant from said tank and for maintaining a constant level of coolant in said tank, vertically spaced upper and lower grid members extending transversely across the lower end portion of said tank with the lower grid member positioned above said inlet opening, a plurality of vertically extending removable aluminum tubes having a body portion defining a generally uniform cross-sectional area and shape and a lower end defining a reduced cross-sectional area supported vertically within said tank in a predetermined spaced relation to each other by said grid members, said grid members being provided with vertical aligned openings, the aligned openings in said upper grid member being of such size as to slidably accommodate the body portion of said tubes and the aligned openings in the lower grid member being of such size as to slidably accommodate the reduced cross-sectional area portions of said tubes, said lower grid member also including additional spaced openings for permitting the coolant to flow freely past said lower grid member, most of said aluminum tubes extending only a short distance above said upper grid member and having an upper end portion shaped so as to be engageable by the end portion of a coacting elongated pickup member for removing said tubes from said tank, at least a major portion of said engageable tubes containing a homogeneous mixture of a solid moderator and a material fissionable by neutrons of thermal energy which constitutes the fuel for said reactor, said fuel containing tubes being fluted adjacent the portions engaged by said upper grid member when the fuel elements are in position within said tank to permit the coolant to flow freely past said upper grid member, and the remainder of said aluminum tubes extending above said upper grid member and containing vertically movable members actuated from the top of said reactor, said vertically movable members including neutron absorbing material for controlling the operation of said reactor.

3. A fuel element for a neutronic reactor, comprising a fluid tight, elongated tube containing a reactive portion formed of a solid homogeneous mixture of zirconium hydride and uranium, the uranium in said mixture being a mixture of about 20 percent uranium 235 and the remainder uranium 238, the ratio of the number of hydrogen atoms to the number of uranium 235 atoms being approximately 150 to 1, the ratio of hydrogen atoms to zirconium atoms being approximately 1 to 1, and a body of reflecting material at one end of the tube.

4. A neutronic reactor having a high, prompt negative temperature coefficient of reactivity, comprising a reactor tank, a quantity of water in said reactor tank which serves both as a coolant and a moderator, an active core within the water in said tank, said active core including a plurality of fluid-tight, elongated tubes, each of said tubes containing a solid, homogeneous mixture of zirconium hydride and enriched uranium, a major proportion by weight of said uranium being uranium 238, said zirconium hydride comprising a major proportion by weight of the mixture with the ratio of hydrogen atoms to zirconium atoms being at least approximately 1 to 1, said tubes being spaced within said tank to provide passageways surrounding each of said tubes, and means for causing water to flow in said passageways in heat exchange relationship with said tubes.

3,127,326

PROCESS FOR PREPARING 6-AMINO-PENICILLANIC ACID

Fritz Lindner and Karl Heinz Wallhäuser, Hofheim, Taunus, and Adolf Mager, Niederhausen, Taunus, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Mar. 22, 1960, Ser. No. 16,639
Claims priority, application Germany Mar. 25, 1959
7 Claims. (Cl. 195—36)

1. A process for preparing 6-amino-penicillanic acid which comprises causing a proteolytic enzyme selected from the group consisting of papain and proteases obtained from the microorganisms *E. coli*, *Proteus vulgaris*, and *Bac. subtilis*, to act on penicillins, and then isolating 6-amino-penicillanic acid from the reaction mixture.

3,127,327

EXTRACTION OF PROTEASE FROM A CULTURE BROTH OF STREPTOMYCES GRISEUS

Masao Nomoto, Masaya Yanagita, Takeo Akahira, Hiroshi Kawabe, and Yoshiko Narahashi, Tokyo, and Shigeo Fujita, Yokohama City, Japan, assignors to Rikagaku Kenkyusho, Tokyo, Japan

Filed Feb. 28, 1961, Ser. No. 92,403
9 Claims. (Cl. 195—62)

1. A protease produced in and isolated from the culture broth of *Streptomyces griseus* and possessing the following properties: molecular weight M_{SD}=19,200–20,800; sedimentation constant $s_{20,w}$=2.8S; diffusion constant $D_{A30,w}$=13.1 or $D_{A20,w}$=13.4×10^{-7} (cm.²/sec.); elemental composition C, 52.0%; H, 6.8%; N, 14.8%; Ca, 0.8%; optimum pH for the enzyme activity 7.5–8.5; hydrolyzing activity for protein: extremely strong; said protease having both "endo-peptidase" and "exo-peptidase" enzymatic action; substrate specificity; extremely broad; first order proteolytic coefficient C=3.34×10^{-2} for glycyl-L-leucine, C=0.18×10^{-2} for carbobenzoxy-L-glutamyl-L-tyrosine; Michaelis' constant for glycyl-L-leucine Km=1.25×10^{-2} M; energy of activation for glycyl-L-leucine Ea=2.7×10^3 cal./mol.

9. A method comprising culturing *Streptomyces griseus* to form a culture broth containing streptomycin and protease and separately isolating the streptomycin and the protease, the latter having an extremely strong hydrolyzing activity for protein both "endo-peptidase" and "exo-peptidase."

3,127,328

PROCESS OF PREPARING 6-DEMETHYL-TETRACYCLINES

Joseph Jacob Goodman, Nanuet, N.Y., assignor to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Filed Oct. 4, 1962, Ser. No. 228,262
12 Claims. (Cl. 195—80)

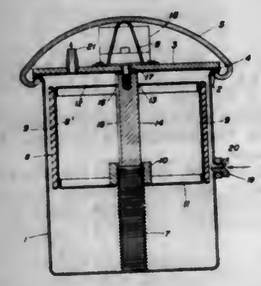
1. A process for the production of 6-demethyltetracyclines which comprises cultivating a microorganism of the genus Streptomyces selected from the group consisting of chlortetracycline-producing and tetracycline-producing microorganisms in an aqueous nutrient medium under aerobic conditions in the presence of an inhibiting amount of a compound selected from the group consisting of 2-amino-4-lower alkyl thiobutanoic acid and a lower alkyl ester thereof.

3,127,329

METHOD AND APPARATUS FOR SAMPLING AIRBORNE MICRO-ORGANISMS

Ariel A. Andersen, 1074 Ash Ave., Provo, Utah

Filed Sept. 5, 1961, Ser. No. 136,421
13 Claims. (Cl. 195—103.5)



1. An apparatus for separating and collecting microscopic, airborne particles which comprises a drum, a layer on the cylindrical surface of said drum capable of retaining microscopic particles impacted thereagainst, nozzle means positioned adjacent to the cylindrical surface of said drum for directing a jet of air thereagainst, and means for simultaneously causing relative rotational and translational movement between said cylindrical surface of the drum and said nozzle means.

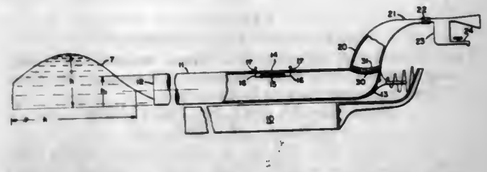
9. The method of sampling air to determine the concentration of viable micro-organisms carried thereby which comprises directing a jet of air carrying such micro-organisms against a cylindrical nutrient surface which will retain such micro-organisms on impaction and simultaneously moving such surface rotationally past said jet and translationally with respect thereto, whereby micro-organisms carried by the air jet are deposited on said cylindrical surface in a helical line extending therearound, and incubating said deposited micro-organisms to cause them to grow into visible, countable microbial colonies, the number and position of which with respect to said line, represent the concentration of micro-organisms in said jet of air and the time when collected, respectively.

3,127,330

PROCESS AND APPARATUS FOR OBTAINING FRESH WATER FROM THE SEA

David Katz, 506 W. 35th St., Wilmington 2, Del.

Filed Oct. 27, 1961, Ser. No. 148,159
8 Claims. (Cl. 202—46)



1. A process of producing fresh water, which comprises

(1) diverting a mass of water from a sea wave into a confined hollow space while simultaneously transforming into kinetic energy the sum of potential and kinetic energies which said mass of water possessed while it was part of said sea wave,

(2) directing said diverted water and kinetic energy against a volume of air contained within a confined space whereby to trap said air within a thermally insulated portion of said space and to compress it adiabatically, in direct contact with said mass of water, at the expense of the kinetic energy of said mass,

(3) securing the greater part of said compressed air against rearward expansion after the instant when said mass of water has spent all its kinetic energy, then

(4) expanding a portion of the compressed air through a throttle into a zone of lesser pressure, and

(5) collecting the moisture which is precipitated near the throttle.

3,127,331

REVERSE CURRENT ELECTROLYTIC PROCESS

Byron W. Neher, Hudson, Wis., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed June 15, 1959, Ser. No. 820,254
6 Claims. (Cl. 204—18)

1. A process for reversing current flow through light struck areas of a photoconductive layer which comprises electrolyzing a conductive solution containing ions of a metal capable of being electrolytically reduced to the free metal state, the cathode being an electrically conductive sheet containing said photoconductive layer bonded to one electrically conductive contiguous surface thereof, thereby selectively depositing free metal on those light struck portions of the photoconductive layer and differentially destroying the rectification properties of the light struck portions of the photoconductive layer, and subsequently carrying out another electrolytic reaction with said electrically conductive sheet as anode.

3,127,332

REPRODUCTION PROCESS

Leon O. Bonrud, Minneapolis, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed May 12, 1961, Ser. No. 109,529
6 Claims. (Cl. 204—18)

2. A process for preparing a visible image on the surface of a photoconductor sheet material in which the photoconductor is supported on a backing material to which has been added an electrically conductive and radiation absorbing film, said film having a thickness of

0.01 to 0.2 micron, which comprises exposing the photoconductor surface to a light source to render the entire surface photoconductive; applying a heat image to the photoconductor, thereby destroying the photoconductivity of the photoconductor in the pre-selected heated areas and subsequently developing an image on the photoconductor surface by means of an electrical current.

3,127,333
REPRODUCTION SYSTEM

Leon O. Bonrud, Minneapolis, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

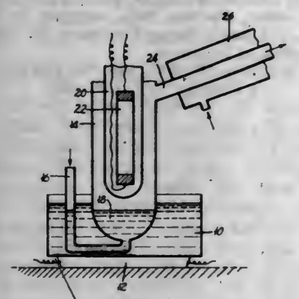
Filed May 29, 1961, Ser. No. 113,290
16 Claims. (Cl. 204—18)

9. A process for making a reproduction which comprises exposing to a light image a reproduction receptor consisting essentially of an opaque substrate containing a continuous laterally-conductive metal layer thereon, an intermediate photoconductive layer conductively bonded to said metal layer, and a subsequent radiation penetrable solid conductive layer substantially coextensively overlying and conductively bonded to said photoconductive layer having more conductivity in at least one polarity direction than said photoconductive layer comprising granular conductive material uniformly disposed laterally throughout said subsequent layer to create a latent image on said receptor, wetting the surface of the receptor with an aqueous electrolyte solution containing a developer material, creating an electrical potential between the metal layer of said receptor and said aqueous electrolyte solution to produce a current and thereby visibly developing said latent image as a reproduction on said receptor.

3,127,334
PRODUCTION OF LOWER VALENCE STATE HALIDES AND OXYHALIDES

Karl H. Heffels, Buffalo, N.Y., assignor to Union Carbide Corporation, a corporation of New York

Filed July 24, 1959, Ser. No. 829,330
4 Claims. (Cl. 204—157)



1. A process for the production of a compound selected from the group consisting of halides and oxyhalides of a metal selected from Groups IVB, VB, and VIB of the periodic table of the elements, which comprises contacting a higher valence state compound corresponding to the selected-group member with gaseous hydrogen at a temperature substantially lower than the temperature necessary for the reactants to react spontaneously but above the condensation temperature of the reactants; subjecting said gaseous mixture to ultraviolet radiation having a maximum wave length defined by the equation:

$$\lambda_{Max}=\frac{hcN}{\Delta H}=\frac{K}{\Delta H}$$

wherein

ΔH=the molar enthalpy of the reaction
h=Planck's constant
c=the velocity of light
N=Avogadro's number
λ_{Max}=the maximum useable wave length of radiation

and

K=constant=2.87×10^5 kcal.-A.-mole^{-1}

for a time sufficient to provide the amount of energy equivalent to the enthalpy of reaction at the temperature of the reaction.

3,127,335
PROCESS FOR PREPARING ACI-AROMATIC NITRO COMPOUNDS

George Henry Dorion, New Canaan, and Kay Oesterle Loeffler, Norwalk, Conn., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine

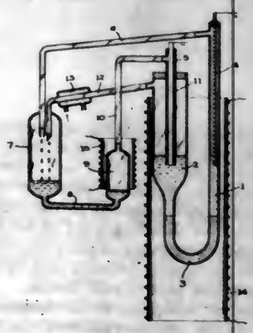
No Drawing. Filed June 22, 1962, Ser. No. 204,635
4 Claims. (Cl. 204—158)

1. A process for the preparation of an aci-aromatic nitromethane adapted for use as a reversible light-sensitive photochromic additive to substantially colorless polymeric materials which comprises: irradiating an aromatic nitromethane in the presence of ultraviolet light from about 2500 A. units to about 4000 A. units at temperatures within the range from about minus (—) 40° C. to about minus (—) 100° C. for from about five minutes to not more than one hour, and recovering the corresponding aci-aromatic nitromethane indefinitely stable at the aforementioned temperature range, but convertible to its original form at room temperature.

3,127,336
PROCESS OF ISOTOPE SEPARATION BY COUNTER-CURRENT ELECTROMIGRATION IN FUSED SALTS

Marius Salomon Chemla, Maisons Alfort, France, assignor to Commissariat a l'Energie Atomique, Paris, France

Filed Nov. 20, 1959, Ser. No. 854,475
Claims priority, application France Nov. 24, 1958
6 Claims. (Cl. 204—180)

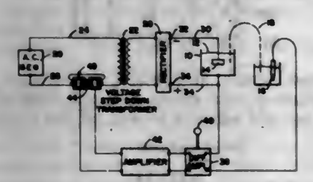


1. In a process for the separation of isotopic cations by electromigration in a bath of a fused salt of the cations conducted in an anode compartment and a cathode compartment separated by a diaphragm using a fused salt countercurrent from the cathode to the anode, the steps of mixing with the salt before electromigration another salt having the same anion as that associated with the isotopic cations and having a cation of substantially the same mobility as the isotopic cations to be separated, and continuously collecting the anions which appear at the anode and continuously recirculating the anions from the anode to the cathode in a closed circuit.

3,127,337
ANODIC PASSIVATION SYSTEM

Norman L. Conger, 939 N. 4th St., and Olen L. Riggs, Jr., 342 S. Oak, both of Ponca City, Okla.

Filed Jan. 7, 1960, Ser. No. 1,135
6 Claims. (Cl. 204—196)

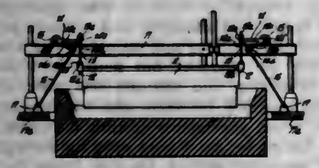


1. A system of anodically polarizing a vessel adopted to contain a corrosive solution, the combination of a source of electrical energy, a load connected across said source of energy, an electrode secured in the vessel in communication with the corrosive solution, a standard electrode communicating with the solution in the vessel, said load comprising the said electrode, the corrosive solution, and the vessel, said source of electrical energy being connected to said load such that said vessel will have a positive potential and said electrode will have a negative potential, current regulating means, said current regulating means connected in series with said load, a differential amplifier means having a first and second input, said standard electrode connected to said first input, said vessel connected to said second input, means connecting the output of said differential amplifier means to said current regulating means whereby variation in the potential between said first and second input results in corresponding change in potential at the output of said differential amplifier means, said output potential causing a proportional change in the resistance of said current regulating means thereby varying the current through the load.

3,127,338
SUSPENSION OF ANODIC CASINGS IN CELLS FOR THE ELECTROLYTIC PRODUCTION OF ALUMINUM

Giovanni Mantovanello, Bolzano, and Silverio Bruni, Milan, Italy, assignors to Montecatini Societa Generale per l'Industria Mineraria e Chimica, Milan, Italy

Filed Mar. 23, 1959, Ser. No. 801,266
Claims priority, application Italy Mar. 25, 1958
1 Claim. (Cl. 204—225)

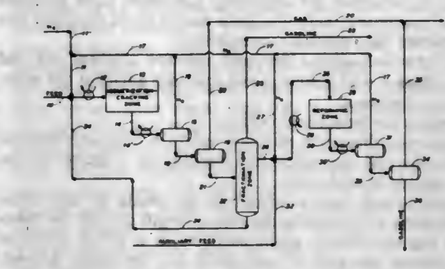


In an apparatus for recovering metal by electrolysis in a fused bath, including a pot structure constituting a cathode, an anode of the continuous type, a casing for said anode mounted independently of said pot structure for vertical movement relative thereto, a vertically movable suspension beam above said casing, and contact rods suspending said anode from said beam; a suspension system for supporting said anodic casing from said beam and capable of maintaining said casing approximately at a desired constant position of elevation relative to said pot structure during vertical displacements of said anode and of said suspension beam, said system comprising mechanical linking means fixedly attached at one connecting location thereof to said casing and at another connecting location thereof to a fixed location apart from said beam, and guide means fixed to said beam and operably associated with said linking means so as to maintain said constant position of said casing and limit vertical movement of said beam to a maximum predetermined distance equal to the maximum vertical distance between said connecting locations of said linking means, said mechanical linking means comprising rod means hingedly attached at one end thereof to a fixed base to form said other connecting location, lever means defining three pivot points and pivotally attached at a first of said pivot points to the other end of said rod means, stay rod means pivotally connected to said casing to form said one connecting location, bushing means slidable on said stay rod means, said lever means being pivotally attached at a second of said pivot points to said bushing means, said guide means comprising journal means fixedly attached to said anodic beam and forming a connection thereon for journalling said lever means at the third pivot point thereof.

3,127,339
HYDROCARBON HYDROCRACKING PROCESS WITH LONG ON-STREAM PERIOD

John W. Scott, Jr., Ross, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

Filed Dec. 28, 1961, Ser. No. 165,059
1 Claim. (Cl. 208—111)



In a process for hydrocracking a hydrocarbon feed stock to produce gasoline, which comprises passing said stock along with at least 1500 s.c.f. of hydrogen per barrel thereof, through a catalyst comprising at least one hydrogenating-dehydrogenating component intimately associated with an active cracking catalyst support in a hydrocracking zone for a given on-stream period, said zone being maintained at a pressure of at least 600 p.s.i.g., and recovering said gasoline from the effluent from said zone, the improvement which comprises: (*a*) selecting as said feed stock a stock containing from 10 to 50 parts per million nitrogen; (*b*) initiating said hydrocracking at the beginning of said on-stream period at a temperature between 400° and 600° F.; (*c*) using as said catalyst a catalyst having a hydrogenating-dehydrogenating component comprising nickel sulfide; (*d*) carrying out said hydrocracking at a substantially constant conversion of said feed of above 50 volume percent to products boiling below the initial boiling point of said feed; (*e*) continuing said on-stream period for at least several thousand hours; (*f*) continuing said hydrocracking at an average temperature between about 400° and 700° F. during at least the first half of said on-stream period; (*g*) continuing said hydrocracking at an average temperature between about 700° and 875° F. during any remaining portion of said period; (*h*) raising said average temperature as necessary during at least said first half of said period to maintain said substantially constant conversion; (*i*) recovering

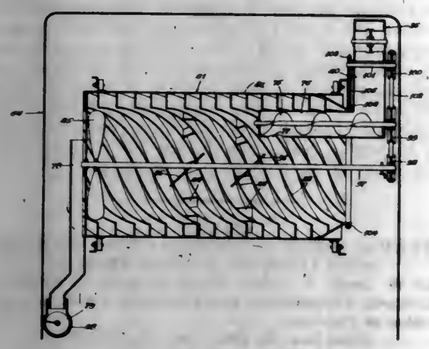
from the effluent from said hydrocracking zone said gasoline having a boiling range essentially below the initial boiling point of said feed and having a high octane rating.

3,127,340

GRAIN SEPARATOR FOR COMBINE

Ernest M. Van Buskirk, East Moline, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey

Continuation of application Ser. No. 731,213, Apr. 28, 1958. This application Nov. 6, 1961, Ser. No. 151,593
2 Claims. (Cl. 209—152)



1. A structure for removing unwanted light particles from a mixture including both heavy grain particles and unwanted light particles, comprising:

a rotor including a first exit aperture adjacent one end thereof and a second exit aperture adjacent the other end thereof,

means for turning said rotor,

means defining an entrance aperture disposed between said exit apertures for feeding the mixture to the inside of said rotor,

spiral track means affixed to the inside of said rotor along substantially the entire length thereof for feeding said heavy grain particles in a given direction along the axis of said rotor for discharge through said second exit aperture,

blower means, mounted within said rotor at said other end, for delivering a current of air through said rotor in a direction substantially opposite said given direction to force the unwanted light particles out through said first exit aperture, said spiral track means including a plurality of dam members spaced intermittently therearound to assist in raising the mixture of grain particles and unwanted particles, thereby causing the mixture of particles to fall through said current of air and enable the blower means to force said unwanted light particles out through said first exit aperture,

at least one angularly disposed member positioned within said rotor and means for supporting said member centrally within the rotor to deflect the falling grain particles toward said second exit aperture.

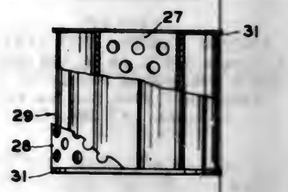
3,127,341

FILTER

James D. Abeles, Mendham, N.J., assignor to Purolator Products, Inc., Rahway, N.J., a corporation of Delaware

Filed Sept. 24, 1959, Ser. No. 842,071
3 Claims. (Cl. 210—493)

1. A filter element comprising an annulus of resin impregnated pleated paper, said paper consisting of two different densities to provide high and low flow rate sections, said annulus formed of a continuous sheet of paper, said pleats extending longitudinally of the annulus and



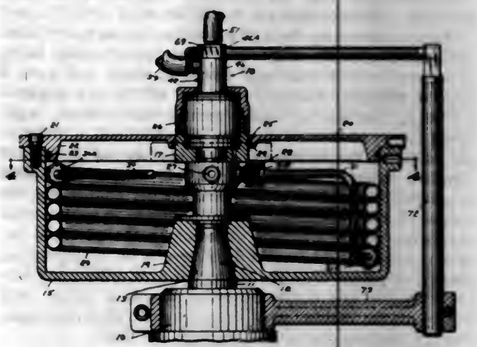
being of equal length, an adhesive deposited on the longitudinal edges of said pleats, and end discs secured to said edges by said adhesive to seal off the annulus ends.

3,127,342

CONTINUOUS FLOW CENTRIFUGE APPARATUS

David F. Mitchell, Tewksbury, Mass., assignor to International Equipment Company, Boston, Mass., a corporation of Massachusetts

Filed Jan. 15, 1962, Ser. No. 166,038
6 Claims. (Cl. 233—21)



1. In a continuous flow centrifuge of the type having a basket into which and from which liquid is to be circulated via concentric passageways axially of the basket when connected to exterior delivery and return conduits, respectively, a device axially of said basket and comprising rotor and stator sections, said rotor section being connected to said basket to rotate therewith and having a chamber and including a lower housing member and a cover threaded thereon, the lower end of said member being within said basket when the rotor section is connected thereto, said chamber having an annular shoulder above its bottom, a delivery port opening into the chamber below said shoulder, and a return port opening into said chamber above said shoulder, and a ball bearing unit within the chamber but above said shoulder rotatably connecting said sections, the outer race of said unit being clamped between said housing member and said cover, and said stator section including a conduit member having an axial bore opening through its lower end and provided with a circular flange between said shoulder and said unit, the upper end of said conduit member being above said rotor section, and a tubular member in said axial bore opening into said chamber below said shoulder, the upper end of said conduit member having a delivery port opening into said tubular member for connection to said delivery conduit, said tubular member and said chamber below said shoulder being the fluid delivery passageway, said conduit member having return ports in communication with said axial bore, one opening into said chamber above said shoulder and the other being above said rotor section for connection to said return conduit, said axial bore and said tubular member being dimensioned, in a zone inclusive of said return ports, to provide a conduit defining clearance, said zone and said chamber above the shoulder being the fluid return passageway.

3,127,343

INVERT EMULSION WELL FLUID

William A. Reddie and Charles O. Bundrant, Houston, Tex., assignors to Magnet Cove Barium Corporation, Houston, Tex.

No Drawing. Filed July 28, 1960, Ser. No. 45,819
16 Claims. (Cl. 252—8.5)

1. An invert emulsion well fluid comprising about 10 to 90 volume percent of an aqueous phase dispersed in about 90 to 10 percent of oil phase; a polymerized polybasic fatty acid pitch, and an adduct made by adducting polymerized polybasic fatty acid pitch with about ¼ to ¾ its weight of ethylene oxide, in proportion equivalent to about 5 to 75 percent of the total weight of the pitch and adduct, said pitch and adduct being present in quantity sufficient to emulsify the phases; tall oil to an extent of about 5 to 10 percent of the total weight of pitch and adduct; a basic material selected from the group consisting of magnesium oxide, magnesium hydroxide and magnesium carbonate, in quantity sufficient to form soaps with all free fatty acids present; and about 0.03 to 1.6 pounds per barrel of a salt of a tetra alkyl substituted ammonium radical in which at least one of the alkyl groups is a hydrocarbon residue of a fatty acid having from 8 to 18 carbon atoms per molecule adsorbed on about 4 to 8 times its weight of attapulgite.

3,127,344

DRILLING FLUIDS CONTAINING METHYLOL PHENOL DERIVATIVES

Melvin De Groote, St. Louis, and Kwan-ting Shen, Brentwood, Mo., assignors to Petrolite Corporation, a corporation of Delaware

No Drawing. Original application May 12, 1960, Ser. No. 28,514. Divided and this application Apr. 11, 1961, Ser. No. 102,092
16 Claims. (Cl. 252—8.5)

1. A drilling fluid for wells containing an emulsion of water and oil, a finely divided solid weighting material dispersed in said emulsion, and a minor amount of a member selected from the group consisting of:

(1) acylated, (2) oxyalkylated, (3) acylated then oxyalkylated, (4) oxyalkylated then acylated, (5) acylated, then oxyalkylated and then acylated, monomeric polyaminomethyl phenols characterized by reacting a preformed methylol phenol having one to four methylol groups in the 2, 4, 6 position with a polyamine containing at least one secondary amine group in amounts of at least one mole of secondary polyamine per equivalent of methylol group on the phenol until one mole of water per equivalent of methylol group is removed, in the absence of an extraneous catalyst; and then reacting the thus formed monomeric polyaminomethyl phenol with a member selected from the group consisting of (1) an acylation agent, (2) an oxyalkylation agent, (3) an acylation then an oxyalkylation agent, (4) an oxyalkylation then an acylation agent, and (5) an acylation then an oxyalkylation and then an acylation agent, the preformed methylol phenol having only functional groups selected from the class consisting of methylol groups and phenolic groups, the polyamine having only functional groups selected from the class consisting of primary amino groups, secondary amino groups and hydroxyl groups, the acylation agent having up to 40 carbon atoms and being selected from the class consisting of unsubstituted carboxylic acids, unsubstituted hydroxy carboxylic acids, unsubstituted acylated hydroxy carboxylic acids, lower alkanol esters of unsubstituted carboxylic acids, glycerides of unsubstituted carboxylic acids, unsubstituted carboxylic acid chlorides and unsubstituted carboxylic acid anhydrides, and the oxyalkylation agent being selected from the class consisting of alpha-beta alkylene oxides and styrene oxide.

3,127,345

TREATMENT OF OIL WELLS AND OIL WELL EQUIPMENT EMPLOYING METHYLOL PHENOL DERIVATIVES

Melvin De Groote, St. Louis, and Kwan-ting Shen, Brentwood, Mo., assignors to Petrolite Corporation, a corporation of Delaware

No Drawing. Original application May 12, 1960, Ser. No. 28,514. Divided and this application Apr. 11, 1961, Ser. No. 102,094
20 Claims. (Cl. 252—8.55)

1. A process for injecting water into an underground formation characterized by employing an aqueous solution of a member selected from the group consisting of: (1) acylated, (2) oxyalkylated, (3) acylated then oxyalkylated, (4) oxyalkylated then acylated, (5) acylated then oxyalkylated and then acylated, monomeric polyaminomethyl phenols characterized by reacting a preformed methylol phenol having one to four methylol groups in the 2, 4, 6 position with a polyamine containing at least one secondary amine group in amounts of at least one mole of secondary polyamine per equivalent of methylol group on the phenol until one mole of water per equivalent of methylol group is removed, in the absence of an extraneous catalyst; and then reacting the thus formed monomeric polyaminomethyl phenol with a member selected from the group consisting of (1) an acylation agent, (2) an oxyalkylation agent, (3) an acylation then an oxyalkylation agent, (4) an oxyalkylation then an acylation agent, and (5) an acylation then an oxyalkylation and then an acylation agent, the preformed methylol phenol having only functional groups selected from the class consisting of methylol groups and phenolic hydroxyl groups, the polyamine having only functional groups selected from the class consisting of primary amino groups, secondary amino groups and hydroxyl groups, the acylation agent having up to 40 carbon atoms and being selected from the class consisting of unsubstituted carboxylic acids, unsubstituted hydroxy carboxylic acids, unsubstituted acylated hydroxy carboxylic acids, lower alkanol esters of unsubstituted carboxylic acids, glycerides of unsubstituted carboxylic acids, unsubstituted carboxylic acid chlorides and unsubstituted carboxylic acid anhydrides, and the oxyalkylation agent being selected from the class consisting of alpha-beta alkylene oxides and styrene oxide.

5. A method of rendering preferentially oil wettable the oil-bearing siliceous formation surrounding an oil well bore hole characterized by treating said formation with a member selected from the group consisting of: (1) acylated, (2) oxyalkylated, (3) acylated then oxyalkylated, (4) oxyalkylated then acylated, (5) acylated then oxyacylated then oxyalkylated monomeric polyaminomethyl yl phenols characterized by reacting a preformed methylol phenol having one to four methylol groups in the 2,4,6 position with a polyamine containing at least one secondary amine group in amounts of at least one mole of secondary polyamine per equivalent of methylol group on the phenol until one mole of water per equivalent of methylol group is removed, in the absence of an extraneous catalyst; and then reacting the thus formed monomeric polyaminomethyl phenol with a member selected from the group consisting of (1) an acylation agent, (2) an oxyalkylation agent, (3) an acylation then an oxyalkylation agent, (4) an oxyalkylation then an acylation agent, and (5) an acylation then an oxyalkylation and then an

acylation agent, the preformed methylol phenol having only functional groups selected from the class consisting of methylol groups and phenolic hydroxyl groups, the polyamine having only functional groups selected from the class consisting of primary amino groups, secondary amino groups and hydroxyl groups, the acylation agent having up to 40 carbon atoms and being selected from the class consisting of unsubstituted carboxylic acids, unsubstituted hydroxy carboxylic acids, unsubstituted acylated hydroxy carboxylic acids, lower alkanol esters of unsubstituted carboxylic acids, glycerides of unsubstituted carboxylic acids, unsubstituted carboxylic acid chlorides and unsubstituted carboxylic acid anhydrides, and the oxyalkylation agent being selected from the class consisting of alpha-beta alkylene oxides and styrene oxide.

9. A process for the removal of the mud sheaths from geological formations penetrated in the drilling of wells characterized by applying thereto a member selected from the group consisting of: (1) acylated, (2) oxyalkylated, (3) acylated then oxyalkylated, (4) oxyalkylated then acylated, (5) acylated then oxalkylated and then acylated, monomeric polyaminomethyl phenols characterized by reacting a preformed methylol phenol having one to four methylol groups in the 2,4,6 position with a polyamine containing at least one secondary amine group in amounts of at least one mole of secondary polyamine per equivalent of methylol group on the phenol until one mole of water per equivalent of methylol group is removed, in the absence of an extraneous catalyst; and then reacting the thus formed monomeric polyaminomethyl phenol with a member selected from the group consisting of (1) an acylation agent, (2) an oxyalkylation agent, (3) an acylation then an oxyalkylation agent, (4) an oxyalkylation then an acylation agent, and (5) an acylation then an oxyalkylation and then an acylation agent, the preformed methylol phenol having only functional groups selected from the class consisting of methylol groups and phenolic hydroxyl groups, the polyamine having only functional groups selected from the class consisting of primary amino groups, secondary amino groups and hydroxyl groups, the acylation agent having up to 40 carbon atoms and being selected from the class consisting of unsubstituted carboxylic acids, unsubstituted hydroxy carboxylic acids, unsubstituted acylated hydroxy carboxylic acids, lower alkanol esters of unsubstituted carboxylic acids, glycerides of unsubstituted carboxylic acids, unsubstituted carboxylic acid chlorides and unsubstituted carboxylic acid anhydrides, and the oxyalkylation agent being selected from the class consisting of alpha-beta alkylene oxides and styrene oxide.

13. A method for treating an earth formation penetrated by the bore of a well characterized by forming a slurry of a particulated solid material in a pumpable emulsion comprising water, oil, and an emulsifying agent, introducing said slurry into the well so as to bring it in contact with the earth formation to be treated, and applying sufficient pressure to fracture the earth formation, said particulated solid remaining suspended in the emulsion and said emulsion remaining unresolved until injected into the earth formation and therein breaking to release the particulated solid material from suspension in the emulsion and depositing the particulated solid in the earth formation, said emulsifying agent comprising a member selected from the group consisting of: (1) acylated, (2) oxyalkylated, (3) acylated then oxyalkylated, (4) oxyalkylated then acylated, (5) acylated then oxyalkylated and then acylated, monomeric polyaminomethyl phenols characterized by reacting a preformed methylol phenol having one to four methylol groups in the 2,4,6 position with a polyamine containing at least one secondary amine group in amounts of at least one mole of secondary polyamine per equivalent of methylol group on the phenol until one mole of water per equivalent of methylol group is removed, in the absence of an extraneous catalyst; and then reacting the thus formed monomeric polyaminomethyl phenol with a member selected from the group consisting of (1) an acylation agent, (2) an oxyalkylation agent, (3) an acylation then an oxyalkylation agent, (4) an oxyalkylation then an acylation agent, and (5) an acylation then an oxyalkylation and then an acylation agent, the preformed methylol phenol having only functional groups selected from the class consisting of methylol groups and phenolic hydroxyl groups, the polyamine having only functional groups selected from the class consisting of primary amino groups, secondary amino groups and hydroxyl groups, the acylation agent having up to 40 carbon atoms and being selected from the class consisting of unsubstituted carboxylic acids, unsubstituted hydroxy carboxylic acids, unsubstituted acylated hydroxy carboxylic acids, lower alkanol esters of unsubstituted carboxylic acids, glycerides of unsubstituted carboxylic acids, unsubstituted carboxylic acid chlorides and unsubstituted carboxylic acid anhydrides, and the oxyalkylation agent being selected from the class consisting of alpha-beta alkylene oxides and styrene oxide.

17. A process for removing deposits of organic matter from oil well equipment characterized by applying thereto a member selected from the group consisting of: (1) acylated, (2) oxyalkylated, (3) acylated then oxyalkylated, (4) oxyalkylated then acylated, (5) acylated then oxyalkylated and then acylated, monomeric polyaminomethol phenols characterized by reacting a preformed methylol phenol having one to four methylol groups in the 2,4,6 position with a polyamine containing at least one secondary amine group in amounts of at least one mole of secondary polyamine per equivalent of methylol group on the phenol until one mole of water per equivalent of methylol group is removed, in the absence of an extraneous catalyst; and then reacting the thus formed monomeric polyaminomethyl phenol with a member selected from the group consisting of (1) an acylation agent, (2) an oxyalkylation agent, (3) an acylation then an oxyalkylation agent, (4) an oxyalkylation then an acylation agent, and (5) an acylation then an oxyalkylation and the an acylation agent, the preformed methylol phenol having only functional groups selected from the class consisting of methylol groups and phenolic hydroxyl groups, the polyamine having only functional groups selected from the class consisting of primary amino groups, secondary amino groups and hydroxyl groups, the acylation agent having up to 40 carbon atoms and being selected from the class consisting of unsubstituted carboxylic acids, unsubstituted hydroxy carboxylic acids, unsubstituted acylated hydroxy carboxylic acids, lower alkanol esters of unsubstituted carboxylic acids, glycerides of unsubstituted carboxylic acids, unsubstituted carboxylic acid chlorides and unsubstituted carboxylic acid anhydrides, and the oxyalkylation agent being selected from the class consisting of alpha-beta alkylene oxides and styrene oxide.

3,127,346
DRY LUBRICANT COMPOSITION AND A METHOD FOR ITS APPLICATION

Curtis S. Oliver and Arthur J. Haltner, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York

Filed Mar. 23, 1960, Ser. No. 19,978
2 Claims. (Cl. 252—25)

1. A method for applying a dry lubricant to a metal surface capable of forming a sulfide comprising the steps of:

(*a*) coating the portion of the metal surface to be lubricated with a film composed of at least one material chosen from the group consisting of Sb_2S_3, PtS, red HgS, Ag_2S, PbS, FeS, Tl_2S_3, Cu_2S, CuS, Au_2S, Bi_2S_3, S, SnS_2, black HgS, Tl_2S_3, Cr_2S_3, CaS, BaS and CdS, and

(*b*) overlaying said film with a coating of at least one material chosen from the group consisting of MoS_2, WS_2, ZrS_2, and TiS_2,

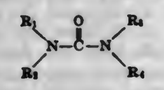
the material chosen for said film being less thermodynamically stable than the material chosen for said coating and also less thermodynamically stable than the sulfide of said metal surface.

3,127,347
LUBRICATING COMPOSITION

Raymond A. Franz, El Dorado, Ark., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed May 20, 1960, Ser. No. 30,431
4 Claims. (Cl. 252—28)

1. A lubricating grease consisting essentially of a major amount of a tetraalkyl urea having the formula



wherein R_1, R_2, R_3 and R_4 represent alkyl radicals containing at least 2 carbon atoms and not more than 18 carbon atoms, thickened to grease-like consistency with a minor amount of a thickening agent.

3,127,348
OVER-BASED CALCIUM-CONTAINING DETERGENT INHIBITORS

Joseph Versteeg, Roselle, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed June 30, 1961, Ser. No. 120,918
3 Claims. (Cl. 252—32.7)

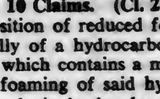
1. An improved process for the preparation of a detergent inhibitor for mineral oil compositions which comprises reacting, at a temperature in the range of about 60 to 190° F. a hydrocarbon oil solution of a phosphosulfurized hydrocarbon and a phenolic compound selected from the group consisting of alkyl phenols having molecular weights in the range of 200 to 700 and sulfides of said alkyl phenols with a base selected from the group consisting of calcium oxide and calcium hydroxide, in an amount sufficient to furnish a ratio of calcium equivalents to phosphosulfurized hydrocarbon equivalents in the range of from about 3 to 1 to about 11 to 1, and thereafter with carbon dioxide, in the presence of a nitrogen base selected from the group consisting of ammonium hydroxide and aliphatic amines of from 1 to 4 carbon atoms, said nitrogen base being present in an amount to provide a weight ratio of nitrogen to calcium of at least 0.02 to 1, the amount of carbon dioxide employed being in the range of from about 80 to about 95 percent of the amount theoretically required to convert the calcium to calcium carbonate, the reaction product being dehydrated and then filtered subsequent to said treatment with carbon dioxide.

3,127,349
LUBRICATING OIL COMPOSITIONS HAVING A HIGH VISCOSITY INDEX

Jack Rockett, Westfield, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Sept. 29, 1961, Ser. No. 141,578
5 Claims. (Cl. 252—32.7)

1. A composition of matter comprising a major portion of mineral lubricating oil, 1 to 8 wt. percent of a polymeric viscosity index improver selected from the group consisting of oil soluble (*a*) homopolymers of ethylenically unsaturated esters of C_2 to C_6 mono- and dicarboxylic acids and C_2 to C_{20} alcohols, (*b*) polyisobutylenes, (*c*) polyvinyl ethers, (*d*) copolymers of 2-N-vinyl pyrollidone and at least one monomer selected from the group consisting of ethylenically unsaturated esters of C_2 to C_6 mono- and dicarboxylic acids and C_2 to C_{20} alcohols, (*e*) copolymers of maleic anhydride and at least one monomer selected from the group consisting of ethylenically unsaturated esters of C_2 to C_6 mono- and dicarboxylic acids and C_2 to C_{20} alcohols, and (*f*) copolymers of at least two different monomers selected from the group consisting of ethylenically unsaturated esters of C_2 to C_6 mono- and dicarboxylic acids and C_2 to C_{20} alcohols; 0.5 to 6.0 wt. percent of a metal salt lubricating oil detergent selected from the group consisting of neutral and basic alkali metal, alkaline earth metal and heavy metal salts of oil-soluble petroleum sulfonates, synthetic alkyl aryl sulfonates, alkyl phenates, alkyl phenate sulfides and reaction products of raid basic metal salts with phosphosulfurized olefin polymers; and 0.1 to 5.0 wt. percent of a compound selected from the group consisting of:



wherein R comprises a divalent aliphatic hydrocarbon group containing 0 to 4 carbon atoms and R′ comprises an alkyl radical containing 1 to 3 carbon atoms; and

$$N{\equiv}C{-}R{-}C{\equiv}N$$

wherein R comprises a divalent aliphatic hydrocarbon group containing 1 to 3 carbon atoms.

3,127,350
WHITE OIL STABILIZER

Oliver C. Kerfoot, New Orleans, La., and Irwin R. Superaw, Shawnee, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

No Drawing. Filed May 23, 1960, Ser. No. 31,222
3 Claims. (Cl. 252—35)

1. A composition of matter consisting essentially of a colorless and odorless white mineral oil free of unsaturated and aromatic hydrocarbons containing from about 0.005% to 0.1% of zinc 2-ethylhexoate.

3,127,351
CYCLOPENTADIENYL MANGANESE TRICARBONYL-CONTAINING FUELS, LUBES AND ADDITIVE FLUIDS

Jerome E. Brown and Earl G. De Witt, Baton Rouge, and Hymin Shapiro, East Baton Rouge, La., assignors to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed July 3, 1963, Ser. No. 292,738
26 Claims. (Cl. 252—49.7)

12. A liquid hydrocarbon crankcase lubricating oil containing a cyclopentadienyl manganese tricarbonyl compound in amount sufficient to improve the operating characteristics of a spark ignition internal combustion engine.

3,127,352
ANTI-FOAMER

Fred J. Stark, Jr., St. Louis, and Keith S. Eckberg, Sr., Ferguson, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

Filed May 29, 1959, Ser. No. 816,741
10 Claims. (Cl. 252—52)

1. A composition of reduced foaming properties consisting essentially of a hydrocarbon liquid having foaming tendencies which contains a minor amount, sufficient to reduce the foaming of said hydrocarbon liquid, of a polymer of a polyvinyl ether having a molecular weight

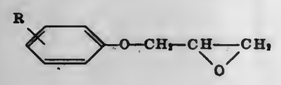
of at least about 150,000 wherein the radical on the ether group contains a member selected from the class consisting of a branched aliphatic group, an aryl group and a cycloaliphatic group.

3,127,353
LUBRICATING COMPOSITIONS

Ernst Roos, Leverkusen, Friedrich Lober, Leverkusen-Bayerwerk, and Walther Lohmar, Mulheim (Ruhr), Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed July 10, 1959, Ser. No. 826,124
4 Claims. (Cl. 252—52)

1. A lubricating composition comprising a major amount of a lubricant and 0.1–5% by weight of an arylglycide ether of the general formula



wherein R stands for an alkyl radical containing at least 12 carbon atoms.

3,127,354
PROCESS FOR INHIBITING FOAM EMPLOYING METHYLOL PHENOL DERIVATIVES

Melvin De Groote, St. Louis, and Kwan-ting Shen, Brentwood, Mo., assignors to Petrolite Corporation, a corporation of Delaware

No Drawing. Original application May 12, 1960, Ser. No. 28,514. Divided and this application Apr. 10, 1961, Ser. No. 101,626
12 Claims. (Cl. 252—321)

1. A process for inhibiting foam characterized by subjecting a foaming composition to a member selected from the group consisting of:

(1) acylated, (2) oxyalkylated, (3) acylated then oxyalkylated, (4) oxyalkylated then acylated, (5) acylated, then oxyalkylated and then acylated, monomeric polyaminomethyl phenols characterized by reacting a preformed methylol phenol having one to four methylol groups in the 2, 4, 6 position with a polyamine containing at least one secondary amine group in amounts of at least one mole of secondary polyamine per equivalent of methylol group on the phenol until one mole of water per equivalent of methylol group is removed, in the absence of an extraneous catalyst; and then reacting the thus formed monomeric polyaminomethyl phenol with a member selected from the group consisting of (1) an acylation agent, (2) an oxyalkylation agent, (3) an acylation then an oxyalkylation agent, (4) an oxyalkylation then an acylation agent, and (5) an acylation then an oxyalkylation and then an acylation agent the preformed methylol phenol having only functional groups selected from the class consisting of methylol groups and phenolic hydroxyl groups, the polyamine having only functional groups selected from the class consisting of primary amino groups, secondary amino groups and hydroxyl groups, the acylation agent having up to 40 carbon atoms and being selected from the class consisting of unsubstituted carboxylic acids, unsubstituted hydroxy carboxylic acids, unsubstituted acylated hydroxy carboxylic acids, lower alkanol esters of unsubstituted carboxylic acids, glycerides of unsubstituted carboxylic acids, unsubstituted carboxylic acid chlorides and unsubstituted carboxylic acid anhydrides, and the oxalkylation agent being selected from the class consisting of alpha-beta alkylene oxides and styrene oxide.

3,127,355
PREVENTION OF CORROSION

Melvin De Groote, St. Louis, and Kwan-ting Shen, Brentwood, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

No Drawing. Original application May 12, 1960, Ser. No. 28,514. Divided and this application Apr. 10, 1961, Ser. No. 101,628
20 Claims. (Cl. 252—392)

1. A process for inhibiting corrosion of ferrous metals by contact with a corrosive material selected from the class consisting of hydrocarbon fluids, water, brines, weak inorganic acids, organic acids, carbon dioxide, hydrogen sulfide, combinations of these materials with each other, combinations of each of these materials with oxygen, and combinations of these materials with each other and oxygen, which includes treating such ferrous metals with a member selected from the group consisting of:

(1) acylated, (2) oxyalkylated, (3) acylated then oxyalkylated, (4) oxyalkylated then acylated, (5) acylated, then oxyalkylated and then acylated, monomeric polyaminomethyl phenols characterized by reacting a preformed methylol phenol having one to four methylol groups in the 2,4,6 position with a polyamine containing at least one secondary amine group in amounts of at least one mole of secondary polyamine per equivalent of methylol group on the phenol until one mole of water per equivalent of methylol group is removed, in the absence of an extraneous catalyst; and then reacting the thus formed monomeric polyaminomethyl phenol with a member selected from the group consisting of (1) an acylation agent, (2) an oxyalkylation agent, (3) an acylation then an oxyalkylation agent, (4) an oxyalkylation then an acylation agent, and (5) an acylation then an oxyalkylation and then an acylation agent the preformed methylol phenol having only functional groups selected from the class consisting of methylol groups and phenolic hydroxyl groups, the polyamine having only functional groups selected from the class consisting of primary amino groups, secondary amino groups and hydroxyl groups, the acylation agent having up to 40 carbon atoms and being selected from the class consisting of unsubstituted carboxylic acids, unsubstituted hydroxy carboxylic acids, unsubstituted acylated hydroxy carboxylic acids, lower alkanol esters of unsubstituted carboxylic acids, glycerides of unsubstituted carboxylic acids, unsubstituted carboxylic acid chlorides and unsubstituted carboxylic acid anhydrides, and the oxyalkylation agent being selected from the class consisting of alpha-beta alkylene oxides and styrene oxide.

3,127,356
PROCESS FOR THE PREPARATION OF HYDROGENATION CATALYSTS

Jefferson Merritt Hamilton, Jr., Wilmington, Del., and Louis Spiegler, Woodbury, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Jan. 22, 1959, Ser. No. 788,276
4 Claims. (Cl. 22—447)

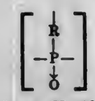
1. In the process of making a hydrogenation catalyst by depositing a compound of a metal taken from the group consisting of platinum, palladium and nickel on an inert support and then reducing said compound to the metal, the improvement wherein at least 25% of an oleophilic carbon, based on the total dry weight of catalyst, said oleophilic carbon having an oil absorption factor of at least 200 is mixed with an aqueous dispersion of said deposited metal at any stage after its deposition on said inert support, said deposited metal being finely divided.

3,127,357
NOVEL PHOSPHONYL POLYMERS

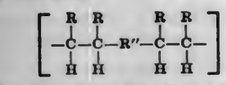
Albert Y. Garner, Springfield, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Oct. 14, 1959, Ser. No. 846,255
6 Claims. (Cl. 260—2)

1. A linear tertiary phosphine oxide polymer consisting essentially of a plurality of recurring structural units, from 40–60% of which correspond to the general formula:



and, correspondingly, from 60–40% of which correspond to the general formula:

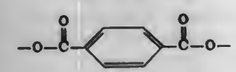


wherein, in the above formulae, R' is a hydrocarbon radical containing from 1–12 carbon atoms, the R groups are radicals independently selected from the group consisting of hydrogen and alkyl radicals containing from 1–4 carbon atoms and R'' is a radical selected from the group consisting of (*a*) alkylene radicals containing from 1–5 carbon atoms, (*b*) arylene radicals containing from 6–14 carbon atoms,

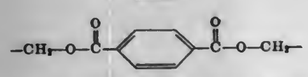
(*c*) —O—

(*d*) —CH_2—O—CH_2—

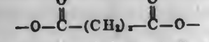
(*e*)



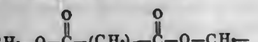
(*f*)



(*g*) radicals corresponding to the general formula:



wherein *x* is an integer of from 1–8, and (*h*) radicals corresponding to the general formula:



wherein *y* is an integer of from 1–8.

3,127,358
POLYMERIZATION OF EPOXIDES

Fred N. Hill, South Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed May 18, 1960, Ser. No. 29,784
7 Claims. (Cl. 260—2)

1. In a process for producing a polymer of a vicinal-monoepoxyhydrocarbon which comprises contacting in a polymerization zone maintained under substantially anhydrous conditions:

(*a*) a vicinal-monoepoxyhydrocarbon monomer free from ethylenic and acetylenic unsaturation,

(*b*) an inert normally-liquid organic vehicle, and

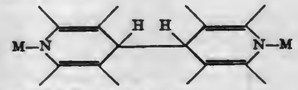
(*c*) a polymerization catalyst, said catalyst having been prepared by the reaction of alkaline earth metal hexammoniate with from about 0.3 to 1.0 mol of olefin oxide and from about 0.2 to 0.8 mol of saturated aliphatic hydrocarbon nitrile, based on 1.0 mol of said alkaline earth metal hexammoniate, said reaction being conducted in an excess liquid ammonia medium, and subsequently evaporating from the resulting product mixture the excess liquid ammonia, whereby a catalytically active product is obtained, the improvement which comprises controlling the molecular weight of said polymer by adding to said polymerization zone immediately after said vicinal-monoepoxyhydrocarbon monomer is brought into contact with said polymerization catalyst, from about 5 to about 100 weight percent saturated aliphatic hydrocarbon nitrile, based on the weight of contained metal in said polymerization catalyst, whereby the molecular weight of said polymer is less than the molecular weight of the polymer produced from the corresponding polymerization system to which no saturated aliphatic hydrocarbon nitrile has been added.

3,127,359
POLY-(HETEROCYCLIC AMINES)

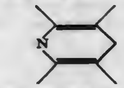
Walter E. Kramer, Niles, and Louis A. Joo, Crystal Lake, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

No Drawing. Filed Dec. 20, 1960, Ser. No. 77,016
20 Claims. (Cl. 260—2)

1. A method of preparing polyamine resins which comprises reacting a dihalo-C_2–C_{20} hydrocarbon with a compound of the formula:



where M is an alkali metal, and



is a heterocyclic amine nucleus, in an inert liquid at 0° to 100° C.

3,127,360
METHOD OF IMPREGNATING SYNTHETIC RESIN PARTICLES WITH A LOWER ALIPHATIC GAS TO RENDER SAID PARTICLES FOAMABLE

James M. Harrison, Fort Worth, Tex., assignor to Crown Machine and Tool Company, Inc., Fort Worth, Tex., a corporation of Texas

No Drawing. Filed June 13, 1961, Ser. No. 116,669
9 Claims. (Cl. 260—2.5)

1. A method for preparing gas impregnated synthetic plastic resin particles with minimal risk of combustion which comprises evacuating oxygen from a contained zone charged with the plastic particles, introducing into said zone an expandable and combustible impregnating lower aliphatic gas, agitating the mixture of combustible gas and plastic particles to allow said combustible gas to impregnate the plastic particles, thereafter introducing into an upper opening of the contained zone a gas inert to combustion and lighter than said combustible gas, and exhausting the combustible gas from a lower opening in the contained zone.

3,127,361
PROCESS FOR PRODUCING POLYMERS OF TRI-O-p-TOLYLSULFONYL-SUCROSE AND POLYMERS OF TETRA-O-p-TOLYLSULFONYL-SUCROSE, AND RESULTING POLYMERS

Louis Long, Jr., Concord, and Erik Vis, Cochituate, Mass., assignors to the United States of America as represented by the Secretary of the Army

No Drawing. Filed Nov. 21, 1960, Ser. No. 70,895
15 Claims. (Cl. 260—9)

1. Process for the production of a polymer, comprising reacting above room temperature a member of the group consisting of tri-O-p-tolylsulfonyl-sucrose and tetra-O-p-tolylsulfonyl-sucrose with a difunctional organic compound copolymerizable therewith and being a member of the group consisting of benzene dithiol, an alkylene diamine having from two to six carbon atoms in the molecule, tolylene diamine, a tolylene diisocyanate, and an alkylene diisocyanate having from six to nine carbon atoms

in its alkylene radical, for a time sufficient to form a solid polymer.

3,127,362
STARCH ESTERS AND PROCESS OF PREPARING SAME

Oscar P. Cohen, Longmeadow, and John F. Heaps, Springfield, Mass., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed July 23, 1957, Ser. No. 673,559
7 Claims. (Cl. 260—17.4)

1. A water-dispersible esterification product of 25–95 weight percent starch and, correspondingly, 75–5 weight percent of an essentially equimolar interpolymer of (*a*) a monomer of the group consisting of maleic anhydride, maleic acid, partial aliphatic alcohol esters of maleic acid and mixtures thereof, and (*b*) a monomer of the group consisting of ethylene, propylene, isobutylene, a monovinylidene aromatic hydrocarbon compound, a vinyl alkyl ether, a vinyl ester of a carboxylic acid and mixtures thereof.

3,127,363
PROCESS FOR THE MANUFACTURE OF ELASTOMERIC ORGANO-POLYSILOXANE PRODUCTS

Siegfried Nitzsche and Manfred Wick, both of Burghausen, Upper Bavaria, Germany, assignors to Wacker-Chemie G.m.b.H., Munich, Germany, a firm of Germany

No Drawing. Filed Aug. 3, 1956, Ser. No. 602,081
Claims priority, application Germany Aug. 5, 1955
33 Claims. (Cl. 260—18)

1. A process for the preparation of a room temperature curing organo-polysiloxane elastomer, which consists in forming a mixture including a non-reactive filler whose sole reactive components are the compounds (A), (B) and (C), wherein (A) comprises the major component and is a linear, difunctional polysiloxane of the formula

$$XO—Si(R)_2—[O—Si(R)_2]_n—O—Si(R)_2—OX$$

wherein R is a member of the group consisting of lower alkyl, aryl and halomethyl aryl groups, and X is a member of the group consisting of hydrogen and R, and *n* is at least 50, (B) is a cross-linking agent which is a polyfunctional compound of the group consisting of (*a*) silanes of the formula R_mSiX_{4-m} wherein R is a monovalent hydrocarbon radical of the group consisting of alkyl and aryl radicals, X is a member of the group consisting of —OH, alkoxy, aryloxy and amino radicals and *m* has a value of from zero to below 2, (*b*) a polysiloxane obtained by polymerizing silane (*a*), (*c*) an organo-polysiloxane resin having a functionality greater than 2 of the group consisting of methyl-siloxanes, ethylsiloxanes, dimethyl-siloxanes, monophenyl siloxanes and polysiloxanes containing a mixture of said groups, (*d*) organo-hydrogen polysiloxanes of the unit formula

$$R_mH_8IO_{\frac{3-m}{2}}$$

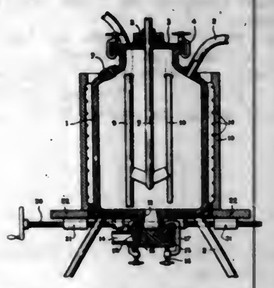
wherein *m* is less than 2 but greater than zero, (*e*) reactive silicic acids, alkoxylated silicic acids and silicic acids having surface oriented —SiH groups, and (*f*) titanium esters and titanium ester polymers, and (C) is a condensation catalyst, shaping the mixture, and allowing the shaped mixture to cure.

3,127,364
PREPARATION OF ALKYD RESINS IN CONTACT WITH SILICA

Paul Ernest Legendre, Ave. de Fontainebleau, Hericy, France; Camille C. A. Le Bozec Legendre, legal representative of said Paul Ernest Legendre, deceased

Filed Mar. 10, 1958, Ser. No. 720,226
Claims priority, application France Aug. 21, 1957
4 Claims. (Cl. 260—22)

1. A method of preparing alkyd resins wherein constituents comprising a polyhydric alcohol, a polycarboxylic acid and a fatty oil are heated at about 200 to



220 degrees C. for a period of time sufficient to form the resin in exclusive contact with substantially pure silica.

3,127,365
ACRYLIC-MODIFIED AMINO POLYAMIDES

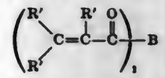
Don E. Floyd, Minneapolis, Minn., assignor to General Mills, Inc., a corporation of Delaware

No Drawing. Filed July 2, 1956, Ser. No. 595,100
4 Claims. (Cl. 260—23)

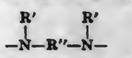
1. The novel cross-linked acrylic adducts of an amino polyamide resulting from the addition product of (1) an amino polyamide resin derived from polymeric fat acids and a polyamine of the general formula

$$H_2NR(NHR)_pNH_2$$

where R is an alkylene radical and *p* is an integer from 1 to 6 and (2) an alpha-beta unsaturated compound having the structural formula



where R' is selected from the group consisting of hydrogen and alkyl radicals and B is selected from the group of nonfunctional organic radicals consisting of



and —O—R''—O— where R'' is an alkylene radical and R' is as defined above.

3,127,366
STABILIZED VINYL CHLORIDE-CONTAINING RESINS

Baruch Zaremsky, South Euclid, Ohio, assignor to Ferro Corporation, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed Oct. 26, 1959, Ser. No. 848,493
9 Claims. (Cl. 260—23)

1. A composition of matter comprising a vinyl chloride containing resin and from 0.01 to 10 parts by weight per 100 parts of said resin of a stabilizer intimately admixed therewith, said stabilizer comprising cadmium 9-hydroxy stearate.

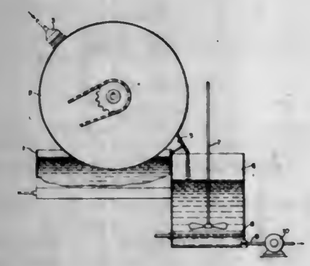
3,127,367
METHOD AND APPARATUS FOR ADDING LATEX TO HOT BITUMEN

Herbert A. Endres, Silver Lake, and Warren W. Burr, West Richfield, Ohio, assignors to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Filed Mar. 14, 1960, Ser. No. 14,642
7 Claims. (Cl. 260—28.5)

1. Apparatus for mixing latex and bitumen comprising a tank for holding a molten bitumen, an endless movable means having an imperforate surface, a portion of which moves into and out of said tank for moving a thin film

of said bitumen from said tank against the force of gravity, means for spraying a controlled amount of latex onto the bitumen film, means for maintaining the film while on the endless movable imperforate surface at about 300° F. to 450° F. and for a sufficient time to evaporate most of the water from the latex added to the bitumen



film to leave a rubberized bitumen mixture upon the endless surface and a means for removing the rubberized bitumen mixture from the endless surface, a second tank for receiving the rubberized bitumen and means for agitating said rubberized bitumen within the second tank whereby a uniform dispersion of the rubber and bitumen is obtained.

3,127,368
PROCESS FOR THE PRODUCTION OF HOMOGENEOUS MIXTURES OF ETHYLENE POLYMERS AND CARBON BLACK

John E. Thomson, Lake Jackson, Tex., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Feb. 29, 1960, Ser. No. 11,426
3 Claims. (Cl. 260—41)

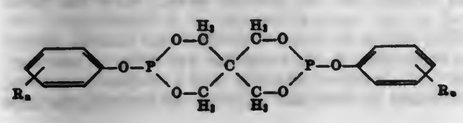
1. In a process for producing ethylene polymers by feeding a stream of ethylene under pressure to a polymerization vessel and polymerizing the ethylene at pressure above about 500 atmospheres and temperature above about 100° C., the improvement which comprises introducing into said vessel a dispersion of carbon black in benzene containing between 2 percent and 12 percent based on the weight of carbon black of a non-ionic surface active agent, withdrawing the resulting mixture from the vessel, separating unreacted ethylene and benzene from the polymer produced, and solidifying the polymer containing carbon black uniformly dispersed therethrough.

3,127,369
STABILIZED POLYPROPYLENE COMPOSITIONS

George W. Warren, Columbus, Ohio, assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Apr. 28, 1960, Ser. No. 25,192
5 Claims. (Cl. 260—43)

1. A propylene resin composition having improved stability toward heat and light induced molecular degradation and being stable toward color development which comprises a normally solid propylene polymer, a stabilizing amount of an A-stage para-tertiaryalkylphenol-formaldehyde resin in which the alkyl group of the para-tertiaryalkylphenol contains from 4 to 20 carbon atoms, and a decolorizing amount of a phosphorus compound having the general formula



wherein each R is individually a monovalent hydrocarbon radical free of aliphatic unsaturation and containing from 1 to 10 aliphatic carbon atoms and *n* is an integer having a value of from zero to 1.

3,127,370
METHOD OF MAKING FIBER-GRADE POLYETHYLENE OVER A CHROMIUM OXIDE CATALYST

Albert J. Head, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed May 28, 1958, Ser. No. 738,486
6 Claims. (Cl. 260—45.5)

1. In a process wherein ethylene is polymerized to normally solid polymer in solution in an inert liquid solvent selected from the group consisting of paraffins and alicyclic hydrocarbons having from 5 to 12 carbon atoms per molecule at a temperature in the range 250 to 400° F. in the presence of a polymerization catalyst comprising chromium oxide supported on at least one material selected from the group consisting of silica, alumina, zirconia and thoria, at least part of the chromium being hexavalent, the improvement which comprises varying the polymerization temperature to effect an average range of temperature variation of between about 3 and about 75 Fahrenheit degrees and a maximum temperature variation of at least 10 Fahrenheit degrees, and commingling the polyethylene polymers formed at the different temperatures to produce a polymer composition which can be readily spun to form fibers, from about 5 to 75 weight percent of said polymer being formed at a temperature in the range of 265 to 285° F.

3,127,371
POLYMERIZATION OF OXIRANE MONOEPOXIDES

Kenneth T. Garty, Somerville, and Thomas B. Gibb, Jr., Murray Hill, N.J., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed July 1, 1959, Ser. No. 824,193
17 Claims. (Cl. 260—47)

1. Method for the production of a polymer of an epoxide compound which comprises polymerizing a monomeric oxirane monoepoxide, which is free of ester, acid, amino and aldehyde groups, in a reaction medium containing at least about 0.01 percent by weight, based on the weight of said monoepoxide, of an organometallic compound having the formula:

$$R_1—Me—R_2$$

wherein R_1 and R_2 are hydrocarbon radicals and Me is a metal of group II of the periodic table, and containing from about 0.01 to about 3 moles of a mono ketone, free of ester, acid, amino and aldehyde groups per mole of said organometallic compound.

3,127,372
STABILIZATION OF POLYOLEFINS

Albert S. Matlack, Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Feb. 10, 1961, Ser. No. 88,313
6 Claims. (Cl. 260—45.75)

1. A stereoregular polymer of an α-olefin selected from the group consisting of propylene, butene-1, pentene-1, 3-methyl butene-1, and 4-methyl pentene-1 containing as a light stabilizer therefor a small amount of a nickel compound selected from the group consisting of bis(8-hydroxyquinoline)nickel complexed with one molecule of the diglycidyl ether of 4,4'-isopropylidenediphenol, bis-(8-hydroxyquinoline)nickel complexed with 3 molecules of pyridine, and bis(8-hydroxyquinoline)nickel complexed

with 2 molecules of an alkylamine in which the alkyl group contains at least 3 carbon atoms.

5. The composition of claim 1 containing also a small amount of a phenolic compound.

3,127,373

POLYOXYALKYLATED PHENOL-KETONE AND PHENOL-ALDEHYDE PHOSPHOROUS CONTAINING RESINS

Alvin Gutag, Bethesda, Md., assignor, by mesne assignments, to Union Carbide Corporation, a corporation of New York

Filed Oct. 17, 1961, Ser. No. 145,575
18 Claims. (Cl. 260—50)

1. A member of the group consisting of phosphite, phosphate and thiophosphate esters of oxyalkylated phenol-aldehyde and phenol-ketone resins, said resins being characterized by etherification of the resin molecule at the phenolic oxygens thereof by at least two divalent oxyalkylene radicals having the formula $(R_1O)_n$ in which R_1 is a member of the group consisting of ethylene radicals, propylene radicals, butylene radicals, hydroxypropylene radicals and hydroxybutylene radicals, *n* is an integer of at least one, the phosphorus is attached to a terminal oxygen of at least one of said divalent radicals and at least a portion of the remainder of said divalent radicals terminating in hydrogen.

3,127,374

PROCESS FOR THE PRODUCTION OF POLYVALENT MACROMOLECULAR ACIDS

Werner Kern, Rolf Schulz, and Irmela Löflund, Mainz, Germany, assignors to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler, Frankfurt am Main, Germany

No Drawing. Filed Jan. 29, 1959, Ser. No. 789,802
Claims priority, application Germany Jan. 31, 1958
4 Claims. (Cl. 260—67)

1. A process for the production of macromolecular polyacrylic acids which comprises treating a polyacrolein having a molecular weight of at least 5000 at a temperature between 60 and 100° C. with a dilute aqueous solution of, as an oxidizing agent, a lower peralkanoic acid.

3,127,375

METHOD FOR PREPARING POLYMER USING A COLUMBIUM COMPOUND AS A CATALYST

Max H. Keck, Cuyahoga Falls, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed Mar. 28, 1961, Ser. No. 98,738
8 Claims. (Cl. 260—75)

1. In a process for preparing a polyester by the self-condensation with the removal of glycol of a bis glycol ester of a dicarboxylic acid, the improvement which comprises carrying out said condensation in the presence of a catalytic amount of a columbium compound.

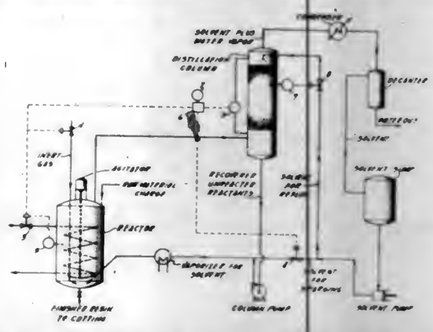
3,127,376

PROCESS FOR PRODUCING POLYESTER RESINS USING A SPARGE OF VAPORIZED, NORMALLY-LIQUID, INERT, WATER-IMMISCIBLE ORGANIC SOLVENT TO MAINTAIN AN ELEVATED BOIL-UP RATE

Abraham Lindenauer, Wallingford, Conn., and Richard N. Housekeeper, Pittsburgh, Pa., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

Filed June 14, 1961, Ser. No. 117,046
10 Claims. (Cl. 260—75)

1. A process for the preparation of a polyester resin comprising heating a polyhydric alcohol and a polycarboxylic acid to the esterification temperature and continuing said heating until the vapor rate, at full heat, begins to decline, thereupon, while continuing full heat, continually introducing a sparge of vaporized, normally-liquid, inert water-immiscible organic solvent having a boiling point below about 150° C. into the reaction vessel, below the liquid level of the reaction mixture, at a continuously controlled rate so as to prevent vapor rate decline, continuing said heating and vapor rate control until



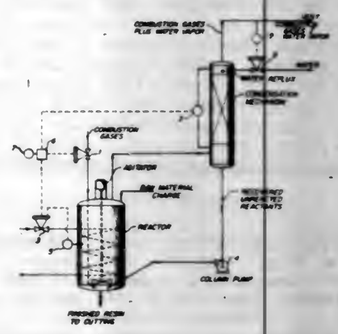
the acid number of the polyester resin is at least below 65, stopping the inert vapor sparge and removing substantially all of the inert organic solvent, wherein the vapor rate leaving the reaction mass, during the reaction cycle, beginning with vapor rate decline at full heat, is maintained at about 30% to about 70% of the reactor content volume per minute, in cubic feet, by means of said sparge.

3,127,377

PROCESS FOR PRODUCING POLYESTER RESINS USING COMBUSTION GASES TO MAINTAIN AN ELEVATED BOIL-UP RATE

Abraham Lindenauer, Wallingford, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

Filed Aug. 17, 1961, Ser. No. 132,049
7 Claims. (Cl. 260—75)



1. A process for the preparation of a polyester resin comprising heating a polyhydric alcohol and a polycarboxylic acid to the esterification temperature and continuing said heating until the vapor rate, at full heat, begins to decline, thereupon, while continuing full heat, continually introducing a sparge of the inert gaseous combustion product of methane which is substantially free of molecular oxygen into the reaction vessel, below the liquid level of the reaction mixture, at a continuously controlled rate so as to prevent vapor rate decline, passing the combustion product together with water of esterification and unreacted reactants into a distillation column, condensing the unreacted reactants and returning the same

to the reaction sphere without condensing the combustion product and water, removing the combustion product and water vapor from the top of the distillation column, continuing said heating of the reactants and vapor rate control until the acid number of the polyester resin is at least below 65, stopping said combustion product sparge and removing substantially all of said combustion product from the polyester resin product, wherein the vapor rate leaving the reaction mass, during the reaction cycle, beginning with vapor rate decline at full heat, is maintained at about 30% to about 70% of the reactor content volume per minute, in cubic feet, by means of said sparge.

3,127,378

REACTION PRODUCTS OF CHLORSULFONIC ACID WITH ACRYLIC POLYMERS

Nicholas D. Cheronis, 5558 Ardmore Ave., Chicago 30, Ill.

No Drawing. Filed May 14, 1958, Ser. No. 735,137
3 Claims. (Cl. 260—79.3)

1. A chlorsulfonated homopolymer having oil-repellent properties, which homopolymer, prior to chlorsulfonation, is liquid at room temperature and is the homopolymer of a monomer selected from the group consisting of acrylic acid, methacrylic acid, alkyl esters of acrylic acid and alkyl esters of methacrylic acid.

3,127,379

NEW VULCANIZED ELASTOMERS DERIVED FROM ALPHA-OLEFIN POLYMERS AND METHODS FOR PRODUCING THE ELASTOMERS

Giulio Natta, Milan, Giovanni Crespi, Busto Arsizio, Varese, and Mario Bruzzone, Milan, Italy, assignors to Montecatini Societa Generale per l'Industria Mineraria e Chimica, a corporation of Italy

No Drawing. Filed Nov. 17, 1958, Ser. No. 774,133
Claims priority, application Italy Nov. 21, 1957
15 Claims. (Cl. 260—79.5)

1. A process for producing vulcanized elastomers, which process comprises heating a high molecular weight linear, substantially amorphous and saturated polymer selected from the group consisting of homopolymers of alpha-olefins having the formula $CH_2{=}CHR$ in which R is a hydrocarbon, copolymers of said alpha-olefins with each other, and copolymers of said alpha-olefins with 5 to 70% by weight of ethylene in the presence of from 1% to 15% by weight of sulfur, said sulfur being the only reactive ingredient at a temperature between 180° C. and 250° C. until the saturated polymer is converted to an unsaturated polymer containing reactive double bonds in the main chain and a homogeneous spongy mass comprising the unsaturated polymer is obtained, and then vulcanizing the unsaturated polymer by heating the spongy mass at a temperature below 200° C.

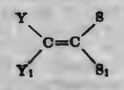
3,127,380

ORGANOBORON POLYMERIZATION CATALYSTS

Frank J. Welch, South Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Apr. 5, 1960, Ser. No. 19,996
11 Claims. (Cl. 260—85.5)

1. A process for the polymerization of ethylenically unsaturated monomers having the general formula:



wherein Y and Y_1 each designate a member selected from the group consisting of hydrogen and halogen atoms, S designates a member of the group consisting of hydrogen atoms, halogen atoms and the alkyl radicals containing from one to four carbon atoms, S_1 designates a substituent having a positive Hammett para-sigma value of at least 0.3, and wherein when S designates an alkyl radical, S_1 designates a substituent having a positive Hammett para-sigma value of at least about 0.4, which process comprises contacting said ethylenically unsaturated monomer with a catalytic quantity, sufficient to polymerize said ethylenically unsaturated monomer, of an organoboron compound having the general formula:

$$BR_mX_n$$

wherein R designates a monovalent aliphatic hydrocarbon radical containing from one to twelve carbon atoms, X designates a halogen atom, *m* is an integer of two and *n* is an integer of one.

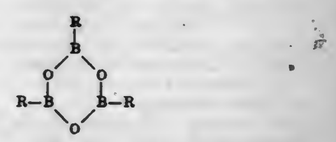
3,127,381

PROCESS FOR THE MANUFACTURE OF VINYL ESTER POLYMERS IN THE PRESENCE OF ALKYL BORON/BOROXOLE CO-CATALYST

Werner Ehmann and Karl-Heinz Kahrs, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Sept. 30, 1960, Ser. No. 59,511
Claims priority, application Germany Oct. 3, 1959
8 Claims. (Cl. 260—85.7)

1. A process for preparing macromolecular substances which comprises polymerizing at a temperature range of 0° to 120° C. a vinyl alcohol ester of a saturated monovalent aliphatic carboxylic acid of 1 to 8 carbon atoms in the presence of a combination of two catalysts, one of them being a boron trialkyl of the formula $B(R)_3$ wherein R is an alkyl radical containing 1 to 4 carbon atoms, and the other being a boroxole corresponding to the formula



wherein R represents a hydrocarbon radical of 1 to 6 carbon atoms, said boron alkyl and boroxole being employed in amounts of 0.1 to 5% by weight and 0.01 to 1% by weight respectively based on the monomer weight.

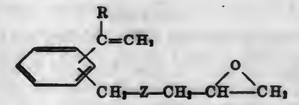
3,127,382

VINYLBENZYL MONOEPOXIDE ETHER

Wendell N. De Lano, Freeland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Dec. 20, 1961, Ser. No. 160,950
13 Claims. (Cl. 260—88.3)

1. The compound:



wherein Z is selected from the group consisting of O and S and R is selected from the group consisting of H and alkyl groups containing from 1 to 4 carbon atoms.

6. The homopolymer consisting of the compound of claim 1 polymerized through the vinyl groups by subjecting said compound to a temperature of between about 50° C. and 120° C. in the presence of a free radical-promoting agent.

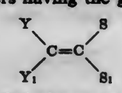
3,127,383

ORGANOBORON POLYMERIZATION CATALYSTS

Frank J. Welch, South Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Apr. 4, 1960, Ser. No. 19,968
14 Claims. (Cl. 260—88.7)

1. A process for the polymerization of ethylenically unsaturated monomers having the general formula



wherein Y and Y_1 each designates a member selected from the group consisting of hydrogen and halogen atoms, S designates a member of the group consisting of hydrogen atoms, halogen atoms and the alkyl radicals containing from 1 to 4 carbon atoms, S_1 designates a substituent having a Hammett para-sigma value of from zero to a positive value, and wherein when S designates an alkyl radical, S_1 designates a substituent having a positive Hammett para-sigma value of at least about 0.4, which process comprises contacting said ethylenically unsaturated monomer with a catalytic quantity, sufficient to polymerize said ethylenically unsaturated monomer, of an organoboron compound having the general formula:



wherein X and X_1 each designates a member selected from the group consisting of hydroxy radical and the alkoxy radicals containing from 1 to 12 carbon atoms, and R designates a monovalent aliphatic hydrocarbon radical containing from 1 to 12 carbon atoms.

3,127,384

PROCESS OF IMPROVING A HALOGEN-CONTAINING POLYMER

Anthony Archibald Sparks, Epsom Downs, and Kenneth Henry Charles Bessant, Banstead, England, assignors to The Distillers Company Limited, Edinburgh, Scotland, a British company

No Drawing. Filed Nov. 28, 1960, Ser. No. 71,881
Claims priority, application Great Britain Dec. 16, 1959
11 Claims. (Cl. 260—92.8)

1. A process for the manufacture of products which comprise contacting (*a*) a halogen-containing polymer in a divided form, said halogen-containing polymer being a member selected from the group consisting of polyvinyl chloride and copolymers of vinyl chloride containing at least 50% by weight of polymerized vinyl chloride units in its molecular structure, with (*b*) a nitrogen compound selected from the group consisting of nitric oxide, nitrogen peroxide and nitrosyl halides and subsequently forming the halogen containing polymer into the finished product by the action of heat and pressure while it retains adsorbed nitrogen compound.

3,127,385

METHOD OF PRODUCING SUBSTANTIALLY PURE PROPYLENE POLYMERS

Rino Mostardini and Luciano Luciani, Milan, Italy, assignors to Montecatini Società Generale per l'Industria Mineraria e Chimica, Milan, Italy

No Drawing. Filed Jan. 3, 1958, Ser. No. 706,900
Claims priority, application Italy Jan. 10, 1957
6 Claims. (Cl. 260—93.7)

1. The method for substantially freeing from residual catalyst a polypropylene consisting predominantly of isotactic polypropylene and obtained by polymerizing propylene under a low pressure in an inert hydrocarbon dispersing agent for the polymer and in contact with catalysts prepared by (1) starting with a solid crystalline low valency chloride of a transition metal belonging to Groups IV to VI inclusive of the Mendeléef Periodic Table and (2) mixing the transition metal chloride with an alkyl compound of a metal belonging to Groups II to III inclusive of said table, and having a residual catalyst content not higher than 1%, which method consists essentially of the steps of filtering the polypropylene from the dispersing agent, subjecting the filtered polymer to steam distillation to remove completely the dispersing agent adhering to it and hydrolyze the catalyst with conversion of the catalyst-forming components to hydroxides and the formation of hydrochloric acid, leaching the steam-treated polymer with a dilute aqueous solution of ammonia to remove the acid, and heating the leached polymer under vacuum to dry the same.

3,127,386

POLYMERIZATION OF CIS-1,4-POLYISOPRENE

William M. Saltman, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed Nov. 6, 1958, Ser. No. 772,172
5 Claims. (Cl. 260—94.3)

1. A method for the preparation of polyisoprene which comprises forming cis-1,4-polyisoprene by polymerizing isoprene in the presence of a catalyst consisting essentially of one prepared by reacting an aluminum trialkyl and titanium tetrachloride in an inert solvent in amounts that the mol ratio of Al/Ti ranges from about 0.8/1 to about 2.0/1 to form hydrocarbon soluble and hydrocarbon insoluble reaction products and then removing at least 30% and not more than 75% of the inert solvent so as to remove at least 30% to about 75% of the hydrocarbons soluble reaction product of said aluminum trialkyl and titanium tetrachloride.

3,127,387

PROCESS OF PRODUCING POLYETHYLENE USING CYCLOHEXENE AS A CHAIN MODIFIER

George E. Ham, Leawood, Kans., and William H. Byler, Nicholas O. Cromwell, and Sam J. Manci, all of Orange, Tex., assignors to Spencer Chemical Company, Kansas City, Mo., a corporation of Missouri

No Drawing. Filed Feb. 29, 1960, Ser. No. 11,440
5 Claims. (Cl. 260—94.9)

1. The process of producing resinous polyethylene of insignificant solubility in lubricating oil having a density above 0.920, a melt index of 0.1 to 40, a tensile yield point of 1000 to 2500 p.s.i., a Vicat softening point of more than 100° C., and a stiffness of at least 20,000 p.s.i. by the flexural method, which comprises subjecting ethylene having dispersed therein a small amount up to 5 weight percent based on the ethylene of cyclohexene and a suitable free radical polymerization initiator also dispersed therein, in a continuous polymerization system to a pressure in the range of 12,000 to 30,000 p.s.i. and a temperature in the range of 50 to 190° C. with the specific temperature and pressure being selected to produce a resinous polymer of the said physical characteristics for a residence time under the polymerization conditions of not more than 15 minutes and recovering the polyethylene so produced.

3,127,388

PEROXIDE TREATMENT IN ALKALINE AND ENZYMIC HYDROLYSIS OF SEED PRESS-CAKE

Robert A. Johnson, San Jose, and Patricia T. Anderson, San Mateo, Calif., assignors to Food Techniques, Inc., San Jose, Calif., a corporation of California

No Drawing. Filed Dec. 8, 1960, Ser. No. 74,472
4 Claims. (Cl. 260—123.5)

1. In the method for separating protein from a vegetable meal by heating the meal in an alkaline aqueous slurry so as to solubilize a substantial portion of the protein and then recovering the same, the combination therewith of treating said meal with hydrogen peroxide in the ratio of about .01 to .4 mole of hydrogen peroxide to 100 grams of said meal at about 150–200° F. prior to recovering the solubilized protein.

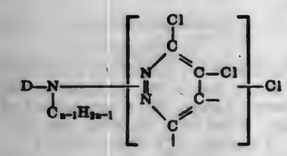
3,127,389

ORGANIC DYESTUFFS

Karl Seitz, Neu-Allschwil, and Henri Riat, Arlesheim, Switzerland, assignors to Ciba Corporation, a corporation of Delaware

No Drawing. Filed May 18, 1961, Ser. No. 110,903
Claims priority, application Switzerland May 23, 1960
12 Claims. (Cl. 260—146)

1. A water-soluble organic dyestuff which contains at least 2 sulfonic acid groups and corresponds to the formula



wherein D represents the radical of a member selected from the group consisting of anthraquinone, phthalocyanine, stilbene, nitro, oxazine, thioxanthone and azo-dyestuff containing at most three azo groups, *n* represents a whole number up to 6, and wherein the pyridazinyl-amino group is directly bound to a phenyl nucleus of the dyestuff molecule.

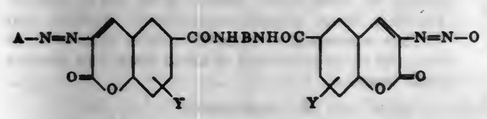
3,127,390

AZO DYESTUFFS

Willy Mueller, Riehen, and Adolf Emil Siegrist, Basel, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a company of Switzerland

No Drawing. Filed Mar. 10, 1961, Ser. No. 94,681
Claims priority, application Switzerland Mar. 15, 1960
6 Claims. (Cl. 260—152)

1. An azo-dyestuff selected from the group consisting of dyes of the formulae



and



in which formulae A and B represent mono- to bi-cyclic aryl radicals and substituents on the radicals A and B are selected from the group consisting of hydrogen, chlorine, bromine, nitro, lower alkyl and alkoxy phenoxy and benzoylamino, and Y is a member selected from the group consisting of hydrogen, halogen, lower alkyl and alkoxy groups.

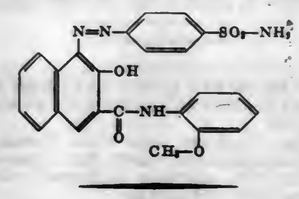
3,127,391

AZO PIGMENT

Arthur S. Neave, Jr., Sycamore Township, Hamilton County, and Nathan N. Crounse, Cincinnati, Ohio, assignors to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 11, 1962, Ser. No. 165,655
1 Claim. (Cl. 260—204)

The water-insoluble monoazo dyestuff having the structural formula:



3,127,392

HYDROXYALKYLATION OF AMYLOSE SUSPENSION AND PRODUCT PRODUCED THEREBY

Earl Eugene Fisher and Reedus Ray Estes, Decatur, Ill., assignors to A. E. Staley Manufacturing Company, Decatur, Ill., a corporation of Delaware

No Drawing. Filed Oct. 27, 1960, Ser. No. 65,295
17 Claims. (Cl. 260—233.3)

1. The method of preparing hydroxyalkyl amylose, which comprises the steps of reacting at a temperature of from about 30° C. to 90° C. an alkaline suspension of amylose with at least 0.20 mole of a vic-epoxy compound per mole of amylose to produce undissolved hydroxyalkyl amylose having an M.S. of at least 0.15, wherein the suspending liquid is a solvent for the vic-epoxy compound, neutralizing the suspension, and isolating undissolved hydroxyalkyl amylose having an M.S. of at least 0.15.

9. The method of preparing cold water-soluble hydroxyalkyl amylose, which comprises the steps of reacting at a temperature of from about 30° C. to about 90° C. an alkaline, aqueous suspension of amylose with at least 0.20 mole of a vic-epoxy compound per mole of amylose, neutralizing said alkaline suspension, heating the suspension to a temperature above 100° C. until the hydroxyalkyl amylose dissolves and then recovering the hydroxyalkyl amylose.

3,127,393

REACTION OF AMIDE AND TRIAZINE SUBSTITUTED STARCHES WITH POLYALDEHYDES

Frederick D. Thayer, Jr., Western Springs, Ill., assignor to Corn Products Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 13, 1961, Ser. No. 94,982
7 Claims. (Cl. 260—233.3)

1. A process for preparing a starch composition of reduced water-solubility as compared to the parent starch derivative which comprises reacting a starch derivative selected from the group consisting of starch propionamide, the 2,4-diaminotriazine ether of starch and starch carbamate, with a polyaldehyde in aqueous medium, adjusting the pH to between about 4 to about 11 and drying.

7. A self-support film comprising the reaction product of a starch derivative selected from the group consisting of starch propionamide, the 2,4-diaminotriazine ether of starch and starch carbamate, and a polyaldehyde, said product having been dried at a pH of about 4 to about 11.

3,127,394
BOROHYDRIDE REDUCTION OF KETOPENICILLINS

Yvon G. Perron, Dewitt, and Leonard B. Crast, Jr., North Syracuse, N.Y., assignors to Bristol-Myers Company, New York, N.Y., a corporation of Delaware

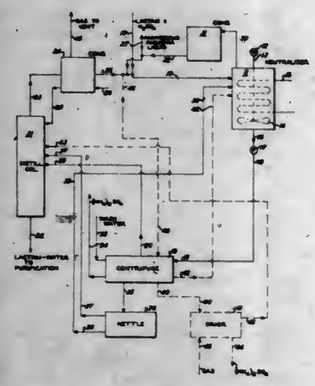
No Drawing. Filed Apr. 21, 1961, Ser. No. 104,531
6 Claims. (Cl. 260—239.1)

1. A process for the production of hydroxypenicillins which comprises contacting in a substantially aqueous medium at a pH greater than about 7 a ketopenicillin with at least one equivalent of a member selected from the group consisting of sodium borohydride and potassium borohydride to produce the corresponding hydroxypenicillin.

3,127,395
PROCESS OF SEPARATING LACTAMS FROM BECKMANN REARRANGEMENT REACTION MIXTURE

Ralph Landau, Northport, John White Colton, Pelham Manor, Westchester, and Martin Barry Sherwin, Jackson Heights, N.Y., assignors to Halcon International, Inc., a corporation of Delaware

Filed Mar. 7, 1962, Ser. No. 178,187
10 Claims. (Cl. 260—239.3)



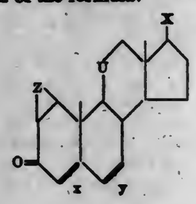
1. The process for recovering a lactam from a mixture thereof with concentrated sulfuric acid which comprises treating the mixture with anhydrous ammonia in the presence of a large excess of liquid anhydrous ammonia, separating from the resulting mixture a solid ammonium sulfate phase and a lactam rich liquid phase, separating ammonia from the latter and recycling ammonia to the treating step.

3,127,396
PRODUCTION OF 1,2-METHYLENE AND 16,17-METHYLENE KETOSTEROIDS

Rudolf Wiechert, Berlin-Lichterfelde, Emanuel Kaspar, Berlin-Wilmersdorf, and Martin Schenck, Berlin-Frohnau, Germany, assignors to Schering A.G., Berlin, Germany

No Drawing. Filed Oct. 6, 1960, Ser. No. 60,812
Claims priority, application Germany Oct. 25, 1958
22 Claims. (Cl. 260—239.5)

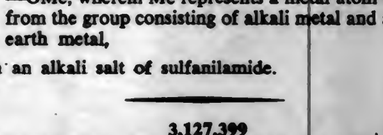
1. A compound of the formula:



wherein U is selected from the group consisting of

—CH_2— and —CH(βOH)

wherein X is selected from the group consisting of



wherein acyl is derived from a lower hydrocarbon aliphatic carbocyclic acid; wherein Z is selected from the group consisting of —CH_2— and —CH_2—N=N; and wherein x is selected from the group consisting of a single bond and a double bond, and wherein y is a single bond when x is a single bond and is selected from the group consisting of a single bond and a double bond when x is a double bond.

2. 1,2 - diazomethylene - $\Delta^{4,6}$-androstadiene-17β-ol-3-one-17-acetate.

3,127,397
3-ETHYLENEDIOXY-17β-BENZYL-OXYSTEROIDS

Eugene L. Woroch, Itasca, Ill., assignor to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois

No Drawing. Filed Sept. 10, 1962, Ser. No. 222,633
3 Claims. (Cl. 260—239.55)

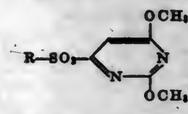
1. 17β-benzyloxy-3-ethylenedioxyandrost-5-ene.

3,127,398
METHOD FOR THE PREPARATION OF A SULFONAMIDE

Hermann Bretschneider and Wilhelm Klötzer, Innsbruck, Austria, assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Aug. 15, 1960, Ser. No. 49,410
Claims priority, application Switzerland Aug. 20, 1959
4 Claims. (Cl. 260—239.75)

1. A method for the production of 4-sulfanilamido-2,6-dimethoxypyrimidine which comprises reacting a pyrimidine compound of the formula



wherein R represents a member of the group consisting of lower alkyl, phenyl lower alkyl, phenyl, naphthyl, lower alkanoylaminophenyl, hydroxy and —OMe, wherein Me represents a metal atom selected from the group consisting of alkali metal and alkaline earth metal,

with an alkali salt of sulfanilamide.

3,127,399
MONO-ESTERS AND DI-ESTERS OF CYANURIC HALIDES AND METHODS OF PREPARING SAME

Lennart Albert Lundberg, Stamford, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Aug. 14, 1959, Ser. No. 833,702
5 Claims. (Cl. 260—248)

1. A method of preparing trisubstituted-s-triazines having the formula



wherein X is halogen, A is OR, R being a monovalent radical which is the residue of a primary, ethylenically-unsaturated monohydric alcohol having from 3 to 10 carbon atoms and A′ is halogen, which comprises bringing into intimate contact under substantially anhydrous conditions and at a temperature in the range of 60° C. to 110° C. a cyanuric halide, a primary, ethylenically-unsaturated monohydric alcohol containing from 3 to 10 carbon atoms, and an alkali bicarbonate in an inert, water-immiscible agent in which the cyanuric halide and the alcohol are miscible, which agent likewise forms an azeotropic mixture with water and an unreacted primary, ethylenically-unsaturated monohydric alcohol having from 3 to 10 carbon atoms.

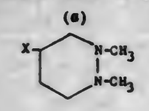
3,127,400
1,2-DIMETHYLHEXAHYDROPYRIDAZINE COMPOUNDS

Harry R. Snyder, Jr., Norwich, N.Y., assignor to The Norwich Pharmacal Company, a corporation of New York

No Drawing. Filed Dec. 6, 1962, Ser. No. 242,650
6 Claims. (Cl. 260—250)

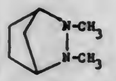
1. A member selected from the group consisting of:

(a)



and

(b)



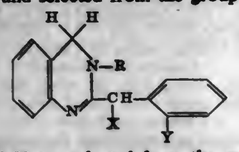
wherein X represents a member of the group consisting of methyl and isohexyl and (c) their methiodide addition salts.

3,127,401
2-BENZYL-3,4-DIHYDROQUINAZOLINES

Bernard C. Lawes and Homer C. Scarborough, Evansville, Ind., assignors to Mead Johnson & Company, Evansville, Ind., a corporation of Indiana

No Drawing. Filed Dec. 18, 1961, Ser. No. 160,228
5 Claims. (Cl. 260—251)

1. A compound selected from the group consisting of:



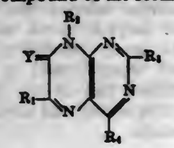
wherein X and Y are selected from the group consisting of hydrogen and methoxy, R is selected from the group consisting of hydrogen and methyl, and the pharmaceutically acceptable acid addition salts thereof.

3,127,402
7-OXOPTERIDINE DERIVATIVES

Irwin J. Pachter, Erdenheim, and Joseph Weinstock, Phoenixville, Pa., assignors to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Mar. 23, 1962, Ser. No. 182,104
7 Claims. (Cl. 260—251.5)

1. A chemical compound of the formula:



in which:

Y is a member selected from the group consisting of O and NH;

R_1 is a member selected from the group consisting of lower alkyl, phenyl, thienyl and benzyl;

R_2 is a member selected from the group consisting of lower alkyl, phenyl and phenyl-lower alkylene;

R_3 is a member selected from the group consisting of amino, lower alkylamino, di-lower alkylamino, phenyl, thienyl, hydrogen and lower alkyl; and

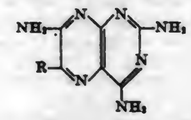
R_4 is a member selected from the group consisting of amino, lower alkylamino, di-lower alkylamino and methylthio.

3,127,403
6-ALKYL-2,4,7-TRIAMINOPTERIDINES

Irwin J. Pachter, Erdenheim, and Joseph Weinstock, Phoenixville, Pa., assignors to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Aug. 2, 1962, Ser. No. 214,201
5 Claims. (Cl. 260—251.5)

1. A chemical compound of the class consisting of a free base and its nontoxic, pharmaceutically acceptable acid addition salts, said free base having the formula:



in which R is a member selected from the group consisting of halo-lower-alkyl and lower alkyl.

3,127,404
TRIETHYLENEDIAMINE ADDITION PRODUCT WITH GLYCOLBORATE

Rocco L. Mascioli, Media, Pa., assignor to Air Products and Chemicals, Inc., a corporation of Delaware

No Drawing. Filed Apr. 4, 1960, Ser. No. 19,524
1 Claim. (Cl. 260—268)

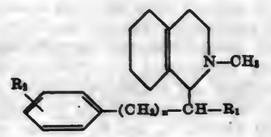
A composition prepared by reacting a lower polyol having alcoholic hydroxyl groups on adjacent carbon atoms with an amount of boric acid corresponding to at least one-half mol of boric acid per mol of polyol to prepare a glycolborate acid, and reacting the glycolborate acid with at least one-half mol of 1,4 diaza (2.2.2) bicyclooctane per mol of acid to prepare a glycolborate salt like addition product of triethylenediamine.

3,127,405
1-PHENYLALKYL-1,2,3,4,5,6,7,8-OCTAHYDROISOQUINOLINES

Otto Schnider and Max Walter, Basel, Switzerland, assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Mar. 14, 1961, Ser. No. 95,505
Claims priority, application Switzerland Mar. 18, 1960
7 Claims. (Cl. 260—283)

1. A compound selected from the group consisting of bases of the formula



wherein n is an integer from 1 to 3, inclusive, R_1 is chosen from the group consisting of hydrogen and lower alkyl, and R_2 is chosen from the group consisting of halogen,

halogen-lower alkyl and nitro; and acid addition salts of said bases with pharmaceutically acceptable acids.

3. 1 - (4 - nitrophenethyl) - 2 - methyl - 1,2,3,4,5,6,7,8-octahydroisoquinoline.

3,127,406

NOVEL STEROIDAL HYDROXAMIC ACID DERIVATIVES AND PROCESSES FOR THEIR MANUFACTURE

Eugene P. Oliveto, Glen Ridge, N.J., assignor to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey

No Drawing. Filed Nov. 25, 1960, Ser. No. 71,458
25 Claims. (Cl. 260—287)

1. A D-homo-steroid of the group consisting of:
3X-17-keto-17a-aza-D-homo-1,3,5(10)-estratriene,
3X-17-keto-17a-aza-D-homo-1,3,5(10)-iso-estratriene,
3Y-17-keto-17a-aza-D-homo-5α-androstane,
3Y-17-keto-17a-aza-D-homo-5α-iso-androstane,
3,17-diketo-17a-aza-D-homo-4-androstene,
3,17-diketo-17a-aza-D-homo-4-iso-androstene,
3,17-diketo-17a-aza-D-homo-19-nor - 4 - androstene, and
3,17-diketo-17a-aza-D-homo-19-nor - 4 - iso-androstene,
where X is a member of the group consisting of hydroxy, lower alkoxy, and an acyloxy radical of a hydrocarbon carboxylic acid having up to eight carbon atoms; and Y is a member of the group consisting of hydroxy and an acyloxy radical of a hydrocarbon carboxylic acid having up to eight carbon atoms;

said D-homo-steroid having attached to the 17a-nitrogen atom a substituent of the group consisting of hydroxy, lower alkoxy, lower alkanoyloxy, p-tolenesulfonyloxy, and methanesulfonyloxy.

3,127,407

CERTAIN 1-(CHLOROPHENYL)-2-TERTIARY AMINO ALKANES

Ernst Seeger and August Kottler, Biberach an der Riss, Germany, assignors to Dr. Karl Thomae, G.m.b.H., Biberach an der Riss, Germany, a corporation of Germany

No Drawing. Filed Feb. 4, 1960, Ser. No. 6,621
5 Claims. (Cl. 260—293)

1. 1-(p-chloro-phenyl)-2-piperidino-pentane.
2. 1-(p-chloro-phenyl)-2-pyrrolidino-pentane.

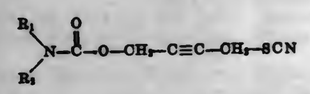
3,127,408

4-THIOCYANATO-2-BUTYNYL CARBAMATES

Thomas R. Hopkins, Prairie Village, Kans., assignor to Spencer Chemical Company, Kansas City, Mo., a corporation of Missouri

No Drawing. Filed June 8, 1960, Ser. No. 34,631
8 Claims. (Cl. 260—293.4)

1. A 4-thiocyanato-2-butynyl carbamate having the formula



wherein R_1 is selected from the class consisting of alkyl, cyclopentyl, cyclohexyl, phenyl, naphthyl, halophenyl, alkoxyphenyl, halonitrophenyl, methylhalophenyl, nitrophenyl, lower alkylphenyl, 3-(1,2,4-triazolyl), thiazoyl, 2-pyridyl, furfuryl and tetrahydrofurfuryl; wherein R_2 is selected from the class consisting of hydrogen, lower alkyl and allyl; and wherein R_1 and R_2 together with the nitrogen atom to which they are attached can represent a group selected from the class consisting of piperidino and morpholino.

7. N-(4-thiocyanato-2-butynyloxycarbonyl)piperidine.

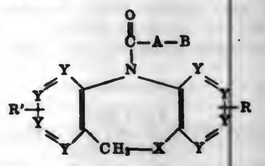
3,127,409

NOVEL DIHYDROPYRIDOBENZOXAZEPINES AND DIHYDROPYRIDOBENZTHIAZEPINES

Harry L. Yale, New Brunswick, Francis A. Sowinski, Edison, and Jack Bernstein, New Brunswick, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Aug. 8, 1962, Ser. No. 215,548
7 Claims. (Cl. 260—295)

1. A compound selected from the group consisting of bases of the formula



wherein A is lower alkylene, B is selected from the group consisting of amino, (lower alkyl)amino, di(lower alkyl)amino, (hydroxy-lower alkyl)amino, di(hydroxy-lower alkyl)amino, piperidyl, (lower alkyl)piperidyl, di-(lower alkyl)piperidyl, (lower alkoxy)piperidly, homopiperidino, pyrrolidyl, (lower alkyl)pyrrolidyl, di(lower alkyl)pyrrolidyl, (lower alkoxy)pyrrolidyl, morpholinyl, (lower alkyl)morpholinyl, di(lower alkly)morpholinyl, (lower alkoxy)morpholinyl, thiamorpholinyl, (lower alkyl)thiamorpholinyl, di(lower alkyl)thiamorpholinyl, (lower alkoxy)thiamorpholinyl, piperazyl, (lower alkyl)-piperazyl, di(lower alkyl)piperazyl, (lower alkoxy)piperazyl, (hydroxy-lower alkyl)piperazyl, (lower alkanoyloxyalkyl)piperazyl, (hydroxy-lower alkoxy-lower alkyl)-piperazyl, and homopiperazyl, X is selected from the group consisting of oxy and thio, and Y is aza and the remaining Y's are carbon, and R and R' are each selected from the group consisting of hydrogen, halogen, lower alkyl, lower alkoxy, trifluoromethyl, trifluoromethylmercapto, trifluoromethoxy and N,N-dimethylaminosulfonyl, and non-toxic acid-addition salts thereof.

2. Di(lower alkyl)amino(lower alkyl) 5,10-dihydropyrido[3,2-b] [4,1]benzoxazepin-5-yl ketone.

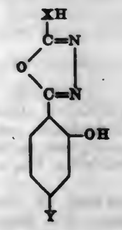
3,127,410

2-(2'-HYDROXY-4'-AMINO-PHENYL)-1:3:4 - OXADIAZOLONE, THE CORRESPONDING OXADIAZOLTHIONE AND DERIVATIVES THEREOF

Arthur Ernest Wilder Smith, 18 Chemin des Lilas Blancs, Geneva, Switzerland

No Drawing. Filed Feb. 10, 1961, Ser. No. 88,305
Claims priority, application Great Britain Feb. 12, 1960
6 Claims. (Cl. 260—307)

1. A compound selected from the group consisting of a compound of the formula



wherein X is a member selected from the group consisting of oxygen and sulphur atoms and Y is a member selected from the group consisting of amino, lower alkanoylamido and benzoylamido; a physiologically acceptable acid addition salt of the compounds of the formula in which Y is amino; and tautomers of the aforementioned compounds.

3,127,411

PROCESS FOR THE PREPARATION OF N-CARBOXYGLYCINE ANHYDRIDE

Edwar E. Schmitt, South Norwalk, Conn., assignor to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Filed May 18, 1962, Ser. No. 196,002
2 Claims. (Cl. 260—307)

1. A process for the preparation of N-carboxyglycine anhydride which comprises: admixing benzyloxycarbonyl glycine with sufficient thionyl chloride to dissolve the latter glycine; ring-closing and precipitating N-carboxyglycine anhydride therein; cooling said mixture to between about 0° C. and about minus (—) 100° C.; and thereafter recovering said anhydride in the form of needle-like crystals in good yield and purity.

3,127,412

PROCESS FOR CONDITIONING PIGMENTS

Hans Gaertner, Basel, and Guenther Zwahlen, Arlesheim, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a company of Switzerland

No Drawing. Filed Sept. 26, 1960, Ser. No. 58,193
Claims priority, application Switzerland Sept. 29, 1959
8 Claims. (Cl. 260—314.5)

1. A process for conditioning organic pigment selected from the group consisting of azo pigment, dioxazine pigment, quinacridone pigment, anthraquinone pigment, indigoid pigment, perinone pigment, perylene-tetracarboxylic acid imide pigment, nitro-dyestuff pigment and phthalocyanine pigment, wherein the pigment to be conditioned is ground in grinding medium consisting essentially of water in the presence as carrier of an organic compound which is solid and largely water-insoluble under the grinding conditions and is capable of being removed by an operation selected from the group consisting of sublimation, distillation with steam and extraction with an organic solvent, said compound being selected from the group consisting of para-dichlorobenzene, hexachlorobenzene, diphenyl, naphthalene, phthalic anhydride, β-hexachlorocyclohexane, hexamethyl - ethane, hexabrom - ethane, chloranil, camphor and hexachlorethane, and the treated pigment is separated from the grinding medium.

6. A process for the manufacture of conditioned copper phthalocyanine pigment from crude form of the pigment, wherein the crude pigment is ground in grinding medium consisting essentially of water in the presence in the grinding medium of hexachlorethane as pigment carrier, and upon completion of the grinding separating the latter from the conditioned pigment.

3,127,413

OCTAHYDROISOINDOLES

Alban Poe Gray, Decatur, Ill., assignor to Nelsler Laboratories, Inc., Decatur, Ill., a corporation of Delaware

No Drawing. Filed Nov. 22, 1960, Ser. No. 75,900
17 Claims. (Cl. 260—319)

1. 2 - aralkyl - 5 - hydroxy - 6 - lower - alkoxy - octahydroisoindole, wherein aralkyl represents an aromatic ring system attached to an alkylene bridge of not more than three carbon atoms, said aromatic ring system having a total of from 5 to 10 coplanar ring atoms no more than one of which is a heteroatom, which heteroatom is selected from the group consisting of nitrogen, oxygen and sulphur atoms.

12. N - aralkyl - 4 - hydroxy - 5 - lower - alkoxy - 1,2-cyclohexanedicarboximide wherein aralkyl represents an aromatic ring system attached to an alkylene bridge of not more than three carbon atoms, said aromatic ring system having a total of from 5 to 10 coplanar ring atoms no more than one of which is a heteroatom, which heteroatom is selected from the group consisting of nitrogen, oxygen and sulphur atoms.

3,127,414

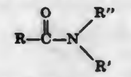
PREPARATION OF m-PHENYLENEDIMALEIMIDE

Halbert N. Cole, Claymont, and Wilhelm F. Gruber, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Jan. 12, 1962, Ser. No. 165,947
6 Claims. (Cl. 260—326.3)

1. In the process which comprises contacting and reacting N,N'-m-phenylenedimaleamic acid with at least a stoichiometric amount of acetic anhydride in the presence of at least 0.12 mole of sodium acetate per mole of N,N'-m-phenylenedimaleamic acid and obtaining as a result thereof N,N'-m-phenylenedimaleimide, the improvement which comprises carrying out the reaction at a temperature within the range of about 45° C. to 60° C. in a polar organic solvent which is liquid at the reaction temperature at atmospheric pressure, wherein said solvent is selected from the group consisting of

(*a*) a compound of the formula



wherein R, R', and R'' are each selected independently from the group consisting of hydrogen and lower alkyl,

(*b*) lower alkyl sulfoxide, and

(*c*) lower aliphatic ketone.

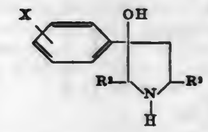
3,127,415

3-SUBSTITUTED-3-PYRROLIDINOLS

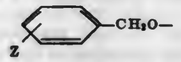
Yao Hua Wu, Rolland Frederick Feldkamp, and William Andrew Gould, Evansville, Ind., assignors to Mead Johnson & Company, Evansville, Ind., a corporation of Indiana

No Drawing. Filed Aug. 14, 1961, Ser. No. 131,066
7 Claims. (Cl. 260—326.5)

1. A compound selected from the group consisting of



and the pharmaceutically acceptable acid addition salts thereof wherein X is selected from the group consisting of phenoxy, halophenoxy, phenyl, halophenyl, benzyhydryloxy and



wherein Z is selected from the group consisting of halo, dihalo and alkoxy groups having up to four carbon atoms, and R^3 and R^5 are independently selected from the group consisting of hydrogen and lower alkyl groups having up to four carbon atoms, at least one of said R^3 and R^5 being a lower alkyl group.

3,127,416

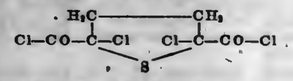
NEW CHLORINATED DICARBOXYLIC ACID DICHLORIDE AND PROCESS FOR ITS MANUFACTURE

Peter Liechti, Binningen, Adolf Emil Siegrist, Basel, and Erwin Maeder, Munchenstein, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a company of Switzerland

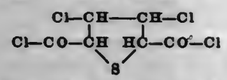
No Drawing. Filed Sept. 25, 1961, Ser. No. 140,235
Claims priority, application Switzerland Sept. 26, 1960
6 Claims. (Cl. 260—332.2)

1. Process for the manufacture of a chlorinated di-

carboxylic acid dichloride selected from the group consisting of the compound of the formula

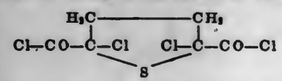


and the compound of the formula

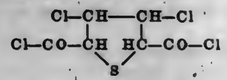


which process comprises treating tetrahydrothiophene-2:5-dicarboxylic acid in an anhydrous medium at a temperature ranging from 20 to 100° C. with a chlorinating agent comprising a mixture of phosphorus oxychloride, phosphorus trichloride and chlorine.

4. A chlorinated dicarboxylic acid dichloride selected from the group consisting of the compound of the formula



and the compound of the formula



3,127,417

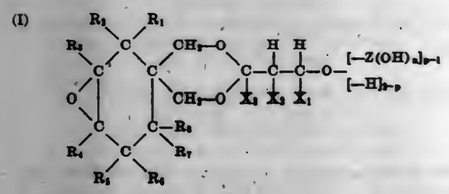
NEW HYDROXYLATED MONOEPOXYACETALS

Daniel Porret, Basel, and Hans Batzer, Arlesheim, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a company of Switzerland

No Drawing. Filed July 14, 1961, Ser. No. 123,994
Claims priority, application Switzerland July 20, 1960
7 Claims. (Cl. 260—340.7)

1. A monoepoxide of the formula

(I)



wherein R_1 and R_5 are selected from the group consisting of hydrogen, halogen, lower alkyl of 1 to 4 carbon atoms and together R_1 and R_5 form the methylene group, R_2, R_3, R_4, R_6, R_7 and R_8 each represents a member selected from the class consisting of hydrogen, halogen and lower alkyl of 1 to 4 carbon atoms, X_1 and X_2 each is a member of the class consisting of hydrogen and methyl, X_3 represents a member of the class consisting of hydrogen and alkyl of 1 to 4 carbon atoms, Z is the hydrocarbon radical of an aliphatic saturated polyhydric alcohol, n is an integer of 1 to 5 and p is an integer of at least 1 and at the most 2.

3,127,418

DIOXOLATED FATTY ACID ESTERS

Frank E. Knester, La Grange, Ill., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois

No Drawing. Filed June 4, 1956, Ser. No. 589,343
3 Claims. (Cl. 260—340.9)

1. The glyceride esters of fatty acids having 10–22 carbons, at least one fatty acyl radical of said esters having at least one dioxolane group on contiguous carbons of said radical, said carbons being in the 4,5 position of said dioxolane group.

3,127,419

MALEIC ANHYDRIDE COMPOSITION AND METHOD OF MAKING THE SAME

Manfred Gans, Leonia, N.J., assignor to Halcon International, Inc., a corporation of Delaware

No Drawing. Filed Nov. 15, 1960, Ser. No. 69,254
2 Claims. (Cl. 260—346.8)

1. A substantially dust-free flaked composition consisting essentially of: at least 99.5 wt. percent maleic anhydride and at least 0.1 wt. percent itaconic anhydride.

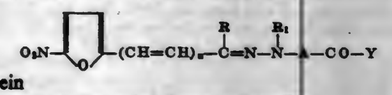
3,127,420

N^1 - [(5 - NITRO - 2 - FURYL)ALKYLIDENE] - N^2-SUBSTITUTED N^2 - (N - SUBSTITUTED CARBAMOYLALKYL) HYDRAZINES

Frank F. Ebetino, Norwich, N.Y., assignor to The Norwich Pharmacal Company, a corporation of New York

No Drawing. Filed July 27, 1961, Ser. No. 127,156
10 Claims. (Cl. 260—347.3)

1. A chemical compound having antimicrobial activity upon oral administration of the formula:



wherein

n represents a number from zero to one;

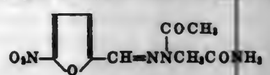
R represents a member of the group consisting of hydrogen and methyl;

R_1 represents a member of the group consisting of lower alkanoyl, crotonyl, benzoyl, phenylacetyl, halo (lower) alkanoyl, p-nitro-benzoyl, benzenesulfonyl, lower alkoxycarbonyl, halo(lower)alkoxycarbonyl and cyclohexylcarbonyl;

A represents a lower alkylene group; and

Y represents a member of the group consisting of amino, lower alkylamino, di(lower)alkylamino, acetylamino, hydroxy(lower)alkylamino, phenylamino, piperidyl, pyrrolidyl and morpholinyl.

2. The chemical compound 2-[1-acetyl-2-(5-nitrofurfurylidene)hydrazino]acetamide of the formula:



3,127,421

MIXED ACID NITRATION OF DISPERSIONS OF CRUDE DIBENZANTHRONE

Joseph S. Milazzo, Palisades Park, David I. Randall, New Vernon, and John H. Shown, Westfield, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 1, 1959, Ser. No. 856,371
4 Claims. (Cl. 260—353)

1. A process for producing a direct dyeing black dyestuff comprising subjecting a slurry in 40 to 65% sulfuric acid of a crude dibenzanthrone mixture resulting from the caustic fusion of benzanthrone to treatment with a nitrating acid containing about 1–4 moles of nitric acid per mole of said mixture.

3,127,422

REACTION PRODUCT OF MONOAMINO-DIBENZANTHRONE AND TWO MOLES OF A HYDROXYALKYLAMINE

Max Staeuble, Basel, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a company of Switzerland

No Drawing. Filed Jan. 31, 1961, Ser. No. 85,970
Claims priority, application Switzerland Feb. 3, 1960
1 Claim. (Cl. 260—354)

The product produced by heating at a temperature within the range of 100° to 240° C. one molecular proportion of monoamino-dibenzanthrone with at least two molecular proportions of a hydroxyalkyl monoamine, whose amino group is primary and which contains 2 to 8 carbon atoms, in the presence of a solvent selected from the group consisting of an excess of the hydroxyalkyl monoamine and an inert high boiling organic solvent, said aminodibenzanthrone being the reduction product of a nitrodibenzathrone obtained by the nitration of dibenzanthrone.

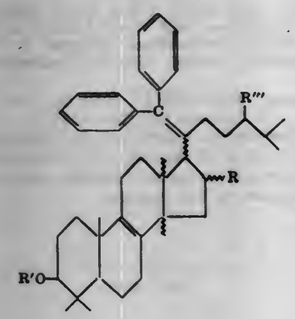
3,127,423

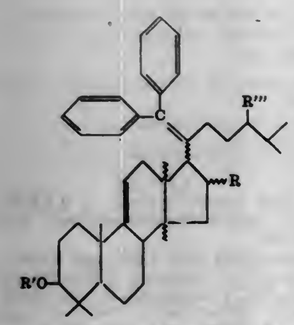
PHENYL DERIVATIVES OF METHYLSTEROLS AND PROCESS FOR PRODUCTION THEREOF

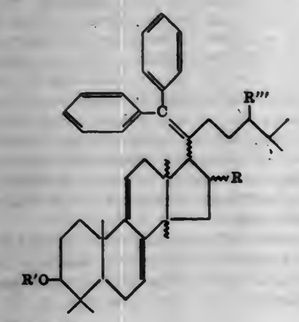
Josef Fried, Princeton, and Gerald W. Krakower, Elizabeth, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Sept. 21, 1962, Ser. No. 225,397
8 Claims. (Cl. 260—397.2)

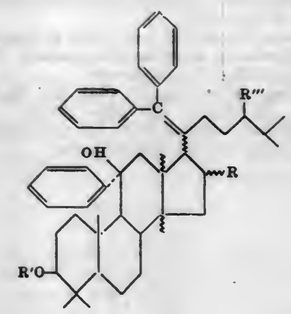
1. A compound selected from the group consisting of steroids having the formulae







and



wherein R' is selected from the group consisting of hydrogen and the acyl radical of a hydrocarbon carboxylic acid of less than ten carbon atoms; R''' is selected from the group consisting of hydrogen and lower alkyl; and R is selected from the group consisting of hydrogen, hydroxy and acyloxy, wherein the acyl radical is of a hydrocarbon carboxylic acid of less than ten carbon atoms.

3,127,424

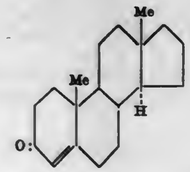
4-CHLORO-3-OXO-Δ^4-STEROIDS OF THE ANDROSTANE AND PREGNANE SERIES AND PROCESS THEREFOR

Winifred June Adams, David Neville Kirk, and Vladimir Petrow, London, England, assignors to The British Drug Houses Limited, London, England, a British company

No Drawing. Filed Apr. 25, 1956, Ser. No. 580,448
Claims priority, application Great Britain Apr. 27, 1955
8 Claims. (Cl. 260—397.3)

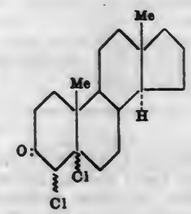
1. 4-chloro-androst-4-ene-3:17-dione.

3. A method for the preparation of 4-chloro-3-oxo-Δ^4-steroids of the androstane and pregnane series, which method comprises chlorinating a 3-oxo-Δ^4-steroid of the androstane and pregnane series having the general formula



(II)

and treating the resulting 4ξ:5ξ-dichloride having the general formula



(III)

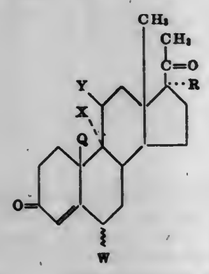
to remove the elements of hydrogen chloride therefrom.

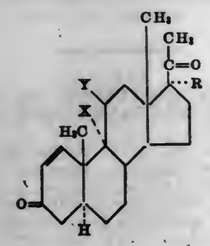
3,127,425
6,17α-DISUBSTITUTED 9α,11β-DIHALOGENO DERIVATIVES OF A-RING UNSATURATED PREGNANE 3,20-DIONES

Hans Reimann, Bloomfield, and David H. Gould, Leonia, N.J., assignors to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey

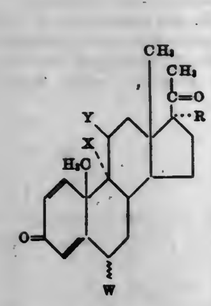
No Drawing. Filed May 29, 1961, Ser. No. 113,089
22 Claims. (Cl. 260—397.3)

1. A compound selected from the group consisting of pregnanes having the following formulae:





and



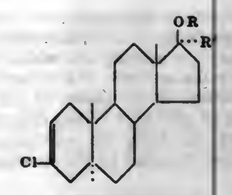
wherein X is a halogen of atomic weight greater than 19; Y is a halogen of atomic weight less than 126 and being at least as electronegative as X; Q is a member of the group consisting of hydrogen and methyl; R is a member of the group consisting of halogen of atomic weight greater than 19 and less than 126; hydroxy and acyloxy radicals of hydrocarbon carboxylic acids containing up to 12 carbon atoms; and W is a member of the group consisting of hydrogen and methyl.

3,127,426
3-HALO ANDROSTENES

Albert Bowers and Percy George Holton, Mexico City, Mexico, assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed Dec. 4, 1961, Ser. No. 156,983
10 Claims. (Cl. 260—397.3)

1. A compound of the following formula:



wherein R is selected from the group consisting of hydrogen and a hydrocarbon carboxylic acyl group of less than 12 carbon atoms and R^1 is a member of the group consisting of hydrogen, lower alkyl, lower alkenyl and lower alkynyl.

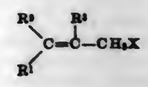
3. 3-chloro-Δ^2-androsten-17-one.

3,127,427
10-ALKENYL-STEROIDS AND PROCESS THEREFOR

Arthur Boller and Andor Fürst, Basel, Ernst Gerhard Herzog, Birsfelden, and Hans Schmid and Richard Barner, Zurich, Switzerland, assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed July 17, 1962, Ser. No. 210,590
12 Claims. (Cl. 260—397.3)

1. A process for the preparation of 10-alkenyl-steroids comprising the steps of reacting a 3-hydroxy-steroid with an aromatic A-ring in aqueous alkaline solution with an alkenyl compound of the formula



wherein R^1, R^2, and R^3 are selected from the group consisting of hydrogen and lower alkyl, and X is an anion of a strong acid,

and isolating from the reaction mixture a 10-alkenyl-$\Delta^{1,4}$-3-keto-steroid.

8. 19-vinyl-$\Delta^{1,4}$-androstadien-3,17-dione.

3,127,428
PROCESS FOR CONVERTING A 3-KETO-$\Delta^{1,4}$-STEROID TO THE CORRESPONDING 3-KETO $\Delta^{1,5}$-COMPOUND

Masuto Tanabe, Palo Alto, Calif., and Elliot L. Shapiro, Cedar Grove, N.J., assignors to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey

No Drawing. Filed Jan. 16, 1963, Ser. No. 251,744
9 Claims. (Cl. 260—397.4)

1. The process for preparing a 3-keto-1,5-bis-dehydro-steroid of the androstane and pregnane series which comprises reacting a steroid selected from the group consisting of a 3-keto-1,4-bis-dehydro-androstane and a 3-keto-1,4-bis-dehydro-pregnane with an isomerization agent selected from the group consisting of alkali metal acetylides, alkali metal hydrides, alkali metal amides and sodium triphenylmethyl in a solvent which does not give up a proton, said solvent being selected from the group consisting of an aromatic monocyclic hydrocarbon, a saturated alicyclic ether, a saturated aliphatic ether, a di-lower alkylsulfoxide, and an N,N-di-lower alkyl alkanoic acid amide.

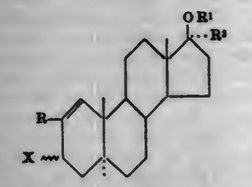
9. The process of preparing 17α-methyl-1,5-androstadiene-17β-ol-3-one which comprises reacting 17α-methyl-1,4-androstadiene-17β-ol-3-one with sodium acetylide in dimethylsulfoxide.

3,127,429
3-HALO-Δ^1 AND 1-HALO-Δ^2-ANDROSTENES AND PROCESS THEREFOR

Alexander D. Cross and Albert Bowers, both of Mexico City, Mexico, assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed Dec. 4, 1961, Ser. No. 156,925
24 Claims. (Cl. 260—397.5)

1. A compound of the following formula:



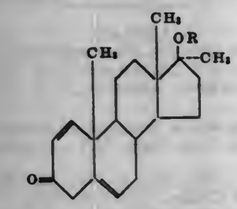
wherein R is a member of the group consisting of hydrogen and methyl; R^1 is selected from the group consisting of hydrogen and a hydrocarbon carboxylic acyl group of less than 12 carbon atoms; R^2 is a member of the group consisting of hydrogen, lower alkyl, lower alkenyl and lower alkynyl and X is selected from the group consisting of α-fluorine and β-chlorine.

3,127,430
17α-METHYL-1,5-ANDROSTADIENES-17β-OL-3-ONE AND DERIVATIVES THEREOF

Elliot L. Shapiro, Cedar Grove, and Eugene P. Oliveto, Glen Ridge, N.J., assignors to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey

No Drawing. Filed Jan. 16, 1963, Ser. No. 251,747
6 Claims. (Cl. 260—397.4)

1. A compound of the following formula:



wherein R is a member selected from the group consisting of H and an acid radical of a carboxylic acid having up to 12 carbon atoms.

3,127,431
METALLORGANIC HALONITRATES

Walter Fink, Zurich, Switzerland, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Apr. 24, 1961, Ser. No. 104,797
Claims priority, application Switzerland Apr. 28, 1960
16 Claims. (Cl. 260—429.7)

1. A process for preparing metallorganic chloronitrates of the formula $(R)_a(R')_bM(X)_c$ wherein R is selected from the class consisting of CH_2NO_3CHCl and

$$CH_2NO_3CH{=}CHCHCl$$

R′ is selected from the class consisting of lower alkyl and lower alkoxy radicals, M is selected from the class consisting of Si, As, Sn, and P=O, X is a halogen atom, a is an integer, b and c are selected from 0 and integers, and $a+b+c$ corresponds to the valence of M in the compound comprising reacting at a temperature in the range of 0° C. to −100° C. chloronitrate with olefinic metallorganic compounds of the formula $(R'')_a(R')_bM(X)_c$ wherein R″ is selected from the class consisting of $CH_2{=}CH$ and $CH_2{=}CHCH{=}CH$, and R′, M, X, a, b, and c are as defined hereinabove.

6. Metallorganic chloronitrates of the formula

$$(R)_a(R')_bM(X)_c$$

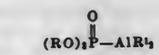
wherein R is selected from the class consisting of CH_2NO_3CHCl and $CH_2NO_3CH{=}CHCHCl$, R′ is selected from the class consisting of lower alkyl and lower alkoxy radicals, M is selected from the class consisting of Si, As, Sn, and P=O, X is a halogen atom, a is an integer, b and c are selected from 0 and integers, and $a+b+c$ corresponds to the valence of M in the compound.

3,127,432
ORGANIC PHOSPHORUS-ALUMINUM COMPOUNDS AND METHOD OF PREPARATION

William K. Johnson, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Oct. 3, 1960, Ser. No. 59,845
8 Claims. (Cl. 260—448)

5. Compound of the formula



wherein each R is a hydrocarbon radical free of non-benzenoid unsaturation and having not more than 20 carbon atoms and each R^1 is an alkyl radical having not more than 20 carbon atoms.

3,127,433
1,1-BIS(TRIFLUOROMETHYL) ETHYL SILANES AND SILOXANES

Paul Tarrant, Gainesville, Fla., assignor, by mesne assignments, to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Filed July 16, 1958, Ser. No. 748,824
9 Claims. (Cl. 260—448.2)

1. A compound of the formula

$$[(CF_3)_2CHCH_2]R_ySiY_{3-y}$$

where R is a monovalent hydrocarbon radical free of aliphatic unsaturation, Y is selected from the group consisting of Cl and Br atoms and radicals of the formula OR′ where R′ is selected from the group consisting of alkyl and aryl radicals, and y is an integer of from 0 to 3 inclusive.

5. An organosiloxane consisting essentially of polymeric units of the formula

$$[(CF_3)_2CHCH_2]R_zSiO_{\frac{3-z}{2}}$$

where R is a monovalent hydrocarbon radical free of aliphatic unsaturation, and z is an integer of from 0 to 2 inclusive.

3,127,434
DIHYDROVITAMIN K MONOPHOSPHATE COMPOUNDS AND PREPARATION THEREOF

Kenneth John Maynard Andrews, Harpenden, England, assignor to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Oct. 10, 1960, Ser. No. 61,338
Claims priority, application Great Britain Oct. 20, 1959
3 Claims. (Cl. 260—461)

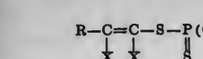
1. Dihydrovitamin K_2 1-monophosphate.
2. Dihydrovitamin K_1 1-dibenzylmonophosphate.
3. Dihydrovitamin K_1 1-dibenzylmonophosphate-4-lower alkanoate.

3,127,435
S - (1,2 - DIHALOALKENYL) O,O - DIALKYL PHOSPHORODITHIOATES AND METHOD FOR THEIR PREPARATION

Bernard Miller, Princeton, N.J., assignor to American Cyanamid Company, Stamford, Conn., a corporation of Maine

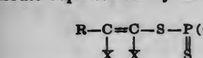
No Drawing. Filed Oct. 16, 1962, Ser. No. 231,019
6 Claims. (Cl. 260—461)

1. The S-alkenyl phosphorodithioate represented by the formula:

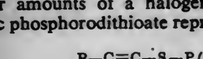


where X is a halogen atom selected from the group consisting of chlorine and bromine, R is selected from the class consisting of hydrogen, lower alkyl, phenyl and naphthyl, and R_1 is lower alkyl.

4. A process for the preparation of an S-alkenyl phosphorodithioate represented by the formula:



where X is a halogen atom selected from the class consisting of chlorine and bromine, R is selected from the group consisting of hydrogen, lower alkyl, phenyl and naphthyl, and R_1 is lower alkyl, which comprises the steps of: bringing into reactive combination substantially equimolar amounts of a halogenating agent and an S-acetylenic phosphorodithioate represented by the formula:



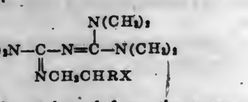
where R and R_1 are as above defined, and thereafter recovering a S-alkenyl phosphorodithioate, said halogenating agent being selected from the class consisting of chlorine and bromine.

3,127,436
ADDUCTS OF HEXAMETHYLBIGUANIDE AND METHOD FOR PREPARING SAME

Kenneth G. Flynn, Bridgeport, and Frederic C. Schaefer, Darien, Conn., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Filed May 28, 1962, Ser. No. 197,904
6 Claims. (Cl. 260—465.5)

1. The compound:



wherein R is a member selected from the group consisting of hydrogen and lower alkyl, and X is a member selected from the group consisting of —CN, —$CONH_2$ —$COOR_1$, wherein R_1 is an alkyl group of from one to four carbon atoms.

3,127,437
ORGANIC HALONITRATES AND METHOD OF PREPARATION

Walter Fink, Ruschlikon, Zurich, Switzerland, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Oct. 17, 1960, Ser. No. 62,881
Claims priority, application Switzerland Oct. 19, 1959
18 Claims. (Cl. 260—465.7)

1. A process for preparing organic halonitrates comprising reacting at a temperature of not more than about 0° C. in an inert solvent a compound having at least one but not more than three ethylenically-unsaturated double bonds and not more than about 18 carbon atoms with a halonitrate.

3,127,438
ESTER PRODUCTION FROM ISOPARAFFIN AND CARBON MONOXIDE

Bernard S. Friedman, Chicago, and Sherwood M. Cotton, Harvey, Ill., assignors, by mesne assignments, to Sinclair Research, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 6, 1959, Ser. No. 804,091
14 Claims. (Cl. 260—468)

1. A method for the production of esters which comprises reacting with carbon monoxide a hydrocarbon selected from cis-decalin, paraffins and cycloparaffins characterized by the presence of a carbon atom to which 3 other carbon atoms and one hydrogen are attached and of 4 to 50 carbon atoms in the presence of about one mole of an agent, for each 1 to 20 moles of selected hydrocarbon, of about 2–32 carbon atoms selected from the group consisting of mono-olefins and alkyl halides and about 2 to 20 moles per mole of agent of a catalyst consisting essentially of substantially anhydrous HF at a temperature of about 10° to 200° F. and a pressure sufficient to maintain the liquid phase, contacting the reaction product with a non-tertiary alkanol of up to 32 carbon atoms and recovering therefrom an ester having an acyl group which contains one more carbon atom than the starting isoparaffin.

3,127,439
HALF ALKYL-HALF AMIDES OF MALEIC ACID

Leslie L. Sims, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Apr. 27, 1962, Ser. No. 190,811
3 Claims. (Cl. 260—482)

1. An alkyl ester of maleamic acid; said alkyl group having from about 18 to about 36 carbon atoms.

3,127,440
MIXTURES OF ESTERS OF UNSUBSTITUTED UNSATURATED 1,4 DICARBOXYLIC ACIDS HAVING 4 CARBONS AND C_{30}—C_{60} SATURATED ALCOHOLS

Leslie L. Sims, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed May 8, 1962, Ser. No. 193,334
4 Claims. (Cl. 260—485)

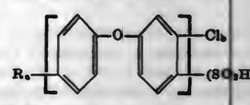
1. Hard waxes yielding films of high gloss consisting essentially of a mixture of alkyl esters of at least one unsubstituted symmetrical unsaturated 1,4-dicarboxylic acid having 4 carbon atoms, said esters being characterized by having a variety of alkyl groups each containing from about 30 to about 60 carbon atoms.

3,127,441
PROCESS FOR MAKING SUBSTITUTED DIPHENYL ETHER SULFONATES

Joseph C. Valenta and Alfred F. Steinhauer, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Nov. 17, 1960, Ser. No. 69,799
8 Claims. (Cl. 260—512)

1. A process for making substituted diphenyl ether sulfonates of the general formula:



wherein *a* is a number from 1–2, R is alkyl and the total number of alkyl carbon atoms in the molecule is 8–18, *b* is a number from 0–1, and *c* is a number from 1–2, which process comprises contacting a substituted diphenyl ether dissolved in a liquid saturated aliphatic hydrocarbon

solvent with at least about the theoretical amount of a sulfonating agent selected from the group consisting of chlorosulfonic acid and sulfur trioxide, said process being carried out at a temperature of 0–50° C. thereby forming a hydrocarbon solvent layer and a diphenyl ether sulfonate layer, and separating said layers.

3,127,442
METHOD FOR PREPARING ALKALI SALTS OF β-ALKYLVINYLSULFONATES

Leslie M. Schenck, Mountainside, and John H. Shown, Westfield, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 12, 1960, Ser. No. 62,087
5 Claims. (Cl. 260—513)

1. The process of preparing alkali metal salts of β-alkylvinylsulfonates of the general formula:

$$R—CH=CHSO_3X$$

wherein R is an alkyl group of 1 to 4 carbon atoms and X is an alkali metal which comprises dehydrating by heating an alkali metal salt of a β-alkylisethionate in which the alkyl group contains from 1 to 4 carbon atoms in the presence of an alkaline material selected from the class consisting of alkali metal carbonates and hydroxides at a pH between 9.2 and 11.7 and a temperature between 120°–210° C., said pH being determined from a 10% aqueous solution of the admixture of said alkali metal salt and said alkaline material prior to dehydrating.

3,127,443
DECOLORIZATION OF AMINO ACIDS

Roger N. Sargent, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Nov. 21, 1958, Ser. No. 775,371
7 Claims. (Cl. 260—534)

1. A method for decolorizing an anmino acid prepared by aminating a halocarboxylic acid wherein colored by-products are formed, which method comprises contacting an aqueous desalted solution of said amino acid with a strongly basic anion exchange resin of the quaternary ammonium and sulfonium types and separating a substantially decolorized amino acid solution therefrom.

3,127,444
ANTI-CAKING AGENT AND COMPOSITION

William F. Tousignant and Wesley J. Tacey, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Oct. 30, 1961, Ser. No. 148,703
4 Claims. (Cl. 260—539)

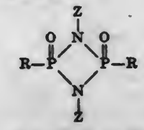
1. A composition comprising from 0.1 to 10 percent by weight of a metal ligno-sulfonate in admixture with a water soluble organic product, the metal ligno-sulfonate being selected from the group consisting of the alkali-metal ligno-sulfonates and alkaline earth metal ligno-sulfonates and the organic product being an alkali metal salt of a chloroalkanoic acid containing from 2 to 5 carbon atoms, inclusive.

3,127,445
METHOD FOR THE MANUFACTURE OF NITROGENOUS ORGANIC PHOSPHORUS COMPOUNDS

Hans Binder, Frankfurt am Main, and Rudolf Heinle, Rottweil (Neckar), Germany, assignors to Rottweiler Kunststoffefabrik AG., Rottweil (Neckar), Germany

No Drawing. Filed May 3, 1960, Ser. No. 26,418
3 Claims. (Cl. 260—551)

1. The method of producing organic nitrogenous phosphorous compounds which comprises reacting a phosphorous containing imide selected from the group consisting of phosphonium acid imides and phosphorus monoesterimides of the formula



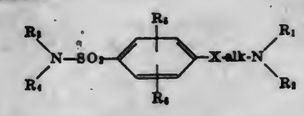
wherein R represents a member selected from the group consisting of alkyl, cycloalkyl, benzyl and phenyl, Z is a member selected from the group consisting of alkyl, cycloalkyl, benzyl, phenyl, R being linked to the phosphorous atoms by a linkage selected from the group consisting of the —C—P— and the —P—O—C— linkages, with a compound containing a reactive hydrogen atom and selected from the group consisting of water, monohydroxy alkanols, polyhydroxy alkanols acetic acid diethyl ester of malonic acid and acetyl acetone at a temperature between 110° and 240° C.

3,127,446
AMINOALKOXYBENZENESULFONAMIDES

William L. Holmes, Rosemont, Pa., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed June 12, 1962, Ser. No. 201,752
10 Claims. (Cl. 260—556)

1. A compound selected from the group consisting of a free base, its nontoxic, pharmaceutically acceptable acid addition salts and its nontoxic, pharmaceutically acceptable quaternary ammonium salts formed with medicinally acceptable quaternizing agents selected from the group consisting of halo and sulfonate esters, said free base being of the formula:



in which:

R_1 and R_2 are members selected from the group consisting of lower alkyl of 1–8 carbon atoms, and when taken together with the nitrogen atom, piperidinyl, morpholinyl; thiomorpholinyl, pyrrolidinyl and N-lower alkyl piperazinyl.

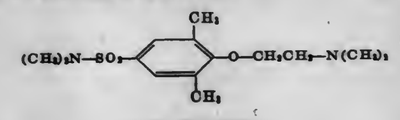
R_3 and R_4 are respectively members selected from the group consisting of hydrogen, lower alkyl of 1–8 carbon atoms, and, when taken together with the nitrogen atom, piperidinyl, morpholinyl, thiomorpholinyl, pyrrolidinyl, piperazinyl and N-lower alkyl piperazinyl;

R_5 and R_6 are respectively members selected from the group consisting of lower alkyl, lower alkoxy, trifluoromethyl, hydrogen and halo;

X is a member selected from the group consisting of sulfur and oxygen; and

Alk is a lower alkylene chain of 2–6 carbon atoms.

4. A compound of the formula:



3,127,447
METHYLNAPHTHALENE DERIVATIVES

John J. Jaruzelski, Pittsburgh, and Myron H. Wilt, Monroeville Borough, Pa., assignors to United States Steel Corporation, a corporation of New Jersey

No Drawing. Filed Apr. 8, 1960, Ser. No. 20,816
1 Claim. (Cl. 260—570.9)

1-phenylaminomethyl-2-methylnaphthalene.

3,127,448
METHOD FOR PREPARING TERTIARY AMINE BORANES

Alfred A. Hinckley, Beverly, Mass., assignor to Metal Hydrides Incorporated, Beverly, Mass., a corporation of Massachusetts

No Drawing. Filed Sept. 21, 1960, Ser. No. 57,370
6 Claims. (Cl. 260—583)

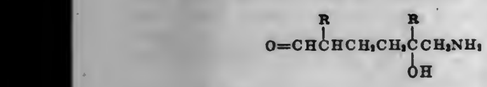
1. The method for preparting tertiary amine boranes which consists of forming a mixture of an alkali metal borohydride, an acid and water in the presence of a tertiary amine, the molar ratio of acid to alkali metal borohydride used being not greater than about 1 to 1, the molar ratio of water to alkali metal borohydride used being not more than about 3 to 1, said acid being selected from the group consisting of formic acid, acetic acid, boric acid, boric oxide and carbon dioxide, said tertiary amine being selected from the group consisting of lower alkyl and lower cyclo-alkyl tertiary amines, agitating said mixture until evolution of hydrogen ceases thereby forming a reaction mixture comprising a solution of the amine borane of the selected tertiary amine in the selected tertiary amine containing a precipitate of a salt of an alkali metal and said acid, and recovering the amine borane from said reaction mixture, the molar ratio of tertiary amine to alkali metal borohydride being sufficiently greater than 1 to 1 to provide an excess of tertiary amine sufficient to dissolve the tertiary amine borane formed.

3,127,449
6-AMINO-2,5-DIALKYL-5-HYDROXYHEXANAL AND METHOD OF PREPARATION

Howard R. Guest, Charleston, Harry A. Stansbury, Jr., South Charleston, and Ben W. Kiff, Ona, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Original application Aug. 19, 1958, Ser. No. 755,871. Divided and this application June 8, 1959, Ser. No. 822,709
4 Claims. (Cl. 260—584)

1. Chemical compounds having the formula:



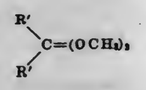
wherein R is an alkyl group having from 1 to 6 carbon atoms.

3,127,450
PROCESS FOR THE PREPARATION OF KETALS

Nicholas B. Lorette and William L. Howard, Lake Jackson, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Mar. 2, 1959, Ser. No. 796,288
3 Claims. (Cl. 260—611)

1. A method for preparing ketone acetals which consists essentially of reacting a ketone dimethyl acetal having the formula



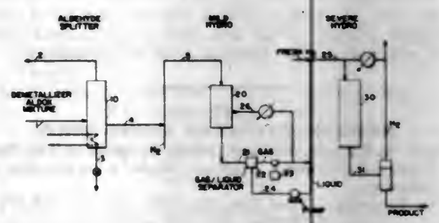
wherein each R′ represents a radical selected from the group consisting of aliphatic, cycloalphatic and aromatic radicals having from 1 to 6 carbon atoms and which when aliphatic and joined together form a cycloaliphatic ring, with an alcohol having the formula ROH wherein R is the residue left by removing OH from the alcohol ROH, said alcohol being selected from the group consisting of primary and secondary alkanols, alkenols, chloroalkanols, alkoxyalkanols, cycloalkanols, and arylalkanols, in the presence of an organic liquid capable of forming an azeotrope with methyl alcohol selected from the group consisting of hydrocarbons containing from 5 to 7 carbon atoms, and chlorohydrocarbons containing from 2 to 4 carbon atoms, at a temperature of from about 0° to about 120° C. under acid conditions such that the methyl alcohol of reaction as formed is azeotropically distilled with the organic liquid; continuing the reaction and distillation until the methyl alcohol of reaction substantially ceases to form; and, finally separating from the mixture at least one of the ketals having one of the formulas

$(R')_2C=(OR)_3$ and $(R')_2C=(OCH_3)(OR)$

3,127,451
CONVERSION OF ALDOX ALDEHYDES TO ALCOHOLS

Peter Joseph Berkeley, Jr., Tulsa, Okla., and Leroy Virgil Robbins, Jr., Baton Rouge, and Rhea N. Watts, St. Francisville, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Jan. 25, 1960, Ser. No. 4,496
8 Claims. (Cl. 260—638)



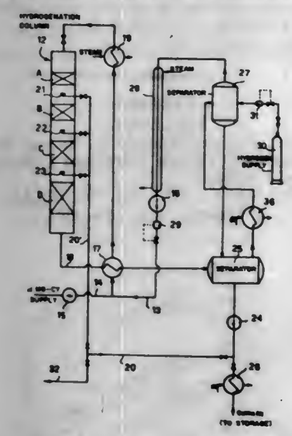
1. A process for obtaining an alcohol having $2n+2$ carbon atoms per molecule and a carbonyl number of less than about 0.5, n being an integer from 2 to 5 which comprises contacting a crude demetallized mixture containing aldehydes having $2n+2$ carbon atoms per molecule and unsaturated aldehydes, obtained from reaction of an olefin having the formula C_nH_{2n} with carbon monoxide and hydrogen at elevated temperature and presssure in the presence of a cobalt and zinc-containing catalyst and subsequently removing residual catalytic metals, in a first stage with hydrogen at a pressure of about 2000 to 4000 p.s.i.g. and at a temperature of about 350–400° F. in the presence of a catalyst selected from the group consisting of molybdenum sulfide, cobalt molybdate and copper chromite for a period of 3 to 6 hours to convert unsaturated aldehydes in said crude mixture to saturated aldehydes without substantial formation of alcohols, contacting the thus hydrogenated mixture in a second stage with hydrogen at a pressure of 2000–4000 p.s.i.g. and a temperature of about 450 to 525° F. in the presence of said catalyst for a residence period of 6 to 12 hours to convert said saturated aldehydes to alcohols.

3,127,452
METHOD OF HYDROGENATING ALPHA-METHYLSTYRENE TO CUMENE

Franco Codignola, Milan, Italy, assignor to Società Italiana Resine, Milan, Italy

Filed Aug. 17, 1961, Ser. No. 132,174
Claims priority, application Italy June 7, 1961
7 Claims. (Cl. 260—667)

1. The process of hydrogenating alpha-methylstyrene to cumene, wherein elemental hydrogen and a solution of alpha-methylstyrene in cumene are simultaneously led in

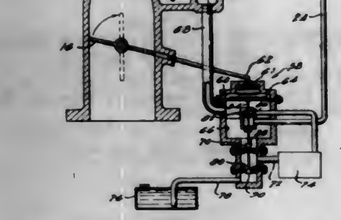


mutual contact through a bed of a catalyst consisting of palladium metal adsorbed on granulated active carbon.

3,127,453
FLOATLESS CARBURETOR

Jorma O. Sarto, Orchard Lake, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

Filed Mar. 23, 1959, Ser. No. 801,228
14 Claims. (Cl. 261—36)

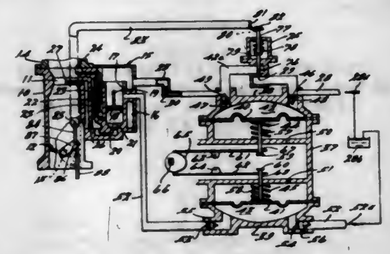


1. In a carburetor, an air intake passage, a fuel orifice opening into said passage, a fuel bowl connected to said orifice and having overflow means, a fuel supply, a feed conduit connecting said supply and bowl, pump means in said conduit for supplying said bowl with an excess of fuel from said supply, an overflow chamber having an inlet in communication with said overflow means to receive excess fuel therefrom and having an outlet in communication with the inlet side of said pump means, return valve means in said outlet for adjusting the flow of said excess fuel to said pump means, feed control valve means in said feed conduit downstream of said pump means for adjusting the flow of fuel to said bowl, shiftable valve actuating means responsive to the fuel in said overflow chamber for shifting in one direction or the opposite as the fuel in said chamber increases or decreases respectively, means operatively connecting said actuating means with each of said valve means for progressively opening said return valve means and closing said feed control valve means in unison upon movement of said actuating means in said one direction and for progressively closing said return valve means and opening said feed control valve means in unison upon movement of said actuating means in the opposite direction.

3,127,454
RETURN FLOW CARBURETOR

Thomas M. Ball, Bloomfield Hills, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

Original application June 5, 1959, Ser. No. 818,349, now Patent No. 3,098,885, dated July 23, 1963. Divided and this application Mar. 23, 1961, Ser. No. 97,775
5 Claims. (Cl. 261—36)



1. In a carburetor for an internal combustion engine having a fuel and air induction system, a floatless fuel bowl, duct means connecting said bowl and system for supplying fuel to the latter, a fuel pump having an inlet adapted to be connected with a source of fuel and also having an outlet, inlet conduit means connecting said outlet and fuel bowl for supplying fuel to the latter upon operation of said pump, means for maintaining the fuel in said bowl at a predetermined level comprising an overflow weir in said bowl defining at least in part a chamber adapted to receive excess fuel overflowing said weir from said bowl when the fuel in said bowl attains said predetermined level, fuel return means in communication with said chamber to drain fuel therefrom upon overflow of excess fuel from said bowl into said chamber, a bypass duct connecting said inlet with said inlet conduit means at a location downstream of said outlet, means for prorating the fuel flow from said outlet to said fuel bowl and bypass duct including valve means in said bypass duct for controlling the fuel flow therein and thereby to control the fuel flow to said bowl, control means including a throttle valve in said system for controlling the air flow therein, and means operably connecting said control means and valve means for adjusting the latter in accordance with operation of said throttle valve to increase the fuel flow in said inlet conduit means to said fuel bowl with opening of said throttle valve.

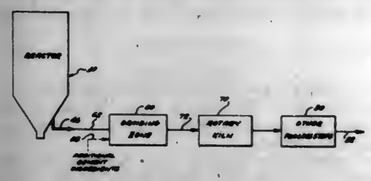
3,127,455
METHOD FOR MAKING CEMENT

William J. Culbertson, Jr., and Thomas D. Nevens, Denver, Colo., assignors, by mesne assignments, to The Oil Shale Corporation, Beverly Hills, Calif., a corporation of Nevada

Filed May 31, 1960, Ser. No. 32,985
5 Claims. (Cl. 263—53)

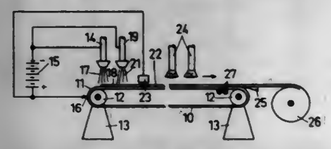
1. In a process for producing cement, the improvement which essentially consists of: fluidizing particualte oil shale by means of an oxidizing gas; substantially completely combusting said fluidized oil shale by means of said oxidizing gas in a first zone to produce hot gases of combustion; fluidizing particulate limestone by means of said hot gases of combustion, and at least partially calcining said limestone in said first zone by means of heat

transferred to said limestone from said hot gases of combustion; and transferring the oil shale ash resulting from said substantially complete combustion of said oil shale



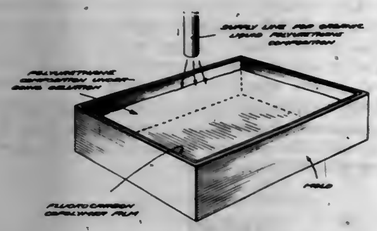
together with the resulting at-least-partially calcined limestone, and together with additional limestone, to a cement-making zone.

3,127,456
PROCESS FOR MAKING FILM BASES
Karl Wahl, Landhaus Neugut, Schaan, Liechtenstein
Filed Mar. 7, 1962, Ser. No. 178,787
14 Claims. (Cl. 264—24)



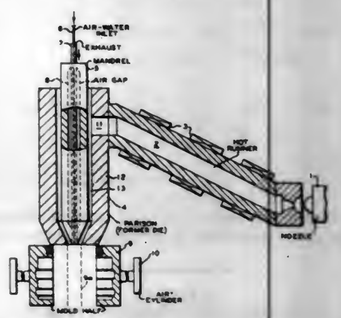
1. A process for making a film base, comprising the steps of electrostatically spraying a polymerizable substance onto a smooth surface, polymerizing said substance on said surface to form a polymeric foil, and stripping said foil from said surface.

3,127,457
METHOD OF MOLDING A POLYURETHANE FOAM IN A MOLD HAVING AN IMPROVED RELEASE AGENT
Joseph G. Di Pinto, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Nov. 18, 1960, Ser. No. 70,106
3 Claims. (Cl. 264—54)



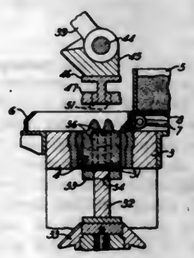
1. In the process of preparing polyurethane articles which process comprises reacting an organic polyisocyanate with an organic compound having at least two groups bearing Zerewitinoff-active hydrogen atoms and allowing the resulting mixture to gel and become tack-free, the improvement of obtaining multiple releases by a mold surface to said polyurethane articles when successively molded thereagainst by the steps of maintaining the ungelled reaction mixture in contact with a solid surface comprising said mold surface and consisting of a fluorocarbon copolymer until said reaction mixture has gelled and become tack-free, said copolymer consisting of about 5 to 50% by weight of hexafluoropropene units and about 95 to 50% by weight of tetrafluoroethylene units and removing said tack-free reaction product from said solid surface, whereby said solid surface is available for release of successively molded polyurethane articles.

3,127,458
MOLDING
John N. Scott, Jr., and Donald L. Peters, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Apr. 11, 1961, Ser. No. 102,243
6 Claims. (Cl. 264—98)



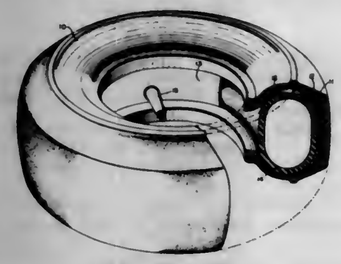
1. A process for the manufacture of blown hollow articles from organic plastic materials which are expandible by blowing and thereafter are capable of being rigidified which comprises extruding a portion of plastic material, blowing the extruded portion of plastic material into conformity with the confines of an enclosing mold, cooling said plastic material by first introducing substantially dry air under pressure, circulating under pressure the air within said blown hollow article, and thereafter introducing into said circulating air under pressure a small amount of an atomized liquid coolant to achieve circulation of said liquid coolant with said air.

3,127,459
PROCESS AND APPARATUS FOR MAKING PERFORATED BRICKS
Richard E. Bratton, Fulton, Mo., assignor to Harbison-Walker Refractories Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 11, 1962, Ser. No. 165,565
10 Claims. (Cl. 264—154)



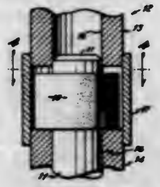
1. In methods of fabricating apertured bodies from unconsolidated granular brickmaking material in which said material is delivered to a cavity and a pair of opposed dies are reciprocally movable within the confines of said cavity to compress material deposited therein to make self-sustaining bodies and in which a plurality of pins are used to make passages through the bodies, the improvement which comprises the steps of moving said pins through unconsolidated material deposited in said cavity to remove a quantity of material therefrom, and then leveling the top of the material remaining in the cavity to evenly distribute material about said pins within said cavity all prior to compressing said material.

3,127,460
METHOD OF VULCANIZING RETREADED TIRES
Harold A. Freeman, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Aug. 1, 1961, Ser. No. 128,420
3 Claims. (Cl. 264—315)



1. A method of vulcanizing a retreaded pneumatic tire comprising, inserting a toroidal shaped, expandable, inflatable, full circle, curing bag into said retreaded tire having means for heating at least the crown area of said bag, injecting a pressurized fluid into said bag to expand the external surface thereof against the internal surface of the tire while said tire is unconfined, applying heat to the internal surface by activating said heating means to heat the carcass of said tire to a temperature close to the vulcanizing temperature of rubber, exhausting said pressurized fluid from said bag after said carcass has been heated to close to the vulcanizing temperature of rubber, inserting the tire and bag into a retreading mold while the carcass is still hot, inflating said bag to hold the tire in contact with said mold under pressure and vulcanizing the retread of said carcass within said mold.

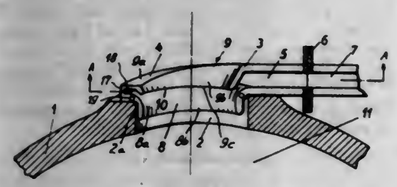
3,127,461
METHOD OF PRODUCING CURVED RADIALLY ALIGNED MATRIX BONDED FINE PARTICLE PERMANENT MAGNETS
Walter S. Blume, Jr., 1371 Colonial Drive, Cincinnati 38, Ohio
Filed July 10, 1961, Ser. No. 122,834
7 Claims. (Cl. 264—325)



1. A method of making a permanently magnetizable ring which displays radial magnetic alignment, said method comprising, bending normally flat perpendicularly oriented fine particle matrix bonded permanent magnet material into the approximate shape of said ring, disposing said material in an annular die cavity having inside and outside diameters equal to the diameter of said ring, and subjecting said material to endwise compression whereby said material is caused to flow and to conform to the shape of said cavity, said material being cohered to itself as an incident to said compression, the direction of alignment of said material being substantially unchanged by said endwise compression.

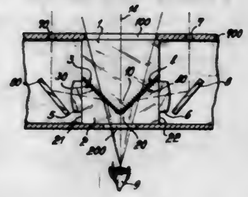
ELECTRICAL

3,127,462
DEVICE FOR THE REMOVAL OF SMOKE FROM ELECTRIC FURNACES AND THE LIKE
Enrico Erni and Fritz Lüscher, Geriafingen, Switzerland, assignors to Gesellschaft der Ludw. von Roll'schen Eisenwerke A.G., Geriafingen, Switzerland, a corporation of Switzerland
Filed Feb. 13, 1961, Ser. No. 88,982
Claims priority, application Switzerland Feb. 17, 1960
13 Claims. (Cl. 13—9)



1. A device for removal of smoke gas and the like from the interior of a furnace adapted to encircle an electrode at the region where said electrode enters said furnace, said device comprising an annular housing provided with an outlet conduit for removal of said gas and an internal annularly arranged flow channel communicating with said outlet conduit, with the cross-sectional area of said annularly arranged flow channel increasing in the direction of said outlet conduit, said housing being provided with annular slot means in registry with said flow channel permitting movement of smoke gas into said flow channel.

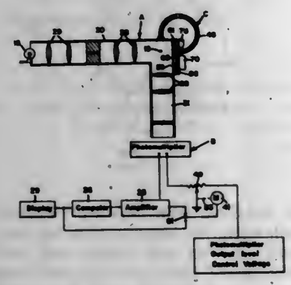
3,127,463
PHOTOGRAPHIC VIEWFINDER WITH DIVIDED FIELD FRAME AND IMAGING MEANS
Friedrich Papke, Braunschweig, Germany, assignor to Voigtlander A.G., Braunschweig, Germany, a corporation of Germany
Filed Oct. 31, 1961, Ser. No. 149,003
Claims priority, application Germany Nov. 15, 1960
6 Claims. (Cl. 88—2.4)



1. An objective field defining viewfinder comprising, in combination, a housing having an object facing front wall and an eye facing rear wall; a composite parallelepiped body of transparent material having a light ray entry end at said front wall and a light ray exit end at such rear wall and through which the observer views directly a scene to be photographed,

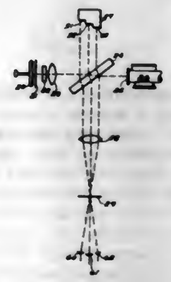
said body including an object facing first body part and an eye facing second body part; the eye facing end surface of said first body part being formed as a V-shaped salient to constitute a male roof prism, and the object facing end surface of said second body part being formed with a V-shaped recess complementary to said salient to constitute a female roof prism; said two body parts being joined at cemented interfaces between their two mating pairs of inner end surfaces; a pair of partially light-permeable mirrors each disposed in a respective one of said interfaces and facing toward the light ray exit end of said body and toward a respective lateral surface thereof; means, including openings in said front wall, forming a pair of complementary field frame defining light ray admission areas disposed symmetrically laterally of, but closely adjacent, said body at the light ray entry end thereof, and respectively adjacent opposite ones of said lateral surfaces thereof; said front wall having an opening for admitting light from the object through the light ray entry end of said body; a pair of reflecting mirrors, each positioned in direct alignment with one of said light admission areas and facing toward the associated light admission area and toward a respective one of said partially light-permeable mirrors to reflect light rays, entering through its associated light admission areas, laterally to the facing partially light-permeable mirror for reflection by the latter to the light ray exit end of said body to form images of said areas in the image field of the viewfinder; said rear wall having a single opening centered on the optical axis of said body for single eye viewing of the object and the images of both of said areas in said image field; the relative orientation of said reflecting mirrors and said partially light-permeable mirrors with respect to the optical axis of the finder being such as to convergingly shift the two frame defining images laterally toward the optical axis of the viewfinder to an extent such that said frame defining images complement each other in said image field to provide therein, in the field of view of a single eye of an observer, an image of a complete objective field defining frame; and a pair of collimating lenses positioned on respective ones of said lateral faces of said eye facing second body part and each disposed in the path of light rays reflected by a respective reflecting mirror to its associated partially light-permeable mirror, the optical constants of each of said lenses being such that the light rays passing therethrough are focused sharply at substantially infinity in the field of view of the viewfinder in association with the image of the photographic objective.

3,127,464
LIGHT SOURCE STANDARDIZING DEVICE
Frank R. Gustavson, Palo Alto, Calif., assignor to Royco Instruments, Inc., Palo Alto, Calif., a corporation of California
Filed Nov. 1, 1960, Ser. No. 66,451
9 Claims. (Cl. 88—14)



1. A device for calibrating an optical device of the type having a light beam focused on a target area and having an electrically reactive light sensing device arranged to sense light reflected from objects within the target area in which the path of a light axis from the reflected object to the light sensing device is at an angle other than in axial alignment with the light beam comprising light receiving means located in axial alignment with the light beam on the opposite side of the target area, means operably connected to transmit light from said light receiving means into axial alignment with said target area and said light sensing means such that light entering said light receiving means is directly transmitted through the target area to said light sensing means in direct proportion to the light received by said light receiving means.

3,127,465
THREE-PHASE INTERFEROMETER
Richard G. Stephens, Binghamton, N.Y., assignor to General Precision, Inc., Binghamton, N.Y., a corporation of Delaware
Filed Jan. 16, 1961, Ser. No. 82,955
6 Claims. (Cl. 88—14)

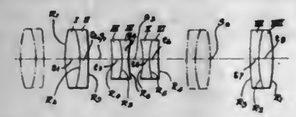


1. An interferometer comprising,
(*a*) a beam-splitter means operable to provide from an incident light beam a pair of light beams;
(*b*) retroreflector means positioned in the optical path of one of said pair of light beams;
(*c*) phase-shifting means positioned in the optical path of said one of said pair of light beams effective to shift unequally the phase of at least two portions of said beam with respect to the remaining portion thereof, the first of said two portions being shifted by $n/6$ wavelengths and the second of said two portions being shifted by $2n/6$ wavelengths wherein n is an add integer; and
(*d*) means for imaging the separate fields of illumination produced by recombining said phase-shifted portions of said one of said pair of light beams and said remaining portion thereof with the other of said pair of light beams at said beam-splitter means upon a corresponding plurality of photo-devices each of which is substantially continuously responsive to one of said separate fields of illumination.

3,127,466
VARIABLE MAGNIFICATION LENS SYSTEM FOR MICROSCOPES
Richard M. Walters, Kenmore, N.Y., assignor to American Optical Company, Southbridge, Mass.
Filed Apr. 12, 1961, Ser. No. 102,494
1 Claim. (Cl. 88—57)

A variable magnification lens system for microscopes and having fixed conjugates at infinity, comprising
a pair of identical negative lens components disposed in fixed, spaced relationship and in oppositely facing relation,

and a pair of identical positive lens components disposed on opposite sides of said negative components and in oppositely facing relation to each other,



each of said positive components consisting of a doublet, one of which is exemplified according to the following in which n_D is the index of refraction and ν is the abbe number of the glass used, the radii R and thickness t being in millimeters:

Lens	n_D	ν	Radii and Thickness	
I	1.5725	57.4	$R_1=+33.14$ $R_2=-23.07$	$t_1=4.0$ $t_2=2.0$
II	1.689	30.9	$R_3=-98.10$	

each of the negative components consisting of a doublet, one of which is exemplified according to the following:

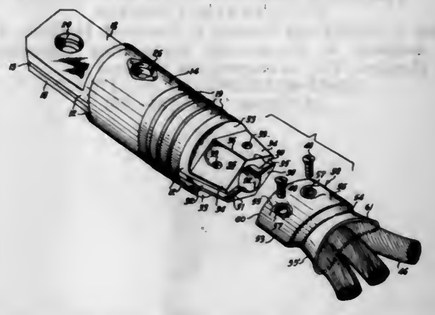
Lens	n_D	ν	Radii and Thickness	
III	1.689	30.9	$R_4=-72.96$ $R_5=-14.25$	$t_3=2.5$ $t_4=1.5$
IV	1.5725	57.4	$R_6=+18.05$	

the fixed spacing between negative components being 4.0 millimeters, the spacing S_1 between the exemplified positive and negative components and the spacing S_2 between the other positive and negative components being variable according to the following:

Magnification	S_1 (mm.)	S_2 (mm.)
.55	6.1248	23.7009
.60	8.225	22.008
.70	11.525	21.062
.80	14.000	20.296
.90	15.924	18.850
1.00	17.464	17.464
1.10	18.724	16.078
1.20	19.774	14.902
1.30	20.663	13.906
1.40	21.424	11.920
1.50	22.084	10.535
1.60	22.662	9.149
1.70	23.171	7.763
1.80	23.624	6.377
1.90	24.029	4.991

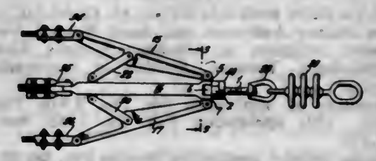
3,127,467
WELDING CABLE ASSEMBLY
William A. Toto, 3645 Warrensville Center Road, Cleveland 22, Ohio
Filed Apr. 13, 1962, Ser. No. 187,302
5 Claims. (Cl. 174—15)

1. A flexible electrical welding cable assembly comprising two mutually insulated groups of cable conductors, each group of conductors being of single polarity and having free end portions; end fittings enclosing the said free end portions of each of said groups of cable conductors to form a unitary point of termination for the cable conductors within each of said groups; terminal elements at each end of said cable assembly, said terminal elements each comprising a pair of elongated, semicylindrical terminal conductor elements joined along inner, flat, mutually insulated, contiguous surfaces, each of said terminal conductor elements having a rearward portion; tongue projections extending axially rearwardly from the said rearward portions of said terminal conductor elements, said tongue projections being integral with, of radial thickness less than, and of similar width as the said terminal conductor elements, said tongue projections having outer surfaces meeting the rearward portion of said terminal conductor elements along radial, substantially planar surfaces; said cable conductor end fittings having arcuate outer surfaces similar in curvature to the outer surfaces of said terminal conductor elements, inner surfaces of such form that they may closely fit against the said outer surfaces of said tongue projections, and substantially planar forward surfaces; each of said groups of cable conductors of like polarity being secured at its opposite ends to a terminal conductor element of similar polarity by means of said cable conductor end fittings; each end fitting being secured to a terminal conductor tongue projection



by means of removable mechanical fastener means, the said inner and forward surfaces of said end fittings abutting respectively the said outer surfaces of said tongue projection and the said radial surfaces of said terminal conductor elements in electrically conductive relationship, and the radial thickness of said end fittings being such that when secured to said tongue projections, the outer surface of each of said end fittings forms substantially a continuation of the outer arcuate surface of the respective terminal conductor element to which it is secured, whereby a smooth, uniform, low resistance cable to terminal joint is obtained; and a tubular, removable, resilient sheath enclosing said cable conductors and extending over the rearward portion of each of said terminal elements at opposite ends of said cable assembly so as to also enclose the cable to terminal joints.

3,127,468
ADJUSTABLE CONDUCTOR SUPPORT
Edward Frederick Bradshaw, Markham, Ontario, Canada, assignor to Burndy Corporation, a corporation of New York
Filed Aug. 10, 1960, Ser. No. 48,616
6 Claims. (Cl. 174—40)



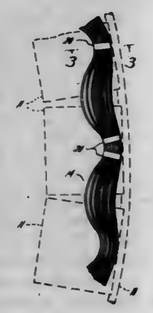
1. A support device adapted to be mounted to a fixed tower or the like for supporting a plurality of electrical conductors having parallel longitudinal axes, comprising: a central shaft member; mounting means on said shaft for engaging said tower to prevent axial movement of said shaft relative thereto; a first support means and a

second support means each disposed on said central shaft and adapted to be adjustably spaced axially apart thereon; a plurality of support arms disposed in equally spaced angular relationship about said central shaft, each pivotally connected at one end thereof to said first support means; means at the other end of each of said arms for pivotally coupling a conductor thereto; and a plurality of link members each pivotally attached at one end thereof to said second support means and at the other end thereof to a corresponding one of said plurality of arms, whereby relative adjustment of the spacing between said first and second support means varies the spacing between said electrical conductors at the ends of said arms while maintaining the axes of said conductors parallel.

3,127,469
FLEXIBLE TOWLINE WITH ELECTRICAL CONDUCTOR HARNESS

Roy L. Rather and Vilmuth P. Goerland, Houston, Tex., assignors to Commercial Engineering Corporation, Houston, Tex., a corporation of Texas

Filed Feb. 28, 1962, Ser. No. 176,317
6 Claims. (Cl. 174—70)



1. An electrical conductor assembly comprising, in combination;

a flexible tow line;

fairing members spaced along said tow line and provided with longitudinally aligned passageways;

a plurality of flat, insulated conductors disposed in overlying relation and extending through said passageways;

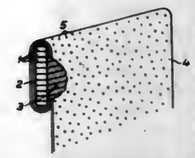
and securement means holding said conductors against relative longitudinal movement, at spaced points within said passageways, and in normally successively varying spaced relation, between said points.

3,127,470
INSULATION FOR ELECTRICAL CONDUCTORS

Anders Ragnar Andersson and Knut Nylund, Vasteras, Sweden, assignors to Allmänna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a corporation of Sweden

Continuation of application Ser. No. 9,926, Feb. 19, 1960. This application Feb. 26, 1963, Ser. No. 261,179
Claims priority, application Sweden Feb. 24, 1959
3 Claims. (Cl. 174—121)

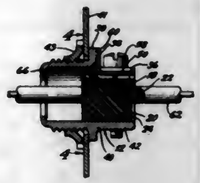
1. An insulated high voltage coil comprising at least one conducting member, at least twelve layers of an insulating tape comprising a mica tape provided with perforations and having a woven glass fibre backing layer, wrapped around the conductor, the sum of the areas of the perforations being from 0.2 to 10 percent of the total area of the mica tape, and a solid resin derived from a liquid resinous composition applied to the electrical conductor and the wrappings thereon to impregnate the wrapping and to bond the whole into a solid member.



3,127,471
STRAIN RELIEF CLAMP

John R. Greiner, Marshalltown, Iowa, assignor to Lennox Industries, Inc., a corporation of Iowa

Filed May 1, 1961, Ser. No. 106,712
1 Claim. (Cl. 174—135)



A strain relief fitting for insulated wires which comprises, in combination, a cable connector comprising a tubular body having a support flange extending therefrom, and retaining means fastened to said support flange; and a strain relief clamp member positioned between said retaining means and said support flange and having an end portion within said body, said strain relief clamp comprising a pair of molded dielectric elements joined by an integral flexible strip for enabling said dielectric elements to be folded together to form a collar, a plurality of spaced-apart, longitudinal semicircular grooves formed in each of said dielectric elements, the grooves on each dielectric element mating with a groove on the other dielectric element to form circular openings through said collar, said dielectric elements having serrations on the surfaces of said grooves for clamping insulated wires between them in said circular openings, each groove having two series of such serrations, the gripping edges of which project in opposite directions longitudinally of the groove, and a lateral retaining flange on said end portion of the strain relief clamp member within said tubular body in engagement with said retaining means to cause said clamp member to be tightly held within said cable connector.

3,127,472
BROAD-BAND ELECTRIC AMPLIFIER WITH PLURAL OUTPUTS AT DIFFERENT POTENTIAL LEVELS

Michael B. Cumbers, Wembley, and Eric Ribchester, Hanworth, England, assignors to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois

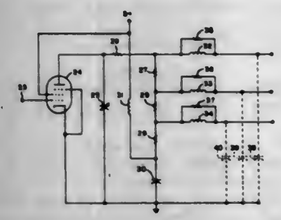
Filed July 2, 1962, Ser. No. 206,710
Claims priority, application Great Britain July 12, 1961
3 Claims. (Cl. 178—5.4)

1. A broad-band electric amplifier circuit comprising:

an electric amplifying element;

a load for said element comprising a capacitance, between the terminals of which the output from said element is applied, a resistance and a parallel tuned circuit connected in series between the terminals of said capacitance, and a plurality of substantially identical series tuned circuits respectively connected between different points on said resistance and the end of said parallel tuned circuit remote from said resistance, said series tuned circuits having a resonant frequency of at least 300 kilocycles per second and said parallel tuned circuit having a resonant frequency several times that of said series tuned circuits;

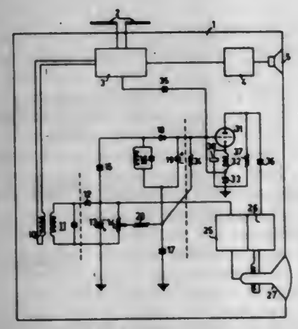
and means for deriving a plurality of outputs respectively from across the capacitances in said series tuned circuits.



3,127,473
TELEVISION RECEIVER PROVIDED WITH AN ARRANGEMENT FOR OBTAINING A CONTROL QUANTITY CORRESPONDING TO THE DEGREE OF DETUNING

Helmut Mehlhorn, Mannheim-Gortenstadt, Germany, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Oct. 12, 1960, Ser. No. 62,224
Claims priority, application Germany Nov. 30, 1959
9 Claims. (Cl. 178—5.8)

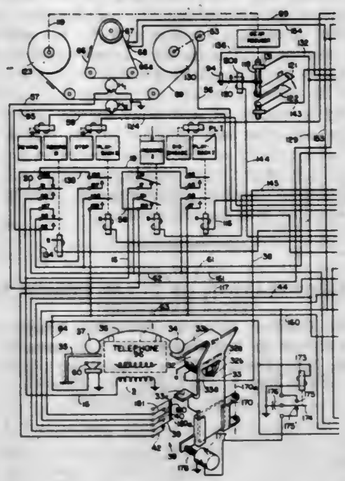


1. A television receiver having means for providing a control quantity dependent upon the tuning of said receiver, said receiver comprising a source of intermediate frequency signals, first and second rectifier means, means applying said intermediate frequency signals to said first rectifier means to provide first unidirectional rectified signals, resonant circuit means tuned to a frequency intermediate the image and sound carrier frequencies of said intermediate frequency signals, means applying said intermediate frequency signals to said resonant circuit means, means connecting said resonant circuit means to said second rectifier means to provide second unidirectional rectified signals, and means for combining said first and second rectified signals to provide said control quantity.

3,127,474
TELEPHONE ANSWERING APPARATUS

Herbert Waldman, Brooklyn, N.Y., assignor, by mesne assignments, to Royal Business Funds Corporation, New York, N.Y., a corporation of New York

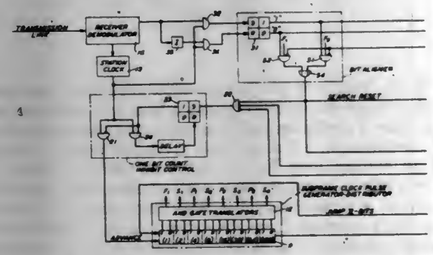
Filed Oct. 13, 1958, Ser. No. 766,746
20 Claims. (Cl. 179—6)

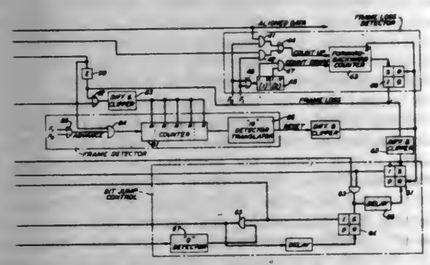


2. A telephone-answering apparatus for association with a telephone receiver having a base and a handset resting upon a cradle on the base, said apparatus comprising, in combination, a first movable recording tape in the form of an endless loop for prerecording thereon within one loop cycle a message to a party calling said associated receiver, a second movable recording tape for recording thereon a message from the calling party, a handset-activating mechanism to effect connection and disconnection respectively of a sound-transmitting circuit in the base of the receiver, first actuating means for driving and activating said tape loop for reproduction of the message recorded thereon, first actuating circuit means for stopping and deactivating said tape loop upon completion of one cycle, second actuating means for driving and activating said second tape for recording thereon message signals from the calling party transmitted through the receiver, second actuating circuit means controlled by the first actuating circuit means for stopping and deactivating said second tape upon expiration of a predetermined period of no-signal reception, third actuating circuit means for stopping and deactivating said second tape upon expiration of a predetermined period of time, relay means movable through intermediate switching positions from a starting position to a terminal position for controlling operation of said mechanism, said first and second tape-actuating means and said first, second and third actuating circuit means in a predetermined sequential order, means inductively responsive to a ringing signal at said receiver for activating said relay means, activation of said relay means by the inductive means actuating said mechanism to activate the handset, a plurality of control circuits controlled by the switching positions of the relay means and interconnecting said relay means, said actuating means and said actuating circuit means in circuits such that operation of any one of said tape-driving means and actuating circuit means respectively effects switching of the relay means toward the terminal position and that switching of the relay means through successive intermediate positions effects deactivation of the respective one of the means causing the switching and also actuation of the respective means next following in said predeter-

mined sequence, further control circuits controlled by switching of the relay means toward and into the terminal position to effect operation of said mechanism for deactivating the handset to disconnect said communication circuit and return of the relay means into the starting position, and switch means for placing a selected one of said second and third actuating circuit means under the control of the control circuits, said handset activating mechanism including a member movable between a handset rest position and a handset raised position, electric motor means for lifting said member from the rest position into the raised position, said motor means being energized by actuation of said relay means, and retaining means for retaining said member in the raised position upon de-energization of the motor means in a predetermined position of the relay means, re-energization of the motor means in another predetermined position returning said member into the rest position.

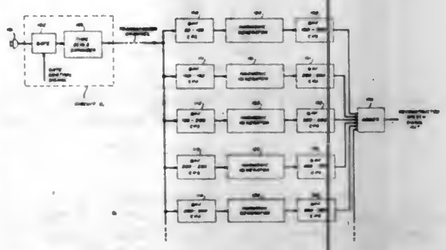
3,127,475
SYNCHRONIZATION OF PULSE COMMUNICATION SYSTEMS
Donald M. Coulter, Hanover Township, Morris County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed July 9, 1962, Ser. No. 208,647
8 Claims. (Cl. 179—15)





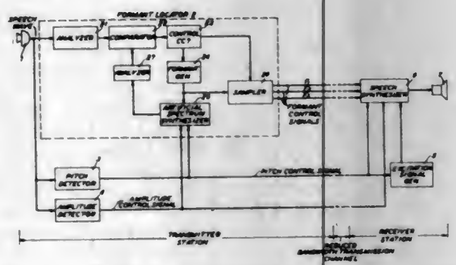
1. In a synchronous pulse communication system which includes receiver apparatus for reconstituting a message from code groups of pulses of an incoming pulse train, at least one pulse period of each frame of said train being assigned to a framing digit which is distinguishable from other digits of the train by virtue of its unique recurrent pattern, which apparatus comprises clock pulse generator means operative in response to the received pulse train to normally generate a synchronous clock pulse signal for each frame of said incoming pulse train, means for comparing the timing of the recurring clock pulse signals with respect to the received framing digits, and means operative in response to a loss of synchronism between said clock pulse signals and said received framing digits to advance the relative phase of said clock pulse signals a predetermined number of pulse periods and to thereafter intermittently retard said phase one pulse period at a time until said synchronism is obtained.

3,127,476
ARTIFICIAL RECONSTRUCTION OF SPEECH
Edward E. David, Jr., Berkeley Heights, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Feb. 2, 1960, Ser. No. 6,301
13 Claims. (Cl. 179—15.55)



1. In a system for the synthesis of speech, a source of narrow-frequency band signals derived from a speech signal by a pitch synchronous processing system and characterized by a plurality of spectral components, means for generating harmonics of the fundamental frequency of said speech signal from said spectral components of said narrow-frequency band signals, and means for combining said harmonics to synthesize a replica of said speech signal.

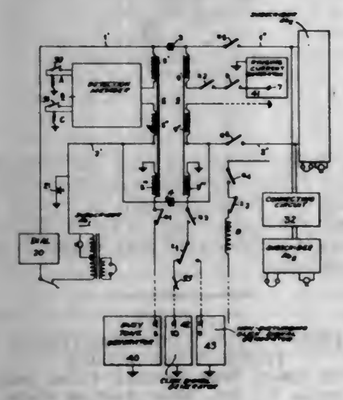
3,127,477
AUTOMATIC FORMANT LOCATOR
Edward E. David, Jr., Berkeley Heights, Max V. Mathews, New Providence, and Joan E. Miller, Plainfield, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed June 27, 1962, Ser. No. 205,663
15 Claims. (Cl. 179—15.55)



1. A system for automatically locating speech formants which comprises a source of a first control signal representative of the fundamental frequency of an incoming speech wave, a source of a second control signal representative of the energy of said speech wave, means for generating a plurality of formant signals whose values collectively vary to represent substantially all possible combinations of formant locations during each of a succession of selected time periods, means for synthesizing an artificial spectrum from said formant signals and said first and second control siganls, first analyzing means for deriving from said artificial spectrum a first group of signals representative of the amplitudes of the individual frequency components of said artificial spectrum, second analyzing means for deriving from the spectrum of said speech wave a second group of signals representative of the amplitudes of the individual frequency components

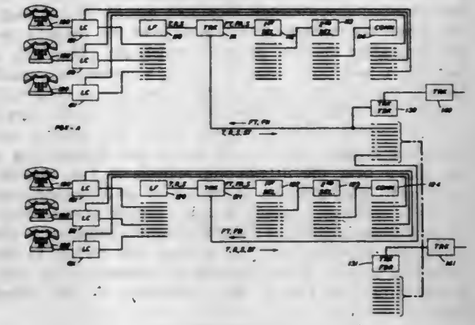
of said speech spectrum, comparing means in circuit relation with said first and second analyzing means for obtaining from said first and second groups of amplitude signals an error signal representative of a selected measure of the difference in formant location between said artificial spectrum and said speech spectrum, means supplied with said error signal for sampling the values of said formant signals which correspond to the minimum magnitude of said error signal during each of said selected time periods.

3,127,478
AUTOMATIC PRIVATE EXCHANGE WITH FACILITIES FOR BREAKING IN AND CONFERENCE CALLS
Johannes Martinus Brouwer, Hilversum, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed May 13, 1959, Ser. No. 812,986
Claims priority, application Netherlands June 3, 1958
4 Claims. (Cl. 179—18)



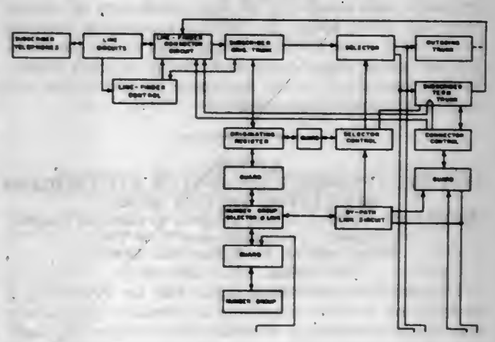
1. An automatic private exchange comprising a plurality of subscribers' lines, a connecting circuit for interconnecting said lines, a source of a break-in signal connected to at least one of said lines, and a source of a conference signal connected to said one line, said connecting circuit comprising first detector means responsive to said break-in signal for establishing a connection with a busy called subscriber and indicating to said busy called subscriber that a break in connection has been made, second detector means responsive to said conference signal for removing indication of a break-in and inhibiting recall of said called subscriber, a source of busy signals for indicating to said one line that a called subscriber is busy, a source of break-in indicating signals for indicating to said called subscriber that a break-in connection has been made, a source of ringing current for ringing said called subscriber, and recall relay means for recalling said called subscriber, said first detector means having first normally open contact means interconnecting said lines, second normally closed contact means applying said busy signal to said one line, third normally open contact means applying said break-in indicating signals to said lines, fourth normally open contact means for energizing said recall relay means, and fifth normally open contact means for applying said ringing current to another of said lines, said second detector means having sixth normally closed contact means in series with said third contact means, and seventh normally closed contact means in series with said fourth contact means, said recall relay means having eighth normally open contact means in series with said fifth contact means.

3,127,479
TELEPHONE SWITCHING SYSTEM
William B. Macurdy, Belmont, Mass., and Herman E. Noweck, Mountain Lakes, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 30, 1960, Ser. No. 79,885
9 Claims. (Cl. 179—18)



1. A telephone switching system comprising a plurality of private branch exchanges, a plurality of stations in each of said exchanges, each of said stations including keyset call signaling apparatus, a plurality of converters in a central office common to said plurality of private branch exchanges for registering call signaling information from said stations and for transmitting dial pulse signals to said private branch exchanges in response thereto, a plurality of connecting means discrete to said private branch exchanges for connecting said private branch exchanges to said converters, means individual to said connecting means for providing a converter control signal, and means in said converters responsive to said converter control signals for altering the operation of said converters.

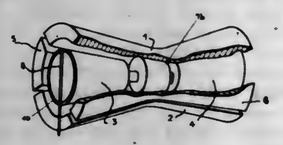
3,127,480
AUTOMATIC TELEPHONE SYSTEM
Folke Ek, Hagersten, Sweden, and John Sture Lindenhall and Arne Oxaal, Gallon, Ohio, assignors to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden
Filed Sept. 9, 1960, Ser. No. 54,896
10 Claims. (Cl. 179—22)



1. In an automatic telephone system having cross-bar switching stages for extending connections between stations connected to subscriber lines, including a first switching stage connected for seizure by a calling one of said lines for use in the extension of a connection toward a called line, a register means connected for seizure by said first switching stage including register circuits for

registering at least certain of the digits transmitted by the calling substation, a selector switch for extending the connection thereover in the direction of the called line, a selector control circuit for said selecter switch connected for seizure by said register means, a number group circuit connected for seizure by said register means in response to the registration of digits indicating a call to a local line, a by-path link circuit connected for seizure by said number group circuit including means in said number group for extending information to the by-path circuit indicating the line group in which the called line is located, a switching stage including a connector circuit for a group of lines including the called line, a connector control circuit for use with said connector circuit, means in said by-path circuit including means for seizing said connector control circuit and means for transmitting a call signal over the originating register to said selector control circuit responsive to seizure of an idle connector control circuit, and means in said number group circuit for extending certain of the information relative to the called line location over the by-path link circuit to the connector control circuit for use in controlling the connector circuit to extend the connection to the called line.

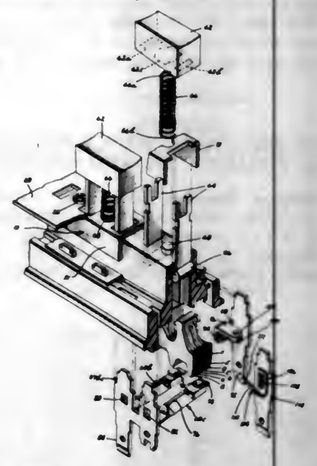
3,127,481
BIDIRECTIONAL TRANSDUCERS
Marcel Hervé, 55 Rue Lacordaire, Paris, France
Filed Nov. 10, 1959, Ser. No. 852,045
Claims priority, application France Nov. 14, 1958
11 Claims. (Cl. 179—100.41)



1. An electrostatic transducer sensitive to movement in two different angularly separated directions comprising two rigid members one of which is movable relative to the other and is arranged at least partially within the other and wherein portions of the surfaces of said two members are provided with conducting areas which together form condensers between the two members, said condensers being connected to form two separate bridge networks each consisting of four condensers of similar electrical value, means for feeding an exciting potential to the input of each bridge network and means for deriving an output signal from each bridge network respectively proportional to the movement in one of the two angularly separated directions.

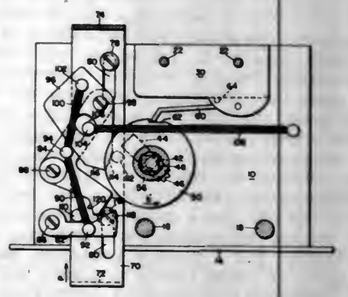
3,127,482
MULTIPLE PUSHBUTTON SWITCH WITH SLIDERS OPERATING SWITCH ARMS
Philip Hutt, Milford, Conn., assignor to General Electric Company, a corporation of New York
Filed July 14, 1960, Ser. No. 42,875
11 Claims. (Cl. 200—5)

1. A multiple pushbutton switch unit for controlling a plurality of circuits comprising a plurality of manually depressible actuators, a predetermined number of longitudinally movable sliders engaged and operated by said actuators, the surfaces of said sliders engaged by said actuators being slanted both for operation by said actuators and for controlling the position of said actuators relative to each other, a plurality of switch arms biased in one direction toward a normal position and being movable by said sliders against their biasing to a second position, first fixed contact means engageable respectively by selected ones of said switch arms when said switch arms are in said normal position, thereby to form a plurality of normally closed switches, and second fixed contact means engageable respectively by at least one other of said switch arms when said other arm is in said second



position, thereby to form at least one normally open switch and increase the circuit controlling flexibility of said switch unit without increasing the number of said sliders, said switch arm of one of the switches engaging at least two of said sliders and being actuated by the conjoint action thereof.

3,127,483
TIMING DEVICE FOR STARTING A THREE-PHASE MOTOR
Richard H. Lehde, West Hartford, Conn., assignor to Dayton Co. Inc., West Hartford, Conn.
Filed May 21, 1962, Ser. No. 196,245
1 Claim. (Cl. 200—38)



In a timing device for cyclically controlling a number of two-position switches in the starting of a three-phase motor by completing the three circuits simultaneously, comprising in combination, a pair of spaced interconnected end plates, a trio of circuit making and breaking devices connected to the three-phase motor and mounted in side-by-side relation between the end plates of said pair thereof and each constituted by a switch carrying a contact pin movable between make and break positions and supporting a cam follower movable between a contacting position with the contact pin in the make position and a non-contacting position with the contact pin in the break position, a timer motor fixedly secured to

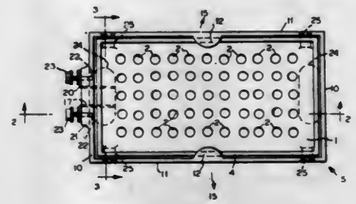
and having an output shaft extending into the space between the end plates of said pair thereof, certain of the switches of the circuit making and breaking devices of said trio thereof being electrically connected to said timer motor, a driving arm secured to the output shaft of said timer motor, an arbor mounted between the end plates of said pair thereof, and having a common rotating axis, a trio of identical peripherally-dwelled rotary cams fixed in spaced side-by-side relation upon said arbor and axially movable on the common rotating axis thereof, each cam of said trio thereof activating and deactivating one of the switches of said trio of circuit making and breaking devices by motivating the contact follower thereof into engagement and disengagement with the contact pin thereof, a manually actuable spring-loaded cocking plunger slidably mounted upon one of the end plates of said pair thereof and being rectilinearly movable in inward-cocking and outward-firing direction, a pawl and bell crank each pivotally mounted upon the named one of the end plates of said pair thereof and being interlockable with each other upon movement of said cocking plunger in inward-cocking direction and being releasable from each other upon movement of said cocking plunger in outward-releasing direction, a spring-loaded slotted actuating lever being pivotally mounted upon said bell crank and being actuable thereby according to inward and outward movement of said cocking plunger, and a pin fixed to one of the cams of said trio thereof and being extendable into the plane of and engageable with said actuating lever for mechanically axially advancing the cams of said trio thereof and said arbor through a predetermined angular increment during the movement of said cocking plunger in inward-cocking direction for urging the cams of said trio thereof ahead of said driving arm and the making of the switches of the circuit making and breaking devices of said trio thereof and the resultant energization of said timer motor and being further extendable into the plane of and engageable with said driving arm for the continued rotation of said arbor and the cams of said trio thereof through a revolution for the breaking of the switches of said trio of circuit making and breaking devices preparatory to recycling.

3,127,484
PUNCH CARD CONTROLLED SWITCH MECHANISMS
Norman N. Hansen, Mercer Island, Wash., assignor to The Boeing Company, Seattle, Wash., a corporation of Delaware
Filed Apr. 19, 1962, Ser. No. 189,667
14 Claims. (Cl. 200—46)



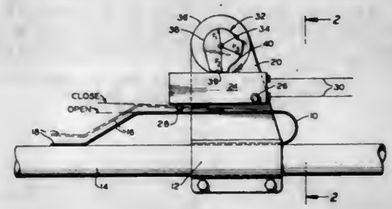
1. A switch assembly comprising an insulative support having a hole therein, a pair of elongated conductive strips removably received in said hole and having ends projecting outwardly therefrom, switch contact elements carried by said projecting ends, means comprising an insulative tubular bushing removably lodged in said hole between said strips to maintain said strips in parallel relationship extending along mutually opposite sides of the hole, and an elongated shuttle having an elongated shank guided slidably in the tubular bushing and further having a head interposed slidably between said contact elements, including a switch conductor alternately engageable with and disengageable from said contact elements by lengthwise reciprocation of said shuttle.

3,127,485
RAIN TRIGGER SWITCH
Robert V. Vitolo, 1929 W. 9th St., Brooklyn, N.Y.
Filed June 26, 1961, Ser. No. 139,024
3 Claims. (Cl. 200—61.05)



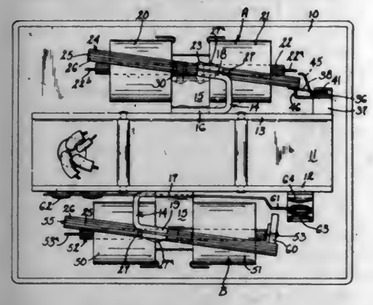
1. A device of the character described comprising a first conductive plate provided with perforations, a second conductive plate, a liquid-responsive element interposed between said plates, a trough-like insulating member having a perforated bottom and side walls holding together said plates and said liquid-responsive element, and a pair of contact members provided at one of the wall portions of said trough-like member and conductively connected to said plates, said liquid-responsive element being adapted to be non-conductive to electricity while dry and to become conductive when wet.

3,127,486
ELECTRIC SWITCH HAVING OBJECT SENSING OPERATING MEANS
Hugh M. Blumenshine, Whittier, Calif., assignor to The Siegler Corporation, Pasadena, Calif., a corporation of Delaware
Filed Mar. 6, 1961, Ser. No. 93,425
5 Claims. (Cl. 200—61.42)



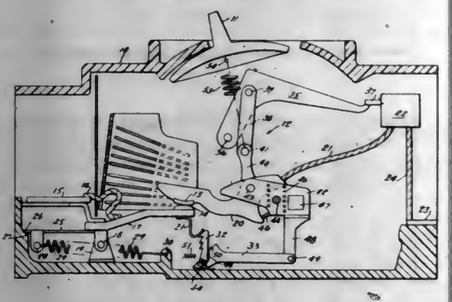
1. Apparatus for sensing the presence of frost on a surface of a component, the apparatus comprising a movable arm having a sensing portion disposed adjacent the surface, yieldable means urging the sensing portion of the arm away from the surface, a switch having a control plunger for operating it, the switch having mechanical hysteresis so the plunger changes the switch from a first to a second state when the plunger is in one position and changes the switch back from the second to the first state when the plunger is in a different position, the plunger being disposed to engage the arm, means for moving the switch toward the surface so the plunger engages the arm and overcomes the yieldable means to move the sensing portion of the arm toward the surface, and means for moving the switch and plunger away from the surface so the sensing portion of the arm is urged away from the surface.

3,127,487
PLURAL ELECTROMAGNETIC RELAY CONTACT STRUCTURE
Theodore W. Kenyon, Lyme, Conn., assignor, by mesne assignments, to Connecticut Valley Enterprises, Incorporated, Essex, Conn., a corporation of Connecticut
Filed Nov. 9, 1959, Ser. No. 851,578
9 Claims. (Cl. 200—98)



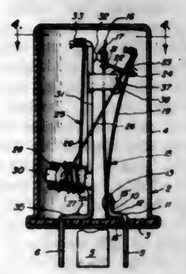
1. A relay comprising an electromagnet including a pair of spaced coils and a core extending through each coil of the pair, the core having an axis and a pair of magnet poles, one pole of the pair being adjacent one end of the core axis and the other pole being adjacent the other end of the core axis, the coils being aligned with the core axis; the relay also comprising an armature extending axially of the core and having an opening therein in which the core is received, supporting means for the armature connected to the core between the coils, and a resilient member connected to the supporting means and to the armature to support the armature for movement about an armature axis substantially midway between the ends of the armature, whereby the armature may be rotated toward and away from the magnet poles responsive to energization and de-energization respectively of the electro-magnet.

3,127,488
CURRENT LIMITING CIRCUIT BREAKER HAVING BOTH CONTACTS MOVABLE
August Bodenschatz, Philadelphia, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed July 18, 1960, Ser. No. 43,680
7 Claims. (Cl. 200—106)



1. A current limiting circuit breaker; said current limiting circuit breaker comprising a movable contact and a semi-stationary contact; first means for moving said semi-stationary contact between an engaging position and a disengaging position; second means for moving said movable contact between an engaged and disengaged position with respect to said semi-stationary contact when said semi-stationary contact is in its said engaging position; said first means including fault responsive operating means for said semi-stationary contact; said fault responsive means operatively associated with said semi-stationary contact to move said semi-stationary contact from its said engaging position to its said disengaging position responsive to fault currents through said circuit breaker of a predetermined nature; said fault responsive operating means operable to move said semi-stationary contact to its said disengaging position while said movable contact is in its said engaged position; and latch means for latching said semi-stationary contact in its said disengaging position.

3,127,489
THERMALLY RESPONSIVE SWITCH
Frank J. Wallace, Chicago, Ill.
(1159 Highland, Oak Park, Ill.)
Filed Apr. 16, 1962, Ser. No. 187,653
5 Claims. (Cl. 200—113)

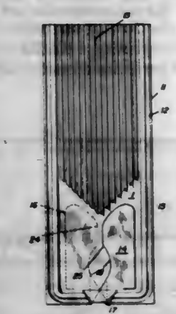


1. In a switching device, a base, first and second opposing contact elements thereon, a biasing member on the base sprung transversely of one of the contact elements and spaced laterally therefrom, a toggle link comprising a U-shaped spring transversely deflected between and pivoted at spaced points to said one element and member and responsive to flexing of said biasing member operative to move said one element into and out of contact with the other element pursuant to transverse back and forth deflection of said member with attendant movement of the point of connection of the spring to said member past dead center positions with respect to the other point, and a thermoelectric wire connected at one end to said member and at the other end to the other of said elements, and a creep accommodating anchorage means fixed with respect to the base and comprising a bearing rotatably supporting said wire intermediate the ends thereof.

3,127,490
EXTINGUISHING DEVICE FOR ELECTRICAL ARCS
André Latour, Grenoble, France, assignor to Etablissements Merlin & Gerin, S.A., Grenoble, France
Filed July 3, 1961, Ser. No. 121,432
Claims priority, application France July 1, 1960
4 Claims. (Cl. 200—144)

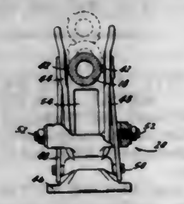
1. In a device for extinguishing an electric arc drawn between separable contact members, first insulating plates having on each of two opposed faces conductive means connected to each other at the lower end of said plates and extending upwardly to a predetermined level, second insulating plates having a notched portion extending upwardly from the lower edge of said second plates, each second plate being disposed between two adjacent first plates, said first and said second plates being disposed face to face and transversely of the established arc, conductive members connected to said second insulating plates and

extending upwardly from the inner end of the notched portions and spacing means between two successive in-



sulating plates for spacing said plates relative to each other and forming an arc chute.

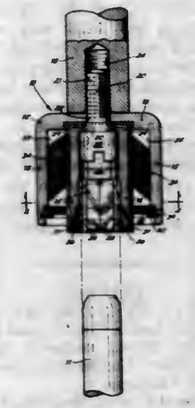
3,127,491
HIGH VOLTAGE AIR SWITCH
Edmond B. Gorman, Campbell, Calif., assignor, by mesne assignments, to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
Filed Jan. 11, 1960, Ser. No. 1,576
7 Claims. (Cl. 200—166)



1. A tail twister switch including, a long switch blade having oppositely disposed lateral contact portions at one end thereof, a pair of oppositely disposed contact fingers at said one end of said switch blade and having a pair of opposed contact portions for resiliently embracing and gripping the respective oppositely disposed contact portions on said switch blade in the closed position of said switch, a tail twister mechanism of the type that swings the switch blade between open and closed positions and including means for twisting the blade along its longitudinal axis for driving the contact portions on said switch blade into pressure engagement with the contact portions on said contact fingers, the contact portions on one of said switch blade and contact fingers being composed of soft silver and projecting from the surface thereof, the contact portions on the other of said switch blade and contact fingers being a work hardened silver lamination united thereto, said laminations being disposed for wiping engagement by the respective oppositely projecting contacts.

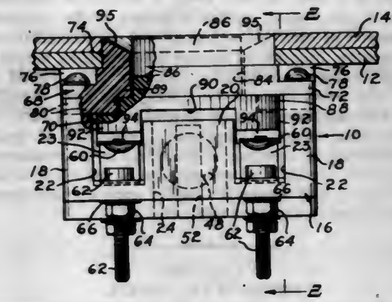
3,127,492
ELECTRIC CONTACT ASSEMBLAGE OF CONTACT FINGERS IN WHICH HELICALLY WOUND CONDUCTIVE MEMBERS PROVIDE CONTACT PRESSURE
Kazuo Henry Date, South Milwaukee, Wis., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed May 29, 1961, Ser. No. 113,224
5 Claims. (Cl. 200—166)

1. A contact assembly comprising a plurality of elongate contact fingers, said contact fingers each having a contact surface on one side thereof, certain of said contact fingers being disposed with their contact surfaces in an opposed relation to each other for receiving an elongate contact therebetween, a conductive member disposed in spaced relation from the opposite sides of each of said contact fingers, a helically wound resilient current interchange spring disposed in the gap between each of said contact fingers and said conductive member, the axis of said springs being parallel to the longitudinal axis of said contact fingers, the outside convolutional diameter



of each of said springs being greater than the distance across said gap so that each of said springs are forced to lay over with their individual convolutions inclined relative to their helical axis, the inherent resiliency of said springs holding each of their individual convolutions in firm frictional engagement with their associated contact fingers and said conductive member, whereby a plurality of current interchange paths are provided across said gaps and said contact fingers are urged into high pressure electrical engagement with said contact rod.

3,127,493
ILLUMINATED FLUSH PUSH BUTTON SWITCH
Buckley R. Reed, Valley Station, Ky., assignor to K. M. White Company, Inc., Louisville, Ky., a corporation of Kentucky
Filed Jan. 23, 1961, Ser. No. 84,033
2 Claims. (Cl. 200—167)



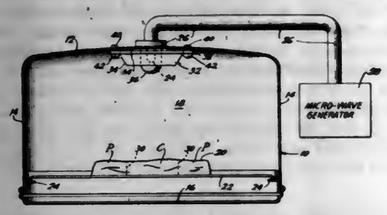
2. A switch comprising: a housing of electrically non-conductive material, including a base portion and a cap portion; at least one set of cooperating electrically conductive contacts on said switch housing base portion; push button means reciprocably mounted in said switch cap portion and adapted to operate said contact means; the

exterior of said housing cap portion being bevelled around the external end of said push button means, with the outermost portion of said push button means being disposed between the inner and outer limits of said bevelled part of the switch housing cap portion; an aperture in said switch housing adapted to receive a base of a lamp with an additional opening in said switch housing for accommodating the body of a lamp; at least one spring contact member on said switch housing adjacent said lamp base aperture, means for aligning a lamp in said aperture in electrical engagement with said spring contact member, and a depression in the opposing wall of said additional opening in said lamp base portion, whereby the spring action of said lamp contact causes a portion of the lamp installed in the housing to be held in said depression; at least one of said push button means and said bevelled cap portion of the switch housing being non-opaque for illumination thereof by a lamp installed in the switch housing; said switch further comprising a recess in said opposing wall of said additional switch housing opening extending between the exterior of the housing and said depression, thereby permitting insertion of an object for removal of a lamp in said housing opening.

3,127,494
MICROWAVE HEATING APPARATUS

Samuel H. Kellough, Anoka County, and Louis P. Polries, Hennepin County, Minn., assignors, by mesne assignments, to Studebaker Corporation, South Bend, Ind., a corporation of Michigan

Filed Mar. 13, 1961, Ser. No. 97,407
9 Claims. (Cl. 219—10.55)



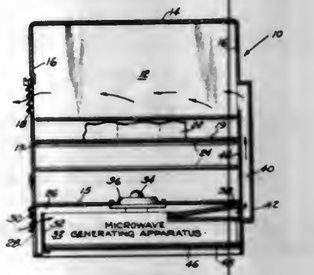
7. In microwave heating apparatus, the improvement of means for providing uniform heating of articles within a heating chamber comprising a microwave oven having top, bottom and side walls defining a heating cavity, shelf means positioned within said oven for receiving articles of food to be cooked, a probe receiving opening formed in a wall of said oven, a source of microwave energy, a microwave energy radiating probe coupled to said source of microwave energy and positioned through said opening, microwave energy concentrating means positioned within said heating chamber and around said probe for concentrating the energy radiated therefrom to provide uniform cooking of said articles of food, said concentrating means comprising a plurality of tapered walls defining an opening of relatively large cross-section and tapered inwardly to an opening of relatively smaller cross-section, and means for rigidly securing said concentrating means to a wall of said oven.

3,127,495
MICROWAVE OVEN

Louis P. Polries and Samuel H. Kellough, Minneapolis, Minn., assignors, by mesne assignments, to Studebaker Corporation, South Bend, Ind., a corporation of Michigan

Filed Sept. 5, 1961, Ser. No. 136,088
4 Claims. (Cl. 219—10.55)

2. An arrangement for use in directing the flow of air past an assemblage of parts comprising a microwave generator adapted to generate high frequency energy in a cooking chamber and including a microwave generating tube located adjacent the intersection of the vertical axes of said chamber, the improvement of means defining a tortuous path for the flow of air within a microwave generating chamber comprising a platform upon which all of said assemblage of parts are mounted and adapted to form

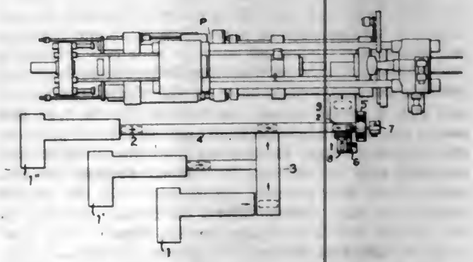


one wall of a generating chamber, a blower, a peripheral flange on said platform and projecting into said generating chamber, and a housing for said tube cooperating with said blower, flange and assemblage for first circulating air in a tortuous path past said assemblage to said blower, and means associated with said blower and housing for thereafter circulating air past said tube.

3,127,496
INDUCTIVE HEATING DEVICE FOR METAL BLOCKS

Arno Finzi, Dortmund, and Wolfgang Faber, Brambauer, Westphalia, Germany, assignors to Brown, Boveri & Cie, Aktiengesellschaft, Mannheim, Germany, a joint-stock company

Filed Aug. 16, 1961, Ser. No. 131,865
Claims priority, application Germany Sept. 21, 1960
4 Claims. (Cl. 219—10.71)

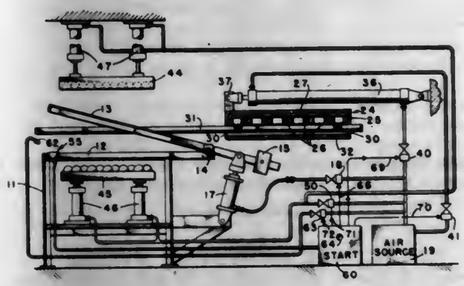


1. Apparatus for heating metal blocks in preparation for working in a press in accordance with the principle of isothermal pressing wherein the head end of the metal block is the first part thereof to be worked in the press which comprises a first stage heating unit for heating the blocks uniformly throughout their length and cross section, conveyor means for transporting the uniformly heated blocks from said first heating unit towards said press, a second stage heating unit of the induction type located in the immediate vicinity of said press, means for stopping the transport of said uniformly heated blocks at said second stage heating unit for a short period, the head end only of said block being further heated in said second stage heating unit, and said blocks being thereafter transported into said press along said conveyor means.

3,127,497
APPARATUS FOR CONTROLLING THE APPLICATION OF HEAT

Ernest A. Taylor, Jr., Decatur, Ala., assignor, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware

Filed June 12, 1961, Ser. No. 116,536
2 Claims. (Cl. 219—19)

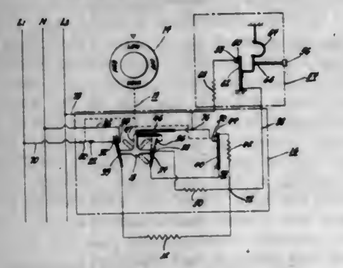


1. An apparatus for applying a predetermined amount of heat to an article from a continuously operating heater which is movable from an inoperative position to an operative position adjacent to the article comprising means for moving the heater, a controller for actuating the heater moving means to move the heater to said inoperative position, a thermistor positioned adjacent to the article and connected to the controller for actuating said controller when a predetermined amount of heat has been applied to said thermistor, an air nozzle positioned to direct a stream of cooling air onto the thermistor for cooling the thermistor to a predetermined temperature prior to movement of the heater into operative position, and means for supplying cooling air to the nozzle in timed relationship with movement of the heater.

3,127,498
FLASH ELECTRIC SURFACE ELEMENT CONTROL

Richard E. Gould and James W. Jacobs, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Feb. 27, 1961, Ser. No. 91,891
6 Claims. (Cl. 219—20)

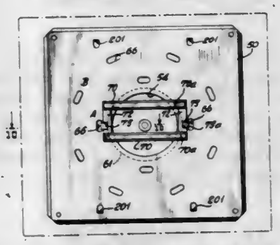


6. In a system for effecting relatively short first and second periods of continuous overenergization of an electrical heating unit in a first or second voltage circuit and a relatively long third period of controlled intermittent energization of said heating unit, switch means for selectively connecting said unit into said voltage circuit, primary means in series with said switch means in said first voltage connection for continuously overenergizing said unit on first voltage during said first period of overenergization and operative to actuate said switch means to said second voltage connection at the termination of said first period of overenergization, and secondary means in parallel with said primary means and in series with said switch means in said second voltage connection for continuously overenergizing said unit on second voltage without delay immediately following said first period of overenergization and during said second period of overenergization, at least a portion of said primary means being effective at the termination of said second period of overenergization for controlling the energization of said heating unit during said third period of controlled intermittent energization.

3,127,499
ELECTRICALLY HEATED FORCED AIR CIRCULATION OVEN

Joseph Savio, Floral Park, and Roland T. Scriber, Syosset, N.Y., assignors, by mesne assignments, to Market Forge Company, Everett, Mass., a corporation of Massachusetts

Filed Sept. 10, 1962, Ser. No. 222,283
8 Claims. (Cl. 219—35)

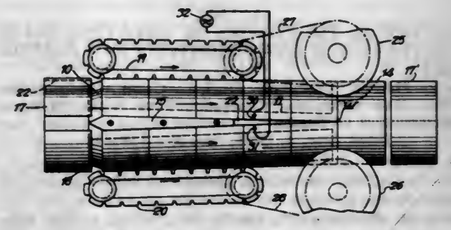


1. An oven comprising a casing having a peripheral wall, end walls, heating means in said peripheral wall, said peripheral wall transmitting said heat into the interior space of said peripheral wall, a baffle plate, means mounting said baffle plate in said casing in relatively closely spaced parallel relation to one end wall, the peripheral edge of said baffle plate being relatively closely spaced from said peripheral wall, said baffle plate having a central opening, and air movement means positioned and operative to draw air through said central opening towards said one end wall and then in a counterflow between said baffle plate and said one end wall and back around said peripheral edge of said baffle plate, said baffle plate having additional openings sized and positioned for flow through said additional openings towards said one end wall of air drawn by the air flow between said baffle plate and said one end wall.

3,127,500
WELDING TUBULAR MEMBERS OF FINITE LENGTH

Jack Morris, Monsey, N.Y., assignor to American Machine & Foundry Company, New York, N.Y., a corporation of New Jersey

Filed Feb. 19, 1962, Ser. No. 173,871
5 Claims. (Cl. 219—59)



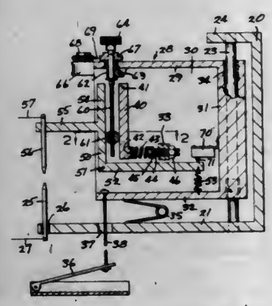
1. Apparatus for welding together the edges of gaps in a succession of tubular members of finite length com-

prising: a tapered mandrel having a longitudinal gap therein; means for feeding in pressure engagement with and along said mandrel toward its smaller end, a succession of said members with the gaps therein aligned along between the edges of the gap in the mandrel; the gaps in the members, due to the taper of the mandrel, collectively forming a narrow elongated V-shaped gap with its apex at a weld point; pressure rollers respectively for engaging opposite sides of the members as they pass such weld point; and means for applying high frequency heating current to the edges of said V-shaped gap in advance of the weld point for heating each point thereon to welding temperature upon reaching the weld point.

3,127,501
PRECISION ELECTRIC WELDING HEAD

Andrew August Mueller, Clay Township, St. Joseph County, Ind., assignor to Wells Electronics, Inc., South Bend, Ind., a corporation of Indiana

Filed Apr. 27, 1962, Ser. No. 190,622
15 Claims. (Cl. 219—86)



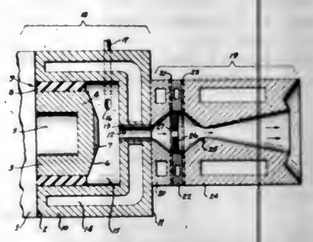
1. An electric welding device comprising
a primary frame,
a second frame shiftable on said primary frame between operative and inoperative positions,
spring means urging said second frame to inoperative position,
actuating means for moving said second frame toward operative position,
a reference spring carried by said second frame,
a reference spring lever pivoted to said second frame and engaged by said reference spring,
an electrode lever pivoted to said second frame spaced from the pivot axis of said reference spring lever,
an electrode carried by said electrode lever,
an electrode carried by said primary frame, and
adjustable means for varying the effective spring pressure of said reference spring acting on said lever when said second frame is moved to position said electrodes in clamping engagement with work to be welded.

3,127,502
ELECTRICAL PROPERTIES OF ABLATING SOLID MATERIALS OF LOW RESISTIVITY IN A PLASMA JET

Mark Phillips Freeman, Darien, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

Filed Aug. 8, 1961, Ser. No. 130,094
8 Claims. (Cl. 219—121)

1. In combination with a plasma jet generator having anode means, cathode means, means for striking an electrical arc therebetween, means for passing a fluid substance through said arc and means for discharging the arc effluent into a chamber means; electrical conducting means in proximity to the path formed by the discharge means and the chamber means, said electrical conducting

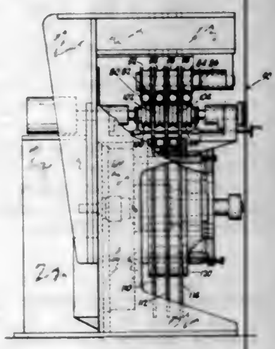


means being in electrical circuit with a conductivity measuring device and an electrode of the plasma generator.

3,127,503
MOVING-TUBE SOLID PANEL WELDER

Kenneth B. Garner and Joseph E. Ranger, Chattanooga, Tenn., assignors to Combustion Engineering, Inc., Windsor, Conn., a corporation of Delaware

Filed Sept. 6, 1961, Ser. No. 136,283
12 Claims. (Cl. 219—124)



1. Apparatus for welding together two parallel, spaced metallic members continuously along their adjacent longitudinal portions comprising, a wheel, said wheel having its outer rim made of copper, said wheel being positioned such that the two members to be welded together pass by adjacent to the upper portion of the rim of said wheel, one member being adjacent one side of the wheel, and the second member being adjacent the other side of said wheel, means for depositing molten metal between said parallel members above said wheel, said molten metal, when solidified, forming a weld connection between said parallel members, the outer rim of said wheel acting as a backing strip for said molten metal, and means for moving said parallel members longitudinally past said wheel and for rotating said wheel as said members move past it.

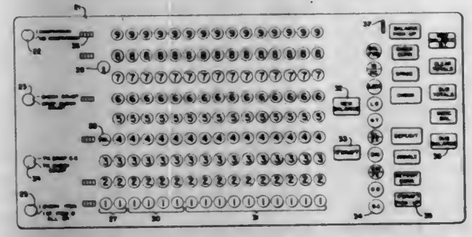
3,127,504
PRINTING CONTROL MEANS FOR ACCOUNTING MACHINES

William C. Arnold, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland

Filed Nov. 1, 1961, Ser. No. 149,256
11 Claims. (Cl. 235—61.9)

10. In a device of the class described, capable of performing different types of operations, the combination comprising

an input keyboard having a plurality of keys arranged in rows according to denomination and in lines according to digital value for entry of information used in recording and computing operations;
keyboard operating means including a solenoid for each key, each solenoid being capable of operating its respective key when energized;
multiple-level, sequentially-operable routing means having an equal number of contact positions on each level and having a wiper for each level, said wipers being capable of stepping in unison from position to position to cause a predetermined sequence of operation;
conducting means including a plurality of conductors connecting a group of corresponding contact positions of different levels of the routing means to solenoids associated with keys of varying digital values in the same rows so that the various contact positions of each level are connected to solenoids associated with different rows of keys on the keyboard;
sensing means for sequentially sensing frames of encoded information from a record medium;



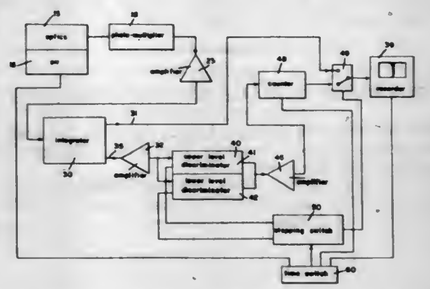
means for selectively energizing a given level of the routing means in connection with each character sensed from the record medium by said sensing means to cause energization of the solenoid connected to the position of that level to which the wiper is set;
additional energizing means for causing energization of certain of said solenoids according to information sensed from said record medium;
first operating means controlled by the sequential position of the routing means for initiating a first type of operation of said device during the sensing of a frame of information following the entry into the keyboard of information by said additional energizing means; and
second operating means controlled by the sensing of a special symbol from the record medium during the sensing of the same frame of information for initiating a second type of operation of said device following the entry into the keyboard of information sensed from the record medium during the time that the sequentially-operable wipers of the routing means were traversing said group of contact positions.

3,127,505
AEROSOL PARTICLE COUNTER

Frank R. Gustavson, Mountain View, Calif., assignor to Royco Instrument, Inc., Mountain View, Calif., a corporation of California

Filed Apr. 26, 1960, Ser. No. 24,768
10 Claims. (Cl. 235—92)

1. In an aerosol particle counter of the type having means to establish a path of air, optical means associated with said path of air to cause a change in light value directly correlated to particle size, and photosensing means adapted to sense said change in light values and provide a pulse output for each particle within said path of air which is an analogue of the particle size the improvement comprising: integrator means responsive to the pulse input from said photosensing means to provide a pulse output which pulse output magnitude reflects the size of individual input pulses and a D.C. signal output which D.C. output reflects the additive magnitude value of all pulses received from said photosensing means within a predetermined interval; discriminator means responsive to the

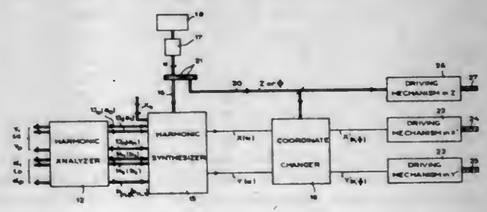


pulse output from said integrator means to provide a pulse output for each pulse received which is above a predetermined lower limit and below a predetermined upper limit; counter means responsive to the pulse output from said discriminator means; recorder means; and means to alternatively connect said recorder means to said D.C. signal or to the output of said counter means.

3,127,506
MACHINE CONTROL

Georges G. Fayard, Paris, France, assignor to Office National d'Etudes et de Recherches Aéronautiques, Chatillon-sous-Bagneux, France, a corporation of France

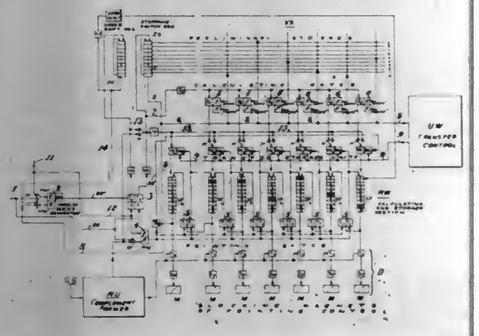
Original application Nov. 7, 1955, Ser. No. 545,397, now Patent No. 3,051,389, dated Aug. 28, 1962. Divided and this application Feb. 12, 1962, Ser. No. 172,466
1 Claim. (Cl. 235—152)



A cutting machine for the shaping of torsional blades having a general shape produced by a constant plane profile displaced and simultaneously rotated along an altitude coordinate axis, said profile being defined by limited Fourier series representing its abscissa and ordinate with respect to fixed coordinate axes and in function of an angular parameter the coefficients of which are given, comprising a harmonic synthesizer means developing from a first rotative shaft the angular position of which represents the said angular parameter and from said given coefficients continuously varying abscissa and ordinate representative first signals, a second rotative shaft the angular position of which represents the altitude coordinate, reductor means between said first and second shafts, coordinate changer means driven by said second shaft, adapted to derive from said continuously varying abscissa and ordinate representative first signal and from said second shaft continuously varying abscissa and ordinate representative second signal respectively equal to said continuously varying abscissa and ordinate representative first signal transformed by a rotation of the co-

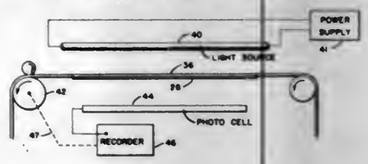
ordinate axes through an angle equal to the angular position of said second shaft, a first servomechanism controlling the abscissa of the cutter of said machine and driven by said continuously varying abscissa representative second signal, a second servomechanism controlling the ordinate of the cutter and driven by said continuously varying ordinate representative second signal and a third servomechanism controlling the altitude of the cutter and driven by said second shaft.

3,127,507
ELECTRONIC STORAGE AND CALCULATING ARRANGEMENT
Günter Martens, Schliersee, Upper Bavaria, Germany, assignor to Kienzle Apparate G.m.b.H., Villingen im Schwarzwald, Germany
Filed Apr. 25, 1960, Ser. No. 24,281
Claims priority, application Germany Apr. 24, 1959
9 Claims. (Cl. 235—173)



1. In an electronic storage and calculating arrangement for processing multi-order numbers, in combination, an electronic accumulator arrangement comprising a plurality of shift registers sequentially assigned to consecutive orders of said numbers respectively, and having each a series of ferromagnetic cores sequentially assigned to different digits and having a rectangular hysteresis characteristic and each being capable of storing alternatively digit-representing and no-digit representing information depending upon the polarity of magnetic saturation thereof, and including circuit means for applying impulses of predetermined polarity for reversing the polarity of an existing magnetization of said cores and for shifting stored information along said series of cores; circuit means interconnecting said shift registers and including switching means capable of establishing alternatively either one of two connections of said shift registers, one connection serving to close each individual shift register to a shift ring in itself for transferring digit information from the last core of the particular register to the first core thereof upon the application of one of said impulses, the other connection serving to connect said plurality of shift registers to a chain of registers for shifting, upon application of said impulses, the information stored in each individual one of said shift registers assigned to respective orders, to the respectively sequent shift register assigned to a different order whereby the total stored digit information is shifted by one order step; and input means for applying said impulses to said shift registers, said input means comprising multi-contact panel means having a plurality of longitudinal conductors respectively assigned to different digit values, a plurality of transverse conductors respectively assigned to consecutive orders of numbers to be processed, each of said transverse conductors being respectively connected in circuit with one of said shift registers assigned to the respective order, and a plurality of contact means arranged at the intersections of said longitudinal and transverse conductors and settable to connect respectively said intersecting conductors for establishing a desired association between digits of said number and their respective order position therein, and digit stepping switch means responsive to the application of a series of control impulses and capable of, and connected with said longitudinal conductors, for applying a sequence of shift impulses sequentially to said longitudinal conductors, respectively, in accordance with the sequence of said series of control imulses, for sequential transmittal of said shifting impulses to said shift registers in accordance with the setting of said contact means whereby the digit values of the number to be processed are transferred in the set order positions into the respective shift registers.

3,127,508
METHOD OF DETERMINING TIME-PHASE COINCIDENCE BETWEEN SIGNALS
William E. N. Doty and Milford R. Lee, Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware
Filed May 11, 1959, Ser. No. 812,289
9 Claims. (Cl. 235—181)



1. A method of determining the time-phase coincidence of a first signal and second signal, which comprises the steps of:

(*a*) recording each signal as an elongated constant width track on a transparent recording medium on the same time scale, the transversal position of the central portion of each of said tracks being representative of the amplitude of the respective signal,

(*b*) superpositioning said recording media in contacting relation with coincidence of their respective time scales,

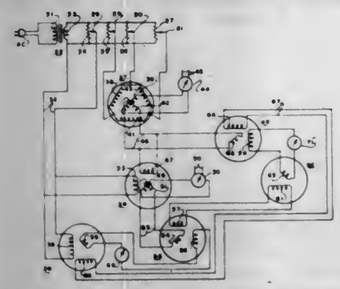
(*c*) simultaneously exposing the entire length of one of said recording media to a constant intensity light source,

(*d*) moving the remaining recording media in a direction to provide relative lengthwise movement between said tracks, and

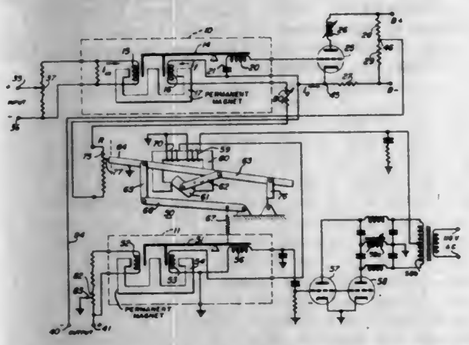
(*e*) registering the amount of light passing through said recording media as a function of the time-phase relation between said tracks.

3,127,509
ELECTRICAL ANALOG DIP COMPUTER
Gilbert Swift, Tulsa, Okla., assignor, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed Jan. 13, 1960, Ser. No. 2,186
4 Claims. (Cl. 235—188)

1. An electric apparatus for computing the true dip and direction of dip of an interface between strata intersecting a well bore, comprising input means for applying to said apparatus a first and a plurality of second electrical quantities respectively proportional to the diameter of the well bore, and the vertical heights from a datum depth of three points of intersection of the interface and the well bore measured at three locations spaced about the well wall, means for vectorially combining said second electrical quantities to produce a third electrical quantity proportional to the height of the projection of the interface along the well bore axis, means for vectorially combining said first and third electrical quantities to generate a fourth electrical quantity proportional to the height of the projection of the interface along the well bore axis, means for producing fifth and sixth electrical quantities which are proportional to the product of said third electrical quantity and first and second functions, respectively, of the angle between the direction of well deviation and the direction of apparent dip, means for producing a seventh electrical quantity proportional to the sum of the product of the first electrical quantity and a function of the angle of well deviation, and the product of the said fifth electrical quantity and a different function of said angle of well deviation, electromechanical means for varying the said fourth electrical quantity to equal said seventh electrical quantity, means for measuring the mechanical movement of said electromechanical means as an indication of the true dip of said stratum, said electromechanical means also producing an eighth electrical quantity proportional to the product of said fourth electrical quantity and a function of the true dip, second electromechanical means for varying said eighth quantity to equal said sixth quantity and means for measuring the mechanical movement of said second electromechanical device as an indication of the direction of the true dip.



3,127,510
COMPUTER EMPLOYING ELECTROMECHANICAL BALANCE
Charles G. Roper, Fairfield, Edgar S. Gilchrist, Easton, and Frederick P. Finck, Jr., Fairfield, Conn., assignors to Robertshaw Controls Company, Richmond, Va., a corporation of Delaware
Original application June 1, 1956, Ser. No. 588,806, now Patent No. 2,957,627, dated Oct. 25, 1960. Divided and this application May 23, 1960, Ser. No. 30,800
7 Claims. (Cl. 235—193)



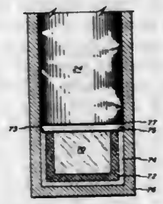
1. An electromechanical computer, comprising a first electromechanical balance unit having a pivotally mounted beam carrying an input coil which is positioned within a magnetic field, means for impressing a direct current input signal on said input coil, thereby to deflect said beam in accordance with said input signal, means including an oscillator responsive to movement of said beam for developing an output current, a second electromechanical balance unit having a pivotally mounted beam carrying an input coil which is positioned within a magnetic field, said second electromechanical balance unit including a variable resistance device, a second coil carried by the beam of said first electromechanical balance unit, and means connecting said second coil and said resistance device in circuit with said input coil of said second electromechanical balance unit.

3,127,511
PRODUCTIVITY WELL LOGGING BY ACTIVATION ANALYSIS AND FLUID WITHDRAWAL
Hugh E. Hall, Jr., Houston, Tex., assignor to Texaco Inc., New York, N.Y., a corporation of Delaware
Filed Jan. 25, 1960, Ser. No. 4,361
4 Claims. (Cl. 250—43.5)



1. A method of making a productivity profile log of a borehole which comprises withdrawing fluid from the borehole at a known flow rate, activating a constituent of the fluid entering from the formation surrounding said borehole, said activation being carried out at a given location in the borehole, detecting the arrival of said activated constituent downstream from said given location, and timing said arrival to determine the velocity of said constituent and the amount of constituent upstream from said given location.

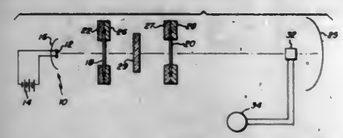
3,127,512
NEUTRON-GAMMA GEOPHYSICAL PROSPECTING METHOD AND APPARATUS
Ralph Monaghan, Tulsa, Okla., assignor to Well Surveys Inc., a corporation of Delaware
Filed June 30, 1958, Ser. No. 745,741
3 Claims. (Cl. 250—71.5)



2. A radioactivity well logging system comprising a scintillation counter having a crystal for radiation detec-

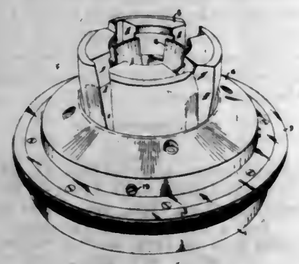
tion in a region exposed to a flux of slow neutrons, an interceptor of slow neutrons disposed about said crystal, said interceptor containing a substantial amount of an element selected from the group consisting of boron and lithium, means disposed between said interceptor and said crystal for stopping alpha particles produced upon the capture of slow neutrons by boron, and electrical means suppressing such electrical signals from said scintillation counter as are occasioned by gamma rays of energy no greater than that of gamma rays from said element.

3,127,513
PYROGRAPHITE POLARIZER
Georg Rupprecht, West Newton, Mass., assignor to Raytheon Company, Lexington, Mass., a corporation of Delaware
Filed Jan. 30, 1961, Ser. No. 85,764
18 Claims. (Cl. 250—86)



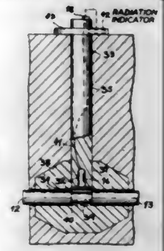
3. A polarization device for electromagnetic radiation from the radio frequency to and including the infrared region comprising a polarization element of pyrographite oriented so that the direction of minimum attenuation of the electrical field vector of said electromagnetic radiation extends in said element in a direction generally perpendicular to the direction of propagation of said radiation.

3,127,514
COLLIMATOR FOR HIGH ENERGY RADIATION BEAMS
George Harold Sharp, Mount Royal, Quebec, Andre Frenette, Laval des Rapides, Quebec, and Frederick William Taggart, Pointe Claire, Quebec, Canada, assignors to Aviation Electric Limited, Montreal, Quebec, Canada, a body corporate and politic
Filed Feb. 6, 1961, Ser. No. 87,230
Claims priority, application Canada Feb. 8, 1960
5 Claims. (Cl. 250—105)



1. For high energy beams wherein the quanta comprising the beam travel as rays in straight lines from a source, a collimator which comprises, an inner and an outer ring of longitudinally extending leaves of quantum absorbing material, each ring comprising at least three leaves extending in a general direction away from the source to define a solid angle at the source each leaf thereby being inclined to the direction of rays from said source so that quanta to be absorbed by said leaves intercept said leaves at small angles to the direction of longitudinal extension of said leaves and a depth of absorption material effectively greater than the thickness of each said leaf is presented to said quanta, means for adjusting the inclination to said general direction of each leaf of the inner and outer rings and means mounting the outer ring of leaves whereby a gap between any two leaves of the inner ring is covered by a leaf in the outer ring for absorbing quanta passing through said gap.

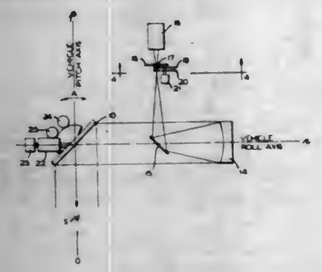
3,127,515
APPARATUS FOR STORING, HANDLING AND/OR UTILIZING HIGHLY RADIOACTIVE MATERIALS
Robert Bernas, 1 Rue Vidal-de-la-Blache, Paris 20, France
Filed Dec. 23, 1959, Ser. No. 861,671
Claims priority, application France Dec. 30, 1958
9 Claims. (Cl. 250—106)



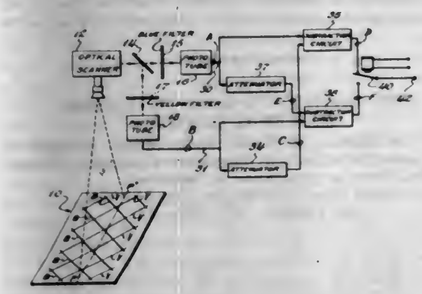
1. An apparatus for the storing and handling of a radiation emitter, comprising a protective mass adapted to shield the operating personnel from said radiation upon the lodging of said emitter substantially at the center of said mass, said mass being provided with a straight duct of uniform cross-section open at its ends and passing substantially through said center, a carrier for said emitter movably disposed in said duct, a pair of elongated plugs slidably fitting within said duct on opposite sides of said carrier, said plugs being composed of a material adapted to absorb radiation from said source, thereby substantially blocking the passage of radiation from said source through said duct in a position of said source within said mass, said carrier and said plugs being displaceable within said duct between a shielded position near said center and an exposed position remote therefrom in which said carrier lies outside said mass, a radiation-sensitive cell positioned within said mass in the vicinity of said shielded position adjacent the path of displacement of said carrier, and electrical circuit means connected to said cell for providing externally of said mass an indication of the intensity of irradiation of said cell by said emitter.

3,127,516
STAR TRACKER HAVING ADJUSTABLE SCAN DEPENDENT UPON RADIATION INTENSITY
Charles R. Ammerman and Daniel Larchuk, State College, Pa., assignors to HRB-Singer, Incorporated, State College, Pa., a corporation of Delaware
Filed May 16, 1960, Ser. No. 29,412
9 Claims. (Cl. 250—203)

1. An electro-optical system comprising, in combination, an optical receiver having at least an optical axis and a field of view, said receiver including means to collect ray energy from an illumination source and focus said energy in a plane, means having an aperture in such focal plane to define the optical field of view, means to modulate said collected ray energy in accordance with azimuth and elevation relations between said source and said system, transducer means located in optical alignment beyond said aperture to produce electrical signals representative of modulated collected ray energy passing through said aperture, means to separately position said receiver optical axis in azimuth and in elevation, first control means to cause said positioning means to move said receiver optical axis until an illumination source is located, means to de-energize said first control means upon the location of said illumination source, and second control means responsive to the resultant modulated electrical signals to produce electrical signals representative of the error in the azimuth and elevation relations between said source and said system, said second control means causing said positioning means to continuously adjust the receiver optical axis to track said illumination source, and a monitoring system connected with the output of said ray energy collecting means to be responsive to output signal strength above a predetermined level to energize the receiver positioning means so as to adjust the scan of the receiver away from a source of illumination of too great an intensity for the system.

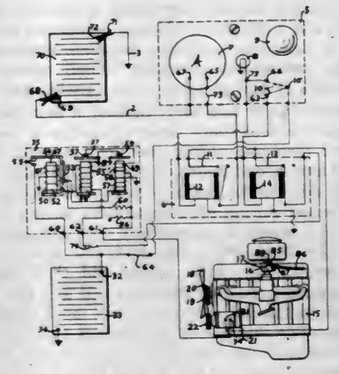


3,127,517
COLOR DISCRIMINATING APPARATUS
William W. Kestenbaum, Long Beach, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed Apr. 27, 1956, Ser. No. 581,245
5 Claims. (Cl. 250—220)



1. Apparatus for scanning an illuminated chart having superposed thereon a plurality of discrete regions, each region being characterized by one of first and second colors, and for producing a first output signal when and only when a region characterized by said first color is being crossed and a second output signal when and only when a region characterized by said second color is being crossed, comprising in combination, first and second photosensitive means for producing composite output signals in accordance with the amount of light received thereby, a scanning means for receiving light successively from a series of contiguous elemental areas of said chart and for directing a first portion of said received light along a first path to the first photosensitive means and a second portion of said received light along a second path to the second photosensitive means, a first filter interposed in the path of said first light portion for preferentially transmitting light of said first color, a second filter interposed in the path of said second light portion for preferentially transmitting light of said second color, whereby each of the composite output signals of the first and second photosensitive means includes a first signal component having a magnitude corresponding to the light received from said first colored regions and a second signal component having a magnitude corresponding to the light received from said second colored regions, a first signal magnitude controlling means coupled to the first photosensitive means for receiving a portion of the composite output signal thereof and for producing a corresponding composite output signal wherein the magnitude of the larger signal component is substantially equal to the magnitude of the smaller signal component of the second photosensitive means composite output signal, a second signal magnitude controlling means coupled to the second photosensitive means for receiving a portion of the composite output signal thereof and for producing a corresponding composite output signal wherein the magnitude of the larger signal component is substantially equal to the magnitude of the smaller signal component of the first photosensitive means composite output signal, and first and second difference signal generating means each adapted to produce a signal representing the difference in magnitude between a pair of received signals, said first difference signal generating means being coupled to receive the respective composite output signals of the second photosensitive means and the first signal magnitude controlling means, and said second difference signal generating means being coupled to receive the respective composite output signals of the first photosensitive means and the second signal magnitude controlling means.

3,127,518
SERVICE VEHICLE ELECTRICAL SUPPLY APPARATUS
Cary H. Pruitt, 114 E. Okmulgee, Muskogee, Okla.
Filed May 7, 1962, Ser. No. 192,883
8 Claims. (Cl. 290—50)



1. Electrical apparatus adapted for assembly with an emergency service vehicle having an electrical system including a battery and an engine driven generator and a regulator, said generator having a field terminal and an output terminal, said regulator having a field terminal normally connected to said generator field terminal, said regulator having an input terminal normally connected to said generator output terminal, said regulator having an output terminal connected to said battery, said apparatus adapting said service vehicle for electrically isolating said service vehicle generator from the balance

of the service vehicle electrical system and impressing the output of said generator onto a foreign electrical system, said apparatus comprising:

(*a*) current metering means and switch means and a pair of charging cables,

(*b*) said switch means being adapted to electrically connect the output terminal of said generator to the input terminal of said current metering means and disconnect the output terminal of said generator from the regulator input terminal,

(*c*) one of said charging cables being adapted for grounding with respect to said service vehicle,

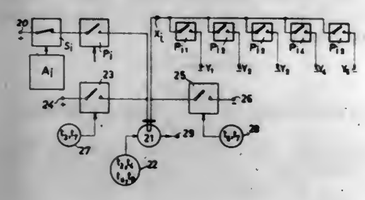
(*d*) the other of said charging cables being electrically connected to the output terminal of said current metering means,

(*e*) said charging cables respectively terminating in means for connecting into the foreign electrical system whereby upon driving said generator current is available for the foreign electrical system.

3,127,519
SWITCHING MATRICES WITH PROTECTION AGAINST SHORT-CIRCUIT IN THE GATES AT THE CROSSINGS

Tjakko Marinus Schuringa and Willem Smit, Hilversum, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Apr. 3, 1961, Ser. No. 100,205
Claims priority, application Netherlands Apr. 13, 1960
4 Claims. (Cl. 307—88)

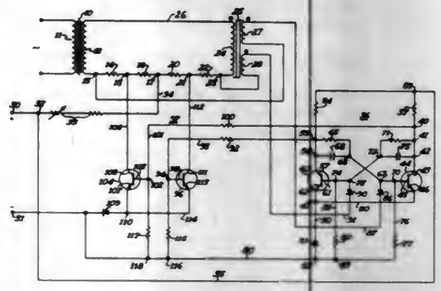


4. A switching matrix comprising a plurality of input conductors and a plurality of output conductors defining a plurality of conductor crossings between separate input and output conductors, normally closed crossing gate means at each of said crossings, said crossing gate means being arranged to be selectively opened at first instants of a pulse cycle whereby any input conductor is connected to no more than one output conductor at said first instants, first and second points of different potential, means connecting said output conductors to said second point, first and second storing pulse generators having first and second setting windings respectively, first and second firing windings respectively, and first and second output windings respectively, first, second and third normally closed gate means, means connecting said first gate means between said first point and one of said input conductors, means connecting said second gate means and first setting winding serially between said first point and said one conductor, means connecting said second setting winding and third gate means serially between said one conductor and said second point, a source of information signals connected to operate said first gate means, a source of pulse signals connected to said second and third gate means to open said second and third gate means simultaneously at a second instant and separately at third and fourth instants of said pulse cycles, means for connecting said pulse source to said first and second firing windings to apply pulses thereto subsequent the application of pulses to the respective serially connected gate means, and output circuit means connected to said first and second output windings.

3,127,520
LOW FREQUENCY MAGNETIC CORE STEPPING DEVICE

Nicholas F. Photiades, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Dec. 21, 1961, Ser. No. 161,075
9 Claims. (Cl. 307—88)

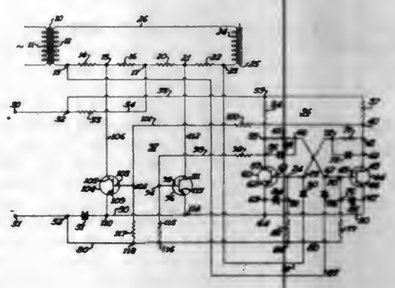


1. Low frequency oscillator apparatus comprising: saturable magnetic core means including a plurality of winding means coupled thereto; a source of alternating current potential; a source of direct current potential; first circuit means including resistive means connecting said sources in energizing relation to a first of said winding means; polarity reversing switching means having control and switching electrodes, said switching electrodes being connected to effect the reversal of polarity of said direct current potential to said first circuit means upon a signal being applied to said control electrodes; means including further of said winding means and said resistive means connected to sense the effect of the saturation of said magnetic core means and provide an output signal in response thereto; and means connecting said output signal to said switching means control electrodes for causing a reversal of the polarity of said direct current source to said winding means upon each occurrence of saturation of said core means.

3,127,521
LOW FREQUENCY MAGNETIC CORE STEPPING DEVICE

James Lee Jensen, St. Louis Park, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Dec. 21, 1961, Ser. No. 161,076
14 Claims. (Cl. 307—88)

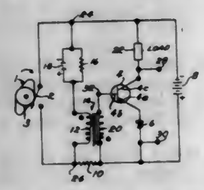


1. Low frequency oscillator apparatus comprising: input circuit means having input terminals energized from a source of alternating current; saturable magnetic core means, said means including winding means; means comprising impedance means connecting said winding means to said input circuit means; a source of direct current potential; switching circuit means having control and switching terminals, said switching terminals connecting said direct current potential in polarity reversable direction to said impedance means for energizing said core means from said alternating current and said direct current to drive said core slowly to saturation; and core saturation responsive control means connected to said switching means control terminals for actuating said switching means to reverse said polarity direction of said direct current potential upon saturation of said core means.

3,127,522
TIME CONTROLLED SWITCH USING SATURABLE CORE INPUT

Lloyd M. Thorndyke, Roseville, Minn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed Jan. 30, 1959, Ser. No. 790,271
5 Claims. (Cl. 307—88.5)



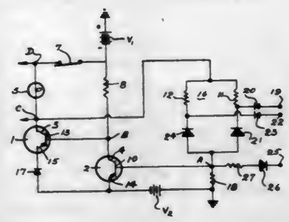
1. A controllable switching circuit for a load comprising a switching device having three electrodes and being capable of passing current from a first to a second of said electrodes only when the third electrode receives a predetermined input signal, a load connected to said second electrode thereby forming a series combination including said switching device and load, a voltage source for producing said current, means for coupling said source across said series combination, a transformer having primary and secondary windings, said secondary winding being coupled between said first and third electrodes, means for making said switching device normally non-conductive of said current, means including a condenser in series with said primary winding for coupling the primary winding across said voltage source, and switching means coupled across said primary winding and condenser, the arrangement being such that when said switching means is open, said condenser is charged by the voltage source current flowing in a first direction through said primary winding so as to cause said switching device to be maintained non-conductive, while when said switching means is closed, said condenser is discharged through the primary winding causing a current therein in a direction opposite to said first direction and thereby effecting said predetermined input signal to the switching device so as to allow current from the voltage source to pass through said first and second electrodes to said load, said switching means being operative after a predetermined time to stop the discharging of said condenser and allow it to be recharged thereby ending said predetermined input signal and causing the current to said load to cease.

3,127,523
BISTABLE HOLDING CIRCUIT HAVING AN "AND" CIRCUIT COUPLING

Gale A. Jallen, St. Paul, Minn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed May 14, 1959, Ser. No. 813,255
16 Claims. (Cl. 307—88.5)

1. A bistable circuit comprising two active elements cross coupled one to another and commonly coupled to a source of potential, a potential divider including the cross coupling from one element to the other, said divider being coupled to said source for providing an operating voltage to said other element when said one element is not conducting, said operating voltage being developed by current from said source through said divider, and

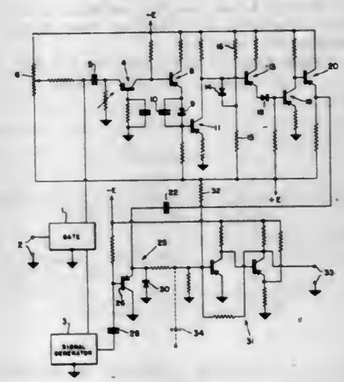


means coupled to said divider for at least momentarily blocking the current therethrough and removing said operating voltage to cause said other element to assume its non-conductive state which in turn causes said one element to become and then remain conductive.

3,127,524
ELECTRICAL APPARATUS

John A. Dever, Philadelphia, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Mar. 27, 1961, Ser. No. 98,404
2 Claims. (Cl. 307—88.5)



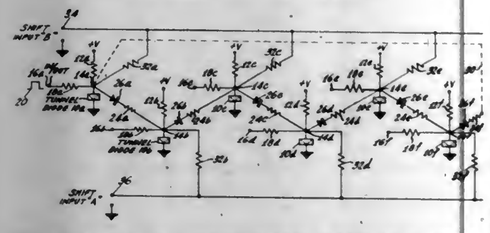
1. A polarity-decision amplifier comprising a signal amplifying means, an input gate means for normally establishing a signal bypass path for an input signal whereby to prevent said input signal from affecting said amplifying means, a signal polarity responsive means, an output gate means connected between said amplifying means and said responsive means for normally establishing a signal bypass path for an output signal from said amplifying means whereby to prevent said output signal from affecting said responsive means, and bias signal supply means for supplying bias signals for selectively affecting said normal operation of said input gate means and said output gate means whereby to allow said input signal to be applied to said polarity responsive means, said bias signal supply means being operative to selectively terminate and restore said normal condition of said output gate circuit within the time interval between a selective termination and restoration of said normal operation of said input gate circuit.

3,127,525

CASCADED TUNNEL DIODES WITH MEANS TO APPLY ADVANCE AND RESET PULSES TO DIFFERENT TERMINALS

Benjamin Rabinovici, Rego Park, N.Y., assignor to Radio Corporation of America, a corporation of Delaware

Filed July 14, 1961, Ser. No. 124,202
14 Claims. (Cl. 307—88.5)



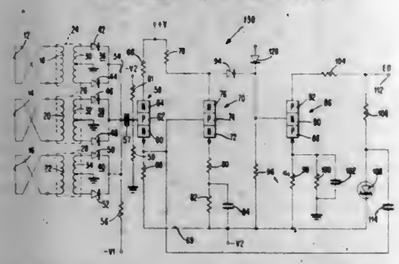
1. A plurality of bistable storage stages each having stable set and reset operating states; means including unidirectional conducting devices connecting said stages in cascade; means for applying information input signals to at least one of said stages for setting said one of said stages; and information shift means applying advance and then reset pulses to all of the even and odd numbered ones of said stages, respectively, followed by advance and then reset pulses to all of said odd and even numbered stages, respectively.

3,127,526

FEEDBACK AMPLIFIER EMPLOYING TUNNEL DIODE

David A. Bishop, Lexington, Ky., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Aug. 15, 1961, Ser. No. 131,657
6 Claims. (Cl. 307—88.5)



1. A circuit comprising a plurality of amplifier stages each including an output load impedance, a tunnel diode element exhibiting a positive resistance characteristic over a pair of potential ranges and a negative resistance characteristic over a potential range intermediate to said potential ranges, one of said stages being responsive to a range of potentials applied to its input to produce output potentials within another range, said element being interposed in series with the load impedance of said one of said stages, and means for positively feeding back the potential developed across said element to the input of a stage of said amplifier.

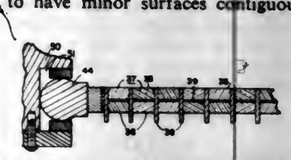
3,127,527

CONTROL APPARATUS

Alvin W. Elston and Gordon A. Vincent, Seattle, Wash., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Dec. 1, 1961, Ser. No. 156,209
7 Claims. (Cl. 310—8.6)

1. An electromechanical transducer comprising: a flexible ceramic beam, said beam being formed from a plurality of individual ceramic elements which produce a mechanical strain when an electrical stress is applied, said elements being arranged in a first and a second row, each of said elements having two major surfaces and two minor surfaces, each of said elements within said rows being positioned to have minor surfaces contiguous, and said



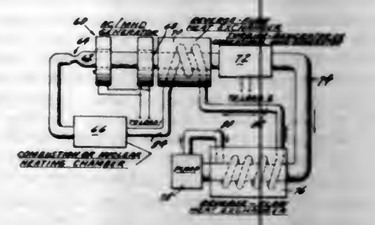
first row being positioned adjacent said second row so as to have major surfaces contiguous; bearing means affixed to opposite ends of said ceramic beam; and support means adapted to cooperate with said bearing means to permit flexure of said ceramic beam when an electrical stress is applied.

3,127,528

MAGNETOHYDRODYNAMIC GENERATOR

Edmund C. Lary, Vernon, and Russell G. Meyerand, Jr., East Hartford, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Oct. 3, 1960, Ser. No. 60,129
15 Claims. (Cl. 310—11)



1. A magnetohydroelectric generator comprising an elongated duct forming a main passage, means for inducing a flow of an electrically conductive gaseous fluid stream through said duct at supersonic velocity, a first means adjacent said duct for inducing a pulsating magnetic field which passes through the fluid stream to create intermittent bunching of the fluid in said stream, thereby providing spaced bits or perturbations which travel in a downstream direction, a second means for inducing a second magnetic field passing through the fluid stream and located a predetermined distance downstream of said first-mentioned field-producing means, said bits passing through said second field and producing pulsating energy, and means for extracting said energy.

3,127,529

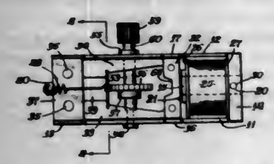
ELECTROMECHANICAL DRIVE AND MOTION CONVERSION DEVICE

Edward L. Barrett, 506 Malden, La Grange Park, Ill., assignor of eleven percent to Louis K. Pohl, Elmwood, eleven percent to H. P. Reynolds, Wilmette, and eleven percent to Frank A. Furar, Riverside, Ill., and eleven percent to William G. Pohl, White Bear Lake, Minn.

Filed July 23, 1962, Ser. No. 211,584
25 Claims. (Cl. 310—21)

18. An electromechanical device of the type in which a spring reed is vibrated electrically and the vibrating reed is utilized as a mechanical drive, comprising a support, a reed, said reed having one end thereof affixed to said support, said reed having spaced apart arms, a ratchet wheel journally carried on said support, said spaced apart

reed arms flanking said ratchet wheel, a ratchet, means rockably mounting said ratchet on said spaced apart reed



arms, and said ratchet arranged and constructed to engage and drive said ratchet wheel.

3,127,530

MOTOR DRIVEN PUMPS

Howard T. White, Melrose Park, Pa., assignor to Fostoria Corporation, Huntingdon Valley, Pa., a corporation of Ohio

Filed Feb. 21, 1962, Ser. No. 174,873
9 Claims. (Cl. 310—54)



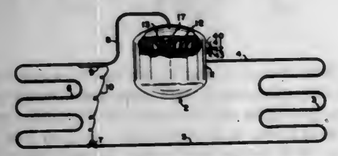
1. Cooling apparatus for the motor housing of a motor driven pump comprising a sheet metal casing having a wall with spaced parallel end marginal edge portions and curved space side marginal edge portions, said edge portions being of at least casing wall thickness and providing gasket retaining abutment faces, said casing being of a size to extend in partial surrounding relation to a motor housing, a hollow rectangular gasket engaging said casing at said abutment faces of said marginal edge portions and extending therealong for simultaneous engagement with the exterior of said motor housing, adjustable connecting members extending between said end marginal edge portions for retaining said casing in mounted position on the motor housing, cooling fluid inlet and delivery connections in communication with the interior of said casing, and members interiorly disposed in said casing and providing a tortuous flow path for cooling fluid flowing between said cooling fluid inlet and delivery connections.

3,127,531

MOTOR PROTECTION ARRANGEMENT

Dwight L. Tothero, North Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware

Filed Nov. 10, 1961, Ser. No. 151,563
3 Claims. (Cl. 310—68)



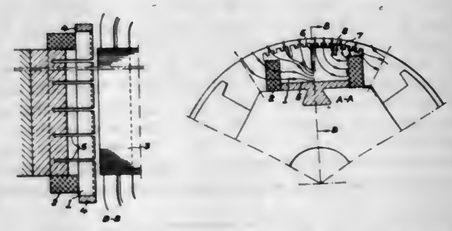
1. In a hermetically-enclosed single phase induction motor adapted to be connected to a source of current, said motor including a stator and a rotor inductively related thereto, the combination of a main winding, a start winding, and means for protecting the motor from adverse conditions of temperature or current, said protecting means comprising a heat conductive strap disposed in a stator winding, said conductive strap being electrically connected to said stator winding, and a thermostat having an electrically conductive casing detachably secured to the conductive strap and being in current conducting relationship thereto, said thermostat having a single terminal extending therefrom and connected to said source of current.

3,127,532

SOLID POLE FOR SELF-STARTING SYNCHRONOUS MOTORS

Sven Gynt, Vasteras, Sweden, assignor to Allmanna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a Swedish corporation

Filed May 8, 1961, Ser. No. 108,639
Claims priority, application Sweden May 14, 1960
2 Claims. (Cl. 310—183)



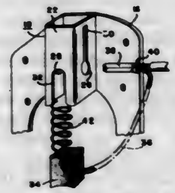
1. Solid salient pole piece for the field magnet of a self-starting synchronous motor, said pole having a number of slots on the pole face, said slots being substantially perpendicular to the axis of rotation, the depth of said slots being at least as great as half the maximum radial thickness of the pole piece and non-magnetic electrically non-conducting material substantially filling said slots.

3,127,533

BRUSH LEAD CONNECTION FOR DYNAMO-ELECTRIC MACHINE

Grayson E. Gardner, Jr., Rochester, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Feb. 24, 1961, Ser. No. 91,450
6 Claims. (Cl. 310—245)



1. A brush assembly for a dynamoelectric machine comprising a generally channel shaped brush casing having a pair of keyhole openings in the side walls thereof, said openings extending generally from the rearward end toward the forward end of said casing, a brush fitting slidably in said casing at the forward end thereof, an electrical lead connected to said brush, an elongate member connected to said lead at a point spaced from said brush, said member being transversely insertable only through the forward ends of said keyhole openings in said brush casing and slidable to the rearward ends of said openings, and a spring biased between said member and said brush

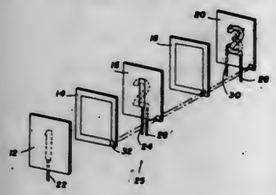
for maintaining said member at the rearward ends of said openings.

3,127,534
ELECTROLUMINESCENT ELEMENT WITH AN ENAMEL COATED BASE
Gesinus Diemer, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Jan. 31, 1961, Ser. No. 86,226
Claims priority, application Netherlands Feb. 4, 1960
2 Claims. (Cl. 313—108)



1. An electroluminescent element built up of a carrier and a layer of electroluminescent material enclosed between two conductive layers, at least one of which is permeable to the radiation emitted by the electroluminescent layer when applying a voltagt between the two conductive layers, characterized in that the carrier consists of metal surrounded by enamel on all sides and that the element comprises, in addition, a third conductive layer and at least one insulating layer, an insulating layer being provided between the third conductive layer and one of the other conductive layers, in a manner such that at least the layers present on the side of the layer of electroluminescent material remote from the carrier are permeable to the radiation emitted by the electroluminescent layer upon applying a voltage between the two conductive layers.

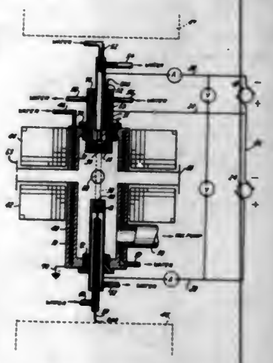
3,127,535
VISUAL READOUT DEVICE
Harold T. Westerheim, 1725 Hilltop Drive, Garland, Tex.
Filed Nov. 21, 1958, Ser. No. 775,637
5 Claims. (Cl. 313—109.5)



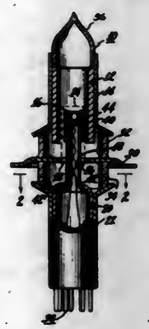
1. A visual readout device comprising a plurality of stacked plates of transparent material, certain of said plates having a transparent conductive symbol deposited on the front side thereof and another conductive symbol on the rear side thereof, a plurality of insulating members spaced in alternate fashion between said plates and provided with a centrally located aperture, a channel extending longitudinally through said plates and said insulating members, a single glow discharge gas entirely filling said channel and the apertures in said insulating members, and means for producing a gaseous discharge between the conductive symbol on the rear side of a selected one of said plates and the conductive symbol on the front side of the next succeeding plate.

3,127,536
MAGNETICALLY-STABILIZED LOW PRESSURE ARC APPARATUS AND METHOD OF OPERATION
Charles K. McLane, Indianapolis, Ind., assignor to Union Carbide Corporation, a corporation of New York
Filed Dec. 23, 1960, Ser. No. 78,089
12 Claims. (Cl. 313—162)

1. A device for producing a very stable low pressure primary arc which comprises a leak-tight arc chamber; means for establishing a magnetic field within said chamber in a direction parallel to the axis of said primary arc, a primary anode mounted within said chamber, a cathode structure consisting of a cathode and cathode holder mounted within said chamber in spaced relation to said primary anode and in axial alignment therewith, a cooled secondary anode mounted within said chamber and surrounding the tip of said cathode and electrically insulated therefrom, a power supply means connected in a first circuit with said secondary anode and said cathode so as to maintain a secondary arc therebetween and said power supply means connected in a second circuit with said primary anode and said cathode so as to maintain a low-pressure primary arc therebetween, evacuating means connected to said chamber to maintain the pressure therein at a selected low pressure, means for feeding gas from a source thereof around said cathode and through said secondary arc, and means for cooling said cathode holder and secondary anode.

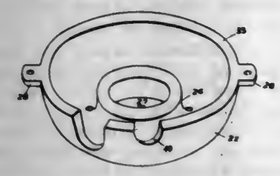


3,127,537
CATHODE MOUNT AND ALLOY THEREFOR
Carel W. Horsting, Caldwell, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Feb. 25, 1960, Ser. No. 11,045
7 Claims. (Cl. 313—346)



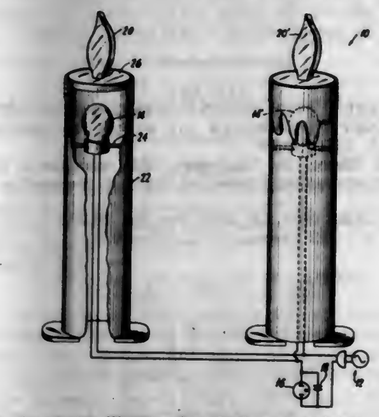
1. A cathode comprising a core having a coating thereon of emitting material, said core comprising an alloy consisting by weight and exclusive of difficultly removable impurities, of from 30 to 60% cobalt, 0.01 to 2.0% aluminum, 2 to 25% tungsten, 2 to 25% molybdenum, 0.01 to 0.25% carbon, 0.01 to 0.10% magnesium and the remainder nickel, said alloy having relatively high hot strength, poor heat conductivity, and good effect on emission from said coating, for improved operation of said cathode.

3,127,538
PACKAGED TRAVELING WAVE ELECTRON DISCHARGE DEVICE HAVING MAGNETIC DIRECTING MEANS
Edward C. Dench, Needham, Mass., assignor to Raytheon Company, a corporation of Delaware
Filed Nov. 30, 1953, Ser. No. 394,965
12 Claims. (Cl. 315—39)



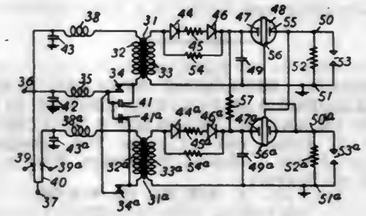
1. A traveling wave tube comprising an evacuated envelope containing therein a periodic slow wave energy transmission structure for propagating electromagnetic wave energy along a predetermined path adjacent said structure, and said tube further including a lead-in assembly extending from said structure, a source of electrons, directive means including means for producing a magnetic field transverse to said path for directing said electrons from said source adjacent said path in energy coupling relationship with said wave energy, said magnetic field producing means surrounding said tube envelope and including a centrally located aperture for receiving said lead-in assembly of said tube, said magnetic field producing means further including at least one reentrant annular portion mounted in substantial alignment with said path, and means for fixedly mounting said tube within said magnetic field producing means.

3,127,539
NOVELTY ILLUMINATION DEVICE
Frank Convertine, Massapequa, N.Y. (292 E. Merrick Road, Lindenhurst, N.Y.), assignor of fifteen percent to Leonard H. King, Valley Stream, N.Y.
Filed Mar. 6, 1962, Ser. No. 177,824
2 Claims. (Cl. 315—179)



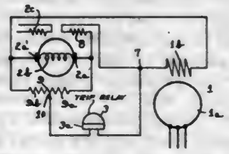
1. A novelty illumination device comprising:
a source of alternating current in series with a light bulb and a neon tube, said neon tube having a capacitor in parallel therewith, whereby an irregular firing cycle is imparted to said neon tube, said light bulb having a correspondingly irregular illumination characteristic; and
a translucent member adapted to resemble a candle flame in configuration and coloring, said translucent member disposed proximate to and adapted to be illuminated by said light bulb, said light bulb normally concealed from view, whereby said translucent member displays an irregular flickering light effect simulating the glow of a candle flame.

3,127,540
SPARK IGNITION APPARATUS
Keith Douglas Collins, Watford, England, assignor to Rotax Limited, Willesden, London, England
Filed Jan. 22, 1962, Ser. No. 167,586
Claims priority, application Great Britain Jan. 31, 1961
10 Claims. (Cl. 315—180)



1. Spark ignition apparatus comprising in combination a pair of transformers having primary and secondary windings, switch means in circuit with the primary windings and movable between a first position in which one of the primary windings is energised, and a second position in which both primary windings are energised, means for breaking the circuits to the primary windings intermittently so as to generate a high voltage in the secondary windings, a pair of capacitors connected across the secondary windings through rectifiers respectively, a pair of control gaps each having two spaced electrodes connected across the pair of capacitors respectively so that the control gaps break down when the voltages across the capacitors reach a predetermined value, a pair of conductive bands surrounding the control gaps respectively and connected to an electrode of the other control gap respectively, breakdown of one control gap applying a bias to the band surrounding the other control gap to reduce the breakdown voltage thereof, and a return path for electrical energy passing through the control gaps, said return path including at least one spark gap.

3,127,541
PROTECTIVE SYSTEM FOR SYNCHRONOUS ELECTRICAL MACHINES
Endre Tarjan, Wettingen, Aargau, and Adolf Kolar, Neuenhof, Aargau, Switzerland, assignors to Aktiengesellschaft Brown, Boveri & Cie, Baden, Switzerland, a joint-stock company
Filed Oct. 14, 1960, Ser. No. 62,790
Claims priority, application Switzerland Oct. 29, 1959
4 Claims. (Cl. 317—13)



1. In a system including an alternating current synchronous machine having a stationary winding and a rotary excitation winding, and an exciter generator pro-

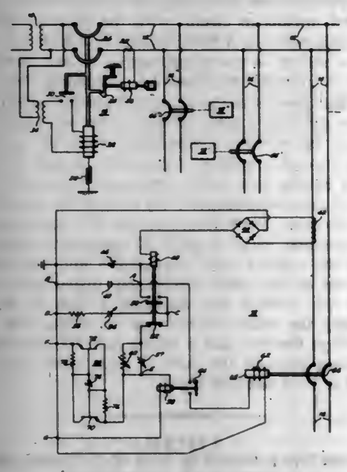
viding a direct current voltage output from its rotary armature which is connected to said excitation winding, said exciter generator also including commutating poles with windings thereon through which the output current of the exciter passes, an arrangement for protecting said excitation winding against disturbances due to disconnection thereof from said exciter generator or to inter-turn short-circuits within said excitation winding, comprising a voltage divider winding connected in parallel with the output voltage from the armature of said exciter generator, a tap on said voltage divider winding, a voltage responsive device and circuit means connecting said device between said tap on said voltage divider winding and a tap point on the excitation circuit located between said commutating pole winding and said excitation winding, said voltage divider tap and said tap point exhibiting like voltages only in the absence of such a disturbance thus maintaining said device in a non-responsive state.

3,127,542

AUTOMATIC RECLOSING BREAKER SYSTEM INCLUDING A REPEATING CIRCUIT INTERRUPTER AND SECTIONALIZER SWITCHES

Richard E. Riebs, Hales Corners, Wis., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware

Filed June 8, 1959, Ser. No. 818,780
16 Claims. (Cl. 317—22)



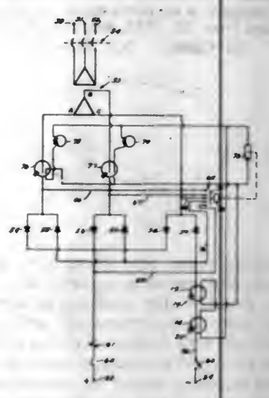
1. In a protective device having switch means disposed in an electrical circuit, the combination of, first and second electrical energy storage means and an electrical energy source, condition responsive means connected to said system and operable each time a predetermined circuit condition occurs to couple said first energy storage means to said energy source and thereby transfer a predetermined quantity of energy from said source to said energy storage means, said condition responsive means being operable upon the disappearance of said circuit condition to uncouple said first energy storage means from said energy source and to couple said first energy storage means to said second energy storage means so that a predetermined portion of the energy upon said first energy storage means is transferred to said second energy storage means, and means connected to said second energy storage means for opening said switch means when energy on said second energy storage means exceeds a predetermined value.

3,127,543

FAULT CURRENT SENSING MEANS

Johannes Schaefer, Philadelphia, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed Aug. 30, 1960, Ser. No. 52,810
7 Claims. (Cl. 317—27)



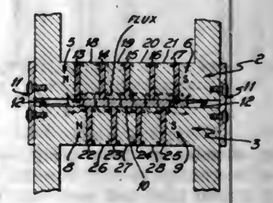
1. A fault current sensing means for an electrical conductor, said fault current sensing means comprising a first and second magnetic core having a first and second output winding thereon; said first and second magnetic cores being magnetically coupled to at least a portion of the current carried by said electrical conductor; said first magnetic core being magentically saturated when the current through said electrical conductor exceeds a predetermined value; said second magentic core being magnetically saturated when the current through said electrical conductor reaches a value substantially higher than said predetermined value; said first and second output windings having output voltages induced therein during a change in flux in said first and second magnetic core respectively; a fault sensing device said first and second windings being connected in series with one another and with said fault sensing device and in opposite polarity relation whereby the output voltage of said first winding opposes the output voltage of said second winding.

3,127,544

APPARATUS FOR MAGNETIZING PERMANENT MAGNET MATERIALS TO FORM BAND-LIKE POLES THEREON

Walter S. Blume, Jr., Cincinnati, Ohio, assignor to Leyman Corporation, Cincinnati, Ohio, a corporation of Ohio

Filed Nov. 18, 1960, Ser. No. 70,232
12 Claims. (Cl. 317—203)



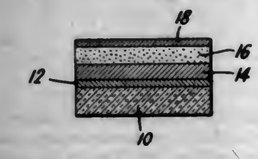
1. Apparatus for the continuous magnetization of permanent magnet material in strip form for simultaneously inducing a number of alternate band-like poles on both surfaces thereof, said apparatus comprising, two spaced assemblies, each assembly comprising, a north primary pole piece and a south primary pole piece which are spaced from each other, a plurality of nonmagnetic spacers and ferromagnetic secondary pole pieces disposed between the north and south primary pole pieces of each assembly in alternate order, said secondary pole pieces being spaced from each other and from the primary pole pieces by said spacers, and electromagnetic means for establishing a magnetic potential difference between primary pole pieces of each assembly whereby north and south magnetic poles can be induced in said north and south primary pole pieces respectively, the north and south primary pole pieces of each assembly being opposed respectively to the north and south primary pole pieces of the other assembly, the spacers of each assembly being substantially centered diametrically opposite the respective secondary pole pieces of the other assembly, the secondary pole pieces and spacers of both assemblies defining a region between them through which material to be magnetized may be passed.

3,127,545

RECTIFIER

Walter Zloczower, Forest Hills, N.Y., assignor to General Telephone and Electronics Laboratories, Inc., a corporation of Delaware

Filed Dec. 23, 1960, Ser. No. 78,001
7 Claims. (Cl. 317—241)



6. A method for producing a rectifier which comprises the steps of applying a conductive film to a surface of an electrically non-conductive substrate; coating said film with a selenium layer; dipping said selenium coated substrate in a strongly alkaline solution containing dissolved selenium; spraying a mixture consisting of cadmium sulfide powder in a vehicle of xylene containing a plastic constituent on top of the layer formed by said selenium, said mixture forming a polycrystalline cadmium sulfide powder layer; and applying an electrode over said powder coating.

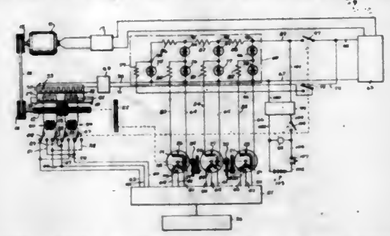
3,127,546

SINGLE SIDE APPROACH SERVO SYSTEM

Joseph R. Moser, Brookfield, and Odo J. Struger and Hubert R. Schatteiner, Milwaukee, Wis., assignors to Allen-Bradley Company, Milwaukee, Wis., a corporation of Wisconsin

Filed June 28, 1962, Ser. No. 205,895
4 Claims. (Cl. 318—28)

1. In an object position control system, the combination comprising: analog input signal means adapted to produce input voltages indicative of a selected final position for the object; an induction device movable in response to motion of the object and having a sine input winding and a cosine input winding in 90° space phase relation and an output winding relatively movable with respect to the input windings and that is inductively coupled to the input windings, said input windings being connected to said analog input signal means to receive said input signals in terms of the sine and cosine of the equivalent angular position between the output winding and the input windings which will yield said final position; driving circuit means for said object connected to said output winding and to which signal voltages of said output winding are fed; and switching means in the connections of said input windings to said analog input signal means and adapted to connect the input signals in terms of the cosine of said equivalent angular position to said sine winding with reversed polarity and to connect



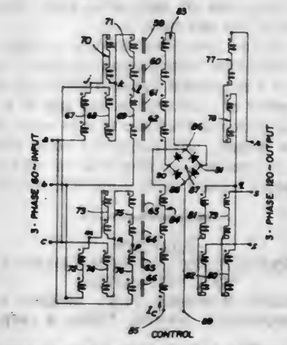
the input signals in terms of the sine of said equivalent angular position to said cosine winding to cause said object to be moved to an offset position displaced from said final position, and thereafter to connect the input signals in terms of the sine of said equivalent angular position to said sine winding and to connect the input signals in terms of the cosine of said equivalent angular position to said cosine winding to cause said object to be moved to said final position.

3,127,547

INFINITE SPEED RATIO STATIONARY CONTROL SYSTEM FOR INDUCTION TYPE MOTORS

Paul Peter Biringer, 6 Lumley Ave., Toronto 17, Ontario, Canada, and Gordon Richard Slemon, 40 Chatfield Drive, Don Mills, Ontario, Canada

Filed May 31, 1960, Ser. No. 32,971
11 Claims. (Cl. 318—229)

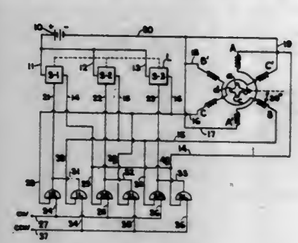


9. A control system for polyphase alternating current electric motor and connectable to a polyphase source of electrical power and comprising in combination: a power modulator connecting power from the power source to the motor which constitutes frequency multipliers having saturable cores with power input windings, power output windings and control current windings for affecting the state of saturation of the cores, said power input windings being joined to one another for connection to a polyphase source and said power output windings being joined to one another with polyphase output terminals for connection to said motor; a control current source connected to said control current windings for controlling saturation of said cores, thereby to control the power supplied to said motor; and means reversing the phase sequence of the output of said power modulator upon reversal of the direction of said control current, thereby to effect a reversal of the direction of torque in the motor.

3,127,548
THREE PHASE CONTROLLER USING SEQUENCE SWITCHING

Bernard Van Emden, Van Nuys, Calif., assignor to Automation Development Corporation, a corporation of California

Filed Mar. 26, 1962, Ser. No. 182,211
5 Claims. (Cl. 318—254)



1. A three phase control circuit for sequentially energizing first, second, and third circuit terminals in a forward direction in response to a series of clockwise pulses and in a reverse direction in response to a series of counterclockwise pulses, said control circuit including:

(*a*) first, second, and third solid state switch means having input, output, and control terminals respectively;

(*b*) a D.-C. source of electrical energy connected to said input terminals, said output terminals connecting respectively to said first, second, and third circuit terminals to energize the same when the corresponding solid state switch means is caused to conduct;

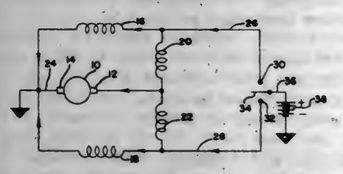
(*c*) interconnecting means between said solid state switch means responsive to conduction of any one of said solid state switch means to render the other two of said solid state switch means non-conducting so that only one of said solid state switch means conducts at any one time; and,

(*d*) logic means connected to said control terminals of said solid state switch means to pass trigger pulses thereto in a sequential forward direction in response to said series of clockwise pulses and in a sequential reverse direction in response to said series of counterclockwise pulses, any one solid state switch being caused to conduct in response to reception of a trigger pulse passed to its control terminal.

3,127,549
REVERSING CIRCUIT FOR COMPOUND WOUND MOTOR

Harold B. Smith, Rochester, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Apr. 4, 1960, Ser. No. 19,927
4 Claims. (Cl. 318—298)

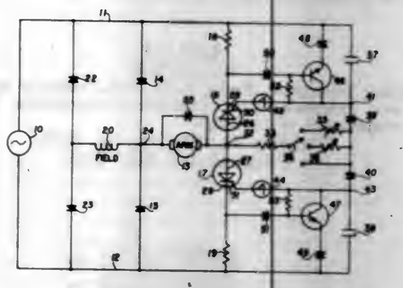


1. A dynamoelectric machine including a rotatable armature, a stationary field magnet assembly, means for exciting the field magnet assembly including a pair of series field windings, one of substantially more turns than the other, and a pair of shunt field windings, one of different wire size than the other, said shunt field windings being wound to develop opposing magnetomotive forces, and means for simultaneously energizing all of said field windings and selectively connecting one of said shunt field windings in shunt across said armature, one of said series field windings in series with said armature, and the other of said series field windings and the other of said shunt field windings in series relation to each other and in shunt across said armature to obtain rotation of the armature in opposite directions with different performance characteristics.

3,127,550
SHUNT MOTOR CONTROL CIRCUIT FOR SPEED REGULATION AND CURRENT LIMITING

Benjamin F. Gilbreath, Richardson, Julian G. Gonzalez, Jr., Garland, and Russell W. Jones, Dallas, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Aug. 13, 1962, Ser. No. 216,672
8 Claims. (Cl. 318—331)



8. In a circuit for supplying direct current to the armature of a shunt motor from an alternating current source:

(*a*) a bridge rectifier with means for supplying alternating current from the source to first and second opposite terminals of the bridge and means for connecting the motor armature to third and fourth opposite terminals of the bridge,

(*b*) a pair of semiconductor controlled rectifiers each having anode, cathode and gate electrodes, the anode-cathode path of each of the controlled rectifiers being connected in a different one of the arms of the bridge adjacent said third terminal, with the anode electrodes of the controlled rectifiers being connected together,

(*c*) a pair of capacitors each having one terminal connecting to a different one of the first and second terminals of the bridge,

(*d*) variable resistance means connecting the third terminal of the bridge to the remaining terminals of the pair of capacitors so that the capacitors are charged during alternated half cycles of the source to values related to armature voltage,

(*e*) a pair of threshold trigger diodes each connecting said remaining terminal of a different one of the capacitors to the gate electrode of a different one of the controlled rectifiers, each diode having a breakdown voltage much less than the peak voltage of the source and exhibiting high impedance until this breakdown is exceeded but thereafter exhibiting a low impedance and a down voltage somewhat less than such breakdown voltage,

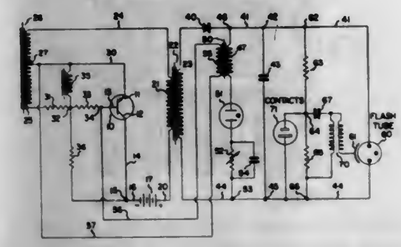
(*f*) a pair of transistors each having its collector-emitter path shunting a different one of the capacitors so that when the transistor is conductive the capacitor will discharge to a value much less than said down voltage during alternate half cycles of the source,

(*g*) and biasing means responsive to armature current connected separately to the bases of the transistors effective to render the transistors conductive only when the armature current exceeds a preselected maximum.

3,127,551
ELECTRICAL SEMICONDUCTOR POWER SUPPLY APPARATUS

John T. Lingle, St. Paul, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Dec. 31, 1958, Ser. No. 784,191
10 Claims. (Cl. 320—1)



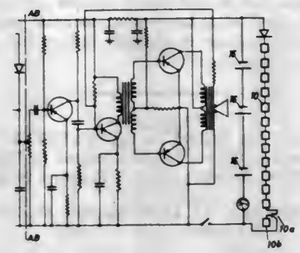
1. Energy conserving power supply apparatus for an electronic photographic flash unit of the type for converting a low voltage battery source to a high voltage for rapidly charging photoflash capacitor means to a predetermined voltage comprising: a low voltage battery source; semiconductor oscillator means energized from said low voltage source, said oscillator means having output terminals for providing a high voltage alternating output; connecting means including rectifying means connecting the alternating output of said semiconductor oscillator means to said capacitor means to provide rapid charging of said capacitor means therefrom; feedback circuit means in said semiconductor oscillator means responsive to the quantity of charge on said capacitor means to stop the oscillation of said oscillator means upon said capacitor means voltage reaching said predetermined voltage; and oscillator restarting signal producing means connected to and energized from said capacitor means, said signal producing means being responsive to a predetermined decay in voltage on said capacitor means from said predetermined voltage to thereafter automatically provide starting current pulses to said semiconductor oscillator means to reinitiate oscillation therein, so that upon said photoflash capacitor means being rapidly charged to said predetermined voltage said oscillator means is thereafter operated intermittently as required to maintain said capacitor means voltage at or near said predetermined value thereby conserving energy in said battery source.

3,127,552
PHOTO-CELL GENERATOR SYSTEM FOR CHARGING STORAGE DEVICES

Raymond Cecil Towler Stead, Belvedere House, 1 Moss Hall Crescent, North Finchley, London N. 12, England

Filed Nov. 28, 1961, Ser. No. 155,338
3 Claims. (Cl. 320—2)

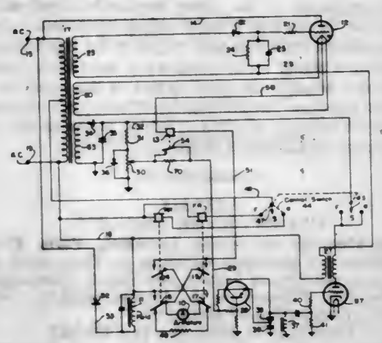
1. A photo-electric generator comprising an assembly of several photo-electric cells sufficient to produce a relatively high output at relatively low light intensity, an electricity storage means, means connecting said assembly of photo-electric cells to said storage means for the charging of the latter, and a light sensitive regulating means including a photo-cell generator, responsive to said light intensity, and a transistor having its emitter/collector circuit connected in series with said assembly of photo-electric cells and its base connected to said photo-cell generator whereby a bias current is applied to the base of the transistor, dependent on the light intensity, to reduce the conductivity of the transistor when the light intensity exceeds a pretetermined amount and thereby control the charging of the electricity storage means and prevent damage thereto due to over-charging.



3,127,553
CONTROL SYSTEM FOR ENERGIZING A DIRECT-CURRENT LOAD FROM AN ALTERNATING-CURRENT SOURCE

William C. Grabau, Honolulu, Hawaii; Ebbe Grabau, executrix of William Christian Grabau, deceased, assignor to Precision Control Corporation, Garden Grove, Calif.

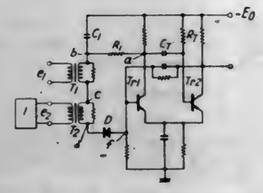
Filed Sept. 11, 1959, Ser. No. 839,350
11 Claims. (Cl. 321—39)



4. A control system for energizing a direct-current load device from an alternating-current source comprising in combination, at least one gas discharge tube having a plate-cathode circuit including in series therewith said load device and said alternating-current source, said tube being of the type having a control grid having a known grid voltage firing characteristic indicative of the grid voltage level required to fire said tube on each positive half-cycle of the voltage applied between plate and cathode from said alternating-current source, first grid input voltage means for applying to said grid a first voltage component varying in a positive direction on each cycle of positive plate voltage so as to gradually approach said firing voltage, a second grid input voltage means for superimposing upon said first voltage component a second voltage component comprising an alternating voltage of relatively high frequency as compared to the frequency of said alternating-current source, and overload control

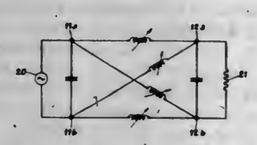
means responsive to the level of current said plate-cathode circuit for reducing the normal amplitude of the voltage provided by said second grid input voltage means to a substantially lower value when said current exceeds a predetermined value, whereby in response to said current overload said last-named means causes said tube to become conductive at a later point in each positive half-cycle of plate voltage to thereby reduce the current in said plate-cathode circuit.

3,127,554
DELTA MODULATION SYSTEM
Hisashi Kaneko, Tokyo, Japan, assignor to Nippon Electric Company, Limited, Tokyo, Japan, a corporation of Japan
Filed June 21, 1960, Ser. No. 37,729
6 Claims. (Cl. 332—11)

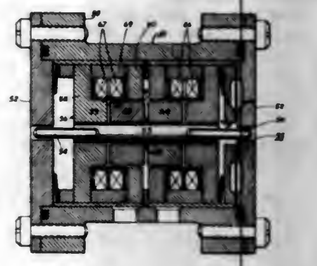


1. A delta modulation circuit for digitalizing an analogue signal into a one digit binary code comprising in combination a monostable circuit having a trigger pulse input terminal and two output terminals one of which acts as the output for the delta modulation circuit, a decoding circuit connected to the other output terminal of said monostable circuit and a series circuit connected between said decoding circuit and said trigger pulse input terminal comprising a signal input transformer secondary winding the primary winding of which serves as the input for the analogue signal, a sampling pulse transformer secondary winding the primary winding of which serves as the input for sampling pulses and a diode.

3,127,555
TRANSFORMER CIRCUITS
Etienne Honoré and Emile Torcheux, Paris, France, assignors to Compagnie Generale de Telegraphie Sans Fil, a corporation of France, and Societe Marocaine de Recherches d'Etudes et de Developpements "Somarede," a corporation of Morocco
Filed Jan. 16, 1958, Ser. No. 709,383
Claims priority, application France Jan. 18, 1957
4 Claims. (Cl. 323—75)

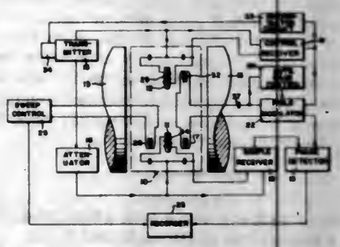


1. A quadripole for computer and transformer circuits, said quadripole comprising a pair of input and output terminals, connecting means for applying an alternating electrical magnitude having a predetermined frequency between said input terminals, first and second capacitors of equal value connected across said input and output terminals respectively, a first pair of variable inductance coils for connecting one input terminal to each output terminal, a second pair of variable inductance coils for connecting the other input terminal to each output terminal, means for varying the inductance of said coils, the sum of the susceptances of said coils remaining constant and being at said predetermined frequency equal to —K, K having a fixed value, said quadripole also including two pairs of coaxial hollow ring-shaped induction pots, each of the pots having two polar surfaces, a shaft extending and movable along the common axis of the pots and carrying two magnetic armatures respectively associated with said pots, said armatures being magnetically insulated from each other and



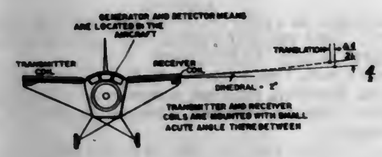
each having two polar surfaces respectively facing the polar surfaces of the respective pots and separated therefrom by respective gaps, one of said gaps between each armature and the respective pot being variable and extending normally to said common axis, the pots of each pair respectively receiving one coil of one of said pairs of coils and one coil of said other pair of coils, said respective magnetic armatures being movable between the respective associated pots for increasing the gap between itself and one of the pots while simultaneously decreasing the gap between itself and the other pot.

3,127,556
GYROMAGNETIC RESONANCE APPARATUS
David E. Gielow, Mountain View, and David L. Wright, Palo Alto, Calif., assignors to Varian Associates, Palo Alto, Calif., a corporation of California
Filed Aug. 14, 1961, Ser. No. 131,414
10 Claims. (Cl. 324—5)



1. In a gyromagnetic resonance apparatus, the combination comprising a transmitter means for supplying a radio frequency driving magnetic field to at least one gyromagnetic sample, first means for forming a polarizing magnetic field for the sample, second means for periodically modulating one of the magnetic fields, the frequency of said modulation being subject to variations, and third means coupled to said second means and responsive to said modulation frequency variations for regulating the amplitude of said modulation in variable accordance with said modulation frequency to thereby maintain a constant modulation index.

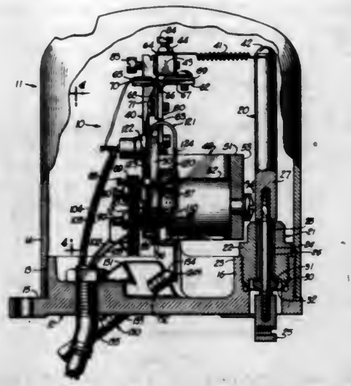
3,127,557
AERIAL GEOPHYSICAL SURVEY APPARATUS HAVING TRANSMITTER AND RECEIVER COILS MOUNTED ON OPPOSITE WINGTIPS OF AN AIRCRAFT SO AS TO MINIMIZE GUST EFFECTS
Peter Doidge Gribble, Old Coulsdon, and Forbes George De Brie Perry, Felbridge, England, assignors to The Mullard Radio Valve Company Limited, London, England
Filed Aug. 3, 1956, Ser. No. 601,973
Claims priority, application Great Britain Aug. 5, 1955
6 Claims. (Cl. 324—4)



3. In aerial geophysical survey apparatus for determining the presence of ores or other conductive geological formations, a pair of transmitting coils for setting up a magnetic field, a pair of receiving coils for detecting said magnetic field, generator means connected to said transmitting coils for supplying a low frequency current thereto for generating said magnetic field, detector means connected to said receiving coils to detect the voltage induced therein by said magnetic field, an aircraft including wings and a longitudinal axis extending between the wingtips for moving said pairs of coils and said generator and detector means over a geological formation, each of said pairs of coils being mounted on opposite wingtips, respectively, of said aircraft, each of said pairs of coils comprising a vertically oriented coil and a horizontally oriented coil at substantially right angles to each other, each of said pairs being located below the said longitudinal axis.

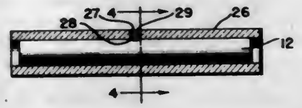
3,127,558
SEALED ELECTROMECHANICAL FORCE BALANCE UNIT WITH AN EXTERNALLY ADJUSTABLE MAGNETIC CIRCUIT
Lawrence T. Garnett, Stratford, Conn., assignor, by mesne assignments, to Robertshaw Controls Company, a corporation of Delaware
Filed Sept. 15, 1959, Ser. No. 840,037
4 Claims. (Cl. 324—34)

1. An electromechanical force balance unit comprising a sealed housing, a pivotally mounted beam positioned in said housing and including a control element portion, a control impedance positioned in said housing adjacent said control element so that movement of said beam varies the impedance of said control impedance, a generally rectangular frame positioned in said housing and having an aperture in one side thereof, a cylindrical pole piece secured to said frame on the side opposite said one side thereof and having an end portion of reduced diameter extending through said aperture to define an annular air gap therebetween, a coil supported on said beam and positioned in said air gap, a mounting bracket supported on said frame and having an opening through which said pole piece extends, means for resiliently biasing said bracket to a predetermined position with respect to said one side of said frame, a shunting ring positioned in said opening of said mounting bracket and enclosing said pole piece, said shunting ring being positioned relatively close to said one side of said frame when said bracket is biased to said predetermined position so as to shunt a part of the magnetic flux normally established across said air gaps, and means adjustable from the exterior of said housing for moving said mounting bracket



away from said one side of said frame against the force of said biasing means, thereby to adjust the shunting effect of said ring.

3,127,559
MAGNETOMETER ELEMENT HAVING A CENTRALLY SECURED FERROMAGNETIC CORE
Victor E. Legg, Maplewood, N.J., and Edmund R. Morton, Brooklyn, N.Y., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Oct. 15, 1947, Ser. No. 779,910
7 Claims. (Cl. 324—43)

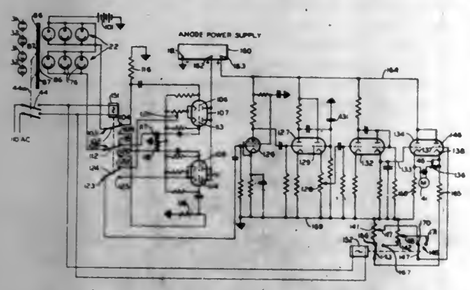


5. In a magnetometer element of the character disclosed, the combination of a non-magnetic tube, a scroll-wound ferromagnetic core disposed within said tube, and mounting means substantially midway the ends of said core and said tube for securing said core against longitudinal and axial shift within said tube when said element is subjected to shocks received by the magnetometer, thereby to avoid alteration of the magnetic characteristics of the core.

3,127,560
AMPLIFIER FOR PHOTOELECTRIC BRIDGE SPECTROPHOTOMETER
Traver J. Smith, San Jose, Calif., assignor, by mesne assignments, of one-half to Genevieve I. Magnuson and one-half to Genevieve I. Magnuson, Robert Magnuson, and Lois J. Fox, as trustees
Original application May 24, 1952, Ser. No. 289,717, now Patent No. 3,016,788, dated Jan. 16, 1962. Divided and this application Apr. 18, 1961, Ser. No. 103,858
6 Claims. (Cl. 324—123)

1. An amplifier adapted for use in color grading of products comprising means responsive selectively to separate electrical signals, said means including at least two amplifying tubes, said tubes having separate input circuits and output circuits, an indicating device, switch means for selectively connecting either of said tube out-

put circuits to said indicating device, and a variable resistor connected to the output circuit of one of said



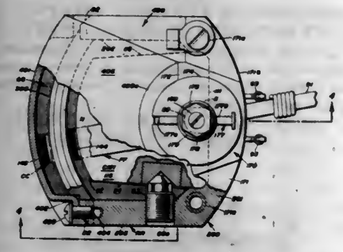
tubes for controlling the ratio of response of said indicating device to said separate electrical signals.

3,127,561

METER MECHANISM OF THE ECCENTRICALLY PIVOTED COIL TYPE HAVING HIGH TORQUE AND THE MAGNETIC FLUX RETURN COMPLETELY SURROUNDING THE METER MOVEMENT

Johann Maislinger, 14 Bayshore Drive, Milford, Conn.

Filed Mar. 31, 1961, Ser. No. 99,794
3 Claims. (Cl. 324—151)



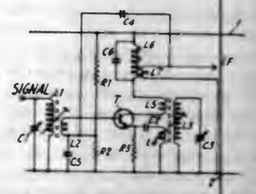
1. In an electrical meter mechanism, in combination, a permanent core magnet; a flux return path structure of open frame form surrounding and containing said core magnet therein; said return path structure including a front wall, spaced opposite side walls, and a rear wall each of substantially the depth of said core magnet; said core magnet being mounted in magnetic connection at one pole end thereof to said front wall of said return path structure and at the opposite pole end thereof being spaced from and along the rear wall of said return path structure to form an air gap therebetween; a moving coil system comprised of a movably mounted coil surrounding the rear wall of said return path structure at and along said air gap for movement therein in either direction; bridge assemblies mounted on and across the top and lower sides, respectively, of said return path structure in positions at and over the pole end portion of said core magnet at said front wall of said return path structure, each of said bridge assemblies including a bearing member; a pivot shaft extending between and being pivotally mounted at its opposite ends in said bearing members; a frame structure mounted on said pivot shaft extending radially therefrom over and across said core magnet to said air gap; said coil being mounted on said frame; a cover structure mounted on said return path structure and comprising, a rear cover wall spaced rearwardly from said coil in position over and covering the rear side of the latter and said rear wall of said return path structure, a top cover wall and a lower cover wall extending forwardly from said rear cover wall covering the top and lower sides, respectively, of said return path structure to and forwardly around said bridge assemblies; said bridge assemblies with said top and lower cover walls of said cover structure completing a covering for said top and lower sides of said return path structure; and said front wall of said return path structure positioned between and closing the space between said top cover wall and said lower cover wall and providing a forward wall for and closing said cover structure to form therewith a complete enclosure of said return path structure and said core magnet, pivot shaft, swinging frame and coil positioned therewithin.

3,127,562

TRANSISTOR FREQUENCY CONVERTER PROVIDING NEUTRALIZATION OF DEGENERATING IMPEDANCE ELEMENTS

Dennis Edwin Alfred Harvey, Enfield, and William James Pitts, Romford, England, assignors to Associated Electrical Industries Limited, London, England, a British company

Filed Feb. 21, 1961, Ser. No. 90,873
Claims priority, application Great Britain Feb. 29, 1960
3 Claims. (Cl. 325—451)



1. A frequency converter circuit arrangement comprising a pair of terminals, a signal path connected between the terminals including mutually in series a heterodyne signal inductive coupling network, a resistor-capacitor combination, a pair of electrodes of a transistor, a feedback coil and an output circuit including an inductance and a capacitance tuned to intermediate frequencies; heterodyne signal means for producing a self-oscillating frequency signal inductively coupled to said beterodyne signal coupling network and said feedback coil; an output signal means inductively coupled to said output circuit for producing an output signal of an intermediate frequency, a potential divider also connected across said pair of terminals; input signal coupling means connected between an intermediate point of said potential divider and another electrode of said transistor; and positive feedback path means connected from said output signal means to said intermediate point of the potential divider for neutralizing the degenerative effect of said resistor-capacitor combination to improve the gain at intermediate frequencies and improve the conversion gain of the converter at high frequencies.

3,127,563

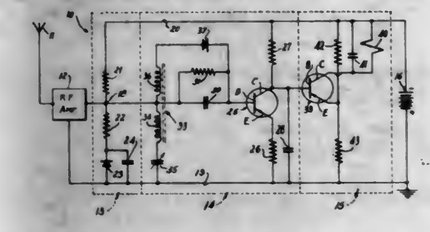
RADIO FREQUENCY DISCRIMINATOR CIRCUIT

William A. Paulson, Rockford, Ill., assignor to Barber-Colman Company, Rockford, Ill., a corporation of Illinois

Filed Nov. 20, 1961, Ser. No. 153,524
4 Claims. (Cl. 325—466)

1. A detector circuit comprising
a rectifying amplifier device having a common, input, and output electrodes,
a pair of input terminals for connection to a source of signals within a given range of input frequencies,
a series circuit comprising a first capacitor and first inductor connected between said terminals,
said series circuit being tuned to a desired frequency in said range,

input circuit means connecting said terminals to said common and input electrodes including in series therewith a second capacitor,
said second capacitor having a sufficiently high value to present a much lower reactance to frequencies within said range other than said desired frequency than does said series circuit,
a second inductor coupled to said first inductor for generation of an induced signal therein when a received signal of said desired frequency is applied across said tuned series circuit,



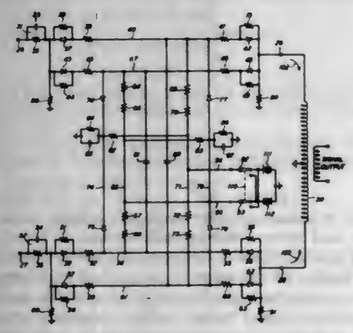
and a rectifying device connected in series with said second inductor across said second capacitor,
said rectifying device being poled for input circuit conduction in a direction opposite that of conduction between said input and common electrodes of said rectifying amplifier device
whereby the rectified induced signal voltage charges said second capacitor to change the direct current component of the signal applied between said input and common electrodes when the received signal is of said desired frequency.

3,127,564

BROADBAND GATE COMPRISING TWO BALANCED BRIDGES CANCELING BIAS VOLTAGES AT OUTPUT AND ATTENUATING WHEN OFF

Adolf J. Giger, Springfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Apr. 14, 1961, Ser. No. 113,974
14 Claims. (Cl. 328—96)



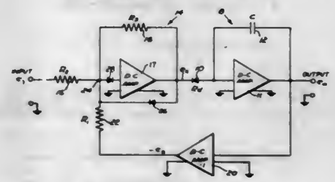
11. An electronic gate comprising a pair of input terminals and a pair of output terminals, two bridge networks each having a first, second, third and fourth vertex, means for respectively connecting the first and second vertices of one bridge network to one input terminal and one output terminal, means for respectively connecting the first and second vertices of the other bridge network to the other input terminal and the other output terminal, a first impedance connecting the third vertices of each bridge network together, a second impedance connecting the fourth vertices of each bridge network together, means for applying a bias of reversible polarity to the bridge networks, means activated by said bias for shunting both of said first and second impedances with a relatively small impedance with respect to the first and second impedances for one polarity of said bias and with a relatively large impedance with respect to the first and second impedances for the other polarity of said bias.

3,127,565

PRECISION PEAK VOLTAGE MEMORY CIRCUIT

Meredith F. Williams, Hawthorne, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Feb. 21, 1961, Ser. No. 90,896
3 Claims. (Cl. 328—127)



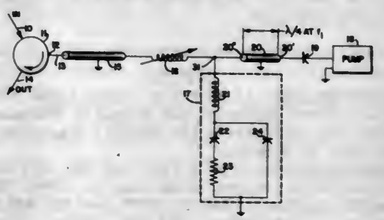
1. A precision peak voltage memory circuit comprising a memory capacitor in series with a diode, the diode being responsive to an input signal so as to unidirectionally charge the capacitor, an amplifier connected across said capacitor and in series with the diode so that the capacitor and the resistance of the diode cause the amplifier to act as an integrator, a feedback loop having a non-gain amplifier connected between the capacitor and a summing point, another amplifier connected between the summing point and the diode and having a return loop connected from its output to said summing point, an input lead responsive to the input signal connected to said summing point, the input lead and the feedback and return loops each having a resistor interposed therealong so as to introduce a resistance along the conductive path of the lead and each of the loops, the resistances of the resistor in the input lead and the feedback loop being equal whereby the charge on the capacitor is forced to follow the input signal so as to substantially eliminate any errors due to nonlinearities within the circuit.

3,127,566

PARAMETRIC AMPLIFIER WITH NO EXTERNAL IDLER CIRCUIT LOADING AND WITH ISOLATION OF SIGNAL AND IDLER FREQUENCIES

Peter P. Lombardo, Huntington Station, N.Y., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware

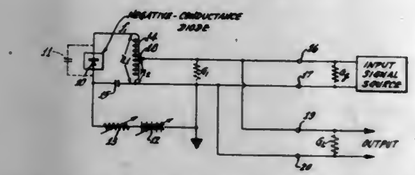
Filed June 20, 1961, Ser. No. 118,451
8 Claims. (Cl. 330—4.9)



1. In a parametric amplifier, the combination which comprises a non-linear variable-capacitance diode circuit resonant at a predetermined idler frequency substantially higher than the input signal frequency, a circuit shunting said diode circuit and resonant at substantially the idler frequency for establishing substantially a short-cir-

cuit across the diode circuit at the idler frequency, a signal input circuit in series with said diode and shunting circuits, an inductance in said signal input circuit tuned to produce substantially series resonance with the diode and shunting circuits at the signal frequency, and means for supplying pump frequency power to the diode at a pump frequency high compared to said input signal frequency and yielding a difference therefrom equal to said predetermined idler frequency.

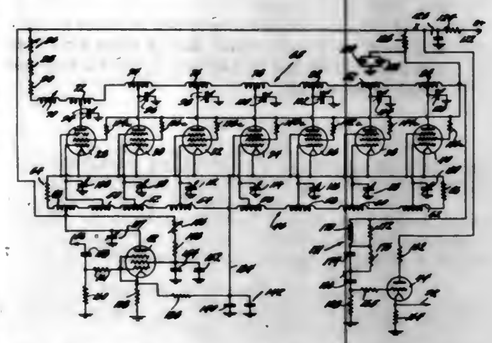
3,127,567
NEGATIVE CONDUCTANCE DIODE AMPLIFIER
Kern K. N. Chang, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed May 13, 1959, Ser. No. 812,842
17 Claims. (Cl. 330—34)



1. A negative conductance amplifier comprising, an abrupt p-n junction semiconductor diode exhibiting negative resistance and having a current-voltage characteristic curve including a negative slope portion, an inductor, a direct current blocking condenser, means to connect said inductor and said condenser in series across said diode to form a resonant circuit for determining the amplifier resonant frequency, means connecting the junction of said condenser and said inductor to a point of reference potential, means providing a source of unidirectional potential connected between said point of reference potential and the junction of said diode and said condenser, the direct-current resistance of said source of unidirectional potential being less than the absolute value of the minimum negative resistance of said diode and the voltage of said source being of a value to supply a bias voltage to said diode to forward bias said diode to an operating point at the steepest point on said negative slope, a tap connection on said inductor, an input circuit connected between said tap and said point of references potential for applying an alternating current signal to be amplified to said resonant circuit, and an output circuit connected between said tap and said point of reference potential for deriving the amplified alternating current signal from said resonant circuit, said tap providing impedance match between said resonant circuit and said input and output circuits, the effective alternating current impedance of said input and output circuits and said resonant circuit presented across said diode being less than the absolute value of the minimum negative resistance of said diode.

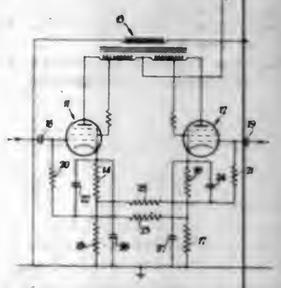
3,127,568
DISTRIBUTED AMPLIFIER WITH LOW NOISE
Ralph E. Sturm, Pikesville, and Russell H. Morgan, Baltimore, Md., assignors to The Bendix Corporation, a corporation of Delaware
Original application June 2, 1954, Ser. No. 433,955, now Patent No. 2,899,494, dated Aug. 11, 1959. Divided and this application July 16, 1959, Ser. No. 827,511
12 Claims. (Cl. 330—54)

1. A line amplifier comprising an anode transmission line, a grid transmission line, a plurality of line tubes having anodes connected in sequence to said anode line and control grids connected in sequence to said grid line, a source of anode potential having one terminal connected to said anode line, terminating impedance means for said line tubes, an input tube having its anode connected to one end of said grid line and having a cathode load connected between its cathode and another terminal of said source, means connecting the cathodes of said line tubes to the cathode of said input tube and through said cathode



load to said other terminal, the anode supply path for said input tube including said grid line terminating means and said line tubes, said means connecting the cathodes of the line tubes to the cathode of the input tube comprising a low pass filter, and said cathode load for the input tube constituting a cathode load for said line tubes.

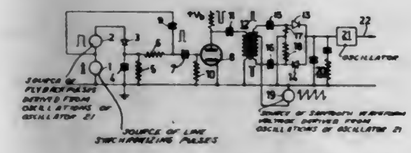
3,127,569
VALVE AMPLIFIER PUSH-PULL OUTPUT STAGE
John Somerset Murray, 7 Ranulf Road, London N.W. 2, England
Filed Oct. 25, 1960, Ser. No. 64,931
Claims priority, application Great Britain Oct. 29, 1959
3 Claims. (Cl. 330—122)



1. A valve-amplifier push-pull output stage comprising first and second valves each having an anode, a control grid and a cathode, both anodes being connected to output means of the stage, each control grid being connected to a respective signal input point and the cathodes of the first and second valves being connected respectively to first and second cathode resistances, each cathode resistance having a tapping intermediate its ends, there being provided, first and second cathode decoupling condensers connected across the first and second cathode resistances respectively, first and second grid leak resistances connected, respectively, between the control grid of the first valve and a first grid-circuit junction and between the control grid of the second valve and a second grid-circuit junction, first and second grid-circuit condensers connected respective by between the first grid-circuit junction and the cathode of the first valve and between the second grid-circuit junction and the cathode of the second valve,

and first and second cross-connecting resistances connecting, respectively, the first grid-circuit junction to the tapping of the second cathode resistance and the second grid-circuit junction to the tapping of the first cathode resistance, wherein the time constants associated with the first grid-circuit condenser and first cross-connecting resistor and with the second grid-circuit condenser and second cross-connecting resistance are greater than the respective time constants associated with the first cathode resistance and first cathode decoupling condenser and, respectively, with the second cathode resistance and second cathode decoupling condenser.

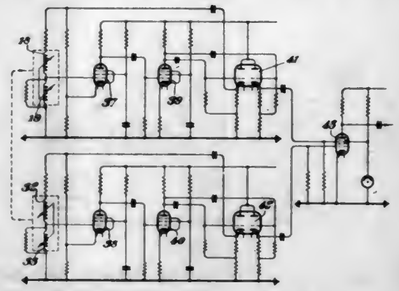
3,127,570
CIRCUIT ARRANGEMENT FOR SYNCHRONIZING A LOCAL OSCILLATOR WITH THE AID OF A PHASE DISCRIMINATOR
Wouter Smeulers, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Oct. 18, 1960, Ser. No. 63,431
Claims priority, application Netherlands Nov. 18, 1959
8 Claims. (Cl. 331—20)



1. A circuit for synchronizing an oscillator with a pulsatory synchronizing signal comprising a source of said synchronizing signal, means providing a sawtooth waveform signal and a second pulsatory signal having repetition frequencies the same as the frequency of said oscillator, phase discriminating means connected to said oscillator for controlling the frequency thereof, gate means for applying one of said synchronizing and sawtooth waveform signals to said phase discriminating means, and means providing a control signal for said gate means comprising means producing a beat signal from said synchronizing and second signals, means integrating said beat signal to provide said control signal, and means applying said control signal to said gate means.

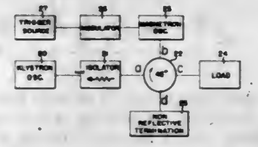
3,127,571
APPARATUS FOR PRODUCING FREQUENCY CHANGES BY OPPOSITELY VARYING TWO INDUCTORS
Peter Lester Crowcroft, Franche, Kidderminster, England, assignor to Imperial Chemical Industries Limited, London, England, a British company
Filed May 25, 1959, Ser. No. 815,491
Claims priority, application Great Britain June 13, 1958
4 Claims. (Cl. 331—40)

1. Apparatus for sensing a physical displacement and producing an electrical signal the frequency of which bears a linear relation to the said displacement, comprising in combination a pair of inductance transducers, each transducer including coil means and a magnetic circuit linking said coil means and having an air gap therein; sensing means operatively connected to said pair of transducers and responsive to an applied displacement to adjust the air gaps of each magnetic circuit in opposite senses to an extent proportionate to the displacement to produce an inductance change in one of said transducers which is inversely proportional to a decrease in the air gap of its associated magnetic circuit resulting from the adjustment and to produce an inductance change in the other of said transducers which is inversely proportional to an increase in the air gap of its associated magnetic circuit resulting from the adjustment; a circuit connected to each coil means to form therewith separate oscillators the frequencies of which are modulated in inverse pro-



portion to the inductance changes of their associated transducers, means for mixing the modulated frequencies of the oscillators to produce a beat frequency output which is linearly related to said displacement.

3,127,572
LOCKED OSCILLATOR SYSTEMS
Willard W. McLeod, Jr., Lexington, Mass., assignor to Raytheon Company, Lexington, Mass., a corporation of Delaware
Filed Aug. 29, 1958, Ser. No. 758,878
7 Claims. (Cl. 331—55)

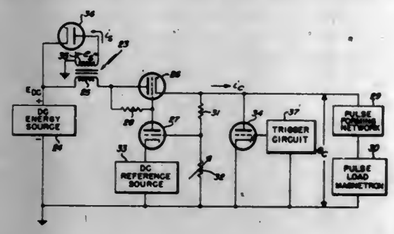


1. A system for locking together two oscillators comprising a driving oscillator, a driven oscillator, a utilization device, and a circulator having nonreciprocal wave transmission arms, means for introducing the output of said driving oscillator into a first one of said arms, substantially the entire output being directly transmitted to a second one of said arms, means securing said driven oscillator to said second arm, said circulator having a third arm for directly receiving the output of said driven oscillator, a utilizatioin device connected to said third arm, and means in said circular for absorbing energy reflected from said utilization device.

3,127,573
PULSING CIRCUIT WITH RETURN OF ENERGY TO SOURCE
Thomas A. Weil, Wellesley Hills, Mass., assignor to Raytheon Company, Lexington, Mass., a corporation of Delaware
Filed May 19, 1959, Ser. No. 814,224
6 Claims. (Cl. 331—87)

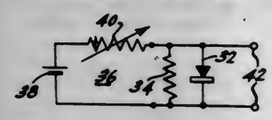
1. A charging regulator circuit for supplying energy to an output circuit, said regulator circuit comprising a source of direct energy; charging means including a primary charging coil connected to said energy source for transferring energy to said output circuit to provide a charging voltage for said output circuit; means connected to said primary charging coil and to said output circuit for selectively controlling the application of said energy to said output circuit, said means including a series switching element, a sensing element connected to said output-circuit and responsive to said charging voltage for provid-

ing a voltage proportional to said charging voltage, and a control element connected to said switching element and to said sensing element responsive to said proportional voltage for controlling the said selective applica-



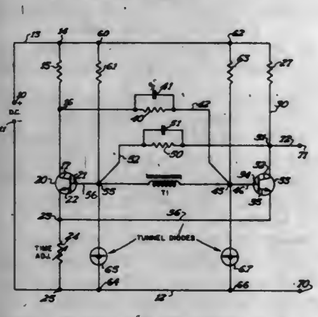
tion of energy by said switching element; and means coupled to said primary charging coil and to said energy source for returning to said source the energy remaining in said primary charging coil in the absence of said energy transfer to said output circuit.

3,127,574
BIASING CIRCUITS FOR VOLTAGE CONTROLLED NEGATIVE RESISTANCE DIODES
Henry S. Sommers, Jr., Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed July 7, 1959, Ser. No. 825,483
20 Claims. (Cl. 331—107)



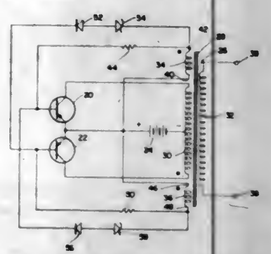
1. In an electrical circuit, a voltage controlled negative resistance device, an operating circuit coupled to said device, biasing circuit means including a resistance element having a positive resistance which is less than the absolute value of negative resistance of said device for biasing said device to exhibit a stable negative resistance to said operating circuit, and means connecting said resistance element across said device through at least a portion of said operating circuit.

3,127,575
TRANSISTOR MULTIVIBRATOR WITH SATURABLE CORE TIMING MEANS
John C. Freeborn, Azusa, Calif., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Sept. 18, 1961, Ser. No. 138,721
6 Claims. (Cl. 331—113)



1. Low frequency oscillating timing apparatus comprising: a source of electrical energy; semiconductor bistable switching means comprising first and second semiconductor current control means each having a plurality of electrodes including input, output and control electrodes; circuit means energizing said input and output electrodes from said source to provide current flow through one or the other of said semiconductor current control means dependent upon the state of said bistable switching means; saturable core timing means connected intermediate the control electrode of said first and said second semiconductor current control means for causing said bistable switching means to switch from one to the other of its operating states upon saturation of said core means; and tunnel diode means connected from said saturable core to said source.

3,127,576
D.C. TO A.C. CONVERTER WITH NEGATIVE FEEDBACK STABILIZATION
Charles Michael Hayward, Brockton, Mass., assignor to Epsco, Incorporated, Cambridge, Mass., a corporation of Massachusetts
Filed Feb. 9, 1962, Ser. No. 172,197
8 Claims. (Cl. 331—113)

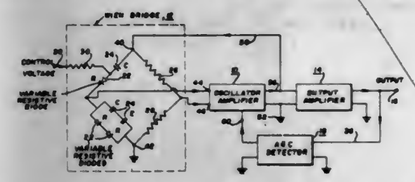


1. Apparatus for converting direct current from a power source to alternating current, said apparatus comprising in combination:
- a transformer,
- a first switch having input, output and control terminals,
- a second switch having input, output and control terminals,
- means for connecting the power source between an intermediate tap on the primary winding of the transformer and the input terminals of the switches,
- means connecting both output terminals of the switches to opposite points adjacent the respective ends of said primary winding,
- means constituting a pair of positive feed-back loops connecting the respective control terminals to different points on the secondary winding of the transformer,
- means comprising a pair of negative feed-back loops connecting said respective control terminals to points on the secondary winding which are opposite in polarity to the points to which the positive feed-back loops are connected,
- the means comprising each negative feed-back loop including a uni-directional conductive device poled to prevent conduction in said loop until a predetermined voltage of appropriate polarity is exceeded across said device.

3,127,577
FREQUENCY CONTROLLED OSCILLATOR
James A. Lapointe, Peabody, Mass., assignor to Raytheon Company, Lexington, Mass., a corporation of Delaware
Filed June 30, 1960, Ser. No. 40,043
8 Claims. (Cl. 332—29)

2. A source of frequency-modulated oscillation comprising a generator of oscillations including a frequency-

determining network, said network including an impedance having a value which varies with the current flowing therethrough and a capacitance which remains substan-

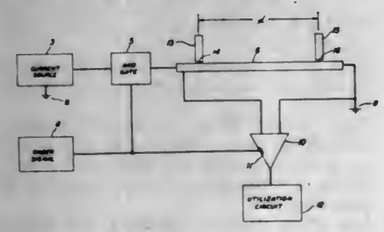


tially constant, and means for continuously varying the current flow through said impedance to modulate the frequency of the generated oscillations.

ERRATUM

For Class 332—11 see:
Patent No. 3,127,554

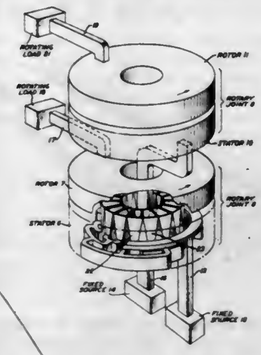
3,127,578
MAGNETOSTRICTIVE DELAY LINE UTILIZING TORSIONAL WAVES
Thomas R. Long, Bridgewater Township, Somerset County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 27, 1958, Ser. No. 724,389
4 Claims. (Cl. 333—30)



3. A solenoidless magnetostrictive delay line comprising a longitudinally disposed magnetoelastic member, means for launching a torsional strain impulse along said delay line, said launching means including a first magnetic means having but a single pole positioned directly adjacent a first point on said delay line and current source means conductively connected to said line, and output means for detecting the occurrence of said strain impulse at a second point on said delay line, said output means including a second magnetic means having but a single pole positioned directly adjacent said second point on said delay line, said second magnetic means causing a magnetic field to have components in opposite directions from said second point along the longitudinal direction of said delay line, and voltage detecting means conductively connected to said delay line on opposite sides of said second point.

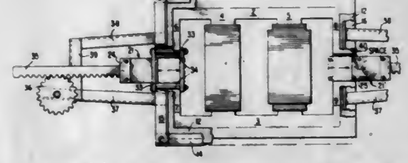
3,127,579
ROTARY JOINT USING CIRCUMFERENTIALLY UNIFORM FIELD TO COUPLE ROTOR TO STATOR
Phillip H. Smith, Murray Hill, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 7, 1962, Ser. No. 215,460
3 Claims. (Cl. 333—98)

1. A rotary joint comprising a ring-shaped stator and a ring-shaped rotor coaxially and adjacently positioned, having opposed planar faces of the same size, and each comprising a series of like horns with keystone-shaped mouths terminating in and substantially filling the op-



posed face, means for supply electromagnetic wave energy of the same frequency and phase to one series of horns, and means for connecting all of the other series of horns to a common load.

3,127,580
CURRENT REGULATING WELDING TRANSFORMERS AND CORE THEREFOR
Frederick C. Owen, 206 Fenton Place, Charlotte 7, N.C.
Filed Apr. 25, 1963, Ser. No. 275,585
13 Claims. (Cl. 336—133)

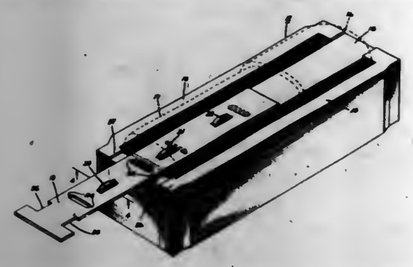


13. A welding transformer comprising inductively coupled primary and secondary windings producing an output current, a ferromagnetic core composing the magnetic circuit for said windings, core extensions on opposite ends of said core outwardly of said windings, each of said core extensions having an air gap therein providing a pair of oppositely disposed air gaps, a shunt transversely movable in one of said air gaps to a preset position to set the maximum output current from said secondary winding, and another shunt independently transversely movable in the other of said air gaps to selectively vary the output current from the set maximum to a minimum.

3,127,581
CORE AND COIL ASSEMBLY
Wayne A. Rasmussen, Rankin, Ill., assignor to General Electric Company, a corporation of New York
Filed Oct. 28, 1959, Ser. No. 849,255
1 Claim. (Cl. 336—197)

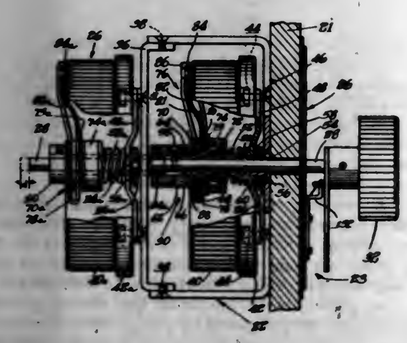
A magnetic core and coil assembly comprising a center core section on which at least one coil assembly is mounted, a pair of outer core sections forming a closed magnetic circuit with said center core section, a pair of oppositely disposed clamps for holding the opposite ends of said outer core sections and said center core section in tightly assembled relation, said coil assembly having an inner portion dimensioned so as to provide only sufficient clearance to permit said coil assembly to be

mounted on said center core section; and not less than one lanced portion on only the outermost one of said laminations of said center core section, said lanced portion projecting outwardly and in a force exerting relationship against said inner portion of said coil assembly so



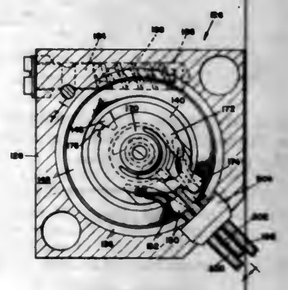
as to hold said laminations tightly in compression and to maintain said center core laminations and said coil assembly in tightly assembled relation, said lanced portion having an elongated semi-ovoid configuration extending longitudinally and centrally of said outermost lamination.

3,127,582
SEQUENCE COUPLED ROTARY ELECTRICAL DEVICES
Leo Newhouse, Mount Prospect, and Robert Pogoff, Skokie, Ill., assignors to Ohmite Manufacturing Company, Skokie, Ill., a corporation of Illinois
Filed May 5, 1961, Ser. No. 108,168
19 Claims. (Cl. 338—129)



1. A system comprising: a plurality of devices of specific function, each of said plurality of devices having a first portion fixed relative to first portions of the other of said devices and each of said plurality of devices having a second portion responsive to a shaft position for varying the effect of said device; rotatable shaft means; means for mechanically coupling the second portions of said devices to said shaft means individually and in a predetermined sequence; dial indicator means including a pointer element movable in cooperation with said shaft means, a plurality of graduated scales each of which is individually associated with one of said devices, a first member fixed with respect to said first portions and a second member arcuately shiftable with respect to said first member; and mechanical transfer means operative between said shaft means and said second member for shifting said second member upon coupling of one of said devices to said shaft means, shifting of said second member exposing the scale which is associated with said coupled device for coaction with said pointer element.

3,127,583
VARIABLE RESISTOR
Milton W. Hudson and Geoffrey Southwell, St. Petersburg, Fla., assignors to International Resistance Company, Philadelphia, Pa.
Filed Jan. 12, 1962, Ser. No. 165,830
9 Claims. (Cl. 338—174)

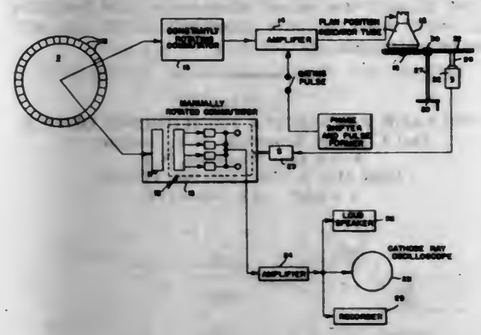


1. A variable resistor comprising:
a casing having a pair of flat opposed surfaces and a circular recess in one of said surfaces;
a circular, cup-shaped housing of an electrical insulating material within the recess in the casing with the open side of said housing facing the bottom of said recess, said housing having a central hole through the base thereof;
an arcuate resistance element mounted within said housing with the ends of the resistance element being spaced apart;
a shaft of an electrically conductive metal extending through and rotatably supported in the hole in said housing;
a wiper member of an electrically conductive metal mounted on the end of said shaft within said housing so as to rotate with said shaft, said wiper member having a wiper finger slidably engaging the resistance element;
a gear of an electrical insulating material within the recess in said casing over said housing, said gear being connected to said shaft so that rotation of the gear rotates the shaft;
a cover plate secured across the recess in the casing over said gear;
a drive shaft extending through the casing and rotatably secured therein, said drive shaft having a worm gear which meshes with the teeth of said gear to rotate said gear upon rotation of the drive shaft; and
three terminals extending from said casing, two of said terminals being electrically connected to opposite ends of the resistance element, and the third terminal being electrically connected to said wiper member through said shaft.

3,127,584
ADJUSTABLE BEARING CHANNEL FOR ECHO RANGING SYSTEM
Jarrett Lewis Hathaway, Manhasset, N.Y., assignor to the United States of America as represented by the Secretary of the Navy
Filed Apr. 7, 1950, Ser. No. 154,605
7 Claims. (Cl. 340—3)

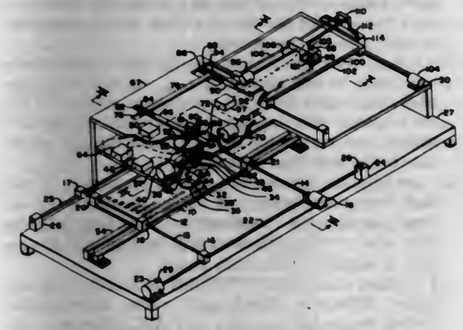
6. An echo ranging system comprising a stationary multi-element transducer, the elements of said transducer arranged to receive signals over a wide angle, commutating means adapted to scan said transducer elements rapidly to produce a substantially continuous indication of signals, indicating means connected to said scanning means for displaying signal received by said transducer,

manually rotatable commutated means for selecting a small segment of transducer elements, and indicating



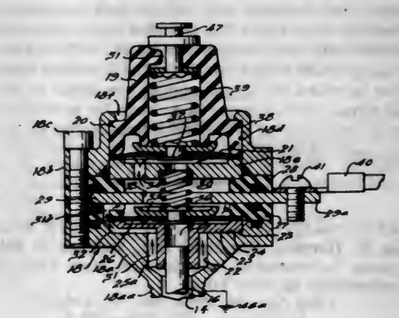
means connected to said manually rotated commutator to display the portion of signal selected.

3,127,585
MIGRATOR FOR GEOPHYSICAL EXPLORATION
Warren A. Alexander and William J. Stark, Tulsa, Okla., assignors, by mesne assignments, to Jersey Production Research Company
Filed Feb. 6, 1958, Ser. No. 713,763
10 Claims. (Cl. 340—15.5)



1. An apparatus for preparing a migrated seismic section from an unmigrated variable density photographic negative-type seismic section which comprises in combination support means having a longitudinal dimension and adapted to support the unmigrated seismic section with the traces in longitudinal alignment with said support means; scanning means arranged to move longitudinally with respect to said section, said scanning means including a rotatable radially slotted disc spaced from and essentially parallel to said unmigrated section, a light source positioned on the opposite side of said section from said scanning means, a light-splitting device disposed between said disc and said unmigrated section, means for rotating said disc about a fixed axis, a photoelectric cell arranged to receive light waves from said light-splitting device which pass through said slot in said disc and adapted to detect the relative position of the slot of said disc when said slot is aligned with the apparent angle of dip of geologic horizons as indicated by reflections recorded on said unmigrated seismic section, and a second photoelectric cell for receiving light waves from said light-splitting device; a second slotted disc adapted to be driven at a speed synchronized with said first disc; a bar, a pivot for said bar intermediate the end of said bar and on the same axis on which said second disc rotates, with said bar being characterized by having a slot therein so positioned as to be capable of alignment with said slot in said second disc; a second light source disposed above said slot in said bar; a third photoelectric cell positioned opposite said second light source and arranged such that said bar and said second disc are between said second light source and said third photoelectric cell; a phase detector electrically connected to said first photoelectric cell and said third photoelectric cell; phase equalizing means responsive to said phase detector and capable of rotating said bar about its axis to bring the output signals of said third photoelectric cell into phase with said first photoelectric cell output; a second support means having a longitudinal dimension and adapted to support a photographic recording medium; a recording device capable of reproducing the migrated section on said medium from impulses received from said second photoelectric cell and movable longitudinally with respect to said medium along a support member pivoted at one end of said second support means; and linkage means connecting said bar with said support member for angular adjustment thereof responsive to said scanning means such that the sine of the angle of dip of geologic horizons as indicated by reflections recorded on said recording medium is equal to the tangent of the angle of dip as indicated on said unmigrated section.

3,127,586
LUBRICATION WARNING SIGNAL
William O. Heyn, Rochester, Charles E. Brady, Farmington Township, Oakland County, and John A. Drude, Royal Oak, Mich., assignors to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed June 1, 1962, Ser. No. 199,380
6 Claims. (Cl. 340—60)



2. In a lubricating system for an automobile engine, a filter for lubricating fluid, a pump connected with the upstream side of said filter for pumping pressurized lubricating fluid therethrough, a gallery connected with the downstream side of said filter for distributing filtered lubricating fluid to said engine, a pair of flexible diaphragms spaced to define a chamber therebetween, means for conducting the pressure of said gallery to said chamber for applying said gallery pressure to said diaphragms, means for conducting the discharge pressure of said pump at a location upstream of said filter to one of said diaphragms exteriorly of said chamber to apply said discharge pressure to said one diaphragm in opposition to said gallery pressure within said chamber, said one diaphragm being thereby actuated by the differential in fluid pressures acting thereon from within said chamber and exteriorly thereof, first and second resilient biasing springs associated with said one and the other of said diaphragms respectively for biasing said one diaphragm in opposition to said pump discharge pressure and for biasing said other

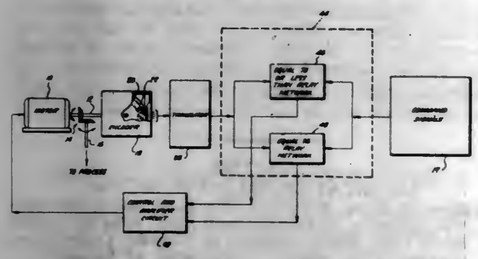
diaphragm in opposition to said gallery pressure, an electrical warning circuit including first and second signal elements, first electrical contact means associated with said one diaphragm and first signal element for actuating the latter when said differential in fluid pressure exceeds a predetermined maximum value determined by said first biasing spring, and second electrical contact means associated with the other of said diaphragms and second signal element for actuating the latter when the fluid pressure within said chamber falls below a predetermined minimum value determined by said second biasing spring.

3,127,587

DIGITAL COMPARING CIRCUITS

Svein Rasmussen, San Pedro, and Carl P. Spaulding, San Marino, Calif., assignors to Datex Corporation, Monrovia, Calif., a corporation of California

Filed Aug. 26, 1960, Ser. No. 52,108
4 Claims. (Cl. 340—146.2)



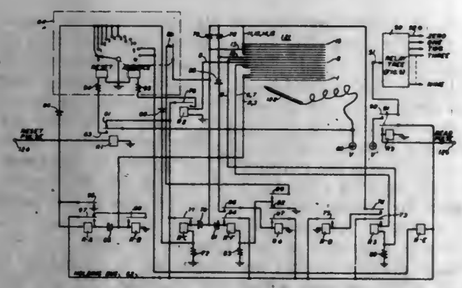
1. A comparison circuit comprising a source of reference signals, a source of variable digital signals to be compared with the reference signals, a comparison circuit coupled intermediate said sources and responsive to the reference signals and the digital signals substantially simultaneously, said comparison circuit including an equality comparison circuit for providing a unique signal indicative of when the digital signals are equal to the reference signals and a comparison circuit for providing output signals indicative of when the reference signals are equal to or less than the digital signals.

3,127,588

AUTOMATIC READING OF CURSIVE SCRIPT

Leon D. Harmon, Plainfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Apr. 24, 1959, Ser. No. 808,827
14 Claims. (Cl. 340—146.3)



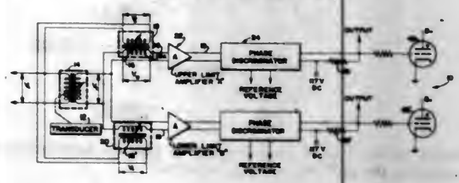
1. Apparatus for identifying words composed of cursive alphabetical characters which comprises transducer means comprising a striated commutator-like surface, a conductive stylus by which words are written on said surface in the general direction of said striae, means for detecting selected sequences of signals developed in said surface as the several striae thereof are contacted by said stylus in writing a word, and means responsive both to said detected sequences of signals and to the relative times of occurrence of said striae contacts for producing an output signal indicative respectively of the word written on said transducer.

3,127,589

VOLTAGE PARAMETER MONITORING DEVICE

Joel T. Harris, Bronxville, N.Y., assignor to Avien, Inc., Woodside, N.Y.

Filed Mar. 6, 1962, Ser. No. 177,825
1 Claim. (Cl. 340—149)



A signal monitoring device for monitoring a variable parameter for providing a control signal whenever said parameter is other than within a range defined by a predetermined high limit and a predetermined low limit, said device comprising:

(*a*) a source of A.C. reference voltage;

(*b*) a monitored signal input transducer having monitored signal output means, and means for automatically varying the monitored output signal responsive to said variable parameter;

(*c*) a high limit transformer having signal input means connected to said source of A.C. reference voltage, high limit signal output means whose output is 180° out of phase with the signal input to said signal input means, and means for manually varying the amplitude of the high limit output signal;

(*d*) an amplifier arranged to receive the output of said high limit transformer and the output of said monitored signal input transducer in a bucking relationship, whereby the difference will be amplified to provide an amplified difference signal;

(*e*) a phase discriminator adapted to receive said amplified difference signal, said phase discriminator having means for receiving said A.C. reference voltage for gating the output of said discriminator "on" during half cycles of a given polarity of the limit signal, and gate it "off" during the corresponding polarity half cycles of the transducer signal to produce said control signal whenever the monitored parameter exceeds the high limit;

(*f*) a low limit transformer having signal input means connected to said source of A.C. reference voltage, low limit signal output means whose output is 180° out of phase with the signal input to said signal input means, and means for manually varying the amplitude of the low limit output signal;

(*g*) an amplifier arranged to receive the output of said low limit transformer and the output of said monitored signal input transducer in a bucking relationship, whereby the difference will be amplified to provide an amplified difference signal; and

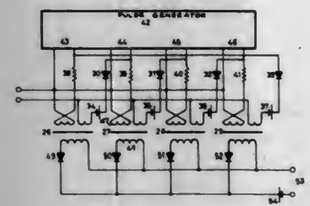
(*h*) a phase discriminator adapted to receive said amplified difference signal, said phase discriminator having means for receiving said A.C. reference voltage for gating the output of said discriminator "on" during half cycles of a given polarity of the limit signal, and gate it "off" during the corresponding polarity half cycles of the transducer signal to produce said control signal whenever the monitored parameter exceeds the low limit.

3,127,590

INFORMATION STORAGE ARRANGEMENTS

Karl Euler, Munich, Germany, assignor to Siemens & Halske Aktiengesellschaft, Berlin and Munich, Germany, a German company

Filed Apr. 22, 1959, Ser. No. 808,133
Claims priority, application Germany Apr. 30, 1958
9 Claims. (Cl. 340—174)



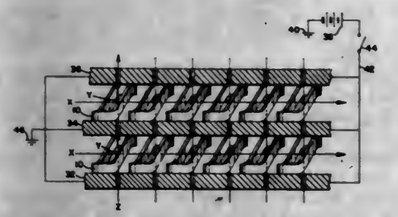
1. An arrangement for storing a plurality of binary digits for a pre-determined period of time comprising a pulse distributor having a plurality of pairs of output terminals; a plurality of magnetic cores made of material having a substantially rectangular hysteresis loop; a write-in winding, a read-out winding and an output winding on each of said magnetic cores; a pair of input terminals; a pair of output terminals; means connecting one of the terminals of said pair of input terminals to one terminal of each of said pairs of pulse distributor output terminals and also to one end of each of said read-out windings; means connecting the other terminal of said pair of input terminals to one end of each of the write-in windings; means connecting the other terminal of each of said pairs of pulse distributor output terminals through a respective resistor to the other end of a respective one of said read-out windings and through a respective rectifier and a bias source, so directed that it makes the rectifier normally non-conductive, to the other end of a respective one of the write-in windings.

3,127,591

OFFSET MAGNETIC CORE

Robert J. Foster, Munroe Falls, Ohio, assignor to Goodyear Aerospace Corporation, a corporation of Delaware

Filed Jan. 29, 1962, Ser. No. 169,457
5 Claims. (Cl. 340—174)



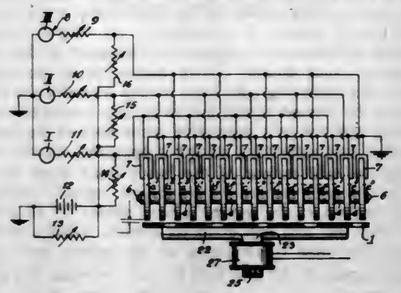
4. An offset magnetic core having a base portion, a top portion, the base portion being diametrically opposed to and longitudinally spaced from the top portion, and side portions connecting the base portion with the top portion.

3,127,592

STATIC PICKUP HEAD

Leif Eric de Neergaard, Chicago, Ill., assignor to Frederic W. Olmstead, Washington, D.C., Hans W. Trechsel, Madison, Wis., Deryck A. Gerard, Minneapolis, Minn., John J. Kojis, St. Louis Park, Minn., Norman S. Parker, Evanston, Ill., and Malcolm S. Bradway, Chicago, Ill., and said de Neergaard as trustees; The Northern Trust Company, executor of said de Neergaard, deceased

Filed June 17, 1955, Ser. No. 516,177
10 Claims. (Cl. 340—174.1)



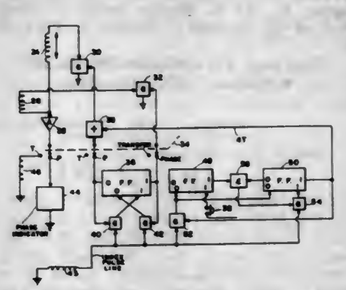
1. A pickup assembly for use with magnetic storage members including a magnetic storage member having an area thereon of predetermined magnetic characteristics and adapted to emit flux, means establishing a flux path from said magnetic storage member to an induction element, and means for varying in a cyclic manner the flux in said path including a plurality of spaced flux conductive members positioned adjacent said path, one of said flux conductive members being nearer to said area than the others, and means for supplying a cyclically varying voltage to each of said flux conductive members with the voltage supplied to each individual member being out of phase with the voltage supplied to the others.

3,127,593

PERIODIC SIGNAL SYNCHRONIZER

Rolland R. Ritter, St. Paul, Minn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

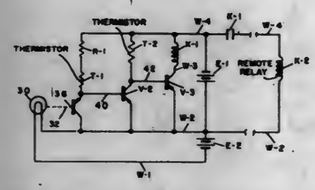
Filed June 13, 1960, Ser. No. 35,749
6 Claims. (Cl. 340—174.1)



1. Apparatus for transferring a randomly placed signal recorded on one memory track of a cyclic storage medium to a second memory track wherein the transferred signal is synchronized with other recorded signals on other tracks of said storage medium, comprising said cyclic storage medium having a plurality of memory tracks, a master one of the said tracks having a randomly located signal recorded thereon, a second one of the said memory tracks having an index pulse recorded thereon for indicating each revolution of the said cyclic medium, a plurality

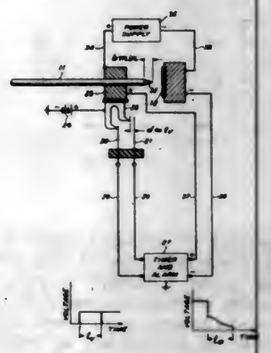
of read-record heads one for each of the said memory tracks, the head associated with the said master track being circumferentially adjustable around said master track, first circuit means for producing a first output during the alternate periods between successive occurrences of the said index pulse, means coupling the output of the index track head as an input to the said first circuit means, first enabling means having an output for energizing the master track head, means coupling the said first output of the first circuit means as an input to the said first enabling means, means coupling the said output of the first enabling means to the said master track head, second circuit means for producing an output during the period between two successive occurrences of the said index pulse, said second circuit means being normally disabled and including activating means whereby the said output of the second circuit means is only produced once beginning with the next successive occurrence of the index pulse after said activating means is operated, means also coupling the said output of the index track head as an input to the said second circuit means, means coupling the said output of the second circuit means as an additional input the said first enabling means, sensing means for indicating time synchronism of the master track signal with respect to the alternate periods between two successive occurrences of the said index pulse, means for coupling the output of the master track head as an input to the said sensing means, switch means having two positions and arranged to complete the coupling of the said first output from the first circuit means and the said output from the master track head to the said first enabling means and to the said sensing means, respectively when in one of the said positions, said switch means arranged to break these said couplings and only couple the output of the said master track head as an input to the selected one of the other memory track heads when in the other of said positions, whereby the randomly located master track signal can be read in time synchronism with respect to the index pulse by adjusting the position of the master track head relative to the position of the index track head and then transferred in only one revolution of the medium to a selected memory track so as to be in time synchronism with respect to the index pulse and other later recorded signals appearing on other memory tracks.

3,127,594
REMOTE METERING DEVICE
Robert F. Roe, 35 N. High St., Jackson, Ohio, and Henry Steinhauer, Jr., 14 N. Skyline Drive, Waverly, Ohio, assignors of ten percent to Robert L. Farr, Waverly, Ohio
Filed Sept. 15, 1960, Ser. No. 56,257
6 Claims. (Cl. 340—203)



1. A remote metering device comprising, in combination, a pulse generating apparatus including a relay apparatus having a relay coil and a pair of normally open contacts; detector means in circuit with said relay coil; a switch apparatus including a source of electrical energy; a first counter including a first counter coil; a second counter including a second counter coil in parallel with said first counter coil, each of said counter coils being in series with said pair of normally open contacts of said relay; and switch means for sequentially and alternately connecting said first and second counter coils with said sources of electrical energy.

3,127,595
MONITORING CIRCUIT
James C. Coyne, Columbus, Ohio, assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed May 10, 1962, Ser. No. 193,798
4 Claims. (Cl. 340—267)



1. In a percussive welding system wherein a movable fixture projects one welding member rapidly toward another member, biasing means connected to said members for initiating an arc therebetween at a prescribed separation, apparatus for monitoring and determining whether a satisfactory or defective weld has been made, said apparatus comprising in combination means for measuring the time (t_y) required for said moving member to traverse a prescribed distance $b_{(min)}$, means for measuring the arc duration (t_a), means for comparing the time (t_a) both with said time (t_y) and with a predetermined time $t_{a(max)}$, and alarm means actuated by said comparing means whenever values of (t_a) are less than (t_y) and whenever values of (t_a) are greater than $t_{a(max)}$.

3,127,596
DEVICE FOR INDICATING VARIATIONS OF POSITION BETWEEN TWO ELEMENTS
Karl Alfred Näsholm, Goteborg, Sweden, assignor to Aktiebolaget Götaverken, Goteborg, Sweden, a corporation of Sweden
Filed May 21, 1962, Ser. No. 196,279
Claims priority, application Sweden June 19, 1961
3 Claims. (Cl. 340—269)

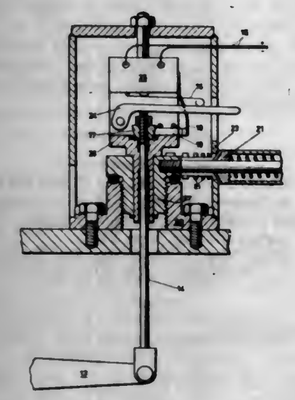
1. A device for indicating unpermissible wear of a bearing in a reciprocatory mechanism, which comprises, in combination,

a double-armed lever with one short and one long arm fitted on a fulcrum at the entablature of the reciprocating mechanism in a manner to place the end of said short arm in a position to be actuated by an unpermissible movement of a reciprocatory element in said mechanism;

an alarm member enclosed in a casing supported by said entablature above the outer end of the longer arm of said lever and

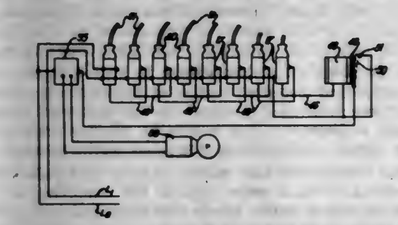
having an actuator for contacting said alarm member;

a pusher rod resting on the end of said longer arm and reaching into said casing, the upper end of said rod being normally axially spaced from said actuator; and



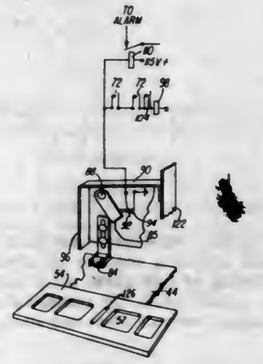
a member in said casing carrying said rod and permitting its movement into, but preventing its movements outwards from, said casing.

3,127,597
TOOL SALES DISPLAY THEFT ALARM
Herman Lewin and Edward Landa, both of 803 Schumacher Drive, Los Angeles 48, Calif.
Filed Apr. 26, 1961, Ser. No. 105,580
2 Claims. (Cl. 340—280)



1. An alarm system comprising: a series of female two-pole electric service outlet receptacles, each of said receptacles comprising a dielectric base having guides for guiding two prongs of an electric service cord plug when the latter is plugged into said receptacle, first and second electric screw terminals fixed on opposite sides of said base, two flexible metallic electric contacts fixed at one end respectively on said terminals and extending freely therefrom alongside said guides whereby said prongs will be guided into engagement with and flex free end portions of said contacts when inserted into said receptacle, thereby making electric connection respectively between said prongs and said contacts, that one of said contacts which is fixed on the second terminal having a rebent J-shaped free end portion which is so engaged, a third electric terminal fixed on said base, and a third contact fixed on said third terminal and extending within said J-shaped contact end portion aforesaid and out of contact therewith excepting when said J-shaped contact is engaged and flexed by insertion of said plug into said receptacle, at which time said J-shaped contact is flexed against and into electrical connection with said third contact; two main circuit leads L1 and L2 for supplying current to said receptacles, lead L1 connecting to the first terminals of all of the receptacles in said series, and lead L2 connecting to the second terminal of the first receptacle in said series, the third terminal of each of said receptacles, excepting the last receptacle in said series, being connected to the second terminal of the next following receptacle in the series; and a current responsive alarm device energized by an electric circuit which draws its current from lead L1 and from the third terminal of the last receptacle in said series.

3,127,598
CURRENCY TESTING APPARATUS
Norbert A. Gecewicz, Rockford, Ill., assignor, by mesne assignments, to Automatic Canteen Company of America, Chicago, Ill., a corporation of Delaware
Filed June 30, 1960, Ser. No. 40,051
6 Claims. (Cl. 340—282)

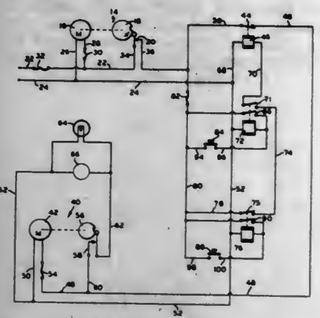


1. A currency testing apparatus comprising:
a slide,
an opening in said slide for receiving a note to be tested,
a cover for said opening having a closed position covering a note received by said slide for testing,
said slide mounted for reciprocable motion to traverse a path from a note receiving position to a note testing position,
said cover mounted to said slide for movement therewith,
detecting means located in the path of movement of said slide for engagement with the closed cover as it reaches the test position,
a control circuit for initiating the testing of said note,
and contacting means in said circuit governed by said detecting means,
said detecting means responsive to engagement with said closed cover to actuate said contacting means and close said initiating circuit,
said detecting means responsive to non-engagement by said cover to release said contacting means and open said circuit.

3,127,599
INSPECTION REMINDER SYSTEM HAVING A PERIODICALLY OPENED ALARM NULLIFIED BY SWITCH ACTUATION AT ALL STATIONS
Morris Smith, Sackville, New Brunswick, Canada, and Robert C. Read, Norwalk, Conn., assignors to The Gordon Company, Inc., Norwalk, Conn., a corporation of Connecticut
Filed Sept. 29, 1960, Ser. No. 59,343
5 Claims. (Cl. 340—286)

1. An alarm inspection system for a plurality of inspection stations comprising; a motor-operated switch which connects a source of electrical power to said system continuously except for periodic reset intervals; an alarm circuit which includes, in series connection, said source of power, a pair of normally closed contacts of an alarm relay, a pair of motor-operated contacts, and a transducer which produces an alarm when actuated by elec-

trical power; a release circuit at each of said stations for disabling the alarm circuit, each of said release circuits including a normally open release switch and a release relay with the switch and relay winding connected in series with said motor-operated switch and the source of power; each of said release relays including a pair



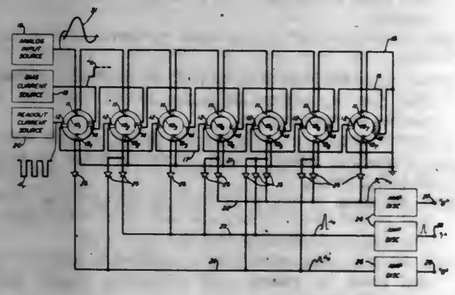
of holding contacts and a pair of normally open operating contacts, said operating contacts all connected in series with the winding of said alarm relay and the source of power; and circuit means for operating said transducer at predetermined intervals when said alarm relay contacts are closed.

3,127,600

MAGNETIC ENCODING CIRCUITS

Reginald A. Kaenel, Murray Hill, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 18, 1959, Ser. No. 860,438
11 Claims. (Cl. 340—347)



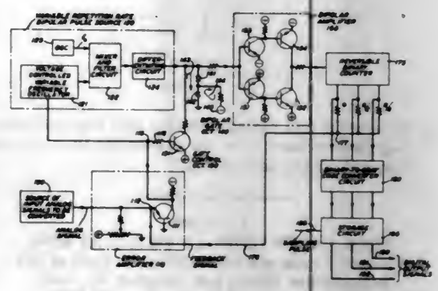
1. An electrical circuit comprising a plurality of magnetic cores each having a substantially rectangular hysteresis characteristic loop, an input, a readout, an output, and a bias winding on each of said cores, an input circuit means for connecting each of said input windings in series, a readout circuit means for connecting each of said readout windings in series, a bias circuit means for connecting each of said bias windings in series, means for applying a current signal of a continuously varying amplitude to said input circuit means, means for applying biasing current to said bias circuit means, said biasing windings each being in a sense and having a number of turns such that each of said plurality of cores is magnetically biased to a different point on its hysteresis loop and is thereby driven to a different first flux excursion for instantaneous amplitudes of said current signal, means for applying periodic readout current pulses to said readout circuit means, said periodic readout current pulses being of an amplitude to cause periodic and equal second flux excursions in each of said cores, a coding network comprising a plurality of output conductors and connecting means for interconnecting said output windings to said output conductors in predetermined combinations, and amplitude discriminating means connected to each of said output conductors.

3,127,601

ANALOG-TO-DIGITAL CONVERTER

Reginald A. Kaenel, Murray Hill, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Nov. 1, 1960, Ser. No. 66,512
7 Claims. (Cl. 340—347)



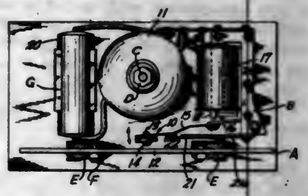
1. In combination in a system for converting analog signals into digital representations thereof, a source of continuous analog signals characterized by intelligence-bearing amplitude variations, reversible counting means, error amplifier means responsive to analog signals to be converted and to output signals of the continuous analog type from said analog signal source and said counting means, respectively, for supplying bipolar analog type error signals indicative of the relationship between said analog signals and said output signals, and pulse means responsive to said error signals for supplying to said counting means pulses whose repetition rate and polarity are a function of said error signals.

3,127,602

AUDIBLE SIGNAL DEVICE

James E. Russo, Locust, and John J. Vitola, West Long Branch, N.J., assignors to Wheelock Signals, Inc., Long Branch, N.J., a corporation of New Jersey

Filed Nov. 3, 1960, Ser. No. 67,105
6 Claims. (Cl. 340—392)



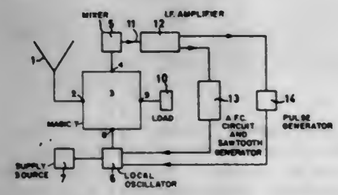
6. A two-tone bell comprising a gong and chime bar spaced apart from each other, an oscillatory clapper which engages the gong sharply on one stroke and the chime bar lightly on the opposite stroke, a resilient positioning element engageable with the clapper during its stroke toward the chime bar and supporting the clapper in a position intermediate the gong and the chime bar when the clapper is at rest, an electromagnet which upon energization moves the clapper against the gong and upon deenergization thereof permits the clapper to fall against the resilient positioning element, causing the clapper to strike the chime bar lightly and but momentarily, and a rigid bar adjacent the supported end of the leaf spring but shorter in length than the leaf spring so that the free end of the leaf spring extends beyond the end of the rigid bar, the rigid bar limiting the deflection of the leaf spring in the direction of the gong but not in the direction of the chime bar.

3,127,603

RADAR BEACON FOR TRANSMITTING PULSE-MODULATED HIGH FREQUENCY ENERGY UPON THE RECEPTION OF A RADAR SIGNAL

Cornelis Kramer, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Oct. 3, 1960, Ser. No. 60,028
Claims priority, application Netherlands Nov. 4, 1959
4 Claims. (Cl. 343—6.8)



1. A radar beacon for transmitting pulse-modified high frequency energy upon the reception of a radar signal, said beacon comprising a source of oscillations, means for mixing said oscillations and radar signal to produce an intermediate frequency signal, means responsive to said intermediate frequency signal connected to said oscillator for maintaining the frequency of said intermediate frequency signal substantially constant by controlling the frequency of said oscillations when a radar signal is received, and for periodically varying the frequency of said oscillations in the absence of said radar signal, means responsive to said intermediate frequency signal for shifting the frequency of said oscillator substantially to the frequency of said radar signal for a predetermined period subsequent the reception of a radar signal, and means for transmitting said oscillations.

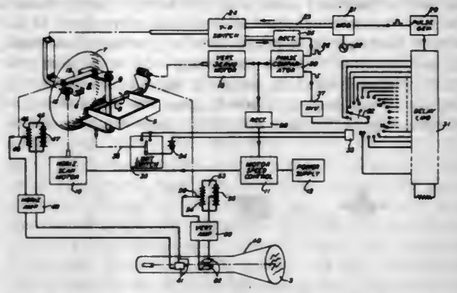
3,127,604

AIRCRAFT RADAR SYSTEM WITH FEEDBACK OF RANGE SIGNAL TO ANTENNA ELEVATION CONTROL AND DISPLAY OF EQUIRANGE CONTOURS

Donald R. Herriott, Morris Township, Morris County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Oct. 11, 1960, Ser. No. 61,914
11 Claims. (Cl. 343—7.4)

8. Apparatus for displaying to the pilot of an aircraft a two-dimensional representation of the terrain toward and over which said aircraft is flying which comprises means for projecting an energy beam toward a point of said terrain, means for recovering reflected energy returned from said point, means for deriving from said reflected energy a control signal representative of the propagation time of said energy over its projected and reflected paths, means for angularly sweeping said beam across said terrain in an azimuth coordinate, means responsive to said control signal for angularly deflecting said beam in an elevation coordinate to hold constant said propagation time at each of a set of discretely different values, one for each of said azimuthal sweeps, a display screen, an indicator, and means causing said indicator to move on said screen in horizontal and vertical directions



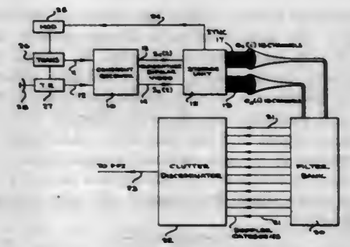
in related conformance with the movements of said beam in said azimuth and elevation coordinates, respectively.

3,127,605

MOVING TARGET RADAR SYSTEMS

William S. Alderson, Springfield, Va., assignor, by mesne assignments, to Melpar, Inc., Falls Church, Va., a corporation of Delaware

Filed Feb. 24, 1960, Ser. No. 10,658
8 Claims. (Cl. 343—7.7)



1. In a pulse radar system, means for transmitting first radio frequency pulses toward a target, means for receiving second echo radio frequencies pulses from said target, a coherent receiver responsive to said first and second pulses for generating third and fourth video pulses, said third and fourth video pulses having substantially a ninety degree phase relation and a Doppler frequency representative of velocity of said target, means for storing in separate time sequences predetermined numbers of said third video pulses and of said fourth video pulses, parallel read out means for reading out the stored video pulses, and filter devices for deriving from said parallel read out means an indication representative of the presence of one of a plurality of possible doppler frequency categories in the stored signals.

3,127,606

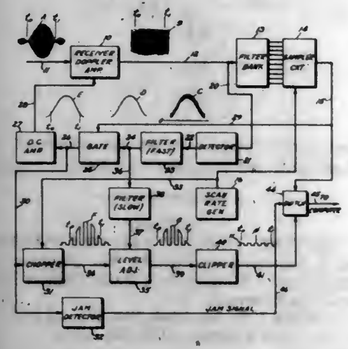
ANGLE INFORMATION DURING JAM CONDITION IN PULSE DOPPLER SEARCH-WHILE-TRACK RADAR

Marvin D. Aasen, Glen Burnie, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Feb. 11, 1960, Ser. No. 8,198
9 Claims. (Cl. 343—8)

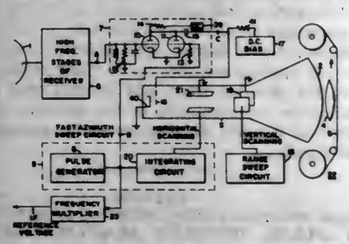
4. In a pulse Dopper receiver system having a Doppler amplifier for conducting received target signals to a sampled filter bank to select target signals from noise cluttered jam signals, the system having an automatic gain control feedback for the amplifier to control the gain thereof inversely to jam signal strength, the invention which comprises: a chopper, a jam detector, and a

filter coupled to the automatic gain control circuit in parallel; a level adjustment control circuit and a clipper circuit serially coupled to the output of said chopper circuit, said level adjustment control circuit being coupled to said filter in a manner arranged to limit the lower level of the chopped jam signals in proportion to jam signal strength, and said jammed detector receiving said automatic gain control voltage including jamming signals and producing a signal on an output thereof upon the occurrence of each jam signal in said automatic gain control circuit;



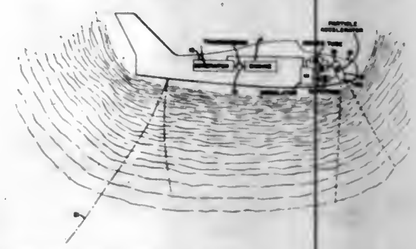
and a switching means having the output of said sampled filter bank, the output of said clipper circuit, and the output of said jam detector coupled as inputs thereto, said switching means being constructed and arranged to alternately switch the outputs of said sampled filter bank through said switching means in the absence of a jam detector output signal and the output of said clipper circuit in the presence of the jam detector output signal whereby a target may be evaluated in; subsequent circuitry equally well from target signal information and jam signal information received.

3,127,607
METHOD AND APPARATUS FOR RECORDING OF RADAR SIGNALS
Frank R. Dickey, Jr., Dewitt, N.Y., assignor to General Electric Company, a corporation of New York
Filed Sept. 29, 1960, Ser. No. 59,336
11 Claims. (Cl. 343—17.1)



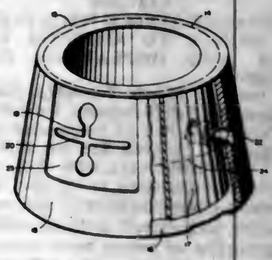
1. A system for recording both the phase and amplitude of radar signals reflected from remote targets, said signals being in the form of repetitive randomly spaced high frequency alternating wave pulses, comprising means for writing the radar signals from a single transmitted pulse upon a first segment of a storage surface, one dimension of said segment corresponding to target range and a second orthogonal dimension of said segment corresponding to the time of occurrence of successive pulses, said means including a control means for writing the alternating component of each target pulse along said second dimension at its respective range coordinate, means for positioning the radar signals derived from succeeding transmitted pulses upon corresponding adjacent surface segments so that the alternating components of successive radar signals reflected from single targets are recorded in approximate alignment along the second dimension of adjacent segments at their respective target range coordinates, whereby the recorded signals may be readily read out so as to provide an indication of the Doppler frequency shift of said reflected radar signals by utilizing the phase relationship between aligned successive recorded pulses.

3,127,608
OBJECT CAMOUFLAGE METHOD AND APPARATUS
Arnold L. Eldredge, Woodside, Calif., assignor to General Electric Company, a corporation of New York
Filed Aug. 6, 1956, Ser. No. 602,400
10 Claims. (Cl. 343—18)



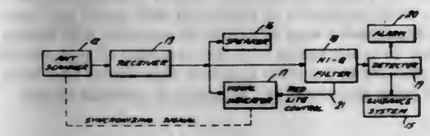
10. The method of obscuring an object from the incident electromagnetic waves of a radar system which comprises producing a cloud of ionized gas around a substantial portion of the object having a density of ionization which diminishes in density as a function of distance from said object whereby incident electromagnetic waves are substantially entirely attenuated and refracted.

3,127,609
ANTENNA HAVING RING WAVEGUIDE TWO WAVELENGTHS LONG FOR FEEDING TWO SLOTS IN DIAMETRICALLY OPPOSED PORTIONS THEREOF
Frederick L. Wentworth, Baldwin, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Mar. 30, 1960, Ser. No. 18,791
5 Claims. (Cl. 343—708)



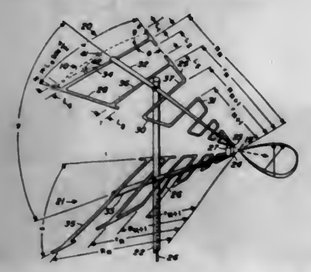
1. A microwave antenna of the type having a directional radiation pattern at a selected operating frequency for use on airborne vehicles comprising a hollow waveguide structure having a closed ring configuration with a selected axis of rotation and with a mean circumference substantially equal to twice the wavelength at said operating frequency, said ring configuration having a substantially uniform cross section with at least first and second substantially parallel sides, said first and second sides being a part of the inner and outer surface of revolution of said ring configuration, respectively, antenna feed means disposed within a first selected segment of said structure and adapted for electromagnetic wave energy conversion, said antenna feed means including an outer conductor electrically connected to said inner surface and an inner conductor electrically connected to said outer surface, said structure including first and second wave energy ports disposed in said outer surface of revolution in diametrically opposite relation outside said first selected segment of said structure.

3,127,610
COLLISION WARNING SYSTEM
John L. McLucas, Boalsburg, Pa., assignor to HRB-Singer, Inc., State College, Pa., a corporation of Delaware
Filed June 30, 1960, Ser. No. 39,904
2 Claims. (Cl. 343—112)



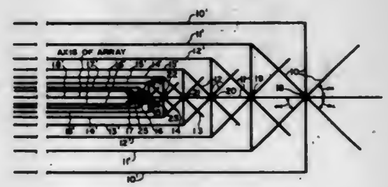
1. A vehicle collision warning system comprising a transmitter for installation in one vehicle to emit signals at a predetermined frequency, a receiver for installation in another vehicle, a directional scanner means connected with the receiver to couple a signal to the input of the receiver, means adapted to rotate said scanner means at a second predetermined frequency, audio means connected with the output of the receiver to provide audible sound responsive to signals received to indicate the presence of said one vehicle, a high-Q filter means connected to the output of the receiver to pass signals of said second predetermined frequency, an audible alarm responsive to the output of the filter means to indicate the bearing of said another vehicle is constant relative to said one vehicle and that collision is impending, an automatic guidance system responsive to the output of the filter means to alter the course of said another vehicle automatically, and a visual indicator responsive to the output of the filter means to show the direction of said signals.

3,127,611
SIDE LOADED LOGARITHMICALLY PERIODIC ANTENNA
Raymond H. Du Hamel, Vito P. Minerva, and Fred R. Ore, Cedar Rapids, Iowa, assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Oct. 18, 1960, Ser. No. 63,299
8 Claims. (Cl. 343—792.5)



1. In an antenna array, a plurality of log periodic antenna elements, each comprising a plurality of radial sections having a common side, each of said radial sections being generally triangular in shape, having a substantially common vertex, and comprising a plurality of teeth extending outwardly from said common side, the radial distance of any given tooth from said common vertex bearing a constant ratio τ to the radial distance of the adjacent tooth next farthest removed from said common vertex, said teeth comprising a plurality of half length transverse conductive elements, end loading elements secured to the outer ends of the longest of said half length transverse conductive elements, said end loading elements comprising conductive members which are short compared with the lengths of said longest half length transverse conductive members and which make good electrical connection with the ends of said longest half length transverse conductive elements, each of said end loading elements constructed and arranged to produce capacitance in parallel with at least a portion of the characteristic impedance of the half length transverse conductive element to which it is connected.

3,127,612
GROUND SCREEN FOR VERTICAL LOG PERIODIC ANTENNA
John Van Nuys Granger, Atherton, Calif., assignor to Granger Associates, Palo Alto, Calif., a corporation of California
Filed Apr. 2, 1962, Ser. No. 184,461
4 Claims. (Cl. 343—792.5)

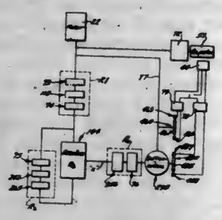


1. An antenna ground screen structure for a directional array of the log periodic type employing a succession of mutually spaced vertical electromagnetic radiating elements extending upwardly from a common ground screen axis and adaped to be excited in progressively varying phase relationship comprising, radially extending mutually angularly spaced conductors projecting from the proximity of the base of successive antenna radiating elements, the group of radial conductors extending from the proximity of the base of each such antenna radiating element being electrically connected together at their common center and additional conductors connected to the ends of certain of said radial conductors and extending substantially parallel to the common ground screen axis of said array and to the direction of propagation of the said array, certain of said radial conductors associated with one antenna element intersecting and being electrically connected to certain of the radial conductors associated with an adjacent antenna element to produce a highly effective ground screen with the use of but a minimum conductor material.

3,127,613
METHOD AND APPARATUS FOR RECORDING A CONTROL PROGRAM
Theodore A. Wetzel, Brookfield, and Thomas A. Stoner, Wauwatosa, Wis., assignors to Kearney & Trecker Corporation, West Allis, Wis., a corporation of Wisconsin
Filed May 18, 1959, Ser. No. 813,958
16 Claims. (Cl. 346—74)

4. In apparatus for recording on magnetic tape a plurality of channels of information defining a pattern of motion; a mechanical resolver of the ball type having at least two take-off components rotatably driven therefrom, said take-off components having their axes of rotation lo-

cated in the same plane but spaced 90° apart; a source of power connected to operate said mechanical resolver; means driven from said source of power and connected to said resolver to establish a relationship of the output of said resolver to said two take-off components; a first differential connected to receive an input motion from

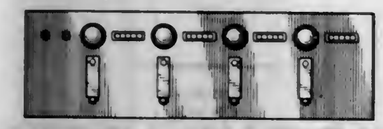


one of said take-off components; a second differential connected to receive an input motion from the other of said take-off components; a reference drive from said source of power and connected to each of said differentials to serve as a reference input motion to each of said differentials; each of said differentials having an output constituting an algebraic summation of the input motions thereto; a first and second pulse generator each operable when activated to produce signals of alternate positive and negative polarity; a plurality of pairs of normally closed switches, said switches of each of said pairs of switches being operably connected to individual pulse generators to activate the associated pulse generator when the individual switches of said pairs of switches are actuated; individual means connected to the output of each of said differentials and operable to actuate the switches of the associated pair of switches to effect operation of the associated pulse generator; a third pulse generator operable when activated to produce signals of positive and negative polarity; a third pair of said pairs of switches operably connected to said third pulse generator to activate it when the individual switches are actuated; means driven from said reference drive and arranged to actuate the switches of said third pair of switches associated with said third pulse generator; a recording head having a plurality of recording sections; means connecting each of said pulse generators to individual sections of said recording head; and a tape transport driven from said source of power in synchronism with the operation of said mechanical resolver to progress magnetic tape across said head as said pulse generators are activated to produce signals.

DESIGNS

MARCH 31, 1964

197,835
BAR LIQUOR DISPENSER
George W. Bayers, Jr., 2314 Champa St., Denver, Colo.
Filed June 14, 1962, Ser. No. 70,546
Term of patent 14 years
(Cl. D2—3)



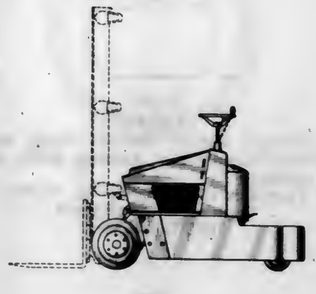
197,836
FORCE CUP
Stanley B. Gross, Philadelphia, Pa., assignor to Hancock Gross, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed Aug. 26, 1960, Ser. No. 61,899
Term of patent 14 years
(Cl. D9—2)



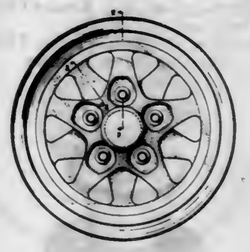
197,837
CAR MAT
Meyer Steinberg, Woodmere, N.Y. (% Ideal Rubber Products Co., 273–299 Van Sinderen Ave., Brooklyn, N.Y.)
Filed July 2, 1962, Ser. No. 70,762
Term of patent 3½ years
(Cl. D9—6)



197,838
LIFT TRUCK
Clifford Brooks Stevens, Milwaukee, Wis., and Clifford C. Bigley, Minneapolis, Minn., assignors, by mesne assignments, to Minneapolis-Moline, Inc., Hopkins, Minn., a corporation of Delaware
Filed Aug. 22, 1962, Ser. No. 71,409
Term of patent 14 years
(Cl. D14—3)



197,839
WHEEL
Ronald M. Logghe, Roseville, Mich., assignor to Motor Wheel Corporation, Lansing, Mich., a corporation of Michigan
Filed Oct. 10, 1963, Ser. No. 76,932
Term of patent 14 years
(Cl. D14—30)



197,840
WHEEL
Dann T. Deaver, Mount Clemens, Mich., assignor to Motor Wheel Corporation, Lansing, Mich., a corporation of Michigan
Filed Oct. 15, 1963, Ser. No. 76,987
Term of patent 14 years
(Cl. D14—30)



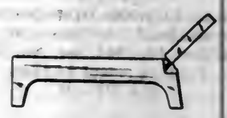
197,841
WHEEL
Dann T. Deaver, Mount Clemens, Mich., assignor to Motor Wheel Corporation, Lansing, Mich., a corporation of Michigan
Filed Oct. 16, 1963, Ser. No. 76,996
Term of patent 14 years
(Cl. D14—30)



197,842
COMBINED STEP AND STOOL
Walter T. Keller, Mission Woods, Kans., and Robert L. Wehner, Kansas City North, Mo., assignors to Cramer Posture Chair Company, Inc., Kansas City, Mo., a corporation of Missouri
Filed Nov. 13, 1962, Ser. No. 72,478
Term of patent 14 years
(Cl. D15—8)



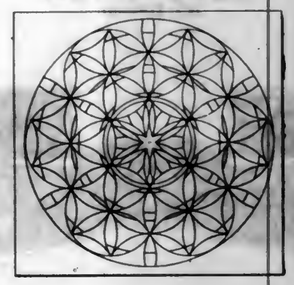
197,843
CHAISE LOUNGE OR SIMILAR ARTICLE
William Shelzi, 50 Chester Road, Lynbrook, N.Y.
Filed July 27, 1962, Ser. No. 71,070
Term of patent 14 years
(Cl. D15—11)



197,844
CHAIR
Diedrich F. Rixmann, St. Louis, Mo., assignor to Contour Chair-Lounge Co., Inc., St. Louis, Mo., a corporation of Missouri
Filed Oct. 19, 1962, Ser. No. 72,197
Term of patent 14 years
(Cl. D15—11)



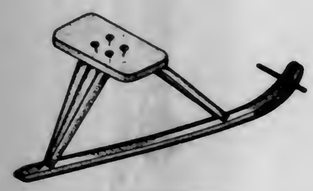
197,845
FLOOR TILE
Eugene E. Parson, 2803 Harding Blvd., Granite City, Ill.
Filed Jan. 24, 1963, Ser. No. 73,300
Term of patent 14 years
(Cl. D18—2)



197,846
RADIATION SHIELDING BLOCK
Leslie William Carter, Harwell, Berkshire, England
Filed Sept. 3, 1963, Ser. No. 76,424
Claims priority, application Great Britain Mar. 13, 1963
Term of patent 14 years
(Cl. D18—2)



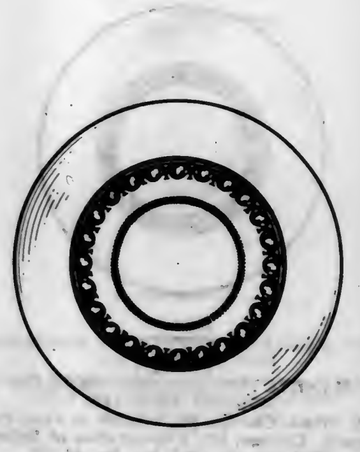
197,847
SLED
Charles J. Krencik, 86 W. Floyd Ave., Dayton, Ohio
Filed Apr. 4, 1962, Ser. No. 69,585
Term of patent 7 years
(Cl. D34—15)



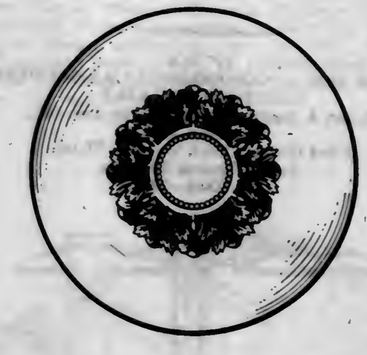
197,848
TOY GUN
Frederick R. Parker and Lambert P. Moreno, Long Beach, Calif.; said Moreno assignor to said Parker
Filed Feb. 18, 1963, Ser. No. 73,595
Term of patent 14 years
(Cl. D34—15)



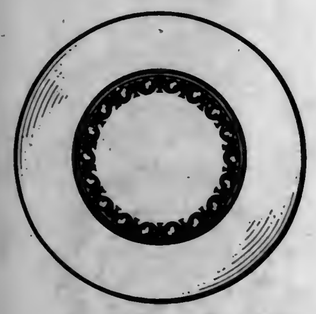
197,849
PLATE OR THE LIKE
Sara Little, New York, N.Y., assignor to Corning Glass Works, Corning, N.Y., a corporation of New York
Filed Nov. 14, 1963, Ser. No. 77,427
Term of patent 14 years
(Cl. D44—15)



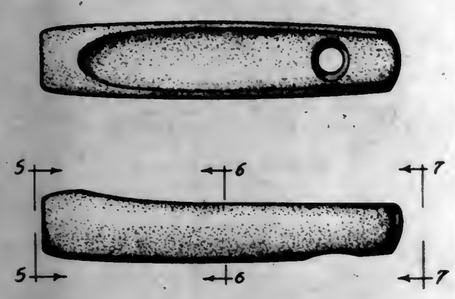
197,850
PLATE OR THE LIKE
Sara Little, New York, N.Y., assignor to Corning Glass Works, Corning, N.Y., a corporation of New York
Filed Nov. 14, 1963, Ser. No. 77,428
Term of patent 14 years
(Cl. D44—15)



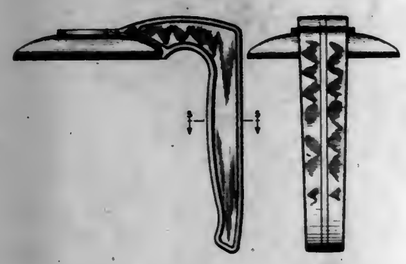
197,851
PLATE OR SIMILAR ARTICLE
Sara Little, New York, N.Y., assignor to Corning Glass Works, Corning, N.Y., a corporation of New York
Filed Nov. 14, 1963, Ser. No. 77,429
Term of patent 14 years
(Cl. D44—15)



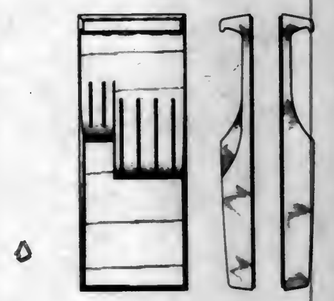
197,852
HANDLE FOR KITCHEN TOOLS OR SIMILAR ARTICLES
James L. Hvale, Chicago, Ill., assignor to Ekco Products Company, Chicago, Ill., a corporation of Delaware
Filed Dec. 28, 1961, Ser. No. 68,107
Term of patent 14 years
(Cl. D44—29)



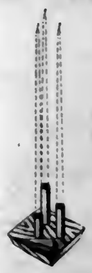
197,853
HANDLE FOR A COMPRESSED GAS SOLDERING TORCH OR THE LIKE
Robert J. Smith, 1267 Plymouth Ave. NE., Massillon, Ohio
Filed Oct. 28, 1963, Ser. No. 77,164
Term of patent 14 years
(Cl. D44—29)



197,854
CUTLERY HOLDER
James L. Hvale, Chicago, and Austin Herbert Munson, Arlington Heights, Ill., assignors to Ekco Products Company, Chicago, Ill., a corporation of Delaware
Filed Dec. 17, 1963, Ser. No. 77,834
Term of patent 14 years
(Cl. D44—29)



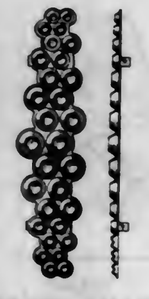
197,855
CANDLE HOLDER
Walter I. Bieger, Minneapolis, Minn., assignor to Arthur Salm Inc., Chicago, Ill., a corporation of Illinois
Filed May 21, 1963, Ser. No. 74,992
Term of patent 14 years
(Cl. D48—2)



197,856
DECORATIVE ELEMENT FOR LIGHTING FIXTURES AND THE LIKE
Irving Harper, Rye, N.Y., assignor to Howard Miller Clock Company, Zeeland, Mich., a corporation of Michigan
Filed Mar. 26, 1962, Ser. No. 69,437
Term of patent 14 years
(Cl. D48—14)



197,857
DECORATIVE ELEMENT FOR LIGHTING FIXTURES AND THE LIKE
Irving Harper, Rye, N.Y., assignor to Howard Miller Clock Company, Zeeland, Mich., a corporation of Michigan
Filed Mar. 26, 1962, Ser. No. 69,438
Term of patent 14 years
(Cl. D48—14)



197,858
DECORATIVE ELEMENT FOR LIGHTING FIXTURES AND THE LIKE
Irving Harper, Rye, N.Y., assignor to Howard Miller Clock Company, Zeeland, Mich., a corporation of Michigan
Filed Mar. 26, 1962, Ser. No. 69,439
Term of patent 14 years
(Cl. D48—14)



197,859
DECORATIVE ELEMENT FOR LIGHTING FIXTURES AND THE LIKE
Irving Harper, Rye, N.Y., assignor to Howard Miller Clock Company, Zeeland, Mich., a corporation of Michigan
Filed Mar. 26, 1962, Ser. No. 69,444
Term of patent 14 years
(Cl. D48—14)



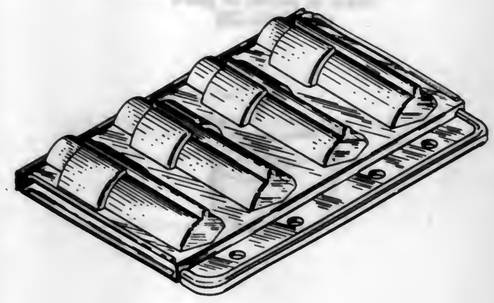
197,860
COMPRESSED AIR SUPPLY CART OR SIMILAR ARTICLE
Joseph A. Winger, Greenwich, Conn., assignor to Texaco Inc., New York, N.Y., a corporation of Delaware
Filed May 22, 1962, Ser. No. 70,235
Term of patent 14 years
(Cl. D52—2)



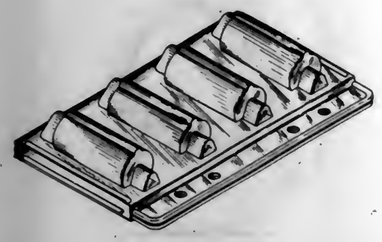
197,861
COMBINED VEGETABLE SHREDDER AND JUICE EXTRACTOR
Nicholas H. Knuth, 1720 N. California Ave., Chicago, Ill.
Filed Sept. 7, 1961, Ser. No. 66,630
Term of patent 14 years
(Cl. D55—1)



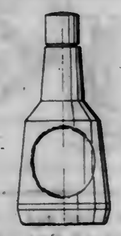
197,862
DISPLAY PACKAGE
Frederick J. Wills, Jr., Cohasset, and Robert J. Chamberlain, Natick, Mass., assignors to Raytheon Company, Waltham, Mass., a corporation of Delaware
Original design application Nov. 20, 1961, Ser. No. 67,663, now Design Patent No. 196,988, dated Nov. 26, 1963. Divided and this application Aug. 12, 1963, Ser. No. 76,308
Term of patent 14 years
(Cl. D58—2)



197,863
DISPLAY PACKAGE
Frederick J. Wills, Jr., Cohasset, and Robert J. Chamberlain, Natick, Mass., assignors to Raytheon Company, Waltham, Mass., a corporation of Delaware
Original design application Nov. 20, 1961, Ser. No. 67,663, now Design Patent No. 196,988, dated Nov. 26, 1963. Divided and this application Aug. 12, 1963, Ser. No. 76,309
Term of patent 14 years
(Cl. D58—2)



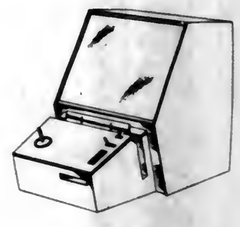
197,864
COMBINED BOTTLE AND CLOSURE
Paul S. Hartland, Knottingley, England, assignor to R. P. Brindley & Co., Limited, a British company
Filed Aug. 30, 1963, Ser. No. 76,414
Claims priority, application Great Britain Mar. 13, 1963
Term of patent 14 years
(Cl. D58—8)



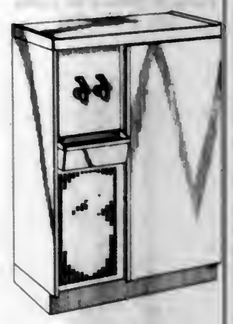
197,865
DISPENSING CAP FOR PRESSURIZED CONTAINERS
Philip H. Sagarin, Bridgeport, Conn., assignor to VCA Incorporated, Bridgeport, Conn., a corporation of Connecticut
Filed July 3, 1961, Ser. No. 65,799
Term of patent 14 years
(Cl. D58—26)



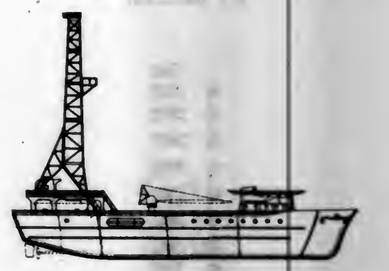
197,866
MICROFILM VIEWER
Jack K. Hockenberry, Vestal, Willard F. Northrup, Endicott, and Myron F. Shlatz, Endwell, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Apr. 1, 1963, Ser. No. 74,238
Term of patent 14 years
(Cl. D61—1)



197,867
COMBINATION WATER COOLER AND REFRIGERATOR OR SIMILAR ARTICLE
William J. Cook, Trumbull, Conn., assignor to General Electric Company, a corporation of New York
Filed Oct. 23, 1962, Ser. No. 72,221
Term of patent 3½ years
(Cl. D67—4)



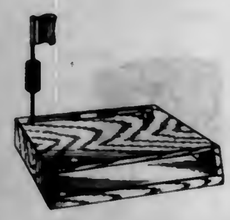
197,868
CATAMARAN OFFSHORE DRILLING VESSEL
Charles E. Thornton, 2121 E. 26th Place, Tulsa, Okla., and George L. Temple, 2217 Troon Road, Houston, Tex.
Filed July 10, 1963, Ser. No. 75,730
Term of patent 14 years
(Cl. D71—1)



197,869
BOAT OR SIMILAR ARTICLE
Randolph S. Rse, 11740 Sunset Blvd., Apt. D, Los Angeles, Calif.
Filed July 15, 1963, Ser. No. 75,790
Term of patent 14 years
(Cl. D71—1)



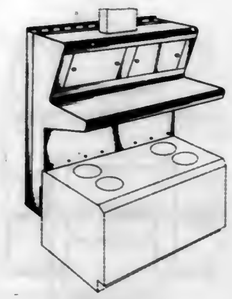
197,870
MEMO PAD HOLDER
Leo F. Wildgen, Minneapolis, Minn., assignor to Arthur Salm Inc., Chicago, Ill., a corporation of Illinois
Filed May 23, 1963, Ser. No. 75,035
Term of patent 14 years
(Cl. D74—1)



197,871
RACK FOR BOOKS OR THE LIKE
Donald W. Crisp, Rte. 2, Maryville, Tenn.
Filed Oct. 19, 1962, Ser. No. 72,195
Term of patent 14 years
(Cl. D80—10)



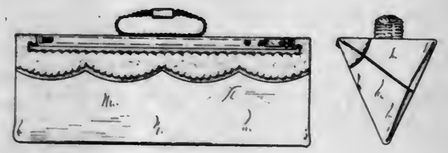
197,872
VENTILATOR
Daniel S. Ekern, 1253 S. Truro Ave., Hawthorne, Calif.
Filed Jan. 22, 1963, Ser. No. 73,272
Term of patent 14 years
(Cl. D81—25)



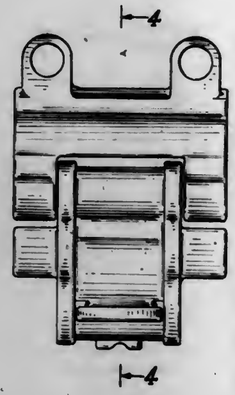
197,873
MOBILE ROOM STERILIZER
William Few and George W. Newton, Durham, N.C., assignors to Newton Instrument Company, Durham, N.C., a corporation of North Carolina
Filed Apr. 2, 1962, Ser. No. 69,517
Term of patent 7 years
(Cl. D83—1)



197,874
COMBINED NURSING BOTTLE CONTAINER AND SUPPORT
Morris J. Berry, % Fashioncraft-Excello, 87 34th St., Brooklyn, N.Y.
Filed Feb. 1, 1963, Ser. No. 73,399
Term of patent 14 years
(Cl. D83—8)



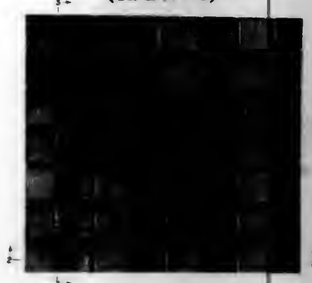
197,875
HANDBAG CLOSURE CLASP
Etienne Aigner, 217 Haven Ave., New York, N.Y.
Filed Oct. 16, 1963, Ser. No. 76,993
Term of patent 14 years
(Cl. D87—2)



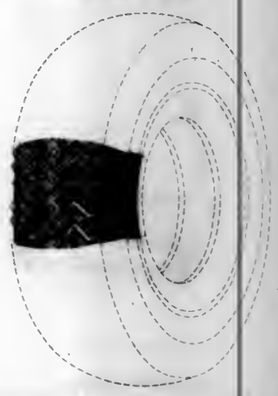
197,876
HANDBAG CLOSURE CLASP
Etienne Aigner, 217 Haven Ave., New York, N.Y.
Filed Oct. 16, 1963, Ser. No. 76,998
Term of patent 14 years
(Cl. D87—2)



197,877
PLASTIC SHEET MATERIAL
John R. Ellefson, Kennett Square, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Dec. 4, 1963, Ser. No. 77,655
Term of patent 14 years
(Cl. D87—3)



197,878
TIRE
James F. Newman, St. Clair Shores, Mich., John C. Bounker, Tophane, Istanbul, Turkey, and John W. Taylor, Grosse Pointe Farms, Mich., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed Nov. 27, 1963, Ser. No. 77,581
Term of patent 14 years
(Cl. D90—20)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 31ST DAY OF MARCH, 1964

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Allpatent Aktiengesellschaft: *See*—
Ruegg, Hans, Keller, and Klopfer. Re. 25,543.
Bell Telephone Laboratories, Inc.: *See*—
Saal, Frederick, and Welber. Re. 25,546.
Elder, Bruce: *See*—
White, John L. Re. 25,545.
Imperial Chemical Industries Ltd.: *See*—
Suckling, Charles W., and Raventos. Re. 25,544.
Jacwill Mfrs.: *See*—
White, John L. Re. 25,545.
Keller, Richard: *See*—
Ruegg, Hans, Keller, and Klopfer. Re. 25,543.
Klopfer, Albert: *See*—
Ruegg, Hans, Keller, and Klopfer. Re. 25,543.
Raventos, James: *See*—
Suckling, Charles W., and Raventos. Re. 25,544.

Saal, Frederick, and I. Welber, to Bell Telephone Laboratories, Inc. Time assignment speech interpolation system. Re. 25,546, 3–31–64, Cl. 179—15.

Suckling, Charles W., and J. Raventos, to Imperial Chemical Industries Ltd. 1,1,1-Trifluoro-2-bromo-2-chloroethane and a process of making it. Re. 25,544, 3–31–64, Cl. 167—52.

Ruegg, Hans, R. Keller, and A. Klopfer, to Allpatent Aktiengellschaft. Flexible coupling member. Re. 25,543, 3–31–64, Cl. 64—15.

Welber, Irwin: *See*—
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White, John L., 60% to Jacwill Mfrs., a partnership and 40% to Bruce Elder. Casket interior structure. Re. 25,545, 3–31–64, Cl. 27—19.

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Aigner, Etienne. Handbag closure clasp. 197,876, 3–31–64, Cl. D87—2.
Bayers, George W., Jr. Bar liquid dispenser. 197,835, 3–31–64, Cl. D2—3.
Berry, Morris J. Combined nursing bottle container and support. 197,874, 3–31–64, Cl. D83—8.
Bieger, Walter I., to Arthur Salm, Inc. Candle holder. 197,855, 3–31–64, Cl. D48—2.
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Bounker, John C.: *See*—
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Brindley, R.P. & Co., Ltd.: *See*—
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Carter, Leslie W. Radiation shielding block. 197,846, 3–31–64, Cl. D18—2.
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Keller, Walter T., and Wehner. 197,842.
Crisp, Donald W. Rack for books or the like. 197,871, 3–31–64, Cl. D80—10.
Deaver, Dann T., to Motor Wheel Corp. Wheel. 197,840, 3–31–64, Cl. D14—30.
Deaver, Dann T. to Motor Wheel Corp. Wheel. 197,841, 3–31–64, Cl. D14—30.
Du Pont de Nemours, E. I., and Co.: *See*—
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Hvale, James L. 197,852.
Hvale, James L., and Munson. 197,854.
Ekern, Daniel S. Ventilator. 197,872, 3–31–64, Cl. D81—25.
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Few, William, and G. W. Newton, to Newton Instrument Co. Mobile room steriliser. 197,873, 3–31–64, Cl. D83—1.
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Harper, Irving, to Howard Miller Clock Co. Decorative element for lighting fixtures and the like. 197,857, 3–31–64, Cl. D48—14.
Harper, Irving, to Howard Miller Clock Co. Decorative element for lighting fixtures and the like. 197,858, 3–31–64, Cl. D48—14.
Harper, Irving, to Howard Miller Clock Co. Decorative element for lighting fixtures and the like. 197,859, 3–31–64, Cl. D48—14.
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Krencik, Charles J. Sled. 197,847, 3–31–64, Cl. D34—15.
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Little, Sara, to Corning Glass Works. Plate or the like. 197,850, 3–31–64, Cl. D44—15.
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Temple, George L.: *See*—
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Alexander, David O., 25% to S. B. Wiczer. Underwater container assembly. 3,126,559, 3–31–64, Cl. 9—10.
Alexander, Warren A., and W. J. Stark, to Jersey Production Research Co. Migrator for geophysical exploration. 3,127,585, 3–31–64, Cl. 340—15.5.
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Allander, Claes, to Aktiebolaget Svenska Flaktfabriken. Method for threading the leading end of a weblike material and a device for carrying out the method. 3,127,079, 3–31–64, Cl. 226—92.
Allander, Claes, and J.-M. Eneroth, to Aktiebolaget Svenska Flaktfabriken. Web turning device. 3,127,080, 3–31–64, Cl. 226—97.
Allard, Pierre J. M. T. Shovelling and loading machine. 3,127,038, 3–31–64, Cl. 214—90.
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Ames, W. R., Co.: *See*—
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Bonrud, Leon O., to Minnesota Mining & Mfg. Co. Reproduction system. 3,127,333, 3–31–64, Cl. 204—18.
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Cruse, Lee H., to Foster Mfg. Co., Inc. Valved hose couplings. 3,127,149, 3–31–64, Cl. 251—149.9.
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Cumbers, Michael B., and E. Ribchester, to Hazeltine Research, Inc. Broad-band electric amplifier with plural outputs at different potential levels. 3,127,472, 3–31–64, Cl. 178—5.4.
Cunningham, Joseph E., and J. L. Smith. Cotton harvester. 3,127,036, 3–31–64, Cl. 214—83.1.
Curtin, Leo P., deceased; L. V. Curtin, executor. Process for cleaning textile fabrics. 3,126,555, 3–31–64, Cl. 8—149.1.
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Curtin, Leo P. 3,126,555.
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Marx, Joseph P., and Daubner. 3,126,934.
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David, Edward E., Jr., M. V. Mathews, and J. E. Miller, to Bell Telephone Laboratories, Inc. Automatic formant locator. 3,127,477, 3–31–64, Cl. 179—15.55
Davis, Francis Earl, Jr. Alternate annular isothermal reactor. 3,127,247, 3–31–64, Cl. 23—288.
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De Groote, Melvin, and K.-T. Shen, to Petrolite Corp. Drilling fluids containing methylol phenol derivatives. 3,127,344, 3–31–64, Cl. 252—8.5.
De Groote, Melvin, and K.-T. Shen, to Petrolite Corp. Treatment of oil wells and oil well equipment employing methylol phenol derivatives. 3.127,345, 3–31–64, Cl. 252—8.55.
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De Lancey, Warren H., to Hardel Laboratories. Air control for oil burners. 3,126,939, 3–31–64, Cl. 168—1.5.
De Laney, John P. Pallet and form for making same. 3,126,843, 3–31–64, Cl. 108—52.
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DeMarre, John M. Fastener. 3,126,601, 3–31–64, Cl. 24—87.
Deming, John E., Sr. Surgical instrument. 3,126,890, 3–31–64, Cl. 128—361.
De Neergaard, Leif E., deceased, to F. W. Olmstead, H. W. Trechsel, D. A. Gerard, J. J. Kojis, N. S. Parker, M. S. Bradway, and said de Neergaard, trustees; The Northern Trust Co., executor. Static pickup head. 3,127,592, 3–31–64, Cl. 340—174.1.
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Deters, Elmer M., to Red Jacket Manufacturing Co. Motor-pump unit. 3,126,831, 3–31–64, Cl. 103—87.

Dettinger, Willi, to Pumpenfabrik Urach. Hydraulically operated unit, particularly for elevating platforms and lifts. 3,126,706, 3–31–64, Cl. 60—52.

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Dickens, George C., to Otis Engineering Corp. Well tools. 3,126,908, 3–31–64, Cl. 137—460.

Dickey, Frank R., Jr., to General Electric Co. Method and apparatus for recording of radar signals. 3,127,607, 3–31–64, Cl. 343—17.1.

Diemer, Gesinus, to North American Philips Co., Inc. Electroluminescent element with an enamel coated base. 3,127,534, 3–31–64, Cl. 313—108.

Dillard, Doyle M., and R. A. Berntsen. Sliding door lock. 3,126,727, 3–31–64, Cl. 70—97.

Dilliner, Herman L. Pump. 3,126,830, 3–31–64, Cl. 103—68.

Di Pinto, Joseph G., to E. I. du Pont de Nemours and Co. Method of molding a polyurethane foam in a mold having an improved release agent. 3,127,457, 3–31–64, Cl. 204—54.

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Dixon, Joseph, Crucible Co., The: *See*—
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Dohrn, Walter, to Schloemann Aktiengesellschaft. Two-column hydraulic extrusion presses. 3,127,013, 3–31–64, Cl. 207—1.

Dohrn, Walter, and W. Jarausch, to Schloemann Aktiengesellschaft. Horizontal metal-tube and extrusion presses. 3,127,014, 3–31–64, Cl. 207—1.

Dombre, Pierre, ½ to P. Saffin. Mixing tap. 3,126,914, 3–31–64, Cl. 137—625.

Dorion, George H., and K. O. Loeffler, to American Cyanamid Co. Process for preparing aci-aromatic nitro compounds. 3,127,335, 3–31–64, Cl. 204—158.

Doty, William E. N., and M. R. Lee, to Continental Oil Co. Method of determining time-phase coincidence between signals. 3,127,508, 3–31–64, Cl. 235—181.

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Dubnick, Arnold J. Tape dispenser. 3,127,078, 3–31–64, Cl. 225—33.

Dubuit, Louis G. Movement transmission system for silk-screen printing machines and the like. 3,126,824, 3–31–64, Cl. 101—124.

Ducey, James A., to Ogden Corp. Diverter valve for a water closet. 3,126,916, 3–31–64, Cl. 137—625.47.

Du Feu, Alan N., to S. Smith & Sons (England) Ltd. Indicating instruments. 3,126,863, 3–31–64, Cl. 116—129.

Dugay, Pierre, to D.B.A. Driving devices with shear section. 3,126,723, 3–31–64, Cl. 64—28.

Du Hamel, Raymond H., V. P. Minerva, and F. R. Ore, to Collins Radio Co. Side loaded logarithmically periodic antenna. 3,127,611, 3–31–64, Cl. 343—792.5.

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Early, Harold C., to Meredith Publishing Co. Apparatus for punching or embossing traveling webs by use of an electric spark. 3,126,778, 3–31–64, Cl. 83—177.

Early, Richard L., to Owens Illinois Glass Co. Measuring and controlling take-up ratio of paper in production of corrugated board. 3,127,292, 3–31–64, Cl. 156—64.

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Eaton, Burton E., to Midwesco, Inc. Slip ring spacer for insulated conduit systems. 3,126,918, 3–31–64, Cl. 138—113.

Ebetino, Frank F., to The Norwich Pharmacal Co. N¹-[(5-nitro-2-furyl)alkylidene]-N²-substituted N¹-(N-substituted carbamoylalkyl)hydrazines. 3,127,420, 3–31–64, Cl. 260—347.3.

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Ehmann, Werner, and K.-H. Kabrs, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning. Process for the manufacture of vinyl ester polymers in the presence of alkyl boron/boroxole co-catalyst. 3,127,381, 3–31–64, Cl. 260—85.7.

Eickhoff, Louis. Shaft positioning device. 3,126,751, 3–31–64, Cl. 74—129.

Eickhoff, Louis. Coin actuated timing control device. 3,126,996, 3–31–64 Cl. 194—84.

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Eller, Harold, to The Pierce Governor Co., Inc. Automatic choke for small engines. 3,126,878, 3–31–64, Cl. 123—119.

Elsan, James R., to Raytheon Co. Adjustable spindles. 3,127,187, 3–31–64, Cl. 279—83.

Ek, Folke, J. S. Lindenhall, and A. Oxaal, to Telefonaktiebolaget LM Ericcson. Automatic telephone system. 3,127,480, 3–31–64, Cl. 179—22.

Eklund, Knut, to Allmänna Svenska Elektriska Aktiebolaget. Wheels for vehicles running on rail tracks. 3,127,212. 3–31–64, Cl. 295—21.

Elders, Gerald W., to E. & E. Mine Service Co. Resilient locking mechanism for a cutting device. 3,127,153, 3–31–64, Cl. 262—33.

Eldredge, Arnold L., to General Electric Co. Object camouflage method and apparatus. 3,127,608, 3–31–64, Cl. 343—18.

Elkin, Eugene M., and P. R. Tremblay, to Canadian Copper Refiners Ltd. Process for separately recovering selenium and tellurium. 3,127,244, 3–31–64, Cl. 23—208.

Elliott, Albert M., to Eastern Stainless Steel Corp. Automatic sheet polishing machine. 3,126,564, 3–31–64, Cl. 15—102.

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Elliston, Edward E. Iron support. 3,127,141, 3–31–64, Cl. 248—117.6.

Elston, Alvin W., and G. A. Vincent, to Minneapolis-Honeywell Regulator Co. Control apparatus. 3,127,527, 3–31–64, Cl. 310—8.6.

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Endres, Herbert A., and W. W. Burr, to The Goodyear Tire & Rubber Co. Method and apparatus for adding latex to hot bitumen. 3,127,367, 3–31–64, Cl. 260—28.5.

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Epeco, Inc.: *See*—
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Karah, Herbert. 3,126,886.

Epstein, Saul. Thermocouple reference junction. 3,126,743, 3–31–64, Cl. 73—359.

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Freedman, Lawrence I., Tone, Erickson, and Oberg. 3,126,627.

Erickson, Ronald O.: *See*—
Swanson, F. V., Knight, Pueschner, Erickson, and Bechman. 3,126,927.

Erni, Enrico, and F. Luscher, to Gesellschaft der Ludw. von Roll'schen Eisenwerke. Device for the removal of smoke from electric furnaces and the like. 3,127,462, 3–31–64, Cl. 13—9.

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Green, Paul R., and Druckenmiller. 3,126,913.
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Fairchild, Edwin B. Lockable container closure. 3,127,064, 3–31–64, Cl. 222—153.

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Fayard, Georges G., to Office National d'Etudes et de Recherches Aeronautiques. Machine control. 3,127,506, 3–31–64, Cl. 235—152.

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Feis, Michael J., and F. C. Philpitt. Coin container device. 3,127,009, 3–31–64, Cl. 206—.8.

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Fink, Walter, to Monsanto Chemical Co. Organic halonitrates and method of preparation. 3,127,437, 3–31–64, Cl. 260—465.7.

Finzi, Arno, and W. Faber, to Brown, Boveri & Cie, Aktiengesellschaft. Inductive heating device for metal blocks. 3,127,496, 3–31–64, Cl. 219—10.71.

Fischer, Herman, to Augsburg-Nurnburg, A.G. Maschinenfabrik. Transfer cylinder for rotary multi-color printing presses. 3,126,826, 3–31–64, Cl. 101—420.

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Guttag, Alvin, to Union Carbide Corp. Polyoxyalkylated phenol-ketone and phenol-aldehyde phosphorus containing resins. 3,127,373, 3-31-64, Cl. 260—50.
Guyer, Reynolds, to Waldorf Paper Products Co. Dispensing carton. 3,127,083, 3-31-64, Cl. 229—11.
Guziak, Leonard F., to Koppers Co., Inc. Process for bonding a terpolymer film to a metal substrate. 3,127,296, 3-31-64, Cl. 156—332.
Gynt, Sven, to Allmanna Svenska Elektriska Aktiebolaget. Solid pole for self-starting synchronous motors. 3,127,532, 3-31-64, Cl. 310—183.
Haberle, Willi, to Dahpe A.G. Apparatus for the manufacture of containers obtained by deep drawing from a thermoplastic synthetic sheeting. 3,126,583, 3-31-64, Cl. 18—19.
HRB-Singer, Inc.: *See*—
Ammerman, Charles R., and Larchuk. 3,127,516.
McLucas, John L. 3,127,610.
Hagedorn, Erwin C.: *See*—
Francel, Josef, and Hagedorn. 3,127,278.
Hailstone, Richard T.: *See*—
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Hainzelin, Jean, L. Le Flem, and J. Robert, to Commissariat a l'Energie Atomique. Cell for vertical channel nuclear reactor. 3,127,320, 3-31-64, Cl. 176—19.
Hajos, Eugene, to Premier Laundry, Inc. Folding and stacking machine for articles of linen. 3,126,657, 3-31-64, Cl. 38—2.
Halaunbrenner, Lazare. Washing and dyeing machine for fabrics operating through fulling. 3,126,726, 3-31-64, Cl. 68—96.
Halcon International, Inc.: *See*—
Gans, Manfred. 3,127,419.
Landau, Ralph, Colton, and Sherwin. 3,127,395.
Hall, Hugh E., Jr., to Texaco Inc. Productivity well logging by activation analysis and fluid withdrawal. 3,127,511, 3-31-64, Cl. 250—43.5.
Hall, Marchand B., to Acme Steel Co. Shear. 3,126,781, 3-31-64, Cl. 83—626.
Hall, William B., and A. H. Torongo, Jr., to The Procter & Gamble Co. Granules dispenser. 3,127,067, 3-31-64, Cl. 222—193.
Haltner, Arthur J.: *See*—
Oliver, Curtis S., and Haltner. 3,127,346.
Ham, George E., W. H. Byler, N. O. Cromwell, and S. J. Manci, to Spencer Chemical Co. Process of producing polyethylene using cyclohexane as a chain modifier. 3,127,387, 3-31-64, Cl. 260—94.9.
Hamilton, Jefferson M., Jr., and L. Spiegler, to E. I. du Pont de Nemours and Co. Process for the preparation of hydrogenation catalyst. 3,127,356, 3-31-64, Cl. 252—447.
Hamilton, Wallace, to Pneumo Dynamics Corp. Hatch cover seal. 3,126,591, 3-31-64, Cl. 20—69.
Hampton, Verner W., T. A. Johnson, N. H. F. Renwick, and G. D. Green, to Pneuways Development Co. (Private) Ltd. Railed transport means or systems. 3,126,839, 3-31-64, Cl. 104—247.
Hancock, John E. Reeling and unreeling apparatus. 3,127,126, 3-31-64, Cl. 242—99.
Hanley, Frank A. Destination selector. 3,126,862, 3-31-64, Cl. 116—119.
Hann, Melvin M., and H. C. Moon, Jr., to Sundstrand Corp. Hydrostatic transmission. 3,126,707, 3-31-64, Cl. 60—53.
Hansen, Norman N., to The Boeing Co. Punch card controlled switch mechanisms. 3,127,484, 3-31-64, Cl. 200—46.
Hanson, Melvin A., to National Lead Co. Traction motor support bearing. 3,127,222, 3-31-64, Cl. 308—86.1.
Hanson, William A.: *See*—
Larson, Gustav A., West, and Hanson. 3,126,639.
Harbison, Dixon T., and J. A. Burns, to Harbison-Fischer Mfg. Co. Hydraulic well pump assemblies. 3,126,829, 3-31-64, Cl. 103—46.
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Harbison, Dixon T., and Burns. 3,126,829.
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Bratton, Richard E. 3,127,459.
Hardel Laboratories: *See*—
De Lancey, Warren H. 3,126,939.
Hardman, James A., to Utah Scientific Research Foundation. Clutch and brake system for track laying vehicle transmissions. 3,126,990, 3-31-64, Cl. 192—4.
Hardman, James A., to Utah Scientific Research Foundation. Control means including pivot control for power selectors of track laying vehicles. 3,126,991, 3-31-64, Cl. 192—4.
Harmon, Leon D., to Bell Telephone Laboratories, Inc. Automatic reading of cursive script. 3,127,588, 3-31-64, Cl. 340—146.3.
Harris, James A. Sprinkler control system. 3,127,108, 3-31-64, Cl. 239—65.
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Henderson, Courtland M., and Harris. 3,127,287.
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Thompson, Wallace M. 3,126,816.
Thompson, Wallace M. 3,126,817.
Harris, Joel T., to Avien, Inc. Voltage parameter monitoring device. 3,127,589, 3-31-64, Cl. 340—149.
Harrison, James M., to Crown Machine and Tool Co., Inc. Method of impregnating synthetic resin particles with lower aliphatic gas to render said particles foamable. 3,127,360, 3-31-64, Cl. 260—2.5.
Hart, Gerald M.: *See*—
Lefevre, Lloyd E., Romesberg, and Hart. 3,126,699.
Hart, John E., H. R. Jaquith, and W. J. Berk, to Taylor Instrument Companies. Cascade control system. 3,126,903. 3-31-64, Cl. 137—84.
Hartley, Edward L.: *See*—
Probert, Rhys P., Martin, and Hartley. 3,126,705.
Harvey, Dennis E. A., and W. J. Pitts, to Associated Electrical Industries Ltd. Transistor frequency converter providing neutralization of degenerating impedance elements. 3,127,562, 3-31-64, Cl. 325—451.
Hathaway, James C., to Collins Radio Co. Wiring techniques for cores. 3,126,622, 3-31-64, Cl. 29—241.
Hathaway, Lewis, to United States of America, Navy. Adjustable bearing channel for echo ranging system. 3,127,584. 3-31-64, Cl. 340—3.
Haucke, Paul A., to Buchanan Electrical Products Corp. Open end connector deforming tool. 3,126,772, 3-31-64, Cl. 81—15.
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Sutcliffe, Peter L. 3,127,134.
Hawkins, Ben K. Automatic book mark. 3,127,195, 3-31-64, Cl. 281—42.

Hawn, Robert D., to Minneapolis-Honeywell Regulator Co. Indicators. 3,126,641, 3–31–64, Cl. 33—172.

Hayward, Charles M., to Epsco, Inc. D.C. to A.C. converter with negative feedback stabilization. 3,127,576, 3–31–64, Cl. 331—113.

Hazelett, Richard. Educational materials and methods. 3,126,647, 3–31–64, Cl. 35—35.

Hazeltine Research, Inc.: *See*—
Crawford, C A. 3,126,549.
Cumbers, Michael B., and Ribchester. 3,127,472.

Head, Albert J., to Phillips Petroleum Co. Method of making fiber-grade polyethylene over a chromium oxide catalyst. 3,127,370, 3–31–64, Cl. 260—45.5.

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Hecht, Helmut, to MAY-Pressenbau Ltd. Mechanical press. 3,126,769, 3–31–64, Cl. 78—39.

Hecht, Irvin. Sheet laminating hand tool. 3,127,299, 3–31–64, Cl. 156—579.

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Heffels, Karl H., to Union Carbide Corp. Production of lower valence state halides and oxyhalides. 3,127,334, 3–31–64, Cl. 204—157.

Heigl, John J., V. F. Massa, and J. A. Wilson, to Esso Research and Engineering Co. Fuel combustion characteristic indicator. 3,126,733, 3–31–64, Cl. 73—35.

Heinemann, Otto, to Polysius G.m.b.H. Heat exchanger and chemical reactor. 3,127,250, 3–31–64, Cl. 34—57.

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Sudrow, Lyle K. V. 3,126,967.
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Heller, Walter E., & Co., Inc.: *See*—
Bonanno, Joseph L., and Crosman. 3,126,668.

Hellmig, Ehrhard, to Agfa Aktiengesellschaft. Tone correction of photographic image. 3,127,268, 3–31–64, Cl. 96—44.

Henderson, Charles B., and J. M. Burton, to Atlantic Research Corp. Process for generating gases. 3,126,701, 3–31–64, Cl. 60—35.4.

Henderson, Charles B., and J. M. Burton, to Atlantic Research Corp. Process for generating gases and apparatus therefor. 3,126,704, 3–31–64, Cl. 60—39.47.

Henderson, Courtland M., and D. M. Harris, to Monsanto Chemical Co. Thermoelectricity. 3,127,286, 3–31–64, Cl. 136—4.

Henderson, Courtland M., and D. M. Harris, to Monsanto Chemical Co. Thermoelectricity. 3,127,287, 3–31–64, Cl. 136—4.

Hennigan, Don C.: *See*—
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Hermanns, Henry M., to Minneapolis-Honeywell Regulator Co. Measuring apparatus. 3,126,744, 3–31–64, Cl. 73—407.

Herriott, Donald R., to Bell Telephone Laboratories, Inc. Aircraft radar system with feedback of range signal to antenna elevation control and display of equirange contours. 3,127,604, 3–31–64, Cl. 343—7.4.

Herrmann, William L. Piano hammer sander. 3,126,677, 3–31–64, Cl. 51—185.

Hersbinger, Lincoln W., to Philco Corp. Process for making phosphor layers. 3,127,282, 3–31–64, Cl. 117—33.5.

Hervé, Marcel. Bidirectional transducers. 3,127,481, 3–31–64, Cl. 179—100.41.

Herzig, Albert M.: *See*—
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Higgins, Harry, to G. T. Stacey. Collapsible trouser creaser. 3,127,074, 3–31–64, Cl. 223—63.

Hilfiker, Hans, to Therma A.G. Set of heat accumulating food warming plates and heating means therefor. 3,126,882, 3–31–64, Cl. 126—246.

Hill, Francis A. Fluid compressors particularly for refrigerating systems. 3,126,833, 3–31–64, Cl. 103—126.

Hill, Fred N., to Union Carbide Corp. Polymerization of epoxides. 3,127,358, 3–31–64, Cl. 260—2.

Hill, Howard M. Dispensing container and closure therefor. 3,127,085, 3–31–64, Cl. 229—17.

Hinckley, Alfred A., to Metal Hydrides Inc. Method for preparing tertiary amine boranes. 3,127,448, 3–31–64, Cl. 260—583.

Hines, William G., and R. L. Addinall, to The Steel Co. of Canada, Ltd. Process for coating zinc and zinc-iron alloy surfaces. 3,127,288, 3–31–64, Cl. 148—6.16.

Hinman, Allen T., to The Hypertension Research Foundation. Blood pressure measuring device. 3,126,885, 3–31–64, Cl. 128—2.05.

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Hintze, Klaus, to VEB Kamera-und Kinowerke Dresden. Film winding apparatus for a photographic camera. 3,126,803, 3–31–64, Cl. 95—31.

Hirschberg, Guenther, and R. H. Ross, to Flinn & Dreffein Engineering Co. Furnace construction. 3,127,154, 3–31–64, Cl. 263—6.

Hirshfeld, Julian J., to Monsanto Chemical Co. Stabilized nap fabric. 3,127,305, 3–31–64, Cl. 161—64.

Hodgeman, Herbert H., and O. F. Beible, to Daniel Orifice Fitting Co. Orifice plate seal ring assembly. 3,126,917, 3–31–64, Cl. 138—44.

Hoff, Wally C. Collating device. 3,127,164, 3–31–64, Cl. 270—58.

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Holland, Theron M. Clamp-type rimmed can holder. 3,126,599, 3–31–64, Cl. 24—81.

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Holly, Harry H.: *See*—
Richards, Louis R., and Holly. 3,126,683.

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Richards, Louis R., and Holly. 3,126,683.

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Bowers, Albert, and Holton. 3,127,426.

Honoré, Etienne, and E. Torcheux, to Compagnie Generale de Telegraphie Sans Fil, and Societe Marocaine de Recherches d'Etudes et de Developpement, "Somarede." Transformer circuits. 3,127,555, 3–31–64, Cl. 323—75.

Hopkins, Thomas R., to Spencer Chemical Co. 4-thiocyanato-2-butynyl carbamates. 3,127,408, 3–31–64, Cl. 260—293.4.

Horsting, Carel W., to Radio Corp. of America. Cathode mount and alloy therefor. 3,127,537, 3–31–64, Cl. 313—346.

Hough, Frank G., Co., The: *See*—
Wilson, Harry R., and Steinhagen. 3,126,762.

Hourdiaux, Jules. Projection screens, in particular for moving pictures. 3,126,788, 3–31–64, Cl. 88—28.9.

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Howard, Ronald W., and R. K. Baritrop, to Elliott Bros. (London) Ltd. Aircraft instrument systems. 3,126,736, 3–31–64, Cl. 73—178.

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Hudson, Milton W., and G. Southwell, to International Resistance Co. Variable resistor. 3,127,583, 3–31–64, Cl. 338—174.

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Hujsak, Karol L.: *See*—
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Huntress, Howard B., to American Brake Shoe Co. Friction couples. 3,126,983, 3–31–64, Cl. 188—78.

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Hutt, Philip, to General Electric Co. Multiple pushbutton switch with sliders operating switch arms. 3,127,482, 3–31–64, Cl. 200—5.

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Schaefer, Johannes. 3,127,543.

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International Business Machines Corp.: *See*—
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International Harvester Co.: *See*—
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Jaccard, Rene-Philippe, to S. J. Kaufman. Time meter. 3,126,700, 3–31–64, Cl. 58—21.13.

Jackson, Donald R. P., to Molins Machine Co. Ltd. Device for feeding articles from the bottom of a stack. 3,127,056, 3–31–64, Cl. 221—262.

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Jakob, Franz, and F. Ostertag, to Agfa Aktiengesellschaft. Adjustable automatic exposure control structure for cameras. 3,126,802, 3–31–64, Cl. 95—10.

Jallen, Gale A., to Sperry Rand Corp. Bistable holding circuit having an AND circuit coupling. 3,127,523, 3–31–64, Cl. 307—88.5.

Janapol, Melvin N., to Wortso Corp. Prescription bedding having individually adjustable spring units. 3,126,554, 3–31–64, Cl. 5—243.

Janszen, Arthur A., to KLH Research and Development Corp. Apparatus for the measurement and control of the modulus of elasticity in filar structures. 3,126,579, 3–31–64, Cl. 18—8.

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Monti, Angelo. 3,126,590.

Jaruzelski, John J., and M. H. Wilt., to United States Steel Corp. Methylnaphthalene derivatives. 3,127,447, 3–31–64, Cl. 260—570.9.

Jasper, Karl-Theodor. Compound supporting structure for underground roads in mines. 3,126,708, 3–31–64, Cl. 61—45.

Jeffries, Joseph L., ½ to J. S. Burden. Safety device for fluid conduits extending between vehicles. 3,127,194, 3–31–64, Cl. 280—421.

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Jennings, William L., and R. E. Baker, to McGraw-Edison Co. Rotary tool. 3,126,793, 3–31–64, Cl. 90—62.

Jenny, Rudolf, to Schweiter AG. Maschinenfabrik. Device for opening yarn hanks. 3,126,607, 3–31–64, Cl. 28—58.

Jensen, James L., to Minneapolis-Honeywell Regulator Co. Low frequency magnetic core stepping device. 3,127,521, 3–31–64, Cl. 307—88.

Jensen, Raymond W., to The Garrett Corp. Cabin temperature control system. 3,126,947, 3–31–64, Cl. 165—26.

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Johannesen, Bjarne. Shrimp head and vein removing tool. 3,126,576, 3–31–64, Cl. 17—7.

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Griffiths, Edward G., and Johnson. 3,127,205.

Johnson, Rayner S., to E. I. du Pont de Nemours and Co. Method for the control of weeds. 3,127,263, 3–31–64, Cl. 71—2.6.

Johnson, Robert A., and P. T. Anderson, to Food Techniques, Inc. Peroxide treatment in alkaline and enzymic hydrolysis of seed press-cake. 3,127,388, 3–31–64, Cl. 260—123.5.

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Johnston, William D. Oxygen dispensing device. 3,127,058, 3–31–64, Cl. 2.2—5.

Jones, Earle D.: *See*—
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Jones, Loyd W., to Pan American Petroleum Corp. Waterflooding method. 3,126,952, 3–31–64, Cl. 166—9.

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Kabell, Louis J., and E. D. Jones, to A. B. Dick Co. Method of making a monoscope tube target. 3,126,610, 3–31–64, Cl. 29—25.17.

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Karlsson, Elof K., and E. M. Van Buskirk, to International Harvester Co. Dust dispersal apparatus. 3,126,810, 3–31–64, Cl. 98—36.

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Kramer, Lawrence I. Sheet feeding apparatus. 3,127,168, 3–31–64, Cl. 271—29.

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Mantovanello, Giovanni, and S. Bruni, to Montecatini Societa Generale per l'Industria Mineraria e Chimica. Suspension of anodic casings in cells for the electrolytic production of aluminum. 3,127,338, 3–31–64, Cl. 204—225.

Mappes, William L., to Duplan Corp. Stop and rear lamp assembly. 3,127,117, 3–31–64, Cl. 240—8.3.

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Maremont Corp.: *See*—
Broadwell, Robert J. 3,127,158.

Markant, Henry P., to The Babcock & Wilcox Co. Conversion of potassium sulphate to potassium carbonate. 3,127,237, 3–31–64, Cl. 23—63.

Marker, Kenneth D., and R. C. Muhl, to National Automatic Tool Co. Vertical honing machine. 3,126,673, 3–31–64, Cl. 51—34.

Market Forge Co.: *See*—
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Marquis, Edgar E. and J. A. Electrical connector device. 3,127,230, 3–31–64, Cl. 339—118.

Marquis, James A.: *See*—
Marquis, Edgar E. and J. A. 3,127,230.

Marriott, Sherman G. Self-adjusting weights for toasting machine. 3,126,813, 3–31–64, Cl. 99—349.

Marsilio, Alphonso W.: *See*—
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Martin, Donald W., J. S. Warwick, and R. F. Ubelhoer, to Sperry Rand Corp. Obstacle type switch detent. 3,126,758, 3–31–64, Cl. 74—565.

Martin, Fred: *See*—
Parker, Frank A., and Martin. 3,126,725.

Martin, George E.: *See*—
Pannier, Ralph A., and Martin. 3,126,822.

Martin, Peter: *See*—
Probert, Rhys P., Martin, and Hartley. 3,126,705.

Marvel Umbrella Frames, Inc.: *See*—
Norkin, Morris. 3,126,901.

Marx, Joseph P. Mufflers. 3,126,979, 3–31–64, Cl. 181—55.

Marx, Joseph P., and W. L. Daubner; said Daubner assor. to said Marx. Nut locking structures. 3,126,934, 3–31–64, Cl. 151—34.

Mascioli, Rocco L., to Air Products and Chemicals, Inc. Triethylenediamine addition product with glycolborate. 3,127,404, 3–31–64, Cl. 260—268.

Maskinfabriks Aktiebolaget Norrbacken: *See*—
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Mason, Hollis N., and T. J. Lunsford. Traveller's canine canteen. 3,126,933, 3–31–64, Cl. 150—48.

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Heigl, John J., Massa, and Wilson. 3,126,733.

Mathews, Max V.: *See*—
David, Edward E., Jr., Mathews, and Miller. 3,127,477.

Matlack, Albert S., to Hercules Powder Co. Stabilization of polyolefins. 3,127,372, 3–31–64, Cl. 260—45.75.

Matthew, Morton P. Selective bird feeder. 3,126,870, 3–31–64, Cl. 119—51.

Matthews, Russell R., and J. L. Hubbard, to Nohasco Industries, Inc. One-shot modified Axminster weave and method of making same. 3,126,919, 3–31–64, Cl. 139—7.

Maves, Walter F., to Nunn-Bush Shoe Co. Apparatus for and method of applying ornamental stitching to shoes or the like. 3,126,853, 3–31–64, Cl. 112—421.

May, Patrick L., and R. E. Beyer, to International Harvester Co. Fabricated baler needle. 3,126,815, 3–31–64, Cl. 100—24.

MAY-Pressenbau Ltd.: *See*—
Hecht, Helmut. 3,126,769.

Mayerand, Russell G., Jr.: *See*—
Lary, Edmund C., and Mayerand. 3,127,528.

Mayers, Dale M., 50% to J. Dulgeroff. Disposable garbage bag and container. 3,127,052, 3–31–64, Cl. 220—65.

Mazur, Paul M. Silage feeding. 3,126,872, 3–31–64, Cl. 119—52.

McAdams, Arthur C.: *See*—
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McCammon, Robert F., and J. G. Tomkinson, to Minneapolis-Honeywell Regulator Co. Photographic flash tube and reflector. 3,127,112, 3–31–64, Cl. 240—1.3.

McCarthy, Earl D., and K. E. McVey. Articulating paper apparatus. 3,126,631, 3–31–64, Cl. 32—19.

McCoy, Thomas A., to Carando Machine Works. Drum body elevating platform unit. 3,126,938, 3–31–64, Cl. 153—48.

McCullough, Ray A., to Blaw-Knox Co. Adjustable chute. 3,126,992, 3–31–64, Cl. 193—16.

McDaniels, John D., Jr., to The Babcock & Wilcox Co. Pressure vessel construction. 3,127,050, 3–31–64, Cl. 220—48.

McDonald, Stewart: *See*—
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McEwan, James. Lawn mower sharpener. 3,126,675, 3–31–64, Cl. 51—48.

McGee, Paul J., to Zenith Radio Corp. Hearing aid apparatus. 3,126,977, 3–31–64, Cl. 181—23.

McGill, Charles H., to Monsanto Chemical Co. Yarn creel. 3,126,695, 3–31–64, Cl. 57—18.

McGinty, William K., and D. L. Stamm, to Thomas Industries Inc. Recessed fixture mounting means. 3,127,145, 3–31–64, Cl. 248—216.

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Date, Kazuo H. 3,127,492.
Gorman, Edmond B. 3,127,491.
Jennings, William L., and Baker. 3,126,793.
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McIntosh, Roland D. Rotary card holder. 3,126,864, 3–31–64, Cl. 116—133.

McKinnell, John C., to California Research Corp. Underground initiated miscible bank flooding. 3,126,957, 3–31–64, Cl. 166—11.

McLane, Charles K., to Union Carbide Corp. Magnetically-stabilized low pressure arc apparatus and method of operation. 3,127,536, 3–31–64, Cl. 313—162.

McLeod, Willard W., Jr., to Raytheon Co. Locked oscillator systems. 3,127,572, 3–31–64, Cl. 331—35.

McLucas, John L., to HRB-Singer, Inc. Collision warning system. 3,127,610, 3–31–64, Cl. 343—112.

McMasters, Robert A., to Southeastern Metals Co. Carrier for coils of strand material. 3,127,018, 3–31–64, Cl. 211—59.

McMillan, Albert L. Tool for positioning a stud for nailing on a sill. 3,126,928, 3–31–64, Cl. 145—1.

McNeil, James S., Jr.: *See*—
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McPherson, Alexander L., H. G. Bailey, and A. D. Stevens, to Gustin-Bacon Mfg. Co. Mandrel stripper for mat winding machine. 3,127,024, 3–31–64, Cl. 214—1.

McReynolds, Andrew W.: *See*—
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McReynolds, Oliver B., Jr. Bridge plugs. 3,126,827, 3–31–64, Cl. 102—30.

McVey, Kenneth E.: *See*—
McCarthy, Earl D., and McVey. 3,126,631.

Mead Johnson & Co.: *See*—
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Wu, Yao H., Feldkamp, and Gould. 3,127,415.

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Meece, John P.: *See*—
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Mehlhorn, Helmut, to North American Philips Co., Inc. Television receiver provided with an arrangement for obtaining a control quantity corresponding to the degree of detuning. 3,127,473, 3–31–64, Cl. 178—5.8.

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Memmer, James A., to LeTourneau-Westinghouse Co. Power transmission device. 3,126,988, 3–31–64, Cl. 192—3.5.

Mencarelli, Enzo. Rotary pump. 3,126,832, 3–31–64, Cl. 103—96.

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Early, Harold C. 3,126,778.

Merlin & Gerin, S.A., Etablissements: *See*—
Latour, Andre. 3,127,490.

Merrill, Gerald L., to Smith-Morris Corp. Process and means for hot metal forming. 3,126,623, 3–31–64, Cl. 29—421.

Merryweather, John P., to Canadian Safety Fuse Co. Ltd. Generation of ice-nucleating crystals. 3,127,107, 3–31–64, Cl. 239—2.

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Metal Hydrides Inc.: *See*—
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Meyer, Harold F., to Miles Laboratories, Inc. Means and method of making multi-test indicator. 3,127,281, 3–31–64, Cl. 117—4.

Meyer, Rudolf X., to The Aerospace Corp. Hypervelocity propulsion arrangement. 3,126,789, 3–31–64, Cl. 89—8.

Meyer-Jagenberg, Gunther, to Jagenberg-Werke Akt.-Ges. Liquid-tight container of paper, cardboard and like carton-forming materials. 3,127,032, 3–31–64, Cl. 229—7.

Meyers, Harold S., to Waldorf Paper Products Co. Receptacle encircling band. 3,126,660, 3–31–64, Cl. 40—312.

Meyers, Harold S., to Waldorf Paper Products Co. Dispensing package. 3,127,054, 3–31–64, Cl. 221—25.

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Schultz, Forrest O. E., and Almond. 3,127,189.

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Mikaelsen, Verner, to Aktieselskabet Brdr. Michaelsen, Hedensted, Metalstoberi & Maskinfabrik. Animal drinking device. 3,126,873, 3–31–64, Cl. 119—75.

Milazzo, Joseph S., D. I. Randall, and J. H. Shown, to General Aniline & Film Corp. Mixed acid nitration of dispersions of crude dibenzanthrone. 3,127,421, 3–31–64, Cl. 260—353.

Miles Laboratories, Inc.: *See*—
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Miller, Albert G. Shoe cleaner. 3,126,565, 3–31–64, Cl. 15—210.

Miller, Bernard, to American Cyanamid Co. S-(1,2-dihaloalkenyl) O,O-dialkyl phosphorodithioates and method for their preparation. 3,127,435, 3–31–64, Cl. 260—461.

Miller, Glenn E., to Western Electric Co., Inc. Apparatus for exerting equalized compressive forces. 3,127,162, 3–31–64, Cl. 269—157.

Miller, Herbert J., M. M. Behles, and J. B. Clark, to United States of America, Navy. Quick release fastening apparatus. 3,127,207, 3–31–64, Cl. 292—300.

Miller, Joan E.: *See*—
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Miller, Lamon E., to The Garrett Corp. Method and apparatus for transfer of cryogenic liquid. 3,126,711, 3–31–64, Cl. 62—52.

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Desjardin, James R., Huber, and Tinkham. 3,126,747.
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Elston, Alvin W., and Vincent. 3,127,527.
Freeborn, John C. 3,127,575.
Hawn, Robert D. 3,126,641.
Hermanns, Henry M. 3,126,744.
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Lingle, John T. 3,127,551.
Lundberg, John E. 3,126,940.
McCammon, Robert F., and Tomkinson. 3,127,112.
Photiades, Nicholas F. 3,127,520.
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Bonrud, Leon O. 3,127,333.
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Mirsky, Monroe, and J. W. Tinning, to Dresser Industries, Inc. Method of applying pipe protectors. 3,126,624, 3–31–64, Cl. 29—450.

Mitchell, Colin C., K. Hinsch, and R. Geyer, to Denny William, & Brothers Ltd., Brown Brothers & Co., Deutsche Werft A.G., and Allgemeine Elektricitats-Gesellschaft. Fin arrangement. 3,126,857, 3–31–64, Cl. 114—126.

Mitchell, David F., to International Equipment Co. Continuous flow centrifuge apparatus. 3,127,342, 3–31–64, Cl. 233—21.

Mittelstaedt, Georg S. Suction pump means having transversely divided suction tubes. 3,127,091, 3–31–64, Cl. 230—92.

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Mohr, John, & Sons: *See*—
Mohr, Louis E., Seaholm, and Berczynski. 3,126,941.

Mohr, Louis E., R. V. Seaholm, and F. A. Berczynski, to John Mohr & Sons. Integral gas burner and valve. 3,126,941, 3–31–64, Cl. 158—109.

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Monahan, Edward J., to National Biscuit Co. Method for continuously wrapping biscuits. 3,127,273, 3–31–64, Cl. 99—171.

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Henderson, Courtland, and Harris. 3,127,287.
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Monti, Angelo, to Jarrow Products, Inc. Refrigerator gasket. 3,126,590, 3–31–64, Cl. 20—69.

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Mostrong, Casey M. Ground drive assembly for drag sled. 3,126,748, 3–31–64, Cl. 74—13.

Motley, Stanley T., to Philip Morris, Inc. Combined cigarette maker and packer. 3,126,999, 3–31–64, Cl. 198—20.

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Froede, Walter. 3,127,096.

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Natland, Manley L., to Richfield Oil Corp. Apparatus for heating an underground formation. 3,127,319, 3–31–64, Cl. 176—17.

Natta, Giulio, G. Crespi, and M. Bruzzone, to Montecatini Societa Generale per l'Industria Mineraria e Chimica. New vulcanized elastomers derived from alpha-olefin polymers and methods for producing the elastomers. 3,127,379, 3–31–64, Cl. 260—79.5.

Nau, David H. Coffee preparing and dispensing apparatus. 3,126,812, 3–31–64, Cl. 99—283.

Nay, Eugene R. Apparatus for manufacturing snow cones. 3,126,841, 3–31–64, Cl. 107—1.

Neale, Charles E., to Southern Bleachery and Print Works, Inc. Vat dyeing or dye stripping with alkaline borohydride and hydrosulfite solution. 3,127,231, 3–31–64, Cl. 8—34.

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Nikols, Leonard W., to Power Jets (Research & Development) Ltd. Gauging linear dimensions. 3,126,642, 3–31–64, Cl. 33—174.

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Noguera, Joseph, to Casablancas High Draft Co. Ltd. Textile fibre roller drafting apparatus. 3,126,586, 3–31–64, Cl. 19—263.

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Noland, Royce P., and F. A. Kuckhoff, to Valiant Sporting Goods. Exercise apparatus with storage container and pedals and weights. 3,127,171, 3–31–64, Cl. 272—58.

Nolen, Herbert I. Adjustable outrigger unit. 3,127,021, 3–31–64, Cl. 211—175.

Nomoto, Masao, M. Yanagita, T. Akahira, H. Kawabe, Y. Narahashi, and S. Fujita, to Rikagaku Kenkyusho. Extraction of protease from a culture broth of streptomyces griseus. 3,127,327, 3–31–64, Cl. 195—62.

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Operhall, Theodore, and C. Yaker, to Howe Sound Co. Method of controlling cooling and decarburization in casting of steel in shell molds. 3,126,597, 3–31–64, Cl. 22—215.

Oprecht, Ulrich, to Adolph Saurer, Ltd. Gas turbine power plant with rotary fuel atomization and annular combustion chamber. 3,126,703, 3–31–64, Cl. 60—39.36.

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Orund, Valdek J., to Shaffer Tool Works. Combination slip and packing apparatus for oil field use. 3,127,198, 3–31–64, Cl. 285—146.

Osborn, Howard B., E. Giles, R. E. Preen, and F. C. D. Streeter, to The Thrissell Engineering Co. Ltd. Letter-sorting machine. 3,127,030, 3–31–64, Cl. 214—11.

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Osborne, Fred H., and H. M. Thomas, to The Wurlitzer Co. Tape playing machine. 3,127,179, 3–31–64, Cl. 274—11.

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Pachter, Irwin J., and J. Weinstock, to Smith Kline & French Laboratories. 6-alkyl-2,4,7-triaminopteridines. 3,127,403, 3–31–64, Cl. 260—251.5.

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Paxton, Stanley K. and K. P., and E. E. Evans, to Paxton Sales Corp. Machine for simultaneously closing top and bottom of cardboard carton. 3,126,685, 3–31–64, Cl. 53—138.

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Pedersen, Dane H., to Rockwell Mfg. Co. Power-operated, hand manipulated block plane. 3,126,929, 3–31–64, Cl. 145—4.

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Bower, Gerald C. 3,126,684.
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Rulon-Miller, Robert, and W. H. Tabor, to Dixie Machine & Tool Co. Means for weighting the rolls of a drafting apparatus or the like. 3,126,587, 3–31–64, Cl. 19—274.
Rupprecht, Georg, to Raytheon Co. Pyrographite polariser. 3,127,513, 3–31–64, Cl. 250—86.
Ruskin, Dan B.: *See*—
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Ruskin, Simon L., deceased, by C. Farhi, D. B. Ruskin, and M. Reder, executors. Cardiac auricular therapy with quinidine adenylate, quinidine adenosine diphosphate or quinidine adenosine triphosphate. 3,127,316, 3–31–64, Cl. 167—65.
Russell, Fred J. Locking retractor slide. 3,127,208, 3–31–64, Cl. 292—336.3.
Russo, James E., and J. J. Vitola, to Wheelock Signals, Inc. Audible signal device. 3,127,602, 3–31–64, Cl. 340—392.
Ryan, John W. Battle contest game board with electrically operable signal means. 3,127,174, 3–31–64, Cl. 273—130.
Ryan, John W. Toy lie detector. 3,127,176, 3–31–64, Cl. 273—139.
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Thesmar, Louis H. 3,127,190.
Rygg, Ralph H., to Socony Mobil Oil Co., Inc. Method of releasing immobilised drill pipe. 3,126,970, 3–31–64, Cl. 175—57.
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Bradt, Lynn. 3,126,838.
Saavedra, Jose J.: *See*—
Vostr, Albert P., Edde and Saavedra. 3,126,930.
Saffin, Paul: *See*—
Dombre, Pierre. 3,126,914.
St. Denny, Ralph B., and F. H. Brown, to W. C. Coyne, and T. M. Flanagan. Folding apparatus. 3,127,165, 3–31–64, Cl. 270—66.
Saltman, William M., to The Goodyear Tire & Rubber Co. Polymerisation of cis-1,4-polyisoprene. 3,127,386, 3–31–64, Cl. 260—94.3.
Sanford, Richard A., to Phillips Petroleum Co. Gas chromatographic analysis of trace materials. 3,126,732, 3–31–64, Cl. 73—23.
Santourian, Melcon, to Phillips Petroleum Co. Miscible phase flooding in oil production. 3,126,951, 3–31–64, Cl. 166—9.
Sargent, Roger N., to The Dow Chemical Co. Decolorisation of amino acids. 3,127,443, 3–31–64, Cl. 260—534.
Sarto, Jorma O., to Chrysler Corp. Floatless carburetor. 3,127,453, 3–31–64, Cl. 261—36.
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Oprecht, Ulrich. 3,126,703.
Savio, Joseph, and R. T. Scriber, to Market Forge Co. Electrically heated forced air circulation oven. 3,127,499, 3–31–64, Cl. 219—35.
Sawyer, William F., to King-Seeley Thermos Co. Tool feed mechanism. 3,126,767, 3–31–64, Cl. 77—33.4.
Sayag, Andre, to Zalles Brothers, Inc. Expansion joints for pipes. 3,127,200, 3–31–64, Cl. 285—226.
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Lawes, Bernard C., and Scarborough. 3,127,401.
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Flynn, Kenneth G., and Schaefer. 3,127,436.
Schaefer, Johannes, to I-T-E Circuit Breaker Co. Fault current sensing means. 3,127,543, 3–31–64, Cl. 317—27.
Scharf, Walter G., to Metal Film Co., Inc. Metallised yarn use in lame fabrics. 3,126,606, 3–31–64, Cl. 57—144.
Scharmer, George A. Sink, drainboard and rim construction. 3,126,552, 3–31–64,, Cl. 4—187.
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Moser, Joseph R., Struger and Schatteiner. 3,127,546.
Schenck, Leslie M., and J. H. Shown, to General Aniline & Film Corp. Method for preparing alkali salts of β-alkylvinyl sulfonates. 3,127,442, 3–31–64, Cl. 260—513.
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Reimann, Hans, and Gould. 3,127,425.
Shapiro, Elliot L., and Oliveto. 3,127,430.
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Traugott, Wilfred F., and Scheublein. 3,127,192.
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Schnider, Otto, and M. Walter, to Hoffmann-La Roche Inc. 1 - phenylalkyl - 1,2,3,4,5,6,7,8 - octahydroisoquinolines. 3,127,405, 3–31–64, Cl. 260—283.
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Schreiber, Carl W., to Owens-Illinois Glass Co. Universal automatic ware loading machine. 3,127,210, 3–31–64, Cl. 294—16.
Schrenk, Walter J., K. J. Cleereman, and T. Alfrey, Jr., to The Dow Chemical Co. Counter-rotation continuous shear mixer. 3,127,152, 3–31–64, Cl. 259—6.
Schröder, Rolf, and A. Winkler, to Agfa Aktiengesellschaft. Controls for a reversible electric motor of a camera. 3,126,805, 3–31–64, Cl. 95—31.
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Schumacher, Frank A., to General Electric Co. Forced air cooled refrigerator. 3,126,717, 3–31–64, Cl. 62—186.
Schuringa, Tjakko M., and W. Smit, to North American Philips Co., Inc. Switching matrices with protection against short-circuit in the gates at the crossings. 3,127,519, 3–31–64, Cl. 307—88.
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Luginbühl, Pierre. 3,127,029.
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Scott, John N., Jr., and D. L. Peters, to Phillips Petroleum Co. Molding. 3,127,458, 3–31–64, Cl. 264—98.
Scott, John W., Jr., to California Research Corp. Hydrocarbon hydrocracking process with long on-stream period. 3,127,339, 3–31–64, Cl. 208—111.
Scott, Lester, to Kent Plastics Corp. Vacuum molding apparatus. 3,126,582, 3–31–64, Cl. 18—19.
Scott, Raymond G., Jr., to Waldorf Paper Products Co. Product encircling band. 3,127,090, 3–31–64, Cl. 229—87.
Scott, Thomas, and D. H. Williams, to General Motors Corp. Window cleaning mechanism. 3,126,569, 3–31–64, Cl. 15—250.35.
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Seeger, Ernst, and A. Kottler, to Dr. Karl Thomae, GmbH. Certain 1-(chlorophenyl)-2-tertiary amino alkanes. 3,127,407, 3–31–64, Cl. 260—293.
Seeger, Nelson V.: *See*—
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Selset, Ronald S., to Beebe Bros., Inc. Quick-release positive hold for use with a towing winch having a pivoted dog. 3,126,985, 3–31–64, Cl. 192—92.7.
Selsted, Walter T., and R. E. Heller, to Ampex Corp. Tape transport mechanism. 3,127,120, 3–31–64, Cl. 242—55.12.
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Sewell, Walter W., to Ford Motor Co. Moldboard plows. 3,126,969, 3–31–64, Cl. 172—719.
Shabram, Lyle F., to Consolidated Thermoplastics Co. Film-piercing apparatus. 3,126,777, 3–31–64, Cl. 83—174.
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Shapiro, Elliot L., and E. P. Oliveto, to Schering Corp. 17α-methyl-1,5-androstadienes-17β-ol-3-one and derivatives thereof. 3,127,430, 3–31–64, Cl. 260—397.4.
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Sharp, George H., A. Frenette, and F. W. Taggart, to Aviation Electric Ltd. Collimator for high energy radiation beams. 3,127,514, 3–31–64, Cl. 250—105.
Sharpe, John W. Coin holder. 3,126,897, 3–31–64, Cl. 133—6.
Sharrow, Robert F., and B. D. Gubi, to General Electric Co. Method of manufacturing armatures. 3,126,618, 3–31–64, Cl. 29—155.53.
Shaw, George. Light fixture. 3,127,114, 3–31–64, Cl. 240—4.
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Sheinwald, Benjamin S. Surveying stake and related structure. 3,126,861, 3–31–64, Cl. 116—114.
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De Groote, Melvin, and Shen. 3,127,345.
De Groote, Melvin, and Shen. 3,127,354.
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Shepperton, Stockton L. Flexible mooring line. 3,126,860, 3–31–64, Cl. 114—230.
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Short, Acree E. Dual line chalk box. 3,126,637, 3–31–64, Cl. 33—87.
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Milazzo, Joseph S., Randall, and Shown. 3,127,421.
Shown, John H.: *See*—
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Krämer, Walter, and Müller. 3,126,722.
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Sigoda, Victor J., to Man-Sew Corp. Safety stitch sewing machines. 3,126,850, 3–31–64, Cl. 112—162.
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Wiessner, Manfred, and Skolaude. 3,126,804.
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Smeulers, Wouter, to North American Philips Co., Inc. Circuit arrangement for synchronizing a local oscillator with the aid of a phase discriminator. 3,127,570, 3–31–64, Cl. 331—20.
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Smith, Arthur E. W. 2-(2′hydroxy-4′-amino-phenyl)-1:3:4-oxadiazolone, the corresponding oxadiazolthione and derivatives thereof. 3,127,410, 3–31–64, Cl. 260—307.
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Smith, Donald L., to Air Reduction Co., Inc. Separation of air into nitrogen, oxygen and argon. 3,127,260, 3–31–64, Cl. 62—22.
Smith, Francis C. Snow melting machine. 3,126,883, 3–31–64, Cl. 126—343.5.
Smith, George, to Molins Machine Co. Ltd. Tobacco-manipulating machines. 3,127,007, 3–31–64, Cl. 198—193.

Smith, Harold B., to General Motors Corp. Reversing circuit for compound wound motor. 3,127,549, 3–31–64, Cl. 318—298.

Smith, Hugh E., to Norton Co. Method of making a polishing wheel. 3,127,253, 3–31–64, Cl. 51—293.

Smith, James L.: *See*—
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Smith, John M. Toy. 3,126,670, 3–31–64, Cl. 46—240.

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Pachter, Irwin J., and Weinstock. 3,127,403.

Smith, Lewis F., to Mechanical Technology Inc. Rotor with impeller vanes. 3,127,094, 3–31–64, Cl. 230—134.

Smith, Morris, and R. C. Read, to The Gordon Co., Inc. Inspection reminder system having a periodically opened alarm nullified by switch actuation at all stations. 3,127,599, 3–31–64, Cl. 340—286.

Smith-Morris Corp.: *See*—
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Smith, Phillip H., to Bell Telephone Laboratories, Inc. Rotary joint using circumferentially uniform field to couple rotor to stator. 3,127,579, 3–31–64, Cl. 333—98.

Smith, Ralph E., to Manning, Maxwell & Moore, Inc. Hook with safety lock. 3,126,604, 3–31–64, Cl. 24—241.

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Du Feu, Alan N. 3,126,863.

Smith, Traver J., ½ to G. I. Magnuson, and ½ to G. I. Magnuson, R. Magnuson, and L. J. Fox, trustees. Amplifier for photoelectric bridge spectrophotometer. 3,127,560, 3–31–64, Cl. 324—123.

Smoot, Van. Solder dispensing package. 3,127,012, 3–31–64, Cl. 206—56.

Snyder, Carl E.: *See*—
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Snyder, Harry R., Jr., to The Norwich Pharmacal Co. 1,2-dimethylhexahydropyridazine compounds. 3,127,400, 3–31–64, Cl. 260—250.

Societa 'Italiana Resine.: *See*—
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Societe Marocaine de Recherches d'Etudes et de Developpement, Somarede.: *See*—
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Nelson, Theodore W., and McNiel. 3,126,953.
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Spangenberg, Robert E., to Hunter Douglas International (Quebec) Ltd. Suspension device for a ceiling carrier. 3,127,147, 3–31–64, Cl. 268—327.

Sparks, Anthony A., and K. H. C. Bessant, to The Distillers Co. Ltd. Process of improving a halogen-containing polymer. 3,127,384, 3–31–64, Cl. 260—92.8.

Spaulding, Carl P.: *See*—
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Sperry Rand Corp.: *See*—
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Kestenbaum, William W. 3,127,517.
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Ritter, Rolland R. 3,127,593.
Schmidt, Ludwig M. 3,127,100.
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Spees, Arthur T. Tearable sheet construction. 3,127,087, 3–31–64, Cl. 229—51.

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Springer, George, and H. A. 3,126,948.

Spurlock, Charles W. Desiccant cartridge. 3,127,257, 3–31–64, Cl. 55—309.

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Staeuble, Max, to Ciba Ltd. Reaction product of monoaminodibenzanthrone and two moles of a hydroxyalkylamine. 3,127,422, 3–31–64, Cl. 260—354.

Stahlecker, Fritz. Spindle bearing. 3,127,223, 3–31–64, Cl. 308—152.

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Stark, William J.: *See*—
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Stauffer, Fred S., to International Business Machines Corp. Binary adder matrix positioner. 3,126,799, 3–31–64, Cl. 95—4.5.

Stauffer, Warren E., to Eastern Engineering Sales Co. Material handling system. 3,127,031, 3–31–64, Cl. 214—16.

Stead, Raymond C. T. Photo-cell generator system for charging storage devices. 3,127,552, 3–31–64, Cl. 320—2.

Steel Co. of Canada, Ltd., The: *See*—
Hines, William G., and Addinall. 3,127,288.

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Steidinger, Oskar: *See*—
Lehmann, Ruediger. 3,127,180.

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Valenta, Joseph C., and Steinhauer. 3,127,441.

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Stell, Joseph, and A. M. Hersig, to Automatic Brake, Inc. Decelerator brake for motor vehicles. 3,126,987, 3–31–64, Cl. 192—3.

Stephens, Richard G., to General Precision, Inc. Three-phase interferometer. 3,127,465, 3–31–64, Cl. 88—14.

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Neave, Arthur S., Jr., and Crounse. 3,127,391.
Reznek, Solomon. 3,127,066.

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McPherson, Alexander L., Bailey, and Stevens. 3,127,024.

Stevens, J. P., & Co. Inc.: *See*—
Turton, Walter, and Reilly. 3,127,306.

Stevens, John H. Boat construction. 3,126,557, 3–31–64, Cl. 9—6.

Stevenson, Lincoln L. Spray-dispensing apparatus. 3,127,065, 3–31–64, Cl. 222—164.

Stine, Glynn L., to American Metal Products Co. Seat cushion and spring construction. 3,127,220, 3–31–64, Cl. 297—452.

Stokke, Kare. Spring mounted rocking chair. 3,127,219, 3–31–64, Cl. 297—264.

Stone, Kenneth C.: *See*—
Greenhalgh, Colin W., and Stone. 3,127,269.

Stoner, Thomas A.: *See*—
Wetzel, Theodore A., and Stoner. 3,127,613.

Stow & Davis Furniture Co.: *See*—
Bennett, Robert H., Jr. 3,127,221.

Streeter, Frederick C. D.: *See*—
Osbor, Howard, Giles, Preen, and Streeter. 3,127,030.

Strong, Earl P., and J. W. Bruce; said Bruce assor. to said Strong. Automatic pacer. 3,126,648, 3–31–64, Cl. 35—35.

Struger, Odo J.: *See*—
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Strum, Ralph E., and R. H. Morgan, to The Bendix Corp. Distributed amplifier with low noise. 3,127,568, 3–31–64, Cl. 330—54.

Stubblefield, Edward M., to The Trane Co. Absorption refrigerating machine. 3,126,720, 3–31–64, Cl. 62—335.

Stubnitz Greene Corp.: *See*—
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Studebaker Corp.: *See*—
Kellough, Samuel H., and Poiries. 3,127,494.
Poiries, Louis P., and Kellough. 3,127,495.

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Dew, Donald C., and Stuewe. 3,127,055.

Stutsman, Guy R. High speed high sensitivity leak detector. 3,126,734, 3–31–64, Cl. 73—40.

Stuy, Harry, to Hughes Aircraft Co. Wire feed mechanism. 3,127,081, 3–31–64, Cl. 226—165.

Sudrow, Lyle K. V., to Helipod, Inc. Automatic auto-rotating means for aircraft sustaining rotor. 3,126,967, 3–31–64, Cl. 170—160.13.

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Sullivan, Charles J. Educational scoring device. 3,126,649, 3–31–64, Cl. 35—48.

Sullivan, Herbert D., and G. O. Tufts, to International Harvester Co. Knot stripper for balers. 3,127,204, 3–31–64, Cl. 289—15.

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Sutcliffe, Peter L., to Hawker Siddeley Aviation Ltd. Aircraft undercarriages. 3,127,134, 3–31–64, Cl. 244—102.

Sutliff, Wayne N. Safety joint. 3,126,972, 3–31–64, Cl. 175—294.

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Swatsick, Michael J. Ice chip making machine. 3,126,719, 3–31–64, Cl. 62—320.

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Patch, Robert S., and Swenson. 3,127,061.

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Taccone, Russell W., to Taccone Corp. Machine for making threaded molds. 3,126,592, 3–31–64, Cl. 22—14.

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Taggart, Frederick W.: *See*—
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Talamonti, John, to Borg-Warner Corp. Annular cartridge fluid seal device. 3,127,183, 3–31–64, Cl. 277—40.

Talamonti, John, to Borg-Warner Corp. Self-contained annular fluid seal. 3,127,184, 3–31–64, Cl. 277—42.

Tanabe, Masato, and E. L. Shapiro, to Schering Corp. Process for converting a 3-keto-$\Delta^{1,4}$-steroid to the corresponding 3-keto-$\Delta^{1,3}$-compound. 3,127,428, 3–31–64, Cl. 260—397.4.

Tardrew, Philip L., and M. A. Nyman, to Abbott Laboratories. Hypocholesterolemic agent M-850 and method of preparation. 3,127,315, 3–31–64, Cl. 167—65.

Tarjan, Endre, and A. Kolar, to Brown, Boveri & Cie, Aktiengesellschaft. Protective system for synchronous electrical machines. 3,127,541, 3–31–64, Cl. 317—13.

Tarrant, Paul, to Dow Corning Corp. 1,1-bis(trifluoromethyl) ethyl silanes and siloxanes. 3,127,433, 3–31–64, Cl. 260—448.2.

Tassie, Douglas P., and L. K. Wetzel, to United States of America, Army. Feed belt booster with demand control. 3,126,790, 3–31–64, Cl. 89—33.

Taylor, Ernest A., Jr., to Monsanto Chemical Co. Apparatus for controlling the application of heat. 3,127,497, 3–31–64, Cl. 219—19.

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Tempe, Andre. Transfer device. 3,127,002, 3–31–64, Cl. 198—104.

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Thompson, Wallace M., to Harris Foundry & Machine Co. Combination shear and baler. 3,126,816, 3–31–64, Cl. 100—98.

Thompson, Wallace M., to Harris Foundry & Machine Co. Shearing apparatus. 3,126,817, 3–31–64, Cl. 100—98.

Thomson, John E., to The Dow Chemical Co. Process for the production of homogeneous mixtures of ethylene polymers and carbon black. 3,127,368, 3–31–64, Cl. 260—41.

Thorington, Luke, to Duro-Test Corp. Method of bonding light transmitting yarn to an incandescent lamp envelope. 3,127,295, 3–31–64, Cl. 156—172.

Thorndyke, Lloyd M., to Sperry Rand Corp. Time controlled switch using saturable core input. 3,127,522, 3–31–64, Cl. 307—88.5.

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Tidland, Charles R., and G. M. Ochs; said Ochs assor. to A. T. Williams. Expansible mandrel. 3,127,124, 3–31–64, Cl. 242—72.

Tiede, Ralph L., to Owens-Corning Fiberglas Corp. Glass composition. 3,127,277, 3–31–64, Cl. 106—50.

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Tochtermann, Walter, and A. Richter; said Richter assor. to C. S. Schmidt Gesellschaft fur Fordertechnik m.b.H. Chain conveyor with plastic ball and socket chain. 3,127,006, 3–31–64, Cl. 198—177.

Tofano, Frank J., to Dun & Bradstreet, Inc. Plate cylinder for wrap-around printing plate and method of converting same from cylinder equipped to carry thicker printing plates. 3,126,825, 3–31–64, Cl. 101—415.1.

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Toto, William A. Welding cable assembly. 3,127,467, 3–31–64, Cl. 174—15.

Tousignant, William F., and W. J. Tacey, to The Dow Chemical Co. Anti-caking agent and composition. 3,127,444, 3–31–64, Cl. 260—539.

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Webster, Milo E., to Berns O Matic Corp. Pressure container closure construction with means for attaching a tap connection thereto. 3,127,072, 3–31–64, Cl. 222—554.
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U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

March 31, 1964 Volume 800 Number 5

TRADEMARKS

NOTICES

Notice of Tentative Recordation of a Trade Name

[T.D. 56122]

Tentative recordation of trade name under section 42. Trademark Act of 1946, and section 11.16, Customs Regulations

TREASURY DEPARTMENT,
OFFICE OF THE COMMISSIONER OF CUSTOMS,
Washington, D.C.

To Collectors of Customs and Others Concerned:

An application has been filed in the Treasury Department for the recordation of the following described trade name under the provisions of section 42, Trademark Act of 1946, and section 11.16, Customs Regulations:

"BARBAN CREATIONS," owned by Herman Pecker and Co., Inc., a corporation organized under the laws of the State of New York, located and doing business at 28 West 36th Street, New York City, which trade name is used in connection with stuffed animals and dolls, Christmas novelties, casual slippers, shoe backs, luggage and general merchandise manufactured in Japan, Hong Kong, and the United States.

Any person who desires to file an opposition to the recordation of this trade name shall notify the Commissioner of Customs, Bureau of Customs, Washington, D.C., before the expiration of 30 days after April 15, 1964, of his intent to oppose the recordation. If a notice of opposition is filed, the opposer will be furnished with a copy of the application for recordation of the trade name, together with its supporting documents and instructions as to the procedure to be followed. The customs officers concerned will be given notice within 45 days after April 15, 1964, of any opposition proceeding.

Until 45 days after April 15, 1964, all articles of foreign manufacture bearing names or marks which copy or simulate the above-mentioned trade name shall be detained, but not seized, and thereafter, shall receive the treatment provided for in section 11.17, Customs Regulations, unless a notice is received that an opposition has been filed, in which case such articles shall continue to be detained until a final determination is made concerning the right of the applicant to the trade name.

(Signed) PHILIP NICHOLS, JR.,
Commissioner of Customs.

March 4, 1964.

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 339,329 (DO-ALL), Continental Machine Specialties, Inc., Combination band sawing and filing machine; **Reg. No. 390,078** (DOALL), The DoAll Company, Grinders of the machine tool type suitable for precision surface grinding and machine tool cutter grinding, milling machines and special milling machines known as duplicators and adapted for duplicating a pattern; **Reg. No. 394,883,** same, Files, file segments, file bands, saws and saw bands; **Reg. No. 424,899** (DOALLOY), same, Metal working and forming dies, molding dies for molding powdered metal, and cutting tools for turning, milling, drilling, boring, threading and planing machines and parts of such tools; **Reg. No. 429,124,** same, Powdered metal, carbonides, and unfinished and partly finished parts made of or with said materials; **Reg. No. 585,424** (DOALL AND DESIGN), same, Steel ink, tool steel, lubricant and coolant used in grinding, and a lubricating wax product in stick form for lubricating the edges of cutting tools, electrical apparatus—namely, butt welders, magnetic chucks, etc., machine

CONDITION OF TRADEMARK APPLICATIONS AS OF JANUARY 31, 1964

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	14,580
Date of oldest new application	June 26, 1963
Date of oldest amended application	June 21, 1963

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 2, 4, 5, 9, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 39, 41, 42, 43, 44	7-1-63	7-2-63
(II) H. E. KASCHUB, Classes 1, 3, 6, 7, 8, 10, 18, 22, 27, 38, 40, 45, 46, 47, 48, 49, 50, 51, 52; Service Marks, Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	6-26-63	6-21-63
Renewals (All Classes)	1-13-64	1-2-64
Sec. 12 (c) Publications (All Classes)	1-3-64	

Applications filed during the month of January 1964— 2,056

Registrations Issued	458—No. 767,314 to No. 767,771
Renewals Issued	50

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington, D. C., 20402 to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington, D.C., 20231.

tools—namely, band saws, sawing machines, etc., gaging instruments and attachments therefor—namely, gage blocks, gage block holders, etc., and supply cabinets; **Reg. No. 666,333**, same, Desk type staplers, pocket knives; **Reg. No. 616,668**, same, Saw pitching gages used for gaging the pitch of saw teeth, and steel rules; **Reg. No. 679,956** (DOALL), same, Taps, reamers, end mills, cutters, counter bores, tool bits, and slicing and dicing machines; **Reg. No. 679,957** (DOALL AND DESIGN), same, Tool bits and lathe centers, slicing and dicing machines, and precision lapping machines, **filed** Apr. 15, 1963, D.C., N.D. Ohio (Toledo), Doc. C–63–60. *The DoAll Company* v. *Du-All Appliance Service Company*. Consent decree; defendant enjoined Nov. 19, 1963.

Erratum

In the OFFICIAL GAZETTE, issue of Feb. 11, 1964, vol. 799, p. TM 32, under the heading "Trademark Suits," Reg. No. 326,972, last line thereof, for "trademark terminated Oct. 2, 1963." read *case dismissed Oct. 2, 1963*.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 132,328. Greenleaf Nursery Co., Muskogee, Okla. Filed Nov. 20, 1961.



For Ornamental Trees, Evergreens, Broad-Leaved Evergreens, and Shade Trees.
First use Nov. 1, 1958.

SN 155,498. Delvaltex Corporation, Trenton, N.J. Filed Oct. 19, 1962.

PAK/CONTROL

For Packing and Insulating Materials for the Protection of Fragile Objects and Equipment From Shock and From Temperature and Moisture Conditions.
First use Sept. 20, 1962.

SN 159,293. Societe Anonyme: Societe d'Electro-Chimie, d'Electro-Metallurgie et des Acieries Electriques d'Ugine, Paris, France. Filed June 5, 1963.

UGIGUM

Owner of French Reg. No. 493,875, dated Jan. 19, 1961 (Seine); Natl. Inst. No. 157,288; and U.S. Reg. Nos. 719,813, 723,226, and 732,000.

For Natural and Synthetic Rubber and Latex; Natural and Synthetic Plastic Materials in Unshaped and in Semi-Shaped State for Use in the Manufacture of Plastic and Plasticized Articles; Plastic Sheet Material; and Molding Powder.

SN 159,459. The Atlantic Seed Company, Martinsville, N.J. Filed Dec. 20, 1962.

ALL SEASONS

For Mixed Grass Seed.
First use September 1962.

SN 165,814. New Ulm Quartzite Quarries, Inc., New Ulm, Minn. Filed Apr. 1, 1963.

CHERRY STONE

For Poultry Grit.
First use Oct. 30, 1961.

SN 172,145. Paul W. Beck, Albuquerque, N. Mex. Filed July 1, 1963.

Dri-Lite

For Combination Fire Starter and Fuel for Use by Campers, for Use in Building Fires for Outdoor Cooking, and for Similar Uses.
First use Apr. 12, 1963.

SN 173,867. Neville Chemical Company, Pittsburgh, Pa. Filed July 24, 1963.

NEVCHEM

For Synthetic Resins Used for Industrial Purposes Including Use as Components of Rubber Products, Coatings, Adhesives, Floor Tiles, Caulking Compounds, Waterproof Materials, Paper Laminates and Coatings, Printing Inks, and the Like.
First use on or about June 10, 1963.

SN 175,116. S. C. Johnson & Son, Inc., Racine, Wis. Filed Aug. 15, 1963.

KALEIDOSCOPE

For Organic Condensation Polymers of the Polyamide and Polyester Types and Synthetic Resins.
First use on or about Mar. 15, 1963.

SN 175,920. J. M. Huber Corporation, Borger, Tex. Filed Aug. 28, 1963.

AROSPERSE

For Carbon Black.
First use July 24, 1963.

SN 176,331. Topco Associates, Inc., Skokie, Ill. Filed Sept. 4, 1963.

TOPCO

Charcoal Briquets.
First use Feb. 23, 1961.

Class 2—Receptacles

SN 145,374. Frank Kelsey, Passaic, N.J. Filed May 24, 1962.



For Plastic Oil Cans.
First use Sept. 11, 1952.

SN 159,290. Senoret Chemical Company, Inc., St. Louis, Mo. Filed Dec. 17, 1962.

ANTRAY

For Dish-Like Receptacle for Insecticide.
First use Sept. 6, 1962.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 172,921. Lustar Products Co., Springfield, N.J. Filed July 12, 1963.

LUSTAR

For Pet Bird Feeders and Component Parts Thereof.
First use Oct. 1, 1951.

SN 179,808. Leslie H. Owens, Edina, Minn. Filed Oct. 25, 1963.

MONEYMANAGER

For Wallets.
First use Oct. 23, 1963.

Class 6—Chemicals and Chemical Compositions

SN 153,747. The Dow Chemical Company, Midland, Mich. Filed Sept. 24, 1962.

NORBAK

For Thickening Agent of the Polymer Type for General Chemical, Industrial, Agricultural, and Horticultural Uses.
First use Aug. 14, 1962.

SN 161,986. Gaston Johnson Corporation, Long Island City, N.Y. Filed Feb. 4, 1963.

HADABUG

For Aerosol Spray Insecticide.
First use on or about Aug. 23, 1957.

SN 163,316. The Brush Beryllium Company, Cleveland, Ohio. Filed Feb. 25, 1963.

THERMALOAD

For Beryllium Oxide and Compositions Comprising Predominantly Beryllium Oxide—Namely, Powder, Porous, Compacted, Sintered, Compressed, Extruded, Cast and Molded Shapes and Articles.
First use Jan. 18, 1963.

SN 164,331. Drill-Kem, Inc., Houston, Tex. Filed Mar. 11, 1963.

HYDROMUL

For Emulsifier for Drilling Fluid Used in the Drilling of Wells.
First use Oct. 24, 1961.

SN 164,363. Merck & Co., Inc., Rahway, N.J. Filed Mar. 11, 1963.

Di·chloricide

Owner of Reg. No. 120,141.
For Insecticides, Deodorants and Insect Repellents.
First use July 26, 1917, on insecticides.

SN 164,417. Animal Repellents, Inc., Griffin, Ga. Filed Mar. 12, 1963.

HALT

For Non-Toxic Repellent Composition Sprayed Into the Face of an Attacking Dog or Other Animal for Personal Protection From Attack.
First use Nov. 28, 1962.

SN 164,503. Black Leaf Products Company, Chicago, Ill. Filed Mar. 13, 1963.

MR. GARDEN

For Rose and Garden Spray.
First use on or about Mar. 4, 1963.

SN 167,206. California Liquid Gas Corporation, Sacramento, Calif. Filed Apr. 22, 1963.

CAL GAS

The drawing is lined for the color red.
For Liquefied Gases—Namely, Propane and Butane.
First use Mar. 1, 1961.

SN 171,179. Quality Control Laboratories, Billings, Mont. Filed June 17, 1963.

QUAL-CO

The drawing is lined for the color red.
For Reagents for Laboratory Use Only.
First use Apr. 1, 1963.

SN 174,208. Monsanto Chemical Company, St. Louis, Mo. Filed Aug. 1, 1963.

LIMIT

For Herbicide.
First use July 10, 1963.

SN 175,284. International Minerals & Chemical Corporation, Skokie, Ill. Filed Aug. 19, 1963.

IMCO-VC-10

For Organic Thinner for Drilling Muds.
First use July 23, 1963.

SN 175,504. Morningstar-Paisley, Inc., New York, N.Y. Filed Aug. 21, 1963.

STAREZ

For Chemicals—Namely, Vinyl Emulsions Used in Textile, Paint, Adhesive and Other Industries.
First use Aug. 9, 1963.

SN 175,529. Visual Graphics Corporation, New York, N.Y. Filed Aug. 21, 1963.

eternol DEVELOPER

The term "Long Life Developer" is disclaimed apart from the mark.
For Photographic Developing Solution.
First use June 21, 1963.

SN 176,104. Merck & Co., Inc., Rahway, N.J. Filed Aug. 30, 1963.

NEOCAL

For Chemical Preparation for Use in Compounding Rubber.
First use Aug. 15, 1963.

SN 176,220. Monsanto Chemical Company, St. Louis, Mo. Filed Sept. 3, 1963.

IP-61

For Alkali Metal Phosphates for Use in the Manufacture of Soaps and Detergents.
First use Oct. 19, 1962.

SN 176,260. Dow Corning Corporation, Midland, Mich. Filed Aug. 29, 1963.

DOPE-SIL

For Hyper-Pure Silicone Pellets Containing Measured Amounts of Various Other Chemical Elements Such as Phosphorus or Boron and Which Are Used by Melting To Add Measured Amounts of Said Other Chemical Elements Into Hyper-Pure Silicon Crystals.
First use Sept. 21, 1961.

SN 176,270. Sherritt Gordon Mines Limited, Toronto, Ontario, Canada. Filed Aug. 30, 1963.

SHERRITT

Owner of U.S. Reg. No. 689,738.
For Urea.
First use Dec. 27, 1962; in commerce Feb. 12, 1963.

SN 176,276. B-D Laboratories, Inc., East Rutherford, N.J. Filed Sept. 4, 1963.

Q-ESS

For Culture Media.
First use on or about Aug. 5, 1963.

SN 176,311. Medi-Chem, Inc., Santa Monica, Calif. Filed Sept. 4, 1963.

MEDI-CHEM

For Reagent Test Sets.
First use on or about Jan. 1, 1961.

SN 176,322. Sel-Rex Corporation, Nutley, N.J. Filed Sept. 4, 1963.

CUFLUOREX

For Copper Electroplating Composition.
First use Apr. 23, 1963.

SN 176,323. Sel-Rex Corporation, Nutley, N.J. Filed Sept. 4, 1963.

SOL-U-SALT

Owner of Reg. No. 692,260.
For Electroplating Composition for Plating Metals.
First use Aug. 12, 1963; Mar. 30, 1951, in a different form.

SN 176,404. Specialized Industrial Products, Inc., Grand Rapids, Mich. Filed Sept. 5, 1963.

WATER WHIP

For Moisture-Displacing and Anti-Corrosive Liquid.
First use Aug. 7, 1963.

SN 176,482. Birko Chemical Corporation, Denver, Colo. Filed Sept. 9, 1963.

ACTO-140

For Chemical Bleaching Agents.
First use on or about July 1, 1959.

SN 176,582. Stauffer Chemical Company, New York, N.Y. Filed Sept. 9, 1963.

ZYBLOC

For Pyrophosphoric Acid.
First use Aug. 16, 1963.

SN 176,776. Carlisle Chemical Works, Inc., Reading, Ohio. Filed Sept. 12, 1963.

CARSTAN

For Polymerization Catalysts Especially for Polyurethane.
First use July 18, 1963.

SN 176,777. Carlisle Chemical Works, Inc., Reading, Ohio. Filed Sept. 12, 1963.

CARSTAB

For Stabilizers for Antiresins.
First use July 15, 1963.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 160,909. Vawter Ammunition, Inc., El Campo, Tex. Filed Jan. 17, 1963.

TEXLOAD

For Shotgun Shells.
First use Sept. 25, 1962.

Class 10—Fertilizers

SN 173,381. Pacific Guano Company, Los Angeles, Calif. Filed July 19, 1963.

LEAF LIFE

The word "Leaf" is disclaimed apart from the mark as shown.
For Plant Nutrients for Leaf Spray Application.
First use Feb. 1, 1963.

SN 177,227. Carolina Nitrogen Corporation, Wilmington, N.C. Filed Sept. 18, 1963.



For Solid and Liquid Fertilizers Containing Ammonium Nitrate.
Filed July 16, 1963.

SN 178,521. Arkwright Merchandising Corporation, New York, N.Y. Filed Oct. 8, 1963.

PACE MAKER

Owner of Reg. No. 430,114.
For Fertilizers of Various Types, Plant and Lawn Foods, Garden Lime, Mineral Mulch, Potash, Bone Meal Agricultural Plant Stimulants.
First use Feb. 13, 1963.

SN 178,630. The New Jersey Zinc Company, New York, N.Y. Filed Oct. 9, 1963.



Owner of Reg. Nos. 409,858, 649,509, and others.
For Limestone for Agricultural Use.
First use Sept. 11, 1963.

SN 178,631. The New Jersey Zinc Company, New York, N.Y. Filed Oct. 9, 1963.

HORSE HEAD

Owner of Reg. Nos. 409,857, 652,242, and others.
For Limestone for Agricultural Use.
First use Sept. 11, 1963.

SN 178,632. The New Jersey Zinc Company, New York, N.Y. Filed Oct. 9, 1963.

NJZ

Owner of Reg. Nos. 148,184, 148,185, and 532,027.
For Limestone for Agricultural Use.
First use Sept. 11, 1963.

SN 178,985. Southern Plant Food Company, Inc., Hampton, Va. Filed Oct. 14, 1963.

NITROGRO

For Fertilizer.
First use Mar. 13, 1956.

Class 12—Construction Materials

SN 103,250. A.R.B. Window Sales Co., Detroit, Mich. Filed Aug. 23, 1960.

"400"

For Metal Sash Guides for Double-Hung Friction-Type Windows.
First use on or about Jan. 5, 1953.

SN 161,826. The Flintkote Company, New York, N.Y. Filed Jan. 24, 1963.

CREVATONE

For Wood Fiber Acoustical Tile.
First use June 13, 1958.

SN 170,826. National Distillers and Chemical Corporation, New York, N.Y. Filed June 4, 1963.

Flexalum

Owner of Reg. Nos. 539,641, 728,905, and others.
For Window Awnings Fabricated of Sheet Metal; Folding Doors Made of Woven Aluminum, Usable as Door Closures, Partitions and Room Dividers; Aluminum Siding Usable for Siding, Roofing Partitions and Interior Walls; Fabricated Open Air Metal Roof Structures; Aluminum Roof Panels; Aluminum Roof Tiles; Paneled Acoustical Ceiling; Down Spouts; Rain Gutters; and Soffitt Panels.
First use July 6, 1949, on window awnings fabricated of metal.

SN 172,426. Elwin G. Smith & Co., Inc., (Emsworth), Pittsburgh, Pa. Filed July 8, 1963.



For Metal Products for Roof and Wall Construction—Namely, Metal Wall Panels; Corrugated Sheets; Insulated Sandwich Walls; Conveyor Hoods; Curved Canopies; Roof Deck; Steel Forms for Concrete Roof and Floor Slabs; and Prefabricated Modular Buildings.
First use Nov. 6, 1962.

SN 172,479. General Capsule Corporation (Feather-Lite Manufacturing Co. Division), Detroit, Mich. Filed July 5, 1963.

FEATHER-LITE

For Combination Storm and Screen Doors.
First use 1946.

SN 177,283. Dependable Chemical Co., Incorporated, Rocky River, Ohio. Filed Sept. 18, 1963.

DEEP-ROCK

For Cementitious Construction and Repair Material for Patching, Filling, Grouting and Anchoring in or to Concrete and Masonry Structures or Members.
First use Mar. 12, 1963.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 133,098. Sterling Automotive Manufacturing Company, Elk Grove Village, Ill. Filed Nov. 30, 1961.

STAMCO

Owner of Reg. No. 630,928.
For Hose Clamps.
First use Dec. 30, 1960.

SN 139,135. The Polymer Corporation, Reading, Pa. Filed Mar. 5, 1962.

POLYPENCO

Owner of Reg. Nos. 553,120 and 704,420.
For Plastic Coated Articles, Including Valves, Valve Inserts, Pipe and Pipe Fittings.
First use Jan. 9, 1962, on valves and valve inserts.

SN 176,992. Atlas Supply Company, Newark, N.J. Filed Sept. 16, 1963.

ATLAS

Owner of Reg. Nos. 290,819, 608,566, and 740,480.
For Positive Crankcase Ventilation Valves.
First use July 2, 1963.

Class 14—Metals and Metal Castings and Forgings

SN 170,243. True Temper Corporation, Cleveland, Ohio. Filed June 3, 1963.



For Rail Anchors.
First use June 1, 1961.

SN 175,807. Murad Casting Co., Inc., Glendale, N.Y. Filed Aug. 19, 1963.

MURAD

For Metal Castings Used for Lamps and Lamp Stands.
First use Aug. 1, 1955.

SN 176,141. Allegheny Ludlum Steel Corporation, Pittsburgh, Pa. Filed Sept. 3, 1963.

EXOCUT

For High Speed Steel in the Form of Steel Mill Products.
First use May 20, 1963.

Class 15—Oils and Greases

SN 116,768. Universal Motor Oils Co., Inc., Wichita, Kans. Filed Mar. 29, 1961.



For Lubricating Oils.
First use Sept. 1, 1922.

Class 16—Protective and Decorative Coatings

SN 162,951. Illinois Bronze Powder & Paint Co., Inc., Chicago, Ill. Filed Feb. 18, 1963.

DAB

For Paints and Enamels.
First use on or about Jan. 11, 1963.

Class 17—Tobacco Products

SN 176,108. John Middleton, Inc., d.b.a. Sugar Barrel Associates, King of Prussia, Pa. Filed Aug. 30, 1963.

SUGAR BARREL

For Smoking Tobaccos.
First use on or about Apr. 1, 1896.

Class 18—Medicines and Pharmaceutical Preparations

SN 118,213. Balanced Foods, Inc., New York, N.Y. Filed Apr. 20, 1961.

BALANCED

Owner of Reg. Nos. 651,530, 645,827, and 640,940.
For Vitamin and Mineral Preparations; Lecithin; and Brewer's Yeast Flakes.
First use January 1948.
Subj. to Intf. with SN 123,825.

SN 123,825. Meyer Laboratories, Inc., Detroit, Mich. Filed July 12, 1961.

BALANCEL

For Multiple Vitamin and Mineral Tablet.
First use Mar. 27, 1950.
Subj. to Intf. with SN 118,213.

SN 135,884. Delta Drug Corporation, Jacksonville, Fla. Filed Feb. 15, 1962.

OMNIVIM

For Pharmaceutical Product for Human Consumption Containing Therapeutic Dosages of Vitamins and Mineral Ingredients.
First use Dec. 1, 1959.

SN 141,657. Syracuse Pharmacal Co., Inc., Syracuse, N.Y. Filed Apr. 5, 1962.

EQUI-BOMINE

For Veterinary Drug of the Vitamin Type for the Treatment of Horses.
First use Feb. 7, 1962.

SN 155,093. Myzon Laboratories Co., Kansas City, Kans. Filed Oct. 12, 1962.

Marogel

For Preparation Incorporated as an Immunological Adjuvant in Bacterins.
First use Aug. 20, 1962.

SN 160,023. The Upjohn Company, Kalamazoo, Mich. Filed Dec. 31, 1962.

MEDROL ENPAK

Owner of Reg. Nos. 657,022 and 694,836.
For Kit Containing a Steroid Enema Preparation.
First use Nov. 14, 1962.

SN 163,265. The Pillsbury Company, Minneapolis, Minn. Filed Feb. 21, 1963.

GRID

For Antibiotic Powder With Vitamins for Animals and Poultry.
First use Jan. 30, 1962.

SN 167,611. Commerce Drug Co., Inc., Brooklyn, N.Y. Filed Apr. 26, 1963.

BOIL-EASE

For Medicated Salve.
First use Apr. 4, 1963.

SN 170,986. Cargill, Incorporated, Minneapolis, Minn. Filed June 14, 1963.

CARGILL

For Medicated Animal Feeds.
First use Feb. 20, 1963.

SN 173,823. American Home Products Corporation, New York, N.Y. Filed July 19, 1963.

DURAGARD

For Analgesic and Decongestant Preparations.
First use July 3, 1963.

SN 173,505. Riker Laboratories, Inc., Northridge, Calif. Filed July 22, 1963.

CONTRAVUL

For Anti-Convulsant.
First use July 5, 1963.

SN 175,420. H. Lundbeck & Co., A/S, Copenhagen, Denmark. Filed Aug. 20, 1963.

SORDINOL

Owner of Danish Reg. No. 459/1959, dated Mar. 14, 1959.
For Psycho-Therapeutic Agents.

SN 175,931. Nopco Chemical Company, Newark, N.J. Filed Aug. 28, 1963.

QUADRI-D

Owner of Reg. No. 555,881.
For Vitamin D Containing Compositions Employed in Animal Feeds.
First use Mar. 22, 1963.

SN 177,187. The Purdue Frederick Company, Yonkers, N.Y. Filed Sept. 17, 1963.

ARTHRYCIN

For Medicinal Preparation for Temporary Relief of Simple Headaches, Head Colds, Muscular Aches and Neuralgia.
First use Sept. 3, 1963.

SN 177,655. Chas. Pfizer & Co., Inc., New York, N.Y. Filed Sept. 24, 1963.

ALACORTRIL

Owner of Reg. No. 649,211.
For Anti-Inflammatory Steroid Preparation.
First use July 18, 1963.

SN 177,821. U.S. Ethicals Inc., Long Island City, N.Y. Filed Sept. 26, 1963.

ETNAVITE-M

For Therapeutic Multiple Vitamin and Mineral Preparation.
First use Sept. 22, 1962.

SN 177,826. Winthrop Products Inc., New York, N.Y. Filed Sept. 26, 1963.

FENAROL

Owner of Reg. No. 404,456.
For Tranquilizer and Muscle Relaxant Preparation.
First use Feb. 13, 1959.

SN 177,836. American Cyanamid Company, Wayne, N.J. Filed Sept. 27, 1963.

AUREO S.P.

Owner of Reg. Nos. 566,712, 659,520, and others.
For Animal Feed Supplement Containing Antibiotics.
First use Aug. 22, 1963.

SN 178,084. Aziende Chimiche Riunite Agelini Francesco, Rome, Italy. Filed Sept. 30, 1963.

OXOLAMINA

Owner of Italian Reg. No. 153,057, dated Jan. 16, 1961.
For Pharmaceutical Preparation for the Treatment of Coughs, Colds, Bronchitis and Respiratory Diseases.

SN 178,415. Carter Products, Inc., New York, N.Y. Filed Oct. 7, 1963.

SOLACEN

Owner of Reg. Nos. 660,517 and 728,793.
For Pharmaceutical Preparation—Namely, a Transquilliser for the Treatment of Anxiety and Tension.
First use Sept. 4, 1963.

SN 178,496. Sterling Drug Inc., New York, N.Y. Filed Oct. 7, 1963.

COPE

For Analgesic.
First use Sept. 20, 1963.

SN 178,742. Smith Kline & French Laboratories, Philadelphia, Pa. Filed Oct. 10, 1963.

PALLIA

For Analgesic Preparation.
First use Oct. 2, 1963.

SN 178,884. Charles A. Crete, d.b.a. Pharmaceutical Associates, San Francisco, Calif. Filed Oct. 14, 1963.

ALLERCOF

For Syrup for Coughs Due to Allergies.
First use May 1, 1963.

SN 178,999. The Upjohn Company, Kalamazoo, Mich. Filed Oct. 14, 1963.

MEDROLAXIN

Owner of Reg. Nos. 657,022 and 707,725.
For Tranquilizer-Steroid Compound To Reduce Inflammation and To Relax the Muscles at the Site of the Inflammation.
First use Nov. 15, 1962.

SN 179,100. American Cyanamid Company, Wayne, N.J. Filed Oct. 16, 1963.

DD plus

For Medicated Cough Preparation.
First use Aug. 26, 1963.

SN 179,992. Biofarma, Société Anonyme, Neuilly-sur-Seine (Seine), France. Filed Oct. 29, 1963.

REVASA

Owner of French Reg. No. 429,404, dated June 25, 1953 (Seine); Natl. Inst. No. 18,455.
For Vaso-Dilator.

Class 19—Vehicles

SN 146,870. Amsted Industries Incorporated, Chicago, Ill., assignee of American Steel Foundries Incorporated, Chicago, Ill. Filed June 14, 1962.

Amsted

For Railway Equipment—Namely, Brake Rigging, Side Frames, Bolsters, Couplers, Draft Gear and Springs, and Fifth Wheel Coupling Devices.
First use May 1, 1962.

SN 162,123. Volkswagenwerk Aktiengesellschaft, Wolfsburg, Germany. Filed Dec. 20, 1962.

For Vehicles—Namely, Automobiles, Trucks, Aircraft, and Boats; and Parts of and Accessories for Automobiles—Namely Radiators, Steering Wheels, Steering Wheel Heads, Vehicle

Bodies and Parts Thereof, Such as the Doors, Hoods, Covers, Door Handles, Decorative Strips, Bumpers, Direction Indicators, Windshield Defrosters, Anti-Dazzle Appliances, Windshield Wipers, Shock Absorbers, Brakes and Baggage Racks.
First use 1959; in commerce 1959.

SN 173,614. American Metal Products Company, Detroit, Mich. Filed July 24, 1963.

ROADRUNNER

For Seats for Trucks and Similar Vehicles.
First use June 10, 1963.

SN 177,697. D. P. Harris Hardware & Manufacturing Co., Inc., New York, N.Y. Filed Sept. 25, 1963.

TOUR DE FRANCE

For Bicycles.
First use July 30, 1963.

Class 21 — Electrical Apparatus, Machines, and Supplies

SN 165,458. Rixson, Inc., Franklin Park, Ill. Filed Mar. 26, 1963.

MAGNETRIC

For Electro-Magnetic Door Holders Adapted To Releasably Hold Doors in Open Position.
First use Feb. 28, 1963.

SN 166,758. Standard Electric Company, Inc., St. Louis, Mo. Filed Apr. 15, 1963.

STELCO

For Rebuilt Generators, Starters, Voltage Regulators, Solenoids and Armatures.
First use Jan. 1, 1958.

SN 167,429. Video Products Company, Inc., Danville, Va. Filed Apr. 23, 1963.

VIDEOTRON

For Television Picture Tubes.
First use Dec. 29, 1961.

SN 170,070. Hughes Aircraft Company, Culver City, Calif. Filed May 31, 1963.

MICROSEAL

For Electronic Components—Namely, Transistor and Diode Semiconductor Devices.
First use on or about Jan. 26, 1961.

SN 173,140. United States Ceramic Tile Company, Canton, Ohio. Filed July 3, 1963.

DIAMONITE

Owner of Reg. Nos. 403,681 and 415,748.
For Electrical Insulators—Namely, Spark Plug Insulators, Insulators for Other Automotive and Aircraft Ignition Accessories, Power Transmission and Distribution Insulators, Power Cable Spacers, Insulating Tubes, Discs and Other Forms, Resistor Bases, Terminal Outlets and Transformer Bushings; Packages and Enclosures for Vacuum Tubes and Semi-Conductors, Such as Silicon Rectifiers, Transistors, Diodes, Triodes and the Like; Plug-In Connectors, Heat Sinks, and Surface Coatings—Namely, Coatings for Covering Objects for the Purpose of Neutralizing Electrical Waves.
First use Dec. 22, 1942.

SN 174,747. Channel Master Corporation, Ellenville, N.Y. Filed Aug. 9, 1963.

RONDO

For Radio Antennas.
First use July 19, 1963.

Class 22 — Games, Toys, and Sporting Goods

SN 157,229. Mattel, Inc., Hawthorne, Calif. Filed Nov. 14, 1962.

HIGH GEAR

No registration rights are claimed for the word "Gear" apart from the mark as shown, but applicant waives none of its common law rights in said mark or any feature thereof.
For Apparatus, Including Gears, Sold as a Unit for Playing a Board Type Game.
First use Aug. 7, 1962.

SN 157,903. Heraclio Fournier, S.A., Vitoria, Alava, Spain. Filed June 4, 1963.

HERACLIO Fournier VITORIA

Applicant herein disclaims any exclusive right to the word "Vitoria" apart from the mark as shown. Owner of Spanish Reg. No. 366,581, dated Mar. 2, 1962.
For Playing Cards.

SN 159,578. Lawrence H. Gordon, Newton, Mass. Filed Dec. 21, 1962.

PIK-A-PAK

For Prepackaged Inexpensive Toys, Games, and Toy Novelties and Notions for Sale Through Vending Machines.
First use July 15, 1960.

SN 169,466. Mattel, Inc., Hawthorne, Calif. Filed May 22, 1963.

BENNY

For Plush Animal Toy.
First use Apr. 16, 1963.

SN 169,695. Grace H. Cameron, d.b.a. G. H. Cameron Company, Whiteville, N.C. Filed May 27, 1963.

CHEE-CO

For Equipment Sold as a Unit for Playing a Dice-Type Parlor Game.
First use Jan. 9, 1963.

SN 169,781. Thomas D. Stow, Berkeley, Calif. Filed May 27, 1963.

Shorty

For Tennis Rackets.
First use Mar. 8, 1963.

SN 171,291. Frank Loven Webb, d.b.a. Baymint Products Company, Collinsville, Va. Filed June 18, 1963.

BAYMINT

For Fishing Lures.
First use May 1, 1963.

SN 171,468. Mattel, Inc., Hawthorne, Calif. Filed June 20, 1963.

WALK 'N TALK

For Doll Stroller.
First use Feb. 12, 1963.

SN 171,552. Mattel, Inc., Hawthorne, Calif. Filed June 21, 1963.

HAPPY, HAPPY BIRTHDAY

For Apparatus Sold as a Unit for Playing a Board Type Game.
First use May 22, 1963.

SN 172,556. Ashaway Line & Twine Mfg. Co., Ashaway, R.I. Filed July 8, 1963.



For Fishing Lines.
First use on or about June 17, 1963.

SN 172,646. Daisy Manufacturing Company, Rogers, Ark. Filed July 9, 1963.

DAISY/MATIC

Owner of Reg. Nos. 530,284, 695,896, and others.
For Toy Model Vehicles.
First use Apr. 13, 1963.

SN 172,802. Burgess Publishing Company, Minneapolis, Minn. Filed July 11, 1963.

DIAL-A-SKILL

For Dial Indicators for Instructing and Guiding Physical Fitness Activities Through Calisthenics and/or With Household Items Such as Chairs, Broom Handles, Etc.
First use May 8, 1963.

SN 173,409. American Publishing Corporation, Waltham, Mass. Filed July 22, 1963.

BLOTTO

For Equipment Sold as a Unit for Playing an Adult Party Game.
First use May 20, 1963.

SN 173,715. Uneeda Doll Co., Inc., Brooklyn, N.Y. Filed July 24, 1963.

THE WORLD'S FAIREST

For Dolls.
First use July 22, 1963.

SN 173,922. Dick Jones, Chino, Calif. Filed July 29, 1963.

SKYWALKER

For Stilts.
First use Sept. 26, 1962.
Subj. to Intf. with SN 183,125.

SN 174,553. Wilson Sporting Goods Co., River Grove, Ill. Filed Aug. 6, 1963.

BLACK HEATHER

For Golf Clubs.
First use May 24, 1963.

SN 175,480. Ron Dunham Tackle Inc., Southfield, Mich. Filed Aug. 21, 1963.

PUT-N-TAKE

For Fishing Floats.
First use Feb. 3, 1963.

SN 183,125. Oswald S. Tanczos, Tustin, Calif. Filed Dec. 16, 1963.

HI-WALKER

For Toy in the Nature of a Walking Device Attachable to the Feet and Legs.
First use May 30, 1963.
Subj. to Intf. with SN 173,922.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

SN 132,967. Athes-Imperial Limited, St. Catharines, Ontario, Canada, by change of name from The Anthes-Imperial Company Limited, St. Catharines, Ontario, Canada. Filed Nov. 29, 1961.

ANOLODER

Priority claimed under Sec. 44(d) on Canadian application filed Oct. 17, 1961; Reg. No. 133,659, dated Nov. 29, 1963.
For Apparatus for Transmitting Solids in an Air Stream, Said Apparatus Including an Injector, Lead Hose, and Equipment for Feeding the Solids to the Hose and for Connecting the Hose to a Source of Compressed Air.

SN 145,341. Eugene Dietzgen Co., Chicago, Ill. Filed May 24, 1962.

SHARPOINT

For Pencil Sharpeners.
First use on or about Jan. 1, 1955.

SN 146,869. Amsted Industries Incorporated, Chicago, Ill., assignee of American Steel Foundries Incorporated, Chicago, Ill. Filed June 14, 1962.

Amsted

For Dipper Teeth.
First use May 1, 1962.

SN 146,882. Amsted Industries Incorporated, Chicago, Ill., assignee of Diamond Chain Company, Inc., Indianapolis, Ind. Filed June 14, 1962.

Amsted

For Power Transmission Chains, Sprockets for Use With Power Transmission Chains, and Chain-Type Flexible Shaft Couplings.
First use May 17, 1962.

SN 148,850. Seaman Corporation, Menomonee Falls, Wis. Filed July 11, 1962.

DUO-STABILIZER

The word "Stabilizer" is disclaimed apart from the mark as shown. Owner of Reg. No. 636,436.
For Soil Processing Machines for Road Building.
First use Apr. 30, 1962.

SN 150,369. Amsted Industries Incorporated, Chicago, Ill., assignee of South Bend Lathe, Inc., South Bend, Ind. Filed Aug. 2, 1962.

Amsted

For Hydraulic Presses, Lathes, Pedestal Grinders, Drill Presses, Shapers, and Milling Machines.
First use May 1, 1962.

SN 170,333. Quality Sales, Inc., d.b.a. Dependable Rebuilders, Charlotte, N.C. Filed June 4, 1963.



For Rebuilt Automobile Engines.
First use on or about May 15, 1955.

SN 175,945. Scriptomatic, Inc., Philadelphia, Pa. Filed Aug. 28, 1963.

SCRIPTOMATIC

Owner of Reg. No. 591,913.
For Electric Typewriters for Producing Master Cards for Addressing Machines; Automatic and Semi-Automatic Addressing Machines; and Manually Operated Addressing Machines, but Not Including Hand Addressers.
First use Dec. 21, 1950.

SN 178,782. Culligan, Inc., Northbrook, Ill. Filed Oct. 11, 1963.

CULLIGAN

Owner of Reg. Nos. 426,059, 683,671, and others.
For Chemical Feed and Water Circulating Pumps.
First use Jan. 2, 1962.

SN 178,784. Culligan, Inc., Northbrook, Ill. Filed Oct. 11, 1963.



The drawing is lined for blue, but no claim is made to color.
For Chemical Feed and Water Circulating Pumps.
First use Feb. 1, 1962.

SN 178,985. E. R. Lurey Co., Inc., Chicago, Ill. Filed Oct. 14, 1963.

KWIKI-SHOP

For Combination Equipment Storage and Work Bench Unit Sold in Knocked-Down Condition for Assembly by Purchaser.
First use Oct. 7, 1963.

SN 180,208. Imperial Knife Associated Companies, Inc., Providence, R.I. Filed Oct. 31, 1963.

INSPIRATION

For Stainless Steel Flatware, Tableware and Kitchen Cutlery Utensils and Tools.
First use Oct. 8, 1963.

SN 180,668. The Monarch Machine Tool Company, Sidney, Ohio. Filed Nov. 7, 1963.



Owner of Reg. No. 507,625.
For Lathes and Metal Turning Machines.
First use on or about Oct. 9, 1963.

SN 180,669. The Monarch Machine Tool Company, Sidney, Ohio. Filed Nov. 7, 1963.



Owner of Reg. No. 507,625.
For Lathes and Metal Turning Machines.
First use on or about Oct. 9, 1963.

SN 180,670. The Monarch Machine Tool Company, Sidney, Ohio. Filed Nov. 7, 1963.

Monarch

Owner of Reg. No. 507,625.
For Lathes and Metal Turning Machines.
First use on or about Oct. 9, 1963.

Class 26 — Measuring and Scientific Appliances

SN 155,534. Teledex Incorporated, North Wales, Pa. Filed Oct. 19, 1962.

TELEFLEX

Owner of Reg. Nos. 360,963 and 684,359.
For Measuring and Scientific Appliances, More Specifically, a Flux Mapping System Which Comprises a Combination of Precision Electrical, Electronic and Mechanical Components.
First use Apr. 25, 1958.

SN 165,986. Burke & James, Inc., Chicago, Ill. Filed Apr. 8, 1963.

BURKE & JAMES

For Photographic Equipment—Namely, Lens Boards, Cameras, Photo Lenses, Dryers, Printers and Washers.
First use at least as early as March 1916.

SN 173,509. Milton Roy Company, Philadelphia, Pa. Filed July 22, 1963.



For Chemical Process Control Instruments and Accessories Therefor—Namely, Diluent Systems, Hydrogen Purifiers, Hydrogen Analysers and Hydrogen Producing Systems.
First use Dec. 6, 1962.

SN 175,525. United Conveyor Corporation, Chicago, Ill. Filed Aug. 21, 1963.

DUALEVEL

For Apparatus for Indicating the Height of Pulverulent Material in a Hopper.
First use March 1963.

SN 176,597. Wilkens Instrument & Research, Inc., Walnut Creek, Calif. Filed Sept. 9, 1963.



Owner of Reg. No. 672,789.
For Measuring Instruments, and More Particularly, Measuring Instruments in the Gas Chromatography Field.
First use July 10, 1956.

SN 179,760. Algas Industries, Los Angeles, Calif. Filed Oct. 25, 1963.



For Instruments for Analyzing Exhaust Gases of Internal Combustion Engines, and for Testing Internal Combustion Engine Electrical Systems.
First use on or about May 1, 1963.

Class 28 — Jewelry and Precious-Metal Ware

SN 158,735. Rubin & Company, New York, N.Y. Filed Dec. 7, 1962.

RWR

For Jewelry.
First use Sept. 15, 1962.

SN 170,681. Royal of Pittsburgh, Inc., Pittsburgh, Pa. Filed 6-10-63.

Royalustre.

For Jewelry.
First use June 15, 1959.

SN 173,159. Faer Lessman Corp., New York, N.Y. Filed July 17, 1963.

FALCO

For Watch Bands and Bracelets.
First use October 1962.

SN 176,034. Royal Bead Novelty Co., Inc., d.b.a. Laguna, New York, N.Y. Filed Aug. 29, 1963.

ECLIPSE

For Beads Made of Crystal Glass, Plastic or Like Material for Personal Adornment Sold in the Form of Finished Articles of Costume Jewelry.
First use Aug. 22, 1963.

Class 31 — Filters and Refrigerators

SN 178,316. American Motors Corporation, Detroit, Mich. Filed Oct. 4, 1963.

KELVINATOR

Owner of Reg. No. 142,652.
For Cabinets for Storing Frozen Comestibles.
First use in or before 1928.

SN 178,695. General Motors Corporation, Detroit, Mich. Filed Oct. 10, 1963.

IMPERIAL NINETEEN

For Refrigerators.
First use Sept. 18, 1963; in or before 1936 as to "Imperial."

Class 32 — Furniture and Upholstery

SN 165,051. Don Robert Gilcrest, Holland, Mich. Filed Mar. 20, 1963.

COLORCRAFT LINE

Applicant hereby disclaims the word "Line" apart from the mark as shown.
For Kitchen Cabinets.
First use on or about Feb. 1, 1960.

SN 176,121. Societe Rhodiaceta, Paris, France. Filed Aug. 30, 1963.

ERTEL

Owner of French Reg. No. 498,204, dated Aug. 3, 1961 (Paris); Natl. Inst. No. 169,194.
For Furniture and Upholstery, Specifically Upholstered Furniture, Mattresses, Pillows, Cushions, Pads, Bolsters, Hassocks, Canvas Shades, Cots and Bunks.

SN 176,931. Meda-Plast Products Co., Palmyra, N.J. Filed Sept. 13, 1963.

MEDA FOAM

No claim is made to the word "Foam," the picturization of the foam material and the "caduceus" apart from the mark as shown.
For Plastic Mattresses.
First use May 13, 1963.

SN 179,688. Artistic Furniture Co., St. Louis, Mo. Filed Oct. 24, 1963.

ALPHA

For Upholstered Furniture.
First use Oct. 10, 1963.

SN 180,306. Helikon Furniture Co. Inc., New York, N.Y. Filed Nov. 1, 1963.

HELIKON

For Furniture—Namely, Desks, Tables, Chairs and Sofas.
First use Nov. 4, 1959.

SN 180,372. The Cochrane Furniture Co., Inc., Lincolnton, N.C. Filed Nov. 4, 1963.

BAY COLONY

For Dining Room Furniture.
First use Oct. 10, 1963.

SN 180,575. Honorbilt Products, Inc., Philadelphia, Pa. Filed Nov. 6, 1963.

ARTHRO-EASE

For Mattresses.
First use Sept. 11, 1959.

SN 181,332. Conolite, Inc., Carpentersville, Ill. Filed Nov. 18, 1963.

CONOMICA

For Counter Tops, Table Tops and Decorative Wall Paneling.
First use Nov. 6, 1963.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 179,832. Eutectic Welding Alloys Corporation, Flushing, N.Y. Filed Oct. 18, 1963.

EUTIG

For Inert Gas Arc Welding Torches, Parts and Accessories Therefor, and Metallic Welding Rods.
First use Sept. 30, 1963.

SN 179,568. Universal Diffuser Corp., Yonkers, N.Y. Filed Oct. 22, 1963.

FLEXIFLO

For Air Diffusers, Registers and Grilles.
First use 1950.

SN 179,706. Eutectic Welding Alloys Corporation, Flushing, N.Y. Filed Oct. 24, 1963.

TIG-TECTIC

Owner of Reg. No. 732,958.
For Welding Torches, Regulators and Parts Thereof.
First use July 19, 1963.

SN 179,761. Algas Industries, Los Angeles, Calif. Filed Oct. 25, 1963.



For Gas Making Equipment and Complete Gas Plant Mixers and Vaporisers, Comprising Apparatus for Mixing and Vaporising Liquefied Petroleum Gas To Be Used for Heating or Lighting Purposes.
First use on or about Mar. 20, 1963.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 163,925. The Borden Company, New York, N.Y. Filed Mar. 5, 1963.

PERMA-LITE

For Plastic Garden Hose.
First use on or before Apr. 11, 1962.

SN 167,354. Textar G.m.b.H., Leverkusen, Germany. Filed Apr. 19, 1963.

TEXTAR

No claim is made to the representation of the goods, separate and apart from the mark as shown. Owner of German Reg. No. 633,639, dated Feb. 5, 1953.
For Brake Linings and Clutch Linings From Asbestos and With the Use of Artificial Resins, Friction Linings, and Brake and Clutch Material.

SN 178,234. Frank M. Thomas, d.b.a. Topog-E Gasket Company, Tulsa, Okla. Filed Oct. 2, 1963.

TOPOG-E

For Gaskets for Boilers and the Like.
First use June 1, 1962.

Class 37 — Paper and Stationery

SN 156,827. The Ricmel Company, Lido Beach, N.Y. Filed Nov. 7, 1962.

BOWL ⊙ BRIDGE

For Printed Scoring Sheets for Playing a Bowling Game.
First use July 23, 1962.

SN 163,054. International Paper Company, New York, N.Y. Filed Feb. 19, 1963.



The mark consists of a fanciful design of the letters "IP" within a circle. Owner of Reg. No. 744,083.
For Folding Cartons, Shipping Containers, Milk Containers, Multi-Wall Bags and Grocery and Shopping Bags and Sacks.
First use Jan. 22, 1962.

SN 166,919. Multicolor Gravure Corporation, Florence, Mass. Filed Apr. 17, 1963.

MULTICOVER

Owner of Reg. No. 749,694.
For Decorated Vinylplastic-Paper Laminated Book and Binder Cover Material.
First use July 25, 1962.

Class 38 — Prints and Publications

SN 165,724. Water Pollution Control Federation, Washington, D.C. Filed Mar. 29, 1963.



For Technical Journal, Manual and Newsletter Published Periodically.
First use Jan. 1, 1960; December 1950 as to the design.

Class 39 — Clothing

SN 135,010. Walter Lantz Productions, Inc., Hollywood, Calif. Filed Jan. 2, 1962.

CHILLY WILLY

For Clothing—Namely, Costumes, Shirts, Socks and Hats.
First use February 1958.

SN 142,464. Societe Anonyme Jeanne Lanvin, Paris, France. Filed Apr. 17, 1962.



For Women's Hosiery, Dresses, Coats, Skirts, Blouses, Hats and Lingerie.
First use 1903; in commerce 1910.

SN 145,151. Whittenton Garment Corporation, Taunton, Mass. Filed May 21, 1962.

"24" HOUR DUTY

For Women's and Girls' Uniforms, Including Nurses' and Maids' Uniforms.
First use March 1946.

SN 154,463. Dave Bellsey Company, Inc., New York, N.Y. Filed Oct. 4, 1962.

JENNIFER JAMES

The name "Jeanifer James" is fanciful.
For Ladies' Coats and Suits.
First use Aug. 14, 1962.

SN 159,581. Genesco, Inc., Nashville, Tenn. Filed Dec. 21, 1962.

Jm-Pressed

For Suits, Top Coats, Overcoats, Slacks, Sport Coats and Jackets for Men, Boys and Youths.
First use Nov. 29, 1962.

SN 159,878. Jacques de Loux Inc., Sellersville, Pa. Filed Dec. 28, 1962.

THE BUCKS COUNTY MOHAIRLAINE

No claim is made to the word "Mohairlaine" apart from the mark as shown.
For Sportswear—Namely, Women's Sweaters and Skirts.
First use May 17, 1962.

SN 162,746. Genesco Inc., Nashville, Tenn. Filed Feb. 14, 1963.

SKYLARK

For Brassieres and Girdles.
First use Jan. 2, 1963.

SN 162,968. E-Z Mills, Inc., New York, N.Y. Filed Feb. 18, 1963.

HI-FI

Owner of Reg. No. 655,544.
For Infants', Children's and Women's Underwear and Outerwear—Namely, Drawers, Panties, Sacques, Shirts, Sleepers, and Vests.
First use April 1959.
Subj. to Intf. with SN 170,772.

SN 163,586. I. Schneierson & Sons, Inc., New York, N.Y. Filed Feb. 27, 1963.

Fairy Tale BOUTIQUE

Owner of Reg. No. 630,064.
For Ladies' and Children's Slips, Petticoats, Robes and Sleepwear.
First use on or about Feb. 7, 1963.

SN 170,816. Clairol Incorporated, New York, N.Y. Filed June 12, 1963.

CLAIROL

For Accessories—Namely, Gloves.
First use Jan. 2, 1962.

SN 172,449. Alps Sportswear Manufacturing Co., Inc., Boston, Mass. Filed July 5, 1963.

ALPENJANKER

For Sweaters for Men and Women.
First use Feb. 16, 1963.

SN 172,450. Alps Sportswear Manufacturing Co., Inc., Boston, Mass. Filed July 5, 1963.

YODELJANKER

For Sweaters for Men and Women.
First use Feb. 16, 1963.

SN 172,454. Americana Hosiery Mills, Inc., Shelbyville, Tenn. Filed July 5, 1963.

BLACKMAIL

For Ladies' Nylon Hosiery.
First use June 27, 1963.

SN 172,555. Americana Hosiery Mills, Inc., Shelbyville, Tenn. Filed July 8, 1963.

BAND-O-LACE

For Ladies' Nylon Hosiery.
First use May 14, 1963.

SN 172,720. Blue Bell, Inc., Greensboro, N.C. Filed July 10, 1963.

LADY WRANGLER

Owner of Reg. Nos. 441,727, 517,844, and 532,851.
For Misses' and Girls' Sportswear—Namely, Dungarees, Skirts, Jackets, Sweaters, Blouses and Shorts.
First use June 17, 1963.

SN 173,141. Arthur Winer, Incorporated, Gary, Ind. Filed July 16, 1963.

ELASTOBAND

For Slacks.
First use on or about June 26, 1963.

SN 173,812. Blue Bell, Inc., Greensboro, N.C. Filed July 26, 1963.

GATESBURY

For Men's and Boys' Sport Shirts, Slacks, Bermuda Shorts, and Outerwear—Namely, Jackets and Rainwear; and Misses' and Girls' Blouses, Slacks, Shorts, and Outerwear—Namely, Jackets and Rainwear.
First use July 9, 1963.

SN 173,819. Cluett, Peabody & Co., Inc., New York, N.Y. Filed July 26, 1963.

PADDOCK CLUB

Owner of Reg. No. 746,678.
For Underwear.
First use Feb. 12, 1963.

SN 174,183. Ginsburg Mfg. Co. Inc., New York, N.Y. Filed Aug. 1, 1963.

Vanessa

For Ladies' Lingerie.
First use June 11, 1952.

SN 174,185. Hicks-Ponder Company, El Paso, Tex. Filed Aug. 1, 1963.

LANKYS

For Slacks and Trousers.
First use Sept. 1, 1962.

SN 174,213. Markstan, Inc., Chicago, Ill. Filed Aug. 1, 1963.

MARKSTAN

For Women's Coats.
First use July 9, 1963.

SN 174,289. Ripple Sole Corporation, Detroit, Mich. Filed Aug. 1, 1963.

RIPPLE

Owner of Reg. Nos. 611,587, 709,376, and others.
For Soles, Heels, Shoe Soling in Sheet Form, Heels for Walking Casts, Shoes, Athletic Shoes and Boots.
First use at least as early as August 1953 on shoes.

SN 176,490. Caressa, Inc., Miami, Fla. Filed Sept. 9, 1963.

Caressables by Caressa

Owner of Reg. Nos. 665,773 and 741,352.
For Women's and Girls' Shoes.
First use Aug. 6, 1963.

Class 41—Canes, Parasols, and Umbrellas

SN 174,103. Kortenbach & Rauh Kommanditgesellschaft, Solingen-Weyer, Germany. Filed July 31, 1963.

K & R

Owner of German Reg. No. 2,079, dated Jan. 23, 1895.
For Sun and Rain Umbrella Frames.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 159,866. Milton C. Blum, Inc., New York, N.Y. Filed Dec. 28, 1962.

VISANTE'

For Cotton Piece Goods.
First use May 1962.

SN 159,889. Henry Glass & Co., New York, N.Y. Filed Dec. 28, 1962.

POLYFIBRIL

For Knitted and Woven Piece Goods of Cotton and Rayon.
First use Dec. 17, 1962.

SN 160,050. Greeff Fabrics, Inc., Port Chester, N.Y. Filed Jan. 2, 1963.

ESPRIT DE FRANCE

For Woven and Printed Textile Fabrics in the Piece for Making Drapes, Curtains, Slipcovers, Upholstery, Handbags and the Like.
First use Nov. 15, 1962.

SN 160,470. Collins & Aikman Corporation, New York, N.Y. Filed Jan. 10, 1963.

WONDAIRE

For Tricot Apparel Fabrics.
First use Jan. 27, 1962.

SN 162,547. Glen Raven Mills, Inc., New York, N.Y. Filed Feb. 12, 1963.

GLENVELVA

For Fabrics of Natural or Synthetic Fibers or Combinations Thereof Used for Making Robes, Sportswear and Other Wearing Apparel.
First use Dec. 13, 1962.

SN 168,093. William J. McLaughlin & Co., Inc., Philadelphia, Pa. Filed May 3, 1963.

MACKSAN

For Bookcloth.
First use Apr. 1, 1960.

SN 171,011. Graniteville Company, Graniteville, S.C. Filed June 14, 1963.

FIRESTAR

Owner of Reg. Nos. 737,218 and 622,382.
For All-Cotton Twill Used for Jackets, Slacks and the Like.
First use May 3, 1963.

SN 174,027. Hodges Research & Development Company, New York, N.Y. Filed July 30, 1963.

RAMICOT

For Cloth Made of Rami/Cotton Mixtures.
First use Apr. 1, 1963.

SN 174,166. Callaway Mills Company, La Grange, Ga. Filed Aug. 1, 1963.

SVELTSUEDE

For Pile Fabrics.
First use Apr. 23, 1963.

SN 174,256. Bartmann & Bixer, Inc., New York, N.Y. Filed Aug. 2, 1963.

VELOUR-GLO

For Draperies and Bedspreads, and Fabrics Adapted To Be Made Up Into Draperies and Bedspreads.
First use on or about July 3, 1963.

SN 174,257. Bartmann & Bixer, Inc., New York, N.Y. Filed Aug. 2, 1963.

Featheredge

For Curtains, and Fabrics Adapted To Be Made Up Into Curtains.
First use on or about June 26, 1963.

SN 174,299. United Merchants and Manufacturers, Inc., New York, N.Y. Filed Aug. 2, 1963.

NYMARRA

For Flocked Synthetic Laminate Upholstery Fabric.
First use on or about Mar. 18, 1963.

SN 174,719. E. F. Timme & Son, Inc., New York, N.Y. Filed Aug. 8, 1963.

TIMOTTA

Owner of Reg. Nos. 390,325, 531,859, and 655,556.
For Pile Fabrics in the Piece of Cotton, Synthetics and Animal Fibers, and Mixtures Thereof.
First use May 22, 1962.

Class 43 — Thread and Yarn

SN 169,344. Astro Dye Works, Inc., Calhoun, Ga. Filed May 21, 1963.

ASTRODYED

For Yarns.
First use Apr. 2, 1963.

SN 173,817. Burlington Industries, Inc., Greensboro, N.C. Filed July 26, 1963.

SYN - SPUN

For Yarns.
First use June 25, 1963.

Class 44 — Dental, Medical, and Surgical Appliances

SN 169,735. Ketchum & Company, Inc., New York, N.Y. Filed May 27, 1963.

KETCO

For Unsterile Cotton.
First use on or before Jan. 2, 1944.

SN 171,262. James H. Mason, d.b.a. Mason Laboratories, Willow Grove, Pa. Filed June 18, 1963.

COLLY-FAST

Owner of Reg. No. 605,858.
For Surgical Appliances, Specifically Bags or Receptacles Applied Externally to the Body To Surround any Opening, Artificial or Otherwise, and Collect Thereby the Drainage.
First use Oct. 15, 1962.

SN 172,674. Morishita Jintan Company, Limited, Higashiku, Osaka, Japan. Filed July 8, 1963.

JINTAN

Owner of U.S. Reg. Nos. 385,576, 590,233, and others.
For Hypodermic Syringes, Hypodermic Needles, Electro-Clinical Thermometers, and Apparatus for Ultrasonically Cleaning and Sterilizing Surgical Instruments.
First use June 1962; in commerce August 1962.

Class 45 — Soft Drinks and Carbonated Waters

SN 149,590. Old Tavern Foods, Los Angeles, Calif. Filed July 23, 1962.

FASSIONOLA

For Non-Alcoholic Cocktail Mix.
First use at least as early as 1945.

Class 46 — Foods and Ingredients of Foods

SN 116,504. Ch. Gervais, Societe Anonyme, Paris, France. Filed Mar. 27, 1961.

GERVITA

Owner of French Reg. Nos. 427,302, dated Apr. 8, 1953 (Paris); Natl. Inst. No. 8,995; and 451,839, dated July 1, 1955 (Seine); Natl. Inst. No. 60,746; and U.S. Reg. Nos. 578,699, 581,935, and 581,936.
For Dairy, Food-Stuffs Having a Milk Base and Confectionery Products—Namely, Cheese of All Sorts, Milk of All Kinds Especially Powdered, Condensed and Evaporated Milk, Ices, Sherbets, Ice-Creams, Candy, Cakes, Pastry and Chocolates; and Products With a Casine Base To Be Used as a Jellying Agent in Food-Stuffs.

SN 130,884. Philip Morris, Incorporated, New York, N.Y., assignee of Clark Brothers Chewing Gum Company, Pittsburgh, Pa. Filed Oct. 30, 1961.

Clark's di-et

For Sugarless Chewing Gum.
First use Oct. 17, 1961.

SN 148,306. Henri's Food Products Company, Inc., Milwaukee, Wis. Filed July 3, 1962.



For Salad Dressing.
First use June 18, 1962.

SN 156,500. Joseph Karbo, d.b.a. Slim-Pak Products, Los Angeles, Calif. Filed Nov. 2, 1962.

SLIM-PAK

For Capsule Containing Principally Safflower Oil Fortified With Vitamins and Minerals, To Be Used as a Food Supplement.
First use Jan. 5, 1962.

SN 159,870. Robert C. Wian Enterprises, Inc., d.b.a. Leonard A. Dunagan Company, Glendale, Calif. Filed Dec. 18, 1962.



Translation of "El Cortez" is "the Cortez," referring to the deceased Spanish explorer.
For Frozen Shrimp.
First use Jan. 1, 1952.

SN 161,476. Dannen Mills, Inc., d.b.a. Glenhaven Eggs, St. Joseph, Mo. Filed Jan. 28, 1963.

GLENHAVEN

For Fresh Eggs.
First use during February 1957.

SN 161,956. William H. Coburn, d.b.a. Blue Chip Farm, Hampton Falls, N.H. Filed Feb. 4, 1963.

BLUE CHIP FARM

For Frozen Meat.
First use in or about September 1958.

SN 162,546. Gifford-Wood Co., Hudson, N.Y. Filed Feb 12, 1963.

VERSILAC

For Reconstituted Milk Beverage.
First use Jan. 31, 1963.

SN 162,938. Filler Products, Inc., Atlanta, Ga. Filed Feb. 18, 1963.

NU-KRISP

For Fried Pork Rinds.
First use on or about Dec. 7, 1962.

SN 163,563. The W. E. Long Co.—Independent Bakers' Co-operative, Chicago, Ill. Filed Feb. 27, 1963. COLLECTIVE MARK.

BAHAMA

For Bread.
First use Feb. 13, 1963.

SN 163,578. Nopco Chemical Company, d.b.a. Vitex Laboratories, Newark, N.J. Filed Feb. 27, 1963.

VITEX

Owner of Reg. Nos. 306,141 and 554,721.
For Acidified Dairy Products—Namely, Sour Cream Dips.
First use Feb. 6, 1963.

SN 164,112. Carnation Company, Los Angeles, Calif. Filed Mar. 7, 1963.



For Dietary Food Wafers for Weight Control.
First use Jan. 30, 1963.

SN 164,113. Carnation Company, Los Angeles, Calif. Filed Mar. 7, 1963.

MEASURED MENU

For Dietary Food Wafers for Weight Control.
First use Jan. 30, 1963.

SN 168,144. Bandana, Inc., Jacksonville, Fla. Filed May 6, 1963.

Fruit&Ball

For Fruit-Flavored Beverage Concentrate.
First use on or about Feb. 5, 1963.

SN 168,923. Golden Grain Macaroni Co., d.b.a. Ghirardelli Chocolate Co., San Leandro, Calif. Filed May 15, 1963.

COOKIE-ETTES

For Chocolate Chips for Cooking and Eating.
First use Nov. 14, 1955.

SN 172,466. Better Foods, Inc., East Point, Ga. Filed July 5, 1963.

RED TOP

Owner of Reg. Nos. 47,495 and 515,651.
For Canned Vegetables, Specifically Canned Tomatoes.
First use 1897.

SN 172,496. Interstate Bakeries Corporation, Kansas City, Kans. Filed July 5, 1963.

BLUE RIBBON

Owner of Reg. No. 199,980.
For Bakery Sweet Goods Made of Yeast Raised Dough, Cakes, and Doughnuts.
First use May 1, 1961.

SN 172,520. Quality Col-Pak, Inc., d.b.a. Quality Col-Pak, Glendale, Calif. Filed July 5, 1963.

KŌL PAK

For Frozen Food Products—Namely, Fruits, Vegetables, and Meats.
First use July 1945.

SN 172,676. My Bread Baking Co., New Bedford, Mass. Filed July 9, 1963.

MY BREAD

Applicant disclaims the word "Bread" apart from the mark as shown.
For Bread and Rolls.
First use prior to July 8, 1924.

SN 172,844. Purity Stores, Inc., Burlingame, Calif. Filed July 11, 1963.

OLD COFFEE HOUSE

No claim is made to the word "Coffee."
For Coffee.
First use June 28, 1963.

SN 172,845. The Quaker Oats Company, Chicago, Ill. Filed July 11, 1963.

RUSSE

For Ice Cream Cake.
First use Feb. 28, 1963.

SN 172,880. Deltown Foods Incorporated, Yonkers, N.Y. Filed July 12, 1963.



Applicant's wholly-owned subsidiary owner of Reg. No. 536,869.
For Fluid Milk, Fluid Orange Juice in Containers, and Butter.
First use Sept. 14, 1962.

SN 173,212. American Home Products Corporation, New York, N.Y. Filed July 18, 1963.

CLUB MIX

The word "Mix" is disclaimed apart and separately from the mark.
For Shelled, Salted Edible Nuts.
First use Oct. 1, 1962.

SN 173,504. Rhodes Refrigeration, Inc., Portland, Oreg. Filed July 22, 1963.

Rhodes BAKE N SERV

The words "Bake N Serv" are disclaimed apart from the mark as shown. The drawing is lined for red and blue.
For Frozen Bread Dough.
First use Feb. 19, 1962.

SN 173,641. Duffy-Mott Company, Inc., New York, N.Y. Filed July 24, 1963.

FREEM

For Fruit Dessert Mix Consisting of Pureed Fruits and Other Ingredients Which When Whipped Make a Desert of a Fruit Whip Nature.
First use July 9, 1963.

SN 175,850. Fair View Packing Company, Inc., Hollister, Calif. Filed Aug. 27, 1963.

MINI·CORE

For Canned Tomatoes.
First use Aug. 12, 1963.

SN 176,075. Colonna Brothers, North Bergen, N.J. Filed Aug. 30, 1963.

THE Cook's BRAND

The word "Brand" is disclaimed.
For Grated Cheese.
First use May 1, 1923.

SN 176,192. Albert S. Howald, d.b.a. Chef Howald's Famous Foods, Des Moines, Iowa. Filed Sept. 3, 1963.

CHEF HOWALD'S

ALL "N" ONE BRAND

The words "All "N" One Brand" are disclaimed apart from the mark as shown.
For All Purpose Food Seasoning.
First use Mar. 17, 1952.

SN 176,251. Sunshine Biscuits, Inc., Long Island City, N.Y. Filed Sept. 3, 1963.

TRICK 'N TREAT

For Dog Food.
First use Aug. 15, 1959.

SN 177,147. American Home Products Corporation, New York, N.Y. Filed Sept. 17, 1963.

BEEFAGHETTI

Owner of Reg. No. 640,120.
For Canned Combination of Spaghetti, Beef and Sauce.
First use July 30, 1963.

SN 177,282. Pangburn Company, Inc., Fort Worth, Tex. Filed Sept. 18, 1963.

MISS TEXAS

Owner of Reg. No. 719,751.
For Candy.
First use Aug. 27, 1963.

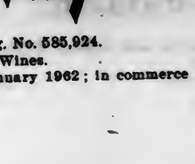
SN 178,860. American Beauty Macaroni Company, Denver, Colo. Filed Oct. 14, 1963.

Hi LOW

For Uncooked Spaghetti.
First use Sept. 12, 1963.

SN 179,123. The Cotton Producers Association, d.b.a. Gold Kist Poultry Growers, Canton, Ga. Filed Oct. 16, 1963.

Early Bird



For Frozen Eviscerated Chicken.
First use July 1, 1961.

SN 179,254. Pet Milk Company, St. Louis, Mo. Filed Oct. 17, 1963.

BIG SHOT

For Flavored Syrups for Addition to Milk.
First use Aug. 20, 1963.

SN 179,464. Sachs Nut Inc., Hopkins, Minn. Filed Oct. 21, 1963.

PUB-NUTS

For Shelled Nuts.
First use Sept. 3, 1963.

SN 180,367. Cadbury Brothers, Limited, Bournville, Birmingham, England. Filed Nov. 4, 1963.

CARAMELLO

Owner of U.S. Reg. Nos. 654,930 and 699,193.
For Chocolate Candy.
First use Mar. 9, 1936; in commerce July 31, 1948.

Class 47—Wines

SN 135,185. Fernando A. de Terry S.A., Puerto de Santa Maria, Spain. Filed Jan. 16, 1963.

FERNANDO A. DE TERRY

For Wines.
First use June 14, 1911; in commerce Mar. 15, 1937.

SN 175,443. Société St. Raphaël, Paris (Seine), France. Filed Aug. 20, 1963.

St Raphael

Owner of Reg. No. 585,924.
For Aperitif Wines.
First use January 1962; in commerce Aug. 1, 1962.

Class 49 — Distilled Alcoholic Liquors

SN 132,465. Haig & Haig Limited, Markinch, Scotland. Filed Nov. 21, 1961.

DIMPLE

For Whisky.
First use Dec. 20, 1960; in commerce Dec. 20, 1960.

SN 159,022. Wolfschmidt Limited, d.b.a. General Distillers Co., London, England. Filed Aug. 27, 1963.

OGUARDSO

Owner of British Reg. No. 833,556, dated Apr. 19, 1962.
For Spirits—Namely, Gin.

SN 162,181. Montebello Liquors, Incorporated, Baltimore, Md. Filed Feb. 6, 1963.

KING'S CROWN

For Scotch Whisky and Gin.
First use Dec. 12, 1933.

SN 170,635. Florasynth Laboratories, Incorporated, New York, N.Y. Filed June 10, 1963.



No claim is made to the words "Purity" and "Uniformity" apart from the mark as shown. Owner of Reg. Nos. 286,411, 752,726, and others.
For Natural and Synthetic Organic Flavors, Extracts, Oils, and Blenders for Alcoholic Beverages.
First use July 1916.

Class 50—Merchandise Not Otherwise Classified

SN 158,497. Richard W. Albertson, d.b.a. Ric-Al Products, Stillwater, Minn. Filed Dec. 5, 1962.

NESTAID

For Sisal, Manila, Hemp, Flax Tow and String for Use by Birds in Building Nests.
First use Mar. 30, 1962.

SN 162,162. Jewel Aquarium Co., Inc., Chicago, Ill. Filed Feb. 6, 1963.

BIO-LAB

For Terraria, Aquaria and Animal Cages for Use as a Biology Study Center.
First use Sept. 27, 1962.

SN 162,615. Anchor Industries, Inc., Cleveland, Ohio. Filed Feb. 13, 1963.

MARINER

For Flexible Protective Floor Mats.
First use Jan. 22, 1963.

SN 165,190. United-Carr Fastener Corporation, Boston, Mass. Filed Mar. 21, 1963.

CARR-KASE

For Plastic Letters Having a Metallic Decorative Coating.
First use Mar. 15, 1963.

SN 165,648. Williamson & Company, North Caldwell, N.J. Filed Mar. 28, 1963.

RED TOP

No exclusive rights are claimed herein to a red colored matrix molding board per se.
For Matrix Molding Boards.
First use 1945.

SN 177,499. Container Corporation of America, Chicago, Ill. Filed Sept. 23, 1963.

PALAPAD

For Pallet Sheets Formed of Paperboard.
First use Aug. 28, 1963.

Class 51 — Cosmetics and Toilet Preparations

SN 149,961. John Robert Powers Products Co., Inc., New York, N.Y. Filed July 27, 1962.

POWERS

Crème de la Crème

The foreign wording "Crème de la Crème" is translated as "cream of the cream" or the "height or acme of excellence."
For Cosmetic Skin Cream.
First use May 7, 1962.
Subj. to Intf. with SN 160,018.

SN 153,810. Nutrilite Products, Inc., Buena Park, Calif. Filed Sept. 17, 1962.

Sport n' tan

For Insect Repelling Sun Tan Gel.
First use May 18, 1962.
Subj. to Intf. with SN 156,241.

SN 154,408. "42" Products Ltd., Inc., Santa Monica, Calif. Filed Oct. 3, 1962.

GO-ROUND

For Men's Toiletries Including Cologne and After-Shave Lotion.
First use Sept. 21, 1961.

SN 156,241. Claus F. Obermeyer, d.b.a. Sport-Obermeyer, Aspen, Colo. Filed Oct. 30, 1962.

SPORTAN

For Suntan Cream.
First use Apr. 16, 1962.
Subj. to Intf. with SN 153,810.

SN 160,861. Guerlain, Inc., New York, N.Y. Filed Jan. 17, 1963.

CHANT D'AROMES

The trademark wording "Chant d'Aromes" is translated "song of fragrances."
For Cologne.
First use Jan. 11, 1963.

SN 160,920. Clairol Incorporated, New York, N.Y. Filed Jan. 18, 1963.

EMCEE

For Hair Tinting, Dyeing and Coloring Preparation.
First use Aug. 27, 1962.

SN 160,921. Clairol Incorporated, New York, N.Y. Filed Jan. 18, 1963.

MASTER OF CEREMONIES

For Hair Tinting, Dyeing and Coloring Preparation.
First use Aug. 27, 1962.

SN 160,922. Clairol Incorporated, New York, N.Y. Filed Jan. 18, 1963.

MC

For Hair Tinting, Dyeing and Coloring Preparation.
First use Aug. 27, 1962.

SN 165,143. Lever Brothers Company, New York, N.Y. Filed Mar. 21, 1963.

STEADY

For Anti-Perspirant Deodorant.
First use Feb. 20, 1963.

SN 165,570. Botany Industries, Inc., d.b.a. Renauld of France, and/or Sea and Ski Company, Reno, Nev. Filed Mar. 28, 1963.

R

For Body and Suntan Lotion.
First use about Apr. 30, 1962.

SN 165,844. Shulton, Inc., Clifton, N.J. Filed Apr. 1, 1963.

Old Spice



Reserving unto itself all of its common law rights, applicant disclaims sole right to the word "Spice" apart from the mark as shown. Owner of Reg. Nos. 344,285, 372,771, and others.
For Men's Cologne, Aerosol Shave Cream, Lather Shaving Soap, Lather and Brushless Shaving Cream, Men's Body Deodorants, Pre-Electric Shave Lotion, After Shave Lotion, Men's Face and Hand Weather Protective Lotion, Men's Hair Groom Products, Men's After Shave Talcum and Body Talcum, and Men's Hair Tonic.
First use 1937.

SN 166,498. Shulton, Inc., Clifton, N.J. Filed Apr. 10, 1963.

Old Spice



Reserving unto itself all of its common law rights, applican disclaims sole right to the word "Spice" apart from the mark as shown. Owner of Reg. Nos. 344,285, 374,868, and others.
For After Shave Lotion, Spray Dedorant, Stick Deodorant, Out-Door Lotion, Brushless Shaving Cream and Lather Shaving Cream.
First use 1954.

SN 166,501. Shulton, Inc., Clifton, N.J. Filed Apr. 10, 1963.

Old Spice



Reserving unto itself all of its common law rights, applican disclaims sole right to the word "Spice" apart from the mark as shown. Owner of Reg. Nos. 344,285, 374,868, and others.
For Cologne for Men, Hair Tonic, Pre-Shaving Lotion and Body Talcum.
First use 1954.

SN 168,317. The House for Men, Inc., Chicago, Ill. Filed May 7, 1963.

DOVER HOUSE

For Cologne and After-Shave Lotion.
First use Apr. 29, 1963.

SN 168,318. The House for Men, Inc., Chicago, Ill. Filed May 7, 1963.

ARCHWAY

For Cologne and After-Shave Lotion.
First use Apr. 29, 1963.

SN 168,320. House of Westmore, Inc., New York, N.Y. Filed May 7, 1963.

WHITE'N LIGHT

For Lipsticks.
First use Feb. 14, 1962.

SN 168,413. The House for Men, Inc., Chicago, Ill. Filed May 8, 1963.

GRAND MARCH

For Cologne and After-Shave Lotion.
First use Apr. 29, 1963.

SN 171,128. Goldblatt Bros., Inc., Chicago, Ill. Filed June 17, 1963.

PERSIST

For Hair Spray.
First use June 1, 1963.

SN 171,518. Adoree Incorporated, New York, N.Y. Filed June 21, 1963.

MADEMOISELLE

For Cosmetic Pencils, Cosmetic Leads for Use With Same, and Mascara.
First use Apr. 9, 1963.

SN 172,266. Helene Wood, North Hollywood, Calif. Filed July 1, 1963.

Peggy Duncan
Teen Tone Facial

"Peggy Duncan" is not the name of any known individual. Applicant disclaims the words "Teen Tone Facial" apart from the mark as shown.
For Preparation for Facials.
First use Apr. 15, 1963.

SN 172,544. Parfums Christian Dior, Societe a Responsabilite Limitee, Paris, France. Filed July 3, 1963.

DIORLING

Owner of French Reg. No. 428,712, dated June 5, 1953 (Paris); Natl. Inst. No. 12,073.
For Perfume, Toilet Water, Face Powder, Lipsticks and Rouge.

SN 172,801. Botany Industries, Inc., d.b.a. Sea and Ski Company, Reno, Nev. Filed July 11, 1963.

TANFASTIC

Owner of Reg. No. 686,462.
For Suntan Lotions and Oils.
First use about Mar. 1, 1963; Dec. 8, 1958, on suntan lotions.

SN 173,846. Lehn & Fink Products Corporation, Bloomfield, N.J. Filed July 26, 1963.

COOL TOUCH

For Cologne.
First use May 1962.

SN 175,241. Harriet Hubbard Ayer, Inc., New York, N.Y. Filed Aug. 19, 1963.

ALEXAND' OF HARRIET HUBBARD AYER

For Hair Spray.
First use Aug. 8, 1963.

SN 175,611. Roux Laboratories, Inc., New York, N.Y. Filed Aug. 22, 1963.

PRETTY FIX

For Preparation for Setting Hair.
First use June 6, 1963.

SN 175,675. Pirrone Laboratories, Inc., Bergenfield, N.J. Filed Aug. 23, 1963.

DANDAVERT

For Hair Lotion Having Dandruff Removing Properties.
First use Feb. 15, 1963.

SN 175,794. Rexall Drug and Chemical Company, d.b.a. Cara Nome, Los Angeles, Calif. Filed Aug. 26, 1963.

SHARI

For Fragrances—Namely, Cologne and Dusting Powder.
First use July 17, 1925.

Class 52 — Detergents and Soaps

SN 153,377. The W. C. Bonner Co., Inc., Watertown, Mass. Filed Sept. 18, 1962.

LUSTERAID

For Liquid Detergents for Use in Commercial Dishwashing Machines.
First use Feb. 15, 1962.

SN 162,190. Plunkett Chemical Company, Chicago, Ill. Filed Feb. 6, 1963.

SANI-KITT

Owner of Reg. No. 748,030.
For Scouring Powder, Grease Solvent, and Preparation for Cleaning Drain Pipes Sold in Kit Form.
First use Oct. 3, 1961.

SN 163,615. The Dow Chemical Company, Midland, Mich. Filed Feb. 28, 1963.

VERTAN

Owner of Reg. Nos. 578,635, 734,765, and others.
For Chemical Cleaning Compounds for Industrial Use.
First use Dec. 18, 1952.

SN 163,768. Rilling Dermetics Company, Bridgeport, Conn. Filed Mar. 1, 1963.

PRECIOUS BODY

For Hair Shampoo Concentrate.
First use Feb. 5, 1963.

SN 165,142. Lever Brothers Company, New York, N.Y. Filed Mar. 21, 1963.

STEADY

For Hair Shampoo.
First use Feb. 20, 1963.

SERVICE MARKS

Class 100 — Miscellaneous

SN 151,546. Washington Engineering Services Company, Inc., Kensington, Md. Filed Aug. 20, 1962.

PRISM

For Engineering Services Relating to Managing, Programming and Scheduling Maintenance for Electronic and Mechanical Equipment and Systems.
First use Nov. 12, 1958.

SN 152,634. Society of Tympanuchus Cupido Pinnatus, Ltd., Wilwaukee, Wis. Filed Sept. 6, 1962.



"Tympanuchus," "Pinnatus" and "Cupido" may be translated to "feathered drummers of love."
For Association Services Such as Dissemination of Literature to Members and the Preparation and Distribution of Publicity and Promotional Materials Designed To Serve Association Members by Creating Interest in, and by Fostering the Preservation of, Prairie Chickens.
First use March 1962.

SN 155,839. Puett Electric Starting Gate, Inc., New York, N.Y. Filed Oct. 24, 1962.

PUETT

For Leasing and Renting of Starting Gates for Starting Horses at Race Tracks.
First use October 1939.

SN 160,467. Auerbach Electronics Corporation, d.b.a. Auerbach Corporation, Philadelphia, Pa. Filed Jan. 10, 1963.

TRACE

For Consulting, Dissemination of Information and Advisory Services in the Field of Data Processing.
First use November 1962.

SN 165,613. National Institute of Diaper Services, Inc., New York, N.Y. Filed Mar. 28, 1963.

CS

For Bed Linen Rental Service.
First use Mar. 4, 1963.

SN 165,614. National Institute of Diaper Services, Inc., New York, N.Y. Filed Mar. 28, 1963.

CUSTOMCARE

For Bed Linen Rental Service.
First use Mar. 4, 1963.

SN 165,728. Water Pollution Control Federation, Washington, D.C. Filed Mar. 29, 1963.



For Association Services—Namely, Informational, Promotional and Education Services Concerning the Collection, Treatment, and Disposal of Sewage and Industrial Waste Waters, the Sanitation of Waterways, Representation of Regional and State Sewage and Industrial Wastes Organizations, and the Design, Construction, Operation and Management of Waste Water Collection and Treatment Works.
First use Jan. 1, 1960; December 1950 in the form of the design.

SN 169,903. Allan Bagge, d.b.a. Electronic Dynamic Balancing Company, Hillside, Ill. Filed May 29, 1963.



For Balancing Services Rendered to Others—Namely, Precision Dynamic Balancing and Vibration Elimination of Mechanical Parts, and Complete Vibration and Preproduction Analysis of Mechanical Parts.
First use on or before Dec. 18, 1962.

SN 175,640. Dobbs Houses, Inc., Memphis, Tenn. Filed Aug. 28, 1963.

TODDLE HOUSE

For Restaurant Services.
First use 1935.

Class 101 — Advertising and Business

SN 108,392. Rocket Pictures, Inc., d.b.a. Better Selling Bureau, Los Angeles, Calif. Filed Nov. 14, 1960.



For Preparing Filmstrips on Order.
First use Sept. 1, 1960.

SN 132,189. J. A. Rodes-Park 'N Shop-Stores, Inc., New York, N.Y. Filed Nov. 16, 1961.



J. A. RODES
PARK 'N SHOP

"J. A. Rodes" is a fictitious name.
For Promoting the Sale of the Goods and Services of Others by Operating a Discount Purchase Club, the Members of Which Are Entitled to a Special Discount on All Purchases Made at Participating Stores.
First use Oct. 19, 1961.

SN 144,891. Keystone Broadcasting System, Inc., Chicago, Ill. Filed May 11, 1962.

RADIOMATION

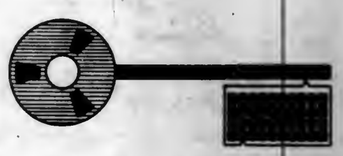
For Preparation of or Arranging for the Preparation of Program Scripts for Affiliated Stations; Recording or Arranging for the Recording of Radio Programs for Affiliated Stations, Arranging for Appropriate Station Times for the Broadcast of Such Programs and Making Payment for Such Station Time and Collecting for Such Time From Applicant's Clients.
First use Apr. 17, 1962.

SN 149,542. Controlled Product Sampling Inc., New York, N.Y. Filed July 23, 1962.



The drawing is lined for red and blue, but color forms no part of the mark.
For Evaluation and Testing of the Products of Others.
First use June 6, 1962.

SN 163,131. Documentation, Incorporated, Bethesda, Md. Filed Feb. 20, 1963.



The drawing is lined for the color blue.
For Information Retrieval Services for Others in the Field of Chemical Patents.
First use Dec. 28, 1962.

SN 163,132. Documentation, Incorporated, Bethesda, Md. Filed Feb. 20, 1963.

TEXTAPE

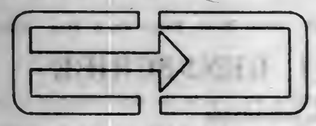
For Information Retrieval Services for Others in the Field of Chemical Patents.
First use Dec. 28, 1962.

SN 164,580. Transkrit Corporation, New York, N.Y. Filed Mar. 13, 1963.

TRANSKRIT

For Application of Hot Spot Carbonizing on Cutting Blanks, Printed and Unprinted Single or Multiple Forms or Sheets.
First use Mar. 26, 1938.

SN 165,218. The East Dayton Tool and Die Company, Dayton, Ohio. Filed Mar. 22, 1963.



For Machinery and Tool Engineering and Design Service.
First use Mar. 1, 1960.

SN 170,372. Bata Shoe Company, Inc., d.b.a. Barrett Shoes, Baltimore, Md. Filed June 5, 1963.

BARETT SHOES

The word "Shoes" is disclaimed apart from the mark as shown.
For Retail Shoe Stores Service.
First use Apr. 2, 1963.

SN 173,096. Carolina Controls Company, Charlotte, N.C. Filed July 16, 1963.



For Custom Design and Fabrication of Systems for the Measurement and Control of Temperature, Pressure and Flow of Gases and Fluids.
First use Nov. 12, 1961.

Class 102 — Insurance and Financial

SN 119,079. Union Finance Corporation, d.b.a. Union Finance Company, Tampa, Fla. Filed May 1, 1961.



For Personal Loan Services.
First use Feb. 13, 1961.

SN 119,080. Union Finance Corporation, d.b.a. Union Finace Company, Tampa, Fla. Filed May 1, 1961.

MR. MONEY

Applicant disclaims the word "Money" apart from the mark as shown.
For Personal Loan Services.
First use Feb. 13, 1961.

SN 172,062. Guarantee Insurance Company, Los Angeles, Calif. Filed June 28, 1963.



For Underwriting Auto Insurance.
First use July 1, 1960.

Class 103 — Construction and Repair

SN 155,350. Frances Roach Schott, d.b.a. Wizard Weavers, Cincinnati, Ohio. Filed Oct. 17, 1962.



For Repair Weaving of Wearing Apparel.
First use 1912.

Class 105 — Transportation and Storage

SN 112,634. The Robert Dollar Co., San Francisco, Calif. Filed Jan. 27, 1961.

SPAL

For Transportation of Passengers, Freight and Mail by Aircraft.
First use Apr. 2, 1960.

SN 112,638. The Robert Dollar Co., San Francisco, Calif. Filed Jan. 27, 1961.

SOUTH PACIFIC AIR LINES

For Transportation of Passengers, Freight and Mail by Aircraft.
First use Apr. 2, 1960.

SN 175,269. Ford Motor Company, Dearborn, Mich. Filed Aug. 19, 1963.

FALS

For Automobile and Truck Leasing Service.
First use July 9, 1962.

Class 106 — Material Treatment

SN 152,915. Photo-Eye Film Service Corporation, Youngstown, Ohio. Filed Sept. 11, 1962.

ROYAL SCOT

For Developing and Printing of Photographs and the Like.
First use Mar. 14, 1960.

SN 175,085. The Amerbelle Corporation, Rockville, Conn. Filed Aug. 15, 1963.



Owner of Reg. Nos. 438,859 and 758,223.
For Fabric Dyeing Service.
First use May 1, 1947.

Class 107 — Education and Entertainment

SN 135,658. Louis Baum, Santa Fe, N. Mex. Filed Jan. 12, 1962.

GENI-SCRIBE

For Teaching Services in the Conducting of a Correspondence Course in Shorthand.
First use Dec. 2, 1961.

SN 162,021. Reading Plus, Inc., Glen Echo, Md. Filed Feb. 4, 1963.

READING PLUS

For Educational Services—i.e. Instruction for Reading Improvement.
First use Oct. 20, 1962.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 173,555. Bowling Proprietors' Association of America, Inc., Park Ridge, Ill. Filed July 23, 1963.



Owner of Reg. Nos. 713,957 and 713,971.
For Indicating Membership in Applicant.
First use Mar. 15, 1963.

TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

767,314. GLOIRE DE ROSENAU. Herbert and Renate Eggert. SN 125,902. Pub. 1–14–64. Filed 8–14–61.

767,315. CENTURA. American Research and Development Company. SN 165,663. Pub. 1–14–64. Filed 3–29–63.

767,316. AC CLAY. United Clay Mines Corporation. SN 165,970. Pub. 1–14–64. Filed 4–2–63.

767,317. LAMINAC. American Cyanamid Company. SN 166,358. Pub. 1–14–64. Filed 4–9–63.

767,318. AMPACET. American Molding Powder & Chemical Corp. SN 166,517. Pub. 1–14–64. Filed 4–11–63.

767,319. SCHJEL-CLAD. G. T. Schjeldahl Company. SN 167,497. Pub. 1–14–64. Filed 4–24–63.

767,320. ANPERTAN. Fred Rueping Leather Company. SN 168,229. Pub. 1–14–64. Filed 5–6–63.

767,321. BOHEMIAN. B. D. Eisendrath Tanning Co. of Racine. SN 169,620. Pub. 1–14–64. Filed 5–24–63.

767,322. VYRAM. Monsanto Chemical Company. SN 169,962. Pub. 1–14–64. Filed 5–29–63.

767,323. MAGNI/MOUNT. Ward's Natural Science Establishment, Inc. SN 170,005. Pub. 1–14–64. Filed 5–29–63.

767,324. ILC. Iowa Limestone Company. SN 170,073. Pub. 1–14–64. Filed 5–31–63.

767,325. GARDEN TIME. Dartmouth Marketing Co., Inc. SN 170,299. Pub. 1–14–64. Filed 6–4–63.

767,326. BARBECUE TIME. Dartmouth Marketing Co., Inc. SN 170,300. Pub. 1–14–64. Filed 6–4–63.

767,327. DACOVIN. Diamond Alkali Company. SN 170,619. Pub. 1–14–64. Filed 6–10–63.

767,328. KICKAPOO. Armour and Company. SN 170,725. Pub. 1–14–64. Filed 6–11–63.

767,329. SEAQUARIUM. Marine Exhibition Corporation. SN 170,927. Pub. 1–14–64. Filed 6–13–63.

767,330. HARTZ MOUNTAIN. Harts Mountain Products Corp. SN 176,912. Pub. 1–14–64. Filed 9–13–63.

Class 2 — Receptacles

767,331. BUILT IN SEAL ASSURED QUALITY AND DESIGN. Plastic Packaging Company. SN. 128,583. Pub. 1–14–64. Filed 9–25–61.

767,332. WINLINER. Hedwin Corporation. SN 164,525. Pub. 1–14–64. Filed 3–13–63.

767,333. LEAFCRAFT. The Lord Baltimore Press, Incorporated. MULTIPLE CLASS (Classes 2 and 37). SN 164,982. Pub. 1–14–64. Filed 3–19–63.

767,334. INNERGLOW. Integral Packaging Corporation. SN 165,782. Pub. 1–14–64. Filed 4–1–63.

767,335. OVERGLOW. Integral Packaging Corporation. SN 165,783. Pub. 1–14–64. Filed 4–1–63.

767,336. TEE PEE. Technical Plastics Co. SN 169,327. Pub. 1–14–64. Filed 5–20–63.

767,337. BAL O FOAM AND DESIGN. Life-Like Products, Inc. SN 169,556. Pub. 1–14–64. Filed 5–23–63.

767,338. KWIK FLIP. American Can Company. SN 169,681. Pub. 1–14–64. Filed 5–27–63.

767,339. FROSTY FOAM. Bob Cross, d.b.a. Bocra of Florida. SN 170,175. Pub. 1–14–64. Filed 6–3–63.

767,340. X-BOSSED. International Paper Company. SN 179,136. Pub. 1–14–64. Filed 10–16–63.

767,341. TRU-EZE. Inland Container Corporation. SN 179,423. Pub. 1–14–64. Filed 10–21–63.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

767,342. VIA. Countess Mara, Incorporated. SN 171,321. Pub. 1–14–64. Filed 6–19–63.

767,343. DANTE. Shields, Inc. SN 171,923. Pub. 1–14–64. Filed 6–26–63.

767,344. HUSH PUPPIES. Wolverine Shoe and Tanning Corporation. SN 172,022. Pub. 1–14–64. Filed 6–27–63.

767,345. DESIGN OF A DOG. Wolverine Shoe and Tanning Corporation. SN 172,265. Pub. 1–14–64. Filed 7–1–63.

767,346. PRIMSTYLE. F. W. Woolworth Co. SN 172,443. Pub. 1–14–64. Filed 7–3–63.

767,347. TOPSALL. F. W. Woolworth Co. SN 173,142. Pub. 1–14–64. Filed 7–16–63.

767,348. SURETTA. Dover Handbag Co., Inc. SN 173,640. Pub. 1–14–64. Filed 7–24–63.

767,349. DOUBLE TAKE. Henry Pollak, Inc. SN 174,285. Pub. 1–14–64. Filed 8–1–63.

767,350. MY DARLIN'. Oklahoma Leather Company, Inc. SN 174,904. Pub. 1–14–64. Filed 8–12–63.

Class 4 — Abrasives and Polishing Materials

767,351. CHEMEX. Chemex Industries, Inc. SN 87,031. Pub. 7–11–61. Filed 12–10–59.

767,352. CHEMEX. Chemex Industries, Inc. SN 87,032. Pub. 8–1–61. Filed 12–10–59.

767,353. UNALUM. Universal Shellac & Supply Co. SN 154,651. Pub. 1–14–64. Filed 10–5–62.

767,354. UNASIL. Universal Shellac & Supply Co. SN 154,652. Pub. 1–14–64. Filed 10–5–62.

767,355. HEIRLOOM. Noxon, Inc. SN 156,513. Pub. 6–11–63. Filed 11–2–62.

767,356. DESIGN OF A TURTLE. Turtle Wax, Inc. MULTIPLE CLASS (Classes 4, 6, 15, and 52). SN 166,327. Pub. 1–14–64. Filed 4–8–63.

767,357. P AND DESIGN. Precision Diamond Tool Company. SN 168,220. Pub. 12–31–63. Filed 5–6–63.

767,358. UNION CARBIDE AND DESIGN. Union Carbide Corporation. SN 171,932. Pub. 1–14–64. Filed 6–26–63.

Class 5 — Adhesives

767,359. USP AND DESIGN. United States Plywood Corporation. SN 150,982. Pub. 1–14–64. Filed 8–10–62.

767,360. RUB-STIK. Lectro-Stik Company. SN 164,981. Pub. 1–14–64. Filed 3–19–63.

767,361. THERMAX. Textile Marking Machine Co., Inc. SN 166,319. Pub. 1–14–64. Filed 4–8–63.

Class 6 — Chemicals and Chemical Compositions

767,356. (See Class 4 for this trademark.)

767,362. ARGOFIX. L. B. Russell Chemicals, Inc. SN 77,036. Pub. 1–5–60. Filed 7–3–59.

767,363. ARGOTONE. L. B. Russell Chemicals, Inc. SN 77,037. Pub. 8–2–60. Filed 7–3–59.

767,364. ARGOLITH. L. B. Russell Chemicals, Inc. SN 77,039. Pub. 1-5-60. Filed 7-3-59.

767,365. SUN-RAY-GARD. Everseal Manufacturing Co. Inc. SN 121,183. Pub. 1-14-64. Filed 6-1-61.

767,366. ACETYL. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, assignee of Carbic-Hoechst Corporation. SN 127,319. Pub. 1-14-64. Filed 9-5-61.

767,367. PYROBRITE. Albright & Wilson (Mfg.) Limited. SN 132,960. Pub. 1-14-64. Filed 11-29-61.

767,368. CEDAR-PLUS. Kalsco Products Co., Inc. SN 135,804. Pub. 1-14-64. Filed 1-15-62.

767,369. SANI-FLUFF. Parachlor Chemical Corporation. SN 137,369. Pub. 11-6-62. Filed 2-6-62.

767,370. LIQUIDATE. Vaughan's Seed Company. SN 139,166. Pub. 1-14-64. Filed 3-5-62.

767,371. STA-TUFF. American Cyanamid Company. SN 140,318. Pub. 10-2-62. Filed 3-21-62.

767,372. SETARON. Geigy Chemical Corporation. SN 165,767. Pub. 1-14-64. Filed 4-1-63.

767,373. CARE. Texize Chemicals, Inc. SN 169,989. Pub. 1-14-64. Filed 5-29-63.

767,374. PLURAFAC. Wyandotte Chemicals Corporation. SN 171,214. Pub. 1-14-64. Filed 6-17-63.

767,375. CLEARSIZE. National Starch and Chemical Corporation. SN 171,372. Pub. 1-14-64. Filed 6-19-63.

767,376. WEST NYSODA. West Chemical Products, Inc. SN 171,414. Pub. 1-14-64. Filed 6-19-63.

767,377. HERITAGE HOUSE AND DESIGN. Heritage House Products, Inc. SN 171,447. Pub. 1-14-64. Filed 6-20-63.

767,378. HERITAGE HOUSE. Heritage House Products, Inc. SN 171,448. Pub. 1-14-64. Filed 6-20-63.

Class 8—Smokers' Articles, Not Including Tobacco Products

767,379. SPARKMASTER AND DESIGN. Sparkmaster Manufacturing Company. SN 173,054. Pub. 1-14-64. Filed 7-15-63.

Class 9—Explosives, Firearms, Equipments, and Projectiles

767,380. CENTENNIAL. Centennial Arms Corporation. SN 121,632. Pub. 6-11-63. Filed 6-8-61.

Class 11—Inks and Inking Materials

767,381. FRYE. Bell Intercontinental Corporation. SN 141,057. Pub. 1-14-64. Filed 3-29-62.

767,382. ZEBRA. Gordon Gullickson, d.b.a. The Litho-Type Company. SN 150,557. Pub. 1-14-64. Filed 8-6-62.

767,383. NEWSDRI. Fred'k H. Levey Company, Inc. SN 167,735. Pub. 1-14-64. Filed 4-29-63.

Class 12—Construction Materials

767,384. INTERPOOL. Charles C. Whitmer, d.b.a. The Interpool Products Company. SN 128,696. Pub. 1-14-64. Filed 9-26-61.

767,385. TARTAN. Minnesota Mining and Manufacturing Company. SN 154,134. Pub. 1-14-64. Filed 9-28-62.

767,386. QUIKRETE. Maintenance Products, Inc. SN 154,360. Pub. 5-21-63. Filed 10-2-62.

767,387. SCULPTILE. Amsterdam Corporation. SN 158,045. Pub. 1-14-64. Filed 11-28-62.

767,388. DECORADOOR. Panelboard Manufacturing Company, Inc. SN 158,928. Pub. 11-26-63. Filed 12-11-62.

767,389. PINWHEELS. The Flintkote Company. SN 161,327. Pub. 1-14-64. Filed 1-24-63.

767,390. SHORE "X." Superior Scaffold Co. SN 162,795. Pub. 1-14-64. Filed 2-14-63.

767,391. MINIT-FIL. M. A. Bruder & Sons, Incorporated. SN 163,029. Pub. 1-14-64. Filed 2-19-63.

767,392. COMMAND 5. Peachtree Doors, Inc. SN 168,343. Pub. 1-14-64. Filed 5-7-63.

767,393. 3 POINT 2. Simpson Timber Company. SN 171,391. Pub. 1-14-64. Filed 6-19-63.

767,394. DU PONT AND DESIGN. E. I. du Pont de Nemours and Company. SN 171,626. Pub. 1-14-64. Filed 6-24-63.

767,395. FENSEASE. Fensease Company. SN 171,632. Pub. 1-14-64. Filed 6-24-63.

767,396. DYNA-COLOR. Plyorient Corporation. SN 172,009. Pub. 1-14-64. Filed 6-27-63.

767,397. KAL-BOND. Kaiser Aluminum & Chemical Corporation. SN 172,390. Pub. 1-14-64. Filed 7-3-63.

767,398. EMULSIBOR. United States Borax & Chemical Corporation. SN 172,533. Pub. 1-14-64. Filed 7-5-63.

767,399. COR-LOVLY. Baker-Aldor-Jones Corp. SN 172,557. Pub. 1-14-64. Filed 7-8-63.

767,400. SCULPTA-GRILLE. Harvey Design Workshop, Inc. SN 172,589. Pub. 1-14-64. Filed 7-8-63.

767,401. SORAN AND DESIGN. Bisiig Bay Lumber Co., Inc. SN 177,482. Pub. 1-14-64. Filed 9-23-63.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

767,402. SENTRY. Interstate Hardware Merchandising, Inc. SN 148,191. Pub. 1-14-64. Filed 7-3-62.

767,403. KENT. Speakman Company. SN 148,764. Pub. 1-14-64. Filed 7-10-62.

767,404. V-BOLTS. Vol-Shan Industries, Inc. SN 149,426. Pub. 1-14-64. Filed 7-19-62.

767,405. TORQ-LOCK. Associated Spring Corporation. SN 155,362. Pub. 11-12-63. Filed 10-18-62.

767,406. INTERNATIONAL PEWTER & PINE AND DESIGN. The International Silver Company. SN 156,121. Pub. 1-14-64. Filed 10-29-62.

767,407. V LINE AND DESIGN. Just Manufacturing Co. SN 159,404. Pub. 1-14-64. Filed 12-19-62.

767,408. BEC AND DESIGN. Brennan Engineering Corporation. SN 161,231. Pub. 1-14-64. Filed 1-23-63.

767,409. COUPLE-JET. Burl L. Cheely, d.b.a. Gold Diver's. SN 165,673. Pub. 1-14-64. Filed 3-29-63.

767,410. HAYS-SEAL. Hays Manufacturing Company. SN 167,258. Pub. 1-14-64. Filed 4-22-63.

767,411. DUO-FLO. Bell & Gossett Company. SN 169,201. Pub. 1-14-64. Filed 5-20-63.

767,412. PL. Jasper Blackburn Corp. SN 169,204. Pub. 1-14-64. Filed 5-20-63.

767,413. DRILOK. E.P.S. (Research & Development) Limited. SN 169,232. Pub. 1-14-64. Filed 5-20-63.

767,414. SPRAY-TIME. H. B. Sherman Manufacturing Company. SN 169,319. Pub. 1-14-64. Filed 5-20-63.

767,415. IS AND DESIGN. Instrument Specialties Company, Inc. SN 169,452. Pub. 1-14-64. Filed 5-22-63.

767,416. PARAWICO PETE AND DESIGN. Paramount Wire Company, Inc. SN 169,562. Pub. 1-14-64. Filed 5-23-63.

767,417. NOVA. Shepherd Casters, Inc. SN 169,984. Pub. 1-14-64. Filed 5-29-63.

767,418. CARGO-LOCK. Woodside Engineering Company. SN 170,010. Pub. 1-14-64. Filed 5-29-63.

767,419. BRIDGESTATE. Bridgestate Construction Material Company. SN 170,024. Pub. 1-14-64. Filed 5-31-63.

767,420. MD. M & D Stores Fixtures, Inc. SN 170,088. Pub. 1-14-64. Filed 5-31-63.

Class 14—Metals and Metal Castings and Forgings

767,421. TRI-NINE. E. J. Lavino and Company. SN 169,145. Pub. 1-14-64. Filed 5-17-63.

767,422. ARISTOVAC-LO NOH. Copperweld Steel Company. SN 169,704. Pub. 1-14-64. Filed 5-27-63.

767,423. STABLOHM. California Fine Wire Company. SN 171,087. Pub. 1-14-64. Filed 6-17-63.

767,424. MADE OF REVERE FOIL AND DESIGN. Revere Copper and Brass Incorporated. SN 171,884. Pub. 1-14-64. Filed 6-19-63.

Class 15—Oils and Greases

767,356. (See Class 4 for this trademark.)

767,425. OVAL FIGURE (DESIGN). The Standard Oil Company. SN 120,259. Pub. 1-1-63. Filed 5-17-61.

767,426. MABANAFT. Marquard & Bahls G.m.b.H. SN 160,432. Pub. 1-14-64. Filed 1-9-63.

767,427. SHIP (DESIGN). Marquard & Bahls G.m.b.H. SN 160,433. Pub. 1-14-64. Filed 1-9-63.

767,428. NALCOOL. Nalco Chemical Company. SN 168,946. Pub. 1-14-64. Filed 5-15-63.

767,429. SWAGEMAGIC AND DESIGN. G & H Research Co. SN 172,382. Pub. 1-14-64. Filed 7-3-63.

767,430. MOLYCON. Continental Oil Company. SN 172,472. Pub. 1-14-64. Filed 7-5-63.

767,431. DRI-TEX. The Capital City Products Company. SN 172,566. Pub. 1-14-64. Filed 7-8-63.

Class 16—Protective and Decorative Coatings

767,432. ZINLAC. William Zinsser & Co. Inc. SN 168,456. Pub. 1-14-64. Filed 5-8-63.

767,433. STEP UP THE LADDER. Cowman-Campbell Paint Co. Inc. SN 169,354. Pub. 1-14-64. Filed 5-21-63.

767,434. SPRAY SCRIPT. Paper Novelty Manufacturing Company. SN 169,758. Pub. 1-14-64. Filed 5-27-63.

767,435. SATINGARD. Iowa Paint Manufacturing Company, Inc. SN 170,478. Pub. 11-19-63. Filed 6-6-63.

767,436. HOMOGENALL. Red Spot Paint & Varnish Co., Inc. SN 171,701. Pub. 1-14-64. Filed 6-24-63.

Class 17—Tobacco Products

767,437. POLYRAMA. Liggett & Myers Tobacco Company. SN 172,830. Pub. 1-14-64. Filed 7-11-63.

767,438. SPIN. P. Lorillard Company. SN 173,861. Pub. 1-14-64. Filed 7-26-63.

Class 18—Medicines and Pharmaceutical Preparations

767,439. AMDAX. Farbenfabriken Bayer Aktiengesellschaft. SN 139,740. Pub. 10-29-63. Filed 3-13-62.

767,440. STAPHLASE. Mead Johnson & Company. SN 163,883. Pub. 9-17-63. Filed 2-25-63.

767,441. VONTROL. Smith Kline & French Laboratories. SN 164,472. Pub. 9-17-63. Filed 3-12-63.

767,442. QUINETAS. U.S. Ethicals Inc. SN 166,764. Pub. 1-14-64. Filed 4-15-63.

767,443. MEPRODONNA. Bristol-Myers Company. SN 168,280. Pub. 1-14-64. Filed 5-7-63.

767,444. MYCORID. Olin Mathieson Chemical Corporation. SN 168,431. Pub. 1-14-64. Filed 5-8-63.

767,445. NUTRI-CHEWS. General Nutrition Corporation, d.b.a. Vitamin Sales Division. SN 168,496. Pub. 1-14-64. Filed 5-9-63.

767,446. MENTHOLATUM M.P.O. The Mentholatum Company. SN 169,044. Pub. 1-14-64. Filed 5-16-63.

767,447. MAJELLA. Rexall Drug and Chemical Company, d.b.a. Rexall Drug Company. SN 169,390. Pub. 1-14-64. Filed 5-21-63.

767,448. UTERACON. The National Laboratories Corporation. SN 170,096. Pub. 1-14-64. Filed 5-31-63.

767,449. MEDIPHAR. Warner-Lambert Pharmaceutical Company. SN 170,136. Pub. 1-14-64. Filed 5-31-63.

767,450. BANAC. Hudson Vitamin Products, Inc. SN 172,905. Pub. 1-14-64. Filed 7-12-63.

767,451. TENSTAN. Standex Laboratories, Inc. SN 173,295. Pub. 1-14-64. Filed 7-18-63.

Class 19—Vehicles

767,452. HYPERFLO. Cook Electric Company. SN 164,509. Pub. 1-14-64. Filed 3-13-63.

767,453. PLEXCEL. General Motors Corporation. SN 167,626. Pub. 1-14-64. Filed 4-26-63.

767,454. NEW YORKER. The New Yorker Homes Corporation. SN 168,214. Pub. 1-14-64. Filed 5-6-63.

767,455. PERMA-TOP. Atlas International Company. SN 174,327. Pub. 1-14-64. Filed 8-5-63.

767,456. MULTI-COAT. Altas International Company. SN 174,328. Pub. 1-14-64. Filed 8-5-63.

767,457. SUPER-CLEAN. Atlas International Company. SN 174,331. Pub. 1-14-64. Filed 8-5-63.

767,458. RIDEMASTER. American Steel Foundries, Incorporated. SN 174,736. Pub. 1-14-64. Filed 8-9-63.

767,459. AGAPCO. Auto Gear & Parts, Inc. SN 174,739. Pub. 1-14-64. Filed 8-9-63.

767,460. MOBL-COR. Union Bag-Camp Paper Corporation. SN 174,807. Pub. 1-14-64. Filed 8-9-63.

767,461. MOBL-COR AND DESIGN. Union Bag-Camp Paper Corporation. SN 174,808. Pub. 1-14-64. Filed 8-9-63.

Class 20—Linoleum and Oiled Cloth

767,462. BOELITE. The Boeing Company. SN 138,763. Pub. 1-14-64. Filed 2-28-62.

Class 21—Electrical Apparatus, Machines, and Supplies

767,463. INN ROOM. Morning Coffee, Inc., d.b.a. Courtesy Products. SN 131,221. Pub. 1-14-64. Filed 11-2-61.

767,464. KUBA. Kuba Tonmöbel und Apparatebau Gerhard Kubetschek. SN 151,062. Pub. 1-14-64. Filed 8-13-62.

767,465. VM AND DESIGN. V-M Corporation. SN 153,351. Pub. 1-14-64. Filed 9-17-62.

767,466. INDY 500 AND DESIGN. Indy 500 Spark Plug Company. SN 154,251. Pub. 1-14-64. Filed 10-1-62.

767,467. SPARTA-MATIC. Sparta Electronic Corporation. SN 161,103. Pub. 1-14-64. Filed 1-21-63.

767,468. MARCOSWITCH. Marco Industries Company. SN 161,537. Pub. 1-14-64. Filed 1-28-63.

767,469. CUBIC. Holophane Company, Inc. SN 165,180. Pub. 1-14-64. Filed 3-21-63.

767,470. BLUE GRASS. Belknap Hardware and Manufacturing Company. SN 168,382. Pub. 12-10-63. Filed 5-8-63.

767,471. KOMLECTRO. Ametek, Inc. SN 173,087. Pub. 1-14-64. Filed 7-16-63.

767,472. MARKSMAN. Day-Brite Lighting Division of The Emerson Electric Manufacturing Company. SN 173,830. Pub. 1-14-64. Filed 7-26-63.

767,473. THERMOBOND. Varian Associates. SN 173,987. Pub. 1-14-64. Filed 7-29-63.

767,474. DUO-FI. Al Davis Radio, Inc. SN 174,016. Pub. 1-14-64. Filed 7-30-63.

767,475. SIGNATURE CUSTOM. Al Davis Radio, Inc. SN 174,018. Pub. 1-14-64. Filed 7-30-63.

767,476. LE CHAPERON. Al Davis Radio, Inc. SN 174,021. Pub. 1-14-64. Filed 7-30-63.

767,477. CENTER LINE AND DESIGN. Tung-Sol Electric Inc. SN 174,061. Pub. 1-14-64. Filed 7-30-63.

767,478. ELOTHERM. AEG-Elotherm G.m.b.H. SN 174,316. Pub. 1-14-64. Filed 8-5-63.

767,479. HYDROLIFE. The Emerson Electric Manufacturing Company. SN 174,356. Pub. 1-14-64. Filed 8-5-63.

767,480. SECSYN. Lear Siegler, Inc. SN 174,513. Pub. 1-14-64. Filed 8-6-63.

Class 22 — Games, Toys, and Sporting Goods

767,481. TIDDLY-LINKS AND DESIGN. Raymond L. Eddy. SN 141,829. Pub. 8-6-63. Filed 4-9-62.

767,482. ORBIT-A WAY. Sock-It Company, Inc. SN 145,740. Pub. 2-26-63. Filed 5-29-62.

767,483. DREADNOUGHT DRIVER. Harry C. Lee & Co., Inc. SN 166,729. Pub. 1-14-64. Filed 4-15-63.

767,484. LEE. Harry C. Lee & Co., Inc. SN 167,009. Pub. 1-14-64. Filed 4-18-63.

767,485. LIONEL AND DESIGN. The Lionel Corporation. SN 167,280. Pub. 1-14-64. Filed 4-22-63.

767,486. MENNIFISH ETC. AND DESIGN. Harry G. Helm. SN 167,907. Pub. 1-14-64. Filed 5-1-63.

767,487. EXERSLIDER. Snyder Manufacturing Company. SN 168,865. Pub. 1-14-64. Filed 5-14-63.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

767,488. E. Houdaille Industries, Inc., assignee of Walen-Strippit Corporation. SN 697,480. Pub. 2-25-58. Filed 10-31-55.

767,489. LYNES. Lynes, Inc. SN 126,175. Pub. 1-14-64. Filed 8-17-61.

767,490. POWER BLOCK. Marine Construction & Design Co. SN 140,144. Pub. 1-14-64. Filed 3-19-62.

767,491. FLUID-PISTON. Allis-Chalmers Manufacturing Company. SN 144,798. Pub. 1-14-64. Filed 5-17-62.

767,492. MONO-PRESS. Hydro-Air Engineering, Inc. SN 146,054. Pub. 1-22-63. Filed 6-4-62.

767,493. KITY AND DESIGN. Emile Wodli. SN 149,238. Pub. 1-14-64. Filed 7-17-62.

767,494. TURBO-CLEAN. Swimquip, Inc. SN 152,845. Pub. 1-14-64. Filed 9-10-62.

767,495. CAGE-PAKTOR. J.M.J. Industries, Inc. SN 153,485. Pub. 1-14-64. Filed 9-19-62.

767,496. COSMOS. Rudolph Erenhouse, d.b.a. Cosmos Products Company. SN 153,637. Pub. 12-3-63. Filed 9-21-62.

767,497. NJM AND DESIGN. New Jersey Machine Corporation. SN 154,913. Pub. 1-14-64. Filed 10-10-62.

767,498. DIANA. New Jersey Machine Corporation. SN 154,915. Pub. 1-14-64. Filed 10-10-62.

767,499. DELTA. New Jersey Machine Corporation. SN 154,916. Pub. 1-14-64. Filed 10-10-62.

767,500. BETA. New Jersey Machine Corporation. SN 154,917. Pub. 1-14-64. Filed 10-10-62.

767,501. AG-MASTER. Hayes Steel Products Limited. SN 159,235. Pub. 1-14-64. Filed 12-17-62.

767,502. MUVATUN. Universal American Corporation. SN 159,311. Pub. 1-14-64. Filed 12-17-62.

767,503. LINE. Fraser's, Inc. SN 160,771. Pub. 1-14-64. Filed 1-16-63.

767,504. PYROMITE. Malaker Laboratories, Inc. SN 163,378. Pub. 1-14-64. Filed 2-25-63.

767,505. WRAP QUEEN. Washington Packaging Corp. SN 164,674. Pub. 1-14-64. Filed 3-14-63.

767,506. HUBER AND DESIGN. J. M. Huber Corporation. SN 164,724. Pub. 1-14-64. Filed 3-15-63.

767,507. ADJUST-O-FEEDER. The New York Air Brake Company. SN 164,875. Pub. 1-14-64. Filed 3-18-63.

767,508. THURON. Thuron Sprayer Mfg. Co. SN 165,188. Pub. 1-14-64. Filed 3-21-63.

767,509. TRANSICON. Huck Co., Inc. SN 167,386. Pub. 1-14-64. Filed 4-23-63.

767,510. SPIRALEX. Perkins Machine and Gear Company. SN 168,350. Pub. 11-19-63. Filed 5-7-63.

767,511. SPIRAL-X. Perkins Machine and Gear Company. SN 168,351. Pub. 11-19-63. Filed 5-7-63.

767,512. ACRATRACE. The Cincinnati Milling Machine Co. SN 169,020. Pub. 1-14-64. Filed 5-16-63.

767,513. SAMURAI. The Mennen Company. SN 169,383. Pub. 1-14-64. Filed 5-21-63.

767,514. BROOKE TOOL. The Brooke Tool Manufacturing Company Limited. SN 169,421. Pub. 1-14-64. Filed 5-22-63.

767,515. GILMAN. Gilman Engineering & Mfg. Co., Inc., assignee of Gilman Engineering & Mfg. Co. SN 169,447. Pub. 1-14-64. Filed 5-22-63.

767,516. VOTRON. Joseph P. Harris. SN 169,543. Pub. 1-14-64. Filed 5-28-63.

767,517. TASTI-KUT. Matthew A. May. SN 169,862. Pub. 1-14-64. Filed 5-24-63.

767,518. M-BOSS. Sossner Tap and Tool Corporation. SN 169,880. Pub. 1-14-64. Filed 5-28-63.

767,519. CENTRIMIL ETC. AND DESIGN. Entoleter, Inc. SN 170,052. Pub. 1-14-64. Filed 5-31-63.

767,520. SNO VAC. Raymond A. Kennedy, d.b.a. B & B Manufacturing Co. SN 170,838. Pub. 1-14-64. Filed 6-12-63.

767,521. TYNE. Tyne Impex Establishment, assignee of David Feldman, d.b.a. Tyne Shavers (Western Hemisphere). SN 171,417. Pub. 1-14-64. Filed 6-17-63.

767,522. HYDRO-JET AND DESIGN. Di-Dro Engineering Company. SN 172,377. Pub. 1-14-64. Filed 7-3-63.

767,523. HYPLICATOR. Engis Limited. SN 174,024. Pub. 1-14-64. Filed 7-30-63.

767,524. AUTOBAG. Automated Packaging Corp. SN 174,335. Pub. 1-14-64. Filed 8-5-63.

767,525. TRAVELOG. Travelog Inc. SN 174,549. Pub. 1-14-64. Filed 8-6-63.

Class 26 — Measuring and Scientific Appliances

767,526. NEOPHAN. Auer-Glaswerke GmbH. SN 118,319. Pub. 1-14-64. Filed 4-21-61.

767,527. VECTORLOG AND DESIGN. Lafayette Radio Electronics Corporation. SN 119,013. Pub. 1-14-64. Filed 5-1-61.

767,528. COPYLINE. Gevaert Photo-Producten N.V. SN 159,344. Pub. 1-14-64. Filed 6-12-63.

767,529. BETAMIKE. Avionic Products Engineering Corporation. SN 171,076. Pub. 1-14-64. Filed 6-17-63.

767,530. LILI. Alfred Odenwald, d.b.a. Kontaktwerk Enzberg Ing. Alfred Odenwald. SN 172,151. Pub. 1-14-64. Filed 6-20-63.

767,531. UNOR. Bergwerksverband G.m.b.H. SN 172,465. Pub. 1-14-64. Filed 7-5-63.

767,532. PMT. Indiana General Corporation. SN 172,495. Pub. 1-14-64. Filed 7-5-63.

767,533. PARKER REACTITROLLER. Hooker Chemical Corporation. SN 172,590. Pub. 1-14-64. Filed 7-8-63.

767,534. ROTO-ANGLE. Sanford Ink Company. SN 172,942. Pub. 1-14-64. Filed 7-12-63.

767,535. ELIMINATE THE RISK—USE THERM-O-DISC. Thermo-O-Disc, Incorporated. SN 172,952. Pub. 1-14-64. Filed 7-12-63.

Class 27 — Horological Instruments

767,536. HIRAM. Les Importations C.M. Ltee. SN 165,690. Pub. 1-14-64. Filed 3-29-63.

767,537. LORD HIRAM. Les Importations C.M. Ltee. SN 165,691. Pub. 1-14-64. Filed 3-29-63.

767,538. LADY HIRAM. Les Importations C.M. Ltee. SN 165,692. Pub. 1-14-64. Filed 3-29-63.

767,539. LIFE-GUARD. Wyler Watch Corporation. SN 171,596. Pub. 1-14-64. Filed 6-21-63.

767,540. PREFERRED. Sunbeam Corporation. SN 171,817. Pub. 1-14-64. Filed 6-25-63.

Class 28 — Jewelry and Precious-Metal Ware

767,541. MC. Murray Chuven. SN 159,043. Pub. 1-14-64. Filed 12-13-62.

767,542. KIRI. Kirie Corporation. SN 166,199. Pub. 1-14-64. Filed 4-5-63.

767,543. ABG. Aaron G. Buch, d.b.a. Al G. Buch. SN 170,026. Pub. 1-14-64. Filed 5-31-63.

767,544. WOOD NYMPH. Coro, Inc. SN 173,154. Pub. 1-14-64. Filed 7-17-63.

767,545. TEMPT ME. Coro, Inc., SN 173,234. Pub. 1-14-64. Filed 7-18-63.

Class 29 — Brooms, Brushes, and Dusters

767,546. SEA SPRAY. Osrow Products Company, Inc. SN 95,112. Pub. 10-18-60. Filed 4-14-60.

Class 31 — Filters and Refrigerators

767,547. GEOMETRIC DESIGN. The American Hardware Corporation, by assignment and merger from C. V. Hill & Company, Inc. SN 151,488. Pub. 1-14-64. Filed 8-20-62.

767,548. AMER-THERM. American Air Filter Company, Inc. SN 159,186. Pub. 1-14-64. Filed 12-17-62.

767,549. BRADFORD AND DESIGN. W. T. Grant Company. SN 159,489. Pub. 1-14-64. Filed 12-20-62.

767,550. HY-SORB. Johns-Manville Corporation. SN 166,465. Pub. 1-14-64. Filed 4-10-63.

767,551. VERSAPOR. Gelman Instrument Company. SN 167,381. Pub. 1-14-64. Filed 4-23-63.

767,552. ACROPOR. Gelman Instrument Company. SN 167,382. Pub. 1-14-64. Filed 4-23-63.

767,553. DRUMDEAN. Dean Products, Inc. SN 169,114 Pub. 1-14-64. Filed 5-17-63.

767,554. CUNO-MATIC. The Cuno Engineering Corporation. SN 170,819. Pub. 1-14-64. Filed 6-12-63.

767,555. AQUA-VEL. Fleischman Plumbing Co., Inc., d.b.a. Water Conditioning Engineers. SN 170,903. Pub. 1-14-64. Filed 6-13-63.

767,556. CONOMANUAL. Continental Air Filters, Inc. SN 170,990. Pub. 1-14-64. Filed 6-14-63.

767,557. TAP KING. Woody Manufacturing Company. SN 172,267. Pub. 1-14-64. Filed 7-1-63.

767,558. SALT-MISER. Everpure, Inc. SN 172,885. Pub. 1-14-64. Filed 7-12-63.

767,559. DESIGN OF ARROWS. Seitz-Asbest-Werke Theo & Geo Seitz Kommanditgesellschaft. SN 173,402. Pub. 1-14-64. Filed 7-18-63.

Class 32 — Furniture and Upholstery

767,560. STORK DESIGN. Storkline Corporation. SN 134,051. Pub. 1-14-64. Filed 12-14-61.

767,561. NU-DESK. Fred R. Amsler, Jr. SN 152,191. Pub. 1-14-64. Filed 8-30-62.

767,562. IMPERIAL CROWN COLLECTION. Imperial Furniture Company. SN 157,703. Pub. 1-14-64. Filed 11-21-62.

767,563. VOTE GARD AND DESIGN. Casto & Harris, Inc. SN 166,889. Pub. 1-14-64. Filed 4-17-63.

767,564. CRAFTSMAN SILHOUETTE (DESIGN). Richard E. Lennox, d.b.a. The Lennox Shop. SN 168,617. Pub. 1-14-64. Filed 5-10-63.

767,565. KIDDIE KASTLE. Roy W. Brown. SN 169,593. Pub. 1-14-64. Filed 5-20-63.

767,566. ESTATE AND DESIGN. Shampaine Industries, Inc. SN 175,805. Pub. 1-14-64. Filed 8-26-63.

767,567. BLUE HEAVEN. The B. F. Goodrich Company. SN 175,991. Pub. 1-14-64. Filed 8-29-63.

Class 33 — Glassware

767,568. FAIRFIELD. Anchor Hocking Glass Corporation. SN 167,601. Pub. 1-14-64. Filed 4-26-63.

Class 34 — Heating, Lighting, and Ventilating Apparatus

767,569. KEWANEE. American Radiator & Standard Sanitary Corporation. SN 166,777. Pub. 1-14-64. Filed 4-16-63.

767,570. COMET GLAS. Hoyt Heater Company. SN 168,194. Pub. 1-14-64. Filed 5-6-63.

767,571. DRUMDEAN. Dean Products, Inc. SN 169,115. Pub. 1-14-64. Filed 5-17-63.

767,572. VULCAN MANUFACTURING. Vulcan-Cincinnati, Inc., d.b.a. Vulcan Manufacturing. SN 169,803. Pub. 1-14-64. Filed 5-27-63.

767,573. HARTILE GXD. Harbison-Walker Refractories Company. SN 169,929. Pub. 1-14-64. Filed 5-29-63.

767,574. HARTILE MXD. Harbison-Walker Refractories Company. SN 169,931. Pub. 1-14-64. Filed 5-29-63.

767,575. STRONGSET. All-State Welding Alloys Co., Inc. SN 173,085. Pub. 1-14-64. Filed 7-16-63.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

767,576. SOFTWALL. Dayco Corporation. SN 137,995. Pub. 1-14-64. Filed 2-15-62.

767,577. RUSTEX. The Russell Manufacturing Company. SN 165,634. Pub. 1-14-64. Filed 3-28-63.

767,578. VELVETOUCH ORGANIK. The S. K. Wellman Company. SN 171,208. Pub. 1-14-64. Filed 6-17-63.

767,579. ELASTOSEAL. W. S. Shamban & Co. SN 172,110. Pub. 1-14-64. Filed 6-28-63.

767,580. RED CIRCLE OF SECURITY. United States Rubber Company. SN 174,461. Pub. 1-14-64. Filed 8-5-63.

Class 36 — Musical Instruments and Supplies

767,581. ZERO START ZS AND DESIGN. Sanders Associates, Incorporated. SN 121,324. Pub. 1-14-64. Filed 6-2-61.

767,582. BAYLOR. Zale Jewelry Company, Inc. SN 174,930. Pub. 1-14-64. Filed 8-12-63.

767,583. HARTZ MOUNTAIN. Hartz Mountain Products Corp. SN 176,917. Pub. 1-14-64. Filed 9-13-63.

767,584. COMMENTATOR. Ricoh Industries, U.S.A., Inc. SN 180,230. Pub. 1-14-64. Filed 10-31-63.

Class 37 — Paper and Stationery

767,583. (See Class 2 for this trademark.)

767,585. SHADE-O-MATIC. Montag, Inc. SN 130,871. Pub. 1-14-64. Filed 10-20-61.

767,586. TRANSOFAX. Columbia Ribbon & Carbon Manufacturing Co., Inc. SN 134,615. Pub. 1-14-64. Filed 12-26-61.

767,587. SCAN-A-WEEK. Professional Printing Company, Inc. SN 140,488. Pub. 1-14-64. Filed 3-22-62.

767,588. REPRESENTATION OF A FLYING DOVE. The Sanitary Paper Mills, Incorporated. SN 141,368. Pub. 1-14-64. Filed 4-2-62.

767,589. SPA. Clearwater Tissue Mills, Inc., assignee of Swanee Paper Corporation. SN 155,757. Pub. 9-17-63. Filed 10-23-62.

767,590. ENVELABEL. Curtis 1000, Incorporated. SN 171,437. Pub. 1-14-64. Filed 6-20-63.

767,591. RAVE. Tomahawk Paper Co., Inc. SN 174,548. Pub. 1-14-64. Filed 8-6-63.

767,592. MINIPOLY. International Paper Company. SN 174,870. Pub. 1-14-64. Filed 8-12-63.

Class 38 — Prints and Publications

767,593. THE POSTGRADUATE. Irving S. Rossoff, d.b.a. I. Lienroc. SN 108,393. Pub. 1-14-64. Filed 11-14-60.

767,594. THROUGH THE BAMBOO CURTAIN. Chinese Refugee Relief. SN 165,027. Pub. 1-14-64. Filed 3-20-63.

767,595. WORLD NEWS OF THE WEEK. News Map of the Week, Inc. SN 165,244. Pub. 1-14-64. Filed 3-22-63.

767,596. THE RIVERSIDE PRESS. Houghton Mifflin Company. SN 165,924. Pub. 1-14-64. Filed 4-2-63.

767,597. BLAST BLAIR. United Feature Syndicate, Inc. SN 166,848. Pub. 1-14-64. Filed 4-16-63.

767,598. IN THE GROOVE ETC. AND DESIGN. Miniature International Racing Association, Inc. SN 166,858. Pub. 1-14-64. Filed 3-29-63.

767,599. TELESPORTS. W. Wallace Orr, Inc. SN 167,081. Pub. 1-14-64. Filed 4-18-63.

767,600. OH, LADY! The Hall Syndicate, Inc. SN 168,081. Pub. 1-14-64. Filed 5-3-63.

767,601. GOLD-STRIKE BOWLING. General Features Corporation. SN 169,130. Pub. 1-14-64. Filed 5-17-63.

767,602. THE GEORGIA BULLETIN. Archbishop of the Roman Catholic Archdiocese of Atlanta, Georgia. SN 169,343. Pub. 1-14-64. Filed 5-21-63.

Class 39 — Clothing

767,603. JAC'-JULIETTE. Jac-Juliette Shoes, Inc. SN 126,345. Pub. 1-14-64. Filed 8-21-61.

767,604. BLACK MAGIC. Billie Lebow. SN 147,006. Pub. 1-14-64. Filed 6-15-62.

767,605. GOLDEN ANCHOR AND DESIGN. U.S.A. Mills, Inc. SN 154,070. Pub. 1-14-64. Filed 9-27-62.

767,606. MISTER G OF DALLAS. Mister G of Dallas, Inc. SN 156,009. Pub. 1-14-64. Filed 10-26-62.

767,607. SNAP-AMATIC. Hat Corporation of America. SN 162,342. Pub. 1-14-64. Filed 2-8-63.

767,608. GRO BABE. Lisle Mills, Inc. (Pennsylvania corporation—new corporation), assignee, by mesne assignments, of Lisle Mills, Inc. (Pennsylvania corporation). SN 162,758. Pub. 1-14-64. Filed 2-14-63.

767,609. INNOVATIONS BY FOOT FLAIRS. Admiral Shoe Corporation, d.b.a. Mutual Shoe Sales Co. SN 166,605. Pub. 1-14-64. Filed 4-12-63.

767,610. ALPINE. McCrory Corporation. SN 166,914. Pub. 1-14-64. Filed 4-17-63.

767,611. SNAP-AMATIC. Hat Corporation of America. SN 167,821. Pub. 1-14-64. Filed 4-30-63.

767,612. CONDAL. Stratton Coats, Incorporated. SN 169,492. Pub. 1-14-64. Filed 5-22-63.

767,613. SOLAR. Mishawaka Rubber Company, Inc. SN 169,559. Pub. 1-14-64. Filed 5-23-63.

767,614. SPEDE-IN-SOLES. Robert P. Glynn, d.b.a. Glynco. SN 169,849. Pub. 1-14-64. Filed 5-28-63.

767,615. MR. POODLE. Browns Hosiery Mills, Inc. SN 170,025. Pub. 1-14-64. Filed 5-31-63.

767,616. GALE MITCHELL. Parade Dress Co. Inc. SN 170,209. Pub. 1-14-64. Filed 6-3-63.

767,617. CUDDLOTTA. Petite Miss Co. SN 170,212. Pub. 1-14-64. Filed 6-3-63.

767,618. TRU-TOUCH. Becton Dickinson and Company. SN 170,302. Pub. 1-14-64. Filed 6-4-63.

767,619. ACME BOOTS AND DESIGN. Acme Boot Company, Inc. SN 170,444. Pub. 1-14-64. Filed 6-6-63.

767,620. LISA COBB. Saks & Company. SN 170,559. Pub. 1-14-64. Filed 6-7-63.

767,621. FANCIFUL SILHOUETTE OF A MAN. Johnny Appleseed's, Inc. SN 170,753. Pub. 1-14-64. Filed 6-11-63.

767,622. AVONSHIRE. Beisman-Rothman Corp. SN 170,764. Pub. 1-14-64. Filed 6-11-63.

767,623. STROLL-EEZ. Super-Form Brassiere, Inc. SN 170,774. Pub. 1-14-64. Filed 6-11-63.

767,624. MAURICE. Maurice Allison, d.b.a. Royal Crown Sales. SN 170,796. Pub. 1-14-64. Filed 6-12-63.

767,625. UNDER RIGHT. Maidenform, Inc. SN 170,920. Pub. 1-14-64. Filed 6-13-63.

767,626. MOREOVER. Maidenform, Inc. SN 170,921. Pub. 1-14-64. Filed 6-13-63.

767,627. POLYVEL. Leath, McCarthy & Maynard, Inc. SN 171,021. Pub. 1-14-64. Filed 6-14-63.

767,628. VACUUM GRIP. Masterbilt Hosiery Company, Inc. SN 171,025. Pub. 1-14-64. Filed 6-14-63.

767,629. ROMI. Romi Shoe Corporation. SN 174,290. Pub. 1-14-64. Filed 8-2-63.

767,630. LOVE. Joseph Love, Inc. SN 174,396. Pub. 1-14-64. Filed 8-5-63.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

767,631. FEATHER-LITE. Middletown Rubber Corporation. SN 124,829. Pub. 3-27-62. Filed 7-27-61.

767,632. TEX-A-GRIP. Textile Rubber & Chemical Company. SN 171,054. Pub. 1-14-64. Filed 6-14-63.

767,633. CHAVACETE. Moulinage et Retorderie de Chavanoz, Societe Anonyme. SN 171,267. Pub. 1-14-64. Filed 6-18-63.

Class 43 — Thread and Yarn

767,634. FILORA. Eastman Kodak Company. SN 156,099. Pub. 1-14-64. Filed 10-29-62.

767,635. PERMA-HUE. Thor Mills Limited. SN 164,756. Pub. 1-14-64. Filed 3-15-63.

767,636. HOECHST AND DESIGN. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. SN 170,825. Pub. 1-14-64. Filed 6-12-63.

767,637. CHAVACETE. Moulinage et Retorderie de Chavanoz, Societe Anonyme. SN 172,326. Pub. 1-14-64. Filed 7-2-63.

Class 44 — Dental, Medical, and Surgical Appliances

767,638. FOOT CARE INTERNATIONAL AND DESIGN. Roger T. Case, d.b.a. Foot Care International. SN 154,207. Pub. 1-14-64. Filed 10-1-62.

767,639. MINI-POLYGRAPH. Warren E. Gilson, M.D., d.b.a. Gilson Medical Electronics. SN 158,443. Pub. 1-14-64. Filed 12-4-62.

767,640. CEL-OPHTHO. Wayne-Ferrell Pharmaceuticals, Inc. SN 163,908. Pub. 1-14-64. Filed 3-4-63.

767,641. JOBST. Jobst Institute, Inc. SN 173,006. Pub. 1-14-64. Filed 7-15-63.

Class 45 — Soft Drinks and Carbonated Waters

767,642. GREEN MIST. Tone Products-The Orange Fresh Co., Inc. SN 163,431. Pub. 11-26-63. Filed 2-25-63.

767,643. SKIP AND DESIGN. The Seven-Up Company. SN 171,495. Pub. 1-14-64. Filed 6-20-63.

767,644. CINCH. The Brooks Bottling Company, d.b.a. Brooks Bottling Co. SN 171,609. Pub. 1-14-64. Filed 6-24-63.

Class 46 — Foods and Ingredients of Foods

767,645. IMPERIAL AND DESIGN. Imperial Products. SN 116,032. Pub. 5-1-62. Filed 3-20-61.

767,646. THE BRAZIER AND DESIGN. American Dairy Queen Corporation, assignee of Brazier Foods, Inc. SN 125,192. Pub. 11-5-63. Filed 8-2-61.

767,647. GALAXY AND DESIGN. Star Poultry Company, Inc. SN 128,477. Pub. 1-14-64. Filed 9-22-61.

767,648. FLAVORESE. Evans Chemicals Limited. SN 137,332. Pub. 1-14-64. Filed 2-6-62.

767,649. ACME IDEAL AND DESIGN. Acme Markets, Inc., by change of name from American Stores Company. SN 138,365. Pub. 11-19-63. Filed 2-21-62.

767,650. SALAD SUPREME. Bancroft Dairy Company, d.b.a. Bancroft Dairy. SN 138,380. Pub. 1-14-64. Filed 2-21-62.

767,651. WHOA NELLIE! AND DESIGN. J. A. Wood Company, Growers, Packers & Shippers. SN 142,760. Pub. 8-21-62. Filed 4-20-62.

767,652. PECAN TWIRLS. Aunt Fanny's Baking Co. SN 151,288. Pub. 8-13-63. Filed 8-16-62.

767,653. NUV (FANCIFUL). Comidex Corporation. SN 153,255. Pub. 1-14-64. Filed 9-17-62.

767,654. DUTCH INN. McCrory Corporation, d.b.a. McCrory-McLellan-Green Stores. SN 153,496. Pub. 11-19-63. Filed 9-19-62.

767,655. TEAM. National Biscuit Company. SN 163,646. Pub. 10-29-63. Filed 2-28-63.

767,656. SEA PAK CONTINENTAL CUT. Sea Pak Corporation. SN 165,710. Pub. 1-14-64. Filed 3-29-63.

767,657. BRAN BUDS. Kellogg Company. SN 167,006. Pub. 1-14-64. Filed 4-18-63.

767,658. CHAR-TOR. Red Arrow Products Corporation. SN 167,164. Pub. 1-14-64. Filed 4-19-63.

767,659. KRAZY KORN. Granny Goose Foods. SN 167,255. Pub. 1-14-64. Filed 4-22-63.

767,660. LAB-BLOX. Allied Mills, Inc. SN 167,442. Pub. 1-14-64. Filed 4-24-63.

767,661. B BREAKSTONE AND DESIGN. National Dairy Products Corporation. SN 167,749. Pub. 1-14-64. Filed 4-29-63.

767,662. BREAKSTONE. National Dairy Products Corporation. SN 167,750. Pub. 1-14-64. Filed 4-29-63.

767,663. SHUR-SEED. Economics Laboratory, Inc. SN 167,989. Pub. 1-14-64. Filed 5-2-63.

767,664. ORANGE RIVER. June Dairy Products Co. Inc., d.b.a. Florida Juice. SN 168,417. Pub. 1-14-64. Filed 5-8-63.

767,665. CAN-STER. Hills Bros. Coffee, Inc. SN 168,504. Pub. 1-14-64. Filed 5-9-63.

767,666. QUIK-DO. Shield Chemical Corporation. SN 168,539. Pub. 1-14-64. Filed 5-9-63.

767,667. GOOD HUMOR MAN HOLDING ICE CREAM-ON-A-STICK (DESIGN). Good Humor Corporation. SN 168,602. Pub. 1-14-64. Filed 5-10-63.

767,668. SHATTCO. F. W. Shattuck & Co. Inc. SN 169,073. Pub. 1-14-64. Filed 5-16-63.

767,669. BEERWURST. Oscar Mayer & Co. Inc. SN 169,148. Pub. 1-14-64. Filed 5-17-63.

767,670. SWISSALP. Chalet-Kase A.G., d.b.a. Cheese Factory Berthoud. SN 169,211. Pub. 1-14-64. Filed 5-20-63.

767,671. TABLE-MATE. Carnation Company. SN 169,513. Pub. 1-14-64. Filed 5-23-63.

767,672. INGERSOLL'S. William Underwood Company. SN 169,587. Pub. 1-14-64. Filed 5-23-63.

767,673. CG AND DESIGN. Eloise Groves Association, assignee of Snively Groves Inc. SN 169,775. Pub. 1-14-64. Filed 5-27-63.

767,674. HOME JUICE CO. AND DESIGN. Home Juice Company. SN 170,475. Pub. 1-14-64. Filed 6-6-63.

767,675. DECOR. Martin Ranch, d.b.a. J. D. Martin. SN 170,673. Pub. 1-14-64. Filed 6-10-63.

767,676. HURRY CANE AND DESIGN. Diasert Corporation. SN 171,108. Pub. 1-14-64. Filed 6-17-63.

767,677. STYL ETTE AND DESIGN. Spaulding Bakeries Incorporated. SN 171,710. Pub. 1-14-64. Filed 6-24-63.

767,678. MIRA-SOY. York Bar Bell Company, Inc., d.b.a. Bob Hoffman-York Barbell Co. SN 171,735. Pub. 1-14-64. Filed 6-24-63.

767,679. CROWN JEWEL AND DESIGN. Lake Wales Citrus Growers Association. SN 171,780. Pub. 1-14-64. Filed 6-25-63.

767,680. ROYAL GUARD ETC. AND DESIGN. Lake Wales Citrus Growers Association. SN 171,781. Pub. 1-14-64. Filed 6-25-63.

767,681. LAKE MENDOCINO. Ukiah Packing Co. SN 173,068. Pub. 1-14-64. Filed 7-15-63.

767,682. VEGONNAISE. National Dairy Products Corporation. SN 173,124. Pub. 1-14-64. Filed 7-16-63.

767,683. LUCIA ANN. Little Lady Foods, Inc. SN 173,583. Pub. 1-14-64. Filed 7-23-63.

767,684. N-R-G. The Morrison Milling Co. SN 173,944. Pub. 1-14-64. Filed 7-29-63.

767,685. SAN FELICIA. Piru Citrus Association. SN 173,955. Pub. 1-14-64. Filed 7-29-63.

767,686. CROUTETTES. Kellogg Company. SN 174,190. Pub. 1-14-64. Filed 8-1-63.

767,687. ENERGY-75. Mars, Incorporated. SN 174,404. Pub. 1-14-64. Filed 8-5-63.

767,688. ICEBOUND. Mitsubishi Shoji Kaisha, Ltd. SN 174,415. Pub. 1-14-64. Filed 8-5-63.

767,689. LOOMIX. E. C. Loomis & Son. SN 174,515. Pub. 1-14-64. Filed 8-6-63.

767,690. AMBER. Giffen, Inc. SN 174,760. Pub. 1-14-64. Filed 8-9-63.

Class 48 — Malt Beverages and Liquors

767,691. REPRESENTATION OF LION. Hofer Löwenbräu Karl Militzer. SN 123,199. Pub. 10–1–63. Filed 6–30–61.

Class 49 — Distilled Alcoholic Liquors

767,692. HANKEY BANNISTER. Saccone & Speed Ltd., d.b.a. Hankey Bannister & Co. SN 166,215. Pub. 1–14–64. Filed 4–5–63.

767,693. BONNE NUIT. Schenley Distillers, Inc. SN 166,936. Pub. 1–14–64. Filed 4–17–63.

767,694. JOSHUA BENNETT. Felton & Son, Incorporated, d.b.a. Joshua Bennett Distilling Co. SN 168,492. Pub. 1–14–64. Filed 5–9–63.

767,695. KENTUCKY RIVER AND DESIGN. Canada Dry Corporation, d.b.a. Kentucky River Distilling Co. SN 170,883. Pub. 1–14–64. Filed 6–13–63.

767,696. GULFSTREAM. The Viking Distillery, Inc., d.b.a. The Johnson Distilling Co. SN 171,593. Pub. 1–14–64. Filed 6–21–63.

Class 50 — Merchandise Not Otherwise Classified

767,697. MISCELLANEOUS DESIGN. Stetson Corporation. SN 165,885. Pub. 1–14–64. Filed 3–25–63.

767,698. BELLE-ART. Renwal Products, Inc. SN 167,412. Pub. 1–14–64. Filed 4–23–63.

767,699. R.O.N. KIT REMAIN OVER NITE AND DESIGN. Airline Textile Mfg. Co. SN 168,798. Pub. 1–14–64. Filed 5–13–63.

767,700. SEAQUARIUM. Marine Exhibition Corporation. SN 170,924. Pub. 1–14–64. Filed 6–13–63.

767,701. ASTRO-SIGN. Hawkins-Hawkins Co., Inc. SN 171,133. Pub. 1–14–64. Filed 6–17–63.

767,702. ULTRA-COVER. Jerlee Products Corporation. SN 172,073. Pub. 1–14–64. Filed 6–28–63.

Class 51 — Cosmetics and Toilet Preparations

767,703. FAYD. Fleetwood Company, assignee of Cosmetic Manufacturing Co. SN 66,702. Pub. 10–20–59. Filed 1–29–59.

767,704. BEAUTY MATTE. Aloe Creme Laboratories, Inc. SN 153,445. Pub. 7–9–63. Filed 9–19–62.

767,705. ROYAL BLEND. Plough, Inc. SN 166,312. Pub. 1–14–64. Filed 4–8–63.

767,706. HAIR BLESSING. The Gillette Company. SN 166,635. Pub. 1–14–64. Filed 4–12–63.

767,707. NUTRI BEAUTY. Nu-Vita Laboratories, Inc. SN 166,830. Pub. 1–14–64. Filed 4–16–63.

767,708. TEENAIRE. Turtle Wax, Inc., d.b.a. Teenaire. SN 166,954. Pub. 1–14–64. Filed 4–17–63.

767,709. FLUORICOOL. Colgate-Palmolive Company. SN 167,219. Pub. 1–14–64. Filed 4–22–63.

767,710. KNOX. Hat Corporation of America. SN 167,819. Pub. 1–14–64. Filed 4–30–63.

767,711. DOBBS. Hat Corporation of America. SN 167,820. Pub. 1–14–64. Filed 4–30–63.

767,712. MEDALIST. R-L Laboratories, Inc. SN 169,459. Pub. 1–14–64. Filed 5–22–63.

Class 52 — Detergents and Soaps

767,356. (See Class 4 for this trademark.)

767,713. PEPTI-FER. General Ionics Corporation. SN 137,335. Pub. 1–14–64. Filed 2–6–62.

767,714. BAKER'S. Hal Collins Company. SN 151,013. Pub. 5–7–63. Filed 8–13–62.

767,715. AUTOTHERMIC. U.S. Sanitary Specialties Corporation. SN 166,329. Pub. 1–14–64. Filed 4–8–63.

767,716. UNIKO. H. Kohnstamm & Co., Inc. SN 169,454. Pub. 1–14–64. Filed 5–22–63.

767,717. CYKLEEN. Diamond Alkali Company. SN 169,706. Pub. 1–14–64. Filed 5–27–63.

Service Marks

Class 100 — Miscellaneous

767,718. FIGURE OF CHEF. Pasquale Foods, Inc. SN 121,421. Pub. 1–14–64. Filed 6–5–61.

767,719. LYNES. Lynes, Inc. SN 126,174. Pub. 1–14–64. Filed 8–17–61.

767,720. WAITER (DESIGN). Sirloin Room, Inc., d.b.a. Costin's Sirloin Room. SN 164,180. Pub. 11–26–63. Filed 3–7–63.

767,721. AEL AND DESIGN. Automation Engineering Laboratory, Incorporated. SN 145,510. Pub. 2–26–63. Filed 5–28–62.

Class 101 — Advertising and Business

767,722. FP AND DESIGN. Federated Purchaser, Inc. SN 160,626. Pub. 1–14–64. Filed 1–14–63.

Class 102 — Insurance and Financial

767,723. PREFERRED CHECK SYSTEM. Preferred Check System, Inc. SN 139,678. Pub. 1–14–64. Filed 3–12–62.

767,724. PIONEER SINCE 1890 AND DESIGN. Pioneer Savings and Loan Association. SN 165,251. Pub. 1–14–64. Filed 3–22–63.

767,725. BIG. Beneficial Standard Life Insurance Company. SN 166,609. Pub. 1–14–64. Filed 4–12–63.

Class 103 — Construction and Repair

767,726. SMITTY AND DESIGN. Elwin G. Smith & Co., Inc. SN 172,427. Pub. 1–14–64. Filed 7–3–63.

Certification Marks

Class A — Goods

767,727. GOLDIE. California Cantaloupe Advisory Board. SN 132,614. Pub. 1–14–64. Filed 11–21–61.

767,728. CALILOPE. California Cantaloupe Advisory Board. SN 132,615. Pub. 1–14–64. Filed 11–22–61.

767,729. GOLDY. California Cantaloupe Advisory Board. SN 132,616. Pub. 1–14–64. Filed 11–22–61.

767,730. CALIOPE. California Cantaloupe Advisory Board. SN 132,617. Pub. 1–14–64. Filed 11–22–61.

767,731. CAL-GEM. California Cantaloupe Advisory Board. SN 132,618. Pub. 1–14–64. Filed 11–22–61.

767,732. BTU/HR COOLING AMPERES AND WATTS ETC. AND DESIGN. National Electrical Manufacturers Association. SN 167,026. Pub. 1–14–64. Filed 4–18–63.

767,733. WASHINGTON AND DESIGN. Washington State Apple Advertising Commission. SN 168,874. Pub. 1–14–64. Filed 5–7–63.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 1 — Raw or Partly Prepared Materials

767,734. Druid Hill Park Seed Corp., Baltimore, Md. SN 164,706. Filed P.R. 3–15–63; Am. S.R. 2–5–64.

WET WEATHER

For Grass Seed.
First use Mar. 1, 1961.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

767,735. R. and P., Inc., Detroit, Mich. SN 162,019. Filed P.R. 2–4–63; Am. S.R. 1–24–64.

PERRIN

For Leather Goods—Namely, Cases for Cameras, Instruments, Telescopes, Lenses, Binoculars, Light Meters, Radios, Tape Recorders, and the Like, and for Gadget Bags.
First use on or about Jan. 1, 1960.

Class 6 — Chemicals and Chemical Compositions

767,736. Chapman Chemical Company, Memphis, Tenn. SN 152,280. Filed P.R. 8–31–62; Am. S.R. 1–21–64.

POL-SEAL

For Wood and Fibre Preservative.
First use July 19, 1962.

767,737. La Mere Industries, Incorporated, Walworth, Wis. SN 162,757. Filed P.R. 2–14–63; Am. S.R. 1–24–64.

DESTROY-IT

For Bathroom Deodorant.
First use Nov. 27, 1962.

Class 18 — Medicines and Pharmaceutical Preparations

767,738. Arthur E. Meyerhoff, d.b.a. J.M. Laboratories, Chicago, Ill. SN 158,919. Filed P.R. 12–11–62; Am. S.R. 11–26–63.

VITAMIN TREATS
DAILY VITAMIN BOOSTER
THAT HORSES LOVE

For Dietary Supplement for Horses Consisting of Vitamins and Minerals.
First use Oct. 31, 1962.

767,739. The Wander Company, Chicago, Ill. SN 163,189. Filed P.R. 2–20–63; Am. S.R. 2–10–64.

CHEXIT

For Cough and Cold Preparation.
First use Feb. 7, 1963.

Class 22 — Games, Toys, and Sporting Goods

767,740. Louis Marx & Company, Inc., New York, N.Y. SN 155,372. Filed P.R. 1–8–62; Am. S.R. 1–22–64.

POCKETOOLS

For Toy Tools Which Resemble Tools in Appearance, but Which Are Adapted for Educational Play by Children Rather Than for Useful Work.
First use Dec. 12, 1961.

767,741. Sportaways, Inc., Paramount, Calif. SN 163,773. Filed P.R. 3–1–63; Am. S.R. 1–21–64.

SPORT-DIVER

For Pressure Regulator for Self-Contained Underwater Breathing Apparatus.
First use Jan. 6, 1961.

Class 37 — Paper and Stationery

767,742. L. & C. Hardtmuth, Inc., Bloomsbury, N.J. SN 161,257. Filed P.R. 1–23–63; Am. S.R. 1–27–64.

"KOLOR-KODED"

For Pencils.
First use Jan. 10, 1963.

Class 38 — Prints and Publications

767,743. Heating Publishers, Inc., New York, N.Y. SN 169,852. Filed P.R. 5–28–63; Am. S.R. 1–17–64.

indoor climate
BUSINESS

For Newsletter Produced Monthly.
First use Nov. 28, 1959.

Class 39 — Clothing

767,744. The Millman Underwear and Sportswear Company, Baltimore, Md., assignee of The Millman Underwear Company, Baltimore, Md. SN 139,654. Filed P.R. 3–12–62; Am. S.R. 12–26–63.

STYLED by Oxford Queen
Millman SPORTSWEAR

For Ladies' and Girls' Sweaters, Swim-Wear, Lounge-Wear, Sleep-Wear, Blouses, Skirts, Bermuda Shorts and Slacks.
First use Oct. 3, 1961.

767,745. The Millman Underwear and Sportswear Company, Baltimore, Md., assignee of The Millman Underwear Company, Baltimore, Md. SN 139,655. Filed P.R. 3-12-62; Am. S.R. 12-26-63.

STYLED by Oxford Hall
Millman SPORTSWEAR

For Men's and Boys' Apparel—Namely, Sweaters, Knit Shirts, Bathing Trunks, Bermuda Shorts and Jackets.
First use Sept. 29, 1961.

Class 40—Fancy Goods, Furnishings, and Notions

767,746. Rexall Drug and Chemical Company, d.b.a. Tupperware, Los Angeles, Calif. SN 160,507. Filed P.R. 1-10-63; Am. S.R. 1-27-64.

BOBBY PIN UP

For Combined Hair Pin Dispensing Containers and Hair Pin Openers.
First use Aug. 13, 1962.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

767,747. Joseph Bancroft & Sons Co., Rockford, Wilmington, Del. SN 140,907. Filed P.R. 3-28-62; Am. S.R. 1-17-64.

YOU CAN'T WASH OUT THE WASH AND WEAR

For Cellulosic Piece Goods.
First use Jan. 22, 1962.

767,748. Pepperell Manufacturing Company, Boston, Mass. SN 147,622. Filed P.R. 6-25-62; Am. S.R. 1-21-64.

STRETCH-FIT

For Bed Sheets.
First use May 18, 1962.

Class 46—Foods and Ingredients of Foods

767,749. Sidney S. Miller, Irwinton, Ga. SN 149,662. Filed P.R. 7-24-62; Am. S.R. 5-28-63.

THE BEST THE HEN AND I CAN DO

For Fresh Eggs.
First use March 1955.

767,750. Chesterton Candy Company, d.b.a. Mrs. Leland's Kitchens, Chicago, Ill. SN 154,470. Filed P.R. 10-4-62; Am. S.R. 11-26-63.

HUNNIE-BUNNIES

For Candy.
First use Sept. 1, 1962.

Class 49—Distilled Alcoholic Liquors

767,751. Schenley Distillers, Inc., d.b.a. Park & Tilford Distillers Co., New York, N.Y. SN 160,442. Filed P.R. 1-9-63; Am. S.R. 1-21-64.

MACRAE & DAVIE

For Blended Scotch Whisky.
First use Nov. 8, 1962.

767,752. John Gross & Co., Baltimore, Md. SN 161,614. Filed P.R. 1-29-63; Am. S.R. 12-12-63.

WATT'S
Something Extra

For Scotch Whisky.
First use Mar. 28, 1962.

Class 50—Merchandise Not Otherwise Classified

767,753. Wardley Products Company, Inc., Long Island City, N.Y. SN 157,869. Filed P.R. 11-23-62; Am. S.R. 1-6-64.

LIFE CYCLE

For Fish Hatching Kits, Containing Fish Eggs, Hatching Foods, and Utensils and Materials for Developing and Hatching Such Eggs.
First use Oct. 30, 1962.

767,754. Boltman Company, Inc., Rochelle, Ill. SN 158,780. Filed P.R. 12-10-62; Am. S.R. 1-29-64.



For Protective Enclosures for Rose Bushes and Other Plants.
First use Oct. 26, 1962.

Class 51—Cosmetics and Toilet Preparations

767,755. Clairol Incorporated, New York, N.Y. SN 113,801. Filed P.R. 2-16-61; Am. S.R. 1-29-64.

SILVER DIAMOND

For Hair Tinting and Coloring Preparations.
First use Dec. 29, 1960.

767,756. Colgate, Culp & Co. Inc., New York, N.Y. SN 127,379. Filed P.R. 9-7-61; Am. S.R. 1-24-64.

BABY TAN

For Sun Tan Lotion Designed for Use Upon Babies and Sun-Sensitive Adults.
First use Aug. 18, 1961.

767,757. Botany Industries, Inc., d.b.a. Sea and Ski Company, and Rolley Co., Reno, Nev. SN 131,781. Filed P.R. 10-25-61; Am. S.R. 1-21-63.



The mark consists of the conformation of a container for applicant's suntan lotion, upon one side of which is applied the fanciful S-like figure.
For Suntan Lotion.
First use Jan. 9, 1961.

767,758. Arlew, Incorporated, Los Angeles, Calif. SN 134,800. Filed P.R. 12-19-61; Am. S.R. 1-20-64.

Forma-nail

For Nail Preparation for Use in Forming a Simulation of a Fingernail, and Repairing and Stimulating Nail Growth.
First use Dec. 10, 1954.

767,759. Merle Norman Cosmetics, Inc., Los Angeles, Calif. SN 141,096. Filed P.R. 3-29-62; Am. S.R. 2-3-64.

BLAZE OF FIRE

For Lipstick.
First use Feb. 27, 1962.

767,760. Merle Norman Cosmetics, Inc., Los Angeles, Calif. SN 142,543. Filed P.R. 4-18-62; Am. S.R. 1-15-64.

PRETTY FINGERS

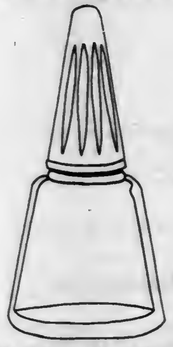
For Fingernail Makeup Kit Consisting of Cream Nail Enamel, Luminous Nail Enamel, Hand Lotion, Hand Cream, Base, Sealer, Cuticle Remover, Cuticle Oil Nail Strengthener, and Nail Enamel Remover.
First use Mar. 23, 1962.

767,761. Merle Norman Cosmetics, Inc., Los Angeles, Calif. SN 143,161. Filed P.R. 4-26-62; Am. S.R. 2-3-64.

HONEY BEIGE

For Face Powder.
First use Apr. 4, 1962.

767,762. Nethercutt Laboratories, Los Angeles, Calif. SN 159,270. Filed P.R. 12-17-62; Am. S.R. 1-31-64.



The mark consists of the configuration of the container for the goods, comprising a bell-shaped bottle with an ornamental fluted cap in the form of an inverted cone.
For Cosmetics—Namely, Nail Enamel.
First use July 20, 1962.

767,763. Roux Laboratories, Inc., New York, N.Y. SN 162,790. Filed P.R. 2-14-63; Am. S.R. 2-11-64.

CLASSIC CHARCOAL

For Hair Coloring Preparation.
First use Jan. 31, 1963.

767,764. Revlon, Inc., New York, N.Y. SN 175,940. Filed 8-28-63.

MELONIQUE

For Lipsticks.
First use Jan. 29, 1962.

767,765. Revlon, Inc., New York, N.Y. SN 175,941. Filed 8-28-63.

MONTEGO BEIGE

For Lipsticks.
First use Jan. 29, 1962.

Class 52—Detergents and Soaps

767,766. B. T. Babbitt Inc., New York, N.Y., assignee of Curley Company, Inc., Camden, N.J. SN 127,206. Filed P.R. 9-5-61; Am. S.R. 1-17-64.

SOFT 'N LOVELY

For Hair Shampoo.
First use Aug. 11, 1961.

767,767. Otto Deutsch, d.b.a. Deutsch Plumbing Co., Chicago, Ill. SN 159,390. Filed P.R. 12-19-62; Am. S.R. 1-2-64.

KLEERDRAIN

For Drain Pipe Cleaner for Removing Obstructions, and the Like.
First use August 1962.

767,768. The Drackett Company, Cincinnati, Ohio. SN 166,076. Filed P.R. 4-4-63; Am. S.R. 1-24-64.

ONCE IN
EVERY WEEK
Drano
IN EVERY
DRAIN

For Chemical Preparation for Opening and Draining Drains of Sinks, Washbowls and the Like.
First use October 1962.

Service Marks

Class 100 — Miscellaneous

767,769. International Textbook Company, Scranton, Pa. SN 152,409. Filed P.R. 9-4-62; Am. S.R. 1-29-64.

EMPLOYEE DEVELOPMENT SERVICES

For Planning, Organizing and Conducting Employee Training Programs for Others.
First use July 2, 1962.

TRADEMARK REGISTRATIONS RENEWED

170,366. DIODE. Cl. 21. 7-17-23.
175,353. BARBARA WAYNE. Cl. 39. 11-6-23.
178,102. JACOBEAN TWIST AND DESIGN. Cl. 15. 1-8-24.
178,119. SUN-MAID. Cl. 45. 1-8-24.
178,414. LACTO-DEXTRIN. Cl. 46. 1-8-24.
178,543. TANGEE. Cl. 51. 1-15-24.
178,609. PROTOSE. Cl. 46. 1-15-24.
178,881. BEAR BRAND AND DESIGN. Cl. 38. 1-29-24.
178,985. SECCOTINE. Cl. 5. 2-5-24.
179,037. GOLDEN SULTANINAS. Cl. 46. 2-5-24.
179,090. DETSO. Cl. 52. 2-5-24.
179,597. QUEENSWEAR. Cl. 42. 2-12-24.
179,761. COUNTRY CLUB. Cl. 42. 2-12-24.
179,798. TRAVERTINE. Cl. 15. 2-19-24.
179,805. PONY. Cl. 23. 2-19-24.
179,807. ELASTEX. Cl. 1. 2-19-24.
179,808. B.R.T. Cl. 1. 2-19-24.
179,964. JUNIOR. Cl. 23. 2-19-24.
179,975. PRIDE OF THE SEA. Cl. 46. 2-19-24.
180,844. B-C AND DESIGN. Cl. 46. 3-11-24.
181,001. STARLAC. Cl. 46. 3-11-24.
181,283. ALKOLAVE. Cl. 18. 3-18-24.
181,788. NATION-WIDE AND DESIGN. Cl. 42. 3-25-24.
183,117. GOPHER DEATH AND DESIGN. Cl. 6. 4-22-24.
183,154. NATION-WIDE. Cl. 42. 4-22-24.
184,249. "THE MINUTE TIE." Cl. 39. 5-20-24.
184,754. KEARNEY & FOOT CO. K & F AND DESIGN. Cl. 23. 6-3-24.
185,250. AUTOCALL. Cl. 21. 6-10-24.
185,282. AMERICAN AND DESIGN. Cl. 23. 6-10-24.
185,332. SHUREBOND. Cl. 12. 6-10-24.
186,114. BLACK DIAMOND FILE WORKS AND DESIGN. Cl. 23. 7-1-24.
186,403. POPPY AND DESIGN. Cl. 46. 7-8-24.
186,505. SHUREBOND. Cl. 13. 7-22-24.
186,623. SIR WALTER RALEIGH AND DESIGN. Cl. 17. 7-22-24.
186,748. HIGHLAND BEAUTY AND DESIGN. Cl. 46. 7-22-24.
186,935. ARCADE AND DESIGN. Cl. 23. 7-22-24.
404,100. SOMETHING BLUE. Cl. 51. 11-2-43.
404,866. MANLEIGH. Cl. 40. 12-28-43.
405,057. MANORBORN AND DESIGN. Cl. 49. 1-4-44.
405,417. USG. Cl. 12. 2-1-44.
405,421. MIXARIUM. Cl. 13. 2-1-44.
405,489. PANA-BRISA. Cl. 39. 2-1-44.
405,588. RESIMEL. Cl. 1. 2-8-44.
406,001. VENDO. Cl. 23. 3-7-44.
406,017. INTRAMIN. Cl. 18. 3-7-44.
406,115. VYCOR. Cl. 1. 3-14-44.
406,195. BRITEX. Cl. 15. 3-14-44.
406,343. CHEVRON DESIGN. Cl. 4. 3-28-44.
407,572. SEITZ. Cl. 31. 6-13-44.
407,614. NACAP. Cl. 6. 6-13-44.

TRADEMARK REGISTRATIONS CANCELED

Section 7(d)

725,567. PROXOL. Cl. 18. 12-26-61.
729,527. ISLAND PRIDE. Cl. 46. 4-3-62.
729,868. COLUMBIA. Cl. 19. 4-3-62.
743,111. VITA-LEATHER. Cl. 50. 1-1-63.
748,593. VITA-PATENT. Cl. 1. 4-30-63.

Section 8

352,205. ATLAS. Cl. 5. 11-23-37.
355,364. SHURON. Cl. 26. 3-15-38.

Class 101 — Advertising and Business

767,770. Bar-B-Q Kitchens, Inc., Center Line, Mich. SN 160,529. Filed P.R. 1-11-63; Am. S.R. 1-17-64.

BAR-B-Q
KITCHEN

For Rendering Technical Assistance to Restaurant Operators in All Phases of Their Business.
First use Nov. 7, 1962.

Class 103 — Construction and Repair

767,771. American Swimming Pools Corporation, Seekonk, Mass. SN 158,310. Filed P.R. 12-3-62; Am. S.R. 1-17-64.

AMERICAN

For Swimming Pool Design, Construction, and Maintenance Services.
First use March 1959.

The following registrations issued Feb. 11, 1958

658,176. LA VONNE. Cl. 6.
658,182. NURSERY MIST. Cl. 6.
658,187. SEALLABEL AND DESIGN. Cl. 6.
658,192. DURA-K. Cl. 10.
658,195. TROPIC AIR VENTANAS TIPO MIAMI AND DESIGN. Cl. 12.
658,196. RANDOMWOOD. Cl. 12.
658,204. W-K-M ETC. AND DESIGN. Cl. 13.
658,205. RAN-GUARD. Cl. 13.
658,208. SPURIT. Cl. 13.
658,210. AROLUBE. Cl. 13.
658,217. BRONCHODERMINE. Cl. 18.
658,218. BLOSSER'S. Cl. 18.
658,219. FERROGLOBIN-C. Cl. 18.
658,223. VEGETONAL AND DESIGN. Cl. 18.
658,225. VICENTRATE. Cl. 18.
658,227. ALBA-F. Cl. 18.
658,228. DELTALOG. Cl. 18.
658,231. PROPONESIN. Cl. 18.
658,233. HEPSTAT. Cl. 18.
658,235. MYCORTOL. Cl. 18.
658,242. A GLO-GO TOY AND DESIGN. Cl. 22.
658,244. ELEO. Cl. 22.
658,247. REDI-SHOT. Cl. 22.
658,249. SCALPUM AND DESIGN. Cl. 22.
658,250. HEDLINER. Cl. 22.
658,253. MAIN STREET. Cl. 22.
658,255. CAST FLO. Cl. 22.
658,259. HAZELTON. Cl. 23.
658,273. SMOGGLE. Cl. 26.
658,274. AL AND DESIGN. Cl. 26.
658,275. TOPSTAT. Cl. 26.
658,279. BORDEAUX. Cl. 28.
658,281. SWEPT BACK. Cl. 28.
658,285. DRUGSAFE. Cl. 32.
658,286. FUN-VUE. Cl. 32.
658,288. EVANS AND DESIGN. Cl. 34.
658,295. DESIGN OF BIRD. Cl. 36.
658,297. NEWD NICK AND DESIGN. Cl. 39.
658,299. M.B.W. Cl. 39.
658,300. AZA. Cl. 39.
658,301. LA STRADA AND DESIGN. Cl. 39.
658,310. HYDRO-NU GANIC ETC. Cl. 46.
658,317. DESIGN OF WOMAN. Cl. 46.
658,327. SLIM-ETTE AND DESIGN. Cl. 46.
658,331. EKCO-MAT. Cl. 50.
658,333. LUCKY LADY AND DESIGN. Cl. 52.
658,335. MAGNET. Cl. 52.
658,339. KENNY THERAPIST. Cl. 100.
658,341. DESIGN OF A WOMAN. Cl. 100.
658,347. CALL MR. MEASURE THE HOUSE TAILOR AND DESIGN. Cl. 103.
658,348. CENDERELLA HOLIDAY. Cl. 105.
658,349. SURFAIR. Cl. 105.
658,355. FULLWIDTH AND DESIGN. Cl. 23.
658,359. DI-ET AND DESIGN. Cl. 46.
658,360. BERRY-JEL. Cl. 46.
658,361. ARANCINA AND DESIGN. Cl. 46.
658,363. EL GRECO RED. Cl. 51.
658,364. BONNARD RED. Cl. 51.
658,369. LETS FACE IT. Cl. 103.

Section 18

725,857. INHECO. Cl. 21. 1-2-62.
748,356. DYNA-TROL. Cl. 21. 4-23-63.

TRADEMARK REGISTRATIONS AMENDED. DISCLAIMED, CORRECTED, ETC.

23,794. GRAY'S COMPOUND TONIC FORMULA DR. JOHN P. GRAY. Cl. 18. 11-7-1893. The Purdue Frederick Company, New York, N.Y. Amended to appear:

GRAY'S COMPOUND TONIC FORMULA DR. JOHN P. GRAY

180,222. ANCHOR AND DESIGN. Cl. 18. 2-26-24. Anchor Serum Company, Philips Roxane, Inc., New York, N.Y. Amended to appear:

ANCHOR

610,479. REISMAN'S. Cl. 46. 8-9-55. J. Reisman & Sons, Inc., Pennsauken, N.J. Amended: In the certificate, lines 6 and 7 and lines 17 and 18, "also known as J. Reisman & Sons Inc. and J. Reisman Sons Incorporated" is deleted, in the statement, column 1, line 1, "also" is deleted and lines 2 through 5 are deleted and *Rt. 130, Pennsauken, N.J.* is inserted, and the drawing is amended to appear:

REISMAN

668,924. VITAND. Cl. 18. 10-28-58. E. F. Drew & Co., Inc., Drew Chemical Corporation, New York, N.Y. Amended: In the statement, column 2, line 1, "cod" is deleted and *fish* is inserted.

677,238. THERMOCONE. Cl. 16. 4-21-59. The Joseph Dixon Crucible Company, Jersey City, N.J. Corrected: In the statement, column 1, line 1, before "Joseph" *The* should be inserted.

692,050. OFFICIAL MOTOR CARRIER DIRECTORY AND DESIGN. Cl. 38. 1-26-60. Official Motor Freight Guide, Inc., Chicago, Ill. Disclaimer: Registrant hereby disclaims the words "Motor Carrier Directory" apart from the mark shown.

734,255. SANI-PAC. Cl. 44. 7-10-62. Sturm & Scheinberg, Inc., New York, N.Y. Amended: In the statement, column 2, line 1, "sanitary belts," is deleted.

760,405. WHITE WINGS ETC. AND DESIGN. Cl. 46. 11-19-63. C. H. Guenther & Son, Inc., doing business as Pioneer Flour Mills, San Antonio, Tex. Corrected: In the statement, column 1, line 1, "Sons" should be deleted and *Son* should be inserted.

763,795. WELLCOME. Cl. 18. 1-28-64. Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y. Corrected: In the statement, column 2, line 1, "preparation" should be deleted and *preparations* should be inserted.

INDEX OF REGISTRANTS

MARCH 31, 1964

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

ACF Industries Inc.: *See*—
W-K-M Mfg. Co., Inc.
AEG-Elotherm G.m.b.H., Remscheid-Hasten, Germany. 767,478, pub. 1-14-64. Cl. 21.
Acme Boot Co., Inc., Clarksville, Tenn. 767,619, pub. 1-14-64. Cl. 39.
Acme Markets, Inc., from American Stores Co., Philadelphia, Pa. 767,649, pub. 11-19-63. Cl. 46.
Adam Hat Stores, Inc., to Miller Bros. Hat Co., Inc., New York, N.Y. 405,489, ren. 3-31-64. Cl. 39.
Admiral Shoe Corp., d b.a. Mutual Shoe Sales Co., Manchester, N.H. 767,609, pub. 1-14-64. Cl. 39.
Airline Textile Mfg. Co., Des Moines, Iowa. 767,699, pub. 1-14-64. Cl. 50.
Albright & Wilson (Mfg.) Ltd., Oldbury, Birmingham, England. 767,367, pub. 1-14-64. Cl. 6.
Allied Chemical Corp.: *See*—
Barrett Co., The.
Allied Mills, Inc., Chicago, Ill. 767,660, pub. 1-14-64. Cl. 46.
Allis-Chalmers Mfg. Co., Milwaukee, Wis. 767,491, pub. 1-14-64. Cl. 23.
Allison, Maurice, d.b.a. Royal Crown Sales, Akron, Ohio. 767,624, pub. 1-14-64. Cl. 39.
All-State Welding Alloys Co., Inc., New York, N.Y. 767,575, pub. 1-14-64. Cl. 34.
Aloe Creme Laboratories, Inc., Fort Lauderdale, Fla. 767,704, pub. 7-9-63. Cl. 51.
American Air Filter Co., Inc., Louisville, Ky. 767,548, pub. 1-14-64. Cl. 31.
American Arts and Crafts, Inc., Columbus, Ohio. 658,242, canc. Cl. 22.
American Can Co., New York, N.Y. 767,338, pub. 1-14-64. Cl. 2.
American Cyanamid Co., Wayne, N.J. 767,317, pub. 1-14-64. Cl. 1.
American Cyanamid Co., New York, N.Y. 767,371, pub. 10-2-62. Cl. 6.
American Dairy Queen Corp., Minneapolis, Minn., from Brazier Foods, Inc., Decatur, Ga. 767,646, pub. 11-5-63. Cl. 46.
American Hardware Corp., The, New Britain, Conn., from C. V. Hill & Co., Inc., Trenton, N.J. 767,547, pub. 1-14-64. Cl. 31.
American Molding Powder & Chemical Corp., Brooklyn, N.Y. 767,318, pub. 1-14-64. Cl. 1.
American Radiator & Standard Sanitary Corp., New York, N.Y. 767,569, pub. 1-14-64. Cl. 34.
American Research and Development Co., San Angelo, Tex. 767,315, pub. 1-14-64. Cl. 1.
American Steel Foundries, Inc., Chicago, Ill. 767,458, pub. 1-14-64. Cl. 19.
American Stores Co.: *See*—
Acme Markets, Inc.
American Swimming Pools Corp., Seekonk, Mass. 767,771. Cl. 103.
Ames Harris Neville Co., San Francisco, Calif. 658,187, canc. Cl. 6.
Ametek, Inc., Kent, Ohio. 767,471, pub. 1-14-64. Cl. 21.
Amsler, Fred R., Jr., Norfolk, Va. 767,561, pub. 1-14-64. Cl. 32.
Amsterdam Corp., New York, N.Y. 767,387, pub. 1-14-64. Cl. 12.
Anchor Hocking Glass, Lancaster, Ohio. 767,568, pub. 1-14-64. Cl. 33.
Anchor Serum Co. Philips Roxane, Inc., New York, N.Y. 180 222. Am. 7(d). Cl. 18.
April Morris Bros., Bridgeton, N.J. 658,360, canc. Cl. 46.
Arcade File Works, Anderson, Ind., to Nicholson File Co., Providence, R.I. 186,935, ren. 3-31-64. Cl. 23.
Archbishop of the Roman Catholic Archdioccse of Atlanta, Georgia, Atlanta, Ga. 767,602, pub. 1-14-64. Cl. 38.
Arlew, Inc., Los Angeles, Calif. 767 758. Cl. 51.
Armour and Co., Chicago, Ill. 767,328, pub. 1-14-64. Cl. 1.
Aro Equipment Corp., The, Bryan, Ohio. 658,210, canc. Cl. 13.
Associated Spring Corp., Bristol, Conn. 767,405, pub. 11-12-63. Cl. 13.
Atlas International Co., Chicago, Ill. 767,455-7, pub. 1-14-64. Cl. 19.
Atlas Supply Co., Newark, N.J. 352 205. canc. Cl. 5.
Auer-Glaswerke GmbH., Bad Gandersheim, Germany. 767,526, pub. 1-14-64. Cl. 26.
Aunt Fanny's Baking Co., Atlanta, Ga. 767,652, pub. 8-13-63. Cl. 46.
Autocall Co., The, Shelby, Ohio. 185,250, ren. 3-31-64. Cl. 21.
Auto Gear & Parts, Inc., Philadelphia, Pa. 767,459, pub. 1-14-64. Cl. 19.
Automated Packaging Corp., Hudson, Ohio. 767,524, pub. 1-14-64. Cl. 23.
Automation Engineering Laboratory, Stanford, Conn. 767,721, pub. 2-26-63. Cl. 100.
Avionic Products Engineering Corp., Succasunna, N.J. 767,529, pub. 1-14-64. Cl. 26.
B & B Mfg. Co.: *See*—
Kennedy, Raymond A.
B & C Products, Inc., Upper Darby, Pa. 658,182, canc. Cl. 6.
B.V.D. Co., Inc., The: *See*—
Weisbaum Brothers.
Babbitt, B. T., Inc., New York, N.Y., from Curley Co., Inc., Camden, N.J. 767,766. Cl. 52.
Baker-Aldor-Jones Corp., Hialeah, Fla. 767,899, pub. 1-14-64. Cl. 12.
Bancroft Dairy: *See*—
Bancroft Dairy Co.
Bancroft Dairy Co., d.b.a. Bancroft Dairy, Madison, Wis. 767,650, pub. 1-14-64. Cl. 46.
Bancroft, Joseph, & Sons Co., Wilmington, Del. 767,747. Cl. 42.
Barash Co., Inc., The, New York, N.Y. 743,111, canc. Cl. 50.
Barash Co., Inc., The, New York, N.Y. 748,593, canc. Cl. 1.
Bar-B-Q Kitchens, Inc., Center Line, Mich. 767,770. Cl. 101.
Barnett, G. & H., Co., Philadelphia, Pa., to Nicholson File Co., Providence, R.I. 186,114, ren. 3-31-64. Cl. 23.
Barrett Co., The, to Allied Chemical Corp., New York, N.Y. 179,807-8, ren. 3-31-64. Cl. 1.
Battle Creek Food Co., The, Battle Creek, Mich., to Worthington Foods, Inc., Worthington, Ohio. 178,414, ren. 3-31-64. Cl. 46.
Battle Creek Food Co., The, Battle Creek, Mich., to Worthington Foods, Inc., Worthington, Ohio. 180,844, ren. 3-31-64. Cl. 46.
Battle Creek Food Co., The, Battle Creek, Mich., to Worthington Foods, Inc., Worthington, Ohio. 178,609, ren. 3-31-64. Cl. 46.
Belknap Hardware and Mfg. Co., Louisville, Ky. 767,470, pub. 12-10-63. Cl. 21.
Bell & Gossett Co., Morton Grove, Ill. 767,411, pub. 1-14-64. Cl. 13.
Bell Intercontinental Corp., New York, N.Y. 767,381, pub. 1-14-64. Cl. 11.
Beneficial Standard Life Insurance Co., Los Angeles, Calif. 767,725, pub. 1-14-64. Cl. 102.
Bennett, Joshua, Distilling Co.: *See*—
Felton & Son, Inc.
Bergwerksverband G.m.b.H., Essen, Germany. 767,531, pub. 1-14-64. Cl. 26.
Bislig Bay Lumber Co., Inc., Manila, Philippines. 767,401, pub. 1-14-64. Cl. 12.
Blackburn, Jasper, Corp., St. Louis, Mo. 767,412, pub. 1-14-64. Cl. 13.
Blosser Co., The, Atlanta, Ga. 658,218, canc. Cl. 18.
Bocra of Florida: *See*—
Cross, Bob.
Boeing Co., The, Seattle, Wash. 767,462, pub. 1-14-64. Cl. 20.
Boltman Co., Inc., Rochelle, Ill. 767,754. Cl. 50.
Borden Co., The: *See*—
Merrell-Soule Co.
Botany Industries, Inc., d.b.a. Sea and Ski Co., and also d.b.a. Rolley Co., Reno, Nev. 767,757. Cl. 51.
Brazier Foods, Inc.: *See*—
American Dairy Queen Corp.
Brennan Engineering Corp., Downers Grove, Ill. 767,408, pub. 1-14-64. Cl. 13.
Bridgestate Construction Material Co., Harrison, N.J. 767,419, pub. 1-14-64. Cl. 13.
Bristol-Myers Co., New York, N.Y. 767,443, pub. 1-14-64. Cl. 18.
British Drug Houses, Ltd., The, London, England. 658,231, canc. Cl. 18.
Brooke Tool Mfg. Co. Ltd., The Greet, Birmingham, England. 767,514, pub. 1-14-64. Cl. 23.
Brooks Bottling Co., The, d.b.a. Brooks Bottling Co., Columbus, Ohio. 767,644, pub. 1-14-64. Cl. 45.
Brooks Bottling Co.: *See*—
Brooks Bottling Co., The.
Brown & Williamson Tobacco Corp.: *See*—
Flynt, J. G., Tobacco Co.
Browns Hosiery Mills, Inc., Burlington, N.C. 767,615, pub. 1-14-64. Cl. 39.
Brown, Roy W., Brandon, Manitoba, Canada. 767,565, pub. 1-14-64. Cl. 32.
Bruder, M. A., & Sons, Inc., Philadelphia, Pa. 767,391, pub. 1-14-64. Cl. 12.
Buch, Aaron G., d.b.a. Al G. Buch, New York, N.Y. 767,543, pub. 1-14-64. Cl. 28.
Buch, Al G.: *See*—
Buch, Aaron G.
Burrougha Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y. 763,795, cor. Cl. 18.
California Cantaloupe Advisory Board, Fresno, Calif. 767,727-31, pub. 1-14-64. Cl. A.
California Fine Wire Co., Grover City, Calif. 767,423, pub. 1-14-64. Cl. 14.
California Packing Corp.: *See*—
Seacoast Canning Co., The.
Camar Pharmacal Distributors: *See*—
Rothbaum, Jack.
Canada Dry Corp., d.b.a. Kentucky River Distilling Co., New York, N.Y. 767,695, pub. 1-14-64. Cl. 49.
Candle-Lite, Inc.: *See*—
Standard Oil Co.

Capital City Products Co., The, Columbus, Ohio. 767,431, pub. 1–14–64. Cl. 15.
Carnation Co., Los Angeles, Calif. 767,671, pub. 1–14–64. Cl. 46.
Carpenter Mfg. Corp., Rio Piedras-Caguas, Puerto Rico. 658,195, canc. Cl. 12.
Case, Roger T., d.b.a. Foot Care International, Long Beach, Calif. 767,638, pub. 1–14–64. Cl. 44.
Casto & Harris, Inc., Spencer, W. Va. 767,563, pub. 1–14–64. Cl. 32.
Centennial Arms Corp., Chicago, Ill. 767,380, pub. 6–11–63. Cl. 9.
Chalet-Kase A.G., d.b.a. Cheese Factory Berthoud, Burgdorf, Switzerland. 767,670, pub. 1–14–64. Cl. 46.
Chapman Chemical Co., Memphis, Tenn. 767,736. Cl. 6.
Cheely, Burl L., d.b.a. Gold Diver's, Hawthorne, Calif. 767,409, pub. 1–14–64. Cl. 13.
Cheese Factory Berthoud: *See*—
Chalet-Kase A.G.
Chemex Corp.: *See*—
Schlumbohm, Peter.
Chemex Industries, Inc., Tampa, Fla. 767,351, pub. 7–11–61. Cl. 4.
Chemex Industries, Inc., Tampa, Fla. 767,352, pub. 8–1–61. Cl. 4.
Chesterton Candy Co., d.b.a. Mrs. Leland's Kitchens, Chicago, Ill. 767,750. Cl. 46.
Chinese Refugee Relief, Washington, D.C. 767,594, pub. 1–14–64. Cl. 38.
Christianson, John M., Minneapolis, Minn. 658,208, canc. Cl. 13.
Chuven, Murray, Newark, N.J. 767,541, pub. 1–14–64. Cl. 28.
Cincinnati Floor Co., Cincinnati, Ohio. 658,196, canc. Cl. 12.
Cincinnati Milling Machine Co., The, Cincinnati, Ohio. 767,512, pub. 1–14–64. Cl. 23.
Clairol Inc., New York, N.Y. 767,755. Cl. 51.
Clearwater Tissue Mills, Inc., Lewiston, Idaho, from Swanee Paper Corp., New York, N.Y. 767,589, pub. 1–14–64. Cl. 37.
Cohn Hall, Marx, Co., to United Merchants and Manufacturers, Inc., New York, N.Y. 179,597, ren. 3–31–64. Cl. 42.
Columbia Metal Box Co., New York, N.Y. 658,285, canc. Cl. 32.
Corning Glass Works, Corning, N.Y. 406,115, ren. 3–31–64. Cl. 1.
Coro, Inc., New York, N.Y. 767,544–5, pub. 1–14–64. Cl. 28.
Cortez Product Co.: *See*—
McGeechie, William O.
Colgate, Culp & Co. Inc., New York, N.Y. 767,756. Cl. 51.
Colgate-Palmolive Co., New York, N.Y. 767,709, pub. 1–14–64. Cl. 51.
Collins, Hal, Co., Dallas, Tex. 767,714, pub. 5–7–63. Cl. 52.
Columbia Ribbon & Carbon Mfg. Co., Inc., Glen Cove, N.Y. 767,586, pub. 1–14–64. Cl. 37.
Comidex Corp., New Canaan, Conn. 767,653, pub. 1–14–64. Cl. 46.
Continental Air Filters, Inc., Louisville, Ky. 767,556, pub. 1–14–64. Cl. 31.
Continental Oil Co., Ponca City, Okla. 767,430, pub. 1–14–64. Cl. 15.
Cook Electric Co., Morton Grove, Ill. 767,452, pub. 1–14–64. Cl. 19.
Copperweld Steel Co., Warren, Ohio. 767,422, pub. 1–14–64. Cl. 14.
Cosmetic Mfg. Co.: *See*—
Fleetwood Co.
Cosmos Products: *See*—
Erenhouse, Rudolph.
Costin's Sirloin Room: *See*—
Sirloin Room, Inc.
Countess Mara, Inc., New York, N.Y. 767,342, pub. 1–14–64. Cl. 3.
Courtesy Products: *See*—
Morning Coffee, Inc.
Cowman-Campbell Paint Co. Inc., Seattle, Wash. 767,433, pub. 1–14–64. Cl. 16.
Cox, Don M., Amarillo, Tex. 658,249, canc. Cl. 22.
Crawford, R. W., d.b.a. Fort Dodge Chemical Co., to J. A. Johnson, d.b.a. Fort Dodge Chemical Co., Fort Dodge, Iowa. 183,117, ren. 3–31–64. Cl. 6.
Cross, Bob, d b.a. Bocra of Florida, Orlando, Fla. 767,339, pub. 1–14–64. Cl. 2.
Cuno Engineering Corp., The, Meriden, Conn. 767,554, pub. 1–14–64. Cl. 31.
Curley Co., Inc.: *See*—
Babbitt, B. T., Inc.
Curtis 1000, Inc., West Hartford, Conn. 767,590, pub. 1–14–64. Cl. 37.
Dartmouth Marketing Co., Inc., Skokie, Ill. 767,325–6, pub. 1–14–64. Cl. 1.
Davis, Al, Radio, Inc., Los Angeles, Calif. 767,474–6, pub. 1–14–64. Cl. 21.
Dayco Corp., Dayton, Ohio. 767,576, pub. 1–14–64. Cl. 35.
Day-Brite Lighting Division of the Emerson Electric Mfg. Co., St. Louis, Mo. 767,472, pub. 1–14–64. Cl. 21.
Dean Products, Inc., Brooklyn, N.Y. 767,553, pub. 1–14–64. Cl. 31.
Dean Products, Inc., Brooklyn, N.Y. 767,571, pub. 1–14–64. Cl. 34.
De Franco, Luciano, Catania, Italy. 658,361, canc. Cl. 46.
Detroit Soda Products Co., Detroit, Mich., to Wyandotte Chemicals Corp., Wyandotte, Mich. 179,090, ren. 3–31–64. Cl. 52.
Deutsch, Otto, d b.a. Deutsch Plumbing Co., Chicago, Ill. 767,767. Cl. 52.
Deutsch Plumbing Co.: *See*—
Deutsch, Otto.
Diamond Alkali Co., Cleveland, Ohio. 767,717, pub. 1–14–64. Cl. 52.
Diamond Alkali Co., Cleveland, Ohio. 767,327, pub. 1–14–64. Cl. 1.
Diasert Corp., Cleveland, Ohio. 767,676, pub. 1–14–64. Cl. 46.
Dickinson, Becton, and Co., East Rutherford, N.J. 767,618, pub. 1–14–64. Cl. 39.
Di-Dro Engineering Co., Detroit, Mich. 767,522, pub. 1–14–64. Cl. 23.
Dixon, Joseph, Crucible Co., The, Jersey City, N.J. 677,238, cor. Cl. 16.
Dover Handbag Co., Inc., New York, N.Y. 767,348, pub. 1–14–64. Cl. 3.
Drackett Co., The, Cincinnati, Ohio. 767,768. Cl. 52.
Drew Chemical Corp.: *See*—
Drew, E. F., & Co., Inc.
Drew, E. F., & Co., Inc. Drew Chemical Corp., New York, N.Y. 668,924. Am. 7(d). Cl. 18.
Druid Hill Park Seed Corp., Baltimore, Md. 767,734. Cl. 1.
Du Pont de Nemours, E. I., and Co., Wilmington, Del. 767,394, pub. 1–14–64. Cl. 12.
E.P.S. (Research & Development) Ltd., Sittingbourne, Kent, England. 767,413, pub. 1–14–64. Cl. 13.
Eastman Kodak Co., Rochester, N.Y. 767,634, pub. 1–14–64. Cl. 43.
Eaton Mfg. Co., Cleveland, Ohio. 748,356, canc. Cl. 21.
Economics Laboratory, Inc., St. Paul, Minn. 767,663, pub. 1–14–64. Cl. 46.
Eddy, Raymond L., Muncie, Ind. 767,481, pub. 8–6–63. Cl. 22.
Eggert, Herbert and Renate, Unterwohlsbach, near Coburg, Germany. 767,314, pub. 1–14–64. Cl. 1.
Eisendrath, B. D., Tanning Co. of Racine, Racine, Wis. 767,321, pub. 1–14–64. Cl. 1.
Ekco Products Co., Chicago, Ill. 658,331, canc. Cl. 50.
Electric Auto-Lite Co., The, Toledo, Ohio. 658,274, canc. Cl. 26.
Electrad Corp. of America, New York, N.Y., to P. R. Mallory & Co. Inc., Indianapolis, Ind. 170,366, ren. 3–31–64. Cl. 21.
Eloise Groves Association, Winter Haven, from Snively Groves Inc., City of Eloise, Fla. 767,673, pub. 1–14–64. Cl. 46.
Emerson Electric Mfg. Co., The, St. Louis, Mo. 767,479, pub. 1–14–64. Cl. 21.
Engis Ltd., London, England. 767,523, pub. 1–14–64. Cl. 23.
Entoleter, Inc., New Haven, Conn. 767,519, pub. 1–14–64. Cl. 23.
Erenhouse, Rudolph, d.b.a. Cosmos Products, New York, N.Y. 767,496, pub. 12–3–63. Cl. 23.
Evans Chemicals Ltd., Boreham Wood, England. 767,648, pub. 1–14–64. Cl. 46.
Evans Products Co., Plymouth, Mich. 658,288, canc. Cl. 34.
Everpure, Inc., Oak Brook, Ill. 767,558, pub. 1–14–64. Cl. 31.
Everseal Mfg. Co., Inc., Ridgefield, N.J. 767,365, pub. 1–14–64. Cl. 6.
Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. 767,439, pub. 10–29–63. Cl. 18.
Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, from Carbic-Hoechst Corp., Mountainside, N.J. 767,366, pub. 1–14–64. Cl. 6
Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius and Bruning, Frankfurt am Main, Germany. 767,636, pub. 1–14–64. Cl. 43.
Federated Purchaser, Inc., Springfield, N.J. 767,722, pub. 1–14–64. Cl. 101.
Feldman, David: *See*—
Tyne Impex Establishment Liechtenstein Establishment.
Felton & Son, Inc., d b.a. Joshua Bennett Distilling Co., South Boston, Mass. 767,694, pub. 1–14–64. Cl. 49.
Fensease Co., Duluth, Minn. 767,395, pub. 1–14–64. Cl. 12.
Fleetwood Co., Chicago, Ill., from Cosmetic Mfg. Co., Atlanta, Ga. 767,703, pub. 10–20–59. Cl. 51.
Fleischman Plumbing Co., Inc., d.b.a. Water Conditioning Engineers, Whittier, Calif. 767,555, pub. 1–14–64. Cl. 31.
Flintkote Co., The, New York, N.Y. 767,389, pub. 1–14–64. Cl. 12.
Florida Juice: *See*—
June Dairy Products Co. Inc.
Flynt, J. G., Tobacco Co., Winston-Salem, N.C., to Brown & Williamson Tobacco Corp., Louisville, Ky. 186,623, ren. 3–31–64. Cl. 17.
Foot Care International: *See*—
Case, Roger T.
Fort Dodge Chemical Co.: *See*—
Crawford, R. W.
Fraser's, Inc., New York, N.Y. 767,503, pub. 1–14–64. Cl. 23.
G & H Research Co., Northridge, Calif. 767,429, pub. 1–14–64. Cl. 15.
Geigy Chemical Corp., Ardsley, N.Y. 767,372, pub. 1–14–64. Cl. 6.
Gelman Instrument Co., Ann Arbor, Mich. 767,551–2, pub. 1–14–64. Cl. 31.
General Distilleries Corp., Hartford, Conn., to Mr. Boston Distiller Inc., Boston, Mass. 405,057, ren. 3–31–64. Cl. 49.
General Features Corp., New York, N.Y. 767,601, pub. 1–14–64. Cl. 38.
General Ionics Corp., Pittsburgh, Pa. 767,713, pub. 1–14–64. Cl. 52.
General Motors Corp., Detroit, Mich. 767,453, pub. 1–14–64. Cl. 19.
General Nutrition Corp., d.b.a. Vitamin Sales Division, Pittsburgh, Pa. 767,445, pub. 1–14–64. Cl. 18.
Gevaery Photo-Producten N.V., Mortsel, Belgium. 767,528, pub. 1–14–64. Cl. 26.

Gibbs Automatic Moulding Corp., Henderson, Ky. 658,253, canc. Cl. 22.
Giffen, Inc., Huron, Calif. 767,690, pub. 1–14–64. Cl. 46.
Gillette Co., The, Boston, Mass. 767,606, pub. 1–14–64. Cl. 51.
Gilman Engineering & Mfg. Co.: *See*—
Gilman Engineering & Mfg. Co., Inc.
Gilman Engineering & Mfg. Co., Inc., from Gilman Engineering & Mfg. Co., Janesville, Wis. 767,515, pub. 1–14–64. Cl. 23.
Gilson Medical Electronics: *See*—
Gilson, Warren E., M.D.
Gilson, Warren E., M.D., d.b.a. Gilson Medical Electronics, Middleton, Wis. 767,639, pub. 1–14–64. Cl. 44.
Glostex Chemicals, Inc., Los Angeles, Calif. 658,192, canc. Cl. 10.
Glynco: *See*—
Glynn, Robert P.
Glynn, Robert P., d.b.a. Glynco, Memphis, Tenn. 767,614, pub. 1–14–64. Cl. 39.
Gold Diver's: *See*—
Cheely, Burl L.
Goldsmith Metal Lath Co., The, Cincinnati, Ohio. 186,505, ren. 3–31–64. Cl. 13.
Goldsmith Metal Lath Co., The, Cincinnati, Ohio. 185,332, ren. 3–31–64. Cl. 12.
Good Humor Corp., Brooklyn, N.Y. 767,667, pub. 1–14–64. Cl. 46.
Goodrich, B. F., Co., The, Akron, Ohio. 767,567, pub. 1–14–64. Cl. 32.
Gorton, George, Machine Co., Racine, Wis. 658,355, canc. Cl. 23.
Granny Goose Foods, Oakland, Calif. 767,659, pub. 1–14–64. Cl. 46.
Grant, W. T., Co., New York, N.Y. 767,549, pub. 1–14–64. Cl. 31.
Gross, John, & Co., Baltimore, Md. 767,752. Cl. 49.
Guenther, C. H., & Son, Inc., d b.a. Pioneer Flour Mills, San Antonio, Tex. 760,405, cor. Cl. 46.
Gullickson, Gordon, d b.a. The Litho-Type Co., Washington, D.C. 767,382, pub. 1–14–64. Cl. 11.
Hall Syndicate, Inc., The, New York, N.Y. 767,600, pub. 1–14–64. Cl. 38.
Hankey Bannister & Co.: *See*—
Saccone & Speed Ltd.
Harbison-Walker Refractories Co., Pittsburgh, Pa. 767,573–4, pub 1–14–64. Cl. 34.
Hardtmuth, L. & C., Inc., Bloomsbury, N.J. 767,742. Cl. 37.
Harris, Joseph P., Berkeley, Calif. 767,516, pub. 1–14–64. Cl. 23.
Hartz Mountain Products Corp., New York, N.Y. 767,330, pub. 1–14–64. Cl. 1.
Hartz Mountain Products Corp., New York, N.Y. 767,583, pub. 1–14–64. Cl. 36.
Harvey Design Workshop, Inc., Lynbrook, N.Y. 767,400, pub. 1–14–64. Cl. 12.
Hat Corp. of America, Norwalk, Conn. 767,607, pub. 1–14–64. Cl. 39.
Hat Corp. of America, Norwalk, Conn. 767,611, pub. 1–14–64. Cl. 39.
Hat Corp of America, Ner York, N.Y. 767,710–11, pub. 1–14–64. Cl. 51.
Hawkins-Hawkins Co., Inc., Berkeley, Calif. 767,701, pub. 1–14–64. Cl. 50.
Hayes Steel Products Ltd., Thoroid, Ontario, Canada. 767,501, pub. 1–14–64. Cl. 23.
Hays Mfg. Co., Erie, Pa. 767,410, pub. 1–14–64. Cl. 13.
Heating Publishers, Inc., New York, N.Y. 767 743. Cl. 38.
Heddon's, James, Sons, Dowagiac, Mich. 658,250, canc. Cl. 22.
Hedwin Corp., Baltimore Md. 767,332, pub 1–14–64. Cl. 2.
Helm, Harry G., Glens Falls, N.Y. 767,486, pub. 1–14–64. Cl. 22.
Heritage House Products, Inc., Pittsburgh, Pa. 767,377–8, pub. 1–14–64. Cl. 6.
Hill-Behan Lumber Co., St. Louis, Mo. 658,347, canc. Cl. 103.
Hill, C. V., & Co., Inc.: *See*—
American Hardware Corp., The.
Hills Bros. Coffee Inc., San Francisco, Calif. 767,665, pub. 1–14–64. Cl. 46.
Hill's West Drug Store Ltd., d.b.a. Mayfair Gifts, Portage La Prairie, Manitoba, Canada. 658 244, canc. Cl 22.
Hofer Lowenbrau Karl Militzer, Hof, Bavaria, Germany. 767,691 pub. 10–1–63. Cl. 48.
Hoffman, Bob, York Bar Bell Co.: *See*—
York Bar Bell Co., Inc.
Hollins, William, & Co. Ltd., Nottingham, Nottinghamshire, England. 658 300, canc. Cl. 39.
Holophane Co., Inc., New York, N.Y. 767,469, pub. 1–14–64. Cl. 21.
Home Decorators, Inc., Newark, N.Y. 658 279, canc. Cl. 28.
Home Juice Co., Melrose Park, Ill. 767,674, pub. 1–14–64. Cl. 46.
Hooker Chemical Corp., New York, N.Y. 767,533, pub. 1–14–64. Cl. 26.
Hopfenberg, Irving J., to Manleigh, Inc., Providence, R.I. 404,866, ren. 3–31–64. Cl. 40.
Houdaille Industries, Inc., Buffalo, from Wales-Strippit Corp., North Tonawanda, N.Y. 767,488, pub. 2–25–58. Cl. 23.
Houghton Mifflin Co., Cambridge, Mass. 767,596, pub. 1–14–64. Cl. 38.
Hoyt Heater Co., Orange, Calif. 767,570, pub. 1–14–64. Cl. 34.
Huber, J. M., Corp., Borger, Tex. 767,506, pub. 1–14–64. Cl. 23.
Huck Co., Inc., Paramus, N.J. 767,509, pub. 1–14–64. Cl. 23.
Hudson Vitamin Products, Inc., New York, N.Y. 767,450, pub. 1–14–64. Cl. 18.
Hydro-Air Engineering, Inc., St. Louis, Mo. 767,492, pub. 1–22–63. Cl. 23.
Imperial Furniture Co., Grand Rapids, Mich. 767,562, pub. 1–14–64. Cl. 32.
Imperial Knife Associated Companies, Inc., Providence, R.I. 658,259, canc. Cl. 23.
Imperial Products, Antwerp, Belgium. 767,645, pub. 5–1–62. Cl. 46.
Indiana General Corp., Valparaiso, Ind. 767,532, pub. 1–14–64. Cl. 26.
Indian Head Mills, Inc.: *See*—
Ulmann, Bernhard, Co., Inc.
Industrial Heater Co., Gardena and San Jacinto, Calif. 725,857, canc. Cl. 21.
Indy 500 Spark Plug Co., Houston, Tex. 767,466, pub. 1–14–64. Cl. 21.
Inland Container Corp., Indianapolis, Ind. 767,341, pub. 1–14–64. Cl. 2.
Integral Packaging Corp., Chicago Heights, Ill. 767,334–5, pub. 1–14–64. Cl. 2.
International Paper Co., New York, N.Y. 767,592, pub. 1–14–64. Cl. 37.
International Paper Co., New York, N.Y. 767,340, pub. 1–14–64. Cl. 2.
International Textbook Co., Scranton, Pa. 767,769. Cl. 100.
International Silver Co., The, Meriden, Conn. 767,406, pub. 1–14–64. Cl. 13.
Interpool Products Co., The: *See*—
Whitmer, Charles C.
Interstate Hardware Merchandising, Inc., Cleveland, Ohio. 767,402, pub. 1–14–64. Cl. 13.
Instrument Specialties Co., Inc., West Paterson, N.J. 767,415, pub. 1–14–64. Cl. 13.
Iowa Limestone Co., Des Moines, Iowa. 767,324, pub. 1–14–64. Cl. 1.
J.M.J. Industries, Inc., Belleville, Ill. 767,495, pub. 1–14–64. Cl. 23.
J.M. Laboratories: *See*—
Meyerhoff, Arthur E.
Jac-Juliette Shoes, Inc., St. Joseph, Mo. 767,603, pub. 1–14–64. Cl. 39.
Jerlee Products Corp., Brooklyn, N.Y. 767,702, pub. 1–14–64. Cl. 50.
Jobst Institute, Inc., Toledo, Ohio. 767,641, pub. 1–14–64. Cl. 44.
Johnny Appleseed's, Inc., North Beverly, Mass. 767,621, pub. 1–14–64. Cl. 39.
Johns-Manville Corp., New York, N.Y. 767,550, pub. 1–14–64. Cl. 31.
Johnson Distilling Co., The: *See*—
Viking Distillery, Inc., The.
Johnson, J. A.: *See*—
Crawford, R. W.
June Dairy Products Co. Inc., d.b.a. Florida Juice, Miami, Fla. 767,664, pub. 1–14–64. Cl. 46.
Just Mfg. Co., Franklin Park, Ill. 767,407, pub. 1–14–64. Cl. 13.
Kaiser Aluminum & Chemical Corp., Oakland, Calif. 767,397, pub. 1–14–64. Cl. 12.
Kalsco Products Co., Inc., Downey, Calif. 767,368, pub. 1–14–64. Cl. 6.
Kearney & Foot Co., Paterson, N.J., to Nicholson File Co., Providence, R.I. 184,754, ren. 3–31–64. Cl. 23.
Kellogg Co., Battle Creek, Mich. 767,686, pub. 1–14–64. Cl. 46.
Kellogg Co., Battle Creek, Mich. 767,657, pub. 1–14–64. Cl. 46.
Kendall Co., The: *See*—
Wilton Mfg. Co., Inc.
Kennedy, Raymond A., d.b.a. B & B Mfg. Co., Sioux City, Iowa. 767,520, pub. 1–14–64. Cl. 23.
Kenny, Elizabeth, Sister, Foundation Inc., Minneapolis, Minn. 658,341, canc. Cl. 100.
Kenny, Elizabeth, Sister, Foundation Inc., Minneapolis, Minn. 658 339, canc. Cl. 100.
Kentucky River Distilling Co.: *See*—
Canada Dry Corp.
Kirie Corp., Newark, N.J. 767,542, pub. 1–14–64. Cl. 28.
Kohnstamm, H., & Co., Inc., New York, N.Y. 767,716, pub. 1–14–64. Cl. 52.
Kontaktwerk Enzberg Ing. Alfred Odenwald: *See*—
Odenwald, Alfred.
Kuba Tonmobel und Apparatebau Gerhard Kubetschek, Wolfenbuttel, Germany. 767 464, pub. 1–14–64. Cl. 21.
Lafayette Radio Electronics Corp., Jamaica, N.Y. 767,527, pub. 1–14–64. Cl. 26.
Lakeland Highlands Cooperative Association: *See*—
Lakeland Highlands Citrus Growers Ass'n.
Lakeland Highlands Citrus Growers Ass'n., Haskell, Fla., to Lakelard Highlands Cooperative Association, Highlands City, Fla. 186,748, ren. 3–31–64. Cl. 46.
Lake Wales Citrus Growers Association, Lake Wales, Fla. 767 679–80, pub. 1–14–64. Cl. 46.
La Mere Industries, Inc., Walworth, Wis. 767,737. Cl. 6.
Langley Corp., San Diego, Calif. 658,255, canc. Cl. 22.
Lavino, E. J., and Co., Philadelphia, Pa. 767,421, pub. 1–14–64. Cl. 14.
Lear Siegler, Inc., Cleveland, Ohio. 767,480, pub. 1–14–64. Cl. 21.
Leatin, McCarthy & Maynard, Inc., Burlington, N.C. 767,627, pub. 1–14–64. Cl. 39.
Lebow, Billie, New York, N.Y. 767,604, pub. 1–14–64. Cl. 39.
Lectro-Stik Co., Chicago, Ill. 767,360, pub. 1–14–64. Cl. 5.
Lee, Harry C., & Co., Inc., New York, N.Y. 767,483–4, pub. 1–14–64. Cl. 22.
Lennox Shop, The: *See*—
Lennox, Richard E.
Lennox, Richard E., d b.a. The Lennox Shop, Hewlett, N.Y. 767,564, pub. 1–14–64. Cl. 32.

Les Importations, C. M. Ltee, Montreal, Quebec, Canada. 767,536–8, pub. 1–14–64. Cl. 27.
Levik, Norma La Vonne, Boston, Mass. 658,176, canc. Cl. 6.
Life-Like Products, Inc., Baltimore, Md. 767,337, pub. 1–14–64. Cl. 2.
Liggett & Myers Tobacco Co., New York, N.Y. 767,437, pub. 1–14–64. Cl. 17.
Lionel Corp., The, New York, N.Y. 767,485, pub. 1–14–64. Cl. 22
Lisle Mills, Inc., from Lisle Mills, Inc., Allentown, Pa. 767,608, pub. 1–14–64. Cl. 39.
Litho-Type Co.: *See*—
Gullickson, Gordon.
Little Lady Foods, Inc., Chicago, Ill. 767,683, pub. 1–14–64. Cl. 46.
Llenroc, I.: *See*—
Rossoff, Irving S.
Levey, Fred'k H., Co., Inc., New York, N.Y. 767,383, pub. 1–14–64. Cl. 11.
Loomis, E. C., & Son, San Luis Obispo, Calif. 767,689, pub. 1–14–64. Cl. 46.
Lord Baltimore Press, Inc., The, New York, N.Y. 767,333, pub. 1–14–64. Multiple Class (Classes 2 and 37.)
Lorillard, P., Co., New York, N.Y. 767,438, pub. 1–14–64. Cl. 17.
Love, Joseph, Inc., New York, N.Y. 767,630, pub. 1–14–64. Cl. 39.
Luft, George W., Co., Inc., The, to The George W. Luft Co., Inc., Long Island City, N.Y. 178,543, ren. 3–31–64. Cl. 51.
Lynes Inc., Houston, Tex. 767,719, pub. 1–14–64. Cl. 100.
Lynes, Inc., Houston, Tex. 767,489, pub. 1–14–64. Cl. 23.
M & D Store Fixtures, Inc., City of Industry, Calif. 767,420, pub. 1–14–64. Cl. 13.
Maidenform, Inc., New York, N.Y. 767,625–6, pub. 1–14–64. Cl. 39.
Maintenance Products, Inc., Columbus, Ohio. 767,386, pub. 5–21–63. Cl. 12.
Malaker Laboratories, Inc., High Bridge, N.J. 767,504, pub. 1–14–64. Cl. 23.
Mallory, P. R., & Co. Inc.: *See*—
Electrad Corp. of America.
Manleigh, Inc.: *See*—
Honfenberg, Irving J.
Marco Industries Co., Anaheim, Calif. 767,468, pub. 1–14–64. Cl. 21.
Marglen, Juliette, Inc., to Juliette Marglen, Inc., Ridgefield, N.J. 658,363–4, canc. Cl. 51.
Marine Construction & Design Co., Seattle, Wash. 767,490, pub. 1–14–64. Cl. 23.
Marine Exhibition Corp., Miami, Fla. 767,329, pub. 1–14–64. Cl. 1.
Marine Exhibition Corp., Miami, Fla. 767,700, pub. 1–14–64. Cl. 50.
Marquard & Bahls, G.m.b.H., Hamburg, Germany. 767,426–7, pub. 1–14–64. Cl. 15.
Mars, Inc., Chicago, Ill. 767,687, pub. 1–14–64. Cl. 46.
Martin, J. D.: *See*—
Martin Ranch.
Martin Ranch, d.b.a. J. D. Martin, Fresno, Calif. 767,675, pub. 1–14–64. Cl. 46.
Marx, Louis, & Co., Inc., New York, N.Y. 767,740. Cl. 22.
Masterbilt Hosiery Co., Inc., New York, N.Y. 767,628, pub. 1–14–64. Cl. 39.
Mayer, Oscar, & Co. Inc., Chicago, Ill. 767,669, pub. 1–14–64. Cl. 46.
Mayfair Gifts: *See*—
Hill's West Drug Store Ltd.
May, Matthew A., West Seneca, N.Y. 767,517, pub. 1–14–64. Cl. 23.
McCaw, Stevenson & Orr, Ltd., Belfast, Northern Ireland. 178,985, ren. 3–31–64. Cl. 5.
McCrory Corp., d b.a. McCrory-McLellon-Green Stores, New York, N.Y. 767 654, pub. 11–19–63. Cl. 46.
McCrory Corp., New York, N.Y. 767,610, pub. 1–14–64. Cl. 39.
McCrory-McLellon-Green Stores: *See*—
McCrory Corp.
McGeechie William O., d.b.a. Cortez Product Co., Fort Worth, Tex. 658,333, canc. Cl. 52.
Mead Johnson & Co., Evansville, Ind. 767,440, pub. 9–17–63. Cl. 18.
Mennen Co., The, Morristown, N.J. 767,513, pub. 1–14–64. Cl. 23.
Mentholatum Co., The, Buffalo, N.Y. 767,446, pub. 1–14–64. Cl. 18.
Merck & Co., Inc., Rahway, N.J. 658,233, canc. Cl. 18.
Merrell-Soule Co., Syracuse, to The Borden Co., New York, N.Y. 181,001, ren. 3–31–64. Cl. 46.
Meyerhoff, Arthur E., d.b.a. J.M. Laboratories, Chicago, Ill. 767,736. Cl. 18.
Middletown Rubber Corp., Middletown, Conn. 767,631, pub. 3–27–62. Cl. 42.
Miller Bros. Hat Co., Inc.: *See*—
Adam Hat Stores, Inc.
Miller, Sidney S., Irwinton, Ga. 767,749. Cl. 46.
Millman Underwear Co., The: *See*—
Millman Underwear and Sportswear Co., The.
Millman Underwear and Sportswear Co., The, from The Millman Underwear Co., Baltimore, Md. 767 744–5. Cl. 39.
Miniature International Racing Association, Inc., Englewood, N.J. 767,598, pub. 1–14–64. Cl. 38.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 767,385, pub. 1–14–64. Cl. 12.
Mishawaka Rubber Co., Inc., Mishawaka, Ind. 767,613, pub. 1–14–64. Cl. 39.
Mr. Boston Distiller Inc.: *See*—
General Distilleries Corp.
Mister G of Dallas, Inc., Dallas, Tex. 767,606, pub. 1–14–64. Cl. 39.
Mitsubishi Shoji Kaisha, Ltd., Chiyoda-ku, Tokyo, Japan. 767,668, pub. 1–14–64. Cl. 46.
Monarch Garment Corp., New York, N.Y. 658,301, canc. Cl. 39.
Monsanto Chemical Co., St. Louis, Mo. 405,588, ren. 3–31–64. Cl. 1.
Monsanto Chemical Co., St. Louis, Mo. 767,322, pub. 1–14–64. Cl. 1.
Montag, Inc., Atlanta, Ga. 767,585, pub. 1–14–64. Cl. 37.
Morning Coffee, Inc., d.b.a. Courtesy Products, San Diego, Calif. 767,463, pub. 1–14–64. Cl. 21.
Morrison Milling Co., The, Denton, Tex. 767,684, pub. 1–14–64. Cl. 46.
Moulinage et Retorderie de Chavanoz, Societe Anonyme, Chavanoz, Isere, France. 767,633, pub. 1–14–64. Cl. 42.
Moulinage et Retorderies de Chavanoz, Societe Anonyme, Chavanoz, Isere, France. 767,637, pub. 1–14–64. Cl. 43.
Mrs. Leland's Kitchens: *See*—
Chesterton Candy Co.
Mutual Orange Distributors, d.b.a. Orangedale Groves, Inc., to Pure Gold, Inc., Redlands, Calif. 186,402, ren. 3–31–64. Cl. 46.
Mutual Shoe Sales Co.: *See*—
Admiral Shoe Corp.
Nalco Chemical Co., Chicago, Ill. 767,428, pub. 1–14–64. Cl. 15.
National Biscuit Co., New York, N.Y. 767,655, pub. 10–29–63. Cl. 46.
National Dairy Products Corp., Chicago, Ill. 767,682, pub. 1–14–64. Cl. 46.
National Dairy Products Corp., New York, N.Y. 767,661–2, pub. 1–14–64. Cl. 46.
National Electrical Manufacturers Association, New York, N.Y. 767,732, pub. 1–14–64. Cl. A.
National Laboratories Corp., The, Kansas City, Mo. 767,448, pub. 1–14–64. Cl. 18.
National Starch and Chemical Corp., New York, N.Y. 767,375, pub. 1–14–64. Cl. 6.
Nethercutt Laboratories, Los Angeles, Calif. 767,762. Cl. 51.
New Jersey Machine Corp., Hoboken, N.J. 767,497–500, pub. 1–14–64. Cl. 23.
New York Air Brake Co., The, New York, N.Y. 767,507, pub. 1–14–64. Cl. 23.
New Yorker Homes Corp., The, Elkhart, Ind. 767,454, pub. 1–14–64. Cl. 19.
News Map of the Week, Inc., Chicago, Ill. 767,595, pub. 1–14–64. Cl. 38.
Nicholson File Co.: *See*—
Arcade File Works.
Barnett, G. & H., Co.
Kearney & Foot Co.
Nicholson File Co., Providence, R.I. 185,282, ren. 3–31–64. Cl. 23.
Norman, Merle, Cosmetics, Inc., Los Angeles, Calif. 767,759–61. Cl. 51.
Northeast Airlines, Inc., Boston, Mass. 658,348, canc. Cl. 105.
Noxon, Inc., Jersey City, N.J. 767,355, pub. 6–11–63. Cl. 4.
Nu-Vita Laboratories, Inc., Racine, Wis. 767,707, pub. 1–14–64. Cl. 51.
Odenwald, Alfred d.b.a. Kontaktwerk Enzberg Ing. Alfred Odenwald, Enzberg, Germany. 767,530, pub. 1–14–64. Cl. 26.
Official Motor Freight Guide, Inc., Chicago, Ill. 692,050, dis. Cl. 38.
Ohio Provision Co., The, Cleveland, Ohio. 658,317, canc. Cl. 46.
Oklahoma Leather Co., Inc., Frederick, Okla. 767,350, pub. 1–14–64. Cl. 3.
Olin Mathieson Chemical Corp., New York, N.Y. 767,444, pub. 1–14–64. Cl. 18.
Orangedale Groves, Inc.: *See*—
Mutual Orange Distributors.
Orr, W. Wallace, Inc., Philadelphia, Pa. 767,599, pub. 1–14–64. Cl. 38.
Osrow Products Co., Inc., Glen Cove, N.Y. 767,546, pub. 10–18–60. Cl. 29.
Otterstrom, Charles F., Burbank, Calif. 658,286, canc. Cl. 32.
Panelboard Mfg. Co., Inc., Newark, N.J. 767,388, pub. 11–26–63. Cl. 12.
Paper Novelty Mfg. Co., Stamford, Conn. 767,434–5, pub. 1–14–64. Cl. 16.
Parachlor Chemical Corp., Long Island City, N.Y. 767,369, pub. 11–6–62. Cl. 6.
Parade Dress Co. Inc., New York, N.Y. 767,616, pub. 1–14–64. Cl. 39.
Paramount Wire Co., Inc., Brooklyn, N.Y. 767,416, pub. 1–14–64. Cl. 13.
Park & Tilford Distillers Co.: *See*—
Schenley Distillers, Inc.
Parke, Davis & Co., Detroit, Mich. 658,235, canc. Cl. 18.
Parvin Mfg. Co., Los Angeles, Calif. 658,297, canc. Cl. 39.
Pasquale Foods, Inc., Cincinnati, Ohio. 767,718, pub. 1–14–64. Cl. 100.
Paulson Mfg. Corp., Fallbrook, Calif. 658,273, canc. Cl. 26.
Peachtree Doors, Inc., Atlanta, Ga. 767,392, pub. 1–14–64. Cl. 12.
Penn Controls, Inc., Goshen, Ind. 658,275, canc. Cl. 26.
Penney, J. C., Co., Salt Lake City, Utah, and New York, N.Y., to J. C. Penney Co., New York, N.Y. 181,783, ren. 3–31–64. Cl. 42.
Penney, J. C., Co., Salt Lake City, Utah, and New York, N.Y., to J. C. Penney Co., New York, N.Y. 183,154 ren. 3–31–64. Cl. 42.
Pepperell Mfg. Co., Boston, Mass. 767,748. Cl. 42.
Perkins Machine and Gear Co., West Springfield, Mass. 767,510–11, pub. 11–19–63. Cl. 23.
Petite Miss Co., New York, N.Y. 767,617, pub. 1–14–64. Cl. 39.

Petronio, Thomas, Mamaroneck, N.Y. 658,335, canc. Cl. 52.
Phenix Co., Los Angeles, Calif. 658,295, canc. Cl. 36.
Plachaud, Lucia B. N., Buenos Aires, Argentina. 658,217, canc. Cl. 18.
Pioneer Flour Mills: *See*—
Guenther, C. H., & Son, Inc.
Pioneer Savings and Loan Association, Honolulu, Hawaii. 767,724, pub. 1–14–64. Cl. 102.
Piru Citrus Association, Piru, Calif. 767,685, pub. 1–14–64. Cl. 46.
Plastic Packaging Co., Chicago, Ill. 767,331, pub. 1–14–64. Cl. 2.
Plough, Inc.: *See*—
Sharp & Dohme.
Plough, Inc., Memphis, Tenn. 767,705, pub. 1–14–64. Cl. 51.
Plyorient Corp., New York, N.Y. 767,396, pub. 1–14–64. Cl. 12.
Pollak, Henry, Inc., New York, N.Y. 767,349, pub. 1–14–64. Cl. 3.
Polley Co.: *See*—
Botany Industries, Inc.
Precision Diamond Tool Co., Elgin, Ill. 767,357, pub. 12–31–63. Cl. 4.
Preferred Check System, Inc., Eugene, Oreg. 767,723, pub. 1–14–64. Cl. 102.
Professional Printing Co., Inc., New Hyde Park, N.Y. 767,587, pub. 1–14–64. Cl. 37.
Purdue Frederick Co., The, New York, N.Y. 23,794. Am. 7(d). Cl. 18.
Pure Gold, Inc.: *See*—
Mutual Orange Distributors.
R-L Laboratories, Inc., New York, N.Y. 767,712, pub. 1–14–64. Cl. 51.
R. and P., Inc., Detroit, Mich. 767,735. Cl. 3.
Rabin, Melvin, Philadelphia, Pa. 658,310, canc. Cl. 46.
Rademacker John W., Humboldt, Iowa. 658,281, canc. Cl. 26.
Randolph Industrial Equipment Co., Franklin Park, Ill. 658,205, canc. Cl. 13.
Red Arrow Products Corp., Milwaukee, Wis. 767,658, pub. 1–14–64. Cl. 46.
Red Spot Paint & Varnish Co., Inc., Evansville, Ind. 767,436, pub. 1–14–64. Cl. 16.
Reisman, J., & Sons, Inc., Pennsauken, N.J. 610,479. Am. 7(d). Cl. 46.
Reisman-Rothman Corp., New York, N.Y. 767,622, pub. 1–14–64. Cl. 39.
Renwal Products, Inc., Mineola, N.Y. 767,698, pub. 1–14–64. Cl. 50.
Republic Filters, Inc., Paterson, N.J. to Republic Seitz Filter Corp., Milldale, Conn. 407,572, ren. 3–31–64. Cl. 31.
Republic Seitz Filter Corp.: *See*—
Republic Filters, Inc.
Revere Copper and Brass Inc., New York, N.Y. 767,424, pub. 1–14–64. Cl. 14.
Revlon, Inc., New York, N.Y. 767,764–5. Cl. 51.
Rexall Drug and Chemical Co., d.b.a. Rexall Drug Co., Los Angeles, Calif. 767,447, pub. 1–14–64. Cl. 18.
Rexall Drug and Chemical Co., d.b.a. Tupperware, Los Angeles, Calif. 767,746. Cl. 40.
Rexall Drug Co.: *See*—
Rexall Drug and Chemical Co.
Ricoh Industries, U.S.A., Inc., New York, N.Y. 767,584, pub. 1–14–64. Cl. 36.
Roni Shoe Corp., New York, N.Y. 767,629, pub. 1–14–64. Cl. 39.
Rossoff, Irving S., d.b.a. I. Llenroc, Taylorville, Ill. 767,593, pub. 1–14–64. Cl. 38.
Rothbaum, Jack, d b.a. Camar Pharmacal Distributors, New York, N.Y. 658 219, canc. Cl. 18.
Roux Laboratories, Inc., New York, N.Y. 767,763. Cl. 51.
Roxane, Philips, Inc.: *See*—
Anchor Serum Co.
Royal Crown Sales: *See*—
Allison, Maurice.
Rubinstein, Helena, Inc., New York, N.Y. 404,100, ren. 3–31–64. Cl. 51.
Rueping, Fred Leather Co., Fond du Lac, Wis. 767,320, pub. 1–14–64. Cl. 1.
Russell, L. B., Chemicals, Inc., Long Island City, N.Y. 767 362–4, pub. 1–5–60. Cl. 6.
Russell Mfg. Co., The, Middletown, Conn. 767,577, pub. 1–14–64. Cl. 35.
Saccone & Speed Ltd., d.b.a. Hankey Bannister & Co., Piccadilly, London, England. 767,692, pub. 1–14–64. Cl. 49.
Saks & Co., New York, N.Y. 767,620, pub. 1–14–64. Cl. 39.
San Joaquin Grocery Co., to Sun-Maid Raisin Growers of California, Fresno, Calif. 178,119, ren 3–31–64. Cl. 45.
Sanders Associates, Inc., Nashua, N.H. 767,581, pub. 1–14–64. Cl. 36.
Sanitary Paper Mills, Inc., The, East Hartford, Conn. 767,588, pub. 1–14–64. Cl. 37.
Sanford Ink Co., Bellwood, Ill. 767,534, pub. 1–14–64. Cl. 26.
Schenley Distillers, Inc., d.b.a. Park & Tilford Distillers Co., New York, N.Y. 767,751. Cl. 49.
Schenley Distillers, Inc., New York, N.Y. 767,693, pub. 1–14–64. Cl. 49.
Schjeldahl, G. T., Co., Northfield, Minn. 767,319, pub. 1–14–64. Cl. 1.
Schlumbohm, Peter, to Chemex Corp., New York, N.Y. 405,421, ren. 3–31–64. Cl. 18.
Scopinich Brothers, East Quoque, N.Y. 729,368, canc. Cl. 19.
Sea Pak Corp., St. Simons Island, Ga. 767,656, pub. 1–14–64. Cl. 46.
Sea and Ski Co.: *See*—
Botany Industries, Inc.
Seacoast Canning Co., The, Eastport, Maine, to California Packing Corp., San Francisco, Calif. 179,975, ren. 3–31–64. Cl. 46.
Seitz-Asbest-Werke Theo & Geo Seitz Kommanditgesellschaft, Bad Kreuznach, Germany. 767,559, pub. 1–14–64. Cl. 31.
Seven-Up Co., The, St. Louis, Mo. 767,643, pub. 1–14–64. Cl. 45.
Shamban, W. S., & Co., Culver City, Calif. 767,579, pub. 1–14–64. Cl. 35.
Shampaine Industries, Inc., St. Louis, Mo. 767,566, pub. 1–14–64. Cl. 32.
Sharp & Dohme, Baltimore, Md., to Plough, Inc., Memphis, Tenn. 181,283, ren. 3–31–64. Cl. 18.
Shattuck, F. W., & Co. Inc., New York, N.Y. 767,668, pub. 1–14–64. Cl. 46.
Shepherd Casters, Inc., Benton Harbor, Mich. 767,417, pub. 1–14–64. Cl. 13.
Sherman, H. B., Mfg. Co., Battle Creek, Mich. 767,414, pub. 1–14–64. Cl. 13.
Shield Chemical Corp., Verona, N.J. 767,666, pub. 1–14–64. Cl. 46.
Shields, Inc., Attleborg, Mass. 767,343, pub. 1–14–64. Cl. 3.
Shuron Optical Co., Inc., Geneva, N.Y. 355,364, canc. Cl. 26.
Simpson Timber Co., Seattle, Wash. 767,393, pub. 1–14–64. Cl. 12.
Sirloin Room, Inc., d.b.a. Costin's Sirloin Room, Washington, D.C. 767,720, pub. 11–26–63. Cl. 100.
Slick Airways, Inc., Dallas, Tex. 658,349, canc. Cl. 105.
Smith, Elwin G., & Co., Inc., Pittsburgh, Pa. 767,726, pub. 1–14–64. Cl. 103.
Smith Kline & French Laboratories, Philadelphia, Pa. 767,441, pub. 9–17–63. Cl. 18.
Snively Groves Inc.: *See*—
Eloise Groves Association.
Snyder Mfg. Co., Philadelphia, Pa. 767,487, pub. 1–14–64. Cl. 22.
Sock-It Co., Inc., High Point, N.C. 767,482, pub. 2–26–63. Cl. 22.
Sosnner Tap and Tool Corp., Lynbrook, N.Y. 767,518, pub. 1–14–64. Cl. 23.
South Bend Tackle Co., Inc., South Bend, Ind. 658,247, canc. Cl. 22.
South River Brick-Face Co., South River, N.J. 658,369, canc. Cl. 103.
Sparkmaster Mfg. Co., Salt Lake City, Utah. 767,379, pub. 1–14–64. Cl. 8.
Sparta Electronic Corp., Sacramento, Calif. 767,467, pub. 1–14–64. Cl. 21.
Spaulding Bakeries, Inc., Binghamton, N.Y. 658,327, canc. Cl. 46.
Spaulding Bakeries Inc., Binghamton, N.Y. 767,677, pub. 1–14–64. Cl. 46.
Speakman Co., Wilmington, Del. 767,403, pub. 1–14–64. Cl. 13.
Sportsways, Inc., Paramount, Calif. 767,741. Cl. 22.
Supreme Pharmaceutical Co., Jersey City, N.J. 658,225, canc. Cl. 18.
Standard Oil Co., The, Cleveland, Ohio. 767,425, pub. 1–1–63. Cl. 15.
Standard Oil Co., Whiting, Ind., and Chicago, Ill., to Candle-Lite, Inc., Cincinnati, Ohio. 179,798, ren. 3–31–64. Cl. 15.
Standex Laboratories, Inc., Columbus, Ohio. 767,451, pub. 1–14–64. Cl. 18.
Star Poultry Co., Inc., New York, N.Y. 767,647, pub. 1–14–64. Cl. 46.
Stetson Corp., Lincoln, Ill. 767,697, pub. 1–14–64. Cl. 50.
Storkline Corp., Jackson, Miss. 767,560, pub. 1–14–64. Cl. 32.
Stratton Coats, Inc., New York, N.Y. 767,612, pub. 1–14–64. Cl. 39.
Sturm & Scheinberg, Inc., New York, N.Y. 734,255. Am. 7(d). Cl. 44.
Sunbeam Corp., Chicago, Ill. 767,540, pub. 1–14–64. Cl. 27.
Sun-Maid Raisin Growers of California: *See*—
San Joaquin Grocery Co.
Sun Maid Raisin Growers, to Sun-Maid Raisin Growers of California, a Co-operative Association of California, to Sun-Maid Raisin Growers of California, Fresno, Calif. 179,037, ren. 3–31–64. Cl. 46.
Super-Form Brassiere, Inc., Orange, N.J. 767,623, pub. 1–14–64. Cl. 39.
Superior Scaffold Co., Torrance, Calif. 767,390, pub. 1–14–64. Cl. 12.
Swanee Paper Corp.: *See*—
Clearwater Tissue Mills, Inc.
Swimquip, Inc., El Monte, Calif. 767,494, pub. 1–14–64. Cl. 23.
Technical Plastics Co., Los Angeles, Calif. 767,336, pub. 1–14–64. Cl. 2.
Teenaire: *See*—
Turtle Wax, Inc.
Texaco Inc.: *See*—
Texas Co., The.
Texas Co., The, to Texaco Inc., New York, N.Y. 406,195, ren. 3–31–64. Cl. 15.
Texize Chemicals, Inc., Greenville, S.C. 767,373, pub. 1–14–64. Cl. 6.
Textile Marking Machine Co., Inc., Syracuse, N.Y. 767,361, pub. 1–14–64. Cl. 5.
Textile Rubber & Chemical Co., Dalton, Ga. 767,632, pub. 1–14–64. Cl. 42.
Therm-O-Disc, Inc., Mansfield, Ohio. 767,535, pub. 1–14–64. Cl. 26.
Thor Mills Ltd., Montreal, Quebec, Canada. 767,635, pub. 1–14–64. Cl. 43.
Thuron Sprayer Mfg. Co., Dallas, Tex. 767,508, pub. 1–14–64. Cl. 23.
Tomahawk Paper Co., Inc., Tomahawk, Wis. 767,591, pub. 1–14–64. Cl. 37.

Tone Products-The Orange Fresh Co., Inc., Chicago, Ill. 767,642, pub. 11–26–63. Cl. 45.
Travelog Inc., West Acton, Mass. 767,525, pub. 1–14–64. Cl. 23.
Tupperware: *See*—
Rexall Drug and Chemical Co.
Tung-Sol Electric Inc., Newark, N.J. 767,477, pub. 1–14–64. Cl. 21.
Turtle Wax, Inc., Chicago, Ill. 767,356, pub. 1–14–64. Multiple Class (Classes 4, 6, 15, and 52.)
Turtle Wax, Inc., d.b.a. Teenaire, Chicago, Ill. 767,708, pub. 1–14–64. Cl. 51.
Tyne Impex Establishment Liechtenstein Establishment, Mauren, Liechtenstein, from David Feldman, d.b.a. Tyne Shavers, San Juan, Puerto Rico. 767,521, pub. 1–14–64. Cl. 23.
Tyne Shavers: *See*—
Tyne Impex Establishment Liechtenstein Establishment.
Ukiah Packing Co., San Jose, Calif. 767,681, pub. 1–14–64. Cl. 46.
Ulmann, Bernhard, Co., Inc., to Indian Head Mills, Inc., New York, N.Y. 178,881, ren. 3–31–64. Cl. 38.
Underwood, William, Co., Watertown, Mass. 767,672, pub. 1–14–64. Cl. 46.
Union Bag-Camp Paper Corp., New York, N.Y. 767,460–1, pub. 1–14–64. Cl. 19.
Union Carbide Corp., New York, N.Y. 767,358, pub. 1–14–64. Cl. 4.
United Clay Mines Corp., Trenton, N.J. 767,816, pub. 1–14–64. Cl. 1.
United Feature Syndicate, Inc., New York, N.Y. 767,597, pub. 1–14–64. Cl. 38.
United Merchants and Manufacturers, Inc.: *See*—
Marx, Cohn Hall, Co.
U.S.A. Mills, Inc., Hickory, N.C. 767,605, pub. 1–14–64. Cl. 39.
United States Borax & Chemical Corp., Los Angeles, Calif. 767,398, pub. 1–14–64. Cl. 12.
U.S. Ethicals, Inc., Long Island City, N.Y. 767,442, pub. 1–14–64. Cl. 18.
United States Gypsum Co., Chicago, Ill. 405,417, ren. 3–31–64. Cl. 12.
United States Plywood Corp., New York, N.Y. 767,359, pub. 1–14–64. Cl. 5.
United States Rubber Co., New York, N.Y. 767,580, pub. 1–14–64. Cl. 35.
U.S. Sanitary Specialties Corp., Chicago, Ill. 767,715, pub. 1–14–64. Cl. 52.
Universal American Corp., Philadelphia, Pa. 767,502, pub. 1–14–64. Cl. 23.
Universal Sheliac & Supply Co., Brooklyn, N.Y. 767,353–4, pub. 1–14–64. Cl. 4.
Upjohn Co., The, Kalamazoo, Mich. 658,227–8, canc. Cl. 18.
Upjohn Co., The, Kalamazoo, Mich. 725,567, canc. Cl. 18.
V-M Corp., Benton Harbor, Mich. 767,465, pub. 1–14–64. Cl. 21.
Vacuum Baking Corp., New York, N.Y. 658,359, canc. Cl. 46.
Vanderbilt, R. T., Co., Inc., New York, N.Y. 407,614, ren. 3–31–64. Cl. 6.
Vanity Fair Mills, Inc.: *See*—
Vanity Fair Silk Mills.
Vanity Fair Silk Mills, to Vanity Fair Mills, Inc., Reading, Pa. 175,353, ren. 3–31–64. Cl. 39.
Varian Associates, Palo Alto, Calif. 767,473, pub. 1–14–64. Cl. 21.
Vaughan's Seed Co., Chicago, Ill. 767,370, pub. 1–14–64. Cl. 6.
Vendo Co., The, Kansas City, Mo. 406,001, ren. 3–31–64. Cl. 23.
Viking Distillery, Inc., The, d.b.a. The Johnson Distilling Co., Albany, Ga. 767,696, pub. 1–14–64. Cl. 49.
Vitamin Sales Division: *See*—
General Nutrition Corp.
Voi-shan Industries, Inc., Pasadena, Calif. 767,404, pub. 1–14–64. Cl. 13.
Vulcan-Cincinnati, Inc., Cincinnati, Ohio. 767,572, pub. 1–14–64. Cl. 34.
W-K-M Mfg. Co., Inc., Houston, Tex., to ACF Industries Inc., New York, N.Y. 658,204, canc. Cl. 13.
Wales-Strippit Corp.: *See*—
Houdaille Industries, Inc.
Wander Co., The, Chicago, Ill. 767,739. Cl. 18.
Wardley Products Co., Inc., Long Island City, N.Y. 767,753. Cl. 50.
Ward's Natural Science Establishment, Inc., Rochester, N.Y. 767,323, pub. 1–14–64. Cl. 1.
Warner-Lambert Pharmaceutical Co.: *See*—
Warner, William R., & Co., Inc.
Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 767,449 pub. 1–14–64. Cl. 18.
Warner, William R., & Co., Inc., Wilmington, Del., and New York, N.Y., to Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 406,017, ren. 3–31–64. Cl. 18.
Washington Packaging Corp., Seattle, Wash. 767,505, pub. 1–14–64. Cl. 23.
Washington State Apple Advertising Commission, Wenatchee, Wash. 767,733, pub. 1–14–64. Cl. A.
Water Conditioning Engineers: *See*—
Fleischman Plumbing Co., Inc.
Wayne-Ferrell Pharmaceuticals, Inc., Iowa City, Iowa. 767,640, pub. 1–14–64. Cl. 44.
Weisbaum Brothers, Cincinnati, Ohio, to The B.V.D. Co., Inc., New York, N.Y. 184,249, ren. 3–31–64. Cl. 39.
Weisman, M. B., Co.: *See*—
Weissman, Marvin B.
Weissman, Marvin B., d.b.a. M. B. Weissman Co., New York, N.Y. 658,299, canc. Cl. 39.
Wellman, S. K., Co., The, Bedford, Ohio. 767,578, pub. 1–14–64. Cl. 35.
West Chemical Products, Inc., Long Island City, N.Y. 767,376, pub. 1–14–64. Cl. 6.
Whitmer, Charles C., d.b.a. The Interpool Products Co., Cleveland, Ohio. 767,384, pub. 1–14–64. Cl. 12.
Wilton Mfg. Co., Inc., New York, N.Y., to The Kendall Co., Walpole, Mass. 179,761, ren. 3–31–64. Cl. 42.
Winter, Elfriede, Frankfurt am Main, Germany. 658,228, canc. Cl. 18.
Wodli, Emile, Strasbourg, Bas-Rhin, France. 767,493, pub. 1–14–64. Cl. 23.
Wolverine Shoe and Tanning Corp., Rockford, Mich. 767,344–5, pub. 1–14–64. Cl. 3.
Wood, J. A., Co., Growers, Packers & Shippers, Phoenix, Ariz. 767,651, pub. 8–21–62. Cl. 46.
Wood Newspaper Machinery Corp., Plainfield, N.J. 179,805, ren. 3–31–64. Cl. 28.
Wood Newspaper Machinery Corp., Plainfield, N.J. 179,964, ren. 3–31–64. Cl. 23.
Wood & Selick Cocoanut Co., Inc., New York, N.Y. 729,527, canc. Cl. 46.
Woodside Engineering Co., Franklin Park, Ill. 767,418, pub. 1–14–64. Cl. 13.
Woody Mfg. Co., Los Angeles, Calif. 767,557, pub. 1–14–64. Cl. 31.
Woolworth, F. W., Co., New York, N.Y. 767,346–7, pub. 1–14–64. Cl. 3.
Worthington Foods, Inc.: *See*—
Battle Creek Food Co., The.
Wyandotte Chemicals Corp.: *See*—
Detroit Soda Products Co.
Wyandotte Chemicals Corp., Wyandotte, Mich. 767,374, pub. 1–14–64. Cl. 6.
Wyler Watch Corp., New York, N.Y. 767,539, pub. 1–14–64. Cl. 27.
York Bar Bell Co., Inc., d.b.a. Bob Hoffman-York Bar Bell Co., York, Pa. 767,678, pub. 1–14–64. Cl. 46.
Zale Jewelry Co., Inc., Dallas, Tex. 767,582, pub. 1–14–64. Cl. 36.
Zinsser, William, & Co. Inc., New York, N.Y. 767,432, pub. 1–14–64. Cl. 16.

U.S. GOVERNMENT PRINTING OFFICE:1964

U.S. DEPARTMENT OF COMMERCE
OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE
April 7, 1964 Volume 801 Number 1

PATENTS
NOTICES

Board of Appeals Decisions Rendered in the Month of February 1964

Examiner affirmed	286
Examiner affirmed in part	63
Examiner reversed	93
Total	442

Notice of Daylight Saving Time

The Patent Office will operate on Daylight Saving Time from April 27, 1964, through October 24, 1964.

Notice of Tentative Recordation of a Trade Name

[T.D. 56122]

Tentative recordation of trade name under section 42, Trademark Act of 1946, and section 11.16, Customs Regulations

TREASURY DEPARTMENT,
OFFICE OF THE COMMISSIONER OF CUSTOMS,
Washington, D.C.

To Collectors of Customs and Others Concerned:

An application has been filed in the Treasury Department for the recordation of the following described trade name under the provisions of section 42, Trademark Act of 1946, and section 11.16, Customs Regulations:

"BARBAN CREATIONS," owned by Herman Pecker and Co., Inc., a corporation organized under the laws of the State of New York, located and doing business at 26 West 36th Street, New York City, which trade name is used in connection with stuffed animals and dolls, Christmas novelties, casual slippers, shoe backs, luggage and general merchandise manufactured in Japan, Hong Kong, and the United States.

Any person who desires to file an opposition to the recordation of this trade name shall notify the Commissioner of Customs, Bureau of Customs, Washington, D.C., before the expiration of 30 days after April 15, 1964, of his intent to oppose the recordation. If a notice of opposition is filed, the opposer will be furnished with a copy of the application for recordation of the trade name, together with its supporting documents and instructions as to the procedure to be followed. The customs officers concerned will be given notice within 45 days after April 15, 1964, of any opposition proceeding.

Until 45 days after April 15, 1964, all articles of foreign manufacture bearing names or marks which copy or simulate the above-mentioned trade name shall be detained, but not seized, and thereafter, shall receive the treatment provided for in section 11.17, Customs Regulations, unless a notice is received that an opposition has been filed, in which case such articles shall continue to be detained until a final determination is made concerning the right of the applicant to the trade name.

(Signed) PHILIP NICHOLS, JR.,
Commissioner of Customs.

March 4, 1964.

Patents Available for Licensing

In accordance with the provision of 10 C.F.R. § 81.10–81.12, the U.S. Atomic Energy Commission is prepared to grant nonexclusive, revocable, royalty-free licenses under the following patents.

Applications for licenses should be addressed to the Assistant General Counsel for Patents, U.S. Atomic Energy Commission, Washington, D.C. 20545, indicating the State of incorporation, if a business firm, or citizenship, if an individual.

3,116,660.	1– 7–64.	High Speed Kerr Cell Framing Camera.
3,116,980.	1– 7–64.	Pulse Column.
3,117,372.	1–14–64.	Stabilized Rare Earth Oxides for a Control Rod and Method of Preparation.
3,117,912.	1–14–64.	Method of Producing Neutrons.
3,118,698.	1–21–64.	Gripping Device for Cylindrical Objects..
3,118,764.	1–21–64.	Liquid Phase Sintering of Metallic Carbides.
3,119,036.	1–21–64.	Radiation Monitor Containing Two Concentric Ionization Chambers and Means for Insulating the Separate Chambers.
3,119,238.	1–28–64.	Cryogenic.
3,119,537.	1–28–64.	Multiple Differential Rotary Mechanical Drive.
3,119,653.	1–28–64.	Preparation of Uranium Monosulfide.
3,119,658.	1–28–64.	Aluminum Cladding Dissolution.
3,119,723.	1–28–64.	Apparatus for Converting Heat Into Electricity.
3,120,120.	2– 4–64.	Ultrasonic Method of Measuring Thickness Using Lamb Waves.
3,120,435.	2– 4–64.	Regeneration of Fission-Products Containing Magnesium-Thorium Alloys.
3,120,470.	2– 4–64.	Method of Producing Neutrons.
3,120,476.	2– 4–64.	Pyrotron Process Apparatus Utilizing Enhancement Principle.
3,120,477.	2– 4–64.	Method for Confining a Dense Plasma.
3,120,480.	2– 4–64.	Control Rod for Nuclear Reactors.
3,120,481.	2– 4–64.	Means for Producing High Density Plasmas.
3,120,493.	2– 4–64.	Suppression of Ruthenium Volatilization in Evaporation and Calcination of Radioactive Waste Solutions.
3,120,827.	2–11–64.	Method of Forming Metal Plates With Explosives.
3,121,034.	2–11–64.	Zirconium Alloy Treatment Process.
3,121,045.	2–11–64.	Control Rod for Nuclear Reactor.
3,121,046.	2–11–64.	Pressure Vessels.
3,121,047.	2–11–64.	Ceramic Coated Fuel Particles.

New Applications Received During February 1964

Patents	6,442
Designs	362
Plant Patents	16
Reissues	18
Total	6,838

Issue—April 7, 1964

Patents	854	No. 3,127,614 to No. 3,128,467, incl.
Designs	65	No. 197,879 to No. 197,943, incl.
Reissues	5	No. 25,547 to No. 25,551, incl.
Total	924	

3,121,052.	2–11–64.	Calandria Type Sodium Graphite Reactor.
3,121,128.	2–11–64.	Process of Making Shaped Fuel for Nuclear Reactors.
3,121,204.	2–11–64.	Non-Reflective Liquid Termination of a Coaxial Cable.
3,121,666.	2–18–64.	Nuclear Reactor Fuel Assembly.
3,121,825.	2–18–64.	Electrically Conductive Floor Covering for Use in Explosive Hazard Areas.
3,121,941.	2–25–64.	A Fluid Operated Tool for Coupling Tubes Together.
3,122,027.	2–25–64.	Linear Motion Device.
3,122,178.	2–25–64.	Magnetic Core Plane Threading Machine and Method.
3,122,414.	2–25–64.	Process for Recovery of Strontium Values From Fission Product Waste Solutions.
3,122,424.	2–25–64.	Graphite-Bonding Method.
3,122,458.	2–25–64.	Grain Refinement of Uranium Billets.
3,122,484.	2–25–64.	Reactor Having Fuel Elements Coated With Burnable Poison.
3,122,509.	2–25–64.	Coherent Nuclear Reactor Elements.
3,122,595.	2–25–64.	Controlled Nuclear Reactor Dispersions and Method of Making.
3,122,648.	2–25–64.	Verner Chronotrol Utilizing at Least Two Shorted Delay Lines.

Adjudicated Patents

(C.A.N.C.) Forrest Patent No. 2,777,815 (210—3), for sewage digestion process, *Held* not infringed. *FMC Corp.* v. *City of Greensboro*, 326 F.2d 581; 140 USPQ 282.

(C.A.N.Y.) First and Melton Patent No. 2,835,874 (333—79), for electric interference suppression filter, *Held* invalid. *J and G Development Co.* v. *All-Tronics, Inc.*, 326 F.2d 204; 139 USPQ 543.

(C.A. Fla.) Lidsky Patent No. 2,974,368 (29—155.5) for metal fastener, *Held* invalid. *Ronel Corp.* v. *Anchor Lock of Florida Inc.*, 325 F.2d 889; 140 USPQ 7.

(D.C. Calif.) Ashlock Patent No. 2,406,733 (146—27), for pitting machine. Claim 11 *Held* valid. *Geo. W. Ashlock Co.* v. *Atlas-Pacific Engineering Co.*, 225 F. Supp. 205; 139 USPQ 421.

Classification Order No. 357

The following transfer is hereby ordered to take effect on Monday, February 3, 1964:

From Group 150 to Group 220

Class 264, PLASTIC AND NON-METALLIC ARTICLE SHAPING OR TREATING: PROCESSES
Subclass 3

H. B. WHITMORE,
Superintendent, Examining Corps.

PATENT EXAMINING CORPS

H. B. WHITMORE, Superintendent

PATENT EXAMINING OPERATIONS AND GROUPS	Oldest Application	
	New	Amended
CHEMICAL EXAMINING OPERATION—P. E. MANGAN, Director.		
GENERAL CHEMISTRY, GROUP 110—R. L. CAMPBELL, Supervisory Examiner. Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries.	3–16–62	4–30–62
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Supervisory Examiner. Heterocyclic; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids.	6–1–62	7–18–62
PETROLEUM CHEMISTRY, GROUP 130—J. R. LIBERMAN, Supervisory Examiner. Hydrocarbons; Halogenated Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices; Organic Chemistry (Part) e.g.: Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhydrides; Acid Halides.	3–16–62	5–1–62
HIGH POLYMER CHEMISTRY, GROUP 140—M. STERMAN, Supervisory Examiner. Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins: Reclaiming; Pore-Forming.	6–4–62	4–19–62
COMPOSITIONS AND MOLDING, GROUP 150—L. H. GASTON, Supervisory Examiner. Compositions (Part) e.g.: Coating; Molding; Adhesive Compositions; Abrading; Liquid Purification or Separation; Gas Separation; Special Utility; Molding Processes.	4–2–62	3–20–62
COATING AND LAMINATING, GROUP 160—J. REBOLD, Supervisory Examiner. Coating: Processes, Apparatus and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Ornamentation; Adhesive Bonding; Special Manufactures.	4–26–62	4–17–62
SPECIALIZED CHEMICAL ARTS AND INDUSTRIES, GROUP 170—W. B. KNIGHT, Supervisory Examiner. Bleaching and Dyeing; Fertilizers; Foods; Fermentation; Photography; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Metallurgical Apparatus; Gas, Heating and Illuminating; Cleaning Processes; Liquid Purification; Thermolytic Distillation; Preserving.	7–10–62	7–6–62
CHEMICAL ENGINEERING, GROUP 180—G. D. MITCHELL, Supervisory Examiner. Gas, Liquid and Solid Separation; Centrifugal Bowl Separators; Gas and Liquid Contact Apparatus; Distillation; Drying; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	7–2–62	6–1–62
ELECTRICAL EXAMINING OPERATION—N. H. EVANS, Director.		
POWER, GROUP 210—M. L. LEVY, Supervisory Examiner. Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art.	8–1–62	8–6–62
SECURITY, GROUP 220—S. BOYD, Supervisory Examiner. Ordnance, Firearms and Ammunition; Radar, Sonar, Directional Radio, Torpedoes, Seismic Exploring, Radio-Active Batteries; Nuclear Reactors, Powder Metallurgy, Rocket Fuels; Radio-Active Material.	9–10–62	9–6–62
INFORMATION TRANSMISSION, GROUP 230—S. W. CAPELLI, Supervisory Examiner. Communications; Multiplexing Techniques; Facsimile and Related Art.	3–8–62	4–4–62
INFORMATION STORAGE AND RETRIEVAL, GROUP 240—W. W. BURNS, Supervisory Examiner. Data Processing, Computation and Conversion; Storage Devices and Related Art.	6–22–62	6–6–62
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—B. G. MILLER, Supervisory Examiner. Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks.	6–14–62	6–13–62
RADIATION AND INSTRUMENTS, GROUP 260—F. M. STRADER, Supervisory Examiner. Optics; Radiant Energy; Measuring.	8–21–62	8–28–62
ELEMENTS, GROUP 270—E. J. SAX, Supervisory Examiner. Conductors; Switches; Miscellaneous.		

CONDITION OF PATENT APPLICATIONS AS OF FEBRUARY 29, 1964

Total number of pending applications (excluding Designs)	205, 093
Total number of Design applications pending	5, 775
Total number of applications awaiting action (excluding Designs)	124, 525
Total number of Design applications awaiting action	2, 043
Date of oldest new application awaiting action	Mar. 8, 1962
Date of oldest amended application awaiting action	Mar. 20, 1962

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during April 1964, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*

Patents ..... Numbers 2,418,109 to 2,419,932, inclusive
Plant Patents ..... Numbers 733 and 734, inclusive

PATENT EXAMINING OPERATIONS AND GROUPS (Continued)	Oldest Application	
	New	Amended
MECHANICAL ENGINEERING EXAMINING OPERATION—R. A. WAHL, Director.		
MATERIAL OR ARTICLE HANDLING AND DISPENSING, GROUP 310—A. BERLIN, Supervisory Examiner Material or Article Handling and Dispensing; Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Fluid Sprinkling and Fire Extinguishers; Coin Handling and Check Controlled Apparatus; Classifying and Assorting Solids.	1-7-63	1-21-63
METAL AND PLASTICS WORKING, GROUP 320—N. BERGER, Supervisory Examiner Metal Bending, Drawing, Extruding, Forging, Rolling; Sheet Metal Working; Wireworking; Chain, Staple, Horseshoe Making; Metal Founding; Wire Fabrics; Plastic Working Apparatus; Plastic Block, Earthenware Apparatus.	10-30-62	10-15-62
MANUFACTURING AND ASSEMBLING MISCELLANEOUS ARTICLES, GROUP 330—A. M. HORTON, Supervisory Examiner Special Article Making; Assembling, Tool and Implement Making; and Metal Working.	7-12-62	8-9-62
MACHINE TOOLS, MECHANISMS AND ELEMENTS, GROUP 340—F. H. BRONAUGH, Supervisory Examiner Machine Tools for Shaping or Dividing Involving Cutting or Breaking; Machine Elements Including Power Transmission Components, Work and Tool Holders.	10-17-62	7-17-62
HARDWARE, TOOLS AND JOINTS, GROUP 350—T. J. HICKEY, Supervisory Examiner Miscellaneous Hardware; Tools; Joints; Cutlery; Locks; Fasteners; Rod Pipe and Electrical Connectors; Buckles; Buttons, Clasps, Etc.; Pushing and Pulling.	6-4-62	8-1-62
FLUID HANDLING, GROUP 360—E. PAUL, Supervisory Examiner Fluid Handling; Valves; Pipes and Tubular Conduits; Fluent Material Handling; Lubrication; Baths, Closets and Sinks; Joint Packing.	9-26-62	11-29-62
POWER PLANTS, MOTORS AND PUMPS, GROUP 370—C. F. GAREAU, Supervisory Examiner Power Plants, Combustion Power Plants, Expansible Chamber Motors, Rotary Motors and Rotary Expansible Chamber Motors, Expansible Chamber Devices and Internal Combustion Engines, Pumps and Pump Regulation.	9-24-62	10-16-62
HEATING, COOLING AND VENTILATING, GROUP 380—P. L. PATRICK, Supervisory Examiner Furnaces, Liquid Heaters and Vaporizers, Burners, Heat Exchange, Automatic Temperature and Humidity Regulation, Refrigeration, Ventilation, and Illumination.	11-15-62	10-22-62
GENERAL ENGINEERING AND INDUSTRIAL ARTS EXAMINING OPERATION—J. A. MANIAN, Director.		
AGRICULTURE, GROUP 410—A. RUEGG, Supervisory Examiner Animal Husbandry; Butchering; Fishing, Trapping and Vermin Destroying; Plant Husbandry; Tobacco, Earth Working.	12-21-62	1-25-63
CIVIL ENGINEERING, GROUP 420—B. BENDETT, Supervisory Examiner Building Structures; Bridges, Closures; Closure Operators; Safes; Earth Engineering; Drilling; Mining.	10-5-62	10-11-62
PHYSICS, GROUP 430—R. L. EVANS, Supervisory Examiner Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.	9-25-62	8-24-62
TEXTILES AND APPAREL, GROUP 440—R. C. MADER, Supervisory Examiner Textiles; Winding and Reeling; Tying Strands; Apparel; Boot and Shoe Making; Sewing Machines.	11-23-62	11-19-62
TRANSPORTATION, GROUP 450—P. ARNOLD, Supervisory Examiner Railways and Rolling Stock; Brakes; Land Vehicles; Aeronautics; Ships.	12-3-62	12-4-62
FURNITURE AND RECEPTACLES, GROUP 460—W. S. COLE, Supervisory Examiner Furniture; Supports; Cabinet Structures; Receptacles; Baggage.	12-4-62	1-14-63
PRINTING, STATIONERY AND MATERIAL TREATMENT, GROUP 470—L. W. VARNER, Supervisory Examiner Printing; Typewriters; Stationery; Material Treatment.	11-16-62	9-17-62
PERSONAL TREATMENT, ADORNMENT AND AMUSEMENTS, GROUP 480—L. R. PRINCE, Supervisory Examiner Surgery; Dentistry; Artificial Body Members; Toiletry; Amusement Devices; Jewelry; Mechanical Guns; Projectors.	11-28-62	12-4-62
DESIGNS, GROUP 490—J. A. MANIAN, Supervisory Examiner Industrial Arts; Household, Personal and Fine Arts.	9-6-63	9-4-63

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE ROBERT R. CITRON

No. 7043. Decided December 12, 1963

[51 CCPA —; 325 F.2d 254; 139 USPQ 520]

1. PATENTABILITY—UTILITY—MEDICAL UTILITY.

For the reasons stated in the concurrent opinion in Patent Appeal No. 7,042, the decision of the Board of Appeals, affirming the rejection by the Examiner of all claims of appellant's application for "lack of utility in the absence of clear and convincing proof that applicant's composition is safe and effective for all the therapeutic uses disclosed in the specification," is affirmed.

APPEAL from the Patent Office. Serial No. 502,231.

AFFIRMED.

James H. Littlepage (*Herman Hersh, Ooms, McDougall & Hersh*, of counsel) for appellant.

Clarence W. Moore (*Raymond E. Martin* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, SMITH, and ALMOND, JR., *Associate Judges*

RICH, *J.*, delivered the opinion of the court.

This appeal is from the decision of the Patent Office Board of Appeals affirming the rejection of all claims of application Serial No. 502,231, filed April 18, 1955, for "Organic Composition and Method for Using Same." The application is stated to be a continuation-in-part of application Serial No. 419,683 which we have just had occasion to consider in Patent Appeal No. 7,042, decided concurrently herewith.

The subject matter here claimed is very similar to that in No. 7,042 and is sufficiently indicated by claims 19 and 23 hereinafter set forth. There is no claim to a "Method for Using," as indicated by the title of the application.

19. The composition comprising mineral oil containing 0.2–2.0 percent by weight of the acetone soluble extract of the fat soluble components in cancer tissue.

23. The method which includes the steps of reducing cancer tissue to a finely divided state, mixing the finely divided tissue with a solvent in which the fat soluble components are soluble for extracting the fat soluble components, dehydrating the fat soluble extract, mixing the dehydrated residue with anhydrous acetone to extract the acetone soluble components, dehydrating the acetone extract, and heating the residue of the acetone extract to a temperature in the range of the boiling point of water for sterilization.

The Examiner made, and the Board affirmed, several rejections on various grounds but since we find one of them sufficient we see no need to recite or consider the others. The Examiner rejected all claims for "lack of utility in the absence of clear and convincing proof that applicant's composition is safe and effective for all the therapeutic uses disclosed in the specification." In affirming, the Board said:

Appellant's sole response to the Examiner's rejection of all the appealed claims as lacking utility in the absence of clear and convincing proof of safety and effectiveness for the stated purposes does not controvert the rejection but indicates an intent to present evidence including such proof. Since appellant's brief was filed on December 10, 1959 and the indicated evidence has not been forthcoming, appellant has not responded properly to the rejection.

We agree with the Examiner's rejection of the claims since the disclosure alleges utilities such as the control of human cancer and the reversal of the process of arteriosclerosis or aging in normal humans *which are not known to be attainable.* Thus, the Examiner had adequate basis for requiring proof of operativeness for the reasons which he set forth in his answer and, absent clear and convincing proof of such utility the rejection is proper. [Emphasis ours.]

There is no occasion in this case to debate with appellant the nature of the disclosures of utility which are contained in his specification since we can accept the summary thereof contained in his brief in this court which reads as follows:

The uses are described in the original specification as follows:

(1) The resulting plasma has been used with significant improvement and control of a clinical course of at least several types of human cancer. * * *

(2) The acetone extract of the fat soluble components of Brown-Pearce and Walker tissue contains a fraction which imparts *steroid* and *endocrine* as well as *antigenic activity.* * * *

(3) It has been found that the residue from the Walker tissue, * * *, the steroid or lipid portions of which are believed to be responsible, shows *metabolic effects* on carbohydrate metabolism and bowel functions. * * *

(4) Administration by subcutaneous injection in the dosages described two or three times a week causes a definite loss in appetite and use of the material is thus suggested for *diet* and *weight control.* * * *

(5) The lipids from the Walker material cause increased activity and peristalsis of the lower bowel, colon and rectum. * * *

(6) Compounds and compositions prepared in accordance with the practice of this invention contain materials which have *luteinizing effects* and which cause definite interference with and, in some instances, complete cessation of the menses in normal women. * * *

(7) The materials prepared in accordance with the practice of this invention contain compounds which are effective, * * * to cause opening and relaxation of the blood vessels in the body. * * *

(8) *Euphoria effects.* * * *

Thus aside from the cure of cancer, appellant has described use in the general pharmaceutical applications stemming from steroid, endocrine, as well as antigenic activity.

[1] From reading the specification ourselves we get the impression that appellant's extracts from rabbit and rat cancer tissue are not only effective to produce serum which is effective "in controlling the clinical course of many types of human cancer," that they "can be used effectively as a vaccine * * * for immunization against cancerous growth" in humans, are effective in treating diabetes millitus, but are also practically a geriatric panacea which reverses the aging process, the long sought "Fountain of Youth." They are also said to control the emotions and create a feeling of euphoria.

The Patent Office characterized these assertions of utility, at least in part, as "incredible and misleading unless proven by proper evidence." It was admitted at oral argument that no evidence has been submitted in this case.

The decision of the Board is affirmed for the reasons stated in our concurrent opinion in No. 7,042.

AFFIRMED.

MARTIN, *J.*, did not sit or participate in decision.

SMITH, *J.* (concurring):

I concur in the result reached by the majority, for the reasons stated in my concurring opinion in Patent Appeal No. 7,042, decided concurrently herewith.

U.S. Court of Customs and Patent Appeals

IN RE JAMES DONALD WALKER

Nos. 6772 and 7058. Decided December 12, 1963.
Petition for rehearing denied March 2, 1964

[51 CCPA —; 324 F.2d 977; 139 USPQ 480]

1. PATENTABILITY—OBVIOUSNESS—COMMERCIAL SUCCESS—FEATURES ESSENTIAL TO COMMERCIAL SUCCESS NOT CLAIMED.

"We find no error in the Board's view * * * that both the dimensional relationship of the spacing of the orifices in the clusters and the disclosed spacing between the clusters are essential to the improved results and commercial success argued by appellant. Since claims 23 and 24 lack a dimensional limitation on the spacing of the orifices, we find no basis for holding them unobvious over the Mallory publication considered with the Wolterink affidavit."

2. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—MATTER BEFORE COURT.

"The Examiner additionally rejected all the claims in P.A. 6772 as unpatentable over the claims of parent application Serial No. 511,453 of P.A. 7058. That rejection was not reversed by the Board. However, both applications having claims to the same subject matter have been treated on the merits by the Board and the Board decisions in both cases are before us for review. Also, appellant states that only one patent will issue, relying on the assumption that the Patent Office will permit all claims found allowable to be placed in one application. Under the rather unusual circumstances here, which include consideration by the Board of the identical claim in both cases, with its allowance in one and rejection on art in the other, the only reasonable course for us is to treat all the claims on the merits and decline to sustain the rejection as unpatentable over the claims in Serial No. 511,453."

3. PATENTABILITY—OBVIOUSNESS.

"In P.A. 6772, claims 26, 27, 36 and 37 define the aerating apparatus, and claims 28 to 34, 38 and 39 are drawn to the method. Claim 37 is identical with claim 32 in P.A. 7058, allowed by the Board, and claims 26 and 39 include substantially all the limitations of claims 32 and 39, respectively in P.A. 7058, also allowed by the Board. Those claims 37, 26 and 39, as well as claims 27 to 34, 36 and 38, all recite the dimensional relationships of the orifices in the clusters and define the amount of spacing between the clusters, the combination of features which the Board found in P.A. 7058 to be unobvious over the references in view of the showing of commercial success of appellant's process and the lack of success of Mallory's process. We are satisfied from such showing that those claims are unobvious over the art of record and hereby reverse their rejection."

4. SAME—COMBINING REFERENCES—SECONDARY REFERENCE CONSIDERED BASIC BY COURT.

"Although we are inclined to regard Mallory rather than Powers as the basic reference, there is no material change in the grounds of rejection since we rely on those two references for the same teachings the Board found in them."

5. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—MATTER BEFORE COURT—ALLEGED NEW REJECTION BY BOARD OF APPEALS.

In respect to an allegation by appellant that the Board of Appeals relied on new grounds of rejection, *Held* that it would not be proper for the court to act in connection with the matter; and that "Appellant has a remedy in the case where he thinks the Board improperly failed to designate a new rejection as such."

6. SAME—SAME—DENIAL OF PETITION TO COMMISSIONER BECAUSE OF APPEAL.

In regard to the Commissioner's denial, based on *In re Allen, Jr.*, 28 CCPA 792, 115 F.2d 936, 47 USPQ 471, of a petition for consideration of an amendment relating to rejected claims, *Held* that the "petition * * * was filed only two days before the notice of appeal to this court and the Commissioner's ruling that he was precluded from granting the request made therein was in accord with the ruling of this court in the *Allen* case that 'jurisdiction of the cause is transferred to this court' when a notice of appeal is duly filed"

and that "We find no circumstances in the present case which warrant our taking a different position now."

7. PATENTABILITY—PARTICULAR SUBJECT MATTER—AERATION OF LIQUIDS.

Upon review of two applications relating to the aeration of liquids such as sewage, the refusal of the claims in one application as unpatentable over the prior art is affirmed, and the like refusal of the claims in the second application is affirmed as to some claims but reversed as to others.

APPEALS from the Patent Office. Serial Nos. 717,681 and 511,543.

MODIFIED.

Howard H. Darbo, Darbo, Robertson & Vandenburgh, Louis Robertson, for appellant.

Clarence W. Moore (*Jere W. Sears* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, JR., *Associate Judges*

WORLEY, *Chief Judge*, delivered the opinion of the court.

This case involves two consolidated appeals from the Board of Appeals. Patent Appeal No. 6772 is from the Board's affirmance of the Examiner's rejection of claims 24 through 34 and 36 through 39, the only remaining claims in appellant's application Serial No. 717,681. Patent Appeal No. 7058 is from that part of the Board's decision refusing claims 9 to 12, 23, 24, and 27 through 29 of application Serial No. 511,453, the Board having reversed the Examiner's rejection of claims 18, 22, 25, 26 and 32, the remaining claims in that application. Application Serial No. 717,681 is designated by appellant as a "straight continuation" of Serial No. 511,453.[1]

The two applications disclose the same subject matter, the aeration of liquids such as sewage by liberating air from spaced clusters of orifices near the bottom of a tank to produce a circulating roll of the contents of the tank. The applications state:

According to the present invention, efficient aeration is accomplished solely by the supply of air through air orifices large enough not to clog but especially arranged to produce a functioning not previously anticipated. The orifices are provided in clusters well separated from other clusters and near the wall or boundary of the circulating roll desired. A sufficient quantity of air is liberated through them to develop the required circulating roll. As this circulation develops, a stable condition is reached, at which unexpected factors produce efficient aeration. As the air leaves the cluster of orifices, it passes upwardly for a foot or two in a rather compact stream of air bubbles which seem to have a smooth flow action which would make them quite inadequate for aeration. As they rise, however, they encounter critical conditions which rather suddenly convert the smooth-flowing stream to a different condition. Here a turbulence develops which keeps breaking up the bubbles or re-forming them and spreading them apart into a much wider column.

The nozzle construction and the dimensional characteristics of the installation are described as important features of the invention. A

[1] Although Serial No. 511,453 was filed on May 27, 1955, and Serial No. 717,681 on February 26, 1958, the cases originally came up for hearing before the Board of Appeals together and decisions were rendered in both on July 28, 1960. After the Board adhered to its decision in Serial No. 717,681 on reconsideration, that application was brought before this court as P.A. 6772.

The original Board decision in Serial No. 511,453 incorporated the decision in the continuation application, with the observation that there concededly was no patentable distinction between the two applications. The Board on reconsideration suspended proceedings in Serial No. 511,453. However, prosecution was later reopened in that application on order of the Commissioner of Patents with a view toward substituting it for the continuation application which was before the court. The earlier decisions in Serial No. 511,453 were vacated and the Board rendered a new decision, allowing five claims, including claim 32 which is identical with claim 37 in Serial No. 717,681. That last decision is the basis of P.A. 7058.

view of the nozzle assembled on a distribution pipe is shown in FIG. 3 of the application reproduced below:



The essence of the application disclosure of the operating characteristics, including dimensions, is as follows:

• • • The orifices are of short tubular type, so that they create enough back pressure to help maintain uniformity of flow through the orifices. Four orifices are preferred, partly for ease of drilling the orifices, but even more for certainty of desirable functioning. Four orifices provide fairly good distribution of air through a column of water to provide some air-lift action initially and good air-lift action after the break-up starts. The preferred diameter of the four orifice nozzles is approximately 3", that having been found to be eminently satisfactory. From 1" to 6" is believed to be acceptable, but this should not be taken as implying equal efficiency. The typical orifice diameter found excellent is 5/16 inch, but from 1/8 inch to 3/8 inch is believed to be satisfactory. The diameter should be large enough so that there will virtually never be sufficiently confined, so that water will have no chance of entering an orifice while the air is flowing.

In a typical, satisfactory operation, sixteen cubic feet of air per minute is liberated through one nozzle (four orifices) with an orifice velocity of 126 ft. per second and with a 7" water column head loss. It is desirable not to let the velocity fall below 70 ft. per second. It then becomes harder to keep the flow balanced through the different nozzles.

With the usual requirements as to total quantity of air, four orifices of about 5/16 inch diameter in each nozzle with the nozzles spaced from 15 inches to 24 inches along the header (or, at the outside 12 inches to 30 inches) has been found to work very satisfactorily.

• • • • • • •

The nozzles should be located at a sufficient depth below the liquid level to make sufficient use of the air-lift effect in producing a circulating roll. A submerged depth of about 8 ft. is believed to be about the minimum for efficiency, and 10 ft. or 12 ft. is preferred. The nozzles should be deep enough to cause the circulating roll to move along the bottom of the tank. As with any other type of air liberator for this purpose, excessive depths would require excessive air pressure and pumping costs. For economy, the tank may most efficiently be as wide as can be reliably caused to produce a circulating roll without excessive short-circuiting. • • •

Claims 24 and 37 are representative of the appealed claims in P.A. 6772 and read:

24. A nozzle for introducing gas into a body of liquid comprising a nozzle body having an internal space adapted to be connected to a source of gas under pressure, and a plurality of gas-discharge conduits extending from said internal space, the outlets of said gas-discharging conduits being spaced about a central area of about three inches in diameter, the outlets of said conduits having a transverse dimension of from about one-eighth inch to about three-eighths inch and being arranged about said central area at a plurality of points of less than about 180° apart, the outlet ends of said gas-discharge conduits being free of closely-surrounding structure, so that when said nozzle is positioned in a body of liquid and gas discharged from it, the gas will be introduced directly into the liquid and will rise unimpeded in the form of a gas-lift column.

37. Apparatus for treating a liquid with a gas comprising at least one gas header, nozzles spaced along said gas header, the distance between said nozzles being in excess of about twelve inches, said nozzles having an internal space communicating with said gas header, and gas-discharge conduits extending from

said internal space and having outlets spaced about a central area of about three inches in diameter, the outlets of said gas-discharge conduits having a transverse dimension of from about one-eighth inch to about three-eighths inch and being spaced about said central area at points of less than about 180° apart, the outlet ends of said gas-discharge conduits being free of closely-surrounding structure so that when said nozzles are positioned in a body of liquid and gas discharged from them, the gas will be introduced directly into the liquid and will rise unimpeded in the form of a gas-lift column.

Representative claims on appeal in P.A. 7058 are 9, 23 and 27 which read:

9. An aeration unit having a fitting at its bottom for communicating with a header, extending up from and communicating with the fitting, having orifice-forming means adjacent the top of the unit, providing for the liberation of air in a stream not over three eighths of an inch thick at at least four positions located in one plane uniformly around a circle of approximately three- to six-inch diameter; said unit having an orifice capacity capable of discharging 16 cubic feet per minute of gas with a pressure loss through the unit of approximately the head of a 7 inch column of water.

23. The method of treating waste liquid which comprises flowing it through an open retention tank, liberating bubbles in the liquid in the tank, by liberating air through a plurality of spaced orifices of one eighth to three eighths inch diameter grouped in clusters of at lest four orifices, with the clusters spaced apart at least several times the spacing of the orifices within a cluster, with the orifices all at substantially the same level at least eight feet below the surface of the liquid and along one side of a zone free from air liberation extending from the clusters at least six feet toward a side wall, and allowing the bubbles as initially liberated to rise under the influence of their buoyancy with their condition and path altered only by the effects of bubbles similarly liberated, and thereby setting up a circulating roll of the liquid through said zone, the liberation of said air being at a velocity of at least 70 feet per second and in sufficient quantity to produce concentrated forceful air lift action above each cluster to provide more than half way down to the cluster from the surface an area of violent local turbulence which causes the bubbles to be broken up and spread around, as they rise.

27. Aeration apparatus for treating waste including an open tank at least seven feet in width for the passage therethrough and suitable retention therein of the waste liquid to be aerated therein, and means for introducing bubbles into said tank, breaking up said bubbles into very fine bubbles and producing a roll of the contents of the tank, said means consisting solely of air introducing means, said air introducing means including orifice means providing a series of separate clusters of separate orifices arranged at least eight feet below the level to which liquid is retained in the tank and all bordering but outside a zone extending at least six feet from the orifice means toward one wall, and means for supplying air through the orifices into the liquid to produce a circulating roll extending through said zone; said orifices having a diameter from ⅛ to ⅜ inch, the orifices of each cluster being located at the same level, adjacent the top of the orifice-forming structure and positioned near a three-inch circle at approximately 90° intervals thereon, and said supply means supplying enough air therethrough to provide a velocity of air through the orifices of at least seventy feet per second and to produce by air lift effect in the liquid upwardly of the cluster an area of violent turbulence in which the bubbles, after rising relatively smoothly initially, are broken up and spread laterally through a much wider area.

The references relied on below are:

Zistel, 1,214,637, February 6, 1917.
Greenawalt, 1,598,858, September 7, 1926.
Powers, 2,479,403, August 16, 1949.
Walker, 2,616,676, November 4, 1952.
E. B. Mallory, "The Combined Complete Treatment of Medium and High Concentration Washes," Water Works and Sewerage, vol. 89, No. 4, November 1942, page 146.

The Zistel patent relates to an arrangement for aerating railroad tank cars for carrying live fish. A series of pipes at the bottom of the tank are provided on their upper sides with nozzles in the form of a closed end nipple having twelve side ports through which air is expelled.

Disclosed in the Greenawalt patent is aerator structure for such purposes as flotation treatment of ores and pneumatic agitation of liquids and ore pulps. That patent refers to application of air or gas to the liquid through porous materials as unsatisfactory because of clogging of the pores, and discloses injecting air mixed with liquid through an arrangement where air jets are surrounded with collars or sleeves through which liquid is drawn and ejected by the air jet.

The Powers patent relates to treating sewage by injecting air through a water-jet injector below the surface. The injector includes four air nozzles radiating at right angles from a vertical feed pipe with water nozzles surrounding the air nozzles at each injection point. It shows that the injectors may be submerged 10 or 13 feet and that the total air flow for 8 jets may be 90 cubic feet per minute. Powers sets out a table purporting to compare the oxidizing effect of his water-jet injection with the effects provided by a porous plate arrangement and compressed air jet operation.

Appellant's earlier patent, the Walker reference, discloses a water-air jet for sewage aeration.

The Mallory report discloses the construction of an air diffuser and describes the use of a system of such diffusers in aerating waste liquid. A drawing of that diffuser follows:

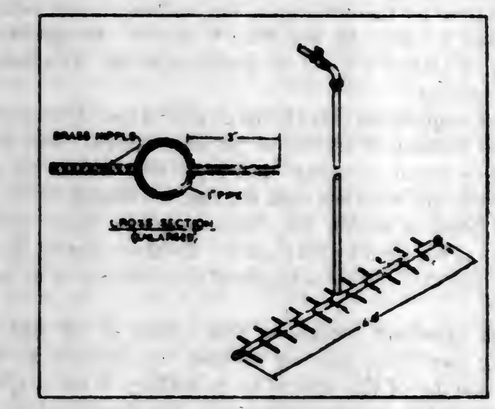


Fig. 3.—Typical Self-Cleansing Jet Diffusers.
WATER WORKS & SEWERAGE. April, 1942

The Wolterink affidavit, one of a number submitted by appellant, was considered in connection with the Mallory report. Accompanying that affidavit is a print corresponding to a 1941 installation of Mallory air diffusers at the bottom of a milk waste treating tank in two rows adjacent a side wall. An inner row of diffusers designated B is shown about 15 inches from the tank wall near the bottom of a 13 foot deep tank. Another print accompanying the affidavit shows the individual diffusers B as including aligned opposite air tubes, as contrasted to the offset tubes of the Mallory drawing, which aligned tubes are of ⅛ inch inside diameter and 2 9/16 inch length mounted on opposite sides of a 1 inch pipe at 1 7/32 inch intervals. A third print illustrates a 1947 installation wherein the air tubes were 3 inches long with an inside diameter of either ¼ inch or 1 3/32 inch.

The Board's decision in P.A. 7058, rendered more than one and one-half years after that in P.A. 6772 and representing the Board's later view of the involved subject matter, will be considered first.

In that appeal, the Board acknowledged that the affidavits submitted by appellant show commercial success of his process and a lack of success of the Mallory process and allowed method and apparatus claims in view of such showing. However, it found that process claims 23 and 24 fail to recite the dimensional relationship of the spacing of the orifices in the clusters, which it considered, along with the spacing between the clusters, as "essential to the attainment of appellant's argued results and commercial success." It sustained the rejection of those claims as unpatentable over Mallory considered with appellant's affidavit of Wolterink. It also sustained the rejection of apparatus claims 27, 28 and 29 on the same art, pointing out that those claims contain no recitation of the dimensional spacing of the clusters.

Claims 9 to 12, defining a single nozzle unit, were held by the Board to be unpatentable over Mallory. In so ruling, the Board indicated that nothing patentable was seen in supplying air upwardly into the nozzle rather than downwardly as in Mallory, pointing out that Greenawalt showed a structure wherein the air supply pipe communicated with the nozzle from the bottom as well as one where such communication was with the top. It further pointed out that each four of Mallory's orifices, as disclosed in the prints filed with the Wolterink affidavit, considering two on one side of the header and the two opposite thereto on the other side, fell within a small rectangle of a size less than 2 inches by less than 6 inches. It regarded the size limitations of claims 9 to 12 as merely obvious variations over the reference structure.

Appellant emphasizes that claims 23 and 24 specify that the spacing between the clusters of orifices is "at least several times the spacing of the orifices within a cluster" and urges that, unless the spacing of the orifices therein were less than six feet, a distance which the Board considered possible within the claim language, there would not be any clusters as required by the claims. He also relies on the recitation in those claims that the air is liberated at a velocity of at least 70 feet per second.

Although appellant recognizes that claims 27, 28 and 29 do not require any particular spacing between the clusters, he urges that "the even spacing of the orifices as in Mallory is not a spacing with orifices arranged in *separate clusters*." He states further that Mallory's structure must be regarded as employing a cluster 4 feet long and fails to meet recitations, such as those in claims 27 and 29, of the orifices of each cluster being located "near a three inch circle."

It is appellant's position that "it is difficult to read claims 9 to 12 except with the understanding that its orifices all lie uniformly around a circle of approximately three inch diameter (or in claims 9 and 10, three to six inches diameter)" and that the claims distinguish from Mallory in that respect.

[1] We find no error in the Board's view, expressed in P.A. 7058, that both the dimensional relationship of the spacing of the orifices in the clusters and the disclosed spacing between the clusters are essential to the improved results and commercial success argued by appellant. Since claims 23 and 24 lack a dimensional limitation on the spacing of the orifices, we find no basis for holding them unobvious over the Mallory publication considered with the Wolterink affidavit. Merely providing orifices of Mallory in groups or clusters arbitrarily spaced at chosen distances in accordance with these claims is not shown by the record to be anything more than an obvious variation within the ability of a person of ordinary skill in the art. Likewise we find nothing in the record to show it is unobvious to employ different rates of air velocity, including at least 70 feet per second.

No reversible error is seen in the Board's refusal to allow claims 27, 28 and 29 over the Mallory publication considered with the Wolterink affidavit. In the absence of a limitation in the spacing therebetween, nothing unobvious is seen in providing the orifices in clusters of four. Such arrangement would result, for example, from merely omitting every third pair of opposed orifices in the construction of the Mallory publication or of the Mallory construction shown in the plates accompanying the Wolterink affidavit.

So far as the recitations in claims 27, 28 and 29 of the spacing of the orifices in each cluster, as well as the corresponding recitations in nozzle or aeration unit claims 9 to 12, are concerned, the prints accompanying the Wolterink affidavit show that four adjacent Mallory type orifices fall within a rectangle of less than 2 inches by less than 6 inches. The applications discuss the nozzles as follows:

*** * * The preferred diameter of the four orifices is approximately 3", that having been found to be eminently satisfactory. From 1" to 6" is believed to be acceptable, but this should not be taken as applying equal efficiency. * * ***

We do not think the Board erred in finding nothing unobvious involved in merely positioning four orifices on a circle approximately three inches in diameter or three to six inches in diameter. Further in connection with claims 9 to 12, we note that appellant in his brief disclaims any contention that delivering air upwardly to the nozzle unit, as required by those claims, is significantly different from delivering it downwardly as in Mallory.

For the foregoing reasons, we find no reversible error in the Board's decision in P.A. 7058 and will affirm the rejection of claims 9 to 12, 23, 24, 27, 28 and 29 in application Serial No. 511,453.

In P.A. 6772, the Board sustained the Examiner's rejection of all claims, 24 to 39, on the prior art. While the Examiner rejected the claims as unpatentable over Powers, Greenawalt or Walker, each in view of the Zistel patent or the Mallory publication, the Board considered principally the Powers patent and Mallory report.

[2] The Examiner additionally rejected all the claims in P.A. 6772 as unpatentable over the claims of parent application Serial No. 511,453 of P.A. 7058. That rejection was not reversed by the Board. However, both applications having claims to the same subject matter have been treated on the merits by the Board and the Board decisions in both cases are before us for review. Also, appellant states that only one patent will issue, relying on the assumption that the Patent Office will permit all claims found allowable to be placed in one application. Under the rather unusual circumstances here, which include consideration by the Board of the identical claim in both cases, with its allowance in one and rejection on art in the other, the only reasonable course for us is to treat all the claims on the merits and decline to sustain the rejection as unpatentable over the claims in Serial No. 511,453.

[3] In P.A. 6772, claims 26, 27, 36 and 37 define the aerating apparatus, and claims 28 to 34, 38 and 39 are drawn to the method.

Claim 37 is identical with claim 32 in P.A. 7058, allowed by the Board, and claims 26 and 39 include substantially all the limitations of claims 32 and 39, respectively in P.A. 7058, also allowed by the Board. Those claims, 37, 26 and 39, as well as claims 27 to 34, 36 and 38, all recite the dimensional relationships of the orifices in the clusters and define the amount of spacing between the clusters, the combination of features which the Board found in P.A. 7058 to be unobvious over the references in view of the showing of commercial success of appellant's process and the lack of success of Mallory's process. We are satisfied from such showing that those claims are unobvious over the art of record and hereby reverse their rejection.

The only other claims in P.A. 6772 are 24 and 25, directed to the nozzle. We think those claims fail to define anything unobvious over the combination of the Mallory report and the Powers patent. The recited dimensions of the nozzle are regarded as obvious over Mallory as indicated in connection with the nozzle claims in P.A. 7058. Disposing the conduits "less than about 180° apart," as recited in claim 24, or "about 90° apart," as set out in claim 25, is also considered obvious, particularly in view of the suggestion of four air conduits radiating from a single feed pipe in a right angle relationship in Powers. While the radiating arms in Powers are apparently much longer than the arms of Mallory's nozzle, Powers clearly suggests the simple expedient of radiating orifice arms, irrespective of their particular length, from a supply pipe at right angles. [4] Although we are inclined to regard Mallory rather than Powers as the basic reference, there is no material change in the grounds of rejection since we rely on those two references for the same teachings the Board found in them. *In re Krammes*, 50 CCPA 1099, 314 F.2d 813, 137 USPQ 60.

Appellant urges that the Board relied on new grounds of rejection although the Mallory reference principally relied upon is not a new reference. He also complains of the Commissioner's denial of a petition for consideration of an amendment relating to the rejected claims in P.A. 7058, which denial was based on *In re Allen, Jr.*, 28 CCPA 792, 115 F.2d 936, 47 USPQ 471.

[5] We do not think it proper for us to act here in connection with either of those matters. Appellant has a remedy in the case where he thinks the Board improperly failed to designate a new rejection as such.[2] [6] The petition which appellant filed in P.A. 7058 was filed only two days before the notice of appeal to this court and the Commissioner's ruling that he was precluded from granting the request made therein was in accord with the ruling of this court in the *Allen* case that "jurisdiction of the cause is transferred to this court" when a notice of appeal is duly filed. We find no circumstances in the present case which warrant our taking a different position now.

[7] The decision of the Board in P.A. 7058 is affirmed; that in P.A. 6772 is affirmed as to claims 24 and 25 and reversed as to claims 26 to 34 and 36 to 39.

MODIFIED.

[2] The Solicitor suggests review of that matter "might be had by petition to the Commissioner followed by Civil Action under 5 U.S.C. 1009."

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,306,361, R. E. Fearon, Well logging method and device; **2,554,844**, L. M. Swift, Casing collar locator; **2,711,084**, R. A. Bergan, Refrigeration system for well logging instruments; **2,810,076**, E. S. Mardock, Process for making a well log with radioactive tracers; **2,933,609**, R. G. Norelius, Radioactivity well surveying; **2,942,112**, D. P. Hearn, Multiple well logging system; **2,945,129**, Swift and Barkalow, Calibrator for radioactivity well logging instruments; **2,967,994**, G. Peterson, Casing joint locator; **2,985,822**, H. W. Georgi, Modulation system for casing collar locators; **3,007,109**, G. Swift, Apparatus for detecting casing joints, filed Apr. 11, 1962, D.C., S.D. Tex. (Houston), Doc. 14,264, *Well Surveys, Inc.* v. *Technical Engineering Petroleum Services Co., Inc.* Stipulation of dismissal without prejudice; complaint and counterclaim dismissed without prejudice Nov. 26, 1963.

Erratum

In the OFFICIAL GAZETTE, issue of Mar. 3, 1964, vol. 800, p. 16, under the heading "Patent Suits" for "2,943,030, S. K. Tchejeyan, Method of making reticles" read *2,943,020, W. L. Gould, Composition for the symptomatic treatment of the male climacteric.*

REISSUES

APRIL 7, 1964

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,547
PREDETERMINED TORQUE RELEASE WRENCH

Richard H. Skidmore, Lyndhurst, Ohio, assignor to Skidmore-Hungerford Industries, Inc., Bedford Heights, Ohio, a corporation of Ohio

Original No. 2,959,078, dated Nov. 8, 1960, Ser. No. 820,977, June 17, 1959. Application for reissue Oct. 29, 1962, Ser. No. 234,582
6 Claims. (Cl. 81—52.4)



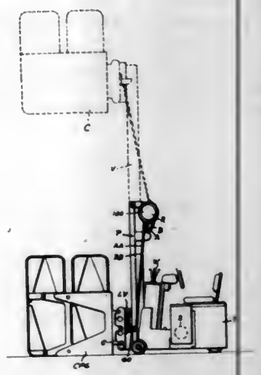
1. In a predetermined torque release wrench of the class having a housing, a block movable in said housing, resilient means biasing said block to move in said housing in one direction extending perpendicular to a reference plane, a work-engaging member having a *roller* follower engaging a surface on said block for restricting block movement in said one direction, and means operatively connecting said member to said housing for relative movement of said follower and housing through a path generally transverse to said one direction from one position to another position, said block surface having two flat portions respectively engaged by said follower to determine said positions, *each of said flat portions being tangent to said roller follower respectively in said positions*, said block surface having one of said portions extending generally parallel to said path and having the other of said portions extending from said one portion away from said follower and approximately inclined 25 to 35 degrees with respect to said reference plane.

25,548
HYDRAULIC HOSE TAKE UP

Bernard B. Becker, Belmont, Mass., assignor to Lewis-Shepard Company, Watertown, Mass., a corporation of Massachusetts

Original No. 2,978,129, dated Apr. 4, 1961, Ser. No. 750,394, July 23, 1958. Application for reissue Mar. 30, 1962, Ser. No. 185,495
11 Claims. (Cl. 214—653)

1. In a material handling truck, a source of fluid pressure, a fixed post, a vertically movable post having a fluid actuated element mounted thereon, means for transmitting fluid pressure from said fluid pressure source to said fluid actuated element, said means comprising a reel mounted on said fixed post, a conduit running from said fluid pressure source to a non-rotatable part of said reel, a hose connected to the rotatable part of said reel and extending to said fluid actuated element, means for transmitting said fluid pressure from said conduit through the non-rotatable part of said reel to the point of connection of said hose with said reel, a spring urging said reel to wind up said hose, means for maintaining pressure at said element while relieving the pressure in said hose prior to winding said hose on said reel.



25,549
METHOD OF STRINGING CABLE

William L. Hendrix, Amherst, N.H.

Original No. 2,983,037, dated May 9, 1961, Ser. No. 756,767, Aug. 25, 1958. Application for reissue Nov. 20, 1962, Ser. No. 239,417
6 Claims. (Cl. 254—134.3)

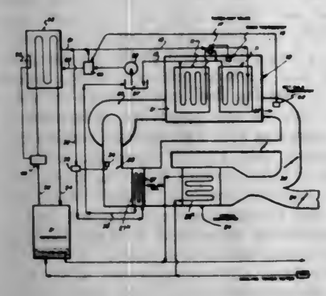


1. In overhead installation of a cable which is to be supported during tensioning thereof by pulleys suspended from and spaced along a messenger mounted on poles, the method of installation which comprises slidably attaching a sequence of pulley-supporting frames to said messenger adjacent a pole, said frames being connected in succession by means extensible to predetermined lengths totaling the approximate distance to the next pole, stringing a cable to be installed over said frame pulleys and attaching said cable to a lead rope which is connected to said frame sequence in advance thereof, and advancing said lead rope lengthwise of said messenger, whereby said frame-connecting means are extended, spacing said frames along said messenger, and said cable is strung along said messenger supported by said frame pulleys, the cable being freely movable over said pulleys so that it may be strung continuously between successive pulleys and sagged uniformly from end to end when stringing is completed, and then replacing said frames with hangers and removing the frames.

25,550
AIR CONDITIONING SYSTEMS

John B. Hewett, 154 Martling Ave., Tarrytown, N.Y., and Elwood A. Windham, 57 W. Meadow Road, Wilton, Conn.

Original No. 3,009,331, dated Nov. 21, 1961, Ser. No. 733,200, May 5, 1958. Application for reissue Apr. 4, 1962, Ser. No. 186,599
5 Claims. (Cl. 62—176)

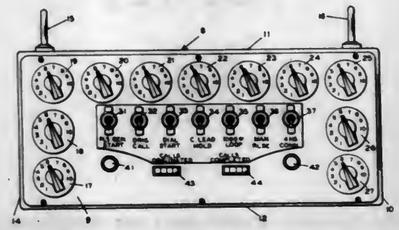


1. An air conditioning system for human comfort comprising:
- an enclosure provided with a plurality of radiant cooling panels provided with pipes for passage therethrough of cooling water,
- said panel being disposed adjacent a wall of said enclosure,
- means for sending cooling water through said pipes,
- means for supplying said cooling water at a temperature in the range of 45 to 65° F.,
- an air blower system for blowing cooled, dehumidified air into the whole of said enclosure, said system comprising
  - a chemical dehumidifier, *whereof the dehumidifying agent is a hygroscopic liquid,*
  - *means for passing atmospherically cooled water through said dehumidifier in heat exchange relationship with said dehumidifyinging agent,*
- a cooling coil and
- a blower, and
- duct work effecting communication between said enclosure and said blower system, *including means for selecting and proportioning fresh air and return air from the aforesaid enclosure for passage through said dehumidifier.*

25,551
TELEPHONE EQUIPMENT

Harry E. McAllister, 3201 Bonnieview Drive, Lima, Ohio

Original No. 3,069,512, dated Dec. 18, 1962, Ser. No. 762,110, Sept. 19, 1958. Application for reissue Oct. 9, 1963, Ser. No. 315,098
5 Claims. (Cl. 179—175.2)



2. *In a telephone exchange system having a plurality of subscribers' lines and pulse responsive equipment operable to establish a connection between any two subscribers' lines;*
- *a testing device and automatic dialing routiner connectible to any two of said subscribers' lines, comprising*
- *means to create pulses of a proper speed and ratio to operate said pulse responsive equipment for the purpose of establishing a connection between the said two selected subscribers' lines;*
- [The testing device according to claim 1, and having, in addition to] a generator responsive relay to control the restarting of the pulse transmission [.];
- a relay operable through the reversal of *the current on* the tip-ring leads, associated with subscribers' line selected as the calling line, by the pulse responsive equipment, said relay controlling the re-starting of the pulse transmission cycle in conjunction with the generator responsive relay [and having];
- a manually operated [toggle switch] *device* to transfer the re-starting cycle from the control of the generator responsive relay alone to the dual control of the generator responsive relay and the said relay operable by the tip-ring reversal [.]; and
- [having] a lamp to visually indicate that the said tip-ring reversal *of current* feature is being tested.

PATENTS

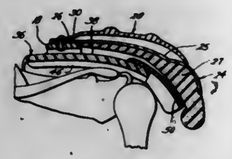
GRANTED APRIL 7, 1964

GENERAL AND MECHANICAL

3,127,614
FOOTBALL SHOULDER PAD AND CUSHION LINER THEREFOR

Don B. Bennett, 9607 Vogue Lane, Houston 24, Tex.

Filed May 5, 1961, Ser. No. 108,012
4 Claims. (Cl. 2—2)

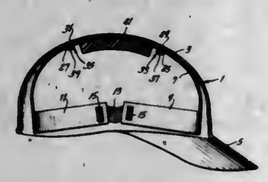


1. In a football shoulder pad a pair of body members shaped to be positioned over the shoulders of a user and having front and rear downwardly extending portions positioned for engagement with the chest and back of the user, an internal element in each member formed of resilient material attached to said front and rear portions at locations to form an arch shaped to extend over the user's shoulder in engagement therewith at locations spaced forwardly and rearwardly from the top of the shoulder to support the member out of contact with the element above the shoulder, each of said elements having a downwardly opening recess in its lower surface positioned to overlie the clavicle bone and acromio-clavicular joint of the shoulder.

3,127,615
REMOVABLE RIGGING FOR HELMET

Jackson A. Alleo, Carbondale, Pa., assignor to Leonard P. Frieder, Great Neck, N.Y.

Filed Sept. 29, 1961, Ser. No. 141,866
8 Claims. (Cl. 2—3)

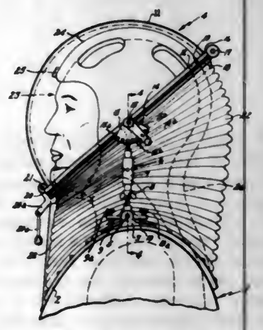


1. A safety helmet comprising a shell having an opening for receiving the head of a wearer and having a crown portion to be disposed adjacent the crown of the wearer's head, head band elements disposed and formed respectively to extend about and to engage the front and rear of the wearer's head, a head strap of stiffly resilient flexible material extending over the inner surface of said shell between and connected adjacent its ends to said head band elements for supporting said head band elements in spaced relation to said shell, said head strap having an intermediate portion thereof spaced from said head band elements and extending over the inner surface of the crown portion of said shell, said head strap having keyhole shaped openings therein spaced therealong adjacent said intermediate portion thereof, said keyhole openings having the slots thereof extending toward each other along said head strap and the enlargements thereof disposed away from each other, and fastening elements rigidly secured to said shell at the inner surface of said crown portion thereof in a spaced relation to each other along said head strap corresponding substantially to the spacing of the closed ends of said slots of said keyhole openings, said fastening elements respectively providing shank portions having diametral dimensions to enter said slots of said keyhole openings and having head portions spaced on said shank portions from said inner surface of said shell, the diametral dimension of said head portions being larger than said shank portions, the enlargements of said keyhole openings being dimensioned to provide for passing the head portions of said fastening elements through the respective enlargements of said keyhole openings, said intermediate portion of said head strap between said keyhole openings being capable of flexure to a form curving from the parts thereof adjacent said keyhole openings to the central part thereof between said keyhole openings disposed away from said shell, thereby to draw said keyhole openings toward each other along said crown portion of said shell to positions to register said enlargements with the respective fastening elements and to provide for passing said head portions of said fastening elements through said enlargements, the resilience of said head strap determining flattening thereof from said curved form concomitantly with movement of said keyhole openings away from each other along said crown portion of said shell to cause said shank portions of said fastening elements to enter the respective slots and said head portions to overlie and engage the head strap along said slots to hold said head strap and said head band elements in position in relation to said helmet.

3,127,616
TRANSPARENT HEMISPHERICAL HELMET FOR PRESSURIZED SUIT

Otto Schueller, Dayton, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force

Filed Nov. 14, 1962, Ser. No. 237,773
12 Claims. (Cl. 2—6)
(Granted under Title 35, U.S. Code (1952), sec. 266)



8. A hemispherical transparent fishbowl type helmet and supporting means therefore comprising, a transparent hemispherical fishbowl type head enclosure, pivot means depending from the diametrical opposite sides of the periphery of said head enclosure for tilting adjustments thereon, adapted to support the hemispherical head enclosure in predetermined spaced relation above the shoulders of a pressure suit, a flexible tubular neck enclosure member having an upper periphery at one end secured to the periphery of said hemispherical head enclosure and a lower periphery at its opposite end adapted to be secured around the head and neck receiving opening in a pressure suit.

3,127,617
DETACHABLE GARMENT TRIM

Betty B. Bonzi, Arcadia, Calif.
(5608 Sultana, Temple City, Calif.)

Continuation of application Ser. No. 863,268, Dec. 31, 1959. This application June 18, 1962, Ser. No. 205,174
5 Claims. (Cl. 2—96)



1. In combination with a garment wherein separated front panels have closure means comprising a row of garment buttons and a row of cooperating garment buttonholes adjacent to respective edges of the front panels, first and second decorative trim panels extending to the respective edges of the garment front panels, said first trim panel having a row of buttonholes therein corresponding in spaced relationship to said garment closure buttons, and said second trim panel having a row of buttons on the reverse side thereof corresponding in spaced relationship to and extending through said garment closure buttonholes to conceal the garment buttonholes and trim panel buttons, whereby the decorative trim panels are respectively attachable to the garment along the row of garment closure buttons and the row of garment closure buttonholes.

3,127,618
NECKTIE

Isaac Whitelaw Roach, General Delivery, Orange, Va.

Filed July 20, 1962, Ser. No. 211,312
5 Claims. (Cl. 2—150)

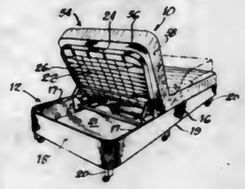


1. A necktie comprising a knot portion having an opening therethrough, a first tie portion secured to the knot portion, a second tie portion having a neck embracing loop, extending through the opening in the knot portion, the lower inside edges of the neck embracing loop of the second tie portion having interlocking means, camming means operatively mounted on the interlocking means for interlocking and unlocking the same to vary the size of the loop and the camming means being secured to the knot portion.

3,127,619
CONTOUR BED

Edward L. Bronstien, St. Paul, Minn., assignor to The United States Bedding Company, St. Paul, Minn., a corporation of Minnesota

Filed June 2, 1958, Ser. No. 739,162
1 Claim. (Cl. 5—68)



An adjustable bed comprising a combined housing and bed frame, said combined housing and bed frame comprising at least supporting walls connected together, said supporting walls having opposed upper and lower horizontal edges, the height of said walls large in comparison to their thickness, at least the external surface and upper edge of said walls protectively encased in a soft resilient upholstering material, legs connected to said supporting walls to support the combined housing and bed frame, the length of said legs projecting below the lower edge of said walls small in comparison to the height of said walls, an articulated bed spring, said bed spring comprising a peripheral frame and a resilient spring system connected therebetween, said peripheral frame similar in shape to the peripheral shape of said combined housing and bed frame and comprising a central portion rigid with the peripheral frame and pivotally connected end portions all protectively encased in a soft resilient material, the central portion of the peripheral frame of said bed spring horizontally disposed and rigidly mounted between the opposed walls of the combined housing and bed frame, and a mechanism protectively mounted in said housing and connected to the end portions of the bed spring to cause them to pivot with respect to the central portion of the bed spring, said mechanism comprising a bell crank lever pivoted intermediate its ends to the combined housing and bed frame, a lever arm pivotally connected at one end on a portion of said bell crank lever offset from its pivot and pivotally connected at the other end to an end portion of said peripheral frame spaced outwardly from its pivotal connection to the central portion, a piston and cylinder assembly having one end pivotally connected to the combined housing and bed frame while the other end is pivotally connected to a portion of the bell crank lever offset from its pivot in the direction away from the pivotal connection with the lever arm whereby operation of the piston and cylinder assembly will cause rocking movement of said bell crank lever about its pivot to effect rocking movement of the end portion of the peripheral frame about its pivot.

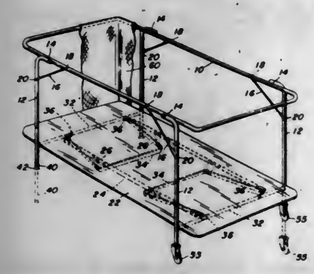
3,127,620
COMBINATION PLAYPEN AND CRIB

Arnold E. Peterson, 700 Allen St., Glendale 1, Calif.

Filed Dec. 27, 1960, Ser. No. 78,402
8 Claims. (Cl. 5—99)

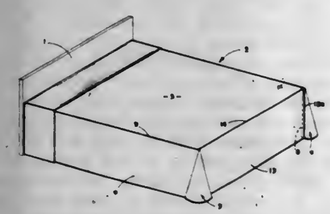
1. A foldable crib and playpen comprising an upper frame having parallel sides, a first pair of legs having the

corresponding ends thereof pivotally attached to the sides of said upper frame adjacent one end of the frame, a second pair of legs having the corresponding ends thereof pivotally connected to the sides of said upper frame adjacent the other end of said frame; the pivotally connected ends of said pairs of legs being formed with opposing bent portions effective, upon folding of said legs, to position the pairs of legs spaced from and substantially parallel to the plane of said upper frame, a rigid platform disposed beneath said upper frame, supporting



means for said platform including a first brace means pivotally connected to said platform adjacent to one side of the midlength thereof and pivotally connected to said first pair of legs, a second brace means similarly pivotally connected both to said platform adjacent the other side of its said midlength and to said second pair of legs, whereby swinging of said pairs of legs toward each other will move said platform bodily into coplanar juxtaposition with said upper frame, and fabric mesh wall material fixed to the perimeters of said upper frame and said platform forming an enclosing wall for said crib and playpen.

3,127,621
BEDSPREAD
Emanuel Gruber, 6509 Coleate Ave., Los Angeles 48, Calif.
Filed Apr. 16, 1962, Ser. No. 187,852
8 Claims. (Cl. 5—334)



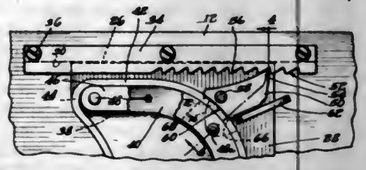
1. A bedspread device comprising
a sheet member,
a side skirt extending downwardly from one side of said sheet member,
an end skirt extending down from one end of said sheet member to define a corner with said side skirt,
a flounce at said corner hanging downwardly and outwardly thereof,
said flounce being formed as an extension of one of said skirts
and being selectively positionable beneath said one skirt and beneath the other skirt, and fastener means at said side skirt and said end skirt for securing said flounce in either of said positions.

3,127,622
WATER SKI APPARATUS
Ralph B. Drennen, Jr., 1305 Darla St., Birmingham 9, Ala.
Filed Aug. 21, 1961, Ser. No. 132,643
4 Claims. (Cl. 9—310)



1. In water ski apparatus, an intermediate water ski adapted to be pulled along the surface of water, a side ski positioned on each side of said intermediate ski at an elevation above the intermediate ski, the bottom contact surfaces of said side skis being slanted outwardly at an angle with respect to the bottom contact surface of said intermediate ski, a platform over all of said skis and spaced therefrom, and support members extending between and secured to the undersurface of the platform and the upper surface of the skis, said side skis being of a length greater than the length of said platform.

3,127,623
SKIS AND BINDINGS THEREFOR
Brooks Roudebush, Glenview, Ill., assignor to Adolph Kiefer & Company, Northfield, Ill., a corporation of Illinois
Filed Jan. 10, 1963, Ser. No. 250,538
11 Claims. (Cl. 9—310)

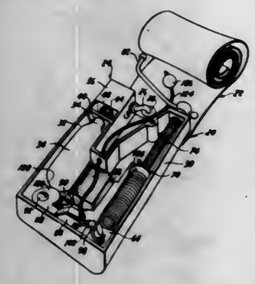


10. Binding means for skis comprising, a foot engaging element formed of a resilient polymeric material, a movable slide having guide edges on opposite sides, two guide channels adapted for atachment to a ski and being shaped to receive said respective guide edges on said slide, a brake element pivoted to said slide and having a normal position in which the brake element engages an adjacent one of said channels to hold said slide against movement in at least one direction along said guide channels, means mounting said resilient foot engaging element on said slide to position a resilient portion of the foot engaging element against said brake element to yieldably resist swinging movement of the brake element away from said normal position thereof, and means for moving said brake element away from said normal position thereof against the yieldable resistance of said foot engaging element to release the brake element from said one channel and free said slide for movement along said channels.

3,127,624
AUTOMATICALLY-INFLATABLE LIFE PRESERVER
Ted J. Kubit, 19332 Montrose Ave., Detroit 35, Mich., and William S. Stanton, 3643 Wakefield Ave., Berkley, Mich.
Filed June 19, 1961, Ser. No. 117,950
2 Claims. (Cl. 9—317)

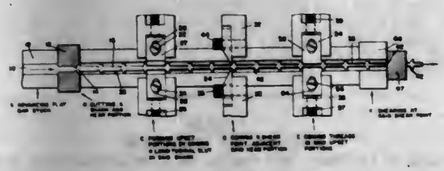
1. An automatically-inflatable life preserver, comprising
a buoyant inflatable gas receptacle having a gas inflation inlet,
a supporting structure,

a stationary hollow puncturing element fixedly mounted on said structure in communication with said inlet, said structure having a compressed gas cartridge holder disposed adjacent said puncturing element,
a pivot element mounted on said structure;
a gas cartridge moving member including a lever pivotally mounted on said pivot element adjacent said gas cartridge holder and having a rotary cam thereon disposed eccentric to said pivot element and engageable with one end of the gas cartridge,



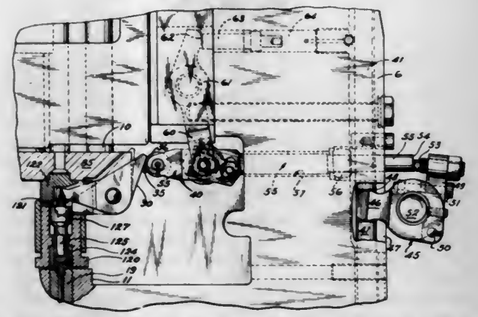
a spring connected to said gas cartridge moving lever and operative to swing said gas cartridge moving lever to rotate said cam and consequently push the gas cartridge into puncturing engagement with said puncturing element,
and means responsive to the presence of a water soluble body for restraining said cartridge-moving lever from cartridge-moving motion and responsive to the dissolution of the water soluble body for releasing said cartridge-moving lever for cartridge-moving motion, said restraining means including a locking lever pivotally mounted on said structure and having a trigger portion engageable with the water soluble body and a locking portion movable out of locking engagement with said cartridge-moving member in response to the swinging of said trigger portion consequent to the dissolving of the water-soluble body.

3,127,625
METHOD OF FORMING SCREWS FROM FLAT BAR STOCK
Paul P. Ruminsky, 281 Crocker St., Amherst, Ohio, assignor of one-half to Herbert C. Brauchla, Fremont, Ohio
Filed Mar. 5, 1963, Ser. No. 263,026
5 Claims. (Cl. 10—10)



1. Method of forming screws comprising:
(A) trimming a shank and head portion in flat bar stock;
(B) forming upset portions by swaging a longitudinal slot in the side of the shank to flow the shank outwardly of the top and bottom surfaces of the flat bar stock, thus thickening the shank at the side edges thereof;
(C) coining a shear point adjacent said head portion; and
(D) swaging threads in said upset portions by applying a lateral force to said thickened edges of said shank.

3,127,626
PUNCH KNOCK-OUTS FOR DOUBLE-BLOW HEADER
Robert G. Friedman, Tiffin, Ohio, assignor to The National Machinery Company, Tiffin, Ohio, a corporation of Ohio
Filed Nov. 1, 1960, Ser. No. 66,494
3 Claims. (Cl. 10—12.5)

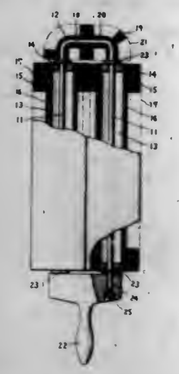


1. A header comprising a frame, a die mounted on said frame, a header slide reciprocable on said frame, first drive means connected to reciprocate said header slide toward and away from said die, a tool carrier mounted on said slide for shifting movement relative thereto, a plurality of tool assemblies mounted on said tool carrier adapted to sequentially engage and work a blank in said die on sequential strokes of said header slide, second drive means connected to said first drive means and said tool carrier operable to shift said tool carrier to operative positions wherein said tool assemblies sequentially work a blank in said die, an actuator bar movable in said frame connected by an actuator drive to said first drive for movement relative to said frame at the same cyclic rate of said header slide, each tool assembly including a lever pivoted thereon and positioned in the same predetermind location relative to said header slide each time its associated tool assembly is shifted by said tool carrier into the operating position in which it works a blank in said die, a knock-out in at least one of said tool assemblies engageable with the associated lever and operable to engage a blank in said die, stop means operable to limit rearward movement of said knock-out beyond a maximum rearward position it assumes during work of said blank by the associated tool assembly, each lever having a cam surface engageable with said actuator when the associated tool assembly is in engagement wtih said blank in said die; said actuator drive, said lever cam surfaces and said knock-out being proportioned so that said actuator engages said cam surface and moves said lever relative to its associated tool assembly in a manner holding said knock-out substantially stationary relative to said die as the associated tool assembly commences to move back from said die with the header slide after working said blank therein.

3,127,627
CLEANING BRUSH
Yoshiyuki Katsumura, 53 8-chome, Uehommachi, Tennoji-ku, Osaka, Japan
Filed June 8, 1962, Ser. No. 201,181
2 Claims. (Cl. 15—27)

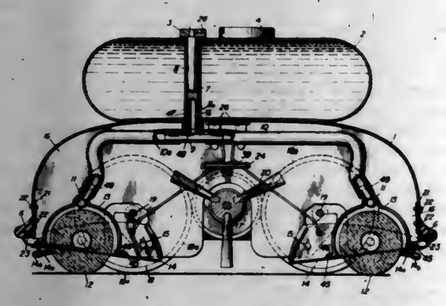
1. A cleaning brush, comprising a pair of rotatable cylindrical brushes rotatable about parallel axes of rota-

tion and having radially projecting fibers forming the bristles of the brushes, and a fixed head brush curving from the end of one of said cylindrical brushes to the corresponding end of the other cylindrical brush and having fibers projecting therefrom forming the bristles of the head brush, said parallel axes of rotation of said cylindrical brushes being spaced to cause the ends of the bristles on one cylindrical brush to contact the ends of the bristles



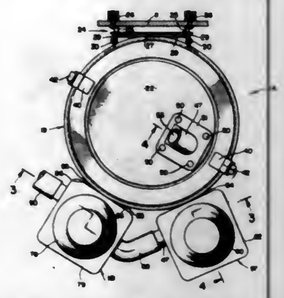
on the other cylindrical brush, so that when the cleaning brush is moved across a surface, the cylindrical brushes rotate in the same direction and the touching bristles scrub each other as they move past each other in opposite directions, and the rotation of the cylindrical brushes is retarded by the touching of the bristles so that the cylindrical brushes perform both a rotational and a sliding movement relative to the surface.

3,127,628
RUG CLEANER
Emil Klumb, Middle Village, N.Y., assignor to Modern Spacemaster Products, Inc.
Filed Aug. 5, 1959, Ser. No. 831,789
7 Claims. (Cl. 15—50)



1. A rug and carpet cleaner comprising a housing, means mounted in said housing for sweeping a rug or carpet, means also mounted in said housing for applying a chemical cleaner to said rug or carpet, said means for applying a chemical cleaner comprising a tank for containing a chemical mounted upon said housing, absorbent rollers for applying said chemical to the area to be cleaned, means for controlling the flow of chemical from said tank to said rollers, plastic tubes extending from said tank to said rollers, a distribution tube having distribution apertures therein located immediately above said rollers and secured to said plastic tubes, and a housing for said rollers and dust pans cooperating with said rollers and said sweeping means for removing dirt, lint and the like.

3,127,629
BUILT-IN VACUUM CLEANING SYSTEM
John H. Miller, Jr., Lynwood, Calif., assignor to The Filtex Corporation, Los Angeles, Calif., a corporation of Michigan
Filed Oct. 23, 1961, Ser. No. 146,693
3 Claims. (Cl. 15—314)



1. A self-contained unitary nonportable suction cleaning system for use in cleaning surfaces within buildings and provided with means fixedly anchoring the same immovably tot he building, said system including an arrangement of installed ducts in communication with one another and having a plurality of normally closed inlets adapted to be selectively coupled to a flexible hose having a suction nozzle at its inlet end, a unitary main casing having a normally closed but detachable cover, inlet connection means having one end opening into said ducts and its other end opening into said casing through said detachable cover, a filter bag supported within said casing and removable for emptying when said cover is detached, a pair of exposed structurally-independent tubular brackets, means rigidly securing said brackets on the exterior wall of said main casing in spaced-apart relation, one of said brackets being in communication with the interior of said main casing on the opposite side of said filter bag from said inlet connection means, a separate multiple stage motor fan suction unit mounted on each of said brackets, means connecting said tubular brackets and said suction uints in series with one another, said inlet connection being mounted on said cover and opening therethrough to the interior of said casing, said inlet connection including a short length of flexible hose having one end attached to said cover and the other end connected to said duct system, and at least one of said suction fan units having final filter means mounted in and readily detachable through an opening in the wall of one of said tubular brackets, and said final filter means being supported across the inlet opening of said one tubular bracket and effective to collect foreign matter carried in the suction air stream entering said one suction fan unit.

3,127,630
FOUNTAIN MARKER
Joseph L. La Mura, 367 Passaic Ave., West Caldwell, N.J.
Filed Jan. 24, 1963, Ser. No. 253,613
4 Claims. (Cl. 15—537)

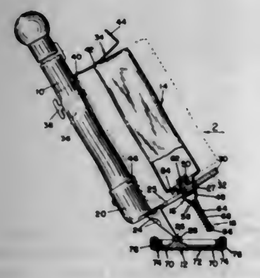
2. A fountain marker comprising, a cylindrical container closed at its lower end and defining an internal reservoir for the storage of marking fluid, a piston chamber secured to the upper end of said container and enclosing a movable piston therein, said chamber open at its upper end for the passage of a marker wick, said piston chamber also formed with an annular constriction intermediate its two ends for limiting the motion of said

piston and to aid in locking the piston in a marking position, said wick secured to the piston at its upper end, and a single spherical ball enclosed in said piston chamber for retaining the piston in a marking position



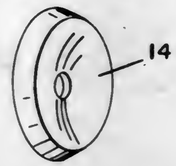
when the container is in an inverted position by limiting against the annular constriction, said single ball also adapted to permit the piston to move to its fully retracted position within the piston chamber when the container is in its upright position.

3,127,631
WAX APPLICATOR
Olin C. Hershberger and Dolore B. Morin, both of Box 8, Thompson, Conn.
Filed Aug. 18, 1961, Ser. No. 132,442
1 Claim. (Cl. 15—588)



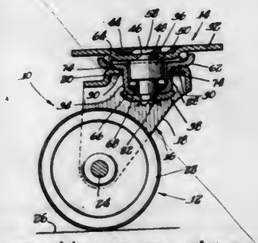
A wax applicator and spreader comprising an elongated handle, a bracket attached to said handle at one end thereof and extending at right angles thereto, a wax spreading plate, means pivotally mounting the spreader plate on the bracket, the spreader plate extending generally normal to the handle, the handle being located generally centrally thereof, the spreader plate being relatively elongated in a direction transverse to the handle, apertures through the spreader plate, said apertures being generally scattered throughout the same, a valve substantially permanently mounted on the bracket, said valve being located vertically over the spreader plate adjacent the center portion thereof, a separable container for the wax to be spread, said container including a pouring lip, means on the bracket receiving the pouring lip and centering the same with respect to said valve, means to open the valve to allow wax to descend by gravity from the container onto the spreader plate and means normally holding the valve closed, said valve opening means comprising a movable stem extending toward the spreader plate and being moved to valve open position by contact with the spreader plate as the handle is actuated to oscillate the same with the bracket, valve, and container as a unit relative to the spreader plate, the wax released by the valve being deposited on the spreader plate and running through the apertures in the spreader plate to be distributed generally evenly over the entire area of the spreader plate.

3 127,632
CASTERS
Albert E. Rice and Ford A. Rice, both of 552 Leader Bldg., Cleveland 14, Ohio
Filed Nov. 3, 1960, Ser. No. 66,969
3 Claims. (Cl. 16—18)



3. In a caster of the character described, a caster body comprising a substantially horizontal upper portion of generally annular form and spaced hollow parts extending downwardly from opposite peripheral edges of said upper portion and formed integrally with said upper portion, said spaced parts having spherical outboard faces providing trim surfaces for the caster, said parts having central openings therein, a shaft supported by said caster body and extending through said openings, a caster wheel mounted between said parts and supported for rotation about said shaft, said caster wheel having a tread surface of spherical form, which forms with the outboard surfaces of said parts a substantially complete sphere, said caster wheel provided in its sides with annular recesses, and fillers of segmental spherical form enclosed within said spaced parts, said fillers having annular flanges extending therefrom and into said recesses to provide thread guards for said shaft.

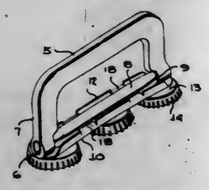
3,127,633
DUAL RACE CASTER
Edward H. Schultz, Jr., Chicago, Ill., assignor to Nagel-Chase Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed Aug. 31, 1961, Ser. No. 135,278
3 Claims. (Cl. 16—21)



1. A caster comprising: an upper plate member having a depending circular boss; a stud member centrally depending from said boss and having an attachment formation at the lower end thereof, the upper end of said stud having means including a radially enlarged surface portion engaging the underside of said boss for interlocking the boss and stud against relative axial movement and a portion of said stud intermediate said surface portion and said attachment formation having a radial enlargement forming ball-race means spaced axially from said boss intermediate said boss and said attachment formation; a cup-like member underlying said plate member and having an upper ball-race surface situated in opposed spaced-apart relationship with said boss, and a central depending throat portion presenting a lower ball-race surface centrally apertured and contiguous with said upper ball-race surface and situated in opposed spaced-apart relationship with said ball-race means and providing an external attachment surface for engagement with said attachment

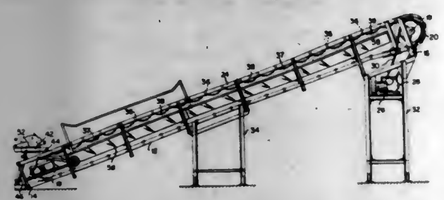
formation; ball bearings engaging each of said contiguous ball-race surfaces to be totally contained within said cup-like member; and rollable means secured to said cup-like member to extend into floor-engaging contact therebeneath.

3,127,634
FISH SCALER
Albert C. Ferguson, P.O. Box 6271, Jacksonville, Fla.
Filed July 3, 1962, Ser. No. 207,261
3 Claims. (Cl. 17—7)



1. A fish scaler comprising an elongated bar, a U-shape handle having alined transverse openings in the terminals of its legs to receive the ends of said bar, an elongated plate extending longitudinally of said bar and secured thereto, portions of said plate adjacent each end being inclined downwardly with said ends of the plate disposed beneath and in abutting engagement with the terminals of the legs of said handle, and a series of scraper disks attached to the underside of said plate with a disk attached to each inclined portion of the plate.

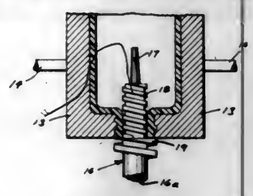
3,127,635
METHOD OF BLEEDING SLAUGHTER ANIMALS
Carl Oscar Schmidt, Jr., Cincinnati, Frederick A. Zaenkert, Greenhills, and Charley E. Watson, Cincinnati, Ohio, assignors to The Cincinnati Butchers' Supply Company, Cincinnati, Ohio, a corporation of Ohio
Filed Apr. 13, 1962, Ser. No. 187,764
7 Claims. (Cl. 17—45)



1. The process of bleeding a slaughter animal after being stuck in the throat, which consists in horizontally supporting and moving the stuck animal on its back with its feet uppermost.

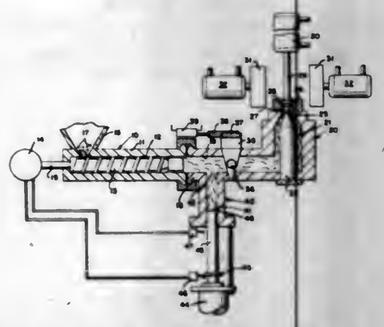
3,127,636
METHOD AND APPARATUS FOR PRODUCING HOLLOW PLASTIC ARTICLES
James E. Heider, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Nov. 1, 1961, Ser. No. 149,354
14 Claims. (Cl. 18—5)

11. For use in an apparatus for producing hollow plastic articles of the type having a neck portion and a substantially larger body portion wherein a heated thermoplastic parison having at least one end thereof open and having a smaller inside diameter than the desired inside diameter of the neck portion of the finished article is expanded in a blow mold, an improved rotatable blow pipe for expanding said parison, the improvement comprising a blow pipe having a free end which is sufficiently small to permit its insertion in the open end of said parison and a reamer portion axially spaced from said free end and having a



diameter corresponding to the desired inside diameter of said neck portion.

3,127,637
METHOD OF AND APPARATUS FOR MAKING PLASTIC ARTICLES
Raymond H. Rex, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed May 12, 1961, Ser. No. 109,620
5 Claims. (Cl. 18—30)

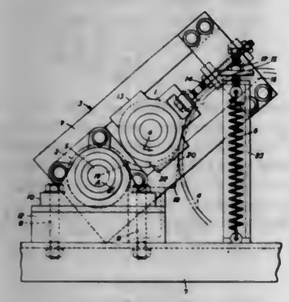


1. In an apparatus for intermittently issuing plasticized material through an orifice, a plasticizer-extruder screw, means for rotatably driving said screw to supply plasticized material to a screw-orifice conduit, a valve in said conduit for alternately establishing and interrupting screw-to-orifice communication, means defining an accumulation chamber in constant communication with said screw and receiving plasticized material from said screw when screw-to-orifice communication is interrupted, a material purging piston for displacing material from said accumulation chamber through said conduit, constant pressure means for displacing said piston in one direction and opposing movement of the piston in its other direction, means responsive to substantially complete displacement of said piston in said one direction by said pressure means for starting rotation of the screw, and means responsive to displacement of said piston in said other direction by pressured material from the screw for stopping rotation of said screw.

3. In a method of making a plastic article from material expressed through an orifice expressed from a screw-type plasticizer-extruder, communication between said plasticizer-extruder and the orifice being controlled by a valve, the steps of accumulating a body of material during those periods when communication is interrupted between the plasticizer-extruder and the orifice, halting rotation of the screw-type plasticizer-extruder when said body of material has attained a predetermined volume, dispensing material from said accumulated body only through said orifice, initiating rotation of the screw-type plasticizer-extruder when the body of accumulated material is exhausted, and dispensing material from both said plasticizer and

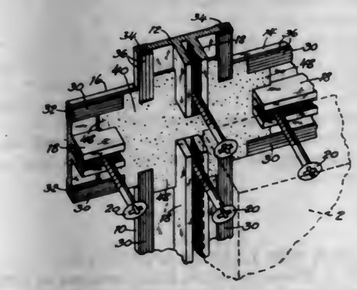
said body during the re-accumulation of the predetermined volume of material.

3,127,638
FEED APPARATUS FOR OPENING MACHINES FOR FIBROUS MATERIALS
Albert Edward Callaghan, West Lavington, Midhurst, England, assignor to Birfield Engineering Limited, London, England
Filed Aug. 18, 1960, Ser. No. 50,514
Claims priority, application Great Britain Jan. 22, 1959
10 Claims. (Cl. 19—96)



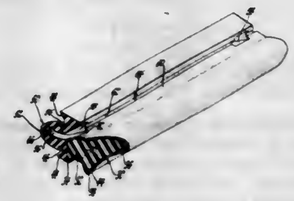
1. In an opening machine for fibrous materials comprising a rotatably mounted opening cylinder, a feed apparatus for feeding fibrous materials to said cylinder comprising a pair of rotatable feed rolls, a pivotal head within which one of said feed rolls is mounted, said head being pivotable about the rotational axis of the other of said feed rolls, and means resiliently loading said head towards said cylinder whereby said one feed roll is urged towards said cylinder and is able to yield to variations in thickness of the materials being opened by the cylinder, the arrangement of the resilient loading means being such that said head can be relieved of the loading to allow the head to be withdrawn, with said one roll, away from the cylinder.

3,127,639
SEALING MEANS FOR INTERSECTING BATTENS
Andrew B. Hammitt, 909 W. State St., Trenton, N.J., and Herbert L. Birum, Jr., Titusville, N.J.; said Birum assignor to said Hammitt
Filed July 6, 1960, Ser. No. 41,168
5 Claims. (Cl. 20—4)



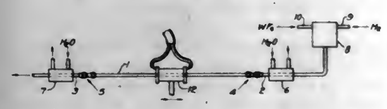
5. An assembly comprising a plurality of sheets of wall forming material having right angularly shaped corners spaced apart to form an intersecting space between the edges of said sheets, means located on the interior of said sheets of wall forming material and engaging the inner surface of said sheets at opposite sides of the space between the adjacent edges of the sheets, batten strips located on the exterior of said sheets of wall forming material and provided with sealing strips extending lengthwise of the batten strips adjacent the edges of the batten strips and located on the inner surface thereof with portions projecting inward from said inner surfaces of the batten strips, said batten strips being arranged in intersecting relation to cover the intersecting space between the sheets of wall forming material, sealing means located between the batten strips and the sheets of wall forming material and spanning the intersecting space between the sheets of wall forming material and conforming generally in shape to the intersecting portions of the battens, said sealing means including a continuous compressible sealing sheet and a pressure plate having its marginal edges spaced inwardly from the marginal edges of the sealing sheet, the sealing sheet, when uncompressed, being thicker than the portions of the sealing strips projecting inwardly from the inner surface of the batten strips but compressible to a thickness not exceeding the thickness of said inwardly projecting portions of the sealing strips, and connecting means extending from the means located on the interior of said sheets of wall forming material to the batten strips and extending through the space between the sheets of wall forming material at points spaced from the edges of the sealing means, said connecting means serving to draw the battens toward said sheets in a manner to compress the sealing strips on the battens against the marginal portions of the sealing means and urge said marginal portions into sealing engagement with both said sealing strips and said sheets of wall forming material.

3,127,640
SEALING STRIP
William J. Streetman, Madison Heights, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 29, 1962, Ser. No. 183,443
3 Claims. (Cl. 20—69)



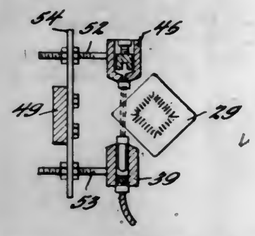
1. A flexible sealing strip comprising, a resilient elongate body including a base section and an integral sealing lip projecting from one side of said base section, a plurality of spaced headed mounting buttons projecting from an opposite side of said base section, a plurality of passageways, each being respective to one of said buttons, said passageways terminating at one end thereof within said buttons and opening at the other end thereof to said one side of said base section and underneath said sealing lip to provide for the insertion of a mounting tool within said headed buttons to stretch said buttons prior to projection thereof through spaced respective apertures in a support member, and means guiding said tool along said base section between the openings of said passageways to prevent movement of said tool laterally of said base section as said tool moves between said passageway openings and to cause said tool to automatically enter each successive opening.

3,127,641
TUNGSTEN TUBE MANUFACTURE
Kenneth S. G. Pertwee, South Euclid, Ohio, assignor to General Electric Company, a corporation of New York
Filed Oct. 5, 1961, Ser. No. 143,197
6 Claims. (Cl. 22—204)



1. The method of making tungsten tubing which comprises flowing a mixture of hydrogen and tungsten hexafluoride through the interior of a copper reaction tube while progressively heating the tube to a temperature of about 600–800° C. in a longitudinally narrow annular zone thereof which moves slowly along the length of the reaction tube at a substantially uniform rate to thereby effect chemical reaction of the hydrogen and tungsten hexafluoride and deposition of tungsten in a layer on the interior of said reaction tube, controlling the thickness of the tungsten layer by repeatedly moving the heated annular zone back and forth along the length of the reaction tube while continuing the flow of hydrogen and tungsten hexafluoride, and subsequently removing the reaction tube.

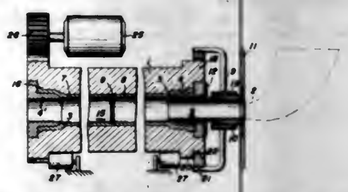
3,127,642
PROCESS AND APPARATUS FOR THE CASTING OF STEEL
Jean Zaeytydt, Montignies-sur-Sambre, Belgium, assignor to Centre National de Recherches Metallurgiques, Association sans But Lucratif, Brussels, Belgium
Filed Mar. 16, 1961, Ser. No. 96,330
Claims priority, application Belgium Mar. 24, 1960
11 Claims. (Cl. 22—57.2)



1. A process to continuously insure a predetermined compactness in a superficial layer of a rimming continuously poured ingot, comprising the steps of pouring a rimming steel in a continuous casting mould, continuously adding deoxidant material to the poured liquid metal, and continuously measuring the apparent compactness of the superficial layer of the ingot in a zone in which the ingot is completely solidified and according to said measure modifying the rate of the adding deoxydant material to the liquid steel to obtain for said measure, a predetermined value which corresponds to a desired apparent compactness of the layer.

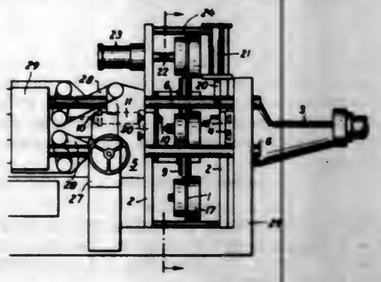
3,127,643
PROCESS AND APPARATUS FOR PRODUCING CENTRIFUGALLY CAST METAL TUBES
Werner Welz, Staffel (Lahn), Germany, assignor to Buderus'sche Eisenwerke, Wetzlar, Germany, a corporation of Germany
Filed May 31, 1961, Ser. No. 113,846
Claims priority, application Germany May 31, 1960
2 Claims. (Cl. 22—65)

1. An apparatus for centrifugally casting pairs of metal tubes, comprising a tubular mold rotatable about a substantially horizontal axis and having a bore extending along said axis, said bore having two open ends; stationary inlet means at one of said open ends for introducing a molten metal into said bore, said bore being provided intermediate said openings with two adjacent generally cylindrical sections of different diameter and an axially fixed annular ridge intermediate said sections, said ridge projecting inwardly beyond the walls of said sec-



tions a fraction of the radius of said bore, the section having the smaller diameter being disposed between said inlet means and said ridge with the section having the larger diameter being disposed beyond said ridge remote from said inlet means, said ridge having flanks of different height rising respectively from said sections with the flank having the smallest height facing said inlet means; and drive means for rotating said mold about said axis.

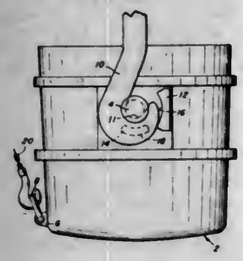
3,127,644
PRESSURE CASTING APPARATUS
Hans Fleckenstein and Gunther Haag, Oldenburg in Oldenburg, Germany, assignors to Licentia Patent Verwaltungs G.m.b.H., Frankfurt am Main, Germany
Filed June 27, 1960, Ser. No. 39,133
Claims priority, application Germany July 1, 1959
3 Claims. (Cl. 22—69)



1. In a pressure casting apparatus having a multiple mold arrangement, the combination of a stationary frame, a stationary mold half secured to said frame, a pair of parallel rods mounted on said frame, a bearing housing slidably mounted on said rods, two pairs of rollers mounted inside and on said bearing housing, an annular member rotatably supported on its inner annual surface by said two pairs of rollers, and a plurality of exchange mold halves mounted on said annular member and capable of both rotary movement and movement toward and away from said stationary mold half for casting operations, said rods extending in the direction of said last mentioned movement.

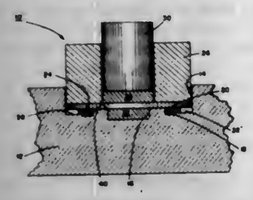
3,127,645
LOCK FOR LADLES AND HOOKS
Hubert I. Dyck, Pleasant Grove, Utah, assignor to United States Steel Corporation, a corporation of New Jersey
Filed Sept. 11, 1961, Ser. No. 137,390
4 Claims. (Cl. 22—82)

1. In a ladle having a pair of trunnions journalled for rotation on a pair of lifting hooks, said ladle being rotatable on said trunnions between an upright position and a pouring position, the improvement which comprises a first locking surface on said ladle, a second locking surface on one of said hooks, said first locking surface being positioned to move to a location vertically below and in alignment with said second surface positioned to prevent



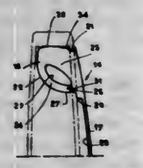
vertical separation of the ladle and hooks when the ladle is rotated into the pouring position and to move to a location out of vertical alignment with the second surface positioned to allow facile vertical disengagement of the ladle and hooks when the ladle is rotated to the upright position.

3,127,646
ALLOYING FIXTURES
Noble E. Hamilton, Belmont, Mass., assignor to Clevite Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Oct. 6, 1959, Ser. No. 844,765
1 Claim. (Cl. 22—116)



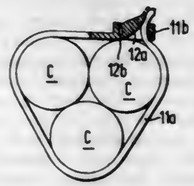
A fixture for alloying contacts on a semiconductor wafer, comprising: An alloying boat recessed to receive a wafer of semiconductor material and having in its bottom surface, an indentation adapted to contain alloying material; and means defining a passage of relatively small cross-sectional area having one end in flow communication with said indentation, wherein said passage takes the form of an annular clearance space radially adjacent to and in flow communication with said indentation.

3,127,647
FOUNTAIN PEN CAP FASTENING DEVICE
Jules Victor Robert Helitas, Asnieres, France, assignor to A. J. Fagard & Cie, Paris, France, a corporation of France
Filed June 18, 1962, Ser. No. 203,184
Claims priority, application France July 28, 1961
5 Claims. (Cl. 24—11)



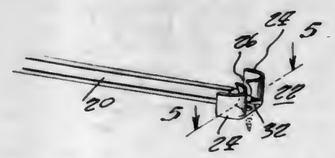
1. A fountain-pen cap and fastening device comprising a cap with side wall and bottom, an opening being provided in said side wall in the vicinity of the bottom of said cap, a clip comprising a clip body and two lugs directed transversely to said body and adapted to be inserted elastically through said opening and to open out after passing through the cap wall so as to lock said clip in position with respect to said cap, said lugs having a height sufficient to cause said lugs to be in contact with the bottom of said cap after the lugs have been inserted inside the cap.

3,127,648
CABLE BINDING CLIP
Edgar Frank Emery, Sharston Works, Leestone Road, Sharston, Manchester 22, England
Filed Oct. 26, 1961, Ser. No. 147,894
Claims priority, application Great Britain Nov. 1, 1960
5 Claims. (Cl. 24—16)



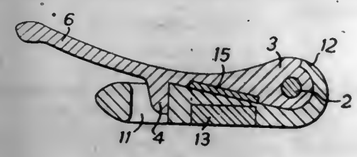
1. A binding clip for cables and the like comprising an elongated flexible tongue, a substantially rectangular frame of a thickness greater than that of said tongue and constituting a head, one end of said tongue being integral with outer face of one element of said frame, a pawl in said frame, one end of said pawl being integrally connected to the inner face of said one element, said connection constituting a pivot, said pawl extending to about the end of said frame opposite to said one element, the free end of said pawl being tapered, the free end of said pawl being displaceable from within said frame by the passage of the free end of said tongue through said frame between said pawl and said opposite end, said pawl being adapted to return into said frame upon removal of said tongue end from said frame.

3,127,649
PENCIL HOLDER FOR CLIPBOARDS
Russel R. Linsenmayer, 2635 Grovenburg Road, Lansing, Mich.
Filed June 29, 1962, Ser. No. 206,410
1 Claim. (Cl. 24—66)



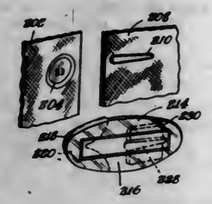
In a clipboard comprising a board and a paper holding clamp secured to one end of said board, a pair of clips in spaced apart alinement to receive and hold a pencil, each of said clips having a base connected to said clamp and a pair of spring elements extending therefrom to engage the pencil to be held, the spring elements of one of said clips being bent inwardly toward one another and having cutting edges cooperating to form a circular opening therebetween through which the point of a pencil to be held is inserted and to additionally provide pencil sharpening means for such point of the pencil to be held.

3,127,650
BUCKLES
William Henry Seward, Havant, England, assignor to Kangol Helmets Limited, London, England, a British company
Filed Mar. 12, 1962, Ser. No. 178,882
Claims priority, application Great Britain Mar. 13, 1961
2 Claims. (Cl. 24—68)



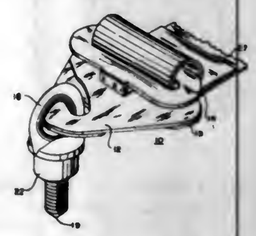
1. A quick-release two-part buckle suitable for joining the ends of a safety seat belt, comprising a first member, an extended portion at one end of said first member forming a finger grip, a pin located in a hole at the other end of said first member and serving for attachment of said first member to one end of the belt, a shoulder on the outer side of said first member on a portion otherwise substantially concentric with said pin, a second member curved outwardly at one end to form a hooked portion generally concentric with said pin in said first member when said first and second members are mated whereupon said shoulder on said first member engages the end of said hooked portion of said second member, there being a slot at the other end of said second member serving for attachment thereof to the other end of the belt, one of said members comprising a permanent magnet and the other of said members comprising a member of magnetic material which co-operates with said permanent magnet to prevent inadvertent disengagement of said first and second members by pivoting of said first members about the axis formed by the engagement of said shoulder on said first member with the end of said hooked portion of said second member.

3,127,651
FASTENER
Clarence Albert Foose, 809 S. National, Fort Scott, Kans., and Billy Dean Foose, 212 S. Oak Park Ave., Oak Park, Ill.
Filed Mar. 15, 1961, Ser. No. 95,906
2 Claims. (Cl. 24—73)



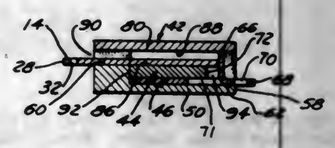
2. A fastener for holding opposite edges of a jacket together comprising a substantially flat base, a spacer substantially perpendicular to the base and being formed on a portion of the outer periphery thereof, a button catch fixed to the spacer and spaced from said base, a buttonhole riser fixed to the base on the same side as the button catch. and a fastener button fixed to said buttonhole riser and being substantially parallel to the base, whereby said fastener button is placed through a buttonhole in an edge of a jacket to place the buttonhole riser within the buttonhole, thereby mounting the fastener on the edge of the coat, and the button catch is placed into engagement with threads holding a button on a second edge of the jacket to position the button between the button catch and the base thereby holding the two edges of the jacket together.

3,127,652
ANCHOR ASSEMBLY FOR SEAT BELT
Raymond L. Springer, Anderson Township, Hamilton County, Ohio, assignor to The Auto Sun Products Company, Cincinnati, Ohio, a corporation of Ohio
Filed Apr. 25, 1962, Ser. No. 190,052
4 Claims. (Cl. 24—165)



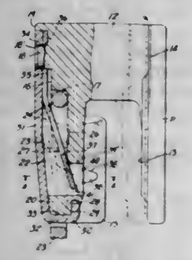
1. In a safety belt anchorable to an eye member, the combination comprising a safety belt web, an anchor for connecting an end portion of the web to the eye member, which anchor comprises a pair of hook plates, each of said hook plates including a body portion and a hook thereon, there being a main web-receiving slot in the body of each hook plate, there being a locking slot in the body of each hook plate between the main slot and the hook, the hooks being adapted to engage the eye member with the hooks overlapping, a lock plate including a body portion having a main web-receiving slot, the end portion of the web being threaded through the web-receiving slots in such a manner that a pull on the web causes the locking plate to grip the web against an adjacent one of the hook plates, and means on the lock plate extending through the locking slots on the hook plates to hold the hook plates adjacent each other to prevent release of the eye member.

3,127,653
MAGNETIC CONNECTOR
Frances Budreck, Chicago, Ill., assignor, by mesne assignments, to Monarch Tool & Machinery Co., a corporation of Illinois
Filed Apr. 2, 1962, Ser. No. 184,288
1 Claim. (Cl. 24—201)



A separable two-part magnetic connector comprising, in combination, a magnet assembly and a cooperating armature, said magnet assembly being in the form of an elongated tubular sheath having a relatively deep pocket extending axially therein, a permanent magnet of the barium-ferrite type having oppositely facing flat pole faces, one of which establishes at least in part one wall of the pocket, an L-shaped pole piece of magnetic sheet material including a flat plate overlying and in substantially coextensive face-to-face contact with the other pole face of the magnet, one edge region of said plate overhanging one end edge of the magnet and having a laterally turned flange projecting completely across the general plane of the magnet and spaced from said one edge so as to define, in combination therewith, a narrow air gap, said laterally turned flange constituting a bottom wall for the pocket, said armature comprising an elongated flat blade-like strip of magnetic material having a cross-sectional shape conformable to the cross-sectional shape of said pocket, said armature being removably and telescopically receivable edgewise within said pocket and when so received within the pocket presenting one flat side thereof to said one pole face in intimate face-to-face contact therewith and having its leading edge region bridging the air gap and its leading edge in engagement with said flange, said flat side of the armature being designed for sliding contact with said one pole face during movement of the armature into and out of the pocket, an attachment tab on the armature at the trailing end thereof, the material of the flat plate having a struck-out portion which is disposed adjacent to said laterally turned flange, is turned through an angle of 180°, projects forwardly of the flange and constitutes an attachment tongue for the tubular sheath as a whole, said tab and tongue being designed for connection to respective key chains or the like.

3,127,654
LOW SILHOUETTE COMPRESSION SLIDER
Louis H. Morin, Bronx, N.Y.
(125 Beechwood Ave., New Rochelle, N.Y.)
Filed Feb. 20, 1963, Ser. No. 259,906
10 Claims. (Cl. 24—205.14)



1. A slider of the character described comprising a body having spaced walls joined at the wide end in a connecting web, one wall having at its ends raised platforms, an elongated yoke fixed to the platform at the wide end portion of the slider by a rivet portion, the other end of said yoke having a hook-shaped member engaging the platform and wall of the slider at the other contracted end thereof, a spring lock mounted on the rivet portion of the first mentioned platform and arranged within said yoke, said spring lock including at its free end lock means operating in an apertured portion of said wall of the slider in checking movement of a slider along stringers of a separable fastener, a pull having a pivot end operating in said yoke between said platforms and operatively engaging said spring lock in movement of the lock means into inoperative position, and said wall of the slider intermediate said platforms having a recess engaged by the pivot end of the pull in maintaining the spring lock in hold-open position.

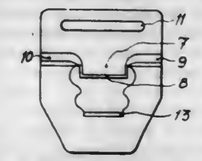
3,127, 655
SLIDE-ACTION BUCKLE FOR SAFETY BELTS
Andrew G. Carter, Grand Rapids, Mich., assignor to Andrew G. Carter and Harriet T. Carter, a partnership doing business as Carter Engineering Company, Grand Rapids, Mich.
Filed Feb. 23, 1960, Ser. No. 10,194
3 Claims. (Cl. 24—230)

1. A safety belt buckle, comprising: a first buckle section, said first buckle section including a frame having spaced overlapping plates fixed with respect to each other, said plates having opposite central openings therein; means forming an abutment on one of said plates extending toward the other of said plates a portion of the distance between said frame plates; a second buckle section, said second buckle section including an engaging plate slidably receivable between said frame plates and having an aperture engageable with said abutment; a latch member slidably mounted between said frame plates and having a handle portion disposed at least in part within the space opposite and between said central openings, and also having a holding portion receivable together with said engaging plate between said spaced plates and disposed to overlap said engaging plate in a locking position of said



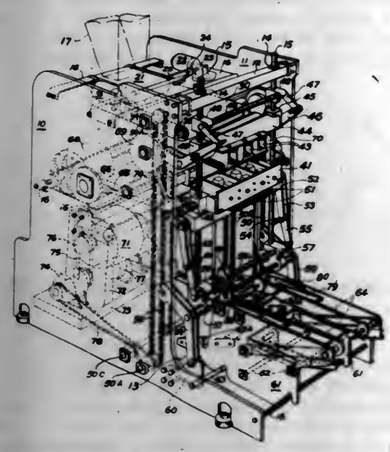
latch member to maintain the engagement of said abutment and aperture, the distance between said spaced plates being at least equal to the height of said engaging plate plus the height of said abutment, and less than the combined heights of said abutment, engaging plate, and holding portion; and biasing means urging said latch member to locking position, said latch member being slidable in a direction away from said second buckle section to a release position wherein said holding portion does not overlap said engaging plate, thereby providing freedom of movement for said aperture and abutment to become disengaged.

3,127,656
CLIPS FOR TEXTILE ARTICLES
Frans Schwabe and Ragnar Fredriksson, Stockholm, Sweden, assignors to Svenska Aktiebolaget Innova, Malmo, Sweden
Filed Apr. 29, 1963, Ser. No. 276,624
Claims priority, application Sweden Apr. 1, 1963
7 Claims. (Cl. 24—246)



1. In a clip for textile articles; a plate with resilient properties; there being a U-shaped opening in said plate; a tongue in said opening; said tongue having a bottom edge, a top edge opposite to the bottom edge and two side edges; the bottom edge being connected to the plate and the upper edge engaging the adjacent edge of said opening; there being a stepped recess in said adjacent edge; said tongue being adapted to abut with a side thereof against a first surface of said recess, said first surface being substantially parallel to said plate and said tongue; said tongue being further adapted to abut with the upper edge thereof against a second surface of said recess, said second surface being substantially at right angles to said plate and said tongue; said plate being foldable along folding lines or grooves therein; said folding lines or grooves being located substantially in the extensions of said adjacent edge of said opening at the sides of the latter; said second surface of said recess being so laterally displaced in its own plane, perpendicularly to the plane of said plate, that said upper edge of said tongue is pressed against said second surface when said plate is bent in one direction along said folding lines, and removed from said second surface when said plate is bent in the opposite direction.

3,127,657
CONCRETE BLOCK MAKING MACHINE
William G. Benjey and William D. Reynolds, Alpena, Mich., assignors to Alpena Research & Development Company, Alpena, Mich., a corporation of Michigan
Filed Mar. 9, 1962, Ser. No. 178,589
7 Claims. (Cl. 25—41)



1. In a machine for making concrete blocks and comprising a vertical supporting framework, cross members in said framework; resilient members in said cross members, and a pair of vertically positioned rods movably mounted in said resilient members, a mold box for receiving a cement mixture positioned between said rods and secured thereto, a core assembly and a support base therefor movably mounted on said vertical rods beneath said mold box for registry vertically into and out of said mold box and a packer head movably mounted on said vertical rods above said mold box and movable vertically into and out of said mold box, means on said framework for imparting horizontal and vertical vibrating motion to said mold box, rods, core assembly, support base and packer head as permitted by said resiliently mounted rods, means for delivering predetermined quantities of material into said mold box, said means comprising an elevated feed hopper having a discharge opening in the upper portion of said machine, a horizontally disposed endless feed belt positioned immediately below said feed hopper so as to partially restrict said discharge opening of said feed hopper, means for imparting driving motion to said feed belt to move said material, a normally horizontally disposed endless weighing belt tiltably positioned beneath said feed belt and extending outwardly therefrom and having one end disposed in a position for delivering material therefrom into said mold box, pivoted support means in said framework tiltably mounting said weighing belt, means for imparting driving motion to said weighing belt and control means on said weighing belt support means responsive to the position thereof for controlling said means for imparting driving motion to said feed belt.

3,127,658
WORSTED STRETCH FABRIC AND PROCESS FOR MANUFACTURING SAME
David Gliksmann, Bronx, N.Y., assignor to Burlington Industries, Inc., Greensboro, N.C., a corporation of Delaware
No Drawing. Filed Feb. 15, 1962, Ser. No. 173,378
8 Claims. (Cl. 28—72)

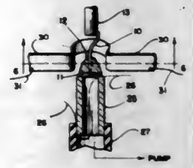
7. The method of preparing a stretch fabric which comprises providing an end of worsted yarn having an appropriate yarn count and grade number and a spun twist in the S direction, providing another end of worsted yarn having essentially the same yarn count, grade number and spun twist in the Z direction, twisting said two ends together by applying a ply twist in either the S or Z direction substantially equal to the original number of turns in said ends before plying, thereafter weaving a fabric using said plied yarn as the filling yarn with the warp yarn being reeded out so that said filling yarn is provided space to bulk when the resulting fabric is relaxed and thereafter finishing said fabric in the completely relaxed condition, the sum of the average picks and ends per inch of the woven fabric being not greater than

$$M=\left[\frac{(\sqrt{x})(y)(1-B)}{y+n}\right] \text{ times } 2$$

wherein:

M is the maximum sum of the average of the picks and ends per inch;
x is the yards per pound determined by multiplying the equivalent count of the filling yarn by 560;
y is the number of ends in a repeat of the pattern;
n is the number of interlacings per end in the weave; and
B is the percent warp contraction depending on the weave and picks per inch.

3,127,659
METHOD OF MANUFACTURING POINT CONTACT SEMICONDUCTOR DEVICES
John V. Jenkinson, Lexington, Mass., assignor to Microwave Associates, Inc., Burlington, Mass., a corporation of Massachusetts
Filed Nov. 4, 1960, Ser. No. 67,294
5 Claims. (Cl. 29—25.3)



1. Method of fabricating a point-contact semiconductor device comprising the steps of:
contacting a surface of a body of semiconductor material with the pointed end of an elongated electrical connector so as to form a rectifying contact;
depositing on only a region of said surface surrounding and contiguous with said rectifying contact, and on a portion of said conductor near said end, a quantity of a viscous mixture of a glass frit and a vehicle therefor;
heating said mixture so as to fuse it into a glass mass intimately bonded to said region and portion while maintaining said surface and end in said rectifying contact; and
cooling said mass to a solid while maintaining said rectifying contact.

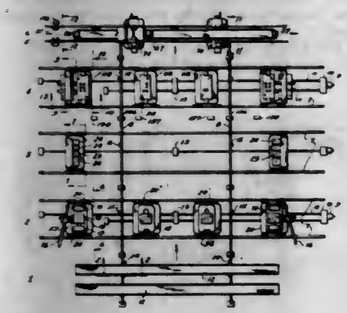
3,127,660
SOLID TANTALUM CAPACITOR
Pierre J. Gerondeau, Andover, Mass., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 6, 1960, Ser. No. 74,184
6 Claims. (Cl. 29—25.31)

1. In the method of fabricating a tantalum solid electrolytic capacitor comprising the steps of anodizing a tantalum body, coating said tantalum body with a first semiconductive layer, reanodizing the said tantalum body, recoating the said tantalum body with a final semiconductive layer and depositing a counter electrode upon and in intimate contact with the said final semiconductive



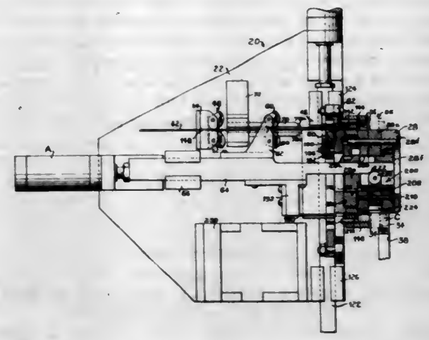
layer, the improvement which comprises simultaneously depositing the said final semiconductive layer and dry powdered carbon from a suspension of powdered carbon in an aqueous solution of manganous nitrate.

3,127,661
FABRICATING OF STRUCTURAL STEEL MEMBERS OR UNITS
John R. McConnell, 148 Woodside Ave., Ridgewood, N.J.
Filed Nov. 13, 1959, Ser. No. 852,892
3 Claims. (Cl. 29—33)



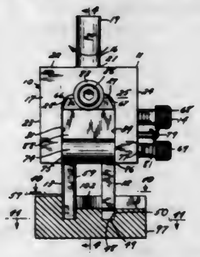
1. A fabricating machine for drilling, coping, nut turning and inspecting the structural shapes comprising a plurality of parallel pairs of tracks, drilling, coping and nut turning units respectively successively disposed for movement on the respective pairs of tracks, means associated with each of said tracks and their units for adjusting said units along the tracks, a pair of structural shape transmission rails extending normal to and over the plurality of tracks intermediate the lengths thereof for the transmission of the structural shape in succession to the different work-performing units, said transmission rails extending from a shape receiving station beside the drilling units and extending to and beyond a discharge station lying beyond the nut running units, work carrying dollies operable along said transmission rails and adapted to receive the structural shape and convey the same thereover to the different work performing units, means for arresting the dollies with the structural shape to respective unit work stations, and an inspection and discharge unit disposed at the discharge end of the transmission rails to receive the assembled structural shape from the work-carrying dollies for inspection and discharge from the machine.

3,127,662
WEDGE INSERTING MACHINE
Harry W. Moore, 5051 Kittridge Road, Dayton, Ohio
Filed Oct. 14, 1960, Ser. No. 62,590
9 Claims. (Cl. 29—33)



1. Apparatus for inserting wedges into the coil-receiving slots in a field member comprising in combination: a field member support; a wedge magazine having a plurality of wedge retaining apertures therein mounted adjacent said support, supply means intermittently operable to load at least one aperture in said magazine with a wedge upon each operation thereof; drive means producing intermittent relative rotation between the magazine and the supply means; means alternately actuating said supply means and said drive means whereby successive magazine apertures are loaded with wedges; and means spaced from said supply means for transferring wedges from the magazine to a field member mounted on said support.

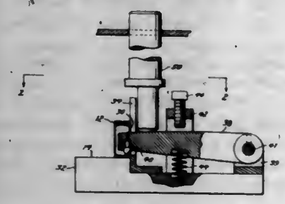
3,127,663
COMBINATION BORING AND ROUTING TOOL
Paul Karlan, 110 Stuyvesant Plaza, Mount Vernon, N.Y.
Filed Oct. 10, 1961, Ser. No. 144,268
2 Claims. (Cl. 29—105)



1. In a machining tool holder, a frame element, machine-engaging means disposed upon said frame element, said machine-engaging means having a principal axis, there being a generally rectangularly-shaped recess in said frame element, having a principal axial plane parallel to the principal axis of said machine-engaging means, a plurality of elongated cutting tools each having a principal axis and a generally rectangularly-shaped cross section, said cutting tools being positioned within said recess in substantially mutually parallel relation, a plurality of elongated spacer members of varying thickness and of rectangular cross section selectively disposed within said recess and substantially filling the remaining volume of said recess, and means for exerting a compressive force upon an exposed surface of each of said

plurality of tools and spacer members, said means including a bolt threadedly engaged upon said frame element and having a principal axis perpendicular to said principal plane of said recess, a washer having a beveled surface slidably disposed upon said bolt, a generally cylindrically-shaped member attached to said frame element having a principal axis disposed parallel to the principal plane of said recess, and having an outer surface thereon, a generally rectangularly-shaped wedge member having a pair of oppositely disposed wedge surfaces and a planar surface therebetween, said planar surface contacting surfaces of said tool and spacer members, one of said wedge surfaces contacting said cylindrically-shaped member, and the other of said wedge surfaces contacting said beveled surface of said washer; whereby tightening of said bolt may serve to compress said planar surface of said wedge member against said cutting tools and spacer members.

3,127,664
METHOD FOR FRACTURING SOCKETS OF BALL AND SOCKET BEARINGS
Joseph Zurick, West Trenton, N.J., assignor to Roller Bearing Company of America, Trenton, N.J., a corporation of New Jersey
Filed Dec. 29, 1961, Ser. No. 163,300
5 Claims. (Cl. 29—149.5)



1. The method of singly fracturing an outer socket member for a self-aligning, self-locking ball and socket bearing comprising

forming an annular member with a spherically-curved internally concave annular surface,

centering said socket member on a fixture for the notching of the socket member,

cutting a notch of V-shape in depth along a small portion of the internally concave surface and adjacent to but spaced from the edge formed by an end face and said internally concave annular surface,

supporting said socket member in a fixture for fracturing said socket member, and

forcefully contacting the outer surface of said socket member with a non-pointed, relatively uniform ram to singly fracture the socket member longitudinally through said notch without fracturing the portion of said socket member disposed generally radially opposite the zone of the notch.

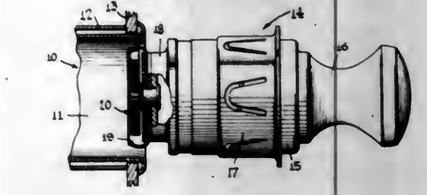
3,127,665
DELAY LINES
Lockhart Taylor, Edinburgh, and Donald Ferguson Walker, Barnton, Edinburgh, Scotland, assignors to Ferranti, Limited, Hollinwood, Lancashire, England, a company of Great Britain and Northern Ireland
Filed May 16, 1960, Ser. No. 29,389
Claims priority, application Great Britain May 27, 1959
5 Claims. (Cl. 29—155.5)

1. A method of manufacturing a delay line having a first inductive section followed by a plurality of intermediate sections and a last section, each intermediate section and last section having inductance and capacitance, the inductance of each section being formed by a winding of a first insulated conductor and capacitance of each of said intermediate sections and said last section being formed by a winding of a separate insulated conductor wound bifilarly with said first insulated conductor, including the steps of winding a first section comprising a specified number of turns of the first insulated conductor, winding one or more intermediate sections and said last section while the partially completed delay line is connected across the resonant tank circuit of an electronic oscillator in place of the inductance of the resonant tank circuit to control the frequency of oscillation thereof in accordance with the delay time of the partially completed



delay line by continuing the winding of said first insulated conductor for a specified number of turns and winding bifilarly therewith for each intermediate section and last section said separate insulated conductors, stopping the bifilar capacitance winding of each intermediate section and last section when said frequency reaches a predetermined value determined according to the number of preceding sections, and completing the inductive winding of each of said intermediate sections and said last section by continuing the winding of said first insulative conductor for a specified number of turns.

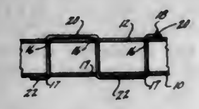
3,127,666
ELECTRIC HEATING ELEMENT
Lawrence E. Fenn, Bridgeport, Conn., assignor to Casco Products Corporation, Bridgeport, Conn., a corporation of Connecticut
Filed July 10, 1953, Ser. No. 367,233
6 Claims. (Cl. 29—155.62)



1. The method of making an electrical heating coil for a cigar lighter comprising the steps of winding a flat, metal ribbon, formed of a metal alloy including iron and aluminum in its composition, into a tight, pancake-shape spiral with adjacent turns touching each other, confining the spiral to prevent appreciable unwinding and separation of the turns, heating the coil to relieve the winding strains and thereafter heating the coil sufficiently to form in situ an oxide on the surfaces of the ribbon, said oxide providing electrical insulation on the surfaces of the wire to prevent short-circuiting between the turns of the coil and providing mechanical adhesion between the contacting turns to prevent relative shifting thereof and axial deformation of the coil.

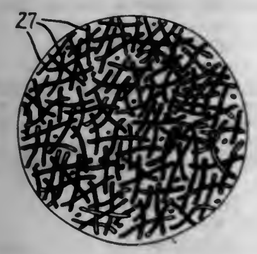
3,127,667
DOUBLE THICKNESS WALL CONSTRUCTION FOR ROCKETS
Julius W. Tumavicus, Old Saybrook, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed June 23, 1959, Ser. No. 822,332
2 Claims. (Cl. 29—157)

1. In the manufacture of a double wall construction for a rocket, the steps of providing inner and outer concentric walls in spaced relation, weaving a thin, bendable wire in and out through pairs of substantially radially



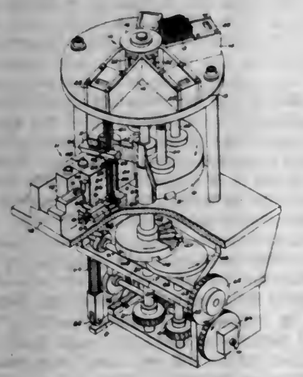
aligned holes in the walls and brazing the wire in the holes in the inner and outer walls.

3,127,668
HIGH STRENGTH-VARIABLE POROSITY SINTERED METAL FIBER ARTICLES AND METHOD OF MAKING THE SAME
Walter C. Troy, Evergreen Park, Ill., assignor to IIT Research Institute, a corporation of Illinois
Filed Mar. 3, 1955, Ser. No. 492,007
11 Claims. (Cl. 29—182)



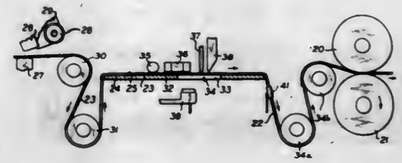
1. A fiber metal skeleton consisting essentially of a bonded mass of metal fibers each of sufficiently short length to be suspendible in a fluid as discrete fibers, the lengths of said fibers being in the range from 0.002 to 2 inches, said fibers being arranged at random in said skeleton and being bonded at points of contact with adjoining fibers to provide a skeleton having a porosity in the range from about 50% to about 95%.

3,127,669
ARTICLE FEEDING APPARATUS
John P. Reber, West Lawn, and William A. Schlemm, Reading, Pa., and Gary G. Seaman, Millard, Nebr., assignors to Western Electric Company Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 14, 1961, Ser. No. 95,666
11 Claims. (Cl. 29—203)



1. Apparatus for feeding members into individual openings of an article, which comprises supply means for the members, a movable feeding unit cooperatively associated with the supply means for receiving the members individually therefrom, means communicating with the feeding unit at predetermined areas for individually receiving each member from the feeding unit, a plurality of movable accumulators each having a plurality of passageways oriented with respect to the receiving means for receiving individual members therefrom to load the accumulator, means cooperatively associated with the accumulators for releasing the members of a loaded accumulator simultaneously into their respective article openings, and means for supporting said supply means, feeding unit, receiving means, accumulators and releasing means in cooperative relationship with each other.

3,127,670
METHOD OF AND MACHINE FOR ASSEMBLING SLIDERS ON SLIDE FASTENER STRINGERS
Fred Bruning, Baldwin, N.Y., assignor to Bruning Bros. Company, Inc., Brooklyn, N.Y., a corporation of New York
Filed Dec. 18, 1961, Ser. No. 159,985
12 Claims. (Cl. 29—408)



1. The method of attaching a slider to coupled stringers of a zipper chain which comprises:

(*a*) feeding to an assembly station a length of such coupled stringers having at the leading end thereof adjacent beaded untoothed edges followed by coupled teeth which are free to be disengaged,

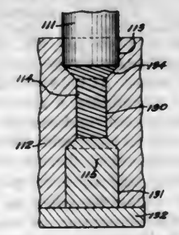
(*b*) orienting the adjacent beaded untoothed edges of the stringers, in advance of the assembly station to accommodate a slider,

(*c*) positioning at the assembly station a preformed slider,

(*d*) inserting the oriented beaded untoothed edges of the stringers into the slider channels at the opposite sides of the slider, and

(*e*) then spreading and advancing the leading spread edges of the stringers to cause engagement of the slider with the teeth on the stringers.

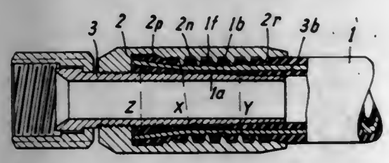
3,127,671
ART OF FORGING BRITTLE METALS
Arthur F. Hayes, Greendale, Wis., assignor to Ladish Co., Cudahy, Wis., a corporation of Wisconsin
Filed June 27, 1961, Ser. No. 119,949
12 Claims. (Cl. 29—423)



12. Forging apparatus comprising a die member having a cavity with a bottom, said cavity being shaped to re-

ceive a blank of metal having a similar cross-sectional shape to that of the cavity to contact all except the top of said blank, a second die member having a punch, and a plastic metal die component surrounding said punch with said punch and component having a bottom of an area to cooperate during forging in contacting the opposite end of the blank which constitutes the remainder of its exterior whereby said blank may be completely confined between the die members, punch, and plastic metal die component, there being expansion space adjacent at least a portion of said plastic die component into which it may flow as it supports part of the blank and as compressive forces on the blank cause deformation of said plastic die component.

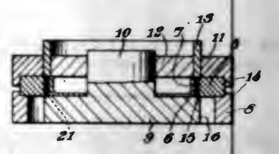
3,127,672
METHOD OF ASSEMBLING A HOSE FITTING
Georg Kretschmer, Darmstadt-Eberstadt, Germany, assignor to Techno-Chemie Kessler & Co. G.m.b.H., Frankfurt am Main, Germany
Filed Feb. 25, 1960, Ser. No. 10,963
Claims priority, application Germany Mar. 7, 1959
1 Claim. (Cl. 29—450)



A method of assembling a high pressure hose fitting including an internally threaded ferrule and an externally threaded nipple upon a reinforced high pressure hose having an inner and an outer layer of flexible material and a reinforcing layer sandwiched between said flexible layers, said method comprising the steps of first threading said ferrule upon one end of a hose having a wider outer diameter than the inner diameter of the ferrule to cut into the surface of the outer layer of the hose and to force the material of said cut outer layer partly into the valleys between the teeth of the threads of the ferrule, then forcing a rigid and solid mandrel having an outer diameter larger than the inner diameter of the hose into the hose end received by the ferrule to expand said hose end to an inner diameter such that the teeth of the threads of the ferrule cut through the entire thickness of the outer hose layer and the cut material is forced to penetrate deeper into the valleys between the teeth, then withdrawing the mandrel, and finally threading the nipple into said hose end to expand the same to an inner diameter such that the reinforcing layer now exposed by the cuts in the outer layer is also partly forced into said valleys.

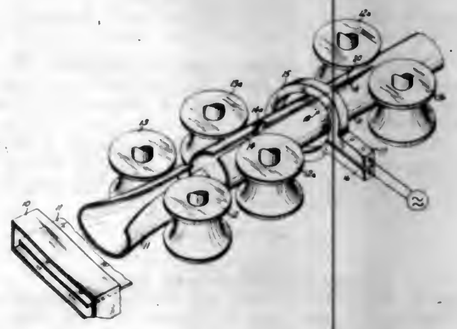
3,127,673
METHOD OF ASSEMBLING RUBBER BUSH UNITS
Alan Caunt, Oadby, England, assignor to Metalastik Limited, Leicester, England, a British company
Filed Dec. 3, 1959, Ser. No. 857,211
Claims priority, application Great Britain Jan. 13, 1959
2 Claims. (Cl. 29—450)

1. A method of assembling a unit comprising inner and outer concentric nested rigid members and a resilient bush of rubber or the like material held pre-compressed radially in an annular space therebetween, the method comprising supporting said rigid members in concentric nested relation one within the other so as to define between them the radial dimension of said annular space, confining said bush between radially inner and outer support members with said bush in spaced axial alignment with said annular space, engaging a rigid plunger directly over the whole of one end surface of said bush, forcing said bush by movement of said plunger axially into said annular space with radial compression of said bush and into abutting relation with a further rigid member substantially completely closing the other end of said annular space, and continuing said movement of said plunger until said annular space is confined in axial di-



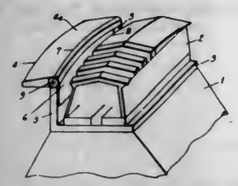
mension between said plunger and said further rigid member and said bush occupying said annular space is compressed to completely fill the volume of said annular space and relieve the undesirable frictional forces produced between said bush and said inner and outer nested members during the forcing of said bush into said annular space.

3,127,674
WELDING OF FERROUS TUBING
Fred Kohler, New York, N.Y., assignor to American Machine & Foundry Company, New York, N.Y., a corporation of New Jersey
Filed Sept. 6, 1962, Ser. No. 221,740
2 Claims. (Cl. 29—477.7)



1. Method of forming tubing of ferrous metal comprising the following combination of steps: heating strip means of such metal in a furnace to bring the same to a temperature at least close to the Curie point thereof or higher, but substantially below welding temperature; continuously forming the thus-heated strip means into an advancing open-seamed tube with edge portions defining an open V-shaped gap and extending opposite one another and longitudinally of the desired tube, the apex of said gap being maintained at the desired weld point; heating such opposed edges to welding temperature while the ferrous strip means is in a condition of being substantially non-magnetic due to being at the temperature of or above the Curie point, such heating being effected by advancing the tube past an induction heating coil positioned circumferentially of the tube walls and energized by high frequency current and located shortly in advance of the weld point, whereby flows of such current are induced and maintained in opposite directions respectively along on the opposed surfaces of said edges, such flows extending from the region of the coil up to and being concentrated at said weld point for heating the metal at said point to welding temperature; and meanwhile pressing together the thus-heated edges at the weld point.

3,127,675
SKIN STRETCHERS FOR SHAVERS
Paul Kobler, 81 Fenimore St., Lynbrook, N.Y.
Filed Oct. 25, 1961, Ser. No. 147,626
3 Claims. (Cl. 30—34)



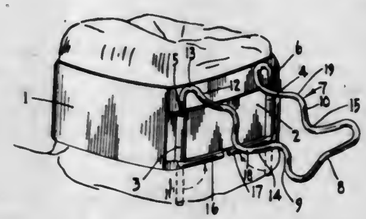
1. In a shaving device having the combination of a shearhead and a skin stretching device, embodying a support for a skin stretcher bar, said support attached at its base to the shaver casing and supporting the ends of said skin stretcher bar at a permanent distance away from the shearhead, said skin stretcher bar with its ends rotatably movable at the approximate height of the cutting surface of the shearhead and lengthwise spaced from said shearhead, said skin stretcher bar consisting of at least one lengthwise curved concave surface, extending from one end of the skin stretcher bar towards the other end, the hollow of said concave surface decreasing towards the ends of said skin stretcher bar, said surface with said concave curvature adjoining a nonconcave surface, whereby the space between shearhead and the skin stretcher bar changes its shape, when said skin stretcher bar is rotatably moved on its axis, without moving the ends of said skin stretcher bar further away from the shearhead, thereby the skin may be adjustably pre-stretched along the length of the skin stretcher bar, before it reaches the cutting surface of the shearhead.

3,127,676
SAFETY RAZOR
Grady L. Johnson, 619 W. Howard Ave., Decatur, Ga.
Filed July 21, 1961, Ser. No. 126,812
2 Claims. (Cl. 30—49)



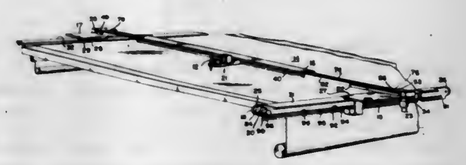
1. A safety razor for a thin flat flexible annular blade, comprising a circular head member having an inner circumferential depressed seat within which said blade is adapted to fit so that the inner wall of said seat will close the open ends of V-form notches in and abut against the inner rim of said blade, said seat being adapted to center the blade with respect to said head member, said head member having an outer circumferential toothed guard portion located below and immediately beyond said seat, said head member having a handle at right angles thereto provided at its upper end portion with a longitudinal bore, opening into the top of said head member, which has an unobstructed smooth top surface located between said seat and the open end of said bore, and a circular cap member having a circumferential downwardly extending rim portion of greater diameter than that of, and located immediately beyond said seat, said cap member having a central stub shaft at right angles thereto having screw-threaded engagement with said bore, for clamping the blade between the head and cap members and deforming the blade into frusto-conical form for shaving purposes.

3,127,677
ORTHODONTIC APPLIANCE
Joseph J. Schachter, 209 Canada Bldg., Saskatoon, Saskatchewan, Canada
Filed Nov. 14, 1960, Ser. No. 69,126
Claims priority, application Canada Sept. 28, 1960
11 Claims. (Cl. 32—14)



1. An orthodontic appliance which comprises a band for a first tooth, securing means on said band, and a spacing maintaining member, said spacing maintaining member comprising a reversely bent wire having two side arms and a distal portion, said distal portion being arcuately bent to engage a second tooth, said side arms each having at least one convolution therein and a terminally turned-down portion engaging said securing means on said band.

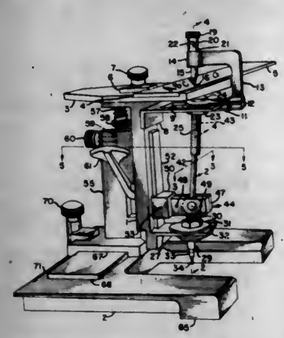
3,127,678
PEN POSITIONING CIRCUIT
William J. Muldoon, Palos Verdes, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Nov. 30, 1961, Ser. No. 156,110
2 Claims. (Cl. 33—1)



1. A circuit responsive to a source of X and Y command signals for moving a pen to a desired position on the surface of an X—Y plotting board when the pen is in an up condition and for moving the pen to a down condition on the surface of the plotting board when intertial movements of the pen have terminated comprising first and second motors mounted on said plotting board for respectively moving said pen in X and Y directions, first and second coincidence means coupled to said source of command signals for respectively responding to the X and Y command signals, said first and second motors respectively coupled to said first and second coincidence means for providing a comparison of the position of said pen with the command position so that said first and second coincidence means respectively develop X and Y direct current error signals, first and second chopping means respectively coupled to said first and second coincidence means and to said first and second motors for

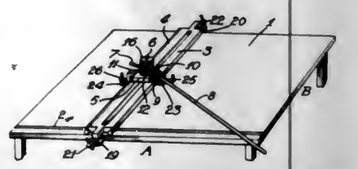
responding to said X and Y direct current error signals to apply X and Y alternating error signals thereto, a source of reference potential, first and second rectifier means respectively coupled between said first and second chopper means and said source of reference potential to form X and Y rectified error signals, a capacitor having first and second plates with the first plate coupled to said source of reference potential, first and second diodes respectively coupled between said first and second rectifier means and the second plate of said capacitor, said capacitor being charged by the X and Y rectified error signals having a larger amplitude, bistable amplifier means coupled to the second plate of said capacitor and responsive to the charge thereon to form a first pen control signal when one of the X and Y rectified error signals has an amplitude greater than a predetermined value and a second pen control signal when both of said X and Y rectified error signals have amplitudes less than said predetermined value, and a pen control relay coupled to said bistable amplifier for holding said pen in an up position in response to said first pen control signal and for moving said pen to a down position in response to said second pen control signal.

3,127,679
LETTERING SCRIBER
David K. Crook, P.O. Box 156, Olney, Md.
Filed Dec. 29, 1960, Ser. No. 79,473
2 Claims. (Cl. 33—24)
(Granted under Title 35, U.S. Code (1952), sec. 266)



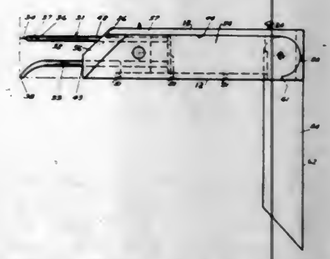
1. A scribing instrument comprising a base; a first support member mounted for horizontal movement on said base; a second support member vertically disposed and mounted for vertical movement on said first support member; template holding means secured to the second support member near the top of said second support member adapted to hold a template in a horizontal plane; a guide member movably mounted on the second support member near the top of said second support member adapted to move in a horizontal plane and follow a pattern on a template; scribing point support means movably mounted on the second support member mounted near the bottom of said second support member and adapted to move in a horizontal plane; a scribing point adapted to contact a surface to be engraved secured to sair scribing point support means; a vertically adjustably spherical fulcrum mounted on said second support member between said guide member and said scribing point support means; rigid means resiliently connected to both said guide member and said scribing point support means and slidably connected through said spherical fulcrum whereby a horizontal motion of the guide member produces a corresponding horizontal motion in the scribing point; means for raising and lowering said second support member on said first support member; and means for horizontally moving said first support member on said base.

3,127,680
APPARATUS FOR CUTTING SHEET GLASS
Edgard Brichard, Jumet, and Michel Charue and Georges Simon, Lodelinsart, Belgium, assignors to Union des Verreries Mecaniques Belges, Societe Anonyme, Charleroi, Belgium, a Belgian company
Filed Oct. 17, 1960, Ser. No. 62,980
Claims priority, application Belgium Nov. 13, 1959
14 Claims. (Cl. 33—32)



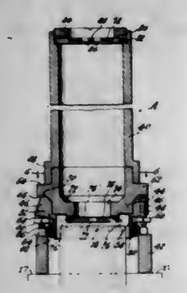
1. Apparatus for cutting sheet glass on a table, comprising a rail, a carriage movably mounted on said rail, a glass cutting tool, means supporting said tool on said carriage for linear movement toward and away from a glass sheet resting on the table and for angular movement about the line of said linear movement, means for rotating said tool about said line as an axis and for setting the same at a desired angle in relation to said glass shee , and actuating means for moving said carriage on said rail and for manipulating said tool at a place remote from said carriage, said actuating means including an elongated handle, means connected to said handle and operable by the latter to move said tool along said line into and out of engagement with the glass sheet without disturbing the angular setting given said tool by said rotating and set ing means, and means connecting said handle to said carriage for angular movement of said handle about said line and tool, without disturbing such given angular setting of the latter whereby said tool may be operated by said handle at a number of positions of the latter disposed around said line as an axis without disturbing the angular setting given such tool by said rotating and setting means.

3,127,681
TOOL FOR LAYING LINOLEUM AND OTHER COVERING MATERIALS
Frank A. Aragon, 195 Grove St., Reno, Nev.
Filed June 25, 1962, Ser. No. 204,752
3 Claims. (Cl. 33—41)



1. In a tool for laying linoleum and the like floor coverings the combination of an elongated body having at least one surface defining a straight edge, said body having an end having an elongated slot for receiving an edge of the floor covering, and an end defining a tracing end adopted to trace the contour of a surface, and an arm having a second straight edge, said arm being movable between positions in which the arm is in side by side relation with said body and a position in which said arm is at an angle to said body, and the second straight edge is at right angles to said first straight edge, means for pivotally mounting said arm on said body to move between said positions and to hold said arm in either position, said arm having one end with an edge at an angle to said second straight edge, a marking member mounted on said body and operatively associated with the end of the body adapted to follow the contour of a surface, means for mounting said marking member at a preselected distance from the tracing end of said body, a balancing peg spaced from said marking member to support said body when the marking member is in use, a scriber, a tracer operatively associated with said scriber, means for mounting said scriber and tracer to be movable between an extended position in which the scriber and tracer are in spaced relation to the body and the body in effect defines a handle and a retracted position in which the scriber and tracer are received within said body, and means for securing said scriber and tracer in either of said positions.

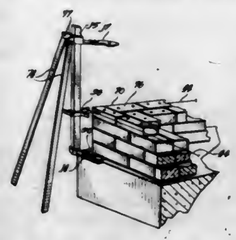
3,127,682
NADIR POINT DETERMINING INSTRUMENT
Eugene P. Griffin, Springfield, and James W. Halbrook, Alexandria, Va., assignors to the United States of America as represented by the Secretary of the Army
Filed Feb. 17, 1960, Ser. No. 9,406
5 Claims. (Cl. 33—46)
(Granted under Title 35, U.S. Code (1952), sec. 266)



2. An optical instrument for locating a point on a surface directly beneath a point source of light above the surface which comprises, in combination, a tubular member having an upper end and a lower end, a top reticle in the tubular member adjacent to the upper end thereof and defining a top longitudinal central bar laterally bounded by slots of equal lengths and widths, a bottom reticle in the bottom end of the tubular member and having a bottom slot therein parallel to the central bar of the top reticle, the slot in the bottom reticle being only slightly larger than the central bar in the top reticle so that a shadow of the top central bar formed in the bottom slot substantially fills the bottom slot but is bounded laterally by streaks of light from the top slots, and connecting instrumentalities for the tubular member adapted to mount the tubular member in upright position on exterior viewing instrumentalities, the connecting instrumentalities including means enabling the tubular member to be adjusted with respect to the viewing instrumentalities.

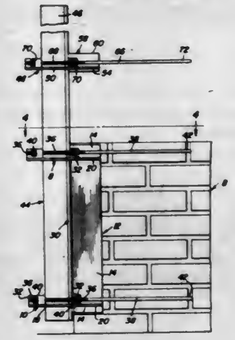
3,127,683
UNIVERSAL MASON'S CORNER POLE
Corbin E. Garton and Carl C. Sahlroot, Geneva, Ill., assignors to Structural Clay Products Research Foundation
Filed Oct. 23, 1961, Ser. No. 146,699
10 Claims. (Cl. 33—85)

8. A mason's corner pole assembly having in combination, a pole, a top bracket mounted on said pole for adjustment along the pole and adapted to engage inside and outside corners and straight walls of building structures, a guideline holder mounted on and adjustable lengthwise of said pole, a bottom bracket mounted on and adjustable lengthwise of said pole and adapted to engage building foundations and walls, releasable means fastening said brackets and guideline holder in



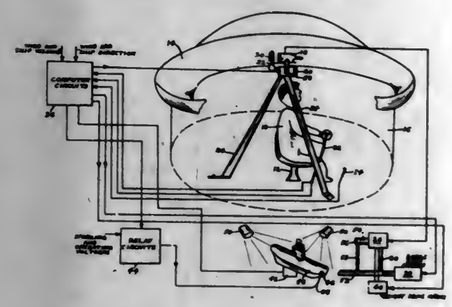
selected positions along said pole, means on said pole, said brackets and said holder defining channels aligned along the length of the pole and adapted to receive a coursing scale in different positions of adjustment of the scale along the pole, and releasable means for securing the scale in adjusted position.

3,127,684
ANGLE IRON BRICK LAYING GUIDE AND BRACKETS THEREFOR
Alvin O. Ernst, P.O. Box 111, Bessie, Okla.
Filed Mar. 25, 1963, Ser. No. 267,545
7 Claims. (Cl. 33—85)



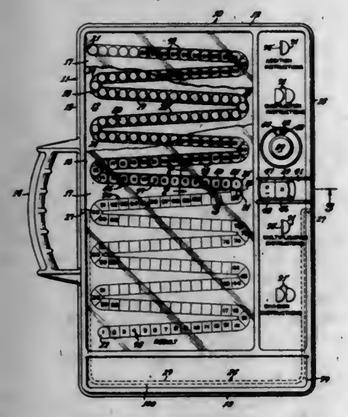
1. A readily applicable and removable brick laying corner guide for both inside and outside corners comprising, in combination, a lower bracket, a companion upper bracket, each bracket comprising a plate which when in use is disposed in a plane at right angles to the corner with which it is cooperable, each plate having a slot means for passage of an angle iron, each plate also having readily accessible means cooperable with the slot means and adapted to detachably fasten the angle iron thereto, marginal edge portions of said plates contiguous to the corner being contoured and adapted to cooperate with said corner, a vertically elongated adapter member of a horizontal cross-sectional shape and dimension to conformingly and firmly abut and fit said corner, said adapter member serving to orient said brackets relative to each other, said adapter member and also said corner, said adapter member being joined to said plates and connecting them together in spaced apart parallel relation, and means adjustably mounted on each plate and designed and adapted to removably anchor the same and cooperating portions of said adapter member in an intended usable position on said corner.

3,127,685
SIMULATED LANDING SIGNAL APPARATUS
Michael C. Ellison, Melbourne, Fla., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Mar. 23, 1960, Ser. No. 17,236
8 Claims. (Cl. 35—12)



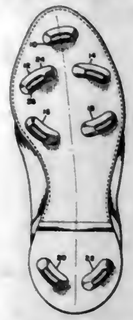
1. In an aircraft trainer, an enclosure, a scale model including means for moving said scale model mounted within said enclosure, means mounted within said enclosure for viewing said scale model, computer circuits and relay circuits secured to said enclosure, a landing signal box mounted on said scale model and adapted to be controlled by said relay circuits, said landing box having a plurality of openings in simulation of a landing signal officer's figure, electrode means extending into each of said openings and operatively connected to said relay circuits, and, said computer circuits operatively connected to said relay circuits for control thereof and operatively connected to said viewing means and to said scale model moving means for movement thereof, control means secured to said enclosure and adapted to be operated by the trainee, said control means generating input signals to said computer circuits.

3,127,686
CALCULATOR
Adolph E. Goldfarb, 7427 Varna St., North Hollywood, Calif.
Filed Mar. 3, 1961, Ser. No. 93,079
5 Claims. (Cl. 35—31)



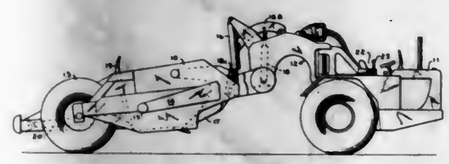
1. A calculator comprising: a base; means defining a sinuous passageway in said base and having blind ends, said base being tiltable into a plane wherein all portions of said passageway are downwardly sloped; manually operable gate means movably mounted in said base for selectively intersecting said passageway so as to selectively open and close said passageway; a plurality of equally dimensioned rollable members residing in an upper portion of said passageway and arranged in single file therein, said rollable members being gravitationally biased towards said gate means in response to tilting of said base into said plane; and removable stop means selectively positionable in said passageway in upwardly spaced relationship to said gate means and spaceable in increments of said dimension of said rollable members for arresting movement of a selective rollable member residing in said upper portion of said passageway, whereby rollable members positioned between said gate means and said stop means are gravitationally biased to roll downwardly in said passage and toward the lowermost of said blind ends in response to actuation of said gate means to open said passageway, said calculator also including indicator means in said base and selectively operable in response to actuation of said gate means for indicating the number of actuations of said gate means.

3,127,687
ATHLETIC SHOE
Solomon C. Hollister, 417 Highland Road, and Frank J. Kavanagh, 408 N. Cayuga St., both of Ithaca, N.Y.
Continuation of application Ser. No. 118,076, June 19, 1961. This application Oct. 17, 1962, Ser. No. 231,881
17 Claims. (Cl. 36—2.5)



1. A shoe for athletic wear having an insole and an outsole and having the bottom of its outsole provided with a plurality of cleats comprising a toe cleat curved transversely of the shoe about an axis that is disposed rearwardly of the shoe from the cleat, to facilitate pivotal motion of the fore part of the foot about its normal pivotal axis, a pair of transversely spaced, generally transversely extending cleats located adjacent and forwardly of the center of the fore part of the foot and curved concavely toward the rear to facilitate said pivotal motion, with their outer ends disposed respectively adjacent the outer edges of the outsole to promote stability in stance, a pair of transversely spaced, generally transversely extending cleats located adjacent and rearwardly of said center and curved concavely forwardly to facilitate said pivotal motion, with their outer ends disposed respectively adjacent the outer edges of the outsole to promote stability in stance, and a pair of transversely spaced heel cleats curved concavely forwardly to facilitate said pivotal motion with their outer ends disposed respectively adjacent the outer sides of the heel to promote stability in stance, said cleats being arcuately arranged and arcuately spaced and formed with narrow ground engaging surfaces extending generally transversely of the outsole to afford traction and being reduced in length to facilitate cutting the turf in said pivotal motion.

3,127,688
HYDRAULIC CIRCUIT FOR CONTROL OF EARTHMOVING SCRAPER BOWLS
Allyn J. Hein and James E. Scheidt, Joliet, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed Dec. 26, 1962, Ser. No. 247,056
3 Claims. (Cl. 37—129)



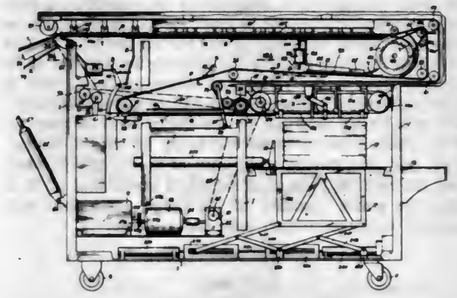
1. In combination with a tractor drawn earthmoving scraper having a bowl, a hydraulic circuit, means supplying fluid under pressure to said circuit, a double acting hydraulic jack in said circuit for raising and lowering the bowl, and means in said circuit including a control valve on the tractor for directing fluid to said jack, a fluid passage between the head and rod ends of the jack a quick drop valve in said passage preventing flow between the head end and rod end of said jack, means normally communicating fluid under pressure to said quick drop valve to hold it closed, means to vent said fluid to permit opening of the valve, and a load supporting check valve disposed in the circuit between the cylinder and the quick drop valve to prevent accidental bowl drop upon leakage of said venting means.

3,127,689
GRADER FOR A ROAD HAVING A CURB
Leonard L. Hopkins, 1422 Moon Road, Vista, Calif.
Filed Mar. 27, 1962, Ser. No. 182,873
2 Claims. (Cl. 37—156)



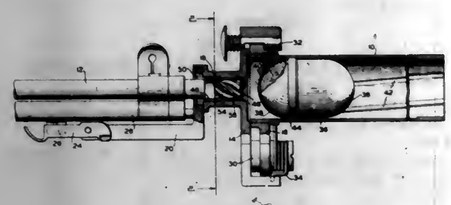
1. In combination with a road grader:
(*a*) a scraper blade,
(*b*) means for angularly moving said scraper blade,
(*c*) a scraper blade frame including an integral stub blade adjustably secured to said scraper balde for raising and lowering said stub blade with respect to said scraper blade,
(*d*) said frame including an integral vertical plate,
(*e*) said stub blade being disposed diagonally with respect to said vertical plate,
(*f*) said vertical plate being recessed at the bottom,
(*g*) a scraper guide plate set flush in said recess,
(*h*) said vertical plate including a vertically extending hollow post integral therewith and extending above and beyond said vertical plate recess,
(*i*) an L-shaped bracket mounted for vertical adjustment in said hollow post and having adjustment clearance with said scraper guide plate,
(*j*) the base leg of said L-shaped bracket including an axle,
(*k*) a wheel member rotatably mounted on said axle and having its axis perpendicular to said scraper guide plate, and
(*l*) means for adjustably locking said L-shaped bracket in said post.

3,127,690
FOLDING AND STACKING MACHINES FOR ARTICLES OF LINEN
Eugene Hajos, Fort Lee, N.J., assignor to Premier Laundry, Inc., Bronx, N.Y., a corporation of New York
Original application May 12, 1953, Ser. No. 354,510. Divided and this application Sept. 14, 1961, Ser. No. 182,697
2 Claims. (Cl. 38—2)



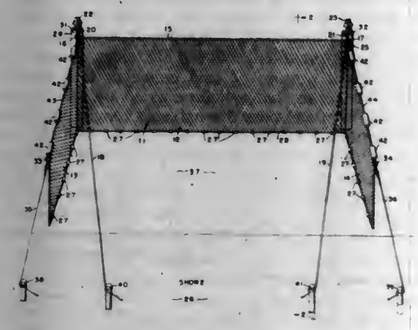
1. In a machine for folding and stacking articles of linen and the like, of the type having a relatively narrow, longitudinally extending frame, a conveyor movably mounted between the sides of said frame and having an input portion at one end of said frame for reception of said articles in succession, conveyor drive means, a longitudinal folder mounted between the sides of said frame near the input portion of said conveyor and positioned relative thereto so that articles carried by said conveyor from said input end pass through said longitudinal folder, said longitudinal folder being adapted to fold the article side portions protruding downwardly of said longitudinal folder under the respective article center portions, and means positioned in the path of travel of the longitudinally folded articles for folding the articles transversely thereof; the combination therewith of a stacking device mounted on said frame and positioned relative to said conveyor and adapted to receive said longitudinally and transversely folded articles successively, said stacking device having means including a normally open switch in the path of movement of said articles for actuating said stacking device upon closure of said switch by an article, whereby to drop said article downwardly, an elevator mounted on said frame for vertical movement and positioned below said stacking device for reception of articles stacked thereby, means for lowering said elevator after reception thereby of a selected number of articles, a pusher device mounted on said frame for movement in a longitudinal direction, drive means for said pusher device, said pusher device being positioned relative to said elevator and said pusher drive means being coupled to said elevator lowering means for actuation of said pusher device upon lowering of said elevator to eject said stack from said elevator, and means for then raising said elevator and returning said pusher device to its preactuated position.

3,127,691
GAS CONTROL MEANS FOR GRENADE LAUNCHING ATTACHMENTS
Cyril A. Moore, Springfield, Mass., assignor to the United States of America as represented by the Secretary of the Army
Filed June 27, 1962, Ser. No. 205,805
6 Claims. (Cl. 42—1)
(Granted under Title 35, U.S. Code (1952), sec. 266)



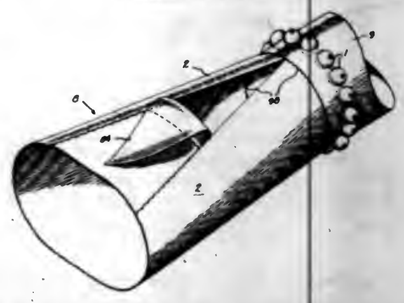
1. In a firearm barrel attachment for launching a relatively thin-walled grenade in response to the discharge of a powerful blank cartridge in the barrel, the combination of a rifled tube for holding the grenade in position to be launched, means for releasably mounting said tube in axial alignment with the muzzle end of the barrel, and a gas control plug disposed in the direct path of the discharge gases evolved upon the firing of the blank cartridge, said plug having a plurality of helical gas passages along the exterior thereof of sufficient length and pitch to rotate the entire quantity of discharge gases into substantially uniform contact with the grenade.

3,127,692
NET CONSTRUCTION
Isaac Adleberg, 7632 Park Heights Ave., Baltimore, Md.
Filed May 16, 1963, Ser. No. 280,833
2 Claims. (Cl. 43—7)



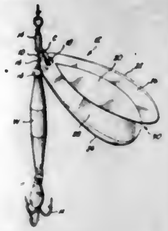
1. The combination of a strip of fish netting having a longitudinal top edge, said strip having a median section and adjacent portions on either side of the median section, a first pair of rope rings secured to said top edge at spaced points defining the outer ends of the median section, a second pair of rope rings secured to the outer ends of the top edge of said adjacent section, posts adapted to be set into the ground at points spaced from each other at a distance corresponding substantially to the length of the median section, a rope attached to each of said rope rings, and rope pulleys swiveled to the posts for engaging the ropes attached to the first pair of rope rings, each of said ropes being adapted to be connected at one end thereof to net anchoring means.

3,127,693
EXPANDER RING FOR TRAWL NETS
Frank J. Luketa, 5567 Greenwood Ave., Seattle, Wash.
Filed Feb. 18, 1963, Ser. No. 259,154
9 Claims. (Cl. 43—9)



1. In a trawl net having a codend, a mesh element defining the entrance to the codend, and elongatable under stress, to be thereby constricted circumferentially, and a plurality of beads each secured to the meshes of said element and distributed about the entrance thereof at sufficiently close spacings to come approximately into mutually supporting engagement when the mesh is elongated under normal stress during use.

3,127,694
FISHING SPINNING LURE
Lester M. Davis, Tacoma, Wash., assignor to Les Davis Fishing Tackle Co., Tacoma, Wash., a corporation of Washington
Filed June 20, 1962, Ser. No. 203,970
6 Claims. (Cl. 43—42.19)

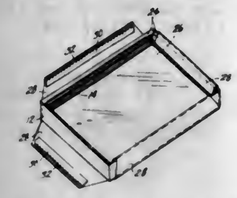


1. A spinner type fishing lure comprising a wire shaft, a generally heart shaped spinning element including a generally pointed end and a recess end, and means mounting the generally pointed end of said element onto said shaft for rotation of said element about said shaft, such spinning element being of one piece, relatively thin sheet material construction configured to include flat, relatively narrow, generally crescent shaped base strips laterally spaced apart within the same horizontal plane, a flat, generally oval shaped top portion disposed between and laterally spaced above said base strips, and arcuate curved body sections extending between said base strips and the flat top portion and around said top portion in the area of the point end and partially around said top portion at the recess end.

3,127,695
CANVAS STRETCHING FRAME
Timothy E. Driscoll and Helen R. Driscoll, both of 701 E. B St., Hutchinson, Kans.
Filed Apr. 9, 1963, Ser. No. 271,621
3 Claims. (Cl. 45—24)

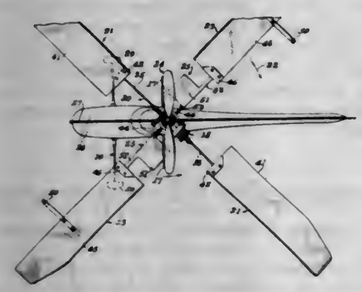
1. A canvas stretching frame comprising, in combination, a rectangular frame having perpendicularly related

sides defining smooth frontal edge, each of said sides having a smooth outer surface, the rear edge of each said side defining a rearwardly facing convex surface and a forwardly and inwardly opening socket of generally U-shaped cross sectional configuration, a sheet of canvas having four tapered sides and a central rectangular area overlying said frontal edge of said frame, a gripper strip secured to the rearwardly facing side of each of said



tapered sides, each said gripper strip being foldable rearwardly with said respective tapered sides of said sheet of canvas about said outer surface and convex surface of each side of said frame, the outermost edges of said gripper strips being received within said sockets of said frame guides, the inside surface of each said frame side defining a longitudinal rib, and the innermost edges of said strips compressing an intermediate portion of said tapered sides of said canvas sheet against said ribs.

3,127,696
MODEL HELICOPTER
Robert J. Pagliuso, La Canada, Calif. (113 W. Harvard St., Glendale, Calif.)
Filed June 5, 1961, Ser. No. 114,952
8 Claims. (Cl. 46—75)

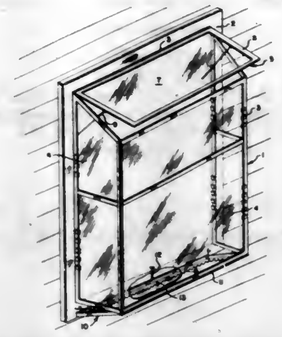


1. In a model helicopter, a rotationally mounted engine, a rotor affixed to and rotational with the engine and having wing blades normally disposed at a negative angle of attack, a propeller driven by the engine to rotate independently of the rotor and disposed to produce a downwardly directed slip stream, and means fixed to the mentioned wing blades disposed in said slip stream and subject to the pressure of said slip stream to shift the blades to a positive angle of attack.

3,127,697
WINDOW SOLARIUM
Fred C. Romenko, Locust, N.J. (% Willowbrook Corp., Newmanspring Road, Lincroft, N.J.)
Filed May 11, 1962, Ser. No. 194,089
3 Claims. (Cl. 47—40)

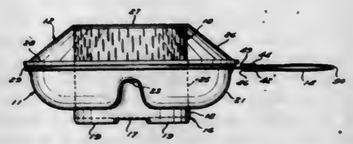
1. A window solarium comprising in combination a box-like rigid framework adapted to be attached to a window frame, glass areas held by said framework and enclosing three sides, an imperforate upper ventilator, said upper ventilator being hinged at its inner edge to said framework and substantially sealed along said inner edge,

and a lower ventilator having a drainage outlet, said lower ventilator being imperforate except for said drainage out-



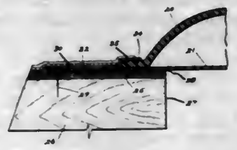
let and further being hinged at its outer edge to said framework and substantially sealed along said outer edge.

3,127,698
HOLDER FOR FLOWER ARRANGEMENTS
Vernon L. Smithers, Kent, Ohio, assignor to The V. L. Smithers Manufacturing Company, Kent, Ohio, a corporation of Ohio
Filed Dec. 8, 1961, Ser. No. 157,896
3 Claims. (Cl. 47—41)



1. A holder for flower arrangements comprising a dish member having a base, outwardly flaring outside walls extending upwardly from said base, a plurality of inwardly extending re-entrant projections in said flaring walls terminating at parallel spaced inner extremities, and a block of water absorbent material engaging and laterally supported by said inner extremities throughout the length thereof, said flaring walls extending above said projections whereby liquid in said dish flows over said projections into the spaces therebetween, said dish having a substantially uniform wall thickness.

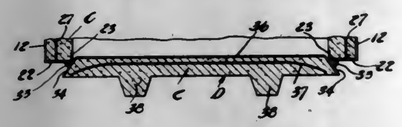
3,127,699
SELF FLASHING SKYLIGHT UNIT
Max Wasserman, Brookline, Mass., assignor, by mesne assignments, to American Cyanamid Company, New York, N.Y., a corporation of Maine
Filed Apr. 27, 1959, Ser. No. 809,307
2 Claims. (Cl. 50—16)



1. A skylight construction comprising an outer plastic dome-like member and an inner member, said members having outwardly extending peripheral flanges in juxtaposition with the flange of said inner member extending

outwardly beyond the flange of said outer member, a continuous strip of plastic material partially overlapping and covering the juncture between said flanges, and means sealing said flanges together and said strip to said flanges.

3,127,700
BURIAL VAULT
Cecil F. Schaaf, G–5522 N. Dort Highway, Flint 7, Mich., assignor of small interests to various assignees
Filed Feb. 23, 1960, Ser. No. 10,193
4 Claims. (Cl. 50—94)



1. A burial vault comprising separate top, side and end panels formed of metal having their adjacent edges bent to form interlocking joints and interlocked with one another to maintain said panels assembled and form a hollow body having an open bottom, said side and end panels having inwardly turned portions at the bottom of said body terminating in upwardly bent portions to form upstanding flanges spaced from and substantially parallel to the respective side and end panels; a lightweight cementitious layer secured to the inner surfaces of said top, side and end panels and sealing the joints therebetween, said layer filling the space between said upstanding flanges and said side and end panels and having a thickness corresponding to the spacing between said flanges and their respective side and end panels; and a base member closing the open bottom of said body, said base member comprising an upper metal panel bent downwardly at its sides and ends to form downwardly inclined flanges in sealing engagement with the inwardly turned portions of said side and end panels of said body, said base member having a lower, lightweight cementitious layer applied to said panel and being of a thickness corresponding to the width of the flanges of said base panel.

3,127,701
ROOF COVERING
Stanley E. Jastrzemski, Bound Brook, N.J., assignor to Johns-Manville Corporation, New York, N.Y., a corporation of New York
Filed July 13, 1960, Ser. No. 42,619
2 Claims. (Cl. 50—192)



1. An asbestos-cement roof covering comprising a plurality of asbestos-cement shingles, each of said shingles having parallel side edges substantially equal in length and connected at their butt ends by a butt edge, a head edge extending from the head end of each side edge, the head edges of each shingle meeting at an apex, the shingles being arranged in overlapping courses, and the shingles in each course being in juxtaposed relationship, each side edge of the shingles having a notch located in the upper half thereof a distance from the midpoint of the side edge at least equal to the distance between the apex and a plane through the head ends of the side edges, a notch of each shingle mating with a similarly located notch in the adjacent edge of the next juxtaposed shingle, the mated notches being located approximately at the apex of the underlying shingle of the next lower course, whereby the shingles provide at least double coverage over the roof.

3,127,702
CORE AND MOLD UNITS FOR CASTING CONCRETE POSTS AND A POST FORMED THEREBY
Elmer C. Karstedt, 640 McHenry St., Burlington, Wis.
Filed Jan. 12, 1960, Ser. No. 1,901
1 Claim. (Cl. 50—321)



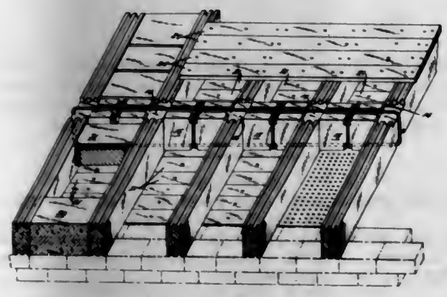
In a concrete post, an integral core unit comprising: an upright, rectangular wall-like core member extending substantially the entire length of the post, said core member having a plurality of relatively large transverse openings therethrough, and having a plurality of channeled grooves adjacent each longitudinal edge spaced alternately on opposite sides thereof, said grooves extending the entire length of said wall-like core member, and said grooves extending inwardly at least half the thickness of said core member, the longitudinal edges of said core member being flush with the exterior surface of the post to receive driven fastening elements; a pair of elongated hollow tubes disposed vertically adjacent the opposite sides of said wall-like core members; closures on the ends of said tubes; crimped wire reinforcing means encircling said tubes in spiral fashion along substantially their entire length; and wire retaining means extending through the openings in said wall-like core member and arranged to clampingly support said tubes against the opposite sides of said core member and to also provide reinforcement in the post interior, the concrete of the post surrounding said core and tube members and filling the spaces therebetween.

3,127,703
ADJUSTABLE GUIDE STRIPS OR GROUND MEMBERS
Ronald E. Eshelman, 2138 Ingersoll Drive, Akron 20, Ohio
Filed May 24, 1962, Ser. No. 197,493
5 Claims. (Cl. 50—322)



5. An adjustable ground assembly for a building wall construction including in combination, mounting plate means and a ground member, said mounting plate means having means to secure same to a wall, said mounting plate means having a plurality of adjusting screw receiving openings therein, wall means defining a plurality of openings extending through said ground members at intervals substantially equal to the placement of said adjusting screw receiving openings, adjusting screws each having first and second end portions, said second end portion of each adjusting screw residing in a corresponding adjusting screw receiving opening in said mounting plate means, said first end portion of said adjusting screw comprising a head portion captively carried by said openings in said ground member, said head portions of said adjusting screws being capable of being turned to move selected portions of said ground member relative to said mounting plate means.

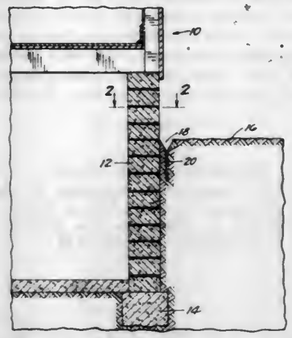
3,127,704
FLOOR AND CEILING CONSTRUCTION
Daniel Salcedo Garcia, Calle de La Union, 186–B Col. Industrial, Mexico City 14, Mexico
Filed Apr. 16, 1958, Ser. No. 728,839
3 Claims. (Cl. 50—389)



1. A floor structure comprising, in combination, a plurality of supporting beams spaced parallel with respect to one another, said beams being provided in their top and bottom faces with transverse recesses so that each recess in one of the beams is aligned with corresponding recesses in the other beams thereby constituting a sequence of recesses in line transversely of the beams; a plurality of transverse connecting beams alternating with the recesses of said transverse line and in substantial alignment therewith each of said connecting beams having in its top and bottom face an open-ended groove extending from end to end of the respective connecting beams, said grooves together with said recesses in said supporting beams forming a continuous depression in the planes of the top and bottom faces of the beams; and a reinforcing frame structure of horizontally elongated rectangular configuration with the horizontal long sides thereof each extending in a respective continuous transverse depression and the vertical short sides of said frame structure extending substantially vertically across the outer side faces of the respective outermost supporting beams for firmly connecting the transverse connecting beams to the supporting beams so as to form a substantially rigid floor structure thereby.

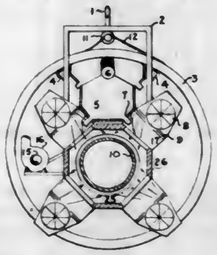
3,127,705
WATER LEAKAGE INHIBITING MASONRY TREATMENT
Howard L. Hoover, 168 Swan Ave., North St. Paul, Minn.
Filed Sept. 23, 1960, Ser. No. 58,124
3 Claims. (Cl. 50—532)

1. A method for arresting the below ground leakage of subterranean masonry wall structures which comprises percolating through the soil adjacent the masonry wall structure a free flowing solution which upon contact with masonry forms a solid, water insoluble complex by interreaction therewith, said solution consisting essentially of water and from about 5% to about 20% solids by weight of a water soluble polymer selected from the group consisting of polyacrylic acid, polymethacrylic acid, and the



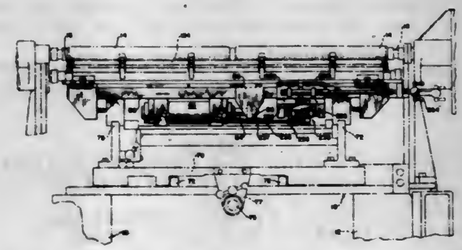
water-soluble salts of polyacrylic and polymethacrylic acids.

3,127,706
PIPE CLEANING APPARATUS
Harvey D. Giffen, New Orleans, La. (Rte. 1, Box 80, Pearl River, La.)
Filed Jan. 16, 1961, Ser. No. 83,093
9 Claims. (Cl. 51—9)



1. A cleaning apparatus for non-rotatable pipe comprising, in combination, power driven centrifugal blast wheels, means of rotating the axes of said blast wheels between parallel and right angle positions with respect to the axis of the pipe, means of locking the blast wheels axes in any position of said rotation, means for advancing the apparatus along the pipe.

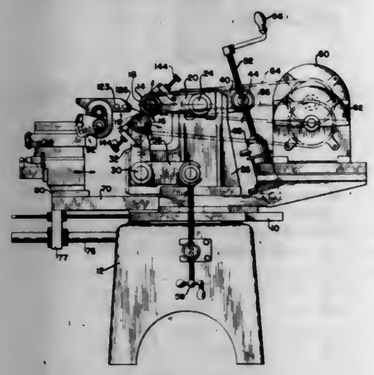
3,127,707
RECIPROCATING WORK HOLDER
William C. Burt, Olean, N.Y., assignor to Clair Manufacturing Co., Inc., Olean, N.Y.
Filed May 25, 1962, Ser. No. 197,756
6 Claims. (Cl. 51—83)



6. In a polishing and glazing machine having in combination, a workpiece processing roll, a work platform

and power means having an output member connected to said platform for causing said platform to oscillate in directions parallel to said roll, said power means comprising pneumatic pressure operated device applying pneumatic pressure forces alternatively moving said output member in opposite directions, and elastic restraint means connected to said output member and arranged to elastically restrain motions thereof in both directions.

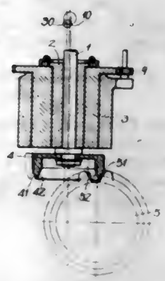
3,127,708
FINISHING MACHINE
William C. Burt, Olean, N.Y., assignor to Clair Manufacturing Co., Inc., Olean, N.Y.
Filed Oct. 11, 1962, Ser. No. 229,951
4 Claims. (Cl. 51—84)



1. In a workpiece surface finishing machine, in combination,
a frame,
a first rocker shaft journaled in said frame,
a pair of rocker arms fixed to said first rocker shaft and projecting generally horizontally and forwardly therefrom,
a first surface finishing roll journalled between the free ends of said rocker arms,
a second rocker shaft journalled in said frame below and forwardly of the first rocker shaft,
a second pair of rocker arms, said second rocker arm being fixed to said second rocker shaft and projecting generally vertically therefrom and terminating below said first rocker shaft,
a second surface finishing roll journalled between the free ends of said second pair of rocker arms,
means for driving said first and second surface finishing rolls,
means for rotatably adjusting said second rocker shaft to shift said second surface finishing roll fore and aft relative to said first surface finishing roll,
means for rotatably adjusting said first rocker shaft to shift said first surface finishing roll toward and away from said second surface finishing roll and thereby vary the gap therebetween,
and means for projecting workpieces into the gap between said surface finishing rolls.

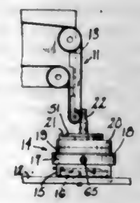
3,127,709
GRINDING METHOD AND GRINDING HEAD FOR GRINDING TOOTH SURFACES OF GEARS WITH CIRCULAR TOOTH TRACE
Akira Waguri, 6 Torigaicho, Fukuoka, Japan
Filed July 9, 1962, Ser. No. 208,261
3 Claims. (Cl. 51—90)

2. A grinding head for use in grinding the tooth surfaces of a gear with circular tooth trace which comprises a cup-shaped grinding wheel having a tapered grinding surface, means mounting said grinding wheel eccentrically within a supporting cylinder for rotation of said grinding wheel about its own axis, means for continuously ro-



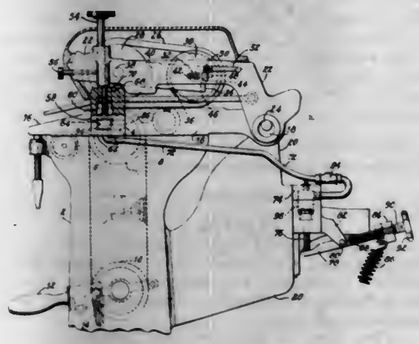
tating said cylinder about its axis to thereby effect a circular motion of the rotational axis of said grinding wheel about the axis of said cylinder, and means for adjusting the degree of eccentricity of said grinding wheel.

3,127,710
WORK-ENGAGING AND POSITIONING DEVICE FOR MACHINE TOOLS
Sylvester Karbowski, New Haven, Conn., assignor to Progressive Tool & Manufacturing Company, East Haven, Conn., a partnership
Filed July 3, 1962, Ser. No. 207,349
12 Claims. (Cl. 51—135)



2. A grinding machine having an abrasive belt adapted upon movement thereof to perform a grinding operation on a workpiece, comprising a work-supporting member; a workpiece-holding fixture mounted on said work-supporting member adapted to operatively position a workpiece in relation to said grinding belt, said fixture comprising first and second annular members disposed about a reference axis, a recess defined by one of said members adapted to receive a workpiece insertable therein, said one of said members having an annular projection of reduced dimension extending axially therefrom, the other of said members having an annular inner-peripheral surface receiving said projection concentrically therein, said other of said members being rotatable about said projection and said axis with respect to said one of said members; a plurality of chucking elements having work-engaging surfaces thereon adapted to engage and position a workpiece to be ground in said recess, each of said chucking elements being pivoted about a respective point on one of said members; chucking element-actuating means on the other of said members arranged to exert a force on said chucking elements upon rotation of said other of said members, to thereby adjust the position of said work-engaging surfaces with respect to said axis; and adjusting means interconnecting said members for rotatively predetermining the position of said other of said members about said projection.

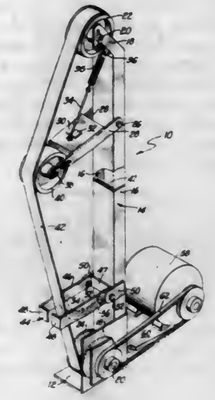
3,127,711
MACHINES FOR ABRADING SHEET MATERIAL
Dennis S. Hall and Michael J. Roberts, Leicester, England, assignors to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed Feb. 5, 1963, Ser. No. 256,446
Claims priority, application Great Britain Feb. 16, 1962
5 Claims. (Cl. 51—135)



1. In a machine for abrading work pieces of sheet material, a pair of opposed rolls comprising an abrading roll and a feed roll between which a work piece is fed, means mounting one of said rolls for movement under the force of gravity toward the other roll, means for applying an opposing force to counteract at least partially the force of gravity acting on said one roll and thereby determine the effective force by which the work piece is pressed against the abrading roll, said force applying means comprising a first piston and cylinder device engageable with said mounting means, a second piston and cylinder device engageable with a lever, a conduit connecting the cylinders of both devices for forming a closed fluid circuit by which force applied through said lever to said second device is transmitted to said first device and applied to said mounting means, means for causing the lever to exert a force against said second device, and means for adjusting the degree of leverage of said lever for varying the force applied to said second device thereby also varying the effective force by which the work piece is pressed against the abrading roll.

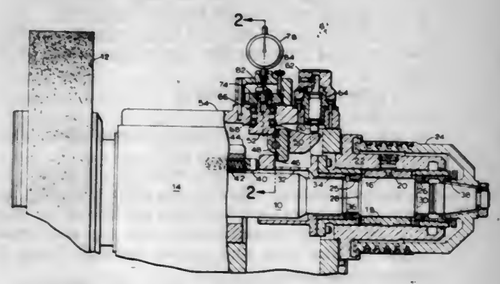
3,127,712
BELT SANDER
Julius J. Krogen, 809 N. Janss St., Anaheim, Calif., and Dean M. Logsdon, Anaheim, Calif.; said Logsdon assignor to said Krogen
Filed Sept. 15, 1961, Ser. No. 138,321
1 Claim. (Cl. 51—148)

A belt sander which includes:
an upwardly extending elongated support having a top and a bottom;
separate drum means rotatably mounted on said support apart from each other and adjacent the top and bottom of said support, and defining a minimum distance therearound;
arm means pivotally mounted on said support so as to extend therefrom on one side of said support intermediate said separate drum means;
further drum means rotatably mounted on the extremity of said arm means remote from said support;
a sanding belt of substantially greater length than said minimum distance extending around said separate drum means and said further drum means so that said arm means extends at nearly a right angle with respect to said support and so that said sanding belt extends in a generally triangular path;
spring means operatively secured to said arm means and said support for moving said arm means so as to move said further drum means against said belt means in an upwardly pivoted direction, said spring means permitting substantial deflection of said arm means and said belt when a weak force is applied to said sanding belt;



means for rotating one of said separate drum means; and
an adjustable ledge means pivotally mounted on said one side of said support, said adjustable ledge means extending around said belt between said separate drum means adjacent the bottom of said support and said further drum means.

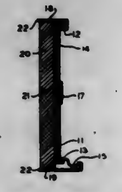
3,127,713
SHOULDER GRINDING AND SPINDLE END ADJUSTMENT MECHANISM
Leunis J. Carlier, Oostvoorne, Netherlands, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed Sept. 26, 1962, Ser. No. 226,332
8 Claims. (Cl. 51—165)



1. In a grinding machine having a wheelhead wherein a rotatable spindle is supported for limited axial movement, a mechanism for axially positioning the spindle comprising:
(*a*) an axially movable housing received in the wheelhead around the spindle,
(*b*) a thrust bearing received in said housing and adapted to hold said spindle in a selected axial position corresponding to the axial position of said housing,
(*c*) a yoke received in the wheelhead and pivotal on an axis,

(*d*) a lever received in said yoke for pivotal movement on an axis spaced from the axis of pivot of said yoke, said lever having one end adapted to engage said housing,
(*e*) bias means to urge said housing into contact with said one end of the lever,
(*f*) first stop means to hold said lever in a predetermined angular position relative to said yoke,
(*g*) second stop means to hold said yoke in a selected angular position in said wheelhead, said second stop means and said first stop means thereby determining the axial position of said housing, and
(*h*) means independently to shift each of said first and second stop means whereby one thereof can be utilized to axially position the spindle for one purpose and the other thereof can be utilized to axially move the spindle for another purpose.

3,127,714
ERASER CLEANER
Mary B. Bara, 151 Van Winkle Ave., Jersey City, N.J.
Filed Nov. 13, 1962, Ser. No. 236,799
2 Claims. (Cl. 51—187)

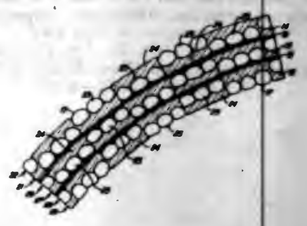


1. An eraser cleaner comprising,
(*a*) a plate having a general flat front face,
(*b*) longitudinal opposed channels defined by folded over portions of the top and bottom longitudinal edges of the face of the plate,
(*c*) a forwardly extending lip on each of the side edges of the plate,
(*d*) top and bottom edges of the plate, beyond the folded over portions, extending in a general rearward direction from the face of the plate,
(*e*) a magnet engaged between the top and bottom edges of the plate at the rear of the face of the plate and spaced inwardly from the edges of the ends,
(*f*) the plate composed of magnetic material,
(*g*) an abrasive sheet disposed in the opposed channels on the plate between the lips on the edges of the plate.

2. An eraser cleaner comprising,
(*a*) a plate,
(*b*) top and bottom longitudinal, opposed channels on the longitudinal face of the plate,
(*c*) a lip on each of the side edges of the plate,
(*d*) top and bottom edges of the plate extending in a general rearward direction from the face of the plate,
(*e*) a magnet positioned between the top and bottom edges of the plate and spaced inwardly from the edges of the ends,
(*f*) the plate composed of magnetic material,
(*g*) an abrasive sheet disposed in the opposed channels on the plate, between the lips on edges of the plate.

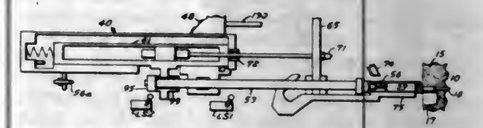
3,127,715
DIAMOND CUTTING DEVICES
Frank L. Christensen, Salt Lake City, Utah, assignors to Christensen Diamond Products Company, Salt Lake City, Utah, a corporation of Utah
Filed Apr. 27, 1960, Ser. No. 24,993
16 Claims. (Cl. 51—206)

1. In a cutting device: a matrix having side faces; cutting elements embedded in said matrix, said cutting elements being arranged in sets adjacent to said side faces which are generally parallel to one another, each set in-



cluding straight rows of cutting elements adjacent to a side face generally parallel to one another.

3,127,716
MACHINE TOOL LOADER
Robert D. Peters, Cincinnati, Ohio, and Joseph F. Uckotter, Covington, Ky., assignors to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed Nov. 25, 1960, Ser. No. 71,707
9 Claims. (Cl. 51—215)



1. In a centerless grinding machine, the combination comprising means defining a grinding throat, a plunger having a forward end adapted to receive a workpiece, a permanent magnet slidably received in said plunger operable when adjacent the forward end thereof to secure a workpiece thereto, said magnet ineffective to hold a workpiece on the forward end of the plunger when the magnet is retracted therefrom, means to reciprocate said plunger between a retracted position and a predetermined advanced position where a workpiece secured thereto is in the grinding throat, means to retract said magnet from the forward end of the plunger after advance of the plunger is stopped and the plunger is in said predetermined advanced position for release of a workpiece in the grinding throat, and means to move the plunger to said retracted position while said workpiece is in the grinding throat.

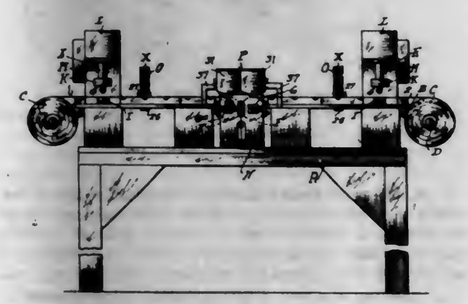
3,127,717
GRINDER ATTACHMENT FIXTURE
Harry H. Sommers, 628 Lincoln Ave., Lincoln, Ill.
Filed May 27, 1963, Ser. No. 283,426
2 Claims. (Cl. 51—218)



1. A grinder fixture for radial saws having a bed plate and grinding wheel mounting comprising, in combination, a base plate for clamped support upon the radial saw bed plate beneath the grinding wheel mounting, a cradle adjustably secured upon said base plate, a cylinder rotatably supported upon said cradle having a longitudinal axis lying in a horizontal plane, clamp means carried by said

cylinder for clamping blades to be ground upon said cylinder with the upper edges thereof projecting above the upper surface of said cylinder, and screw thread adjustment means acting between said cradle and said cylinder for rotatably adjusting the position of said cylinder upon said cradle to vary the cutting angle of the grinding wheel upon the uppermost edges of the blades to be ground, said cradle comprising a substantially horizontal plate and a pair of upright end pieces, said end pieces having a fixed center at one end and a longitudinally adjustable center at the opposite end axially supporting said cylinder, said cylinder having a periphery defining a plurality of longitudinally extending stepped ridges for receiving a stack of blades to be ground, and said clamp means comprising a plurality of plates secured to said cylinder for pressure engagement with said stack of blades.

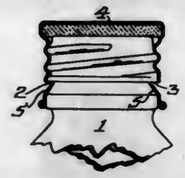
3,127,718
METHOD OF AND APPARATUS FOR MAKING TABLET PACKAGES
Joseph L. Arcudi, Elizabeth, and Edward J. David, Point Pleasant, N.J., assignors to Ivers-Lee Company, Newark, N.J., a corporation of Delaware
Filed Oct. 3, 1961, Ser. No. 142,547
5 Claims. (Cl. 53—28)



1. The method of making article-containing packages consisting of forming two separate self-sustaining halves of the article to be packaged, each of said halves including a flat surface to abut the corresponding surface on the other half, forming identical recesses in two strips of ductile material, said recesses being shaped to correspond to the contour of the other portions of the article halves, placing in each recess one pre-formed half of the article, applying adhesive to said flat surfaces of said halves, bringing said strips and said halves into contact with each other with one recess of one strip and the article half therein facing a recess and the other half of the article in the other strip and sealing the strips together in a zone in surrounding relation to said recesses, thereby forming a package having a compartment in which said article is enclosed.

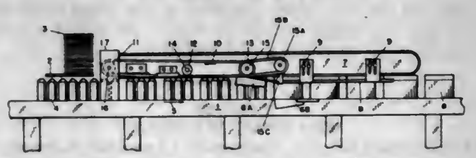
3,127,719
METHOD OF SECURING CAPS OR FERRULES TO BOTTLES AND OTHER SUITABLE CONTAINERS
Frank Fox, Beechwood House, Beechwood Road, Illingworth, Halifax, England
Filed Sept. 25, 1959, Ser. No. 842,469
Claims priority, application Great Britain Feb. 25, 1959
1 Claim. (Cl. 53—42)

A method of forming and securing a tamper-proof and reusable metal screw cap to the mouth of a container having screw threads at the neck thereof and a peripheral groove on the neck with an inclined upper side portion below the threads on said neck comprising the following steps; positioning a ductile, smoothly-surfaced cylindrical metal cap over the mouth of said container with the sides of said cap surrounding said threads and peripheral groove, pressing a part of the upper skirt portion of said cap inwardly into conforming engagement with the screw thread, substantially simultaneously therewith pressing and cutting at the bottom portion of the skirt of said cap inwardly into engagement with said peripheral groove to thereby form a tag integral with said cap and axially conforming to the inclined upper side of said peripheral groove, the tag of said cap being only partly severed from



the body of said ductile cap, the severed edge of said tag being adjacent the inner upper edge of said groove and being substantially spaced from the lower edge of the skirt, said cap being adapted upon initial rotating displacement against the threads of the container to bend the tag portion by engagement with the groove and to then shear off the tag from the cap by bearing against said outer edge of said groove in the neck of the container without affecting subsequent replacement of the cap.

3,127,720
PACKAGING MACHINE AND METHOD
Hermond G. Gentry and Bruce Garrard, Atlanta, Ga., assignors to The Mead Corporation, a corporation of Ohio
Filed Feb. 15, 1962, Ser. No. 173,581
14 Claims. (Cl. 53—48)

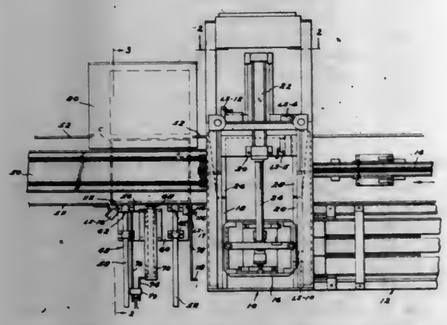


1. A machine for packaging a plurality of articles in a wrap-around type wrapper, said machine comprising means for advancing a group of articles along a predetermined path, means for advancing a wrapper blank along said path and immediately above a group of articles to be packaged, a tucking conveyor having a tucking reach disposed immediately above and in downwardly converging relation to said predetermined path, and a tucking stud mounted on said conveyor and arranged to engage a part of the wrapper along the leading edge thereof, said tucking stud being effective to fold said part of the wrapper downwardly and generally toward the articles below the wrapper.

3,127,721
APPARATUS FOR EJECTING EMPTY CASES
Ralph M. Burton, Grosse Pointe, Mich., assignor, by mesne assignments, to Cesco Container Mfg. Corp., Northampton, Mass., a corporation of Massachusetts
Filed May 18, 1961, Ser. No. 111,055
2 Claims. (Cl. 53—53)

1. Apparatus for the purpose described comprising: a case-supporting station; a case conveyor along which cases are transported out of said case-supporting station; a bottle-accumulating station; transfer means operable between said stations to transfer bottles from the accumulating station to a case in the case-supporting station; case reject mechanism coupled to said transfer means responsive to the improper seating of a bottle in a case to

cause the transfer means to withdraw such improperly seated bottle; said case-supporting station including means for releasing a case from the supporting station for movement along the case conveyor in response to the operation of said transfer means; a case ejector positioned adjacent the conveyor downstream of said case-supporting station, said case ejector comprising a reciprocable pusher shiftable laterally across said conveyor and motive means operably coupled to the pusher to shift the same; and an

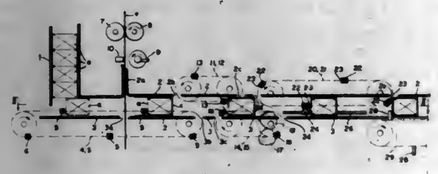


ejector control circuit coupled to said case ejector for operating the same and including a first part connected to the case reject mechanism to be actuated thereby and a second part disposed adjacent said case conveyor opposite said pusher to be actuated by a case on the conveyor in front of the pusher, said ejector control circuit operable in response to both the actuation of said first part and the subsequent actuation of said second part to energize said motive means for shifting the pusher across the conveyor to sweep a case therefrom.

3,127,722
WRAPPING MACHINE

Eduard Josef Schoder, Stuttgart-Bad Cannstatt, Germany, assignor to Firma Fr. Hesser Maschinenfabrik-Aktiengesellschaft, Stuttgart-Bad Cannstatt, Germany, a corporation of Germany

Filed Feb. 19, 1962, Ser. No. 173,897
Claims priority, application Germany Mar. 7, 1961
16 Claims. (Cl. 53—230)

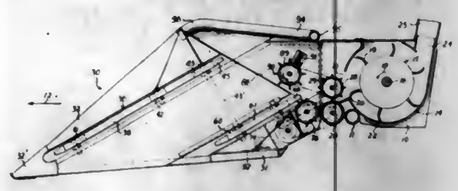


1. In an apparatus for wrapping an article: means for guiding said article in a substantially straight-line path; a first endless conveyor means adjacent said guide means having one reach to engage and move said article along a first portion of said path; means associated with said first conveyor means for feeding wrapping material across the path of said article in a transverse direction thereto whereby the wrapping material covers the article in a substantially U-shaped conformation having a pair of shank portions trailing therebehind; a second endless conveyor means having one reach cooperating with said first conveyor means to engage and move said article along a second portion of said path, said second conveyor means engaging and wrapping the first of said shank portions about the trailing surface of said article as it moves the article along said straight-line path; a third endless conveyor means adjacent said guide means having one reach cooperating with said second conveyor means to engage and move said article along a third portion of said path, said third conveyor means engaging and wrapping the second of said shank portions about the trailing surface of said article as it moves the article along said straight-line path; and means to drive each of said conveyor means.

3,127,723
ROW CROP FORAGE HARVESTER AND CROP FEED MEANS

Edward C. Procter, New Holland, Allison W. Blanshine, Lititz, and Robert E. Wallin, New Holland, Pa., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware

Filed Mar. 24, 1961, Ser. No. 98,122
5 Claims. (Cl. 56—16)



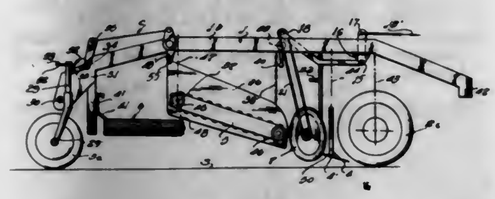
1. A row crop forage harvester adapted to travel forwardly at a ground speed variable within a given range comprising, in combination, a frame, a pair of laterally spaced dividers mounted on said frame and defining a fore-and-aft inlet opened forwardly to receive crop material standing in a row, a first gathering means forwardly supported on said frame and engageable with material in said inlet, said first gathering means comprising a pair of upwardly and rearwardly extending endless gathering elements operative on opposite sides respectively of said inlet, said gathering elements having infeed reaches travelling rearwardly and converging inwardly to a grip point where their paths of travel meet and located generally at said row, then extending side by side for a relatively short conveying distance, and then diverging outwardly and separating at a rearward release point, means operating said first gathering means at a speed approximately at least as fast as the highest ground speed of said given range, a second gathering means supported on said frame rearwardly of said first gathering means, said second gathering means comprising one pair only of upwardly and rearwardly extending gathering elements operative on opposite sides respectively of said inlet and at least one of said gathering elements being endless and having an infeed reach which travels rearwardly, said second gathering means having a lower forward crop grabbing end and an upper rearward discharge end, a crop supporting ramp beneath and coextensive with said second gathering means, an infeed roll above and rearwardly of said second gathering means discharge end and a stripping roll rearwardly of the end, said infeed and stripping rolls being carried in parallel relation on said frame to extend across said inlet and relatively vertically spaced to define a passage for the crop, said forward end of said second gathering means being rearwardly of said release point whereby the crop is free of gathering means subsequent to release by the first gathering means and prior to being grabbed by the second gathering means, said passage between said infeed and stripping rolls being at

a lower level than said release point, cutting means supported on said frame and operable to sever the standing crop from the ground at a point proximate to the grabbing of the crop by said second gathering means, and power means operating said second gathering means at a speed faster than the speed of said first gathering means whereby the ground end of the standing crop is swung upwardly and rearwardly and pivoted about said release point to be fed rearwardly butt end first through said passage between said infeed and stripping rolls.

3,127,724
CUTTER-WINDROWER APPARATUS

Giordano Fraresso and Elio Fraresso, Laguna Larga, Cordoba, Argentina

Filed May 11, 1961, Ser. No. 134,061
11 Claims. (Cl. 56—23)

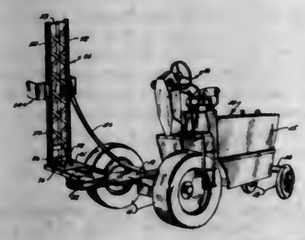


1. A cutter windrower apparatus to be used for cutting peanuts and the like crops comprising a frame supporting at least one cutter blade transverse to the longitudinal axis of the apparatus and adapted to cut a plant, a pair of rotatable diverging rim portion contacting disks arranged behind said cutter blade, said diverging disks being disposed to receive and provide a support for said cut plant, said rim of each of said contacting disks including resilient means and means for rotating said disks so as to raise the cut plants upwardly and letting them fall behind said disks in an aligned row.

3,127,725
FRUIT PICKER

Irwin W. Richardson, Drawer I, Lady Lake, Fla.

Filed Sept. 20, 1961, Ser. No. 139,398
4 Claims. (Cl. 56—328)

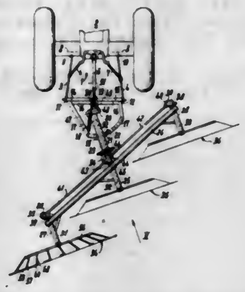


1. A fruit picker of a construction to be mounted upon a tractor or other vehicle, said picker comprising a mounting constituting an extension structure, a turntable mounted on said structure, a track mounted on said turntable, a support reciprocable on said track, a standard pivoted on said support, means whereby said turntable may be caused to revolve, said support caused to move along said track and said standard to swing about its pivot, a picker head having spaced flexible fruit engaging elements, means mounting said picker head for movement up and down said standard, and means whereby harvested fruit may be discharged in a direction toward a selected area.

3,127,726
DEVICES FOR LATERALLY DISPLACING CROP LYING ON THE GROUND

Cornelis van der Lely, Zug, Switzerland, and Ary van der Lely, Maasland, Netherlands, assignors to C. van der Lely N.V., Maasland, Netherlands, a Dutch limited liability company

Continuation of application Ser. No. 595,659, July 3, 1956. This application Sept. 7, 1960, Ser. No. 54,430
Claims priority, application Netherlands July 5, 1955
24 Claims. (Cl. 56—366)

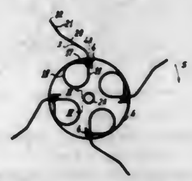


1. A raking device for laterally displacing material lying on the ground and capable of operation in a first arrangement as a tedder with raking elements in a first working position and in a second arrangement as a side delivery rake with the raking elements in a second different working position; said device comprising a frame, a plurality of axles on said frame, a plurality of rake wheels constituting the raking elements on said axles and operatively associated in tedding arrangement, drive means coupled to said rake wheels for rotating the same, the device further comprising fastening means on said axles for maintaining the rake wheels selectively and detachably in said tedding arrangement and in said arrangement as a side delivery rake, said fastening means defining at least two rows, said rake wheels being detachably engageable with said fastening devices.

3,127,727
TEDDERS

Cornelis van der Lely, Zug, Switzerland, assignor to C. van der Lely N.V., Maasland, Netherlands, a Dutch limited-liability company

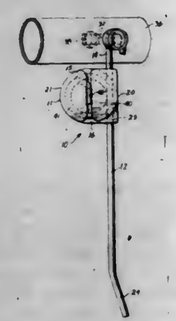
Filed July 6, 1961, Ser. No. 122,295
Claims priority, application Netherlands July 12, 1960
5 Claims. (Cl. 56—372)



1. In a tedder of the kind set forth, a rotating body including a plurality of horizontally extending tined bars, a pair of spaced support members supporting said bars, at least one of said bars turnable with reference to said support members about an axis parallel to the axis of rotation of said body, said bar including a bearing, at least one of said tines secured to said bar, said tine including a first bent portion extending from where it is secured to said bar to said bearing and a second portion extending outwardly from said bearing relative to said body, said first portion substantially lying in a plane

oblique to the axis of rotation of said body and said second portion substantially lying in a plane perpendicular to the axis of rotation of said body, retaining means disposed substantially midway between said support members interconnecting said body and said bar, said retaining means including selection means for selectively securing said bar to said body with the second portion of said tines extending outwardly from said body at a selected angular setting.

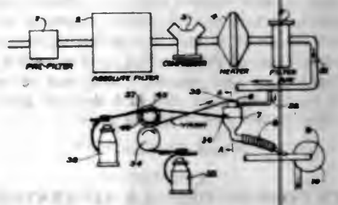
3,127,728
RAKE TOOTH STRUCTURE
Roland P. Gehman, Akron, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Jan. 25, 1962, Ser. No. 168,722
5 Claims. (Cl. 56—400)



1. A rake tooth structure for mounting on a rake bar comprising a grooved mounting block of elastomer material having a top portion, a bottom portion, a pair of spaced sides and a pair of end walls, a rake tooth extending from said bottom portion and having an upper end detachably connected to said block and an outer free end remote therefrom, said upper end being generally U-shaped and having a first leg integral with the rake tooth and extending from said bottom and toward said top portion, a second leg extending from said top portion to said bottom portion, and a bight connecting said legs and extending along said top portion, said second leg having a free end opposite said bight, means on said second leg free end engaging the bottom portion and holding the rake tooth against movement in a direction toward said block, said upper end being located adjacent and inwardly of one of said pair of sides and said legs in their entireties being located in grooves of said block and spaced inwardly from said end walls, and means separate from said rake tooth and connected to the other of said sides for fastening the block to the rake bar.

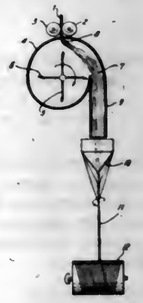
3,127,729
METHOD AND APPARATUS FOR MAKING BULK YARN
William I. Head, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Apr. 29, 1959, Ser. No. 809,689
7 Claims. (Cl. 57—34)

1. An apparatus for the production of blown yarn, a gas jet adapted to receive the multifilament yarn to be converted into said blown yarn, means for withdrawing the blown yarn from the jet, a conduit for supplying gas to the jet, the improvement features which include means in association with said gas conduit comprising in series a prefilter, an absolute filter, a compressor, a heater and a final filter for improving the gas before it enters the jet, and an exhaust system at least substantially completely enclosing the exit from said jet, said exhaust system in-



cluding an opening through which the blown yarn may be withdrawn.

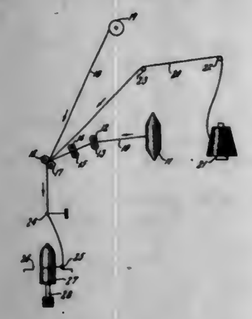
3,127,730
DEVICE FOR SEPARATING THE FIBRES AND CONVEYING THE SEPARATED FIBRES
Miloslav Pávek and Jiří Havlas, Liberec, Czechoslovakia, assignors to Sdruzeni podniku textilniho strojirenstvi, Liberec, Czechoslovakia
Filed Dec. 22, 1960, Ser. No. 77,678
Claims priority, application Czechoslovakia Dec. 24, 1959
9 Claims. (Cl. 57—58.91)



3. In a spinning machine, in combination, a spinning means; supply means for supplying fibrous material; and a rotary fan member disposed between said supply means and said spinning means adjacent said supply means to receive the fibrous material from said supply means, and including a plurality of vane means, each vane means having a free end, and a comb secured to said free end of each vane means for dividing the supplied fibrous material into individual fibers, said combs and the air current produced by said vane means being adapted to convey the fibers toward said spinning means.

3,127,731
PLASTIC CORE YARN
Allen G. McKinnon, Asheboro, N.C., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Continuation of application Ser. No. 861,394, Dec. 22, 1959. This application Sept. 6, 1962 Ser. No. 223,289
20 Claims. (Cl. 57—152)

11. Elastic yarn comprising a low twist roving, a rubber thread, and a continuous high strength strand, said roving, said rubber thread and said high strength strand being so arranged that a sinuous path about the other is followed by one of said rubber thread on the one hand and the group including said high strength strand and said roving on the other, said roving and said rubber thread being so arranged and proportioned that the ratio of X/Y is at least 1.7, wherein X equals the length in inches of roving per unit length of yarn divided by the number of



turns of twist of the roving with the rubber thread in said unit length, and

$$Y_1=\sqrt{A(2\pi R)^2+\frac{h^2}{A^2}}$$

in which R equals the radius in inches of the rubber thread relaxed, h equals the length in inches of relaxed rubber thread in said unit length of yarn divided by the number of turns of twist of the roving with the rubber thread in said unit length of yarn, and A is the ratio of the relaxed length in inches of the segment of rubber thread in said unit length to the segment's new length in inches at the stretch condition of the yarn at which Y_1 is a minimum, and wherein the ratio X/Y is at least 1.4 when,

$$Y=\sqrt{(2\pi R)^2+h^2}$$

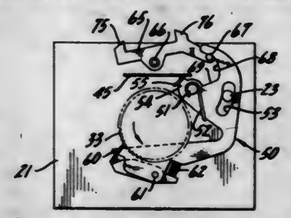
said yarn at a contracted condition of the rubber thread having the roving wrapped about the rubber thread and the individual fibers of the roving loosely associated with each other, said high strength strand preventing the ready disassociation of the staple length fibers in said roving from said thread.

3,127,732
METHOD FOR PRODUCING BULKED, HIGHLY STRETCHABLE TEXTURED COTTON YARNS
John J. Brown, New Orleans, and George F. Ruppenicker, Jr., Metairie, La., assignors to the United States of America as represented by the Secretary of Agriculture
No Drawing. Filed Sept. 18, 1961, Ser. No. 139,005
8 Claims. (Cl. 57—164)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A process for producing stretchable cotton yarns comprising the following sequential operations: plying a plurality of single yarns having the same directional twist, the plied yarn being twisted during plying in the same direction as the several singles from which it is made; treating the plied yarn with a heat curing resin of the crosslinking type; curing the plied resin treated yarn to set the initial yarn twist; and backtwisting the resin treated and cured yarn.

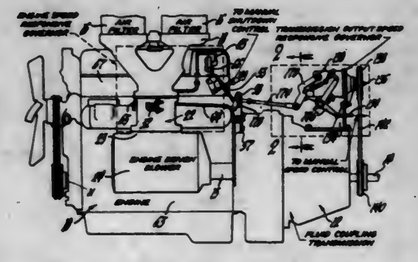
3,127,733
DROWSE ALARM MECHANISM
Ralph C. Robinson, Athens, Ga., assignor to General Time Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 22, 1960, Ser. No. 77,656
6 Claims. (Cl. 58—21.12)

1. In a clock mechanism having a driven timing train including a gear wheel mounted in a frame, the combination comprising, an alarm member mounted on said frame for producing an alarm signal, a plate-like drowse cam pivoted on said frame and carrying a pawl positioned for ratcheting engagement with the teeth of said gear wheel upon swinging movement of said cam in a direction opposite to the direction of rotation of said wheel, said cam being effective to disable said member and turn said alarm off as the cam moves in said direction to engage said pawl with said wheel, an operator pivoted on said frame for



manual swinging movement in either direction from a central rest position, and a pin carried by said operator, said drowse cam having opposed cam surfaces flanking said pin, said surfaces being formed so that the cam is swung varying distances to engage said wheel upon swinging movement of said operator in one direction or the other.

3,127,734
GOVERNOR CONTROL MECHANISM
Charles H. Frick, Pontiac, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Continuation of applications Ser. No. 477,809 and Ser. No. 477,857, Dec. 27, 1954. This application May 9, 1960, Ser. No. 27,901
7 Claims. (Cl. 60—12)



1. In a power plant including an engine and a power transmitting mechanism driven thereby, said power transmitting mechanism including an output shaft drivingly connectable to a variable load and having operating characteristics whereby the speed of the output shaft tends to decrease with the application of load thereto more rapidly than the speed of the engine: a control mechanism comprising fuel supply means for supplying variable amounts of fuel to the engine and including a control member movable between an off position in which it conditions said supply means to substantially cut off the supply of fuel to the engine, an intermediate position in which it causes fuel to be supplied to the engine at a restricted rate permitting said engine to operate at a low idling speed, and an open position in which it conditions said fuel supply means to supply fuel to the engine at a maximum rate, means for normally biasing said fuel supply control member toward its open position, means responsive to the speed of the engine and operably connected to actuate said fuel supply control member in a decreasing fuel direction between said open and intermediate fuel supply controlling positions in opposition to said biasing means to vary the engine fuel supply in accordance with deviations from a selectively established engine speed to maintain such established engine speed, said engine speed responsive means including means for

selectively establishing the engine speed from which deviations render said engine speed responsive means effective to actuate said fuel supply control member, means responsive to the speed of the output shaft and including an output member movable in response to deviations from a selectively established speed of said output shaft, a control element movable through an operating zone between a first and second position and operably connected to selectively establish the output shaft speed from which deviations effect movement of said output member, and means operably connecting said engine speed selecting means to the output member of said output shaft speed responsive means, whereby said fuel supply control member is actuated alternatively in a fuel increasing or decreasing direction by said biasing and engine speed responsive means between said intermediate and open fuel supply controlling positions in accordance with actuation of said engine speed selecting means by said shaft speed responsive output member indicating respectively a decreasing or increasing speed deviation from the selectively established output shaft speed to thereby maintain the output shaft speed selectively established by the positioning of the output shaft speed control element in said operating zone.

3,127,735
PROPELLANT COMPOSITIONS

George L. Bauerle, Canoga Park, and Robert C. Ahlert and Jacob Silverman, Woodland Hills, Calif., assignors to North American Aviation, Inc.

No Drawing. Filed July 5, 1960, Ser. No. 40,576
8 Claims. (Cl. 60—35.4)

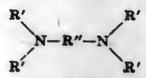
1. A method of effecting combustion in a reaction chamber with a minimum of ignition delay between a fuel composition and an oxidizer for combusting said fuel composition, the method comprising contacting in said reaction chamber said oxidizer with said fuel composition, said fuel composition comprising a boron compound having the formula R_3B and from one to about 99 weight percent, based on the total weight of the composition, and an aluminum compound having the formula R_3Al, and wherein each R is an alkyl hydrocarbon group having from one to about 12 carbon atoms.

3,127,736
NITROFLUORO-ALKANES AS OXIDANT FOR LIQUID ROCKET PROPELLANTS

Howard W. Bost and Richard C. Doss, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Feb. 6, 1961, Ser. No. 87,488
20 Claims. (Cl. 60—35.4)

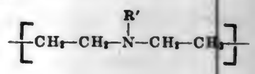
20. A method for the development of thrust by the combustion of propellant components in a combustion chamber of a reaction motor, which method comprises: introducing into said combustion chamber (1) an oxidant component selected from the group consisting of fluoronitromethane, difluoronitromethane, trifluoronitromethane, and mixtures thereof, and (2) a fuel component selected from the group consisting of (A) fuel which are non-hypergolic with said oxidant component and selected from the group consisting of ammonia, hydrazine, alkyl and cycloalkyl alcohols containing from 1 to 8 carbon atoms per molecule, alkane nitriles containing from 1 to 8 carbon atoms per molecule, dialkyl ethers containing from 2 to 10 carbon atoms per molecule, dialkyl ketones containing from 1 to 8 carbon atoms per molecule, paraffin and cycloparaffin hydrocarbons containing from 5 to 12 carbon atoms per molecule, gasoline, kerosine, dialkylene and cycloalkylene sulfones containing from 4 to 8 carbon atoms per molecule, benzene, and alkyl substituted benzenes containing from 6 to 12 carbon atoms per molecule, and mixtures thereof, and (B) fuel which are hypergolic with said oxidant component and selected from the group consisting of polyamines characterized by the formula



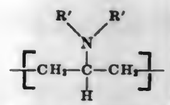
wherein each R′ is selected from the group consisting of alkyl and alkenyl hydrocarbon radicals containing from 1 to 3 carbon atoms; and R″ is selected from the group consisting of

(*a*) alkylene, alkenylene, alkadienylene, and alkynylene hydrocarbon radicals containing from 2 to 6 carbon atoms and

(*b*)



and

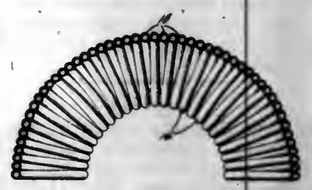


radicals wherein R′ is as defined above; said oxidant component and said fuel component being introduced in combustible proportions with respect to each other; burning said oxidant and fuel components; and exhausting the products of combustion from said motor to develop said thrust.

3,127,737
NOZZLE TUBE CONSTRUCTION

Walter A. Ledwith, Glastonbury, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Mar. 29, 1961, Ser. No. 99,271
2 Claims. (Cl. 60—35.6)



2. A substantially annular wall construction for a rocket in which the wall varies in diameter from end-to-end including a set of first axially extending tubes extending substantially the full axial dimension of said wall and being arranged in a ring to form the annular wall, said tubes at smaller diameters of the wall being in side-by-side contacting relation and being spaced apart circumferentially at larger diameters of the wall to form a space between adjacent first tubes and a set of second axially extending tubes positioned between the first set where the tubes of the first set are spaced apart with each of said second tubes abutting and joined to adjacent tubes of said first set throughout the full space between adjacent first tubes and with each tube of the second set merging with an adjacent tube of the first set to form a single flow path for coolant through the adjacent tubes.

3,127,738
GAS BLEED FROM ROCKET CHAMBER

Augustus Hasbrouck and Leander H. Lippincott, Middletown, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed May 26, 1961, Ser. No. 112,870
3 Claims. (Cl. 60—35.6)

1. A rocket bleed construction including a rocket wall having a plurality of substantially parallel tubes in side-by-side contact forming at least a part of the wall, certain of said tubes being reduced in diameter over a substantially circular area of the wall to define openings between the tubes, and a duct attached externally to the rocket wall around the circular area into which hot gas

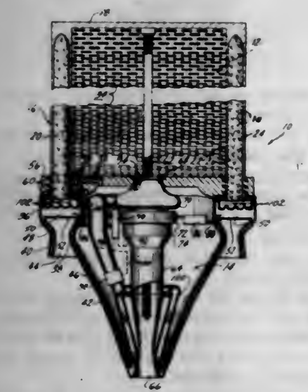


from the rocket is discharged in which said reduced diameter tubes are formed in pairs to define said opening and in which the tubes in each of said pairs are in contact to prevent hot gas passage therethrough and hence hot gas heat to transfer thereto.

3,127,739
ROCKET MOTOR WITH CONSUMABLE CASING

Charles R. Miller, Rockville, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Oct. 12, 1961, Ser. No. 149,142
20 Claims. (Cl. 60—35.6)



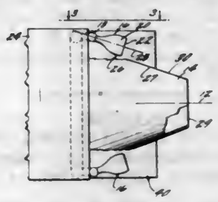
1. The combination in a rocket motor of a propellant charge assembly comprising an elongated casing having a front wall and a consumable side wall and a propellant charge disposed in and substantially filling the casing, a nozzle and combustion chamber assembly disposed at and surrounding a rear end portion of the casing side wall and movable forwardly along the length thereof, and means for advancing said combustion chamber and nozzle assembly along the casing such that the side wall of the latter and the propellant charge are consumed within the last-mentioned assembly.

3,127,740
CLUSTERED ROCKET NOZZLES

Anthony J. Chamay, Andover, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Oct. 17, 1962, Ser. No. 231,211
5 Claims. (Cl. 60—35.6)

1. A powerplant having a plurality of thrust producing engines which function by discharging energized exhaust fluid to atmosphere, an expansion plug positioned adjacent each of said engines and shaped so that energized exhaust fluid from said engines expands against said plug to generate thrust, and expansion fairings lo-

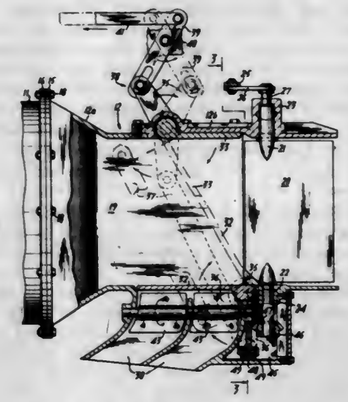


cated between adjacent engines and extending from said plug and being positioned and shaped so that energized exhaust gas from said engines will also expand against said fairings to produce thrust.

3,127,741
JET PROPULSION CONTROL SYSTEM

John E. Pottharst, Jr., 408 Northline Metairie, New Orleans, La.

Filed Sept. 28, 1961, Ser. No. 141,376
9 Claims. (Cl. 60—35.54)



2. A control for a marine jet propulsion unit comprising an exhaust passage for discharging a jet stream to impart forward thrust to the boat, means defining a reverse discharge passage for the jet stream to impart reverse thrust to the boat, and counterbalanced reversing gates movable in unison in opposite directions to the jet stream from open positions to positions in which they cooperate to deflect the jet stream into the reverse discharge passage, one gate moving against and the other moving with the jet stream.

3,127,742
PETROLEUM FUEL COMPOSITION AND PROCESS

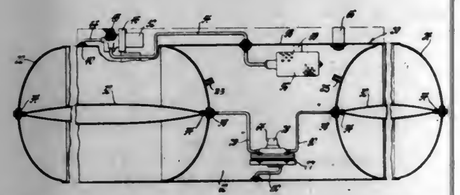
Wesley D. Niles, Roselle Park, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Aug. 8, 1961, Ser. No. 129,946
21 Claims. (Cl. 60—39.02)

12. In a power plant in which a fuel oil containing vanadium is burned and which includes heat resisting ferrous metallic parts exposed to hot combustion gases and liable to be corroded by the corrosive vanadium-containing ash resulting from the combustion, the method of reducing said corrosion which comprises introducing into said plant a small corrosion inhibiting amount of an additive selected from the group consisting of (1) a mix-

ture of a barium compound which yields the oxide at temperatures above 1000° F. and an aluminum silicate clay, and (2) a barium aluminum silicate wherein the silicates have a ratio of Al_2O_3/SiO_2 of between ½ and ⅛ and said small amount is sufficient to yield a ratio of Ba/V/Al+Si of from 0.25/1/0.5 to 3.0/1/5.0 whereby enhanced corrosion protection is effected at temperatures above about 1600° F.

3,127,743
FLUID TANK PRESSURIZING SYSTEM
James P. Kern, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 28, 1961, Ser. No. 162,822
1 Claim. (Cl. 60—39.48)

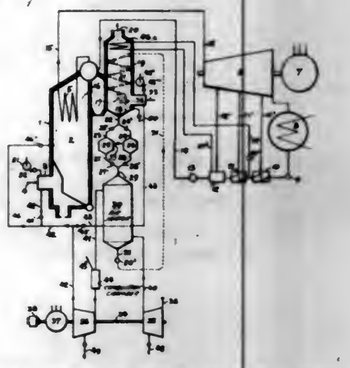


A fuel tank pressurizing system comprising a tank filled with a fuel, a hollow casing surrounding one end of said tank forming a closed fluid chamber therebetween, a gas generator in said chamber containing a fuel reactant producing a gas when combined with said fuel, said generator having a fuel inlet and a gas outlet opening into said chamber, conduit means connecting the fuel in said tank to said inlet, fuel pumping means in said conduit means, actuating means to drive said pumping means, gas pressure responsive means in said chamber connected to said actuating means, said tank having an expandable closed gas compartment therein, means connected to said compartment and chamber for communicating the gas in said chamber to said compartment, said pressure responsive means being operable below a predetermined chamber gas pressure to effect actuation of said actuating means to drive said pumping means and deliver fuel to said gas generator, said generator discharging gas into said chamber and thence into said compartment to expand said compartment raising the pressure of said fuel in said tank, said pressure responsive means being operable upon the attainment of a predetermined chamber gas pressure to deactivate said actuating means to terminate the supply of fuel to said generator, said means connected to said compartment and chamber including pressure regulator means having an inlet connected to the gas in said chamber and an outlet connected to said compartment and being responsive to a predetermined gas pressure in said compartment to terminate the flow of gas thereto.

3,127,744
COMBINED STEAM TURBINE-AIR TURBINE POWER PLANTS
Frederick Nettel, 173 Chapel Road, Manhasset, N.Y.
Filed Oct. 19, 1960, Ser. No. 63,560
12 Claims. (Cl. 60—49)

1. In a power plant using solid granular material as heat carrier, comprising the combination of: steam boiler means with first fuel burner means and furnace, steam turbine means connected to said boiler means for producing useful power, air turbine means consisting of rotary compressor means wherein air is compressed, turbine means driven by expansion of air from said compressor means, said turbine means being coupled with said compressor means so as to drive same and to produce useful power,

first conduit means for connecting the intake of said compressor means to the ambient atmosphere,
second conduit means for connecting the outlet of the compressor means to the inlet of said air turbine means,
third conduit means for connecting the exhaust port of said air turbine means with said first fuel burner means and first furnace of said steam boiler means,
granular material,
contact type gas cooler means for cooling the gases issuing from the steam boiler means by contact heat transfer to said granular material thereby heating the latter,
fourth conduit means for the combustion gases issuing from said steam boiler means for leading them into said gas cooler means,

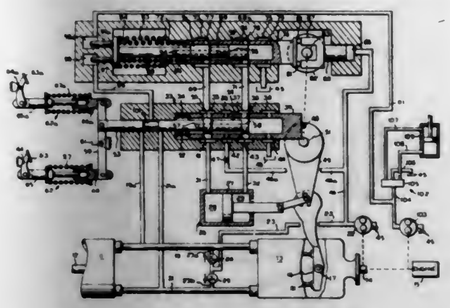


fifth conduit means for leading the cooled gases from said cooler to the ambient atmosphere,
second fuel burner means and furnace connected to said gas cooler means,
sixth conduit means for connecting said second burner means and furnace with said third conduit means for supplying combustion air to said second fuel burner means and furnace,
contact type air heater means interposed in said second conduit means,
first pipe means for the heated granular material issuing from said gas cooler means for connecting the latter to said contact type air heater means for heating the air issuing from said compressor means while cooling the granular material,
second pipe means for leading said cooled granular material issuing from said air heater means back into said gas cooler means in a substantially closed circuit.

3,127,745
HYDROSTATIC TRANSMISSION
John E. G. Young, Watertown, N.Y., assignor to The New York Air Brake Company, a corporation of New Jersey
Filed July 5, 1962, Ser. No. 207,555
8 Claims. (Cl. 60—53)

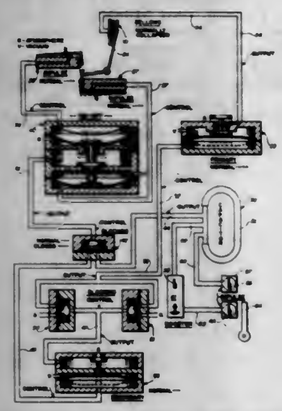
1. A hydrostatic transmission comprising
(*a*) a motor;
(*b*) a variable displacement pump;
(*c*) first and second conduits connecting the pump and motor in a transmission circuit;
(*d*) a displacement control element connected with the pump and having a maximum displacement position in which the pump discharges to the first conduit and a minimum displacement position;
(*e*) a manual actuator;
(*f*) a reservoir;
(*g*) a source of fluid under pressure;

(*h*) a fluid pressure position-responsive servo control connected with the manual actuator and the displacement control element for positioning the latter in accordance with the position of the former, the servo control being connected with and deriving motive fluid from the source and including a fluid pressure motor connected with the displacement control element;



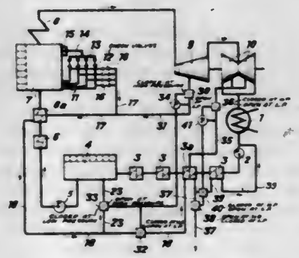
(*i*) override means separate from the servo control for connecting the fluid pressure motor with the reservoir when the pressure in the first conduit exceeds a predetermined value; and
(*j*) override control means responsive to the position of the displacement control element for increasing and decreasing said predetermined value as the displacement control element moves toward and away from the minimum displacement position.

3,127,746
PNEUMATIC CAPACITOR
Clarence M. Blythe and Gerald T. Hammond, Hendersonville, N.C., assignors to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York
Filed July 7, 1961, Ser. No. 122,477
9 Claims. (Cl. 60—60)



1. In a pneumatic circuit including a motor for an actuating linkage in combination,
a pneumatically operated valve having a control line through which signal impulses may be passed to control operation of said valve between two operative positions,
a normally evacuated pneumatic capacitor having a predetermined storage volume for air at atmospheric pressure and connectable to said control line,
means including a valve element connected to said capacitor and to atmosphere and effective upon opening operation of said valve element to fill said capacitor with air at atmospheric pressure,
and valve means connected in said control line and operable between open and closed positions to connect said capacitor to said control line when open thus to intermittently permit air to flow through said control line from said capacitor to said first valve to effect operation of said first valve between its two said positions a given number of times as determined by the storage volume of said capacitor.

3,127,747
DESALTING A FORCED FLOW STEAM GENERATOR
Gottfried Peter, Winterthur, Swizerland, assignor to Sulzer Freres, S.A., Winterthur, Switzerland, a corporation of Switzerland
Filed Oct. 17, 1960, Ser. No. 63,133
Claims priority, application Switzerland Oct. 30, 1959
1 Claim. (Cl. 60—67)

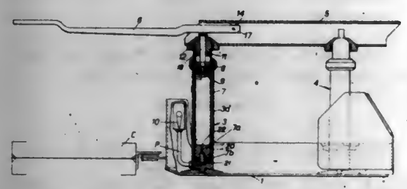


In a stream power plant in which operating fluid moves in a circuit including a forced flow steam generator operating at least at the critical pressure of water, a prime mover connected for steam flow to said steam generator for converting thermal energy of the steam to mechanical power, means connected to said prime mover for receiving steam therefrom and condensing the steam, and means connected to said condensing means for receiving condensate therefrom and returning the condensate as feedwater to said steam generator, said last mentioned means including feedwater preheating means, said steam generator including a heating tube system comprising a plurality of tube lines arranged in parallel relation with respect to the flow of operating fluid therethrough, a check valve placed at the outlet of each of said tube lines permitting flow of operating fluid out of said tube lines and preventing backing up of operating medium into said tube lines, a valved pipe connected to each of said tube lines upstream of the respective check valve for relieving operating medium from the individual tube lines by opening the respective valved pipe for washing out the respective tube line, a washing fluid conduit connected to all of said valved pipes for receiving the washing fluid relieved by said valved pipes, said washing fluid conduit being connected to at least one of said feedwater preheating means for conducting washing fluid thereto and transferring at least a part of the thermal energy contained in the washing fluid to the operating fluid moving in the circuit, a pipe interconnecting said washing fluid conduit and said prime mover for tapping steam from the latter, a valve interposed in said pipe, and pressure responsive means connected to said pipe downstream of said valve and to said valve for opening said valve upon a pressure drop in said pipe below a predetermined pressure and for closing said valve upon an increase of the pressure in said pipe above said predetermined pressure.

3,127,748
MINE ROOF SUPPORTS

John Cooke, Walkden, England, assignor to Gullick Limited, Wigan, England, a British company

Filed May 2, 1961, Ser. No. 107,195
Claims priority, application Great Britain May 10, 1960
3 Claims. (Cl. 61—45)

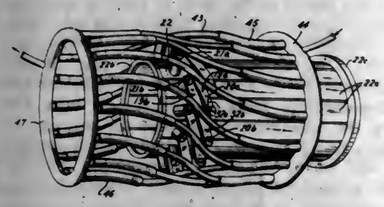


1. A hydraulically-operated mine roof support comprising a base, a roof support member, an extensible leg having a tubular ram movably supporting said roof support member from said base, a pressure fluid system in which said leg is connected at a level below said ram whereby the ram can be moved upwardly with respect to the leg to lift the roof supporting member to secure the support between floor and roof of a mine, a passageway through said tubular ram at the lower part thereof communicating said pressure fluid system with the interior of said tubular ram, a cantilever bar sensitive to roof movement articulated to the roof support member at a point above and inwardly of the point of support of said leg and extending outwardly from the support member to bear against a mine roof, an auxiliary fluid pressure ram in said leg operative to act on said cantilever bar and apply it to the roof, said auxiliary ram being coaxial with and having its piston working in the tubular ram of said leg, and a rod connected to the piston of said auxiliary ram and extending through the top of said tubular ram into engagement with said cantilever bar at a point spaced outwardly from its point of articulation to the roof support member.

3,127,749
THERMOELECTRIC REFRIGERATION

Pär Bergvall, Uppsala, Sweden, and Kai M. B. Siegbahn, Berkeley, Calif., assignors to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden

Filed Apr. 10, 1962, Ser. No. 186,441
Claims priority, application Sweden Apr. 13, 1961
14 Claims. (Cl. 62—3)

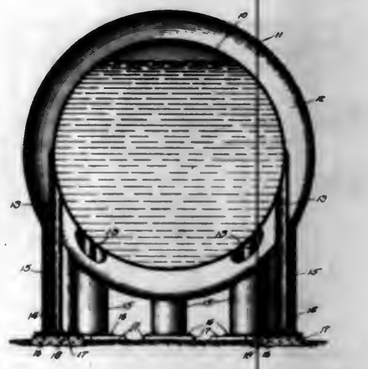


1. A thermoelectric refrigeration device comprising a linear thermopile of annular form having inner cold junctions on one side of the thermopile defining an inner core and outer hot junctions on the other side of the thermopile defining an outer rim encircling the inner core, the thermopile including a group of thermoelectric elements, and means for connecting said elements in a circuit to provide a path of flow for current through the thermopile which is substantially in the form of a spiral at the surface of a toroid.

3,127,750
LOW TEMPERATURE STORAGE FACILITIES FOR LIQUEFIED GASES

Ivan V. La Fave, Homewood, and Walter R. Mikesell, Jr., Park Forest, Ill., assignors to Chicago Bridge & Iron Company, Chicago, Ill., a corporation of Illinois

Filed Jan. 11, 1960, Ser. No. 1,534
11 Claims. (Cl. 62—45)

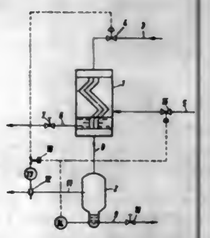


8. A method for storing liquefied, normally gaseous material in a storage vessel supported by means of a plurality of support columns positioned about said vessel which comprises prestressing said columns by applying force thereto at ambient temperature sufficient to displace said columns radially inward relative to said storage vessel to relieve bending stresses normally induced in said columns through thermal contraction of said vessel while being cooled to operating service temperature, said force being applied prior to filling said vessel.

3,127,751
PROCESS AND APPARATUS FOR THE VAPORIZATION OF LIQUID

Fritz Ranke, Pullach, near Munich, Germany, assignor to Gesellschaft fur Linde's Eismaschinen Aktiengesellschaft, Wiesbaden, Germany

Filed July 20, 1961, Ser. No. 125,595
Claims priority, application Germany July 20, 1960
5 Claims. (Cl. 62—52)

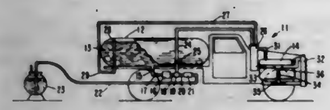


1. A process for the continuous vaporization of low boiling point liquid substance containing higher boiling point mixtures down to a residual liquid, and comprising the steps of passing a gas in heat exchange relationship to the low boiling point substance so that the gas is condensed thereby, and periodically interrupting the supply of gas to the substance to form residual liquid, the moment of interruption being a function of the level of the residual liquid so that the substance is periodically vaporized.

3,127,752
AUTOMATIC MOBILE LIQUID PETROLEUM TRANSFER DEVICE

John P. Smith, P.O. Box 675, Nixon, Tex.

Filed Nov. 22, 1961, Ser. No. 154,280
5 Claims. (Cl. 62—52)

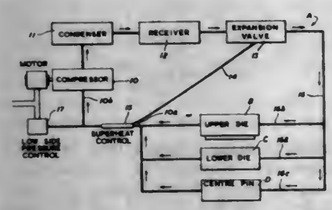


1. In a system for delivering liquefied gas to a consumer's container from an internal combustion engine powered vehicle, said engine being water cooled, said vehicle having a radiator for said water, a tank mounted on said vehicle adapted to contain liquified gas, conduit means to deliver the liquefied gas from the tank to the consumer's container, a pump in said conduit means to pressurize said liquefied gas, a further conduit means to deliver a portion of said pressurized liquefied gas to a heat exchanger for vaporization of said liquefied gas, means to deliver the vaporized gas to the tank to pressurize the tank, the heat exchanger being connected to the water supply of the internal combustion engine, the heat exchanger being directly supplied with water from the internal combustion engine through a first conduit, a water return conduit between said heat exchanger and said water supply of said internal combustion engine, said return conduit being divided into a first branch connecting said water return conduit with said radiator through a first port, a second branch connecting said water return conduit with a second conduit connecting said second branch to the water supply of said internal combustion engine, a conduit connecting a second port of said radiator with said second conduit, a heat sensitive control means positioned in said water return conduit to control the supply of the water to the engine, a flow control valve positioned in said first branch and a flow control valve positioned in said second branch, said control means adapted to operate said valves in each branch.

3,127,753
METHOD OF CHILLING DIE ELEMENTS OF MOLDING APPARATUS

George A. Tinnerman, 17864 Beach Road, Lakewood, Ohio

Filed Jan. 4, 1960, Ser. No. 246
3 Claims. (Cl. 62—66)

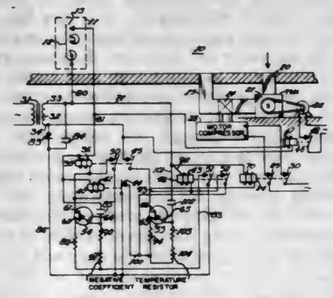


1. The method of chilling cooperating die parts of molding apparatus for molding and solidifying hot fluid thermoplastic material, said cooperating die parts having a refrigerant passage therein which comprises connecting said passages in the refrigerant circuit of a refrigeration system to incorporate said cooperating die parts as the evaporator of said refrigeration system, vaporizing the refrigerant passing to said die parts, compressing the refrigerant passing from said die parts, adjusting the vaporization of the refrigerant passing to said die parts responsively to the prevailing chilling requirements thereof, and recycling the refrigerant through an expansion valve to said die parts whereby repeatedly to solidify successive charges of hot plastic material delivered to said cooperating die parts substantially as soon as delivered and thereby imparting improved strength characteristics to the material thus solidified.

3,127,754
REFRIGERATION CONTROL APPARATUS WITH TIME DELAY MEANS

John W. Mobarry, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Oct. 4, 1962, Ser. No. 228,483
4 Claims. (Cl. 62—158)

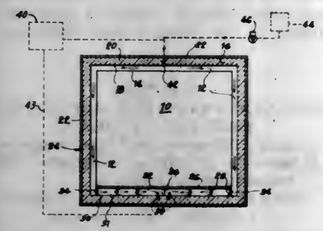


2. In a control system for a refrigeration system to prevent short cycling of a motor compressor, a thermostatic switch in a space in which the temperature is being controlled, a motor compressor refrigeration apparatus for cooling the space, a source of power, a timing means connecting said motor compressor through said switch to said source for providing a delay in the operation of said motor after said switch is closed and a longer delay after said switch opens before a subsequent operation can take place upon the closing of said switch, said timing means comprising: a first unijunctional transistor having two base electrodes and an emitter electrode, a first relay means adapted to control said motor compressor having an energization winding and a plurality of switch means operated thereby, a second unijunctional transistor having two base electrodes and an emitter electrode, a second relay means having an energization winding and two normally open switches, circuit means connecting said energization winding of said first relay means to said source of power through said thermostat and a circuit of said base electrodes of said first transistor and one of said normally open switches of said second relay, a holding circuit for said first relay means, a control circuit for said first transistor connected to said emitter to cause said first transistor to become conductive after a first predetermined period of time after said thermostat closes, circuit means connecting said energizing winding of said second relay to said source through a circuit of said base electrodes of said second transistor and another of said plurality of switches, a second control circuit for said second transistor connected to said emitter to cause said transistor to become conductive after a second predetermined period, and a holding circuit means connecting a second switch of said second relay in parallel with said base electrodes of said second transistor to maintain said second relay energized.

3,127,755
FROZEN FOOD STORAGE AND CONVEYANCE MEANS

Jack L. Hemery, Des Plaines, Ill., assignor to Continental Freezers of Illinois, Division of F. H. Prince Co., Inc., Chicago, Ill., a corporation of Delaware

Filed Mar. 16, 1962, Ser. No. 180,161
4 Claims. (Cl. 62—267)



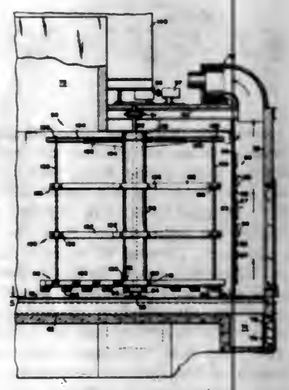
1. A storage and transportation means for frozen and refrigerated foods comprising an enclosure for housing packages of frozen foods, a refrigeration passage surrounding the enclosure and separated therefrom by a wall formed of a material having a high heat transfer coefficient, a floor forming part of said wall at the bottom of the enclosure, a plurality of supporting beams extending in spaced-apart relation through the refrigeration passage adjacent said floor to support the floor and subdivide the passage into sections, said beams being formed with crosswise extending openings for communicating said sections to enable flow of refrigeration medium therethrough, a bulkhead extending along the central portion of said floor to subdivide the passage adjacent the floor and to close off communication between portions thereof, an inlet in communication with said refrigeration passage at one end of said enclosure and outlets in communication with said refrigeration passage at another end remote from said inlet, an insulation space surrounding at least the top, bottom, side and ends of said refrigeration passage and separated therefrom by a substantially fluid and vapor impervious wall, a thermal insulating material within said insulation space, a protective outer shell of a structurally strong material enclosing said insulation space, refrigeration passage and enclosure, and means for feeding refrigeration medium to the inlet of said refrigeration passage for circulation through said refrigeration passage to the outlet to block heat loss from the ambient atmosphere to the enclosure and for transmission of refrigeration to the enclosure through the separating wall, and wherein said outlets communicate with the bottom of the refrigeration passage adjacent said bulkhead whereby refrigeration medium flows from the top to the bottom through said refrigeration passages and across the bottom to the outlets.

3,127,756
ICE MAKING AND STORAGE FACILITY

Crosby Field, Brooklyn, N.Y., assignor to Flakice Corporation, Brooklyn, N.Y., a corporation of Delaware

Filed May 12, 1961, Ser. No. 109,627
13 Claims. (Cl. 62—344)

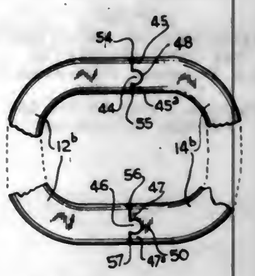
1. An ice-making and storage facility comprising, the combination of, an icemaker for producing ice in the form of sub-cooled fragments, a storage bin formed by heat-insulated walls with air passageways between the insulation and the ice storage zone, means to cool and circulate air through said passageways to maintain the surfaces which are contacted by the ice in said zone at a temperature below the freezing temperature of the ice, said last-named means including a refrigeration system having an air-cooling coil through which the air is circulated, an ice outlet chamber adjacent the periphery of said zone from which ice is withdrawn, and an ice rake assembly centrally positioned within said zone and comprising a rotatable sled rake and supporting means for supporting and rotating said sled rake about the central axis of said bin including rigid arm means projecting radially from said central axis and vertical chain means connecting said rigid arm means to said sled rake adjacent the periphery of said bin, said assembly including radial spacer means holding said chain means adjacent said periphery, said sled rake and said spacer means being freely moveable upwardly whereby rotary forces are imparted tangentially to said sled rake and it is adapted to ride upwardly upon the ice as it is rotated and to divert the ice toward said ice outlet chamber.



3,127,757
FINGER RING OF ARCUATE MEMBERS SNAP-FITTED TOGETHER PRIOR TO SOLDERING

Benjamin Weiss, 7154 169th St., Flushing, N.Y.

Filed June 28, 1960, Ser. No. 39,278
1 Claim. (Cl. 63—15.7)

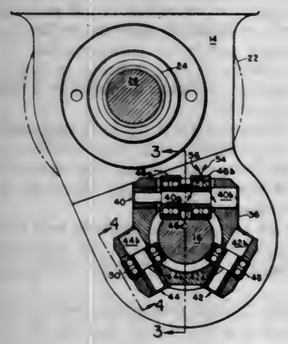


As an article of manufacture, a ring formed by a pair of complementary substantially semicircular arcuate metal sections, an initial letter integral with each of said metal sections at one end thereof, the free ends of the sections being abutted, the abutted ends of the sections opposite from said one end thereof being formed with a transverse ridge and groove interengaging in snap fit relation and soldered, the initial letters being laterally and vertically offset from each other at the abutted joined edges thereof, the end of each initial letter constituting a straight edge, there being a second ridge in one of said straight edges and a corresponding second groove in the opposite straight edge, said first-mentioned ridge and groove and said second ridge and groove extending parallel to the axis of the ring, said second ridge and second groove interengaging in snap fit relation and being soldered together.

3,127,758
COUPLING FOR PRECISION GRINDING MACHINE APPARATUS

Harry E. Luebkemann, Cincinnati, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio

Filed May 11, 1962, Ser. No. 193,968
3 Claims. (Cl. 64—23.7)



1. In a precision grinding machine having a wheelhead movable on a base by operation of a feed mechanism, the feed mechanism comprising in combination:

(*a*) a drive shaft rotatably supported in the base and having a flat surface along one side thereof,

(*b*) a drive sleeve rotatably supported from the wheel head having a clearance opening therethrough adapted loosely to receive said shaft for relative movement in a telescoping manner when the wheelhead is moved,

(*c*) a drive roller rotatably received in said sleeve for rotation on an axis transverse to the drive shaft and adapted to engage and roll along said flat surface and to transmit torque between said shaft and sleeve for rotation thereof together,

(*d*) a plurality of aligning rollers rotatably received in said sleeve and adapted to engage and roll along the cylindrical surface of said shaft to hold said said flat surface firmly in contact with said drive roller,

(*e*) means to adjust said drive and aligning roilers transversely relative to said shaft to adjust the contact pressure therebetween to maintain uniform contact when said shaft and sleeve are rotated in one and the other directions, and

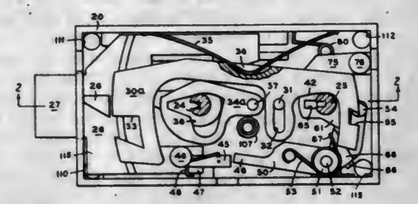
(*f*) means responsive to rotation of said sleeve correspondingly to move the wheelhead on the base.

3,127,759
SAFETY DEPOSIT BOX LOCK

Roy T. Ellis, 29–43 W. Apple St., Dayton 2, Ohio, and Stephen A. Denman, Piqua, Ohio; said Denman assignor to said Ellis

Filed Feb. 27, 1961, Ser. No. 91,915
22 Claims. (Cl. 70—339)

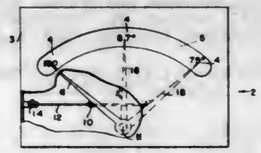
4. In a lock having a housing with a retractable locking bolt, a plurality of primary tumblers movable from positions normally blocking retraction of the bolt to unblocking positions, a sloted key nose for receiving a key to position the tumblers, a plurality of secondary tumblers surrounding the key nose, and means biasing the primary tumblers toward the secondary tumblers, but yieldable for movement of the primary tumblers in response to movement of the secondary tumblers by the said key.



3,127,760
METHOD OF CALIBRATING A TEMPERATURE GAUGE

Wylie C. Kirkpatrick, Wayland, and John W. Harrison and Robert D. Lowry, Winchester, Mass., assignors to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut

Filed Nov. 19, 1958, Ser. No. 774,913
2 Claims. (Cl. 73—1)

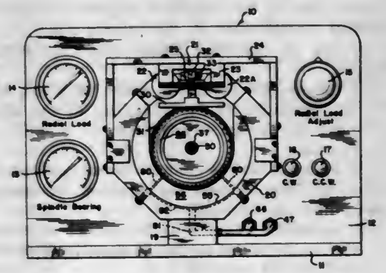


1. A method of calibrating a temperature gauge comprising employing a monofilament operatively connected with temperature indicating means and consisting of a heat shrinkable polymer, which polymer has been stretched at least 350% in at least one direction in a temperature gauge, heating the temperature gauge to a first temperature sufficiently to partially shrink the monofilament, recording the temperature, and then heating the temperature gauge to a second temperature higher than said first temperature and thereby further shrinking said monofilament and recording said second temperature.

3,127,761
BEARING RADIAL LOAD TORQUE TEST INSTRUMENT

Keith M. Gordon, Munsonville, N.H., assignor to Miniature Precision Bearings, Inc., Keene, N.H., a corporation of New Hampshire

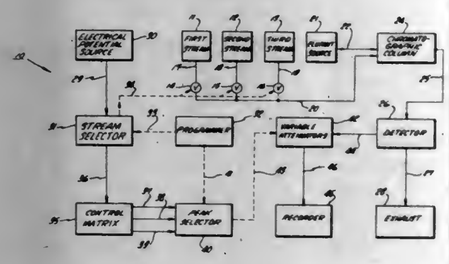
Filed Mar. 29, 1961, Ser. No. 99,221
7 Claims. (Cl. 73—9)



1. A bearing test instrument for measuring the running torque of an anti-friction bearing having inner and

outer race members and rolling elements disposed therebetween comprising a housing, a cylindrical spindle rotatably mounted and supported in said housing by a cylindrical gas bearing, said spindle having coaxial shaft means adapted to mate with said inner race member to rotate said inner race about an axis common with the spindle axis of rotation, a rotor having a central bore adapted to receive the outer race of said bearing, clamping means for face clamping said outer race member in the central bore of said rotor, driving means for rotating said spindle, whereby a running torque is applied to said outer race from the inner race through the said rolling elements therebetween, a torque restraining element attached to said rotor, said element being adapted to apply a restoring torque to said rotor in proportion to its rotational displacement to restrain said rotor at an equilibrium position indicative of the magnitude of the bearing running torque, gas jet means supported by said housing for supplying a substantially friction-free force against a partial surface of said rotor so as to produce an effective radial load on said bearing, and displacement-sensitive sensing means for measuring the rotational displacement of said rotor.

3,127,762
CHROMATOGRAPHY
William Kneen, Glendora, and William E. Fisher, Rosemead, Calif., assignors to Consolidated Electrodynamics Corporation, Pasadena, Calif., a corporation of California
Filed Mar. 23, 1961, Ser. No. 97,855
3 Claims. (Cl. 73—23)



1. A system for conducting chromatographic analyses comprising

(*a*) a chromatographic column;

(*b*) means for passing a stream of elutant through the column;

(*c*) means for introducing a sample to be analyzed into the elutant stream entering the column;

(*d*) a detector for receiving fluid emerging from the column, sensing the successive appearance therein of different components of the sample analyzed, and producing an electrical signal output in response thereto,

(i) the magnitude of the peaks of which signal are functions of the quantities of the components of the sample analyzed;

(*e*) a recorder;

(*f*) a plurality of output channel means connected between the detector and the recorder by normally open output circuits, and

(i) including means in each channel to attenuate the magnitude of an output signal applied thereto from the detector;

(*g*) means for controlling sample introduction into the column;

(*h*) a plurality of sample sources;

(*i*) means connected between said programmer, said means for introducing a sample into the column, and said plurality of sample sources for sequentially introducing samples from said sources into said column;

(*j*) a plurality of electrical conductors arranged in a rectangular array

(i) such that a conductor in one coordinate of the array corresponds to one of said sample sources, and

(ii) a conductor in the other coordinate of the array corresponds to one of said output channel means;

(*k*) means connected between the programmer and the sample source coordinate conductors and operable to apply an electrical potential to that sample source coordinate conductor corresponding to the source from which a sample is being analyzed;

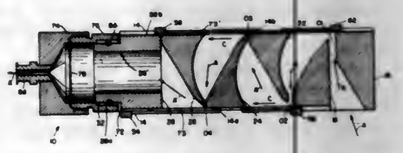
(*l*) a plurality of diodes disposed in a rectangular coordinate array

(i) such that each diode is connected between a sample source coordinate conductor and an output channel coordinate conductor at the crossing thereof to provide an electrical circuit therebetween;

(*m*) means for normally opening said output channel coordinate conductors and for sequentially closing and opening said conductors during each analysis; and

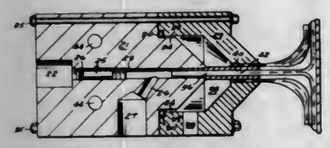
(*n*) output channel connecting means operable in response to the transfer by a diode of said electrical potential to any closed output channel coordinate conductor to close the normally open circuit connecting the output channel corresponding thereto between the detector and the recorder and to apply the attenuated output signal from the detector to the recorder.

3,127,763
COMPACT CASCADE IMPACTOR
Morton Lippmann, Mount Vernon, N.Y., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed July 19, 1961, Ser. No. 125,282
2 Claims. (Cl. 73—28)



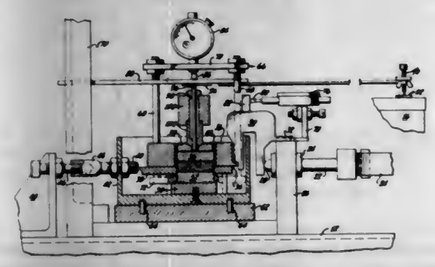
1. A cascade impactor for collecting particulate from an aerosol comprising an elongated main body consisting of a row of spaced members with chambers therebetween, means for holding said members rigidly in assembly, the chamber between each adjacent pair of members terminating in a nozzle formed by a portion of each of said adjacent pair of members, each said chamber and nozzle extending completely through said main body at substantially right angles to the long axis of said impactor with the next successive chamber and nozzle being reversed in orientation, thereby forming a row of nozzles along one side of said main body and a row of nozzles along the opposite side of said main body, and a particle collection plate opposite each row of nozzles, each nozzle having one of its forming portions touching its collection plate to prevent aerosol flow therebetween and its other forming portion spaced from its collection plate to permit aerosol to flow from each nozzle to the next successive chamber on the opposite side of the adjacent member with the spaced forming portion, thereby forming within said main body a passage for said aerosol successively through chambers and nozzles with a jetting of said aerosol from each nozzle against the opposite collection plate, said aerosol changing its direction of flow into the successive chamber resulting in impaction of particles from said aerosol on said collection plates, said nozzles in the direction of aerosol flow being successively smaller in cross-section to result in the impacted particles becoming distributed by size on said collection plates.

3,127,764
CONCENTRIC DOUBLE APERTURE AIR NOZZLE
Earl B. Hudson, Des Plaines, Ill., assignor to G.P.E. Controls Inc., Chicago, Ill., a corporation of Illinois
Filed Sept. 18, 1961, Ser. No. 138,850
4 Claims. (Cl. 73—37.5)



4. An improved proximity detection apparatus for sensing the proximity of a material against which said apparatus directs an airstream, comprising in combination: a first member having a through passageway, one end of said passageway being adapted to be connected to a first air source for supplying air at a first pressure to said passageway; a chamber having an opening surrounding the other end of said passageway; a second air source connected to supply air to said chamber at a second pressure greater than said first pressure; pressure-detecting means; and a second passageway having one of its ends connected with said through passageway between the ends of said through passageway and its other end connected to said pressure-detecting means, thereby to enable said pressure-detecting means to detect variation in the back pressure in said through passageway as the distance between said material and said proximity detection apparatus varies.

3,127,765
CONSOLIDATION AND SHEAR TEST APPARATUS
Hugh M. O'Neil, 610 16th St., Oakland 12, Calif.
Filed Aug. 3, 1961, Ser. No. 129,005
9 Claims. (Cl. 73—94)



1. In a shear apparatus wherein a soil specimen is subjected to a compressive force while laterally confined, said compressive force being transmitted through rigid porous members positioned above and below said specimen, one of said rigid porous members being fixed and one of said rigid porous members being movable toward and away from the other, the improvements comprising:

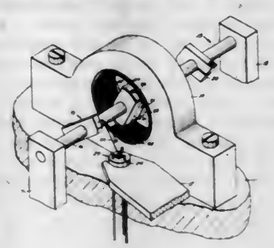
(*a*) support means secured to the fixed porous member at a point adjacent the specimen said means having at least a single, arm extending therefrom for supporting an extensometer opposite said movable rigid porous member;

(*b*) an extensometer mounted on said arm and positioned opposite the said movable rigid porous member, said extensometer having a reciprocating probe extending toward the surface of said movable rigid porous member farthest removed from said specimen;

(*c*) means for applying and removing a continuously variable force to the said surface of said movable rigid porous member farthest removed from said specimen, said means for applying a force being positioned beneath the reciprocating probe of the said extensometer and being free of contact therewith whereby movement of the said means for applying force will not directly affect the said extensometer and probe, said means for applying a force having a passage therethrough co-axial with said extensometer probe for receipt of a pin, said passage extending to the surface of said movable rigid porous member farthest removed from said specimen;

(*d*) a pin positioned in the said passage and planar means at the top thereof for contacting and controlling movement of the said probe of the said extensometer, said pin directly contacting the surface of said movable rigid porous member farthest removed from said specimen, said pin and said probe of said extensometer being free to move horizontally relative to one another.

3,127,766
APPARATUS FOR MEASURING THE STRENGTH OF A BOND BETWEEN TWO PIECES OF MATERIAL
Donald L. Wolle, Bern Township, Berks County, Pa., assignor to Western Electric Company, Incorporated, a corporation of New York
Filed Nov. 1, 1961, Ser. No. 149,462
2 Claims. (Cl. 73—141)



1. Apparatus for measuring the strength of a bond between two pieces of material which comprises:

a stator including a field winding in hollow coil form and a stationary mass of magnetizable material encompassed by the field winding;

a rotor mounted for rotation within the field winding of the stator, said rotor including a rotatable shaft and a movable mass of magnetizable material attached to the shaft in eccentric relation to the rotational axis of the shaft;

means for energizing said field winding to produce a magnetic field within a region including the two masses of magnetizable material such that said masses are magnetized wtih the same polarity and tend to repel each other;

means for biasing the rotor to a predetermined angular position when the field winding is de-energized, in which position the two masses are in relatively close proximity but angularly offset from one an-

other so that upon energization of the field winding a torque tending to rotate the shaft results from the repulsion between the magnetized masses;

means for fixedly supporting two pieces of material bonded to each other adjacent to the shaft;

an arm secured to said shaft and extending generally radially therefrom, said arm having a free end thereof arranged to engage one of said two bonded pieces of material and to exert a force on the bond between said two pieces of material when the torque is applied to the shaft;

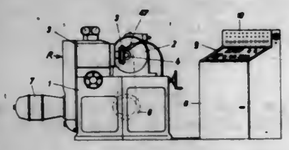
means for varying the magnitude of the current supplied by the field energizing means to vary the resultant torque applied to the shaft; and

a meter responsive to the current supplied to the field winding, said meter being calibrated to indicate directly the magnitude of the force applied to the bond.

3,127,767
NOISE TESTING DEVICE FOR GEARS AND TRANSMISSIONS

Egon Kamp, Frankfurt am Main Praunsheim, Germany, assignor to W. Ferd. Klingelnberg Sohne, Remscheid-Berghausen, Germany

Filed Aug. 11, 1960, Ser. No. 48,932
2 Claims. (Cl. 73—162)

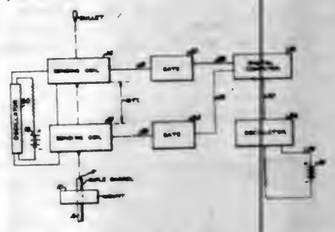


2. In a noise testing installation for gears and transmissions in which the gears are run together and the noise developed thereby detected by a microphone, and having an amplifier which is fed by the microphone: first and second spindles for supporting said gears, a plurality of band filters in parallel fed by the said amplifier operable to subdivide the frequency of the amplifier output, a plurality of variable second amplifiers respectively connected to be supplied by said band filters, a plurality of relays respectively connected to said second amplifiers to be responsive to the outputs thereof, optical and acoustical signaling means electrically connected to said relays operable in response to actuation of the relays which occurs when the permissible noise level of the gears being tested is exceeded in any of the frequency ranges of said band filters, and means for controlling the torque between the gears being tested including switch and control means and comprising: a direct current motor driving one spindle, a generator serially connected in circuit with the motor, a resistor serially connected with the motor and generator and having an intermediate terminal, a measuring bridge to which the said intermediate terminal of the resistor is connected, timer means, a switch operatively connected to said timer means so as to be actuated by the timer means, a direct current source, a pair of adjustable potentiometers supplied by said source each having an intermediate terminal, an electrical unit connected to said bridge and also connected for supplying current for the field excitation of said generator, the magnitude of the current so supplied and, therefore, the torque between the gears being tested being determined by adjustment of said potentiometers, said potentiometers and said resistance being adapted for having the voltages of their respective intermediate terminals compared by said bridge, said switch when actuated by said timer means being operable for selectively individually connecting said intermediate terminals of the potentiometers to said bridge, the voltage difference in said bridge controlling said electrical unit, and a drive motor for the other of said spindles.

3,127,768
ELECTRONIC METHOD FOR OBTAINING VELOCITY AND PRESSURE CHARACTERISTICS OF FIREARMS

George S. Mason, S. Main St. Ext., R.D. 2, Jamestown, N.Y.

Filed Sept. 13, 1960, Ser. No. 55,739
1 Claim. (Cl. 73—167)

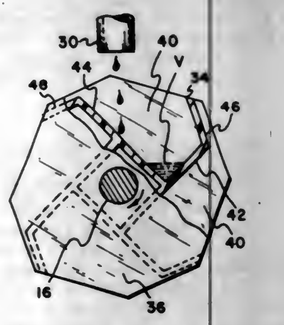


A method of testing a rifle to determine its velocity and pressure components that comprises the steps of mounting a rifle in a testing mount, firing the rifle and directing its bullet through the coils of at least two sensing members which have been connected to a high frequency oscillating circuit, transmitting the signal therefrom to gate means and from said gate means to a computer, applying a separate high frequency oscillating current to said computer while simultaneously obtaining an amplified signal from a pressure transducer mounted on said rifle to a second computer, whereby to obtain signals from the same rifle and the same explosion therefrom indicating velocity and pressure factors of said rifle bullet as fired from said rifle.

3,127,769
RAIN GAGE

Clifford P. Stucky and Orlin P. Stucky, both of Rte. 2, Box 103, Moundridge, Kans.

Filed June 28, 1962, Ser. No. 206,076
1 Claim. (Cl. 73—171)



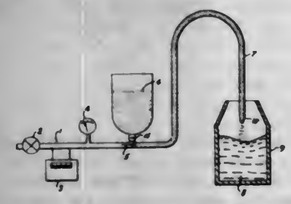
A rain gage comprising, in combination; a rotor having a horizontal axis of rotation; there being a set of circumferentially spaced apart, outwardly open pockets which are provided about said rotor, and the volumetric center of which when each is in an upwardly extending position being eccentric to the axis of rotation of said rotor; an equiangular box secured to the rotor in symmetrical disposition about said axis; a captive ball in the box adapted to roll, under gravity, from corner to corner as the rotor pockets fill with liquid; internal obstacles in said box in

the path of the ball to limit its rolling velocity to movement such that it transfers from one corner no farther than the next corner and stops; and an indicator device driven by the rotor and having indicator hands and a dial providing readings in terms of cumulative rainfall.

3,127,770
METHOD AND APPARATUS FOR MEASURING THE OUTPUT OF A PULVERULENT MATERIAL SUSPENDED IN A FLUID

Marc Allard and Bernard Trentini, Saint Germain-en-Laye, France, assignors to Institut de Recherches de la Siderurgie, Saint Germain-en-Laye, France, a professional institution

Filed Feb. 27, 1959, Ser. No. 795,962
Claims priority, application France Mar. 6, 1958
4 Claims. (Cl. 73—194)



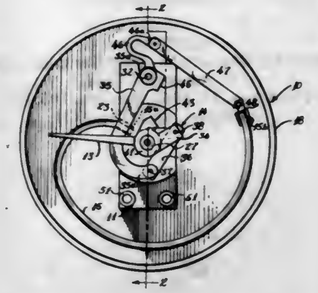
1. A method for measuring the throughput of pulverulent material introduced and suspended in a carrier fluid flowing at a constant rate of flow through a predetermined circuit, consisting in causing a first predetermined point of said circuit located downstream of the point of introduction of said pulverulent material to be subjected to a constant pressure for any predetermined fluid output; causing indication of the amount of carrier fluid flowing through said circuit at a second point of said circuit located upstream of said point of introduction of said pulverulent material; adjusting at a third point located upstream of said second point of said circuit the flow of said carrier fluid in such a manner that it flows at a constant rate at said second point of said circuit; causing indication of the pressure of said fluid at a point of the circuit located between said third point of said circuit and said point of introduction of said pulverulent material; and adjusting the throughput of pulverulent material in said carrier fluid flowing at a constant rate by application to said indicated pressure of an experimentally found relationship between the value of the throughput of pulverulent material and the indicated pressure at said second predetermined point of the circuit of said fluid, whereby the pressure indication constitutes a measure of the throughput of said pulverulent material.

3,127,771
GAUGE DRIVE SYSTEM

Karl L. Diehl, Chicago, Ill., assignor to Colorado Oil and Gas Corporation, Denver, Colo., a corporation of Delaware

Filed June 14, 1962, Ser. No. 202,538
15 Claims. (Cl. 73—345)

8. A compact temperature and pressure gauge including a pressure sensing element, an indicator, a linkage connecting said sensing element and said indicator, a temperature pointer, and temperature responsive means, said linkage including a first link connected to said indicator and mounted on a pivot post for pivotal movement about the axis of said pivot post, a second link connected to said sensing element and supported for pivotal movement about an axis fixed relative to said pivot post and spaced a distance *a* from the axis of said pivot post, and a third link pivotally joined to said first and second links at points spaced distances *d* and *b* from said pivot post axis and said second axis, respectively, and spaced apart a distance *c*; and wherein *d* is less than *a*/2 but greater than ¼", *b* is less than 2*a* but greater than *a*, and *a*—*d*+*c* falls within the range from about 0.85*b* to about 1.15*b*, said pivot

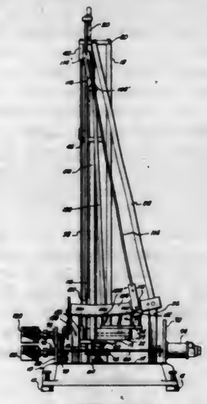


post having a bore therethrough, a drive shaft extending through the bore of said pivot post, said temperature pointer being connected to said drive shaft on one side of said pivot post and said temperature responsive means being connected to said drive shaft on the other side of said pivot post.

3,127,772
BAROMETER FOR INDICATING SEA LEVEL PRESSURE

Donald D. Kallenbach, Cheyenne, Wyo., assignor to Royal Industries, Inc., Los Angeles, Calif., a corporation of California

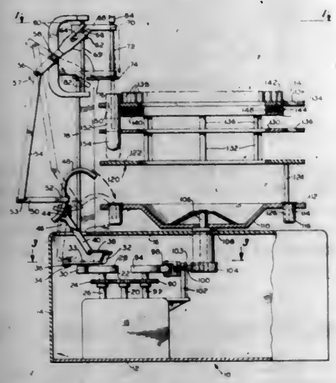
Filed June 6, 1960, Ser. No. 34,311
7 Claims. (Cl. 73—385)



3. Apparatus for indicating changes in sea level pressure in response to changes in ambient pressure comprising a vertical tube sealed at its upper end, a column of liquid supported in the tube by air pressure, means movable along the tube for sensing the top of the column, drive means responsive to the sensing means for moving the sensing means with changes in the level of the top of the column including first means for producing a movement proportional to the variations in ambient pressure, a differential device having two inputs and an output, indicating means actuated by the output of the differential device, means for actuating one input of the differential device in response to the movement of said first movement producing means, second means responsive to movement of the sensing means for producing a movement

proportional to variations in ambient pressure, said second means including means for adjusting the proportionality factor of said second means, and means for actuating the other input of the differential device in response to the movement of said second movement producing means.

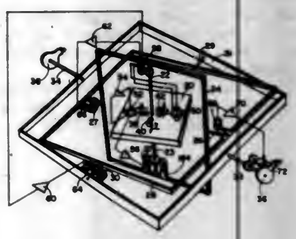
3,127,773
SAMPLING
Charles M. Blumenfeld, 4700 Parkridge Road, Sacramento, Calif.
Filed Apr. 17, 1961, Ser. No. 103,477
6 Claims. (Cl. 73—423)



1. In an automatic sampler having a turntable adapted to carry sample containers, a motor, means connecting the motor to the turntable to rotate it, a rocker post mounted to pivot adjacent the turntable, and means connecting the motor to the rocker post to oscillate it through an arcuate path and move a suction tube conneeted to the rocker post into and out of sample containers when they are on the turntable, the improvement comprising a rack, means for mounting the rack on the turntable to rotate with it, a plurality of open top elongated sample container mounted on the rack, an upright guide means mounted above the rack, a block mounted to rectilinearly slide up and down the guide means, an elongated suction tube extending downwardly from the block, a rocker arm mounted to pivot adjacent the guide, means connecting the rocker post to the rocker arm so the arm pivots when the post does, and means connecting the block to the arm to slide the block rectilinearly up and down the guide means and move the suction tube longitudinally into and out of containers as they move under the tube.

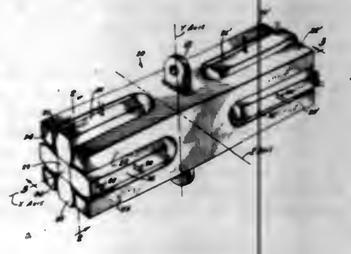
3,127,774
MEANS AND METHOD FOR DETERMINING THE DIRECTION OF THE AXIS OF ROTATION OF A CONTROLLABLY ROTATING PLATFORM
John J. Fischer, Fullerton, and Frank M. Pelteson, Long Beach, Calif., assignors to North American Aviation, Inc.
Filed Nov. 8, 1961, Ser. No. 151,011
14 Claims. (Cl. 73—504)

1. A process for determining the components of angular velocity of drift of a platform, expressed in a cartesian set of coordinates fixed relative to said platform, said platform having accelerometer means positioned thereon with three sensitive axes aligned with said cartesian axes comprising the steps of: aligning a first one of said axes in a north-south and initially locally level with respect to gravity direction; aligning a second one of said axes in an east-west and initially locally level with respect to gravity direction; releasing said platform to allow it to drift; measuring and computing the angular velocity of said platform about its north-south oriented axis; subtracting the known component of rotation of said platform due to earth's rotation to determine the angular velocity of drift of said platform about its north-south oriented axis; realigning said first north-south oriented axis into an east-west and initially locally level with respect to gravity



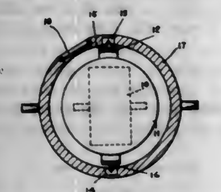
direction; aligning one of said axes other than said first axis into a north-south initially locally level with respect to gravity direction; releasing said platform to allow it to drift; measuring and computing the angular velocity of said platform about its newly north-south oriented axis; subtracting the known component of rotation of said platform due to earth's rotation to determine the angular velocity of drift of said platform about its newly north-south oriented axis.

3,127,775
VIBRATORY RATE GYROSCOPE
Roy A. Hansen, Los Angeles, and William J. Holt, Jr., Pacific Palisades, Calif., assignors to The Gyrex Corporation, Santa Monica, Calif., a corporation of California
Filed Oct. 28, 1960, Ser. No. 65,784
18 Claims. (Cl. 73—505)



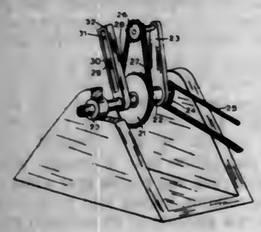
1. An inertial angular velocity sensing instrument, including, a vibratory member having a central portion and a plurality of tines symmetrically disposed with respect to said central portion, electromagnetic means positioned between pairs of adjacent tines for setting the tines in each pair in vibration toward and away from each other in a particular phase relationship to obtain a cancellation of shock forces applied to the sensing instrument, electromagnetic means positioned between the tines in different adjacent pairs for sensing any relative motion of the tines in the different adjacent pairs toward and away from each other to obtain a cancellation of the effects of shock on the sensing instrument and to obtain a sensing of the angular velocity of the sensing instrument, and means for rigidly securing said vibratory member at said central portion.

3,127,776
LIQUID METAL FLOATED GYROSCOPE
Michael Tarasevich, Glen Cove, N.Y., and Milan A. Telian, San Diego, Calif., assignors to American Bosch Arma Corporation, a corporation of New York
Filed June 27, 1960, Ser. No. 39,089
7 Claims. (Cl. 74—5)



1. Means for supporting a gyroscope comprising a tank, a fluid tight casing suspended in a gimbal ring in said tank, said gimbal ring being adapted for rotation about a vertical axis through bearings and a floating medium in said tank between said casing and said tank, said floating medium comprising an alloy of bismuth, indium and tin, and having a specific gravity of approximately 7.84 at a temperature of 85° C.

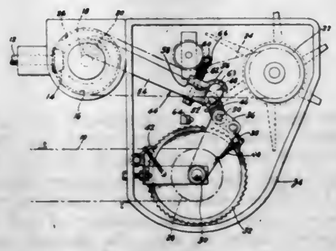
3,127,777
MECHANICAL MOVEMENT FOR THE CONVERSION OF CONTINUOUS MOTION INTO INTERMITTENT MOTION
Paul Pietsch, Einbeck, Hannover, Germany, assignor to Arnold & Stolzenberg G.m.b.H., Einbeck, Hannover, Germany
Filed Aug. 22, 1961, Ser. No. 157,864
Claims priority, application Germany Aug. 22, 1960
14 Claims. (Cl. 74—84)



1. A mechanical movement comprising a central body having a closed peripheral surface lying in a plane and surrounding an axis transverse to said plane, a satellite swingable about said central body in said plane, a closed flexible member encircling said satellite and said central body in peripheral engagement therewith, and a guide body slidably engaging a portion of said flexible member, one of said bodies being coupled to a load for operating it with intermittent motion upon a swinging of said satellite about said axis, the other of said bodies being fixed against displacement.

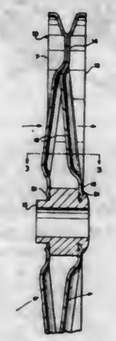
3,127,778
RATCHET DRIVE SAFETY RELEASE
Earl E. Koch, Mohnton, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed June 26, 1961, Ser. No. 119,702
6 Claims. (Cl. 74—116)

1. Ratchet drive mechanism for the movable apron or chains of a manure spreader movably mounted to effect feeding of manure to the discharge end of the spreader and passing around rotatable supporting and actuating means, said drive means comprising, a toothed ratchet gear connectable to said rotatable supporting and actuating means, a pawl arm oscillatably supported at one end substantially coaxially with said gear, a pawl movably carried by the opposite end of said pawl arm and engageable with the teeth of said gear, and a crank supported for rotation about an axis fixed relative to the axis of said gear, in combination with a broken pitman extending between said crank and pawl arm and connected respectively at its opposite ends thereto, said broken pitman comprising two arms each having one end permanently pivotally connected together and one of said arms being at an acute angle to the axis of the other arm, whereby said pivotal connections are not in a straight



line, and releasable cam-like latch means on one of said pitman arms engageable releasably with a portion of the other pitman arm normally to hold said pitman arms in extended driving condition but said latch means being yieldable to permit breaking of said pitman and movement of the ends of the arms thereof to a contracted position upon said apron or chains resisting forces applied by said drive means in feeding direction in excess of a predetermined amount, said cam-like latch means also being operable to effect re-engagement of said latch means with said one pitman arm when the arms of said broken pitman are extended during retracting movement of the crank.

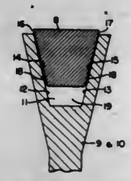
3,127,779
PULLEY
Alvin A. Hanke, Parma, Ohio, and Merlin S. Hanke, 501 Vineland Road, Bay Village 40, Ohio; said Alvin A. Hanke assignor to said Merlin S. Hanke
Filed Jan. 18, 1962, Ser. No. 167,037
10 Claims. (Cl. 74—230.14)



2. A pulley comprising, an outer rim for engaging a V-belt or the like, a central hub, a plurality of spokes connecting the hub and rim together, said hub, rim and spokes defining a plurality of apertures for the passage of air therethrough, said spokes being arranged in axially spaced pairs, each of said spokes being a dished radially

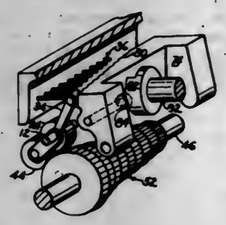
elongated vane, the spokes being oriented in the same direction.

3,127,780
BELT DRIVE
Wayne H. Buhrmann, Martell, Nebr., assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed May 18, 1962, Ser. No. 195,754
2 Claims. (Cl. 74—229)



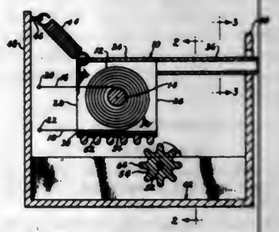
1. A belt drive for use in combination with an automotive vehicle having dual axles, one driven and one idle, with aligned dual tire rims on each end of each axle, comprising a V-belt sheave mounted between each of the dual rims and aligned with the other sheave, the belt receiving groove around the outer periphery of each sheave having angularly extending sides, the included angle of said belt receiving groove in each sheave being in the range of 22° to 32° and a V-belt under tension in said grooves of the aligned sheaves to drive the idle axle from the driven axle when power is applied thereto, the included angle of said belt being in the range of 22° to 32°, the angle being no less than that of said belt receiving groove in said sheave around which it is trained and the thickness of the belt being at least 75% of the theoretical top width of the belt.

3,127,781
MACHINE TOOL TRANSMISSION
Herbert R. Uhtenwoldt, Wilmington, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed Feb. 6, 1961, Ser. No. 87,409
4 Claims. (Cl. 74—348)



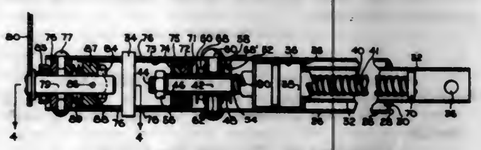
1. In a transmission mechanism having a cone of stepped gears fixed on a first shaft, a second shaft rotatable about an axis having a gear axially movable thereon, and a bracket having a tumbler gear engaged with said axially movable gear, said bracket axially movable therewith and pivotal about said axis for engagement of said tumbler gear with the gears of said cone, a tumbler gear shifting mechanism comprising in combination, a rotatably positionable speed selection dial indexed for rotation to selected positions, a rack connected to said axially movable gear and said bracket for longitudinal movement thereof in unison along said second shaft when said rack is moved longitudinally, a pinion gear connected to and rotatable with said dial, said pinion gear engaged with said rack for longitudinal movement thereof to a selected position when said dial is rotated to a corresponding selected position, a pivotal engaging member having a cam surface stepped in accordance with the gears of said cone and engaged with said bracket for pivotal movement thereof as said bracket is moved along said second shaft to maintain a predetermined clearance between said tumbler gear and the gears of said cone, fixed stop means spaced from said cone and adapted to stop pivotal movement of said bracket in predetermined angular positions as said bracket is moved along said cone, a cam follower fixed in said engaging member, a movable cam engaged with said follower, and means to move said cam to effect pivotal movement of said engaging member against said bracket for rotation thereof to eliminate the predetermined clearance between said tumbler gear and the gears of said cone and to rotate said bracket into firm contact with said stop means.

3,127,782
ELECTROMECHANICAL DRIVE MECHANISM
Alvin S. Hopping, Nolan's Point, Lake Hopatcong, N.J.
Filed Apr. 6, 1960, Ser. No. 20,375
6 Claims. (Cl. 74—405)



1. A mechanically assisted electromagnetic device comprising a ferromagnetic pinion gear; means for driving said pinion gear in rotary motion; and a travelling assembly which includes a plunger, a rack linked to said plunger by linking means and adapted to engage said pinion gear, a resilient member for normally disengaging said rack and pinion gear and retaining said travelling assembly in a normal rest position, an electromagnetic field coil adapted, on passage of electric current therethrough, to develop a magnetic engaging force between said rack and said ferromagnetic pinion gear sufficient to overcome the disengaging force exerted by said resilient member and cause said rack and pinion gear to engage; whereby such engagement of said rack and pinion gear while said pinion gear is driven in rotation impels said travelling assembly from its normal rest position to an actuated position, and a ferromagnetic stop disposed to engage said linking means when said assembly is so impelled to said actuated position.

3,127,783
ADJUSTABLE HOLDING MECHANISM
Jack E. Martens, Gary, Ind., assignor to The Anderson Company, a corporation of Indiana
Filed June 8, 1961, Ser. No. 115,694
8 Claims. (Cl. 74—424.8)



1. A position brake mechanism comprising in combination; a first member and a second member coaxially and telescopically disposed with respect to each other, means on each member for connection to a device to be positioned, said first member fixedly carrying a nut means

therewith, said second member rotatably carrying a screw means having helical threads of appreciable axial lead cooperating with the nut means whereby axial force applied between said members will cause relative axial movement therebetween and rotation of said rotatable screw, and brake means on said second member movable to brake the screw means for nonrotation in either direction to thereby prevent relative movement of said members.

3,127,784
ANTI-BACKLASH GEARS
Robert F. O'Neill, 1613 Comly St., Philadelphia, Pa.
Filed Jan. 29, 1963, Ser. No. 254,841
1 Claim. (Cl. 74—440)
(Granted under Title 35, U.S. Code (1952), sec. 266)



In a gear train,
a first gear having a coaxial, outwardly extending cylindrical hub and a coaxial tubular member extending from said hub,
a second gear coaxially and rotatably mounted about said cylindrical hub,
said first and second gears being in contacting relation and having the same diametral pitch and number of teeth thereon, said teeth of said first gear being staggered with respect to said teeth of said second gear,
a shaft extending through said tubular member and said hub,
means for clamping said tubular member to said shaft and for retaining said second gear in said contacting position,
a pair of aligned apertures formed in said first and second gears,
a pair of resilient rods extending through and filling said apertures,
and mating gear means having teeth thereon for meshing engagement with said teeth of said first and second gears when said latter mentioned teeth are urged into approximate alignment against the bias of said resilient rods; whereby said teeth of said first and second gears will be in wedged contact with said teeth of said mating gear.

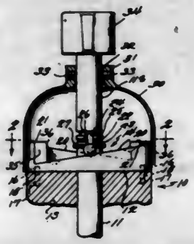
3,127,785
SINGLE LEVER ENGINE AND IDLE CONTROL
John F. Morse, Hudson, Donald W. Waner, Munroe Falls, Frank S. Payerle, Akron, and Roger F. Olsen, Cuyahoga Falls, Ohio, assignors to The Morse Instrument Co., Hudson, Ohio, a corporation of Ohio
Filed Aug. 22, 1960, Ser. No. 51,061
10 Claims. (Cl. 74—472)

1. In a single lever control unit for opening and closing a throttle and operating a clutch of an engine having a housing, a throttle control member, a clutch control member operatively connected to said throttle control member for movement only during the first portion of rotation of said throttle control member, said members adapted for operative connection with the throttle and clutch of an engine, the improvement comprising an idle control means comprising, a rotatable drive member journaled in said housing and normally operatively connecting the throttle and clutch control members, a throttle control shaft journaled in an axially translatable with respect to said drive member, a control lever attached to and extending laterally from said control shaft, said throttle control member extending laterally from said control shaft, engaging means for selectively connecting said throttle control shaft to said drive member, axial translation of said throttle control shaft disconnecting said engaging means



to permit regulation of the throttle independently of the clutch.

3,127,786
DETENT FOR A SELF-CLOSING WATER FAUCET
William Hubert Wooley, 509 S. 31st St., Corsicana, Tex.
Filed Dec. 13, 1960, Ser. No. 75,532
4 Claims. (Cl. 74—527)

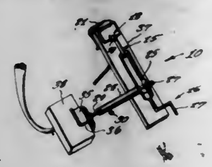


1. In a self-closing water faucet, a housing, a spring biased valve stem extending vertically through said housing, a cam member seated on the top of said housing having an inclined surface provided with spaced detents, portions of said valve stem defining a vertically disposed slot therethrough, an arm extending transversely from said stem passing through said slot and being vertically slidable therein, ball members on said arm ridingly engaged with said inclined surface and engaged selectively in said detents, a handle operatively connected to said valve stem for rotating said valve stem, means defining a plurality of annular grooves on said valve stem surrounding said slot, and a spring clip selectively engaged in one of said grooves and extending across a portion of said slot above said arm to limit movement of said arm in said slot.

3,127,787
ACCELERATOR DEPRESSOR
Segar C. Fagan, 4111 54th St., Bladensburg, Md.
Filed Nov. 2, 1961, Ser. No. 149,552
1 Claim. (Cl. 74—532)

A device for depressing a pivotally mounted accelerator pedal to an adjustable extent relative to a brake pedal disposed laterally thereof, comprising a spring clamp fitting on the free end of said accelerator pedal for attaching the device thereto, a threaded shaft connected to said clamp through a ball and socket joint to permit universal movement of said shaft with respect to said clamp, means for rotating said shaft at the end thereof remote from said

joint, a cylindrical body provided with an internal threaded bore in engagement with said threaded shaft to effect longitudinal movement of said body in response to the rotation of said shaft, an adjustable post extending laterally from said body towards said brake pedal comprising a tubular member having a sleeve at one end thereof for adjustable mounting along said body, a rod extending from the opposite end of said tubular member and provided at



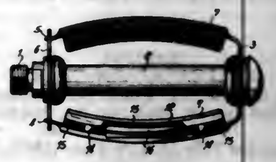
its free end with a second spring clamp for attachment to the brake pedal, a ball and socket joint interconnecting said second clamp and said rod for universal movement, a set-screw on said sleeve for fixing the position thereof along said body and a second set-screw on said tubular member for fixing the position of said rod thereon, so that rotation of said shaft effects a depression of the free end of the accelerator pedal to any desired degree.

3,127,788
POSITION-RETAINING DEVICE
Jack E. Martens, Gary, Ind., assignor to The Anderson Company, a corporation of Indiana
Filed Dec. 29, 1960, Ser. No. 79,255
4 Claims. (Cl. 74—586)



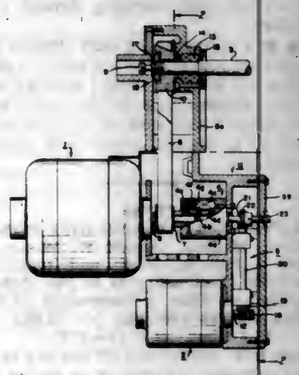
1. A position-retaining device comprising in combination; a pair of axially spaced adjustable members each adapted to be attached to respective members which are to be fixedly retained in relative position, one of the adjustable members being telescopically received within the other member in nonrotative relationship, said one adjustable member fixedly carrying a nut member, the other of said adjustable members rotatably carrying a screw member axially disposed therein and being operatively received within the nut member, said screw member having threads of appreciable axial lead whereby axial force applied to either adjustable member relative to the other will cause rotation of the screw member and repositioning of the adjustable members, resilient means encircling a substantial portion of the one adjustable member and received within the other adjustable member normally urging the adjustable members into a retracted position, releasable holding means operative between the screw and said other adjustable member for restraining rotation of said screw relative thereto, second resilient means concentrically disposed within said other member and stronger than the first-mentioned resilient means operative in one direction to urge the holding means into operative contact whereby the adjustable members will be fixedly restrained from movement to an extended position but permit movement to the retracted position responsive to a force above a predetermined value, and release means operative with the holding means to overcome the second resilient means whereby the adjustable members are returned to their retracted position by the action of the first-mentioned resilient means.

3,127,789
FOOT PEDAL STRUCTURE FOR BICYCLES AND LIKE VEHICLES
Heinrich van de Loo, Lendringsen, Kreis Iserlohn, Germany, assignor to Union Sils, van de Loo & Co., Frondenberg (Ruhr), Germany, a firm
Filed May 20, 1960, Ser. No. 30,534
2 Claims. (Cl. 74—594.4)



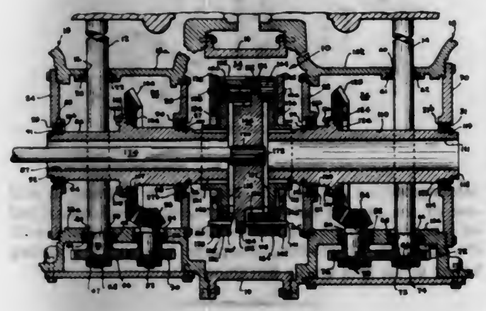
1. A bicycle pedal comprising a U-shaped bow frame member having a plate portion and side members integral with the plate portion, an end plate spanning the ends of the side members, a tubular frame member adapted to receive a pedal axle connecting said plate portion with the end plate, foot rests of rubber and holding plates to keep said foot rests on the side members, there being tubular rivet shanks formed integral with the side members extending through and substantially filling apertures in the holding plates for maintaining the holding plates and the foot rests firmly against the side members, and heads on the tubular shanks countersunk in depression portions in the holding plates arranged to serve as spacer members between the side members and the holding plates.

3,127,790
ELECTRIC DRIVE
Charles K. Howey, Torrance, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Apr. 20, 1960, Ser. No. 23,568
4 Claims. (Cl. 74—661)



1. An electric drive, comprising: an output shaft; a first motor; means connecting said motor to said output shaft to drive said output shaft; a second motor; means including a normally disengaged, electrically operated clutch coupling said second motor to said output shaft; a first motor energizing circuit connected to said first motor and a second motor energizing circuit connected to said second motor for energizing said motors in a sense to drive said output shaft in one direction; a normally inoperative motor braking circuit coupled to said first motor; a clutch control circuit coupled to said clutch; and control means coupled to said first motor energizing circuit, to said motor braking circuit and to said clutch control circuit to disconnect said first motor energizing circuit from said first motor, to operate said motor braking circuit and to operate said clutch control circuit to engage said clutch.

3,127,791
POWER TRANSFER DEVICE
Charles C. Roe, Rockford, Ill., assignor to Warner Electric Brake & Clutch Company, South Beloit, Ill., a corporation of Delaware
Filed Jan. 22, 1963, Ser. No. 253,163
6 Claims. (Cl. 74—675)



1. A power transfer device adapted to transfer power alternately from one of two input power sources to an output shaft, said transfer device comprising:

a pair of axially aligned input shafts at least one of said shafts defining an open central portion extending into said shaft, each of said input shafts being interconnected, respectively, to one of said input power sources, and an output shaft disposed within the open central portion of said one of said input shafts;

a spur gear affixed to one end, respectively of each shaft of said pair of input shafts, said spur gears when assembled on the ends of said shafts being in face-to-face relation and defining a space therebetween;

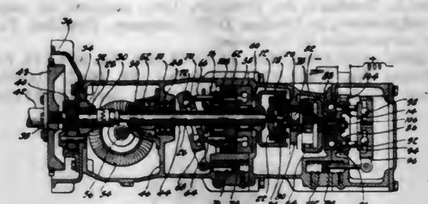
a pair of gear mounting plates each of which is telescopically received about one of said input shafts;

a caged member mounted on one end of the output shaft, said caged member being operatively disposed within the space defined between said face-to-face spaced spur gears, said caged member having a plurality of radially extending flanges thereon; and

a plurality of pinion gears meshingly engaged with each of said spur gears, respectively, each of said pinion gears being rotatably mounted on a shaft, one end of each of said shafts being mounted in one of said mounting plates, the other end of each of said shafts being mounted in the radially extending flange of said cage member, said pinion gears engaging one of said spur gears being mutually meshingly interengaged with the pinion gears engaging the other of said spur gears.

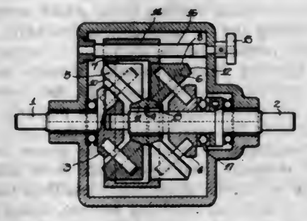
3,127,792
HYDROSTATIC-MECHANICAL POWER TRANSMISSION MECHANISM
Alexander Balbaschewski, Cologne, Germany, assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Dec. 7, 1960, Ser. No. 74,423
Claims priority, application Germany Dec. 8, 1959
13 Claims. (Cl. 74—687)

1. A power transmission mechanism for delivering driving torque from a driving member to a driven member comprising a planetary gear unit, said planetary gear unit including a sun gear member, a ring gear member, a carrier member and planetary gears rotatably mounted on said carrier member in driving engagement with said sun gear member and said ring gear member, said carrier member being connected to said driving member, a hydrostatic pump unit, a hydrostatic motor unit, said hydrostatic units being disposed in a common, closed hydraulic circuit whereby one unit drives the other, means for



drivably connecting said sun gear member to said pump unit, overrunning clutch means for establishing a one-way driving connection between said motor unit and said ring gear member, a connection between said driven member and said ring gear member, means for varying the displacement of said motor unit, means for varying the displacement of said pump unit, and brake means for anchoring said pump unit during high speed operation of said mechanism.

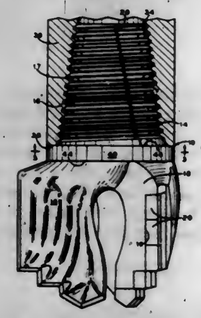
3,127,793
INFINITELY VARIABLE SPEED CHANGE GEAR
Manabu Kashihara, 12 Karahashi-Hanazono-cho, Minami-ku, Kyoto, Japan
Filed Jan. 30, 1961, Ser. No. 85,687
Claims priority, application Japan Feb. 20, 1960
5 Claims. (Cl. 74—796)



1. An infinitely variable speed change gear comprising a driving shaft and a driven shaft arranged coaxially, two groups of double cone wheels provided with shafts, each group containing a plurality of double cone wheels and each double cone wheel of each group having a top cone surface arranged to touch internally at one generating line to an imaginary common cylindrical surface which has the same axis with the axis of the driving shaft and a bottom cone surface, a member arranged to rotate with the driving shaft, the shafts of the double cone wheels of the one group being supported by the above said member, a member arranged to rotate with the driven shaft, the shafts of the double cone wheels of the other group being supported by the last mentioned member, a wheel with two cone surfaces, and having an internal diameter greater than the diameter of the driven shaft, arranged normally coaxially with the driven shaft, the one cone surface of the wheel being engaged to the bottom cone surface of the double cone wheel of the one group, and the other cone surface of the wheel being engaged to the bottom cone surface of the double cone wheel of the other group, a non-rotatable bridging member with two ring-shape parts, of which the one ring-shaped part engaging at one point to the top cone surface of each double

cone wheel of the one group and the other ring-shaped part engaging at one point to the top cone surface of each double cone wheel of the other group and operating means to shift the bridging member along the top cone surfaces of the double cone wheels.

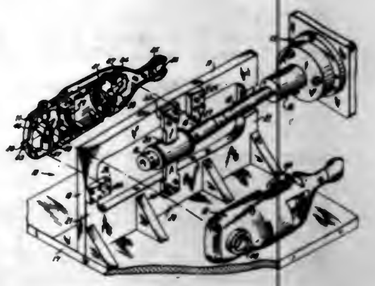
3,127,794
METHOD OF MAKING DRILLING BITS
Jesse L. Stockard, Jr., Houston, Tex., assignor, by mesne assignments, to Hughes Tool Company, Houston, Tex., a corporation of Delaware
Original application Mar. 31, 1959, Ser. No. 803,110, now Patent No. 3,061,025, dated Oct. 30, 1962. Divided and this application Aug. 16, 1962, Ser. No. 217,391
3 Claims. (Cl. 76—108)



1. A method of producing a drilling bit of the type including a plurality of bit segments having cooperatively engaging upper shank portions rigidly secured together and provided with exterior tapered threads and an annular shoulder for engagement with the end of a cooperating interiorly threaded drilling collar which comprises the steps of forming the bit segments individually, positioning the shank portions of the segments in cooperating engagement, forming exterior tapered threads and an exterior ring receiving portion adjacent the lower end of the threads on said cooperating shank portions while together, measuring the axial position of the tapered threads on said bit segments to determine the proper axial location of said shoulder, heating separate from said bit segments a ring of interior dimensions less than the exterior dimensions of said ring receiving portion, fitting said ring, while heated, on said ring receiving portion in a position such that the upper surface of said ring will be disposed in the determined axial location of said shoulder, and allowing said ring to cool whereby the same serves to rigidly secure the bit segments together under peripheral stress and to provide said collar end engaging shoulder.

3,127,795
BORING APPARATUS AND SPLIT-CASING WORKPIECE THEREFOR
Adam J. Quick, Lutherville, and Charles A. Porter, Baltimore, Md., assignors to The Black and Decker Manufacturing Company, Towson, Md., a corporation of Maryland
Filed Aug. 8, 1960, Ser. No. 48,194
6 Claims. (Cl. 77—3)

6. Apparatus for boring an internal bearing surface in a split-casing workpiece of the type having a pair of complementary mating halves adapted to be joined together along a common longitudinal midplane, wherein one of the halves is provided with an opening communicating with the longitudinal midplane, said boring apparatus comprising a boring bar rotatable about its longitudinal axis, a fixture including an outboard bearing for journaling said boring bar and further including a supporting lug secured to said bearing and projecting radially therefrom, and means to clamp first one and then the other of said mating halves within said fixture, whereby



said supporting lug projects through the opening in said one of the mating halves, and whereby the longitudinal axis of the said boring bar is substantially aligned with the common longitudinal midplane between the mating halves of the split-casing workpiece.

3,127,796
HOUSING BUCK INSTALLATION DRILL JIG
Alvin C. Amos, Jr., Schuylkill Haven, Pa., assignor to Aetna Steel Products Corporation, New York, N.Y., a corporation of New York
Filed May 9, 1962, Ser. No. 193,489
9 Claims. (Cl. 77—62)



1. A jig comprising opposite jig-clamping end sections, an intermediate section to which said end clamping sections are attached, at least one of said end clamping sections being provided with at least one drill-guide opening, said end clamping sections extending transversely of and projecting beyond said intermediate section, at least one of said end clamping sections being provided with spring pressed pin means extending endwise of the jig outwardly from said end clamping section, at least one of said end clamping sections being adjustably movable toward and away from the other of the end clamping sections, and means operatively connected to said one of said end clamping sections within said intermediate section for moving it adjustably toward and away from said other end clamping section to clamp said jig in drill-guide position.

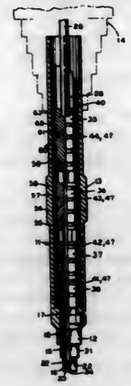
3,127,797
HAND TOOL FOR ROTATING A THREADED MEMBER HAVING AXIALLY MOVABLE CLUTCHING HANDLE SECTIONS
Jesse P. Rogers, 11811 Lincoln Ave., Beltsville, Md.
Filed May 1, 1962, Ser. No. 191,522
2 Claims. (Cl. 81—58.3)



1. A self-selecting nut runner for quick advancement of a nut during continuous contact therewith comprising a housing connected in alignment with a removable outer socket casing, a plurality of normally aligned sockets encased by said outer socket, each of said plurality of sockets independently movable with respect to the adjacent sockets to accommodate various sized nuts, a first biasing means for maintaining said plurality of sockets in the normally aligned position, a shank normally connected at one end thereof to said housing, a floating handle means located at the other end on said shank, said handle means including a first section rigidly mounted on said shank, a second section slidably mounted on and extending beyond said first section, a second biasing means interengaging said first and second sections normally biasing said second section in a disengaged position, means for engaging said second section to said shank comprising an axial polygonal shaped opening in said second section and a mating polygonal shaped member located on said shank, said second section being capable of being constrained to an inward engaged position engaging said shank.

3,127,798
TELESCOPING INSERTED WRENCHES
Michael J. Gol, 33 Catalpa Terrace, Darien, Conn.
Filed Sept. 29, 1961, Ser. No. 141,784
9 Claims. (Cl. 81—71)

1. An adjustable tool comprising: an outer tube; a plurality of nested tubes, each having a portion within said outer tube, and each having at one end a portion extending beyond the end of the tube of next larger size; each of said tubes terminating at the other end in a respective plunger and the plungers being aligned longitudinally with juxtaposed radial surfaces; a sleeve enclosing the peripheral surfaces of said plungers; detent means which include a set of annular recesses and resilient locking means disposed between said sleeve and each of said plungers; each of said inner tubes being movable inwardly to a telescoped condition within the tube of next larger size in response to the application of inward force upon the respective extending portion whereby the associated plungers are adapted to assume a new axial position in said sleeve, being secured in said new position by said detent means, and reset means disposed for applying an outward motion upon said plungers for returning inwardly telescoped tubes to the position at which the said



portions extend beyond the end of the tube of next larger size.

3,127,799
REVERSIBLE RATCHET DRIVE
Clifford A. Bergquist, Monterey Park, Calif., assignor to Pendleton Tool Industries, Inc., Los Angeles, Calif., a corporation of California
Filed May 3, 1962, Ser. No. 192,221
2 Claims. (Cl. 81—62)



1. A ratchet drive comprising:
a body having a bore opening through one end of the body,
means for turning said body,
a ratchet wheel rotatably mounted in said bore and having ratchet teeth about its periphery,
means on said ratchet wheel accessible at said one end of said body for drivably coupling said wheel to an element to be rotated,
a generally semicircular recess in the wall of and opening to said bore and continuing at one end in a journal bore opening through one end of said body,
a ratchet pawl having one generally semicylindrical end positioned in said recess, a cylindrical intermediate portion journaled in said journal bore, and another semicylindrical end projecting beyond the other end of said body,
said other end of said pawl having a transverse face approximately parallel to the rotation axis of the pawl,
said one end of said pawl having two longitudinal edges selectively engageable with said ratchet teeth by rotation of said pawl in said recess to lock said body and ratchet wheel against relative rotation in one direction or the other depending upon which pawl edge engages said teeth,
a pawl reversing member rotatably mounted on the other end of said body,

a plunger tube carried on and extending generally radially of said pawl reversing member to a position in the vicinity of said transverse pawl face.

there being an opening through said tube which opens to the outside of said latter member,

a plunger slidably fitted in said one end of said tube and engaging said transverse pawl face,

a spring in said tube seating at one end against said plunger,

a set screw threaded in the other end of said tube and seating against the other end of said spring,

said set screw being accessible exteriorly of said member, and

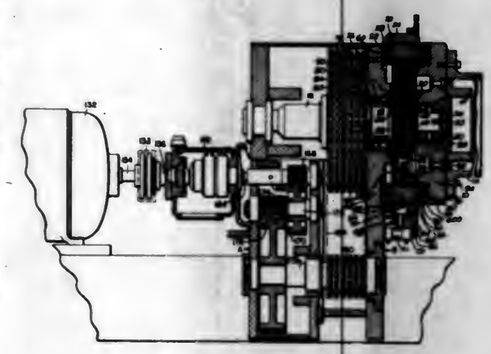
said member being rotatable on said body between one position in which said plunger engages said pawl at one side of its rotation axis, whereby to resiliently urge one pawl edge into engagement with said ratchet teeth, and another position wherein said plunger engages said pawl at the opposite side of its rotation axis, whereby to resiliently urge the other pawl edge into engagement with said ratchet teeth.

3,127,800
ADJUSTABLE WRENCH
Ovila Kirouac, 733 Campbell Blvd., Chibougamau, Quebec, Canada
Filed Sept. 4, 1962, Ser. No. 221,277
Claims priority, application Canada Oct. 6, 1961
1 Claim. (Cl. 81—166)



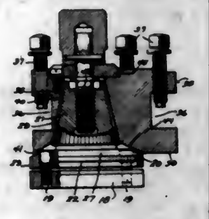
An adjustable wrench comprising an elongated cylindrical body, having a fixed integral jaw at one end at an angle to said body, an axial extension at the other end of said body of a smaller diameter than that of said body, said body and said extension being provided with an axial bore closed at one end by said fixed jaw and opening at the free end of said extension, said bore being in communication with the exterior at one side of said body and of said extension by means of a longitudinal slot extending from said fixed jaw to the free end of said extension, a peripheral shoulder formed at the junction of said body and said extension, the free end of said extension being externally threaded, an inwardly threaded sleeve screwed on the threaded free end of said extension, a disc integral with said sleeve and forming a radially outwardly protruding abutment shoulder, a tubular sleeve spacedly surrounding said extension and rotatably bearing on said first-named sleeve and said body, and prevented from longitudinal displacement with respect to said body and said extension by abutting said shoulders at its two ends, said tubular sleeve having inner threads at its end adjacent said body, protruding in the space between said tubular sleeve and said extension, a stem longitudinally displaceable within said bore and having on one side a longitudinal rib longitudinally displaceable within said slot, a movable jaw secured at an angle to one end of said stem and co-operable with said fixed jaw, said rib extending from said movable jaw to the free end of said stem, and rack teeth formed in said rib along the entire length thereof and in threaded engagement with the threads of said sleeve, rotation of said sleeve causing movement of said movable jaw towards and away from said fixed jaw, to thereby adjust the spacing between said jaws.

3,127,801
CONTOUR ROLL-TURNING LATHE DRIVE MECHANISM AND GEAR SHIFTING ASSEMBLY
Jack N. Binns, 4886 Oaklawn Drive, Cincinnati, Ohio
Filed Nov. 3, 1959, Ser. No. 850,575
15 Claims. (Cl. 82—29)



1. In a headstock assembly, the combination of a face plate, a drive spindle, and planetary drive means interconnecting said face plate in driven relationship with said drive spindle, said planetary drive means including an annular member shiftable to selectively place the face plate in direct driven relationship with said drive spindle or in reducing driven relationship therewith for rotation at a slower speed and a higher torque than said drive spindle, and a plurality of duplicate hydraulic means sequentially operative to shift said member of said planetary drive means.

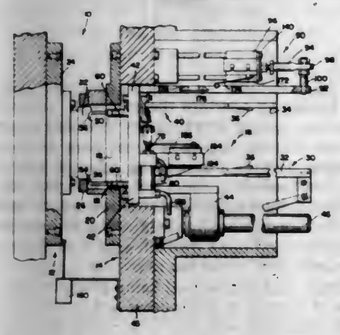
3,127,802
LATHE TOOL HOLDER
Frank P. Zierden, 3709 E. Allerton Ave., Cudahy, Wis.
Filed Sept. 17, 1959, Ser. No. 840,783
3 Claims. (Cl. 82—36)



1. A holder for adjustable mounting on the tool slide of a lathe for receiving a plurality of cutting tools and comprising a base member having a circular plate portion with a conical fluted boss extending from one side thereof and having a threaded aperture centrally of the boss, a bar attached to the other side of the base plate for co-action therewith in engaging in a T-slot in the lathe slide, the bar having a neck portion extending from and fitted into the tool slide groove for holding the bar and base member against rotation relative to the tool slide, a head block with conical fluted aperture centrally therethrough for engagement with the base member boss,

the head block having plural channels in the sides thereof for severally receiving the cutting tools, multiple screws clamping the tools severally in the channels, and a screw threaded into the aperture in the base boss and engageable with the head block for lifting the head block flutes free from the base cone flutes.

3,127,803
EXTRACTION COUNTER
Eric L. Midgley, Danvers, Mass., assignor to Sweetheart Plastics, Inc., a corporation of Maryland
Filed Feb. 23, 1962, Ser. No. 175,112
9 Claims. (Cl. 83—81)



3. In combination with a trim press for severing articles from a sheet in which they are formed;

a rack mounted on the machine for receiving the severed articles,

means including a plurality of separators mounted on the press for engaging the last of a predetermined number of articles preventing additional articles from nesting fully with the previously deposited articles,

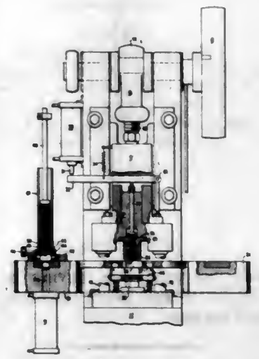
said separators including a plurality of fingers extending parallel to the rack and having gripping ends which turn inwardly in the direction of the articles to engage the last of the predetermined number of articles,

means slidably supporting the first-named means enabling the additional articles to push the first-named means and predetermined number of articles when the gripping ends engage the last of the predetermined number,

and means responsive to the deposition of a second group of articles for inactivating said separators and returning them to a starting position.

3,127,804
STAMPING AND LOADING APPARATUS
Louis C. Bufalino, University Lane, Manchester, Mass.
Filed June 8, 1961, Ser. No. 115,821
8 Claims. (Cl. 83—96)

8. Apparatus for stamping and magazine-loading of mica parts comprising a punch press, a ring mounted for indexing rotation upon said press, a plurality of uniformly spaced work areas formed in said ring, each said work area including at least a large opening and a small opening formed through said ring, said small opening having an upward-facing shoulder formed therein for supporting a mica part, a punch and die supported by said press at a first given point, means for indexing said ring periodically to align each said large opening successively with said punch and die, means for actuating said die to stamp a mica part from a sheet of mica inserted adjacent said large opening, means for retracting said die, means for retaining said mica part in said die during an indexing motion of said ring, means for arresting said indexing motion of said ring to hold one of said small openings beneath said die, means for ejecting said



mica part into said small opening, said mica part resting on said shoulder formed therein, a magazine supported by said punch press adjacent said ring and spaced from said punch and die, and means for ejecting said mica part from said small opening into said magazine as said ring is indexed to bring said small opening into register therewith.

3,127,805
CUTTING TOOL
John Parstorfer, Philadelphia, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Aug. 15, 1960, Ser. No. 49,633
8 Claims. (Cl. 83—456)



1. A tool for shaving off a portion of a printed circuit or the like conductor on a face of a panel comprising, a rigid base, an elongated rigid bar rigidly secured at one end to said base with its other free end spaced therefrom, one of said base and bar members having a formation adjacent to its secured end whereby said base and said free end are relatively movable elastically toward each other, a toothed cutting blade movably mounted on the free end of said bar, screw threaded means operable independently of movement of said cutting blade for effecting relative movement between said base and said free end to clamp a said panel therebetween, and means for moving said cutting blade across a face of said panel while it is so clamped in such manner that a tooth of said cutting blade will shave off a portion of a said conductor thereon.

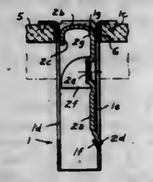
3,127,806
BASSOON
Hugo E. Fox, Rte. 1 S., Whitley, Ind.
Filed Apr. 13, 1961, Ser. No. 102,781
1 Claim. (Cl. 84—380)

A bassoon having a body constructed entirely of poly-



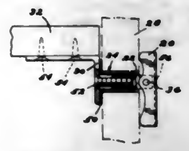
propylene, said polypropylene having a modulus of elasticity of 0.16×10^6 and being essentially soft, elastic to the touch and resilient.

3,127,807
HOLLOW WALL ANCHOR WITH PIVOTED ANCHOR MEMBER
Henry J. Modrey, Eagle Drive, Stamford, Conn.
Filed Oct. 13, 1961, Ser. No. 144,953
7 Claims. (Cl. 85—3)



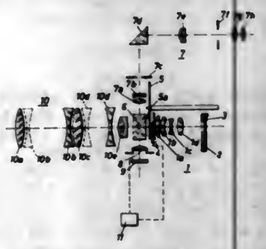
1. A wall anchor for locking in a mounting opening of wall, said wall anchor comprising an open-ended shell having outwardly turned flanges at one end, said shell being insertable in said mounting opening from one side of the wall whereby the other end of said shell protrudes from the other side of the wall, said shell having lengthwise slots in oppositely disposed side walls extending from adjacent said one end and terminating short of said other end, an inwardly protruding deflective lip at the end of one of said slots adjacent said other end of the shell, an anchor member having a long arm and a short arm extending at a right angle from the long arm at one end thereof, said long arm being longer than the interior width of the shell and having a guide means laterally extending from said long arm at the same side as said short arm and said short arm being of a length corresponding substantially to and fitting the interior width of the shell, said anchor member being slidably inserted into said shell from one end thereof in a mounting position in which said long arm is substantially parallel to the shell wall having the slot terminating in the lip, and locking means inserted into said shell and into pressure engagement with said short arm to displace said anchor member in the shell towards the lip for pivoting said anchor member about said lip from its mounting position into a locking position in which the anchor member is substantially transverse of the shell and protrudes therefrom through said shell slots, said anchor member being provided with means to cooperate with said locking means when said anchor member is in said transverse position whereby said anchor member may engage said other side of said wall, said guide means engaging side wall portions of the shell to guide the member along the wall having the lip and toward the same.

3,127,808
TOGGLE BOLT
John S. Drybread, Sr., R.R. 4, Box 325, Winamac, Ind., assignor of one-half to Bernice L. Drybread (Mrs. John S. Drybread, Sr.), Winamac, Ind.
Filed June 18, 1962, Ser. No. 203,320
1 Claim. (Cl. 85—3)



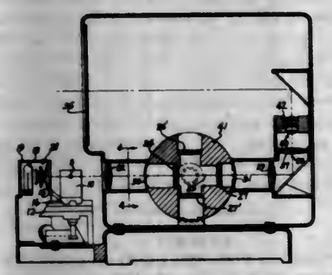
A toggle bolt assembly for securing an object to a wall or the like having an aperture therethrough, comprising: a toggle head nut having an externally threaded length adjacent one end thereof and an internal bore exhibiting a threaded length opening through the opposite end thereof; a toggle head pivotally mounted on said nut adjacent said opposite end for swingable movement about said end from a position longitudinally juxtaposing the nut for insertion of the nut and head through said wall aperture to a position transversely of the nut to overlie marginal edges of said aperture; said toggle head being pivotally mounted closer to one of its ends than the other and having an aperture in axial alignment with and larger than the nut bore when the head is positioned in its transverse position to permit a threaded bolt to pass completely through said nut and head; and a sleeve-like holder having an internally threaded length engageable with the external threads of said nut and a radially outwardly extending flange portion at one end thereof, said holder being receivable within said wall aperture for engagement with said toggle head nut to draw the toggle head and the holder flange respectively against opposite surfaces of said wall adjacent the aperture whereby the toggle assembly including the nut, head and holder is retained in the wall independently of an object to be secured to the wall thereby.

3,127,809
SINGLE LENS REFLEX MOTION PICTURE CAMERA
Richard Denk, Munich, Germany, assignor to Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany, a corporation of Germany
Filed Feb. 10, 1961, Ser. No. 88,354
Claims priority, application Germany Feb. 27, 1960
5 Claims. (Cl. 88—16)



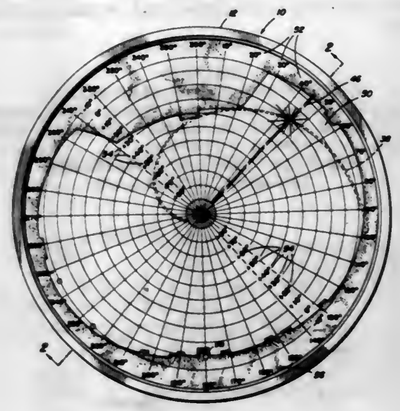
1. A single lens reflex motion picture camera comprising an objective lens including a main objective lens and provisions for mounting interchangeable supplementary lenses in front of said main objective lens, a semi-transparent mirror positioned toward the object in front of said main objective lens which transmits part of said light from said object along the optical axis of said camera, a rotary shutter mounted between said semi-transparent mirror and said main objective lens, the surface of said rotary shutter facing said object being reflective, said semi-transparent mirror reflecting an other part of the light rays originating from said object in a direction which is angularly displaced from said optical axis of said camera and reflecting part of the light rays from said reflective surface of said reflective shutter in a direction which is 180° opposite to said reflected direction of said light rays from said object, a viewfinder disposed in the path of said other part of the light rays reflected by the said semi-transparent mirror from said object, and light-measuring means disposed in the path of said light rays reflected by said semi-transparent mirror from said rotary shutter whereby the amount of light impinging upon said light-measuring means is maintained in correspondence with the light passing through said objective lens regardless of any change in overall focal length.

3,127,810
OPTICAL PROJECTOR LENS SYSTEMS
Nathan Gottlieb, Buffalo, N.Y., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts
Filed Nov. 25, 1960, Ser. No. 71,801
2 Claims. (Cl. 88—24)



1. An optical relay lens system for use in an optical comparator having a viewing screen, a work holder, and means for illuminating a work piece on said work holder, said relay lens system being adapted to provide a magnified image of said work piece on said viewing screen and comprising a first telecentric system consisting of first and second positive lenses separated from each other a distance equal to the sum of their respective focal lengths, said telecentric system being arranged to receive light from said work piece and to form a first aerial image thereof, a second telecentric system aligned with said first telecentric system and consisting of third and fourth positive lenses separated from each other a distance equal to the sum of their respective focal lengths, said second telecentric system being arranged to receive light from said first aerial image and to form a second aerial image thereof, and a projection objective optically aligned with said second telecentric system and arranged to receive light from said second aerial image and to project an enlarged image thereof onto said viewing screen, said second positive lens of the first telecentric system and said third positive lens of said second telecentric system being contained in common mounting means and together forming a telescopic optical system adapted to provide a predetermined magnification for the projected image of said work piece on said screen, and said common mounting means containing said second and third positive lenses being removable as a unit from said relay system so as to permit insertion of a different common mounting means containing a different pair of positive lenses which together function as a telescopic optical system of different power and which function in said relay system as components of said first and second telecentric systems to yield a different predetermined magnification for the projected image on said screen.

3,127,811
POSITION MONITOR
Anthony E. Filangeri, Silver Spring, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Feb. 1, 1960, Ser. No. 6,080
5 Claims. (Cl. 89—134)

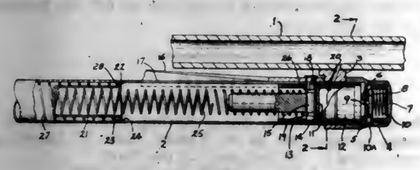


1. In a missile launching system having a launcher movable in train nad elevation and a firing cutout mechanism, means for indicating the position of the launcher at any given time during its train and elevation movement, said means including visible warning means for indicating movement of the launcher into an unsafe-to-fire zone and the position of the launcher therein, said warning means being operable only in response to the operation of the firing cutout mechanism a graduated scale, said scale including train, elevation and unsafe-to-fire indicia thereon, means for projecting said position indication on said graduated scale, and means for checking the alignment of said indicating means with the position of the launcher each time the launcher is returned to the loading position.

3,127,812
GAS SYSTEM FOR FIREARMS
Henry A. Into, Wallingford, and David F. Butler, Hamden, Conn., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed June 14, 1962, Ser. No. 202,510
6 Claims. (Cl. 89—193)

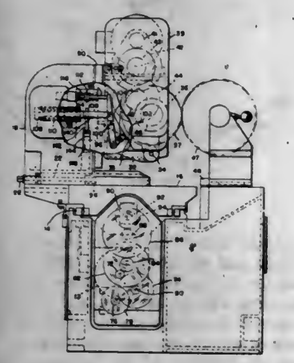
1. In an autoload firearm having a barrel, a magazine tube mounted below said barrel, piston means slidably mounted in the forward end of said magazine, a cup shaped spring support having an outturned flange at one end mounted intermediate the ends of said magazine, the cup shaped portion of said spring support being spaced inwardly from the side walls of said magazine, return spring means interposed between said piston and said spring support, one end of said return spring being positioned within said cup shaped support and the opposite end of said return spring being positioned within a

hollow skirt portion of said piston, a magazine spring interposed between said spring support and the rearward end of said magazine, one end of said magazine spring



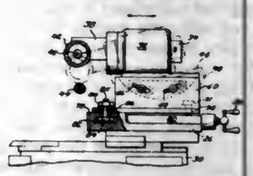
abutting said outturned flange and being concentrically positioned around the cup shaped support and the portion of the return spring positioned in said cup shaped support.

3,127,813
GEAR FINISHING MACHINE
Thomas S. Gates, Grosse Pointe Woods, Mich., assignor to National Broach & Machine Company, Detroit, Mich., a corporation of Michigan
Filed Apr. 9, 1962, Ser. No. 188,294
23 Claims. (Cl. 90—1.6)



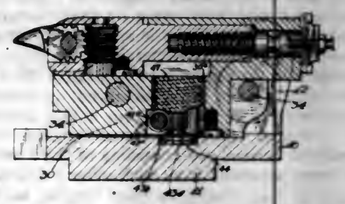
1. A gear finishing machine comprising a base, a first rotary support mounted on said base for supporting a first rotary member for rotation about its axis, a slide on said base mounted for reciprocation thereon in a direction parallel to the said axis of rotation, a column mounted on said slide for adjustment thereon toward and away from said first rotary support, an adjustable head mounted on said column for angular adjustment about an axis perpendicular to the direction of reciprocation of said slide and substantially intersecting the said axis of rotation, a second rotary support for a second rotary member pivoted to said adjustable head for rocking movement about an axis parallel to the direction of reciprocation of said slide, the axis of rotation of said second rotary member being substantially adjacent a vertical plane passing through the pivot axis between said head and second rotary support whereby rocking movement of said second rotary support causes the second rotary member carried by said second rotary support to move substantially directly toward and away from the first rotary member carried by said first rotary support, means for driving one of the rotary members directly, means for effecting reciprocation of said slide, and progressively operable yieldable means effective to rock said pivotally mounted rotary support about its pivot mounting to effect controlled pressure contact between said rotary members.

3,127,814
MILLING ATTACHMENT
Israel J. Yermish, Philadelphia, Pa., assignor to Fenway Machine Co., Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed Mar. 12, 1962, Ser. No. 178,921
1 Claim. (Cl. 90—17)



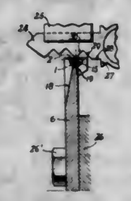
In a milling attachment for a lathe having a rotatable chuck, a self contained auxiliary drive means at one end of said lathe for rotating said chuck at slow speeds, a carriage on said lathe, and a tool compound on said carriage, the attachment comprising, a support plate mounted on said tool compound, a motor, a base coupled to said motor, said base being selectively pivotably coupled to said support plate, said base providing selective arcuate movement about an axis substantially parallel to the axis of rotation of said chuck, a cutting tool coupled to said motor for cutting materials supported at least in part by said chuck, said support plate being U-shaped and having upwardly extending parallel arms, the inner surfaces of said upwardly extending parallel arms being indented to form arcuate guide surfaces thereon, said base having downwardly extending parallel arms, said downwardly extending parallel arms having arcuate support surfaces formed thereon for cooperation with said upwardly extending parallel arm guide surfaces, locking means extending through at least one pair of cooperating arms of said base and support plate to lock said base in a predetermined position with respect to said support plate.

3,127,815
TAIL STOCKS FOR MILLING MACHINES
Erick Moen, 9400 Whitcomb, Detroit 28, Mich.
Substituted for abandoned application Ser. No. 537,971, Oct. 3, 1955. This application July 3, 1962, Ser. No. 246,642
1 Claim. (Cl. 90—23)



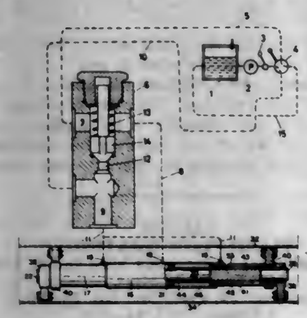
A tail stock for milling machines having a base, side walls rising from the same, a block movable vertically between the side walls carrying a pivotally adjustable center pin, a vertical screw threaded into the block and rotatable to raise and lower the same, said screw having a center pinion at the bottom thereof, a transverse shaft carried by the tail stock adjacent to said center pinion and journaled with end portions in said side walls, a spiral pinion carried by said shaft in mesh with the center pinion in order to actuate said screw when the shaft is rotated, the base having a cavity in its upper face and seating a ball bearing, and a stem depending from the center pinion and securing a rotary support in the bearing.

3,127,816
FEELER FOR KEY COPYING MACHINE
Charles Rossetti, Lausanne, Switzerland, assignor to Simeca S.A., Vevey, Switzerland
Filed Dec. 29, 1961, Ser. No. 163,151
Claims priority, application Switzerland Jan. 19, 1961
3 Claims. (Cl. 90—62)



1. A cutter guide for a key duplicating machine arranged slidably to scan the profile of the bitted edge of a pattern key to be duplicated, comprising a supporting body portion having mounted thereon a tiltably supported shoe, said shoe being provided with a bearing face arranged to contact a portion of the said profile of the bitted edge of said pattern key whereby said bearing face can assume an inclination conforming to the portion of the profile of the bitted edge of said pattern key in the relative sliding movement of said bearing face of the shoe and the bitted edge of the pattern key, said bearing face of said shoe being disposed substantially medially of said shoe between pivot pins providing the tiltable mounting for said shoe in said supporting body, said medial portion having a cylindrical nose coaxial to the pivot pins and constituting the apex of the cutter guide.

3,127,817
DEVICE FOR HYDRAULIC APPARATUSES COMPRISING A DOUBLE ACTING PISTON MOTOR
Viking Nils Christoffer Dunér, Goteborg, Sweden, assignor to Aktiebolaget Gotaverken, Goteborg, Sweden, a corporation of Sweden
Filed Jan. 29, 1962, Ser. No. 169,532
Claims priority, application Sweden Jan. 30, 1961
1 Claim. (Cl. 91—216)



In a pressure fluid medium-operated mechanism for bringing about angular displacement between a first part and a second part connected to each other by means of at least two hinges as said parts move from a first position to a second position, an actuating device consisting of a tubular part connected to the first of said parts between the hinges and a piston reciprocable in opposite directions in said tubular part under the influence of fluid pressure and connected to the second of said parts,

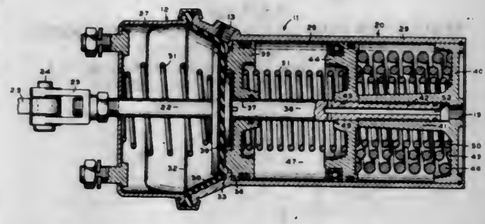
means for selectively introducing fluid under pressure to either side of said piston for effecting a turning movement between said tubular part and said piston said means including connections on said tubular part communicating with opposite sides of said piston and pressure fluid conduits attached to said connections,

means mounting said tubular part on one of said first and second parts which, during operation of said motor, shifts its position with respect to a horizontal plane in such manner that in one of said first and second positions said connections coincide with the highest point in the pertaining tubular part;

a passage interconnecting said pressure fluid conduits immediately adjacent said connections; and

an overflow valve in said passage arranged to open in the direction towards that pressure fluid conduit which, while acting as a return flow from the pertaining tubular part, moves from a lower to a higher position.

3,127,818
BRAKE OPERATING MECHANISM
Oliver B. Cruse, Florissant, Mo., assignor to Wagner Electric Corporation, St. Louis, Mo., a corporation of Delaware
Filed July 31, 1961, Ser. No. 128,030
16 Claims. (Cl. 92—63)



16. In a brake operating mechanism of the type described, including power means for normally effecting brake actuation in response to operator metered fluid pressure from a source, and resiliently urged means normally rendered inoperative by fluid pressure from said source and adapted to move toward said power means to effect emergency brake actuation upon a predetermined loss of fluid pressure acting thereon, the combination of movable piston means intermediate to said power means and resiliently urged means, means for normally maintaining said piston means in fixed position adjacent to said power means, said piston means being urged to move in response to operator metered fluid pressure to oppose the movement of said resiliently urged means upon said predetermined loss of fluid pressure.

3,127,819
PACKAGE FORMING MECHANISM
John E. Woolsey, 1540 Kirby Drive, Houston, Tex.
Filed Dec. 30, 1960, Ser. No. 79,670
1 Claim. (Cl. 93—82)

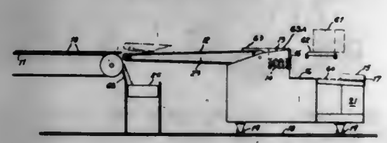
In packaging mechanism a hollow forming head for flexible sheet material comprising a central part having a longitudinally downwardly tapering outer face positioned for engagement with one face of an elongated strip of flexible sheet material during longitudinal movement of the material over said outer face, side parts on opposite sides of said central part shaped to form with the side edges of said central part longitudinally extending open ended slots through which side marginal portions of said material may be extended to cause said marginal portions to be moved into contact with the inner faces of said side parts during such downward movement, said central part

having a laterally curved external surface adjacent its lower end positioned for engagement with said one face of said material and said side portions having laterally curved internal surfaces at their lower ends positioned for engagement with the other face of said material to



move the material laterally into a tubular shape as the material emerges from the head and said central and side parts having internal surface portions positioned to form an inwardly tapering throat in communication with the interior of the tubular portion of the material emerging from the head.

3,127,820
MACHINES FOR COUNTING AND STACKING TILES OR OTHER PRODUCTS
Terry L. Carter, Box 75, Glen Road, Sparta, N.J.
Filed Jan. 23, 1963, Ser. No. 253,313
1 Claim. (Cl. 93—93)



A machine for counting and stacking tiles or other products, comprising

a narrow elongated portable carriage of approximately the width of the products to be counted, in unitary form shiftable for positioning at the end of a row of products issuing from a supply line,

an infeeding conveyor carried by and projecting from one end of said carriage for taking off the products of one row issuing from the supply line,

an outfeeding conveyor on said carriage below and at the inner end of said infeeding conveyor,

a motor on the carriage below and connected to drive said conveyors,

an elevator on the carriage at the inner end of said infeeding conveyor and arranged to operate up through said outfeeding conveyor,

a stationary stacking enclosure at the inner end of said infeeding conveyor, above said elevator and extending downward toward said outfeeding conveyor to a point above the height of a stack to be accumulated on the elevator and whereby said outfeeding conveyor may remove a stack of products from below said stacking enclosure,

said elevator having movement between an upper position within said stacking enclosure and a lower position below said outfeeding conveyor,

a cutoff fork beneath the inner end portion of said infeeding conveyor and projectible past the inner end of said conveyor into position above the elevator for receiving products delivered by said conveyor,

means for counting products delivered by said infeeding conveyor,

means controlled by said counting means for effecting projection of said cutoff fork when a predetermined number of tiles has been accumulated on the elevator and for retracting said cutoff fork after a stack has been discharged from the elevator and the elevator has risen to a position within the stacking enclosure,

means controlled by said counting means for effecting the lowering of the elevator when a stack of a predetermined number of products has been accumulated on the elevator and for raising the elevator after a completed stack has been deposited on the outfeeding conveyor by the lowering of said elevator in respect to said outfeeding conveyor,

said infeeding conveyor, cutoff fork, elevator and outfeeding conveyor, all being in alignment and along with the motor all within the narrow confines of the carriage, and whereby

the carriage forming a self-powered unit may be located in line with ony one of a number of rows of products off a supply line or a number of such units be located in closely adjoining side by side relation at the end of a number of such supply lines, and whereby

a plurality of such powered units in such close side by side relation may be arranged in fanned out relation at their delivery ends,

the infeeding and the outfeeding conveyors having parallel drive shafts at the inner ends of the same spaced in parallel relation one above the other,

gearing connecting said upper and lower drive shafts for operating them in unison,

drive gearing from said motor to one of said shafts,

the infeeding conveyor including a supporting frame pivotally mounted on said upper shaft and enabling said infeeding conveyor to be pivotally shifted to align said conveyor with the supply products or to raise the infeeding conveyor out of alignment with the supply products,

the cutoff fork being mounted on said pivoted frame of the infeeding conveyor,

bearings on said upper shaft in alignment with the cutoff fork and

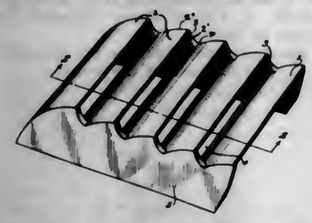
said cutoff fork being in riding engagement on said bearings and thereby supported by said bearings on said upper shaft when projected in position over the elevator,

all of said elements described being housed within the confines of said narrow carriage and

flexible convergently disposed tile guides at opposite edges of the infeeding conveyor positioned at the approach of said conveyor to the stacking enclosure at the inner end of said conveyor for effecting alignment of tiles reaching the elevator and cutoff fork.

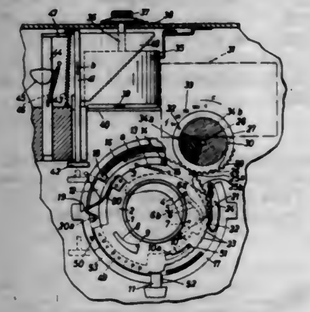
3,127,821
FLUID-FLOW GRATING
Francis LeBaron, Jr., Commercial Yard and E. Union St., Brockton, Mass.
Filed Apr. 29, 1960, Ser. No. 25,587
8 Claims. (Cl. 94—33)

1. For use in directing flowing ground water or the like to a catch basin or the like, a grating comprising a plurality of vanes extending longitudinally along a first, generally horizontal direction and spaced from one another in a row along a second, generally horizontal direction substantially orthogonal to said first direction, the first and second directions defining a first plane, each vane having a cross-section in a second, generally vertical plane substantially orthogonal to said first plane, that is curved, with the vane increasing in thickness from the top toward the bottom, each vane having a concave forward surface and a convex rearward surface, the rearward surface of each vane intersecting said first plane at an acute angle at the top of the vane and being substantially orthogonal to



said first plane at the bottom of the vane, the space between adjacent vanes normal to the direction of flow therebetween increasing along the direction of flow from the top toward the bottom of said vanes.

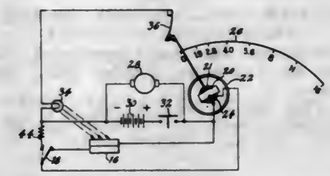
3,127,822
CONTROLS FOR AT LEAST PARTLY AUTOMATIC CAMERAS
Gerd Kiper, Unterhaching, near Munich, Germany, assignor to Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany
Filed Nov. 6, 1961, Ser. No. 150,315
Claims priority, application Germany Dec. 8, 1960
30 Claims. (Cl. 95—10)



1. In a camera, in combination, diaphragm means including a pair of rotary diaphragm rings operatively connected to blades of the diaphragm for maintaining a given diaphragm aperture when said rings do not change their angular position relative to each other and for moving the blades of the diaphragm to change the aperture thereof when at least one of the rings turns relative to the other; exposure time setting means operatively connected to one of said rings so that when both rings turn together the exposure time will be set without changing the aperture of the diaphragm means while when the other of said rings turns relative to said one ring the aperture will change while the exposure time remains unchanged; and light-responsive means cooperating with said other ring for turning the latter.

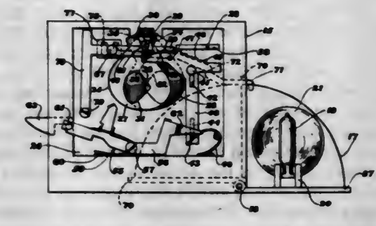
3,127,823
SIGNAL APPARATUS FOR PHOTOGRAPHIC CAMERAS
David L. Babcock and Allen G. Stimson, Rochester, N.Y., and Joseph L. Byrd, Columbus, Ohio, assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Aug. 8, 1962, Ser. No. 219,355
16 Claims. (Cl. 95—10)

1. In a photographic camera, a signal device comprising: a photoelectric-to-mechanical transducer including a photoresponsive element adapted to be exposed to field light, a member deflectable under control of said element in a first direction as a function of field brightness and means urging said member in a second, opposite direc-



tion; an electric lamp; and feedback means operable in response to movement of said member to a predetermined position for intermittently energizing said lamp to generate a flashing light signal for identifying a predetermined level of field brightness.

3,127,824
EXPOSURE CONTROL MECHANISM FOR PHOTOGRAPHIC CAMERA
Francis A. Williams, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Jan. 24, 1963, Ser. No. 253,689
8 Claims. (Cl. 95—10)



1. In a camera having a focus adjusting means, an exposure regulating device comprising an adjustable diaphragm having a range of exposure apertures, and an exposure meter energizable by scene light and having an output member positionable as a function of the intensity of said light, the combination comprising:

control means coupled to said focus adjusting means and adapted to be positioned thereby for establishing the size of the exposure aperture as a function of focus adjustment;

selection means movable between a first position in which the exposure aperture is established as a function of scene light and a second position in which the exposure aperture is established as a function of focus adjustment;

yieldably movable means coupled to said diaphragm and, upon release, for selectively sensing the position of said output member or of said control means in accordance with the position of said selection means to adjust said diaphragm to an exposure aperture corresponding thereto;

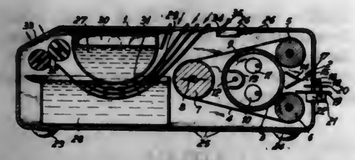
means coupled to said control means and engaged by said selection means when in said first position for maintaining said control means in a disabled position relative to said sensing means and engageable by said selection means as it is moved into said second position for moving said control means into an enabled position relative to said sensing means; and

operating means normally maintaining said sensing means in a disabled position and manually movable to a position for releasing said sensing means to establish the exposure aperture.

ERRATUM

For Class 95—64 see:
Patent No. 3,128,168

3,127,825
DEVICE AND A METHOD FOR THE PRODUCTION OF COPIES
Walter Limberger, Hamburg-Poppenbuttel, Germany, assignor to Lumoprint Zindler KG., Hamburg, Germany
Filed Apr. 24, 1961, Ser. No. 104,973
Claims priority, application Germany Apr. 28, 1960
2 Claims. (Cl. 95—77.5)



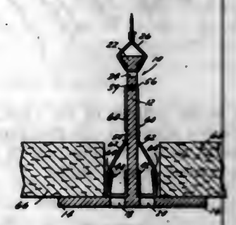
1. In a device for producing copies, at least one first radiation source effective for exposure of light-sensitive copy sheets, at least one second radiation source emitting heat, movable guide means effective to guide an original and a copy sheet past said first and second radiation sources, drive means for said movable guide means, a housing enclosing said first and second radiation sources and movable guide means and having inlet and outlet means, stationary guide members in said inlet means and forming a slot, electric circuit means for energizing said first and second radiation sources and said drive means, a first switch in said circuit means for connecting said first radiation source, a second switch in said circuit means for connecting said second radiation source, actuating means for said second switch pivotally connected therewith, and a click-stop device in the connection between said actuating means and second switch for selectively retaining said actuating means in a first position in which it projects into said slot and a second position in which it leaves said slot unobstructed.

3,127,826
AIR OUTLET AND DEFLECTION VANES
Carl E. Horneck, Moline, Ill., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed Oct. 30, 1961, Ser. No. 148,640
6 Claims. (Cl. 98—40)



1. An air deflecting vane comprising a vane main body, and opposite right angle end flanges thereon adapted to be pivotally secured to correspondingly opposite frame members, each end flange including a forward portion thereof connected along its upper edge to said vane main body, and a rearward portion encompassing the securement location being unconnected to said vane main body except through said forward portion, said rearward portion being displaced outwardly as a whole into facing contact with the respective frame member for securement thereto.

3,127,827
VENTILATED CEILING STRUCTURE USING PANEL-SUPPORTING T-RAILS WITH VALVE CONTROLLED SLOTS IN PAIRS FOR ADMITTING VENTILATING AIR
Walter M. Ericson, Milwaukee, Wis., assignor, by mesne assignments, to United States Gypsum Company, a corporation of Illinois
Filed Mar. 26, 1962, Ser. No. 182,435
8 Claims. (Cl. 98—40)



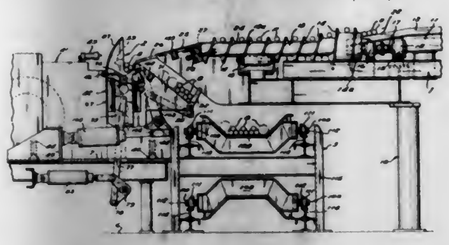
1. A ventilated ceiling construction comprising a plurality of ceiling panels arranged in side-by-side relation, and a plurality of rails supporting said panels; each rail including an elongated rib disposed in spaced relation with respect to the marginal portion of an adjacent panel, a flange extending transversely from said rib, said flange having an outer portion engaging and supporting the marginal portion of said adjacent panel and an inner portion spaced from said panel marginal portion and provided with a plurality of ventilating openings, and valve means carried by said rail and slidably mounted on said flange inner portion to effect opening and closing of said ventilating openings.

3,127,828
LAMINATED DISPOSABLE BROILING PADS
Ralph R. Fine, 13—11 140th St., Whitestone, N.Y.
Filed Dec. 13, 1962, Ser. No. 244,521
2 Claims. (Cl. 99—446)



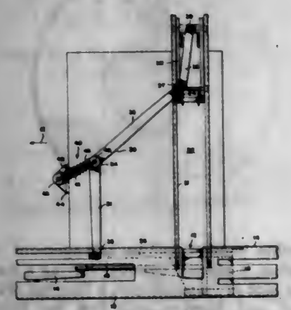
1. A broiling pad comprising a first metal foil sheet folded to form a generally box-like shallow tray with flat bottom, upright side and end walls and open top, a flat rectangular second metal foil sheet overlaying the tray and having flaps extending outwardly beyond said walls respectively, said second sheet having a rectangular inner portion peripherally secured to edges of said side and end walls to define a continuous bead, said inner portion of the second sheet having a multiplicity of holes distributed uniformly throughout to pass food juices therethrough, and a filling of porous material disposed inside the tray between the first and second sheets to absorb said food juices, said flaps being foldable over said inner portion of the second sheet to cover the holes therein and retain said food juices inside the tray, each of said flaps being generally trapezoidal in form to define overlapping angular corners when the flaps are extended vertically upward from said bead, said filling being formed by a plurality of layers of paper, each of said flaps having parallel score lines to facilitate folding the flaps or forming horizontal and vertical extensions of said tray, said score lines serving the additional function of rigidifying and strengthening the tray.

3,127,829
PIPE BUNDLING APPARATUS
Joseph R. Rossi, Cortland, Ohio, assignor to Blaw-Knox Company, Pittsburgh, Pa., a corporation of Delaware
Filed July 12, 1960, Ser. No. 42,274
19 Claims. (Cl. 100—4)



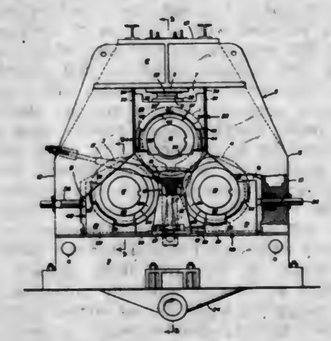
1. In an apparatus of the type described, means for positively transversely advancing a plurality of lengths of elongated material; means for causing the successive discharge from said advancing means of a predetermined number of said lengths while they are disposed in a predetermined longitudinal relationship to each other; holding means for receiving said number of lengths so discharged and arranging them in a substantially parallel relationship to each other; means for wrapping strand material around said arranged lengths to form a bundle; means for removing each of said bundles from said holding means and temporarily storing it; means for discharging a group of bundles after a predetermined number of them have been so stored; means for conveying said group of bundles away from said storing means to a predetermined location; and means at said location for removing said bundles and forming a load of a predetermined number of bundles.

3,127,830
HAY BALER
James W. McDuffie, New Holland, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Jan. 31, 1963, Ser. No. 255,283
3 Claims. (Cl. 100—142)



1. A hay baler comprising an elongated bale case having a feed opening in a side wall thereof, a plunger reciprocal in said bale case and movable from a retracted position forwardly of said opening to an extended position rearwardly thereof, a hay receiving platform extending laterally from said one side wall, a track extending transverse to said bale case and supported above said platform and bale case in register with said opening, a feeder carriage mounted on said track and movable rectilinearly thereover toward and away from said bale case, depending finger means on said carriage and engageable with hay on said platform to feed the hay into said bale case through said opening, a bell crank oscillatable about a vertical axis, said bell crank having an apex from which a first leg and a second leg extend in fixed angular relation to each other, means pivotally connecting said first leg to said plunger at one location only on the leg, an arm having one end pivotally connected to said carriage, means pivotally connecting an opposite end of said arm to said second leg of the bell crank, floating pivot means supporting said bell crank at said apex and permitting said vertical axis to shift relative to said bale case upon oscillation of the bell crank responsive to reciprocation of said plunger, and means fixed relative to said bale case for carrying said floating pivot means.

3,127,831
ROLL MOUNTING FOR SUGAR MILL
Thomas M. Hamill, Kailua, Hawaii, assignor to Honolulu Iron Works Company, Honolulu, Hawaii, a corporation of Hawaii
Filed June 20, 1962, Ser. No. 203,875
11 Claims. (Cl. 100—168)



1. In a sugar mill having spaced recessed housings and pressure and back-up rolls mounted therein, mountings for said rolls each comprising a bearing on a shaft of a roll, a chair slidable in a recess in a housing for seating said bearing, and cooperating surfaces on said bearing and chair for enabling said bearing to angle universally relative to said chair and therethrough to said housing.

3,127,832
SMALL, READILY PORTABLE CHECK OR DOCUMENT PROTECTOR
Maurice R. Selbert, 5901 N. Figueroa St., Los Angeles 42, Calif.
Filed June 4, 1962, Ser. No. 199,914
6 Claims. (Cl. 101—24)

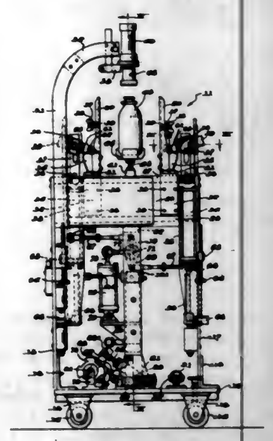


1. A small, readily portable check or document protector, comprising: a mounting base member provided

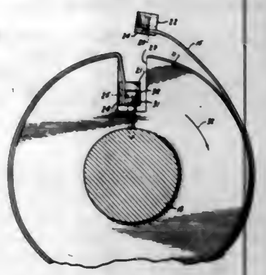
with an auxiliary member having an attachment portion at one end effectively attaching said auxiliary member with respect to said mounting base member and having a free portion of said auxiliary member at the other end thereof positioned in lateral spaced opposition with respect to a lateral adjacent portion of said mounting base member, said free portion of said auxiliary member and said laterally adjacent portion of said mounting base member being effectively provided with rotary marking means defining a document reception region therebetween, said marking means being forcibly cooperable with a portion of a document drawn through said document reception region for forced relative rotary movement along similar areas of opposite surfaces of said portion of said document for visibly discernably spacedly perforately marking same in a manner such that subsequent alteration of at least one of said surfaces of said portion of said document will be visibly observable, said rotary marking means comprising a first rotary marking means portion rotatively carried by said free end of said auxiliary member and a second rotary marking means portion comprising an exterior sleeve rotatively carried by said laterally adjacent portion of said mounting base member, said first rotary marking means portion being provided with a first set of outwardly directed projecting first marking elements and said second rotary marking means portion being provided with a first set of correspondingly positioned first receiving portions adapted to receive said projecting first marking elements, said second rotary marking means portion being provided with a second set of outwardly projecting second marking elements and said first rotary marking means portion being provided with a second set of correspondingly positioned second receiving portions for the reception thereof, each set of projecting marking elements and the corresponding receiving portions being positioned to matingly engage as said portion of said document positioned therebetween is relatively moved with respect to said first and second rotary marking means as they roll along opposite surfaces thereof, each set of said outwardly projecting marking elements comprising a plurality of circumferentially and longitudinally spaced radially outwardly projecting points, each set of said receiving portions comprising spaces defined between the circumferentially and longitudinally spaced radially outwardly projecting points of the set of marking elements carried by the other one of said rotary marking means portions positioned on the opposite side of said document reception region from the set of projecting points adapted to be received thereby during a document marking and alteration-preventing operation.

3,127,833
SURFACE DECORATING MACHINE
Rome R. Rudolph, Gibsonia, and Carl Strutz, Sr., Carl J. Strutz, Jr., and Frank C. Strutz, Mars, Pa., assignors to Carl Strutz & Co., Inc., Valencia, Pa., a corporation of Pennsylvania
Filed Feb. 6, 1963, Ser. No. 256,767
10 Claims. (Cl. 101—126)

1. Decorating apparatus comprising a pair of upright screen carriers adapted to receive decorating screens in upright position and in horizontally spaced relation, means supporting said screen carriers for horizontal straight-line movement toward and away from each other, a holding device comprising upper and lower workpiece engaging members for holding a workpiece to be decorated between said screen carriers, said means supporting said screen carriers being disposed at the ends of said screen carriers whereby free access is provided to said holding device through either of the adjacent sides of said screen carriers, squeegees individual to the screen carriers, an arm supporting the upper workpiece engaging member and having a vertical portion positioned in general alignment with the path of travel of the screen carriers, and piston motors mounted on said carriers and including vertical piston rods connected to said squeegees for moving the squeegees up and down.

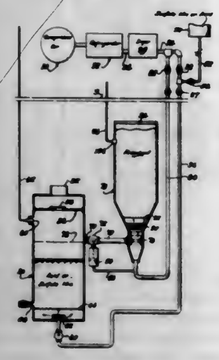


3,127,834
BLANKET LOCKUP ASSEMBLY
Louis S. Tyma, Jr., Hinsdale, and Glenn R. Peabody, Villa Park, Ill., assignors to Miehle-Goss-Dexter, Incorporated, Chicago, Ill., a corporation of Delaware
Filed Oct. 4, 1960, Ser. No. 60,407
6 Claims. (Cl. 101—415.1)



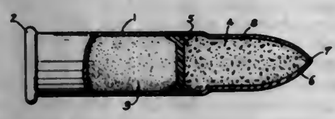
1. A flexible blanket lockup arrangement comprising, in combination, a blanket cylinder having a narrow axially extending slot in its periphery, a first bar secured along one edge of said blanket, said first bar being slidably fitted into said slot, means anchoring said first bar near the bottom of said slot with sufficient looseness to permit some lost motion of the bar radially of the cylinder, a second bar secured along the edge of said blanket opposite the first bar, said second bar being fitted into said slot above said first bar so that the bars are radially spaced in said slot with the bottom of the second bar abutting the top of the first bar, and means for drawing said second bar and thus both of said bars down into said slot so as to tension the blanket uniformly about the cylinder from each of said blanket edges.

3,127,835
METHOD AND APPARATUS FOR MAKING EXPLOSIVES IN THE PLACE OF USE
Ford I. Alexander, Arcadia, Calif.; Ruth L. Alexander, James R. Ethridge, and James B. Alexander, executors of Ford I. Alexander, deceased
Filed May 29, 1961, Ser. No. 113,257
10 Claims. (Cl. 102—23)



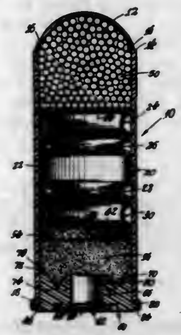
1. An apparatus for manufacturing an explosive at the detonation position by dispersing a liquid explosive throughout a solid absorbent comprising a destructible reaction chamber in a blast hole for reacting materials to form a liquid explosive, said liquid explosive being formed as a layer above liquid by-products of the reaction in which said liquid explosive is formed, means for introducing the reacting material into said chamber, conduit means opening into said chamber at an elevated position therein and sufficiently high to draw off substantially only said liquid explosive, an absorption vessel containing solid absorbent adjacent said chamber, said conduit means leading into said absorption vessel and means for drawing said liquid explosive from said reaction vessel to said absorption vessel.

3,127,836
ABATTOIR DEVICE
Joseph W. Silva, New Haven, Conn., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed Apr. 24, 1962, Ser. No. 189,738
4 Claims. (Cl. 102—41)



1. An abattoir cartridge for a small arms animal stunning gun comprising in combination a cartridge case, a priming assembly, a propellant charge of powder, an obturating over powder wad and a divided, non-toxic projectile charge of a weight ranging from about 10 grains to about 20 grains and comprised of a variety of particle sizes distributed in a range having particles not larger than about 0.05–0.060 of an inch of a material other than lead, said projectile charge being projectable from the case upon ignition of said propellant charge as a pulverulent missile capable of stunning an animal within a predetermined short range distance from the case and muzzle of said stunning gun.

3,127,837
SHOT SHELL CONSTRUCTION
Harry A. Lockwood, Westport, Conn. (% DriAire Inc., 26 Fitch St., East Norwalk, Conn.)
Filed Apr. 27, 1961, Ser. No. 105,948
6 Claims. (Cl. 102—42)



1. A gun shell comprising, in combination:
(*a*) a shell case,
(*b*) a multi-shot projectile means in the nose of the shell case,
(*c*) a box-like force-absorbing wad in the case, disposed behind the projectile means, said wad comprising:
(1) a round, hollow, flexible and resilient tubular one-piece preformed plastic structure having closed ends including spaced-apart substantially parallel end walls and having an annular solid and imperforate side wall extending between and joining the end walls,
(2) said annular side wall having a preformed grooved formation comprising at least one deep, circularly-extending annular permanently formed groove characterized by a relatively wide mouth portion with respect to the length of the tubular structure,
(3) all corresponding, circumferentially spaced portions of the groove being equi-spaced from an end wall, and
(*d*) a powder charge disposed behind the force-absorbing wad,
(*e*) the preformed grooved formation in the annular side wall facilitating ready, uniform axial collapse of the wad upon ignition of the powder charge so as instantly to smooth the explosive force.

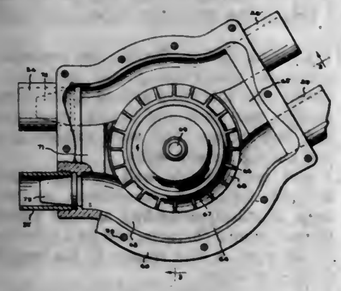
3,127,838
RETRACTABLE BLADE TAIL UNIT FOR PROJECTILES
Francesco Moratti and Carlo Tosti, Colleferro, Rome, Italy, assignors to Bombrini Parodi-Delfino Societa per Azioni, Rome, Italy, a company of Italy
Filed Sept. 18, 1961, Ser. No. 138,820
Claims priority, application Italy Oct. 12, 1960
3 Claims. (Cl. 102—50)



1. A projectile comprising a body, a tail unit arranged on the end portion of said body comprising a bushing

threadedly secured to said body having a plurality of recesses at its side adjacent said body, a plurality of trapezoidal stabilizing fins, each of said recesses having a flat surface located in a plane at a right angle to an axis inclined with respect to the longitudinal axis of said body and a rest surface located at a right angle to said longitudinal axis, a pivot in each recess secured to said bushing for pivoting said fins, each root end of said fins having a bore through which said pin passes, said bores being aligned in inclined position with respect to the longitudinal axis of said projectile body, said root ends having a first surface capable of sliding on said flat surface to rotate about said pivot pin and a second surface normal to said first surface for resting on said rest surface when said fins are in extended position and a plurality of helical springs cooperating with said bushing and root ends urging said fins from a position parallel to the longitudinal axis of said projectile body to a position wherein said fins lie in a plane at right angles to said longitudinal axis of said body.

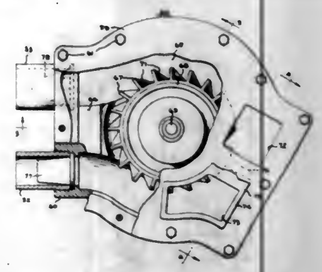
3,127,839
CLOTHES WASHER WITH IMPROVED TURBINE TYPE PUMP
James M. Pinder, North Canton, Ohio, assignor to General Electric Company, a corporation of New York
Filed Dec. 11, 1961, Ser. No. 158,288
1 Claim. (Cl. 103—3)



A turbine pump comprising a housing having a substantially annular outer wall and end walls closing the ends of said outer wall, said housing defining therewithin a substantially toroidal pump chamber, a rotatable impeller having an annular series of blades extending outwardly into said chamber, circumferentially adjacent first and second ports and circumferentially adjacent third and fourth ports, each said port being formed extending through one of said walls from said chamber, said first and second ports being inlet ports and said third and fourth ports being outlet ports respectively associated with said first and second inlet ports, check valves respectively positioned in each of said third and fourth ports so as to prevent flow through said third and fourth ports into said chamber, a first dam positioned in said chamber between said first and second ports, a second dam positioned in said chamber between said third and fourth ports, and reversible drive means connected to said impeller for rotating said impeller in opposite directions.

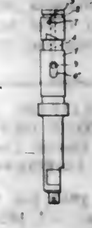
3,127,840
CLOTHES WASHER WITH IMPROVED TURBINE TYPE PUMP
John Bochan, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Dec. 26, 1961, Ser. No. 162,022
4 Claims. (Cl. 103—3)

1. A turbine pump comprising a housing having a substantially annular outer wall and top and bottom walls closing the ends of said outer wall, said housing defining therewithin a pump chamber, a rotatable impeller having an annular series of blades extending outwardly into said chamber and forming with said walls a substantially toroidal space, said outer wall having first and second circumferentially spaced outlet openings formed therein, check valve means positioned to permit flow from said chamber through said outlet openings and to prevent flow



from said outlet openings into said chamber, said top wall having first and second circumferentially spaced inlet openings formed therein in circumferentially spaced relation to said first and second oulet openings respectively, said inlet openings both opening into said toroidal space, and dams positioned respectively in said chamber between said inlet openings and between said outlet openings.

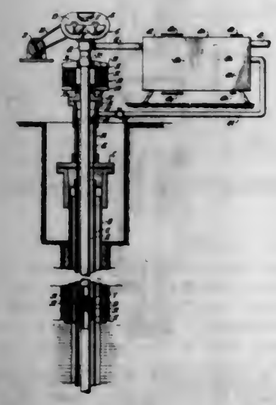
3,127,841
FUEL INJECTION PUMPS
William Friedlander, Esher, England, assignor to Mono-Cam Limited, London, England, a company of Great Britain
Filed Apr. 6, 1960, Ser. No. 20,318
Claims priority, application Great Britain Apr. 7, 1959
2 Claims. (Cl. 103—41)



1. In a fuel injection pump, in combination, a cylinder; an injection piston mounted in said cylinder for reciprocation through injection and retraction strokes thereof; said injection piston having an axial fuel injection passage therethrough having a discharge opening through the injection end thereof and having an injection discharge port therefrom through a side wall of said piston; said cylinder providing an inlet port opening thereinto for supply of fuel to the injection end of said cylinder for injection therefrom by and through said piston on injection strokes of the latter; said piston being also mounted for rotation in said cylinder and being adapted to be rotated in one direction during normal operation thereof; said cylinder providing a discharge port therefrom at the injection end thereof; said piston being provided with an angularly positioned slot therein disposed longitudinally thereof at an angle to the axis of said piston in a direction opposite the direction of rotation of said piston in normal operation thereof; and said piston upon rotation thereof in the direction opposite said direction of normal rotation positioning said angularly disposed slot in open communication with said inlet port during an

injection stroke of said piston for discharge of fuel from said cylinder through said inlet port.

3,127,842
SYSTEM FOR PUMPING FROM SANDY WELLS WITH SONIC PUMP
Albert G. Bodine, Jr., Los Angeles, Calif.
(7877 Woodley Ave., Van Nuys, Calif.)
Filed Sept. 12, 1962, Ser. No. 223,026
2 Claims. (Cl. 103—1)



1. The method of producing petroleum fluid from a sonic well pump in a well bore in a petroleum producing formation characterized by presence of a substantial amount of free, unconsolidated sand, and which sonic well pump embodies an elastic pump tubing extending from the ground surface down the well bore to the level of the producing formation, with means for generating sonic waves and transmitting said waves along said tubing, there being fluid impelling means within said tubing, and a wall around said pump tubing so as to define thereabout a well annulus which communicates at the bottom with the open lower end of the pump tubing, the lower portion of said well annulus being also in communication with well fluids from the formation, that includes:

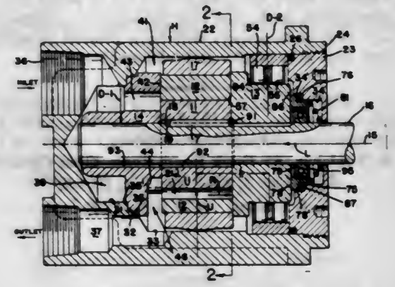
generating said sonic waves and transmitting them along said pump tubing so as to activate said fluid impelling means,

directing a flow of fluid down said well annulus, whereby said fluid combines with well fluid from the formation, and the combined fluids enter and are pumped up the pump tubing, and

supplying the fluid directed down the well annulus at a rate such that the flow rate of the combined fluids up the pump tubing is greater than the rate that permits sand particles in the rising fluid in the pump tubing to fall out of suspension therein under the conditions of wave transmission in said tubing.

3,127,843
HYDRAULIC PUMP OR MOTOR
Robert W. Brundage, 80 Bellerive Acres, Normandy 21, St. Louis, Mo.
Filed Mar. 22, 1960, Ser. No. 16,765
7 Claims. (Cl. 103—126)

1. In a hydraulic device comprised of: a housing having a radially-inwardly-facing surface defining a closed hollow interior, a shaft extending into said interior, a plurality of members rotatable with said shaft and relatively movable in said interior to define a plurality of axially-open-ended chambers which revolve on a fixed-closed path of movement, said chambers gradually increasing in volume after they pass a fixed point of minimum volume on said path of movement until they reach a fixed point of maximum volume on said path of movement and then gradually decreasing in volume until they reach said point of minimum volume, generally one half of said chambers being at high fluid pressure and generally the other half being at low fluid pressure, a sealing plate mounted on said shaft and having a sealing surface in sealing engagement with said members to close one axial end of said chambers, said high pressure exert-



ing a radially-offset axial force on said sealing plate, means exerting an opposing coaxial force on said plate, said forces exerting a moment on said plate tending to separate said sealing surface from said members adjacent said high pressure chambers, bearing means on both axial ends of said members rotatably supporting said shaft, said sealing plate and said shaft being effectively integral and being axially movable relative to at least one of said members, the improvement which comprises: said sealing plate having an axial length at least greater than one-half of the diameter of said shaft whereby the moments created by the two axial forces on said plate are resisted by the combined strength of said shaft and said plate.

3,127,844
PUMP
Clyde D. McCann, 3323 E. 13th St., and Immanuel Steltz, 516 E. Sheridan, both of Des Moines, Iowa
Filed June 15, 1961, Ser. No. 117,398
4 Claims. (Cl. 103—137)



1. In a pump, comprising, in combination,
a housing having a cavity with a cylindrical wall,
a shaft rotatably mounted on said housing,
a circular rotor operatively secured to said shaft and in said cavity; said cylindrical wall of said cavity being eccentric in relation to said circular rotor,
an inlet passageway in said housing communicating with the inside cavity of said housing,
an outlet passageway in said housing communicating with the inside cavity of said housing; said point where said outlet passageway communicates with the

inside of said cavity being at a point opposite from the point where said inlet passageway communicates with said cavity,

a blade slidably mounted on said rotor and engaging the cylindrical wall of said cavity,

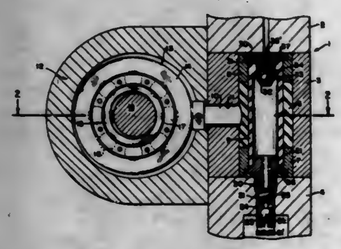
and a second blade slidably mounted on said rotor and engaging the cylindrical wall of said cavity at a point opposite from the point of engagement where said first blade engages the cylindrical wall of said cavity; said blades each having a thickness less than that of the width of either said inlet passageway or said outlet passageway; and a passageway in said rotor extending from said first blade to said second blade whereby when said two blades are in direct line communication with said two passageways, respectively, said two passageways will have limited communication past said blades and with each other.

3,127,845

PUMP DESIGN

Carl S. Voelcker, 52 Duck Pond Road, Glen Cove, N.Y.

Filed Oct. 3, 1960, Ser. No. 59,940
5 Claims. (Cl. 103—148)



1. A high-pressure metering pump comprising a housing, a first tubular element made of an incompressible flexible elastomer, a second tubular element made of an incompressible flexible elastomer surrounding said first tubular element and contained within said housing, a reciprocally movable plunger extending through a side wall of said housing and engaging said second tubular element, plunger moving means, an inlet check valve means at one end of said housing and closing one end of said first tubular element, and an outlet check valve means at the other end of said housing enclosing the other end of said first tubular element; said housing and said plunger engaging and confining the entire outer surface of said second tubular element.

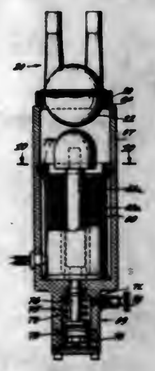
3,127,846

ARTIFICIAL BLOOD PUMP MEANS

Homer Kerns, New York, N.Y.
(10 Holder Place, Forest Hills, N.Y.)

Filed Feb. 16, 1960, Ser. No. 9,070
2 Claims. (Cl. 103—152)

2. An artificial heart pump comprising, in combination, a circular base, said base having a threaded portion exterior thereto, a threaded ring included and mounted over the threaded portion of said base, said ring having a centrally located circular opening, said opening being smaller in diameter than the thread in said ring and forming a circular shelf, a hollow spherical body in said base formed of a pair of semispherical hollow shells made of plastic material comprising an upper shell and a lower shell, each shell having a circular flange formed around its midriff and facing away from the shell, said lower shell being housed in said circular base, said upper shell being mounted above said lower shell with the circular flange of the upper shell contacting the circular flange of the lower shell, said upper shell passing through the circular opening in said ring, the flange of said upper shell contacting the circular shelf in said ring, the threading of said threaded ring to the thread in said circular base tightening said ring to said base to join by the medium of their respective flanges the upper shell to the lower shell together to form said hollow spherical body; inlet and outlet means in said pump including an inlet and an



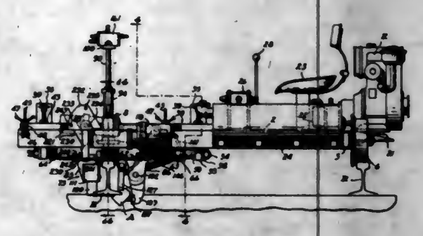
outlet valve in said upper shell, reciprocating means located externally of said flexible lower shell and contacting said shell, a solenoid coil in said pump, said means having a plunger mounted in said solenoid coil, said solenoid coil connected to an electric source, said plunger in said coil being given a pulsating reciprocating motion by said electric source in said coil, said pulsating plunger means pounding upon said flexible lower shell to flex said shell to alternately compress said shell to produce pressure and suction to operate said pump.

3,127,847

RAIL ANCHOR DRIVING MACHINES

Robert L. Sivon, Perry, Ohio, assignor to True Temper Corporation, Cleveland, Ohio, a corporation of Ohio

Filed Feb. 11, 1959, Ser. No. 792,603
26 Claims. (Cl. 104—2)



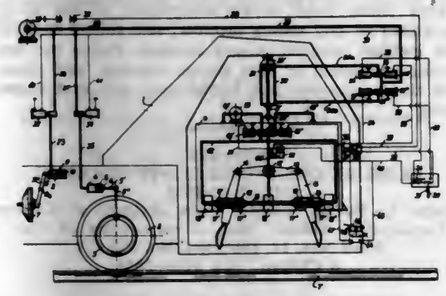
1. A rail anchor driving machine for driving a rail anchor upon the base flange of a rail said driving machine movably positioned and supported upon a railroad track, an anchor driver mounted upon said machine, rail blocking means mounted upon said machine, means associated with said anchor driver whereby said driver may drive a rail anchor upon said base flange from one side of said rail and said rail blocking device will engage said base flange at the opposite side thereof during the driving of said rail anchor whereby the forces exerted by said anchor driver and said blocking device are directed toward each other.

3,127,848

MOBILE TRACK TAMPING MACHINE

Franz Plasser and Josef Theurer, both of Johannesgasse 3, Vienna 1, Austria

Filed Apr. 13, 1959, Ser. No. 805,951
Claims priority, application Austria Apr. 14, 1958
3 Claims. (Cl. 104—12)



1. A ballast tamping machine mounted on a chassis with wheels for mobility on a railroad track which is mounted on spaced ties and comprising, in combination, a frame mounted on said chassis, a tamping tool carrier vertically adjustably supported in said frame, means mounted on said frame and connected with said carrier for lowering the carrier into a tamping position wherein the tamping tools are immersed in the ballast and for raising the carrier out of said tamping position, means mounted on said carrier for operating the tamping tools, brake means mounted for stopping the wheels, brake actuating means mounted for selective engagement with, and disengagement from, the brake means, an electric brake control circuit actuatable to effect intermittent stoppage of the chassis by causing the brake actuating means to engage the brake means, said circuit comprising an electric power source, electric conductor means connected to said power source, an electromagnet connected to said electric conductor means, said electromagnet being connected for actuation of the brake actuating means, and a tactile element in said electric conductor means between the power source and said electromagnet, said tactile element being actuatable into respective positions activating and deactivating the electromagnet to disengage and engage the brake means, and means connected to said electric conductor means and actuating the means for lowering the tamping tool carrier in response to the tactile element position corresponding to the brake engagement.

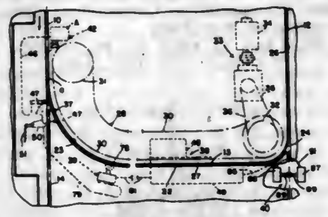
3,127,849

SUB-FLOORING CONVEYOR CONTROL SYSTEM

Paul Klamp, St. Clair Shores, Mich., assignor to Mechanical Handling Systems, Incorporated, Detroit, Mich., a corporation of Michigan

Original application Sept. 9, 1957, Ser. No. 682,797, now Patent No. 3,045,610, dated July 24, 1962. Divided and this application July 16, 1962, Ser. No. 210,066
8 Claims. (Cl. 104—88)

1. A sub-floor signaling device for use in controlling the floor travel of a truck or like mobile unit, comprising a movable actuator positioned beneath a floor in the absence of a mobile unit thereabove and adapted to be elevated above the floor for operation by a passing mobile unit, said actuator having means to operatively connect the same to a control unit to operate the latter to control the travel of said passing unit, a control member mounted beneath said floor and engaged and movably operated by a mobile unit passing above the same, and an operating connection between said control member and actuator to elevate the latter above the floor for operation by said mobile unit, and as thus operated to operate said control unit through said operating connection.

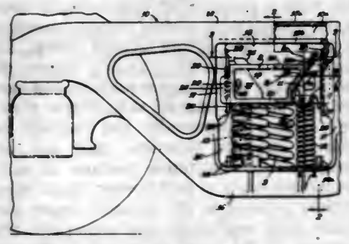


3,127,850

STABILIZED RAILWAY CAR TRUCK

Claus J. Werner Clasen, Chicago, Ill., assignor to Standard Car Truck Company, Chicago, Ill., a corporation of New Jersey

Filed Sept. 18, 1959, Ser. No. 840,847
2 Claims. (Cl. 105—197)

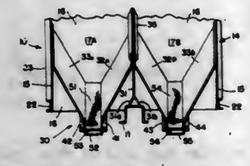


1. A stabilized car truck including a side frame having a bolster window therein, a bolster having a box end portion projecting into said window and formed with a wedge-shaped pocket which opens through one side face and through the top and bottom walls of said box end portion and is defined by parallel side walls and a rear wall having an upwardly and outwardly inclined portion which extends above and below the top wall of the bolster, load springs interposed between the bolster and a subjacent portion of said frame to support the bolster, each load spring being of such length that it can be installed, when free of compression, only when the bolster is elevated to the top of the window, means for damping the vertical oscillations of said load springs comprising a wedge positioned in said pocket and having an inclined face in wedging engagement throughout its length at all times with the inclined portion of the rear wall of said pocket including the portion thereof extending above the top wall of the bolster and having also a vertical face frictionally engaging an opposing vertical face of the side frame, and a wedge supporting helical spring reacting between said wedge and a subjacent portion of the side frame; the said wedge spring being so arranged that its longitudinal axis intersects the midpoint of said inclined face of the wedge, whereby the horizontal thrust of the wedge is substantially uniformly distributed to areas of the inclined wall at locations above and below said midpoint of said inclined face of the wedge to prevent turning of the wedge in said pocket and thereby insure uniform wear on the bolster and on the friction face of the wedge, and the portion of the frame defining the top of the bolster window being formed with an opening for receiving the upper end portion of the wedge and the extended upper end portion of the inclined rear wall of said pocket when the bolster is elevated to the upper end of the bolster window.

3,127,851
RAILWAY HOPPER CARS

Peter E. Anksel, East Chicago, Ind., assignor to General American Transportation Corporation, Chicago, Ill., a corporation of New York

Filed July 13, 1960, Ser. No. 42,547
5 Claims. (Cl. 105—248)

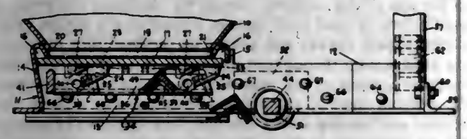


1. A railway car comprising a rigid underframe including an elongated rigid longitudinally extending center sill, an elongated longitudinally extending upstanding substantially box-like body carried on top of said underframe, and structure arranged within said body and dividing the interior thereof into a pair of elongated longitudinally extending and laterally spaced-apart hoppers adapted to receive granular material; said structure comprising an elongated longitudinally extending upstanding divider plate arranged directly above said center sill and provided with a plurality of longitudinally spaced-apart feet on the bottom edge thereof directly engaging the top of said center sill and rigidly secured thereto, and a pair of elongated longitudinally extending hopper sheets disposed in laterally spaced-apart relation and respectively arranged on opposite sides of said divider plate and respectively sloping downwardly and laterally outwardly therefrom in opposite directions, said pair of hopper sheets respectively constituting portions of said pair of hoppers, the top edges of said hopper sheets being respectively rigidly secured to the adjacent upper portions of said divider plate well above said center sill, whereby at least portions of the loads of granular material respectively supported by said hopper sheets are transmitted directly through said divider plate to said center sill.

3,127,852
SLIDING GATES AND OPERATING ASSEMBLY FOR RAILWAY HOPPER CARS

Wilfred A. Beauchamp, Chicago, Ill., assignor to The Youngstown Steel Door Company, Cleveland, Ohio, a corporation of Ohio

Filed Oct. 19, 1959, Ser. No. 847,316
5 Claims. (Cl. 105—253)

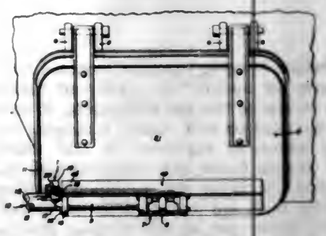


1. In a railway car having a hopper provided with a discharge opening and a frame having front, side and rear members secured to the hopper adjacent to the discharge opening and extending downwardly from the hopper, a gate for closing the discharge opening, said gate comprising a sliding member, a closure member having front, side and rear portions supported upon said sliding member, said front portion of said closure member projecting beyond said sliding member toward said front member of said hopper frame, brackets secured to the underside of said closure member, said brackets having portions inclined downwardly and toward said front member of said hopper frame, rollers carried by said sliding member, said rollers being disposed beneath said inclined portions, means on said hopper frame supporting said sliding member for sliding movement, said hopper frame extending beyond said hopper and operating means on said extending portion of said hopper frame and said sliding member for imparting sliding movement to said sliding member, said operating means sliding said gate toward said front member of said hopper frame to close the discharge opening, said front portion of said closure member being engaged with said front member of said hopper frame prior to the completion of the sliding movement of said sliding member, said rollers engaging said inclined portions of said brackets during the final closing movement of said sliding member and raising said closure member into engagement with said hopper frame.

3,127,853
CLOSURE OPERATING SHAFT LOCKING MECHANISM

Walter L. Flochr, Toledo, Ohio, assignor to Unitcast Corporation, Toledo, Ohio, a corporation of Ohio

Filed Nov. 18, 1959, Ser. No. 853,871
6 Claims. (Cl. 105—308)



1. Mechanism for locking an operating shaft of a railway car door against operation comprising a door operating shaft, means fixed to and extending axially of said shaft beyond an end thereof, bracket means mounted on said door and projecting above said fixed means, key means connected above said shaft to and movable about and longitudinally relative to said bracket means, a downwardly tapered portion on said key means, a correspondingly tapered aperture in and extending substantially radially of said fixed means, said tapered portion in a closed position of said door being longitudinally insertable into said aperture, means on said key means for enabling said tapered portion thereof to be driven into said aperture in said closed position of said door, and means on said fixed means and cooperating with means on said key means for enabling said key means to be dislodged from said aperture and thereafter swung about said bracket means to inoperative position.

3,127,854
OVEN CONVEYOR SYSTEM

Albert Reisman, Philadelphia, Pa., assignor to J. Reisman & Sons, Inc., Pennsauken, N.J., a corporation of Pennsylvania

Filed July 12, 1961, Ser. No. 123,510
1 Claim. (Cl. 107—57)



A conveyor system comprising an oven housing, an endless belt disposed about rollers in said housing, means driving said rollers, a plurality of spaced parallel support means extending transversely of said belt, a plurality of V-shaped support members each having an apex and two outer ends, the outer ends of each V-shaped member being secured to the ends of a respective support means, the apex of each of said support members being substantially equidistant from the side edges of said belt, the apex of each support member extending over and being supported by the support means secured to the next adjacent support member, all of said support members extending in the direction of travel of the portion of said belt supported thereby, and means for biasing one of said rollers to tension said belt.

3,127,855
LABORATORY APPARATUS SHIELDS

Daniel R. Conlon, % Instruments for Research & Industry, Cheltenham, Pa.

Filed Aug. 2, 1960, Ser. No. 46,950
3 Claims. (Cl. 109—49.5)

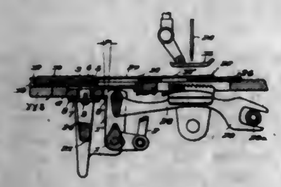


1. A laboratory apparatus shield comprising an upright self-supporting body of rigid transparent sheet material resistant to shatter upon impact, said body having a horizontal base edge with spaced upright side margins extending therefrom and a top margin connecting said side margins, said body having inner and outer faces and having a curved configuration between said side margins, with the generating line of the curved configuration between said side margins being inclined with respect to the base edge whereby the center of gravity of the body is below the midpoint of the height.

3,127,856
HOLE STITCHING DEVICE FOR ZIGZAG SEWING MACHINE

Bunsaku Taketomi, 9 2-chome, Uchiyama-cho, Chikusa-ku, Nagoya-shi, Japan

Filed Dec. 3, 1959, Ser. No. 856,968
Claims priority, application Japan Sept. 23, 1959
3 Claims. (Cl. 112—77)



1. In a sewing machine, in combination, a bed provided with a needle plate and a lowerable pressure foot above said needle plate, said bed being provided with a depression adjacent said needle plate and with a hole in the bottom of said depression;

a shaft extending upwardly through said hole, said shaft being provided at its top with a pinion rising above said bottom;

a stud rising from said bed between said needle plate and said depression;

an elongated feed plate movably disposed on said bed above said depression and said needle plate, said feed plate being provided at one end with a needle-receiving elongated cutout underneath said pressure foot and at the other end with an opening overlying said depression, said feed plate further having an intermediate portion with a longitudinal slot engaged by said stud, said feed plate being formed at said one end with upstanding serrations for gripping a fabric placed between it and said pressure foot;

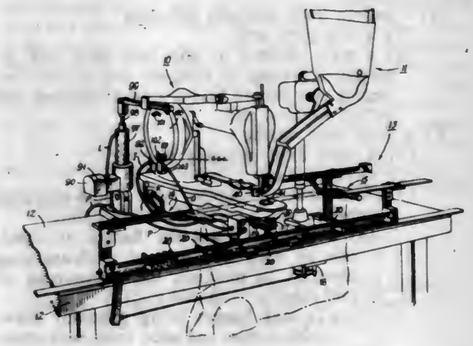
an oblong coupling member positioned with clearance in said depression, said coupling member being provided with a peripheral shoulder at the level of said needle plate supporting said feed plate and with a projection above said shoulder detachably fitting into said opening for positive engagement between said coupling member and said feed plate, said coupling member being provided on its underside with rack teeth forming an endless oblong track around said pinion and in mesh therewith;

and drive means for intermittently imparting unidirectional rotation to said shaft and said pinion, thereby displacing said feed plate in a buttonhole-stitching pattern past said pressure foot.

3,127,857
FEEDER ACTUATOR

Irving Medoff, Flushing, and Charles Bonsignore, Queens Village, N.Y., assignors to Emsig Manufacturing Co., New York, N.Y., a partnership

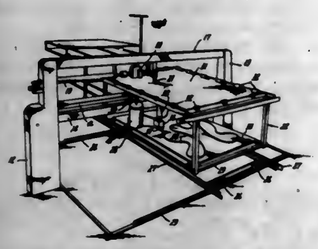
Filed June 29, 1962, Ser. No. 206,238
5 Claims. (Cl. 112—113)



1. An automatic stitching device for performing spaced stitching operations comprising, in combination with a stitching machine including a work clamp member, a stitching machine actuator lever shiftable progressively between inoperative, intermediate and operative positions for initiating in said operative position a stitching cycle of said machine, said machine including a control cam progressively shifted during the stitching cycle, a motorized work holder carriage movable adjacent said clamp member, stops on said carriage, normally closed bleed valve means in the path of movement of said stops, first and second operating cylinders for operating said actuator lever and work clamp, respectively, said cylinders having pistons shiftable to operative and inoperative positions thereof, a source of air under pressure, conduit means including an interposed, an adjustable valve member connecting said source to said first control cylinder and arranged to shift the piston of said first cylinder from the inoperative to the operative position thereof at a controlled rate governed by the adjusted position of said adjustable valve member responsive to the opening of said control valve means by said stops, and second valve

means operated responsive to movement of said actuator lever from the inoperative to the intermediate position thereof and arranged to communicate said second cylinder to said source and shift the piston of the second cylinder to operative position in advance of the movement of said actuator lever from the neutral to the operative position thereof, and means on said cam for releasing the piston of said first cylinder to the inoperative position thereof at the completion of a stitching cycle.

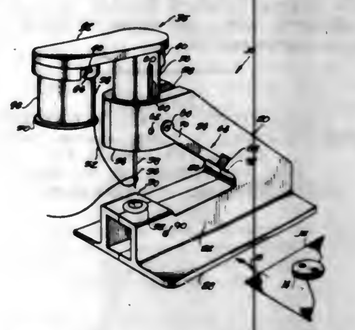
3,127,858
DRIVE MECHANISM FOR QUILTING MACHINES
David R. Cash, Louisville, Ky., assignor to James Cash Machine Co., Louisville, Ky., a corporation of Kentucky
Filed Apr. 4, 1962, Ser. No. 185,041
4 Claims. (Cl. 112—118)



1. A drive mechanism for a quilting machine or the like, comprising:
(A) a pattern track assembly including
(1) a base plate and
(2) a track secured to said base plate and arranged to present an elongate row of teeth extending in a pattern having straight sections and curved sections; and
(B) a drive head having
(1) a track tooth-engaging member,
(2) an input shaft,
(3) drive means coupling said tooth-engaging member to said input shaft and including
(*a*) a pair of wheel-like flanges arranged, one on each side of said tooth-engaging member, to maintain the engagement of said member with said track,
(1) said flanges being relatively movable toward and away from each other, and
(4) resilient means biasing one flange toward the other.

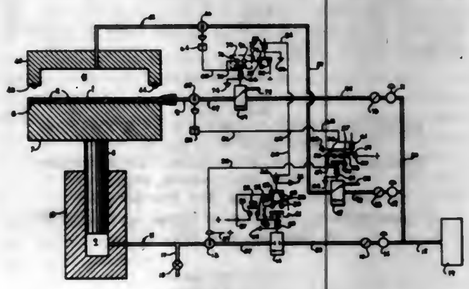
3,127,859
HAND OPERATED BUTTON STITCHING SEWING MACHINE
Bernard Saltz, 2829 Birchwood, Wilmette, Ill., and John H. Campbell, 3717 W. 84th Place, Chicago, Ill.
Filed Feb. 29, 1960, Ser. No. 11,611
17 Claims. (Cl. 112—169)

1. A band operated sewing machine for chain stitching comprising in combination, a V-shaped support member having a first horizontal arm and a second arm sloping upwardly from said first arm; a needle well with a tapered passage therethrough supported in said first arm; a movable head supported by the second arm of said member for reciprocal motion having means for securing a spool of thread and a needle to said head, and having a nonlinear cam surface externally thereof facing toward the bight of said member; a needle bent toward the bight of said support member and secured to said head in alignment for sliding engagement with said tapered passage as reciprocal motion of said head carries the needle through said passage; a looper pivotally supported on said first arm of said member, underneath the needle well; an L-shaped member supported for reciprocation relative to said first arm and providing a branch extending into said second arm; a connecting rod pivotally connected at one end to said looper and pivotally connected at the other end to said



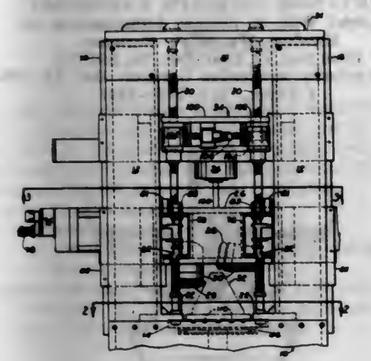
L-shaped member; a push bar reciprocably supported in said second arm to engage said branch of said L-shaped member and extending along said second arm a distance to engage said cam surface when said movable head is moved toward said first arm; and a spring biasing said looper to a thread-engaging position under said needle well.

3,127,860
FABRICATION OF HOLLOW ARTICLES
William Vernon Wenger, Alton, Ill., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Filed June 23, 1959, Ser. No. 822,290
6 Claims. (Cl. 113—44)



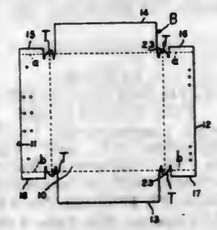
1. An apparatus for fabricating a hollow panel by expansion of a blank having an unjoined interior portion contained within outer faces of said blank comprising a pair of dies relatively movable between open and closed positions, said dies being adapted to receive said blank in the open position and to limit the outer expansion thereof in the closed position, one of said dies having a recess therein adjacent one face of said blank and adapted to be placed in sealing relationship with said blank when said dies are in a closed position, said recess being deep enough to limit the expansion of said blank to a predetermined height, the other of said dies being substantially smooth for contiguous engagement with the other face of said blank, closure means for opening and closing said dies, a blank-holding conduit connected to said recess to transmit blank-folding fluid thereinto, an expansion conduit means adapted for connection to said blank for injecting a blank-expanding fluid into said unjoined portion, activating means to operate said closure means to close said dies above a predetermined pressure level, means operating in response to a predetermined pressure level of said dies to inject blank-holding fluid through said recess conduit means into said recess at a predetermined blank-holding pressure, programming means responsive to a predetermined blank-holding pressure for transmitting a signal after a predetermined time delay, means responsive to said signal to supply blank-expanding fluid pressure into the unjoined portions of said panel, and means responsive to a predetermined blank-expanding pressure to release said blank-holding and blank-expanding pressures.

3,127,861
METAL SPINNING MACHINE
Richard A. Paulton, Cozzadale, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed June 7, 1961, Ser. No. 115,465
5 Claims. (Cl. 113—52)



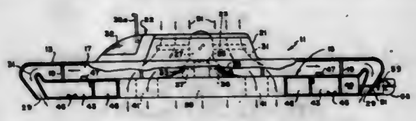
1. A metal spinning machine for shaping a workpiece around a mandrel concentric with a vertically oriented axis of rotation comprising, a machine base having a driving member therein adapted to receive and rotate said mandrel on said axis, a plurality of spaced columns extending from said base having guide ways thereon parallel to said axis, a plurality of spaced lead screws extending from said base parallel to said axis, a rigid box frame held in alignment around said axis by said guide ways, said box frame having ways therein transverse to said axis and having a plurality of lead screw nuts, each nut engaged with one of said lead screws, to support the weight of said box frame over said base, a plurality of spin forming tools adapted to force a workpiece, received on said mandrel and rotating therewith, to conform to the shape of said mandrel when said tools are forced into forming contact with the workpiece, said tools received in said box frame on said ways therein for transmission of reactive forces to said box frame tending to balance one another when said tools are in forming contact with the workpiece, means to effect relative rotation between said lead screws and the respective nuts engaged therewith for movement of said box frame along said guide ways, means to effect a constant force tending to produce relative rotation between said lead screws and the respective nuts engaged therewith to counter balance the weight of said box frame, and means to move said tools on said ways in said box frame, said means to move said tools and means to effect relative rotation coacting to effect forming contact between said tools and the workpiece.

3,127,862
BOX AND METHOD OF MAKING THE SAME
Michael C. Presnick, 150—20 71st Ave., Flushing, N.Y.
Original application Mar. 12, 1958, Ser. No. 720,868, now Patent No. 3,035,735. Divided and this application Oct. 10, 1961, Ser. No. 144,096
2 Claims. (Cl. 113—120)



1. The method of forming an open top case having parti-spherical corners from an integral blank of sheet metal, said blank comprising a substantially rectangular sheet including a rectangular bottom panel having a pair of end forming panels extending from a first pair of opposed edges of said bottom panel and a pair of side panels extending from a second pair of opposed edges of said bottom panel, said blank including notches interposed between said side panels and said end panels, thereby to define generally triangular tongues having base portions generally parallel with said first pair of opposed edges, comprising the steps of first forming a pair of parti-cylindrical folds along lines paralleling said first pair of opposed edges, said fold lines intersecting a pair of said tongues and a pair of said side panels, thereby to form end portions on said side panels which lie normal to the remainder of said side panels and to form parti-cylindrical folds intersecting said tongues, thereafter forming a second pair of parti-cylindrical folds along lines parallel with said second pair of edges, said second pair of folds also intersecting a portion of said tongues, thereby to form said tongues into parti-spherical configurations, and thereafter welding together the contiguous edges of said end panels and said end portions of said side panels and the edges of said tongues.

3,127,863
SUBMERSIBLE GROUND EFFECT MACHINE
Anibal A. Tinajero, 1310 N. Meade St., Arlington, Va.
Filed Mar. 23, 1962, Ser. No. 182,145
1 Claim. (Cl. 114—16)
(Granted under Title 35, U.S. Code (1952), sec. 266)



A vehicle operable by ground effect over water and operable in surfaced or submerged positions, said vehicle comprising:
outer and inner juxtaposed essentially flat elongated hollow bodies of low profile separated from each other by rigid supports, there being formed between said bodies an internal duct having an upper opening and a bottom peripheral nozzle, said duct therefore being freely floodable when the vehicle is in water;
means comprising a fan mounted in said vehicle for directing water upwardly and downwardly in said duct to at least enhance the speed of descent or ascent respectively of said vehicle when said fan is immersed in water;

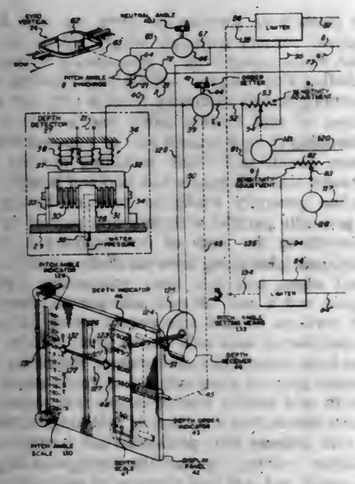
said fan when free of water directing air upwardly or downwardly in said duct to enhance the speed of descent or ascent respectively;

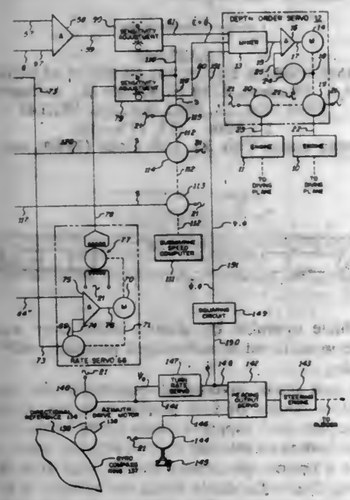
said fan when free of water directing high velocity air through said nozzle to produce ground effects;

ballast means located in said vehicle for varying the buoyancy of the vehicle; and

propulsion means for propelling said vehicle through water.

3,127,864
COORDINATED DEPTH CONTROL SYSTEM FOR SUBMARINES
Jerome Bentkowsky, Charlottesville, Va., Joseph H. Chadwick, Jr., Amityville, N.Y., and Virgel E. Williams, Charlottesville, Va., assignors to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Apr. 17, 1962, Ser. No. 188,119
11 Claims. (Cl. 114—144)





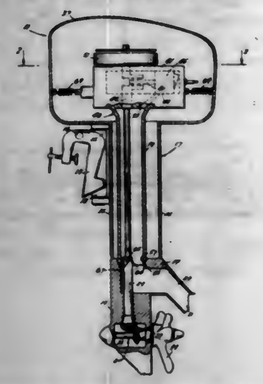
1. A system for maneuvering a submarine with diving planes including servo means connected to operate the diving planes having a synchro providing a repeatback output; means for changing the depth of the submarine to an order depth providing a combined depth error and pitch angle error output including a vertical reference having a synchro with a pitch angle input, a depth reference having an input synchro, a manually movable order member, a depth order indicator with a movable element connected to the member, and a synchro connected to the member and the depth reference synchro having an input depending on the movement of the order member; means operatively connected to said vertical reference synchro and said depth order synchro for providing an output in accordance with the rate of change of pitch angle and depth of the submarine; means for adjusting the means providing the combined error output non-linearly, means for adjusting the means providing the rate of change output linearly, and means for combining the output of said repeatback synchro and the adjusted outputs of said combined error output means and rate of change output means connected to operate said servo means.

3,127,865
PROPULSION UNITS FOR WATERCRAFT
Friedrich Wilhelm Pleuger, Juthornstrasse 80, Hamburg-Wandsbek, Germany
Filed Dec. 12, 1961, Ser. No. 158,771
Claims priority, application Germany Dec. 23, 1960
1 Claim. (Cl. 114—148)



In a watercraft having a bow with a horizontal transverse duct, a propulsion unit comprising a driving motor carried by the watercraft and having a vertical motor shaft, a clutch carried by a lower end of said shaft, a vertical driving shaft having an upper end connected with said clutch and extending into said duct, a tubular casing located in said duct and connected with the watercraft, said casing liquid-tightly enclosing the last-mentioned shaft, an aspirating propeller in said duct, a flow-receiving propeller in said duct, a horizontal shaft firmly connected with said aspirating propeller, a horizontal shaft firmly connected with said flow receiving propeller, a horizontal housing liquid-tightly connected with said casing and having bearings liquid-tightly supporting the two last-mentioned shafts, whereby said two propellers are arranged in tandem in said duct, said housing being adapted to be filled with oil under superatmospheric pressure, and differential gear means located in said housing and comprising a horizontal gear firmly connected with the lower end of the vertical driving shaft, a larger vertical gear firmly connected with the shaft of the aspirating propeller and meshing with said horizontal gear, a smaller vertical gear firmly connected with the shaft of the aspirating propeller, another smaller vertical gear firmly connected with the shaft of the flow-receiving propeller, and two horizontal gears meshing with the two smaller vertical gears, whereby said differential gear means drive said aspirating propeller at a slower speed than that of said flow-receiving propeller and in the same direction as that of said flow-receiving propeller and whereby said differential gear means automatically adjust the relative speeds of the two propellers.

3,127,866
OUTBOARD MOTOR MOUNTING ARRANGEMENT
James W. Mohr, Brookfield, Wis., assignor to Outboard Marine Corporation, Waukegan, Ill., a corporation of Delaware
Filed Apr. 27, 1962, Ser. No. 190,660
20 Claims. (Cl. 115—17)



1. An outboard motor comprising a transom bracket, and a propulsion unit supported by said bracket for rotation about an upright axis, said propulsion unit comprising a lower unit including a rotatably mounted shaft carrying a propeller, the improvement comprising

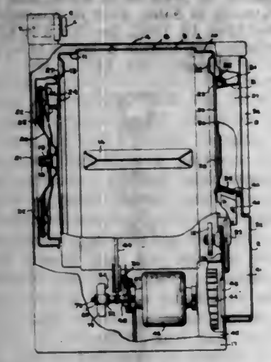
a power unit including

a generally upright strut, and

a power head rigidly mounted on the upper end of said strut, and

means connecting the lower end of said strut and said lower unit for universal angular movement of said power unit relative to said lower unit.

3,127,867
MEANS FOR INDICATING THE END OF OPERATION OF A MACHINE
John Bochan, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Jan. 18, 1963, Ser. No. 252,338
5 Claims. (Cl. 116—67)



1. In a machine having driving means for providing operation of said machine, and control means for starting and terminating operation of said driving means:

(*a*) A shaft driven by said driving means, said machine being formed to effect relatively rapid acceleration of said shaft when operation of said driving means starts and relatively rapid stopping of said shaft when operation of said driving means is terminated;

(*b*) a rotatably mounted member including a striker;

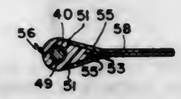
(*c*) low friction bearing means mounting said member on said shaft whereby said member accelerates relatively slowly upon rotation of said shaft and decelerates relatively slowly upon stopping of said shaft;

(*d*) a moveable assembly mounted to said shaft for rotation therewith, said assembly including a clapper and a counterweight;

(*e*) and biasing means biasing said assembly to a first position wherein said clapper and said striker impact each other to produce an audible signal during relative rotation of said assembly and said rotatably mounted member;

(*f*) said counterweight causing the assembly to move to a second position in response to centrifugal force during rotation of said assembly, said second position of said assembly moving said clapper to a position wherein it does not impact said striker during relative rotation of said assembly and said rotatably mounted member.

3,127,868
MEANS FOR ATTACHMENT OF A PENNANT STAFF TO AUTOMOBILES
Lyle D. Guthrie, 1619 Guy St., Apt. 3, San Diego, Calif.
Filed Apr. 3, 1961, Ser. No. 100,084
1 Claim. (Cl. 116—173)



A pennant comprising:

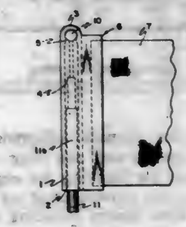
a body portion of sheet material;

a substantially rigid pivotal portion, disposed along one edge of said body portion, having a smoothly rounded leading edge and a gradually rearwardly tapering trailing edge;

rearwardly facing shoulders substantially at the junction of said leading and trailing edges, said pivotal portion being streamlined except for said shoulders; and

said body portion having portions overlapping said trailing edge, secured thereto and abutting on said shoulders, the depth of said shoulders being substantially equal to the thickness of said overlapping portions of said body portion, whereby the over all streamlining of said pivotal portion and said overlapping portions is achieved.

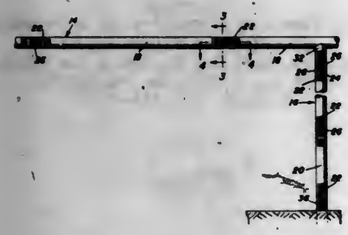
3,127,869
FLAG SUPPORT
John William Howland, % Mene Grande Oil Co., Apartado 45, Barcelona, Venezuela
Filed Sept. 17, 1962, Ser. No. 224,167
4 Claims. (Cl. 116—173)



1. The combination with an automobile radio antenna having a spherical end of a flag support comprising a flexible, resilient plastic tubular member having one open

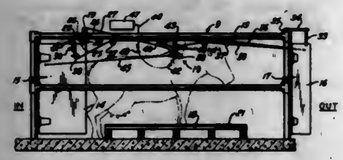
end and one closed end and a substantially uniform diameter bore therebetween, an integral necked down portion of a diameter smaller than said antenna spherical end internally of said tubular member adjacent the closed end for temporarily holding said tubular member on a said antenna spherical end, a pair of closely spaced integrally attached flanges extending substantially radially therefrom and generally parallel to each other, and a flag member mounted between said flanges along its hoist with its fly extending therefrom, there being at least a plastic portion along the hoist of said flag, and means for integrally securing said plastic portion between said flanges for securing said flag member to said support member.

3,127,870
BREAKAWAY RAIL FOR RACE TRACKS
Philip Bieber, 2915 Segovia St., Coral Gables 34, Fla.
Filed Feb. 27, 1962, Ser. No. 175,970
5 Claims. (Cl. 119—15.5)



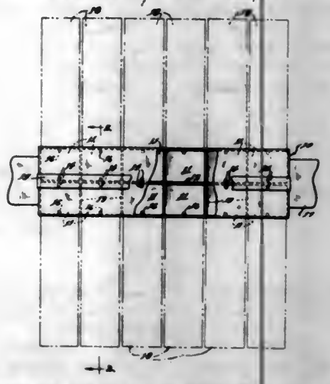
1. A breakaway race track rail comprising a rail means and posts, both the rail means and posts consisting of a plurality of sections and means securing said sections together, said last mentioned securing means being substantially weaker than said sections and easily broken upon the application of a force against the sections in excess of a mere brushing force, said securing means including plates spanning the ends of adjacent sections and secured thereto by a plurality of bolts, said plates being provided with centrally located points of weakness.

3,127,871
INDIVIDUAL RESTING COMPARTMENTS FOR ANIMALS
Morgan J. Jorgensen, Jr., Menasha, Wis.
(Rte. 2, Neenah, Wis.)
Filed Aug. 31, 1961, Ser. No. 135,259
16 Claims. (Cl. 119—27)



1. A resting stall for animals, comprising an enclosure having entry door means and exit door means, animal-operated latch means for latching the entry door means closed in response to the movement of an animal into the stall, and said exit door means including releasing means associated with the stalls and the latch means and actuated by the movement by the animal through the exit door means and thereby releasing said latch means in response to the movement of an animal from the stall.

3,127,872
EXPERIMENTAL ANIMAL WATERING DEVICE
Miriam P. Finkel, Chicago, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed May 24, 1963, Ser. No. 283,127
2 Claims. (Cl. 119—72.5)



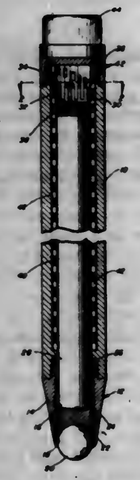
1. A watering device for experimental animals, comprising a rectangular plastic enclosure adapted to be inserted into a battery of experimental animal individual enclosures, the said rectangular plastic enclosure having a longitudinal partition midway along its entire length and depth and a plurality of equally spaced, parallel transverse partitions across its entire width and depth, whereby two parallel rows of fluid-tight rectangular compartments are formed of equal size and shape, two parallel rows of equally spaced filling holes offset a short distance on either side of said longitudinal partition, at least one of said filling holes entering each said compartment, a strip of tape gas-tightly sealing said rows of filling holes, and two parallel rows of equally spaced drinking holes, only one of said holes entering each compartment, along the bottom of said plastic enclosure, adjacent its side walls.

3,127,873
TETHERING DEVICES FOR STABLED ANIMALS
Roger Guillaume, 51 Ave. de la Saisa, and Emile Guillaume, 49 Ave. de la Saisa, both of Vieuxalm, Belgium
Filed Mar. 14, 1962, Ser. No. 179,679
Claims priority, application Belgium Mar. 23, 1961
5 Claims. (Cl. 119—147)



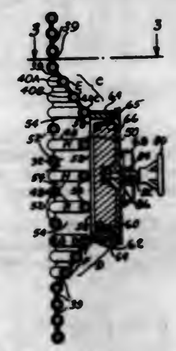
1. A device for tethering animals in stables, comprising a pair of chain lengths for disposition in vertical alignment, upper and lower fixing components each having means for removably securing one end of each of said chain lengths, a releasable coupling device for securing the other ends of said chain lengths, an animal neck piece terminating in a pair of rings slideably disposed on said chain lengths, said coupling device having a rocking lever releasably maintained in a raised position by a locking lever, the coupling device having recesses in laterally opposed walls, the rocking lever being provided with pegs pivotally inserted in said recesses, and grooves in said rocking lever provided with a median transverse slot for receiving the end links of the lower length of chain, said grooves being offset relatively to the said pegs.

3,127,874
WRITING IMPLEMENT
Nathan Zepelovich, Fort Madison, Iowa, assignor to W. A. Sheaffer Pen Company, Fort Madison, Iowa, a corporation of Delaware
Filed Aug. 26, 1960, Ser. No. 52,171
6 Claims. (Cl. 120—42.4)



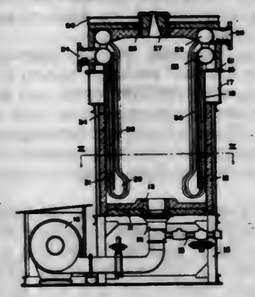
1. An implement of the character described, comprising a barrel, a tip at one end of said barrel, said tip having a central bore extending from said barrel and terminating in an annular shoulder defining a reduced forward opening, a spherical applicator member loosely disposed within said central bore, the diameter of said applicator being intermediate the respective diameters of said central bore and said shoulder to permit free longitudinal movement thereof to a position engaging said shoulder and projecting through said forward opening, a stop member disposed within said central bore and spaced rearwardly of said applicator when said applicator is in said projected position, the diameter of said applicator being greater than the opening past said stop member whereby said applicator is maintained against loss from said central bore, a column of solid marking material within said barrel, the cross section of said column permitting movement thereof past said stop member and into said central bore to provide a consumable upper seat for said applicator, a follower longitudinally movable within said barrel and positioned against the surface of said column remote from said applicator, means for automatically moving said follower and said column in a forward direction to provide engagement between said upper seat and said applicator and to urge said applicator into said projected position spaced forwardly of said stop member, and a locking portion arranged within said barrel, said locking portion engaging said follower and restraining said follower and said column against rearward movement relative to said tip whereby said applicator is supported for rotation in said projected position by said upper seat.

3,127,875
VAPOR GENERATORS
Richard Henry Evans, Surrey, England, assignor to Babcock & Wilcox, Limited, London, England, a corporation of Great Britain
Filed July 27, 1960, Ser. No. 45,619
3 Claims. (Cl. 122—235)



1. In combination with a planar wall portion including contiguous coplanar horizontally extending drainable fluid cooled tube lengths arranged for parallel flow of fluid therethrough and providing a boundary for a chamber confining high temperature heating gases, means forming an aperture in said wall, means forming a pocket flanking said aperture and having an access opening disposed directly opposite said aperture, and a door normally closing said access opening, said last named means comprising intermediate portions of alternate tubes of a group of said tube lengths displaced laterally from said wall in an outward direction, and intermediate portions of the remaining tubes of said group extending horizontally in the plane of said wall and across said aperture to screen said door from the heating gases, each of said intermediate displaced tube portions having its entire length disposed in a plane extending normal to the plane of said wall.

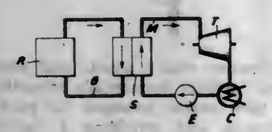
3,127,876
HEAVY DUTY FLUID HEATER
Arthur A. Olson, 4150 Windsor Ave., Youngstown, Ohio
Filed June 30, 1961, Ser. No. 121,105
4 Claims. (Cl. 122—276)



1. In a fluid heating furnace an elongated combustion chamber having end walls and a side wall, inlet and out-

let headers extending along said side wall adjacent one of said end walls, a plurality of generally U-shaped fluid-conducting tubes connected at their ends to said headers and extending longitudinally along said side wall toward the other end wall, a baffle interposed between the longitudinally reaches of the respective tubes to direct products of combustion to flow longitudinally along the inner reaches of said tubes in one direction and thereafter longitudinally along the outer reaches of said tubes in the other direction, a burner port in one of said end walls to direct a flame stream longitudinally into said chamber, said inner reaches of said tubes being arranged in two closely spaced layers adjacent the inner surface of said baffle with the reaches in one layer being staggered with respect to the reaches in the other layer and the diameters of the reaches being such that the inner surface of said baffle is entirely hidden from said flame stream.

3,127,877
ONCE-THROUGH BOILER AND METHOD OF OPERATING THE BOILER
Paul Profos, Winterthur, Switzerland, assignor to Sulzer Freres, S.A., Winterthur, Switzerland, a corporation of Switzerland
Filed July 15, 1960, Ser. No. 43,124
Claims priority, application Switzerland July 17, 1959
5 Claims. (Cl. 122—406)



1. A method of operating a heat exchanger for cooling the coolant fluid of a nuclear reactor, the heat exchanger having a tube system forming a once-through type forced flow vapor generator wherein a vaporizable operating medium is forced to flow at variable flow rates corresponding to variable loads in counterflow relation to the coolant issuing from the reactor consecutively through a first heat exchange section, a liquid separator and through a second heat exchange section, the method comprising:

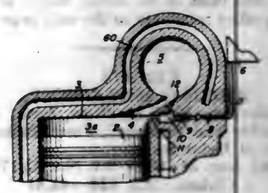
maintaining a flow rate of the operating medium through the first heat exchange section at which flow rate the operating medium leaves said first heat exchange section in wet vapor state, and

separating the liquid phase from the vapor phase in said separator and conducting the vapor phase into said second heat exchange section and diverting the liquid phase from said second heat exchange section, upon operation of the heat exchanger below a predetermined load;

maintaining a flow rate of the operating medium through the first heat exchange section at which flow rate the operating medium leaves said first heat exchange section in saturated vapor state and passing the entire effluent of said first heat exchange section into said second heat exchange section, upon operation of the heat exchanger at said predetermined load; and

maintaining a flow rate of the operating medium through the first heat exchange section at which flow rate the operating medium leaves said first heat exchange section in superheated vapor state and passing the entire effluent of said first heat exchange section into said second heat exchange section, upon operation of the heat exchanger above said predetermined load.

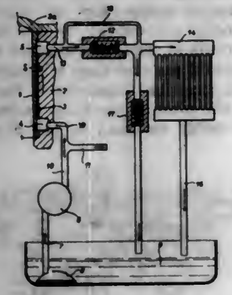
3,127,878
INTERNAL COMBUSTION ENGINE OPERATING WITH SELF-IGNITION
Günther Leunig, Bad Homburg, and Jean Herbert Willich, Wiesbaden, Germany, assignors to Gesellschaft für Linde's Eismaschinen Aktiengesellschaft, Hollriegelskreuth, near Munich, Germany
Filed Oct. 31, 1960, Ser. No. 66,116
Claims priority, application Germany Nov. 10, 1959
10 Claims. (Cl. 123—32)



1. An internal combustion engine of the self-ignition type, which comprises a cylinder; a reciprocating piston within said cylinder; a main combustion chamber within said cylinder and above said reciprocating piston; a secondary combustion chamber having a uniformly curved wall; a constricted transfer channel leading from said main to said secondary combustion chamber, said transfer channel opening into said secondary combustion chamber tangentially with respect to said curved wall, which latter is adapted to function as a guide surface for a stream of air and fuel blown into said secondary combustion chamber in the course of the movement of said piston towards its upper position and for droplets of liquid fuel centifuged thereon; means for introducing fuel into said transfer channel, said fuel-introducing means consisting essentially of a fuel storage chamber; a fuel feed duct supplying fuel to said fuel storage chamber through a check valve; a fuel delivery duct extending from the fuel storage chamber to the transfer channel and entering the latter at substantially its narrowest zone, and a scavenging duct connecting said fuel storage chamber with said main combustion chamber at a point above the upper piston-reversing position; a cylindrical sleeve in said fuel storage chamber extending between said fuel feed duct and said scavenging duct, ports in said sleeve adjacent each end, and a plunger slidable in said sleeve and tending to close the end of said scavenging duct in consequence of a vacuum obtaining on that side of said plunger, from said main combustion chamber.

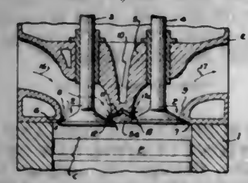
3,127,879
COOLING CYLINDER LINERS OF INTERNAL COMBUSTION ENGINES
Dante Giacosa and Giovanni Torazza, Turin, Italy, assignors to Fiat Societa per Azioni, Turin, Italy
Filed Feb. 5, 1963, Ser. No. 256,341
Claims priority, application Italy Feb. 10, 1962
6 Claims. (Cl. 123—41.72)

1. A device for cooling the cylinder liners of internal combustion engines comprising a cylinder block having at least one cylinder bore provided with a conduit extending substantially radially of the bore at each end portion of said bore, a cylinder head on said cylinder block, a cylinder liner provided externally and intermediately its ends with a circumferentially extending recess having a depth varying from a minimum value at one end to a maximum value at the opposite end of said liner, said liner being fitted in the cylinder bore with the shallow end of the recess facing the cylinder head, so that a clearance communicating with said conduits is formed between the liner and the cylinder block, one of said conduits being connected to the pressure oil lubricat-



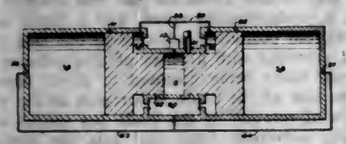
ing circuit of the engine, the other conduit being connected to a cooler.

3,127,880
MEANS FOR COOLING THE EXHAUST PORT WALL IN A POPPET VALVE INTERNAL COMBUSTION ENGINE
Siegfried Meurer and Klaus Henning Barner, Nurnberg, Germany, assignors to Maschinenfabrik Augsburg-Nurnberg AG., Nurnberg, Germany
Filed Aug. 29, 1963, Ser. No. 305,281
Claims priority, application Germany Sept. 7, 1962
6 Claims. (Cl. 123—41.85)



1. In an internal combustion engine having an intake poppet valve, an exhaust poppet valve, a valve port web between these valves, and at least one air passageway through said web for bringing cooling intake air into contact with the wall of the exhaust valve port, the improvement comprising a first guide element adjacent the intake opening into said passageway for scooping intake air into said passageway, and a second guide element adjacent the air outlet end of said passageway for discharging air from said passageway in the direction of the exhaust gas flow through the exhaust valve port.

3,127,881
FREE PISTON ENGINE
Harold Kosoff, 1203 Hale St., Philadelphia 11, Pa.
Filed Dec. 19, 1960, Ser. No. 76,933
33 Claims. (Cl. 123—46)



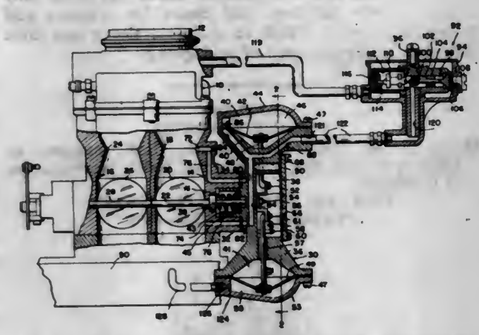
1. A free piston engine comprising:

(*a*) at least one cylinder,

(*b*) at least one free piston each of which has a plurality of faces, at least portions of said faces opposing one another, each of said pistons being arranged to move axially in a reciprocating fashion in a corresponding one of said cylinders, and

(*c*) means including a source of gas under pressure for supplying said pressurized gas to at least one chamber bounded by a face portion of one piston and said cylinder thereby controlling the average positions of said pistons, said means being arranged to vary the gaseous pressure exerted axially upon said pistons in response to deviations of the respective average positions thereof from predetermined average positions.

3,127,882
EXHAUST AND VACUUM GOVERNOR SYSTEM
Ramuald B. Locher, Jr., Madison Heights, Mich., assignor to Holley Carburetor Company, Warren, Mich., a corporation of Michigan
Filed Mar. 13, 1961, Ser. No. 95,205
14 Claims. (Cl. 123—103)

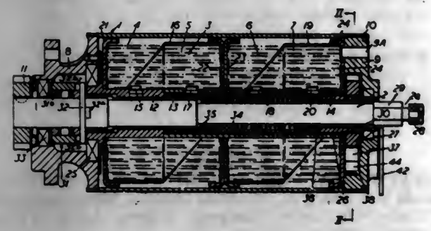


3. A multi-stage carburetor for an internal combustion engine having an exhaust manifold, said carburetor comprising a body with primary and secondary induction passages therethrough and having respective primary and secondary throttle plates therein controlling the flow of combustible mixtures to said engine, a venturi formed within said primary induction passage, means for manually controlling the position of said primary throttle plate, vacuum responsive means for controlling the position of said secondary throttle plate, and fluid actuating means operatively connected to said primary throttle plate, said last named means comprising a housing having a lever connected to said primary throttle plate, a pair of movable walls dividing said housing into a pair of chambers, means connecting each of said walls to opposite ends of said lever, first passage means connecting one of said chambers to a source of engine vacuum which is a function of speed and throttle position, and second passage means connecting the other chamber to the exhaust manifold so as to provide a pushing force on the wall thereof which is effective to complement the pulling force of the engine vacuum on said other wall when moving said primary throttle plate towards closed position.

3,127,883
SPRING STARTER MOTOR
Alan Wycliffe Sparrow, Peterborough, England, assignor to F. Perkins Limited, London, England, a British company
Filed June 5, 1961, Ser. No. 114,825
Claims priority, application Great Britain June 9, 1960
7 Claims. (Cl. 123—179)

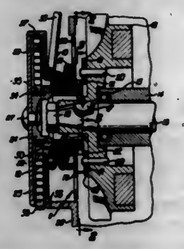
1. A starter motor for an internal combustion engine comprising, in combination, a frame, a shaft rotatably mounted in said frame, a gear on said shaft adapted to drivingly engage said engine, a sleeve rotatably mounted in said frame about said shaft, a one-way clutch coupling said shaft and said sleeve so that said sleeve can drive

said shaft in one direction, a spring positioned within said frame having one end coupled to said sleeve and the other end coupled to said frame so that rotation of said shaft counter to said direction rotates said sleeve and tensions



said spring, a releasable one-way clutch coupling said frame and said sleeve so that the sleeve can rotate only in said counter direction, and means for releasing said releasable one-way clutch so that said sleeve can drive said shaft under the force of said spring.

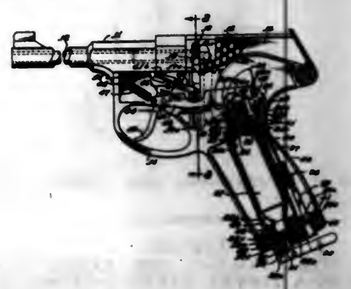
3,127,884
ENGINE STARTER
Henry T. M. Rice, San Gabriel, Calif., assignor to Ohlsson & Rice, Inc., Los Angeles, Calif., a corporation of California
Filed May 1, 1961, Ser. No. 106,689
15 Claims. (Cl. 123—185)



1. In a starter for an internal combustion engine: a rotatable member adapted to be connected to the engine to rotate therewith; a pawl pivotally mounted on said member; a ratchet wheel engageable with said pawl; means for rotating said wheel to rotate said member; said pawl being subject to centrifugal force acting thereon when rotating with said rotatable member, and due to the mass of the pawl itself, to be disengaged by such force from said ratchet wheel; said pawl and rotatable member having coengageable means thereon for limiting outward movement of said pawl from engagement with said wheel upon starting of the engine and disengagement of said pawl from said ratchet wheel by such centrifugal force.

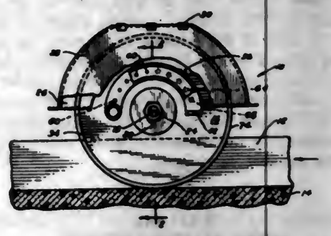
3,127,885
GAS CARTRIDGE MOUNTING
Richard M. Kline, 9413 Sawyer St., Los Angeles 35, Calif., and Kenneth R. Pitcher, 5001 Odessa, Encino, Calif.
Application June 27, 1958, Ser. No. 744,968, now Patent No. 3,048,159, dated Aug. 7, 1962, which is a continuation of abandoned application Ser. No. 538,858, Oct. 6, 1955. Divided and this application July 14, 1961, Ser. No. 124,124
1 Claim. (Cl. 124—11)

In a small arms weapon: a body having a hollow handle portion, the end of the handle portion having a threaded opening; a cylinder accommodated in the hollow handle portion and having one end registering with the said threaded opening; said cylinder being adapted to receive, with peripheral clearance, a gas cartridge having a penetrable end closure; a plug threadedly received in said body opening and having a reduced extension projecting in sealing relationship into said end of said cylinder; a piercing pin carried by the plug for axial movement selectively to engage, at its inner end, the penetrable closure of said gas cartridge; said piercing pin having its outer end accessible exteriorly of the plug; sealing means between the pin and the plug; manually operable cam means accessibly mounted by the plug for limited



movement, said cam means being engageable with the outer end of said piercing pin for axially moving said pin to puncture said cartridge; and a valve assembly including a body provided with a part sealingly engaging the other end of said cylinder, and a movable valve member mounted on the body and operable to release a quantity of fluid from said cylinder; said valve body forming a seat for that end of the gas cartridge remote from said plug against which said cartridge reacts upon inward movement of said piercing pin.

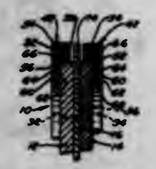
3,127,886
SYSTEM FOR SUPPLYING A COOLANT LIQUID TO A ROTARY STONE CUTTING SAW OR THE LIKE
Harold C. Miller, Chicago, Ill., assignor to Super-Cut, Inc., Chicago, Ill., a corporation of Illinois
Filed Feb. 1, 1962, Ser. No. 170,443
8 Claims. (Cl. 125—13)



1. In a rotary stone cutting saw designed for use in sawing a kerf in a workpiece, in combination, a flat-sided circular saw blade of predetermined diameter mounted for rotation about an axis and adapted to be driven at a predetermined speed, and a liquid coolant supply manifold positioned adjacent to one side of said blade and provided with a series of jet-producing holes therein, said holes being disposed in direct opposition to said one side of the blade at a region in the vicinity of the axis of rotation of the blade but spaced slightly and radially outwardly from said axis, the positioning of said holes with respect to said side of the blade being so cooperatively related to the diameter of the blade and its speed of rotation that jets of the liquid coolant issuing from said holes will impinge against said side of the blade and, under the combined influence of molecular adhesion between the liquid coolant and the blade

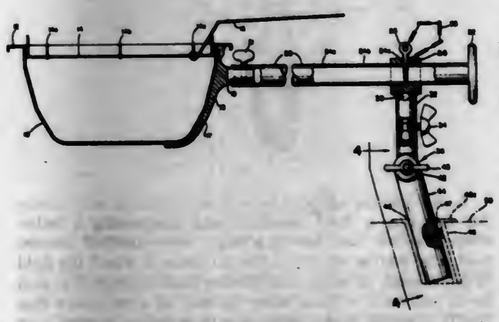
as modified by the frictional drag of the swirling ambient air stream in the vicinity of the blade, will be given a circumferential component of motion causing the same to travel in a spiral divergent path terminating within the kerf undergoing sawing so that flat sheets of the liquid coolant are flung from a limited region of the periphery of the blade and into the kerf at spaced regions therealong, to the exclusion of the peripheral regions of the blade remote from the kerf.

3,127,887
DIAMOND SAW BLADE ASSEMBLY FOR ROUTING AND REGROOVING CONCRETE JOINTS
Leopold H. Metzger, Glencoe, Ill., assignor to Super-Cut, Inc., Chicago, Ill., a corporation of Illinois
Filed Mar. 5, 1963, Ser. No. 262,880
20 Claims. (Cl. 125—15)



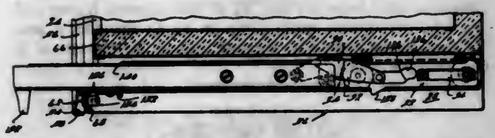
1. A diamond saw blade assembly for routing and regrooving joints in a concrete areaway, said assembly comprising, in combination, a composite saw blade including two outside circular cutting disks of equal diameter and a central circular inside routing and regrooving disk of larger diameter sandwiched between the outside disks in face-to-face coaxial relationship, the circular rim of each of said disks being interrupted by a series of inwardly extending radial slots which are spaced apart in a circumferential direction and define therebetween intervening arcuate rim portions, each rim portion on each outside cutting disk having associated therewith two block-like cutting teeth in the form of metallic matrices containing diamond particles and consisting of an outer tooth mounted on the outer arcuate edge of the associated rim portion and overhanging the outside face of the latter, and an inner tooth mounted on the outside face of the associated disk and underlying the overhanging portion of the adjacent cutting tooth.

3,127,888
CHARCOAL GRILL HOLDERS
Wilbur H. Burnham, Jr., 167 Sewall Woods Road, Melrose 76, Mass., and Edward G. Hart, 764 Lynnfield St., Lynn, Mass.
Filed Oct. 5, 1961, Ser. No. 143,167
3 Claims. (Cl. 126—25)



1. A charcoal grill holder, comprising a bowl-like receptacle for burning coals, a removable grill fitting the top of said receptacle for cooking food thereon, a bracket having a stub arm fixedly attached to said receptacle for supporting the same horizontally, a tubular shaft fitting the end of said stub arm and having means for keying said shaft to said arm, a bearing for adjustably supporting said shaft in a horizontal plane and having a downwardly extending arm, a tubular sleeve fitting said downwardly extending arm, and a shaft hingedly and adjustably connected to said tubular sleeve, said shaft being capable of being supported in a rigid socket.

3,127,889
OVEN CLOSURE AND HINGE CONSTRUCTION
Herbert E. Mills, Detroit, Mich., assignor to Mills Products, Inc., Walled Lake, Mich., a corporation of Michigan
Filed Sept. 23, 1960, Ser. No. 57,964
4 Claims. (Cl. 126—194)

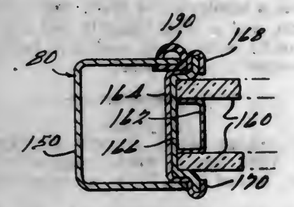


1. A heat insulated cooking oven having a heating element therein and a front access opening, a compartment open at the front and disposed below said oven, a heat insulating wall separating said compartment and oven, a track extending from the front to the rear of said compartment, a carriage removably mounted on said track for movement therealong, a closure for said access opening and the open front end of said compartment and comprising a rectangular frame and a window mounted in the frame so as to be in line with said oven when the closure is in its closed position, a hinge connection between the frame of said closure and said carriage to support said closure for pivotal movement from its closed to a horizontal position as a shelf in front of and below said oven, said hinge connection including supporting links having a pivotal connection with said closure frame and a pin and slot connection with said carriage and spanning the hinge axis, means engageable with said links to form a stop for limiting opening movement of said closure, counterbalancing springs reacting on said links and carriage for biasing said closure to its closed position, and a second stop partially formed from said links and cooperable with said links for holding said closure ajar, said closure when horizontally supported by said carriage being movable into said compartment, said carriage and track being constructed so as to permit a user to remove said carriage as a unit with the closure hinged thereto, from said track by withdrawing said carriage from said compartment.

3,127,890
OVEN CLOSURE CONSTRUCTION
Herbert E. Mills, Detroit, Mich., assignor to Mills Products, Inc., Walled Lake, Mich., a corporation of Michigan
Original application Sept. 23, 1960, Ser. No. 57,964. Divided and this application July 28, 1961, Ser. No. 127,529
2 Claims. (Cl. 126—200)

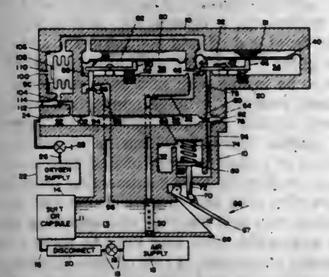
1. A rectangular closure for the access opening of an oven including a window unit comprising a pair of spaced window panels with a spacer between and sealingly engaging said panels at the edges thereof, a continuous clamping and sealing frame for clamping said panels against said spacer comprising a channel frame fitting around the peripheral edges of said spaced window panels with said spacer therebetween; said clamping frame having integral continuous lateral projections on each side thereof, and a one-piece sheet metal outer wrap-around

closure frame of channel-shaped cross section wrapped around said window unit on at least three sides thereof, with the open side of the channel facing inwardly and seating on the lateral projections of said clamping frame to effect a nested fit around said window unit thereby locat-



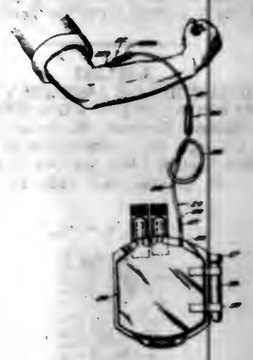
ing said window unit within the closure frame, and a gasket secured between one leg of said closure frame and one of said lateral projections so as to provide a seal between the closure and the oven when the closure is in the closed position.

3,127,891
FLUID CONTROL
John W. Heaneman, Rock Island, Ill., and Alan C. Tracy, Davenport, Iowa, assignors to The Bendix Corporation, a corporation of Delaware
Filed Sept. 4, 1959, Ser. No. 838,177
2 Claims. (Cl. 128—144)



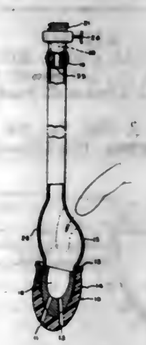
1. A two-stage pilot operated exhaust valve for regulating fluid pressure at not less than the physiological critical pressure comprising: an exhaust passage; a first stage flow control valve comprising valve means for varying the exhaust passage outlet, a fluid chamber, an internal movable piston disposed in the interior of said fluid chamber dividing said chamber into two chambers and movable in response to variation in the pressure differential in the chambers, a member connecting said valve means and said internal movable piston, means arranged to maintain a back-up pressure in one of said chambers; a second stage pilot valve means arranged to maintain an actuating pressure in the second of said chambers comprising a restricted passage means in fluid communication with said second chamber for metering a pressurized fluid through said passage and passing said fluid to said second chamber, means for relieving said actuating pressure comprising a pressure chamber, a resilient member disposed across the interior of said pressure chamber dividing said chamber into two chambers, means arranged to maintain the current static pressure in said flow passage in one of said chambers, means arranged to provide a pressure inversely variable with altitude but never less than said critical pressure in the other of said chambers, and valve means responsive to the movement of said resilient member for venting said actuating pressure from said restricted passage.

3,127,892
BLOOD HANDLING APPARATUS
David Bellamy, Jr., and Edward Sohler Welch, Jr., Framingham, Mass., assignors, by mesne assignments, to Baxter Laboratories, Inc., Morton Grove, Ill., a corporation of Delaware
Filed July 13, 1960, Ser. No. 42,691
5 Claims. (Cl. 128—214)



1. In an apparatus for obtaining separate main donation and pilot sample blood volumes in sterile manner, an intergral flexible plastic collecting tube, said tube conditioned for separating in a length thereof, a flexible plastic blood container integrally joined to an end of said collecting tube, a donor needle mounted at the other end of the tube, and a stopper piercing cannula received in said tube and pointed at one end for applying to a stoppered pilot tube, said cannula positioned in said conditioned length such that said separating exposes said pointed end, said collecting tube initially providing a substantially uninterrupted path for the flow of blood from the donor needle to the flexible blood container.

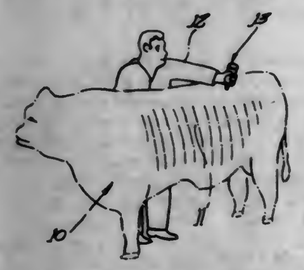
3,127,893
INJECTOR
Joseph F. Montague, 104 E. 40th St., New York 16, N.Y.
Filed Nov. 23, 1960, Ser. No. 71,192
6 Claims. (Cl. 128—239)



1. An injector adapted to be inserted into a body cavity for injecting a fluid thereinto and comprising a bullet shaped hollow head having a finger recess formed therein, said head having an orifice therein through which the fluid is discharged, an elongated tubular base connected to said head, said tubular base being formed of a relatively thin elastic material, and said tubular base being formed with a bulge adjacent the connection thereof to said head and a pouch formed in said base opposite said bulge and adjacent

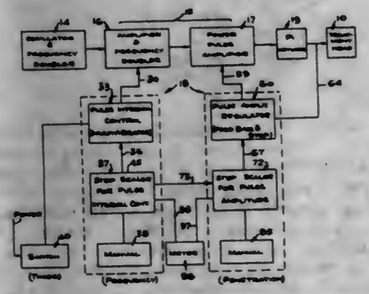
to the connection of said tubular base to said head, said pouch being adapted to accommodate the insertion of a finger, said pouch portion of said tubular base being stretchable so that the end of said pouch is receivable in the finger recess formed in said head upon the insertion therein of said finger by which said head is guided into said body cavity; and whereby said bulge permits said base to pivot to conform to the curvature of the cavity when inserting said head into the body cavity.

3,127,894
METHOD OF MEDICINE ADMINISTRATION AND DEVICE THEREFOR
Gail B. Smith, 622 11th St., Ames, Iowa
Filed Sept. 26, 1960, Ser. No. 58,258
5 Claims. (Cl. 128—347)



3. In combination, an aerosol medicine container, an outlet fitting mounted on said container and having a flow passage communicating with the interior of said container, and an elongated puncturing member having one end coupled to said fitting, said member comprising a trocar knife and a trocar cannula slidably mounted on said trocar knife, said knife being coupled to said fitting and equipped with a longitudinally extending flow passage communicating with said fitting, the other end of said knife being equipped with a puncturing point and with opening means for discharge of fluid from said longitudinally-extending flow passage.

3,127,895
THERAPEUTIC PULSE GENERATION AND CONTROL CIRCUIT
William Denis Kendall and Frank A. Yarger, Los Angeles, Calif., assignors to Dynapower System Corporation, Los Angeles, Calif., a corporation of Delaware
Filed July 2, 1962, Ser. No. 206,700
4 Claims. (Cl. 128—422)



1. Electrotherapeutic apparatus, comprising a power radiating head including a single turn primary coil, a multiple turn secondary coil and a condenser connected with the secondary coil to provide a tank circuit, and input circuit means for the head including an oscillator generating an oscillating electrical signal which is a submultiple of approximately the frequency 27.12 megacycles, first means to amplify and increase said signal frequency to an operation frequency of about 27.12 megacycles, vibrator means coupled to said first means to interrupt the transmission of said operating frequency signal at predetermined intervals thereby to create a sequence of high frequency pulses transmitted by said first means, primary control means including a first step switch coupled to said vibrator means to control the operation thereof so as to provide stepwise selection of the recurrence interval of successive pulses, a power amplifier coupled to receive and amplify the pulses transmitted by said first means for transmission to said primary coil of the head, and secondary control means including a second step switch coupled to said power amplifier to control the operation thereof so as to provide stepwise selection of the transmitted pulse amplitude.

3,127,896
SLACKS AND GIRDLE COMBINATION
Frank V. Pullafico, Mier's Corners, N.Y., assignor to Sportmaker, Inc., New York, N.Y., a corporation of New York
Filed Apr. 24, 1962, Ser. No. 189,769
1 Claim. (Cl. 128—519)



A combination slacks and girdle comprising an inner girdle body and an outer slacks body each provided with a waistband and each provided with a side opening leading downwardly from its waistband, complementary slide fasteners carried by the sides, complementary slide fasteners carried by the slacks body at the sides of its said side opening, a second band of said opening in the middle girdle body carried by the slacks waist band inwardly thereof, slide fastener elements carried by said second band longitudinally thereof, slide fastener elements carried by the girdle waistband longitudinally thereof for engagement with those carried by the slack waistband, a third and shield band carried by the slacks waistband inwardly thereof and overlying the longitudinally extending slide fasteners of second band and those of the girdle waistband, whereby the girdle may be applied to the slacks, may be removed for cleansing, and whereby shield means is afforded intermediate the waist area of the combined garment and the body of the wearer.

3,127,897
FOUNDATION GARMENT
Mary R. Buckingham, New Haven, Conn., assignor to Sarong, Inc., a corporation of Delaware
Filed Nov. 10, 1960, Ser. No. 68,448
4 Claims. (Cl. 128—528)

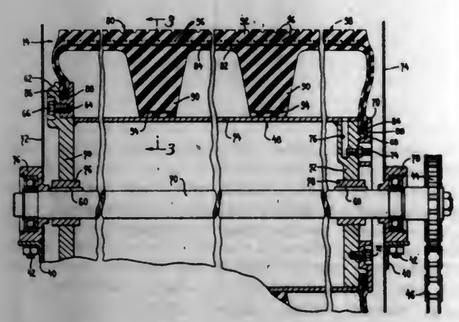
1. A foundation garment of the panty girdle type comprising plurality of torso-encircling panels including two upper front panels and a lower front panel, said panels

being secured along their side edges to front edges of an adjacent panel, said upper front panels extending from the top of the girdle to below the midpoint of the girdle and being in substantial overlapping relationship with their free lower edges disposed obliquely and crossing generally at the vertical median line of the panels, said



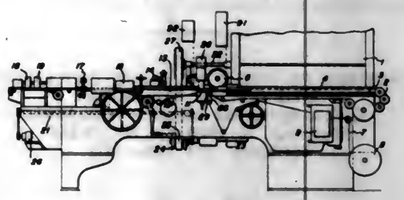
lower front panel extending from the crotch region upwardly over the lower abdominal region when in position on the wearer and underlying the two upper front panels and being unattached to said upper front panels except at the side edges, and a crotch piece and leg-forming portions secured to the bottom of said lower front panel.

3,127,898
THRESHING CYLINDER CONSTRUCTION
Herman G. Klemm, Birmingham, and Alexander H. Mark, Livonia, Mich., assignors to Massey-Ferguson Limited, Toronto, Ontario, Canada, a corporation of Canada
Continuation of applications Ser. Nos. 95,203 and 95,250, Mar. 13, 1961. This application May 28, 1962, Ser. No. 200,017
4 Claims. (Cl. 130—27)



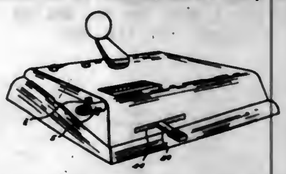
1. In a threshing machine, the combination comprising, a frame, a semi-cylindrical concave mounted in said frame and opening upwardly, a shaft journalled in said frame above said concave, a drum portion on said shaft, a cylinder mounted on said drum portion and having a thin flexible cylindrical wall disposed for rotation just above said concave, said cylindrical wall being axially elongated so as to extend from side to side of said concave and having a smooth outer surface lying equidistantly from said shaft axis with outwardly opening shallow grooves defining a tread pattern, said cylinder also having flexible portions formed integrally with said cylindrical wall and extending from the wall to said drum portion so as to resiliently hold the wall in its cylindrical conformation, a plurality of wire rings embedded in axially spaced relation within said cylindrical wall to impart hoop strength thereto, and means for selectively adding internal stiffness and mass to said cylinder.

3,127,899
CIGARETTE MAKING MACHINE
Wallace G. Lloyd, Richmond, and Orville R. Harris and Otis L. Updike, Jr., Charlottesville, Va., assignors to Philip Morris Incorporated, New York, N.Y., a corporation of Virginia
Filed July 17, 1958, Ser. No. 749,120
39 Claims. (Cl. 131—21)



9. A cigarette-making machine comprising a tobacco conveying means, a main hopper for showering tobacco onto said conveying means, control apparatus for controlling the rate at which said main hopper showers tobacco on said conveying means, a cylindrical cigarette rod forming apparatus disposed to receive tobacco from said conveying means, a shoe means disposed between said main hopper and said rod forming apparatus for compressing the tobacco on said conveying means, said conveying means having a roller and an endless belt disposed above and below said roller, radio-active source and detector means for producing a signal in accordance with variations in the density of the tobacco on said conveying means from a desired density, said source and detector means including a source of radio-activity, means for mounting said source in said roller, said source and detector means further including a detector of radio-activity, means for mounting said detector above a portion of said belt having tobacco thereon and circuit means for applying the said signal developed by said source and detector means to said control means so as to vary the rate at which said main hopper supplies tobacco in such a sense as to reduce said signal.

3,127,900
CIGARETTE MACHINE
Arnold Kastner, 4200 Ostell Place, Montreal, Quebec, Canada
Filed Jan. 25, 1962, Ser. No. 168,844
Claims priority, application Canada Jan. 25, 1961
6 Claims. (Cl. 131—70)

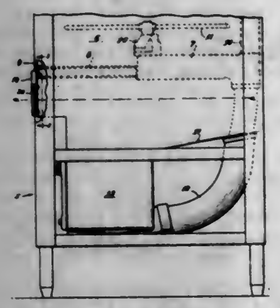


1. In cigarette making machines of the type having a casing and a nipple secured to said casing adapted to receive a cigarette tube, a tobacco receiving chamber formed within said casing adjacent said nipple, a tobacco compacting member displaceable within said chamber from a tobacco disengaging position to a tobacco compacting position, toggle lever means for displacing said tobacco compacting member, a tobacco plunger and injector for ejecting the compacted tobacco through said nipple into said cigarette tube, an arm for actuating said plunger and said injector, a cigarette tube retaining lever pivoted on said casing for movement between a cigarette tube retaining position and a cigarette tube releasing position, a spring urging said lever into said cigarette tube retaining position, a first extension on said lever and engageable by said toggle lever means for maintaining said lever in cigarette tube releasing position when said tobacco compacting member is in tobacco disengaging position, and a second extension on said lever and engageable by said arm for maintaining said lever in a cigarette tube releasing position when said plunger and said injector have reached tobacco ejecting position, the improvement comprising means operably associated with said lever for lengthening or shortening said second extension on said lever, to enable said machine to accommodate cigarette tubes of either the pain-end or filter-tipped variety, said second extension of said lever being provided with a selector plate pivotally attached thereto, and said plate having a manual handle formed integral therewith for varying the positioning of said selector plate on said lever.

3,127,901
ABSORBING COMPOSITION FOR TOBACCO SMOKE
Harry Whitefield and Mario Porta, both of 20 Strada Val S. Martino, Turin, Italy
No Drawing. Filed Apr. 14, 1961, Ser. No. 102,916
Claims priority, application Italy July 22, 1960
6 Claims. (Cl. 131—208)

3. A cigarette tip incorporating a filtering material comprising a porous support having deposited thereon at least 1% by weight of an absorbent composition for noxious combustion products of tobacco, said composition comprising an amine selected from the group consisting of alkylamines and hydroxyalkyl-amines having a boiling point of at least 60° C., a double salt of said amine and iron selected from the group consisting of sulfates and chlorides, and ferric-hydroxide colloidally dispersed in the amine.

3,127,902
WATER LEVEL INDICATOR
John Cumming, River Forest, Ill., assignor to G. S. Blakeslee & Co., Chicago, Ill., a corporation of Illinois
Filed Feb. 12, 1963, Ser. No. 257,955
1 Claim. (Cl. 134—113)



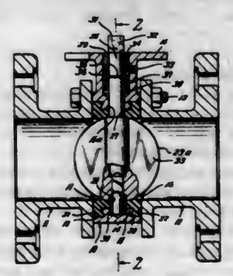
In water level viewing means for dish washing machines, a dish washing machine having a washing compartment substantially rectangular in plan, a substantially horizontal washing solution manifold mounted at one end on one wall of said compartment above the bottom thereof and extending from said one wall toward the opposite wall to approximately the center of said compartment, means comprising a pump connected to said manifold for supplying thereto washing solution under pressure, spray means mounted on the inner end of said manifold for rotation about a substantially vertical axis and overlying said manifold, said compartment having in the operation of said machine a predetermined normal water level adjacent and underlying said manifold, said opposite wall having therein an opening extending above and below said water level, a transparent closure member mounted over said opening with its center disposed substantially at said normal water level and its inner surface exposed to the interior of said compartment, means mounting said closure member on the outer face of said opposite wall, said mounting means comprising a rigid frame overlying said closure member and having an opening exposing the latter, said frame extending a material distance above said opening therein, means adjacent said opening in said frame securing the latter to said opposite wall, mounting bracket means having an inner end secured to said inner end of said manifold and an outer end seating on the inner face of said opposite wall above said opening therein, and means securing said outer end of said bracket means to said opposite wall and said frame above said opening in the latter.

3,127,903
VALVE DRIVE SYSTEM
Ernest R. Workman, Chicago, Ill., assignor to James Ladas, Evanston, Ill.
Filed Feb. 27, 1961, Ser. No. 91,757
3 Claims. (Cl. 137—115)



1. A valve drive system associated with a pipe, which includes: a valve gate chamber, a sump compartment, valve means; pawl and ratchet means for positively closing and opening said valve means, a valve stem attached to said valve means and extending vertically upward therefrom, a by-pass passageway embodied within said valve means communicating with opposite sides of said valve means; pump means for forcing material through said by-pass passageway; motor means connected to said pump means, the teeth on said ratchet means being constructed and terminated on the valve stem extending upwardly from the said valve means limiting the movement of said valve means when it reaches the open or closed position thereof.

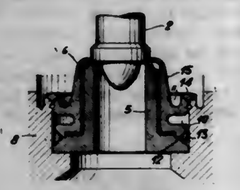
3,127,904
DISC VALVE
Crawford K. Stillwagon, 5325 Kirby Drive, Houston, Tex.
Filed Mar. 22, 1961, Ser. No. 97,618
5 Claims. (Cl. 137—315)



1. A disc valve comprising a valve body having a flow passageway therethrough, an annular seat position

within the body about such passage having aligned stem receiving openings on an axis transverse to said passageway and being resilient around said openings, a removable stem mounted in the body and seat for rotation about said axis and passing through said openings in the seat at two points, one end of the stem projecting from the body when operably positioned therein, said stem having a cylindrical portion extending from adjacent its projecting end to intermediate its ends, a non-circular portion adjacent the cylindrical portion having no greater maximum radial dimension than the least radial dimension of said cylindrical portion, and the portion of the stem remote from its projecting end having a no greater radial dimension than the least radial dimension of the cylindrical and non-circular portions of said stem, a disc operably positioned in the flow passageway and adapted to co-act with the seat for rotation to control flow through the body, said disc having an opening adapted to receive the stem, the opening having a portion complementary in radial dimension to the non-cylindrical portion of the stem to provide a non-rotating connection therebetween, a sleeve carried on the disc in axial alignment with the stem and extending from the disc about a part of said portion of said stem remote from its projecting end and into the seat and terminating short of aligning engagement with the body, said cylindrical portion and the sleeve having equal outer diameters and the stem receiving openings in the seat being of a smaller diameter than said cylindrical portion and the sleeve, whereby said stem can be withdrawn by its projecting end from the assembled valve to permit removal of said disc and seat from the valve body.

3,127,905
VALVE SEAT UNIT
Ernst F. Vögeli, Wiesendangen, Switzerland, assignor to Sulzer Freres, S.A., Winterthur, Switzerland, a corporation of Switzerland
Filed Feb. 28, 1961, Ser. No. 92,302
Claims priority, application Switzerland Mar. 9, 1960
4 Claims. (Cl. 137—334)



1. A valve seat unit for passing a high temperature compressible fluid having different temperatures on the input and output sides of the unit, comprising:

a valve seat element having an annular end surface forming a valve seat,

said valve seat element having a circular portion coaxial of said valve seat,

a protective element having a circular portion corresponding to said circular portion of said seat element and being placed concentrically of said circular portion of said seat element,

a narrow clearance between said valve seat element and said protective element, said clearance having an open end adjacent to said valve seat,

one of said elements having a lip portion adjacent to said valve seat and overlying said open end,

said elements being constructed and arranged so as to close the opposite end of said clearance, and

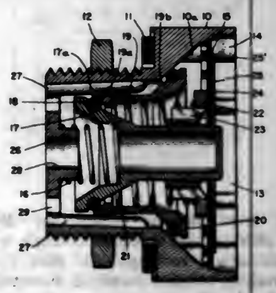
a stagnant fluid in said clearance for impeding heat flow through said valve seat element.

3,127,906
CHECK VALVE ASSEMBLY
Frederick W. Balster, Cedar Rapids, Iowa, assignor to Wagner Electric Corporation, St. Louis, Mo., a corporation of Delaware
Filed Aug. 20, 1962, Ser. No. 217,842
6 Claims. (Cl. 137—493)



1. In a housing having a valve seat between an outlet and an interior portion of said housing, means for controlling pressure fluid flow between said housing interior portion and outlet comprising a resilient annular member sealably engaged with said valve seat, a rigid member having an annular sealing surface adjacent to the peripheral edge thereof and normally sealably engaged with said annular member, diaphragm means integral with said annular member, passage means between said diaphragm means and annular member in open pressure fluid communication with said outlet, aperture means in said rigid member through which the flow passes, another sealing surface on said rigid member about said aperture means for engagement with said diaphragm means, said diaphragm means being disengaged from said other sealing surface in response to the flow to provide passage through said aperture means in one direction and being engaged with said other sealing surface in response to the flow to prevent passage through said aperture means in the opposite direction, and said rigid member having an effective area between said sealing surfaces and being movable in response to the flow acting on said effective area to disengage said first named sealing surface from said annular body and provide passage therebetween in the opposite direction.

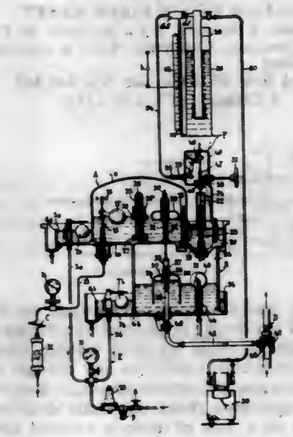
3,127,907
TWO-WAY POPPET VALVE
Stanley Novak, P.O. Box 125, El Segundo, Calif.
Filed Sept. 18, 1962, Ser. No. 224,311
3 Claims. (Cl. 137—493.6)



1. A two-way poppet valve comprising, in combination: a valve body having a cylindrical interior with an open front end and an open rear end, said interior tapering from its front end to a reduced diameter portion to define a front conical seating area; a spider structure at said rear end including an inwardly directed hub; a first coil spring having a rear end supported about said hub to bear against said spider; a first plunger member of cup shape receiving the front end of said spring in its cup opening, said plunger having a conical exterior decreasing in diameter in a direction towards said front end of said valve body; a first sealing ring on said conical exterior; a second plunger having a cylindrical interior with open front and rear ends coaxially surrounding said first plunger, the interior rear end opening on said second plunger having an interior conical surface sloping towards a decreased interior diameter to provide a seating surface in opposing relationship to said first sealing ring on said conical exterior of said first plunger, the exterior front end of said second plunger flaring radially outwardly to define a second conical exterior; a second sealing ring on said second conical exterior in opposing relationship to said front conical seating area of said valve body; a second coil spring positioned in the interior of said second plunger with its rear end bearing against the rear end interior portion of said second plunger ahead of said internal conical surface; and a perforated supporting disc secured within said front end of said valve body and including a rearwardly directed hub supporting the front end of said second spring, said valve body including a plurality of ribs extending rearwardly and spaced circumferentially about the interior of said open front end, each of said ribs including a transverse slot; and a star washer having projections adapted to fit within the transverse slots upon rotation within said open front end to secure said perforated supporting disc in position, whereby pressure exerted on said first and second plungers through said rear opening of said valve body moves said first and second plungers as a unit toward said front end opening with the aid of said first coil spring and against the bias of said second coil spring to provide an annular opening between said front conical seating area and said second conical exterior and whereby pressure exerted on said first and second plungers through said front end opening moves said first plunger only in a rearward direction to provide an annular opening between said first conical exterior at the rear end of said first plunger and said interior conical surface at the rear end of said second plunger.

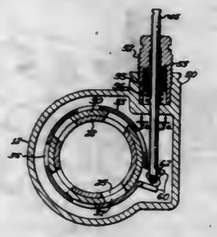
3,127,908
APPARATUS FOR INJECTING A METERED AMOUNT OF A GAS INTO A LIQUID, SUITABLE IN PARTICULAR FOR USE AS A CHLORINATION APPARATUS
André Louis Lapaix, 8 Residence Beausoleil, Saint-Cloud, France, assignor of one-half to Prat-Daniel, Paris, France, a French body corporate
Filed Sept. 16, 1960, Ser. No. 56,490
Claims priority, application France Sept. 24, 1959
17 Claims. (Cl. 137—501)

1. Apparatus for metering the amount of gas sucked from the apparatus by suction means and injected into a liquid to be treated, said apparatus being useful in particular in a chlorination apparatus and comprising two enclosures, an orifice having an adjustable cross-sectional area and putting a first of said enclosures in communication with the second of said enclosures, a first inlet tube for connecting to the source of gas to be injected and opening into the first of said enclosures which forms an expansion chamber for said gas, a second inlet tube supplying liquid to the second of said enclosures which constitutes an absorption chamber, an outlet tube for the liquid in said second enclosure, said outlet tube communicating with said suction means, which latter creates in said second enclosure a depression which is transmitted to said first enclosure through said orifice, means combined with the outlet tube and including relatively movable valve elements defining a passageway the cross-sectional area of which is regulated by the relative movement between the valve elements, the outlet tube communicating with the inside of the second enclosure in the part of the latter above said liquid therein by way of said passageway, means responsive to the depression prevailing in the first enclosure and including a movable element which moves in opposite directions for opposite changes in the depression in the first enclosure, said movable element being operatively connected to one of said valve elements for effecting said relative movement between said valve elements, the shape of one of said valve elements being determined in such manner that said passageway increases



in cross-sectional area when the depression decreases in said first enclosure and that the pressure difference between the two enclosures is held at a constant value whereby the amount of gas injected per time unit is proportional only to the cross-sectional area of said orifice, and means for measuring said cross-sectional area and thus the amount of injected gas.

3,127,909
ROTARY GATE VALVE
Leo Alamprese, Elmhurst, Ill., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed July 18, 1962, Ser. No. 210,740
12 Claims. (Cl. 137—625.31)



6. A rotary type gate valve comprising, a two-part valve casing means each part having a flow opening therein, one of said valve casing means including a tubular ported member connected with the flow opening and adapted to be positioned within the other of said valve casing means when said two-part valve casing means is assembled, an expandable and slideable band type gate member positioned over said tubular member and having ports therein spaced to align with the ports in said tubular member, operating means included in said casing means and movable therein being adapted to engage said gate member to rotate said gate member on said tubular member, and means included in said operating means for spreading said band type gate member on said tubular

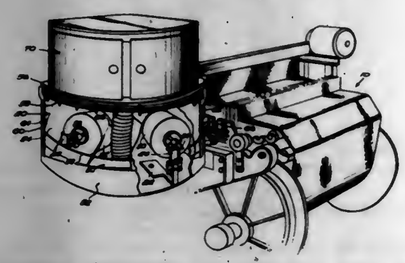
member for one direction of movement of said operating means causing slideable rotative movement of said gate member and clamping said gate member on said tubular member for an opposite position of said operating means and said gate member as said ports in said gate member and said tubular member are brought into and out of alignment.

3,127,910
HOLLOW GLASS FIBER SHAFT
Arthur L. Scott, Columbia, S.C., assignor to Columbia Products Company, Columbia, S.C., a corporation of South Carolina
Filed June 30, 1954, Ser. No. 440,369
6 Claims. (Cl. 138—144)



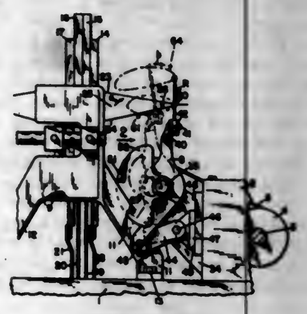
5. A hollow shaft for archery arrows and the like characterized by its uniformity of external dimensions and balance and ability to retain its form without warping regardless of atmospheric conditions and changes comprising an outer tubular cylindrical sheath of longitudinally extending straight glass fibers uniformly distributed circumferentially on a layer of uniform external dimension, each of said fibers being bonded to adjacent fibers and maintained in position with a flexible waterproof resin and a tubular paper core, said core having a mechanical strength which is negligible compared to that of said sheath but adequate to support said fibers prior to the bonding thereof, said sheath determining the mechanical characteristics of said shaft.

3,127,911
LINT COLLECTOR
Philip F. Maguire, Jr., Providence, R.I., assignor to Grinnell Corporation, Providence, R.I., a corporation of Delaware
Filed Apr. 19, 1961, Ser. No. 104,046
3 Claims. (Cl. 139—122)



1. In combination with a loom having a plurality of supply reels providing filling yarn to be woven:
(A) a container enclosing said reels,
(1) said container having a substantially flat bottom sloping downwardly towards one side of said container,
(B) a lint collection chamber joined to said container,
(C) a suction device connected to said chamber,
(D) a conduit having one end with access to the interior of said chamber and extending into said container with the other end adjacent the lowest portion of said bottom of said container,
(E) slidably removable filter means in said chamber sealingly interposed between said one end of said conduit and said suction device,
(F) at least one elbow-shaped rotatable nozzle in a side wall of said container directed into said container toward the lowest portion of said bottom of said container and said conduit,
(1) said nozzle providing free passage of air from the exterior of said container to the interior in the form of a directable stream in accordance with the demand requirements of said suction device; whereby said stream may be directed along the bottom of said container toward said conduit to give optimum cleaning in accordance with the type of yarn on said supply reels.

3,127,912
BEAT-UP MEANS FOR LOOMS
Melville C. Mosher, Hopedale, Mass., assignor to Crompton & Knowles Corporation, Worcester, Mass., a corporation of Massachusetts
Filed Sept. 8, 1961, Ser. No. 136,866
6 Claims. (Cl. 139—191)

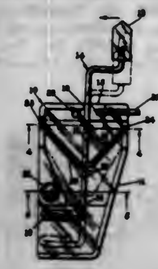


1. In a beat-up motion for a loom operating with warp threads for insertion of weft therein a weft beat-up reed having a part extending above said threads and in constant registry therewith, a shaft formed with a wrist at one end thereon, an upright support for the reed journaled on the wrist for rotational oscillation about the axis of said shaft to a forward and back position during loom operation, rocking means between the support and a fixed part of the loom to cause oscillation of the support during rotation thereof, and counterbalance means directly on said wrist to minimize vibration of said reed and support to effect smooth operation thereof during loom operation, said part of said reed being constantly above said threads so as to maintain registry therewith.

3,127,913
FEELER MECHANISM FOR LOOMS
Leonard E. Dunton, Franklin, Mass., assignor to Draper Corporation, Hopedale, Mass., a corporation of Maine
Filed Oct. 18, 1961, Ser. No. 145,885
4 Claims. (Cl. 139—281)

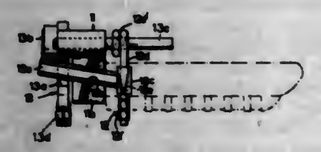
1. In a feeler mechanism for looms, the combination of a feeler case, a pivot member, a stem member having a first portion extending in a direction substantially perpendicular to the axis of the bobbin from which it is adapted to derive an indication and a second portion extending from the forward end of said first portion and in a direction substantially perpendicular thereto, said pivot member being effective to limit rearward movement of said stem member and also being adapted to guide forward and rearward motion of said first portion of said stem member, said stem member including a feeler tip affixed to the rearward end thereof, a pair of oppositely

disposed resilient members for stabilizing said stem member in a centralized position within said case and said



resilient members further urging said feeler tip and stem member to a fully extended position therefrom.

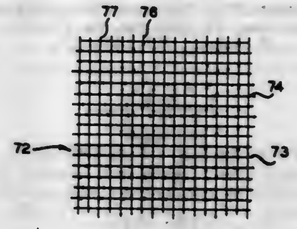
3,127,914
LOOM TEMPLE WITH A WEFT THREAD CUTTING DEVICE
Colin L. L. Bulcock, Clitheroe, England, assignor to Lupton Brothers Limited, a corporation of Great Britain
Filed May 1, 1961, Ser. No. 106,921
Claims priority, application Great Britain May 4, 1960
2 Claims. (Cl. 139—303)



1. A loom temple including cutter means for the severance of weft threads extending outwardly beyond the selvedge of the web being woven, the cutting means consisting of, a temple casting provided with a face portion having an inclined, undercut groove extending across it, a straight bar conforming in cross-sectional shape to the groove and being non-rotatively and slidably mounted in the groove, the bar being provided at one end with a cutter block rigidly attached to it, the cutter block having its axis disposed at a flat angle to the longitudinal axis of the bar, the angle of the bar in respect to the axis of the cutter block being such as to conform to the angularity of the groove whereby the maintenance of the bar in the angular groove will dispose the cutter block substantially vertically and the inclination of the groove and the angle at which the bar is disposed therethrough permitting longitudinal gravitational sliding movement of the bar through the groove and relatively to the groove to cause lowering movement of the cutter block to thread-engaging position, a cutter-bolt slidable through the axial passage in the cutter block, a portion of the cutter block being provided with notches for weft thread engagement to enable the threads so engaged to be severed by movement of the cutter bolt, and means for reciprocating the cutter bolt.

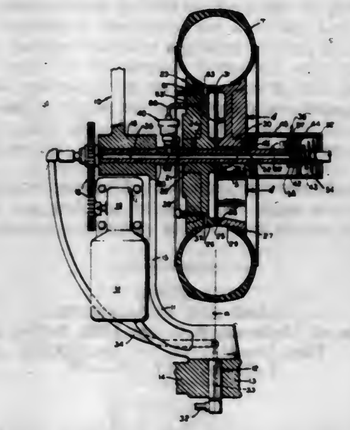
3,127,915
SYNTHETIC KNOPPED FILAMENTS
Anthony Bottomley, East Providence, R.I., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed July 1, 1960, Ser. No. 40,349
11 Claims. (Cl. 139—420)

6. A woven fabric comprising warp and filling monofilaments of polymer, a substantial program of the monofilaments of at least one of said warp and filling monofilament being knopped monofilaments made by extruding a melt of a normally solid extrudable polymer thru a small orifice to form an extrudate having a "sawtooth" or undulating configuration or outline and drawing



the extrudate so as to form drawn knops at spaced intervals along the resulting drawn filament to orient same, said knops being of smaller diameter than the corresponding section of the extrudate and of circular cross-section.

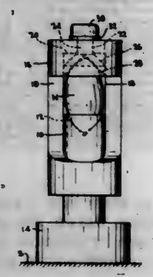
3,127,916
DELAYED ACTION REGULATOR FOR BUFFER
Elmer Wesley Robertson, Berkeley, Calif., assignor, by mesne assignments, to Elrick Industries, Inc., Oakland, Calif.
Filed Jan. 23, 1961, Ser. No. 84,443
5 Claims. (Cl. 144—288)



1. In a tire mounting assembly on a rotary spindle for supporting a split rim providing rim halves upon which a tire is mounted, such spindle having an axial passage communicating with a source of air supplied at high pressure and a conduit communicating said axial passage with a tire mounted on said rim halves for inflating said tire; means coordinated with said source of air supply for urging said rim halves toward each other for supporting said tire thereon comprising pneumatic means on said spindle having a piston engageable with one of said wheel halves, and means communicating said axial passage in said spindle with said pneumatic means for urging said piston toward said one of said wheel halves by air supplied thereto at said high pressure, and a delayed action regulator including a normally open air actuated valve in said conduit for admitting air into the cavity of said tire from said source of air at high pressure, and means communicating one side of said air actuated valve with the interior of said tire for closing said air actuated valve when the air within the tire reaches a predetermined

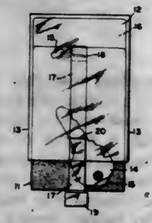
pressure less than that of said source of air at high pressure.

3,127,917
NUT CRACKER
Henry H. Turner, 2702 Techwood Drive, Columbus, Ga.
Filed Aug. 23, 1962, Ser. No. 219,003
8 Claims. (Cl. 146—15)



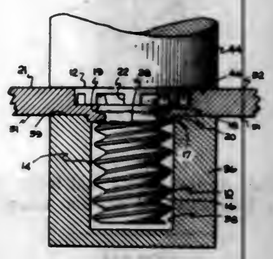
1. A nut cracker comprising an anvil formed with an upwardly opening recess for reception of a nut to be cracked, an inertia weight, means guiding said inertia weight for free and unrestricted movement at all times with respect to the anvil, said means constituting the sole connection between said anvil and said inertia weight, an impact member guided for generally vertical movement relative to both said weight and the anvil, said member having an operative nut striking portion positioned to engage and rest on a nut operatively positioned in said recess, said portion defining a relatively opposed complementary recess for partial reception of the upper end of said nut, said impact member having means normally abutting against and supporting the weight in raised position above the anvil and constituting the sole such supporting means, said impact member and said weight having a lost motion connection permitting a restricted amount of downward movement of the member independently of the weight and thereafter coupling said member and said weight together for downward movement together.

3,127,918
SPARE KEY CONTAINER
Walter G. McElvain, P. O. Box 2222, Pueblo, Colo.
Filed June 4, 1962, Ser. No. 199,723
4 Claims. (Cl. 150—40)



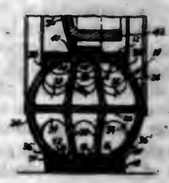
1. A spare key container comprising
(*a*) a flat support,
(*b*) a layer of pile material on the support, said material being depressible by a key placed thereon, that portion of the pile material surrounding the key serving to prevent unintended movement of the key, and
(*c*) a cover extending over the pile material and free at its ends for placement of the key between said cover and the pile material, said cover snugly overlying the pile material and key and thus aiding in depression of the material by the key and formation of a depressed bed for the key regardless of where it is placed on the support.

3,127,919
SCREW WITH CAVITY HEAD
Klas Arent Swanstrom, Doylestown, Pa., assignor to Penn Engineering & Manufacturing Corporation, Doylestown, Pa., a corporation of Pennsylvania
Filed May 6, 1959, Ser. No. 811,495
9 Claims. (Cl. 151—41.73)



2. In combination, a sheeted material having top and bottom surfaces and a hole therethrough, a stud including a head and a shank, said shank extending through said hole, said shank having a threaded portion spaced from said head, said shank having first and second undercut annular recesses between said threaded portion and said head, said first recess being closer to said threads than said second recess, said head being driven into said sheet flush with the top surface thereof, a portion of the material of said sheet encompassing said stud being displaced and forced by said head to flow downwardly and radially inwardly toward said recesses, the volume of said first recess being larger than the volume of said second recess, and an annular bead encompassing and extending into a portion of said first recess and formed by said flowing material, said bead depending from the bottom surface of said sheet metal body, and said bead filling at least a portion of the first recess.

3,127,920
RESILIENT CUSHION TIRE AND WHEEL
Christopher De J. Hercules, 4640 Q St. NW., Washington, D.C.
Filed May 1, 1963, Ser. No. 277,331
8 Claims. (Cl. 152—325)



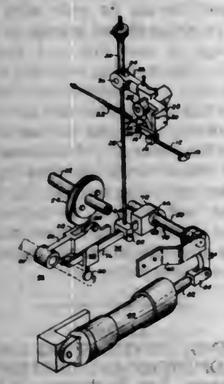
1. A hollow vehicle tire comprising a one-piece carcass having outer flexible casing walls and internal bracing strip and web structure of substantially stiff but resilient material, the inner edges of said casing walls and bracing strips being adapted to form a beaded inner-wall surface for stretchably mounting in a flat-bottomed well tire rim, and the outer edges of said casing walls and bracing strips being adapted to form a beaded outer-wall surface for compressively mounting in a flat-bottomed well substantially flexible tread band, said walls and structure being stiff enough to resiliently support the casing walls against substantial deformation thereof on the road under maximum vehicle loading.

3,127,921
TUBE BENDING APPARATUS
Ike W. Kusisto, 471 E. Center St., Wickenburg, Ariz.
Filed July 10, 1961, Ser. No. 122,675
2 Claims. (Cl. 153—48)



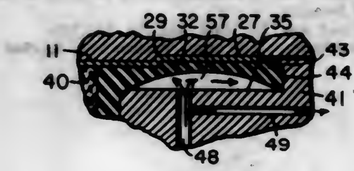
1. A tube bending apparatus comprising in combination:
(*a*) a fixed work support member having,
(*b*) a convex arcuate surface in which is formed an annular groove having rigid side surfaces spaced apart a fixed distance equal to the outside diameter of the workpiece to be operated upon,
(*c*) the convex arcuate closed bottom of said groove being of semi-circular cross section conforming to the outside diameter of said workpiece,
(*d*) said convex arcuate closed bottom of said groove being further characterized by being positioned below the convex arcuate surface of said work support member a distance equal to the diameter of said workpiece,
(*e*) and a cooperating bending element comprising a rigid block having diametrically spaced work engaging pressure edges separated by an arcuate cutout portion having open sides adapted to receive the convex arcuate surface of said work support member during the bending operation.

3,127,922
PITCH CONTROL DEVICE FOR SPRING COILING MACHINE
Peter J. Bennett, 1000 Bell Ave., Mattoon, Ill., and Donald W. Noren, 9144 N. Mason Ave., Morton Grove, Ill.
Filed June 1, 1961, Ser. No. 114,166
3 Claims. (Cl. 153—64)



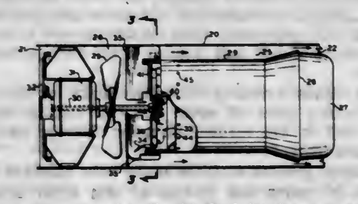
1. An adjustable pitch control tool for spring coiling machines including means for initially setting said pitch control tool for a predetermined coil pitch, said means comprising a rotatable shaft, a radial arm mounted on said shaft and means for engaging the outer end of said arm to provide an initial predetermined pitch reference setting, additional means for varying the actual pitch setting above and below said predetermined pitch reference setting in corrective amounts comprising an eccentric keyed to the shaft on which said radial arm is mounted, a bearing sleeve on said radial arm enclosing said eccentric, and means to rotate said shaft to vary the angular position of said eccentric about the axis thereof whereby the inner end of said arm is moved to effect a corrective pitch adjustment about the reference position of the outer end thereof.

3,127,923
HIGH ENERGY TUBE EXPANDER
Gilbert C. Cadwell, San Diego, Calif., assignor to Rohr Corporation, a corporation of California
Filed Feb. 17, 1961, Ser. No. 102,081
10 Claims. (Cl. 153—79)



1. A high energy tube expander of the character disclosed comprising, in combination, means mountable externally of the tube for forming an annular die surface against which an end portion of the tube may be expanded, and explosive means insertable into the tube in force transmitting relation to the inner-wall of said tube portion, said explosive means including an explosive charge, a radially vented holder for said charge, and a resilient rubber-like energy transfer device sleeved on said holder and operatively interposed between said charge and said inner-wall for uniformly applying thereto the explosive forces applied to said energy transfer device through said vented holder and generated by said charge when the same is fired.

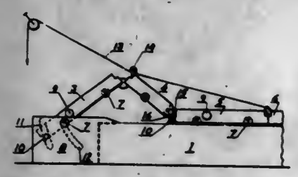
3,127,924
ROTARY ATOMIZING BURNER APPARATUS
Edgar S. Downs, P.O. Box 242, Worthington, Ohio
Original application June 22, 1960, Ser. No. 37,874, now Patent No. 3,029,863, dated Apr. 17, 1962. Divided and this application Mar. 28, 1962, Ser. No. 183,251
3 Claims. (Cl. 158—77)



1. In a burner for liquid fuel having a combustion chamber with a peripheral wall, a spinner for throwing the fuel outwardly toward said wall, said spinner comprising a centrally disposed tube mounted for rotation about its axis and through which the liquid fuel is supplied, means for rotating the tube about said axis, a pair of

inner and outer walls carried by said tube in opposed, axially-spaced relationship for rotation therewith and extending radially outwardly therefrom, said tube having means for directing liquid fuel radially outwardly into the space between said walls from which it is thrown outwardly toward said peripheral wall by centrifugal force developed by rotation of said tube and the walls carried thereby, and means for directing air for combustion into said space and comprising air-passageway means adjacent said tube and communicating with said space at said inner wall and adjacent said liquid fuel directing means on said tube, each of said opposed inner and outer walls having radially extending baffle ribs thereon, with the ribs on one wall being staggered relative to the ribs on the other wall but being spaced from the opposed wall so that the entire space between the plates is in continuous communication.

3,127,925
SHIP'S HATCH COVERS
Rainer Vilho Albin Sjöström, Abo, Finland, assignor to Aktiebolaget Gotaverken, Goteborg, Sweden, a corporation of Sweden
Filed Apr. 21, 1961, Ser. No. 104,744
Claims priority, application Sweden May 5, 1960
1 Claim. (Cl. 160—193)



In a ship having a deck with a hatch opening therein, a coaming and a hatch cover adapted to cooperate with said coaming, said cover comprising a number of pairs of first and second cover sections foldably connected to each other;

wheels supporting said cover sections upon and arranged to slide along the coaming;

a stowing ramp situated at one end of the opening and arranged at about the same level as the upper edge of the coaming, the first cover section of each pair of cover sections being about as much wider than the second cover section of the same pair as corresponds to the height of the coaming;

pin-shaped members fitted to the corners of the larger first cover sections closest to the stowing ramp;

mainly vertical guiding slots in side parts of the stowing ramp, the number of the slots in each side part corresponding to the number of pairs of cover sections;

said slots being further shaped and designed in relation to the pin-shaped members so that the two pin-shaped members on any first cover section in a pair during movement of the cover to overlie the ramp will pass such slots as correspond to subsequent pairs, but will engage their own pertaining slots;

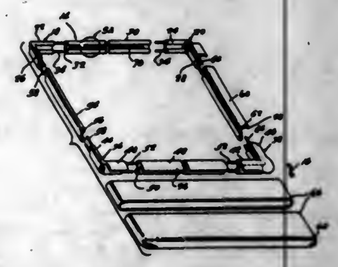
locking means including lost-motion links for mutually connecting pairs of cover sections with a limited mobility in the vertical direction for the abutting corners thereof;

cam shaped guiding surfaces at the links adjacent their point of connection to one of said cover sections and juxtaposed, and guiding roller members fitted on the cover sections, for cooperation therewith; and

a fulcrum on the hatch coaming;

the guiding cam surfaces and the guiding roller members cooperating so that a larger first cover section is given a tilting movement when pressed against the fulcrum by the second cover section of a preceding pair upon said preceding pair being brought to a vertical position.

3,127,926
BUILDING CONSTRUCTION
Carl W. Adelt, P.O. Box 115, Mays Landing, N.J.
Filed Oct. 14, 1960, Ser. No. 62,674
2 Claims. (Cl. 160—371)

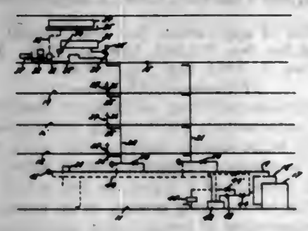


1. A decking block of a four-sided configuration and including a first pair of right-angled corner pieces arranged so that one of their legs are in spaced linear alignment and the other of their legs are in parallel, a first connecting piece interposed in the space between said one aligned legs and having its ends each provided with spaced sockets receiving spaced prongs on said one legs of said corner pieces, a second pair of right-angled corner pieces arranged so that one of their legs are in linear alignment and the other of their legs are in parallel, a second connecting piece interposed in the space between the said one aligned legs of said second pair and having its ends each provided with spaced sockets receiving spaced prongs on the aligned legs of said second pair, the parallel other legs of said second pair being in spaced linear alignment with the parallel other legs of said first pair, a third connecting piece interposed within the space between the aligned legs of one of the other legs of said first and second pairs and having its ends each provided with spaced sockets receiving spaced prongs on the aligned legs of one of the other legs of said first and second pairs, a fourth connecting piece interposed within the space between the aligned legs of the other legs of said first and second pairs and having its ends each provided with spaced sockets receiving spaced prongs on the aligned legs of the other legs of said first and second pairs, one of said connecting pieces being provided with a longitudinally-extending slot, the opposed walls of said slot having serrations which are flexible and are arranged for insertion therebetween of an end portion of a flat flexible sack, and a flexible cover of polyethylene embodying an open-ended flat sack encasing said decking block with the open end portion extending through the slot in said one connecting piece and engaged by the serrations in the opposed walls of the slot in the last-mentioned connecting piece to thereby sealingly secure the open end portion to said last-mentioned connecting piece.

3,127,927
HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS
Samuel C. Zlaman, Far Rockaway, N.Y., assignor to Milzin Corp., New York, N.Y., a corporation of New York
Filed Mar. 24, 1960, Ser. No. 17,018
2 Claims. (Cl. 165—22)

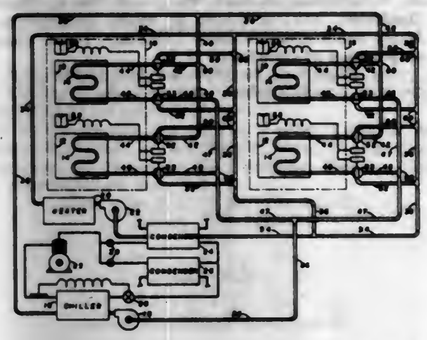
1. In a combination heating and cooling system, including a boiler element, a riser connected to said boiler element, and a radiator having an inlet connected to said

riser, an air conditioner unit including an evaporating coil and a drip pan disposed beneath said evaporating coil, the improvement comprising: means for selectively collecting condensate from, and connected to, said drip pan



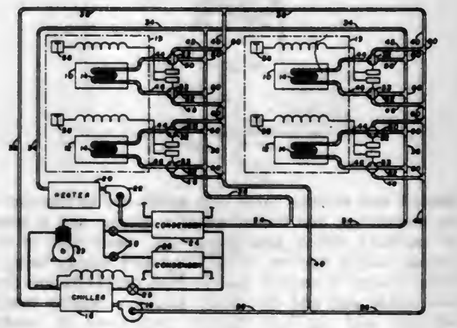
and said radiator, and pump means connected to said last-mentioned means for returning said condensate to said riser; said collecting means including a thermostatically controlled valve providing for the venting of air to the outside atmosphere.

3,127,928
AIR CONDITIONING SYSTEM WITH ONE PIPE HEATING
Clarence L. Ringquist, La Crosse, Wis., assignor to The Trane Company, La Crosse, Wis., a corporation of Wisconsin
Filed May 29, 1961, Ser. No. 121,286
7 Claims. (Cl. 165—22)



1. An air conditioning system for a space having a plurality of areas with similar heating and cooling requirements, a compressor, an evaporator, and a condenser interconnected to provide a refrigeration system, a first conduit for conducting hot fluid from said condenser to said areas, a second conduit for conducting cold fluid from said evaporator to said areas, a third conduit for conducting hot fluid from said areas back to said condenser, a fourth conduit for conducting cold fluid from said areas back to said evaporator, at least one heat exchange unit in each of said areas, said heat exchange unit having a coil therein, a fifth conduit connected to said first conduit and said third conduit, a sixth conduit connected to said second conduit, a seventh conduit connected to said fourth conduit, first conduit means connected to said fifth conduit to conduct hot fluid from said fifth conduit through said coil and back into said fifth conduit, second conduit means connected to said sixth and seventh conduits to conduct cold fluid from said sixth conduit through said coil and into said seventh conduit, and valve means operably connected to said first and second conduit means to selectively control the flow of hot and cold fluid via said first and second conduit means respectively, to and from said coil in response to load conditions in said area.

3,127,929
AIR CONDITIONING SYSTEM WITH ONE PIPE HEATING AND COOLING
Clarence L. Ringquist, La Crosse, Wis., assignor to The Trane Company, La Crosse, Wis., a corporation of Wisconsin
Filed May 29, 1961, Ser. No. 121,287
7 Claims. (Cl. 165—22)

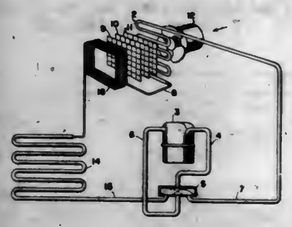


1. An air conditioning system for a space having a plurality of areas with similar heating and cooling requirements, a compressor, an evaporator, and a condenser interconnected to provide a refrigeration system, a first conduit for conducting hot fluid from said condenser to said areas, a second conduit for conducting cold fluid from said evaporator to said areas, a third conduit for conducting hot fluid from said areas back to said condenser, a fourth conduit for conducting cold fluid from said areas back to said evaporator, at least one heat exchange unit in each of said areas, said heat exchange unit having a coil therein, a fifth conduit connected to said first conduit and said third conduit, a sixth conduit connected directly to said second and fourth conduits, first conduit means connected to said fifth conduit to conduct hot fluid from said fifth conduit through said heat exchange coil and back into said fifth conduit, second conduit means connected to said sixth conduit to conduct cold fluid from said sixth conduit through said heat exchange coil and back into said sixth conduit, and valve means operably connected to said first and second conduit means to selectively control the flow of hot and cold fluid via said first and second conduit means respectively to and from said coil in response to load conditions in said area.

3,127,930
HEAT PUMP FOR COOLING OR HEATING AIR
Howard J. Tenniswood, Adrian, Mich., assignor to Revco, Inc., Deerfield, Mich., a corporation of Michigan
Filed May 27, 1959, Ser. No. 816,148
4 Claims. (Cl. 165—29)

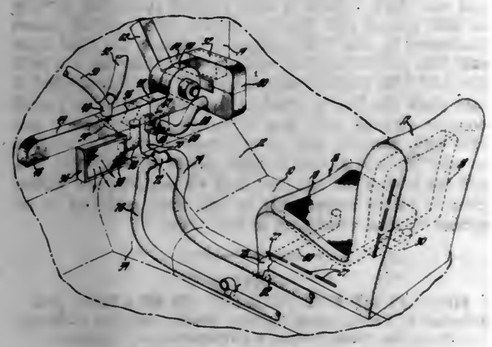
1. In a heat pump, in combination, an inside coil capable of functioning either as an evaporator for refrigerant or as a condenser for refrigerant, a motor-operated compressor, a four-way reversing valve, a hot gas pipe connecting said compressor to said four-way reversing valve, a suction pipe connecting said four-way reversing valve to said compressor, an outside coil conduit connecting said four-way reversing valve to said inside coil, a fan arranged to blow a blast of air over said inside coil, a series of auxiliary electric heating means so located as to supply supplemental heat to such blast of air, thermostatic means to progressively activate said electric heating

means in accordance with heat requirements exceeding the heat supplied by said inside coil, an outside coil capable of functioning either as an evaporator for refrigerant or as a condenser for refrigerant, said four-way reversing valve being settable either to direct hot compressed refrigerant in gaseous phase through said inside coil conduit and thereby cause said inside coil to function as a condenser, and hence act as a heater, or to withdraw vaporized refrigerant through said inside coil



conduit and thereby cause said inside coil to function as an evaporator, and hence act as a cooler, and a length of capillary tubing connecting said inside coil to said outside coil, a portion of said capillary tubing being in folds located to receive heat in high concentration from said inside coil and from said auxiliary heating means, whereby said capillary tube is conditioned to conduct refrigerant at rates which decrease when said outside temperature falls, and increase when outside temperature rises.

3,127,931
HEATING AND COOLING EMPLOYING AERATED CAR SEATS
Laurence H. Johnson, Buffalo, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 4, 1959, Ser. No. 810,659
3 Claims. (Cl. 165—43)



1. A method of subjecting the person of an occupant of a seat portion in an automotive compartment to the temperature modulating effect of a flow of air, said method comprising selectively forcing air to flow by blower means from said compartment free of the influence of an air heater and in paths contiguous to said person and immediately from about said person into the interior of said seat portion in one direction while imparting a cooling effect on said person, and forcing air to flow by blower means through a heater and in the opposite direction outward from said seat portion interior while imparting a heating effect on said person.

3,127,932
COMPOSITION AND METHOD FOR INHIBITING CORROSION IN OIL WELLS
Frederic W. Schremp, Fullerton, and Joseph F. Chittum, Whittier, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Continuation of applications Ser. No. 725,001, Mar. 31, 1958 and Ser. No. 725,085, Mar. 31, 1958. This application Dec. 1, 1961, Ser. No. 159,814
11 Claims. (Cl. 166—1)

1. A corrosion-inhibiting composition consisting essentially of a water-soluble ferrocyanide and a water-soluble borate, said water-soluble ferrocyanide being present in an amount to produce a concentration of ferrocyanide ion in aqueous solution of 5 p.p.m. to 140 p.p.m. and said water-soluble borate being present in an amount to produce a concentration of borate ion in aqueous solution of 5 p.p.m. to 140 p.p.m.

10. A method of inhibiting corrosion of ferrous metal surfaces in contact with an oil field brine in an oil well which comprises determining the presence and concentration of any borate ion which may be in said brine, adding to said brine a water-soluble borate in an amount sufficient based upon the borate ion concentration of said brine to bring the concentration of borate ion in said brine at least into the range of 5 p.p.m. to 140 p.p.m. and adding to said brine sufficient water-soluble ferrocyanide to produce a concentration of ferrocyanide ion in the range of 5 p.p.m. to 140 p.p.m.

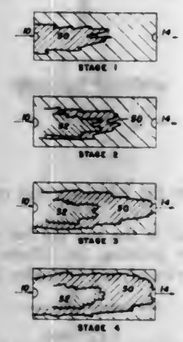
3,127,933
FORMATION FLUID SAMPLING METHOD AND APPARATUS
John W. Graham, Bellaire, Tex., and Nils L. Muench, Huntsville, Ala., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Sept. 26, 1960, Ser. No. 58,262
12 Claims. (Cl. 166—3)



1. A method for obtaining samples of formation fluids through a drill pipe string during drilling operations comprising the steps of closing off adjacent the drill bit the circulating fluid flow path downward through the drill pipe string; raising the drill pipe and drill bit while restricting the downward flow of drilling mud in the annulus between the drill pipe string and the borehole wall to reduce pressure below the drill bit to less than formation pressure to thereby draw a sample of formation fluids into the borehole below the drill bit; and reverse circulating fluids down said annulus through the drill bit and up the drill pipe string until the sample of formation fluids reaches the earth's surface.

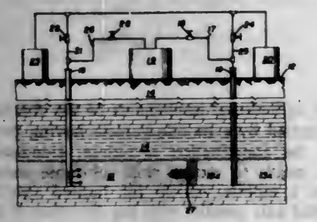
3,127,934
SOLVENT INJECTION PETROLEUM RECOVERY METHOD
Albert K. Csaszar, Dundee, Ill., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
Filed May 18, 1961, Ser. No. 111,060
7 Claims. (Cl. 166—9)

1. The method of recovering petroleum from subterranean reservoirs, containing petroleum and water, penetrated by an injection well and a producing well, comprising injecting through said injection well and into said formation a quantity of light anhydrous liquid solvent having a high solubility in crude oil, said quantity being in the range of one-third to one-half the volume of solvent which, if injected, would cause solvent breakthrough at the producing well, next following the injection of said



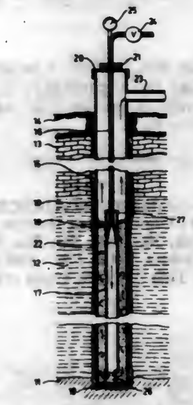
solvent injecting through said injection well 0.03 to 0.10 pore volume of a reagent capable of reaction in the presence of water to form a formation-plugging product, then injecting through said injection well an additional quantity not less than about 0.05 reservoir pore volume of a solvent as aforedefined, then driving said injected fluids by the injection through said injection well of a displacing fluid, and producing oil from said producing well.

3,127,935
IN SITU COMBUSTION FOR OIL RECOVERY IN TAR SANDS, OIL SHALES AND CONVENTIONAL PETROLEUM RESERVOIRS
Fred H. Poettmann and Bert K. Larkin, Littleton, and Harry W. Milton, Jr., and John C. Bixel, Denver, Colo., assignors to Marathon Oil Company, Findlay, Ohio, a corporation of Ohio
Filed Apr. 8, 1960, Ser. No. 21,043
19 Claims. (Cl. 166—11)



1. In a method for the recovery of hydrocarbons from underground formations penetrated at spaced points by an injection well and a producing well wherein combustion is initiated in such a formation prepared for in situ combustion and a combustion front is propagated through a prepared portion of said formation having an oxidation catalyst distributed therein, the improvement which comprises propagating a combustion front through the formation by varying, in relation to oxidation catalyst concentration in the prepared portion, the velocity and oxygen content of a continuous flow of a gas mixture introduced through the injection well for directing said frontal movement, so as to establish a maximum temperature in said frontal movement capable of maintaining distillation temperatures but insufficient to cause coking of an appreciable amount of the hydrocarbons within the prepared portion during recovery of a major portion of the hydrocarbon content of said prepared portion, and recovering evolved products through the producing well.

3,127,936
METHOD OF IN SITU HEATING OF SUBSURFACE PREFERABLY FUEL CONTAINING DEPOSITS
Malte Oscar Eurenius, Santa Cruz, Calif., assignor to Svenska Skifferolje Aktiebolaget, Orebro, Sweden, a joint-stock company of Sweden
Filed Jan. 2, 1958, Ser. No. 706,789
Claims priority, application Sweden July 26, 1957
1 Claim. (Cl. 166—39)

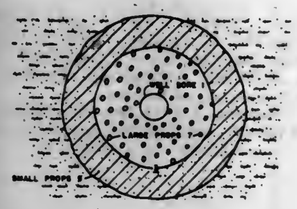


In a method of heating in situ of subsurface deposits for recovery of valuable liquid and/or gaseous products by combustion of a mixture containing fuel and a combustion sustaining medium within an elongated tubular heating member extending into said deposit through which tubular device the flue gases from said combustion are conducted downwardly and then reversed to flow upwardly through a space between said heating member and the wall of the deposit characterized in that granules of an inert solid material of heat transfer modifying character are introduced into and caused to remain in floating condition between the wall of the deposit to be heated and the heating member by gas rising in said space whereby said granules provide predetermined distribution of the heat transfer from said tubular heating member externally thereof to the deposit along the longitudinal direction of said member, in which the tubular heating member has an open lower end, and in starting operation, the granules are introduced to a level exceeding the position of the lower open end edge of the tubular structure when in continuous operation, the feed of the combustible mixture is commenced and said mixture ignited with the said tubular structure lowered towards the mass of introduced granules which thereby are gradually whirled up by the flue gases into said space around said tubular structure.

3,127,937
METHOD AND A COMPOSITION FOR TREATING SUBSURFACE FRACTURES
William J. McGuire, Jr., Dallas, Loyd R. Kern, Irving, and Reece E. Wyant and Thomas K. Perkins, Dallas, Tex., assignors to The Atlantic Refining Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Aug. 22, 1960, Ser. No. 51,078
2 Claims. (Cl. 166—42)

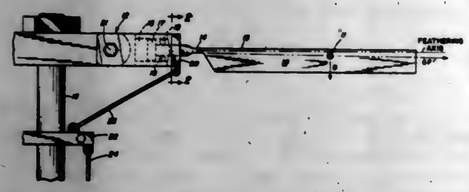
1. The method of propping fractures in a subsurface earth formation comprising injecting into said fracture a

first carrier liquid containing a first solid, particle-form propping agent whose specific gravity is equal to or less than the specific gravity of said carrier liquid and there-



after injecting into said fracture a second carrier liquid containing a second solid, particle-form propping agent whose specific gravity is greater than the specific gravity of said second carrier fluid.

3,127,938
SELF-ADJUSTING AIRSCREW
Vadym V. Utgoff, Dark Harbor, Maine
Filed Feb. 28, 1961, Ser. No. 92,420
3 Claims. (Cl. 170—160.1)
(Granted under Title 35, U.S. Code (1952), sec. 266)

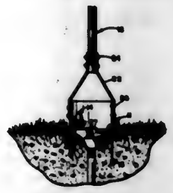


1. A self-adjusting airscrew, comprising in combination, a power driven rotatable hub, at least one blade having a feathering axis and being in the form of an airfoil surface, the center of gravity and center of lift of said blade coinciding in both the spanwise and chordwise directions, means for mounting said blade in said hub in radial relation thereto, said mounting means permitting said blade to rotate freely about its feathering axis and permitting limited movement of said blade relative to said hub in the plane of rotation of said blade, controllable means attached to said hub for varying the coning angle of said blade whereby the rotation of said hub will produce a component of force normal to the plane of said hub, the magnitude and direction of which force will be determined by the magnitude and sense of said coning angle.

3,127,939
LAWN TRIMMER
John Denter Rink, 5614 Via Collado, Torrance, Calif., assignor of twenty percent to Edward A. Sokolski
Filed Dec. 18, 1961, Ser. No. 160,121
4 Claims. (Cl. 172—13)

1. In a trimmer for trimming lawn growth around a circular lawn sprinkler head,

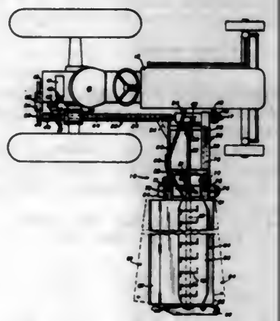
a cylindrical member having a plurality of planar cutting blades extending inwardly from the inner circumference of said cylindrical member in a direction substantially normal to the adjoining portion of the inner wall of said member, the edges of said blades adjacent to said inner circumference extending along axes substantially parallel to the longitudinal axis of said cylindrical member, said blades being in the shape of a right triangle, the hypotenuse of said triangle converging with said inner wall in a direction towards the bottom end of said member, said blades further being spaced substantially



equally from the edges of said cylindrical member, and

means attached to the top portion of said cylindrical member for rotating the blades of said member against the rim of said sprinkler head.

3,127,940
CULTIVATOR ASSEMBLY
Allen R. Hutchinson, 1216 W. Central Ave., Orlando, Fla., and William A. Hutchinson, deceased, late of 2214 Stanley Ave., Orlando, Fla., by Jean M. Hutchinson, administratrix, Orlando, Fla.
Filed Dec. 1, 1960, Ser. No. 73,142
4 Claims. (Cl. 172—79)



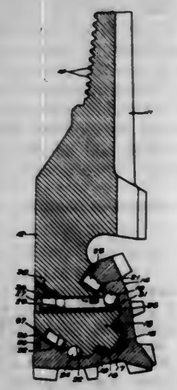
1. In agricultural implements of the character adapted to be carried by a mobile vehicle having power take-off means, the combination including, elongated subframe means, means to mount said subframe means horizontally on a mobile vehicle for limited rotation about a horizontal axis parallel with the direction of travel of the vehicle, power-driven cultivator means to be disposed laterally with respect to said subframe means, first and second pivotal connecting means having limited universal swivelling action, first and second attaching means to join said pivotal connecting means with said subframe means and said cultivator means, respectively, said pivotal connecting means being disposed in horizontally spaced relationship, one of said attaching means including means to vary the horizontal distance between one portion of the cultivator means and the subframe means to vary the angular relationship between the cultivator means and said subframe means, said swiveling action of the pivotal connecting means also permitting the cultivator means to follow the contour of the ground regardless of its angular relationship to the vehicle, and power-transmitting means to connect the power take-off means of the mobile vehicle with said cultivator means.

3,127,941
IMPACT TOOL
Charles B. Sieber, 17 W. 514 Riardon Road, Villa Park, Ill.
Filed Oct. 18, 1960, Ser. No. 63,356
9 Claims. (Cl. 173—98)



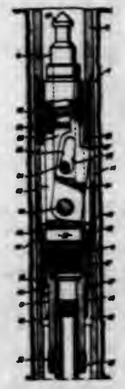
1. An impact tool comprising in combination a frame, a striking wheel mounted thereon having a peripheral opening therein, a hammer block having an opening longitudinally thereof slidably mounted in the opening in the said wheel, a plug fixed to the striking wheel at one end of the said peripheral opening, a bolt in the said plug extending into the longitudinal opening in the hammer block, a spring on the said bolt within the longitudinal opening in the hammer block normally biasing the said hammer block inwardly of the said wheel, a power driven wheel mounted upon a common axis with said striking wheel and a spring secured at one of its ends to the striking wheel adjacent its outer periphery and at its other end to the power driven wheel also adjacent its outer periphery.

3,127,942
BEARING CLOSURE FOR ROTARY ROCK BIT
William J. Nelson, Whittier, Calif., assignor to Smith Industries International, Inc., Compton, Calif., a corporation of California
Filed Jan. 2, 1962, Ser. No. 163,792
2 Claims. (Cl. 175—227)



1. A well drilling bit having a body attachable to a drill string, a journal on the body, a cutter rotatable on the journal, a bearing between the journal and the cutter, a ball plug extending through the journal largely closing the aperture through which parts of the bearing were fed through the journal from the exterior of the body to between the journal and cutter, said ball plug having a passage formed therein leading to the bearing, there being a first passage in the body leading from the exterior surface of the body adjacent the outer end of the ball plug to the passage in the ball plug through which lubricant can be forced into the bearing, an O-ring recessed in the outer end face of the cutter bearing against the body around the journal and around the bearing, there being a second passage formed in the body leading from the exterior surface of the body adjacent the outer end of the ball plug to the bearing at a point remote from where the passage in the ball plug discharges into the bearing and within the O-ring, and means closing the outer end of the second passage.

3,127,943
WIRE LINE CORE BARREL
Takeshi Mori, Salt Lake City, Utah, assignor to Christensen Diamond Products Company, Salt Lake City, Utah, a corporation of Utah
Filed Mar. 5, 1962, Ser. No. 177,560
8 Claims. (Cl. 175—246)



6. In coring apparatus: an outer core barrel; an inner core barrel structure adapted to be lowered into and elevated from said outer core barrel; a suspension sleeve carried by said outer barrel and having circumferentially spaced, laterally expandible and contractable latch feet engageable by and expanded outwardly by said inner barrel structure; said inner barrel structure having a suspension member at its upper portion adapted to engage said feet when contracted to suspend said structure in said outer core barrel.

3,127,944
DRILLING SAW
Frank F. Davis, 2170 Markham Way, Sacramento, Calif.
Filed Sept. 4, 1959, Ser. No. 838,105
2 Claims. (Cl. 175—329)

1. A drilling saw adapted for attachment to the bottom end of a drill pipe, said saw comprising:

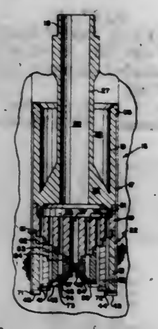
(*a*) an adapter sub having on its lower end a plurality of concentric threaded annular members in stepped relation, said hub being also provided with a plurality of openings extending from the upper end of said sub to each of said stepped annular members;

(*b*) a plurality of annular rings in threaded engagement with said annular members on said sub, said rings being spaced apart to define a plurality of concentric annular passageways, said passageways being in communication with said plurality of openings in said sub; and

(c) a plurality of diamond-set matrices mounted on the bottom ends of said annular rings, said matrices being larger in a radial dimension than said rings, said matrices thereby extending laterally into the adjacent of said annular passageways and into the path of drilling fluid descending through said annular passageways.

2. A rock drilling device for attachment to the bottom of a drill pipe, said device comprising:

(a) an adapter sub having on its lower end a plurality of screw threads, said sub having formed therein a central vertical opening and a plurality of openings connecting with said central opening and extending to the bottom of said sub at locations removed from said central opening and between said screw threads;



(b) an annular ring in threaded engagement with the outermost of said screw threads;

(c) a diamond-set matrix on the bottom end of said annular ring, said matrix being larger in a radial dimension than said annular ring; and

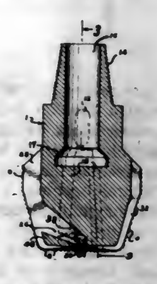
(d) a rock bit in threaded engagement with the innermost of said screw threads, the outer surface of said rock bit and the inner surface of the adjacent annular ring defining a passageway for the flow of drilling fluid to said matrix and the adjacent lower end of said rock bit, the lowermost portion of said rock bit being at an elevation above the lowermost portion of said matrix, and the outer periphery of said rock bit being in vertical non-interfering relation with respect to said matrix whereby said rock bit is independently removable.

3,127,945
DRAG BIT
Harold C. Bridwell and David S. Rowley, Tulsa, Okla., assignors to Jersey Production Research Company, a corporation of Delaware
Filed Mar. 2, 1960, Ser. No. 12,407
5 Claims. (Cl. 175—329)



1. A rotary drag bit comprising a bit body and a plurality of blades depending from said body, each of said blades having a face and gage edge formed from a matrix within which are bonded cutting particles between about 0.045 and about 0.250 inch in size having a Rockwell A hardness in excess of about 85, said matrix comprising hard abrasion-resistant powder granules between about 150 and about 400 mesh in size interspersed within a bonding metal having a melting point below about 2400° F. and in the molten state having the ability to wet said cutting particles and powder granules, the thickness of said matrix decreasing across the face of each blade from the gage edge to the inner edge, and the total matrix cross-sectional area on the bottoms of said blades ranging between about 1/14 and about 1/16 of the area swept by said blades as said bit is rotated.

3,127,946
DRILL BIT
Carroll L. Deely, 6210 N. Central Expressway, Dallas 6, Tex.
Filed May 1, 1961, Ser. No. 106,606
6 Claims. (Cl. 175—404)

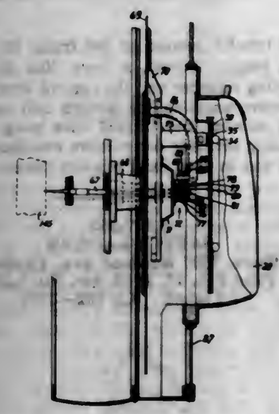


1. A drill bit comprising a hollow, threaded member with an enlarged bit body thereon, said bit body having the upper portion thereof substantially cylindrical in form, said enlarged body having an axial opening formed in the upper portion thereof which extends thereinto, said body having a passage extending out of said axial opening to a point on the lower face of said bit body and being off-set laterally with respect to the rotational axis thereof, said bit body having an axial, cylindrical, core receiving hole formed in the lower portion thereof and extending thereinto, a wall encircling said axial, cylindrical, core receiving hole for a spaced distance upward above the lower face of said bit body, said bit body having a closed, lateral conduit leading from said axial, cylindrical, core receiving hole to a side of said bit body, said bit body having an upwardly extending groove formed in the side thereof, the width of which groove is at least as wide as the diameter of said axial, cylindrical, core receiving hole which closed, lateral conduit connects with said groove, and abrading elements inset on the face of said bit and in the wall surrounding said axial, cylindrical, core receiving hole in position to be in contact with the formation being drilled.

3,127,947
CONTROL DEVICE FOR INDICATING APPARATUS, PARTICULARLY FOR BALANCES
Uwe Vogel, Hamburg-Wellingsbuttel, Germany, assignor to Vogel & Halke, Hamburg, Germany
Filed Feb. 5, 1962, Ser. No. 171,462
Claims priority, application Germany Feb. 8, 1961
9 Claims. (Cl. 177—70)

1. In control means for supplying more than two batches of material to a weighing scale, an indicator scale, an indicator movable over said indicator scale in dependence upon the load on the weighing scale, at least two photodiodes secured to said indicator in positions which are offset to one another in a direction perpendicular to

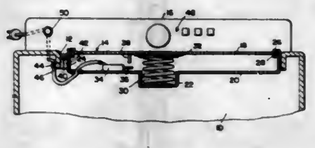
the path of movement of said indicator, a source of light adapted to illuminate a band-shaped field corresponding to the paths of movement of said photodiodes, a housing enclosing said indicator, indicator scale and source of light, means for holding a hole card between said indicator and source of light, said hole card having a first group of holes and a second group of holes, said first group of holes including two rows of holes arranged along said band-shaped field of illumination each for coaction with one of said photodiodes in such a manner that in the movement of the indicator said photodiodes alternatingly pass the holes in their respective rows, a control device, first connecting circuit means between said photodiodes and control device for progressively actuating said control device in dependence upon impulses from said photodiodes, a plurality of control means in said control device for controlling the supply of the respective batches, second connecting circuit means between the control de-



vice and said control means for actuation of the individual control means successively corresponding to the impulses delivered by the photodiodes, a program selector device with a switch for each of said plurality of control means, actuating elements in said selector device disposed adjacent to said hole card and each registering with a hole in said second group of holes to actuate said selector device in dependence upon the presence and absence of a program hole at the respective actuating element, third connecting circuit means between said selector device and the control device for conditioning said plurality of control means in dependence upon the operation of said actuating elements and for bridging any of said control means where no actuating element has been operated, and relay switching means in said control device for operation in dependence upon alternating impulses from said photodiodes to cause control steps including connecting a selected control means and disconnecting said control means.

3,127,948
CLOTHES WASHER SCALE
Edward Nitenson, 3 Lyndon Road, Sharon, Mass.
Filed June 14, 1961, Ser. No. 117,037
4 Claims. (Cl. 177—144)

4. In a washing machine having a body and an opening in the top of the body through which articles to be washed are placed in the body; a cover for the opening comprising a base plate adapted to be hinged to the body of the washer, a top plate disposed generally parallel to the base plate and moveable toward and away from the base plate, biasing means urging the top plate to a selected position above the base plate, means mounted on the base plate and adapted to be actuated by the top plate



in response to movement of the top plate toward the base plate, and indicating means operatively connected to the last named means and operative in response to actuation of said last named means.

3,127,949
GROUND EFFECT MACHINE WITH CONTROLS THEREFOR
Walter T. Harter, New Palestine, Ind.
Filed May 11, 1961, Ser. No. 109,403
5 Claims. (Cl. 180—7)



5. An aircraft comprising a body formed of a thin sheet of material and having a V-shaped vertical cross section with the apex thereof projecting upwardly, said V-shaped cross section extending along a major portion of the length of the body and being open at the forward end, the bottom edge of said body forming a plane which is completely open for the passage of air, means for moving gas into the forward end of the body for exit out the bottom thereof said bottom edge extending continuously around said body except at the forward end thereof, the rear portion of said body being completely closed above said plane and having a V-shape in horizontal cross section with the apex of said last mentioned V-shape projecting forwardly, a framework secured to and reenforcing said body, passenger seating means supported on said framework, a series of deflectors extending downwardly and mounted on the lower surface of said body along both legs of said V-shape for pivoting about axes perpendicular to the extent of said major portion of said body, and control means connected to said deflectors operable at said passenger seating means for selectively controlling the deflectors on each leg of said V-shape to deflect air forwardly and rearwardly in said body.

3,127,950
METHOD OF DETERMINING SHEAR WAVE VELOCITIES
Oswald A. Itria, Bellaire, Tex., assignor to Texaco Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 3, 1959, Ser. No. 856,965
8 Claims. (Cl. 181—.5)

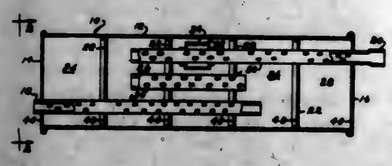
1. A method of determining shear wave velocities at predetermined locations along a bore hole, comprising the steps of measuring the density of the fluid in said bore hole, measuring the formation density at said predetermined locations, measuring the longitudinal wave

velocity of the fluid in said bore hole, measuring the tube wave velocity in said bore hole at said predetermined



locations, and computing the shear wave velocity from said measurements.

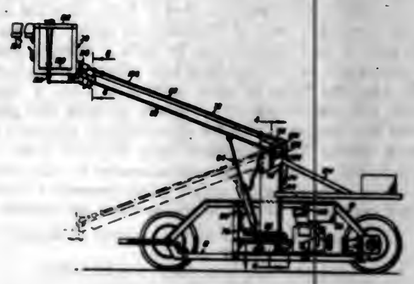
3,127,951
METHOD FOR PORCELAIN ENAMELING MUFFLERS AND THE LIKE
William E. Pierce, Radnor, Pa., assignor to Porcelain Enamel Institute, Inc., Washington, D.C., a corporation of Illinois
Filed June 20, 1961, Ser. No. 118,294
12 Claims. (Cl. 181—61)



1. A method for preparing an assembled compartmented article having exterior walls and interior partitions for interior coating with a fluid which comprises: forming at least one straight passageway at least part way through said article by forming a hole in an exterior wall and in at least one of said partitions said holes being axially aligned; and inserting a tube having apertures in the wall thereof at predetermined longitudinal positions into said passageway whereby one of said apertures may be positioned in each of said compartments.

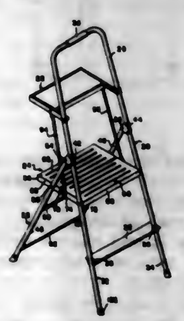
3,127,952
MOBILE WORK PLATFORM
John G. Baerg, 10069 Ave. 400, Dinuba, Calif.
Filed Oct. 23, 1961, Ser. No. 147,709
8 Claims. (Cl. 182—2)

1. A mobile work platform comprising a frame having a tubular portion extended therefrom in axially erect position, a sleeve rotatably mounted on said tubular portion, a parallelogram lift beam assembly pivotally mounted on the sleeve and radially extended therefrom for elevational adjustment, a worker support pivotally mounted on the extended beam assembly, power means borne by the frame, and control linkage interconnecting the power means on the frame and the worker support, said control means including actuating means in the support, a first bell crank pivotally mounted concentrically of the pivotal connection of the support to the beam assembly having controlled connection to the actuating means, a second bell crank pivotally mounted concentrically of the pivotal connection of the beam assembly to the sleeve and radially extended in fixed radial relation from the sleeve, a push-pull linkage interconnecting said bell cranks, a control lever having controlling connection to the power means mounted in the frame for pivotal elevational movement and disposed in fixed radial relation to the tubular portion, a connecting member mounted concentrically



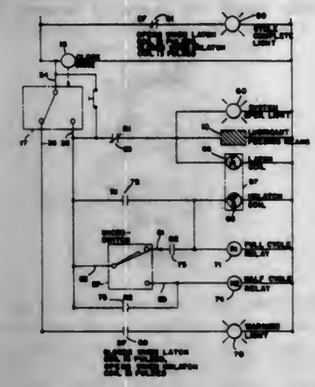
within the tubular portion of the frame for axial movement with respect thereto, a lower link interconnecting the connecting member and the control lever, and an upper link interconnecting the second bell crank and the connecting member, one of said links being connected to the connecting member for relative rotational movement thereabout and in fixed axial relation thereto.

3,127,953
SAFETY LADDER
Charles Shore, 7507 Rowland Ave., Cheltenham, Pa.
Filed Feb. 17, 1960, Ser. No. 9,298
2 Claims. (Cl. 182—106)



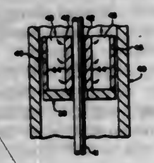
1. A safety ladder comprising a tubular member bent in a U-shaped guardrail, a spacer member secured between the legs of said guardrail member adjacent the ends thereof, two leg members pivotally secured in spaced relation to said guardrail legs, two step members respectively pivotally linked to said guardrail legs and to said leg members and a pair of bars fixedly connected to the undersurface of a first one of said step members and pivotally connected to the undersurface of the second step member at points intermediate the forward and rear edges thereof to permit folding thereof essentially only in an upward direction and affording a support for an undersurface of said second step member to position upper platform surfaces of said step members in substantially the same plane and a shelf pivotally linked to said guardrail legs above said step members and to one of said step members so that said shelf folds up with said step members, whereby said step members can be folded up by raising said shelf.

3,127,954
LUBRICATION MONITORING SYSTEM
James J. Callahan, Mentor, and Robert D. Roberts, Solon, Ohio, assignors to Trabon Engineering Corporation, Solon, Ohio, a corporation of Ohio
Filed Aug. 24, 1962, Ser. No. 219,199
5 Claims (Cl. 184—7)



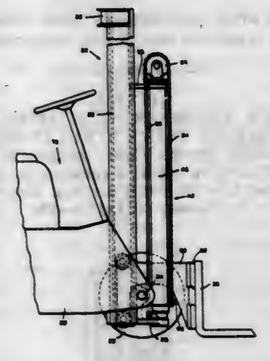
1. A lubrication and monitoring system for intermittently properly proportioning lubricant among a plurality of points over a period of months or years while at any moment indicating whether the history of the operation of the system is satisfactory as of that moment, comprising lubricant feeding means, cyclic type lubricant distribution means having an element whose back and forth movement measures the volume of lubricant delivered by the system, means for activating said lubricant feeding means for relatively short intervals which are spaced relatively far apart from each other in time, means for counting the number of back and forth movements of said measuring element occurring as a result of said actuation, and means for indicating at the conclusion of each of said relatively short intervals whether a desired count of back and forth movements has been reached within the interval and for maintaining said indication as to the most recent one of said relatively short intervals during the time between said most recent relatively short interval and the next successive one of said relatively short intervals.

3,127,955
FLUID SUPPORTED DEVICE
Elmer Fred Macks, Willow Lane, Vermilion, Ohio
Original application Mar. 30, 1956, Ser. No. 575,185, now Patent No. 3,001,609, dated Sept. 26, 1961. Divided and this application Sept. 26, 1961, Ser. No. 140,792
14 Claims. (Cl. 184—18)



7. An assembly comprising a member movable relative to a guide member and another member, said movable member having a foraminous wall section at least partially defining a fluid chamber in said movable member that is open at one end thereof, said other member comprising a casing enclosing said movable member and said guide member, and means for supplying fluid under pressure to said chamber through the open end of said movable member whereby a lubricating film of fluid is produced between said foraminous wall section and said guide member by the flow of fluid from said chamber through said foraminous wall section.

3,127,956
LIFT TRUCK
Hugh W. Hosbein, Niles, and Robert Lapsley, Berrien Springs, Mich., assignors to Clark Equipment Company, a corporation of Michigan
Original application Feb. 25, 1954, Ser. No. 412,439. Divided and this application Nov. 16, 1961, Ser. No. 163,003
6 Claims. (Cl. 187—9)



1. In a lift truck having a main frame and a pair of transversely spaced ground engaging wheels mounted adjacent the forward end of the frame, the combination of an upright assembly comprising an outer upright guideway including transversely spaced channeled members and an inner upright guideway including transversely spaced channeled members, the longitudinal center line of the upright assembly lying rearwardly of the axis of rotation of said wheels, a load supporting carriage supported by and vertically movable in said inner upright guideway, a pair of transversely spaced hydraulic assemblies carried at the forward end of the main frame and arranged forwardly of and substantially in line with the channeled members of the outer upright guideway and rearwardly of said carriage, each of said hydraulic assemblies comprising relatively vertically movable elements, and means associated with said carriage and said hydraulic assemblies for moving said carriage relative to said inner upright guideway and said inner upright guideway relative to said outer upright guideway upon actuation of said hydraulic assemblies.

3,127,957
ELEVATOR
Donald S. Nelson, 1807 Commerce St., Dallas 1, Tex.
Filed July 19, 1961, Ser. No. 125,214
12 Claims. (Cl. 187—19)

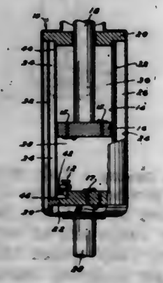
1. In elevator mechanisms, the combination including, elevator car means, a pair of cylindrical wheel members rotatably mounted on a common axis on said car means, means to drive said wheel members simultaneously in opposite directions, a pair of longitudinally vertically ex-

tending supporting means positioned on opposite sides of the car means, and means for engaging each of the periph-



eries of said wheel members in tractive climbing engagement with a respective one of said supporting means.

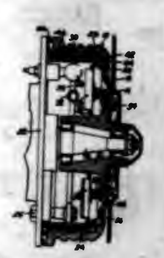
3,127,958
SHOCK ABSORBER WITH IMPROVED RELIEF VALVE STRUCTURE
Henry T. Szostak, Orange, Calif., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed June 30, 1961, Ser. No. 120,997
6 Claims. (Cl. 188—88)



1. In a hydraulic shock absorber having sprung and unsprung components, a pressure tube, a valved piston reciprocable within said tube and dividing the interior of said tube into compression and rebound pressure chambers, a reservoir tube surrounding said pressure tube, valve means closing one end of said pressure tube and providing controlled communication between one of said pressure chambers and the interior of said reservoir tube, exclusive passage means exterior of said pressure tube interconnecting said pressure chambers, an inertia sensitive valve device controlling fluid flow through said passage means, said valve device being spring pressed to a normally closed position but adapted to permit fluid flow by moving to an open position in response to a predetermined minimum acceleration rate of one of said components.

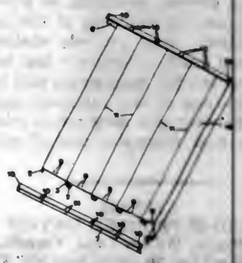
3,127,959
COOLING DEVICE FOR BRAKE DRUMS AND SHOES
Bronislaus Wengrowski, 7729 Mettetal, Detroit, Mich.
Filed Mar. 12, 1962, Ser. No. 179,109
4 Claims. (Cl. 188—264)

1. In an automobile braking system having a rotatable brake drum provided with a radially extending plate and an axially extending flange carried by said axially extending plate, brake shoes movable toward and away from the inner periphery of the axially extending flange of said brake drum and having their outer edges spaced axially from the radially extending plate of said brake drum, mechanism for moving said brake shoes toward and away from the axially extending flange of said brake drum, a disc plate having an outer diameter equal to a sliding fit with the inner periphery of the flange carried by said brake drum and extending between the outer



edges of said brake shoes and radially extending plate of said brake drum, vent openings in said disc plate and air circulating vanes on a side face of said disc plate facing said brake shoes for circulating air in said brake drum, and permanent magnetic means carried on the side of said disc plate facing the radially extending plate of said brake drum for contact engagement with the radially extending plate of said brake drum for retaining said disc plate to said brake drum.

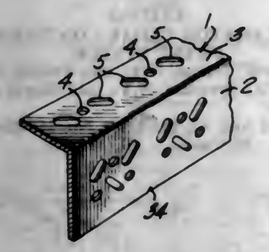
3,127,960
PANEL SYSTEMS
Charles Aquila Vincent Smith, 50 Knightsbridge Court, Sloane St., London SW. 1, England, and Albert Francis Rekert, 194 Croydon Road, Beckenham, England
Filed Sept. 21, 1959, Ser. No. 841,256
Claims priority, application Great Britain Sept. 24, 1958
8 Claims. (Cl. 189—1)



1. A panel assembly for use in building construction as a major portion of the fabric of a building without additional framework coextensive with the assembly, the assembly comprising a number of co-planar panels, each having flanges integrally formed along at least two opposite edges, both flanges on each panel extending in the same direction therefrom, a narrow, unitary stiffening length extending along edges of said panels that lie transversely to said flanges at one end thereof, a second narrow, unitary stiffening length extending along edges of said panels that lie transversely to said flanges at the other end thereof, means for attaching said stiffening lengths to said panels at isolated points distributed along said stiffening lengths in a manner which permits separation of adjacent flanges of adjacent panels, means, for joining the adjacent flanges together so as to internally stress said panels in the plane thereof, thereby eliminating play in the joints between said panels and in the

joints between said panels and said unitary lengths, whereby a rigid assembly for use as an independent unit in building construction is provided.

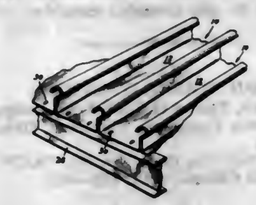
3,127,961
STRUCTURAL ELEMENTS
Bob G. Frazier, Dallas, Tex., assignor to Frontier Manufacturing Company, Dallas, Tex., a corporation of Texas
Filed Aug. 4, 1959, Ser. No. 831,671
2 Claims. (Cl. 189—34)



1. A structural element comprising, an elongated member of right angle cross-section having a wide flange and a narrow flange, longitudinally spaced rectangular groups of openings in the wide flange, each group including a plurality of slots which are inclined at a 45° angle to the longitudinal axis of the wide flange and a plurality of holes, the minor dimension of the slots corresponding to the diameter of the holes, and to the cross-sectional diameter of fasteners to be received therethrough, the slots of a group being positioned at the corners of at least one triangular arrangement and the holes of a group being positioned at the corners of at least one triangular arrangement overlying and inverted with respect to the triangular arrangement of the slots, the opening at the apex of each triangular arrangement of openings lying in longitudinal alignment with the openings at the base corners of the overlying triangular arrangement of openings, and the slot at the apex of the triangular arrangement of slots positioned so that its major axis projected bisects the major axis of the slot at one base corner and the major axis projected of the slot at the other base corner of the triangular arrangement of slots bisects the major axis of the slot at he apex, whereby the slots of said wide flange and the holes of the wide flange of a like companion structural element intersect to provide fastener receiving openings coextensive with said holes at a plurality of different relative longitudinal overlapped conditions of said wide flanges when the first mentioned and companion structural elements are in similarly oriented, longitudinally aligned, lapped relation and whereby the slots of the wide flanges of said first mentioned structural element and a like companion structural element intersect to provide fastener receiving openings over a series of interrupted ranges of relative longitudinal adjustment of said structural elements when the structural elements are arranged with their wide flanges in aligned abutment and their narrow flanges extend oppositely in coplanar relation.

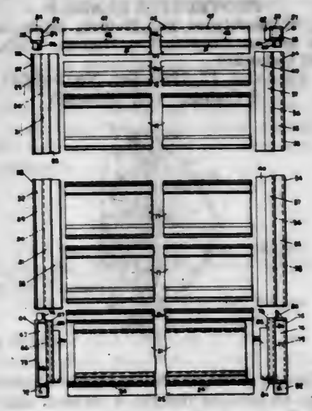
3,127,962
JOINT FOR PANELS
William E. James, Witmer, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Dec. 21, 1960, Ser. No. 77,408
1 Claim. (Cl. 189—36)

Panels of resilient sheet material of uniform thickness provided along opposite lateral edges with integral parallel flanges of substantially equal width perpendicular to said panels and terminating in connecting members of self-connecting type and comprising elongated sections of cylinders connected integrally along one edge respectively to and extending longitudinally along said terminal edges of said flanges of said panels, said cylindrical connecting members being of single thickness of said sheet material and extending substantially more than 180° about the axes thereof between the connected edges and free edges thereof but providing adequate space between said edges of at least one cylindrical connecting member on each panel to receive the cylindrical connecting member on the opposite edge of an adjacent panel when said panels are being connected together and the inner



diameter of one member being slightly less than the outer diameter of the other member of an adjacent panel received therein when said panels are connected together by said members so as to render said connection substantially air-tight and said members being substantially coincident when adjacent panels are connected together and said panels are disposed within a common plane, the axes of said connecting members being substantially within the planes of the abutting flanges which support said members when in connected position, whereby the terminal edges of said connecting members overhang said flanges when extending vertically from said panels.

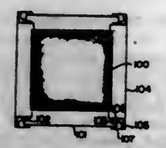
3,127,963
ALUMINUM DOORS FOR BOX CARS
Wilfred A. Beauchamp, Chicago, Ill., assignor to The Youngstown Steel Door Company, Cleveland, Ohio, a corporation of Ohio
Filed Apr. 7, 1961, Ser. No. 101,490
7 Claims. (Cl. 189—46)



1. An aluminum door having a panel and front, rear, top and bottom extruded reinforcing members secured to and along the margins of said panel, said front extruded member terminating contiguous to the top front corner of said door having an angular section including a flange lying substantially in the inner plane of said door, said top extruded member terminating short of

said corner and having an angular section including flange lying substantially in the plane of said first flange, a corner member having an angular section substantially similar to said angular section of said top member and forming a continuation thereof and completely filling said corner, said corner member being seated upon said first angular section within the vertical edges of said front extruded member and having a flange forming a continuation of said flanges of said front and top extruded members, said extruded members terminating contiguous to the remaining corners of said door, corner members continuous with said extruded members and completely filling said remaining corners, and means securing said corner members to said extruded members.

3,127,964
ADJUSTABLE WAINSCOT
Gordon J. Pollock, Parma Heights, Ohio, assignor to The E. F. Hauserman Company, Cleveland, Ohio, a corporation of Ohio
Filed Nov. 18, 1960, Ser. No. 70,179
10 Claims. (Cl. 189—85)



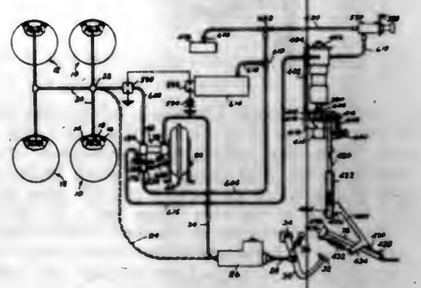
1. In combination, a building column and a wainscot construction therefor, said wainscot construction comprising a first panel having a bulb flat fold rebent vertical edge portion terminating in a transversely extending flange portion, and a second panel supported against said flange portion and adjustable transversely of said first panel, and a snap-on cap secured to said bulb flat fold rebent portion of said first panel and overlapping said second panel whereby floating adjustment of said second panel with respect to said first panel is obtained.

3,127,965
PLASTIC TRIM MOLDING CLIP WITH PROTECTIVE FLANGE
Robert A. Weisenberger, Sr., Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 12, 1959, Ser. No. 845,941
5 Claims. (Cl. 189—88)



1. A molding strip mounting assembly comprising a wall having an opening therein, a resilient clip including a body portion, a locking portion being centrally disposed on said body portion and extending in a generally normal direction therefrom, a plurality of locking shoulders formed on said locking portion, said shoulders being adapted to coact with the wall opening to retain the clip body portion in abutting relation with the wall, a pair of outwardly flared shoulders formed on said clip body portion, a molding strip having a pair of inwardly turned edges and adapted to be snapped into position over said clip, said edges being adapted to coact with the flared shoulders of said body portion to retain the molding strip upon said clip whereby the strip edges are disposed proximate said wall, a pair of outwardly extending flanges formed on said clip body portion and extending transversely the width of said body portion, said clip flanges extending between said strip edges and said wall and in engagement with said strip edges and said wall to prevent direct contact between said strip and said wall.

3,127,966
ACCELERATOR PEDAL CONTROLLED BRAKE SYSTEM
Merle M. Sheriff, Minoa, N.Y., and Francis J. Holland, 753 James St., Syracuse, N.Y.; said Sheriff assignor to said Holland
Filed Aug. 22, 1958, Ser. No. 756,664
32 Claims. (Cl. 192—3)

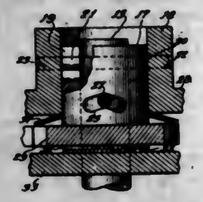


1. A full power brake system comprising, in combination with brake operating means operable by fluid pressure, a fluid pressure power unit including a fluid pressure pump having an outlet connected to the brake operating means and a pump drive operable by a variable fluid pressure force to drive the pump and supply variable fluid pressure to the brake operating means, variable fluid pressure control means having a fluid pressure inlet and a variable fluid pressure outlet connected to the pump drive of the power unit, movable regulating means in the variable fluid pressure control means and operable by a signal force applied thereto to regulate the fluid pressure output from the latter in proportion to the signal force inducing movement of the movable regulating means, variable signal power means operatively connected with the movable regulating means for applying said signal force to the latter, and movable operating means operatively connected to the variable signal power means for providing the signal force to the movable regulating means in proportion to the position of the operating means.

3,127,967
SELF-LOCKING DIRECT NUT OPERATOR
Donald G. Fawkes, Chicago, Ill., assignor to Henry Pratt Company, a corporation of Illinois
Filed Sept. 22, 1961, Ser. No. 139,921
5 Claims. (Cl. 192—8)

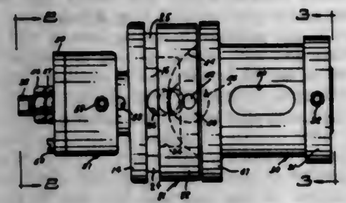
5. A self-locking direct nut operator for a valve stem, comprising: a valve housing; a valve stem; a valve stem sleeve mounted on said valve stem for turning movement with the stem and limited movement longitudinally of the stem; a plurality of locking teeth on said valve housing; a plurality of locking teeth at one end of said valve stem sleeve in mating locking engagement with said valve housing locking teeth, said valve stem sleeve teeth being stationary relative to said sleeve; a nut connected to the valve stem and said sleeve with a lost motion connection permitting said nut to turn relative to said stem and sleeve;

camming means between the valve stem sleeve and the nut to move said sleeve longitudinally of said stem to



simultaneously move all of the teeth of the sleeve out of locking engagement with all of the teeth of the valve housing.

3,127,968
SAFETY OVERLOAD CLUTCH
Edward J. Radenberg, Oakland, Mich. (17611 Ramsgate, Lathrop Village, Mich.)
Filed Nov. 8, 1961, Ser. No. 151,070
5 Claims. (Cl. 192—56)



1. In a safety overload clutch, the combination comprising:
(*a*) a driving member,
(*b*) a driven member rotatably mounted on said driving member,
(*c*) a carrier member non-rotatively axially slidably mounted on said driving member for movement toward and away from said driven member;
(*d*) a plurality of spaced, radially disposed rollers mounted on one end of said carrier member and facing said driven member,
(*e*) said driven member being provided with a plurality of radially disposed slots aligned with said rollers for the reception of said rollers for a driving coupling connection therewith,
(*f*) biasing means carried by said driving member for normally urging said carrier member towards said driven member to engage said rollers in said slots to form a driving connection between said driving and said driven members,
(*g*) means for locking the carrier member in a position disengaged from said driven member when an overload is impressed on the clutch so as to cause the rollers to be moved out of driving engagement with said slots,
(*h*) an axially disposed plunger mounted within said driven member, coaxially with said carrier member, and being provided with an enlarged head and a transverse hole on the inner end thereof,
(*i*) said carrier member being provided with a circular recess on the other side thereof opposite to the side facing the driven member, and said driving member having a transverse slot elongated axially of said driven member and aligned with the transverse hole in said plunger,
(*j*) a pressure pin mounted in the transverse hole in the inner end of said plunger and said elongated slot and being disposed in said recess in said carrier member, and
(*k*) said biasing means engaging the enlarged head on said plunger for normally biasing said plunger and pressure pin toward said carrier member to engage the same and urge the carrier member toward said driven member, and said means for locking the carrier member in a position disengaged from the driven a member being adapted to detachably engage said plunger for carrying out said locking operation.

3,127,969
MECHANICAL CLUTCH OF THE COMPACT AND SELF-CONTAINED TYPE
Quinten A. Hansen, Highway 38, Franksville, Wis.
Filed Feb. 8, 1962, Ser. No. 171,836
7 Claims. (Cl. 192—93)

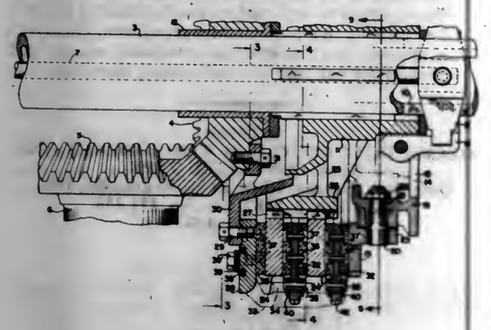


1. A self-contained, mechanically operated clutch comprising, a rotatable sleeve, a pair of drive transmitting elements mounted on said sleeve, one of said elements being secured to said sleeve for rotation therewith but axially movable relative to the other element to thereby effect driving engagement therebetween, a pair of antifriction, ball bearing assemblies mounted on said sleeve, one of said assemblies abutable against said one element for axially moving the latter, a cam member mounted on each of said assemblies for rotative movement with respect to one another and having cam surfaces forming pairs of complementary and oppositely facing cam surfaces, a ball between and in engagement with each pair of oppositely facing cam surfaces whereby rotation of one member causes the balls to ride along their respective surfaces and separate said members and axially shift said one element, stop means axially secured on said sleeve and located between said assemblies, and Belleville spring means mounted on said sleeve and urging one of said assemblies against said stop means when said clutch is disengaged, said spring means resiliently biasing both said assemblies toward the drive transmitting elements when said cam members are separated to cause clutch engagement.

3,127,970
DISC CLUTCH
George S. Allin, Sr., Green Bay, Wis., assignor to Northwest Engineering Corporation, Green Bay, Wis., a corporation of Wisconsin
Filed Nov. 7, 1960, Ser. No. 67,608
4 Claims. (Cl. 192—107)

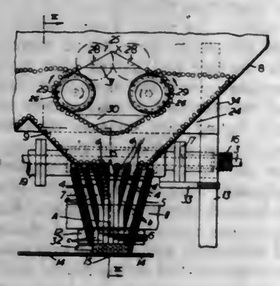
1. In a multiple disc structure of the class described having alternate discs lined with friction material for engagement with corresponding faces of the remaining discs, a construction for said alternate lined discs each of which comprises circumferentially spaced segments providing a line of separation between adjacent segments, removable means bridging the line of separation between said segments to secure said separate segments of each disc rigidly together to provide the corresponding discs, and external clamping means carried by one of said segmental discs and interlocking with the other segmental discs to position the same concentrically with respect to said other

discs, said clamping means being removable along with said one segmental disc to provide for removal of



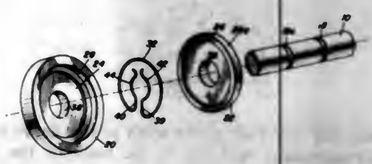
said other lined disc segments from the structure after removal of said securing means.

3,127,971
DEVICE FOR THE CONTROLLED FEEDING OF CIGARETTES OR SIMILAR ROD-SHAPED ARTICLES
Alfred Schmermund, 62 Kornerstrasse, Gevelsberg, Westphalia, Germany
Filed May 16, 1961, Ser. No. 110,407
Claims priority, application Germany May 23, 1960
4 Claims. (Cl. 193—14)



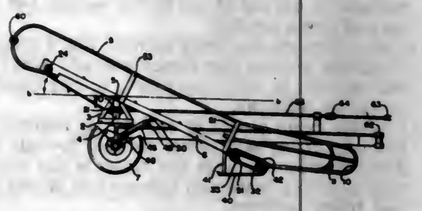
1. In and for a device for feeding cigarettes and similar rod-shaped articles from a supply hopper therefor to a handling station, a chute arrangement adapted to be positioned between said supply hopper and said handling station, the chute arrangement comprising a plurality of plates having flat plane-parallel faces, means mounting said plates at equal distances one from the next with the plane-parallel faces of each plate parallel to those of the others to form first chute portions between parallel faces of adjacent plates, said plane-parallel faces and thus said first chute portions being inclined at equal angles relatively to a vertical plane, each plate at its end remote from said supply hopper having a flat surface parallel to and facing said vertical plane, and a plurality of flat wall members, each wall member extending from a respective one of said flat surfaces in the direction away from said supply hopper, said wall members being parallel to said vertical plane to form second chute portions between adjacent wall members, said second chute portions being parallel to said vertical plane, said first chute portions merging into said second chute portions.

3,127,972
CODE WHEEL
Jacob Rabinow, Bethesda, Md., assignor to Rabinow Engineering Co., Inc., Takoma Park, Md.
Filed July 17, 1961, Ser. No. 124,418
4 Claims. (Cl. 198—1)



1. In a code device which includes a shaft provided with circumferential grooves spaced along the length of said shaft, code wheels mounted on said shaft, at least one of said wheels having a central aperture forming a bearing through which said shaft extends, and means defining a cavity within said wheel, a flat spring member being loosely captive within said cavity and having a loop, sides at the ends of said loop which extend across the edges of said aperture to engage one of said grooves thereby coupling said spring member to the shaft until said wheel is moved axially of said shaft in response to which said spring member loop flexes and said sides climb out of said groove and flex radially outwardly toward the inner reaches of said cavity thereby disengaging from said groove and permitting said wheel to be adjusted to an adjacent groove position on said shaft, said flat spring member having clearance between its outer surfaces and the surfaces of said cavity when said member is engaged with one of said grooves so that the wheel rotates free from said spring member.

3,127,973
BALE LOADER
Joseph Alexander Scott, Turners Station, Ky.
Filed Jan. 31, 1963, Ser. No. 255,403
7 Claims. (Cl. 198—7)



1. A bale loader, adapted to pick up and convey baled materials, which comprises: a mobile frame, an inclined chute conveyor, driving means and lifting means for said inclined chute conveyor in which:

(*a*) said mobile frame contains a transverse beam having a fixed upright frame portion connected with one side of said beam and a tractor hitch frame connected with the other side of said beam, said tractor hitch frame having inner and outer side members meeting at an apex forwardly of said transverse beam and having a tractor hitch secured thereto near said apex;

(*b*) said inclined chute conveyor being pivotably attached intermediate at its ends to said fixed upright frame portion and consisting of a pick up portion, a conveyor portion and an unloading portion, said chute conveyor containing side frame members and an endless chain conveyor;

(*c*) said conveyor portion containing a first sprocket and shaft assembly journaled at the midpoint of said chute, an endless conveyor chain having an upper flight, arranged to travel along the upper surface of said chute and a lower flight arranged to travel under said chute, a series of evenly spaced barbs on said chain, said sprocket of said first sprocket and shaft assembly, contacting the lower flight of said chain and driving same, a second sprocket and shaft assembly journaled at the rear of said chute and a third sprocket and shaft assembly journaled at the front of said chute, said second and third sprockets of said assemblies being idler sprockets and having said chain trained over them so as to contact said lower and upper flights;

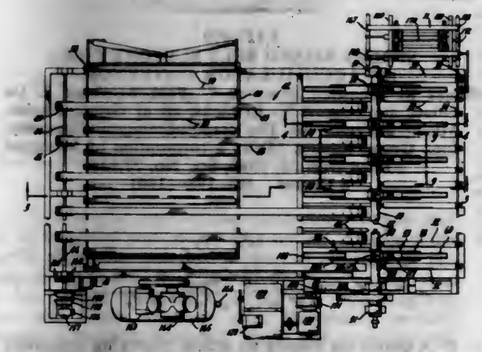
(*d*) said pick up portion containing a fourth sprocket and shaft assembly, means operatively connecting said third sprocket and shaft assembly and said fourth sprocket and shaft assembly, the shaft of said fourth sprocket and shaft assembly containing evenly spaced tongues along its length and around its body, each of said tongues having a base portion and a body portion, said base portion being disposed at about 90° from said fourth shaft and said body portion being turned downwardly opposite to the direction of rotation of said fourth shaft, stripper bars connecting said conveyor portion and said pick up portion and adapted to support baled material, and guiding members on either side of said chute projecting forwardly and outwardly and which are adapted to guide bales onto said pickup portion;

(*e*) said unloading portion containing roller means adapted to disengage bales from the barbs on the chain of said conveyor portion;

(*f*) driving means for driving said first sprocket and shaft assembly; and

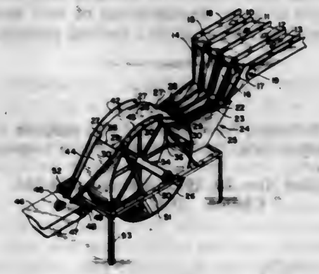
(*g*) lifting means for lifting said chute vertically from an incline to a horizontal position.

3,127,974
GREEN BOARD INVERTER AND TRANSFER MACHINE
Hugh D. Kelley, Enterprise, Kans., assignor to The J. B. Ehrsam & Sons Manufacturing Company, Enterprise, Kans., a corporation of Kansas
Filed Sept. 28, 1961, Ser. No. 141,528
6 Claims. (Cl. 198—31)



5. In a machine of the class described, a receiving conveyor, an inverter operatively associated with said receiving conveyor to accept work pieces successively therefrom, an off conveyor spaced from said inverter, a transfer conveyor interposed between said inverter and said off conveyor to receive work pieces from said inverter and deliver the same to said off conveyor, means for intermittently driving said inverter through successive 180° cycles to invert work pieces and transfer the same from said receiving conveyor to said transfer conveyor, drive means for said transfer conveyor, means independent of such work pieces and moving with said inverter to activate said transfer conveyor drive means each time said inverter deposits a work piece on said transfer conveyor, means independent of said work pieces and moving with said transfer conveyor to deactivate said transfer conveyor drive means after a first such deposit, with the deposited work piece positioned between said inverter and said off conveyor, and means independent of said work pieces and moving with said transfer conveyor means to deactivate said transfer conveyor drive means, after a subsequent such deposit, with all of the work pieces so deposited on said transfer conveyor in operative registry with said off conveyor.

3,127,975
APPARATUS FOR SELECTING AND COMBINING SMALL PARTS OF POULTRY
Everett C. Lemmond, Rte. 3, Somerville, Ala.
Filed Oct. 17, 1962, Ser. No. 231,242
3 Claims. (Cl. 198—32)

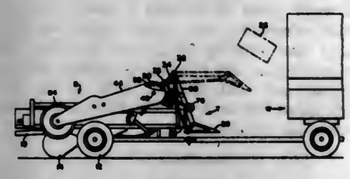


1. Apparatus for transferring individual small chicken parts, one at a time simultaneously, from separate masses of said parts and depositing the individual parts as a group in a common location for further disposition, said apparatus comprising a feed bin having individual compartments each for holding multiple individual items of like character with the bottom of said bin inclined to cause movement in a given direction toward an open discharge side, a wheel having a rim in proximity with said open side and with openings through said rim in communication through said open discharge side with the interior of said compartments, a housing on the inner side of said rim over said openings, a tubular shaft, a hub on said shaft, tubular spokes connecting said hub and said housing and in communication with said bin a valve-forming member between said axle and hub and having an opening extending from its horizontal to its verticle portions whereby suction may be exerted therethrough to pick up articles in said feed bin and carry them upwardly to a vertical position from which they will travel downwardly by gravity to a common area, said wheel having a series of such spokes for continuously picking up and discharging articles, and guard members on each side of the rim of the wheel along the area of gravitational travel.

3,127,976
BALE-HANDLING MECHANISM
Harold E. De Buhr, Ottumwa, Iowa, assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Feb. 9, 1960, Ser. No. 7,718
6 Claims. (Cl. 198—128)

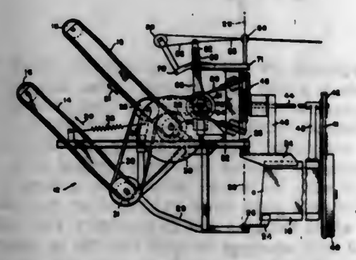
1. For a baler having a discharge portion over which bales are successively discharged, a bale thrower, compris-

ing: support means; means for connecting the support means to the baler adjacent to said discharge portion; a bale receiver initially disposed in a loading position adjacent to said portion and at a level therebelow so that a bale discharged over said portion is caused to descend to said receiver; means mounting the receiver on the support means for accelerative movement from said loading position to an unloading position and back to said loading position for throwing the received bale from adjacent to said



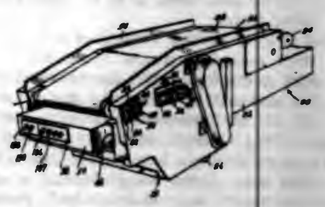
portion and for returning to said loading position for a succeeding bale; drive mechanism connected to the receiver and de-energized when the receiver is in said loading position; and bale-sensing and control means operative on a bale moved over said discharge portion and connected to the drive mechanism and operative in response to descent of a bale onto said receiver to energize said mechanism and operative to incur de-energizing of said mechanism when the receiver returns to said loading position.

3,127,977
CONVEYOR
James H. Hollyday, New Holland, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Nov. 28, 1962, Ser. No. 240,564
7 Claims. (Cl. 198—128)



1. A bale thrower mountable on the bale case of a baler as an extension thereof to receive discharged bales and traject them from the baler comprising, in combination, a frame, bale trajecting means carried on said frame, a lever extending upwardly relative to said frame and having a lower end and an upper end, split sheave means rotatably carried on said lever between said ends, means connecting said split sheave means to said bale trajecting means, means supporting said lever lower end on said frame for pivotal movement about an axis transverse to said bale case, a rack extending perpendicular to said transverse axis adjacent said lever upper end and having a series of teeth thereon, a dog selectively engageable with said teeth, means supporting said dog on said lever upper end for movement into and out of engagement with said rack teeth to lock the lever to the rack and in a selected pivotal position, spring means interposed between said lever and said dog biasing the dog toward said teeth, a control member connected to said dog and engaging said lever for rockable movement to each side of a neutral position, the engagement location of said control member and said lever changing when the control member is rocked, said dog engaging said teeth when said control member is in said neutral position and being withdrawn therefrom against said spring means when the control member is rocked to either side of the neutral position, and means for rocking said control member and pivoting said lever.

3,127,978
TELESCOPING LOADING CONVEYOR
Anthony J. Zuercher, Easton, Pa., assignor to T. W. & C. B. Sheridan Co., New York, N.Y., a corporation of New York
Filed June 27, 1960, Ser. No. 39,054
8 Claims. (Cl. 198—139)



1. A loading conveyor device having side frame members and cross members joining said side frame members, support legs for said frame members carried thereon at a location adjacent one end of said frame members, the other end of said frame members being pivotally mounted on the frame of a separate conveyor system, and operator controlled elevating means for raising and lowering said side frame members; at least one telescoping section means supported by said side frame members and operator controlled means for extending and retracting said telescoping section means to position the discharge end thereof at varying distances from the outer end of said frame members; continuous belt means carried on belt support rollers journalled in both said side members and said telescoping section means for providing a conveying surface from the end of said device adjacent said separate conveyor system to the discharge end of said device, driving means for said belt means and operator controlled means for starting and stopping the movement of said continuous belt means, said elevating control means, extending and retracting means and said starting and stopping means comprising individual switch means, all of which are carried on the discharge end of said telescoping section means.

3,127,979
SPRING BIASED BELT SUPPORT FOR AN ACCUMULATOR CONVEYOR
James R. Sebastian, Norman C. Peel, Maynard J. De Good, and August V. Redlicha, all of Grand Rapids, Mich., assignors to The Rapids-Standard Company, Inc., Grand Rapids, Mich., a corporation of Michigan
Filed Dec. 22, 1960, Ser. No. 77,622
8 Claims. (Cl. 198—160)



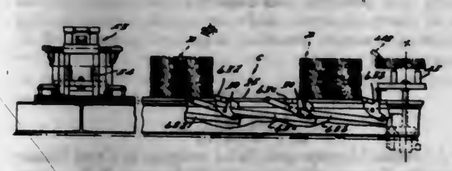
1. A device for biasing an article conveying propelling member into frictional engagement with articles received thereover and principally supported by other conveyor structure comprising; an endless driven propelling member; a pressure wheel assembly and support wheel assembly movably suspended from said other conveyor structure, connector means joining said assemblies; said assemblies having wheels engaging said article conveying propelling member; stop means; link means; resilient tensioning means connected to one of said assemblies and to said other conveyor structure, biasing said assemblies against said stop means, a trigger wheel unit movably suspended from said other conveyor structure and being connected to one of said assemblies by said link means, the position of said trigger wheel unit being determined solely by said link means irrespective of the tension of said resilient tensioning means.

3,127,980
CHAIN LINK CONVEYOR BELT
William E. Lanham, Decatur, Ga., assignor to Apache Belt Company, Inc., Atlanta, Ga., a corporation of Georgia
Filed May 11, 1961, Ser. No. 109,291
2 Claims. (Cl. 198—195)



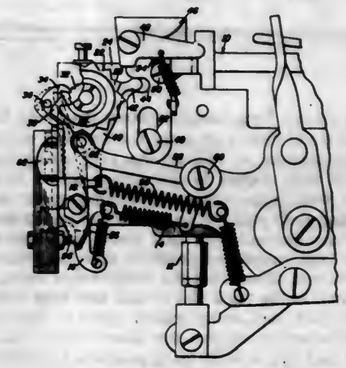
1. A conveyor belt comprising a plurality of spaced parallel rods each having a single link at each end for articulate connection with corresponding links on adjacent rods whereby articulation occurs between links only, each of said single links at each end of each rod comprising a sleeve surrounding the rod with a press fit, spaced arms projecting from one side of said sleeve with free ends offset a distance equal to the thickness thereof, cylindrical bosses projecting outwardly from the sides of the arms as extensions of the sleeve, and the offset ends of the arms having holes through which the bosses of an adjacent link project with a sliding fit whereby each rod and the links at its ends move as a unit relative to an adjacent rod and its links with the links on one rod rocking on the links of the adjacent rod.

3,127,981
RECIPROCATING PUSHER-TYPE CONVEYOR
Frederick P. Sharpe, Dearborn, Mich., assignor to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware
Filed May 2, 1960, Ser. No. 26,052
7 Claims. (Cl. 198—221)



1. In a transfer mechanism, a supporting structure having an elongated work supporting surface, a reciprocable shuttle associated with said supporting structure, a plurality of pusher members pivotally mounted on said shuttle for moving work supported on said supporting surface, said pusher members being individually movable between a position projecting above and a position disposed entirely below said supporting surface, at least one lever pivoted on said shuttle provided with means projecting above the level of said supporting surface for actuation of said lever on contact with work in a predetermined position on said supporting surface, at least one of said pusher members having means engageable with said lever whereby when said lever is actuated by contact with the work in the predetermined position, said pusher member will be moved to its position beneath said work-supporting surface.

3,127,982
TELETYPESETTER PERFORATOR ATTACHMENT
Olen Bearden, 1501 W. 27th, Pine Bluff, Ark.
Filed Mar. 15, 1962, Ser. No. 179,969
4 Claims. (Cl. 199—18)



1. In combination, a Teletypesetter perforator of the type including a rotatable toothed drive wheel assembly for driving engagement with the tape to be perforated and provided with ratchet teeth for engagement by one end of an elongated tape feed pawl pivotally supported at its other end portion from a reciprocating portion of the drive mechanism of said perforator for intermittently advancing said wheel assembly one position each time said reciprocating portion completes a reciprocating cycle, said perforator also including detent means yieldably retaining said wheel in intermittently advanced positions of rotation and a cam and single backspace pawl assembly for sequentially camming said feed pawl out of engagement with said ratchet teeth and backing said wheel assembly one position, said feed pawl including a cam surface inclined relative to the direction along which said reciprocating portion is reciprocated and disposed in a plane generally paralleling the axis of rotation of said feed pawl, a back spacing facilitating attachment, said attachment comprising a mounting bracket, an abutment carried by said bracket, means securing said bracket on said perforator with said abutment in alignment with the reciprocating movement of said cam surface, said cam surface engaging said abutment upon said completion of each of said reciprocating cycles of said reciprocating portion to cam said feed pawl out of engagement with said ratchet teeth after each advancement of said wheel assembly whereby said wheel assembly may be manually backed a plurality of positions at one time while said feed pawl remains out of engagement with said ratchet teeth.

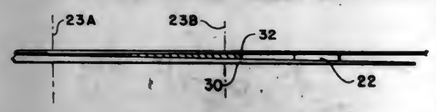
3,127,983
SELF CLEANING SPACEBAND FOR TYPE CASTING MACHINES
Charles D. Smith, 604 Ford Ave., Bremerton, Wash., and Carl J. Anderson, Olalla, Wash.; said Anderson assignor to said Smith
Filed Oct. 31, 1961, Ser. No. 148,986
5 Claims. (Cl. 199—67)

1. A self cleaning spaceband for hot metal type setting machines, comprising:

(1) a first long wedge having an outer surface and an inner surface, said inner surface being tapered with

respect to said outer surface and said wedge having a beveled edge guideway extending substantially the length of said wedge;

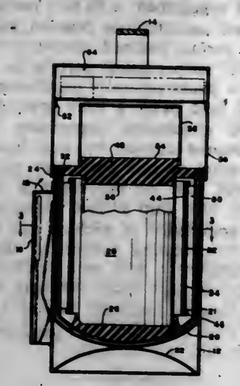
(2) a wedge-shaped short sleeve member having a beveled edge guide mounted for longitudinal reciprocation within said guideway, said sleeve member having oppositely directed outstanding supporting lugs and said sleeve having opposed tapered surfaces;



(3) a second long wedge, thinner than said first long wedge and having an outer and an inner surface, said inner surface of said second long wedge being tapered with respect to said outer surface and facing said inner surface of said first long wedge in sliding contact with said sleeve, said second long wedge being unconnected with said sleeve and free of said first long wedge except at the thick end thereof, the thick end of said second long wedge being fixedly secured to the thick end of said first long wedge with said thick ends being spaced apart at their point of securement to receive the lower end of said sleeve and said long wedges being positioned by said securement to slant toward one another; and

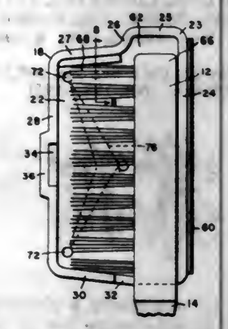
(4) the tapered surfaces of said sleeve being integrated with the tapers of said long wedges so that said outer surfaces of said long wedges will be parallel throughout that portion of their length contacted by said sleeve despite their lack of parallelity when said sleeve is positioned at a higher level.

3,127,984
LUNCH KIT
Arthur D. Hertzog, 116 N. 11th St., Allentown, Pa.
Filed June 7, 1961, Ser. No. 115,375
5 Claims. (Cl. 206—4)



1. A lunch kit comprising a housing having an open end, a double-walled insulation unit open at one end within said housing, said open ends being adjacent one another, a vial open at one end disposed within said unit, spacing means for spacing said vial radially inwardly from said unit so as to provide an annular space between said vial and said insulation unit, said spacing means including a stopper within said housing extending across said open end of said insulation unit, a seal between a peripheral portion of said stopper and said open ends of said insulation unit, a central portion of said stopper being coupled and sealed to said vial for simultaneous removal of said stopper and vial from said housing, and a cap secured across the open end of said housing enveloping said stopper.

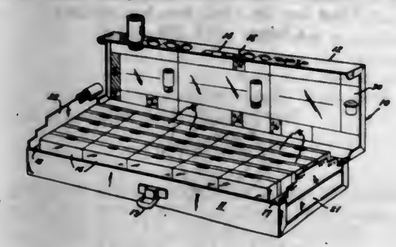
3,127,985
PROTECTIVE CASE FOR TOOTHBRUSHES
Wade E. Scott, Box 323, Cordele, Ga.
Filed Oct. 31, 1961, Ser. No. 148,893
1 Claim. (Cl. 206—15.1)



A protective case for the head portion of a tooth brush of the type having a handle portion and a brush head portion, said case comprising two separable hinged half sections, each half section comprising top, bottom, side and end members, each of said side and end members having vertically walled lower portions and inwardly tapering upper portions, the lower vertical portions of the ends closest to the handle portion having aligned notches formed therein for the reception of the handle portion, the lower vertical portions of the ends remote from the handle being offset outwardly from the upper vertical portion to form a pocket for the end of the brush head, an angular lug on the upper end portion of one hinged member above one of said offset lower portions, adapted to fit and bear against the inside wall of its adjacent inwardly tapered end portion when said case is closed, whereby the bristles on the end of the brush head adjacent said lug will be cammed slightly inwardly, moving the brush head slightly longitudinally to cause the bristles on the other end of said head to contact their adjacent tapering upper end portions, the upper inwardly tapering side portions also engaging the bristles on the sides of the brush when said case is closed, thus forcing the bristles inwardly from all sides and returning them to their normal position.

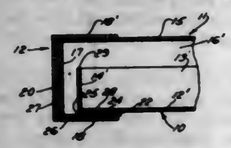
3,127,986
KIT MEANS
John J. Hulka, Massapequa, N.Y., assignor to Crest Manufacturing Company, Incorporated, Syosset, N.Y., a corporation of New York
Filed Apr. 30, 1962, Ser. No. 191,035
5 Claims. (Cl. 206—16)

1. A device of the class described comprising a case including an openable cover, a plurality of receptacles disposed within said case, and gauge means formed integrally with said case; said gauge means comprising a first portion and a second portion, said first portion constructed for determining a first parameter and said second portion constructed for determining a second parameter differing in character from said first parameter; said device further comprising a means carried by said case for converting determinations of said first and said second parameters into information referable to a particular one of said receptacles; said first portion constituting a diameter gauge and said second portion constituting a thread gauge; said openable cover including



a depending edge, said diameter gauge comprising a series of graduated apertures in said edge.

3,127,987
DISPLAY BOX
Lewis Douglas Young, Providence, R.I., assignor to Douglas Young, Inc., a corporation of Rhode Island
Filed Sept. 21, 1962, Ser. No. 225,196
3 Claims. (Cl. 206—45.2)



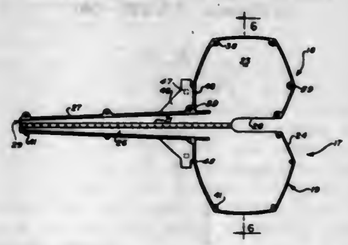
1. In a box, a body member having a bottom wall and upstanding opposite pairs of side wall arranged in rectangular relation, a cover member having a top wall and depending opposite pairs of side walls arranged in rectangular relation and of a size so that the side walls of the cover member telescope over the side walls of the body member, and a supporting member having opposite pairs of walls closed at one of their edges by a bridging wall and with their open edges telescoping both body and cover members with its bridging wall substantially coextensive with one side wall of the cover member and contacting the same with the opposite pairs of walls of the support member extending a fraction of the extent of the top wall of the cover member in one direction and the full extent in a right angular direction, a hinge secured to the bottom wall, thence doubled back on itself and extending along one of the opposite pairs of walls of the support member and thence between the bridging wall and side wall of the cover member and there held in position by a snug friction fit between the telescoped support and cover members.

3,127,988
DISPLAY BOX
Lewis Douglas Young, Providence, R.I., assignor to Douglas Young, Inc., a corporation of Rhode Island
Filed Sept. 21, 1962, Ser. No. 225,197
4 Claims. (Cl. 206—45.2)



1. In a box, a body member having a bottom wall and upstanding pairs of opposite side walls arranged in rectangular relation, a cover member having a top wall and depending pairs of opposite side walls arranged in rectangular relation and of a size so that the side walls of the cover member telescope over the side walls of the body member, and a hinge of relatively stiff cardboard secured to the bottom wall in face to face relation and scored to provide a hinge line, thence doubled back on itself along said line and projecting beyond said body member when in closed position with a first portion extending at right angles to the doubled back portion and along one of the side walls of the cover member and secured in position in face to face relation with said side wall, whereby the doubled back portion serves as a support for the body to incline it to a horizontally supported surface when the cover member is moved to a position vertical to said supporting surface.

3,127,989
COILED TAPE MAGAZINE FOR EMBOSSING MACHINES AND THE LIKE
Daisy Travaglio, Berkeley, Calif., assignor to Dymo Industries, Inc., Berkeley, Calif., a corporation of California
Filed Mar. 6, 1961, Ser. No. 93,669
7 Claims. (Cl. 206—52)

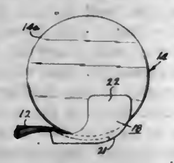


1. A magazine for containing a coil of tape or the like comprising a pair of substantially symmetrical sections each having a generally planar base and a normally related peripheral flange defining a tape coil receiving cavity, flexible means formed integrally with and connecting said sections at adjacent peripheral portions thereof along their general line of symmetry, said means being resilient whereby said sections may be folded into a closed position wherein said cavities define a substantially enclosed chamber and the ends of said flanges on the respective sections are in opposed abutting relation, said flanges adjacent said means being spaced to define a generally tangential tape discharge opening, said bases having openings therein extending from adjacent the flanges to a medial portion of the base and defining an access opening to tape within said cavity, means securing said sections in said closed position, means on at least one of said sections adapted to engage spaced portions of the outer convolution of a tape coil and maintain the same in spaced relation to the major portion of the inner peripheral surfaces of said flanges, and detents extending outwardly from opposed base portions adjacent said access openings.

3,127,990
PACKAGE FOR STRAND MATERIAL
Frederick W. Krupp, Princeton, N.J., assignor to Gudebrod Brothers Silk Co., Inc., Pottstown, Pa., a corporation of Pennsylvania
Filed June 8, 1962, Ser. No. 201,103
14 Claims. (Cl. 206—52)

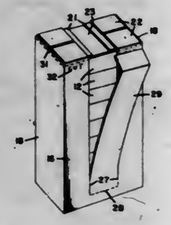
1. A strand material package comprising, in combination, a container having means defining an aperture therein, an insert in said container having at least one passageway to receive a plurality of strands extending

therethrough whereby portions of each of the strands are disposed on one side of said insert and portions of each of the strands are disposed on the opposite side of said insert, said passageway affording passage of said strands



through said aperture, through said passageway and along the inner surface of the insert, and a core element confronting the inner surface of said insert to engage the strands thereon to hold the strands in place as one of said strands is removed from the insert through the aperture.

3,127,991
COMBINED SHIPPING CONTAINER AND ORGANIZER FOR FROZEN FOOD PACKAGES
Edward N. Burnett, Fremont, Mich., assignor to Gerber Products Company, Fremont, Mich.
Filed Nov. 23, 1960, Ser. No. 71,224
3 Claims. (Cl. 206—56)



1. A container for a plurality of smaller containers and an organizer for point-of-sale display of said smaller containers within said container comprising a rectangular sleeve having front, back and a pair of side panels and means for securing meeting edges of two said panels together to form a longitudinal joint therefor, a top inner end flaps at the top end of said sleeve hingedly connected to said side panels, top outer end flaps at the top end of said sleeve hingedly connected to said front and back panels and overlying said top inner end flaps, the inner edges of said top outer end flaps meeting along a transverse central parting line across said top end, means closing off the bottom end of said sleeve, each said top outer flap formed with spaced first score lines extending from said parting line to the corner where said outer flap joins the contiguous sleeve panel, each said front and back panel formed with spaced second score lines comprising continuations of said first score lines, said second score lines extending down toward said bottom of said sleeve but terminating a distance from the bottom of said sleeve, and third score lines interconnecting the bottom edges of said second score lines, said third score lines parallel to but spaced from said bottom; whereby, upon pulling each said top outer flap between said first score lines at said parting line a tear strip is formed which may be severed from said container across the top and down to said third score line, said front, back and side panels also being severable along the extreme top edges thereof to remove said top inner and outer flaps, the remainder of said container thereupon comprising an organizer having an open top and an opening equal to the width of said tear strips down the front and back panels to the level of said third score line to provide access to the smaller containers within said container.

3,127,992
SUTURE PACKAGE
Cyrus F. Horine, Medical Arts Bldg., Baltimore 1, Md.
Filed Jan. 19, 1962, Ser. No. 167,364
2 Claims. (Cl. 206—63.3)



2. A sterilized coiled suture and package comprising in combination:

(*a*) a single pliable sheet folded along a line forming two flat adjacent side portions of substantially uniform size in which the flat sides are in substantially parallel planes, and having means holding the edges of said folded sheet opposite the folded edge in adjacent relationship;

(*b*) each flat side portion having a circular recess, the recesses in one side portion being opposite the recess in the other side portion, and each recess extending toward the outside of the respective flat side in which each is formed for receiving the coiled suture therebetween;

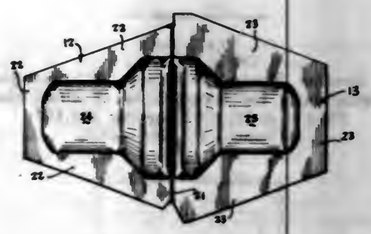
(*c*) each flat side having a slit extending inwardly from its outer edge opposite the fold line from spaced adjacent points, the slits extending into the recessed area in the respective side portions containing the suture having opposite ends of the suture retained, one in each of the two slits formed in the two side portions;

(*d*) said holding means comprising an adhesive being at the edge of the package adjacent the outer end of the slits and positioned outside the area lying between the two slits;

(*e*) an hermetically sealed transparent closure envelope extending about the suture and package for maintaining the same in a sanitary and sterilized state;

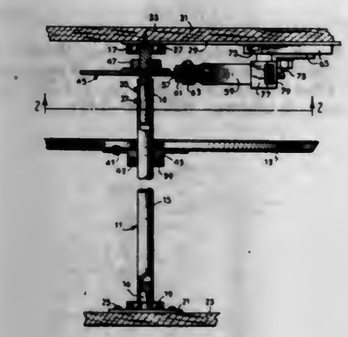
whereby, the suture may be removed from the suture package after its removal from the envelope by extending the suture in a straight and taut line allowing the suture to move through the slits and out through the outer ends thereof.

3,127,993
DOUBLE BUBBLE SINGLE CARD PACKAGE
Cornelius M. Phipps, 511 N. Stoddard, Wheaton, Ill.
Filed May 3, 1962, Ser. No. 192,236
13 Claims. (Cl. 206—78)



1. A sales display package for a unit of product, said package comprising: a display card having an opening therethrough; and a unit holder comprising a first transparent plastic sheet across said opening, said first sheet having flanges affixed to the portion of one face of the card immediately adjacent said opening, a second transparent plastic sheet across said first sheet and having flanges larger than the flanges of the first sheet and affixed to the flanges of the first sheet and to portions of said one face of the card surrounding the portions to which the flanges of the first sheet are affixed, at said opening said two sheets being spaced from each other to define a space for receiving said unit.

3,127,994
ROTARY SHELF ASSEMBLY MECHANISM
Homer E. Campbell, 2921 Broadway, Fort Wayne, Ind.
Filed Nov. 19, 1962, Ser. No. 238,454
5 Claims. (Cl. 211—144)



1. A rotary shelf assembly comprising, in combination:

(*a*) a vertical shaft mounted for rotation about its central axis,

(*b*) at least one substantially circular shelf mounted on said shaft,

(*c*) a cam mounted on said shaft substantially parallel to said shelf,

(*d*) said cam having a shallow circular peripheral notch and having a gradual rise portion disposed on each side of said cam,

(*e*) said cam having a rest portion connecting the highest points of said rise portions and merging therewith,

(*f*) a follower roller for said cam,

(*g*) a leaf spring disposed substantially in the plane of the cam and arched to follow generally the periphery of the cam,

(*h*) means for rotatably mounting said roller on one end of said spring with its axis substantially parallel to that of the shaft,

(*i*) a holder for the other end of said spring,

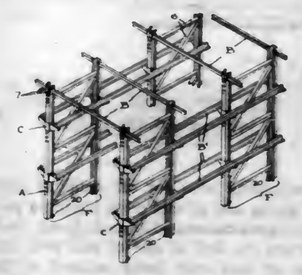
(*j*) means mounting said holder for adjustment in a substantially radial path toward and away from said cam,

(*k*) said holder having means defining a passageway through which the other end of the spring is passed, said passageway being substantially perpendicular to said radial path,

(*l*) said holder having means for securing said spring in the passageway, whereby

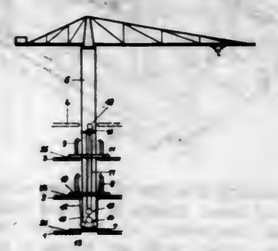
(*m*) the adjustment of said holder radially toward and away from said cam and the adjustment of the spring in the passageway serving jointly to regulate the pressure of said follower roller against the cam notch to provide a firm stop and to equalize the pressure on the two rise portions of the cam so that the cam will rotate with equal ease in either direction.

3,127,995
ADJUSTABLE PALLET RACK
Joseph J. Mosinski, Garfield Heights, Ohio, assignor to Republic Steel Corporation, Cleveland, Ohio, a corporation of New Jersey
Filed Aug. 28, 1961, Ser. No. 134,350
3 Claims. (Cl. 211—148)



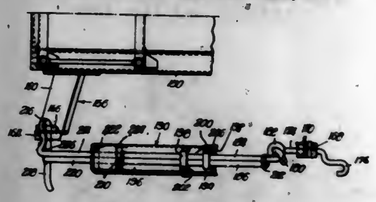
1. A pallet rack assembly comprising in combination, a plurality of vertically disposed channel shaped columns including a web and spaced parallel side walls extending therefrom, the free end of each of said side walls terminating in an outwardly turned flange, said flanges having a plurality of vertically spaced slots, said web having a plurality of vertically spaced tapered openings, brace members connecting an opposed pair of said columns to form a frame section, at least one pair of longitudinal spacer elements extending between a pair of frame sections, means at the ends of said spacer elements cooperating with both said vertically spaced slots and said vertically spaced tapered openings to secure said spacer elements to aligned columns of opposed frame sections, and means connecting a series of the thus connected pairs of frame sections to form an aisleway with pallet supporting surfaces on opposite sides thereof.

3,127,996
CLIMBING CRANES
Friedrich Wilhelm Schwing, 424 Dorstener Strasse, Wanne-Eickel, Germany
Filed Oct. 10, 1960, Ser. No. 61,530
2 Claims. (Cl. 212—57)



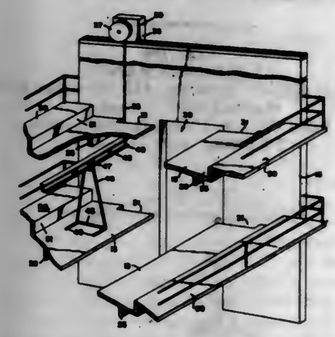
1. In combination a climbing crane assembly, vertically spaced load supporting platforms, said crane assembly adapted for vertical movement through openings in the vertically spaced load supporting platforms; support means provided on said supporting platforms and adjacent the openings therein; and a block and pulley system, including cable means, interconnecting said climbing crane assembly and said support means for effecting vertical movement of said climbing crane assembly through the apertures in said load supporting platforms; said support means including a base member, a pair of spaced apart vertically extending arms, and means at the extremities of said arms for detachably securing said cable means.

3,127,997
COUPLER OPERATING DEVICE
Parker John Lahey, Chicago, Ill., assignor to Stanray Corporation, Chicago, Ill., a corporation of Delaware
Filed Jan. 18, 1963, Ser. No. 253,025
7 Claims. (Cl. 213—166)



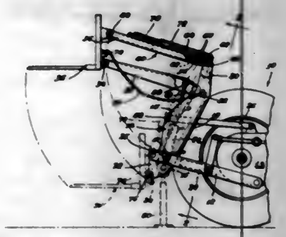
1. An uncoupling lever for car couplers comprising a plurality of parts, one of said parts having a pair of elongated parallel rods connected by a U-bend, and a handle depending from the end of one of said rods and the end of the other of said rods being secured to the handle, another of said parts having a hook at one end for attachment to the lock lifter of a car coupler, an intermediate part having a flattened eye at one end slidably and non-rotatably engaging the parallel rods, and at the other end slidably and non-rotatably receiving the other end of said another part, whereby the intermediate part may slide and angle on said rods and the said another part may slide on the intermediate part to compensate for relative lateral and longitudinal movements of car body and coupler, and be rotated thereby to operate the coupler.

3,127,998
ELEVATOR AND TRAILER SUPPORT STRUCTURE
Walter K. Zell, 1472 Filbert St., San Francisco, Calif.
Filed Oct. 19, 1961, Ser. No. 146,300
5 Claims. (Cl. 214—16.1)



1. In a building structure of the type adapted to carry a plurality of house trailers in stacked relationship, the improvement comprising: an enclosure including two spaced apart, vertical walls and having at least one vertical opening at right angles thereto extending substantially from one of said vertical walls to said other vertical wall, a plurality of trailer support platforms mounted on said walls in superimposed relationship and extending horizontally therebetween, each platform having a trailer supporting area and a non-trailer supporting area, said trailer supporting area being at least as wide as the trailer to be supported and being attached to the vertical wall at its ends from substantially mid-point outwardly and being spaced from the vertical walls from the mid-point inwardly to define a cable passageway thereon, said non-trailer supporting area extending outwardly from said trailer supporting area toward said vertical opening, a vertical shaftway positioned on the side of said trailer supporting area opposite said vertical opening, elevator means mounted on the top of each wall, cables depending adjacent each of said walls operated by said elevator means, trailer transfer means connecting the bottom ends of said cables to support trailers, said elevator means being positionable along said support wall to a first position wherein the trailer transfer means is located in the shaftway to allow the trailers to be elevated to positions in alignment with each of said platforms and movable to a second position with the cables aligned with substantially the mid-point of the trailer support areas of said platforms wherein the trailer transfer means is located over one of said platforms, said cables being aligned to depend through the space between the vertical wall and the horizontal platform when the elevator means is moved to the second position.

3,127,999
REAR END LOADER
Frank T. Gostomski, Renton, Wash. (3019 54th Ave. E., Tacoma, Wash.)
Filed May 15, 1961, Ser. No. 110,236
2 Claims. (Cl. 214—140)



1. In a rear end loader arrangement for a tractor having spaced rearwardly extending hydraulically actuatable lift arm; spaced frame plates pivoted at their lower ends to respective lift arms; a lower support member interconnecting said plates; a tie plate interconnecting said plates at the upper ends thereof; a support link pivoted to said tractor and to said frame plates at a medial portion thereof; a boom pivot pin interconnecting said plates toward the upper ends thereof; a boom supported at its inner end to said pin substantially centrally of said plates; hydraulic cylinder means pivotably connected to said lower support member and to said boom for pivoting the latter relative to the frame plates; an upper pivot pin interconnecting said plates; a rod connected to said upper pin for pivotal movement therewith; a tube arranged to telescope over said rod; spring means secured to said rod and tube respectively for urging said rod and tube into telescoped position; and releasable means for locking said rod and tube in said telescoped position.

3,128,000
CLOSURE DEVICE FOR LIQUID CONTAINERS
Walter Haberle, 10 Gronauer-Weg, Bad Vilbel, Hesse, Germany
Filed Mar. 22, 1962, Ser. No. 181,630
Claims priority, application Germany Dec. 2, 1958
20 Claims. (Cl. 215—78)

1. A closure device for containers for liquids, particularly for bottles for carbonated beverages with a neck, comprising a closure housing mounted on the bottle neck, a sleeve-like supporting member inserted in said closure housing, a hose piece surrounded by said supporting member and with a reinforcement at each end supported on the end faces of said supporting member and respectively sealingly engaged by one of said end faces with the open end of the bottle neck and by the other of said end faces with the outer end of said closure housing, a spring urged clamping member for compressing said hose piece to close passage through said hose piece serving for filling



and emptying the bottle, and an actuating member for actuating said clamping member.

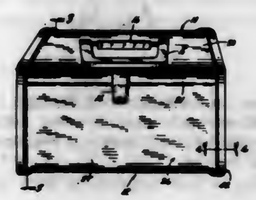
3,128,001
INTEGRAL END COURSE FOR MULTILAYER PRESSURE VESSELS
Ewald F. Schmitz, Milwaukee, Wis., assignor, by mesne assignments, to Chicago Bridge & Iron Company, Oak Brook, Ill., a corporation of Illinois
Filed Dec. 22, 1961, Ser. No. 161,649
3 Claims. (Cl. 220—3)



2. In a "Multilayer" pressure vessel, a cylindrical wall section composed of a series of superimposed concentric cylindrical layers, said wall section having an annular end surface defined by the ends of said concentric layers, a weld deposit disposed continuously over the annular end surface and connecting the ends of the individual layers together, said end surface and said weld deposit having a plurality of bolt-receiving passages therein disposed axially parallel to the longitudinal axis of said vessel, said bolt-receiving passages being internally threaded and having a pressure flank angle less than 7°, an end closure disposed directly against said weld deposit and having a series of openings located in alignment with said passages, and a plurality of bolts disposed within said openings and threaded into said passages, said bolts being externally threaded and having a pressure flank angle to complement that of said passages.

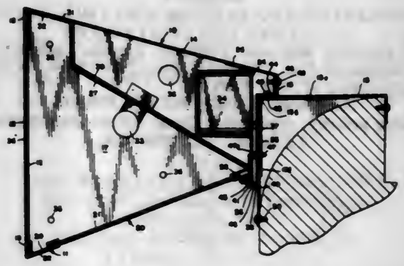
3,128,002
CARRYING CASE
Melvin L. Buchanan, Columbus, Ind., assignor to Arvin Industries, Inc., Columbus, Ind., a corporation of Indiana
Filed Feb. 12, 1962, Ser. No. 172,701
5 Claims. (Cl. 220—4)

1. A carrying case, comprising
(*a*) an upper and lower shell releasably locked together,
(*b*) said upper shell having a pair of downwardly extending end walls rigidly connected to a top wall having downwardly projecting front and rear portions terminating coplanar with the lower edges of said end walls and having its lateral edges projecting outwardly beyond said end walls,
(*c*) said bottom shell having a U-shaped wrap forming front and rear walls interconnected by a bottom wall,



(*d*) a pair of end panels having outwardly projecting flanges abutting the inner faces of the wrap end margins, and
(*e*) a pair of generally rectangular channeled frames rigidly mounted on said end panel flanges and wrap end margins,
(*f*) said end panels and frames projecting above said wrap with the upper faces of said frame projecting above the plane of said upper shell top wall and said lateral edges of the upper shell being interposed between said end panels when the case is in closed position.

3,128,003
LIGHTING FIXTURE INSTALLATION
Samuel J. Zegel, Chicago, Ill., assignor to Compco Corporation, Chicago, Ill., a corporation of Illinois
Filed May 15, 1962, Ser. No. 194,809
4 Claims. (Cl. 220—18)

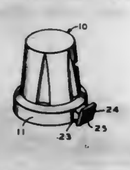


1. A lighting fixture installation, comprising a supporting structure, an elongated casing having a generally flat rear wall, said rear wall extending beyond said casing transversely thereof to provide a lower mounting flange, said casing having a hook-shaped portion extending rearwardly transversely beyond said flat wall to provide an upper mounting flange, and an elongated mounting bracket secured to said supporting structure and said casing, said bracket having a trough-like portion along one longitudinal edge receiving said lower mounting flange of said casing, and a rigid flat portion along its other edge standing free of said supporting structure, said flat portion being positioned between said casing and said hook-shaped portion.

3,128,004
SELF-LIFTING LOCKING CAP FOR AEROSOL CONTAINERS AND THE LIKE

Jack W. Soffer, St. Louis, Mo., assignor, by mesne assignments, to The Clayton Corporation of Delaware, St. Louis, Mo., a corporation of Delaware

Filed Apr. 12, 1962, Ser. No. 186,975
7 Claims. (Cl. 220—27)

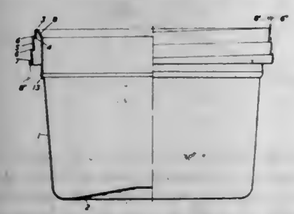


1. For use on a container of the type having an annular lip undercut on its radially-outer side,
a cap formed of plastic material characterized by toughness in torsion,
and having a skirt terminating in a continuous lower rim,
the skirt having a locking tooth formed as a portion of and projecting radially inward from the rim, whereby to engage such undercut,
a camming portion on the radially-inner surface of the skirt above the tooth portion,
a lever having the base portion form integral with and projecting outward from the outer surface of the skirt in registration with the tooth portion and camming portion,
the skirt having a line perforated therethrough and interrupted by a fracturable skirt portion, said line extending over and downward alongside the outer surface of the skirt the tooth and camming portions and the lever base portion,
said line having lower ends spaced above the rim on both sides of the tooth,
whereby on fracture of said fracturable portion an aperture is formed into which the lever base is rotated by twisting the parts of the rim below the lower ends of the perforated line.

3,128,005
THIN-WALLED CONTAINERS AND THIN-WALLED CLOSURES FOR CONTAINERS

John Gerrard Sherlock, Feltham, England, assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed Aug. 4, 1961, Ser. No. 129,318
Claims priority, application Great Britain Aug. 5, 1960
5 Claims. (Cl. 220—39)

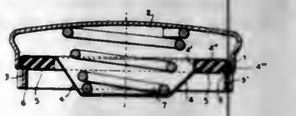


1. A thin-walled container means made of resilient plastic sheet material, including a thin-walled tubular part having a screwthread of "reverse buttress" type formed thereon by deformation of the material without substantial change in its thickness, the tubular part on which the screwthread is formed being of mean tapered form and with the narrow flank of the reverse buttress thread facing towards the smaller end of the tubular part, while the angle of the mean taper is such in relation to the axial length of the wider flank of the reverse buttress thread, the angle which this wider flank makes with the axis of the tubular part and the mean taper of such tubular part that, in cross-sections containing the axis of the tubular part, whereas the wider flank of the thread is inclined at a small angle to the said axis in one sense, the line representing the mean taper on the tubular part is inclined at a slightly larger angle to the said axis in the opposite sense and so that, as regards any two adjacent convolutions of the thread, the crown of the convolution lying nearer the smaller end of the tubular part lies nearer to said axis than the root of the convolution lying nearer the larger end of the tubular part.

3,128,006
PLUG, PARTICULARLY FOR GASOLINE TANKS AND OIL PANS IN MOTORCARS

Paul Fernand Rousselet, 1 Place de la Porte Molitor, Paris 16, France

Filed May 14, 1962, Ser. No. 194,238
Claims priority, application France May 15, 1961
3 Claims. (Cl. 220—40)

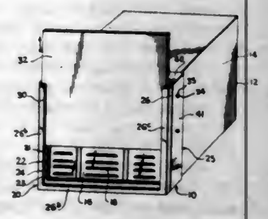


1. A closure for gasoline tanks and the like having a projecting spout comprising a rigid cylindrical cap having a cylindrical side wall, a freely movable disk located inside said cap, a spring located between said disk and said cap, spaced claws provided on the periphery of said disk, a ring of elastically distortable material fixed against the lower face of said disk adjacent the periphery thereof by means of said claws, and spaced projections provided inside said cylindrical side wall of said cap near its lower end serving simultaneously as locking means for said closure on said spout and as abutments to maintain said disk and said ring in said cap.

3,128,007
EXTERNAL COVER FOR AIR CONDITIONER UNITS

Israel Kops, 1025 E. 55th St., Brooklyn, N.Y.

Filed Aug. 31, 1960, Ser. No. 53,146
1 Claim. (Cl. 220—41)

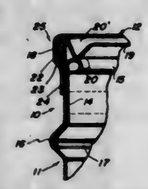


A cover for a rectangular shaped air conditioner unit having a front wall with louvers therein, said cover comprising a sleeve around the front wall, said sleeve constituted by top, side and bottom walls and a bottom front wall, a frame secured to the side and bottom front walls, said frame constituted by channel-shaped side and front portion, the channels in said portions communicating with each other, the side channels being open at the top, and a solid panel slidably and removably mounted in said channels through the open top ends of the channels for covering and protecting the louvers in the front wall of the conditioner unit.

3,128,008
PLASTIC COVER CRIMPED TO FLANGED METAL BODY

John Henchert, River Forest, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed Oct. 14, 1959, Ser. No. 846,318
9 Claims. (Cl. 220—54)

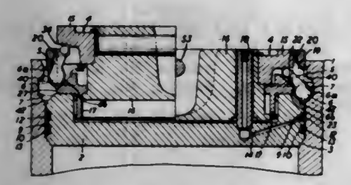


1. A container comprising a metal body and a plastic cover, and a hooked seam connecting said plastic cover to said metal body, said hooked seam including a reversely bent downwardly turned flange at one end of said metal body, said flange being continuous and spaced from an adjacent portion of said metal body, said plastic cover having a flange portion extending below said metal body flange and extending upwardly between said metal body flange and the adjacent portion of said metal body, said metal body flange clamping and compressing said flange portion between the metal body flange and the adjacent portion of the metal body thereby interlocking said plastic cover with said metal body, and a depending skirt on said plastic cover compressively engaging the exterior of said metal body below said seam and forming a seal therewith.

3,128,009
CLOSURE MEANS FOR PRESSURE VESSELS

Harry William Norton, Sutton Coldfield, England, assignor to Geartight Unions Limited, Ponders End, England, a company of Great Britain

Filed Jan. 22, 1960, Ser. No. 4,036
Claims priority, application Great Britain Jan. 28, 1959
8 Claims. (Cl. 220—55.3)

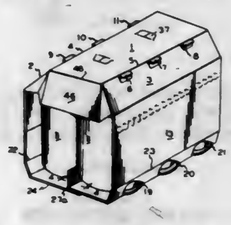


8. A closure device for closing a passageway having an inner and an outer end and provided with a peripheral groove, said device comprising an inner closure portion having an inner surface facing said inner end, a central portion and an outer surface facing said outer end, an outer closure portion carried on the outer side of said inner closure portion for limited movement toward and away from said inner closure portion, cam members carried by one of said closure portions outwardly of the central portion of said inner closure portion for radial movement relative to said closure portions, an inclined cam surface carried by the other of said closure portions outwardly of the central portion of said inner closure member and positioned to engage and radially project said cam members partially into said groove as said portions are brought together but permit said cam members to leave said groove as said closure portions are separated, said cam members having a radial dimension greater than that of said groove and portions which project over said cam surface at all times, the portions of said cam members projecting into said groove having axial dimensions less than that of said groove so as to permit said cam members to move in said groove between a position against the outer edge of said groove and one removed therefrom, and a locking surface carried by said closure device outwardly of the central portion of said inner member and positioned, when said closure portions are together and said cam members are adjacent said outer groove edge, to hold said cam members jammed in a stationary position between said locking surface and outer groove edge athwart the outward path of travel of said inner closure portion, thus blocking outward movement of said inner closure portion, so that said closure device can then be opened only after inward movement of said inner closure portion.

3,128,010
BOTTLE CARRIER

Homer W. Forrer, Atlanta, Ga., assignor to The Mead Corporation, a corporation of Ohio

Filed Feb. 12, 1962, Ser. No. 172,744
4 Claims. (Cl. 220—112)



1. A carrier of the wrap-around type for packaging a plurality of articles arranged in side-by-side rectilinear relation, said carrier comprising a single continuous top center panel overlying the tops of the articles within the carrier, a pair of sloping top panels foldably joined to said center panel along opposite side edges thereof, a pair of side panels having their top edges respectively foldably joined to the edges of said sloping panels remote from the edges thereof which are foldably joined to said center panel said sloping panels being disposed at obtuse angles with respect to said top and side panels and said side panels being in generally normal disposition relative to said top center panel, end panels foldably joined to the end edges of said center panel, tucking panels foldably joined to the end edges of said side panels, and collapsible web structure foldably interconnecting each tucking panel with the adjacent ends of the adjacent end panel and sloping panel.

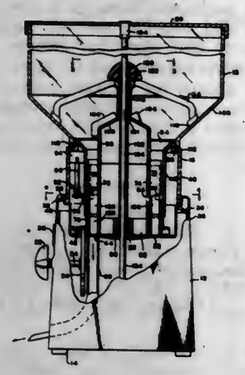
3,128,011
COIN OPERATED VENDING MACHINE

Howard W. Bleiman, 8518 Forrest Ave., Philadelphia 50, Pa.

Filed Sept. 20, 1961, Ser. No. 139,549
5 Claims. (Cl. 221—68)

1. A dispensing machine for dispensing rectangular shaped articles comprising a container, an annular ring-shaped housing, the bottom end of said container being in open communication with said housing, said housing being supported on a base having a delivery chute therein, a rotatably mounted rotor in said housing, means providing a longitudinally extending peripheral passage on the outer periphery of said rotor juxtaposed to the inner periphery of said housing, said passage being in communication with said chute in only one rotary position of said rotor, means for selectively rotating said rotor, means preventing more than one rectangular shaped article from moving from said passage into said chute each time the passage is disposed over said chute, said means including a spring-biased arm positioned between the upper and lower extremities of said passage for engagement with

the article next above the lowermost article in said passage when said passage is in communication with said chute, means on said rotor for directing articles radially outwardly with respect to said rotor as said rotor is rotated, said last-mentioned means including agitator blades on said rotor above said passage, and said blades being substantially parallel to lines tangent to the periphery of said rotor.



3,128,012
LABEL DISPENSER
Jack V. Berg, St. Paul, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Oct. 31, 1961, Ser. No. 149,036
10 Claims. (Cl. 221—70)



7. A label-dispensing machine for dispensing labels mounted on and adhering to a backing strip, said machine comprising a frame, a spool for supporting a supply roll of labels, means for rotatably supporting said spool on said frame, a plate-like member presenting a projecting edge over which a backing strip may be bent, retaining means adjacent said edge, an elastomeric annular member encompassing said plate-like member and removably held adjacent said edge by said retaining means, one portion of said annular member being adapted to guide the backing strip in a path along one face of said plate-like member and another portion of said annular member adapted to hold the backing strip closely adjacent the other face of said plate-like member to effect progressive bending of said strip about said edge as it is drawn from the supply roll.

3,128,013
VENDING MACHINE
Alvin W. Holstein, Brentwood, Harry H. Pryor, St. Louis, and Fred J. Melvin, Bellefontaine Neighbors, Mo., assignors, by mesne assignments, to Universal Match Corporation, Ferguson, Mo., a corporation of Delaware
Filed Apr. 7, 1961, Ser. No. 101,465
11 Claims. (Cl. 221—129)

1. Dispensing apparatus comprising a magazine of rectangular shape in cross section adapted to receive a stack of items to be vended, a rock shaft extending between two opposite sides of the magazine at a third side of the magazine and adjacent the bottom of the magazine, crank arms on the ends of the shaft outside said two opposite sides of the magazine, a trap door swingable with the crank arms on the axis of the shaft adapted to occupy a raised position for holding up the stack and being swingable downward from raised position for dispensing the lowermost item, the shaft extending adjacent one edge of the door and being offset below the upper surface of the door so that the door may swing down freely without pushing up on the stack, a rod slidable in horizontal slots in said two opposite sides of the magazine at a level corresponding to the level of the bottom of the second item next above the lowermost item, each crank arm having a connection with a respective end of the rod, and means connected to one of the crank arms for rocking it away from and back to a retracted position to effect downward swing of the trap door and movement of the rod from a retracted position clear of the stack to a stack-supporting position under the second item and then to effect retraction of the rod and raising of the door.

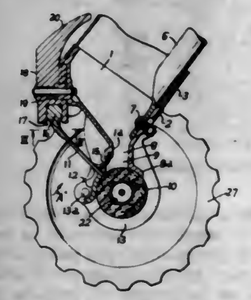


3,128,014
VARIABLE CALIBRATION SCALE FOR MEASURING BULK MATERIALS
John Duncan Turner, Aurora, Ill., assignor to Barber-Greene Company, Aurora, Ill., a corporation of Illinois
Filed Oct. 2, 1961, Ser. No. 142,395
20 Claims. (Cl. 222—29)



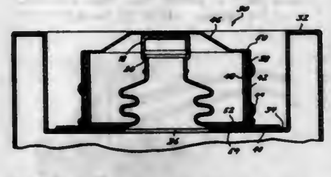
1. For use with an asphalt plant, an aggregate bin with an adjustable gate for controlling the amount of aggregate discharge from the bin, a calibration device for use in connection with said gate and comprising a first measure element, a variable element of measurement juxtaposed to and along the length of said first measure element comprising a coil spring having convolutions thereof arranged into predetermined segments each representative of a given amount of aggregate for a given unit of measurement on the first measure element, a series of adjustable indicating elements securable along the length of said elements for holding said convolutions at spaced intervals on the first measure element, and an indicator extending crosswise of said elements and movable in response to variations in the opening of the bin gate.

3,128,015
APPARATUS FOR DISTRIBUTING OR DISPENSING POWDERED OR GRANULAR MATERIAL
George Leslie Wallis, 74 Lonelby Road, Tolworth, Surbiton, England
Filed Oct. 23, 1961, Ser. No. 146,692
5 Claims. (Cl. 222—177)



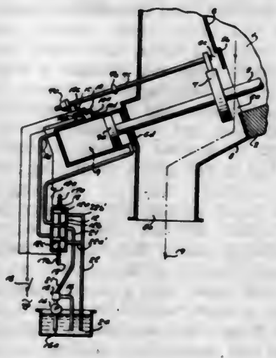
3. Apparatus for distributing powdered or granular material, comprising, in combination,
a wheeled axle assembly 22–34,
a hopper 3,
a dispensing trough for said hopper and mounted on said axle assembly and having inclined diverging bottom walls (1*a*+1*b*) terminating in spaced parallel vertical walls forming a restricted outlet,
a distributing roller 10 having a covering of soft resilient material in closing and wiping contact with said opening,
a hinged material smoothing member 12 having a curved metering face co-acting with the surface of the roller for controlling the amount of material discharged thereby,
a turnable feed regulating member 20 mounted on the outer front side wall 1*a* of the hopper and having a cam slot 17 engaging with a portion of the smoothing member 12 for swinging said smoothing member relative to the surface of the roller to adjust its curved face relative to the surface of the roller and permit a greater or lesser amount of material to be discharged by the roller,
a tube 22 forming an internal part of said roller,
driving elements 24 in the ends of said tube,
flanges 25 on said driving elements having friction faces in engagement with the side faces of the wheels of the axle assembly,
and means for engaging and disengaging said friction faces with the ground wheels for transmitting and interrupting the drive to the roller 10.

3,128,016
CONTAINER WITH DISPENSING SPOUT
Gustave L. Ferri, Jr., 9 Sandra Circle, Westfield, N.J.
Filed Feb. 16, 1961, Ser. No. 106,990
6 Claims. (Cl. 222—212)



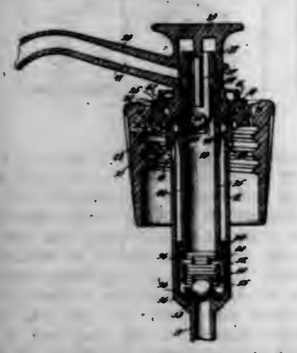
3. A container comprising a hollow body, a collapsible bellows type spout of synthetic resin, said spout being connected to said body, a cap integral with said spout, the inner diameter of said cap being substantially equal to the outer diameter of said spout, said cap being connected to said spout by a portion of reduced thickness which is readily severable, said cap being cup-shaped with the interior of said cap forming a continuation of the passage through said spout, the open end of said cap being directly connected to the open end of said spout in juxtaposed relation thereto, whereby said cap is capable of being severed from said spout and disposed around said spout by means of a snap fit.

3,128,017
STORAGE COMPARTMENT DISPENSING MECHANISM
Josip Bacoka, St. Gallen, Switzerland, assignor to Gebrüder Bühler, Uzwil, Switzerland
Filed Sept. 11, 1961, Ser. No. 137,249
Claims priority, application Germany Sept. 13, 1960
9 Claims. (Cl. 222—243)



1. A storage container having a bottom wall sloping to a discharge opening, a discharge device disposed in said opening and including an elongated rod member extending through said opening along said inclined bottom wall, a rake element on said elongated member adapted to move backwardly and forwardly with said elongated member to move materials disposed above said wall, a closure lid secured to said member adapted to move between positions closing and opening said discharge opening, a cylinder mounted adjacent said elongated member, a piston slidable in said cylinder connected to said elongated member, and fluid control means for cyclically pressurizing said cylinder on alternate sides of said piston to effect reciprocation of said elongated member and movement of said closure lid toward and away from said discharge opening.

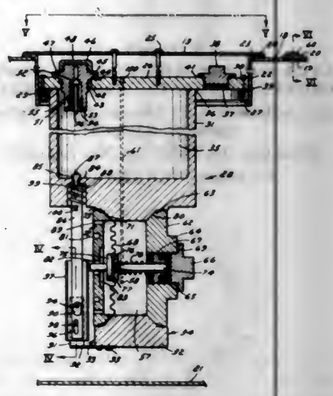
3,128,018
FLUID DISPENSING PUMP WITH SEALING MEANS
Douglas F. Corsette, Los Angeles, and Rex C. Cooprider, Downey, Calif., assignors to The Drackett Company, Cincinnati, Ohio, a corporation of Ohio
Filed July 7, 1961, Ser. No. 122,585
12 Claims. (Cl. 222—321)



1. In a fluid dispensing pump, the combination with a generally vertical cylindrical pump barrel having at its upper end a collar, of a plunger reciprocally disposed in said barrel and having at its upper end and above said collar a discharge head having a discharge orifice for fluid, spring means acting between said barrel and plunger for urging said plunger upwardly in said barrel, a check valve associated with said barrel to prevent downward movement of fluid therein, said plunger being formed to provide a discharge passage extending therethrough and communicating with said discharge orifice, means acting between said head and said collar to hold said head and plunger in a depressed and immobilized position against the action of said spring means, sealing means acting between said head and collar, said sealing means being rendered operative when said plunger is depressed and immobilized to seal said barrel to prevent leakage externally of said plunger, and means operable when said plunger is depressed and immobilized to seal said discharge passage to prevent leakage internally of said plunger, said last named means comprising coacting sealing surfaces relatively displaced into engagement to block flow of liquid through the discharge passage and hence to said orifice, said first named sealing means comprising a depending annular flange on said head having a peripheral bead thereon, a first surface on said collar engaged by said bead, and a second surface on said collar forming an acute angle with said first surface and engaging said flange when said head and plunger occupy said depressed and immobilized position to expand said flange and thereby to apply pressure between said bead and said first surface on said collar.

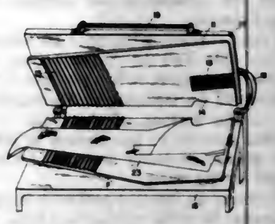
3,128,019
PORTABLE BEVERAGE DISPENSER
Lindley E. Mills, Kalamazoo County, Mich. (518 Pinehurst Blvd., Kalamazoo, Mich.)
Filed Dec. 5, 1960, Ser. No. 73,667
10 Claims. (Cl. 222—396)

1. In portable dispensing apparatus for dispensing a carbonated beverage, the combination including: a container having therein a beverage chamber adapted to contain a carbonated beverage at a dispensing temperature and pressure and to have successive portions of the beverage dispensed therefrom; a gas chamber inside the container adapted to contain a supply of carbon dioxide gas under a pressure greater than the pressure exerted by the beverage at the dispensing temperature; conduit means inside the container communicating at one of its ends with the gas chamber and at its other end with the beverage chamber and comprising a gas release valve whereby carbon dioxide can be released from the gas chamber into the beverage chamber; and valve-actuating means within the container responsive to change in pressure in the beverage chamber and adapted, when the pressure in the beverage chamber falls below the dispensing pressure, to open the gas release valve and permit carbon dioxide to flow from the gas chamber into the beverage chamber to restore the pressure in the beverage chamber to the dispensing pressure whereby es-



sentially all of a carbonated beverage in the beverage chamber can be dispensed therefrom at essentially the same degree of carbonation, the valve actuating means comprising a mechanically tensioned flexible diaphragm subject on one of its sides to the pressure of the beverage chamber and on its other side to an essentially constant pressure including that of the tensioning means and comprising, further, mechanical means connecting the diaphragm and the carbon dioxide release valve adapted to apply a force to the carbon dioxide release valve to cause it to open when the diaphragm flexes which is greater than the differential of the forces on the two sides of the diaphragm which causes the diaphragm to flex.

3,128,020
DEVICE FOR SHIRRING LINING, REINFORCEMENT OR STIFFENER FOR GARMENTS
Frank Pagano, Bethlehem Pike, Ambler, Pa., assignor of one-third to Jack Uchitel, New York, N.Y.
Filed June 30, 1960, Ser. No. 39,845
4 Claims. (Cl. 223—32)



1. In a device for forming temporary shirrs or corrugations in garment reinforcing linings, a pair of mating platens, each of said platens having formed therein a first plurality of corrugations which run in a direction across the platen at one portion thereof and a second plurality of corrugations which run in a direction at an angle with resepct to the corrugations of said first plurality of corrugations, said angle being approximately a right angle, said corrugations of one of said pair of mating platens being offset with respect to the corrugations of the other one of said pair of mating platens, means to which said platens are attached for a mating operation with the lining to be shirred or corrugated interposed therebetween, said second plurality of corrugations being disposed between opposite sides of each of said platens and being spaced from said first plurality of corrugations, at least one of said platens having a side cut-out in substantial alignment with said second plurality of corrugations, said second plurality of corrugations being spaced from said cut-out, the ridges of the corrugations of said first plurality of corrugations slanting downwardly from the side of the platen having said side cut-out towards the opposite side thereof.

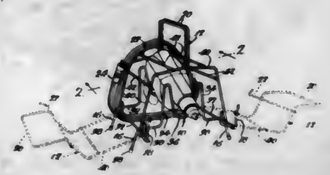
3,128,021
TRAY FOR GOLF CARTS
Carl C. Habbena, 530 Lake St., Rockwell City, Iowa
Filed Sept. 22, 1960, Ser. No. 57,675
2 Claims. (Cl. 224—29)



1. A tray for golf carts comprising a substantially flat support, means on the support for fixing the support to a golf cart, and an elongated ball supporting and retaining rack secured to the underside of the support, said rack being capable of simultaneously retaining a plurality of golf balls, said support having an opening therethrough located over a portion of the rack, said opening being of a size so as to allow for the passage of a golf ball therethrough to and from the rack, said rack having an aperture through the bottom thereof in axial alignment with the support opening, said aperture being large enough so as to allow for the projection of a finger therethrough while being too small to allow the passage of a golf ball therethrough, whereby, upon alignment of a golf ball with the rack aperture and support opening, the ball can be discharged through the support opening by means of a finger extended through the rack aperture, said rack including a generally smooth bottom, vertically extending end portions on the bottom, said end portions being fixed to the underside of the support, said end portions providing limits to the longitudinal movement of the golf balls received in the rack, and elongated side flanges secured to each longitudinal edge of the rack bottom and projecting upwardly therefrom toward but stopping short of the underside of the support, the distance between the upper edges of the flanges and the support being less than the diameter of the golf balls.

3,128,022
CARRIER FOR ELECTRIC TOOLS
Conrad D. Mastrud, Jr., 2921 Sheridan Road, Evanston, Ill.
Filed Mar. 1, 1961, Ser. No. 92,489
1 Claim. (Cl. 224—45)

A carrier for a portable electric tool having a power supply cord, comprising a generally rectangular base formed of integrally united wires, said wires being shaped to form a pair of longitudinally spaced upwardly extending wire elements, the upper surface portions of which are conformed generally to lower surface portions of the tool for conformable reception of the tool, said wire elements including upwardly extending portions opposed to one another longitudinally and transversely of the base complemental to oppositely facing vertical surfaces of the tool for retaining the tool against movement relative to the base in the horizontal direction, a pair of wire bails pivotally connected to opposite sides of said base, said bails each including surface portions conformed generally to upper surface portions of the tool which normally overly the base for encompassing the tool, said bails each



including a hand grip spaced upwardly from the tool and abutting against one another centrally above the tool when the bails encompass the tool, and outwardly projecting portions on each of said bails and said base at one end of the base transverse to the pivot axes of said bails about which the cord of the tool may be wound to secure the bails and the base together in encompassing relation to the tool, said bails upon removal of the cord from said outwardly extending portions being pivotally movable to positions outwardly of the base to accommodate removal of the tool.

3,128,023
FISHING LINE CUTTER
James A. Cook, El Monte, Calif. (213 Burress, Houston, Tex.)
Filed Nov. 9, 1962, Ser. No. 236,553
5 Claims. (Cl. 225—19)

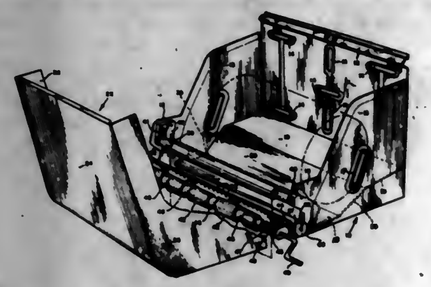


1. A fishing line cutter comprising an elongated flat body formed at one side edge with a notch, a blade secured to said body and having a sharp cutting edge exposed at said notch, and respective offset lugs projecting from the opposite ends of said body, whereby the body is adapted to be engaged lengthwise on a fishing rod and secured in offset parallel relation thereto by fastening said lugs to the rod.

3,128,024
ROLL TOWEL DISPENSERS
Cyril Edward Downham, Green Bay, Wis., assignor to Fort Howard Paper Company, Green Bay, Wis., a corporation of Wisconsin
Filed Oct. 18, 1962, Ser. No. 231,439
17 Claims. (Cl. 225—43)

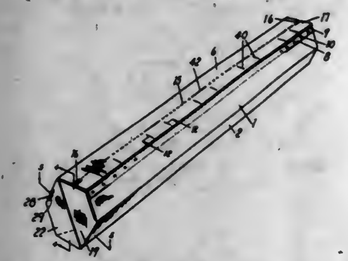
1. In a roll towel dispenser having a cabinet with means for dispensing toweling from a roll and including dispensing rollers, a roll-supporting and cradling bottom in said cabinet having a rear portion which angles downwardly and forwardly from the rear and having a front plate portion behind said dispensing rollers which angles convergently downwardly and rearwardly from the front, there being an intermediate well portion between said two angled portions, said front and rear angled portions being adapted to engage spaced lower peripheral portions

of a supply roll placed thereon and said well being shaped to receive therein a progressively greater portion of the



diameter of the roll as the roll decreases in diameter to thereby compensate for the loss of weight of the roll in maintaining the roll in position.

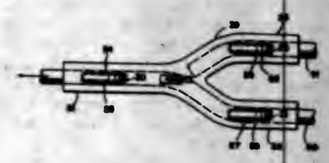
3,128,025
PAPER DISPENSING CARTON
Kenneth T. Buttery and David D. Cornell, Kalamazoo, Mich., assignors to KVP Sutherland Paper Company, Kalamazoo, Mich.
Filed Feb. 4, 1963, Ser. No. 256,022
21 Claims. (Cl. 225—48)



1. In combination with a roll of paper, a polygonal dispensing container therefor formed integrally of paperboard cut and scored to provide outer side walls of substantially uniform width, a cutter blade fixedly secured to one of said outer side walls with its cutting edge operatively extending therefrom, said container also including an inner side wall and paper guide and support member dimensioned to correspond to the outer walls integral with and extending from the edge of the wall from which said blade projects, the outer wall adjacent the wall to which said cutter blade is secured having a detachable section releasably connected to said inner wall, and end closures comprising end members integral with said walls, certain of which are disposed in overlapping relation to each other and fixedly connected and which support said side walls in erected angular relation, the outer end of the roll of paper being positionable in supported relation between said inner wall and paper guide and support member and the portion of said outer wall remaining after said detachable section has been removed.

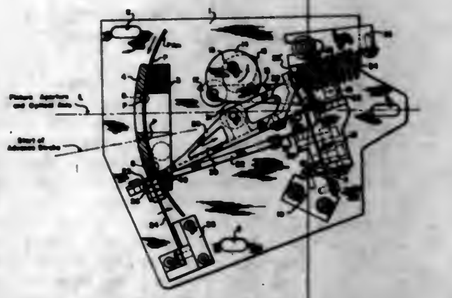
3,128,026
APPARATUS FOR THE CONTINUOUS FEEDING OF STRANDULAR MATERIAL
George N. Bonnell, Fanwood, and Robert A. Barr, Bound Brook, N.J., assignors to Midland-Ross Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Aug. 31, 1962, Ser. No. 220,690
8 Claims. (Cl. 226—11)

1. An apparatus for insuring continuous feeding of strandular material comprising, a source of strandular material, guiding means through which it is forwarded, motive means in frictional surface contact with said material in said guiding means for moving it therethrough, at least one other additional source of said material, sens-



ing means in continuous contact with the moving strandular material, and said sensing means upon loss of contact with the strandular material diverting said strand moving means onto said additional material source.

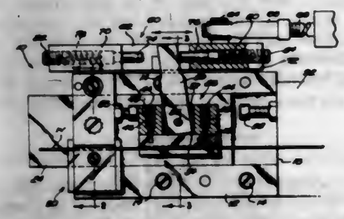
3,128,027
SHUTTLE, GATE, AND POSITION PIN ASSEMBLY FOR MOTION PICTURE FILM PRINTERS
Jasper S. Chandler, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Apr. 17, 1961, Ser. No. 103,415
14 Claims. (Cl. 226—57)



1. A film advancement device for a film using apparatus having a gate comprising a mounting plate, a shuttle means having a shuttle tooth mounted at one end thereof for intermittently engaging perforations on a film edge, at least two flat springs the planes of which intersect supporting said shuttle means with the intersection of the planes of said springs forming a pivot point about which said shuttle means may pivot, a first rotatable cam for moving said shuttle means towards and away from said gate to move said shuttle pin intermittently into and out of engagement with perforations in said film, a second rotatable cam for rotating said shuttle means about said pivot point to intermittently advance said film through said gate, cam rotation means for rotating said first and second cams, and cam followers operatively associated with said shuttle means engaging said first and second cams.

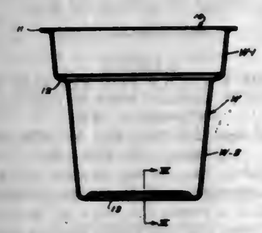
3,128,028
WIRE FEEDING DEVICE
Thomas J. Crafford, Riverside, R.I., assignor to Crafford Tool & Die Co., Riverside, R.I., a corporation of Rhode Island
Filed Apr. 17, 1961, Ser. No. 103,567
9 Claims. (Cl. 226—151)

1. In a device for feeding a length of wire, a fixed base having a track formed therein, a plate mounted for movement in said track and having a feed block mounted thereon, said feed block including a passage through which said wire extends, a recess formed in said feed block and communicating with said passage, a resiliently biased gripping member carried by said feed block and located in said recess, said gripping member including a projection that is adapted to extend into said passage but that is normally located out of engagement with said wire, a pivotally mounted actuating arm extending into said block for engaging said gripping member, a drive assembly mounted for reciprocating movement in a feed direction and a return direction, said drive assembly including spaced plungers that straddle said actuating arm, and means for



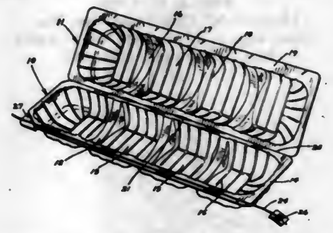
reciprocating said drive assembly wherein one of said plungers engages said actuating arm to pivotally move it into clamping engagement with said gripping member, said gripping member thereby being biased toward said wire to force said projection into said passage and into gripping engagement with said wire whereupon further movement of said drive assembly in said feed direction causes said feed block to carry said wire therewith, said reciprocating means reversing the direction of movement thereof at a predetermined position, whereupon the other of said plungers engages said actuating arm to release it from clamping engagement with said gripping member which is then released from engagement with said wire.

3,128,029
CUP
Warren R. Price, Skokie, and Alexander Stanley Houston, Chicago, Ill., assignors to St. Regis Paper Company, a corporation of New York
Original application May 9, 1957, Ser. No. 658,155, now Patent No. 2,942,301, dated June 28, 1960. Divided and this application Dec. 3, 1959, Ser. No. 2,318
1 Claim. (Cl. 229—1.5)



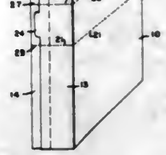
A cup consisting of a seamless integral piece of highly vesiculated polystyrene having closed cells therein; said cup having continuous side, base, and corner wall portions of uniform thickness throughout; said thickness being in the range of from 0.020 to 0.070 inch; and said polystyrene having a specific gravity on the order of 0.04; the highly vesiculated character of the polystyrene being uniform throughout the said side, base, and corner wall portions of said cup.

3,128,030
PACKAGE
Donald D. Davies, Golden Valley, Minn., assignor to RAP Industries, Inc., Minneapolis, Minn., a corporation of Minnesota
Filed Oct. 5, 1961, Ser. No. 143,230
4 Claims. (Cl. 229—2.5)



1. A reclosable container for protecting foodstuffs and other commodities which comprises a molded tray, said tray consisting of at least one hollow article supporting cavity portion and a surrounding flat flange portion, a cover for said tray including a flat flange surface adapted to abut the flange of said tray, and pressure sensitive adhesive sealing means interposed between at least a portion of said abuttable flange surfaces of said tray and cover, said pressure sensitive adhesive means being a tear string element interposed between the abuttable flange surfaces of said cover and tray and carrying a pressure sensitive adhesive material thereon.

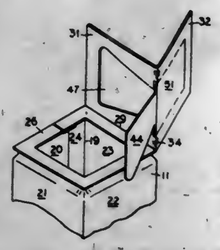
3,128,031
CARTON
Gerald Dembo, 850 Field St., Lakewood, Colo.
Filed Aug. 10, 1960, Ser. No. 48,719
8 Claims. (Cl. 229—7)



1. A carton having a front, a back, a bottom interconnecting said front and said back, a first side interconnecting said front and said back, a second side integral with said front and sealed to a flange extending forwardly from the corresponding side edge of said back, and a top including a flap which folds forwardly from the upper edge of said back, the improvement which comprises a removable section including the uppermost portion of said front, said first side and said second side; a lateral row of perforations extending across said first side, said front and said second side at a distance spaced from said top corresponding to the height of said removable section; a vertical row of perforations at the intersection of said first side and said back extending from said lateral row of perforations to the top of said carton; a row of perforations across said flange, spaced from said top the same distance said lateral row of perforations is spaced from said top, so that said section may be removed from said carton along said lateral row of perforations and the upper portion of said flange torn along said row of perforations and folded against the upper portion of said

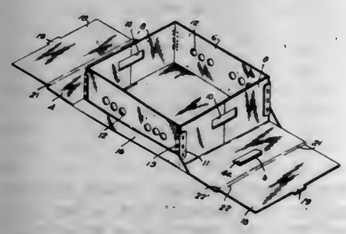
back, which may be bent forwardly to form a new top for said carton and said flap slid behind the remainder of said front, inside said carton.

3,128,032
DISPENSING CONTAINER AND ONE PIECE BLANK
Howard M. Hill, Hamilton, Va.
Filed Aug. 1, 1962, Ser. No. 214,058
16 Claims. (Cl. 229—17)



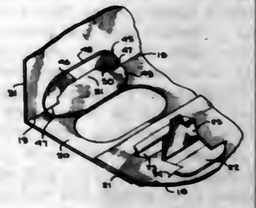
1. A container for liquids comprising a tubular body of foldable material closed at its lower end, three side walls of said body terminating at their upper edges in a necked-in area and outwardly extending end seam flanges, the fourth wall of said body terminating in a necked-in area and an outwardly extending end seam flange and integral therewith a two ply dispensing top closure including an inner ply having a filling and dispensing opening therein and an outer ply having a tear strip therein, said outer ply integrally hinged to said first ply, said tear strip having an integral tear tab formed of material cut from said filling and dispensing opening in said inner ply.

3,128,033
SHIPPING CONTAINER
William T. Cook, 238 W. 106th St., New York, N.Y.
Filed Feb. 19, 1962, Ser. No. 174,173
2 Claims. (Cl. 229—23)



1. A shipping container comprising a receptacle consisting of three-locked-together but separable units, two of said units being alike and interchangeable, said two units constituting two half sections of a frame portion of the container, each half section consisting of a flat rigid side board and two rigid end boards permanently connected thereto in abutting relationship by means of flexible hinges and forming inwardly extending right angles therewith, the flat rigid side boards forming parallel side walls of the frame portion and each of the two inwardly extending rigid end boards forming parallel end walls of the frame portion, adjoining ends of the inwardly extending end boards having elongated cutouts located centrally between the side walls, said two half sections of the frame portions forming the confining and load bearing unit of said receptacle, and the third one of said units being an integral corrugated cardboard bottom member comprising a central rectangular bottom portion, containing a suitable plurality of locking cutouts, two end walls forming upwardly extending right angles therewith to thus form the outer locking end wall of the receptacle, a locking tab extending inwardly from each of said outer locking end walls and bent downwardly through a respective pair of said cutout contained in the end boards to lock said ends in butting relation, two extensions substantially parallel to said outer end walls, a suitable plurality of locking tabs projecting from each of said extensions arranged to lock said extensions in parallel position with the outer end walls and when inserted in the suitable plurality of locking cutout slots contained in the bottom member, to thus rigidly contain the two inwardly extending sections of the rigid end boards, webs of the approximate thickness of the rigid frame portions inwardly extending end boards integrally connecting the outer end walls and the extensions, the upwardly extending side portions of the central rectangular bottom portion being extended to provide stiffening means for both said side portions and said upwardly extending outer end walls.

3,128,034
CAN CARRIER WITH REINFORCING MEANS
Arthur J. Weiss, Bergenfield, N.J., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed Feb. 24, 1961, Ser. No. 91,529
23 Claims. (Cl. 229—48)

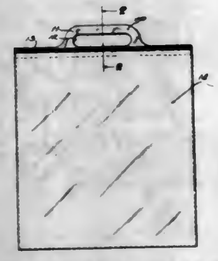


1. In a paperboard can carrier of the type including a first wall in the form of a can end engaging wall and a second wall in the form of a can body engaging wall with said first and second walls being joined together along a fold line and wherein said second wall has openings therein spaced along said fold line for the reception of can seams; reinforcing means on said can carrier for preventing the tearing of said can carrier along said fold line starting at said openings, said reinforcing means being in the form of a flap struck from one of said walls and folded to overlie said fold line at the ends of one of said openings and portions of said second wall.

3,128,035
PLASTIC HANDLE FOR PLASTIC BAG
Lawrence W. Teweles, 8365 N. Pelican Lane, Milwaukee, Wis.
Filed Sept. 20, 1961, Ser. No. 139,452
1 Claim. (Cl. 229—54)

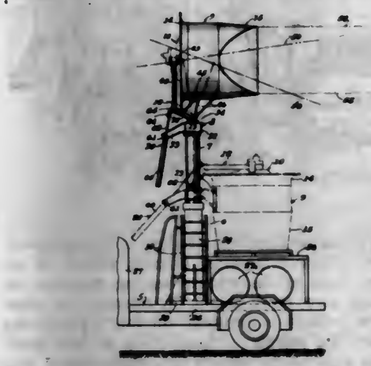
A heat-sealable bag having a pair of separate coextensive sides provided with free edges, a handle for said bag composed of a single thickness of heat-sealable material which is very stiff and tough relative to the material of said bag, said handle being provided with an integral base portion between said free edges and substantially coextensive therewith, and a handle loop integral with said base portion, said handle loop having a portion spaced from said base portion to form an opening extending longitudinally of said base portion for approximately one-half of the longitudinal extent of said base portion, said free edges of said sides being heat sealed to the base portion of said handle, those edges of the said separate

sides which are not heat sealed to the base portion of said handle being heat sealed to each other, said base member having sufficient rigidity in the plane of said



sides to support the contents of the bag without further attachment to the bag, said bag being low density polyethylene film and said handle being medium density polyethylene sheet.

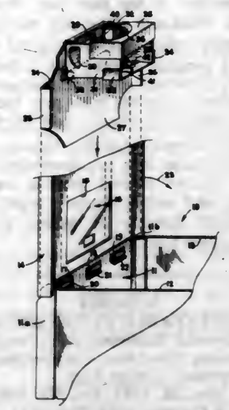
3,128,036
MACHINE TO GENERATE AND CONTROL AN AIRSTREAM
Le Roy C. McBride, 3802 W. 109th St., Inglewood 2, Calif., assignor, by mesne assignments, to Le Roy C. McBride and Margaret B. McBride, both of Inglewood, Calif.
Filed Oct. 17, 1960, Ser. No. 62,985
7 Claims. (Cl. 230—116)



1. A wind-generating machine comprising a pivoted support frame, an engine provided with a propeller and fixedly mounted on the frame, an impermeable and circular air duct around and spaced from said engine, a cowl around the engine and cooperating with the air duct to define an annular air passage therebetween, means fixedly connecting said duct and cowl to the frame, an air-flow straightener on the outer air duct on the downstream thereof, and a tubular extension from said circular air duct having a gradual transitional change from a circular to a rectangular cross-sectional form to provide a rotation-resisting rectangular discharge outlet for air forced by the propeller through the air-flow straightener.

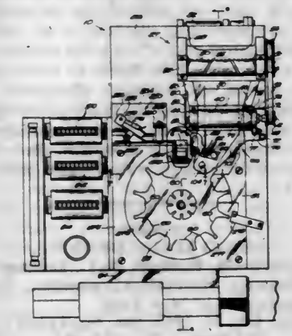
3,128,037
COIN BOX ANTI-THEFT DEVICE
Edward L. McClellan, Los Angeles, Calif., assignor to Universal Products Corporation, a corporation of California
Filed Mar. 23, 1962, Ser. No. 181,893
7 Claims. (Cl. 232—63)

1. An anti-theft device for a coin box comprising: a coin receiving scoop means including an upper scoop terminating in a downwardly slanting rearwardly facing lower edge; and a lower scoop slanting forwardly and downwardly below said upper scoop, said scoop means being adapted to receive coins and positioned to pass said coins into said box when said coins slide down said upper scoop and fall onto said lower scoop; and opening means



adjacent the side edges of said lower scoop of smaller size than any coins received in said device, said rearwardly facing lower edge of said upper scoop following at least in part a convex curve whereby any flexible retrieving tool forced against said scoops is guided by said lower edge to pass through one of said opening means.

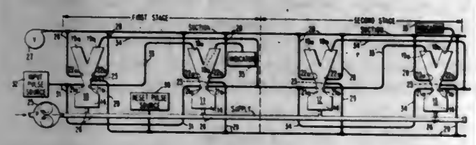
3,128,038
FARE COLLECTING MACHINE
Gardner L. Grant, Providence, Walter Antonoff, Coventry, and Emile Gauthier, Pawtucket, R.I., and Howard A. Powers, Medfield, Mass., assignors to Universal Controls, Inc., New York, N.Y., a corporation of Maryland
Filed Oct. 18, 1960, Ser. No. 63,334
8 Claims. (Cl. 235—32)



6. In fare collecting apparatus, a fare inlet for receiving fare parts therein, a rotor for receiving said fare parts from said fare inlet, means for transferring said fare parts from said fare inlet to said rotor, means for driving said rotor to move said fare parts to a gauging station, means for gauging the diameter of said fare parts at said gauging station, means for detecting the thickness of said fare parts at said gauging station, said diameter engaging means including a contact blade that is pivotally movable in response to the diameter of the coin being gauged, a selector plate having a plurality of spaced contacts mounted thereon, each of said contacts having reference to a

fare part and being located on said selector plate in accordance with the diameter of the associated fare part, cam means responsive to the rotation of said rotor, switch means operated by said cam means in a predetermined sequence and cooperating with said contacts to produce a pulse in accordance with the denomination of the coin being gauged, said pulse being recorded and registered to indicate the amount of the fare part deposited in said apparatus, said thickness detecting means including a pivotally mounted roller that is adapted to engage the fare part at said gauging station, and a switch responsive to said pivotally mounted roller and adapted to be actuated by said roller when the fare part being gauged exceeds a predetermined thickness, said thickness detecting means and said diameter gauging means cooperating to indicate that two fares of a predetermined thickness are simultaneously located at said gauging station, whereby said cam means and switch means cooperate to produce the corresponding number of pulses to indicate the presence of the two fare parts.

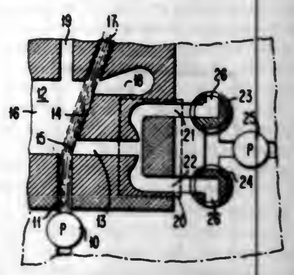
3,128,039
MULTI-STABLE FLUID DEVICE
Richard E. Norwood, Endicott, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 20, 1961, Ser. No. 160,770
9 Claims. (Cl. 235—61)



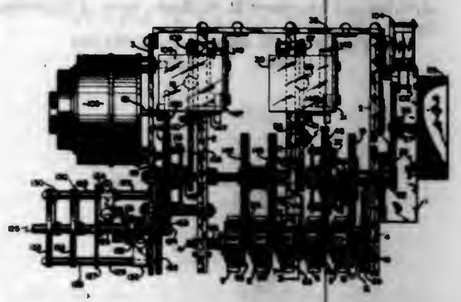
4. A fluid device comprising two elements, each comprising means providing an inlet for conveying a fluid power stream, a plurality of outlets, and a plurality of control ports selectively chargeable with pressure fluid for switching the stream in that element to desired outlets; means for supplying input pressure fluid pulses concurrently to at least one control port of each element; and means interconnecting one outlet of each element with one other control port of the other element as necessary to cause successive input pulses to switch the stream in a certain one of said elements alternately back and then forth between two outlets thereof and upon every other pulse switch the stream of the remaining element momentarily from one outlet thereof to the other outlet thereof for providing a regenerative signal pulse.

3,128,040
FLUID LOGIC DEVICE
Richard E. Norwood, Endicott, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Oct. 29, 1962, Ser. No. 233,574
10 Claims. (Cl. 235—61)

1. A fluid device comprising,
means providing two input passages to which pressure fluid can be supplied selectively or concurrently, said input passages being joined at a junction and having substantially aligned orifices disposed at opposite ends of said junction, and
an output passage extending generally transversely from said junction,
such that upon supply of pressure fluid to only one of said input passages, such fluid will flow past said output passage and out the other of the input passages, whereas upon supply of pressure fluid concurrently to both input passages, such fluid will flow laterally into the output passage to give a logical AND fluid pressure output signal.



3,128,041
COUNTER
Clarence E. Adler, Toledo, Ohio, assignor to Toledo Scale Corporation, Toledo, Ohio, a corporation of Ohio
Filed July 13, 1961, Ser. No. 123,683
19 Claims. (Cl. 235—91)

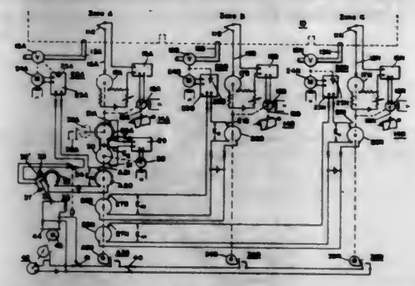


1. A dual speed counter comprising, in combination, a plurality of rotatably mounted number wheels of ascending order, each of the wheels bearing numbers ascending through zero, input means for rotating the wheel of the lowest order, intermittent motion transmitting means between the wheels so functioning in low speed operation that each of the wheels of orders higher than the lowest is stationary except when the indication of the next lower wheel is changing at zero, and means effecting high speed operation by rotating a portion of the intermittent motion transmitting means between the wheels of the lower two orders at the same speed and in the same direction as the wheel of the lowest order thereby for rotating the wheel of the next to the lowest order at the same speed and in the same direction as the wheel of the lowest order.

3,128,042
TEMPERATURE CONTROL SYSTEMS FOR MULTI-ZONE, BATCH-TYPE FURNACES
Herman L. Daneman, Gwynedd, Pa., assignor to Leeds and Northrup Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Oct. 13, 1960, Ser. No. 62,497
4 Claims. (Cl. 236—15)

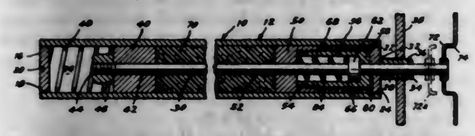
1. A system for controlling a multi-zone furnace comprising a plurality of means for producing signals respectively representative of the existing temperatures of said zones, means preset to provide a first set-point signal representative of the desired initial high temperature of all zones and a second set-point signal representative of

a somewhat higher desired temperature of all zones, means for regulating the rate of supply of a temperature-changing agent to one of said zones including means initially responsive to mismatch between said first set-point signal and the temperature signal of that zone, means for regulating the rate of supply of a temperature-changing agent to each of the other of said zones including means responsive to mismatch between its existing



temperature signal and a signal representative of the existing temperature of said one zone, and means effective when at least said one of said zones has reached said desired initial high temperature for shifting from said first set-point signal to said second set-point signal for further control of the temperature of said one of the zones by its regulating means, the control of temperature of each of the other zones continuing as before by its corresponding regulating means.

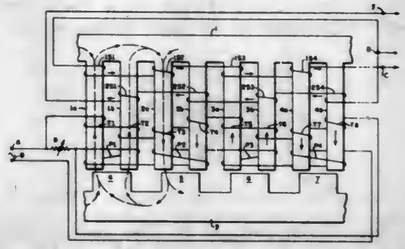
3,128,043
FAIL SAFE THERMOSTAT
Maurice Feinberg, 2 Jackson St., Waltham, Mass.
Filed Apr. 30, 1962, Ser. No. 191,166
19 Claims. (Cl. 236—93)



1. An actuator device comprising an elongated housing, actuating material comprising an annular, expandable, heat-sensitive plastic received within said housing, first movable means engaging one end of the actuating material, second movable means engaging the opposite end of said actuating material, operating means extending through the actuating material and operatively coupled to said first and second movable means, said operating means having one end portion extending to the exterior of said housing, and means associated with said second movable means for driving said operating means toward said first movable means when said actuating material is removed from said housing.

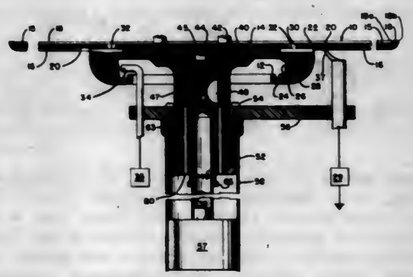
3,128,044
VARIABLE TRANSFORMER
Henry Packard, Norwood, Mass., assignor to Northrop Corporation, Beverly Hills, Calif., a corporation of California
Filed Nov. 1, 1961, Ser. No. 149,365
6 Claims. (Cl. 336—135)

1. A variable transformer, comprising a first ferromagnetic element having a plurality of projecting pole pieces, a second ferromagnetic element provided with a projecting tooth for each pair of pole pieces on said first element, said elements being mounted for relative movement with said teeth confronting said pole pieces, a first series of secondary coils connected in series and wound on alternate pole pieces, said coils being alternately oppositely wound, a second series of secondary coils connected in series and wound on the remaining alternate pole pieces, said second series of coils being alternately oppo-



sitely wound, and a series of primary coils, each wound on a pair of pole pieces on which a pair of oppositely wound secondary coils from different series are wound, said primary coils being alternately oppositely wound, said first and second series of secondary coils being connected in series opposition.

3,128,045
ELECTROSTATIC COATING APPARATUS
William D. Gauthier, Indianapolis, Ind., assignor to Ransburg Electro-Coating Corp., Indianapolis, Ind., a corporation of Indiana
Filed May 31, 1961, Ser. No. 113,928
19 Claims. (Cl. 239—15)

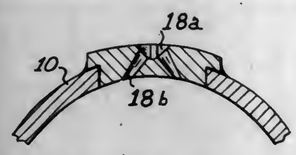


2. In a charging apparatus for coating material, a pair of insulating members, one of said insulating members terminating in a discharge edge, an electro-conductive element interposed between said members, said element being adapted to be connected to a high voltage source, means for supplying coating material from a source of supply onto the outwardly presented face of one of said members, and means for moving the coating material over and in contact with said face of one of said members into operative association with said element and to said discharge edge where the coating material is discharged as a charged spray having the same polarity as the electro-conductive element.

3,128,046
NON-CLOGGING SPRAY NOZZLE
Arthur E. Broughton, Glens Falls, N.Y., assignor to A. E. Broughton & Co., Inc., a corporation of New York
Filed Sept. 23, 1960, Ser. No. 58,100
1 Claim. (Cl. 239—116)

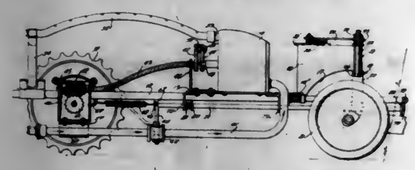
A spray tube assembly comprising a generally cylindrical elongated hollow shower tube, a cleaning plunger working in close fitting relation within said tube and re-

sponsive to change in the direction of flow of liquid through the tube for axial shifting movement therewithin, said tube having a plurality of apertures in the wall thereof, a nozzle insert in each aperture, each nozzle insert having an exteriorly disposed recess with one axis thereof lying parallel to the axis of the tube and the contour of the entire inner surface of each nozzle insert forming a smooth continuation of the inner surface of said tube,



each insert having passages the inner ends of which are of less diameter than their outer ends, the axes of said passages being arranged to converge toward and communicate with said recess and the inner ends of said passages being passed by said close fitting plunger during axial shifting movement thereof within the tube, whereby solids lodged in said passages will be sheared off at the inner ends of said passages for expulsion through the nozzle portions of larger diameter.

3,128,047
SELF-PROPELLED MOBILE LAWN SPRINKLER
Richard J. Rogers, 400 E St., Oxnard, Calif.
Filed Jan. 8, 1963, Ser. No. 250,063
5 Claims. (Cl. 239—191)



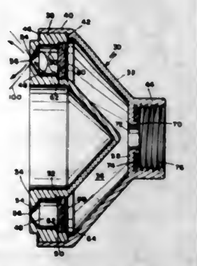
1. A mobile sprinkler comprising an elongated supporting frame including a pair of spaced parallel horizontal longitudinally extending side frame bars, a supporting wheel assembly pivoted to one end of said frame, a guiding member rigidly connected to said pivoted supporting wheel assembly, ground-engaging propelling means mounted on the frame adjacent its other end, a hydraulic motor mounted on the frame, means drivingly connecting said motor to said propelling means, a sprinkler head mounted on the frame, a fluid supply conduit mounted on the frame and connected to said motor and said sprinkler head, a shut-off valve in said fluid supply conduit, a bumper member slidably and yieldably mounted on the forward portions of the frame bars and being engageable with an obstacle in the path of movement of the frame, whereby the bumper member will be moved rearwardly relative to the frame upon engaging the obstacle, and means to close said shut-off valve responsive to said rearward movement of the bumper member.

3,128,048
FOG NOZZLE
Jesse V. Denure, 2066 Parrot St., San Diego, Calif., assignor of one-third to Mary Ansara Nelson, San Diego, Calif.
Filed Nov. 13, 1962, Ser. No. 236,935
1 Claim. (Cl. 239—488)

A fog nozzle comprising:

an outer generally conical body member having an axially extending flange at the base and a cylindrical internally threaded axial flange at the apex, said axial flange including a restricted opening at the apex center;

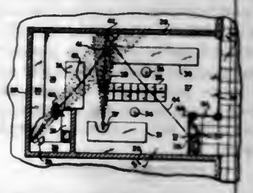
an inner generally conical body member having a radially extending flange at the base, said member being assembled concentrically with said outer body member and spaced therefrom with said axially extending flange overlapping said radially extending flange, the apex of said inner body member being disposed adjacent said restricted opening to disperse a liquid stream divergently;



a plurality of cylindrical swirl chambers circumferentially spaced about said radially extending flange, the axes of said chambers being parallel with the axes of said body members, each of said chambers having a restricted opening in the outer end thereof, the wall of each chamber adjacent said restricted opening being divergent therefrom at an angle of substantially 120 degrees; and

a restrictor plug partially closing the inner end of each chamber, each plug having a spiral passage in the periphery thereof, said passage extending from the space between said inner and outer body members to said chamber so that said spiral passage imparts a swirling motion to liquid passing therethrough and the diverging wall of said chamber causes the swirling liquid to strike said restricted opening at a converging angle, thus creating a dense fog that is emitted in a substantially 120-degree cone.

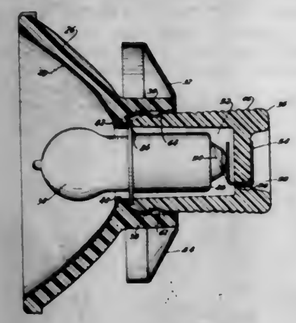
3,128,049
SURVEILLANCE AIDING ILLUMINATION SYSTEM
John R. Maxim, 630 Briar Hill Park, Riverdale 71, New York, N.Y.
Filed Apr. 30, 1962, Ser. No. 190,925
1 Claim. (Cl. 240—9)



An illuminating system for a room having a ceiling, side walls, and a floor with fixtures on the floor, a door in one of the side walls, windows in the side walls, door locking mechanism supported on the door with a portion of the mechanism outside the door, said locking mechanism including a movable cylinder, lights on the ceiling directing light rays downwardly to illuminate the interior of the room, a light on one of the side walls directing light rays horizontally and parallel to the floor onto an opposite side wall, a light on a fixture on the floor directing light rays horizontally and parallel to the floor onto a side wall, said lights being connected in parallel in an

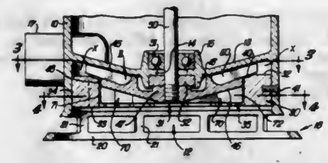
electrical circuit, switch mechanism having a movable switch contact connected in circuit with said lights, said cylinder carrying the movable switch contact of said switch mechanism, and spaced stationary electrical contacts disposed in the path of movement of said movable switch contact, and a key removably inserted into the locking mechanism outwardly of the door for actuating said movable cylinder for selectively closing the circuit through either the ceiling lights or the other lights, the windows being positioned to afford a view of the interior of the room.

3,128,050
FLASHLIGHT AND REFLECTOR ASSEMBLY THEREFOR
Richard H. Parker, St. Albans, Vt., assignor to Union Carbide Corporation, a corporation of New York
Filed July 20, 1960, Ser. No. 44,092
1 Claim. (Cl. 240—10.66)



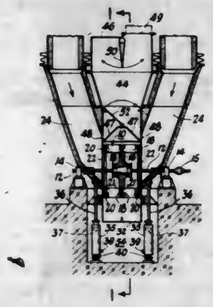
In a flashlight having a casing, a movable switch mounted on said casing and inside said casing a plurality of battery cells and a switch contactor member mounted to said switch, the combination of a molded plastic reflector body mounted in one end of said casing, said reflector body having substantially corresponding concavo-convex sides and a central apertured cylindrical neck, the concave side of said reflector body having a metallic reflecting coating therein, a metallic contact shell, said contact shell including a rigid tubular socket co-axially sleeved into the cylindrical neck of said reflector body and an integral skirt portion projecting radially outwardly from and out of contact with said reflector body, said skirt portion being adapted to make electrical contact with said switch contactor member in one position of said switch, said tubular socket having a plurality of annularly disposed substantially equally spaced projections directed radially inwardly from its inner wall, a resilient plastic lamp retainer plug, said plug having an open forward end for receiving a lamp provided with a flange around the neck thereof and a closed end, the forward end of said plug being detachably snapped into place in said tubular socket by means of an annular groove so positioned on its exterior surface as to engage said plurality of spaced projections when said plug is pushed into said tubular socket to seat the flange of the lamp therein, said closed end of said plug having a recessed portion for receiving the terminal of one of said battery cells in said casing, and a generally U-shaped leaf spring mounted in said closed end of said plug, one leg of which makes electrical contact with the base of said flashlight lamp and the other leg of which resides in said recessed portion for contacting said battery cell terminal and for aligning said reflector body and plug with said battery cells in said casing.

3,128,051
PUMP
Arthur W. Smith, La Habra, Calif.
(% Dag Mfg. Co., 11828 E. Algardi, Norwalk, Conn.)
Filed Nov. 7, 1960, Ser. No. 67,575
9 Claims. (Cl. 241—46)



1. A pump of the character referred to including, a cylindrical body having a closed top, and an open bottom, an annular jaw ring engaged in the lower open end of the body, an exhaust duct projecting laterally from the body and communicating with the space between the top of the body and the jaw ring, a drive shaft projecting through the top of the body and a disc-shaped rotor on the shaft to occur within the confines of the jaw ring, said jaw ring having a plurality of circumferentially spaced, radially inwardly projecting, substantially vertically disposed teeth, said rotor having a plurality of circumferentially spaced, substantially radially disposed vanes projecting from its top and having ends projecting radially outwardly from the rotor, to extend between the top of the body and the jaw ring and having a plurality of substantially radially disposed impellers projecting from its bottom and having ends opposing the teeth on the jaw ring, and a plurality of circumferentially spaced fluid conducting apertures extending between the top and bottom of the rotor and spaced radially inwardly from the peripheral edge thereof.

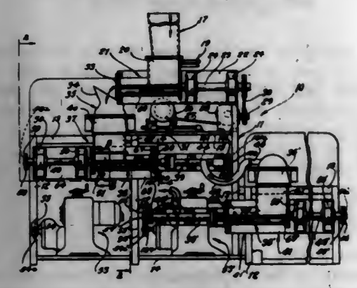
3,128,052
BEATER WHEEL MILL
Richard Wagner, Vienna, Austria, assignor to Kohlenscheidungs-Gesellschaft, m.b.H., a corporation of Germany
Filed June 11, 1962, Ser. No. 201,516
Claims priority, application Germany June 24, 1961
7 Claims. (Cl. 241—55)



1. A beater wheel mill organization for pulverizing material, having a beater wheel axially supported on a horizontal shaft for rotation within a vertical housing, an opening for receiving material and carrier gas axially of the wheel, and an opening for discharging tangentially of the wheel said pulverized material from said housing, the combination of means for dividing said housing into an upper portion and a beater wheel, means for supporting said upper portion independently of said lower portion, means for supporting and lowering said lower portion downwardly and away from said upper portion, and cavity forming means provided below said lower portion

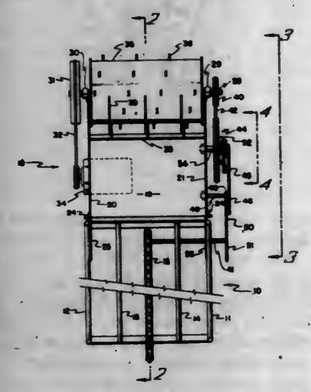
and said wheel for submerging therein at least a major part of said lower housing portion when access to said mill is needed for removal of said wheel in horizontal direction and perpendicular to said horizontal shaft.

3,128,053
EQUIPMENT FOR COMPOUNDING MATERIALS
Harold J. Renaud, Okemos, Mich., assignor to Ren Plastics, Inc., Lansing, Mich., a corporation of Michigan
Filed May 8, 1961, Ser. No. 108,383
12 Claims. (Cl. 241—101)



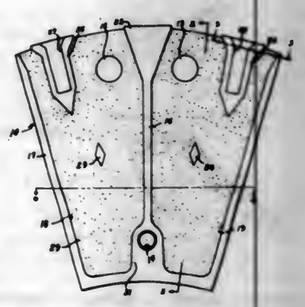
1. In apparatus for mixing and blending materials, the combination of a blending unit of the rotating screw type having a cylindrical blending chamber in which a driven conveying and blending screw rotates, said chamber having a discharge opening at one axial end thereof, and a pump of the helical rotor-helical stator type having an intake at one end of the rotary axis of its rotor which is in direct and substantially coaxial receiving relation to said discharge opening of said blending chamber, said pump having means driving the same at the axial end thereof opposite its axial intake end to forward material received at said intake end thereof through a closed path and under pressure, the pump discharging radially between said axial ends.

3,128,054
AGRICULTURAL DEVICE
Aaron P. Beiler, Gap, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Mar. 12, 1962, Ser. No. 178,846
3 Claims. (Cl. 241—186)



2. A device for shredding bales of hay or the like comprising means to support a bale in a predetermined plane, an endless conveyor adapted to receive a plurality of bales thereon and move said bales successively across said support means, a toothed shredding cylinder disposed above said support means and in the path of movement of bales across said support means, power means rotating said toothed shredding cylinder in a direction whereby the teeth on said cylinder move upwardly into the end of a bale moving across said support means, a normally disengaged speed reducing drive train from said cylinder to said conveyor for driving the conveyor from the cylinder, and control means responsive to the speed of rotation of said cylinder to affect driving engagement of said drive train when said cylinder rotates above a predetermined speed.

3,128,055
REFINER PLATE
Donald P. Michel, Springfield, Ohio, assignor to The Bauer Bros. Co., Springfield, Ohio, a corporation of Ohio
Filed May 31, 1961, Ser. No. 113,916
10 Claims. (Cl. 241—298)



1. A refiner plate for application to a backing plate of a disc refiner or the like having on one face a working surface and, on the opposite face, means projected for firm abutment thereof to a backing plate, said means defining recesses having a filling of chemically inert, compressible substance normally arranged to project therefrom and form a seal with the backing plate on application of the refiner plate thereto, said sealing substance being operative to prevent sifting and build up of the material being refined to the rear of the refiner plate.

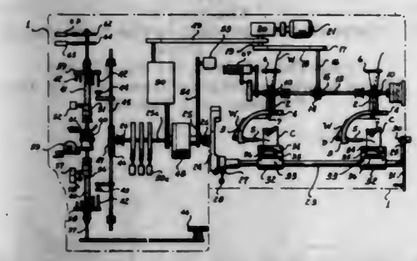
3,128,056
MACHINE FOR WINDING TOROIDAL TELEVISION VERTICAL DEFLECTION COILS
Rudolf Fahrbach, Union, N.J., assignor to Universal Manufacturing Co., Inc., Irvington, N.J., a corporation of New Jersey
Filed Mar. 2, 1962, Ser. No. 177,065
8 Claims. (Cl. 242—9)

1. A machine for winding toroidal television vertical deflection coils comprising:

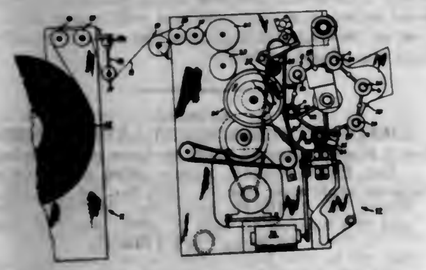
(*a*) a plurality of wire winding flier arms supported for rotation on parallel spaced apart axes with means to simultaneously rotate them,

(*b*) a common arbor for rigidly supporting a plurality of core sections in cooperative relation with a corresponding number of said flier winding arms and adapted to be individually wound with wire supplied by the latter, and

(*c*) means for imparting an oscillatory movement to said arbor about an axis to maintain the center of curvature of each of the core sections in substantial alinement with the axis of rotation of the corresponding flier arm.



3,128,057
DOUBLE PLY WEB TRANSFER DEVICE
Robert E. Barnhart, Springfield Township, Hamilton County, and Philip B. Lodge, Cincinnati, Ohio, assignors to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
Filed June 12, 1962, Ser. No. 201,905
5 Claims. (Cl. 242—56)



1. In a paper winding machine having a bedroll about which a multiple ply web of paper passes and a plurality of mandrels adapted to successively and continuously receive and wind predetermined lengths of paper upon cores, the combination comprising:

(A) adhesive applicating means for applying adhesive to a multiplicity of continuous ring-shaped areas on the periphery of a core prior to winding,

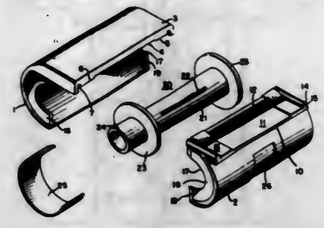
(B) intermittently actuated piercing means for producing apertures in said web at a multiplicity of points spaced transversely across said web, said piercing means comprising a multiplicity of punches each aligned with one of the ring-shaped adhesive areas of said core, said punches being positioned to penetrate the web from the side thereof which is to be outermost when the web is wound on a core, to thereby cause fibers from the outermost ply of the web to be exposed on the innermost side of said web, said punches being actuated only once during the winding of each core,

(C) severing means for cutting said web in timed relationship with the operation of said piercing means and at a position on the web slightly in advance of said apertures, and

(D) transfer means for causing the apertured and severed end of said web to be pressed against said core with said apertures directly contacting the aligned rings of adhesive on said core,

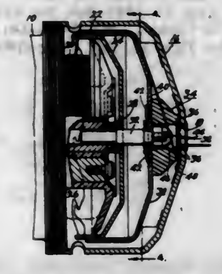
whereby fibers from the outermost ply of said web become adhered to said core so as to prevent separation of said plies during the initial stages of the winding operation.

3,128,058
PLASTIC CASING FOR PHOTOGRAPHIC FILM SPOOLS HAVING LIGHT-ABSORBING BAFFLES
Louis A. Ringle, Wilmington, Del., and Robert N. Marona, Forest Hills, N.Y., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Dec. 27, 1961, Ser. No. 162,452
6 Claims. (Cl. 242—71.1)



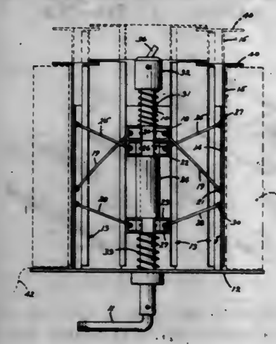
6. In a lightproof casing for a spool of photographic film having lips providing an elongated slot for the ingress and egress of photographic film, each of said lips having an outer straight portion and an inner curved portion providing a curved inner extension of the slot, said curved portion serving to prevent light rays from passing into the casing by having therein steps that constitute light-absorbing baffles, the risers of said steps being in planes that are substantially perpendicular to the outer straight portion and the treads being in planes that are substantially parallel to said outer straight portion.

3,128,059
SPINNING REEL LOOP PICKUP
Joseph M. Holahan, Jr., Abington, Pa., assignor to True Temper Corporation, Philadelphia, Pa., a corporation of Ohio
Filed Mar. 8, 1961, Ser. No. 94,210
6 Claims. (Cl. 242—84.2)



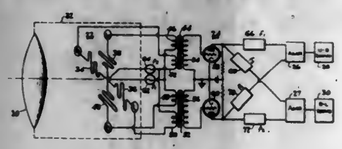
3. In a closed face spinning reel comprising a housing, a spool carried by said housing, said housing having a centrally apertured shroud member, rotatable and axially movable line-winding means disposed interiorly and adjacent of said centrally apertured shroud member for winding line passing into the reel through said aperture upon said spool, the improvement comprising a line pickup member associated with said line-winding means, a loop pickup member carried by said line-winding means projecting forwardly from said line-winding means toward and spaced from the aperture axially of said shroud member, control means projecting said line-winding means and said loop pickup means to cause said loop pickup means to engage the line passing through said aperture upon rotation and axial movement forwardly of said line-winding means to tension the line and cause it to be engaged by the said line pickup member.

3,128,060
YARN CAKE HOLDER
Grover Lee Todd, Wilmington, Del., assignor, by mesne assignments, to FMC Corporation, San Jose, Calif., a corporation of Delaware
Filed Sept. 27, 1962, Ser. No. 226,578
10 Claims. (Cl. 242—110.1)



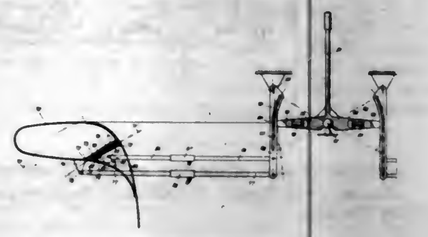
1. A yarn cake holder comprising an axial shaft, a plurality of longitudinally extending cake engaging elements supported by said shaft, said elements being movable radially of said shaft from inner positions to outer cake engaging positions, means urging said elements to their outer positions, a flange on the end of each of said elements, and said last mentioned flanges extending beyond the longitudinal edges of their respective elements and lapping the flanges of adjacent elements when said elements are in both their inner positions and their outer cake engaging positions.

3,128,061
AUTOMATIC SELF-GUIDANCE SYSTEM FOR MOVABLE OBJECTS
Thornton W. Chew, 2228 Prosser Ave., Los Angeles 64, Calif.
Filed Aug. 11, 1945, Ser. No. 610,382
16 Claims. (Cl. 244—14)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A radiation detector comprising focusing means having an optical axis, a first pair of radiation sensitive elements in spaced relation normal to and diametrically centered on said axis, a second pair of radiation sensitive elements in similar spaced relation normal to and diametrically centered about said optical axis, said second pair of elements lying substantially in the plane of and at right angles to said first pair of elements, an alternating current source operating at a first frequency, a second alternating current source operated at a second frequency, said pairs of elements energized by said alternating current sources respectively, amplifier means responsive to the voltage across each element of said pairs of elements, first servo means controlled by said amplifier and responsive to said first frequency, second servo means controlled by said amplifier means responsive to said second frequency whereby radiation falling on at least one of said elements causes operation of at least one of said servos.

3,128,062
AIRCRAFT
Jean Marie René Brocard, 32 Rue La Fontaine, Paris, France
Filed Feb. 19, 1962, Ser. No. 174,314
Claims priority, application France July 19, 1961
7 Claims. (Cl. 244—23)



1. In an aircraft having a propeller the axis of which being substantially vertical, a collector guiding the airstream downwards energized by the propeller and supporting the motor driving the propeller, said collector being co-axial with the propeller axis and having an enlarged collecting portion disposed upstream of the propeller, stabilizing and piloting means comprising a series of sections of the enlarged collecting portion each rotatable about a horizontal axis and means operable to impart a local deformation unsymmetrical with respect to the said axis of the said enlarged collecting portion by lifting at least one of said sections.

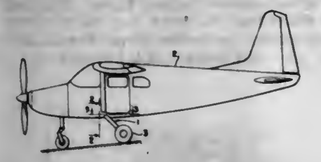
3,128,063
AIRFOIL WITH BOUNDARY LAYER CONTROL
Leo I. Kaplan, Sunland, Calif., assignor to Poly Industries, Inc., Pacoima, Calif., a corporation of California
Original application July 28, 1958, Ser. No. 753,172, now Patent No. 3,010,680, dated Nov. 28, 1961. Divided and this application May 8, 1961, Ser. No. 108,461
6 Claims. (Cl. 244—42)



1. An aerodynamically-contoured structure having a relatively thick leading edge portion and a relatively thin trailing edge, a major portion of one of the surfaces of said structure being depressed rearward of the thickest part of said leading edge portion, means for supplying pressurized elastic fluid to the chamber formed by said depressed surface, said last-named means including means for varying the direction and distribution of said elastic fluid in a manner to support the slipstream in the area contiguous to but spaced from said depressed surface and along an aerodynamically-contoured path merging smoothly with the adjacent portions of the boundary layer of said structure.

3,128,064
AIRCRAFT LANDING GEAR
Albert W. Mooney, Smyrna, Ga., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Sept. 1, 1959, Ser. No. 837,422
2 Claims. (Cl. 244—104)

2. In combination with an aircraft fuselage, a flexural resilient landing gear strut member extending from each side of the fuselage and having substantially equal flexural resiliency in any direction normal to the strut axis, each of said strut members fixedly secured to the fuselage and depending therefrom in a direction having downward, lateral and aft components when the aircraft is in its static condition, and a ground engaging member connected to the free end of each strut, said ground engaging member deflecting in an outward, upward and aft direction relative to the fuselage as each strut assumes support of the fuselage weight as a result of the flexural resiliency of the strut members and the depending directions of the strut members from the fuselage.

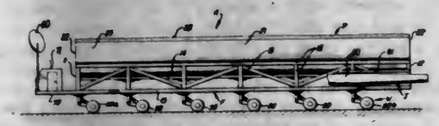


3,128,065
HEAVY DUTY AIRCRAFT SKI
Wesley K. Landes, P.O. Box 1254, Anchorage, Alaska
Filed May 15, 1961, Ser. No. 109,948
17 Claims. (Cl. 244—108)



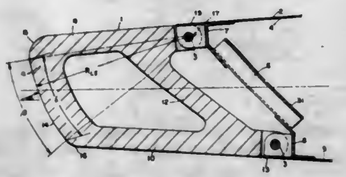
1. A structurally integrated aircraft ski having a generally laterally flat runner portion and a raised pedestal portion, said aircraft ski also having a pedestal and runner surrounded landing wheel receiving well, formed by and extending through said pedestal and runner portions, said raised pedestal portion including support means for a wheel disposed in said wheel well, and said runner portion and said pedestal portion being joined only at the outer edges thereof and around said wheel well.

3,128,066
LANDING PLATFORM
Albert C. Bailey, 1570 E. Howard St., Pasadena, Calif.
Filed Oct. 31, 1960, Ser. No. 66,010
4 Claims. (Cl. 244—114)



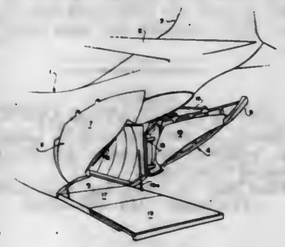
1. An aircraft landing platform of the character referred to including an elongate horizontally disposed, rectangular frame having front and rear ends, an upwardly disposed aircraft supporting pad fixed to and carried by the frame, supporting and guiding wheels at the four corners of the frame and a plurality of support wheels secured to the frame between the supporting and guiding wheels, steering means related to the supporting and guiding wheels and operable to selectively turn the four supporting and guiding wheels synchronously and to turn the two supporting and guiding wheels at one end of the frame independent of said wheels at the other end of the frame, propulsion means including gas turbine jet engines fixed to the frame and disposed rearwardly, braking means related to the several wheels, and control means related to the steering, propulsion and braking means to steer and propel the platform to occur below and catch a descending aircraft.

3,128,067
ASYMMETRIC HYPER-VELOCITY LEADING EDGES
George A. Loegering, Manhattan Beach, Martin R. Kinsler, Los Angeles, and Robert T. Lancet, Van Nuys, Calif., assignors to North American Aviation, Inc.
Filed Oct. 26, 1961, Ser. No. 147,807
5 Claims. (Cl. 244—117)



1. An airfoil including a leading edge member, said leading edge member comprising a temperature and shock resistant body having upper and lower surfaces interconnected by a leading edge portion, said leading edge portion having a bluntly curved external surface that is nontangent to said upper and lower surfaces, and which has its maximum chord substantially normal to the direction of airflow when the airfoil is disposed at a relatively large angle of attack.

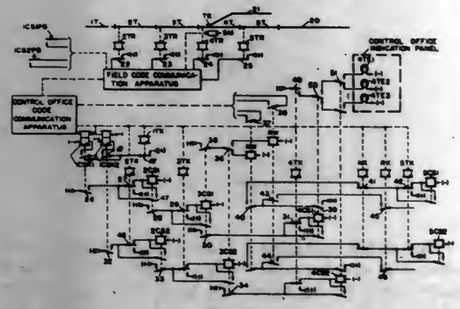
3,128,068
PETAL TYPE DOOR FOR CARGO AIRCRAFT
Julius A. Pauli, Marietta, Ga., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Nov. 9, 1962, Ser. No. 236,513
3 Claims. (Cl. 244—129)



3. An aft door structure for a cargo aircraft fuselage comprising: a pair of door assemblies each having an upper and lower door panel pivotally connected together and each assembly having an open and closed position, a first actuating means for pivoting the lower door panels upward and inward relative to its related upper door panel whereby the inner surfaces of the upper and lower door panels are confronting, said upper door panels pivotally connected to the fuselage, and a second actuating means moving the door assemblies about the pivotal connections of the upper door panels to the fuselage, the pivotal connections between the upper door panels and the fuselage arranged so as to swing the aft portions of the door assemblies away from each other in an opening direction and to bring the aft portions of the door assemblies toward each other in a closing direction, the movement of the lower door panels relative to the upper door panels in an opening and closing direction capable of occurring concurrently while the upper door panels move

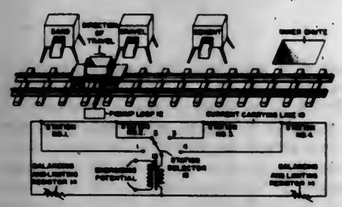
about their pivotal connections to the fuselage in an opening or closing direction.

3,128,069
TRAIN DESCRIBER SYSTEM
Clark A. Pickell, Rochester, N.Y., assignor to General Signal Corporation
Filed Nov. 9, 1959, Ser. No. 851,820
6 Claims. (Cl. 246—2)



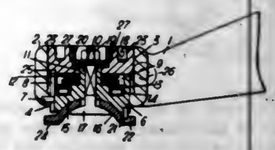
5. A train describer system for indicating at a remote control office the identity of trains occupying different track sections of a stretch of railway track comprising, train describer storage means at the control office for each of the track sections responsive to the condition of the storage means for the next adjoining track section, and means including track circuits for the respective track sections for permitting the response of said storage means for each track section to the condition of the storage means for the next adjoining track section only provided that the associated track section is unoccupied by a train, whereby train description for the storages associated with several track sections are contemporaneously established for the same train provided that such track sections are unoccupied.

3,128,070
POSITION INDICATING DEVICE
Samuel C. Harris, Jr., and Lawrence W. Langley, Waynesboro, Va., assignors to General Electric Company, a corporation of New York
Filed May 31, 1960, Ser. No. 32,700
14 Claims. (Cl. 246—122)



1. A device for indicating the position of two objects with relation to each other comprising current carrying means adapted to be associated with one of said objects, said current carrying means being unwound and having a common current path which branches into two main current paths, and current sensitive means adapted to be associated with the other of said objects, said current sensitive means being arranged to produce a signal in response to the current through said two main current paths of said current carrying means.

3,128,071
LOAD CARRYING DEVICES FOR AIRCRAFT AND OTHER VEHICLES
Archibald Goodman Frazer-Nash, 84 Kingston Hill, Kingston-on-Thames, Surrey, England
Filed Dec. 24, 1962, Ser. No. 246,787
Claims priority, application Great Britain Jan. 4, 1962
5 Claims. (Cl. 248—1)



1. A sway-brace comprising a support, a thrust piece, means adjustably mounting said thrust piece on said support, a pad carried by said thrust piece, first abutment means fixed relatively to said thrust piece, second abutment means fixed relatively to said pad, resilient means acting between said thrust piece and said pad to allow movement of said pad relative to said thrust piece to take place until said first abutment means comes into contact with said second abutment means to prevent further relative movement taking place and said resilient means then exerting a predetermined thrust on said pad, a member connected to said thrust piece, a first spherical surface on said pad and a second spherical surface on said member, said two spherical surfaces being slidable on each other to allow said pad to rock in any direction relative to said member.

3,128,072
ARTICLE ATTACHING DEVICE
Ryoji Shibata, 390 Okuyama-cho, Higashi-ku, Osaka, Japan
Filed Sept. 22, 1961, Ser. No. 140,103
1 Claim. (Cl. 248—29)



An article attaching device comprising a base sheet of a pliable synthetic resin, a coating of an adhesive on one face of said base sheet for adhering to a supporting surface, a holding sheet of a flexible synthetic resin having one face fixedly connected solely along a line at the medial portion thereof to the other face of said base sheet and the remaining portions of said holding sheet being free, and a coating of an adhesive on the other face of said holding sheet for engaging and adhering to the article to be attached.

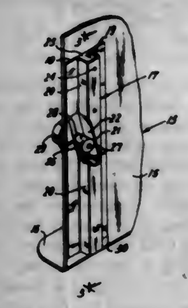
3,128,073
HEAT COMPENSATED SUPPORT FOR AN ELONGATED ELEMENT
Gerald E. Berlyn, 264 Chandler St., Worcester, Mass.
Filed Nov. 5, 1962, Ser. No. 235,198
4 Claims. (Cl. 248—55)

1. A support for an elongated element subject to variations due to heat, said support comprising a base, a plate slidable rectilinearly on said base, a second plate mounted transversely of said first plate and at a right angle thereto, said second plate having a concave upper edge, an outwardly extending supporting protuberance on said concave edge, a plate complementary to the second plate, means securing the complementary plate to the second plate in edge-to-edge relation, said complementary plate having a concave edge forming an opening with the concave edge in the second plate, said opening being completely surrounded by the second and complementary plate, a supporting protuberance on the complementary plate, said protuberances together providing supports for said elongated element and rigidly and fixedly contacting and holding the same at spaced points about the periphery



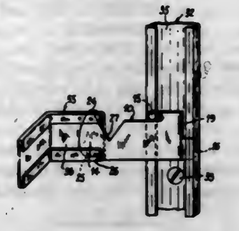
thereof, and an elongated gap in each of said second and complementary plates, said elongated gaps substantially surrounding the opening and providing for a generally even expansion of the edges of the second and complementary plates under conditions of applied heat with respect to said element, the latter being generally parallel to the base and at right angles to the second plate and its complementary plate.

3,128,074
METAL SHELVING BRACKET
Richard Schwarz, Livingston, N.J., assignor to Bro-Dart Industries, Inc., Newark, N.J., a corporation of New York
Filed Oct. 5, 1962, Ser. No. 228,545
6 Claims. (Cl. 248—246)



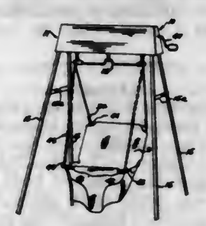
1. In a shiftable shelf structure, an upright provided with a vertical groove of dove-tail cross-section, a shelf bracket comprising a vertical panel having a shelf support on its front face and a vertical rib on its rear face, said rib having one side face contoured to fit one side of said groove, the other side face being provided with an opening, the over-all width of said rib being no greater than the narrower front part of said groove so that the rib can be inserted into said groove through said narrower part, a clamping element movably mounted in said opening, means including a spring for urging said element laterally to enlarge the effective width of said rib and establish frictional gripping contact with the adjacent side of the groove, and release means on the front face of the bracket for retracting said element against the urgence of said spring.

3,128,075
ADJUSTABLE SUPPORT FOR CURTAIN RODS AND THE LIKE
Benjamin Stein, New York, N.Y.
(704 Palmer Court, Mamaroneck, N.Y.)
Filed Sept. 11, 1961, Ser. No. 137,304
4 Claims. (Cl. 248—265)



1. A support for curtain rods and the like, said support comprising a generally upright mounting strip, a pair of longitudinal walls along opposite edges of said strip, said longitudinal walls extending generally inwardly spaced from one face of said strip and terminating short of each other, an elongate bracket member having one end proximate to said one strip face and having its other end extending laterally in a direction parallel to said one face and beyond one of said longitudinal walls for supporting engagement with a curtain rod or the like resting adjacent said other end, and a pair of fingers laterally offset and projecting oppositely from said bracket member and respectively removably engaged beneath said longitudinal walls, said fingers being spaced vertically with the upper finger engaged beneath said one longitudinal wall and the lower finger engaged beneath the other longitudinal wall, said fingers thereby providing a reactive couple maintaining said bracket member in a selected position relative to said mounting strip under the weight of a curtain rod or the like, and said fingers being disengageable from said walls upon upward swinging of said other bracket-member end for vertical movement of said bracket member along and removal of said bracket member from said mounting strip.

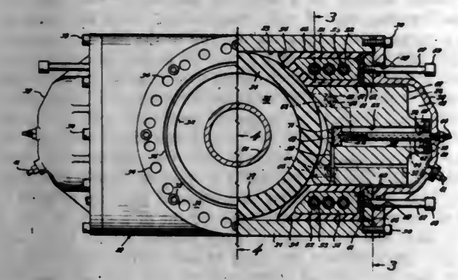
3,128,076
TORSION BAR ASSEMBLY FOR MECHANICAL SWING
Joseph Di Pasqua, Detroit, Mich., assignor to Mechanical Swinging Cradle Corporation, Detroit, Mich.
Filed Sept. 28, 1962, Ser. No. 226,987
8 Claims. (Cl. 248—370)



1. A swing suspension comprising a horizontally arranged support housing having a pair of spaced apart end wall supports; a horizontally arranged torsion bar made of stiff, rod-like material and having its opposite ends each rotatably connected to one of said end wall supports, the central portion of said torsion bar being bent into an upwardly opening, deep U-shaped whose legs are substantially vertically arranged and whose base is horizontally arranged, with the base and legs joining at relatively sharp bent corners; a motor supported in said housing, the

motor having a driven, reciprocating lever extending downwardly therefrom and being connected to the center of said base for reciprocating said torsion bar about its rotatably connected ends; a swing having a pair of elongated, upright arranged swing support rods, each arranged adjacent to one of said legs and having its upper end connected to the torsion bar at a point located between the respective leg and torsion bar end and extending downwardly at an angle to the vertical to contact its respective leg just above its connection to said horizontally arranged base, the rods further extending downwardly in contact with its respective leg and then extending further downwardly and having its lower end located at a considerable distance beneath the torsion bar with the lower end being formed with means for connection to said swing; means connecting the upright rods to their respective legs at the bent corners where the legs join said base.

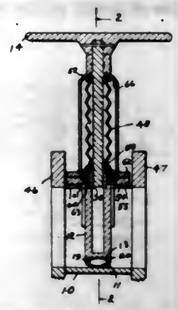
3,128,077
LOW PRESSURE BLOWOUT PREVENTER
Maurice C. Lucky, Houston, Tex., assignor to Cameron Iron Works, Inc., Houston, Tex., a corporation of Texas
Filed May 16, 1960, Ser. No. 29,236
9 Claims. (Cl. 251—1)



1. A low pressure blowout preventer comprising; a body having a bore therethrough, a plurality of guideways in the body connecting with the bore; seal means of resilient material extending longitudinally of the bore across the connection of each guideway therewith and anchored at only one end against movement axially of the bore; and a ram movable longitudinally within each guideway between retracted and extended positions, said seal means providing an opening in said bore when the rams are retracted, and being deformable into sealing engagement about an object in the opening, or with itself when the opening is empty, when the rams are extended.

3,128,078
GATE VALVE WITH PARTICULAR SEAL MEANS
Joseph Kosik, Main St., Townville, Pa.
Filed Mar. 24, 1961, Ser. No. 98,159
3 Claims. (Cl. 251—214)

1. A valve comprising a hollow body having an inlet and an outlet, said body being generally U-shaped in transverse cross section, a generally flat plate forming one side of said body defined between the legs of said U, a bonnet supported on said plate, a generally rectangular slot in said plate forming an opening between said bonnet and the inside of said body, a generally U-shaped sealing block having a flat upper end and a curved lower end extending through said slot, a resilient sealing member attached to the outer edge of said sealing block and extending entirely around said curved end, and means extending through said bonnet to force said block through said slot into said hollow body to bring said sealing member into sealing relation with the inside of said body forming a seal between said inlet and said outlet, said sealing member having a space generally round in cross section extending around said curved end thereof, said space in said sealing member being adapted to receive gas under pressure, a second sealing member made of resilient material attached to the flat end of said sealing



block, said plate having an inwardly and downwardly inclined surface around said slot, said block having a third sealing member having an inwardly and downwardly inclined undersurface thereon adapted to sealingly engage the surface of said plate around said slot when said block is in position to close said body.

3,128,079
SURGICAL TURBINE
Morton S. De Groff, Bryan, Ohio, assignor to The Aro Corporation, Bryan, Ohio, a corporation of Ohio
Filed Mar. 4, 1963, Ser. No. 262,665
14 Claims. (Cl. 253—5)

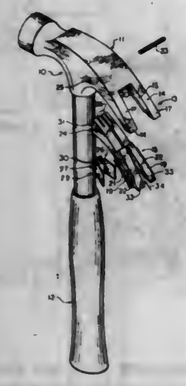


1. In a surgical turbine, an elongated housing of a size suitable to be held pen-like in the hand, means for supplying fluid pressure to one end of said housing, a collet at the other end of said housing for the reception of the shank of a surgical bur or the like, a shaft, bearings journaling said shaft in said housing for rotating said collet, said collet being mounted on the outer end of said shaft, a turbine wheel on said shaft for rotating the same, means for directing fluid pressure to the vanes of said turbine wheel including a control valve, a brake for said shaft comprising a friction applying element longitudinally movable with respect to said housing and normally biased to engage the inner end of said shaft, a brake release element movable transversely of said housing, and a control lever pivoted at one end to said housing and extending longitudinally thereof so that index finger pressure may be applied thereto as said housing is held in the hand, said control lever upon initial depression cooperating with said brake release element and thereafter upon further pressure cooperating with said control valve to open it in proportion to the degree of pressure applied to said control lever.

3,128,080
CLAW HAMMER
Robert W. Weller, 26017 Eshelman Ave., Lomita, Calif.
Filed Feb. 26, 1962, Ser. No. 175,742
8 Claims. (Cl. 254—24)

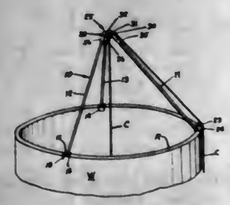
1. An improved nail pulling device, comprising a head unit to be rocked by a handle, the head at one side of

the handle locus forming first terminal claw means having relatively short tines the roots of which are joined by a transversely thickened section of the head spaced a substantial distance from the handle locus, and other means carried by the head including second terminal claw means located in such force transmitting relationship to said first claw means that said second claw means



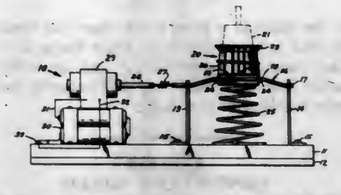
becomes energized to increasingly grip a nail shank in response to force transmission thereto from said first claw means during rocking of said head in nail pulling sense, said other means being pivotally mounted on said head at a locus spaced from said second and away from the tines and so that said second claw means is received within said first claw means.

3,128,081
SILO UNLOADER TRIPOD
Floyd E. Buschbom, Long Lake, Minn., assignor to Vandale Corporation, Long Lake, Minn., a corporation of Minnesota
Filed Mar. 30, 1960, Ser. No. 18,697
4 Claims. (Cl. 254—139)



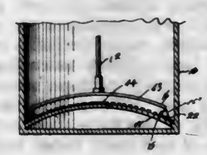
3. In an improved tripod assembly for silo unloaders of the type having legs comprising two members and a hollow member that engage the top rim of a silo and having means for supporting a silo unloader, the improvement comprising, a separable center assembly comprising three tubular members, two of said tubular members being of larger diameter than the third tubular member and each adapted to receive one of said two members inside thereof, two members engaged inside said two tubular members of larger diameter, releasable means securing said two tubular members to said two members, a V-bar means, each of said tubular members being pivoted to an arm of said V-bar means, means precluding substantial movement of said tubular members axially of said arms, a sheave, a hanger means, means joining the ends of said V-bar means and serving as a supporting shaft for said sheave and hanger means, means precluding substantial movement of said sheave and said hanger means axially of said means joining the ends of said V-bar means, said sheave being positioned interior of said hanger means, said third tubular member being joined to said hanger means, a hollow member, said third tubular member adapted to be positioned interior of said hollow member and releasable means for securing said third tubular member to said hollow member.

3,128,082
SHAKER
Claude D. Cline, P.O. Box 4308, Pasadena, Calif.
Filed Mar. 2, 1962, Ser. No. 176,931
4 Claims. (Cl. 259—72)



1. A mechanical shaker apparatus for use in shaking small containers of cosmetic materials and the like, said apparatus comprising a base having an upright helical spring secured thereto, at least one of the upper convolutions of said helical spring being of larger diameter than the adjacent lower convolutions thereof and being adapted to resiliently grip the lower end of a container to be shaken with the bottom of the container closely overlying said adjacent smaller diameter convolutions of said spring, and power driven eccentric means coupled to the upper end of said helical spring and effective to agitate the contents of a container while supported within the top convolution of said spring.

3,128,083
AGITATOR FOR PLASTER MAKING KETTLES AND THE LIKE
Robert C. Blair, Winnipeg, Manitoba, Canada, assignor to Western Gypsum Products Limited, Winnipeg, Manitoba, Canada
Filed Dec. 11, 1961, Ser. No. 158,501
3 Claims. (Cl. 259—107)

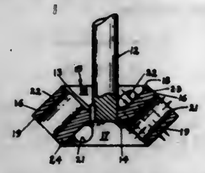


1. The combination of a receptacle having a bottom, and an agitator provided in said receptacle, said agitator comprising a rotatable blade closely spaced from said bottom of the receptacle, an elongated flexible element connected at its ends to the ends of said blade and having a length greater than the blade whereby said flexible element may drag along said bottom when the blade is rotated, and a plurality of polygonal agitator blocks carried by said flexible element, said blocks being formed with apertures having said flexible element threaded freely therethrough whereby the blocks are rotatable on said element.

3,128,084
STIRRER
Wilbur W. Castor, 746 Shady Lane, Pittsburgh 34, Pa.
Filed Nov. 15, 1961, Ser. No. 152,424
9 Claims. (Cl. 259—134)

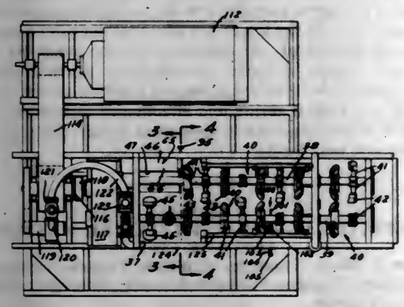
2. A stirrer comprising a rotary shaft, a hub fixed on the shaft, and a circumferential flange fixed to the hub

with passages and ports formed therethrough on axes inclined with respect to the shaft axis and radial thereto, the passage and port axes being at an angle with respect to one another such that the inner ends of the passages



open on the shaft at a level lower than the inner ends of the ports and a liquid containing the flange is caused by centrifugal force to flow outwardly and upwardly through the passages and outwardly and downwardly through the ports upon rotation of the shaft.

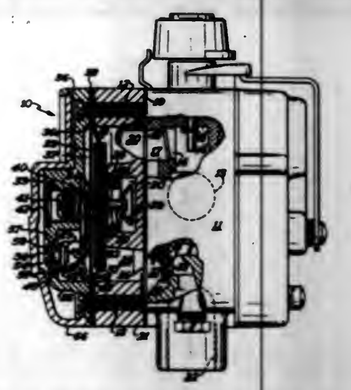
3,128,085
CONTINUOUS MIXER
Walter M. Madsen, Arcadia, Calif., assignor to Baldwin-Lima-Hamilton Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Aug. 29, 1960, Ser. No. 52,641
4 Claims. (Cl. 259—169)



4. In a continuous mix plant: a twin-shaft pug mill mixer body including bottom, end and side walls, said body having a discharge opening at one end and at one side of the longitudinal center thereof; a pair of parallel, laterally spaced, longitudinally extending shafts rotatably mounted in said body; partition means adjacent said discharge opening and defining with the adjacent end wall of the body, a discharge compartment opening laterally inwardly of said body; means operably attached to the shafts for moving material in said body toward the discharge end thereof; means on one shaft adjacent the partition means for moving material in said body transversely toward the other side of said body; means on said other shaft and adjacent the open side of the discharge compartment for moving material laterally into said discharge compartment; a pivoted gate controlling the size of a part of the discharge opening; and yielding means yieldingly urging said gate toward the closed position.

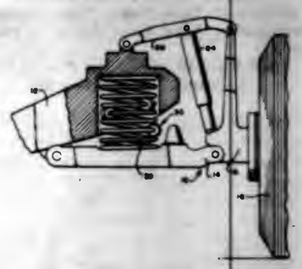
3,128,086
ADJUSTABLE BIASING MEANS FOR PRESSURE REGULATORS
Frank T. Wolfhope, Torrance, Calif., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Apr. 13, 1962, Ser. No. 187,309
2 Claims. (Cl. 267—1)

1. A spring adjustment structure for a pressure regulator comprising a motion transmitting member, a first loading means for exerting a regulating force on said member, a lever having an end thereof engageable with said member, a second loading means positioned to bias said lever towards said member, and manually operable means movable between two positions, said manually operable means



being out of engagement with said lever in one of said positions to free said lever for engagement with said member to additionally load it and being in engagement with said lever to hold said lever out of engagement with said member in said other position.

3,128,087
GLIDE RIDE FOR AUTOMOBILES
Marshall H. Hughes, 2414 Wedgewood Drive, Wichita Falls, Tex.
Filed June 12, 1961, Ser. No. 116,389
2 Claims. (Cl. 267—33)

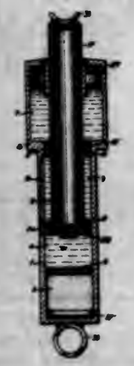


1. An invention of the character described comprising, a tough, hard, resilient, annular body, the annular body being demarcated between its centrally located periphery and its external boundary and the coil of a spring snugly passing through the center of the said annular body thereby providing an auto glide for automobiles.

3,128,088
HYDROPNEUMATIC SUSPENSION UNIT
Peter Paschakarnis, Schweinfurt (Main), Germany, assignor to Fichtel & Sachs A.G., Schweinfurt (Main), Germany, a corporation of Germany
Filed Mar. 21, 1961, Ser. No. 97,238
Claims priority, application Germany Apr. 1, 1960
11 Claims. (Cl. 267—64)

11. In a suspension unit, in combination:
(*a*) a cylinder member having an axis and defining a cavity therein;
(*b*) a piston member axially reciprocable in said cylinder member and dividing said cavity into a pressure space and a pump space,

(1) said piston member having respective radially extending opposite faces in said spaces, the effective area of the piston member face in said pressure space being greater than the effective area of the opposite piston member face in said pump space;
(*c*) a liquid substantially filling said spaces;
(*d*) resilient means for maintaining the liquid in said pressure space under a predetermined pressure greater than atmospheric pressure;
(*e*) a liquid reservoir;



(*f*) two check valve means respectively interposed between said pump space and said pressure space and between said pump space and said reservoir for selectively blocking passage of liquid between said pressure space and said pump space when the pressure in said pressure space exceeds the pressure in said pump space, and for blocking passage of liquid between said pump space and said reservoir when the pressure in said pump space exceeds the pressure in said reservoir;
(*g*) attaching means on each of said members outside said cavity;
(*h*) passage means connecting said pressure space and said pump space; and
(*i*) means on said piston member for interrupting connection of said spaces by said passage means when said piston member moves inward of said pressure space past a predetermined position, said cylinder member being formed with an axially extending groove radially open to said cavity, constituting said passage means and extending axially in a direction from said pump space to a portion of said cavity radially aligned with said predetermined position of said piston member.

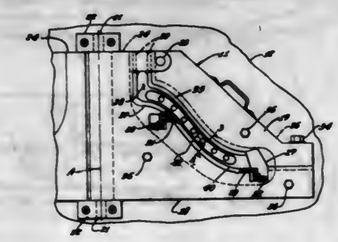
3,128,089
SUSPENSION AND HEIGHT CONTROL SYSTEM FOR VEHICLES
Richard A. Burris, Pekin, and Robert E. Gerber and Charles C. Sons, Jr., Peoria, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed Aug. 25, 1961, Ser. No. 133,888
2 Claims. (Cl. 267—64)

2. In a vehicle suspension system, a vertically disposed hollow strut fixed relative to a vehicle wheel, a cylinder fixed to the vehicle body and telescoping downwardly over said strut to provide therewith a liquid chamber of variable capacity, a cylindrical gas chamber extending downwardly from the upper end of said cylinder into said strut and having an open lower end, and a floating piston therein to confine gas to its upper portion whereby weight imposed on said cylinder will cause said floating piston to move upwardly against the pressure of gas in the gas chamber, and means operable upon raising and lowering of the cylinder relative to the strut to decrease and increase respectively the volume of liquid in said liquid chamber to maintain the cylinder and suspended vehicle at a constant elevation relative to the ground,



said means comprising a recess between the walls of the strut and cylinder communicating with a high pressure liquid source, a similar recess below the first recess communicating with a discharge line, an orifice in the wall of the strut normally positioned between said recesses, and sealing means in the cylinder wall normally closing said orifice.

3,128,090
FIXTURE FOR CHUCKING COMPONENTS
Max B. Andersen, Gardena, Calif., assignor to Northrop Corporation, Beverly Hills, Calif., a corporation of California
Filed May 28, 1962, Ser. No. 198,319
6 Claims. (Cl. 269—7)



1. Apparatus adapted to provide firm and rigid support for a component mounted therein comprising: a fixture having an opening therein adapted to receive a component on which a machine operation is to be performed; a plurality of elongated flexible sleeves positioned against the outer sides of said opening and adapted to contact and surround major peripheral portions of said component; and a filling of a solid eutectic material in said sleeves.

3,128,091
FLEXIBLE LIQUID FLOW BARRIER FOR EMBALMING TABLE
Dennis W. Pannell, Fort Worth, Tex.
(403 N. Page, Comanche, Tex.)
Filed Oct. 8, 1962, Ser. No. 229,049
2 Claims. (Cl. 269—327)

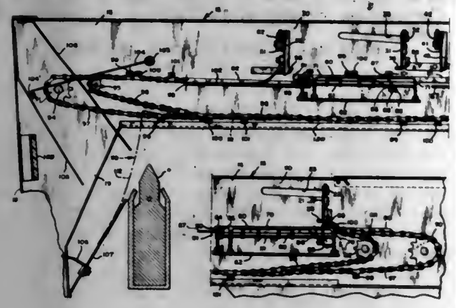
1. An elongated flexible, resilient element formed of molded resilient material for use as a portable, movable

liquid flow barrier or dam for temporary application to the surface of an embalming table, said element having an upstanding central portion, coextensive with its length, and having a relatively wider base portion which is arched intermediate its side edges and has marginal flange portions which extend laterally outwardly in opposite directions, the marginal flange portions being flexed downwardly and laterally outwardly by their inherent elasticity and being tapered whereby they terminate in knife edges



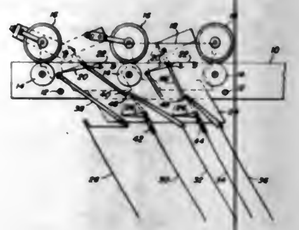
and are adapted to be seated with their under sides flush with the table top, and with their top sides inclined at an obtuse angle relative thereto, upon depressing the upstanding central portion, and having a series of integral suction cups connected to the under side of the base portion along its longitudinal center line, between the marginal flange portions, in longitudinally spaced relation to each other and facing downwardly, whereby said element is adapted to be removably secured to the table top upon depressing the upstanding central portion.

3,128,092
COLLATOR FOR FOLDED SHEETS
Marcellus Nelson, 417 Garfield St., Viroqua, Wis.
Filed May 31, 1962, Ser. No. 199,185
8 Claims. (Cl. 270—54)



1. Sheet handling apparatus comprising a frame, movable sheet moving means for moving collated signatures having leaves on each side of a fold line longitudinally of said frame, said sheet moving means including means for causing the signatures to be opened into inverted V-form at a predetermined point in their movement with the leaves on one side of the fold line hanging free and the opposite leaves supported in a generally horizontal plane, a receiving saddle extending transversely of said frame directly below said moving means and so positioned that one of its sides obstructs movement of said free-hanging signature leaves while said signatures pass thereabove, there being means temporarily supporting the horizontal leaves against downward movement by gravity until said supporting means progresses to a position to permit said leaves to fall by gravity into draped position on the other side of said saddle with the signature fold line on top of the saddle, and means for driving said sheet moving means.

3,128,093
GUIDEWAY FOR DOCUMENT SORTING MACHINES
William D. Highsmith and Richard L. Swartz, Columbia, S.C., assignors to Universal Business Machines, Inc., Columbia, S.C., a corporation of South Carolina
Filed May 11, 1961, Ser. No. 109,427
3 Claims. (Cl. 271—64)



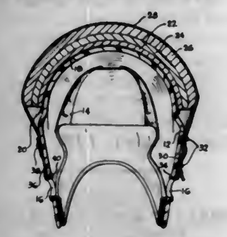
1. A guideway construction for sorting machines comprising: a pair of side walls; a first plurality of hinged gates forming sections of the floor of the guideway, said gates being tiltable from a normally closed horizontal position to an open position; a plurality of pairs of bins located below the floor of said guideway, each pair having a common wall and communicating with one of said gates; a second plurality of gates located below the first, said gates being tiltable from a horizontal position closing one of each pair of bins to a second position opening said one and closing the other bin of said pairs, the tilting axis lying substantially in line with said common wall of each adjacent pair of bins; and means for advancing articles to be sorted along said guideway.

3,128,094
EXERCISER WITH HYDRAULICALLY INTERCONNECTED CHINNING BAR AND FOOT SUPPORT
Lloyd J. Wolf, 4580 Bordeaux St., Dallas 5, Tex.
Filed Jan. 11, 1962, Ser. No. 165,642
5 Claims. (Cl. 272—79)



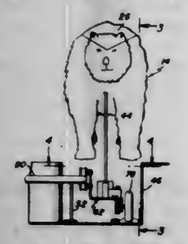
1. An exercising device comprising a foot bar for supporting a person in standing position and carried by a first lever pivoted at one end remote from the foot bar, a chinning bar above the foot bar for grasping by the person and carried by a second lever pivoted at one end remote from the chinning bar, and a hydraulic system connecting intermediate parts of the levers for changing a downward pull on the chinning bar by the person into an upward thrust of the person weighted foot bar and including movable, first and second, pressure applying means respectively connected to the first and second levers, and conduit means connecting the first and second, pressure applying means.

3,128,095
METALLIC WEIGHT EXERCISING HELMET
John Sharkey, 221 Hancock Ave., Jersey City, N.J.
Filed Mar. 30, 1961, Ser. No. 99,534
4 Claims. (Cl. 272—80)



1. An exercise device comprising a headpiece having ear pieces extending downwardly therefrom, a substantially hemispherical shell secured to the top of said headpiece, a hollow substantially hemispherical weight housing said shell therein and being supported thereon, and a strap disposed across said weight and having end portions releasably engaging said ear pieces to hold said weight on said shell and to prevent movement thereof.

3,128,096
MOVING ANIMAL TARGET SYSTEM
Clinton G. Hammond, 286 Harbor, and Arthur J. Tickell, Jr., Damascus Road, both of Branford, Conn.
Filed Mar. 21, 1961, Ser. No. 97,346
23 Claims. (Cl. 273—102.2)

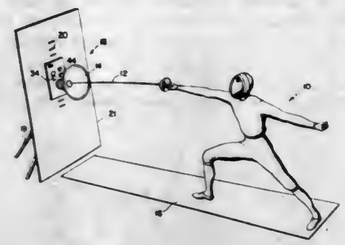


1. A moving target system, comprising target figure means, propelling means operatively connected to the figure means for movement thereof with life-like action along a prescribed path within a target area and at a predetermined speed, and reaction control means operatively connected to the propelling means and the figure means operative in response to release of sound energy by the discharge of a missile within the target area to instantaneously change the movement of the figure means simulating expected reaction of a moving live target to missile discharge.

11. The combination of claim 1, wherein said reaction control means includes means responsive to puncture of the figure means at predetermined locations thereon by a missile discharged from the firearm, to provide an indicating signal and stop movement of the figure means for a predetermined interval after which movement is resumed.

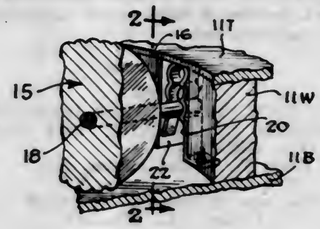
3,128,097
ELECTRIC FENCING TARGET FOR INSTRUCTING THE BLIND
Rosario S. La Rocca, 208 Bellingham Ave., Revere, Mass.
Filed June 1, 1962, Ser. No. 199,397
1 Claim. (Cl. 273—102.2)

A target for instructing blind students in the art of fencing, comprising a base support, a frustrum of a hollow cone mounted on said support and having its base portion extending outwardly therefrom, said cone being formed from a hard, smooth material having a relatively low co-efficient of friction, electrically operated signal means associated with said target, a plurality of switches arrayed in a common plane on said support at the inner end of said cone, said switches being operatively connected to said signal means, a normally flat flexible dia-



phragm mounted across the inner end of said cone in spaced parallel relation to said switches, said diaphragm being formed from a material having a relatively high co-efficient of friction and a rigid disc mounted on the inner surface of said diaphragm and spanning said switches whereby at least one of said switches will be closed by the tip of a fencing foil impinging against any point on said diaphragm.

3,128,098
GAME BOARD WITH MEANS FOR RECEIVING GAME PIECES IN A PLURALITY OF DIFFERENT VERTICALLY DISPLACED POSITIONS
Edward R. Kolenda, 8025 S. Linder, Oak Lawn, Ill.
Filed Sept. 6, 1962, Ser. No. 221,763
5 Claims. (Cl. 273—136)

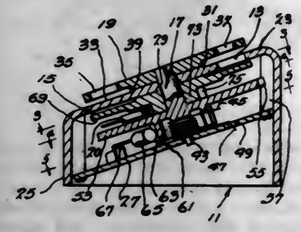


3. In game apparatus for playing the game of checkers, a playing board having a checker board design thereon and downward recesses formed centrally in alternate squares of the checker board, disc-like playing pieces disposed in the respective recesses, and means supporting said pieces within said recesses for rotative movement about horizontal axes and for up and down movement to any one of a plurality of different vertical positions, and resilient means for yieldingly supporting said pieces in any one of said different vertical positions.

3,128,099
SPINNER TYPE CHANCE DEVICE SIMULATING A TOY TELEPHONE
Henry Stan, Chicago, Ill., assignor, by mesne assignments, to Marvin Glass and Associates, Chicago, Ill., a partnership
Filed Sept. 12, 1961, Ser. No. 137,617
2 Claims. (Cl. 273—142)

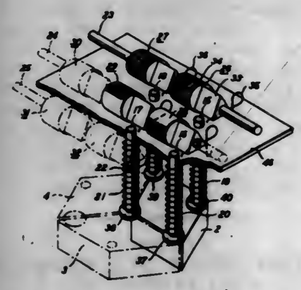
1. A random selection device for use in a game involving an element of chance, which device comprises a housing, one wall of which includes an aperture, a spin-

dle rotatably mounted within said housing, a coil spring encircling said spindle and biasing said spindle for rotation in a given direction, means for selectively effecting any one of several degrees of rotation of said spindle in a direction opposite to said given direction so as to cock said spring for subsequent biased rotation of said spindle in said given direction, means for automatically abruptly halting rotary movement of said spindle in said given direction, a member rotatably carried on said spindle within said housing and having a plurality of messages disposed on the surface thereof in spaced relation to one another and individually alignable with said aperture, and means connecting said spindle and member causing said member to rotate with said spindle but permitting



said member to continue to rotate independently when rotation of said spindle is halted abruptly, said connecting means comprising a plurality of detents provided on the surface of one of said spindle and member, and means connected to the other of said spindle and member for engaging any one of said detents, said latter mentioned means being disengageable from said detent when rotation of said spindle is halted abruptly thereby permitting said member to rotate independently of said spindle, said means being subsequently re-engageable with any one of said detents after a random degree of independent rotation of said member so as to arrest movement of said member in a position in which one of said messages is aligned with said aperture.

3,128,100
PUZZLE WITH CHANGEABLE INDICATORS ARRANGED IN DISTINCT BUT INTER-RELATED GROUPS
Frank W. Sinden, Stirling, N.J.
(106 Maple St., Summit, N.J.)
Filed Apr. 28, 1960, Ser. No. 25,380
12 Claims. (Cl. 273—153)



1. A puzzle comprising, in combination, n actuating means, n being not less than 3, 2^n-1 indicating means including a plurality of unique combinations thereof each having 2^{n-1} of said indicating means therein, each of said indicating means being capable of assuming any one of a plurality of m indicating states, m being not less than 3, means responsive to each of said actuating means for changing the indicating state of each of said indicating means in a respective one of said unique combinations of said indicating means, each of said unique combinations including at least one of said indicating means from at least one other of said unique combinations, at least one of said indicating means being common to all of said unique combinations, whereby the indicating states of said indicating means may be changed to form a preselected pattern of indicating states by the operation of said actuating means in accordance with a mathematically determinable number of operations of selected sets of said actuating means.

3,128,101
AUTOMATIC RECORD CHANGING PHONOGRAPHS
Michael Robert Benwell, Bowers Gifford, Basildon, England, assignor to The Magnavox Electronics Company Limited, Barking, Essex, England, a company of Great Britain
Filed May 21, 1962, Ser. No. 196,223
Claims priority, application Great Britain July 28, 1961
3 Claims. (Cl. 274—10)



1. In an automatic record-changing phonograph having a mechanism which brings about a record change cycle the improvement which comprises a magazine spindle comprising a tube, wall portions of said tube defining at least three slots spaced around the periphery of said tube, an operating sleeve axially slidable within said tube, at least three fingers having inner and outer ends, means fixing said inner ends to said sleeve and said outer ends projecting one from each of said slots, said fingers together forming a primary support for a stack of records on the spindle, a plurality of lugs extending one through each of the sots to form a secondary support for all the records in said stack except the lowermost record when said primary support is withdrawn to allow the lowermost record to fall, an operating rod which is slidable within said sleeve independently of the movement of said sleeve, cams on the upper end of said operating rod in contact with cam follower surfaces on said lugs, and an operating mechanism for reciprocating said sleeve and said rod independently of each other once during each record change cycle in such a way that initially said rod is moved downwards and said lugs are caused by said cams to move out of said slots, one lug coming into engagement with the lowermost record in the stack and moving this record sideways, and this lug and the other lugs coming into position under the next lowest record in the stack after which said said sleeve, and with it said fingers, are moved downwards so that all the records in the stack except the lowermost are supported on said lugs, continued downward movement of said sleeve withdrawing said fingers within said slots to allow the lowermost record to fall from the stack after which said sleeve is moved upwards to cause said fingers to project again and support the stack and said rod is also then moved upwards and said cams cause said lugs to be withdrawn again within said slots.

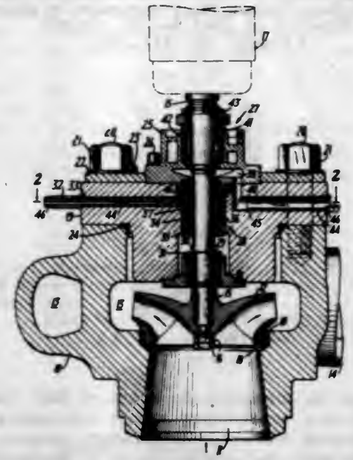
3,128,102
SEAL FOR A SUSPENSION DRILLING DEVICE
Julius S. Beck, 2785 Cherry Ave., Long Beach 6, Calif.
Filed Apr. 19, 1961, Ser. No. 104,067
10 Claims. (Cl. 277—17)



1. In combination with a drill string, a tubular body connected at one end thereof to a section of said drill string, a tubular mandrel slidably mounted in said body and extensible therefrom, the extending end of said mandrel being connected to another section of the drill string, means limiting longitudinal sliding movement of said mandrel and means limiting rotational movement of the mandrel in said body, the end portion of said mandrel in said body being diametrically reduced and providing an abutment shoulder, a first radially expansible seal unit positioned on said reduced portion of the mandrel in abutment with said shoulder, a second radially expansible seal unit positioned on said reduced mandrel portion in spaced relation from said first seal unit, resiliently compressible means interposed between the first and second seal units for spacing the same apart, and a screw-threaded element positioned on said reduced mandrel portion in abutment with said second seal unit, whereby upon tightening of said screw-threaded element said seal units may be radially expanded into engagement with the inside surface of said tubular body.

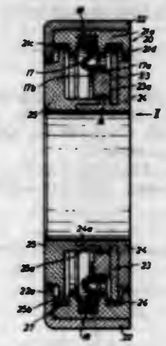
3,128,103
THERMAL SLEEVES FOR BOILER WATER CIRCULATING PUMPS
Thomas Ravese, Harrison, N.Y., assignor to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware
Filed Oct. 2, 1959, Ser. No. 843,997
7 Claims. (Cl. 277—32)

1. A pump adapted to circulate boiler fluid at a relatively high temperature and pressure comprising a housing having first passageway means formed in and defined by said housing adapted to convey said boiler fluid, second passageway means formed in and defined by said housing, fluid conveying means disposed in said second passageway means adapted to be connected to a source of fluid that is relatively cool as compared to said boiler fluid being circulated by said pump, said fluid conveying means including a sleeve mounted within the second passageway means having, at least in one portion, an outside dimension smaller than the inside dimension of the second passageway means so as to provide a space therebetween, means providing fluid communication between the space and the interior of the sleeve to permit



fluid flowing through the sleeve to enter the space, and means forming a relatively fluid-tight seal between the sleeve and the housing to maintain the fluid in the space in a relatively stationary condition so as to provide a heat insulating layer between the sleeve and the housing.

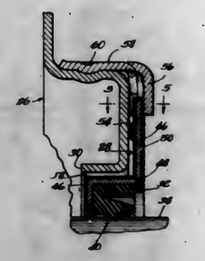
3,128,104
MAGNETIC LABYRINTH-TYPE SEAL FOR SHAFTS
Fritz Teske, Niehler-Kirschweg 139, Cologne-Weidenpesch, Germany
Filed Dec. 15, 1961, Ser. No. 159,617
4 Claims. (Cl. 277—42)



1. A unitary shaft seal comprising, in combination, inner and outer annular housing rings, at least one of said rings having a pair of axially spaced annular grooves therein, disc members associated with the other of said rings extending into said grooves to form longitudinally spaced labyrinth seals, means defining a chamber between said disc members, a permanent ring magnet having a radial mirror ground surface in said chamber, a cooperating magnetic radial mirror ground surface associated with said other ring slidably abutting the radial mirror ground surface of said ring magnet to form a seal, and a flexible corrugated membrane in said chamber sealingly con-

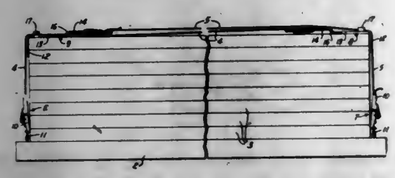
nected between said ring magnet and said one housing ring.

3,128,105
SELF-ALIGNING FRONT END SEAL
Joseph M. Liebig, Wheaton, Ill., assignor to Illinois Milling, Inc., Chicago, Ill., a corporation of Illinois
Filed Jan. 26, 1962, Ser. No. 169,078
9 Claims. (Cl. 277—187)



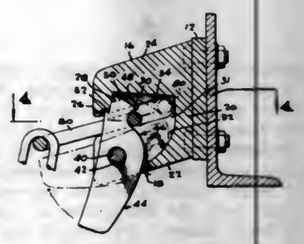
3. A seal for preventing the escape of fluid from a housing having an abutment surface surrounding an aperture through which a rotatable member projects perhaps eccentrically, said seal comprising in combination: an annular body adapted to be received in the aperture, said body having first sealing means disposed along the inner periphery thereof arranged to engage the rotatable member, said annular body including an outwardly projecting flange having second sealing means extending from one face axially of said body for engagement with the abutment, surface surrounding the aperture to effect a fluidtight relationship between said body and the housing; and a ring-like retainer member having pockets circumferentially spaced apart along the central opening in said member, said retainer member being mounted on the housing coaxially with the aperture whereby said pockets are disposed over the abutment surface, said flange of said annular body having tongues receivable in said pockets for holding said second sealing means firmly against the abutment surface.

3,128,106
LOAD TIE-DOWN ASSEMBLY
Charles J. Zinkel, Jr., Milwaukee, Wis., assignor to Lakeview Manufacturing Corporation, Milwaukee, Wis., a corporation of Wisconsin
Filed Mar. 14, 1961, Ser. No. 95,617
8 Claims. (Cl. 280—179)



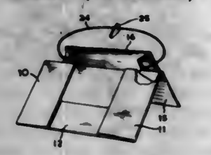
2. A load tie-down assembly in combination with a vehicle flatbed for carrying a load of vertically stacked board-like members, a pair of flexible straps, a releasable strap connector secured on aligned opposite edge portions of the bed adjacent the load area for the load and releasably secured to one end of the straps, a pair of similar top corner members formed of a sheet metal and being L-shaped to define a side engaging leg and a top engaging leg respectively engaging the side and top of said load in alignment with the releasable strap connector, said corner member being wider than said straps and having a raised extension connected with the top engaging leg by a normal junction corner member portion and defining an opening slightly wider than said strap, an inverted U-shaped strap guide secured to the top engaging leg in alignment with said opening and with the upper surface generally below the upper edge of the opening, means carried by said extension releasably secured to the strap from the releasable strap connector on the opposite side of the load, each of said straps being similarly extended from the connector and through the strap guide of the immediately adjacent corner member, one of said straps extending through the opening in the adjacent corner member and laterally to the opposite corner member and being secured to the extension thereof, and the other strap extending from the strap guide upwardly and laterally over the adjacent corner member extension and the opposite strap and being secured to the corner member extension of the opposite top corner member.

3,128,107
SAFETY CHAIN HITCH FOR TRAILER VEHICLES
Joseph R. Miller, 2638 N. 29th St., and Carl O. Wilson, 317 E. Roser Road, both of Phoenix, Ariz.
Filed Dec. 15, 1961, Ser. No. 159,666
5 Claims. (Cl. 280—457)



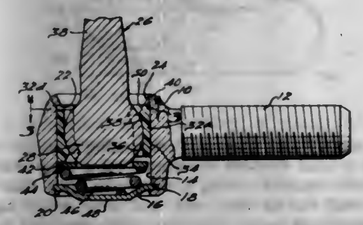
5. An article of manufacture comprising a safety chain trailer hitch:
(*a*) said hitch including a base adapted for connection with said trailer;
(*b*) a substantially rhomboidal keeper plate fixedly secured to said base and projecting laterally therefrom;
(*c*) said keeper plate having a downwardly and forwardly-facing opening formed therein;
(*d*) said keeper plate having a depending shoulder at its outer end partially closing said opening;
(*e*) a pair of side plates fixedly secured to said base and projecting laterally therefrom on opposite sides of said keeper plate;
(*f*) said plates each having a slot formed therein extending from the outer end thereof, said slots confronting one another and communicating with said opening;
(*g*) a pivot pin extending between and having its opposed ends supported on said side plates;
(*h*) a lever loosely supported for pivotal movement on said pin;
(*i*) said lever substantially closing said opening and having a terminal tongue disposed in said opening and normally engaging against said shoulder to limit the pivotal movement thereof out of said opening;
(*j*) a cam element formed in said tongue and confronting said opening, said cam element normally registering with said slots;
(*k*) said cam element being adapted to releasably receive therein a link of said safety chain whereby tension on said chain causes said link to effect a turning force in one direction on said lever causing said tongue to abut said shoulder and to hold said link against disengagement with said cam element; and
(*l*) said lever being pivotal in the opposite direction to force said link out of said cam element for escape over said tongue and removal from said hitch as said tongue clears said slots.

3,128,108
BOOK JACKET
Willard G. Finch, 63 Humbercrest Blvd., Toronto, Ontario, Canada
Filed Jan. 7, 1963, Ser. No. 249,742
3 Claims. (Cl. 281—33)



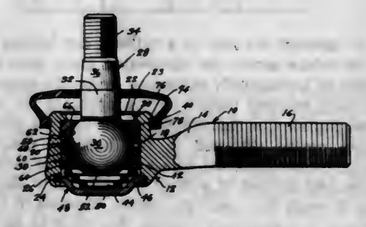
1. A protective jacket and book support of heavy paper stock or like foldable material, the jacket comprising a lower part adapted to cover the lower part of a book and having pockets for receiving the edges of the lower part of the back of the book, and an upper part adapted to cover the upper part of the back of a book and foldable back along a transverse fold line to provide a support for the book, said upper part comprising an outer panel and an inner panel folded one on the other to form a pocket and having triangular gusseted end walls whereby the said upper part may be opened out and folded back substantially at right angles to the lower part of the cover to form a wedge-shaped support for the book, characterised in that the gusseted end walls are secured to the outer panel by triangular flaps which overlap the transverse fold line to reduce the tendency of the jacket to tear along said fold line.

3,128,109
BALL STUD JOINT
William A. Flumerfelt, Columbus, Ohio, assignor to The Columbus Auto Parts Company, Columbus, Ohio, a corporation of Ohio
Filed Jan. 13, 1961, Ser. No. 82,446
1 Claim. (Cl. 287—90)



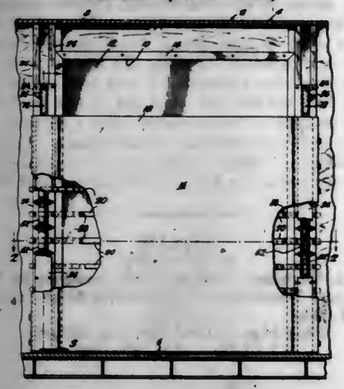
A ball joint including a ball stud having a segmental ball and a stud, a socket member having a cavity for receiving said ball and an opening through which said stud extends, at least four ball seat elements in said cavity each having an inwardly projecting segmental spherical portion disposed at one end thereof, said ball seat elements being arranged in first and second groups, the inwardly projecting portions of the ball seat elements of said first group engaging said ball on one side of a transverse plane through said cavity which includes the center of said ball and the inwardly projecting portions of said second group engaging said ball on the other side of said transverse plane, the ball seat elements of said first and second groups being alternately arranged in said cavity, shoulder means at one end of said cavity engageable by the ball seat elements of said first group, the ball seat elements of said second group being spaced from said shoulder, and means at the other end of said cavity spaced from the ball seat elements of said first group and engageable with the ball seat elements of said second group operable to apply a force thereto from a common source urging the ball seat elements of said second group toward said shoulder to tightly confine said ball under pressure between the projecting portions of said ball seat elements.

3,128,110
BALL JOINT
Edward J. Herbenar, Detroit, Mich., assignor to Thompson Ramo Wooldridge Inc., Detroit, Mich., a corporation of Ohio
Filed May 3, 1961, Ser. No. 107,408
1 Claim. (Cl. 287—90)



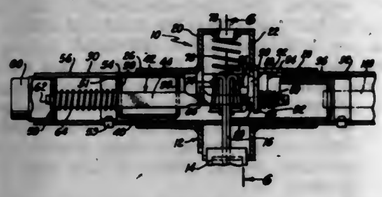
A ball joint comprising
a socket having a chamber formed therein with a cylindrical side wall,
said socket having a shoulder partially overlying one end of said chamber to form an opening into said chamber,
a ball stud having a segmental spherical ball head in said chamber and a shank extending rotatably and tiltably outwardly through said opening,
axially spaced upper and lower annular bearing halves in said chamber snugly receiving said ball head in bearing relation,
a closure plate secured at the other end of said chamber,
spring means in said chamber opposite said opening and engaging said closure plate urging said lower bearing half against said ball head and thereby urging said ball head against said upper bearing half and said upper bearing half against said shoulder,
said bearing halves each having inner segmental spherical surfaces conforming to and engaging said ball head in snug bearing relationship and each having exterior surfaces shaped complementarily to the cylindrical side wall of the chamber,
said bearing halves each being split substantially axially relative to the chamber for resiliently varying the diameter of the exterior surface of the bearing halves relative to the diameter of the chamber to expand the diameter of the exterior surface of the bearing halves in the chamber due to the lateral expanding effect thereon from the ball head and the spring means when the outside diameter of the bearing halves is less than the diameter of the cylinder,
whereby snug engagement of the bearing halves in the chamber is attained between the diameter of the exterior surfaces of the bearing halves and the diameter of the cylinder.

3,128,111
FASTENING MEANS FOR RAILWAY CAR GRAIN DOORS
Lamont F. Andrews, 8707 William St., Omaha 24, Nebr.
Filed Apr. 12, 1962, Ser. No. 187,060
7 Claims. (Cl. 292—52)



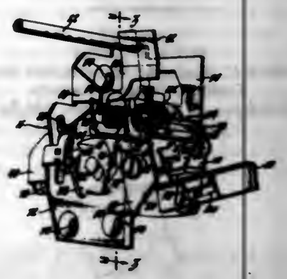
1. A fastener for use in a railway car having a doorway, to secure across the doorway a grain door having a plurality of horizontally extending, vertically spaced straps comprising housing means having openings for receiving the end portions of the straps therethrough, a plurality of gripping means disposed in the housing means, each gripping means disposed adjacent to and for cooperating with the end portion of a strap extending into the housing means through the openings, means disposed in the housing means for yieldingly biasing the gripping means into wedging engagement with the end portions of the straps against an interior wall of the housing means to permit movement of the straps only in a direction outwardly relative to the doorway and means for simultaneously retracting the gripping means against the action of the biasing means out of engagement with the straps.

3,128,112
PRIVACY LOCK SET
Kenneth F. Fryer, Anaheim, Calif., assignor to The American Hardware Corporation, New Britain, Conn., a corporation of Connecticut
Filed July 17, 1961, Ser. No. 124,463
4 Claims. (Cl. 292—169)



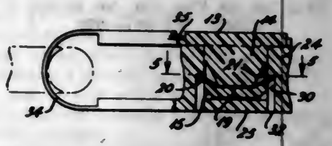
1. In a lock set having a case, a latch bolt, a retractor slide in said case, and a rollback rotatable relative to said case for actuating said slide to retract said latch bolt, the combination of: a locking dog having a mounting opening therein; an elongated locking bar slidably mounting said locking dog, said bar having an end extending through said opening and beyond said dog, said locking bar being movable to a locking position to dispose said locking dog between said case and said rollback to prevent rotation of said rollback relative to said case, said locking bar being movable to a release position independently of said locking dog; and bias means engaged between said locking dog and said locking bar end and tending to bias said locking dog from between said case and said rollback upon movement of said locking bar to said release position.

3,128,113
ROTARY BOLT DOOR LATCH
Charles Harold Lee, Taylor, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 26, 1961, Ser. No. 112,859
8 Claims. (Cl. 292—280)



1. A vehicle door latch of the character described, including: a latch frame; latching means movably mounted on said frame; detent means mounted for movement between latched position in engagement with said latching means to hold the latching means against movement in an unlatching direction, and unlatched position out of holding engagement with said latching means; outside latch operating means; inside latch operating means coupled directly to said detent means; and means for coupling said outside latch operating means to said detent means, including an intermittent member mounted on said inside latch operating means for movement between an unlocked position wherein it couples said outside latch operating means to said detent means through said inside latch operating means, and a locked position wherein said outside latch operating means is uncoupled from said detent means.

3,128,114
LOCK HASP SEAL
Henry Nierhaus, Scarsdale, N.Y., assignor to Stoffel Seals Corporation, Tuckahoe, N.Y.
Filed Apr. 28, 1961, Ser. No. 106,251
6 Claims. (Cl. 292—320)



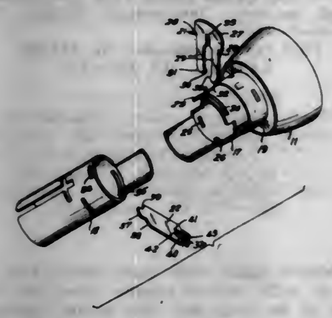
4. A unitary lock hasp seal comprising a socket member and a head member connected by a strap member, said socket member having a relatively thick side wall, an end wall and an open end, said strap extending laterally from said socket member and connected to the base of said head member, said side wall having a relatively narrow rim at the open end, said head member including a relatively wide base of a size to be snugly received within the rim of said socket member and with a face abutting the open end of said side wall, a projecting member extending outwardly from said base and of a size to be snugly received within the wall of said socket member, and means for locking said projecting member and said socket member in assembled relation.

3,128,115
RESIDENTIAL LOCK ASSEMBLY
George P. Patriquin, Gardner, and Norman R. Adler, Fitchburg, Mass., assignors to Independent Lock Company, Fitchburg, Mass., a corporation of Massachusetts
Filed July 21, 1959, Ser. No. 828,530
13 Claims. (Cl. 292—336.3)



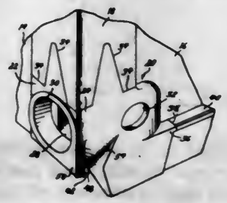
1. In a cylindrical door lock assembly, the combination having an outside rosette shell, an inside rosette shell, each having a spindle bearing sleeve extending axially longitudinally thereof, and a rosette core of plastic filling each of said shells, an auxiliary bearing in each rosette core and a spindle sleeve in each of said bearings, said spindle sleeves having integrally formed retractor cams at their inner terminal ends, said rosette cores being formed with end thrust bearing faces, and transverse, radially slidable spindle sleeve retainer plates removably seated on said spindle sleeves having extensions to one side thereof, the latter making end thrust engagement with said end thrust bearing faces of said cores.

3,128,116
RETAINER MEANS FOR CYLINDRICAL LOCKS
George P. Patriquin, Gardner, and Norman R. Adler, Fitchburg, Mass., assignors to Independent Lock Company, Fitchburg, Mass., a corporation of Massachusetts
Filed Nov. 15, 1961, Ser. No. 152,482
1 Claim. (Cl. 292—358)



In a cylindrical lock assembly, a spindle having diametrically opposed slots disposed in a plane normal to the axis of said spindle, an escutcheon having an axial bearing in which said spindle is rotatably mounted, thrust bearing means on said spindle limiting axial movement of said spindle and said escutcheon in a first direction, and a retainer plate endwisely insertable into locking engagement into said slots of said spindle forming thrust bearing means limiting axial movement of said spindle in a direction opposite said first direction, said retainer plate including a resiliently deflectable retainer shoulder portion normally offset from the plane of said plate and a cam surface adjacent said retainer shoulder portion, said cam surface, upon endwise insertion of said plate into a slot, being positioned to coact with portions of said spindle adjacent said slot to deflect said shoulder portion toward the plane of said plate and into registry with said slot, said shoulder portion being resiliently urged out of registry with said slot upon passing through said spindle, said plate including a spindle wall abutment shoulder positioned to limit transverse movement of said plate with respect to said spindle.

3,128,117
CONTAINER CORNER FITTING FOR BOTTOM LIFTING
Andrew Abolins, Penndel, Pa., assignor to Strick Trailers, a Division of Fruehauf Trailer Co., Philadelphia, Pa., a corporation of Michigan
Filed Jan. 11, 1962, Ser. No. 165,477
4 Claims. (Cl. 294—67)

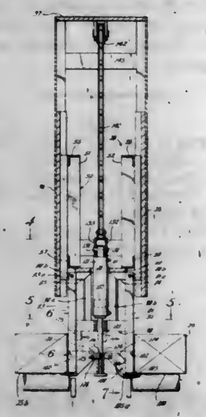


1. In combination with a lifting rope, a substantially rectangular container having at least side and end walls and a bottom wall, said side and end walls being interconnected by vertically extending posts, corner members fixedly secured to the lower ends of said posts, and including side, end and bottom faces substantially parallel respectively to said side, end and bottom walls, a groove in the bottom and side faces of said member having an arcuate bearing surface for said lifting rope, said end face of said member including a portion extending below said groove forming a first flange extending substantially parallel to an adjacent end wall to prevent the rope from slipping endwise off said member when said rope extends vertically of said container and in a plane substantially perpendicular to that of said bottom wall, said side face of said member being formed with a shoulder contiguous with said groove and constituting a second flange at an angle to the plane of said first flange to serve as a limiting bearing surface for said rope when said rope extends vertically of said container and at an angle to said bottom wall.

3,128,118
COIL STACKER HEAD
Luther F. Ezzell, South Houston, Tex., assignor to Anderson, Clayton & Company, Houston, Tex., a corporation of Delaware
Filed June 14, 1962, Ser. No. 202,439
6 Claims. (Cl. 294—97)

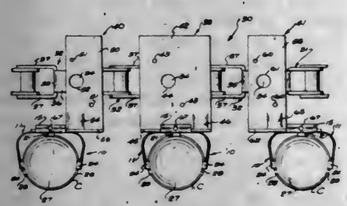
1. A coil stacker head for engaging, moving and releasing coils of metal and the like comprising,
a support carrier,
downwardly depending arms pivotally supported from said carrier,
laterally extending projection means pivotally mounted at the lower end of each of said arms for engaging the bottom of a coil,
power means mounted on said carrier and connected with said projection for moving said projections laterally to a coil engaging position and for retracting said projections from engagement with the coils,
said projection means being pivotally connected to said arms in a transverse plane slightly above said pivotal connection between said projection means and said power means when said projection means are in their extended positions whereby retraction of said

projection means initially expands said arms radially outward to retain said arms in engagement with the coil as said projection means are retracted to keep



the coil aligned in its stacked position, continued upward movement of said power means functioning to retract said arms to release them from the coil.

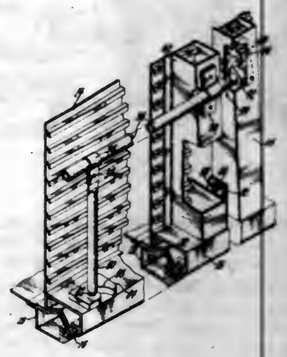
3,128,119
HOLDER FOR CAN BODIES
Charles T. Walter, Lemont, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed June 1, 1960, Ser. No. 33,330
11 Claims. (Cl. 294—99)



1. A can body holder comprising a spring clip of a generally U-shaped cross section in a transverse plane and having a longitudinal axis normal to said transverse plane, said spring clip including a back and two sides, said back and sides having can body engageable portions with can body engageable faces, said faces of said side portions being disposed in longitudinal converging relation with respect to said longitudinal axis.

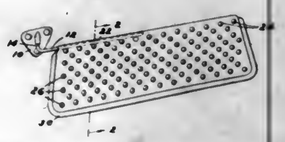
3,128,120
CLOSURE STRUCTURE FOR FLOATABLE TRUCK BODY
William Fournier and John V. Peeples, Pontiac, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 24, 1961, Ser. No. 147,289
7 Claims. (Cl. 296—57)

2. In a vehicle body including a closure member mounted for movement between open and closed positions about a hinge axis, the combination of a resilient hinge mounting said closure to said body, sealing means interposed between the body and said closure for providing a liquid tight seal when the closure is in the closed position, latch means associated with the closure member for locking said closure member to said body, said latch means having a shaft mounted on said closure member for pivotal movement about its axis, bolt means fixed to said shaft, keeper means carried by said body, means for pivoting said shaft about its axis when the closure member is in the closed position whereby said bolt means moves into said keeper means, means for locking said last-mentioned means, a raised surface formed on the body adjacent the hinge axis, a complementary surface formed on the closure member adjacent the hinge axis and mating with



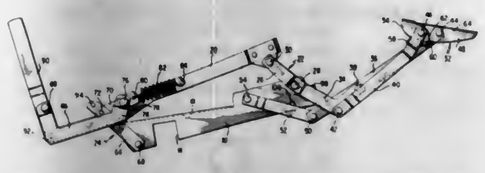
said raised surface when the closure member is in a closed position, cooperating engageable portions formed with the bolt and keeper means, said engageable portions being so located so as to cause said complementary surface of the closure to be urged towards the raised surface when the latch means are locked to ensure proper mating of the surfaces so as to align said closure member with respect to said body and prevent unsealing movement of the closure member.

3,128,121
HOLLOW PLASTIC SUN VISOR HAVING DEFORMED AREAS
James W. Greig, Grosse Pointe Park, Mich., assignor to Woodall Industries, Incorporated, Detroit, Mich., a corporation of Michigan
Filed Oct. 10, 1961, Ser. No. 151,407
4 Claims. (Cl. 296—97)



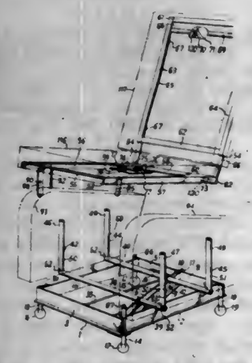
1. A hollow plastic visor blade having two opposed plastic side walls secured together along the marginal boundary of the blade and with certain opposed areas of said side walls deformed and spaced apart forming a hollow stiffly resilient blade structure, said two side walls having other areas deformed and fused together along a second line spaced from and parallel to a portion of said boundary line providing therewith a marginal tubular rod-receiving socket bearing, said two side walls fused together along said second line only at and by a plurality of spaced bridging connecting points between which points the two side walls are spaced apart, said blade adapted to be mounted upon a rod received within said bearing, said bearing portion of the blade so formed as to releasably, grippingly embrace the rod whereby the blade may be rotated about the rod and releasably, frictionally maintained at adjusted positions of rotation thereabout, said blade being somewhat flexible but sufficiently rigid and self-supporting to respond without undue bending to pressure of rotation applied to the free margin of the blade to rotate the blade about the rod.

3,128,122
RECLINING CHAIR FIXTURE
Ned W. Mizelle, High Point, N.C., assignor, by mesne assignments, to General Steel Products, Inc., High Point, N.C., a corporation of North Carolina
Filed May 23, 1961, Ser. No. 112,009
15 Claims. (Cl. 297—68)



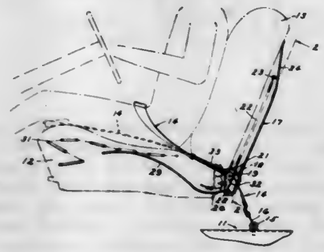
1. A reclining chair fixture comprising a base link having a first fixed pivot and a second fixed pivot at spaced locations thereon, a seat link having a first seat pivot and a second seat pivot at spaced locations thereon, first support link means pivotally connected to said first fixed pivot and to said first seat pivot, second support link means pivotally connected to said second fixed pivot and to said second seat pivot, said first and second support link means cooperatively supporting said seat link for movement relative to said base link between a substantially horizontal normal position and a rearwardly inclined first reclined position, a back link pivotally mounted on said seat link for movement relative to said seat link between a normally maintained upright position and a rearwardly tilted inclined position, stop means for blocking movement of said first support link means about said first fixed pivot when said seat link is in said first reclined position, and control link means pivotally interconnected between said back link and said second support link means for pivoting said seat link about said first seat pivot to a second reclined position upon movement of said back link to said inclined position while said first support link means is engaged with said stop means.

3,128,123
CONVERTIBLE CHAIRS
Wilhelm Schreier, London, England, assignor to P. Fanghanel and Company Limited, London, England, a company of Great Britain
Filed Apr. 2, 1962, Ser. No. 184,367
Claims priority, application Great Britain Apr. 4, 1961
13 Claims. (Cl. 297—118)



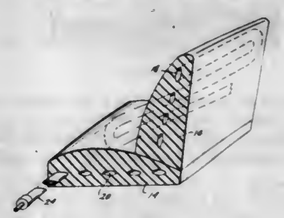
1. A convertible armchair frame comprising a seat frame, a back frame, a first arm frame extending permanently alongside one side edge of the seat frame and a second arm frame, in which the seat frame and the back frame are movable to an aligned settee position, mounting means for said second arm frame, said mounting means being capable of adopting a chair position, in which said second arm frame extends alongside the other side edge of the seat frame, and a settee position, in which said second arm frame is substantially aligned with the first arm frame.

3,128,124
RETRACTABLE SEAT BELT ASSEMBLY
Robert H. Fredericks, Dearborn, and William B. Archer, Inkster, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Dec. 19, 1961, Ser. No. 160,572
5 Claims. (Cl. 297—388)



1. In a motor vehicle, a seat, a seat belt adapted to extend over said seat, means anchoring a portion of said belt, retraction means cooperating with said belt to provide an extended operative position and a retracted storage position for said belt, said retraction means including resilient means operative to bias said seat belt into said retracted storage position, latch means pivotally supported for movement from a disengaged position to a position of engagement with said retraction means when said seat belt is in said extended operative position, and means responsive to occupancy of said seat operatively connected to said latch means for causing the latter to pivot from the disengaged position to the engaged position when said seat is occupied.

3,128,125
PNEUMATIC CAR SEAT
Raymond Loewy, 900 5th Ave., New York, N.Y.
Filed Nov. 14, 1960, Ser. No. 68,713
1 Claim. (Cl. 297—452)

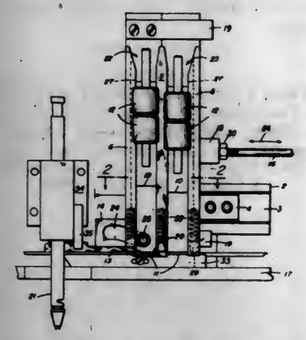


A pneumatic car seat comprising a seat cushion and a back cushion, each of said cushions being molded of resilient material and having a continuous respective zigzag air channel molded in the interior thereof, the air channels of said seat seat cushion being independent of the air channels of said back cushion, and a respective valve for the air channels of said cushions whereby said cushions may be inflated to selective degrees of hardness.

3,128,126
BRUSH STUFFING MACHINES

Emil Schnekenburger, Todtnau, Black Forest, Germany, assignor to Anton Zahoransky, Todtnau, Black Forest, Germany, a family corporation of Germany

Filed Sept. 27, 1961, Ser. No. 141,097
11 Claims. (Cl. 300—7)

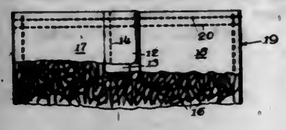


1. In a brush stuffing machine having a frame, a stuffing tool, a guide means, a material gripping means and a transport means associated with said gripping means for moving stuffing material along said guide means from a supply position to said tool, a container adapted to supply said material in uniformly controlled amounts to said gripping means, said container comprising a fixed compartment and at least one movable compartment for receiving an evenly arranged supply of said material therein, movable means for sliding said container to and fro above said guide means in a co-axial path therewith to alternately bring said fixed and movable compartments into and out of engagement with said gripping means, each said department being disposed perpendicular to said guide means to unobstructively discharge said material at a 90° angle to said gripping means in said uniformly controlled amounts.

3,128,127
METHOD OF MAKING YARN MOP BODY

Philip K. O'Connor, Riverside, and Edward D. Zelinski, Worth, Ill., assignors to The Drackett Company, a corporation of Ohio

Filed Sept. 10, 1962, Ser. No. 222,454
6 Claims. (Cl. 300—21)

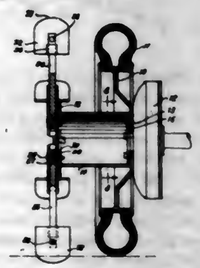


1. A method of manufacturing a yarn mop body having on the top thereof a pocket for receiving a supporting mop head that is affixed to a mop handle which comprises; (1) attaching a plurality of yarn segments to a backing member to extend from a single face thereof, said backing member having a length approximately equal to that of the completed mop body and a width approximately twice that of the completed mop body, with the points of attachment of said segments extending substantially from one end of said backing member to the other and occupying approximately that portion of the backing member representing the inner two quarters of said member measured from one side to the other; (2) folding the two outer quarter portions of said backing member over upon the exposed yarn segments carried by the backing member; (3) securing the ends of said folded outer quarters of the backing member to the respective ends of said yarn-carrying backing portion against which they are folded, to form a pouch having an opening running down its center line and having said yarn segments enclosed therewithin; and (4) turning said pouch inside out to expose the yarn segments on the resulting bottom face of said backing member, and to form a pocket on the top of said backing member for receiving said supporting mop head.

3,128,128
TRACTION-INCREASING DEVICES FOR TRACTION WHEELS

James E. Jines, 113 S. Main, Perryton, Tex.

Filed May 24, 1962, Ser. No. 197,411
1 Claim. (Cl. 301—47)



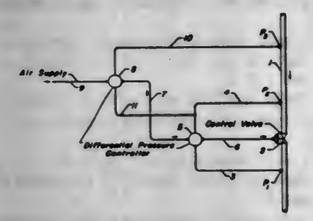
A traction-increasing device for traction wheels including, a drum having a bottom wall at one end and an external flange at its opposite end, the bottom wall having a plurality of openings therein, some of the openings being of a size to pass the heads of the lug bolts by which the traction wheel is secured in place, others of the openings being of a size to pass only the shanks of said lug bolts, a plate removably secured to the flange, a plurality of elongate sleeves of non-circular cross-section carried by the plate and disposed radially thereof, elongate rectilinear arms formed of a spring steel material and having cross-sections corresponding in size and shape to the insides of the sleeves, the arms being slidably received in the sleeves for longitudinal adjustment therein and projecting radially outwardly from the perimeter of the plate in a plane parallel to the plate, the arms having the major portion of their lengths disposed radially outwardly of the outer ends of the sleeves, means for selectively positioning the inner portions of the arms in the sleeves, and plate-like traction elements removably secured upon the outer ends of the arms.

3,128,129
CONTROL OF CATALYST CIRCULATION RATE IN A FLUIDIZED SYSTEM

Laurence O. Stine, Western Springs, and Norman H. Scott, Berwyn, Ill., assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed June 26, 1961, Ser. No. 119,525
8 Claims. (Cl. 302—35)

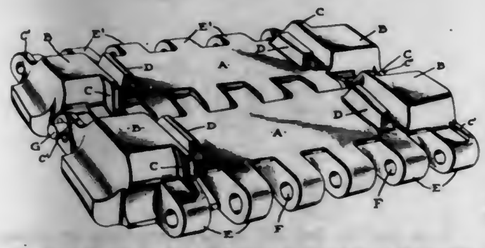
1. In a processing system wherein subdivided solid material is continuously circulated from a first contacting zone to a second contacting zone and from the latter zone to the first zone and wherein said subdivided material is collected in a relatively compact phase in a confined column after contact in the first zone and prior to transfer through an adjustable restriction in said column to the second zone, the improved method of controlling the circulation rate of the solid material in the system which comprises measuring variations in the pressure differential of the solid material phase existing just above said restriction, measuring the pressure differential across said restriction, and continuously controlling and adjusting the flow of solid material through said system responsive to the combination of both said pressure differential measurement occurring across said restriction and to said pressure differential measurement above said restriction.



3,128,130
LINK FOR CRAWLER TRACK

Leonard T. Harris, Chicago Heights, Ill., assignor to Poor & Company, Chicago, Ill., a corporation of Delaware

Filed Sept. 21, 1962, Ser. No. 225,292
1 Claim. (Cl. 305—53)

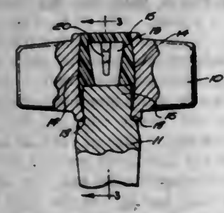


A crawler link for an endless track, driven by sprockets having peripheral offset teeth comprising, in combination,
- a tranversely elongated body having pivot eyes projecting from opposite sides of said body,
- a driving lug at each outer end of the upper face of the body and of a transverse length to span a related pair of outermost eyes,
- and forwardly and rearwardly directed flanges on opposite sides of each lug to receive successive sprocket teeth therebetween, whereby, the sprocket teeth driving each lug are held against lateral movement and the space between adjacent teeth bears on the lug to insure that the full propulsion force of the sprocket is applied to the embraced lug.

3,128,131
HAMMER HANDLE ANCHORING MEANS

Andrew F. Bianchini, Providence, R.I.
(Higgins Lane, Georgiaville, R.I.)

Filed Nov. 2, 1961, Ser. No. 149,581
3 Claims. (Cl. 306—33)

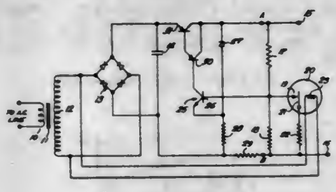


1. A hammer comprising a head having a vertical opening therethrough, the walls of said opening being concave, being narrow at the bottom and top and widest intermediate the ends, a hammer handle having a narrow upper end with straight parallel sides extending into said opening, the upper end of said handle being below the upper end of said opening, said handle having a slot extending downwardly from its upper end, a wedge in said slot spreading said handle in said opening whereby the top of said handle extends outwardly to the walls of said opening, and epoxy resin glue surrounding said handle in the wider part of said opening and filling said opening around said handle and filling the space from the upper end of said handle to the upper end of said opening.

3,128,132
SOURCE OF COMBINED ALTERNATING CURRENT AND DIRECT CURRENT VOLTAGE

Louis W. Erath, Houston, Tex., assignor to Test Equipment Corporation, Harris County, Tex., a corporation of Texas

Filed Jan. 24, 1962, Ser. No. 168,435
2 Claims. (Cl. 307—2)



1. Low impedance apparatus for providing a known amplitude alternating current voltage superimposed on a known amplitude direct current voltage comprising
- an alternating current source,
- rectifier means supplied with voltage from said source and operable to supply a direct current voltage across its output,
- the series combination of three resistors connected across said output;
- said apparatus having a pair of output terminals with one connected to the junction between a first and a second of said resistors and the other connected to the junction between the third resistor and said rectifier means,
- a Zener diode connected across said rectifier means,
- a fourth resistor,
- and a switch operable when supplied with an alternating current voltage to cyclically connect said fourth resistor across said third resistor, said switch being connected to said alternating current source to receive voltage therefrom.

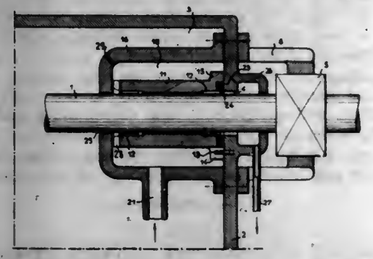
3,128,133
SHAFT SEAL

Pierre Audemar, Mulhouse, France, assignor to Societe Alsacienne de Constructions Mecaniques, Mulhouse, Haut-Rhin, France

Filed Sept. 5, 1961, Ser. No. 135,984
Claims priority, application France June 26, 1961
10 Claims. (Cl. 308—36.3)

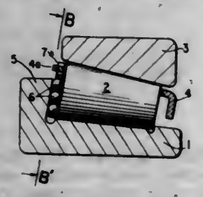
1. The combination comprising a wall having one side exposed to a higher fluid pressure than its opposite side, a shaft freely extending through an aperture in said wall and supported for movement relative thereto, a tubular sleeve member snugly fitted around the shaft on the higher-pressure side of the wall and supported substantially solely by the shaft, said member having an end face sealingly engageable with the wall surface around said aperture, whereby said member will be pressed by

said higher fluid pressure into sealing engagement with the wall surface while remaining centered around the



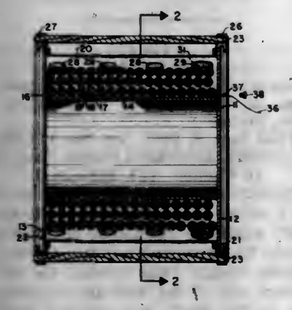
shaft and means for locking said member against rotation relative to said wall surface.

3,128,134
TRIPLE RACE TAPERED ROLLER BEARINGS
Francis J. L. Dorl, 17 Mountain Ave., Summit, N.J.
Original application July 7, 1961, Ser. No. 122,511. Divided and this application Nov. 21, 1962, Ser. No. 245,344
2 Claims. (Cl. 308—174)



1. In a tapered roller bearing comprising an inner bearing cone, an outer bearing cup and a plurality of one piece frustro-conical rollers having a conical thick base and a cage therebetween, a thrust flange on said inner bearing cone with a slanting surface facing the conical base of the said rollers and a crate containing tapered roller bearings between the thrust flange and the conical base of the said rollers, the said crate being loosely mounted on a projection of the cage.

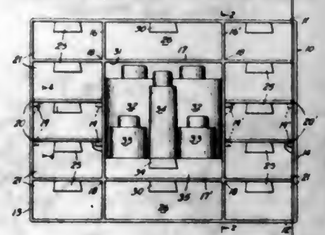
3,128,135
MOISTURE-FREE PACKAGE
Sigmund Ege, Hastings on Hudson, N.Y., assignor to Anaconda Wire and Cable Company
Filed May 29, 1962, Ser. No. 198,560
7 Claims. (Cl. 312—31)



1. A package for shipping moisture-sensitive material comprising:

(A) a substantially moisture-tight covering surrounding said material,
(B) a quantity of a first drying agent within said covering,
  (*a*) said first drying agent having a moisture capacity less than 10% by weight at 5% R.H. and 25° C.,
(C) a lesser quantity of a second drying agent, separated from said first drying agent, within said covering,
  (*a*) said second drying agent having a moisture capacity greater than 15% by weight at 5% R.H. and 25° C.,
(D) a substantially moisture-tight container for said second drying agent, and
(E) means for opening said container without removing said covering.

3,128,136
PORTABLE FIRST AID CABINET
Louis P. Mancini, 129 Braidburn Road, Florham Park, N.J.
Filed Sept. 1, 1961, Ser. No. 135,564
9 Claims. (Cl. 312—209)

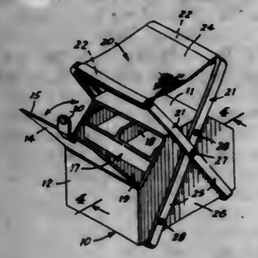


1. A portable first aid cabinet comprising an oblong rectangular molded casing defined by a back wall, top, bottom and side walls, a pair of spaced vertical partition walls integral with the top and bottom walls, a pair of spaced horizontal partition walls integrally joining said side walls, the last named partition walls integrally intersecting the first named partition walls, said partition walls dividing the cabinet into a large rectangular center compartment, said center compartment being bordered by top, bottom and side large drawer receiving compartments and four small corner drawer receiving compartments, drawers conforming to and fitting in said top, bottom and corner drawer compartments, means between the spaced horizontal partition walls and each side wall and the adjacent vertical partition wall for forming a plurality of drawer compartments in each of said side drawer compartments, and drawers in said last named compartments.

3,128,137
COMBINATION FOLDING CHAIR AND TACKLE BOX
Robert F. Dokter, 817 Coolidge Road, Aberdeen, Wash.
Filed July 5, 1962, Ser. No. 207,549
1 Claim. (Cl. 312—235)

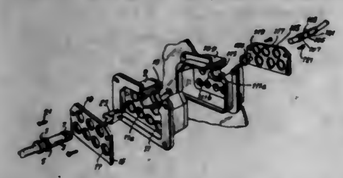
An invention of the character described, comprising a tackle box of light weight material embodying a pair of spaced vertically disposed sides and a horizontally disposed top and one or more angularly disposed lids hingeably secured to the upper edge of the said vertically disposed sides, the upper edge of each lid nesting with one edge of the said top and catch secured to the upper edge of each lid and overlapping the said top, and a removable tray inside the said tackle box the said tray having a centrally located vertical partition therein, the said tray resting on a centrally located vertical partition inside the said tackle box, and a pair of rectangular frames each of

which is channel-shaped in cross section and which encompass the said tackle box to which one of the vertical members is secured to each end of the said tackle box, the said pair of frames having their vertical members crossing one another and being hingeably secured together



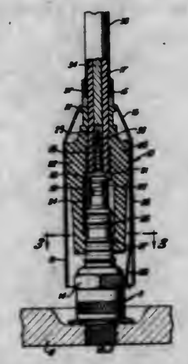
by a bolt and a canvas seat having two parallel edges encompassing the uppermost of the horizontal members of the pair of frames which the said edges of the said canvas seat encompasses thereby providing a combination folding chair and tackle box.

3,128,138
CONNECTOR
Rocco J. Nocchese, 16 Thomes St., Rowayton, Conn.
Filed Mar. 23, 1960, Ser. No. 16,981
4 Claims. (Cl. 339—14)



1. A connector assembly for electrically connecting a plurality of pairs of coaxial cables, each of said cables having an outer and inner conductor comprising,
a plurality of pairs of coaxial connector means each pair terminating one of said pairs of coaxial cables;
each of said connector means having an outer conductive sleeve coupled to the outer conductor of one of said cables, and;
a coaxially disposed inner member coupled to the inner conductor of one of said cables;
the outer sleeves and inner members of the connector means for each of said pair of cables adapted to mate with each other respectively;
a pair of housings each having an electrically conductive portion;
each of said housings including a portion having a plurality of cavities;
one of each of said pairs of coaxial connector means disposed within a cavity in one of said housings and;
the other of each of said pairs of coaxial connector means disposed in a corresponding cavity in the other of said housings;
means for removably interlocking each of said connector means in one of said cavities in said housings;
and spring means associated with each of said housing cavities to couple said outer sleeves of said connector means to said conductive portion of said housings whereby the outer conductors of each of said coaxial cables are electrically connected.

3,128,139
SPARK PLUG SHIELD
Stanley E. Estes, Inglewood, Calif., assignor to Hallett Manufacturing Company, Los Angeles, Calif., a corporation of California
Filed June 27, 1960, Ser. No. 38,976
8 Claims. (Cl. 339—26)



1. Electrical shielding means for use with a spark plug of an internal combustion engine which spark plug comprises a conductive shell including a wrench shoulder formed thereon, a porcelain insulator mounted on said shell and an electrode terminal projecting from said insulator, said electrical shielding means comprising an electrically conductive tubular housing including a first open ended section of relatively large diameter adapted to receive the spark plug, a second open ended section of relatively small diameter, and an intermediate section conductively connected with the first and second sections, an insulator member mounted within said housing including an annular enlarged portion engaging said tubular housing and reduced portions projecting from said enlarged portion into said intermediate section and said first open ended section respectively, said reduced portions radially spaced from said intermediate section and said first open ended section respectively of said housing, said insulator member formed with a bore extending entirely therethrough, said bore including an annular end portion which is adapted to frictionally engage a section of the porcelain insulator spaced from said wrench shoulder, whereby said housing is adapted to be retained in spaced relation from said spark plug, an electrode terminal conductive cap mounted in said insulator bore adapted to frictionally engage said electrode terminal and stabilize said tubular housing about said spark plug, an insulated conductive cable extending through said second open ended section and said insulator bore and conductively connected with said electrode terminal cap, said cable being provided with external conductive sheathing terminating on the second open ended section and conductively connected thereto and providing electrical grounding therewith, and a second ground connection extending from the housing adapted to engage the conductive shell of said spark plug.

3,128,140
TIMING LIGHT EXTENSION
Eugene H. Stephenson, Sr., 1105 N. Buchanan St., Beeville, Tex.
Filed June 28, 1962, Ser. No. 206,101
2 Claims. (Cl. 339—28)

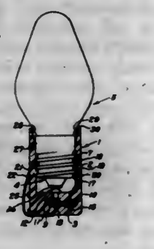
1. A timing light extension comprising, in combination, an elongated conductor, a length of copper tubing

receiving the upper end of said elongated conductor providing an electrical connection point for a stroboscopic timing light, an electrical insulation element connected at the upper end of said length of copper tubing, a hook affixed to the opposite end of said electrical insulation element for attachment to any convenient support, a T-shaped insulator received at the lower end of said elongated conductor, a small insulated conductor received by said T-shaped insulator, said elongated conductor be-



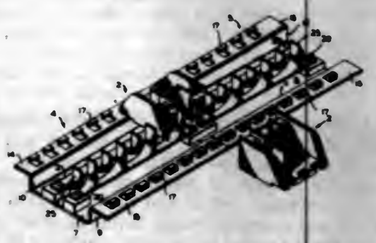
ing in electrical communication with said small insulated conductor and a pair of tubes of copper electrically secured to said small insulated conductor for electrical attachment to a spark plug and a high tension conductor, said copper tubing receiving a threaded screw, said screw being cemented within said electric insulation element, said electric insulation element providing insulation means between said hook and said screw, said hook providing suspension means for said timing light extension within the engine compartment of an automobile.

3,128,141
ELECTRIC LAMP SOCKET
Anton M. Krupp, Gates Mills, and Richard D. Divoky, Mayfield Heights, Ohio, assignors to General Electric Company, a corporation of New York
Filed June 30, 1961, Ser. No. 121,137
4 Claims. (Cl. 339—97)



1. A unitary socket for electric lamps having a threaded base comprising a hollow smooth-walled cylindrical socket body of stiffly flexible thermoplastic material, said socket body being open at one end and closed at the opposite end by an integral circular end wall of substantial thickness, a pair of mutually insulated conductors of an electric rip cord molded within the thickness of the end wall, said conductors being in side-by-side relation in a common plane transverse to the longitudinal axis of the socket body with one of the conductors extending along a diameter of the end wall and with the other of said conductors offset from the center of the end wall, the end wall being provided with a cavity at its center opening inwardly of the socket body and an inwardly opening side cavity located adjacent the inner surface of the cylindrical wall of the socket body and directly above the conductor offset from the center of the end wall, and a pair of electrical contacts extending from the interior of the socket body through the cavities into engagement with the said conductors and making a pressure fit with the sides of said cavities, one of said contacts being a headed straight pin having a pointed end extending through the center cavity and the conductor beneath said cavity, the other of said contacts being a strip contact provided with a pointed end extending through the side cavity and through the conductor beneath said side cavity, said strip contact also having a straight portion extending longitudinally of the socket body and set in the cylindrical wall of the socket body, said strip contact having between the said straight portion and the pointed end thereof a shoulder engaging the end wall of the socket body, the longitudinally extending straight portion of the strip contact being provided with spaced apart protuberances projecting laterally inward of the socket body for engagement with the threads of an inserted lamp base.

3,128,142
CABLE CONNECTOR FOR PLUG-IN PANEL
Lewis W. Jacobs, West Hartford, and Robert J. Sabatella, Southington, Conn., assignors to General Electric Company, a corporation of New York
Filed Mar. 29, 1962, Ser. No. 183,634
2 Claims. (Cl. 339—198)



1. For use with an electric panel assembly having a plurality of electrical bus bars and a row of plug-type stationary electrical contacts, each of said contacts being connected to one of said bus bars, and retaining means in spaced relation to each of said stationary plug-type contacts, a cable connector assembly comprising:

(*a*) an insulating body having a base portion and parallel opposed upstanding side wall portions;

(*b*) a screw type electric cable connector carried by said base between said opposed side walls adjacent one end of said body;

(*c*) a pair of spaced apart socket-type electrical connectors carried by said base between said opposed side walls adjacent the other end of said body;

(*d*) said insulating body including a generally U-shaped wall in the space between said plug-type connectors, the space within said U-shaped wall being open from front to back of said body.

(*e*) means connecting said cable connector to each of said socket-type connectors, and

(*f*) means carried by said insulating body and cooperable with said retaining means whereby said insulating body may be engaged with said retaining means and pivoted thereabout into plugged-in electrical engagement with said stationary plug-type contacts;

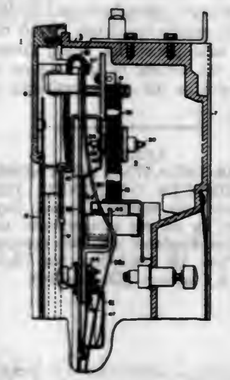
(*g*) the transverse dimension of said space within said U-shaped wall being greater than the corresponding dimension of said insulating body at either side thereof, whereby said insulating body may be mounted in nested relation with another similar insulating body mounted on said panel assembly from the opposite side thereof.

3,128,143
ELECTRICAL CONNECTOR
Fred C. Sitzler, Mechanicsburg, Pa., assignor to Berg Electronics, Inc., New Cumberland, Pa., a corporation of Pennsylvania
Filed Dec. 23, 1960, Ser. No. 77,875
4 Claims. (Cl. 339—223)



1. An electrical connector comprising a strip of sheet metal formed to provide a slot type socket open and unobstructed at both ends for telescopically receiving and yieldably holding a spade terminal, and a ferrule integrally connected to one end of said socket for crimping on the bared end of an insulated wire, said strip having a fold transversely thereof between one end of said socket and one end of said ferrule, said socket being disposed laterally of and in side-by-side relation with said ferrule, said socket having a ferrule integrally connected to the other end thereof for crimping around the insulation on said wire, the wall of said socket transversely thereof being continuous throughout more than half the periphery thereof, and the arrangement of said socket and ferrules being such that the sockets of a series of similarly oriented connectors can be disposed in series on a common spade terminal with adjacent connectors disposed in overlapping relation.

3,128,144
ELECTRICAL MEASURING INSTRUMENTS
Dennis F. Roarty, Carteret, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Original application Aug. 13, 1958, Ser. No. 754,774. Divided and this application Apr. 20, 1961, Ser. No. 104,356
7 Claims. (Cl. 346—140)



1. A supporting apparatus for ink sacks or the like comprising, a substantially U-shaped member having a pair of outwardly extending arms connected at their bases by a base member, an elongated member, first means pivotally supporting one portion of said elongated member intermediate the free end portions of said arms and adjacent said free end portion of one of said arms, said elongated member extending between said arms toward said base member and having an end portion adjacent said base member, said elongated member being cooperable with said base member and a first of said arms to provide a pocket for supporting the ink sack, second means continually urging said elongated member about its said supporting means in a direction away from said first arm to maintain said pocket of predetermined size, third means urging said free end portion of said first arm in a direction toward said one portion of said elongated member to provide a restricted opening for said pocket to prevent accidental movement of the ink sack outwardly of said pocket, said free end portion of said first arm being movable against the force exerted by said third means to permit the passage of the ink sack through said opening.

CHEMICAL

3,128,145
SHRINKPROOFING WOOL BY ACIDIFICATION AND SUBSEQUENT APPLICATION OF ALKALI METAL BROMATES AND HALIDE
John P. Redston, Upper Montclair, N.J., Malcolm J. Reider, Reading, Pa., and Gerard M. Weiss, White Meadow Lake, N.J., assignors to Drew Chemical Corporation, a corporation of Delaware
No Drawing. Filed Aug. 9, 1961, Ser. No. 130,264
7 Claims. (Cl. 8—128)

1. A method of shrinkproofing wool which comprises first treating said wool with aqueous sulfuric acid, then pressing said wool and removing excess water therefrom, the amount of sulfuric acid remaining on the wool after pressing being about 2%–10% by weight, thereafter depositing on and thereby wetting the wool with an aqueous solution of alkali metal bromate and alkali metal halide so that substantially all of the acid remains on the wool, said halide being taken from the class consisting of chloride and bromide, the amount of bromate so deposited being about 0.5%–1.5% and the halide being about 26%–12% based on the weight of the wool, the higher amounts of bromate corresponding to the lower amounts of halide, maintaining contact of the wool with the salts for a period not over about two minutes to substantially completely decompose the bromate, and subsequently neutralizing the acid.

3,128,146
POLYOLEFIN DYEING
Joseph Bianco, Lock Haven, Pa., and Herman P. Baumann, Charlotte, N.C., assignors to American Aniline Products, Inc., a corporation of Maryland
No Drawing. Filed Oct. 11, 1961, Ser. No. 144,323
4 Claims. (Cl. 8—55)

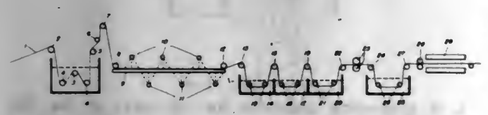
1. A method of coloring polypropylene comprising immersing said polypropylene in a dye liquor at a tempera-

ture between 75° C. and the boiling point of said liquor, said liquor comprising (1) 0.01–1% by weight, based upon the weight of said liquor, of a water-insoluble, oil-soluble dyestuff dissolved in an inert solvent selected from the group consisting of volatile liquid hydrocarbons, polar haloalkanes and polar water-soluble amides, the amount of said solvent being 0.5–5% by weight of said liquor, (2) an aqueous emulsion of an organic phosphite selected from the group consisting of triaryl phosphites, tri lower alkaryl phosphites and trialkyl phosphites wherein the alkyl group has from 50–10 carbon atoms, the amount of said phosphite being from 1–10% by weight based on the weight of said liquor, and (3) sufficient water to provide the above-indicated concentration of said dyestuff.

3,128,147
PROCESS FOR TREATING POLYNOSIC FIBERS AND PRODUCTS OBTAINED THEREBY

Robert S. Kenyon and William Frank Taylor, Mobile, Ala., assignors, by mésne assignments, to Courtaulds, Limited, London, England, a British company

Filed Nov. 18, 1960, Ser. No. 70,247
8 Claims. (Cl. 8—116)



1. A method for making improved textile material which comprises treating regenerated cellulose textile material having a degree of crystallinity above about 50%, a fine and stable microfibrillar structure, a minimum wet strength of 2.2 grams per denier and a wet elongation of less than 3.5% at a stress of 0.5 gram per denier, with a swelling agent for cellulose equivalent to a solution containing between about 5 and about 40% of an alkali metal hydroxide, drying the material, and subsequently impregnating said material with a cross-linking agent for the cellulose and curing the impregnated material.

3,128,148
BOILING AQUEOUS ORGANIC LIQUID ENHANCEMENT OF HIGH ACETYL CELLULOSE ACETATE PRODUCTS FLOW POINT AND WRINKLE RECOVERY

Louis D. Moore, Jr., Roger M. Schulken, Jr., and John W. Tamblyn, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Feb. 6, 1957, Ser. No. 638,443
7 Claims. (Cl. 8—131)

1. The process for the after treatment of products from the group consisting of solid fibers, films, yarns and fabrics, formed from high acetyl cellulose acetate to increase the crystallinity thereof without substantial loss of toughness of the product, said cellulose acetate being substantially uncrystallized and containing more than 40% acetyl calculated on the basis of the percent by weight of the functional group CH_3CO— and being capable of undergoing a crystallinity change, which consists of the steps of immersing the product of said uncrystallized cellulose acetate in an aqueous liquid solution at a boiling temperature and containing 2–25% of a chemical from the group consisting of phenol, n-amyl acetate, γ-butyrolactone, ethyl acetate, 2-chloroethanol, tri-fluoro acetic acid, cyclohexanone and pyrrole which solution has the property of altering the crystallinity of said high acetyl cellulose acetate, maintaining the product in contact with the boiling solution for a few minutes up to 60 minutes until the crystallinity is increased, but not for a long enough period to impair the physical make-up of said product, removing the product from the liquid, washing and drying the product.

3,128,149
PROCESS FOR PRODUCING CALCIUM TETRACUPROXY CHLORIDE

Herbert Baumgartner, Burghausen-Upper Bavaria, Germany, assignor to Wacker-Chemie G.m.b.H., Munich, Bavaria, Germany, a corporation of Germany

No Drawing. Filed Jan. 6, 1959, Ser. No. 785,122
Claims priority, application Germany June 30, 1958
2 Claims. (Cl. 23—85)

1. Process for producing crystalline calcium tetracuproxy chloride which comprises reacting calcium hydroxide at a temperature of about 9–20° C. and in the absence of ammonium ions with an aqueous suspension of copper oxychloride whose formula is

$$CuCl_2.3CuO.7\text{–}8H_2O$$

for at least 2 hours until the diminishing of the hydroxyl ions ceases, the proportion of said copper oxychloride to said calcium hydroxide being such that there is at least 1 $Ca(OH)_2$ for 4 Cu.

3,128,150
PROCESS FOR PRECONDITIONING THE CARBON BED USED IN A METHOD OF CONVERTING REFRACTORY METAL OXYCHLORIDES

James A. Brothers, Trenton, Mich., assignor to Wyandotte Chemicals Corporation, Wyandotte, Mich., a corporation of Michigan

No Drawing. Filed June 28, 1961, Ser. No. 120,200
5 Claims. (Cl. 23—87)

1. In a method of converting refractory metal oxychlorides, wherein the metal portion thereof is selected from the group consisting of columbium, vanadium, tungsten and molybdenum, to the corresponding refractory metal chloride by heating a carbon bed, wherein the carbon is selected from the group consisting of amorphous carbon and carbon mixtures containing amorphous carbon, to a minimum temperature of 450° C. and passing through said bed said refractory metal oxychloride and a chlorinating agent, said agent being about 10 percent in excess of the stoichiometric amount required for the conversion of metal oxychloride to metal chloride, the improvement which comprises preconditioning the carbon of said bed by heating the carbon to a minimum temperature of 200° C. and passing chlorine through said carbon until the off-gas from said carbon is essentially chlorine.

3,128,151
PROCESS FOR PRODUCING A SODIUM FLUOALUMINATE COMPOSITION HAVING PREDETERMINED NaF/AlF_3 RATIO

Domenico Zanon and Roberto Trupiano, both of Venice, Italy, assignors to I.C.P.M.—Industrie Chimiche Porto Marghera S.p.A., Milan, Italy, a corporation of Italy

No Drawing. Filed Oct. 4, 1960, Ser. No. 60,306
Claims priority, application Italy Oct. 30, 1959
2 Claims. (Cl. 23—88)

1. A process for producing a sodium fluoaluminate composition with a predetermined sodium fluoride/aluminum trifluoride molar ratio between 1.67 and 2.65 having substantially all of its aluminum trifluoride content chemically combined with sodium fluoride, comprising the steps of intimately and rapidly mixing together a first solution containing two compounds selected from the group which consists of a sodium halide, an aluminum halide and hydrofluoric acid, and a second solution containing the third compound, thereby forming a suspension, said sodium halide being present in an amount not exceeding the stoichiometric equivalent of sodium in said sodium fluoaluminate and being in a molar ratio with the aluminum of said aluminum halide substantially equal to said predetermined molar ratio, said hydrofluoric acid being present in an amount selected so that the total quantity of fluoride ion in said solutions is substantially equal to the stoichiometric amount of fluoride in the sodium fluoaluminate composition of predetermined sodium fluoride/aluminum trifluoride molar ratio; and conditioning the suspension by continuously stirring it for a period of at least one hour at a temperature on the order of 50° C.

3,128,152
PROCESS FOR RECOVERING HYDROGEN FLUORIDE FROM AQUEOUS FLUOSILICIC ACID SOLUTION

Robert N. Secord, Wenham, and Clifford Le Roy Carpenter, Wellesley, Mass., assignors to Cabot Corporation, Boston, Mass., a corporation of Delaware

No Drawing. Filed Oct. 10, 1961, Ser. No. 144,071
3 Claims. (Cl. 23—153)

1. A process for recovering hydrogen fluoride from fluosilicic acid which comprises reacting an aqueous solution of fluosilicic acid with ammonia and recovering an ammonium fluoride solution from the resulting products, evaporating said ammonium fluoride solution to produce hydrogen ammonium difluoride and ammonia, oxidizing said hydrogen ammonium difluoride with a substance chosen from the group consisting of oxygen and oxygen-containing gas, and recovering the hydrogen fluoride produced by said oxidation reaction.

3,128,153
PREPARATION OF THE NITRIDES OF ALUMINUM AND GALLIUM

Arrigo Addamiano, Willoughby, Ohio, assignor to General Electric Company, a corporation of New York

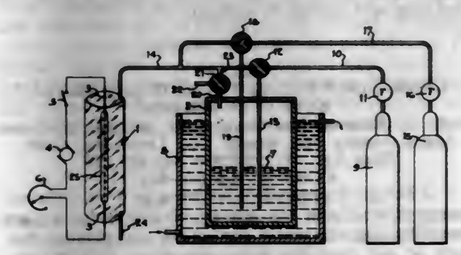
No Drawing. Filed May 1, 1961, Ser. No. 106,482
12 Claims. (Cl. 23—191)

1. A method of preparing aluminum and gallium nitrides comprising the steps of reacting a powder selected from the class consisting of the phosphide and arsenide of aluminum and gallium with anhydrous ammonia gas at a temperature between approximately 700° and 1200° C., then firing the resultant product in an atmosphere consisting essentially of anhydrous ammonia gas at approximately 1200° C. to promote crystallization and then cooling the resultant product.

3,128,154
PROCESS FOR PRODUCING CRYSTALLINE SILICON OVER A SUBSTRATE AND REMOVAL THEREFROM

Kenneth E. Bean and William E. Medcalf, Miami, Okla., assignors to The Eagle-Picher Company, Cincinnati, Ohio, a corporation of Ohio

Filed Dec. 19, 1958, Ser. No. 781,687
12 Claims. (Cl. 23—223.5)

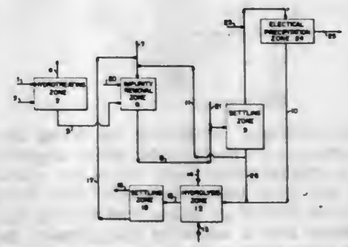


2. A process for preparing crystalline silicon comprising the steps of depositing on a filament a substrate of powdery silicon in the form of fine discrete particles produced by the thermal decomposition of a silane, depositing crystalline silicon over said substrate, and then pulling the crystalline silicon deposit longitudinally from the filament.

3,128,155
DESULFURIZATION PROCESS

William Judson Mattox, Baton Rouge, La., assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed July 26, 1960, Ser. No. 45,309
3 Claims. (Cl. 23—284)



1. The process of regenerating a molten potassium hydroxide reagent containing potassium sulfide and about 5 to 30 wt. percent water based on total reagent which comprises bubbling steam through said molten potassium hydroxide and potassium sulfide at a temperature in the range of about 400 to 1000° F. and a pressure in the range from about atmospheric to about 500 p.s.i. to hydrolyze the potassium sulfide in the reagent.

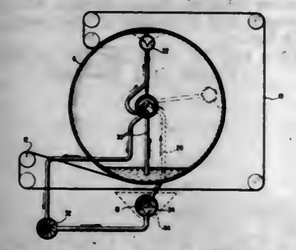
3,128,156
RECOVERY AND SEPARATION OF COBALT AND NICKEL

Ray S. Long, Concord, and James E. Magner, Antioch, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Feb. 8, 1960, Ser. No. 7,119
3 Claims. (Cl. 23—312)

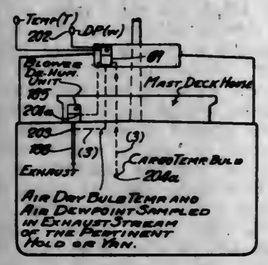
1. In a method of recovering cobalt and nickel values from an aqueous acidic solution consisting of a sulfate leach liquor which has been freed of copper and iron values and contains substantially no heavy metal values other than cobalt and nickel, the steps which comprise contacting the said aqueous acidic solution with a cation extractant consisting essentially of a solution of an oil-soluble sulfonated hydrocarbon in a non-polar organic solvent whereby cobalt and nickel values are taken up by the cation extractant; separating the loaded cation extractant from the aqueous acidic phase; contacting the loaded cation extractant with an aqueous chloride solution whereby cobalt and nickel values are stripped into the aqueous chloride solution, said chloride solution containing essentially a chloride selected from the group consisting of hydrochloric acid, sodium chloride and mixtures thereof; separating the cation extractant and the aqueous chloride solution; adjusting the chloride concentration of the aqueous chloride solution to at least 3 molar; contacting the aqueous chloride solution with an anion extractant consisting essentially of a water-immiscible medium having dissolved therein about 5 to 50 volume percent of the hydrochloride of a substantially water-insoluble alkyl amine containing about 7 to 50 carbon atoms and a pK value above about 10, said amine hydrochloride having a partition co-efficient favorable to its retention in the water-immmiscible medium; and separating the anion extractant from the aqueous chloride solution.

3,128,157
ARRANGEMENT FOR HEATING DRYING DRUMS OF DRYING MACHINES
Heinrich Gerster, Industriestrasse 1, Bruchsal-Karlsdorf, Baden, Germany
Filed Feb. 15, 1961, Ser. No. 89,458
Claims priority, application Germany Feb. 19, 1960
4 Claims. (Cl. 34—48)



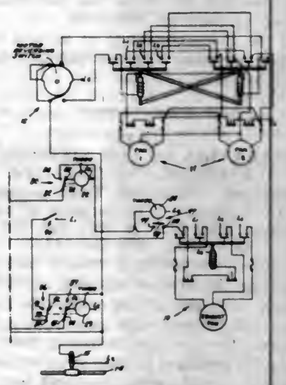
1. An installation for heating the drying drum of a drying apparatus for photographic prints, comprising drum means, a relatively fixed shaft, means for rotatably supporting said drum means about said shaft, drying cloth means in the form of an endless band abutting against said drum means over a section of the periphery thereof to press the prints against said drum means, said band having a portion forming an angle with the lowermost portion of said section, said drying cloth means and said drum means moving in the same direction, said drum means being constructed in a liquid-tight manner, means for heating said drum means in a manner such that the temperature of said drum means increases in directions upwardly from said lowermost portion to the uppermost portion of said section, spray means disposed on the inside of said drum means for covering a predetermined section of the drum casing with a spray of a liquid heat carrier maintained at essentially a predetermined temperature, said spray means being disposed below and adjacent the top point of said drum means and comprising a spray pipe extending substantially parallel to the longitudinal axis of said drum means, said spray pipe being provided on two sides thereof with nozzle means for angularly discharging said liquid heat carrier on peripherally spaced portions of the inner periphery of said drum means, and securing means for securing said spray means on said shaft.

3,128,158
APPARATUS FOR CONTROLLING ATMOSPHERIC CONDITIONS IN STORAGE COMPARTMENTS
Oliver D. Colvin, 459 Exeter Road, Hampton, N.H., and Robert W. Furman, 142 Robinson Place, Shrewsbury, N.J.
Filed Sept. 27, 1960, Ser. No. 58,749
7 Claims. (Cl. 34—50)



1. In a dehumidification system for a ship having a plurality of separate holds, a like plurality of dehumidifier devices, one for each hold, each being located adjacent its respective hold and having a conduit system for interconnecting same thereto for recirculating the air therein; each of said devices including fan means for moving the air through such hold and conduit system to accomplish such recirculation; means for bypassing via said dehumidifier device a selected fraction of the total air flow moved by said fan means; means for sensing the dewpoint temperature of the air of each of said holds, the dry bulb temperature of the weather air, and the sea water in which such ship floats; and means for automatically initiating the operation of any one of said dehumidifier devices in response to the occurrence of a selected difference between the dewpoint temperature of such a hold and one of said dry bulb temperatures.

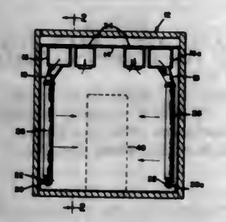
3,128,159
DRYING CHAMBER CONTROL SYSTEM
Joseph de Francisci, Jr., 197 Raymond St., Rockville Centre, N.Y., and Leonard de Francisci, 43 Trenton Ave., Long Beach, N.Y.
Filed May 2, 1960, Ser. No. 26,285
9 Claims. (Cl. 34—53)



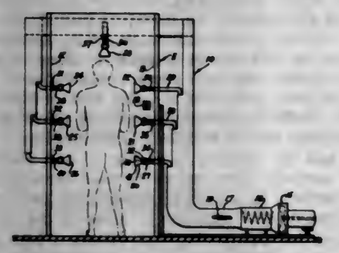
1. In a system for controlling the atmospheric condition within a drying chamber, the combination of an exhaust fan for the chamber, dry bulb temperature controlled means for converting a temperature signal to a pressure signal, wet bulb temperature controlled means for converting a temperature signal to a pressure signal, switch means for starting and stopping said exhaust fan, means controlled by the difference between the wet and dry bulb pressure signals and operable when the difference in the signals is above a desired value to cause said switch means to stop said exhaust fan and operable when the difference in the signals is below the desired value to cause said switch means to start said exhaust fan, a timer stopped and started by said switch means to limit the total time said fan can be stopped.

3,128,160
GLASS FIBER FILTER FOR HOT GAS DISTRIBUTION IN DRIERS
Hollis H. Bascom, Livermore, Calif., assignor to Coast Manufacturing and Supply Co., Livermore, Calif.
Filed Apr. 17, 1959, Ser. No. 807,129
4 Claims. (Cl. 34—82)

1. A hot gas drying system including an oven; a plenum communicating with the interior of said oven; a glass fiber filter bag removably carried by said plenum interiorly of said oven; first means associated with said plenum to blow gas therethrough and through said filter bag into said oven; second means associated with said plenum to heat the gas prior to passage through said filter bag; and exhaust means communicating the interior of said oven with said plenum, first and second means and operable to exhaust gases from said oven and recirculate at least a portion of the same through said plenum and associated first and second means.



3,128,161
AFTER SHOWER BODY DRIER
Marie-Antoinette Hudon, Hotel Seville, 29th St. and Madison Ave., New York, N.Y.
Filed Sept. 24, 1962, Ser. No. 225,465
1 Claim. (Cl. 34—233)

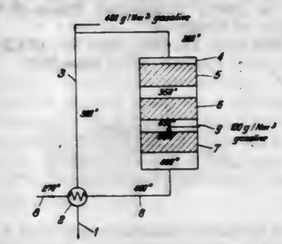


A drier for drying a person's body, said drier comprising in combination: a pair of parallel spaced side walls, and a back wall interconnecting said side walls, said back wall and said side walls constituting a stall enclosure wherein a person may stand; a source of heated air; a main air duct connected with said source of heated air and extending around said stall enclosure; a first series of branch air ducts extending from said main air duct and extending through one of said side walls, said branch air ducts being arranged in vertical alignment with each other; a second series of branch air ducts depending from said main air duct and extending through the other one of said side walls, each of the branch air ducts in said second series being aligned with one of the branch air ducts in said first series; an additional branch air duct depending from said main air duct and extending through said back wall, said additional branch air duct being located above the uppermost branch air duct in each of said side walls, the terminal portion of said additional branch air duct extending vertically downwardly; an air diffuser swingably supported on each of said branch air ducts for varying the direction of flow of air flowing from said branch air ducts; and means for controlling the volume of air flowing through said branch air ducts.

3,128,162
ANTI-ICING AGENT
Donald A. Maxwell and Ben N. Stuckey, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Oct. 18, 1961, Ser. No. 145,972
5 Claims. (Cl. 44—70)

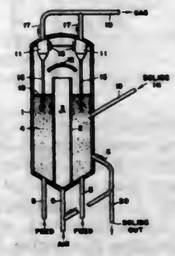
1. A hydrocarbon-base fuel comprising a major proportion of hydrocarbon liquid having a distillation end point below 650° F. and from about 0.01 to about 0.5 volume percent, based on the hydrocarbon volume, of bis-(3-methyl norcamphane-2-methylol) azelate.

3,128,163
METHOD OF CARRYING OUT EXOTHERMIC CATALYTIC CARBON MONOXIDE-STEAM GAS REACTIONS
Hellmuth Weittenhiller, Essen-Bredeney, Franz Bieger, Dorsten, and Harry Schöfl, Essen-Margarethenhohe, Germany, assignors to Metallgesellschaft Aktiengesellschaft, Frankfurt am Main, Germany, and Steinkohlengas Aktiengesellschaft, Dorsten, Germany, both corporations of Germany
Filed May 18, 1961, Ser. No. 110,908
Claims priority, application Germany May 21, 1960
9 Claims. (Cl. 48—197)



1. A catalytic carbon monoxide-steam conversion process which comprises initially heating a stream of a carbon monoxide steam conversion gas, steam and hydrocarbon vapors to a temperature below that corresponding to the carbon monoxide steam conversion temperature, thereafter passing the initially heated stream serially through a plurality of catalytic stages at temperatures at which substantial hydrocarbon reformation and carbon monoxide-steam conversion occurs and controlling the temperatures in said catalytic stages by cooling the stream of reactants and products between successive catalytic stages by introducing into the said stream of reactants and products fluid hydrocarbons the heat created in said exothermic carbon-monoxide steam conversion reaction being transferred by direct heat exchange to the endothermic hydrocarbon gas reformation reaction taking place simultaneously in said stream.

3,128,164
PROCESS FOR GASIFICATION OF HYDROCARBONS TO HYDROGEN AND CARBON MONOXIDE
Karsten Herbert Moritz, North Plainfield, N.J., and John Frederick Moser, Jr., Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed May 10, 1961, Ser. No. 109,137
8 Claims. (Cl. 48—212)



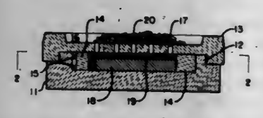
1. In a process wherein a fluidized bed of coke formed by coking a hydrocarbonaceous liquid feed is gasified in a gasification zone in the presence of air at a temperature of 1700° to 2200° F. and with the further presence of

components formed in said coking stage produces a reducing gas containing H_2 and CO, wherein a portion of the coke undergoes combustion, the improvement which comprises maintaining the gasification zone under conditions such that the carbon/oxygen ratio of said feed components to said gasification zone is less than the carbon/oxygen ratio of the gasification product so that coke carbon is consumed from said bed at a higher rate than it is deposited by cracking of the feed hydrocarbon, wherein direct contact between said air and said feed is avoided and wherein replenishment coke is added to said bed to replace that consumed.

3,128,165
HARD SURFACING MATERIAL

Harold C. Bridwell and David S. Rowley, Tulsa, Okla., assignors to Jersey Production Research Company, a corporation of Delaware

Filed Nov. 15, 1961, Ser. No. 153,257
15 Claims. (Cl. 51—307)

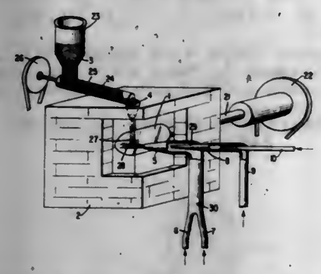


4. A hard surfacing material comprising a plurality of closely-spaced tungsten carbide particles between about 0.045 and about 0.400 inch in size; an alloy bonding said carbide particles together, said alloy having a melting point between about 1550° F. and about 2400° F. and in the molten state having the ability to wet said carbide particles; and a plurality of structurally-altered tungsten carbide powder granules and fine crystals of precipitated tungsten carbide dispersed within said alloy as a discontinuous phase.

3,128,166
PROCESS FOR PRODUCING QUARTZ GLASS

Heinrich Mohn, Haller, Kreis Gelnhausen, Germany, assignor to Heraeus Quarzschmelze G.m.b.H., Hanau am Main, Germany, a corporation of Germany

Original application Nov. 25, 1953, Ser. No. 394,462, now Patent No. 2,904,713, dated Sept. 15, 1959. Divided and this application Oct. 15, 1958, Ser. No. 767,363
Claims priority, application Germany Nov. 27, 1952
11 Claims. (Cl. 65—18)

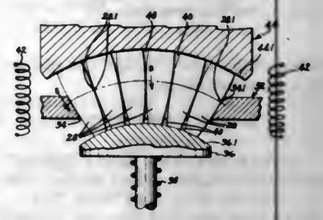


1. Process of producing a quartz glass of improved ultra-violet radiation transmission efficiency over extended periods of ultra-violet radiation exposure, which comprises maintaining a quartz glass material at a temperature of at least about 1600° C. and intimately contacting such material, while at said temperature, with a gas selected from the group consisting of chlorine, fluorine and gases yielding such halogens by decomposition at said temperature, for a period of time sufficient to substantially eliminate any hydrogen which may be present in said material and at least those particles normally present in such material of size above about 100μ of impurities reactable with said gas to form halogenides volatile at said temperature.

3,128,167
METHOD AND APPARATUS FOR FORMING TAPERED FIBER OPTICAL IMAGE TRANSFER DEVICES

Richard F. Woodcock, South Woodstock, Conn., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts

Filed Nov. 28, 1960, Ser. No. 72,189

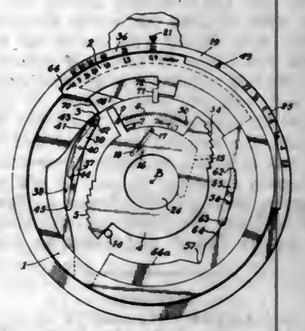


1. A method of forming a tapered fiber-optical image-transfer device comprising the steps of providing a plurality of light-conducting members each of which has a slight convexity intermediate its ends, assembling said members in side-by-side relation to form a bundle in which adjacent members contact each other at points of said convexity, enclosing at least part of the periphery of said bundle for initially contacting those members at the periphery of said bundle at least at points of said convexity and for defining a section of said bundle which tapers inwardly from points of said convexity, heating said members to a fusing temperature, and causing at least some of said members to move in the direction of said taper for compacting said members into intimately fused relation progressively along the lengths of said member from points of said convexity.

3,128,168
PHOTOGRAPHIC CAMERAS

Willi Günther, Stuttgart-Mohringen, and Heinz Köppen, Stuttgart, Germany, assignors to Zeiss Ikon Aktiengesellschaft, Stuttgart, Germany

Filed Jan. 15, 1962, Ser. No. 166,169
Claims priority, application Germany Jan. 21, 1961
4 Claims. (Cl. 95—64)



1. In a photographic device, such as a camera, having a camera objective and a shutter means, the device comprising in combination:

(*a*) an adjustable diaphragm,

(*b*) a flash guide number adjusting member provided with a guide number scale,

(*c*) a distance adjusting member provided with a distance scale,

(*d*) means for adjusting said diaphragm upon adjustment of said two adjusting members and in which the interval spacings of said guide number scale are proportionate to the interval spacings of said distance scale, and

(*e*) means forming an abutment arranged in such a position between said two adjustment members that it upon adjustment to one limit value of the diaphragm aperture, preferably to the smallest one, becomes effective to prevent any relative adjustment between said two adjustment members in a direction which would result in an adjustment to an impossible diaphragm value which lies beyond said one limit value of said diaphragm aperture,

(*f*) said abutment upon further adjustment of one of said two adjustment members causes the other adjustment member to move with it, whereby the existing limit value of the diaphragm aperture is maintained.

3,128,169
PROCESS FOR MAKING QUARTZ GLASS CASINGS

Wilhelm Heinrich Heraeus, Hanau am Main, and Heinrich Mohn, Haller, Kreis Gelnhausen, Germany, assignors to Heraeus Quarzschmelze G.m.b.H., Hanau am Main, Germany, a corporation of Germany

Original application Nov. 25, 1953, Ser. No. 394,462, now Patent No. 2,904,713, dated Sept. 15, 1959. Divided and this application Oct. 15, 1958, Ser. No. 767,364
Claims priority, application Germany Nov. 27, 1952
4 Claims. (Cl. 65—111)



1. In the process for making quartz glass casings for ultraviolet lamps from quartz glass containing amounts of impurities, selected from the group consisting of the conductive elements, carbon, metalloids, compounds containing such elements, including the oxides of silicon with a lower oxygen content than silicon dioxide, and hydrogen normally capable of forming centers of recrystallization including the steps, in which the glass is heated to a melting temperature, shaped in the form of a casing and allowed to solidify in this form, the improvement which essentially consists of the combination with said steps of reducing the particle size of said impurities to below about 100μ, and homogenizing and uniformly dispersing the same throughout said quartz glass prior to solidification in the form of said casing.

3,128,170
METHOD FOR INHIBITING POTATO SPROUTS

Edwin K. Plant, Pittsburgh, Pa., assignor, by mesne assignments, to Pittsburgh Plate Glass Company

No Drawing. Filed Aug. 25, 1960, Ser. No. 51,765
3 Claims. (Cl. 71—2.6)

1. A method of treating potatoes to inhibit the sprouting thereof and the development of reducing sugars therein during storage which comprises establishing a gas stream having a temperature of from about 40° F. to 70° F., generating finely divided liquid particles of a size of from 1 to 10 microns of an organic solution of isopropyl N-3-chlorophenylcarbamate, the organic solvent content of which consists of a water-soluble organic solvent having a normal boiling point greater than 212° F., distributing said liquid particles in said gas stream to form a stable suspension in said gas stream of said finely divided liquid particles, circulating the resulting suspension at a temperature substantially below the normal boiling point of said organic solvent and within said range of from about 40° F. to 70° F. in contact with potatoes, depositing a sprout-inhibiting concentration of isopropyl N-3-chlorophenylcarbamate from said suspension upon the potatoes and thereafter storing said potatoes at a temperature of between 50° F. and 70° F.

3,128,171
CONTROLLING WEED GROWTH IN A CORN CROP

Nathaniel Tischler, Jamesburg, N.J., assignor to Heyden Newport Chemical Corporation, a corporation of Delaware

No Drawing. Filed Nov. 19, 1956, Ser. No. 622,739
16 Claims. (Cl. 71—2.6)

1. In the culture of a corn crop in an area, the method of inhibiting weed growth in such area comprising applying to the area a herbicide composition containing a herbicidal material selected from the group consisting of 2,3,6-trichlorobenzoic acid, salts of 2,3,6-trichlorobenzoic acid, and mixtures thereof, the amount of herbicidal composition so applied per acre containing an amount of such herbicidal material equivalent to 0.15 to 3 pounds of 2,3,6-trichlorobenzoic acid.

3,128,172
NON-SPHERICAL CUPREOUS POWDER

Irwin D. Wagner and Luther D. Fetterolf, Palmerton, Pa., assignors to The New Jersey Zinc Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Dec. 27, 1960, Ser. No. 78,289
1 Claim. (Cl. 75—.5)

A copper-cobalt alloy powder having a composition consisting essentially of from about 2.5 to about 4.5 percent by weight of cobalt and the remainder essentially copper, the powder having been produced by forming a molten copper-cobalt alloy of said composition and thereafter atomizing the molten copper-cobalt alloy with air.

3,128,173
MAGNETIZATION OF IRON ORES

Ralph R. Gresham, P.O. Box 217, Brighton, Colo.

No Drawing. Filed Jan. 30, 1961, Ser. No. 85,478
4 Claims. (Cl. 75—1)

1. The method of magnetizing naturally non-magnetic ores which comprises grinding said non-magnetic ore to a fineness that it will pass through a screen of 4–200 mesh, then intimately admixing 10 parts of said pulverized non-magnetic ore with approximately 1 part, by volume, of a solid combustible fuel, and thereafter treating said ore-fuel mixture with a reducing flame, at a temperature between about 750° F. and about 1400° F.

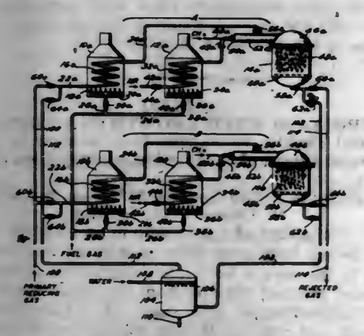
3,128,174
METHOD OF MAKING SPONGE IRON

Juan Celada, Monterrey, Nuevo Leon, Mexico, assignor to Fierro Esponja S.A., Monterrey, Nuevo Leon, Mexico

Filed June 26, 1959, Ser. No. 823,236
3 Claims. (Cl. 75—34)

1. In a method of preparing a hot reducing gas mixture adapted to be used for the reduction of iron ore to sponge iron of the type wherein a stream of preheated air is added to a heated reducing gas composed essentially of carbon monoxide and hydrogen, the amount of added air being such as to burn only partially the reducing constituents of the reducing gas to produce a reducing gas mixture at a temperature of 1800° to 2250° F., the improvement which comprises adding a gaseous hydrocarbon to and burning the said hydrocarbon in the air

stream prior to admixture of the air stream with the reducing gas and in an amount insufficient to react with all of the oxygen of the air stream, whereby an oxidizing mixture is produced, and mixing said oxidizing mixture



with said reducing gas to burn a portion only of said reducing gas, whereby a reducing gas mixture at 1800° F. to 2250° F. is achieved with a diminished consumption of the reducing constituents of said reducing gas.

3,128,175

LOW ALLOY, HIGH HARDNESS, TEMPER RESISTANT STEEL

Alexander Nagy, Pittsburgh, Louis W. Lherbier, Cuddy, and Alexander Altieri, McDonald, Pa., assignors to Universal-Cyclops Steel Corporation, Bridgeville, Pa., a corporation of Pennsylvania

No Drawing. Filed July 15, 1960, Ser. No. 43,002
5 Claims. (Cl. 75—126)

1. A low alloy content, high hardness, temper resistant steel having a composition consisting essentially, by weight, of 0.30 to 0.40 percent of carbon, 0.20 to 1 percent of manganese, 0.50 to 1.50 percent of silicon, 3 to 4 percent of chromium, 2.5 to 3.5 percent of molybdenum, 0.50 to 1 percent of vanadium, 1.50 to 2.50 percent of cobalt and the remainder iron and incidental impurities that do not deleteriously affect the product.

3,128,176

ALUMINUM SILICON CASTING ALLOYS

Wayne Martin, 19820 Battersea Blvd., Rocky River, Ohio

No Drawing. Filed June 14, 1961, Ser. No. 116,929
2 Claims. (Cl. 75—148)

1. An aluminum die casting alloy consisting of essentially of from 3 to 13 percent silicon and calcium introduced as elemental calcium in an amount within the range of 0.004 to 0.015 percent, the balance being essentially aluminum.

3,128,177

COPPER-COBALT INFILTRANT FOR IRON POWDER

Elliott H. Rennhack, Palmerton, Pa., assignor to The New Jersey Zinc Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Dec. 27, 1960, Ser. No. 78,211
3 Claims. (Cl. 75—153)

1. An infiltrant for iron powder compacts having a melting point lower than that of iron and capable, when melted in contact with an iron powder compact, of infiltrating the compact without pitting the surface of the compact and without leaving a residue on the surface of the compact, said infiltrant comprising a copper-cobalt alloy consisting essentially of 1% to 4.5% by weight of cobalt and the balance copper.

3,128,178

TANTALUM-TITANIUM BASE ALLOY

Edward F. Duffek, Jr., Mountain View, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed Feb. 28, 1961, Ser. No. 92,151
2 Claims. (Cl. 75—174)

1. A ductile metal composition resistant to the action of hot oxidizing and non-oxidizing acids and consisting essentially of, in percent by weight, 10–30% of titanium, 3–10% of vanadium, .25 to 3% of nickel, up to 25% columbium, up to 10% tungsten, and the balance essentially tantalum, with the tantalum being present in an amount of at least 30%.

3,128,179

CYANINE DYE-SENSITIZED PHOTOCONDUCTIVE COMPOSITIONS COMPRISING ZINC OXIDE

William B. Kendall and Paul H. Stewart, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Sept. 2, 1960, Ser. No. 53,689
10 Claims. (Cl. 96—1)

1. A photoconductive composition comprising photoconductive zinc oxide, a high dielectric insulator binder for said zinc oxide, and adsorbed to the surface of said zinc oxide, a cyanine dye containing a carboxyl radical attached to a carbon atom thereof.

3,128,180

HARDENED HIGH-CONTRAST PHOTOGRAPHIC SILVER CHLORIDE EMULSIONS AND METHOD OF PROCESSING

Richard W. Hean and Charles A. Goffe, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed July 2, 1958, Ser. No. 746,079
2 Claims. (Cl. 96—27)

1. In the preparation of a half-tone pattern by exposing a dried, thin photographic silver halide emulsion layer on a photographic support to a half-tone image and developing the resulting exposed silver halide emulsion layer with a photographic aqueous developer, the improvement which comprises employing a high-contrast photographic gelatino-silver halide emulsion layer containing at least 6 mg. per square foot of uncombined formaldehyde, the quantity of formaldehyde present in said silver halide emulsion layer prior to drying being between about 0.1 and 2.0 mole per mole of silver halide, said silver halide emulsion containing at least 70 mole percent silver chloride, and a photographic aqueous developer having a pH of at least 9.0 and containing a hydroquinone as the active developing agent and at least 0.01 molar of sulfite ion.

3,128,181

SHEET MATERIAL COATED WITH WATER-RESISTANT POLYVINYL ALCOHOL AND METHOD OF MAKING THE SAME

Towers Doggett, Westbrook, Maine, assignor to S. D. Warren Company, Boston, Mass., a corporation of Massachusetts

No Drawing. Filed Feb. 13, 1962, Ser. No. 172,874
5 Claims. (Cl. 96—33)

1. A process for preparing a lithographic printing plate comprising applying to a flexible base a thin coating of an aqueous dispersion of an at least 98% hydrolyzed polyvinyl alcohol containing finely-divided, mineral pigment and free from any added cross-linking agent, drying said thin coating, and heating the dried coating to a temperature above 175° C. for a sufficient length of time to render said thin coating water insoluble.

2. The process of claim 1 wherein said flexible base is a paper sheet that has been first coated with a barrier coating of a pigmented waterproof resinous polymer.

3. The process of claim 2 wherein said lithographic printing plate is rendered photosensitive by applying a wash coating thereto containing a sensitizer.

3,128,182

SILVER HALIDE SOLVENT CONTAINING DEVELOPERS AND PROCESS

Charleton C. Bard, Allan G. Milliken, and Deane S. Thomas, Jr., Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Oct. 23, 1961, Ser. No. 147,055
20 Claims. (Cl. 96—61)

1. A photographic developing composition consisting of an aqueous alkaline solution comprising a photographic developing agent and a silver halide solvent comprising a cyclohexane containing an amino radical attached to the carbocyclic ring thereof and in addition to said amino radical, a polar substituent selected from the class consisting of an amino radical, a hydroxyl radical and a hydroxyalkyl radical.

6. A photographic developing composition consisting of an aqueous alkaline solution comprising at least one photographic silver halide developing agent selected from the class consisting of 3-pyrazolidones, dihydroxybenzenes and p-N-methylaminophenol salts, and 1,4-bis(methylamino)cyclohexane.

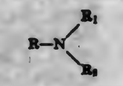
3,128,183

PHOTOGRAPHIC HALIDE EMULSIONS SENSITIZED WITH ALKYLENE OXIDE POLYMERS AND ALIPHATIC AMINES

Joan E. Jones, Rochester, N.Y., John Segal, Jr., Mount Prospect, Ill., and Charles V. Wilson, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed June 17, 1960, Ser. No. 36,756
10 Claims. (Cl. 96—107)

1. A photographic silver halide emulsion sensitized with from 0.05 to 5.0 grams per mole of silver halide of (*a*) an alkylene oxide polymer selected from the class consisting of (1) a polyalkylene glycol and (2) a condensation product of an alkylene oxide with an organic compound containing an active hydrogen atom, said alkylene oxide containing from 2 to 4 carbon atoms and said alkylene oxide polymer having a molecular weight of at least 300, and from 0.05 to 2.0 grams per mole of silver halide of (*b*) an aliphatic amine selected from those represented by the following general formula:



wherein R represents a member selected from the class consisting of an alkyl group containing from 6 to 20 carbon atoms and an alkenyl group containing from 6 to 18 carbon atoms, and R_1 and R_2 each represents a member selected from the class consisting of a hydrogen atom, an alkyl group containing from 1 to 8 carbon atoms, a hydroxyalkyl group containing from 2 to 3 carbon atoms, an alkoxyalkyl group containing from 3 to 4 carbon atoms and a halogenoalkyl group containing from 2 to 3 carbon atoms, the molar ratio of alkylene oxide polymer to aliphatic amine being from about 1:1 to 25:1.

3,128,184

ANTIFOGGANTS FOR GOLD SENSITIZED EMULSIONS IN THE PRESENCE OF REDUCTION SENSITIZERS

Wesley G. Lowe, Gordon N. Shayler, and Gordon D. Brady, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Jan. 25, 1960, Ser. No. 4,188
9 Claims. (Cl. 96—108)

2. A photographic silver halide emulsion sensitized with a labile sulfur compound, a gold salt, and a reduction sensitizer, said photographic silver halide emulsion having been digested in the presence of a compound selected from the class consisting of mucochloric acid, a water-soluble salt of mucochloric acid, mucobromic acid and a water-soluble salt of mucobromic acid subsequent to sensitization with said gold salt, but prior to sensitization with said reduction sensitizer.

3,128,185

ANTIFOGGANTS FOR FORMALDEHYDE-HARDENED PHOTOGRAPHIC LAYERS

Charles A. Goffe, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Jan. 25, 1960, Ser. No. 4,186
13 Claims. (Cl. 96—108)

1. A photographic silver halide emulsion hardened substantially only with formaldehyde, sensitized with a labile sulfur compound and a gold salt, and stabilized with an aldehyde compound selected from the class consisting of mucochloric acid, a water-soluble salt of mucochloric acid, mucobromic acid, a water soluble salt of mucobromic acid and an aromatic aldehyde containing a substituent only in at least one of the positions: the 3-position with respect to the aldehyde group and the 4-position with respect to the aldehyde group, said substituent being selected from the class consisting of an hydroxyl group, a halogen atom, a lower alkyl group, and an alkoxyl group, said aromatic aldehyde containing from 7 to 10 carbon atoms.

3,128,186

STABILIZED PHOTOGRAPHIC SILVER HALIDE EMULSIONS

Leo D. Corben, Oak Park, Mich., and Ernst Albert Steigmann, Winchester, Mass., assignors to General Foods Corporation, White Plains, N.Y., a corporation of Delaware

No Drawing. Filed July 15, 1960, Ser. No. 42,967
8 Claims. (Cl. 96—109)

1. A photographic gelatin silver halide emulsion in close association with an antifogging agent selected from the group consisting of amine salts of 6-thioctic acid, alkali metal salts of 6-thioctic acid, and alkaline earth metal salts of 6-thioctic acid, said agent being present in fog-inhibiting amounts.

3,128,187

ANTIFOGGANTS FOR PHOTOGRAPHIC SILVER HALIDE EMULSIONS

John Segal, Jr., Mount Prospect, Ill., and Frank D. Allen, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

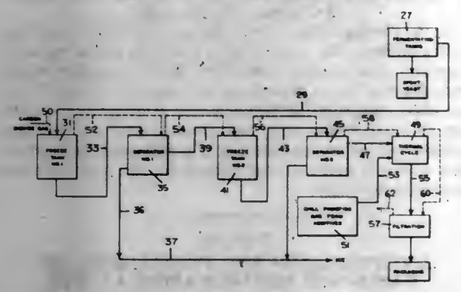
No Drawing. Filed Feb. 8, 1961, Ser. No. 87,752
8 Claims. (Cl. 96—109)

1. A photographic gelatino-silver-halide emulsion stabilized by the addition thereto of a saturated aliphatic carboxylic acid containing from 2 to 10 carbon atoms and having a bromine atom substituted on a carbon atom adjacent to the carboxyl radical.

3,128,188
BEER LAGERING PROCESS

Donald B. McIntire, Milwaukee, Wis., assignor to Union Carbide Corporation, a corporation of New York

Filed Sept. 2, 1960, Ser. No. 53,782
2 Claims. (Cl. 99—48)

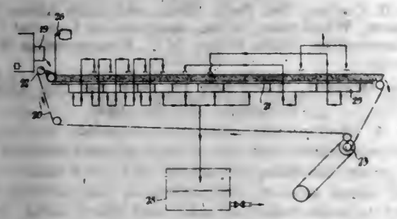


1. A process for lagering ruh beer comprising freezing water from said ruh beer so as to produce a slurry of concentrated beer, ice, and other solids, said concentrated beer being at less than about a fivefold volume concentration; and removing said ice and other solids from said concentrated beer, while maintaining the beer in a substantially inert atmosphere throughout all said process steps, thereby lagering said ruh beer without extensive storage periods.

3,128,189
METHOD FOR PREPARING BREWERS' WORT

Percy Henry Watts, Pinner, Michael Edward Ash, Ealing, London, and George Cordery Phillpotts, Putney, London, England, assignors to Arthur Guinness Son and Company (Park Royal) Limited, London, England, a British company

Filed Apr. 10, 1962, Ser. No. 186,456
Claims priority, application Great Britain Apr. 14, 1961
16 Claims. (Cl. 99—51)



1. A continuous filtration process for separating particulate solid materials from brewers wort, which comprises conveying a mixture of said wort and said solid materials continuously and at a controlled rate in a substantially horizontal linear direction through a filtration zone by means of a perforate conveyor moving in a trough; causing said solid materials to settle on said moving conveyor to form a settled and mechanically undisturbed filter bed of particles; moving said filter bed smoothly over a perforate platform above a wort collecting zone; draining wort through said filter bed, said perforate conveyor and said perforate platform and collecting said wort; and removing said solids from said conveyor at the downstream end of said filtration zone.

3,128,190
METHOD OF MAKING COMBINED FRUIT YOGHURT

John K. Donay, Fresno, Calif., and Victor G. Tahan, P.O. Box 98, Caruthers, Calif.; said Donay assignor to said Tahan

No Drawing. Filed Sept. 11, 1961, Ser. No. 137,033
8 Claims. (Cl. 99—59)

1. A method of making a substantially stable food product comprising cooking fruit particles in a sucrose solution whereby natural sugars of the fruit are partially replaced by sucrose and the particles covered with sucrose, mixing the fruit particles with milk which has been condensed to approximately 20% solid content and to which sucrose has been added, fermenting the milk with the fruit particles mixed therewith by the action of *Lactobacillus bulgaricus*, said fruit particles and milk being mixed at a ratio of about 1:2, and cooling the resulting mixture at least below about 60° F. to terminate fermentation.

3,128,191
PROCESSES FOR IMPROVING THE FLAVOR AND TENDERIZING MEAT BY ANTE-MORTEM INJECTION OF THAMNIDIUM AND ASPERGILLUS

Beverly E. Williams, La Grange Park, Ill., assignor to Hodges Research and Development Company, New York, N.Y., a corporation of California

No Drawing. Filed Feb. 7, 1963, Ser. No. 256,831
2 Claims. (Cl. 99—107)

1. In a process for improving the flavor and tenderness of meat, the steps of injecting an aqueous physiological, isotonic solution containing from approximately equal parts of the molds Thamnidium and Aspergillus to one part of Thamnidium to two parts of Aspergillus into the vascular system of a living livestock animal, holding the animal alive for up to four hours after the injection, then slaughtering and dressing the animal in the conventional manner and then holding the animal carcass at approximately 35° F. for from one to ten days, the injection solution containing from approximately 500 to approximately 1000 viable spores of Thamnidium and Aspergillus for each milliliter of the animal's blood, approximately 5 ml. of the solution being injected for each liter of the animal's blood.

3,128,192
PROCESS FOR PRODUCING A DRY CHEESE PRODUCT

Demetrius G. Vakaleris, Niles, Ill., assignor to National Dairy Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 11, 1961, Ser. No. 137,006
4 Claims. (Cl. 99—116)

1. In a process for preparing a dry product reconstitutable as a bakers'-type cheese, the improvement which comprises including in the product between about 10 percent and about 20 percent of heat-denatured serum protein, based on the milk protein in the product.

2. A process for producing a dry product reconstitutable as a bakers'-type cheese, which process comprises the steps of heat treating skim milk at an elevated temperature above the pasteurization temperature of the milk for a length of time sufficient to effect at least about two-thirds denaturation of the serum protein therein, coagulating said milk to form a curd, cutting the curd, forming a slurry from said curd and drying said slurry to provide a product which includes between about 10 percent to about 20 percent by weight of the milk protein in the product of heat denatured serum protein, whereby a dry reconstitutable bakers'-type cheese product having improved water absorbing properties is obtained.

3,128,193
METHOD OF FREEZING A LOW FAT FROZEN DESSERT

Luther D. Hilker, Evanston, Ill., assignor to National Dairy Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 25, 1961, Ser. No. 133,794
4 Claims. (Cl. 99—136)

1. A method for preparing a low-fat frozen dessert, comprising the steps of preparing a mix comprising an aqueous component and a fat component, the fat component comprising between about 2 percent and 10 percent of the mix, cooling the mix and simultaneously subjecting the mix to intensive shear during said cooling, terminating said cooling and said shear when the mix reaches a temperature whereat between about 50 percent and about 55 percent of the aqueous component of the mix is present in a crystalline state and thereafter freezing and hardening the mix to provide a low fat frozen dessert.

4. An improved low-fat frozen dessert prepared by the method set forth in claim 1.

3,128,194
ALKALI RESISTANT MULLITE REFRACTORY

Leonard D. Christie, Jr., Old Greenwich, Conn., assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Jan. 23, 1959, Ser. No. 788,505
6 Claims. (Cl. 106—67)

1. A fired refractory shape formed of a dense impervious fused mullite grog consisting substantially entirely of large well-developed interlocked mullite crystals, with an alumina content of 60 to 80% by weight; and a bonding material consisting of alumina and silica, the alumina constituting from 25 to 40% by weight of the bonding material; the proportions of the grog and bonding material being, respectively, 75–80% and 25–20%.

3,128,195
METHOD OF MAKING LIMED TALL OIL

Anargiros P. Patellis, Clairton, Pa., assignor to Pennsylvania Industrial Chemical Corporation, Clairton, Pa., a corporation of Pennsylvania

No Drawing. Filed May 6, 1960, Ser. No. 27,269
6 Claims. (Cl. 106—123)

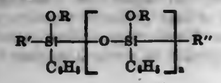
6. That method of making limed tall oil comprising the steps of forming a dispersion of hydrated lime in a mineral oil of naphthenic character at a temperature of at least about 120° C., adding tall oil to the dispersion while vigorously agitating it and progressively raising the temperature to not over about 220° C., and continuing the agitation to complete reaction between the tall oil and the lime, there being used, by weight, about 70 to 50 percent of mineral oil and 30 to 50 percent of tall oil, and about 11 percent by weight of lime based on the tall oil.

3,128,196
SURFACE MODIFIED SILICA

Edward Keith Pierpoint, Largs, Scotland, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed May 12, 1961, Ser. No. 109,508
Claims priority, application Great Britain June 10, 1960
7 Claims. (Cl. 106—308)

1. A process for the production of a surface modified silica which comprises providing a quantity of a finely divided silica and intimately admixing said silica with from about 5 to about 40% by weight thereof of a mixture of (1) a liquid cyclic siloxane and (2) an organosilicon compound of the general formula



where R is a radical selected from methyl, ethyl and propyl groups, R′ and R″ are radicals selected from alkyl and alkoxy groups having up to three carbon atoms, and phenyl groups, *n* is a whole number having a value from 0 to 3 inclusive, and at least one of the groups R′ and R″ is a group other than a phenyl group when *n* is 0, said cyclic siloxane being in amount from about 5 to 95% by weight of said mixture of cyclic siloxane and organosilicon compound.

3,128,197
CERAMIC UNDERGLAZE DECALCOMANIA AND METHOD OF MAKING SAME

Johannes Göbel, Aschaffenburg (Main), Germany, assignor to Buntpapierfabrik A.G., Aschaffenburg (Main), Germany

Filed July 11, 1961, Ser. No. 123,124
10 Claims. (Cl. 117—3.5)

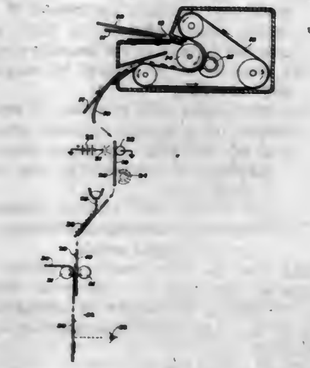


1. The method of preparing a ceramic underglaze decalcomania comprising applying on a carrier a water soluble layer, and applying thereon in optional sequence a design in ceramic colors and a hydrophilic masking coating containing a film forming ingredient consisting of a water insoluble carboxy group containing polyvinyl compound, said water soluble layer essentially consisting of a water soluble carboxy group containing polyvinyl compound and serving as an anchoring and separating layer.

3,128,198
THERMOXEROGRAPHY

William J. Dulmage and William A. Light, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed June 21, 1961, Ser. No. 118,593
5 Claims. (Cl. 117—17.5)



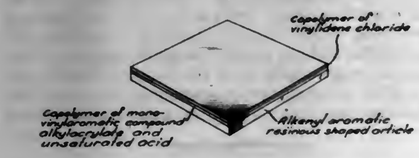
1. A copying process comprising imagewise heating so as to produce a pattern of heated and unheated areas thereon, the outer surface of a high electric resistance layer coated on a sheet of paper which outer surface at room temperature accepts and stores an electrostatic charge except after being heated, then substantially uniformly applying electrostatic charges to said outer surface to deposit charges on the unheated areas, and then with said surface cooled at least to the temperature at which xerographic toner will not fuse to the areas to which it is

not electrostatically attracted xerographically toning the surface in accordance with the charge image.

3,128,199
STABILIZATION OF WOOD AGAINST ULTRAVIOLET LIGHT
Roland S. Foster, Lake Jackson, Tex., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Dec. 14, 1960, Ser. No. 75,688
9 Claims. (Cl. 117—33.3)

1. A process for protecting a wood surface from damage caused by ultraviolet light which comprises impregnating said wood surface with an effective amount of a substance selected from the group consisting of salicylate esters, ortho hydroxylated aromatic ketones, and mixtures thereof.

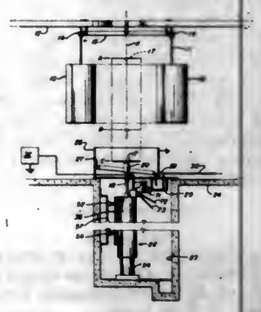
3,128,200
COATED ALKENYL AROMATIC ARTICLE AND METHOD OF COATING
William R. R. Park and Jerome H. Stickelmeyer, both of Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Nov. 24, 1961, Ser. No. 154,490
19 Claims. (Cl. 117—72)



1. A method of providing an alkenyl aromatic resinous shaped article with an adherable coating of a vinylidene chloride copolymer, said method comprising
(1) applying to a hydrophilic surface of an alkenyl aromatic resinous article a continuous coating
comprised of an aqueous dispersion of a copolymer consisting essentially of
(*a*) from 40 to 60 percent by weight of a monovinyl aromatic compound of 8 to 10 carbon atoms wherein the vinyl group is attached directly to the benzene ring;
(*b*) from 35 to 50 percent by weight of an alkyl acrylate,
(*c*) from about 0.25 to about 10 percent by weight of a copolymerizable unsaturated acid selected from the group consisting of acrylic acid, methacrylic acid, and itaconic acid,
and drying said aqueous dispersion to deposit a continuous adherent coating on said shaped article,
(2) applying over the dried coating a second coating of an aqueous dispersion of a copolymer comprising at least 70 percent by weight of vinylidene chloride and at least one other monomer copolymerizable therewith, and
drying said second coating.

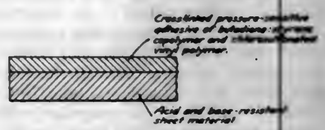
3,128,201
ELECTROSTATIC SPRAY COATING METHOD AND APPARATUS
William D. Gauthier, Indianapolis, Ind., assignor to Ransburg Electro-Coating Corp., Indianapolis, Ind., a corporation of Indiana
Filed May 6, 1955, Ser. No. 506,418
14 Claims. (Cl. 117—93.42)

1. A method of electrostatically spray coating articles with different types of coating materials comprising distributing a plurality of articles to be coated along a circular path about a predetermined axis, positioning a reciprocable spray source along said axis, initiating a radially expanding annular spray of charged liquid particles of a given type from said source while said source is located beyond the extremities of the articles and within a shroud on which the spray particles are deposited, moving said spray source along said axis into coating relation with the articles to deposit charged spray particles on



articles, reciprocating said spray source along said axis generally between the extremities of the articles to effect a coating of the articles, returning said spray source to within said shroud, terminating said spray, flushing out said spray source with a cleaning fluid, initiating from said spray source a radially expanding spray of charged liquid particles of a different type, and again moving said spray source along said axis into coating relation with articles to be coated.

3,128,202
PRESSURE-SENSITIVE ADHESIVE TAPE
Robert W. Schilling, St. Paul, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Aug. 15, 1960, Ser. No. 49,412
5 Claims. (Cl. 117—122)



4. A pressure-sensitive adhesive tape which is suitable for masking in chemical milling operations carried out at temperatures as high as 190° F., which can be readily removed after the milling operation is completed and thereafter re-applied as a protective cover, said tape comprising in combination: a smooth, hydrophobic, non-absorbent acid- and base-resistant sheet backing material having adhered to one surface thereof a normally tacky and pressure-sensitive adhesive, said adhesive comprising a rubbery butadiene:styrene copolymer crosslinked with an oil-soluble heat-reactive phenolic resin, a tackifier for said copolymer, and a crosslinked acid- and base-resistant chlorosulfonated polyethylene polymer, said polymer being compatible with both said copolymer and said tackifier, the exposed surface of said pressure-sensitive adhesive being substantially free from irregularities, thereby permitting said tape to be applied to a metal surface in such a manner that said adhesive establishes uniform intimate contact with said metal.

3,128,203
PROTECTIVE POLYINDENE AND TERPENEPHENOL COATINGS FOR SEMICONDUCTORS AND METHOD
Reinhard Dahlberg, Freiburg im Breisgau, Germany, assignor to Clevite Corporation, a corporation of Ohio
No Drawing. Filed May 2, 1961, Ser. No. 107,073
Claims priority, application Germany May 10, 1960
8 Claims. (Cl. 117—201)

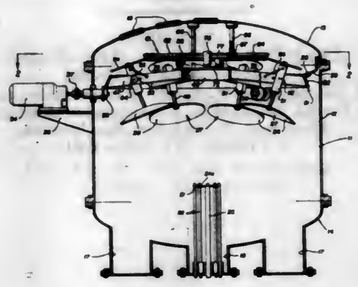
1. In combination, a semiconductor device comprising a body of a semiconductive material having free valence bonds available on its surface, and a thin coherent chemically bonded surface layer on said body consisting essentially of an unsaturated cyclic hydrocarbon selected from the group consisting of polyindene and terpene-phenol resins.

3,128,204
PROCESS OF PREPARING PHOTOCONDUCTIVE LAYERS FOR ELECTROPHOTOGRAPHY
Gustav Schaum and Hildegard Haydn, Leverkusen, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed Nov. 13, 1957, Ser. No. 696,024
Claims priority, application Germany Nov. 14, 1956
5 Claims. (Cl. 117—221)

3. A process of producing an electrophotographic plate which comprises mixing together in a ball mill zinc oxide, an aqueous dispersion of a heat-hardenable melamine-formaldehyde film-forming resinous binding agent in an amount between 0.3 and 2 parts of the resin per part of the zinc oxide, together with a waterproofing substance of the group consisting of
(i) an aqueous emulsion of paraffin wax in an amount between 2 and 12 percent by weight of the resinous binding agent based on the paraffin wax content of the emulsion, and
(ii) zirconium oxychloride in an amount between 0.1 and 1 percent by weight of the resinous binding agent,
and subsequently applying the said aqueous dispersion to a conductive support in such amount that the photoconducting layer deposited therefrom contains between 5 and 60 grams of zinc oxide per square meter, and subsequently drying the said coated conductive support.

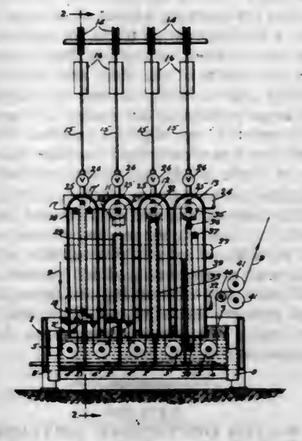
3,128,205
APPARATUS FOR VACUUM COATING
Rolf F. Illsley, Santa Rosa, Calif., assignor to Optical Coating Laboratory, Inc., Santa Rosa, Calif., a corporation of Delaware
Filed Sept. 11, 1961, Ser. No. 137,168
4 Claims. (Cl. 118—49)

1. In apparatus for applying a coating of thermally evaporable material to a plurality of substrates, a vacuum chamber, means for mounting a plurality of sources in a fixed predetermined position within the chamber so that the sources are substantially coincident with the vertical axis of the chamber, a wheel structure rotatably mounted in the chamber and having its axis of rotation in substantial alignment with the vertical axis of the chamber, a plurality of spindles, means for mounting said spindles on said wheel structure so that said spindles are spaced from the center of the wheel structure and so that the spindles can be rotated on their axes and pivoted at right angles to their axes, a rack mounted on each of the spindles, each of the racks carrying a plurality of substrates, a stationary member mounted in the chamber, means mounted on the spindles and engaging the stationary member independent of the angular positions of the spindles for rotating the spindles about



their axes as the wheel structure is rotated, and means for rotating the wheel structure to rotate the racks about the sources.

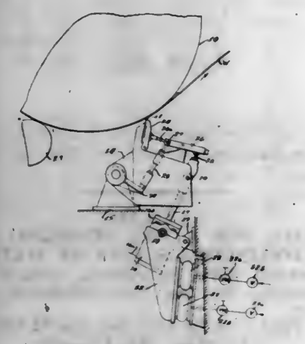
3,128,206
APPARATUS FOR A WET FINISHING PROCESS FOR CONTINUOUS SHEETS OF MATERIALS
Julien Dungler, Basel, Switzerland, assignor to Artof Maschinenfau Dr. Ing. Meier-Windhorst, Hamburg, Germany
Filed Nov. 30, 1960, Ser. No. 72,739
14 Claims. (Cl. 118—50)



1. Apparatus for a wet finishing process for continuous sheets of materials comprising a treatment liquid carrying trough, a plurality of rotatably mounted material pulling cylinders immersed in the liquid in said trough for successively pulling a continuous sheet of material through the trough, a plurality of material guiding and treating elements around which the material passes during treatment, said elements being positioned above said pulling cylinders, hoods having open bottom sides immersed in the treatment liquid in the trough and means suspending said hoods so that they can be easily adjusted and removed, said hoods enclosing said guiding and treating elements in a plurality of successive runs of the material being treated, and a cross partition disposed in sealing relation across at least one of said hoods proximate the

open bottom side thereof, said cross partition having transition slots therein permitting passage of the sheet of material therethrough, said cross partition closing the hood and providing a separate treating zone therewithin.

3,128,207
TRAILING BLADE COATER BLADE LOADING MECHANISM
Arnold Joseph Schmitt, Beloit, Wis., assignor to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin
Filed Sept. 7, 1961, Ser. No. 136,636
4 Claims. (Cl. 118—126)



1. In a paper coating machine the combination comprising means for applying a layer of coating to a moving paper web, a trailing coating blade for applying the coating to the web surface, a starting fluid pressure means supporting the weight of the blade and moving the blade into touching contact with the web at a light predetermined pressure preventing an excess of coating on the sheet from passing the blade, a control fluid pressure means applying a predetermined variable operating pressure to said blade solely to control operating pressure for obtaining sensitive pressure control, a first pivoted arm connected to said starting and said control fluid pressure means with said starting means and control means connected in parallel, a second pivotal arm connected to said blade, and a positioning fluid pressure means between said arms for transmitting the forces of said first and second pressure means to said blade and for moving the blade from a rest position away from the web to a ready position adjacent the web.

3,128,208
WATER DISPERSIBLE AMYLOSE
Benjamin R. Zeitlin, Spring Valley, Anatole Sarko, Irvington on Hudson, and Felix J. Germino, Peekskill, N.Y., assignors to General Foods Corporation, White Plains, N.Y., a corporation of Delaware
No Drawing. Filed Oct. 24, 1961, Ser. No. 147,192
19 Claims. (Cl. 127—67)

1. The method of producing water-dispersible amylose, which comprises subjecting a mixture of water and amylose to autoclaving to form a hot aqueous solution containing about 1 to 25% amylose by weight, diluting the solution with water to form a non-gelling amylose solution, cooling the solution to a temperature ranging from room temperature to just above the temperature of ice formation to precipitate the amylose, separating the precipitate from the solution, subjecting the precipitate to freezing conditions, and lyophilizing the precipitate.

3,128,209
SOLUBLE AMYLOSE
Felix J. Germino, Peekskill, Benjamin R. Zeitlin, Spring Valley, and Anatole Sarko, Irvington on Hudson, N.Y., assignors to General Foods Corporation, White Plains, N.Y., a corporation of Delaware
No Drawing. Filed Oct. 6, 1959, Ser. No. 844,634
10 Claims. (Cl. 127—71)

1. A method of producing cold water-soluble amylose, which comprises forming an aqueous solution containing about 0.1 to 25% by weight of amylose, adding to said solution an aqueous solution of a salt having a cation selected from the group consisting of alkali metals and alkaline earth metals and an anion selected from the group consisting of phosphates, arsenates and vanadates so that the resulting solution has a pH of more than 7.0, and coprecipitating the amylose and said salt from said resulting solution.

3,128,210
CORROSION PREVENTIVE PROCESS
Lewis J. Brown, North Wales, Pa., assignor to Pennsalt Chemicals Corporation, a corporation of Pennsylvania
No Drawing. Filed Nov. 23, 1956, Ser. No. 623,810
2 Claims. (Cl. 134—29)

1. In the manufacture of steel wherein the steel surface is cleaned in aqueous alkali, rinsed with water containing substantially in excess of 10 parts per million of anions of the group consisting of chlorides, sulfates and nitrates and then annealed, the method of reducing pin-point rusting of the steel surface which comprises subjecting said steel surface prior to annealing, and subsequent to such rinsing in said water containing substantially in excess of 10 parts per million of the said anions, to a final rinse with water which contains less than 10 parts per million of said anions and then annealing said steel.

3,128,211
PROCESS FOR MINIMIZING RIDGING IN CHROMIUM STEELS
James H. Waxweiler, Middletown, Ohio, assignor to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio
No Drawing. Filed Aug. 14, 1961, Ser. No. 131,092
15 Claims. (Cl. 148—12)

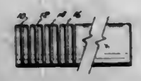
1. A process of diminishing ridging upon drawing in ferritic chromium-bearing steels having a chromium content of about 14.00% to 20% and not more than a nugatory quantity of nickel, which process comprises hot rolling the steel to an intermediate gauge, with at least the final 50% of the hot rolling reduction taking place at a temperature below 1600° F., box annealing the hot rolled product, and cold rolling it to gauge with a reduction of at least about 50% in at least two cold rolling stages, each followed by an anneal, the said anneals being at temperatures below the critical temperature, whereby to produce a product having a fine grain size and exhibiting low ridging characteristics.

3,128,212
SOLID HIGH ENERGY BORANE FUEL COMPOSITION
Trescott B. Larchar, Sr., Lewiston, Wallace R. Mitten, Grand Island, and Amandus D. Snyder and William K. Taft, Lewiston, N.Y., assignors to Olin Mathieson Chemical Corporation
No Drawing. Filed July 18, 1958, Ser. No. 749,563
18 Claims. (Cl. 149—19)

1. A solid high energy fuel composition consisting essentially of the product of reaction of butadiene-methyl-vinylpyridine polymer and a borane selected from the group consisting of diborane, pentaborane, decaborane, lower alkyl pentaborane and lower alkyl decaborane and mixtures thereof at a temperature of about −10 to 150°

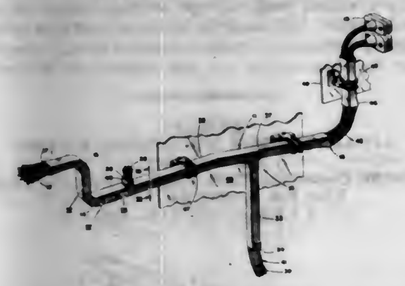
C. and in amounts of about 20 to 0.1 parts by weight of polymer per part of borane.

3,128,213
METHOD OF MAKING A SEMICONDUCTOR DEVICE
John M. Gault, Manhattan Beach, and John R. Moross, Whittier, Calif., assignors to International Rectifier Corporation, El Segundo, Calif., a corporation of California
Filed July 20, 1961, Ser. No. 125,556
4 Claims. (Cl. 156—17)



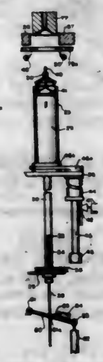
1. A method of making a plurality of semiconductor devices comprising the steps of partially cutting through an ingot of semiconductor material to form a plurality of partially formed wafers secured to one another over uncut portions of said ingot, producing P-N conductivity junctions on each of said partially formed wafers by sequential treatment with controlled impurities of the appropriate conductivity types, heating the surfaces of said partially formed wafers to produce the corresponding conductivity type zones, and then completely cutting said wafers from said ingot.

3,128,214
METHOD OF MAKING MULTICONDUCTOR CABLE
Norman R. Lay, Arlington, Tex., assignor, by mesne assignments, to Ling-Temco-Vought, Inc., Dallas, Tex., a corporation of Delaware
Original application Apr. 6, 1959, Ser. No. 804,177, now Patent No. 2,991,328, dated July 4, 1961. Divided and this application Dec. 27, 1960, Ser. No. 78,718
5 Claims. (Cl. 156—55)



5. The method of making a high-density multiconductor cable of the type having a rigid, molded cover and a flexible jacket extending from a cover opening comprising: arranging individually insulated, elongated conductors in a group in general parallel relation with each other; slipping over the end of the group of conductors a convoluted flexible jacket that has a dielectric material with low coefficient of friction for its inside wall, slipping the encircling jacket along the group of conductors to where one end thereof is positioned around the conductors where the conductors and the jacket are to extend from an opening in the rigid cover; providing on the group of conductors over the length desired for the rigid cover and over the one end of the positioned jacket a continuous wrapping made of a cloth impregnated with hard-setting resin that is adhesively incompatible with the individually insulated conductors, reducing the cross-sectional area of the group of conductors and forming them within their wrapping including the wrapped end of the jacket to a desired cross-sectional shape by pressing them between dies, and curing the resin of the wrapping under pressure of the dies until it has substantially solidified to a rigid state.

3,128,215
METHOD AND APPARATUS FOR SEALING A THERMOPLASTIC TOP TO A TUBULAR BODY
Charles R. Hood, Springfield Township, Hamilton County, and Jean E. Schaefer, Colerain Township, Hamilton County, Ohio, assignors to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
Filed July 13, 1961, Ser. No. 123,862
11 Claims. (Cl. 156—69)

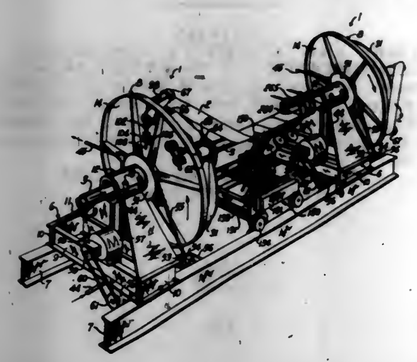


1. In the process of sealing a premolded thermoplastic top having a depending skirt portion to a preformed thermoplastic coated tubular body, the steps which comprise positioning said body and top in axial alignment and slightly axially spaced relationship, rotating both body and top while simultaneously heating selected surfaces of each until said skirt portion is softened to plastic adhesive consistency, said selected surfaces comprising portions of said body and top which are to be sealed together, thereafter effecting relative axial displacement of said body and top to place them in substantially the same relative position desired in the finished article wherein the depending skirt portion of the top is telescoped with the adjacent end of the body, and applying internal pressure to the inner skirt portion of the top so that it contacts the inside surface of the upper end of the body while concurrently embracing the exterior periphery of the telescoped top and body until the said selected surfaces adhere and solidify thereby to complete a seal between the telescoped portions of the body and top.

3,128,216
METHOD AND APPARATUS FOR MAKING FIBER REINFORCED PLASTIC PIPE
Daniel J. Reed, Milwaukee, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Apr. 20, 1959, Ser. No. 807,664
32 Claims. (Cl. 156—184)

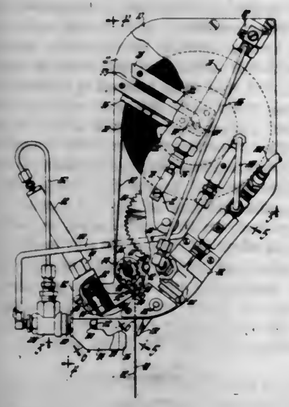
25. A method of fabricating a tubular article, comprising advancing a mandrel longitudinally through the central openings in a series of spaced axially aligned coiled strips of reinforcing material impregnated with a partially cured solid resin, guiding an end of each strip onto the mandrel at spaced locations thereon, rotating each alternate coiled strip in the opposite direction to wind each alternate strip on the mandrel with the generally opposite helix angle to that of the intermediate strips in

said series and thereby form said tubular article, heating each strip as it is applied to the mandrel to melt the resin,



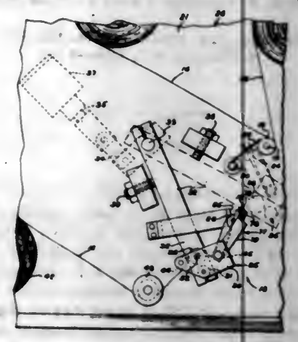
and curing the resin to an infusible state after the winding of all of said strips to form a strong integral structure.

3,128,217
TAPE DISPENSING APPARATUS
Norman R. Brown, Pontiac, John A. Gustairs, Royal Oak, and Clarence E. Herider, Dearborn, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 7, 1961, Ser. No. 115,454
3 Claims. (Cl. 156—355)



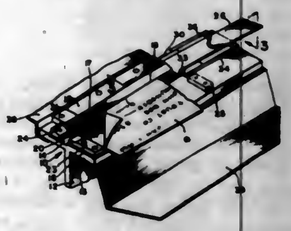
1. Tape dispensing and applying apparatus for fastening identification tape on a workpiece and comprising support means, a roll of tape rotatably supported by said support means, means to dispense a predetermined length of said tape, jaw means associated with said support means and defining a jaw cavity, said length of said tape extending into said jaw cavity, seat means provided for a workpiece in said jaw means, said length of tape extending in front of said seat means to be engaged by and carried with said workpiece into said seat, means to sever said length of tape from said roll as said workpiece is moved into said seat, and jaw means actuable by movement of said workpiece onto said seat to secure the ends of said tape to one another around said workpiece.

3,128,218
DEVICE FOR APPLYING PRESSURE SENSITIVE TAPE TO ARTICLES
George P. McGraw, Jr., Downers Grove, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed June 21, 1961, Ser. No. 118,690
5 Claims. (Cl. 156—522)



1. A device for applying pressure sensitive tape to an article supported in a predetermined position comprising a carrier, means for imparting forward and return movements to said carrier along a predetermined path to and from an advanced position adjacent to the article, means on said carrier engageable with the adhesive side of the tape for effecting a connection therewith to advance the tape during the forward movement of said carrier and to release the connection with the tape during the return movement of said carrier, suction means on said carrier for releasably supporting the end portion of the tape and for guiding said end portion into adhesive engagement with the article in response to movement of said carrier to the advanced position, tape severing means mounted on said carrier, and means for actuating said tape severing means in response to return movement of said carrier to effect the severance of the tape adjacent to the article.

3,128,219
APPARATUS FOR ATTACHING A STRIP TO A SHEET
Carl M. Cummings, 725 S. Maple, Montebello, Calif.
Filed Feb. 6, 1961, Ser. No. 87,193
5 Claims. (Cl. 156—584)



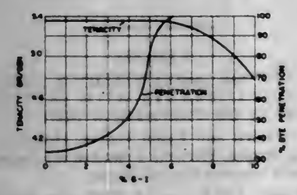
1. In a device for use in transferring strips from a roll of carrier tape to attach each strip to a marginal edge of a rectangular sheet in overlapping relationship, the carrier tape having a plurality of the strips serially attached thereto, each strip having an adhesive coating on one surface thereof, the combination of: a base having a table thereon, means on the base for supporting the roll of carrier tape, a guide element fixed to said base, an edge stop fixed on said table whereby a rectangular sheet may be placed on said table with said marginal edge aligned by said guide element and with another edge of the sheet contacting said edge stop, the strips each being movable longitudinally on said table with the adhesive coating on each strip exposed, means on the base forming a passage for said carrier tape and strips thereon, a transverse element mounted on said base adjacent the table and at one end of said passage, the carrier tape alone passing around said transverse element, whereby manual force applied to tension the carrier tape about the said transverse element is effective to separate a strip from the carrier tape and to project the strip longitudinally on said table.

3,128,220
METHOD AND MACHINE FOR MAKING FLEXIBLE DUCT CONNECTOR STOCK AND RESULTANT PRODUCT
Martin M. Gracer, 71 Laurel Drive, Massapequa Park, N.Y.
Filed July 9, 1959, Ser. No. 825,954
3 Claims. (Cl. 161—36)



1. A flexible duct connector stock for joining the edges of ducts comprising two elongated sheet metal strips and a length of duct sealing fabric, said strips each having a side marginal portion folded over toward the strip and clampingly engaging a different side edge of said length of fabric to sandwich said side edge of said fabric between said folded over portion and a part of said strip, said folded over portions and said parts each having longitudinally spaced apart, transversely extending slots, the outline of said slots being defined by sharp burred elements extending beyond the plane of one face of said strips, said one face forming the inside of said fold whereby said burred elements are driven into both surfaces of said fabric upon formation of said clamping fold and thereby augment the engagement of said strips and said fabric, said fabric, after folding of said strips, serving to seal said slots of said strips.

3,128,221
DYE RECEPTIVE FILAMENT
Juan Antonio Flores, Chattanooga, Tenn., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Feb. 19, 1962, Ser. No. 173,892
9 Claims. (Cl. 161—175)



1. A drawn nylon filament consisting essentially of a copolymer of polyhexamethylene adipamide and polyhexamethylene isophthalamide, there being less than 10% by weight of the isophthalamide in the copolymer.

6. A drawn nylon filament comprising at least two continuous adhered components, one of said components consisting essentially of a homopolyamide, another component consisting essentially of a copolymer of polyhexamethylene adipamide and polyhexamethylene isophthalamide, there being less than 10% by weight of the isophthalamide in the copolymer.

3,128,222
PROCESS OF COLORING CELLULOSIC FIBERS
Robert J. Herschler and Rainer G. Jaffe, Camas, Wash., assignors to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada
No Drawing. Filed Nov. 7, 1960, Ser. No. 67,492
17 Claims. (Cl. 162—162)

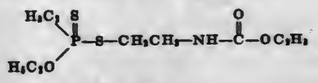
1. A process for coloring cellulosic fibers which comprises adding to an aqueous slurry of said fibers (*a*) a liquid dispersion comprising 10 to 99 parts by weight of a dialkyl sulfoxide and 1 to 90 parts by weight of a water-insoluble colorant and (*b*) a sufficient amount of a cationic agent to effect a substantially complete deposition of the colorant on the fibers.

3,128,223
PROCESS FOR IMPROVING THE RETENTION OF MINERAL FILLERS IN THE FORMATION OF PAPER FLEECES
Guido von Rosenberg, Hellmut Jochinke, and Otto Huber, all of Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Filed Oct. 24, 1961, Ser. No. 160,380
Claims priority, application Germany Oct. 28, 1960
3 Claims. (Cl. 162—181)

1. A process for improving the retention of mineral fillers in the formation of paper fleeces from an aqueous cellulose pulp which comprises adding to the pulp containing a filler prior to the sheet formation as a hydrogel-forming substance at least 0.5% by weight calculated on the weight of the cellulose of a basic aluminum chloride of the formula $Al_2(OH)_5Cl.3H_2O$.

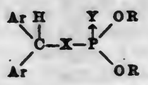
3,128,224
THIOPHOSPHONATES HAVING A URETHANE GROUPING
John G. Brady, Campbell, Calif., and Karoly Szabo, Pleasantville, N.Y., assignors to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Aug. 6, 1962, Ser. No. 214,840
8 Claims. (Cl. 167—22)

6. A method of killing lower pest organisms which comprises applying to the habitat thereof a small but effective amount of a thiophosphonic ester of the following formula:



3,128,225
DIPHENYLMETHYL ESTERS OF O,O-DIALKYL MONOTHIO- AND DITHIOPHOSPHORIC ACIDS AND PESTICIDAL METHODS USING SAME
Llewellyn W. Fancher, Lafayette, and Stephen C. Dorman, Los Gatos, Calif., assignors to Stauffer Chemical Company, a corporation of Delaware
No Drawing. Filed Jan. 20, 1960, Ser. No. 3,513
18 Claims. (Cl. 167—30)

1. A compound having the formula



where Ar is selected from the class consisting of phenyl and chlorophenyl, where X is selected from the class consisting of oxygen and sulfur, where Y is selected from the class consisting of oxygen and sulfur with Y being sulfur when X is oxygen and where R is lower alkyl.

3,128,226
COMPOSITION FOR RELIEVING PAIN
Saul Howard Rubin, Nutley, and John James Vance, Park Ridge, N.J., assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey
No Drawing. Filed Aug. 22, 1962, Ser. No. 218,528
6 Claims. (Cl. 167—55)

1. A therapeutic composition comprising (1) a compound selected from the group consisting of 1-(4-chlorophenethyl) - 2 - methyl-6,7-dimethoxy-1,2,3,4-tetrahydroisoquinoline and an acid addition salt thereof with a medicinally acceptable acid (2) acetylsal.cylic acid (3) p-ethoxyacetanilide and (4) caffeine, there being present in said composition for each part by weight of said 1,2,3,4-tetrahydroisoquinoline component from about 3.0 to about 10.0 parts by weight of said acetylsalicylic acid, from about 2.0 to about 6.0 parts by weight of said p-ethoxyacetanilide and from about 0.25 part to about 1.5 parts by weight of caffeine.

3,128,227
ANTIBIOTIC INTRAMUSCULAR COMPOSITION
Leon Abbott Kanegis and Lawrence Ritter, New City, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed June 17, 1954, Ser. No. 437,553
18 Claims. (Cl. 167—65)

1. An intramuscularly acceptable broad-spectrum antibiotic composition comprising an antibiotic selected from the group consisting of tetracycline and oxytetracycline, and their acid and basic salts, a soluble source of magnesium ions, and a soluble source of absorption enhancing ions selected from the group consisting of citrate ions, ascorbate ions, gluconate ions, thioglycollate ions and ions from soluble mineral acid salts of amino acids having a pH in aqueous solution of less than 3.5, said components being present in such form that when water is present an aqueous composition with a pH of less than 5 is formed.

3,128,228
TISSUE CULTURE MEDIUM
Jiří Michl, Prague, Czechoslovakia, assignor to Ustav sera a ockovacich latek, Prague, Czechoslovakia
No Drawing. Filed Feb. 27, 1961, Ser. No. 91,593
Claims priority, application Czechoslovakia Mar. 4, 1960
7 Claims. (Cl. 167—78)

1. A process of growing a tissue culture which comprises inoculating a tissue culture medium including a nutrient solution, and further containing as a growth promoting constituent an active alpha globulin fraction having an electrophoretic mobility of 4.55×10^{-5} to 4.75×10^{-5} cm.²/v. sec., said medium being substantially free of other active alpha globulins, with tissue cells.

3,128,229
STABILIZATION OF VIRAL VACCINE AND INACTIVATION OF ADVENTITIOUS TISSUE CULTURE CONTAMINANTS THEREIN
Joseph L. Melnick and Craig Wallis, Houston, Tex., assignors to Baylor Medical Foundation, Houston, Tex., a non-profit corporation of Texas
No Drawing. Filed Oct. 5, 1961, Ser. No. 143,038
2 Claims. (Cl. 167—78)

1. The process which comprises adding a concentrated aqueous solution containing at least one member of the group consisting of magnesium chloride, magnesium sulfate, calcium chloride, zinc chloride, manganese sulfate, cobalt chloride, aluminum chloride, aluminum sulfate, and mixtures thereof to an aqueous suspension containing at least one live ribonucleic acid-containing tissue-culture propagated enterovirus, attenuated to avirulence to man, in concentrations effective to inactivate adventitious tissue culture contaminants.

3,128,230
MILK HAVING ANTIBODIES THEREIN AND PROCESS FOR PRODUCING SAME
Wilfred F. Heinbach, Middleburg, Pa., assignor to Sunbury Milk Products Co., Sunbury, Pa., a corporation of Pennsylvania
No Drawing. Filed Apr. 4, 1961, Ser. No. 100,527
1 Claim. (Cl. 167—78)

In a method for producing controlled bacterial antibody potency at a minimum agglutination titer of 1:40 in an immunological milk product containing bacterial antibodies, produced by milking lactating mammals which have previously been immunized by a graded series of subcutaneous injections, administered at predetermined intervals, of a mixed bacterin vaccine having a 1,200 million total killed organism content of the following component organisms per cubic centimeter:

Escherichia coli (colon bacillus)	200 million
Streptococcus (*viridans*, hemolytic and non-hemolytic)	200 million
Diplococcus pneumoniae (Pneumococcus)	200 million
Staphylococcus aureus	300 million
Staphylococcus albus	300 million

until both the serum of the blood and the milk obtained from the immunized lactating mammals have a bacterial antibody agglutination titer of no less than 1:40, the improvement which consists essentially of the following steps:

(*a*) obtaining a quantity of milk from said immunized lactating mammal, selecting a sample of milk therefrom, and instilling the milk sample into the stomach of an avian host subject constituting an agglutination-titer diagnostic intermediate,
(*b*) said avian host subject being seronegative to the bacterial components of the mixed bacterin vaccine;
(*c*) removing blood from said avian host subject and separating the serum therefrom;
(*d*) titering the avian serum for agglutination of the bacterial components of the mixed bacterin vaccine; and
(*e*) selecting for immunological purposes quantities of the milk wherein a milk sample obtained therefrom produces an agglutination titer of not less than 1:40 in the serum of the seronegative avian host subject.

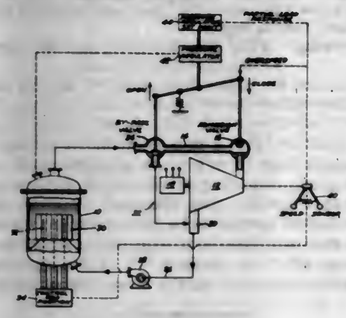
3,128,231
SUPPRESSION OF ADVENTITIOUS TISSUE CULTURE CONTAMINANTS WITH SELECTED SOLUBLE SALTS OF TRIVALENT METAL CATIONS
Joseph L. Melnick and Craig Wallis, Houston, Tex., assignors to Baylor Medical Foundation, Houston, Tex., a non-profit corporation of Texas
No Drawing. Filed Apr. 11, 1962, Ser. No. 186,618
4 Claims. (Cl. 167—78)

1. The process which comprises adding aqueous solutions containing at least one member of the group consisting of aluminum chloride, aluminum sulfate, chromic chloride, chromic sulfate, ferric chloride and ferric sulfate to a tissue culture medium for cell cultures suitable for the production and for the safety testing of viral vaccines containing at least one live ribonucleic acid-containing tissue-culture propagated enterovirus, attenuated to avirulence to man, in concentration effective to suppress adventitious tissue culture contaminants.

3,128,232
OXIDATION DYESTUFF AGENT FOR HUMAN HAIR
Hermann Wilmsmann and Eugen Konrad, Darmstadt, Germany, assignors to Wella A.G., Darmstadt, Germany
No Drawing. Filed Mar. 21, 1960, Ser. No. 16,128
Claims priority, application Germany Mar. 21, 1959
11 Claims. (Cl. 167—88)

1. Dye composition for human hair, said composition comprising an oxidation dyestuff for human hair, and a substance selected from the group consisting of 3,4-diaminobenzoic acid and alkali metal, ammonium and organic amine salts thereof.

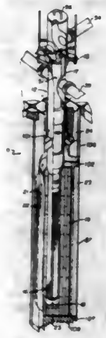
3,128,233
CONTROL OF SINGLE CYCLE POWER SYSTEM HAVING A STEAM GENERATING REACTOR
Robert E. Kuerzel, San Jose, Calif., assignor to General Electric Company, a corporation of New York
Filed Aug. 7, 1961, Ser. No. 129,717
7 Claims. (Cl. 176—24)



1. A control system for a single cycle power system including a steam generating nuclear reactor, control rods in said reactor for governing the power level of said reactor, a turbine, and valve means for controlling the rate of flow of steam from the reactor to the turbine, said control system comprising first means responsive to the speed at said turbine, second means responsive to the pressure in said reactor, means operatively connecting said first means to said reactor to set the control rod positioning so as to vary the power level in said reactor in accordance with said speed, means operatively connecting said first means to said second means to set a base pressure for said reactor in accordance with said speed, and means operatively connecting said second means to said valve means to vary the flow of steam from said reactor to said turbine in accordance with pressure changes in said reactor as sensed by said second means to maintain said pressure in said reactor.

3,128,234
MODULAR CORE UNITS FOR A NEUTRONIC REACTOR
Joseph F. Cage, Jr., Saratoga, and Dunham B. Sherer, Gilroy, Calif., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed Aug. 26, 1960, Ser. No. 52,318
13 Claims. (Cl. 176—43)

1. A modular core unit suitable for assembly with a plurality of like units to provide a nuclear reactor core comprising an elongated moderator material member constituting a fractional part of the entire moderator of said core, said moderator member having an exterior configuration adapted to be disposed in contiguous relation to other like moderator material members and having a re-entrant cavity formed interiorly therein, a primary coolant channel assembly disposed in said cavity, said channel assembly including nuclear fissile fuel disposed within said assembly and an exterior shell in close proximity to the interior moderator wall defining said re-entrant cavity, and a neutronic cladding material clad exteriorly about said moderator material member, said cladding being joined with said coolant channel assembly at the entrance region of said assembly into said moderator material member.



13. In a sodium cooled graphite moderated neutronic reactor having a plurality of self-contained modular fuel elements in which fuel material contained therein is cooled by forced liquid metal circulation through each module, the improvement comprising a reactor vessel including a lower secondary coolant gas plenum therein, a plurality of modular fuel elements of generally square cross section and chamfered corners in abutting relation, said elements being suspended from said reactor vessel, each of said modules including an elongated cylinder of abutting graphite blocks, said entire cylinder of graphite blocks being about 30 inches diameter and defining an inner coaxial bore of about 12 inches diameter extending downwardly from the top about three quarters the length of said cylinder of graphite blocks, an outer sodium coolant tube extending throughout each bore in close tolerance with the surface of each inner coaxial bore, said outer tube end within each bore being closed, an inner coolant tube co-axially mounted within said outer coolant tube, an end of said inner tube being in spaced relation to said closed outer tube end, a fuel assembly disposed in the annular region between said inner and outer coolant tubes and in spaced relation thereto, a layer of thermal insulating material having low thermal neutron absorption cross section disposed around the outside and bottom of each cylinder of graphite blocks, neutronic cladding material in close tolerance around the insulated outside and bottom of each cylinder of graphite blocks, said cladding being joined to each outer sodium coolant tube in the region of entry of said outer sodium coolant tube into said cylinders of graphite blocks, four elongated moderator members of generally triangular cross section disposed in spaced relation to each cylinder of graphite blocks, insulation and cladding to form four corners therefor with longitudinal edges and defining secondary coolant passages of uniform width longitudinally along said cladding, said longitudinal edges having chamfered corners, means for carrying and supporting said four elongated moderator members on said cylinders of graphite blocks, a block of transversely slotted shielding material defining an axial bore in spaced relation above each cylinder of graphite, said block having edges coplanar with the top surfaces of said cylinders of graphite

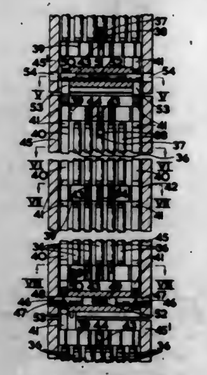
blocks, said coolant pipe passing through each bore and being rigidly attached to each shielding block, said slots in each block providing passages for coolant gas, and an upper secondary coolant gas plenum above said plurality of modular units wherein said coolant gas is collected and withdrawn.

3,128,235

FUEL ELEMENTS FOR NUCLEAR REACTORS

Stanley Hackney, Fearnhead, Warrington, and Ernest Edward Jerkins, Culcheth, Warrington, England, assignors to United Kingdom Atomic Energy Authority, London, England

Filed Jan. 19, 1959, Ser. No. 787,430
Claims priority, application Great Britain Jan. 24, 1958
3 Claims. (Cl. 176—77)



1. For a nuclear reactor, a fuel element comprising, in combination, an assembly comprising first, second and third plate members spaced beyond one another on a common axis and having a lattice of holes defined therein, a first spacer bar disposed between the opposed faces of the first and second plate members, a second spacer bar disposed between the opposed faces of the second and third plate members, means clamping both the plate members and the spacer bars together, a first cluster of elongated fuel members disposed lengthwise between the first and second plate members and end located by holes therein, a second cluster of elongated fuel members disposed lengthwise between the second and third plate members and end located by holes therein, a sleeve member disposed lengthwise about said assembly and means attaching said assembly to said sleeve member.

2. For a nuclear reactor, first and second fuel element assemblies, each assembly comprising first, second and third plate members spaced beyond one another on a common axis and having a lattice of holes defined therein, tie rods extending between and secured to said first, second and third plate members, a first cluster of elongated fuel members disposed lengthwise between the first and second plate members and end located by holes therein, a second cluster of elongated fuel elements disposed lengthwise between the second and third plate members and end located by holes therein, graphite sleeve means enclosing with clearance said assemblies, means attaching one of said tie rods to said sleeve member and coupling one end of the first fuel element assembly with one end of the second fuel element assembly, said means comprising a block, a first pair of pins pivotally connecting the block with the tie rods at one end of the first fuel element assembly and with the sleeve member and a second pair of pins pivotally connecting the block with the tie rods at one end of the second fuel element assembly.

3,128,236

PROCESS FOR PREPARING BETA-CAROTENE

James E. Zajic, Oklahoma City, Okla., assignor to Grain Processing Corporation, Muscatine, Iowa, a corporation of Iowa

No Drawing. Filed Nov. 21, 1961, Ser. No. 154,035
11 Claims. (Cl. 195—28)

1. A process for producing beta-carotene which includes the step of cultivating unequal proportions of plus and minus mating type strains of beta-carotene producing organisms of the genus Choanephora in a nutrient medium containing a carbohydrate source and a nitrogen source, the proportion of one mating type strain of organism to the opposite mating type strain of organism being greater than about 1.2:1 on a dry weight basis.

3,128,237

PROCESS FOR PRODUCING L-GLUTAMIC ACID BY BACTERIAL FERMENTATION

Shinichi Motozaki, Tokyo, Toshinao Tsunoda, Zushi, Shinji Okamura, Tokyo, Hiroshi Okada, Kawasaki, and Asaichiro Ozaki and Tomoyuki Ishikura, Tokyo, Japan, assignors to Ajinomoto Co., Inc., and Sanraku Distillers Co., Inc., Tokyo, Japan

No Drawing. Filed Feb. 24, 1961, Ser. No. 109,234
9 Claims. (Cl. 195—47)

1. A process for producing L-glutamic acid by bacterial fermentation which comprises cultivating a strain of *Brevibacterium lactofermentum* nov. sp. having the characteristic set forth in Table 1 in a fermentative culture liquor containing at least 20 γ/l. of an addition agent selected from the group consisting of vitamin B_1 (thiamine), thiamine propyl disulfite, and dibenzoyl thiamine, together with a source of carbon and a nitrogen source compound under aerobic conditions at a temperature within the range from about 28° C. to about 37° C. and separating thus formed glutamic acid from the fermentation broth.

3,128,238

Δ^1-DEHYDROGENATION OF STEROIDS BY FERMENTATION WITH ACTINOPLANACEAE

Gordon E. Mallett, Indianapolis, Ind., assignor to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana

No Drawing. Filed Sept. 14, 1962, Ser. No. 223,806
7 Claims. (Cl. 195—51)

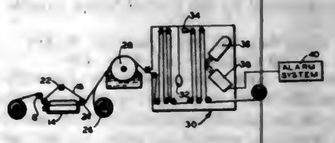
1. A process for introducing a double bond between positions 1 and 2 of a steroid wherein said positions are fully hydrogenated, said steroid being further characterized by having a configuration selected from the group consisting of 3-keto-Δ^4, 3-keto-$\Delta^{5(6)}$, 3α-hydroxy-Δ^4, 3α-hydroxy-$\Delta^{5(6)}$, 3β-hydroxy-Δ^4, and 3β-hydroxy-$\Delta^{5(6)}$, which comprises bringing said steroid into contact with an enzyme system elaborated by a microorganism of the family Actinoplanaceae, genera Actinoplanes, Streptosporangium, Ampullaria, and Spirillospora.

3,128,239

BIOLOGICAL DETECTION EQUIPMENT

Robert Z. Page, 7117 Kerr Drive, Springfield, Va.

Filed June 29, 1962, Ser. No. 206,524
5 Claims. (Cl. 195—127)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. Apparatus comprising filter tape made of material capable of filtering out from a suspending fluid medium and retaining microorganisms; a vacuum chamber having perforated wall and means for subjecting said chamber to vacuum; means for moving said filter tape continuously past said wall in intimate contact with the exterior surface of said wall whereby, when a vacuum is applied to said vacuum chamber, the fluid medium surrounding said chamber is caused to flow through said filter tape to deposit microorganisms from said medium on said filter tape; means for bringing absorbent tape into intimate contact with said filter tape after said filter tape has passed said chamber; means for causing said absorbent tape and said filter tape, while remaining in intimate contact, to move together continuously to a moistening unit for moistening absorbent tape to produce therein a plurality of moist regions, each containing, for supply to said filter tape, nutrient, dye, and dye activator for a particular microorganism, there being separate regions adapted to culture different microorganisms; an incubation chamber; means for feeding said tapes into said incubation chamber, the rate of travel of the tapes being such that they remain in said incubation chamber for an incubation period long enough to develop observable colonies of microorganisms; a light source to produce light to illuminate microorganism colonies which produce characteristic colors in the presence of their assoicated dyes and dye activators; means for passing said tapes after said incubation period into the path of light from said light source; photoelectric pickup means which respond to selected wavelengths of light characteristic of particular microorganisms, located to receive light from said light source after impingement on said tapes; optical filter means associated with said light source and photoelectric pickup means to facilitate transmission to said photoelectric pickup means of selected wavelengths of light characteristic of particular microorganism; and an alarm system connected to said photoelectric pickup means to signal an alarm upon receipt from said photoelectric pickup means, of a signal indicative of light characteristic of a particular microorganism.

3,128,240

METHOD FOR THE HALOGENATION OF BENZENE

Paul F. Kuny, Moline, Ill., assignor to The Bendix Corporation, a corporation of Delaware

No Drawing. Filed May 15, 1959, Ser. No. 813,356
2 Claims. (Cl. 204—154)

1. The method for decreasing the yield of polydichlorobenzene in the chlorination of benzene which comprises the steps of combining benzene and anhydrous ferric chloride in solution, maintaining the temperature of said solution between 40 and 60° C., adding chlorine to said temperature controlled solution while sonically cavitating said solution, washing and drying the product and distilling off the chlorobenzene.

3,128,241

WAX COMPOSITION AND METHOD OF PRODUCING SAME

John Podlipnik, Palos Heights, and Jack F. Renner, Calumet City, Ill., assignors, by mesne assignments, to Sinclair Research, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 26, 1959, Ser. No. 788,772
9 Claims. (Cl. 208—21)

1. A method for producing microcrystalline wax material consisting essentially of treating a penetration asphalt having a needle penetration at 77° F. of between about 25 and 350 derived from a mixed base petroleum oil with a solvent consisting essentially of about 20% to 90% propane and about 10 to 80% butane at a solvent to asphalt ratio of about 3 to 11:1 at a pressure from about 400 to 650 pounds per square inch and a temperature of about 80 to 200° F., separating the resulting oil and asphalt phases, solvent dewaxing the oil, separating the resulting dewaxed oil and petrolatum microcrystalline wax material having a petrolatum melting point of about 170° to 190° F., a penetration at 77° F. of about 10 to 50 and a viscosity of about 130 to 175 Saybolt seconds at 210° F.

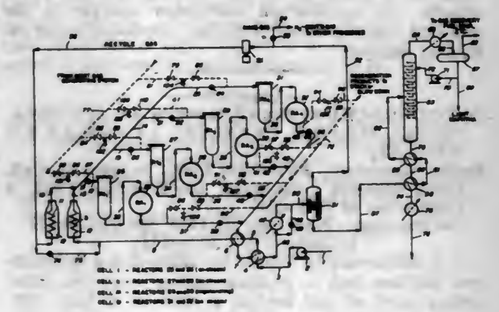
4. A wax composition capable of producing a smooth non-serpentine coating of improved tensile strength, flexibility and modulus of rupture consisting essentially of a major amount of paraffin wax and a minor amount of a microcrystalline wax having a petrolatum melting point of about 170° to 190° F., a penetration at 77° F. of about 10 to 50, and a viscosity of about 130 to 175 Saybolt seconds at 210° F.

3,128,242

ISOTHERMAL-ADIABATIC CATALYTIC HYDROCARBON CONVERSION

Eric V. Bergstrom, Byram, Conn., and Robert J. Devlin, Iselin Township, Woodbridge County, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York

Filed June 8, 1961, Ser. No. 115,645
21 Claims. (Cl. 208—65)



1. In the method of catalytic hydrocarbon conversion wherein in a closed container a plurality of vertical tubular reaction zones are established, wherein in each of said tubular reaction zones a single columnar static bed of particle-form solid hydrocarbon conversion catalyst, hereinafter designated catalyst, is established, wherein the preponderant portion of each of said tubular reaction zones within said closed container is in direct heat exchange relation with heat transfer medium, wherein the total periphery of each of said single columnar static beds of catalyst is in contact with the wall of said tubular reaction zone and thus each said single columnar static bed of catalyst is in indirect heat exchange relation throughout the entire length thereof with said heat transfer medium, wherein a substantially equal volume of charge mixture comprising vaporous hydrocarbon reactant is introduced into each of said tubular reaction zones, wherein said charge mixture flows downwardly through said single columnar static bed of catalyst in each of said reaction tubes without substantial indirect heat transfer relation with said heat transfer medium, and wherein the effluents of said plurality of vertical reaction zones are combined to form feed for a single adiabatic reaction zone, the improvement which comprises in each of the aforesaid vertical reaction zones establishing a plurality of annular major static beds of said catalyst comprising a head annular major catalyst bed, at least one intermediate annular major catalyst bed, and a tail annular major catalyst bed, the outer peripheries of all of said annular major static catalyst beds being spaced from the inner peripheries of said tubular reaction tubes

to form outer vapor pathways between the outer peripheries of said major catalyst beds and the inner periphery of said reaction zone for vaporous charge mixture, each of said annular major catalyst beds being divided horizontally into an upper minor annular catalyst bed and a lower minor annular catalyst bed, the inner periphery of each of said annular minor catalyst beds forming an inner vapor pathway for vaporous charge mixture, each of said minor annular catalyst beds being in vaporous communication with contiguous minor annular catalyst beds for substantially lateral flow of vaporous charge mixture alternately between said outer vapor pathway and said inner vapor pathway and flowing said charge mixture laterally through said minor annular beds of catalyst alternately in one direction and then in the opposite direction, and heating said vaporous charge mixture by indirect heat exchange with said heat transfer medium whilst said charge mixture is flowing through each of said outer vapor pathways.

5. The method of catalytic hydrocarbon conversion as set forth and described in claim 1 wherein the hydrocarbon reactant boils in the naphtha boiling range and comprises paraffins and naphthenes, wherein the hydrocarbon conversion catalyst in the tubular reaction zones comprises platinum-group metal reforming catalyst and wherein the hydrocarbon conversion catalyst in the adiabatic reaction zones comprises non-noble metal reforming catalyst.

3,128,243

HYDROCRACKING PROCESS WITH AN ALUMINA-NICKEL SULFIDE CATALYST ACTIVATED WITH BF_3

Sachio Yamamoto, Richmond, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed June 29, 1960, Ser. No. 39,449
4 Claims. (Cl. 208—112)

4. A hydrocracking process for converting a hydrocarbon distillate feed to products boiling below the initial boiling point of said feed in a yield of at least 20% per-pass, which comprises contacting said feed, along with at least 750 s.c.f. of hydrogen per barrel of said feed, in a hydrocracking zone at a temperature below about 700° F., a pressure in the range of from about 500 to 2000 p.s.i.g., and an LHSV of from about 0.5 to 15.0 v./v./hr. with a catalyst comprising nickel sulfide disposed on a non-siliceous, predominantly alumina support, said catalyst having been activated after deposition of the nickel component on said support by contact with BF_3, and recovering from said zone products boiling below the initial boiling point of said feed.

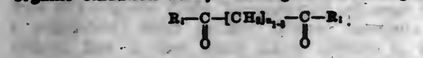
3,128,244

PROCESS OF SWEETENING SOUR PETROLEUM HYDROCARBONS

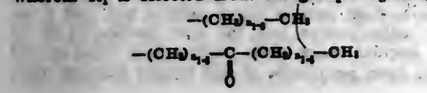
Thomas J. Wallace, Elizabeth, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Apr. 28, 1961, Ser. No. 107,004
13 Claims. (Cl. 208—204)

5. The process of sweetening a sour hydrocarbon fraction containing mercaptan compounds which comprises contacting said hydrocarbon fraction in the presence of an oxidizing agent with an aqueous basic solution and an organic oxidation catalyst having the following formula:



wherein R_1 is selected from the group consisting of



and

$$-O-(CH_2)_{2-4}-CH_3$$

for a sufficient period of time to reduce the mercaptan concentration and separating a hydrocarbon fraction of substantially reduced mercaptan concentration.

3,128,245

TREATING HYDROCARBON DISTILLATES

Robert P. Zimmerman, Downers Grove, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Illinois

No Drawing. Filed Nov. 24, 1961, Ser. No. 154,883
5 Claims. (Cl. 208—206)

1. A combination process for treating a sour hydrocarbon distillate to produce a distillate of reduced mercaptan content and of acceptable color, which comprises reacting said distillate with an oxidizing agent in the presence of a phthalocyanine catalyst, separating from the catalyst a sweetened distillate of depreciated color, and thereafter treating the separated distillate with sufficient hydrosulfite to improve the color of the distillate.

3,128,246

LUBRICATING OIL OF IMPROVED HIGH TEMPERATURE PROPERTIES

Edward A. Oberright, Woodbury, and Robert H. Williams, Pennington, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York

No Drawing. Filed Sept. 14, 1960, Ser. No. 55,825
4 Claims. (Cl. 208—255)

1. The method of treating a conventionally refined petroleum lubricating oil to reduce its tendency to form lacquer-type deposits under high temperature conditions which comprises treating said oil with from about 5% to about 25%, by weight, of an organic peroxide at a temperature of from about 100° C. to about 200° C. for a period of from about one to about 20 hours and distilling off alcohol formed in the course of said treatment and unreacted peroxide.

3,128,247

ION EXCHANGE

Pierre Cohen, Neuilly-sur-Seine (Seine), and Rene Amavis, Wissous, Seine-et-Oise, France, assignors to Commissariat à l'Energie Atomique, Paris, France

No Drawing. Filed Nov. 7, 1960, Ser. No. 67,460
Claims priority, application France Nov. 16, 1959
12 Claims. (Cl. 210—37)

9. In a process for the exchange of ions in an aqueous solution containing at least one radioactive cation and at least one radioactive anion, the steps of contacting the solution with a powder containing basic hydrated sulfate of lead, the solution having a pH between 7 and a value less than 7, the powder being relatively insoluble in the solution, then adjusting the pH of the solution to a value from 7 to a value greater than 7 and then contacting the solution with the powder, the powder being relatively insoluble in the solution having a pH from 7 to a value greater than 7.

12. A process for the exchange of ions in an aqueous solution containing cations selected from the group consisting of NH_4^+, Ca^{++}, $[Co(NH_3)_6]^{+++}$, Sr^{++}, C6, Pm, Y, Na^+ and anions selected from the group consisting of Cl^-, SO_4^{--}, NO_3^-, TeO_4^{--}, the steps of contacting the solution with a powder containing basic hydrated sulfate of lead, the solution having a pH from 7 to a value less than 7, the powder being relatively insoluble in the solution, then adjusting the pH of the solution from 7 to values greater than 7 and then contacting the solution with the powder, the powder being relatively insoluble in the solution.

3,128,248

METHOD FOR THE PURIFICATION OF BRINE

Hidetomo Suzuki, Ota-ku, Tokyo, Japan, assignor to Ebara-Infilco Kabushiki Kaisha, Tokyo, Japan, a corporation of Japan

No Drawing. Filed Jan. 22, 1962, Ser. No. 167,892
2 Claims. (Cl. 210—44)

1. In a method for removing magnesium and calcium ions from brine and sea water by conversion into magnesium hydroxide and calcium carbonate precipitates after treatment with sodium hydroxide, sodium carbonate and slaked lime, that improvement in the clarification of the sea water and brine being treated which comprises: adjusting the temperature of the water to from 50–100° C.; introducing air under pressure into the water after it is treated with the aforesaid alkaline treating reagent whereby bubbles of air rise to the surface of the water and entrain the finely divided particles of precipitated magnesium hydroxide and calcium carbonate; simultaneously introducing from 1 to 100 parts per million, based upon the weight of the precipitates, of a coagulant selected from the group consisting of oil, soap and polyelectrolyte; and thereafter removing the entrained solids from the top of the water.

3,128,249

METHOD FOR CLARIFYING WATER

David J. Pye, Concord, and George F. Scherz, Antioch, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed July 18, 1955, Ser. No. 522,864
5 Claims. (Cl. 210—53)

1. A method for facilitating the reduction of turbidity in water which comprises the steps of dispersing in the water a slurry of bentonite in the amount of from about 10 to 500 parts by weight of bentonite per million parts by weight of water and adding to the resulting dispersion an acrylamide polymer in the amount of from about 0.05 to 2 parts by weight per million parts by weight of water.

3,128,250

CORROSION AND CHINA PATTERN FADING INHIBITOR

Anthony E. Lintner, Castle Shannon, Pa., assignor to Calgon Corporation, a corporation of Pennsylvania

No Drawing. Filed July 1, 1959, Ser. No. 824,207
3 Claims. (Cl. 252—99)

1. A mechanical dishwashing composition inhibited against the tendency to cause china pattern fading consisting essentially of, by weight, about 137 parts sodium tripolyphosphate anhydrous, about 54 parts sodium metasilicate anhydrous, 7½ parts dichlorcyanuric acid, and one part aluminum acetate basic.

3,128,251

PREPARATION OF CONCENTRATED SILICA SOLS

Lewis Z. Reven, La Grange Park, and Donald G. Blake, Villa Park, Ill., assignors to Nalco Chemical Company, Chicago, Ill., a corporation of Delaware

No Drawing. Filed Apr. 13, 1960, Ser. No. 21,883
5 Claims. (Cl. 252—313)

1. A method of preparing stable silica sols having an SiO_2 content of up to about 52% which comprises: boiling a sol having (1) an SiO_2 content of from about 28% to 38%, (2) a particle size of from about 13 to about 50 millimicrons, and (3) a pH of from about 8.7 to about 9.5, in a reaction vessel while maintaining a substantially constant volume in said vessel by adding to said sol a feed sol having (1) an SiO_2 content of from about 28% to 38%, (2) a particle size of from about 13 to about 50 millimicrons, and (3) a pH of from about 8.7 to about 9.5, and continuing the addition of said feed sol until the product has the desired SiO_2 content, said content being greater than 28% and up to about 52%.

3,128,252

PREPARATION OF PARTIALLY REDUCED TRANSITION METAL HALIDE CATALYST COMPOSITIONS

Erik Tornqvist, Westfield, Charles W. Seelbach, Cranford, and Arthur W. Langer, Jr., Nixon, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Apr. 16, 1956, Ser. No. 578,198
5 Claims. (Cl. 252—429)

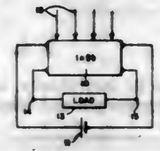
1. The method of preparing a solid catalyst comprising the steps of reducing a halide of a transition metal of groups IV, V, VI, and VIII of the periodic table with a reducing agent selected from the group consisting of (1) a metal of groups II–III, (2) a mixture of at least two metals of groups II–III, (3) a mixture of the transition metal corresponding to the transition metal in the transition metal halide and a halide of a metal of groups II–III, (4) a mixture of the transition metal corresponding to the transition metal in the transition metal halide and a metal of groups II–III, and (5) a mixture of a metal of groups II–III and a halide of a metal of groups II–III to form a solid catalyst component, said solid catalyst component comprising a reduced halide of said transition metal intimately associated with a halide of a metal of groups II–III; and adding to the resulting product a metal alkyl compound of an element of groups II and III of the periodic table in an amount sufficient to give a molar ratio of the metal alkyl compound to the reduced compound of the transition metal of from 0.1 to 20.

3,128,253

INFRARED DETECTOR AND METHOD OF MAKING SAME

Howard J. Beaupre and Curtis M. Meesecke, Dallas, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Apr. 5, 1961, Ser. No. 100,906
2 Claims. (Cl. 252—501)



1. An infrared detector comprising a body of indium antimonide having a sufficient quantity of mercury atoms therein to provide a concentration of charge carriers in said body supplied by said mercury of around 10^{16} per cc. when said body is at a temperature of about 200° K.

3,128,254

POLYMERIC BORON COMPOSITIONS

Gaetano F. D'Alelio, South Bend, Ind., assignor to Dal Mon Research Co., Cleveland, Ohio, a corporation of Delaware

No Drawing. Filed June 25, 1958, Ser. No. 744,339
14 Claims. (Cl. 260—2)

1. The process for effecting the condensation polymerization reaction of a polyunsaturated hydrocarbon and a boron compound having all its substituent radicals selected from the class consisting of hydrogen and hydrocarbon radicals having no more than 14 carbon atoms therein comprising the step of maintaining a mixture consisting essentially of at least one polyunsaturated hydrocarbon having a molecular weight no greater than 300 and having a plurality of ethylenically unsaturated groups therein and at least one boron compound having all its substituent radicals selected from the class consisting of hydrogen and hydrocarbon radicals having no more than 14 carbon atoms therein at a temperature high enough

to displace at least a major part of the radicals originally attached to the boron in said compound by said polyunsaturated compound and effecting said reaction for a period sufficient to give a condensation polymer having a plurality of boron atoms therein, in which said reacting composition also comprises at least one monoalkenyl compound selected from the class consisting of monoalkenyl hydrocarbons and monoalkenyl ethers having no more than 16 carbon atoms therein.

3,128,255

EPOXIDE COMPOSITIONS

Charles W. McGary, Jr., and Charles T. Patrick, Jr., South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Nov. 24, 1958, Ser. No. 775,727
27 Claims. (Cl. 260—2)

1. A curable composition comprising 3,9-bis(1,2-epoxy-1-methylethyl)spirobi(meta-dioxane) and a polyfunctional amine containing at least two active amino hydrogen atoms and selected from the group consisting of methylenedianiline, diethylenetriamine, xylylenediamine, ethylenediamine and hexanediamine.

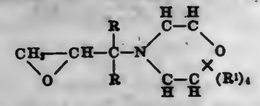
3,128,256

POLYMERIZATION OF EPOXIDES

Frederick E. Bailey, Jr., Charleston, and Haywood G. France, South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed June 2, 1959, Ser. No. 817,465
5 Claims. (Cl. 260—2)

1. A copolymer obtained by polymerizing a vicinal-epoxy hydrocarbon which has a single vicinal-epoxy group, and which is free from unsaturation other than benzenoid unsaturation and an N-(2,3-epoxypropyl)morpholine having the formula:



wherein each R and R^1 individually, is selected from the group consisting of hydrogen and alkyl.

3,128,257

PRODUCTION OF ION EXCHANGE RESINS

Merwin Frederick Hoover and Ralph N. Thompson, Pittsburgh, Pa., assignors to Calgon Corporation, Pittsburgh, Pa.

No Drawing. Filed Feb. 26, 1962, Ser. No. 175,843
7 Claims. (Cl. 260—2.2)

7. Method of making a cation exchange resin of a solid mass of copolymer comprising a major proportion by weight of styrene and about 0.5% to about 20% divinyl benzene comprising immersing said mass in a liquid of the group consisting of the chlorides and oxychlorides of sulfur thereby to swelling the mass, and subsequently sulfonating said copolymer.

3,128,258

FOAMABLE COMPOSITION COMPRISING A HALOMETHYLATED DIAROMATIC ETHER, AN ORGANIC SOLVENT, AND A FINELY DIVIDED SOLID SALT OF CARBONIC ACID; PROCESS OF FOAMING SAME; AND FOAMED PRODUCT

James D. Doedens, Midland, and Earl H. Rosenbrock, Auburn, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Mar. 29, 1961, Ser. No. 99,074
5 Claims. (Cl. 260—2.5)

1. A thermally, foamable composition of matter comprising a halomethylated diaromatic ether of the benzene series having an average halomethyl functionality of at least about 1 and up to about 4 per molecule, wherein the halogens are selected from the group consisting of chlorine and bromine, and from about 0.1 to about 4 percent by weight, based on the weight of the halomethylated diaromatic ether, of each of (1) an organic solvent composed essentially of paraffins having from 7 to 50 carbon atoms and a boiling point above and a melting point below a temperature sufficient to cause the halomethylated diaromatic ether composition to foam and (2) a finely divided solid salt of carbonic acid selected from the group consisting of alkali metal and ammonium carbonates and bicarbonates and alkaline earth metal carbonates.

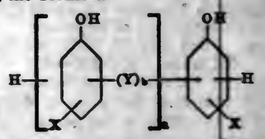
3,128,259

SYNTHETIC RESINS CONTAINING PHENOLIC HYDROXYL GROUPS

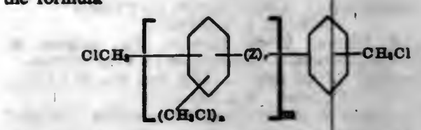
Lawrence F. Sonnabend, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Aug. 3, 1959, Ser. No. 831,002
3 Claims. (Cl. 260—18)

1. A resin containing phenolic hydroxyl groups, said resin being produced by the reaction of, as sole essential reactants, (A), at least two nuclear hydrogens, activated by a phenolic hydroxyl, of a hydroxylated aryl compound having the formula



wherein X represents a radical selected from the group consisting of hydrogen, halogen, alkyl, cycloalkyl and aryl; Y represents a radical selected from the group consisting of alkylidene and oxygen; *b* represents an integer from 0 to 1; *a* represents an integer from 0 to 1; with (B) a chloromethylated aromatic compound having the formula



wherein Z represents a member selected from the group consisting of oxygen, alkylidene, and SO_2; *r* represents an integer from 0 to 1; *m* represents an integer from 0 to 5; *n* represents an integer from 0 to 1; and mixtures thereof at a temperature of from about 50° to 150° C., for between about ¼ to 4 hours.

3,128,260

COATING COMPOSITIONS COMPRISING COCONUT OIL-MODIFIED PHTHALIC ALKYD RESINS AND PREPARATION OF THE SAME

Theodore A. Langstroth, Cincinnati, Ohio, assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 25, 1958, Ser. No. 723,664
11 Claims. (Cl. 260—22)

1. A coating composition comprising a dry-film former and a pigmented varnish consisting essentially of a flushed color, a liquid aromatic hydrocarbon solvent, and a coconut oil-modified phthalic alkyd resin obtained by alcoholyzing coconut oil with glycerol and esterifying the alcoholysis product with phthalic anhydride to an acid number in the approximate range 40–60, the approximate proportions of the reactants being 0.75–0.85 mole of coconut oil and 1–1.7 moles of phthalic anhydride per mole of glycerol.

3,128,261

PROTECTIVE COATING

John J. Lane, Murrysville, Pa., and Lawrence F. Flaherty, Augusta, Ga., assignors to Koppers Company, Inc., a corporation of Delaware

Filed Dec. 16, 1960, Ser. No. 76,185
5 Claims. (Cl. 260—28.5)

2. A flexible, corrosion resistant, instantly adherent waterproof coating composition consisting essentially of:

(A) a homogeneous solution of, by weight,
- (1) from about 10 percent to 30 percent coal having in excess of 10 percent volatile matter,
- (2) from about 1 percent to 15 percent of a butadiene acrylonitrile synthetic elastomer that is a copolymer comprised of from 51 to 81 parts by weight of butadiene and from 49 to 19 parts by weight of acrylonitrile,
- (3) from about 10 percent to 44 percent coal tar pitch having a softening point of from about 80° F. to about 200° F. and
- (4) from about 25 percent to 65 percent of a heavy creosote oil having a distillation range of from about 290° C. to 350° C.

5. A method of protecting material subject to environmental deterioration which comprises:

(A) dissolving from about 10 percent to 30 percent of coal having volatile matter in excess of 10 percent and from about 1 percent to 15 percent of butadiene acrylonitrile copolymer comprised of from 51 to 81 parts by weight of butadiene and from 49 to 19 parts by weight of acrylonitrile,

(B) in a mixture of from about 10 percent to 44 percent coal tar pitch having a ring and ball softening point of from between 80° F. to 200° F. and from about 25 percent to 65 percent of a high boiling aromatic oil having a distillation range of from 230° C. to 530° C.,

(C) adding a filler material,

(D) cooling the thus prepared composition, and

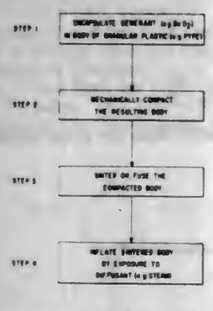
(E) coating a substrate therewith whereupon an instantaneous protective bond forms.

3,128,262

PLASTIC ARTICLES AND PROCESS FOR THEIR MANUFACTURE

Charles Leandro Lightfoot, New Providence, N.J. (33 Lorraine Road, Madison, N.J.), assignor of forty percent to Peter H. Smolka, Alexandria, Va.

Filed June 20, 1960, Ser. No. 37,502
14 Claims. (Cl. 260—41)



1. An article of manufacture comprising a solid body of polytetrafluoroethylene containing uniformly dispersed therein a finely divided thermally stable solid selected from the group consisting of barium peroxide, aluminum carbide, calcium carbide, magnesium nitride, calcium cyanamide, magnesium silicide, calcium phosphide, lithium hydride, and a mixture of phosphorus pentoxide with sodium chloride.

3,128,263

N-HALOBENZOGUANAMINE VULCANIZING AGENTS FOR SATURATED ELASTOMERS

Peter E. Wei and John Rehner, Jr., Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Mar. 5, 1962, Ser. No. 177,177
12 Claims. (Cl. 260—41)

1. A composition of matter comprising a saturated rubbery alpha-olefin polymer cured with an N-halobenzoguanamine wherein the halogen is selected from the class consisting of chlorine, bromine and iodine, and at least one compound selected from the class consisting of sulfur and zinc oxide.

3,128,264

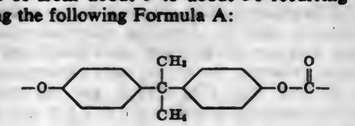
BLOCK COPOLYCARBONATES OF BISPHENOL A AND 4,4'-BIS(HYDROXYPHENYL) DIPHENYL METHANE

Thomas M. Laakso and David A. Buckley, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed July 17, 1959, Ser. No. 827,693
2 Claims. (Cl. 260—42)

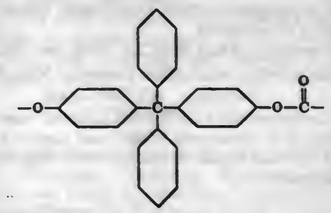
1. An improved polycarbonate of 2,2-bis(4-hydroxyphenyl)propane consisting of a highly polymeric block copolymer having an inherent viscosity of from about 0.4 to about 3.5 essentially composed of alternating blocks having the structures:

I. Blocks characterized in that these blocks as an independent polymer would have an inherent viscosity of at least 0.05 measured in chloroform and be composed of from about 3 to about 50 recurring units having the following Formula A:



and

II. Blocks characterized in that these blocks as an independent polymer would have an inherent viscosity of at least 0.05 measured in chloroform and be composed of about 3 to about 50 recurring units having the following Formula B:



wherein from about 30 to 70 mole percent of said block copolymer is composed of said units having Formula A, said block copolymer being characterized by having a heat softening temperature in the range of from about 180°–240° C., having a Young's Modulus of elasticity for film which is at least substantially as great as for the homopolymers of units of Formula A and Formula B and at least about 28,000 kg./sq. cm., and having a flexibility measured by the MIT folds test at least about 2 times greater than for the homopolymer of units of Formula B and at least about 25.

3,128,265

RESINOUS COMPOSITIONS COMPRISING MIXTURES OF POLYESTERS CONTAINING QUATERNIZED AMINE GROUPS AND EPOXY RESINS

John R. Caldwell, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Apr. 25, 1960, Ser. No. 24,246
10 Claims. (Cl. 260—45.4)

1. A resinous composition comprising a mixture of (1) from 5–98% by weight of a polyester of a dibasic carboxylic acid component containing from 4–10 carbon atoms and at least one organic dihydroxy component containing from 2–10 carbon atoms at least one of said components, containing an amine group which is quaternized by a quaternizing agent selected from the group consisting of an alkyl chloride, an alkyl bromide, a dialkyl sulfate, an alkylbenzenesulfonate, an alkyltoluenesulfonate and benzyl chloride wherein in each instance the said alkyl group contains from 1–4 carbon atoms, and (2) from 95–2% by weight of a glycidyl polyether of a material selected from the group consisting of polyhydric phenols and polyhydric aliphatic alcohols, said glycidyl polyether having at least two epoxy groups in each molecule.

3,128,266

POLYMERIZATION OF ETHYLENE

Donald H. Antonsen, Glen Mills, and Richard S. Stearns, Malvern, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Filed Dec. 23, 1960, Ser. No. 78,095
4 Claims. (Cl. 260—94.9)

1. A process for polymerizing ethylene which comprises contacting ethylene in an inert hydrocarbon solvent with a catalyst system prepared by reacting titanium tetrachloride and an aluminum alkyl sesquihalide until at least incipient precipitation takes place, and then adding water, wherein the atomic ratio of aluminum to titanium is from 0.25:1 to 0.75:1, and the mol ratio of water to aluminum is from 1.8:1 to 2.5:1, and recovering a solid polymer.

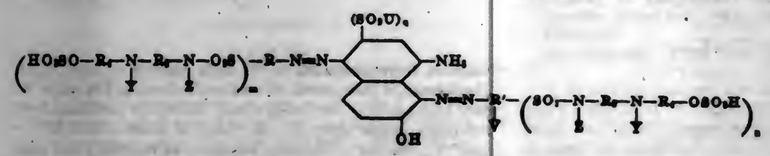
3,128,267

DISAZO DYESTUFFS AND THEIR METAL COMPLEX COMPOUNDS

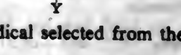
Peter Schmitz, Cologne-Stammheim, Heinrich Merschel, Leverkusen, and Karlfried Wedemeyer, Cologne-Stammheim, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Mar. 22, 1960, Ser. No. 16,648
Claims priority, application Germany Mar. 25, 1959
2 Claims. (Cl. 260—148)

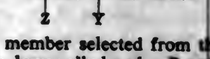
1. A metal complex compound selected from the group consisting of a chromium, cobalt and copper complex of a disazo dyestuff which in the free acid state corresponds to the formula



wherein R and R′ represent residues of the benzene series, V stands for a substituent capable of forming a metal complex, R′ containing V in o-position to the azo bridge, R_2 stands for a lower alkylene radical, R_4 stands for a lower alkylene radical selected from the group consisting of a straight chain lower alkylene and a branched chain lower alkylene having 2 carbon atoms in straight chain linkage between



U means a radical selected from the group consisting of OH and



Y stands for a member selected from the group consisting of hydrogen, lower alkyl and $—R_4—OSO_3H$, Z stands for a member selected from the class consisting of hydrogen and lower alkyl, n and m stand for integers within the range of from 0 to 2, $m+n$ being at least 1 and not more than 4 and q is an integer within the range of 0 to 1.

3,128,268

RECOVERY OF COMPLEX LIPID MATERIAL AND PREPARATION OF CORRESPONDING FATTY ACID ALKYL ESTERS

Charles K. Cross, Rexdale, Ontario, Stepas Kairys, Toronto, Ontario, and Michael C. Attwell, Downsview, Ontario, Canada, assignors to Canada Packers Limited, Toronto, Ontario, Canada

No Drawing. Filed Oct. 18, 1961, Ser. No. 145,967
20 Claims. (Cl. 260—210)

15. A method for the recovery of sphingolipids from nerve tissue, comprising: mixing said nerve tissue in ethylene dichloride, subjecting said mixture to azeotropic distillation until most of the moisture has been removed, separating the remaining hot ethylene dichloride solution containing the sphingolipid fraction from the residual material, removing the ethylene dichloride from the sphingolipid fraction and recrystallizing the sphingolipid fraction from a solvent selected from the group consisting of mono- and di- methyl and ethyl ethers of ethylene glycol and diethylene glycol.

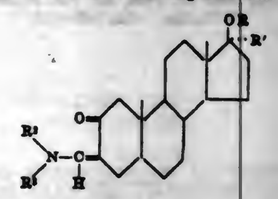
3,128,269

3-AMINOMETHYLENE ANDROSTANES

Albert Bowers and John Edwards, Mexico City, Mexico, and John Zderic, Palo Alto, Calif., assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed Aug. 1, 1961, Ser. No. 128,363
17 Claims. (Cl. 260—239.5)

1. A compound of the following formula:



wherein R is selected from the group consisting of hydrogen and a hydrocarbon carboxylic acyl group of less than 12 carbon atoms; R^1 is a member of the group consisting of hydrogen, an alkyl group, an alkenyl group and an alkynyl group each containing up to 8 carbon atoms; R^2 and R^3 are selected from the group consisting of hydrogen, lower alkyl, di(lower alkyl)amino lower alkyl, an aryl group and an aralkyl group each containing up to 8 carbon atoms; and R^2 and R^3 together with the nitrogen atom form a heterocyclic radical selected from the group consisting of piperidino, morpholino and pyrrolidino.

8. 3-piperidino-methylene-androstan-17β-ol-2-one.

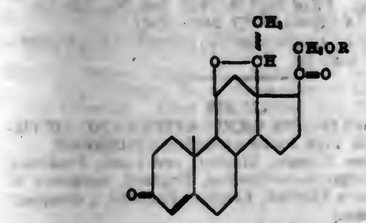
3,128,270

NOVEL 11β, 18-OXIDO-18-METHYL-PREGNENES

Georges Muller, Nogent-sur-Marne, Jacques Martel, Bondy, and Roland Bardonnechi, Tremblay Les Gonesses, France, assignors, by mesne assignments, to Roussel-UCLAF, S.A., Paris, France, a corporation of France

No Drawing. Filed Nov. 8, 1961, Ser. No. 150,882
Claims priority, application France Nov. 15, 1960
7 Claims. (Cl. 260—239.55)

3. The process for the preparation of a compound having the formula



wherein R is selected from the group consisting of hydrogen, an acyl radical of a mineral acid and an acyl radical of an organic carboxylic acid having 1 to 18 carbon atoms which comprises saponifying 3-ethylenedioxy-11β, 18-oxido-18 ξ-methyl-20β-acetoxy-Δ^4-pregnene to form 3-ethylenedioxy-11β, 18-oxido-18 ξ-methyl-Δ^4-pregnene-20β-ol, oxidizing the latter to form 3-ethylenedioxy-11β, 18-oxido-18 ξ-methyl-Δ^4-pregnene-20-one, reacting the latter with a dilower alkyl oxalate under alkaline conditions followed by acidification to form 3-ethylenedioxy-11β, 18-oxido-18 ξ-methyl-21-lower alkoxalyl-Δ^4-pregnene-20-one, reacting the latter with iodine to form 3-ethylenedioxy-11β, 18-oxido-18 ξ-methyl-21-iodo-Δ^4-pregnene-20-one, reacting the 21-iodo product with an alkali metal acetate to form 11β, 18-oxido-18 ξ-methyl-21-acetoxy-Δ^4-pregnene-3, 20-dione, saponifying the latter to form 11β, 18-oxido-18 ξ-methyl-Δ^4-pregnene-21-ol-3, 20-dione and recovering a compound of the above formula.

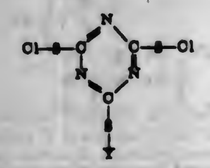
3,128,271

TRIAZINE SULFENYL CHLORIDE CURING AGENTS

Morris B. Berenbaum and Rind H. Gobran, Levittown, Pa., assignors to Thiokol Chemical Corporation, Bristol, Pa., a corporation of Delaware

No Drawing. Filed Sept. 14, 1960, Ser. No. 55,859
4 Claims. (Cl. 260—248)

1. A compound having the structural formula



wherein Y is selected from the group consisting of Cl and —R.Cl and R is an alkylene group having from 2 to 8 carbon atoms.

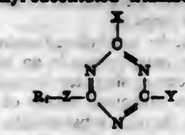
3,128,272

PERFLUOROALKYL-SUBSTITUTED TRIAZINES

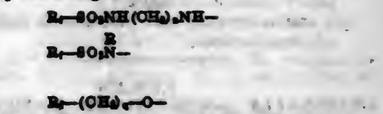
Robert L. Wear, West St. Paul, and Arthur H. Ahlbrecht, White Bear Lake, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed June 11, 1957, Ser. No. 664,911
9 Claims. (Cl. 260—249.6)

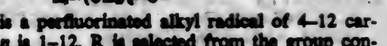
1. Perfluoroalkyl-substituted triazines of the formula:



wherein X and Y are selected from the group consisting of amino and hydrazino radicals and $R_4—Z—$ is selected from the group consisting of



and



wherein R_4 is a perfluorinated alkyl radical of 4–12 carbon atoms, n is 1–12, R is selected from the group consisting of hydrogen and lower alkyl and q is 1–13.

5. 2,4-diamino-6-(6-perfluorooctanesulfonamidohexylamino)-s-triazine.

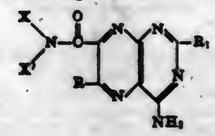
3,128,273

4-AMINO-PTERIDINE-7-CARBOXAMIDES AND METHOD OF PREPARATION

Irwin J. Pachter, Erdenheim, and Joseph Weinstock, Phoenixville, Pa., assignors to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Apr. 26, 1962, Ser. No. 190,213
9 Claims. (Cl. 260—251.5)

7. A compound having the structure:



wherein:

R is a member selected from the group consisting of phenyl, thienyl and lower alkyl;

R_1 is a member selected from the group consisting of phenyl, thienyl and amino;

X and X′ are each members selected from the group consisting of hydrogen, phenyl, phenyl lower alkyl, lower alkyl and taken together, alkylene of from 4 to 5 carbon atoms.

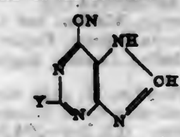
3,128,274

6-CYANOPURINE AND 2-AMINO-6-CYANOPURINE

George H. Hitchings, Tuckahoe, Gertrude B. Elion, Bronxville, and Lottie E. Mackay, Pleasantville, N.Y., assignors to Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y., a corporation of New York

No Drawing. Filed July 19, 1962, Ser. No. 211,104
3 Claims. (Cl. 260—252)

1. A compound of the formula



wherein Y is selected from the class consisting of hydrogen and the amino group.

3,128,275
METHOD FOR THE PURIFICATION OF TRIETHYLENEDIAMINE

Myrl Lichtenwalter and Herbert G. Muhlbauer, Austin, Tex., assignors to Jefferson Chemical Company, Inc., Houston, Tex., a corporation of Delaware

Filed June 7, 1962, Ser. No. 200,849
7 Claims. (Cl. 260—268)

1. A method for the purification of triethylenediamine which comprises the steps of:

(*a*) dissolving crude triethylenediamine contaminated with piperazine components in an inert organic solvent solution comprising acrylonitrile, said acrylonitrile being in chemical excess of the piperazine components to thereby substantially, selectively and quantitatively cyanoethylate the piperazine components and form cyanoethylpiperazine compounds,

(*b*) cooling said solution to selectively precipitate high purity triethylenediamine,

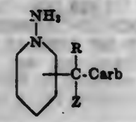
(*c*) and recovering said precipitated high purity triethylenediamine.

3,128,276
OPTIONALLY α-SUBSTITUTED 1-AMINO-2,3, OR 4 - (CYCLOHEXYL/ - PHENYL)METHYLPIPERIDINES AND PRECURSORS

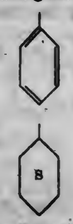
Kurt J. Rorig, Glenview, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Sept. 9, 1960, Ser. No. 54,862
5 Claims. (Cl. 260—293)

1. A compound of the formula



wherein Carb represents a member of the class consisting of carbocyclic radicals having the formulas



in which the letter S confirms that the ring in which it appears is saturated as shown, R represents a member of the class consisting of hydrogen and hydroxyl, and Z represents a member of the class consisting of hydrogen and a radical having the formula



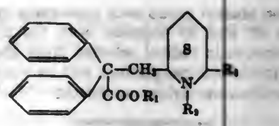
2. 1-amino-2-benzylpiperidine.

3,128,277
LOWER ALKYL-α,α-DIPHENYL-β-PIPERIDYL-2-PROPIONATES

Richard William Temple, Marlow, and Leslie Frederick Wiggins, Wargrave-on-Thames, England, assignors to Aspro-Nicholas Limited, London, England, a company of Great Britain

No Drawing. Filed Jan. 15, 1960, Ser. No. 2,597
Claims priority, application Great Britain Jan. 19, 1959
5 Claims. (Cl. 260—294.3)

1. A compound selected from the group consisting of compounds having the formula:



wherein R_1 is lower alkyl, R_2 is selected from the group consisting of hydrogen and methyl, and R_3 is selected from the group consisting of hydrogen and lower alkyl; and pharmacologically acceptable acid addition salts thereof.

3,128,278
SUBSTITUTED 1,1-DIPHENYL-4-(1-PIPERIDYL)-BUTANOL-1 DERIVATIVES

Paul N. Craig, Roslyn, and Charles L. Zirkle, Berwyn, Pa., assignors to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Sept. 8, 1961, Ser. No. 136,730
4 Claims. (Cl. 260—294)

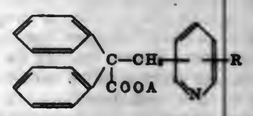
4. 1-phenyl-1-(4-trifluoromethylphenyl) - 4 - (1-piperidyl)-butanol-1 maleate.

3,128,279
DIPHENYL METHANE DERIVATIVES AND METHODS FOR THE PREPARATION THEREOF

Richard William Temple, Marlow, and Leslie Frederick Wiggins, Wargrave-on-Thames, England, assignors to Aspro-Nicholas Limited, London, England, a company of Great Britain

No Drawing. Filed Oct. 8, 1959, Ser. No. 845,068
Claims priority, application Great Britain Oct. 14, 1958
11 Claims. (Cl. 260—295)

1. A compound selected from the group consisting of compounds of the formula:



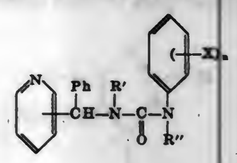
wherein A is selected from the group consisting of hydrogen, alkali metal, lower alkyl, and tertiary amino having the formula $(CH_2)_n(NR_2R_3)$, wherein n is an integer from 1 to 3, and R_2 and R_3 are lower alkyl, and R is selected from the group consisting of hydrogen and lower alkyl; and pharmacologically acceptable acid addition salts thereof.

3,128,280
1-(ALKOXYLATED/HALOGENATED PHENYL)-3-PYRIDYLMETHYLUREAS

Kurt J. Rorig, Glenview, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Oct. 23, 1959, Ser. No. 848,190
19 Claims. (Cl. 260—295)

1. A compound of the formula



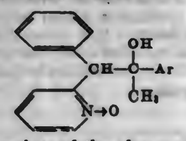
wherein Ph is selected from the group consisting of hydrogen and phenyl radicals, R′ and R″ are selected from the group consisting of hydrogen and lower alkyl radicals, X is selected from the group consisting of halogen and lower alkoxy radicals, and n is a positive integer less than 4.

3,128,281
AMINE OXIDES

John R. Dice and Roger D. Westland, Ann Arbor, Mich., assignors to Parke, Davis & Company, Detroit, Mich., a corporation of Michigan

No Drawing. Filed Aug. 14, 1961, Ser. No. 131,095
3 Claims. (Cl. 260—297)

1. A compound of the formula



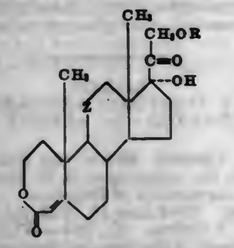
where Ar is a member of the class consisting of phenyl and 3-methoxyphenyl.

3,128,282
11-OXYGENATED 17α,21-DIHYDROXY - 3 - OXA-A-HOMOPREGN - 4a - ENE - 4,20 - DIONES, ESTERS THEREOF, AND INTERMEDIATE THERETO

Raphael Pappo, Skokie, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Feb. 2, 1962, Ser. No. 170,804
6 Claims. (Cl. 260—340.9)

1. A compound of the formula



wherein R is selected from the group consisting of hydrogen and lower alkanoyl, and Z is selected from the group of radicals consisting of carbonyl and β-hydroxymethylene.

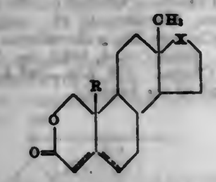
6. 17,20;20,21 - bismethylenedioxy - 2,11 - dioxo - 2,3-secopregn-4-en-3-oic acid.

3,128,283
17-OXYGENATED OXA-STEROIDS AND INTERMEDIATES THERETO

Raphael Pappo, Skokie, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Dec. 11, 1961, Ser. No. 158,577
Claims priority, application Mexico May 10, 1961
20 Claims. (Cl. 260—343.2)

1. A compound of the formula



wherein R is selected from the group consisting of hydrogen and methyl, X is selected from the group of radicals consisting of carbonyl, β-hydroxymethylene, α-(lower alkyl)-β-hydroxymethylene, β-(lower alkanoyl)oxymethylene, and α-(lower alkyl)-β-(lower alkanoyl)oxymethylene, and the dotted lines indicate the optional presence of a double bond between carbon atom 5 and an adjacent secondary carbon atom.

3,128,284
PRODUCTION OF PHTHALIDE

William R. Edwards and Robert D. Wesselhoft, Baytown, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

Filed Dec. 3, 1962, Ser. No. 241,957
5 Claims. (Cl. 260—343.3)

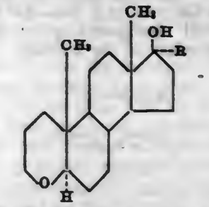
1. A process for producing phthalide comprising passing o-toluic acid vapors in admixture with air in concentrations ranging between 0.2 and 2.0 mol percent o-toluic acid at a temperature ranging between about 675° and 850° F. at a pressure of 0 to 50 p.s.i.g. and at a rate of 0.05 to 1 liquid v./v./hr. across a V_2O_5 on Al_2O_3 catalyst preheat-treated with air at a temperature in the range of 1500° F. to 2500° F. for from 1 to 30 mins.

3,128,285
17-(HYDROCARBON-SUBSTITUTED)-4-OXA-5α-ANDROSTAN-17β-OLS

Norman W. Atwater, Arlington Heights, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Sept. 25, 1962, Ser. No. 226,168
8 Claims. (Cl. 260—345.2)

1. A compound of the structural formula



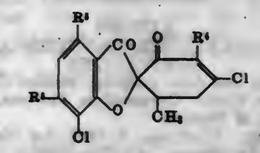
wherein R is selected from the group of radicals consisting of lower alkyl, lower alkenyl, and lower alkynyl.

3,128,286
PROCESS FOR PREPARING ANALOGUES OF GRISEOFULVIN

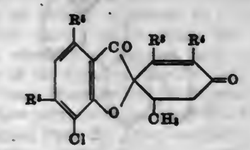
Thomas Walker, Wembley, and Godfrey Basil Webb, Greenford, England, assignors to Glaxo Group Limited, Greenford, England, a British company

No Drawing. Filed Oct. 12, 1961, Ser. No. 144,547
Claims priority, application Great Britain Oct. 21, 1960
10 Claims. (Cl. 260—346.2)

1. A process for the preparation of enol halides of the formula



where R^4 is a member selected from the group consisting of hydrogen, lower alkyl, and lower aralkyl and R^5 is lower alkoxy, said process comprising reacting a compound of the formula



where R^3 is lower alkoxy and R^4 and R^5 have the meanings given above with phosphorous oxychloride in the

presence of a metal chloride selected from the group consisting of lithium chloride and magnesium chloride.

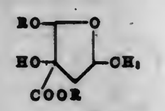
3,128,287
2,2' - OXODISUCCINIC ACID, DERIVATIVES THEREOF, AND PROCESS FOR PREPARING
Rudolph G. Berg, Groton, Conn., assignor to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Jan. 31, 1963, Ser. No. 255,167
6 Claims. (Cl. 260—346.8)

1. A compound selected from the group consisting of 2,2'-oxodisuccinic acid, the bisanhydride thereof, an alkyl ester of said acid wherein each alkyl group is one to eighteen carbon atoms, an alkali metal salt and an alkaline earth metal salt thereof.

4. 2,2'-oxodisuccinic bisanhydride.

3,128,288
LOWER ALKYL 2-ALKOXY-3-HYDROXY-5-METHYLTETRAHYDROFURAN-3-CARBOXYLATES
Alexander D. Argoudelis, Kalamazoo, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware
No Drawing. Filed Jan. 22, 1962, Ser. No. 167,914
4 Claims. (Cl. 260—347.5)

1. Lower alkyl 2-alkoxy-3-hydroxy-5-methyltetrahydrofuran-3-carboxylate of the formula:



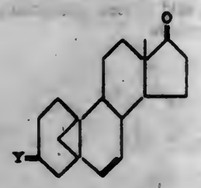
wherein R is lower alkyl.

3,128,289
PENTAERYTHRITOL AND TRIMETHYLOLALKANE POLY(2,3-EPOXYALKANOATES)
Benjamin Phillips, Paul S. Starcher, and Donald L. MacPeek, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Dec. 14, 1962, Ser. No. 244,548
8 Claims. (Cl. 260—348)

1. A compound of the group consisting of pentaerythritol tetra(2,3-epoxyalkanoate) and 1,1,1-trimethylolalkane tri(2,3-epoxyalkanoate).

3,128,290
5,19-CYCLO-Δ^4-CYCLOPENTANOPHENANTHRENE DERIVATIVES
Albert Bowers and Otto Halpern, Mexico City, Mexico, assignors to Syntex Corporation, Panama, Panama, a corporation of Panama
No Drawing. Filed Sept. 5, 1962, Ser. No. 221,430
20 Claims. (Cl. 260—397.3)

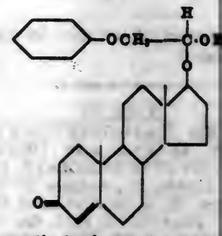
10. A compound of the following formula:



wherein Y is selected from the group consisting of a β-hydroxyl group, a β-hydrocarbon carboxylic acyloxy group of less than 12 carbon atoms and a keto group.

3,128,291
NEW HEMIACETALS AND HEMIACETAL ESTERS OF THE ANDROSTANE SERIES AND A METHOD FOR THEIR PRODUCTION
Poul Borrevang, Copenhagen, Denmark, assignor to Lovens Kemiske Fabrik ved A. Kongsted, Ballerup, Denmark, a firm
No Drawing. Filed June 16, 1961, Ser. No. 117,497
Claims priority, application Great Britain June 23, 1960
7 Claims. (Cl. 260—397.4)

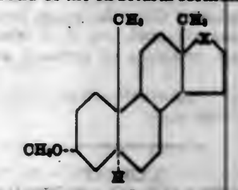
1. A compound selected from the group consisting of testosterone-17-phenoxyacetaldehyde-hemiacetal and its esters of the formula



in which R is a radical selected from the group consisting of hydrogen-, formyl-, acetyl-, propionyl-, butyryl-, isobutyryl-, cyclopentylpropionyl-, phenylpropionyl-, enanthyl-, glycyl-, succinyl-, and glutaryl radicals.

3,128,292
OPTIONALLY 17-(HYDROCARBON-SUBSTITUTED) 17 - OXYGENATED - 3α - ALKOXY - 5α - ANDROSTANES
Raymond E. Counsell, Skokie, and Paul D. Klimstra, Northbrook, Ill., assignors to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed June 18, 1962, Ser. No. 203,016
8 Claims. (Cl. 260—397.4)

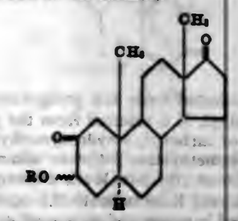
1. A compound of the structural formula



wherein X is selected from the group consisting of carbonyl, β-hydroxymethylene, α-(lower alkyl)-β-hydroxymethylene, β-(lower alkanoyl)oxymethylene, and α-(lower alkyl)-β-(lower alkanoyl)oxymethylene radicals.

3,128,293
3-OXYGENATED-5α-ANDROSTANE-2,17-DIONES
Paul D. Klimstra, Northbrook, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed Oct. 4, 1962, Ser. No. 228,268
5 Claims. (Cl. 260—397.4)

1. A compound of the formula



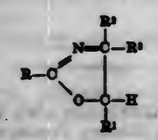
wherein R is selected from the group consisting of hydrogen, methyl, and lower alkanoyl.

3,128,294
SALTS OF α-SULFONATED FATTY ACID ESTERS
Alexander J. Stirton and Raymond G. Bistline, Jr., Philadelphia, James K. Weil, North Wales, and Waldo C. Ault, Glenside, Pa., assignors to the United States of America as represented by the Secretary of Agriculture
No Drawing. Original application June 9, 1961, Ser. No. 117,491. Divided and this application June 21, 1962, Ser. No. 210,281
16 Claims. (Cl. 260—400)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A compound of the formula $RCH(SO_3M)COOR'$ where R is an n-alkyl group containing from 2 to 12 carbon atoms, inclusive, M is selected from the group consisting of sodium, potassium and ammonium, R' is a radical selected from the group consisting of dodecafluoroheptyl and a straight and branched chain alkyl radical containing from 2 to 12 carbon atoms, inclusive, and the sum of the carbon atoms in R plus R' plus 2 is an integer from 14 to 19, inclusive.

3,128,295
PERIODATE OXIDATION OF OXAZOLINES
Herbert L. Wehrmeister, Terre Haute, Ind., assignor to Commercial Solvents Corporation, New York, N.Y., a corporation of Maryland
No Drawing. Filed May 31, 1961, Ser. No. 113,665
6 Claims. (Cl. 260—410.9)

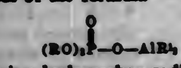
1. A process for the production of acyloxyketones, acyloxyaldehydes and acyloxyalkanoic acids which comprises reacting 4-α-hydroxyalkyl-2-oxazolines of the formula:



wherein R is a member selected from a group consisting of alkyl, phenyl and chlorophenyl; R^1 is a member selected from a group consisting of H and alkyl; and R^2 is a member selected from the group consisting of H, alkyl, phenyl, and α-hydroxyalkyl, with the proviso that at least one R^2 must be an alkyl with a hydroxy substitution in the alpha position; with periodate to oxidize the oxazoline.

3,128,296
ORGANIC PHOSPHINYLOXYALUMINUM COMPOUNDS AND THE PREPARATION THEREOF
William E. Johnson, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Oct. 3, 1960, Ser. No. 59,846
6 Claims. (Cl. 260—448)

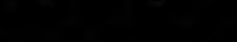
4. Compounds of the formula



wherein each R is a hydrocarbon radical having not more than 20 carbon atoms and each R^1 is an alkyl radical free of non-benzenoid unsaturation and having not more than 20 carbon atoms.

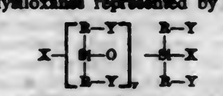
3,128,297
PROCESS FOR SILICON-HALOGEN BOND REDISTRIBUTION
Bernard Kanner, Tonawanda, and Donald L. Bailey, Snyder, N.Y., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Mar. 31, 1961, Ser. No. 99,667
20 Claims. (Cl. 260—448.2)

1. A process for the redistribution of silicon-halogen bonds in organo-silicon compounds which comprises forming a reactive mixture consisting of (1) at least one organo-silicon compound selected from the class consisting of (a) silanes represented by the formula:

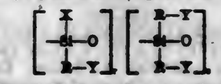


wherein R is a divalent hydrocarbon group, Y is a group selected from the class consisting of hydrogen, fluoro, chloro, bromo, iodo, cyano,

and nitro, G is a monovalent hydrocarbon group, R' is selected from the class consisting of hydrogen, the vinyl group, and Y—R— groups, X is a halogen, e is an integer having a value from 0 to 3, f is an integer having a value from 0 to 1 and the sum of e and f is never greater than 3. (b) linear polysiloxanes represented by the formula:



wherein R, Y and X have the meanings defined hereinabove and y is an integer having a value from 1 to 10,000, and (c) cyclic polysiloxanes represented by the formula:



wherein R, Y and X have the meanings defined hereinabove, r is an integer having a value from 1 to 3, and s is an integer having a value from 2 to 10, and (2) a basic catalyst selected from the class consisting of tertiary amines wherein all three normal valencies of the nitrogen atoms are bonded to carbon atoms of hydrocarbon moieties, tri(monovalent hydrocarbon group) phosphines, and silylamines represented by the formula:

$$G_mSi(NG_2)_{4-m}$$

wherein G has the meaning defined hereinabove, and m is an integer having the value of zero to 3, there being present in said reactive mixture at least one silicon-fluorine bond and at least one other different silicon-halogen bond, and heating said mixture to a temperature sufficiently elevated to cause said redistribution to take place.

3,128,298
SURFACTIVE LOW POLYMERS
Norman A. Lefevre, Bay City, and Harold G. Hahn, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Feb. 4, 1960, Ser. No. 6,588
4 Claims. (Cl. 260—458)

1. A process for the production of surface active low polymers having the formula

$$r[X]_n$$

wherein n is an integer from 1 to 2 and each X is independently selected from the group consisting of —SO_3H, —OSO_3H and alkali metal and ammonium salts thereof, and R is selected from the group consisting of mono- and divalent organic radicals consisting of low polymers of olefinic monomers, which process comprises the steps of introducing an olefinic monomer as a vapor, into an aqueous solution having sulfur oxide free radicals dissolved therein, whereby an aqueous foam product forms on the surface of the aqueous solution, and continuously separating the foam from the solution whereby the desired surface active low polymer is obtained, said olefinic monomer being selected from the group consisting of ethylene, propylene, butylene, vinyl chloride, vinylidene chloride, vinyl fluoride, vinylidene fluoride, chlorotrifluoroethylene, perfluoroethylene, acrylic acid, methacrylic acid, alkyl acrylates, alkyl methacrylates, acrylonitrile, methacrylo-

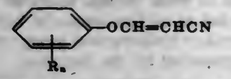
nitrile, vinyl acetate, vinyl propionate, vinyl butyrate, styrene, α-methyl styrene, alkyl styrenes, halostyrenes, butadiene and chloroprene; and said sulfur oxide radicals being provided by a catalyst system selected from the group consisting of persulfates, persulfate-bisulfite mixtures and bisulfite-peroxide mixtures, with enough of the catalyst system being used to provide from about 0.05 to about 5 percent by weight of the solution of the sulfur oxide providing solute.

3,128,299
PREPARATION OF TRIMETHYLBORATE
Lawrence J. Edwards, Zellenople, Pa., assignor to Callery Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 9, 1957, Ser. No. 682,940
6 Claims. (Cl. 260—462)

1. A method of preparing methyl borate which comprises contacting carbon monoxide and a methanol solution of a compound selected from the group consisting of sodium metaborate, sodium tetraborate and hydrates thereof, and distilling methyl borate from the resultant reaction mixture.

3,128,300
3-PHENOXYACRYLONITRILES PREPARED BY CYANOVINYLATION REACTION
Robert E. Miller and Lee A. Miller, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Dec. 9, 1960, Ser. No. 74,774
12 Claims. (Cl. 260—465)

7. 3-phenoxyacrylonitriles of the formula



where R is a halogen selected from the group consisting of chlorine, bromine, and iodine and *n* is an integer from 1 to 5.

3,128,301
ALKYL ESTERS OF ACYLATED 3,5-DIAMINO-2,4,6-TRIIODOBENZOIC ACIDS AND THEIR PREPARATION
Aubrey A. Larsen, Schodack Center, and James O. Hoppe, Albany, N.Y., assignors to Sterling Drug Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Dec. 17, 1953, Ser. No. 398,885
7 Claims. (Cl. 260—471)

1. A compound having the formula



wherein R is a lower-alkyl group, and R′ and R″ are lower-alkanoyl groups.

3,128,302
SYNTHETIC LUBRICANTS
Thomas W. Martinek, Crystal Lake, Ill., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
No Drawing. Filed June 26, 1959, Ser. No. 822,992
13 Claims. (Cl. 260—475)

1. A synthetic monomeric ester lubricant consisting essentially of the reaction product of at least stoichiometric amounts of

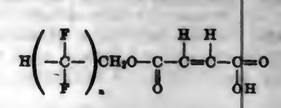
(1) complex polynuclear aromatic carboxylic acids derived from solvent extracts obtained in the solvent refining of mineral lubricating oils with a solvent selective for aromatic compounds by metalation of said solvent extracts to form the alkali metal adduct, carbonation of said adduct to form the corresponding alkali metal salt of the carboxylic acid and acidification of said salt to form the free carboxylic acid characterized by being complex, polynuclear, aromatic, alkyl-aromatic compounds predominating in carbon and hydrogen, containing about 2.0 to 4.5 weight percent of sulfur, having a molecular weight of above about 320 and having about 1.7 to 3.5 average number of aromatic rings per aromatic molecule and

(2) a monohydroxyl-organic compound of the group consisting of alkanols of 1 to 18 carbon atoms per molecule, benzyl alcohol, benzhydrol, triphenylcarbinol, phenol, cresols, xylenols, and naphthols

under esterification conditions at a temperature of about 100° to 250° F.

3,128,303
FLUORALKYL ACID MALEATES
Robert L. Zimmerman, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Mar. 5, 1962, Ser. No. 177,245
5 Claims. (Cl. 260—485)

1. Fluoroalkyl acid maleate esters having the formula:



wherein *n* is an integer from 1 to about 12.

3,128,304
CYCLODODECADIENOLS AND THEIR ESTERS
Pierre Lafont, Lyon (Rhone), France, assignor to Societe des Usines Chimiques Rhone-Poulenc, Paris, France, a French body corporate
No Drawing. Filed Feb. 16, 1961, Ser. No. 89,633
Claims priority, application France Feb. 20, 1960
4 Claims. (Cl. 260—487)

1. An ester of trans-trans-cyclododeca-5,9-dien-1-ol with an acid selected from the class consisting of formic, acetic and trifluoroacetic acids.

3,128,305
PROCESS FOR THE RECOVERY OF L-GLUTAMIC ACID
William F. Phillips, Terre Haute, Ind., assignor to Commercial Solvents Corporation, New York, N.Y., a corporation of Maryland
No Drawing. Filed Oct. 14, 1960, Ser. No. 62,530
3 Claims. (Cl. 260—527)

1. A process for the recovery of L-glutamic acid from its fermentation medium which comprises treating an L-glutamic acid containing fermentation medium with from about 0.8 to about 1.2 volumes of acetone per volume of fermentation medium to cause flocculation of bacterial cells, separating the flocculent cells from the L-glutamic acid containing medium, and recovering L-glutamic acid.

3,128,306
STABILIZATION OF ADIPIC ACID CRYSTAL SIZE BY STORAGE OF ADIPIC ACID FOR AT LEAST SEVEN DAYS
Nicholas D. Pintauro, New City, and Oscar R. Friedemann, Yonkers, N.Y., assignors to General Foods Corporation, White Plains, N.Y., a corporation of Delaware
No Drawing. Filed June 9, 1960, Ser. No. 34,887
2 Claims. (Cl. 260—537)

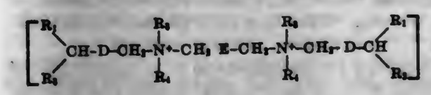
1. A method of preparing stable adipic acid crystals which comprises storing adipic acid crystals for at least seven days to reduce said crystals to an average particle size wherein 60 to 66% of said crystals pass through a 100 mesh screen and the remainder are retained on a 100 mesh screen, said adipic acid crystals undergoing no further change in particle size, and classifying said stabilized adipic acid crystals according to particle size.

3,128,307
PROCESS FOR THE MANUFACTURE OF COPOLYMERS FROM OLEFINS AND DERIVATIVES OF VINYLSULFONIC ACID AND PRODUCTS OBTAINED THEREBY
Hermann Zorn and Michael Franz, Vienna, Austria, assignors, by mesne assignments, to Hercules Powder Company Incorporated, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Apr. 27, 1959, Ser. No. 808,874
Claims priority, application Germany Apr. 30, 1958
6 Claims. (Cl. 260—543)

1. A process for the manufacture of a copolymer of (1) at least one α-olefin, said olefin being a monoethylenically unsaturated hydrocarbon having 2–4 carbon atoms and (2) a compound selected from the group consisting of vinylsulfonyl chloride, vinylsulfonyl bromide, vinylsulfonyl iodide, vinylsulfonyl fluoride, a vinylsulfonic acid ester of an alcohol having 1 to 18 carbon atoms, vinylsulfonamide, alkylated vinylsulfon amides, the alkyl chains of which having 1 to 18 carbon atoms and mixtures thereof, which comprises contacting in an inert diluent the components 1 and 2 with a catalyst system consisting essentially of (*a*) an alkylaluminum sesquichloride wherein the alkyl group contains 1–4 carbon atoms and (*b*) titanium tetrachloride.

3,128,308
ALKYLENEBIS (BENZHYDRYLOXYALKYL) DIALKYL QUATERNARY AMMONIUM COMPOUNDS
Leonard Doub, Pontiac, and George Rieveschl, Jr., Grosse Pointe Farms, Mich., assignors to Parke, Davis & Company, Detroit, Mich., a corporation of Michigan
No Drawing. Filed Feb. 23, 1960, Ser. No. 10,111
12 Claims. (Cl. 260—567.6)

1. A bis quaternary compound of the formula



wherein R_1 represents a phenyl radical and R_2 represents a member of the group consisting of unsubstituted phenyl and phenyl substituted by a member selected from the group consisting of chloro, bromo and lower alkyl; R_3 and R_4 each represent a member of the group consisting of lower alkyl radicals containing one to two carbon atoms and further members wherein R_3 and R_4 together form an alkylene radical containing four to five carbon atoms inclusive; D represents a member of the group consisting of alkylene radicals and alkylene radicals in which a member selected from the group consisting of —O— and —S— is substituted for at least one but not more than two-thirds of the non-adjacent methylene groups, said D group containing between one and eight atoms inclusive in its principal chain; E represents a member of the group consisting of alkylene radicals and alkylene radicals in which a member selected from the group consisting of —O— and —S— is substituted for some, but not more than two-thirds, of the non-adjacent methylene groups, said E group containing between four and thirty atoms inclusive in its principal chain; and A^- is one equivalent of an anion of an acid selected from the class consisting of inorganic acids, organic carboxylic acids, and organic sulfonic acids.

3,128,309
β-METHALLYL-β-PHENETHYLAMINE
Burton K. Wasson, Valois, Quebec, and John M. Parker, Montreal, Quebec, Canada, assignors to Charles E. Frosst & Co., Montreal, Quebec, Canada, a corporation of the province of Quebec
No Drawing. Filed Feb. 12, 1962, Ser. No. 172,759
3 Claims. (Cl. 260—570.8)

1. A compound selected from the group consisting of β-methallyl-β-phenethylamine, and the non-toxic acid addition salts thereof.

3,128,310
RECOVERY OF AMINES
Hans-Joachim Koch, Leverkusen, Germany, assignor, by direct and mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and of one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Filed July 31, 1959, Ser. No. 830,723
Claims priority, application Germany Sept. 9, 1955
9 Claims. (Cl. 260—582)

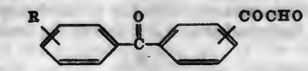
1. A process for the preparation of aromatic carbocyclic primary amines selected from the group consisting or aromatic carbocyclic primary monoamines and meta- and para-aromatic carbocyclic primary diamines which comprises heating water and the disitillation residue obtained when distilling the product of phosgenation of said aromatic primary amine to form the corresponding isocyanate, to a temperature within the range of from about 160° C. to about 250° C. until said distillation residue is converted by reaction with said water to said aromatic primary amine.

3,128,311
PREPARATION OF PRIMARY AMINES
Robert L. Shirley and George P. Speranza, Austin, Tex., assignors to Jefferson Chemical Company, Inc., Houston, Tex., a corporation of Delaware
No Drawing. Filed Dec. 11, 1961, Ser. No. 158,596
8 Claims. (Cl. 260—585)

1. A liquid phase process for preferentially preparing a primary amine which comprises the steps of contacting a primary alkyl alcohol and ammonia with a catalyst at a temperature within the range of about 150° to about 350° C. and a reaction pressure of at least about 200 p.s.i.g. for a period of time sufficient to convert from about 60 to about 95 wt. percent of said primary alkyl alcohol to thereby provide a reaction product comprising both a secondary amine and a primary amine corresponding to said alkyl alcohol and wherein a significant portion of said amines are said primary amine, and recovering said primary amines, said catalyst comprising an active component consisting of about 50 to about 90 wt. percent nickel, 10 to 50 wt. percent copper and 0.5 to 5 wt. percent of an oxide selected from the group consisting of chromium oxide, titanium oxide, thorium oxide, magnesium oxide, zinc oxide and manganese oxide.

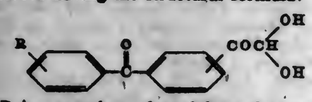
3,128,312
GLYOXYLYLBENZOPHENONE DERIVATIVES
William H. Edgerton, Strafford-Wayne, Pa., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Filed June 27, 1960, Ser. No. 38,770
7 Claims. (Cl. 260—591)

1. A chemical compound selected from the group consisting of: (1) a glyoxylylbenzophenone having the structural formula:

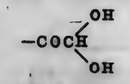


in which R is a member selected from the group consist-

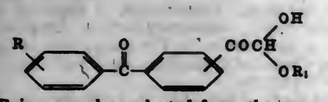
ing of hydrogen and glyoxylyl; (2) hydrate addition compounds thereof having the structural formula:



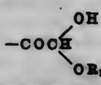
in which R is a member selected from the group consisting of hydrogen and



and (3) alcoholate addition compounds thereof having the structural formula:



in which R is a member selected from the group consisting of hydrogen and



and R_1 is an aliphatic hydrocarbon moiety of less than 6 carbon atoms.

3,128,313
PREPARATION OF CONCENTRATED FORMALDEHYDE
Carl Harding Mauwiller and John Brockway Thompson, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Dec. 22, 1960, Ser. No. 77,499
14 Claims. (Cl. 260—606)

1. A process of producing concentrated solutions of formaldehyde in alcohol which comprises distilling a solution of formaldehyde in an alcohol selected from the class consisting of alkanols of 1 to 4 carbon atoms and mixtures of said alkanols with water containing up to 30% by weight of the total composition of water, through a distillation column containing as catalyst a compound selected from the class consisting of inorganic and organic bases having a pK_b at 25° C. of greater than 5.15 and metal salts of acids having a pK_a at 25° C. of greater than 3, and recovering a more concentrated solution of formaldehyde in said alcohol.

3,128,314
OXYALKYLATED CONDENSATES
Kwan-Ting Shen, Brentwood, and Melvin De Groote, University City, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware
Filed May 8, 1958, Ser. No. 734,000
2 Claims. (Cl. 260—611)

1. Oxyalkylated 1-deoxy-1,1-di-(o-xylyl)-D-glucitol.
2. Oxyalkylated 1-deoxy-1,1-di-(p-hydroxyphenyl)-D-glucitol.

3,128,315
METHYLCHLOROFORM STABILIZED WITH DIALKYLETHERS OF ALKYLENE GLYCOLS
Donald E. Hardies, Wadsworth, Ohio, assignor to Pittsburgh Plate Glass Company (Chemical Division), Pittsburgh, Pa., a corporation of Delaware
No Drawing. Filed Mar. 13, 1961, Ser. No. 95,004
5 Claims. (Cl. 260—652.5)

1. Methylchloroform containing a stabilizing concentration of a dialkyl ether of a diol having the formula:

$$R_1OXOR_2$$

in which R_1 is an alkyl radical containing up to 4 carbon atoms, R_2 is also an alkyl radical containing up to 4 carbon atoms and X is an alkylene residue containing up to 4 carbon atoms.

3,128,316
REACTION OF TRICYCLIC PERHYDROAROMATIC HYDROCARBONS
Abraham Schneider, Overbrook Hills, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
No Drawing. Filed Aug. 7, 1962, Ser. No. 215,271
20 Claims. (Cl. 260—666)

1. Method of preparing adamantanes having methyl substituents which comprises contacting a perhydroaromatic hydrocarbon having three rings and at least twelve carbon atoms at a temperature in the range of −5 to +50° C. with an aluminum halide catalyst, and continuing such contact until at least a substantial proportion of the perhydroaromatic has been converted to hydrocarbon product having adamantane structure.

3,128,317
SELECTIVE HYDROGENATION OF ACETYLENE IN ETHYLENE WITH A ZEOLITIC CATALYST
Alfred Artell and Dwight M. Smith, Wappingers Falls, N.Y., and Morford C. Throckmorton, Akron, Ohio, assignors to Texaco Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Jan. 13, 1961, Ser. No. 82,469
6 Claims. (Cl. 260—677)

1. A process for the selective hydrogenation of acetylene in a gaseous mixture comprising acetylene and ethylene which process comprises contacting under hydrogenation reaction conditions said gaseous mixture together with hydrogen with a catalyst comprising a synthetic zeolite material of metal aluminum silicate wherein at least a major portion of said metal is copper.

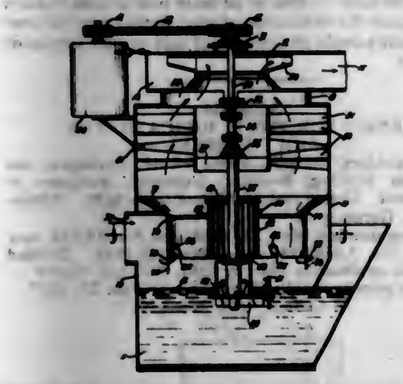
3,128,318
ALKALI METAL AMIDE CATALYSTS AND THEIR USE IN POLYMERIZING OLEFINS
Erwin E. Meisinger, Elmhurst, and Herman S. Bloch, Skokie, Ill., assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Filed June 18, 1962, Ser. No. 203,006
15 Claims. (Cl. 260—683.15)

1. A process for the conversion of a monoolefinic hydrocarbon which comprises polymerizing said hydrocarbon at polymerization conditions in the presence of a catalyst comprising an alkali metal amide disposed on a high surface area substantially anhydrous alumina support which has been promoted with a hydroxide of a metal selected from the group consisting of the alkali metals and alkaline earth metals and calcined.

3,128,319
ISOMERIZATION OF NORMAL BUTANE
Erwin E. Meisinger, Elmhurst, and Richard S. Corey, Rolling Meadows, Ill., assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Filed Mar. 13, 1963, Ser. No. 264,780
7 Claims. (Cl. 260—683.65)

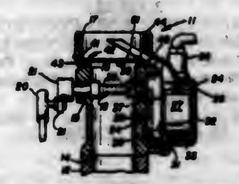
1. A process for the production of isobutane which comprises isomerizing normal butane at substantially anhydrous isomerization conditions in contact with a catalyst comprising an alkali metal amide disposed on a high surface area alumina support which has been promoted with a hydroxide of a metal selected from the group consisting of the alkali metals and alkaline earth metals and calcined, and recovering the resultant isobutane.

3,128,320
GAS WASHING WITH LIQUID SPRAY
Emil Umbricht, Northville, Mich., assignor to Ajem Laboratories, Inc., Livonia, Mich.
Filed Sept. 28, 1961, Ser. No. 141,902
4 Claims. (Cl. 261—39)



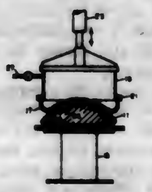
1. Gas washing apparatus of the character described for washing and removing entrained matter from a stream of gas to be washed by subjecting said stream of gas and said entrained matter therein to the action of a rotating spray pattern of washing liquid droplets, comprising in combination an outer casing for said apparatus having a gas outlet in the upper portion thereof, fan means adjacent said outlet for drawing said stream of gas to be washed through said casing for discharge through said outlet, rotating spray distributor means mounted for vertical rotation within said casing in the lower portion thereof and vertically spaced below said outlet, said distributor means including a cage of spaced vertical bars rotatable about a vertical axis for hurling washing liquid impinging thereon outwardly at high velocity to form said rotating spray pattern, means for pumping washing liquid into said cage for impingement against said bars, gas inlet means for introducing gas to be washed into said apparatus axially adjacent the lower portion of said spray pattern and tangentially with respect to rotation of said spray pattern, a generally circular deflecting baffle surrounding at least the lower portion of said rotating spray pattern and being radially spaced from both said distributing means and said casing, said circular baffle having vertical walls around said spray pattern and a transverse top radially outwardly extending therefrom and forming with said tangential inlet a generally circumferential distributing passage for conducting said stream of gas to be washed in a generally circumferential distributing path from said inlet around the outside of said baffle and around said rotating spray pattern, the lower edge of said vertical walls of said baffle being spaced from said casing whereby portions of said stream of gas to be washed are drawn by said fan means under said lower edge from outside said baffle to the inside thereof for upward passage through said rotating spray pattern, and said baffle being asymmetrically disposed within said casing providing a decreasing cross-sectional area of said distributing passage around said baffle for said stream of gas to be washed as said passage leads around said casing away from said gas inlet whereby said stream of gas to be washed entering said gas inlet is distributed with substantial uniformity all around the cross-sectional area defined by said rotating spray pattern and enclosed by said baffle as portions of said stream of gas flow under said lower edge of said baffle along and around the circumferential extent thereof as the cross-sectional area of said distributing passage diminishes.

3,128,321
CARBURETOR DE-ICER
Rudolph L. Hammerschmidt, Contra Costa County, Calif. (P.O. Box 727, Walnut, Calif.)
Filed Sept. 18, 1961, Ser. No. 138,979
4 Claims. (Cl. 261—142)



1. Apparatus for preventing the formation of ice within the venturi throat of a carburetor of the class in which fuel is injected into the throat through passages in a throttle shaft extending thereacross comprising, in combination, a resistance heating element extending around at least a portion of said venturi throat in proximity to said throttle shaft, a quantity of electrically insulative material disposed between said element and said venturi throat for conducting heat therebetween, and means for connecting said heating element with a source of electrical current.

3,128,322
METHOD OF MOLDING
Richard E. Young, Rocky Hill, N.J., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
Filed Oct. 26, 1960, Ser. No. 64,946
1 Claim. (Cl. 264—314)



The process for molding shaped structures of resin-impregnated fibrous material which comprises

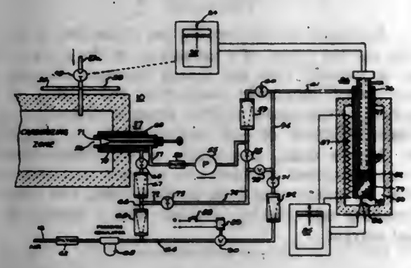
(*a*) placing a layer of fibrous material consisting essentially of a mat of intermeshed glass filaments impregnated with an uncured thermosetting resin on a mold form,

(*b*) initially applying pressure to the layer of impregnated fibrous material at a locus in the central area of said layer by bringing a preinflated, substantially hemispherical, flexible, substantially nonextensible bag into initial pressure contact with said layer at said locus by movement relative to each other of said bag and said impregnated fibrous material to force said layer at said locus against the mold form,

(*c*) thereafter progressively advancing the application of pressure to the layer of impregnated fibrous material outwardly in all directions from said locus toward the margins of said layer while maintaining pressure on the areas of said layer to which pressure is already applied by progressively enveloping all areas of said layer with said bag from said locus of initial pressure contact outwardly to the extremity of the mold form by continued movement relative to each other of said bag and said impregnated fibrous material, thereby creating a progressively increasing pressure gradient across the advancing pressure front to force air and excess uncured thermosetting resin out of the impregnated fibrous material ahead of the advancing pressure front, and

(*d*) heating the impregnated fibrous material while under the pressure exerted by the enveloping inflated flexible bag to cure the thermosetting resin therein.

3,128,323
MEASUREMENT AND CONTROL OF CONSTITUENT POTENTIALS
Raymond L. Davis II, Newtown Square, Pa., assignor to Leeds and Northrup Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed July 11, 1960, Ser. No. 41,966
10 Claims. (Cl. 266—2)



1. A system for measuring the carbon potential of a carburizing atmosphere, comprising

means providing a fluid circuit including an inlet adapted to be disposed in said carburizing atmosphere, a mixing chamber, a filament chamber, and an outlet passage,

means in said fluid circuit for moving a sample stream of the atmosphere in said carburizing zone serially through said inlet and thence through said mixing and filament chambers,

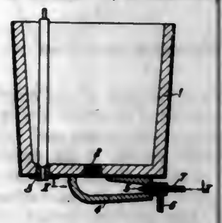
a sensitive element including a ferrous metal filament supported in said filament chamber, the electrical resistance of said element varying in accordance with change in carbon content thereof, the carbon potential of said atmosphere being normally above the range within which said element will reliably respond,

an electrical measuring circuit connected to said element for producing a signal varying in accordance with the electrical resistance of said element,

supply means for supplying to said sample stream prior to its arrival in said filament chamber a second gaseous stream to form with said sample stream a third stream of gases for flow through said filament chamber, said second gaseous stream including at least one gas of character which when mixed with said sample stream reduces the carbon potential of that stream to within said range within which said element will reliably respond, and

flow-responsive means disposed for the measurement of the rates of flow of at least two of said streams of gases for indication of the relative rates of flow of said sample stream and of said second stream of gases.

3,128,324
DEVICE FOR THE PURIFICATION OF MOLTEN STEEL
Rudolf Spolders, Bochum, Heinz Pieper, Hattingen, and Wilhelm Breuing, Bochum, Germany, assignors to Ruhrstahl Huttenwerke Aktiengesellschaft, Witten-Annen, Germany
Original application Mar. 22, 1960, Ser. No. 16,754, now Patent No. 3,060,015, dated Oct. 23, 1962. Divided and this application Mar. 6, 1961, Ser. No. 93,555
Claims priority, application Germany Feb. 27, 1957
10 Claims. (Cl. 266—39)

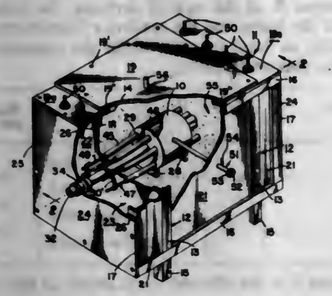


1. In a device for the purification of molten steel, in combination, container means for holding a body of molten steel; said container means having a bottom wall; withdrawal means for withdrawing molten steel from said container means; gas distributing means in said bottom wall of said container means; and blowing means for blowing a gas through said gas distributing means into said container means, said blowing means including a blast box chamber located below said container means in direct contact with that portion of said bottom wall in which said gas distributing means are located and in direct communication with the latter and adapted for combusting a combustible gas therein, and also including means for introducing a combustible gas and for introducing oxygen into said blast box chamber, whereby the combustion gases will be created in said blast box chamber in direct contact with said gas distributing means so as to heat the same to a high temperature and thereby to prevent clogging thereof by the steel in said container means.

ELECTRICAL

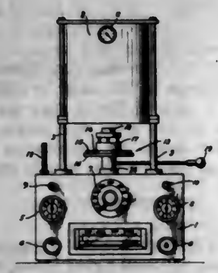
3,128,325
HIGH TEMPERATURE FURNACE
James C. Andersen, Niagara Falls, and Timothy J. Keaty, Ransomville, N.Y., assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed June 27, 1960, Ser. No. 38,797
5 Claims. (Cl. 13—20)

1. An electrical resistance furnace comprising a hollow casing formed of structural material such as metal and having gas outlet means and an interior closed by end walls; a hollow muffle formed of thermal insulating refractory material such as graphite and arranged within said interior and having an interior closed by end walls, said casing and muffle end walls being provided with alined central apertures and alined outer apertures surrounding said central apertures, an elongated tube formed of dense refractory material such as alumina and extending through said muffle and casing, said tube fitting tightly in said central apertures in said casing and muffle end walls and forming an isolated furnace chamber, elongated shielding tubes formed of refractory material such as alumina and extending between said casing and muffle end walls, said shielding tubes fitting tightly in said outer apertures in said casing and muffle end walls and provided with interior surfaces of electrical insulating material such as alumina, a particular mass formed of thermal insulating refractory material such as carbon and filling said casing interior around said muffle, furnace tube and shielding tubes, removable elongated heating elements formed of electrical conducting refractory material such as silicon carbide and slidably extending through said muffle and shielding tubes, said heating elements including central heating sections exposed within said muffle interior in radiant heat transfer relationship with said furnace tube and cold end portions arranged within said shielding tubes and thereby electrically insulated from said muffle and mass, and a gas inlet tube directly connected to said muffle interior for providing an inert atmosphere surrounding said central heating sections and for permitting said atmosphere to bleed off around said cold end portions



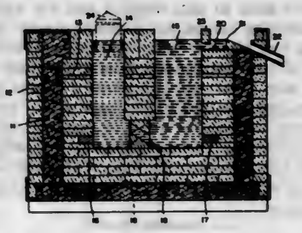
through said shielding tubes in order to effectively protect said heating elements against oxidation, whereby said furnace is capable of operating at temperatures up to about 1850° C., with only about a 55° C. differential between the surface temperature of said heating elements and the interior of said furnace tube, with a surface loading of less than about 25 watts per square inch of nominal heating element radiating surface, and with a power input requirement of less than about 3 kilowatts.

3,128,326
ELECTRICALLY HEATED VACUUM FURNACE
Karl Josef Hintenberger, Hochstrasse 39, Frankfurt am Main, Germany
Filed Feb. 28, 1961, Ser. No. 92,370
5 Claims. (Cl. 13—31)



1. An electrically heated vacuum furnace particularly for fusing dental ceramics and comprising in combination, a base housing, an inverted cup-shaped furnace chamber supported above said base with the entrance facing said base, a vacuum pump connected by conduit means to the interior of said furnace chamber, the sides and the top of the furnace chamber being insulated for heat retention, a charge elevator movable in opposite vertical directions above said base housing toward and from the entrance in the bottom of the furnace chamber and provided at its upper end with a charge carrying horizontal table adapted to fit against the entrance of the furnace vessel to seal the entrance opening tightly when the table is lifted into engagement with the said aperture, the lower end of said charge elevator having a piston slidably movable within a vertical cylinder for movement in opposite directions, an air conduit connected to the lower end of the said cylinder, a ball check valve mounted on said conduit, said conduit having between this valve and the said cylinder a bleeder hole of a diameter substantially less than that of said conduit, the other end of said air conduit being connected to the pressure side of the said vacuum pump, a conduit extending from said air conduit to receive air under pressure therefrom and having a valve seat at the outer end thereof, another branch conduit extending from said vacuum conduit interconnecting the vacuum pump and the said furnace vessel and having a valve seat at the free end thereof, and valve means operable relative to said valve seats successively first to close said valve seat in said first-mentioned branch conduit to cause air pressure to raise said piston and charge-carrying table against said entrance of said furnace to close it and said valve means then being movable to close said valve seat in said second mentioned branch conduit to close said vacuum conduit to said furnace chamber to maintain said table against said furnace entrance while said air pressure is released from said piston.

3,128,327
METAL MELTING FURNACE
Richard C. Upton, Mount Clemens, Mich., assignor to Upton Electric Furnace Company, Inc., Roseville, Mich., a corporation of Michigan
Filed Apr. 2, 1962, Ser. No. 184,323
11 Claims. (Cl. 13—33)

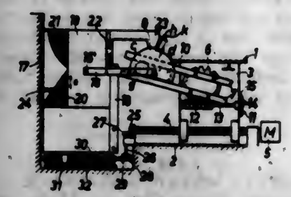


1. A metal melting and pouring furnace comprising a chamber containing an upper layer of molten metal and a lower layer of molten salt of greater specific gravity than said molten metal, a discharge spout connected to said chamber above the normal level of said molten metal, a second chamber containing molten salt, a displacer insertable into said molten salt, a fluid conduit hydraulically connecting said lower layer of molten salt in said first chamber with the molten salt in said second chamber, means for moving said displacer into the molten salt in said second chamber to thereby raise the level of molten metal in said first chamber and discharge said metal through said spout, and means for withdrawing said displacer from the salt in said second chamber.

3,128,328
DEVICES FOR MEASURING AND RECORDING EXTINCTION COEFFICIENTS
Wilfried Muller, Jena, Germany, assignor to VEB Carl Zeiss Jena, Jena, Germany
Filed Aug. 8, 1960, Ser. No. 48,331
1 Claim. (Cl. 88—14)

A device for measuring and recording extinction and absorption coefficients comprising a light-source emitting two beams in different directions, each of said beams being influenced by a system made up of a first convergent optical element having said light-source at its object-side focus, a slit, another convergent optical element, beam-interrupting means so coupled to beam-interrupting means of the other beam that only one of said two beams is interrupted at a time, said other convergent optical ele-

ment imaging said slit in the plane of said interrupting means, at least one reflector, said reflector deflecting the beam to a photoelectric receiver serving both beams, and optical means imaging on said photoelectric receiver the plane of said interrupting means, said measuring and recording device further comprising a support for two measuring means influencing the intensity of said first beam, said support being displaceable transversely to the part of said first beam between said convergent optical elements, the zero lines of said measuring means being out of coincidence with each other and only one of said measuring means being effective at a time, the test specimen lying near the plane of said interrupting means and being transversely displaceable in said other beam, a motor controlled by photocurrents due to exposure of said photoelectric receiver, a spindle actuated by said motor and controlling both a stylus and a slide, on said slide a measurably rotatable guide for transmitting the displacement of said slide to said support and for adjusting one of said measuring means, entrainment means, and a cam-disc having two circular slideways of different radii, the difference of said radii corresponding to the space between said zero lines, said entrainment means being fixed to said cam-disc and slidable in said guide, said support having a lever and an arm and a spring, said cam-disc being linked to said lever and influenced by said spring to contact said arm, and the direction of displacement of said slide being at right angles to the direction of displacement of said support.



3,128,329
OPTICAL PROJECTOR LENS SYSTEMS
Robert M. Muller, Cheektowaga, N.Y., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts
Filed Nov. 28, 1960, Ser. No. 72,192
2 Claims. (Cl. 88—57)



2. An optical system for use in an optical projector for testing the visual anomalies of the human eye or the like, said system comprising in combination a well corrected Cooke triplet and a well corrected negative doublet disposed in optical alignment, said negative doublet being positioned between said triplet and object to be projected so as to provide a virtual image of said object, and being adjustable relative to said triplet so as to vary the size of said virtual image and thereby bring the magnification of the image projected by said triplet onto an associated viewing screen at a preselected distance from said projector to the correct size desired for viewing purposes, and said doublet and triplet being simultaneously adjustable relative to said object for accurate focus of said projected image, the first element of said doublet being a bi-concave negative element formed of a borosilicate crown glass and having its surface of longer radius facing said object, and the second element of said doublet being a positive element arranged in close axially spaced relation thereto and formed of an extra dense flint glass, the refractive indices N and dispersive values V, the radii of curvatures R of the optical surfaces, the axial thicknesses t of the lenses and the spacing s therebetween being substantially as listed in order under the respective headings in the following table:

Lens	N	V	Radii	Thicknesses and Spacing
1	1.517	64.5	$R_1=+.628F$ $R_2=-.271F$	$t_1=-.0107F$ $s_1=-.0007F$
2	1.699	30.9	$R_3=-.628F$ $R_4=-1.256F$	$t_2=-.01F$

and wherein F is the effective focal length of said doublet.

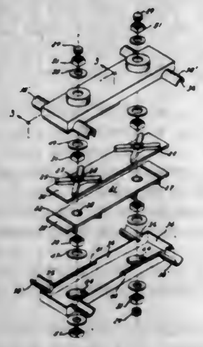
3,128,330
VIBRATION DAMPING METHOD AND DEVICE
Arthur P. Grasser, Cleveland, Ohio, assignor to Ball Damping Devices, Inc., Cleveland, Ohio, a corporation of Ohio
Filed May 5, 1960, Ser. No. 27,202
13 Claims. (Cl. 174—42)



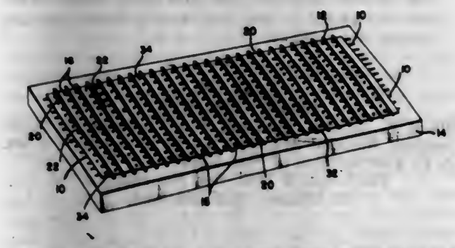
7. In a vibration damping device for the span of a longitudinal vibratory member having a pair of spaced support terminals and having a dominant natural frequency and wave length of vibration, the combination of a pair of longitudinally spaced connectors secured on the span of said member intermediate said support terminals to define a trap zone between said connectors, stress transfer means secured between said connectors for mechanically forcing a change in the stress in said trap zone of said member to a value different than the stress in said member external to said zone, and means responsive to said stress transfer means for introducing a radial component of force on said member in said trap zone.

3,128,331
BARE WIRE TRANSMISSION ARRANGEMENT
David W. Groom, 115 Mill Creek Drive, Willits, Calif.
Filed June 5, 1962, Ser. No. 200,280
2 Claims. (Cl. 174—43)

1. In an open wire transmission system the combination comprising in combination a plurality of uninsulated conductors, poles disposed for stringing said conductors therebetween, and an insulator structure on each of said poles to support said conductors therefrom, said insulator structure comprising a conductor support block of dielectric material, said block including means adapted to hold a plurality of uninsulated conductors in spaced apart relation to establish a predetermined impedance therebetween, said block being formed in two halves, and means for compressing said halves together to hold said conductors, a cover forming a closed envelope around said support block, means spacing said block free of the interior surfaces of said cover to provide a void around said block, said cover including openings dimensioned and disposed to pass conductors clear of and through said cover, insulator means interposed between said cover and a pole associated therewith, and clamping means holding said insulator structure, insulator means and pole together with an applied compressive force independent of the compressive force holding said block halves clamped together, said clamping means further serving to support said block, whereby deposits of environmental contaminants upon said block are minimized thereby maintaining said predetermined impedance substantially constant.



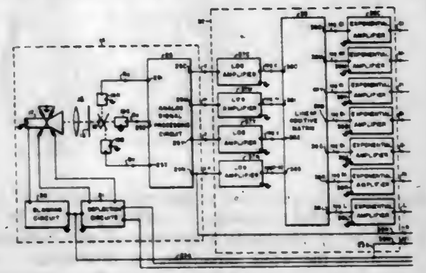
3,128,332
ELECTRICAL INTERCONNECTION GRID AND METHOD OF MAKING SAME
Jack W. Burkig, Santa Monica, and John E. Richardson, Los Angeles, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Mar. 30, 1960, Ser. No. 18,759
6 Claims. (Cl. 174—68.5)

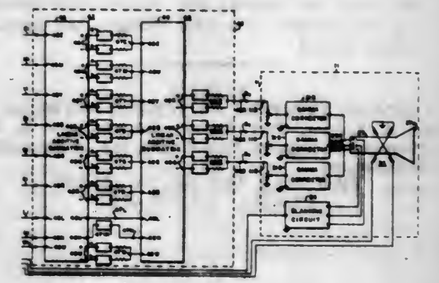


1. An electrical interconnection grid comprising a first plurality of electrical conductors, each having electrical continuity, a second plurality of electrical conductors, each having electrical continuity and crossing said first conductors and insulated therefrom, each conductor of said second plurality of electrical conductors having a plurality of tab portions extending therefrom and making electrical contact with respective conductors of said first plurality of electrical conductors, circuits including selected portions of conductors and tab portions being obtained by severing conductors to leave said selected portions and severing tab portions from conductors excepting those tab portions forming part of said circuits.

3,128,333
ELECTRONIC PREVIEWER FOR COLOR PRINTING PROCESSES
Bernard D. Loughlin, Huntington, N.Y., assignor to Hazeltine Research, Inc., a corporation of Illinois
Filed Jan. 12, 1960, Ser. No. 1,898
12 Claims. (Cl. 178—5.2)

1. An electronic previewer for displaying an electronic preview color image of the printed color reproduction which will be obtained from an original color picture by printing photo-engraved half-tone color-separation images thereof in pigments of the corresponding colors, said previewer comprising: electronic color-image-reproducing means for producing respectively controlled primary color components of light which form said displayed electronic image; electro-optical input means for deriving from said original picture electrical signals representing the relative areas of the colored half-tone dots which will be printed in each incremental region of said color reproduction by respective ones of said color-separation images; first signal processing means for combining the individual dot area-representative signals in accordance with the contributions of all dots to the individually evaluated proportions of the color components which will be printed thereby in each of said regions; and second signal processing means for combining the printed color component-representative signals to produce signals for respectively controlling said primary color components of light produced by said electronic image-reproducing means, such signal combination being in accordance with the color matching relationships between said printed color components and said electronically produced primary color components; whereby the control signals so obtained are adapted to respectively control said electronically produced color components so that said image-reproducing means displays said preview electronic color image.





3,128,334
COLOR TELEVISION
Charles H. Heuer, Gleacoe, Ill., assignor to Zenith Radio Corporation, Chicago, Ill., a corporation of Delaware
Filed Jan. 3, 1962, Ser. No. 164,121
3 Claims. (Cl. 178—5.4)

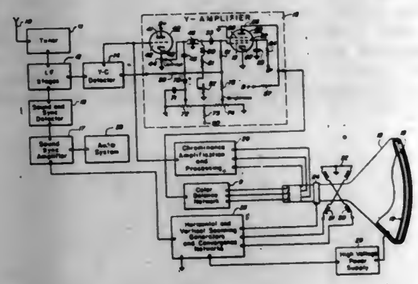
1. A luminance control circuit for a television receiver comprising:

a signal source for providing a luminance signal having amplitude variations representative of an image to be reproduced;

a luminance signal translating channel, including an electron device, for translating said luminance signal to an image-reproducing device;

a luminance-signal time delay network included in said channel, terminated at one end in its characteristic impedance and coupled at said terminated end to said electron device;

means for coupling the remaining end of said delay network to said source;



clamping means, coupled to said remaining end of said delay network including a rectifier poled to be responsive to amplitude excursions of said luminance signal in the white direction, for producing a unidirectional potential when said amplitude excursions exceed a predetermined threshold amplitude level;

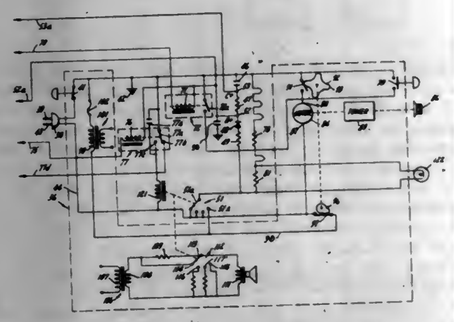
and means for applying said unidirectional potential to said electron device for changing the operating point thereof.

3,128,335

REMOTE CONTROL SWITCHING NETWORK

Paul E. Knauer, Fort Wayne, Ind., assignor to The Magnavox Company, Fort Wayne, Ind., a corporation of Delaware

Filed Dec. 1, 1961, Ser. No. 156,379
5 Claims. (Cl. 178—5.8)



1. In a system for remote control of a television set or the like:

input means for connection to a source of electrical energy;

a television receiver;

a first switch coupling said television receiver to said input means;

a first remotely controllable multi-position operating element in said television receiver, said element being positionable in a plurality of distinct stable positions;

a second remotely controllable multi-position operating element in said television receiver, said second element being positionable in a plurality of distinct stable positions;

a remote control signal receiver having a pair of output channels, one of said channels being responsive to energy at a first frequency and coupled to said first element to drive said first element to its various said stable positions in succession in response to signals of said first frequency, and the other channel of said pair being responsive to energy at a second frequency and coupled to said second element to operate said second element to its various stable positions in succession in response to signals at said second frequency;

means coupling said first element to said first switch, said coupling means being operable by said first element to open said switch upon a predetermined extent of operation of said first element through a plurality of its positions;

a second switch having a first condition coupling said remote receiver to said input means through a first path, said second switch being operable to a second condition coupling said remote receiver to said input means through a second path including said first switch;

and second means coupling said second switch to said second element, said second coupling means being operable by said second element to change said second switch from said first condition to said second condition upon a predetermined extent of operation of said second element;

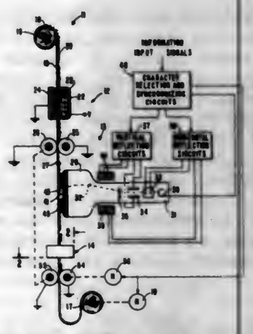
whereby signals at said first frequency are useful to operate said first element through its said positions to its said predetermined extent and open said first switch to disconnect said television receiver from said input means and thereby deenergize said television receiver, and signals at said second frequency are useful to actuate said second element to operate said second element through its said positions to its said predetermined extent and change said second switch to said second condition to disconnect said remote receiver from said input means when said first switch is open and thereby deenergize said remote receiver.

3,128,336

FIBER PRINTING

William E. Semple, Endicott, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Apr. 4, 1962, Ser. No. 185,134
12 Claims. (Cl. 178—6.6)



9. Apparatus for producing a printed copy of a document comprising:

a document to be reproduced;

means to scan said document to provide information input signals corresponding to the information on said document;

a record medium having on at least one surface thereof a plurality of projecting fibers;

each of said fibers having a bent and depressed state and an elevated or extended state;

means for receiving said information input signals and placing those of said fibers corresponding to said information input signals in one of said states; and

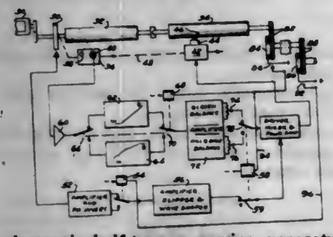
means for marking the fibers in one of said states so that the same are readily distinguishable from the remaining fibers in the other of said states to provide a copy of said document.

3,128,337

COLD CUTTING TECHNIQUE FOR HALF-TONE ELECTRONIC ENGRAVING

Samuel W. Levine, Westbury, N.Y., assignor to Fairchild Camera and Instrument Corporation, a corporation of Delaware

Original application Dec. 23, 1959, Ser. No. 861,625, now Patent No. 3,075,042. Divided and this application Apr. 26, 1962, Ser. No. 195,358
3 Claims. (Cl. 178—6.6)



1. In electronic half-tone engraving apparatus of the type including a pair of sheet supports, respective image scanner and engraving stylus control carriages arranged for synchronous line-by-line scanning and reproduction of materials carried by said supports, drive means connected to said supports and said carriages for effecting successive such line scan operations, a screen tone source energized synchronously by said drive means, and electrical circuits connecting said engraving stylus for row-by-row discrete cavity-engraving operations under joint control of said scanner and said tone source, the improvement which comprises control means operated synchronously with said drive means for disabling the output of said tone source during alternate successive line scans, and means responsive to the output of said scanner for operating said stylus as a variable-width line engraving means to remove additional sheet material along paths intervening between successive rows of such cavities, in amounts controlled by the magnitude of the signal output of the scanner, whereby to convert discrete cavity recordings on the engraved sheet into rows of simulated half-tone dots.

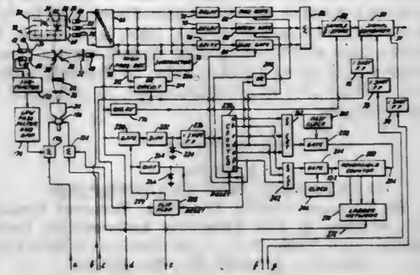
3,128,338

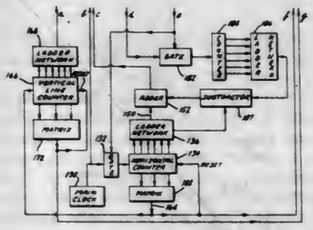
TIME-BANDWIDTH REDUCTION SYSTEM FOR IMAGE SIGNAL TRANSMISSION

Charles F. Teacher, Philadelphia, and Melvin E. Partin, Montgomeryville, Pa., assignors to Philco Corporation, Philadelphia, Pa., a corporation of Delaware

Filed Aug. 15, 1962, Ser. No. 217,044
12 Claims. (Cl. 178—6.8)

1. In an image scanning system adapted to receive an image to be scanned, the combination comprising a mask formed with spaced reference lines, image scanning means including a movable image scanning element, scan control means coupled to said image scanning means for causing said image to be scanned at a first rate, said image scanning means including means for generating a video signal representative of the density of the image along the path scanned, means associated with said image scanning means for causing said mask to be scanned in a direction transverse to said reference lines in synchronism with the scanning of said image, reference signal generating means associated with said mask for generating position reference signals coincident in time with the scanning of reference lines of said mask, detail detector means responsive to said video signal for producing signals indicative of the presence of image detail in an area delineated in





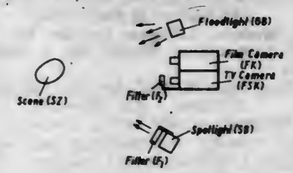
part by the positions at which adjacent reference lines are scanned, means responsive to said signal provided by said detail detector means and said position reference signals for causing said image scanning means to retrace and rescan a portion of said image between positions corresponding to positions at which adjacent reference lines on said mask are scanned.

3,128,339

ARRANGEMENT FOR FILM MAKING AND PRODUCING A TELEVISION PICTURE SIGNAL

Max Eugen Wupper, Darmstadt, Stephan, Germany, assignor to Fernseh G.m.b.H., Darmstadt, Germany

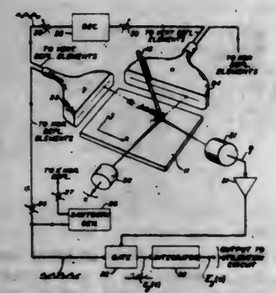
Filed Nov. 1, 1960, Ser. No. 66,590
Claims priority, application Germany Nov. 13, 1959
12 Claims. (Cl. 178—6.8)



1. In an arrangement for producing a cinematographic picture of a scene and for simultaneously producing a video signal of said scene, in combination, a cinematographic camera directed at the scene and including a film adapted to be exposed to said scene; a television pickup camera directed at said scene and including a pickup tube adapted to be exposed to said scene; means for illuminating the entire scene by general light having a predetermined wide spectral range and a brightness sufficient to produce in said pickup tube a video signal representing said scene and being also effective on said film; means

for illuminating additionally at least a portion of said scene which is illuminated by said general light and also represented by said video signal, with additional light of at least one limited spectral range forming a portion only of said predetermined wide spectral range, said light of limited spectral range being particularly effective on said film and being added to said general light having a predetermined wide spectral range, so that at least said portion of said scene is simultaneously illuminated by said general light and said additional light; and means for rendering said additional light of limited spectral range ineffective only on said pickup tube, so that said pickup tube is exposed only to the illumination of said scene by said general light.

3,128,340
ELECTROGRAPHIC TRANSMITTER
Leon D. Harmon, Warren Township, Somerset County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 21, 1961, Ser. No. 161,167
11 Claims. (Cl. 178—18)

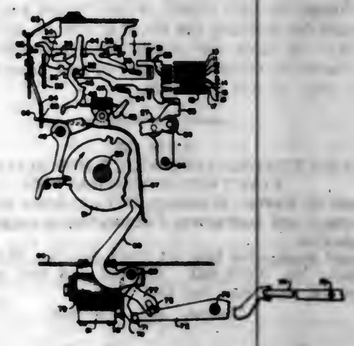


1. An electrographic transmitter that comprises a writing surface, means for effectively sweeping a beam of light over said surface in a plane substantially parallel to and a small distance above said surface, a photosensitive element positioned to capture the light of said beam throughout its entire sweep over said writing surface, and means for identifying that instant in the sweep of said beam at which said photosensitive element is shadowed by an opaque object.

3,128,341
FUNCTION DISABLING MECHANISM FOR TELEGRAPH PRINTERS
Berthel F. Madsen, Arlington Heights, Ill., assignor to Teletype Corporation, Skokie, Ill., a corporation of Delaware
Filed Mar. 29, 1962, Ser. No. 183,636
6 Claims. (Cl. 178—25)

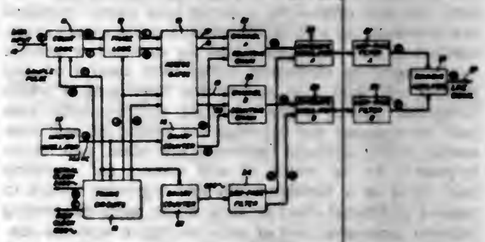
1. In a telegraph printer having a selector mechanism comprising a plurality of permutation code bars permutatively shiftable to predetermined positions in response to received code combination signals, a plurality of function slides slidably mounted for movement toward and away from said code bars, a function pawl associated with each function slide and disposed in alignment therewith for selective actuation by its associated function slide when its slide is moved toward the permutation code bars to a predetermined extent, a function actuating blade for moving those function slides that have moved beyond said predetermined point away from the code bars, a separate function lever for actuation by each function pawl, a function clutch for actuation by each of said function levers, in combination with

(*a*) a blocking member normally biased to block at least one of said pawls from being operatively engaged with its associated function slide,
(*b*) a leverage mechanism for moving said blocking member out of blocking relation with said function pawls,



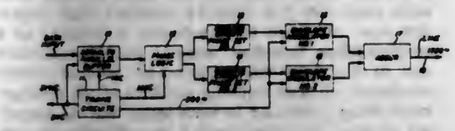
(*c*) manually operable means for actuating said leverage mechanism,
(*d*) electromagnetic means for holding said leverage mechanism actuated, and
(*e*) switch means actuated by said leverage mechanism for supplying current to hold said electromagnetic means operated.

3,128,342
PHASE-MODULATION TRANSMITTER
Paul A. Baker, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed June 28, 1961, Ser. No. 120,312
8 Claims. (Cl. 178—66)



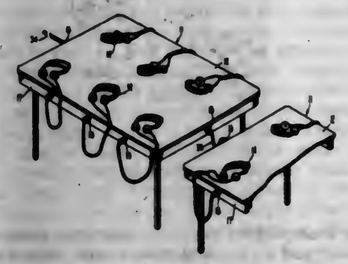
2. Apparatus for incrementally phase-shifting a carrier wave in accordance with a binary data signal comprising pulse generator means furnishing an output harmonically related to the frequency of said carrier wave, a source of paired binary data dibits occurring at a synchronous rate, count logic means for producing a first output whenever a data pair contains unlike elements and a second output whenever the initial data pair digit is a marking element, phase logic means under the control of the first and second outputs of said count logic means for establishing an initial phase for said carrier wave at each dibit interval, two channels counting down from the outputs of said pulse generator means to the frequency of said carrier wave, the phase relationship between said two channels being maintained at an odd multiple of 45 electrical degrees, means for setting the phases of said two channels alternately to a reference state every dibit period, and means for gating the output of said phase logic means alternately to said channels to control the initial phase thereof with respect to the reference state, and means for adding the outputs of said two channels to form a single phase-modulated line signal.

3,128,343
DATA COMMUNICATION SYSTEM
Paul A. Baker, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 15, 1960, Ser. No. 49,544
10 Claims. (Cl. 178—67)



4. A data transmitter comprising a source of binary "1" and "0" signals in a sequence of dibit pairs chosen from the combinations 10, 00, 01 and 11; a timing circuit producing a dibit synchronizing signal; digital logic means controlled by said timing circuit for synchronously generating a few cycles of a carrier wave every dibit period, each successive few cycles being shifted in relative phase at least 45 degrees even in the absence of an input signal; means for applying said dibit signals to said logic means as an input signal to cause said latter means to impart additional relative phase shifts to said successive few cycles of carrier wave of 0, 90, 180 or 270 degrees according to a fixed relationship between said dibit combinations and said additional phase shifts; and means for amplitude modulating the output of said logic means by a cosine wave occurring at half said dibit rate.

3,128,344
AUDIO OUTPUT TABLE
Stanley Eugene Goold, 40091 Vargas Road, Fremont, Calif., assignor of one-fourth each to Don M. Russell, Garrett M. Burt, and James T. Howden, all of Fremont, Calif.
Filed Apr. 17, 1962, Ser. No. 188,133
1 Claim. (Cl. 179—1)



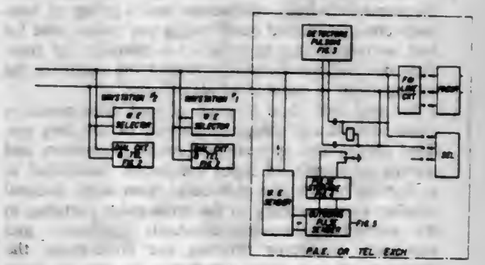
Apparatus of the character described comprising a table having a top member, a rim secured to said table and extending along the periphery thereof, said rim being composed of electrically conducting material, plurality of audio output jacks secured to said rim each having a first terminal electrically coupled to said rim and a second terminal insulated from said rim, an audio input jack secured to said rim having a first terminal electrically coupled to said rim and a second terminal insulated from said rim, said rim serving as an electrical connection between the first terminal of said input jack and the first terminals of each output jack, and an electrical conductor coupled between the second terminal of said input jack and the second terminals of each output jack.

3,128,345
LIMITER CONTROL SYSTEM FOR STEREOPHONIC RADIO RECEIVER
Larry A. Freedman, East Brunswick, and Joseph O. Preisig, Trenton, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Nov. 1, 1960, Ser. No. 66,510
15 Claims. (Cl. 179—15)



1. In a stereophonic radio receiver for amplitude and angle-modulated carrier signals, the combination with an intermediate-frequency signal amplifier having automatic gain control means, of means providing an amplitude-modulation signal channel coupled to said amplifier and an amplitude-modulation detector therefor having an output circuit providing a positive-going direct-current control voltage component which increases within the average amplitude of an applied signal, means providing an angle-modulation signal channel coupled to said amplifier and including angle-modulation detector means, a signal limiter amplifier coupled to said angle-modulation detector means for controlling the signal amplitude applied thereto and the tracking relation of the signal output from said signal channels, and a tracking control circuit for said limiter amplifier operative under control of said intermediate-frequency amplifier and the automatic gain control action therefor and in response to the control voltage component derived from the amplitude-modulation detector output circuit to provide effective control of said tracking relation.

3,128,346
WAYSTATION TELEPHONE SYSTEM
Robert P. Dimmer, Lombard, and Edward L. Roback, Chicago, Ill., assignors to Automatic Electric Laboratories, Inc., a corporation of Delaware
Filed Dec. 14, 1959, Ser. No. 859,217
7 Claims. (Cl. 179—17)



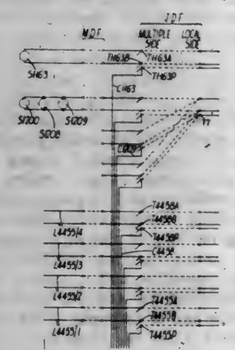
6. In a communication system, a waystation line having a plurality of stations thereon each having a calling device and a waystation selector thereat, a telephone exchange having regular subscribers and automatic switches for extending connections between the lines, a calling terminal and a called terminal in the exchange connected to the said waystation line, means at each waystation, controlled by the operation of the calling device thereat, for transmitting impulses of high frequency

alternating current over the line to the exchange, means in the exchange operated by said impulses in one instance for extending a connection to a line in the exchange and in another instance to the called terminal of the waystation line, and means operated over the called terminal, when the connection is extended thereto, responsive to said impulses for transmitting impulses of a different character over the waystation line to operate the waystation selectors to signal another station thereon.

3,128,347
ARRANGEMENTS FOR AUTOMATICALLY IDENTIFYING CALLING NUMBERS IN TELEPHONE SYSTEMS

Bernard Drake, London, John Brownlie Clark, Bexleyheath, Kent, Percy William Hicks, Dartford, Kent, and James George Taylor, London, England, assignors to Associated Electrical Industries Limited, London, England, a British company

Filed Jan. 26, 1962, Ser. No. 168,946
Claims priority, application Great Britain Mar. 13, 1961
5 Claims. (Cl. 179—18)



1. In a telephone exchange, an arrangement for automatically identifying calling numbers pertaining to lines connected to the exchange, said arrangement comprising in combination:

(*a*) input conductors each individual to a line connected to the exchange,

(*b*) thousands-digit and hundreds-digit and tens-digit and units-digit decimal output conductors,

(*c*) two groups of conductors comprising a group of thousands-hundreds conductors and a group of tens-units conductors and constituting one cross-point for and corresponding to each of a plurality of four-digit decimal numbers constituting the numbers the arrangement is capable of identifying,

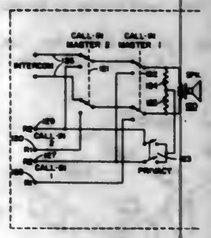
(*d*) for and individual to each of said cross-points, a cross-point circuit comprising a pair of coupling gas-filled diodes and at least two coupling resistors and serving to couple an input conductor, individual to a line to which the particular four-digit decimal number corresponding to the cross-point pertains, to the particular thousands-hundreds conductor and tens-units conductor forming the cross-point, the coupling of said input conductor to one of these two conductors forming the cross-point being by way of one diode of the pair of coupling gas-filled diodes in series with at least one coupling resistor and the coupling of said input conductor to the other of these two conductors forming the cross-point being by way of the other diode of the pair in series with at least one coupling resistor and these diodes serving to cause each of these two conductors forming the cross-point to be normally, so far as the particular cross-point circuit is concerned, isolated from said input conductor by a coupling gas-filled diode in the non-conducting condition and isolated from the other conductor of the two by two coupling gas-filled diodes in the non-conducting condition, and

(*e*) for and individual to each thousands-hundreds conductor two isolating rectifiers over respective ones of which the conductor is coupled to a corresponding thousands-digit decimal output conductor and to a corresponding hundreds-digit decimal output conuctor, and for and individual to each tens-units conductor two isolating rectifiers over respective ones of which the conductor is coupled to a corresponding tens-digit decimal output conductor and to a corresponding units-digit decimal output conductor, all such isolating rectifiers of the arrangement being connected in such sense that an electrical marking condition applied, for effecting identification of the calling number in respect of a call, to the particular input conductor relevant to the call, by causing each coupling gas-filled diode of the appropriate cross-point circuit to conduct in series with at least one coupling resistor of this cross-point circuit, produces current flow in the low-resistance direction through each of the four said isolating rectifiers pertaining to the particular thousands-hundreds conductor and tens-units conductor forming the cross-point concerned, causing an electrical marking condition to appear upon each of the relevant four decimal output conductors.

3,128,348
LOUDSPEAKING INTERCOM SYSTEM

Bruce D. Lummis, Webster, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Filed Oct. 19, 1959, Ser. No. 847,365
10 Claims. (Cl. 179—38)

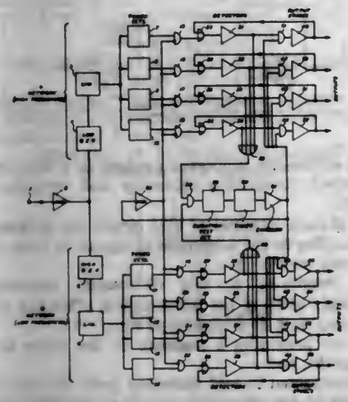


3. In a loudspeaking intercommunication system having a master and a remote station, master station amplifying means having input and output circuits, an electro-acoustic transducer located at each of said master and remote stations, said transducer at said remote station being a bidirectional transducer, means for connecting said transducer at said master station to said output circuit, interstation circuits extending from said master station to said remote station, means for connecting said bidirectional transducer at said remote station to said interstation circuits, means for connecting said interstation circuits to said input circuit, privacy switch means located at said remote station having operative and inoperative conditions, means located at said master station for muting said amplifying means, and means including said input circuit connecting means for controlling said muting means in accordance with the operative condition of said switch means whereby privacy at said remote station is under the control of the operator at the remote station.

3,128,349
MULTIFREQUENCY SIGNAL RECEIVER

Francis T. Boesch, Brooklyn, N.Y., and Donald H. Nash and Leo Schenker, Berkeley Heights, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Aug. 22, 1960, Ser. No. 50,916
13 Claims. (Cl. 179—84)



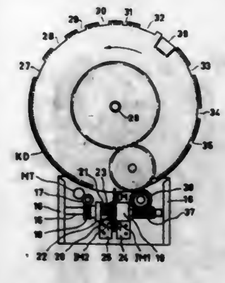
6. A signal receiver for converting pairs of substantially simultaneous multifrequency input signals into D.-C. output signals comprising, in combination, a first network for input signals within a first preselected band of frequencies; a second network for input signals within a second preselected band of frequencies; each of said networks comprising a respective plurality of signal paths; each of said paths including a respective tuned circuit resonant at a respective preselected frequency, a respective one of a plurality of detector circuits and a respective output point, means responsive to a coincidence of preassigned duration between an output from one of said detectors in each of said networks for generating a triggering signal; means responsive to said triggering signal for generating a timing signal having a preselected duration; means in each of said paths jointly responsive to said timing signal and to a signal from a respective one of said detector circuits for applying an output signal to a corresponding one of said output points; means in each of said signal paths for applying a part of said output signal from a respective one of said output points to the input of a corresponding one of said detectors, whereby, for each of said input signal pairs, a D.-C. output signal having a duration equal to said timing signal, irrespective of the duration of said input signal, is applied to a respective one of said output points in each of said networks.

3,128,350
SIGNALLING SYSTEM

Tore Hesselgren, Borenavagen 5, Johanneshov, Sweden

Filed Dec. 9, 1959, Ser. No. 858,449
Claims priority, application Sweden Apr. 14, 1959
9 Claims. (Cl. 179—90)

1. In a signalling system, a pulsing device comprising a first rotatable disc having contact segments on at least one side, a pair of fixed contact members coacting with said first disc, said contact members being so arranged in relation to said contact segments that on the rotation of the disc said contact segments periodically establish connection between said contact members, a second roatable disc situated in a plane substantially at right angles to the plane in which said first rotatable disc is situated, said first disc having at least one projection on its periphery, said second disc having its perphery located in the path

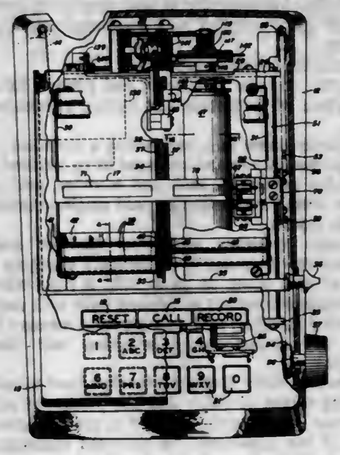


of movement of said projection on the first disc, the periphery of the second disc having a number of recesses of a depth sufficient to allow the passage of said projection on the first disc, a shaft for said first disc, a friction coupling between said shaft and asid first disc, and driving means for driving the shaft of said first disc with a speed exceeding the speed of rotation of said second disc.

3,128,351
REPERTORY DIALER

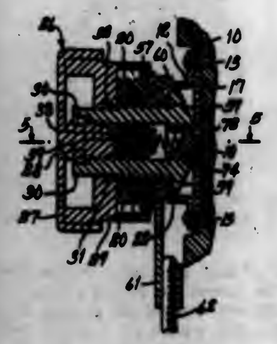
Lawrence A. Hohmann, Jr., Chatham, N.J., Frank W. Klaaman, Penfield, N.Y., and Theodore P. Nenninger, East Brunswick, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Mar. 2, 1960, Ser. No. 12,440
8 Claims. (Cl. 179—90)



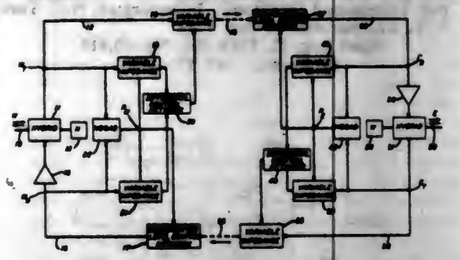
6. A repertory dialer comprising dialing means for generating signals, a multichannel storage medium, transducer means for recording on the storage medium signals generated by the dialing means and for reproducing signals previously recorded on the storage medium, drive means for moving the storage medium, and means for preventing the drive means from moving the storage medium when the transducer means is not positioned in alignment with one of the channels of the storage medium.

3,128,352
CLAMPING MEANS FOR AN ARTICLE-SUPPORTING BOOM
George Capen, Brooklyn, N.Y., assignor to Roanwell Corporation, New York, N.Y., a corporation of New York
Filed Jan. 25, 1962, Ser. No. 168,711
10 Claims. (Cl. 179—156)



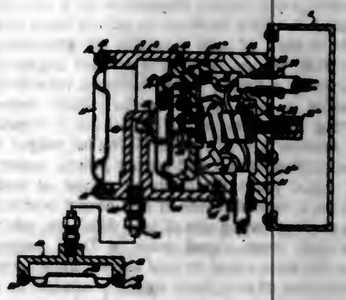
1. Clamping means for adjustably attaching an article-supporting boom to a supporting means wherein:
(a) said boom and a clamping assembly of said clamping means may be angularly adjusted as a unit with respect to said supporting means,
(b) said boom may be adjusted in a direction longitudinal thereof with respect to said clamping assembly while the latter is secured to said supporting means,
(c) said clamping assembly and said boom may be removably secured to said supporting means, and
(d) all the adjustments aforesaid and the securing of said clamping assembly to said supporting means are locked and controlled by a single manually operable means;
said clamping means comprising:
(1) a stud member having an end portion formed as a surface of revolution and having a threaded portion,
(2) a thumbscrew member having a threaded portion complementary to and arranged to be screwed to said threaded portion of said stud member, said thumbscrew member constituting said single manually operable means,
(3) means including said stud member and said thumbscrew member for graspingly engaging a portion of said boom so as to hold it rigid when said thumbscrew member is screwed tight with respect to said stud member, said members and means (1), (2) and (3) collectively constituting said clamping assembly,
(4) a substantially U-shaped bracket fixed to said supporting means in which said end portion of said stud member is removably engaged in the operative position of the apparatus, the threaded connection between said stud member and said thumbscrew member serving also, when these members are screwed tight together, to lock said stud member to said bracket by squeezing portions of said bracket between said end portions of said stud member and a part which is held in place between said stud member and said thumbscrew member, and
(5) additional means for locating and holding said clamping assembly including said stud member at a predetermined position with respect to said bracket.

3,128,353
TRANSMISSION CONTROL IN SIGNALING SYSTEM
Mark B. Gardner, Chatham Township, Morris County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 6, 1962, Ser. No. 177,854
6 Claims. (Cl. 179—170.6)



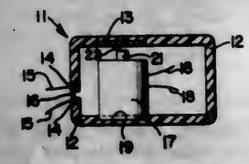
1. In a system for suppressing echoes in a two-way signaling circuit comprising incoming and outgoing one-way paths,
means at each terminal of said circuit for differentially responding to the amplitude of signals in both of said one-way paths,
means responsive to said differential response for smoothly altering the transmission efficiency of said outgoing path at a prescribed rate,
means for providing a measure of the noise level in said paths, and
means connected in said incoming paths for controlling the maximum permissible level of incoming signals in response to said measure of noise level.

3,128,354
SEALED LEVEL CONTROL SWITCH FOR SUMP PUMPS OR THE LIKE
William J. Conery, Ashland, Ohio, assignor to Hyde-O-Matic Pump Company, Hayesville, Ohio, a corporation of Ohio
Filed July 10, 1962, Ser. No. 208,769
6 Claims. (Cl. 200—83)



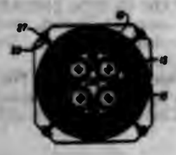
1. A sealed level control switch for sump pumps and the like comprising;
an enclosure means,
a flexible diaphragm attached to and forming one wall portion of said enclosure means to enable the pressures inside and outside of said enclosure means to be balanced,
an enclosed diaphragm type switch unit positioned within said enclosure means and including a chamber forming means, a flexible control diaphragm positioned in said chamber forming means to divide it into two separate sections, and contact means positioned in one of said sections which has the pressure within said enclosure means set up therein,
control pressure supply means operatively connecting between said enclosure means and the other of said sections in said switch unit, and
electric leads extending through said enclosure means in sealed engagement therewith and connecting to said switch unit whereby said switch unit is positioned in a sealed enclosure means where the pressure is that of the surrounding atmosphere and with a control pressure being applicable to said switch unit for operation thereof.

3,128,355
PLASTIC RELAY STRUCTURE AND METHOD OF MAKING
Evander K. Fuller, Greensboro, N.C., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 19, 1959, Ser. No. 847,247
9 Claims. (Cl. 200—87)



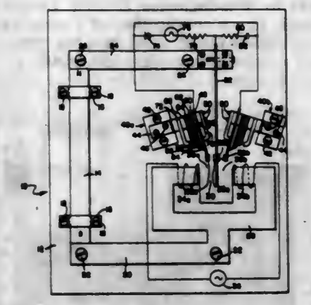
4. A relay structure comprising a strip of resilient, insulating material formed in a loop with the ends thereof spaced from each other, a pair of contacts attached to said ends to form a switch gap, an armature secured to the inside of the strip, and a coil secured to the inside of the strip and spaced from said armature for attracting the armature to flex the resilient loop and move the contacts through the switch gap and into engagement with each other.

3,128,356
MOUNTING LUGS AND BOBBIN FOR DRY REED RELAYS
George S. Lychyk, Cicero, and Arvo Talkio, Oak Park, Ill., assignors to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Filed July 28, 1961, Ser. No. 127,648
4 Claims. (Cl. 200—87)



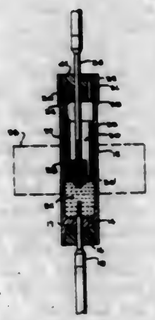
1. A reed relay comprising:
a coil;
a plurality of reed switches activated upon the energization of said coil and having each a vitreous capsule with a circumferential surface;
and a tubular shaped bobbin supporting said coil and having an inner surface with a plurality of rib members extending therefrom, each of said vitreous capsules making line contact with adjacent ones of said rib members and with said inner surface to contain said switches within said bobbin and to provide relief from adverse effects resulting from a difference in the expansion coefficient of said bobbin and said vitreous capsules.

3,128,357
POLARIZED HARMONIC RELAY AND METHOD OF OPERATING SAME
Henry E. Hartig, Robbinsdale, Minn., assignor to Control Corporation, a corporation of Minnesota
Filed June 27, 1961, Ser. No. 120,015
16 Claims. (Cl. 200—93)



13. A polarized harmonic relay comprising a permanent magnet, magnetically permeable means including a pole structure and a vibratile reed having a free end spaced from a portion of said pole structure and forming therewith an air gap through which the magnetic flux emanating from the permanent magnet passes thus completing a magnetic circuit, electromagnetic means for inducing said reed to vibrate over a particular frequency range in said gap, and means to substantially counteract the non-linear excess of the static magnetic forces acting on said reed.

3,128,358
MERCURY RELAY CONTAINER
Irving L. Mitchell, Rockville Centre, and Victor Horowitz, Oceanside, N.Y., assignors to Ebert Electronics Corp., Floral Park, N.Y., a corporation of New York
Filed Jan. 31, 1962, Ser. No. 170,174
15 Claims. (Cl. 200—112)



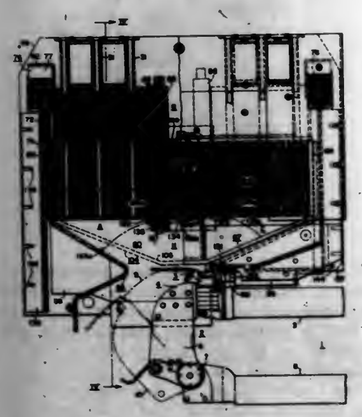
1. A mercury relay of the displacer type comprising a container for said mercury relay, said container consisting of polyamide impregnated with fiberglass and molded in the form of a hollow receptacle with at least one opening therein for insertion therethrough of the operating elements of the relay, electrical conducting means extending through, and sealed to, said hollow receptacle, closure means for said at least one opening, said closure means being sealed to said hollow receptacle and a pool of mer-

cury in said container for selectively electrically connecting said conducting means together.

3,128,359
CIRCUIT INTERRUPTERS HAVING ARC EXTINGUISHING MEANS

Robert C. Dickinson, Penn Hills Township, Allegheny County, and Russell E. Frink, Forest Hills, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Jan. 6, 1960, Ser. No. 796
5 Claims. (Cl. 200—144)

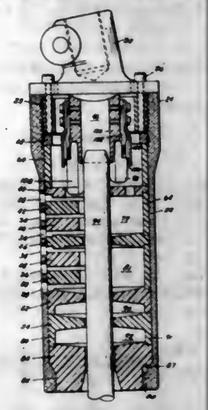


1. A circuit interrupter including contact means comprising a relatively stationary contact and a cooperable movable contact separable to establish an arc, elongated arc-chute means disposed on one side of said contact means and having spaced side housing plate means into which said arc may be moved to effect its extinction, said elongated arc-chute means having a front portion and a rear portion, an elongated rear arc-horn assembly extending along the rear portion of the arc-chute means and having an inner U-shaped reversed-bend portion immediately adjacent to said relatively stationary contact and disposed between said relatively stationary contact and said arc-chute means to quickly effect arc-terminal transfer thereto, means electrically connecting said reversed-bend portion to the relatively stationary contact, a front elongated arc-horn assembly for said arc-chute means extending along the front portion thereof and having an inner portion, said movable contact being movable adjacent the inner portion of said front elongated arc-horn assembly so that said established arc may quickly transfer to the front arc-horn assembly and move therealong into said arc-chute means, said elongated arc-chute means comprising a number of substantially parallel-disposed, spaced, insulating plate portions having end venting passages therebetween, said plate portions being positioned substantially transversely of the established arc, a plurality of widened exhaust passages spaced at intervals along the length of the arc-chute, each of which has a greater venting capacity than the venting capacity of the normal venting passages between the spaced plate portions, means defining a widened chimney extension for each of a plurality of said widened exhaust passages which extends beyond the outer ends of the insulating plate portions, a plurality of staggered diagonally-extending deflecting plates disposed between the chimney extensions, and registering lateral vent openings provided in the spaced side housing plate means for lateral as well as end dissemination of the exhaust arc gases to prevent restriking across the exhaust end of the arc-chute means.

3,128,360
INTERRUPTER STRUCTURE HAVING SPLITTER PLATES OF MALLEABLE MATERIAL

Earl B. Rietz, Glendale, Calif., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed Jan. 14, 1960, Ser. No. 2,390
6 Claims. (Cl. 200—150)

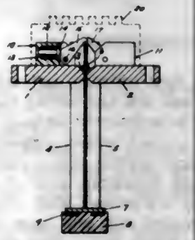


2. In an interrupting chamber for an oil blast circuit breaker; a hollow cylindrical container having a venting port therein and a first and second arc splitter plate; said first and second arc splitter plate being disposed adjacent one another and being supported with respect to said container; said first and second arc splitter plate having a configuration defining a channel from an internal portion of said container to said venting port; edge portions of said first and second arc splitter plates being positioned adjacent the top and bottom respectively of said venting port; said first and second arc splitter plates being of identical construction and being interchangeable with respect to one another; said first and second arc splitter plates being of a malleable material whereby said edge portions of said first and second arc splitter plates will flow over the upper and lower portions of said venting port to seal the engagement between said first and second arc splitter plates and the container portion carrying said venting port.

3,128,361
HIGH CURRENT SWITCH ARRANGEMENT FOR QUICK BREAK

Fritz Kesselring, Kusnacht, Zurich, Switzerland, assignor to Siemens-Schuckertwerke A.G., Berlin, Germany, a corporation of Germany

Filed Jan. 27, 1960, Ser. No. 5,066
Claims priority, application Germany Feb. 17, 1959
2 Claims. (Cl. 200—151)



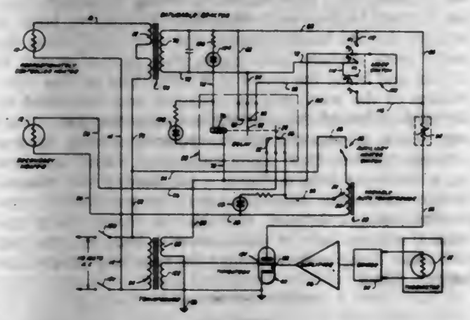
1. A high voltage circuit breaker; said high voltage circuit breaker comprising a pair of stationary contacts

positioned in spaced relation with respect to one another and a movable bridging contact; an operating means for said movable bridging contact; said operating means being operable to move said movable contact between an engaged and disengaged position; said operating means being a high speed operating means operable to move said bridging contact to said contact disengaged position at a speed whereby recovery voltage at any instant is insufficient to cause breakdown from said movable contacts to said stationary contacts; and an insulating barrier means; said insulating barrier means being interposed between said pair of stationary contacts when said movable bridging contact is moved to said disengaged position; said pair of stationary contacts being relatively closely spaced with respect to one another relative to their required spacing in the absence of said insulating barrier whereby the mass of said movable contact is decreased; said movable bridging contact being carried by said insulating barrier; a spring biasing means; said spring biasing means being operatively connected to said insulating barrier for biasing said movable contact toward said engaged position and for providing contact pressure; said spring biasing means being characterized in having its biasing force sharply decreased to zero immediately after movement of said movable bridging contact toward its said disengaged position.

3,128,362
HEATER CONTROL SYSTEM

Fred V. Clark and Blount C. Trice, Ponca City, Okla., and Ralph J. Karr, deceased, late of Ponca City, Okla., by Geraldene Y. Miller, administratrix, Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

Filed May 25, 1962, Ser. No. 186,277
6 Claims. (Cl. 219—20)



1. A control system for an electrically heated oven having a proportionately controlled heating element and a booster heating element, the control system comprising:

a control circuit having means for producing a current therein proportional to the difference between the actual temperature and the desired operating temperature of the oven;

means responsive to the current in the control circuit for delivering electrical power to the proportionately controlled heating element in proportion to said current in the control circuit;

a source of power;

relay means having a first position for delivering full source power to the booster heating element responsive to said current in the control circuit, and having a second position when said relay is de-energized;

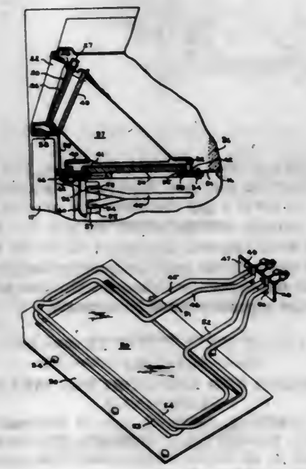
circuit means for energizing said relay means to said first position to deliver power to the booster heating element until the oven is heated to the desired operating temperature and current no longer flows in the control circuit causing said relay to de-energize to said second position; and

means for preventing subsequent energization of the relay means upon current subsequently being produced in the control circuit due to a difference in actual temperature and the desired operating temperature of the oven.

3,128,363
BROIL UNIT FOR TOP VIEWING OVEN

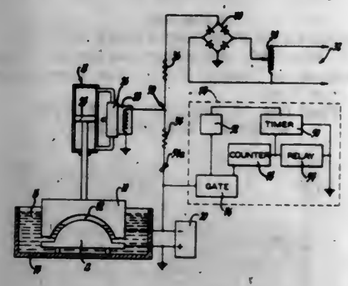
Maurice T. Rose, Jr., and Robert A. Kinkle, Louisville, Ky., assignors to General Electric Company, a corporation of New York

Filed Oct. 30, 1962, Ser. No. 234,140
3 Claims. (Cl. 219—35)



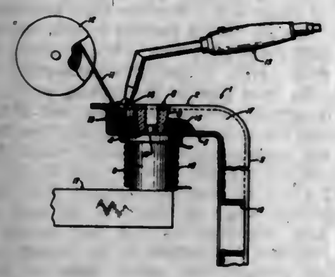
1. A domestic range comprising a cabinet structure with a top cooking surface supporting a plurality of surface heating means and a box-like oven liner built into the cabinet beneath the top cooking surface, the walls of the oven liner cooperating with a front opening door to form an oven cavity, a generally rectangular viewing window in the front edge of the cooking surface and a generally rectangular window in the top wall of the oven liner adjacent the oven door for viewing into the oven cavity, a top heating means supported within the oven liner beneath the top wall thereof, said heating means comprising a pair of generally coplanar metal sheathed heating elements which terminate in the back wall of the oven liner, where in the back half portion of the oven the elements are confined in the central area and have straight portions that extend generally from the back toward the front thereof, while in the front half portion of the oven the elements have portions forming rectangular loops around the periphery of the oven liner window so that the heating elements may not be seen readily through the viewing window, and a generally vertical reflector supported from the oven liner between the front edge of the heating elements and the oven door to re-radiate the heat energy back into the oven cavity to obtain even heat distribution therein, the front edges of the elements being vertically offset one above the other, and suspension means hanging from the oven liner to engage the offset edges of the elements for supporting same.

3,128,364
ELECTRICAL STOCK REMOVAL APPARATUS
Glenn E. Wasatnja, Hales Corners, Wis., and August F. Scarpelli, Warren, and Thomas T. Stapleton, Clawson, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 16, 1960, Ser. No. 49,867
11 Claims. (Cl. 219—69)



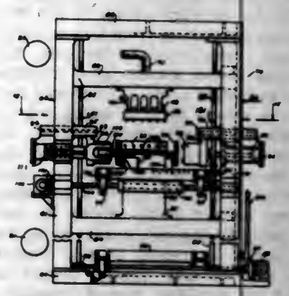
1. In electrical stock removal apparatus, the combination of conductive tool and workpiece electrodes spaced apart so as to form a gap therebetween, an energy source applying a certain voltage across the gap for producing time spaced stock removal discharges across the gap in the presence of an ionizable medium, and means interrupting operation of the apparatus when fluctuations of the gap voltage exceed a predetermined frequency.

3,128,365
METHOD FOR REINFORCING METAL STAMPINGS
Arnold G. Schilberg, deceased, late of Milwaukee, Wis., by Irene G. Schilberg, administratrix, Milwaukee, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Dec. 15, 1961, Ser. No. 160,428
8 Claims. (Cl. 219—76)



1. A method of producing a built-up annular metal layer in a sheet metal stamping and around an opening provided therein consisting of the steps of fixedly positioning a non-metallic core in the said opening, continuously advancing a consumable filler wire to said stamping at said opening while providing said wire with melting heat to form molten wire material, directing said wire continuously around said core to build-up a solid metal deposit on said stamping and around said core, and removing said core from said opening to provide the annular metal deposit.

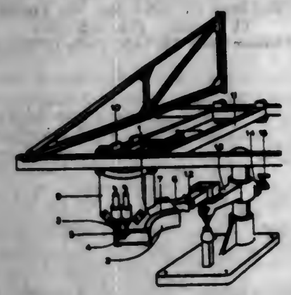
3,128,366
FABRICATING OF STRUCTURAL STEEL MEMBERS OR UNITS
John R. McConnell, 148 Woodside Ave., Ridgewood, N.J.
Filed Aug. 28, 1959, Ser. No. 836,793
6 Claims. (Cl. 219—78)



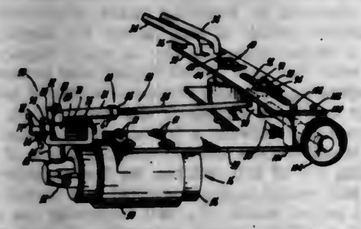
6. A flame-punching hole cutting device for piercing metal comprising an electrically conductive body having a vertical exhaust hole, manifold means for receiving and distributing combustion-supporting gases, an electrically conductive inner sleeve fitted into the exhaust hole and providing in cooperation with the wall surface of the exhaust hole an annular slot communicating with said manifold means for delivering downwardly an annular sheet of combustion-supporting gas against the work metal, electric terminal means connected to said conductive body and forming one leg of an electrical circuit that continues through said inner sleeve, said inner sleeve providing an electric arc heating means depending into the exhaust hole, non-conductive means projecting from the bottom face of said electrically conductive body to support the arc heating means and said body above the metal work surface, said arc heating means serving to initiate and bring the metal to a white heat so that combustion of the work will be sustained and intensified by the application of the combustion-supporting gas, a support block of opposite electric polarity serving to provide an opposite force against the work metal and having a receiving hole outlining a gas cutting slot effected by the combustion supporting gas, the products of combustion being exhausted through the inner sleeve and vertical exhaust hole of the conductive body and the slag and waste being passed through the receiving hole of the support block.

3,128,367
APPARATUS FOR THE ELECTRIC WELDING OF HOLLOW BODIES, SUCH, MORE PARTICULARLY, AS VENTILATION CASING
Michel Darmon, 1 Square Commandant l'Herminier, and Marcel Le Bihan, 3 Rue Emile Combe, both of Brest, Finistere, France
Filed Apr. 10, 1961, Ser. No. 101,957
Claims priority, application France Apr. 12, 1960
3 Claims. (Cl. 219—78)

1. In a machine for welding hollow bodies, a U-shaped structure having two arms which are electrically interconnected and substantially symmetrical with one another, a counter electrode on the extremity of each of said arms, two welding electrodes which are electrically connected to a current source and disposed above and toward a lateral edge of each counter electrode, a hollow body to be welded being positioned on one or the other of said arms, and means for moving said arms and electrodes simultaneously toward one another to bring one welding electrode into contact with said body on one arm and the other electrode into contact with the counter electrode on the other arm whereby a weld is effected by said one welding electrode and the other welding electrode and corresponding counter electrode provide a return path for the current.



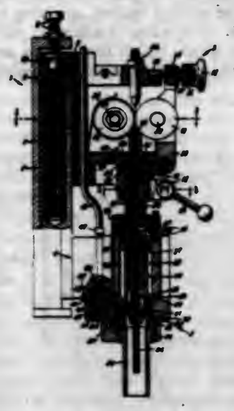
3,128,368
APPARATUS FOR WELDING
Raymond J. Franz, Crown Point, Ind., Clarence Verbeek, Lansing, Ill., and Ansel R. Meyer, Griffith, Ind., assignors to Union Tank Car Company, Chicago, Ill., a corporation of New Jersey
Filed July 31, 1961, Ser. No. 128,097
7 Claims. (Cl. 219—125)



1. An apparatus for welding a seam defined by adjoining edge means comprising a welding means, a carriage adapted to move along the seam, an oscillation control assembly, said oscillation control assembly including a base member supported by said carriage, a mounting member mounted on said base member for oscillating movement relative thereto, said welding means being mounted on said mounting member for travel with said control assembly in predetermined relation to the seam, said welding means adapted to build up a weld bead in the seam as it moves longitudinally of the seam, said oscillation control assembly including power means associated with said base member, a drive connection between said power means and said mounting member, said power means adapted to oscillate said mounting member and consequently said welding means, and adjustment means for varying the amplitude and the speed of oscillation of said mounting member and, accordingly, said welding means, relative to the seam as the welding means moves along the seam.

3,128,369
ELECTRIC ARC WELDING APPARATUS
Frank J. Pilla, West Orange, and Gerald J. Duddy, Jr., Newark, N.J., assignors to Union Carbide Corporation, a corporation of New York
Filed Nov. 29, 1961, Ser. No. 155,611
4 Claims. (Cl. 219—127)

1. A mechanized inert gas shielded consumable electrode spot welding torch for work-in-circuit electric arc welding, which comprises, in combination, a slide assembly having a mounting bracket with a slide thereon, a wire feed roll casing mounted on said slide and having a socket, a torch housing mounted on said slide and having a bore aligned with said socket, a torch cartridge inserted through



said bore into said socket to receive wire from said casing, and means including a handle on said casing for constricting said socket to clamp said cartridge thereon and thereby retain said cartridge in said torch housing bore.

3,128,370
GAS CUP ASSEMBLY FOR WELDING GUN
Gilbert F. Meyer, Milwaukee, Wis., assignor to Machinery and Welder Corporation, Skokie, Ill., a corporation of Missouri
Filed June 21, 1963, Ser. No. 289,611
3 Claims. (Cl. 219—130)

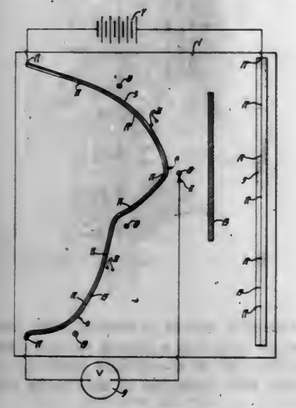


1. In a welding gun of the type having a frame and having means for feeding a continuous length of welding wire axially from the front end thereof as well as means for conducting shielding gas thereto, the combination comprising a cylindrical socket secured to the front end of the gun and having an inner wall, a cylindrical gas cup having a base portion dimensioned to fit into said socket, the end of the base portion being undercut with a profile which is eccentric with respect to the cup axis to form a peripheral ramp, a radial protuberance on the inner wall of the socket and registering with the ramp when the cup is inserted into the socket so that when the cup is manually rotated from a registering position the crowding engagement between the ramp and the protuberance causes the cup to be frictionally locked in seated position.

3,128,371
METHOD OF PREDICTING CURRENT DISTRIBUTION IN AN ELECTROPLATING TANK
Robert A. Spaulding, Huntington Woods, Dano Joseph Agresta, Warren, and Kenneth E. Ruff, St. Clair Shores, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 28, 1957, Ser. No. 692,907
8 Claims. (Cl. 235—61.6)

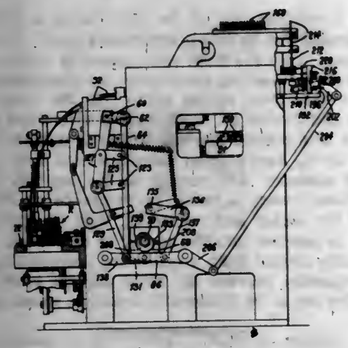
1. The method of predicting current distribution over the cross section of a part to be plated in an electroplat-

ing tank comprising the steps of applying conducting material upon a conducting surface having a lesser conductivity than that of the conducting material to represent the cross section of the part and thus serve as an analog electrode of the plating system, applying conducting material upon said conducting surface to represent the cross section of the anode which thus serves as another analog electrode of the plating system, the painted anode being



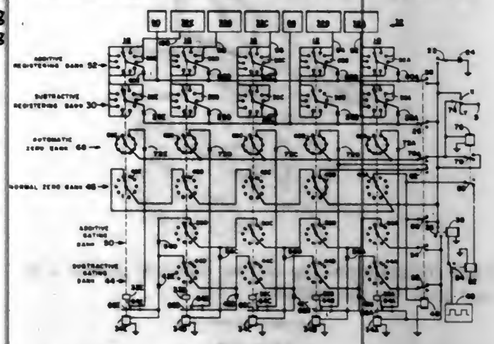
in the same relative position with respect to the part as it would have in the proposed tank layout, passing a current between the analog electrodes, and contacting the conducting surface with a voltmeter probe with reference to a point on the part and at a small distance away therefrom, the voltage drop with reference to the point on the part being directly proportional to the current density at the point on the part.

3,128,372
RECORD ANALYZING APPARATUS
Karl J. Braun, Springdale, Conn., assignor to A. Kimball Company, Brooklyn, N.Y., a corporation of New York
Filed July 27, 1960, Ser. No. 45,661
10 Claims. (Cl. 235—61.11)



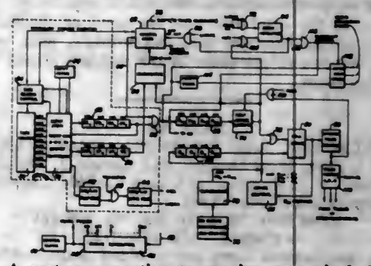
1. An apparatus for decoding records having data encoded in groups of indications of one or the other of two multi-position codes including means for sensing each group for code indications of both of said codes, a plurality of decoding mechanisms each controlled by the sensing means for an individual group and manually settable means for individually conditioning each mechanism to decode the indications sensed from the associated group according to one or the other of said codes.

3,128,373
COUNTDOWN CLOCK
Graydon A. Phleger, 325 McCleod Drive, Cocoa, Fla.
Filed June 13, 1961, Ser. No. 116,888
11 Claims. (Cl. 235—92)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A counting device for singly and successively registering digits subtractively and additively corresponding to the incidence of a control signal comprising a plurality of successively disposed gang switches, each of said gang switches including; a plurality of individual sections respectively having a radix of stationary contacts and a movable contact successively cooperative with said stationary contacts, an actuating means cooperative with said movable contact of each section for stepping said switch, a display means having as many display units as said radix with each of said display units connected to a corresponding stationary contact of a first of said sections for displaying a separate and distinct digit, a first diode connected between a first stationary contact of a second of said sections and said actuating means of a next succeeding one of said switches, the first stationary contact of said second section connected to a movable contact of a second section of a next succeeding one of said switches; a pulsing means responsive to said control signal; a voltage source; a first normally closed contact set connected between said voltage source and the movable contact of said first section of each of said switches; and a second normally closed contact set connected between said pulsing means and the movable contact of said second section.

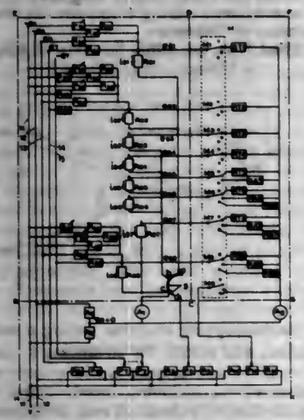
3,128,374
CONTROL SYSTEM
Yu Chi Ho, Boston, Mass., and Ewell Calvin Johnson and John Lachlan McKelvie, Royal Oak, Mich., assignors to The Bendix Corporation, Southfield, Mich., a corporation of Delaware
Filed Dec. 8, 1960, Ser. No. 74,687
18 Claims. (Cl. 235—151)



16. A system operative to receive numerical data including data including at least two numbers representative of distances along mutually perpendicular axes and

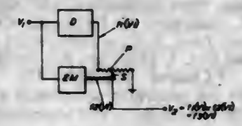
to generate trains of pulses equal in number to said number of axes, said system including: first registers to retain said numbers; an adder; summation registers equal in number to said axes; and a control operative to cause the contents of said first registers to be repeatedly added into said summation registers, to generate a pulse each time an overflow occurs from the most significant stage of one of summation registers, and to terminate the addition process upon the occurrence of zeros in a number of stages of summation registers equal to the number of digits in said numbers less one.

3,128,375
APPARATUS FOR CALCULATION OF DEPTH, TRIM, BENDING MOMENT AND SHEARING STRESS IN A LOADED SHIP
Knut Grimsæe, Trondheim, Norway, assignor to SINTEF, Trondheim, Norway
Filed Apr. 12, 1960, Ser. No. 21,797
Claims priority, application Norway Apr. 28, 1959
12 Claims. (Cl. 235—179)



1. An electrical analog computing apparatus for a ship for calculating the draught, the trim in the pitch plane, and the bending moment at a first predetermined transverse plane, for a proposed manner of loading, comprising a first signal-generating means adjustable to produce an electric signal in accordance with the adjustment so made to be used in the apparatus as a draught-representing signal, a second signal-generating means adjustable to produce an electric signal in accordance with the adjustment so made to be used in the apparatus as a trim-representing signal, a plurality of elementary computing means, one for each of a corresponding plurality of sections into which the ship is assumed to be divided, each elementary computing means comprising a weight-signal-generating circuit and a buoyancy-force-signal-generating circuit, the weight-signal-generating circuit including manually adjustable means settable in accordance with an associated scale means representing weight and operative to control the output of the first signal-generating circuit to provide an output current proportional to the sum of the weight of the corresponding section and the proposed load to be placed in it as indicated on the scale means, and the buoyancy-force-signal-generating circuit having first and second input channels and being operative to produce an output signal that is the sum of a first component output signal that is proportional to a first input signal applied to the first input channel with a gain representative of a predetermined buoyancy factor for the corresponding section and of a second component output signal that is proportional to a second input signal applied to the second input channel with a gain representative of the product of the buoyancy factor of the corresponding section and the distance of the section from a first reference transverse plane of the ship, the first and second input channels being respectively connected to receive the draught-representing and trim-representing signals as inputs, whereby the total output signal of the buoyancy-force-signal-generating circuit is representative of the buoyancy force that would be exerted on the corresponding section for the proposed manner of loading if the ship were to have the values of draught and trim provided by the draught-representing signal and trim-representing signal generating means, elementary summing means connected to receive the outputs of the weight-signal-generating circuit and the buoyancy-force-signal-generating circuit as inputs and to provide an output signal that is representative in magnitude and sense of their algebraic sum, and a moment-computing circuit operative to produce an output signal that is proportional to an input signal with an adjustable gain, said computer apparatus also including first and second primary summing means, first and second switch means, said first switch means being selectively operable to connect the output signals of all the elementary summing means to the first primary summing means, and said second switch means being selectively operable to connect all the output signals of the elementary summing means as input signals to the corresponding moment-computing circuits, simultaneously to adjust the gains of the moment-computing circuits so as to make the gains respectively proportional to the distances of the corresponding sections from a second reference transverse plane, and to connect the output signals of all the moment-computing circuits to said second primary summing means, whereby, by suitable adjustment of the draught-representing-signal-generating means the trim-representing-signal-generating means to make the outputs of the first and second primary summing means substantially zero, more accurate values of draught-representing and trim-representing signals are obtained, said second switch means being further selectively operable to connect the output signals of the elementary summing means of those elementary computing means corresponding to those sections to one side of the first predetermined plane at which it is desired to calculate bending moment as input signals to corresponding moment-computing circuits, simultaneously to adjust the gains of the said moment-computing circuits so as to make the gains respectively proportional to the distances of the corresponding sections from the said first predetermined transverse plane, and to connect the output signals of the selected moment-computing circuits to the second summing means to provide a measure of the bending moment.

3,128,376
NON-LINEAR FUNCTION GENERATOR
Ernest Edward Barber, South Harrow, and Kenneth Henry Simpkin, Aylesbury, England, assignors to General Precision Systems Limited, a corporation of Great Britain
Filed Dec. 6, 1954, Ser. No. 473,349
Claims priority, application Great Britain Dec. 4, 1953
8 Claims. (Cl. 235—197)



1. An analogue computer for evaluating the instantaneous value of a non-linear time-independent complex

function of an input variable comprising, static means for connection to an input voltage and adapted to produce a basic output voltage representing a simple time-independent function of said variable, in combination with dynamic means adapted to be driven by said input voltage and to operate upon said basic output voltage in accordance with a further and different time-independent function to modify said basic output voltage and produce a resultant voltage representing the complex function.

3,128,377

LOG-TIME VOLTAGE GENERATOR

Murray C. Goddard, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Mar. 27, 1961, Ser. No. 98,397
6 Claims. (Cl. 235—197)



1. A log time voltage generator comprising a voltage-integrating D.C. amplifier including a feed-back capacitor and adapted upon application of a predetermined D.C. potential to the input thereof to produce an output voltage which varies substantially linearly with time, a resistive feed-back circuit shunting said capacitor and comprising a first resistance means and a first diode connected in series with one another and means including a second diode connecting an intermediate point on said resistance means to a point of predetermined reference potential, the values in said shunt circuit being so selected that said first diode will become conductive when the output from said amplifier reaches a first predetermined value and said second diode will subsequently become conductive when the output reaches a second predetermined value whereby the output voltage from said amplifier will vary linearly with respect to time until said first diode becomes conductive, then generally exponentially until said second diode becomes conductive, and then again linearly for the remainder of its intended period of operation, a second D.C. amplifier having a resistance feed-back circuit in shunt therewith and a plurality of parallel resistance paths connecting its input to the output of said first mentioned amplifier, certain of said parallel resistance paths each having a diode connecting an intermediate point on said resistance path of a point of predetermined reference potential, said diodes being arranged to sequentially become conductive in response to the output voltage from said first amplifier reaching corresponding predetermined values during said second linear period of operation to effectively vary the response of said second amplifier to the output of said first amplifier.

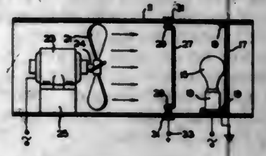
3,128,378

NEGATIVE ION GENERATOR USING AN ULTRAVIOLET SOURCE TO IRRADIATE ELECTRICALLY CONDUCTIVE MATERIAL

Charles L. Allen, West Englewood, and Allen R. Taylor, Nutley, N.J., assignors to Dynamics Corporation of America, New York, N.Y., a corporation of New York

Filed Oct. 4, 1960, Ser. No. 60,353
3 Claims. (Cl. 250—43)

3. A negative ion generator comprising a housing having a passage therethrough, a first electrically conductive metallic screen within said passage at one end of said housing and substantially covering one end of said passage, a fan within said passage at the other end of said housing for forcing air past said screen, an ultraviolet light source between said fan and said first screen, and a second electrically conductive screen between said fan



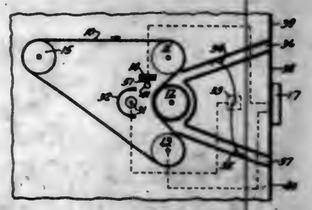
and said light source, said second screen being maintained at a positive potential with respect to said first named screen.

3,128,379

THERMOCOPYING MACHINE WITH TEMPERATURE AND SPEED CORRELATING MEANS

Raymond M. Cook, St. Paul, Paul A. Eahlem, Eden Prairie Township, Hennepin County, and Robert J. Kline, North St. Paul, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed Nov. 14, 1960, Ser. No. 68,831
6 Claims. (Cl. 250—65)



1. In a thermocopying machine having a source of intense radiation, and means for advancing a composite of a graphic original and a heat sensitive copy-paper past said radiation source including speed control means for controlling the rate of passage of said composite past said radiation source, means for correlating the speed of passage of said composite past said radiation source with the internal temperature of said machine, said correlating means including a heat insulating body having a radiation reflective surface adjacent said radiation source and over which said composite is drawn past said radiation source, said body and said radiation source providing a copy exposure zone therebetween wherein the graphic information on the graphic original is reproduced on the copy-paper as the composite is drawn past said radiation source, temperature sensing means mounted within said machine for registering temperature variations in said copy exposure zone, and indicating means correlating said temperature sensing means and said speed control means whereby the rate of passage of said composite through said exposure zone is controllable in response to temperature variations sensed by said sensing means.

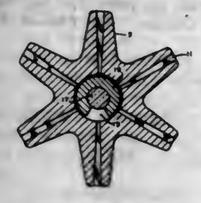
3,128,380

GAMMA RADIATION SCANNER AND AN AERIAL SURVEYING AND RECORDING SYSTEM UTILIZING THE SAME

Joseph C. Nirschl, Elberon, N.J., assignor to the United States of America as represented by the Secretary of the Army

Filed Oct. 30, 1961, Ser. No. 149,780
4 Claims. (Cl. 250—83.3)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A radiation scanner comprising, a radiation detector positioned within a generally cylindrical stationary radiation shield, said stationary shield having an angular cutaway section, a rotating radiation shield surrounding said stationary shield, said rotating shield being in the shape of a gear with radial radiation-admitting and collimating bores in each of the teeth of said gear, the angular spacing between adjacent bores being the same as the angular extent of said cutaway section.



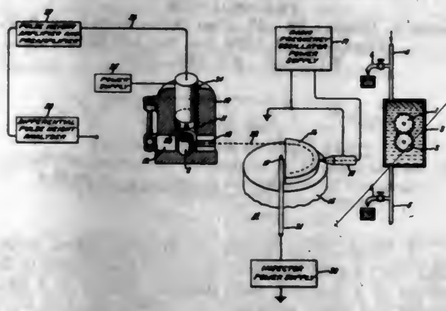
4. A radiation surveying and recording system comprising; a pair of radiation scanners mounted adjacent each other on the same axis of rotation, each scanner comprising; a central radiation detector surrounded by a generally cylindrical stationary shield, said stationary shield having a downwardly directed angular cutaway section, a rotating shield mounted concentrically with said stationary shield, said rotating shield having a plurality of radial radiation admitting and collimating bores, the angular spacing between adjacent bores being the same as the angular extent of said cutaway section, both of said scanners being rotated together by a common driving means, the bores of one scanner being midway between those of the other scanner, each of said scanners being adapted to scan alternate, inter-leaved strips of ground beneath an aircraft, means to convert the outputs of said radiation detectors into light beams, means for focusing said light beams onto a pair of rotating mirrors driven synchronously with said scanners and being adapted to direct said light beams across a strip of moving film, thereby producing a radiation map of the surveyed area.

3,128,381

WEAR MEASUREMENT WITHOUT INTRODUCING RADIOACTIVE MATERIAL INTO THE SYSTEM

David H. Morley, Scotia, and Warner W. Schultz, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York

Filed Mar. 31, 1958, Ser. No. 725,228
9 Claims. (Cl. 250—106)



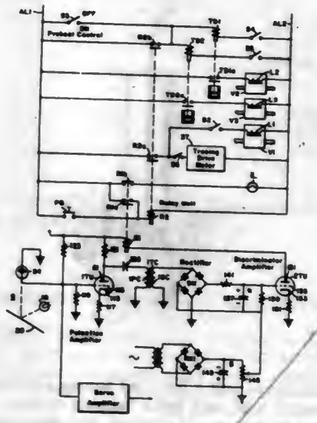
1. In a method for determining the wear of a member without introducing radioactive material into the system including, the steps comprising subjecting a non-radioactive member to wear in the presence of a fluid capable of carrying the wear particles from said member, irradiating only said wear particles to make said wear particles radioactive, and determining the amount of wear from the radioactivity of said wear particles.

3,128,382

PHOTOSENSITIVE LINE TRACER FOR INDUSTRIAL TOOLS

Frank J. Rau, Pittsburgh, Pa., and Kenneth Losch, North Canton, Ohio, assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Continuation of application Ser. No. 759,243, Sept. 5, 1958. This application Feb. 27, 1962, Ser. No. 176,057
17 Claims. (Cl. 250—202)



1. Apparatus for performing an operation on work with tool means, said operation being governed by a curve formed by a line on an area, said line having a different light reflecting ability from adjacent regions of said area, said curve being interrupted by a gap, said apparatus including means connected to said tool means actuable for operating said tool means, photoelectric scanning means cooperative with said line for scanning said line, means connected to said scanning means and responsive thereto for moving said scanning means so that said scanning means follows said line, connections between said scanning means and said operating means for moving said tool means so that said tool means follows said scanning means, means connected to said scanning means and to said operating means and automatically responsive to said scanning means for conditioning said operating means to operate so long as said scanning means scans a line and for interrupting said conditioning while said scanning means is not scanning a line, and manually actuable means connected to said conditioning means for causing said conditioning means to condition as aforesaid when said scanning means does not scan a line so long as said manually actuable means remains actuated.

3,128,383

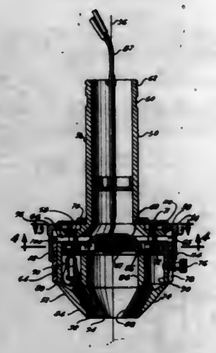
CALIBRATED KERF CONTROL FOR THE PROJECTING LENS OF A SENSING HEAD

Frans Brouwer, Glencoe, and Frank L. Sobchak, Chicago, Ill., assignors to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia

Filed Apr. 12, 1962, Ser. No. 187,069
7 Claims. (Cl. 250—202)

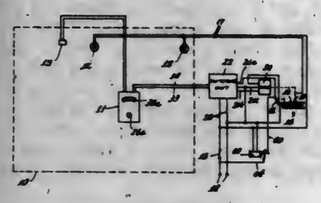
7. A scanner head for a pattern tracer comprising a rotatable body member defining a central axis, scanning means within said body having a light sensitive device and means defining a center of scan in approximate alignment with said axis, a circular plate member secured to said body normal to and axially aligned with said central axis, a cylindrical member having an inner cylindrical

bearing surface surrounding said plate member and a flange defining an inner circular cam surface, the axis of said cam surface and the axis of said inner bearing surface being non-coextensive with one another and parallel with said central axis, a cam follower carried by said plate member engageable with said cam surface, resilient means for maintaining engagement between said cam follower and said cam surface, an assembly comprising il-



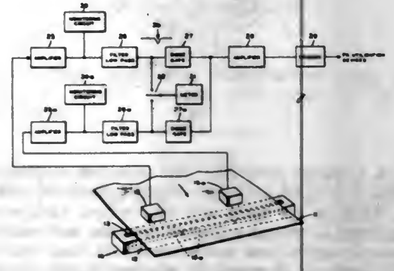
luminating means and a lens and having an outer bearing surface mated with said inner bearing surface, means on said assembly defining a pair of radially aligned slots, screw means in threaded engagement with said plate and passing through said slots whereby said assembly is held from rotation with respect to said plate member but is free to be radially translated with respect thereto responsive to rotation of said cylindrical member.

3,128,384
AUTOMATIC ILLUMINATION REGULATING UNIT
Alfred B. Nelson, Bristol, Richard F. Greene, Forestville, and Owen J. McCabe, Bristol, Conn., assignors to The Superior Electric Company, Bristol, Conn., a corporation of Connecticut
Filed Nov. 14, 1958, Ser. No. 774,011
7 Claims. (Cl. 250—205)



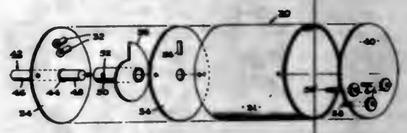
1. An automatic light regulating unit for maintaining substantially constant a selected value of total illumination in an area which may be illuminated by a source of artificial light and natural light, comprising means for energizing the light source, control means for controlling the amount of energy transmitted to the light source and hence the amount of illumination emitted therefrom, sensing means for producing a signal for regulating the control means, a switch for energizing and deenergizing the unit and means connected to the control means for causing said means to be set upon deenergization of the unit to transmit the maximum amount of energy to the light source when the unit is next energized.

3,128,385
PHOTOSENSITIVE HOLE DETECTOR USING PHOSPHOR RADIATION SOURCE
Erich Scharf, Massapequa Park, and Jack Fajans, Douglaston, N.Y., assignors, by mesne assignments, to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Feb. 18, 1959, Ser. No. 794,099
9 Claims. (Cl. 250—219)



1. An apparatus for inspecting material moving along a path, comprising illuminating means including a source of ultraviolet radiation mounted on one side of said path for illuminating a predetermined area of said material, photoelectric means mounted on the opposite side of said path and in position to scan the area of the surface opposite to that illuminated and to receive radiation from said illuminating means which passes through a hole in said material, filter means interposed between the scanned area and said photoelectric means adapted to pass substantially only said ultraviolet radiation, said filter means including at least one filter element transparent to said ultraviolet radiation and substantially opaque to radiation of a longer wave length, said filter element having a coating on the surface thereof presented towards said photoelectric means, said coating when excited by said ultraviolet radiation being adapted to emit radiation for exciting said photoelectric means, and means responsive to said photoelectric means for providing a signal when a hole in said material passes through said scanned area.

3,128,386
RADIATION SENSITIVE LOW-TORQUE TRANSDUCER
Harold K. Hughes, 98—20 62nd Drive, Rego Park, N.Y.
Filed Sept. 22, 1959, Ser. No. 841,573
8 Claims. (Cl. 250—237)



7. A device for producing an electrical signal output which bears a predetermined functional relationship to the position of a movable shaft member relative to a fixed member and which comprises in combination, in a housing impervious to radiation:
(1) a source of radiation;
(2) a radiation-sensitive target, positioned so as to receive at least a portion of the radiation from said source, and producing an electrical signal output in response to that portion of said radiation received thereon;
(3) a fixed mask interposed between said source of radiation and said target, said mask having a single aperture, located so as to limit the portion of the

radiation from said source received on said target to a specific region of the surface of said target;
(4) a movable shaft member; and
(5) a movable mask operatively connected to said shaft member, configured in accordance with a preassigned function and which in response to motion of said movable shaft member attenuates the radiation from said source permitted to reach said target by passing a shadow of said movable mask across said radiation sensitive target which shadow moves across said aperture in said fixed mask in a direction generally perpendicular to the direction of motion of the movable mask, whereby the electrical signal output of said device is the intended function of said movable shaft member.

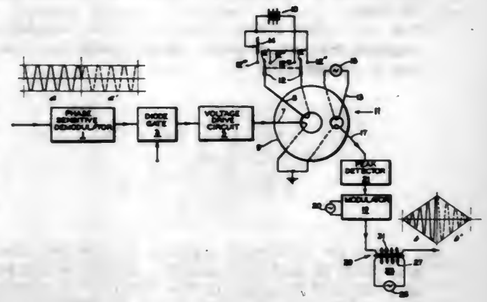
3,128,387
PHOTOSENSITIVE LOW-TORQUE TRANSDUCER
Harold K. Hughes, 98—20 62nd Drive, Rego Park, N.Y. and Myron A. Coler, 56 Secor Road, Scarsdale, N.Y.
Filed Sept. 22, 1959, Ser. No. 841,574
3 Claims. (Cl. 250—237)



3. A device for producing an electrical signal output which bears a predetermined functional relationship to the positions of a plurality of independently movable shaft members in the device and which includes in combination, in a suitable housing: at least one source of radiation, at least one radiation-sensitive target positioned so as to receive at least a portion of said radiation said target converting the radiation received thereon into at least one electrical signal and a plurality of attenuating means, each attenuating means comprising a mask, a diffuser and a slit bearing member, each mask operatively connected to one of said movable shaft members, responsive to a mechanical input and, in response to a change in position of said movable shaft, adapted to attenuate the radiation from said source permitted to reach the target, whereby the electrical signal output of said device is the intended function of the positions of said shaft members.

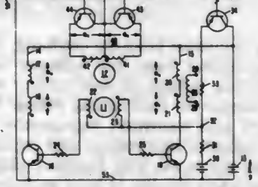
3,128,388
TRANSFLUXOR INTEGRATOR
Arthur S. Robinson, Allendale, N.J., assignor to The Bendix Corporation, a corporation of Delaware
Filed May 28, 1958, Ser. No. 738,491
2 Claims. (Cl. 307—88)

1. An integrating circuit having memory and non-destructive readout comprising a transfluxor having a core magnetized to a predetermined level and having a control winding, a low impedance source of pulsating signal voltage connected to the control winding for changing the level of magnetization of the core according to the instantaneous polarity of the signal voltage and by an amount corresponding to the amplitude and duration of the signal, an energizing winding on the core adapted to be connected to a source of alternating current and an output winding on the core inductively coupled to the energizing winding by an amount corresponding to the level to which the core is magnetized, means connected to the output winding for detecting the peak voltage of the output and providing a sine wave of predetermined frequency modulated by the peak output voltage, and means connected to the last mentioned means for providing an



output corresponding to the level of magnetization of the core from the predetermined level.

3,128,389
VARIABLE FREQUENCY MAGNETIC MULTIVIBRATOR
Stephen Paull, Falls Church, Va., assignor to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration
Filed Sept. 18, 1961, Ser. No. 139,006
17 Claims. (Cl. 307—88)
(Granted under Title 35, U.S. Code (1952), sec. 266)



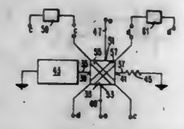
16. A multivibrator comprising a controlled magnetic element and an uncontrolled magnetic element, a pair of circuit means linking said controlled and uncontrolled magnetic elements for producing flux changes in opposite directions within said magnetic elements, switching means interposed in each of said pair of circuit means, means cooperating with said uncontrolled element for effecting an alternate mode of operation of said switching means, and variable controlled voltage limiting means associated with said controlled magnetic element for setting the degree of flux change in both directions of said controlled magnetic element whereby the frequency of said multivibrator is variably controlled.

3,128,390
MAGNETORESISTIVE LOGICAL CIRCUITRY
Charles Pettus, Vestal, and Thomas Young, Endicott, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Feb. 28, 1962, Ser. No. 176,310
8 Claims. (Cl. 307—88)

1. A logical circuit including
a magnetoresistive logic unit,
said magnetoresistive logic unit comprising a thin film ferromagnetic element possessing magnetoresistive properties,

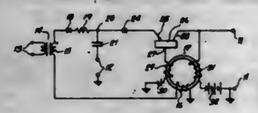
current input means connected across said ferromagnetic element and adapted to be coupled to a current source to establish a current flow through said element,

voltage tap output means connected across said ferromagnetic element at points spaced along the direction of current flow,



and means for selectively applying at least two magnetic fields to said ferromagnetic element which are each oriented diagonal to the direction of current flow, but oppositely inclined thereto whereby the resultant fields produced are parallel to, perpendicular to, and at an angle to the direction of current flow.

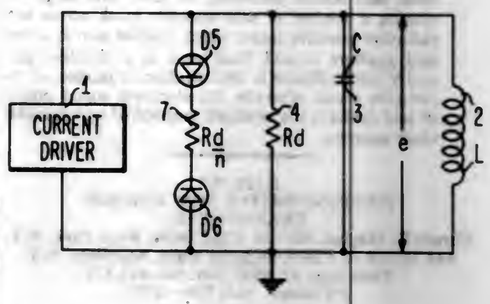
3,128,391
TRIGGERED PULSE GENERATOR TRANSISTOR CIRCUIT
George D. Bruce, Wappingers Falls, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 17, 1954, Ser. No. 476,010
15 Claims. (Cl. 307—88.5)



14. In a transistor blocking oscillator, a transistor having at least emitter, base, and collector electrodes, means for establishing voltage on said emitter electrode of said transistor, means for establishing voltage on said collector electrode of said transistor, regenerative feedback paths from said collector electrode to said emitter electrode and to said base electrode, said feedback paths comprising a pulse transformer having at least primary and secondary windings, said primary winding being connected to receive the output of said collector electrode, said secondary winding being connected in series circuit with said base and said emitter electrodes, and a unidirectional current flow device connected between said emitter electrode and said secondary winding.

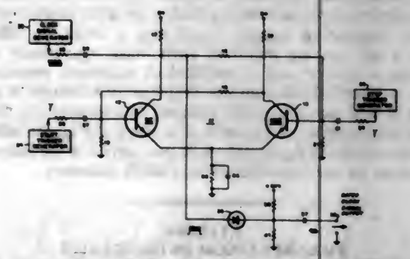
3,128,392
BACK VOLTAGE LIMITING CIRCUIT
Richard W. Jones, Apalachin, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Jan. 30, 1959, Ser. No. 790,224
2 Claims. (Cl. 307—88.5)

1. An electrical inductive load control system comprising a source of electrical power having a current waveform with various rates of change of current with time, an inductive electrical load connected to be energized by said source, a damping resistance connected in parallel with said electrical load, a control circuit connected in parallel with said electrical load and said damping resistance, said control circuit comprising first and second Zener diodes connected in series with a control resistance, said first and second Zener diodes being oriented in opposite directions, the magnitude of said damping resistance being selected to critically damp the induced voltage waveform in said inductive load, the magnitude of the reverse bias breakdown voltage of the Zener diodes and the magnitude of said control resistance being selected to limit the maximum induced voltage in said inductive load and limit the recovery time period required



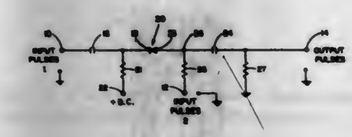
for the current in the load to follow the input current waveform by overdamping the inductive load when the rate of change of current of the source exceeds a selected value.

3,128,393
BISTABLE TRANSISTOR MULTIVIBRATOR USED AS A GATING CIRCUIT
Samuel Pure, Rydal, Pa., assignor to the United States of America as represented by the Secretary of the Navy
Filed Feb. 29, 1960, Ser. No. 11,937
4 Claims. (Cl. 307—88.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



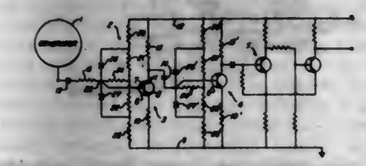
2. A transistorized gating circuit, comprising in combination: a first transistor, a second transistor, first resistor means connecting the base of said first transistor to the collector of said second transistor, second resistor means connecting the base of said second transistor to the collector of said first transistor, low impedance means connecting the emitters of said first and second transistors in common to ground, direct current source means connected to the collectors of said first and second transistors, input terminal means connected to the collector of said first transistor, output terminal means connected to said collector of said first transistor, control means connected to the bases of said first and second transistors for reversing the conductive states of said first and second transistors whereby for one conductive state said first transistor effectively connects an infinite impedance between said input terminal means and the emitter of said first transistor.

3,128,394
DIODE AND GATE HAVING INTEGRATOR DIFFERENTIATOR EFFECTING LOGIC FUNCTION
Eduardo A. Bianchi, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Aug. 29, 1960, Ser. No. 52,396
6 Claims. (Cl. 307—88.5)



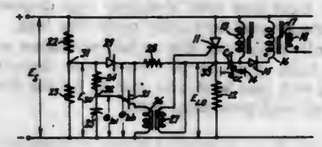
1. A logic AND circuit comprising first input terminal means adapted to receive first input pulses of one polarity, second input terminal means for receiving second input pulses of the opposite polarity, said first input pulses being of relatively short duration compared with said second input pulses, a unilateral impedance device coupled to said first and second input terminal means and positioned between said first and second input terminal means, said device blocking passage therethrough of said first pulses during the absence of said second pulses and presenting a low impedance to the passage of said first pulses whenever said second pulses are available, integrating means for integrating available second input pulses and receptive of available first input pulses for providing a composite waveform made up of integrated second input pulses upon which are superimposed said first input pulses, and differentiating means operating upon said composite waveform to provide output pulses of appreciable magnitude only in response to the superimposed first input pulses.

3,128,395
SQUARE WAVE GENERATOR EMPLOYING REVERSE-BIASED DIODES AT TRANSISTOR INPUT TO PRODUCE SYMMETRICAL OUTPUT
Richard A. Greiner, Madison, Wis., assignor to Gisholt Machine Company, Madison, Wis., a corporation of Wisconsin
Filed May 8, 1961, Ser. No. 108,403
6 Claims. (Cl. 307—88.5)



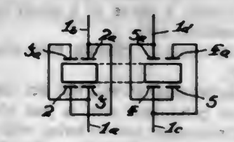
1. In an amplifier having a transistor and an input capacitor coupled to a base of the transistor and a signal source for providing a symmetrically varying input signal, a voltage divider connected to the base to establish a direct current operating voltage in the transistor characteristic, and a pair of series connected unidirectional current means connected across the voltage divider, the unidirectional current means being reversely biased by said voltage divider, the center connection of the current means being connected to said base to establish a low impedance load to the capacitor, the reverse bias of the current means preventing conduction of the current means immediately adjacent the direct current operating voltage of the transistor and thereby transmitting a small signal current to the transistor and maintaining the same zero crossover point in the input signal and the output signal of the transistor.

3,128,396
LOCK OUT CONTROL CIRCUIT FOR POWER AMPLIFIER
Raymond E. Morgan, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Sept. 25, 1961, Ser. No. 140,391
13 Claims. (Cl. 307—88.5)



2. A controlled rectifier circuit including in combination a controlled rectifier device, a load element adapted to be connected in series circuit relationship with said controlled rectifier device across a source of electric potential, a commutating circuit including a capacitor connected across said controlled rectifier device, firing circuit means coupled to the control gate element of said controlled rectifier device, and lock out circuit means operatively coupled to said firing circuit means and to the capacitor in said commutating circuit to lock out operation of said firing circuit during commutating intervals of said controlled rectifier device.

3,128,397
FORK-SHAPED QUARTZ OSCILLATOR FOR AUDIBLE FREQUENCY
Toshio Shinada and Susumu Okuma, Tokyo, Japan, assignors to Kabushiki Kaisha Kinseikisha Kenkyujo, Tokyo, Japan, a corporation of Japan
Filed June 14, 1961, Ser. No. 117,030
Claims priority, application Japan June 21, 1960
2 Claims. (Cl. 310—9.5)



1. A fork-shaped quartz oscillator for audible frequency comprising an oblong slab having in its lengthwise direction an incision of a prescribed width in the central part thereof characterized in that the azimuth of cut (α) of the plane X—Y′ defined by the principal face the oscillator crystal with respect to the plane X—Y of a mother crystal having crystal axes X, Y, and Z with the X axis as a pivot is in the range of $-5°$ to $+10°$, and the size is such that the ratio of the width W of each of the legs, which are the oscillation parts, to its length L is from 0.02 to 0.09.

3,128,398
ELECTROMAGNETIC OSCILLATING PENDULUM
Reijiro Ito, 7 Komagomehoral-cho, Bunkyo-ku, Tokyo-to, Japan
Filed Feb. 27, 1961, Ser. No. 92,046
2 Claims. (Cl. 310—32)

1. In an electromagnetic oscillating pendulum including an elongated upright frame, a vertical pendulum arm, a small permanent magnet mounted on said arm under the lower end thereof with a pole facing downwardly an electromagnet mounted in said frame beneath said pole of the permanent magnet with the magnetic axis aligned with said pole when said pendulum arm is in the vertical position, and an electric circuit for energizing the electromagnet from a direct current source so that the upper pole of

the electromagnet has the same polarity as said pole of the permanent magnet, the improvement therein comprising:

a pair of forwardly projecting spaced lugs towards the uppermost central portion of said frame, a metal plate disposed parallel to said frame having a V-shaped bearing at its central upper portion secured to the ends of said lugs, and, a pair of downwardly projecting front and rear V-shaped lugs disposed over and between said forwardly projecting lugs;

a rearwardly projecting arm on said pendulum arm having a knife edge on the lower side thereof cooperating with said V-shaped bearing for the free oscillation of said pendulum arm;



a V-shaped first contact held between said downwardly projecting lugs including spring means biasing said first contact downwards;

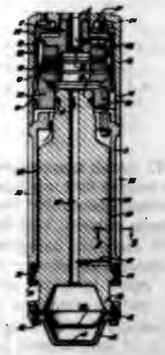
a knife edge second contact on said rearwardly projecting arm for engaging said first contact, said first and second contacts being so disposed that they will only engage during oscillating motions of the pendulum arm within a range of a small angle around its lowest position; and,

leads from said contacts closing said electric circuit upon contact,

whereby the electromagnet will not act on the pendu- arm until the pendulum arm is just about to pass over the electromagnet and its swing will carry it over the electromagnet at which time the electromagnet will impart a strong repulsion force on the permanent magnet to accelerate it towards the end of its run.

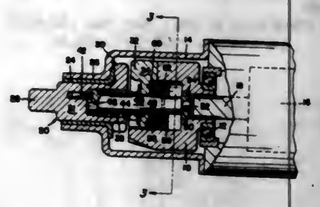
3,128,399
COOLING SYSTEM FOR A SUBMERSIBLE ELECTRIC MOTOR
Paul B. O'Reilly, Pico Rivera, Calif., assignor, by mesne assignments, to The Emerson Electric Manufacturing Company, St. Louis, Mo., a corporation of Missouri
Filed Sept. 26, 1960, Ser. No. 58,477
2 Claims. (Cl. 310—87)

1. In a submersible motor adapted to be lowered in a well, said motor having a casing, a liquid filling for the casing, a stator structure in the casing, and isolated from the liquid filling, an end wall at the upper end of the stator structure, a shaft projecting through said end wall, a rotor structure carried by the shaft, and cooperable with said stator structure, a rotary seal located at said upper end wall for isolating the liquid filling from the well, the combination therewith of: means forming a passage in the shaft and having an upper opening in the casing between the seal and the upper end of the rotor structure, said passage having a lower opening beneath the rotor; pumping means having an intake connected to said lower opening of said shaft; a heat exchanger suspended from and closing the lower end of the casing and receiving the discharge of said pumping means, said heat exchanger defining a heat exchange path for return of the liquid filling to the casing at the lower end of said rotor structure at an area exterior of the shaft; and diaphragm means carried by the heat exchanger and exposed on opposite sides to the discharge of said pumping



means and the liquid of the well respectively whereby the pumping means and the diaphragm cooperate to cause the pressure of the liquid filling at the upper end of said rotor structure adjacent said seal to be substantially less than the pressure of the liquid of the well on the outside of said seal.

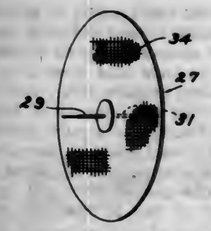
3,128,400
CLUTCH MECHANISM
Hanns Hornschuch, Easton, and Jack R. Webb, Bethlehem, Pa., assignors to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey
Filed July 13, 1961, Ser. No. 123,824
10 Claims. (Cl. 310—100)



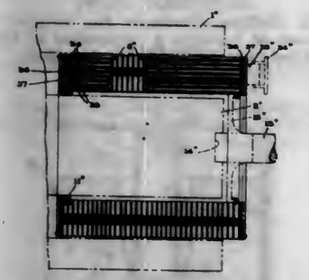
1. An intermittently engageable clutch comprising a rotatable driving member, a rotatable driven member coaxial therewith, a set of jaws on each of said members mutually engageable to couple said members, the set of jaws on said driving member being movable with respect thereto to effect engagement and disengagement with the other set of jaws, magnetic means to urge the movable jaws periodically into engagement, and resilient means to separate said sets of jaws.

3,128,401
ELEMENT FOR EDDY CURRENT DEVICES
Ivis J. Allen, Ann Arbor, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Aug. 1, 1960, Ser. No. 46,891
6 Claims. (Cl. 310—106)

1. An eddy current induction device comprising, an electrically conductive wire screen constructed of a material having a low resistivity and a ferromagnetic material positioned in the openings in the screen.



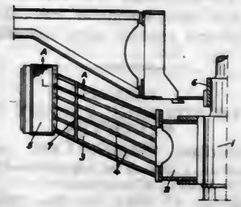
3,128,402
DIRECT CURRENT GENERATOR
Owen D. Amick, Jr., 425 5th Ave., Rear, Huntington 1, W. Va.
Filed May 17, 1962, Ser. No. 195,483
5 Claims. (Cl. 310—178)



1. A direct current generator, comprising a field magnet structure having the form of an outer axially extended tubular pole member of uninterrupted and continuous annular form and an inner cylindrical pole member disposed co-axially within the outer pole member in uniform radially spaced relation thereto for at least a substantial axial length thereof and defining an annular air-gap therebetween, said pole members being of opposite magnetic polarity in the zone of the air-gap aforesaid and serving to produce a continuous and uniformly distributed magnetic field radially across the air-gap between the pole members, and a rotary armature of annular form axially extended within the air-gap from one end of the pole members and co-axially mounted in relation to the pole members aforesaid, said armature including a laminated core having peripherally spaced conductor receiving slots alternately arranged in concentric circular series and having a plurality of conductors extending axially thereof and disposed in parallel relation to each other, with the conductors lying within the air-gap, and current collector means operatively co-acting with the respective opposite ends of the armature conductors.

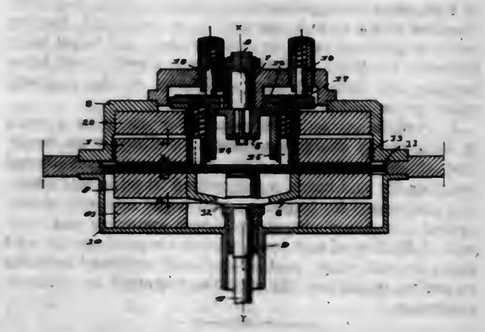
3,128,403
ROTOR SPIDER FOR ELECTRICAL MACHINES
Sven Gynt, Vasteras, Sweden, assignor to Allmänna Svenska Elektriska Aktiebolaget, Vasteras, Sweden
Filed Feb. 29, 1960, Ser. No. 11,665
Claims priority, application Sweden Mar. 3, 1959
7 Claims. (Cl. 310—261)

1. A rotor for electrical machines comprising a spider and a ring of magnetic material mounted in a pre-stressed condition on said spider, said spider comprising a boss, a plurality of arms secured to and extending outwardly from the boss to said ring and engaging said ring at least in the peripheral direction of the ring, and a plurality of rods also extending between said ring and said boss, said plurality of rods absorbing at least the major part



of the compressive stresses resulting from the pre-stressing of said ring upon said spider, the arms of the spider transmitting the turning moment between the boss and the ring.

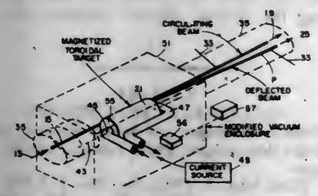
3,128,404
SEALED ELECTRIC MOTOR
Robert Dechet, Boulogne-sur-Seine, France, assignor to Cie Electro-Mecanique, Paris, France, a body corporate of France
Filed Mar. 5, 1962, Ser. No. 177,500
Claims priority, application France Mar. 30, 1961
3 Claims. (Cl. 310—268)



1. In a sealed direct current electric motor the combination comprising first and second casings mounted on opposite sides respectively of a partition member, a disc type armature member having a flat armature winding thereon secured to one face of said partition and located within the confines of said first casing, said first casing also enclosing a first annular inductor member of magnetic material establishing a ring of circumferentially spaced magnetic poles alternating in polarity and having one side thereof confronting said armature winding, brush means within said first casing engaging said armature winding, means mounting said first annular inductor member adjacent said armature and said brush means for rotation, a first stationary annular yoke member arranged concentrically with and adjacent the opposite side of said first annular inductor member within said first casing, said second casing enclosing a second annular inductor member of magnetic material establishing a ring of circumferentially spaced magnetic poles alternating in polarity and having one side thereof confronting the opposite face of said partition, means mounting said second annular inductor member for rotation about an axis coincident with the axis of rotation of said first inductor member, and a second stationary annular yoke member arranged concentrically with and adjacent the opposite side of said second annular inductor member within said second casing, the magnetic attractive forces existing between said first

and second annular inductor members being counterbalanced by the opposite directed magnetic attractive forces existing respectively between said first annular inductor member and the associated first annular yoke member and between said second annular inductor member and its associated second annular yoke member.

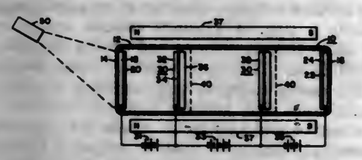
3,128,405
EXTRACTOR FOR HIGH ENERGY CHARGED PARTICLES
Glen R. Lambertson, Oakland, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed July 31, 1962, Ser. No. 213,827
7 Claims. (Cl. 313—62)



1. Particle extracting apparatus for use with a beam of high energy charged particles travelling in an evacuated chamber along an axis, comprising an evacuated chamber and a magnetized target in said chamber, said target being impacted relatively against said beam whereby said beam particles are deflected from said beam by the magnetic induction in said target.

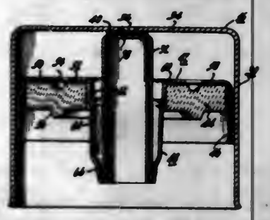
2. Particle extracting apparatus for use with a beam of high energy charged particles, travelling in an evacuated chamber along an axis, comprising an evacuated chamber for said beam, a magnetized target in said chamber, and means for impacting said target relatively slowly against said beam whereby coulomb scattering and magnetic deflection of said beam particles is produced by said target in said target, said magnetically deflected particles exceeding in number the particles extracted by coulomb scattering.

3,128,406
RADIATION IMAGE PICKUP TUBE
Gerhard W. Goetze and Helmut Kanter, Monroeville, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 28, 1961, Ser. No. 106,222
9 Claims. (Cl. 313—65)



2. A direct view storage tube comprising an input screen of photoemissive material which emits an electron beam in response to a radiation image directed thereon, an output screen spaced from said input screen and having a layer of phosphor material thereon capable of emission of light in response to electron bombardment, a storage electrode positioned between said input screen and said output screen, said storage electrode comprising a continuous layer of electrically conductive material, and a continuous layer of secondary emissive material positioned on the surface of said conductive layer facing said output screen, means for directing a radiation image to be stored onto said input screen to generate an electron image corresponding to said radiation image, means for accelerating said electron image to bombard said storage electrode and penetrate said conductive electrode and enter said secondary emissive layer, said secondary emissive layer exhibiting the property of emitting electrons from the exposed surface at a ratio greater than one and the rate of yield of said electrons increasing with time at a constant primary bombardment, means for maintaining the stored radiation pattern from said input screen for a substantial length of time to produce a charge image on the exposed surface of said secondary electron emissive layer of enhanced contrast over said input radiation image, and means for directing an electron beam of uniform intensity over the exposed surface of said conductive layer to generate secondary electrons from the exposed surface of said secondary electron emissive layer corresponding to said charge image and means for accelerating said secondary electrons to bombard said output screen to provide an intensified image of enhanced contrast.

3,128,407
CATHODE-GRID ASSEMBLY FOR ELECTRON GUNS
Clarence H. Mattson, Manheim, Pa., assignor to Radio Corporation of America, a corporation of Delaware
Filed Nov. 14, 1960, Ser. No. 68,817
5 Claims. (Cl. 313—82)



1. In an electron gun, a cathode-grid assembly comprising a tubular cathode sleeve closed at one end, a cathode support sleeve coaxially surrounding said cathode sleeve and fixed to said cathode sleeve at a point along said cathode sleeve longitudinally spaced from said one end, a ceramic washer having a metalized surface portion, said cathode support sleeve being brazed to said metalized surface portion at a point on said support sleeve longitudinally spaced from the point thereon at which said cathode sleeve is fixed, said cathode sleeve extending through the aperture of said washer, and a grid cup coaxially surrounding and fixed to said washer.

3,128,408
ELECTRON MULTIPLIER
George W. Goodrich, Oak Park, and William C. Wiley, Northville, Mich., assignors to The Bendix Corporation, a corporation of Delaware
Filed Apr. 20, 1960, Ser. No. 23,574
21 Claims. (Cl. 313—103)

1. A multiplier comprising

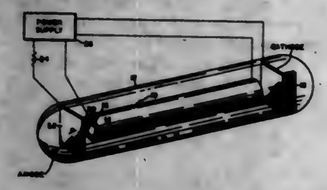
wall means of secondary electron emissive material defining a multiplying path having its longitudinal dimension substantially larger than its lateral dimension,

entrance means into the multiplying path defined by said wall means,

exit means from the multiplying path defined by said wall means spaced from said entrance means by said longitudinal dimension,

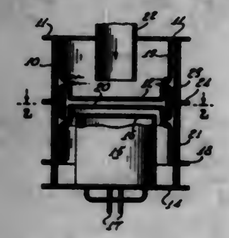
said multiplying path being totally clear of a field producing wire on the longitudinal axis of the multiplying path,

said multiplying path being free of any superimposed oscillating electric field in a direction transverse to the longitudinal axis,



and means for producing a longitudinal electrical current flow in said wall means to establish in the multiplying path a total field which is an electric field having a component parallel to the wall means in its longitudinal direction and having a substantially zero component in a transverse direction to move electrons away from the region of secondary emission on said wall means so that the primary means for moving electrons away from the region of secondary emission on said wall means is the energy of secondary emission.

3,128,409
FLOATING ELECTRODE FOR GASEOUS DISCHARGE DEVICE
Ward W. Watrous, Jr., Chatham, N.J., assignor to Tung-Sol Electric Inc., a corporation of Delaware
Filed Oct. 17, 1960, Ser. No. 63,107
8 Claims. (Cl. 313—188)



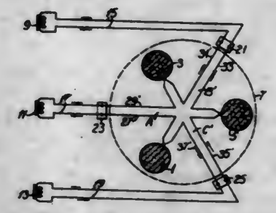
1. A gaseous discharge device comprising; an insulating envelope containing gas at a reduced pressure; an anode, a cathode, a firing electrode, and an electrically floating electrode also within said envelope; said floating electrode positioned adjacent to the anode and the firing electrode and near the inside surface of the envelope; and insulating securing means for holding the floating electrode in position.

3,128,410
ELECTRON DISCHARGE DEVICE
Joel H. Fink, Elmira, N.Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 31, 1959, Ser. No. 863,251
4 Claims. (Cl. 313—243)



1. A rectifier tube device comprising a cylindrical cathode and an anode, said anode comprising a first and a second sheet member, said sheet members comprising a semi-cylindrical portion, lateral portions extending outwardly from said cylindrical portion and fastening flange portions at the outer extremities of said lateral portions, said first and second sheet members fastened together at their flange portion to produce a cylindrical member into which said cylindrical cathode is inserted and spaced therefrom by about .052 inch, and oppositely disposed radial openings of about .040 inch between said lateral portions of said sheet member.

3,128,411
BUS SYSTEM AND APPARATUS FOR REDUCING THE REACTANCE OF ELECTRIC FURNACES
John A. Persson, Buffalo, N.Y., assignor to Union Carbide Corporation, a corporation of New York
Filed Nov. 22, 1960, Ser. No. 70,972
2 Claims. (Cl. 314—31)

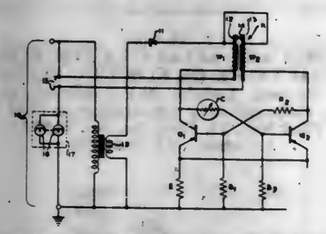


2. A bus system and apparatus for supplying current to a three phase electric furnace having three electrodes arranged in a triangular configuration comprising, in combination, three electrically conductive cylinders arranged at a substantially common level along the longitudinal axes of the electrodes each cylinder enclosing a longitudinal portion of a different electrode and spaced therefrom; contact means for connecting each cylinder to the electrode surrounded thereby; three pairs of conductors located at common level parallel to the level of the cylinders and spaced away from said contact means in a direction away from the tips of the electrodes; each said pair of conductors being adapted to be connected exterior the electrode configuration to separate phase voltages and each pair having the conductors thereof arranged in close proximity for flux cancellation and all said pairs extending from exterior the electrode configuration through different sides thereof to different positions interior the electrode configuration substantially equidistant from all the electrodes, the conductors of each pair being separated at said equidistant positions, one separated conductor of each given pair extending directly to the cylinder enclosing one of the electrodes defining the side of the configuration through which said given pair passes and the other separated conductor of the given pair extending directly to the cylinder enclosing the other electrode defining the side of the configuration through which said given pair passes; the conductors extending to a common cylinder being arranged in close proximity for flux cancellation and connected to each other at the common cylinder.

3,128,412
PHOTOSENSITIVE BISTABLE SWITCHING CIRCUIT
Andre T. Abromaitis, East Orange, N.J., assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
Filed May 25, 1959, Ser. No. 815,656
1 Claim. (Cl. 315—159)

A street lamp control comprising a bistable circuit of substantially symmetrical arrangement, including a pair of transistors respectively having base, emitter and collector electrodes, a fixed resistor connected between the collector electrode of one transistor and the base electrode

of the other transistor, a photoconductive cell connected between the collector electrode of said other transistor and the base electrode of said one transistor for unbalancing the bistable circuit in one direction or the other according to whether the ambient light intensity is above or below a predetermined threshold, a pulsating source of current connected to said circuit for operating the same and for extinguishing the bistable circuit between pulses, a differential thermal relay comprising a pair of tempera-

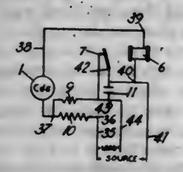


ture responsive elements and respective heater windings therefor and a switch operable thereby with predetermined time delay responsive to a differential heating of said elements, means connecting said heater windings in said bistable circuit between said pulsating source and said respective collector electrodes to cause said switch to be operated according to the direction of unbalance of said bistable circuit, and a street lamp circuit controlled by said switch.

3,128,413
LIGHT ACTUATED SWITCH

Bertil G. Person, Allegan, Mich., assignor to Com-Pak-Ett Manufacturing Company, Allegan, Mich.

Filed Sept. 7, 1960, Ser. No. 54,444
2 Claims. (Cl. 317—124)



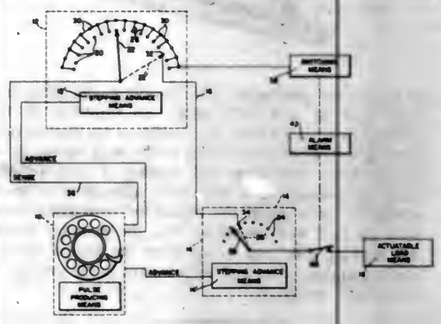
1. In a light sensitive switch the combination of a light sensitive cell having reduced electrical resistance when subjected to light, a capsule of tinted light filtering transparent material fitted over the top, sides and edges of the cell and enclosing said cell, a casing covering said cell and having a hole directing light to the cell from a single direction through said capsule, a solenoid coil, a switch arm carrying a normally closed switch contact and positioned to be moved to switch opening position by energization of said coil, a first circuit from a power source connected through a load to be controlled and said switch in series, a control circuit connected across said source ahead of said switch and including a relatively large resistance and said cell and said coil in series, a condenser bridging said switch, and a second relatively small resistor connected at one end to said second circuit between said large resistor and said cell and at its other end to said first circuit between said switch and said load.

3,128,414
PERMUTATION CONTROL DEVICE

William Michle, Havertown, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Filed Feb. 26, 1960, Ser. No. 11,230
6 Claims. (Cl. 317—134)

1. A code-controlled permutation device comprising, in combination, means for producing series of groups of electrical pulses with selectable numbers of pulses in each group, said means also producing a single pulse for each of said groups of pulses, first sequential stepping means including a stepping arm and stationary contacts, said first stepping means being advanced cumulatively by each pulse in said series of groups of pulses under a predetermined code to a final contact, second sequential stepping means including a stepping arm and stationary contacts, said second stepping means being advanced by said single

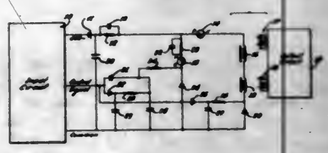


pulses under said predetermined code to a final contact, a direct connection between said final contacts under said predetermined code, and an ultimate circuit through said first sequential stepping means and said second sequential stepping means including said arm of each of said stepping means and said direct connection completed only when said pulse-producing means is actuated in accordance with said predetermined code to the completion of said code.

3,128,415
TIMING CIRCUIT

Henry T. Winchel, Culver City, Calif., assignor to Consolidated Electronics Industries Corp., New York, N.Y., a corporation of Delaware

Filed Dec. 14, 1959, Ser. No. 859,307
14 Claims. (Cl. 317—142)

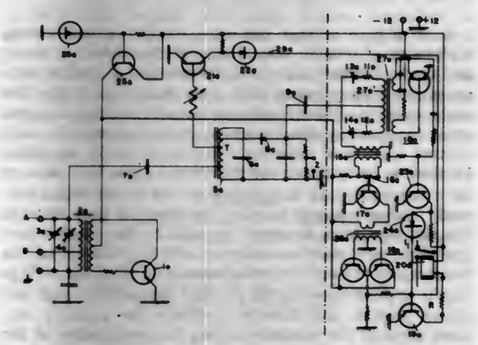


1. A timing circuit including, an output member having operative and released states an alternating signal source a control signal source, the alternating signal source and the control signal source being coupled to the output member for operating the output member, release circuit means coupled to the output member and to the control signal source for releasing the output member upon an operation of the release circuit means; and storage circuit means coupled to said control signal source and to said release circuit means and to said alternating signal source for operating said release circuit means a particular interval of time after termination of the control signal from said control signal source to release the output member, said storage circuit means including a pair of oppositely poled asymmetrically conducting impedance elements connected to said alternating signal source, a first storage capacitor coupled electrically to one of said pair of elements and to said control signal source whereby said first capacitor is charged by said control signal to a potential of one polarity, a second capacitor coupled electrically to the other one of said pair of elements and to said control signal source whereby said second capacitor is charged by said control signal to a potential having a polarity opposite to the one polarity, and circuit means interconnected to said first and said second capacitors and connecting said second capacitor to said release circuit means for providing a potential of one polarity for disabling said release circuit means during the time the control signal is provided from said control signal source and for providing a potential of opposite polarity for operating said release circuit means the particular interval of time after the termination of the control signal from said control signal source.

3,128,416
SIGNALLING SYSTEMS

Johannes Rösle, Hamburg-Rahlstedt, Germany, assignor to Telefonbau und Normalzeit G.m.b.H., Frankfurt am Main, Germany

Filed Feb. 13, 1961, Ser. No. 88,909
10 Claims. (Cl. 317—146)



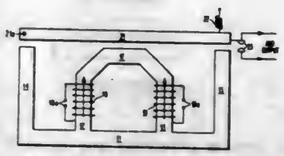
1. A signalling and alarm system comprising local oscillator means including a sensing circuit causing upon disturbance thereof a change of the frequency of said local oscillator means; means for establishing D.-C. currents dependent upon said change in frequency, said D.-C. current establishing means including a CR circuit, the capacitance of said CR circuit being formed by a capacitor and the ohmic resistance of said CR circuit being formed by a diode bridge including a secondary transformer winding having a center tap connected to said capacitor, said bridge further having a pair of parallel branches each connected to one end of said secondary winding and each including an ohmic resistor and a diode; a primary transformer winding cooperatively related to said secondary transformer winding; an A.-C. source feeding said primary transformer winding; and switching means under the control of the voltage prevailing at the ends of said parallel branches remote from said secondary winding responsive to A.-C. currents introduced into said CR circuit as a result of the flow of said D.-C. currents therein.

3,128,417
ELECTROMAGNETIC LOGIC APPARATUS

Edgar A. Brown, Gilroy, and Gunter H. Schacht, San Jose, Calif., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 20, 1960, Ser. No. 77,050
9 Claims. (Cl. 317—155.5)

1. Electromagnetic apparatus for performing logical operations comprising a magnetic core structure including a base member and a plurality of legs, an armature associated with said core, coil means disposed upon each of said legs for producing a magnetomotive force in each of said legs, said magnetomotive forces at all times opposing each other in said legs on which the associated coil is energized, means for selectively energizing said coils, each said coil when energized sending flux through those of said legs whose associated coils are de-energized, said legs and said coils being disposed so that when all of said coils are energized no appreciable flux flows from any one of said legs to any of the other of said legs,

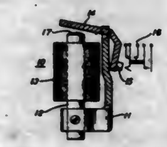


said armature having a first position in response to said flux flow through said de-energized legs when at least one but less than all of said coils are energized and having a second position in response to the lack of flux flow from any one of said legs to any of the other of said legs when all of said coils are energized, and means responsive to said armature being in said second position in response to simultaneous energization of all of said coils to provide a measure of said simultaneous energization.

3,128,418
MAGNETICALLY LATCHED SWITCH OPERATOR

Frank A. Zupa, New York, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed July 13, 1960, Ser. No. 42,678
2 Claims. (Cl. 317—165)



1. A magnetically latchable switch operator comprising a magnetic core of about 1% carbon steel, a coil for energizing the core, an armature associated with the core and for controlling contacts, said core having a Rockwell 30-N scale hardness of 54 to 64, and a high retentivity coupled with a high permeability, the coercive force of the core being from 20 to 27 oersteds and the residual flux density from 10,000 to 13,500 gausses based on an applied magnetizing force of at least 70 oersteds.

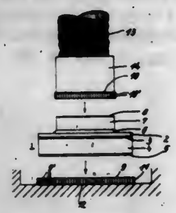
3,128,419
SEMICONDUCTOR DEVICE WITH A THERMAL STRESS EQUALIZING PLATE

Erich Waldkötter, Berlin-Spandau, and Hans Schering, Berlin-Haselhorst, Germany, assignors to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt, Germany, a corporation of Germany

Filed June 21, 1961, Ser. No. 119,014
Claims priority, application Germany June 23, 1960
9 Claims. (Cl. 317—234)

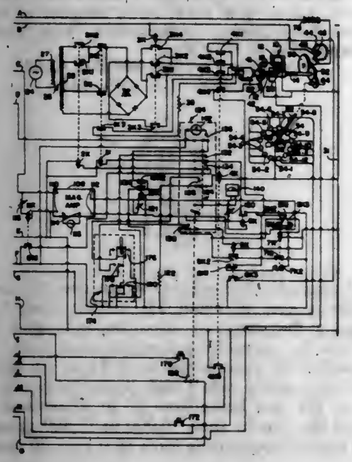
1. An electronic semiconductor device comprising a semiconductor body having an electrode, and a metallic structure joined with said electrode in face-to-face relation thereto and having a thermal coefficient of expansion different from that of said electrode, in combination with an equalizing plate disposed between said electrode and said structure and being joined with both in area contact therewith, said equalizing plate comprising a mul-

tiplicity of individual metallic pins of highly heat-conductive and highly current-conductive material positioned with their longitudinal axes perpendicular to the plane of said plate, said pins arranged and being displaceable relative to one another within said plate for minimizing



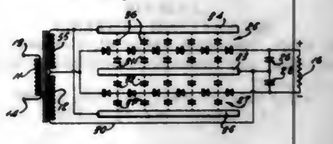
mechanical tension otherwise due to said different coefficients when said device is subjected to temperature variation, and soldered joints connecting the respective ends of said pins on one side of said plate to said electrode and on the other side of said plate to said metallic structure.

3,128,420
COARSE AND FINE ELECTRIC SERVOMOTOR POSITION SELECTOR
Glenn R. Rose, St. Paul, Minn., assignor to General Mills, Inc., a corporation of Delaware
Filed Apr. 24, 1961, Ser. No. 105,011
18 Claims. (Cl. 318—28)



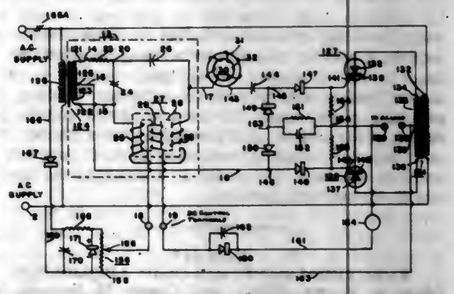
2. A programmed manipulator for effecting predetermined work motions comprising a work performing device, motor means for moving said device toward a desired position, means operated by said motor means for producing a signal variable in accordance with the actual position of said device at any given moment, means for producing a fixed signal in accordance with said desired position of the device, sensing means for comparing said signals to determine when said signals are approximately equal, switch means operated by said motor means, said switch means having a plurality of contacts spaced in accordance with certain actual positions of said motor means, selector switch means having a number of contacts corresponding to said plurality of contacts, respective conductor means connecting corresponding contacts of said motor operated switch means in circuit with those of said selector means, relay means controlled by said sensing means when said signals are approximately equal for transferring control of said motor means to said motor operated switch means, and means actuated by said motor operated switch means for stopping said motor means when said motor operated switch means engages a contact corresponding to a selected contact of said selector switch means.

3,128,421
SERIES RECTIFIER CIRCUIT WITH CAPACITY COMPENSATING MEANS
Albert M. Skellett, Madison, N.J., assignor to Tung-Sol Electric Inc., a corporation of Delaware
Filed May 19, 1961, Ser. No. 111,209
10 Claims. (Cl. 321—11)



6. In a high voltage full-wave rectifier circuit having a plurality of rectifier components arranged in two stacks and connected between a transformer and a load, a compensation means comprising, two conductors, one for each stack, positioned adjacent to said rectifier components for creating distributed capacities between the conductors and their adjacent components, said capacities adjusted so as to match the distributed capacities between the components and that portion of the circuit which normally causes unequal capacity currents to flow through the rectifiers in a direction opposite to the normal current flow, said conductors connected to portions of the transformer so as to receive substantially twice the voltage that is applied between the rectifier components and said circuit portion and thereby eliminate the capacity currents through the rectifiers during the application of the inverse voltage pulses.

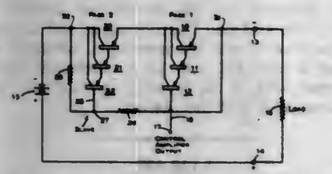
3,128,422
CONTROL CIRCUIT FOR UNIDIRECTIONAL CURRENT CONDUCTING DEVICES
Walter J. Brown, Stamford, Conn., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
Filed Apr. 18, 1960, Ser. No. 23,004
Claims priority, application Great Britain Apr. 21, 1959
17 Claims. (Cl. 321—45)



6. In a control circuit for unidirectional current conducting devices, a phase shifting network comprising: a capacitive voltage dividing means including at least a first and a second capacitive element serially connected to one another with a center tap therebetween; said dividing means adapted to be connected across an alternating current supply for receiving therefrom an input signal; the series combination of a resistive element and a third

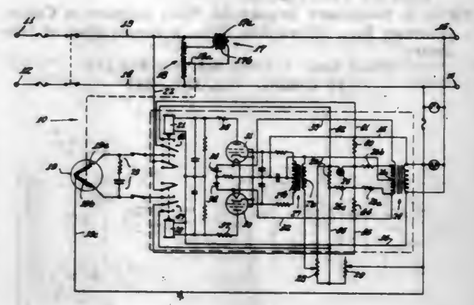
capacitive element connected across said voltage dividing means; the series combination of a fourth capacitive element and an inductive element connected across said third capacitive element; means varying the relative impedance of said inductive and fourth capactive elements whereby said network is adapted to produce an output signal between said tap and the junction between said fourth capacitive element and said inductive element, which output signal is phase shifted relative to the input signal in response to the value of the impedance of said inductive element with respect to said fourth capacitive element; further phase retarding and signal peaking means which include another inductive element; a transformer having a primary and a secondary winding connected to receive said output signal whereby said output signal flows serially through said another inductive element and primary transformer winding; said primary transformer winding being possessed of an impedance which presents a substantial load to the phase shifting network to cause the output signal after being modified by said retarding and peaking means to be at least one spike shaped pulse for each half cycle of said alternating current input signal; a set of unidirectional current conducting devices connected to said secondary winding for receiving said spike shaped pulse to cause said devices to pass cyclically from their non-conductive state to their conductive state, and said first, third and fourth capacitive elements being in series with said another inductive element and primary transformer winding forming a low impedance return path for said pulse signal.

3,128,423
TRANSISTORIZED POWER SUPPLY
Aaron Rosenfeld, Jackson Heights, and Kenneth Kupferberg, Flushing, N.Y., assignors to Forbro Design Inc., New York, N.Y., a corporation of New York
Filed Aug. 1, 1958, Ser. No. 752,485
1 Claim. (Cl. 323—22)



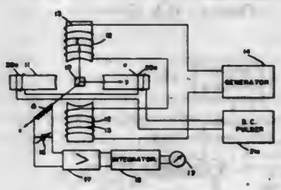
An electronic power supply comprising, in combination, a source of input potential; a pair of output terminals; a control power transistor; at least one slave follower transistor connected in series with said control power transistor and said source and said output terminals; driving transistors associated with said power transistors, the current gain of said transistors being such that, for a relatively heavy current flow through said power transistors, only a minute driving current is required for the lowest level driving transistors; a connection for applying a control signal to the driving electrode of the lowest level driving transistor for said control power transistor; a passive voltage divider connected in parallel with said power transistors between said source and an output terminal; and means connecting points on said voltage divider to the driving electrodes of the lowest level driving transistor for each slave power transistor, such points being so selected that there is an equal division of the voltage drop of said divider across each power transistor; the voltage divider being designed for a relatively small current flow therethrough, and the minute driving current for each lowest level driving transistor having substantially no effect on the voltage at said points.

3,128,424
STABILIZED VOLTAGE REGULATOR
Robert D. Cooley, Litchfield, and Allen R. Perrins, Cheshire, Conn., assignors to The Superior Electric Company, Bristol, Conn., a corporation of Connecticut
Filed Aug. 4, 1959, Ser. No. 831,617
3 Claims. (Cl. 323—47)



1. An automatic voltage regulator comprising input terminals, output terminals, means connected between the terminals for regulating the output voltage by adding to or subtracting from the input voltage, sensing means including a bridge having a pair of adjacent legs which have resistances connected to the output terminals for sensing the deviation of the output voltage from a preselected value and producing a signal indicative of the direction and magnitude of the deviation, control means connected to receive the signal from the sensing means and to control the regulating means and means for altering the value of the output voltage from which the sensing means senses the deviation of the output voltage by altering the relative value between the resistances in the pair of adjacent legs upon the regulating means adding to or subtracting from the input voltage.

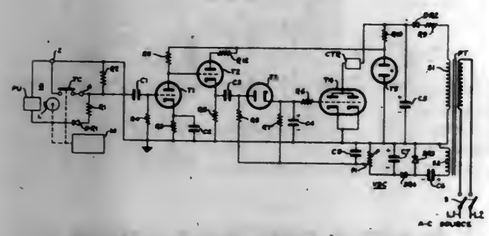
3,128,425
MAGNETIC RESONANCE SYSTEMS
Robert S. Codrington, Ridgefield, Conn., assignor to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Continuation of application Ser. No. 484,797, Jan. 28 1955. This application Aug. 9, 1960, Ser. No. 48,502
18 Claims. (Cl. 324—.5)



1. In apparatus for detecting magnetic resonance phenomena in particles exhibiting paramagnetic properties wherein the macroscopic moments associated with such particles are initially in line with a first magnetic field of a substantially constant first intensity, the combination comprising means for applying a second magnetic field of substantially constant second intensity substantially perpendicularly to said first magnetic field, means for periodically reversing the polarity of said second magnetic field after predetermined periods of time, and means for detecting the presence of a signal induced perpendicu-

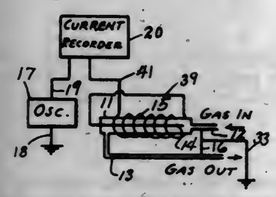
larly to said second field at a frequency substantially equal to the resonance precession frequency of said particles at said second intensity.

3,128,426
MEANS FOR ELECTRICAL TESTING OF THE EFFECTIVENESS OF CLOSURE OF ELECTRICAL CONTACTS
Merle R. Swinehart, Brookfield, Wis., assignor to Cutler-Hammer Inc., Milwaukee, Wis., a corporation of Delaware
Filed Sept. 4, 1959, Ser. No. 838,111
16 Claims. (Cl. 324—28)



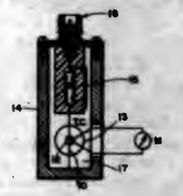
1. In a system for testing the effectiveness of a contact to efficiently close an electrical circuit, in combination, a test circuit, a test contact in said circuit for closing the latter when said contact is closed, voltage generating means connected in said circuit for applying a test voltage across said contact, said voltage generating means being ineffective when said contact is open so that it does not generate a voltage, means for closing said contact, means operating in synchronism with said contact closing means for rendering said voltage generating means effective to generate a test voltage across said contact one after said contact is closed, failure of said contact to efficiently complete a conductive path therethrough causing a voltage to appear across said contact when said test voltage is generated, and means responsive to said voltage across said contact when it is above a predetermined value for indicating said failure.

3,128,427
RADIO FREQUENCY GAS CHROMATOGRAPHY APPARATUS WITH BALLAST COIL AND SHORTED INLET AND OUTLET CONDUITS
William C. Hampton, Takoma Park, Md., assignor to American Instrument Company, Inc., Silver Spring, Md.
Filed June 6, 1960, Ser. No. 34,134
7 Claims. (Cl. 324—33)



7. In a gas chromatography apparatus, a detection cell comprising an electrically conductive gas sampling chamber, electrode means in said chamber, respective conductive gas inlet and outlet conduits communicatively connected at spaced points to said chamber, a radio frequency oscillator, a coil surrounding said chamber, means connecting said oscillator in circuit with said electrode means and said coil, and conductive shorting means connected across said conduits externally of said chamber.

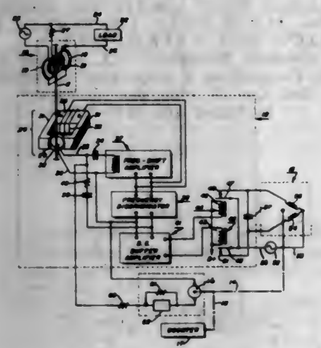
3,128,428
HIGH FREQUENCY THERMOCOUPLE VOLTMETER
Morley J. Lush, Old Road to Nine Acre Corner, Concord, Mass.
Filed Dec. 19, 1960, Ser. No. 76,877
1 Claim. (Cl. 324—95)



A thermocouple voltmeter with high frequency response, comprising, in combination, a cylindrical electrically conductive housing having one end closed and the other open, an electrical series assembly mounted in said housing through said open end in closing relation therewith and along the axis of said housing and concentrically thereof, in such dimension as to provide a cylindrical sleeve air gap between the inner wall of said housing and said assembly said series assembly comprising a resistor individually and cylindrically encapsulated in resin as a rigid dielectric, and a heater wire, an adjacent thermocouple responsive to said heater wire, said series assembly being electrically insulated from said housing at said open end thereof and electrically connected thereto at said closed end, a capacity wire connected at one end only, electrically, to one end of said resistor, said capacity wire extending radially from said last named connection to the periphery of said resin cylinder and thence along the surface of said resin cylinder to a lesser length than said resin and adjustable to a desired specific length and in parallel, capacity relation with said resistor between said resin and said housing, whereby the distributed capacity of the combination of said resistor and said capacity wire effectively balances out the distributed capacity across said heater wire and said thermocouple, and a measuring meter responsive to said thermocouple, whereby said capacity wire is provided with an air dielectric between it and the inner wall of the housing and a fixed, resin, dielectric between it and the resistor.

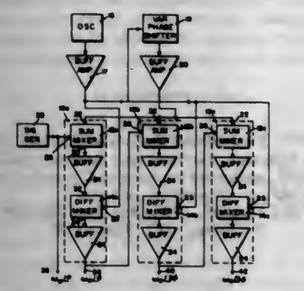
3,128,429
INTEGRATING APPARATUS USING A TORQUE CONVERTER REBALANCED BY THE OUTPUT OF A GENERATOR DRIVEN BY THE CONVERTER OUTPUT
John R. Pattee, Scotch Plains, N.J., assignor to Daystrom Incorporated, Murray Hill, N.J., a corporation of New Jersey
Filed May 9, 1961, Ser. No. 109,885
7 Claims. (Cl. 324—99)

1. Apparatus for producing a time integral of a mechanical torque provided by a primary torque producing means and comprising, an electromagnetic means to which the mechanical torque of the primary torque producing means is mechanically coupled, the said electromagnetic means developing an alternating current component having a magnitude and phase sense respectively relating to the magnitude and direction of rotation of the electromagnetic means provided by the mechanical torque produced by the primary torque producing means, means phase rectifying the said alternating current component to produce a corresponding first output direct current, a feedback path including a series-connected surge capacitor feeding a portion of said output direct current back into the electromagnetic means and producing a torque opposing the torque produced by the primary torque producing means, a motor responsive to the said output direct current, means actuated by the motor and producing a second direct current output, and means feeding said second direct current output back into said electromagnetic means to produce a torque opposing the torque



produced by the primary torque producing means, the amount of rotation of the motor being directly related to the time integral of the torque provided by the primary torque producing means.

3,128,430
PHASE SHIFTING SYSTEM FOR PHASED ANTENNA ARRAYS
Martin R. Richmond, Belmont, Mass., assignor to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware
Filed Jan. 9, 1962, Ser. No. 165,194
15 Claims. (Cl. 325—15)



12. A steerable beam multi-element antenna array comprising, in combination,

(*a*) a first voltage source having a first frequency,

(*b*) a second voltage source having a second frequency,

(*c*) a variable phase shifter connected to said first source to develop a delayed voltage at said first frequency,

(*d*) a first frequency combiner connected to said second source and with said phase shifter to develop a combined voltage having a third frequency equal to one of the sum and difference of said first and second frequencies,

(*e*) a second frequency combiner connected to receive said combined voltage and said first source and develop an output voltage whose frequency is the other of the sum and difference of said first and third frequencies and thus equal to said second frequency,

(*f*) a plurality of radiating elements,

(*g*) transmission means connected between said elements and said second combiner and second source to deliver said output voltage and delayed voltage to said elements,

(*h*) whereby the radiation pattern of said array is directed in different directions when the phase delay imparted by said phase shifter is changed.

3,128,431
MINIATURE RADIO TRANSMITTER
Robert H. Walker, Morton Grove, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Dec. 7, 1961, Ser. No. 157,795
6 Claims. (Cl. 325—111)



1. A miniaturized radio transmitter device of the type to be carried on the person and operated from a self-contained battery power source, said transmitter device including in combination, housing means, a printed circuit chassis within said housing means and having electrical circuit components mounted thereon, a subminiature microphone having means for protecting the same against the effects of shock and vibration, said means including a U-shaped bracket having a base affixed to the bottom of said microphone and first and second resilient support arms, each of which being formed by a pliant sleeve of shock absorption material and adapted for receiving a portion of said bracket base in one end thereof and a mounting lug in the other end, said mounting lugs being adapted for attachment to said printed circuit chassis, a final amplifier circuit including a power transistor and a driver transistor for applying signals to said power transistor, and a heat sink affixed to said printed circuit chassis and adapted for receiving said transistors thereon, said heat sink providing thermal feedback from said power transistor to said driver transistor to reduce the output thereof with increasing temperature to control the current in said power transistor within predetermined limits.

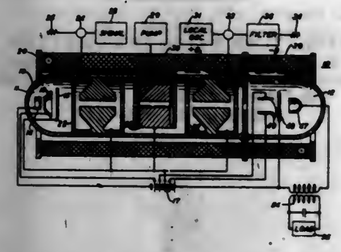
3,128,432
CYCLOTRON-WAVE PARAMETRIC AMPLIFIER-MIXER TUBE
Eugene I. Gordon, Convent Station, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 5, 1961, Ser. No. 157,214
9 Claims. (Cl. 325—447)

4. A mixer tube comprising:

means including a cathode for forming and projecting a beam of electrons;

means for producing a longitudinal magnetic focusing field along the beam;

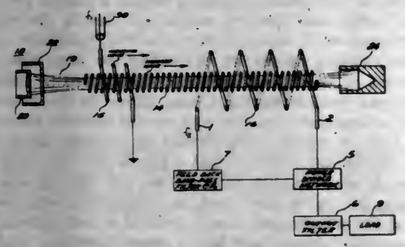
means for causing signal frequency energy to propagate along the beam as a cyclotron wave;
means for causing local oscillator frequency energy to propagate along the beam as a cyclotron wave;
means for converting the signal frequency and local oscillator frequency cyclotron waves to synchronous waves;



means comprising a first electron collector for collecting only those electrons that transmit synchronous waves;
means comprising a second electron collector for collecting the remainder of the electron beam;
the electron collectors being downstream from the converting means;
and a resonant circuit connected to said first electron collector for transmitting electrical current therefrom.

3,128,433
T.W.T. FREQUENCY CHANGER UTILIZING INDUCED GENERATION OF MODULATION SIGNAL

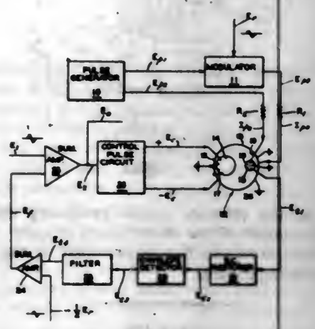
William A. Edson, Los Altos, Calif., assignor to General Electric Company, a corporation of New York
Filed Apr. 7, 1960, Ser. No. 20,754
8 Claims. (Cl. 328—25)



1. In combination in a frequency dividing system a high frequency energy interchange device of the type wherein an interaction takes place between a stream of electrons and radio frequency fields, said high frequency energy interchange device including an evacuated envelope, an electromagnetic wave propagating main transmission line within said envelope, electron stream producing and directing means within said envelope for producing and directing a stream of electrons in close proximity to said transmission line, output coupling means including an output transmission line positioned in energy interchange relationship with said transmission line for simultaneously introducing a time varying electromagnetic wave along said transmission line and extracting electromagnetic waves therefrom, said output coupling transmission line comprising a section of substantially a quarter space-beat-wavelength for frequencies to be introduced thereon and having input and output terminal means electrically interconnected whereby energy is returned from said output terminal to said input terminal, and means to bunch electrons along the stream prior to interaction with the time varying electromagnetic wave introduced on said transmission line by said output coupling means.

3,128,434
TRANSFLUXOR WITH AMPLITUDE MODULATED DRIVING PULSE INPUT CONVERTED TO ALTERNATING SINE WAVE OUTPUT

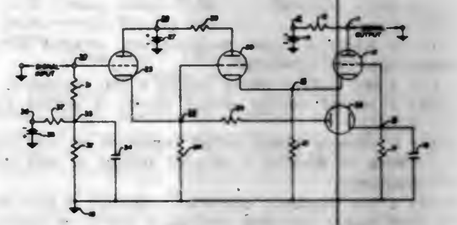
Harold Moreines, Springfield, N.J., assignor to The Bendix Corporation, a corporation of Delaware
Filed Apr. 28, 1960, Ser. No. 25,455
9 Claims. (Cl. 328—27)



1. A transfluxor operating circuit comprising a transfluxor having control, energizing and output windings, driving means connected to the energizing winding providing alternate sine wave modulated drive pulses and priming pulses of opposite polarity for energizing the transfluxor to produce modulated pulse signals at its output winding, means connected to the control winding providing signals to control the level of energization of the transfluxor, and means connected to the output winding to convert the pulse signals to alternating sine wave voltage.

3,128,435
NOISE ELIMINATING GATE CIRCUIT

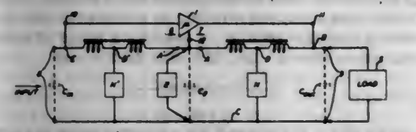
Eugene L. Mleczko, Covina, and Bernard Elbinger, Los Altos, Calif., assignors to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
Filed Dec. 15, 1958, Ser. No. 780,624
9 Claims. (Cl. 328—115)



1. An electronic gate circuit operable by an operating signal in the presence of undesired random signals of lesser amplitude than the operating signal, comprising an input relay having a cathode, anode and control electrode, an output relay having a cathode, anode and control electrode and a bias control relay having an anode, cathode and control electrode for controlling the bias on the cathode electrode of the output relay, said control relay having its input connected to receive the output from the input relay and having a resistor in its output circuit included in the cathode electrode circuit of said output relay to control the bias on the last-mentioned cathode electrode, a second resistor in the circuit of the output relay control electrode, a charging condenser shunting said second resistor, and means for charging said condenser from the output of said input relay by the voltage of the random signals or noise at the output of said input relay, whereby the bias on said output relay control electrode is controlled by said second resistor with a delay determined by the time constant of said second resistor and said condenser, the bias on the control electrode of the control tube being beyond cutoff in the absence of operating signal.

3,128,436
NEGATIVE FEEDBACK AMPLIFIER

Frithiof B. Anderson, Winston-Salem, N.C., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 16, 1959, Ser. No. 860,047
9 Claims. (Cl. 330—79)

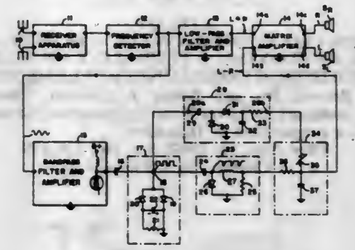


1. An amplifier comprising an amplifying means having an input terminal, an output terminal and a common terminal, a transformer having a plurality of serially-connected winding sections with a pair of outside terminals and intermediate terminals at the junctions between adjacent windings, means connecting said outside terminals between said common terminal and the input terminal of said amplifying means, a conductor of reference potential, at least one two-terminal network connected between said conductor and at least one of said intermediate transformer terminals, an input circuit and an output circuit for said amplifier, means connecting said input circuit between said conductor and a transformer terminal, a second transformer also having a plurality of serially-connected winding sections with a pair of outside terminals and intermediate terminals at their junctions between adjacent windings, means connecting the outside terminals of said second transformer between said common terminal and the output terminal of said amplifying means, at least one two-terminal network connected between said conductor and at least one of the intermediate terminals of said second transformer, and means connecting said output circuit between said conductor and a terminal of said second transformer.

3,128,437
BALANCED FREQUENCY DETECTOR CIRCUIT

Bernard D. Loughlin, Huntington, N.Y., assignor to Hazeltine Research, Inc., a corporation of Illinois
Filed Jan. 24, 1961, Ser. No. 84,667
10 Claims. (Cl. 329—133)

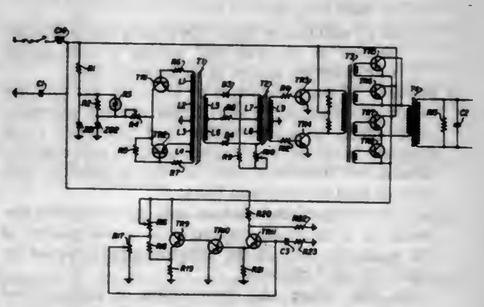
1. A balanced frequency detector circuit for the subcarrier channel of an FM/FM multiplex signal receiver comprising: means for supplying a subcarrier signal which may be both frequency and amplitude modulated; means for deriving from said subcarrier signal a train of pulses having an average amplitude component determined by said subcarrier frequency modulation and, at least in part, by said subcarrier amplitude modulation; auxiliary detection means for deriving a measure of said subcarrier amplitude modulation; and means for combining said derived measure of amplitude modulation with said pulse train to substantially remove any effect



said subcarrier amplitude modulation has on the average amplitude component of the pulse train.

3,128,438
SQUARE WAVE GENERATOR WITH THIRD HARMONIC SUPPRESSOR

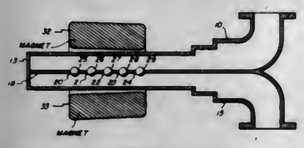
Douglas J. Suda, Downers Grove, Ill., assignor to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Filed July 10, 1961, Ser. No. 123,047
3 Claims. (Cl. 331—75)



1. The combination, of a square wave generator of alternating current including transistors and a transformer having an output winding with a center tap, with a third harmonic suppressor including a second transformer having a center tapped primary winding and a center tapped secondary winding and having a saturable magnetic core, a diode connected between each end of the output winding of the generator and one end of the said primary winding, the center tap of said output winding connected through a resistance to the center tap of said primary winding, said connections of the output winding of the generator with the primary winding of the second transformer causing the output of the generator to be applied between the center tap and one end of the primary winding of the second transformer during one half cycle of the alternating current, and between the center tap and the other end of said primary winding during the other half cycle of the alternating current, adjustable means comprising a potentiometer connected across the said primary winding to adjust the current through said primary winding to such a value that said core becomes saturated in one third less time than the time of each one half cycle of the current received from said generator, the saturation of said core preventing the generation of the third harmonic of said alternating cur-

rent in the secondary winding of said second transformer, and a driver circuit and an output amplifier connecting said secondary winding to the usual load.

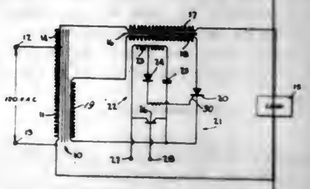
3,128,439
BROADBAND GYROMAGNETIC COUPLING LIMITER EMPLOYING A PLURALITY OF NARROW-LINEWIDTH GYROMAGNETIC ELEMENTS
Julian Brown, Jr., and Bobby J. Duncan, Clearwater, Fla., assignors to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Aug. 10, 1962, Ser. No. 216,179
6 Claims. (Cl. 333—24.2)



1. A gyromagnetic coupling power limiting electromagnetic wave transmission line device comprising,
first and second conductively bounded electromagnetic wave transmission lines for propagating electromagnetic waves within a given frequency range,
said two transmission lines being disposed adjacent each other and having a common conductive boundary separating them over at least a portion of their lengths,
each of said transmission lines being short-circuited at one of its ends and having a transmission line coupling means at its opposite end,
a plurality of small elements of low loss, narrow linewidth gyromagnetic material that exhibits gyromagnetic effects to waves within said frequency range disposed in spaced-apart relationship in said common conductive boundary and in communication with both of said transmission lines,
means for magnetizing each of said gyromagnetic elements in a direction transverse to a component of the magnetic field of the electromagnetic waves incident on said elements,
the size, shape and composition of each of said elements and the strength of the magnetizing field immersing each element being proportioned so that each element is gyromagnetically resonant at a different frequency within a continuous relatively broad range of frequencies within said given frequency range and exhibits power limiting characteristics for waves at its respective resonant frequency that exceed a critical power level,
each of said spheres being spaced from the short-circuited end of each transmission line by integral number of transmission line half wavelengths at its respective gyromagnetic resonant frequency.

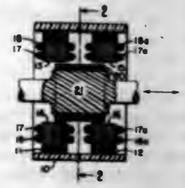
3,128,440
ELECTRICAL APPARATUS FOR CONTROLLING CURRENT AND VOLTAGE
Ariel R. Davis, 3687 S. State, Salt Lake City, Utah
Filed May 28, 1959, Ser. No. 816,641
3 Claims. (Cl. 323—60)

1. Electrical control apparatus for controlling the voltage applied to a load comprising a control transformer having a single load current carrying winding for connecting in series with a load for passing both halves of the alternating current and variable in impedance to vary the applied voltage over a wide range and having a control winding for varying the impedance of said load current carrying winding by reducing the impedance, said control transformer storing energy on passage of load current to maintain the impedance of the load current carrying winding on the succeeding half cycle at substantially the same value, a silicon controlled rectifier in series with said control winding for controlling the amount of current therethrough by variation of the phase relation



of the firing current applied to the silicon controlled rectifier and the voltage applied across the rectifier, a phase shifting circuit having a transistor for varying the phase relation of the firing current produced by the phase shifting circuit and the voltage applied to the silicon controlled rectifier and a booster winding in series with said control winding and said rectifier to produce a range of initiating conduction over 0° to 180° of a half cycle.

3,128,441
VARIABLE DYNAMO TRANSFORMER HAVING LINEARLY MOVABLE ARMATURE
Ernest W. Johnson, Randolph, and Henry Packard, Norwood, Mass., assignors to Northrop Corporation, Beverly Hills, Calif., a corporation of California
Filed June 30, 1960, Ser. No. 39,883
4 Claims. (Cl. 336—30)

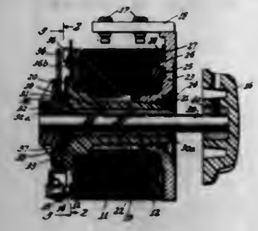


1. In a variable dynamo transformer, the combination of first and second adjacent stator members spaced apart along a common axis, an armature composed of a homogeneous length of magnetic material and of annular cross-section disposed coaxially within said stator members such that its peripheral area may be projected upon said stator members, the projected area of said armature upon said first stator member being normally substantially equal to the projected area of said armature upon said second stator member, means for displacing said armature in either direction along said axis, an input coil having a first winding on said first stator member and a second winding on said second stator member connected in series, and an output coil having a first winding on said first stator member and a second winding on said second stator member, the windings of one of said coils being like-poled and the windings of the other of said coils being oppositely poled.

ERRATUM

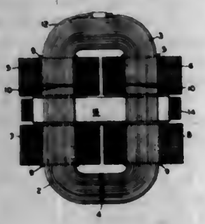
For Class 336—135 see:
Patent No. 3,128,044

3,128,442
ADJUSTABLE VOLTAGE AUTOTRANSFORMER HAVING A WINDING PROVIDED WITH A COMMUTATING TRACK
Arthur E. Snowdon, Philmore E. Johnson, and Nimo A. Gianzinetti, all of Bristol, Conn., assignors to The Superior Electric Company, Bristol, Conn., a corporation of Connecticut
Filed May 2, 1961, Ser. No. 107,204
4 Claims. (Cl. 336—149)



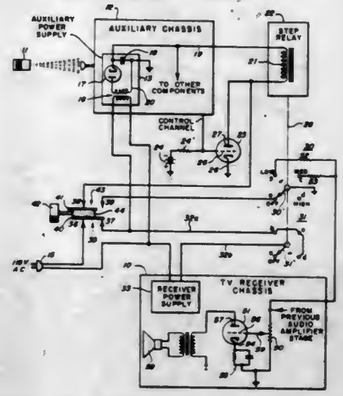
1. An adjustable voltage autotransformer comprising a coil having an annular core of magnetic material and a winding wound on said core with a commutating track formed on the winding, an end plate abutting one end of the coil, a member formed of insulating material having an end abutting the other end of the coil and having a portion extending axially through the center of the coil and being formed with an axial aperture, means interconnecting the end plate and the member to clamp the coil therebetween, a tube rotatably mounted in said axial aperture, a brush engageable with the commutating track, means mounting the brush on said tube for movement therewith and including means insulating the tube from the current through the brush, and a shaft positioned in said tube and secured thereto for movement therewith.

3,128,443
REACTIVE TRANSFORMERS
Luther R. Herman, Flat Rock, and Howard T. Jones, Hendersonville, N.C., assignors to General Electric Company, a corporation of New York
Filed Aug. 6, 1958, Ser. No. 753,460
3 Claims. (Cl. 336—160)



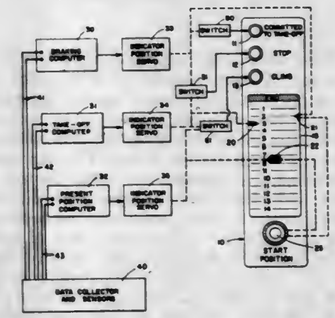
1. A reactive transformer comprising a magnetic circuit loop formed of a plurality of laminations of magnetic material bent flatwise to form a closed path about a central window, a flat stack of laminations placed against the side of said circuit loop defined by the edges of the laminations of said circuit loop across said central window in edge-to-edge relationship with the laminations of said loop, said loop being provided with a butt joint on one side of said stack of laminations, a primary electrical winding on said one side of said stack of laminations and overlying said butt joint, and a secondary electrical winding on said loop on said other side of said stack of laminations.

3,128,444
REMOTE CONTROL SYSTEM
Nicholas Kafka, Lombard, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Filed Nov. 9, 1960, Ser. No. 68,214
5 Claims. (Cl. 340—15)



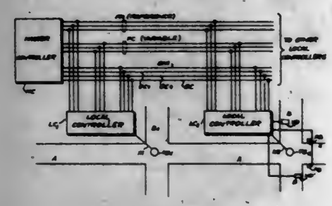
1. In combination: an electrical utilization device having a predetermined controllable operating characteristic; means including an on-off switch for establishing an operative connection between said utilization device and a main electrical power source; a control unit responsive to received command signals for controlling said operating characteristic; power-supply-control means including said control unit and also responsive to received command signals for alternately opening and closing said operative connection between said main power source and said utilization device; and means responsive to actuation of said on-off switch to its "off" condition for conditioning said power-supply-control means to re-establish said operative connection upon subsequent actuation of said on-off switch to its "on" condition.

3,128,445
AIRCRAFT TAKE-OFF MONITORING
Norman F. Hosford, Davenport, Iowa, assignor to The Bendix Corporation, a corporation of Delaware
Filed Sept. 4, 1958, Ser. No. 759,012
5 Claims. (Cl. 340—27)



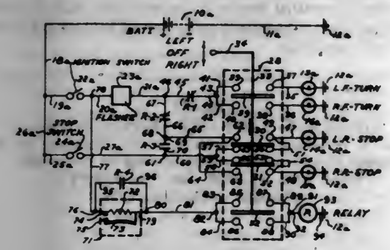
1. A display system for an aircraft take-off monitor comprising a scale element representing a runway and points therealong and means for continuously predicting and indicating on said scale during an attempted take-off the current predicted points at which the craft may be stopped and made airborne, respectively.

3,128,446
TRAFFIC ACTUATED CONTROL SYSTEM
John L. Barker, Norwalk, Conn., assignor, by mesne assignments, to Laboratory for Electronics Inc., Boston, Mass., a corporation of Delaware
Filed Oct. 3, 1957, Ser. No. 688,080
21 Claims. (Cl. 340—35)



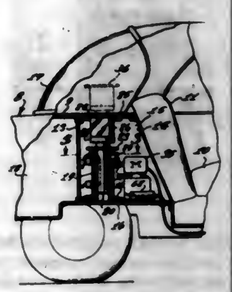
21. In a traffic control system, means for providing two periodic electrical wave energies, one of which is shifting progressively in phase relation to the other at a controlled slow time rate to provide phase coincidences at time intervals of the order of the desired traffic signal time cycle, traffic actuated means for responding to traffic, coincidence responsive means for responding to phase coincidence of said two wave energies, and means for controlling a traffic signal change in response to conjoint operation of said traffic actuated means and said coincidence responsive means.

3,128,447
VEHICLE TIMED TURN SIGNAL APPARATUS
Beecher C. Eaves, 1406 Edgewood Drive, Royal Oak, Mich.
Filed July 24, 1961, Ser. No. 126,022
3 Claims. (Cl. 340—56)



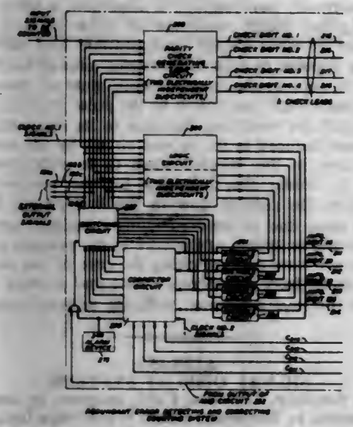
1. A vehicle timed turn signalling apparatus comprising: a first pair of lights adapted to be mounted on one side of a vehicle in a longitudinally spaced apart arrangement; a second pair of lights adapted to be mounted on the other side of a vehicle in a longitudinally spaced apart arrangement; a direct current source; a flasher unit electrically interconnected between said direct current source and said first and second pairs of lights; a directional turn switch having contact means interconnected between said flasher unit and said first and second pairs of lights for selective alternate connecting of said pairs of lights to the flasher unit; said flasher unit being adapted to periodically break the current flow to a pair of said pairs of lights when connected thereto by said directional turn switch; a relay switch means; and, additional contacts operated by said directional control turn switch, a time delay device interconnected between said direct current source, said additional contacts and said relay switch means energizing the relay switch means to disconnect said flasher unit from said directional turn switch after a predetermined time interval when the directional turn switch is in a position for connecting one of said pairs of lights to the flasher unit.

3,128,448
REAR WINDOW BLINKER LIGHT
Murray Shumer, 94 Rockaway Parkway, Brooklyn 12, N.Y., and Jerry Cohen, 783 Lydia Place, Westbury, N.Y.
Filed Dec. 23, 1960, Ser. No. 78,185
1 Claim. (Cl. 340—87)



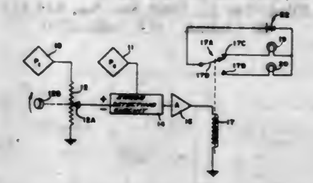
A rear window blinker light, for an automobile having a ledge at the rear window thereof rearwardly of the back of a seat, including a lamp housing with an electric lamp therein, the ledge having an opening therein, and means for vertical movement of said lamp housing through said opening from an upper display position above said ledge to a concealed position below the ledge and vice versa, without rotational movement of said lamp housing during said vertical movement, said lamp housing having an upright supporting plunger surmounted by the housing, and the vehicle having a stationary hollow support for the plunger, means for raising and lowering said plunger while guided by said hollow support, said means comprising a rack upon said plunger, a rotatable pinion meshing with said rack and having a driven shaft rotatably supported upon the stationary hollow support, said shaft having a driven pinion engaging a driving pinion mounted on a motor shaft of a reversible electric motor, two branch electrical circuits connected to said motor and a current source, as well as a flasher unit connected to the lamp housing and its lamp and to the current source, selective switch means alternatively connectible to the two branch circuits, a pair of switches with switch fingers vertically spaced apart on said stationary hollow support, said switch fingers being in the vertical path of a detent on said plunger, said detent being movable between said fingers, the detent engaging of one said fingers at each end of its path of travel to activate selectively said switches, one of which switches is in each one of said branch circuits, said selective switch means including a rocker arm switch with a pair of manual push buttons located on the dashboard of a vehicle and capable of operating said rocker arm switch at will, said lamp housing having a circular upper flanged top and a circular base flange of substantially equal diameter alternatively adapted to close the opening in the ledge, said stationary hollow support with the plunger and lamp housing together with motor flasher unit form an operating unit based below the ledge and supported on a portion of the vehicle below said ledge, said pinions upon said driven shaft differing from one another by one being a gear pinion meshing directly with the rack upon the plunger and the other being a helical pinion, while the pinion on the motor shaft forming the driving pinion is a helical pinion meshing with the helical pinion upon the driven shaft.

3,128,449
ERROR DETECTING AND CORRECTING SYSTEM
Douglas B. Armstrong, Bedminster, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed June 14, 1960, Ser. No. 35,920
1 Claim. (Cl. 340—146.1)



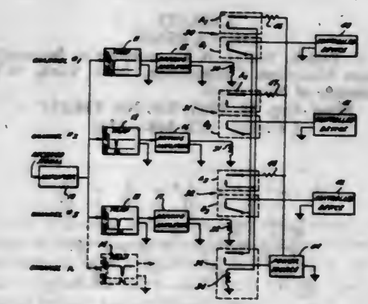
In combination in a redundant error detecting and correcting system, a source for providing input signals, a logic circuit connected to said source for providing information signals, said logic circuit including a plurality of electrically-independent subcircuits each having p output terminals, where p is any positive integer, a parity circuit connected to said source for providing check signals each of which establishes a preassigned parity relationship with selected ones of said information signals, said parity circuit including a plurality of electrically-independent subcircuits each having p output terminals, first and second identical parity reconstruction circuits each having input terminals, means connecting the output terminals of said logic circuit and the output terminals of said parity circuit to respective ones of the input terminals of said first parity reconstruction circuit, means connecting the output terminals of said logic circuit and the output terminals of said parity circuit to respective ones of the input terminals of said second parity reconstruction circuit, an error logic circuit connected to said second parity reconstruction circuit for providing correction signals indicative of erroneous information signals, a corrector circuit responsive to said correction signals for providing corrected versions of said erroneous information signals, an output circuit connected to said corrector circuit for receiving correct infromation signals therefrom, means connecting the output terminals of said logic circuit to said corrector circuit, a detector circuit connected to said parity reconstruction circuits and to said error logic circuit for providing a first indication in response to the occurrence of a fault in one of the logic and parity circuits and for providing a second indication in response to the occurrence of a fault in the first parity reconstruction circuit and for providing a third indication in response to the occurrence of a fault in one of the second parity reconstruction and error logic circuits, and means connected to the output terminals of said logic circuit and responsive to the occurrence of either one of said second and third indications provided by said detector circuit for connecting the output terminals of said logic circuit directly to said output circuit.

3,128,450
MACH NUMBER INDICATING AND COMPUTING MEANS
Robert E. Scott, Los Angeles, and John P. Kemmer, Woodland Hills, Calif., assignors, by mesne assignments, to Litton Industries, Inc., Beverly Hills, Calif., a corporation of Delaware
Filed Jan. 4, 1960, Ser. No. 378
1 Claim. (Cl. 340—149)



Apparatus for comparing the relative pressure ratio of two pressure transducers to a preselected ratio and indicating the result of such comparison comprising: first and second pressure sensitive electrical transducers each effective to develop a voltage in response to pressure, phase comparison means for comparing two applied voltages and developing a signal indicative of the relative magnitude of said voltages, means for applying a preselected fraction of the voltage developed by said first transducer to said phase comparison means, means for applying the voltage developed by said second transducer to said phase comparison means, and indicating means responsive to the signal developed by said phase comparison means for producing a first indication when the preselected fractional voltage applied to said phase comparison means is greater than the voltage developed by said second transducer and a second indication when the preselected fractional voltage applied to said phase comparison means is less than the voltage developed by said second transducer.

3,128,451
ELECTRICAL SYSTEMS
Joseph R. Lewis, Willow Grove, Pa., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Sept. 16, 1959, Ser. No. 840,314
4 Claims. (Cl. 340—171)



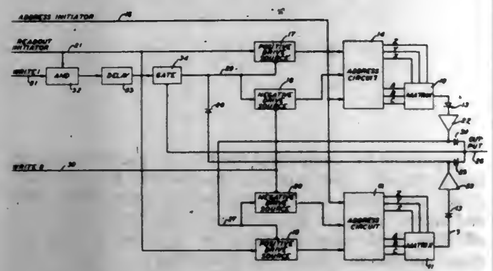
1. A system for controlling at least three devices in response to the application thereto of a corresponding number of different frequency control signals, said system comprising: at least three channels, a common input to said channels, frequency discriminating means in the respective channels constructed to reject different ones of said control signals, whereby upon application of one of said control signals to said common input the signal is rejected in one channel and is passed through at least two other channels, at least three devices to be operated from a power source, and means controlled by said frequency

discriminating means for effecting operation of only one of said devices in response to the applied signal.

3,128,452
MAGNETIC STORAGE CIRCUITS

Ernest G. Andrews, Mountain Lakes, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed May 22, 1959, Ser. No. 815,229
20 Claims. (Cl. 340—174)

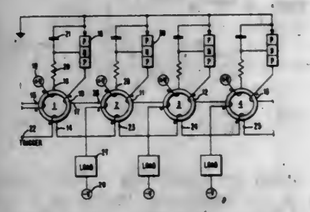


1. In combination first and second identical groups of two-state devices, a pair of sensing means associated respectively with said groups to produce output pulses when said devices are switched from a first of said states to a second of said states, first means responsive to an input signal for switching a preselected one of said devices in said first group to said second state when in said first state, second means responsive to said input signal for switching the device in said second group that corresponds to said preselected device to said second state when in said first state, third means responsive to said output pulses produced by said first and second groups sensing means for disabling said second and first means, respectively, fourth means responsive to said output pulses produced by said second group sensing means for switching said preselected device from said second state to said first state, and fifth means responsive to said output pulses produced by said first group sensing means for switching said corresponding device from said second state to said first state.

3,128,453
DRIVE RING

Donald F. Busch, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Aug. 28, 1961, Ser. No. 134,531
1 Claim. (Cl. 340—174)

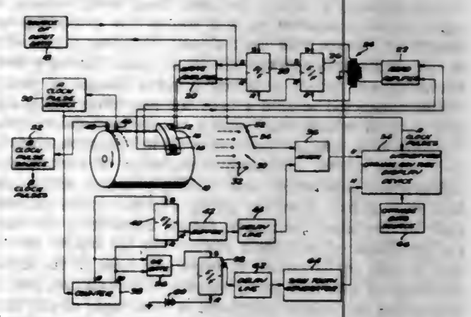


Apparatus for producing sequential pulses upon the receipt of input signals comprising a plurality of stages, each stage including a magnetic core exhibiting bistable states of magnetic remanence, one of which is a reference state, and having a bias winding, a trigger winding, an output winding, and a set winding inductively coupled thereto, a transistor switching device, and an associated load; a plurality of first circuits including the transistor of one stage, the output winding on the core of the same stage, the load associated with the same stage, a set winding on the core of the next succeeding stage connected in a series circuit configuration and with a load potential source; a plurality of second circuits each including a bias potential, a bias winding of one of said stages, and a resistor in series circuit configuration and coupled with the transistor of the same stage for biasing it to a normally non-conductive condition; a third circuit including the trigger windings on each of said stages connected in series circuit configuration; and means for applying a pulse to said third circuit, one of said stages having its core in the non-reference state of remanence being selected and responsive to the pulse applied to said third circuit for switching the core to its reference state, the current induced in the second circuit by the switching of the core in the selected stage to its reference state serving to render the transistor for the selected stage conductive, the current flow in the first circuit for the selected stage due to the conducting transistor serving to complete the switching of the core in the selected stage to its reference state and switching the core of the next succeeding stage from its reference state and provide a drive pulse to the load associated with the selected stage.

3,128,454
SIGNAL DISPLAY SYSTEMS

Jack C. Smeltzer, Torrance, Calif., assignor, by mesne assignments, to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio

Filed Aug. 20, 1958, Ser. No. 756,197
3 Claims. (Cl. 340—174.1)

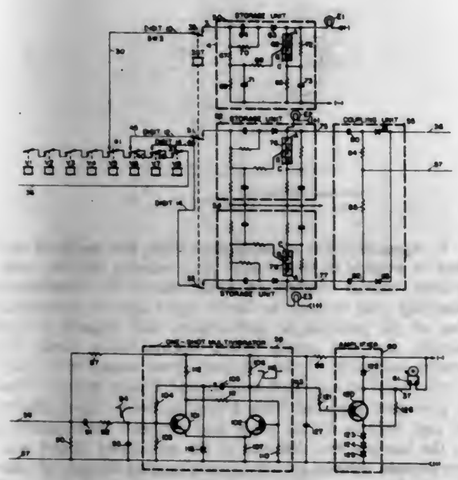


1. In a system of the type wherein a group of digital signals are recorded on a movable storage medium and a writing transducer is operatively juxtaposed to said storage medium, a system for displaying signals recorded on said storage medium comprising a reading transducer, means for positioning said reading transducer operatively adjacent said storage medium and spaced from said writing transducer in the direction of motion of said storage medium a distance at least equal to the distance occupied by said group of digital signals on said storage medium, a digital signal delay means for coupling said reading transducer output to said writing transducer input, said signal delay means including a flip-flop circuit, and means for driving said flip-flop circuit responsive to said reading transducer output signals, cathode-ray tube means, including cathode ray beam generating means, means for deflecting said cathode ray beam along one coordinate axis responsive to said flip-flop circuit output, means for recurrently deflecting said cathode ray beam along a second coordinate axis, means for generating a voltage during alternate intervals of deflection of said cathode ray beam along said second coordinate axis, and means for adding said voltage to the output from said flip-flop circuit for providing two display levels for signals by said cathode ray tube means, and means for applying output from said flip-flop circuit to said cathode-ray tube means to be displayed thereby.

3,128,455
INDICATION SYSTEM AND STORAGE APPARATUS

John A. Snell, Rochester, N.Y., assignor to General Signal Corporation, a corporation of New York

Filed Nov. 24, 1961, Ser. No. 154,447
8 Claims. (Cl. 340—213)

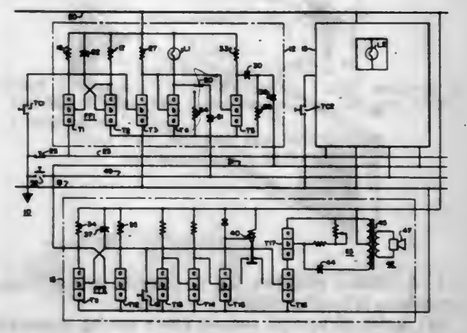


1. In a centralized traffic control organization for indicating the condition of a single piece of apparatus in response to the character of each digit of an indication code cycle having a series of digits, and for causing simultaneously two indications for a single selected piece of apparatus wherein an output voltage of opposite polarities is selectively applied to an output circuit for each individual digit, the combination of an electronic storage device for each output circuit of an indication code cycle, each said storage device having an anode and cathode and gating electrode, circuit means connecting each of said storage devices to a respective output circuit to govern said storage device to conduct in response to an output voltage of one polarity and to govern said storage device to cease conducting in response to an output voltage of opposite polarity, a first indication means connected to each of said storage devices operated to one condition in response to the conducting of its storage device and to another condition in response to the non-conducting of its respective storage device, a coupling circuit means connected to selected pairs of said storage devices operative to pass an effective voltage pulse in response to the application of an output voltage of said one polarity only to its respectively connected storage devices, a mono-stable multivibrator electrically connected to said coupling circuit means operated in response to said effective voltage pulse from said coupling circuit means, and a second indication means responsive to the operation of said mono-stable multivibrator.

3,128,456
ANNUNCIATORS WITH MANUAL RESET

Sheldon D. Silliman, Forest Hills, and John F. Reuther, Swissvale Boro, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Jan. 22, 1957, Ser. No. 635,529
10 Claims. (Cl. 340—213.1)

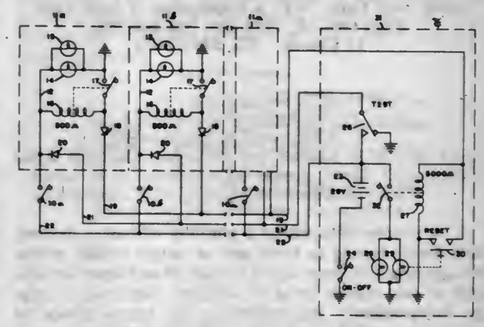


2. An annunciator comprising an alarm device, a flip-flop individual to the alarm device, a plurality of indicating devices, a flip-flop individual to each indicating device, switch means effecting operation of each of the individual flip-flops, means for resetting the individual flip-flops, and capacitor means connecting the individual flip-flops to the alarm device flip-flop.

3,128,457
SERIES OPERATED RELAY ALARM SYSTEM

George T. Culbertson, Gardena, Calif., assignor to Don M. Hallerberg, Los Angeles, Calif.

Filed Apr. 12, 1961, Ser. No. 102,428
4 Claims. (Cl. 340—213.1)

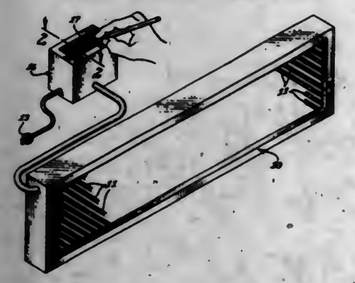


1. An indicator system of the type described comprising: at least one remote station having a fault switch responsive to a predetermined condition, a remote indicator device for each said fault switch energized in response to said predetermined condition, and a first relay having a first relay coil, a master station having a source of supply voltage common to said master station and said at least one remote station, a single master indicator device energized in response to said predetermined condition, and a second relay having a second relay coil included in a series circuit with said first relay coil across said source of supply voltage when said fault switch operates, said second relay coil having a greater impedance than said first relay coil whereby said second relay is operated to energize said master indicator device while said first relay remains in a de-activated state.

3,128,458
STYLUS CONTROLLED SIGN WITH CONTACT GRID OF PARALLEL PLATES

Adolph Romero, 5536 N. 19th Place, Phoenix 16, Ariz.

Filed May 10, 1962, Ser. No. 193,838
3 Claims. (Cl. 340—337)



1. A contact grid box for an electric writing board comprising in combination:

(*a*) series of parallel contact plates having transverse slots formed in the sides thereof placed in side abutting contact,

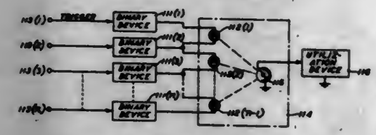
(*b*) insulated wires having exposed ends fitted in and supported by their insulation in said slots,

(*c*) and plastic insulative material in the ends of said slots surrounding said exposed ends of said wires to form a continuous writing surface grid consisting of the ends of said wires and the checkerboard grid contact areas of said plates formed by said ends of said slots.

3,128,459
BINARY GROUP COUNTER

Leon D. Harmon, Warren Township, Somerset County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 18, 1959, Ser. No. 860,398
12 Claims. (Cl. 340—347)



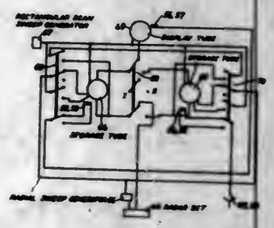
1. A counter comprising a plurality of binary devices, each device having an input and an output circuit, means for applying a different signal to each of said input circuits, each of said signals being of sufficient magnitude to trigger independently and selectively the binary device to which it is applied, a plurality of energy radiation sources each connected between the output circuits of a different pair of said binary devices, and means for detecting the total energy radiated by said radiation sources.

3,128,460
PRODUCTION OF A PICTURE OF THE TRUE PATHS OF MOTION OF RADAR TARGETS

Hans Georg Möller, Hamburg-Bergedorf, and Carl Wilhelm Busch and Friedrich Wilhelm Kallmeyer, Bremen, Germany; said Möller and Busch assignors to Atlas-Werke Aktiengesellschaft, Bremen, Germany

Filed Nov. 20, 1957, Ser. No. 697,565
Claims priority, application Germany Nov. 26, 1956
11 Claims. (Cl. 343—5)

1. Apparatus for visually displaying the paths of motion of objects in the vicinity of a moving vehicle comprising, means located on said vehicle for repetitively scanning said vicinity to derive echo signals representative of the position of said objects with respect to said vehicle, at least one image storage tube, a display tube, means for storing said echo signals derived from a scan on said image storage tube in positions displaced from a starting point representative of said vehicle by an angle and distance corresponding to the bearing and distance of the associated object relative to said vehicle, means for repetitively transferring the picture stored on said image storage tube to said display tube and displacing said starting point in accordance with the progress of said vehicle to provide a representation of said paths of motion on said display tube.

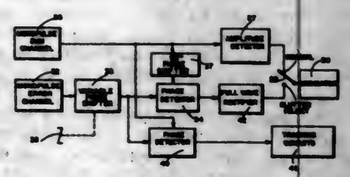


4. Apparatus for visually displaying the paths of motion of objects in the vicinity of a moving vehicle, comprising, means located on said vehicle for repetitively scanning said vicinity to derive echo signals representative of the position of said objects with respect to said vehicle, first and second image storage tubes, means for storing said echo signals derived from consecutive scans respectively on said first and second image storage tubes in positions displaced from a starting point representative of said vehicle by an angle and distance corresponding to the bearing and distance of the associated object relative to said vehicle, means for exchanging the stored echo signals between said image tubes and displacing said starting point in accordance with the progress of said vehicle to develop stored representations of said paths of motion on said image tubes.

3,128,461
CLUTTER MINIMIZER FOR MONOPULSE RADAR

Robert O. Case, Jr., La Habra, Calif., assignor to North American Aviation, Inc.

Filed Nov. 3, 1960, Ser. No. 67,035
11 Claims. (Cl. 343—16)

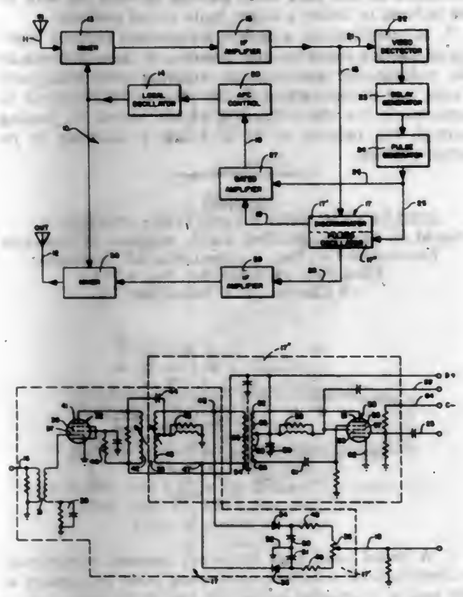


1. A device for use in a monopulse radar system for facilitating the detection of target signals in the presence of clutter, said monopulse radar having sum and error channels and an indicator, comprising means for detecting the quadrature component of the signals in said error channel, said quadrature detecting means being responsive to signals from said sum channel with respect to signals from said error channel, and means for alternatively coupling the output of said quadrature detecting means or the output of said sum channel to said indicator.

3,128,462
TEST ARRANGEMENT

Martin G. Woolfson, Baltimore, Md., assignor to Aircraft Armaments, Inc., Cockeysville, Md., a corporation of Maryland

Filed July 2, 1959, Ser. No. 824,554
11 Claims. (Cl. 343—17.7)



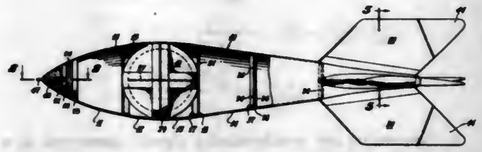
1. A radar test set comprising means to receive an initial radar RF pulse, means including a tunable local oscillator for converting said radar RF pulse to a radar IF pulse, means to convert said radar IF pulse to a video pulse delayed in time with respect to said initial radar RF pulse, a discriminator having a tank circuit tuned to a given frequency and responsive to said radar IF pulse for producing an error signal having a polarity and magnitude proportional to the deviation of the frequency of said radar IF pulse from said given frequency, control means responsive to said error signal for tuning said local oscillator to a frequency removed from that of said radar RF pulse by an amount equal to said given frequency, and an IF oscillator including a tank circuit tuned to said given frequency and responsive to the delayed video pulse for producing an IF echo pulse delayed in time with respect to said IF radar pulse and at substantially the same frequency, means for maintaining the magnitude and phase of the voltages in the tank circuit of the discriminator equal to the magnitude and phase of the voltages in the tank circuit of the IF oscillator so that the resonant frequency of the discriminator tank circuit is the same as the resonant frequency of the oscillator tank circuit, and means including said local oscillator for converting said IF echo pulse to an RF echo pulse delayed in time with respect to said RF radar pulse and at substantially the same frequency.

11. In combination, means including a local oscillator for converting high frequency input pulses to lower frequency pulses, an AFC circuit for stabilizing said local oscillator including a discriminator having a circuit which is resonant at a frequency substantially the same as said lower frequency pulses, detector means for converting said lower frequency pulses to video pulses, means for delaying said video pulses with respect to said input pulses, an oscillator having a resonant circuit which includes the resonant circuit of said discriminator, said oscillator being responsive to said delayed video pulses for producing delayed pulses at substantially the same frequency as said lower frequency pulses, and means including said local oscillator for converting the delayed lower frequency pulses to delayed output pulses at the same frequency as the input pulses.

3,128,463
FRANGIBLE TARGET

Robert J. Hopper, Pacific Palisades, Calif., assignor to Del Mar Engineering Laboratories, Los Angeles, Calif., a corporation

Filed Dec. 28, 1955, Ser. No. 555,858
14 Claims. (Cl. 343—18)

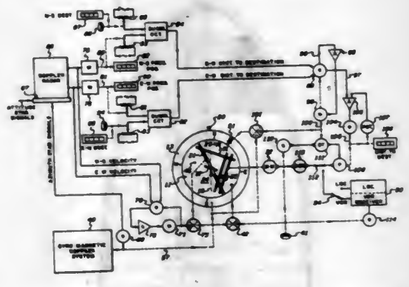


1. An aerial tow target of the type described, comprising: a plurality of concavo-convex longitudinally extending body sections formed of a low density, low weight non-metallic material permeable by radar signals; means holding said sections assembled to form a hollow streamlined elongate body member having a low-drag aerodynamic stable configuration, said holding means being permeable by radar signals and including internal wall means for mounting and supporting a plurality of sheets of metallic foil, said wall means supporting said foil sheets to provide at least three normally intersecting reflecting surfaces for reflecting exteriorly propagated radar signals; said body sections including integral extensions forming, when said sections are assembled, stabilizing fins so contoured as to rotate said body member about its longitudinal axis in towed flight; and swivel means carried by said body member for attaching the latter to a tow line for tow by a towing aircraft.

3,128,464
NAVIGATION INSTRUMENT FOR DIRIGIBLE CRAFT

Lloyd Kaufman, Freeport, and Richard R. Strock, Levittown, N.Y., assignors to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware

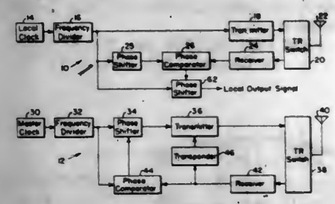
Filed Dec. 16, 1959, Ser. No. 859,976
15 Claims. (Cl. 343—107)



1. A navigation instrument for dirigible craft comprising a reference index adapted to indicate the heading of said craft, means including a positionable ground track ponter cooperable with said index for indicating the orientation of the ground track with respect to said craft

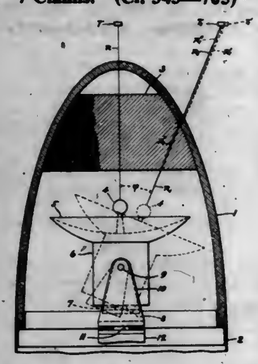
heading, and meanse including a positionable course deviation pointer cooperable with said index for indicating the deviation of said craft from a desired course.

3,128,465
TIMING SYNCHRONIZATION BY RADIO FREQUENCY COMMUNICATION
Martin B. Brilliant, Cambridge, Mass., assignor to National Company, Inc., Melrose, Mass., a corporation of Massachusetts
Filed July 27, 1961, Ser. No. 127,249
6 Claims. (Cl. 343—225)



1. Apparatus for synchronizing signals generated at a local station with signals generated at a master station, said apparatus comprising means located at said local station to transmit to said master station recurrent signals manifesting the timing of said local signals, means located at said master station to determine the timing deviation of the signals received from said local station with respect to the signals generated at said master station, means located at said master station to transmit to said local station recurrent signals manifesting a timing deviation from said master signals equal and opposite to that of the signals received at said master station, means located at said local station to determine the timing deviation of the signals received from said master station with respect to the signals generated at said local station, and means to introduce a correction of the timing of said local signals corresponding to approximately one-half of the amount of the deviation determined at said local station.

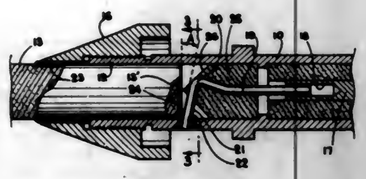
3,128,466
RADOME BORESIGHT ERROR COMPENSATOR
Donald L. Brown, Akron, and Alden L. Rogers, Cuyahoga Falls, Ohio, assignors to Goodyear Aerospace Corporation, a corporation of Delaware
Filed Sept. 4, 1953, Ser. No. 378,514
7 Claims. (Cl. 343—705)



1. For a guided missile a radar antenna radome forming a body of rotation of elliptical shape and being made of plies of resin-impregnated glass fiber cloth, a rotatable and tiltable antenna located in said radome, and a plug made of material having a low dielectric constant inserted in and in circumferential contact with the front portion of the radome and being in the path of the electro-magnetic rays emitted from the antenna to compensate the refraction of said rays when passing through the wall of the radome to locate a target in its actual position.

7. In combination, a hollow streamlined radome capable of passing electromagnetic waves, a radar antenna in the radome for emitting or receiving electromagnetic waves, and means carried by the inside of the radome to compensate for the refraction of the waves in passing through the radome so as to locate a scatterer in its actual position.

3,128,467
DIELECTRIC ROD RADIATING ANTENNA
Donald H. Lanctot, Malibu, Calif., assignor to Don-Lan Electronics Co., Inc., a corporation of California
Filed Feb. 19, 1960, Ser. No. 9,771
8 Claims. (Cl. 343—768)

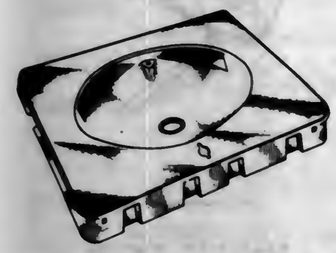


1. A broad band high frequency antenna comprising, in combination: a hollow conducting body terminaing at one end in a co-axial connector and at its other end in a sleeve in co-axial alignment with said connector; a rod member of high dielectric material having a cylindrical section received within said sleeve and rotatable therein, the remaining portion of said rod extending from the end of said sleeve in axial alignment therewith; a probe co-axially disposed within said body having one end connected to the inner conductor of said connector and its other end terminating in a laterally bent portion in juxtaposed relationship to the base of said cylindrical section, said laterally bent portion being bent less than 90 degrees with respect to the axis of said body to form an acute angle with the plane of said base, the extreme end of said bent portion being connected to said body, and a conductive coating surrounding the exterior cylindrical surface of that portion of said cylindrical section of said rod within said sleeve, said coating extending over a circumferential edge portion of said base at the end of said cylindrical section to provide a sector shaped coating on said base, said sector shaped coating being defined by converging edges of said coating extending from said circumferential edge portion towards the central axis of said rod, said laterally bent portion and said sector shaped coating constituting a coupling for transferring electromagnetic energy passed into said connector to said rod member, said rod member serving as a directive lens for said electromagnetic energy, rotation of said rod member through small angles less than the angle of convergence of said sector shaped coating serving to vary the position of said sector shaped coating with respect to said laterally bent portion of said probe to tune said coupling for maximum power transfer, and rotation of said rod member over ninety degrees serving to alter the mode of excitation of said electromagnetic energy in said rod member transferred from said connector to said rod member.

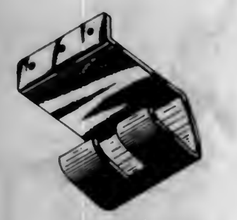
DESIGNS

APRIL 7, 1964

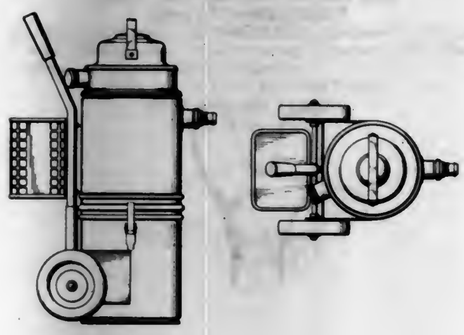
197,879
LAVATORY
Stanley F. Korol, Johnstown, Pa., assignor to Crane Co., Johnstown, Pa., a corporation of Illinois
Filed Nov. 7, 1962, Ser. No. 72,411
Term of patent 14 years
(Cl. D4—2)



197,880
RAZOR HOLDER
Alan Rubin, 104 Chadwick Drive, Charleston, S.C.
Filed Aug. 14, 1963, Ser. No. 76,213
Term of patent 14 years
(Cl. D4—3)



197,881
COMBINED PORTABLE VACUUM CLEANER TANK AND ACCESSORY BASKET
William E. Holt, % Holt Mfg. Co., 10702 46th St., Tampa, Fla.
Filed Feb. 26, 1962, Ser. No. 68,988
Term of patent 14 years
(Cl. D9—2)



197,882
GAS OPERATED PLUMBER'S HELPER
Delmar C. Steinwedel, Seymour, Ind., assignor to Seymour Tool & Engineering Co., Inc., Seymour, Ind., a corporation of Indiana
Filed Feb. 7, 1963, Ser. No. 73,474
Term of patent 14 years
(Cl. D9—2)



197,883
DOOR HANDLE
Philip Crain, Valley Stream, N.Y., assignor to Allen-Stevens Corp., Woodside, N.Y., a corporation of New York
Filed Mar. 26, 1963, Ser. No. 74,139
Term of patent 14 years
(Cl. D10—8)



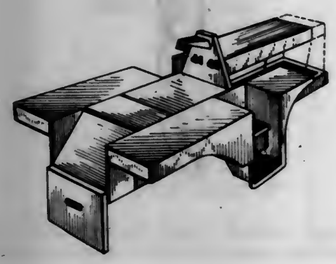
197,884
COACH FOR PICK-UP TRUCKS
Steve P. De Gennaro and Steve J. De Gennaro, both of 6301 Industrial Ave., Riverside, Calif.
Filed Feb. 28, 1963, Ser. No. 73,753
Term of patent 14 years
(Cl. D14—3)



197,885
TOP FOR A PASSENGER VEHICLE
Dominic A. Saporito, Birmingham, Mich., assignor to Kalamazoo Manufacturing Company, Kalamazoo, Mich., a corporation of Michigan
Filed Mar. 7, 1963, Ser. No. 73,854
Term of patent 7 years
(Cl. D14—3)



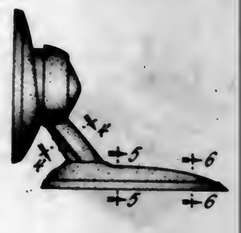
197,886
BODY FOR A TRACTOR
Lovell R. Simmons, Horace Hilton Ray, and Lester Rasberry, Jackson, Miss., assignors to M-R-S Manufacturing Company, Flora, Miss., a corporation of Delaware
Filed May 9, 1963, Ser. No. 74,820
Term of patent 14 years
(Cl. D14—3)



197,887
REAR VIEW MIRROR
Wallace W. Ward, Chatham Township, Morris County, N.J., assignor to Diecasters, Inc., Closter, N.J., a corporation of New Jersey
Filed Aug. 29, 1961, Ser. No. 66,532
Term of patent 14 years
(Cl. D14—6)



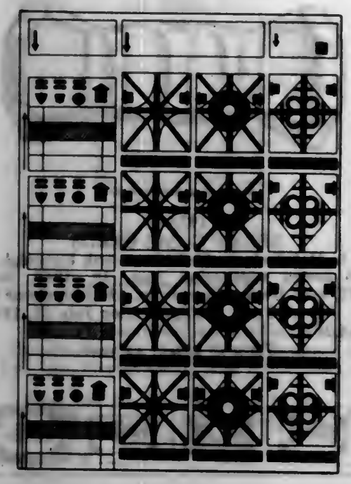
197,888
REAR VIEW MIRROR
Karl H. Jepson and Richard L. Jones, Birmingham, and Charles R. Oliver, Utica, Mich., and John A. Busby, Anderson, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 25, 1963, Ser. No. 76,732
Term of patent 7 years
(Cl. D14—6)



197,889
COMBINED GUM AND MUSCLE EXERCISER OR THE LIKE
Martin A. Haas, 1055 Medio Drive, Pacific Palisades, Calif.
Filed Feb. 18, 1963, Ser. No. 73,605
Term of patent 14 years
(Cl. D24—1)



197,890
DIRECTIONAL CHART FOR TRAVELERS
Charles Chong, 1330 New Hampshire Ave. NW., Washington, D.C.
Filed Oct. 14, 1963, Ser. No. 76,960
Term of patent 3½ years
(Cl. D25—1)



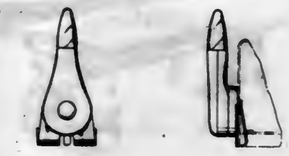
197,891
ELECTRICAL DEVICE COVER PLATE
Robert E. V. Ramsing, 15283 El Sonato, Whittier, Calif.
Filed Oct. 14, 1963, Ser. No. 76,957
Term of patent 14 years
(Cl. D26—13)



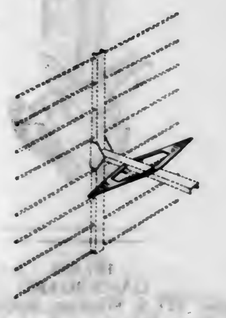
197,892
TAPE CARTRIDGE
Sheldon Lee Pastor, St. Paul, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Jan. 9, 1963, Ser. No. 73,113
Term of patent 14 years
(Cl. D26—14)



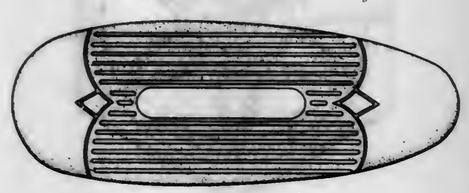
197,893
ILLUMINABLE TELEPHONE SWITCH ATTACHMENT OR SIMILAR ARTICLE
Arthur L. Davenport, 5140 Avenida Hacienda, Tarzana, Calif.
Filed Mar. 4, 1963, Ser. No. 73,800
Term of patent 14 years
(Cl. D26—14)



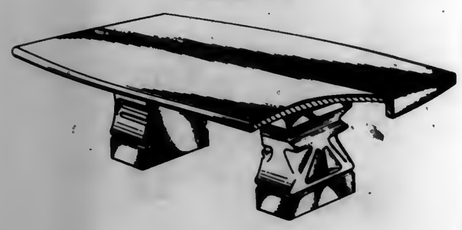
197,894
ANTENNA DIPOLE ELEMENT OR SIMILAR ARTICLE
Harry Greenberg, Kerhonkson, and Charles C. Y. Liu, Ellenville, N.Y., assignors to Channel Master Corporation, Ellenville, N.Y., a corporation of New York
Filed Aug. 15, 1963, Ser. No. 76,223
Term of patent 14 years
(Cl. D26—14)



197,895
FIREARMS RECOIL PAD
Frank A. Pachmayr, Los Angeles, Calif., assignor to Mershon Company, a Division of Firearms Accessories, Inc., Los Angeles, Calif., a corporation of California
Filed Sept. 30, 1963, Ser. No. 76,788
Term of patent 14 years
(Cl. D30—1)



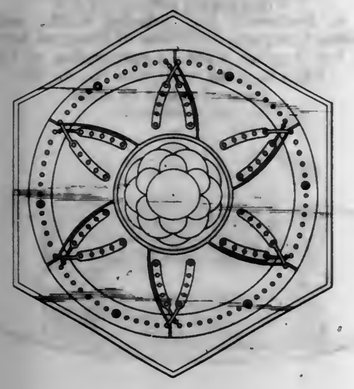
197,896
TABLE OR THE LIKE
Herbert Ritts, P.O. Box 64,336, Los Angeles 64, Calif.
Filed Jan. 21, 1963, Ser. No. 73,251
Term of patent 7 years
(Cl. D33—14)



197,897
STUFFED ANIMAL TOY
Florence Journer, 276 1st Ave., New York 9, N.Y.
Filed Dec. 30, 1963, Ser. No. 77,961
Term of patent 7 years
(Cl. D34—2)



197,898
GAMEBOARD
Silas C. Vines, 927 S. Windsor, Stockton 5, Calif., and Murrel O. Short, 3911 Gross Road, Santa Cruz, Calif.
Filed May 29, 1963, Ser. No. 75,123
Term of patent 3½ years
(Cl. D34—5)



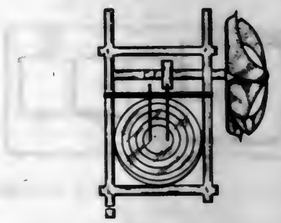
197,899
HAND-GRIP WEIGHT FOR EXERCISING OR THE LIKE
Eugene G. Sutcliffe, Kirkwood, Mo. (122 E. Main Ave., St. Louis, Mo.)
Filed Sept. 23, 1963, Ser. No. 76,695
Term of patent 14 years
(Cl. D34—5)



197,900
SET OF GAME CARDS
Joseph L. Hvizdash, N. Main St., North Uxbridge, Mass.
Original design application Mar. 18, 1960, Ser. No. 59,782, now Design Patent No. 196,180, dated Sept. 3, 1963. Divided and this application July 21, 1961, Ser. No. 66,261
Term of patent 14 years
(Cl. D34—13)



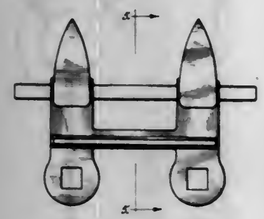
197,901
COMBINED WINDMILL AND DRUM TOY
Cheung Ngun Lee, 779 Commercial St., San Francisco, Calif.
Filed Sept. 16, 1963, Ser. No. 76,601
Term of patent 14 years
(Cl. D34—15)



197,902
DRAWBAR FOR HARROWS AND THE LIKE
Gordon A. Irwin, Gwinner, N. Dak., assignor to Melroe Manufacturing Company, Gwinner, N. Dak., a corporation of North Dakota
Filed Apr. 1, 1963, Ser. No. 74,228
Term of patent 14 years
(Cl. D39—1)



197,903
MOWER GUARD
Thomas J. Scarnato, Park Ridge, and Paul C. Gordon, Riverside, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Continuation of design applications Ser. No. 73,451, Feb. 5, 1963 and 73,452, Feb. 5, 1963. This application Aug. 2, 1963, Ser. No. 76,137
Term of patent 14 years
(Cl. D40—1)



197,904
PLATE OR SIMILAR ARTICLE
Shigeru Masuda, Nagoya, Aichi, Japan, assignor to Noritake Co., Inc., New York, N.Y., a corporation of New York
Filed July 30, 1962, Ser. No. 71,090
Term of patent 3½ years
(Cl. D44—15)



197,905
CONDIMENT SHAKER
Morris Friedman, New York, N.Y., and Andrey V. Mackey, Ambler, Pa., assignors to Minerware, Inc., New York, N.Y., a corporation of New York, and H.M.S. Associates Co., Willow Grove, Pa., a corporation of Pennsylvania, jointly
Filed Nov. 14, 1963, Ser. No. 77,422
Term of patent 14 years
(Cl. D44—22)



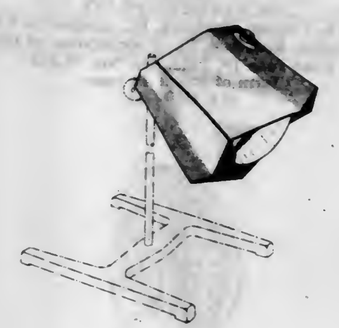
197,906
NECKLACE SHORTENER
Ernst Bohlinger, 31—15 25th Ave., Astoria, Long Island 5, N.Y., and Samuel Friedman, 556 Ave. Z, Brooklyn, N.Y.
Filed Oct. 21, 1963, Ser. No. 77,057
Term of patent 3½ years
(Cl. D45—4)



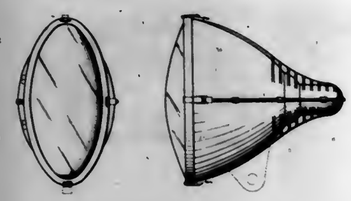
197,907
NUT FOR AN EAR WIRE
George A. Armstrong, 314 Norwood Ave., Cranston, R.I.
Filed June 4, 1962, Ser. No. 70,410
Term of patent 3½ years
(Cl. D45—9)



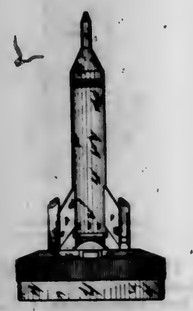
197,908
THERAPEUTIC LAMP
William H. Chaffee, Hinsdale, Ill., assignor to United Fabricators, Inc., Farmington, Conn., a corporation of Ohio
Filed June 12, 1963, Ser. No. 75,312
Term of patent 14 years
(Cl. D48—20)



197,909
LUMINAIRE
Alva B. Winters, Golf, Ill., assignor to Revere Electric Manufacturing Company, a corporation of Delaware
Filed Aug. 22, 1963, Ser. No. 76,328
Term of patent 14 years
(Cl. D48—20)



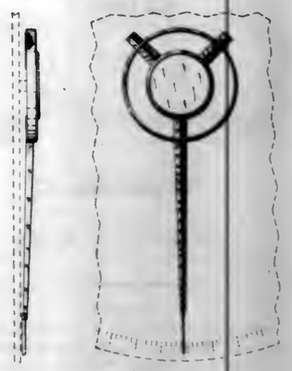
197,910
TABLE LIGHTER
Zenzaburo Yoshino, 7–1, 1-chome, Toshin-cho, Itabashi-ku, Tokyo, Japan
Filed Feb. 7, 1963, Ser. No. 73,471
Term of patent 14 years
(Cl. D48—27)



197,911
ESCUTCHEON PLATE
La Verne E. Clayton, Rockford, Ill., assignor to Amerock Corporation, Rockford, Ill., a corporation of Illinois
Filed June 19, 1963, Ser. No. 75,420
Term of patent 14 years
(Cl. D50—6)



197,912
WEIGHING SCALE POINTER
Raymond D. Rodd, Rutland, Vt., assignor to Howe Richardson Scale Company, Rutland, Vt., a corporation of Delaware
Filed Oct. 15, 1962, Ser. No. 72,102
Term of patent 14 years
(Cl. D52—10)

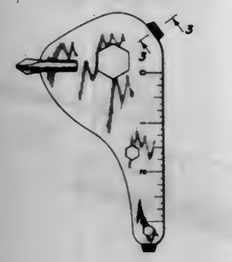


197,913
WORKPIECE MOUNTING AND TURNING UNIT FOR SURFACE GRINDERS AND THE LIKE
Paul G. Nesteriak, Pearmain St., Shelton, Conn.
Filed Aug. 17, 1962, Ser. No. 71,342
Term of patent 14 years
(Cl. D54—6)

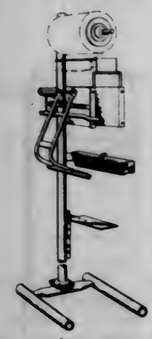
197,914
FORK OR SIMILAR ARTICLE OF FLATWARE
Siro R. Toffolon, Meriden, Conn., assignor to The International Silver Company, Meriden, Conn., a corporation of Connecticut
Filed Nov. 4, 1963, Ser. No. 77,289
Term of patent 14 years
(Cl. D54—12)



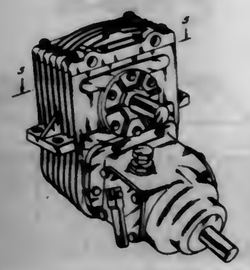
197,915
UTILITY TOOL
Nancy F. Ayars, 4404 La Crosse Ave., San Diego, Calif.
Filed Oct. 22, 1962, Ser. No. 72,213
Term of patent 14 years
(Cl. D54—13)



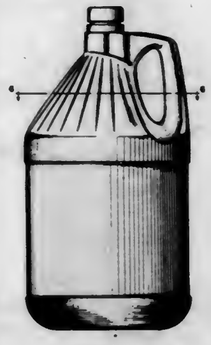
197,916
PACKAGING MACHINE
William W. Thompson, 3985 Race Road, Cincinnati, Ohio
Filed Apr. 13, 1961, Ser. No. 64,713
Term of patent 3½ years
(Cl. D55—1)



197,917
TRANSMISSION
Ernest R. Casale, Whittier, Calif.
(939 Goodrich Blvd., Los Angeles, Calif.)
Filed Mar. 23, 1962, Ser. No. 69,402
Term of patent 3½ years
(Cl. D55—1)



197,918
JUG
Albert C. Petitto, Hudson, Mass., assignor to Foster Grant Co., Inc., Leominster, Mass., a corporation of Delaware
Filed May 16, 1962, Ser. No. 70,166
Term of patent 14 years
(Cl. D58—5)



197,919
BEER BOTTLE
Richard C. Runyon, 11662 Mayfield Ave., Los Angeles, Calif.
Filed May 1, 1961, Ser. No. 64,974
Claims priority, application Denmark Apr. 15, 1961
Term of patent 14 years
(Cl. D58—8)



197,920
BOTTLE
Paul Nataf, 54 Rue de Sablonville, Neuilly-sur-Seine, France
Filed July 3, 1961, Ser. No. 65,801
Claims priority, application France Jan. 4, 1961
Term of patent 14 years
(Cl. D58—8)



197,921
BOTTLE COVERING
David M. Marsh, Roslyn, N.Y., assignor to Huntley Ltd., a corporation of St. Thomas, Virgin Islands
Filed Sept. 24, 1962, Ser. No. 71,819
Term of patent 14 years
(Cl. D58—8)



197,922
CLOSURE PLUG
Herbert P. Senoff, Trenton, N.J., assignor to Allen-Stevens Drum Accessories Corp., Woodside, N.Y., a corporation of New York
Filed May 16, 1962, Ser. No. 70,167
Term of patent 14 years
(Cl. D58—10)



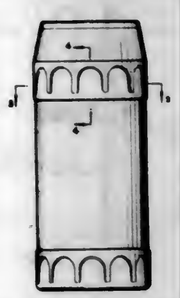
197,923
BOX
Carlo Caprioli, Montreal, Quebec, Canada, assignor to Plastic Packaging Products Limited, Montreal, Quebec, Canada
Filed Sept. 10, 1962, Ser. No. 71,616
Term of patent 14 years
(Cl. D58—11)



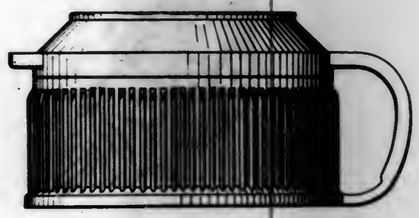
197,924
TRAY FOR DISPLAYING COIN HOLDERS OR THE LIKE
Giorgio I. Spadaro, Evanston, Ill., assignor to Simon L. Friedman, Chicago, Ill.
Filed Dec. 10, 1962, Ser. No. 72,779
Term of patent 14 years
(Cl. D58—12.6)



197,925
DISPENSING CONTAINER
Richard C. Allen, Glen Ellyn, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed July 26, 1963, Ser. No. 75,993
Term of patent 14 years
(Cl. D58—17)



197,926
CAP FOR CONTAINERS
Morton B. Stull, Boonton, N.J. (% Stull Engraving Co., 221–223 Banta Ave., Garfield, N.J.)
Filed July 5, 1962, Ser. No. 70,805
Term of patent 14 years
(Cl. D58—26)

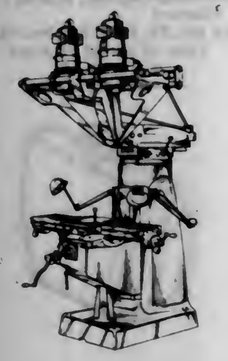


197,927
COMBINED CAP AND DISPENSER FOR PRESSURIZED CONTAINERS
Robert Henry Abplanalp, 10 Hewitt Ave., Bronxville, N.Y.
Filed July 9, 1963, Ser. No. 75,715
Term of patent 14 years
(Cl. D58—26)

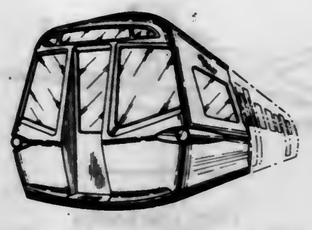


197,928
SERVING ATTACHMENT FOR A JAR OR SIMILAR ARTICLE
Everett A. Johnson, 15 S. Prospect Ave., Park Ridge, Ill., and Rose Marie Ann Bragiel, 4224 Henry St., Hammond, Ind.
Filed Aug. 29, 1963, Ser. No. 76,384
Term of patent 14 years
(Cl. D58—26)

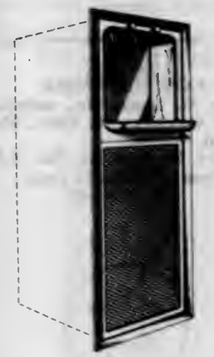
197,929
STEREO PHOTOGRAPHIC AND PROJECTION APPARATUS
Harry E. Nogle, Winthrop Harbor, Ill., assignor to Chicago Aerial Industries, Inc., a corporation of Delaware
Filed June 24, 1963, Ser. No. 75,500
Term of patent 14 years
(Cl. D61—1)



197,930
RAILWAY RAPID TRANSIT CAR BODY
Charles Herbert Gale, 2721 Little Tell, Pontiac, Mich.
Filed May 23, 1963, Ser. No. 75,018
Term of patent 14 years
(Cl. D66—1)



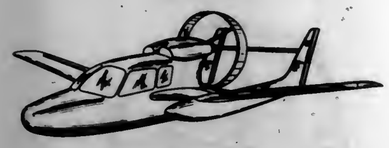
197,931
WATER DISPENSER
Roy Eugene Roberts, Cleburne, Tex., assignor to Rangaire Corporation, a corporation of Texas
Filed Feb. 12, 1963, Ser. No. 73,530
Term of patent 14 years
(Cl. D67—4)



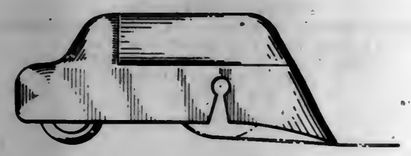
197,932
BOAT HULL
James W. Greig, Grosse Pointe Park, and Leslie J. Berridge, Detroit, Mich., assignors to Woodall Industries, Incorporated, Detroit, Mich., a corporation of Michigan
Filed Jan. 16, 1963, Ser. No. 73,190
Term of patent 14 years
(Cl. D71—1)



197,933
AIRPLANE
Arthur H. Sumner, 150 W. Bayberry Road, Islip, N.Y.
Filed Jan. 28, 1963, Ser. No. 73,354
Term of patent 3½ years
(Cl. D71—1)



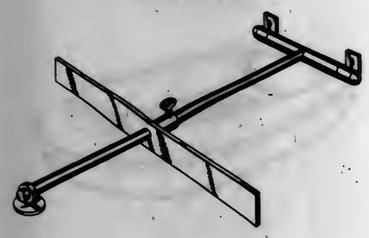
197,934
TAPE DISPENSER
Earl Wayne Weaver, 1091 Suemar Road, Dunedin, Fla.
Filed Sept. 19, 1962, Ser. No. 71,764
Term of patent 14 years
(Cl. D74—1)



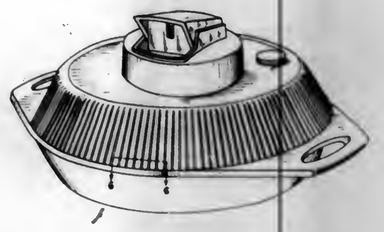
197,935
TAPE DISPENSER
Alan E. Sherman, St. Louis, Mo., assignor to Superior Insulating Tape Company, St. Louis, Mo., a corporation of Missouri
Filed Oct. 16, 1963, Ser. No. 76,997
Term of patent 14 years
(Cl. D74—1)



197,936
FOOT ALIGNING ROD FOR X-RAYING PATIENTS
Louis E. Kroll, Cass County, Mich.
(1515 S. Nappanee St., Elkhart, Ind.)
Filed May 3, 1963, Ser. No. 74,737
Term of patent 7 years
(Cl. D83—1)



197,937
STEAM VAPORIZER OR THE LIKE
Lawrence Katzman and Monte L. Levin, New York, N.Y., assignors to Kaz Manufacturing Co., Inc., New York, N.Y., a corporation of New York
Filed June 12, 1963, Ser. No. 75,319
Term of patent 14 years
(Cl. D83—1)



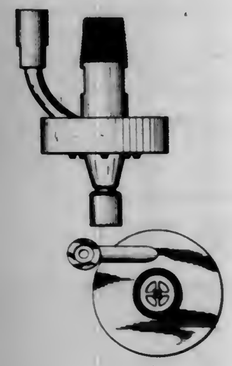
197,938
HAIR DRYING BLOWER
Richard B. Hall, Cincinnati, Ohio, assignor to Dominion Electric Corporation, a corporation of Ohio
Filed June 20, 1963, Ser. No. 75,451
Term of patent 14 years
(Cl. D86—10)



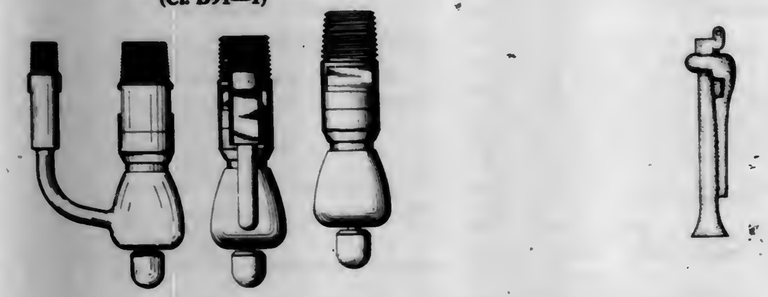
197,939
BOWLING BALL CASE OR SIMILAR ARTICLE
Sam Fabes, Kansas City, Mo., assignor to Gateway Luggage Manufacturing Co., Inc., Kansas City, Mo., a corporation of Missouri
Filed Jan. 29, 1962, Ser. No. 68,540
Term of patent 14 years
(Cl. D87—5)



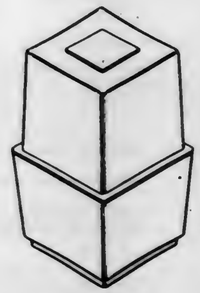
197,940
COMBINED RESONATOR AND NOZZLE FOR ACOUSTIC TREATMENT OF LIQUIDS
William K. Fortman, Syosset, N.Y., assignor to Astrosonics, Inc., Syosset, N.Y.
Filed Aug. 28, 1962, Ser. No. 71,475
Term of patent 14 years
(Cl. D91—1)



197,941
COMBINED RESONATOR AND NOZZLE FOR ACOUSTIC TREATMENT OF LIQUIDS
William K. Fortman, Syosset, N.Y., assignor to Astrosonics, Inc., Syosset, N.Y.
Filed Aug. 28, 1962, Ser. No. 71,480
Term of patent 14 years
(Cl. D91—1)



197,942
WATER SOFTENER
Herman George Treiss, Jr., 100 Westbrook Drive, Lancaster, Pa.
Filed Apr. 1, 1963, Ser. No. 74,244
Term of patent 14 years
(Cl. D91—1)



197,943
BALL COCK
Alvin E. Jacobson, Jr., Grand Haven, Mich., assignor to Grand Haven Brass Foundry, Grand Haven, Mich., a partnership
Filed Jan. 15, 1962, Ser. No. 68,383
Term of patent 14 years
(Cl. D91—3)

LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 7TH DAY OF APRIL, 1964

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Becker, Bernard, to Lewis-Shepard Co. Hydraulic hose take up. Re. 25,548, 4–7–64, Cl. 214—653.

Hendrix, William L. Method of stringing cable. Re. 25,549, 4–7–64, Cl. 254—134.3.

Hewett, John B., and E. A. Windham. Air conditioning systems. Re. 25,550, 4–7–64, Cl. 62—176.

Lewis-Shepard Co.: *See*—
Becker, Bernard. Re. 25,548.

McAllister, Harry E. Telephone equipment. Re. 25,551, 4–7–64, Cl. 179—175.2.

Skidmore-Hungerford Industries, Inc.: *See*—
Skidmore, Richard H. Re. 25,547.

Skidmore, Richard H., to Skidmore-Hungerford Industries, Inc. Predetermined torque release wrench. Re. 25,547, 4–7–64, Cl. 81—62.4.

Windham Elwood A.: *See*—
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Applanalp, Robert H. Combined cap and dispenser for pressurized container. 197,927, 4–7–64, Cl. D58—26.

Allen, Richard C., to Continental Can Co., Inc. Dispensing container. 197,925, 4–7–64, Cl. D58—17.

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Crain, Philip. 197 883.

Allen-Stevens Drum Accessories Corp.: *See*—
Senoff, Herbert P. 197,922.

Amerock Corp.: *See*—
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Armstrong, George A. Nut for an ear wire. 197,907, 4–7–64, Cl. D45—9.

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Fortman, William K. 197,940.
Fortman, William K. 197,941.

Ayars Nancy F. Utility tool. 197,915, 4–7–64, Cl. D54—13.

Berridge, Leslie J.: *See*—
Greig, James W., and Berridge. 197,932.

Bohlinger, Ernst, and S. Friedman. Necklace shortener. 197,906, 4–7–64, Cl. D45—4.

Bragiel, Rose M. A.: *See*—
Johnson, Everett A., and Bragiel. 197,928.

Busby, John A.: *See*—
Jepson, Karl H., Jones, Oliver, and Busby. 197,888.

Caprioli, Carlo, to Plastic Packaging Products Ltd. Box. 197,923, 4–7–64, Cl. D58—11.

Casale, Ernest R. Transmission. 197,917, 4–7–64, Cl. D55—1.

Chaffee, William H., to United Fabricators, Inc. Therapeutic lamp. 197,908, 4–7–64, Cl. D48—20.

Channel Master Corp.: *See*—
Greenberg, Harry, and Liu. 197,894.

Chicago Aerial Industries, Inc.: *See*—
Nogle, Harry E. 197,929.

Chong, Charles. Directional chart for travelers. 197,890, 4–7–64, Cl. D25—1.

Clayton, La Verne E., to Amerock Corp. Escutcheon plate. 197 911, 4–7–64, Cl. D50—6.

Continental Can Co., Inc.: *See*—
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Crane Co.: *See*—
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Davenport, Arthur L. Illuminable telephone switch attachment or similar article. 197,893, 4–7–64, Cl. D26—14.

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Fabes, Sam, to Gateway Luggage Mfg. Co., Inc. Bowling ball case or similar article. 197 939, 4–7–64, Cl. D87—5.

Fortman, William K., to Astrosonics, Inc. Combined resonator and nozzle for acoustic treatment of liquids. 197,940, 4–7–64, Cl. D91—1.

Fortman, William K., to Astrosonics, Inc. Combined resonator nozzle for acoustic treatment of liquids. 197,941, 4–7–64, Cl. D91—1.

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Petitto, Albert C. 197,918.

Friedman, Morris, and A. V. Mackey, to Minerware, Inc., and H.M.S. Associates Co., jointly. Condiment shaker. 197,905, 4–7–64, Cl. D44—22.

Friedman, Samuel: *See*—
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Friedman Simon L.: *See*—
Spadaro, Giorgio I. 197,924.

Gale, Charles H. Railway rapid transit car body. 197,930, 4–7–64, Cl. D36—1.

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General Motors Corp.: *See*—
Jepson, Karl H., Jones, Oliver, and Busby. 197,888.

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Grand Haven Brass Boundry: *See*—
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Greenberg, Harry, and C. C. Y. Liu, to Channel Master Corp. Antenna dipole element or similar article. 197,894, 4–7–64, Cl. D26—14.

Greig, James W., and L. J. Berridge, to Woodall Industries, Inc. Boat hull. 197,932, 4–7–64, Cl. D71—1.

H.M.S. Associates Co.: *See*—
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Hall, Richard B., to Dominion Electric Corp. Hair drying blower. 197,938, 4–7–64, Cl. D86—10.

Hass, Martin A. Combined gum and muscle exerciser or the like. 197 889, 4–7–64, Cl. D24—1.

Holt, William E. Combined portable vacuum cleaner tank and accessory basket. 197,881, 4–7–64, Cl. D9—2.

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Johnson, Everett A., and R. M. A. Bragiel. Serving attachment for a jar or similar article. 197,928, 4–7–64, Cl. D58—26.

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Katzman, Lawrence, and M. L. Levin, to Kaz Mfg. Co., Inc. Steam vaporizer. 197,937, 4–7–64, Cl. D83—1.

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Korol, Stanley F., to Crane Co. Lavatory. 197,879, 4–7–64, Cl. D4—2.

Kroll, Louis E. Foot aligning rod for X-raying patients. 197,936. 4–7–64, Cl. D83—1.

Lee, Cheung N. Combined windmill and drum toy. 197,901, 4–7–64, Cl. D34—15.

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Liu, Charles C. Y.: *See*—
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M-R-S Mfg. Co.: *See*—
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Mackey, Andrey V.: *See*—
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Masuda, Shigeru, to Noritake Co., Inc. Plate or similar article. 197,904, 4–7–64, Cl. D44—15.

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Pastor, Sheldon L. 197,892.

Nataf, Paul. Bottle. 197,920, 4–7–64, Cl. D58—8.

Nesteriak, Paul G. Workpiece mounting and turning unit for surface grinders and the like. 197,916, 4–7–64, Cl. D54—6.

Nogle, Harry E., to Chicago Aerial Industries, Inc. Stereo photographic and projection apparatus. 197,929, 4–7–64, Cl. D61—1.
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Pachmayr, Frank A., to Mershon Co., a division of Firearms Accessories, Inc. Firearms recoil pad. 197,895, 4–7–64, Cl. D30—1.
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Petitto, Albert C., to Foster Grant Co., Inc. Jug. 197,918, 4–7–64, Cl. D58—5.
Plastic Packaging Products Ltd.: *See*—
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Roberts, Roy E., to Rangaire Corp. Water dispenser. 197,931, 4–7–64, Cl. D67—4.
Rodd, Raymond D., to Howe Richardson Scale Co. Weighing scale pointer. 197,912, 4–7–64, Cl. D52—10.
Rubin, Alan. Razor holder. 197,880, 4–7–64, Cl. D4—3.
Runyon, Richard C. Beer bottle. 197,919, 4–7–64, Cl. D58—8.
Saporito, Dominic A., to Kalamazoo Mfg. Co. Top for a passenger vehicle. 197,885, 4–7–64, Cl. D14—3.
Scarnato, Thomas J., and P. C. Gordon, to International Harvester Co. Mower guard. 197,903, 4–7–64, Cl. D40—1.
Senoff, Herbert P., to Allen-Stevens Drum Accessories Corp. Closure plug. 197,922, 4–7–64, Cl. D58—10.
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Sherman, Alan E., to Superior Insulating Tape Co. Tape dispenser. 197,935, 4–7–64, Cl. D74—1.
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Stull, Morton B. Cap for containers. 197,926, 4–7–64, Cl. D58—26.
Sumner, Arthur H. Airplane. 197,933, 4–7–64, Cl. D71—1.
Superior Insulating Tape Co.: *See*—
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Sutcliffe, Eugene G. Hand-grip weight for exercising or the like. 197,899, 4–7–64, Cl. D34—5.
Thompson, William W. Packaging machine. 197,916, 4–7–64, Cl. D55—1.
Toffolon, Siro R., to The International Silver Co. Fork or similar article of flatware. 197,914, 4–7–64, Cl. D54—12.
Treiss, Herman G., Jr. Water softener. 197,942, 4–7–64, Cl. D91—1.
United Fabricators, Inc.: *See*—
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Vines, Silas C., and M. O. Short. Gameboard. 197,898, 4–7–64, Cl. D34—5.
Ward, Wallace W., to Diecasters, Inc. Rear view mirror. 197,887, 4–7–64, Cl. D14—6.
Weaver, Earl W. Tape dispenser. 197,934, 4–7–64, Cl. D74—1.
Winters, Alva B., to Revere Electric Mfg. Co. Luminaire. 197,909, 4–7–64, Cl. D48—20.
Woodall Industries, Inc.: *See*—
Greig, James W., and Berridge. 197,937.
Yoshino, Zenzaburo. Table lighter. 197,910, 4–7–64, Cl. D48—27.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 7TH DAY OF APRIL, 1964

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Abolins, Andrew, to Strick Trailers. Container coner fitting for bottom lifting. 3,128,117, 4–7–64, Cl. 294—67.
Abromaitis, Andre T., to McGraw-Edison Co. Photosensitive bistable switching circuit. 3,128,412, 4–7–64, Cl. 315—159.
Addamiano, Arrigo, to General Electric Co. Preparation of the nitrides of aluminum and gallium. 3,128,153, 4–7–64, Cl. 23—191.
Adelt, Carl W. Building construction. 3,127,928, 4–7–64, Cl. 160—371.
Adelberg, Isaac. Net construction. 3,127,692, 4–7–64, Cl. 43—7.
Adler, Clarence E., to Toledo Scale Corp. Counter. 3,128,041, 4–7–64, Cl. 235—91.
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Alexander, Ford I., deceased; R. L. Alexander, J. R. Ethridge, and J. B. Alexander, executors. Method and apparatus for making explosives in the place of use. 3,127,835, 4–7–64, Cl. 102—23.
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Alexander, Ford I. 3,127,835.
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Allen, Charles L., and A. R. Taylor, to Dynamics Corp. of America. Negative ion generator using an ultraviolet source to irradiate electrically conductive material. 3,128,378, 4–7–64, Cl. 250—43.
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Amick, Owen D., Jr. Direct current generator. 3,128,402, 4–7–64, Cl. 310—178.
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Andrews, Ernest G., to Bell Telephone Laboratories, Inc. Magnetic storage circuits. 3,128,452, 4–7–64, Cl. 340—174.
Andrews, Lamont F. Fastening means for railway car grain doors. 3,128,111, 4–7–64, Cl. 292—52.
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Argoudelis, Alexander D., to The Upjohn Co. Lower alkyl 2-alkoxy-3-hydroxy-5-methyltetrahydrofuran-3-carboxylates. 3,128,288, 4–7–64, Cl. 260—347.5.
Arkell, Alfred, D. M. Smith, and M. C. Throckmorton, to Texaco Inc. Selective hydrogenation of acetylene in ethylene with a zeolitic catalyst. 3,128,317, 4–7–64, Cl. 260—677.
Armco Steel Corp.: *See*—
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Armstrong, Douglas B., to Bell Telephone Laboratories, Inc. Error detecting and correcting system. 3,128,449, 4–7–64, Cl. 340—146.1.
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Audemar, Pierre, to Societe Alsacienne de Constructions Mecaniques. Shaft seal. 3,128,133, 4–7–64, Cl. 308—36.3.
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Suda, Douglas J. 3,128,438.
Babcock, David L., A. G. Stimson, and J. L. Byrd, to Eastman Kodak Co. Signal apparatus for photographic cameras. 3,127,823, 4–7–64, Cl. 95—10.
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Baerg, John G. Mobile work platform. 3,127,952, 4–7–64, Cl. 182—2.

Bailey, Albert C. Landing platform. 3,128,066, 4–7–64, Cl. 244—114.

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Bailey, Frederick E., Jr., and H. G. France, to Union Carbide Corp. Polymerization of epoxides. 3,128,256, 4–7–64, Cl. 260—2.

Baker, Paul A., to Bell Telephone Laboratories, Inc. Phase-modulation transmitter. 3,128,342, 4–7–64, Cl. 178—66.

Baker, Paul A., to Bell Telephone Laboratories, Inc. Data communication system. 3,128,343, 4–7–64, Cl. 178—67.

Balbaschewski, Alexander, to Ford Motor Co. Hydrostatic-mechanical power transmission mechanism. 3,127,792, 4–7–64, Cl. 74—687.

Baldwin-Lima-Hamilton Corp.: *See*—
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Balster, Frederick W., to Wagner Electric Corp. Check valve assembly. 3,127,906, 4–7–64, Cl. 137—493.

Bara, Mary B. Eraser cleaner. 3,127,714, 4–7–64, Cl. 51—187.

Barber, Ernest E., and K. H. Simpkin, to General Precision Systems Ltd. Non-linear function generator. 3,128,376, 4–7–64, Cl. 235—197.

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Bard, Charleton C., A. G. Millikan, and D. S. Thomas, Jr., to Eastman Kodak Co. Silver halide solvent containing developers and process. 3,128,182, 4–7–64, Cl. 96—61.

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Barker, John L., to Laboratory for Electronics Inc. Traffic actuated control system. 3,128,446, 4–7–64, Cl. 340—35.

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Baumgartner, Herbert, to Wacker-Chemie G.m.b.H. Process for producing calcium tetracuproxy chloride. 3,128,149, 4–7–64, Cl. 23—85.

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Bean, Kenneth E., and W. E. Medcalf, to The Eagle-Picher Co. Process for producing crystalline silicon over a substrate and removal therefrom. 3,128,154, 4–7–64, Cl. 23—223.5.

Bearden, Olen. Teletypesetter perforator attachment. 3,127,982, 4–7–64, Cl. 199—18.

Beauchamp, Wilfred A., to The Youngstown Steel Door Co. Sliding gates and operating assembly for railway hopper cars. 3,127,852, 4–7–64, Cl. 105—253.

Beauchamp, Wilfred A., to The Youngstown Steel Door Co. Aluminum doors for box cars. 3,127,968, 4–7–64, Cl. 189—46.

Beaupre, Howard J., and C. M. Mesecke, to Texas Instruments Inc. Infrared detector and method of making same. 3,128,253, 4–7–64, Cl. 252—501.

Beck, Julius S. Seal for a suspension drilling device. 3,128,102, 4–7–64, Cl. 277—17.

Beiler, Aaron P., to Sperry Rand Corp. Agricultural device. 3,128,054, 4–7–64, Cl. 241—186.

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Bellamy, David, Jr., and E. S. Welch, Jr., to Baxter Laboratories, Inc. Blood handling apparatus. 3,127,892, 4–7–64, Cl. 128—214.

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Moreines, Harold. 3,128,434.
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Benjey, William G., and W. D. Reynolds, to Alpena Research & Development Co. Concrete block making machine. 3,127,657, 4–7–64, Cl. 25—41.

Bennett, Don B. Football shoulder pad and cushion liner therefor. 3,127,614, 4–7–64, Cl. 2—2.

Bennett, Peter J., and D. W. Noren. Pitch control device for spring coiling machine. 3,127,922, 4–7–64, Cl. 153—64.

Bentkowsky, Jerome, J. H. Chadwick, Jr., and V. E. Williams, to Sperry Rand Corp. Coordinated depth control system for submarines. 3,127,864, 4–7–64, Cl. 114—144.

Benwell, Michael R., to The Magnavox Electronics Co. Ltd. Automatic record changing phonographs. 3,128,101, 4–7–64, Cl. 274—10.

Berenbaum, Morris B., and R. H. Gobran, to Thiokol Chemical Corp. Triazine sulfenyl chloride curing agents. 3,128,271, 4–7–64, Cl. 260—248.

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Berg, Jack V., to Minnesota Mining and Mfg. Co. Label dispenser. 3,128,012, 4–7–64, Cl. 221—70.

Berg, Rudolph G., to Chas. Pfizer & Co., Inc. 2,2'-oxodisuccinic acid, derivatives thereof, and process for preparing. 3,128,287, 4–7–64, Cl. 260—346.8.

Bergquist, Clifford A., to Pendleton Tool Industries, Inc. Reversible ratchet drive. 3,127,799, 4–7–64, Cl. 81—62.

Bergstrom, Eric V., and R. J. Devlin, to Socony Mobil Oil Co., Inc. Isothermal-adiabatic catalytic hydrocarbon conversion. 3,128,242, 4–7–64, Cl. 208—65.

Bergvall, Par, and K. M. B. Siegbahn, to Electrolux Aktiebolaget. Thermoelectric refrigeration. 3,127,749, 4–7–64, Cl. 62—3.

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Bianchini, Andrew F. Hammer handle anchoring means. 3,128,131, 4–7–64, Cl. 306—33.

Bianco, Joseph, and H. P. Baumann, to American Aniline Products, Inc. Polyolefin dyeing. 3,128,146, 4–7–64, Cl. 8—55.

Bieber, Philip. Breakaway rail for race tracks. 3,127,870, 4–7–64, Cl. 119—15.5.

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Blythe, Clarence M., and G. T. Hammond, to Royal McBee Corp. Pneumatic capacitor. 3,127,746, 4–7–64, Cl. 60—60.

Bochan, John, to General Electric Co. Clothes washer with improved turbine type pump. 3,127,840, 4–7–64, Cl. 103—3.

Bochan, John, to General Electric Co. Means for indicating the end of operation of a machine. 3,127,867, 4–7–64, Cl. 116—67.

Bodine, Albert G., Jr. System for pumping from sandy wells with sonic pump. 3,127,842, 4–7–64, Cl. 103—1.

Boesch, Francis T., D. H. Nash, and L. Schenker, to Bell Telephone Laboratories, Inc. Multifrequency signal receiver. 3,128,349, 4–7–64, Cl. 179—84.

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Bonnell, George N., and R. A. Barr, to Midland-Ross Corp. Apparatus for the continuous feeding of strandular material. 3,128,026, 4–7–64, Cl. 226—11.

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Bonzi, Betty B. Detachable garment trim. 3,127,617, 4–7–64, Cl. 2—96.

Borrevang, Poul, to Lovens Kemiske Fabrik ved A. Kongsted. New hemiacetals and hemiacetal esters of the androstane series and a method for their production. 3,128,291, 4–7–64, Cl. 260—397.4.

Bost, Howard W., and R. C. Doss, to Phillips Petroleum Co. Nitrofluoro-alkanes as oxidant for liquid rocket propellants. 3,127,736, 4–7–64, Cl. 60—35.4.

Bottomley, Anthony, to Phillips Petroleum Co. Synthetic knopped filaments. 3,127,915, 4–7–64, Cl. 139—420.

Bowers, Albert, J. Edwards, and J. Zderic, to Syntex Corp. 3-aminomethylene androstanes. 3,128,269, 4–7–64, Cl. 260—239.5.

Bowers, Albert, and O. Halpern, to Syntex Corp. 5,19-cyclo-Δ^4-cyclopentanophenanthrene derivatives. 3,128,290, 4–7–64, Cl. 260—397.3.

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Bridwell, Harold C., and D. S. Rowley, to Jersey Production Research Co. Drag bit. 3,127,945, 4–7–64, Cl. 175—329.

Bridwell, Harold C., and D. S. Rowley, to Jersey Production Research Co. Hard surfacing material. 3,128,165, 4–7–64, Cl. 51—307.

Brilliant, Martin B., to National Company, Inc. Timing synchronization by radio frequency communication. 3,128,465, 4–7–64, Cl. 343—225.

Brocard, Jean M. R. Aircraft. 3,128,062, 4–7–64, Cl. 244—23.

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Bronstien, Edward L., to The United States Bedding Co. Contour bed. 3,127,619, 4–7–64, Cl. 5—68.

Brothers, James A., to Wyandotte Chemicals Corp. Process for preconditioning the carbon bed used in a method of converting refractory metal oxychlorides. 3,128,150, 4–7–64, Cl. 23—87.

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Broughton, Arthur E., to A. E. Broughton & Co., Inc. Non-clogging spray nozzle. 3,128,046, 4–7–64, Cl. 239—116.

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Brown, Donald L., and A. L. Rogers, to Goodyear Aerospace Corp. Radome boresight error compensator. 3,128,466, 4–7–64, Cl. 343—705.

Brown, Edgar A., and G. H. Schacht, to International Business Machines Corp. Electromagnetic logic apparatus. 3,128,417, 4–7–64, Cl. 317—155.5.

Brown, John J., and G. F. Ruppenicker, Jr., to United States of America, Agriculture. Method for producing bulked, highly stretchable textured cotton yarns. 3,127,732, 4–7–64, Cl. 57—164.

Brown, Julian, Jr., and B. J. Duncan, to Sperry Rand Corp. Broadband gyromagnetic coupling limiter employing a plurality of narrow-linewidth gyromagnetic elements. 3,128,439, 4–7–64, Cl. 333—24.2.

Brown, Lewis J., to Pennsalt Chemicals Corp. Corrosion preventive process. 3,128,210, 4–7–64, Cl. 134—29.

Brown, Norman R., J. A. Gustairs, and C. E. Herider, to General Motors Corp. Tape dispensing apparatus. 3,128,217, 4–7–64, Cl. 156—355.

Brown, Walter J., to Sprague Electric Co. Control circuit for unidirectional current conducting devices. 3,128,422, 4–7–64, Cl. 321—45.

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Bruning, Fred, to Bruning Bros. Co., Inc. Method of and machine for assembling sliders on slide fastener stringers. 3,127,670, 4–7–64, Cl. 29—408.

Buchanan, Melvin L., to Arvin Industries, Inc. Carrying case. 3,128,002, 4–7–64, Cl. 220—4.

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Buhrmann, Wayne H., to The Goodyear Tire & Rubber Co. Belt drive. 3,127,780, 4–7–64, Cl. 74—229.

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Burkig, Jack W., and J. E. Richardsson, to Hughes Aircraft Co. Electrical interconnection grid and method of making same. 3,128,332, 4–7–64, Cl. 174—68.5.

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Burnett, Edward N., to Gerber Products Co. Combined shipping container and organizer for frozen food packages. 3,127,991, 4–7–64, Cl. 206—56.

Burnham, Wilbur H., Jr., and E. G. Hart. Charcoal grill holders. 3,127,888, 4–7–64, Cl. 126—25.

Burris, Richard A., R. E. Gerber, and C. C. Sons, Jr., to Caterpillar Tractor Co. Suspension and height control system for vehicles. 3,128,089, 4–7–64, Cl. 267—64.

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Burt, William C., to Clair Mfg. Co., Inc. Reciprocating work holder. 3,127,707, 4–7–64, Cl. 51—83.

Burt, William C., to Clair Mfg. Co., Inc. Finishing machine. 3,127,708, 4–7–64, Cl. 51—84.

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Cage, Joseph F., Jr., and D. B. Sherer, to United States of America, Atomic Energy Commission. Modular core units for a neutronic reactor. 3,128,234, 4–7–64, Cl. 176—43.

Cagen, George, to Roanwell Corp. Clamping means for an article-supporting boom. 3,128,352, 4–7–64, Cl. 179—156.

Caldwell, John R., to Eastman Kodak Co. Resinous compositions comprising mixtures of polyesters containing quaternized amine groups and epoxy resins. 3,128,265, 4–7–64, Cl. 260—45.5.

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Callaghan, Albert E., to Birfield Engineering Ltd. Feed apparatus for opening machines for fibrous materials. 3,127,638, 4–7–64, Cl. 19—96.

Callahan, James J., and R. D. Roberts, to Trabon Engineering Corp. Lubrication monitoring system. 3,127,954, 4–7–64, Cl. 184—7.

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Case, Robert O., Jr., to North American Aviation, Inc. Clutter minimizer for monopulse radar. 3,128,461, 4–7–64, Cl. 343—16.

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Cisek, Raymond M., P. A. Enblom, and R. J. Kline, to Minnesota Mining and Mfg. Co. Thermocopying machine with temperature and speed correlating means. 3,128,739, 4–7–64, Cl. 250—65.
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Burt, William C. 3,127,708.
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Conlon, Daniel R. Laboratory apparatus shields. 3,127,855, 4–7–64, Cl. 109—49.5.
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Cook, James A. Fishing line cutter. 3,128,023, 4–7–64, Cl. 225—19.
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Davis, Frank F. Drilling saw. 3,127,944, 4–7–64, Cl. 175—329.
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Diehl, Karl L., to Colorado Oil and Gas Corp. Gauge drive system. 3,127,771, 4–7–64, Cl. 73—345.
Dimmer, Robert P., and E. L. Roback, to Automatic Electric Laboratories, Inc. Waystation telephone system. 3,128,346, 4–7–64, Cl. 179—17.
Di Pasqua, Joseph, to Mechanical Swinging Cradle Corp. Torsion bar assembly for mechanical swing. 3,128,076, 4–7–64, Cl. 248—370.
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Drake, Bernard, J. B. Clark, P. W. Hicks, and J. G. Taylor, to Associated Electrical Industries Ltd. Arrangement for automatically identifying calling numbers in telephone systems. 3,128,347, 4–7–64, Cl. 179—18.
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Drybread, John S., Sr., ½ to B. L. Drybread (Mrs. J. S. Drybread, Sr.). Toggle bolt 3,127,808, 4–7–64, Cl. 85—3.
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Head, William I. 3,127,729.
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Fine, Ralph R. Laminated disposable broiling pads. 3,127,828, 4–7–64, Cl. 99—446.
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Fischer, John J., and F. M. Pelteson, to North American Aviation, Inc. Means and method for determining the direction of the axis of rotation of a controllably rotating platform. 3,127,774, 4–7–64, Cl. 73—504.
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Jones, Richard W., to International Business Machines Corp. Back voltage limiting circuit. 3,128,392, 4–7–64, Cl. 307—88.5.

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Karbowski, Sylvester, to Progressive Tool & Mfg. Co. Workengaging and positioning device for machine tool. 3,127,710, 4–7–64, Cl. 51—135.

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Kendall, William D., and F. A. Yarger, to Dynapower System Corp. Therapeutic pulse generation and control circuit. 3,127,895, 4–7–64, Cl. 128—422.

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Kirouac, Ovila. Adjustable wrench. 3,127,800, 4–7–64, Cl. 81—166.

Klamp, Paul, to Mechanical Handling Systems, Inc. Subflooring conveyor control system. 3,127,849, 4–7–64, Cl. 104—88.

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Knauer, Paul E., to The Magnavox Co. Remote control switching network. 3,128,336, 4–7–64, Cl. 178—5.8.

Kneen, William, and W. E. Fisher, to Consolidated Electrodynamics Corp. Chromatography. 3,127,762, 4–7–64, Cl. 73—23.

Kobler, Paul. Skin stretchers for shavers. 3,127,675, 4–7–64, Cl. 30—34.

Koch, Earl E., to Sperry Rand Corp. Ratchet drive safety release. 3,127,778, 4–7–64, Cl. 74—116.

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Kosik, Joseph. Gate valve with particular seal means. 3,128,078, 4–7–64, Cl. 251—214.

Kosoff, Harold. Free piston engine. 3,127,881, 4–7–64, Cl. 123—46.

Kretschmer, Georg, to Techno-Chemie Kessler & Co. G.m.b.H. Method of assembling a hose fitting. 3,127,672, 4–7–64, Cl. 29—450.

Krogen, Julius J., and D. M. Logsdon; said Logsdon assor. to said Krogen. Belt sander. 3,127,712, 4–7–64, Cl. 51—148.

Krupp, Anton M., and R. D. Divoky, to General Electric Co. Electric lamp socket. 3,128,141, 4–7–64, Cl. 339—97.

Krupp, Frederick W., to Gudebrod Brothers Silk Co., Inc. Package for strand material. 3,127,990, 4–7–64, Cl. 206—52.

Kubit, Ted J., and W. S. Stanton. Automatically-inflatable life preserver. 3,127,624, 4–7–64, Cl. 9—317.

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Kusy, Paul F., to The Bendix Corp. Method for the halogenation of benzene. 3,128,240, 4-7-64, Cl. 204—154.

Laakso, Thomas M., and D. A. Buckley, to Eastman Kodak Co. Block copolycarbonates of bisphenol A and 4,4'-bis (hydroxyphenyl) diphenyl methane. 3,128,264, 4-7-64, Cl. 260—42.

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La Fave, Ivan V., and W. R. Mikesell, Jr., to Chicago Bridge & Iron Co. Low temperature storage facilities for liquefied gases. 3,127,750, 4-7-64, Cl. 62—45.

Lafont, Pierre, to Societe des Usines Chimiques Rhone-Poulenc. Cyclododecadienols and their esters. 3,128,304, 4-7-64, Cl. 260—487.

Lahey, Parker J., to Stanray Corp. Coupler operating device. 3,127,997, 4-7-64, Cl. 213—166.

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La Mura, Joseph L. Fountain marker. 3,127,630, 4-7-64, Cl. 15—537.

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Landes, Wesley K. Heavy duty aircraft ski. 3,128,065, 4-7-64, Cl. 244—108.

Lane, John J., and L. F. Flaherty, to Koppers Co., Inc. Protective coating. 3,128,261, 4-7-64, Cl. 260—28.5.

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Langstroth, Theodore A., to Sterling Drug Inc. Coating compositions comprising coconut oil-modified phthalic alkyd resins and preparation of the same. 3,128,260, 4-7-64, Cl. 260—22.

Lanham, William E., to Apache Belt Co., Inc. Chain link conveyor belt. 3,127,980, 4-7-64, Cl. 198—195.

Lapaix, André L., ½ to Prat-Daniel. Apparatus for injecting a metered amount of a gas into a liquid, suitable in particular for use as a chlorination apparatus. 3,127,908, 4-7-64, Cl. 137—501.

Lapsley, Robert: *See*—
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Larchar, Trescott B., Sr., W. R. Mitten, A. D. Snyder, and W. K. Taft, to Olin Mathieson Chemical Corp. Solid high energy borane fuel composition. 3,128,212, 4-7-64, Cl. 149—19.

Larkin, Bert K.: *See*—
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La Rocca, Rosario S. Electric fencing target for instructing the blind. 3,128,097, 4-7-64, Cl. 273—102.2.

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Lay, Norman R., to Ling-Temco-Vought, Inc. Method of making multiconductor cable. 3,128,214, 4-7-64, Cl. 156—53.

Le Baron, Francis, Jr. Fluid-flow grating. 3,127,821, 4-7-64, Cl. 94—33.

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Ledwith, Walter A., to United Aircraft Corp. Nozzle tube construction. 3,127,737, 4-7-64, Cl. 60—35.6.

Lee, Charles H., to General Motors Corp. Rotary bolt door latch. 3,128,113, 4-7-64, Cl. 292—280.

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Lefevre, Norman A., and H. G. Hahn, to The Dow Chemical Co. Surfactive low polymers. 3,128,298, 4-7-64, Cl. 260—458.

Lemmond, Everett C. Apparatus for selecting and combining small parts of poultry. 3,127,975, 4-7-64, Cl. 198—32.

Leunig, Günther, and J. H. Willich, to Gesellschaft fur Linde's Eismaschinen Aktiengesellschaft. Internal combustion engine operating with self-ignition. 3,127,878, 4-7-64, Cl. 123—32.

Levine, Samuel W., to Fairchild Camera and Instrument Corp. Cold cutting technique for half-tone electronic engraving. 3,128,337, 4-7-64, Cl. 178—6.6.

Lewis, Joseph R., to Philco Corp. Electrical systems. 3,128,451, 4-7-64, Cl. 340—171.

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Liebig, Joseph M., to Illinois Milling, Inc. Self-aligning front end seal. 3,128,105, 4-7-64, Cl. 277—187.

Light, William A.: *See*—
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Lightfoot, Charles L., 40% to P. H. Smolka. Plastic articles and process for their manufacture. 3,128,262, 4-7-64, Cl. 260—41.

Lilly, Eli and Co.: *See*—
Mallett, Gordon E. 3,128,238.

Limberger, Walter, to Lumoprint Zindler KG. Device and a method for the production of copies. 3,127,825, 4-7-64, Cl. 95—77.5.

Ling-Temco-Vought, Inc.: *See*—
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Linsenmayer, Russel R. Pencil holder for clipboards. 3,127,640, 4-7-64, Cl. 24—66.

Lintner, Anthony E., to Calgon Corp. Corrosion and china pattern fading inhibitor. 3,128,250, 4-7-64, Cl. 252—99.

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Lippmann, Morton, to United States of America, Atomic Energy Commission. Compact cascade impactor. 3,127,763, 4-7-64, Cl. 73—28.

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Scott, Robert E., and Kemmer. 3,128,450.

Lloyd, Wallace G., O. R. Harris, and O. L. Updike, Jr., to Philip Morris, Inc. Cigarette making machine. 3,127,899, 4-7-64, Cl. 131—21.

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Pauli, Julius A. 3,128,068.

Lockwood, Harry A. Shot shell construction. 3,127,837, 4-7-64, Cl. 102—42.

Loegering, George A., M. R. Kinsler, and R. T. Lancet, to North American Aviation, Inc. Asymmetric hyper-velocity leading edges. 3,128,067, 4-7-64, Cl. 244—117.

Loewy, Raymond. Pneumatic car seat. 3,128,125, 4-7-64, Cl. 297—432.

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Loughlin, Bernard D., to Haseltine Research, Inc. Balanced frequency detector circuit. 3,128,437, 4-7-64, Cl. 329—133.

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Lowe, Wesley G., G. N. Shayler, and G. D. Brady, to Eastman Kodak Co. Antifoggants for gold sensitized emulsions in the presence of reduction sensitizers. 3,128,184, 4-7-64, Cl. 96—108.

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Lucky, Maurice C., to Cameron Iron Works, Inc. Low pressure blowout preventer. 3,128,077, 4-7-64, Cl. 251—1.

Luebkemann, Harry E., to The Cincinnati Milling Machine Co. Coupling for precision grinding machine apparatus. 3,127,758, 4-7-64, Cl. 64—23.7.

Luketa, Frank J. Expander ring for trawl nets. 3,127,693, 4-7-64, Cl. 43—9.

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Lush, Morley J. High frequency thermocouple voltmeter. 3,128,428, 4-7-64, Cl. 324—95.

Lychyk, George S., and A. Taliste, to Automatic Electric Laboratories, Inc. Mounting lugs and bobbin for dry reed relays. 3,128,356, 4-7-64, Cl. 200—87.

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Macks, Elmer F. Fluid supported device. 3,127,955, 4-7-64, Cl. 184—18.

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Mallett, Gordon E., to Eli Lilly and Co. 11-dehydrogenation of steroids by fermentation with actinoplanaceae. 3,128,238, 4-7-64, Cl. 195—51.

Mancini, Louis P. Portable first aid cabinet. 3,128,136, 4-7-64, Cl. 312—209.

Manwiller, Carl H., and J. B. Thompson, to E. I. du Pont de Nemours and Co. Preparation of concentrated formaldehyde. 3,128,313, 4-7-64, Cl. 260—606.

Marathon Oil Co.: *See*—
Poettmann, Fred H., Larkin, Milton, and Bixel. 3,127,935.

Mark, Alexander H.: *See*—
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Martens, Jack E., to The Anderson Co. Position-retaining device. 3,127,788, 4-7-64, Cl. 74—586.

Martin, Wayne. Aluminum silicon casting alloys. 3,128,176, 4-7-64, Cl. 75—148.

Martinek, Thomas W., to The Pure Oil Co. Synthetic lubricants. 3,128,302, 4-7-64, Cl. 260—475.

Mason, George S. Electronic method for obtaining velocity and pressure characteristics of firearms. 3,127,768, 4-7-64, Cl. 73—167.

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Mastrud, Conrad D., Jr. Carrier for electric tools. 3,128,022, 4-7-64, Cl. 224—45.

Mattox, William J., to Esso Research and Engineering Co. Desulfurization process. 3,128,155, 4-7-64, Cl. 23—284.

Mattson, Clarence H., to Radio Corp. of America. Cathode-grid assembly for electron guns. 3,128,407, 4-7-64, Cl. 313—82.

Maxim, John R. Surveillance aiding illumination system. 3,128,049, 4-7-64, Cl. 240—9.

Maxwell, Donald A., and B. N. Stuckey, to Eastman Kodak Co. Anti-icing agent. 3,128,162, 4-7-64, Cl. 44—70.

McBride, Le Roy C., to L. C. and M. B. McBride. Machine to generate and control an airstream. 3,128,036, 4-7-64, Cl. 230—116.

McBride, Margaret B.: *See*—
McBride, Le Roy C. 3,128,036.

McCabe, Owen J.: *See*—
Nelson, Alfred B., Greene, and McCabe. 3,128,384.

McCann, Clyde D., and I. Stelts. Pump. 3,127,844, 4-7-64, Cl. 103—137.

McClellan, Edward L., to Universal Products Corp. Coin box anti-theft device. 3,128,037, 4-7-64, Cl. 232—63.

McConnell, John R. Fabricating of structural steel members or units. 3,127,661, 4-7-64, Cl. 29—33.

McConnell, John R. Fabricating of structural steel members or units. 3,128,366, 4-7-64, Cl. 219—78.

McDuffie, James W., to Sperry Rand Corp. Hay baler. 3,127,830, 4-7-64, Cl. 100—142.

McElvain, Walter G. Spare key container. 3,127,918, 4-7-64, Cl. 150—40.

McGary, Charles W., Jr., and C. T. Patrick, Jr., to Union Carbide Corp. Epoxide compositions. 3,128,255, 4-7-64, Cl. 260—2.

McGraw-Edison Co.: *See*—
Abromaitis, Andrs T. 3,128,412.

McGraw, George P., Jr., to Western Electric Co., Inc. Device for applying pressure sensitive tape to articles. 3,128,218, 4-7-64, Cl. 156—522.

McGuire, William J., Jr., L. R. Kern, R. E. Wyant, and T. K. Perkins, to The Atlantic Refining Co. Method and a composition for treating subsurface fractures. 3,127,937, 4-7-64, Cl. 166—42.

McIntire, Donald B., to Union Carbide Corp. Beer lagering process. 3,128,188 4-7-64, Cl. 99—78.

McKelvie, John L.: *See*—
Ho, Yu C., Johnson, and McKelvie. 3,128,374.

McKinnon, Allen G., to United States Rubber Co. Elastic core yarn. 3,127,731, 4-7-64, Cl. 57—152.

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Gentry, Hermond G., and Garrard. 3,127,720.

Mechanical Handling Systems, Inc.: *See*—
Klamp, Paul. 3,127,849.

Mechanical Swinging Cradle Corp.: *See*—
Di Pasqua, Joseph. 3,128,076.

Medcalf, William E.: *See*—
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Medoff, Irving, and C. Bonsignore, to Emsig Mfg. Co. Feeder actuator. 3,127,857, 4-7-64, Cl. 112—115.

Melsinger, Erwin E., and H. S. Bloch, to Universal Oil Products Co. Alkali metal amide catalysts and their use in polymerizing olefins. 3,128,318, 4-7-64, Cl. 260—683.15.

Melsinger, Erwin E., and R. S. Corey, to Universal Oil Products Co. Isomerization of normal butane. 3,128,319, 4-7-64, Cl. 260—683.65.

Melnick, Joseph L., and C. Wallis, to Baylor Medical Foundation. Stabilization of viral vaccine and inactivation of adventitious tissue culture contaminants therein. 3,128,229, 4-7-64, Cl. 167—78.

Melnick, Joseph L., and C. Wallis, to Baylor Medical Foundation. Suppression of adventitious tissue culture contaminants with selected soluble salts of trivalent metal cations. 3,128,231, 4-7-64, Cl. 167—78.

Melvin, Fred J.: *See*—
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Beaupre, Howard J., and Mesecke. 3,128,253.

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Metallgesellschaft Aktiengesellschaft: *See*—
Weittenhiller, Hellmuth, Bieger, and Schöe. 3,128,163.

Metzger, Leopold H., to Super-Cut, Inc. Diamond saw blade assembly for routing and regrooving concrete joints. 3,127,887, 4-7-64, Cl. 125—15.

Meurer, Siegfried, and K. H. Barner, to Maschinenfabrik Augsburg-Nurnberg AG. Means for cooling the exhaust port wall in a poppet valve internal combustion engine. 3,127,880, 4-7-64, Cl. 123—41.85.

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Meyer, Gilbert F., to Machinery and Welder Corp. Gas cup assembly for welding gun. 3,128,370, 4-7-64, Cl. 219—130.

Michel, Donald P., to The Bauer Bros. Co. Refiner plate. 3,128,055, 4-7-64, Cl. 241—298.

Michl, Jiri, to Ustav ser a ockovacich Latek. Tissue culture medium. 3,128 228, 4-7-64, Cl. 167—78.

Microwave Associates, Inc.: *See*—
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Midland-Ross Corp.: *See*—
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Miehle-Goss-Dexter, Inc.: *See*—
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Mikesell, Walter R., Jr.: *See*—
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Miller, Charles R., to United Aircraft Corp. Rocket motor with consumable casing. 3,127,739, 4-7-64, Cl. 60—35.6.

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Miller, Harold C., to Super-Cut, Inc. System for supplying a coolant liquid to a rotary stone cutting saw or the like. 3,127,886, 4-7-64, Cl. 125—13.

Miller, John H., Jr., to The Filtex Corp. Built-in vacuum cleaning system. 3,127,629, 4-7-64, Cl. 15—314.

Miller, Joseph R., and C. O. Wilson. Safety chain hitch for trailer vehicles. 3,128,107, 4-7-64, Cl. 280—457.

Miller, Lee A.: *See*—
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Miller, Robert E. and L. A., to Monsanto Chemical Co. 3-phenoxyacrylonitriles prepared by cyanovinylation reaction. 3,128,300, 4-7-64, Cl. 260—465.

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Mills, Lindley E. Portable beverage dispenser. 3,128,019, 4-7-64, Cl. 222—396.

Mills Products, Inc.: *See*—
Mills, Herbert E. 3,127,889.
Mills, Herbert E. 3,127,890.

Milton, Harry W., Jr.: *See*—
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Zinman, Samuel C. 3,127,927.

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Gordon, Keith M. 3,127,761.

Minneapolis-Honeywell Regulator Co.: *See*—
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Mobarry, John W. 3,127,754.
Wolfhope, Frank T. 3,128,086.

Minnesota Mining and Mfg. Co.: *See*—
Berg, Jack V. 3,128,012.
Cisek, Raymond M., Emblom, and Kline. 3,128,379.
Schilling, Robert W. 3,128,202.
Wear, Robert L., and Ahlbrecht. 3,128,272.

Mitchell, Irving L., and V. Horowitz, to Ebert Electronics Corp. Mercury relay container. 3,128,357, 4-7-64, Cl. 200—112.

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Miselle, Ned W., to General Steel Products, Inc. Reclining chair fixture. 3,128,122, 4-7-64, Cl. 297—68.

Mieczko, Eugene L., and B. Elbinger, to Aerojet-General Corp. Noise eliminating gate circuit. 3,128,435, 4-7-64, Cl. 328—115.

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Koch, Hans-Joachim. 3,128,310.

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Klumb, Emil. 3,127,628.

Modrey, Henry J. Hollow wall anchor with pivoted anchor member. 3,127,807, 4-7-64, Cl. 85—3.

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Mohr, James W., to Outboard Marine Corp. Outboard motor mounting arrangement. 3,127,866, 4-7-64, Cl. 115—17.

Möller, Hans G., C. W. Busch, and F. W. Kallmeyer, said Möller and Busch, assor., to Atlas-Werke Aktiengesellschaft. Production of a picture of the true paths of motion of radar targets. 3,128,460, 4-7-64, Cl. 343—5.

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Mono-Cam Ltd.: *See*—
Friedlander, William. 3,127,841.

Monsanto Chemical Co.: *See*—
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Miller, Robert E. and L. A. 3,128,300.

Montague, Joseph F. Injector. 3,127,893, 4-7-64, Cl. 128—239.

Mooney, Albert W., to Lockheed Aircraft Corp. Aircraft landing gear. 3,128,064, 4-7-64, Cl. 244—104.

Moore, Cyril A., to United States of America, Army. Gas control means for grenade launching attachments. 3,127,691, 4-7-64, Cl. 42—1.

Moore, Harry W. Wedge inserting machine. 3,127,662, 4-7-64, Cl. 29—33.

Moore, Louis D., Jr., R. M. Schulken, Jr., and J. W. Tamblyn, to Eastman Kodak Co. Boiling aqueous organic liquid enchancement of high acetyl cellulose acetate products how point and wrinkle recovery. 3,128,148, 4-7-64, Cl. 8—131.

Moratti, Francesco, and C. Tosti, to Bombrini Parodi-Delfino Societa per Azioni. Retractable blade tail unit for projectiles. 3,127,838, 4-7-64, Cl. 102—50.

Moreines, Harold, to The Bendix Corp. Transfluxor with amplitude modulated driving pulse input converted to alternating sine wave output. 3,128,434, 4-7-64, Cl. 328—27.

Morgan, Raymond E., to General Electric Co. Lock out control circuit for power amplifier. 3,128,396, 4-7-64, Cl. 307—88.5.

Mori, Takeshi, to Christensen Diamond Products Co. Wire line core barrel. 3,127,943, 4-7-64, Cl. 175—246.

Morin, Dolore B.: *See*—
Hershberger, Olin C., and Morin. 3,127,631.

Morin, Louis H. Low silhouette compression slider. 3,127,634, 4-7-64, Cl. 24—205.14.

Moritz, Karsten H., and J. F. Moser, Jr., to Esso Research and Engineering Co. Process for gasification of hydrocarbons to hydrogen and carbon monoxide. 3,128,164, 4-7-64, Cl. 48—212.

Morley, David H., and W. W. Schultz, to General Electric Co. Wear measurement without introducing radioactive material into the system. 3,128,381, 4-7-64, Cl. 250—106.

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Morris, Philip, Inc.: *See*—
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Morse, John F., D. W. Waner, F. S. Payerle, and R. F. Olsen, to The Morse Instrument Co. Single lever engine and idle control. 3,127,785, 4-7-64, Cl. 74—472.

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Motorola, Inc.: *See*—
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Motozaki, Shinichi, T. Tsunoda, S. Okumura, H. Okada, A. Osaki, and T. Ishikura, to Ajinomoto Co., Inc., and Sanraku Distillers Co., Inc. Process for producing L-glutamic acid by bacterial fermentation. 3,128,237, 4-7-64, Cl. 195—47.

Muench, Nils L.: *See*—
Graham, John W., and Muench. 3,127,933.

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Lichtenwalter, Myrl, and Muhlbauer. 3,128,275.

Muldoon, William J., to Hughes Aircraft Co. Pen positioning circuit. 3,127,678, 4-7-64, Cl. 33—1.

Muller, Georges, J. Martel, and R. Bardoneschi, to Roussel-Uclaf, S.A. Novel 11β, 18-oxido-18 ξ-methyl-pregnenes. 3,128,270, 4-7-64, Cl. 260—239.55.

Muller, Robert M., to American Optical Co. Optical projector lens systems. 3,128,329, 4-7-64, Cl. 88—57.

Muller, Wilfried, to Carl Zeiss VEB Jena. Devices for measuring and recording extinction coefficients. 3,128,328, 4-7-64, Cl. 88—14.

Nagel-Chase Mfg. Co.: *See*—
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Nagy, Alexander, L. W. Lherbier, and A. Altieri, to Universal-Cyclops Steel Corp. Low alloy, high hardness, temper resistant steel. 3,128,175, 4-7-64, Cl. 75—126.

Nalco Chemical Co.: *See*—
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Boesch, Francis T., Nash, and Schenker. 3,128,849.

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National Dairy Products Corp.: *See*—
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National Machinery Co., The: *See*—
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Neilson, William J., to Smith Industries International, Inc. Bearing closure for rotary rock bit. 3,127,942, 4-7-64, Cl. 175—227.

Nelson, Alfred B., R. F. Greene, and O. J. McCabe, to The Superior Electric Co. Automatic illumination regulating unit. 3,128,384, 4-7-64, Cl. 250—205.

Nelson, Donald S. Elevator. 3,127,957, 4-7-64, Cl. 187—19.

Nelson, Marcellus. Collator for folded sheets. 3,128,092, 4-7-64, Cl. 270—54.

Nelson, Mary A.: *See*—
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New Jersey Zinc Co., The: *See*—
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Nierhaus, Henry, to Stoffel Seals Corp. Lock hasp seal. 3,128,114, 4-7-64, Cl. 292—320.

Niles, Wesley D., to Esso Research and Engineering Co. Petroleum fuel composition and process. 3,127,742, 4-7-64, Cl. 60—39.02.

Nirschl, Joseph C., to United States of America, Army. Gamma radiation scanner and an aerial surveying and recording system utilizing the same. 3,128,380, 4-7-64, Cl. 250—83.3.

Nitenson, Edward. Clothes washer scale. 3,127,948, 4-7-64, Cl. 177—144.

Noren, Donald W.: *See*—
Bennett, Peter J., and Noren. 3,127,922.

North American Aviation, Inc.: *See*—
Bauerle, George L., Ahlert, and Silverman. 3,127,735.
Case, Robert O., Jr. 3,128,461.
Fischer, John J., and Pelteson. 3,127,774.
Loegering, George A., Kinsler, and Lancet. 3,128,067.

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Johnson, Ernest W., and Packard. 3,128,441.
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Northwest Engineering Corp.: *See*—
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Norton, Harry W., to Geartight Unions Ltd. Closure means for pressure vessels. 3,128,009, 4-7-64, Cl. 220—55.3.

Norwood, Richard E., to International Business Machines Corp. Multi-stable fluid device. 3,128,039, 4-7-64, Cl. 235—61.

Norwood, Richard E., to International Business Machines Corp. Fluid logic device. 3,128,040, 4-7-64, Cl. 235—61.

Noschese, Rocco J. Connector. 3,128,138, 4-7-64, Cl. 339—14.

Novak, Stanley. Two-way poppet valve. 3,127,907, 4-7-64, Cl. 137—493.6.

Oberright, Edward A., and R. H. Williams, to Socony Mobil Oil Co., Inc. Lubricating oil of improved high temperature properties. 3,128,246, 4-7-64, Cl. 208—255.

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Olson, Arthur A. Heavy duty fluid heater. 3,127,876, 4-7-64, Cl. 122—276.

O'Neil, Hugh M. Consolidation and shear test apparatus. 3,127,765, 4-7-64, Cl. 73—94.

O'Neill, Robert F. Anti-backlash gears. 3,127,784, 4-7-64, Cl. 74—440.

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Packard, Henry, to Northrop Corp. Variable transformer. 3,128,044, 4-7-64, Cl. 336—135.

Pagano, Frank, ⅛ to J. Uchitel. Device for shirring lining, reinforcement or stiffener for garments. 3,128,020, 4-7-64, Cl. 223—32.

Page, Robert Z. Biological detection equipment. 3,128,239, 4-7-64, Cl. 195—127.

Pagliuso, Robert J. Model helicopter. 3,127,696, 4-7-64, Cl. 46—75.

Pannell, Dennis W. Flexible liquid flow barrier for embalming table. 3,128,091, 4-7-64, Cl. 269—327.

Pappo, Raphael, to G. D. Searle & Co. 11-oxygenated 17α, 21-dihydroxy-3-oxa-a-homopregn-4a-ene-4, 20-diones, esters thereof, and intermediates thereto. 3,128,282, 4-7-64, Cl. 260—340.9.

Pappo, Raphael, to G. D. Searle & Co. 17-oxygenated oxasteroids and intermediates thereto. 3,128,283, 4-7-64, Cl. 260—343.2.

Park, William R. R., and J. H. Stickelmeyer, to The Dow Chemical Co. Coated alkenyl aromatic article and method of coating. 3,128,200, 4-7-64, Cl. 117—72.

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Parker, Richard H., to Union Carbide Corp. Flashlight and reflector assembly therefor. 3,128,050, 4-7-64, Cl. 240—10.66.

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Patellis, Anargiros P., to Pennsylvania Industrial Chemical Corp. Method of making limed tall oil. 3,128,195, 4-7-64, Cl. 106—123.

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Patriquin, George P., and N. R. Adler, to Independent Lock Co. Retainer means for cylindrical locks. 3,128,116, 4-7-64, Cl. 292—358.

Pattee, John R., to Daystrom Inc. Integrating apparatus using a torque converter rebalanced by the output of a generator driven by the converter output. 3,128,429, 4-7-64, Cl. 324—99.

Paull, Julius A., to Lockheed Aircraft Corp. Petal type door for cargo aircraft. 3,128,068, 4-7-64, Cl. 244—129.

Paull, Stephen, to United States of America, National Aeronautics and Space Administration. Variable frequency magnetic multivibrator. 3,128,380, 4-7-64, Cl. 307—88.

Paulton, Richard A., to The Cincinnati Milling Machine Co. Metal spinning machine. 3,127,861, 4-7-64, Cl. 113—52.

Pavek, Miloslav, and J. Havlas, to Sdruzeni podniku textilniho strojirenstvi. Device for separating the fibres and conveying the separated fibres. 3,127,730, 4-7-64, Cl. 57—58.91.

Payerle, Frank S.: *See*—
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Penn Engineering & Mfg. Corp.: *See*—
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Perkins, Thomas K.: *See*—
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Perrins, Allen R.: *See*—
Cooley, Robert D., and Perrins. 3,128,424.

Person, Bertil G., to Com-Pak-Ett Mfg. Co. Light actuated switch. 3,128,413, 4-7-64, Cl. 317—124.

Persson, John A., to Union Carbide Corp. Bus system and apparatus for reducing the reactance of electric furnaces. 3,128,411, 4-7-64, Cl. 314—31.

Pertwee, Kenneth S. G., to General Electric Co. Tungsten tube manufacture. 3,127,641, 4-7-64, Cl. 22—204.

Peter, Gottfried, to Sulzer Freres, S.A. Desalting a forced flow steam generator. 3,127,747, 4-7-64, Cl. 60—67.

Peters, Robert D., and J. F. Uckotter, to The Cincinnati Milling Machine Co. Machine tool loader. 3,127,716, 4-7-64, Cl. 51—215.

Peterson, Arnold E. Combination playpen and crib. 3,127,620, 4-7-64, Cl. 5—99.

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Pettus, Charles, and T. Young, to International Business Machines Corp. Magnetoresistive logical circuitry. 3,128,390, 4-7-64, Cl. 307—88.

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Berg, Rudolph G. 3,128,287.

Philco Corp.: *See*—
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Teacher, Charles F., and Partin. 3,128,338.

Phillips, Benjamin, P. S. Starcher, and D. L. MacPeek, to Union Carbide Corp. Pentaerythritol and trimethylolalkane poly (2,3-epoxyalkanoates). 3,128,289, 4-7-64, Cl. 260—348.

Phillips Petroleum Co.: *See*—
Bost, Howard W., and Doss. 3,127,736.
Bottomley, Anthony. 3,127,915.

Phillips, William F., to Commercial Solvents Corp. Process for the recovery of 1-glutamic acid. 3,128,305, 4-7-64, Cl. 260—527.

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Phipps, Cornelius M. Double bubble single card package. 3,127,993, 4-7-64, Cl. 206—78.

Phlieger, Graydon A. Countdown clock. 3,128,373, 4-7-64, Cl. 235—92.

Pickell, Clark A., to General Signal Corp. Train describer system. 3,128,069, 4-7-64, Cl. 246—2.

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Spolders, Rudolf, Pieper, and Breuing. 3,128,324.

Pierce, William E., to Porcelain Enamel Institute, Inc. Method for porcelain enameling mufflers and the like. 3,127,951, 4-7-64, Cl. 181—61.

Pierpont, Edward K., to Imperial Chemical Industries Ltd. Surface modified silica. 3,128,196, 4-7-64, Cl. 106—308.

Pietsch, Paul, to Arnold & Stolzenberg G.m.b.H. Mechanical movement for the conversion of continuous motion into intermittent motion. 3,127,777, 4-7-64, Cl. 74—84.

Pilia, Frank J., and G. J. Duddy, Jr., to Union Carbide Corp. Electrode arc welding apparatus. 3,128,369, 4-7-64, Cl. 219—127.

Pinder, James M., to General Electric Co. Clothes washer with improved turbine type pump. 3,127,839, 4-7-64, Cl. 103—3.

Pintauro, Nicholas D., and O. R. Friedemann, to General Foods Corp. Stabilization of adipic acid crystal size by storage of adipic acid for at least seven days. 3,128,306, 4-7-64, Cl. 260—537.

Pitcher, Kenneth R.: *See*—
Kline, Richard M., and Pitcher. 3,127,885.

Pittsburgh Plate Glass Co.: *See*—
Hardies, Donald E. 3,128,315.
Plant, Edwin K. 3,128,170.

Plant, Edwin K., to Pittsburgh Plate Glass Co. Method for inhibiting potato sprouts. 3,128,170, 4-7-64, Cl. 71—2.6.

Plasser, Franz, and J. Theurer. Mobile track tamping machine. 3,127,848, 4-7-64, Cl. 104—12.

Plueger, Friedrich W. Propulsion units for watercraft. 3,127,865, 4-7-64, Cl. 114—148.

Podlipnik, John, and J. F. Renner, to Sinclair Research, Inc. Wax composition and method of producing same. 3,128,241, 4-7-64, Cl. 208—21.

Poel, Norman C.: *See*—
Sebastian, James R., Poel, De Good, and Redlichs. 3,127,979.

Poettmann, Fred H., B. K. Larkin, H. W. Milton, Jr., and J. C. Bixel, to Marathon Oil Co. In situ combustion for oil recovery in tar sands, oil shales and conventional petroleum reservoirs. 3,127,935, 4-7-64, Cl. 166—11.

Pollock, Gordon J., to The E. F. Hauserman Co. Adjustable wainscot. 3,127,964, 4-7-64, Cl. 189—85.

Poly Industries, Inc.: *See*—
Kaplan, Leo I. 3,128,063.

Poor & Co.: *See*—
Harris, Leonard T. 3,128,180.

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Porta, Mario: *See*—
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Porter, Charles A.: *See*—
Quick, Adam J., and Porter. 3,127,795.

Pottharst, John E., Jr. Jet propulsion control system. 3,127,741, 4-7-64, Cl. 60—35.54.

Powers, Howard A.: *See*—
Grant, Gardiner L., Antonoff, Gauthier, and Powers. 3,128,038.

Prat-Daniel: *See*—
Lapaix, André L. 3,127,908.

Pratt, Henry, Co.: *See*—
Fawkes, Donald G. 3,127,967.

Preisig, Joseph O.: *See*—
Freedman, Larry A., and Preisig. 3,128,345.

Premier Laundry, Inc.: *See*—
Hajos, Eugene. 3,127,690.

Presnick, Michael C. Box and method of making the same. 3,127,862, 4-7-64, Cl. 113—120.

Price, Warren R., and A. S. Houston, to St. Regis Paper Co. Cup. 3,128,029, 4-7-64, Cl. 229—1.5.

Procter, Edward C., A. W. Blanshine, and R. E. Wallin, to Sperry Rand Corp. Row crop forage harvester and crop feed means. 3,127,723, 4-7-64, Cl. 56—16.

Procter & Gamble Co., The: *See*—
Barnhart, Robert E., and Leege. 3,128,057.
Hood, Charles R., and Schaefer. 3,128,215.

Profos, Paul, to Sulzer Freres, S.A. Once-through boiler and method of operating the boiler. 3,127,877, 4-7-64, Cl. 122—406.

Progressive Tool & Mfg. Co.: *See*—
Karbowski, Sylvester. 3,127,710.

Pryor Harry H.: *See*—
Holstein, Alvin W., Pryor and Melvin. 3,128,013.

Pultafico, Frank V., to Sportmaker, Inc. Slacks and girdle combination. 3,127,896, 4-7-64, Cl. 128—519.

Pure Oil Co., The: *See*—
Csaszar, Albert K. 3,127,934.
Martinek, Thomas W. 3,128,302.

Pure, Samuel, to United States of America, Navy. Bistable transistor multivibrator used as a gating circuit. 3,128,393. 4-7-64, Cl. 307—88.5.

Pye, David J., and G. F. Schurz, to The Dow Chemical Co. Method for clarifying water. 3,128,249, 4-7-64, Cl. 210—53.

Quick, Adam J., and C. A. Porter, to The Black and Decker Mfg. Co. Boring apparatus and split-casing workpiece therefor. 3,127,795, 4-7-64, Cl. 77—3.

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Rabinow, Jacob. 3,127,972.

Rabinow, Jacob, to Rabinow Engineering Co., Inc. Code wheel. 3,127,972, 4-7-64, Cl. 198—1.

Radenberg, Edward J. Safety overload clutch. 3,127,968, 4-7-64, Cl. 192—56.

Radio Corp. of America: *See*—
Freedman, Larry A., and Preisig. 3,128,345.
Mattson, Clarence H. 3,128,407.

Ranke, Fritz, to Gesellschaft fur Linde's Eismaschinen Aktiengesellschaft. Process and apparatus for the vaporization of liquid. 3,127,751, 4-7-64, Cl. 62—52.

Ransburg Electro-Coating Corp.: *See*—
Gauthier, William D. 3,128,201.
Gauthier, William D. 3,128,045.

RAP Industries, Inc.: *See*—
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Rapids-Standard Co., Inc., The: *See*—
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Rau, Frank J., and K. Losch, to Westinghouse Electric Corp. Photosensitive line tracer for industrial tools. 3,128,382, 4-7-64, Cl. 250—202.

Ravese, Thomas, to Combustion Engineering, Inc. Thermal sleeves for boiler water circulating pumps. 3,128,103, 4-7-64, Cl. 277—32.

Reber, John P., W. A. Schlemm, and G. G. Seaman, to Western Electric Co. Inc. Article feeding apparatus. 3,127,669, 4-7-64, Cl. 29—203.

Redlichs, August V.: *See*—
Sebastian, James R., Poel, De Good, and Redlichs. 3,127,979.

Redston, John P., M. J. Reider, and G. M. Weiss, to Drew Chemical Corp. Shrinkproofing wool by acidification and subsequent application of alkali metal bromates and halide. 3,128,145, 4-7-64, Cl. 8—128.

Reed, Daniel J., to A. O. Smith Corp. Method and apparatus for making fiber reinforced plastic pipe. 3,128,216, 4-7-64, Cl. 156—184.

Rehner, John, Jr.: *See*—
Wei, Peter E., and Rehner. 3,128,263.

Reider, Malcolm J.: *See*—
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Reisman, Albert, to J. Reisman & Sons, Inc. Oven conveyor system. 3,127,854, 4-7-64, Cl. 107—57.

Reisman, J., & Sons, Inc.: *See*—
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Rekert, Albert F.: *See*—
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Renaud, Harold J., to Ren Plastics, Inc. Equipment for compounding materials. 3,128,053, 4-7-64, Cl. 241—101.

Ren Plastics, Inc.: *See*—
Renaud, Harold J. 3,128,053.

Renner, Jack F.: *See*—
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Rennhack, Elliott H., to The New Jersey Zinc Co. Copper-cobalt infiltrant for iron powder. 3,128,177, 4-7-64, Cl. 75—153.

Republic Steel Corp.: *See*—
Mosinski, Joseph J. 3,127,995.

Reuther, John F.: *See*—
Silliman, Sheldon D., and Reuther. 3,128,456.

Revco, Inc.: *See*—
Tenniswood, Howard J. 3,127,930.

Reven, Lewis E., and D. G. Blake, to Nalco Chemical Co. Preparation of concentrated silica sols. 3,128,251, 4-7-64, Cl. 252—313.

Rex, Raymond H., to Owens-Illinois Glass Co. Method of and apparatus for making plastic articles. 3,127,637, 4-7-64, Cl. 18—30.

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Rice, Albert E. and F. A. Casters. 3,127,632, 4-7-64, Cl. 16—18.

Rice, Ford A.: *See*—
Rice, Albert E. and F. A. 3,127,632.

Rice, Henry T. M., to Ohlsson & Rice, Inc. Engine starter. 3,127,884, 4-7-64, Cl. 123—185.

Richardson, Irwin W. Fruit picker. 3,127,725, 4-7-64, Cl. 56—328.

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Rietz, Earl B., to I-T-E Circuit Breaker Co. Interrupter structure having splitter plates of malleable material. 3,128,360, 4-7-64, Cl. 200—150.

Rieveschl, George, Jr.: *See*—
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Ringle, Louis A., and R. N. Marona, to E. I. du Pont de Nemours and Co. Plastic casing for photographic film spools having light-absorbing baffles. 3,128,058, 4-7-64, Cl. 242—71.1.

Ringquist, Clarence L., to The Trane Co. Air conditioning system with one pipe heating. 3,127,928, 4-7-64, Cl. 165—22.

Ringquist, Clarence L., to The Trane Co. Air conditioning system with one pipe heating and cooling. 3,127,929, 4-7-64, Cl. 165—22.

Rink, John D., 20% to E. A. Sokolski. Lawn trimmer. 3,127,939, 4-7-64, Cl. 172—13.

Ritter, Lawrence: *See*—
Kanegis, Leon A., and Ritter. 3,128,227.

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Robertson, Elmer W., to Elrick Industries, Inc. Delayed action regulator for buffer. 3,127,916, 4-7-64, Cl. 144—288.

Robinson, Arthur S., to The Bendix Corp. Transfluxor integrator. 3,128,388, 4-7-64, Cl. 307—88.

Robinson, Ralph C., to General Time Corp. Drowse alarm mechanism. 3,127,783, 4-7-64, Cl. 58—21.12.

Rode, Johannes, to Telefonbau und Normalzeit G.m.b.H. Signalling systems. 3,128,416, 4-7-64, Cl. 317—146.

Roe, Charles C., to Warner Electric Brake & Clutch Co. Power transfer device. 3,127,791, 4-7-64, Cl. 74—675.

Roerty, Dennis F., to Westinghouse Electric Corp. Electrical measuring instruments. 3,128,144, 4-7-64, Cl. 346—140.

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Rogers, Jesse P. Hand tool for rotating a threaded bearing axially movable clutching handle sections. 3,127,797, 4-7-64, Cl. 81—58.3.

Rogers, Richard J. Self-propelled mobile lawn sprinkler. 3,128,047, 4-7-64, Cl. 239—191.

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Roller Bearing Co. of America: *See*—
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Romenko, Fred C. Window solarium. 3,127,697, 4-7-64, Cl. 47—40.

Romero, Adolph. Stylus controlled sign with contact grid of parallel plates. 3,128,458, 4-7-64, Cl. 340—337.

Rorig, Kurt J., to G. D. Searle & Co. Optionally α-substituted 1-amino-2,3, or 4-(cyclohexyl/phenyl)methylpiperidines and precursors. 3,128,276, 4-7-64, Cl. 260—293.

Rorig, Kurt J., to G. D. Searle & Co. 1-alkoxylated/halogenated phenyl)-3-pyridylmethylureas. 3,128,280, 4-7-64, Cl. 260—295.

Rose, Glenn R., to General Mills, Inc. Coarse and fine electric servomotor position selector. 3,128,420, 4-7-64, Cl. 318—28.

Rose, Maurice T., Jr., and R. A. Kinkle, to General Electric Co. Broil unit for top viewing oven. 3,128,363, 4-7-64, Cl. 219—35.

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Rossetti, Charles, to Simeca S.A. Feeler for key copying machine. 3,127,816, 4-7-64, Cl. 90—62.

Rossi, Joseph R., to Blaw-Knox Co. Pipe bundling apparatus. 3,127,829, 4-7-64, Cl. 100—4.

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Rousselet, Paul F. Plug, particularly for gasoline tanks and oil pans in motor cars. 3,128,006, 4-7-64, Cl. 220—40.

Rowley, David S.: *See*—
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Bridwell, Harold C., and Rowley. 3,128,165.

Royal Industries, Inc.: *See*—
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Rubin, Saul H., and J. J. Vance, to Hoffmann-La Roche Inc. Composition for relieving pain. 3,128,226, 4-7-64, Cl. 167—55.

Rudolph, Rome R., C. Struts, Sr., C. J. Struts, Jr., and F. C. Struts, to Carl Struts & Co., Inc. Surface decorating machine. 3,127,833, 4-7-64, Cl. 101—126.

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Schilberg, Arnold G., deceased; by I. G. Schilberg, administratrix, to A. O. Smith Corp. Method for reinforcing metal stampings. 3,128,365, 4-7-64, Cl. 219—76.

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Schmitt, Arnold J., to Beloit Iron Works. Trailing blade coater blade loading mechanism. 3,128,207, 4-7-64, Cl. 118—126.

Schmits, Ewald F., to Chicago Bridge & Iron Co. Integral end course for multilayer pressure vessels. 3,128,001, 4-7-64, Cl. 220—3.

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Schneider, Abraham, to Sun Oil Co. Reaction of tricyclic perhydroaromatic hydrocarbons. 3,128,316, 4-7-64, Cl. 260—666.

Schnekenburger, Emil, to A. Zahoransky. Brush stuffing machines. 3,128,126, 4-7-64, Cl. 300—7.

Schoder, Eduard J., to Hesser, Fr., Maschinenfabrik-Aktiengesellschaft, Firma. Wrapping machine. 3,127,722, 4-7-64, Cl. 53—230.

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Schwarz, Richard, to Bro-Dart Industries, Inc. Metal shelving bracket. 3,128,074, 4-7-64, Cl. 248—246.

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Scott, Arthur L., to Columbia Products Co. Hollow glass fiber shaft. 3,127,910, 4-7-64, Cl. 138—144.

Scott, Joseph A. Bale loader. 3,127,973, 4-7-64, Cl. 198—7.

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Scott, Wade E. Protective case for toothbrushes. 3,127,985, 4-7-64, Cl. 206—15.1.

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Secord, Robert N., and C. L. Carpenter, to Cabot Corp. Process for recovering hydrogenfluoride from aqueous fluosilicic acid solution. 3,128,152, 4-7-64, Cl. 23—153.

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Seward, William H., to Kangol Helmets Ltd. Buckles. 3,127,650, 4-7-64, Cl. 24—68.

Sharkey, John. Metallic weight exercising helmet. 3,128,095, 4-7-64, Cl. 272—80.

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Sheriff, Merle M., and F. J. Holland; said Sheriff assor. to said Holland. Accelerator pedal controlled brake system. 3,127,966, 4-7-64, Cl. 192—3.

Sherlock, John G., to Continental Can Co., Inc. Thin-walled containers and thin-walled closures for containers. 3,128,005, 4-7-64, Cl. 220—39.

Shibata, Ryoji. Article attaching device. 3,128,072, 4-7-64, Cl. 248—29.

Shinada, Toshio, and S. Oinuma, to Kabushiki Kaisha Kinsekisha Kenkyujo. Fork-shaped quartz oscillator for audible frequency. 3,128,397, 4-7-64, Cl. 310—9.5.

Shirley, Robert L., and G. P. Speranza, to Jefferson Chemical Co., Inc. Preparation of primary amines. 3,128,311, 4-7-64, Cl. 260—585.

Shore, Charles. Safety ladder. 3,127,953, 4-7-64, Cl. 182—106.

Shumer, Murray, and J. Cohen. Rear window blinker light. 3,128,448, 4-7-64, Cl. 340—87.

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U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

April 7, 1964 Volume 801 Number 1

TRADEMARKS

NOTICES

Notice of Daylight Saving Time

The Patent Office will operate on Daylight Saving Time from April 27, 1964, through October 24, 1964.

Service by Publication

A petition to cancel the registration identified below having been filed, and the notice of such proceedings sent by registered mail to the registrant at the last known address having been returned by the Post Office as undeliverable, notice is hereby given that unless the registrant listed herein, his assigns or legal representatives, shall enter an appearance within thirty days from the date of this publication, the cancellation will be proceeded with as in the case of default.

Fassett & Company, Tacoma, Wash., Reg. No. 205,763, Canc. No. 8198.

HORACE B. FAY, JR.,
Assistant Commissioner of Patents.

Notice of Tentative Recordation of a Trade Name

[T.D. 56122]

Tentative recordation of trade name under section 42, Trademark Act of 1946, and section 11.16, Customs Regulations

TREASURY DEPARTMENT,
OFFICE OF THE COMMISSIONER OF CUSTOMS,
Washington, D.C.

To Collectors of Customs and Others Concerned:

An application has been filed in the Treasury Department for the recordation of the following described trade name under the provisions of section 42, Trademark Act of 1946, and section 11.16, Customs Regulations:

"BARBAN CREATIONS," owned by Herman Pecker and Co., Inc., a corporation organized under the laws of the State of New York, located and doing business at 28 West 36th Street, New York City, which trade name is used in connection with stuffed animals and dolls, Christmas novelties, casual slippers, shoe backs, luggage and general merchandise manufactured in Japan, Hong Kong, and the United States.

Any person who desires to file an opposition to the recordation of this trade name shall notify the Commissioner of Customs, Bureau of Customs, Washington, D.C., before the expiration of 30 days after April 15, 1964, of his intent to oppose the recordation. If a notice of opposition is filed, the opposer will be furnished with a copy of the application for recordation of the trade name, together with its supporting documents and instructions as to the procedure to be followed. The customs officers concerned will be given notice within 45 days after April 15, 1964, of any opposition proceeding.

Until 45 days after April 15, 1964, all articles of foreign manufacture bearing names or marks which copy or simulate the above-mentioned trade name shall be detained, but not seized, and thereafter, shall receive the treatment provided for in section 11.17, Customs Regulations, unless a notice is received that an opposition has been filed, in which case such articles shall continue to be detained until a final determination is made concerning the right of the applicant to the trade name.

(Signed) PHILIP NICHOLS, JR.,
Commissioner of Customs.

March 4, 1964.

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 22,406 (COCA-COLA in script), The Coca Cola Company, Nutrient or tonic beverages; **Reg. No. 47,189,** same, Tonic beverages and syrups for the manufacture of such

CONDITION OF TRADEMARK APPLICATIONS AS OF FEBRUARY 29, 1964

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	15,213
Date of oldest new application	July 15, 1963
Date of oldest amended application	July 3, 1963

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 2, 4, 5, 8, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 39, 41, 42, 43, 44	8-6-63	8-1-63
(II) H. E. KASCHUB, Classes 1, 3, 6, 7, 9, 10, 18, 22, 27, 38, 40, 45, 46, 47, 48, 49, 50, 51, 52; Service Marks, Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	7-15-63	7-3-63
Renewals (All Classes)	2-4-64	2-14-64
Sec. 12 (c) Publications (All Classes)	2-10-64	

Applications filed during the month of February 1964—1,922

Registrations Issued—280—No. 767,772 to No. 768,051
Renewals Issued—50

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PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington, D.C., 20231.

beverages; **Reg. No. 238,145** (COCA-COLA), same, Beverages and syrups for the manufacture of such beverages; **Reg. No. 238,146** (COCA-COLA in script), same; **Reg. No. 415,755** (COKE), same, Non-alcoholic maltless beverages and the syrups for making such beverages, **filed** Oct. 7, 1963, D.C. Oreg. (Portland), Doc. 63–486, *The Coca-Cola Company* v. *John A. Dodok et al.* Defendants enjoined Nov. 14, 1963. Same, **filed** Nov. 19, 1963, D.C., S.D.N.Y., Doc. 63/3381, *Coca-Cola Company* v. *Leonard Caterers, Inc.*

Reg. No. 47,189. (See Reg. No. 22,406.)

Reg. No. 87,889 (DU BARRY), Richard Hudnut, Soap (solid and liquid), abrasive, detergent, and polishing materials; **Reg. No. 307,276**, same, Perfumes, toilet water, sachet powder, talcum powder, etc.; **Reg. No. 414,195**, same, Makeup base, skin tinting preparations and antiseptic lotion; **Reg. No. 555,330** (DU BARRY (in script) CREME SUPERBE), same, Face cream, **filed** Nov. 15, 1963, D.C., S.D.N.Y., Doc. 63/3363, *Warner-Lambert Pharmaceutical Co. et ano.* v. *Du Barry Hair Creations, Inc.*

Reg. No. 238,145. (See Reg. No. 22,406.)

Reg. No. 238,146. (See Reg. No. 22,406.)

Reg. No. 249,754 (NIVEA), P. Beiersdorf & Co., Inc., Toilet cream, **filed** Feb. 14, 1961, D.C., S.D.N.Y., Doc. 61/560, *Duke Laboratories, Inc.* v. *Bremen House, Inc.* Consent judgment; defendant enjoined Nov. 23, 1963.

Reg. No. 307,276. (See Reg. No. 87,889.)

Reg. No. 346,787 (THE HOUSE OF WESTMORE), The House of Westmore, Inc., Cosmetics and toilet preparations—namely, face powder, lipstick, eye shadow, cream rouge, etc.; **Reg. No. 347,813** (THE HOUSE OF WESTMORE AND DESIGN), same; **Reg. No. 347,814** (DESIGN AND SHIELD), same, **filed** Nov. 19, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63–1394–Y, *The House of Westmore of Calif., Inc.* v. *House of Westmore, Inc.*

Reg. No. 347,813. (See Reg. No. 346,787.)

Reg. No. 347,814. (See Reg. No. 346,787.)

Reg. No. 385,638 (SNUGL), Claud W. Mills, Wheel counterbalancing weights for vehicles, **filed** Nov. 19, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63–1397–WM, *Ralph W. Mills et al.* v. *Kenneth V. Mills et al.*

Reg. No. 407,813 (DAN RIVER), Riverside & Dan River Cotton Mills, Inc., Cotton plaids and checks in the piece or in cut lengths, cotton sheetings, sheet, pillow cases, and bolster cases, etc.; **Reg. No. 420,302** (DANSPORT), same, Piece goods of cotton, rayon, wool or mixtures thereof; **Reg. No. 432,463** (IT'S A DAN RIVER FABRIC), same, Men's shirts, shorts, and pajamas, and women's and children's dresses, blouses, shirts, etc.; **Reg. No. 439,158** (DANSHEEN), same, Piece goods of cotton, rayon, or mixtures thereof, **filed** Nov. 13, 1963, D.C., S.D.N.Y., Doc. 63/3318, *Danskin, Inc.* v. *Dan River Mills, Inc.*

Reg. No. 414,063 (WARNER), William R. Warner & Co., Inc., Chemicals, medicines, and pharmaceutical preparations on or for the following: diuretics, deodorants, mouthwash, flavors for medicinals, **filed** Nov. 14, 1963, D.C., S.D.N.Y., Doc. 63/3344, *Warner-Lambert Pharmaceutical Co.* v. *Warner Laboratories, Inc.*

Reg. No. 414,195. (See Reg. No. 87,889.)

Reg. No. 415,755. (See Reg. No. 22,406.)

Reg. No. 419,869 (BAYLOR), Texoma Wholesale Jewelers, Watches, watch movements, and chronographs; **Reg. No. 751,683**, same, Zale Jewelry Company, Inc., Watches and parts thereof, **filed** Jan. 24, 1963, D.C. Nebr. (Omaha), Doc. 593L, *Zale Jewelry Company, Inc.* v. *Kenneth L. Mitzner, doing business as Crown Jewelry Co.* Consent judgment; trademarks held valid; defendant enjoined (notice Nov. 14, 1963).

Reg. No. 420,302. (See Reg. No. 407,813.)

Reg. No. 432,463. (See Reg. No. 407,813.)

Reg. No. 439,158. (See Reg. No. 407,813.)

Reg. No. 501,478 (PERMANENTE), Permanente Cement Company, Cements—namely, Portland, oil well, high-early strength and plastic, etc., **filed** Oct. 3, 1963, D.C. Oreg. (Portland), Doc. 63–479, *Permanente Cement Company* v. *Permanente Asphalt Co., Inc.* Consent judgment; defendant enjoined Nov. 15, 1963.

Reg. No. 554,811 (DACRON), E. I. du Pont de Nemours and Company, Synthetic polyester fibers for generalized use in the industrial arts; **Reg. No. 555,085**, same, Yarns or synthetic fibers, **filed** Nov. 20, 1963, D.C., S.D.N.Y., Doc. 63/3397, *E. I. du Pont de Nemours & Co.* v. *Alexander's Department Stores, Inc.*

Reg. No. 555,085. (See Reg. No. 554,811.)

Reg. No. 555,330. (See Reg. No. 87,889.)

Reg. No. 592,331 (MANPOWER), Manpower, Inc., Furnishing of its employees on a contract basis to persons or places of business requiring part-time or temporary help, including stenographers, typists, office and factory workers, etc.; **Reg. No. 596,927** (MI AND DESIGN), same; **Reg. No. 596,928** (MI AND DESIGN MANPOWER, INC.), same; **Reg. No. 672,365** (MANPOWER), same; **Reg. No. 749,437**, same, Newsletter; **Reg. No. 750,696** (GEAR AND WORLD DESIGN), same, Supplying of trained personnel for integrated advertising, merchandising and sales promotional services, including market research and distribution, **filed** Nov. 15, 1963, D.C., S.D.N.Y., Doc. 63/3350, *Controlled Manpower, USA* v. *Manpower, Inc. et al.*

Reg. No. 596,927. (See Reg. No. 592,331.)

Reg. No. 596,928. (See Reg. No. 592,331.)

Reg. No. 596,678 (TRIDENT DESIGN), Merriman Bros., Inc., Marine and yacht hardware including chocks, blocks, turnbuckles, cleats, etc.; **Reg. No. 755,368** (TRIDENT), same, Surf and/or planing type sailboats, **filed** Oct. 8, 1963, D.C., S.D.N.Y., Doc. 63/2932, *Merriman Brothers, Inc.* v. *Trident Marine Products Corp.* Consent decree; defendant enjoined Nov. 23, 1963.

Reg. No. 606,564 (CYCLONE), United States Steel Corporation, Wire baskets, wire fencing, picket fencing, fence gates, fence posts, etc., **filed** Nov. 21, 1963, D.C., N.D. Ohio (Toledo), Doc. C–63–178, *United States Steel Corporation* v. *Cyclone Fence, Inc.*

Reg. No. 671,020 (MARTINIZING), The American Laundry Machinery Company, Fabric cleaning and processing service, **filed** Oct. 23, 1963, D.C.N.J. (Newark), Doc. 881–63, *Martin Equipment Sales et al.* v. *Emanuel J. Tubis.* Consent judgment; injunction issued Nov. 12, 1963.

Reg. No. 672,365. (See Reg. No. 592,331.)

Reg. No. 675,676 (ARABESQUE in script), Arabesque, Incorporated, Plaques, **filed** Nov. 15, 1963, D.C., E.D. Mo. (St. Louis), Doc. 63C–416(2), *Burwood Products Company* v. *General Art Co. et al.*

Reg. No. 688,765 (HYDROTHERM), Hydrotherm, Inc., Hot water sterilizer for use in sterilizing dishes, pots, pans and flatware in connection with kitchens and restaurants, **filed** Nov. 21, 1963, D.C., S.D.N.Y., Doc. 63/3423, *Hydrotherm, Inc.* v. *Lindy Hydrothermal Products, Inc.*

Reg. No. 749,437. (See Reg. No. 592,331.)

Reg. No. 750,696. (See Reg. No. 592,331.)

Reg. No. 751,683. (See Reg. No. 419,869.)

Reg. No. 755,368. (See Reg. No. 596,678.)

Reg. No. 757,361 (ARGO), Argo Record Company Limited, Phonograph records, **filed** Nov. 20, 1963, D.C., S.D.N.Y., Doc. 63/3402, *Argo Record Company, Ltd.* v. *Chess Producing Corp.*

Erratum

In the OFFICIAL GAZETTE, issue of Jan. 28, 1964, vol. 798, p. TM 135, under the heading "Trademark Suits," second column, lines 8 and 9 thereof, for "600,644 (CORAX), Mead Cornell, High melting point mineral waxes" read *600,944 (SANTA'S WORKSHOP), Santa's Workshop, Inc., Toys and games;*.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 161,995. Harold M. Kuckuk, d.b.a. Beacon Products Company, Milwaukee, Wis. Filed Feb. 4, 1963.

SPARKLE NO. 6

For Non-Caustic Athletic Field Marking Material.
First use June 15, 1956.

SN 165,718. United Cement Products Company, Wichita, Kans. Filed Mar. 29, 1963.

GLOW-CORE

For Resins To Be Used in Casting and Producing Architectural Structural and Decorative Units.
First use Mar. 18, 1963.

SN 168,760. Owens-Corning Fiberglas Corporation, Toledo, Ohio. Filed May 13, 1963.

BETA

For Textile Glass Fibers.
First use October 1962.

SN 170,757. Monsanto Chemical Company, St. Louis, Mo. Filed June 11, 1963.

ACRILASTIC

For Fiber and Filaments.
First use May 22, 1963.

SN 173,604. Ross & Roberts, Inc., Stratford, Conn. Filed July 23, 1963.

TOUCHSTONE

For Composite Fabric Having a Vinyl Surface Layer Sold in Roll Form and Used for the Manufacture of Upholstery, Handbags, Outer Wear and Luggage.
First use Oct. 24, 1962.

SN 174,501. Favorite Plastic Corp., Brooklyn, N.Y. Filed Aug. 6, 1963.



The monogram shown as part of the mark is composed of the letters "FP."
For Polyethylene Film and Tubing.
First use August 1956.

Class 2—Receptacles

SN 157,098. Goss Gas, Inc., Glenshaw, Pa. Filed Nov. 13, 1962.

GOSS

For Machinery and Tools and Parts Thereof—Namely, Cylinders for Liquefied Gas and Refill Adaptors Therefor.
First use July 1, 1939.

SN 159,641. Celanese Corporation of America, New York, N.Y. Filed Dec. 24, 1962.



For Plastic Containers—Namely, Bottles and Jars.
First use Jan. 17, 1962.

SN 168,419. George Koch Sons, Inc., Evansville, Ind. Filed May 8, 1963.

Floratainer

Owner of Reg. No. 402,583.
For Flower Baskets and Flower Receptacles and Holders Made Partly or Wholly of Metal, Plastic, Wood, Ceramic and Fibrous Materials.
First use Aug. 28, 1962.

SN 172,583. Gilman Paper Company, New York, N.Y. Filed July 8, 1963.

GAR-BAG

For Refuse Bags.
First use in July 1962.
Subj. to Intf. with SN 171,547.

SN 172,584. Gilman Paper Company, New York, N.Y. Filed July 8, 1963.

DisPOzit

For Refuse Bags.
First use July 1962.

SN 175,858. Maryland Cup Corporation, Owings Mills, Md. Filed Aug. 27, 1963.



The mark consists of a line of hearts of indefinite length.
Owner of Reg. Nos. 752,714 and 753,111.
For Paper Cups.
First use in or about October 1962.

Class 4—Abrasives and Polishing Materials

SN 148,202. A. Kimball Ltd., Toronto, Ontario, Canada. Filed July 2, 1962.

WISP

Priority claimed under Sec. 44(d) on Canadian application filed May 24, 1962; Reg. No. 133,175, dated Oct. 18, 1963.
For Shoe Polishing Preparations.

SN 177,913. Red Hill Grinding Wheel Corporation, d.b.a. Red Hill Grinding Wheel Corp., Pennsburg, Pa. Filed Sept. 27, 1963.

SPIN-ON

For Grinding Wheels.
First use on or about Sept. 5, 1963.

Class 5—Adhesives

SN 178,662. United States Rubber Company, New York, N.Y. Filed Oct. 8, 1963.

KWIK-SEALZ

For Latex Adhesives for Joining Fabrics, Paper, and Cardboard.
First use July 10, 1956.

Class 6—Chemicals and Chemical Compositions

SN 125,601. A. H. Howard Chemical Company, Limited, Orangeville, Ontario, Canada. Filed Aug. 8, 1961.

GRAIN GUARD

Applicant disclaims the use of the word "Grain" apart from the mark as shown. Priority claimed under Sec. 44(d) on Canadian application filed July 7, 1961; Reg. No. 128,456, dated Oct. 26, 1962.
For Pesticide.

SN 155,744. K. J. Quinn & Co. Inc., Malden, Mass. Filed Oct. 23, 1962.

SOLCRON

For Finish for Leather.
First use May 7, 1962.

SN 162,908. Corn Products Company, New York, N.Y. Filed Feb. 18, 1963.



For Ironing Aid Ingredient Incorporated in Starch for Laundry Purposes.
First use at least as early as Mar. 20, 1962.

SN 163,748. Michigan Chemical Corporation, St. Louis, Mich. Filed Mar. 1, 1963.

NEMASTER

Owner of Reg. Nos. 535,490 and 559,957.
For Pesticide Preparation for Use as a Fumigant.
First use Dec. 21, 1962.

SN 164,065. Pennco Engineering Company, d.b.a. Pennsylvania Engineering Company, Philadelphia, Pa. Filed Mar. 6, 1963.

PENNOXIDE

For Sterilizing Gas.
First use Jan. 17, 1963.

SN 164,066. Pennco Engineering Company, d.b.a. Pennsylvania Engineering Company, Philadelphia, Pa. Filed Mar. 6, 1963.

PENNGAS

For Sterilizing Gas.
First use Feb. 14, 1963.

SN 165,567. N. P. Benson Optical Company, Minneapolis, Minn. Filed Mar. 28, 1963.

FILTRCOTE

For Metallic Coating for Ophthalmic Lenses.
First use Mar. 18, 1963.

SN 166,606. American Cyanamid Company, Wayne, N.J. Filed Apr. 12, 1963.

PLASTANOX

Owner of Reg. No. 626,428.
For Antioxidant.
First use Apr. 2, 1963.

SN 167,392. M. Michel and Company, Inc., New York, N.Y. Filed Apr. 23, 1963.

AQUALOC

For Evaporation Inhibiting Compound.
First use Feb. 15, 1961.

SN 167,993. Geigy Chemical Corporation, Ardsley, N.Y. Filed May 2, 1963.

SELLAZYM

Owner of Reg. Nos. 695,139 and 358,125.
For Depilatory Chemical.
First use Apr. 4, 1963.

SN 169,357. The Dow Chemical Company, Midland, Mich. Filed May 21, 1963.

GELGARD

For Thickening Agent.
First use Feb. 22, 1963.

SN 170,262. Schill & Seilacher Chemische Fabrik, Boeblingen, Wurttemberg, Germany. Filed Nov. 6, 1962.

NEUTRALAT

Owner of German Reg. No. 734,538, dated Mar. 9, 1960.
For Neutralizing Agent in the Tanning of Leather.

SN 172,435. A. M. Todd Company, Kalamazoo, Mich. Filed July 3, 1963.

CRYSTAL WHITE

For Essential and Volatile Vegetable Oils.
First use December 1875.

SN 172,692. Sternco Industries, Inc., Allendale, N.J. Filed July 9, 1963.

ALGI-STOP

For Chemical Agent Added to Water To Control the Growth of Algae in Aquarium Tanks.
First use Nov. 14, 1960.

SN 172,793. Alcolac Chemical Corporation, Baltimore, Md. Filed July 11, 1963.

SIPENOL

Owner of Reg. Nos. 562,373 and 634,502.
For Organic Amino Compounds.
First use May 1963.

SN 172,805. Colonial Rubber Works, Inc., Dyersburg, Tenn. Filed July 11, 1963.

STABLENE X

For Polyolefin Compound.
First use May 13, 1963.

SN 172,806. Colonial Rubber Works, Inc., Dyersburg, Tenn. Filed July 11, 1963.

CHEMI-BLEND

For Chemical Mixtures for Use in the Manufacture of Rubber or Plastic.
First use June 1, 1963.

SN 172,807. Colonial Rubber Works, Inc., Dyersburg, Tenn. Filed July 11, 1963.

CARB-O-BLEND

For Carbon Black Mixtures for Use in the Manufacture of Rubber or Plastic.
First use May 31, 1963.

SN 172,983. F & M Scientific Corporation, Avondale, Pa. Filed July 15, 1963.

DIATOPORT

For Treated Diatomaceous Earth for Use as a Column Support for Gas Chromatography.
First use August 1962.

SN 174,596. Lorayn Corporation, d.b.a. Electronic Medical Systems, Inc., Minneapolis, Minn. Filed Aug. 7, 1963.

TRANSLYTE

For Electrode Paste for Reducing Electrical Resistance Between a Surface Electrode and the Skin in Electrocardiography and in Other Situations Where Minimum Resistance Between Adjacent Surfaces Is Desirable.
First use Jan. 15, 1962.

SN 176,017. Petrolite Corporation, St. Louis, Mo. Filed Aug. 29, 1963.

LOCAP

For Sweetening Catalyst, Particularly Useful in Sweetening Petroleum.
First use Aug. 1, 1963.

SN 176,517. General Latex and Chemical Corporation, Cambridge, Mass. Filed Sept. 9, 1963.

VULT-A-GRIP

Owner of Reg. Nos. 240,652, 624,246, and others.
For Back Sizing for Rugs and Carpets.
First use Aug. 16, 1963.

SN 176,675. W. A. Scholten's Chemische Fabrieken N.V., Foxhol, Netherlands. Filed Sept. 10, 1963.

FOBAMYL

Owner of Dutch Reg. No. 147,787, dated May 7, 1963.
For Starch and Starch Products for Industrial Purposes.

Class 8—Smokers' Articles, Not Including Tobacco Products

SN 164,320. The Central Tobacco Manufacturing Company Limited, Montreal, Quebec, Canada. Filed Mar. 11, 1963.

PREMIER SUPERMATIC

For Hand-Operated Cigarette Making Machines.
First use March 1959; in commerce December 1960.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 167,908. Hunt Foods and Industries, Inc., Fullerton, Calif. Filed May 1, 1963.



The drawing is lined for the color blue.
For Matches.
First use Nov. 20, 1962.

SN 167,909. Hunt Foods and Industries, Inc., Fullerton, Calif. Filed May 1, 1963.

OHIO BLUE TIP

The drawing is lined for blue. Owner of Reg. Nos. 355,761, 509,704, and others.
For Matches.
First use Nov. 20, 1962.

SN 174,948. Explosive Technology, Inc., Santa Clara, Calif. Filed Aug. 13, 1963.

X-CORD

For Mild Detonating Fuse Having an Explosive Core Surrounded by a Seamless Jacket.
First use Oct. 5, 1961.

Class 10 — Fertilizers

SN 175,823. Whitney Seed Co. Inc., Buffalo, N.Y. Filed Aug. 26, 1963.

Vital

For Lawn Fertilizer.
First use Mar. 3, 1958.

Class 12 — Construction Materials

SN 143,215. Dacar Chemical Products Company, Pittsburgh, Pa. Filed Apr. 27, 1962.

DAXCEL FOAMGUARD

Owner of Reg. No. 669,748.
For Impact Resistant Coating for Foam Type Insulation and Surface Finish for Concrete Surfaces and Block and Brick Walls, Comprised of a Dry Powder Mix and a Special Formula Liquid To Be Mixed Together Just Before Using and Applied to a Surface by Troweling.
First use July 28, 1960.

SN 144,046. Ciments d'Obourg, Societe Anonyme, Obourg, Belgium. Filed May 8, 1962.

SUPERIOR PORTLAND CEMENT OBOURG

The wording "Superior Portland Cement" and the name "Obourg" are disclaimed apart of the mark. Owner of Belgian Reg. No. 1,698, dated Mar. 20, 1946.
For Portland Cement, Limestone and Plaster.

SN 150,199. Unican Plastics Co., Inc., Shrewsbury, Mass. Filed July 31, 1962.

Plastik

For Plastic Mender, Solder or Filler.
First use June 1956.

SN 154,501. Milwaukee Motive Mfg. Co., Milwaukee, Wis. Filed Oct. 4, 1962.

Tru-Bond

For Plastic Metal Mender and Hardener.
First use May 11, 1962.

SN 156,258. Ames Metal Moulding Company, Inc., Saddle Brook, N.J. Filed Oct. 31, 1962.

ADJUST-O VINYL

Applicant hereby disclaims the word "Vinyl" apart from the mark as shown.
For Construction Materials—Namely, Threshold Devices, Door Sills, Weather Stripping and Scuff Plates for Closure Devices.
First use July 1962.

SN 159,853. Sun-Trol Incorporated, Southfield, Mich. Filed Dec. 27, 1962.

Sun-Trol

The term "Inc." is disclaimed apart from the mark as shown.
For Metal Awnings.
First use Oct. 17, 1962.

SN 160,834. California Wood Products, Inc., Santa Rosa, Calif. Filed Jan. 17, 1963.

CAL-WOOD

For Doors, Such as Hollow and Solid Core Veneered Flush Doors.
First use July 21, 1952.

SN 163,683. Washington Aluminum Company, Incorporated, Baltimore, Md. Filed Feb. 28, 1963.

WacoPlate

Applicant disclaims the descriptive word "Plate" apart from the mark as shown. Owner of Reg. Nos. 618,477, 621,190, and 628,147.
For Metallic Floor Grating.
First use May 7, 1962.

SN 163,684. Washington Aluminum Company, Incorporated, Baltimore, Md. Filed Feb. 28, 1963.

WacoGrate

Applicant disclaims the descriptive word "Grate" apart from the mark as shown. Owner of Reg. Nos. 618,477, 621,190, and 628,147.
For Metallic Floor Grating.
First use May 17, 1962.

SN 165,063. Nippon Eternit Pipe Co., Ltd., Chuo-ku, Tokyo, Japan. Filed Mar. 20, 1963.

NIPPONITE
ニッポンナイト
ニッポナイト

The Japanese characters shown in the drawing in the first line in transliteration are "nippon naito." Those shown in the second line are "nippo naito." The word "Nipponite" is an invented word and has no specific significance. Owner of Japanese Reg. No. 345,562, dated Aug. 15, 1941.
For Pipe, Pipe Fittings and Other Goods Made of Asbestos Cement.

SN 165,717. United Cement Products Company, Wichita, Kans. Filed Mar. 29, 1963.

GLOW-CORE

For Architectural Structural and Decorative Units—Namely, Masonry Structural Blocks.
First use Mar. 12, 1963.

SN 167,174. Sivad Ceramic Corporation, Oak Hill, Ohio. Filed Apr. 19, 1963.

Dū-KAST

The drawing is lined for the colors red and green.
For Refractory Castables.
First use Dec. 1, 1962.

SN 167,331. Selby, Battersby & Company, Philadelphia, Pa. Filed Apr. 22, 1963.

SELBY BATTERSBY & CO

Owner of Reg. Nos. 204,448, 204,449, and 275,251.
For Plastic and Mastic Floor, Roof and Deck Surfacing Compositions; a Bonding Medium for Flooring Materials; and a Plastic Floor Underlayment Coating.
First use Oct. 11, 1962.

SN 170,608. Certain-Teed Products Corporation, Ardmore, Pa. Filed June 10, 1963.

IDEAL ALLWETHR

The term "Allwether" is disclaimed apart from the mark as shown. Owner of Reg. No. 398,411.
For Window Units.
First use on or about Apr. 16, 1963.

SN 172,737. The Flintkote Company, New York, N.Y. Filed July 10, 1963.

DUO-VINA

For Asbestos Cement Siding Shingles.
First use Feb. 2, 1960.

SN 172,899. Hexcel Products Inc., Berkeley, Calif. Filed July 12, 1963.

For Honeycomb-Type Cellular Core Material for Structural and Decorative Uses in the Construction Arts.
First use about June 21, 1963.

SN 173,535. Arthur F. Tyler Sales Company, Athol, Mass. Filed July 22, 1963.

TYLER TILT

For Louvered Wood Products—Namely, Interior and Exterior Shutters, Doors and Partitions.
First use May 14, 1963.

SN 176,757. Nanette B. Stevenson, d.b.a. Nancy Stevenson, Sarasota, Fla. Filed Sept. 11, 1963.

CON-CRYSTA

For Concrete Blocks.
First use June 11, 1963.

SN 176,761. West Bank Oil Terminal, Inc., Paulsboro, N.J. Filed Sept. 11, 1963.

RITE-PAK

For Liquid Bituminous Composition for Use in Preparing Cold Bituminous Road Surfacing Mixes Containing Aggregate.
First use Jan. 4, 1963.

SN 177,442. Quigley Company, Inc., New York, N.Y. Filed Sept. 20, 1963.

GUNTAPITE

For Magnesite-Base Refractory.
First use on or about Jan. 27, 1956.

SN 177,450. N.V. Schokbeton, Zwijndrecht, Netherlands. Filed Sept. 20, 1963.

SCHOKBETON

For Mechanically Compacted Molded Concrete Elements for Structural Building Purposes, Road Paving Purposes, Floor Paving Purposes, and as Stands for Bicycles.
First use Jan. 25, 1960; in commerce Jan. 25, 1960.

SN 177,451. N.V. Schokbeton, Zwijndrecht, Netherlands. Filed Sept. 20, 1963.

SCHOKCRETE

For Mechanically Compacted Molded Concrete Elements for Structural Building Purposes, Road Paving Purposes, Floor Paving Purposes, and as Stands for Bicycles.
First use Nov. 15, 1961; in commerce Nov. 15, 1961.

SN 177,547. The Rollside Corporation, Columbus, Ohio. Filed Sept. 23, 1963.

ROLLSIDE

For Sheet Metal Siding and Accessories—i.e., Undersill Trim, Outside Corner Post, Inside Corner Post, Channel Pieces, and Staples.
First use Aug. 23, 1963.

SN 177,794. Johns-Manville Corporation, New York, N.Y. Filed Sept. 26, 1963.

BLASTAPE

For Protective Asbestos Tape for Missile Launching Equipment.
First use at least about Nov. 30, 1959.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 156,259. Ames Metal Moulding Company, Inc., Saddle Brook, N.J. Filed Oct. 31, 1962.

ADJUST-O VINYL

Applicant hereby disclaims the word "Vinyl" apart from the mark as shown.
For Packaged Screws, Bolts Nails, Etc., of Metal, Designed for Installation of Threshold Devices, Door Sills, Weatherstripping, Scuff Plates and the Like.
First use July 1962.

SN 158,397. Stratoflex, Inc., Fort Worth, Tex. Filed Dec. 3, 1962.



Owner of Reg. No. 681,241.
For Hose Fittings and Hose Assemblies.
First use Aug. 30, 1962.

SN 158,398. Stratoflex, Inc., Fort Worth, Tex. Filed Dec. 3, 1962.

ZING ZONG

Owner of Reg. No. 681,241.
For Hose Fittings and Hose Assemblies.
First use Aug. 30, 1962.

SN 161,299. Bostitch, Inc., East Greenwich, R.I. Filed Jan. 24, 1963.

Regal

For Wire Staples for Tacking, Stitching, and Binding.
First use Dec. 27, 1962.

SN 173,897. John B. Chakeres, Columbus, Ohio. Filed July 29, 1963.

ADJUSTAL

For Clamps for Aligning Adjoining Members.
First use Aug. 1, 1949.

SN 174,454. Telsco Industries, Dallas, Tex. Filed Aug. 5, 1963.

PERM SEAL

The representation of the goods is disclaimed apart from the mark.
For Pipe Repair Clamps.
First use July 10, 1963.

SN 174,774. Just Manufacturing Co., Franklin Park, Ill. Filed Aug. 9, 1963.

GRIP-RIM

For Sink Bowls.
First use June 24, 1963.

SN 176,686. Stefano Rivetti, Maratea, Potenza, Italy. Filed Sept. 10, 1963.



Owner of Italian Reg. No. 161,467, dated May 14, 1963.
For Sanitary Apparatus for Installation in Bathrooms, and Assembly of Said Sanitary Apparatus.

SN 176,961. Westinghouse Air Brake Company, Wilmerding, Pa. Filed Sept. 13, 1963.

WABCO

Owner of Reg. Nos. 394,437, 728,268, and others.
For Air Valves and Air Line Devices Consisting of Filters, Regulators, Lubricators and Cocks, Separately or in Combination.
First use Feb. 4, 1963, on air line devices.

SN 177,091. Rain Bird Sprinkler Manufacturing Corp., Glendora, Calif. Filed Sept. 16, 1963.

TURF BIRD

Owner of Reg. No. 567,442.
For Sprinklers.
First use Feb. 19, 1960.

SN 177,092. Rain Bird Sprinkler Manufacturing Corp., Glendora, Calif. Filed Sept. 16, 1963.

RAIN BIRD

Owner of Reg. No. 567,442.
For Manually-Operated Turf Valves, Angle, Globe, and Check Valves, Quick Coupling Valves and Valve Keys, Electrically and Hydraulically Operated Remote Control Valves.
First use Aug. 26, 1957, on turf valves.

SN 177,617. Therm-O-Disc, Incorporated, Mansfield, Ohio. Filed Sept. 26, 1963.

Eliminate the Risk -- Use Therm-O-Disc

Owner of Reg. Nos. 518,007, 750,151, and others.
For Valves.
First use Nov. 17, 1960.

SN 180,353. Ajax Hardware Corporation, City of Industry, Calif. Filed Nov. 4, 1963.

HINGE-A-MATIC

For Cabinet Hinges.
First use Oct. 2, 1963.

SN 161,263. James J. Oussani, d.b.a. The Staplex Company, Brooklyn, N.Y. Filed Nov. 15, 1963.

STAPLEX

Owner of Reg. Nos. 540,853 and 601,607.
For Staples.
First use Sept. 15, 1949.

Class 14—Metals and Metal Castings and Forgings

SN 151,138. Gries Reproducer Corporation, New Rochelle, N.Y. Filed Aug. 14, 1962.

GRC

For Die Castings and Moldings Made of Metal or a Combination of Plastic and Metal.
First use June 1959.

SN 173,091. The Bon Ami Company, New York, N.Y. Filed July 16, 1963.

Tidy Home

For Aluminum Foil.
First use Aug. 15, 1956.

SN 176,267. Magnolia Metal Company, Inc., Auburn, Nebr. Filed Aug. 30, 1963.

DEFENDER

For Babbitt, Bearing, and Anti-Friction Metals and Alloys.
First use January 1893.

Class 15—Oils and Greases

SN 113,609. Robert L. Batchelor, d.b.a. Lather-Lube Co., Bergenfield, N.J. Filed Feb. 14, 1961.

LATHER-LUBE

For Liquid Lubricant, Particularly for Conveyors.
First use Dec. 9, 1960.

SN 160,348. Vitramon, Incorporated, Monroe, Conn. Filed Jan. 7, 1963.

Vitramon

Owner of Reg. No. 565,945.
For Lubricants, Specifically Colloidal Graphite in Oil.
First use Dec. 26, 1962.

SN 162,598. Tenneco Corporation, Houston, Tex. Filed Feb. 12, 1963.



The drawing is lined for red and blue.
For Petroleum Products—Namely, Gasoline, Lubricating Oil and Grease, Diesel Fuel, and Furnace Oils.
First use Oct. 24, 1960.

SN 162,662. The Pure Oil Company, Palatine, Ill. Filed Feb. 18, 1963.



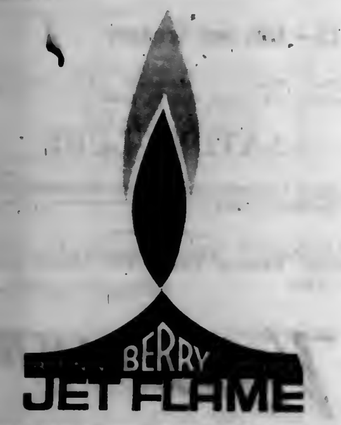
The drawing is lined for the color red.
For Heating Oil.
First use on or about Dec. 18, 1962.

SN 163,326. Cosden Oil & Chemical Company, Big Spring, Tex., assignee of Cosden Petroleum Corporation, Big Spring, Tex. Filed Feb. 25, 1963.

COSDEN

For Gasoline, Kerosene, Benzene, Toluene, Furnace Fuel Oils, and Motor Fuel Oils and Greases.
First use Feb. 4, 1928.

SN 170,601. Berry Refining Company, Gary, Ind. Filed June 10, 1963.



The words "Refining Company" are disclaimed apart from the mark as shown.
For Residual Fuel Oils.
First use Jan. 15, 1963.

SN 174,162. Bowes "Seal Fast" Corporation, d.b.a. "B/4 Laboratories," Indianapolis, Ind. Filed Aug. 1, 1963.

B/4

For Motor Oil Conditioner, Known in the Trade as Oil Conditioner, an Upper Cylinder Lubricant, Known in the Trade as Top Oil, a Valve Lubricant Known in the Trade as Valve Aid and a Carburetor Cleaner.
First use July 18, 1963.

SN 174,866. Edgar W. Holyoke, d.b.a. Burnzall Company, El Monte, Calif. Filed Aug. 12, 1963.



The drawing is lined for the colors yellow and red. Owner of Reg. No. 645,321.
For Drums of Fuel Oil Additive.
First use Apr. 21, 1955.

SN 176,628. Oil Center Research, Inc., Lafayette, La. Filed Sept. 12, 1963.

Liquid-O-Ring

For Lubricant and Sealant for Bolt Threads, Pipes, Tubing, Casing, Tool Joints, Drill Collars, Stop Cocks, Plug Valves, Flanges, Pumps, and Well Head Equipment.
First use on or about Dec. 3, 1962.

SN 177,364. Metal Lubricants Co., Chicago, Ill. Filed Sept. 19, 1963.

MELTAC

Owner of Reg. Nos. 695,930 and 695,933.
For Oil and Grease Lubricant for Machinery.
First use in or about May 1963.

SN 177,425. Hudson Oil Company, Kansas City, Kans. Filed Sept. 20, 1963.



The drawing is lined for the color red, but no claim is made to any particular color. Owner of Reg. Nos. 614,216 and 748,826.
For Lubricating Oils, Outboard Motor Oil and Automatic Transmission Fluid.
First use during August 1960.

SN 178,958. Northern Chemical Company, Niles, Mich. Filed Oct. 14, 1963.

BLUE PENGUIN

For Starting Fluid for Diesel and Gasoline Engines.
First use Aug. 19, 1963.

Class 16—Protective and Decorative Coatings

SN 162,244. Empire Coatings & Chemical Co., Denver, Colo. Filed Feb. 7, 1963.

ARO/GLAZE

Applicant disclaims the word "Glaze" apart from the mark.
For Two-Component, Thermosetting Resin Coatings for Masonry Surfaces.
First use on or about Sept. 10, 1962.

SN 168,653. Reeves and Sons Limited, Enfield, Middlesex, England. Filed May 8, 1963.

TEMPERABLOCK

For Artists' Materials—Namely, Colors.
First use Jan. 1, 1952.

SN 172,599. Lithoid Corporation, Lima, Pa. Filed July 8, 1963.

LITHOID

For Coating—Namely, a Heat and Corrosion Paint of Ceramic Composition.
First use May 4, 1963.

SN 173,218. Arnold Chemical Corporation, Chicago, Ill. Filed July 18, 1963.

MICRO SHIELD

For Automobile Finish Preserver Used as a Foundation Coat To Cleanse and Remove Waxes, Dirt and Other Foreign Material From the Finish, and as Automobile Sealer Coat To Preserve the Finish.
First use Apr. 16, 1963.

SN 173,816. Brown & Brown, Inc., Mobile, Ala. Filed July 26, 1963.



Owner of Reg. Nos. 520,117, 617,590, and others.
For Composition for Treating Canvas To Render It Water and Mildew Resistant.
First use June 24, 1959.

SN 177,621. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Sept. 24, 1963.

CADMOPUR

Owner of German Reg. No. 604,419, dated Jan. 23, 1951.
For Pigments for Coloring of Paints, Lacquers, Enamels, Plastics, Rubber, Glass, Ceramic and Like Products.

Class 17—Tobacco Products

SN 155,417. Imperial Tobacco Company of Canada, Limited, Montreal, Quebec, Canada. Filed Oct. 18, 1962.



Dutch Mill

Owner of Canadian Reg. No. 127,858, dated Aug. 31, 1962.
For Pipe Tobacco.

SN 161,333. Wally Frank, Ltd., New York, N.Y. Filed Jan. 24, 1963.

WILD GRAPE

For Tobacco Products—Namely, Pipe Tobacco.
First use on or about Oct. 1, 1940.

SN 176,723. Faber, Coe & Gregg, Inc., New York, N.Y. Filed Sept. 11, 1963.

GEMINI

For Cigarettes, Cigars, Smoking Tobacco and Snuff.
First use June 1963.

Class 18—Medicines and Pharmaceutical Preparations

SN 124,258. J. H. De Lamar & Son, Inc., Chicago, Ill. Filed July 19, 1961.

DELCHEM

For Drugs and Pharmaceuticals—Namely, Anesthetics, Anti-Histamines, Steroids, Bactericides.
First use Sept. 17, 1947.

SN 159,282. Quisenberry Mills, Inc., Kansas City, Mo. Filed Dec. 17, 1962.



For Medicated Feeds and Feed Supplements, and Feed Supplements Containing Vitamins and Minerals for Livestock and Poultry.
First use Feb. 10, 1962.

SN 167,053. Societe d'Etudes et de Realisations Scientifiques, en Abrege S.E.R.E.S.C.I., Schaerbeek-Brussels, Belgium. Filed Apr. 18, 1963.

KARBINONE

Owner of Belgian Reg. No. 89,255, dated Apr. 1, 1960.
For Synthetic Hemostatic Agent.

SN 169,463. Liv-Rite Products Co., Inc., Chicago, Ill. Filed May 22, 1963.

LIV-RITE

For Vitamin Tablets.
First use May 31, 1962.

SN 169,533. Drug Development Corporation, Brooklyn, N.Y. Filed May 23, 1963.

ATTAPECTATE

For Pharmaceutical Preparation for the Treatment of Diarrhea.
First use Apr. 29, 1963.

SN 170,998. Ethical Veterinary Supply Co., d.b.a. Evsco Pharmaceutical Co., Long Island City, N.Y. Filed June 14, 1963.

ENDERM

For Composition for Relief of Dermatosis in Pet Animals.
First use June 3, 1963.

SN 171,368. Charles A. Morris, d.b.a. Medical Specialties Company, Paris, Tex. Filed June 19, 1963.

OLE TIGE

For Medical Capsule for Veterinary Use in Treating Dogs for Worms.
First use Jan. 2, 1963.

SN 175,339. Dr. Karl Thomae GmbH, Biberach an der Riss, Germany. Filed Aug. 19, 1963.

BISOLVON

Owner of German Reg. No. 685,527, dated Dec. 14, 1955.
For Preparation for the Treatment of Diseases of the Respiratory Organs.

SN 176,068. Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y. Filed Aug. 30, 1963.

GUANERAN

For Anti-Metabolic Drug.
First use Aug. 5, 1963.

SN 176,433. The Dow Chemical Company, Midland, Mich. Filed Sept. 6, 1963.

METOFANE

For General Inhalation Anesthetic for Veterinary Use.
First use Apr. 23, 1963.

SN 177,040. Hudson Vitamin Products, Inc., New York, N.Y. Filed Sept. 16, 1963.

AERO-MEDIC

For Medicated Preparation in Vaporized Form for Room Use Designed To Relieve Nasal Congestion, Colds and Hay Fever.
First use Sept. 5, 1963.

SN 177,524. Heterochemical Corporation, Valley Stream, N.Y. Filed Sept. 23, 1963.

HETRAZEEN

For Vitamin K Composition for Animal Use.
First use September 1963.

SN 177,587. A. Allen Horton, d.b.a. Acid-Ease Company, Trion, Ga. Filed Sept. 9, 1963.

AQUA-TON

For Urinary Analgesic and Antiseptic.
First use Oct. 1, 1962.

SN 178,523. C. H. Boehringer Sohn, Ingelheim (Rhine), Germany. Filed Oct. 8, 1963.

DOSOLATOR

Owner of German Reg. No. 767,673, dated Nov. 22, 1962.
For Medicinal Preparations for the Treatment of Asthma and Other Diseases of the Respiratory Organs.

SN 178,786. Delaware Poultry Laboratories, Inc., Millsboro, Del. Filed Oct. 11, 1963.

BIBRON

For Bronchitis Vaccine for Poultry.
First use Aug. 27, 1963.

SN 178,787. Delaware Poultry Laboratories, Inc., Millsboro, Del. Filed Oct. 11, 1963.

MULTIBRON

For Bronchitis Vaccine for Poultry.
First use Aug. 27, 1963.

SN 178,792. Endo Laboratories Inc., Richmond Hill, N.Y. Filed Oct. 11, 1963.

VALPIGEL

Owner of Reg. No. 689,393.
For Medicinal Preparation Used as an Antidiarrheal Antacid.
First use July 15, 1963.

SN 178,862. Atlas Chemical Industries, Inc., Wilmington, Del. Filed Oct. 14, 1963.

NORMACID

Owner of Reg. No. 585,477.
For Preparation for the Treatment of Gastric Subacidity.
First use Nov. 24, 1952.

SN 178,874. Charles A. Crete, d.b.a. Pharmaceutical Associates, San Francisco, Calif. Filed Oct. 14, 1963.

HINTIMATE

For Douche Powder.
First use May 28, 1963.

SN 178,889. Cutter Laboratories, Inc., Berkeley, Calif. Filed Oct. 14, 1963.

BOCEPTOL

For Veterinary Vaccine for Respiratory Condition.
First use on or before June 1, 1962.

SN 179,219. Garrett Laboratories, Inc., Baltimore, Md. Filed Oct. 17, 1963.

HS 35

For Hemorrhoid Spray.
First use Sept. 19, 1963.

SN 179,386. American Home Products Corporation, New York, N.Y. Filed Oct. 21, 1963.

FLUVAC

For Vaccine for Use in Veterinary Medicine.
First use Aug. 30, 1963.

SN 179,814. Schering Corporation, Bloomfield, N.J. Filed Oct. 25, 1963.

PROLERGIC

For Antihistamine Preparation.
First use Sept. 27, 1963.

SN 179,888. First Texas Pharmaceuticals, Inc., Dallas, Tex. Filed Oct. 28, 1963.

ZEMA STRINGENT

For Astringent, Soothing and Protective Agent for Itching, Skin Rashes, and Minor Skin Irritations.
First use 1922.

SN 180,534. Smith Kline & French Laboratories, Philadelphia, Pa. Filed Nov. 5, 1963.

ESKARESE

For Diuretic Preparation.
First use Oct. 21, 1963.

SN 180,663. Schering Corporation, Bloomfield, N.J. Filed Nov. 7, 1963.

CELESTAFORM

For Anti-Inflammatory Preparation.
First use July 15, 1963.

SN 180,706. Block Drug Company, Inc., Jersey City, N.J. Filed Nov. 8, 1963.

FEMICARE

For Vaginal Douche.
First use on or about Nov. 1, 1963.

SN 180,847. Clinical Specialties, Inc., Tulsa, Okla. Filed Nov. 12, 1963.

HEMATIL

For Multiple Vitamin-Iron Preparation for Anemia, Iron Deficiency in Pregnancy, Chronic Blood Loss, Nutritional Deficiencies, Anorexia and Post-Operative Lassitude.
First use July 15, 1957.

SN 180,848. Clinical Specialties, Inc., Tulsa, Okla. Filed Nov. 12, 1963.

GRAVICAL

For Multiple Vitamin-Mineral Preparation for the Supplementation of Pregnant and Lactating Patients and Containing the Recommended Dosage of Calcium.
First use May 15, 1960.

SN 180,849. Clinical Specialties, Inc., Tulsa, Okla. Filed Nov. 12, 1963.

GRAVIMINE

For Multiple Vitamin-Iron Preparation for Anemia, Iron Deficiency in Pregnancy, Chronic Blood Loss, Nutritional Deficiencies, Anorexia, Post-Operative Lassitude and Routine Pre-Natal Care, Including an Appetite Curbing Factor, and Also a Guard Against Hyper-Excitability.
First use June 15, 1962.

Class 19—Vehicles

SN 138,892. Societe Industrielle Generale de Mechanique Appliquee S.I.G.M.A., Paris, France. Filed Mar. 1, 1962.

FREE FLOW

Owner of French Reg. No. 489,381, dated July 11, 1960 (Seine); Natl. Inst. No. 147,876.
For Ships, Especially Tankers, and Hydraulically Controlled Devices Forming Structural Parts of Ships for Loading and Unloading the Ships.

SN 140,968. W. H. Miner, Inc., Chicago, Ill. Filed Mar. 28, 1962.

POWER-BRACE

For Manually Operable Vertical Bar-Type Cam and Hook Action Car Door Fasteners—Namely, Self-Locking and Door Stabilizing Fasteners for Hinged Cargo Doors of the Type Used on Railway Freight Cars, Highway Transport and Piggy-Back Trailers and Trucks, and Vehicle-Transportable Containers.
First use Oct. 9, 1961.

SN 158,164. Theodore C. Johnson, d.b.a. T. C. Johnson Company, Chagrin Falls, Ohio. Filed Nov. 29, 1962.

TCJ

For Air Brake System Parts.
First use Jan. 14, 1959.

SN 166,231. Wenger Music Equipment Co., Owatonna, Minn. Filed Apr. 5, 1963.

Wenger BANDWAGON

For Vehicle Mounted Music Shell.
First use June 1959.

SN 171,240. Dynaco Manufacturing, Inc., Tucson, Ariz. Filed June 18, 1963.

DYNA-MITE

For Four-Wheel Drive, Off-the-Road Vehicles, Capable of Carrying or Towing Cargo.
First use Mar. 29, 1962.

SN 173,858. Okresni Kovopodnik Benesov se Sidlem ve Vlasimi, Vlasim, Czechoslovakia. Filed July 26, 1963.



The term "Made in Czechoslovakia" is disclaimed. Owner of Czechoslovakian Reg. No. 155,004, dated Feb. 21, 1962.
For Motorcycles; Motorcycle Frames; Motorcycle Handlebars; and Parts of Said Goods.

SN 175,426. Carlton B. Morgan, Holliston, Mass. Filed Aug. 20, 1963.

WATER BOY

For Wheel-Mounted Mobile Tank and Fountain Assemblies in the Nature of Hand Trucks for Transporting Water Supplies Under Pressure for Internal and External Use by Game and Sports Participants.
First use on or about Sept. 12, 1961.

SN 177,515. Michael O. Farrand, d.b.a. Kart Industries, San Jose, Calif. Filed Sept. 23, 1963.

BONANZA

For Three and Four Wheeled Motorized Carts, Motorized Racing Carts, Motor Scooters, Mini-Bikes (Motor Driven) and Motorized Golf Carts.
First use Mar. 3, 1960.

SN 177,632. D. P. Harris Hardware & Manufacturing Co., Inc., New York, N.Y. Filed Sept. 24, 1963.

STARLIGHT

For Bicycles.
First use July 30, 1963.

SN 177,688. Demco Library Supplies, Madison, Wis. Filed Sept. 25, 1963.

LOK-MOBILE

For Book Trucks.
First use Aug. 28, 1963.

SN 177,729. Shore-Calnevar, Inc., Paramount, Calif. Filed Sept. 25, 1963.

BODY GUARD

For Seat Belts.
First use Sept. 5, 1963.

SN 178,446. Grassbuggy, Inc., Elkhart, Ind. Filed Oct. 7, 1963.

GRASSBUGGY

For Collapsible, Portable, Motorized Golf Cart.
First use June 20, 1962.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 127,247. Fritz Müller "Coroplast" K.G., Wuppertal-Nachstebreck, Germany. Filed Sept. 5, 1961.

PLASTACOR

Owner of German Reg. No. 646,416, dated Oct. 21, 1953.
For Insulating Tubes and Insulating Tape for Electrical Applications.

SN 136,538. Clevite Corporation, Cleveland, Ohio. Filed Jan. 25, 1962.

OYSTER

For Acoustical, Underwater, Sending and/or Receiving Transducers.
First use Dec. 16, 1960.

SN 137,018. George Ulanet Company, Newark, N.J. Filed Jan. 30, 1962.

HEETGRID

For Electric Heating Elements.
First use Oct. 20, 1961.

SN 138,254. Trygon Electronics Inc., Roosevelt, N.Y. Filed Feb. 19, 1962.

TRYPACK

For Electrical Power Supplies Constructed in Modular Form for Rack and Panel Mount and Producing Regulated Direct Current at Ratings of 0 to 50 Volts and 0 to 2 Amperes.
First use in or about June 1961.

SN 143,695. U.S. Communications Corporation, Hollywood, Calif. Filed May 2, 1962.

PAGEFONE

For Radio Paging Devices.
First use Aug. 16, 1961.

SN 156,785. Rust Corporation of America, Cambridge, Mass., assignee of General Electronic Laboratories, Inc., Cambridge, Mass. Filed Nov. 2, 1962.

AUTOLOG

For Modular Automatically Operating Log Chart Recording System, and Components Thereof, for Application in the Communication and Broadcasting Industry.
First use on or about June 20, 1962.

SN 157,781. Engineering Sales & Service Corporation, Sandy Springs, Ga. Filed Nov. 23, 1962.



"Engineering Sales and Service" is disclaimed apart from the mark as shown.
For Electrical Switch Gear, Electric Motors and Machines.
First use Oct. 9, 1962.

SN 161,736. The Reuben H. Donnelley Corporation, New York, N.Y. Filed Jan. 30, 1963.

SEL-A-RAMA

For Display Machine for Projecting Advertisements.
First use Oct. 19, 1962.

SN 163,350. Flotronic Products, Inc., Fort Lauderdale, Fla. Filed Feb. 25, 1963.

FLOTRONIC

For Marine Radio-Telephones and Marine Radio Antennas.
First use Nov. 7, 1962.

SN 165,895. Charles Bruning Co., Inc., Mount Prospect, Ill. Filed Apr. 2, 1963.

BRUNING

Owner of Reg. Nos. 565,125, 572,350, and 662,551.
For Electrically Operated Reproduction Machines, Including Electrophotographic Reproduction Machines, Which Are Suitable for the Exposure or Electrically Charging, Development and Printing of Sensitized Materials Including Diazo Papers, Films and Cloths, and Electrophotographic Recording Papers and Films; and Electrically Operated Erasing Machines.
First use 1931.

SN 167,129. The Electric Auto-Lite Company, Toledo, Ohio. Filed Apr. 19, 1963.

TEACO

Owner of Reg. No. 746,820.
For Electric Lighting Apparatus Usable With Self-Propelling Vehicles—Namely, Signal Lamps, Rear End Signal Lights, Stop and Direction Light Signals, Electric Headlamps and Electric Spot Lamps, and Parts Thereof.
First use Nov. 1, 1961.

SN 169,913. Cyclo Floor Machine Corporation, Newark, N.J. Filed May 29, 1963.

YALE

For Floor Polishing Machines.
First use Jan. 17, 1963.

SN 171,226. Basic Products Corporation, Watertown, Wis. Filed June 18, 1963.

ACUVOLT

For Static Magnetic Voltage Regulators.
First use May 10, 1963.

SN 171,625. Dunhill International, Inc., Ravenna, Ohio. Filed June 24, 1963.

ROUND THE CLOCK WITH BABY

Owner of Reg. Nos. 428,145 and 614,412.
For Electrically Operated Bottle Warmers.
First use on or before Apr. 1, 1963.

SN 171,821. The Wadsworth Electric Mfg. Co., Inc., Covington, Ky. Filed June 25, 1963.



For Circuit Breakers.
First use June 10, 1963.

SN 173,440. Fairfax Distributing Co., Inc., Washington, D.C. Filed July 22, 1963.

VANTAGE

For Radios and Televisions.
First use July 2, 1963.

SN 176,216. Minneapolis Scientific Controls Corp., d.b.a. Electric Service Systems, Minneapolis, Minn. Filed Sept. 3, 1963.



For Electric Battery Chargers.
First use December 1945.

SN 176,652. Globe-Union Inc., Milwaukee, Wis. Filed Sept. 10, 1963.

CRL

For Electrical and Electronic Apparatus—Namely, Fixed and Variable Resistors, Fixed and Variable Capacitors, Semiconductors, Switches, Switch Parts, Ceramic Bodies and Modular and Integrated Electronic Circuits.
First use on or about May 27, 1922.

SN 177,093. Rain Bird Sprinkler Manufacturing Corp., Glendora, Calif. Filed Sept. 16, 1963.

RAIN BIRD

Owner of Reg. No. 567,442.
For Electrically-Operated Controllers for Sprinkler Systems, and Electrical Wire for Use in Such Systems.
First use June 21, 1962, on controllers.

SN 178,719. New-Tronics Corporation, Cleveland, Ohio. Filed Oct. 10, 1963.

CLIFF DWELLER

For Radio Antennas.
First use Mar. 29, 1963.

SN 178,876. Claude Paz & Visseaux, Gennevilliers (Seine), France. Filed Oct. 14, 1963.

CLAUDE

Owner of French Reg. No. 487,422, dated Apr. 8, 1960 (Paris); Natl. Inst. No. 142,570.
For Electric Bulbs and Fluorescent Lamps.

SN 178,915. Halcolite Company, Inc., Brooklyn, N.Y. Filed Oct. 14, 1963.

HALCOLITE

Owner of Reg. No. 166,572.
For Electric Lighting Fixtures and the Parts Thereof.
First use Mar. 15, 1922.

SN 179,061. Pearce-Simpson, Inc., Miami, Fla. Filed Oct. 15, 1963.

ALUDIZED

For Chassis for Radio Transmitters and Receivers.
First use Sept. 1, 1963.

Class 22 — Games, Toys, and Sporting Goods

SN 145,555. Hassenfeld Bros., Inc., Central Falls, R.I. Filed May 28, 1962.

HOKEY POKEY

For Toy Cotton Candy Machine.
First use on or about Apr. 23, 1962.

SN 150,732. James V. Toner, Jr., Weston, Mass., assignee of United Shoe Machinery Corporation, d.b.a. United Last Company, Boston, Mass. Filed Aug. 7, 1962.

ALL AMERICAN

The drawing is lined for the color red, but no claim is made to that color.
For Bowling Pins.
First use on or about Nov. 18, 1957; on or about June 1, 1940, in a different form.

SN 161,401. Eyerly Aircraft Co., Salem, Oreg. Filed Jan. 25, 1963.

FLYOPLANE

For Airplane Amusement Device.
First use Mar. 1, 1941.

SN 161,900. Nomable Corporation, Lowell, Mass. Filed Feb. 1, 1963.

NOMABE

For Equipment Sold as a Unit for Playing Indoor and Outdoor Golf Games.
First use Sept. 5, 1962.

SN 162,801. Wilson Sporting Goods Co., River Grove, Ill. Filed Feb. 14, 1963.

AIR LITE

Owner of Reg. No. 849,634.
For Baseball Gloves and Mitts.
First use Nov. 2, 1962.

SN 174,777. Raymon McVay, d.b.a. Speed Cast Fishing Tackle Manufacturers, Denison, Tex. Filed Aug. 9, 1963.

CHUMP

For Artificial Fish Bait.
First use Oct. 20, 1962.

SN 175,817. Thompson Fishing Tackle Company, Inc., Knoxville, Tenn. Filed Aug. 26, 1963.

ZING-FLY

For Fishing Lures.
First use July 30, 1963.

SN 176,228. Plastilite Corporation, Omaha, Nebr. Filed Sept. 3, 1963.

BOTTOMS UP

For Depth Control Rigs for Fishing.
First use Mar. 1, 1963.

SN 176,229. Plastilite Corporation, Omaha, Nebr. Filed Sept. 3, 1963.

PLASTI-BOB

For Fishing Floats.
First use in the fall of 1960.

Class 23 — Cutlery, Machinery, and Tools and Parts Thereof

SN 132,166. Leonard Precision Products Co., Santa Ana, Calif. Filed Nov. 16, 1961.

LEONARD grind-r-lap

Applicant disclaims the expression "Grind-R-Lap" apart from the mark as shown.
For Tool-Finishing Machines—Namely, Machines for Effecting Grinding or Lapping of Tools.
First use on or about Mar. 2, 1961.

SN 133,533. Gewerkschaft Eisenhütte Westfalia, Westphalia, Germany. Filed Dec. 7, 1961.

TANDEM-PLANER

For Mining Machinery—Namely, a Mining Plough.
First use Feb. 17, 1960; in commerce Feb. 17, 1960.

SN 142,783. John S. Barnes Corporation, Rockford, Ill. Filed Apr. 23, 1962.



Applicant disclaims the words "Closed Circuit" and the circuit diagram, apart from the mark as shown. Owner of Reg. No. 628,009.
For Apparatus Used for Hydraulically Actuating and Controlling Operational Movements, for Example, Starting, Stopping, Feeding, Reversing, Etc., of Machine Tools and the Like, Including, in Assembly, Electric Motors, Pumps, Valves, Cylinders, Pistons, Oil Reservoirs, and the Like.
First use Sept. 16, 1953.

SN 150,725. Sunbeam Corporation, Chicago, Ill. Filed Aug. 7, 1962.

WHISK-AIRE

For Cleaner Utilizing Pressurized Gas.
First use July 12, 1962.

SN 155,204. Stacey Handprints, Inc., South El Monte, Calif. Filed Oct. 15, 1962.

MURALMASTER

For Wallpaper, Paper Hanging Tools and Related Supplies.
First use June 27, 1962.

SN 156,815. IMEA S.A. Neuchatel, Switzerland. Filed Nov. 7, 1962.

IMEA

Owner of Swiss Reg. No. 191,252, dated Mar. 27, 1962.
For Machines and Machine Tools for Use in Working Metals by Electro-Erosion, Spark Machining, or by Hot Forging.

SN 157,478. The DeVilbiss Company, Toledo, Ohio. Filed Nov. 19, 1962.

DEVILBISS

Owner of Reg. Nos. 164,521, 623,617, and others.
For Spraying and Finishing Equipment and Systems, Parts, and Accessories Therefor—Namely, Spray Guns; Flow Guns and Applicators; a Liquid Circulating and Supply System; Material Containers Including Suction and Pressure Feed Cups and Pressure Feed Tanks; Fluid Agitators, Strainers and Regulators; Material Heaters; Air Dryers; Hose Cleaners; Hose Connections; Multiple Component Reactive Liquid Catalyst Systems; Apparatus for Forming Fiber Reinforced Articles; Liquid Pumps; Air Compressors; Dip Tanks and Flow Coaters; Phosphatizing Equipment; Spray Booths, Exhaust Fans, Blowers and Hoods; Air Cleaning, Washing and Replacement Apparatus; Dust Collectors; Conveyors and Turntables; and Drying and Finishing Equipment of the Convection and Radiant Type.
First use 1911.

SN 159,353. Jas. H. Matthews & Co., Pittsburgh, Pa. Filed Dec. 18, 1962.

For Metal and Rubber Type for Industrial Marking Devices and Hand Stamps; Rubber Stamps and Rubber Stamp Devices; Machines for Printing, Embossing and Stamping Sold in the Industrial Marking Field; Inks and Inking Pads; Stencils and Stencil Cutting Machines; Abrasive Marking Machines; and Industrial Marking Presses.
First use about February 1957.

SN 159,705. Dri-Pak Industries, Inc., Highland Park, Ill. Filed Dec. 26, 1962.

DRI-PAK

For Pellet Mills, Parts and Accessories Thereof.
First use Sept. 6, 1962.

SN 159,834. Mercury International Insurance Underwriters, Los Angeles, Calif. Filed Dec. 27, 1962.

INSUROMATIC

For Insurance Policy Dispensing Machines.
First use Nov. 30, 1961.

SN 160,856. Federal Engineering Company, Detroit, Mich. Filed Jan. 17, 1963.

ROTO-LIFT

For Workpiece Lifting Apparatus for Manufacturing Establishments.
First use on or about Nov. 14, 1962.

SN 160,897. Salina Manufacturing Company, Inc., Salina, Kans. Filed Jan. 17, 1963.

•BLENDVANE•

For Volumetric Feeders.
First use August 1962.

SN 161,173. Gandy Company, Owatonna, Minn. Filed Jan. 22, 1963.

ROOSTER

For Power Transmission Devices for Use on Agricultural Equipment Such as Applicators for Fertilizers, Chemicals, Seeds and the Like.
First use Jan. 18, 1962.

SN 161,203. A. J. Sackett & Sons Co., Baltimore, Md. Filed Jan. 22, 1963.

BULK-TOTER

For Conveyor System.
First use Sept. 24, 1962.

SN 163,217. George W. Bayers, Jr., d.b.a. The Bayers Company, Denver, Colo. Filed Feb. 21, 1963.

LIQUORMATIC

For Coin-Operated Vending Machines for Dispensing Alcoholic Beverages.
First use Jan. 18, 1963.

SN 165,219. The East Dayton Tool and Die Company, Dayton, Ohio. Filed Mar. 22, 1963.

EDCO

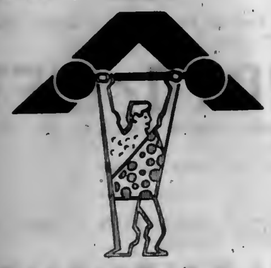
For Universal Boring Heads.
First use Jan. 14, 1963.

SN 165,360. Motan G.m.b.H. zur Verwertung Technischer Entwicklungen, Uberlingen (Bodensee), Germany. Filed Mar. 25, 1963.

FONTAN

Owner of German Reg. No. 767,199, dated Nov. 8, 1962.
For Agricultural Implements of All Types—Namely, Spraying, Misting and Dusting Apparatus.

SN 166,358. Arlo Industries, Inc., Mount Vernon, N.Y. Filed Apr. 9, 1963.



The drawing is lined for red.
For Telescoping Hoists Alone, for Assembly on Motor Trucks; and for Telescoping Hoists Assembled on Individual Motor Trucks as a Unit.
First use Aug. 31, 1962.

SN 166,359. Arlo Industries, Inc., Mount Vernon, N.Y. Filed Apr. 9, 1963.

THE ARLO CRANE

The drawing is lined for red.
For Telescoping Hoists Alone, for Assembly on Motor Trucks; and for Telescoping Hoists Assembled on Individual Motor Trucks as a Unit.
First use Aug. 31, 1962.

SN 167,570. Pines Engineering Co. Inc., Aurora, Ill. Filed Apr. 25, 1963.

DYNA/CUT

For Tube and Pipe Cut-Off Machines.
First use November 1962.

SN 175,285. International Road Seal, Inc., Omaha, Nebr. Filed Aug. 19, 1963.

SLURRY MASTER

No claim is made to the word "Slurry" apart from the mark as shown.
For Road Construction Equipment—Namely, Asphaltic Slurry Sealing Machines.
First use on or about May 15, 1963.

SN 176,750. The A. J. Sackett and Sons Company, Baltimore, Md. Filed Sept. 11, 1963.



Owner of Reg. Nos. 709,605 and 715,419.
For Liquid and/or Bulk Fertilizer Processing Plants.
First use June 27, 1963.

SN 177,575. Topco Associates, Inc. (Cooperative), Skokie, Ill. Filed Sept. 23, 1963.

TOPCO

For Lawn Mowers.
First use Jan. 22, 1963.

SN 177,651. Minne Punch and Die Co., Inc., Union, N.J. Filed Sept. 24, 1963.

MINNIE DIE

The word "Die" is disclaimed apart from the mark as shown.
For Punch and Die Tools.
First use November 1961.

SN 178,800. General Kinetics, Inc. of West Palm Beach, West Palm Beach, Fla. Filed Oct. 11, 1963.

SATURA-MATIC

For Filling Machines for Aerosol or Pressurized Packages.
First use Nov. 16, 1962.

SN 179,078. Tona, Narodni Podnik, Pecky, Czechoslovakia. Filed Oct. 15, 1963.



Owner of Czechoslovakian Reg. No. 155,481, dated June 15, 1963.
For Tongs, Hammers, Mallets, Pinch Bars, Crow Bars for Iron and Stone, Combination Pliers, Cutting Nippers, Bolt Cutters.

SN 179,368. Silent Hoist & Crane Co., Inc., Brooklyn, N.Y. Filed Oct. 18, 1963.

SILENT HOIST KRANE KAR

Applicant disclaims the words "Krane Kar" except in association with the entire mark, but without sacrificing any common law rights therein to the said words "Krane Kar." Owner of Reg. No. 396,180.
For Self-Propelled, Industrial Crane Trucks.
First use Feb. 23, 1933, on portable hoists and cranes.

SN 180,071. Consolidated Sewing Machine Corp., New York, N.Y. Filed Oct. 30, 1963.

PANASEW

For Sewing Machines, and Parts and Accessories Therefor.
First use Sept. 30, 1963.

SN 180,681. Carl A. Raub, d.b.a. Raub Manufacturing Company, Dallas, Tex. Filed Nov. 7, 1963.

JETLINE

For Machine for Applying Paint in the Form of Stripes to Pavements, Sidewalks and Other Surfaces.
First use Oct. 9, 1963.

Class 24 — Laundry Appliances and Machines

SN 163,139. Herbert Glatt, d.b.a. Mozaic Products, Huntersville, N.C. Filed Feb. 20, 1963.

MOZAIC

For Ironing Board Covers and Pads.
First use Dec. 21, 1962.

Class 26 — Measuring and Scientific Appliances

SN 146,490. The Kalart Company Inc., Plainville, Conn. Filed June 8, 1962.

KALART
SOUNDSTRIP
PROJECTOR

The word "Projector" apart from the mark is disclaimed herewith, all common law rights which the applicant may have in the mark being preserved. Owner of Reg. No. 708,401.
For Projectors for Strip Film, Both Sound Film and Silent Film, Projectors for Photographic Transparencies, Assemblies Including Apparatus for Projecting Strip Film and Apparatus for Reproducing Recorded Messages Associated With the Projected Strip Film, Sold as a Unit; and Assemblies Including Apparatus for Projecting Photographic Slides and Apparatus for Reproducing Recorded Messages Associated With the Projected Slides, Sold as a Unit.
First use Dec. 7, 1961.

SN 148,852. Societe Generale du Vide (Sogev), Paris, France. Filed July 11, 1962.

ULTRAVAC

Priority claimed under Sec. 44(d) on French Reg. No. 501,949, dated Jan. 25, 1962 (Seine); Natl. Inst. No. 432.
For Electrical and Electronic Apparatus and Instruments for the Treatment of Material in a Vacuum, for Maintaining a Vacuum and for Generating and Measuring Vacua; Gas Pressure Measuring Apparatus, and Electric Current Measuring Apparatus.

SN 162,249. Esterline Angus Instrument Company, Inc., Indianapolis, Ind. Filed Feb. 7, 1963.

RECTI*Graph*

For Rectilinear Movements for Recording Instruments.
First use Sept. 5, 1962.

SN 163,350. Flotronic Products, Inc., Fort Lauderdale, Fla. Filed Feb. 25, 1963.

FLOTRONIC

For Marine Depth Sounders.
First use Dec. 2, 1962.

SN 163,368. Ipsen Industries, Inc., Rockford, Ill. Filed Feb. 25, 1963.

PHASETRONIK

For Solid State Switches for Controlling the Temperature of a Heat Treating Furnace.
First use Jan. 8, 1963.

SN 163,932. Cognitronics Corporation, Briarcliff Manor, N.Y. Filed Mar. 5, 1963.

COMPOSITAPE

For Electronic Equipment of the Data Tape Type for the Automatic Operation of Printing Machinery.
First use Dec. 4, 1962.

SN 165,026. Cherry-Burrell Corporation, Cedar Rapids, Iowa. Filed Mar. 20, 1963.

LEVELMATIC

For Pressure Transducers and Process Control Systems Associated Therewith.
First use April 1962.

SN 167,043. Picker X-Ray Corporation, White Plains, N.Y. Filed Apr. 18, 1963.

MAGNASCALER

For Radiation Detectors.
First use June 29, 1959.

SN 169,270. James E. Hoyle, d.b.a. Hoyle Engineering Company, Barstow, Calif. Filed May 20, 1963.

ACU-ARC

For Drawing Instruments—Namely, Rulers, Scales, and Drawing Curves.
First use on or before Jan. 16, 1961.

SN 173,214. Aviation Educators Corporation, Coral Gables, Fla. Filed July 18, 1963.

PASS MASTER

For Aids to Education, Machines for Aiding in Teaching, Mechanical Teaching Aids, Such as Desk-Type Machines Containing and Displaying Educational Material.
First use Mar. 28, 1963.

SN 175,673. PI Tape, Lemon Grove, Calif. Filed Aug. 23, 1963.



For Measuring Tapes.
First use Mar. 1, 1960.

SN 175,793. The Refinery Supply Company, Tulsa, Okla. Filed Aug. 26, 1963.



Owner of Reg. No. 650,510.
For Scientific Laboratory Supplies and Equipment—Namely, Consistometers, Dew Point Recorders, Vacuum Pumps, Charcoal Distillation Apparatus, Pycnometers, Dead Weight Gauges and Testers, Hydrometer Jars and Cottonseed Oil Samplers.
First use Apr. 9, 1962.

SN 178,135. Robert C. Ringholz, San Bernardino, Calif. Filed Oct. 1, 1963.

VALOMETER

For Apparatus for Printing a Validating Stamp on Parking Tickets and Counting the Number of Validated Stamps Printed.
First use Nov. 1, 1962.

SN 178,149. Therm-O-Disc, Incorporated, Mansfield, Ohio. Filed Oct. 1, 1963.

HL

For Thermostats and Temperature Control Devices.
First use Nov. 1, 1953.

SN 184,774. Rudolph Rodenstock, Munich, Germany. Filed Dec. 30, 1963.

Rodenstock

For Field Glasses, Photographic Lenses, Eye Refractometers, Vertex Refractometers, Adjustable Chair and Tray Combination for Optical Examinations, Devices for Testing Eyes With Built-In Test Figures, Ophthalmic Frames, Ophthalmic Lenses.
First use 1898 on ophthalmic lenses and field glasses; in commerce 1898.

Class 27 — Horological Instruments

SN 169,088. Vornado, Inc., Garfield, N.J. Filed May 16, 1963.



For Watches, Watch Movements, and Parts Thereof.
First use on or about Sept. 12, 1962.

Class 28 — Jewelry and Precious-Metal Ware

SN 148,157. Leonore Doskow, Inc., Montrose, N.Y. Filed July 2, 1962.



For Men's and Women's Jewelry, Especially Rings, Pins, Earrings, Brooches, Pendants, Necklaces, Bracelets, Cuff Links and Tie Pins.
First use Oct. 16, 1935.

SN 148,713. E. Dragsted A/S, Copenhagen, Denmark. Filed July 10, 1962.

E. DRAGSTED

For Gold- and Silverware, Including Sets of Knife, Fork, and Spoon, and Hollowware of Silver, Sterling Silver or Silverplate, Jewelry of Silver, and Glass Bottles and Glass Vases With Silver Ornaments, Silverplated Copper- and Brassware.
First use Jan. 1, 1923; in comemrce Jan. 1, 1925.

SN 172,615. Aaron Silverberg, d.b.a. Favorite Ring Co., New York, N.Y. Filed July 8, 1963.



For Jewelry.
First use Jan. 1, 1961.

SN 173,635. Deyo and Stumme, Inc., Waterloo, Iowa. Filed July 24, 1963.



For Jewelry for Personal Wear—Namely, Precious Metal Rings and Ornamental Jewelry.
First use Mar. 26, 1963.

SN 174,251. Vladimir Martin Slezak and Anna Slezak, d.b.a. Valanna, Miami, Fla. Filed Aug. 1, 1963.

SKOOLY

For Jewelry.
First use Jan. 1, 1963.

SN 177,725. Ruth S. Roach, Plainfield, Iowa. Filed Sept. 25, 1963.

ROACH

For Jewelry for Personal Wear.
First use June 1, 1955.

Class 29 — Brooms, Brushes, and Dusters

SN 173,100. The Drackett Company, Cincinnati, Ohio. Filed July 16, 1963.

CEDARLON

Owner of Reg. Nos. 676,323, 678,428, and 715,048.
For Bristles Incorporated in and Sold as a Component Part of Brooms, Brushes and the Like.
First use June 1958.

SN 176,043. Sunbeam Corporation, Chicago, Ill. Filed Aug. 29, 1963.

VISTA

Owner of Reg. No. 752,845.
For Electric Toothbrushes.
First use Aug. 7, 1963.

Class 30 — Crockery, Earthenware, and Porcelain

SN 145,771. Castleton China, Inc., New Castle, Pa. Filed May 31, 1962.

PLYMOUTH ROSE

The word "Rose" is disclaimed apart from the mark as shown.
For China Dinnerwear.
First use Feb. 12, 1962.

Class 31 — Filters and Refrigerators

SN 154,614. Minerals & Chemicals Philipp Corporation, Menlo Park, N.J. Filed Oct. 5, 1962.

ATTAFLO

For Filter Aid.
First use Aug. 31, 1962.

SN 165,524. Marquette Corporation, Minneapolis, Minn. Filed Mar. 27, 1963.

COLDAIRE

For Refrigerators, Freezers and Combination Refrigerator-Freezers.
First use September 1961.

SN 175,907. Dunham-Bush, Inc., West Hartford, Conn. Filed Aug. 28, 1963.



Owner of Reg. No. 670,232.
For Refrigeration Units—Namely, Self-Contained Condensing Units and Refrigeration Systems, and Refrigerant Compressors and Motor Compressors.
First use October 1962.

Class 32 — Furniture and Upholstery

SN 164,761. The Weiss & Klau Co., New York, N.Y. Filed Mar. 15, 1963.

MAYFAIR

For Window Shades.
First use Jan. 24, 1963.

SN 169,720. Carl Forslund, Inc., Grand Rapids, Mich. Filed May 27, 1963.

FORSLUND CHERRY

The word "Cherry" is disclaimed apart from the mark. Owner of Reg. Nos. 631,076 and 711,515.
For Wood Finish on Furniture.
First use in or about November 1950.

SN 177,235. Drexel Enterprises, Inc., High Point, N.C. Filed Sept. 18, 1963.

BARCELONA

For Living Room, Bedroom, and Dining Room Furniture, and Occasional Tables and Chairs.
First use Oct. 19, 1962.

SN 180,693. Webster Spring Co., Inc., Oxford, Mass. Filed Nov. 7, 1963.

WEBSTERLOC

For Spring Assemblies for Bedsprings, Mattresses and Seat and Back Constructions.
First use Feb. 11, 1960.

SN 180,701. Basic-Witz Furniture Industries, Inc., Waynesboro, Va. Filed Nov. 8, 1963.

ANNIVERSARY *Concerto 75*

For Living Room, Dining Room, and Bedroom Furniture.
First use May 28, 1963.

SN 181,340. Ebenreiter Woodworking Company, Sheboygan, Wis. Filed Nov. 18, 1963.

EBCO

For Wood Furniture—Namely, Cabinets, Wardrobes, Chests of Drawers and Bookcases.
First use Sept. 15, 1959.

Class 33 — Glassware

SN 144,807. Coltra, Ltd., Milwaukee, Wis. Filed May 17, 1962.

COLTRA

For Flat and Curved Transparent Glass Sheets Having Patterns Thereon.
First use May 7, 1962.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 157,099. Goss Gas, Inc., Glenshaw, Pa. Filed Nov. 13, 1962.

GOSS

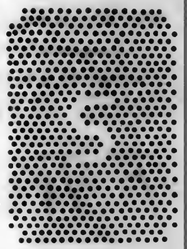
For Heating Apparatus—Namely, Small Metal Melting Furnaces and Melting Pots Therefor, Liquid Fuel Burners, Acetylene, Propane and Gas Torches and Parts Thereof, Gas Pressure Regulators, Gas Valves, Flint Lighters for Torches, Gas-Type Soldering Irons and Parts Thereof, and Hoses and Hose Adaptors and Unions for Gas Torch Equipment, Gas Burners.
First use July 1, 1939.

SN 159,567. Crutcher-Rolfs-Cummings, Inc., Houston, Tex. Filed Dec. 21, 1962.

SCAMP

For Portable Engine-Generator Welding Machines and Wire Feeders.
First use July 12, 1962.

SN 163,279. Schwank Gasgerate Gesellschaft mit beschrankter Haftung, Cologne-Niehl, Germany. Filed Feb. 21, 1963.



The dots on the drawing representing orifices in a burner plate are hereby disclaimed, the mark being represented by the letter "S" only.
For Ceramic Burner Plates.
First use March 1950; in commerce July 1955.

SN 170,578. Erwin L. Weber, Seattle, Wash. Filed June 7, 1963.



For Ventilators.
First use Apr. 3, 1961.

SN 178,932. Lennox Industries, Inc., Marshalltown, Iowa. Filed Oct. 14, 1963.

DURACURVE

For Heat Exchangers for Furnace Equipment.
First use Sept. 13, 1963.

SN 179,283. The International Boiler Works Co., East Stroudsburg, Pa. Filed Oct. 17, 1963.

IBW

For Steam Boilers and Hot Water Generators.
First use 1906.

SN 180,054. Aluminum Company of America, Pittsburgh, Pa. Filed Oct. 30, 1963.

ALTIGWELD

For Welding and Brazing Rod.
First use Feb. 14, 1962.

SN 180,733. Grinnell Corporation, Providence, R.I. Filed Nov. 8, 1963.

MINICAIR

For Air Duct Outlet Grilles.
First use May 31, 1963.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 145,564. The Kelly-Springfield Tire Company, Cumberland, Md. Filed May 28, 1962.

DUAL TRAC

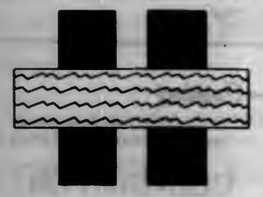
For Tires.
First use Mar. 26, 1948.

SN 166,708. Gross Manufacturing Company, Inc., Monrovia, Calif. Filed Apr. 15, 1963.

MAGICURE

For Pneumatic Tire and Tube Repair Patches.
First use June 15, 1956.

SN 175,110. The Hercules Tire & Rubber Company, Stamford, Conn. Filed Aug. 15, 1963.



For Pneumatic Tires, Tubes, Tread Rubber, and Tire Flaps.
First use Apr. 20, 1963, on tires.

Class 36 — Musical Instruments and Supplies

SN 173,440. Fairfax Distributing Co., Inc., Washington, D.C. Filed July 22, 1963.

VANTAGE

For Tape Recorders.
First use July 2, 1963.

Class 37 — Paper and Stationery

SN 125,813. Eugene Dietzgen Co., Chicago, Ill. Filed Aug. 11, 1961.

QUIKDRAFT

For Drafting Pads.
First use on or about June 15, 1961.

SN 137,762. Kimberly-Clark Corporation, Neenah, Wis. Filed Feb. 12, 1962.



Owner of Reg. Nos. 705,597 and 706,967.
For Paper Envelopes, Folders, and Wrappers; Papeteries.
First use Nov. 16, 1961.

SN 150,260. A. P. Little Inc., Rochester, N.Y. Filed Aug. 1, 1962.

thermo-jet

For Copying Paper.
First use Mar. 10, 1960.

SN 153,960. David Kahn, Inc., North Bergen, N.J. Filed Sept. 26, 1962.

TELSTAR

For Writing Instruments—Namely, Pens and Mechanical Pencils.
First use Aug. 14, 1962, on containers for the goods.

SN 154,196. The Bailey Wall Paper Company, Cleveland, Ohio. Filed Oct. 1, 1962.

Dip-n-Hang

For Wall Paper.
First use in or before September 1955.

SN 159,733. International Paper Company, New York, N.Y. Filed Dec. 26, 1962.

INTERNATIONAL PAPER

The word "Paper" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 50,974, 732,704, and others.
For Paper and Paperboard.
First use Jan. 31, 1898.

SN 164,872. Moss Key-Rec Systems, Inc., Dayton, Ohio. Filed Mar. 18, 1963.



For Partially Printed Business Forms.
First use Apr. 1, 1950.

SN 169,507. Peninsular Paper Company, Ypsilanti, Mich. Filed May 22, 1963.



Applicant disclaims the wording "Cover Stock Specialists Since 1867" apart from the mark as shown. Owner of Reg. No. 531,791.
For Cover Paper.
First use Jan. 10, 1963.

SN 172,239. Rim Trim, Inc., Elmont, N.Y. Filed July 1, 1963.

TOPS

For Self-Adhering Wallpaper.
First use Dec. 31, 1962.

SN 172,575. Feldmühle Aktiengesellschaft, Dusseldorf, Germany. Filed July 8, 1963.

FELDMUHLE

Owner of German Reg. No. 421,696, dated July 24, 1930.
For Paper, Foils of Cellulose or Cellulose Derivatives, Paperboard, Cardboard, Paper and Paperboard Goods, Raw Materials and Intermediates for Paper Manufacture, and Wall Paper.

SN 173,094. The Bon Ami Company, New York, N.Y. Filed July 16, 1963.



Owner of Reg. No. 678,122.
For Paper Napkins, Freezer Paper, and Wax Paper.
First use July 31, 1956.

SN 173,282. Oxford Paper Company, New York, N.Y. Filed July 18, 1963.

DUOSET

For Coated Offset Papers.
First use in or about April 1953.

SN 175,394. Daitch Crystal Dairies, Inc., New York, N.Y. Filed Aug. 20, 1963.



Owner of Reg. Nos. 634,423 and 634,424.
For Paper Napkins.
First use May 1, 1963.

SN 180,318. Multiforms, Inc., Pelham, N.Y. Filed Nov. 1, 1963.

MULTIFLO

For Manifold Blank Forms.
First use May 2, 1961.

Class 38 — Prints and Publications

SN 162,466. The Massillon-Cleveland-Akron Sign Company, Massillon, Ohio. Filed Feb. 11, 1963.



For Outdoor Advertising Displays and Signs Printed on Cardboard and Metal.
First use Jan. 10, 1963.

Class 39 — Clothing

SN 123,772. Sarong, Inc., Dover, Del. Filed July 11, 1961.

CLING-EVER

For Foundation Garments.
First use Dec. 1, 1960.

SN 123,985. House of Suburbia, Inc., New York, N.Y. Filed July 14, 1961.



Applicant makes no claim to the words "House of" apart from the mark as shown.
For Ladies' and Teen-Age Sportswear—Namely, Shorts, Pedal Pushers, Slacks, Beach Robes, Bathing Suits, and Coveralls.
First use Oct. 1, 1960.

SN 134,744. The Lemon Tree Shop, Pittsburgh, Pa. Filed Dec. 27, 1961.



For Juniors' and Ladies' Apparel—Namely, Dresses, Suits, Coats, Skirts, Blouses, Lingerie, and Raincoats.
First use Nov. 18, 1961.

SN 139,104. Jay-F Rainwear Co., Inc., Fall River, Mass. Filed Mar. 5, 1962.



For Rainwear.
First use August 1961.

SN 141,193. Billie Lebow, Inc., New York, N.Y. Filed Mar. 30, 1962.



For Ladies' Fur Garments—Namely, Stoles, Jackets, and Coats.
First use January 1949.

SN 141,815. Celanese Corporation of America, New York, N.Y. Filed Apr. 9, 1962.

DATESETTERS, U.S.A.

"U.S.A." is disclaimed apart from the mark as a whole.
For Women's and Misses' Dresses.
First use at least as early as November 1960.

SN 143,097. Best Rainwear, Inc., New York, N.Y. Filed Apr. 26, 1962.

RAINTIMER

For Rainwear Garments.
First use Apr. 10, 1962.

SN 145,820. Faye J. Fikany, Brockton, Mass. Filed May 31, 1962.

TRAMPOLINE

For Shoes—Namely, Sneakers.
First use May 10, 1962.

SN 147,829. Variety Supply Company, Clara City, Minn. Filed June 19, 1962.

PAUL BUNYAN

"Paul Bunyan" is a legendary character in the logging business, and reputed to be the greatest logger in history.
For Men's and Boys' Jackets and Overalls, and Men's Work Pants, Shirts, and Gloves.
First use in January 1960 on overalls, pants, and jackets.

SN 151,574. Arthur Doctor, d.b.a. Arthur Doctor & Company, New York, N.Y. Filed Aug. 21, 1962.

NORBA

For Women's Coats Made of Pile Fabric.
First use Apr. 15, 1962.

SN 154,308. Sunnyvale, Inc., New York, N.Y. Filed Oct. 1, 1962.



The mark "Pat Perkins" does not identify a particular individual. Applicant disclaims the words "Reflecting America's Most Treasured Daytime Dress" apart from the mark as shown in combination with "Pat Perkins" and the mirror design. Owner of Reg. No. 591,708.
For Women's Dresses.
First use May 31, 1962.

SN 154,437. Ricki Rand, Inc., Brooklyn, N.Y. Filed Oct. 3, 1962.

RICKI RAND

The mark "Ricki Rand" does not identify a particular designer or any other living individual.
For Women's and Children's Ski-Pants, Slacks, Jumpers, Shorts, Pedal Pushers, Jackets, Blouses and Skirts.
First use May 2, 1961.

SN 156,039. Smarteens Blouses, Inc., New York, N.Y. Filed Oct. 26, 1962.



For Ladies', Misses' and Girls' Sportswear—Namely, Blouses, Skirts, Shirts, Jackets, Slacks, Shorts, Sweaters and Mix-and-Match Outfits of Sweaters, Blouses, Skirts, Slacks and Shorts.
First use Oct. 18, 1960.

SN 156,693. Albert Lee Van Slyke, Redding, Calif. Filed Nov. 5, 1962.

MR. VAN

For Shoes.
First use in or about August 1956.

SN 156,940. Calree Glove Company, Inc., Baldwin, N.Y. Filed Nov. 9, 1962.

PLAYMASTER

For Men's and Women's Gloves, Caps, Hosiery and Sport Jackets Which Are Intended Solely for the Use of Golfers and Sold Solely in Golf Professional Shops at Golf Courses.
First use Aug. 15, 1962.

SN 158,027. Speyside & Cairngorm Sportswear Limited, Grantown-on-Spey, Moray, Scotland. Filed Nov. 27, 1962.

Cairngorm

For Knitted Outerwear—Namely, Pullover Sweaters and Cardigans, Skirts, Dresses and Suits, Scarves, Stoles, Berets, Gloves and Shawls, Socks and Stockings; Tailored Garments—Namely, Skirts, Dresses, Jackets, Suits and Coats, Trousers and Slacks, and Shirts.
First use 1955; in commerce February 1960.

SN 158,607. Diaper Jeans, Inc., Denison, Tex. Filed Dec. 6, 1962.

AMERICAN HEIR

For Infants' and Children's Dresses, Suits, Shirts, Pants, Pinafores and Blouses.
First use on or about Oct. 15, 1962.

SN 160,798. Phillips-Van Heusen Corporation, New York, N.Y. Filed Jan. 16, 1963.

MARCO DiROMA

"Marco Diroma" is the English equivalent for the name "mark of Rome."
For Men's Knit Shirts.
First use Nov. 12, 1962.

SN 161,102. Sol Duchovnay & Sons, Philadelphia, Pa. Filed Jan. 21, 1963.



For Men's and Boys' Suits, Sport Jackets and Trousers.
First use December 1962.

SN 162,841. Karaway, Inc., New York, N.Y. Filed Feb. 15, 1963.

RAINETTE

For Ladies' Rain Bonnets.
First use January 1961.

SN 162,889. Zeeman Clothing Company, Inc., Allentown, Pa. Filed Feb. 15, 1963.

Heathgate

For Men's Pajamas, Sweaters, Sport Shirts, Ties, Slacks, Raincoats, Underwear, and Outerwear Jackets.
First use July 13, 1962.

SN 163,227. Easton Shoe Co., Inc., Wakefield, Mass. Filed Feb. 21, 1963.

Mr. Easton

For Women's Shoes.
First use January 1958.

SN 164,943. Clement P. Carney, d.b.a. Hop-Sox of Michigan, Detroit, Mich. Filed Mar. 19, 1963.

HOP SOX

Without waiving his common law rights and for the purpose of this registration only, applicant disclaims the word "Sox" apart from the mark as shown.
For Hosiery.
First use Mar. 8, 1963.

SN 165,429. Kalamazoo Pant Company, Kalamazoo, Mich. Filed Mar. 26, 1963.

HIP-ZIP

For Slacks for Men and Boys.
First use Mar. 14, 1963.

SN 167,060. Superba Cravats, Inc., Rochester, N.Y. Filed Apr. 18, 1963.

DEFT

For Neckwear and More Particularly, Neckties.
First use Apr. 11, 1963.

SN 167,931. Phil Rose of California, Inc., Los Angeles, Calif. Filed May 1, 1963.

PANTSWEATER

For Women's Sweaters Made of Knitted Material.
First use Apr. 2, 1963.

SN 169,174. The Scholl Mfg. Co., Inc., Chicago, Ill. Filed May 17, 1963.

SCHO-PED WHITES

Applicant disclaims the word "Whites" apart from the mark as shown. Applicant's related company owner of Reg. No. 381,658.
For Women's Shoes.
First use May 9, 1963.

SN 169,992. Top Shokai Ltd., Taito-ku, Tokyo, Japan. Filed May 29, 1963.

Mt. Top

Owner of Japanese Reg. No. 488,316, dated Sept. 20, 1956.
For Clothing—Namely, Men's and Women's Sweaters, Jackets, and Shirts.

SN 170,401. Gold Seal Rubber Company, Boston, Mass. Filed June 5, 1963.

AFTER SPORTS

For Rubber and Rubber and Canvas Shoes for Men, Women and Children.
First use May 9, 1963.

SN 170,703. Summit Sportwear Co., Boston, Mass. Filed June 10, 1963.

WALKERPANTS

Owner of Reg. Nos. 569,806, 692,098, and others.
For Ladies' and Misses' Sportswear—Namely, Slacks, Pants and Shorts.
First use on or before Mar. 22, 1963.

SN 170,881. The Bamberger-Reinthal Company, Cleveland, Ohio. Filed June 13, 1963.

UP 'N' DOWNER

For Knitted Hats or Caps.
First use June 1, 1963.

SN 171,088. Campus Sweater & Sportswear Company, d.b.a. Campus Sweater & Sportswear Co., Campus Sweater Company and The Campus Sweater Company, Cleveland, Ohio. Filed June 17, 1963.

POWER SLEEVE

Applicant disclaims the word "Sleeve" alone and apart from the mark as shown.
For Men's Knit Shirts.
First use on or about Oct. 1, 1961.

SN 172,456. Americana Hosiery Mills, Inc., Shelbyville, Tenn. Filed July 5, 1963.

CHAPERONES

For Ladies' Nylon Hosiery.
First use June 27, 1963.

SN 172,671. Melville Shoe Corporation, New York, N.Y. Filed July 9, 1963.

FURBELOW

For Women's and Girls' Shoes.
First use June 26, 1963.

SN 173,026. Milsan Manufacturing Corporation, Lebanon, Pa. Filed July 15, 1963.

CANDLEWYCK

For Ladies', Girls', Men's and Boys' Wearing Apparel—Namely, Ladies' Lingerie, Sleeping Gowns, Pajamas, Robes and Underwear; Men's and Boys' Underwear, Pajamas and Sport Shirts.
First use May 10, 1963.

SN 173,687. R. Leo Plouf, d.b.a. Mercantile Company, Richfield, Minn. Filed July 24, 1963.



For Gloves.
First use during June 1963.

SN 173,771. Chas. Macintosh & Co. Limited, Edmonton, London, England. Filed July 25, 1963.



The mark "Lady Macintosh" is fanciful. Owner of U.S. Reg. No. 385,402.
For Raincoats.
First use 1953; in commerce 1953.

SN 173,813. Blue Bell, Inc., Greensboro, N.C. Filed July 26, 1963.

COTESBURY

For Men's and Boys' Sport Shirts, Slacks, Bermuda Shorts, and Outerwear—Namely, Jackets and Rainwear; and Misses' and Girls' Blouses, Slacks, Shorts, and Outerwear—Namely, Jackets and Rainwear.
First use July 9, 1963.

SN 174,035. The Kohl Corporation, Milwaukee, Wis. Filed July 30, 1963.

Lady Bascom

The name "Lady Bascom" is fanciful.
For Ladies' Dresses, Underwear, Pajamas, Blouses, Slacks, Jackets, Coats, Gowns, Shorts, Hosiery, Robes, Swim Suits and Maternity Wear.
First use June 28, 1963.

SN 174,872. Kayser-Roth Corporation, New York, N.Y. Filed Aug. 12, 1963.

JIFFIES

Owner of Reg. No. 724,852.
For Men's and Women's Slippers.
First use Aug. 8, 1957.

SN 177,701. Hubler Shoes, Inc., Auburn, Pa. Filed Sept. 25, 1963.

"Hub Bubs"

For Misses' and Children's Shoes.
First use Aug. 8, 1963.

SN 178,407. Boe Jeans, Inc., New York, N.Y. Filed Oct. 7, 1963.

SEA WEEDS

For Women's Swim Wear.
First use Sept. 30, 1963.

SN 178,761. Aberfoyle Manufacturing Co., New York, N.Y. Filed Oct. 11, 1963.

TWETER

For Sweaters.
First use Aug. 30, 1963.

Class 40—Fancy Goods, Furnishings, and Notions

SN 169,875. Schner-Block Company, Inc., New York, N.Y. Filed May 28, 1963.

Imperial BUTTONS

The word "Buttons" is disclaimed apart from the mark as shown.
For Buttons.
First use on or about Apr. 28, 1963.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 144,994. Horace Small Manufacturing Company, Nashville, Tenn. Filed May 18, 1962.

MR. 2 PLY



No claim is made to the term "2 Ply" apart from the mark shown.
For Blended Polyester Piece Goods.
First use January 1959.

SN 158,307. Albany Felt Company, Albany, N.Y. Filed Dec. 3, 1962.

DRI SCREEN

For Papermakers' Dryer Felts.
First use on or about Oct. 19, 1962.

SN 160,777. Coin Sales Corporation, New York, N.Y., assignee of Guilford Industries, Inc., Guilford, Maine. Filed Jan. 16, 1963.

COIN

For Laminated Fabrics for Use in Making Wearing Apparel and the Like.
First use Oct. 23, 1962.

SN 161,021. The Dow Chemical Company, Midland, Mich. Filed Jan. 21, 1963.

DOW

Owner of Reg. No. 711,287.
For Fabrics of Artificial Fibers and/or Filaments.
First use Feb. 15, 1960.

SN 162,797. Thomaston Cotton Mills, Thomaston, Ga. Filed Feb. 14, 1963.

THOM-SET

Owner of Reg. Nos. 228,811, 732,777, and others.
For Stretch Fabric To Be Used for Making Garments.
First use January 1962.

SN 167,506. The Wool "O" Company, Philadelphia, Pa. Filed Apr. 24, 1963.

MONO-TACHE

For Textile Rugs.
First use Apr. 19, 1963.

SN 173,907. The General Tire & Rubber Company, Akron, Ohio. Filed July 29, 1963.

SEA SKIN

For Vinyl Coated Fabric, Particularly for Outerwear.
First use Oct. 30, 1961.

SN 173,920. Jersey Carpet Corporation, Clifton, N.J. Filed July 29, 1963.

RUGMASTER

The word "Rug" is disclaimed apart from the mark as shown.
For Rugs and Carpets.
First use Mar. 30, 1940.

SN 173,941. Jacques R. Milberg, Riverdale, N.Y. Filed July 29, 1963.

MELO-GLO

For Fabrics and Piece Goods Used in the Manufacture of Ladies' Underwear.
First use July 16, 1963.

Class 43—Thread and Yarn

SN 160,532. Coats & Clark Inc., New York, N.Y. Filed Jan. 11, 1963.

"DUAL-DUTY"

For Thread and Yarn.
First use on or about Nov. 8, 1962.

SN 168,760. Owens-Corning Fiberglas Corporation, Toledo, Ohio. Filed May 13, 1963.

BETA

For Strand and Yarn.
First use October 1962.

SN 174,071. Joseph Bancroft & Sons Co., Wilmington, Del. Filed July 31, 1963.

TEXTRALIZED

Owner of Reg. Nos. 674,250, 619,617, and 601,773.
For Bulked Yarn.
First use Oct. 9, 1952.

Class 44—Dental, Medical, and Surgical Appliances

SN 140,495. Superma Limited, London, England. Filed Mar. 22, 1962.

SUPERMA BRUSHWAVE

Owner of British Reg. No. 760,102, dated Nov. 30, 1956.
For Hair Dressing Apparatus—Namely, Exothermic Activators for Use in Conjunction With Hair Waving Lotions and Creams.

SN 158,889. Allied Latex Sales Co., Inc., New York, N.Y. Filed Nov. 26, 1962.

GENITROL

For Chemical Coating Comprising a Cross-Linked Siloxane Formulation Serving as a Lubricant on Prophylactic Rubber Articles for the Prevention of Contagious Diseases.
First use Oct. 16, 1962.

SN 166,221. Sunbeam Corporation, Chicago, Ill. Filed Apr. 5, 1963.

SUNBEAM

For Electric Massaging Machines and Parts Thereof.
First use June 19, 1962.

SN 167,919. John Luft, d.b.a. John Luft Prescription Alloys, New York, N.Y. Filed May 1, 1963.

CERAM GOLD

The word "Gold" is disclaimed apart from the mark as shown.
For Precious Metal—Namely, Gold Used in Dental Laboratories.
First use Nov. 27, 1962.

SN 169,198. Atlantic Alloy Industries, Inc., Union, N.J. Filed May 20, 1963.

SURGI-PREP SYSTEM

Applicant disclaims the word "System" except as a part of the trademark itself.
For Hospital Operating Room Equipment—Namely, Instrument Table, Adjustable Instrument Stand, Basin Stand, Discard Pail, Instrument Tray, and a Sponge and Suture Tray.
First use Feb. 16, 1963.

SN 173,834. Howard B. Bymel, d.b.a. Medical Industries, Chatsworth, Calif. Filed July 19, 1963.

ANIMEX

For X-Ray and Dark Room Equipment, Examination Room Furniture, Surgical Tables and Lights, Dryers and Grooming Equipment, Waiting Room and Office Furniture Primarily Designed for Veterinarian Usage.
First use on or before Jan. 2, 1963.

SN 174,343. Coastal Dynamics Corporation, Venice, Calif. Filed Aug. 5, 1963.

DYNA-VAC

For Dental Vacuum System—Namely, a Vacuum Pump, Motor for Same, and Related Instruments to the Vacuum System for Use by a Dentist, Primarily for Use in Withdrawing Saliva From a Patient's Mouth.
First use on or before May 1, 1963.

SN 174,344. Coastal Dynamics Corporation, Venice, Calif. Filed Aug. 5, 1963.

DYNA-DENT

For Dental Instrumentation Console and Movable Head Structures Housing a Plurality of Dental Instruments for Use by a Dentist Upon a Patient, and Dental Instruments as Such—Namely, Cuspidor Units, Saliva Ejector Units, Vacuum Control Valves for Saliva Units, Trays for Holding Dental Tools, Syringes, Drills, Vacuum Pumps for Use With Dental Instruments, and Foot Control Units for Such Instruments.
First use on or before May 1, 1963.

SN 177,571. The Telex Corporation, Tulsa, Okla. Filed Sept. 23, 1963.

COMFORT SOUND

For Hearing Aids.
First use Sept. 3, 1963.

SN 178,477. Thomas R. Peyton, Los Angeles, Calif. Filed Oct. 7, 1963.

RECTALATOR

For Medical Supplies—Namely, Ano-Rectal Applicators.
First use Sept. 24, 1963.

SN 178,511. Welsh Manufacturing Company, Providence, R.I. Filed Oct. 7, 1963.

PROTEX

For Industrial Respirators.
First use Aug. 29, 1963.

SN 179,128. H.G. Enterprises, Kansas City, Mo. Filed Oct. 16, 1963.

MALE-DRI

Owner of Reg. No. 711,928.
For Hygienic Belts.
First use on or about Mar. 1, 1963.

Class 45—Soft Drinks and Carbonated Waters

SN 172,618. The Squirt Company, Sherman Oaks, Calif. Filed July 8, 1963.

SQUIRT

Owner of Reg. Nos. 367,659, 748,123, and others.
For Soft Drinks and the Bases and Syrups for Making the Same.
First use June 6, 1963.

Class 46—Foods and Ingredients of Foods

SN 156,780. C. J. Van Houten & Zoon N.V., Weesp, Netherlands. Filed Nov. 6, 1962.

NJAM-NJAM

The English translation of the words "Njam-Njam" is "yum yum." Owner of Dutch Reg. No. 145,152, dated Aug. 21, 1962.
For Cocoa, Baking Chocolate, and Chocolate Candies.

SN 157,347. Hortex Przedsiebiorstwo Handlu Zagranicznego Centrali Spoldzielni Ogrodniczych, d.b.a. Hortex, Warsaw, Poland. Filed Oct. 8, 1962.

HORTEX

For Fresh Fruits, Fresh Vegetables, Deep-Frozen Fruits, Deep-Frozen Vegetables, Fruit Pulps, Strained Fruits, Pickled Vegetables, Sauerkraut, Pickled Cucumbers, Pickled Dill Cucumbers, Canned Vegetables, Canned Fruits, Fruit Sirups for Food Purposes, Jams and Fruit Jellies, Dehydrated Vegetables and Fruits and Honey.
First use 1958; in commerce 1961.

SN 158,141. Centromint Company (Establishment), Vaduz, Liechtenstein. Filed Nov. 29, 1962.

CHOCOROUND

Priority claimed under Sec. 44(d) on Leichtenstein Reg. No. 1,378, dated Sept. 11, 1962.
For Candy.

SN 159,084. Nopco Chemical Company, d.b.a. Vitex Laboratories, Newark, N.J. Filed Dec. 13, 1962.

VITEXTURE

Owner of Reg. Nos. 306,141 and 554,721.
For Acidified Dairy Products—Namely, Tart Cream.
First use Nov. 12, 1962.

SN 159,557. The Paul F. Beich Company, Bloomington, Ill. Filed Dec. 21, 1962.

"PIK-A-SWEET"

For Candy.
First use Dec. 6, 1962.

SN 160,459. Walter Williams Candy Mfg. Div., Oklahoma City, Okla. Filed Jan. 9, 1963.

HOT SHOTS

For Candy—Namely, Hard Candy Balls.
First use Nov. 26, 1962.

SN 160,545. Lakeshire Products, Inc., d.b.a. Lakeshire Sandwiches, St. Louis, Mo. Filed Jan. 11, 1963.

NIKE

For Sandwiches.
First use Dec. 1, 1961.

SN 164,837. George T. Hansen, d.b.a. Boyden-Hansen Co., Alameda, Calif. Filed Mar. 18, 1963.

BEEVILLE

For Honey.
First use on or about Aug. 20, 1932.

SN 168,753. Nelson-Ricks Creamery Company, d.b.a. Banquet Better Foods, Salt Lake City, Utah. Filed May 13, 1963.

BANQUET

Applicant claims use for the area comprising the States of Montana, Wyoming, Colorado, New Mexico, Idaho, Utah, Arizona, Washington, Oregon, Nevada, and California.
For Butter Cheese, Fresh Eggs and Salad Dressings.
First use in or about 1906 for butter and eggs.
Subj. to concurrent use proceeding with Reg. Nos. 46,038, 59,755, 60,560, 541,469, 542,462, 549,551, 559,374, 614,006, 663,888, 674,286, and 677,067.

SN 169,546. International Refining and Packaging Corp., Bayonne, N.J. Filed May 28, 1963.

TAS-T-FRY

For Animal Derived Shortening.
First use Apr. 1, 1960.

SN 170,057. Flavor Spray, Inc., Kansas City, Mo. Filed May 31, 1963.

SECRET SEASON

The word "Season" is hereby disclaimed apart from the mark as shown.
For Liquid Food Flavoring Dispensed in an Aerated Can.
First use May 20, 1963.

SN 172,436. A. M. Todd Company, Kalamazoo, Mich. Filed July 8, 1963.

CRYSTAL WHITE

For Essential Vegetable Oils for Use as Flavors in Foods.
First use December 1875.

SN 174,060. W. W. Taylor, d.b.a. Your Hickory Host, Wichita, Kans. Filed July 30, 1963.



The representation shown in the drawing is not that of a particular living individual.
For Barbecue Sauce.
First use May 31, 1963.

SN 174,195. Leslie Salt Co., San Francisco, Calif. Filed Aug. 1, 1963.

BACTER-E-ADE

For Nutritional Supplement for Livestock Feeds.
First use Aug. 1, 1961.

SN 174,197. Leslie Salt Co., San Francisco, Calif. Filed Aug. 1, 1963.

LAY-ADE

For Nutritional Supplement for Poultry Feeds.
First use Oct. 9, 1961.

SN 174,514. Thomas J. Lipton, Inc., Hoboken, N.J. Filed Aug. 6, 1963.

GOLDEN LADLE

Owner of Reg. No. 739,103.
For Various Types of Dry Packaged Dinners Consisting of Combinations of Certain of the Following Principal Ingredients: Meat, Poultry, Fish, Alimentary Paste and Rice.
First use Jan. 4, 1963.

SN 174,711. Safeway Stores, Incorporated, Oakland, Calif. Filed Aug. 8, 1963.

DOROTHY DUNCAN

"Dorothy Duncan" is not the name of a particular living individual. Owner of Reg. No. 405,397.
For Candy and Fruit Cake.
First use Aug. 28, 1939, on candy.

SN 175,235. American Home Products Corporation, New York, N.Y. Filed Aug. 19, 1963.

DENNISON'S

Owner of Reg. No. 508,037.
For Tomato Catsup, Tomato Chili Sauce, Tomato Cocktail Sauce, Chili Con Carne With and Without Beans, Lima Beans With Ham, Chili Beans, Red Beans, Red Kidney Beans and Tamales.
First use 1927 on tomato catsup, tomato chili cauce, and tomato cocktail sauce.

SN 175,566. Eskimo Pie Corporation, Richmond, Va. Filed Aug. 22, 1963.

ESKI-MOLDS

Owner of Reg. Nos. 300,055, 400,973, and others.
For Frozen Formed Desserts Made of Ice Cream, Frozen Custard, Ice Milk, Sherbet and Ices.
First use June 23, 1960.

SN 175,568. Eskimo Pie Corporation, Richmond, Va. Filed Aug. 22, 1963.



Owner of Reg. Nos. 218,779, 302,649, and others.
For Frozen Formed Desserts Made of Ice Cream, Frozen Custard, Ice Milk, Sherbet and Ices.
First use at least as early as Oct. 5, 1926.

SN 176,027. Rabin-Winters Corporation, El Segundo, Calif. Filed Aug. 29, 1963.

Amplify

For Low Sodium Diet Seasoning Preparation—Namely, a Mixture of Spices, Herbs and Chemicals Low in Sodium Content That Have Been Blended Together To Form a Seasoning Which Is Applied to Foods To Enhance Flavor.
First use Apr. 3, 1963.

SN 176,338. Yamasa Shoyu Kabushiki Kaisha, d.b.a. Yamasa Shoyu Co., Ltd., Choshi-shi, Chiba-ken, Japan. Filed Sept. 4, 1963.

YAMASA LG

For All Purpose Food Seasonings.
First use May 15, 1962; in commerce May 20, 1963.

SN 177,267. Maryland Chicken Processors, Inc., Snow Hill, Md. Filed Sept. 18, 1963.

Buddy Boy

For Poultry Products—Namely, Fresh Dressed Chickens.
First use on or about May 13, 1963.

SN 177,673. American Bakeries Company, d.b.a. Dressel's, Chicago, Ill. Filed Sept. 25, 1963.

DRESSEL'S

For Bakery Products—Namely, Cakes.
First use June 1, 1929.

SN 178,240. Southern Fruit Distributors, Inc., Orlando, Fla. Filed Oct. 2, 1963.

CIRCUS

Owner of Reg. Nos. 380,079 and 92,795.
For Citrus Juices in Containers, More Particularly Orange Juice.
First use on or about Aug. 4, 1958.

SN 179,416. Granny Goose Foods, Oakland, Calif. Filed Oct. 21, 1963.

Betty Lou

Owner of Reg. No. 571,382.
For Cheese Spreads.
First use Dec. 24, 1962.

SN 179,420. Hoffmann-La Roche Inc., Nutley, N.J. Filed Oct. 21, 1963.

PERMACURE

For Preparation Used in the Curing of Meat.
First use Sept. 10, 1963.

SN 179,421. Hoffmann-La Roche Inc., Nutley, N.J. Filed Oct. 21, 1963.

PERMACURATE

For Preparation Used in the Curing of Meat.
First use Sept. 10, 1963.

SN 179,660. The Rath Packing Company, Waterloo, Iowa. Filed Oct. 23, 1963.

CEDAR FARM

Owner of Reg. Nos. 93,495, 557,250, and others.
For Bacon, Sausage, and Smoked Beef.
First use in or about June 1954.

SN 179,770. W. B. Camp & Sons, Inc., Bakersfield, Calif. Filed Oct. 25, 1963.

GEORGIANNA

Owner of Reg. No. 669,361.
For Potatoes in Their Natural State and Fresh Grapes.
First use Apr. 4, 1937.

SN 180,114. National Dairy Products Corporation, New York, N.Y. Filed Oct. 30, 1963.

GRIL FYNE

For Vegetable Shortening.
First use Oct. 4, 1963.

SN 180,193. Fair View Packing Company, Inc., d.b.a. Fairview Packing Co., Inc., Hollister, Calif. Filed Oct. 31, 1963.

Ondine

For Canned Vegetables; and Canned Stewed Seasoned Coreless Tomatoes.
First use Oct. 17, 1963.

Class 47 — Wines

SN 142,726. Monsieur Henri Wines, Ltd., d.b.a. Henri Wines, Ltd., Brooklyn, N.Y. Filed Apr. 20, 1962.

BRIAULT

For Wine.
First use September 1953.

SN 152,298. Roger Gouin S.A.R.L., Saumur, Maine-et-Loire, France. Filed Aug. 31, 1962.

ROSELET

For Rosé Wine.
First use Oct. 28, 1961; in commerce Oct. 28, 1961.

SN 152,299. Roger Gouin S.A.R.L., Saumur, Maine-et-Loire, France. Filed Aug. 31, 1962.

VALROSÉ

For Rosé Wine.
First use Oct. 4, 1961; in commerce Oct. 4, 1961.

Class 49 — Distilled Alcoholic Liquors

SN 166,155. Barton Distilling Company, d.b.a. William Sanderson Co., Chicago, Ill. Filed Apr. 5, 1963.

COCKTAIL PARTY

Applicant claims the use of the word "Cocktail" only as used in the mark.
For Prepared Alcoholic Cocktail.
First use Mar. 18, 1963.

SN 174,216. McKesson & Robbins, Incorporated, New York, N.Y. Filed Aug. 1, 1963.

NEWPORT

Owner of Reg. Nos. 311,971, 725,709, and 753,434.
For Brandy.
First use Apr. 18, 1963.

Class 50 — Merchandise Not Otherwise Classified

SN 147,695. Bourges Color Corporation, New York, N.Y. Filed June 26, 1962.

SOLOTONE

Owner of Reg. Nos. 624,175 and 628,904.
For Transparent Plastic Sheets Used in the Preparation of Art Work and in Connection With a Process of Color Reproduction.
First use at least as early as 1939.

SN 158,263. Theodore L. Million, d.b.a. Million Manufacturing Company, Santa Barbara, Calif. Filed Nov. 30, 1962.

HOUSE-BOY

For Pants Hangers.
First use Oct. 27, 1962.

SN 158,318. Edward Louis Carl, d.b.a. Teacher's Pal, Villa Park, Ill. Filed Dec. 3, 1962.

TEACHER'S PAL

For Arithmetic Concept Plaques.
First use Nov. 14, 1961.

SN 166,072. Cosmic Products, Whittier, Calif. Filed Apr. 4, 1963.



Applicant hereby disclaims the word "Pad" apart from the mark as shown.
For Disposable Floor Pad Made of Absorbent Paper.
First use Mar. 12, 1963.

SN 171,868. General Plastics Corporation, Marion, Ind. Filed June 26, 1963.

SUGARPLUM

For Wrought Iron Framework Shaped as a Tree Branch Which Is Decorated With Colored Globes.
First use Mar. 25, 1963.

SN 173,021. Raya L. Markson, d.b.a. Gregory of Hollywood, Los Angeles, Calif. Filed July 15, 1963.

"FORM-ally YOURS"

For Dress Forms.
First use May 9, 1959.

SN 177,797. Johns-Manville Corporation, New York, N.Y. Filed Sept. 26, 1963.

FLASH-O-LANTERN

For Hollow, Sculptured, Decorative Fiber Glass Shapes Adapted To Receive Lighting Devices and Serve as Warning or Decorative Lighting Devices and the Like.
First use July 3, 1963.

SN 178,014. MHQ Art Products, Inc., Stuart, Fla. Filed Sept. 30, 1963.

PORTA-PAINTER

For Portable Art Lesson Devices—Namely, a Unified Package Containing an Oil Painting Surface Having a Faint Outline of a Picture Thereon and Separate Sheets Containing a Reproduction in Color of the Faintly Outlined Picture and Instructions for the Painter.
First use on or about July 2, 1963.

Class 51 — Cosmetics and Toilet Preparations

SN 140,496. Superma Limited, London, England. Filed Mar. 22, 1962.

BRUSHWAVE

Owner of British Reg. No. B784,773, dated Dec. 4, 1958.
For Chemically Impregnated Pads, Lotions and Creams, All for Use in Hair Waving.

SN 143,787. Avon Products, Inc., New York, N.Y. Filed May 4, 1962.

HAWAIIAN DELIGHTS

For Nail Polish.
First use Apr. 18, 1962.

SN 175,727. Countess Mona Parfums S.A., Geneva, Switzerland. Filed Aug. 26, 1963.

THE COUNT

Priority claimed under Sec. 44(d) on Swiss Reg. No. 197,957, dated Feb. 25, 1963.
For Perfume, Bath Oil, Eau de Cologne, and Shaving Lotion.

Class 52 — Detergents and Soaps

SN 146,373. J. Goddard & Sons Limited, Leicester, England. Filed June 7, 1962.



The words "Dry Clean" are hereby disclaimed apart from the mark as a whole. Owner of Reg. Nos. 260,103 and 703,737.
For Cleaning Preparations for Use on Clothing, Carpets, and Wallpaper.
First use Mar. 16, 1962; in commerce Mar. 16, 1962.

SN 165,270. A. Gusmer, Inc., Hoboken, N.J. Filed Mar. 22, 1963.

BRANDHEFETON

For Brewers' Tank Cleaning Preparation—Namely, a Prepared Paste Utilizing China Clay Applied to the Inside Surface of a Fermentation Tank or Vat, and Remaining on During Fermentation and Being Cleaned Off After the Fermented Contents Has Been Removed From the Tank.
First use on or about Mar. 25, 1938.

SN 174,334. Beecham Products Inc., Clifton, N.J. Filed Aug. 5, 1963.

COUNTESS

Owner of Reg. No. 747,715.
For Hair Shampoo.
First use July 3, 1963.

SN 176,398. Shaklee Products, Hayward, Calif. Filed Sept. 5, 1963.

BASIC-H

For Liquid Cleaners for Household and Industrial Use.
First use April 1961.

SERVICE MARKS

Class 100 — Miscellaneous

SN 151,549. Washington Engineering Services Company, Inc., Kensington, Md. Filed Aug. 20, 1962.

DO-CONS

For Document, Data and Information Control for Engineering Research and Development, Maintenance and Use Programs.
First use May 21, 1962.

SN 155,189. Public Service Company of Colorado, Denver, Colo. Filed Oct. 15, 1962.



For Supplying Electricity and Gas for Heating and Power.
First use in or about the middle of March 1957.

SN 173,071. Western Red Cedar Lumber Association, Seattle, Wash. Filed July 15, 1963.



For Promoting the Interests of Western Red Cedar Lumber Manufacturers, Distributors and Users by Engaging in Activities To Increase the Public Demand and To Create and Enlarge Markets for Western Red Cedar Lumber—Namely, Making Investigations and Surveys for Ascertaining Current and Prospective Demand and Markets, Advising Regarding and Participating in Publicity and Advertising Programs, Conducting Research Projects Regarding Utilization and Treatment of Lumber, Disseminating to Its Members Information Pertaining to Lumber, Its Treatment and Use, and Cooperating With Other Nonprofit Corporations, Associations and Federations Whose Object Is To Further the Interest of the Lumber Business in General.
First use July 1962.

Class 101 — Advertising and Business

SN 132,160. Sidney Hamilton, Denton, Tex. Filed Nov. 16, 1961.

NCAS

For Compiling a List of Names and Addresses of College Students and Supplying Information Therefrom to Graduates, Who Subscribe to Applicant's Service.
First use Apr. 15, 1955.

SN 157,107. E. F. Hutton & Company Inc., Kansas City, Mo. Filed Nov. 13, 1962.

TICKERS

For Title of a Radio Program—Namely, a Stock Market News Program.
First use Mar. 3, 1960.

SN 161,882. Industrial Public Relations Limited, New York, N.Y. Filed Feb. 1, 1963.

IPR

For Services in Promoting the Sale of the Products of Others Through the Use of Publicity Material of an Editorial Nature.
First use 1956.

SN 167,905. Gold Bell Enterprises, Inc., Detroit, Mich. Filed May 1, 1963.

AID

For Promoting Sales by Others in Client Companies Through the Installation and Administration of Incentive Programs.
First use Oct. 5, 1961.

SN 171,371. National Bellas Hess, Inc., North Kansas City, Mo. Filed June 19, 1963.

BELLAS HESS ***SUPERSTORE***

Applicant disclaims the word "Superstore." The words "Bellas Hess" do not constitute the name of any known living individual.
For Department Store Services.
First use on or about Mar. 14, 1963.

Class 102 — Insurance and Financial

SN 155,820. The Merchants National Bank & Trust Company of Syracuse, Syracuse, N.Y. Filed Oct. 24, 1962.



For Banking and Trust Services.
First use Sept. 1, 1962.

SN 160,949. Keystone Custodian Funds, Inc., Boston, Mass. Filed Jan. 18, 1963.

Keystone

For Managing Funds of Its Subscribers or Certificate Holders in the Selection and Supervision of Securities.
First use in or about September 1958.

SN 160,950. Keystone Custodian Funds, Inc., Boston, Mass. Filed Jan. 18, 1963.



For Managing Funds of Its Subscribers or Certificate Holders in the Selection and Supervision of Securities.
First use in or about August 1935.

Class 103 — Construction and Repair

SN 147,327. The United Research and Development Company, Incorporated, New Britain, Conn. Filed June 20, 1962.

Groutwall

For Custom Laying of Building Blocks for Grout Filled Masonry Walls.
First use Jan. 1, 1955.

Class 105 — Transportation and Storage

SN 151,306. Econo-Car International, Inc., Elizabeth, N.J. Filed Aug. 16, 1962.

ECONO-CAR

For Leasing of Motor Vehicles.
First use on or about Nov. 1, 1961.

SN 151,347. McLean Trucking Company, Winston-Salem, N.C. Filed Aug. 16, 1962.



The drawing is lined to indicate red.
For Transportation of Freight by Truck.
First use at least by July 1958.

SN 169,730. Hertz System, Inc., New York, N.Y. Filed May 27, 1963.

HERTZ 3-R

Owner of Reg. Nos. 569,760, 700,684, and others.
For Combined Plane, Car Rental and Motel/Hotel Reservation Service.
First use Nov. 1, 1961.

Class 106 — Material Treatment

SN 134,100. District Photo, Inc., Washington, D.C. Filed Dec. 15, 1961.



The words "Photo Supply" are disclaimed apart from the mark as shown.
For Repairing and Adjusting Photographic Equipment.
First use July 1, 1959.

Class 107 — Education and Entertainment

SN 173,360. Independence Broadcasting Company, Philadelphia, Pa. Filed July 19, 1963.

BAGELS AND LOX

For Title of a Radio Program Which Features Jewish Stars on English Language Recordings and Makes Community Announcements.
First use July 1, 1962.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

767,772. AIRMAT. Goodyear Aerospace Corporation, by change of name from Goodyear Aircraft Corporation. SN 150,332. Pub. 7–16–63. Filed 8–2–62.

767,773. KYRIAL. Konrad Hornschuch Aktiengesellschaft Werk Weissbach. SN 155,620. Pub. 1–21–64. Filed 10–22–62.

767,774. PYRAMID. The Consolidation Coal Company. SN 161,310. Pub. 1–21–64. Filed 1–24–63.

767,775. FAIRWAY. S. B. Foot Tanning Company. SN 161,785. Pub. 1–21–64. Filed 1–31–63.

767,776. EVEREST. S. B. Foot Tanning Company. SN 161,786. Pub. 1–21–64. Filed 1–31–63.

767,777. PARADISE KID. Fleming-Joffe Limited. SN 163,722. Pub. 1–21–64. Filed 3–1–63.

767,778. NP AND DESIGN. National Polychemicals, Inc. SN 167,400. Pub. 1–21–64. Filed 4–23–63.

Class 2 — Receptacles

767,779. POLYPRO. Kisco Boiler & Engineering Co. SN 170,840. Pub. 1–21–64. Filed 6–12–63.

767,780. SPILL CLEAR. H & P Manufacturing Co. SN 171,132. Pub. 1–21–64. Filed 6–17–63.

767,781. CHEF'S CORN CRIBS. Fluted Paper Products Co., Inc. SN 173,246. Pub. 1–21–64. Filed 7–18–63.

767,782. FILL-RITE. Jackson Bag Corporation. SN 173,363. Pub. 1–21–64. Filed 7–19–63.

767,783. DORCOLIPSE. Dorcon Incorporated. SN 173,639. Pub. 1–21–64. Filed 7–24–63.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

767,784. TOTE-N-FLOTE. Carlson Products Corp. SN 123,397. Pub. 2–27–62. Filed 7–7–61.

Class 6 — Chemicals and Chemical Compositions

767,785. CHATAIGNIER FRANCE AND DESIGN. Chataignier France. SN 140,069. Pub. 1–21–64. Filed 1–3–62.

767,786. SURE SEAL. Yale Engineering Company. SN 140,894. Pub. 1–21–64. Filed 3–27–62.

767,787. PM+MILES WITH "LET-LIVE" AND DESIGN. Tony Piet Motor Sales, Inc. SN 148,527. Pub. 1–21–64. Filed 7–6–62.

767,788. POLYNAL. Allied Chemical Corporation. SN 148,700. Pub. 1–21–64. Filed 7–10–62.

767,789. MORFAX. The Goodyear Tire & Rubber Company. SN 148,718. Pub. 1–21–64. Filed 7–10–62.

767,790. D.M. AND DESIGN. Thermidaire Corporation of America. SN 154,530. Pub. 1–21–64. Filed 10–4–62.

767,791. HI-LITE. Stauffer Chemical Company. SN 158,396. Pub. 1–21–64. Filed 12–3–62.

767,792. CLOSET SACHET. Bug-A-Boo Products Inc. SN 158,786. Pub. 1–21–64. Filed 12–10–62.

767,793. AL AND DESIGN. Albimi Laboratories, Inc. SN 159,935. Pub. 1–21–64. Filed 12–31–62.

767,794. THIOSET M. Evans Chemetics, Inc. SN 161,171. Pub. 1–21–64. Filed 1–22–63.

767,795. ATOMERGIC. Gallard-Schlesinger Chemical Mfg. Corp. MULTIPLE CLASS (Classes 6 and 14). SN 162,733. Pub. 1–21–64. Filed 2–14–63.

767,796. CHLOROPROPYLATE. Geigy Chemical Corporation. SN 164,035. Pub. 1–21–64. Filed 3–6–63.

767,797. BUHACH. Richard E. Beckwith, d.b.a. International Laboratories. SN 167,447. Pub. 1–21–64. Filed 4–24–63.

767,798. PY-VONA. United Co-Operatives, Inc. SN 169,498. Pub. 1–21–64. Filed 5–22–63.

767,799. SOIL-SNUB. Arkansas Co., Inc. SN 169,604. Pub. 1–21–64. Filed 5–24–63.

767,800. WEEDAWAY. Miller Chemical and Fertilizer Corporation. SN 172,001. Pub. 1–21–64. Filed 6–27–63.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

767,801. 220 MAX-FIRE. Alcan Company, Incorporated. SN 153,051. Pub. 1–21–64. Filed 9–13–62.

767,802. AMCEL AND DESIGN. Celanese Corporation of America. SN 159,642. Pub. 1–21–64. Filed 12–24–62.

767,803. "QUAILS FARGO." Simmons Gun Specialties, Inc., assignee of Dakin Gun Company. SN 167,882. Pub. 1–7–64. Filed 5–1–63.

Class 10 — Fertilizers

767,804. LAWNSCAPE. R. J. Reynolds Tobacco Company. SN 167,935. Pub. 1–21–64. Filed 5–1–63.

Class 12 — Construction Materials

767,805. AITC QUALITY INSPECTED AND DESIGN. American Institute of Timber Construction. SN 156,454. COLLECTIVE MARK. Pub. 1–21–64. Filed 11–2–62.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

767,806. QUALITY CONTROLLED . . . . . FROM ORE TO FINISHED PRODUCT. Calumet & Hecla, Inc. SN 109,240. Pub. 1–8–63. Filed 11–29–60.

767,807. K AND DESIGN. Kohler Co. SN 170,321. Pub. 1–21–64. Filed 6–4–63.

767,808. PIONEER AND DESIGN. Pioneer Industries, Inc. SN 170,423. Pub. 1–21–64. Filed 6–5–63.

767,809. PI AND DESIGN. Pioneer Industries, Inc. SN 170,424. Pub. 1–21–64. Filed 6–5–63.

767,810. NOVAC. Frank M. Rule and John L. Schmeller. SN 170,872. Pub. 1–21–64. Filed 6–6–63.

767,811. P NUT. Hi-Shear Corporation. SN 170,910. Pub. 1–21–64. Filed 6–13–63.

Class 14 — Metals and Metal Castings and Forgings

767,795. See Class 6 for this trademark.

767,812. MONOLAMIC. G. T. Schjeldahl Company. SN 168,963. Pub. 1–21–64. Filed 5–15–63.

Class 15 — Oils and Greases

767,813. TRIM. Master Chemical Corporation. SN 173,938. Pub. 1–21–64. Filed 7–29–63.

767,814. CETRON. The Standard Oil Company. SN 173,977. Pub. 1–21–64. Filed 7–29–63.

Class 18 — Medicines and Pharmaceutical Preparations

767,815. LANAT. Wade Chemical Corporation, assignee, by mesne assignments, of Modern American Chemical Corporation. SN 131,976. Pub. 1–21–64. Filed 11–14–61.

767,816. STING KILL. Medical Supply Company. SN 144,262. Pub. 1–21–64. Filed 5–10–62.

767,817. KREM. Neisler Laboratories, Inc., assignee of Irwin, Neisler & Co. SN 149,850. Pub. 1–21–64. Filed 7–26–62.

767,818. GOLDEN ARTH-RHEUM. Harry Lebow, d.b.a. Lebow Pharmaceutical Co. SN 153,662. Pub. 1–21–64. Filed 9–21–62.

767,819. TELES. Torch Laboratories, Inc. SN 155,028. Pub. 1–21–64. Filed 10–11–62.

767,820. DIOTHYLLINE. Cutter Laboratories, Inc. SN 160,162. Pub. 1–21–64. Filed 1–4–63.

767,821. BOL-THUM. Carpenter Chemical Company. SN 160,835. Pub. 1–21–64. Filed 1–17–63.

767,822. PRE-PUP. Ceetee Products, Inc. SN 161,305. Pub. 1–21–64. Filed 1–24–63.

767,823. BIONAMIN. Wallace & Tiernan Inc. SN 161,570. Pub. 1–21–64. Filed 1–28–63.

767,824. ENTROMYCIN. The Dow Chemical Company. SN 162,915. Pub. 1–21–64. Filed 2–18–63.

767,825. PESON. Lloyd Brothers Incorporated. SN 163,564. Pub. 1–21–64. Filed 2–27–63.

767,826. RENALGEN. Axentie T. Babienco. SN 163,598. Pub. 8–27–63. Filed 2–28–63.

767,827. ARTHRA-ZENE. Xttrium Laboratories, Inc. SN 163,990. Pub. 1–21–64. Filed 3–5–63.

767,828. ROBINSON. Robinson Laboratory, Inc. SN 164,174. Pub. 1–21–64. Filed 3–7–63.

767,829. MACALOZONE. E. Am. Ass'n for Oxygen Therapy Inc. SN 164,204. Pub. 1–21–64. Filed 2–14–63.

767,830. SIBENA. Plough Laboratories, Inc. SN 167,930. Pub. 1–21–64. Filed 5–1–63.

767,831. SENOFORT. The Purdue Frederick Company. SN 168,113. Pub. 1–21–64. Filed 5–3–63.

767,832. WINTOS. Sterling Drug Inc. SN 168,121. Pub. 1–21–64. Filed 5–3–63.

767,833. VAPOFAC. Shell Oil Company. SN 168,638. Pub. 1–21–64. Filed 5–10–63.

767,834. PRANDIUM. American Home Products Corporation. SN 170,268. Pub. 1–21–64. Filed 6–4–63.

Class 19 — Vehicles

767,835. SIERRAGLO. The Sierracin Corporation. SN 136,927. Pub. 5–14–63. Filed 1–30–62.

767,836. HYNAUTIC AND DESIGN. Fluid Controls, Inc. SN 156,289. Pub. 1–21–64. Filed 10–31–62.

767,837. ACRIVUE. Swedlow Inc. SN 163,896. Pub. 1–21–64. Filed 3–4–63.

Class 21 — Electrical Apparatus, Machines, and Supplies

767,838. SONOTROL. Sonotone Corporation, assignee of Aaron H. Axelrod, d.b.a. Electronics Company. SN 125,964. Pub. 7–24–62. Filed 8–14–61.

767,839. ACE. Ace-Sycamore, Inc. SN 132,008. Pub. 6–4–63. Filed 11–15–61.

767,840. MICRONIC RUBY. Standard Radio Corporation. SN 173,793. Pub. 1–21–64. Filed 7–24–63.

767,841. VELVETORK. Coilform Company. SN 175,169. Pub. 1–21–64. Filed 8–16–63.

Class 22 — Games, Toys, and Sporting Goods

767,842. CROWN DEVICE (DESIGN MARK). Brunswick-MacGregor Inc. SN 141,250. Pub. 1–21–64. Filed 4–2–62.

767,843. CHATTY CHERYL. Mattel, Inc. SN 154,044. Pub. 1–21–64. Filed 9–27–62.

767,844. DUNCAN. Donald F. Duncan, Incorporated. SN 154,574. Pub. 1–21–64. Filed 10–5–62.

767,845. BANKROLL. Henry C. Jacoby, d.b.a. H. C. Jacoby Company. SN 154,604. Pub. 1–21–64. Filed 10–5–62.

767,846. SARANADE. Westinghouse Electric Corporation. SN 156,699. Pub. 1–21–64. Filed 11–5–62.

767,847. BIRTHSTONE BELLES. A & H Doll Manufacturing Corporation. SN 161,224. Pub. 1–21–64. Filed 1–23–63.

767,848. MIGHTY MO. De Luxe Reading Corporation. SN 163,820. Pub. 1–21–64. Filed 3–4–63.

767,849. JUMPIN' JIMINY. Herbert Rubin, d.b.a. New York Toy and Game Mfg. Co. SN 164,659. Pub. 1–21–64. Filed 3–14–63.

767,850. RIJO. Rijo Ski Mfg. Co. SN 169,068. Pub. 1–21–64. Filed 5–16–63.

767,851. COLUMBIA 300. Columbia Industries, Inc. SN 170,033. Pub. 1–21–64. Filed 5–31–63.

767,852. WEEPSY WIGGLES. Uneeda Doll Co., Inc. SN 170,962. Pub. 1–21–64. Filed 6–13–63.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

767,853. STIRSTIX. Glassips Incorporated. SN 127,002. Pub. 1–21–64. Filed 8–31–61.

767,854. FLETCHER. Pennsalt Chemicals Corporation, by merger from The Sharples Corporation. SN 160,333. Pub. 12–24–63. Filed 1–7–63.

767,855. CENTRI-BREW. Vendomatic Services Limited. SN 169,995. Pub. 1–21–64. Filed 5–29–63.

767,856. CHRONIWELD. Eaton Manufacturing Company. SN 170,395. Pub. 1–21–64. Filed 6–5–63.

767,857. NUMERIMITE. Giddings & Lewis Machine Tool Company. SN 170,398. Pub. 1–21–64. Filed 6–5–63.

767,858. BACON AMERICAN AND DESIGN. Bacon American Corporation. SN 170,449. Pub. 1–21–64. Filed 6–6–63.

767,859. UNION CARBIDE AND DESIGN. Union Carbide Corporation. SN 170,964. Pub. 1–21–64. Filed 6–13–63.

767,860. HEFCO. Hefco, Inc. SN 171,184. Pub. 1–21–64. Filed 6–17–63.

767,861. MINI-MAX. Borg-Warner Corporation. SN 174,009. Pub. 1–21–64. Filed 7–30–63.

767,862. CENTRI-AIR PAK. Aero-Flow Dynamics, Inc. SN 174,317. Pub. 1–21–64. Filed 8–5–63.

767,863. VIBRA HIDER. Hobam, Inc. SN 174,371. Pub. 1-21-64. Filed 8-5-63.

767,864. ASTRON AND DESIGN. Astron, Inc. SN 174,563. Pub. 1-21-64. Filed 8-7-63.

767,865. GILLETTE. The Gillette Company. SN 174,954. Pub. 1-21-64. Filed 8-13-63.

767,866. TOWN HOUSE. Bissell Inc. SN 175,245. Pub. 1-21-64. Filed 8-19-63.

767,867. TRU-GUIDE. Pratt & Whitney Company, Incorporated. SN 175,315. Pub. 1-21-64. Filed 8-19-63.

767,868. MAGNA POWER. Schick Incorporated. SN 175,325. Pub. 1-21-64. Filed 8-19-63.

767,869. 3-GEAR DESIGN. Huck Co., Inc. SN 175,493. Pub. 1-21-64. Filed 8-21-63.

Class 26—Measuring and Scientific Appliances

767,870. UNISTEEL. The United Steel Companies Limited. SN 173,080. Pub. 1-21-64. Filed 7-15-63.

Class 28—Jewelry and Precious-Metal Ware

767,871. K AND DESIGN. H. C. Klonka & Co., Inc., d.b.a. Kimberley Diamond Company. SN 149,474. Pub. 12-25-62. Filed 7-20-62.

Class 31—Filters and Refrigerators

767,872. M & M AND DESIGN. Food Filters Corporation. SN 175,104. Pub. 1-21-64. Filed 8-15-63.

767,873. BANDOR. American Air Filter Company, Inc. SN 175,710. Pub. 1-21-64. Filed 8-26-63.

767,874. DEEM-A-FLOW. Crystal Research Laboratories, Inc. SN 178,260. Pub. 1-21-64. Filed 10-3-63.

Class 32—Furniture and Upholstery

767,875. ARTEL. Artel Decorators, Inc. SN 176,275. Pub. 1-21-64. Filed 9-4-63.

767,876. PARTHENEAN. Drexel Enterprises, Inc. SN 176,432. Pub. 1-21-64. Filed 9-9-63.

767,877. MAR-CEL. Mario Martinez Celis. SN 176,626. Pub. 1-21-64. Filed 9-10-63.

767,878. KING-O-PEDIC. The Mebane Company. SN 176,741. Pub. 1-21-64. Filed 9-11-63.

Class 34—Heating, Lighting, and Ventilating Apparatus

767,879. DP AND DESIGN. Atlantic Research Corporation. SN 172,798. Pub. 1-21-64. Filed 7-11-63.

Class 37—Paper and Stationery

767,880. STANDARD DIARY. Wilson Jones Company. SN 174,470. Pub. 1-21-64. Filed 8-5-63.

Class 38—Prints and Publications

767,881. TAB. Marion G. Ward, d.b.a. Tab Publishing Co. SN 140,607. Pub. 1-21-64. Filed 3-23-62.

767,882. SPELL C-A-R-D. Henry Reichman, assignee of Henry Reichman, Inc. SN 140,868. Pub. 1-21-64. Filed 3-27-62.

767,883. CINE-REVISTA. Cine Revista, Inc. SN 153,064. Pub. 1-21-64. Filed 9-13-62.

767,884. B MICRO-TEL AND DESIGN. Micro-Fax Service, Inc. SN 156,423. Pub. 1-21-64. Filed 11-1-62.

767,885. SCOTTY'S SHOPPER. Malcolm C. Brown, d.b.a. Alpha 2 Company, SN 157,450. Pub. 1-21-64. Filed 11-19-62.

767,886. BRUSH UP AND DESIGN. The Fuller Brush Company. SN 160,107. Pub. 1-21-64. Filed 1-3-63.

767,887. SHOWPLACE. Hartford Publications, Inc. SN 160,380. Pub. 1-21-64. Filed 1-8-63.

767,888. DESIGN OF A DEER. The American Institute of Biological Sciences. SN 161,225. Pub. 1-21-64. Filed 1-23-63.

767,889. GEOMETRIC DESIGN. U.C.P. Service, Inc. SN 162,122. Pub. 1-21-64. Filed 2-5-63.

767,890. CHRISTOPHEL CINE CAMERA, INC. AND DESIGN. Christophel Cine Camera, Inc. SN 162,225. Pub. 1-21-64. Filed 2-7-63.

767,891. PARTY LINE STUDIO CARD AND DESIGN. Herman F. Hinz, Jr., d.b.a. Hinz Publishing Company. SN 162,261. Pub. 1-21-64. Filed 2-7-63.

767,892. THE GOVERNMENT CONTRACTOR BRIEFING PAPERS ETC. AND DESIGN. Federal Publications, Inc. SN 165,012. Pub. 1-21-64. Filed 3-18-63.

767,893. BLACK BOOK. National Auto Research Co. SN 168,338. Pub. 1-21-64. Filed 5-7-63.

767,894. A STONEHENGE BOOK AND DESIGN. Time, Incorporated. SN 168,647. Pub. 1-21-64. Filed 5-10-63.

767,895. DAN FLAGG. Don Sherwood. SN 169,074. Pub. 1-21-64. Filed 5-16-63.

767,896. ELECTRONIC SCIENCE PREVIEW AND DESIGN. Preview Publications, Inc. SN 169,305. Pub. 1-21-64. Filed 5-20-63.

767,897. COMPACT FACTS. Visual Education Association, Inc. SN 169,330. Pub. 1-21-64. Filed 5-20-63.

767,898. ELECTROGUIDE. Arcos Corporation. SN 169,602. Pub. 1-21-64. Filed 5-24-63.

Class 39—Clothing

767,899. EVERKREASED. B. Kuppenheimer & Co. Inc. SN 101,270. Pub. 5-15-62. Filed 7-21-60.

767,900. STACY AMES. Stacy Ames, Inc. (New York corporation—new corporation), by assignment and change of name from Stacy Ames, Inc. (New York corporation). SN 132,495. Pub. 1-21-64. Filed 11-21-61.

767,901. MISTER A. Allied Stores Corporation. SN 150,306. Pub. 4-2-63. Filed 8-2-62.

767,902. CROWN AND GLOBE (DESIGN). Samuel E. Schlein, Inc. SN 170,114. Pub. 1-21-64. Filed 5-31-63.

767,903. PRIVATE LABEL. Arthur Winer, Incorporated. SN 170,138. Pub. 1-21-64. Filed 5-31-63.

767,904. NORTH BAY. Arthur Doctor & Co. SN 170,621. Pub. 1-21-64. Filed 6-10-63.

767,905. VYSHEER. Alba-Waldensian, Inc. SN 170,719. Pub. 1-21-64. Filed 6-11-63.

767,906. NEAT 'N TIDY. Swirl, Inc. SN 171,499. Pub. 1-21-64. Filed 6-20-63.

767,907. NYOCO. The H. D. Lee Company, Incorporated. SN 171,894. Pub. 1-21-64. Filed 6-26-63.

767,908. DREAM FLOWERS. Maidenform, Inc. SN 171,897. Pub. 1-21-64. Filed 6-25-63.

767,909. CALLIOPE. Calliope, Inc. SN 171,962. Pub. 1-21-64. Filed 6-27-63.

767,910. BRAIDBURN. Unishops, Inc. SN 172,532. Pub. 1-21-64. Filed 7-5-63.

767,911. SPARKL'ETTE. Surprise Brassiere Co., Inc. SN 174,621. Pub. 1-21-64. Filed 8-7-63.

767,912. OX-CORD. Oxford Boyswear, Inc. SN 175,202. Pub. 1-21-64. Filed 8-16-63.

767,913. OX-WOOL. Oxford Boyswear, Inc. SN 175,204. Pub. 1-21-64. Filed 8-16-63.

Class 40—Fancy Goods, Furnishings, and Notions

767,914. D FUZZ IT AND DESIGN. D-Fuzz-It Company. SN 145,061. Pub. 1-21-64. Filed 5-21-62.

767,915. SUGAR 'N SPICE. Standard Pyroxoloid Corporation. SN 168,641. Pub. 1-21-64. Filed 5-10-63.

767,916. PELICAN BIB AND DESIGN. Marvin Stanley Korshak, d.b.a. Stan-Mar Manufacturing Company. SN 169,736. Pub. 1-21-64. Filed 5-27-63.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

767,917. UCB AND DESIGN. UCB (Union Chimique-Chemische Bedrijven), Societe Anonyme. SN 159,026. Pub. 1-21-64. Filed 11-1-62.

767,918. BIG BUSINESS. Deering Milliken, Inc. SN 171,326. Pub. 1-21-64. Filed 6-19-63.

767,919. BUOY. Deering Milliken, Inc. SN 171,327. Pub. 1-21-64. Filed 6-19-63.

767,920. SCAGWAY. Deering Milliken, Inc. SN 171,330. Pub. 1-21-64. Filed 6-19-63.

767,921. MAD-AVE. Deering Milliken, Inc. SN 171,331. Pub. 1-21-64. Filed 6-19-63.

Class 46—Foods and Ingredients of Foods

767,922. EARLY AMERICAN. The Procter & Gamble Company. SN 84,013. Pub. 11-21-61. Filed 10-26-59.

767,923. BAKERS DOZEN. J. S. Wilson, Inc. SN 109,133. Pub. 1-21-64. Filed 11-25-60.

767,924. COFFEE-MATE. George O. Graves, d.b.a. Michiana Mills. SN 142,080. Pub. 1-21-64. Filed 4-11-62.

767,925. MORTON. Continental Baking Company. SN 143,212. Pub. 1-21-64. Filed 4-27-62.

767,926. POMPADOUR. Firma R. Seelig & Hille. SN 150,546. Pub. 1-21-64. Filed 8-6-62.

767,927. WRIGLEY'S SPEARMINT AND DESIGN. Wm. Wrigley Jr. Company. SN 151,630. Pub. 1-21-64. Filed 8-21-62.

767,928. DRI-PUFF. Armour and Company. SN 152,744. Pub. 1-21-64. Filed 9-10-62.

767,929. LITTLE PRINCESS AND DESIGN. Buhler Mills, Inc. SN 154,465. Pub. 1-21-64. Filed 10-4-62.

767,930. HAWAIIAN HARVEST SALAD. Foremost Dairies, Inc. SN 155,309. Pub. 8-27-63. Filed 10-17-62.

767,931. COUNTRY OVEN. The Dietene Company, d.b.a. The Delmark Company. SN 155,383. Pub. 1-21-64. Filed 10-18-62.

767,932. DILLY CUES AND DESIGN. Park and Hagna (Incorporated). SN 156,351. Pub. 6-4-63. Filed 10-29-62.

767,933. SAFF-CAPS. Joseph Karbo, d.b.a. Slim-Pak Products. SN 156,499. Pub. 1-21-64. Filed 11-2-62.

767,934. AUSTIN'S AND DESIGN. Fairmont Foods Company, d.b.a. Austin Biscuit Co. SN 157,988. Pub. 1-21-64. Filed 11-27-62.

767,935. CONFETTI. The Glidden Company, d.b.a. Durkee Famous Foods. SN 158,705. Pub. 1-21-64. Filed 12-7-62.

767,936. MAMA WEISS'. Mama Weiss Foods, Inc. SN 159,748. Pub. 1-21-64. Filed 12-26-62.

767,937. THRIFTY MAID. Winn-Dixie Stores, Inc. SN 160,396. Pub. 1-21-64. Filed 1-8-63.

767,938. LU AND DESIGN. Etablissements Lefevre-Utile. SN 163,690. Pub. 1-21-64. Filed 2-28-63.

767,939. LU. Etablissements Lefevre-Utile. SN 163,718. Pub. 1-21-64. Filed 3-1-63.

767,940. PERUGINA AND DESIGN. Societa per Azioni Perugina, d.b.a. Perugina. SN 164,183. Pub. 1-21-64. Filed 3-7-63.

767,941. LAKE SHORE. W. F. Straub & Company. SN 164,575. Pub. 1-21-64. Filed 3-13-63.

767,942. STABIL-9. Monsanto Chemical Company. SN 167,298. Pub. 1-21-64. Filed 4-22-63.

767,943. KOFFEE-BALL. Bandana, Inc. SN 168,470. Pub. 1-21-64. Filed 5-9-63.

767,944. ORANGE-BALL. Bandana, Inc. SN 168,471. Pub. 1-21-64. Filed 5-9-63.

767,945. SKREW-BALL. Bandana, Inc. SN 168,472. Pub. 1-21-64. Filed 5-9-63.

767,946. ELDA'S CHIC N KRISP AND DESIGN. Frank Blasco. SN 168,576. Pub. 1-21-64. Filed 5-10-63.

767,947. THE REAL McCOY AND DESIGN. The McCoy Meat Co., Inc. SN 169,467. Pub. 1-21-64. Filed 5-22-63.

767,948. MC McCORMICK AND DESIGN. McCormick & Company, Incorporated. SN 170,204. Pub. 1-21-64. Filed 6-3-63.

767,949. LSP. General Mills, Inc. SN 174,864. Pub. 1-21-64. Filed 8-12-63.

767,950. JUMBO. Kellogg Company. SN 174,875. Pub. 1-21-64. Filed 8-12-63.

767,951. AMPORT. American Importing Co. SN 175,091. Pub. 1-21-64. Filed 8-15-63.

767,952. OCEANSIDE AND DESIGN. A. B. Mackenzie, d.b.a. Angus Mackenzie. SN 175,300. Pub. 1-21-64. Filed 8-19-63.

767,953. SEA PAK AND DESIGN. Sea Pak Corporation. SN 175,326. Pub. 1-21-64. Filed 8-19-63.

Class 48—Malt Beverages and Liquors

767,954. HEINEKEN'S AND DESIGN. Heineken's Brouwerijen Nederland N.V. SN 128,558. Pub. 1-21-64. Filed 9-25-61.

767,955. KRONENBOURG LE GRAND NOM DES BIERES D'ALSACE. Brasserie de Kronenbourg, Ancienne Maison F.G. Hatt, Brasserie du Bas-Rhin, S.A. SN 145,321. Pub. 1-21-64. Filed 5-24-62.

Class 49—Distilled Alcoholic Liquors

767,956. COAT OF ARMS (DESIGN). The Huntington Creek Corporation, d.b.a. Leroux & Company and Leroux and Company. SN 168,087. Pub. 1-21-64. Filed 5-3-63.

767,957. REGENT STREET. Heublein, Inc. SN 169,037. Pub. 1-21-64. Filed 5-16-63.

767,958. OLD FITZ. Stitzel-Weller Distillery. SN 169,489. Pub. 1-21-64. Filed 5-22-63.

Class 50—Merchandise Not Otherwise Classified

767,959. TRAVIS RODS. Ruth L. Travis. SN 133,337. Pub. 1-21-64. Filed 12-4-61.

767,960. PURPLE MARTIN MANOR AND DESIGN. William Loren Bear, d.b.a. Bearline Products. SN 138,760. Pub. 1-21-64. Filed 2-28-62.

767,961. SAF-T-TUB. Saf-T-Tub Corporation. SN 140,494. Pub. 1-21-64. Filed 3-22-62.

767,962. HAWKINS. Hawkins-Hawkins Co. Inc. SN 143,391. Pub. 1-21-64. Filed 4-30-62.

767,963. CASTAWAY SHAVE AND DESIGN. Rochester Razor, Inc. MULTIPLE CLASS (Classes 50 and 51). SN 151,367. Pub. 1–21–64. Filed 8–16–62.

767,964. TITLE SPOTS. Hudson Photographic Industries, Inc. SN 158,251. Pub. 1–21–64. Filed 11–30–62.

767,965. SCENT-A-RAMA. Schenley Industries, Inc. SN 161,285. Pub. 1–21–64. Filed 1–23–63.

767,966. PORT-A-SCAF. Angeles Machine & Welding Corporation. SN 162,895. Pub. 1–21–64. Filed 2–18–63.

767,967. REDI-RUNG. Redi-Rung Manufacturing Company, Inc. SN 170,763. Pub. 1–21–64. Filed 6–11–63.

767,968. CRYSTOLUME. Crystopal, Ltd. SN 172,876. Pub. 1–21–64. Filed 7–12–63.

Class 51 — Cosmetics and Toilet Preparations

767,963. (See Class 50 for this trademark.)

767,969. Y. Yardley & Company, Limited. SN 107,091. Pub. 1–21–64. Filed 10–24–60.

767,970. MONSIEUR MARQUAY. Marquay, S.a.r.l. SN 140,849. Pub. 1–21–64. Filed 3–27–62.

767,971. SHELLEY. Aerosol Specialties Inc. SN 141,674. Pub. 1–21–64. Filed 4–6–62.

767,972. RENAULD OF FRANCE. Botany Industries, Inc., d.b.a. Renauld of France. SN 147,995. Pub. 1–21–64. Filed 6–29–62.

767,973. SCOUNDREL AND DESIGN. Sero of New Haven, Inc. SN 148,236. Pub. 1–21–64. Filed 7–2–62.

767,974. TUB O'BUBBLES. Schrats Products, Inc. SN 148,915. Pub. 1–21–64. Filed 7–12–62.

767,975. DRI-DAY. Maradel Products Inc. SN 156,312. Pub. 1–21–64. Filed 10–31–62.

767,976. BABY'S BREATH. Rudolph Rebold. SN 164,658. Pub. 1–21–64. Filed 3–14–63.

767,977. SO PRETTY. Melvin W. Bronson, d.b.a. Bronson Products Company. SN 167,449. Pub. 1–21–64. Filed 4–24–63.

767,978. TWIN GEMS. Twin Gems, Inc. SN 169,404. Pub. 1–21–64. Filed 5–21–63.

767,979. MISCELLANEOUS DESIGN. Carissa Cosmetics, Inc. SN 170,808. Pub. 1–21–64. Filed 6–12–63.

767,980. AWAKEN. Carissa Cosmetics, Inc. SN 170,811. Pub. 1–21–64. Filed 6–12–63.

767,981. KENNETH. Kenneth Beauty Salons & Products, Inc. SN 170,915. Pub. 1–21–64. Filed 6–13–63.

Class 52 — Detergents and Soaps

767,982. CADDIE CLEAN AND DESIGN. Francis H. Bellevue, d.b.a. Bellevue Distributors. SN 122,753. Pub. 2–13–62. Filed 6–26–61.

767,983. ROBBIE JET. Kleen-Air, Inc. SN 151,593. Pub. 1–21–64. Filed 8–21–62.

767,984. DEOSTAY. The Procter & Gamble Company. SN 155,012. Pub. 1–21–64. Filed 10–11–62.

767,985. BONGO. The A. L. Wilson Chemical Company. SN 155,542. Pub. 8–20–63. Filed 10–19–62.

767,986. GUN BUTTER. James A. Butterworth, d.b.a. Lake Forest Laboratories. SN 156,265. Pub. 1–21–64. Filed 10–31–62.

767,987. JUMBO HI-BULK. Sanitary Soap Company, Inc. SN 157,727. Pub. 1–21–64. Filed 11–21–62.

767,988. UP 'N OUT AND DESIGN. The Roctim Company. SN 157,928. Pub. 1–21–64. Filed 11–26–62.

767,989. CHEM-GRIP. Acme Quality Paints, Inc. SN 161,843. Pub. 1–21–64. Filed 2–1–63.

767,990. SUDSDOWN. Brulin & Company, Inc. SN 163,910. Pub. 1–21–64. Filed 11–13–62.

767,991. PANGO. The Procter & Gamble Company. SN 167,573. Pub. 1–21–64. Filed 4–25–63.

767,992. LAMB (DESIGN). Turtle Wax, Inc. SN 169,791. Pub. 1–21–64. Filed 5–27–63.

767,993. STYLIZED INDIAN AND GLOBE (DESIGN). Chaska Chemical Company, Inc. SN 170,030. Pub. 1–21–64. Filed 5–31–63.

Service Marks

Class 100 — Miscellaneous

767,994. GENERAL TEST. & INSP. General Testing & Inspection Agency, Inc., assignee of Gifford L. Martin, d.b.a. General Testing and Inspection. SN 74,594. Pub. 1–21–64. Filed 5–27–59.

767,995. NORTH AND DESIGN. North Brothers, Inc. SN 140,721. Pub. 1–21–64. Filed 3–26–62.

767,996. GAIT. Arthur Young & Company. SN 163,445. Pub. 1–21–64. Filed 2–25–63.

767,997. MAGIC FINGERS. Magic Fingers, Inc. SN 165,064. Pub. 1–21–64. Filed 3–20–63.

Class 101 — Advertising and Business

767,998. GIFT-O-GRAM. Bensel R. Smythe. SN 148,087. Pub. 1–21–64. Filed 6–29–62.

767,999. ECHELONS. Office Temporaries, Inc. SN 156,154. Pub. 1–21–64. Filed 10–29–62.

768,000. AD-CHART AND DESIGN. Chilton Company. SN 161,849. Pub. 1–21–64. Filed 2–1–63.

Class 102 — Insurance and Financial

768,001. GRAMATAN. The Gramatan Company Incorporated of Bronxville, New York. SN 117,483. Pub. 1–21–64. Filed 4–10–61.

768,002. AEROPAK. Insurance Company of North America. SN 156,606. Pub. 1–21–64. Filed 11–5–62.

768,003. GEOMETRIC DESIGN. The Mitsubishi Bank, Ltd. SN 167,394. Pub. 1–21–64. Filed 4–23–63.

Class 103 — Construction and Repair

768,004. DOANE DESIGNED AND DESIGN. Doane Agricultural Service, Inc. SN 114,192. Pub. 1–21–64. Filed 2–23–61.

768,005. SUPERMET. Globe Industries, Inc. SN 152,691. Pub. 1–21–64. Filed 9–7–62.

768,006. DEL WEBB'S SUN CITY. The Del E. Webb Corporation. SN 153,138. Pub. 1–21–64. Filed 9–13–62.

768,007. RMT AND DESIGN. R. M. Thornton, Inc. SN 163,289. Pub. 1–21–64. Filed 2–21–63.

Class 104 — Communication

768,008. THE JOHNNY RABBITT SHOW. Storz Broadcasting Co. SN 168,245. Pub. 1–21–64. Filed 5–6–63.

Class 105 — Transportation and Storage

768,009. BRIEFCASE COMMUTER SERVICE. Trans World Airlines, Inc. SN 160,144. Pub. 1–21–64. Filed 1–3–63.

768,010. AUTO-PASS. Auto-Europe, Inc. SN 161,896. Pub. 1–21–64. Filed 1–25–63.

768,011. ASCA AND DESIGN. Automotive Service Consolidating Association. SN 166,153. Pub. 1–21–64. Filed 4–5–63.

768,012. GEOMETRIC DESIGN. West Coast Airlines, Inc. SN 166,602. Pub. 1–21–64. Filed 4–11–63.

Class 107 — Education and Entertainment

768,013. OPERA IN FOCUS. William B. Fosser. SN 159,398. Pub. 1–21–64. Filed 12–19–62.

Collective Membership Marks

Class 200

768,014. JEWEL DESIGN. National Court of the Royal Order of Jesters. SN 141,467. Pub. 1–21–64. Filed 4–3–62.

768,015. REPRESENTATION OF LABORATORY EQUIPMENT. American Medical Technologists. SN 154,394. Pub. 1–21–64. Filed 10–3–62.

768,016. MEMBER INDUSTRIAL FASTENERS INSTITUTE. Industrial Fasteners Institute. SN 159,240. Pub. 1–21–64. Filed 12–17–62.

Certification Marks

Class A — Goods

768,017. CALI-LOPE. California Cantaloupe Advisory Board. SN 160,408. Pub. 1–21–64. Filed 1–9–63.

Class B — Services

768,018. MARTI-THRIFT. McGraw-Edison Company. SN 154,268. Pub. 1–21–64. Filed 10–1–62.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 2 — Receptacles

768,019. Weyerhaeuser Company, Tacoma, Wash. SN 162,603. Filed P.R. 2–12–63; Am. S.R. 1–30–64.

PLASTICLAD

For Paperboard Cartons—Namely, Milk Cartons, Which Have Been Coated With a Plastic Preparation and Which Are Shipped to the Dairy in a Flattened Condition, Stacked in Cardboard Shipping Containers.
First use Nov. 26, 1962.

Class 5 — Adhesives

768,020. Miracle Adhesives Corporation, Bellmore, N.Y. SN 136,266. Filed P.R. 1–22–62; Am. S.R. 1–9–64.

CONSTRUCTION BY ADHESION

For Adhesives—Namely, a Resin Base Glue.
First use Dec. 21, 1951.

Class 8 — Smokers' Articles, Not Including Tobacco Products

768,021. Eugene Magidson, New York, N.Y. SN 175,591. Filed P.R. 8–22–63; Am. S.R. 2–5–64.

Wilkinson

For Smoking Pipes.
First use February 1962.

Class 12 — Construction Materials

768,022. Twin Pane Corporation, Detroit, Mich. SN 132,950. Filed P.R. 11–28–61; Am. S.R. 1–6–64.

TWIN DOR

For Glass Doors.
First use Oct. 13, 1961.

768,023. Miracle Adhesives Corporation, Bellmore, N.Y. SN 136,265. Filed P.R. 1–22–62; Am. S.R. 1–9–64.

CONSTRUCTION BY ADHESION

For Construction Materials in the Form of a Synthetic Rubber Base Liquid Roof Covering Material and Insulating Pipe Covering.
First use Dec. 21, 1951.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

768,024. Bijur Lubricating Corporation, Rochelle Park, N.J. SN 95,973. Filed P.R. 4–28–60; Am. S.R. 1–27–64.

BIJUR METERUNIT

For High Restriction Outlet Fittings Which Serve To Connect Small Diameter Tubing to a Bearing and Obstruct the Flow of Lubricant From the Tubing to the Bearing.
First use 1936.

Class 16 — Protective and Decorative Coatings

768,025. Sterneo Industries, Inc., Allendale, N.J. SN 162,196. Filed P.R. 2–6–63; Am. S.R. 2–14–64.

CRYSTAL FROST

For Decorative Lacquers for Application to Aquarium Tanks.
First use Dec. 16, 1962.

Class 19 — Vehicles

768,026. Freedman Seating Company, Chicago, Ill. SN 141,286. Filed P.R. 4–2–62; Am. S.R. 1–30–64.

SHOCKFREE

For Seats for Motor Vehicles.
First use Jan. 30, 1959.

Class 21 — Electrical Apparatus, Machines, and Supplies

768,027. Supro Lux Manufacturing Co. Inc., Bronx, N.Y. SN 136,608. Filed P.R. 1-25-62; Am. S.R. 2-10-64.

COLOR MATCHER

For Fluorescent Tubes.
First use June 13, 1960.

768,028. The National Instrument Company, Inc., Baltimore, Md. SN 165,810. Filed P.R. 4-1-63; Am. S.R. 1-24-64.

QUIK-SEAL

For Electrical Heat Sealers for Plastic Film.
First use Dec. 5, 1962.

Class 22 — Games, Toys, and Sporting Goods

768,029. American Toy & Furniture Co. Inc., Chicago, Ill. SN 170,595. Filed P.R. 6-10-63; Am. S.R. 2-17-64.

THE BIG SPINNER

For Indicating Mechanism Used in Combination With a Game Table Top for Playing Various Games.
First use Feb. 1, 1963.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

768,030. Renold Chains Limited, Wythenshawe, Manchester, England. SN 118,312. Filed P.R. 4-17-61; Am. S.R. 2-17-64.

BRAMPTON

Owner of British Reg. No. 730,518, dated May 24, 1954.
For Cycle Chains.

768,031. Mixing Equipment Co., Inc., Rochester, N.Y. SN 130,816. Filed P.R. 10-27-61; Am. S.R. 1-27-64.

LINE BLENDER

For Continuous In-Line Mixers.
First use at least as early as Oct. 11, 1961.

768,032. Mixing Equipment Co., Inc., Rochester, N.Y. SN 139,184. Filed P.R. 2-15-62; Am. S.R. 2-10-64.

SuperPitch

For Impellers for Mixing Equipment.
First use at least as early as Aug. 11, 1961.

Class 26 — Measuring and Scientific Appliances

768,033. Botany Industries, Inc., d.b.a. Rolley Co., Reno, Nev. SN 131,782. Filed P.R. 11-6-61; Am. S.R. 1-27-64.

ROLLEY OF FRANCE

For Sun Glasses.
First use about January 1961.

Class 32 — Furniture and Upholstery

768,034. Kenlin Enterprises, Inc., Highland Park, Ill. SN 156,234. Filed P.R. 10-30-62; Am. S.R. 2-20-64.

STURDY-LOCK

For Supporting Bracket for a Bed Rail.
First use Sept. 26, 1962.

768,035. William F. Schick, d.b.a. Comfort Cushions, West Hollywood, Fla. SN 159,431. Filed P.R. 12-19-62; Am. S.R. 2-5-64.

Spine Ease

For Seat Cushions.
First use on or about Sept. 17, 1962.

768,036. O. D. Bending and Equipment Corp., North Grosvenor Dale, Conn. SN 175,129. Filed P.R. 8-15-63; Am. S.R. 2-5-64.

"RUMPUS LOUNGER"

For Furniture—Namely, Chairs, Sofas and Lounges.
First use Jan. 17, 1963.

Class 34 — Heating, Lighting, and Ventilating Apparatus

768,037. Dry Manufacturing Co., Winters, Tex. SN 159,339. Filed P.R. 12-18-62; Am. S.R. 2-12-64.



For Portable Heater for Camping Use, Hunting, Fishing and Spectator Sports.
First use Oct. 10, 1962.

Class 39 — Clothing

768,038. Rosecrest Incorporated, Boston, Mass. SN 143,165. Filed P.R. 4-26-62; Am. S.R. 2-3-64.

GREAT SPORTSWEAR FOR ACTIVE LIVING

For Ladies Wearing Apparel—Namely, Skirts, Shorts, Slacks, Dresses, Suits, Blouses, Jackets, Sweaters and Coats, Sold Separately and as Coordinate Sets.
First use on or before Mar. 20, 1962.

768,039. S.P.I. Sales, Buffalo, N.Y. SN 152,529. Filed P.R. 9-5-62; Am. S.R. 2-17-64.

HAND PROTECTORS

For Plastic Film Gloves.
First use on or about May 1, 1962.

768,040. Stokes Knitting Mills, Inc., Mount Airy, N.C. SN 160,727. Filed 1-15-63.

STOKES

For Knitted Wearing Apparel for Men, Women and Children—Namely, Sweaters, Shirts, Pajamas, Underwear, Socks, Blouses, Skirts and Slacks.
First use Aug. 15, 1960.

768,041. Arthur Vale, d.b.a. La Trique Brassieres, New York, N.Y. SN 177,120. Filed 9-16-63.

Breathe Eze

For Brassiere.
First use Jan. 13, 1939.

Class 46 — Foods and Ingredients of Foods

768,042. Ward Baking Company, New York, N.Y. SN 122,493. Filed P.R. 6-20-61; Am. S.R. 11-13-63.

FRESH-WHIPT

For Bread.
First use Apr. 13, 1961.

768,043. John Morrell & Co., Chicago, Ill. SN 136,997. Filed P.R. 1-31-62; Am. S.R. 1-31-64.

Kitty krumpets

For Dry Cat Food.
First use Oct. 16, 1961.

768,044. Whis Fish Products Company, Inc., d.b.a. Whis Pet Food Co., Seattle, Wash. SN 144,575. Filed P.R. 5-14-62; Am. S.R. 12-26-63.

FISH-N-CHIX

For Canned Cat Food.
First use Apr. 20, 1962.

768,045. Red Owl Stores, Inc., d.b.a. Lakeland Grocery Company, Minneapolis, Minn. SN 159,917. Filed P.R. 12-28-62; Am. S.R. 1-8-64.



The trademark consists of a representation of the container for the goods, presenting that part of the container's background design matter which depicts a burlap coffee bag having its top edge rolled down a little so as to expose coffee beans in the bag adjacent the top of the container.
For Coffee.
First use Oct. 4, 1962.

Class 49 — Distilled Alcoholic Liquors

768,046. John Groes & Co., Baltimore, Md. SN 161,612. Filed P.R. 1-29-63; Am. S.R. 2-11-64.

MUNRO'S

For Scotch Whisky.
First use Nov. 14, 1962.

Class 50 — Merchandise Not Otherwise Classified

768,047. Screen Print Products, Inc., Cincinnati, Ohio. SN 125,848. Filed P.R. 8-11-61; Am. S.R. 2-5-64.

CHANGE TOP

For Advertising Signs.
First use May 1, 1957.

768,048. Topco Associates, Inc., Skokie, Ill. SN 149,497. Filed P.R. 7-20-62; Am. S.R. 1-7-64.

NOEL

For Decorative Icicles.
First use Sept. 5, 1961.

Class 51 — Cosmetics and Toilet Preparations

768,049. Avon Products, Inc., New York, N.Y. SN 130,871. Filed P.R. 10–30–61; Am. S.R. 2–17–64.

TONE 'N' TINT

For Cream and Powder Make-Up.
First use Oct. 10, 1961.

768,050. Clairol Incorporated, New York, N.Y. SN 160,838. Filed P.R. 1–17–63; Am. S.R. 2–17–64.

BASIC BEIGE

For Hair Tinting, Dyeing and Coloring Preparation.
First use Mar. 29, 1962.

Service Mark

Class 105 — Transportation and Storage

768,051. U.S.A.C. Transport, Inc., Detroit, Mich. SN 151,103. Filed P.R. 8–13–62; Am. S.R. 2–10–64.

THE SPACE AGE CARRIER

For Interstate Motor Transportation by Truck.
First use May 4, 1959.

TRADEMARK REGISTRATIONS RENEWED

176,270. SPORTOGS. Cl. 39. 11–20–23.
177,903. PAL. Cl. 39. 1–1–24.
179,117. BEAR BRAND. Cl. 39. 2–5–24.
179,748. BUTTERCUP. Cl. 46. 2–12–24.
179,978. LUXOR. Cl. 44. 2–19–24.
180,065. TWINKLE YARN. Cl. 43. 2–19–24.
180,416. ZEP. Cl. 46. 2–26–24.
181,778. EAGLE. Cl. 2. 3–25–24.
182,257. RED LINE AROUND SPOOLED BARBED WIRE. Cl. 13. 4–8–24.
182,258. BLUE LINE AROUND SPOOLED BARBED WIRE. Cl. 13. 4–8–24.
182,259. WHITE LINE AROUND SPOOLED BARBED WIRE. Cl. 13. 4–8–24.
182,260. YELLOW LINE AROUND SPOOLED BARBED WIRE. Cl. 13. 4–8–24.
182,261. BLACK LINE AROUND SPOOLED BARBED WIRE. Cl. 13. 4–8–24.
182,262. GREEN LINE AROUND SPOOLED BARBED WIRE. Cl. 13. 4–8–24.
182,263. ORANGE LINE AROUND SPOOLED BARBED WIRE. Cl. 13. 4–8–24.
183,194. HOUGHTON'S DRAW TEMP. Cl. 6. 4–22–24.
183,195. HOUGHTON'S LIQUID HEAT. Cl. 6. 4–22–24.
183,234. FLAMME DE GLOIRE. Cl. 51. 4–22–24.
183,235. FLAMME D'OR. Cl. 51. 4–22–24.
183,424. VANITY FAIR AND DESIGN. Cl. 39. 4–29–24.
183,769. AMBASSADOR CLOTHES. Cl. 39. 5–6–24.
183,810. KASHMIRDOWN. Cl. 42. 5–6–24.
184,735. CONTIN-U-MATIC. Cl. 28. 6–3–24.
184,981. BEAD CHAIN AND DESIGN. Cl. 13. 6–3–24.
185,509. COLONIAL. Cl. 42. 6–17–24.
185,700. KASHMIRSUEDE. Cl. 42. 6–24–24.
185,701. KASHMIRBLOOM. Cl. 42. 6–24–24.
185,703. PEBLEEN. Cl. 42. 6–24–24.
185,706. CHARNONA. Cl. 42. 6–24–24.
185,707. CORDEEN. Cl. 42. 6–24–24.
185,734. MAJANA. Cl. 42. 6–24–24.
186,288. DOMINANT. Cl. 46. 7–8–24.
187,187. OUT OF THE WEST. Cl. 46. 7–29–24.
187,236. KNIT-TEX. AND DESIGN. Cl. 42. 7–29–24.
405,354. MULTIFLEX LAST-LINK AND DESIGN. Cl. 50. 1–25–44.
405,606. LEATHERNECK. Cl. 37. 2–8–44.
406,041. AQUA-LIC. Cl. 6. 3–7–44.
406,138. LADY LIEUTENANT AND DESIGN. Cl. 27. 3–14–44.
406,249. FLOQUIL. Cl. 11. 3–21–44.
406,407. ABESTO. Cl. 12. 4–4–44.
406,456. DEMANDO. Cl. 16. 4–4–44.
406,873. GOLD $ DOLLAR. Cl. 46. 5–2–44.
406,917. FOLLIES BERGERE. Cl. 51. 5–9–44.
407,022. REPRESENTATION OF TWO LIONS. Cl. 45. 5–16–44.
407,194. HYSTER. Cl. 23. 5–23–44.
407,632. P & G. Cl. 52. 6–13–44.
407,729. ACTINA. Cl. 26. 6–20–44.
408,177. SULFA-CEEPRYN. Cl. 18. 7–25–44.
408,201. CAPITRON. Cl. 21. 7–25–44.
408,278. SWIVODEX. Cl. 37. 8–1–44.

TRADEMARK REGISTRATIONS CANCELED

Section 8

297,904. APPLADAY. Cl. 46. 10–4–32.

The following registrations issued Feb. 18, 1958

658,371. MEXI-KETS. Cl. 1.
658,373. KINGSCROST KX. Cl. 1.
658,374. RO-GEL. Cl. 1.
658,376. NU-GRO. Cl. 1.
658,391. BACTIVITY. Cl. 1.
658,395. PADDY WASTE. Cl. 2.
658,404. ERCEPOL. Cl. 6.
658,410. FRAMINGDALE. Cl. 6.
658,411. ELGON. Cl. 6.
658,414. CONOCO ETC. AND DESIGN. Cl. 6.
658,419. PCN. Cl. 6.
658,421. DORCOLOR. Cl. 7.
658,425. OZARK MAHONING AN DDESIGN. Cl. 10.
658,426. BACTIVITY. Cl. 10.
658,428. VELVETEX. Cl. 11.
658,430. ROTO-GLO. Cl. 11.
658,432. FLEX-GLO. Cl. 11.
658,438. BLACK-MASTER. Cl. 15.
658,439. GERM-PROOF FILM. Cl. 16.
658,440. KRYLVAR AND DESIGN. Cl. 16.
658,442. ERCEPOL. Cl. 16.
658,444. PLASMOTEX. Cl. 16.
658,450. DIBETOL. Cl. 18.
658,452. COLDENE. Cl. 18.
658,455. VINYLURE. Cl. 20.
658,456. BERYLSTONE. Cl. 20.
658,461. SKYCEIL. Cl. 21.
658,472. KINECURE. Cl. 21.
658,477. MARLON. Cl. 22.
658,478. QUE VEE. Cl. 22.
658,479. LIVLON. Cl. 22.
658,480. MOMOI HI-TEST BRAND. Cl. 22.
658,481. GINGER DOLL-MATE. Cl. 22.
658,485. LIGHTFOOT. Cl. 22.
658,487. POLYGRAPH VICTORIA V AND DESIGN. Cl. 23.
658,491. FEDSPEC. Cl. 23.
658,495. SOLROL. Cl. 26.
658,496. NOMINAR. Cl. 26.
658,497. NOMIGAR. Cl. 26.
658,498. IMAGON. Cl. 26.
658,499. REDAP. Cl. 26.
658,500. ELECTRONIC DESIGN. Cl. 26.
658,505. RAINBOW. Cl. 26.
658,508. CATALINA. Cl. 31.
658,510. TOURICAMP. Cl. 32.

658,516. POWAIR-X-HAUSTER. Cl. 34.
658,517. CINEMA. Cl. 36.
658,520. MICHIGAN WOLVERINE OFFSET. Cl. 37.
658,525. KRAFTSMAN. Cl. 37.
658,526. LA-CEAL. Cl. 37.
658,538. LIVESTOCK & DAIRY TOPICS. Cl. 38.
658,540. X CITEMENT IN PICTURES. Cl. 38.
658,543. MY WEEKLY READER CRUISE AND DESIGN. Cl. 38.
658,545. RMI ROCKET AND DESIGN. Cl. 38.
658,549. SAN MARCO. Cl. 39.
658,551. NOBELLA. Cl. 39.
658,552. HERITAGE. Cl. 39.
658,554. FUR-A-LURE. Cl. 39.
658,556. HECHTON. Cl. 39.
658,558. DOVETOE. Cl. 39.
658,567. BURBERRYS PRORSUM AND DESIGN. Cl. 39.
658,568. SWIPPERS. Cl. 39.
658,570. CRADE-L-CREPE. Cl. 39.
658,576. POCONO. Cl. 39.
658,579. CHAUGS. Cl. 39.
658,580. AQUA MODES. Cl. 39.
658,581. CRYSTELLA. Cl. 39.
658,584. AQUASOL. Cl. 39.
658,588. FUL DOG DINNER. Cl. 46.
658,589. STELLA'S. Cl. 46.
658,595. GINOS ETC. AND DESIGN. Cl. 46.
658,601. MAGNICOLOR. Cl. 46.
658,607. DREWRYS GENUINE BOCK BEER AND DESIGN. Cl. 48.
658,634. L & N TOTE ETC. AND DESIGN. Cl. 105.
658,635. GIFTRAVEL BY GARBER AND DESIGN. Cl. 105.
658,637. ALUMI-SPRA. Cl. 106.
658,648. KIL DAT RAT. Cl. 50.

Erratum

In the OFFICIAL GAZETTE of March 3, 1964, at page TM 49, under Trademark Registrations Canceled, Section 8, "659,988" should be *656,988*.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

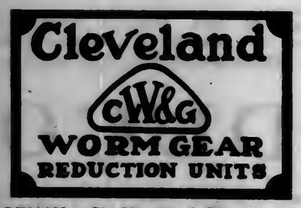
176,505. ANGEL FOOD AND DESIGN. Cl. 46. 11–27–23. Trenton Milling Co. Martha White Mills, Inc., Nashville, Tenn. Amended: In the statement, column 2, lines 6 through 11, the description of goods is deleted and *The mark consists of a red stripe above the circular design and and a blue stripe below the circular design.* is inserted, and the drawing is amended to appear:



182,182. STONHARD. Cl. 12. 4–1–24. Benjamin Berman. Stonhard Company, Inc., Maple Shade, N.J. Amended: In the statement, column 2, lines 7 and 8, "No claim is made for the exclusive use of the words 'Products Preserve.'" is deleted, and the drawing is amended to appear:

STONHARD

182,385. CLEVELAND WORM GEAR, ETC. AND DESIGN. Cl. 23. 4–8–24. The Cleveland Worm and Gear Company. Eaton Manufacturing Company, Cleveland, Ohio. Amended to appear:



232,722. ALTMAN. Cl. 39. 9–13–27. B. Altman & Co., New York, N.Y. Amended: In the statement, column 1, line 9, "no claim being made to" is deleted, lines 10 and 11 are deleted and in line 12, "from the mark shown," is deleted, and the drawing is amended to appear:



363,068. DOUBLE AND DESIGN. Cl. 46. 12–13–38. Wm. Wrigley Jr. Company, Chicago, Ill. Amended: In the statement, column 1, lines 20 and 21 are deleted, and the drawing is amended to appear:



599,000. SIGNAL AND DESIGN. Cl. 21. 12–7–54. Standard Oil Company of California, doing business as Signal Oil Company, Los Angeles, Calif. Amended to appear:



666,689. MEDIKLEEN. Cl. 52. 9–2–58. Klenzade Products, Incorporated. Economics Laboratory, Inc., St. Paul, Minn. Amended: In the statement, column 2, line 1, "powdered detergent" is deleted and *general purpose detergent and blood solvent* is inserted, and the drawing is amended to appear:

MEDIKLEEN

718,878. AUTOAIRE AND DESIGN. Cl. 21. 7–25–61. Mansions Car Radio Ltd., Montreal, Canada. Amended: In the statement, column 1, after line 3, , *now of 8580 Darnley Road, Mount Royal, Quebec, Canada.* is inserted.

754,357. EUROPEA. Cl. 38. 8–6–63. Editions Culturelles Europeennes., Le Havre, France. Corrected: In the statement, column 1, line 2 should be deleted and *22, Rue Helene Boucher* should be inserted.

762,426. CF AND DESIGN. Cl. 46. 12–31–63. Cosmopolitan Foods, Inc., Modesto, Calif. Corrected: In the statement, column 1, line 3, "Modesta" should be deleted and *Modesto* should be inserted.

762,942. QED, ETC. AND DESIGN. Cl. 12. 1–14–64. Magnesium Products of Milwaukee, Inc., Milwaukee, Wis. Corrected: In the statement, column 2 line 5, "qed" should be deleted and *qed* should be inserted.

764,138. IRGARENE. Cl. 6. 2–4–64. Geigy Chemical Corporation, Ardsley, N.Y. Corrected: In the statement, column 2, line 3, "692,266" should be deleted and *696,266* should be inserted.

TRADEMARK REGISTRATIONS—NEW CERTIFICATES

New Certificates issued under sections 7(c), 7(f), 7(g) of the Trademark Act of 1946 for the unexpired term of the original registrations.

340,923. CHEER UP. Cl. 45. Orange Smile Sirup Company. 11–24–36. New Cert. Sec. 7(c) to The Seven-Up Company, St. Louis, Mo.

556,405. WELADOL. Cl. 6. West Laboratories, Inc. 3–18–52. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

559,354. WELADOL. Cl. 18. West Laboratories, Inc. 5–27–52. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

658,615. WELADOL. Cl. 52. West Laboratories, Inc. 2–18–58. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

666,211. WELADOL. Cl. 18. West Laboratories, Inc. 8–26–58. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

712,460. DI-VI-DO. Cl. 22. Masters Sporting Goods Co., Inc. 3–14–61. New Cert. Sec. 7(c) to Wilson Sporting Goods Co., River Grove, Ill.

REGISTRATIONS PUBLISHED UNDER SEC. 12(c)

The following marks registered under the act of 1905, or the act of 1881, are published under the provisions of section 12(c) of the Trademark Act of 1946. These registrations are not subject to opposition but are subject to cancellation under section 14 of the act of 1946.

Class 1—Raw or Partly Prepared Materials

405,358. Jan. 25, 1944. Georgia Kaolin Company, Elizabeth, N.J. Pub. by registrant.

ALSITE

For Clay for Use in the Manufacture of Paper, Rubber, and Ceramics.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

405,762. Feb. 22, 1944. Globe Novelty House, New York, N.Y. Pub. by Globe Novelty House, Inc., New York, N.Y.



For Pocketbooks, Brief Cases, Wallets, Billfolds, Key Cases Made of Metal and Leather or Made Wholly of Leather, Traveling Kits, All Being Made in Whole or in Part of Leather.

Class 6—Chemicals and Chemical Compositions

340,605. Nov. 17, 1936. Carbide and Carbon Chemicals Corporation, New York, N.Y. Pub. by Union Carbide Corporation, New York, N.Y.

WINTER FLO

For Anti-Freeze Compounds.

Class 14—Metals and Metal Castings and Forgings

180,963. Mar. 11, 1924. A. W. Cadman Manufacturing Company, Pittsburgh, Pa. Pub. by registrant.

BEARITE

For Bearing Metals.

Class 15—Oils and Greases

185,687. June 24, 1924. Southern Oil Company of New York, Inc., Horseheads, N.Y. Pub. by registrant.

ROTARY

For Gasoline and Lubricating Oils and Greases.

Class 16—Protective and Decorative Coatings

183,504. Apr. 29, 1924. Henry A. Dewey Company, Inc., New York, N.Y. Pub. by E. I. du Pont de Nemours and Company, Wilmington, Del.

DUCO

For Wood Stains, Fillers, Dry Colors, Including Dry Aniline Woodstain Powders, Prepared Shellac, Varnishes, Thinners, Etc.

Class 17—Tobacco Products

405,667. Feb. 15, 1944. Larus & Brother Company, Richmond, Va. Pub. by registrant.

AIRLINE



For Cigarettes.

Class 21—Electrical Apparatus, Machines, and Supplies

404,649. Dec. 14, 1943. The Gamewell Company, Newton Upper Falls, Mass. Pub. by registrant.

VIGILARM

For Automatic Fire Detection and Alarm Systems and Equipment, and Parts Therefor, Including Control Panels, Relays, Pneumatic Tubing, and Alarm Devices.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

410,745. Dec. 19, 1944. Atlas Imperial Diesel Engine Co., Oakland, Calif. Pub. by The White Motor Company, Cleveland, Ohio.

ATLAS IMPERIAL

For Diesel Engines and Parts Thereof.

Class 26—Measuring and Scientific Appliances

404,873. Dec. 28, 1943. Percy Hermant Limited, Toronto, Ontario, Canada. Pub. by Imperial Optical Company Ltd., Toronto, Ontario, Canada.

TONE-RAY

For Ophthalmic Lenses for Spectacles, Special Spectacles, and Goggles.

Class 27—Horological Instruments

182,097. Apr. 1, 1924. Waltham Watch & Clock Company, Waltham, Mass. Pub. by Waltham Watch Company, Chicago, Ill.

Colonial

For Watches.

Class 30—Crockery, Earthenware, and Porcelain

406,004. Mar. 7, 1944. Philco Corporation, Philadelphia, Pa. Pub. by registrant.

PHILCO

For Ceramic Ware—Namely, Jars for Containing Various Solids and Liquids, Plants, and Like Articles, and for Decorative Purposes, and Covers Therefor.

Class 32—Furniture and Upholstery

178,478. Jan. 15, 1924. Simmons Company, New York, N.Y. Pub. by registrant.

ACE

For Bed Springs.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

226,692. Apr. 19, 1927. Sears, Roebuck and Co., Chicago, Ill. Pub. by registrant.

ARGOSY

For Vehicle Tires and Tubes of Rubber or Rubber and Fabric.

Class 37—Paper and Stationery

67,088. Jan. 14, 1908. Bleistiftfabrik vormals Johann Faber Actiengesellschaft, Nuremberg, Germany. Pub. by A. W. Faber-Castell, Stein, near Nuremberg, Germany.

JOHANN FABER.

For Lead-Pencils, Colored Pencils, Copying-Pencils, Pencils With Movable Leads, Erasing-Rubber, and Penholders.

72,352. Jan. 19, 1909. Bleistiftfabrik vormals Johann Faber Actiengesellschaft, Nuremberg Germany. Pub. by A. W. Faber-Castell, Stein, near Nuremberg, Germany.

"GOLDEN ROD"

For Lead Pencils, Copying Pencils, Slate Pencils, and Pencils With Movable Leads.

180,004. Feb. 19, 1924. The Mani-Fold Company, Cleveland, Ohio. Pub. by Uarco Incorporated, Barrington, Ill.

CONTINUOUS MANI-FOLD FORMS

For Blank Forms—Namely, Freight Expense Bills, Freight Waybills, Invoice Forms, Purchase Order Forms, Factory Order Forms, Customers' Order Forms, Shipping Order Forms, Bills of Lading, Express Receipt Forms, Bank Collection Forms, Acknowledgement Forms, Interoffice Correspondence Forms, and Memoranda.

247,311. Sept. 25, 1928. Crown Williamette Paper Company, San Francisco, Calif. Pub. by Crown Zellerbach Corporation, San Francisco, Calif.

CROWN

For Paper Towels.

362,593. Nov. 22, 1938. Crown Zellerbach Corporation, San Francisco, Calif. Pub. by registrant.

MONARCH

For Wrapping Paper.

Class 38—Prints and Publications

162,324. Dec. 12, 1922. Musical Courier Company, Inc., New York, N.Y. Pub. by Summy-Birchard Company, Evanston, Ill.

MUSICAL COURIER

For Musical Magazine Published Periodically.

410,799. Dec. 19, 1944. The Procter & Gamble Company, Cincinnati, Ohio. Pub. by registrant.

LI'L IVRY

For Comic Strip.

Class 40—Fancy Goods, Furnishings, and Notions

406,523. Apr. 11, 1944. Globe Novelty House, New York, N.Y. Pub. by Globe Novelty House, Inc., New York, N.Y.

ROYAL London

For Buckles, Collar Clasps, Collar Buttons, Collar Pins, Composed of Nonprecious Metal, and Boutonnieres Made of Artificial Flowers.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

177,342. Dec. 18, 1923. Empire Silk Company, Wilmington, Del., and New York, N.Y. Pub. by William Skinner & Sons, New York, N.Y.

Check-a-Check

For Silk Piece Goods.

Class 46—Foods and Ingredients of Foods

383,998. Dec. 31, 1940. Nutregen Limited, London, England. Pub. by registrant.

NUTREGEN

For Wheat Gluten.

Class 49—Distilled Alcoholic Liquors

321,815. Feb. 19, 1935. Isaac Palewonsky, d.b.a. A. H. Riise, St. Thomas, Virgin Islands. Pub. by Virgin Islands Rum Industries, Ltd., Frederiksted, St. Croix, Virgin Islands.

OLD ST. CROIX BRAND Rum A.H. Riise

For Rum.

Class 50—Merchandise Not Otherwise Classified

404,926. Dec. 28, 1943. Bernhard Ulmann Co. Inc., New York, N.Y. Pub. by Indian Head Mills, Inc., New York, N.Y.

JIFFY-KLEEN

For Table Mats Made in Whole or in Part of Heat Resisting and Water Repellent Material Intended for Use Under Plates, Dishes, and the Like To Protect the Surface of the Table.

Class 51—Cosmetics and Toilet Preparations

180,528. Mar. 4, 1924. Velsch & Holtz, Paris, France. Pub. by Helene Curtis Industries, Inc., d.b.a. Lentheric, Chicago, Ill.

LENTHÉRIC

For Perfumes, Toilet Waters, Eau de Cologne, Lotion for the Skin and Hair.

225,220. Mar. 15, 1927. Marshall Field & Company, Chicago, Ill. Pub. by Yardley of London, Inc., Totowa, N.J.

FLAIR

For Perfume, Toilet Water, Talcum Powder and Dusting Powders.

406,533. Apr. 11, 1944. H. Lynn Underwood, d.b.a. Underwood Products, Greenville, Ohio. Pub. by The Magnesia Products, Inc., Dayton, Ohio.

CHEWRITE

For Denture Adhesive Powder for Holding False Teeth in Position.

409,079. Sept. 12, 1944. Henri Bendel, Inc., New York, N.Y. Pub. by The Procter & Gamble Company, Cincinnati, Ohio.

pert

For Lipstick.

Erratum

In the notice of republication under Section 12(c) of the Trademark Act of 1946 of Registration No. 356,026, appearing in the OFFICIAL GAZETTE of February 4, 1964, page TM 28, the drawing should have appeared as follows:

MORRIS

INDEX OF REGISTRANTS

APRIL 7, 1964

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

A & H Doll Mfg. Corp., Woodside, N.Y. 767,847, pub. 1–21–64. Cl. 22.

AMP Inc.: *See*—
Aircraft-Marine Products Inc.

Abesto Mfg. Corp.: *See*—
Purcell, Isaac S.

Ace-Sycamore, Inc., Sycamore, Ill. 767,839, pub. 6–4–63. Cl. 21.

Acme Quality Paints, Inc., Detroit, Mich. 767,989, pub. 1–21–64. Cl. 52.

Actina, Inc., New York, N.Y. 407,729, ren. 4–7–64. Cl. 26.

Aero-Flow Dynamics, Inc., Center Line, Mich. 767,862, 1–21–64. Cl. 23.

Aerosol Specialties Inc., Bridgeport, Conn. 767,971, pub. 1–21–64. Cl. 51.

Aircraft-Marine Products Inc., to AMP Inc., Harrisburg, Pa. 408,201, ren. 4–7–64. Cl. 21.

Alba-Waldensian, Inc., Valdese, N.C. 767,905, pub. 1–21–64. Cl. 39.

Albimi Laboratories, Inc., Flushing, N.Y. 767,793, pub. 1–21–64. Cl. 6.

Alcan Co., Inc., Alton, Ill. 767,801, pub. 1–21–64. Cl. 9.

Allied Chemical Corp., New York, N.Y. 767,788, pub. 1–21–64. Cl. 6.

Allied Stores Corp., New York, N.Y. 767,901, pub. 4–2–63. Cl. 39.

Alpha 2 Co.: *See*—
Brown, Malcolm C.

Altman, B., & Co., New York, N.Y. 232,722. Am. 7(d). Cl. 39.

Aluma, Craft Boat Co.: *See*—
Flour City Ornamental Iron Co., The.

American Air Filter Co., Inc., Louisville, Ky. 767,873, pub. 1–21–64. Cl. 31.

American Chewing Products Corp., Newark, N.J. 406,873, ren. 4–7–64. Cl. 46.

American Home Products Corp., New York, N.Y. 767,834, pub. 1–21–64. Cl. 18.

American Importing Co., Minneapolis, Minn. 767,951, pub. 1–21–64. Cl. 46.

American Institute of Biological Sciences, The, Washington, D.C. 767,888, pub. 1–21–64. Cl. 38.

American Institute of Timber Construction, Washington, D.C. 767,805, pub. 1–21–64. Cl. 12.

American Medical Technologists, Enid, Okla. 768,015, pub. 1–21–64. Cl. 200.

American Toy & Furniture Co., Inc., Chicago, Ill. 768,029. Cl. 22.

Ames Safety Envelope Co., Somerville, Mass. 658,526, canc. Cl. 37.

Ames, Stacy, Inc., from Stacy Ames, Inc., New York, N.Y. 767,900, pub. 1–21–64. Cl. 39.

Androscoggin Mills, to Bates Mfg. Co., Lewiston, Maine. 185,509, ren. 4–7–64. Cl. 42.

Angeles Machine & Welding Corp., Port Angeles, Wash. 767,966, pub. 1–21–64. Cl. 50.

Anything Goes, Inc., New York, N.Y. 658,540, canc. Cl. 38.

Arcos Corp., Philadelphia, Pa. 767,898, pub. 1–21–64. Cl. 68.

Aries, R. S., & Associates, Inc., New York, N.Y. 658,450, canc. Cl. 18.

Arkansas Co., Inc., Newark, N.J. 767,799, pub. 1–21–64. Cl. 6.

Armour and Co., Chicago, Ill. 767,928, pub. 1–21–64. Cl. 46.

Arnold Shoe Products Co., Inc., Boston, Mass. 658,568, canc. Cl. 39.

Artel Decorators, Inc., Brooklyn, N.Y. 767,875, pub. 1–21–64. Cl. 32.

Astron, Inc., Dayton, Ohio. 767,864, pub. 1–21–64. Cl. 23.

Atlantic Research Corp., Alexandria, Va. 767,879, pub. 1–21–64. Cl. 34.

Atlas Imperial Diesel Engine Co., Oakland, Calif., by The White Motor Co., Cleveland, Ohio. 410,745, 12(c) pub. 4–7–64. Cl. 23.

Austin Biscuit Co.: *See*—
Fairmont Foods Co.

Auto-Europe, Inc., New York, N.Y. 768,010, pub. 1–21–64. Cl. 105.

Automotive Service Consolidating Association, New York, N.Y. 768,011, pub. 1–21–64. Cl. 105.

Avon Products, Inc., New York, N.Y. 768,049. Cl. 51.

Axelrod, Aaron H.: *See*—
Sonotone Corp.

Babienco, Axentie T., San Diego, Calif. 767,826, pub. 8–27–63. Cl. 18.

Bacon American Corp., Muncie, Ind. 767,858, pub. 1–21–64. Cl. 23.

Ball, William N., North Wales, Pa. 658,395, canc. Cl. 2.

Bandana, Inc., Jacksonville, Fla. 767,943–5, pub. 1–21–64. Cl. 46.

Barnard Hosiery Co., Inc., New York, N.Y. 658,576, canc. Cl. 39.

Bates Shoe Co., Webster, Mass. 658,579, canc. Cl. 39.

Bead Chain Mfg. Co., The, Bridgeport, Conn. 184,981, ren. 4–7–64. Cl. 13.

Bear, William L., d.b.a. Bearline Products, Cedar Rapids, Iowa. 767,960, pub. 1–21–64. Cl. 50.

Bearline Products: *See*—
Bear, William L.

Beckwith, Richard E., d.b.a. International Laboratories, Rochester, N.Y. 767,797, pub. 1–21–64. Cl. 6.

Bellevue Distributors: *See*—
Bellevue, Francis H.

Bellevue, Francis H., d.b.a. Bellevue Distributors, Everett, Mass. 767,982, pub. 2–13–62. Cl. 52.

Bellini, W. H., Cheese Corp., Green Bay, Wis. 658,595, canc. Cl. 46.

Bendel, Henri, Inc., New York, N.Y., by The Procter & Gamble Co., Cincinnati, Ohio. 409,079, 12(c) pub. 4–7–64. Cl. 51.

Benrus Watch Co., to Benrus Watch Co., Inc., New York, N.Y. 406,138, ren. 4–7–64. Cl. 27.

Benrus Watch Co., Inc.: *See*—
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Bergere Perfume Co., to Bourjois, Inc., New York, N.Y. 406,917, ren. 4–7–64. Cl. 51.

Berman, Benjamin, Stonhard Co., Inc., Maple Shade, N.J. 182,182. Am. 7(d). Cl. 12.

Bijur Lubricating Corp., Rochelle Park, N.J. 768,024. Cl. 13.

Bissell Inc., Grand Rapids, Mich. 767,866, pub. 1–21–64. Cl. 23.

Blasco, Frank, Kansas City, Mo. 767,946, pub. 1–21–64. Cl. 46.

Bleistiftfabrik vormals Johann Faber Actien-Gesellschaft, Nuremberg, Germany, by A. W. Faber-Castell, Stein bei Nuremberg, West Germany. 67,088, 12(c) pub. 4–7–64. Cl. 37.

Bleistiftfabrik vormals Johann Faber Actien-Gesellschaft, Nuremberg, Germany, by A. W. Faber-Castell, Stein bei Nuremberg, West Germany. 72,352, 12(c) pub. 4–7–64. Cl. 37.

Borg-Warner Corp., Chicago, Ill. 767,861, pub. 1–21–64. Cl. 23.

Bourjois, Inc.: *See*—
Bergere Perfume Co.

Botany Industries, Inc., d.b.a. Renauld of France, Reno, Nev. 767,972, pub. 1–21–64. Cl. 51.

Botany Industries, Inc., d.b.a. Rolley Co., Reno, Nev. 768,033. Cl. 26.

Bourjois, Inc.: *See*—
Stearns, Frederick, & Co.

Brasserie de Kronenbourg, Ancienne Maison F. G. Hatt, Brasserie du Bas-Rhin, S.A., Strasbourg-Cronenbourg, France. 767,955, pub. 1–21–64. Cl. 48.

Breidert, G. C., Co., The, Pacoima, Calif. 658,516, canc. Cl. 34.

Bronson, Melvin W., d.b.a. Bronson Products Co., Chicago, Ill. 767,977, pub. 1–21–64. Cl. 51.

Bronson Products Co.: *See*—
Bronson, Melvin W.

Brown, Malcolm C., d.b.a. Alpha 2 Co., Palo Alto, Calif. 767,885, pub. 1–21–64. Cl. 38.

Brulin & Co., Inc., Indianapolis, Ind. 767,990, pub. 1–21–64. Cl. 52.

Brunswick-MacGregor Inc., Cincinnati, Ohio. 767,842, pub. 1–21–64. Cl. 22.

Bug-A-Boo Products Inc., Wichita, Kans. 767,792, pub. 1–21–64. Cl. 6.

Buhler Mills, Inc., Buhler, Kans. 767,929, pub. 1–21–64. Cl. 46.

Bullard Co., The: *See*—
Bullard Machine Tool Co.

Bullard Machine Tool Co., The, to The Bullard Co., Bridgeport, Conn. 184,735, ren. 4–7–64. Cl. 23.

Burberrys Ltd., London, England. 658,567, canc. Cl. 39.

Butterworth, James A., d.b.a. Lake Forest Laboratories, Lake Forest, Ill. 767,986, pub. 1–21–64. Cl. 52.

Cadman, A. W., Mfg. Co., Pittsburgh, Pa. 180,963, 12(c) pub. 4–7–64. Cl. 14.

California Cantaloupe Advisory Board, Fresno, Calif. 768,017, pub. 1–21–64. Cl. A.

Calliope, Inc., Philadelphia, Pa. 767,909, pub. 1–21–64. Cl. 39.

Calumet & Hecla, Inc., Allen Park, Mich. 767,806, pub. 1–8–63. Cl. 13.

Camel Color & Paint Corp.: *See*—
Camel Lead Color & Chemical Products Mfg. Corp.

Camel Lead Color & Chemical Products Mfg. Corp., Brooklyn, to Camel Color & Paint Corp., Rego Park, N.Y. 658,439, canc. Cl. 16.

Carbide and Carbon Chemicals Corp., by Union Carbide Corp., New York, N.Y. 340,605, 12(c) pub. 4–7–64. Cl. 6.

Carissa Cosmetics, Inc., Sarasota, Fla. 767,979–80, pub. 1–21–64. Cl. 51.

Carlson Products Corp., Brooklyn, N.Y. 767,784, pub. 2–27–62. Cl. 3.

Carpenter Chemical Co., Detroit, Mich. 767,821, pub. 1–21–64. Cl. 18.

Carthage Mills Inc., Cincinnati, Ohio. 658,455, canc. Cl. 20.

Ceetee Products, Inc., Clinton, N.J. 767,822, pub. 1–21–64. Cl. 18.

Celanese Corp. of America, New York, N.Y. 767,802, pub. 1–21–64. Cl. 9.
Celis, Mario M., Mexico City, Mexico. 767,877, pub. 1–21–64. Cl. 32.
Charcoal Specialties, Inc., San Francisco, Calif. 658,371, canc. Cl. 1.
Chaska Chemical Co., Inc., Chaska, Minn. 767,993, pub. 1–21–64. Cl. 52.
Chataignier France, Paris, France. 767,785, pub. 1–21–64. Cl. 6.
Chicago Metallizing Corp., Chicago, Ill. 658,637, canc. Cl. 106.
Chilton Co., Philadelphia, Pa. 768,000, pub. 1–21–64. Cl. 101.
Christophel Cine Camera, Inc., Coral Gables, Fla. 767,899, pub. 1–12–64. Cl. 38.
Cine Revista, Inc., New York, N.Y. 767,883, pub. 1–21–64. Cl. 38.
Circuit Mfg. Co., Inc., Philadelphia, Pa. 658,472, canc. Cl. 21.
Clairol Inc., New York, N.Y. 768,050. Cl. 51.
Cleveland Worm and Gear Co., The. Eaton Mfg. Co., Cleveland, Ohio. 182,385. Am. 7(d). Cl. 23.
Cluett, Peabody & Co., Inc., Troy, N.Y. 658,549, canc. Cl. 39.
Cohen, Goldman & Co. Inc., New York, N.Y., to House of Worsted-Tex, Inc., Philadelphia, Pa. 187,236, ren. 4–7–64. Cl. 42.
Coliform Co., Batavia, Ill. 767,841, pub. 1–21–64. Cl. 21.
Columbia Industries, Inc., San Antonio, Tex. 767,851, pub. 1–21–64. Cl. 22.
Comfort Cushions: *See*—
Schick, William F.
Congoleum-Nairn Inc., Kearny, N.J. 658,456, canc. Cl. 20.
Connon, Bernard J., d.b.a. Solrol Mfg. Co., Chicago, Ill. 658,495, canc. Cl. 26.
Consolidation Coal Co., The, Chicago, Ill. 767,774, pub. 1–21–64. Cl. 1.
Continental Baking Co., Rye, N.Y. 767,925, pub. 1–21–64. Cl. 46.
Continental Oil Co., Ponca City, Okla. 658,414, canc. Cl. 6.
Cosmopolitan Doll and Toy Corp., Jackson Heights, N.Y. 658,481, canc. Cl. 22.
Cosmopolitan Foods, Inc., Modesto, Calif. 762,426, cor. 4–7–64. Cl. 46.
Cotra Corp., New York, N.Y. 658,551, canc. Cl. 39.
Crossett Lumber Co., d.b.a. Crossett Paper Mills, to Georgia-Pacific Paper Corp., Crossett, Ark. 405,606, ren. 4–7–64. Cl. 37.
Crossett Paper Mills: *See*—
Crossett Lumber Co.
Crown Willamette Paper Co., by Crown Zellerbach Corp., San Francisco, Calif. 247,311, 12(c) pub. 4–7–64. Cl. 37.
Crown Zellerbach Corp.: *See*—
Crown Willamette Paper Co.
Crown Zellerbach Corp., San Francisco, Calif. 362,593, 12(c) pub. 4–7–64. Cl. 37.
Crystal Research Laboratories, Inc., Hartford, Conn. 767,874, pub. 1–21–64. Cl. 31.
Crystopal, Ltd., New York, N.Y. 767,968, pub. 1–21–64. Cl. 50.
Curtis, Helene, Industries, Inc.: *See*—
Velsch & Holtz.
Cutter Laboratories, Inc., Berkeley, Calif. 767,820, pub. 1–21–64. Cl. 15.
Dakin Gun Co.: *See*—
Simmons Gun Specialties, Inc.
Deering Milliken, Inc., New York, N.Y. 767,918–21, pub. 1–21–64. Cl. 42.
Delmark Co., The: *See*—
Dietene Co., The.
De Luxe Reading Corp., Elizabeth, N.J. 767,848, pub. 1–21–64. Cl. 22.
De Saymont, Chicago, Ill. 658,517, canc. Cl. 36.
Dewey, Henry A., Co., Inc., New York, N.Y., by E. I. du Pont de Nemours and Co., Wilmington, Del. 183,304, 12(c) pub. Cl. 16.
D-Fuzz-It Co., New York, N.Y. 767,914, pub. 1–21–64. Cl. 40.
Dietene Co., The, d.b.a. The Delmark Co., Minneapolis, Minn. 767,931, pub. 1–21–64. Cl. 46.
Diversey Corp., The: *See*—
Trojan Products & Mfg. Co.
Doane Agricultural Services, Inc., St. Louis, Mo. 768,004, pub. 1–21–64. Cl. 103.
Doctor, Arthur, & Co., New York, N.Y. 767,904, pub. 1–21–64. Cl. 39.
Dorcon Inc., Warren, Pa. 767,783, pub. 1–21–64. Cl. 2.
Dow Chemical Co., The: *See*—
West Laboratories, Inc.
Dow Chemical Co., The, Midland, Mich. 767,824, pub. 1–21–64. Cl. 18.
Drewrys Ltd. U.S.A., Inc., South Bend, Ind. 658,607, canc. Cl. 48.
Drexel Enterprises, Inc., High Point, N.C. 767,876, pub. 1–21–64. Cl. 32.
Dry Mfg. Co., Inc., Winters, Tex. 768,037. Cl. 34.
Duncan, Donald F., Inc., Evanston, Ill. 767,844, pub. 1–21–64. Cl. 22.
Du Pont de Nemours, E. I., and Co.: *See*—
Dewey, Henry A., Co., Inc.
Durkee-Atwood Co., Minneapolis, Minn. 658,570, canc. Cl. 39.
Durkee Famous Foods: *See*—
Glidden Co., The.
E. Am. Ass'n For Oxygen Therapy Inc., Long Valley, N.J. 767,829, pub. 1–21–64. Cl. 18.
Eagle Mfg. Co., Wellsburg, W. Va. 181,778, ren. 4–7–64. Cl. 2.
Eaton Mfg. Co.: *See*—
Cleveland Worm and Gear Co., The.
Eaton Mfg. Co., Cleveland, Ohio. 767,856, pub. 1–21–64. Cl. 23.
Economics Laboratory, Inc.: *See*—
Klenzade Products, Inc.
Editions Culturelles Europeennes, Le Havre, France. 754,357, cor. 4–7–64. Cl. 38.
Electronics Co.: *See*—
Sonotone Corp.
Elowsky, S. M., & Co., Brooklyn, N.Y., to Sporteens, Inc., New York, N.Y. 176,270, ren. 4–7–64. Cl. 39.
Empire Silk Co., Wilmington, Del., and New York, by William Skinner & Sons, New York, N.Y. 177,342, 12(c) pub. 4–7–64. Cl. 42.
Engelhard Hanovia, Inc.: *See*—
Hanovia Chemical & Mfg. Co.
Etablissements Lefevre-Utile, Loire-Atlantique, France. 767,938–9, pub. 1–21–64. Cl. 46.
Eureka Mills, Inc., St. Louis, Mo. 658,588, canc. Cl. 46.
Evans Chemetics, Inc., New York, N.Y. 767,794, pub. 1–21–64. Cl. 6.
Faber-Castell, A. W.: *See*—
Bleistiftfabrik vormals Johann Faber Actien-Gesellschaft.
Fairmont Foods Co., d.b.a. Austin Biscuit Co., Omaha, Nebr. 767,934, pub. 1–21–64. Cl. 46.
Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. 658,421, canc. Cl. 7.
Farmingdale Garden Laboratories, Inc., Massapequa, N.Y. 658,410, canc. Cl. 6.
Federal Publications, Inc., Washington, D.C. 767,892, pub. 1–21–64. Cl. 38.
Field, Marshall, & Co., Chicago, Ill., by Yardley of London, Inc., Totowa, N.J. 225,220, 12(c) pub. 4–7–64. Cl. 51.
Fleming-Joffe Ltd., New York, N.Y. 767,777, pub. 1–21–64. Cl. 1.
Floquil Products, Inc., Cobleskill, N.Y. 406,249, ren. 4–7–64. Cl. 11.
Flour City Ornamental Iron Co., The, d.b.a. Aluma Craft Boat Co., Minneapolis, Minn. 658,485, canc. Cl. 22.
Fluid Controls, Inc, Mentor, Ohio. 767,836, pub. 1–21–64. Cl. 19.
Fluted Paper Products Co., Inc., South Norwalk, Conn. 767,781, pub. 1–21–64. Cl. 2.
Food Filters Corp., Eaton, Ohio. 767,872, pub. 1–21–64. Cl. 31.
Foot, S. B., Tanning Co., Red Wing, Minn. 767,775–6, pub. 1–21–64. Cl. 1.
Foremost Dairies, Inc., San Francisco, Calif. 767,930, pub. 8–27–63. Cl. 46.
Forstmann & Huffmann Co., Passaic, N.J., to J. P. Stevens & Co., Inc., New York, N.Y. 183,810, ren. 4–7–64. Cl. 42.
Forstmann & Huffmann Co., Passaic, N.J., to J. P. Stevens & Co., Inc., New York, N.Y. 185,700–1, ren. 4–7–64. Cl. 42.
Forstmann & Huffmann Co., Passaic, N.J., to J. P. Stevens & Co., Inc., New York, N.Y. 185,703, ren. 4–7–64. Cl. 42.
Forstmann & Huffmann Co., Passaic, N.J., to J. P. Stevens & Co., Inc., New York, N.Y. 185,706–7, ren. 4–7–64. Cl. 42.
Forstmann & Huffmann Co., Passaic, N.J., to J. P. Stevens & Co., Inc., New York, N.Y. 185,734, ren. 4–7–64. Cl. 42.
Fowser, William B., Detroit, Mich. 768,013, pub. 1–21–64. Cl. 107.
Freedman Seating Co., Chicago, Ill. 768,026. Cl. 19.
Freund, Peter, Knitting Mills, Inc., North Bergen, N.J. 658,554, canc. Cl. 39.
Fuller Brush Co., The, East Hartford, Conn. 767,886, pub. 1–21–64. Cl. 38.
Gallard-Schlesinger Chemical Mfg. Corp., Garden City, N.Y. 767,795, pub. 1–21–64. Multiple Class (Classes 6 and 14).
Gamewell Co., The, by The Gamewell Co., Newton Upper Falls, Mass. 404,649, 12(c) pub. 4–7–64. Cl. 21.
Garber's Travel Service: *See*—
Garber's Travel Service, Inc.
Garber's Travel Service, Inc., d.b.a. Garber's Travel Service, Brookline, Mass. 658,635, canc. Cl. 105.
Gedalius, Erich, Valley Stream, N.Y. 658,376, canc. Cl. 1.
Geigy Chemical Corp., Ardsley, N.Y. 764,138, cor. Cl. 6.
Geigy Chemical Corp., Ardsley, N.Y. 767,796, pub. 1–21–64. Cl. 6.
Geller, Andrew, Inc., Brooklyn, N.Y. 658,558, canc. Cl. 39.
General Mills, Inc., Minneapolis, Minn. 767,949, pub. 1–21–64. Cl. 46.
General Testing and Inspection: *See*—
General Testing & Inspection Agency, Inc.
General Testing & Inspection Agency, Inc., from G. L. Martin, d.b.a. General Testing and Inspection, Portland, Oreg. 767,994, pub. 1–21–64. Cl. 100.
Georgia Kaolin Co., Elizabeth, N.J. 405,358, 12(c) pub. 4–7–64. Cl. 1.
Georgia-Pacific Paper Corp.: *See*—
Crossett Lumber Co.
Giddings & Lewis Machine Tool Co., Fond du Lac, Wis. 767,857, pub. 1–21–64. Cl. 23.
Gillette Co., The, Boston, Mass. 767,865, pub. 1–21–64. Cl. 23.
Glassips Inc., Towson, Md. 767,853, pub. 1–21–64. Cl. 23.
Glidden Co., The, d.b.a. Durkee Famous Foods, Cleveland, Ohio. 767,935, pub. 1–21–64. Cl. 46.
Globe Industries, Inc., Dayton, Ohio. 768,005, pub. 1–21–64. Cl. 103.
Globe Novelty House, by Globe Novelty House, Inc., New York, N.Y. 405,762, 12(c) pub. 4–7–64. Cl. 3.
Globe Novelty House, by Globe Novelty House, Inc., New York, N.Y. 406,523, 12(c) pub. 4–7–64. Cl. 40.

Globe Novelty House, Inc.: *See*—
Globe Novelty House.
Goodyear Aerospace Corp., from Goodyear Aircraft Corp., Akron, Ohio. 767,772, pub. 7–16–63. Cl. 1.
Goodyear Aircraft Corp.: *See*—
Goodyear Aerospace Corp.
Goodyear Tire & Rubber Co., The, Akron, Ohio. 767,789, pub. 1–21–64. Cl. 6.
Gramatan Co., Inc., of Bronxville, New York, The, Bronxville, N.Y. 768,001, pub. 1–21–64. Cl. 102.
Graves, George O., d.b.a. Michiana Mills, South Bend, Ind. 767,924, pub. 1–21–64. Cl. 46.
Gross, John, & Co., Baltimore, Md. 768,046. Cl. 49.
H & P Mfg. Co., Hayward, Calif. 767,780, pub. 1–21–64. Cl. 2.
Hamilton Paper Co.: *See*—
Michigan Paper Co.
Hanovia Chemical & Mfg. Co., to Engelhard Hanovia, Inc., Newark, N.J. 179,978, ren. 4–7–64. Cl. 44.
Hanson, H. P., & Co., Chicago, Ill. 297,904, canc. Cl. 46.
Hartford Publications, Inc., New York, N.Y. 767,887, pub. 1–21–64. Cl. 38.
Hawkins-Hawkins Co. Inc., Berkeley, Calif. 767,962, pub. 1–21–64. Cl. 50.
Hecht Co., The, Washington, D.C. 658,556, canc. Cl. 39.
Hefco, Inc., Cleveland, Ohio. 767,860, pub. 1–21–64. Cl. 23.
Heineken's Brouwerijen Nederland N.V., Amsterdam, Netherlands. 767,954, pub. 1–21–64. Cl. 46.
Hermant, Percy, Ltd., by Imperial Optical Co., Ltd., Toronto, Ontario, Canada. 404 873, 12(c) pub. 4–7–64. Cl. 26.
Heritage Shirtmakers, Inc., New York, N.Y. 658,552, canc. Cl. 39.
Herman, Jacob, d.b.a. J. Herman Co., to Mac Largever and Arnold Largever, New York, N.Y. 183,769, ren. 4–7–64. Cl. 39.
Heublein, Inc., Hartford, Conn. 767,957, pub. 1–21–64. Cl. 49.
Hinz Publishing Co.: *See*—
Hinz, Herman F., Jr.
Hoffman, Robert W., Sterling, Ill. 658,648, canc. Cl. 50.
Hinz, Herman F., Jr., d.b.a. Hinz Publishing Co., Mount Prospect, Ill. 767,891, pub. 1–21–64. Cl. 38.
Hi-Shear Corp., Torrance, Calif. 767,811, pub. 1–21–64. Cl. 13.
Houghton, E. F., & Co., Philadelphia, Pa. 183,194–5, ren. 4–7–64. Cl. 6.
House of Worsted-Tex, Inc.: *See*—
Cohen, Goldman & Co. Inc.
Hobam, Inc., Buffalo, N.Y. 767 863, pub. 1–21–64. Cl. 23.
Huck Co., Inc., Paramus, N.J. 767,869, pub. 1–21–64. Cl. 23.
Hudson Photographic Industries, Inc., Irvington-on-Hudson, N.Y. 767,964, pub. 1–21–64. Cl. 50.
Huntington Creek Corp., The, d.b.a. Leroux & Co. and Leroux and Co., Ruffsdale, Pa. 767 956, pub. 1–21–64. Cl. 49.
Hycon Electronics, Inc., Pasadena, Calif. 658,500, canc. Cl. 26.
Hyster Co.: *See*—
Hyster, Willamette, Co.
Hyster, Willamette, Co., to Hyster Co., Portland, Oreg. 407,194, ren. 4–7–64. Cl. 23.
Ichiyasu, Ben M., d.b.a. Momoi Co., Torrance, Calif. 658,477, canc. Cl. 22.
Ichiyasu, Ben M., d.b.a. Momoi Co., Torrance, Calif. 68,479–80, canc. Cl. 22.
Imperial Optical Co. Ltd.: *See*—
Hermant, Percy, Ltd.
Indian Head Mills, Inc.: *See*—
Ulmann, Bernhard, Co. Inc.
Ulmann, Bernhard, Co. Inc.
Industrial Fasteners Institute, Cleveland, Ohio. 768,016, pub. 1–21–64. Cl. 200.
Insurance Co. of North America, Philadelphia, Pa. 768,002, pub. 1–21–64. Cl. 102.
International Laboratories: *See*—
Beckwith, Richard E.
International Touri Camp Organisation Reg. Trust, Vaduz, Liechtenstein. 658,510, canc. Cl. 32.
Irwin, Neisler & Co.: *See*—
Neisler Laboratories, Inc.
Jackson Bag Corp., Jackson, Tenn. 767,782, pub. 1–21–64. Cl. 2.
Jacoby, H. C., Co.: *See*—
Jacoby, Henry C.
Jacoby, Henry C., d.b.a. H. C. Jacoby Co., Hollywood, Calif. 767,845, pub. 1–21–64. Cl. 22.
Jones, Wilson, Co., Chicago, Ill. 767,880, pub. 1–21–64. Cl. 37.
Kabushiki-Kaisha Mitsuboshi, Nakano-ku, Tokyo, Japan. 658,505, canc. Cl. 26.
Kaplan, Joseph A., & Sons, Inc., New York, N.Y. 658,581, canc. Cl. 39.
Karbo, Joseph, d.b.a. Slim-Pak Products, Los Angeles, Calif. 767,933, pub. 1–21–64. Cl. 46.
Kellogg Co.: *See*—
Kellogg's Pep & Zep Products, Inc.
Kellogg Co., Battle Creek, Mich. 767,950, pub. 1–21–64. Cl. 46.
Kellogg's Pep & Zep Products, Inc., New York, N.Y., to Kellogg Co., Battle Creek, Mich. 180,416, ren. 4–7–64. Cl. 46.
Kenlin Enterprises, Inc., Highland Park, Ill. 768,034. Cl. 32.
Kenneth Beauty Salons & Products, Inc., New York, N.Y. 767,981, pub. 1–21–64. Cl. 51.
Keystone Steel & Wire Co., Bartonville, Peoria, Ill., to Keystone Steel & Wire Co., Peoria, Ill. 182,257–63, ren. 4–7–64. Cl. 13.
Klonka, H. C., & Co., Inc., New York, N.Y. 767,871, pub. 12–25–62. Cl. 28.
Kisco Boiler & Engineering Co., St. Louis, Mo. 767,779, pub. 1–21–64. Cl. 2.
Kleen-Air, Inc., Payne, Ohio. 767,983, pub. 1–21–64. Cl. 52.
Klenzade Products, Inc., Economics Laboratory, Inc., St. Paul, Minn. 666,689. Am. (7d). Cl. 52.
Kohler Co., Kohler, Wis. 767,807, pub. 1–21–64. Cl. 13.
Konrad Hornschuch Aktiengesellschaft Werk Weissbach, Weissbach (Wurttemberg), Germany. 767,773, pub. 1–21–64. Cl. 1.
Korshak, Marvin Stanley, d.b.a. Stan-Mar Mfg. Co., San Jose, Calif. 767,916, pub. 1–21–64. Cl. 40.
Kuppenheimer, B., & Co. Inc., Chicago, Ill. 767,899, pub. 5–15–62. Cl. 39.
Lake Forest Laboratories: *See*—
Butterworth, James A.
Lakeland Grocery Co.: *See*—
Red Owl Stores, Inc.
Largever, Mac: *See*—
Herman, Jacob.
Largever, Arnold: *See*—
Herman, Jacob.
Larus & Brother Co., Richmond, Va. 405,667, 12(c) pub. 4–7–64. Cl. 17.
La Trique Brassieres: *See*—
Vale, Arthur.
Lebow, Harry, d.b.a. Lebow Pharmaceutical Co., Minneapolis, Minn. 767,818, pub. 1–21–64. Cl. 18.
Lebow Pharmaceutical Co.: *See*—
Lebow, Harry.
Lee, H. D. Co., The, Kansas City, Mo. 767,907, pub. 1–21–64. Cl. 39.
Lemtheric: *See*—
Velsch & Holtz.
Leroux and Co.: *See*—
Huntington Creek Corp., The.
Lloyd Brothers Inc., Cincinnati, Ohio. 767,825, pub. 1–21–64. Cl. 18.
Loren, William Bear, d.b.a. Bearline Products, Cedar Rapids, Iowa. 767,960, pub. 1–21–64. Cl. 50.
Louisville and Nashville Railroad Co., Louisville, Ky. 658,634, canc. Cl. 105.
Lyons-Magnus, Inc., San Francisco, Calif. 407,022, ren. 4–7–64. Cl. 45.
Mackenzie, A. B., d.b.a. Angus Mackenzie, Oceanside, Calif. 767,952, pub. 1–21–64. Cl. 46.
Mackenzie, Angus: *See*—
Mackenzie, A. B.
Magic Fingers, Inc., Rochelle Park, N.J. 767,997, pub. 1–21–64. Cl. 100.
Magidson, Eugene, New York, N.Y. 768,021. Cl. 8.
Magnesia Products, Inc., The: *See*—
Underwood, H. Lynn.
Maidenform, Inc., New York, N.Y. 767,908, pub. 1–21–64. Cl. 39.
Mama Weiss Foods, Inc., Los Angeles, Calif. 767,936, pub. 1–21–64. Cl. 46.
Mani-Fold Co., The, Cleveland, Ohio, by Uarco Inc., Barrington, Ill. 180,004, 12(c) pub. 4–7–64. Cl. 37.
Manalons Car Radio Ltd., Montreal, Canada. 718,878. Am. (7d). Cl. 21.
Master Chemical Corp., Perrysburg, Ohio. 767,813, pub. 1–21–64. Cl. 15.
Maradel Products Inc., New York, N.Y. 767,975, pub. 1–21–64. Cl. 51.
Marquay, S.a.r.l., Paris, France. 767,970, pub. 1–21–64. Cl. 51.
Martin, Gifford L.: *See*—
General Testing & Inspection Agency, Inc.
Masters Sporting Goods Co., to Wilson Sporting Goods Co., River Grove, Ill. 712,460, new cert. Cl. 22.
Mattel, Inc., Hawthorne, Calif. 767,843, pub. 1–21–64. Cl. 22.
Mebane Co., The, Mebane, N.C. 767,878, pub. 1–21–64. Cl. 32.
Medical Supply Co., Rockford, Ill. 767,816, pub. 1–21–64. Cl. 18.
Merrell, Wm. S., Co., The, Cincinnati, and Lockland Station, Cincinnati, Ohio, to Richardson-Merrell Inc., Cincinnati, Ohio. 406,177, ren. 4–7–64. Cl. 18.
Michiana Mills: *See*—
Graves, George O.
Michigan Paper Co., to Hamilton Paper Co., Plainwell, Mich. 658,520, canc. Cl. 37.
Michigan Peat, Inc., New York, N.Y. 658,426, canc. Cl. 10.
Michigan Peat, Inc., New York, N.Y. 658 391, canc. Cl. 1.
Micro-Fax Service, Inc., Perry, Iowa. 767,884, pub. 1–21–64. Cl. 38.
Miller Chemical and Fertilizer Corp., Baltimore, Md. 767,800, pub. 1–21–64. Cl. 6.
Miracle Adhesives Corp., Bellmore, N.Y. 768,020. Cl. 5.
Miracle Adhesives Corp., Bellmore, N.Y. 768 023. Cl. 12.
Mixing Equipment Co., Inc., Rochester, N.Y. 768,031–2. Cl. 23.
Modern American Chemical Corp.: *See*—
Wade Chemical Corp.
Momoi Co.: *See*—
Ichiyasu, Ben M.
Monsanto Chemical Co., St. Louis, Mo. 767,942, pub. 1–21–64. Cl. 46.
Moore, Benjamin, & Co., New York, N.Y. 406,456, ren. 4–7–64. Cl. 16.
Morrell, John, & Co., Chicago, Ill. 768,043. Cl. 46.
Mitsubishi Bank, Ltd., The, Chiyoda-ku, Tokyo, Japan. 768 003, pub. 1–21–64. Cl. 102.
Multiflex Last Link, Inc.: *See*—
McNeill, Alexander W.
Musical Courier Co., Inc., New York, N.Y., by Summy-Birchard Co., Evanston, Ill. 162,324, 12(c) pub. 4–7–64. Cl. 38.

McCormick & Co., Inc., Baltimore, Md. 767,948, pub. 1-21-64. Cl. 46.
McCoy Meat Co., Inc., The, Los Angeles, Calif. 767,947, pub. 1-21-64. Cl. 46.
McGraw-Edison Co., Elgin, Ill. 768,018, pub. 1-21-64. Cl. 8.
McNeill, Alexander W., Lynn, to Multiflex Last Link, Inc., Saugus, Mass. 405,334, ren. 4-7-64. Cl. 50.
National Auto Research Co., Gainsville, Ga. 767,893, pub. 1-21-64. Cl. 38.
National Court of the Royal Order of Jesters, Pittsburg, Kans. 768,014, pub. 1-21-64. Cl. 200.
National Instrument Co., Inc., The, Baltimore, Md. 768,028. Cl. 21.
National Polychemicals, Inc., Wilmington, Mass. 767,778, pub. 1-21-64. Cl. 1.
Neisler Laboratories, Inc., from Irwin, Neisler & Co., Decatur, Ill. 767,817, pub. 1-21-64. Cl. 18.
New York Toy and Game Mfg. Co.: *See*—
Rubin, Herbert.
North Brothers, Inc., Atlanta, Ga. 767,995, pub. 1-21-64. Cl. 100.
Northrup, King & Co., Minneapolis, Minn. 658,373, canc. Cl. 1.
Nutregen Ltd., London, England. 383,998, 12(c) pub. 4-7-64. Cl. 46.
O.D. Bending and Equipment Corp., North Grosvenor Dale, Conn. 768,036. Cl. 32.
Office Temporaries, Inc., New York, N.Y. 767,999, pub. 1-21-64. Cl. 101.
Orange Smile Sirup Co., to The Seven-Up Co., St. Louis, Mo. 340,923, new cert. Cl. 45.
Oxford Boyswear, Inc., New York, N.Y. 767,912-13, pub. 1-21-64. Cl. 39.
Ozark-Mahoning Co., Tulsa, Okla. 658,425, canc. Cl. 10.
Palewonsky, Isaac, d.b.a. A. H. Riise, St. Thomas, by Virgin Islands Rum Industries, Ltd., Frederiksted, St. Croix, Virgin Islands. 321,815. 12(c) pub. 4-7-64. Cl. 49.
Paramount Trading and Sales Corp., Seattle, Wash. 658,496-7, canc. Cl. 26.
Park and Hagna (Inc.), New York, N.Y. 767,932, pub. 6-4-63. Cl. 46.
Pennsalt Chemicals Corp., from The Sharples Corp., Philadelphia, Pa. 767,854, pub. 12-24-63. Cl. 23.
Perugina: *See*—
Societa per Azioni Perugina.
Philco Corp., by Philco Corp., Philadelphia, Pa. 406,004, 12(c) pub. 4-7-64. Cl. 30.
Philco Corp., Philadelphia, Pa. 658,499, canc. Cl. 26.
Piet, Tony, Motor Sales, Inc., Chicago, Ill. 767,787, pub. 1-21-64. Cl. 6.
Pioneer Industries, Inc., Cleveland, Ohio. 767,808-9, pub. 1-21-64. Cl. 13.
Plasmotex Corp.: *See*—
Slavick, Joseph V.
Plough Laboratories, Inc., Memphis, Tenn. 767,830, pub. 1-21-64. Cl. 18.
Pratt & Whitney Co., Inc., West Hartford, Conn. 767,867, pub. 1-21-64. Cl. 23.
Preview Publications, Inc., Elmhurst, Ill. 767,896, pub. 1-21-64. Cl. 38.
Procter & Gamble Co., The: *See*—
Bendel, Henri, Inc.
Procter & Gamble Co., The, Cincinnati, Ohio. 767,922, pub. 11-21-61. Cl. 46.
Procter & Gamble Co., The, Cincinnati, Ohio. 767,984, pub. 1-21-64. Cl. 52.
Procter & Gamble Co., The, Cincinnati, Ohio. 767,991, pub. 1-21-64. Cl. 52.
Procter & Gamble Co., The, Cincinnati, Ohio. 410,799, 12(c) pub. 4-7-64. Cl. 38.
Procter & Gamble Co., The, Cincinnati, Ohio. 407,632, ren. 4-7-64. Cl. 52.
Purcell, Isaac S., d.b.a. Abesto Mfg. Co., to Abesto Mfg. Corp., Michigan City, Ind. 406,407, ren. 4-7-64. Cl. 12.
Purdue Frederick Co., The, Yonkers, N.Y. 767,831, pub. 1-21-64. Cl. 18.
Qvale & Associates, Inc., Los Angeles, Calif. 658,478, canc. Cl. 22.
Rarolite Chemical Co. Inc., Raritan, N.J. 658,428, canc. Cl. 11.
Reaction Motors, Inc., Denville, N.J. 658,545, canc. Cl. 38.
Rebold, Rudolph, New Brunswick, N.J. 767,976, pub. 1-21-64. Cl. 51.
Redex Inc., Brooklyn, N.Y. 658,438, canc. Cl. 15.
Redi-Rung Mfg. Co., Inc., Rye, N.Y. 767,967, pub. 1-21-64. Cl. 50.
Red Owl Stores, Inc., d.b.a. Lakeland Grocery Co., Minneapolis, Minn. 768,045. Cl. 46.
Reichman, Henry, from Henry Reichman, Inc., New York, N.Y. 767,882, pub. 1-21-64. Cl. 38.
Renald of France: *See*—
Botany Industries, Inc.
Renold Chains Ltd., Wythenshawe, Manchester, England. 768,030. Cl. 23.
Reynolds, R. J., Tobacco Co., Winston-Salem, N.C. 767,804, pub. 1-21-64. Cl. 10.
Richardson-Merrell Inc.: *See*—
Merrell, Wm. S. Co., The.
Riise, A. H.: *See*—
Palewonsky, Isaac.
Rijo Ski Mfg. Co., Jacksonville, Fla. 767,850, pub. 1-21-64. Cl. 22.
Robinco, Inc., Norristown, Pa. 658,440, canc. Cl. 16.
Robinson Laboratory, Inc., San Francisco, Calif. 767,828, pub. 1-21-64. Cl. 18.
Rochester Razor, Inc., Rochester, N.Y. 767,963, pub. 1-21-64. Multiple Class (Classes 50 and 51).
Roctim Co., The, Wilmington, N.C. 767,988, pub. 1-21-64. Cl. 52.
Rodenstock, Optische Werke G., Munich, Germany. 658,498, canc. Cl. 26.
Rohm & Haas, G.m.b.H., Darmstadt, Germany. 658,411, canc. Cl. 6.
Roily Co.: *See*—
Botany Industries, Inc.
Rombro Brothers, to Rombro Brothers, Inc., Baltimore, Md. 177,903, ren. 4-7-64. Cl. 39.
Rombro Brothers, Inc.: *See*—
Rombro Brothers.
Rosecrest Inc., Boston, Mass. 768,038. Cl. 39.
Rotary Mud Co., Inc., Oklahoma City, Okla. 658,374, canc. Cl. 1.
Rubin, Herbert, d.b.a. New York Toy and Game Mfg. Co., New York, N.Y. 767,849, pub. 1-21-64. Cl. 21.
Ruhrchemie Aktiengesellschaft, Oberhausen-Holten, Germany. 658,442, canc. Cl. 16.
Ruhrchemie Aktiengesellschaft, Oberhausen-Holten, Germany. 658,404, canc. Cl. 6.
Rule, Frank M., and John L. Schmeller, Fort Lauderdale, Fla. 767,810, pub. 1-21-64. Cl. 13.
S.P.I. Sales, Buffalo, N.Y. 768,039. Cl. 39.
Saf-T-Tub Corp., Toledo, Ohio. 767,961, pub. 1-21-64. Cl. 50.
Sanitary Soap Co., Inc., Paterson, N.J. 767,987, pub. 1-21-64. Cl. 52.
Santa Clara Pear Association: *See*—
Weston, Will B.
Schick Inc., Lancaster, Pa. 767,868, pub. 1-21-64. Cl. 23.
Schjeldahl, G. T., Co., Northfield, Minn. 767,812, pub. 1-21-64. Cl. 14.
Schenley Industries, Inc., New York, N.Y. 767,965, pub. 1-21-64. Cl. 50.
Schick, William F., d.b.a. Comfort Cushions, West Hollywood, Fla. 768,035. Cl. 32.
Schlein, Samuel E., Inc., New York, N.Y. 767,902, pub. 1-21-64. Cl. 39.
Schmeller, John L.: *See*—
Rule, Frank M., and John L. Schmeller.
Schratz Products, Inc., Detroit, Mich. 767,974, pub. 1-21-64. Cl. 51.
Screen Print Products, Inc., Cincinnati, Ohio. 768,047. Cl. 50.
Seagram, Joseph E., & Sons, Inc., New York, N.Y. 658,452, canc. Cl. 18.
Sea Pak Corp., St. Simons Island, Ga. 767,953, pub. 1-21-64. Cl. 46.
Sears, Roebuck and Co., Chicago, Ill. 226,692, 12(c) pub. 4-7-64. Cl. 35.
Seelig, Firma R., & Hille, Duesseldorf, Germany. 767,926, pub. 1-21-64. Cl. 46.
Sero of New Haven, Inc., New Haven, Conn. 767,973, pub. 1-21-64. Cl. 51.
Seymour Mfg. Co., The, Seymour, Conn. 658,419, canc. Cl. 6.
Seven-Up Co.: *See*—
Orange Smile Sirup Co.
Sharples Corp., The: *See*—
Pennsalt Chemicals Corp.
Shell Oil Co., New York, N.Y. 767,833, pub. 1-21-64. Cl. 18.
Sherwood, Don, New York, N.Y. 767,895, pub. 1-21-64. Cl. 38.
Sierracin Corp., The, Burbank, Calif. 767,835, pub. 5-14-63. Cl. 19.
Signal Oil Co.: *See*—
Standard Oil Co. of California.
Silvray Lighting, Inc., New York, N.Y. 658,461, canc. Cl. 21.
Simmons Gun Specialties, Inc., from Dakin Gun Co., Kansas City, Mo. 767,803, pub. 1-7-64. Cl. 9.
Simmons Co., New York, N.Y. 178,478, 12(c) pub. 4-7-64. Cl. 32.
Skinner, William, & Sons: *See*—
Empire Silk Co.
Slavick, Joseph V., d.b.a. Plasmotex Corp., Phoenix, Ariz. 658,444, canc. Cl. 16.
Slim-Pak Products: *See*—
Karbo, Joseph.
Smith-Worth Co., Inc., New York, N.Y. 658,491, canc. Cl. 23.
Smythe, Bensel R., Sherman Oaks, Calif. 767,998, pub. 1-21-64. Cl. 101.
Societa per Azioni Perugina, d.b.a. Perugina, Perugia, Italy. 767,940, pub. 1-24-64. Cl. 46.
Soirol Mfg. Co.: *See*—
Connon, Bernard J.
Sonotone Corp., Elmsford, from A. H. Axelrod, d.b.a. Electronics Co., Brooklyn, N.Y. 767,838, pub. 7-24-62. Cl. 21.
Southern Oil Co. of New York, Inc., Horseheads, N.Y. 185,687, 12(c) pub. 4-7-64. Cl. 15.
Sporteens, Inc.: *See*—
Elowsky, S. M., & Co.
Standard Oil Co. of California, d.b.a. Signal Oil Co., Los Angeles, Calif. 599,000. Am. 7(d). Cl. 21.
Standard Oil Co., The, Cleveland, Ohio. 767,814, pub. 1-21-64. Cl. 15.
Standard Pyroxoloid Corp., Leominster, Mass. 767,915, pub. 1-21-64. Cl. 40.
Standard Radio Corp., Shibuya-ku, Tokyo, Japan. 767,840, pub. 1-21-64. Cl. 21.
Stan-Mar Mfg. Co.: *See*—
Korshak, Marvin S.
Stauffer Chemical Co., New York, N.Y. 767,791, pub. 1-21-64. Cl. 6.
Stella Baking Co., Danville, Ill. 658,589, canc. Cl. 46.
Stearns, Frederick, & Co., Detroit, Mich., to Bourjois, Inc., New York, N.Y. 183,284-5, ren. 4-7-64. Cl. 51.
Sterling Drug Inc., New York, N.Y. 767,832, pub. 1-21-64. Cl. 18.

Sternco Industries, Inc., Allendale, N.J. 768,025. Cl. 16.
Stevens, J. P., & Co., Inc.: *See*—
Forstmann & Huffmann Co.
Stitzel-Weller Distillery, Louisville, Ky. 767,958, pub. 1-21-64. Cl. 49.
Stokes Knitting Mills, Inc., Mount Airy, N.C. 768,040. Cl. 39.
Stonhard Co., Inc.: *See*—
Berman, Benjamin.
Stora Broadcasting Co., St. Louis, Mo. 768,008, pub. 1-21-64. Cl. 104.
Straub, W. F., & Co., Chicago, Ill. 767,941, pub. 1-21-64. Cl. 46.
Suffolk Biological Development Corp., Northport, N.Y. 658,601, canc. Cl. 46.
Summy-Birchard Co.: *See*—
Musical Courier Co., Inc.
Sun Chemical Corp., Long Island City, N.Y. 658,432, canc. Cl. 11.
Sun Chemical Corp., Long Island City, N.Y. 658,430, canc. Cl. 11.
Sunbeam Corp., Chicago, Ill. 658,558, canc. Cl. 38.
Sunland Packing House Co., Porterville, Calif. 186,288, ren. 4-7-64. Cl. 46.
Supro Lux Mfg. Co. Inc., Bronx, N.Y. 768,027. Cl. 21.
Surprise Brassiere Co., Inc., New York, N.Y. 767,911, pub. 1-21-64. Cl. 39.
Swedlow Inc., Los Angeles, Calif. 767,837, pub. 1-21-64. Cl. 19.
Swift and Co., to Swift & Co., Chicago, Ill. 179,748, ren. 4-7-64. Cl. 46.
Swirl, Inc., Easley, S.C. 767,906, pub. 1-21-64. Cl. 39.
Tab Publishing Co.: *See*—
Ward, Marion G.
Thermidaire Corp. of America, Syracuse, N.Y. 767,790, pub. 1-21-64. Cl. 6.
Thornton, R. M., Inc., Washington, D.C. 768,007, pub. 1-21-64. Cl. 103.
Time, Inc., New York, N.Y. 767,894, pub. 1-21-64. Cl. 38.
Topco Associates, Inc., Skokie, Ill. 768,048. Cl. 50.
Torch Laboratories, Inc., Philadelphia, Pa. 767,819, pub. 1-21-64. Cl. 18.
Trans World Airlines, Inc., New York, N.Y. 768,009, pub. 1-21-64. Cl. 105.
Travis, Ruth L., Kentfield, Calif. 767,959, pub. 1-21-64. Cl. 50.
Trenton Milling Co. Martha White Mills, Inc., Nashville, Tenn. 176,508. Am. 7(d). Cl. 46.
Trojan Products & Mfg. Co., to The Diversey Corp., Chicago, Ill. 406,041, ren. 4-7-64. Cl. 6.
Turtle Wax, Inc., Chicago, Ill. 767,992, pub. 1-21-64. Cl. 52.
Twin Gems, Inc., New York, N.Y. 767,978, pub. 1-21-64. Cl. 51.
Twin Pane Corp., Detroit, Mich. 768,022. Cl. 12.
UCB (Union Chimique-Chemische Bedrijven), Societe Anonyme, Saint-Gilles-les-Brussels, Belgium. 767,917, pub. 1-21-64. Cl. 42.
U.C.P. Service, Inc., Garden City, N.Y. 767,889, pub. 1-21-64. Cl. 38.
U.S.A.C. Transport, Inc., Detroit, Mich. 768,051. Cl. 105.
Uarco Inc.: *See*—
Mani-Fold Co., The.
Ulmann, Bernhard, Co. Inc., by Indian Head Mills, Inc., New York, N.Y. 404,926, 12(c) pub. 4-7-64. Cl. 50.
Ulmann, Bernhard, Co. Inc., to Indian Head Mills, Inc., New York, N.Y. 179,117, ren. 4-7-64. Cl. 39.
Ulmann, Bernhard, Co Inc., to Indian Head Mills, Inc., New York, N.Y. 180,065, ren. 4-7-64. Cl. 43.
Underwood, H. Lynn, d.b.a. Underwood Products, Greenville, by The Magnesia Products, Inc., Dayton, Ohio. 406,533, 12(c) pub. 4-7-64. Cl. 51.
Underwood Products: *See*—
Underwood, H. Lynn.
Uneeda Doll Co., Inc., Brooklyn, N.Y. 767,852, pub. 1-21-64. Cl. 22.
Union Carbide Corp., New York, N.Y. 767,859, pub. 1-21-64. Cl. 23.
Union Carbide Corp.: *See*—
Carbide and Carbon Chemicals Corp.
Unishops, Inc., Jersey City, N.J. 767,910, pub. 1-21-64. Cl. 39.
United Co-Operatives, Inc., Alliance, Ohio. 767,798, pub. 1-21-64. Cl. 6.
United States Rubber Co., New York, N.Y. 658,580, canc. Cl. 39.
United Steel Companies Ltd., The, Sheffield, England. 767,870, pub. 1-21-64. Cl. 26.
Vale, Arthur, d.b.a. La Trique Brassieres, New York, N.Y. 768,041. Cl. 39.
Vanity Fair Silk Mills, to Vanity Fair Mills, Inc., Reading, Pa. 183,424, ren. 4-7-64. Cl. 39.
Veb Druckmaschinenwerk Victoria, Heidenau, Germany. 658,487, canc. Cl. 23.
Velsch & Holtz, Paris, France, by Helene Curtis Industries, Inc., d.b.a. Lentheric, Chicago, Ill. 180,528, 12(c) pub. 4-7-64. Cl. 51.
Vendomatic Services Ltd., Toronto, Ontario, Canada. 767,855, pub. 1-21-64. Cl. 23.
Virgin Islands Rum Industries, Ltd.: *See*—
Palewonsky, Isaac.
Visual Education Association, Inc., Dayton, Ohio. 767,897, pub. 1-21-64. Cl. 38.
Wade Chemical Corp., from Modern American Chemical Corp., Shreveport, La. 767,815, pub. 1-21-64. Cl. 18.
Wallace & Tiernan Inc., Belleville, N.J. 767,823, pub. 1-21-64. Cl. 18.
Waltham Watch & Clock Co., Waltham, Mass., by Waltham Watch Co., Chicago, Ill. 182,097, 12(c) pub. 4-7-64. Cl. 27.
Waltham Watch Co.: *See*—
Waltham Watch & Clock Co.
Ward Baking Co., New York, N.Y. 768,042. Cl. 46.
Ward, Marion G., d.b.a. Tab Publishing Co., Little Rock, Ark. 767,881, pub. 1-21-64. Cl. 38.
Webb, Del E., Corp., The, Phoenix, Ariz. 768,006, pub. 1-21-64. Cl. 103.
Wesleyan University, Middletown, Conn. 658,543, canc. Cl. 38.
West Coast Airlines, Inc., Seattle, Wash. 768,012, pub. 1-21-64. Cl. 105.
Westinghouse Electric Corp., Pittsburgh, Pa. 767,846, pub. 1-21-64. Cl. 22.
West Laboratories, Inc., to The Dow Chemical Co., Midland, Mich. 658,615, new cert. Cl. 52.
West Laboratories, Inc., to The Dow Chemical Co., Midland, Mich. 559,354, new cert. Cl. 18.
West Laboratories, Inc., to The Dow Chemical Co., Midland, Mich. 556,405, new cert. Cl. 6.
West Laboratories, Inc., to The Dow Chemical Co., Midland, Mich. 666,211, new cert. Cl. 18.
Weston, Will B., to Santa Clara Pear Association, Santa Clara, Calif. 187,187, ren. 4-7-64. Cl. 46.
West Virginia Pulp & Paper Co., New York, N.Y. 658,525, canc. Cl. 37.
Weyerhaeuser Co., Tacoma, Wash. 768,019. Cl. 2.
White, Martha, Mills, Inc.: *See*—
Trenton Milling Co.
White Motor Co., The: *See*—
Atlas Imperial Diesel Engine Co.
White Stores, Inc., Wichita Falls, Tex. 658,508, canc. Cl. 31.
Whiz Fish Products Co., Inc., d.b.a. Whiz Pet Food Co., Seattle, Wash. 768,044. Cl. 46.
Whiz Pet Food Co.: *See*—
Whiz Fish Products Co., Inc.
Whyman, S. H., Ltd., Leeds, England. 658,584, canc. Cl. 39.
Wilson, A. L., Chemical Co., The, Kearny, N.J. 767,985, pub. 8-20-63. Cl. 52.
Wilson, J. S., Inc., Davenport, Iowa. 767,923, pub. 1-21-64. Cl. 46.
Wilson Sporting Goods Co.: *See*—
Masters Sporting Goods Co.
Winer, Arthur, Inc., Gary, Ind. 767,903, pub. 1-21-64. Cl. 39.
Winn-Dixie Stores, Inc., Jacksonville, Fla. 767,987, pub. 1-21-64. Cl. 46.
Wrigley, Wm., Jr., Co., Chicago, Ill. 767,927, pub. 1-21-64. Cl. 46.
Wrigley, Wm., Jr., Co., Chicago, Ill. 363,068. Am. 7(d). Cl. 46.
Xttrium Laboratories, Inc., Chicago, Ill. 767,827, pub. 1-21-64. Cl. 18.
Yale Engineering Co., Chicago, Ill. 767,786, pub. 1-21-64. Cl. 6.
Yardley & Co., Ltd., Stratford, London, England. 767,969, pub. 1-21-64. Cl. 51.
Yardley of London, Inc.: *See*—
Field, Marshall, & Co.
Young, Arthur, & Co., New York, N.Y. 767,996, pub. 1-21-64. Cl. 100.
Zephyr American Corp., Long Island City, N.J. 408,278, ren. 4-7-64. Cl. 37.

U.S. GOVERNMENT PRINTING OFFICE:O—1964

U.S. DEPARTMENT OF COMMERCE
OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE
April 14, 1964 Volume 801 Number 2

PATENTS
NOTICES

Board of Appeals Decisions Rendered in the Month of February 1964

Examiner affirmed	286
Examiner affirmed in part	63
Examiner reversed	93
Total	442

Notice of Daylight Saving Time

The Patent Office will operate on Daylight Saving Time from April 27, 1964, through October 24, 1964.

Notice of Tentative Recordation of a Trade Name

[T.D. 56122]

Tentative recordation of trade name under section 42, Trademark Act of 1946, and section 11.16, Customs Regulations

TREASURY DEPARTMENT,
OFFICE OF THE COMMISSIONER OF CUSTOMS,
Washington, D.C.

To Collectors of Customs and Others Concerned:

An application has been filed in the Treasury Department for the recordation of the following described trade name under the provisions of section 42, Trademark Act of 1946, and section 11.16, Customs Regulations:

"BARBAN CREATIONS," owned by Herman Pecker and Co., Inc., a corporation organized under the laws of the State of New York, located and doing business at 28 West 36th Street, New York City, which trade name is used in connection with stuffed animals and dolls, Christmas novelties, casual slippers, shoe backs, luggage and general merchandise manufactured in Japan, Hong Kong, and the United States.

Any person who desires to file an opposition to the recordation of this trade name shall notify the Commissioner of Customs, Bureau of Customs, Washington, D.C., before the expiration of 30 days after April 15, 1964, of his intent to oppose the recordation. If a notice of opposition is filed, the opposer will be furnished with a copy of the application for recordation of the trade name, together with its supporting documents and instructions as to the procedure to be followed. The customs officers concerned will be given notice within 45 days after April 15, 1964, of any opposition proceeding.

Until 45 days after April 15, 1964, all articles of foreign manufacture bearing names or marks which copy or simulate the above-mentioned trade name shall be detained, but not seized, and thereafter, shall receive the treatment provided for in section 11.17, Customs Regulations, unless a notice is received that an opposition has been filed, in which case such articles shall continue to be detained until a final determination is made concerning the right of the applicant to the trade name.

(Signed) PHILIP NICHOLS, JR.,
Commissioner of Customs.

March 4, 1964.

Dedication

2,654,652.—*Linton G. Ray, Jr.*, Kenmore, N.Y. DYEING OF ACRYLONITRILE POLYMERS WITH ACETATE DYES. Patent dated Oct. 6, 1953. Dedication filed Jan. 22, 1964, by the assignee, *E. I. du Pont de Nemours and Company.*

Hereby dedicates to the public the entire terminal part of said patent.

Disclaimers

2,792,150.—*Arthur J. Stock*, Cleveland, Ohio. BULK MATERIAL VALVE. Patent dated May 14, 1957. Disclaimer filed Jan. 14, 1964, by the assignee, *Stock Equipment Company.*

Hereby enters this disclaimer to claims 1, 2, 3, 4, 5 and 6 of said patent.

3,006,920.—*Werner Richard Boehme*, Somerville, and *Edgar Siegmund Schipper*, Highland Park, N.J. N-SUBSTITUTED 2,5,BISHALOMETHYL PYRROLIDINES. Patent dated Oct. 31, 1961. Disclaimer filed Jan. 21, 1964, by the assignee, *Ethicon, Inc.*

Hereby enters this disclaimer to claims 4 and 5 of said patent.

3,058,621.—*Herbert E. Stenzel*, Hampton Township, Allegheny County, Pa. LADLE FEEDING MEANS. Patent dated Oct. 16, 1962. Disclaimer filed Jan. 22, 1964, by the assignee, *Blaw-Knox Company.*

Hereby enters this disclaimer to claims 1–6 inclusive of said patent.

Adjudicated Patents

(D.C. Conn.) Bassett Patent No. 2,477,782 (132—75.5), for nail clipper, *Held* invalid. *W. E. Bassett Co.* v. *H. C. Cook Co.*, 225 F. Supp. 1015; 139 USPQ 185.

(D.C. Ohio) Peterson Patent No. 2,609,653 (57—145), for combination of cable and helical reinforcing device, *Held* invalid and not infringed. *Preformed Products Co.* v. *Fanner Mfg. Co.*, 225 F. Supp. 762; — USPQ —.

(D.C. Ohio) Fellabaum Patent No. 2,693,889 (214—38), for trailer with detachable load platform. Claim 3 *Held* invalid and not infringed. *Felburn* v. *New York Cent. R.R. Co.*, 225 F. Supp. 991; 140 USPQ 126.

(D.C. Ohio) Peterson Patent No. 2,761,273 (57—145), for dead end for cables, *Held* valid and infringed. *Preformed Products Co.* v. *Fanner Mfg. Co.*, 225 F. Supp. 762; — USPQ —.

(D.C. Conn.) Pocaski and Hennesey Patent No. 2,779,098 (30—155), for combined tool, *Held* valid and infringed. *W. E. Bassett Co.* v. *H. C. Cook*, 225 F. Supp. 1015; 139 USPQ 185.

(D.C. Ohio) Felburn Patent No. 3,002,636 (214—38), for method of "piggleback" transportation. Claims 1, 3, 4, 11, 12, 14 and 15 *Held* invalid and not infringed. *Felburn* v. *New York Cent. R.R. Co.*, 225 F. Supp. 991; 140 USPQ 126.

New Applications Received During February 1964

Patents	6,442
Designs	362
Plant Patents	16
Reissues	18
Total	6,838

Issue—April 14, 1964

Patents	961	No. 3,128,468 to No.	3,129,428, incl.
Designs	70	No. 197,944 to No.	198,013, incl.
Plant Patents	2	No. 2,389 to No.	2,390, incl.
Reissues	4	No. 25,552 to No.	25,555, incl.
Total	1037		

(D.C. Pa.) Philip Reissue Patent No. 25,101 (66—19), for method of and apparatus for changing knitting. Claims 20 and 21 *Held* invalid and not infringed. *Philip et al. v. Wildman Jacquard Co.*, 225 F. Supp. 955; 140 USPQ 56.

Correction in Index of Patentees

In the OFFICIAL GAZETTE for March 24, 1964, the section pertaining to the List of Patentees beginning on page iv, should begin on page ii, column 2, line 22.

Patents Available for Licensing

In accordance with the provisions of 14 C.F.R. § 1245.200 et seq., and 42 U.S.C. 2457(g) (1958), the National Aeronautics and Space Administration is prepared to grant royalty-free licenses, of the types specified, under the following patents.

Applications for licenses should be addressed to the Administrator, National Aeronautics and Space Administration, Washington 25, D.C.

Patents Available for Exclusive, Revocable, Royalty-Free Licensing

2,837,706.	6– 3–58.	Line Following Servosystem.
2,898,886.	8–11–59.	Mechanically - Limited Electrically Operated Hydraulic Valve System for Aircraft Controls.
2,903,307.	9– 8–59.	Two Component Bearing.
2,926,123.	2–23–60.	Temperature Reducing Coating for Metals Subject to Flame Exposure.
2,934,331.	4–26–60.	Apparatus for Making a Metal Slurry Product.
2,940,259.	6–14–60.	Rocket Propellant Injector.
2,944,316.	7–12–60.	Process of Casting Heavy Slips.
2,945,667.	7–19–60.	Flexible Seal for Valves.
2,956,772.	10–18–60.	Liquid-Spray Cooling Method.
2,971,837.	2–14–61.	High Temperature Nickel-Base Alloy.
2,974,925.	3–14–61.	External Liquid-Spray Cooling of Turbine Blades.
2,984,735.	5–16–61.	Runway Light.
2,991,671.	7–11–61.	Wire Grid Forming Apparatus.
2,991,961.	7–11–61.	Jet Aircraft Configuration.
2,996,212.	8–15–61.	Self Supporting Space Vehicle.
2,997,274.	8–22–61.	Turbo-Machine Blade Vibration Damper.
3,001,363.	9–26–61.	Spherical Solid-Propellant Rocket Motor.
3,001,395.	9–26–61.	Air Frame Drag Balance.
3,001,739.	9–26–61.	Aerial Capsule Emergency Separation Device.
3,004,735.	10–17–61.	Particle Detection Apparatus.
3,005,081.	10–17–61.	High Intensity Heat and Light Unit.
3,005,339.	10–24–61.	Wind Tunnel Airstream Oscillating Apparatus.
3,008,229.	11–14–61.	Process for Applying a Protective Coating for Salt Bath Brazing.
3,010,372.	11–28–61.	Folding Apparatus.
3,011,760.	12– 5–61.	Transpiration Cooled Turbine Blade Manufactured From Wires.
3,012,400.	12–12–61.	Nozzle.
3,012,407.	12–12–61.	Insulating Structure.
3,016,693.	1–16–62.	Electro-Thermal Rocket.
3,016,863.	1–16–62.	Hydrofoil.
3,022,672.	2–27–62.	Differential Pressure Cell.
3,024,659.	3–13–62.	Magnetically Centered Liquid Column Float.
D. 187,350.	3– 1–60.	Aircraft.
D. 187,351.	3– 1–60.	Aircraft.
D. 187,352.	3– 1–60.	Aircraft.
D. 187,353.	3– 1–60.	Aircraft.

Patents Available for Nonexclusive, Revocable Royalty-Free License

3,028,122.	4– 3–62.	Landing Arrangement for Aerial Vehicles.
3,028,126.	4– 3–62.	Three Axis Controller.
3,028,128.	4– 3–62.	Reentry Vehicle Leading Edge.
3,038,077.	6– 5–62.	Infrared Scanner.
3,038,175.	6–12–62.	Survival Couch.
3,041,587.	6–26–62.	Angular Measurement System.
3,041,924.	7– 3–62.	Motion Picture Camera for Optical Pyrometry.
3,045,424.	7–24–62.	Method for Continuous Variation of Propellant Flow and Thrust in Propulsive Devices.
3,049,876.	8–21–62.	Annular Rocket Motor and Nozzle Configuration.
3,053,484.	9–11–62.	Variable Sweep Wing Configuration.
3,057,597.	10– 9–62.	Modification and Improvements to Cooled Blades.
3,059,220.	10–16–62.	Apparatus for Coupling a Plurality of Ungrounded Circuits to a Grounded Circuit.
3,063,291.	11–13–62.	High Vacuum Condenser Tank for Ion Rocket Engines.
3,064,928.	11–20–62.	Variable Sweep Wing Aircraft.
3,067,573.	12–11–62.	Telescoping-Spike Supersonic Inlet for Aircraft Engines.
3,068,658.	12–18–62.	Venting Vapor Apparatus.
3,069,123.	12–18–62.	Instrument Support With Precise Lateral Adjustment.
3,070,330.	12–25–62.	Attitude and Propellant Flow Control System and Method.
3,070,349.	12–25–62.	Multistage Multiple-Reentry Turbine.
3,070,407.	12–25–62.	Air Bearing.
3,072,574.	1– 8–63.	Gas Lubricant Compositions.
3,076,065.	1–29–63.	High-Speed Low-Level Electrical Stepping Switch.
3,077,599.	2–12–63.	Collapsible Loop Antenna for Space Vehicle.
3,079,113.	2–26–63.	Vehicle Parachute and Equipment Jettison System.
3,080,711.	3–12–63.	Peneshape Exhaust Nozzle for Supersonic Engine.
3,083,611.	4– 2–63.	Multi-Lobar Scan Horizon Sensor.
3,084,421.	4– 9–63.	Reinforced Metallic Composites.
3,085,165.	4– 9–63.	Ultra-Long Monostable Multivibrator Employing Bistable Semiconductor Switch To Allow Charging or Timing Circuit.
3,087,692.	4–30–63.	Variable-Span Aircraft.
3,088,441.	5– 7–63.	Valve Actuator.
3,090,212.	5–21–63.	Sandwich Panel Construction.
3,090,580.	5–21–63.	Space and Atmospheric Re-Entry Vehicle.
3,093,000.	6–11–63.	Check Valve Assembly for a Probe.
3,093,346.	6–11–63.	Space Capsule.
3,098,630.	7–23–63.	Annular Supersonic Decelerator or Drogue.
3,100,294.	8– 6–63.	Time-Division Multiplexer.
3,100,990.	8–20–63.	Two-Plane Balance.
3,102,948.	9– 3–63.	Electric Arc Welding.
3,104,079.	9–17–63.	Variable-Geometry Winged Reentry Vehicle.
3,104,082.	9–17–63.	Variable Sweep Aircraft Wing.
3,105,515.	10– 1–63.	Pressure Regulating System.
3,106,603.	10– 8–63.	High Voltage Cable.
3,108,171.	10–22–63.	Radiant Heater Having Formed Filaments.
3,110,318.	11–12–63.	Slosh Suppressing Device and Method.
3,112,672.	12– 3–63.	Umbilical Separator for Rockets.
3,115,630.	12–24–63.	Reflector Space Satellite.
3,118,100.	1–14–64.	Electric Battery and Method of Operating the Same.
3,119,232.	1–28–64.	Rocket Engine.
3,120,101.	2– 4–64.	Channel Type Shell Construction for Rocket Engine and the Like.
3,120,361.	2– 4–64.	Landing Arrangement for Aerospace Vehicle.
3,120,738.	2–11–64.	Ignition System for Manopropellant Combustion Devices.
3,121,309.	2–18–64.	Spherically Shaped Rocket Motor.
3,122,000.	2–25–64.	Apparatus for Transferring Cryogenic Liquids.
3,122,098.	2–25–64.	Apparatus and Method for Control of a Solid Fueled Rocket Vehicle.
3,122,885.	3– 3–64.	Injector for Bipropellant Rocket Engines.
3,123,248.	3– 3–64.	Expulsion Bladder Equipped Storage Tank Structure.
3,123,996.	3–10–64.	Heat Flux Measuring Device.
D. 193,454.	8–21–62.	Aircraft.

CURRENT COMPACT PROSECUTION PRACTICE

On March 18, 1964, the memorandum reproduced below was distributed to the Patent Examining Corps. It is presented here for the information of all applicants and their representatives.

Optimum Examining Procedure—Memorandum #3

Compact prosecution has been official policy since issuance of the Commissioner's Order, "New Examining Procedure," dated July 26, 1962, 781 O.G. 1.

The underlying basic policy of this practice requires that both the applicant and the examiner use thorough forethought and care to do everything essential in every case as early as possible, so that each application may be brought to a proper and equitable conclusion in the minimum total time. Since the practice was adopted, problems during the transition to full enforcement of the new practice have been minimized by flexibility and continuing search for solutions of any problems which emerged. With increasing understanding and use of the practice, increasing benefits are emerging.

This basic policy *now applies to all applications*, and will be cooperatively but rigorously enforced.

The following paragraphs supplement earlier directions by describing particular problem solutions which have yielded increased benefits from compact prosecution procedures.

1. *Loss of opportunity to enter amendments through rigorous enforcement of Rules 112 and 116.*

Experience has shown that adoption of the suggestion of the sixth paragraph of the notice "Practice under Rule 112," 791 O.G. 2, will avoid any loss of rights caused by denial of entry of an amendment under Rule 112.

Nearly all amendments formerly proposed after final rejection (Rule 116), including after appeal (Rules 196 through 198) or after allowance (Rule 312), can *with adequate forethought* be submitted earlier, during the "conference period" discussed below, with no loss of rights.

Trivial informalities, often the subject of Rule 312 amendments, seldom affect significantly the vital formal requirements of any patent, namely (1) that its disclosure be adequately clear, and (2) that any invention present be defined with sufficient clarity to form an adequate basis for an enforceable contract. If important, they should be corrected during the conference period.

For *extreme* cases where an appropriate showing can be made, Rule 116 provides a specific escape route.

If despite the above there are any significant and substantive rights still unprotected, the applicant always has the right to file a continuing application, defining therein such additional rights as he deems necessary. Despite expectations, a continuing check reveals no evidence that compact prosecution has brought any increase in continuation applications, perhaps because proposed changes seldom prove upon investigation to be important enough to justify further expense.

2. *Foreign applications.*

It has been stated that some foreign applicants might be deprived of substantive rights through early closing of prosecution.

Substantive rights for all applicants, domestic or foreign, are always subject to compliance with laws and rules of procedure. Notice currently given by attorneys to foreign clients that protection of their substantive rights requires putting each application in proper condition *prior to* the first action, preferably immediately following filing, has afforded foreign applicants who followed the suggested procedure full protection of their substantive rights.

3. *The Conference Period.*

The "Conference Period," as used here, is the time between the filing of applicant's thorough first response and a concluding action by the examiner. Its intensive use has proved an open sesame to satisfactory and time-saving early conclusion of many cases.

The concept which underlies this practice is that an interview between an applicant or attorney and an examiner, whether in person or by telephone, is not an adversary proceeding. It is a joint and cooperative voyage of discovery, to reveal and define the proper boundary between the applicant's invention and the public right. It calls for maximum cooperation, followed promptly by a supplemental amendment which embodies all areas of agreement, to prepare the case for final action.

To many within and outside of the Office, the saving in time and expense through maximum cooperative use of this "Conference Period" for interviews has been a revealing and pleasant surprise.

4. *Interview practice.*

The availability of personal interviews in the "Conference Period" for attorneys resident or frequently in Washington is obvious. For others more remote, authorization for collect telephone calls has saved much time. If an attorney's "Remarks" request a collect call whenever the examiner considers the case is ready for final disposition other than by allowance, the examiner should call the attorney as requested, regardless of what he plans to do about the case, and inform him of the planned action.

For example, the examiner might simply state that an interview would be useless. More hopefully, he might suggest minor, probably quickly acceptable changes which would result in allowance. If there are major questions or suggestions, the call might state them concisely, and suggest a further telephone or personal interview, at a prearranged later time, giving applicant more time for consideration before discussing the points raised.

For an interview with an examiner who does not have negotiation authority, arrangements should always include an examiner who does have such authority, and who has familiarized himself with the case, so that authoritative agreement may be reached at the time of the interview.

For attorneys remote from Washington who prefer personal interviews, the *grouped interview* practice is effective.

The cases they wish to discuss may include some applications which will not be up for action for many months. If in any such case there is a prearranged interview, *with agreement to file a prompt supplemental amendment putting the case as nearly as may be in condition for concluding action*, prompt filing of the supplemental amendment gives the case special status, and brings it up for immediate special action. Such interviews, promptly followed by supplemental amendments, are richly rewarding time savers for both applicants and examiners.

H. B. WHITMORE,
Superintendent of the Examining Corps.

Mar. 18, 1964.

PATENT EXAMINING CORPS

H. B. WHITMORE, Superintendent

PATENT EXAMINING OPERATIONS AND GROUPS	Oldest Application	
	New	Amended
CHEMICAL EXAMINING OPERATION—P. E. MANGAN, Director.		
GENERAL CHEMISTRY, GROUP 110—R. L. CAMPBELL, Supervisory Examiner Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries.	3-16-62	4-30-62
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Supervisory Examiner Heterocyclic; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids.	6-1-62	7-18-62
PETROLEUM CHEMISTRY, GROUP 130—J. R. LIBERMAN, Supervisory Examiner Hydrocarbons; Halogenated Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices; Organic Chemistry (Part) e.g.: Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhydrides; Acid Halides.	8-10-62	7-23-62
HIGH POLYMER CHEMISTRY, GROUP 140—M. STERMAN, Supervisory Examiner Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins; Reclaiming; Pore-Forming.	3-16-62	5-1-62
COMPOSITIONS AND MOLDING, GROUP 150—L. H. GASTON, Supervisory Examiner Compositions (Part) e.g.: Coating; Molding; Adhesive Compositions; Abrading; Liquid Purification or Separation; Gas Separation; Special Utility; Molding Processes.	6-4-62	4-19-62
COATING AND LAMINATING, GROUP 160—J. REBOLD, Supervisory Examiner Coating: Processes, Apparatus and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Ornamentation; Adhesive Bonding; Special Manufactures.	4-2-62	3-20-62
SPECIALIZED CHEMICAL ARTS AND INDUSTRIES, GROUP 170—W. B. KNIGHT, Supervisory Examiner Bleaching and Dyeing; Fertilizers; Foods; Fermentation; Photography; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Metallurgical Apparatus; Gas, Heating and Illuminating; Cleaning Processes; Liquid Purification; Thermolytic Distillation; Preserving.	4-26-62	4-17-62
CHEMICAL ENGINEERING, GROUP 180—G. D. MITCHELL, Supervisory Examiner Gas, Liquid and Solid Separation; Centrifugal Bowl Separators; Gas and Liquid Contact Apparatus; Distillation; Drying; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	7-10-62	7-6-62
ELECTRICAL EXAMINING OPERATION—N. H. EVANS, Director.		
POWER, GROUP 210—M. L. LEVY, Supervisory Examiner Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art.	7-2-62	6-1-62
SECURITY, GROUP 220—S. BOYD, Supervisory Examiner Ordnance, Firearms and Ammunition; Radar, Sonar, Directional Radio, Torpedoes, Seismic Exploring, Radio-Active Batteries; Nuclear Reactors, Powder Metallurgy, Rocket Fuels; Radio-Active Material.	8-1-62	8-6-62
INFORMATION TRANSMISSION, GROUP 230—S. W. CAPELLI, Supervisory Examiner Communications; Multiplexing Techniques; Facsimile and Related Art.	9-10-62	9-6-62
INFORMATION STORAGE AND RETRIEVAL, GROUP 240—W. W. BURNS, Supervisory Examiner Data Processing, Computation and Conversion; Storage Devices and Related Art.	3-8-62	4-4-62
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—B. G. MILLER, Supervisory Examiner Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks.	6-22-62	6-6-62
RADIATION AND INSTRUMENTS, GROUP 260—F. M. STRADER, Supervisory Examiner Optics; Radiant Energy; Measuring.	6-14-62	6-13-62
ELEMENTS, GROUP 270—E. J. SAX, Supervisory Examiner Conductors; Switches; Miscellaneous.	8-21-62	8-28-62

CONDITION OF PATENT APPLICATIONS AS OF FEBRUARY 29, 1964

Total number of pending applications (excluding Designs)	205, 093
Total number of Design applications pending	5, 775
Total number of applications awaiting action (excluding Designs)	124, 525
Total number of Design applications awaiting action	2, 043
Date of oldest new application awaiting action	Mar. 8, 1962
Date of oldest amended application awaiting action	Mar. 20, 1962

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during April 1964, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*

Patents	Numbers 2,418,109 to 2,419,932, inclusive
Plant Patents	Numbers 733 and 734, inclusive

PATENT EXAMINING OPERATIONS AND GROUPS (Continued)	Oldest Application	
	New	Amended
MECHANICAL ENGINEERING EXAMINING OPERATION—R. A. WAHL, Director.		
MATERIAL OR ARTICLE HANDLING AND DISPENSING, GROUP 310—A. BERLIN, Supervisory Examiner Material or Article Handling and Dispensing; Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Fluid Sprinkling and Fire Extinguishers; Coin Handling and Check Controlled Apparatus; Classifying and Assorting Solids.	1-7-63	1-21-63
METAL AND PLASTICS WORKING, GROUP 320—N. BERGER, Supervisory Examiner Metal Bending, Drawing, Extruding, Forging, Rolling; Sheet Metal Working; Wireworking; Chain, Staple, Horseshoe Making; Metal Founding; Wire Fabrics; Plastic Working Apparatus; Plastic Block, Earthenware Apparatus.	10-30-62	10-15-62
MANUFACTURING AND ASSEMBLING MISCELLANEOUS ARTICLES, GROUP 330—A. M. HORTON, Supervisory Examiner Special Article Making; Assembling, Tool and Implement Making; and Metal Working.	7-12-62	8-9-62
MACHINE TOOLS, MECHANISMS AND ELEMENTS, GROUP 340—F. H. BRONAUGH, Supervisory Examiner Machine Tools for Shaping or Dividing Involving Cutting or Breaking; Machine Elements Including Power Transmission Components, Work and Tool Holders.	10-17-62	7-17-62
HARDWARE, TOOLS AND JOINTS, GROUP 350—T. J. HICKEY, Supervisory Examiner Miscellaneous Hardware; Tools; Joints; Cutlery; Locks; Fasteners; Rod Pipe and Electrical Connectors; Buckles; Buttons, Clasps, Etc.; Pushing and Pulling.	9-4-62	8-1-62
FLUID HANDLING, GROUP 360—E. PAUL, Supervisory Examiner Fluid Handling; Valves; Pipes and Tubular Conduits; Fluent Material Handling; Lubrication; Baths, Closets and Sinks; Joint Packing.	9-26-62	11-29-62
POWER PLANTS, MOTORS AND PUMPS, GROUP 370—C. F. GAREAU, Supervisory Examiner Power Plants, Combustion Power Plants, Expansible Chamber Motors, Rotary Motors and Rotary Expansible Chamber Motors, Expansible Chamber Devices and Internal Combustion Engines, Pumps and Pump Regulation.	9-24-62	10-16-62
HEATING, COOLING AND VENTILATING, GROUP 380—P. L. PATRICK, Supervisory Examiner Furnaces, Liquid Heaters and Vaporizers, Burners, Heat Exchange, Automatic Temperature and Humidity Regulation, Refrigeration, Ventilation, and Illumination.	11-15-62	10-22-62
GENERAL ENGINEERING AND INDUSTRIAL ARTS EXAMINING OPERATION—J. A. MANIAN, Director.		
AGRICULTURE, GROUP 410—A. RUEGG, Supervisory Examiner Animal Husbandry; Butchering; Fishing, Trapping and Vermin Destroying; Plant Husbandry; Tobacco, Earth Working.	12-21-62	1-25-63
CIVIL ENGINEERING, GROUP 420—B. BENDETT, Supervisory Examiner Building Structures; Bridges, Closures; Closure Operators; Safes; Earth Engineering; Drilling; Mining.	10-5-62	10-11-62
PHYSICS, GROUP 430—R. L. EVANS, Supervisory Examiner Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.	9-25-62	8-24-62
TEXTILES AND APPAREL, GROUP 440—R. C. MADER, Supervisory Examiner Textiles; Winding and Reeling; Tying Strands; Apparel; Boot and Shoe Making; Sewing Machines.	11-23-62	11-19-62
TRANSPORTATION, GROUP 450—P. ARNOLD, Supervisory Examiner Railways and Rolling Stock; Brakes; Land Vehicles; Aeronautics; Ships.	12-3-62	12-4-62
FURNITURE AND RECEPTACLES, GROUP 460—W. S. COLE, Supervisory Examiner Furniture; Supports; Cabinet Structures; Receptacles; Baggage.	12-4-62	1-14-63
PRINTING, STATIONERY AND MATERIAL TREATMENT, GROUP 470—L. W. VARNER, Supervisory Examiner Printing; Typewriters; Stationery; Material Treatment.	11-16-62	9-17-62
PERSONAL TREATMENT, ADORNMENT AND AMUSEMENTS, GROUP 480—L. R. PRINCE, Supervisory Examiner Surgery; Dentistry; Artificial Body Members; Toiletry; Amusement Devices; Jewelry; Mechanical Guns; Projectors.	11-28-62	12-4-62
DESIGNS, GROUP 490—J. A. MANIAN, Supervisory Examiner Industrial Arts; Household, Personal and Fine Arts.	9-6-63	9-4-63

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE LYMAN S. ALLEN

No. 7016. Decided December 12, 1963

[51 CCPA —: 324 F.2d 993; 139 USPQ 492]

1. PATENTABILITY—OBVIOUSNESS—EVIDENCE—UNSOLVED PROBLEM IN THE ART.

"While appellant's arguments imply that there may have been an unsolved problem in the art, an allegation to this effect is not evidence of unobviousness unless it is shown, as was not done here, that the widespread efforts of skilled workers having knowledge of the prior art had failed to find a solution to the problem."

2. APPEAL TO THE U.S. COURT OF CUSTOMS AND PATENT APPEALS—EFFECT OF GENERAL AFFIRMANCE BY BOARD OF EXAMINER'S DECISION.

The general affirmance by the Board of Appeals *Held* to go to all stated grounds of rejection by the Examiner.

3. SAME—MATTER BEFORE COURT—ARGUMENT NOT ADVANCED BELOW.

"No reason has been advanced why the Examiner or the Board should have acted specifically on the manipulative steps of adding acid hydro-organosols and sodium silicate below the surface of the boiling sol as claimed in claims 16 through 19 since this feature apparently was not urged by appellant as a basis for patentability either before the Examiner or the Board of Appeals. From the record here, it appears that this argument was put forward by appellant for the first time in this court. The failure of appellant to have advanced this argument before the Examiner and the Board precludes raising it for the first time here."

4. PATENTABILITY—PARTICULAR SUBJECT MATTER—"PREPARATION OF SOLS."

The decision of the Board of Appeals, refusing certain claims in an application entitled "Preparation of Sols" as unpatentable over the prior art, is affirmed.

APPEAL from the Patent Office. Serial No. 555,258.

AFFIRMED.

Ellsworth H. Mosher, Stevens, Davis, Miller & Mosher, Richard W. Sternberg for appellant.

Clarence W. Moore (*Jack E. Armore* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, Jr., *Associate Judges*

SMITH, *J.*, delivered the opinion of the court.

The issue in the present appeal requires a determination of whether the differences between the cited prior art and the invention disclosed in appellant's application [1] and claimed in rejected claims 1–19, inclusive, are such that the invention is unpatentable in view of 35 U.S.C. 103.

The appealed rejection predicated obviousness of the claimed invention on the combined teachings of the following references:

Di Maio, 2,515,949, July 18, 1950.
Marshall, 2,515,960, July 18, 1950.
Rule I, 2,577, 484, December 4, 1951.
Rule II, 2,577,485, December 4, 1951.

The invention defined by the appealed claims relates to a process for the production of colloidal dispersions having silica as the disperse phase in water as the liquid dispersion medium. The problem in this

[1] Serial No. 555,258, filed Dec. 27, 1955, for "Preparation of Sols."

art which appellant asserts was solved by his invention appears to have been how to increase the silica content of such dispersions without rendering the dispersion unstable towards gelation. Appellant asserts that by his claimed process such dispersions can be achieved in which the disperse phase is 30% or more by weight of the dispersion and consists of sub-microscopic silica particles (within the size ranges of about 5 to about 150 millimicrons), the dispersion having a stability toward gelation for at least 6 months at storage temperatures ranging from 0° C. up to 35° C., and without any significant settling of the silica particles.

The specific combination of references relied upon to support the rejection was that all the claims were "unpatentable over Di Maio or Marshall in view of the Rule patents."

Appellant's position here as stated in his brief is:

> • • • The appellant's process is unobvious in that it enables the production of valuable end products (stable aquasols of 30% silica content) not heretofore obtainable by processes using a raw or starting material of the nature employed by appellant, which process is in no way taught by, suggested, or even likely to be discovered from the prior art. • • •

In reaching the ultimate judgment as to obviousness required by section 103, we must analyze the record to determine factually what constitutes the "subject matter as a whole" and the "differences" between it and the prior art. We shall start this analysis by first considering the rejected claims.[2]

The 19 rejected claims are each directed to "a process of producing stable, alkaline silica aquasols of high silica concentration" which are further specified in the claims as "containing about 30% by weight and more of silica" (cl. 1–6) or "colloidal silica" (cl. 7–19). Except for specifying a control of the salt content of the materials within the claimed limits of 0.025% (cl. 1–6 and 12–15) or "less than 0.01%" (cl. 7–11 and 16–19) the claimed process steps per se are those of the Marshall or Di Maio references.

The position of the Board was summarized in its opinion as follows:

> • • • While concededly both Di Maio and Marshall disclose the use of acid-reacting organo aquasols as the initial material containing more than 0.025% by weight of sodium sulfate • • •[3], we agree with the Examiner that the reduction in the amount of salt in the acidic hydro-organosol to the degree as claimed would be obvious, particularly in view of the Rule patents in which substantially salt free aquasols are taught for the production of basic aquasols of high concentration and good stability. • • •

The specification of the appealed application discusses the Di Maio and Marshall references and states specifically as to Di Maio:

> • • • While the process described in such patent is suitable for producing stable alkaline silica aquasols containing about 15 to 20% by weight of silica, the subsequent concentrating of such sols to a silica content of 25% by weight by the evaporation of water results in a sol having rather limited stability to gelation. Usually such sols will gel within a period of one month at normal storage temperatures, and this period of stability toward gelation is not sufficient for commercially saleable sols which are often stored for periods of 6 months or longer prior to use. Moreover, there is a distinct need in commerce for alkaline silica aquasols containing 30% or more of silica.

As to the Marshall reference, the specification states:

> • • • In accordance with the teachings of this patent it is possible to obtain silica sols containing 20–25% by weight of SiO_2 which are stable toward gelation for practical periods of time. However, if such sols are concentrated to a 30% by weight or higher silica concentration by evaporation of water the sols are not stable toward gelation for practical periods of time, and hence the 30% silica sols produced by the process of this patent are not generally satisfactory for commercial sale.

The specification also states:

> The present invention is based on the discovery that stable, alkaline silica aquasols containing about 30% by weight or more of colloidal silica can be prepared from acidic silica hydro-organosols by a process which involves alkalizing the hydro-organosol and removing the organic liquid therein by heating, followed by removal of a portion of the water from the sol by evaporation, provided that the acidic silica hydro-organsol used is free or substantially free of salts.

Thus we see that appellant's process is essentially an improvement on the prior Di Maio and Marshall processes and that a novel critical feature of appellant's process is asserted to reside in the proviso above quoted, i.e., "that the acidic silica hydro-organosol used is free or substantially free of salts."

At this point we turn in our analysis to the Rule patents to determine what they teach the art. It is appellant's position as stated in his brief that the Board was "overgenerous in its interpretation of the Rule patents," and that:

> • • • While it is true that the Rule patents do teach *specific and special* processes for the production of basic aquasols of high concentration and good stability from salt-free aquasols, it is submitted that the Rule patents do not teach that such basic aquasols can be produced from any silica starting or raw material or by any general technique or any sequence of manipulative steps. • • •
>
> • • • • • • •
>
> It has already been pointed out in the discussion of the Rule I and Rule II references in this brief that these Rule patents are improvements over the process of the Bechtold et al. patent • • • in regard to the preparation of high purity aquasols, and that the Bechtold et al. process results in stable aquasols of at least 35% silica concentration *without* the removal of salt contaminants using commercial sodium silicates, with anion contaminants, as the basic raw material. • • •

The Solicitor, however, states in his brief:

> The contention that the Rule patents do not suggest or teach that salt reduction is employed to produce stable aquasols of high concentration • • • is inaccurate. The title of each patent contains the expression "Stable Silica Sols." One of the objects clearly stressed in each patent is to provide processes whereby "silica sols of high purity and stability can be made" • • •. This is particularly pointed out in connection with sols containing "upwards of 35% SiO_2" in the first paragraph of the Rule II specification • • •.

After charging that appellant "has misleadingly misinterpreted the Rule patents" the Solicitor further states:

> • • • Thus, he [appellant] states • • • that Rule I in Example I treats a commercial sodium silicate solution with a cation exchanger and "provides a starting aquasol raw material containing *appreciable* amounts of sulfate and chloride ions." But, the same Example I goes on to state that the impure silica acid solution thus formed was then passed through an anion exchanger to remove the chloride and sulfate ions (as hydrochloric and sulfuric acids), thus

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[2] Claim 1 is considered to be representative of the rejected claims and reads as follows:

> 1. A process of producing stable, alkaline silica aquasols of high silica concentration which comprises admixing an acidic silica hydro-organosol containing water, from about 4 to about 12% by weight of silica as silicic acid, from about 25 to about 60% by weight of a substantially neutral, water-miscible organic liquid consisting of carbon, hydrogen and oxygen atoms and having a boiling point below that of water at atmospheric pressure and less than 0.025% by weight of a salt contaminant, with an alkaline aqueous solution containing a low concentration of an alkaline alkali metal compound selected from the group consisting of alkali metal hydroxides and alkali metal silicates, distilling said organic liquid from the resulting sol and subsequently evaporating sufficient water to provide an aquasol containing about 30% by weight and more of silica, said hydro-organosol and alkaline aqueous solution being employed in quantities to provide a final sol having a pH within the range of about 9.0 to about 10.7.

[3] The opinion here refers to Example 1 "of Marshall as originally presented" as showing a sodium sulfate content of 0.01%. This appears to have been predicated on a printing error in the patent. In its decision on petition for reconsideration the Board stated:

> • • • our conclusions were not based upon the interpretation of Marshall as originally and erroneously printed, but upon the combination with the teachings in the Rule patents.

We take this to mean that the essence of the rejection is as we have quoted it in the text above.

providing a substantially salt-free starting material. Then, appellant erroneously * * * refers to Rule II as teaching that de-ionization (salt removal) of an aquasol to a high degree renders the aquasol comparatively unstable at high concentration. However, this refers to statements in Rule II * * * relating to two abandoned applications by a third party and has no relation whatsoever to the process disclosed in the Rule II patent.

This disagreement requires us to determine from the Rule patents themselves which view should be adopted here. Rule I clearly discloses the addition of a substantially salt-free sol of active silica to "a substantially salt-free silica sol of substantially spherical, unaggregated, dense particles." In so doing Rule I states:

By the operation of a process of this invention as just described there may be produced *silica sols which are stable even when concentrated to upwards of 35% SiO_2*, at SiO_2: M_2O ratios of 130:1 to 500:1, and the processes including such a concentration step constitute a preferred embodiment of the invention. The sols produced may have a silica content of, say, 40 or 45% by weight at these ratios. Such sols may advantageously be prepared according to this invention from cheap, readily available grades of commercial sodium silicate solution. *The processes, in a preferred aspect, employ ion-exchange methods for removing unwanted ions to make the salt-free, active-silica sols*, and may do so with a minimum of handling of the sols and of plant investment. [Emphasis added.]

Rule II states:

This invention relates to novel *silica sols* and methods for making them. More particularly, the invention is concerned with sols *which are stable, even when concentrated to upwards of 35% SiO_2*, by reason of the fact that they contain amorphous silica particles which are dense, non-agglomerated, spherical and 10 to 130 millimicrons in diameter, and *that they are substantially salt-free* and contain enough alkali metal hydroxide to give a silica: alkali mole ratio from 130:1 to 500:1. * * * [Emphasis added.]

While we recognize the differences urged by appellant between the processes of Rule I and Rule II and appellant's process, it was not this comparison which the Examiner and the Board relied upon in finding appellant's process to be obvious. As we understand the position of the Patent Office it is that the claimed process is old in Di Maio or Marshall except for the use of the salt-free or substantially salt-free materials claimed by appellant. Rules I and II were used to show what was within the knowledge of one of ordinary skill in this art concerning salt-free or substantially salt-free silica sols having 35% and upwards of silica oxide.

We therefore find it unnecessary to compare the processes of Rule I and II with the process of appellant's claims.

The processes of the primary and secondary references seem to us to be both analogous and comparable. One skilled in this art is taught by these references to substitute sodium silicate for the hydroxides of the primary references, as the alkalizing material. The consequent advantages asserted by the appellant, that such silicate introduces a portion of the silica in the final product, would seem to be obvious.

[1] Appellant's argument based on the alleged discovery of a defect in the processes of the primary references and the correction of this defect by salt reduction of the hydro-organosol starting material to produce stable aquasols of 30% or more silica content is not in point. Salt reduction in the production of stable colloidal suspensions of high silica content was taught by the Rule patents as above pointed out. While appellant's arguments imply that there may have been an unsolved problem in the art, an allegation to this effect is not evidence of unobviousness unless it is shown, as was not done here, that the widespread efforts of skilled workers having knowledge of the prior art had failed to find a solution to the problem. See *Toledo Pressed Steel Co.* v. *Standard Parts, Inc.*, 307 U.S. 350, 356, 41 USPQ 593 (1939).

We therefore affirm the rejection of claims 1–5, 7, 9 and 10.

Appellant asserts that even if the above claims be found unpatentable his use of sodium (or alkali metal) silicates with hydro-organosols as called for in claims 6, 8 and 11 through 19 is not disclosed in the art and the manipulative steps of adding acid hydro-organosols and sodium silicate below the surface of the boiling sol, as in claims 16 through 19, are not disclosed in the art.

[2] While the Board of Appeals in affirming the Examiner's rejection did not specifically discuss the above stated rejection of claims 6, 8 and 11 through 19 on the Rule II disclosure relating to the use of alkali metal silicates, the general affirmance by the Board goes to all stated grounds of rejection. *In re Wagenhorst*, 20 CCPA 991, 64 F.2d 780, 17 USPQ 330; *In re Rubinfield*, 47 CCPA 701, 270 F.2d 391, 123 USPQ 210.

Appellant stated his position as to the use of sodium (or alkali metal) silicates as called for in claims 6, 8 and 11 through 19, in the amendment of April 11, 1958. Here appellant referred to his use of alkali metal silicates but made no reference to allowability of the claims by reason of the manipulative steps specified in claims 16 through 19. In response to this amendment, the Examiner repeated the prior rejections which disposed of all the claims without considering the issues here raised by appellant as to claims 6, 8 and 11 through 19.

In appellant's brief on appeal to the Board, appellant argued the allowability of claims 6, 8 and 11 through 19 over the Rule patents by reason of the limitation in the claims to alkali metal silicates. We note, however, that appellant again failed to assert patentability on the basis of the manipulative steps now asserted as to claims 16 through 19. The Examiner's answer of June 2, 1940 stated:

Appellant further contends the Rule patents do not describe the use of alkali metal silicates. This assertion also appears to be in error. See Rule II, column 9, lines 63–68.

The portion of Rule II referred to by the Examiner reads:

It will be understood that the addition of an alkali metal oxide or a soluble alkali metal silicate is the equivalent of adding an alkali metal hydroxide because as soon as the oxide or silicate makes contact with the aqueous silica sol it forms the hydroxide. * * *

We agree with the Examiner that the use of an alkali metal silicate, such as sodium silicate instead of sodium hydroxide, as the alkaline aqueous solution in the alkalizing step, would be an obvious expedient, in view of the above teaching in Rule II that "a soluble alkali metal silicate is the equivalent of adding an alkali metal hydroxide."

[3] No reason has been advanced why the Examiner or the Board should have acted specifically on the manipulative steps of adding acid hydro-organosols and sodium silicate below the surface of the boiling sol as claimed in claims 16 through 19 since this feature apparently was not urged by appellant as a basis for patentability either before the Examiner or the Board of Appeals. From the record here, it appears that this argument was put forward by appellant for the first time in this court. The failure of appellant to have advanced this argument before the Examiner and the Board precludes raising it for the first time here.

[4] The decision of the Board of Appeals is therefore affirmed.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

IN RE JOSEPH G. WILSON, ROBERT F. DUTTON, TERRELL W. HAYMES AND JUSTIN C. DYGERT

No. 7029. Decided December 12, 1963

[51 CCPA —; 325 F.2d 243; 139 USPQ 507]

1. PATENTABILITY—OBVIOUSNESS—NON-ANALOGOUS ART.

"* * *, appellants point out the differences between claim 1 and the disclosures of Campbell et al. and Tyson, and argue that these differences are such that the subject matter of claim 1 would not have been obvious. They dismiss the disclosures of the British patent and Sedille et al. as "non-analogous art,' since they are not closely related to the art of regenerating spent cracking catalyst. This argument fails to recognize, however, that claim 1 does not specifically relate to that art; indeed, the process defined therein may be used in a whole range of applications, including power plants such as those shown in the British patent and Sedille et al."

2. SAME—SAME—SAME.

"With respect to this claim, we think little consideration need be given to the disclosures of the British patent and Sedille et al. Those patents are concerned with power plants, an art which, as appellant asserts, is remote from the catalyst regeneration process of claim 9. When we evaluate the differences between the prior art and appellants' process as claimed in claim 9, we find that these references have little weight in establishing obviousness of appellants' process. Section 103 requires us to test obviousness from the viewpoint of one skilled in the art to which the subject matter of the claimed invention pertains. In the case of claim 9 that art is, broadly, fluidized-bed catalyst regeneration, and not power plants such as those with which the British patent and Sedille et al. are concerned."

3. SAME—PARTICULAR SUBJECT MATTER—"COMBUSTION WITH FLUIDIZATION AND AFTER-BURNING."

The refusal of certain claims in an application entitled "Combustion with Fluidization and After-Burning," as unpatentable over the prior art, is reversed as to one claim and affirmed as to the others.

APPEAL from the Patent Office. Serial No. 817,420.

MODIFIED.

Oswald H. Milmore, for appellants.

Clarence W. Moore (*George C. Roeming* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, JR., *Associate Judges*

SMITH, *J.*, delivered the opinion of the court.

Appealed claims 1–19 of appellants' patent application [1] were, as stated by the Board of Appeals, "rejected as being unpatentable over" certain references. This rejection raises the single issue under 35 U.S.C. 103 of the obviousness of the claimed invention.

The asserted invention with which we are here concerned relates to a process and accompanying apparatus which is employed particularly in connection with petroleum cracking in which a powdered metal oxide catalyst is used. The asserted improvement over prior processes and apparatus resides in the conservation and utilization of energy developed during the regeneration of such catalyst. During the cracking process, the catalyst loses its catalytic activity when it becomes coated with carbonaceous matter and in this condition is referred to as "spent" catalyst. In order to reuse such spent catalyst it is regenerated by burning away the carbonaceous matter. In appellants' process the spent catalyst, which is already hot as a result of its use in the cracking process, is continuously introduced into a combustion chamber or tower where air is forced upwards through it, forming a fluidized bed.[2] The carbonaceous matter combines with the oxygen in the air and is burned off the catalyst particles. The regenerated catalyst is then discharged continuously from the system at another point, and is available for reuse in the cracking process. In order to avoid excessive air compression costs as well as to control the temperature in the fluidized bed, it is necessary to limit the amount of fluidizing air introduced into the tower. This results in a supply of air which, although sufficient to burn away the carbon coating on the catalyst particles, is not sufficient to effect *complete* combustion of the carbon in the fluidized bed. The products of this incomplete combustion (hereinafter called "exhaust gas") contain carbon monoxide in addition to carbon dioxide and nitrogen. The concentrations of the various components in this exhaust gas are such that the gas is incapable of self-sustained, normal burning when diluted with supplemental air (i.e., the exhaust gas will not burn without either heating, as with a flame, or adding fuel, or introducing an oxidation promoting catalyst).

Appellants propose by their invention to recover a maximum amount of the energy remaining in this exhaust gas and to convert it to productive use in their process. To this end they first clean the exhaust gas and remove any entrained catalyst particles by means of separators. The clean exhaust gas is then mixed with supplemental air and heated to cause combustion of the carbon monoxide. The resulting heat energy is removed from the combustion gases by heat exchange in a waste-heat boiler. The gas is then discharged from the boiler through one or more turbines, and the power thereby generated in the turbines is used to drive compressors which in turn supply the system with both the original fluidizing air and the subsequent supplemental air. Appellants state that this increased efficiency in energy recovery makes their system self-sustaining with respect to air compression requirements.[3]

The essence of appellants' claimed invention appears to be their discovery of a method whereby both the mechanical and the chemical energy of the exhaust gas are recovered, thereby increasing the efficiency and economy of the regeneration process.

The references relied upon by the Examiner are as follows:

Janicki, 1,052,588, February 11, 1913.
Tyson, 2,384,356, September 4, 1945.
Holmes, 2,559,623, July 10, 1951.
Sedille et al., 2,592,749, April 15, 1952.
Campbell et al., 2,853,455, September 23, 1958.
British patent, 675,583, July 16, 1952.

The Examiner stated in his answer that claims 1–3, 7–12 and 15–19 were rejected as unpatentable over Campbell et al. in view of Tyson and Sedille et al. or the British patent. Claims 4 and 13 were rejected as unpatentable over the above combination of references when taken

[1] "Combustion with Fluidization and After-Burning," Serial No. 817,420, filed June 1, 1959, as a continuation-in-part of appellants' application Serial No. 747,007, filed July 7, 1958, and later abandoned.

[2] As appellants state at page 4 of their brief, "a fluidized bed is a confined bed of solids of powdery size through which air ascends, causing the particles to be separated and undergo rapid motions; the bed has a defined upper surface and acts as a quasi-liquid, and exerts a hydrostatic pressure."

[3] It is clear that, in using the term "self-sustaining as regards compression requirements," appellants are not asserting that their invention transcends the First Law of Thermodynamics, or that they have found some magical way to increase the enthalpy of their system. They are merely stating that the most beneficial feature of their invention is that they are able to recover enough of the energy produced in burning away the carbonaceous matter from the spent catalyst to satisfy the compressed air requirements of their process.

further with Janicki, while claims 5, 6 and 14 were rejected on the first combination when taken further with Holmes. Section 103 requires that we first determine the differences between the subject matter sought to be patented and the prior art, and then decide whether these differences are such that, as a matter of law, the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art of regenerating spent cracking catalyst by a fluidized-bed combustion process.

The following summary sets forth what we deem to be the essential disclosures of the references. The features which we believe to differ significantly from appellants' claimed invention (in its most narrow form) are italicized:

1. Campbell et al. discloses a fluidized-bed type of catalyst regeneration system, wherein supplemental air *and additional fuel* are added to the exhaust gas, and the mixture is burned in a boiler. *The steam from the boiler is then passed through the regeneration tower, where it is superheated.* The resulting superheated steam is then used to drive a steam turbine. *No attempt is made to recover the mechanical energy of the exhaust gas.*

2. Tyson discloses a catalyst regeneration system *which operates without fluidization. Complete combustion occurs in the catalyst bed so that the exhaust gas contains no carbon monoxide. Fuel is added to the exhaust gas and burned to remove the excess oxygen* and the hot gas passes through waste-heat boilers and then drives a turbine-compressor set which supplies air to the regeneration tower. *The system is not self-sustaining with respect to compression requirements.*

3. The British patent discloses a *power plant* in which *pulverized coal* is fed into a gas-producing chamber and is gasified by the addition of compressed air. The resulting gas is then cleaned, mixed with additional air and burned in a combustion chamber. The combustion products are used to drive a turbine which in turn may drive a generator or a compressor. Steam generated *in cooling jackets* located at various places in the system is used to drive a steam turbine which in turn drives a generator.

4. Sedille et al. discloses a *power plant* very similar to that shown in the British patent.

5. Janicki discloses a *hydrocarbon power generator* with pressure venting means designed to control the power output of a turbine.

6. Holmes discloses a *turbo-supercharger system* with pressure venting means for controlling the rate of delivery of air to a burner from a compressor.

With these differences in mind, we must now consider the legal question of whether appellants' claimed subject matter as a whole would have been obvious to one of ordinary skill in this art at the time appellants made their invention.

Claim 1 is not limited to the catalyst regeneration process which we have described, but instead is more broadly directed to a "process which comprises the incomplete combustion of fuel within a closed fluidization-combustion zone."[4] We agree with the Board that the scope of this language is broad enough to include the type of power plant disclosed by the British patent (and similarly, by Sedille et al.). [1] In their brief, appellants point out the differences between claim 1 and the disclosures of Campbell et al. and Tyson, and argue that these differences are such that the subject matter of claim 1 would not have been obvious. They dismiss the disclosures of the British patent and Sedille et al. as "non-analogous art," since they are not closely related to the art of regenerating spent cracking catalyst. This argument fails to recognize, however, that claim 1 does not specifically relate to that art; indeed, the process defined therein may be

[4] Among the examples listed by appellants in their specification as possible applications of their process are (1) the burning of fly ash which is produced when powdered coal is consumed in a furnace and which still contains oxidizable fuel, (2) the burning of finely-subdivided coke, and (3) the burning of limestone which is admixed with coal, soot or coke for the production of lime.

used in a whole range of applications, including power plants such as those shown in the British patent and Sedille et al. There are but two substantial differences between the process described in claim 1 and that shown in the British patent: (1) The British patent is concerned with gasification of low-grade fuel in a fluidized bed, while claim 1 involves incomplete combustion in a fluidized bed; (2) the British patent teaches recovery of the chemical energy (heat) of the exhaust gas only incidentally to the process of cooling various parts of the system. These differences are so slight that we think the invention as defined in claim 1, the asserted essence of which lies in the utilization, in a power plant, of both the mechanical and chemical energy of the fuel gas, would have been obvious to one of ordinary skill in the art.

Process claims 2, 3, 7 and 8 are all dependent upon claim 1 and define various modifications thereof. For example, claim 8 specifies the use of an oxidation catalyst and claim 7 calls for the burning of auxiliary fuel as alternative methods for bringing the exhaust gas to oxidizing conditions in the boiler. Claim 10 defines the apparatus necessary to perform the process described in the earlier claims and claims 11, 12 and 15–19 define various modifications of that apparatus. For example, claim 12 calls for a second compressor-turbine set (to supply the supplemental air) in addition to the single set in claim 10 (which supplies only the fluidizing air). We have carefully considered all the various modifications and details set forth in these claims and it is our opinion that the subject matter of these claims would have been obvious in view of the slight differences between the claimed subject matter and the prior art.

Claims 4 and 13 describe pressure venting means located between the boiler and the turbine which cause the turbine to operate at constant output power. Likewise, claims 5, 6 and 14 describe pressure venting means located between the compressor and the regeneration tower which control the amount of fluidizing air which enters the system. We can perceive no substantial differences between these modifications and the comparable devices disclosed by Janicki and Holmes, and we therefore agree with the Board that the subject matter described in these claims would have been obvious.

Claim 9, however, is much more narrowly drawn, and requires a fresh analysis. It reads as follows:

9. In the process of regenerating spent finely divided metal oxide cracking catalyst bearing carbonaceous deposits, wherein said spent catalyst is continuously admitted into a closed fluidization-combustion zone, fluidizing-combustion air is continuously flowed upwardly through said catalyst to form a fluidized bed, said carbonaceous deposits are burned to produce an exit gas which is discharged from the top of said bed and contains entrained catalyst, carbon dioxide and carbon monoxide, said exit gas being incapable of self-sustained combustion at the exit temperature when mixed with supplemental air, and regenerated catalyst is continuously discharged from said zone, the improvement of recovering heat and work energy from said exit gas sufficient to supply the combustion and fluidization air requirements of the process by: maintaining said fluidization-combustion zone at a substantial superatmospheric pressure sufficient to permit expansion of the exit gas in a turbine, sustantially separating said entrained catalyst from the exit gas by inertia without substantially lowering the exit gas temperature, mixing the clean exit gas with supplemental air, subjecting the resulting mixture to oxidizing conditions substantially at said superatmospheric pressure within a boiler having fluid-confining heat-transfer walls to cause further combustion in the clean gas with oxidation of the carbon monoxide and thereby heating said heat-transfer wall by radiation and convection, discharging the resulting combustion products from the boiler and

expanding them in expansion gas turbine means and thereby generating shaft power, compressing said fluidizing-combustion air and supplemental air to said superatmospheric pressure and supplying them to the fluidization-combustion zone and the clean exit gas by using said shaft power.

[2] With respect to this claim, we think little consideration need be given to the disclosures of the British patent and Sedille et al. Those patents are concerned with power plants, an art which, as appellant asserts, is remote from the catalyst regeneration process of claim 9. When we evaluate the differences between the prior art and appellants' process as claimed in claim 9, we find that these references have little weight in establishing obviousness of appellants' process. Section 103 requires us to test obviousness from the viewpoint of one skilled in the art to which the subject matter of the claimed invention pertains. In the case of claim 9 that art is, broadly, fluidized-bed catalyst regeneration, and not power plants such as those with which the British patent and Sedille et al. are concerned.

Campbell et al., although directed to a fluidized-bed type of catalyst regeneration process, does not disclose recovery of the *mechanical energy* of the exhaust gas. Tyson, on the other hand, does suggest the dual methods of energy recovery, but the gas from which the energy is recovered is very different from that found in appellants' process as claimed in claim 9. Tyson's gas is the result of *complete* combustion (i.e., all of the carbon is converted to carbon dioxide and the gas contains excess oxygen) in a *non*-fluidized system; therefore, *no carbon monoxide is present and additional fuel must be added to remove the excess oxygen* from the gas. We think these factual differences warrant the legal conclusion that it would not have been obvious for one of ordinary skill in the catalyst regeneration art to attempt the recovery of both the chemical and mechanical energy from hot exhaust gases containing amounts of carbon monoxide, where the gas is produced as the result of incomplete combustion in a fluidized bed of spent catalyst. In addition, neither Campbell et al. nor Tyson disclose a system which is self-sustaining with respect to air compression requirements. This feature is an essential advantage of appellants' invention as defined in claim 9.

[3] For the foregoing reasons the decision of the Board is affirmed with respect to claims 1–8 and 10–19, and reversed with respect to claim 9.

MODIFIED.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,432,963, T. P. Camp, Water-resistant gypsum products and process of making, **filed** Nov. 15, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c2069, *United States Gypsum Co.* v. *National Gypsum Co.*

2,571,435, A. L. Flamm, Gas fueled cigar lighter; **2,882,940,** C. Zellweger, Filling valves for liquefied gas lighters; **Re. 24,163,** same, Valves for filling pyrophoric lighters for liquified gas, **filed** Nov. 19, 1962, D.C., S.D. Calif. (Los Angeles), Doc. 63–1522–EC, *Ronson Corporation (Ronson Art Metal Works, Inc.) et al.* v. *Maruman of California, Inc. et al.* Patents held valid; defendants enjoined; preliminary injunction of Jan. 23, 1963, enjoining defendants from use of T/M is made permanent Nov. 22, 1963.

2,734,651, A. C. Lindstrom, Bottle closures, **filed** Apr. 26, 1961, D.C., S.D.N.Y., Doc. 61–1502, *Gilbert Mfg. Co., Inc.* v. *Poly Seal Corp.* Action dismissed Nov. 27, 1963.

2,748,480, B. Weissman, Artificial denture, **filed** Dec. 5, 1963, D.C., E.D.N.Y. (Brooklyn), Doc. 63C–1286, *Whaledent, Inc.* v. *Lajos Salamon.*

2,788,784, Birch and Gattone, Means for administering medication orally into the respiratory organs, **filed** May 22, 1963, D.C., S.D.N.Y., Doc. 63/1474, *Birch & Gattone, Inc.* v. *National Dynamics Corp.* Consent judgment; patent infringed Dec. 4, 1963.

2,802,495, T. W. Nicholson, Swiveled-scraper-plate rotary-ring log barkers; **2,802,496,** same, Barking scraper blades and mountings therefor, **filed** Aug. 17, 1959, D.C., W.D.S.C. (Greenville), *Thomas W. Nicholson* v. *Carl W. Mullis Engineering & Mfg. Co., Inc.* Final judgment; complaint and counterclaim dismissed Nov. 18, 1963.

2,802,496. (See 2,802,495.)

2,806,811, R. S. Von Hazmburg, Paper-covered gypsum board, **filed** Nov. 15, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c2070, *U.S. Gypsum Co.* v. *National Gypsum Co.*

2,815,339, F. A. Harte, Jr. et al., Tray or support therefor, **filed** Nov. 25, 1963, D.C., E.D. Mich. (Detroit), Doc. 24648, *Francis A. Harte, Jr. et al.* v. *Retracto-Tray, Inc. et al.*

2,816,591, K. Reiner, Light weight metal lock nut having a relatively hard, thin and resilient locking sleeve portion, **filed** Nov. 26, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63–1436–HW, *Kaynor Mfg. Co., Inc.* v. *Elastic Stop Nut Corp. of America et al*

2,828,194, Hopkins and Easley, Etching, **filed** Apr. 4, 1963, D.C., W.D.S.C. (Greenville), Doc. 4313, *The Dow Chemical Company* v. *Frederick John Locke et al. doing busines as Palmetto Engraving Company.* Patent held valid (notice Nov. 29, 1963).

2,854,925, J. A. Crockford et al., Projectile for delivery of drugs to animals, **2,923,243,** same, Projectile for liquid drug delivery to animals; **3,022,785,** same, Method of delivering drugs into animals; **Reg. No. 688,538** (CAP-CHUR EQUIPMENT), Palmer Chemical & Equipment Company, Inc., projectiles containing a paralytic or medicinal composition for use on animals, and guns for propelling said projectiles, **filed** Nov. 27, 1963, D.C. Nebr. (Omaha), Doc. 01890, *Palmer Chemical & Equipment Co., Inc.* v. *Products Design.*

2,882,940. (See 2,571,435.)

2,883,727, C. J. Obst, End construction for an expansion bracelet, **filed** Dec. 9, 1963, D.C., E.D.N.Y. (Brooklyn), Doc. 63C–1295, *Flex-Let Corp.* v. *Jacoby Bender, Inc.*

2,896,857, G. R. Thompkins, Washing apparatus, **filed** Nov. 26, 1963, D.C., E.D. Wis. (Milwaukee), Doc. 63–C–290, *George R. Thompkins* v. *Robert F. Dryden.*

2,923,243. (See 2,854,925.)

2,926,367, Gilbridge and Rockwell, Machines for shaping uppers over lasts; **2,966,753,** A. J. Gilbridge, Toe lasting machines, **filed** Oct. 11, 1961, D.C. Mass. (Boston), Doc. 61–798–W, *United Shoe Machinery Corporation* v. *Industrial Shoe Machinery Corp.* Patents held invalid; complaint and counterclaims dismissed Nov. 26, 1963.

2,931,216, A. W. Rauth, System of testing gas meters, **filed** Dec. 4, 1963, D.C., E.D. Mich. (Detroit), Doc. 24684, *Adolph W. Rauth* v. *Michigan Consolidated Gas Company.*

2,951,741, H. A. Sill, Process for treating complex ores; **Reg. No. 526,596** (TITRACINE), Schenley Laboratories, Inc., Tablets for gastric hyperacidity, **filed** Apr. 30, 1962, D.C., S.D.N.Y., Doc. 62/1641, *Austin B. Pilliner* v. *Metallurgical Resources, Inc. et al.* Order of dismissal Nov. 26, 1963.

2,959,555, Martin and Abel, Copper and iron containing scale removal from ferrous metal, **filed** Feb. 20, 1962, D.C., N.D. Ohio (Cleveland), Doc. C-62–206, *The Dow Chemical Co.* v. *Solvent Service, Inc. et al.* Patent held valid and infringed; defendant enjoined; counterclaim dismissed Nov. 27, 1963.

2,960,316, J. D. McKellar, Fluid driven vibrator, **filed** Nov. 21, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63–1423, *John D. McKellar* v. *McCaron Bros.*

2,966,753. (See 2,926,367.)

2,968,848, J. H. Lemelson, Noisemaking toys, **filed** Dec. 2, 1963, D.C., S.D.N.Y., Doc. 63/3502, *Jerome H. Lemelson* v. *National Bulk Carriers, Inc.*

3,004,813, H. L. Shivek, Dispensing apparatus, **filed** Nov. 20, 1963, D.C., S.D. Fla. (Miami), Doc. 63–646, *Servo-O-Lift Corporation* v. *Shelley Manufacturing Co.*

3,004,814, H. L. Schultze, Knockdown display tables, **filed** Nov. 26, 1963, D.C., E.D. Mich. (Detroit), Doc. 24652, *American Fixture, Inc.* v. *Almor Corporation.*

3,022,785. (See 2,854,925.)

3,028,197, K. H. Wilson, Nestable combination table and bench structure, **filed** July 12, 1962, D.C., N.D. Ill. (Chicago), Doc. 62c1351, *Kermit H. Wilson* v. *Midwest Folding Products Corp. et al.* Consent decree; defendants enjoined Nov. 21, 1963.

3,031,072, H. G. Kraut, Package and method of forming same, **filed** Nov. 25, 1963, D.C., E.D. Mich. (Detroit), Doc. 24645, *The Stanley Works* v. *Marfree, Inc.*

3,035,372, K. E. Mayers, Method for making a glass-to-metal seal, **filed** Dec. 4, 1963, D.C.N.J. (Newark), Doc. 1026–63, *Philips Electronic and Pharmaceutical Industries Corp.* v. *Thermal and Electronics Industries, Inc.*

3,043,619, George and Lamb, Guide for oil well pipe, **filed** Nov. 27, 1963, D.C., W.D. La. (Shreveport), Doc. 9878–L, *William C. Lamb et al.* v. *Gulf Coast Rental Tool Service, Inc.*

3,049,775, E. J. Ondeck, Strand chuck, **filed** Nov. 29, 1963, D.C., M.D. Fla. (Jacksonville), Doc. 63–258, *Supreme Products Corporation* v. *Holley-Edwards Sales, Inc.*

3,055,988, B. B. Bauer, Magnetic phonograph pickup; **3,077,521,** E. Ahrens et al., Stereophonic moving magnet phonograph pickup; **3,077,522,** Gunter and Anderson, Stereophonic pickup cartridge, **filed** Dec. 5, 1963, D.C., E.D.N.Y. (Brooklyn), Doc. 63C–1287, *Shure Bros., Inc.* v. *Empire Scientific Corp.* **Same,** Doc. 63C–1288, *Shure Bros., Inc.* v. *Recoton Corporation.*

3,061,812, A. Z. Rachwalski, Pulse type depth sounder, **filed** Dec. 2, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c2169, *Jetronic Industries, Inc.* v. *Aerguide Instrument Company.*

3,077,521. (See 3,055,988.)

3,077,522. (See 3,055,988.)

3,087,518, W. R. Scholle, Packaging means, **filed** Aug. 30, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c1555, *Scholle Container Corporation* v. *Fitting Specialties Corporation.* Patent held valid and infringed; defendant enjoined Nov. 29, 1963.

3,091,572, Luedemann and Weinstein, Gentamycin and method of production, **filed** Nov. 12, 1963, D.C., N.D.N.Y. (Utica), Doc. 9833, *Americo Woyciesjes* v. *Schering Corporation.*

Re. 24,163. (See 2,571,435.)

Re. 25,360, E. G. Rice, Combination stockings and panty, **filed** Dec. 3, 1963, D.C.N.D. (Greensboro), Doc. C–217–G–63, *Morpul, Inc.* v. *Glen Raven Knitting Mill, Inc.*

Des. 189,868, Casselman and Stoller, Carrying case; **Reg. No. 540,179** (POLAROID), Polaroid Corporation, Light-polarizing organic plastic in sheet form for further manufacture, photographic cameras, photographic camera shutters, etc.; **Reg. No. 607,263,** same, Camera cases, exposure meter cases, master compartment cases, etc., **filed** Oct. 30, 1963, D.C.N.J. (Trenton), Doc. 907–63, *Polaroid Corporation* v. *Louis Lefkowitz & Bro., Inc.* Consent judgment; injunction issued Dec. 3, 1963.

Des. 190,575, A. I. Sheldon, Girdle, **filed** Dec. 4, 1963, D.C., S.D. Ind. (Indianapolis), Doc. IP–63–C–611, *S. H. Camp & Company* v. *Lane Bryant, Inc.*

Des. 190,964, C. O. Bliss, Pitcher or similar article, **filed** Dec. 3, 1963, D.C., S.D.N.Y., Doc. 63/3514, *Blisscraft of Hollywood* v. *Rona Plastic Corp.*

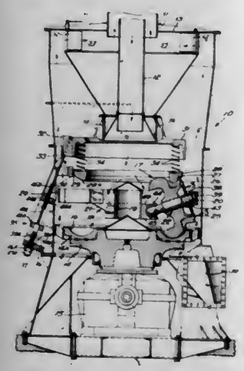
REISSUES

APRIL 14, 1964

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,552
RING AND ROLLER PULVERIZING APPARATUS

Max Berz, Bayerlandstrasse 23, Kochel am See, Germany
Original No. 2,944,744, dated July 12, 1960, Ser. No. 675,847, Aug. 2, 1957. Application for reissue Feb. 5, 1962, Ser. No. 172,378
4 Claims. (Cl. 241—118)



4. Pulverizing apparatus comprising a casing, a grinding plate mounted for rotation and having an annular grinding surface provided with an annular arcuate depression, means for rotating the grinding plate, means for introducing material to be pulverized into said casing and into said arcuate depression, at least one roller having a shaft for rotatably mounting the roller, said roller having a peripheral and arcuate grinding face adapted for movement within the arcuate depression and in contact therewith, the roller shaft being supported at opposite ends for oscillatory movement in a vertical plane relative to the grinding plate, means exerting a biasing force on said rollers to maintain the latter in constant engagement with the arcuate depression; and the grinding plate and roller being constructed in accordance with the following relationships:

$$\frac{d}{Dr} = 0.25 \text{ to } 0.55$$

$$\frac{T}{Dr} = 0.10 \text{ to } 0.40$$

$$\frac{Dt}{Dr} = 1.30 \text{ to } 2.00$$

where

Dt is the mean diameter of the annular arcuate depression,

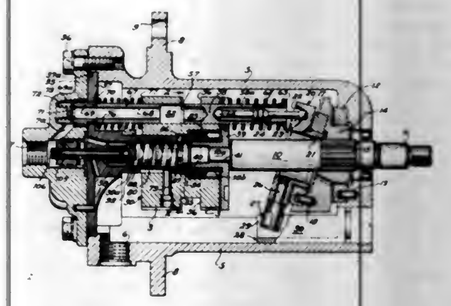
Dr is the overall diameter of the roller,

d is the diameter of curvature of the arcuate grinding face of the roller,

and T is the depth of the arcuate depression, with the combination of said various relationships selected so as to be mutually compatible.

25,553
PUMP

Tadeusz Budzich, Shaker Heights, Ohio, assignor to The Weatherhead Company, Cleveland, Ohio, a corporation of Ohio
Original No. 3,087,432, dated Apr. 30, 1963, Ser. No. 825,005, July 6, 1959. Application for reissue Aug. 2, 1963, Ser. No. 300,144
13 Claims. (Cl. 103—37)

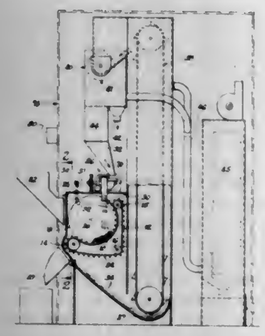


1. A piston pump comprising a pump housing providing a liquid chamber, inlet and outlet ports for said chamber, a guide extending from said housing into said chamber, a cylinder block slidably mounted on said guide, a cylinder bore in said cylinder block, a plunger extending into one end of said cylinder bore, means on said housing to reciprocate said plunger member in said cylinder bore, an inlet port for said cylinder bore, a reaction piston extending into the other end of said cylinder bore, said reaction piston being axially slidable relative to said housing and said cylinder block, a discharge port in said reaction piston, a discharge check valve for said discharge port, said check valve having an annular member with a planar sealing face adjacent said discharge port, said reaction piston having a mating planar sealing surface engaging said sealing face on said annular member, and control means to adjust the axial position of said cylinder block member relative to said guide for determining the effective discharge stroke of said plunger member.

25,554
METHOD AND MEANS FOR DEFLASHING OR TRIMMING MOLDER RUBBER PARTS

Raymond M. Leliaert, South Bend, Ind., assignor, by mesne assignments, to Bell Intercontinental Corporation, South Bend, Ind., a corporation of Delaware
Original No. 2,996,846, dated Aug. 22, 1961, Ser. No. 830,393, July 29, 1959. Application for reissue Aug. 27, 1963, Ser. No. 305,247
13 Claims. (Cl. 51—13)

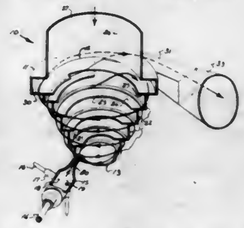
6. An apparatus for definning or deflashing or trimming molded rubber parts or the like, said apparatus including a housing and means for centrifugally projecting an airless stream of blast media particles into said housing, means for supporting a plurality of workpieces interiorly of said housing while continuously turning them to present different facets thereof to the blast media projection stream, and means for reducing the temperature of the workpieces so that the relatively thin portions thereof become embrittled.



11. A method for deflashing or trimming molded rubber parts, said method comprising treating the flash portions of said parts to assume a condition of embrittlement, and then subjecting the parts to an airless abrasive media barrage, collecting the refuse from the operation, separating said refuse and segregating therefrom the reusable blast media and returning the latter to the operation for reuse.

25,555
VACUUM PUMP

Berry W. Foster, 1147 10th St., Santa Monica, Calif.
Original No. 2,993,639, dated July 25, 1961, Ser. No. 855,941, Nov. 27, 1959. Application for reissue Apr. 25, 1963, Ser. No. 276,145
11 Claims. (Cl. 230—95)



1. A pumping device wherein a partial vacuum is produced by a vortex pumping action of high velocity gases, comprising a helical-spiral conduit, the diameter of the spiral increasing with its length between an inlet nozzle at one end and an outlet at the opposite end, said conduit encompassing a central space and being open on its radially inner side for direct communication with the atmosphere or surrounding environment through said space, said device having a wall connected to said conduit and bounding said space at one end of said spiral and has a suction intake inducer opening into said space at the opposite end of said spiral; and means for supplying high-pressure gases to said inlet nozzle, said high-pressure gases being expanded through said inlet nozzle and its pressure head converted into a high-velocity gas in said conduit, where it is forced to follow said spiral conduit and produce a vortex, whereby atmospheric or environmental fluid and free particles are pulled into said space and exhausted from said outlet.

PLANT PATENTS

GRANTED APRIL 14, 1964

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,389
CHRYSANTHEMUM PLANT

Orville O. Dunham, Niles, Mich., assignor to George J. Ball, Inc., West Chicago, Ill., a corporation of Illinois
Filed Sept. 7, 1962, Ser. No. 222,250
1 Claim. (Cl. Plt.—77)

A new and distinct variety of chrysanthemum plant substantially as herein disclosed, characterized as to novelty by its more decorative, less reflexing blooms, the longer lasting more fresh retaining appearance of the blooms, the brilliant yellow center to white extremity of the blooms, the branching form of its plant, and its early profuse and continuous, long blooming habit.

2,390
CHRYSANTHEMUM PLANT

Orville O. Dunham, Niles, Mich., assignor to George J. Ball, Inc., Chicago, Ill., a corporation of Illinois
Filed Sept. 7, 1962, Ser. No. 222,252
1 Claim. (Cl. Plt.—79)

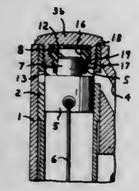
A new and distinct variety of chrysanthemum plant substantially as herein disclosed, characterized as to novelty by its more tightly incurving blooms, the strong orange shading into moderate orange yellow color of the blooms, its upright compact growth, its bushy plant habit and early profuse and continuous blooming habit.

PATENTS

GRANTED APRIL 14, 1964

GENERAL AND MECHANICAL

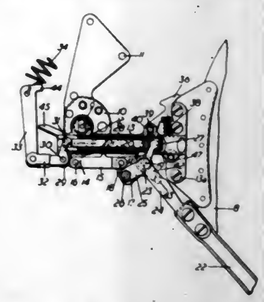
3,128,468
PORTABLE STAPLER WITH PNEUMATIC DRIVE
Heinz Emil Bade, Hamburg-Garstedt, Germany, assignor to Joh. Friedrich Behrens, Ahrensburg, Holstein, Germany
Filed Mar. 8, 1962, Ser. No. 178,419
Claims priority, application Germany Mar. 15, 1961
10 Claims. (Cl. 1—44.4)



1. In a portable stapler having a cylinder and a cylinder head closing one end thereof, and inlet means in said cylinder for admitting compressed air; a piston provided with staple driver means and reciprocable in said cylinder from a starting position into an end position and vice versa, said piston also being provided with an effective surface area continuously communicating with said inlet means and operable in response to a certain pressure acting upon said effective surface area to actuate said piston for performing a driving stroke from said starting position to said end position, first holding means in said one end of said cylinder, and second holding means connected to said piston and telescopically received in said first holding means in said starting position of said piston, said first and second holding means adhering to each other by friction only and at a force sufficient to balance only a certain air pressure acting on said piston area which is less than said first mentioned certain pressure.

3,128,469
FLYING HELMETS
Marcel Jules Odilon Lobelle, Farnham Royal, England, assignor to M. L. Aviation Company Limited, Maidenhead, Berkshire, England, a British company
Filed Aug. 4, 1960, Ser. No. 46,737
Claims priority, application Great Britain Aug. 6, 1959
4 Claims. (Cl. 2—6)

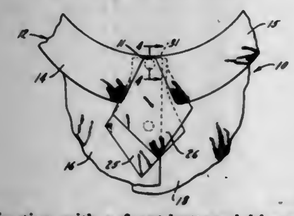
1. A helmet capable of being pressurized and including: a rigid shell having a front opening; a visor for closing said opening; a pair of side arm assemblies one on each side of said shell, each said side arm assembly comprising: an inner tubular member having a front end and a rear end and having a slot therethrough toward said front end; means pivotally mounting said inner tubular member to said shell near said rear end; an outer tubular member concentric with and surrounding said inner tubular member and axially movable thereon, said outer tubular member having a front end and a rear end and having a slot therethrough toward said front end; means fixing said visor to said front end of said outer tubular member; a plunger mounted within and slidable with respect to said inner tubular member, said plunger having a front end and a rear end; a toggle linkage comprising first and second toggle members each of said toggle members having a front end and a rear end; means pivotally mounting said rear end of said first toggle member to said outer tubular member near said rear end of said outer tubular member; means pivotally connecting said front end of said first toggle member to said rear end of said second toggle member; means pivotally mounting said front end of said second toggle member to said inner tubular member near said front end of said inner tubular members; means projecting from said front end of said second toggle member through said slots in said inner and outer tubular members and into contact with said front end of said plunger; a bell crank lever having first and second arms; means pivoting said bell crank lever to said inner tubular member whereby said first arm of said bell crank lever bears on said rear end of said plunger; and a link having first and second ends, and means pivoting said first end of said link to said second arm of said bell crank lever; tension spring means at each side of said helmet and each connected to said second end of said link of said side arm assembly at that side of said shell and extending from said link up that side of said shell, said tension spring means thus acting on said visor through said side arm assemblies to bias said visor to a closed position and to urge said visor rearwardly; a spring loaded catch mounted on said shell to hold said



visor in said open position; a pair of tracks fixed to said shell, said tracks having arcuate upper parts and rearwardly extending notches at their lower parts; and a pair of rollers, one mounted on each side of said visor and each running on one of said tracks whereby the action of said spring means to urge said visor rearwardly is resisted by the cooperation of said tracks and said rollers while said visor is lowered, and as said visor reaches said closed position, said rollers are received in said rearwardly extending notches to remove said resistance, said side arm assemblies operating to magnify the force of said spring means to pull said visor rearwardly against said shell so that said visor makes tight sealing contact with the sides of said opening in said shell; an operating bar extending between said side arm assemblies at each side of said helmet across the width of said helmet, said operating bar having two similar ends, means pivoting each end of said operating bar to said inner tubular member of the respective side arm assembly, coaxially with said means pivotally mounting said front end of said second toggle member to said inner tubular member, a lug on each end of said operating bar extending beyond said operating bar pivoting means, means connecting said lug to said second toggle member so that as said operating bar is moved upwards

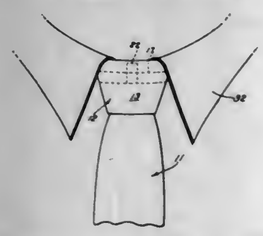
to open said visor, said toggle linkages are collapsed whereby further upward movement of said operating bar moves said visor forward against the force of said spring means until said rollers move out of said rearwardly extending notches, and upon further upward movement of said operating bar said rollers engage with arcuate parts of said tracks, said helmet being moved against the force of said springs to said open position.

3,128,470
ARTICLE OF NECKWEAR
Ursula A. Petermann, 1900 W. Bittersweet Place, Chicago 13, Ill., and Opal Allen, 519 E. 94th St., Chicago 19, Ill.
Filed Feb. 12, 1962, Ser. No. 172,636
1 Claim. (Cl. 2—145)



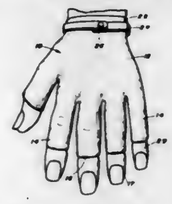
In combination with a front-buttoned blouse having a button disposed in proximity to the blouse neck and between the opposed tab portions of the blouse collar, a tie formed of an elongated generally flat sheet of pliable material, said tie having a relatively narrow medial portion and relatively wide first and second substantially identical wing portions projecting therefrom, the medial portion of said tie having a single button hole formed therein and extending entirely therethrough for attachment to said button in a selectable one of two reversible positions, said tie being foldable along a transverse line immediately adjacent to the upper end of said button hole when said tie is attached to said button whereby said first and second wing portions both depend from said button with one of said wing portions overlying said button hole and the associated button so as to effectively conceal both the button hole and the button, said buttonhole being centered with respect to said first and second wing portions and extending longitudinally through said tie so that it extends vertically when attached to said button with the button being disposed at the upper end of the button hole whereby the underlying wing portion terminates at a point spaced below the tip of the overlying wing portion.

3,128,471
NECKTIE ANCHOR
Roger J. Bertrand, 199 Washington St., West Warwick, R.I.
Filed Aug. 24, 1962, Ser. No. 219,155
3 Claims. (Cl. 2—145)



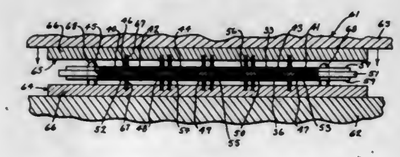
1. A four-in-hand necktie having end portions, a first intermediate portion to encircle the collar and a second intermediate portion for forming a knot, said knot forming portion having front and back surfaces, a first fastener part secured on said back surface, an elongated tab having a buttonhole at one end and a second fastener part at its other end attached to said first fastener part and extending perpendicular to said second intermediate portion, said tab being slightly shorter in length than the length of the necktie knot when the necktie is tied about the collar of a shirt.

3,128,472
HAND PROTECTIVE DEVICE
Florence M. Raney, Coffeyville, Kans., now by marriage Florence M. Kinney, 1356 S. Hydraulic, Wichita, Kans.
Filed Feb. 23, 1961, Ser. No. 91,060
1 Claim. (Cl. 2—159)



A glove comprising a main hollow portion adapted to completely encase the palm and back and sides of a hand of a wearer when said hand is positioned within the gloove, said main portion having an aperture for the passage of the hand therethrough into the interior of the glove, said aperture encircling the wrist portion of the wearer, the main portion also being provided with a plurality of depending finger enclosing portions, said finger portions provided with open ends to allow at least the portion of the fingers from the first joint to the end of the fingers to extend therefrom, strap means secured to the main portion in the proximity of the aperture for encircling the main portion to provide a liquid tight seal between the operture and the wrist portion of the wearer, and means on the interiors of the ends of the finger enclosing portions to provide a liquid tight seal between the open ends of the finger enclosing portions and the respective fingers of the hand.

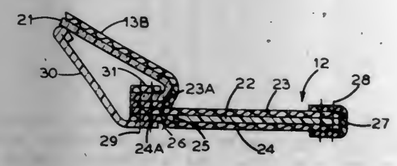
3,128,473
METHOD FOR FORMING GLOVES FROM VINYL FILM OR SHEETING
James L. Clark, Milwaukee, Wis., assignor to Mark-Clark, Inc., Milwaukee, Wis., a corporation of Wisconsin
Filed Apr. 26, 1961, Ser. No. 105,596
4 Claims. (Cl. 2—169)



1. The method of electronically welding a stacked assembly of tracks of thermoplastic film together to form a finished fingered glove which comprises providing a palm side, a thumb piece formation a back side, and a single intermediate gusset assembly for fingers and both glove sides formed from electronically weld sheets to define longitudinally extending elongated side flat sleeves forming outer side gussets for outer fingers and gussets for the sides of the palm and back sections and a plurality of

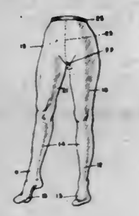
short pockets having closed outer terminals forming inner gussets for end fingers and side gussets for intermediate fingers with tip gussets for all fingers, inserting a one-piece rigid floating press bed having elongated side prongs and intermediate short prongs into the sleeves and pockets, interposing the gusset assembly with the floating press bed between the palm and back sides and bringing exactly matching electronic die electrodes having spaced welding edges against the outer faces of the palm and back sides for co-acting against the opposite sides of the floating press bed to form independent tear welds and seals on opposite sides of the stacked assembly with intermediate portions of sleeves and pockets electronically welded by tear seals to the palm and back sides.

3,128,474
GLAREPROOF CAP
Samuel Feldman, Hewlett, N.Y., assignor to Clearasite Headwear, Inc., New York, N.Y., a corporation of New York
Filed Nov. 7, 1963, Ser. No. 322,224
5 Claims. (Cl. 2—195)



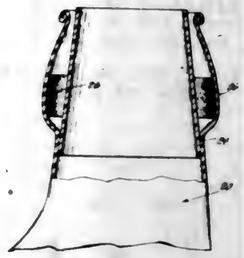
1. A cap comprising a crown portion and a visor extending from an edge portion of said crown portion, said visor comprising a plastic transparent antiglare sheet, and a fabric covering secured to at least one surface of said sheet, said fabric covering having a surface area substantially coextensive with the surface area of said sheet and having an open weave permitting the passage therethrough of a substantial portion of incident light rays.

3,128,475
COMBINATION GARMENT AND METHOD OF MAKING SAME
Ernest G. Rice, P.O. Box 52, and Joseph G. Walser, Jr., P.O. Box 49, both of High Point, N.C.
Filed Oct. 24, 1958, Ser. No. 769,339
11 Claims. (Cl. 2—224)



1. A combination stocking and panty garment comprising a pair of similarly knit stocking blanks having integrally knit foot, leg, hip, waist and inner panty portions, said blanks having means for securing the hip, waist and inner panty portions together in such a manner as to form continuous outer and inner tubular waist and hip portions and forming an inner panty portion upon inverting the inner panty portion, and an elastic band extending about the waist portion of the garment.

3,128,476
FLUID-IMPERMEABLE CLOSURE
Seymour Lash, 40 Fox Place, Hicksville, N.Y.
Filed July 24, 1961, Ser. No. 126,354
10 Claims. (Cl. 2—270)
(Granted under Title 35, U.S. Code (1952), sec. 266)

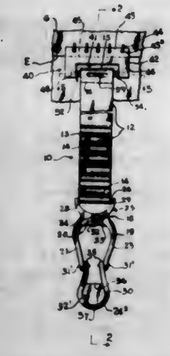


1. A fluid-impermeable closure for attaching a fluid-impermeable garment appendage to the associated receiving section of a fluid-impermeable garment, said appendage being of a type having an opening through which a body member such as a hand can be inserted, comprising, in combination: a tapered cuff formed from rigid material and having sufficient diameter to permit the passage therethrough of the desired body member, said cuff being inserted inside the opening of said appendage and the portion of said appendage nearest the innermost end of said cuff being securely affixed thereto so that said appendage is completely sealed off except for the entrance through the cuff, the edges of the appendage which formed the original opening therein now comprising a free portion of said appendage, the free portion of said appendage tightly hugging said cuff but being rollable along the extent thereof, the taper of said cuff decreasing from its innermost end to its outermost end; and a "Velcro"-type fastener comprising two sections, the first section being securely affixed to said receiving section of said impermeable garment with its pile strip forming an extension along the outer edge of said receiving section, and the second section being securely affixed around the inner surface of said free portion of said appendage at a location which enables its pile strip to engage said pile strip of said first "Velcro" section when said receiving section of said garment is slid inwardly along said tapered cuff as far as it will go, said closure being completed by rolling said free portion of said appendage outwardly over the "Velcro" juncture and over a portion of said receiving section.

3,128,477
NON-BULGING GARTER FASTENER
Paul Winchell, Whitestone, N.Y., assignor to Chelwin Productions, Inc., New York, N.Y., a corporation of New York
Filed Feb. 3, 1961, Ser. No. 86,918
1 Claim. (Cl. 2—335)

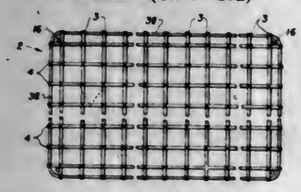
A substantially flat garter, comprising an elastic strap, a buckle secured at one end of the strap, said buckle having a horseshoe-shaped body, with depending arms, a U-shaped clasp member pivotally attached at ends of its legs to ends of the arms of the body, and means for securing the clasp member between the arms of the body comprising a catch member rotatably mounted on the bight of the body for engaging the bight of the clasp

member, the bight of the body having a recessed portion for receiving the bight of the clasp member with an



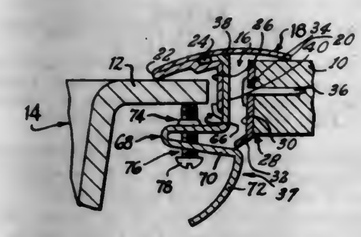
edge of a stocking engaged on and over the bight of the clasp member and under the catch member.

3,128,478
BUOYANT NET AND SAFETY COVER FOR SWIMMING POOLS
James F. Beal, Hempfield Township, Westmoreland County, Pa. (1068 Summit Ave., Greensburg, Pa.)
Filed Dec. 2, 1959, Ser. No. 856,691
13 Claims. (Cl. 4—172)



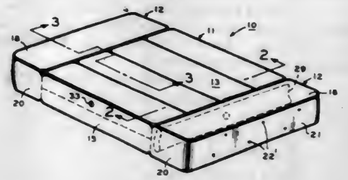
3. A buoyant safety net of the class described comprised of at least two sets of parallel air-filled flexible plastic tubes having sealed ends, the tubes of one set intersecting those of the other, with the tubes of one set passing over and under the tubes of the other set in basket-weave fashion, and a tubular margin around the periphery of the net to which the ends of the tubes are secured, the points of intersection of the two sets of tubing being of the order of about four inches.

3,128,479
MOUNTING CLIP HAVING ATTACHMENT LIP
William A. Juergens, Harper Woods, Mich., assignor to Juergens Manufacturing Company, Inc., Southfield, Mich., a corporation of Michigan
Filed Nov. 17, 1961, Ser. No. 153,152
5 Claims. (Cl. 4—187)



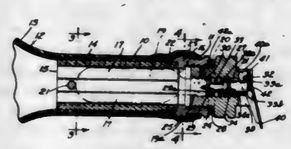
1. In a fastening clip, a wall having first and second spaced edges, and first and second face surfaces, a lip formed along said first edge, a support ledge formed along said second edge, said lip and edge extending away from said first face, said ledge being doubled back to form a spring arm detent terminating in a cam surface positioned beyond said second face of said wall, an aperture in said support ledge, an access opening in said spring arm detent in alignment with said aperture, and an offset lip extending outwardly from said first face of said wall and extending toward said first edge.

3,128,480
INFLATABLE MATTRESS OR THE LIKE
Thomas J. Lineback, 7042 Ethel Ave., St. Louis 17, Mo.
Filed Nov. 9, 1962, Ser. No. 236,494
9 Claims. (Cl. 5—348)



1. An inflatable article comprising a main body section defining a main compartment, an end section defining an end compartment, distensible means in said end compartment in air flow communication with said main compartment, and yieldable means in the end compartment normally maintaining said distensible means in a substantially collapsed condition.

3,128,481
SAFETY FLOAT
Samuel M. Davison, Jr., Skokie, Ill., assignor to Dacor Corporation, Evanston, Ill., a corporation of Illinois
Filed June 27, 1961, Ser. No. 120,013
2 Claims. (Cl. 9—316)



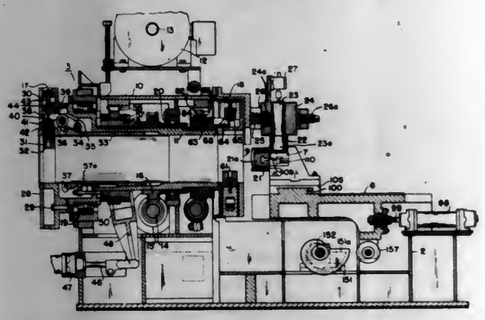
1. A buoyant and leak-proof float device comprising an inflatable bladder having an open end, a cylinder disposed in the bladder adjacent the open end thereof for receiving and for positioning therein a rupturable cartridge containing a pressurizing medium for inflating the bladder, a bored and removable threaded fitting secured to the cylinder with the bore thereof in alignment with the longitudinal axis of the cylinder, an annular, shoulder-defining flange extending into said bore and defining a pair of counterbores, one of said counterbores being located to receive a portion of a rupturable cartridge in said cylinder, a movable piston in the bore carrying a member for rupturing the portion of said cartridge disposed in said one of the counterbores, and O ring seal movably carried by the piston in the other of said counterbores to prevent discharge of pressurized fluid from said bladder between the piston and the wall of said bore, an external annular flange carried by the piston in said other counterbore, spring means in said other counterbore bottomed at one end against said piston flange and at its other end against a shoulder provided by said shoulder defining flange for biasing the rupturing member away from the rupturable cartridge, an operating lever mem-

ber carried by the fitting, and a round bottomed projection carried by said lever member adjacent said piston, said spring urging said piston away from said cartridge and against said round bottom projection to locate the lever member in an inoperative position, said lever member being pivotable from said inoperative position to move said rupturing member to an operative position to rupture said cartridge, said round bottomed projection being rideable on said piston during pivotal movement of said lever member to facilitate movement of said lever member between said positions and to prevent binding between said lever member and said piston during movement of the lever member between said positions.

3,128,482
METHOD OF SUPPORTING AND ROTATING PIPE FOR THREADING OPERATION

William Mynard McConnell, Pittsburgh, Pa., assignor to Taylor-Wilson Manufacturing Co., Pittsburgh, Pa., a corporation of Pennsylvania

Filed Mar. 30, 1960, Ser. No. 18,578
4 Claims. (Cl. 10—1)



1. A method of threading an end of a length of pipe comprising gripping the pipe at a place along its length spaced apart from the end to be threaded, centering and locating said end axially at a given position relative to a tool for threading said end by engaging and applying force radially to said pipe about its periphery adjacent the end to be threaded, said engaging and applying being closer to said end than said place where said pipe is gripped, said force being in an amount sufficient to center and locate said end but insufficient to round ovalled pipe and less than that force used to grip said pipe, after said centering and locating and while engaging, maintaining said end in said given position during threading without application of pressure thereto by effecting a lock upon said end through provision of a backing which prevents radial movement of the pipe out of said position, rotating said pipe about its longitudinal axis during said maintaining, during said rotating, feeding said threading tool, which is stationary, into engagement with said end to be threaded.

3,128,483
METHOD OF MAKING A THREADED STUD WITH WRENCH-RECEIVING PORTION

Harrington Moore, East Acton, Mass.
(100 Beaver St., Waltham, Mass.)

Filed July 12, 1960, Ser. No. 42,364
1 Claim. (Cl. 10—10)

A method of making a stud having threads at each end and a wrench-receiving portion intermediate the ends, which comprises screw-threading a length of rod stock, cutting off a piece of said stock of desired length which is threaded from end to end, and swaging an intermediate portion only of said piece at an even number of points to completely flatten the crest portions of the thread convolutions in said portion forcing the crest metal in the

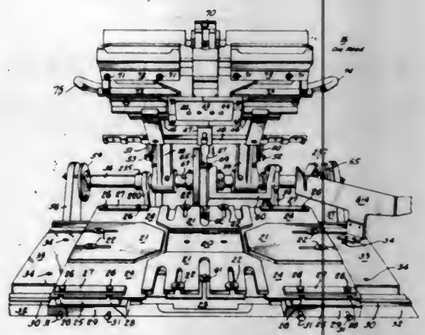


adjacent thread valleys to form an even number of wrench-receiving plane faces on said portion of the piece.

3,128,484
MACHINE FOR MAKING FLEXIBLE BOOK COVERS OR SIMILAR ARTICLES

William H. Rogers, Reading, Mass., George B. Gilbert, Hudson, N.H., and Alfred G. Gilbert, South Acton, and Joseph V. Dinarello, Melrose, Mass., assignors to Reece Folding Machine Company, a corporation of Maine

Filed Sept. 8, 1961, Ser. No. 136,930
16 Claims. (Cl. 11—2)



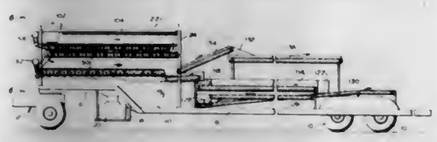
1. In a machine for forming a flexible book cover or the like with an adhesively attached liner, the combination of a stationary pad upon which the cover blank is supported, a contractible and extensible die, means for effecting the contraction and extension of the die, said die in its normal extended and loading position including means to support for the liner, means moving the die while extended to place the linear in proper position upon the cover blank and for subsequently returning the die to its loading position, folder blades movable in one direction to turn the marginal edges of the cover blank inwardly above the die while it is still extended and then movable in a different direction to press said edges into adhesive contact with the liner after the die has been contracted, and means for effecting such two-way movements of the folder blades.

3,128,485
APPARATUS FOR THE FIELD CLEANING OF VEGETABLES

Harold G. Bradshaw, Martin I. Sanderson, and Hugh H. Shaw, Salinas, Calif., assignors to Cochran Equipment Company, Salinas, Calif., a corporation of California

Filed Mar. 30, 1960, Ser. No. 18,708
13 Claims. (Cl. 15—3.14)

7. A field processing apparatus for vegetables comprising, in combination, conveyor means for conveying vegetables in the relatively dry condition in which they come from the ground; beater means for subjecting vegetables carried by said conveyor means to a mild beating action to remove clods of soil therefrom: means for washing vegetables, after said beating, delivered thereto by said conveyor means and including a plurality of parallel rotatable brushes arranged in superposed tiers, spray means for dispersing a washing liquid over the brushes and for the capture and recirculation of same together with suspended soil particles washed from the vegetables, means for driving said brushes in rotation such that the brushes in any one tier rotate in the same direction and

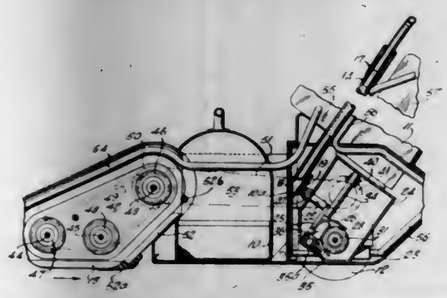


the adjacent peripheries of the brushes in adjacent tiers moving in the same direction and defining a scrubbing path therebetween to propel the vegetables along said scrubbing path while at the same time effecting their scrubbing with soil particles suspended in said washing liquid, and means for applying a clear liquid rinse to the vegetables after washing and adding said rinse to said washing liquid.

3,128,486
POWER-DRIVEN CLEANING AND THE LIKE MACHINE

Werner Kammann, Box 625, Bunde, Westphalia, Germany

Filed Aug. 6, 1962, Ser. No. 215,202
Claims priority, application Germany Aug. 5, 1961
12 Claims. (Cl. 15—51)



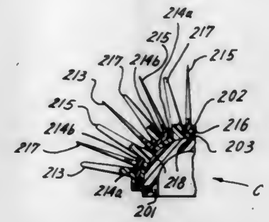
9. A machine of the character described comprising a wheeled carrier, a continuously running driving motor upon said carrier, a steering column connected to said carrier and terminating in an operating handle relatively slidably mounted thereon, releasable clutch means having relatively fixed and movable clutch elements, to transmit driving power from said motor to at least one of the wheels of said carrier, coupling means between said motor and said fixed clutch element, and motion-transmitting coupling means in part mounted within said column and connecting said handle with said movable clutch element, whereby to power drive said carrier in response to a pressure applied to said handle.

3,128,487
COMPOSITE BRUSH

Joseph Vallis, Toronto, Ontario, Canada, assignor to Valden Company, Toronto, Ontario, Canada

Filed Feb. 19, 1962, Ser. No. 173,883
8 Claims. (Cl. 15—176)

1. In a composite brush, in combination, a first panel having an inner side, an outer side, a first and a second group of apertures extending between said inner side and said outer side, and a plurality of bristles projecting from said outer side; a second panel having an inner side, an outer side adjacent to the inner side of said first panel, a plurality of apertures aligned with the first group of apertures in said first panel, and a plurality of bristles extending through the second group of apertures in said first panel and projecting beyond the outer side and be-

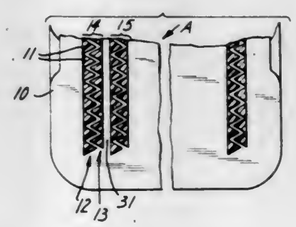


tween the bristles of said first panel; and a third panel having a side adjacent to the inner side of said second panel, and a plurality of bristles extending through the aligned apertures of said first and second panels and projecting beyond the outer side and between the bristles of said first panel.

3,128,488
PLASTIC BRUSH

Robert D. Schad, Toronto, Ontario, Canada, assignor to Valden Company, Toronto, Ontario, Canada

Filed Aug. 24, 1961, Ser. No. 133,737
5 Claims. (Cl. 15—187)



1. A plastic brush comprising a backing element having a bristle-supporting side and a plurality of long, slender bristles integral with and projecting from said side, said bristles arranged in a plurality of pairwise disposed rows each comprising a plurality of closely adjacent bristles, the adjacent bristles of each row defining between themselves spaces and the rows of bristles in each pair of rows being in such close proximity of each other that the spaces defined by the bristles in one row at least partially receive and that substantial portions of such spaces are filled by the bristles in the other row of the respective pair of rows, and said pairs of rows defining between themselves elongated gaps which communicate with the spaces defined by the bristles adjacent thereto.

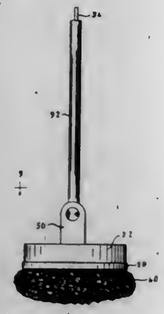
3,128,489
CLEANING AND SCOURING ROTARY ATTACHMENT DEVICE

Denzel Lorene Strominski, 662 S. Shore Drive, Edwardsburg, Mich.

Filed Apr. 23, 1962, Ser. No. 189,500
4 Claims. (Cl. 15—230)

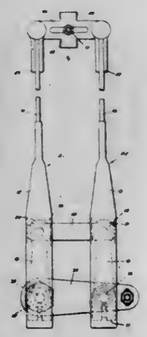
4. In a cleaning and scouring device: a stem, a downwardly facing cup-shaped body on one end of said stem,

a spring clamp in said cup-shaped body for releasably holding by spring action a pad of scouring material, oper-



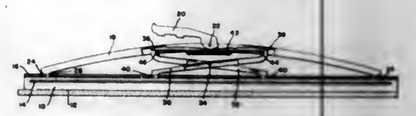
ating handles for said clamp extending from said cup-shaped body in spaced relation to said stem.

3,128,490
ARTICULATED PARALLELOGRAM SUPPORTING DEVICE FOR SUPPORTING BLADES OR SIMILAR PARTS IN AUTOMOTIVE VEHICLE WIPERS
Giuseppe Alfieri, Milan, Italy, assignor to Fabbrica Italiana Magneti Marelli S.p.A., Milan, Italy, a corporation of Italy
Filed Dec. 28, 1962, Ser. No. 248,119
Claims priority, application Italy Jan. 2, 1962
2 Claims. (Cl. 15—250.23)



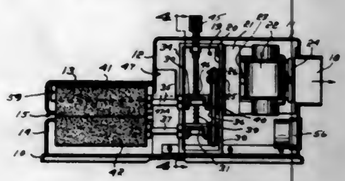
1. A device for supporting the blade of windshield wipers comprising two pivotally mounted arms, a cross bar pivotally connected to said arms at one end thereof, means for holding a blade on said cross bar, a crank associated with each arm at the other end thereof, resilient toggle means interconnecting said arms with said cranks so that said arms may be swung away from a windshield, a shaft for oscillating said device fixed to one of said cranks, a second cross bar pivotally connecting said cranks at one end thereof so that said cranks are oscillated in unison by said shaft and a third cross bar pivotally connecting said cranks at the level of said shaft so that a pair of articulated parallelograms are formed comprising said arms and said first and third cross bars and said cranks and said second and third cross bars, said resilient toggle means comprising a pivotally mounted extension upon each of said cranks, a pivot pin upon said extension, a rod pivotally mounted upon said pin and a coil spring mounted upon said rod coacting with its corresponding arm.

3,128,491
WINDSHIELD WIPER BLADE ASSEMBLY
Elmer E. Reese, Rochester, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 3, 1961, Ser. No. 150,041
5 Claims. (Cl. 15—250.42)



1. A wiper blade assembly including, a squeegee unit having an elongate flexible wiping element and an elongate flexible support therefor, and an elongate pressure applying superstructure comprising a holder having an arm attaching part, said holder being connected to said squeegee unit adjacent each end thereof, and a pair of pivotally interconnected crossed links carried by said holder and having their free ends connected to the intermediate portion of said squeegee unit, one of said crossed links being pivotally connected to said holder at its opposite end.

3,128,492
DEVICE FOR CLEANING PHOTOGRAPHIC FILM BY ROTATING BRUSHES AND BY THE NEUTRALIZATION OF STATIC ON THE FILM
Frank E. Hanscom, 21 Simmons Road, South Portland, Maine, and Donald E. Hardy, 311 Middle Road, Falmouth, Maine
Filed Oct. 23, 1961, Ser. No. 147,008
8 Claims. (Cl. 15—308)

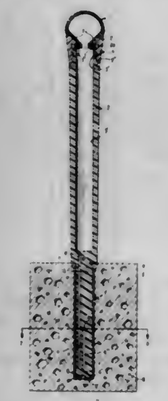


1. In a device for cleaning the surfaces of photographic film, housing structure including a main portion and a pair of housing portions, the pair of housing portions being spaced to define a film passage slot, a pair of rotary brushes, one in one of said pair of housing portions and the other in the other housing portion of that pair, said brushes engaging one another and receiving the film between them, an elongated rigid static electric neutralizer member disposed transversely of the path of said film adjacent said brushes and within one of said pair of housing portions, a rigid insulated conductor disposed transversely of said main housing portion and supported therein and said neutralizer member is connected at one end to the conductor and supported thereby, a drive in said main housing connected to both of said brushes and including a motor, and means to create a flow of air through said slot and across the film in the zone of said brushes and neutralizer member.

3,128,493
HANDLE SOAP SPONGE
Tadeusz Paul, 2532 Ross Road, Apt. 102, Silver Spring, Md.
Filed Aug. 14, 1962, Ser. No. 216,938
7 Claims. (Cl. 15—542)

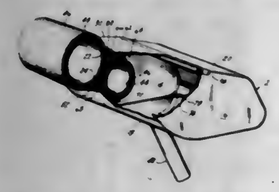
4. A handle structure forming a liquid-soap container adapted to selectively dispense soap to a sponge, said structure comprising a sponge-receiving section adapted

to receive said sponge, a handle of hollow construction over a part of its length and open at one end thereof, the hollow interior of said handle forming a liquid soap container, squeezable cap-like means secured to said one end for hermetically sealing the same, and conduit means in the sponge-receiving handle section opposite said one end including a first section communicating with said hollow interior and extending in the direction toward the oppo-



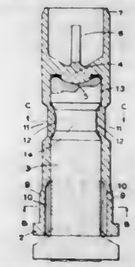
site end, a substantially oppositely directed second section, a connecting section operatively connecting said first section with said second section, said second section extending at least a substantial distance in the said opposite direction from the adjoining ends of said first and second sections and transversely extending bore means in communication with said second section near the end thereof and adapted to communicate with said sponge.

3,128,494
PAINT ROLLER COATING APPARATUS
William R. Hohmann, 375 Wethersfield Ave., Hartford, Conn.
Filed Nov. 23, 1962, Ser. No. 239,476
14 Claims. (Cl. 15—573)



1. A paint roller coating apparatus comprising a housing assembly providing a reservoir portion with a transverse opening at one end thereof; a generally cylindrical inner roller rotatably mounted adjacent said transverse opening in said housing assembly with its axis extending transversely of said housing, said roller having a relatively rigid core portion and an absorbent outer portion adapted to absorb paint contained within said reservoir portion during operation of the apparatus; first sealing means for said inner roller mounted on said housing assembly having portions extending transversely thereof above and below the axis of said inner roller and in close-fitting relationship with the surface of said inner roller along the axial length thereof; second sealing means for said inner roller mounted on said housing assembly having portions adjacent the end portions of said inner roller in close-fitting relationship therewith and cooperating with said first sealing means at the ends thereof to prevent substantially the passage of paint from said reservoir portion through said opening at said one end of said housing assembly except as absorbed and transported by said absorbent outer portion of said inner roller during operation of the apparatus; a generally cylindrical outer roller having an absorbent outer portion and a relatively rigid core portion; means rotatably mounting said outer roller with its axis outwardly of said inner roller and adjacent said opening of said housing assembly and parallel to the axis of rotation of said inner roller and with a portion thereof extending radially outwardly of said opening, said means mounting said outer roller with its absorbent outer portion secantally intersecting the absorbent outer portion of said inner roller to rotate said inner roller and effect transfer of paint from said inner roller to said outer roller during rotation thereof in operation of the apparatus.

3,128,495
SOCKETS FOR CASTORS
Arthur Cecil Tooth, Maidenhead, England, assignor to Flexello Castors & Wheels Limited, Slough, England
Filed June 26, 1961, Ser. No. 119,416
2 Claims. (Cl. 16—43)

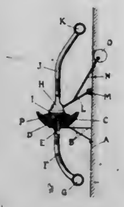


1. A socket for receiving a castor stem therein having a shoulder adjacent its upper end comprising a cylindrical elongated plastic resilient sleeve with an internal and external surface, said sleeve having an upper end and an open lower end for inserting a castor stem therein, said sleeve having solid axial splines circumferentially disposed and projecting radially outwardly of said external surface adjacent said upper end for frictionally gripping the walls of a bore of an article in which said sleeve is disposed, a plurality of projections disposed on the internal surface of said sleeve and projecting radially inwardly, said projections being disposed axially in spaced relationship below said solid axial splines and adapted to be positioned below the shoulder of a castor stem inserted into the sleeve to detachably connect a castor stem to the sleeve, hollowed out axial ribs circumferentially disposed around the lower end of said sleeve in spaced relationship below said projections, an outwardly extending peripheral flange disposed adjacent the lower edge of said open end of the sleeve for forming a bearing surface for a shoulder on a castor detachably connected to said sleeve, and a disc shaped bearing member in said sleeve adjacent the lower end of said axial splines and spaced above said projections whereby a resilient socket member is provided for maintaining its bore diameter when compressed to allow a castor stem disposed therein to swivel freely.

3,128,496
APPARATUS FOR OPENING THE SHELLS OF OYSTERS AND LIKE BIVALVES
Henri Bertrand, 20 Rue d'Alsace-Lorraine, Orleans, France
Filed July 6, 1961, Ser. No. 122,349
4 Claims. (Cl. 17—9)

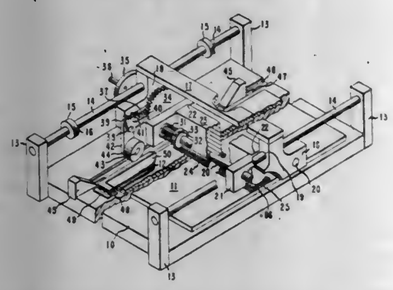
1. In a device for opening the shell of an oyster or like bivalve, in combination, a first and a second shell

opening member; attaching means for releasably attaching said members respectively to the two valves of a bivalve shell, said attaching means including first and second suction cup means on said first and second shell opening members respectively, and a source of vacuum communicating with said suction cup means for attaching said first and second shell opening members to respective valves of said shell when said cup means are in contact



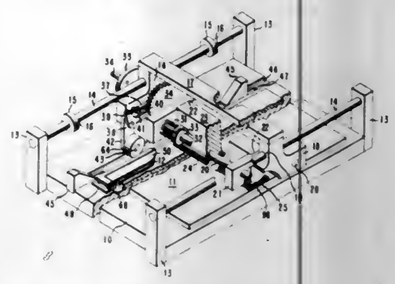
with respective valves; and means applying repeated stresses to said shell opening members in a direction away from each other while said members are attached to said valves, the latter means including rotary drive means, and motion transmitting means interposed between said drive means and one of said shell opening members for actuating reciprocating movement of said one shell opening member toward and away from the other shell opening member when said drive means rotates.

3,128,497
MACHINE FOR FORMING IMAGES
Francis Peter Alles, Basking Ridge, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Feb. 5, 1963, Ser. No. 257,053
5 Claims. (Cl. 18—1)



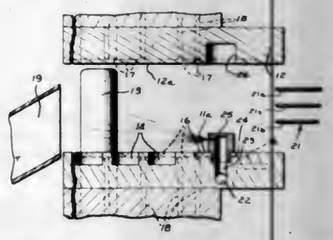
1. An improved image-forming machine having:
(A) a horizontal bedplate adapted to support a relief printing form and an opaque pressure-clearable film in contact with the relief surface of said form,
(B) a frame member having a transverse support member extending across said bedplate,
(C) a row of spring fingers of small coactive area adjustably mounted on the bottom surface of said member, the coactive area of the fingers being adapted to contact with the upper surface of such a film and press the lower surface of the film against the relief surface of said form, and
(D) means for allowing relative motion between the bedplate and frame member to subject the film to a stroking pressure from said fingers during the motion;
characterized in that the transverse support member is pivotally mounted so that said member can be tilted about a transverse axis to vary the position of contacting surfaces of the row of fingers above the bedplate.

3,128,498
IMAGE-FORMING MACHINE
Francis Peter Alles, Basking Ridge, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Apr. 24, 1962, Ser. No. 189,891
13 Claims. (Cl. 18—1)



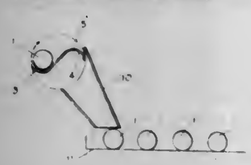
1. An image-forming machine comprising:
(A) a bedplate adapted to support a relief printing form and an opaque, pressure-clearable film in contact with its relief surface,
(B) a frame member mounted above and suspended across said bedplate,
(C) at least 1 row of yieldable fingers of small coactive area and another row of such fingers with small coactive areas offset from those of the first row held by said frame member and adapted to contact with the upper surface of such a film and press the film against the relief surface of said form, and
(D) means providing reciprocating motion between the bedplate and frame member to subject the film to a stroking pressure from said fingers during the motion.

3,128,499
MOLDING APPARATUS
Wilfried H. Smolenski, Indianapolis, Ind., assignor to Western Electric Company, Incorporated, a corporation of New York
Filed June 15, 1961, Ser. No. 117,206
1 Claim. (Cl. 18—2)



In molding apparatus including opposed relatively movable upper and lower dies, said dies having substantially flat parting faces designed to mate with one another when the dies are in a closed molding position and including mold and runner cavities opening into one of the parting faces, ejecting means for removing material from the mold and runner cavities into positions between the dies when the dies move to an open position, means at one side of the dies for receiving material, and material removing mechanism mounted at the opposite side of the dies and movable between the dies when the dies are in their open position, for removing material from between the dies and into the receiving means, the improvement which comprises, air jet means projecting from the parting face of one of the dies within the peripheral limits of the parting face, said air jet means being spaced from the mold and runner cavities in a direction away from the material receiving means and being arranged to direct air blasts toward the receiving means so that portions of the air blasts are directed substantially parallel to the parting face of the lower die to remove any material remaining between the dies after the operation of the material removing mechanism into the receiving means, the other die being provided with recesses in its parting face for receiving said projecting air jets upon the movement of the dies to their closed position.

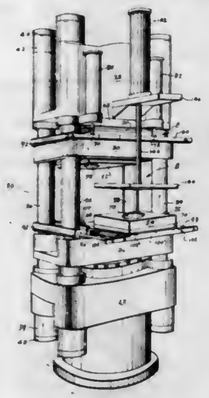
3,128,500
APPARATUS FOR CUTTING CONTINUOUSLY EXTRUDED MATERIAL
William Cunningham, Stevenston, Scotland, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
Filed Apr. 25, 1961, Ser. No. 105,426
Claims priority, application Great Britain Apr. 25, 1960
6 Claims. (Cl. 18—12)



3. Apparatus for dividing a continuously extruded column of plastic material into predetermined lengths comprising: shaping means provided with an extruder nozzle for extruding a continuous column of plastic material along a path; conveyor means disposed forwardly of said nozzle for moving a severed length of the moving column out of the path of the column and for immediately supporting a next length which is still integral with the moving column without displacing any of the next length from the extrusion path, said means defining at least two supporting surfaces extending generally parallel to the extrusion path and means for intermittently moving said supporting surfaces across the extrusion path, said supporting surfaces facing generally in the direction of the movement so as to present no structure which will cross the extrusion path between the time of removal of the severed length of column and the time of arrival of a supporting surface at a position to support the next length of column.

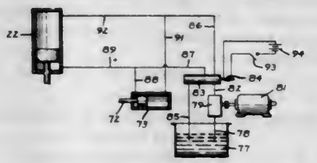
3,128,501
POWER OPERATED MULTIPLE PRESS
John E. Borah, 815 Mishawaka Ave., Mishawaka, Ind.
Filed May 8, 1961, Ser. No. 108,523
5 Claims. (Cl. 18—17)

1. In a press for molding articles of rubber and the like using a mold having upper and lower and intermediate mold sections: a head and a ram platen and an intermediate platen dividing the press into an upper and a lower press section, rods extending upwardly on either side of the press for supporting and positioning said intermediate platen, fluid cylinders connected to said rods for selectively retaining said intermediate platen in its raised and lowered positions, each press section having an upper and lower platen, a pair of spaced guide means on either side of said lower platen, a pair of flange means on each side of the lower mold section cooperating with said guide means, a pair of fluid cylinders mounted on opposite sides of said press and having rods therein, cross members connecting said last mentioned rods with said lower mold section for moving said lower and intermediate sections from the press to a position projecting from the press, spaced telescopic means connected to said lower platen and supporting a major portion of said sections beyond the respective edge of said lower platen, a pair of spaced track means secured to the underside of said upper platen, flange means on said upper moid section engaging said track means, means for centering said upper mold section in said track means and for loosely retaining said upper mold section in approximate position



for engagement with the intermediate section, and a plunger means above the position of the intermediate section when projecting from the press for separating said intermediate mold sections from said lower mold sections of both upper and lower press sections selectively including a fluid cylinder for raising and lowering said plunger and magnetic means releasably holding said intermediate mold section to said plunger.

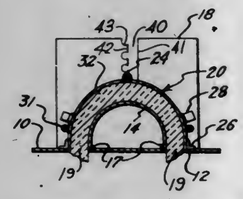
3,128,502
INJECTION MOLDING MACHINE
Arvid S. Johnson, Jr., Northboro, and Cornelius T. Kelleher, Holden, Mass., assignors to Progressive Tool & Die Company, Shrewsbury, Mass., a corporation of Massachusetts
Filed June 30, 1961, Ser. No. 121,019
3 Claims. (Cl. 18—30)



1. An injection molding machine for use with a separable die, comprising a main feed apparatus having a plunger movable to feed plastic to the die, a heating apparatus through which the plastic passes on its way to the die, a platen on which the die is mounted having a vertical passage leading to the die, an injection nozzle connected to the heating apparatus and having a vertical passage lying in alignment with and close to the passage in the platen, an apertured horizontal plate movable between the nozzle and the platen, the plate being an elongated strip slidable in a groove formed in the upper surface of the platen, the plate being provided with upper and lower plain surfaces, the upper surface engaging the nozzle and the lower surface engaging the platen, the said aperture in the plate being tapered with its large end downward and the passage in the platen being at least as large as the largest dimension of the aperture, and means connecting the plate to the main feed apparatus to move

it horizontally at the end of the feeding stroke of the plunger from a first position in which the aperture in the plate is aligned with the passage in the platen to a second position in which the aperture is not so aligned, the plate being movable by means of a cut-off cylinder, the cylinder being mounted in parallel with the main feed cylinder to produce synchronous actuation thereof, the cut-off cylinder being considerably smaller than the main feed cylinder so that the plate reaches the first position a considerable period of time before the main feed cylinder reaches its extreme position.

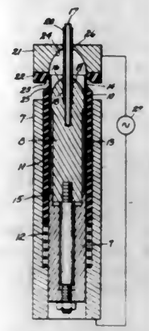
3,128,503
APPARATUS FOR MOLDING PIPE INSULATION
William P. Hahn, Toledo, Ohio, and John O. Collins, Jr., Martinsville, N.J., assignors to Johns-Manville Corporation, New York, N.Y., a corporation of New York
Filed Apr. 21, 1961, Ser. No. 104,571
2 Claims. (Cl. 18—34)



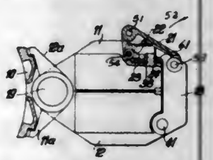
1. Apparatus for forming a felt of pliable, fibrous insulation into a semi-cylindrical section comprising a base plate having formed therein a pair of longitudinally extending transversely-spaced slots, a male die having a substantially, foraminous bearing surface mounted on said base plate between the inner edges of said slots, a female die member having at least two relatively movable side wings of generally arcuate form on their interior compression surface, means for supporting said wings adjacent to but spaced from the longitudinal central portion of said male die and with the free edges of said wings movable toward or away from said male die and the outer edges of said slots, and means for moving said side wings toward said male die to a position wherein the interior surface of said female die is concentric to the exterior surface of said male die and to compress a felt of pliable fibrous insulation between said male and female dies and to force any excess portion of said fibrous insulation through said slots.

3,128,504
METHOD FOR MAKING A PLASTIC DRIP CHAMBER
Theodore H. Gewecke, Glenview, Ill., assignor, by mesne assignments, to McGaw Laboratories, Inc., Milledgeville, Ga., a corporation of Delaware
Original application May 19, 1958, Ser. No. 736,304. Divided and this application Mar. 10, 1961, Ser. No. 102,342
3 Claims. (Cl. 18—36)

1. A mold for making a drip chamber from thermoplastic tubing comprising a mold body having a cylindrical cavity of insulating material with an upstanding metal spindle at its center forming an annular recess between it and the cavity for receiving the lower end of a length of transparent thermoplastic tubing, said spindle having a dome shaped upper end extending above said annular recess and opposite the upper end of said length of tubing, a small diameter metal spindle projecting up from the center of said dome shaped upper end for receiving a length of smaller diameter thermoplastic tubing, said dome shaped section having a reentrant annular recess for receiving the lower end of the smaller diameter tubing a controlled distance below the outer surface of said dome section, a metal mold cap having a cavity complementary to and of slightly larger size than said dome section and having a central opening slidably receiving the upper end of said small diameter tubing, insulating means between said mold cap and body, a source of high frequency voltage connected between the cap and body as they are closed under pressure together for creating an electric field between the cap and spindles for softening the tubing and causing the outer tubing to soften and flow to a dome shape and to be fused edgewise to said small diameter tubing.

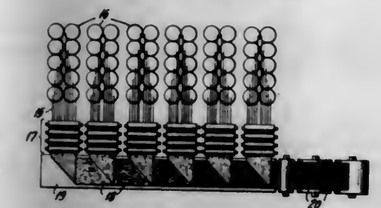


3,128,505
APPARATUS FOR INJECTION MOLDING OF PLASTICS ARTICLES, ESPECIALLY SHOES
Herbert Ludwig, Desmastrasse 112, Uesen, near Bremen, Germany
Filed Oct. 11, 1961, Ser. No. 144,486
Claims priority, application Germany Oct. 17, 1960
8 Claims. (Cl. 18—42)



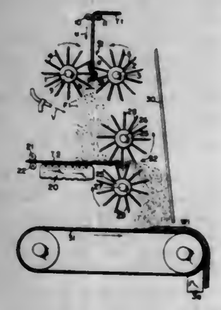
4. An apparatus for injection molding of hollow plastic articles comprising, in combination, support means; a pair of lateral mold supporting members each pivotally mounted with one end thereof on said support means projecting laterally therefrom and turnable between an open and a closed position; core means mounted on said support means in fixed position projecting laterally therefrom between said pair of lateral mold supporting members; a cover member pivotally connected to the other end of one of said lateral mold supporting members and movable between an open and a closed position; mold parts removably secured to said lateral mold supporting members and said cover member and having each an inner surface portion defining together a mold cavity about said core means when said lateral mold supporting members and said cover member are in said closed position; moving means operatively connected to said lateral mold supporting members and said cover member for moving said members between said open and said closed positions thereof; a pair of stop faces on said support means located laterally of and outside said mold supporting members; a pair of abutment means projecting from and respectively fixed to said lateral mold supporting members and abutting against said stop faces when said lateral mold supporting members are in said closed position thereof for keeping the latter in proper fixed position relative to said core means; and means for injecting plastic material into said mold cavity around said core means.

3,128,506
METHOD OF PREPARING LAPS FOR COMBING MACHINES
Carl D. Brandt, Whitinsville, Mass., assignor to Whitin Machine Works, Whitinsville, Mass., a corporation of Massachusetts
Filed Sept. 12, 1960, Ser. No. 55,531
1 Claim. (Cl. 19—115)



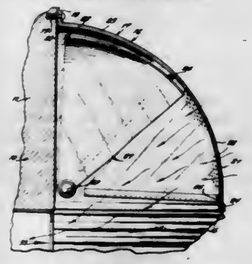
A method of increasing the productivity of a combing machine by supplying thereto a heavier, higher quality lap, comprising the steps of, simultaneously drawing with a draft or not less than 6, from 8 to 12 carded slivers in a given direction to straighten fibers bent in a predetermined manner with respect to said given direction and increase the parallelism of the fibers of said slivers, consolidating said drafted slivers to form a second sliver, combining and drawing with a draft of not less than 2, a plurality of groups of from 10 to 20 of said second slivers in a second drafting operation in a direction reverse to said given direction to straighten fibers bent in a manner opposite to said predetermined manner further to increase the parallelism of the fibers and to form simultaneously a like plurality of ribbons of drafted fibers, the total draftings being from 18 to 45, superposing said plurality of ribbons to form the lap for said combing machine, said lap having total doublings from 320 to 800 and increased parallelism of fibers, and thereafter combing said lap in said combing machine.

3,128,507
METHOD OF DEPOSITING FIBERS FROM ONE TOW ONTO ANOTHER TOW INCIDENT TO FORMING A NONWOVEN WEB
Lincoln E. Pearson, Worcester, Mass., assignor to Crompton & Knowles Corporation, Worcester, Mass., a corporation of Massachusetts
Continuation of application Ser. No. 85,592, Jan. 30, 1961. This application Jan. 19, 1962, Ser. No. 167,279
8 Claims. (Cl. 19—155)



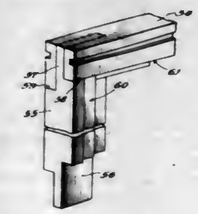
1. The method of converting filaments of synthetic material in tow form into a nonwoven web including the following steps: feeding a tow of filaments to an operating station, breaking the filaments into fibers at the station, collecting the fibers on a second tow, passing the second tow and the fibers thereon through a second station to break the filaments of the second tow into fibers and mix the latter with the fibers of the first tow, and thereafter depositing the fibers from both tows on a moving conveyor to produce a composite nonwoven web including fibers corresponding to both tows.

3,128,508
WINDOW WELL COVER
Charles E. Burnham, Box 312, Broadway Road, Lutherville, Md.
Filed May 23, 1961, Ser. No. 112,047
2 Claims. (Cl. 20—1)



1. In combination with a building wall and a semi-circular vertically disposed sheet metal window well having an exposed upper edge adjacent the ground surface below and outwardly of said building wall, a well cover comprising an upright outer hood of quarter-spherical shape having the lower edge thereof engaging the well upper edge and the upper edge thereof engaging the building wall, there being apertures in the portion of said hood adjacent the lower edge, a door conformably shaped to fit snugly within said hood normally disposed within said hood adjacent the lower edge thereof and in covering relation with respect to said apertures, and means connecting said door to said hood for swinging movement from the normal position to a position adjacent to the portion of said hood adjacent the upper edge and out of covering relation with respect to said hood apertures, a first lip on the inner face of said hood adjacent the lower end thereof, said lip receiving the lower end of said door when said door is in the normal position, and a second lip on the inner face of said hood intermediate the ends thereof, said door upper end being provided with a hook portion received in said second lip when said door is in the normal position.

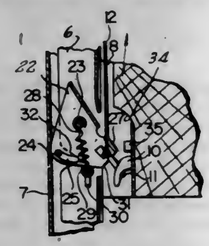
3,128,509
WINDOW FRAME STRUCTURE
Ottmar Stotz, 1504 Washington St., Evanston, Ill.
Filed Apr. 13, 1962, Ser. No. 187,432
6 Claims. (Cl. 20—11)



1. A wooden frame member for window construction, comprising: top, bottom and side frame members ar-

ranged and connected in a generally rectangular fashion to form a frame for a window, each frame member having the same asymmetrical cross-sectional shape including inner stepped surfaces forming rabbets, alternate members in said frame having tongues at each end and the other members in said frame having mating grooves to receive said tongues, said tongues on said alternate members being centered on said frame member and having an end surface square with the length of the frame member, said tongues having an outwardly extending shoulder on each side generally parallel with said end surface, said shoulders being spaced from said end surface distances generally equal to the shortest and longest distances respectively across the frame member to said rabbets, said shoulders being arranged oppositely in relation to said tongues at opposite ends of the frame member providing for assembly of the frame members with the rabbets facing inwardly or outwardly of the frame as desired.

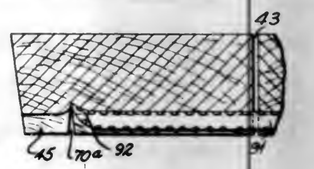
3,128,510
SASH MOUNTING
Dominick C. Fanello, Mansfield, and George N. Rado, Ashland, Ohio, assignors to Shiloh Tool & Die Mfg. Company, Mansfield, Ohio, a corporation of Ohio
Filed May 23, 1961, Ser. No. 112,096
8 Claims. (Cl. 20—52.2)



7. A window structure comprising a sash, vertical frame members on both sides of said sash, stops projecting from said frame members slidably engaged in grooves at the sides of said sash, tensioned sash cords operatively associated at one end thereof with said stops, the opposite ends of said sash cords adapted to be removably engaged on hooks mounted on said sash within said grooves, said stops having cord arresting means pivotally connected thereto, said cord arresting means in one position having their cord arresting portions releasably held within said stops, and in a second position having their cord arresting portions projected from said stops adapted to arrest said cords, whereby said cord arresting portions may be manually projected from said stops, said sash may be lowered until said hooks pass below said cord arresting portions and then raised thereby transferring said sash cords from said hooks to said cord arresting means.

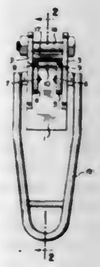
3,128,511
PARQUET FLOORING BLOCK
Charles Ernest Tibbals, Oneida, Tenn., assignor to Wood Products Development Company, Inc.
Original application Jan. 29, 1958, Ser. No. 711,868, now Patent No. 2,983,295, dated May 9, 1961. Divided and this application Feb. 24, 1960, Ser. No. 10,752
4 Claims. (Cl. 20—78.3)

1. A parquet flooring block comprising a plurality of individual, elongated, relatively narrow slats transversely spaced relative to one another with the mutually facing edges of adjacent slats being planar, each slat having formed in the nonwear surface thereof laterally spaced parallel grooves with the grooves in adjacent slats being aligned with one another, and a knurled, flexible, ductile wire-like binding element seated in said aligned grooves, and in frictional engagement with the walls thereof to retain the slats in spaced relationship to compensate for



thermal and moisture expansion of the slats relative to one another and to accommodate surface irregularities of the surface on which the block rests.

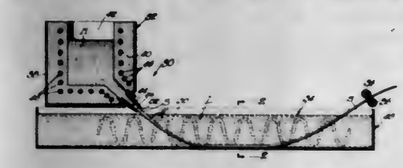
3,128,512
RELEASE MECHANISM
William R. Moulton, Pierson, Fla., assignor to Merritt-Chapman & Scott Corporation, a corporation of Delaware
Filed May 10, 1961, Ser. No. 109,100
2 Claims. (Cl. 24—270)



1. A remote control positive release means for releasably connecting a pontoon to a section of pipe comprising, a body member adapted to be brought against a side of a pontoon, two spaced vertically extending plate members affixed to said body member, two rotatable discs, with a disc being mounted on each said plate member along a single horizontally extending axis, there being a notch on the periphery of each said disc with said notch being above said axis when a pontoon is connected to a section of pipe, a load carrying strap affixed at one end to said plate members above said discs adapted to extend over a pontoon and under a section of pipe, a releasable pin member affixed to the other end of said load carrying strap and positioned in said notches when a pontoon is connected to a section of pipe, a handle for rotating said discs, and control means extending from said handle to a remote control station whereby when said control means is actuated, said handle is caused to move to rotate said discs and allow said releasable pin to be pulled from said notches under the force of said load carrying strap.

3,128,513
MOLDLESS METAL CASTING PROCESS
Joseph W. Charlton, Liberty St., Madison, Conn., and John L. Cotsworth, 1400 Unquowa St., Fairfield, Conn.
Filed Mar. 29, 1961, Ser. No. 118,209
3 Claims. (Cl. 22—200.1)

1. The moldless process of continuously casting rod or the like stock of shaped section, which comprises discharging in non-vertical direction from a nozzle of a section different from the stock section into a fluid in a tank, a continuous stream of molten metal of higher specific gravity than the fluid with sufficient force substantially to confine the molten metal in the fluid to the shape and size of the nozzle section; solely by the effects of surface tension and pressure of the metal of the stream gradually reshaping the section of the metal stream, by externally chilling the metal stream while passing through the completely enveloping fluid toward the tank bottom at an inclined approach thereto for gradual solidification



at plastic self-deformation of the metal stream to the point where the metal stream is beyond disintegration on the hereinafter recited stock retraction; and retracting the substantially solidified stock on the tank bottom in a direction and at a rate to keep the metal stream at its inclined approach to the tank bottom and preserve the continuity of the stock with the molten metal stream.

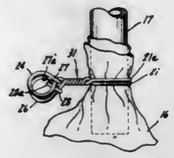
3,128,514
WRITING INSTRUMENT RELEASABLE SECURING MEANS
Kenneth Parker and Donald W. Doman, Janesville, Wis., assignors to The Parker Pen Company, Janesville, Wis., a corporation of Wisconsin
Filed Apr. 3, 1959, Ser. No. 803,914
1 Claim. (Cl. 24—11)



In combination, a writing instrument and a cooperating mounting device therefor, said writing instrument including an elongate body with a narrow annular band of a first fabric material fastened encirclingly about said body intermediate the ends thereof, and said mounting device comprising a substantially flat plate member having mounted on one face a resilient clip element for releasable attachment of said plate member to a supporting structure and covered on its second face with a second fabric material, said plate and second fabric material having heights and widths greater than the respective height and diameter of the band of said first fabric material, one of said first and second fabric materials including upstanding pile thread flexible hooks that releasably interlock mechanically with the other fabric material when said first and second fabric materials are brought into surface engagement.

3,128,515
PREFORMED WIRE TIE
Herbert F. Cox, Jr., Syracuse, N.Y., assignor to Inland Container Corporation, Indianapolis, Ind., a corporation of Indiana
Filed Sept. 13, 1961, Ser. No. 137,796
4 Claims. (Cl. 24—30.5)

1. A preformed wire tie for closing the gathered end folds of a bag or the like, said wire tie being formed to provide a generally circular wrapping loop intermediate the wire tie ends with terminal portions of the wire extending from the loop, said loop having a diameter permitting the loop to be slipped over the gathered end folds of a bag, said wrapping loop being formed as a substantially two coil helix with at least one coil of uniformly circular cross-section, said terminal portions of the wire forming the helix extending tangentially therefrom in converging



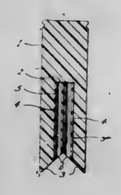
relation to each other, generally registering end loops which face each other in side-by-side relation formed on said terminal portions, said end loops lying in planes substantially parallel to the plane of said wrapping loop and being closed by hooks formed to embrace the adjacent terminal wire portions with the free tips of said hooks disposed at the facing sides of said generally registering end loops.

3,128,516
STRAP TIGHTENER AND FASTENER
Ralph E. Halvarson, 3747 N. 36th St., Milwaukee, Wis.
Filed May 22, 1961, Ser. No. 111,742
4 Claims. (Cl. 24—68)



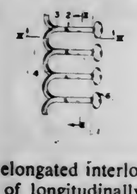
1. A fastener and tightener for straps comprising a body portion adapted to be secured at one end to a support, a throw and take-up lever pivotally secured at one end to the opposite end of said body, said throw lever and said body portion being of a U-shape in cross-section and each including outer walls and side walls, a cross-pin carried by the side walls of the body inward of but adjacent to the pivot point of the lever, and said lever having a slot therein at a point intermediate its ends adapted to receive the strap being tightened and said cross-pin being adapted to receive an intermediate portion of the strap, means for detachably securing the strap inward of the cross-pin to the body including a shaft rotatably carried by the side walls of the body, a cam roller having a high clamping point rigidly secured to the shaft adjacent to the outer wall of the body, the strap being adapted to be passed between the cam roller and the outer wall of the body so that the high point of the cam roller will bind the strap against said outer wall, one end of said shaft being extended beyond a side wall of the body and having an operating handle thereon, means for latching the lever in a lowered position over the body including a latch plate pivotally carried by one side wall of the lever having a slot for receiving the extended end of the shaft with the shaft functioning as a keeper for the safety latch.

3,128,517
CLOTHESPIN
David W. Alley, 5917 Hartbrook, Houston, Tex.
Filed Nov. 6, 1961, Ser. No. 150,234
2 Claims. (Cl. 24—137)



1. In a clothespin, a rigid body member, there being a longitudinal axial slot in said body member extending from one end thereof to a point adjacent the other end thereof, there being axial opposing grooves in the side walls of said slot, flexible tubular inserts mounted in and extending the full length of said grooves, the slotted end of said body member having inwardly tapering end faces, and the end faces of said inserts at the slotted end of said body member being tapered inwardly in alignment with the end faces of said body member.

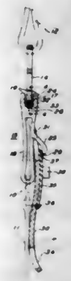
3,128,518
ZIPPER
Arthur Steingrübner, Bonn, Rhine, Germany, assignor, by mesne assignments, to Wahl Brothers, New York, N.Y., a partnership
Filed Aug. 4, 1959, Ser. No. 831,628
Claims priority, application Germany Aug. 7, 1958
7 Claims. (Cl. 24—205.13)



1. In a zipper, an elongated interlocking element composed of a plurality of longitudinally consecutive members and constituted by a single length of elastically resilient elongated material, longitudinally consecutive sections of said length of material constituting each of said members, in order, a first connecting portion in common with an adjacent other member, a first leg portion, a head portion, a second leg portion, and a second connecting portion in common with another adjacent member, said portions being each elongated, said leg portions and said head portion extending in a common plane transverse of the direction of elongation of said element, said first and second leg portions having respective substantially parallel foot parts adjacent the respective connecting portions, and the remainders of said leg portions flaring from the respective foot parts toward said head portion in a direction away from each other.

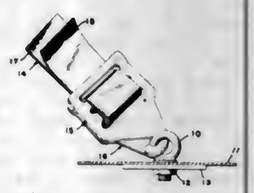
3,128,519
PARACHUTE DISCONNECT DEVICE
John Shearman Donaldson, Chatham, N.J. (% Penna. Engr. Co., 1107–21 N. Howard St., Philadelphia 23, Pa.)
Filed Feb. 20, 1962, Ser. No. 174,576
1 Claim. (Cl. 24—230)

A parachute disconnect device for interposition between body harness and parachute lines comprising a first body member for connection to the parachute lines and having a horizontal bar, a second body member for connection to the body harness and having a bifurcated portion at the upper end thereof, said bifurcated portion having a bar receiving sleeve horizontally disposed therein for pivotal mounting of the bar therein and extending therefrom to opposite sides thereof, said sleeve having enlarged ends and an upwardly extending opening for the reception of said bar, a manually operable control lever having spaced hooked portions pivotally engaged on said sleeve between said bifurcated portion and said ends, said control lever being movable from a downwardly disposed holding position to an upwardly disposed release position, said hooked portions having openings facing along



said control lever for alignment with said upwardly extending openings in said upwardly disposed position of said lever for insertion and separation of said bar and for downward disposition for preventing removal of said bar from said sleeve, and interengaging members on said control lever and said second body member for releasably locking said control lever in said downwardly disposed holding position, said interengaging members including a locking lever pivotally mounted on said control lever for lateral movement with respect thereto, said locking lever having a dished end portion, and said second body member having a portion for engagement by said dished portion.

3,128,520
CLAMPED SISTER-HOOK TERMINAL COUPLING FOR SAFETY BELTS
Andrew G. Carter and Herman G. Alofs, Grand Rapids, Mich., assignors to Andrew G. Carter and Harriett T. Carter, a partnership doing business as Carter Engineering Company, Grand Rapids, Mich.
Filed June 19, 1961, Ser. No. 118,121
4 Claims. (Cl. 24—242)

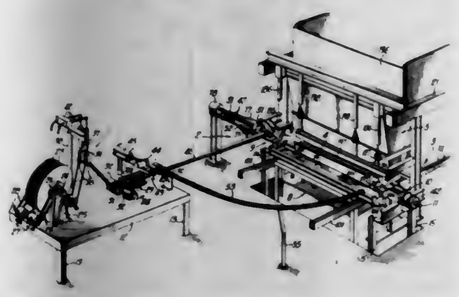


4. A coupling, comprising: a pair of normally superimposed sister-hook elements each including a portion provided with spaced bars including an outer bar, an intermediate bar and an inner bar, each of said elements also having a hook portion at the opposite end thereof from said bars, said hook portions normally extending in opposite directions and defining an opening when said elements are held together; and belt means looped around the intermediate of said bars on each of said elements to embrace the same together, said belt extending also around the inner bar on each of said elements and between said outer bars.

ERRATUM

For Class 24—270 see:
Patent No. 3,128,512

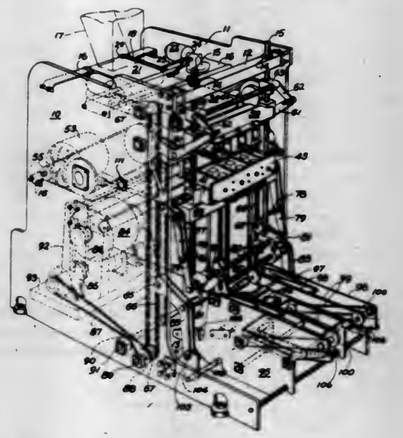
3,128,521
APPARATUS FOR MOLDING PRE-STRESSED CONCRETE MEMBERS
Robert S. Baker, Greensboro, N.C., assignor, by mesne assignments, of one-third each to J. L. Cone, Jr., C. W. Cone, and Douglas P. Cone, all of Tampa, Fla.
Filed Oct. 5, 1959, Ser. No. 844,441
16 Claims. (Cl. 25—41)



1. A machine for making pre-stressed concrete members comprising, a frame having a transversely extending molding position thereon, a mold box mounted transversely of the frame adjacent the molding position and movable vertically to and from the molding position, a pallet feed path extending longitudinally of the frame and across the vertical transverse plane of the molding position, a supply of pallets of channel-shaped transverse cross-section having a header at each end bridging the channel-shaped pallet with at least one of the headers being unattached to the pallet, means to move assembled pallets along the feed path to and through the molding position, means to string tensioning cables between the headers of the pallets, means on the headers to engage the cables to prevent release of the cables from the headers when the headers are moved apart, means on the frame to engage the unattached header of a pallet to separate the cable engaging means of the headers to tension cables strung between the headers, and means on the unattached header to hold the cable engaging means in cable tensioned position, means to move the mold box to pallet-contacting cable-surrounding position to form a mold cavity at the molding position, and means to feed concrete mix to the mold cavity.

3,128,522
CONCRETE BLOCK MAKING MACHINE
William G. Benjey and William D. Reynolds, Alpena, Mich., assignors to Alpena Research & Development Company, Alpena, Mich., a corporation of Michigan
Filed May 24, 1962, Ser. No. 197,452
6 Claims. (Cl. 25—41)

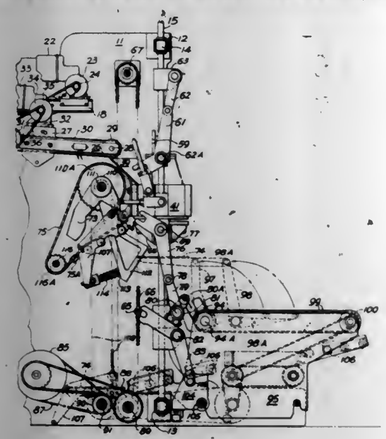
1. A machine for making concrete blocks comprising a rigid frame, a pair of rods, resilient means resiliently connecting said rods to said frame in substantially parallel and vertically extending relationship so that said rods may move both axially and radially relative to said frame, a mold box extending between said rods, a core assembly including a support base beneath said mold box for vertical movement into and out of said mold box, a packer head above said mold box for vertical movement into and out of said mold box, means mounting said mold box, core assembly and packer head on said rods for vertical movement relative thereto, support means connected between said frame and mold box supporting said mold box on a portion of said rods, vibration means adapted to virate said mold box mounted on said frame, a packer head operating means connected to said packer head so as to move it down into and up out of said mold box, said packer head operating means adapted to selectively fix said packer head to said rods so as to prevent relative vertical movement therebetween, core operating means connected to said core assembly so as to move it up into and downwardly out of said mold box, said core operating means adapted to selectively fix said core assembly to said rods so as to prevent relative vertical movement therebetween, a pallet movably mounted on said frame, a pallet operating means connected to said pallet and adapted to move said pallet under and adjacent the bottom of said mold box so as to receive said concrete blocks thereon from said mold box, rod operating means connected to said rods adapted to move said rods downwardly when said packer head means fixes said packer head to said rods whereby said packer head is moved into said mold box and forces said concrete blocks downwardly therefrom onto said pallet.



3,128,523
CEMENT BLOCK MAKING MACHINE
William G. Benjey and William D. Reynolds, Alpena, Mich., assignors to Alpena Research & Development Company, Alpena, Mich., a corporation of Michigan
Filed Dec. 19, 1962, Ser. No. 245,780
8 Claims. (Cl. 25—41)

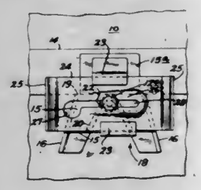
6. A machine for making concrete blocks comprising a frame, vertically extending spaced guide members movably mounted on said frame, a mold box extending between said guide members and supported on said frame, packer means movably mounted on said frame above said mold box and movable vertically into and out of said mold box, a core assembly movably mounted on said frame beneath said mold box for movement vertically into and out of said mold box, core assembly operating means connected between said members and core assembly adapted to selectively move said core assembly downwardly out of, away from and upwardly towards said mold box, conveyor means on said frame below said mold box for moving said concrete blocks away from said mold box, means for introducing a pallet beneath said mold box so that the pallet may receive said concrete blocks from said mold box, said last mentioned means comprising a pallet moving means for moving said pallet and the concrete blocks thereon from below said mold box onto said conveyor means, said pallet moving means including at least one pair of arms pivotally connected to said

frame, and connecting means connecting said core assembly operating means to said arms so that when said core assembly operating means moves said core assembly down-



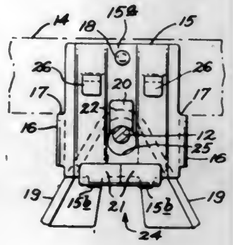
wardly from said mold box the arms are pivoted upwardly so as to support said pallet beneath said mold box and then pivoted downwardly to move said pallet onto said conveyor means.

3,128,524
CLAMP BRACKET FOR CONCRETE FORMS
John D. Kay, Los Angeles, Calif., assignor to Burke Concrete Accessories, Inc., a corporation of California
Filed Nov. 27, 1962, Ser. No. 240,273
6 Claims. (Cl. 25—131)



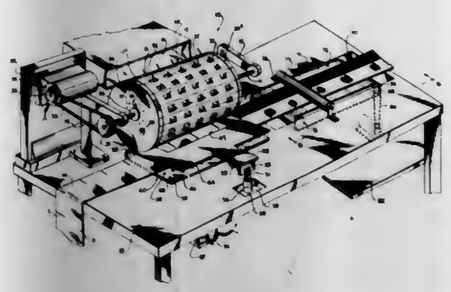
6. A clamp bracket cooperatively associated with the terminal head of a tie-rod extension and a timber arranged transversely thereof comprising an inner substantially vertical planar portion adapted to engage cooperatively with a form wall, an outer planar portion arranged substantially in parallel relation to the inner portion, opposed side portions interposed between the inner and outer planar portions and having seat means for supporting the timber, a saddlelike element interposed between and rigidly connected to the inner and outer planar portions, the saddlelike element having a part thereof overlying and seated upon the tie-rod extension, the inner and outer planar portions having aligned apertures to permit the terminal head to pass therethrough, an elongated wedge member mounted for slidable adjustment on the outer planar portion and having an inner face engaging with the outer planar portion and having an aperture adjacent an end thereof adapted to receive the terminal head, the said aperture being adapted to register with the aligned apertures of the inner and outer portions when the wedge is in a certain adjusted position, and a longitudinal cam surface on the wedge member cooperatively engaging with the terminal head and extending longitudinally from the aperture in such wedge member and disposed in an outwardly inclined position with respect to the inner face of the wedge member, the wedge member having a slot transversing the cam surface longitudinally, the slot accommodating slidably the tie-rod extension, and the slot having a substantially uniform width narrower than the diameter of the terminal head.

3,128,525
CLAMP BRACKET FOR CONCRETE FORMS
John D. Kay, Los Angeles, Calif., assignor to Burke Concrete Accessories, Inc., a corporation of California
Filed June 3, 1963, Ser. No. 285,026
4 Claims. (Cl. 25—131)



1. In a clamp bracket cooperatively associated with the terminal head of a tie-rod extension and a timber arranged transversely thereof, an outer planar portion lying in a substantially vertical plane adapted to engage with the outer side of the timber and having an aperture permitting the terminal head to pass therethrough, the outer planar portion having depending extensions thereon, inwardly extending opposed side portions secured to the outer planar portion and having their upper edges arranged in a substantially horizontal plane and forming a seat for supporting the timber, an element of substantially inverted V-shape in cross-section having an outer end secured to the outer planar portion, said element having a vertex portion overlying and seating on the tie-rod extension and such vertex portion being in substantially horizontal alignment with the aperture in the outer planar portion, an inner planar portion on the inner end of the element, such inner planar portion lying in a plane substantially parallel to the outer planar portion and also having an opening in horizontal alignment with the aperture of the outer planar portion, such opening being of sufficient size to allow the terminal head of the tie-rod extension to pass freely therethrough, upper and lower opposed guide members extending outwardly beyond the outer planar portion, the lower guide members having openings for receiving the depending extensions of the outer planar portion, an elongated wedge member adjustably supported between the guide members and having an inner planar side slidably engaging with the outer planar portion, the wedge member having an aperture adjacent an end thereof of sufficient size to allow the terminal head of the tie-rod extension to pass freely therethrough, such aparture being positioned for registry with the aperture of the outer planar portion when such wedge member is in a certain adjusted position, a cam surface on the wedge member cooperatively engaging with the terminal head of the tie-rod extension and extending longitudinally from the aperture in the wedge member and disposed in an inclined plane extending outwardly with respect to the inner planar side of the wedge member, and a longitudinal slot in the wedge member connecting with the aperture in such wedge member and traversing the cam surface longitudinally and adapted to accommodate and slidably receive the tie-rod extension, the slot having a width narrower than the diameter of the terminal head.

3,128,526
FABRIC FRINGE FRAYING DEVICE
Irving Plastock, 2470 64th St., Brooklyn 4, N.Y.
Filed Nov. 21, 1962, Ser. No. 239,203
17 Claims. (Cl. 28—18)



9. A fabric fraying apparatus comprising:
(*a*) a support;
(*b*) a drum rotatably mounted above said support;
(*c*) fabric engaging prongs extending radially from said drum and adjustably extensible from the drum;
(*d*) fabric clamping means disposed on said support underneath the drum;
(*e*) means for drawing said fabric through said clamping means;
(*f*) motor means for rotating the drum;
(*g*) means for actuating said clamping means; and
(*h*) control means alternately actuating the fabric drawing means and the drum rotating means.

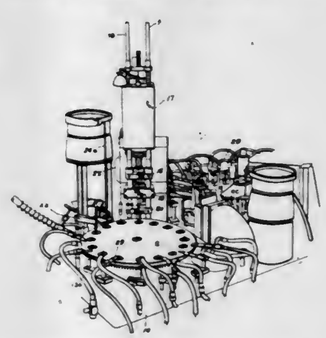
3,128,527
PROCESS FOR MAKING FABRIC FROM BULKED YARN
Francis Schulz, Keith Jarnell, and Arthur M. G. Kinnear, all of Harrogate, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Filed Nov. 23, 1960, Ser. No. 71,177
2 Claims. (Cl. 28—72)

1. A process for producing a bulked filament yarn for making fabrics having improved wear properties comprising (1) melt spinning and drawing a fibre forming thermoplastic polymer having an intrinsic viscosity between 0.35 and 0.46 selected from the group consisting of polyesters and copolyesters of terephthalic acid when said filaments have an initial tenacity greater than about 4.5 grams per denier, followed by (2) reducing the tenacity of the individual filaments of said yarn when measured at intervals of not more than ¾ inch to between 1 and 3.5 grams per denier by treating and bulking the filament yarn by passing the yarn over a narrow heated surface followed by relaxing the yarn, until the desired tenacity is obtained.

3,128,528
PREPARATION OF HYDROSET TEXTILE MATERIAL
Bernard Magel, Wilmington, Del., Otto Jack Matray, Concordville, Pa., Louis Charles Palmer, Richmond, Va., and David Tanner, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Apr. 28, 1960, Ser. No. 25,241
7 Claims. (Cl. 28—76)

1. In the production of textile structures that are processed in a configuration different from the desired final configuration, the improvement for introducing a predetermined stable configuration that can be altered temporarily for processing and then be restored by relaxing the structure which comprises preparing a textile structure of a polymer having hydrophilic side chains, wetting out the structure in a predetermined configuration and drying the structure to hydroset the configuration, the hydroset being introduced at a temperature of at least 60° C. and below that at which significant degradation of the polymer occurs, resetting the hydroset structure in a different configuration with dry heat at temperatures imparting a temporary configuration, and subsequently wetting out the structure in a relaxed condition to remove the temporary configuration and restore the hydroset, said polymer of the structure being selected from the class consisting of (*a*) a polymer of a substrate of a carbonaceous polymeric textile modified, substantially throughout its cross-sectional area, with graft-polymerized side chains derived from an addition-polymerizable monomer selected from the class consisting of an unsaturated organic acid, a water-soluble salt thereof, an unsaturated organic amide, an unsaturated amine, and an unsaturated alcohol, the said side chains in the homopolymerized non-grafted form being soluble, or at least highly swellable, in water, and (*b*) a polymer mixture of a synthetic linear fiber-forming polymer and a compatible water-soluble polymer obtained by addition polymerization of an unsaturated monomer of (*a*) above.

3,128,529
MACHINE FOR ASSEMBLING ELECTRICAL COMPONENTS
David I. Cropp, Warren, Chalmer C. Jordan, Saegertown, and Robert W. Lingo, Meadville, Pa., assignors, by mesne assignments, to Saegertown Glasseals, Inc., Crawford, Pa., a corporation of Delaware
Filed June 9, 1958, Ser. No. 740,966
10 Claims. (Cl. 29—25.2)



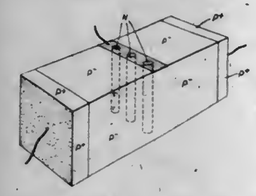
1. A machine for cutting wire into pieces of predetermined lengths and fitting beads and said wire together over said wire comprising spaced columns on said machine, means to receive said cut pieces of wire at the bottom of said columns, said columns being adapted to support a spool of wire at the upper end thereof, gripping means to move said wire downwardly a predetermined distance intermittently, means to grip said wire, another means to hold an end of said wire, another means to cut said predetermined lengths of wire off of the end thereof, said holding means moving said wire into said cut wire receiving means after each wire with a bead thereon is discharged therefrom, said means to receive said cut ends of said wire comprising a table having said spaced wire receiving means thereon, means to rotate said wire receiving members, a bead loading mechanism for disposing beads having holes therein over said cut pieces of wire in said wire receiving members around said table for hermetically sealing said beads to said cut pieces of wire, said machine having a second table, means on said second

table for rotatably receiving said cut pieces of wire, means to synchronize the rotation of said second table with said first table, means for transferring said cut pieces of wire from said first table to said second table in synchronism with the movement of said tables, means for feeding glass tubes onto said second table to receive said wire and said beads, and heating means for sealing said beads to the inside of said glass tubes.

3,128,530
PRODUCTION OF P.N. JUNCTIONS IN SEMICONDUCTOR MATERIAL

Robert Lindsay Rouse, Caversham, Reading, James Wakefield, Beenham, near Reading, and Ronald Charles Newman, Earley, Reading, England, assignors to Associated Electrical Industries Limited, London, England, a British company

Filed May 12, 1960, Ser. No. 28,644
Claims priority, application Great Britain May 21, 1959
4 Claims. (Cl. 29—25.3)

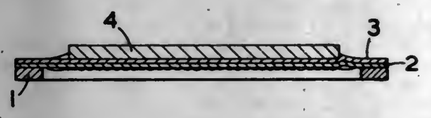


1. The process of producing a p.n. junction device which consists in heating a crystal body of semi-conductor material containing oxygen together with impurity activators of opposite conductivity types in homogeneous concentration said activator concentration of one conductivity type being initially predominant, said body being characterised by a crystal structure possessing an internal crystal boundary forming an array of dislocations substantially regularly spaced from one another, the heating being such as to produce controlled diffusion to and precipitation with said oxygen at the crystal boundary of at least one of said initially predominant activators to obtain an array of spaced regions of opposite conductivity type from that of the remainder of the body, and attaching ohmic contacts to the array and to spaced regions of the body on opposite sides of the array.

3,128,531
DYNODES FOR ELECTRON DISCHARGE TUBES AND METHODS OF MAKING SAME

William Leslie Wilcock, East Molesey, England, assignor to National Research Development Corporation, London, England, a British corporation

Filed Oct. 5, 1960, Ser. No. 60,643
Claims priority, application Great Britain Oct. 22, 1959
13 Claims. (Cl. 29—25.17)



1. A method of making dynodes for incorporation in electron discharge tubes, said dynodes consisting of an outer frame and a composite film supported by said outer frame, said composite film including an electron-permeable supporting layer and a layer of secondary emission material, said method comprising the steps of producing on the supporting frame a slack, thin, supporting film, forming on one surface thereof a coating of secondary emission material, said coating of secondary emission material being of smaller dimensions than the area enclosed within the frame and being so situated within the frame that a margin is left between the outer edge of the secondary emission material and the inner edge of the frame so that, on subsequent baking, at least some of the slack in the supporting film is taken up by shrinkage of said electron emission material.

3,128,532
METHOD OF MAKING ELECTROACOUSTIC TRANSDUCERS

Frank Massa, Cohasset, Mass., assignor to Massa Division of Cohu Electronics, Inc.

Original application Sept. 17, 1957, Ser. No. 684,551, now Patent No. 2,967,957, dated Jan. 10, 1961. Divided and this application Dec. 9, 1960, Ser. No. 75,028
10 Claims. (Cl. 29—25.35)

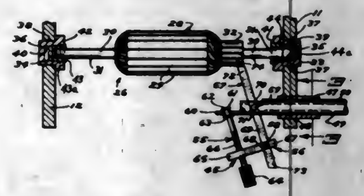


1. The method of constructing an electroacoustic transducer operable at a predetermined frequency which includes the steps of forming a bilaminar assembly including a transducer element and an inert elastic plate of such dimensional size that the resonant frequency of the vibrating portion of the assembly lies above the desired frequency of operation; and affixing a selected concentrated mass to the vibrating surface of the assembly of such magnitude that the resonant frequency of the assembly is reduced to the required operating value.

3,128,533
PORTABLE COMMUTATOR DRESSING APPARATUS

Earl Haugland, Hampden, N. Dak.

Filed Feb. 7, 1962, Ser. No. 171,749
6 Claims. (Cl. 29—27)

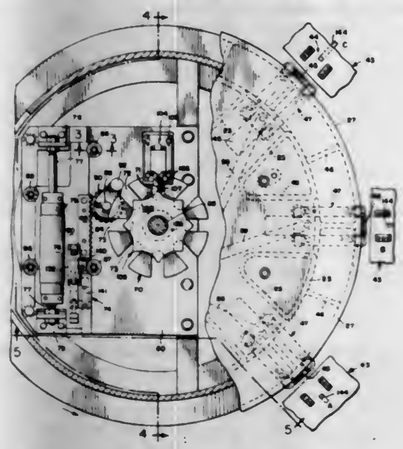


1. A portable dressing apparatus for turning down motor and generator armature commutators and the like, said armatures having a shaft at least one end of which is threaded, said apparatus comprising, a pair of spaced and parallel bearing plates the distance therebetween being variable, a tapered bearing secured to each bearing plate and in axial alignment, each said tapered bearing having an internal frusto conically shaped recess opening inwardly toward the other tapered bearing, means adapted for being secured to the threaded end of said armature and cooperatively interfitting with one of said tapered bearings whereby the armature may be rotatably bridged between said tapered bearings, means for rotating said armature, and a tool means for turning down said armature commutator.

3,128,534
MULTI-STATION OPERATION WORKPIECE SUPPORTING APPARATUS

John E. Karlovitz, Chicago, and Rudolph F. Onsrud, Niles, Ill., assignors to Onsrud Machine Works, Inc., Niles, Ill., a corporation of Illinois

Filed Apr. 4, 1960, Ser. No. 19,670
11 Claims. (Cl. 29—38)



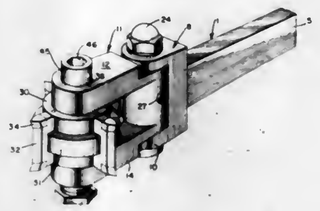
1. A multi-station precision operation workpiece supporting apparatus for transporting a workpiece from one to another of a plurality of operating tools disposed adjacent to said apparatus in successively operative positions with respect to the path of workpiece travel, said apparatus comprising a power driven rotatable table for rigidly supporting and moving said workpiece from a first operating tool station to a second operating tool station when said first operating tool has completed its operation on said workpiece, means for supporting each of said tools independently of said table and for limited lateral resilient movement, means in said apparatus for controlling rotation of said table for moving said workpiece from said first operating tool station to said second operating tool station and indexing said table with respect to said second tool station, and projectable-retractable tool positioning and locking keys mounted in said apparatus, said tool positioning and locking keys being projectable from said table at each of said stations and into interlocking relation with the respective operating tool support for adjusting said tool laterally into precise radial relation with the respective key.

3,128,535
CUTTER TOOL ASSEMBLY

James A. Anania, 1925 McCarter Highway, Apt. 1-D, Newark, N.J., assignor of thirty-three percent to Frederick Carlton Holle, Hasbrouck Heights, N.J., thirty-three percent to Otto Sass, Irvington, N.J., and ten percent to William J. Matt, Jr., Westfield, N.J.

Filed May 14, 1962, Ser. No. 194,538
6 Claims. (Cl. 29—98)

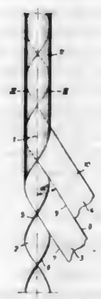
1. A multiple bit holder for lathe and milling equipment comprising a tool bar having a yoke provided with upper and lower arms at one end thereof, a pivot pin in said yoke, a second yoke having parallel arms and a cross member therebetween, said cross member being attached to said pivot pin for rotatable movement with respect to said first yoke, set screw means threaded in said cross member for engagement with said pivot pin to independently lock said cross member and said second yoke in adjusted position with respect to said pivot pin, said pivot pin having a nut at one end thereof engaging said first yoke and a serrated end portion at the other end thereof, a complementary serrated end portion on said lower arm, whereby, on tightening said nut said yokes are locked together in predetermined position by engagement of said serrated portions, said second yoke having a rotatable bit holder therein provided with four bits spaced 90° from each other, and means to selectively rotatably position and to lock said bit holder in said second yoke in predetermined position, said means comprising a bushing having four exterior ribs corresponding to said 90° positions, apertures in one of said arms and said bit holder to accommodate said ribbed bushing, removable means to lock said bushing in said one arm and said bit holder, whereby said second yoke may be angled to one side of said tool bar and locked in place, and said bit holder may be rotated 90° to position an unused bit in cutting position and locked in said last named position.



3,128,536
METHOD FOR PRODUCING HOLLOW BODIES FROM STRIPS

Wilhelm Eckhardt, Paris, France, assignor to Firma Driam S.A., Vaduz, Liechtenstein

Filed Apr. 10, 1961, Ser. No. 101,751
Claims priority, application Germany Jan. 19, 1961
7 Claims. (Cl. 29—155)

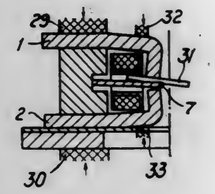


1. A method of producing reinforced rigid tubular bodies comprising the steps of, spirally twisting a flat strip about its longitudinal axis to form a spiral web, feeding and bending in edge to edge relation two other strips obliquely to said longitudinal axis and about said spiral web to form the tubular covering therefor, the longitudinal axis of the tubular body corresponding to said longitudinal axis of said web, said two other strips forming spiral seams adjacent to and of a pitch equal to the side edges of said web, and bonding said two strips and said side edges of said web to each other at said seams to form a rigid webbed tubular body.

3,128,537
MANUFACTURE OF ELECTROMAGNETIC DEVICES

Sten Daniel Vigren, 16–18 Mose Backetorg, Stockholm, Sweden; Per Harry Elias Claesson, 4 Sportstugevagen, Danderyd, Sweden; and Rolf Albin Zander, 15 Ivar Vidfamnesgatan, Stockholm, Sweden

Filed June 25, 1959, Ser. No. 822,949
Claims priority, application Sweden June 26, 1958
6 Claims. (Cl. 29—155.5)



1. A method in the manufacture of a polarized electromagnetic device which includes permanent magnet means and two pole pieces of magnetic material connected to poles at opposite sides of the permanent magnet means and having end portions carrying pole faces facing each other to form an air gap of predetermined length and an armature positioned between said pole pieces and having an end extending into said air gap, said method comprising the steps of: manufacturing the permanent magnet means and the pole pieces to specified dimensions within given tolerance limits and connecting the permanent magnet means and the pole pieces in an assembly, said dimensions being such that after assembling the permanent magnet means and the pole pieces the length of the air gap between said pole faces is slightly different from said predetermined length; inserting at least one spacing member between the armature and one of said pole faces; applying pressure to the pole pieces to move them into close contact with the poles of the permanent magnet means and to move said pole faces into contact with said spacing member and armature under deformation of the pole pieces; and removing said pressure and said spacing member, the size of said spacing member being so chosen in relation to the dimensions of the permanent magnet means the armature, the pole pieces and the predetermined length of the air gap that after removal of the pressure and the spacing means the said end portions of the pole pieces spring back to such extent that the distance between said pole faces becomes substantially equal to said predetermined length.

3,128,538
SEMICONDUCTOR-METAL BONDING METHOD

Horst Kutschera, Hamburg-Langenhorn, Germany, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

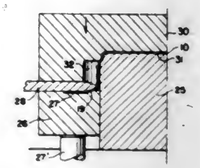
No Drawing. Filed Feb. 6, 1961, Ser. No. 87,063
Claims priority, application Germany Mar. 11, 1960
4 Claims. (Cl. 29—155.5)

1. A method of bonding a semiconductor crystal to a metal element, comprising providing between and in contact with the semiconductor crystal and metal element a layer of germanium oxide, and heating the assembly in a hydrogen-containing reducing atmosphere and at a temperature above about 650° C. but below the melting point of the crystal and elemental germanium wherein the oxide is reduced and the resultant reduced material bonds the crystal and metal element firmly together in a uniformly penetrating alloyed bond.

3,128,539
WHEEL MANUFACTURE

Dewey H. Brooks, Jr., and Orville Wright Jacobs, Dayton, Ohio, assignors to The Sheffield Corporation, Dayton, Ohio, a corporation of Delaware

Filed Jan. 16, 1961, Ser. No. 82,748
4 Claims. (Cl. 29—159)



1. The method of making a peripherally grooved sheet metal wheel comprising drawing a sheet metal blank to substantially cup-shape to provide a central disk portion with a generally cylindrical flanged portion having a terminal outwardly flaring portion with an offset in the flanged portion so that part of the flanged portion which is adjacent to the disk portion is of a smaller diameter than the part of the flanged portion which is adjacent the terminal outwardly flaring portion, then progressively camming the offset portion of the blank by relative axial sliding movement of the blank over a camming member to force the flange into an outwardly bulged shape while maintaining the diameter of the flange where it joins the outwardly flaring portion, then axially compressing the partially formed blank to overlap the bulged portion of the flange upon itself and thus form one side of the peripheral groove, the other side of which is provided by the outwardly flaring terminal portion of the blank.

3,128,540
ELECTRICAL CONTACT

Childress B. Gwyn, Jr., Export, and Norman S. Hoyer, Pittsburgh, Pa., assignors to Gibson Electric Company, Delmont, Pa., a corporation of Pennsylvania

No Drawing. Filed Sept. 19, 1960, Ser. No. 56,690
7 Claims. (Cl. 29—182)

1. An electrical make and break contact surface element constituted of from about 10% to 90% by weight of a low melting conducting metal component selected from the group consisting of silver, copper, their mixtures and alloys, and a binary alloy component consisting essentially of from about 2% to about 98% of tungsten by weight, the balance of said binary alloy component consisting essentially of molybdenum.

3,128,541
HIGH TEMPERATURE RESISTANT METAL

Max Fredrick Bechtold, Kennett Square, Pa., and Ernest Lewis Little, Jr., Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed June 4, 1959, Ser. No. 817,974
14 Claims. (Cl. 29—182.5)

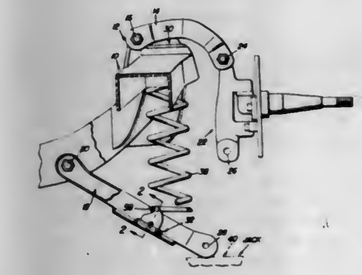
1. A novel powder metallurgy composition of less than 75 micron particle size consisting essentially of chromium and a complex metal silicide consisting essentially of 18–65% Mo, 15–50% Fe, and 17–57% Si, the ratio of silicide to chromium falling within the range of 85:15 to 10:90.

3,128,542
TOOL FOR INSTALLING VEHICLE COIL SPRINGS

L T Strawn, Aztec, N. Mex.
(1310 Lincoln Ave., Farmington, N. Mex.)

Filed Sept. 5, 1961, Ser. No. 135,978
5 Claims. (Cl. 29—227)

1. In combination with a vehicle wheel suspension assembly of the type including a front coil spring disposed between upper and lower spring seats of a vehicle carried by the frame and a lower control arm of the vehicle respectively, said assembly also including an upper control arm, said control arms being pivotally secured to the frame at their inner ends and interconnected at their outer ends by means of a steering knuckle support; a tool for assisting in the placement and securement of said coil spring between said seats after the outer end of the lower control arm has been disconnected from the steering knuckle support and said lower control arm has been swung downwardly at its free outer end away from its normal position engaged with said steering knuckle support and from said upper seat to position the upper and lower seats a sufficient distance apart to receive there-



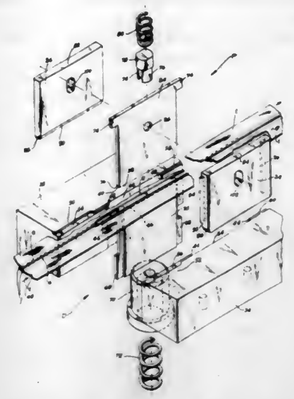
between the coil spring in an uncompressed state whose lower end, when the upper end is engaged with said upper seat, is normally laterally offset outwardly of said lower seat, said tool comprising a cam member removably supported from said lower arm and including cam means engageable with the lower end of said spring to cam the lower end of said spring inwardly into proper seating engagement with said lower seat in response to upward movement of the outer end of said lower control arm toward its normal position secured to said steering knuckle support, said lower spring seat having a centrally disposed aperture formed therethrough, said cam means including a base portion removably secured to the undersurface of said lower control arm adjacent said aperture and a cam portion receivable upwardly through said aperture and defining said abutment means.

3,128,543
PRODUCTION OF FASTENER-ELEMENT-FREE GAPS IN SLIDE FASTENER CHAIN

Patrick Fasciano, Jersey City, N.J., assignor to Conmar Products Corporation, Newark, N.J., a corporation of New Jersey

Filed Nov. 16, 1962, Ser. No. 238,119
13 Claims. (Cl. 29—408)

1. The method of producing a fastener-element-free gap in a continuous slide fastener chain having laterally spaced tapes carrying along their adjacent longitudinal edges fastener elements of continuous plastic coil filaments which are attached by stitches to the tapes, the coils of which filaments have coupling parts which are interengaged to fasten the tapes together, the said method comprising the steps of cutting a group of coils of said interengaged coil filaments along a length corresponding to the free gap to be produced, the cutting being along said length only at one side of the circumference of each of the coils of said group, and then withdrawing the still

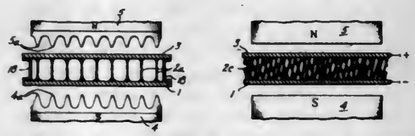


interengaged group of said cut coils from the said stitches by way of the formed cuts in said coils.

3,128,544
METHOD OF MAKING A PANEL

William D. Allingham, 12223 25th Ave. SW., Seattle 66, Wash.

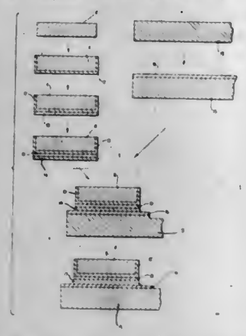
Filed Apr. 28, 1959, Ser. No. 809,400
12 Claims. (Cl. 29—420)



1. A method of forming a structural member comprising introducing a mass of bodies into a cavity separating a pair of plates, applying a directional force field across the cavity so that its lines of force extend in substantially normal relationship to the plates, said mass having a volume that is smaller than that of the cavity so as to permit random movement of the bodies within the cavity, said bodies having a length at least equal to the spacing between the plates and being responsive to the field to orient themselves in spaced columnar distributions along the concentrations of force lines, thereby forming a multiplicity of struts between the plates, effecting a bond between the struts and each of the plates, thereby forming an integral panel, and thereafter effecting relative removal of the panel from the field.

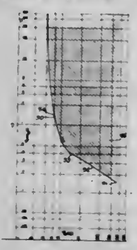
2. A method of forming a structural member comprising introducing a mass of magnetizable bodies into a cavity separating a pair of mold faces, at least one of said faces being formed by a plate, said mass having a volume that is smaller than that of the cavity so as to permit random movement of the bodies within the cavity, applying a magnetic field across the cavity so that its lines of force extend in substantially normal relationship to the mold faces, whereupon the bodies are induced to orient themselves in spaced columnar distributions along the concentrations of force lines, the quantity of the bodies being sufficient to enable the columnar distributions to bridge the spacing between the mold faces, effecting a bond between the bodies in the columnar distributions and the plate, thereby forming an integral panel member having a multiplicity of struts, and thereafter effecting relative removal of the panel member from the field.

3,128,545
BONDING OXIDIZED MATERIALS
Theodore W. Cooper, Torrance, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Sept. 30, 1959, Ser. No. 843,467
6 Claims. (Cl. 29—472.7)



1. The method of forming an electrically insulating, thermally conducting and non-penetrating bond to a silicon semiconductor crystal, which comprises: coating a surface of the crystal with a layer of silicon oxide; vapor coating the oxide on said surface with a film of germanium; and alloy bonding a thermally conducting body to said germanium film.

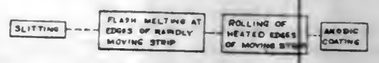
3,128,546
METHOD AND FLUX FOR SOLDERING CHROMIUM OXIDE COATED STEEL MEMBERS
Ludwig K. Schuster, Philadelphia, and Alfonso L. Baldi, Jr., Drexel Hill, Pa., assignors to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Feb. 1, 1960, Ser. No. 6,021
3 Claims. (Cl. 29—495)



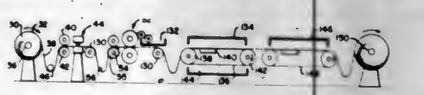
1. A method of uniting plain carbon steel members that have been coated with an in situ formed combination of trivalent and hexavalent chromium oxides, which method includes the step of soldering coated portions of the members together with a tin-lead type of solder, using as a flux a mixture of hydrochloric acid and ammonium chloride in which the range of proportions of ammonium chloride and hydrogen chloride is as represented by the shaded area of FIG. 2.

3,128,547
METHOD FOR PRODUCING STRIP CONDUCTORS HAVING UNIFORMLY INSULATED EDGES
Clarence F. Manning, Manakin, John Staley, Richmond, and Thomas E. Lewis, Chesterfield County, Va., assignors to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Oct. 6, 1959, Ser. No. 846,530
5 Claims. (Cl. 29—527)

1. The method of forming an insulated strip conductor comprising, rapidly moving an uninsulated conductor having burred edges through a heating zone to melt said burred edges and cause surface tension to form protruding rounded edges thereon, rolling said rounded edge conductor to provide a substantially uniform thickness transversely thereof, and thereafter insulating said conductor by depositing an insulating coating thereon.

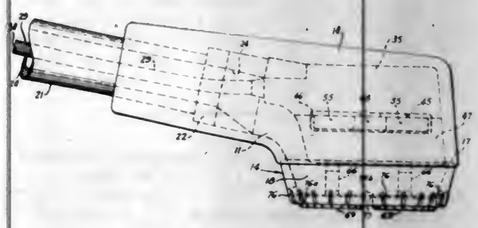


3,128,548
METHOD AND MEANS FOR PROCESSING COILED STOCK INTO CONTAINERS
Peter A. Zelisko, 5650 S. Whipple St., Chicago, Ill.
Filed Sept. 26, 1960, Ser. No. 58,280
26 Claims. (Cl. 29—529)



1. Method of manufacturing container ends from coiled stock comprising the steps of uncoiling the stock, maintaining one edge of the stock in contact with a reference guide while forming a predetermined pattern of index holes in what will be waste areas of the stock between the container ends to be stamped therefrom, spot coating only the areas of said stock which comprise the container ends to be stamped therefrom, and, after baking and cooling the spot coated stock, stamping out the container ends, and using said pattern of index holes to longitudinally align the stock in said spot coating and stamping steps while urging the stock sidewise against further reference to guides to laterally align the stock whereby the container ends stamper from the sheet stock will contain the spot coatings properly centered thereon.

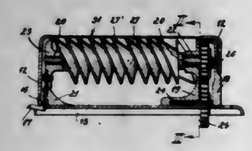
3,128,549
ROTARY TYPE SHAVER WITH SUCTION DISPOSAL MEANS
James E. Hubbartt, Irving Silver, and Richard B. Inman, Atlanta, Ga., assignors to Shavair of America, Inc., Atlanta, Ga.
Filed Mar. 19, 1962, Ser. No. 180,550
4 Claims. (Cl. 30—41.5)



1. A power shaver comprising, in combination, a head piece having a cavity therein and a bottom opening, a handle portion having an open central air passage, a glide plate removably closing said bottom opening and forming an air space, a flexible suction hose connected to said open central air passage, a venturi throat piece in said air passage adjacent said air space and communicating therewith, a frame member having a recess therein, a flexible casing interiorly of said hose having one end secured in said recess, a flexible drive shaft extending through said flexible casing into said head piece, a bearing housing having a passage therethrough in said

cavity, a rigid drive shaft connected to said flexible drive shaft extending through said passage, a miter gear carried by said rigid drive shaft, a gear mounting plate in said body cavity, a shaft perpendicular to said rigid drive shaft extending through an opening in said gear mounting plate, a central drive gear on said perpendicular shaft, a miter gear on said perpendicular shaft meshing with said first-mentioned miter gear, oppositely driven gears in mesh with said drive gear, a tubular shaft mounting each driven gear, each tubular shaft extending through a bushing seated in an opening in said gear mounting plate and extending parallel to said perpendicular shaft, a coil spring in each tubular shaft, a stud secured to the outer end of each spring, a rotary cutting head secured to each stud, said guide plate having a pair of cutter comb supporting openings therein, each coaxial with one of said cutting heads, a cup-shaped cutter comb in each opening, each comb having a flat bottom having radial severing slots therein communicating with said air space, said cutting heads extending interiorly of said cup-shaped cutter combs and being rotatable therein, means for producing suction in said suction hose and hence in said air space, and means for driving said flexible shaft to rotate said rotary cutting heads.

3,128,550
CUTTING HEAD FOR ELECTRIC SHAVERS HAVING A HELICAL SHAPED MOVABLE CUTTER
Afro Miselli, Gardone Val Trompia, Brescia, Italy
Filed Aug. 29, 1962, Ser. No. 220,306
3 Claims. (Cl. 30—43)



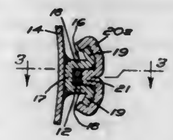
1. In a rotating cutter for a power driven razor having a perforated grid plate in contact with a plurality of nested cutting discs mounted on a spindle for rotation therewith, each of said cutting discs comprising: a body portion provided with a centrally disposed opening; said body portion having a segment thereof disposed on each of the opposite sides of a plane passing diametrically through said disc, the periphery of said segments providing cutting edges, one of said segments being formed with a right-hand helical pitch and the other of said segments being formed with a left-hand helical pitch, the periphery of said segments of said discs being cylindrical and coaxial with said opening for cutting in cooperating with said grid plate upon rotation of said spindle.

3,128,551
ADJUSTABLE INJECTOR RAZOR
James A. Crown, Harrisonburg, Va., assignor to Philip Morris Incorporated, New York, N.Y., a corporation of Virginia
Filed Mar. 29, 1962, Ser. No. 183,617
9 Claims. (Cl. 30—63)



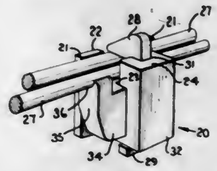
1. A safety razor having a head portion including a cap, and means for supporting a blade in the head against said cap; a bridge member mounted in the head having a guard part arranged adjacent the blade cutting edge, a portion engageable against the surface of the blade to urge the blade against the cap, and an arm portion extending away from the blade, said arm portion being provided with a cam contact part; an adjustable cam means operative on the said contact part; spring means and a support therefor, said spring means being arranged to press the said bridge portion against the blade and to urge said contact part into engagement with said cam means; said cam means being effective to vary the relation of said guard with respect to the blade cutting edge.

3,128,552
ORTHODONTIC APPLIANCE
Garfford J. Broussard, Beaumont, Tex., assignor to Williams Gold Refining Company, Inc., Buffalo, N.Y.
Filed Apr. 13, 1960, Ser. No. 21,951
6 Claims. (Cl. 32—14)



1. For use in an orthodontic appliance comprising an arch wire and a band to be applied to a tooth to be moved, a bracket for mounting upon said band and receiving said arch wire in detachable connection relation, said bracket comprising a base member of winged U-shape sectional form having a bottom wall portion adapted to be permanently fixed to the tooth band and opposed side wall portions extending therefrom in generally parallel spaced relation to provide an arch wire receiving channel therebetween, said side walls having integral flanges bent laterally and outwardly therefrom at acute angles to said side walls to provide open recesses therebehind having overhangs beneath which ligation wires may be wrapped about said base member, and a cap member of C-shape sectional form detachably connected upon said base member and having edge flange portions bearing in slide clamping relation upon the edges of the flanges of said base member.

3,128,553
ORTHODONTIC BRACKET
Percy Raymond Begg, Shelf House, North Terrace, Adelaide, South Australia, Australia
Filed Dec. 8, 1961, Ser. No. 158,093
Claims priority, application Australia Dec. 12, 1960
14 Claims. (Cl. 32—14)

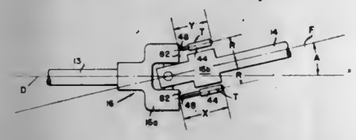


1. An improved orthodontic bracket assembly comprising a bracket member the inner surface of which is weldable to a tooth band, a lock pin slot extending through the bracket member from its upper surface to its lower surface and extending outwardly from the inner surface, an arch wire retaining slot extending from side to side and downwardly from the upper surface, and an arch wire engaging auxiliary member in the base of the arch wire slot.

3,128,554
TOOL AND METHOD FOR MEASURING THE PROPER ANGLE BETWEEN ANGULARLY DISPOSED SHAFTS

Arthur Robert Borden, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Sept. 21, 1961, Ser. No. 139,722
6 Claims. (Cl. 33—1)

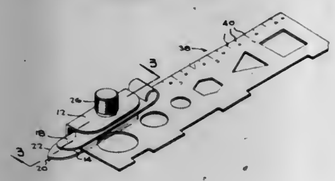


6. A method for determining the driveline angle between a pair of shafts coupled by a universal joint by means of a tool detachably secured to one shaft for contacting a reference surface on the other shaft, said tool having a linearly extensible and retractable spring-loaded contact finger terminating in a contact end, said contact finger being located at a radial distance from the axis of said one shaft and movable parallel to said axis, a stationary portion for guiding said contact finger, a measuring surface on said guide portion and means for releasably locking said contact finger on said guide portion, said method comprising the steps of measuring first the distance between the contact end of said finger and the measuring surface of said guide portion with said finger being in an extended position and locked in said position, securing said tool to said one shaft at the bottom thereof with the contact end contacting said reference surface on said other shaft, releasing said locking means, rotating said one shaft with tool 180° the tool being then on top of said one shaft, locking said contact finger in the contacting position to said guide portion, removing the said tool from the top of said one shaft, then measuring the new distance between said contact end of said finger and said measuring surface of said guide portion, determining the difference between the first measurement and the second measurement and using said difference to determine the driveline angle.

3,128,555
CIRCLE-MAKING ATTACHMENT FOR RULER

Richard L. Jackson, 2205 S. 84th East Ave., Tulsa, Okla.

Filed Sept. 11, 1962, Ser. No. 222,784
11 Claims. (Cl. 33—27)

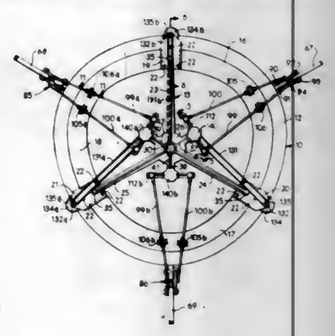


1. A geometric instrument for guided tracing of patterns in circular array, comprising a sheet-form template and a centering element adjustably positionable on said template, said element comprising a channel-form rider having a pair of spaced, parallel walls of substantially equal width, and a bottom, and engageable over an outer edge of said template, a screw having a knurled head and threadedly secured in one of said walls with the head outwardly disposed, a plastic insert centrally located in the inner face of said screw and extending outwardly thereof, the other of said walls having an end edge of ogival form extending beyond an end edge of said one of said walls, a pointed, outwardly-extending centering pin integral with said other of said walls at the apex of said end edge thereof, and a bearing plate adapted for insertion between said screw and said other of said walls, said plate being generally planiform, and having an arcuately-looped, outer end, said template being in the form of an elongated rectangle, with linear graduations along the margin of one edge, a series of notches of different lengths along an edge opposite said one edge, and a series of openings of various geometric forms in said template, between said edges.

3,128,556
DRAFTING APPARATUS FOR PRODUCING THREE-PLANE DRAWINGS

Frank F. Hess, 14170 Piedmont, Detroit 23, Mich.; Francis A. Hess, 18780 San Jose, Lathrup Village, Mich.; and John J. Hess, 8335 Centralia, Dearborn Township, Wayne County, Mich.

Filed Feb. 15, 1962, Ser. No. 173,492
14 Claims. (Cl. 33—77)



1. In a drafting instrument for producing three-plane drawings, the combination of:

(*a*) an elliptical drawing board having a front side and a rear side,

(*b*) a support frame mounted on the rear surface of said board,

(*c*) three straight edges operatively mounted on the front side of the drawing and being disposed in a position with their inner ends directed to a common meeting point,

(*d*) a control knob assembly hingedly connecting the inner ends of said straight edges and adapted for moving the straight edges over the front side of the drawing board for drawing operations,

(*e*) a movable carriage means mounted on the periphery of the drawing board at the outer end of each of said straight edges and having fixedly connected thereto the adjacent straight edge outer end,

(*f*) a pair of control rods disposed on the rear side of the drawing board adjacent each of the movable carriage means and having the outer ends thereof hingedly connected to the adjacent carriage means,

(*g*) a directional control means for each of said pairs of control rods mounted on said board and being operatively connected to the inner ends of each pair of control rods,

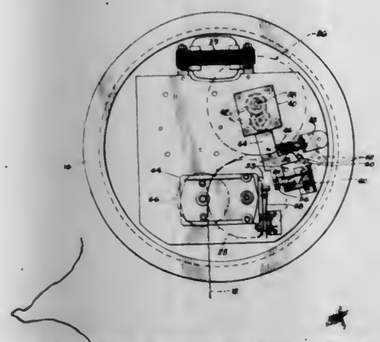
(*h*) a diminishing control means for each of said pairs of control rods and being adapted to operatively connect the inner ends of each pair of control rods to the directional control means for each pair of control rods, and

(*i*) supporting means for said control rods.

3,128,557
REMOTE BIN LEVEL-INDICATING DEVICE

John E. Childs, Boone, Iowa, assignor to Rolfes Electronics Corporation, Boone, Iowa, a corporation of Iowa

Filed Apr. 17, 1961, Ser. No. 103,639
7 Claims. (Cl. 33—126.6)



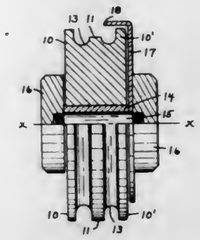
1. In a storage bin provided with means for periodically removing and introducing material whereby the level of material within said bin is constantly changing, the improvement comprising level detector means connected to the top of said bin, said detector means including a housing, a tape reel located within said housing, a motor for driving said reel and a tape adapted to be played out from or wound onto said reel depending on the direction of operation of said motor, a weight secured to the end of said tape, means for actuating said motor whereby said tape can be played out and said weight lowered into said bin, a wheel disposed adjacent said reel within said housing and adapted to be rotated by said tape, means associated with said wheel for recording the extent of movement of said weight and being adapted to retain a reading corresponding to said movement when said weight strikes the material within said bin, means for reversing said motor when said weight strikes the material stored in said bin whereby said tape is adapted to be wound onto said reel, said housing being provided with an elongated cylindrical means having one end secured to the housing with the other end extending toward said bin, an axis of said cylindrical means being disposed generally in the same plane as said tape reel, said cylindrical means comprising first and second cylinders with said second cylinder being slidably received within said first cylinder, spring means having one end fastened intermediate the ends of said first cylinder and the other end attached to said second cylinder, said second cylinder normally projecting substantially beyond the end of said first cylinder through the action of said spring means and being adapted to be forced into said first cylinder in opposition to said spring means, said weight having a diameter greater than the diameter of said second cylinder whereby said weight will be forced against said second cylinder as said tape is wound onto said reel.

3,128,558
WET FILM GAUGE

Maynard R. Euverard, Richmond, Va., assignor to Interchemical Corporation, New York, N.Y., a corporation of Ohio

Filed Sept. 7, 1961, Ser. No. 136,501
5 Claims. (Cl. 33—169)

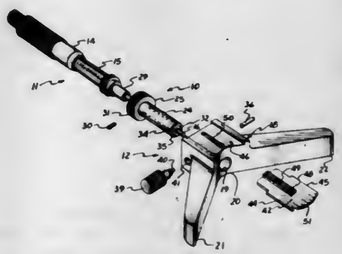
1. A wet film thickness gauge comprising a composite body including first and second circular coaxial disc portions of the same diameter, a third disc portion having an arcuate periphery regularly changing in distance from the axis of rotation of said first and second disc portions and which constitutes the measuring surface, the periphery of said third disc portion having a point of minimum depth below the peripheries of said first and second disc portions with a lower limit of zero and a point of maximum depth below the peripheries of said first and second disc portions which exceeds the thickness of any film to be measured, one of said first and second disc portions being provided with a reference mark denoting that point on the periphery of said third disc portion which is at minimum depth below the peripheries of said first and second disc portions, and a scale plate rotatably mounted on said body for rotation about an axis coincident with the axis of said first and second disc portions, said scale plate being provided with a pointer element extending across the periphery of one of said first and second disc portions to a position adjacent the periphery of said third disc portion, said scale plate being provided with an arcuate scale of graduations beginning with said pointer element and which matches the regularly changing depth of the periphery of said third disc portion below the peripheries of said first and second disc portions.



3,128,559
DEPTH MICROMETER

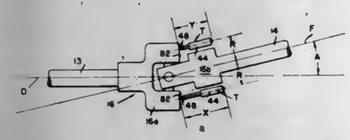
Rudolph R. Winter, 1381 Woodland Place, Plymouth, Mich.

Filed Dec. 2, 1960, Ser. No. 73,322
10 Claims. (Cl. 33—170)



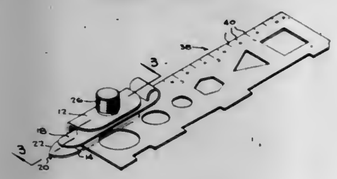
1. A tool for measuring the depth of grooves in rounded workpieces having different diameters comprising, in combination, an inverted V-shaped base including a pair of diverging work engaging arms, said base having a bore extending through its apex, a depth micrometer mounted in said bore, said micrometer having a work engaging spindle passing through said bore and longitudinally movable therein, means for locking said micrometer to said base in a selectable one of diverse reference positions within said bore, and means for centering said tool relative to the sides of said groove.

3,128,554
TOOL AND METHOD FOR MEASURING THE PROPER ANGLE BETWEEN ANGULARLY DISPOSED SHAFTS
Arthur Robert Borden, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 21, 1961, Ser. No. 139,722
6 Claims. (Cl. 33—1)



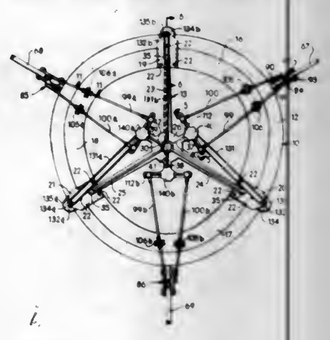
6. A method for determining the driveline angle between a pair of shafts coupled by a universal joint by means of a tool detachably secured to one shaft for contacting a reference surface on the other shaft, said tool having a linearly extensible and retractable spring-loaded contact finger terminating in a contact end, said contact finger being located at a radial distance from the axis of said one shaft and movable parallel to said axis, a stationary portion for guiding said contact finger, a measuring surface on said guide portion and means for releasably locking said contact finger on said guide portion, said method comprising the steps of measuring first the distance between the contact end of said finger and the measuring surface of said guide portion with said finger being in an extended position and locked in said position, securing said tool to said one shaft at the bottom thereof with the contact end contacting said reference surface on said other shaft, releasing said locking means, rotating said one shaft with tool 180° the tool being then on top of said one shaft, locking said contact finger in the contacting position to said guide portion, removing the said tool from the top of said one shaft, then measuring the new distance between said contact end of said finger and said measuring surface of said guide portion, determining the difference between the first measurement and the second measurement and using said difference to determine the driveline angle.

3,128,555
CIRCLE-MAKING ATTACHMENT FOR RULER
Richard L. Jackson, 2205 S. 84th East Ave., Tulsa, Okla.
Filed Sept. 11, 1962, Ser. No. 222,784
11 Claims. (Cl. 33—27)



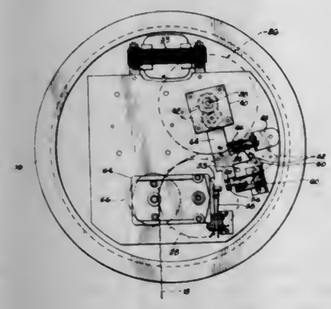
1. A geometric instrument for guided tracing of patterns in circular array, comprising a sheet-form template and a centering element adjustably positionable on said template, said element comprising a channel-form rider having a pair of spaced, parallel walls of substantially equal width, and a bottom, and engageable over an outer edge of said template, a screw having a knurled head and threadedly secured in one of said walls with the head outwardly disposed, a plastic insert centrally located in the inner face of said screw and extending outwardly thereof, the other of said walls having an end edge of ogival form extending beyond an end edge of said one of said walls, a pointed, outwardly-extending centering pin integral with said other of said walls at the apex of said end edge thereof, and a bearing plate adapted for insertion between said screw and said other of said walls, said plate being generally planiform, and having an arcuately-looped, outer end, said template being in the form of an elongated rectangle, with linear graduations along the margin of one edge, a series of notches of different lengths along an edge opposite said one edge, and a series of openings of various geometric forms in said template, between said edges.

3,128,556
DRAFTING APPARATUS FOR PRODUCING THREE-PLANE DRAWINGS
Frank F. Hess, 14170 Piedmont, Detroit 23, Mich.; Francis A. Hess, 18780 San Jose, Lathrup Village, Mich.; and John J. Hess, 8335 Centralia, Dearborn Township, Wayne County, Mich.
Filed Feb. 15, 1962, Ser. No. 173,492
14 Claims. (Cl. 33—77)



1. In a drafting instrument for producing three-plane drawings, the combination of:
(*a*) an elliptical drawing board having a front side and a rear side,
(*b*) a support frame mounted on the rear surface of said board,
(*c*) three straight edges operatively mounted on the front side of the drawing and being disposed in a position with their inner ends directed to a common meeting point,
(*d*) a control knob assembly hingedly connecting the inner ends of said straight edges and adapted for moving the straight edges over the front side of the drawing board for drawing operations,
(*e*) a movable carriage means mounted on the periphery of the drawing board at the outer end of each of said straight edges and having fixedly connected thereto the adjacent straight edge outer end,
(*f*) a pair of control rods disposed on the rear side of the drawing board adjacent each of the movable carriage means and having the outer ends thereof hingedly connected to the adjacent carriage means,
(*g*) a directional control means for each of said pairs of control rods mounted on said board and being operatively connected to the inner ends of each pair of control rods,
(*h*) a diminishing control means for each of said pairs of control rods and being adapted to operatively connect the inner ends of each pair of control rods to the directional control means for each pair of control rods, and
(*i*) supporting means for said control rods.

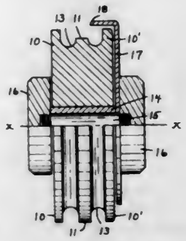
3,128,557
REMOTE BIN LEVEL-INDICATING DEVICE
John E. Childs, Boone, Iowa, assignor to Rolfes Electronics Corporation, Boone, Iowa, a corporation of Iowa
Filed Apr. 17, 1961, Ser. No. 103,639
7 Claims. (Cl. 33—126.6)



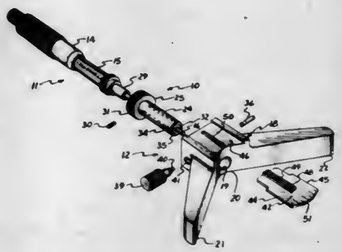
1. In a storage bin provided with means for periodically removing and introducing material whereby the level of material within said bin is constantly changing, the improvement comprising level detector means connected to the top of said bin, said detector means including a housing, a tape reel located within said housing, a motor for driving said reel and a tape adapted to be played out from or wound onto said reel depending on the direction of operation of said motor, a weight secured to the end of said tape, means for actuating said motor whereby said tape can be played out and said weight lowered into said bin, a wheel disposed adjacent said reel within said housing and adapted to be rotated by said tape, means associated with said wheel for recording the extent of movement of said weight and being adapted to retain a reading corresponding to said movement when said weight strikes the material within said bin, means for reversing said motor when said weight strikes the material stored in said bin whereby said tape is adapted to be wound onto said reel, said housing being provided with an elongated cylindrical means having one end secured to the housing with the other end extending toward said bin, an axis of said cylindrical means being disposed generally in the same plane as said tape reel, said cylindrical means comprising first and second cylinders with said second cylinder being slidably received within said first cylinder, spring means having one end fastened intermediate the ends of said first cylinder and the other end attached to said second cylinder, said second cylinder normally projecting substantially beyond the end of said first cylinder through the action of said spring means and being adapted to be forced into said first cylinder in opposition to said spring means, said weight having a diameter greater than the diameter of said second cylinder whereby said weight will be forced against said second cylinder as said tape is wound onto said reel.

3,128,558
WET FILM GAUGE
Maynard R. Euverard, Richmond, Va., assignor to Interchemical Corporation, New York, N.Y., a corporation of Ohio
Filed Sept. 7, 1961, Ser. No. 136,501
5 Claims. (Cl. 33—169)

1. A wet film thickness gauge comprising a composite body including first and second circular coaxial disc portions of the same diameter, a third disc portion having an arcuate periphery regularly changing in distance from the axis of rotation of said first and second disc portions and which constitutes the measuring surface, the periphery of said third disc portion having a point of minimum depth below the peripheries of said first and second disc portions with a lower limit of zero and a point of maximum depth below the peripheries of said first and second disc portions which exceeds the thickness of any film to be measured, one of said first and second disc portions being provided with a reference mark denoting that point on the periphery of said third disc portion which is at minimum depth below the peripheries of said first and second disc portions, and a scale plate rotatably mounted on said body for rotation about an axis coincident with the axis of said first and second disc portions, said scale plate being provided with a pointer element extending across the periphery of one of said first and second disc portions to a position adjacent the periphery of said third disc portion, said scale plate being provided with an arcuate scale of graduations beginning with said pointer element and which matches the regularly changing depth of the periphery of said third disc portion below the peripheries of said first and second disc portions.



3,128,559
DEPTH MICROMETER
Rudolph R. Winter, 1381 Woodland Place, Plymouth, Mich.
Filed Dec. 2, 1960, Ser. No. 73,322
10 Claims. (Cl. 33—170)



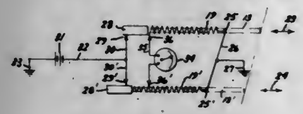
1. A tool for measuring the depth of grooves in rounded workpieces having different diameters comprising, in combination, an inverted V-shaped base including a pair of diverging work engaging arms, said base having a bore extending through its apex, a depth micrometer mounted in said bore, said micrometer having a work engaging spindle passing through said bore and longitudinally movable therein, means for locking said micrometer to said base in a selectable one of diverse reference positions within said bore, and means for centering said tool relative to the sides of said groove.

3,128,560
PIPE TEMPLETS AND METHODS OF CUTTING PIPE
Gordon D. McKenzie, Ridgefield, Conn.
Filed Oct. 12, 1961, Ser. No. 144,742
5 Claims. (Cl. 33—174)



1. A templet for cutting pipe to fit onto the curved surface of a main line pipe comprising a flexible sheet having an arcuate edge whose radius is equal to the diameter of the outer periphery of the pipe to be cut and whose chord is greater than one half of the circumference of the pipe to be cut, center indexing means on the radius of the center of the arc, and second indexing means on each side of said center indexing means spaced apart from the center indexing means a distance equal to one fourth of the circumference of the pipe to be cut and parallel thereto.

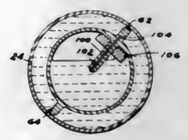
3,128,561
WHEEL ALIGNMENT GAGE
John H. Payne, Jr., 79 West St., Ballston Spa, N.Y.
Filed Oct. 19, 1960, Ser. No. 63,665
4 Claims. (Cl. 33—203.2)



2. A "toe in" gage measuring device to measure "toe in" in automative type steering wheels comprising in combination, a first extensible member to be placed between said wheels at a forward position, a second extensible member adapted to be placed between said wheels at a rearward location, a first electrical resistance coil directly connected to said first extensible means, a second electrical resistance coil directly connected to said second extensible means, electrical conductor means to connect said first and said second electrical resistance coils to a source of power, sliding conductor means engaging said coils to measure the potential difference therebetween depending on the angular relationship of said wheels to each other, and integrating electrical gage means connected to said sliding conductor means to provide a signal indicating the angular relationship of said wheels to each other.

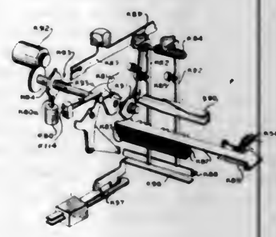
3,128,562
AZIMUTH COMPASS
Toshikazu Yusa, 1054 Oyama-cho, Yoyogi, Shibuya-ku, Tokyo, Japan
Filed June 30, 1961, Ser. No. 121,140
2 Claims. (Cl. 33—223)

1. A compass comprising:
(*a*) an outer transparent body such as a sphere and an inner rotatable hollow body within said outer body, said inner body having mounted thereon a magnet responsive to the magnetic field of the earth to orient the interior body relative to the outer body,
(*b*) a quantity of liquid partially filling the inner body and completely filling the space between the inner body and the outer body, the remainder of the space in the inner body being filled with a gas, and
(*c*) means to connect the interior of said inner body with the space between said inner body and said outer body comprising a spigot projection extending radially from an interior wall of said inner body toward the center thereof wherein the end of said spigot is constantly immersed in the liquid within said inner body regardless of the relative position of said bodies, said projection having a passage connecting the inside of said inner body to the space between said inner and outer bodies,



(*d*) said spigot projection extending inwardly and outwardly from the walls of the inner body, the outward projection serving to locate the inner body relative to the outer body while carrying the connecting passage.

3,128,563
DECODE-ENCODE SYSTEM FOR TEACHING MACHINES
Richard Kobler, West Orange, N.J., assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
Filed Apr. 6, 1962, Ser. No. 185,555
8 Claims. (Cl. 35—6)

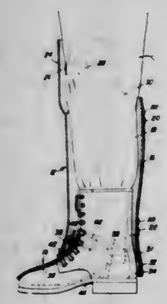


1. In a teaching machine including a keyboard having characters imprinted on the keys thereof: the combination of an exhibitor having a medium with said characters imprinted thereon in preselected order and pointer means advanceable by steps to designate successive characters, a translator mechanism normally blocking said keyboard and activatable selectively to free said respective keys, a reproducer selectively activatable for pronouncing said respective characters, logic circuitry for selectively activating said reproducer, an encoder operated during a step advance of said pointer means to a new character for encoding said logic circuitry to cause said reproducer to pronounce said new character and for encoding said translator mechanism to free the respective key of said keyboard, means responsive to pressing said freed key for preparing said machine for a decode-encode cycle, and means responsive to releasing said freed key for starting said decode-encode cycle to (1) decode said logic circuitry and said translator mechanism in the sequence named, (2) advance said pointer means to a next succeeding character, and (3) operate said encoder to encode said logic circuitry to cause said reproducer to pronounce said next succeeding character and to encode said translator mechanism to free the key for said next succeeding character.

3,128,564
METHOD OF MAKING UP A TEST AND PROVIDING A KEY THEREFOR
Lawrence L. Atherton, 433 Knickerbocker Ave., Springfield, Ohio, assignor, by direct and mesne assignments, of forty-five percent to Thomas C. Rousseau, Tipp City, Ohio, and ten percent to Warren W. Hamilton, Yellow Springs, Ohio
Filed July 10, 1962, Ser. No. 208,758
1 Claim. (Cl. 35—48)

In a method of making up a test and providing a key therefor, the steps of; constructing a duplicator master assembly comprising a top master sheet, a double-faced carbon sheet underlying the top master sheet with the carbon face facing the undersurface of the top master sheet being of spirit duplicator quality, a second master sheet underlying the double-faced carbon sheet, a single-faced carbon sheet, of a color distinguishable from the color of the double-faced carbon sheet, underlying the second master sheet with the distinguishable carbon thereon facing the undersurface of the second master sheet and being of spirit duplicator quality, a first separator sheet disposed between the top master sheet and the double-faced carbon sheet, a second separator sheet disposed between the double-faced carbon sheet and the top surface of the second master sheet and a third separator sheet disposed between the second master sheet and the single faced sheet; removing the first and second separator sheets; printing test questions on the top surface of the top master sheet, these test questions being simultaneously printed upon the undersurface of the top master sheet and the top surface of the second master sheet through the double-faced carbon sheet; removing the third separator sheet; and placing the correct responses to the question on the second master sheet, these correct responses being simultaneouly printed on the reverse surface of the second master sheet through the single-faced carbon.

3,128,565
HUNTING BOOT PROTECTOR
Joe W. Graham, 622 E. Kelly St., Pharr, Tex., and Harold R. Graham, 514 N. 4th St., Uvalde, Tex.; said Harold R. Graham, assignor of forty percent to said Joe W. Graham, and of ten percent to Andrew J. Lidwin
Filed Aug. 17, 1961, Ser. No. 132,113
5 Claims. (Cl. 36—2)



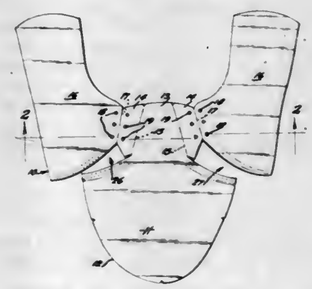
1. In a protector, a boot covering member generally shaped so as to conform to the upper portion of a boot and including an upper portion and sides, a pair of slots through said sides, transverse rows of apertures through said upper portion of the boot covering member adjacent and inwardly of said slots, a boot instep engaging and tensioning elastic strap having its intermediate portion disposed freely within the upper portion of said member and its end portions projecting slidably outwardly through said slots, and hooks provided at the ends of said strap, said hooks being selectively engageable with the apertures in said rows whereby to adjust the tensioning of said strap.

3,128,566
VENTILATED BOOT
Garry L. Burlison, P.O. Box 594, and James P. Savok, P.O. Box 456, both of Nome, Alaska
Filed Mar. 14, 1961, Ser. No. 95,555
1 Claim. (Cl. 36—3)



A ventilated boot comprising in combination, a sole, an upper attached to said sole, and a liner of insulating material contained within said upper and covering said sole, said liner being spaced above the sole in the heel portion of the boot to provide an air chamber therebetween, said chamber being collapsible upon application of weight to the heel portion of the liner, said liner being provided within the thickness thereof with an air inlet passage communicating with said chamber at one end thereof and having its other end open to the atmosphere at the upper edge of the liner, the sole covering portions of the liner being provided with an air delivery passage extending forwardly from said chamber and terminating in an opening communicating with the interior of the liner in the toe portion of the boot, said liner also being provided with an air outlet passage communicating at one end thereof with the interior of the liner in the top of the toe portion of the boot and having its other end open to the atmosphere at a point laterally on the inside of the boot adjacent the sole, and a flap valve provided in said chamber for said air inlet passage.

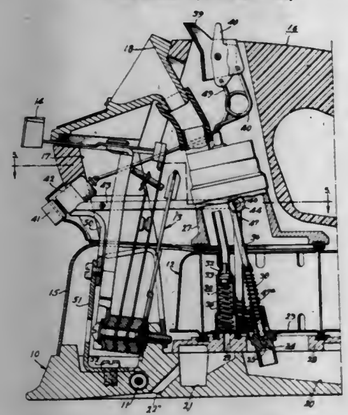
3,128,567
SHOE
Leo A. Huard, 7 Early St., Spencer, Mass.
Substituted for abandoned application Ser. No. 77,232, Dec. 20, 1960. This application Aug. 23, 1963, Ser. No. 305,023
1 Claim. (Cl. 36—48)



In a one piece shoe upper blank including a vamp portion and a tongue portion formed integrally with said

vamp portion, said tongue portion having opposed side edges converging from the juncture with said vamp portion to the free end of said tongue portion, a facing portion adjacent each of said tongue side edges and formed integrally with said tongue portion, said facing portions each having a side edge spaced from and substantially parallel to the adjacent side edge of said tongue portion, and a quarter portion adjacent said side edge of each of said facing portions and formed integrally with said facing portion, said blank being foldable along said tongue side edges and along each of said facing portion side edges, there being apertures for laces in said facing portions and in the adjacent parts of said quarter portions, said apertures being in registry when each of said quarter portions and the adjacent facing portions are folded together.

3,128,568
STEAM IRON WITH WATER SPRAY
Walter M. Schwartz, Jr., Philadelphia, Pa., assignor to Proctor Manufacturing Corporation, Rio Piedras, Puerto Rico, a corporation of Delaware
Filed May 19, 1961, Ser. No. 111,259
3 Claims. (Cl. 38—78)



1. In a spray iron, an outer shell surrounding the lower portion of the iron, a container for water within said shell, an electric resistance heating element arranged to convert the water within said container into steam, eductor means communicating at its inlet end with the water in said container and with the generated steam to deliver a spray of water to the material to be ironed, said eductor means having a control valve positioned at the outlet end thereof, a portion of said eductor means between said container and said control valve extending exteriorly of said container through an area where it is exposed to an ambient temperature low enough to cause condensation of steam in said portion when said control valve is closed, and a heat conductive member separate from said shell and container and in heat-conductive relationship with said heating element and operatively connected to said portion to superheat any water within said portion and to maintain said portion at a temperature above that at which condensation can occur therein.

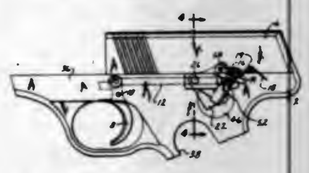
3,128,569
CHROMATOGRAPHIC DEVICE
John C. Eberhart, Shelbyville, Ind., assignor to Herb Williams & Sons, Inc., Shelbyville, Ind., a corporation of Indiana
Filed Oct. 26, 1962, Ser. No. 233,288
6 Claims. (Cl. 40—34)

1. A chromatograph comprising a disc having on one face thereof a series of circular overlapping bands of primary color, said bands having differing diameters with the locus of centers of said bands defining a circle about the center of said disc, and power means for orbitally rotating said disc at a predetermined speed about a



point lying on said circle defined by the locus of band centers and for simultaneously rotating said disc about its own center at a speed substantially less than said predetermined speed and in opposite direction from the direction of orbital rotation of said disc.

3,128,570
SAFETY AND DRY-FIRING DEVICE FOR PISTOLS
Bruce W. Browning, Ogden, Utah, assignor to Browning Industries, Inc., Ogden, Utah, a corporation of Utah
Filed Sept. 19, 1961, Ser. No. 139,276
16 Claims. (Cl. 42—70)

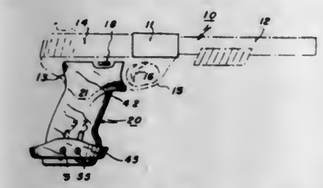


13. In a firearm, a frame, a concealed hammer pivotally mounted on the frame and having a pin in one side projecting transversely of the frame, a sear pivotally mounted on the frame rearwardly of said hammer and engageable therewith for retaining said hammer in a cocked position, said sear being pivotable into a hammer releasing position, a dry firing and safety member mounted on said frame for limited movement relative thereto, said member having a portion extending longitudinally of said frame adjacent said hammer and sear with means on the rearward end thereof for locking said sear in engagement with said hammer in one position of said dry firing member, said portion having an aperture therein for receiving the pin on said hammer and adapted to limit relative movement therebetween in a second position of said member, said member being movable into a third position permitting free movement of the pin relative thereto for normal firing of the pistol and having a thumbpiece for effecting the several movements, said dry-firing and safety member being movable in the direction of hammer movement to recock the hammer after dry-firing.

3,128,571
HAND GUN STOCK
Steven J. Herrett, Box 741, Twin Falls, Idaho
Filed Feb. 23, 1962, Ser. No. 175,032
14 Claims. (Cl. 42—71)

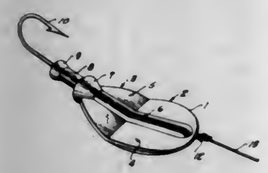
1. In a stock for hand guns having a grip receiving frame portion, a pair of opposed stock members having external hand conforming surfaces, at least one of said stock members being provided with a pair of longitudi-

nally extending spaced parallel slotted openings, fastener members for securing said stock members to said frame portion, a laterally extending hand engaging flange adjustably secured to one of said stock members, and male



and female threaded fastener elements with the male fastener elements extending through apertures in said flange and through each of said slotted openings to secure said flange in an adjusted position.

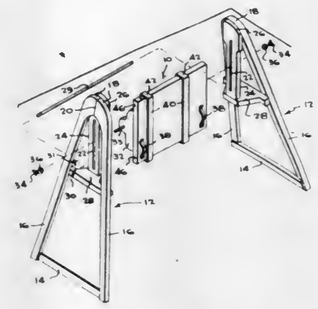
3,128,572
FISHING LURE
Raymon McVay, 717 W. Morgan, Denison, Tex.
Filed Mar. 10, 1961, Ser. No. 94,856
1 Claim. (Cl. 43—42.45)



In a fishing lure, a body having a front portion and a rear portion angularly disposed with relation to each other; a continuous convex surface on the lower side of the front and rear portions; a rounded rib extending continuously, centrally, and longitudinally of the upper surface of the front and rear portions; the body being so balanced that the front portion extends angularly upwardly from the rear portion when pulled through the water; a frusto-conical collar attached to the rear end of the rear portion of the body; a cylindrical extension extending from the larger circumference of the collar; a frusto-conical collar secured to the rear end of the extension; and a hook attached to the rear of the body.

3,128,573
ADJUSTABLE BOOK HOLDER
Lester C. Johnson, 430 Parkfair Drive, Apt. 35, Sacramento 25, Calif., and Lester E. Cook, 3500 Mignon St., Sacramento 26, Calif.
Filed Sept. 28, 1962, Ser. No. 226,801
9 Claims. (Cl. 45—80)

1. A book holder comprising a pair of end standards, of generally triangular outline, a shelf carried by each standard, medially of its height, a member secured to each standard at its upper end, and to said shelf in spaced relation to the standard, and disposed at an angle therewith, each said member having an elongate slot, a tie rod connecting said blocks, in a position with said members mutually parallel, and said standards converging upwardly, a book-holding plate having a pair of blocks extending from one face, near opposite ends of the plate, pivot bolts carried by said latter blocks, and adapted to be received in the slots in the respective, said members, a wing nut to secure each bolt in position in its receiving slot, a pair of spring clips carried by said plate in corner areas, and a pair of straps having hooked ends received over edges of said plate, said plate having parallel grooves in said one face, and said hooked ends having bent, terminal edges received in said grooves, said straps



located inwardly of said clips, and retained on said plate thereby.

3,128,574
AERIAL FLIGHT DEVICE
Bernard Sunray, Box 254, Crystal River, Fla.
Filed Mar. 29, 1962, Ser. No. 183,661
8 Claims. (Cl. 46—74)

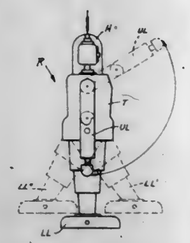


1. In an aerial flight device, a winged strut having a longitudinal flight axis, a lever mounted on the forward end of said strut, a propeller journaled on the rearward end of said strut for rotation on an axis parallel with said flight axis, resilient driving band means connected between said lever and said propeller to rotate said propeller by twist therein, and means mounting said lever and propeller to said strut for release therefrom in response to substantial depletion of twist in said band means.

3,128,575
TOY ROBOT AND ACTUATING MEANS THEREFOR
Lothar Stanetzki, Bonn, Germany, assignor to Markes & Co., Kommanditgesellschaft, Ludenscheid, Westphalia, Germany
Filed Jan. 18, 1960, Ser. No. 3,176
Claims priority, application Germany Feb. 2, 1959
9 Claims. (Cl. 46—120)

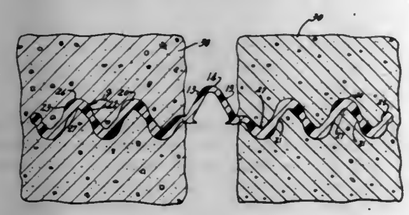
1. In an automaton, such as a toy robot, in combination, a main body portion including a shell having a front wall and a rear wall; a block journalled in said shell; upper limbs articulately carried by said shell; lower limbs articulately connected to said block; first drive means operatively connected with said lower limbs for operating

the same in such a way that the latter perform movements in imitation of the walk of a human being; second drive means operatively connected with said shell and with said block for pivoting the shell with respect to the block; third drive means for lifting and lowering the upper limbs with respect to said shell; fourth drive means for pivoting the upper limbs toward and away from each other, each of said drive means having a driving shaft rotatably mounted in said shell and each driving shaft having an



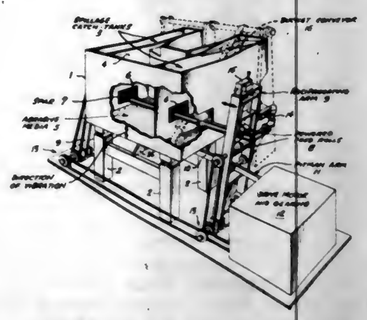
exposed end rotatably mounted in the rear wall of said shell, the ends of said driving shafts having non-circular bore accessible from the outer side of said rear wall, all said driving shafts being parallel with each other and having their ends disposed on the periphery of a common circle; and control and actuating means releasably connectable with the rear wall of said shell and comprising means extendable into said bores for selectively initiating operation of the respective drive means.

3,128,576
WATERSTOP
Stephen D. Bradley, Grosse Pointe Farms, Mich., assignor to Detroit Macoid Corporation, Detroit, Mich., a corporation of Michigan
Filed Nov. 25, 1960, Ser. No. 71,752
2 Claims. (Cl. 50—346)



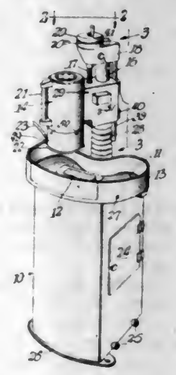
1. A sealing strip for sealing adjacent cast concrete members having abutting faces to one another comprising a deformable central section extending longitudinally of the strip for interposition between said faces and side flanges longitudinally coextensive with the central section and projecting laterally therefrom to be embedded in said members, respectively, said side flanges being sinuous in cross-sectional shape and having longitudinally extending, transversely spaced ridges of appreciably greater thickness than the portions joining the ridges, the portions joining said ridges being tapered toward a restricted medial portion, said side flanges each defining a tortuous flow path for water attempting to bypass the strip and the tapered portions thereof adapted to wedgingly engage that portion of the panel in which the flange is embedded upon attempted separation of said cast members to prevent water flow between the tapered portions and the surrounding cast members and to resist lateral displacement of the strip.

3,128,577
METHOD FOR DEBURRING COMPONENTS OF CONSIDERABLE LENGTH
Martin M. Gulbert, Port Orchard, and Curtis S. Skinner, Jr., Renton, Wash., assignors to The Boeing Company, Seattle, Wash., a corporation of Delaware
Filed Mar. 5, 1963, Ser. No. 262,894
11 Claims. (Cl. 51—7)



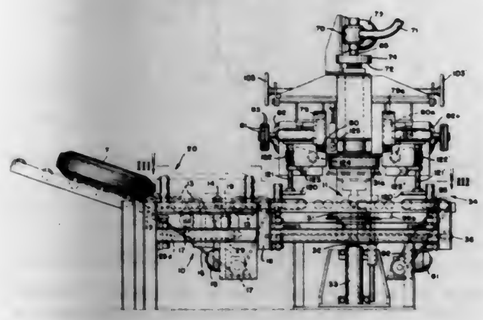
1. A method of deburring, descaling or surface finishing parts including the steps of: containing a predetermined quantity of abrasive media, controllably vibrating the abrasive media for providing a circular flow pattern thereof, passing a part through the abrasive media at a predetermined rate, and controllably reciprocating the part during passage through the abrasive media.

3,128,578
SURFACE GRINDER
James A. Ball, Cedar Rapids, Iowa, assignor to The Morris Plan Company of Cedar Rapids, a corporation of Iowa
Filed July 18, 1962, Ser. No. 220,931
(Filed under Rule 47(b) and 35 U.S.C. 118)
7 Claims. (Cl. 51—55)



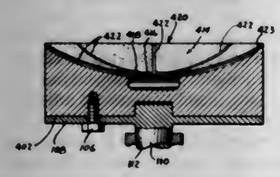
1. A surface grinder, comprising
(A) a base,
(B) an upstanding post on said base,
(C) a work support on said base adjacent to but spaced from said post,
(D) a housing slidably, rotatably mounted on said post,
(E) a motor mounted in said housing and equipped with a grinding cup axially related to the motor, said cup being positionable over said support, and
(F) means on said post for sliding said housing thereon and for stabilizing said housing, said means including an elongated rod-like member arranged parallel to and spaced from said post, said housing being slidably mounted on said member with said post being positioned between said member and motor.

3,128,579
APPARATUS AND PROCESS FOR ABRADING TIRE SIDEWALLS
Norman T. Kehoe, Detroit, and Joe F. Scantland, East Detroit, Mich., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed Mar. 1, 1961, Ser. No. 92,630
16 Claims. (Cl. 51—106)



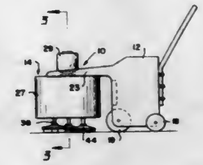
8. Apparatus for precisely abrading the sidewalls of tires comprising: grinding means; a pair of bead-engaging means for gripping and supporting a tire so as to present the sidewall to be abraded to said grinding means; and means for adjusting the relative position of at least one of said pair of bead-engaging means with respect to the other thereof to change the orientation of said sidewall relative to the active surface of said girnding means while said sidewall is being subjected to the action of said grinding means.

3,128,580
COMPOSITE LAP FOR GRINDING AND POLISHING MACHINES
Wallace E. Davis, Des Plaines, Ill., assignor to Super-Cut, Inc., Chicago, Ill., a corporation of Illinois
Filed Jan. 30, 1963, Ser. No. 255,054
10 Claims. (Cl. 51—131)



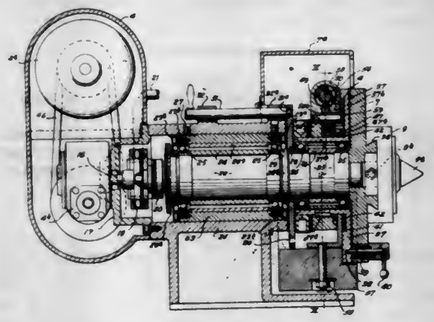
1. In a lapping machine for producing a spherical surface in a lens or the like, in combination, a rotary diamond lap body having an upwardly presented annular surface of frusto-spherical contour and shaped conformably to the spherical surface to be produced on the lens, a thin sheet-like matrix of uniform thickness throughout bonded to said surface and coextensive therewith, said matrix having diamond particles distributed throughout the same, said matrix presenting an annular upper lap surface from which fixed diamond particles project in part outwardly for cutting purposes as the lap surface becomes progressively worn, said lap body and matrix, considered as a whole, being formed with a central well having a circular rim which defines the inner periphery of the lap surface, said lap surface being formed with a series of equally spaced diverging grooves which are of substantially equal depth throughout and extend from the inner peripheral region of the lap surface to the outer peripheral region thereof so that they substantially divide the matrix into a series of circumferentially spaced segments, the extreme ends of the bottoms of said grooves adjacent to one of the lap peripheries being provided with fluid restrictions therein, and means for supplying a liquid coolant to said central well.

3,128,581
FLOOR GRINDERS
Antonio Tosetti, 296 Keefer St., Vancouver, British Columbia, Canada
Filed Apr. 3, 1962, Ser. No. 184,793
10 Claims. (Cl. 51—177)



1. In a machine for grinding floors, a central gear having teeth inclined in an axial direction, a plurality of floating vertical shafts arranged around and radially spaced from said central gear and mounted for rotary movement, a lateral gear having correspondingly inclined teeth fixedly mounted on each shaft and meshing with the central gear, said shafts and their respective lateral gears being free at all times during operation to move up and down, a grinding element mounted on a lower end of each vertical shaft and supporting the latter shaft and the lateral gear mounted thereon, and driving means for causing the vertical shafts and the grinding elements thereof to rotate, the incline of the teeth of the central and lateral gears being such as to impart under the action of said driving means a downward component to the lateral gears, shafts and grinding elements during rotation of said shafts.

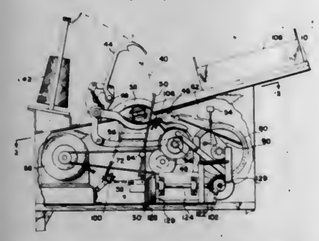
3,128,582
CRANKSHAFT BALANCING MEANS
Kjeld C. Winther, Dallas, Tex., assignor to Storm-Vulcan, Inc., Dallas, Tex., a corporation of Minnesota
Filed Oct. 1, 1962, Ser. No. 227,173
9 Claims. (Cl. 51—237)



1. In a device of the class described, a supporting frame having an inner end; a spindle rotatably supported in the frame; means for rotating the spindle; a pair of

counterweights radially spaced from the spindle adjacent the inner end of the supporting frame; support means for the counterweights movable arcuately with respect to the spindle; means to rotate the support means with reference to the spindle to adjust the counterweights arcuately about the spindle; and means to disengageably attach the counterweights to the spindle for rotation therewith or for disengagement of the spindle from the counterweights to permit rotation of the spindle free of the counterweights.

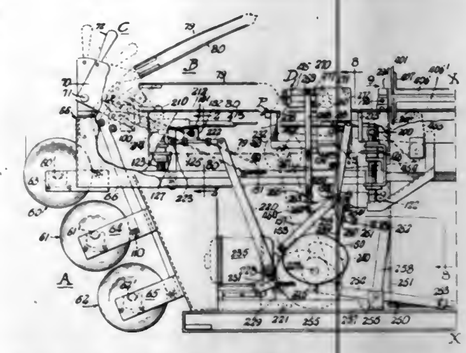
3,128,583
PACKAGING MACHINE
Gilbert Murray, 129 Foster Terrace, Ridgewood, N.J.
Filed May 17, 1962, Ser. No. 195,564
5 Claims. (Cl. 53—119)



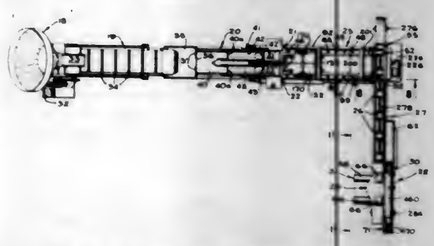
1. A packaging machine for rolling and tying individual newspapers comprising a horizontal cylindrical wrapping spindle rotatable about its own axis, a forked member secured to said spindle and rotatable therewith, said member having two spaced apart prongs extending in the direction of said spindle and equidistantly spaced about the periphery of said spindle, said prongs being adapted to receive a flat newspaper therebetween for rolling; driving means which when actuated rotates said spindle through a predetermined number of revolutions and when deactuated cannot rotate said spindle; a switch which when closed actuates said driving means and when open deactuates said driving means, said switch positioned adjacent said prongs to be closed by the passage of said newspaper as it is inserted between said prongs whereby rotation of said spindle rolls said newspaper; a tying mechanism disposed adjacent said spindle and horizontally separated from said prongs and said spindle, said mechanism being mechanically coupled to said driving means and actuated thereby to tie and knot a length of string about the rolled newspaper during completion of said number of revolutions; and means to vary automatically the horizontal spacing between said spindle and said mechanism in accordance with the thickness of the newspaper being rolled.

3,128,584
METHOD OF AND MACHINE FOR AUTOMATICALLY WRAPPING ARTICLES
Louis R. Muskat, Glenview, and King L. Klopfenstein, Prospect Heights, Ill., assignors to Triangle Package Machinery Company, Chicago, Ill., a corporation of Illinois
Filed July 3, 1961, Ser. No. 121,519
8 Claims. (Cl. 53—184)

1. In a machine for wrapping articles, the combination of a plurality of means, each formed and adapted to hold in spaced article-receiving relation sections of limited portions of a different one of a plurality of supplies of wrapping material, means for supporting each said supply of wrapping material with a limited portion of each supply so positioned that sections of such limited portions are operatively disposed with respect to the first-mentioned means with which the particular material supply is associated, and means for moving each of said first-mentioned means and that portion of the wrapping material associated therewith into and away from article receiving position.

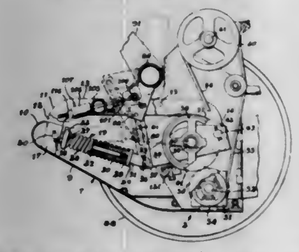


3,128,585
APPARATUS FOR PACKING ELONGATE ARTICLES
Hugh M. Brownlee and Norman H. Liberty, Portland, Oreg., assignors to FMC Corporation, a corporation of Delaware
Filed Aug. 20, 1959, Ser. No. 835,136
7 Claims. (Cl. 53—236)



1. A string bean packing machine comprising a hopper for receiving a weighed mass of string beans in random formation, bean orienting means including conveyor means movable through said hopper to engage beans therein and convey them along a predetermined path, means disposed in the path of movement of the beans for intercepting and orienting the beans in side by side parallel relation for lengthwise movement on said conveyor, an article receiving member mounted adjacent to and at a lower elevation than the discharge end of said conveyor for receiving beans therefrom, said article receiving member including a downwardly directed chute and a movable member in said chute adapted to guide beans through said chute in lengthwise orientation, second conveyor means having a plurality of open-top U-shaped spaced bean carriers adapted to receive beans from said chute, means for intermittently actuating said conveyor to move each carrier from a bean receiving station adjacent the discharge end of said chute to a bean discharge station, tamping means including a power cylinder mounted above the path of movement of said carriers adjacent said discharge station and having a piston rod arranged for vertical reciprocating movement between an elevated position and a lowered position in an adjacent carrier, a curved tamping plate carried by said piston rod, said tamping plate and the bottom of said carrier cooperating when said rod is in lowered position to provide complementary arcuate portions defining a cylindrical bean chamber having a diameter slightly less than that of a container, a second power cylinder mounted adjacent said discharge station and having a piston rod with an end movable axially through said cylindrical bean chamber and a circular pusher plate secured to said piston rod end, said pusher plate having a diameter slightly less than that of said chamber, third conveyor means having a plurality of spaced U-shaped container carriers movable into registry with said pusher plate, each carrier having forwardly and rearwardly projecting ledges, the adjacent ledges of adjacent container carriers cooperating to form a platform between said carriers, a container guide chute having a lower end disposed adjacent the path of movement of said container carriers and arranged to position the lowermost container in said chute on a platform between two carriers, means for advancing said third conveyor to cause said platform to move from beneath the lowermost container so that the container drops into the succeeding carrier and the trailing ledge of that carrier and the leading ledge of the next carrier next behind arrest the descent of the remaining containers in said chute, and a cam-actuated motor-driven cycling timer control associated with said bean orienting means, said conveyors and said power cylinders for actuating said orienting means and said cylinders when said second conveyor is stationary and one of said bean carriers is at the bean receiving station, and another of said bean carriers is at the bean discharge station in registry with one of said container carriers.

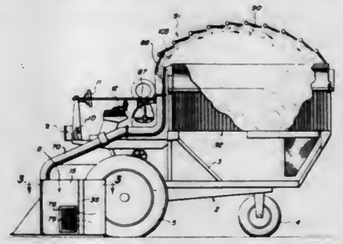
3,128,586
HAY CONDITIONER WITH MECHANISM FOR CONTROLLING HEIGHT AND DROP
Edward J. Johnston, La Grange Park, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Mar. 5, 1962, Ser. No. 177,452
4 Claims. (Cl. 56—1)



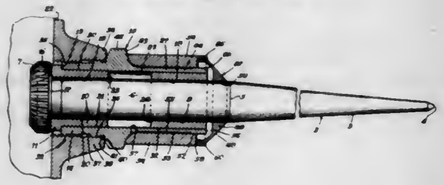
1. In a hay conditioner having a hay conditioning component and a wheel and axle assembly swingably mounted thereto and operative to raise and lower said component attendant to such swinging movement, said component comprising a pair of cooperative hay conditioning rollers, one of said rollers movable toward the other of said rollers, a hydraulic ram connected between said component and wheel and axle assembly, said ram being characterized upon being unloaded causing said component to fall freely, and shock absorbing means interposed between said assembly and the movable one of said rollers of said component for cushioning the fall of the latter.

3,128,587
COTTON HARVESTER WITH TRASH DISCHARGE MEANS
Louis Nickla, Memphis, Tenn., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Apr. 1, 1960, Ser. No. 19,368
1 Claim. (Cl. 56—41)

A picking unit for a cotton harvester comprising a vertically elongated housing having a peripheral side portion, a picking drum mounted in said housing, said drum having picking spindles extending laterally therefrom, said housing having a vertically extending opening in its side portion through which said spindles extend, said housing having a trash discharge opening, a cotton doffing means within the housing spaced beyond said opening, whereby when cotton and trash are brought into said housing by said spindles the trash will be permitted to depart out of the housing through said trash discharge opening while the cotton will be carried on and removed by said doffing means, said housing having a cotton discharge opening and a side portion adjacent to and beyond the doffing means for passing cotton removed by the doffing means, and door structure mounted on the housing closing the cotton discharge opening, said door structure having an outer panel including a series of vertically arranged louvers angled outwardly of the door structure and rearwardly and defining rearwardly opening substantially vertically elongated slots to permit the exit of large trash accumulations as they are deposited in the door structure and directing said accumulations to exit rearwardly, said door structure disposed to provide brushing contact of said outer panel and louvers with an adjacent row of cotton plants to facilitate exit of the trash therefrom.

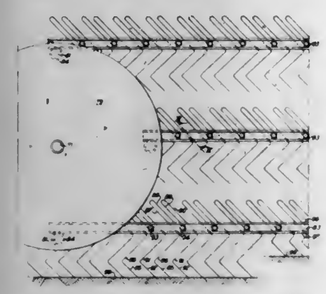


3,128,588
COTTON PICKING SPINDLE NUT STRUCTURE
Russell R. West, Pine Bluff, Ark., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Aug. 28, 1961, Ser. No. 134,527
5 Claims. (Cl. 56—50)



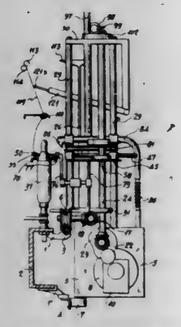
1. A cotton picker spindle nut structure comprising a tubular member defining an axially disposed internal bore and having inner, outer and intermediate portions, said inner end portion having an outer peripheral threaded section, a wrench-engaging part on the intermediate portion having a radial abutment surface facing said threaded section and having a generally conical surface facing said outer end portion, and a sleeve having a bore admitting said outer end portion, said sleeve having an inner end with a generally conical surface complementally seating against said generally conical surface on the wrench-engaging part, said sleeve having an axial flange radially spaced from and overlapping the outer end of said outer end portion and developing an axially directed groove therewith.

3,128,589
DEVICES FOR LATERALLY DISPLACING GRASS, HAY OR OTHER MATERIAL LYING ON THE GROUND
Cornelis van der Lely, Zug, and Ary van der Lely, Maasland, Netherlands, assignors to C. van der Lely N.V., Maasland, Netherlands, a Dutch company
Original application Jan. 26, 1955, Ser. No. 484,165, now Patent No. 2,939,265, dated June 7, 1960. Divided and this application June 7, 1960, Ser. No. 34,565
Claims priority, application Netherlands Jan. 29, 1954
17 Claims. (Cl. 56—377)



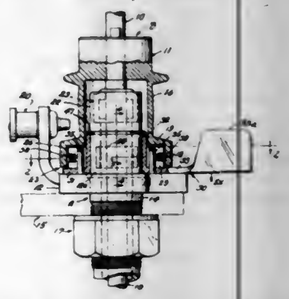
1. A device for laterally displacing material on the ground comprising support means adapted for rotation, a raking beam connected to the support means and movable therewith to describe a path of movement and raking means supported on the raking beam and including a tooth having an end describing a path in interference with the ground along a portion of the path of the raking beam, said raking means further comprising means supporting said tooth from the raking beam and including a torsion bar, said torsion bar and tooth initially lying in a common plane, said torsion bar being secured to said raking beam and extending therefrom to secure the tooth for elastic rotation about an axis inclined with respect to the raking beam as the tooth contacts the ground, said torsion bar being elastically and torsionally deformed during rotation of said tooth relative to said beam and restoring the tooth to the original position thereof as the beam describes the portion of the path in which the tooth is free of the ground.

3,128,590
AUTOMATIC THREAD JOINER FOR CONTINUOUS SPINNING MACHINES
Roberto Escursell-Prat, 35 Mandri, Barcelona, Spain
Filed June 11, 1962, Ser. No. 201,495
Claims priority, application Great Britain June 14, 1961
17 Claims. (Cl. 57—34)



1. An automatic thread joiner for use with continuous spinning machines of the type including a spindle rail supporting a plurality of aligned bobbin supporting driven spindles for each of which a thread is formed of roving issuing from drafting rollers and fed through a fixed guide and a traveller on a ring surrounding the respective spindle, the rings for all of the spindles being carried by a ring rail reciprocable axially of the spindles so that the travellers will guide the thread along the bobbins as it is wound thereon by rotation of the spindles; said thread joiner comprising a carriage movable along the spindle rail of a spinning machine; a detector device movably mounted on said carriage and including a shoe for slidably engaging the threads between the drafting rollers and fixed guides of the spinning machine; thread joining mechanism including means on said carriage for braking and stopping the spindle corresponding to a broken thread, support means vertically movable on said carriage, an extractor on said support means and having a mouthpiece for extracting the end of the broken thread from the bobbin on such spindle and establishing a stressed length of thread between the mouthpiece and the bobbin, means for moving the extractor mouthpiece together with said stressed thread into the appropriate position for being threaded, means on said support means for threading the stressed thread into the respective fixed thread guide on the spinning machine, means on said support means for hunting and moving the respective traveller to a predetermined position on its ring, means on said support means for threading the stressed thread laterally through the traveller, a device for gripping the thread raised by the extractor mouthpiece and having means for cutting off excess thread, said gripping device being operative to place the cut thread end in engagement with the roving issuing from the respective drafting rollers and releasing the cut thread end to be joined with the roving, and means on said carriage responsive to the height of the ring rail for moving said support means to the proper level; and drive means on said carriage for driving said carriage and operating said thread joining mechanism and including clutch means actuated by said detector device to drive said carriage until a broken thread is detected and thereupon stop said carriage and drive said thread joining mechanism.

3,128,591
TEXTILE SPINDLE BRAKES
James W. Hammond, Mentor, Ohio, assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed Jan. 30, 1963, Ser. No. 254,982
8 Claims. (Cl. 57—88)



1. In a textile spindle, a bolster case, a blade rotatable in the bolster case and having an internal brake drum surface coaxial therewith, a pair of brake shoes disposed for braking contact with the drum surface, an actuator plate member having a circular sleeve portion telescoping a mating external circular surface of the bolster case for guiding the actuator member for angular movement about the blade axis, a pair of cam surfaces in fixed position on the bolster case diametrically of the drum surface for contact with cam-associated surfaces of the shoes, said sleeve portion having diametrically disposed radial openings outwardly exposing the cam surfaces for operating contact with the shoes, said cam-associated surfaces of the shoes normally occupying the radial openings for contact with respective cam surfaces, and means connecting the actuator member with each of the shoes for compelling simultaneous angular movement of said surfaces of the shoes into camming contact with respective cam surfaces whereby to thrust the shoes outwardly into braking contact with the drum surface.

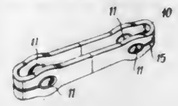
3,128,592
RING FRAME TRAVERSE DEVICE
Henry O. Calvert, Arcadia, and Alfred J. Boos and James E. Mullis, Spartanburg, S.C., assignors to Insulating Fabricators, Inc., Spartanburg, S.C., a corporation of South Carolina
Filed Aug. 3, 1962, Ser. No. 214,555
4 Claims. (Cl. 57—136)



1. In a ring frame and the like having a longitudinally disposed rail caused to traverse vertically by reciprocation of spaced vertical lifter rods mounted within spaced apertures within a fixed rail, the improvement including a bearing supporting each lifter rod carried by said fixed rail, said bearings each comprising, an element having an axial opening therein, each of said elements engaging said fixed rail on one side of the fixed rail, a plurality of circumferentially spaced segments carried by the element projecting inwardly of said opening, spaced inner bearing surfaces carried by said segments engaging the lifter rod, said segments being constructed of a yielding synthetic polymeric material having a relatively low coefficient of friction, said element having passageways between said segments within said element extending longitudinally of the lifter rod for the removal of lint and the like, and means fastening the element to said fixed rail, whereby locking of the rail traverse is avoided since the longitudinal passageways and the yielding segments of the bearings avoid binding as a result of lint accumulations and faulty alignment of the lifter rod, and whereby friction between the lifter rod and the bearing is reduced since the lifter rod is supported within the bearing by said spaced inner bearing surfaces reducing the surface area of contact between the rod and the bearing.

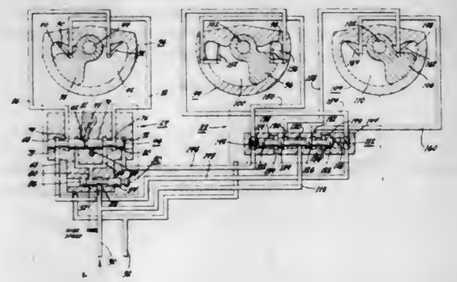
3,128,593
CHAINS FOR USE IN CONVEYOR SYSTEMS
Donald Mayer King, Argyle Works, Stevenage, England
Filed July 31, 1961, Ser. No. 128,225
Claims priority, application Great Britain Aug. 3, 1960
5 Claims. (Cl. 59—35)

1. A method of forming an inner link for a chain, comprising: locally compressing a rectangular strip having parallel longitudinal edges at a pair of spaced locations to form recesses of curved shape in the strip to cause bulging of the strips in the longitudinal edges at said spaced locations along a curve substantially corresponding



to the curvature of the recesses and bending said strip midway between the recesses to form two substantially parallel legs wherein the bulges are substantially aligned with one another in a direction transverse of the legs.

3,128,594
HYDRAULICALLY OPERATED WINDSHIELD WIPER ACTUATING MECHANISM
Harry W. Schmitz, Camillus, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 10, 1961, Ser. No. 81,769
19 Claims. (Cl. 60—10.5)

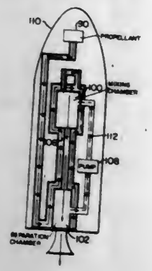


1. Windshield wiper actuating mechanism for a pair of spaced wipers, including, a master motor connected to one of said wipers comprising a cylinder having a pressure differential actuated piston therein dividing its cylinder into opposed chambers, a slave motor assembly connected to the other wiper comprising a pair of cylinders having a synchronizer piston disposed in one cylinder and a driver piston disposed in the other cylinder and movable under pressure differential, said synchronizer and driver pistons dividing their respective synchronizer and driver cylinders into opposed chambers, reversing valve means actuated by the master motor piston for controlling the alternate application of pressure differential to its opposed cylinder chambers, a slave motor reversing valve controlling the alternate application of pressure differential to the opposed chambers of the driver cylinder, servo means for actuating said slave motor reversing valve, and conduit means interconnecting the opposed chambers of the master motor cylinder and the synchronizer cylinder through the servo means for actuating the slave motor reversing valve to effect synchronous operation of said master and slave motors under normal load conditions.

3,128,595
PROPULSION METHOD AND APPARATUS
Rudolf X. Meyer, Pacific Palisades, Calif., assignor to Space Technology Laboratories, Inc., Los Angeles, Calif., a corporation of Delaware
Original application Nov. 25, 1959, Ser. No. 855,330. Divided and this application Dec. 22, 1961, Ser. No. 161,707
8 Claims. (Cl. 60—35.3)

6. Propulsion method, comprising the steps of: injecting into a first chamber a fissionable gas at a high tempera-

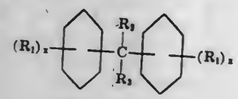
ture and pressure; injecting a propellant material into said first chamber; mixing said propellant material with the said high temperature fissionable gas thereby heating said propellant; transferring said mixture of fissionable gas and propellant material to a second chamber; establishing a rotating magnetic field in the region containing



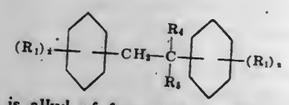
said mixture in said second chamber thereby inducing a rotation of said mixture; selectively extracting said propellant material from said second chamber and expanding said propellant material; and simultaneously and selectively extracting said fissionable gas from said second chamber and returning it to said first chamber.

3,128,596
BIS(ALKYLCYCLOHEXYL)ALKANES AND USE AS HIGH ENERGY FUELS
Herbert E. Morris, Winchester, Mass., assignor, by mesne assignments, to Monsanto Research Corporation, Everett, Mass., a corporation of Delaware
No Drawing. Filed Oct. 3, 1960, Ser. No. 59,838
14 Claims. (Cl. 60—35.4)

1. The method of developing thrust in a reaction chamber which comprises oxidizing in said reaction chamber a hydrocarbon fuel comprising essentially a bis(alkylcyclohexyl)alkane having a formula selected from the group consisting of



and

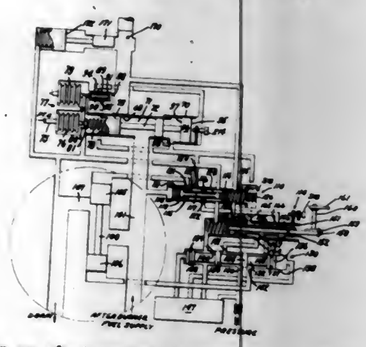


wherein R_1 is alkyl of from 1 to 4 carbon atoms, R_2, R_3, R_4 and R_5 are selected from the class consisting of hydrogen and alkyl of from 1 to 4 carbon atoms, the sum of the number of carbon atoms in R_2 and R_3 being not greater than 5 and the sum of the number of carbon atoms in R_4 and R_5 being not greater than 4, and x is an integer of from 1 to 4, to produce a mass of high temperature gases and exhausting said gases from said reaction chamber in a manner so as to develop a high thrust.

3,128,597
ISOLATED POLYCYCLOALKYL HYDROCARBONS AND USE AS HIGH ENERGY FUELS
John O. Smith, Swampscott, and K Warren Easley, Wayland, Mass., assignors, by mesne assignments, to Monsanto Research Corporation, Everett, Mass., a corporation of Delaware
No Drawing. Filed Oct. 19, 1960, Ser. No. 63,475
9 Claims. (Cl. 60—35.4)

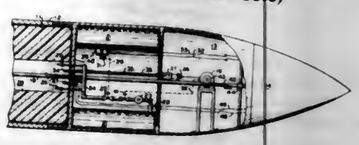
1. The method of developing thrust in a reaction chamber which comprises oxidizing in said chamber a hydrocarbon fuel comprising essentially a polycycloalkyl hydrocarbon of from 9 to 41 carbon atoms, having no condensed rings, having from 2 to 7 cycloalkyl groups containing from 3 to 8 carbon atoms and consisting only of cycloalkyl groups, and wherein all of the cycloalkyl groups are not the same, to produce a mass of high temperature gases and exhausting said gases from the reaction chamber in a manner so as to develop a high thrust.

3,128,598
AFTERBURNER FUEL CONTROL
Richard E. Gordon, Ypsilanti, Mich., assignor to Ex-Cell-O Corporation, Detroit, Mich., a corporation of Michigan
Filed Apr. 24, 1956, Ser. No. 580,378
6 Claims. (Cl. 60—35.6)



1. In an afterburner fuel control for a turbojet engine including an air compressor and having an afterburner thereon, the combination with a variable-area orifice valve interposable in the fuel supply line to the afterburner, control pressure fluid operated means for positioning said valve independently of fuel pressure in the supply line on either side thereof, a null-point bellows mechanism for actuating said pressure fluid means to position said orifice valve in response to changes in the absolute pressure of air delivered by the engine compressor, and a mechanical feed-back interposed directly between said valve and said bellows mechanism for mechanically feeding back to said bellows a direct applied force proportional to the position of opening of said valve, of a control fluid pressure operated servo mechanism for maintaining constant pressure drop across said orifice valve and comprising a master valve shiftable in opposite directions from a null-point in response to changes in opposite senses from a predetermined value of the pressure drop across said orifice valve, together with valve means acting on the fuel supply to said orifice valve and actuated by control pressure fluid in response to a shift of said master valve for retaining a flow of fuel to said orifice valve commensurate with a constant pressure drop therethrough.

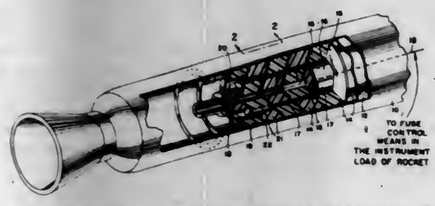
3,128,599
SOLID-FLUID ROCKET PROPELLANT SYSTEM
Donald E. Carr, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 6, 1958, Ser. No. 765,674
4 Claims. (Cl. 60—35.6)



1. In combination in a rocket motor comprising a combustion chamber, an exhaust nozzle, a combustible

solid charge in said combustion chamber, and a supply of combustion supporting fluid, apparatus to control the flight of the rocket according to a predetermined flight plan at controlled combustion chamber pressure comprising means to introduce said fluid to the charge in said combustion chamber in varying quantities according to a predetermined schedule comprising a constant speed motor; a cam having a configuration corresponding to the predetermined flight plan operatively connected to said motor and to said means to introduce fluid to said charge; means to limit the amount of fluid passed to the charge so as to maintain the pressure in the combustion chamber below a predetermined maximum value; and means to reduce the exhaust nozzle area to maintain the combustion chamber pressure above a predetermined minimum value.

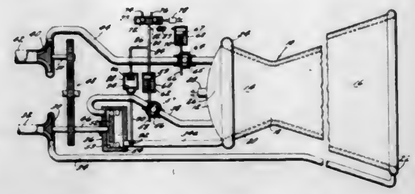
3,128,600
MULTILEVEL SOLID PROPELLANT ROCKET MOTOR
Herman J. Oldham, New Hope, Ala., assignor to Thiokol Chemical Corporation, Bristol, Pa.
Filed May 18, 1960, Ser. No. 29,951
4 Claims. (Cl. 60—35.6)



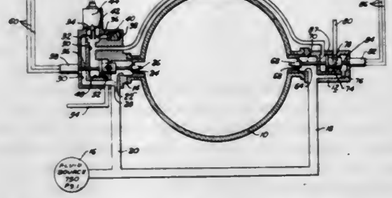
1. A multilevel rocket motor comprising a motor casing having nozzle means, a heat-removable tubular central support longitudinally disposed within said casing, a plurality of charge segments of a solid propellant composition arranged along said tubular central support, each segment comprising an inner annulus adjacent to said support and an outer annulus adjacent to said motor casing and having two lateral surfaces at least one of which faces an adjacent propellant segment, each said segment further having said inner annulus and said outer annulus cast about an ignitable band embedded in said segment, said ignitable band extending only between the lateral surfaces of said segment and comprising electrically actuated fuze means therein, a plurality of disintegrable discoid insulating members separating facing lateral surfaces of adjacent propellant chage segments, control means in said rocket casing for electrically actuating said fuze means, and a plurality of electrically conducting wires connecting said control means and said fuze means and extending through said tubular central support.

3,128,601
PRE-BURNER ROCKET CONTROL SYSTEM
Robert N. Abild, New Britain, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Sept. 15, 1960, Ser. No. 56,320
2 Claims. (Cl. 60—35.6)

1. A rocket motor including a combustion chamber having a discharge nozzle, a jacket surrounding said combustion chamber and in heat exchange relation therewith, a source of oxidizer, an oxidizer supply line connected between said source of oxidizer and said combustion chamber, said oxidizer supply line having a pump therein and a valve downstream of said pump, a source of fuel, a fuel supply line connected between said source of fuel and said combustion chamber, said fuel supply line including said jacket, a pump and a turbine in said fuel supply line, a driving connection between said turbine and both of said pumps, said fuel line pump being upstream of said jacket and said turbine being downstream of said jacket, the energy level of the fuel in said fuel supply line being raised by heating all of said fuel in said jacket, said fuel supply line having an enlarged section between said jacket and said turbine, and said fuel supply line having a valve therein between said turbine and said combustion chamber, means to supply a material to said enlarged portion of said fuel supply line to combust with part of the fuel therein to increase the energy level of the fuel therein, means for concomitantly actuating said material supplying means and said valve in said fuel supply line, and means for actuating said valve in said oxidizer supply line subsequent to the actuation of said material supplying means and said valve in said fuel supply line.

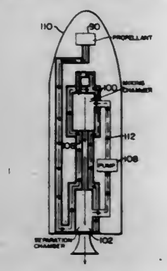


3,128,602
THRUST VECTOR CONTROL
Robert M. Salemka, South Bend, Ind., assignor to The Bendix Corporation, South Bend, Ind., a corporation of Delaware
Filed Dec. 30, 1960, Ser. No. 79,770
11 Claims. (Cl. 60—35.54)



6. In a servo system the combination comprising a source of fluid under pressure, a first valve assembly and a second valve assembly both of which are in parallel communication with said source and each of which includes a valve member for controlling the flow through its corresponding orifice, and a differential area piston connected to each of said valve members, a controlled pressure chamber in communication with said source and a servo valve movable to vary the pressure level in said chamber, means connecting said controlled pressure chamber and said source to opposing sides of said pistons such that said pistons are responsive to the pressure differential between the chamber and the source, the relative areas of the ends of said pistons being such that both said valve members are held closed when said servo valve is in its null position, and when said servo valve is moved in a direction to increase the pressure in said chamber above a threshold value, one of said pistons is caused to withdraw its corresponding valve member from its orifice in response to the increase in said pressure differential and the other piston holds its valve member against its seat in response to the increase in said pressure differential, and when said servo valve is moved in a direction

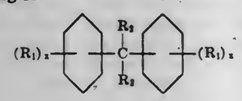
ture and pressure; injecting a propellant material into said first chamber; mixing said propellant material with the said high temperature fissionable gas thereby heating said propellant; transferring said mixture of fissionable gas and propellant material to a second chamber; establishing a rotating magnetic field in the region containing



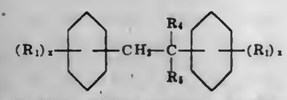
said mixture in said second chamber thereby inducing a rotation of said mixture; selectively extracting said propellant material from said second chamber and expanding said propellant material; and simultaneously and selectively extracting said fissionable gas from said second chamber and returning it to said first chamber.

3,128,596
BIS(ALKYLCYCLOHEXYL)ALKANES AND USE AS HIGH ENERGY FUELS
Herbert E. Morris, Winchester, Mass., assignor, by mesne assignments, to Monsanto Research Corporation, Everett, Mass., a corporation of Delaware
No Drawing. Filed Oct. 3, 1960, Ser. No. 59,838
14 Claims. (Cl. 60—35.4)

1. The method of developing thrust in a reaction chamber which comprises oxidizing in said reaction chamber a hydrocarbon fuel comprising essentially a bis(alkylcyclohexyl)alkane having a formula selected from the group consisting of



and

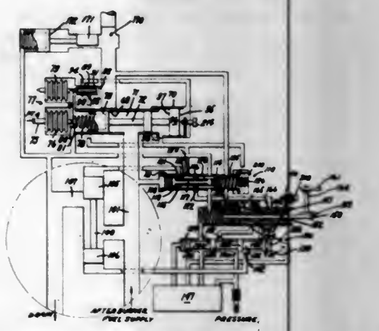


wherein R_1 is alkyl of from 1 to 4 carbon atoms, R_2, R_3, R_4 and R_5 are selected from the class consisting of hydrogen and alkyl of from 1 to 4 carbon atoms, the sum of the number of carbon atoms in R_2 and R_3 being not greater than 5 and the sum of the number of carbon atoms in R_4 and R_5 being not greater than 4, and x is an integer of from 1 to 4, to produce a mass of high temperature gases and exhausting said gases from said reaction chamber in a manner so as to develop a high thrust.

3,128,597
ISOLATED POLYCYCLOALKYL HYDROCARBONS AND USE AS HIGH ENERGY FUELS
John O. Smith, Swampscott, and K Warren Easley, Wayland, Mass., assignors, by mesne assignments, to Monsanto Research Corporation, Everett, Mass., a corporation of Delaware
No Drawing. Filed Oct. 19, 1960, Ser. No. 63,475
9 Claims. (Cl. 60—35.4)

1. The method of developing thrust in a reaction chamber which comprises oxidizing in said chamber a hydrocarbon fuel comprising essentially a polycycloalkyl hydrocarbon of from 9 to 41 carbon atoms, having no condensed rings, having from 2 to 7 cycloalkyl groups containing from 3 to 8 carbon atoms and consisting only of cycloalkyl groups, and wherein all of the cycloalkyl groups are not the same, to produce a mass of high temperature gases and exhausting said gases from the reaction chamber in a manner so as to develop a high thrust.

3,128,598
AFTERBURNER FUEL CONTROL
Richard E. Gordon, Ypsilanti, Mich., assignor to Ex-Cell-O Corporation, Detroit, Mich., a corporation of Michigan
Filed Apr. 24, 1956, Ser. No. 580,378
6 Claims. (Cl. 60—35.6)



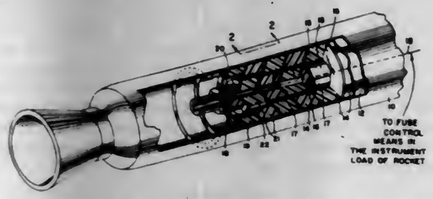
1. In an afterburner fuel control for a turbojet engine including an air compressor and having an afterburner thereon, the combination with a variable-area orifice valve interposable in the fuel supply line to the afterburner, control pressure fluid-operated means for positioning said valve independently of fuel pressure in the supply line on either side thereof, a null-point bellows mechanism for actuating said pressure fluid means to position said orifice valve in response to changes in the absolute pressure of air delivered by the engine compressor, and a mechanical feed-back interposed directly between said valve and said bellows mechanism for mechanically feeding back to said bellows a direct applied force proportional to the position of opening of said valve, of a control fluid pressure operated servo mechanism for maintaining constant pressure drop across said orifice valve and comprising a master valve shiftable in opposite directions from a null-point in response to changes in opposite senses from a predetermined value of the pressure drop across said orifice valve, together with valve means acting on the fuel supply to said orifice valve and actuated by control pressure fluid in response to a shift of said master valve for retaining a flow of fuel to said orifice valve commensurate with a constant pressure drop therethrough.

3,128,599
SOLID-FLUID ROCKET PROPELLANT SYSTEM
Donald E. Carr, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 6, 1958, Ser. No. 765,674
4 Claims. (Cl. 60—35.6)



1. In combination in a rocket motor comprising a combustion chamber, an exhaust nozzle, a combustible solid charge in said combustion chamber, and a supply of combustion supporting fluid, apparatus to control the flight of the rocket according to a predetermined flight plan at controlled combustion chamber pressure comprising means to introduce said fluid to the charge in said combustion chamber in varying quantities according to a predetermined schedule comprising a constant speed motor; a cam having a configuration corresponding to the predetermined flight plan operatively connected to said motor and to said means to introduce fluid to said charge; means to limit the amount of fluid passed to the charge so as to maintain the pressure in the combustion chamber below a predetermined maximum value; and means to reduce the exhaust nozzle area to maintain the combustion chamber pressure above a predetermined minimum value.

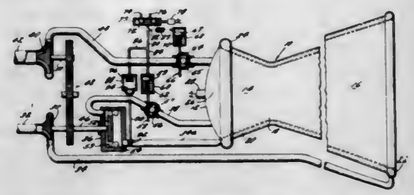
3,128,600
MULTILEVEL SOLID PROPELLANT ROCKET MOTOR
Herman J. Oldham, New Hope, Ala., assignor to Thiokol Chemical Corporation, Bristol, Pa.
Filed May 18, 1960, Ser. No. 29,951
4 Claims. (Cl. 60—35.6)



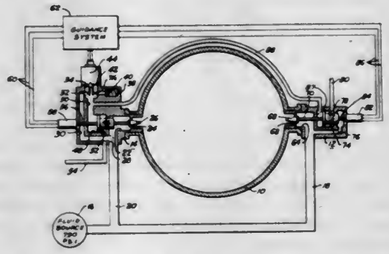
1. A multilevel rocket motor comprising a motor casing having nozzle means, a heat-removable tubular central support longitudinally disposed within said casing, a plurality of charge segments of a solid propellant composition arranged along said tubular central support, each segment comprising an inner annulus adjacent to said support and an outer annulus adjacent to said motor casing and having two lateral surfaces at least one of which faces an adjacent propellant segment, each said segment further having said inner annulus and said outer annulus cast about an ignitable band embedded in said segment, said ignitable band extending only between the lateral surfaces of said segment and comprising electrically actuated fuze means therein, a plurality of disintegrable discoid insulating members separating facing lateral surfaces of adjacent propellant chage segments, control means in said rocket casing for electrically actuating said fuze means, and a plurality of electrically conducting wires connecting said control means and said fuze means and extending through said tubular central support.

3,128,601
PRE-BURNER ROCKET CONTROL SYSTEM
Robert N. Abild, New Britain, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Sept. 15, 1960, Ser. No. 56,320
2 Claims. (Cl. 60—35.6)

1. A rocket motor including a combustion chamber having a discharge nozzle, a jacket surrounding said combustion chamber and in heat exchange relation therewith, a source of oxidizer, an oxidizer supply line connected between said source of oxidizer and said combustion chamber, said oxidizer supply line having a pump therein and a valve downstream of said pump, a source of fuel, a fuel supply line connected between said source of fuel and said combustion chamber, said fuel supply line including said jacket, a pump and a turbine in said fuel supply line, a driving connection between said turbine and both of said pumps, said fuel line pump being upstream of said jacket and said turbine being downstream of said jacket, the energy level of the fuel in said fuel supply line being raised by heating all of said fuel in said jacket, said fuel supply line having an enlarged section between said jacket and said turbine, and said fuel supply line having a valve therein between said turbine and said combustion chamber, means to supply a material to said enlarged portion of said fuel supply line to combust with part of the fuel therein to increase the energy level of the fuel therein, means for concomitantly actuating said material supplying means and said valve in said fuel supply line, and means for actuating said valve in said oxidizer supply line subsequent to the actuation of said material supplying means and said valve in said fuel supply line.



3,128,602
THRUST VECTOR CONTROL
Robert M. Salemka, South Bend, Ind., assignor to The Bendix Corporation, South Bend, Ind., a corporation of Delaware
Filed Dec. 30, 1960, Ser. No. 79,770
11 Claims. (Cl. 60—35.54)



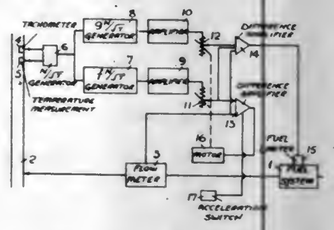
6. In a servo system the combination comprising a source of fluid under pressure, a first valve assembly and a second valve assembly both of which are in parallel communication with said source and each of which includes a valve member for controlling the flow through its corresponding orifice, and a differential area piston connected to each of said valve members, a controlled pressure chamber in communication with said source and a servo valve movable to vary the pressure level in said chamber, means connecting said controlled pressure chamber and said source to opposing sides of said pistons such that said pistons are responsive to the pressure differential between the chamber and the source, the relative areas of the ends of said pistons being such that both said valve members are held closed when said servo valve is in its null position, and when said servo valve is moved in a direction to increase the pressure in said chamber above a threshold value, one of said pistons is caused to withdraw its corresponding valve member from its orifice in response to the increase in said pressure differential and the other piston holds its valve member against its seat in response to the increase in said pressure differential, and when said servo valve is moved in a direction

to decrease the pressure in said chamber below a second, lower threshold value, the other of said pistons is caused to withdraw its corresponding valve member from its orifice in response to the decrease in said pressure differential and said one piston holds its valve member against its seat in response to the decrease in said pressure differential.

9. For use with a thrust vector control including a rocket nozzle, first and second injection orifices oppositely disposed in the sidewall of said rocket nozzle and a source of fluid under pressure, said first and second injection orifices arranged to inject said pressurized fluid into said nozzle transversely to the longitudinal axis of said nozzle to thereby effect a corresponding variation in the nozzle thrust vector, the combination of a first injector unit connected to said source associated with said first orifice comprising a valve member for controlling the flow through said first orifice, a cylinder and a differential area piston reciprocable in said cylinder, a conduit communicating the small area end of said piston with said source, a torque motor including a pair of opposing orifices and flapper valve member movable between said orifice, a conduit communicating one of said orifices with said source, another conduit connecting said other orifice with a low pressure source having a check valve therein, a control pressure chamber disposed between said orifices having a fluid presure level variable between the pressure at said source of fluid under pressure and the pressure of said low pressure source, means communicating the large diameter end of said piston with said control pressure chamber; a second injector unit connected to said source associated with said second orifice comprising a valve member for controlling the flow through said second orifice, a cylinder and a second differential area piston reciprocable in said cylinder, a conduit communicating the small area end of said piston with said source of fluid under pressure, and a conduit connecting the large diameter end of said second piston with said control pressure chamber, the relative areas of the large area ends of said pistons with respect to each other and their corresponding small area ends being such that both said valve members are held closed when said flapper valve member is in its null position, and when said flapper valve is moved closer to said one orifice and the control pressure level is reduced below a first threshold value, one of said valves is caused to open and when said flapper valve is moved closer to said other orifice, and the control pressure is increased above a second, higher threshold value, said one valve is closed and the other of said valve is caused to be opened.

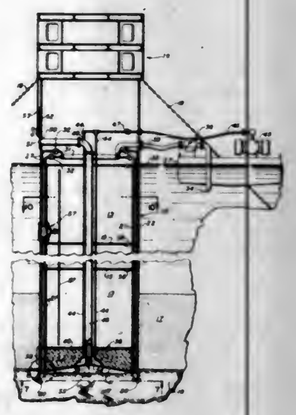
3,128,603
FUEL SUPPLY CONTROL FOR GAS TURBINE ENGINES
Richard Woolliscroft Haigh, Shelsley Beauchamp, England, assignor to Joseph Lucas (Industries) Limited, Birmingham, England
Filed May 18, 1961, Ser. No. 111,092
Claims priority, application Great Britain May 24, 1960
3 Claims. (Cl. 60—39.28)

3. An acceleration control for a gas turbine engine, comprising in combination a fuel system for supplying fuel to the engine, a flow meter for producing an electrical signal dependent on the rate of supply of fuel to the engine by the fuel system, first function generating means for producing a first voltage varying with engine speed in the manner of the steady running fuel flow curve of the engine, second function generating means for producing a second voltage which varies with engine speed in a manner to represent the excess fuel over said steady state fuel which is required at any given speed to accelerate the engine rapidly without stalling, first and second potentiometers each including a fixed resistor and a slider movable thereon, the first and second voltages being applied across the resistors of first and second potentiometers respectively, a first difference amplifier receiving a first input from the slider of the first potentiometer and a second input from the flow meter, and producing an output when the inputs are unequal, a reversible motor operable by the output from the first difference amplifier and coupled to the sliders of both potentiometers for moving the sliders until the inputs to the first difference amplifier are equal, a second difference amplifier receiving a first



input from the flow meter, a second input from the slider of the second potentiometer, and a third input from the slider of the first potentiometer, means associated with the fuel system and operable by the output from the second difference amplifier, said means being effective to prevent further increase in flow of fuel to the engine when the first input to the second difference amplifier becomes equal to the sum of the second and third inputs thereto, and means for preventing operation of the motor whilst the engine is accelerating.

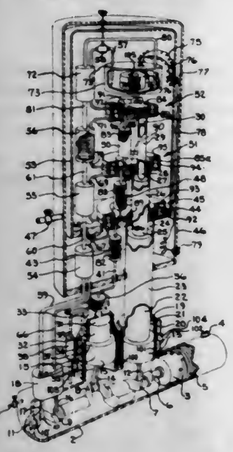
3,128,604
OFF SHORE DRILLING RIG
William A. Sandberg, 325 Orange Grove Ave., Pasadena, Calif.
Filed May 16, 1960, Ser. No. 29,404
1 Claim. (Cl. 61—46.5)



Off-short equipment, comprising a caisson in the form of a tubular column standing lengthwise vertically above and below the off-shore water level and supported by the underwater formation, the column including inner and outer tubular metallic shells which are spaced apart, guide pipes extending upwardly in the space between the shells, concrete-like material in said space attaching the guide pipes to the shells and bonded thereto, the caisson having a vertically thickened partition extending laterally across the lower interior thereof, means including other pipes extending downwardly within the caisson for jetting water

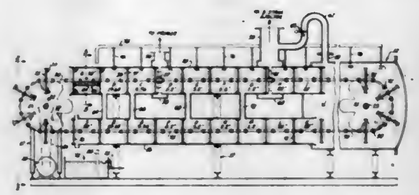
beneath said partition to excavate and break up the formation material during installation of the caisson, means for flowing said jetted water and broken up formation material in a stream directed upwardly and for jetting air into said stream to effect lifting of the material upwardly through the partition for discharge, tubular casings within said guide pipes and projecting downwardly into the underwater formation below the caisson, means anchoring the casings to the formation and attaching the casings to the guide pipes to hold the casings in tension so that the casings exert loading acting to urge the caisson downwardly, said last named means including holding material extending in spaces formed between the casings and cylinders defined by the bores of the guide pipes, superstructure carried by the caisson, generally circularly spaced conduit strings extending upwardly from the formation into the casings and upwardly therein, and equipment on the superstructure for cooperating with the conduit strings to effect passage of fluid therein vertically of the caisson.

3,128,605
CLOSED CYCLE CRYOGENIC SYSTEM
Stephen F. Malaker, Mountainside, N.J., and John G. Daunt, Columbus, Ohio, assignors to Malaker Laboratories, Inc., Clinton, N.J., a corporation of New Jersey
Filed Nov. 30, 1962, Ser. No. 241,221
8 Claims. (Cl. 62—6)



1. A transportable closed-cycle deep refrigeration unit comprising,
- a gas-tight housing designed to hold a working gas, and having two separate engine cylinders projecting upwardly therefrom in parallel relation to each other, and having an electric motor mounted therein for driving said unit,
- an engine designed to operation on a working gas supplied within said housing, using the Stirling cycle, and connected to and in operating relation with said motor, and having a compression piston reciprocatable in one of said cylinders and an expander piston reciprocatable in said other cylinder with a phase difference of about 90°, between which pistons a working gas is cycled,
- said expander piston comprising a composite of three pistons of equal strokes superimposed upon each other in tandem relation with decreasing diameters,
- said expander cylinder comprising a composite of three cylinders superimposed upon each other in tandem relation with decreasing diameters, and designed so that an expander volume is present at the end of the stroke of each piston,
- an after-cooler mounted above said compression cylinder for cooling compressed gas from said cylinder,
- a cooler connected in heat transfer relation with each expander cylinder head for cooling compressed gases therefrom,
- a first regenerator connected between said after-cooler and the first cooler of said expander cylinder,
- a second regenerator connected between the first cooler and the second cooler and a third regenerator between said second cooler and the third cooler, for minimizing the unwanted transport of refrigeration to the higher temperature levels as compressed working gas is cycled back and forth between each expander volume and its interconnected cooler, whereby each successive cooler establishes a colder temperature level, the lowest temperature being maintained at the third cooler,
- line means for returning said working gas to said compressor for recycling,
- insulation means for enclosing such of the aforesaid equipment as is maintained at low temperatures, and
- cooling means for cooling said compression cylinder and the lower portion of said expander cylinder.

3,128,606
VACUUM COOLING DEVICE
Elwin J. Watson, Hayward, Calif., assignor to McDonough Steel Co., a corporation of California
Filed May 18, 1961, Ser. No. 110,997
10 Claims. (Cl. 62—100)

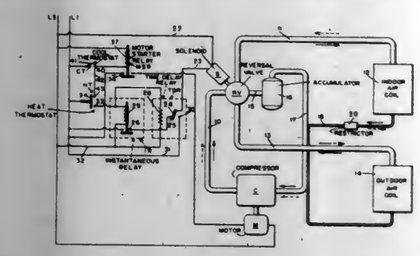


1. A process for cooling a material which is amenable to vacuum cooling comprising: passing said material in a moist condition into a vacuum zone maintained at a predetermined gas pressure, said predetermined pressure being the pressure equivalent to the saturation temperature corresponding to the ultimate material temperature desired, said material, prior to entering said vacuum zone, being under a pressure in excess of that required to permit the said moisture to flash off therefrom, said vacuum zone being sufficiently small that on entry of the material to be treated therein, the gas pressure within said vacuum zone rises to a level substantially equivalent to the saturation temperature which corresponds to the entering material temperature, exhausting gas from said zone while retaining said material in said zone until the gas pressure again reaches said predetermined pressure.

3,128,607
CONTROLS FOR HEAT PUMPS
William K. Kyle, Staunton, Va., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 20, 1962, Ser. No. 238,900
3 Claims. (Cl. 62—158)

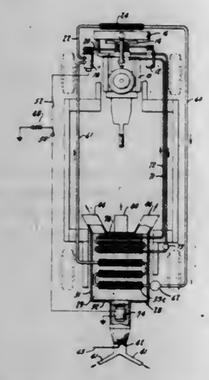
1. A heat pump comprising an indoor air coil, an outdoor air coil, a refrigerant compressor, an electric motor for driving said compressor, means including a refrigerant reversal valve for connecting said coils to said compressor, a solenoid for adjusting said valve to route refrigerant from said compressor to said outdoor

coil and then to said indoor coil or to route refrigerant from said compressor to said indoor coil and then to said outdoor coil, a first thermostat, electric supply connections, means including said thermostat for connecting said motor to said connections, relay means, a normally open quick make switch which closes when said relay



means is energized, a normally closed slow break switch which opens when said relay means is energized, a second thermostat, means including said second thermostat for connecting said motor and said relay means to said connections, and means including said switches in series for connecting said solenoid to said connections.

3,128,608
AUTOMOTIVE AIR CONDITIONING SYSTEM
Herman W. Kleist, Hollywood, Ill., assignor to Dole Refrigerating Company, Chicago, Ill., a corporation of Illinois
Filed Jan. 11, 1962, Ser. No. 165,570
4 Claims. (Cl. 62—243)



1. In an automotive vehicle having an interior enclosure, a variable speed power plant, and an auxiliary compartment, a system for maintaining the interior enclosure below ambient temperature during periods of idle and shutdown of the vehicle's variable speed power plant, said system including, in combination,

a compressor,

a direct driving connection adapted for connection to the vehicle's variable speed power plant and the compressor, the compressor thereby being adapted to be driven at a speed in consonance with variations in speed of the vehicle's power plant, said compressor thereby being adapted to be shut down during periods of shut down of the vehicle's power plant,

a refrigerant condenser,

an evaporator comprising a plurality of overlapping runs, and refrigerant circulant lines connecting the condenser, evaporator and compressor in a closed circuit,

said evaporator being spaced substantially parallel to an adjacent surface in the auxiliary compartment, said evaporator being substantially longer and wider than it is thick and being closely spaced to the adjacent surface with the thickness dimension being substantially perpendicular to the adjacent surface,

structure forming a substantially impervious, confined, air flow path having an inlet and outlet,

said evaporator being located in the air flow path structure intermediate its inlet and outlet,

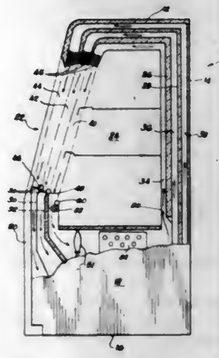
air circulating means located on the inlet side of the evaporator and being positioned to move air from the inlet across the evaporator,

liquid tight eutectic housing means associated with the evaporator runs,

the air flow path structure being relatively thin and having its largest opposed walls substantially parallel to one another,

said air circulating means being operable by a power source independent of the vehicle's power plant to move air across the eutectic housing means whereby said air circulating means may operate during periods of shut down of the vehicle's power plant and consequently the refrigerant flow is minimal or lacking, the cooling effect of air drawn into the vehicle's interior being thereby provided by the stand-by cooling effect of the eutectic completely independently of the operation of the compressor or vehicle power plant.

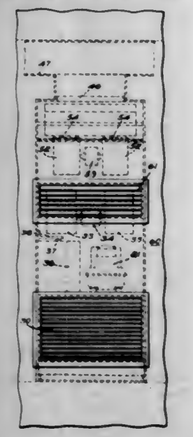
3,128,609
REFRIGERATED ENCLOSURE
Sterling Beckwith, Libertyville Township, and Robert Vogel, Deerfield, Ill., assignors, by mesne assignments, to Dual Jet Refrigeration Company, a corporation of Illinois
Filed May 31, 1962, Ser. No. 198,963
7 Claims. (Cl. 62—256)



1. In a refrigerated enclosure of the type which defines an access opening in one wall communicating the otherwise enclosed space with the ambient atmosphere, and which is provided with at least one inner cold air inlet and at least one outer warmer air inlet, at least one inner cold air nozzle and at least one outer warmer air nozzle, said inlet extending in side-by-side relationship across an opposite edge of said access opening, passages communicating each of the corresponding inlets and nozzles, circulating means in at least some of the passages for forcing air through the passages and in the form of panels across said access opening and refrigeration means disposed in at least some of said passages and adapted to refrigerate at least the innermost of said panels, the improvement comprising screening means extending substantially completely across said inlet to impede entrance of foreign material into said passages, the screening means

covering at least the innermost one of said cold air inlets being provided with heating means whereby the temperature of this screening means is adapted to be made higher than the temperature of the air panel entering the cold air inlet, said last mentioned screening means contacting substantially all of the cold air passing through its associated inlet.

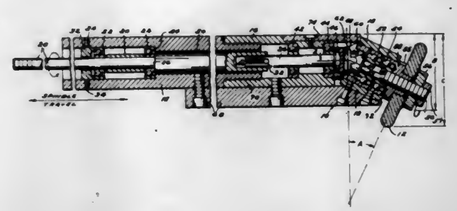
3,128,610
AIR CONDITIONING UNITS
Paul B. Moore, Staunton, Va., assignor to Westinghouse Electric Corporation, a corporation of Pennsylvania
Filed Feb. 19, 1963, Ser. No. 259,657
8 Claims. (Cl. 62—263)



1. An air conditioning unit comprising a lower outdoor air section having upwardly extending outer and inner ends; an upper indoor air section having upwardly extending outer and inner ends, on said outdoor section; said outdoor section having a top portion spaced outwardly from the bottom of said outer end of said indoor section, said indoor section having a bottom portion spaced inwardly from the top of said inner end of said outdoor section, said outer end of said outdoor section having an outdoor air inlet opening in its lower portion, said top portion of said outdoor section having an outdoor air outlet opening therein; a heat exchange coil, a refrigerant compressor, and a fan within said outdoor section, said fan being positioned to draw outdoor air through said inlet opening, to move the outdoor air through said coil and over said compressor, and to discharge the outdoor air through said outlet opening; said bottom portion of said indoor section having a recirculated air inlet opening therein, the top of said indoor section having a conditioned air outlet opening therein; an indoor air heat exchange coil, and an indoor air fan within said indoor section, said indoor fan being positioned to draw indoor air through said recirculated air opening, to move the indoor air through said indoor coil, and to discharge the indoor air through said conditioned air outlet opening, said coils and said compressor being connected in a closed refrigeration circuit.

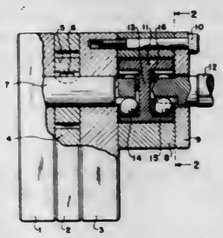
3,128,611
UNIVERSALLY JOINTED SPINDLE
Leo F. Doran, Clawson, Mich., assignor to Beaver Precision Products, Inc., Clawson, Mich., a corporation of Michigan
Filed June 25, 1962, Ser. No. 205,046
2 Claims. (Cl. 64—4)

1. A spindle assembly comprising a casing, a drive shaft journalled for rotation in said casing, another casing adjoining one end of said first casing, a stub shaft journalled for rotation in said second casing about an axis intersecting the rotational axis of said drive shaft at an oblique angle, a universal joint coupling said shafts so that said drive shaft rotatably drives said stub shaft and means for rigidly interconnecting said casings and maintaining said oblique angle relationship of said shafts, said casing connecting means comprising a connecting mem-



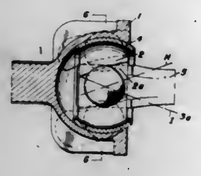
ber disposed adjacent the exterior of the adjoining ends of said casings, said member having first and second surfaces respectively adjacent the exterior of said first and second casings shaped complemental to the exteriors of the respectively adjacent casings, said surfaces being disposed at a predetermined angle to thereby brace said casings to maintain said shafts therein in said angled relation, and fastening means for detachably securing said connecting member to said casings.

3,128,612
SHAFT COUPLING
James W. I. Heijnis, Arnhem, Netherlands, assignor to American Enka Corporation, Enka, N.C., a corporation of Delaware
Filed Nov. 16, 1961, Ser. No. 152,881
Claims priority, application Netherlands Dec. 3, 1960
3 Claims. (Cl. 64—6)



1. Apparatus for connecting the end of a driving shaft to the end of an adjacent driven shaft extending generally in the same direction as said driving shaft comprising a tubular coupling box surrounding each of said shaft ends, means defining a partition within said coupling box between said shaft ends, means defining no more than three longitudinal arcuate recesses in the internal surface of said coupling box on each side of said partition, means defining no more than three longitudinal arcuate recesses in the outer surfaces of said driving shaft and said driven shaft, one for cooperating with each of said coupling box recesses, a spherical ball positioned between each cooperating pair of recesses for connecting said coupling box to said driving shaft and said driven shaft despite any misalignment which might exist between shaft ends, and means defining an enclosure around said shaft ends and coupling box.

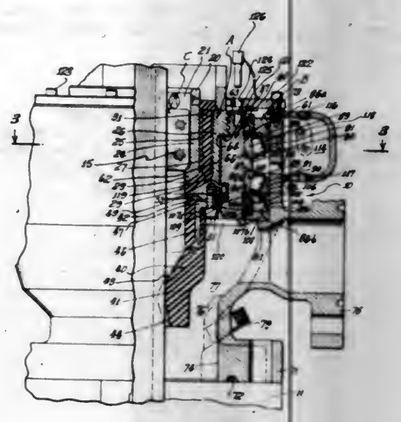
3,128,613
UNIVERSAL BALL JOINT
Henry Faure, 13 Rue de Balzac, Saint-Etienne, Loire, France
Filed Oct. 16, 1961, Ser. No. 145,075
Claims priority, application France Feb. 2, 1961
1 Claim. (Cl. 64—21)



A homokinetic universal joint comprising, in combination, a female head having a spherical internal surface, a plurality of rectilinear ball races formed in said spherical internal surface and uniformly distributed about said internal surface, a male head having a spherical external surface, a plurality of ball races formed in said spherical external surface and uniformly distributed about said external surface intersecting and oppositely inclined to the races of said female head, a plurality of balls equal in number to the number of corresponding pairs of ball races with each of said balls being engaged simultaneously with a ball race of the male head and a corresponding ball race in the female head and adapted to transmit a mechanical couple between said male and female heads, and a single piece intermediate cage of spherical shape adapted to fit over said male head and within said female head, said cage having a plurality of slots of oblong shape adapted to hold said balls laterally but allow them a relative displacement in the rotational and radial directions, and at least one slot of circular shape adapted to receive one of said balls whereby said intermediate cage is centered in the direction of rotation with respect to said balls and said balls are subjected to a scissoring effect and their geometric center as well as the plane of symmetry of the cage are maintained constantly in the plane bisecting the axes of revolution of the male and female heads.

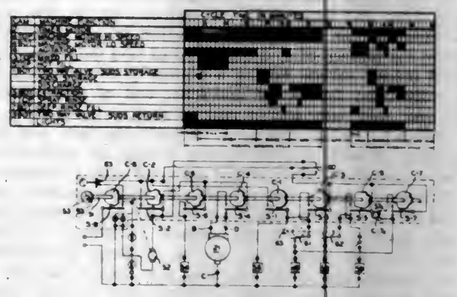
3,128,614
DRILLING HEAD
Leland S. Auer, Sherman Oaks, Calif., assignor to Grant Oil Tool Company, Los Angeles, Calif., a corporation of California
Filed Oct. 27, 1961, Ser. No. 148,091
4 Claims. (Cl. 64—23.5)

1. A well drilling head for confining fluid within a well by surrounding and sealing against a rotatable drill string including a kelly of non-circular cross-sectional configuration: a kelly bushing adapted to engage the kelly in longitudinally sliding engagement for rotation therewith; a spindle assembly non-rotatably mated with said kelly bushing for rotation thereby, said spindle assembly including a drive bushing member, a wiper affixed to said drive bushing member and depended therefrom and adapted for sealing contact with the drill string, and a spindle drive member; a bearing assembly, said bearing assembly rotatably mounting said spindle drive member for rotation of said spindle assembly about the axis of the drill string; a housing enclosing said bearing assembly, said housing having an axial opening therethrough for the passage of said drill string and for engagement of said kelly into said kelly bushing, sealing means within said housing enclosing a cavity surrounding said bearings, means supplying lubricant to said cavity, and means for mounting said drive bushing and wiper assembly within said spindle drive member for selective removal therefrom with said



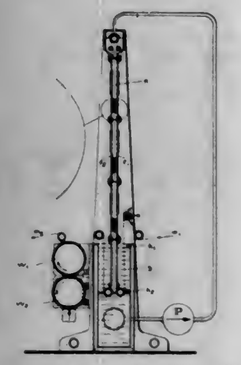
kelly bushing, said spindle drive member having an inside diameter greater than said drill string.

3,128,615
AUTOMATIC WASHING MACHINE HAVING A TWO-SPEED ELECTRIC MOTOR
William E. Mahaffay, Benton Harbor, Mich., assignor, by mesne assignments, to Whirlpool Corporation, a corporation of Delaware
Filed Mar. 28, 1955, Ser. No. 497,059
8 Claims. (Cl. 68—12)



6. In a washing machine of the type having a rotatable receptacle and an agitator therein for washing and centrifuging clothes, drive means including a two-speed electric motor for driving said agitator at either a first agitating speed suitable for ordinary fabrics or a second slower agitating speed suitable for delicate fabrics, and for rotating said receptacle at either a first centrifuging speed suitable for ordinary fabrics or a second slower centrifuging speed suitable for delicate fabrics, control mechanism including presettable sequential control means controlling said drive means and having separate ordinary fabric and delicate fabric programming schedules and including presettable means for selectively presetting the speed of said motor for effecting a sequential operation of said agitator and receptacle at their respective first speeds during said ordinary fabric programming schedule or at said second slower speeds during said delicate fabric programming schedule.

3,128,616
APPARATUS FOR THE FLUID TREATMENT OF RUNNING LENGTHS OF MATERIAL
Adolfo Giani, Bergamo, Italy, assignor to Reggiani S.p.A., Bergamo, Italy
Filed Apr. 13, 1961, Ser. No. 102,871
Claims priority, application Italy Nov. 19, 1960
1 Claim. (Cl. 68—62)



In apparatus for treating fabric tape, the combination comprising

(*a*) a substantially vertical tank having an opened upper end and a lower port means,

(*b*) said tank adapted to contain a fabric treating liquid,

(*c*) an elongated hollow channel member having an opened lower end disposed in said tank and an upper end extending vertically out of said tank,

(*d*) conduit means establishing communication between the lower port means of said tank and the upper end of said channel member,

(*e*) liquid circulation means in said conduit means adapted to continuously circulate the liquid from said tank to said channel member feeding back to said tank whereby said channel member is always filled with moving liquid,

(*f*) a plurality of restricted throat portions spaced vertically along the inner periphery of said channel member,

(*g*) each of said restricted throat portions including guide vanes horizontally spaced from each other on the inner periphery of said channel member and a throttling member disposed between said guide vanes to define upward and downward passageways,

(*h*) inlet and outlet guide rollers disposed in said tank adjacent the opened lower end of said channel member,

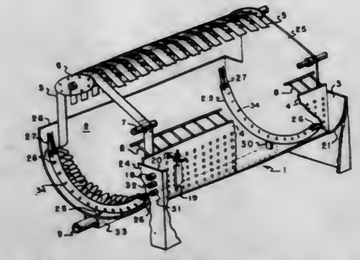
(*i*) return roller means disposed in the upper end of said channel member,

(*j*) said inlet guide roller being aligned with the upward passageway of each restricted throat portion to define an upward pass for the fabric tape to said return roller means,

(*k*) said outlet guide roller being aligned with the downward passageway of each restricted throat portion to define a downward pass for the fabric tape from said return roller means, and

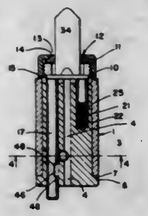
(*l*) fabric tape moving means adapted to continuously move the fabric tape into said tank, through the upward and downward passes in said channel member and out of said tank.

3,128,617
FLUID TREATING APPARATUS
Marvin E. Maynard, Spartanburg, S.C., assignor to Deering Milliken Research Corporation, Spartanburg, S.C., a corporation of Delaware
Filed June 22, 1961, Ser. No. 118,985
20 Claims. (Cl. 68—177)



1. Fluid treating apparatus comprising a container for said fluid; baffle means located within the container so as to separate the container into at least a first and a second inner chamber, said baffle means having a plurality of openings along its length and width to permit free flow of fluid between the first and second chambers; outlet means adapted for removing fluid from the first chamber at uniform strata along the depth of the fluid; inlet means for said second chamber; a conduit system adapted for recirculating the fluid from the outlet means for the first chamber into the inlet means for the second chamber; at least one deflector means located within said second chamber intersecting at a transverse angle the delivery path of the fluid into the second chamber.

3,128,618
KEY SHUT OUT FOR LOCKS
Hollis L. De Vlnes, San Mateo, Calif., assignor to Schlage Lock Company, a corporation
Filed May 25, 1959, Ser. No. 815,722
5 Claims. (Cl. 70—364)

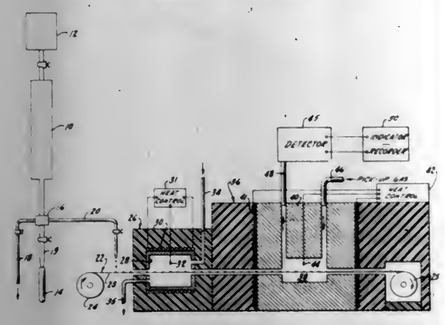


1. In a lock cylinder plug having a keyway extending longitudinally thereof, a bore formed in said plug and extending transversely thereof into said keyway, a key obstructing element movable from a position within said bore to a position partially within said keyway for blocking movement of a key along said keyway, an actuating pin slidably received in said plug and slidable from a first position permitting movement of said element in said bore out of said keyway to a second position blocking such movement, whereby a key is prevented by said element from being inserted along the length of said key way when said actuating pin is in said second position, said pin being formed with a notch intermediate its ends to receive said element therein when said pin is in said first position, and said notch being formed with a camming surface for urging said element toward said keyway when said pin is moved to said second position.

3,128,619
METHOD OF AND APPARATUS FOR MONITORING FOR FLOWING STREAM CONTENT

Seymour Lieberman, Flushing, N.Y., assignor to Packard Instrument Company, Inc., Lyons, Ill., a corporation of Illinois

Filed Mar. 24, 1961, Ser. No. 98,230
11 Claims. (Cl. 73—23)

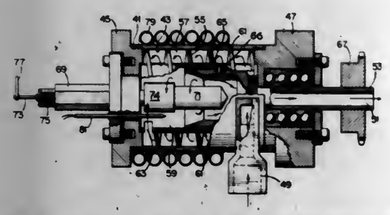


1. A monitor for a flowing fluid stream including a carrier fluid and possibly additional components dissolved or suspended therein, said monitor comprising, in combination, a conveyor, means for depositing upon said conveyor at least a portion of said stream, a carrier removal section including a chamber traversed by said conveyor and maintained at a relatively low temperature for removing the carrier fluid and leaving as residue upon said conveyor any components of the stream in addition to the carrier fluid, a residue converting section including a second chamber traversed by said conveyor and including means for converting any residue upon said conveyor into gas phase, and means for conducting any such gas to a mass detector to denote the presence in the flowing fluid stream in significant quantities of components in addition to carrier fluid.

3,128,620
TORQUE TUBE ROTATIONAL VISCOMETER

Satyabrata Sen Gupta, Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

Filed Nov. 28, 1961, Ser. No. 155,368
2 Claims. (Cl. 73—60)

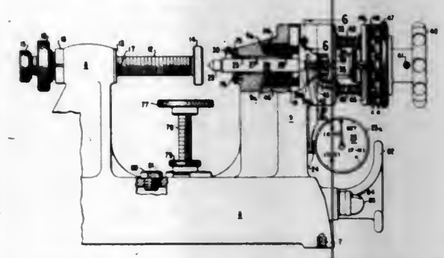


1. A viscometer comprising, in combination, a body having a hollow interior defined by a cylindrical wall extending longitudinally therethrough; a cap assembly closing one end of said hollow interior; a base assembly closing another end of said interior; a cylindrically hollow helical screw extending throughout said hollow interior, arranged concentrically therein to divide said hollow interior into an outer heliform passage and an inner cylindrical passage, said screw having a spiral peripheral land surface in sliding contact with said cylindrical wall and a passage connecting said outer heliform passage and said inner cylindrical passage; fluid inlet means connected to said outer heliform passage; fluid outlet means connected to said inner cylindrical passage; a shaft rotatably mounted in and extending through said base assembly in longitudinally concentric alignment with said hollow interior and said helical screw and operably attached to said helical screw; means to impart rotational movement to said shaft; a torque-sensitive tube assembly extending through said cap assembly into and in concentric alignment with said inner cylindrical passage; and means operably connected to said torque-sensitve tube assembly to convert sensed torque to an output signal.

3,128,621
HORIZONTAL HARDNESS TESTER

Robert C. Scott, 340 Common St., Belmont, Mass.

Filed Sept. 19, 1960, Ser. No. 56,770
2 Claims. (Cl. 73—81)



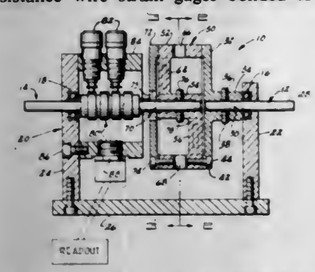
1. A hardness tester comprising, in combination: support means, anvil means adjustably mounted in said support means for supporting a specimen to be tested, a specimen penetrator mounted in said support means for movement along a penetration axis, a spindle assembly threadedly engaged in said support means for movement along said axis to apply a load to said penetrator, a base plate mounted on said spindle assembly for relative rotation, a plurality of guide pins secured to said base plate and received in said support means for sliding movement along said axis, means including a load spring imposed between said spindle assembly and said penetrator for measuring the load applied to said penetrator, means drivingly engaged with said spindle assembly for measuring the movement of said penetrator along said axis, and a plurality of compression springs each disposed about one of said guide pins and imposed between said support means and said spindle assembly to bias said spindle assembly along said axis in a direction opposite to the load applied to said penetrator, said compression spring means opposing back-lash movement between said spindle assembly and said support means due to looseness of the threaded engagement thereof.

3,128,622
TORQUE METER

Milton J. Lebow, Oak Park, Mich., assignor to Lebow Associates Inc., Detroit, Mich.

Filed Mar. 21, 1960, Ser. No. 16,529
1 Claim. (Cl. 73—136)

In a torque meter, the combination of, a mounting frame; co-axial input and output shaft members; two concentric, generally hollow cylindrical sleeve members positioned intermediate said input and output shaft members; a plurality of resilient members disposed intermediate said hollow cylindrical sleeve members, said resilient members located in two axially displaced geometric planes; at least one of said resilient members in a first plane and at least one of said resilient members in a second plane and displaced along a common axis, said resilient members displaced 180° from each other, said resilient members coupling said hollow cylindrical sleeve members together: a disc member connecting said input shaft and said outer sleeve, the output shaft positioned in said inner sleeve, thereby forming a rotatable unit assembly; resistance wire strain gages bonded to each of

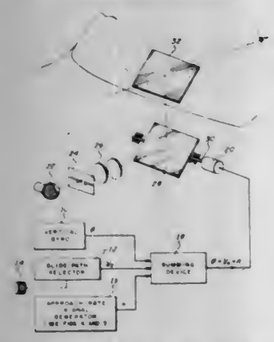


said resilient members; and means for reading and recording the resistance change in said strain gages when said resilient members are flexed.

3,128,623
FLIGHT CONTROL SYSTEMS

Theodore Gold, Ronkonkoma, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware

Filed Sept. 7, 1960, Ser. No. 54,400
11 Claims. (Cl. 73—178)



1. Apparatus for enabling a craft to be directed to and maintained on a reference flight path projecting from a reference point comprising means producing a signal representing the attitude of said aircraft relative to said reference flight path, means producing a signal representing the rate of approach of said aircraft to said reference flight path, means connected to receive said attitude and approach rate signals and produce a signal representing the algebraic sum of those signals, means secured to said aircraft defining a line of sight and means responsive to said sum signal for controlling said means defining a line of sight for varying the direction of the sight line relative to the longitudinal axis of said aircraft in proportion to said sum signal, whereby said aircraft will asymptotically approach and maintain said reference flight path when said aircraft is controlled so as to maintain the line of sight directed at said point.

3,128,624
HEAT QUANTITY METER

Adam Wesp, Messenhausen, Hesse, Germany, assignor to Techem G.m.b.H., Frankfurt am Main, Germany, a German body corporate

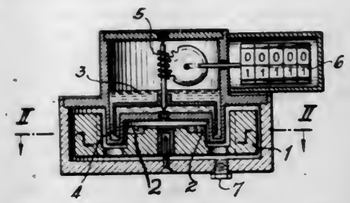
Filed Feb. 24, 1961, Ser. No. 91,495
Claims priority, application Austria Jan. 22, 1961
14 Claims. (Cl. 73—193)

1. A heat quantity metering device, comprising

a housing containing first and second chambers arranged in heat-exchanging relationship, said first chamber having an inlet and an outlet for the passage of a temperature-modifying fluid therethrough;

a bladed wheel rotatably mounted in said first chamber, said wheel being arranged to be rotatably driven by the flow of said temperature-modifying fluid through said first chamber;

a quantity of a viscous medium in said second chamber in heat-exchanging relationship with said temperature-modifying fluid, the viscosity of said medium varying in accordance with changes in the temperature of said fluid;



a rotor rotatably mounted in said second chamber for rotation about an axis colinear with the axis of rotation of said wheel, at least a portion of said rotor being submerged in said viscous medium;

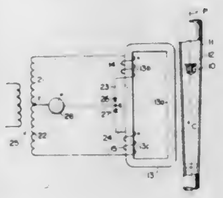
magnetic coupling means causing said rotor to be rotatably driven by said wheel;

and indicating means responsive to the rotary speed of said rotor, whereby the viscosity of the viscous medium and the braking effect on the rotor produced thereby are a function of the temperature of the temperature-modifying fluid.

3,128,625
SATURABLE REACTOR POSITION TRANSDUCER

Henry F. Heineman, 841 Valley View Road, Pittsburgh 16, Pa.

Filed May 14, 1962, Ser. No. 194,279
7 Claims. (Cl. 73—209)



5. Apparatus for sensing a fluid flow rate comprising:

(A) a vertically extending upwardly-expanding-tapered flow circuit for upwardly conducting the fluid flow;

(B) a float positioned within said conduit, directly contacting the fluid, and being constructed and arranged to cooperate with said conduit to move along a path that extends lengthwise of said conduit to different positions as a function of the rate of fluid flow;

(C) a magnetic flux source located within said conduit and connected for movement with said float, said magnetic flux source having a polar axis that is oriented substantially parallel to said path;

(D) a magnetically saturable core member having a first portion that extends substantially parallel to said path and is positioned within the magnetic field of said flux source, and having second and third portions effectively located at opposite ends of said path;

(E) circuit means comprising, a first gate winding mounted on said second portion of said core member, a second gate winding mounted on said third portion of said core member, electrical means for periodically simultaneously energizing said first and second gate windings to produce magnetic fields that are similarly directed with respect to said core member; and

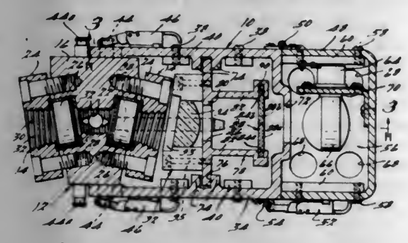
(F) output means connected with said circuit means and responsive to asymmetric magnetization of said core member resulting from the position of said flux source along said path as determined by the rate of fluid flow in said conduit for operating as a function indicative of the fluid flow rate.

3,128,626

ILLUMINATOR FOR LIQUID LEVEL GAUGE

Josef Faber, Lancaster, Ohio, assignor to Diamond Power Specialty Corporation, Lancaster, Ohio, a corporation of Ohio

Filed Dec. 11, 1961, Ser. No. 158,440
6 Claims. (Cl. 73—331)



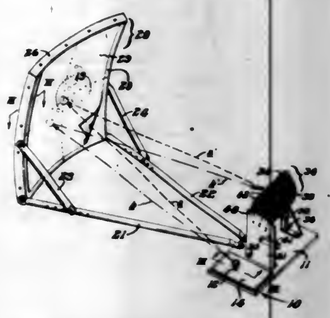
1. In a liquid level indicating system including a liquid level gauge of the type having at least one transparent gauge port for transmitting light through the gauge and a fluid contained in a columnar passage within the body of the gauge, the improvement comprising an illuminator adapted to be removably mounted on a gauge for directing a split beam of light into a gauge port thereof, said illuminator comprising an elongated housing formed with an open side adapted to be positioned adjacent to a gauge port, means for removably mounting said housing on a gauge, a rear wall of said housing disposed opposite to said open side formed with a light port therethrough adapted to be positioned in approximate axial alignment with a gauge port, illuminating means for directing a beam of light through said light port, a slide assembly removably mounted in said housing and extending longitudinally thereof, coacting means on said housing and said slide assembly for guidably and movably positioning said slide assembly in a plane transverse of said housing, a light filter comprising a pair of vertical halves mounted on said slide assembly in spaced relationship from said rear wall for splitting a beam of light directed therethrough into a pair of adjacent beams, a lens mounted on said slide assembly forwardly of said filter and in prealigned relationship therewith for refracting and focusing said pair of adjacent beams into a gauge port wherein one of said pair of adjacent beams is refracted so as to be visible to an observer in accordance with the refractive index of the fluid therein, and means on said slide assembly adapted to coact with index means on a gauge for precisely aligning the prealigned said filter and lens on said slide assembly relative to a gauge port.

3,128,627

GOLF PRACTICE DEVICE

George A. Harris, Warren Ave., R.D. 2, Malvern, Pa.

Filed Nov. 7, 1962, Ser. No. 235,983
12 Claims. (Cl. 73—381)



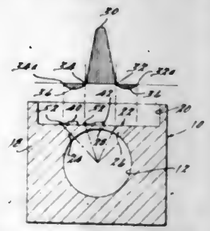
1. A golf practice device which includes a concave spherical surface mounted in a generally upright position for intercepting and reflecting a ball driven toward it from a tee located a short distance in front thereof, and a receiver connected to said spherical surface mounting for receiving the intercepted reflected ball.

3,128,628

PRESSURE TRANSDUCER

Milton J. Lebow, Oak Park, Mich., assignor to Lebow Associates, Inc., Oak Park, Mich., a corporation of Michigan

Filed June 9, 1961, Ser. No. 116,032
12 Claims. (Cl. 73—398)



1. A pressure transducer comprising a body having a thin wall portion varying in thickness to provide adjacent tension and compression stress zones with a neutral stress zone therebetween, and strain gage means on the surface of said thin wall portion having terminals in said neutral stress zone so as to improve the fatigue life of said pressure transducer.

3,128,629

MATERIAL SAMPLING APPARATUS

Merwyn E. Grimes, Carlsbad, N. Mex., assignor to International Minerals & Chemical Corporation, a corporation of New York

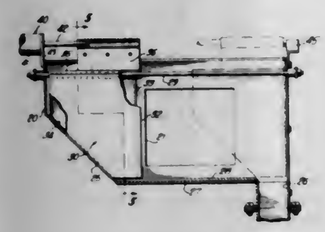
Filed Jan. 10, 1961, Ser. No. 81,724
5 Claims. (Cl. 73—423)

1. Apparatus for sampling a stream of material comprising

a housing connectable to receive the stream of material and having inlet and outlet openings to accommodate flow of the material in a longitudinal flow path through said housing,

a sample cutter having spaced side walls with an open leading end and a rear wall closing the trailing ends of said side walls defining an elongated sample receiving chamber therein,

means mounting said sample cutter to be reciprocable generally normal to said flow path with the longitudinal dimension of said sample receiving chamber coincident with the direction of reciprocation of said sample cutter and the open leading end facing in said direction of reciprocation,



means for reciprocating said sample cutter between a first position whereat said cutter is disposed to one side of said flow path with said open leading end facing said flow path and a second position whereat said cutter is disposed on the opposite side of said flow path,

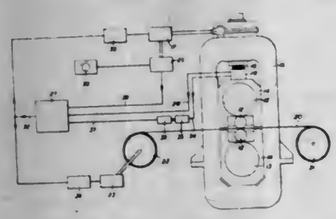
and a sample discharge duct disposed at said opposite side of said flow path to receive a sample of the material from said chamber upon movement of said cutter from said first position to said second position.

3,128,630

MEASUREMENT AND CONTROL OF THICKNESS IN THE PRODUCTION OF SHEET AND STRIP MATERIAL

Peter Richard Ashworth Briggs, Sheffield, England, assignor to Davy and United Engineering Company Limited

Filed Mar. 22, 1960, Ser. No. 16,823
Claims priority, application Great Britain Mar. 24, 1959
2 Claims. (Cl. 73—432)



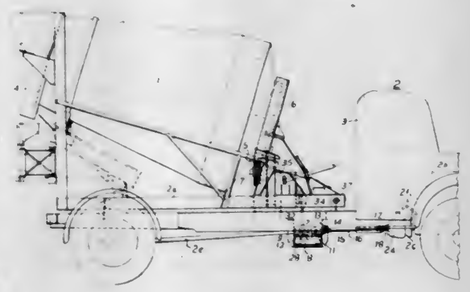
1. Apparatus for indicating the departure from a desired value of the thickness of elongate material issuing from between the rolls of a rolling mill, comprising means for generating a first signal in accordance with the separating force developed between the rolls by the material therebetween, means for generating a second signal in accordance with the nominal setting of the rolls, means for generating a third signal in accordance with a required thickness of the material, means for generating a fourth signal in accordance with the speed of the mill, means responsive to said separating force for generating a compensation signal determined by said separating force but non-linearly related thereto, and means for combining together said first, second, third, fourth and compensating signals to form a resultant signal representing the departure of the thickness from said required value.

3,128,631

MOBILE MATERIAL MIXERS AND AGITATORS, PARTICULARLY CONCRETE MIXERS AND AGITATORS

Wallace Cunningham, Chatham, England, assignor to Winget Limited, Rochester, Kent, England

Filed Feb. 9, 1960, Ser. No. 7,719
17 Claims. (Cl. 74—15.84)



1. A vehicle comprising vehicle means, power driven means carried by said vehicle means, motor means for selectively driving said vehicle means and said power driven means, transmission gear means for interconnecting said motor means and said vehicle means, first clutch means interconnecting said gear means and said motor means for operatively engaging and disengaging said motor means and said gear means, power take-off means from said gear means for driving said power driven means, transmission gear means interconnecting said power take-off means and said power driven means, second clutch means interconnecting said transmission means and said power take-off means for operatively engaging and disengaging said power take-off means and said power driven means, first actuating means for actuating said first clutch means, second actuating means interconnecting said first actuating means and said second clutch means for actuating said second clutch means in response to actuation to said first clutch means, and means independent of said second actuating means for independently actuating said second clutch means.

3,128,632

FORCE-BALANCED MULTIPLE POSITION SEALS FOR VALVES AND THE LIKE

Leland W. Green, Santa Monica, Calif., assignor to Calmec Manufacturing Co., Los Angeles, Calif., a corporation of California

Filed Feb. 24, 1961, Ser. No. 91,437
2 Claims. (Cl. 74—18.2)

1. A force-balanced seal adapted for use in conjunction with a stem, control rod or the like movably associated with a stationary wall body, comprising:

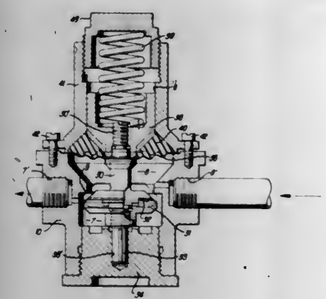
a wall body provided with a bore and a stem extending into said bore;

a thin, flexible corrosion-resistant annular diaphragm having its outer edge firmly attached to said wall body at said bore and its inner edge firmly attached to said stem to seal said bore;

a body of mobile, virtually incompressible back-up material within said bore and in contact with the outer annular face of said thin diaphragm; the inner annular face of said thin diaphragm being subjected to a predetermined pressure within said wall body; and

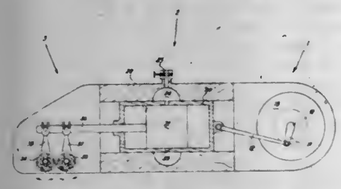
predetermined controllable force applying means for continuously retaining said body of material in contact with and support for said outer annular face of

said diaphragm at all positions of movement of said stem and diaphragm so as to provide balanced pres-



sures on the inner and outer annular faces of said diaphragm during all positions of movement thereof.

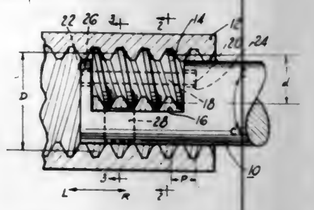
3,128,633
TORQUE CONVERTER
Jean Henri Bertin, Neuilly-sur-Seine, France, assignor to Societe Bertin & Cie, Paris, France, a company of France
Filed Sept. 18, 1961, Ser. No. 138,889
Claims priority, application France Oct. 1, 1960
2 Claims. (Cl. 74—116)



2. In a variable torque converter having rotary torque input means and rotary driven torque output means, the improvement which comprises pneumatic means for variably controlling and adjusting the ratio of transmissible torque transmitted from said torque input means to said torque output means comprising a movable cylinder and a reciprocable double-acting piston in said cylinder both relatively movable, continuously in operation, means for driving said cylinder axially reciprocably from said torque input means continuously in operation, means connecting said piston to said torque output means, and means for variably applying a gaseous fluid under pressure internally of said cylinder directly to both sides of said piston thereby to elastically vary the torque transmitted from said input means to said output means.

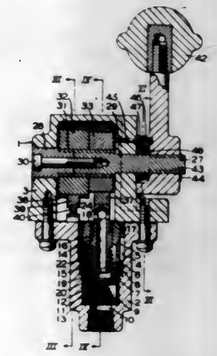
3,128,634
SCREW ACTUATOR
James M. Eastman, South Bend, Ind., assignor to The Bendix Corporation, South Bend, Ind., a corporation of Delaware
Filed Feb. 21, 1962, Ser. No. 174,902
9 Claims. (Cl. 74—424.8)

1. A screw actuating mechanism adapted to provide a linear output movement in response to a rotary input movement comprising:
- a rotatable input member fixed against axial movement thereof,
- a screw member rotatably carried by said input member and rotatable about an axis parallel to and displaced radially outwardly from the axis of rotation of said input member,
- a threaded member threadedly engaged with said screw member and movable axially in response to movement of said screw member,



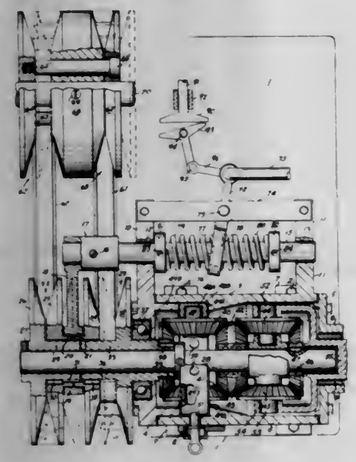
- said screw member being provided with a single screw thread, and
- said threaded member being provided with a multiple screw thread.

3,128,635
MULTI-CHARACTERISTIC VALVE DEVICE
Charles Doolittle, Pittsburgh, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Aug. 9, 1960, Ser. No. 48,525
6 Claims. (Cl. 74—471)



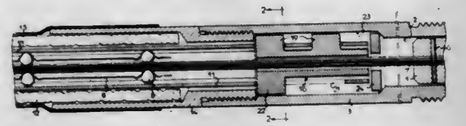
1. An actuating mechanism for a device having an operating member, said actuating mechanism comprising a rotatable shaft, a cam member removably carried by said shaft for rotation therewith and having peripherally spaced thereon, in each of a plurality of defined cam sectors, respective cam surfaces of predetermined characteristic contours different from each other, said cam member being so angularly positionable on said shaft that only one of said cam sectors and its respective cam surface at a time is effective for operative engagement with the operating member, and detent means including a disc member removably carried by said shaft for rotation therewith and having peripherally formed thereon, at predetermined angular positions, a plurality of notches selectively engageable one at a time, by a cooperating yieldable detent for determining a varying number and spacing of preselected angular positions of said shaft, said cam member and said disc member each being angularly positionable on said shaft in any one of a plurality of different positions relative thereto and to each other, whereby variations in characteristics of operation of the device to be actuated may be effected by placing the appropriate cam sector and its respective cam surface of said cam member and the appropriate notches of said disc member into respective operative positions relative to the operating member and said detent.

3,128,636
FULLY AUTOMATIC POWER TRANSMISSION AND VEHICLE CONTROL MEANS
Clinton L. Graybill, Superior, Mont., assignor to Graybill Industries, Inc., Superior, Mont., a corporation of Montana
Filed Oct. 5, 1960, Ser. No. 60,751
2 Claims. (Cl. 74—472)



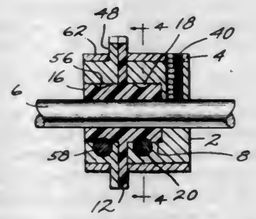
1. Automatic transmission comprising,
- a closed housing,
- a driven shaft rotatably mounted within the housing and extending outwardly from one end thereof,
- a vehicle drive shaft extending outwardly from the opposite end of said housing,
- a first epicyclic gear train disposed within the housing and including an annulus and two gears of said train rotatably carried by the annulus,
- a second epicyclic gear train disposed within said housing,
- both of said gear trains having a driving connection with each other,
- detent means associated with said housing and engageable with said annulus for holding said annulus to effect normal operation of the transmission or for selectively releasing the annulus to render the transmission inoperative,
- a driving shaft driven by an engine operatively controlled by a throttle valve linkage,
- a first series of variable diameter split pulleys associated with and driven by said engine drive shaft,
- a second series of variable diameter pulleys having a driving connection with said driven shaft at said outwardly extending end thereof and with said first and second epicyclic gear trains,
- each pulley in each of said series comprising one pulley member movable toward and away from a companion member pulley,
- belt means operatively interconnecting the pulleys of said first and second series,
- a shifting rod,
- means carried by said housing slidably supporting said shifting rod for reciprocal motion relative to the housing,
- means interconnecting one end of said shifting rod and said movable pulley members in said second series,
- a control lever rockably mounted on said shifting rod supporting means,
- cam means interconnecting said control lever with said engine throttle valve linkage and operable by said control lever to accelerate said engine upon movement of the control lever in either of two directions, means normally urging said control lever in a non-accelerating position and also normally urging the pulley members in both of said series to neutral positions of equal effective diameters, whereby movement of said control lever in one direction, will accelerate the engine to cause movement of said pulley members into position to impart high-speed rotation to said vehicle drive shaft under normal load conditions, and whereby when the vehicle drive shaft encounters increased torque loads the additional pulling stresses on said belt means will shift said pulley members to a higher torque ratio at the same time moving said control lever in the other of said directions to maintain engine acceleration.

3,128,637
FLEXIBLE CONTROL DEVICE
Raymond Richoux, 3 Rue René Boulanger, Paris, France
Filed Mar. 23, 1959, Ser. No. 801,171
Claims priority, application France Mar. 25, 1958
16 Claims. (Cl. 74—501)



1. A tubular remote control device for transmitting traction or compression forces comprising a flexible tubular sheath, a flat flexible band adapted to move to and fro in said sheath, a pair of flexible flat elongated guiding members arranged opposite each other on either side of said band in said sheath for guiding said band, spaced rolling elements between said members and said band, a tubular end fastener secured at each end of said sheath, a sleeve rotatably mounted in each of said tubular end fasteners and prevented against axial movement therein at least in one direction, means on said sleeve for connection to said elongated guiding members, each end portion of said band protruding axially through the associated one of said sleeves to permit transmission of forces from one end of said device to the other.

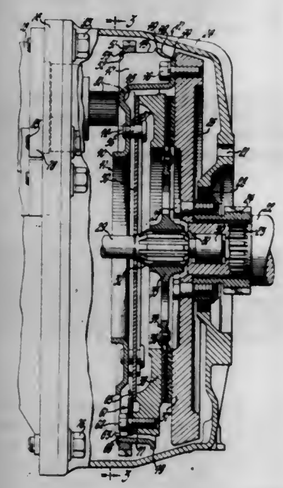
3,128,638
ADJUSTABLE CAM
James L. King, Sudbury, Mass., assignor to Acton Laboratories, Inc., a corporation of Massachusetts
Filed Aug. 15, 1961, Ser. No. 131,579
7 Claims. (Cl. 74—568)



1. A timing cam assembly comprising a hub member, means for securing said hub member to a rotatable shaft, a first cam member rotatably supported by said hub

member, means for controllably rotating and locking said first cam member relative to said hub member, a second cam member rotatably mounted on said first cam member, and means for controllably rotating and locking said second cam member relative to said first cam member.

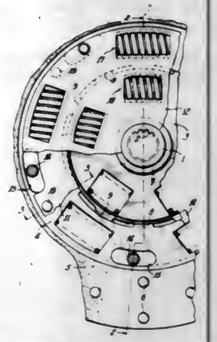
3,128,639
CLUTCH AND STARTER ASSEMBLY
Joseph F. Hein, Flint, and Robert G. Renius, Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 1, 1959, Ser. No. 843,685
23 Claims. (Cl. 74—572)



1. In a clutch, a flywheel having a backing plate surface on the output side opposite the input side, an annular sheet metal cover member having a radial portion and a peripheral portion secured to the output side of said flywheel, said peripheral portion having a cylindrical surface portion at least as large in diameter as said flywheel adjacent the output edge, said cover member having support means extending from a point substantially within said cylindrical surface axially beyond said cylindrical surface portion and having a pad portion extending radially outwardly and engaging the surface of the output side of said flywheel within said cylindrical surface, means securing said pad portion to said flywheel, and a starter ring gear secured to said cylindrical portion adjacent the output edge of said cover member.

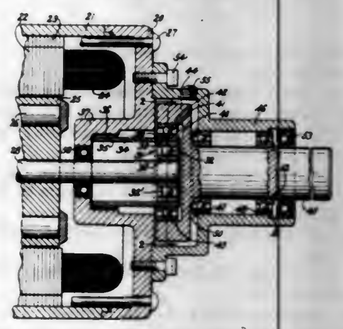
3,128,640
VIBRATION DAMPENERS
Reinhold C. Zeidler, Detroit, Mich., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Feb. 9, 1962, Ser. No. 172,255
9 Claims. (Cl. 74—574)

1. A vibration dampener comprising a hub having an annular radially extending flange, said flange having a peripheral edge portion and side portions; an annular disc member mounted for rotational movement on the edge portion of said flange; means providing a frictional connection between said annular disc member and said flange; washer means positioned on opposite sides of said flange, means providing a frictional damping relationship between said washer means and said annular flange whereby relative movement therebetween is frictionally retarded; first resilient means interconnecting said annular disc member and said washer means; and



second resilient means interconnecting said washer means and said flange.

3,128,641
POWER TRANSMISSION
C Walton Musser, Palos Verdes Estates, Calif., assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed June 5, 1962, Ser. No. 200,130
15 Claims. (Cl. 74—640)

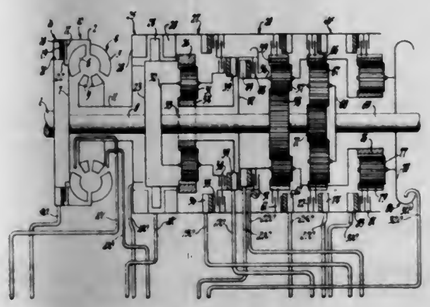


1. In a power transmission, a first bearing having bearing rolling elements, a flextube having one radial side engaging one radial side of said first bearing, reaction means engageable with the flextube, and a second bearing having bearing rolling elements and engaging the other radial side of said flextube, either the latter or one of the bearings being operative as an input when the other of the bearings or the flextube transmits a power output, the rolling elements of one of said first and second bearings being of different diameters and propagating a non-circular shape around said flextube by relative rotation of the first and second bearings and the flextube about a common axis with planetary motion of said bearing rolling elements of different diameters.

3,128,642
TRANSMISSION
Mark E. Fisher, Carmel, Sidney A. Rains, Speedway City, and William B. Clark, Greenwood, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 5, 1960, Ser. No. 73,564
39 Claims. (Cl. 74—752)

1. In a transmission; a drive train including a torque converter having an input member and an output member

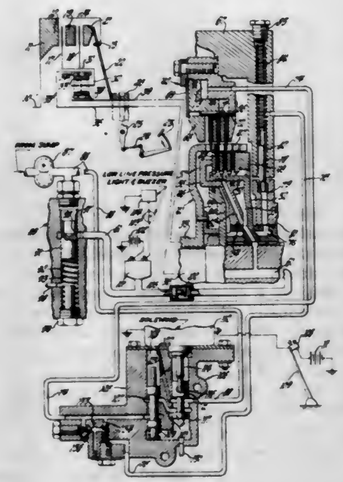
and a lockup clutch having lockup fluid operated means engageable to connect said input and output members, and a multiratio gear unit having first and second speed ratio fluid operated means operable, on the supply of fluid, to selectively engage a first and second speed ratio connected in series; a source of fluid under pressure; lockup clutch control means operably connected to said source and said lockup fluid operated means operable to connect said source for flow to said lockup fluid operated means; ratio control means including a restriction operably connecting said source to said first and second ratio fluid operated means to connect said source for flow through said restriction, providing a higher differential pressure on the upstream side of said restriction and a lower pressure on the downstream side of said restriction, selectively to said first and second ratio fluid operated means to selectively engage said first and second speed ratios of said multiratio gear unit, lockup cutoff control means operatively



connected to said lockup clutch control means and said ratio control means on opposite sides of said restriction and operative in response to said differential pressures caused by flow to said first and second ratio fluid operated means to change said speed ratios in said multiratio unit under the control of said ratio control means operative to move from a normal position permitting engagement of said lockup clutch to cutoff position to control said lockup clutch control means to disengage the lockup clutch for the duration of the ratio change, and an accumulator operatively connected to said lockup cutoff control means and operative to accumulate the lower of said differential pressures to delay movement of said lockup cutoff means from said cutoff to said normal position to delay re-engagement of said lockup clutch for a predetermined period after the initiation of engagement of the ratio engaging device to insure completion of said ratio change before re-engagement of said lockup clutch.

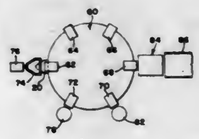
3,128,643
TRANSMISSION
Francis O. Gadd, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 20, 1959, Ser. No. 835,090
26 Claims. (Cl. 74—781)

1. In a transmission, a gear unit providing a first and a second ratio drive, means normally biased to actuate said gear unit to establish said first ratio, fluid operated release means operative at a predetermined low pressure to complete disengagement of said first drive at normal torque values in response to a predetermined low pressure, fluid operated apply means inoperative at said predetermined low pressure and operative at said normal torque values at a predetermined high pressure to complete establishment of said second drive, a source of fluid under pressure, means to regulate the pressure of said source at a normally constant value above said predetermined high pressure, shift valve means operative in a first position to connect said source to said fluid operated release means and said fluid operated apply means and operative in a second position to connect said fluid operated release means and said fluid operated apply means to exhaust, and means to provide a low volume supply of fluid



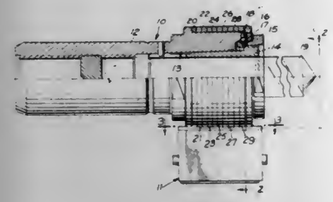
from said shift valve means to said fluid operated apply means when the fluid pressure in said fluid operated release means is below said predetermined low pressure and a high volume supply of fluid from said shift valve means to said fluid operated apply means when the fluid pressure in said fluid operated release means is above said predetermined low pressure at which said fluid operated release means completes disengagement of said first drive.

3,128,644
METHOD FOR MAKING CUTTING COMPONENTS FOR HARVESTING MACHINE CUTTING MECHANISMS
William S. Forsyth, Moline, Ill., and Kenneth W. Madsen, Davenport, Iowa, assignors to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Oct. 17, 1960, Ser. No. 62,979
6 Claims. (Cl. 76—89.1)



1. The method of serrating a harvesting machine cutting element formed of flat steel material having opposite surfaces and of generally triangular shape having a pair of convergent shearing edges comprising, heating the element in portions thereof respectively along said edges, and serrating the heated element simultaneously in both of said portions to provide along each edge and in one surface thereof a series of serrations crosswise of said edge.

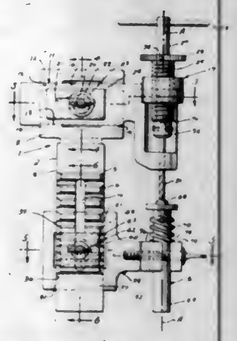
3,128,645
MACHINE TOOL CHANGER
Myron L. Anthony, La Grange, Ill., assignor to Scully-Jones & Company, Chicago, Ill., a corporation of Illinois
Filed Apr. 18, 1960, Ser. No. 23,046
11 Claims. (Cl. 77—5)



1. In a data-controlled machine tool, including a transfer mechanism for transferring a plurality of tool assemblies individually between a storage position and an operating position, a control system comprising: encoding means, individually associated with each tool assembly, for identifying said tool assembly in accordance with a predetermined digital code, said encoding means comprising a series of individual code elements, all of substantially similar dimensions and configuration but selected from two groups having different field-coupling properties, mounted on said tool assembly in predetermined alignment with each other; sensing means, located in close proximity to but spaced from said storage position, for sensing said code elements without physical engagement therewith, said sensing means comprising a plurality of individual field-sensitive sensing elements each exhibiting substantially different electrical properties when in close proximity to but spaced from code elements of said two different groups; and an electrically actuated control circuit, coupled to said sensing means, for controlling operation of said transfer mechanism in response to predetermined changes in the electrical properties of said sensing elements.

3,128,646
BIB SCREW REMOVER
Karl L. Zimmerman, Philadelphia, Pa., assignor to Woodward Wanger Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed May 28, 1962, Ser. No. 198,179
1 Claim. (Cl. 77—20)

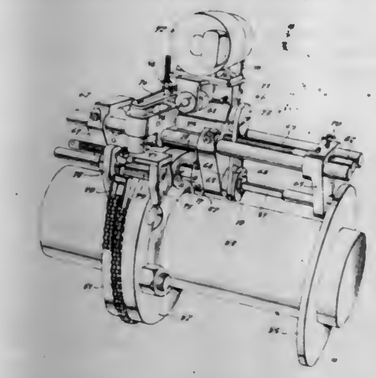
A bib screw remover or the like comprising:
a frame formed with a head and a body, the frame body having two parallel edge walls and the frame head being formed with a groove having side walls which extend at right angles to said edge walls and the frame body being further formed with a slot extending parallel to the edge walls and with serrations extending between the edge walls;
a table formed with a groove, the side walls of which respectively slidably engage said edge walls, the edge walls and groove providing for the table to be adjusted along the frame;
a screw threaded on the bottom of said table groove and extending outwardly through said frame slot, the screw having a holding head;
a plate on said screw below said holding head and having serrations for mating with said frame body serrations, the screw when threaded up causing its holding head to contact the plate and tightly engage the serrations to lock the table in adjusted position on said body;
means on said table forming a V-shaped slot for receiving and holding a faucet stem with the axis of the stem parallel to the axis of the slot and the V-shaped slot being formed with its axis parallel to said frame edge walls;
a pair of screws threaded on said table and respectively disposed on opposite sides of said V-shaped slot;
clamp means rotatably mounted on the shank of one of said screws and formed with a slot for receiving the shank of the other said screw, each screw having a holding head for tightening down against the clamp to cause the same to hold a faucet stem firm against the V-shaped slot and the screws providing for positioning the clamp with respect to the slot to accommodate different diametered stems;



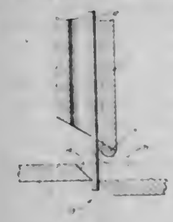
a drill support formed with two parallel edge walls and a slot extending parallel the edge walls, the edge walls slidably engaging the side walls of said frame head groove and the frame head groove and the edge walls providing for the drill support to be adjustable toward and away from the frame head;
a screw threaded on the bottom of said frame head groove and extending outwardly through said drill support slot, the screw having a holding head for tightening down against the drill support to lock the same in an adjusted position in the groove; and
means on said drill support for mounting a drill bit for rotation and for movement along its rotational axis, the means mounting the drill bit, with its rotational axis parallel the axis of the V-shaped slot and lying in a plane containing the axis of the V-shaped groove.

3,128,647
TAPER BORING BARS
Austin Patrick Malia and Robert Clough Wiles, Newcastle-upon-Tyne, England, assignors to said Malia and Buma Engineering Company Limited, Newcastle-upon-Tyne, England, a company of Great Britain and Northern Ireland
Filed Feb. 2, 1961, Ser. No. 86,794
Claims priority, application Great Britain June 9, 1960
6 Claims. (Cl. 77—57)

6. A taper boring bar comprising, in combination, a driving sleeve, a head on said sleeve, a pair of parallel faces on said head tangential to the axis of said sleeve, a tail spigot member, a pair of cutter-carrier guide bars, each of said bars having one of its ends secured to one of said faces with variable lateral setting, said bars having their other ends pivotally attached on a common transverse axis to said tail spigot member, said spigot member being spaced from and connected to said driving sleeve solely by said guide bars, a cutter-carrier having two opposed recesses in each of which one of said guide bars is embraced so that said cutter-carrier is slidable between and firmly guided by said guide bars, a displacing rod axially slidable within said driving sleeve and having one end extended between said guide bars, means preventing relative rotation of said displacing member and said sleeve, means connecting said one end of said displacing member to said cutter-carrier, and means to predetermine the lateral setting of said guide bar ends secured to said faces of the driving sleeve relative to the axis of said sleeve.



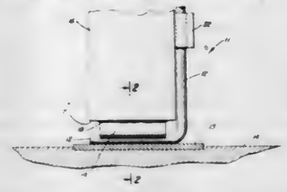
3,128,648
APPARATUS FOR JOINING METAL LEADS TO SEMICONDUCTIVE DEVICES
Robert P. Clagett, Yardley, Pa., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 30, 1961, Ser. No. 135,032
24 Claims. (Cl. 78—82)



1. A device for bonding a wire-like member to a preselected part which comprises an elongated member having a longitudinal axis and an end surface slanted with respect to said axis for forming an apex, said member having a passageway extending from said end surface at least partially through said elongated member for guiding the wire-like member, and a tip of hard material secured to said apex for bonding the guided wire-like member to said part.

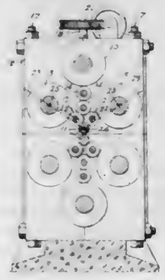
3,128,649
BONDING DEVICE FOR JOINING A WIRE-LIKE MEMBER TO A PART
Arthur J. Avila, Flemington, and Steven J. Buzash, Riverside, N.J., and Ralph E. Thomas, Yardley, Pa., assignors to Western Electric Company, Incorporated, a corporation of New York
Filed Aug. 30, 1961, Ser. No. 135,051
6 Claims. (Cl. 78—82)

1. A high frequency vibratory energy bonding device for bonding a gold wire to a preselected part, which comprises an elongated member having a flat surface at one end, a pair of parallel contiguous tungsten wires having equal diameters of substantially twice that of a gold wire to be bonded and fixed to said flat surface to form a groove for supporting the gold wire in bonding position,



and means fixed to the elongated member for guiding said gold wire into said supporting groove.

3,128,650
MULTIPLE ROLL ROLLING MILL
Axel Gustav Edvard Leufvén, Goteborg, Sweden, assignor to Aktiebolaget Svenska Kullagerfabriken, Goteborg, Sweden, a corporation of Sweden
Filed June 7, 1960, Ser. No. 34,398
Claims priority, application Sweden June 16, 1959
6 Claims. (Cl. 80—38)

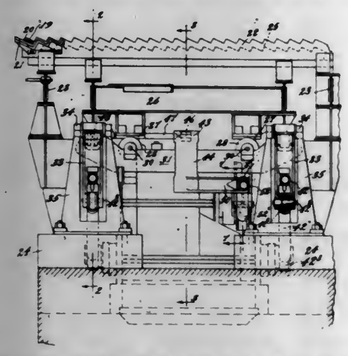


1. A multiple roll rolling mill for rolling strip material and the like, comprising; a pair of working rolls between which the strip material is rolled, said working rolls being disposed in a predetermined common plane transverse to the direction of the material, two backing-up rolls disposed respectively in front of and behind at least one of said working rolls in the direction of passage of the material therebetween, non-adjustible, fixed bearings mounted in said mill concentrically journalling each said backing-up roll therein, at least one pair of intermediate rolls, one of said intermediate rolls positioned in engagement between said one working roll and one of said backing-up rolls, the other of said intermediate rolls positioned in engagement between said one working roll and the other of said backing-up rolls, a pressure roll disposed in the same plane as said working roll and adjustably mounted for movement in only said plane relative to said working roll and acting on said intermediate rolls to vary the spacing of the working roll with respect to the fixed backing-up rolls, a bearing housing mounted in said mill concentrically journalling said pressure roll therein which is displaceable in said plane of the working rolls and guided against displacement in a direction transverse thereto and means for adjusting said pressure roll.

3,128,651
COOLING BED
Edward T. Peterson, Reading, Pa., assignor to Birdsboro Corporation, Birdsboro, Pa., a corporation of Pennsylvania
Filed May 5, 1961, Ser. No. 107,981
4 Claims. (Cl. 80—42)

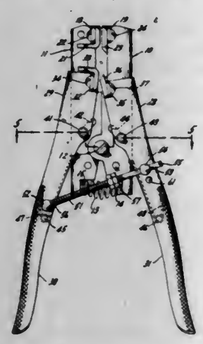
1. In a cooling bed, a first set of relatively stationary notched bars extending generally horizontally, a second

set of relatively movable notched bars extending generally horizontally and interspersed among the bars of the first set, a support for the bars of the second set, rails on the support extending generally horizontally in the direction of horizontal motion of the bars of the second set, stationary standards, vertically movable horizontal cross beams adapted to remain horizontal beneath the rails, rollers on the cross beams engaging the rails, levers pivotally connected at both ends of the cross beams for manipulating the cross beams vertically comprising bellcranks



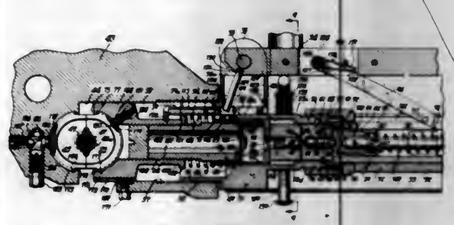
pivotally connected to the standards at a relatively upper position and pivotally connected to the cross beams near the top, an equalizing link connected to a cross beam near the bottom and pivotally connected to a lower portion of one of the standards, the equalizing link being parallel to the bellcrank position at the top of the lever, a connecting rod and a spherical bearing interconnecting the connecting rod with one of the levers for actuating the levers in unison and means for driving the support horizontally on the rollers.

3,128,652
ADJUSTABLE WIRE STRIPPER
William G. Schinske, Sycamore, Ill., assignor to Ideal Industries, Inc., Sycamore, Ill., a corporation of Delaware
Filed May 17, 1962, Ser. No. 195,549
8 Claims. (Cl. 81—9.5)



1. An adjustable wire stripper for removing insulation covers from electrical conductors and the like which includes, in combination, a pair of separable jaw members movable about a first pivot, means to urge said members towards a closed position, a stationary gripping blade on one jaw member, a stationary cutting blade on the other jaw member, a cutting blade carrier having a cutting blade mounted thereon slidably engaged with one jaw member to move the cutting blade towards the stationary cutting blade, a gripping blade carrier having a gripping blade mounted thereon slidably engaged with the other jaw member to move the gripping blade towards the stationary gripping blade, means to separate said jaw members, a stop means of adjustable length joining said carriers, said stop means interrupting the movement of the gripping carrier and providing a second pivot to move the gripping blade on the carrier away from the gripping blade on the jaw member.

3,128,653
EXPLOSIVELY ACTUATED TOOL
Robert J. Service, Middleville, N.Y., and Philip R. Haskell, Flossmoor, Ill., assignors to Remington Arms Company, Inc., Bridgeport, Conn., a corporation of Delaware
Filed Oct. 14, 1960, Ser. No. 62,589
7 Claims. (Cl. 81—15)

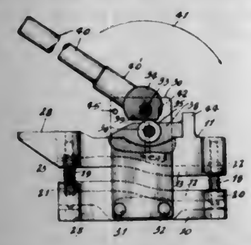


1. In an explosively actuated tool, the improvement comprising a barrel, a cylinder having a plurality of annularly and longitudinally disposed cartridge receiving chambers, said cylinder being rotatably mounted at one end of said barrel so that upon rotation thereof each said chamber successively communicates with the interior of said barrel, and tool firing means comprising a hammer mounted for movement between a cocked position and a tool firing position thereof relative to any said chamber communicating with said barrel interior, means normally biasing said hammer into its said tool firing position, a tool actuating handle mounted for movement between a first and a second position thereof, and means connected to said handle for engaging said hammer upon movement of said handle to its said second position whereby movement of said handle from its said second position to its said first position moves said hammer against the bias of its said bias means to its said cocked position and thereafter releases said engagement of the hammer to permit said hammer to move in response to the bias of its said bias means to its said tool firing position, and cylinder indexing means mounted for movement in engagement with said cylinder, said handle engaging said cylinder indexing means whereby, during each successive movement of said handle towards its said first position, said cylinder is rotated by said cylinder indexing means to successively index each said chamber into its said position communicating with the interior of said barrel.

3,128,654
HAND-OPERATED PIPE BENDING MACHINE
Rudolph E. Herrstrum, Rockford, Ill., assignor to Greenlee Bros. & Co., a corporation of Illinois
Filed Apr. 23, 1962, Ser. No. 189,522
3 Claims. (Cl. 81—15)

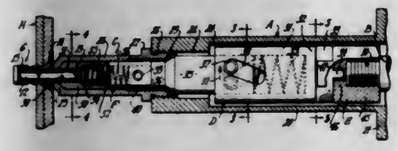
1. A hand-operated bending machine having, in combination, a lower die block and an upper die block provided with opposed grooves operable to form an offset bend in a pipe, guide pins anchored in one block and extending slidably into bores in the other block, a pair of members rigidly secured at their lower ends to the lower block and extending upwardly alongside of and to a position above the upper block, a pivot pin extending

transversely above the upper block and through openings in the members, an operating cam rotatably supported on said members and operable to move the dies toward each other, and an operating handle extending from said cam,



said cam having a somewhat flat spot effective to provide a rapid initial movement of the upper die block to initially engage a pipe when the handle is turned to bend a pipe, and an eccentric portion which thereafter slowly moves the upper die block toward the lower die block.

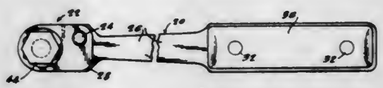
3,128,655
BLIND BOLT INSTALLATION TOOL WITH PRELOADED TORQUE-RESPONSIVE DRIVING MECHANISM
Ben C. Keasler, San Pedro, Calif., assignor to Lok-Fast, Inc., Torrance, Calif., a corporation of California
Filed June 22, 1962, Ser. No. 204,479
10 Claims. (Cl. 81—55)



1. In a tool for setting a bolt-type fastener comprising respective nut and screw elements having wrenching surfaces at the same end of the fastener, in combination: inner and outer wrenching members, one telescoped within the other; means for holding one of said members against rotation; and means for transmitting rotation to the other member, said last means comprising parts relatively shiftable axially and having limited rotative movement with respect to one another, one of said parts transmitting drive to said other member and the other of said parts receiving drive from a motor, and torque-reactive means comprising interengaging surfaces of said parts, at least one of which has an angular inclination with reference to the driving axis of the tool, thereby coupling said parts in a manner to substantially eliminate resistance to retraction of said one part when transmitting torque, whereby said one part may retract in unison with the axial movement of one of said fastener elements with respect to the other as the fastener is closed against parts to be fastened.

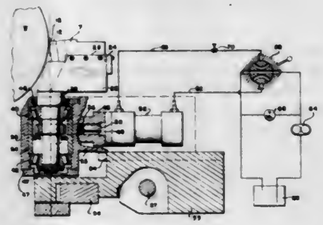
3,128,656
CLOSE CLEARANCE RATCHET WRENCH
Clarence L. Dracka, 802 E. Perry St., Port Clinton, Ohio
Filed July 10, 1962, Ser. No. 208,706
4 Claims. (Cl. 81—98)

1. A wrench comprising an elongated handle, a wrench head, said wrench having an elongated opening therein, said opening defined by two opposed substantially circular arcs drawn on two centers offset from each other and lying on the longitudinal axis of said wrench head, said arcs being connected by a pair of opposed intermediate surfaces, the portion of said opening defined by one of said arcs being substantially smooth faced, the portion of said opening defined by the other of said arcs having a plurality of projections adapted to engage a polygonally shaped bolt head, said wrench head having a portion overlapping said handle, pivot means offset from the longitudinal axis of said handle articulately connecting the



overlapping portions of said wrench head and said handle, the overlapping portion of said handle including a pawl surface having at least one V-shaped groove, and said pawl surface normally projecting into said opening when engaging said bolt head for applying pressure thereto and normally withdrawn from said opening when said bolt head is ratcheted in said opening.

3,128,657
PIVOTING TRACING TOOL
James C. Hebert, Springfield, Vt., assignor to Jones & Lamson Machine Company, Springfield, Vt.
Filed Oct. 11, 1960, Ser. No. 61,884
5 Claims. (Cl. 82—14)

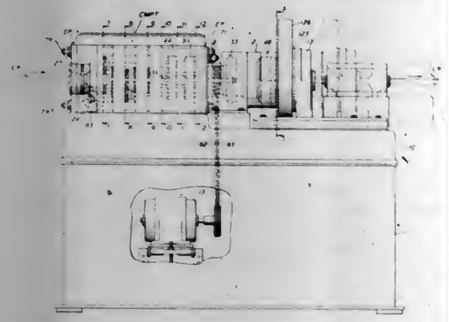


1. In combination with a template tracing machine of the type adapted to move a turning tool radially and axially relative to a rotatable workpiece for turning the same in accordance with a predetermined pattern on the template, an improved pivotable cutting tool attachment comprising; a tool support adapted to trace movements corresponding to a template pattern, a single turning tool mounted on said support and bodily movable therewith, said tool including a rounded cutting nose with a cutting periphery being at least a portion of a circle defined by a radius from a center point within the rounded cutting nose, means for pivotally mounting the tool on the tool support with the pivot point coincident with the center point of said portion of said circle of said rounded cutting nose, and means for moving said tool about its pivot so that said cutting tool may be pivoted to cut opposing steps while utilizing preselected efficient tool cutting angles.

3,128,658
DEVICE FOR SHAVING CABLE CORE
David M. Mitchell, Middletown, N.J., and Earl R. Phinney, South Attleboro, Mass., assignors, by direct and mesne assignments, to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Jan. 8, 1962, Ser. No. 164,901
3 Claims. (Cl. 82—20)

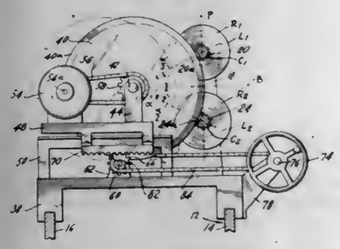
1. A mechanism for shaving to a preassigned diameter the insulation of a cable core including a central con-

ductor, said mechanism comprising a rotatable shaving head including radially adjustable knives positioned to encompass the core, and adjustable to a required cutting circle, means for operating and adjusting the knives comprising a mounting plate, a hollow spindle secured to and projecting from the plate, a first sleeve rotatably mounted on the spindle, means for rotating said sleeve, a first ring including a first set of spaced longitudinally extending camming fingers mounted on the first sleeve for longitudinal movement with respect thereto, a segmented ring also mounted on the first sleeve and including a camming finger between each adjacent pair of its segments for rotation therewith, an adjusting ring including a second set of spaced longitudinally extending



camming fingers mounted on the first sleeve, said fingers mating with and biased against respective fingers of the first set for rotation upon longitudinal movement of said first set, a shouldered sleeve surrounding the adjusting ring, its fingers, and a portion of the mating fingers; a shaving head plate secured to the outer end of the shouldered sleeve, means resiliently coupling the adjusting ring to the shouldered sleeve and biasing the sets of camming fingers together, and means securing together for simultaneous rotation the first sleeve, the ring segments, and the shouldered sleeve; means coupling the first ring to core diameter sensing means for longitudinal movement in response to variations in core diameter, means adjustably mounting the knives on the shaving head plate, and means coupling the adjusting ring to the knives.

3,128,659
ROTARY KNIFE MACHINE FOR CUTTING MULTIPLE ROLLS
David N. Judelson, New York, N.Y., assignor to Oscar L. Judelshon Inc., Jersey City, N.J., a corporation of New York
Filed Mar. 20, 1961, Ser. No. 97,042
4 Claims. (Cl. 82—46)



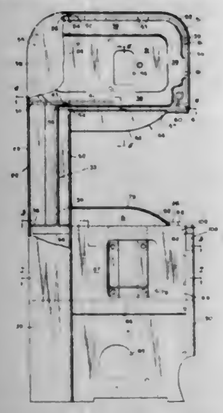
1. In a rotary knife cutting machine, a frame, a stationary main shaft adapted to receive a first roll of material and mounted on said frame, a chuck adapted to engage said first roll for rotating the same about said main shaft, an auxiliary shaft adapted to receive a second roll of material and mounted on said frame, the longitudinal axes of said main and auxiliary shafts being disposed in a common plane, a second chuck adapted to engage said second roll for rotating the same about said auxiliary shaft, a knife carrier, a rotary knife, means operatively connected to and mounting said rotary knife on said knife carrier for rotary movement about a knife axis, a drive on said knife carrier for rotating said rotary knife about said knife axis, and means mounting said knife carrier on said frame for movement toward and away from said common plane such that the locus of the path of said knife axis bisects the angle subtended by successive lines through said knife axis and the respective longitudinal axes of said main and auxiliary shafts in successive positions of said rotary knife.

3,128,660
WEB CUTTING MECHANISM
Rene J. Gaubert, 4206 Oakmore Road, Oakland, Calif.
Filed Apr. 4, 1960, Ser. No. 19,629
23 Claims. (Cl. 83—155)



1. A mechanism for shearing a web of sheet material comprising means for transporting said web along a predetermined path; two pairs of knife carrying gears mounted one pair adjacent each side of said path of movement; said gears of each pair being mounted one above the other in meshing engagement with each other; an upper shearing knife connected between the two upper knife carrying gears in a position eccentric with relation to the axis of rotation thereof; a lower shearing knife connected between the two lower knife carrying gears in a position eccentric with relation to the axis of rotation thereof; means for guiding said upper and lower knives for translatory movement comprising a horizontal slide rod mounted adjacent each side of said path of movement with its axis parallel thereto, a slide block slidably mounted on each of said horizontal slide rods, a vertical slide rod fixed to each of said slide blocks and projecting both upward and downward therefrom, means slidably connecting the upper shearing knife with the upwardly projecting portion of each of said vertical slide rods, and means slidably connecting said lower shearing knife with the downwardly projecting portion of each of said vertical slide rods; means for driving said knife carrying gears in timed relation with the movement of said web to effect orbital translatory movement of said knives; means for periodically actuating said drive means to cause said knives to shear said web into sheets of predetermined length; and means for varying the period of operation of said drive actuating means to produce sheets of different lengths.

3,128,661
BAND SAWS
John H. Diehl, Warren Dean Weikart, and Richard F. Nenstiel, Bellefontaine, Ohio, assignors to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 6, 1960, Ser. No. 27,361
8 Claims. (Cl. 83—201)



1. In a fabricated sheet metal support frame having a wheel enclosing cabinet for bandsaw, bandfiling, and like machine tools comprising a hollow, vertically elongated, sheet metal column and vertically aligned upper and lower wheel compartment assemblies connected thereto in vertically spaced relation to define a substantially C-shaped throat opening for said machine tool, a column reinforcing assembly comprising a post-like structure of tube steel of lesser length than said column, a pair of vertically spaced and aligned, radially protruding, steel support arms respectively cantilever supported at opposite ends of said post-like structure, and weld means securing said post-like structure adjacent its ends to peripherally related interior portions of said hollow column inwardly from the upper and lower column ends with said arms protruding through and extending substantially beyond one column side face in respective adjacent relation to said upper and lower wheel compartment assemblies; the upper and lower arms each being rigidly supportingly connected to said upper and lower compartment assemblies, respectively, at least at a point substantially removed from said column whereby said reinforcing assembly serves to provide a rigidifying cantilever support for said upper and lower wheel compartments to resist the static and dynamic stresses applied thereto.

3,128,662
CHANGE GEAR MECHANISM
David Noel Obenshain, Luke, Md., assignor to West Virginia Pulp and Paper Company, New York, N.Y., a corporation of Delaware
Filed Jan. 13, 1961, Ser. No. 82,487
4 Claims. (Cl. 83—298)

2. A plural denomination, positive change gear unit in combination with a web cutting mechanism, comprising

(*a*) first, second, and third denominational input shafts equally spaced apart in the same vertical plane,

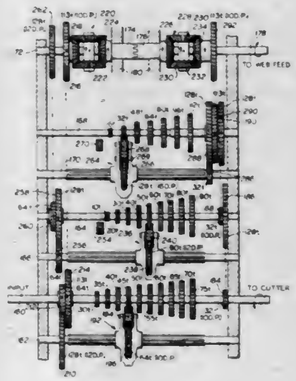
(*b*) gears fixed on said input shafts drivingly connecting each of said shafts to at least one of the others so that one of said input shafts may serve as the common driver for all of said shafts,

(*c*) first, second, and third coupling shafts equally spaced apart in the same vertical plane which is parallel to the vertical plane of the denominational input shafts, each of said coupling shafts lying in a horizontal plane common to one of the denominational input shafts and operatively associated therewith,

(*d*) an output assembly including a pair of differential gear units each having a pair of inputs, a pair of spider gears, and a spider, a first input of one of said pair of differentials being directly connected to an input of the other of said pair of differentials, said output assembly further including an input shaft attached to the spider of said one differential and an ultimate output shaft attached to the spider of said other differential, said input and output shafts for said differentials in axial alignment in the horizontal plane of the second denominational input shaft and the second coupling shaft and parallel to the second denominational input shaft,

(*e*) positively gripping web feed rolls for feeding web material to a web cutter,

(*f*) means drivingly connecting the feed rolls with the ultimate output shaft for positive operation with the ultimate output shaft,



(*g*) a flying cutter for severing sheets from the leading end of the web material,

(*h*) means drivingly connecting a rotary cutter drum of the flying cutter with the first denominational input shaft for positive operation with said input shaft,

(*i*) a plurality of gears of graduated sizes fast on each denominational input shaft,

(*j*) settable coupling gearing carried on each coupling shaft drivingly connecting each coupling shaft with any selected one of the graduated gears on the associated denominational input shaft,

(*k*) an output gear fixed on each coupling shaft,

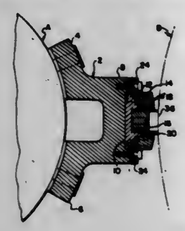
(*l*) idler gearing carried on each denominational input shaft and meshing with said output gear on the associated coupling shaft,

(*m*) said idler gearing on the first denominational input shaft drivingly connecting said first coupling shaft to a second input of said one differential,

(*n*) said idler gearing on the second denominational input shaft drivingly connecting said second coupling shaft to the spider of said one differential to turn the spider and thereby add to the output from said one differential, the resultant output from said one differential being transmitted to said other differential by the direct connection between the first input of said one differential and an input of said other differential,

(*o*) said idler gearing on the third denominational input shaft drivingly connecting said third coupling shaft to an input of said other differential to add to the ultimate output from said other differential.

3,128,663
KNIFE SUPPORT
Norman E. Dovey, 1922 Indiana Ave., Anderson, Ind.
Filed Feb. 6, 1961, Ser. No. 87,268
5 Claims. (Cl. 83—669)



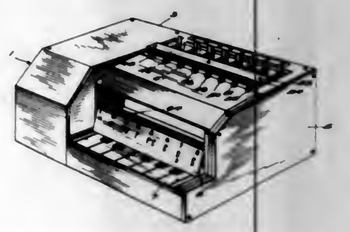
1. A knife holder adapted for mounting a cutting blade bent along its length to form a given configuration, said blade having a cutting surface at the upper edge and a relatively flat surface at the lower edge, said holder comprising a support member with a recess and a rib coextensive with said recess, said recess and rib having approximately the same configuration as the cutting blade, a cover member provided with an aperture having approximately the same configuration as the cutting blade, said cover member having a recessed portion coextensive with said aperture and adjacent thereto, said recessed portion of the cover coacting with the rib of said support member to form a contractible space having an open side, a mass of flexible relatively noncompressible material in said space, a knife support located within the recess of the first mentioned support, said knife support having a shoulder thereon against which the flat bottom surface of said blade abuts so that the blade is adjacent the open side of said contractible space, said knife support being on the opposite side of said knife from said open side, and means for advancing said cover toward said first mentioned support to force said mass against said cutting blade to thereby hold the cutting blade against the knife support so that the cutting surface extends outwardly.

3,128,664
BASS BOW HOLDER
Joseph Bango, South Bend, Ind., assignor to Kay Musical Instrument Co., a corporation of Illinois
Filed July 13, 1962, Ser. No. 209,667
8 Claims. (Cl. 84—329)



1. A bow holder for a string instrument comprising a sheath of nonvibratory material having one end open for reception of a bow, means for securing said open end against the front surface of a string instrument adjacent one of the sound holes of said string instrument, and means for securing the other end of said sheath against the front surface of said string instrument adjacent the lower end thereof.

3,128,665
MUSICAL NOTE METER
Hjalmar Kylin and Anne Kylin, both of 104 W. Cedar St., Alexandria, Va.
Filed Sept. 6, 1962, Ser. No. 221,686
3 Claims. (Cl. 84—454)



1. A musical note meter comprising a motor, a shaft connected to said motor, a plurality of linear profile cams mounted on said shaft, each of said cams having a predetermined number of profile segments to represent a desired rhythm to be reproduced, an arcuately shaped baton element having two ends with a depending cam follower intermediate said ends and engageable with each of said cams, a pivot shaft, one end of each of said baton elements being pivotally mounted on said pivot shaft, a striker member mounted on the other end of each of said baton elements, a projecting lever integral with said one end of each of said baton elements and extending away from said baton element in a direction opposite from said depending cam follower, a draw bar member mounted adjacent each baton element and adapted to engage the projecting lever on each baton element to move said baton element into and out of engagement with its associated cam, and a tone bar mounted adjacent said baton elements and extending parallel to the shaft on which said linear profile cams are mounted in position to be struck by the striker members on said baton elements when said baton elements engage said cams, whereby a plurality of said baton elements can be operated simultaneously to produce a desired predetermined combination of rhythmic patterns without objectionable chatter.

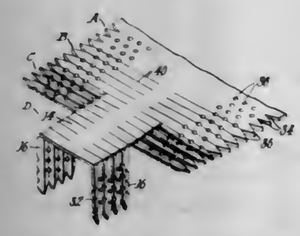
3,128,666
SPLIT BOLT ANCHOR
Robert S. Baker, Tampa, Fla., assignor to Julian L. Cone, Jr., Charles W. Cone, and Douglas P. Cone, all of Tampa, Fla.
Filed July 21, 1960, Ser. No. 44,498
1 Claim. (Cl. 85—2.4)



An anchor for insertion into an opening having opposite walls which converge toward one end of the opening

for wedging engagement with the converging walls upon the insertion of a threaded bolt into the anchor, the anchor comprising a pair of unattached elongated mating members adapted to lie within said opening in a confronting face-to-face relationship, each member having an arcuately concave threaded sector adjacent one end for engagement with the threads of the bolt when said members are in said face-to-face relationship, a sector having a smooth internal surface and arcuate wings to embrace the bolt on each member adjacent the end opposite the arcuately concave threaded sector, the arcuately concave threaded sectors and sectors having arcuate wings of the respective members lying in substantially the same longitudinal planes of their respective members, legs integrally connected to and extending from said sectors having arcuate wings, said legs inclined to the respective longitudinal planes of the sectors of the two members with the legs inclining in opposite directions away from said planes when the mating members are in face-to-face relation, said legs being flat and of substantially uniform thickness whereby the planer inner and outer surfaces thereof are substantially parallel and braces connecting one end of each leg with one of the threaded sectors of its respective member, said braces being inclined relative to said respective longitudinal planes, said braces being flat and of substantially uniform thickness whereby the planer inner and outer surfaces thereof are substantially parallel, the inclinations of said leg and brace of each member meeting to define an apex thereby creating an offset relative to the said plane of the respective members so that when the members are staggered longitudinally relative to one another the arcuately concave threaded sector of one member of the pair will nest within the offset of the other member of the pair to reduce the span of the members across the inclined legs to permit simultaneous insertion of a pair of said members into the small end of the opening when staggered relatively longitudinally from their confronting relationship.

3,128,667
STAPLE HAVING A LEG CONFIGURATION FOR SECURING WOOD OR METAL STUDDING
Raymond M. Tremblay, Whitman, Mass., assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed Nov. 19, 1959, Ser. No. 854,065
2 Claims. (Cl. 85—49)



1. A staple formed of sheet metal comprising an elongated back portion and a pair of attaching legs extending from the ends of the back in spaced relation to each other, said back and said legs lying in a common plane, each of said legs being generally channel-shaped and having side edge portions which extend diagonally outwardly in relation to said plane and in a direction away from the other leg, said legs being spaced apart a distance at least several times that of the over-all width of said legs, each of said side edge portions having semi-circular notches formed therein, the axis of each notch being substantially perpendicular to the plane of the portion of the leg in which it is formed and of a depth sufficient to receive and engage the edge portion of a metal stud.

3,128,668
SHELL PRIMER LOADING APPARATUS
Howard E. Dicken, 22921 Cedar Point Road, Berea, Ohio
Filed Sept. 5, 1961, Ser. No. 136,026
4 Claims. (Cl. 86—45)



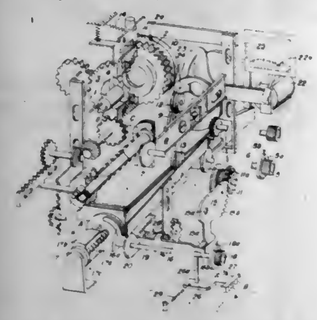
1. Loading apparatus for priming a shell casing with a primer cap having one end formed with a peripherally projecting rim comprising a shell loading die having a chamber formed therein, an elongated magazine connecting at one end with said die chamber for receiving primer caps rim end down, a receptacle into which primer caps are randomly disposed, a chute connecting said receptacle with the opposite end of said magazine, means in said chute engageable with the rim of each said primer cap effective to tilt said cap and permit its gravitational movement rim end up through said chute, abutment means in said chute engageable with the opposite end of each said cap effective to tilt said cap and enable its gravitational descent rim end down through said magazine, and ejector means in said die for stacking said primer caps rim end down in said die chamber and actuatable to eject a primer cap rim end down singularly from said chamber.

3,128,669
CAMERA WITH AUTOMATIC DIAPHRAGM CONTROL
Kurt Steisslinger, Stuttgart-Hedelfingen, Germany, assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed May 9, 1962, Ser. No. 193,419
9 Claims. (Cl. 88—16)

1. In a cine camera having a lens system arranged along an optical axis for focusing an image of a viewed scene onto a photosensitive material, selectively operable means for advancing said photosensitive material across said optical axis, a photoelectric element illuminatable by scene light, a first diaphragm located on said axis and having a variable aperture, and means coupling said element to said first diaphragm for varying the size of said aperture as a function of the illumination of said element, the combination comprising:

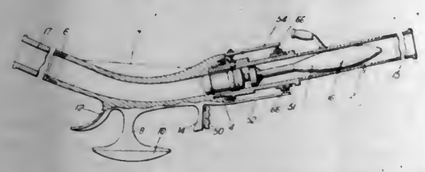
(*a*) a second diaphragm having a variable aperture and arranged in front of said photoelectric element for controlling the illumination of said element; and

(*b*) control means coupling said second diaphragm to said advancing means for varying the aperture in



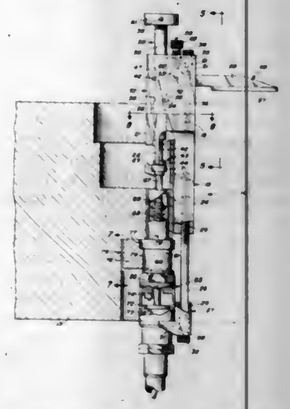
said second diaphragm as a function of the rate of advancement of said photosensitive material.

3,128,670
FLASHLESS NON-RECOIL GUN AND ROUND
Latham Valentine Stewart Blacker, Coldhayes, Liss, England
Filed Oct. 9, 1961, Ser. No. 143,700
2 Claims. (Cl. 89—1.7)



1. A portable infantry gun, comprising: a first tubular member defining an elongate, open-ended passage having a straight axis and forming chamber and front barrel portions of the gun; a second tubular member defining an elongate, open-ended rear barrel passage for the gun and having a curvilinear axis the two extremities of which are inclined to one another at an obtuse angle of the order of 150° to 140°, the rear barrel passage having the same substantially uniform bore along its entire length; and means so detachably engaging the chamber portion of the first tubular member with the second tubular member as to join the passages with their axes in alignment at the joint and form a continuous open-ended tube within the gun; and a unitary round loaded within the chamber portion of the gun, the round comprising a projectile of large mass relative to the mass of the gun; a cup-shaped gas check on the rear end of the projectile adapted to seal the front barrel portion; a thin-walled casing containing a quantity of small shot and adapted to pass along the curved rear barrel passage; a second cup-shaped gas check on the forward end of the casing adapted to seal the rear barrel passage; a propellant charge enclosed between the two gas checks, adapted when fired to propel the projectile from the front barrel portion with low muzzle velocity of the order of 1000 to 1200 feet per second and to propel the casing and shot from the rear barrel passage, whereby, if the gun is adjacent the ground and the first tubular member is substantially horizontal, the projectile travels in a nearly flat forward trajectory to each a target with substantial energy, and the small shot travels in a curved trajectory obliquely upwards and then downwards to reach the ground with a non-lethal velocity, and the firing is accompanied by only very low emission of flash from the front barrel and rear barrel; and means carried by the chamber portion for firing the propellant charge.

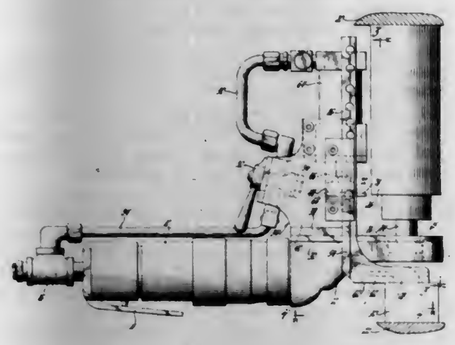
3,128,671
DYNAMIC MISSILE SIMULATOR
William H. Mairs, Hampton, and Frank E. Macalady, Newport News, Va., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Dec. 31, 1962, Ser. No. 248,821
16 Claims. (Cl. 89—1.7)



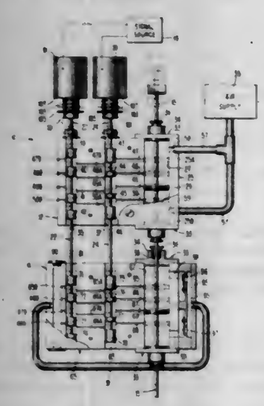
1. An electrical circuit control device comprising:
a support,
a casing releasably attached to said support,
normally cocked movable means mounted in said casing,
a blast responsive device pivotally mounted in said casing, means carried by said blast responsive device in locking engagement with said movable means for maintaining said movable means in a cocked condition, means carried by said movable means for moving the movable means to said cocked condition, means carried by said blast responsive device and actuated in response to a sudden blast received thereby for releasing the means on the blast responsive device from locking engagement with the movable means,
means controlled by said movable means for establishing a first electrical control circuit as the movable means moves to said cocked condition,
additional means operated as said movable means is released and moved a predetermined amount for establishing a second electrical circuit, and means for moving said movable means said predetermined amount as the movable means is released from said cocked position.

3,128,672
WELDING ELECTRODE DRESSING MEANS
Neal E. O'Connor, Birmingham, and Thomas W. Shearer, Jr., Auburg Heights, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 21, 1961, Ser. No. 139,673
8 Claims. (Cl. 90—12)

1. Apparatus for dressing welding electrodes in a welding press and comprising an electrode dressing tool, said electrode dressing tool having a dressing head in which a cutting tool is mounted for cutting engagement with a welding electrode, bracket means fixed to said dressing head and extending outwardly therefrom, guideway means formed on said bracket means, slide means slidably supported in said guideway means for movement in a path parallel to the central axis of the cutting means on said dressing tool and the central axis of the electrode to be dressed, locating and support means fixedly secured to said slide means, power means to actuate said slide means and cause relative movement between said support and locating means and said cutting means, and said support and locating means being spaced and positioned in alignment with said cutting means to rigidly support said dressing tool relative to said electrode when said cutting tool is engaged with said electrode.

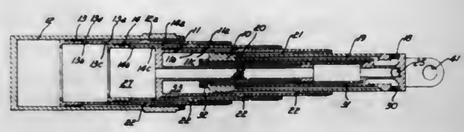


3,128,673
POSITIONING APPARATUS
Frank H. Moore, Jr., Wayne, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Jan. 30, 1962, Ser. No. 169,887
7 Claims. (Cl. 91—43)



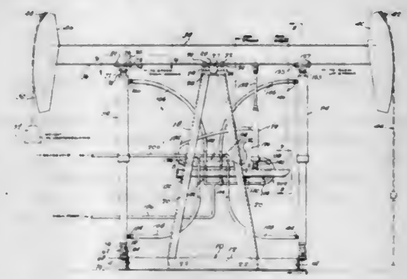
1. A positioning device including an elongated member, a cylinder extending therein, a piston within said cylinder and movable with respect thereto, a port at each end of said cylinder for admitting a medium under pressure, means associated with each port for preventing backflow of said medium therethrough, a plurality of passages opening into and axially spaced along the length of said cylinder, valve means associated with said passages to control the flow of medium therethrough, means for selectively opening a given valve of a passage along said cylinder, means for moving said piston toward said opened passage and means for conveying said medium flowing through the opened passage to each port at each end of said cylinder for entry into the latter.

3,128,674
MULTIPLE STAGE TELESCOPIC CYLINDERS
Leonard N. Ganchar, Canfield, and John Petro, Hubbard, Ohio, assignors to Commercial Shearing & Stamping Company, Youngstown, Ohio
Filed June 25, 1962, Ser. No. 204,844
6 Claims. (Cl. 91—167)



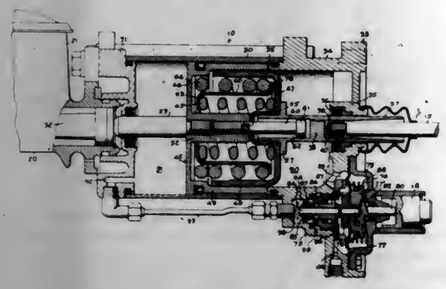
1. A multistage telescoping cylinder unit comprising a plurality of concentric cylinders, one adapted to nest inside the next adjacent one to form a telescopic unit, a source of fluid under pressure, a piston member adapted to fit the smallest of said cylinders, said smallest cylinder receiving fluid under pressure to extend the piston axially thereof, inlet means in the piston communicating with the interior of all of the cylinders introducing fluid under pressure into the interior of all of said cylinders except the smallest cylinder whereby the cylinders may be expanded, means supplying a continuous fluid pressure between the walls of the several cylinders constantly urging them towards the closed position and control means selectively delivering fluid from the source of fluid to the smallest cylinder and the concentric cylinders whereby to override the constant pressure urging the cylinders to the closed position.

3,128,675
HYDRAULIC WELL PUMP
Richard O. Dulaney, 1403 Continental National Bank Bldg., Fort Worth, Tex.
Filed Dec. 1, 1961, Ser. No. 156,308
6 Claims. (Cl. 91—176)



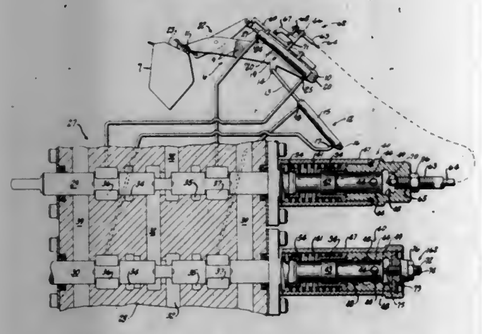
1. A hydraulic well pump comprising a base, an upstanding Samson post on the base, a generally horizontal walking beam pivoted intermediate its ends on the post, a well string secured to one end of the walking beam, a counterbalance weight secured on the other end of the walking beam, vertically extensible and contractible hydraulic rams pivoted to the walking beam at opposite sides of the Samson post and pivoted on the base, distributing valve means connected between the rams, a vertically extensible and contractible hydraulic valve operator pivoted to the walking beam at one side of said post and pivoted on said post, a hydraulic return line connected to the distributing valve means and to the valve operator, and a fluid pressure line leading to the distributing valve means.

3,128,676
VEHICLE BRAKE MECHANISM
David T. Ayers, Jr., Birmingham, Mich., assignor to Kelsey-Hayes Company, Romulus, Mich., a corporation of Delaware
Filed June 14, 1962, Ser. No. 202,428
12 Claims. (Cl. 91—391)



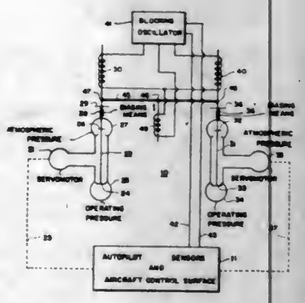
1. A fluid pressure motor mechanism comprising a pressure responsive unit having chambers at opposite sides thereof, a member to be operated connected to said pressure responsive unit, a valve mechanism operable for controlling pressures in said chambers to move said pressure response unit by establishing differential pressures in said chambers, a pedal having a first normal position engaging said valve mechanism and from which position it is movable to operate said valve mechanism, and normally inoperative pedal control means connected to said pedal and operative for moving said pedal to a second normal position, said pressure responsive unit comprising relatively axially movable members and spring means between such members tending to push them apart and operate said pedal control means, one of said chambers normally being subject to pressure in the source to maintain said spring means compressed and inoperative so that upon a failure in such pressure, said spring means will expand and move said pedal to said second position whereby said pedal will transmit forces through said pedal control means and through said spring means to operate said member to be operated.

3,128,677
CONTROL INSTRUMENTALITY HAVING DETENT MECHANISM
Francis H. Tennis, Milwaukee, Wis., assignor to Hydraulic Unit Specialties Company, Pewaukee, Wis.
Filed Apr. 30, 1962, Ser. No. 191,180
5 Claims. (Cl. 91—383)



5. In combination:
(A) power means;
(B) an actuator driven by said power means;
(C) control means for said power means comprising
(1) a fixed element and
(2) a manually operable element which is movable relative to the fixed element in opposite directions to and from a predetermined position at which the movable control element is adapted to effect operation of the power means;
(D) biasing means acting upon the movable control element to yieldingly resist movement thereof to said predetermined position;
(E) means to define and yieldingly hold the movable control element in said predetermined position thereof against the force exerted thereon by said biasing means, said last named means comprising
(1) a detent member carried by one of said elements and movable relative to the element by which it is carried toward and from a detent defining position of engagement in a groove in the other element, with which groove the detent member registers when the movable element is in its said predetermined position, and
(2) a spring for urging said detent member toward its detent defining position;
(F) detent control means comprising
(1) a movable part independent of the detent member,
(2) means fixed with respect to one of said elements mounting said movable part thereon for motion relative to said element and to the detent member between detent enabling and detent disabling positions, the movable part being clear of the detent member in its said detent enabling position.
(3) an abutment on the movable part operatively associated with said spring to render the same effective to urge the detent member toward its detent defining position in the detent enabling position of the movable part and to render the spring ineffective to hold the detent member in its detent defining position in the detent disabling position of the movable part; and
(G) means operated by said actuator for moving said movable part to its detent disabling position in consequence of movement of said actuator to a predetermined position.

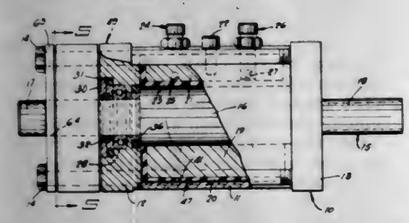
3,128,678
CONTROL APPARATUS
Keith C. Jones, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed July 11, 1962, Ser. No. 209,199
7 Claims. (Cl. 91—413)



1. In a dual section pneumatic servomotor each section having a three way valve biased to a normally open position to vent each servomotor section to atmosphere and

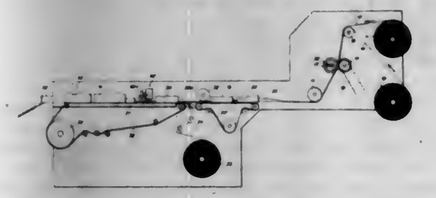
operable to another position for applying pressure to said servomotor section, a source of control signal;
operating means for each valve;
a source of pulse width modulated energy responsive to said control signal for energizing the operating means of said valves alternately, a lever mounted on a movable pivot intermediate connections from said lever to each valve;
and means shifting said pivot jointly energized concurrently with the energization of a valve operating means.

3,128,679
SEALING AND STOP MEANS FOR FLUID MOTORS
Carl F. Trendle, St. Clair Shores, Mich., assignor to Roto Actuator Corporation, a corporation of Michigan
Filed Apr. 26, 1962, Ser. No. 190,367
4 Claims. (Cl. 92—13)



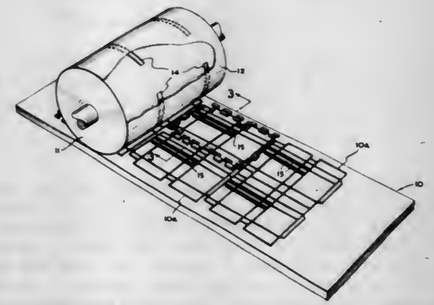
1. In an oscillating fluid motor having a body member, a head member on each end of said body member, a stator and a rotor in said body member, said rotor including a shaft having an enlarged portion carrying a vane and an output end portion extended outwardly through a shaft bore in one of the head members, the combination comprising:
(*a*) a compressible outer sealing ring in a recess in said one head member on the inner side thereof, around the shaft output end, said recess being formed around the inner end of said shaft bore and communicating with the same,
(*b*) an inner plastic sealing ring in said recess disposed against the inner side of said outer sealing ring and biased by the same into sealing engagement with the peripheral edge of the end of the enlarged shaft portion; and,
(*c*) a sleeve bearing mounted in said recess against the enlarged portion of said shaft and between the rotor shaft and both of said sealing rings.

3,128,680
METHOD OF FORMING CIGARETTE FILTER
Edward M. Schaaf, Jr., Richmond, Va., assignor to Philip Morris Incorporated, New York, N.Y., a corporation of Virginia
Filed Mar. 15, 1960, Ser. No. 15,079
6 Claims. (Cl. 93—1)



1. The method of forming a rod like filter comprising, forming a first strip of fibrous sheet material embodying solid particles of smoke filtering material exposed at the surface of the sheet, bringing the said first strip into superposed plied relation with a second strip of fibrous absorbent material but stronger in character and adapted to serve as a carrier for the first strip, simultaneously embossing the two strips in their plied relation to produce interdigitated surface areas of the two strips, compressing the plied and embossed strips laterally into a cylindrical rod, and applying an enclosing covering sheet thereto.

3,128,681
DOUBLE DIE-CUTTING
Frederick E. Miller, London, Ontario, Canada, assignor to Somerville Industries Limited, London, Ontario, Canada
Filed Oct. 25, 1961, Ser. No. 147,687
2 Claims. (Cl. 93—58)

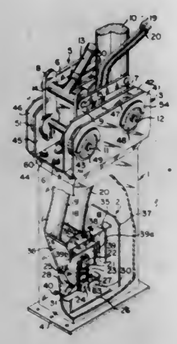


1. An apparatus for die-cutting a carton blank as to form a zone of weakness in the blank, said apparatus comprising cutting die means, cylinder jacket means for pressing said blank against said die means, a first cutting knife carried by said die means, said first knife being of a height to only partially cut through said blank when said blank is pressed against said die means, a second cutting knife carried on the outer surface of said cylinder jacket pressing means beneath said blank, said second knife consisting of an upstanding sharpened ridge in a flat strip of flexible tool steel and also being of a height to only partially cut through said blank when said blank is pressed against said die means, and anvil means carried by said die means to back said blank on said second cutting knife, said first and second knives being generally parallel to each other but spaced in the direction taken transverse to their longitudinal axes whereby to form a linear zone of weakness capable of forming one edge of a tear strip in a carton blank.

3,128,682
APPARATUS FOR COMPACTING EARTH AND OTHER MATERIALS
Benny L. Thompson, 16517 Superior St., Sepulveda, Calif., and Kermit L. Thompson, 13323 Glenoak Road Blvd., Sylmar, Calif.
Filed Aug. 23, 1963, Ser. No. 304,043
2 Claims. (Cl. 94—48)

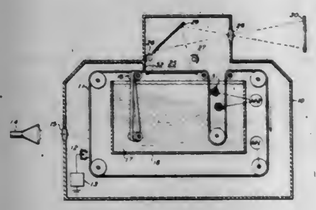
1. A device for compacting earth materials which is adapted for connection to a maneuverable boom, said device comprising: a hollow housing having an open upper end; vibrating means positioned within and rigidly affixed to said housing; a motor positioned completely within and surrounded by said housing and supported thereby; means intercoupling said motor and said vibrating means; a mounting head rigidly affixed to and closing said housing to seal said housing and prevent the entry of foreign matter, said mounting head including a base member, con-

duit means passing through said base member and connected to said motor for conducting energizing power thereto, first and second pairs of axially spaced-apart and axially aligned sleeve members rigidly affixed to said base, said second pair of said sleeve members being spaced transversely from said first pair of said sleeve members, a rubberlike shock absorbing mount defining a centrally disposed aperture therein removably received within each



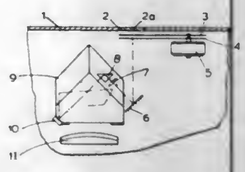
of said sleeve members, first and second rigid mounting rods each having its outer ends received within said aperture of said mounts received within said first and second pair of said sleeve members respectively thereby leaving the inter-mediate portion of each of said rods free for connection to said boom, and keeper means in contact with each of said mounts and cooperating with said sleeve members to retain said mounts in operative position during operating of said compacting device.

3,128,683
XEROGRAPHIC APPARATUS
Daniel Rubin, Rochester, N.Y., assignor to Xerox Corporation, Rochester, N.Y., a corporation of New York
Filed Apr. 17, 1961, Ser. No. 103,345
5 Claims. (Cl. 95—1.7)



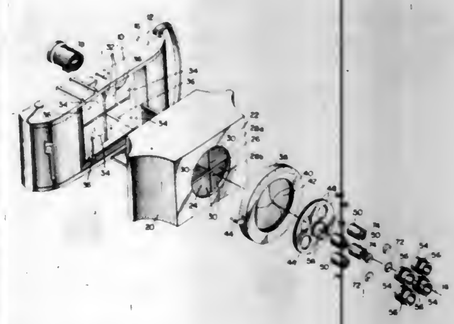
1. In a xerographic process including the steps of forming an electrostatic latent image of copy on a continuously moving xerographic plate, developing the latent image with electroscopic developer particles from a substantially electrically insulating liquid and utilizing the developed image; the improvement comprising a plate cleaning process for removing remaining developer particles from the plate surface after utilization comprising the steps of presenting the plate into contact with an electrically-like liquid as that employed for developing said like liquid having insufficient developer particle concentration therein to be capable of developing a latent image and concomitantly therewith grazing the plate surface whereby the particles thereon are removed to the like liquid contained therein.

3,128,684
CAMERA DATA DEVICE
Werner Trankner, Rolf Jurenz, and Gerhard Börner, all of Dresden, Germany, assignors to Veb Kamera- und Kinowerke Dresden, Dresden, Germany
Filed Dec. 28, 1959, Ser. No. 862,319
5 Claims. (Cl. 95—10)



1. A photographic monocular reflex camera having, in combination:
(*a*) a housing;
(*b*) a viewfinder roof-edge prism mounted within the housing, having a first light transmitting surface through which the light rays from the object to be photographed enter the prism, a second light transmitting surface through which the light rays reflected within the prism pass along the line of sight of the observer, and a third light transmitting surface;
(*c*) exposure condition indicating means arranged in the housing;
(*d*) an image field lens located within said housing adjacent the first light transmitting surface;
(*e*) a reflecting surface provided on said prism for reflecting an image of said indicating means into the light path of the viewfinder prism;
(*f*) a light aperture in said housing adjacent said indicating means; and
(*g*) a converging lens located between said indicating means and said third light transmitting surface, but not contacting the latter, for transmitting an image of said indicating means into the line of sight of the observer by way of said third light transmitting surface and said reflecting surface.

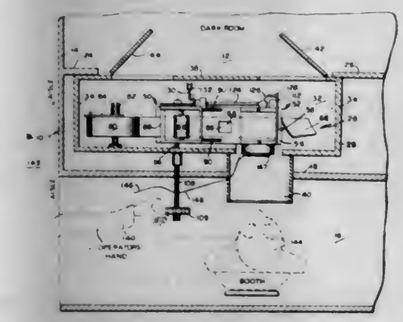
3,128,685
CAMERA
Samuel Kitrosser, Lexington, Mass., assignor, by mesne assignments, to Avant Incorporated, Lincoln, Mass., a corporation of Massachusetts
Filed June 26, 1962, Ser. No. 205,433
11 Claims. (Cl. 95—18)



1. A camera for producing from a single exposure of a subject a plurality of images having centers substantially

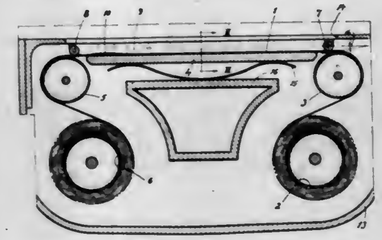
symmetrically disposed about a camera axis in an image receiving plane, comprising:
a light tight housing;
means for transporting and storing an image receiving material within said housing;
a plurality of lenses coupled to said housing and symmetrically disposed about said camera axis, said lenses each having optical centers so disposed relative to said image centers whereby lines passing through said optical centers and image centers converge between said lenses and said subject; and
a prism associated with each of said lenses for diverging said converging lines to cause intersection thereof substantially at said subject whereby a plurality of geometrically like images of said subject are provided in said image receiving plane.

3,128,686
CONTINUOUS STRIP PHOTO APPARATUS
Robert E. Tolleson, Box 818, Atlanta, Ga.
Filed Oct. 31, 1958, Ser. No. 771,156
1 Claim. (Cl. 95—31)



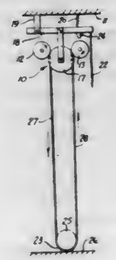
In a photo unit, a closed box having entrance means therein, a base member, said base having an elongated top surface on which a continuous strip may travel, a top plate member complementary to said base member and having a strip track formed on the underside thereof, said underside of said plate member fitting against said top surface to place said track in juxtaposition with said top surface forming a strip entrance and a strip exit therewith on opposite ends thereof, attachment members on said base attached to said box, a continuous roll of photo strip material mounted for rotation on said box and the strip therefrom lead through said entrance and through said track from said exit, a box on said base having a reflective surface therein, said strip being exposed through said lens at one position thereof moving through said box, a knife blade mounted adjacent said exit to contact and cut the strip coming therefrom, a control member for said knife blade extending remotely therefrom to the outside of said box, and means automatically stopping said hand drive of said strip at a pre-selected amount of extension of said strip to halt said strip temporarily at each desired exposure area on said strip, two pairs of lugs on opposite sides of said base, a knife control shaft on one of said pairs of lugs, said box having a front opening to said lens and a bottom opening over said strip, said box being positionable in either one of two opposite positions over said strip to place the lens on selectively the right hand side or the left hand side, said pair of lugs being selected according to the direction of said box, whereby said box may be selected for one of right and left hand operation thereby placing said control and lugs in a corresponding position.

3,128,687
FILM FEEDING MECHANISMS FOR ROLL FILM CAMERAS
Lennart Gunnar Oskar Dahlgren, Goteborg, Sweden, assignor to Fritz Victor Hasselblad, Goteborg, Sweden
Filed July 2, 1963, Ser. No. 292,331
Claims priority, application Sweden July 10, 1962
1 Claim. (Cl. 95—34)



In a roll film camera having means defining a film opening across which a portion of the roll film extends, a film feeding mechanism comprising supply and take-up rollers and two idler rollers disposed adjacent opposite edges of said film opening, the film passing from the supply roll over one of said idler rollers, across the film opening with the sensitized side facing said opening, around the second idler roller and to the take-up roller, two guide ribs disposed adjacent opposite edges of the film opening and at right angles to the axes of said idler rollers and having edges disposed in the focal plane of the camera, a pressure plate extending substantially between said idler rollers behind the film portion extending therebetween, means urging said pressure plate towards the back of the film to press the film against said guide rib edges, two guide rollers being provided one between each of said idler rollers and the adjacent edge of said pressure plate in a position lying against the sensitized side of the film and in substantially tangential relation to the focal plane, said idler rollers being so disposed that a plane coinciding with that side of the pressure plate which faces the film intersects the envelope surfaces of said idler rollers.

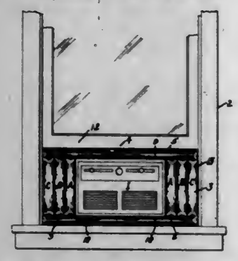
3,128,688
PHOTOGRAPHIC BACKGROUND ROLLER ASSEMBLY
Alfred Coda, 48 Wyandemere Drive, Woodcliff Lake, N.J.
Filed June 12, 1962, Ser. No. 202,001
5 Claims. (Cl. 95—83)



1. A photographic background roller assembly for displaying photographic backgrounds, said roiler assembly comprising a pair of parallel spaced rollers, means connected with one of said rollers for driving said one roller, a driving disc adapted to engage said rollers for transmitting rotation of said one roller to the other roller, means connected to said driving disc for moving it into and out

of engagement with said rollers, an elongated screen connected at one end to the circumferential surface of one of said rollers and connected at its other end to the circumferential surface of the other of said rollers whereby said screen may be wound from one to the other of said rollers and vice versa when said rollers are rotated, and roller means loosely supported on said screen between said rollers and adapted to establish a loop in said screen in a direction away from said rollers when said driving disc is disengaged from said rollers and said one roller is rotated.

3,128,689
PNEUMATIC FILLER-SEALING DEVICES
Arthur J. Binsfeld, % Quarters "J" (Officers'), New York Naval Shipyard, Naval Base, Brooklyn, N.Y.
Filed Feb. 7, 1962, Ser. No. 171,735
4 Claims. (Cl. 98—94)



1. A device for fitting and sealing the space in an open window in which a room air-conditioning unit may be mounted, to be disposed between such unit and the window sash, and the sides and still defining the opening in the window frame, which comprises:

(*a*) an inflatable sealing unit of flexible, sheet impervious material having an opening from face to face thereof of a size and shape to receive and fit a selected air-conditioning unit,

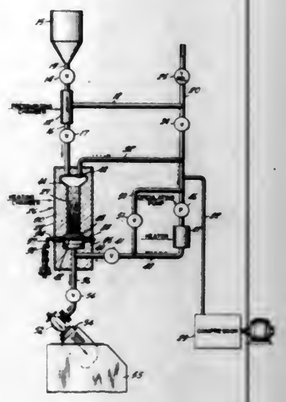
(*b*) such sealing unit being formed of a top, tubular member of flexible, impervious material, extending for the full horizontal width of said sealing unit and closed at its ends, a bottom tubular member of flexible material also extending for the full horizontal width of said sealing unit, and also of two groups of upright flexible tubular members of flexible, impervious material, one group at each side of said opening, the members of each group being vertically arranged in side by side relation, flexibly connected to one another at their adjacent sides, and at their ends also flexibly connected to said top and bottom members, and both groups filling the space from the ends of the top and bottom members to said opening,

(*c*) each of said upright members having therein a separate air cell connected at its upper end to said top member by a passage, and

(*d*) said top member having a valve controlled inlet connection opening into the interior of said top member through which inflating air under pressure may be admitted to the interior of that member and pass from it through said passages into the air cells of said upright members enabling inflation of the top and upright members.

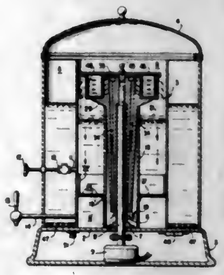
3,128,690
CEREAL PUFFING APPARATUS
Elmore F. Maehl, Fanwood, N.J., assignor to National Biscuit Company, a corporation of New Jersey
Filed Feb. 15, 1961, Ser. No. 89,508
7 Claims. (Cl. 99—238)

1. An apparatus for heating cereal grain comprising a heating chamber for gelatinizing a charge of cereal grain, means for introducing said charge of cereal grain into said chamber under pressure, said heating chamber having a gas heat inlet and a gas heat outlet for passing gas heat through said chamber in heat exchange with the cereal grain therein, a solids outlet to transfer heated cereal grain from said heating chamber, a recycle line



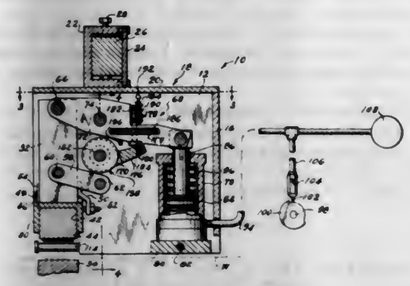
connecting said gas heat inlet and said gas heat outlet, said recycle line having interposed therein a gas circulating pump and a heater, said solids outlet comprising a rotatable apertured plate operable in closed position to retain said cereal grain in said chamber while permitting the entry therethrough of gas heat.

3,128,691
INFUSION MACHINE
Andres M. Carrillo, Miami, Fla., assignor to Rotat-Coffee, Inc., a corporation of Puerto Rico
Filed Dec. 13, 1961, Ser. No. 160,408
8 Claims. (Cl. 99—293)



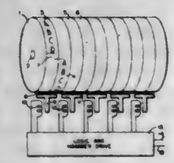
1. A machine for making infusions, particularly for brewing coffee, comprising a heating and storage tank for water, a brew tank for brewing and storing a batch of the infusion located completely within the storage tank, manual means for controlling flow of heated water from said storage tank to said brew tank, a centrifugal strainer for holding grounds to be infused located in the upper part of said brew tank, a centrifugal pump in said brew tank for causing the liquid to be contained therein to flow into said centrifugal strainer, heating means in said water storage tank, means for conducting and serving the infusion from said brew tank to a point outside the water storage tank, and means for rotating said pump and said strainer.

3,128,692
MARKING APPARATUS
Lawrence J. Talarico, South Plainfield, N.J., assignor to Adolph Gottscho, Inc., Hillside, N.J., a corporation of New York
Filed Oct. 27, 1961, Ser. No. 148,195
10 Claims. (Cl. 101—11)



1. An apparatus for imprinting intermittently advanced sheet material by pressing a hot roll leaf stamping tape against the latter, comprising support means adapted to be mounted adjacent the path of travel of the intermittently advanced sheet material, heated type holding means movably mounted on said support means for reciprocation toward and away from the sheet material, supply means mounted on said support means for holding a supply of unused stamping tape, take-up means mounted on said support means for receiving the used stamping tape, guide means leading the stamping tape from said supply means to said take-up means along a path having a portion extending between said type holding means and the sheet material at right angles to the direction of the intermittent advancement of the latter, a tape feeding roller for frictional engagement with the tape to move the latter along said path of the tape, lever means rockably mounted on said support means and connected to said type holding means for moving the latter toward and away from the sheet material in response to rocking of said lever means, a rockable arm resiliently urged toward said lever means, an adjustable member carried by said lever means to rock said arm with the latter upon rocking of said lever means in the direction moving said type holding means away from the sheet material, transmission means connecting said arm with said tape feeding roller and having clutch means interposed therein which transmits only the turning movements of said arm caused by rocking of said lever means in said direction, yieldable drive means for operating said take-up means from said feeding roller, and fluid pressure operated means connected to said lever means for rocking the latter.

3,128,693
HIGH SPEED PRINTER DRUM
Francis V. Thiemann, Levittown, N.Y., assignor to Potter Instrument Company, Inc., Plainview, N.Y., a corporation of New York
Filed June 9, 1961, Ser. No. 115,956
4 Claims. (Cl. 101—93)



1. In a high speed printer, a type carrier assembly including:

a movable type carrier adapted to support a plurality of printing type arranged in rows in the direction of movement,

a plurality of printing hammers supported in positions to strike the printing type,

each of the printing hammers including a head portion arranged to span at least two rows of the printing type,

circuit means to actuate the printing hammers in accordance with a predetermined logic,

the two rows spanned by a head portion comprising:

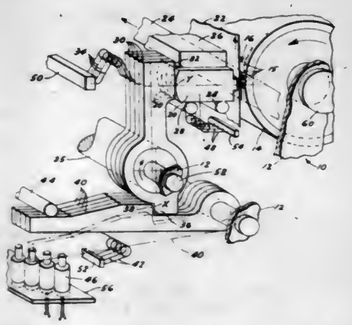
a first plurality of printing type positioned in one row,

a second plurality of printing type positioned in the other of the two rows, and

one printing type in the first plurality being displaced relative to the corresponding printing type in the second plurality by a distance a least equal to the length of one plurality of printing type,

so that the head portion of the printing hammer can strike all of the printing type in the first plurality before striking the printing type in the second plurality.

3,128,694
PRINT HAMMER MECHANISM
Milton J. Kittler, Bloomfield Hills, Mich., assignor to Holley Carburetor Company, Warren, Mich., a corporation of Michigan
Filed Oct. 16, 1961, Ser. No. 145,279
3 Claims. (Cl. 101—93)



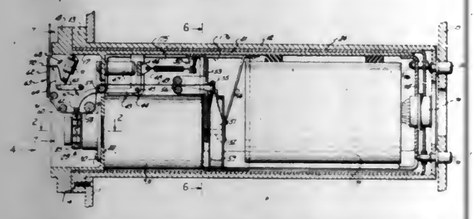
1. In a printer having a rotating print drum, the combination of a free flight projectile type print hammer, first spring means for urging said print hammer away from said print drum, a rotating eccentric shaft, first means for at times impacting said print hammer, said first means being fitted freely around said rotating eccentric shaft and caused to move in an orbital path, second spring means connected to the impact end of said first means for urging said impact end against said print hammer and thereby determining orbital path of the other end of said first means, second means for at times entering said orbital path of said other end of said first means, and thereby changing a portion of said orbital path, third spring means for urging said second means into said orbital path and third means for preventing said second means from entering said orbital path.

3,128,695
PRINTER
Chris A. Christoff, San Gabriel, Calif., assignor to Clary Corporation, San Gabriel, Calif., a corporation of California
Filed Dec. 1, 1961, Ser. No. 156,201
5 Claims. (Cl. 101—93)

1. A printer comprising

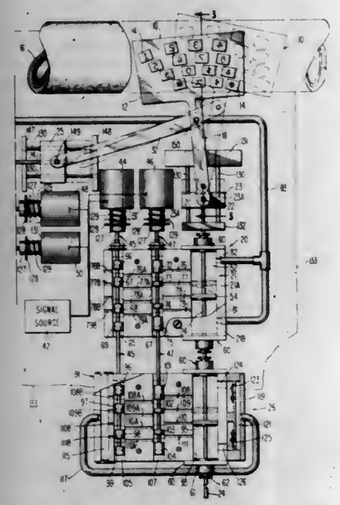
an elongate housing,

a motor in said housing having its axis extending along the length of said housing, said motor being located adjacent one side of said housing,
an output shaft at one end of said motor and driven by said motor,
an internal gear fixed relative to said housing,
a cylindrical type member having type characters spaced therearound,
an eccentric bearing portion on said shaft rotatably supporting said type member,
an external gear carried by said type member and meshing with said internal gear,



the ratio of the number of teeth of said external gear to the number of teeth of said internal gear being such that said type character will advance from one of said type characters to another during each revolution of said shaft,
means cooperable with said type member for transferring an imprint of a selected type character to a record medium,
means in said housing at the opposite end of said motor for supporting a roll of record medium in strip form for rotation about an axis extending lengthwise of said housing, and means for guiding said record medium from said supply roll intermediate said motor and the opposite side of said housing and intermediate said imprint transferring means and said type member.

3,128,696
TYPE SETTING MEANS IN SERIAL PRINTERS
Paul R. Hoffman, Grand Haven, Mich., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Feb. 5, 1962, Ser. No. 170,994
6 Claims. (Cl. 101—93)



1. Apparatus for printing comprising.
(*a*) first and second actuator means disposed upon intersecting axes and each including an element movable to a plurality of positions along the axis of its respective actuator,
(*b*) a type carrier having a plurality of type characters disposed therein in rows and columns,
(*c*) said carrier including an integral depending link portion pivotally connected to the movable element of said first actuator means,
(*d*) a link pivotally connected at one end to the movable element of the second actuator and at its other end to said integral depending link portion of said carrier,
(*e*) and means for permutably operating the first and second actuator electrical means to position the elements thereof at preselected locations along said axes to thereby present a selected type character in said carrier in its printing position.

3,128,697
LOCKING MEANS FOR BELT TYPE STAMP IMPRINTING DEVICES
Paul L. Clausing, 551 Hamilton, Ottumwa, Iowa
Filed May 23, 1962, Ser. No. 196,997
5 Claims. (Cl. 101—111)

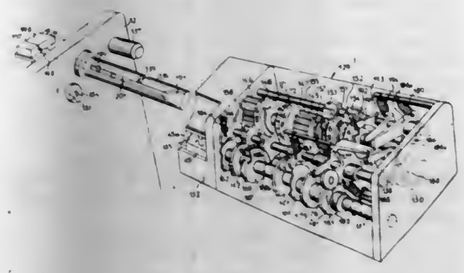


1. In a lockable belt type stamp imprinting device, comprising, in combination,
a frame portion,
two spaced apart arms operatively secured to said frame,
a bar extending between the forward ends of said two arms,
a shaft connected to and extending between said two arms and spaced apart from said bar,
a plurality of disc plate members each having a hub portion in the form of a cup operatively rotatably slidably embracing said shaft, a belt embracing the hub portion of each disc plate member and said bar,
and a circular bearing plate in the cup hub portion of each of said disc plate members having a thickness greater than that of the depth of the cup hub portion in which it resides;
said shaft extending through rectangular holes in said circular bearing plates and being rectangular in cross section where it extends through said bearing plates.

3,128,698
STAMPING MACHINES
Maurice Hennequin, 1 bis, Rue St. Augustin, Asnieres, Seine, France
Filed Feb. 23, 1961, Ser. No. 90,999
Claims priority, application France Mar. 9, 1960
6 Claims. (Cl. 101—235)

3. In a mail marking machine, the combination with two parallel rotary printing drums one of which is a stamp printing drum, conveyor means for advancing mail matter successively from a starting point towards and past said drums to receive impressions therefrom simultaneously on different regions of the individual mail matter, a mobile counter carrying said one drum and bodily removable from and replaceable in the machine adjacent the other drum, said counter being operated from said

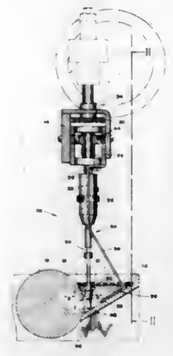
one drum once for each rotation thereof, a first continuously frictionally driven shaft positioned between said drums and having a driving connection therewith for revolving them simultaneously, and releasable arresting means for arresting said first shaft at each revolution thereof, of a trip mechanism comprising a second continuously frictionally driven shaft positioned between said starting point and said drums, a stop and a cam projecting from said second shaft, said cam being axially and circumferentially spaced from said stop, a bell crank lever pivotable between an operative position in which one of its arms engages said stop and an inoperative position in which said one arm releases said stop, resilient means for urging said bell crank lever towards said operative position thereof, trip mechanism including a pivotally mounted trip lever having one of its ends positioned at least adjacent said starting point so as to be engage-



able by the leading end of each successive mail matter, a link connecting the other end of said trip lever with the other arm of said bell crank lever whereby to pivot said bell crank lever against the action of said resilient means into its inoperative position as said trip lever is pivoted by the leading end of an advancing mail matter from its initial rest position, said resilient means being effective upon disengagement of said one end of the trip lever from said leading end of an advancing mail matter to simultaneously return said bell crank lever into its operative position to stop the second shaft when the same has made one revolution and to return the trip lever into said initial position thereof, and means operable by said cam after release of said stop by said crank bell lever for releasing said arresting means for the first shaft each time said second shaft is caused to make one revolution for each mail matter passing said starting point.

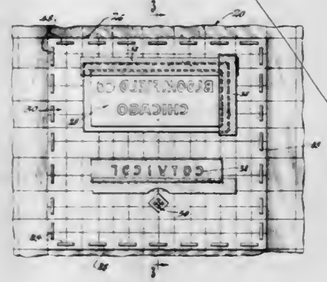
3,128,699
VERTICAL INK FOUNTAIN AGITATOR
Harold Walter Gegenheimer, Darien, Conn., and Andrew N. Stad, Syosset, N.Y., assignors to Baldwin-Gegenheimer Corporation, Brooklyn, N.Y., a corporation of New York
Filed Oct. 11, 1962, Ser. No. 229,872
8 Claims. (Cl. 101—364)

1. An agitator device for the ink fountain of a printing press having an ink fountain roller adapted for rotation into and out of said ink fountain, said agitator device comprising an agitator mill, means mounting said mill for travel longitudinally in said fountain, means for rotating said mill simultaneously wtih its longitudinal travel in said fountain, means mounting said agitator device on said press with the terminal portion of said agitator mill adjacent the intersection of said ink fountain roller and the bed of said ink fountain, one side of said agitator mill being positioned in adjacent, spaced relationship to the circumference of said ink roller in said fountain, whereby the ink in said fountain is forcefully urged by said agitator mill against a substantial segment



of the ink roller, ensuring uniform application of said ink to said ink roller.

3,128,700
STRUCTURE FOR MOUNTING RUBBER PRINTING PLATES FOR PRINTING ON CORRUGATED AND THE LIKE BOARD
Lawrence S. Kunetka, Chicago, Ill., assignor to Jefferson State Bank, Chicago, Ill., an Illinois banking association
Filed May 11, 1961, Ser. No. 109,379
1 Claim. (Cl. 101—379)

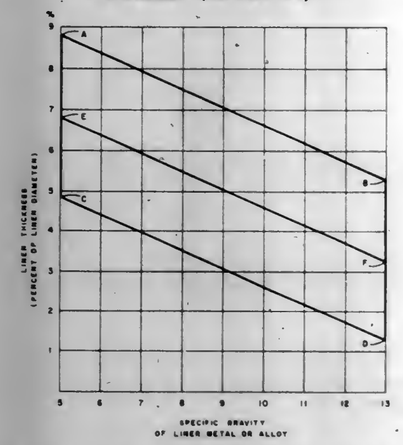


A printing plate assembly for printing directly upon corrugated paperboard and the like, comprising, a rubber printing plate, a unitary, flexible backing structure adapted to be installed on a printing cylinder and having said printing plate secured on the upper surface thereof, said printing plate being smaller in both length and width than said backing structure, said backing structure comprising, a flexible, single-ply sheet of latex impregnated paperboard having a very thin, plastic film permanently bonded thereto overlying a face of said paperboard sheet and coextensive therewith to provide said surface, said film being harder than said sheet and impervious to conventional printing inks and solvents, said assembly being removable from and replaceable on said cylinder without requiring separating of the printing plate from the backing structure, and adhesive tape strips secured overlying the entire edges of said printing plate and adjacent portions of said film for sealing said edges.

3,128,701
SHAPED CHARGE PERFORATING APPARATUS

John S. Rinehart, Cambridge, Mass., and Robert D. Cocanower, Dallas, Tex., assignors to The Western Company of North America, a corporation of Delaware

Filed July 24, 1958, Ser. No. 750,657
3 Claims. (Cl. 102—20)

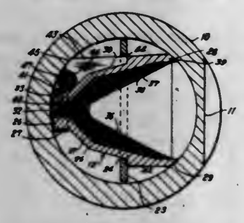


1. A well borehole casing perforating apparatus comprising a closed container capable of being inserted into a well borehole comprising a housing having an open end and containing a shaped high-order explosive charge and a low melting metallic concave liner sealing the open end of said housing, said low melting metallic concave liner being composed of a metal having a melting point of not more than about 500° C., the surface area of said liner in contact with said explosive charge being such that said liner will disintegrate upon detonation of said explosive charge, said liner having a thickness to diameter ratio within the area delineated by the points ABCD of FIG. 4 of the attached drawings and which will produce a resulting perforation which is free from the presence of a metallic slug.

3,128,702
SHAPED CHARGE PERFORATING UNIT AND WELL PERFORATING APPARATUS EMPLOYING THE SAME

Glenn B. Christopher, Fort Worth, Tex., assignor to Jet Research Center, Inc., Arlington, Tex., a corporation of Texas

Filed May 15, 1959, Ser. No. 813,562
3 Claims. (Cl. 102—20)

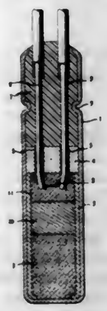


1. In a well perforating assembly, the combination comprising: a shaped charge perforating unit having a case, said case being generally rearwardly tapered and symmetrical about a longitudinal axis and including a forward body, a boss integral with said body and projecting rearwardly therefrom, and a cap fitted over the end of said boss, said body providing a main cavity defined by the inner body face, said boss having an axial bore therethrough providing a booster cavity communicating with the rear end of said main cavity, the rear end of said booster cavity being closed by said cap, said boss having a radial channel through its rear end, the inner end of said channel communicating with said booster cavity and the rear opening and outer end of said channel being closed by said cap; a main explosive charge seated in said main cavity, said charge providing a concavity in its forward end defined by a charge face conforming to a surface of revolution about said axis; a liner applied to the charge face defining said concavity; a booster charge seated in said booster cavity and adapted to detonate said main charge; said body having a rearwardly facing circumferential shoulder on the exterior of said body, and said case to the rear of said shoulder not exceeding in diameter the diameter of the case at the shoulder; a radial fin integral with said body and extending rearwardly from said shoulder, said fin terminating rearwardly in a hook for positioning a detonating fuse at the side of said boss adjacent to said radial channel; a detonating fuse engaged by said hook and having a portion disposed closely adjacent to the outer end of said radial channel and adapted to fire said booster charge; and means for detonating said fuse.

3,128,703
WATER IMPERVIOUS DETONATOR

Paul John Bryan, Hewitt, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed May 23, 1961, Ser. No. 112,051
4 Claims. (Cl. 102—28)



1. In an electrical initiator comprising an imperforate tubular shell having one open and one closed end, explosive charges within the shell, and lead wires extending through and from an insulating plug which seals the open end of the shell,

means operating in conjunction with the insulating plug to provide an effective hydraulic seal between the explosive charges and the open end of the shell under such conditions of temperature and pressure that said plug is plastic comprising:

(*a*) a rigid tubular shell liner fixedly positioned between the closed end of the shell and the insulating plug, and

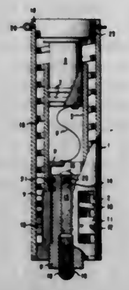
(*b*) a closure element of heat- and pressure-resistant material closing and being supportably seated on the end of the shell liner nearest the insulating plug in a position contiguous to said plug, the circumferential surface of the closure element conforming substantially to and being in peripheral engagement with the internal surface of the shell, said closure element being provided with openings therethrough for said lead wires,

said explosive charges being between said closed end of the shell and the closure element.

3,128,704
PRESSURE RESPONSIVE INITIATOR

George Adelbert Noddin, Sewell, and James Pershing Swed, Gibbstown, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Apr. 25, 1961, Ser. No. 105,494
6 Claims. (Cl. 102—70)

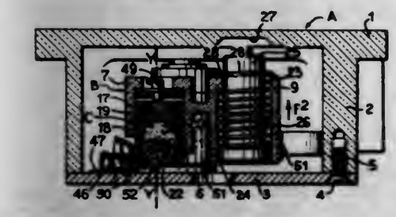


1. A hydrostatic pressure-responsive initiator comprising a tubular shell open at both ends and having an axially projecting base at one extremity thereof, a piston slidably mounted within and closing the end opposite the base of said shell, said piston having a circumferential flange at its exposed extremity, a flexible, resilient striker arm fixed to the inner end of the piston and curved so that its free end extends toward the side wall of said shell, a collar threadably mounted on said base for movement toward either extremity of the said shell, a spring means mounted on the shell and abutting both the said collar and the said piston flange, an explosive charge-containing unit secured within said base and closing the open extremity of the shell, a percussion sensitive ignition composition mounted on the contained inner extremity of the said explosive unit in striking relationship to said striker arm and a striker arm arrester extending from the side wall of the shell and between the free end of the striker arm and said ignition composition, the alignment of said free end, the striker arm arrester, and the ignition composition being such that upon gradual depression of said piston, the striker arm first engages and is compressed by the striker arm arrester and then slips off said arrester and snaps onto said ignition composition.

3,128,705
ELECTRIC FUSE FOR ROCKET

Joseph Raymond Jasse, Paris, France, assignor to Hotchkiss-Brandt, Paris, France, a corporation of France

Filed July 10, 1961, Ser. No. 122,987
Claims priority, application France July 21, 1960
5 Claims. (Cl. 102—70.2)

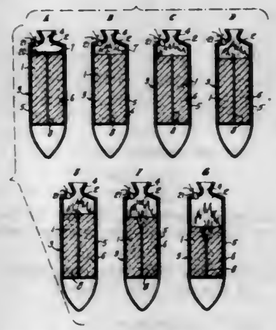


1. In an electric fuse of utility in a non-gyratory projectile having an explosive charge and electric current producing means, the fuse having a body and, disposed within the body, a pivotal support and an electric primer-detonator carried by the support the primer-detonator having two primer-igniting electrodes carried by the support, a spring interposed between the support and the body for biasing the support in a direction from an unarmed fuse position in which the primer-detonator is in misalignment with the explosive charge to an armed fuse position in which the primer-detonator is in alignment with the explosive charge; the structure comprising, in combination with the support, a dashpot device mounted in the body and having a chamber, a damping fluid in the chamber and a member movable relative to the chamber, by the effect of inertia when the projectile accelerates, in opposition to the retarding action of the damping fluid, between a retaining position in which said member directly engages and retains the support in said unarmed fuse position and a retracted position in which said member disengages from and releases the support and allows the support to pivot to said armed fuse position, and an electric switching means for connecting said electric current producing means to said electric primer-detonator, the switching means comprising a first terminal and a second terminal mounted on the body, said current producing means having a first conductor connected to the first terminal and a second conductor connected to the second terminal, the first terminal being permanently connected to one of the electrodes of the primer-detonator, a contact member mounted on the support and permanently connected to the other electrode of the primer-detonator, the contact member being in contact with said first terminal in said unarmed fuse position of the support thereby short-circuiting the primer-detonator and being disconnected from the first terminal and connected to the second terminal in said armed fuse position of the support.

3,128,706
MONOPROPELLENT GRAINS

Keith E. Rumbel, Falls Church, Va., assignor to Atlantic Research Corporation, Alexandria, Va., a corporation of Virginia

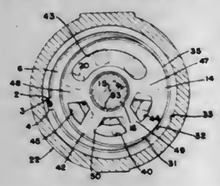
Filed Apr. 17, 1959, Ser. No. 807,253
23 Claims. (Cl. 102—98)



1. A monopropellent grain which burns progressively from one end which defines the initial ignition surface, comprising a self-oxidant matrix, the combustion of which generates propulsive gases, said matrix being a semi-solid, thixotropic mass having a minimum tensile strength of about 0.03 p.s.i., and being capable of flow under applied pressure at ambient temperature, its maximum apparent viscosity at ambient temperature as measured by its flow through a circular tube being about 150,000 poises, said matrix containing embedded therein elongated metal heat conductor means, said metal heat conductor means being positioned substantially normal to the plane of said initial ignition surface and being continuously and longitudinally disposed in the direction of

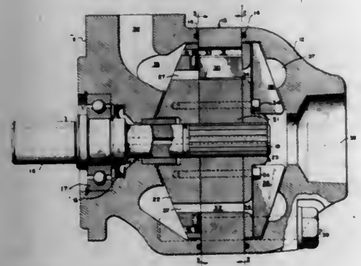
flame propagation of the grain, said conductor within the body of the grain having a length of at least about 0.2 inch and a maximum metal thickness of about 0.05 inch in at least one transverse direction, the entire surface of said length of said metal heat conductor means lying within the body of the propellent grain and being in intimate, gas-sealing contact with the propellent matrix, the burning surface of said grain after ignition regenerating progressively along said metal heat conductor and, in so doing, forming a recess which is substantially V-shaped in at least one plane with said metal heat conductor at the apex of said recess, thereby forming a recessed surface of substantially larger surface area than that of a plane burning surface, the metal heat conductor means thereby serving controllably to increase the mass burning rate and, thereby, the mass rate of gas generation of said monopropellent grain.

3,128,707
MULTIPLE DISCHARGE HYDRAULIC PUMP
Robert W. Brundage, 80 Bellerive Acres, Normandy 21, St. Louis, Mo.
Filed Mar. 11, 1960, Ser. No. 14,258
11 Claims. (Cl. 103—2)



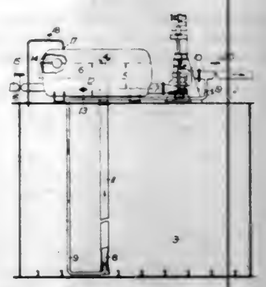
1. In a hydraulic pump of the type capable of simultaneously discharging hydraulic fluid at two different pressures, said pump including a plurality of members defining a plurality of chambers revolving on a fixed line of movement and which progressively increase in volume to a maximum and then decrease in volume to a minimum and then again increase in volume to a maximum, an inlet port arranged to be in communication with said chambers as they increase in volume, the improvement which comprises three separate discharge ports each arranged on the line of movement of said chambers to be in communication at any one instant with different decreasing volume chambers as they revolve to receive hydraulic fluid therefrom, and means interconnecting the first and third of said ports.

3,128,708
PUMP
James C. Henning, Kalamazoo, Mich., assignor to The New York Air Brake Company, a corporation of New Jersey
Filed Dec. 19, 1960, Ser. No. 76,831
1 Claim. (Cl. 103—5)



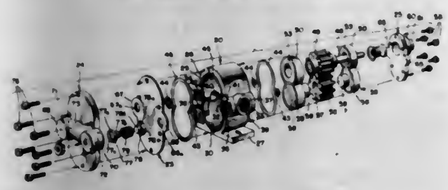
A vane pump comprising in combination a housing; a drive shaft journalled therein; said housing including a one-piece stator element encircling a cylindrical impeller cavity and having plane, parallel side face portions adjacent the periphery of said cavity and having a plurality of spaced vane slots, each slot having a width equal to the thickness of the stator element in the region of said plane, parallel side face portions and extending radially outward from said impeller cavity; vane means reciprocable in each vane slot; a rotor element of generally elliptical form connected to said shaft in said cavity, said rotor element having a thickness equal to the width of the slots in the stator element and a major axis equal in length to the diameter of said cavity; high pressure and low pressure valve plates abutting the opposite faces of said rotor element and connected with said shaft so as to rotate therewith, said plates extending outward beyond the periphery of the rotor to overlie the plane, parallel side face portions of the stator element and thus close the sides of the vane slots; a high pressure manifold in the housing adjacent the high pressure valve plate; a low pressure manifold in the housing adjacent the low pressure valve plate, each valve plate having a pair of diametrically opposed arcuate ports extending therethrough and affording communication between the high pressure manifold and the impeller cavity and between the low pressure manifold and the impeller cavity, the angular interval between the ends of the high pressure ports and the ends of the low pressure ports being substantially equal to the angular interval between adjacent vanes, means defining a constantly open flow path from the high pressure manifold to the vane slots beneath the vanes therein whereby fluid under pressure from said manifold urges the vanes radially inward; radial impeller elements mounted on the side of the low pressure valve plate which is remote from the rotor element, and extending outward from the central portion of that valve plate into the low pressure manifold; and an inlet connection formed through said housing adjacent the central portion of the low pressure valve plate.

3,128,709
SYSTEM FOR PUMPING LIQUIDS INTO AND OUT OF TANKS
George F. Arkless and Forrest T. Randell, Cathcart, Glasgow, Scotland, assignors to G. & J. Weir Limited, Cathcart, Glasgow, Scotland, a company of Great Britain
Filed June 14, 1962, Ser. No. 202,414
Claims priority, application Great Britain June 17, 1961
4 Claims. (Cl. 103—5)



1. A system for pumping liquids into and out of a main storage tank, including an auxiliary tank, a pump the suction of which is in communication with the interior of the auxiliary tank, a jet pump located in the main tank adjacent the bottom thereof, a branch connecting the discharge from the pump to the suction of the jet pump, a duct connecting the discharge from the jet pump to the interior of the auxiliary tank whereby liquid may circulate through the pump, the jet pump, the auxiliary tank and back to the pump and means for controlling the flow of liquid through the branch connecting the pump discharge with the jet pump suction, said means comprising a device located within the auxiliary tank and sensitive to the level of liquid in the auxiliary tank, a throttle valve intercalated in the branch connecting the pump discharge with the jet pump, and means operatively connecting the device to the throttle valve to control the flow of liquid through the aforesaid branch.

3,128,710
GEAR PUMP
Oscar C. Blomgren, 472 Lincoln Ave., and Oscar C. Blomgren, Jr., 239 Park Lane, both of Lake Bluff, Ill.
Filed Sept. 19, 1960, Ser. No. 56,833
12 Claims. (Cl. 103—42)



2. A gear pump comprising a body having a pair of cylindrically shaped intersecting symmetrical cavities, a pair of bores one extending through each side of said body substantially transverse the axes of the cavities and at the intersection thereof, said bores defining the inlet and outlet of said pump, a passageway at each side of the body extending therethrough and substantially parallel to said cavities and intersecting a bore, said passageways being symmetrically positioned at the intersection of said cavities, a drive gear cartridge unit including a drive gear carried on a shaft and bearing supports bearingly mounting said drive gear and received in one of said cavities, an idler gear cartridge unit including an idler gear and bearing supports carrying said idler gear and bearingly received in the other of said cavities, said cartridge units being symmetrically formed for fitting in either of said cavities, a front cover secured to said body over one end of said cavities and said passageways and receiving the shaft therethrough, means coacting with said front cover, shaft and body for sealing fluid leakage along and between the shaft and said one ends of said cavities and passageways, said body and said front cover being so symmetrically formed as to be interchangeably mountable on either end of the cavities, a rear cover plate sealingly mounted on the body over the other end of the cavities, said rear cover plate being shaped substantially identical to the cross section of said body and closing the other ends of said cavities and having openings in alignment with the other ends of said passageways, a rear cover over said cover plate and secured to the body, said rear cover plate and said rear cover being so symmetrically formed as to be interchangeably mountable on either ends of the cavities, said rear cover having a pair of spaced blind bores in the side facing the rear cover plate and in alignment with the openings therein, a recess in the side of the rear cover facing the rear cover plate and extending between said blind bores for intercommunicating same, said recess coacting with said rear cover plate to define a by-pass channel extending parallel to said bores and in communication at opposite ends with said passageways, and a by-pass valve member in one of said blind bores normally blocking passage of fluid through said by-pass channel by engaging said rear cover plate and covering the aligned opening therein and responding to pump pressure at said outlet to selectively intercommunicate said outlet with said inlet.

3,128,711
APPARATUS FOR TRANSPORTING PASTY MATERIALS
Otto Voigt, Butzbach, Hesse, and Martin Presch, Lohr (Main), Sendelbach, Germany, assignors to Pintsch Bamag Aktiengesellschaft, Berlin, Germany, and Ludwig Rexroth, Lohr (Main), Germany
Filed Apr. 25, 1960, Ser. No. 24,529
Claims priority, application Germany Apr. 25, 1959
7 Claims. (Cl. 103—45)

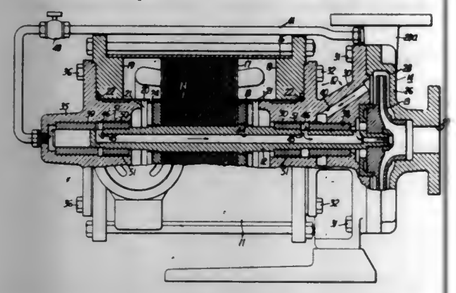


1. Apparatus for transporting a pasty material such as non-solid concrete or the like, comprising, in combination, pump means for pumping the pasty material, said pump means repeatedly carrying out an operating cycle during which said pump means performs a plurality of operations; hydraulic means cooperating with said pump means and moving through a plurality of positions in which said hydraulic means drives said pump means through said operations, respectively, said hydraulic means including at least one fluid conduit in which the fluid pressure increases at the end of each of said operations; and moving means cooperating with said hydraulic means and responding to the increase in fluid pressure for automatically moving said hydraulic means from one position to the next, said pump means including a cylinder having an open end and a piston which moves toward said open end of said cylinder during a suction stroke of said piston, and said hydraulic means including a driving cylinder and piston with the driving piston of the hydraulic means connected to the piston of the pump means for reciprocating the latter piston, said hydraulic means also including a stop carried by one of said cylinders in the path of movement of the piston therein during the time when said driving piston moves said pump piston along its suction stroke for limiting the movement of both of said pistons, said stop being removable so that said drive piston can move through a stroke longer than the suction stroke of said pump piston to move the latter through the open end of said pump cylinder beyond the latter in order to give access to said pump piston and pump cylinder.

3,128,712
CANNED MOTOR PUMP
Leonard H. Sence, Milford, Ohio, assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Aug. 3, 1961, Ser. No. 129,099
6 Claims. (Cl. 103—87)

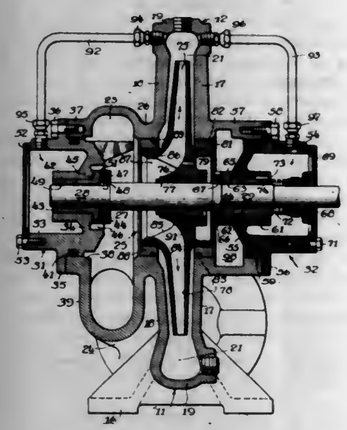
1. A motor pump unit comprising: an annular stator, a motor housing surrounding said stator, a rotor mounted within said stator, a cylindrical can positioned intermediate said rotor and said stator to form a chamber in which said rotor rotates, a shaft connected to said rotor and extending out of said chamber, an impeller mounted on the extended end of said shaft, a pump casing surrounding said impeller, a bearing housing surrounding said

shaft intermediate said rotor and said impeller, means on said shaft positioned to cooperate with said bearing housing to form such a close clearance therebetween as to



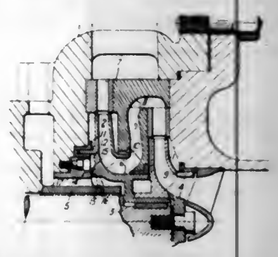
limit the amount of liquid entering said can to such a small amount that during operation, said liquid will be completely vaporized by the heat generated by the motor.

3,128,713
HYDRAULIC PUMP
Leonard M. Nechine, Highland Park, Ill., assignor, by mesne assignments, to FMC Corporation, a corporation of Delaware
Filed Sept. 26, 1958, Ser. No. 763,755
2 Claims. (Cl. 103—103)



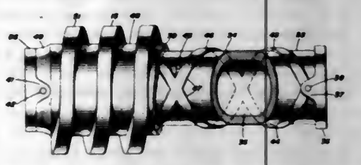
1. In a fluid pump including spaced apart circular walls connected at their outer perimeter to define an impeller chamber between them, an impeller arranged in said chamber, a shaft mounting said impeller, a bearing surface on the inside peripheral edge of each wall, concentric annular bearing surfaces on the impeller seated in said wall bearing surfaces, a bearing for said shaft outwardly of each side wall, a fluid chamber in which said shaft bearings are mounted, conduits in flow communication with the pressure side of the impeller chamber and said fluid chambers for conveying fluid under pressure from the impeller chamber while the impeller is operating to said fluid chambers for lubricating the bearings therein, and means for conducting said lubricating fluid from the shaft bearings into contact with the impeller bearings for lubricating the same and then into the low pressure side of the impeller.

3,128,714
CENTRIFUGAL PUMPS
George Frederick Arkless and Thomas Orr Leith, Cathcart, Glasgow, Scotland, assignors to G. & J. Weir Limited, Glasgow, Scotland
Filed Feb. 13, 1962, Ser. No. 173,027
5 Claims. (Cl. 103—108)



1. A centrifugal pump including two stages, a driving shaft, a rotatable assembly including an overhung impeller in each stage mounted on the driving shaft, each impeller having an eye, the driving shaft terminating short of the eye of the impeller of the first stage whereby the diameter of said eye is maintained at a minimum, bearing means on the shaft for the rotatable assembly, the rotatable assembly being cantilevered out from the bearing means, and the bearing means extending underneath the eye of the impeller of the second stage thus to bring the centre of gravity of the rotatable assembly close to the bearing means.

3,128,715
PUMP
Frank W. Amadon and Albert A. Zalis, Warren, Mass., assignors to Warren Pumps, Inc., Warren, Mass., a corporation of Massachusetts
Filed Feb. 14, 1962, Ser. No. 173,159
3 Claims. (Cl. 103—128)

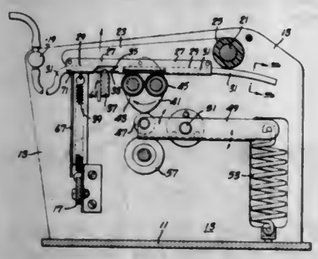


1. A pump, comprising a housing having an entrance port and an exit port, a pair of parallel shafts extending through the housing and rotatably mounted therein, a member consisting of a metal sleeve and a conjugate screw body formed of an elastomer material mounted on each shaft to cause fluid to flow from the entrance port to the exit port, and a pair of opposite hand helical flanges formed on the exterior of the sleeve and embedded in the body.

3,128,716
PERISTALTIC PUMP
Richard C. Stallman and William M. Oates, San Carlos, Calif., assignors to Beckman Instruments, Inc., a corporation of California
Filed July 17, 1961, Ser. No. 124,532
39 Claims. (Cl. 103—149)

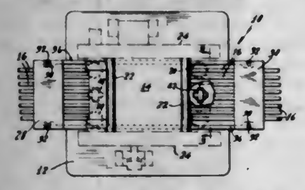
1. A peristaltic pump comprising a frame, a arm pivotally secured to said frame, a resilient tube, said resilient tube positioned along a surface of the arm facing the direction of pivotal rotation, a portion of said tube being restrained from axial movement, another portion of said tube being slidably retained along said surface, means for resiliently urging said arm about its pivot point in a

direction toward said tube, means disposed for eccentric rotation on said frame, said last named means being mov-



ably positioned adjacent said tube for intermittent contact therewith whereby during its eccentric rotation it alternatively compresses and retracts from said tube.

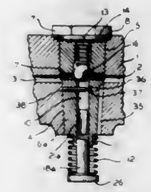
3,128,717
PROPORTIONING PUMP
Edwin C. Weiskopf, New York, N.Y., assignor to Technicon Instruments Corporation, Chauncey, N.Y., a corporation of New York
Filed Aug. 1, 1961, Ser. No. 128,590
7 Claims. (Cl. 103—149)



1. In a pump having a plurality of resiliently flexible pump tubes disposed laterally of each other for the delivery of a plurality of fluids in predetermined relative proportions, said tubes having substantially the same wall thickness so that all of said tubes can be compressed and simultaneously closed at points intermediate their lengths, respectively, along a common transverse line for the pumping operation, and means including a spring loaded platen having a pump tube supporting surface and a plurality of rollers engageable with said tubes for simultaneously compressing the tubes progressively along their lengths against said surface of said platen for the pumping operation; a pair of laterally spaced members mounted on said platen, said members having roller engaging surfaces spaced from said surface of said platen a distance equal to approximately twice the wall thickness of said tubes for limiting the position of said rollers relative to the surface of said platen during the closed condition of said tubes and thereby limiting the compression load of said rollers on said tubes when said tubes are closed during said pumping operation, and means for providing additional spring pressure on said platen for increasing the tube closing pressure of said rollers on said tubes.

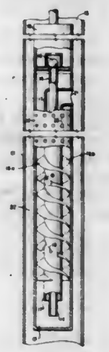
3,128,718
HIGH PRESSURE PUMP
Stanley J. Rhodes, 2702 S. 46th St., Milwaukee, Wis., and Arthur F. Zeman, 8622 Stickney Ave., Wauwatosa, Wis.
Filed May 8, 1961, Ser. No. 108,573
2 Claims. (Cl. 103—153)

1. In a high speed-high pressure hydraulic pump including a cylinder and inlet and outlet valving means; an elongated piston reciprocable in said cylinder and having an axially recessed head end, said recess defined by a relatively thin annular wall, the inner periphery of the wall flaring outwardly toward the head end of said cylinder, the diameter of the piston and outer periphery of said wall closely approximating the inner diameter of said cylinder, and the annular thickness of said wall de-



creasing toward said head end of said cylinder, whereby the expansible resiliency of said wall increases toward said head end of said cylinder and is increasingly responsive to high pressure in said cylinder in proportion to decreasing thickness of said wall.

3,128,719
GAS ANCHOR
Lodewijk J. Schmit Jongbloed and Eduard A. Vos, Delft, Netherlands, assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed May 5, 1961, Ser. No. 108,113
Claims priority, application Netherlands June 13, 1960
4 Claims. (Cl. 103—203)



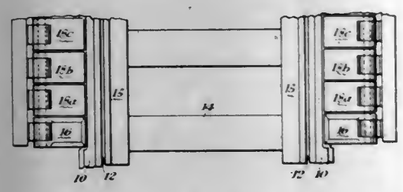
1. For use with a well pump having fluid inlet means thereto, a gas anchor comprising: a tubular housing member closed at the lower end and having fluid port means through the side wall thereof; gas conduit means fixedly secured to and axially disposed within said housing member, the upper end of said conduit means being directed to and through the side wall of said housing member above the port means therein; downwardly opening spirally trough channel means formed on the outside of said gas conduit means throughout a substantial portion of the length thereof, said channel means extending substantially to the inner wall of said housing member; fluid openings through the wall of said gas conduit means at locations near the top of said trough channel means; and, an imperforate delivery tube carried by said housing member, said delivery tube extending axially through said gas conduit means in spaced relationship therewith, said delivery tube having its lower end open to the space within the housing member near the lower closed end thereof and having its upper end in open communication with the fluid inlet means of a well pump.

3,128,720
MEAT HOOK TROLLEY
William F. Hansen, Shipman Road, Jerseyville, Ill.
Filed Apr. 2, 1963, Ser. No. 269,985
1 Claim. (Cl. 104—89)



In a trolley device for suspending meat from an overhead track including a grooved wheel to ride on said track, a bracket carried by said wheel and adapted to extend downwardly therefrom and to terminate below said track, a meat hook suspended from the terminal of said bracket, the improvement that comprises a latching member pivotally mounted to said bracket so as to accommodate said track between said latching member and said wheel, said latching member including a projection extending therefrom, a latch stop mounted on said bracket whereby when said latching member is in a first position away from said stop, said projection does not overlie said track and when said latching member is in the second position bearing against said latch stop, said projection does overlie said track to prevent said trolley device from falling off of said track.

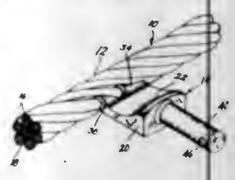
3,128,721
WEIGHT PROPORTIONAL VEHICLE SPEED CONTROLLING APPARATUS
Kenneth J. J. McGowan, Richmond, Ind., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed June 9, 1961, Ser. No. 115,953
31 Claims. (Cl. 104—162)



1. Vehicle speed controlling apparatus comprising a vertically movable speed control member disposed alongside a track rail of a trackway and so projecting above the rail as to be depressed from a first to a second position by wheels moving on said rail, and means operatively connected with said speed control member for applying against wheels actuating said speed control member a speed control effort substantially proportional to the weight sustained by the wheels.

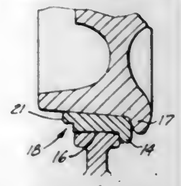
3,128,722
MECHANISM HANGER FOR WIRE ROPE
Tony R. Sowder, N. 1231 Washington, Spokane, Wash.
Filed Feb. 19, 1962, Ser. No. 174,142
4 Claims. (Cl. 104—201)

1. A hanger for wire rope, comprising:
a body (**20**);
a straight sectional bar (**24**) of a size and configuration to displace the core of a wire rope without materially distorting the peripheral dimension of said rope;



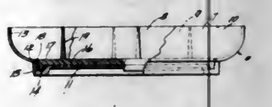
said bar having a space (**30**) of a size to pass one strand of a wire rope therethrough; and
a web (**34—36**) rigidly fixing each section (**26—28**) of said bar to said body and disposed at an angle therewith substantially equal to the pitch of helicoidal strands of a wire rope with a minimum distortion of the peripheral dimensions of said rope.

3,128,723
RAILWAY SKATE
Herbert H. Smith, Cleveland, Ohio, assignor to National Castings Company, Cleveland, Ohio, a corporation of Ohio
Filed Oct. 20, 1961, Ser. No. 146,480
5 Claims. (Cl. 104—260)



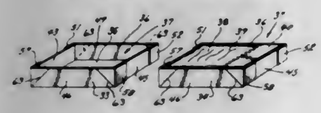
1. A railway skate comprising: a skid bar having a skid surface on the underside thereof adapted for engagement with a railhead, a depending rail-engaging flange along one edge of said surface, and a top wheel-engaging surface; said top surface of the bar being substantially wider in a direction away from said flange than the combined widths of the flange and said skid surface, and the width of the skid surface conforming substantially to the width of a railhead; said top surface being wider than the skid surface to provide good wheel-supporting and heat-dissipation characteristics of the skate.

3,128,724
GELATIN MOLDS
Marshall L. Linder, Rockford, Ill., assignor to Mo-Mac Manufacturing Co. Inc., Rockford, Ill., a corporation of Illinois
Filed Dec. 7, 1961, Ser. No. 157,758
7 Claims. (Cl. 107—19)



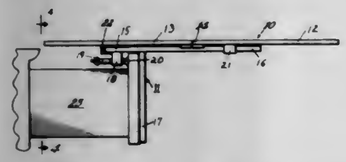
1. A food molding structure comprising an outer larger main mold element, and an inner smaller auxiliary mold element, each of the two mold elements having side walls and said mold elements having detachably interfitting bottom walls, whereby the side walls of said elements are held disposed in a predetermined radially spaced relationship to one another during filling and for a period of time thereafter, the cavities defined in the two mold elements being separately fillable and being separated by the side walls of the inner mold element, the bottom wall of the outer mold element having a circular depression, and the bottom wall of the inner mold element being circular and fitting in and filling said depression, permitting assembling of the mold elements in any position of rotation relative to one another.

3,128,725
METHODS AND APPARATUS FOR SHAPING BAKING MATERIALS AND THE LIKE
William C. Becker, New Rochelle, N.Y., and Everett Smith, Jr., Waldwick, N.J., assignors to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Oct. 5, 1960, Ser. No. 63,677
11 Claims. (Cl. 107—54)



11. A method of making a selectively shaped baked product and the like, comprising the steps of providing a container, at least part of the container being adapted to form a baking means, disposing baking material and mold-forming means in said container, removing said baking material and mold-forming means from said container, forming a mold chamber having a selected configuration in said baking means of said container with said mold-forming means whereby flange means of said mold-forming means projects into said mold chamber, diposing said baking material in said mold chamber whereby said baking material will press said flange means against said baking means to hold said mold-forming means thereto, and, thereafter, baking said baking material in said baking means to produce said baked product.

3,128,726
PORTABLE FOLDING IRONING BOARD
Mary L. Lewis, 303 E. Sinto, Spokane, Wash.
Filed May 25, 1962, Ser. No. 197,648
4 Claims. (Cl. 108—112)



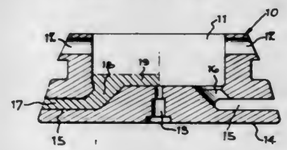
1. A portable ironing board assembly comprising:
a mounting bracket having a plurality of parallel horizontal members and individual vertical members depending downwardly therefrom adjacent the first end of each of said horizontal members;
means on said bracket adapted to clamp said mounting bracket to a fixed supporting member;
an ironing board comprising two sections hinged about a transverse axis, each of said sections having a coplanar top surface when extended to a horizontal position;
first means on the underside of one section of said ironing board adapted to slidably receive said horizontal members of said bracket;
and second means on the underside of the remaining section of said ironing board adapted to engage said first end of each of said horizontal members of said bracket.

3,128,727
TUBULAR FOLDABLE FRAME
Orman M. Rainwater, 2551 Midvale Ave., Los Angeles, Calif.
Filed Jan. 16, 1962, Ser. No. 166,603
6 Claims. (Cl. 108—129)



1. A folding table comprising a plurality of U-shaped tubular units, each unit having two leg sections and a section interconnecting one end of each of said leg sections, the leg sections of one of said units telescoping within a respective leg section of two other units, and the leg sections of another unit telescoping within the other leg sections of said two other units, one of said two other units and said first-mentioned unit being adapted to rotate about the leg sections of said other units to first fold said units into substantially a single plane and then to continue said rotating to fold said units into two substantially parallel planes, a table top being provided with parallel cleats along two opposite edge portions of said top, one of said cleats being hinged to one interconnecting section of one of said U-shaped units, the other cross member being resiliently attached to said other cleat.

3,128,728
HEAT RESISTANT MONEY SAFE DOOR
Russell F. Houston, Overpeck, Ohio, assignor to The Mosler Safe Company, Hamilton, Ohio, a corporation of New York
Filed Apr. 6, 1960, Ser. No. 20,387
2 Claims. (Cl. 109—76)

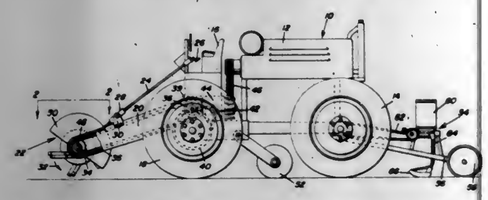


2. A steel safe door having a groove extending about its periphery, said door having a lock receiving central cavity therein spaced from said groove, and having a plurality of spaced holes connectnig said groove to said cavity, and a continuum of copper spanning said cavity, and filling said holes and said groove.

3,128,729
ALL-PURPOSE FARM MACHINE
James A. Henson, Box 625, Chetopa, Kans.
Filed May 24, 1960, Ser. No. 31,321
5 Claims. (Cl. 111—1)

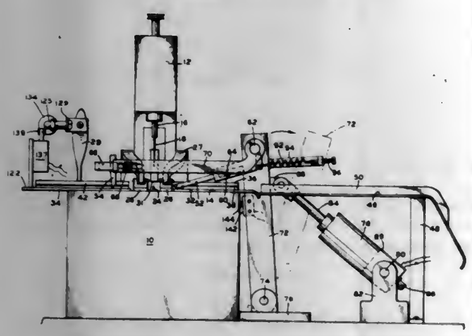
1. An agricultural machine comprising, vehicle means adapted to be propelled in a forward direction, supporting means adjustably mounted on said vehicle means and extending forwardly therefrom, rotary means rotatably mounted at the forward end of the supporting means in downwardly exposed relation for all positions of the supporting means, blade means adjustably mounted on the rotary means for downward exposure to matter engaged thereby when the supporting means is either in a lowered position or in an elevated position, forward and reverse drive means drivingly connected to said rotary

means for movement of the exposed blade means in a direction opposite to said forward direction when the supporting means is in said lowered position and in the forward direction when the supporting means is in said elevated position, attachment means operatively connected to the vehicle means and extending rearwardly therefrom for contact with said matter engaged by the blade means in response to forward movement of the vehicle means, and driver operated means mounted on said vehicle means and operatively connected to said supporting means for selectively lowering said blade means into ground engagement for plowing and soil mat-



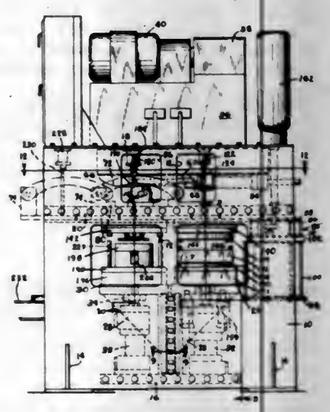
ter preparation and raising said blade means above ground surface for silage matter cutting, said forward and reverse drive means being operative to rotate said rotary means in one direction at a slow speed for plowing and soil matter preparation and in the other direction at a fast speed for silage matter cutting, said rotary means including a plurality of cutter mounting disks rotatably mounted by said supporting means, said mounting disks having cutter blade attaching means thereon operative to mount said blade means both radially with respect to the disks for silage matter cutting and nonradially for plowing and soil matter preparation.

3,128,730
SEWING MACHINE FOR FEEDING, SEWING AND CUTTING SECTIONS OF TAPE
Jack Simon, Rye, N.Y., assignor to L. M. Rabinowitz & Co., Inc., New York, N.Y., a corporation of New York
Filed Nov. 23, 1962, Ser. No. 239,608
6 Claims. (Cl. 112—2)



1. In a railway sewing machine for forming overcast stitches at the ends of short sections of hook or eye tape, a base frame, a sewing head having straight line travel across a continuous length of tape to form two rows of closely spaced stitches, clamp feet for holding the tape during stitching, an anvil and a cutting knife which are movable relative to each other for cutting the tape between said rows to form short sections of tape, said cutting knife having small gaps in the cutting edge to leave slender fibres between the sections, means for feeding the tape after each cutting comprising spaced fingers which engage the hooks, means for intermittently moving the fingers a distance equal to the length of said short sections, and means for guiding the tape during movement.

3,128,731
PRESS
Earl F. Hamilton, Columbus, Ind., assignor to Hamilton Cosco, Inc., Columbus, Ind., a corporation of Indiana
Filed June 2, 1960, Ser. No. 33,595
26 Claims. (Cl. 113—3)

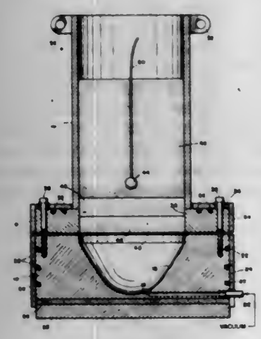


1. A metal-working press, comprising a supporting frame, a bed and top plate fixedly mounted on the frame in vertically spaced relation, a slide carried on the underside of the top plate and longitudinally movable with respect to the bed in a fixed horizontal plane, a first set of dies carried on a plurality of rams mounted on the bed for vertically moving said dies with respect to the slide, a second set of dies mounted on the slide and adapted to mate with said first set of dies, means for actuating said rams for moving said first set of dies selectively and independently with respect to each other and with respect to said second set of dies into operative engagement with said second set of dies to effect a plurality of work steps on work-pieces interposed between the two sets of dies when the slide is moved into position to dispose the two sets of dies in vertical alignment, each of the dies in said second set being adapted to hold a work-piece above said first set of dies whereby movement of the slide will cause each of the dies in said second set to move the work-piece carried therein from a position overlying its mating die in the first set of dies to a position overlying an adjacent die in said first set of dies, and means mounted in a fixed position above the plane of said top plate and movable between a retracted position above the plane of said slide and an extending position projecting through said top plate and slide to eject the work-pieces from said second set of dies, the die in the second set of dies adjacent one end of the slide moving its work-piece beyond the extent of the bed during the slide movements for ejection of the finished work-piece from the press by said means.

3,128,732
MEANS AND METHOD FOR EXPLOSIVE FORMING MATERIALS AT HIGH TEMPERATURES
Allison Lloyd Paynter and Charles W. Gipe, San Diego, Calif., assignors to The Ryan Aeronautical Co., San Diego, Calif.
Filed Jan. 24, 1961, Ser. No. 84,635
8 Claims. (Cl. 113—44)

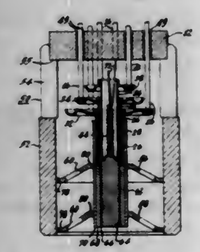
1. Means for explosive forming materials at high temperatures, comprising: a die block having a cavity shaped

to conform to the part to be formed; a clamp plate removably attachable to said die block to hold a blank to be formed over said cavity in sealed relation therewith; a plurality of heating elements operatively mounted in both said die block and said clamp plate; said clamp plate having an opening substantially corresponding in area with the mouth of said cavity; a standpipe fixed on said clamp plate above said opening, heated sand within said open-



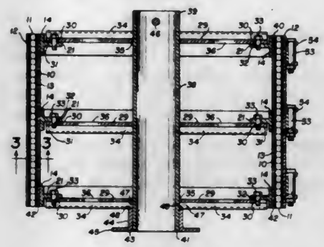
ing and contacting the entire area of said part exposed in said opening thus assuring the heating of said entire area; cool sand in said standpipe above said heated sand; said heated sand insulating said entire area of said part from said cool sand; an explosive charge embedded in said cool sand and thus protected from the heat of the hot sand and from the heat generated by said heating elements; and means for firing said explosive charge to drive the blank into said cavity.

3,128,733
BRAZING JIG FOR ELECTRON TUBE FABRICATION
George A. Lalak, Springfield, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Dec. 30, 1960, Ser. No. 79,592
5 Claims. (Cl. 113—99)



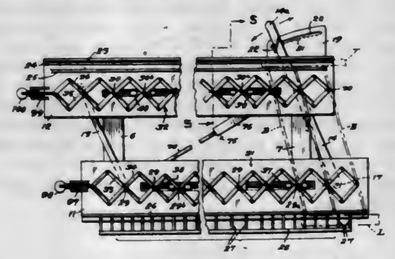
1. A brazing jig comprising a housing having a generally cylindrical opening therein, said opening being stepped adjacent one end thereof to provide an internal peripheral shoulder, a centrally apertured dish-shaped support ring mounted transversely within said opening in longitudinal spaced relationship with and protuberant toward said shoulder, and a jigging assembly extending through the aperture of said support ring and supported by said support ring, said jigging assembly having portions facing said shoulder for receiving parts to be brazed.

3,128,734
APPARATUS FOR MAKING CURVED SANDWICH PANELS
Thomas A. Herbert, Jr., Chula Vista, Calif., assignor to Rohr Corporation, a corporation of California
Original application Jan. 13, 1956, Ser. No. 558,973, now Patent No. 2,979,005. Divided and this application Mar. 13, 1961, Ser. No. 102,343
5 Claims. (Cl. 113—99)



1. In the construction of a metallic sandwich structure having a closed cylindrical shape wherein the ends of a metallic cellular core are brazed to the opposed faces of two spaced apart cylindrically shaped metallic skins, means for holding said skins and core in assembled relationship during the brazing operation comprising: a tubular member comprising a semi-rigid sheet of metal formed end to end into a substantially cylindrical shape adapted to support said skins and core; a plurality of circumferentially expansible and adjustable annular split rings disposed within said tubular member, said split rings respectively having inwardly extending annular ribs, said rings being expanded to engage the inner surface of said tubular member and to adjustably expand and hold said member in a desired shape; a plurality of disc shaped supporting webs disposed within said tubular member, said webs being secured to and arranged to engage and hold said annular ribs in fixed positions and each of said webs being provided with a central opening; a rigid hollow column passing through said central openings and in engagement with the marginal walls thereof, the ends of said column extending out past the ends of said tubular member; and a flexible metallic blanket surrounding said sandwich structure and pressing said skins and core together and against said tubular member.

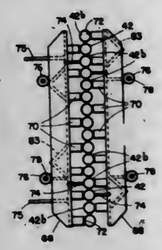
3,128,735
WELDING JIG
David I. D. Mayers, Box 9456, Richmond 28, Va.
Filed July 17, 1961, Ser. No. 124,421
17 Claims. (Cl. 113—99)



2. In a welding jig, first and second discrete supports having laterally-spaced, parallel, longitudinal axes, guide means mounting one said support for translatory movement relatively to the other in the direction of said axes, a first plurality of abutments mounted on and projecting from said first support for adjustment therealong, first

means connecting all said abutments for simultaneous proportional spacing on said first support, a second plurality of abutments mounted on and projecting from said second support for adjustment therealong, second means connecting all said second plurality of abutments for simultaneous proportional adjustment, and means connecting said first and second means for simultaneous operation and adjustment of all said abutments.

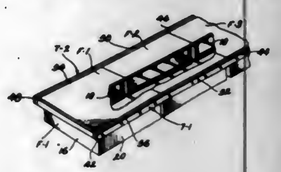
3,128,736
RAISING-SUPPORTING-ALIGNING JIG FOR TUBULAR WALL CONSTRUCTION
William C. Norris, Bellmore, N.Y., Waldemar Rupinski, Haworth, N.J., and Konrad S. Svendsen, Bellerose, N.Y., assignors to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware
Original application Sept. 14, 1954, Ser. No. 455,912, now Patent No. 2,946,116, dated July 29, 1960. Divided and this application Feb. 16, 1960, Ser. No. 9,074
5 Claims. (Cl. 113—102)



1. A jig assembly adapted to be used for positioning and holding two groups of tubes to be welded whereby one group is arranged in end-to-end alignment with the other, each group comprising a multiplicity of at least four closely adjacent tubes lying in a plane and fastened together in alignment at a point remote from their ends, said jig assembly comprising a first jig laterally mounted on said one group of tubes adjacent one end thereof, a second jig mounted on said other group of tubes adjacent one end thereof and in axially spaced relation with said first jig, both said first and said second jig having a pair of lateral members parallelly positioned on opposite sides of said tubes, said members having a length extending over said multiplicity of closely adjacent tubes, and being provided with protuberances facing said tubes and, said protuberances having a width being at most equal to the clearance between alternate tubes, the protuberances of one side being staggered with respect to the protuberances of the other side of said tubes, said members being so positioned on opposite sides of said tubes such that said protuberances engage the outer surface of alternate tubes, means associated with each pair of said members to force said members of each pair toward each other in directions lateral to the tube axes whereby alternate tubes are offset with respect to the remaining tubes, and means associated with said two groups of tubes and said first and second jigs to align and hold in position the tube ends of one group and the corresponding tube ends of the other group for welding the tube ends of one group to the tube ends of the other group.

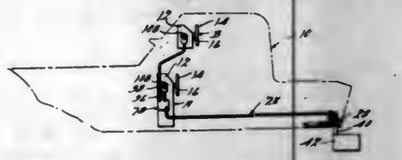
3,128,737
FLOATING WHARF STRUCTURE
Ernest M. Usab, Long Beach, Calif.
(500 Via Malaga, Newport Beach, Calif.)
Filed Sept. 18, 1961, Ser. No. 138,643
6 Claims. (Cl. 114—.5)

1. A floatable wharf structure for use on a body of water subject to wave action, said wharf structure comprising: a plurality of wide float units of shallow depth each comprising concrete bottom and top walls joined by concrete side and end walls to form a chamber of sufficient size to provide buoyancy to such float unit, said floats being aligned end to end in adjoining relation in a single series, each float having opposed pairs of axially-aligned openings through said side walls opening inwardly on said chamber, the outer ends of said openings opening outwardly of said side walls; and connection means for flexibly interconnecting said float units in such aligned end to end series with the ends of adjacent float units closely adjacent and with the float units of said series capable of undergoing relative deflection due to said wave action, said connection means including two long narrow flexible tie rail means each of a width only a small fraction of the width of said float units respectively on opposite sides of said aligned float units extending continuously from end to end of said series and being of substantially uniform cross-sectional area throughout their lengths, a plurality of transverse tension elements extending across each float unit at anchor positions spaced



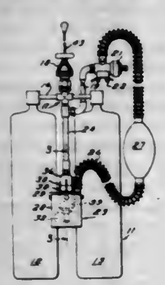
therealong, each tie rail means being formed of inner and outer stringer means each formed of wooden stringers disposed end to end with the joints between the ends of the stringers of the inner and outer stringer means being longitudinally staggered, each wooden stringer being of a length approximately twice the length of each float unit, said joints being staggered a distance approximately the length of each of said float units, each stringer having openings in each of the respective halves thereof receiving tension elements of two adjoining float units, and enlargements on the ends of each tension element respectively bearing against said tie rail means, said enlargements placing said tension elements in tension and holding the tie rail means firmly to the sides of said float units at said anchor positions and in sealing relationship with said outer ends of said side-wall openings while placing the concrete of said float units between said enlargements in compression, the flexibility of said tie rail means between the closest anchor positions of adjacent float units of said series permitting said relative deflection in response to wave action.

3,128,738
DUAL STATION STEERING MECHANISM
Robert K. Farrington, Shaker Heights, Ohio, and Russell G. Marr, Detroit, Mich., assignors to Marmac Products, Inc., Cleveland, Ohio, a corporation of Ohio
Filed Mar. 27, 1963, Ser. No. 268,284
11 Claims. (Cl. 114—146)



1. In a multiple station steering system for a boat including a plurality of diversely spaced steering units drivingly connected respectively to a corresponding number of steering arms, the improvement comprising an interchange assembly for selectively coupling only one of said steering arms and the steering unit connected thereto to a rudder post, said interchange device comprising a body, means for rotatably mounting said body in a boat, coacting means for drivingly coupling said body to a rudder post, said body including a cylindrical portion disposed with its axis in alignment with the axis of rotation of said body and formed with an axial bore therein, said cylindrical portion provided with a longitudinally extending elongated aperture disposed in communication with said bore, slide means slidably disposed and axially reciprocable in said bore, engaging means on said slide means extending through said aperture and projecting beyond the periphery of said cylindrical portion, a plurality of steering arms each formed with a cylindrical bore defining a cylindrical surface disposed in rotatable bearing contact around said cylindrical portion and overlying said aperture, each said cylindrical surface formed with an axially extending groove for slidably receiving and engaging said engaging means, means for maintaining said arms in appropriate longitudinally spaced relationship along said cylindrical portion, coacting means on each of said steering arms for connecting each arm to a steering unit, and means for selectively positioning said slide means and said engaging means thereon within said bore for engaging said groove of one of said steering arms and coupling that arm to said body.

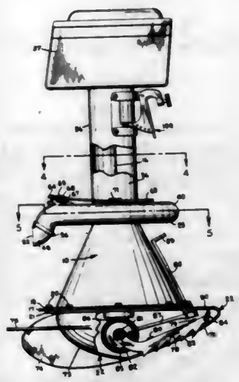
3,128,739
COMBINED PROPELLING AND BREATHING DEVICE FOR SKIN DIVERS
Paul A. Schultz, 2250 Soquel Drive, Santa Cruz, Calif.
Filed Nov. 30, 1961, Ser. No. 155,906
6 Claims. (Cl. 115—6.1)



4. An underwater swimming aid comprising a compressed air source, an inhalation device for introducing air to a user for breathing, an air motor secured to said source, a first air inhalation path coupling said inhalation device to said source, and a second air inhalation path coupling said inhalation device to said source through said air motor.

3,128,740
WATER JET DRIVE
Kermit H. Burgin, R.R. 1, Whitestown, Ind., assignor of eighty percent to Frederick B. Cline, Indianapolis, Ind.
Filed May 16, 1963, Ser. No. 280,794
10 Claims. (Cl. 115—12)

1. A jet boat drive comprising
a base member;
a centrifugal pump mounted at the top of said base and having a unit of spirally diverging blades rotatable about a vertical axis, and having a central, axial water intake chamber from which water flows between inner end portions of the blades exposed around said chamber;
a drive shaft connected to said unit and through which said axis extends;
an auxiliary screw-type pump having a rotatable unit defined by a central, inner frusto-conical member fixed to said shaft, an outer frusto-conical member, open at its base and apex ends, and a spiral screw-blade winding around the outside of the inner conical member within the outer conical member, the screw-blade being fixed by its edges to both of said conical members thereby forming a unit lifting water between the two rotating conical members;
said rotatable unit being revoluble within said base member;
a water scoop carried by the lower end portion of said base member;
said scoop having water intake openings at its forward end in respect to forward travel of a boat;

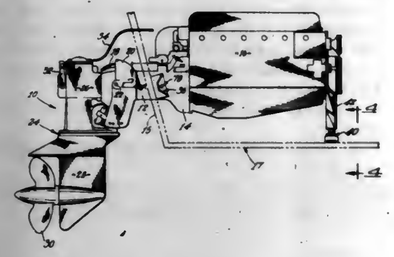


a pair of horizontally spiralling scrolls fixed around said centrifugal pump and receiving water from said diverging vanes;
each of said scrolls extending approximately one hundred eighty degrees in a common direction, one following the other about the diverging blade unit;
a discharge conduit leading from each of said scrolls and having horizontally spaced apart discharging ends each terminating in approximately a common plane and at the same elevation therein;
said plane being inclined rearwardly and upwardly from the horizontal within the range of from ten to twenty degrees;
a nozzle rotatively mounted on said conduit end portions in each instance; to rotate about an axis normal to said plane; and
means rotating the nozzles from rearward direction to forward and downward direction.

3,128,741
MARINE ENGINE MOUNT
Lysle I. Benjamen, Birmingham, Mich., assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Sept. 8, 1961, Ser. No. 136,779
6 Claims. (Cl. 115—34)

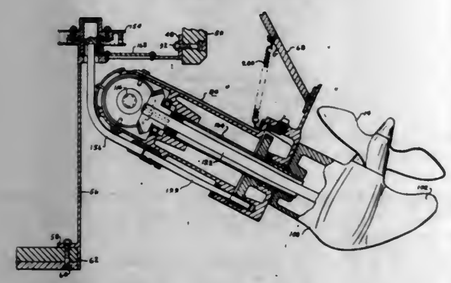
1. A marine engine mounting means for an inboard marine engine, said means comprising laterally spaced pivotal bracket means including means fixed to a transom of a boat, bracket supporting means fixed to said engine, means including said bracket means being effective to pivotally support said engine at the aft portion of said engine, means adapted to connect the forward portion of said engine to a hull portion of the boat, and means comprising an opening in said transom in power shaft receiving relationship with said engine and being disposed

laterally between said bracket means so that said engine is rigidly laterally supported and the angle of the power



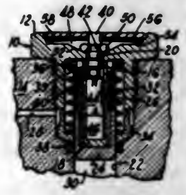
shaft is positionable with respect to the angle of the transom.

3,128,742
POWER TRANSMISSION
Colin E. Cameron, 201 6th, Winona Lake, Ind.
Filed June 7, 1961, Ser. No. 115,526
3 Claims. (Cl. 115—37)



1. A power plant for twin propellers of a boat having a pair of spaced openings at the junction between the hull and transom, comprising an engine mounted in the boat for driving the propellers, transmissions for said propellers, each transmission including a housing with side and top panels, a flange on said panels for engaging said hull and transom about the respective openings therein in water-tight relation, a body in said housing, horizontal pivot means supporting said body in said housing, a rotatable sleeve in said body, a leg secured to the lower end of said sleeve, a horizontal drive shaft in said leg, a propeller on one end of said shaft, a power input shaft axially positioned in the pivot means, a shaft extending concentrically through said sleeve, a pair of beveled gears operatively connecting said input shaft with said last mentioned shaft, a pair of beveled gears connecting said last mentioned shaft with said drive shaft, a gear for rotating said sleeve to rotate said leg and thereby steer the boat, a pinion for rotating said gear, a shaft means connected to said pinion and extending parallel with said sleeve to a point adjacent said pivot means, a rotatable steering control means, a flexible shaft connecting said control means with said shaft means and bendable circumferentially to said pivot means, a power takeoff means between said transmissions, a shaft connecting said power take-off means with said engine, axially aligned shafts connecting said power take-off means with said transmissions, a door for the opening in said transom, and a means connecting said door with said body for opening and closing said door when said body is rotated on said pivot means.

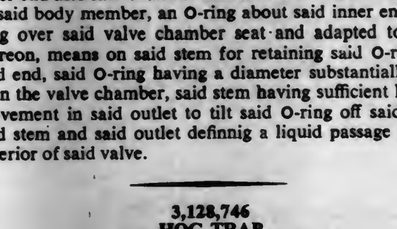
3,128,743
DIFFERENTIAL PRESSURE RESPONSIVE DEVICE
James C. Whiting, Madison Heights, Mich., assignor to The Bendix Corporation, a corporation of Delaware
Filed May 26, 1961, Ser. No. 112,837
6 Claims. (Cl. 116—70)



1. A temperature sensitive differential pressure indicating device comprising a housing having a first bore therein, a hollow tubular member extending into said first bore to form a second bore, said tubular member having an open end and a closed end, an annular ramp formed at said open end of said tubular member, a hollow piston member slidable in said first bore from a first position to a second position, said piston member being formed to envelop said tubular member, first passage means formed in said housing for communicating one side of said piston member with a first pressure source, second passage means formed in said housing for communicating the other side of said piston member with a second pressure source, spring means located in said housing and operatively connected to said piston member for opposing movement of said piston member from said first to said second position, first magnetic means operatively connected to said piston member and movable therewith from said first to said second position, second magnetic means located in said second bore and movable from a non-signalling to a signalling position, said second magnetic means being magnetically repelled by said first magnetic means towards said non-signalling position when said piston member is in said first position and being magnetically repelled by said first magnetic means towards said signalling position after the piston member has moved a predetermined distance away from said first position, an indicator pin operatively connected to said second magnetic means and movable therewith from said non-signalling to said signalling position, said indicator pin having an annular groove formed thereon, a plurality of balls located at the open end of said tubular member and movable along said annular ramp into and out of said annular groove, said balls being dimensioned to protrude from the surface of said indicator pin when located in said annular groove, and a bimetallic temperature sensitive convex disc element located adjacent said balls and having an opening at the center thereof for permitting movement of said indicator pin therethrough, means for operatively connecting the periphery of said disc to said housing, said disc element being caused to invert and confine said balls in said annular groove and against said annular ramp to prevent movement of said indicator pin at temperatures below a predetermined value.

3,128,744
METHOD FOR INVESTIGATING THE MIGRATORY HABITS OF MACRO-ORGANISMS
Keith B. Jefferts and Peter K. Bergman, Seattle, Wash., assignors to the United States of America as represented by the Secretary of the Interior
Filed Jan. 2, 1963, Ser. No. 249,103
6 Claims. (Cl. 119—3)

1. A method for researching the periodic movements of macro-organisms from one habitat to another, comprising the steps of tagging the organisms of interest by implanting within their body substance relatively small tags marked with identifying coded data, releasing the organisms to exist in their normal environment, recovering the tagged organisms from the mass of organisms



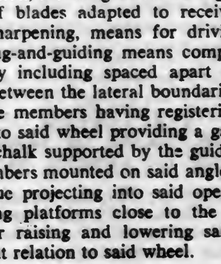
with which they are ultimately removed from their normal environment, passing all the organisms removed across a means to detect and indicate the presence of an organism having a tag within, and removing the tag from recovered tagged organisms, whereby the coded data may be deciphered.

3,128,745
NIBBLER VALVE
Raymond Alter, Darien, Wis.
Filed Nov. 8, 1960, Ser. No. 68,126
1 Claim. (Cl. 119—75)

A nibbler valve comprising an upper tubular base member, a lower tubular body member, said lower tubular body member having a diametral bore in the upper end thereof, the upper portion of said diametral bore engaging the lower end of said base member to define the upper wall of a valve chamber, said base member having an axial passage defining an inlet to said valve chamber, means for connecting said inlet to a source of water under pressure, the lower portion of said diametral bore having an annular machined surface to define the lower wall of said valve chamber, the lower end of said lower tubular body member having an axial passage defining an outlet having a diameter less than the valve chamber and greater than said inlet, the intersection of the annular machined surface and the outlet in the tubular body member defining a valve chamber seat, a valve stem consisting of a length of rod contained loosely in said outlet, extending at its inner end into said chamber and at its outer end outwardly of said body member, an O-ring about said inner end lapping over said valve chamber seat and adapted to seat thereon, means on said stem for retaining said O-ring at said end, said O-ring having a diameter substantially less than the valve chamber, said stem having sufficient lateral movement in said outlet to tilt said O-ring off said seat, said stem and said outlet definnig a liquid passage to the exterior of said valve.

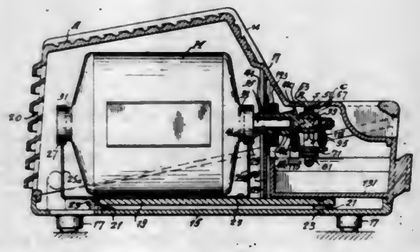
3,128,746
HOG TRAP
Cecil Farr, Albion, Wash.
Filed June 20, 1960, Ser. No. 37,242
4 Claims. (Cl. 119—99)

1. In a hog trap having a chute defining a passageway between spaced side walls; a pair of opposed upright doors hinged for swinging movements between complementary positions athwart of said passageway to control passage therethrough, and an open position wherein the doors are substantially parallel to and at each side of said passageway, linkage pivotally interconnecting said doors for coincident swinging movement, a control bar carried by said chute for manual movements within predetermined limits,



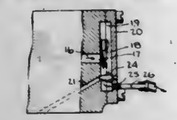
means releasably locking said bar at selected locations intermediate its limits of movement, and a lost motion connection securing said linkage to said bar for restricting the coincident swinging movements of the doors in both directions to a predetermined fraction of their available travel and at circumferential positions about their respective hinge axes according to the manual disposition of said control bar for the time being.

3,128,747
MARKING CHALK SHARPENING DEVICE
Herbert L. Wax, 543 Chester St., Mount Royal, Quebec, Canada
Filed June 25, 1962, Ser. No. 204,813
3 Claims. (Cl. 120—96)



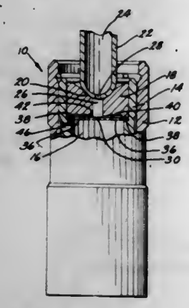
1. An apparatus for sharpening tailor's chalk, comprising in combination, a cutting wheel having axially spaced-apart gangs of blades adapted to receive chalk therebetween for sharpening, means for driving said wheel, chalk-supporting-and-guiding means comprising an elongated guideway including spaced apart angle members forming therebetween the lateral boundaries of the guideway, said angle members having registering cut out portions adjacent to said wheel providing a gap for access to said wheel of chalk supported by the guideway, a pair of adjustable members mounted on said angle members each having a tongue projecting into said opening to provide chalk-supporting platforms close to the cutting blades, and means for raising and lowering said guideway to adjust its height relation to said wheel.

3,128,748
APPARATUS AND METHOD FOR RECOVERING ENGINE DRAINAGE
Charles P. Goggi, Staten Island, N.Y., assignor to Goggi Corporation, Staten Island, N.Y., a corporation of New York
Filed Jan. 19, 1962, Ser. No. 167,238
6 Claims. (Cl. 123—73)



1. In an engine having an induction system adapted to convey the fuel-air mixture to the engine cylinder, said induction system having a passage extending from the interior portion thereof to the exhaust system of said engine, said passage being adapted to convey drainage fluid from said induction system to said exhaust system, the combination comprising means for closing said passage to said exhaust system and means connected to said passage for accumulating said drainage fluid from said induction system.

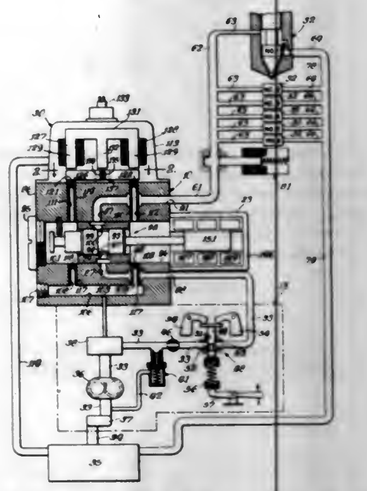
3,128,749
ROCKER ARM OIL CONTROL MEANS
Morris V. Dadd, Muskegon, Mich., assignor to Johnson Products, Inc., Muskegon, Mich., a corporation of Michigan
Filed Jan. 28, 1963, Ser. No. 254,064
7 Claims. (Cl. 123—90)



5. Oil flow control means for a valve tappet, comprising: a tappet body including a hollow plunger having an internal shoulder; a push rod seat closing said plunger and having a rim portion biased toward said shoulder; an annular groove formed in said push rod seat inwardly of said rim portion; said push rod seat having a nose portion inwardly of said annular groove; and a flat metering disc having its perimeter interposed between said rim portion and said shoulder, and having apertures formed therein opposite said annular groove; a passageway formed in said nose portion normal to said metering disc; said nose portion having a cylindrical surface tangential to said metering disc, said passageway opening into said cylindrical surface astraddle the tangent along which said surface touches said metering disc.

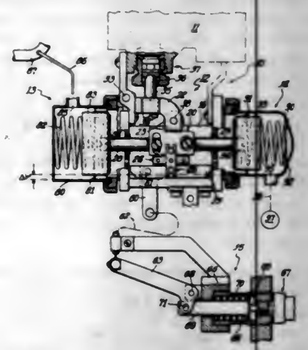
3,128,750
FUEL CONTROL
Robert C. Schmidt, Columbus, Ind., assignor to Cummins Engine Company, Inc., Columbus, Ind., a corporation of Indiana
Filed Jan. 23, 1961, Ser. No. 84,051
15 Claims. (Cl. 123—140)

1. A fuel control for controlling the flow of fuel to an engine, comprising a housing having a fuel passage therethrough adapted to be connected at one end with a source of fuel under pressure and at its other end with said engine, said housing also having a bore intersecting said fuel passage, a valve body movably mounted in said bore for variably restricting said passage to control the fuel flow to the engine, the ends of said bore being adapted to be connected to said source to receive fuel under pressure therefrom, and means responsive to an



operating condition of the engine for controlling the pressure of the fuel in the respective ends of said bore to move said valve body and thereby vary the flow of fuel to the engine, the portions of said fuel passage at its intersection with said bore being offset relative to each other, and said valve body including an annular groove therearound communicating with said portions, said groove defining a shoulder movable with respect to one of said portions to variably restrict said passage.

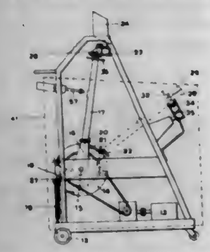
3,128,751
FUEL INJECTION CONTROL MECHANISM
Einar S. Dahl and John M. Whalen, Decatur, Ill., assignors to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Sept. 19, 1961, Ser. No. 139,141
6 Claims. (Cl. 123—140)



1. In a control system for a fuel metering device adapted to supply fuel to an internal combustion engine having an air-intake manifold, the combination of a

movable cam connected to control the output of the device, a first actuator connected to the air-intake manifold of the engine and to said cam for exerting a metering force thereon for moving said cam in accordance with changes in pressure within the air-intake manifold, a second reference pressure actuator also connected to said cam for exerting a metering force thereon to adjust the position of said cam in accordance with changes in ambient pressure, said cam being positioned between said first and second actuators and adapted for longitudinal movement, shaft means directly interconnecting said actuators and said cam, said cam, shaft interconnecting means and actuators being constructed and arranged for joint linear reciprocation, whereby said cam is moved to an equilibrium position of the metering forces exerted by said actuators.

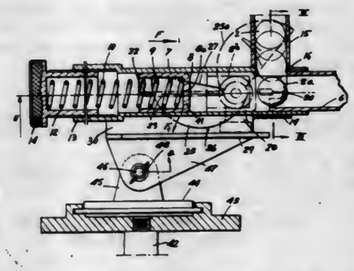
3,128,752
BALL PROJECTOR HAVING CLUTCH AND SPRING MEANS CAUSING A STRIKER HEAD TO CONTACT A BALL IN ITS PATH OF TRAVEL
Reidar E. Andersen, 30 Onyx St., Kensington, Johannesburg, Transvaal, Republic of South Africa
Filed Feb. 5, 1962, Ser. No. 171,017
Claims priority, application Republic of South Africa Feb. 17, 1961
10 Claims. (Cl. 124—16)



1. A machine for projecting balls comprising a substantially rigid frame, a shaft rotatably mounted on said frame, a swinging operating arm pivoted to said frame coaxially with said shaft, a detent on said arm, a disc having at least one notch secured to said shaft, the detent adapted to extend into said notch and latch the arm to the disc, a fixed trigger on the frame and in the path of movement of the detent on said arm, motor means drivingly connected to said shaft so as to drive it in one direction, a striker head mounted on the arm, a support for supporting a freely resting ball in the path of movement of said head, resilient means secured between said arm and frame urging said arm to rotate in second direction opposite to said one direction, said motor means adapted to rotate said arm and detent in said one direction toward said trigger when said detent is in said notch whereby said trigger engages and releases said detent from said notch and said resilient means snaps said arm in said second direction so said head may strike a ball on said support, stop means on said frame in the path of movement of said arm, said stop means contacting said arm after said arm has struck said ball and thereby preventing said arm from rotating completely around its pivot axis.

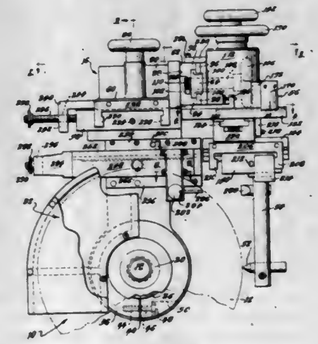
3,128,753
DEVICE FOR THE AUTOMATIC THROWING OF BALLS FOR TRAINING FOR CERTAIN SPORTS
Eugène Jim Politzer, 65 Rue Jouffroy, Paris 17, France
Filed Dec. 27, 1961, Ser. No. 162,346
Claims priority, application France Jan. 6, 1961
8 Claims. (Cl. 124—26)

1. A device for automatically throwing balls comprising a throwing tube, a cylinder supporting said throwing tube in coaxial relationship, a slidable piston within said cylinder, a coil compression spring within said cylinder acting to force said piston toward said throwing tube, a magazine extending outwardly away from the axis of said cylinder and connected to said cylinder adjacent the rear portion of said throwing tube, an axially directed slot in said cylinder adjacent said piston, a finger portion integral with said piston projecting through said slot, a cam follower integral with said finger portion exterior to said



cylinder, a motor driven cam adapted to contact said cam follower to force said piston rearwardly against the force of said coil compression spring and to compress said coil spring, a tooth integral with said finger portion, an electromagnet controlled stop pawl adapted to grasp said tooth to maintain said piston rearwardly and said coil spring compressed, a relay for stopping and starting said motor, and a bimetallic switch mechanism periodically operated for controlling said electro-magnet to release said tooth and for controlling said relay to operate said motor.

3,128,754
DRESSER FOR AN ABRASIVE WHEEL
Ralph S. Kirwin, 245 N. Main St., Crystal Lake, Ill.
Filed June 5, 1962, Ser. No. 200,081
9 Claims. (Cl. 125—11)



1. A surface dresser adapted to shape the surface of an abrasive wheel of a grinder comprising a support member adapted to be mounted on the grinder, said support member defining a first track having an axis of elongation normal to a first plane traversing an axis parallel to the rotational axis of the wheel, said support member also defining a second track having an axis of elongation parallel to the first track, a first slide slidably disposed in the first track, a second slide slidably disposed in the second track, means for controlling the position of the first slide in the first track, means for controlling the position of the second slide in the second track, a third track mounted

on the first slide having an axis of elongation parallel to the rotational axis of the wheel, a third slide slidably disposed on the third track, means for controlling the position of the third slide on the third track, a geometric curve generator having a control member and a shaft extending therefrom normal to the translational axis of the third slide, actuation of the control member translating the shaft in an arc, a cutter mounted on the shaft adapted to engage the peripheral surface of the wheel, means for mounting a template on the second slide having a control edge oriented with respect to an axis disposed normal to the translational axis of the second slide, and a stylus mounted on the shaft adapted to engage the control edge of the template.

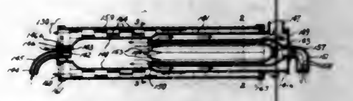
3,128,755
UNDERCUT RESISTANT DIAMOND ABRASIVE SAW BLADE
Donald H. Benson, Spencerport, N.Y., assignor to Vanguard Abrasive Corporation, Le Roy, N.Y., a corporation of New York
Filed Oct. 1, 1962, Ser. No. 227,285
5 Claims. (Cl. 125—15)



1. An abrasive blade comprising a steel center having a radially slotted outer marginal portion forming a plurality of spaced peripheral segments, selected segments having a shorter radial dimension than the other segments, a diamond segment bonded to the peripheral edge of each of said other segments, and an abrasive segment bonded to the peripheral edge of each of said selected segments, said diamond segment having a width greater than the width of said steel center about said outer marginal portion, said abrasive segment having a width greater than said steel center about said marginal portion and not exceeding the width of said diamond segment, and said abrasive segment having the inner bonded edge portion spaced inwardly in offset relation to the corresponding portions of said diamond segment, each of said abrasive segments being of diamond-impregnated material throughout its entire radial thickness from its outer circumferential edge to its inner edge offset inwardly with respect to the inner edges of said diamond segments.

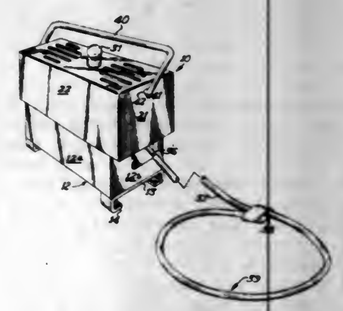
3,128,756
HEATING APPARATUS
Ralph B. Galvin, 614 S. Dunton Ave., Arlington Heights, Ill.
Continuation of application Ser. No. 811,147, May 5, 1959. This application June 27, 1961, Ser. No. 119,901
14 Claims. (Cl. 126—116)

1. A fuel-fired heater mechanism comprising an elongated, combustion chamber defined laterally by a thin-walled heat transfer surface, a fuel burner means situated at one end of said chamber and arranged to deliver a fuel spray in a conical pattern symmetrically of the longitudinal axis of said chamber, and preheater means situated at the end of and away from said combustion chamber opposite from said burner means for delivering preheated combustion air to the flame in said chamber, such combustion air preheater means having spaced apart concentric shells defining between shells an annular pattern of flow paths for the incoming combustion air and also defining between shells an annular pattern of flow paths for the products of combustion discharged from said combustion chamber, and further including means discharging the preheated air as an envelope along the inside of



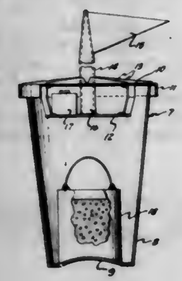
said combustion chamber wall, such envelope being delivered by said preheater means substantially concentrically of said combustion chamber and in counterflow, surrounding relation to said flame so as to be further heated by the flame and so as to mix gradually with and elongate the flame, such air envelope providing efficient fuel combustion and substantially uniform flame temperature throughout the length of the flame while preventing over-heating of any portion of said combustion chamber wall, yet permitting efficient heat transfer from the flame through said combustion chamber wall.

3,128,757
APPARATUS TO PREVENT FREEZING OF ICE FISHING HOLES
William T. Borman, 2201 Jersey Ave., Minneapolis, Minn.
Filed Mar. 30, 1961, Ser. No. 99,432
3 Claims. (Cl. 126—271.1)



1. A portable apparatus to prevent a fishing hole in an ice surface from freezing, a heating chamber structure, a substantially closed receptacle for containing a supply of water therein and being mounted within said heating chamber structure, mechanism for heating the water supply within the receptacle to thereby generate steam within the latter, an elongate tubular conduit constructed of a buoyant flexible non-metallic material and having one end thereof connected with said receptacle in communicating relation with the interior thereof so that steam generated within the receptacle will pass through the conduit, and means adjustably interconnecting the outer terminal portion of the conduit and intermediate portion thereof to thereby define an adjustable generally circular heating loop which when positioned upon the surface of the water within said fishing hole will float and thereby prevent freezing of the water.

3,128,758
ICE HOLE MAKER
Harold C. Schwabe, Rte. 1, Box 187, Grafton, Wis.
Filed Apr. 2, 1962, Ser. No. 184,184
3 Claims. (Cl. 126—360)



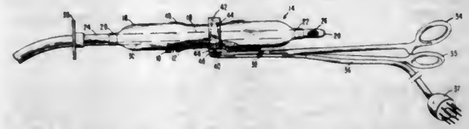
1. An ice hole maker of the character described, comprising a metal bucket of non-corrodible metal having a removable cover to the underside of which is attached a rack, a staff having a pennant protruding upward from the said cover to which it is secured, and a container of liquid fuel placed on the said rack and removable ballast placed in the said bucket which is adapted to be placed in a natural body of water before the same freezes over forming ice, the said bucket, with the ballast and fuel adapted to float at a predetermined depth in the said water, when it is desirable to make a hole in the said ice the said cover can be removed from the said bucket, the ballast can be removed and the fuel can be poured into the bucket and ignited thereby generating heat which acting on the sides of the said bucket melts the ice holding the same within its grip thereby providing a clean ice-chip free opening in the said ice when the said bucket is removed from the said water.

3,128,759
TOOTH VITALITY DETERMINING DEVICE
Richard P. Bellis, Old Bridge, N.J., assignor to The S. S. White Dental Manufacturing Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Mar. 10, 1961, Ser. No. 94,795
10 Claims. (Cl. 128—2.1)



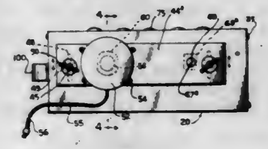
1. A tooth vitality determining device comprising a source of electrical energy, a return electrode for contact with the patient, an insulating electrode holder having an electrode adapted to be applied to the tooth being tested, a voltage dividing device connected to said source and including a voltage selecting element connected to said return electrode with the other electrode having a return connection to the source, a current-measuring device connected in series between said return electrode and the source and effective for indicating the current flowing between the electrodes at the prevailing position of the voltage selecting element, electromotive means to move said voltage selecting element for increasing or decreasing the voltage applied at the electrodes, and electric circuit means including switches for selectively energizing said electromotive means.

3,128,760
VAGOTOMY TEST APPARATUS
David K. Baker, Heston, Middlesex, England, assignor to Winston Electronics Limited, Shepperton, England, a British company
Filed Aug. 21, 1961, Ser. No. 132,748
9 Claims. (Cl. 128—2.1)



1. A device for testing the completeness of the severance of the vagus nerve comprising means for blocking the passage between the esophagus and the stomach, means for creating a predetermined pressure within the stomach, a pair of arcuate electrodes adapted to substantially surround the esophagus, means for pressing the outer wall of the esophagus against said electrodes, means for energizing said electrodes whereby that portion of the esophagus including the vagus nerve between said electrodes is electrically stimulated, and means for measuring the change in said predetermined pressure.

3,128,761
ROLLER MASSAGING MACHINE
Robert D. Smith, 2742 E. Tremont Ave., Bronx 61, N.Y.
Filed Oct. 22, 1962, Ser. No. 231,997
14 Claims. (Cl. 128—58)



1. A portable massage device, comprising a rectangular casing having an open top, open ends, a closed bottom and closed sides, a pair of covers removably secured to the open ends of the casing and closing the same, a pair of supporting plates adjustably mounted on the covers respectively, a pair of endless chains movable in parallel planes inside the casing, freely rotatable rollers carried by the chains and movable in a straight course across the open top of the casing while projecting therethrough, sprockets carrying the chains at opposite end loops thereof, shafts carrying the sprockets and being rotatably carried by said plates, and a motor mounted on one of the plates and operatively engaged with one of the shafts to turn the same whereby the rollers are driven across the casing while the motor is energized.

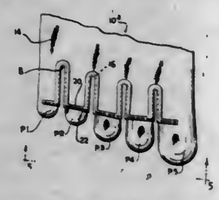
3,128,762
MECHANICAL CONTRACEPTIVES
John C. Young, 135 S. Hiland Ave., Pittsburgh, Pa.
Filed Aug. 23, 1961, Ser. No. 133,378
8 Claims. (Cl. 128—127)



1. In a contraceptive device, a generally cylindrical foamed elastomer member adapted to engage the walls of a vaginal passage in uniform sealing relation, a cervix contacting portion at one end of said member, and the

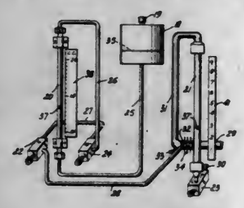
other end provided with integral sheath means on said member said sheath defining a cavity having re-entrant inside wall surfaces with the innermost end of said cavity being spaced from said contacting portion to define an impervious wall portion therebetween, said sheath means adapted to releasably engage a firm member for placement in said vaginal passage by completion of the original inward stroke and released from said firm member by engagement of the said member by said vaginal passage when the original back stroke of the firm member begins.

3,128,763
STOCKING WITH SPECIAL TOE CONSTRUCTION
Andrew G. Langenfeld, 609 W. 151st St., New York, N.Y., and Victor Pare, New York, N.Y. (Homestead Drive, Lake Carmel, N.Y.)
Filed Apr. 2, 1963, Ser. No. 269,987
8 Claims. (Cl. 128—153)



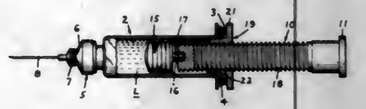
1. A foot garment having a tubular cloth body for fitting on a human foot, said body having an integral toe end with five tubular stalls for receiving individual toes of the foot, said stalls having different lengths and diameters, each stall having a closed free end, each stall being joined at its base end to the toe end of said body with a web between each pair of adjacent stalls, and holders for pads between adjacent walls of adjacent stalls, each of the holders being a band arranged in the form of a loop with sides abutting adjacent walls of adjacent stalls and with a bight abutting the web between the adjacent stalls.

3,128,764
ANESTHESIZING APPARATUS
Wilbur R. Koehn, Sherwood Drive, Sands Point, Long Island, N.Y.
Filed Oct. 6, 1960, Ser. No. 60,829
5 Claims. (Cl. 128—188)



5. Apparatus for controlling and accurately measuring the concentration of anesthetic delivered to a patient comprising a conduit having a mixing element therein in the form of a porous capillary diffusing baffle providing an extended surface to promote evaporation of liquid anesthetic, a container for liquid anesthetic, a conduit connecting the container for liquid anesthetic to the mixing element and including a valve for controlling and a meter for indicating the rate of flow of liquid anesthetic from said container to the mixing element, a container for oxygen, conduit means connecting the container for oxygen to the mixing element and including a valve for controlling and a meter for indicating the rate of flow of oxygen, said liquid anesthetic evaporating into said oxygen in said mixing element to produce any desired ratio of anesthetic to oxygen below saturation as controlled by the valves and indicated by the meters, and an outlet from which the mixture of oxygen and anesthetic is delivered in gaseous form.

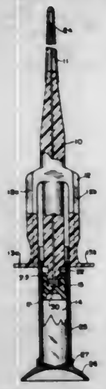
3,128,765
HYPODERMIC SYRINGE AND DOSE DISPENSER
Howard Tint, Havertown, Pa., assignor to American Home Products Corporation, New York, N.Y., a corporation of Delaware
Filed July 17, 1962, Ser. No. 210,426
4 Claims. (Cl. 128—218)



1. A cartridge-syringe unit device adapted for selective gross-ejection and incremental dose-dispensing, said device comprising:
(1) a cartridge having an opening at its distal end;
(2) an ejection member;
(3) means sealing the proximal end of said cartridge and mounting said ejection member thereon in communication with the interior of said cartridge;
(4) a plunger mounted within said cartridge for reciprocation therein, said plunger having connecting means thereon accessible via the opening in said distal end of said cartridge;
(5) an elongate cover for said ejection member, said elongate cover having means at one end thereof for mounting the latter on said device in covering relationship with respect to said member, said cover having at the other end thereof connecting means connectable with said connecting means of said plunger for affixing said cover to said plunger whereby the former is adapted to serve as a push-rod for said plunger when the device is to be used;
(6) a seating member movably mounted on the exterior surface of said combined cover and push-rod, means on said surface to permit relative axial incremental movement between said seating member and said combined cover and push-rod, said seating member being provided with means for selectively maintaining said member within the opening in said distal end of said cartridge in substantially non-rotatable relationship with said cartridge whereby said combined cover and push-rod is adapted to serve as a dose-dispensing actuator upon rotation of said combined cover and rod with respect to said seating member, said seating member also being selectively removable from the opening in said distal end of said cartridge whereby said member may be moved on said surface of said combined cover and push-rod toward the distal end thereof without causing reciprocation of said plunger in said cartridge thereby to adapt said combined cover and push-rod to serve as a gross-ejection actuator upon axial movement thereof into said cartridge.

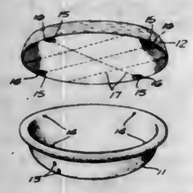
3,128,766
MEDICINAL SYRINGE
Arnold Robert Mizzy, 42 E. 73rd St., New York 21, N.Y.
Filed June 15, 1962, Ser. No. 202,718
12 Claims. (Cl. 128—220)

1. A syringe comprising: an integrally molded plastic one-piece plunger member having a first plunger portion which surrounds and holds a hollow needle, said needle extending longitudinally of said first plunger portion and protruding through both ends thereof, said plunger member also being integrally molded with a pair of upwardly extending arms which are generally parallel to and spaced from said first plunger portion to define a space therebetween, said arms being separated from each other along the lengths thereof, each of said arms terminating in a finger grip member which is generally transverse to said plunger and said arms; a separate generally cylindrical container adapted for holding a quantity of a fluid therein to form a unitary operating device with said



plunger member, said container having an outer diameter less than the distance between the insides of said two arms and an inner diameter greater than the diameter of said plunger first portion extending between said two arms whereby said fluid container can move over said plunger in the space between said plunger and said arms, a seal for one end of said fluid container, said seal being pierced by said needle as said container is moved over said plunger to provide communication between the interior of said container and the hollow needle.

3,128,767
VAGINAL TAMPON DEVICE INCORPORATING MEMBRANE FOR SUBSTANTIALLY BLOCKING INFLOW OF WATER
James J. Nolan, 2311 N. Rosewood, Santa Ana, Calif.
Continuation of application Ser. No. 820,702, June 16, 1959. This application July 16, 1962, Ser. No. 212,184
1 Claim. (Cl. 128—285)



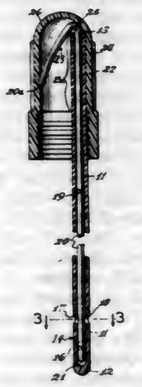
A vaginal tampon device adapted to permit marital relations during the menstrual periods of the wearer without offending her aesthetic sensibilities, which comprises a resilient ring having an over-all diameter such that said ring will seat in the vaginal of an adult human female in contact with both the posterior fornix and the sub-pubic portion of the upper vaginal wall, the cross-sectional diameter of said ring being sufficiently small to prevent said ring from extending a substantial distance away from the sub-pubic portion of the upper vaginal wall when the device is in mounted condition, a substantially impermeable dome-shaped membrane having its peripheral portion associated with said ring, the diameter of said peripheral portion of said membrane being substantially the maximum diameter thereof and corresponding generally to the over-all diameter of said ring, said membrane being thin said membrane being provided with relatively small opening means at one portion thereof to permit escape of menstrual fluid in the event of building up of excessive fluid pressure between said membrane and the cervix, and flexible and characterized by the absence of stiffening elements or braces, and a large-area absorbent pad mounted in said membrane parallel to and adjacent only the inner concave surface thereof, said pad being disposed adjacent the crevix when the device is in mounted condition, said pad having sufficient thickness to absorb substantial quantities of menstrual fluid but insufficient thickness to cause said membrane to come into substantial engagement with the lower vaginal wall when the device is in mounted condition, the outer convex surface of said membrane remote from the cervix being smooth and characterized by the absence of absorbent means.

3,128,768
SURGICAL DRILL
Mikelis Geistauts, St. Paul, Minn., assignor to Rosemount Engineering Company, Minneapolis, Minn., a corporation of Minnesota
Filed Nov. 24, 1961, Ser. No. 154,580
8 Claims. (Cl. 128—305)



1. A surgical drill comprising a hollow chucking mandrel, a slender drill fitted in said mandrel and having its bit end projecting from said mandrel, a helical coil spring slidably mounted over an exposed part of said drill and being of diameter to snugly fit said drill, a telescopic sleeve composed of at least two sections mounted over said drill and spring and attached to said mandrel, means to prevent said spring from moving axially out of said telescopic sleeve, said telescopic sleeve having an aperture therein through which the drill is adapted to be projected as the sleeve is telescoped.

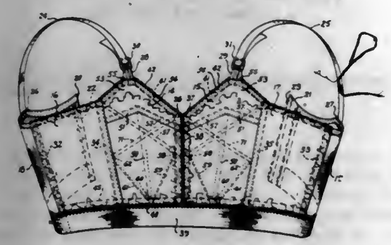
3,128,769
CATHETER ASSEMBLY
Henry M. Scislowicz, Lake Bluff, Ill., assignor to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois
Filed July 23, 1962, Ser. No. 211,504
1 Claim. (Cl. 128—348)



In a catheter assembly: a longitudinally extending tubular catheter having a closed, rounded distal end, a

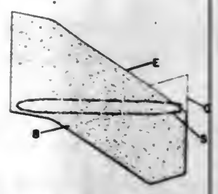
longitudinally extending passage defined by said catheter and terminating at said closed end, a plurality of spaced apertures defined by said catheter proximate the distal end thereof, a semi-rigid stiffener disposed in said passage, said stiffener having a rounded distal end disposed between said apertures and the distal end of said passage and a reversely directed proximal end portion extending beyond the proximal end of said catheter and a flexible-walled hollow cap having an open end and overlying the proximal end portion of said catheter whereby the proximal end of said stiffener is imbedded in the inner wall of said cap and said proximal end portion of said stiffener resiliently biases the proximal end portion of said catheter against the inner wall of said cap.

3,128,770
BRASSIERE
Mario Laguzzi, Long Island City, N.Y., Ann F. Martelli, Ridgewood, N.J., and Jack E. Robbins, Larchmont, N.Y., assignors to Poirette Corsets, Inc., New York, N.Y.
Filed July 16, 1963, Ser. No. 295,338
2 Claims. (Cl. 128—484)



1. In a brassiere construction, a pair of complementary front cup panels (14—15), each having an inner side strip (36—37), said inner side strips being secured together at the center (38), and an outer side strip (34—35), an inelastic side panel (16—17) secured to each outer side strip, and an elastic back panel (18—19) secured to each side panel, complementary fastening means at the ends of the back panels (22—23), and an elastic bottom strip (39) extending substantially the full length of the brassiere, each front cup panel comprising an inelastic cup-shaped outer front panel (15) and a pair of one-way stretch elastic inserts (56—70), each insert comprising a quadrangular member, one of said inserts (56) having one side secured to a portion of said outer strip (35) extending from the top thereof to an intermediate point (62) thereof, a second side (61) extending angularly from said intermediate point to said bottom strip (39) at substantially the center (60) of the inelastic outer panel, and secured along its length to said outer panel, a third side (59) extending from said bottom strip at the center of the inelastic outer panel to an intermediate point (58) of said inner strip and secured to said inelastic panel and a fourth side (57) extending from said intermediate point of said inner strip to the top of said outer strip and being unsecured along its full length, the other of said inserts (70) having a first side secured to said inner strip (37) and extending from the top thereof to said intermediate point (58) thereof, a second side extending along and secured to the third side of said one insert, a third side extending along and secured to the second side of said one insert, and a fourth side (71) extending diagonally from said intermediate point (58) on said outer strip to the top of said inner strip (35), crossing said fourth side (57) of said one insert at an intermediate point between said inelastic outer panel and said one insert being unsecured to said inelastic panel and unsecured to said fourth side of said one insert (56) to permit relative movement of said fourth side (57) of said one strip and said fourth side (71) of said other strip and said inelastic panel (15) relative to each other.

3,128,771
TOBACCO PRODUCT AND METHOD FOR MAKING SAME
Sterling T. Gustavson, Rosedale, and Victor G. Hanson, Brooklyn, N.Y., assignors to International Cigar Machinery Company, a corporation of New Jersey
Original application Nov. 23, 1956, Ser. No. 624,067, now Patent No. 3,016,779, dated Jan. 16, 1962. Divided and this application Apr. 7, 1961, Ser. No. 108,228
9 Claims. (Cl. 131—15)



1. The method of forming tobacco binders for cigars having at least one reduced end from a continuous web source comprising selecting a web source having a width substantially equal to the length of a cigar to be wrapped, advancing a portion of said web source a distance shorter than said web width and correlated to the diameter of said cigar, making a single irregular substantially transverse severance of said web to separate said advanced portion and reducing said portion in the region which is to cover said reduced end of the cigar by removing a single small tab therefrom.

3,128,772
SMOKING TOBACCO ADDITIVES IN THE FORM OF MENTHYL ETHERS
Charles H. Jarboe and John G. Esterle, Louisville, Ky., assignors to Brown & Williamson Tobacco Corporation, Louisville, Ky., a corporation of Delaware
No Drawing. Filed Nov. 19, 1962, Ser. No. 238,763
14 Claims. (Cl. 131—17)

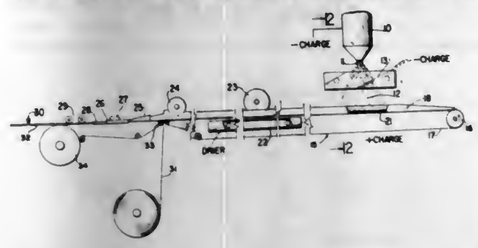
10. A smoking tobacco product which has the cooling characteristics of menthol without the distinctive taste, flavor and aroma of menthol which comprises a smoking tobacco material and a menthyl ether which volatilizes below the pyrolysis temperature of a smoking tobacco product and which has the following formula:

$$R—O—R'$$

in which R is menthyl and R' is an organic radical selected from the group consisting of aliphatic, aromatic and heterocyclic radicals.

3,128,773
CIGARETTE MAKING MACHINE
Morehead Patterson, New York, N.Y., assignor to American Machine & Foundry Company, a corporation of New Jersey
Filed Mar. 15, 1961, Ser. No. 95,885
11 Claims. (Cl. 131—61)

9. Apparatus for making cigarette rods comprising means for spraying a tobacco slurry having a charge of one sign, first and second electrodes disposed on opposite sides of the spray and having a charge of the same sign as the spray to decrease the cross sectional area of the spray, a third electrode disposed centrally of the spray between the first and second electrodes and having a charge of opposite sign to that of the spray to also decrease the cross sectional area of the spray, a conveyor disposed below the first and second and third electrodes including a plurality of rollers and a belt trained on the rollers, a guide to hold the upper run of the belt of the conveyor in a U shape, the belt of the conveyor receiving the spray, a fourth electrode disposed between the belt of the conveyor and the guide and having a charge of opposite sign to that of the spray to attract the spray to the belt, a drier disposed below the upper run of the belt of the conveyor to dry the tobacco slurry, and means receiving the tobacco slurry from the belt of the conveyor and forming it into a cigarette rod.



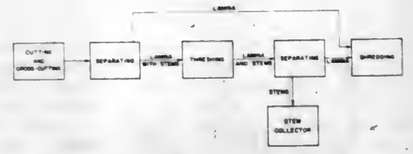
3,128,774
TOSCANI CIGAR MACHINE
Sigurd Clausen, Brooklyn, N.Y., assignor to International Cigar Machinery Co., a corporation of New Jersey
Original application May 24, 1956, Ser. No. 587,168, now Patent No. 3,033,210, dated May 8, 1962. Divided and this application July 6, 1961, Ser. No. 122,130
4 Claims. (Cl. 131—91)

1. In a Toscani machine having a means adapted to trim the end of a cigar and adjacent knurling means adapted to knurl said end of the cigar, a plate member, a cam and linkage operative to reciprocate said plate member alongside said trimming means to remove adherent trimming therefrom, a further member and means subsequently operative to actuate said further member so that it sweeps across said plate member in engagement therewith, to remove adherent trimming from said plate member.

3,128,775
METHOD FOR PROCESSING TOBACCO FOR USE IN THE MANUFACTURE OF CIGARETTES
Oswald Erich Eissmann, Richmond, Va., assignor to American Machine & Foundry Company, a corporation of New Jersey
Filed Jan. 18, 1961, Ser. No. 83,545
4 Claims. (Cl. 131—146)

3. A method of producing uniformly shredded tobacco comprising the steps of:

(*a*) neatly cutting and cross-cutting natural tobacco leaf into pieces larger than shred size having a substantially uniform, definite shape,



(*b*) subjecting said pieces to a separating operation to segregate pieces containing tobacco stem and rib portions from pieces containing essentially only tobacco leaf, and

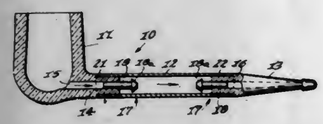
(*c*) shredding said pieces thereby separated and containing essentialiy only tobacco leaf.

3,128,776
PIPE CONSTRUCTION
Bryant Bigelow, 105 N. Main St., South Yarmouth, Mass.
Filed Aug. 8, 1962, Ser. No. 217,239
2 Claims. (Cl. 131—184)



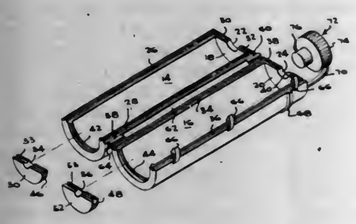
1. An improved smoking device comprising a member for holding and burning a quantity of tobacco, said member being formed with a tubular extension having a central passageway and a radial slot intersecting said passageway, a pipe stem element comprising a cylindrical sleeve secured at its inner end to the tubular extension, a mouthpiece formed with a smoke passageway and constructed with a reduced inner end and an intermediate shouldered portion, said shouldered portion being snugly fitted into the pipe stem element at the outer end thereof in a position such that the reduced inner end of the mouthpiece element extends into the pipe stem in spaced relation to its inner peripheral surface, a helically coiled spring received in the pipe stem and arranged to have helical turns thereof engaging the reduced inner end of the mouthpiece, a radially compressible absorbent body held within the helical turns of the spring, said spring having an outer diameter normally greater than the inner diameter of the pipe stem member and being radially compressed to tightly engage with the pipe stem and the reduced inner end of the mouthpiece to detachably secure these parts to one another in a manner such that they may be disengaged by twisting the spring in one direction only, said absorbent body being radially compressed and held by the radially compressed spring and cooperating with the spring and cylindrical stem element to form a helical duct along which smoke may travel, and said helical turns of the compressed spring being adapted to exert a pressure radially outwardly against the inner peripheral surface of the stem member and to constitute means for scraping and cleaning the stem element when the coiled spring and mouthpiece are removed therefrom, and said radial slot providing communication between the helical duct and the member for holding tobacco.

3,128,777
MEANS FOR REMOVING MOISTURE IN SMOKING PIPES
Anthony Romeo, 1695 Fevereisen Ave., Bohemia, N.Y.
Filed Mar. 18, 1963, Ser. No. 265,745
1 Claim. (Cl. 131—211)



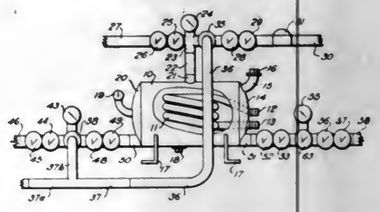
A smoking pipe of the class described comprising, in combination, a bowl having a short extension, a hollow stem secured to said extension, a bit secured to said stem, said bowl having an opening, said bit having an opening, means whereby said openings communicate with the interior of said hollow stem and means to trap and condense the moisture in the smoke, said means comprising a tubular element within each opening of said bowl and bit, each said tubular element having an enlarged head at one end, said heads being arranged in opposed position relative to each other, each of said enlarged heads comprising a radially outwardly extending flange adjacent a cylindrical portion of said tubular element, a terminal portion adjacent said flange, said terminal portion having a configuration of a frustum of a cone, said terminal portion comprising a hollow element having the base of said cone adjacent and integral with the peripheral edge of said flange, and the opposite end of said cone having an opening therethrough.

3,128,778
HAIR-TREATING DEVICE
Robert F. J. Ricci and Alphonse J. Gaudio, both of 239 Clinton Ave., New Haven, Conn.
Filed Aug. 17, 1962, Ser. No. 217,566
3 Claims. (Cl. 132—9)



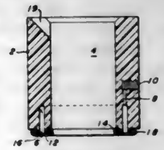
1. A hair-treating device comprising an elongated substantially hollow cylindrical member including a pair of axially-elongated semi-cylindrical sidewalls, means pivotally connecting together a pair of adjacent edges of said sidewalls, means disposed on the other pair of adjacent edges of said semi-cylindrical members releasably securing said sidewalls in closed position, each of said sidewalls at a pair of adjacent ends thereof having a semi-cylindrical end wall fixedly secured thereto, each of said end walls having an opening extending therethrough to admit into said device a hair-treating liquid, means for plugging said openings, said sidewalls adjacent their respective other ends having, respectively, a semi-circular insert secured thereon, and said inserts having openings extending transversely therethrough to admit and to pass hair strands therethrough and into said device.

3,128,779
LINE CLEANING EQUIPMENT
Frank E. Morris, 4435 NE. Prescott St., Portland, Oreg.
Original application Dec. 21, 1953, Ser. No. 399,492, now Patent No. 2,974,071, dated Mar. 7, 1961. Divided and this application Mar. 2, 1961, Ser. No. 92,895
7 Claims. (Cl. 134—107)



7. In line cleaning equipment: a reservoir pressure and heating tank having an outlet; a source of pressure connected to said reservoir pressure and heating tank; an inner cross-head with multiple valvularly controlled outlets connected to the outlet of said reservoir pressure and heating tank; a pump connected to an outlet of said inner cross-head; an outer cross-head with multiple valvularly controlled outlets connected to said pump; a pre-heating and reheating device connected to an outlet of said outer cross-head; a source of heat connected to said reservoir pressure and heating tank and to said pre-heating and reheating device; and the remaining outlets of said inner and outer cross-heads being connectible to a supply line, a return line and a vent line of a pipe system and to a waste receptacle, thereby permitting alternate introduction of a cleaning agent into, and its withdrawal from, said lines and receptacle.

3,128,780
VACUUM-SEALED CHAMBER FOR COATING-STRIPPING SOLUTION
Louis P. Worrell, Clairton, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Oct. 26, 1962, Ser. No. 233,360
5 Claims. (Cl. 134—201)



1. Apparatus for stripping protective coating material from the surface of a flat coated product comprising a body member having a solution receiving cavity formed therein and opening in one outer face thereof, a pair of concentric ribs encompassing said opening and extending outwardly from said face, a first resilient O-ring disposed outboard around the outer of said ribs, a second resilient O-ring disposed inboard around the inner of said ribs, an annular groove extending into said body member from said face between said ribs and a passageway connecting said groove through the wall of said body member to a source of vacuum external of said member.

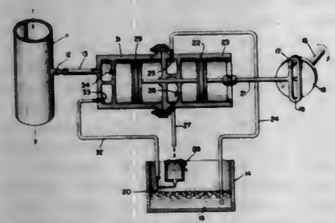
3,128,781
TENT
Arthur J. Kirkham, 24 W. 5th S., Salt Lake City, Utah
Filed Oct. 3, 1962, Ser. No. 228,110
10 Claims. (Cl. 135—1)

1. Tent construction, including a covering of flexible sheet material fabricated to have a ridge and gabled ends when erected, and supporting structure adapted to hold said covering in taut, erected condition, said structure comprising a ridge member; a pair of elongate resilient members; interengaging means carried by the covering and at opposite ends of the resilient members, respectively, for anchoring the resilient members to the covering in horizontal positions intermediate the height of the tent and transversely of said gabled ends; and a pair of elongate



upright members which are adapted to engage, intermediate their lengths said resilient members, respectively, intermediate their lengths and whose upper ends are adapted to engage respective opposite ends of the ridge member, whereby movement, to final positions, of the lower portions of the upright members in mutually opposite directions outwardly of the tent on said ridge connections as fulcrums will bow the respective resilient members outwardly of the tent and stretch the covering taut.

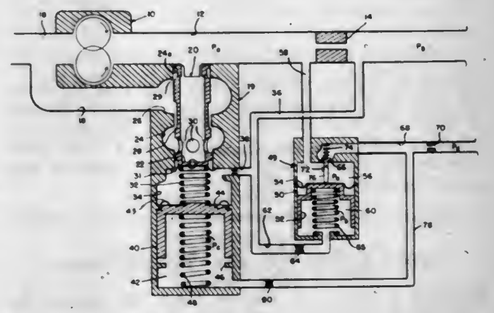
3,128,782
SMALL VOLUME FEEDER PUMP AND PROCESS OF PROPORTIONAL FEEDING
Alexander S. Limpert, 121 S. Clinton Ave., and Robin J. Limpert, 12 S. Atlantic St., both of Bay Shore, N.Y.
Filed Feb. 13, 1961, Ser. No. 88,798
8 Claims. (Cl. 137—1)



6. The process of proportioning one liquid containing an entrained gas with another liquid flowing under desired pressure and having a particular rate of flow, which comprises supplying a flow of said one liquid at a flow rate which is arbitrarily large, repetitively intercepting and measuring out discrete and predetermined-volume portions of liquid from said flow of said one liquid at a uniform rate of repetition, injecting each said measured-out portion of said one liquid together with an arbitrary amount of entrained gas into said other liquid, and adjusting the said repetition rate of said interception, measuring, and injection to provide a predetermined concentration of said one liquid in said other liquid at the said particular rate of flow of the said other liquid.

3,128,783
BYPASS VALVE WITH LIMITED RESET
Warren H. Cowles, Detroit, and John E. Smith, St. Clair Shores, Mich., assignors to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan
Filed Feb. 11, 1957, Ser. No. 639,294
3 Claims. (Cl. 137—117)

1. A pressure regulating system controlling the pressure drop $P_a - P_b$ across an orifice located in a conduit of a hydraulic circuit wherein P_a is the pressure in the conduit upstream of the orifice and P_b is the pressure in the conduit downstream of the orifice, said pressure regulating system comprising a bypass valve assembly including a movable bypass valve adapted to be connected at one side to the pressure P_a in the conduit, a housing, a movable wall forming a resettable spring seat spanning the interior of said housing and dividing said housing into a pair of compartments, a spring in one of said compartments engageable with said spring seat and the other side of said bypass valve and acting in a direction to close said valve, a servo valve assembly including a housing having a movable wall therein which divides said housing into a pair of chambers, a valve port in said last-mentioned housing in fluid communication with one of said chambers, first passage means adapted to connect the pressure P_b to the other of said chambers and also to said one compartment tending to cause movement of said spring seat in a direction to decrease the effectiveness of said spring, second passage means adapted to connect the pressure P_a to said one chamber, third passage means connected to said valve port and having a fixed restric-

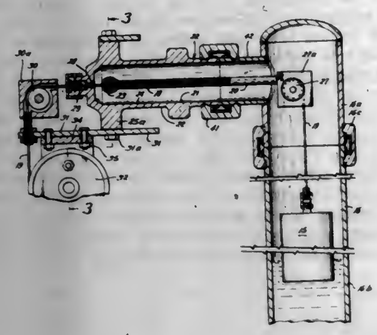


tion therein, a movable servo valve cooperating with said valve port to form a variable orifice in said third passage means, said variable orifice and said fixed restriction being located in series in said third passage means with the pressure intermediate said variable orifice and said fixed restriction being P_c and the pressure downstream of said fixed restriction being P_d, the differential pressure across the wall in said servo valve assembly being effective to control the position of the servo valve relative to said valve port to determine the size of said variable orifice, and fourth passage means connected to said third passage means at a point intermediate said variable orifice and said fixed restriction and to the other of said compartments so as to also subject said spring seat to pressure P_c whereby said spring seat is reset in accordance with a change in the pressure differential $P_b - P_c$, the pressure P_c intermediate said variable orifice and said fixed restriction constituting a modulated fluid pressure which is less than pressure P_a but greater than pressure P_d, said servo valve being moved towards a closed position whenever the pressure differential $P_a - P_b$ across the wall in said servo valve assembly increases.

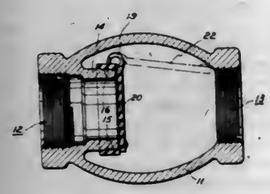
3,128,784
WIDE RANGE LIQUID LEVEL CONTROL DEVICES
Asbury S. Parks, Houston, Tex., assignor to Dover Corporation, Tulsa, Okla., a corporation of Delaware
Filed Aug. 4, 1961, Ser. No. 129,480
15 Claims. (Cl. 137—172)

1. A liquid level control device including, a housing, a tubular float support arm having one end pivotally

mounted within said housing and its other end projecting into an area in which liquid level is to be controlled, a float element responsive to changes in liquid level and disposed in said area, a flexible line having one end attached to the float element and extending upwardly to and through the tubular float support arm, the opposite end of the line extending outwardly from the housing whereby it is accessible from the exterior of the area in which the float element is mounted, and means for attaching said outer end of said line to a fixed point, whereby the float element is suspended from the free end of the float support arm.

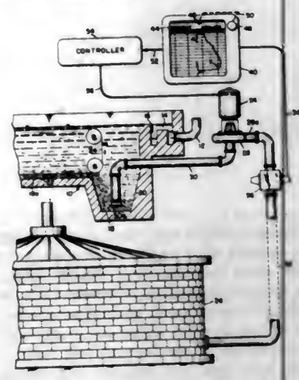


3,128,785
CHECK VALVE FOR RELATIVELY LARGE SIZE PIPES
Frederick J. Krummel, East St. Louis, Ill., assignor to Walworth Company, New York, N.Y., a corporation of Massachusetts
Filed Mar. 15, 1961, Ser. No. 96,000
5 Claims. (Cl. 137—315)



1. A hollow valve body within which is an inwardly projecting nozzle, said valve body having a pipe connection opening opposite said nozzle and being in combination with a one-piece check valve unit of flexible resilient material, said check valve unit including as integral parts thereof a ring larger than the pipe connection opening and capable of being placed on the nozzle, a check valve hinged to the ring by integral flexible hinge members and having a pair of reinforcing plates imbedded in and completely surrounded by the flexible resilient materials of said check valve, said plates being spaced from each other along a central line and separated by a flexible area of said material, the entire check valve unit including the ring and valve member being capable of being compressed to a size to be inserted through the pipe connection opening and the ring put in place on the nozzle.

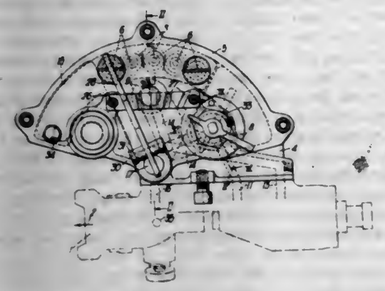
3,128,786
RADIATION DENSITY GAUGE CONTROL OF SLUDGE TRANSFER OPERATIONS IN SEWAGE WORKS
Charles O. Badgett, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Nov. 27, 1959, Ser. No. 855,856
2 Claims. (Cl. 137—467.5)



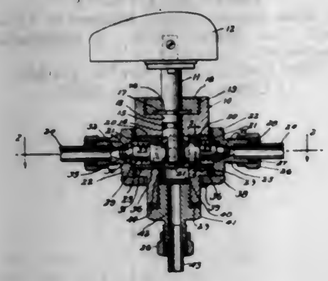
1. Apparatus for controlling the removal of sludge from a settling tank so as to withdraw therefrom only sludge having a desired solids content, which comprises sludge withdrawal means in connection with said settling tank for providing a flow of sludge from said tank, means for directing a beam of penetrative radiation selected from the group consisting of gamma rays, X rays, beta rays and neutrons across the path of said flow, means for quantitatively detecting a portion of said radiation which has been modified by interaction with the mass of said flow to provide an indication of the density of said flow, means for initiating operation of said sludge withdrawal means to start said flow, means for maintaining said operation for an interval not less than the time required for said flow of sludge to travel the distance from said settling tank to said detecting means regardless of said density indication, means responsive to said density indication for terminating said operation after the lapse of said interval when said density indication has been reduced to a selected value, and alarm signal means activated by failure of said density indication responsive means to terminate said operation within a pre-determined period of time after said lapse of said interval.

3,128,787
LIQUID SPRAYING GUNS
Howard Richard James Knight, Leamington Spa, England, assignor, by mesne assignments, to Howard Vincent Schweitzer, Cleveland, Ohio
Filed June 6, 1961, Ser. No. 115,159
Claims priority, application Great Britain June 15, 1960
8 Claims. (Cl. 137—594)

1. A service unit for a spray gun, said unit comprising a housing having a plurality of liquid entry ports and a liquid outlet passage, a valve member located in said housing and including a passage selectively connectable between said liquid outlet passage and any one of the liquid entry ports, said housing including an atomizing air entry port communicating with an atomizing air passage by which atomizing air is passed to a gun, a control air entry port communicating with a control air passage by which control air is delivered to a gun, an auxiliary passage in said housing connecting the atomizing air entry port and control air passage, and a cock operable to obturate the auxiliary passage from the atomizing air entry port and to connect said port to the atomizing air passage or to open the auxiliary passage to the atomizing air entry port and close the atomizing air passage whereby atomizing air may be diverted to the control air passage.

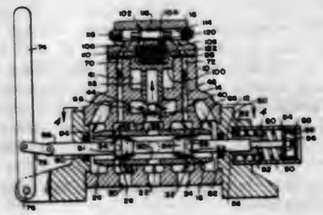


3,128,788
FLUID SWITCHING VALVES
Angus W. Millard, Tyle Cottage, Tylers Green, Godstone, Surrey, England, assignor of one-half to Drallim Industries Limited, Upper Warlingham, Surrey, England, a British company
Filed Aug. 23, 1960, Ser. No. 51,391
Claims priority, application Great Britain Aug. 26, 1959
11 Claims. (Cl. 137—595)



1. A multiple port device having
(*a*) a main body,
(*b*) a central cylindrical control spindle supported in said body,
(*c*) said body having a plurality of openings therein each having its axis radially disposed with respect to the axis of said spindle, each of said openings having an internal thread,
(*d*) a plurality of valve inserts, one of which is mounted in each of said openings, each valve insert including a threaded cylindrical portion adapted to engage the thread of the opening in which it is mounted,
(*e*) the cylindrical portion of each valve insert having an external flange at its outer end and having a cylindrical opening therein,
(*f*) each of said valve inserts having a tapered opening connecting with its cylindrical opening and extending radially outwardly, the major diameter of each tapered opening being smaller than the diameter of the cylindrical opening to form a shoulder at the outer end of said cylindrical opening,
(*g*) a plurality of movable valve members, one of which is mounted in each valve insert in its cylindrical opening,
(*h*) each of said valve members having an enlarged inner end portion to position it in the cylindrical opening in which it is mounted, each enlarged inner end portion being shaped to provide a passage past it and the wall of said valve insert to provide for fluid transfer,
(*i*) each of said valve members having a stem extending from said enlarged inner end portion to form a shoulder, each of said stems extending into said tapered opening and having a groove with a resilient sealing ring at its outer end to engage said tapered channel when the valve member is held in the outer position by engagement of the inner end of the valve member by said spindle cylindrical surface,
(*j*) a plurality of spring elements, one of which is mounted to react between the shoulder of each valve member and the shoulder of the valve insert in which it is mounted to urge the valve member inwardly toward said spindle,
(*k*) said main body having a common chamber around said control spindle adjacent the inner ends of said valve units,
(*l*) said spindle having a flattened portion in its cylindrical surface in the plane of the valve members, said spindle being rotatable to bring said flattened portion into sequential registry with the inner end of each said valve members to permit it to open under the urging of its spring element to provide a flow channel by way of said tapered opening past the valve member and connecting with said common chamber.

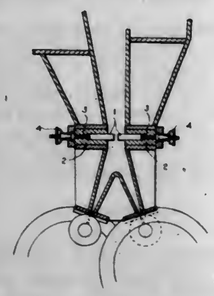
3,128,789
FLUID CONTROL VALVE
William Wagner, 825 Farmleigh Road, West Vancouver, British Columbia, Canada
Filed Jan. 9, 1961, Ser. No. 81,577
11 Claims. (Cl. 137—596.13)



10. A fluid flow metering and directional control valve comprising a housing formed with a valve cylinder having a pair of longitudinally spaced load ports and a supply port intermediate said load ports for connection to a high pressure fluid source, said cylinder having a return port intermediate the load ports, an adjustable flow control element adapted to open and close the return port and biased to close said return port, said control element having first and second opposed and equally effective operating surfaces, separate passage means extending from each load port to the first surface of said control element to direct fluid from said load port to said first surface to move the element towards the return port closing position, the second surface of the control element being exposed to fluid at the supply port, control means in and common to both of said passage means adapted partially to close both passage means and movable by fluid in either passage means to shut off the other passage means, a by-pass passage extending from each of said passage means through the cylinder and to the return port, and a valve spool mounted in the cylinder and having a neutral position closing off both

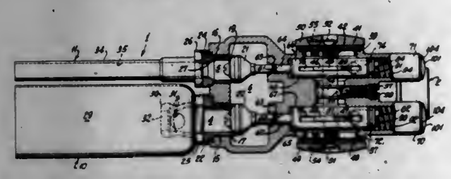
load ports from the supply port and connecting each by-pass passage to a load port, said valve spool being movable axially of said cylinder for selectively connecting the supply port to one of said load ports and to the passage means of said selected load port, and to close the by-pass passage of the latter passage means to cut off said selected load port from the return port, said flow control element being responsive to changes in the pressure difference between the selected load port and the supply port as determined by the amount of displacement of the valve spool from its neutral position thereby to maintain a substantially constant rate of fluid flow to the selected load port regardless of load pressure.

3,128,790
STOCK INLET
Vivian S. Grater, Beaconsfield, Quebec, Canada, assignor to Dominion Engineering Works Limited
Filed Dec. 5, 1960, Ser. No. 73,767
1 Claim. (Cl. 137—605)



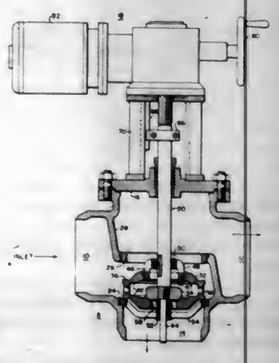
A stock inlet for paper machine headboxes comprising two sources of stock, a pair of convergent ducts each fed upwardly and exclusively from one of said two sources of stock and terminating in a common duct, two independently adjustable elongated control plates having opposed sharp-edged lips arranged transversely of said common duct, and in opposed alignment, said lips being substantially normal to said common duct and forming a constriction therein, said plates being adjustable along their length and having plural means of adjustment mounted thereon in an evenly spaced arrangement, whereby the adjustability of the plates may be controlled at various points along their lengths, thus controlling the thickness of the incoming stock.

3,128,791
DUAL STREAM NOZZLE AND VALVE
Walter M. Haessler, Chatham, and Arthur R. Blair, Clifton, N.J., assignors to The Fyr-Fyter Company, Dayton, Ohio
Filed July 6, 1961, Ser. No. 122,232
3 Claims. (Cl. 137—609)



1. A valve comprising a valve body having an inlet and at least one outlet, the inlet offset at one end of the longitudinal axis of the valve body and the outlet at the opposite end of the longitudinal axis of the valve body, means in the valve body defining a valve operating chamber in alignment with the outlet and positioned at one side of the offset inlet, means in the valve body defining a valve chamber in fluid communication with the inlet and outlet, valve seat means about the outlet in the valve chamber, a valve member in the valve chamber adapted to engage the valve seat, a valve stem for the valve member extending into the valve operating chamber, sealing means about the valve stem closing off fluid communication between the valve chamber and the valve operating chamber, a shaft extending across the valve operating chamber, enlarged bearing means for the shaft at each end thereof, the bearing means journalled in the wall of the operating chamber, end members at opposite ends of the shaft positioned outwardly of the bearing means, the end members preventing axial movement of the shaft, a valve operating rod at one end operatively engaging the valve stem, guideway means in the valve body for the valve operating rod, spring means at the other end of the valve operating rod urging the valve operating rod into valve member seating position, the valve operating rod having two slots therethrough one slot being at right angles to the other slot, the shaft extending through one slot, a cam member carried by the shaft for rotation thereby, the cam member positioned in the other slot in the valve operating rod, ball bearing means in the valve operating rod providing bearing surfaces for the cam member, and a handle engaging at least one of the end members for rotation of the shaft, the handle swingable in the directions toward the inlet and towards the outlet, the valve member being closed when the handle is towards the outlet.

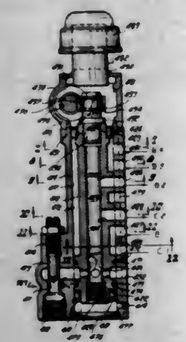
3,128,792
THREE-WAY VALVE
Clinton Rule, Beverly, Mass., assignor to Atwood & Morrill Co., Salem, Mass., a corporation of Massachusetts
Filed June 12, 1962, Ser. No. 201,854
2 Claims. (Cl. 137—625.5)



1. A three-way valve comprising a valve body having an inlet and a pair of outlets, passages in the body from the inlet to each of the outlets, the passages for the outlets having circular seats facing one another in spaced coaxial relation, a main poppet valve intermediate said seats and having oppositely facing external circular seats aligned with the seats in the outlet passages in the valve body, an axially-movable actuating stem extending from outside the valve body axially through the seat openings in the outlet passages and through the main poppet therebetween, axially spaced bearing means carried by the main poppet in sliding engagement with the stem, bearing means positioned within one of the outlet passages in the valve body in sliding engagement with the stem adjacent the main poppet for centering support of said stem and main poppet, the main poppet having a generally circular

chamber within the poppet body, said chamber having axially spaced walls, a pilot poppet within the chamber and secured to the stem, said pilot poppet having oppositely facing circular seats, the main poppet having circular seats within the chamber on the opposite axially spaced walls thereof, said seats being aligned with the seats on the pilot poppet and of lesser diameter than the external seats on the main poppet, passages in the main poppet extending intermediate the spaced external seats thereof into the chamber within the poppet for flow communication from valve inlet to poppet chamber, and other passages in the main poppet intermediate the valve stem and the seats for the pilot poppet for flow communication through the chamber past the pilot poppet to a valve outlet when the main poppet is seated on said outlet and the pilot poppet is out of seating engagement with the main poppet.

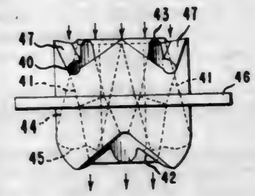
3,128,793
SELECTOR VALVE
Carl E. Schou, Oshkosh, Wis., assignor to Rockwell-Standard Corporation, Coraopolis, Pa., a corporation of Pennsylvania
Original application Mar. 9, 1956, Ser. No. 570,462, now Patent No. 3,023,640, dated Mar. 6, 1962. Divided and this application July 18, 1960, Ser. No. 43,539
2 Claims. (Cl. 137—625.23)



1. A hydraulic valve rotor comprising an elongated hollow body having along its length a correlated series of laterally open hollow bosses for selective discharge of liquid from the interior of said body, bearing support means at opposite ends of said body, means closing both ends of said body, the closure means at one end comprising a plug rigid with the body and mounting a drive gear outside the body, means providing an annular liquid inlet passage on the body surface at the opposite end from said gear and connected by radial openings into said body interior, and annular seal means on the periphery of said body at opposite sides of said annular inlet passage.

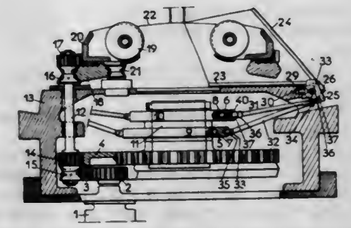
3,128,794
FLUID FLOW INVERTER
Donald Frederick Boucher, New Castle, and Byron Christos Sakiadis, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Continuation of application Ser. No. 835,350, Aug. 21, 1959. This application Jan. 8, 1963, Ser. No. 250,161
4 Claims. (Cl. 138—37)

1. An improved fluid flow inverter device in combination with a closed cylindrical fluid conduit for handling a moving fluid stream having a relatively high viscosity, said device comprising an integral housing unit adapted to be fitted and positioned in a fluid-tight arrangement within such a closed conduit conforming to the inner surface thereof, said housing comprising a first fluid directing portion for separating an annular outer portion of fluid in the conduit from the fluid in the central portion of such a conduit and simultaneously smoothly deflecting the separated outer portion laterally angularly into a first channel means, said first channel means operatively joined with said first fluid directing portion to direct the separated deflected outer portion fluid into the central portion of the conduit downstream of the device,



said housing further comprising a second channel means constructed and arranged to direct the incoming central portions of the fluid outwardly downstream of the device, said housing further comprising a second fluid directing portion for receiving outwardly directed fluid from the central portion of the incoming fluid and smoothly distributing it into the annular outer portion of the conduit downstream of said device, the construction and arrangement of all of said means such that undesirable turbulence and flow resistance in the conduit are minimized.

3,128,795
CIRCULAR LOOM
Philippe Burnel, 1 bis Blvd. Richard Wallace, Neuilly-sur-Seine, France
Filed July 25, 1960, Ser. No. 44,974
Claims priority, application France Aug. 4, 1959
5 Claims. (Cl. 139—13)



1. A circular loom including shuttle carriers, means including a first internal series of waisted shuttle supporting rollers mounted for idle rotation in a fixed frame, and an external second series of waisted shuttle supporting rollers mounted on vertical spindles, said second series of rollers carrying pinions for driving said shuttle carriers.

3,128,796
COMBINED SHUTTLE BOX CHANGING MECHANISM AND LAY MOTION
Carl P. Bergstrom, Millbury, and Raymond F. Dion, Worcester, Mass., assignors to Crompton & Knowles Corporation, Worcester, Mass., a corporation of Massachusetts
Filed Dec. 27, 1962, Ser. No. 247,581
2 Claims. (Cl. 139—171)

1. In a loom operating with a plurality of shuttles and with a multi-cell shuttle box therefor vertically shiftable by a pair of coacting drop box levers, including an intermediate lever operatively connected to said box and also operating with a lay reciprocated by a crank and driven

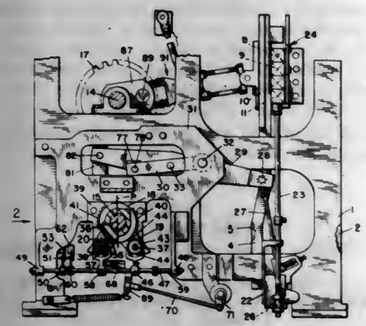
thereby through front, top, back, bottom and back to front center positions during loom operation, the combination of

(*a*) lay retarding means including control means between the crank of the lay and a stationary part of the loom to induce retardation of the lay during shuttle flight thereacross,

(*b*) an inverted shuttle box changing mechanism operatively connected to said drop box levers to selectively move the latter to cause shifting of said shuttle box in interconnected time relationship with the lay to place one or another of said shuttles in picking position with respect to said lay incident to retardation thereof,

(*c*) whereby said combination permits increased loom speeds without a proportional increase in shuttle velocity,

(*d*) toggle means forming part of said control means between the crank and the lay comprising a crank connector including two parts, one end of the connector pivotally mounted on the crank and the other end thereof pivotally mounted on the lay,



(*e*) a pivot pin substantially intermediate and pivotally connecting said two parts to form said crank connector,

(*f*) an upright swing rod forming part of said toggle means and having its lower end pivotally mounted on said pin and its upper end pivotally connected to a stationary part of the loom,

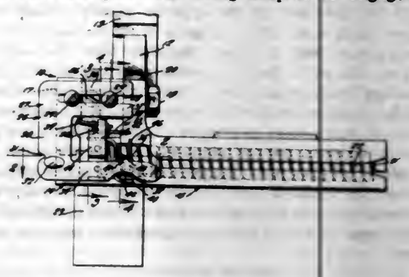
(*g*) said toggle means being in a substantially locked position when the lay is at front center position and unlocked when the lay is at top and bottom center positions by reason of said swing rod, said two parts of said connector each including a yoke, the yoke on said one of said parts having a pair of bolts extending rearwardly therefrom and held to a bearing on the crank, and the yoke on said other of said parts having a pair of bolts extending forwardly therefrom for operative connection to the lay,

(*h*) one of said yokes being nestled within the other and said yokes being articulated to each other by said pin,

(*i*) said swing rod having the lower end thereof pivotally connected to said pin centrally of said yokes.

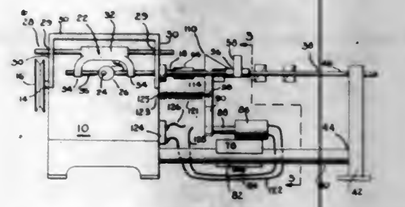
3,128,797
FABRIC EDGER
Leslie D. La Valley, 243 Shamrock Road, Charlottesville, Va.
Filed Jan. 31, 1962, Ser. No. 170,070
5 Claims. (Cl. 139—266)

1. In a loom including a loom reed, a temple head assembly spaced from said reed, a temple roll supported on said assembly, and an electric thread parting device carried by said assembly, a guide bar disposed in the space between said reed and said roll and projecting from said assembly, and an upwardly directed shoulder disposed adjacent said thread parting device and carried by said guide bar, said guide bar being adapted to engage the



selvage portion of a web being woven on said loom and to lift said portion to said shoulder, said shoulder being adapted to engage filling threads projecting from said selvage portion and to force said threads against said device for parting thereby.

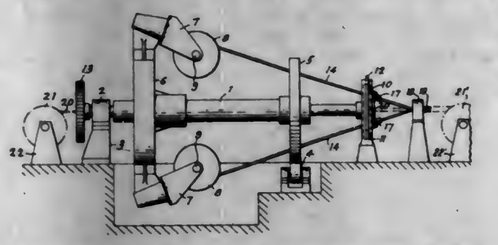
3,128,798
METHOD AND APPARATUS FOR WINDING COILS AUTOMATICALLY AND COIL STRINGS DERIVED THEREFROM
Charles Liebman, Rte. 3, McHenry, Ill.
Filed July 18, 1958, Ser. No. 749,499
3 Claims. (Cl. 140—92.2)



2. In a coil winding machine including a rotating mandrel having a free end, a winding needle for laying wire on a predetermined coil winding area of said mandrel and mechanism for counting mandrel revolutions, a coil ejector movable axially relative to said mandrel from a position away from said coil winding area through said coil winding area toward said free end of said mandrel and having a face engageable with an end of a coil formed in said coil winding area to displace said coil from said area upon said movement, a needle lifter associated with said ejector to be movable therewith and having a sloping surface to move said needle out of the path of said ejector prior to said movement of said ejector into said winding area, and means for moving and returning said ejector upon said revolution counting mechanism counting a predetermined number of turns.

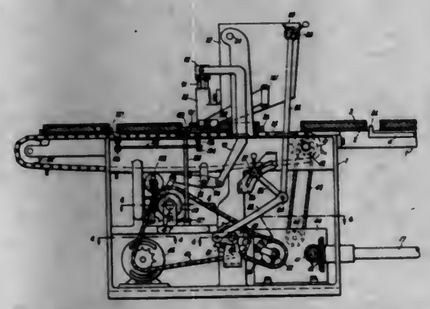
3,128,799
STRAND FORMING DEVICE
Robert A. Kerr, Lachine, Quebec, Canada, assignor to Northern Electric Company, Limited, Montreal, Quebec, Canada, a corporation of Canada
Filed May 29, 1961, Ser. No. 113,385
8 Claims. (Cl. 140—149)

1. In an apparatus for making a stranded wire structure from a plurality of component strands which comprises a rotary cable forming machine, a closing die adjacent the outlet end thereof, a haul-off mechanism adjacent said closing die for pulling the stranded wire structure through said machine and said closing die; a forming die plate included in said machine and rigidly attached to the output end thereof, having affixed thereto a forming die individual to each of said strands, a longitudinal passage formed in said forming die adapted to engage and impart a twist to said strand, said passage at the entrance end thereof being a helix of infinite pitch,



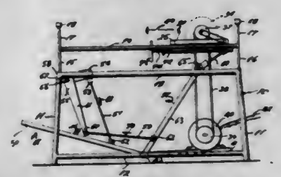
tangential to said strand, and having the form of a helix at the exit end thereof corresponding to the helix of said strand in said stranded wire structure, said passage being smoothly transitional between said entrance and said exit ends thereof in the form of a helix of progressively decreasing pitch.

3,128,800
CONFECTIONERY MOULDING MACHINE
Hans A. Faerber, 12–16 Stokes Ave., Alexandria, near Sydney, New South Wales, Australia
Filed Sept. 27, 1960, Ser. No. 58,765
Claims priority, application Australia Aug. 19, 1957
3 Claims. (Cl. 141—137)



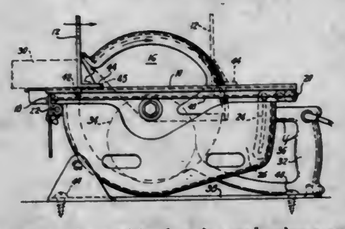
1. In a confectionery moulding machine having slide rails to support a plurality of trays, a conveyor adjacent one end of said slide rails adapted to move said trays from said slide rails on to said conveyor, conveyor driving means arranged to impart a continuous periodically varying speed on said conveyor, a confectionery substance hopper arranged above said conveyor, trunnions fixed to said frame pivotally supporting said hopper a continuously rotating shaft and a crank fixed thereto, a link connecting said crank with a floating pivot and a further link connecting said floating pivot with said hopper, eccentric means at said hopper to adjust the connection between said further link and said hopper, a third link having one end thereof connected to said floating pivot, and adjusting means connected to said third link and adjustably mounted on said frame to alter the position of said floating pivot and thus the stroke of said further lever, a pumping and metering device connected with said hopper and consisting of two banks of barrels, plungers in said barrels connected to a crosshead, a rocking shaft having cranks thereon and connection levers linking said cranks with said crosshead to impart a reciprocating movement on said plungers, a continuously rotating axle and a bracket supporting said axle and mounted on said frame, a crank fixed to said axle, a link connecting said crank with said rocking shaft for the movement thereof, a transverse valve chamber arranged underneath said barrels, a shuttle valve in said valve chamber having a through port therein for each barrel, a delivery nozzle plate with ports therein mounted underneath said valve chamber, means to reciprocate said shuttle valve and to control the movement thereof, and common driving means connected to drive said conveyor driving means, said rotating shaft, said rotating axle and said shuttle valve operating means in predetermined time relationship.

3,128,801
SAW WITH RECIPROCATING ARBOR ASSEMBLY
Albert Brede, 582 College Ave., Winnipeg 4, Manitoba, Canada
Filed Dec. 11, 1961, Ser. No. 158,292
1 Claim. (Cl. 143—47)



A saw comprising in combination a supporting framework, a pair of spaced and parallel guides supported by said framework and running from the front to the rear thereof adjacent the upper side thereof, a saw arbor assembly mounted on said guides for fore and aft movement therealong, a source of power operatively connected to said saw arbor, treadle means pivotally connected by one end thereof to said framework, and linkage means connected between said treadle means and said saw arbor assembly adapted to move said saw arbor along said guideways, said linkage means including a bell crank pivotally secured by the apex thereof to adjacent the upper front side of said framework with one arm depending substantially downwardly from said apex and the other arm extending substantially horizontally therefrom and towards the rear of said framework, a link extending from said treadle to said other arm, a main lever pivotally connected by the lower end thereof to said framework adjacent the point of pivotal connection thereto of said treadle, and by the other end thereof to said arbor assembly, and a connecting link pivotally connected by one end thereof to said one arm of said bell crank and by the other end thereof to intermediate the ends of said main lever.

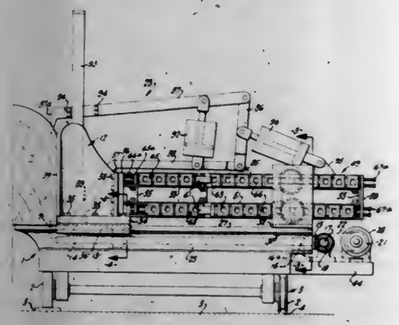
3,128,802
PORTABLE POWER SAW WITH TILTABLE FACE PLATE
John V. Hostetter, 5216 Cochran Road, Beltsville, Md.
Filed Apr. 5, 1962, Ser. No. 185,457
9 Claims. (Cl. 143—51)



1. An inverted portable electric saw having a saw frame, a saw blade extending upwardly therefrom, a face plate

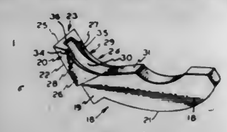
on top of said saw frame and hinged to the saw frame in the plane of the saw blade, said face plate having a slot in it at the hinge line through which said saw blade projects, a square bracket slidably mounted in said face plate and extending inversely of, and to both sides of, the saw blade and having a relief opening enabling it to pass over said saw blade, for guiding a strip held against and pushing it over said face plate into the saw to make a cut through said strip perpendicular to its leading edge, and means in said face plate for normally resiliently biasing said square bracket into a position in front of said saw blade.

3,128,803
LOG AND RE-SAW CARRIAGE
Elbridge W. Thrasher, 19541 Red Berry Drive, Los Gatos, Calif.
Filed Oct. 22, 1962, Ser. No. 231,907
13 Claims. (Cl. 143—115)



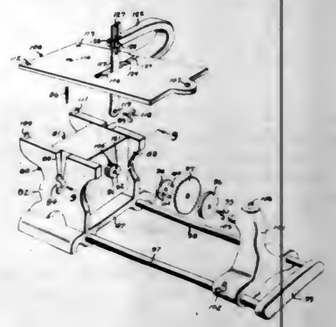
1. A frame; a log-supporting carriage mounted on said frame for reciprocation thereon in a first direction; an elongated rigid member mounted on said carriage normal to said first direction for translation thereover in a second direction normal to said first direction; a log-engaging knee fixed to one end of said rigid member; at least one row of tapered sockets provided along the length of said rigid member; at least one wedge mounted on said carriage arranged for movement into and out of one of said sockets; means for stepwise advancing said rigid member so as to successively position each of said sockets into substantial alignment with said wedge; means for forcing said wedge into a socket substantially aligned therewith; means for reciprocating said carriage and means for retracting said wedge.

3,128,804
INSERTED-TOOTH SAW BIT
Hartwell T. Scott, Rte. 2, Homerville, Ga.
Filed July 9, 1962, Ser. No. 208,353
5 Claims. (Cl. 143—141)



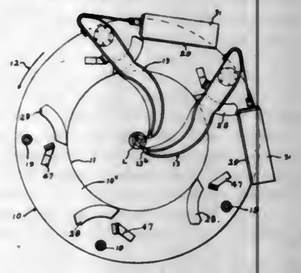
1. An inserted tooth saw bit having an elongated leg portion, head portion and cutter tip portion, said cutter tip portion having; a radial face, a pair of side faces, a cutter face, and a semi-cylindroidal chip-receiving face; said chip-receiving face being provided with a central longitudinally extending semi-cylindroidal throat portion defined between a pair of forwardly projecting stabilizing ribs, the respective inner faces of the ribs being defined by planes generally normal to the plane of the radial face and slightly diverging from each other in a direction extending longitudinally of the throat portion away from the cutting edge.

3,128,805
ELECTRIC MOTOR-DRIVEN CONVERTIBLE WOOD MACHINE SHOP TOY
Julian Silver, Scarsdale, N.Y., assignor to Louis Marx & Company, Inc., New York, N.Y., a corporation of New York
Filed Aug. 16, 1961, Ser. No. 131,817
18 Claims. (Cl. 144—1)



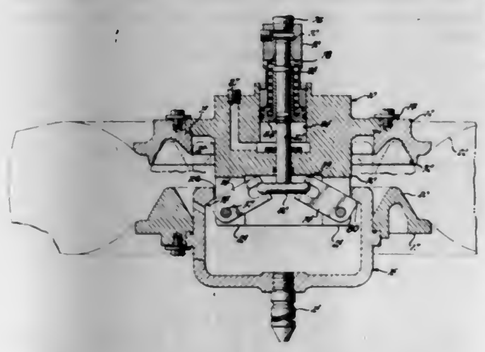
2. In a convertible wood working machine shop toy for use in working soft plastic foam, a motor-driven spindle head, a guide rod extending laterally from the spindle head, a lathe-type tailstock slidably adjustable along said guide rod, pin projections extending upwardly from said spindle head and from said tailstock above the lathe center of the tailstock, and a saw table having pin receiving openings at one end adapted to rest over the pin projections upon the spindle head and pin receiving openings at the other end adapted to rest over tailstock, said tailstock being adjustable along the guide rod means to accommodate the pin openings of the saw table, said saw table having an elongated slot, said spindle head having a spindle and a saw connected to the spindle and extending upwardly to said saw slot.

3,128,806
ARM BIASING CONSTRUCTION FOR RING TYPE DEBARKERS
Dean W. Shields, Birmingham, Ala., assignor to Budow Manufacturing Company, Inc., a corporation of Alabama
Filed Sept. 24, 1962, Ser. No. 225,634
5 Claims. (Cl. 144—208)



3. For use in a ring type debarker,
(*a*) a tool arm pivoted intermediate its inner and outer ends and disposed to carry a debarking tool on its inner end,
(*b*) a spring for the arm characterized in that the force delivered thereby varies with its travel,
(*c*) a flexible member operatively connected to transmit the force of said spring to the arm, and
(*d*) a contoured section on the arm outwardly of its pivot point over which the cable passes in unattached manner, the cable being secured to the arm at a point other than in said contoured section thereof, the configuration of said contoured section being such as to compensate for the change in force exerted by the spring and for the change in effective lever arm through which the force thereof is applied to said arm, whereby the tool is urged against logs of varying diameter with substantially constant force.

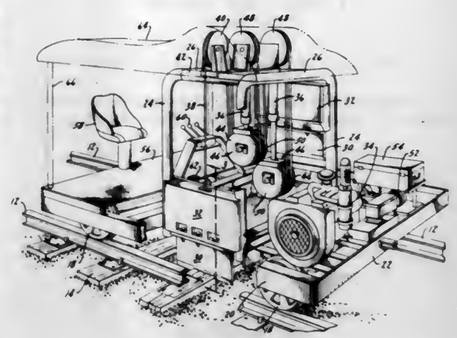
3,128,807
FAIL SAFE VALVE FOR TIRE CHUCK ON POST-INFLATION MACHINE
Woodson B. Kilgore, Livonia, Mich., assignor to Firwood Manufacturing Company, Dearborn, Mich., a corporation of Michigan
Filed July 15, 1960, Ser. No. 43,027
10 Claims. (Cl. 144—288)



1. A tire inflating device comprising in combination, a pair of separable tire chuck members each having a ring for supporting one bead of a tire, said chuck members when coaxial and adjacent each other forming a support for inflating a tire, the chuck members together with tire when supported thereon forming a container for air under pressure, locking means to prevent the separation of the chuck members more than a predetermined distance when the tire is inflated, operating means to lock and unlock the locking means, means for conducting air under pressure into the container, and valve means carried by the operating means for preventing the establishment fo pressure in the container, said valve means being positioned by the operating means to prevent the establishment of pressure when the locking means is unlocked and being positioned to permit the establishment of pressure in the container when the locking means is locked.

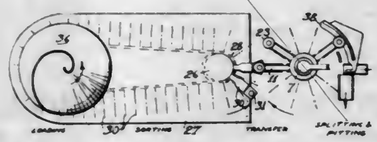
3,128,808
METHOD AND APPARATUS FOR USED TIE DISPOSAL
Weltzin B. Blix, Jr., South Milwaukee, Wis., assignor to Nordberg Manufacturing Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Dec. 22, 1961, Ser. No. 161,546
11 Claims. (Cl. 144—309)

3. A device for cutting ties beneath the rails of a railroad track including a generally horizontal frame, wheels mounted on said frame for moving it over a railroad track, a pair of generally upright guide rails adjacent each side of said frame, a weighted blade mounted for vertical reciprocation between each pair of guide rails,



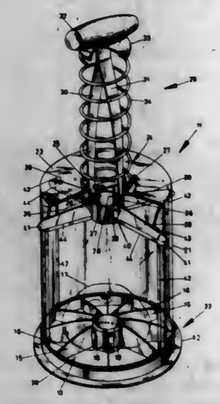
said blades being positioned to cut the same tie at points adjacent and inside of the track rails, fluid means for moving said blades upward and means for controlling said fluid means so that said blades fall substantially freely downward upon the tie to be cut.

3,128,809
DRUPE SPLITTER AND PITTER
Marcus Warnecke, Laurence Percy Kupke, and Leslie Chalmers, all of Nuriootpa, South Australia, Australia, and Ivon Garnet Rock, 13 Balmoral Ave., Berkeley, Brighton, South Australia, Australia
Filed Jan. 11, 1960, Ser. No. 1,746
Claims priority, application Australia Jan. 12, 1959
3 Claims. (Cl. 146—28)



1. An improved fruit splitter and pitter comprising a main frame, bearing means on the main frame, a rotatable member in said bearing means, arms radiating in pairs outwardly from said rotatable member, fruit engaging cups each rotationally supported on the end of an arm, a sub frame on the main frame, a bracket hinged near one end to said sub frame, a splitting knife hinged near one end to the other end of said bracket, a spring between said knife and said bracket and a spring between said bracket and said sub frame, stone removing means on said knife near its hinged end, means to rotate each pair of cups in one direction as they traverse said splitting knife, said springs urging said knife into fruit retained between a pair of cups to follow the contour of the stone in said fruit as said fruit rolls over said knife, a sorting table, a chain on sprockets on said sorting table, outwardly extending members with bifurcated ends on said chain, means to close the bifurcated ends to receive fruit, means to open said bifurcated ends to release fruit, and means to synchronise relative motion of said arms and said outwardly extending members whereby fruit is transferred from said outwardly extending members to said cups.

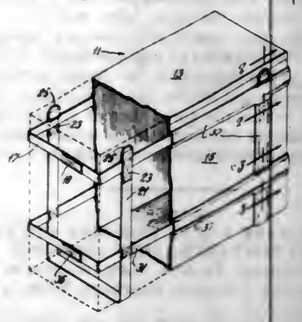
3,128,810
FRUIT CORER AND QUARTERING DEVICE
Albert E. Whipp, % Canadian Research & Development Foundation, 1434 Queen St. W., Toronto 3, Ontario, Canada
Filed Jan. 10, 1962, Ser. No. 165,413
1 Claim. (Cl. 146—40)



A fruit corer and quartering device for removing the core and dividing the pulp of said fruit comprising, a base, a transparent housing removeably mounted on said base, said transparent housing having an upper closed end, a cutting blade assembly including a coring blade and at least one quartering blade, said cutting blade assembly being located internally of said housing, bushing guide means perforating said upper closed end of said housing substantially centrally thereof, said cutting blade assembly being carried by spindle means slideably located in said bushing guide means, said cutting blade assembly being reciprocally moveable toward and away from said base, core ejector means secured to said guide means, positioned to eject said core from within said coring blade upon movement of said blade assembly away from said base, the said transparent housing totally enclosing said cutting blade assembly during said removal of the core and dividing of the pulp of said fruit; said base is supplied with a plurality of fruit locating and holding members, said base is further supplied with two upwardly disposed flanges defining an annular space therebetween, said spindle means carrying said cutting blade assembly being divided axially into a pair of blade supports, having upper ends and lower ends, said blade supports being slidably located in said bushing guide means for reciprocal movement therein, a handle including a spring pad rigidly secured to both said upper ends of said blade supports, a compression spring mounted between said closed end of said housing and said spring pad, said spring thus biasing said supports upwardly away from said base, said core ejector being positioned across said bushing guide means, between said blade supports, said core being ejected by said ejector upon said spring biasing said blade supports away from said base.

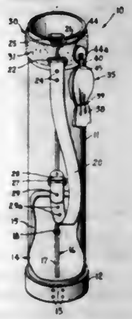
3,128,811
TRANSFER CONTAINERS
William J. Higgins, 12 Capp St., Shorecrest, Carteret, N.J.
Filed May 24, 1960, Ser. No. 31,496
4 Claims. (Cl. 150—.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. In a transfer container comprising a closed receptacle fabricated wholly of flexible material, a cradle comprising a first slotted webbing strap encircling horizontally the upper portion of said receptacle, a pair of slotted webbing straps extending along the sides and bottom of said receptacle proximate the ends thereof, each end of each of said vertically disposed straps passing through a slot of said first strap and being doubled back upon itself to de-



fine an end loop, a D-ring secured in each such end loop, and a second slotted webbing strap encircling horizontally the lower portion of said receptacle, said second strap passing through slots of each of said pair of webbing straps.

3,128,812
GOLFING EQUIPMENT
Robert S. Scheurer, P.O. Drawer 539, Wichita Falls, Tex.
Filed July 30, 1962, Ser. No. 213,353
14 Claims. (Cl. 150—1.5)

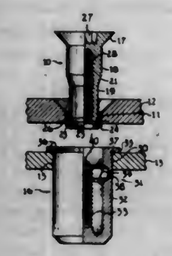


1. In combination: a golf bag having a strip of pile material secured to the exterior thereof; and a golf club head cover having a piece of pile material secured thereto, one of said pile materials secured to said golf bag and to said head cover having a plurality of outwardly extending loops and the other of said pile materials having a plurality of hooks extending therefrom, said hooks being coengageable with said loops for releasably securing said head cover to said golf bag.

3,128,813
FASTENING DEVICE
John H. Davis and Wallace F. Harbison, Fort Worth, Tex., assignors to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware
Filed Oct. 28, 1960, Ser. No. 65,681
2 Claims. (Cl. 151—41.72)

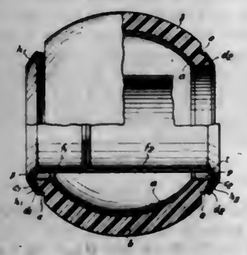
1. A composite fastening device for attaching a panel to an understructure comprising a stud nut for installation in a hole in said understructure, a sleeve bolt for insertion through a hole in said panel, and a retainer ring disposed

about said sleeve bolt to retain same in said panel, said stud nut including a head portion having an integral, longitudinally serrated collar thereabout and a groove around said head portion below said collar for forced engagement with said understructure to embed said collar into said understructure flush therewith and to prevent rotation of said stud nut, said stud nut having a barrel portion and a portion intermediate said head and barrel portions, the wall thickness of said intermediate portion being less than the wall thickness of said head and barrel portions to facilitate expansion of said intermediate portion on the



underside of said understructure to form an integral tension locking ring, and an externally threaded stud positioned within said barrel portion and connected thereto, said sleeve bolt including a head provided with driving means, a flange extending outwardly from the end of said sleeve bolt opposite said head to prevent the disengagement of said retainer ring, a first shank portion adjacent said head, a second shank portion of smaller diameter than said first shank portion, and a tapered shoulder interconnecting said shank portions whereby the holes in said panel and understructure are forced into alignment as said sleeve bolt is tightened on said threaded stud.

3,128,814
RESILIENT WHEEL
Johannes Rohland, Bamberg, Upper Franconia, Germany, assignor to Anny Och, née Eger, Bamberg, Germany
Filed Dec. 17, 1962, Ser. No. 245,171
2 Claims. (Cl. 152—41)



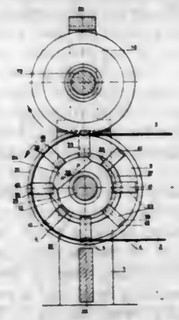
1. A wheel for vehicles comprising a rigid annular body formed as an annular section of a hollow, spherical body, a tread carried on the outer surface of said annular body and formed of a solid layer of elastic material bonded directly to the outer spherical surface of said rigid body, said tread layer having annular edge portions extending beyond the edges of said annular body at opposite sides thereof, a wheel hub mounted within said annular body and extending beyond the annular edge portions of said tread layer, annular rings encircling the annular edge portions of said tread layer on the outer faces thereof and being rigidly connected with the ends of said hub, said annular rings having outer surfaces conforming with annular sections of a sphere surrounding said body and said tread layer between said annular rings having an outer surface forming a continuation of the spherical outer surfaces of said annular rings, said hub being of smaller diameter than the end openings in said annular body to provide space for spring or resilient movement between said hub and said rigid body.

3,128,815
SIDEWALL AND PNEUMATIC TIRE COMBINATION
William M. Nonnamaker, Akron, Ohio, assignor to The Mohawk Rubber Company, Akron, Ohio, a corporation of Ohio
Filed May 16, 1962, Ser. No. 195,232
11 Claims. (Cl. 152—353)



1. The combination of a pneumatic tire with an annular tire trim member engaging said tire sidewall where said tire has a continuous annular radially outwardly facing flexible overhanging shoulder formed thereon in the sidewall thereof and a continuous annular flexible radially inwardly facing overhanging shoulder formed on a radially outer portion of said tire sidewall, said tire trim member being thicker at the radial center thereof and tapering to radially outer and inner edges contoured to be received under said shoulders, said tire trim member having substantially uniform flexibility at all portions thereof, said tire trim member being of a radial length greater than the distance between the adjacent edges of said shoulders to have the edge portions of said trim member received under said shoulders to be secured to the tire thereby.

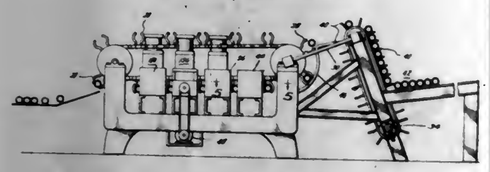
3,128,816
APPARATUS FOR FORMING LIPS IN STRIP-LIKE MATERIAL
Arend C. van Witteloostuyn, Zwijndrecht, Netherlands, assignor to Hunter Douglas International Corporation, New York, N.Y., a corporation of New York
Filed Nov. 17, 1960, Ser. No. 69,889
Claims priority, application Netherlands Nov. 23, 1959
5 Claims. (Cl. 153—2)



1. In an apparatus for forming lips in strip-like material and having a frame, the combination with a rotary punch

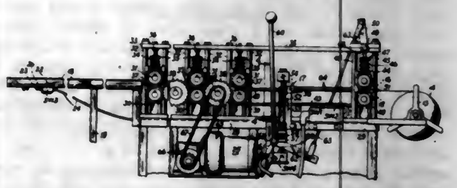
roller and a rotary counter roller, said rollers being rotatably mounted in the frame about parallel axes and with their surfaces closely adjacent but separated by a sufficient amount to receive between them the strip-like material to be provided with lips, said punch roller being provided with a plurality of punches, means for radially displacing said punches into their operative position and guiding means for radially displacing said punches out of engagement with the strip-like material, all said means being constructed and arranged in such a way that always at least two punches are at the same time in engagement with the strip-like material and no punches are in engagement with the strip-like material at the point where said strip-like material leaves the rotary punch roller, said rollers being free to turn as said strip-like material passes therebetween.

3,128,817
APPARATUS FOR FORMING THREADS ON PIPE ENDS
Elijah C. Shaver, Houston, Tex., assignor to Brown & Root, Inc., Houston, Tex., a corporation of Texas
Filed Jan. 9, 1961, Ser. No. 81,395
23 Claims. (Cl. 153—2)



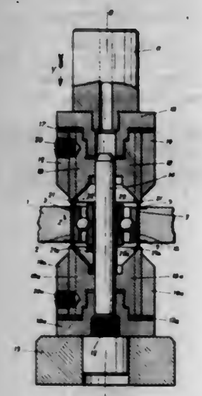
1. Pipe forming apparatus comprising a frame, a plurality of pipe forming stages, each adapted to receive a pipe axially aligned within the stage, disposed on the frame in axial and transverse alignment, the stages including; a pipe upsetting stage having a pipe supporting head and a pipe upsetting head, means to engage the upsetting head and a pipe received into the upsetting stage into upsetting relation and disengage the pipe and upsetting head to a rest position, electrical control means to control the cycle of engagement, upsetting operation, and disengagement of the upsetting stage with the pipe and to prepare the upsetting stage for a successive upsetting cycle, and linkage means to cause completion of the upsetting cycle with no pipe received in the upsetting stage; a bead rolling stage having a beading head and a resilient positioning head, said beading head having a first beading die mounted on a shaft supported by a fixed bearing, a second beading die mounted on a shaft supported by a bearing in axially parallel moveable relation to the first beading die, and transmission means adapted to rotate the beading dies at like peripheral speeds, means to longitudinally position the wall of a pipe received in the bead rolling stage and the beading dies into a beading position and return the pipe and the beading dies to a rest position, means to bring the beading dies into bead forming engagement with the wall of the pipe and return the beading dies to a rest position, the electrical control means causing a cycle of positioning the pipe longitudinally, bringing the beading dies into bead forming engagement, holding the beading dies in bead forming engagement for a preselected period, returning the beading dies to rest position, and returning the pipe to rest position, and preparing the bead rolling stage for a successive beading cycle, and linkage means to cause completion of the beading cycle with no pipe received in the bead rolling stage; a female thread rolling stage having a threading head and a resilient positioning head, said threading head having a first threading die mounted on a shaft supported by a fixed bearing a second threading die mounted on a shaft supported by a bearing in axially parallel moveable relation to the first threading die, and transmission means adapted to rotate the threading dies at like peripheral speeds, means to longitudinally position the wall of a pipe received in the female thread rolling stage and the threading dies into a thread rolling position and return the pipe and the threading dies to a rest position, means to bring the threading dies into thread forming engagement with the wall of the pipe and return the threading dies to a rest position, the electrical control means causing a cycle of positioning the pipe longitudinally, bringing the threading dies into thread forming engagement, holding the threading dies in thread forming engagement for a pre-selected period, returning the threading dies to rest position, returning the pipe to rest position, and preparing the female thread rolling stage for a successive rolling cycle, and linkage means to cause completion of the threading cycle with no pipe received in the female thread rolling stage; a male thread rolling stage having a thread rolling and a resilient positioning head, said threading having a first male threading die mounted on a shaft supported by fixed bearing and a second male threading die mounted on a shaft supported by a bearing in axially parallel moveable relation to the first threading die, and transmission means adapted to rotate the threading dies at like peripheral speeds, means to longitudinally position the wall of a pipe received in the thread rolling stage into a threading position adjacent the bead forming by the beading stage and return the pipe and the threading dies to a rest position, means to bring the threading dies into thread forming engagement with the wall of the pipe and return the threading dies to a rest position, the electrical control means causing a cycle of positioning the pipe longitudinally, bringing the threading dies into threading engagement, holding the threading dies in threading engagement for a pre-selected period, returning the threading dies to rest position, longitudinally returning the pipe to a rest position, and preparing the male thread rolling stage for a successive rolling cycle, and linkage means to cause completion of the threading cycle with no pipe received in the male thread rolling stage; and a pipe transfer means having a moveable conveyor means tautly disposed on the frame in transverse relation to the axes of the pipe forming stages, pipe supporting tongs disposed in alignment to the axis of the forming stages, each of said tongs adapted to diverge at the outer ends of the frame into pipe receiving and ejecting relation and to converge between the ends into pipe supporting relation, means to move the conveyor means the distance from the axis of one forming stage to the next, the electrical control means causing the conveyor means to move each time the forming stages have all completed their forming cycles and retracted to rest position.

3,128,818
ROLL-FORMING MACHINE
Theodore J. Bottom, Kirkwood, Mo. (% Aluma Kraft Mfg. Co., 1330 N. Rock Hill Road, St. Louis 24, Mo.)
Filed Feb. 27, 1961, Ser. No. 91,969
5 Claims. (Cl. 153—2)



1. A machine for roll-forming sheet metal stock to produce elongated shaped elements of various lengths, including forming rolls, a feeder roll for advancing flat strip stock material to said forming rolls, a drive motor, transmission means connecting said drive motor to said forming and feeder rolls, clutch means associated with said feeder roll, manually operable to render said feeder roll ineffective to advance the stock material to forming rolls, cutoff means for the stock material located and fixed between said forming and feeder rolls, including a blade element movable into and out of cutting relation to the stock material, and means operatively connecting said blade element and said feeder roll clutch means for rendering said feeder roll ineffective to advance the stock material when said blade element is moved into cutting relation with the stock material.

3,128,819
TOOLS FOR USE IN CRIMPING THE HOLDING RACES OF ROLLER OR BALL BEARINGS
Gilbert H. Bachelet and Désiré Brulet, Orly, France, assignors to Air France, Paris, France
Filed Mar. 3, 1961, Ser. No. 93,241
Claims priority, application France July 16, 1960
3 Claims. (Cl. 153—2)



1. A punch for use in crimping the cylindrical holding sleeve of a ball or roller bearing, comprising an annular device having at its rim a continuous peripheral series of wedge faces with adjacent wedge faces sloped oppositely to each other and disposed crosswise relatively to each other so that the series of wedge faces presents a peripheral V-groove to receive the rim of the sleeve, and relative axial movement between the device and the sleeve causes simultaneously axial shearing of the sleeve rim into a peripheral series of tongues, and bending of adjacent tongues in opposite directions.

3,128,820
APPARATUS FOR CURLING AN END OF A WIRE
Robert L. Hoyt and Carl L. Knutson, Omaha, Nebr., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 15, 1961, Ser. No. 95,987
18 Claims. (Cl. 153—2)

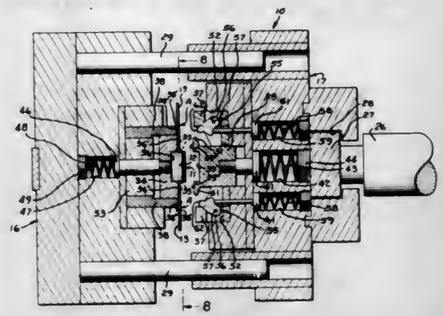
1. Apparatus for curling an end of a wire, which comprises

a pair of spaced carrier blocks;

a clamping member carried by a first one of said blocks for movement toward and away from the second block;

a mandrel member carried by said second block for movement toward and away from said first block and said clamping member, said mandrel member having a rounded end constituting a form about which the wire end is to be curled;

means for biasing each of said clamping and mandrel members to initial positions with respect to their associated blocks projecting toward each other;

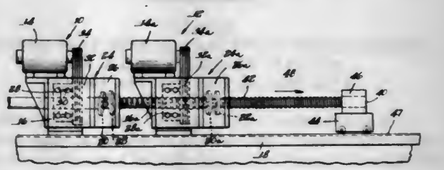


means for moving said blocks relatively together so that said clamping and mandrel members clamp a wire positioned therebetween with a free end of the wire to be curled projecting beyond the rounded end of said mandrel member, first said clamping member and then said mandrel member retracting with respect to its associated block against the action of its associated biasing means upon further movement of said blocks toward each other;

means mounted to said first block for bending the free end of the wire partially around the rounded end of said mandrel member as said clamping member retracts with respect to said first block; and

means mounted to said second block for engaging the wire end after initial bending by said bending means and for curling the wire end about the rounded end of said mandrel member in co-operation with said mandrel member as that member retracts with respect to said second block.

3,128,821
CORRUGATOR FOR METAL TUBING
Raymond C. Andersen, deceased, late of Lombard, Ill., by Jessie K. Peterson, administratrix, Lombard, Ill., assignor to Flexonics Corporation, Maywood, Ill., a corporation of Illinois
Continuation of application Ser. No. 792,792, Feb. 12, 1959. This application Mar. 5, 1962, Ser. No. 179,277
7 Claims. (Cl. 153—71)

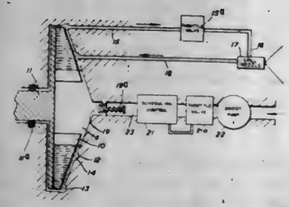


1. Apparatus for helically corrugating metal tubing comprising:

(*a*) a first annular die ring adapted to encompass the tubing, a portion of the inner periphery of said first die ring indentably bearing on the exterior of said tubing in a substantially radial direction;

(*b*) a second annular die ring adapted to encompass said tubing axially spaced-apart from said first die ring, a portion of the inner periphery of said second die ring indentably bearing upon the exterior of said tubing in a different, substantially radial direction;
(*c*) means supporting said first and second die rings for free rotation thereof; and
(*d*) means incurring relative rotation between said tubing and said die rings whereby to displace said tubing axially and whereby to form a helical corrugation in said tubing.

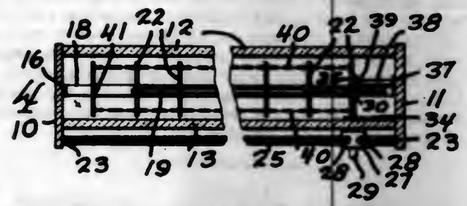
3,128,822
HYDRAULIC SUPPLY SYSTEMS
Stanley R. Tyler, 48 Bournside Road, Cheltenham, England
Filed Jan. 4, 1961, Ser. No. 80,967
14 Claims. (Cl. 158—36.3)



1. In combination with a hydraulic load, a variable liquid supply system comprising drive means, relatively fixed and rotative elements arranged cooperatively about an axis of rotation to form a centrifugal pump having a chamber and an inlet and an outlet therefor disposed adjacent the axis and the periphery of the chamber, respectively, said pump being connected with the drive means to operate at a predetermined speed, means for supplying pressurized liquid to the pump, means defining inlet and delivery passages for the pump interconnecting the liquid supply means and the hydraulic load with the chamber inlet and outlet, respectively, valve means disposed adjacent the chamber inlet and operative to admit liquid to the chamber from the inlet passage in response to a pressure differential between such passage and the chamber, and control means operable to vary the rate of liquid flow in the inlet passage in accord with a demand which is variable over a predetermined range of flow rates having an upper limit of less than the delivery rate of the pump at said speed so that liquid flowthrough in the pump chamber assumes the form of an annulus in the relatively peripheral portion thereof, the relatively axial portion of the chamber being closed to atmosphere so that a hollow core is formed centrally of the liquid annulus to enable it to compensate for variation in the hydraulic load at a particular demand by adjusting its radial depth.

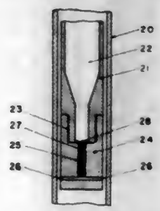
3,128,823
COMBINATION VENETIAN BLIND AND WINDOW
Arnold S. Klopstad, Baltic, S. Dak.
Filed May 15, 1961, Ser. No. 109,999
2 Claims. (Cl. 160—34)

1. A combination Venetian blind and window comprising a framework, a pair of spaced sheets of glass secured within said framework, a plurality of vertically positioned slats arranged between said sheets of glass, means for supporting said vertically positioned slats including an upper track and a lower track, chains attached to the upper and lower edges of said slats for securing said slats together, means for moving all of said slats to one side of said framework including magnetic members attached to an end slat, said end slat being pivotally mounted, further magnetic members positioned outside of said framework, means for moving said further magnetic members whereby said magnetic members will be moved to thereby move all of said slats, said magnetic members including arms attached thereto, said arms being attached to the pivoting point of said end slat, means for pivoting said slats including posts attached within said framework, the inner



ends of said posts bearing against said end slat, bosses attached to said end slat, said bosses having tapered surfaces for engaging the ends of said posts, said posts being slightly off-center of the pivoting point of said end slat, said tapered surfaces providing means for compensating for said off-center arrangement, movement of said further magnetic members being adapted to pivot all of said slats.

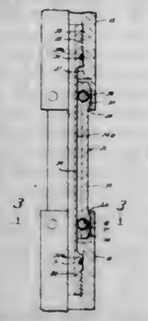
3,128,824
CHEMICAL CUTTING AND WORKING
John F. Gall, Narberth, Pa., assignor to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Original application May 18, 1959, Ser. No. 813,662, now Patent No. 3,066,058, dated Nov. 27, 1962. Divided and this application Apr. 7, 1961, Ser. No. 108,698
13 Claims. (Cl. 166—35)



1. A method for altering the form of a structure comprising supplying a perhalogenyl fluoride to the area of said structure where said alteration is desired and bringing the perhalogenyl fluoride into chemically reactive contact with a fuel in said area.

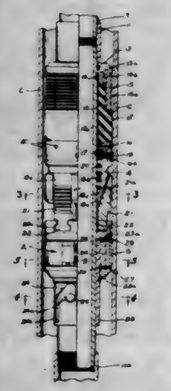
3,128,825
FLEXIBLY COUPLED WELL TOOLS
Leon Blagg, Channelview, Tex., assignor to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Filed Aug. 8, 1961, Ser. No. 130,072
4 Claims. (Cl. 166—55)

2. A well tool particularly for use in a tubing string which has changes in inclinations comprising: at least two elongated cylindrically-shaped, relatively rigid housing sections with maximum diametrical dimensions permitting passage through a small diameter and relatively straight short section of a tubing string, said housing sections having hollow end portions arranged to face one another, a straight walled tubular flexure and coupling member having a relatively short length as compared to said housing sections and a lesser diameter than the outer diameter of said housing sections, said straight walled flexure member being threadedly connected to the respective hollow end portions of said housings, seal means for sealing the connection between said housing sections and said coupling member, said straight walled flexure member having a length and cross-section sufficient to permit bending of said flexure member in response to bending forces developed by said housing sections when passing through a



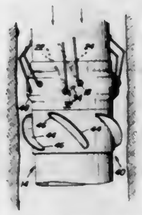
change in well bore inclination, said bending forces being substantially ineffective to said housing sections so that said housing sections remain substantially straight, and longitudinally extending means coupled between ends of said housing sections for limiting the degree of flexure of said flexure member.

3,128,826
WELL PACKER ASSEMBLIES
Cicero C. Brown, 8490 Katy Road, Houston, Tex.
Filed Nov. 21, 1960, Ser. No. 70,548
10 Claims. (Cl. 166—134)



1. A well packer assembly including, a tubular support, an annular flexible packing element mounted on the support, an external abutment on the support engaging with one end of the packing element to confine said element against movement in one direction on the support, an anchoring means for anchoring the assembly against movement in one direction in a well bore carried by the support including an expander cone and slips, said packing element engaging one of said expander cone and said slips and confining that end of the packing element which is opposite the end engaged by said abutment, shoulder means on said tubular support and said expander cone, a spring means engaging said shoulder means on said tubular support and said expander cone urging said expander cone in a direction permitting movement of said packing element towards retracted or non-sealing position, and means mounting said anchoring means on the support for limited longitudinal movement relative to said support, whereby said support may be moved with respect to the anchoring means after the latter has been anchored within the well bore to thereby apply endwise force to the packing element to deform the same into sealing position.

3,128,827
CASING CENTRALIZER WITH WELL BORE AND CASING SCRAPING MEANS
Louis Kluck, Box 1421, Odessa, Tex.
Filed July 27, 1961, Ser. No. 127,364
9 Claims. (Cl. 166—173)



1. A casing centralizer with well bore and casing scraping means comprising a mounting ring adapted to be disposed about a section of well casing in any convenient manner for reciprocation with said casing section through at least portions of the reciprocal strokes of said casing section, a plurality of elongated stiff and resilient fingers including first and second angulated end portions, means resiliently mounting the ends of the first end portions of said fingers remote from said second end portions to said ring at points spaced circumferentially thereabout with each of said fingers normally disposed in a plane extending through and slightly inclined similarly relative to the longitudinal axis of said ring, said fingers being normally disposed with said first end portions extending outwardly from said ring and said second end portions extending inwardly from the outer ends of the corresponding first end portions to points closely adjacent a surface generated by a line swung about an axis parallel thereto and at a distance substantially equal to the radius of said ring.

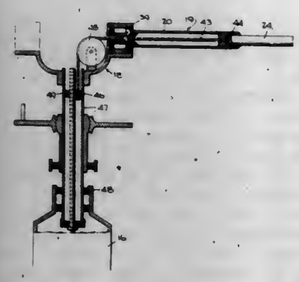
3,128,828
COLLAR FINDER
Derwood U. Skinner, Houston, Tex., assignor to Houston Oil Field Material Company, Inc., Houston, Tex., a corporation of Delaware
Filed Apr. 11, 1961, Ser. No. 102,235
4 Claims. (Cl. 166—214)



1. In a collar finder for pipe in a well bore, an elongate mandrel, upwardly extending flipper dogs hinged at their lower ends on said mandrel, means yieldingly urging

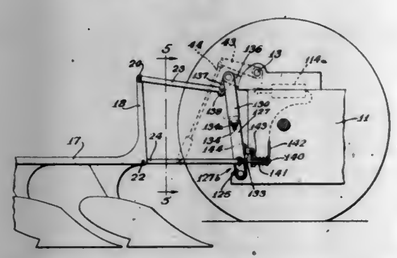
the upper ends of said flipper dogs outwardly from said mandrel, said flipper dogs when urged outwardly contacting said pipe, a sleeve mounted to slide on said mandrel adjacent and below said flipper dogs, thread means mounted on said mandrel, thread means mounted on said sleeve and engageable with said mandrel thread means, said sleeve holding said flipper dogs retracted adjacent said mandrel when said sleeve thread means are engaged with said mandrel thread means, said sleeve releasing said flipper dogs to urge outwardly when the sleeve thread means are disengaged from the mandrel thread means and the mandrel is slid relative to the sleeve, said sleeve retracting said flipper dogs when said sleeve thread means are re-engaged with the mandrel thread means, and movement retarding means mounted on said sleeve contacting said pipe.

3,128,829
VARIABLE DIAMETER PROPELLER
Arthur M. Young, Paoli, Pa.
Filed Oct. 24, 1962, Ser. No. 232,741
9 Claims. (Cl. 170—160.11)



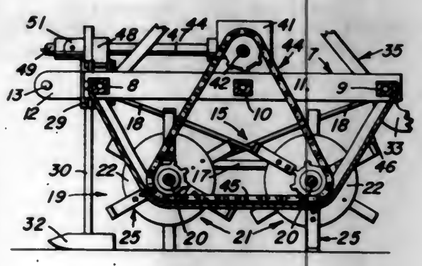
1. A variable diameter propeller assembly comprising at least one blade having an outboard and an inboard section, said outboard section retractable with respect to said inboard section, means for retracting said outboard section, and driving means for rotating said blade and imparting torque to said retracting means, said retracting means actuated when said torque imparted thereto exerts a force on the outboard section of said rotating blade that exceeds the centrifugal force exerted on the outboard section of said rotating blade.

3,128,830
DRAFT SENSING TRACTOR IMPLEMENT HITCH
Charles W. Doering, Westchester, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed May 2, 1960, Ser. No. 26,055
8 Claims. (Cl. 172—7)



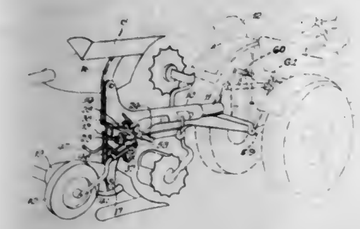
4. A hitch linkage mechanism for coupling an earth-working implement to a vehicle, comprising: first, second and third links spaced from one another with the first thereof spaced vertically from said second and third links which latter two are transversely aligned and all of said links being pivotally connected on fixed centers at outer ends thereof to the implement; a plurality of separate means, one of which connects the inner end of said first link and another of which connects the inner ends of second and third links to the vehicle and operative to permit longitudinal movement of said links relative to the vehicle and substantially parallel to one another; additional means interconnecting said plurality of separate means and responsive to draft loading imposed on said implement for effecting movement of all said links in the same direction and in unison; said additional means being further arranged and proportionally dimensioned between said plurality of separate means so that the amount of movement is substantially equal for all said links; and spring means supported by the vehicle and connected to said additional interconnecting means and disposed upon being compressed for normally yieldably resisting longitudinal movement of said links relative to the vehicle responsive to draft loading on the implement.

3,128,831
CULTIVATOR AND MULCHER
Philip Arndt, Rte. 2, Box 293, Ontario, Oreg.
Filed Aug. 2, 1962, Ser. No. 214,298
4 Claims. (Cl. 172—123)



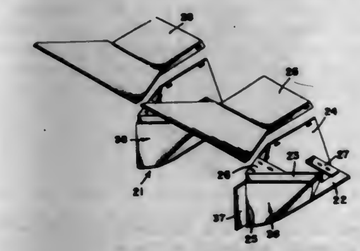
1. A row crop cultivator comprising, in combination, a horizontal transversely elongated frame including spaced, parallel, tubular front, rear and intermediate bars of square cross-section, said frame further including a plurality of spaced, parallel, flat longitudinal bars having square openings therein having the tubular bars extending therethrough and fixedly secured therein, downwardly convergent rods on the front and rear bars, bearings on the lower end portions of said rods, longitudinal spacing bars extending between the bearings, a pair of spaced, parallel transverse rotor shafts journaled in the bearings, crossed rods secured at their ends to the front and rear bars and to the end portions of the spacing bars, spaced groups of disks on the rotor shafts, tools radiating from said disks, a pair of longitudinal guards mounted beneath the frame, said guards including generally U-shaped channel bars comprising straight horizontal bight portions extending beneath the rotor shafts and adapted to slide over obstructions, said channel bars further comprising upwardly divergent end portions affixed to the front and rear bars, a shaft journaled on the intermediate bar in parallelism therewith, means comprising triangular sprocket chains operatively connecting the second-named shaft to the rotor shafts, said chains including horizontal lower runs operable in said bight portions of the channel bars, and means for operatively connecting the second-named shaft to a power takeoff of a tractor for actuation thereby.

3,128,832
GAUGE WHEEL FOR TWO-WAY PLOW
Serge Habare, Caufry par Rantigny, France, assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Apr. 30, 1962, Ser. No. 190,966
Claims priority, application France May 2, 1961
8 Claims. (Cl. 172—224)



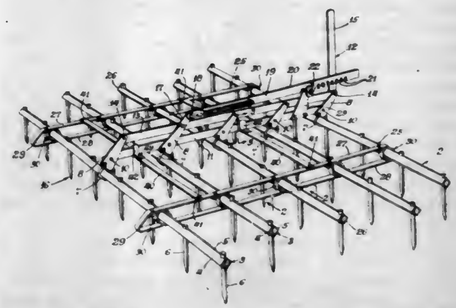
1. In a two-way plow having a main supporting frame and a tool-carrying sub-frame including alternately operable right and left hand plow units mounted on the main frame for rotation about a longitudinal axis to alternately place one plow unit in operation while the other is raised, power lift means for raising said main and sub-frames above the ground to accommodate said rotation of the tool carrying sub-frame, a rearwardly extending shaft member secured to the sub-frame, a ground engaging wheel unit mounted on said shaft for rotation bodily with the sub-frame from a position with the wheel unit disposed on one side of and below the axis of rotation of the sub-frame to a position on the other side thereof and adapted to swing downwardly by gravity about the axis of said shaft to a ground engaging position below said axis when the other of said plow units is moved into operating position, axially yieldable means mounted on said shaft and reacting between the shaft and the wheel unit to resist the downward swinging of the latter about the axis of the shaft, and means actuated by said downward swinging of the wheel unit for increasing the resistance thereto, said yieldable means comprising a coil spring surrounding the shaft and under compression between the shaft and the wheel unit to resist the downward swinging of the wheel unit about the axis of the shaft.

3,128,833
PLANTING AND CULTIVATING DEVICE
Roy W. Johnson and Bernell H. Johnson, Davis, Calif., assignors to Johnson Farm Machinery Co., Davis, Calif.
Filed Jan. 15, 1962, Ser. No. 166,229
8 Claims. (Cl. 172—245)



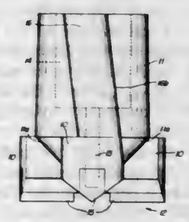
3. A seed bed shaping device comprising a mobile frame, at least two furrow forming devices attached to said frame at laterally spaced points, and bed forming means removably attached to adjacent portions of said furrow forming devices.

3,128,834
OPEN END HARROW AND FRAMEWORK THEREFOR
Eugen J. Birkenbach, Park Ridge, and Daniel M. O'Neill, Naperville, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Mar. 22, 1961, Ser. No. 97,566
1 Claim. (Cl. 172—635)



In an open end harrow, a unitary framework comprising a pair of laterally spaced longitudinal draft elements each having a plurality of transverse openings, at least two spreader elements extending transversely of said draft elements and interconnecting the same, a pair of laterally spaced guiding means connected to each of said spreader elements intermediate said draft elements and defining cooperative guiding slots; a plurality of tooth bars extending transversely of said draft elements laterally beyond the same through said openings therein providing a pivotal mounting for said tooth bars to said draft elements, an operating linkage associated with the bars for setting them in a plurality of working positions and including a longitudinal member connected to and movable with the tooth bars and having slidable guided engagement within said guiding slots, and shock absorbing means operatively connected to said member for resisting movement thereof in response to actuation thereby by the tooth bars pivoting away from an obstruction.

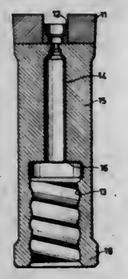
3,128,835
ROCK DRILL BIT
Robert L. Kirker, Central, N. Mex., assignor to Kennecott Copper Corporation, New York, N.Y., a corporation of New York
Filed Mar. 28, 1962, Ser. No. 183,126
3 Claims. (Cl. 175—401)



1. A rock drill bit of multi-wing, cutaway type adapted for attachment to one end of an elongate drill rod, said bit comprising a shank portion of substantially uniform

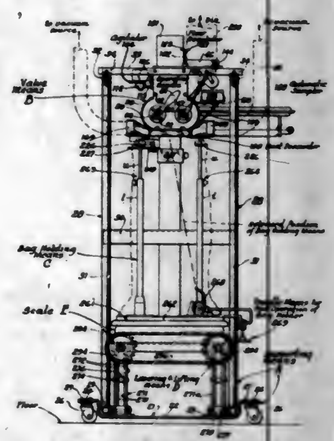
diameter; a plurality of V-shaped cutter wings integral with the shank portion at one end thereof and extending outwardly beyond the periphery of the shank portion to define a cutting face for the bit having a diameter greater than the diameter of the shank portion, at least two of said wings being diametrically opposite each other; means at the opposite end of the shank portion for attaching the bit to a drill rod; and a set of two diametrically opposite, longitudinally rectilinear, cutter ribs extending backwardly from said two diametrically opposite wings integrally therewith and along the length of and integral with the shank portion, said cutter ribs having oppositely directed, lateral cutting faces which intersect corresponding lateral faces of their respective wings above and in spaced relation to said cutting face of the bit, and said cutter ribs being tapered inwardly toward the shank portion in their backward extension from their respective wings and canted inwardly of said respective wings and tapered inwardly of the bit from the intersections of their cutting faces with said lateral faces of the wings, respectively, and said one end of the shank portion being tapered toward said cutting face of the bit, the shank portion being substantially free of lateral encumbrances except for said cutter ribs.

3,128,836
PERCUSSION DRILL BIT
John Anders Hjälsten, Karl Einar Jernberg, and Curt Vilhelm Dahlin, Sandviken, Sweden, assignors to Sandvikens Jernverks Aktiebolag, Sandviken, Sweden, a corporation of Sweden
Filed Apr. 23, 1962, Ser. No. 189,499
3 Claims. (Cl. 175—408)



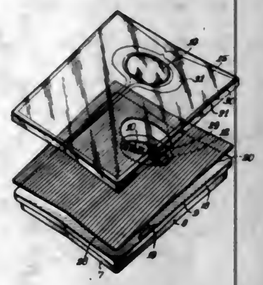
1. A percussion drill bit comprising a body portion having a substantially cylindrical outer surface, a front end portion at one end of said body portion, said front end portion being provided with at least one cutting insert extending radially beyond said cylindrical outer surface, a plurality of spaced apart lugs arranged around said cylindrical surface adjacent to the rear end thereof, said lugs extending outwardly from said cylindrical surface a distance substantially equal to the radial extension of said cutting insert, the peripheral surfaces of said lugs lying in a cylindrical surface which is eccentric with said cylindrical surface of said body portion, the length of said lugs in the axial direction of said drill bit being within the range from 1/20 to 1/2 of the length of the drill bit, a threaded bore extending axially into said body portion from the rear end thereof to a distance greater than the diameter of said bore but not more than half the length of said body portion and terminating in a substantially plane surface perpendicular to the longitudinal axis of the drill bit, a flushing channel extending from said plane surface through said body portion to the front surface of said front end portion, said flushing channel having a substantially smaller diameter than said threaded bore thereby providing a substantial shoulder at the bottom of said threaded bore.

3,128,837
FILLING AND WEIGHING APPARATUS
Earl E. Gibbons, deceased, late of Fort Lauderdale, Fla., by A. Lucile Gibbons, administratrix, Fort Lauderdale, Fla., assignor to A. Lucile Gibbons, Fort Lauderdale, Fla.
Filed Feb. 1, 1960, Ser. No. 5,942
19 Claims. (Cl. 177—76)



1. Filling and weighing apparatus comprising: a weighing scale having a weighing platform; valve means supported above said platform and having inlet and outlet ports with closure means therebetween, said inlet port being in communication with a source of material to be bagged; a bag-holder on the platform being biased to grip a bag with the bag mouth positioned to receive material discharging from said outlet port and foot operable means below the level of the platform for releasing the bag; means for opening said closure means to start the flow of material into the bag; and means responsive to indication by said scale of a pre-selected weight for closing said closure means to stop the flow of material into the bag.

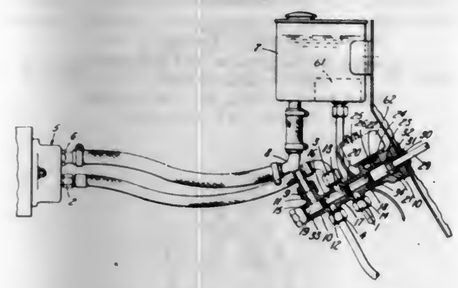
3,128,838
BATHROOM SCALE
Howard H. Monk, Rockford, Ill., assignor to The Brearley Company, Rockford, Ill., a corporation of Illinois
Filed Feb. 12, 1962, Ser. No. 172,555
5 Claims. (Cl. 177—181)



2. In combination with a bathroom scale including a weighing platform supported above a base member; a replaceable decorative platform cover unit comprising, a decorative mat conforming to the outline of said platform and superimposed thereon, and a transparent cover for said platform superimposed on said mat, said cover

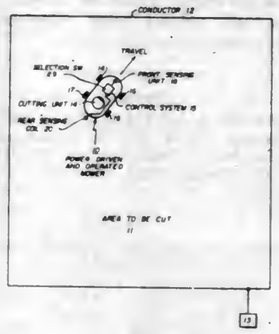
having depending marginal portions detachably engaging beneath said platform.

3,128,839
CONTROL DEVICES FOR HYDRAULICALLY ACTUATED JACKING OR PARKING MECHANISM
Archibald James Butterworth, 7 Grove Gardens, Frimley, near Aldershot, England
Filed Mar. 23, 1959, Ser. No. 801,254
Claims priority, application Great Britain Mar. 24, 1958
3 Claims. (Cl. 180—1)



1. A control device for a parking mechanism of a motor-driven vehicle comprising a hydraulic jack having a cylinder and a piston reciprocable therein, a ground-engaging roller mounted on said piston, a hydraulic pump driven by the vehicle engine for actuating said jack, a valve casing having port means disposed at spaced intervals therealong, a valve member movable within said valve casing including controlling portions thereon, resiliently yielding means disposed between said valve member and said valve casing to urge said valve member into a normally inoperative position, reservoir means for holding a hydraulic fluid, means connecting said reservoir means to said pump and said port means, means connecting said pump to said port means, means connecting said port means to said jack, said controlling portions when said valve member is in said inoperative position connecting said pump and reservoir means together through said port means and connecting means, manual control means operatively connected to said valve member adapted to move said valve member into and operative position against the action of said resiliently yielding means so that said controlling portions connect said pump means to said jack through said port means and connecting means to extend said piston and cause said ground-engaging roller to engage the ground to lift a part of said vehicle therefrom, one of said controlling portions when in said operative position being acted on by the pressure of the hydraulic fluid to maintain said valve member in said operative position against the action of said resiliently yielding means independently of said manual control means and in the absence of the pressure of the hydraulic fluid the action of the resiliently yielding means moves the valve member into said inoperative position, locking means for holding said valve member in the inoperative position, power means for releasing said locking means, a change-speed gear box through which the vehicle is driven and having a first gear and a reverse gear, a gear-selecting mechanism mounted in the gear box for selecting the gear to be used therein, and a control device for the power means actuated by the gear-selecting mechanism when it is moved to a position in which the first gear or reverse gear is engaged and which causes the power means to release the locking means.

3,128,840
RANDOM CONTROL FOR POWER-DRIVEN UNIT
Arthur M. Barrett, Jr., Northbrook, Ill., assignor to Barrett Electronics Corporation, Northbrook, Ill., a corporation of Illinois
Filed Apr. 23, 1962, Ser. No. 189,642
15 Claims. (Cl. 180—77)



1. For use in a guidance system in which a signal-radiating boundary-defining means substantially encloses an area to be traversed by a mobile unit having both propulsion means and steering means, the combination of control means on said mobile unit including sensing means for providing output signals from the signals radiated by said boundary-defining means having characteristics which vary with the position of the unit relative to the boundary-defining means, and signal responsive means including steering control means operatively controlled to adjust the position of said steering means, and switching means having a first position for coupling the generated steering signals to said signal responsive means to control same to maintain said unit on a course defined by said boundary-defining means, and a second position for coupling said generated steering signals to said signal responsive means to control same to turn said unit to a course directed away from said boundary defining means responsive to detection of a signal therefrom by said sensing means.

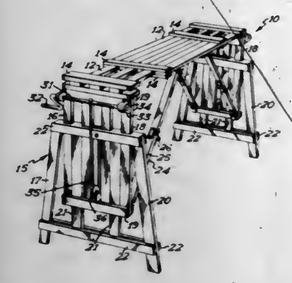
3,128,841
SOUND ATTENUATING GAS CONDUIT AND RESONATORS THEREFOR
Edmund Ludlow and Benjamin H. Irwin, both of Columbus, Ind., assignors to Arvin Industries, Inc., Columbus, Ind., a corporation of Indiana
Filed Aug. 17, 1961, Ser. No. 132,117
15 Claims. (Cl. 181—59)



1. A sound attenuating resonator formed from a pair of sheet-metal members, comprising first wall areas on said members spaced inwardly from the peripheral edges thereof and disposed in spaced relationship to each other to form a resonator volume, said first wall areas constituting a concavity formed in at least one of said members and that portion of the other member extending thereover, second wall areas on said members constituting the abutting margins thereof and rigidly interconnected to each other and bordering said first wall areas, and third wall areas within the extent of said second wall areas and disposed in spaced relationship to each other to form a resonator throat, said third wall areas constituting a bead formed in at least one of said members

and that portion of the other member extending thereover, said bead terminating within the extent of said concavity and at least one of said members being provided with an opening within the extent of its third wall area whereby said throat is open within and without the extent of said volume for operatively interconnecting said volume to a sound energy source for attenuating the noise level thereof, said volume being completely enclosed except for its connection to said throat.

3,128,842
COLLAPSIBLE ADJUSTABLE SCAFFOLD
Clarence Satrum, 224 W. 28th St., Minneapolis, Minn.
Filed July 9, 1962, Ser. No. 208,311
3 Claims. (Cl. 182—149)



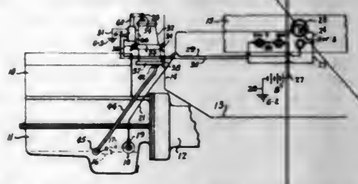
1. A collapsible scaffold apparatus comprising
a longitudinally adjustable platform including a pair of substantially flat platform sections slidably interconnected together for longitudinal slidable and retractable and extensible movement relative to each other,
a pair of vertically adjustable leg structures each being pivotally connected at its upper end to the outer end of one of said platform sections with pivotal movement between an erect upright position and a collapsed position against the lower surface of said platform,
each of said leg structures including a substantially flat upper leg section and a substantially flat lower leg section interconnected together for vertical extensible and retractable movement relative to each other, each of said lower leg sections having an elongate vertically disposed slide element extending approximately the full length thereof, each of said upper leg sections having an elongate vertically oriented slide-engaging structure slidably engaging the slide element of the associated lower leg section and having a length substantially approximating the length of the upper leg section,
a pair of collapsible sectional elongate brace members each extending diagonally between and being pivotally connected at the respective opposite ends thereof to the lower portion of one of the upper leg sections and to the adjacent platform sections, each of said brace members including a pair of brace sections pivotally connected together for movement between extended end-to-end relation and collapsed folded relation,
means for vertically extending and retracting said leg structures comprising a pair of winch mechanisms each being mounted on one of said upper leg sections adjacent the upper ends thereof,
each of said winch mechanisms including an elongate flexible element having one end secured thereto and being windable thereon and having the other end secured to the lower leg section of its associated leg structure,
a pair of guide members each being mounted on the lower portion of one of said upper leg sections at a point spaced below the attachment of the flexible elements of the associated lower leg structure,
each of said flexible elements being trained over one of said guide members whereby an operator on the platform may selectively revolve each of the winch mechanisms to independently extend or retract each of said leg structures,
and releasable lock means for releasably locking each of said leg structures against vertical retraction by permitting vertical extension thereof.

3,128,843
ROPE LADDER
George N. Anagnostou, 203 Missouri St., San Francisco, Calif.
Filed July 23, 1962, Ser. No. 211,565
15 Claims. (Cl. 182—198)



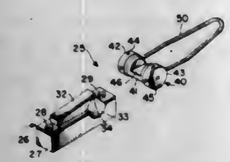
1. In a rope ladder assembly, the combination comprising: a rope housing formed of resilient material having an upper inverted Y juncture, a lower Y juncture, and arcuate sleeves interconnecting the respective divergent arms of said upper and lower junctures, said housing defining an inner opening for receiving a rung plate, and a rung plate matable within said inner opening.

3,128,844
AUXILIARY OIL SUPPLY SYSTEM FOR MOTOR VEHICLE ENGINES
John E. Bult, Wessington Springs, S. Dak., and Donald D. Bult, Kimball, Nebr.
Filed Aug. 27, 1963, Ser. No. 304,887
3 Claims. (Cl. 184—105)



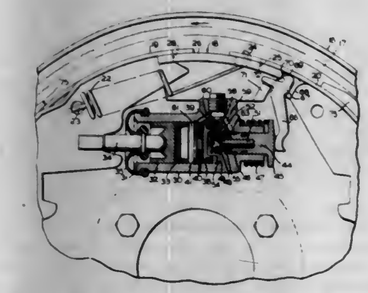
1. In an auxiliary supply system for an internal combustion engine propelling a motor vehicle and having a battery and a crankcase forming an oil reservoir with a supply of oil therein, the improvement which comprises an auxiliary oil container having an auxiliary oil supply therein, conduit means communicating between said auxiliary oil container and the oil reservoir in the crankcase, valve means operatively interposed in said conduit means, and actuating means for opening said valve means, said actuating means including electrical means for lifting said valve means, a first parallel circuit from the battery to said electrical means, a first switch interposed in said first parallel circuit, and a second parallel circuit from the battery to said electrical means, a second switch interposed in said second parallel circuit, the current supplied by each of said first and second parallel circuits separately being insufficient to energize said electrical means, and the combined current supplied by both said first and second parallel circuits together being sufficient to energize said electrical means.

3,128,845
DESPIN WEIGHT RELEASE
Otis J. Parker, Portsmouth, Va., assignor to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration
Filed July 31, 1962, Ser. No. 213,836
8 Claims. (Cl. 188—1)
(Granted under Title 35, U.S. Code (1952), sec. 266)



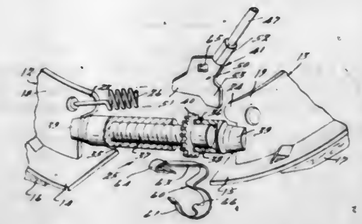
1. A despin mechanism comprising: a body, release assemblies fixed to said body, said release assemblies having latch means, bolt means retained by and movable relative to said latch means and having a connection with said weight and cable means, bolt means being moved by the transfer of momentum to said weight and cable means upon despin, said latch means simultaneously and instantaneously releasing said bolt means upon a predetermined angular relationship therebetween, and said bolt and latch means being so constructed and arranged so that said bolt means upon reaching the point of release immediately loses all physical contact with said latch means.

3,128,846
VEHICLE WHEEL BRAKE HAVING TORQUE RESPONSIVE WEIGHT TRANSFER COMPENSATING MEANS
William Stelzer, Bloomfield Hills, Mich., assignor to Kelsey-Hayes Company, Romulus, Mich., a corporation of Delaware
Filed July 10, 1962, Ser. No. 208,763
13 Claims. (Cl. 188—78)



1. In a brake device for a vehicle wheel having brake shoes, a brake cylinder having a plunger therein movable to transmit force to the brake shoes to apply the brakes, said brake cylinder having a fluid chamber therein of which said plunger forms one wall, means comprising a fluid inlet for supplying fluid under pressure to said chamber to effect movement of said plunger, means operative when the brake develops a predetermined torque for closing communication between said inlet and said chamber, a pressure responsive member exposed to said inlet and movable to increase pressure in said chamber and having means for resisting such movement whereby, when communication is closed between said inlet and said chamber, said pressure responsive member will be moved against its resisting means by pressure in said inlet to increase pressure in said chamber, but at a rate lower than the rate of increase in pressure in said inlet.

3,128,847
AUTOMATIC BRAKE ADJUSTING MECHANISM
Harvey C. Swift, Birmingham, Mich., assignor to Kelsey-Hayes Company, Romulus, Mich., a corporation of Delaware
Filed Aug. 22, 1962, Ser. No. 218,643
12 Claims. (Cl. 188—79.5)

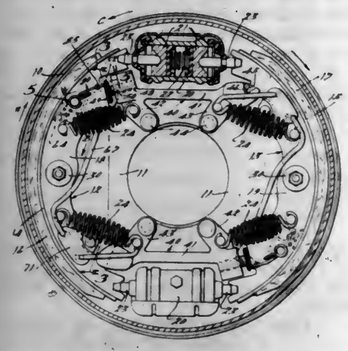


1. In a brake mechanism comprising first and second brake shoes, a brake drum, an anchor, means for moving said brake shoes away from said anchor and into engagement with said brake drum, an extensible strut connecting adjacent ends of said shoes, and a rotatable toothed wheel which controls the extension of said strut, that improvement which comprises, an adjusting member having means to engage said toothed wheel to rotate the same, a spring device mounted on said strut and engaging said adjusting member, said spring device having a substantially semicircular resilient portion adapted to be snapped into engagement with said strut to secure said spring device thereto, and means translating brake applying movement of one shoe into movement of said adjusting member in one direction to engage a successive portion of said toothed wheel and to load said spring device, said spring device, when loaded, serving to urge said adjusting member to its original position to thereby adjustably rotate said toothed wheel when the brake is released and said shoe is retracted.

3,128,848
AUTOMATIC BRAKE ADJUSTING MECHANISM
Harvey C. Swift, Birmingham, Mich., assignor to Kelsey-Hayes Company, Romulus, Mich., a corporation of Delaware
Filed Sept. 24, 1962, Ser. No. 225,673
8 Claims. (Cl. 188—79.5)

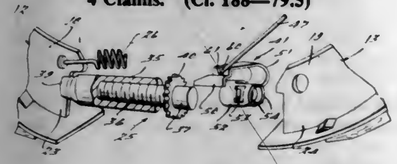
1. In a vehicle brake comprising a brake shoe, a brake drum, a torque-resisting member, and means for moving said brake shoe into engagement with said brake drum, that improvement which comprises, an adjustable anchor carried by said torque-resisting member and adapted for engagement by said brake shoe, spring detent means normally locking said anchor to prevent adjustment thereof, an adjusting member for adjusting said anchor, means activated by movement of said brake shoe in one direction for moving said adjusting member to an operative position with respect to said anchor, and a lost motion con-

nection between said spring detent and brake shoe actuated by excessive movement of said brake shoe in the



other direction for releasing said spring detent means to permit adjustment of said anchor.

3,128,849
AUTOMATIC BRAKE ADJUSTING MECHANISM
Harvey C. Swift, Birmingham, Mich., assignor to Kelsey-Hayes Company, Romulus, Mich., a corporation of Delaware
Filed Jan. 18, 1963, Ser. No. 252,372
4 Claims. (Cl. 188—79.5)



1. In an adjusting means for a brake mechanism comprising first and second brake shoes, a brake drum, an anchor, means for moving said brake shoes away from said anchor and into engagement with said brake drum, an extensible strut connecting adjacent ends of said shoes, and a rotatable toothed wheel which controls the extension of said strut, that improvement which comprises, a unitary spring device comprising a portion functioning as a pawl, a sleeve-like portion engaging said strut and a bifurcated portion engaging the web at the end of the adjacent brake shoe to nonrotatably hold said spring device on said strut, and operating means for said pawl mounted on said second shoe and connected to said anchor whereby movement of said second shoe into brake applying position moves said pawl in one direction to engage a successive portion of said toothed wheel and loads said spring device, whereupon said spring device serves to urge said pawl to its original position to thereby adjustably rotate said toothed wheel when the brake is released and said shoe is retracted.

3,128,850
BRAKE MECHANISM FOR PUSH BUTTON CONTROLLED TAPE RECORDERS AND RECORD PLAYERS
Friedrich Laa, Vienna, and Godfried Kargl, Brunn am Gebirge, Austria, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed July 8, 1959, Ser. No. 825,718
Claims priority, application Austria July 9, 1958
4 Claims. (Cl. 188—106)

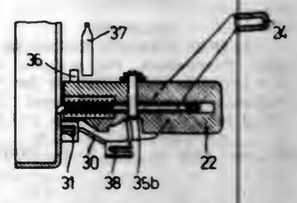
1. A brake operating mechanism for recording/reproducing apparatus having a brake means movable between a brake applied position and a brake released position comprising,

a rotatable pawl having a plurality of spaced projections,

means for rotatably mounting said pawl,

means operatively connecting said pawl and said brake means,

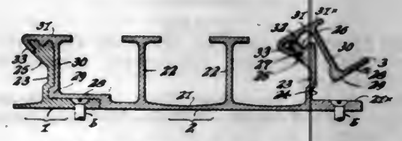
a plurality of control members for selectively controlling said apparatus,



each said control member having at least a first and a second pawl notch of unequal depth for successively receiving an associated pawl projection upon movement of the associated control member in one direction and preventing movement of said control member in the reverse direction whereby movement of any one of said control members rotates said pawl for moving said brake means from one of said positions to the other of said positions,

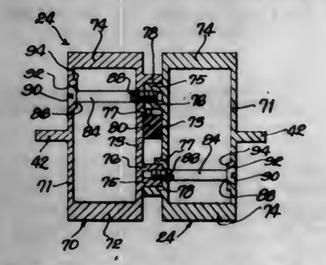
and a release member connected with said pawl for independently controlling movement thereof.

3,128,851
INTERLOCKING METALLIC STRUCTURAL MEMBERS
Ernst J. Deridder and Harry E. Weiler, Richmond, Va., assignors to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Continuation of application Ser. No. 559,865, Jan. 18, 1956. This application Aug. 3, 1959, Ser. No. 832,879
16 Claims. (Cl. 189—34)



1. At least two panel-like extruded metal sections adapted for interlocking engagement along their side edges to form at least a portion of a floor, each of said sections having a plurality of uniformly-spaced parallel upstanding load-carrying longitudinal ribs of uniform height, each of said ribs having an upstanding straight wall portion and a laterally-flanged flat top, the width of said top being of the order of the spacing therebetween to define slots communicating with air channel ways between said ribs, one of said sections having an upstanding substantially flat-topped rib-like load-carrying projection along one side edge, the inner side of said projection, adjacent its top, being provided with a curved-bottom groove-like seat, a generally horizontal fastening flange having a flat undersurface projecting from the outer side of said projection at its base, the other of said sections having, along one side edge, an upwardly offset marginal portion provided with an upstanding rib-like web, the undersurface of said marginal portion and the outer surface of said web being complementary, respectively, to the upper surface of said flange and to the outer surface of said projection for snug mating engagement therewith when said sections are interlocked, a generally horizontal flange projecting from the outer side and at the top of said web and adapted to overlie the top of said projection, said last-mentioned flange having a downturned lip terminating in an inturned rounded edge adapted for interfitting engagement within said seat and the undersurface of said last-mentioned flange and of its lip being complementary to the corresponding underlying surfaces on said projection for snug mating engagement therewith, when said sections are interlocked, the construction and arrangement of said sections being such that said lip edge can be engaged in said seat with said other section tilted up from its said one side edge and then said other section can be pivoted downwardly about said lip edge to interlock said sections against relative translational movement therebetween in any direction normal to the longitudinal extent of the interlocking engagement therebetween.

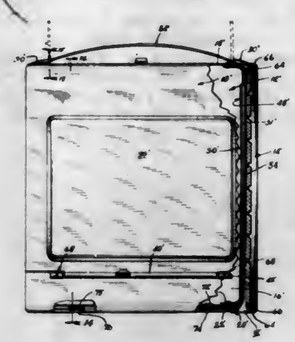
3,128,852
PREFABRICATED BUILDING WALL CONSTRUCTION
Glenn J. Chell, Highland Park, Ill. (5425 N. Kedzie Ave., Chicago, Ill.); Brooks Buderus, 233 N. Northwest Highway, Park Ridge, Ill.; and Robert Palmer, 1819½ Hinman Ave., Evanston, Ill.
Filed Sept. 27, 1960, Ser. No. 58,697
1 Claim. (Cl. 189—34)



In a building wall construction, the combination comprising a pair of adjacent elongated structural members, each of said members being hollow and generally rectangular in cross section, each of said members having four parallel fins projecting laterally therefrom and extending longitudinally therealong, said fins projecting toward the adjacent member of said pair, said four fins on each structural member being grouped into a first pair of fins and a second pair of fins with a substantial interval between said first and second pairs of fins, the spacing between the fins of said second pair being relatively wide and corresponding to the total distance spanned by the fins of said first pair, the first pair of fins on each member being received between the second pair of fins on the adjacent member to form snug joints therebetween, a soft resilient gasket compressed between the adjacent structural members and disposed in the interval between said pairs of fins, said structural members having bolt holes extending therethrough and disposed substantially midway between said fins of said second pair, and self-tapping threaded bolts extending through said bolt holes and threadedly tapped between the fins of the first pair on each structural member, each bolt tapping its own threads on the corresponding first pair of fins.

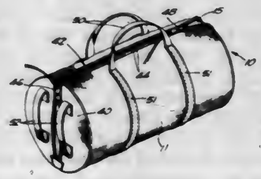
3,128,853
CARRYING CASE
Frank A. Hoffman, James K. Baker, and Melvin L. Buchanan, all of Columbus, Ind., assignors to Arvin Industries, Inc., Columbus, Ind., a corporation of Indiana
Filed Oct. 20, 1961, Ser. No. 146,488
9 Claims. (Cl. 190—41)

1. A carrying case, comprising interconnected opposed front and rear, top and bottom, and side walls, said top wall being pivotally mounted on said case for swinging movement between open and closed positions, lock means for releasably locking said case in closed position, a pair of opposed rigid guides fixedly mounted within said case and having channels generally parallel with and spaced closely adjacent to said side walls to form therewith a pair of passages extending along the length of said side walls, and an elongated flexible strap slidably carried in



said passages with its intermediate portion projecting outwardly through openings formed in the front case wall and its ends projecting outwardly through openings formed in the rear case wall and releasably connected to said rear case wall whereby said strap is adjustable between a retracted hand grip position with its ends connected to the case and an extended shoulder strap position with its ends retained in said passages.

3,128,854
HAND LUGGAGE
John Knox Specht, Aurora, Colo. (2816 Shenandoah Ave., Riverside, Calif.)
Filed Feb. 5, 1962, Ser. No. 171,143
6 Claims. (Cl. 190—41)



1. A lightweight travel bag for containing garments and other personal effects, comprising:

a generally cylindrical inner core, having radial flanges at opposite ends thereof, each of said flanges having a plurality of spaced apertures which are aligned with corresponding apertures in the other flange;

a hanger adapted to receive and hold a garment at one end thereof, said garment being wrapped around said cylindrical core;

means at opposite ends of said hanger engageable in one pair of said apertures in said flanges;

a keeper bar having means at opposite ends thereof engageable in another pair of said apertures, said keeper bar overlying the other end of said garment and holding it against said core;

means within said cylindrical core forming compartments to receive personal effects;

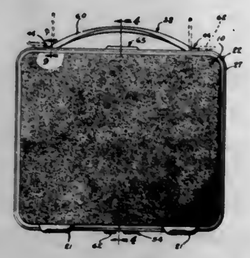
a resilient, fabric-like cover enclosing said inner core, said cover being generally cylindrical in configuration to conform to said core, and having an opening extending the length thereof along one side and diametrically across both ends theerof, said opening having slide closure means along the opposed edges thereof; and

handle means on said cover.

3,128,855
CARRYING CASE

Frank A. Hoffman, Edward A. Farr, and Melvin L. Buchanan, Columbus, Ind., assignors to Arvin Industries, Inc., Columbus, Ind., a corporation of Indiana

Filed Dec. 12, 1960, Ser. No. 75,218
6 Claims. (Cl. 190—49)



1. A carrying case, comprising a pair of opposed sheet-metal shells having peripherally extending side walls, a pair of peripherally extending moldings mounted on the side walls of said shells, one of said moldings forming around each of the case side walls a recessed channel in which an elongated unitary carrying strap is adjustably carried, means hingedly interconnecting said moldings at the edge of said channel along one side of said case for opening and closing said case, said strap having thickened portions at each of its ends and a thickened handle portion intermediate its ends, a pair of brackets mounted on one of said moldings along one case side wall and having webs overlying said channel in spaced relation thereto, the thicknesses of said handle portion and ends of said strap being greater than the spacing between said webs and the channel lying thereunder, fastening means mounted on said one molding along the central portion of the case wall opposite said pair of brackets for releasably fastening the ends of said strap in said channel along said means hingedly interconnecting said moldings to releasably retain said strap in a retracted hand grip position in which said handle portion is retained adjacent said case and whereby upon release of said fastening means the portions of the strap intermediate said handle and end portions may be slid under said pair of brackets to move said strap to an extended shoulder strap position in which said handle portion is remotely disposed from the case and said thickened strap ends bear against said pair of brackets, and means releasably locking the shells in a closed position.

3,128,856
LUGGAGE CASE

Willard G. Axtell, Englewood, Colo., assignor to Shwayder Brothers, Inc., Denver, Colo., a corporation of Colorado

Filed Apr. 3, 1962, Ser. No. 184,848
7 Claims. (Cl. 190—49)

1. A concave luggage case section comprising a strip formed substantially of metallic material which extends around the inner edge of said section, said strip being constructed and arranged to interfit with a corresponding strip of an opposite section when the case is closed, said strip being provided with a lateral flange having a rim at the inner edge thereof to form a recess for receiving one edge of a liner; a frame of substantial lateral extent formed substantially of metallic material, said frame extending around said section and being provided with a

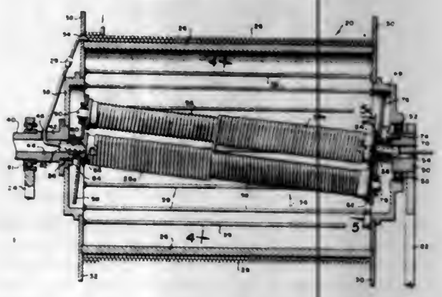


hook shaped flange at the outer edge thereof to form a recess for receiving the opposite edge of said liner; and a flexible covering extending over the outer edge of said frame and covering the outside of said frame, said strip being constructed and arranged to interfit with the inner edge of said frame to hold said cover in taut condition.

3,128,857
REEL DEVICE

Cecil E. Walton, Silver Spring, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Sept. 26, 1961, Ser. No. 140,962
17 Claims. (Cl. 191—12.2)

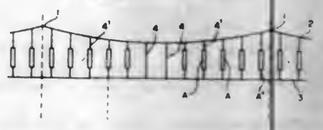


1. A reel device for winding a current carrying electrical cable, comprising an outer drum having a pair of side walls extending beyond the periphery of said drum, a series of turns of said electrical cable wound on said drum, means for rotating said drum to wind or pay out said cable, a pair of rolls mounted within said outer drum, a portion of said cable being also wound on said rolls; and means including said rolls for maintaining said cable fixed at one end while said drum is rotated whereby said fixed end may be continuously electrically connected to an electric power source.

3,128,858
COMPOSED CATENARY OVERHEAD CONTACT WIRE SYSTEMS

Ikuro Kumezawa, Tokyo, Japan, assignor to N.H.K. Spring Co., Ltd., Yokohama, Japan, a corporation of Japan

Filed Feb. 27, 1961, Ser. No. 91,876
2 Claims. (Cl. 191—41)

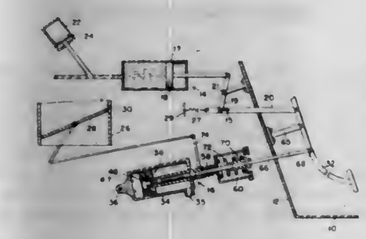


1. A trolley wire suspension composite catenary element for use in a composite catenary overhead contact wire system, comprising a member having a measured mass, a spring means having a measured spring constant and attached to said member and adapted to be connected to a messenger wire in the wire system, and a mechanical resistance means connected to said member for absorbing the oscillation energy of a trolley wire suspended from the messenger wire by said element.

3,128,859
COMBINATION BRAKE AND ACCELERATOR CONTROL

Ralph R. Griffen, Roseville, Mich., assignor to Holley Carburetor Company, Warren, Mich., a corporation of Michigan

Filed Dec. 13, 1960, Ser. No. 75,575
14 Claims. (Cl. 192—3)

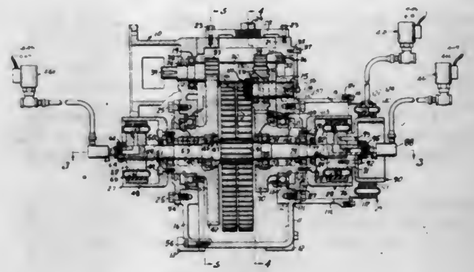


1. A brake-throttle control system comprising a brake actuating element for moving the brake between applied and released positions, a throttle actuating device for moving the throttle between closed and opened positions comprising a movable actuating member which is connected to the throttle, power means for moving said actuating member, a movable control member for said power means interconnected to said actuating member for movement therewith and limited movement relative thereto, and biasing means having a predetermined relatively small effectiveness interconnecting said control member and said actuating member, an operating member for said brake actuating element and said throttle actuating device, said operating member being movable in a predetermined path from an intermediate neutral position in which the throttle is closed and the brake is released through a brake actuating range at one side of said neutral position and through a throttle actuating range at the other side of said neutral position, first means providing for relative motion between said operating member and said control member of the throttle actuating device when said operating member is moved through the aforesaid brake actuating range, second means providing for relative motion between said operating member and said brake actuating element when said operating member is moved through the aforesaid throttle actuating range, said operating member being moved by a force applied thereto which is effective to move said control member with respect to said actuating member and overcome said biasing means so as to energize said power means, said power means being capable of applying a force to said actuating member which exceeds the force applied to said operating member required to overcome said biasing means and which tends to move said actuating member in a direction opposite to the movement of said control member to move the throttle to an open position whereby the application and maintenance of a force on said operating member which exceeds the force of said power means causes said operating member to move in the brake actuating range to move the brake to an applied position through said brake actuating element and whereby the application and maintenance of a force on said operating member which has a magnitude greater than the force required to overcome said biasing means but less than sufficient to overcome the force of said power means causes the actuating member to be moved by said power means to move the throttle to an open position.

3,128,860
POWER TAKEOFF UNIT

Lionel Pease, 3526 Dawson, Seattle, Wash.

Filed Sept. 22, 1958, Ser. No. 762,356
12 Claims. (Cl. 192—4)



1. A sawmill setworks comprising in combination a set shaft, a reversible power transmission mechanism and a control unit therefor, said mechanism comprising an input shaft, an intermediate shaft, an output shaft, means interconnecting the input shaft, the intermediate shaft and the output shaft for rotating the output shaft in a first direction, means interconnecting the input shaft, the intermediate shaft and the output shaft for rotating the output shaft in a second direction, said first and second directions being opposed, means interconnecting the output shaft and the set shaft in order for the former to drive the latter, said control unit comprising a main rotating shaft, a support means juxtapositioned with respect to said shaft, a plurality of switch means comprising switches and actuators therefor, said plurality of switch means being referred to as a first part of the switch means and a second part of the switch means, a plurality of members on the rotating shaft, a first part of the switch means being on one of the members, a second part of the switch means being on the support, means interconnecting the main rotating shaft and the reversible power transmission mechanism so that with the operation of said mechanism and the rotation of said rotating shaft one of the first part of the switch means on one of the members contacts with and coacts with one of the second part of the switch means on the support, and means interconnecting the switch means and said transmission mechanism so that with the contacting of said first part and said second part the transmission mechanism is removed from driving relationship with the set shaft.

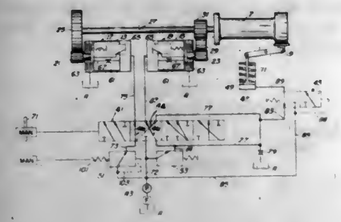
3,128,861
POWER CONTROLLED WINCH

John M. Trondsen, Portland, Oreg., assignor to Hyster Company, Portland, Oreg., a corporation of Nevada

Filed June 23, 1960, Ser. No. 38,370
8 Claims. (Cl. 192—17)

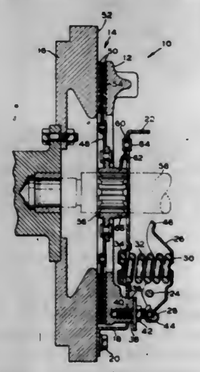
1. In a power controlled winch, a drum, a drive to the drum including first and second fluid actuated friction clutches, a fluid actuated brake for the drum biased to engaged position but releasable under an operating pressure, a source of fluid under pressure, and valve means for (1) simultaneously directing fluid under operating

pressure to said brake and to one or the other of said clutches, or (2) for isolating said clutches and brake simul-



taneously from such operating pressure, or (3) for isolating only said clutches from such operating pressure.

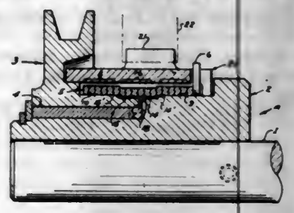
3,128,862
CLUTCH DRIVE DISK POSITIONING DEVICE
John Robert Ludwig, Swanton, Ohio, assignor to Dana Corporation, Toledo, Ohio, a corporation of Virginia
Filed Oct. 14, 1960, Ser. No. 62,737
6 Claims. (Cl. 192—68)



1. In a friction clutch the combination comprising a driving element, a driven element, a pressure plate movable to cause engagement of said driving and driven elements, means for retracting said pressure plate to cause disengagement of said driving and driven elements and resilient means carried by said driving element for biasing the driven element away from said driving element and away from said pressure plate to a neutral position between the driving element and the pressure plate upon movement of the pressure plate to its retracted position.

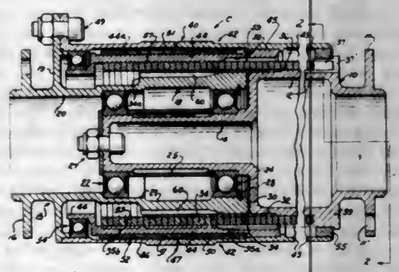
3,128,863
SPRING CLUTCH MECHANISMS
Donald R. Tomko, Cleveland, Ohio, assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed Sept. 2, 1959, Ser. No. 837,688
1 Claim. (Cl. 192—81)

A friction coil clutch comprising an input clutch drum adapted to be continuously driven unidirectionally, an output clutch drum coaxial therewith, a helical clutch spring having end coils preloaded radially against respective drums for self-energization thereon and gripping connection therewith, the input-drum-associated coils being otherwise unconnected with the input drum, control means associated with an input-drum-associated end coil portion of the spring and operable to arrest rotation of the spring and disengage the clutch, the relatively axially adjacent peripheral surface portions of the clutch drums being substantially of equal diameters and defining a crossover region between the drums and a crossover gap of less width axially of the drums than the axial thickness of the individual spring coils, and the clutch spring having intermediate coil portions between its preloaded end coils disposed during disengagement of the clutch in sufficiently radially spaced relation to both crossover-defining drum surface portions so that overrunning torque incident to the preloading of end coils of the spring on the input drum



is insufficient to deflect the intermediate coils into contact with the crossover-defining drum surface portions, the clutch spring, in a relaxed state thereof, being basically cylindrical and both clutch drums being stepped in regions remotely of the crossover region sufficiently to maintain substantial clearance between the drum surface portions of the two drums which define the crossover region and the associated spring coils during disengagement of the clutch.

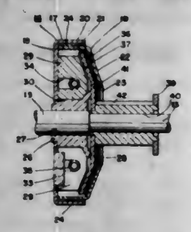
3,128,864
TORQUE LIMITING COIL OR SPRING CLUTCH MECHANISMS
Philip C. Hungerford, Jr., Cleveland, and Donald R. Tomko, East Cleveland, Ohio, assignors to Curtiss-Wright Corporation, a corporation of Delaware
Filed Dec. 17, 1959, Ser. No. 860,129
4 Claims. (Cl. 192—81)



1. A normally disengaged helical coil clutch mechanism operable as a starter unit, comprising an input clutch drum member for connection to a starting prime mover, an output clutch drum member axially adjacent thereto and coaxial therewith for connection to an engine or similar load to be started, a main helical coil spring connected at one end to turn with the input drum member and having coils disposed intermediately of its opposite ends around but normally in radially spaced relationship to a clutch drum surface of the output drum member and having one or more free end coils extending axially beyond such drum surface in a direction away from the input drum member, a control collar journalled to turn freely independently of both drum members about said axis, the control collar having a circular drum surface against which said free end coil or coils are preloaded radially to drive the collar while permitting overrun of said coil or coils thereon when torque is applied to the spring in the starting direction, and centrifugal clutch

means between the control collar and the output drum member arranged for operation at a critical predetermined speed of the input drum member and the control collar to cause the control collar to lag angularly behind the rotating input drum member and, via overrunning friction of the preloaded free end coil or coils of the main clutch spring on the control collar, move said intermediately disposed coils of the main spring into gripping contact with the clutch drum surface of the output drum member.

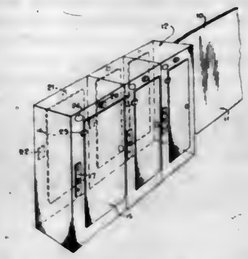
3,128,865
CENTRIFUGAL CLUTCH
Leslie M. Marderwald, Alliance, Ohio, assignor to Consolidated Electronics Industries Corp., a corporation of Delaware
Filed Nov. 1, 1960, Ser. No. 66,554
8 Claims. (Cl. 192—105)



1. A centrifugal clutch comprising, in combination, an input housing having a planar wall and a friction wall axially spaced therefrom and relatively axially fixed thereto, a hub coaxially in said housing, input means to rotate said housing, an outer head on said hub spaced from said planar wall, a plurality of weight members substantially symmetrically disposed within said housing between said head of said hub and said planar wall, tab means fixed inside said housing between said weight members to provide rotation thereof with said housing, a surface defining an arcuate groove in each of said weight members with said groove extending generally axially from the surface of each weight member adjacent said planar wall, an annular tension spring disposed in said grooves urging said weight members inwardly toward said hub, a portion of one of said housing walls being beveled toward the other of said walls in a radially outward direction, an output member of said clutch coaxially journaled and axially movable relative to said input housing, and an output disc fixed as a part of said output member and disposed between said housing friction wall and said weight members, whereby when said housing reaches a predetermined speed in acceleration said weight members move generally radially outwardly under centrifugal force and coact with said beveled housing wall portion to axially move said output disc into engagement with said housing friction wall to thus frictionally drive said output member at the speed of rotation of said housing.

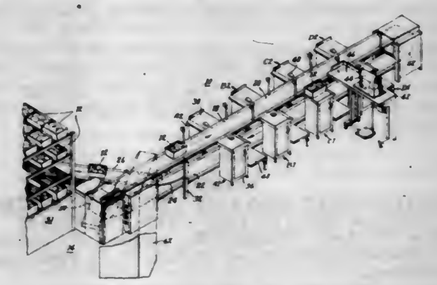
3,128,866
COIN-OPERATED LOCKER CABINET
Fred Ratowsky, Harrisburg, Pa., assignor to National Cleaning Equipment Corporation, Harrisburg, Pa., a corporation of Delaware
Filed Mar. 15, 1961, Ser. No. 95,899
4 Claims. (Cl. 194—16)

1. A coin-operated locker cabinet having a first door and a second door, said first door having a spring latch lock, electro-magnetically energized release means for said lock, a first signal light visible with said first door, a second signal light visible with said second door, a coin-operated switch, means responsive to the operation of said coin switch to energize said lock release means and said first and second signal lights, means responsive to the opening of said first door for deenergizing said lock release means, a manually-operated switch adjacent said



second door, and means responsive to the operation of said manually-operated switch for energizing said lock release means and deenergizing said first and second lights.

3,128,867
CONVEYOR SYSTEMS
Ralph E. Karcher, Jr., Magnolia, and Alfred G. Cicchetti, Beverly, Mass., assignors to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed Apr. 5, 1962, Ser. No. 185,273
8 Claims. (Cl. 198—19)

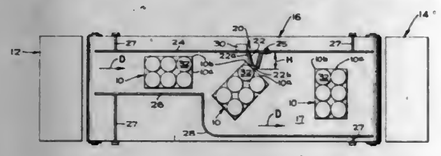


1. A conveyor system comprising endless belt means, a series of work stations disposed alongside the belt, a dispatch station at the head of the belt, and control means comprising a stepping relay having a contact arm indexable successively from a home position to a series of contacts corresponding to the various work stations, switch means at each work station and at the dispatch station disposed in series for energizing a conveyor starting circuit, means responsive to the completion of said starting circuit for completing a conveyor running circuit through the stepping relay, means responsive to the movement of said conveyor for causing said stepping switch contact arm to index to the successive contacts, means for breaking the starting circuit after the running circuit is energized, means responsive to the arrival of said contact arm at the contact corresponding to the work station from which the conveyor was energized to break the running circuit to the conveyor.

3,128,868
MAGNETIC 6 PACK TURNING DEVICE
Philip Eugene Bowen, Paxton, Ill., assignor to FMC Corporation, a corporation of Delaware
Filed Aug. 1, 1960, Ser. No. 46,710
1 Claim. (Cl. 198—33)

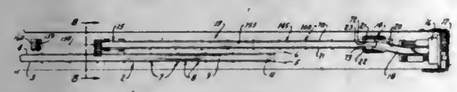
Apparatus for turning rectilinear articles having ferromagnetic portions comprising, in combination: a conveyor having a substantially horizontal conveying surface

for supporting and advancing said articles; a guide rail extending along one side of said conveying surface and having an inner face facing said surface and an outer face facing away from said surface; a bumper secured to the inner face guide rail and extending from said guide rail over the conveying surface; a substantially planar abutment surface defining the upstream side of the bumper and upstanding substantially perpendicularly from the plane of the conveying surface, said abutment surface comprising an inner portion and an outer portion and being formed from resilient material having a high coefficient of friction, the inner abutment surface portion lying closest to the rail, being substantially planar and forming an acute downstream angle with the rail and the



outer abutment surface portion being part-cylindrical and arranged so that said inner portion joins the outer portion tangentially; and a magnet fixed to the guide rail outwardly of said inner face immediately upstream from said bumper and arranged to attract an article to be turned so that a corner of the article will strike the inner abutment surface portion near the guide rail to make line contact therewith and arranged to oppose the centrifugal forces acting on said article as it pivots about said line contact, abuts said inner surface portion and rolls around said outer portion while being frictionally advanced by said conveyor surface past said abutment, slippage between said abutment and said article thereby being substantially prevented.

3,128,869
CONTINUOUSLY MOVABLE CONVEYOR SYSTEM AND METHOD OF CONVEYING MATERIAL
James W. Hardy, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed July 20, 1960, Ser. No. 44,052
7 Claims. (Cl. 198—96)



1. An auxiliary shuttle conveyor, said conveyor including

a traction means at the tail end of the conveyor,

a carriage means at the head end of the conveyor,

a series of vertically extending longitudinally aligned support standards located at intervals between said carriage and traction means,

said standards having ground-engaging skids at their bases and rope seats adjacent their upper end portions,

a first pair of ropes stretched between said carriage means and traction means substantially at ground level and secured to the bases of each of said standards,

a second pair of ropes stretched between said carriage means and traction means and secured to said rope seats,

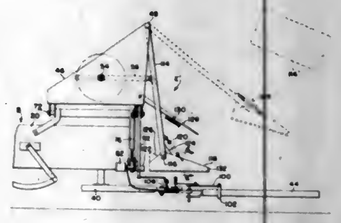
retarding means which maintain the pairs of ropes taut when an advancing force is applied to the conveyor by the traction means,

troughing idler assemblies suspended from said second pair of ropes at intervals and a flexible conveyor belt carried by said troughing idler assemblies,

said traction means being secured to said ropes so as to continuously move said conveyor over the ground by applying an advancing force to the pairs of ropes of a greater magnitude than the retarding force exertable by the retarding means on the pairs of ropes, and

means for discharging material carried by the flexible conveyor belt at an angle transverse to the axis of the conveyor.

3,128,870
BALE HANDLING APPARATUS
Harold E. de Buhr, Ottumwa, Iowa, assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Original application Dec. 7, 1959, Ser. No. 857,588. Divided and this application Mar. 1, 1961, Ser. No. 92,670
3 Claims. (Cl. 198—128)



1. In combination with a baler having an elongated bale chamber including side walls, a floor and a top terminating in a discharge opening through which bales emerge along said floor as the baler operates: bale-handling mechanism comprising a support adjacent to said opening and having pivot means on an axis above the opening and transverse to the length of the bale case; means connecting the support to the baler; a bale receiver normally positioned as an extension of but separate from the floor to receive a bale emerging from said opening, said receiver having a normally generally horizontally positioned bottom on which the received bale is supported; arm means pivoted at an upper end thereof to said pivot means and normally depending to a lower portion adjacent to the receiver; pivot means connecting the receiver to said lower portion on a transverse axis offset toward the discharge opening as respects the center of gravity of the receiver and a received bale whereby a received bale tilts the bale received so that its bottom slopes downwardly and away from the floor; means biasing the receiver to the aforesaid position in which its bottom is normally generally horizontal; and means for swinging the arm means away from the opening and about the first-mentioned axis to carry the receiver and bale received thereby remotely from said opening.

3,128,871
TRANSPORTABLE FLEXIBLE BELT CONVEYOR
William J. Huber, Oak Lawn, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed Aug. 29, 1960, Ser. No. 55,613
3 Claims. (Cl. 198—184)

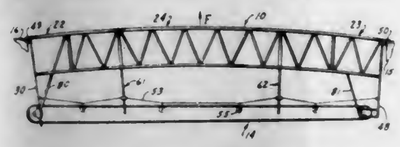
1. A flexible belt conveyor, said conveyor being characterized by its relatively lightweight in proportion to the loads it is capable of carrying, said conveyor including, in combination,

a framework,

said framework being composed of a material deformable into a substantially upwardly convex condition upon the appropriate application of externally applied forces,

two pairs of downwardly extending anchor members, one pair at each end portion of the framework,

two generally parallel elongated bodily flexible dual purpose tension members extending between the anchor members, each elongated bodily flexible dual purpose tension member extending between two anchor members, one anchor member at each end portion of the framework,



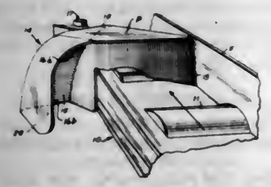
a plurality of idler assemblies suspended from the pair of generally parallel elongated tension members in load transferring relationship thereto,

a load carrying flexible belt supported by the idler assemblies,

structure connecting the elongated tension members to the framework intermediate its end portions in load transferring relationship thereto whereby the weight of the load on the belt is applied, in a downward direction, to the framework, and

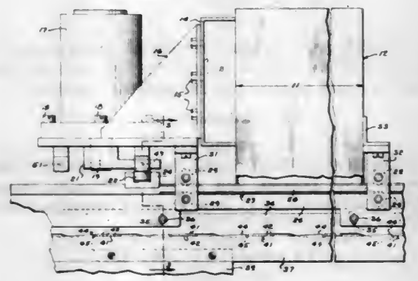
means for applying tension to the elongated tension members of a magnitude capable of inducing upwardly directed load resisting forces in the framework sufficient to overbalance the downwardly directed dead weight forces and at least partially counterbalance live loads carried by the conveyor.

3,128,872
UNLOADERS FOR LUMBER MILLS
Walden M. Gaitten, Sylacauga, Ala., assignor to Soderhamn Machine Manufacturing Co., Talladega, Ala.
Filed Nov. 2, 1960, Ser. No. 66,822
3 Claims. (Cl. 198—188)



1. A deflector means for deflecting elongated items travelling endwise along a conveyor having at least one longitudinal marginal edge to remove the items from the conveyor, said deflector comprising a vertical plate means adapted to extend entirely across the conveyor at an acute angle to the direction of travel of items therealong and adapted to be engaged by the leading end of an elongated item for forcing said leading end laterally to one side beyond the longitudinal edge of the conveyor, and second plate means carried by and extending generally normal to said vertical plate and including a surface overlying the conveyor lying in a horizontal plane and curving downwardly as it extends along the vertical plate means to a point outwardly beyond the longitudinal edge of the conveyor where said second plate means extends vertically downwardly below the longitudinal, marginal edge whereby the leading end of an elongated item deflected by said vertical plate means to one side beyond the longitudinal edge of the conveyor will be pushed downwardly by said curved surface relative to the conveyor so that the elongated item will slide off of the edge of the conveyor.

3,128,873
ARTICLE FEED DEVICE
Cecil C. McCain, Glen Ellyn, and Ben L. Wright, Chicago, Ill., assignors to Western Electric Company, Incorporated, a corporation of New York
Filed Oct. 27, 1961, Ser. No. 148,197
1 Claim. (Cl. 198—219)



A device for feeding articles having a body portion and reduced end portions extending therefrom comprising:

a pair of parallel supporting bars mounted in spaced relation to each other and engageable with the end portions for supporting the article with the body portion positioned between the bars, said bars having upwardly directed aligned projections for holding the articles against reverse movement and having sloping surfaces for guiding the articles upwardly and over said projections;

an elongated feed bar disposed above and in parallel relation to said supporting bars for holding the articles on the supporting bars and having downwardly directed projections for holding the article against reverse movement and having sloping surfaces for raising the feed bar and the projections over the articles in response to relative movement between the feed bar and the articles;

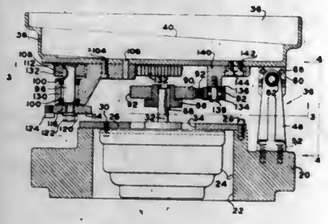
means for supporting said feed bar for reciprocatory movement parallel to said supporting bars and for limited vertical movement; and

means for reciprocating said feed bar through a predetermined distance to effect a step by step feeding movement of the articles on said supporting bars.

3,128,874
INERTIA CONVEYOR
Edward C. Hanna, Waynesboro, Pa., assignor to Landis Machine Company, Waynesboro, Pa., a corporation of Pennsylvania
Filed July 3, 1961, Ser. No. 121,739
6 Claims. (Cl. 198—220)

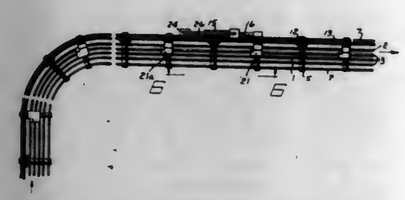
1. An inertia feeder comprising a stand, a generally circular reservoir having an inclined ramp, a plurality of springs carried by said stand supporting said reservoir for limited rotary movement about its axis, additional springs interposed between said stand and said reservoir and yieldably opposing motion of said reservoir in one direction about its axis, a plurality of weights carried by said reservoir, and means for moving said weights in synchronism to impart a series of oppositely directed drive impulses to said reservoir, the drive impulses in one di-

rection being opposed by said additional springs and the drive impulses in the opposite direction being augmented



by said additional springs whereby the rotary velocity of said reservoir in said one direction is less than the rotary velocity of said reservoir in the opposite direction.

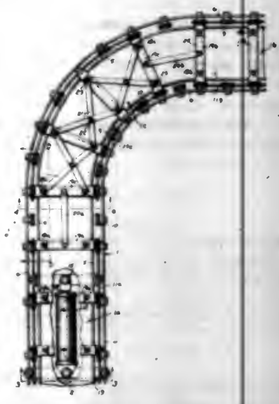
3,128,875
RECIPROCATING PUSHER-TYPE CONVEYOR
John G. Kay, Detroit, and Alfred L. Osinski, Warren, Mich., assignors to F. Jos. Lamb Company, Detroit, Mich., a corporation of Michigan
Filed Oct. 30, 1961, Ser. No. 148,339
12 Claims. (Cl. 198—221)



1. A conveyor comprising a runway curved in a horizontal plane along at least a portion of its length, a resiliently flexible transfer rail, a supporting rail fixedly mounted in relation to the runway and supporting the transfer rail for reciprocation, means on the supporting rail for maintaining the transfer rail uniformly spaced along its entire length from the runway throughout its movement, means for reciprocating the transfer rail, a plurality of longitudinally spaced feeding members for advancing workpieces along the runway, brackets on the transfer rail, pivot means on the brackets supporting the feeding members, and stops on the brackets for preventing pivotal movement of the feeding members past their operative positions when the transfer rail is moving in one direction.

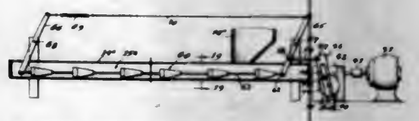
3,128,876
RECIPROCATING PUSHER-TYPE CONVEYOR
John G. Kay, Detroit, and Alfred L. Osinski, Warren, Mich., assignors to F. Jos. Lamb Company, Detroit, Mich., a corporation of Michigan
Filed Jan. 26, 1962, Ser. No. 168,912
15 Claims. (Cl. 198—221)

1. A conveyor comprising a longitudinally curved runway, transfer rails on opposite sides of the curved runway, means mounted on the opposite sides of the runway for supporting the transfer rails for reciprocation coaxially with the runway, a plurality of supports spaced longitudinally of the curved runway, said supports extending radially of the curved runway and secured to the transfer rails, means for reciprocating one of the supports longitudinally, means interconnecting said supports in fixed relation to each other and in fixed radial relation to the axis of the curved runway, and feed members mounted on the supports for advancing workpieces along the



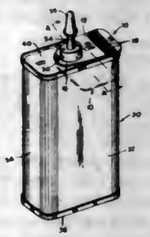
curved runway upon each forward movement of said supports.

3,128,877
POULTRY FEEDER WITH RECIPROCABLE CONVEYOR
Nat Cordis, Crown Stock Farms, Silver Lake, Wis.
Filed Sept. 8, 1958, Ser. No. 759,464
20 Claims. (Cl. 198—224)



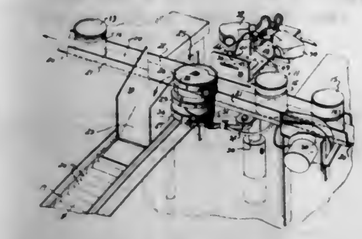
1. A stock feeder comprising in combination open-topped trough means affording access to stock, a feed supply means discharging thereinto, reciprocable conveying means in said trough means, means for actuating said conveying means, said conveying means comprising an elongated flexible linear member having feed-engaging portions therealong, and hold-down means reciprocated with said linear member and coacting with said trough means at spaced points intermediate the ends thereof thereby to guide the said member there-along and to retain the feed engaging portions therewithin.

3,128,878
FLINT PACKAGE SEAL FOR LIGHTER FUEL CONTAINERS
Bernard Ring, 239 Park Ave. S., New York 3, N.Y.
Filed Oct. 12, 1961, Ser. No. 144,749
1 Claim. (Cl. 206—42)



A flint cartridge comprising a substantially rectangular flat body of flexible plastic material having a round hole at one end for attachment of the body to a cylindrical article, a series of short spaced aligned lugs integral with the body at the other end thereof and protruding thereabove, the spaces between the lugs constituting stalls, metal flints for spark-type cigarette lighters removably mounted in the stalls, and teats on the opposed walls of the lugs for yieldingly holding the flints in the stalls, the base of each stall being slitted to facilitate flexure of the body.

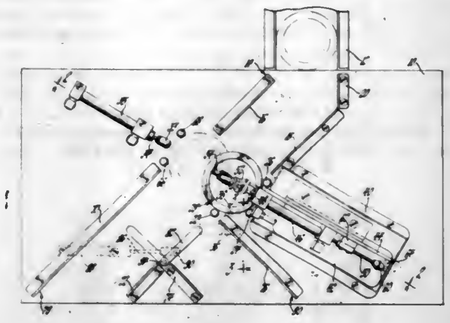
3,128,879
CAN-SORTING DEVICE
Thomas D. Birchall, Turlock, Calif., assignor to G. W. Hume Company, Turlock, Calif., a corporation of California
Filed June 13, 1960, Ser. No. 35,466
10 Claims. (Cl. 209—111.5)



5. A can sorting device for sorting from a conveyor line cans having a dark band at a predetermined height around their outer periphery from cans not so marked by using electromagnetic means beside the can conveyor to pull a can off said conveyor when magnetized; said device being characterized by photoelectric cell means which controls the magnetization and demagnetization of the electromagnetic means according to whether a predetermined quantity of light is or is not directed at said photoelectric cell means, a wave shaping circuit for converting photoelectric energy from said cell means into a definite wave pattern, and timing means utilizing one pulse portion of said definite wave pattern for energizing said electromagnetic means for a predetermined and definite time independent of the time of actuation of said photoelectric cell means, said photoelectric cell means being combined with light diffusing means for causing reaction of said cell means to the general intensity of reflection of said can at band height rather than to spot reflection.

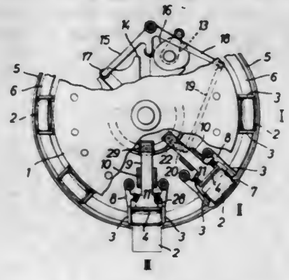
3,128,880
SPRING DETECTION DEVICE
Robert L. Dega, Utica, and Edward F. Bundsbuh, Berkley, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 4, 1961, Ser. No. 100,698
3 Claims. (Cl. 209—111.5)

1. Apparatus for testing lip-type seal units for the presence of metallic spring elements associated with the lip portion thereof comprising support means for receiving and retaining a lip-type seal unit, inductive sensing means including a movable sensing head adapted to produce a signal when in proximity to metallic objects, said sensing head being engagable with the lip portion of said seal unit when said seal unit is received and retained by said support means and circuit means electrically connected to said head and responsive to the signal produced therein to indicate the presence or absence of said spring, reject means controlled by said inductive sensing means to reject means controlled by said inductive sensing means to reject seal units where the absence of a spring is detected, and switch means responsive to the lip engaging position of the sensing head to prevent accidental control of the reject means by the inductive sensing means occasioned by spurious signals produced on movement of the sensing head near metallic objects other than said



spring, said reject means being operative when the sensing head is disengaged from the lip to effect rejection of defective seal units.

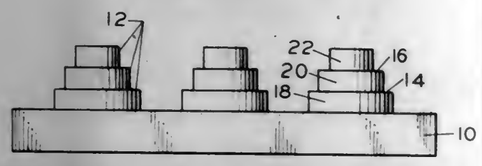
3,128,881
CONVEYOR APPARATUS IN PACKAGING MACHINES
Paul Kühnle, Winnenden, Wurttemberg, Germany, assignor to Firma Fr. Hesser Maschinenfabrik-Aktiengesellschaft, Stuttgart-Bad Cannstatt, Germany, a corporation of Germany
Filed Jan. 16, 1961, Ser. No. 82,982
Claims priority, application Germany Jan. 16, 1960
3 Claims. (Cl. 209—121)



1. In a packaging machine, the combination comprising fixed support means, a single horizontal conveyor for moving a plurality of packages relative to said fixed support means, a weighing station mounted on said fixed support means, an underweight rejection station mounted on said fixed support means and disposed in spaced relation to said weighing station to define a space therebetween, a plurality of package holders attached to said conveyor for movement therewith and being spaced from each other a distance corresponding to the space between said weighing and rejection stations, each package holder including a plurality of pivoted walls and operating means therefor, said pivoted walls being movable in a horizontal plane between a package holding position and a package releasing position, drive means for intermittently driving said conveyor whereby said package holders pause in their travel at said weighing and rejection stations, said movable walls normally being disposed in their package holding position during movement with said conveyor, means mounted on said fixed support means at said weighing station for actuating said operating means causing said pivoted walls to move to their package releasing position

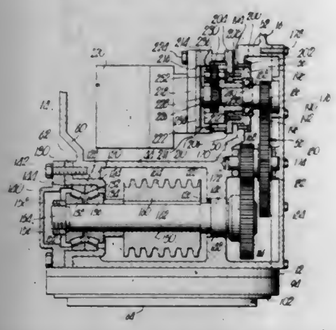
whereby a package is released from its holder during its pause at said weighing station, ejecting means carried by said fixed support means at said rejection station, and underweight control means operatively connected to said during its pause at said weighing station is subsequently ejected from said conveyor during its pause at said rejection station.

3,128,882
HAIR ROLLER HOLDER
Rena Kardulas, 30 Orchard Ave., Nashua, N.H.
Filed July 11, 1963, Ser. No. 294,290
6 Claims. (Cl. 211—13)



1. A holder for hair rollers which comprises a base having secured thereto at least two cylindrical carriers that are spaced apart, each carrier comprising at least three cylindrical surfaces, each cylindrical surface having a sufficiently greater diameter than the cylindrical surface above it to define a shoulder surface wide enough to support a hair roller.

3,128,883
SWINGABLE BOOM TURRET STRUCTURE FOR MOBILE VEHICLES
Raymond F. Pitman, Prairie Village, Kans., and Dean E. Broderson and Herbert W. Gronemeyer, Jr., Kansas City, Mo., assignors to Pitman Manufacturing Company, Grandview, Mo., a corporation of Missouri
Filed Nov. 6, 1961, Ser. No. 150,530
4 Claims. (Cl. 212—68)



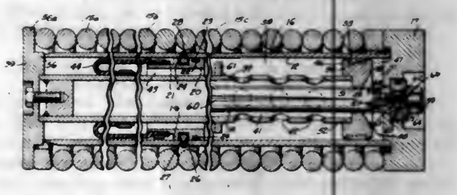
1. Apparatus for rotatably mounting an elongated boom on a mobile vehicle, said apparatus comprising a support adapted to be secured to said vehicle; turret structure including a base and a pair of plate members secured to said base and normally projecting upwardly therefrom, said base being rotatably mounted on said support for movement about a vertical axis, said plate members being adapted for mounting therebetween one end of said boom for movement relative thereto; power-actuated mechanism carried by said base between said plate members and provided with a drive shaft; and means operably coupled to said support and the drive shaft of said mechanism for rotating the latter and thereby said structure about said axis to thereby rotate said boom, said rotating means comprising first gear means on said support, second gear means on said base and operably coupled with said first gear means for movement relative thereto, and planetary gear means on said drive shaft for interconnecting the latter with said second gear means, said planetary gear means including an element rotatably mounted on said structure, a gear train operably coupling said element with said second gear means, a planetary gear rotatably mounted on said element and movable therewith along a path substantially concentric to the axis of rotation thereof, and a sun gear fixed to said drive shaft and in mesh with said planetary gear.

3,128,884
LONG TRAVEL HYDRAULIC CUSHION DEVICE
Bernard J. Trautman and William R. Shaver, Hammond, Ind., and Earl L. Thompson, Chicago, Ill., assignors to Pullman Incorporated, Chicago, Ill., a corporation of Delaware
Filed Oct. 23, 1961, Ser. No. 146,769
14 Claims. (Cl. 213—43)



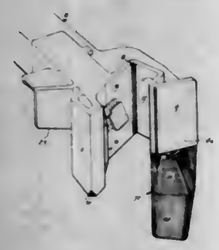
1. A hydraulic cushioning device comprising a fluid containing cylinder having a closed end and an open end, fluid displacement means received in said cylinder and including a piston head having guiding surface means elevated above the peripheral surface of said head contacting the inner wall of said cylinder to guide said fluid displacement means for reciprocation relative to said cylinder and to provide a seal so as to define a high-pressure chamber adjacent said closed end of said cylinder and a low-pressure chamber adjacent said open end, orifice means formed in said fluid displacement means to provide communication between said high and low-pressure chambers, a piston rod connected to said piston head, and which extends through said open end, and a flexible expandable fluid receptacle attached to said cylinder and said piston rod to close said open end.

3,128,885
LONG TRAVEL HYDRAULIC CUSHION DEVICE
Earl L. Thompson, Chicago, Ill., and James L. Forand and William C. Voss, Munster, Ind., assignors to Pullman Incorporated, Chicago, Ill., a corporation of Delaware
Filed Oct. 23, 1961, Ser. No. 146,770
9 Claims. (Cl. 213—43)



1. A hydraulic cushioning device comprising a hydraulic fluid containing cylinder including an open-ended tube, a first cylinder head closing one end of said tube, a second cylinder head located between the open and closed ends of said tube and including a peripheral keyway, a plurality of peripherally spaced openings extending through the wall of said tube, key means disposed in said keyway and accessible through said openings for positioning said key means to fix said second cylinder head against axial movement within said tube, fluid displacement means movable through said second cylinder head and including a piston head located between said cylinder heads and defining a high-pressure chamber adjacent said first cylinder head and a low-pressure chamber adjacent said second cylinder head, a flexible fluid receptacle connected to said fluid displacement means and said second cylinder head adjacent the open end of said tube and in constant communication with said low-pressure chamber, and orifice means providing communication between said high and low-pressure chambers.

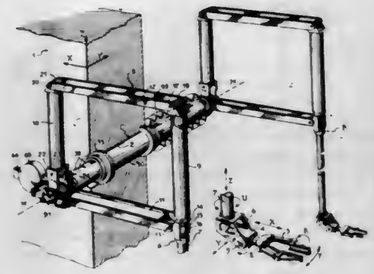
3,128,886
CAR COUPLER
Kenneth L. De Penti, Mayfield Heights, Ohio, assignor to National Castings Company, Cleveland, Ohio, a corporation of Ohio
Filed Sept. 5, 1961, Ser. No. 135,964
5 Claims. (Cl. 213—100)



2. A car coupler of the fixed-jaw type comprising: a buffing jaw and a pulling jaw horizontally spaced on opposite sides of a longitudinal vertical center plane of the coupler to receive the buffing jaw of a similar coupler therebetween; and an aligning horn mounted beneath said pulling jaw and on the same side of said plane as the pulling jaw; said horn having a buffing face canted inwardly and rearwardly toward said plane, and an upwardly-facing surface for supporting an opposing similar coupler when coupled to said coupler; said buffing face being spaced forwardly of said pulling jaw a distance maintaining, when the horn buffing faces of said coupler and a similar coupler are engaged, said pulling jaw apart from the buffing jaw of the similar coupler; said horn having an aligning surface sloping forwardly and downwardly from said pulling jaw for engaging the buffing jaw of a similar coupler in effecting vertical alignment of the couplers.

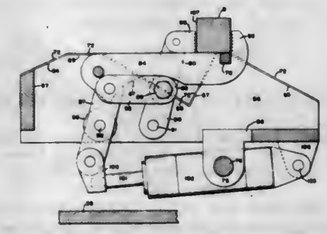
3,128,887
MECHANICAL MANIPULATORS FOR THE DISPLACEMENT OF OBJECTS LOCATED IN A RADIOACTIVE MEDIUM
René Le Guennec, La Haie Bergerie Villepreux (Seine et Oise), and Pierre Pesenti, Montrouge (Seine), France, assignors to Commissariat à l'Energie Atomique, Paris, France
Filed Feb. 23, 1961, Ser. No. 90,991
Claims priority, application France Feb. 25, 1960
12 Claims. (Cl. 214—1)

1. A mechanical manipulator for the displacement of objects in a radioactive medium comprising: a pilot member and a controlled member disposed symmetrically in parallel relation on opposite sides of one wall of an enclosure surrounding the radioactive medium; and articulated parallelogram connected to each of said members deformable in parallel planes; a pair of concentric tubes disposed perpendicular to said parallelograms and extending through an opening formed in said one wall, said tubes being connected at the opposite ends thereof to one corner of said parallelograms for transmitting movement from said pilot member to said controlled member by way of said parallelograms, said one corner of each of said parallelograms including a pivotal connection between one end of a first arm and the adjacent one end of a second arm, the outer of said tubes being axially slidable and rotatably mounted within said opening and being fixedly secured at the opposite ends thereof to said one end of said first arms, the inner of said tubes being mounted within said outer tube for axial movement therewith and for independent rotary movement relative thereto; said inner tube being nonrotatably secured at the opposite ends thereof to said adjacent one end of said second arms, each of said parallelograms including third



and fourth arms pivotally joined together at one end thereof, the other end of said third and fourth arms being pivotally joined to the other end of said first and second arms respectively, said pilot member and said controlled member being mounted on and forming extensions of corresponding arms of respective parallelograms other than said first and second arms thereof, movement of said pilot member toward and away form said wall producing a simultaneous, parallel movement of said controlled member, and lateral and vertical movement of said pivot member producing simultaneous, parallel movement of said controlled member.

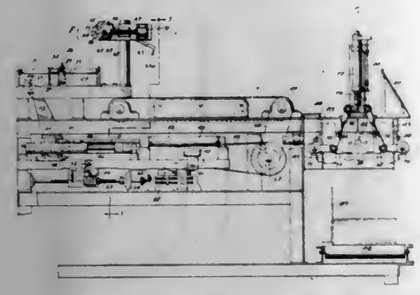
3,128,888
GRINDING MACHINE
Paul Di Lella, Solvay, N.Y., assignor, by mesne assignments, to E. W. Bliss Company, Canton, Ohio, a corporation of Delaware
Filed Feb. 5, 1962, Ser. No. 171,230
9 Claims. (Cl. 214—1)



8. A work piece clamping and turning structure for multi-sided work pieces including a work piece support mounted for vertical movement between up and down positions, a fixed member for engagement by only an edge portion of the under side of the work piece, said support being operable upon movement to up position to position the work piece with said edge portion coplanar with said fixed member and forming in conjunction therewith a complete support for the work piece, said fixed member serving to effect rolling of the work piece when said support is moved toward down position, and clamping means movable into engagement with opposite vertical

sides of the work piece when the same is positioned on said support and fixed member.

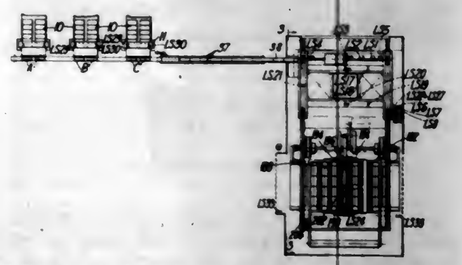
3,128,889
MACHINE FOR HANDLING SHINGLES OR SIMILAR SHEET-LIKE PIECES
Helge C. Johnson, West Chester, and Norman M. Robinson, Parkesburg, Pa., assignors to Certain-Teed Products Corporation, Ardmore, Pa., a corporation of Maryland
Filed Jan. 6, 1959, Ser. No. 785,259
15 Claims. (Cl. 214—6)



1. A machine for handling shingles or similar sheet-like pieces comprising a tray for receiving shingles from one direction, a shingle assembly box spaced therefrom, a conveyor for transferring shingles in a direction transverse the receiving direction from the tray to the box where they accumulate in a pile, a reciprocating pusher for moving shingles in the same transverse direction from the tray to the conveyor, and a shingle flipping finger mounted above the plane of the conveyor upon a pivot shaft from which it is adapted to hang downwardly with its lower end across the path of shingle movement as the shingles travel from the tray to the box, said lower end being adapted to engage the leading edge of a shingle, latch means normally holding said finger out of the path of shingle movement, means for releasing said latch means to permit engagement with a selected shingle, said finger when released and engaged by a shingle being adapted to be swung by the shingle and to guide said leading edge upwardly as the shingle moves from the tray to the box whereby to permit the following edge to pass under the leading edge and itself become the leading edge and then to allow the shingle to fall to the conveyor for delivery to the box in inverted position.

3,128,890
APPARATUS FOR STACKING OR SETTING UP BRICKS
John Paisley, London, England, assignor to Eastwoods Limited, London, England, a company of Great Britain
Filed Sept. 26, 1960, Ser. No. 58,246
2 Claims. (Cl. 214—6)

1. An apparatus for setting bricks comprising a step by step moving marshalling platform, means for feeding bricks onto that platform so as to form a number of spaced rows with a predetermined number of bricks in each row, two gripper heads arranged side by side in the direction of the lengths of the said rows and each rotatable and movable in an up and down direction of a carriage frame, a lift at one end of the marshalling platform, a track arranged above the platform and extending above the lift, a transfer trolley movable along the track, a first motor on the trolley adapted to drive it along the tracks, a superstructure vertically movable on the trolley, a reciprocable motor mounted in the trolley and adapted to transmit vertical movement to the superstructure, horizontal guide rails on the superstructure, two carriages each including said carriage frame movable horizontally towards and away from one another on said guide rails, a further motor on said superstructure for imparting said horizontal movement to the carriages, said further motor comprising two cylinders fixed to a frame member at the bottom of said superstructure and between the two carriages with reciprocable plungers in said cylinders engaging said carriages and a lever pivotally connected at its center to said frame member with links pivotally connected between the ends of the levers and the two carriages whereby the movements of the two carriages are equalized, a gripper shaft rotatable about a vertical axis on each carriage, a rotary motor on each carriage coupled for imparting said rotary movement, inflatable bolsters on said gripper frames adapted to grip the bricks in the row of bricks on the marshalling platform, pneumatic means for controlling the gripping action by inflating and deflating said bolsters, control means energizing said further motor to move the gripper heads apart rotating them and returning them together selectively on different operation cycles while each of said

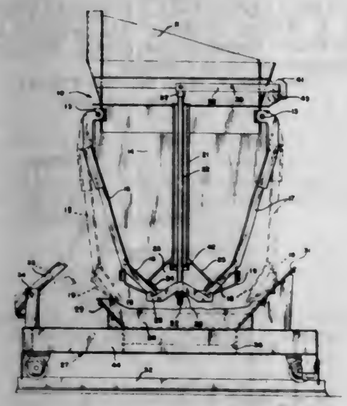


gripper heads carries a number of grippers for half the number of bricks in said rows, means for moving the lift in an up and down direction and means for raising and lowering said gripper frames responsive to proper pressure in said bolsters, wherein the pneumatic means for the grippers has a control adjacent the marshalling platform actuated by downward movement of a part of said frame whereby the grippers close on the bricks when the heads are first lowered, and including another control adjacent the means for moving the lift arranged to release the gripper when the heads again descend, and wherein a control for the reciprocable motor on the trolley is arranged to come into operation when said gripper heads rise from the receiving platform whereby the heads are separated, and wherein the motor adapted to rotate each gripper head is provided with a control which is actuated by the outlined movement of the frames whereby the frames are rotated through 90°, and wherein said control for the first said motor is arranged to be actuated by the rotational movement of said frames when approaching the end of their rotation.

3,128,891
CUPOLA CHARGING APPARATUS
Harold W. Schwengel, Port Washington, Wis., assignor to Modern Equipment Company, Port Washington, Wis., a corporation of Wisconsin
Filed Oct. 15, 1962, Ser. No. 230,443
4 Claims. (Cl. 214—19)

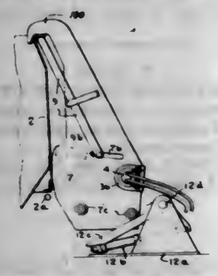
1. In combination with a cupola charging bucket adapted to be transported in an inclined path from a loading area to a cupola, said bucket having an upper portion, having a relatively small bottom member, and having a plurality of doors hinged to and depending from said upper portion, said doors being swingable from a normal hanging position spaced laterally from said bottom member to a closed position against said bottom member, a

door-closing apparatus comprising: a movable carriage positionable below said charging bucket; means on said carriage adapted to engage the open hanging doors of the empty bucket as the latter moves downwardly and rearwardly on its inclined path, and to urge said doors into their closed position against the bucket bottom member as said carriage moves rearwardly with said descending



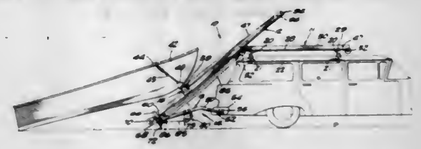
bucket; means on said bucket and operatively associated with said carriage adapted to engage and lock said bucket doors in their closed position; and means on said carriage engageable by the closed charging bucket as the latter commences its upward and forward travel to the cupola whereby said bucket will pull said carriage forwardly to a point where the latter is properly positioned to receive the empty bucket upon its return from the cupola.

3,128,892
MEANS FOR EVACUATING CARS OF THE HOPPER TYPE
Leland G. Plant, Edenton, N.C.; Pattie Louise Moore Plant, executrix of said Leland G. Plant, deceased, assignor to Munson H. Lane, trustee, Washington, D.C.
Original application Apr. 12, 1956, Ser. No. 577,820, now Patent No. 2,889,943, dated June 9, 1959. Divided and this application Feb. 11, 1959, Ser. No. 797,000
5 Claims. (Cl. 214—64.2)



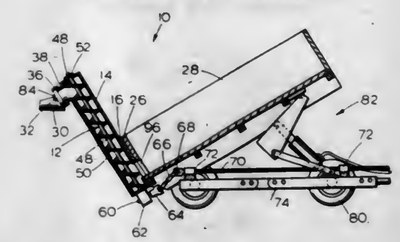
1. A hopper car evacuator comprising an eccentrically weighted power rotated shaft, a frame supporting bearings in which said shaft revolves, said frame having hook arms by which it can hang upon a flange projecting outwardly from the top edge of one side wall in a railway hopper car; and mechanism bearing upon the underside of said flange for clamping said hook arms to the car flange in such manner that upwardly directed thrusts upon the frame structure caused by rotating said shaft are transmitted to the underside of said flange through said mechanism, said mechanism bearing on the under side of the flange comprising a pair of latch bars each slidably positioned upon its respective hook arm, and means for actuating said latch bars toward or from the flange to clamp or release the hook arms.

3,128,893
BOAT HANDLING AND LOADING ASSEMBLY
Harvey B. Jones, 3843 Strang St., Rosemead, Calif.
Filed Apr. 30, 1962, Ser. No. 190,894
16 Claims. (Cl. 214—450)



1. A cable-operated car-top boat handling accessory adapted to be attached to a motor vehicle and useful in loading and transporting a small boat on the top of the vehicle, said accessory comprising anchor means including means for securing the same rigidly to the roof of a motor vehicle to support a boat thereon, an inverted U-shaped frame having means for pivotally connecting the lower end of its legs to the lower lateral sides of a vehicle at one end thereof, an elongated rigid member movably connected centrally to the bight portion of said U-shaped frame and extending lengthwise of the vehicle top, winch means mounted on said U-shaped frame having cable means extending therefrom over roller means carried by said anchor means on the car roof and thence over other roller means on said rigid frame member and including means for attaching said cable means to the bow of a boat to be loaded on the car roof, said winch and cable means being operable to pull the boat lengthwise of said elongated member and upwardly onto the vehicle roof as said U-shaped frame is elevated upwardly into a generally vertical boat-carrying position.

3,128,894
END GATE MOUNTED GRAIN AUGER
Robert L. Nelson, Rte. 2, Atlantic, Iowa
Filed Apr. 3, 1961, Ser. No. 100,437
2 Claims. (Cl. 214—509)



1. In combination: a dump wagon box having a rear wall, said rear wall having an end gate opening therein, end gate receiving track means attached to said rear wall on each side of said opening for vertically slidably receiving an end gate, an end gate slidably mounted in said track means and positioned to cover said opening, said end gate having a grain opening therethrough, an elongated grain elevating mechanism mounted on said end gate and having a lower end in communication with said end gate grain opening and said elevating mechanism having a grain exit opening at its upper end, said end gate having a plurality of sections adjustably secured together for horizontal movements with respect to each other

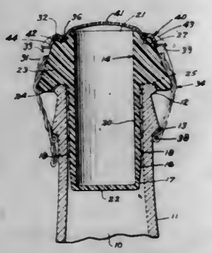
whereby the total width of said end gate can be varied to adjust to wagon boxes having end gate openings of different widths.

3,128,895
PROTECTIVE WRAPPERS FOR BREAKABLE ARTICLES
Rudolf Nelle, Nordenham, Oldenburg, Germany, assignor to Norddeutsche Seekabelwerke Aktiengesellschaft, Nordenham, Oldenburg, Germany
Filed Jan. 24, 1961, Ser. No. 84,668
Claims priority, application Germany Jan. 26, 1960
2 Claims. (Cl. 215—12)



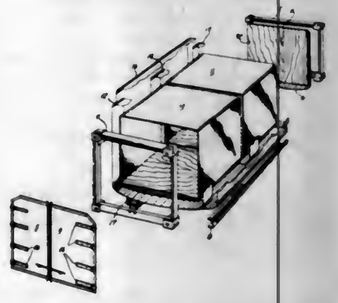
1. A structure of the character described comprising, in combination, a bottle-like article consisting of glass-like material; a protective wrapper surrounding said article, said wrapper consisting of an elastically expandable netting comprising at least one layer of intersecting filaments consisting of foamed stretchable thermoplastic material, said layer having overlapping edge portions so as to form a tube about the article and the filaments of said layer overlapping and being connected to each other at the points of intersection so that such points are free of knots; and means for connecting said edge portions to each other.

3,128,896
BOTTLE CLOSURE
Robert F. Schnier, Woodside, Calif.
(683 Bryant St., San Francisco 7, Calif.)
Filed Feb. 20, 1961, Ser. No. 90,497
3 Claims. (Cl. 215—48)



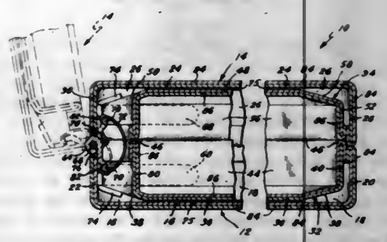
1. A separate closure member adapted for mounting at the outer open head end of a tubular bore of a bottle stopper which has an annular crown groove and spaced channels radiating outwardly and downwardly from said crown groove, said closure member comprising a convexly crowned circular disc having radially extended deformed indentations in its outer circumferential edge portion, said deformed indentations being circumferentially spaced to conform with the spacing of a preselected number of said channels, the said disc closure member including an indented crown groove circumferentially of its convex portion, said groove being spaced radially inwardly from the outer circumferential edge of the disc and said indented deformations extending radially outwardly from said crown groove to said outer circumferential edge of the disc.

3,128,897
CARGO CONTAINER CONSTRUCTION
William B. Wilkins, Roxboro, N.C., assignor to Reinforced Plastic Container Corporation, Roxboro, N.C., a corporation of North Carolina
Filed Mar. 9, 1962, Ser. No. 178,741
13 Claims. (Cl. 220—1.5)



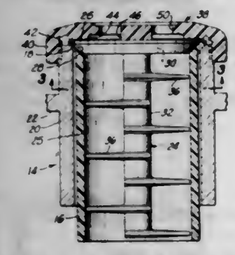
1. A container wall unit comprising:
(A) a substantially rigid tubular wall comprising: in any transverse cross section thereof, a sheet of thin gauge material wrapped upon itself as a plurality of superimposed laminae which forms said wall in an integral contiguous seamless cross section, said wall having a sub-floor portion of inwardly-concave outwardly-convex contour along said cross section normally disposed below the remainder of the wall and any adhesive joining said laminae; and
(B) truss structure wherein said sub-floor portion is a tension member, the truss structure comprising;
(1) a planate floor bridging the inner convex surface of said sub-floor portion and joining therewith at its extremities and cooperating therewith as a compression member; and
(2) tie means disposed between, and joined rigidly with, said sub-floor portion and the floor to support one in fixed relation with the other.

3,128,898
HINGED BOX CONSTRUCTION
Joseph O. Burman, Jr., Attleboro, Mass., assignor to Progressive Machinery Corp., Attleboro, Mass., a corporation of Massachusetts
Filed July 3, 1961, Ser. No. 121,761
3 Claims. (Cl. 220—35)



1. A box comprising a base section having a bottom wall and upstanding front, rear and side walls, a cover section having a top wall and downwardly depending front, rear and side walls, an inner shell snugly positioned within each of said sections, each of said shells being of generally the same configuration as its section and forming a complete inner liner therefor, means for securing said shells within their respective sections, hinge means for pivotally connecting said base and cover sections, said hinge means comprising a pair of hinged plates, each of which is mounted between one of the section rear walls and the adjacent liner rear wall, and means for securing said hinge plates in their aforedescribed position without any penetration of said sections, shells or plates, said securing means comprising integral fingers extending laterally from said plates around the rear corners of the box and terminating between the side walls of each section and the adjacent shell side walls, and tabs extending from the upper and lower edges of said hinge plates to a point beneath the adjacent shell, whereby said hinge plates are maintained in assembled position solely by being clamped between said sections and shells.

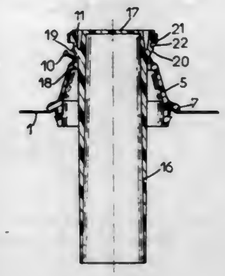
3,128,899
VENTING DEVICE
Gordon B. Runo, P.O. Box 149, Tulare, Calif.
Filed Oct. 22, 1962, Ser. No. 232,063
1 Claim. (Cl. 220—44)



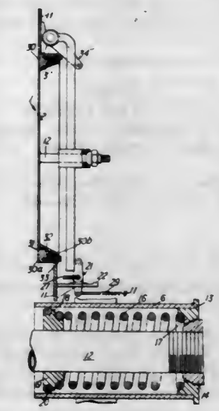
A venting device for use in a fluid storage tank, said device comprising a hollow tubular fitting adapted to be sealed intermediate the top and bottom end thereof in an opening in said tank, said fitting being provided with a seating surface at the top end thereof, a tubular duct supported in coaxial relation with respect to and within said fitting by means of a flange positioned at the top end of said duct, a baffle assembly coaxially disposed within said duct, said assembly comprising a positioning plate having passage holes and which spans the top end of said duct and is provided with a seating surface engageable with said flange, shaft depending from said plate on which is disposed a plurality of spaced and staggered baffle plates defining a tortuous open path along the length of said duct, and perforate cap means having a flange removably engageable with the top end of said fitting whereby a bearing surface on said cap means is engaged with said positioning plate to maintain said duct, fitting and positioning plate in assembled position.

3,128,900
STOPPERS FOR CONTAINERS
Miguel Chaboche, Paris, France, assignor to Etablissements Pierre Remy & Cie., Paris, France, a corporation of France
Filed Jan. 5, 1961, Ser. No. 80,889
Claims priority, application France Oct. 11, 1960
1 Claim. (Cl. 220—54)

A safety sealing device for a container which is provided with an orifice, comprising an element made of synthetic material forming a neck, an upper portion on said neck having a solid top, a lower portion on said neck to be fixedly secured in said orifice, tear off strip between and joining said upper and lower portions, an annular wall surrounding and depending from said solid top and peripherally secured at its lower end to said tear strip, an annular groove on the outer surface of said wall, an annular bead at the top of said lower portion projecting inside said neck to cooperate with said groove after said strip has been torn off to permit a tight closure of the neck by means of said upper portion by translation thereof inside said neck.

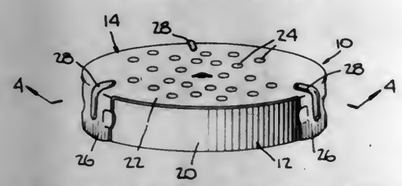


3,128,901
EMERGENCY SEALING DEVICES
Shmuel Agnon, Haifa, Israel, assignor to The State of Israel, Ministry of Defense, Hakirya, Tel Aviv, Israel
Filed Feb. 5, 1963, Ser. No. 256,327
5 Claims. (Cl. 220—57)



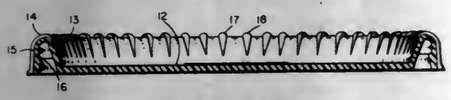
1. An emergency sealing device for sealing an aperture comprising a drop flap, having a substantially spherically faced rim, a sealing ring fixed around the aperture and against which the rim is adapted sealingly to seat, flap support means adapted to be pivotally mounted with respect to a support structure, coupling means for coupling the flap support to the drop flap as to permit limited pivotal displacement of the flap with respect to the support means about a point substantially located at the spherical centre of the rim, first means for releasably retaining the flap out of engagement with the sealing ring and second means for automatically locking and retaining the flap in sealing engagement with the sealing ring after the flap has been released so as to drop into said sealing engagement, said second means comprising a pivotally mounted lever, spring biased into rotation toward said flap.

3,128,902
HISTOLOGIC TISSUE RECEPTACLE
Hewitt M. Barnum, Rye, N.Y., assignor to The Technicon Company, Inc., Chauncey, N.Y., a corporation of New York
Filed May 13, 1963, Ser. No. 279,720
3 Claims. (Cl. 220—60)



1. A tissue receptacle for use in processing histologic tissue specimens for microscopic examination, comprising a receptacle body having a cylindrical side wall, and a removable cover therefor releasably securable to said receptacle body, said cover comprising a flexible circular disk and circumferentially spaced fingers integral with said disk and releasably engageable with said cylindrical side wall of the receptacle body in cover securing relation thereto when said disk is in flexed outwardly convex form and in cover releasing relation to said side wall when said disk is flexed from said outwardly convex form, said fingers having stiffening ribs formed therein and the marginal edge portion of said disk having stiffening ribs therein extending radially in said disk from and as continuations of said finger ribs, respectively, to facilitate restoring said disk to said outwardly convex form when the cover is placed on the receptacle body and said fingers are pressed toward said side wall for securing said cover to the receptacle body, said stiffening ribs in said disk terminating in said marginal edge portion thereof and said fingers having free end portions devoid of said ringer ribs.

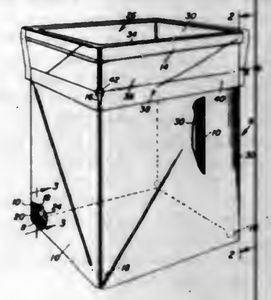
3,128,903
SNAP-OVER COVER
Victor E. Crisci, Leominster, Mass., assignor to Mammoth Plastics, Inc., Clinton, Mass., a corporation of Massachusetts
Filed Dec. 13, 1963, Ser. No. 331,344
4 Claims. (Cl. 220—60)



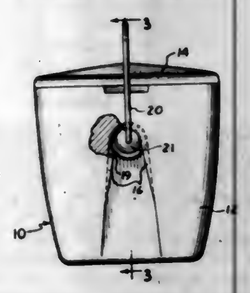
1. A flexible cover for use with a container having a circular opening, a slight body taper and an outwardly protruding top rim, comprising a substantially flat horizontal body portion terminating in a circumferential upward flange bent over to form an annular notch; the inner flange wall having a slight outward taper; the outer wall being substantially perpendicular; the notch having a minimum clearance slightly less than the rim of the container; the outer flange wall terminating substantially in the plane of the flat body portion; the outer surface of the flange having a plurality of spaced protrustions extending continuously along the inner wall, over the top and down the outer wall.

3,128,904
CONTAINER AND READILY REMOVABLE LINERS THEREFOR
Hugh A. Reilly, 73 Treaty Road, Drexel Hill, Pa.
Filed Jan. 21, 1963, Ser. No. 252,884
7 Claims. (Cl. 220—65)

1. A waste and trash collector comprising an open-top container having a bottom wall and upstanding side and end walls defining a receptacle portion having individual corners, liner positioning and retaining means mounted on the interior of the receptacle portion and secured in the respective corners, and holddown hooks mounted on exterior upper portions of said upstanding walls, said positioning and retaining means consisting of inwardly and upwardly directed anchoring members for cooperating corner portions of insertable and removable liners.



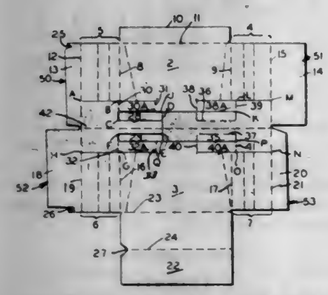
3,128,905
WIRE HANDLE FOR A MOLDED CONTAINER
Milton B. Hesslein, Highland Park, Ill., assignor to Arvey Corporation, Chicago, Ill., a corporation of Delaware
Filed Nov. 16, 1961, Ser. No. 152,724
1 Claim. (Cl. 220—95)



A receptacle comprising a molded insulating composition body including a bottom and opposed pairs of upwardly outwardly tapering side walls, one pair of side walls being each formed with an outwardly and downwardly opening vertically extending indentation opening adjacent the bottom of the side wall having side edges converging upwardly toward each other and terminating in an arcuate upper terminal end adjacent the top of the side wall, said terminal end being formed with an undercut groove and the upper ends of said side edges being formed with undercut grooves merging with the undercut groove of said upper terminal end, the bottoms of said indentations being substantially flat and parallel to each other whereby the tapering side walls cause progressive thickening of the side edges of the indentations, and the undercut grooves tapering upwardly and converging less than the side edges whereby to cause the lateral extent of said undercut grooves progressively to decrease in a downward direction, and a bail having a bight and legs spaced apart a distance substantially equal to the distance between the upper extremities of the side walls and terminating at each end in inwardly turned opposed end portions, spaced apart a distance substantially equal to the distance between the bottoms of the indentations, and discs rotatably mounted on each end portion of a diameter substantially equal to the diameter of the

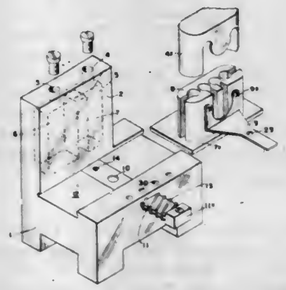
undercut groove of said terminal end and the minimum distance between the uppermost portion of the undercut grooves of the side edges, each disc including on its inner face a yieldable concaved element, the thickness of each disc and its associated element being substantially equal to the depth of the groove whereby said discs may be frictionally wedged into said undercut grooves in said indentations.

3,128,906
ARTICLE CARRIER
Homer W. Forrer, Atlanta, Ga., assignor to The Mead Corporation, a corporation of Ohio
Continuation of application Ser. No. 7,814, Feb. 10, 1960. This application Apr. 5, 1963, Ser. No. 271,017
4 Claims. (Cl. 220—113)



1. A paperboard carrier for bottles or similar articles, said carrier comprising a bottom wall, opposed side walls joined to said bottom wall along opposite side edges thereof, end wall panels joined at the ends of said side walls and extending transversely inward therefrom, riser panels joined at the inwardly extending edges of said end wall panels and extending inwardly of the carrier, said riser panels also extending above said end wall panels and having respectively joined thereto in alignment with the joined edges of said end wall panels at one end of the carrier a pair of outer handle panels and at the other end of the carrier a pair of inner handle panels, said pair of inner handle panels being in face contacting relation and said pair of outer handle panels being disposed about said inner handle panels to form a composite handle for the carrier, a plurality of partition strips disposed in spaced relation intermediate said end wall panels on each side of said handle and foldably joined to said handle and to said side walls to form a row of article receiving cells between said handle and each side wall, the end cells in each row being smaller than the inner cells and one riser panel at each end of the carrier extending inwardly from the end wall panels a distance greater than the adjacent riser panel and beyond the centers of the end cells to form a protective partition between the end articles on opposite sides of the handle, said end cells being deformable into general conformity with the articles to be placed therein, and a cushioning partition structure interposed between adjacent partition strips on each side of and generally below said handle, the structure on each side of said handle having a cushioning panel in abutting face contacting relation with a complementary structure on the opposite side of the handle, means securing said cushioning panels to each other, said cushioning panels being foldably joined with a pair of cushioning partition panels in face contacting relation with adjacent ones of said partition strips, the fold lines between said abutting face contacting panels and said pairs of panels being generally coincident with the adjacent fold lines between the associated strips and handle respectively, and means connecting said cushioning partition panels with their associated partition strips.

3,128,907
MERCURY
DISPENSER FOR DENTAL ALLOYS AND
David Weiner, 2102 Naple Ave., Philadelphia, Pa.
Filed Nov. 4, 1960, Ser. No. 67,269
3 Claims. (Cl. 221—96)

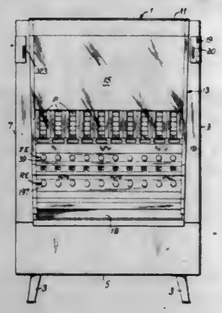


1. A dispenser for dental alloys and mercury comprising a unitary molded plastic body member with a vertically extending container section at the rear thereof, the container section being chambered for reception of mercury, and the body member having a slideway and a plunger-receiving passageway transversely of the slideway, a tablet holder, for a plurality of stacks of tablets, adjustably mounted in said slideway, a plunger in the said passageway of the body member and having an opening for reception of tablets from the tablet holder and also a mercury receiving opening for registration with the mercury chamber, a longitudinal passageway being formed in the plunger and in communication with its mercury receiving opening, a spring engaged stud in said plunger longitudinal passageway, means carried by the plunger for endwise adjustment of the stud into the said mercury receiving opening of the plunger, said last named means comprising a rotary dial, a shaft carried by the plunger and on which the dial is carried and a cam carried by the shaft and engaging said stud, said cam being operated by the dial, a tablet control member extending upwardly in a passageway formed vertically in the body member and adapted for registration with the tablet-receiving aperture of the plunger, and means for adjusting the vertical position of the tablet control member both in and out of said last named aperture.

3,128,908
DISPENSER FOR A VENDING MACHINE
Alvin W. Holstein, Brentwood, Robert N. Cox, Bridgeton, and Leonard A. Ficken, St. Louis County, Mo., assignors, by mesne assignments, to Universal Match Corporation, Ferguson, Mo., a corporation of Delaware
Filed Apr. 7, 1961, Ser. No. 101,466
19 Claims. (Cl. 221—105)

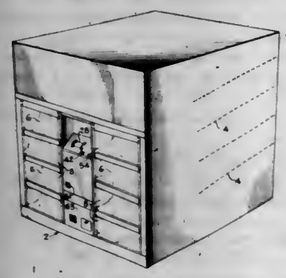
1. In a vending machine, a front bank of columns, a rear bank of columns each aligned with a respective front column, each column being adapted to hold a stack of items to be vended, a plurality of independently operable ejectors, one for each front column and one for each rear column, each adapted to eject the lowermost item of the stack in the respective column, the front and rear column ejectors being arranged in horizontal rows one above the other, each front column ejector being aligned with the respective front column, each rear-column ejector in-

cluding a forward pull-out rod aligned with the respective rear column and a member extending to the rear



column offset laterally from the pull-out rod and the respective aligned front column.

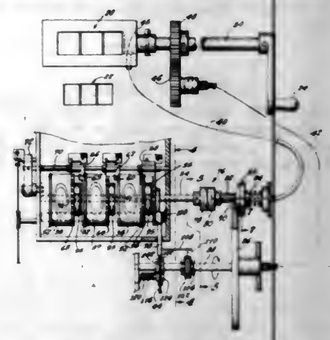
3,128,909
VARIABLE CONTROL MEANS FOR DISPENSING EQUIPMENT
Lansing P. Shield, Saddle River, N.J., and George A. Just, Bronxville, N.Y., assignors, by mesne assignments, to Grocerette Vending Machines, Inc., Long Beach, Calif., a corporation of Colorado
Filed Nov. 3, 1959, Ser. No. 850,694
9 Claims. (Cl. 221—129)



1. Dispensing equipment comprising a plurality of channels having articles therein to be dispensed, electrically actuated control means controlling the delivery of articles from said channels, selecting means including a rotatable drum having projections thereon positioned to correspond to each article to be dispensed, said projections also being positioned to correspond to the prices of said articles, a series of contact elements positioned adjacent said drum, means for moving said contact elements toward and away from the drum and into and out of position to actuate said contact elements, and means for establishing a circuit including said contact elements and said control means.

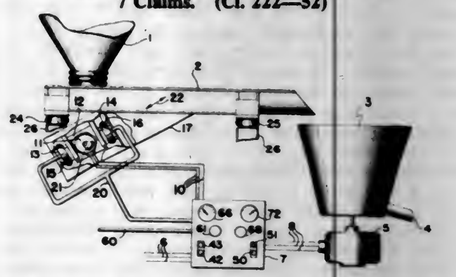
3,128,910
CONTROL APPARATUS
Fredrick L. Calhoun, Torrance, Calif., assignor to Industrial Dynamics Company, Ltd., Los Angeles, Calif., a corporation of California
Filed Mar. 6, 1961, Ser. No. 93,629
15 Claims. (Cl. 222—20)

1. In an apparatus to dispense a fluid, the combination of: a main up-counting counter responsive to the dispensing flow of the fluid; means to reset the counter in preparation for a dispensing operation; an auxiliary down-counting counter adjustable upward from a zero setting; means including a normally engaged clutch to connect the auxiliary counter with the main counter for actuation thereby, said clutch being releasable in response to operation of said resetting means; a latch to prevent operation of the resetting means, said latch being releasable in response to adjustment of said auxiliary counter upward



from its zero setting whereby the auxiliary counter must be adjusted before the resetting means is operated; and means to control the dispensing flow of the fluid, said control means being responsive to said auxiliary counter to terminate the dispensing flow when the auxiliary counter counts down to zero.

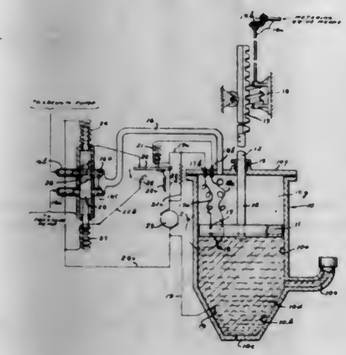
3,128,911
VIBRATORY FEEDER CONTROLS
John M. Morris, Louisville, Ky., and Robley W. Evans, New Albany, Ind., assignors to Chain Belt Company, Milwaukee, Wis., a corporation of Wisconsin
Filed June 13, 1961, Ser. No. 116,826
7 Claims. (Cl. 222—52)



1. In a processing assemblage control, in combination, an electrically driven processing apparatus in which the power varies with the rate of flow of material through the apparatus, electrical means for signaling variations in power input from a prescribed power input, a vibratory conveyor including pneumatic springs serving as resilient elements of the conveyor, said conveyor having a feed rate that varies with the pressure in the pneumatic springs, and control means connected to and responsive to said electrical signaling means for varying the pressure in said pneumatic springs in response to changes in power demand of said apparatus.

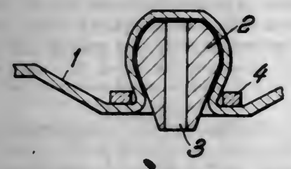
3,128,912
METERING DEVICE FOR MOLTEN METAL
Burns A. Cash, Madison, Wis., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Mar. 8, 1963, Ser. No. 264,006
6 Claims. (Cl. 222—52)

1. A metering device for metering molten metal comprising a vertical cylindrical receptacle, a cylindrical metering piston member movable axially in said cylindrical receptacle in spaced relation to the inner wall thereof, metering means for moving said piston axially to meter molten metal from said receptacle below said piston, vertically spaced upper and lower electrical contact means carried by said piston within the planes of the upper and lower surfaces of the piston, adapted to be contacted by the molten metal, respectively when the level of the molten metal rises toward the plane of the upper surface of the piston, and when the molten metal level moves downwardly toward the plane of the lower surface of the



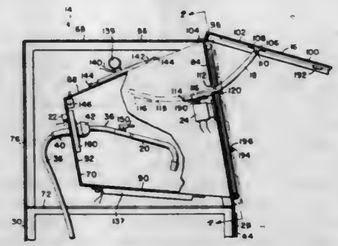
piston, balancing pressure supply means responsive to contact of the molten metal with said upper contact means for supplying a balancing pressure into said receptacle above said piston on the surface of the molten metal for preventing the level of the molten metal in said receptacle from rising above the said upper contact means, including means responsive to contact of the molten metal in said receptacle with said lower contact means only for supplying relative lower pressure in the receptacle above said metering piston and molten metal for causing the molten metal in the receptacle to rise, relative to the piston, toward contacting relation with said upper contact means.

3,128,913
CONTAINER SPOUT HAVING ITS OUTLET PASSAGE SEALED BY A WALL OF THE CONTAINER
Hellmut Specketer, Frankfurt am Main, Germany, assignor to Pantaplast G.m.b.H., Eschborn, Taunus, Germany
Filed Nov. 29, 1960, Ser. No. 72,483
Claims priority, application Germany Dec. 2, 1959
12 Claims. (Cl. 222—107)



1. In a container having a container wall, in combination, a flexible container wall portion formed of flexible sheet material; elongated spout means arranged within said container inside of said flexible container wall portion and having a surface portion in contact with the inner face of said flexible container wall portion, said spout means formed with an elongated conduit one end of which opens into the interior of said container and the other end of which opens into said surface portion of said spout means which is in contact with the inner face of said flexible container wall portion said elongated spout means including a portion of smaller transverse dimensions interposed between end portions of greater transverse dimensions; and holding means surrounding and situated between the ends of said elongated spout means in the area of said portion of smaller transverse dimensions thereof and engaging said flexible container wall portion, with a portion of said flexible container wall portion and of said spout means extending outwardly in contact with each other for holding said spout means within said container with said surface portion thereof in contact with said inner face of said flexible container wall portion, whereby said holding means are holding said spout means in inoperative condition without any possibility of removal of substance from said container through said spout means without removal of at least a portion of said flexible container wall portion and whereby upon removal of a portion of said flexible container wall portion overlying the other end of said conduit of said spout means the same is adapted for removal of substance from said container.

3,128,914
PROTECTIVE ENCLOSURE FOR SERVICE STATION DISPENSERS
Howard G. Bertrand, 127 Butternut Drive, Hatboro, Pa.
Filed July 11, 1961, Ser. No. 123,213
20 Claims. (Cl. 222—146)

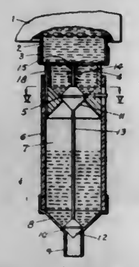


1. A protective enclosure for a service station dispenser containing at least one dispensing element, said enclosure comprising a recessed protective housing having an open end, a door hingedly secured to the housing and removeably covering said open end, support linkage and solenoid means associated with said door and adapted to hold said door in an open position, at least one dispensing element located in said housing, said dispensing element adapted to be withdrawn from said housing prior to dispensing and adapted to be replaced therein subsequent to dispensing, switch means associated with said dispensing element and adapted to be activated thereby upon return of said element to said housing, said solenoid means adapted to release said support linkage upon activation by said switch means, said solenoid means and switch means being related electrically in series so that replacement of said dispensing element in said housing will automatically cause said door to close and the solenoid means being deactivated by the closing of said door.

3,128,915
MEASURING DISPENSER
Gustave O. Matter, 3112 NE. 46th Ave., Portland, Oreg.
Filed Oct. 16, 1961, Ser. No. 145,085
10 Claims. (Cl. 222—156)

1. A dispenser for attachment to the outlet of a container, said dispenser comprising a measuring compartment having an upper inlet end, a lower outlet end and a vertical side wall surrounding and defining said measuring compartment between said inlet end and said outlet end, a measuring compartment inlet valve and an inlet valve

seat between the container outlet and the said inlet end of said measuring compartment, a wall extending upwardly from the upper end of said measuring compartment and surrounding said inlet valve and said inlet valve seat, the upper end of said side wall of said measuring compartment being slidably mounted on said wall surrounding said inlet valve and said inlet valve seat, said inlet valve secured to the upper end of a valve stem, an outlet valve secured to the lower end of said valve stem, said inlet valve and said outlet valve with said valve stem thereby being operative in unison, said outlet end provides an outlet valve seat for said outlet valve, said outlet end with said outlet valve seat and said measuring compartment side wall being movable vertically, as a unit, said outlet end and said measuring compartment side wall being entirely accessible to manually move said unit in a direction toward said inlet valve seat



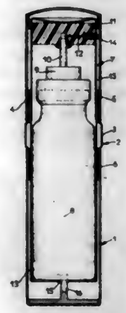
thereby to raise said outlet valve seat to said outlet valve and to raise said outlet valve with its seat and to raise said inlet valve away from its seat thereby allowing contents to pass from the container into said measuring compartment, said measuring compartment side wall having at least a portion thereof adapted to permit the operator of the dispenser too determine, by visual observation, when the exact desired amount of contents, to be dispensed, has entered the measuring compartment and then said unit is manually moved in a direction away from said inlet valve seat thereby to lower said outlet valve with its seat and to lower said inlet valve to its seat thereby retaining the desired amount of contents in said measuring compartment, said unit is then moved further, manually, in the direction away from said inlet valve seat to lower said outlet valve seat from said outlet valve and allow the measured contents to pass out from said measuring compartment.

3,128,916
SPRAY WITH REFILL AEROSOLS

Bernard Thomas Emile Picot, Paris, France, assignor to Parfums Christian Dior

Filed July 3, 1961, Ser. No. 121,520
Claims priority, application France May 10, 1961
1 Claim. (Cl. 222—183)

An atomizer for spraying a liquid, comprising a refill cartridge comprising a container for a liquid and a gas under pressure above said liquid, provided at its top with a valve and a spray-head, and casing consisting of a cylindrical wall with an upper end face and a bottom end face, provided near the upper end face with an orifice for the passage of said liquid, and in the bottom end face with an opening, said spray-head being fixed in said casing and said container being displaceable within said casing, and operation of said valve being controlled by displacement of the container relative to said casing, the container being resiliently applied against the bottom end face of said casing by means of the valve, and a body of general cylindrical form with a bottom end face, for receiving said refill cartridge, provided with a peg on the inside of said bottom end face, the dimensions of the peg corresponding to the dimensions of the opening in the bottom end face of said casing of said refill cartridge, so as to penetrate into said casing through said orifice in its bot-

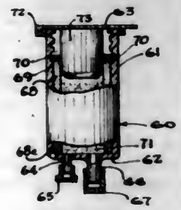


tom end face, on depressing said casing in said body, and then first to contact the bottom of said container and after pushing said container in order to operate said valve.

3,128,917
DEVICE FOR PARENTERAL SOLUTIONS

Ira Jay Krause, Winthrop Harbor, Ill., assignor to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois

Filed July 26, 1960, Ser. No. 45,402
2 Claims. (Cl. 222—190)



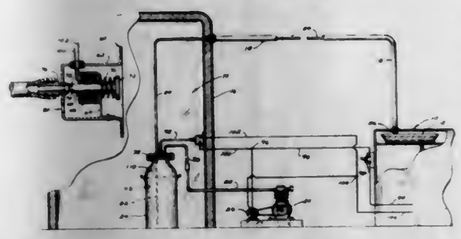
1. A device for the sterile storing and mixing of medicinal powders, and for the dispensing of parenteral solutions formed therefrom comprising in combination: a plastic, cylindrical body section having an end wall and a skirt portion with internal threads at the outer end thereof to form a fluid-tight, detachable connection with the outlet of a fluid container; a cylindrical glass insert, the external diameter of which is approximately the same as the internal diameter of said skirt portion, said insert resting against said end wall at one end and extending to a point a short distance below said threads; an internal groove in said skirt portion accommodating a ring therein, said ring contacting the other end of said insert and holding said insert securely in said body section; a plug in sealing engagement with the inside of said insert; a sealing cap detachably secured to the outer surface of said skirt portion until such time as said device is attached to said outlet of said fluid container to protect the interior of said body section against contamination, said sealing cap being integrally attached to said sealing plug, said sealing plug and said insert with said end wall forming a storage compartment partially filled with said medicinal powders in said body section; an air vent with valve means associated therewith communicating with the interior of said body section through said end wall; a liquid discharge passage in said end wall spaced in a parallel manner with said air vent; said passage having at the outer end thereof an inwardly tapering surface adapted to receive in sealing

engagement a hypodermic syringe hub; and a sealing plug mounted on said end closure in the absence of said hub.

3,128,918
SOFT ICE CREAM DISPENSING SYSTEM

Joel N. Sandven and Simon H. Haunsperger, Kellogg, Iowa, assignors to Joel N. Sandven

Filed Jan. 13, 1961, Ser. No. 82,572
2 Claims. (Cl. 222—205)



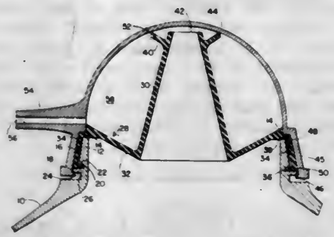
1. The combination of a refrigerated room and a soft ice cream dispensing machine having a mix pan therein, a container in said room adapted to hold a quantity of soft ice cream, lid means on said container for sealing the interior thereof from the outside atmosphere, said lid having three openings extending therethrough for placing the inside of said container in communication with the outside, an air compressor means in communication with one of said openings in said lid for supplying compressed air into said container, an air exhaust means in communication with a second of said openings in said lid to exhaust air from the interior thereof, an electrical control circuit including a switch means, a solenoid operated valve connected to said circuit and adapted to close said exhaust means, a spring means in engagement with said valve for normally holding said valve open, said air compressor having a motor connected to said circuit, and said valve means adapted to be closed when said compressor is operating by closing said switch means and energizing said control circuit, the third of said openings having a smooth uniform surface extending through said lid means, a first hollow straight tube forcibly fit into and extending through said third opening, said first hollow tube having its first end terminating beyond the exterior surface of said lid means and the other end terminating beyond the interior surface of said lid means within the interior of said container, a second hollow tube detachably forcibly receiving the other end of said first tube and thence extending downwardly towards the bottom of said container, a third tube detachably forcibly receiving the first end of said first tube and extending to the close proximity of said mix pan, and a hollow conduit extending from said room to a point on said dispensing machine adjacent said mix pan, and said third tube being slidably and detachably resting in and extending through said hollow conduit to said mix pan.

3,128,919
LIQUID MEASURING AND DISPENSING DEVICE

Ernest W. Baxter, Van Wert, Ohio, assignor to Baxter Products Company, Van Wert, Ohio

Filed May 31, 1961, Ser. No. 113,850
2 Claims. (Cl. 222—207)

1. A liquid measuring and dispensing device comprising a flexible container having a pouring spout composed of an annular neck portion, said neck portion being tubular in shape and having an annular outer end, an outwardly extending annular projection on the outer peripheral surface of said neck portion, said projection having upper and lower surfaces, two annular grooves in said neck portion on opposite sides of said projection respectively, a rubber closure device comprising a tapered spout member and a partition, said tapered spout member having upper and lower ends at the smaller and larger diameter portions respectively, said partition being annular in shape and being joined at its inner perimeter to said lower end, the upper end of said tapered spout member having an outwardly extending annular shaped check valve thereon, said check valve being formed integrally with said tapered spout member, an annular sleeve portion joined to the outer perimeter of said partition, said sleeve portion surrounding said neck portion and having an inturned flange on the end thereof which engages the upper surface of said projection and the adjacent one of said two annular grooves, said sleeve portion also having an annular sealing portion which engages the outer end of said neck portion, said partition angling downwardly from said outer end to the location



of joinder to said tapered spout member, a dome member of hemispherical shape having an annular skirt on the perimetral edge thereof, said skirt surrounding and intimately engaging said sleeve portion, an inwardly projecting annular flange on the outer end of said skirt engageable with the lower surface of said annular projection, said dome member having an annular shoulder on the inner wall thereof which is juxtaposed with respect to the annular outer end of said neck portion, said annular sealing portion of said partition being sealingly clamped between said annular outer end and said annular shoulder to prevent the escape of liquid, the outer perimeter of said check valve sealingly engaging the upper inner wall of said dome member, an aperture in said check valve, and a nozzle on said dome member adjacent to said partition whereby liquid inside said dome member may be dispensed.

3,128,920
DROP APPLICATOR PACKAGE

Lloyd I. Volckening, Glen Ridge, John R. O'Meara, North Caldwell, and Edward J. David, Point Pleasant, N.J., assignors to Ivers-Lee Company, Newark, N.J., a corporation of Delaware

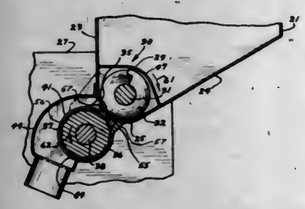
Filed Feb. 9, 1961, Ser. No. 88,090
2 Claims. (Cl. 222—215)



1. An applicator package containing a fluent commodity, including two walls each comprising a unitary thin layer of thin flexible sheet material, and a relatively stiff discharge tube between them constantly open from

end to end, said layers being sealed together and sealed in fluid-tight relation to said discharge tube intermediate the ends of the tube with portions of said layers normally in spaced relation to each other and providing a compartment containing said fluent commodity between said layers at one end portion of said tube, portions of said layers being sealed together in spaced enclosing relation to the other end portion of said tube throughout its circumference and beyond its extremity providing a cavity in which said end of the tube is located free of contact with said layers, the seal between the second-mentioned portions of said layers that form said cavity providing for separation of said portions from each other with a peeling action to expose the corresponding end of the tube, said discharge tube having a resiliently flexible bell-shaped extension in said compartment in contact with the inner surfaces of both of said walls throughout the major portion of said inner surfaces and yieldingly resisting movement of either of said walls inwardly of the compartment but permitting deliberate compression of the compartment walls under external pressure for forcing the commodity from the compartment and said extension also resiliently expanding said walls outwardly into their normal spaced apart relation upon release of such pressure.

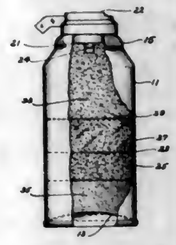
3,128,921
FEED MECHANISM FOR GRANULAR MATERIALS
David C. Henderson, Tower City, N. Dak.
Filed Apr. 13, 1961, Ser. No. 102,699
16 Claims. (Cl. 222—238)



16. A mechanism for metering flow of material from a storage hopper provided with at least one discharge opening therethrough, said mechanism including an agitator mounted with respect to said hopper and in adjacent relationship with said opening, a feed roller rotatably mounted with respect to said hopper positioned in alignment with and below said discharge opening, transition means terminating closely adjacent the feed roller for directing material passing through said opening onto said feed roller and comprising at least two bounding walls forming a narrowing portion for the material supported on said roller so that the material in contact with said roller forms a pattern on the surface of the roller which diverges in the sense of rotation of the roller, so that a predetermined axially extending line on the surface of the roller will first pass beneath the narrowest portion of the transition means during each revolution of the roller.

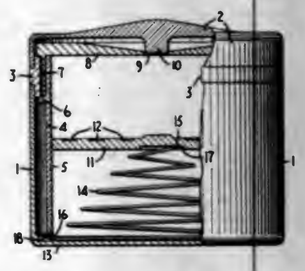
3,128,922
DISPENSER WITH MOVABLE PISTON
John Jacob Kuster, Brooklyn, N.Y., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware
Filed June 6, 1960, Ser. No. 34,171
8 Claims. (Cl. 222—389)

1. A dispenser for fluid materials comprising a container for both fluid material to be dispensed and a compressed propellant fluid for expelling said material to be dispensed from said container, said container having a normally closed dispensing valve operable to permit discharge therethrough of said material to be dispensed, and a movable piston inside the container conforming to the walls of the container and separating it into contents and propellant sections, the piston having a face of substantially imperforate flexible material where it adjoins the contents section of the container, a peripheral side portion of flexible material contiguous with the imperforate face, and an open celled resilient sponge body of



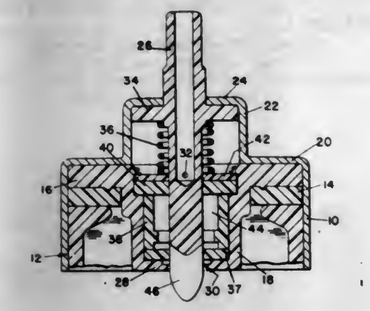
greater size, when unrestrained, than the inside of the piston peripheral side portion, which sponge body holds the piston in substantially coaxial relationship with the container wall in position separating contents and propellant sections thereof, and which exerts force on the side of the piston to hold it sufficiently close to the container wall to prevent passage of contents and propellant past the piston.

3,128,923
CONTAINER FOR RECEIVING AND DELIVERING PASTY SUBSTANCES
Josef Gabler, Mainaustrasse 44, Zurich 8, Switzerland
Filed Mar. 6, 1962, Ser. No. 177,874
1 Claim. (Cl. 222—390)



A container for receiving and dispensing a pasty substance comprising, an outer container having a lower portion and a cover, an inner container comprising a tubular member disposed internally of said outer container rotatable therein and having a threaded inner wall surface, a piston disposed internally of said inner container tubular member and having complementary threads engaging with said threaded inner surface for axial movement relative to said tubular member of said inner container, a compression spring coupled to said piston and coupled to the bottom of said outer container, means defining an upper wall covering said tubular member of said inner container and having an outlet opening for dispensing said pasty substance, said means defining said upper wall comprising an outer free surface for rotating said inner container within said outer container upon removal of said cover on said outer container, a ring disposed between said lower portion of said outer container and said cover thereof, said ring having an annular portion extending into said outer container, and said inner container having an annular rim abutting the underside of said portion of said ring.

3,128,924
METERED VALVE CONSTRUCTION
William G. Gorman, Albany, N.Y., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware
Filed Apr. 13, 1961, Ser. No. 102,777
7 Claims. (Cl. 222—394)



1. A metering valve construction for controlling the discharge of fluid material, under pressure from a container, said valve construction comprising a valve stem, a one-piece hollow tank of generally tubular shape having an apertured bottom wall, an exterior annular flange on said tank, an apertured gasket located in said tank in spaced parallel relation to the bottom wall thereof, the apertures in the bottom wall and the gasket being aligned and receiving the valve stem, the aperture in the gasket having an edge conforming to and relatively tightly embracing the valve stem to seal it while still allowing motion of the valve stem, a ferrule having a central aperture coaxial with the first two apertures, said ferrule clamping the flange and thereby the tank to the container, the valve stem including a portion arranged in said ferrule aperture and being guided thereby and by the gasket, a resilient means engaging said stem to normally urge the same in one direction, a reaction element for the resilient means, separate and removable means located in said tank and forming a metering chamber therein, the walls of the metering chamber being spaced at least in part from the surface of the valve stem and the gasket forming a top wall for the metering chamber, spaced exit and filling ports in said stem, said filling ports forming communication of the container with the metering chamber when the valve stem is extended under influence of the spring, and the exit port forming communication of the metering chamber to an exterior point when the stem is pressed relatively inwardly with respect to said tank against the spring action, said ports each being closed when the other is open, and means on the gasket, surrounding and bearing on the valve stem, increasing the relative sealing action of the gasket relative to the valve stem while maintaining ease of operation of the valve stem.

3,128,925
GRAVITY LIQUID FEEDER WITH HEADLOSS EQUALIZER
Sterling E. Norcross, 19 Osborne St., Bloomfield, N.J.
Filed Oct. 23, 1961, Ser. No. 146,832
3 Claims. (Cl. 222—442)

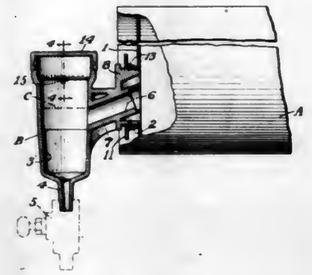
1. In a gravity feeder for dispensing selected quantities of liquid from a selectively air tight container, the combination comprising:

(*a*) a casing;

(*b*) means defining a substantially vertically disposed chamber within said casing;

(*c*) means defining an inlet passage interconnecting the interior of said container and said chamber at a point intermediate the ends of said chamber,

(*d*) said inlet passage disposed in an upwardly and outwardly extending attitude with respect to said chamber such that the lowermost edge portion of the upper outer end of said passage connected to said container is at the same level or above the uppermost edge portion of the end of said passage connected to said chamber;



(*e*) means defining a liquid dispensing outlet in said casing;

(*f*) vent means in said casing interconnecting said chamber and atmosphere at a point above the interconnection of said inlet passage and said chamber; and

(*g*) a fluid tight feeder connection between said inlet passage and said container.

3,128,926
HOLSTER FOR FIREARMS
Frank A. Stella, Lyndhurst, N.J., assignor to The Hubley Manufacturing Company, Lancaster, Pa., a corporation of Pennsylvania
Filed Mar. 15, 1962, Ser. No. 179,915
2 Claims. (Cl. 224—2)



1. A one-piece holster for firearms, comprising, in combination,

a body including,

a hanger portion having front and rear faces,

a gun pocket integral with the hanger portion and including,

a front section projecting outwardly from the plane of said hanger portion and a rear section folded around behind said hanger portion and secured to the rear face thereof,

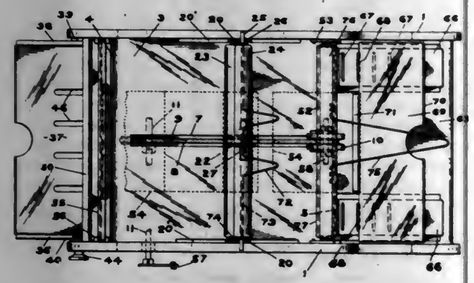
a substantially transverse slot in said body, the two edges of said body forming said slot defining the top opening of said pocket, one of said edges forming the top of said front section, the other of said edges forming the bottom of said hanger portion and abutting said rear section.

3,128,927
ROLL DISPENSING DEVICE
Jack H. Robertson, 2809 63rd St., Sacramento, Calif.
Filed Dec. 11, 1961, Ser. No. 158,339
2 Claims. (Cl. 225—38)



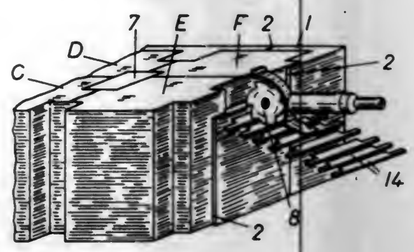
1. In a roll dispensing device, the combination of a support for at least one roll of material to be dispensed, a front wall member for said support adjacent each roll of material including an upper section and a lower rearwardly offset section defining a transverse slot between said sections, side members extending rearwardly from said front wall members, and means forming part of said support adapted to be secured to a supporting surface, a transverse bar positioned adjacent and across each of said lower sections of the front wall members, means pivoting each of said bars to said side walls in spaced relation to its associated lower front wall section, the free end of each of said rolls of material extending through the spaced defined by its associated lower front wall section and bar, and a severing edge on the lower side of each of said bars whereby a pull on said free end of each roll will sever said material along said lower edge of its associated bar and simultaneously pivot the upper edge of said bar towards the associated lower front wall section to clamp said material against said front wall member.

3,128,928
STRIP SEVERING MACHINE
Allan C. Davis, Baltimore, Md., assignor to F. A. Davis & Sons, Inc., a corporation of Maryland
Filed Dec. 5, 1961, Ser. No. 157,099
14 Claims. (Cl. 225—100)



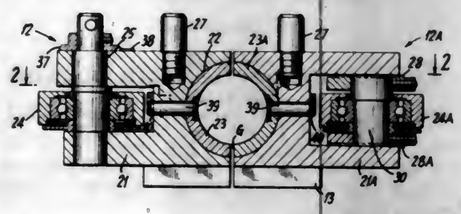
1. A bursting machine for a continuous web of forms weakened transversely at regular intervals between forms, the web advancing in the machine from front to rear including, a web support having a slot extending longitudinally centrally therein a forward roll web feeding device, a rearward roll web pulling device, driven bursting means in the slot of said support adjacent and rearward of said forward roll web feeding device engaging the web opposite the feeding device, said bursting means including a belt positioned to drive the rolls of said devices in timed relation to each other, the peripheral speed of the web pulling device slightly faster than that of the web feeding device.

3,128,929
METHOD AND APPARATUS FOR THE REMOVAL OF WASTE IN THE PREPARATION OF CONTAINER BLANKS OF SHEET FORMED MATERIAL
Gunnar Ruud, Sarpsborg, Norway
Filed May 22, 1962, Ser. No. 196,368
Claims priority, application Norway May 26, 1961
2 Claims. (Cl. 225—103)



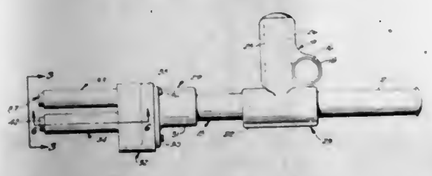
1. A tool for removing waste material portions situated along the edges of sheet material such as cardboard as defined by weakening lines in the sheet material where the sheets are vertically stacked with the waste portions in substantial alignment comprising in combination, means sequentially presenting a series of tooth-like projections cyclically at a vertically positionable working plane passing through the waste portions of each sheet in said stack, structural contour on the projections to produce at the working plane a vertical striking action combined with a laterally frictional motion substantially in the working plane to strike the waste material portions and thereafter frictionally tear them laterally in the plane of the sheets, said projections being spaced with respect to the cyclically presenting means so that each tooth sequentially engages a waste portion on a successive one of the sheets in said stack, and guide means on the tool shaped for positioning the projections at a position relative to the edges of the sheets in the stack and directing the flow of separated waste portions along a defined path.

3,128,930
APPARATUS FOR MAKING THIN WALLED CORRUGATED METAL TUBING
Gunther Lehnert, Hannover-Bothfeld, Germany, assignor to Hackethal Draht und Kabel Werke AG, Hannover, Germany, a corporation of Germany
Filed May 17, 1962, Ser. No. 195,593
6 Claims. (Cl. 226—173)



2. Tubing gripping means comprising a base plate, a pair of blocks slidably mounted on said plate for movement toward each other, each block being formed with a semicircular cutout on the inner edge thereof, a semicircular gripper sleeve in each cutout in said blocks, a cam follower member on the outer edge of each of said blocks, means for independently adjusting the position of each of said cam follower members relative to its associated block.

3,128,931
ROLLER SUPPORT AND GUIDE MECHANISM FOR STRIP AND SHEET MATERIALS
Richard Seyffarth, 77 Main St., Bedford Hills, N.Y.
Filed Apr. 27, 1961, Ser. No. 105,929
8 Claims. (Cl. 226—199)



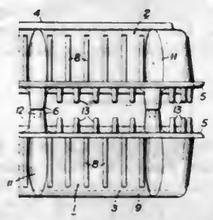
4. A roller support and guide mechanism for flat materials, comprising a plurality of substantially cylindrical rollers, said cylindrical rollers being substantially parallel to one another, means rotatably supporting the cylindrical rollers, combination support and adjustment means supporting the roller support means, a support column adjustably supporting the combination support and adjustment means for the cylindrical rollers, said combination support and adjustment means providing longitudinal and multiple angular adjustment of the cylindrical rollers, relative to the support column, the combination support and adjustment means including a longitudinal support member providing longitudinal and rotational angular adjustment of the roller support means, in multiple planes, the roller support means including a support head adjustably supported by the longitudinal support member, each of the rotatable cylindrical rollers including a tubular roller, the means rotatably supporting each of the tubular rollers being a substantiallly cylindrical member removably supported by the support head, bearing means fitted to each of said tubular rollers adapted to rotatably support the tubular roller on the cylindrical member, and means for clamping the support head to the longitudinal support member in the adjusted position.

3,128,932
MOLDED EGG CARTON
Richard F. Reifers, Stamford, Conn., assignor to Diamond National Corporation, New York, N.Y., a corporation of Delaware
Filed Mar. 30, 1960, Ser. No. 18,623
8 Claims. (Cl. 229—2.5)



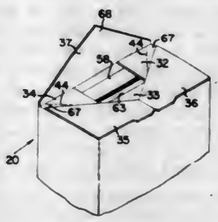
3. An egg carton molded of pulp of single ply construction comprising a cover portion and a bottom portion having cells therein adapted to hold eggs, said cover portion and bottom portion being integral, said bottom portion containing the egg cells having a uniformly lesser weight per square inch than said cover portion, said bottom portion having discrete areas therein in a repeated geometric pattern of less than 3/8" major dimension to each discrete area which are of lesser thickness than the remainder of said bottom portion and which are each completely surrounded by thicker pulp areas.

3,128,933
TWO-PART PACKAGING CONTAINER OF PLASTIC FOR CARRYING SENSITIVE MATERIAL
Zeljko Hohnjec, Gonzagagasse 17, Vienna I, Austria
Filed June 11, 1962, Ser. No. 201,407
Claims priority, application Austria June 13, 1961
1 Claim. (Cl. 229—2.5)



A two-part packaging container consisting of plastic material, for the transport of easily perishable material, comprising two tub-shaped parts having registering rim portions facing each other and interengaging spacing means arranged along said rims, said spacing means consisting of pegs and registering depressions, respectively, said pegs and depressions holding the assembled parts of the container in spaced position in order to provide a gap between said parts for allowing for the passing of air between said assembled parts, the rims of the tub-shaped parts being provided with a series of spaced projections forming a fence for preventing small pieces of packaged material from falling out from the container.

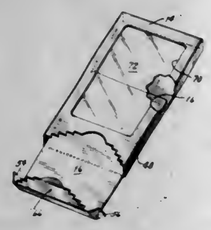
3,128,934
RECLOSABLE CARTONS AND BLANKS THEREFOR
Raymond E. Jacke, Henrico County, Va., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Sept. 29, 1960, Ser. No. 59,304
2 Claims. (Cl. 229—14)



1. A carton comprising a plurality of foldably connected side panels providing sidewall means for said carton and defining an open end thereof, a liner disposed in said carton and having an end thereof extending beyond said open end of said carton and terminating in a closing seam, a first closure flap foldably connected to one of said side panels and extending across a portion of said open end, said first closure flap having a pair of opposed side edges and having a free edge disposed closely adjacent said closing seam of said liner, a pair of closure flaps respectively foldably connected to a pair of opposed side panels and being respectively superimposed on portions of said first closure flap, said pair of closure flaps respectively folding portions of said end of said liner between said pair of closure flaps and said first closure flap, said portions of said liner being folded at said side edges of said first closure flap, and an outer closure flap foldably connected to another side panel and being superimposed over said other closure flaps to close said open

end of said carton, said outer closure flap being dividable into a plurality of sections, two of said sections being tearaway sections that are respectively secured to said pair of closure flaps to carry said pair of closure flaps therewith when said outer closure flap is divided into said sections to initially open said end of said carton, said tearaway sections defining at least part of an end edge of a substantially triangular portion on a remaining section of said outer closure flap that is insertable under edge defining means of said first closure flap to reclose said open end of said carton.

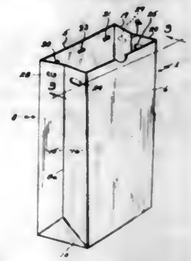
3,128,935
CARTON WITH SEPARABLE TRAY
Anton Ricca, East Paterson, N.J., assignor to Alford Cartons Division, Continental Paper Company, Ridgefield Park, N.J., a corporation of New Jersey
Filed June 13, 1962, Ser. No. 202,243
1 Claim. (Cl. 229—19)



In a generally rectangular folded carton constructed of a single piece of cardboard stock, said carton having a face panel and a back panel, a first end wall integrally connecting said back panel to one end of said face panel, a second end wall integrally connected to the other end of said face panel, a tray panel substantially coextensive with said face panel formed as a flat tongue free about three edges thereof in integral continuation of said second end wall adapted for infolding into underlying relation to said face panel, and a line of perforations extending across said face panel defining a generally triangular area whose base line is the line demarking said face panel and said second end wall and whose apex is in said face panel and extends in the direction of said first end wall thereby defining a reclosure tongue extending from opposite corners of said carton formed at the intersection of said face panel and said second end wall, said perforations facilitating separation of said second end wall from said face panel so that said second end wall and said tray panel may be removed from said carton.

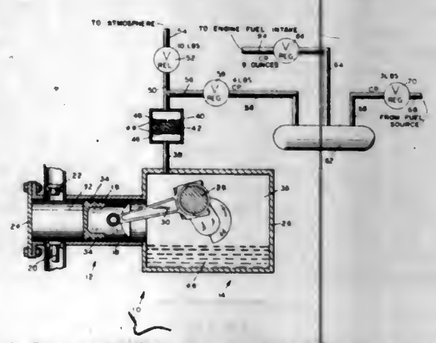
3,128,936
HEAT SEALABLE CONTAINER
Allan E. Sprosty, 21570 Erie Road, Rocky River, Ohio
Filed Sept. 26, 1962, Ser. No. 226,423
2 Claims. (Cl. 229—62)

2. A bag having a generally rectangular cross section when open and comprising a pair of opposed panels about the same size and shape and a pair of side walls foldable between said panels, a bottom wall connecting said panels and side walls thereby forming a closed bottom for said bag, the side walls being infolded when the bag is flat, closure means for the top of said bag comprising a pair of slots, one slot located in the upper margin of each of the side walls near a corner thereof adjacent to a common panel, a pair of spots of heat sealable adhesive material located in the upper margin of each of the side walls, each spot being disposed near a corner of the side wall and aligned with the slot therein whereby the spot is superimposed in the slot when the top of the bag is folded and when the top is closed the spot adheres to the common panel, there being provided on the common panel a second pair of adhesive spots in the upper margin near opposed corners thereof for sealing the panel to



the inner surface of the infolded sides, and a third adhesive spot located between the adhesive spots on the panel for adhering to its opposed panel when the top of the bag is closed, and each of said spots being generally ovular in outline.

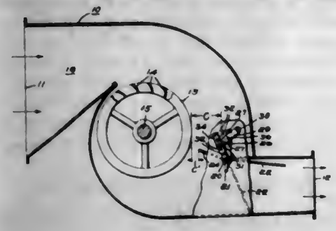
3,128,937
GAS CONSERVING MEANS
Harry W. Evans, 4409 S. Lewis; Dean B. Knight, 3952 S. Delaware Place; and Cecil K. Vandagriff, 7653 E. 7th, all of Tulsa, Okla.
Filed Apr. 27, 1961, Ser. No. 105,943
4 Claims. (Cl. 230—1)



1. In a combustible gas compressor driven by an engine having connection to a gas fuel source, said engine having a fuel intake, said compressor having a piston reciprocated in a cylinder and a crankcase compartment in communication with said cylinder, a method of conserving combustible gas which escapes past said piston and into said crankcase compartment, comprising; collecting said combustible gas escaping past said piston and into said crankcase compartment; directing said collected combustible gas to said engine fuel intake; and regulating the pressure of gas from said fuel source whereby said collected gas is consumed first by said engine.

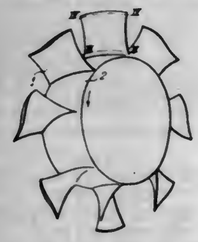
3,128,938
VOLUME CONTROLS FOR FANS
Daniel Ariewitz, Framingham, Mass., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 16, 1962, Ser. No. 217,338
3 Claims. (Cl. 230—114)

1. A fan having a casing with a tangential air outlet and an air inlet, a centrifugal rotor supported for rotation within said casing between said inlet and outlet, cut-off plate means and damper means connected and supported for concurrent rotation within said casing between said rotor and outlet, and means for rotating said cut-off plate and damper means, said cut-off plate means having an inner end rotatable towards and from said rotor when



said damper means is rotated towards open and closed position respectively, said inner end being nearest said rotor when said damper means is in open position and being rotated further from said rotor when said damper means is rotated towards closed position.

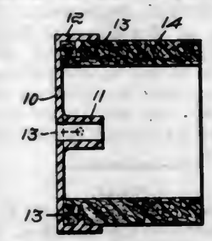
3,128,939
AXIAL-FLOW COMPRESSORS
Joseph Szydlowski, Usines Turbomeca, Bordes, France
Filed July 19, 1960, Ser. No. 43,750
Claims priority, application France Feb. 3, 1960
8 Claims. (Cl. 230—134)



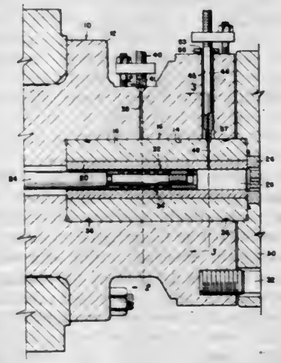
1. A wheel for an axial flow compressor adapted for operating at ultrasonic and supersonic speeds, said wheel comprising: a body adapted for rotation about an axis, and a plurality of blades supported on said body, said blades having a root at the location where said blades contact said body and a remote tip, said blades also having leading and trailing edges, each blade in cross-sections in planes parallel to a plane tangent to the body at the blade root having centers which are substantially aligned from the blade root to the blade tip along a radial line, said blades each having a chordal pitch which uniformly decreases from a relatively large positive value at the root of the blade to a relatively small positive value at the tip of the blade, said cross-sections of each blade progressively varying in outline as viewed from a pressure side of the blade from a concave curve at the root of the blade to a curve having successive convex and concave portions at the blade tip, said convex and concave portions being respectively disposed adjacent the leading and trailing edges.

3,128,940
CAPILLARY FANS
John E. McDonald, Newton, Mass., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 16, 1962, Ser. No. 217,341
6 Claims. (Cl. 230—134)

1. A rotor for a centrifugal fan comprising a circular backplate having a hub around its axis, an annular ring of sponge-like foamed plastic having one end in contact with said backplate, said ring being concentric with said backplate, said backplate having an annular rim portion extending around the end portion of said ring at said end and having its inner surface in contact with the outer surface of said end portion, the other end of said ring being spaced from said rim portion a distance large than the distance said rim portion extends from said backplate, and a plurality of spikes extending from said backplate into said end portion of said ring.



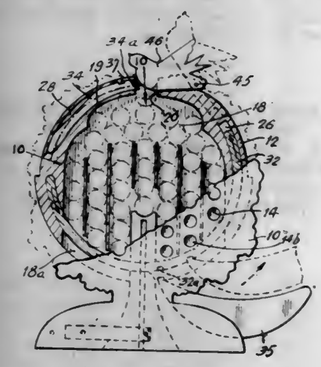
3,128,941
CYLINDER ARRANGEMENT FOR HIGH PRESSURE COMPRESSORS
Anthony J. Waibel, Painted Post, N.Y., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey
Filed Oct. 27, 1960, Ser. No. 65,360
1 Claim. (Cl. 230—206)



In a compressor, a casing having a bore, means to form a cylinder in said bore, a reciprocatory piston in said cylinder to be actuated to compress fluid in said cylinder, said cylinder having a discharge for the conductance of fluid after compression, a passage in the casing wall leading to the inner periphery of said bore for the conductance of fluid, means to conduct fluid from said discharge into said passage and to between the outer periphery of said cylinder and to the associated periphery of said bore to cause said cylinder to be subjected to external compression, means to maintain the pressure of the fluid between the outer periphery of said cylinder and the associated periphery of said bore constant, a lubricant supply for said compressor, at least one second passage in said casing wall comprising a first portion having a circular cross section extending through the casing wall to the inner periphery of said bore for communicating said bore with said first portion, and a second portion of said second passage having a circular cross section extending in axial alignment with said first portion through the wall of said cylinder for the conductance of lubricant, a conduit disposed to be in communication

with said second portion of said second passage and held in said first portion of said second passage such that the inner end of said conduit is held in sealing relation with the opposing end of said second portion of said second passage to prevent communication between the interior and the exterior of said conduit, means to prevent communication between the atmosphere and the interior of said first portion of said second passage, and means to conduct lubricant from said lubricant supply to flow through said conduit and said second portion of said second passage into the interior of said cylinder.

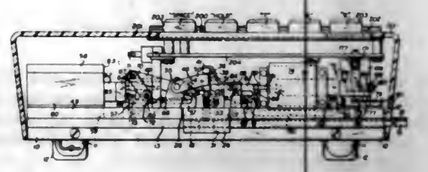
3,128,942
MONEY SAVING DEVICE
Josef S. Abrams, 3775 City Hall Ave., Montreal, Quebec, Canada
Filed Aug. 13, 1962, Ser. No. 216,595
2 Claims. (Cl. 232—5)



1. A coin saving device comprising a flat relatively thin body having an external configuration outlining a base portion, a relatively narrow intermediate portion and a main body portion of irregular circular outline, the whole simulating the external outline of a tree, the front surface of said main body portion containing a plurality of circular recesses arranged in spaced relationship about the center of said main body, said main body portion having an internal coin receiving chamber of substantially circular outline directly beneath said main body front surface recesses, a coin entry slot in alignment with and leading into said coin receiving chamber, said coin receiving chamber having a front-to-back depth sufficient only to accommodate the flat passage of a single coin from said entry slot and being provided with a first coin receiving portion feeding a plurality of spaced coin guiding partitions extending lengthwise of said chamber and being adapted to guide coins fed thereto into aligned locations within said chamber in register with said circular recesses in said main body front surface, and means located within the lower portion of said coin receiving chamber to retain and selectively release said coins from said coin receiving chamber.

3,128,943
CODING MACHINE
Alfred W. Stewart, New Paltz, N.Y., assignor to Varifab Incorporated, High Falls, N.Y.
Filed July 10, 1961, Ser. No. 122,883
6 Claims. (Cl. 234—37)

1. In apparatus of the class described, a die having a series of like holes therein; a series of like punches, each thereof adapted to cooperate with one of the holes and normally held retracted by a spring at a distance from the die common to all punches; a hammer as wide as the series of punches normally held at a distance from the punches and capable of movement toward but only to the punches; a series of substantially incompressible elements, there being one element for each punch capable of being moved between that punch and the hammer; a series of solenoids, there being as many such solenoids as there are elements and punches, each solenoid adapted to move an element between its related punch and the hammer; a printing wheel having a number of characters thereon, there being one character corresponding to each



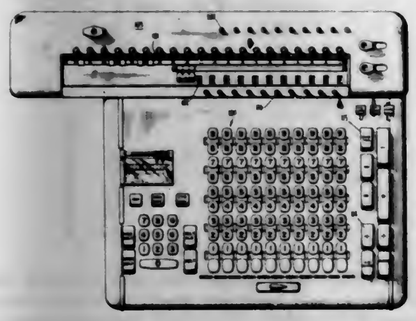
punch, and means whereby each solenoid upon energization rotates the printing wheel to bring a particuflar character thereof into a certain position; a solenoid for moving the hammer; another solenoid for moving the printing wheel edgewise; a number of push buttons with each thereof labeled to correspond to a particular punch, element, and character, and each controlling energization of one of said series of solenoids; and means actuated by energization of each of said series of solenoids for energizing the solenoid for moving the hammer, energization of the latter solenoid effecting energization of the solenoid for moving the printing wheel edgewise.

3,128,944
PRECISION TRIANGLE SOLVER AND COMPUTER
Edwin Z. Gabriel, 91 Mount Tabor Way, Ocean Grove, N.J.
Filed July 27, 1961, Ser. No. 127,262
8 Claims. (Cl. 235—61)



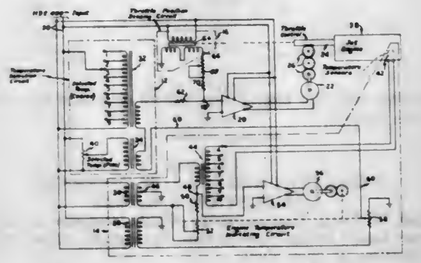
1. A computer for solving oblique triangles, comprising a flat sheet-like basal member having an arcuate graduated scale of more than 90° thereon described about a center on said basal member, said basal member having straight horizontal and vertical side edges, two movable arm means pivotally fixed to said basal member at said center and having free ends extending across said arcuate scale, each said arm means having a longitudinally extending graduated scale thereon, a third movable arm member having a length which extends from a side edge of said basal member across said arcuate scale and across said pivoted arm means, said third arm member and basal member having interengaging guiding means retaining said third arm member slidable and at all times normal to a side edge of said basal member, said interengaging guiding means comprising a folded over part in the form of a continuous loop integral with one of said members and a straight edge part on the other of said members normal to the longitudinal axis of said third arm member and resiliently and frictionally engaged by said folded over part, said loop being parallel with a side edge of said basal member and opening in a direction inwardly of said basal member, the closed part of said loop having sliding engagement with the straight edge part of the other of said members.

3,128,945
CALCULATING MACHINE
Arthur J. Malavazos, Hayward, and Jan Urdal, Daly City, Calif., assignors, by mesne assignments, to Friden, Inc., San Leandro, Calif., a corporation of Delaware
Filed Aug. 31, 1962, Ser. No. 220,650
4 Claims. (Cl. 235—63)



1. In a calculating machine having:
(1) a selection mechanism,
(2) a shiftable carriage,
(3) an ordinally arranged accumulator in said carriage,
(4) An accumulator driving means under the control of said selection mechanism for differentially driving said accumulator,
(5) a digitation control member for controlling operation of said driving means additively or subtractively,
(6) means for shifting said carriage,
(7) a division control mechanism operative to control operation of said digitation control member and said shifting means to divide a dividend registered in said accumulator by a divisor set in said selection means by the method of continuous subtraction to an overdraft followed by a corrective additive cycle to correct the overdraft and a shift of the carriage,
(8) a stopping mechanism operative during the first succeeding operation of the shifting means to terminate a division operation,
an automatic means for operating said division stopping mechanism in a preselected ordinal position of the carriage comprising:
(9) a plurality of ordinally arranged keys mounted in said carriage and representative of the ordina. positions of said carriage movable from a normally inoperative to an operative position,
(10) means for latching said keys in an operative position,
(11) a connecting member carried by said stopping mechanism and adapted to engage said digitation control member,
(12) resilient means for biasing said connecting member into engagement with said digitation control member,
(13) blocking means normally disabling such engagement of said connecting means with said digitation control member, and
(14) means operated by an operated key upon movement of said carriage into the ordinal position represented by such key for operating said blocking means to enable said connecting means to engage said digitation control member.

3,128,946
TEMPERATURE CONTROLLED FUEL VALVE FOR A JET ENGINE
Max J. Hoberman, Fair Lawn, N.J., assignor, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware
Filed Feb. 4, 1959, Ser. No. 791,120
1 Claim. (Cl. 236—78)

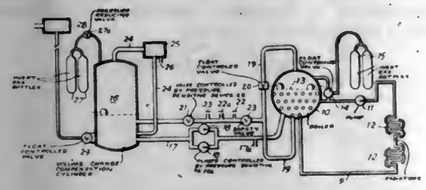


In a heat control circuit, means for providing a selectively variable alternating current signal representing the desired temperature, said means including a transformer having a tapped primary winding for coarse control, another transformer for fine temperature control having its secondary in series with the secondary of the first transformer, and a variable resistor for controllably energizing the primary winding of the fine control transformer; means including a linear variable differential transformer for providing an alternating current signal indicating the position of a fuel supply valve; means for providing another alternating current signal having a magnitude which is a linear function of the actual temperature, said last mentioned means including an alternating current Wheatstone bridge, a transformer and a variable resistor connected in the respective branch circuits of said bridge, a fixed resistor connected in the branch circuit with said variable resistor, a plurality of temperature sensing thermoelements connected to the secondary of the transformer in the Wheatstone bridge circuit, electrically controlled rebalancing means for controlling the variable resistance in said Wheatstone bridge circuit, and a non-linear resistance mechanically connected to said rebalancing means for correcting for the non-linearity of the temperature sensing thermoelements; valve position control circuitry; means for combining said three alternating current signals, with the signals representing the selected and the actual temperature being combined in phase opposition, and for applying the resultant voltage to the valve control circuitry; and means including a variable resistor for varying the magnitude of the valve position displacement signals with respect to the signals representing the selected and the actual temperatures.

3,128,947
HEATING SYSTEMS
Jack Norman Saunders, Wilmslow, England, assignor to Warmac Limited, a corporation of Great Britain and Northern Ireland
Filed Aug. 6, 1958, Ser. No. 753,549
Claims priority, application Great Britain Aug. 8, 1957
4 Claims. (Cl. 237—8)

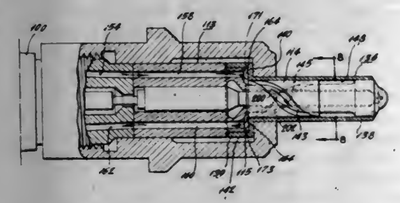
1. A heating system of the type having a high pressure container and a heater characterised in that the system includes a boiler-like container having a liquid volume space and a gaseous volume space above it, heating means within said container for heating said liquid, and means for pressurizing said gas volume space sufficiently to pre-

vent said liquid from boiling at the operating temperature of the system, said boiler-like container thereby con-



stituting both the high pressure container and the heater of the system.

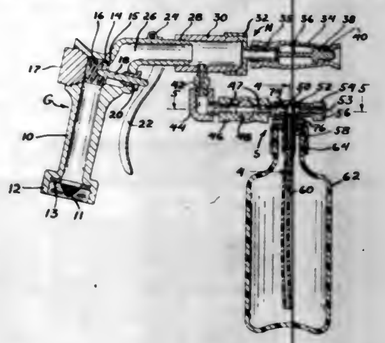
3,128,948
INJECTION NOZZLE FOR INTERNAL COMBUSTION ENGINES
Frank De Luca, Thompsonville, Conn., assignor to American Bosch Arma Corporation, Springfield, Mass., a corporation of New York
Filed Nov. 16, 1962, Ser. No. 238,145
5 Claims. (Cl. 239—132)



1. In a fuel injection nozzle for internal combustion engines, a general cylindrical nozzle body, an elongated nozzle tip projecting from one end of said nozzle body, said nozzle tip being of a reduced cross section of define a shoulder at the juncture of said nozzle body and tip, a jacket including a generally cylindrical hollow sleeve surrounding said nozzle tip connected at one end adjacent the outer free end of said nozzle tip and having at its opposite end a cup in which the lower end of said nozzle body is nested, means defining a circumferentially extending cooling chamber adjacent the free end of said nozzle tip formed by the outer peripheral surface of said nozzle tip and the inner wall of said sleeve, means defining a pair of diametrically opposed inlet and outlet coolant passageways formed between the nozzle tip and sleeve extending downwardly from the shoulder at the juncture of said nozzle body and tip and respectively communicating with said cooling chamber, means defining a pair of inlet and outlet coolant conduits in said nozzle body, offset radially relative to said passageways and means defining a pair of radial grooves in said shoulder forming inlet and outlet channels connecting said inlet conduit with said inlet passageway and said outlet conduit with said outlet passageway to facilitate circulation of coolant through said nozzle and said cooling chamber.

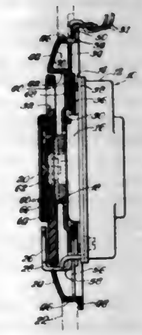
3,128,949
LIQUID SPRAY WASHING APPARATUS
Sherman Harold Kaufman, 137 Thompson St., New Haven, Conn.
Filed Aug. 8, 1962, Ser. No. 215,668
4 Claims. (Cl. 239—312)

1. A washing device which comprises a plurality of conduit means; a first normally closed valve connected to supply, upon actuation, pressurized first fluid to each of said plurality of conduit means; first nozzle means at the outlet of a first of said conduit means, said first nozzle means including means for selectively preventing or allowing fluid flow therethrough; cleaning fluid valve means at the outlet of each of the remaining conduit means; aspirating means at the outlet of each of said cleaning fluid valve means, said aspirating means including



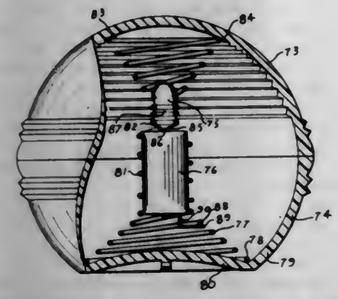
aspirated fluid supply means; adjustable air bleed means connected to said aspirating means to allow controlled passage of atmospheric air into said aspirating means; and cleaning fluid nozzle means connected to each of said aspirating means to discharge a spray mixture of air, first fluid, and aspirated fluid therefrom.

3,128,950
ILLUMINATIVE TELEPHONE DIAL
Edward E. Bauman and Willard A. Roberts, Galion, Ohio, assignors to North Electric Company, Galion, Ohio, a corporation of Ohio
Filed Jan. 4, 1960, Ser. No. 194
4 Claims. (Cl. 240—2.1)



4. An illuminative telephone dial comprising a generally annular electroluminescent plate, an annular indicia member generally coextensive with and overlying said plate, said indicia member being formed of a light transmitting insulating material and including an essentially translucent annular central portion through which substantially the entirety thereof light is adapted to pass from said plate, said translucent portion engaging said plate, an upstanding cylindrical wall bounding said central portion, an annular flange extending outwardly from said wall and a second cylindrical wall concentric with the first-named wall and extending from the outer edge of said flange downwardly beyond the plane of said central portion, said second wall having an inner diameter greater than the outer diameter of said plate and receiving said plate therein, a transparent finger wheel rotatable within the cylindrical recess defined by the first-named wall in overlying relation to said central portion of said indicia member, and said finger wheel having finger openings therein the marginal edges of which are outlined above the illuminative background of said indicia member.

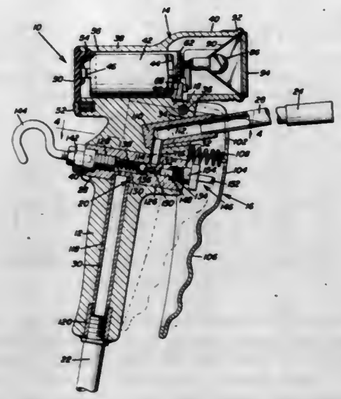
3,128,951
EMERGENCY SIGNAL LAMP DEVICE
Thomas H. Nicholl, 9935 High Drive, Prairie Village, Kans.
Filed Nov. 7, 1960, Ser. No. 67,599
6 Claims. (Cl. 240—6.4)



5. A self-contained emergency signal lamp device comprising, a substantially spherical hollow body, said body having walls of resilient elastic shock-resistant light transmitting material defining a chamber within said body with said walls deformable inwardly from static positions by exterior pressure, a battery within said chamber adjacent a bottom of the body whereby the center of gravity of the device is below the center of the spherical body, an electric bulb positioned within said chamber for emitting light when energized for transmission through walls of the body, said battery having terminals, a contact electrically connected to one of the battery terminals, means electrically connecting the light bulb to the other of the battery terminals, and resilient conductor means engaging opposed portions of the walls of the body and supporting the light bulb with said resilient conductor means normally biased to complete the circuit between the contact and the light bulb when the walls of the body are in static position, said resilient conductor means being movable in response to deformation of said opposed portions of said body to separate said circuit between the contact and bulb and interrupt the circuit between the battery and the light bulb.

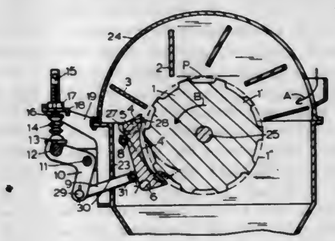
3,128,952
ILLUMINATING GREASE GUN
Leslie C. Bloom, Libby, Mont., assignor to Lubrilite Corporation, Libby, Mont., a corporation of Montana
Filed July 21, 1960, Ser. No. 44,343
9 Claims. (Cl. 240—6.46)

1. An illuminating grease gun comprising longitudinal handle means having inlet means and outlet means for directing a flow of grease in a direction transverse to the handle means, illuminating means connected to one longitudinal end of said handle means spaced from the outlet means for directing a beam in intersecting relation to the direction of fluid flow forwardly of the outlet means, valve means disposed within said handle means intermediate said one end and an opposite longitudinal end of said handle means for controlling flow of grease between said inlet and outlet means, valve actuating means operatively connected to said valve means and extending laterally of said handle means; control means disposed within said illuminating means and operative to establish illumination in response to actuation thereof, lever means pivotally connected to said handle means at said one end extending in longitudinal spaced relationship thereto and being operative in response to movement thereof laterally toward said handle means to sequentially actuate said control means and valve actuating means, said inlet means



including a longitudinal passage extending from said opposite end of said handle means to said valve means and said outlet means includes a passage extending from said valve means laterally out of said handle means and through said lever means.

3,128,953
ROCK CRUSHER
Franz Wageneder, No. 260, Laakirchen, Austria
Filed Mar. 9, 1962, Ser. No. 178,655
Claims priority, application Austria Mar. 13, 1961
5 Claims. (Cl. 241—241)

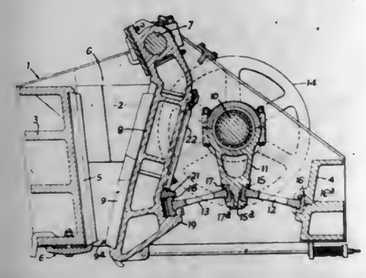


1. A rock crusher comprising a housing, a substantially cylindrical rotor horizontally mounted in said housing and provided along its periphery with spaced-apart, generally axially extending vanes, at least one baffle plate in said housing positioned close to said periphery above said rotor for intercepting rock fragments propelled by said vanes, said baffle plate being perpendicular to a plane tangent to said periphery at a location ahead of said baffle plate as viewed in the direction of rotation of said rotor, a solid cheek plate adjacent the descending side of said rotor having a concave surface closely spaced from the orbit of said vanes and forming therewith a narrow arcuate gap converging in said direction of rotation, and a substantially radially extending fixed shield plate disposed immediately above the entrance to said gap at close spacing from said periphery for slowing down rock fragments propelled by said vanes toward said gap.

3,128,954
JAW CRUSHERS

Donald J. Davidson, Ravenstone, England, assignor to Pegson Limited, Coalville, England, a British company

Filed Feb. 26, 1962, Ser. No. 175,406
Claims priority, application Great Britain Mar. 17, 1961
6 Claims. (Cl. 241—269)



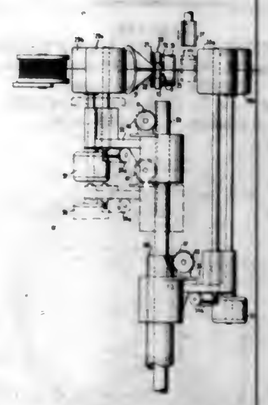
1. A jaw crusher comprising, in combination, a frame having front and rear walls, a fixed jaw mounted within and adjacent the front end of said frame, a first shaft mounted on said frame, a movable jaw stock pivotally mounted upon and depending from said first shaft for oscillation within said frame towards and away from said fixed jaw and formed at the rear side adjacent the lower end thereof with a rearwardly-extending step, a jaw mounted upon the front side of said jaw stock and confronting said fixed jaw, a second shaft mounted on said frame for rotation and having an eccentric portion intermediate its ends, a Pitman rotatably mounted upon said eccentric portion of said second shaft and located between said jaw stock and the rear end of said frame, a first elongated block received in a recess at the rear side of said Pitman and formed with a first toggle seat, a second elongated block received in a recess in the rear wall of said frame and formed with a second toggle seat, a rear toggle interposed between said Pitman and said rear wall and seating at its opposite ends in said first and second toggle seats, a third elongated block received in a recess at the front side of said Pitman and formed with a third toggle seat, a fourth elongated and channelled block formed with a fourth toggle seat resting upon said rearwardly-extending step and adjustable upon said step towards and away from the rear side of said movable jaw stock, a clamping plate provided above said step and having an engaging surface substantially parallel to the upper surface of said step, means for urging said clamping plate downwardly toward said step to clamp said fourth toggle seat block in an adjusted position relatively to said movable jaw stock, and a front toggle interposed between said Pitman and said movable jaw stock and seating at its opposite ends in said third and fourth toggle seats.

3,128,955
DEVICE FOR WINDING ANNULAR CORES

Gerhart Stütz, Sindelfingen, Wurttemberg, Germany, assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed June 27, 1961, Ser. No. 120,016
Claims priority, application Germany July 1, 1960
6 Claims. (Cl. 242—4)

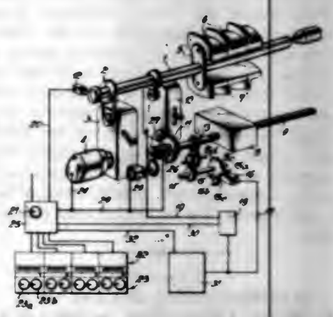
1. A winding apparatus for winding an annular ring comprising in combination means for orienting said ring whereby the aperture thereof is exposed, a source of winding material, first and second feeding and gripping means normally disposed on the entry and exit sides and along the central axis of said ring, one of said feeding and gripping means alternately feeding the forward end of said winding material through said aperture and the other gripping said winding material on the other side of said core, means positioned between one of said feeding and gripping means and said ring for guiding said material through said aperture, and means for reversing the positions of said first and second feeding and gripping means by rotating said feeding and gripping means after each feeding operation about a shaft perpendicular to said axis of said ring, each of said reversals completing one winding on said ring.



3,128,956
WINDING MACHINES FOR ELECTRICAL COILS

Heinrich Schümann, 14a Schwartauer Allee, Lubeck, Germany

Filed Jan. 23, 1962, Ser. No. 168,199
Claims priority, application Germany Jan. 26, 1961
5 Claims. (Cl. 242—9)

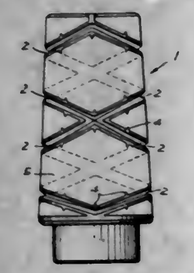


1. A coil winding machine adapted to wind wire upon a form having a plurality of separate compartments formed therein, each compartment being separated from an adjacent compartment by a separating wall, said machine comprising: a first shaft upon which said form is removably mounted; a first motor connected to drive said first shaft; a second shaft having a lead screw formed thereon, said second shaft being spaced from and extending parallel to said first shaft; wire guide means mounted for movement parallel to said shafts, said guide means being threadedly engaged with said lead screw for displacement by rotation of said second shaft to guide wire into any desired one of said compartments; reversing clutch means connecting said second shaft to be driven by said first motor along with said first shaft; first adjustably presettable counting means responsive to a first predetermined number of revolutions of said first shaft, said first number of revolutions being equal to the number of turns to be wound in a single layer in the one of said compartments into which wire is being guided by said guide means, said reversing clutch means being connected to said first counting means to cause a reversal in the direction of rotation of said second shaft each time that said first counting means responds to said first predetermined number of revolutions; second adjustably presettable counting means responsive to a second predetermined number of revolutions of said first shaft, said second number of revolutions being equal to the total number of turns to be wound in said one of said compartments; control means responsive to said second counting means for stopping rotation of said first shaft by said first motor in response to said second number of revolutions, said control means simultaneously controlling said reversing clutch means to cause said second shaft to be disconnected for rotation independently of said first motor; a second motor controlled by said control means; further clutch means controlled by said control means for selectively connecting said second shaft to be driven by said second motor when said first shaft is stopped; third adjustably presettable counting means responsive to a third predetermined number of impulses; impulse producing means connected to said third counting means and responsive to rotation of said second shaft, said impulse producing means causing said third counting means to reach said third predetermined number in response to rotation of said second shaft by said second motor by an amount sufficient to move said guide means to guide wire into a compartment adjacent to said one compartment; said third counting means being connected to said control means to cause disconnection of said second shaft from said second motor by said further clutch means and connection of said second shaft to be driven by said first motor through said reversing clutch means, said control means thereupon stopping operation of said third counting means and causing operation of said first and second counting means to be resumed for winding wire into said adjacent compartment.

3,128,957
YARN GUIDING TRAVERSE ROLL

Paul Fallscheer, Reutlingen, Wurttemberg, Germany, assignor to Emil Adolff, Kommanditgesellschaft, Reutlingen, Wurttemberg, Germany

Filed May 29, 1962, Ser. No. 198,626
Claims priority, application Germany June 2, 1961
5 Claims. (Cl. 242—43.2)

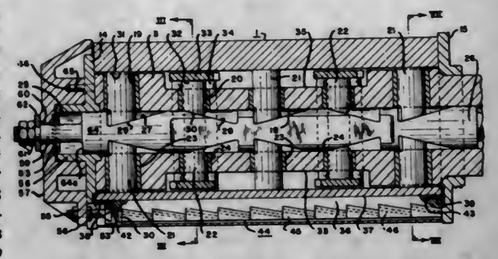


1. A yarn-guiding traverse roll comprising
a first member consisting of at least one self-supporting helically wound band of rigid material disposed along the periphery of an imaginary cone to define spaces between said helically wound band,
the latter having a helical groove open towards the outside of said imaginary cone,
a second element consisting of a filler received in the spaces between the helical windings of said band and forming jointly with said helically wound band a solid, cone-shaped element having said helically wound band embedded at its periphery, and said self-supporting, helically wound band being of rigid, wear resistant material and said second element being formed of weaker material than said first member.

3,128,958
EXPANDABLE TENSION REEL

John C. Bongiovanni, New Kensington, Harold O. Hill, Leechburg, Clair T. Whitacre, Apollo, and Charles H. Anderson, Jr., Washington, Pa., assignors to Hyde Park Foundry and Machine Company, Hyde Park, Pa.

Filed Dec. 21, 1961, Ser. No. 161,024
12 Claims. (Cl. 242—72.1)

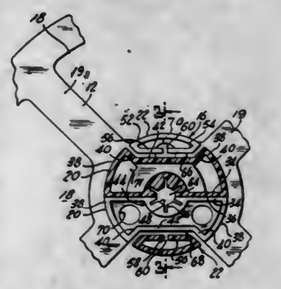


1. A tension reel for strip material comprising an axial rotary reel support means, a plurality of peripheral segments mounted thereon for relative outward and inward movement so as to increase and decrease the effective diameter of the reel, means for effecting said relative movement comprising a plurality of wedge members engaging at least one of said segments and being slidably mounted in said support means for outward and inward movement relative to the axis of said support means, actuator means slidably mounted in said support means for reciprocating movement directed along said axis and having wedge surfaces corresponding to and cooperative with said wedge members whereby some of said wedge members are actuated to increase said diameter when said actuator means is moved in one direction and other of said wedge members are actuated to decrease said diameter when said actuater means is moved in the other direction.

3,128,959
REEL CONSTRUCTION

Ernest Pelson, 41 S. Mountain Ave., Montclair, N.J.

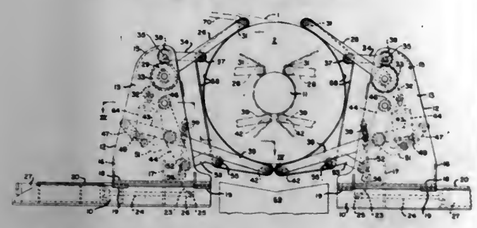
Filed May 5, 1959, Ser. No. 811,205
15 Claims. (Cl. 242—74)



9. A reel for strip means, the reel consisting of a pair of identical members, each member including a flange for the reel and projections, the projections of the pair of identical members being interfitted with each other, a projection of each member being abutted against and secured to the opposed flange of the other member to space the flanges from each other; identical portions of all interfitted projections cooperating to define a hub

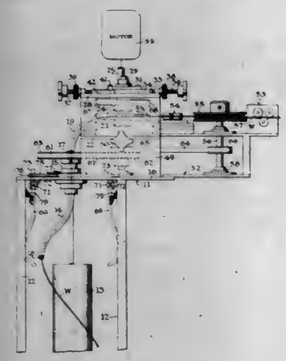
for having the strip wound thereon and for receiving a spindle for mounting the reel, and strip-receiving passages.

3,128,960
MEANS AND METHOD FOR FORMING COILS OF STRIP-LIKE MATERIAL
Walter O. Jones, Warren, Ohio, assignor to The Wean Engineering Company, Inc., Warren, Ohio, a corporation of Ohio
Filed Apr. 20, 1959, Ser. No. 807,672
13 Claims. (Cl. 242—78.5)



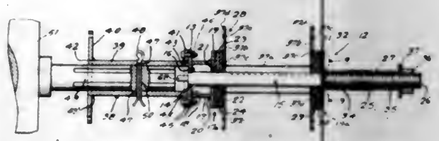
1. A belt wrapper comprising a pair of opposed support members disposed on opposite sides of a coiling axis, each support member having a pair of primary belt guiding frames movably mounted in the support member, a pair of secondary belt guiding frames movably mounted in each support member, a single belt trained about all the belt guiding frames on each support member, belt tension means, and means urging the primary belt guiding frames together and abutting a coil being formed about the coiling axis.

3,128,961
WIRE COILING MACHINE
Chester F. Wickwire, Cortland, N.Y., assignor to Wickwire Brothers, Inc., Cortland, N.Y., a corporation of New York
Filed Jan. 8, 1962, Ser. No. 164,829
7 Claims. (Cl. 242—82)



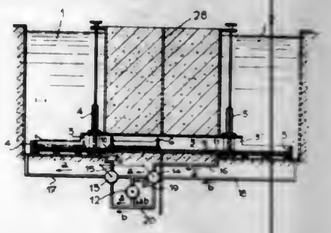
1. A machine for coiling wire of circular cross section comprising
(*a*) a curved guide pipe mounted for rotation about a vertical axis and having an entrance on the axis of rotation and an exit spaced radially from that axis;
(*b*) means for feeding wire to the entrance of the guide pipe including a pair of rotary cylinders which are canted with respect to each other and between which the wire moving toward the entrance is fed, the cylinders imparting longitudinal movement to the wire and being so canted relatively to each other that they twist the wire about its longitudinal axis approximately 360° per loop of the coil to be formed; and
(*c*) drive means for rotating the pipe and the canted cylinders.

3,128,962
REEL DEVICE
Robert D. Bieber, Beecher City, Ill.
Filed July 23, 1962, Ser. No. 211,669
19 Claims. (Cl. 242—86.5)



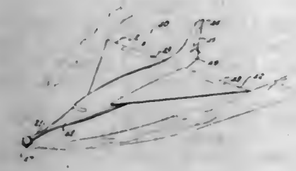
15. In a reel device; a shaft; a slip clutch on said shaft, said clutch having a holding portion; a spool on said shaft adjacent said clutch holding portion; and means including a resilient friction washer on said shaft between said spool and said clutch holding portion effectively holding said spool against rotation relative to said clutch holding portion as said clutch slips during winding and unwinding operation of the reel device, said washer having physical properties comparable to those of the side wall of a conventional automobile tire.

3,128,963
METHOD OF AND APPARATUS FOR TRANSFERRING A LOAD BETWEEN TWO FLUID-CONTAINING RESERVOIRS
Pierre Alphone Erkes, Ixelles, Brussels, Belgium, assignor to Bureau d'Etudes Nucleaires en abrege B.E.N., Brussels, Belgium
Filed Dec. 28, 1960, Ser. No. 78,988
Claims priority, application Belgium Jan. 5, 1960
1 Claim. (Cl. 243—1)



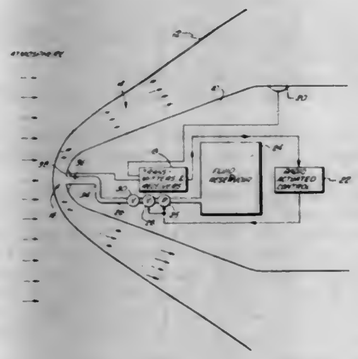
In a method for transferring a load, contained in a carriage having a piston at each end, between a first fluid containing reservoir and a second fluid containing reservoir, through a tube connecting said reservoir, the diameter of said tube being slightly greater than the diameter of said pistons of said carriage, a first valve being provided in said tube to close communication with said first reservoir, a second valve being provided in said tube to close communication with said second reservoir, and means being provided near both said valves for retaining at least one of said pistons in said tube, the method comprising opening said first valve while said carriage is in said first reservoir and said second valve is closed, establishing a suction in said tube between said carriage and said second valve to move said carriage from said first reservoir through said tube towards the second reservoir, closing said first valve when the carriage is within said tube, opening said second valve, establishing in said tube between said first valve and said carriage a pressure higher than that in said second reservoir and sufficient to move said carriage into said second reservoir, and closing said second valve when said carriage is in said second reservoir.

3,128,964
SPACE VEHICLE WITH COOLED BALL ON LEADING END
John P. Le Bel, 1948 E. 5th Ave., Mesa, Ariz., assignor of one-half to Hugh E. Nichols, Higley, Ariz.
Filed Sept. 17, 1962, Ser. No. 224,039
19 Claims. (Cl. 244—1)



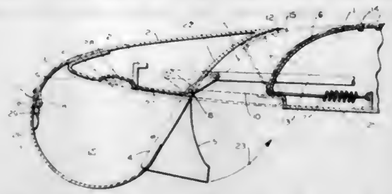
14. A space vehicle, comprising:
an airframe;
a spherical ball supported behind its diametral plane at the leading end of said airframe;
means for selectively rotating said ball about an axis transverse to the longitudinal axis of said airframe;
and means for cooling the aft surfaces of said ball as it rotates.

3,128,965
COMMUNICATION METHOD AND APPARATUS
Richard W. Ziemer, Gardena, Calif., assignor to Space Technology Laboratories, Inc., Los Angeles, Calif., a corporation of Delaware
Filed Apr. 5, 1960, Ser. No. 20,085
11 Claims. (Cl. 244—14)



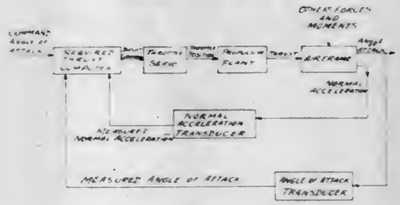
1. In communicating radio waves between first and second stations, effectively surrounding the first of which is a layer of ionized gas that tends to attenuate the radio waves, the method comprising directing a fluid stream which is relatively transparent to the radio waves into the layer of ionized gas from the first station so as to provide a region in the ionized gas layer which is relatively transparent to the radio waves, and communicating between the stations with radio waves through the relatively transparent region by means including an antenna located at the first station adjacent the directed fluid stream, said antenna having a maximum of its radiation pattern directed along the fluid stream.

3,128,966
HIGH LIFT SYSTEM FOR AIRCRAFT WINGS
Alberto Alvarez-Calderon, 1560 Castilleja St., Palo Alto, Calif.
Filed Dec. 6, 1961, Ser. No. 157,423
10 Claims. (Cl. 244—42)



1. For an aircraft wing having an upper surface, a lower surface, and a wing leading edge, the improved means for increasing the lift of the wing comprising: means defining a leading edge slot adjacent to said leading edge for conveying fluids from said lower surface to said upper surface with said slot having a fluid intake mouth in said lower wing surface and a forward slot wall surface, a spanwise intake door pivotally mounted on said wing about a spanwise pivoted axis positioned substantially between said wing leading edge and said fluid intake mouth, and means provided for moving said door between a first position covering said fluid intake mouth and a second position uncovering said fluid mouth with the surface of said door inclined in a downwardly and forwardly manner with respect to said lower wing surface and located with respect to forward slot wall surface as a forwardly and downwardly extension of said forward slot wall.

3,128,967
AIRCRAFT CONTROL SYSTEM
Robert F. Hays, Jr., Charlottesville, Va., assignor to Specialties Incorporated, Syosset, N.Y., a corporation of New York
Filed Oct. 24, 1962, Ser. No. 232,792
13 Claims. (Cl. 244—77)

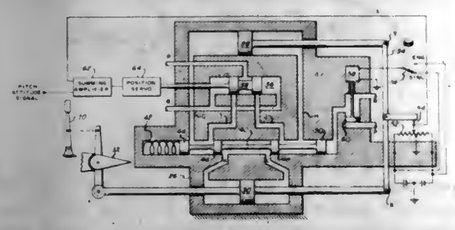


1. In an aircraft engine throttle control system, means for controlling the thrust produced by an engine of said aircraft, means for determining angle of attack of said aircraft, means for determining normal acceleration of said aircraft, and means operatively connecting said angle of attack and acceleration determining means with said thrust controlling means to cause a predetermined mode of flight of said aircraft.

3,128,968
AIRCRAFT CONTROL SERVO APPARATUS HAVING SIGNAL MEMORIZING MEANS
Lawrence Kaufman, West Hartford, Conn., and Harvey V. Moore, Jr., Phoenix, Ariz., assignors to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Oct. 25, 1961, Ser. No. 147,653
13 Claims. (Cl. 244—78)

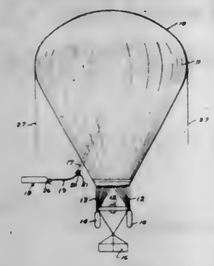
1. Apparatus for use with an aircraft automatic flight control system for assuring that said system will maintain

the attitude said aircraft has when said sysem is engaged comprising summing means adapted to receive a signal representing the instantaneous attitude of the aircraft about one of its axes, means producing a signal representing the deflection of a craft control surface associated with said axis, means adapted to subtract said summing means output signal from said surface deflection signal



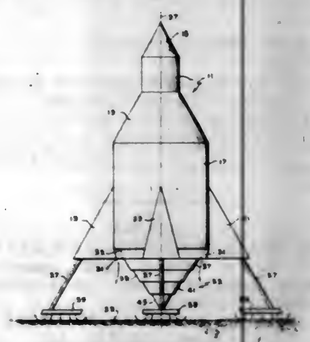
when said system is not engaged, means adapted to store a signal representing the result of said subtraction, said storing means applying its output signal to said summing means, whereby said summing means produces a signal representing the sum of its input signals, and means for applying said summing means output signal to said system when said flight control system is engaged.

3,128,969
CARTRIDGE INFLATED BALLOON
Paul E. Yost, Sioux Falls, S. Dak., assignor to Raven Industries, Inc., Sioux Falls, S. Dak., a corporation of South Dakota
Filed Dec. 22, 1961, Ser. No. 161,669
1 Claim. (Cl. 244—98)



A hot air balloon assembly with a ground inflation and an air inflation mechanism comprising in combination, a hot air balloon including a balloon envelope having a predetermined volume sufficient to carry and maintain a payload of a given size aloft, means for supporting the payload on the balloon envelope, a portable ground inflation gas generator having a closed container with a charge of combustible propellant therein being of a size for generating sufficient heated combustion gases for inflating said balloon envelope to provide adequate free lift for carrying the balloon aloft and having a burning time to be consumed in less than three minutes, a propellant igniter in said container, a gas conduit leading from said container conducting hot combustion gas after the propellant has been ignited, an elongate inflation conduit adapted for insertion into an opening in the balloon envelope while the balloon is on the ground for delivering gas to the balloon envelope interior away from the balloon envelope material, an air aspirator between the inflation conduit and gas conduit providing an inlet for mixing a substantial volume of air with the gas to substantially increase the valume of gases delivered to the balloon envelope for rapid inflation and mixing sufficient air with the gas to diminish the temperature of the combustion gas to less than slightly higher than 500° F., and a gas generator mounted on the balloon envelope carried aloft therewith being of sufficient size for generating gas at a rate maintaining the balloon and payload aloft after inflation on the ground and maintaining the elevated temperature of gases delivered to the balloon by said ground inflation generator.

3,128,970
VEHICLE SOFT LANDING SYSTEM
Anibal A. Tinajero, Arlington, Va., and Albert Sopp, Montgomery County, Md., assignors to the United States of America as represented by the Secretary of the Navy
Filed May 28, 1962, Ser. No. 198,381
17 Claims. (Cl. 244—100)
(Granted under Title 35, U.S. Code (1952), sec. 266)



10. A rocket propelled vehicle capable of making a soft landing comprising:

(*a*) a hollow body for said vehicle;

(*b*) a rocket engine mounted interiorly of said hollow body;

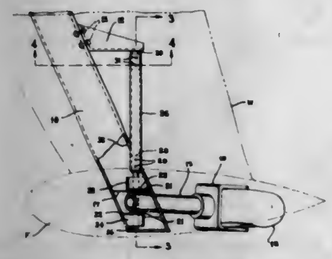
(*c*) an annular discharge nozzle for directing the flow of exhaust from said rocket engine longitudinally rearwardly of said body;

(*d*) telescoping plug means mounted centrally of said annular nozzle for further directing in a heat dissipative manner the flow of exhaust from said rocket engine, said telescoping plug means comprising a longitudinally telescoping cascade of discrete tapered bodies of decreasing size protruding aftwardly of said vehicle, each of said discrete bodies having a cavity therein for receiving the adjacent aftwardly positioned smaller discrete body thereinto;

(*e*) a plurality of opposed pairs of radially outwardly extensible and retractible ground effect producing means mounted on said body, each of said ground effect producing means when extended being approximately in the same plane as that of the tip of the extended telescoping plug of said annular nozzle for providing additional landing stability for said vehicle;

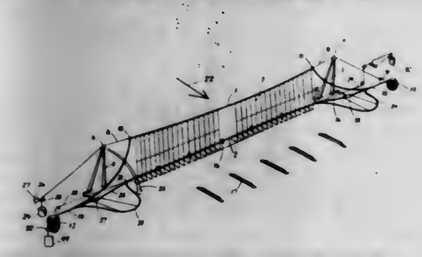
(*f*) whereby when said vehicle is brought nozzle-first into close proximity to a surface, the action of ground effect produced by the discharge of rocket exhaust causes said plug to telescope inwardly to said vehicle body, and the weight of said body causes said ground effect producing means to retract.

3,128,971
AIRCRAFT LANDING GEAR
George H. Daffer, Shepherdstown, W. Va., assignor to Renaer, Inc., Williamsport, Md., a corporation of Maryland
Filed June 18, 1962, Ser. No. 203,063
3 Claims. (Cl. 244—104)



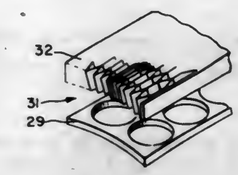
1. In combination with an aircraft wing of the swept back type including a rigid rectilinear main wing spar having a free outer end, said spar extending diagonally to the line of flight of the aircraft, a landing gear supporting arm having an upper end pivotally connected to the outer end portion of said spar for free angular movement about a substantially horizontal axis diagonal to the spar and normal to said line of flight, a reaction bracket rigidly secured to said spar at a lengthwise location thereon spaced inwardly from said arm, and projecting from said spar into alignment with said axis, and a rectilinear torsion member having its rectilinear axis aligned with said fixed axis, its opposite ends being fixedly connected respectively to said arm and to said reaction bracket.

3,128,972
ARRESTING DEVICES FOR AIRPLANES
Per B. Fondén, Hejdegatan 3, and Karl Ove Torgny Wålander, Vasavagen 49, both of Linkoping, Sweden
Filed Jan. 12, 1962, Ser. No. 165,732
9 Claims. (Cl. 244—110)



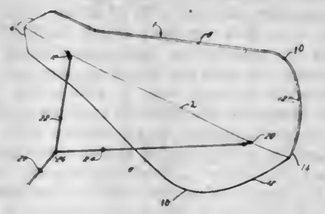
1. An arresting device for airplanes comprising in combination, a net to be stretched across a runway for airplanes, said net comprising upper and lower parallel bounding cables and a plurality of connecting wires extending therebetween, a brake situated outside each end of the net, the ends of the cables extending beyond each end of the net being connected in common to the respective brake, foldable masts at opposite ends of the net for allowing raising and lowering of said net, means for keeping the net stretched between the masts, and means for keeping one net bounding cable at least raised from the runway in the lowered position of the net so as to allow said cable to be engaged by a hook depending from an airplane to be arrested.

3,128,973
POROUS MATERIAL
Robert E. Dannenberg, Palo Alto, Calif., assignor to Kendan Associates, Palo Alto, Calif., a partnership
Filed May 17, 1961, Ser. No. 110,738
8 Claims. (Cl. 244—130)



6. A vehicle designed to be driven through an enveloping fluid including an outer skin over which turbulence is likely to occur during forward motion of the vehicle, at least one permeable partially expanded expandable cell honeycomb member positioned in said skin and having one surface exposed to the fluid, said honeycomb member including a plurality of open ended substantially unobstructed cell passageways, one open end of said passageways being at said exposed surface of said honeycomb member and providing the passageways direct communication with the enveloping fluid, the axes of adjacent passageways being substantially parallel and the cross sectional area of certain of said passageways varying with respect to the cross sectional area of other of said passageways to product a permeability gradient across the skin of the vehicle whereby the flow rate of a fluid passing through said certain and said other passageways varies in a given manner and a conduit within the vehicle communicating with said passageways for passing boundary layer fluid drawn into said passageways whereby turbulence over said skin is reduced.

3,128,974
KITE
Paul V. Teague, Jr., 6705 General Custer, Wichita Falls, Tex.
Filed Apr. 24, 1962, Ser. No. 189,797
5 Claims. (Cl. 244—153)



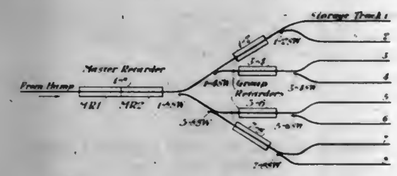
1. An astronaut capsule kite of formaceous material and of monolithic construction, which kite comprises, a single piece of formaceous material having a pair of side faces disposed at an angle to form an apex and meeting along a longitudinal, medial line on the forward, wind receiving side of the kite, an area of less air exposure above a transverse medial line than below said transverse medial line, anchor means secured to said formaceous material on said longitudinal, medial line on the apex of said kite above and below a transverse medial line, cords secured to said anchor means and extending outward from the apex and being joined together to maintain said kite at a predetermined upwardly and forwardly inclined angle when in flight in the air, and a further cord leading from said first mentioned cords to allow said kite to maintain said predetermined angle when in flight in the air.

3,128,975
PREVENTIVE DETECTOR CAR
Heung-Duk Dan, 35th Samchung-dong, Chong-no, Seoul, Korea
Filed May 17, 1960, Ser. No. 29,660
2 Claims. (Cl. 246—121)



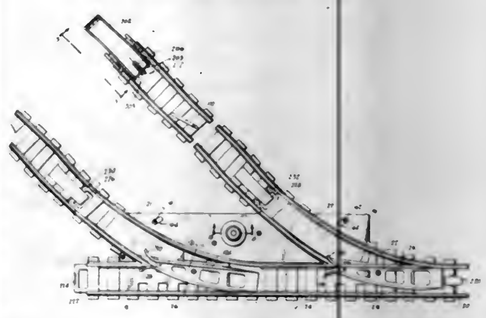
1. A detector assembly adapted to be driven in front of a train on the same track at a physically remotely controlled distance, comprising a drive car, a driven car forward of said drive car, an arm, one end of said arm being pivotally mounted on said drive car, the other end of said arm being releasably coupled to said driven car, mean on said driven car responsive to impact of said driven car with an obstacle to release said arm from said driven car, and means responsive to movement of said arm after release to transmit a warning signal to said train.

3,128,976
INFORMATION TRANSFER IN AUTOMATIC RAILROAD CLASSIFICATION YARDS
Sih Hsuin Tsiang, Morristown, N.J., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Apr. 14, 1958, Ser. No. 728,159
3 Claims. (Cl. 246—182)



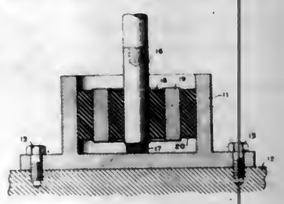
1. In control apparatus for a classification yard having a master retarder and a plurality of group retarders interconnected by at least one track switch, automatic switching means for transferring information along a predetermined route for each cut of one or more cars from the master retarder through one of said group retarders, means for measuring the speed of each cut in the master retarder, means adjustable in accordance with a desired speed, speed check registration means controlled by said speed measuring means and said adjustable means and actuated to a first or a second condition according as the actual speed of a cut in the master retarder is the same as or different from the desired speed, respectively, leaving detector means actuated from a first condition to a second condition as each cut leaves the master retarder, first and second group registration means associated with each group retarder, each operable to a first or a second condition, means controlled by said automatic switching means and said leaving detector means for operating said first group registration means to its first or its second condition according as said leaving detector means is in its first or second condition, respectively, and means controlled by said automatic switching means, said first group registration means in its first condition and said speed check registration means for operating said second group registration means to its first or its second condition, respectively, according as said speed check registration means is in its first or its second condition as each cut leaves the master retarder.

3,128,977
TOY RAILWAY SYSTEM
Raymond J. Lohr and John J. Dobkowski, Erie, Pa., assignors to Louis Marx & Company, Inc., New York, N.Y., a corporation of New York
Filed May 31, 1960, Ser. No. 32,790
3 Claims. (Cl. 246—415)



1. A toy railway system comprising a main line, a siding, a track switch for connecting the siding into the main line, said track switch having a movable frog, the frog of said track switch having a straight rail and a curved rail with divergent wings at the adjacent ends of said straight and curved rails whereby the wheels of an approaching car may deflect the frog, and resilient means shiftable to either of two positions one of which biasses the frog toward the siding and the other of which biasses the frog toward the main line, a post projecting upward from said means and laterally movable to one position or the other, and a locomotive having a cam at one side for engaging said post to shift said switch.

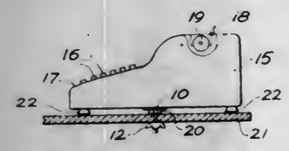
3,128,978
VIBRATION CANCELLING ISOLATION MOUNTS
Alan O. Sykes, 304 Mashie Drive SE., Vienna, Va.
Filed June 10, 1960, Ser. No. 35,382
10 Claims. (Cl. 248—22)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A vibration cancelling mount comprising a pair of resilient elements mounted in mechanically parallel relationship, said pair of resilient elements including means for introducing a 180 degree phase shift in vibrations transmitted through one of said elements relative to vibrations transmitted through the other of said pair of elements.

3,128,979
TYPEWRITER MOUNTING BRACKET
Maurice M. Damelio, 12 Davis St., Girard, Ohio, assignor of one-half to Beatrice V. Scanlon, Girard, Ohio
Filed July 10, 1961, Ser. No. 122,966
3 Claims. (Cl. 248—25)

1. The new combination of a typewriter having a base, feet attached to said base for supporting the typewriter on a desk surface, a mounting bracket consisting of a rigid, non-resilient flat bar, of a length less than the width of the typewriter base and positioned against the undersurface of the base and extending transversely thereof, the bar being of narrow width as compared to its length and being plane throughout and lying flat against the underside of the base, the bar being relatively thin as compared to the height of the supporting feet of the typewriter whereby the bar will clear the underlying supporting desk surface on which the feet of the typewriter rest, said bar having a plurality of openings in and adjacent to each end thereof, fastening bolts passing through



certain of the openings at each end of the bar and threadably engaged with the typewriter base and securing the bar flat against the said underside of the base, a threaded stud connected at one end to said bar midway between the ends of the latter and extending from the side of the bar away from said typewriter base, the stud having a securing nut threaded upon the other end thereof for coupling the bar with the typewriter supporting surface on which the typewriter rests, and a spacing member encircling said stud to fill out a space between the bar and the supporting surface upon which the typewriter rests.

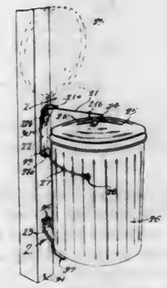
3,128,980
CONTAINER CUSHIONING DEVICE
Sigvald F. Udstad, Summit, and Claude P. Wampler, Short Hills, N.J., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Apr. 5, 1960, Ser. No. 20,068
6 Claims. (Cl. 248—119)



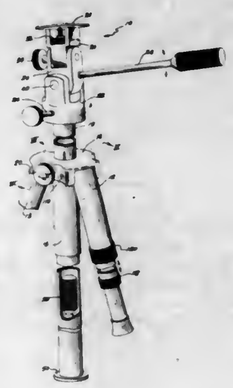
1. An article of manufacture comprising an elongated slidable beam structure, having ends, undersurfaces, upper surfaces and sides, said upper surfaces including spaced platform areas, said undersurfaces including spaced apart friction areas, said sides being spaced apart and defining a longitudinally extending opening therebetween, resilient means in said opening and disposed longitudinally, support means in said opening and supporting said resilient means, means adjacent the ends of said resilient means and abutting the same, said last mentioned means being abuttingly engaged by said beam structure and extending through the spaced sides thereof and adapted to be engageable by structure independent of said beam structure.

3,128,981
HOLD-DOWN DEVICE FOR CANS AND LIDS
William F. Puetsch, 729 E. 6th St., and Clyde M. Herington, 2005 W. 1st St., both of Davenport, Iowa
Filed Aug. 23, 1961, Ser. No. 133,475
9 Claims. (Cl. 248—146)

1. A can and cover holder for garbage cans and the like comprising a sheet metal strap having a hook portion for engaging a handle member on said can formed at one end thereof, a hinge portion formed on the other end of said strap, and a movable cover holder member provided with a cover holder portion for engaging the handle of a can cover and additionally provided with a hinge portion operatively associated with the first mentioned hinge portion, said hinge portions having cooperating means for locking said cover holder member when said member is pivoted upwardly to an open position, said cooperating means releasing said cover upon the mere raising of said cover holder member relative to the first-mentioned hinge portion.

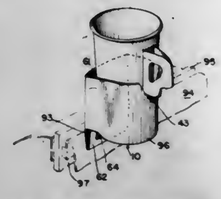


3,128,982
TRIPOD HEAD
Albert J. Christopher, Muskegon, Mich., assignor to Alkirk Inc., Muskegon, Mich., a corporation of Michigan
Filed Dec. 4, 1962, Ser. No. 242,208
8 Claims. (Cl. 248—183)



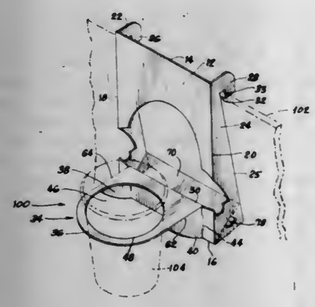
1. A camera-supporting tripod comprising, leg means attached to a main support bracket; a center post normally held locked to said bracket; a camera support bed; horizontal panoramic sweep means between said post and bed; said sweep means comprising a sweep bracket rotatably mounted on a bearing inside the upper end of said center post; said bearing including an annular bushing snugly held against the inner periphery of the center post; a central post depending from said sweep bracket and snugly fitting inside said bushing; and releasable lock means between said sweep bracket and post.

3,128,983
BEVERAGE CUP-HOLDER FOR MOTOR-VEHICLE DOORS
Arthur B. Wood, Arlington Heights, Ill., assignor to Admart, Inc., Chicago, Ill., a corporation of Illinois
Filed Mar. 4, 1963, Ser. No. 262,515
17 Claims. (Cl. 248—208)



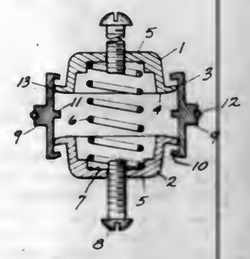
1. A cup-holder-forming templet comprising, an elongated strip of flexible material having end extensions disposed transversely outward from one lateral perimeter of the strip, a score in the strip extending longitudinally thereof to facilitate the folding of the strip upon itself, transverse scores in the strip located inwardly from the ends thereof and converging oppositely outwardly from the longitudinal score toward the opposite lateral perimeters of the strip, a pair of scores each extending from the intersection of said transverse scores and said longitudinal score, and diverging outwardly to the upper perimeter of said strip the extensions having formations therein whereby when the folded strip of material is flexed to dispose the folded end portions, outwardly of the transverse scores, into overlapping relationship they are retained in such relationship by the interfitting extension formations so that the overlapping end portions subtend the resulting arcuate contour of the intermediate portion of the folded strip to provide a pocket for seating a cup.

3,128,984
CONTAINER HOLDER AND BLANK
Felix L. Palm, 2241 W. Greenleaf Ave., Chicago, Ill.
Filed Feb. 6, 1962, Ser. No. 171,463
10 Claims. (Cl. 248—311)



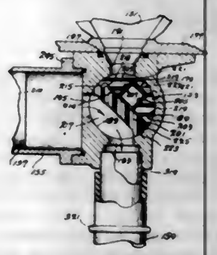
1. A device for supporting a container, said device being formable from flat relatively flexible sheet material, comprising: a body including a body portion and integral first reinforcing means hingedly connected to said body portion for rigidifying said body portion, an aperture defined by said body from which a holder element has been struck out, a holder element integral with said body and hingedly connected thereto along a line coincident with at least a portion of the periphery of said aperture, said holder element being generally perpendicularly disposed with respect to said body portion, second reinforcing means operatively engaging said body and said holder element for maintaining the perpendicularity of said body portion and said holder element, and means connected to said body for suspending said body from independent support means.

3,128,985
RESILIENT MOUNTING
Leon Wallerstein, Jr., Erie, Pa., assignor to Lord Manufacturing Company, Erie, Pa., a corporation of Pennsylvania
Filed Oct. 17, 1961, Ser. No. 145,603
4 Claims. (Cl. 248—358)



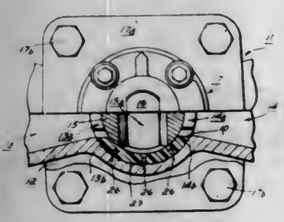
1. A resilient mounting comprising supporting and supported members and spring means connected in load carrying relation between said members, at least one of said members having a flange with polygonal sides, a plurality of shoes each frictionally engaging one of said sides, and means supporting said shoes for free tilting relative to the associated sides and for holding the shoes in contact with the associated sides.

3,128,986
VALVE CONSTRUCTION FOR PACKAGING APPARATUS
Roland E. Miller, Orangeville, and Carmen G. Tumino, Elk Grove Village, Ill., and Gerald Wynn, Stone Mountain, Ga., assignors to National Dairy Products Corporation, Chicago, Ill., a corporation of Delaware
Filed July 18, 1960, Ser. No. 43,490
4 Claims. (Cl. 251—175)



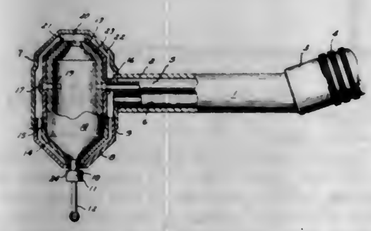
1. A valve construction comprising a housing having a bore therein with one portion of the wall thereof having two spaced-apart ports therein, a valve element disposed within said bore, said element being fabricated with a resilient surface for engagement with said one portion of the wall of said bore, inflatable means confined within said bore intermediate said element and a second portion of the wall of said bore opposite said first portion, and means for supplying pressure fluid to said inflatable means so as to urge said resilient surface into sealing engagement with said one portion of the wall of said bore, said element having a passageway therein opening into said surface and being movable to connect said passageway between said ports.

3,128,987
NON-LUBRICATED PLUG VALVE WITH PLASTIC LINER
Hugh W. O'Connor, Wollaston, Mass., assignor to Walworth Company, New York, N.Y., a corporation of Massachusetts
Filed Oct. 2, 1962, Ser. No. 227,819
14 Claims. (Cl. 251—312)



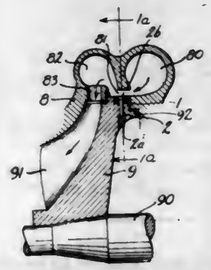
1. A lined plug valve comprising a valve body having a plug-receiving opening therein communicating with flow ports in the surface thereof, plug member mounted on said body for rotation within said opening, said plug member being of lesser cross-section than said opening and having a flow passageway therethrough disposed for alignment with said ports, a hollow deformable plastic liner mounted between and occupying substantially all of the space between said surface of said body opening and the exterior surfaces of said plug member, said liner having ports therethrough in registration with said flow ports and having a plurality of slots in the exterior surfaces thereof, said slots being spaced from said ports and extending substantially from one to the opposite axial end of said liner and being of lesser depth than the thickness of said liner, and adjustable means for forcing said plug member axially into said body opening and liner to compress said liner into tight sealing engagement with said surfaces of said body opening.

3,128,988
TURBINE DRIVEN AIR BEARING DENTAL HANDPIECE
Harold Mandrolan, La Canada, Calif., assignor to Spacelabs, Inc., Van Nuys, Calif., a corporation of California
Filed Oct. 11, 1960, Ser. No. 62,004
2 Claims. (Cl. 253—2)



1. An inflow impulse turbine comprising, a hollow rotor having first and second frusto-conical end surfaces and a cylindrical surface therebetween, a hollow housing of complimentary symmetry as compared with said rotor separated from, and enclosing said rotor, the separation between said rotor and said housing being substantially uniform and of such dimension as to establish a hydrostatic film therebetween, a source of pressurized fluid communicating with the interior of said housing for establishing said hydrostatic film, the radial load on said rotor being supported by the complete film and the end thrust loads on said rotor being supported by the film at the frusto-conical end surfaces, nozzle means communicating the interior of said housing with the interior of said rotor, exhaust passage means communicating the interior of said rotor with the exterior of said housing, whereby rotary motion may be imparted to said rotor as a result of the passage of said pressurized fluid from the space between the housing and the rotor through said nozzle means.

3,128,989
TURBINE OVERSPEED CONTROL
William D. Allingham, 12223 25th Ave. SW., Seattle 66, Wash.
Filed Nov. 7, 1960, Ser. No. 67,672
24 Claims. (Cl. 253—59)

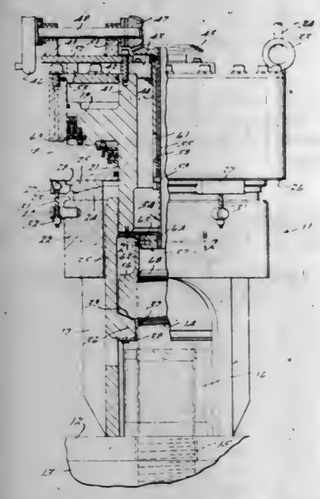


1. A centrifugally operable valve construction comprising a rotatable valve seat, casing means extending thereabout and defining an annular passage with said seat, an annular valve member disposed about the seat and split axially along a radial plane thereof, and fastener means connecting said valve member with the seat for rotation therewith, one of said valve member and said fastener means being constructed of a material that will yield under the action of a predetermined centrifugal force, whereby the valve member will move radially outwardly into said passage at a rotational speed of the seat commensurate with said force.

3,128,990
SELF-ALIGNING CONNECTOR FOR STUD TENSIONERS
Ernest A. Brooks, Hudson, and LeRoy S. DeMart, Lancaster, Ohio, assignors to Diamond Power Specialty Corporation, Lancaster, Ohio, a corporation of Ohio
Filed May 8, 1961, Ser. No. 108,612
12 Claims. (Cl. 254—29)

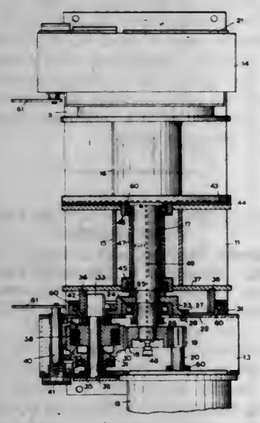
1. In combination, a stud tensioner having a pedestal and a reciprocable motor disposed above said pedestal and supportable thereby, a drawbar connected to said motor and extending downwardly within said pedestal, the lower portion of said drawbar being of annular shape with an internal diameter sufficiently large to permit the drawbar to be freely lowered over a stud, a connector having a nut disposed within said drawbar and movable axially with respect thereto, an internal thread on said nut complementary to the stud thread, facing surfaces on said nut and drawbar responsive to an upward force exerted on said drawbar when said surfaces are in engagement to cause an upward force to be exerted on said stud, means for moving said nut with respect to said drawbar between an upper position in which said nut threads are disengaged from said stud and a lower position in which said nut

threads are engaged with said stud, and a driving member extending upwardly from said nut and non-rotatably



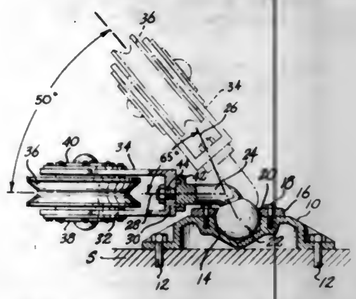
secured thereto, said means for moving said nut including means for rotating said driving member.

3,128,991
DOUBLE DRUM HOISTS
Arthur Henry Pillman, Primrose Hill, Germiston, Transvaal, Republic of South Africa (P.O. Box 67, Cleveland, Transvaal, Republic of South Africa)
Filed Mar. 9, 1960, Ser. No. 13,920
4 Claims. (Cl. 254—185)



1. A double drum rope hoist comprising in combination a rigid base, a driving shaft on which both drums are supported and are mounted to be freely rotatable, a pair of identical pedestals removably mounted on said base, and held in spaced relation to one another by said driving shaft, a set of driving gear and clutch mechanism for each drum and each set a mirror copy of the other, and a driving motor selectably attached to either pedestal in driving engagement with the corresponding set of driving gear and clutch mechanism.

3,128,992
ADJUSTABLE AND LOCKABLE OFFSET PULLEY
Frank J. Luketa, 5567 Greenwood Ave., Seattle, Wash.
Filed Oct. 31, 1960, Ser. No. 66,078
7 Claims. (Cl. 254—195)



1. A pulley assembly comprising means mounting a pulley wheel for free rotation including two spaced, parallel cheek members and a cheek spanner extending therebetween; a stem connected at one end to a mid-portion of said cheek spanner and connected at the other end to a ball member, with the center axis of said cheek spanner coincident with the center of juncture of said cheek spanner and stem deviating by a substantial angle of offset with respect to the radius of the ball coincident with the center of juncture of the ball and stem; a base plate including a generally planar bottom surface; and wide-mouthed socket means adjustably mounting and locking said ball member on said base plate and allowing adjustment of the attitude of said pulley wheel within a zone of adjustment extending 360° azimuthally and at least 50° elevationally with respect to the bottom surface of said base plate.

3,128,993
DEVICE FOR COMMINGLING SLOWLY FLOWING LIQUIDS
Jerome A. Platte, Penn Hills Township, Allegheny County, Richard V. Wright, Findlay Township, Allegheny County, and Victor M. Marcy, Pittsburgh, Pa., assignors to Calgon Corporation, a corporation of Pennsylvania
Filed Jan. 16, 1961, Ser. No. 82,992
2 Claims. (Cl. 259—4)



1. A continuous liquid sample and reagent mixing device comprising:

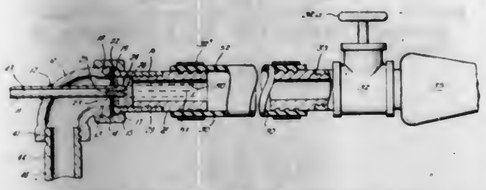
(*a*) a sample tube;

(*b*) a reagent injector tube of smaller internal diameter than said sample tube, said reagent injector tube projecting through the wall of said sample tube to a point within the interior of said sample tube and having an open end whose axis is substantially perpendicular to said sample tube;

(*c*) a mixing chamber forming a continuation of the sample tube downstream from said reagent injector tube, said mixing chamber comprising a short length of tubing having an internal diameter of from about two to about four times the internal diameter of said sample tube; and

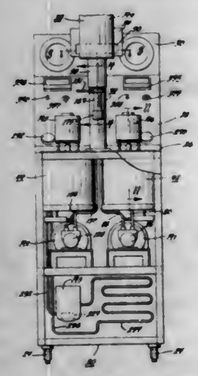
(*d*) an exit tube having an internal diameter smaller than that of the mixing chamber.

3,128,994
MIXING HEAD
William Hungate, West University Place, Tex. (6320 Vanderbilt, Houston 5, Tex.)
Filed Feb. 27, 1961, Ser. No. 91,990
6 Claims. (Cl. 259—4)



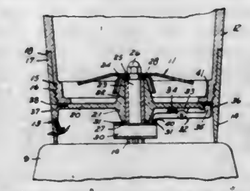
1. Apparatus for mixing fluids, comprising body means having a passage extending therethrough, one end of said passage serving as a first fluid inlet and the other end of said passage serving as a fluid outlet, a tubular means substantially smaller in outer diameter than said passage extending through a wall of said body from the exterior thereof and terminating at a point intermediate the length of said passage and at the center thereof, said tubular means having an orifice opening at its terminus within said passage directed toward said outlet, an elastomeric web disposed laterally of said terminus of said tubular means and sealingly secured to said body means thereabout and resiliently engaged around said tubular means adjacent said terminus thereof, said web being resiliently proportionately displaced from engagement with said tubular means by increased fluid pressure at its side toward said inlet whereby with increased pressure of first fluid entering said body at said inlet for flow toward said outlet through said passage a proportionately increased flow thereof will occur, a second fluid entering the end of said tubular means exteriorly of said body and flowing therethrough to enter said passage of said body through said orifice, the amount of said second fluid flow being proportional to the pressure thereof within said tubular means, whereby by control of the relative pressures of said first and second fluids as described relative amounts of each entering and mixing in said passage and flowing therein toward said outlet may be controlled.

3,128,995
PORTABLE MIXING MACHINE
Paul F. Shaeffer, Lewisburg, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 30, 1960, Ser. No. 59,618
2 Claims. (Cl. 259—23)



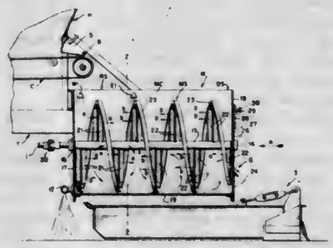
1. Mixing apparatus including a plurality of supply containers adapted to contain different liquids, refrigerant evaporating means associated with one of said containers, means including refrigerant liquefying means operatively connected to said evaporating means for keeping said evaporating means at a substantially constant temperature, a mixer housing, supply and return conduit means extending from said supply containers to said mixer housing, valve means associated with said mixer housing for connecting said supply conduit means with said return conduit means or for delivery into said mixer housing, positive displacement pump means located in each of said supply conduit means for pumping liquids individually from said supply containers to said valve means, the supply conduit means connected with said one container being provided with electric heating means, a variable transformer and a thermostatic control means for controlling said heating means having a thermosensitive element in heat transfer with the liquid in said supply conduit means between said heating means and said valve means for delivering liquid at a substantially constant temperature to said mixer housing.

3,128,996
MIXER DRIVE LOCK
John C. Kuzara, New Britain, Conn., assignor to Landers, Frary & Clark, New Britain, Conn., a corporation of Connecticut
Filed Dec. 1, 1960, Ser. No. 73,033
8 Claims. (Cl. 259—108)



1. A mixer comprising, a vessel having first and second portions, said portions having cooperating means thereon releasably securing the portions into a unitary assembly, a driven agitator rotatably mounted on said first portion, locking means preventing rotation of said agitator when said first and second portions are disconnected, and means actuated to release said locking means upon assembly of said first and second portions.

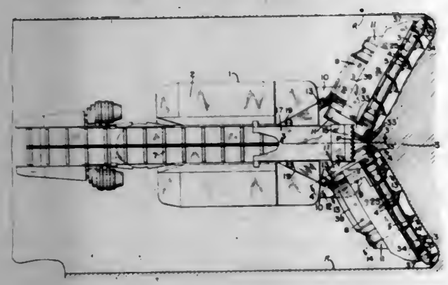
3,128,997
APPARATUS FOR FORMING AND APPLYING MIXTURES
Bernard W. Young, P.O. Box 2369, Waco, Tex.
Filed Jan. 9, 1961, Ser. No. 81,441
17 Claims. (Cl. 259—161)



4. In a mixing apparatus, a container having a material receiving station and a mixture discharging station; and a mixer structure mounted for rotation in said container about an axis extending from said receiving station to said

discharging station and comprising a central shaft, material mixing and feeding means mounted on said shaft and including a first set of blades within a first zone adjacent said receiving station and terminating at a part of said shaft intermediate said receiving station and said discharging station, the blades of said first set respectively being inclined about their own axes at an angle with reference to their planes of rotation whereby to tend to force material toward said discharging station, and material mixing and feed opposing means including a second set of blades within a second zone extending from said intermediate part of said shaft to said discharging station and being inclined about their own axes oppositely to the inclination of said first set whereby to tend to force material toward said receiving station in opposition to the forcing of material by said material mixing and feeding means, the latter exerting a greater force on the material than said material mixing and feed opposing means whereby said material will be fed from said receiving station to said discharging station.

3,128,998
SCROLL TYPE FULL FACE CONTINUOUS MINER
John R. Sibley, Franklin, Pa., assignor to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed June 2, 1958, Ser. No. 739,053
15 Claims. (Cl. 262—9)

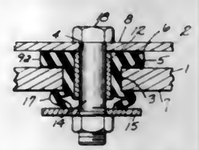


8. In a mining machine, a base movable over the floor of a mine, cutting and disintegrating mechanism carried by said base comprising a pair of relatively inclined disintegrating and conveying rotors diverging forwardly and outwardly from said base, means for rotating said rotors in unison, means for advancing said rotors with respect to the face of a mine vein, said rotors as they are advanced forming a face substantially V-shaped in plan, and floor and roof cutters for detaching the apex portion of the V-shaped face from the roof and floor as said rotors are advanced.

14. In combination, a disintegrating rotor, supporting and driving means therefor, and a movable breaker device driven simultaneously with said rotor relative thereto for engaging and breaking away mineral at one end of said rotor wherein a rotary toothed head is arranged at the opposite end of said rotor from said breaker device and is movable relative to said rotor and to said breaker device as said rotor is driven.

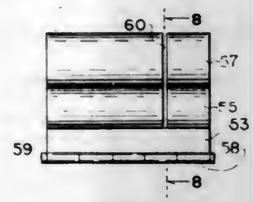
15. A mining apparatus comprising, a mobile base, spaced pivot means on said base, said pivot means being located on opposite sides respectively of the longitudinal medium of said base, elongated support means connected to said pivot means respectively for pivotal movement toward and away from each other, other pivot means on said elongated supports respectively, disintegrating head support means pivotally connected to said other pivot means respectively for pivotal movement relative to said elongated support with the axes of said other pivot means disposed normal to the pivot axes of said spaced pivot means respectively, said other pivot means having the axes thereof extending in the same general direction as said elongated support and said disintegrating head support.

3,128,999
RESILIENT MOUNTING
Regis V. Schmitt, Erie, Pa., assignor to Lord Manufacturing Company, Erie, Pa., a corporation of Pennsylvania
Filed Sept. 17, 1962, Ser. No. 223,947
3 Claims. (Cl. 267—1)



1. In a resilient mounting, spaced supporting and supported members each having a hole therein and the holes being aligned with each other, said members having opposed inner load carrying surfaces surrounding the respective holes and facing toward each other and having outer load carrying surfaces also surrounding the respective holes and facing away from each other, a through bolt extending through said holes with an associated thrust surface presented toward each of said outer surfaces and an associated rigid section clamped between said thrust surfaces when the bolt is tightened, a body of elastomer arranged in load carrying relation between said inner surfaces and surrounding said rigid section, said body having at at least one end a tubular skirt extending through one of said holes and beyond the outer surface surrounding said one hole and having its outer part engaging the associated thrust surface of said bolt, said skirt having an internal radially extending circumferential groove between the outer surface surrounding said one hole and the associated thrust surface of said bolt to cause the inner part of the skirt to buckle outwardly and the end of the skirt to fold inwardly as the bolt is tightened thereby providing a resilient shoulder in load carrying relation between the outer surface surrounding said one hole and the associated thrust surface of said bolt.

3,129,000
SAW GUIDE FOR CUTTING FLEXIBLE CONDUIT
Nicholas V. Casson, 175 Murray Ave., Yonkers, N.Y.
Filed Jan. 15, 1962, Ser. No. 166,208
2 Claims. (Cl. 269—2)



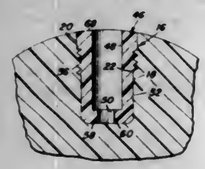
1. A saw guide for cutting flexible conduit comprising, in combination, first and second side members each having a flat base portion with upper and lower edges, a first semicircular channel portion extending upward from the upper edge of each of said base portions, and a larger semicircular channel portion extending upward from each of said first semicircular channel portions, said flat base portions and said first and second semicircular channel portions being disposed adjacent to each other, said first and second semicircular channel portions containing corresponding transverse saw guide slots disposed toward one end of said first and second side members, and hinge means pivotally joining the lower edges of said base portions.

3,129,001
INVERTED NOVELTY MASK
Paul Winchell, 9—05 166th St., Whitestone, N.Y.
Filed May 22, 1961, Ser. No. 111,656
3 Claims. (Cl. 272—8)



1. A masking device in the form of a dummy of a human being, said device having a hollow shell body in the shape of a fragment of the front of a human body including a torso, arms and legs of the human body, said shell body semi-circular in cross-section and adapted to fit over the head of a wearer of the device, said shell body having a protuberance in simulation of the human nose, and having a pair of spaced openings in simulation of human eyes, the outer surface of the torso and arms having markings simulating a jacket with lapels and a vest, the outer surfaces of the legs having markings simulating trousers, said nose simulating protuberance disposed between said lapels, said eye simulating openings disposed in said lapels, and an elastic band adjacent one end of the body for holding the shell body on the head of the wearer in upside down condition.

3,129,002
BOWLING BALL HAVING REMOVABLE FINGER GRIP INSERT WITH VENTING AND TOOL-RECEIVING OPENING
John H. Bednash, 101 Gladstone St., Detroit, Mich.
Filed Nov. 9, 1961, Ser. No. 151,317
4 Claims. (Cl. 273—63)



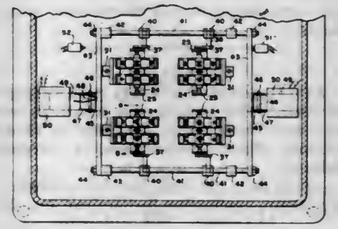
2. A bowling ball of solid, one piece material having a finger bore extending thereinto from the spherical surface of the ball, a cylindrical finger grip insert removably secured in said bore, said insert and said bore having bottom walls with flat, smooth surfaces engaging over their entire areas, fastening means including a rotatable connection between the adjacent cylindrical walls of said insert and bore, said insert bottom wall having a non-circular opening extending entirely therethrough for venting the space in the bore below said insert bottom wall and for the reception of the complementary shaped extremity of a tool whereby rotation may be given to the insert, said insert and bore being in continuous engagement at their flat surfaced bottom walls and the lower portion of their adjacent cylindrical surfaces.

3,129,003
BALL BAT WITH REINFORCED HANDLE
Alvin W. Mueller and Lyle R. Perry, Ferguson, Mo., assignors to Mueller-Perry Co. Inc., Ferguson, Mo., a corporation of Missouri
Filed Sept. 29, 1960, Ser. No. 59,359
8 Claims. (Cl. 273—72)



1. In a round baseball bat made of substantially rigid material, having an impact portion and an elongated handle extending from the impact portion; a reenforcement layer superposed around the handle and terminating short of the impact portion whereby the impact portion is free of the said layer, the layer comprising a plurality of crossed strands of resistingly elongatable flexible material, all of which crossed strands extend from end to end of the handle to provide a longitudinally and transversely continuous seamless sleeve, the strands being taut and snugly disposed about the handle, an adhesive impregnating the strands, and also bonding the sleeve to the handle throughout the length of the sleeve; the impregnating adhesive and resistingly elongatable strands being of such materials that the bonded sleeve has a modulus of elasticity at least substantially as great as that of the bat and yet below a value that would interfere with the normal resiliency of the bat in driving a ball, and the sleeve providing a lengthwise, bonded strand arrangement extending continuously substantially from end to end of the handle in such wise that the strands provide continuous, unbroken paths along the surface of the handle lengthwise of its axis, to receive the impact and bending forces that are produced in the bat when an object is batted so that the strands restrict the bending strains in the bat.

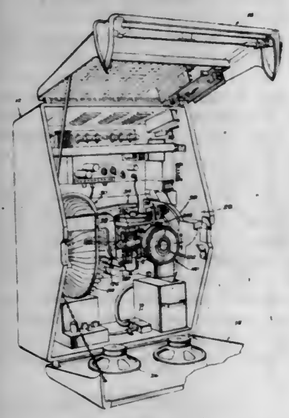
3,129,004
GAMING DEVICE COMPRISING ALIGNED WORD-FORMING DISCS ROTATABLE IN OPPOSITE DIRECTIONS
George A. Ritzler, 606 N. Jameson Ave., Lima, Ohio
Filed Oct. 24, 1962, Ser. No. 232,679
3 Claims. (Cl. 273—143)



2. In combination, a gaming device comprising a plurality of discs of spoke-like construction and adapted to spin, the spokes of said discs having bent over end portions which bear insignia, a pair of said discs mounted on shafts which are in alignment with one another to form a first set, a second pair of said discs mounted on shafts in alignment with one another to form a second set, said two sets of disc pairs being in alignment with one another, a pair of said discs being mounted on shafts which

are in alignment with one another to form a third set and a pair of said discs mounted on shafts which are in alignment to form a fourth set, the third and fourth sets of disc pairs being in line with one another but out of alignment with the first and second sets, impellers for rotating the discs of all sets, each of said impellers being operated through a combined crank arm and a reciprocatory mechanism, said mechanism comprising a drive rod extending adjacent the first and third sets of disc pairs, a driving rod positioned adjacent to the second and fourth sets of disc pairs, and means coupling said rods to said crank arms, said rods being interconnected by a metal bar at each end thereof, and means for providing a reciprocatory motion to both of said driving rods in order to spin the discs first in one direction and then in the other direction.

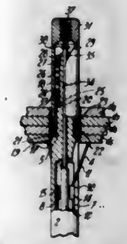
3,129,005
AUTOMATIC PHONOGRAPH
David C. Rockola, Chicago, Ill., assignor to Rock-Ola Manufacturing Corporation, Chicago, Ill., a corporation of Delaware
Filed Dec. 29, 1960, Ser. No. 79,344
9 Claims. (Cl. 274—10)



4. In a phonograph, a drum type magazine having a plurality of dividers extending outwardly from a central portion at an inclination to the radial, forming similarly inclined pockets which are open at their outer ends, the magazine being mounted for rotation on a horizontal axis, stationary means for retaining the records in the pockets in the lower portion of the magazine, a turntable, and means for transferring records between the magazine and the turntable.

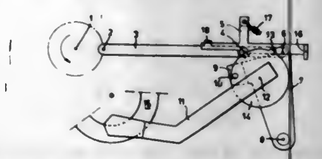
3,129,006
AUTOMATIC RECORD CHANGER
Adrien Zahner, Prilly, Vaud, and Louis Thévenaz, Les Rasses, Vaud, Switzerland, assignors to Thorens S.A., Sainte-Croix, Vaud, Switzerland, a corporation of Switzerland
Filed Jan. 16, 1961, Ser. No. 83,060
Claims priority, application Switzerland Jan. 20, 1960
13 Claims. (Cl. 274—10)

1. In an automatic record changer comprising a frame, a turntable, a motor for said turntable, a spindle centrally mounted with respect to said turntable, a record-supporting means provided on said spindle to hold a stack of records on said spindle above said turntable, lowering means associated with said supporting means to lower said records individually on said turntable, a supporting member pivotally mounted on said frame for free horizontal movement, a pick-up arm pivotally mounted on said supporting member for free vertical movement, cycle control means actuated by said motor and comprising first cam means to control a horizontal movement of said supporting member from a rest position, in which said pick-up arm is situated outside the periphery of said records, towards said spindle through a friction coupling and second cam means to control a vertical movement of said pick-up arm and of said record lowering means, a pick-up cartridge on said pick-up arm provided with a needle for playing said records supported by said turntable, and retractible feeler means comprising a first feeler member movably mounted on the free end of said pick-up arm for free movement between two stable positions, said positions including an active position in which said feeler is situated below said needle and at a distance from said needle corresponding to the mean distance between the



periphery of said records and the non-modulated grooves preceding the first modulated grooves of said records, and an inactive position in which said feeler is situated above said needle, said cycle control means through horizontal and vertical movement of said pick-up arm bringing said feeler situated in said active position against the periphery of each of said records during its individual lowering movement toward said turntable to stop the horizontal movement of said pick-up arm against the action of said friction coupling until said needle is located above the first grooves of the record to be played, said cycle control means subsequently lowering said pick-up arm towards said record lowered on said turntable, said feeler coming in contact with said record and being urged into its inactive position by said downward movement of said pick-up arm bringing the needle into the record groove.

3,129,007
PHONOGRAPH PICK-UP ARM CONTROL
Gilbert Edouard Mestdagh, Emmasingel, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Mar. 9, 1961, Ser. No. 94,627
2 Claims. (Cl. 274—15)



1. A tone arm control apparatus for a phonograph comprising a rotatably driven control disc, a rod member pivotally connected to the periphery of said control disc at one end thereof, a pivotally mounted lever having an inclined surface portion, the other end of said rod member being pivotally connected to said lever for imparting to said rod a substantial motion component in the longitudinal direction thereof, a pivotal tone arm having a pin engaging said lever for raising and lowering said tone arm, a disc means connected with said tone arm, and coupling means pivotally connected to and movable with said rod member for engaging said disc means to rotate said tone arm upon movement of said rod member in one direction and being disengaged from said disc upon movement of said rod member in the opposite direction.

3,129,008
STEREO PICKUP DEVICE
Ken Suzuki and Shoji Kikuchi, Kanagawa-ku, Yokohama, Japan, assignors to Victor Company of Japan, Limited, Yokohama, Japan, a corporation of Japan
Filed Jan. 27, 1961, Ser. No. 85,277
Claims priority, application Japan Feb. 27, 1960
1 Claim. (Cl. 274—23)



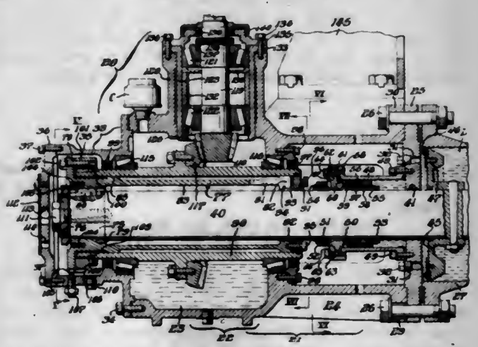
A stereo pick-up device comprising a pick-up arm, a pick-up head at one end of said pick-up arm, a U-shaped support pivotally supporting said arm on a horizontal axis and having a vertical shaft rotatably mounted in a motor board of said device, the axis of said shaft intersecting said horizontal axis, a balance weight attached to said pick-up arm at that end thereof opposite to said pick-up head whereby said arm is substantially balanced about the intersection of said axes, thereby substantially eliminating distortion due to inertia forces, said arm having an outside force acting on it during operation providing a variable torque about said vertical axis, an outside force compensating means for compensating said torque produced by said outside force, said compensating means comprising a spring engaged at one end with a bracket extending from said vertical shaft, the other end of said spring being fixed to said motor board and extending at an angle to said bracket for suitably varying said inside force on said arm to correspond with the variation of said outside force caused in operating the pick-up device, and a needle pressure adjusting means, regulatable independently of vibration and inertia forces, mounted on said pivotal arm support, said needle pressure adjusting means comprising a needle pressure adjusting spring which is fixed at each end to a needle pressure adjusting knob fitted to said U-shaped support and is wound around both horizontal shafts secured to said support so as to support said arm with its bottom part.

3,129,009
HYDRAULIC LINE WIPER
Harry E. Simpson, Dallas, Tex., assignor, by mesne assignments, to Dresser Industries, Inc., Dallas County, Tex., a corporation of Delaware
Filed Oct. 10, 1960, Ser. No. 61,764
7 Claims. (Cl. 277—4)



5. In a wiper device attachable to a well pipe; a housing; a central bore in the housing; a resilient wiper element slidably disposed in the bore, and having a passage therethrough adapted to receive an elongate element to be wiped; a retainer member detachably positioned in the outer end of the bore for preventing the wiper element from moving outwardly of the bore; a tubular member positioned in the bore below the wiper element; an enlarged head on the tubular member slidably and sealingly engaged with the bore wall, said tubular member being adapted for attachment to a well pipe; inwardly directed piston means attached to the housing and being slidably sealed to the tubular member and working against the enlarged head, whereby the housing moves downwardly with respect to the tubular member when fluid pressure is exerted between the piston and the enlarged head; and means to admit fluid under pressure to the interior of the housing between the piston means and the enlarged head to cause relative movement between the housing and the tubular member to radially expand the wiper element.

3,129,010
SHAFT SEAL ASSEMBLY
Andrew Stratienko, Philadelphia, Pa., assignor to Philadelphia Gear Corporation, King of Prussia, Pa.
Filed June 2, 1960, Ser. No. 33,455
4 Claims. (Cl. 277—9)

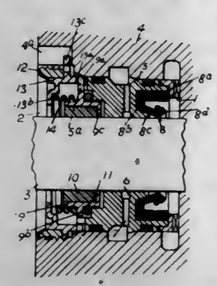


1. In a shaft seal construction for a unitary rotatable shaft one end portion of which passes through an opening into a fluid container and the other portion of which projects therefrom; primary sealing means encircling a projecting portion of said shaft and adapted, when in sealing position, to prevent leakage of fluid from said container along said shaft; auxiliary sealing means encircling said shaft and normally out of sealing position but adapted to be moved into sealing position; a first sleeve adapted to be connected to drive means external of said container, said first sleeve surrounding a projecting portion of said shaft beyond a said primary sealing means and having an internal diameter larger than the outside diameter of said primary sealing means; removably-mounted connecting means connecting said first sleeve to said shaft, said connecting means including a second sleeve positioned between said first sleeve and said shaft, said second sleeve being removably connected to said first sleeve and to said shaft, and so arranged that when said connecting means is removed said primary sealing means may be slid axially along said projecting portion of said shaft and removed from said shaft.

3,129,011
ROTARY SHAFT SEAL WITH DRAINAGE MEANS
Thomas Campbell, Knowle, England, assignor to Joseph Lucas (Industries) Limited, Birmingham, England
Filed Dec. 10, 1962, Ser. No. 243,340
2 Claims. (Cl. 277—59)

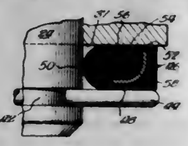
1. Means for effecting a fluid seal around a shaft rotatably supported within a bush mounted in a body and

having a circumferential groove in its internal periphery, said means comprising in combination a resilient annular sealing member located at one end of the bush to bear on the shaft, a rigid and annular carrier member located at the other end of the bush, interengaging means on the bush and the carrier permitting lateral



movement of the carrier member relative to the bush but preventing relative angular movement therebetween, a second resilient annular sealing member carried by said carrier and bearing on the shaft, a part fixed relative to the body, a spring acting between said part and the carrier to urge the carrier towards said bush and passage means in the bush connecting the groove to a drain.

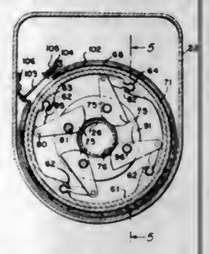
3,129,012
SEALS
Benjamin A. Seidenfeld, Chicago, Ill., assignor to Merit Automotive Parts, Inc., Chicago, Ill., a corporation of Illinois
Filed Nov. 24, 1961, Ser. No. 154,768
1 Claim. (Cl. 277—81)



A seal to be supported on the anchor pin of a brake assembly, which brake assembly includes a rotatable boss having an end wall, said seal being molded of a plastic compound and having spaced upper and lower side walls merging with an inner curvilinear wall, said curvilinear wall having a bearing surface positioned approximately centrally between said upper and lower side walls and adapted to engage only at said bearing surface with the anchor pin, an L-shaped reinforcing member wholly within said seal and between said spaced upper and lower side walls, said upper side wall adapted to engage the end wall of the rotatable boss and said upper side wall having an annular recess for accommodating a lubricant so that the lubricant contacts the end wall of the rotatable boss.

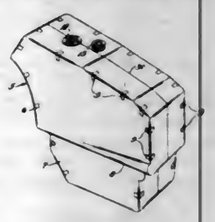
3,129,013
POWER UNIT ASSEMBLY
Benny L. Thompson, 16517 Superior St., Granada Hills, Calif., and Kermit L. Thompson, 13323 Glenoaks, Sylmar, Calif.
Filed May 2, 1960, Ser. No. 26,314
5 Claims. (Cl. 279—109)

1. A power transmitting unit for use in combination with a movable boom, said power transmitting unit comprising: a frame structure adapted to be connected to said boom; a tubular member carried by said frame structure and having an axis and first and second ends; a chuck disposed at said first end of said tubular member substantially coaxially therewith and supported by said frame structure, said chuck including first and second members disposed substantially concentrically about said axis of said tubular member and having relative movement there between, jaw means pivotally connected to said first member, means connecting said jaw means to said second



member, and friction means affixed to said frame and surrounding said first member; power means; and means connecting said power means in driving relationship to said second member, whereby rotation of said second member in one direction with respect to said first member moves said jaw means first into engagement with a means to be driven and thereafter, upon overcoming said friction means, causes rotation of said chuck.

3,129,014
FUEL CELLS AND MANUFACTURE THEREOF
Cyril Paul Hutchison, Fullerton, and John L. Eberly, Garden Grove, Calif., assignors to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Oct. 6, 1960, Ser. No. 60,975
10 Claims. (Cl. 280—5)



6. The method of building a fuel cell which comprises inflating a form to produce a surface complementary to the surface of the wall of the fuel cell, applying liquid polyurethane precursor to the inflated surface, and heating to set it without completely curing it, covering this with nylon in solution and removing the solvent, and applying thereover another ply of liquid polyurethane precursor, and thereafter heating and simultaneously completing the cure of both plies of polyurethane precursor, and then deflating and removing the form through an opening in the cell wall.

10. A fuel cell with plastic walls composed essentially of polyurethane containing a nylon barrier, which cell is adapted to be located under the fender near a wheel of an automobile, one end of the cell which is adapted to be near the wheel being curved substantially concentrically with the wheel, an outwardly extending substantially horizontal shelf portion between the top and bottom of the cell, which shelf portion extending the length of one side wall and the entire width of the opposite end of the cell joins a lower portion of the cell of lesser cross-sectional area with an upper portion of larger cross-sectional area

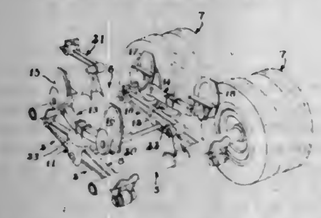
and is adapted to rest on a cell support located under the fender of the automobile.

3,129,015
SEAT CONSTRUCTION FOR GROCERY CARTS
Gerald J. Lachance, North Brookfield, Mass., assignor to American Metal Products, Inc., Auburn, Mass., a corporation of Massachusetts
Filed Jan. 19, 1962, Ser. No. 167,300
4 Claims. (Cl. 280—33.99)



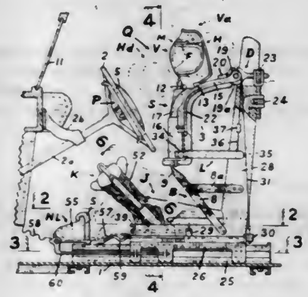
1. A folding seat construction for nesting grocery carts including a swinging gate mounted on the cart, a pivoted wall associated with the swinging gate, a folding seat construction operatively associated with the gate and the wall to fold or to be extended between the wall and the gate, a seat-forming member pivotally mounted with relation to said folding seat construction, said seat-forming member comprising a generally flat sheet of material including a substantially cylindrical tubular member adjacent an edge thereof, a longitudinal rod-like member, a head on the rod-like member adjacent one end thereof, said head being spaced slightly from said one end leaving a short projection on the rod-like member beyond the head, the tubular member receiving the rod-like member so that the rod-like member is contained within the same, the tubular member abutting the head, said seat construction including a pair of spaced parallel resilient members, aligned eyes on the resilient members, one of the eyes receiving the short projection on the rod-like member at said one end thereof adjacent said head, the head abutting said eye at the side thereof facing the other eye, and the opposite end of the rod-like member being located in said other eye, the latter and the head confining the tubular member and the flat sheet of material that forms the seat, and the head and the adjacent end of the tubular member fixing the rod-like member against longitudinal shifting.

3,129,016
TANDEM AXLE SUSPENSION
Charles L. Small, Chicago, Ill., assignor to Hendrickson Manufacturing Company, Lyons, Ill., a corporation of Illinois
Filed Jan. 3, 1962, Ser. No. 164,078
3 Claims. (Cl. 280—104.5)



1. In a tandem axle suspension for wheeled vehicles including fore and aft axle assemblies with ground wheels on opposite ends thereof, a pair of equalizer beam assemblies interconnecting the ends of said axle assemblies on opposite sides of said suspension, saddle assemblies pivotally mounted on the equalizer beams midway between the ends thereof, leaf spring assemblies mounted on said saddle assemblies, and a pair of spring hangers for each side of said suspension for connecting the front and rear ends of each spring assembly in load bearing relationship to a vehicle frame, the improvement which comprises a beam center cross tube interconnecting said saddle assemblies with the opposite ends of said tube firmly clamped to said assemblies so as not to allow either saddle assembly to pivot independently of the other, and said leaf spring assemblies being mounted on said saddle assemblies by simplified and light-weight fastening means.

3,129,017
VEHICLE OCCUPANT SAFETY BARRIER
Phillip Graham, 2825 Glenmore Ave., Pittsburgh, Pa.
Filed Mar. 22, 1961, Ser. No. 97,658
20 Claims. (Cl. 280—150)

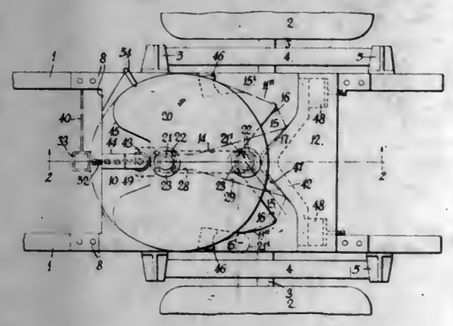


1. In a vehicle having a seat for an occupant, in combination, a shield means confronting at least a portion of the front of the occupant, support means mounted in said vehicle, said support means including means for supporting said shield means in substantially vertical position, a lower portion of said shield means confronting at least the chest of said occupant, said shield means including bearing surface means confronting said occupant's forehead and chin, said shield means being of a construction to allow said occupant to see therethrough, a second bearing surface means for engaging at least upper portions of the legs of said occupant, said support means including means to support said second bearing surface means, said support means being yieldable in a forward direction of said vehicle for allowing yieldable movement of said shield means and said second bearing surface means in a forward direction of said vehicle in response to the momentum thrust of said occupant against said shield means and said second bearing surface means due to a high degree of deceleration of said vehicle, said shield means and said second bearing means being interconnected so as to move with the same lineal speed forwardly, thereby restraining said occupant from being injured, and yieldable force absorbing and rebound-preventing means to gradually absorb said momentum thrust and thereby cushion said occupant during the deceleration of said vehicle and prevent rebound of said occupant.

3,129,018
TRACTOR-TRAILER CONNECTING DEVICE
Jesse Colpo, Newark, Del., assignor to Colpo Safety Wheel Inc., Buffalo, N.Y., a corporation of Delaware
Filed Nov. 1, 1961, Ser. No. 149,242
13 Claims. (Cl. 280—438)

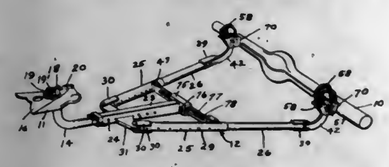
1. A tractor-trailer connection device comprising, a floor adapted to be mounted on a tractor for movement

therewith, a turntable mounted on said floor for rotation relative thereto, trailer attaching means carried by said turntable for rotation therewith, means causing said turntable to move rearwardly relative to said floor to a predetermined rearward position thereon during relative



rotation therebetween through a predetermined acute angle, and means thereafter constraining said turntable to remain in said rearward position on said floor during relative rotation therebetween beyond said predetermined angle.

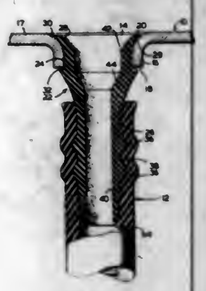
3,129,019
TRAILER HITCH
John Bartone, 1052 E. 24th St., Erie, Pa.
Filed June 1, 1961, Ser. No. 114,247
7 Claims. (Cl. 280—485)



5. A trailer hitch comprising a relatively heavy, resilient, stiff, generally L-shaped member, said member having a vertically extending cylindrical upper end, means adapted to be attached to a trailer tongue, said means having a vertically extending cylindrical hole therein complementary in shape to said cylindrical end and snugly receiving said cylindrical end therein, attaching means on the front end of said L-shaped member, spaced rearwardly extending legs, said legs being swingably attached at their rear ends to said attaching means, means attaching an intermediate part of said legs to said attaching means adjustably holding said legs in spaced relation, and means for swingably attaching the front ends of said legs to the axle of an automobile.

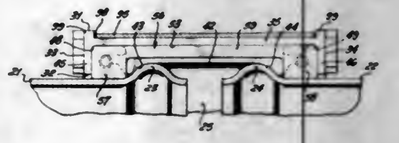
3,129,020
TRAY DRAINHOSE NIPPLE
Raymond S. Bujnowski, Warren, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 10, 1961, Ser. No. 101,710
1 Claim. (Cl. 285—110)

A nipple structure for insertion in a support member, said support member having an opening for receiving said nipple structure wherein said opening is defined by an upper edge, a lower edge, and inwardly and downwardly curved side walls describing a continuous uninterrupted arcuate surface, said nipple structure including a head portion and a shank portion and having a central aperture therethrough, said head portion having its uppermost portion outwardly flared to conform to the curved side walls of said opening, gradually reducing in cross section as it flares outwardly and terminating with a sharp peripheral edge portion, said peripheral edge portion upon insertion of said nipple structure in said opening terminating below the upper edge of said opening, an annular



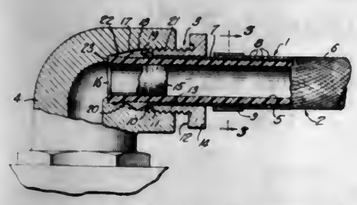
deformable shoulder formed on said head portion between said uppermost flared portion and said shank portion, said flared portion and said shoulder adapted upon insertion of said nipple structure into said opening to cooperate with the curved side walls and lower edge of said opening respectively to clamp and seal said nipple structure in said opening.

3,129,021
FLEXIBLE JOINT
William M. Willis, Northridge, and Robert W. Graves, Canoga Park, Calif., assignors to Aeroquip Corporation, Jackson, Mich., a corporation of Michigan
Filed Dec. 3, 1959, Ser. No. 857,089
2 Claims. (Cl. 285—233)



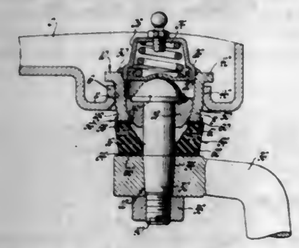
1. A joint structure for interconnecting the end portions of two tubes arranged in axially aligned relationship, comprising a plurality of arcuate segments arranged to form a collar circumscribing the end portions of the tubes, means for constricting the segments around the tubes, each segment having an inside surface, two end surfaces and two side surfaces, each segment having two grooves formed therein opening in said inside surface and extending in a circumferential direction proximate said side surfaces respectively, and from one end surface to the other end surface, each segment having two end grooves formed in the respective end faces thereof, said end grooves being open to the inside surface grooves, and a unitary seal of elastomer fitted into said grooves whereby those side portions of the seal contained in said inside surface grooves will engage the outside surfaces of said tubes, respectively, and that end portion of the seal contained in an end groove will engage a corresponding end portion of the seal of an adjacent segment, and said side portions of the seals having centrally extending elongated, resilient arcuate support members compressed therein and providing circumferential end to end sealing pressure at the sides of said seal end portions for said engagement of said seal end portions.

3,129,022
COUPLING
Theodore P. Avery, 44 Seneca St., Oil City, Pa.
Filed Dec. 20, 1960, Ser. No. 77,044
5 Claims. (Cl. 285—249)



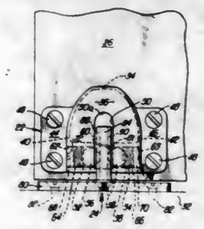
1. A hose and coupling assembly connectable to a fitting having a bore, which fitting has a threaded portion adjacent its end and the bore including an enlarged conical section terminating in an annular face at right angles to the longitudinal axis of the bore, the hose and coupling assembly comprising a tube of resilient material, a covering movably mounted on the tube having a length less than the tube and positioned relative to the tube to allow at least one end of the tube to project beyond the cover, a movable pressure sleeve connected to the cover at the end from which the tube projects slidably mounted on the tube, a take-up nut carried by the pressure sleeve and threadedly engageable with the threaded portion of the fitting, an annulus rigidly fixed about the projecting end of the tube spaced from the outer end of the tube at a distance sufficient to enable the end of the tube to engage the annular face of the bore in the fitting at least simultaneously with the engagement of the annulus with the conical section of the tube when the tube is inserted into the bore in the fitting, a shape retaining sleeve inserted within the projecting end of the tube and spaced from the outer end of the tube so that the outer end of the tube is unsupported and means on the pressure sleeve to bear against the annulus when the take-up nut is threaded into the threaded portion of the fitting to move the outer end of the tube into compressive engagement with the annular face of the fitting and to move the annulus into engagement with the enlarged conical section of the bore in the fitting.

3,129,023
SUSPENSION BALL JOINT ASSEMBLY
Burton A. Fierstine, Saginaw, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 21, 1961, Ser. No. 125,760
3 Claims. (Cl. 287—90)



1. A ball joint assembly comprising a cylindrical casing having a reduced diameter lower end portion and a parti-spherical socket, an aperture in said casing communicating with one end of said socket, a stud extending through said aperture having a parti-spherical end portion disposed in tiltable and rotatable bearing engagement with said socket, means for sealing the juncture of said aperture and said parti-spherical end portion comprising an axially compressed annular plastic body surrounding said stud and axially abutting said socket, said body including solid plastic bearing portions at either end thereof bonded to an intermediate flexible foam portion, one of said solid plastic bearing portions being formed with an upturned peripheral flange piloted on the reduced diameter lower end portion of said socket.

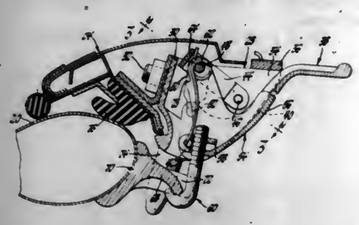
3,129,024
DOOR HOLDING DEVICE
Charles J. Schuessler, West Covina, and Herbert Wilzig, Los Angeles, Calif., assignors to Triangle Brass Manufacturing Company, Los Angeles, Calif., a co-partnership
Filed Feb. 27, 1961, Ser. No. 91,906
3 Claims. (Cl. 292—15)



1. A door holding device comprising in combination a holder and a strike member having a strike plate, said holder comprising a housing adapted to be mounted on a vertical surface and comprising at least a front wall, a rear wall, a bottom wall, and two side walls, said housing being formed with a vertical slot extending through at least said front and bottom walls, said bottom wall being thick in comparison to said front, rear, and side walls and having two coaxial bores extending therethrough and located on opposite sides of said slot respectively, and each having an inner end communicating with said slot and an outer end, the inner end of each bore being reduced in size in comparison to the remainder of the corresponding bore, two spherical catch members located in said bores respectively, the diameter of each of said catch members being larger than the size of the inner end of the corresponding bore, whereby the catch members are retained in the bores, two compression springs in said bores for resiliently projecting said spherical catch members toward the inner ends of said bores respectively, whereby portions of said catch members protrude into said slot, said coaxial bores and said catch members in spaced relation to said rear wall, whereby either the portion of said slot in said front wall or the portion of said slot in said bottom wall can serve as an entrance to receive said strike plate and means closing the outer end of each bore, respectively, said holder being formed with a seat cut out of said bottom wall and extending at opposite sides of said slot, cushioning means mounted in said seat adapted for contact by said strike plate, said strike plate comprising a bar adapted to be mounted on a second surface, said bar having a width sized to penetrate said slot, the opposite sides of said bar each provided with an elongated groove generally uniform in cross section, said strike member and said holder being mounted for relative movement toward each other, the length of said bar and said grooves being large in comparison to the diameter of said spherical catch members, said elongated grooves on said bar being positioned when said bar is in said slot for penetration by said spherical catch members urged by said compression springs, whereby said strike plate is yieldably held in said slot in the holder and variations in the point of engagement between said spherical catch members and said grooves do not affect the yieldable connection between the holder and the strike member whereby

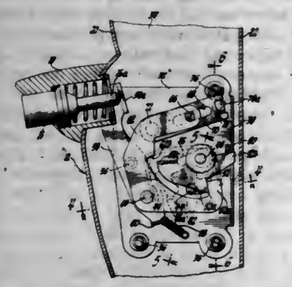
the vertical relationship between the holder and the strike member is not critical in the direction the grooves extend and the door holding device will function despite sagging of the door to which part of the door holding device is attached.

3,129,025
CONVERTIBLE TOP HEADER LATCH
Alfred E. Krueger, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 27, 1962, Ser. No. 219,450
7 Claims. (Cl. 292—97)



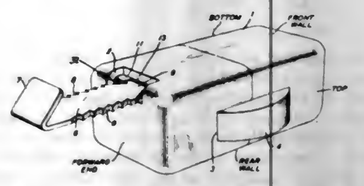
1. A closure latch comprising, in combination, a latch support member, an operating member pivotally mounted on said support member, a pair of articulated links, means pivotally connecting one of said links to said support member, means pivotally connecting the other of said links to said operating member, a latch bolt assembly pivotally mounted on said links for movement between latched and unlatched positions, the pivot of said one link to said operating member being to one side of a line through the pivot of said operating member to said support member and the pivotal joint of said links in the latched position of said bolt assembly.

3,129,026
ROTARY BOLT DOOR LATCH WITH DIRECT ACTING DETENT
Bela Gergoe and Bela Sandor, Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 24, 1962, Ser. No. 225,474
7 Claims. (Cl. 292—280)



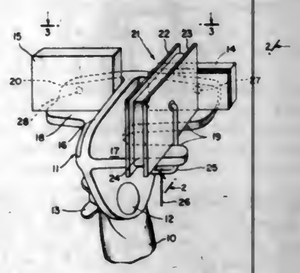
1. A vehicle door latch of the character described, including: a latch frame having a body plate lying in a plane parallel with the jamb face of the door; a bolt housing projecting from said body plate through said jamb face; a toothed bolt pivotally mounted in said housing; a detent pivotally mounted in said housing and having a foot adapted to engage a tooth of said bolt to hold the bolt against pivotal movement in one direction; an actuating lever mounted on said body plate outside said bolt housing for pivotal movement rigid with said detent; and operating means adapted to engage said actuating lever to swing the detent out of holding engagement with the bolt.

3,129,027
LOCKING DEVICE FOR INWARDLY SWINGING DOORS
Stan J. Sussina, Mamaroneck, N.Y.
(226 Pelham Road, New Rochelle, N.Y.)
Filed Mar. 26, 1962, Ser. No. 182,405
7 Claims. (Cl. 292—296)



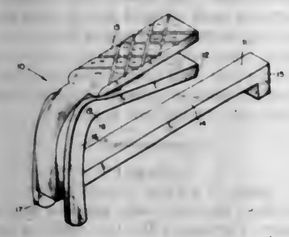
1. A locking device for locking an inwardly opening door to its door-frame strike, comprising
an elongated locking bar of rectangular cross-section, the intermediate portions of each lateral side of the bar being provided with an array of saw-teeth,
the saw teeth of each array being staggered in relation to the saw teeth of the other array,
means at one end of the bar for engaging the bar to the strike,
a housing,
the locking bar except for its strike engaging means being normally within the housing,
stop means at the other end region of the locking bar to limit to a predetermined amount the distance the bar may be withdrawn from the housing, and
manually operable latching means extending from the exterior into the interior of each lateral wall of the housing and on operation to permit relative movement of the housing on the bar within the predetermined amount on engagement of the strike engaging means of the bar with the strike and on release to lock the housing to the bar with the housing in the path of opening of the door.

3,129,028
MAGNET MANIPULATING POLE
William Haber, 5812 Donna, Tarzana, Calif., and Irving L. Freeman, 13013 Hartsook, Van Nuys, Calif.
Filed Jan. 2, 1962, Ser. No. 163,840
9 Claims. (Cl. 294—19)



9. A magnet manipulating means for securing a magnet against an area of magnetically attracted material and subsequently removing said magnet from said area wherein said magnet is normally held against said area with a given force, comprising: a carrying head having a first surface arranged to attract magnetically and hold said magnet with a force less than said given force, and a second surface arranged to attract magnetically and hold said magnet with a force greater than said given force, whereby said magnet may be transferred from said head to said area when initially held on said head against said first surface, and retransferred from said area to said head by attracting said magnet to said second surface.

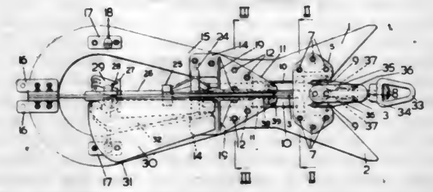
3,129,029
DEVICE FOR LAYING BRICKS
Henry G. Ruzza, 55 N. Shore Drive, Rte. 19, Eau Claire, Wis.
Filed July 10, 1961, Ser. No. 122,877
3 Claims. (Cl. 294—62)



1. A device for laying brick comprising in combination two pivotally connected lever members, the first said lever member comprising an upper handle portion, pivotal connecting means adjacent said handle portion, a depending portion below said pivotal connecting means, a screed portion rearwardly extending from said depending portion, said screed portion being adapted to be disposed adjacent a portion of the top surface of a brick which extends for the entire length of the brick to be carried, a terminal rear jaw portion depending downward from said screed portion, the second said lever member comprising a lower handle portion disposed immediately below said upper handle portion of said first lever member, said pivotal connecting means being disposed adjacent said lower handle portion and affixed thereto to operably couple said second lever member to said first lever member, said second lever having a portion which depends below the pivotal connecting means of said second lever member and a front jaw portion disposed at the lower terminal extremity of said depending portion of said second lever member, said front jaw member being operably biasable toward said rear jaw portion when said levers are moved toward each other.

3,129,030
GRAPNELS FOR SUBMARINE CABLES
Robert Alston Brockbank and Eric Fifield Stuart Clarke, Kenton, Harrow, England, assignors to Her Majesty's Postmaster General, London, England
Filed Apr. 10, 1962, Ser. No. 186,388
13 Claims. (Cl. 294—66)

1. A submarine cable grapnel comprising in combination a framework, at least two outwardly extending cable prongs fixedly mounted on said framework, cable cutters movably mounted on said framework adjacent the roots of said prongs, a plurality of sea-bed engaging fluke-like members pivotally mounted on said framework and movable between a retracted position close to said framework and a position in which said fluke-like members are extended from said framework, trigger means for locking said fluke-like members in retracted position, and operating means interconnecting said cable-cutters and said trigger means, said operating means unlocking said trigger means in response to movement of said cable cutters by a submarine cable engaged thereby for permitting movement of said fluke-like members to a sea-bed engaging position.



3,129,031
SELF RELEASING SLING
John G. Bryant, Radnor, Pa., assignor to The Cambridge Wire Cloth Company, a corporation of Maryland
Filed Apr. 12, 1962, Ser. No. 186,974
1 Claim. (Cl. 294—75)



The combination with a flexible sling including an end plate on one of the ends of said sling and an end member on the other of the ends of said sling, said end plate having an opening for receiving a hoist hook and said end member having an eye, of a choker comprising an upright support member, an upwardly facing hook on the lower end of said support member on one face of latter, and a pair of eye formations on the other face of said support member, one of said eye formations being spaced inwardly of the upper end of said support member and the other of said eye formations being spaced inwardly of the lower end of said support member, said eye formations being in registry with each other and slidably receiving therethrough a portion of said sling intermediate the ends thereof, said support member hook being removably received in the eye of said end member, the length of said support member relative to the depth of said support member hook being such that when said support member hook is received in said end member with the sling encompassing a load and a hoist hook in lifting engagement with said sling end plate, the execution of lowering of said load to a supporting surface and slackening the tension on said sling end plate results in the movement by the force of gravity of said support member from the upright position to a horizontal position freeing said support member hook from said sling end member.

3,129,032
PORTABLE LECTERN
Jack R. Meyer and Betsey A. Meyer, both of 4505 4th St. NE., Minneapolis, Minn.
Filed Aug. 13, 1962, Ser. No. 216,623
6 Claims. (Cl. 297—163)



1. The collapsible portable lectern readily attachable to the back rest of a seat for use in supporting reading articles such as books, papers and the like, said lectern comprising

an article supporting member having substantially flat parallel upper and lower surfaces and having straight front and rear edges,

a front flange element and rear flange element affixed to and extending from said article supporting member in close proximity to the front and rear edges thereof respectively,

a leg member pivotally connected to the lower surface of said article supporting member for pivotal movement relative thereto about an axis extending substantially normal to the front edge of said article supporting member between a depending erect operative position and collapsed inoperative position against the lower surface of the said article supporting member,

releasable locking means interconnecting said leg member and article supporting member for releasably locking said leg member in the erect operative position,

said leg member having substantially straight front and rear edge surfaces spaced in opposed relation to said front and rear flange elements respectively, one of said edge surfaces being angulated and the other of said surfaces being disposed substantially normal with respect to general plane of said article supporting member,

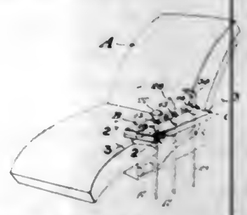
said front flange element cooperating with the front edge surface of said leg member and the lower surface of said article supporting member to permit the upper edge of a chair back to be engaged and gripped thereby whereby said lectern is supported from the chair in one position,

and said rear flange cooperating with the rear edge surface of said leg member and the lower surface of said article supporting member to permit the upper edge of a chair back rest to be gripped thereby whereby said lectern may be selectively positioned and supported from the back rest of a chair in another position,

said article supporting member being substantially horizontally oriented when in one of said positions and being inclined with respect to the back rest in the other of said positions.

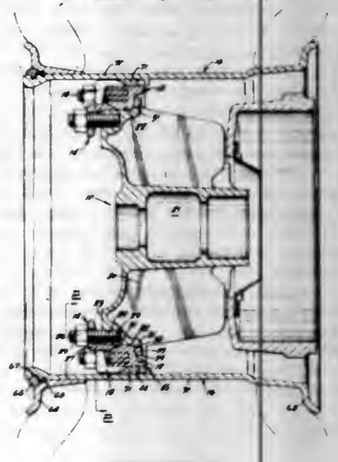
3,129,033
UTILITY SUPPORTING ATTACHMENT FOR DENTAL CHAIRS
Clinton C. Emmerson, Rte. 3, Box 196-B, Hemet, Calif.
Filed Oct. 3, 1960, Ser. No. 59,895
6 Claims. (Cl. 297—194)

1. The combination of a dental chair having a seat portion supporting a patient in a semi-recumbent position, said chair having an arm at one side of the seat portion, said arm having an upper surface, and an equipment stand secured to the arm of said dental chair at one side of said seat portion and immediately adjacent said arm, said equipment stand having a top portion extending in a horizontal plane above that of the seat portion and substantially coincident with the upper surface of the arm, plural



dental utilities of elongated form extending through and projecting above said top portion and being removably supported thereby, each of said dental utilities having a flexible operating connection joined therewith, and extending pendant from said top portion, whereby a patient supported by said seat may utilize said facilities by lifting them from said top portion without required bodily movement from said semi-recumbent position.

3,129,034
WHEELS FOR VEHICLES
Daniel A. Walther, Dayton, Ohio, assignor to The Dayton Steel Foundry Company, Dayton, Ohio, a corporation of Ohio
Filed July 31, 1962, Ser. No. 213,796
2 Claims. (Cl. 301—12)



1. The combination of:

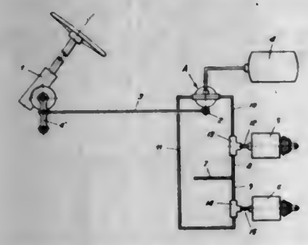
a wheel having a plurality of spoke members, a felly surface on the radially outer end of each spoke member, and a flange portion (31) on the axially inner end of each felly surface, each flange portion having a surface (32) oriented substantially perpendicularly to the rotational axis of said wheel;

an annular adapter having a radially inner base portion (35), said base portion having a continuous axially extending surface (36) seating on said wheel felly surfaces and a continuous radially oriented surface (38) seating against the substantially perpendicular surfaces of said wheel flange portions, the radially outer portion of said adapter having a circumferentially continuous felly surface;

a first series of clamp lugs supported by bolts (25) on the axially outer face of said spoke members, each said clamp lug having a lateral leg (29) wedged between a wheel felly surface and the axially outer side of the base portion of said adapter;

a wide base rim having a medial load bearing member seated on the adapter felly surface, and a second series of clamp lugs supported by bolts (85) on the axially outer face of said adapter, each said clamp lug having a lateral leg (89) wedged between said adapter felly surface and a radially inner portion of said rim load bearing member.

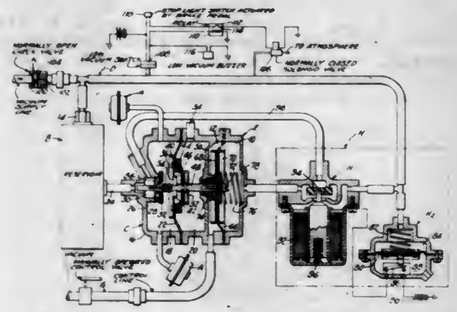
3,129,035
DEVICE FOR BRAKING EITHER REAR WHEEL OF A VEHICLE WHEN TAKING A CURVE
Giuseppe Alfieri, Milan, Italy, assignor to Fabbrica Italiana Magneti Marelli S.p.A., Milan, Italy, a corporation
Filed June 5, 1961, Ser. No. 114,981
Claims priority, application Italy June 24, 1960
3 Claims. (Cl. 303—6)



1. A distributor device for automatically braking the internal rear wheel of a vehicle during the passage of the vehicle around a curve wherein the vehicle is of the type adapted to have a steering mechanism and rear wheel brake cylinders and a customary braking system including a brake line, said device comprising a distributor adapted to be connected to a pressurized source of brake fluid for selectively delivering brake fluid to the brake cylinders, said distributor being adapted to be connected to the steering mechanism of a vehicle, said distributor having an inlet adapted to receive a pressurized source of brake fluid, said distributor having two separate outlets adapted to communicate with brake cylinders, two separate valves disposed between said inlet and each of said outlets, a valve seat for each of said valves, a cylindrical hollow element mounted beneath each of said valves with a tubular extension, each of said extensions having a discharge port in communication with a port disposed in said distributor open to the atmosphere, each of said hollow elements normally communicating its respective discharge port to the atmosphere, and each of said tubular extensions having a tip engageable with its respective hollow element and unseat its respective valve member from its valve seat.

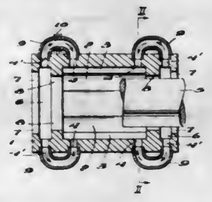
3,129,036
AUTOMATIC BRAKING SYSTEM
Earl R. Price and Richard H. Long, South Bend, Ind., assignors to The Bendix Corporation, South Bend, Ind., a corporation of Delaware
Filed Jan. 2, 1962, Ser. No. 163,537
3 Claims. (Cl. 303—31)

1. In a pneumatic control system for automotive braking and the like: a fluid pressure motor actuated by the application of a pressure differing from atmosphere; a normal but fluctuable source of said pressure differing from atmosphere; a reservoir supplied by said fluctuable source of said pressure differing from atmosphere; check valve means interpositioned between said reservoir and said source for closing off communication therebetween when the intensity of said source falls below that existing in said reservoir; a control valve having a movable element which opens and closes communication of said fluid pressure motor with atmosphere and said reservoir; a fluid pressure actuated control motor having a movable wall therein which operates said movable element and which movable wall separates opposing pressure chambers in said motor; a control line communicating with one of said opposing chambers; a normal supply line for communicating the other of said opposing chambers with said source; said control motor being arranged to cause said movable element to close communication between said reservoir and said first mentioned fluid pressure motor when pressures of substantially equal intensities exist in said opposing chambers, and to cause said movable element to open communication between said reservoir and



said fluid pressure motor when atmospheric pressure is bled into said one opposing chamber and said differing pressure exists in said other opposing chamber; means for communicating said normal supply line to said other opposing chamber when the differential pressure between said normal supply line and atmosphere exceeds a predetermined amount and for communicating said reservoir to said other opposing chamber when said differential pressure is below said predetermined amount; manually operated means modulating atmospheric pressure to said control line; a normally closed dump valve for dumping atmospheric pressure to said supply line; and means sensing said fluctuable source of pressure and actuated at a second differential pressure between said normal supply and atmosphere which somewhat exceeds said first predetermined amount to place said normally closed dump valve under the control of said manually operated means.

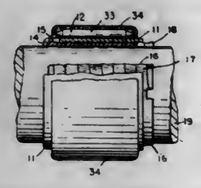
3,129,037
GAS-LUBRICATED JOURNAL BEARING
Hanns Ott, Nussbaumen, Switzerland, assignor to Aktiengesellschaft Brown, Boveri & Cie., Baden, Switzerland, a joint-stock company
Filed Dec. 26, 1961, Ser. No. 162,178
Claims priority, application Switzerland Jan. 11, 1961
5 Claims. (Cl. 308—121)



1. A self-acting gas-lubricated journal bearing comprising a bushing member having on opposite sides of

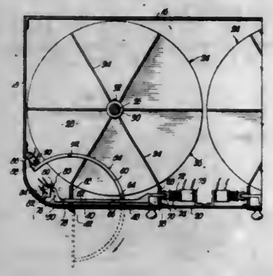
the shaft supporting part thereof flat recesses 2 and axial grooves 3 in said recesses for distributing the gas over the recesses and whose cavities are filled with gas for lubrication, the improvement wherein annular grooves 6 are disposed respectively in end parts of the bushing member located axially to each side of the shaft supporting part thereof, said annular grooves being in communication respectively with said flat recesses by means of annular gaps 8 constituting the clearance between the shaft supporting part of the bushing and the shaft 5 and said annular grooves also being in communication with said axial grooves in said flat recesses by means of duct connections 9 whereby the lubricating gas flowing from said flat recesses through said annular gaps into said annular grooves is returned to said axial grooves and hence, to said flat recesses.

3,129,038
SHAFT MOUNTING FOR ROLLER BEARING
Carl F. Benson, Torrington, Conn., assignor to The Torrington Company, Torrington, Conn., a corporation of Maine
Filed Feb. 8, 1962, Ser. No. 172,010
9 Claims. (Cl. 308—236)



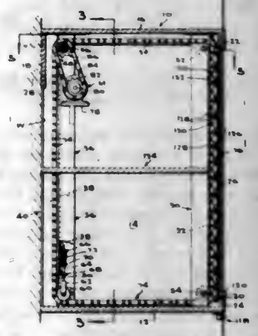
2. In combination with an antifriction bearing including an outer race member, a series of antifriction elements and an inwardly flanged inner race member having on its interior surface a continuous laterally sloped helix, both race members being of light sheet metal, a split sleeve having an oppositely sloped helix on its outer surface complementary to said first named helix, and means for effecting relative movement of the sleeve angularly in contact with the flange of the inner race and consequent partial axial separation between the helices of said sleeve and inner race member.

3,129,039
VISIBLE PRODUCT VENDING MACHINE
John C. Staley, Independence, Mo., assignor to The Vendo Company, Kansas City, Mo., a corporation of Missouri
Filed Feb. 3, 1958, Ser. No. 712,851
15 Claims. (Cl. 312—97.1)



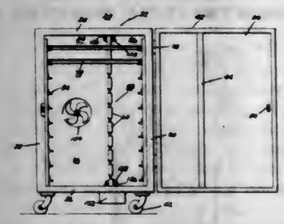
1. In a vending machine, a housing provided with a plurality of vertically spaced delivery openings and swingable doors normally blocking each of said openings; a cylindrical display drum mounted within said housing, rotatable about a vertical axis and having a series of radially disposed product compartments for each of said openings, the compartments of each of said series being successively registrable with a corresponding opening as the drum is rotated; mechanism connected with said drum for continuously rotating the latter; selectively actuatable components associated with said mechanism for inactivating the latter substantially immediately upon actuation of said components and interrupting rotation of said drum, said components including parts for delaying interruption of rotation of said drum upon actuation of said components until the compartments in closest proximity to respective openings at the time of actuation of said components are in exact registration with the openings; and means coupled with said doors for preventing movement of any of the same to positions unblocking corresponding openings except upon actuation of said actuatable components to effect cessation of rotation of said drum.

3,129,040
CABINET HAVING AN ELECTRICALLY OPERATED CLOSURE
James De Rose, 1840 S. Euclid Ave., Berwyn, Ill.
Filed Oct. 19, 1962, Ser. No. 231,704
5 Claims. (Cl. 312—223)



1. A cabinet having an open front, a bottom wall, side walls, a top wall, and a back wall, upper and lower forward idler sprocket wheels journaled in the cabinet at its side walls and spaced from its top and bottom walls adjacent to the front opening, upper rear driven sprocket wheels journaled in the cabinet at its side walls and spaced from its back wall and the top and bottom walls, lower rear sprocket wheels journaled in the cabinet at its side walls and spaced above its bottom wall adjacent to its back wall, endless chains trained around the sprocket wheels at the cabinet side walls, a closure shorter than and extending between and along the chains, said closure comprising laterally adjacent slats extending between and pivoted on links of the chains, said closure being dimensioned to close the front opening of the cabinet, and means for moving the chains in opposite directions for placing the closure across the opening and for removing the closure from the opening, rearwardly-facing vertical forward channels fixed to the inner surfaces of the cabinet sidewalls within which said forward upper and lower sprocket wheels are mounted, and forwardly-facing vertical rear channels fixed to the inner surfaces of the cabinet sidewalls within which said upper and lower rear sprocket wheels are mounted, the chains being protectively enclosed by said channels.

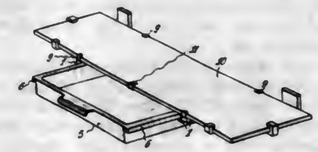
3,129,041
FOOD SERVICE CART
Phillip S. Traycoff, 231 E. Woodland Ave., Fort Wayne, Ind., and John T. Heckel, Jr., 1126 Prospect St., Indianapolis, Ind.
Filed Dec. 4, 1961, Ser. No. 156,750
15 Claims. (Cl. 312—236)



6. Apparatus for storing and delivering trays of preportioned hot and cold food from its point of preparation directly to the cnosumer comprising: a transportable chest having top, bottom, side and back walls defining a generally rectangular compartment; a door closing said compartment and providing access thereto; partition means extending vertically between said top and bottom walls and transversely between said back wall and door thereby dividing said compartment into two thermally different sections, said partition means comprising a plurality of transversely extending elements each having upper and lower edges, said upper and lower edges of adjacent elements being vertically spaced-apart respectively to define a plurality of transversely extending tray-receiving slots; a plurality of generally rectangular food trays each having a single food-receiving section defining the bottom wall of the tray and surrounded by a rim, means respectively on said side walls for removably supporting said trays in said compartment in vertically spaced-apart relation with each tray extending through a respective slot and with the upper edge of the next lower partition means element engaging the bottom surface of the bottom wall of the tray whereby portions of each tray are respectively located in said two compartments sections; and transversely extending shutter members respectively slidably mounted on said partition means elements for vertical movement between a lower normal position and an upper position, each of said shutter members having a lower edge and in its lower position extending along the next lower slot with said lower edge thereof engaging the upper edge of the next lower partition means element thereby respectively closing said slots when said trays are removed from said compartment, each of said shutter members being biased to its upper position responsive to initial insertion of a tray in the respective slot, each of said shutter members extending into and transversely across said section of a tray when the tray is positioned entirely in said compartment and extends through the respective slot with the bottom edge of said shutter member engaging the top surface of said bottom wall and the rim of the tray thereby respectively closing said slots when said trays are positioned in said compartment.

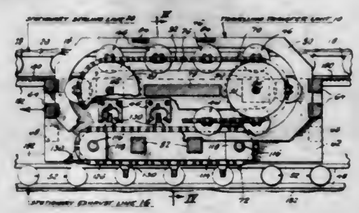
3,129,042
DRAWER GUIDE
Henriette Liener-Kunde, Hofstrasse 79, Zurich 7, Switzerland
Filed Feb. 23, 1962, Ser. No. 175,215
Claims priority, application Switzerland Feb. 24, 1961
6 Claims. (Cl. 312—246)

1. A drawer guide for drawers to be mounted on the underside of a shelf, with guide bars provided on the drawer for engaging with the drawer guide, said drawer guide consisting of a profile rail, holding members guided in both ends of said rail with hook-shaped ends for attaching over opposite edges of a shelf, at least one of said holding members being movable in said profile rail against



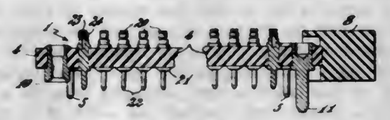
the force of a tension-spring and the holding members being formed in such a way that the free portions of the hooked ends to engage the upper side of the shelf tend to move resiliently toward the upper side of the profile rail.

3,129,043
AUTOMATIC MANUFACTURING MACHINE
Clair M. Rively, Rockaway, and William A. Brenneck, West Caldwell, N.J., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 15, 1959, Ser. No. 787,059
20 Claims. (Cl. 316—31)



1. An article-fabricating apparatus comprising a plurality of article-supporting units on which articles are disposed and a device comprising a carriage, means for causing relative movement between said carriage and said article-supporting units, means supported by said carriage and movable with respect thereto and operable to perform a fabricating operation for said articles, means for moving said carriage-supported means, the relative movement of said carriage-supported means with respect to said carriage being such that a portion of said carriage-supported means is relatively stationary with respect to said article-supporting units during a predetermined period of the relative movement between said carriage and said article-supporting units to permit said carriage-supported means to perform the fabricating operation for said articles.

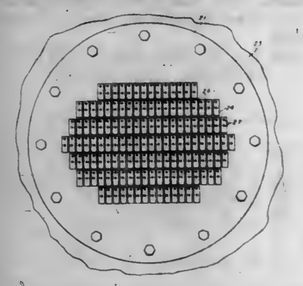
3,129,044
PATCH PANEL PRESS
Frank Lyman, Jr., Cambridge, Mass., and Warren H. West, Seabrook Beach, N.H., assignors to Cambridge Thermionic Corporation, Cambridge, Mass., a corporation of Massachusetts
Filed Mar. 7, 1961, Ser. No. 93,924
4 Claims. (Cl. 339—18)



1. A patch panel comprising:
a board carrying a plurality of terminal means extending therefrom;

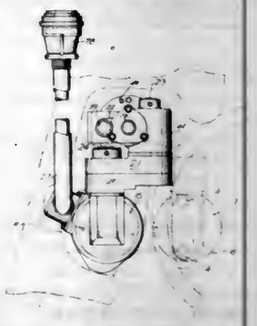
an aligning pin extending near an edge portion of said board beyond said terminal means;
an aligning bushing near an edge portion opposite to said aligning pin; and
two riding pins extending on either side of said bushing beyond said terminal means but being shorter than said aligning pin;
whereby said aligning and riding pins protect the terminal means from contact with a surface on which the board may rest with these pins, and whereby the aligning pin and bushing can be brought into initial engagement with a corresponding aligning bushing and pin, respectively, without interference by the riding pins.

3,129,045
PATCH PANEL
Fred A. Dexter, 4715 Filipo St., San Diego 15, Calif.
Filed Dec. 22, 1961, Ser. No. 161,750
3 Claims. (Cl. 339—18)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An air-tight electrical patch panel for use with a bulkhead provided with an aperture and adapted for separating high differential pressures, said panel comprising:
an integrally-cast body portion formed of a moldable dielectric material sized and shaped to sealably engage said aperture;
means for removably securing said body portion to said bulkhead,
a plurality of spaced-apart rectangular conductive-metal patch inserts arranged side-by-side in a parallel arrangement in said body portion with said integral body portion material filling the spaces between said inserts,
the inserts having their outwardly-oriented face portions each disposed in a plane and said integrally cast body portion material also providing a continuous covering for one side of the panel whereby the outwardly oriented insert faces on said one side of the panel are completely covered by said integrally cast material,
a layer of moldable dielectric material covering the opposite faces of said inserts,
said panel being provided with terminal socket openings extending from both its face portions interiorly into each of said inserts, and
each insert having at least two sockets on each of its faces and the sockets of one face being staggered relative to the sockets of the opposite face for permitting a minimizing of the patch panel thickness,
each of said insert sockets projecting inwardly a distance greater than one-half the width of its insert and being closed at its inner end, and
each of said insert sockets being aligned with a panel socket for receiving a terminal plug.

3,129,046
SWINGABLE ELECTRIC CONTACTOR FOR GUIDED MISSILES
Lawrence R. Morris, Port Orchard, Wash., assignor to the United States of America as represented by the Secretary of the Navy
Filed Mar. 28, 1962, Ser. No. 183,708
17 Claims. (Cl. 339—35)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An electrical contactor apparatus for engaging and applying warm-up power to a missile, comprising a casing, means for axially rotating the casing, first and second shafts carried by and freely rotatable about their longitudinal axes within said casing, said first shaft having its longitudinal axis substantially aligned with said casing axis of rotation, and said second shaft being radially spaced from said rotational axis for a swinging movement on said radius upon casing rotation, a contactor member fixed to said second shaft, and an epicyclic gear train coupling said shafts one to another, said second shaft initially being rotatably oriented to face its contactor member in a particular direction, and said gear train being adapted to rotate said second shaft about its longitudinal axis as said second shaft is radially swung by said casing rotation, whereby the rotated orientation of said contactor member is controllable during said swing for effecting a desired engagement of the contactor member with the missile.

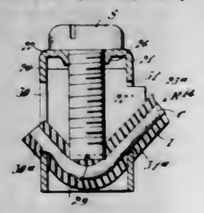
3,129,047
BATTERY CONNECTOR
Roswell J. Bennett, Lakewood, Ohio, assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Oct. 23, 1961, Ser. No. 147,106
1 Claim. (Cl. 339—95)



A terminal board for a delayed action battery for use in high spin, high setback projectiles comprising:
a circular plug-in turret,
said turret including a base plate having a plurality of open-ended cylindrical chambers circumferentially spaced about the periphery thereof,
said base plate being further provided with an indentation surrounding the open end of each cylindrical chamber,
a plurality of pin connectors secured to said turret and each comprising an elongated metal strip having one end thereof bifurcated to provide a yieldable substantially claw-shaped pin receptor,

the bifurcated end of each pin connector being disposed in one of said indentations and the other end of each connector being adapted for internal connection to said battery,
said bifurcated ends each being defined by an elliptical opening having its major axis coincident with the longitudinal axis of said strip and an elongated slot coaxial with said strip superimposed on said elliptical opening and extending beyond the ends thereof,
said strips each being further provided with a plurality of slits substantially radial with respect to said elliptical opening and communicating therewith to define a plurality of resilient gripping fingers on the circumference of said elliptical opening,
and a circular cover plate fixed to said base plate and having a plurality of apertures formed therein in axial alignment with said elliptical openings to permit electrical connections with said battery by insertion of pins into said cylindrical chambers through said apertures and said elliptical openings,
said circular cover plate serving to closely confine said bifurcated ends of said connectors within said indentations whereby electrical connection is maintained between said connectors and the inserted pins despite the forces applied thereto by high spin and high setback.

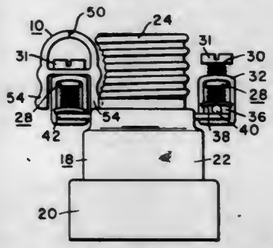
3,129,048
ELECTRICAL CONNECTOR
Frederick J. Broch, 10 Wendell St., Cambridge, Mass.
Filed June 15, 1961, Ser. No. 117,215
13 Claims. (Cl. 339—97)



13. An electrical connector for use with a solid-core conductor, said connector comprising a metal frame including spaced front and rear members and an upper part having therein a screw-threaded hole, a screw, whose axis is vertical, having threaded engagement with the hole in the upper part, each of said front and rear members, respectively, having an insulation-cutting edge, said edges collectively constituting a support for a length of conductor arranged to bridge the space between said edges, the axis of the screw being midway between said edges and the latter being so spaced from the periphery of the screw that, as the screw is advanced downwardly so as to apply pressure to the middle of the bridging portion of the conductor, the said bridging portion will be gradually bowed downwardly between said edges thus increasing the length of the bridging portion of the conductor and causing the insulation-cutting edges to form incisions in the insulation which make acute angles with the axis of the metal core, and means operative to prevent horizontal deflection of the conductor in response to the downward pressure exerted by the screw.

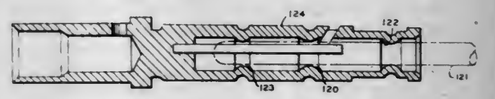
3,129,049
TERMINAL ASSEMBLY SHIELD
Melvin R. Anderson, Avon Lake, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 5, 1960, Ser. No. 73,802
10 Claims. (Cl. 339—149)

1. A shield for an assembly having a terminal bracket and a terminal screw, said shield being of one-piece construction comprising a first means for shielding said bracket and a second flexible insulating means for shielding said screw, said first and second means including a common interconnecting web portion having an aperture



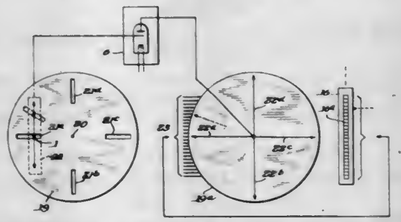
of a size so that said screw can pass therethrough, and said second means including separable slot means for providing ready accessibility to said screw without impairing the protecting function of said shield.

3,129,050
ELECTRICAL CONNECTORS
Henry P. Dupre, Wilton, and Glenn M. Osborn, Old Greenwich, Conn., assignors to Burndy Corporation, a corporation of New York
Filed Oct. 6, 1960, Ser. No. 61,006
2 Claims. (Cl. 339—258)



1. A connector comprising a socket contact and a mating pin contact having a given diameter; said socket having a bore of diameter greater than said given diameter including an open end adapted to receive said pin contact; said bore including an unbroken annulus located substantially at the bore open end, and a longitudinally disposed leaf spring formed into and from a portion of the wall of said socket and depending into substantially the medial length of said bore; a first internal annular bead formed in a section of said bore including said unbroken annulus; a second internal annular bead formed in a section of said bore including said leaf spring; the inner diameter of said first and second beads being substantially equal to the diameter of said pin contact.

3,129,051
METHOD OF AND APPARATUS FOR THE DIRECT RECORDING OF LIGHT RADIATION
Franz Frischen, Davenstedter Platz 4, Hannover-Davenstedt, Germany
Filed July 6, 1956, Ser. No. 596,348
Claims priority, application Germany July 8, 1955
4 Claims. (Cl. 346—1)



1. A method of directly recording the actions of a plurality of beams of light as a function of time, on a

recording media, comprising the steps of consecutively dissecting the light beams on a recurring basis solely as a function of time, continuously over the entire range of action of the light beams, whereby the time increments representing the beams actions are continuously variable to operatively cover the entire beam action ranges without gaps, converting said light impulses into electrical impulses without destruction of the continuous nature of such time increments, and recording said electrical impulses continuously throughout the range of said beam actions whereby such impulses representing each light beam are consecutively combined to form substantially closed line courses which are continuous in the direction corresponding to the beam action and intermittent only as may be reflected by the time function of original dissection.

CHEMICAL

3,129,052
NEW DYEING PROCESS

Timothy Leslie Dawson and Walter Percival Mills, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Oct. 24, 1960, Ser. No. 64,285
Claims priority, application Great Britain Nov. 13, 1959
4 Claims. (Cl. 8—54)

1. Process for dyeing natural and regenerated protein textile materials with a water-soluble dyestuff of the class consisting of azo, nitro, anthraquinone, and phthalocyanine, and which contain an acryloylamino group attached to a carbon atom of the dyestuff, which process comprises treating the textile material with an aqueous solution containing, as essential ingredients, said dyestuff and a member selected from the class consisting of acids and acid salts in sufficient amount so that the pH of the solution is less than 7, heating the solution while said textile material is treated therewith, thereafter adding a material selected from the class consisting of alkalis, alkaline salts, and salts which become alkaline on heating, in sufficient quantity so that the pH of the solution is raised to a level of about 4.5 to 8, and then continuing heating said solution until the dyeing is completed.

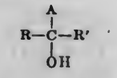
3,129,053
DISPERSIONS OF ORGANIC DYES AND PIGMENTS IN FLUOROALCOHOLS

John E. Castle, Hockessin, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

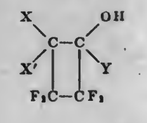
No Drawing. Filed May 21, 1962, Ser. No. 196,461
21 Claims. (Cl. 8—93)

1. A stable dispersion of a normally solid organic colorant in a liquid dispersing medium which comprises at least 55% by weight of organic ingredients and which contains at least 15% by weight of a polyhaloalcohol wherein all halogens are of atomic number 9–17 selected from the group consisting of

(I)

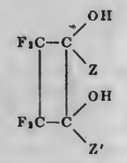


(II)



and

(III)



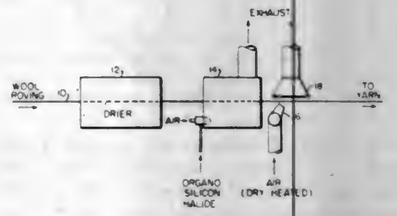
wherein:

(1) R is selected from the group consisting of fluoroperhalomethyl, difluoromethyl and perfluoroalkyl, ω-hydroperfluoroalkyl and ω-chloroperfluoroalkyl of 2–6 carbons; (2) R′ is selected from the group consisting of R and hydrocarbon, halohydrocarbon, hydroxyhydrocarbon and halohydroxyhydrocarbon of 1–10 carbons; (3) and A is selected from the group consisting of hydrogen hydroxyl and R, with the proviso that the polyhaloalcohol (I) contains at least two members of the group defined under (1) attached to hydroxyl-bearing carbon; (4) X and X′ are halogen; (5) Y is selected from the group consisting of hydroxyl, phenyl, halophenyl, hydroxyphenyl and alkoxy of 1–2 carbons; and (6) Z and Z′ are selected from the group consisting of hydroxyl and alkoxy of 1–2 carbons.

3,129,054
METHOD OF TREATING WOOL WITH ORGANIC SILICON HALIDES TO RENDER SAME WATER REPELLENT

Edward Robbart, 321 Fairmont Ave., Milton, Mass.

Filed Nov. 21, 1960, Ser. No. 70,809
8 Claims. (Cl. 8—128)



1. The method of treating wool comprising contacting wool fibers having a moisture regain of less than 10 percent based on the dry weight of the wool with an atmosphere comprising vapors of an organo silicon halide until the wool is rendered water repellent, whereby hydrogen halide is formed on said fibers, removing said fibers from contact with said atmosphere, and passing a current of gas through said fibers sufficient to remove said hydrogen halide from said fibers.

3,129,055
MANUFACTURE OF SINTERED URANIUM DIOXIDE

Alain Bel, Fontenay-aux-Roses, Roger Delmas, Wissous, and Bernard François, La Garenne-Colombes, France, assignors to Commissariat à l'Energie Atomique, Paris, France

No Drawing. Filed Mar. 31, 1960, Ser. No. 18,814
Claims priority, application France Apr. 28, 1959
9 Claims. (Cl. 23—14.5)

1. A process for the manufacture of high density uranium dioxide of stoichiometric composition consisting essentially of the steps of preparing a uranium trioxide, reduction of the uranium trioxide in two stages of temperature, the first stage at temperatures on the order of 350 to 450° C. and the second stage at temperatures on the order of 600 to 700° C., reoxidation of the reduced trioxide in the cold in a current of nitrogen containing oxygen, incorporation of a moulding additive therein, then compressing the resulting mixture under vacuum, crushing and then screening the compressed product, compressing the crushed and screened product for moulding under pressures on the order of 2.5 to 5 t./cm.², then eliminating the moulding additive under vacuum at a temperature limited upwardly from 600 to 700° C. and then sintering for approximately five hours at a temperature on the order of 1250 to 1400° C., the uranium trioxide being obtained by calcination of ammonium uranate at a temperature between 350 and 450° C. for from 5 to 20 hours and the two stage reduction step and the sintering step taking place in an atmosphere of dry cracked ammonia.

3,129,056
PROCESS FOR PRODUCING RARE EARTH SELENIDES AND TELLURIDES

Hubert M. Muir, Sunland, Calif., assignor to Nuclear Corporation of America, Denville, N.J., a corporation of Delaware

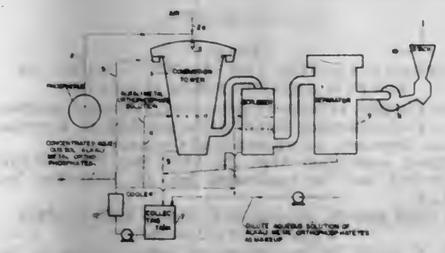
Filed Apr. 1, 1960, Ser. No. 19,406
2 Claims. (Cl. 23—50)

1. A method of preparing a gadolinium selenide compound, comprising sealing gadolinium and selenium in divided form in a chamber containing an inert gas at a pressure materially below atmospheric, gradually and slowly raising the temperature of the chamber for a period of several hours to generate vapors and cause a slow, controlled and non-explosive vapor reaction to take place between the two elements, maintaining the temperature of the chamber for a prolonged period of time sufficiently high to substantially complete the reaction, thereafter gradually cooling the chamber, removing the resulting powdered reaction product from the chamber, homogenizing and pressing the resulting powdered reaction product into pellets and arc melting the pellets in an inert atmosphere.

3,129,057
PROCESS FOR THE PRODUCTION OF STRONG SOLUTIONS OF ALKALI METAL SALTS OF INCREASED PURITY

Louis Germain, Tassin, France, assignor to Progil, S.A., Rhone, France, a corporation of France

Filed Oct. 28, 1960, Ser. No. 65,691
7 Claims. (Cl. 23—107)

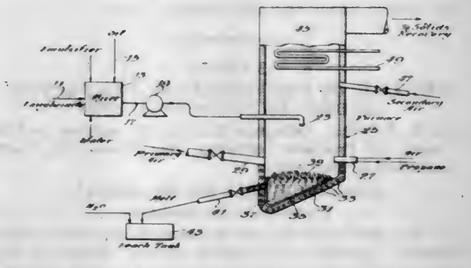


1. A method for obtaining more concentrated aqueous solutions of alkali metal salts of phosphoric acid from a starting dilute aqueous solution of an alkali metal orthophosphate derived from natural phosphates by the so-called "wet process" wherein, in comparison to the initial solution, the phosphorus to alkali metal ratio is increased and the impurity to phosphorus ratio is decreased, which comprises burning phosphorus in an atmosphere containing oxygen to gaseous P_2O_5 and flowing the resulting combustion gases containing P_2O_5 into contact with finely divided droplets of said starting solution in stoichiometric proportions of P_2O_5 and alkali metal orthophosphate to form an aqueous solution of an alkali metal phosphate having reduced alkalinity and a decreased impurity to phosphorus ratio, and said formed solution having at least the P_2O_5 to alkali metal ratio of alkali metal pyrophosphate.

3,129,058
METHOD FOR PREPARING POTASSIUM SULFIDE

Edward A. White, Glenview, and Oscar L. Norman, Northbrook, Ill., assignors to International Minerals & Chemical Corporation, a corporation of New York

Filed Oct. 25, 1960, Ser. No. 64,930
11 Claims. (Cl. 23—137)



1. A method of preparing potassium sulfide from potassium sulfate-containing material which comprises forming a homogeneous mixture of a potassium sulfate-containing material and a liquid hydrocarbon material in proportion to provide a $C:K_2SO_4$ mole ratio of at least 2:1; introducing said mixture into the primary combustion zone of a reaction vessel having a lower primary combustion zone and an upper secondary combustion zone; introducing primary air into said primary combustion zone in an amount insufficient to complete combustion of said liquid hydrocarbon material; effecting combustion in said primary combustion zone to obtain a temperature therein above about 1600° F. to produce gaseous products, a lower molten phase containing potassium sulfide products and an upper char phase floating on said molten phase; admixing secondary air with said gaseous combustion products to effect combustion thereof in a secondary combustion zone above said primary combustion zone; and recovering molten phase product containing potassium sulfide from said primary combustion zone.

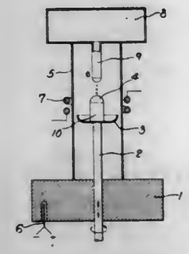
3,129,059
PROCESS FOR MANUFACTURING HIGH PURITY GALLIUM ARSENIDE

Eduard Enk, Herbert Jacob, and Julius Nickl, all of Burghausen, Upper Bavaria, Germany, assignors to Wacker-Chemie G.m.b.H., Munich, Germany, a corporation of Germany

Filed Apr. 18, 1961, Ser. No. 103,832
Claims priority, application Germany Apr. 27, 1960
4 Claims. (Cl. 23—204)

1. Process for producing high purity gallium arsenide which comprises placing a nucleus of gallium arsenide in a reaction vessel out of contact with the latter, evacuating

said vessel, vaporizing arsenic within said vessel at a constant temperature of 645±5° C., placing a melt of gallium upon said nucleus without allowing any of said molten



gallium to drop off said nucleus, whereby gallium arsenide is formed on said nucleus by a reaction between said arsenic vapor and said molten gallium.

3,129,060

CONTROL OF CONVERSION IN A CATALYTIC HYDROGEN PRODUCING UNIT

Jack B. Pohlenz, Arlington Heights, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed Apr. 3, 1962, Ser. No. 186,817
5 Claims. (Cl. 23—212)

1. In a processing system for catalytically converting a normally gaseous hydrocarbon charge stream to hydrogen and carbon wherein subdivided catalyst particles are contacted in a reaction zone by the hydrocarbon charge stream at decomposition conditions, resulting carbonized catalyst particles are subsequently contacted within a regeneration zone by an oxygen containing stream being introduced thereto to effect the gasification of carbon from said particles and such contacted catalyst particles in turn carry heat into the reaction zone, the improved method of operation to provide variations in the heat release per mole of carbon gasified in the regeneration zone for a given carbon gasification rate, which comprises, varying the oxygen introduction rate to the regeneration zone within a range below the theroretical required to gasify all of the carbon on the catalyst particles to carbon dioxide, thereby varying the carbon level on the catalyst particles, and varying said heat release per mole of carbon gasified inversely responsive to the carbon level retained on the catalyst particles and directly responsive to the carbon dioxide to carbon monoxide ratio produced in the regeneration zone.

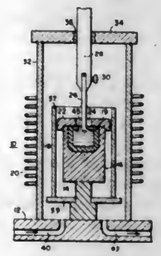
3,129,061

PROCESS FOR PRODUCING AN ELONGATED UNITARY BODY OF SEMICONDUCTOR MATERIAL CRYSTALLIZING IN THE DIAMOND CUBIC LATTICE STRUCTURE AND THE PRODUCT SO PRODUCED

Steve N. Dermatis, Youngwood, and John W. Faust, Jr., Forest Hills, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Mar. 27, 1961, Ser. No. 98,618
17 Claims. (Cl. 23—223.5)

1. An elongated body of semiconductor material crystallizing in the diamond cubic lattice structure comprised of at least two parallel elongated dendritic crystal portions, each dendritic portion consisting of a dendritic crystal having a plurality of twin planes and a thin web portion therebetween, said thin web portion having substantially parallel flat faces and being substantially dislocation free, said dendritic crystals being joined crystallographically into a unitary body by the thin web portion of the same semiconductor material extending between the dendritic crystals over the entire length of the body.

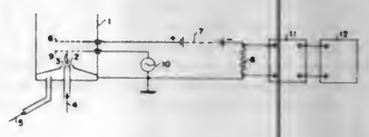


3,129,062

FLAME IONIZATION DETECTOR

Leo Ongkiehong, Aart Bijl, and Albertus Schuringa, all of Amsterdam, Netherlands, assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed May 2, 1961, Ser. No. 107,105
Claims priority, application Great Britain May 6, 1960
7 Claims. (Cl. 23—255)



1. A flame ionization type of detector system for analysis of gases obtained by a chromatographic separation comprising: a detector having a first electrode; a burner assembly, said burner assembly forming a second electrode a control electrode disposed between said first and second electrode; a source of alternating voltage coupled to said control electrode and said second electrode; a source of direct voltage coupled to said first and second electrodes and an alternating voltage amplifier coupled to said first and second electrodes to detect the signal appearing across said first and second electrodes.

3,129,063

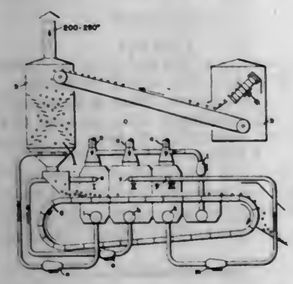
APPARATUS FOR THE MANUFACTURE OF SULFUR DIOXIDE FROM SULFATES

Hans Zirngibl, Leverkusen-Bayerwerk, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

Original application Mar. 28, 1957, Ser. No. 649,032. Divided and this application Jan. 25, 1960, Ser. No. 4,287
Claims priority, application Germany Mar. 31, 1956
4 Claims. (Cl. 23—262)

1. A device for manufacturing sulfur dioxide by the reduction of sulfates, comprising an endless conveying belt, three successively arranged heating hoods positioned to partially surround the conveying belt and to substantially completely surround a portion of belt travel, each of said heating hoods being equipped with a burner in the upper part thereof above the belt for directing heat downwardly toward said belt, a gas inlet for

produced reduction gas in the upper part of each of said hoods above the belt between it and said burner, a gas outlet for produced reduction gas in the lower part of the heating hood below the belt, means for dedusting and purifying SO_2 containing produced gas, gas conduit means connecting said gas outlet of the first heating hood (in the direction of the movement of the conveying belt) to said dedusting and purifying means, the gas outlets



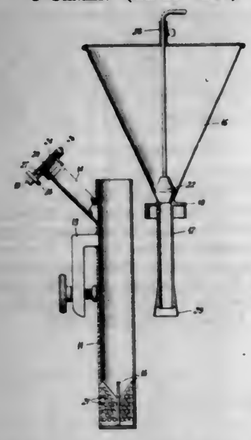
of the second and third heating hoods communicating with the produced reduction gas inlets of the preceding heating hood, means for introducing SO_4, containing materials to be reduced on to said conveying belt in front of the first of said hoods for passage on said belt through said hoods, and means for withdrawing the spent SO_4 material from the conveying belt behind the last of said three hoods.

3,129,064

APPARATUS FOR DISPERSING FINELY-DIVIDED SOLIDS IN LIQUIDS

John K. Harvey, Charleston, and Paul E. Bolick, St. Albans, W. Va., assignors to Union Carbide Corporation, a corporation of New York

Filed Sept. 19, 1960, Ser. No. 56,969
5 Claims. (Cl. 23—267)



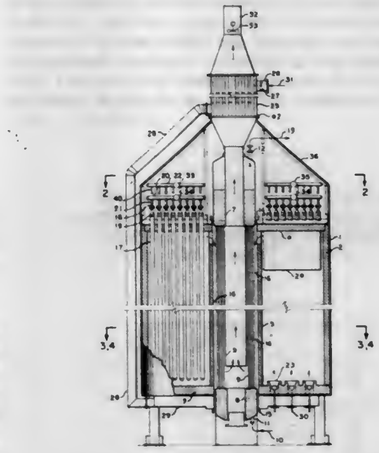
1. An apparatus for dispersing solids in a liquid medium which comprises an open-ended, cylindrical mixer tube, conduit means communicating with said mixer tube for introducing a flow of liquid downwardly and tangentially into said mixer tube thereby forming a spiralling liquid flow down the inside surface of said mixer tube, solids feeding means for introducing a stream of finely-divided solids into said mixer tube below said conduit means, and a pair of intersecting baffles having a plurality of holes through said baffles, said pair of intersecting baffles being located below said solids feeding means.

3,129,065

UPRIGHT FLUID HEATING FURNACE WITH INTEGRAL HEAT RECOVERY MEANS

Paul Koniewiez, Flushing, N.Y., now by change of name Paul Korwin, assignor to Chemical Construction Corporation, New York, N.Y., a corporation of Delaware

Filed Sept. 14, 1960, Ser. No. 55,965
14 Claims. (Cl. 23—277)



1. Upright fluid heating furnace with integral waste heat steam boiler comprising a vertically extending container, a vertical partition duct centrally disposed within said container, said partition duct extending upwards from the base of said container and terminating near the top of said container, a plurality of vertically oriented heater tubes disposed within said container and external to said partition duct, means for passing process fluid through said heater tubes, a plurality of hydrocarbon combustion burners positioned in the base of said container and external to said partition duct, means for conducting fluid hydrocarbon fuel and oxygen-containing gas to said burners, a central flue gas duct positioned within said partition duct and extending vertically upwards from near the base of said container to upper flue gas disposal means external to said container, a plurality of vertically oriented boiler water tubes disposed in the space between said flue gas duct and said partition duct, means for passing boiler feed water into said boiler tubes, and steam recovery means connected to the upper ends of said boiler tubes.

3,129,066

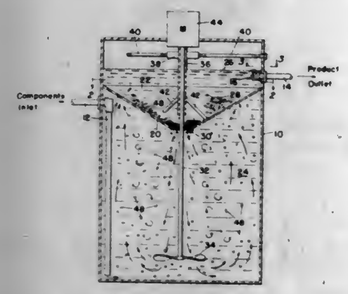
MIXER-SETTLER APPARATUS

William P. Ambrogi and David O. Nicodemus, Philadelphia, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

Filed Apr. 18, 1961, Ser. No. 103,829
9 Claims. (Cl. 23—288)

1. A continuous flow mixer-settler apparatus for separating into its components a mixture of at least one liquid and at least one solid of different densities, comprising, a vessel, a substantially dish-shaped member mounted in said vessel so that the external side of its dished surface is directed toward a first end of the vessel and the external perimetral surface of said dished member is secured in substantially liquid-tight relationship with the interior wall of the vessel so as to prevent the passage thereby of any of the components to be separated and to divide the vessel into a first chamber which contains said dished member's external surface and a second chamber which contains said dished member's internal surface, said

dished member having at least one opening through its wall in the central region of its dished surface and at least one opening through its wall at a point spaced laterally a substantial distance from the central region, inlet means for continuously feeding to said vessel at least one of the components to be separated in said vessel's first chamber, outlet means for continuously removing the liquid contents of the vessel from its second chamber situated at a point in said vessel's second chamber which is a vertical distance substantially more removed from any opening in the central region of the dished surface than any opening through that surface spaced laterally therefrom so as to assure ample opportunity for the liquid and solid components to become separated as the liquid heads for



the outlet means and the solid heads for any opening in the central dished surface and return to the vessel's first chamber, and mixing means spaced from any opening in said dished surface's central region and entirely operative in said first chamber for urging the components entering said first chamber to move away from any opening in said dished member's central region so that the continuously flowing contents will pass from said vessel's first chamber into its second chamber via any opening in said dished member which is spaced laterally a substantial distance from the latter's central region, whereby the solid matter in those flowing contents tends to remain in said vessel while the liquid matter flows out of said vessel's second chamber through said outlet means.

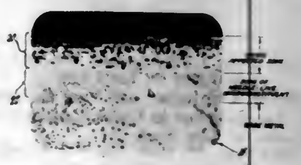
3,129,067
PROCESS FOR EXTRACTING SOLVENT SOLUBLE SUBSTANCES
John A. Hermann, Golden, Colo., assignor to Farm Chemical Resources Development Corporation, a corporation of Delaware
Filed Sept. 23, 1960, Ser. No. 58,072
12 Claims. (Cl. 23—311)

1. In a process for leaching ores amenable to percolation leaching and containing a desired solvent soluble constituent wherein the ore is leached with a solvent liquid to produce an effluent containing the desired constituent, the improvement comprising percolation leaching a plurality of bodies of coarse ore to produce an effluent at least substantially saturated with the desired solvent soluble constituent, the ore having a particle size such that at least 10% by weight of the particles are in the size range of plus 3 Tyler mesh to 4 inches, the plurality of bodies of ore being arranged in series and the solvent liquid being passed through the first ore body in the series and then successively through subsequent bodies of ore in the series, the total path of the solvent liquid upon passing through the plurality of bodies of ore being of a length to provide a value for Q of at least 0.2, where Q is the ratio by volume of effluent at least substantially saturated with the desired constituent to the total volume of solvent liquid required for achieving not less than 80% by weight extraction of the desired constituent, the number of bodies of ore being not less than the numerical value for the reciprocal of Q, monitoring the content of the desired constituent in the effluent from an ore body in the series, and taking the first ore body in the series offstream and placing a fresh ore body onstream not substantially later than the time at which the effluent from the last ore body in the series would deviate substantially from saturation as indicated by the concentration of the desired constituent in the monitored effluent.

3,129,068
METAL COATED REFRACTORY AND PROCESS OF MANUFACTURING SAME
Jimmy C. C. Wu, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
No Drawing. Filed Feb. 5, 1960, Ser. No. 6,864
4 Claims. (Cl. 29—180)

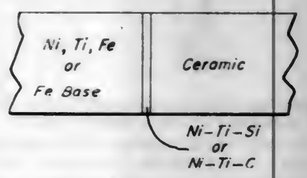
1. A new article of manufacture consisting of particles of zircon which are thoroughly wetted and bound together by a solidized liquid phase consisting of a metal selected from the group consisting of copper, silver and copper-silver alloys.

3,129,069
OXIDATION-RESISTANT TURBINE BLADES
Dean K. Hanink, Indianapolis, Ind., and Erwin R. Price, Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application Oct. 11, 1956, Ser. No. 615,417, now Patent No. 3,000,755, dated Sept. 19, 1961. Divided and this application Dec. 17, 1959, Ser. No. 860,147
6 Claims. (Cl. 29—183.5)



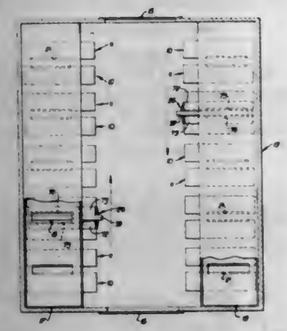
1. An oxidation-resistant turbine blade formed of a metal selected from the class consisting of nickel base alloys and cobalt base alloys, the working surfaces of said blade having a thin layer of an alloy of aluminum with the base metal of said blade, said layer having a thickness of approximately 0.0005 inch to 0.0025 inch.

3,129,070
METALLIC BOND
John H. Westbrook, Ballston Spa, and Edward R. Stover, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
Original application Sept. 2, 1960, Ser. No. 53,652, now Patent No. 3,091,028, dated May 28, 1963. Divided and this application Nov. 20, 1962, Ser. No. 238,991
3 Claims. (Cl. 29—195)



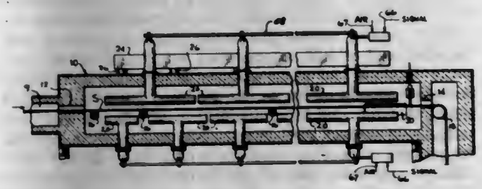
1. An article comprising a metal portion selected from the group consisting of nickel, titanium, iron and iron base metals, a non-metallic refractory portion, and an alloy of 50 to 55 atomic percent titanium, 0.3 to 10 atomic percent of an element selected from the group consisting of silicon and carbon, and the balance being nickel bonding said metal portion to said non-metallic refractory portion.

3,129,071
PRODUCE TREATING APPARATUS AND METHOD
Diven Meredith, 46—025 Arabia St., Indio, Calif.
Filed Apr. 25, 1962, Ser. No. 190,120
9 Claims. (Cl. 34—34)



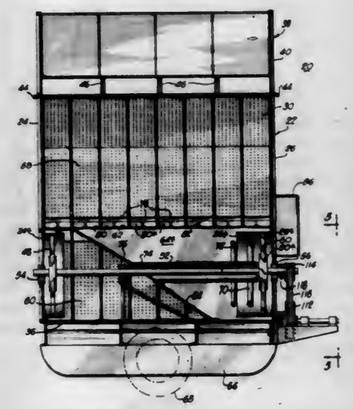
8. In the method of treating produce with a fluid medium, the steps of placing the produce in containers and stacking the containers in separate stacks in spaced apart location adjacent to separate openings in a fluid conditioning conduit and to provide a space between adjacent stacks, and so that said space is closed at least in part by the interior of a building, moving a portable flow directing means to a position with respect to individual groups of containers whereby to form at least a partial enclosure with respect to a group of containers and providing a passageway for flow of fluid medium over the said group of containers, and between said group of containers and one of said openings, and so that said space is closed at least in part by the interior of a building and is otherwise enclosed by said portable flow directing means, causing the said medium to pass both over the produce containers and through the said opening, and then moving the said portable flow directing means to another group of produce containers and conduit opening and similarly treating said group.

3,129,072
HEAT TRANSFER APPARATUS FOR CONTINUOUSLY MOVING STRIP
Eugene A. Cook and Carroll Cone, Toledo, Ohio, assignors, by mesne assignments, to Midland-Ross Corporation, Cleveland, Ohio, a corporation of Ohio
Original application Dec. 29, 1958, Ser. No. 783,466, now Patent No. 3,033,539, dated May 8, 1962. Divided and this application Dec. 21, 1961, Ser. No. 168,862
4 Claims. (Cl. 34—54)



1. Apparatus for altering the heat content of a continuously moving strip which comprises, in combination: wall means forming an elongate treating chamber; means for advancing the strip through said chamber; a source of fluid heat transfer medium; heat transfer exchange means positioned within said chamber for circulating said medium in heat transfer relation with the strip, said exchange means having a positionable distributor portion; a plurality of temperature measuring means for measuring the temperature at laterally separated portions of the strip; signal transmitting means operatively associated with the temperature measuring means for transmitting a signal indicative of the temperature difference between said laterally separated portions; and means responsive to a signal from said signal transmitting means for selectively and automatically positioning said distributor portion whereby the heat transfer effect across the width of the strip is controlled.

3,129,073
CONTINUOUS GRAIN DRYER
Bernard C. Mathews, Box 414, Crystal Lake, Ill.
Filed July 25, 1961, Ser. No. 128,627
6 Claims. (Cl. 34—56)

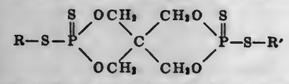


1. A continuous grain dryer, comprising means defining a pair of opposed grain columns each having perforated side walls and terminating in a lower discharge opening, heating means for heating air, means directing heated air through one portion of said columns so that grain passing downwardly through said columns is dried, a vaned metering shaft positioned adjacent each of said discharge openings, means including a pawl and ratchet wheel for rotating each of said metering shafts to discharge grain from said columns at a predetermined rate, and means responsive to the temperature of the grain in each of said columns and arranged to control the periods of engagement of each pawl and ratchet wheel independently in accordance with the temperature of the grain in the associated column.

3,129,074
MOTOR FUEL
Jack F. Bussert, Munster, Ind., and Fred K. Kawahara, Park Forest, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
No Drawing. Filed July 31, 1961, Ser. No. 127,896
5 Claims. (Cl. 44—69)

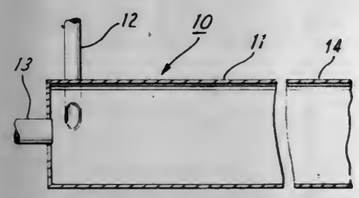
1. A hydrocarbon motor fuel of the gasoline boiling range adapted for spark ignition, internal combustion engines containing an effective anti-knock amount of tetraethyl lead and in combination therewith, in an amount sufficient to give a mol ratio of phosphorus to lead in

the range of from about 0.001:1 to about 1:1, a dithiophosphate having the following general formula:



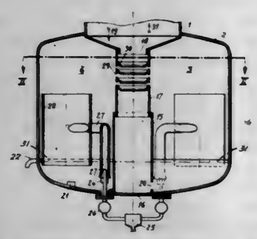
wherein R and R' are each radicals having from 2 to about 35 carbon atoms and are selected from the class consisting of hydrocarbon radicals, oxygen-containing hydrocarbon radicals, and mixtures thereof.

3,129,075
SEPARATION METHOD AND APPARATUS
Robert Anliot, Wheaton, Ill., assignor to Admiral Corporation, Chicago, Ill., a corporation of Delaware
Filed Sept. 17, 1959, Ser. No. 840,746
5 Claims. (Cl. 55—17)



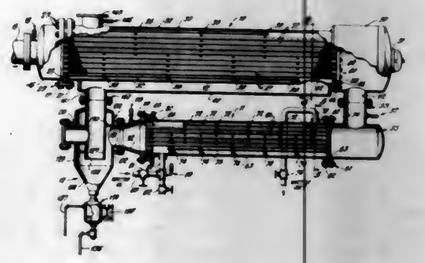
1. The method of separating a gas from a mixture of said gas and a heavier constituent of gaseous, liquid or solid particulate form which comprises directing a stream of said mixture generally tangentially into a vortex tube, withdrawing a concentration of the lighter, gaseous constituent of said mixture through a passage opening to the radially central portion of said vortex tube, withdrawing a concentration of the heavier constituent through a passage opening to the radially outer portion of said vortex tube, and cyclically interrupting the flow of said stream of said mixture whereby back pressure resisting flow of said stream is repeatedly relieved.

3,129,076
METHOD FOR DEODORIZING OIL AND SIMILAR MATERIALS, AND APPARATUS FOR THE WORKING THEREOF
Jean Albert De Smet, Wilrijk, Belgium, assignor to Extraction continue De Smet, Antwerp, Belgium, a company of Belgium
Filed Feb. 9, 1961, Ser. No. 88,097
Claims priority, application Belgium Feb. 12, 1960
5 Claims. (Cl. 55—38)



1. A method for deodorizing liquid material, which comprises
(*a*) passing the material through a column,
(*b*) passing the material from said column successively through a plurality of compartments arranged in series for deodorizing treatment therein,
(*c*) discharging the treated material from the last compartment of said series,
(*d*) injecting a fluid into each of said compartments in such a manner as to subject the resulting fluid-material mixture therein to a circulating motion which is stronger than the flow of said material through said series of compartments,
(*e*) causing said fluid-material mixture to separate into fluid and material and returning the material to said flow through said series of compartments, and
(*f*) passing the separated fluid through said column countercurrently to the material passing therethrough.

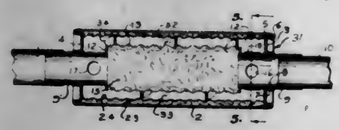
3,129,077
GAS PURIFYING APPARATUS
Renard P. Adams, 87 Nottingham Terrace, Buffalo 16, N.Y.
Filed May 23, 1961, Ser. No. 112,003
4 Claims. (Cl. 55—269)



1. A gas purifying apparatus comprising first heat exchanger means including a first elongated hollow shell having header means at opposite end portions thereof and in sealing relationship thereto, a plurality of tubular members diposed within said first shell, all of such tubular members comprising a first plurality of tubular members having opposite end portions thereof supported by and in sealing relationship to said header means at opposite end portions of said first shell, first gas inlet means connected with one end of said first shell, all of said first plurality of tubular members opening at one end to said first inlet means for receiving hot gas to be purified, first gas outlet means connected with the other end of said first shell, all of said first plurality of tubular members opening at the other end thereof to said first outlet means, whereby incoming hot gas passes through said first plurality of tubular members within said first shell in only one direction, second heat exchanger means including a second elongated hollow shell having header means at opposite end portions thereof in sealing relationship thereto, a second plurality of tubular members having opposite end portions thereof supported by and in sealing relationship to said header means at opposite end portions of said second shell, second gas inlet means connected with one end of said second shell, means connecting said second gas inlet means with said first gas outlet means, all of said second plurality of tubular members opening at one end to said second inlet means for receiving gas to be purified which has passed through said first heat exchanger means, second gas outlet means connected with the other end of said second shell, all of said second plurality of tubular members opening at the other ends thereof to said second outlet means, whereby gas to be purified passes through said second plurality of tubular members within said second shell in only one direction, means for introducing a cooling medium within said second shell adjacent said other end of said second shell, outlet means for said cooling medium for removing cooling medium from said second shell adjacent said one end of said second shell, separator means connected with the second gas outlet means associated with said second shell, said separator means including a liquid outlet and a gas outlet

and being adapted for separating condensed vapor from gas, the gas outlet of said separator means being connected with said first shell adjacent said other end of said first shell, and outlet means for purified gas connected with said first shell adjacent said one end of said first shell, whereby purified gas from said separator means passes through said first shell and around the first plurality of tubular members within said first shell in only one direction which is in counterflow to the direction of flow of gas through said first plurality of tubular members.

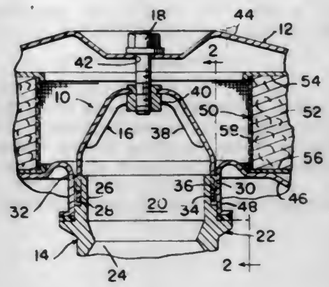
3,129,078
EXHAUST MUFFLER FILTER
Marian L. Hobbs, 916 Orville, Kansas City, Kans.
Filed June 16, 1961, Ser. No. 117,548
3 Claims. (Cl. 55—313)



1. An exhaust muffler filter for internal combustion engines comprising, open-ended inner and outer metal shells in substantially concentric relation, said shells being radially spaced with a longitudinal passage therebetween, the outer shell being substantially imperforate and the inner shell being perforate, end walls in said outer shell to close the ends thereof, the inner shell being shorter in length than the outer shell with the ends of the inner shell adjacent to and spaced from the end walls, an inlet duct extending through one end wall and an outlet duct extending through the other end wall, means on inner ends of the inlet and outlet ducts supporting the inner shell, a fibrous filter media filling said inner shell between said inlet and outlet ducts whereby exhaust gases moving from the inlet duct to the outlet duct normally pass through said filter media, said inlet and outlet ducts having apertures therein between the ends of the inner shell and the end walls of the outer shell, and valve members on the inlet duct for said apertures therein and biased into aperture closing position for normally closing said apertures against normal operating pressures in the inlet duct, said valve members being opened in response to increase of pressure in the inlet ducts resulting from increase of resistance to flow through the filter media and thereby permitting flow of exhaust from the inlet duct through the passage between the inner and outer shells to the outlet duct bypassing the filter media in the inner shell.

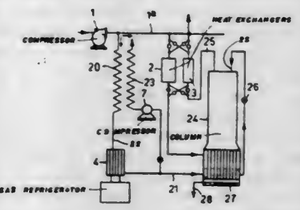
3,129,079
AIRCLEANER HOLD-DOWN BRACKET
John Dirda, Detroit, Mich., assignor to Holley Carburetor Company, Warren, Mich., a corporation of Michigan
Filed Aug. 7, 1961, Ser. No. 129,678
2 Claims. (Cl. 55—505)

1. An air horn for a carburetor defining an air induction passage and including an annular aircleaner mounting lip surrounding the air induction passage having an axially outer, radially outer, bevelled edge therearound, a pair of oppositely disposed upwardly opening U-shaped recesses in the aircleaner mounting lip forming oppositely disposed aircleaner hold-down bracket mounting bosses on the aircleaner mounting lip, a U-shaped aircleaner hold-down bracket formed of a substantially flat strip of resilient material including substantially flat enlarged end portions each having an opening therethrough and adapted to fit within said oppositely disposed U-shaped recess with the mounting bosses extending through the openings, the central portion of said bracket extending over and in spaced relation to the air induction passage, a downwardly extending rib on each side of the central portion of the aircleaner hold-down bracket for providing rigidity, the center of said aircleaner hold-down bracket being enlarged transversely of the bracket, a threaded nut fixedly secured in the enlarged center of said aircleaner hold-down bracket, an aircleaner including an aircleaner mounting ring positioned over said air



induction passage and aircleaner hold-down bracket with the aircleaner mounting ring sleeved over the aircleaner mounting lip for locking the ends of the aircleaner hold-down bracket in position over the mounting bosses, a central opening in the aircleaner aligned with the nut on the aircleaner hold-down bracket and a headed bolt extending through said central portion in the aircleaner and engaged with the threaded nut for securing the aircleaner to the air horn in cooperation with said aircleaner hold-down bracket.

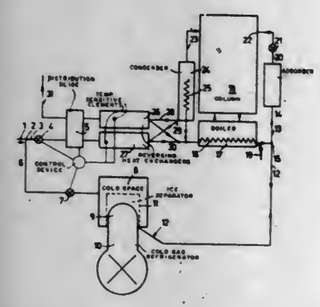
3,129,080
EQUIPMENT FOR SUPPLYING BOTH AIR COMPRESSED TO HIGH PRESSURE AND LIQUID OXYGEN
Jacob Willem Laurens Kohler, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Sept. 1, 1961, Ser. No. 135,649
Claims priority, application Netherlands Sept. 13, 1960
2 Claims. (Cl. 62—13)



1. An apparatus for supplying both high pressure air and liquid oxygen comprising a cold-gas refrigerator, a liquid oxygen supplying column provided with a condenser-evaporator, conduit means for connecting said condenser-evaporator to said column for supplying gaseous oxygen thereto, a high pressure liquid compressor for producing high pressure air, a precompressor for precompression of atmospheric air to relatively low pressures, a heat exchanger, the outlet of said precompressor being operatively connected to said heat exchanger for cooling said precompressed air, conduit means for partly conducting the precompressed, cooled air to the cold

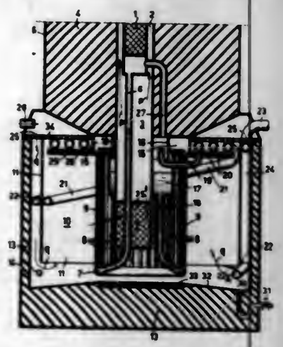
head of said cold-gas refrigerator and partly to the condenser-evaporator of said liquid oxygen supplying column, means for cooling said precompressed air flowing through said column by the waste gases of said column flowing in the opposite direction, said cold-gas refrigerator being provided with a liquid discharge conduit arrangement for conveyng part of the liquified air from said high pressure liquid compressor to the condenser-evaporator of said column and part to said high pressure liquid compressor, and a discharge duct connecting said high pressure liquid compressor to said heat exchanger in which said high pressure air is in heat exchanging contact with at least that part of the precompressed air that flows to said cold gas refrigerator.

3,129,081
DEVICE FOR FRACTIONATING GAS
Johannes Rudolphus van Geuns, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Feb. 3, 1960, Ser. No. 6,500
Claims priority, application Netherlands Mar. 17, 1959
5 Claims. (Cl. 62—37)



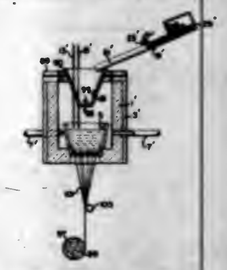
1. An apparatus for separating gas into fractions of which at least one of said fractions is gaseous nitrogen and another fraction is the product in a liquid state comprising a gas separation column having a boiler at the bottom thereof and an outlet near the top, a reversing heat exchanger outside of said column, a conduit means connecting said reversing heat exchanger to said column, an additional heat exchanger for warming said gaseous nitrogen coming through the outlet at the top of said column before said gaseous nitrogen enters said reversing heat exchanger and for supplying additional cold to said conduit means, said reversing heat exchanger and additional heat exchanger being connected in series with said column, a source of compressed gas of a pressure between 3–10 atmospheres and having a main duct therefor, said main duct being connected to said reversing heat exchanger, a branch duct being connected to said main duct at a location between said source of compressed air and the reversing heat exchanger and providing a path of compressed air flow to said column, a separate flow control member being arranged in both said main duct and said branch duct, a device for cleaning out impurities from the compressed air flow in said branch duct, said device being located in said branch duct and arranged in the path of the compressed air flow to said column, and a cold gas refrigerator being connected in said branch line for supplying cold to both said column and said cleaning device, the latter being a separator arranged on said cold gas refrigerator and being connected to said branch duct, said branch duct and flow control member therein being constructed to allow in said branch duct a mass flow corresponding substantially to the amount of liquefied gas-tapped as a product from the boiler of said column.

3,129,082
COLUMN FOR FRACTIONATING GAS MIXTURE
Klaas Roozendaal, Emmasingel, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed May 5, 1961, Ser. No. 108,068
Claims priority, application Netherlands May 7, 1960
5 Claims. (Cl. 62—42)



1. A column for fractionating a gas mixture comprising a boiling vessel for collecting liquid gas, said column being provided with a liquid gas outlet at the bottom thereof and pipes connected thereto and said boiling vessel, said pipes forming a frame around said boiling vessel, said frame having a gauze secured thereto and located in close proximity to said boiling vessel and cooled by the liquid gas in said pipes, said gauze being pervious to the supplied gas mixture to be fractionated, a duct communicating with said boiling vessel and for conducting cold gas therefrom, a receptacle surrounding and containing said gauze frame, said duct being located principally within said receptacle and being in communication with the top of said boiling vessel, an inlet in said receptacle for supplying said gas mixture to be fractionated, and at least part of said duct being provided with a heat insulation means adjacent to the top of said receptacle and supporting said part of said duct.

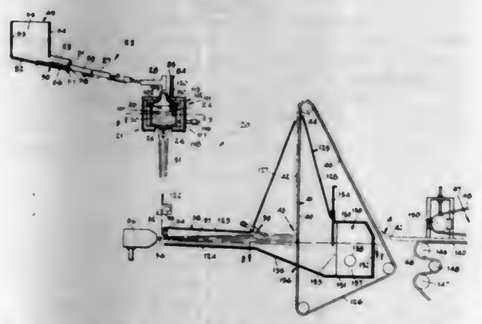
3,129.083
METHOD FOR HEATING GLASS
Dominick Labino, Toledo, Ohio, assignor, by mesne assignments, to Johns-Manville Fiber Glass Inc., Cleveland, Ohio, a corporation of Delaware
Original application Oct. 20, 1953, Ser. No. 387,260. Divided and this application Dec. 23, 1954, Ser. No. 481,654
2 Claims. (Cl. 65—2)



1. A process of forming glass filaments, comprising establishing a body of molten glass within a glass melting crucible, heating the crucible to maintain the glass therein in molten condition by subjecting the exterior of the crucible to the heat of gaseous combustion products, withdrawing filaments of glass from the body of molten glass

through orifices in the base of the crucible, supporting solidified raw glass above the crucible, directing the exhaust of the gases employed to heat the crucible into contact with the raw glass supported above the crucible to melt the raw glass and cause it to flow downwardly and commingle with the molten glass contained in the crucible, and maintaining the volume of glass flow to the crucible substantially equivalent to the volume withdrawn therefrom.

3,129,084
MACHINE AND PROCESS FOR FORMING GLASS FIBERS
Dominick Labino, Grand Rapids, Ohio, assignor to Johns-Manville Corporation, New York, N.Y., a corporation of New York
Continuation of abandoned application Ser. No. 565,808, Feb. 16, 1956. This application Mar. 12, 1963, Ser. No. 264,687
7 Claims. (Cl. 65—2)



1. The method of continuously melting glass increments and continuously forming glass filaments, comprising:

(*a*) providing a glass melting zone defined by a refractory clay crucible;

(*b*) providing in said melting zone a supply of glass;

(*c*) heating the exterior of said crucible with hot gaseous products of combustion while isolating said products of combustion from the interior of said crucible;

(*d*) melting said glass in said zone with heat transferred from said crucible to provide a body of molten glass from which a plurality of exudations are exuded generally vertically downwardly through the bottom of said crucible;

(*e*) and drawing from said exudations a plurality of glass filaments.

3. In apparatus for continuously melting glass increments and continuously forming glass filaments, the combination comprising:

(*a*) a refractory clay crucible having a bottom and a peripheral side wall for containing a supply of molten glass,

(*b*) said bottom wall being provided with a plurality of generally vertically downwardly extending and normally open orifices through which glass is continuously exuded to form a plurality of exudations;

(*c*) an enclosure in spaced relation with said crucible and

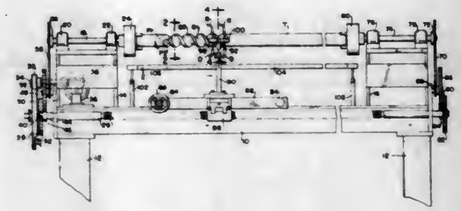
(*d*) defining a heating chamber therebetween, to which chamber heating gases are continuously supplied,

(*e*) said crucible and said enclosure being arranged to isolate the heating gases from direct contact with the molten glass and to deter contamination of the molten glass;

(*f*) means for supplying heating gases to said chamber; and

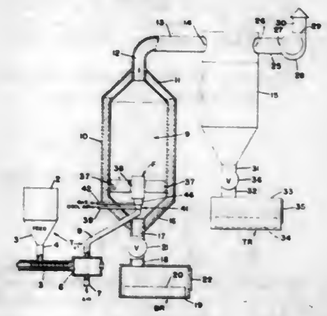
(*g*) means for drawing filaments from said exudations.

3,129,085
METHOD FOR FORMING SPIRAL LAMP TUBES
Andrew H. Olsen, Jersey City, and Donald G. Trutner, Chatham, N.J., assignors to Duro-Test Corporation, North Bergen, N.J., a corporation of New York
Filed Jan. 30, 1961, Ser. No. 85,790
5 Claims. (Cl. 65—109)



1. A method of forming at least one helical groove in the wall of a glass tube by displacing the wall along a helical path by heating the wall at a point to a temperature high enough to soften the wall thereat sufficiently so that on subsequent rotation the heated wall will sag inwardly, rotating the gass tube on its axis and progressing the point of heating along a line parallel to the axis of the glass tube at a rate proportioned to the speed of rotation of the glass tube to form a helical groove of predetermined pitch.

3,129,086
APPARATUS FOR PRODUCING HOLLOW GLASS PARTICLES
Franklin Veatch, Lyndhurst, Harvey E. Alford, Amherst, and Richard D. Croft, Wapakoneta, Ohio, assignors to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio
Original application Oct. 22, 1957, Ser. No. 691,725, now Patent No. 2,978,339, dated Apr. 4, 1961. Divided and this application Dec. 2, 1959, Ser. No. 859,833
3 Claims. (Cl. 65—142)



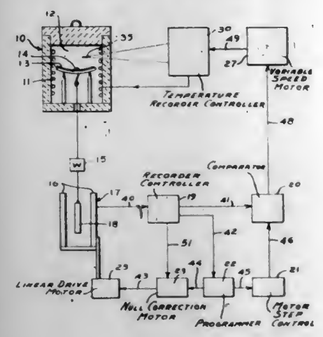
1. Apparatus for producing spheres from particles of a fusible material, which comprises a cylindrical structure comprising a furnace section, a feed section positioned below said furnace section, and a quenching section positioned above said furnace section; the feed section of said cylindrical structure comprising a series of peripherally arranged perforations, and adjustable means for simultaneously varying the exposed area of said

perforations, and means to introduce a fluid suspension of finely divided particles into said feed section; the furnace section of said cylindrical structure comprising a plurality of burners to provide a temperature in said furnace section at which said particles fuse; and the quenching section of said cylindrical structure comprising a series of peripherally arranged perforations, and adjustable means for simultaneously varying the exposed area of said perforations.

3,129,087
APPARATUS FOR CONTROLLED HEAT TREATMENT OF GLASS

Henry E. Hagy, Corning, N.Y., assignor to Corning Glass Works, Corning, N.Y., a corporation of New York

Filed May 15, 1961, Ser. No. 110,111
3 Claims. (Cl. 65—162)

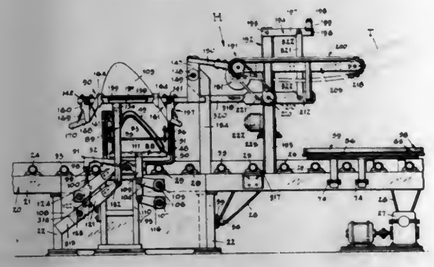


1. Apparatus for maintaining an object of glass at a viscosity of substantially constant value during crystallization comprising means for indicating the rate of deformation of said glass under an applied stress and for providing a signal indicating variations between said indicated rate of deformation and a predetermined standard rate, and means responsive to said signal for regulating the temperature of said glass object to restore its viscosity to said value and thereby produce a rate of deformation identical with said predetermined standard rate.

3,129,088
BENT GLASS SHEET HANDLING

George F. Ritter, Jr., Toledo, Ohio, assignor to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio

Filed Oct. 30, 1961, Ser. No. 148,524
20 Claims. (Cl. 65—260)

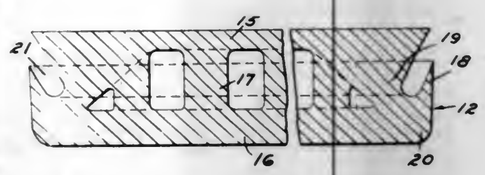


1. A glass transfer device for removing bent glass sheets from a bending mold moving along a first conveyor and depositing said sheets upon a second conveyor wherein said bending mold includes movable mold sections in the closed position and said first conveyor has an open area formed therein which device includes the combination of means located in the path of movement of said mold moving along the first conveyor to stop the mold above the open area, means for moving the movable mold sections from their closed position to another position so that a glass sheet resting on said sections may be lifted off said sections, means for removing a bent glass sheet from said mold and depositing said sheet upon the second conveyor, bending mold aligning means located in the path of the mold and in advance of said sheet removing means to align the bending mold as it moves along the first conveyor and towards the open area formed therein with said glass removing means and means for actuating the said bent glass sheet removing means only after the said mold stopping means has arrested the movement of the mold along the path of the first conveyor and held said mold at rest in a position above the open area of the first conveyor.

3,129,089
FORMING GLASS ARTICLES

Julius J. Torok, Toledo, Ohio, assignor, by mesne assignments, to Owens-Illinois Glass Company, Toledo, Ohio, a corporation of Ohio

Filed Dec. 30, 1959, Ser. No. 862,824
12 Claims. (Cl. 65—319)



1. In an apparatus for forming a glass article having a base and a peripheral flange by pressing a plunger downwardly into contact with the gob of glass placed in a mold having an internal molding surface corresponding to the external configuration of the article which is to be formed, said plunger having an external molding surface corresponding to the internal configuration of the article which is to be formed and comprising a base portion and a flange portion extending upwardly from the periphery of said base portion, the improvement wherein said plunger comprises an imperforate lower member having a central portion the external surface of which is adapted to contact the glass, an imperforate upper member overlying and spaced from the central portion of the lower member, the upper surface of said upper member being adapted to be cooled by a liquid coolant, and a plurality of spaced columns extending between and thermally bonded to said upper and lower members, said columns forming paths of heat flow between said lower member and said upper member.

3,129,090
METHOD OF CONTROLLING PLANT GROWTH

Robert L. Blain, Calgary, Alberta, Canada, assignor to Weed-Master (Western) Ltd., Calgary, Alberta, Canada

No Drawing. Filed Nov. 4, 1959, Ser. No. 156,550
(Filed under Rule 47(b) and 35 U.S.C. 118)
6 Claims. (Cl. 71—2.6)

1. The method of controlling the growth of plant life which comprises providing a solid body of a solid wax carrier containing associated herbicide with the body having shape-retaining solidity and being attrition expendable, and passing said solid body in attrition contact with plant life to deposit an adherent coating of wax and an effective amount of associated herbicide on said plant life.

3,129,091
GRANULAR UREAFORM FERTILIZER

Adrian E. Buter, East Orange, N.J., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Oct. 10, 1960, Ser. No. 61,380
6 Claims. (Cl. 71—28)

1. In a process for production of a granular ureaform fertilizer, the steps comprising impregnating freshly prepared expanded vermiculite, said vermiculite being at a temperature lying within the range of 500 to 700° F., with ureaform by spraying a premixed solution of urea in a urea-formaldehyde concentrate, which solution is at temperatures of about 140–230° F. on to the surface of said freshly prepared expanded vermiculite; promptly treating the mixture with an acid to form ureaform under the acid conditions at temperatures of at least about 212° F.; neutralizing the acidulated product within about 5 minutes of the acid treatment and recovering a granular ureaform fertilizer consisting essentially of expanded vermiculite impregnated with ureaform formed in situ.

3,129,092
METHOD FOR PRODUCING GRANULATED CALCIUM SUPERPHOSPHATE

Casimer C. Legal, Jr., Elkridge, and James A. Long, Jr., Baltimore, Md., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed July 17, 1961, Ser. No. 125,043
5 Claims. (Cl. 71—64)

1. A method for granulating phosphatic fertilizers which comprises combining from about 0.1 to about 1.0 part by weight of substantially hydrated phosphatic fertilizer having a moisture content of from about 2 to about 8% by weight and a free acid content of from 2 to 4% by weight with about 1.0 parts by weight of said fertilizer in a non-hydrated form having a moisture content from about 5 to about 15% by weight and a free acid content of from 16 to 24% by weight, and agitating said combined fertilizer for a time sufficient to cause granulation thereof.

3,129,093
PROCESS FOR PRODUCING A COMPOSITE METAL OXIDE PARTICLE IN A COLLOIDAL AQUASOL

Guy B. Alexander and Paul C. Yates, Brandywine Hundred, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Original application July 16, 1958, Ser. No. 748,828, now Patent No. 3,069,292, dated Dec. 18, 1962. Divided and this application Nov. 30, 1961, Ser. No. 156,160
5 Claims. (Cl. 75—.5)

1. In a process for producing a particulate metal oxide composition the steps comprising forming a colloidal aquasol of substantially discrete particles which are 5 to 250 millimicrons in size and comprise a refractory metal oxide filler having a melting point above 1550° C. and a free energy of formation at 1000° C. greater than 100 kilocalories per gram atom of oxygen, effecting contact between the dispersed filler particles in said aquasol and a dissolved compound of a metal selected from the group consisting of vanadium, niobium, manganese, chromium, and titanium, precipitating an oxide of the selected metal from said dissolved compound in contact with the dispersed refractory filler particles whereby the particles are coated with the precipitated oxide, and recovering the coated filler from the liquid.

3,129,094
METHOD OF PRODUCING A SLAG HAVING THE LOW MELTING POINT IN THE MANUFACTURE OF METALLIC MAGNESIUM BY REDUCTION OF MAGNESIA WITH FERROSILICON

Eiji Munekata and Akira Suzuki, Tokyo, Japan, assignors to Asahi Kasei Kogyo Kabushiki Kaisha, Osaka, Japan, a corporation of Japan

No Drawing. Filed Apr. 21, 1960, Ser. No. 23,616
Claims priority, application Japan May 27, 1959
1 Claim. (Cl. 75—67)

In the continuous production of magnesium by the reduction of a magnesium-containing raw-material with ferro-silicon in a reducing zone, evaporation of the reduced metallic magnesium from the reducing zone, condensation and recovery of the magnesium, and tapping of the formed slag, the improvement in combination therewith consisting essentially of

(*a*) feeding into the reducing zone magnesia, ferro-silicon, a CaO-containing material selected from the group consisting of quick lime and calcined carbide, and an Al_2O_3-containing material selected from the group consisting of alumina and calcined clay,

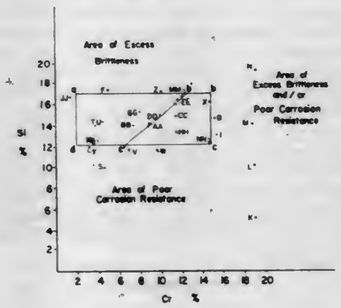
(*b*) heating the resulting mixture at a temperature of 1300° to 1400° C. under a pressure of about 8 mm. Hg, said CaO- and Al_2O_3-containing materials being added in such amounts that there is obtained a slag having a composition of about 62% SiO_2, about 15% Al_2O_3, and about 23% CaO, said slag being molten and electrically conductive at the aforecited temperature, and

(*c*) maintaining said slag in the molten state within said temperature range by passing electric current therethrough, thereby utilizing the Joule effect produced due to the electrical conductivity in said slag at said temperature, corresponding to maximally about 100 Ω–cm.³ at 1300° C.

3,129,095
HIGH SILICON CAST IRON

Walter A. Luce, Glenn W. Jackson, and Earl Ryder, Dayton, and Mars G. Fontana, Columbus, Ohio, assignors to The Duriron Company, Inc., Dayton, Ohio, a corporation of New York

Filed May 9, 1963, Ser. No. 279,140
11 Claims. (Cl. 75—126)



1. A corrosion resistant high silicon cast iron containing from 12% to 17% silicon, 2% to 15% chromium and more than 0.1% to about 3.0% carbon, the balance being substantially all iron; said cast iron within the range of alloy compositions represented by the area *b′—b—c—c′* in the accompanying drawing having a carbon content always in excess of the value defined by the expression:

$$C = 1.66 - 0.063(\text{percent Cr}) - 0.089(\text{percent Si})$$

to provide free graphite randomly dispersed in the ferrous matrix.

3,129,096
PHOTOGRAPHIC NEGATIVES AND THEIR PREPARATION

James Archibald Collinson, Middletown, and Robert William Nottorf, Westfield, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Jan. 27, 1960, Ser. No. 4,891
11 Claims. (Cl. 96—27)

1. A process for preparing a photographic negative utilizing a relief printing form which comprises the steps in combination of contacting a heated printing form whose relief surface is coated with a layer of dry pigment, with a high-contrast silver halide emulsion photographic film at least one of whose sides has been overcoated with a layer of thermoplastic, solvent-soluble polymeric composition, said composition being relatively non-adhesive at normal room temperature, being insensitive to light and being capable of transmitting some light actinic to said silver halide emulsion, thereby depositing said pigment on only one of said overcoated sides of said film, exposing the side of said film having the pigment deposited thereon to a light source, processing said film which includes the steps of developing, fixing and removing the pigment and overcoating layer with a solvent for said overcoating layer, the removal of said overcoating layer being carried out at any stage prior to completion of processing.

3,129,097
MANUFACTURE OF PHOTOGRAPHIC GELATIN RELIEF IMAGES

Albert Emiel van Hoof, Berchem-Antwerp, and Jozef Frans Willems, Wilrijk-Antwerp, Belgium, assignors to Gevaert Photo-Producten N.V., Mortsel-Antwerp, Belgium, a Belgian company

No Drawing. Filed June 20, 1960, Ser. No. 37,101
Claims priority, application Belgium July 1, 1959
7 Claims. (Cl. 96—28)

1. In a method of forming a photographic gelatin relief image, the steps of: treating an exposed gelatino silver halide emulsion with an aqueous composition comprising a developing agent that reduces the silver halide in the regions of the emulsion that have been exposed to light and is oxidized to a tanning agent that hardens the gelatin emulsion in these exposed regions; an organic onium salt that is, in the organic portion thereof, free from substituents selected from the group consisting of acid substituents and said acid substituents in salt form, said onium salt accelerating the actions of the developing and tanning agents, and a softening agent for softening the unexposed regions of the emulsion, the proportion of the amounts of onium salt and softening agent being such that the onium salt accelerates the actions of the developing and tanning agents on the exposed regions of the emulsion so that these regions are hardened prior to the action of the softening agent, and the softening agent thereafter selectively acts upon and softens the unexposed regions of the emulsion; and, removing thereafter the softened unexposed regions of the emulsion to produce a gelatin relief image.

3,129,098
PROCESS FOR PREPARING PRINTING ELEMENTS

Robert Bernard Kitson, Philadelphia, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

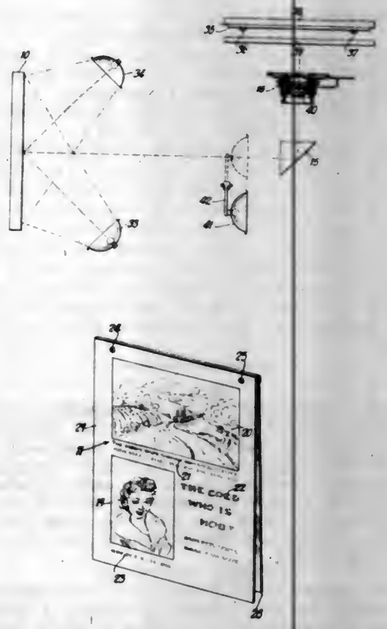
No Drawing. Filed Feb. 10, 1960, Ser. No. 7,748
8 Claims. (Cl. 96—35)

1. A process for preparing printing reliefs by exposing to actinic radiation a photopolymerizable element having a solid photopolymerizable layer from 3 to 250 mils in thickness comprising (1) a preformed compatible macromolecular polymer binding agent, (2) a non-gaseous, addition-polymerizable ethylenically unsaturated compound containing at least one terminal ethylenic group capable of forming a high polymer by photoinitiated addition polymerization in the presence of an addition polymerization initiator therefor activatable by actinic light, and (3) from 0.0001 to 10%, by weight, of the layer of such an initiator, through an image-bearing transparency, characterized by (*a*) exposing said element to said radiation for ⅛ to ½ the time required for essentially complete addition polymerization in the relief height-forming stratum of said layer, (*b*) washing the unexposed areas of said stratum with a solvent for said binder for 1/30 to ½ the time required for essentially complete removal of the unexposed portion of said stratum, (*c*) placing the transparency in register with the relief image, (*d*) exposing the resulting element to actinic light until polymerization is essentially complete in the exposed areas without polymerization in unexposed areas, and (*e*) washing the exposed element with an aforesaid solvent to remove the unexposed portion of said stratum.

3,129,099
METHOD OF GRAVURE REPRODUCTION

John G. Consaul, Plainfield, and Edwin Velten, North Plainfield, N.J., assignors to Art Color Printing Company, New York, N.Y., and Dunellen, N.J., a corporation of New York

Filed Nov. 12, 1958, Ser. No. 773,397
6 Claims. (Cl. 96—43)



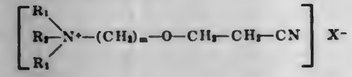
1. The method of producing a gravure resist from non-transparent, reflective copy having continuous tone areas and other areas of uniform reflection density, said resist being adapted for use in making a gravure printing member with said resist in contact with said member, said method comprising exposing said resist to light reflected by said reflective copy for a time sufficent to produce an image of said copy thereon, with the tones of the continuous tone areas in substantially the same relation as the tones of the corresponding areas on said copy, exposing said resist to light reflected by said copy with the continuous tone areas masked for a time sufficient to produce an in-register, increased density image of said other areas of said copy thereon, and exposing said resist to a uniform light source with a line screen means to produce a line screen image thereon and on the areas thereof where the images of both the continuous tone and the other areas are produced.

3,129,100
DEVELOPING ACCELERATORS FOR SILVER HALIDE EMULSION LAYERS

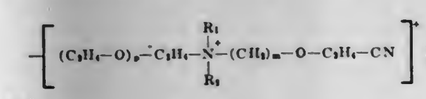
Herbert Grabhöfer, Cologne-Flittard, Horst Schüler, Munich, and Hans Ulrich and August Randolph, Leverkusen, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Mar. 13, 1962, Ser. No. 179,472
Claims priority, application Germany Mar. 16, 1961
6 Claims. (Cl. 96—66)

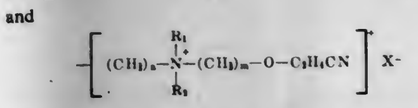
1. In a process for developing an exposed photographic material containing at least one silver halide emulsion layer, the improvement which consists in developing the exposed photographic material in contact with a compound having the formula



in which R_1 and R_2 are each a radical of the group consisting of alkyl, phenylalkyl, phenyl, cyanoethyl, and cyanoethoxyethyl and together are the atoms required to complete a heterocyclic radical of the group consisting of morpholino and piperidino; R_3 is a member of the group consisting of alkyl, phenylalkyl, phenyl, cyanoethoxyethyl and radicals having the following formulae



and

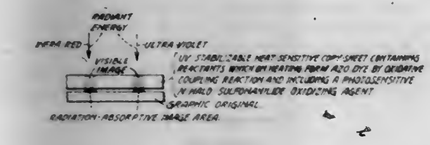


wherein *m* is an integer from 2 to 5, *n* is an integer from 2 to 6 and *p* is an integer from 1 to 100; and X is an anion.

3,129,101
HEAT-SENSITIVE COPY-SHEET

Wesley R. Workman, St. Paul, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed Nov. 1, 1961, Ser. No. 149,224
4 Claims. (Cl. 96—90)



1. A heat-sensitive copy-sheet product useful in the thermographic reproduction of differentially radiation-absorptive graphic originals and capable of providing permanent reproductions stable against further heating, said copy-sheet product including a visibly heat-sensitive layer containing, in intimate association, a normally solid condensation composite of a heterocyclic hydrazone and an amine-reactive organic compound, and a photosensitive N-halo-sulfonanilide oxidizing agent solid at temperatures below about 55° C. and which is rendered inactive as an oxidizing agent by exposure to actinic radiation; and said layer including an azo coupler component.

3,129,102
STABILIZED PEANUT BUTTER AND METHOD OF PRODUCING THE SAME

Judson H. Sanders, Wyoming, Ohio, assignor to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio

No Drawing. Filed Apr. 9, 1962, Ser. No. 185,881
6 Claims. (Cl. 99—128)

1. A peanut butter comprising a homogeneous mixture of particles of peanuts and peanut oil, said peanut butter having dispersed therein from about 0.5% to 5.0%, by weight of peanut butter, of a hydrogenated rapeseed oil stabilizer having an iodine value not greater than about 10.

3,129,103
INK COATING FOR PRESSURE SENSITIVE TRANSFER RECORD SHEET

Robert W. Martel and Howard G. Stroble, Dayton, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland

No Drawing. Filed May 16, 1960, Ser. No. 29,142
3 Claims. (Cl. 106—20)

1. Pressure-sensitive record material consisting of a base member having a surface on which is contained a coating which is dry to the touch and which consists of a profusion of microscopic pressure-rupturable liquid-containing capsules in substantial contiguity, each capsule having solid walls of gelled film-forming hydrophilic colloid material and each having encased therein a cluster of smaller capsules containing an ink solution having the characteristic of drying instantaneously when released from the capsules and transferred to a receiving surface, which ink solution includes coloring material, a binder material soluble in tetrachloroethylene, and tetrachloroethylene as a highly-evaporable solvent, the ink solution being a central nucleus around which has been deposited by coacervation a dense solvent-impermeable shell-like coating of the colloid material, the capsules being rupturable by printing or marking pressures applied to the coated base member to release the ink solution for transfer to the receiving surface.

3,129,104
SYNTHETIC WAX SUBSTITUTES FOR CARNAUBA WAX AND TRANSFER INK COMPOSITIONS CONTAINING SUCH SUBSTITUTES

Thomas D. Callinan, Yorktown Heights, Joseph S. Crimi, Poughkeepsie, Hansel L. McGee, Bronx, Ann M. Parks, Tarrytown, and Paul M. Schwartz, Mahopac Falls, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Jan. 9, 1961, Ser. No. 81,273
10 Claims. (Cl. 106—31)

1. Carbon transfer inks of the hot-melt type comprising as the wax ingredient from 30% to 50% by weight of at least one compound selected from the class of compounds having the general formula:

where *n* is an integer of from 2 to 8, *m* is an integer selected from the group consisting of 2*n* and 2*n*—2, R is an alkyl group having from 16 to 22 carbon atoms and R′ is a substituent selected from the group consisting of hydrogen and an alkyl radical having from 16 to 22 carbon atoms, the balance comprising paraffin ink oil and carbon blacks.

3,129,105
FIBROUS METAL TITANATES

Kenneth L. Berry and Donald M. Sowards, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed July 28, 1961, Ser. No. 127,483
7 Claims. (Cl. 106—55)

1. A fibrous water-insoluble protonated alkali metal hexatitanate of the general formula $M_xH_y(O(TiO_2)_n)_z$ wherein x equals 1 to 2; y equals 1 to 15; z equals $\frac{1}{2}(x+y)$; n is 6–7; and M is an alkali metal of atomic number of at least 11.

3,129,106
WETTING AND ANTI-STRIPPING ALIPHATIC ETHER AND POLYAMINE CHAIN COMPOUNDS FOR USE IN CONNECTION WITH ASPHALT COMPOSITIONS

Jacob Katz, 15 Bevelin Road, Providence, R.I.

No Drawing. Filed May 3, 1960, Ser. No. 26,425
11 Claims. (Cl. 106—273)

1. A heat stable asphalt additive having stable anti-stripping properties at elevated temperatures of 250° to 400° F. and composed of the reaction product of one to three mols of fatty acids containing 8 to 22 carbon atoms with one mol of dialkylaminoalkoxyalkyl amine, said reaction product being formed by heating the mixture of the fatty acids and the amine up to about 300 to 450° F. for from four to five hours and removing any water generated, the alkyl groups containing 1 to 4 carbon atoms.

3,129,107
MIXTURES OF RESINS FROM OXIDIZED AROMATIC EXTRACTS AND OXIDIZED LIQUID DIOLEFIN POLYMERS

Neville Leverne Cull, Baker, and Glen Porter Hamner, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Sept. 1, 1960, Ser. No. 53,504
8 Claims. (Cl. 106—285)

1. A coating composition consisting essentially of from 10 to 90% by wt. of air-blown phenol extracts of heavy aromatic-containing fractions from catalytic cracked gas oil and 90 to 10% by wt. of an air-blown polymer of a conjugated diolefin of 4 to 6 carbon atoms.

3,129,108
ELECTROLUMINESCENT CELL AND METHOD

Gabriel P. Katona, Corning, N.Y., assignor to Corning Glass Works, Corning, N.Y., a corporation of New York

Filed Dec. 23, 1960, Ser. No. 78,022
9 Claims. (Cl. 117—33.5)

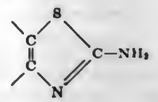
1. A process for forming an electroluminescent cell having a glass substrate comprising the steps of applying an electroconductive coating to one side of said substrate, applying to said electroconductive coating a layer of a mixture of phosphor and a dielectric binder material selected from the group consisting of glass and ceramic, preheating the unit so formed to a point below the firing temperature of said binder material and, applying sufficient additional local heat to said layer by dissipating electrical energy within said electroconductive coating to raise the temperature of said layer to the firing temperature thereof.

3,129,109
HEAT-SENSITIVE COPY-SHEET

Wesley R. Workman, St. Paul, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Sept. 25, 1961, Ser. No. 140,236
7 Claims. (Cl. 117—36.8)

1. A heat-sensitive copy-sheet product useful in the copying of differentially radiation-absorptive graphic originals by the thermographic copying process, said copy-sheet including a heat-sensitive layer containing in uniform intimate juxtaposition inter-reactant image-forming components consisting of a normally stable 2-aminothiazole having the structure



and an organic oxidizing agent having a positive halogen atom attached to a nitrogen atom.

3,129,110
PROCESS OF PRODUCING DECORATIVE PLASTIC SURFACES

Theodore R. Anderson, Oakland, Calif., assignor to The Glidden Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed July 31, 1958, Ser. No. 752,200
5 Claims. (Cl. 117—37)

1. A process for preparing a decoratively-discontinuous, webby design on the surface of a substrate, comprising the steps of applying on said substrate a background coat of catalyzed polyester/monomer solution characterized by being substantially 100% polymerizable to a gel state in advance of the fully cured state, gelling said applied background coat, spraying on said background coat before it has cured a webby deposit of a homogeneous, compatible solution comprising a gelable substantially 100% polymerizable polyester/monomer solution and a web-forming polyvinyl acetate resin characterized by a molecular weight of at least 6000, and curing said polyester/monomer solutions; said polyester/monomer solutions being composed essentially of (*a*) polyhydric alcohol/polycarboxylic acid ester products containing a plurality of $\Delta^{2,3}$-enedioyl groups dissolved in (*b*) liquid monomeric compound which is copolymerizable with said enedioyl ester products by reason of the presence of a $CH_2=C<$ group in said monomeric compound.

3,129,111
PROCESS FOR TIN COATING COPPER PLATED MAGNESIUM

Werner F. R. Loening, Wilton, Conn., assignor to the United States of America as represented by the Secretary of the Air Force

No Drawing. Filed May 3, 1962, Ser. No. 192,293
2 Claims. (Cl. 117—51)

1. The process of applying a protective coating over a copper plated magnesium article in which the copper plated magnesium article is surface covered with paste flux, then immersing said article for a sufficient length of time to bring the article to substantially the solution temperature in a coating solution at 475° F. and comprising 90% tin and 10% of 50–50 solder, then removing said article from the coating solution and brushing the surface of said article with a brush containing said flux, then final dipping said article into said coating solution to produce a smooth coating on the article and then removing said article from said coating solution for cooling.

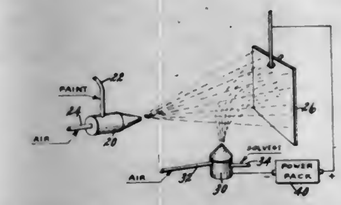
3,129,112
ELECTROSTATIC COATING OPERATIONS

John T. Marvin, Xenia, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Nov. 15, 1961, Ser. No. 152,551
11 Claims. (Cl. 117—93.4)

10. The method for electrostatically painting an object, the steps comprising distributing a dispersion of paint from a source, distributing a dispersion of solvent for the paint from another source, electrostatically charging

the solvent only, causing the solvent dispersion to intercept and intermingle with the paint dispersion at a point remote from either source of dispersion to form a mixture, separately controlling the quantities of the paint and

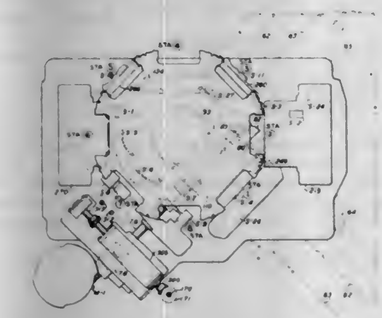


solvent dispersions to obtain an optimum mixture, and depositing said mixture on an object to be painted by charging said object opposite to the charge on the solvent.

3,129,113
AUTOMATIC POWDER APPLICATOR APPARATUS

Walter F. Lutzweit, Rochester, N.Y., and Onni W. Niemi, Santa Monica, Calif., assignors to Xerox Corporation, Rochester, N.Y., a corporation of New York

Filed Feb. 13, 1962, Ser. No. 172,996
10 Claims. (Cl. 118—6)



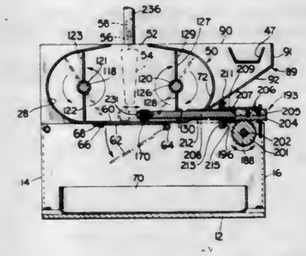
1. Apparatus for the application of electroscopic powder onto plate surfaces, said apparatus comprising:
(*a*) support means to support a plurality of plates on which electroscopic powder is to be applied;
(*b*) means to discharge an aerosol of electroscopic powder in a controlled discharge path;
(*c*) means to feed plates seriatim from said support means into said aerosol discharge path wherein to receive an application of the powder of the aerosol on the plate surface;
(*d*) determination means to determine the homogeneity of powder application effected by said last recited means relative to a predetermined standard; and,
(*e*) disposition means selectively responsive to the determination of said determination means to effect appropriate disposition of plates on which powder has been applied.

3,129,114
MACHINE FOR APPLYING DRY COATINGS TO FROZEN CONFECTIONS AND THE LIKE

Joseph L. Kindman, East Rockaway, N.Y., assignor to Fulton Engineering Co., Inc., Long Island City, N.Y., a corporation of New York

Filed Apr. 16, 1962, Ser. No. 187,538
6 Claims. (Cl. 118—24)

1. A machine of the class described, comprising an enclosed housing having a substantially flat bottom, spaced rotary spraying units having radial blades mounted within said housing, an opening in said housing through which a plurality of spaced frozen confections may be moved into the space between said spraying units, means for discharging granular material into said housing, reciprocat-

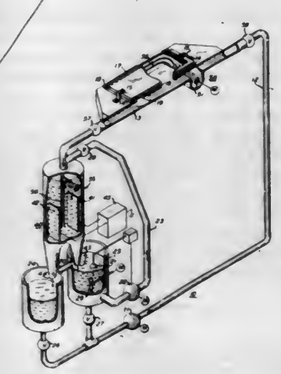


ing means operating within said housing and across the bottom thereof to move the coating material collecting on said bottom in alignment with the space between said rotary spraying units into the paths of the blades thereof for respraying over said confections, and means for operating said spraying units and said reciprocating means.

3,129,115
XEROGRAPHIC DEVELOPING APPARATUS

Harold E. Clark, Penfield, and Robert W. Gundlach, Victor, N.Y., assignors to Xerox Corporation, a corporation of New York

Filed Apr. 17, 1961, Ser. No. 103,344
6 Claims. (Cl. 118—637)



1. Apparatus comprising in combination means to support a xerographic plate, at least two reservoirs for containment of a liquid of high electrical resistance in which electroscopic developing material can be contained, means to selectively contact a xerographic plate on its support means with a quantity of liquid contained in each of said reservoirs and return an excess of said liquid quantity through a common return to the reservoirs, and developing material separating means connected in the common return to said reservoirs to maintain the liquid in at least one of said reservoirs with a high concentration of developing material adapted to effect development of an electrostatic latent image on a xerographic plate

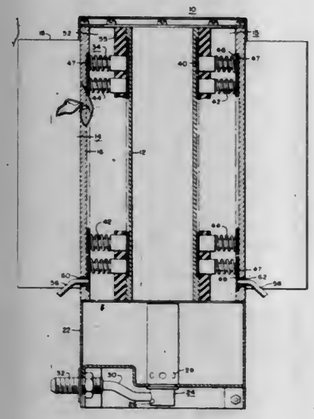
by depositing developing material thereon while maintaining the liquid in another of said reservoirs with a substantially lower concentration of developing material adapted to remove developer deposited on a plate by the highly concentrated liquid.

3,129,116

THERMOELECTRIC DEVICE

Thomas M. Corry, Monroeville, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Mar. 2, 1960, Ser. No. 12,426
4 Claims. (Cl. 136—4)



1. A thermoelectric assembly comprising a plurality of thermoelectric elements each comprising a body of thermoelectric material and a flexible conductor of a material having high heat and electrical conductivity secured to said body on one end thereof, a plurality of thermally and electrically conductive flexible flat straps for connecting electrically adjacent thermoelements, some of said flat straps connecting electrically adjacent pairs of thermoelectric elements at an end remote from said conductors, other of said straps connecting electrically adjacent pairs of said conductors at their ends remote from said body, compressible biasing means having at least two degrees of freedom intermediate said other straps and said bodies for extending said flexible conductors.

3,129,117

THERMOELECTRIC MATERIALS AND THEIR PRODUCTION BY POWDERED METALLURGY TECHNIQUES

William R. Harding, Jr., Jeannette, and Allan S. Gelb, Greensburg, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Aug. 12, 1960, Ser. No. 49,359
8 Claims. (Cl. 136—5)

8. A thermoelectric device in which at least one p-type and at least one n-type thermoelectric element is an anisotropic intermetallic thermoelectric material which has been formed by compacting an admixture of at least two anisotropic intermetallic material with a compacting force which was applied perpendicular to the direction of electrical current flow through the thermoelectric elements within the thermoelectric device.

3,129,118

RESERVE ELECTRIC BATTERY WITH COMBINED ELECTRODE AND SEPARATOR MEMBER

Milton E. Wilke and Thomas H. Loverude, Freeport, Ill., assignors to Servel, Inc., Evansville, Ind., a corporation of Delaware

Original application May 26, 1959, Ser. No. 815,859, now Patent No. 3,061,659, dated Oct. 30, 1962. Divided and this application Mar. 23, 1962, Ser. No. 182,055
4 Claims. (Cl. 136—100)



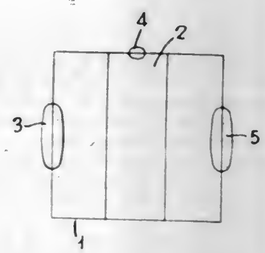
1. An assembly unit for a reserve battery having elements comprising a magnesium anode, a combined cathode and separator member comprising a sheet-form silver chloride electrode having on a surface thereof a plurality of spaced mounds of a solid electrically insulating organic plastic composition, said composition comprising a plastisol of a polymer of vinyl chloride and being characterized in that it is capable of being provided in liquid form at temperatures below the fusion temperature of said cathode, and means for binding said elements together.

3,129,119

PRODUCTION OF P.N. JUNCTIONS IN SEMICONDUCTOR MATERIAL

Robert Lindsay Rouse, Caversham, Reading, James Wakefield, Beenham, near Reading, John Bernard Willis, Sulhamstead Hill, near Reading, and Ronald Bullough and Ronald Charles Newman, Earley, Reading, England, assignors to Associated Electrical Industries Limited, London, England, a British company

Filed Apr. 15, 1960, Ser. No. 22,637
Claims priority, application Great Britain Apr. 22, 1959
4 Claims. (Cl. 148—1.5)



1. The process of producing a p-n junction of extended area which consists in heating a body of monocrystal semiconductor material containing oxygen together with impurity activators of opposite conductivity types in homogeneous concentration, the activator concentration of one conductivity type being initially predominant, said body having an internal planar crystal boundary, so as to produce controlled diffusion to, and precipitation with said oxygen at, the crystal boundary, of at least one of said initially predominant activators, whereby to deplete the region in the immediate neighbourhood of the boundary of said one type of initially predominant activator and thereby to form an adjacent region of opposite conductivity type to that of the body.

3,129,120

STAINLESS STEEL RESISTANT TO NITRIC ACID CORROSION

Raymond Smith, Pittsburgh, Pa., and Charles O. Tarr, Cincinnati, Ohio, assignors to United States Steel Corporation, a corporation of New Jersey

No Drawing. Continuation of application Ser. No. 779,571, Dec. 11, 1958. This application Feb. 5, 1962, Ser. No. 171,272
2 Claims. (Cl. 148—38)

1. Molybdenum-containing hot-worked, chromium-nickel, completely austenitic steel consisting essentially of

Carbon	Up to .03%.
Manganese	Up to 2.00%.
Silicon	Up to .60%.
Molybdenum	2.00 to 3.10%.
Nickel	14.30 to 16.00%.
Chromium	17.00 to 20.00%.

with the balance iron and residual impurities, said steel having been reduced in cross-sectional area at least 60% while in the temperature range of 1200 to 2000° F. and not thereafter heated above 2000° F., the composition of said steel and said hot work combining to produce a delta ferrite free structure and resistance to nitric acid corrosion characterized by a penetration rate of less than .002 inch per month in boiling 65% nitric acid after sensitizing for 2 hours at 1250° F. and air cooling.

3,129,121

PHOSPHATE COATING SOLUTION AND METHOD OF COATING FERRIFEROUS METAL

Edward A. Rodzewich, Flourtown, Pa., assignor to Amchem Products, Inc., Ambler, Pa., a corporation of Delaware

No Drawing. Filed Apr. 4, 1962, Ser. No. 184,959
7 Claims. (Cl. 148—6.15)

1. In the art of forming a phosphate conversion coating on a ferriferous metal surface wherein an aqueous alkali metal phosphate coating solution is applied to the surface to form the coating: the method which comprises including in the coating solution, as addition agents, the following ingredients:

(1) from 0.3 to 1 gram/liter of a saturated alkyl secondary amine of the formula:

$$H—N—(C_nH_{2n}X)_2$$

wherein X is selected from the group consisting of hydrogen and hydroxyl, and n is an integer of from 2 to 4 inclusive

and

(2) nitrite ion (calculated as NO_2) within the range determined by the following equations:

(A) For the minimum amount of NO_2,

$$\frac{0.3}{\text{Molecular weight of secondary amine used}} \times 46$$

(B) For the maximum amount of NO_2,

$$\frac{1}{\text{Molecular weight of secondary amine used}} \times 46$$

maintaining the pH of said solution at from 4.0 to 5.8; and maintaining the temperature of the solution at not less than 120° F.

3,129,122

SOLUTION FOR AND METHOD OF COATING FERRIFEROUS SURFACES

Edward A. Rodzewich, Flourtown, Pa., assignor to Amchem Products, Inc., Ambler, Pa., a corporation of Delaware

No Drawing. Filed Apr. 4, 1962, Ser. No. 184,960
7 Claims. (Cl. 148—6.15)

1. In the art of forming a phosphate conversion coating on a ferriferous metal surface wherein an aqueous alkali metal phosphate coating solution is applied to the surface to form the coating: the method which comprises including in the coating solution, as addition agents, the following ingredients:

(1) from 0.05 to 1 gram/liter of a heterocyclic compound selected from the group consisting of melamine, 3-amino-1,2,4-triazole, imidazol, succinimide and 2-oxazolidone

and

(2) nitrite ion (calculated as NO_2) within the range determined by the following equations:

(A) For the minimum amount of NO_2,

$$\frac{0.05}{\text{Molecular weight of heterocyclic compound used}} \times 46$$

(B) For the maximum amount of NO_2,

$$\frac{1}{\text{Molecular weight of heterocyclic compound used}} \times 46$$

maintaining the pH of said solution at from 4.0 to 5.8; and maintaining the temperature of the solution at not less than 120° F.

3,129,123

METHOD AND SOLUTION FOR APPLYING A PHOSPHATE CONVERSION COATING ON FERRIFEROUS SURFACES

Edward A. Rodzewich, Flourtown, Pa., assignor to Amchem Products, Inc., Ambler, Pa., a corporation of Delaware

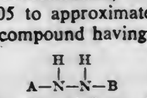
No Drawing. Filed Apr. 4, 1962, Ser. No. 184,961
7 Claims. (Cl. 148—6.15)

1. The method of forming a phospate conversion coating on a ferriferous surface which comprises the following steps:

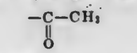
(A) Applying to the surface an aqueous solution consisting essentially of:

(1) alkali metal phosphate from the class which consists of sodium, potassium, and ammonium mono and dihydrogen phosphates in coating producing concentration,

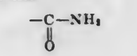
(2) from 0.05 to approximately 1 gram/liter of hydrazine compound having the formula:



where A is selected from the group consisting of hydrogen, the phenyl radical and unsubstituted alkyl radicals of from 1 to 3 total carbon atoms, and B is selected from the group consisting of hydrogen, the



radical and the



radical

and

(3) nitrite ion (calculated as NO_2) within the range determined by the following equations:

For the minimum amount of NO_2,

$$\frac{0.05}{\text{Molecular weight of hydrazine compound used}} \times 46$$

For the maximum amount of NO_2,

$$\frac{1}{\text{Molecular weight of hydrazine compound used}} \times 46$$

(B) maintaining the pH of said solution at from 4.0 to 5.8; and

(C) maintaining the temperature of the solution at not less than 120° F.

3,129,124
PROCESS FOR PRODUCING INTERLAMINAR INSULATION FOR ELECTRICAL APPARATUS

Duane L. Barney, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

No Drawing. Filed Dec. 30, 1959, Ser. No. 862,765
1 Claim. (Cl. 148—6.35)

A process for establishing a thin film of insulation on a silicon steel lamination comprising the steps of placing said lamination in a closed receptacle, introducing sulfur hexafluoride gas in the receptacle and circulating it in contact with the silicon steel lamination, heating the lamination in said receptacle to a temperature between 675 and 750° C. for a period of time sufficient to cause a chemical reaction between the gas and the metal surface and thereby form a thin layer of insulation on the metal surface, said insulation comprising a fluoride of the gas and the base metal.

3,129,125
PREPARATION OF SILICON CARBIDE MATERIALS

Donald R. Hamilton, Monroeville, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed July 1, 1959, Ser. No. 824,190
5 Claims. (Cl. 148—174)

1. In a method of preparing silicon carbide single crystals containing an element selected from the group consisting of aluminum and boron as the significant, p-type conductivity determining impurity in a portion thereof, in which a raw material charge containing said element is heated to a temperature sufficient to produce a vapor of silicon carbide and p-type doped silicon carbide crystals having a high concentration of the p-type doping impurity nucleate and grow therefrom, the step of decreasing the concentration of p-type impurity present in a predetermined subsequently grown portion of the crystals being so produced comprising flowing an inert gas comprising chlorine into the area of crystal growth at the time said predetermined portion of said crystals is growing whereby the concentration of the p-type element in the subsequent portion is reduced.

3,129,126
BLASTING COMPOSITION

Harold G. Carlevato, Hagerstown, Md., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 22, 1961, Ser. No. 161,378
2 Claims. (Cl. 149—29)

1. An aqueous slurry blasting composition, each 100 parts by weight thereof consisting essentially of:

(*a*) about from 20 to 30 parts by weight of ammonium nitrate,
(*b*) about from 10 to 25 parts by weight of sodium nitrate,
(*c*) about from 20 to 30 parts by weight of trinitrotoluene,
(*d*) about from 10 to 30 parts by weight of ferrophosphorus, and
(*e*) about from 8 to 20 parts by weight of water.

3,129,127
BLASTING COMPOSITION

Cyril J. Breza, Smithsburg, Md., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Feb. 17, 1961, Ser. No. 89,916
3 Claims. (Cl. 149—30)

1. A blasting agent consisting of ingredients which per se are non-explosive, said blasting agent consisting essentially of at least about 50% by weight of ammonium nitrate and about from 3 to 50% by weight of ferrophosphorus.

3,129,128
PRODUCTION OF AMMONIUM NITRATE-FUEL OIL BLASTING AGENTS WHICH WHEN DETONATED RESULT IN GASEOUS MIXTURES OF LOW TOXITY

Henryk S. Berczely, Orrantia del Mar, Lima, Peru, assignor to Explosivos S.A., Pisco, Lima, Peru, a corporation of Peru

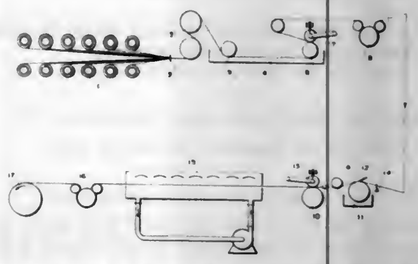
No Drawing. Filed July 31, 1962, Ser. No. 213,585
4 Claims. (Cl. 149—46)

1. A process of producing detonable mixtures of ammonium nitrate and petroleum oils in regulated proportions such that when detonated the fumes produced are of low toxicity, which process comprises mixing with the petroleum oil a control oil-soluble dyestuff to produce a colored petroleum oil of a definite color, mixing the thus colored petroleum oil containing oil-soluble dyestuff with ammonium nitrate to uniformly distribute the colored petroleum oil throughout the ammonium nitrate and produce a control sample having a predetermined color substantially the same as the color of the desired mixture of ammonium nitrate and petroleum oil in proportions such that when this mixture is detonated fumes of low toxicity are produced, mixing ammonium nitrate with colored petroleum oil having the same dyestuff and in the same relative proportions as in the colored petroleum oil employed to proluce said control sample, and regulating such mixing in accordance with the color of the control sample to produce mixtures of ammonium nitrate and colored petroleum oil in which the colored petroleum oil is uniformly distributed throughout the ammonium nitrate and the mixtures have substantially the same color as the color of the control sample, and which mixtures upon detonation result in a gaseous atmosphere of low toxicity.

3,129,129
METHOD FOR PREPARING SYNTHETIC TIRE CORD FABRIC

Hans Schrode, Wuppertal-Elberfeld, Heinz Grotjahn, Dremmen, Rhineland, and Kurt Heuer, Oberbruch-Grebben, Germany, assignors to American Enka Corporation, Enka, N.C., a corporation of Delaware

Filed Oct. 17, 1960, Ser. No. 63,059
Claims priority, application Germany Oct. 24, 1959
11 Claims. (Cl. 156—161)

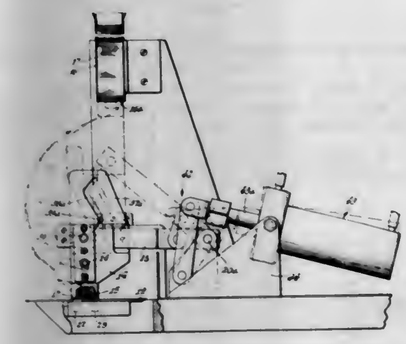


1. A method of producing a reinforcing fabric of high elasticity modulus for elastomeric articles, which comprises treating a weftless ribbon of synthetic threads, each thread being substantially completely free from twist, while free from tension, said synthetic threads selected from the group consisting of rayon and polyester threads, with a liquid medium containing rubber and a polymeric material selected from the class consisting of partially polymerized mixtures of hydroxy benzenes and formaldehyde, and polyisocyanates, then stretching and heat-drying the treated threads under tension.

3,129,130
LABELING MACHINE

Bernard Lerner, Great Neck, Milton Rothstein, East Williston, Martin Kaplan, Oceanside, and Georg Hramoff, New York, N.Y., assignors to Willcox & Gibbs Sewing Machine Co., New York, N.Y., a corporation of New York

Filed June 27, 1961, Ser. No. 119,922
20 Claims. (Cl. 156—367)

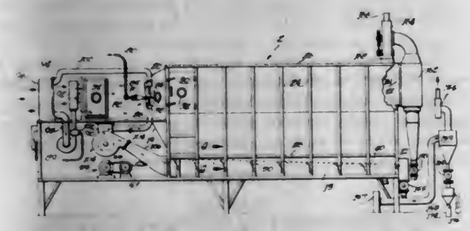


1. A device for applying labels to articles, at least one of which includes thermoplastic material, comprising an anvil having heating means over which an article is disposed; a fixed hopper having a supply of labels therein and provided with an open bottom for removal of the labels seriatim therefrom; means carrying a cooperating heating means swingable in a predetermined path between a label receiving position and a position overlying said article on the anvil and having means for holding a label thereto; actuating means operating the means carrying the cooperating heating means to move the label into engagement with the article on the anvil with the cooperating heating means in cooperative relation with the heating means on the anvil; and means energizing the heating means to cause the thermoplastic material to soften and adhere the label to said article.

3,129,131
SPRAY DRYING APPARATUS

Richard R. Henszey, Oconomowoc, Wis., assignor, by mesne assignments, to C. E. Rogers Company, Detroit, Mich., a corporation of Michigan

Filed Oct. 27, 1960, Ser. No. 65,357
1 Claim. (Cl. 159—4)

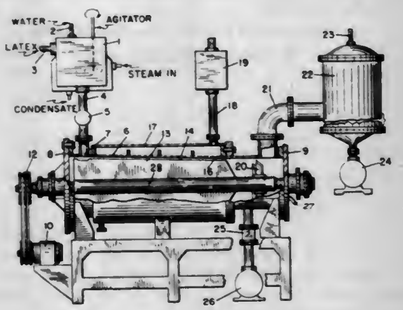


Drying apparatus comprising
walls defining an enclosed elongated horizontal chamber,
a perforate bed support movably supported adjacent the bottom of said chamber and extending longitudinally of said chamber,
means for introducing a liquid-containing material to be treated in a dispersed form above said bed support at one end of said chamber,
means for introducing a heated drying gas upwardly past said perforate bed support into said chamber above said bed support and into contact with the material to be treated,
said bed support being disposed to receive by gravity directly from said means for introducing the portion of the material remaining after contact with the drying gas,
means for removing drying products from the opposite end of said chamber,
means for horizontally reciprocating said bed support at a predetermined rate,
sealing means to minimize leakage of the drying gas around an edge of the bed support, said sealing means including
a longitudinally extending flange disposed along the longitudinal edges of said bed support and a longitudinal member mounted on each of the walls adjacent the edges of said bed support,
said members defining inverted V-shaped openings in their cross section and being disposed to receive but not to physically engage said flanges within the V-shaped openings,
and further including end seal means having an imperforate region at the end of said bed support in the opposite end of said chamber,
a sealing plate extending between said imperforate region and the wall at said opposite end of said chamber,
and means for supporting said plate in sealing relationship between said imperforate region and said last-named wall.

3,129,132
TREATMENT OF LATEX

Arne R. Gudheim, N. Main St., Petersham, Mass.

Filed Apr. 14, 1960, Ser. No. 22,298
1 Claim. (Cl. 159—49)



The process for removing monomers from latices by the addition of liquid thereto only when the solids content thereof exceeds approximately sixty percent to seventy percent, followed by the evaporation of water therefrom in a horizontal chamber, comprising passing the latex through said chamber concurrently with the flow of the vapors, agitating or scraping said latices to form a thin turbulent film on the wall of said chamber, applying vacuum to said chamber to maintain said chamber at a pressure of about 10 mm. to 400 mm. Hg absolute, applying heat to said chamber to cause evaporation of liquid and monomers therefrom, and separating the vapors from the liquid latices.

3,129,133

COLLOIDAL DISPERSIONS OF PARTIALLY CURED POLYEPOXIDES, THEIR PREPARATION AND USE FOR PREPARING WET STRENGTH PAPER

Marshall E. Doyle, Alameda, and Melvin E. Nicholsen, Jr., Oakland, Calif., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 21, 1960, Ser. No. 23,618

10 Claims. (Cl. 162—164)

7. A process for preparing paper having improved wet strength which comprises applying at some time during the production of paper from paper pulp to finished paper to the paper product present at that stage an aqueous colloidal dispersion of a reaction product of a polyepoxide having more than one vic-epoxy group and a polyfunctional epoxy curing agent which reaction product is free of gel, and then heating to effect cure of the polyepoxide.

3,129,134

SILICEOUS PIGMENTS

Gosta B. Lagerstrom, Clinton, Ohio, assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed Mar. 21, 1961, Ser. No. 97,177

18 Claims. (Cl. 162—181)

7. Paper having distributed therein finely divided siliceous pigment comprised of porous flocs of ultimate particles and having an average ultimate particle size of below 0.5 micron, said pigment being characterized by ultimate particles which are in the form of an optically dense outer shell of water insoluble siliceous material and an interior volume substantially free of water insoluble precipitated siliceous material and of an optical density substantially lower than said outer shell.

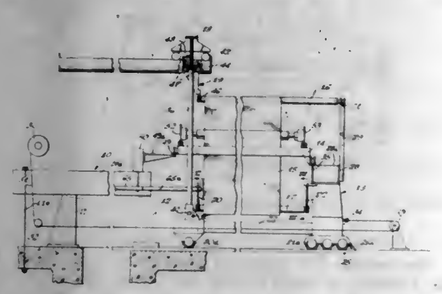
3,129,135

FOURDRINIER WIRE STRINGING APPARATUS

Lloyd Hornbostel and Edward D. Beachler, Beloit, Wis., assignors to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin

Filed Aug. 16, 1960, Ser. No. 50,008

8 Claims. (Cl. 162—273)



6. A mechanism for changing wires on a Fourdrinier machine comprising, a movable vehicle for carrying a wire back over the Fourdrinier machine, a track extending transversely across the vehicle and supported thereon and movable with the vehicle, a carriage on said track for traveling thereacross and opening the wire loop on the vehicle, and means for supporting the opened loop to be moved with the vehicle over the Fourdrinier machine.

3,129,136

CONTROLLING NEMATODES WITH 2-CHLORO-3-HYDROXY-4-NITRO-BENZALDEHYDE

David P. Mayer, Chicago, Ill., assignor to Velsicol Chemical Corporation, Chicago, Ill., a corporation of Illinois

No Drawing. Filed Nov. 17, 1961, Ser. No. 153,216

3 Claims. (Cl. 167—30)

1. A method for the control of nematodes which comprises applying to the locus of said nematodes a toxic quantity of 2-chloro-3-hydroxy-4-nitrobenzaldehyde.

3,129,137

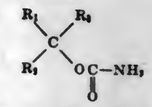
METHOD OF INHIBITING GASTRO-INTESTINAL IRRITATION

Karl H. Beyer, Gwynedd Valley, Pa., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Mar. 30, 1961, Ser. No. 99,370

9 Claims. (Cl. 167—55)

1. A therapeutic composition comprising glycine and a carbamate of the formula



wherein R_1 and R_2 are alkyls having a combined total of 4 carbon atoms and R_3 is an alkyl containing no more than 2 carbon atoms, said glycine being present in said composition in an amount of from about 0.5 mg. to about 2.5 mg. per mg. of carbamate.

3,129,138

PROCESS OF EXTRACTING *PLEIOCARPA MUTICA*

Francis A. Hochstein, New London, Conn., assignor to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed June 17, 1960, Ser. No. 36,758

9 Claims. (Cl. 167—67)

1. A process for the preparation of a hypotensive alkaloid concentrate which comprises subjecting a subdivided bark of *Pleiocarpa mutica* to extraction with a lower alkanol, washing an aqueous solution of said extract at a pH of from about 8 to 11 with a liquid aliphatic chlorinated hydrocarbon solvent, extracting said washed aqueous solution with a water-insoluble lower alkanol, and concentrating said extract.

3,129,139

THERAPEUTIC COMPOSITION

Lamar B. Dale, Jr., George L. Christenson, and Raymond C. Pogge, Cincinnati, Ohio, assignors to Richardson-Merrell Inc., a corporation of Delaware

No Drawing. Filed Apr. 14, 1958, Ser. No. 728,079

8 Claims. (Cl. 167—68)

5. A method for treating iron deficiency in patients which comprises administering to the patient a medicinal composition containing a ferrous salt useful for iron medication in an amount sufficient to provide about 5 to 10 milligrams of elemental iron, and about 200 to 800 milligrams of polyoxyethylene sorbitan monolaurate, and in a weight ratio of about 1 part of elemental iron to about 40 to 80 parts of polyoxyethylene sorbitan monolaurate.

3,129,140

FUEL ELEMENTS FOR NUCLEAR REACTORS

Jacques-André Stohr, Bures-sur-Yvette, and Maurice Gauthrou, Paris, France, assignors to Commissariat a l'Energie Atomique, Paris, France

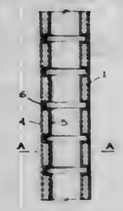
Filed Aug. 17, 1959, Ser. No. 834,135

Claims priority, application France Aug. 21, 1958

5 Claims. (Cl. 176—76)

1. In a fuel element for a nuclear reactor, a plurality of rings of ceramic fuel aligned and spaced along their

longitudinal axes, an exterior thin metal sheath surrounding and in intimate contact with the exterior surfaces of said rings, an interior thin metal sheath engaging



and in intimate contact with the interior surfaces of said rings, said sheaths being in contact between said rings whereby said sheaths retain said rings in their relative longitudinal axial positions in the fuel element.

3,129,141

NUCLEAR REACTOR FUEL ELEMENT AND PROCESS FOR MAKING SAME

John B. Burnham, Jr., Bloomfield Hills, Mich., and James G. Darrah, Wethersfield, Conn., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

No Drawing. Filed Nov. 3, 1958, Ser. No. 771,248

4 Claims. (Cl. 176—69)

1. A fuel element for nuclear reactors consisting essentially of uranium carbide particles and agglomerates of particles at least partially covered with graphite and relatively uniformly dispersed in a matrix of silicon and silicon carbide.

3,129,142

FUEL ELEMENT

Warren P. Chernock, West Hartford, Conn., assignor to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 31, 1959, Ser. No. 803,074

2 Claims. (Cl. 176—69)

1. A fuel element comprising a protective casing, a fuel within said casing that is a homogeneous face centered cubic solid solution of from 5 mole percent to 55 mole percent UO_2 in stabilized ZrO_2.

3,129,143

PROCESS FOR THE PRODUCTION OF 11β-HYDROXYTESTOLOLACTONE

Josef Fried, Princeton, and Richard William Thoma, Somerville, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Original application Nov. 9, 1961, Ser. No. 151,146. Divided and this application Jan. 23, 1963, Ser. No. 258,365

1 Claim. (Cl. 195—51)

A process for preparing 11β-hydroxytestololactone which comprises subjecting 11β-hydroxyandrostenedione to the actions of enzymes of *Cylindrocarpon radicicola* in the presence of oxygen and recovering the resulting 11β-hydroxytestololactone.

3,129,144

BIOLOGICAL DETECTION EQUIPMENT

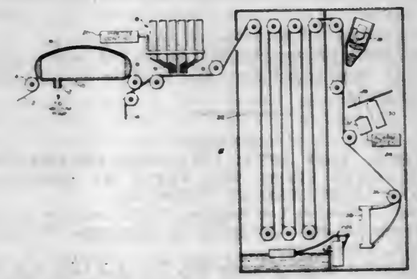
Robert Z. Page, 7117 Kerr Drive, and Jack W. Terrill, 5912 Backlick Road, both of Springfield, Va.

Filed June 29, 1962, Ser. No. 206,525

3 Claims. (Cl. 195—127)

(Granted under Title 35, U.S. Code (1952), sec. 266)

1. Apparatus comprising filter tape made of material capable of filtering out from a suspending fluid medium and retaining microorganisms; a vacuum chamber having a perforated wall and means for subjecting said chamber to vacuum; means for moving said filter tape continuously past said wall in intimate contact with the exterior surface of said wall whereby, when a vaccum is applied to said vacuum chamber, the fluid medium surrounding said chamber is caused to flow through said filter tape to deposit microorganisms from said medium on said filter tape; means for bringing absorbent tape into intimate contact with said filter tape after said filter tape has passed said chamber; means for causing said absorbent tape and said filter tape, while remaining in intimate contact, to move together continuously to a moistening unit for moistening said absorbent tape to produce therein a plurality of moist region, each containing, for supply to said filter tape, nutrient, dye, and dye activator for a particular microorganism, there being separate regions adapted to culture different microorganisms; an incubation chamber; means for feeding said tapes into said incubation chamber, the rate of travel of the tapes being such that they remain in said incubation chamber for an incubation period long enough to develop observable colonies of microorganisms; a light source to produce



light to illuminate microorganism colonies which produce characteristic colors in the presence of their associated dyes and dye activators; means for passing said tapes after said incubation period into the path of light from said light source; photoelectric pickup means which respond to selected wavelengths of light characteristic of particular microorganisms, located to receive light from said light source after impingement on said tapes; optical filter means associated with said light source and photoelectric pickup means to facilitate transmission to said photoelectric pickup means of selected wavelengths of light characteristic of particular microorganisms; and an alarm system connected to said photoelectric pickup means to signal an alarm upon receipt from said photoelectric pickup means of a signal indicative of light characteristic of a particular microorganism; said moistening unit comprising a plurality of adjacent dispensers, each for dispensing its own solution containing particular nutrient, dye, and dye activator components; and means for controlling operation of said dispensers in synchronism with the travel of said tapes, whereby separate regions of said tapes are impregnated separately with the effluent from each dispenser.

3,129,145

MEANS AND METHOD FOR MASS AND HEAT TRANSFER

Gerald L. Hassler, Los Angeles, Calif., assignor to The Regents of the University of California, Berkeley, Calif., a corporation

Continuation of application Ser. No. 817,538, June 2, 1959. This application Oct. 18, 1962, Ser. No. 231,883

7 Claims. (Cl. 202—51)

1. A distillation structure comprising:

(*a*) first and second closely spaced porous layers, each having inner and outer surfaces, the layers being

separated by a gap, with the layers inner surfaces being opposed;

(*b*) first barrier means adjacent the outer surface of said first porous layer, incorporating means to conduct feed liquid into contact with the outer surface of said first porous layer at spaced intervals; said liquid passing therefrom through said first porous layer to the inner surface thereof;



(*c*) means for maintaining a gas pressure in said gap higher than the liquid pressure in said first and second porous layers, whereby a quantity of said liquid vaporizes across said gap, and forms a condensate on said second porous layer which passes to the outer surface of said second porous layer;

(*d*) second barrier means adjacent the outer surface of said second porous layer incorporating means to conduct the condensate away from the outer surface of the second porous layer; and

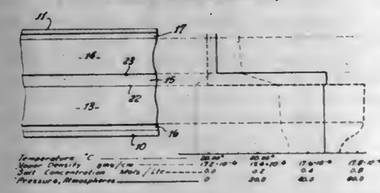
(*e*) means for applying heat to the first barrier means and means to withdraw heat from the second barrier means.

3,129,146

METHOD AND APPARATUS FOR SEPARATING SOLVENTS FROM SOLUTIONS BY DISTILLATION ACTIVATED BY PRESSURE

Gerald L. Hassler, Los Angeles, Calif., assignor to The Regents of the University of California, Berkeley, Calif., a corporation

Continuation of application Ser. No. 827,529, July 16, 1959. This application Oct. 18, 1962, Ser. No. 232,665
17 Claims. (Cl. 202—51)



1. A cell for separating solvent from solution by diffusion transfer activated by pressure comprising:

(*a*) an enclosed body of solvent;

(*b*) an enclosed body of solution containing said solvent maintained under a pressure greater than the pressure on said body of solvent, said solution pressure being sufficient to increase the vapor pressure of the solvent therein above the vapor pressure of said body of solvent;

(*c*) a pair of closely spaced, thin, permeable sheets separating said body of solvent from said body of solution, said sheets having a narrow gap therebetween; and

(*d*) a body of fluid enclosed in said gap at a pressure greater than the pressure on said body of solution but insufficient to render said cell inoperative,

(I) said body of fluid being adapted to permit the flow of solvent vapor from said solution and to prevent the flow of solution from said body of solution to said body of solvent, and

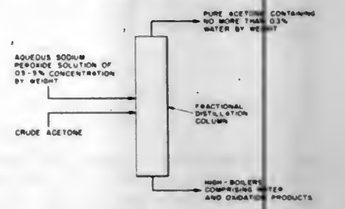
(II) said sheet producing sufficient capillary forces to maintain said body of fluid in said gap and the pressure difference between said gap and said body of solvent.

3,129,147

RECOVERY OF ACETONE BY DISTILLATION IN THE PRESENCE OF SODIUM PEROXIDE

Franco Codignola, Milan, Italy, assignor to Societá Italiana Resine, Milan, Italy

Filed Sept. 7, 1960, Ser. No. 54,346
Claims priority, application Italy July 1, 1960
3 Claims. (Cl. 202—59)



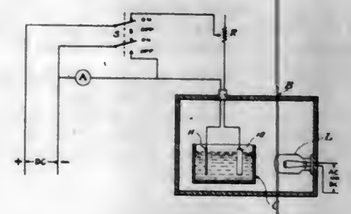
1. A method of purifying crude acetone obtained from acid dissociation of cumene hydroperoxide comprising rectifying the crude acetone in a rectification column while supplying to the column an aqueous solution of 0.5% to 5% by weight of sodium peroxide to thereby oxidize the permanganate-reducing substances contained in pure acetone.

3,129,148

METHOD AND APPARATUS FOR MEASURING FLUORIDE ACTIVITY

Lester Steinbrecher, Philadelphia, David Y. Dollman, Lansdale, Dwight E. Buczkowski, Ambler, and James W. Harrison, Philadelphia, Pa., assignors to Amchem Products, Inc., Ambler, Pa., a corporation of Delaware

Filed Nov. 8, 1962, Ser. No. 236,266
12 Claims. (Cl. 204—1)



10. A method for measuring fluoride activity in a solution comprising immersing a pair of electrodes, one of which comprises an n-type silicon electrode, in said solution, directing light having a constant intensity and spectral distribution on said silicon electrode, placing a D.C. voltage across said electrodes, with the positive side of said voltage at said silicon electrode, and measuring the current passing between said electrodes.

3,129,149

CHROMIUM PLATING PROCESS

Andy Albert Johnson, Oak Park, Mich., assignor, by mesne assignments, to M & T Chemicals Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed May 8, 1961, Ser. No. 108,281
9 Claims. (Cl. 204—29)

1. In a process for electroplating chromium over a nickel surface, the improvement comprising immersing a nickel surfaced article in an aqueous carboxylic acid bath consisting essentially of between 1 g./l. and 100 g./l. of at least one dicarboxylic acid selected from the class consisting of oxalic acid, malonic acid, tartronic acid, mesoxalic acid, succinic acid, malic acid, tartaric acid, glutaric acid and adipic acid; and removing said nickel surfaced article from said aqueous bath; and inserting said nickel surfaced article into a chromium plating bath and electrodepositing chromium on said article.

3,129,150

METHOD OF CONTINUOUSLY PRODUCING HEAT TREATED ELECTROLYTIC TINPLATE

Stanley M. Newbrander and Edwin J. Smith, Steubenville, Ohio, and John R. Smith, Weirton, W. Va., assignors to National Steel Corporation, a corporation of Delaware

Filed Feb. 27, 1958, Ser. No. 718,048
1 Claim. (Cl. 204—37)

A method of continuously producing electrolytic tinplate consisting essentially of the steps of continuously electroplating ferrous base metal strip with a coating of tin; continuously heating the resulting tinplate strip above the reflow temperature of the tin coating, continuously cooling the tinplate strip below the reflow temperature of the tin coating to produce flow brightened electrolytic tinplate, and continuously heat treating the flow brightened electrolytic tinplate at a temperature from about 175° C. to about 230° C. over a period sufficient to increase the shelf life, the minimum period of the heat treatment of the flow brightened electrolytic tinplate varying between about 30 seconds at 230° C. and about 5 minutes at 175° C., the flow brightened electrolytic tinplate prior to the heat treatment and subsequent to the heat treatment having a bright reflective flow brightened tin surface which is substantially free of a permanent adherent hard organic coating, and the heat treatment being the first heat treatment under the recited conditions of temperature and time to which the flow brightened electrolytic tinplate is subjected following flow brightening.

3,129,151

CONVERSION OF ALKALI METAL FLUORIDES TO CHLORIDES

Howard M. Dess and Donald J. Hansen, Niagara Falls, N.Y., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 22, 1960, Ser. No. 77,501
4 Claims. (Cl. 204—64)

1. In electrolytic deposition processes for the production of metal wherein a fused alkali metal bath is utilized as an electrolyte, the improvement comprising introducing hydrogen chloride into a substantially anhydrous, fused salt bath containing at least one fused alkali metal fluoride and reacting said hydrogen chloride with said fused alkali metal fluoride to form alkali metal chloride and hydrogen fluoride.

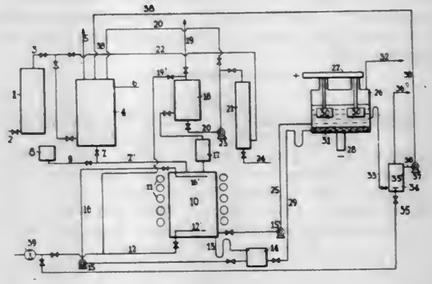
3,129,152

PROCESS FOR THE ELECTROLYTIC RECOVERY OF CHLORINE FROM HYDROGEN CHLORIDE OR HYDROCHLORIC ACID

Wolfgang Teske, Bad Soden, Taunus, and Hans Holemann, Kronberg, Taunus, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

Filed Aug. 9, 1960, Ser. No. 48,403
Claims priority, application Germany Aug. 12, 1959
12 Claims. (Cl. 204—128)

1. In an electrolytic process for the production of chlorine from aqueous hydrochloric acid, the steps which comprise: (A) reacting aqueous hydrochloric acid, at a temperature between at least 40° C. and the boiling point of said aqueous hydrochloric acid, with an oxygen-containing gas and metallic mercury, in the presence of a catalyst consisting of at least one salt of a metal having at least two different valence states, to form dissolved mercury-(2)-chloride, the catalytic metal salt in its higher valence state having sufficient oxidizing power to oxidize metallic mercury and mercury-(1)-chloride and in its lower valence state being capable of reoxidation to the higher valence state by oxygen in said oxygen-containing gas; (B) electrolyzing the resulting aqueous solution, containing mercury-(2)-chloride, between an anode and a cathode to form chlorine at the anode and metallic mercury at the cathode; (C) reconducting metallic mercury separated at the cathode to a stock of mercury serving for preparation of further mercury-(2)-chloride; (D)



freeing electrolyzed electrolyte, poor in mercury-(2)-chloride, from its chlorine content and recycling the electrolyte for reaction with metallic mercury and said oxygen-containing gas to form further mercury-(2)-chloride according to step (A); and (E) withdrawing from the cycle water formed by the oxidation of metallic mercury to mercury-(2)-chloride.

3,129,153

DISSOLUTION OF COPPER

Paul H. Margulies, Princeton, and William J. Tillis, Levittown, N.J., assignors to FMC Corporation, a corporation of Delaware

No Drawing. Filed Aug. 23, 1960, Ser. No. 51,280
4 Claims. (Cl. 204—143)

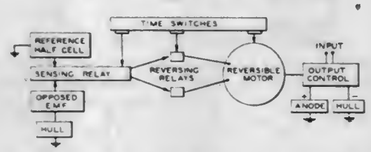
1. A method for dissolving copper which comprises contacting the copper with an aqueous solution consisting essentially of about 10 to about 45% of a persulfate while simultaneously applying an electric potential between said copper and an inert conductor, said copper serving as an anode, said persulfate serving as the electrolyte, and said inert conductor serving as the cathode, said electric potential being above the polarizing potential of copper in said persulfate solution and sufficient to permit a substantial current flow through said cell, but below the deposition potential of copper in said persulfate solution.

3,129,154

CATHODIC PROTECTION SYSTEM

Eugene M. Fry, Summit, N.J., assignor, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware

Filed May 1, 1958, Ser. No. 732,275
6 Claims. (Cl. 204—147)



4. A method for cathodically protecting a metallic surface in contact with an electrolyte which comprises continuously supplying electrical power to an anode and to the metallic surface as the cathode, generating an electromotive force between a reference half cell and the metallic surface, opposing the generated electromotive

force with a constant electromotive force such that the resulting electromotive force amounts to zero when the potential on the metallic surface reaches a predetermined optimum, registering the direction of the resulting differential electromotive force as a signal in an electrical circuit, automatically transforming the obtained signal into mechanical energy and adjusting the power supplied to the anode and to the metallic surface as a function of the signal, the signal circuit being energized periodically and intermittently, and the resulting differential electromotive force being periodically re-registered during the de-energized intervals.

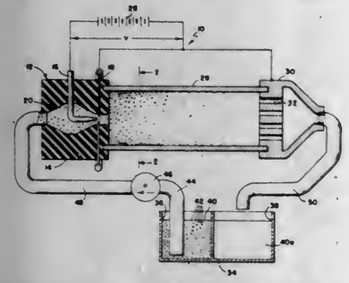
3,129,155
METHOD OF PRODUCING CYCLOALKANONEOXIME HYDROCHLORIDES
Yoshikazu Ito and Ryoh Endoh, Nagoya-shi, Aichi-ken, Japan, assignors to Toyo Rayon Kabushiki Kaisha, Tokyo, Japan, a corporation of Japan
No Drawing. Filed Sept. 20, 1961, Ser. No. 139,352
Claims priority, application Japan Sept. 26, 1960
8 Claims. (Cl. 204—162)

1. A method of producing cycloalkanoneoxime hydrochlorides photochemically which comprises, in reacting photochemically a cycloalkane with nitrosyl chloride in the presence of hydrogen chloride, continuously feeding to the reaction zone a gas containing nitrosyl chloride at a temperature ranging from —10° to 50° C., said nitrosyl chloride having a partial pressure ranging from 5 to 80 mm. Hg.

3,129,156
PREPARATION OF VINYL FLUORIDES
Peter J. Manno and William H. Snavely, Jr., Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware
No Drawing. Filed Mar. 31, 1960, Ser. No. 18,812
1 Claim. (Cl. 204—163)

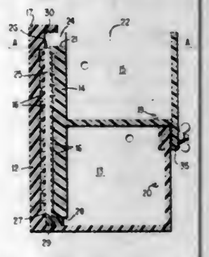
In a process for manufacture of vinyl fluoride by vapor phase reaction of 0.1 to 20 volumes of acetylene with 1 volume of anhydrous hydrogen fluoride at a temperature varying from 20 to 100° C. in the presence of a mercuric oxide catalyst, at an hourly space velocity of 10 to 500 volumes of reactants per volume of catalyst, followed by recovery of vinyl fluoride as a reaction product, the step of subjecting said catalyst to gamma radiation.

3,129,157
SPACE-CHARGE FIELD PRECIPITATION METHOD
Herbert E. Loeckenhoff, Minneapolis, Minn., assignor, by mesne assignments, to Litton Systems, Inc., Beverly Hills, Calif., a corporation of Maryland
Filed June 15, 1960, Ser. No. 36,333
2 Claims. (Cl. 204—180)



1. A space-charge precipitation method for particle-laden liquid, which comprises in sequence the steps of passing said liquid through ionizing means to provide ions in said liquid which electrically charge the particles to be precipitated and provide a space charge in said liquid, passing said liquid through a dielectric conduit with a velocity sufficient to move the charged particles away from said ionizing means into said dielectric conduit so that the charged particles are collected on the inner surfaces of the dielectric conduit, and withdrawing the relatively particle-free liquid from said conduit.

3,129,158
PROCESS FOR GEL ELECTROPHORESIS
Samuel Raymond and Robert H. Raymond, both of 538 Walnut Lane, Swarthmore, Pa.
Filed Jan. 24, 1961, Ser. No. 84,729
2 Claims. (Cl. 204—180)



1. A process for separating mixtures by gel electrophoresis comprising:
providing a confined passage,
providing reservoirs to receive buffer solutions,
providing openings for communications between said reservoirs and said passage;
positioning said passage horizontally,
pouring liquid gel solution into said passage,
containing said solution in said passage and allowing it to set and gel,
positioning said passage vertically,
placing buffer solutions in said reservoirs,
at least one of said buffer solutions directly contacting said gel through at least one of said openings,
said gel preventing mass flow of said buffer solutions between said reservoirs,
applying a mixture of substances to be separated to the gel, and
passing direct electrical current through the buffer solutions and the gel until separation is effected.

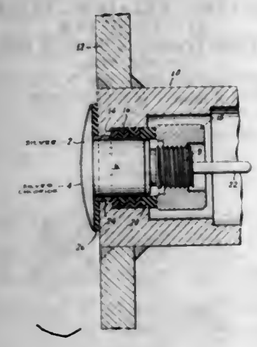
3,129,159
PROCESS FOR MANUFACTURING MEMBRANES
Karl-Heinrich Maier, Gottingen, and Wolfgang Grassmann, Munich, Germany, assignors to Firma Membranfiltergesellschaft G.m.b.H., Gottingen, Germany, a corporation of Germany
No Drawing. Filed Sept. 29, 1961, Ser. No. 141,640
2 Claims. (Cl. 204—180)

1. A process of producing a micro-porous flexible membrane useful for the separation of colloidal solutions and suspensions by electrophoresis, said process comprising applying a cellulose acetate solution to a base to establish a film of said solution of uniform thickness, said acetate solution consisting essentially in parts by weight of 50 to 90% of cellulose diacetate, 10 to 50% of cellulose triacetate, and a solvent mixture of 9 parts methylene chloride and 1 part butyl alcohol, together with about 1.5% of glycerin, and about 0.1% of a low fat alcohol having a carbon content of C_{12} to C_{14} as a wetting agent and sufficient isobutyl alcohol to produce a viscous solution; thereafter subjecting said film to a drying atmosphere of approximately 60% relative humidity and at a temperature of 20° C. to evaporate substantially all of the solvent mixture therefrom until less than 1% of the solvent remains so that a gelatinization of the membrane is obtained.

3,129,160
DESENSITIZED GLASS MEMBRANE AND THE METHOD AND COMPOSITION FOR PRODUCING THE SAME
Norman W. Carter, Dallas, Tex., assignor to Beckman Instruments, Inc., Fullerton, Calif., a corporation of California
No Drawing. Filed Apr. 25, 1962, Ser. No. 189,959
30 Claims. (Cl. 204—195)

1. The method of desensitizing selected areas of cation sensitive glass electrodes so as to inhibit sensitivity in said selected areas including, contacting the selected area with a substance, said substance having at least one of the salts selected from the group consisting of silver and copper salts, and heating at least the selected area while in contact with the substance to approximately the annealing temperature of the glass for a period of time not less than approximately 10 minutes.

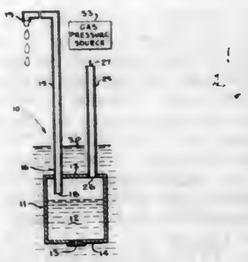
3,129,161
REFERENCE ELECTRODE ASSEMBLY
Edward P. Anderson, Livingston, and Arthur J. Zwanzig, Madison, N.J., assignors, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware
Filed Oct. 10, 1958, Ser. No. 766,462
1 Claim. (Cl. 204—196)



In a cathodic protection system for ships, the hull of the ship, a reference electrode including a solid, integral rivet-shaped body portion having a metallic stem and a head with a continuous silver surface secured to said stem, a coating of silver chloride on said head, a cylindrical packing gland mounted in a bore in the hull to protrude inwardly into the ship, said stem extending through said gland, insulating packing means arranged between said stem and said packing gland, means for compressing said packing means, and an electrical connector secured to said stem.

3,129,162
WATER CONDITIONING SYSTEM AND METERING DEVICE THEREFOR
Clyde B. Jones, Los Angeles, Calif. (3531 Alginet Drive, Encino, Calif.)
Filed Mar. 6, 1962, Ser. No. 177,796
10 Claims. (Cl. 204—278)

1. The combination of
a first source of liquid electrolyte;
a second source of liquid water for supplying water to said first source;
an electrolytic cell associated with the first source for producing gas from the liquid electrolyte; and
means for causing electrolyte from the first source to be supplied to said electrolytic cell in response and proportion to gas produced in said cell, said means comprising
a housing defining a chamber having a fixed opening;
an open-ended capillary tube connected to the housing such that a portion of the tube extends downwardly within the housing chamber and such that one open end of the tube is positioned above the fixed opening in said chamber;



said housing being associated with one of the first and second sources of liquid such that one source is fluid-conductively connected to the housing chamber for conducting liquid through the fixed chamber opening from said one source of liquid into said chamber and from the chamber to said one source, and such that said housing is arranged with respect to said one source so that liquid from said one source is caused to flow through the fixed chamber opening into said housing chamber and upwardly in the downwardly extending portion of the capilliary tube so as to form a column of said liquid in said tube having a preselected height; and
a gas conducting conduit connecting the electrolytic cell and the housing so that gas produced in said cell is caused to enter the housing chamber for causing liquid in the chamber to flow outwardly thereof through the fixed chamber opening to said one source of liquid until the level of the chamber liquid is such that said chamber liquid is separated from the one open end of the capillary tube in said housing chamber and from the bottom of the column of liquid in said tube so that said gas is applied to said column of liquid for causing the same to be expelled from the other open end of the capillary tube; said housing, the source of electrolyte and the electrolytic cell being arranged with respect to each other and the capillary tube such that liquid expelled from the other open end of said tube results in electrolyte from said source being added to said cell.

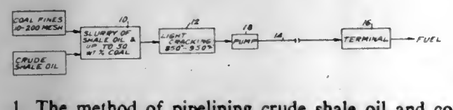
3,129,163
ANODE FOR ELECTROLYTIC CELL
Milton Stern, Indianapolis, Ind., and Herman Wissenberg, Niagara Falls, N.Y., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Dec. 23, 1960, Ser. No. 77,826
7 Claims. (Cl. 204—290)

1. An anode for use in electrolytic cells comprising a base of an alloy consisting essentially of from 4 to 30% by weight tungsten and the balance substantially all titanium and incidental impurities, said anode base being at least partially coated with a metallic material selected from the group consisting of ruthenium, rhodium, palladium, osmium, iridium, platinum, and gold.

3,129,164
METHOD OF TREATING AND PIPELINING OF CRUDE SHALE OIL-COAL SLURRIES

Russell J. Cameron, Denver, Colo., assignor to Cameron and Jones, Incorporated, Denver, Colo., a corporation of Colorado

Filed June 30, 1961, Ser. No. 121,159
5 Claims. (Cl. 208—8)

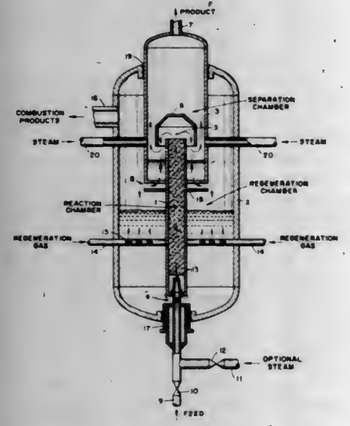


1. The method of pipelining crude shale oil and coal slurries comprising: admixing a substantial amount of finely divided coal with shale oil up to about fifty percent coal based upon the shale oil, said coal having a particle size in the range of about 10 to 200 mesh; thermally cracking the coal and shale oil admixture in the range of from about 850° F. to about 950° F. for a period of time sufficient to viscosity break the shale oil and to carbonize the coal releasing liquid products therefrom to produce a pumpable slurry of coal and shale oil; transporting the said pumpable slurry via a pipeline to a terminal point; and, cracking the said slurry at said terminal to provide as products a refinery feed stock and a fuel.

3,129,165
REFINING OF STEAM-CRACKED GASOLINES WITH MOLTEN SALT

Pieter Visser and Gerrit van der Most, Amsterdam, and Sydney Muller, The Hague, Netherlands, assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed Mar. 22, 1961, Ser. No. 97,564
Claims priority, application Great Britain May 9, 1960
4 Claims. (Cl. 208—283)



1. In the process for the conversion of steam-cracked gasoline, wherein said gasoline comprises substantial proportions of aromatics, olefins and diolefin hydrocarbons in the gasoline boiling range, the steps comprising subjecting said steam-cracked gasoline to a reaction temperature of 700–1200° C. in contact with a molten salt wherein the cation thereof is selected from the group consisting of lithium, sodium, potassium, calcium, barium, cadmium, lead, antimony, and sodium aluminum; and wherein the anion is selected from the group consisting of sulfate, chloride, fluoride, sulfide, and cyanide, for a contact time of 0.005–0.1 second, separating the molten salt from the conversion product, said product comprising substantial reduction in non-aromatic hydrocarbons in the normally liquid boiling range and substantial formation of normally gaseous hydrocarbons.

3,129,166
ORE BENEFICIATION PROCESS AND AGENT

Marvin B. Gillis, Glenview, Ill., assignor to International Minerals & Chemical Corporation, a corporation of New York

No Drawing. Filed June 30, 1961, Ser. No. 120,916
13 Claims. (Cl. 209—166)

1. In an ore concentration process for separating acidic ore materials from other ore constituents, the step which comprises carrying out the concentration operation in the presence of a reagent selected from the group consisting of I a mixture of reagents containing from about 0.25 to about 3 weight proportions of (A) a conventional amine flotation reagent per weight proportion of (B) the reagent produced by reacting about 1 mole of a polyalkylene polyamine having the formula

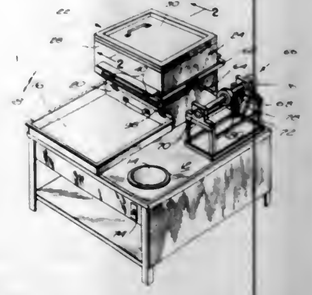
$$H_2N(C_mH_{2n}NH)_xC_mH_{2n}NH_2$$

in which *n*, *m*, and *x* are whole numbers with from about 1.8 to about 2.2 mole equivalents of a fatty acid triglyceride at a temperature of about 190 to about 210° C. for a period of about ¼ to about 2 hours in the presence of about 0.1 to about 0.5 weight percent caustic, basis triglyceride; II partially neutralized I; and III totally neutralized I.

3,129,167
COMBINATION BREADING TABLE AND POWER SIFTER

John William Frangos, 2 Brimball Hill Drive, Beverly, Mass.

Filed Aug. 28, 1961, Ser. No. 134,501
1 Claim. (Cl. 209—315)



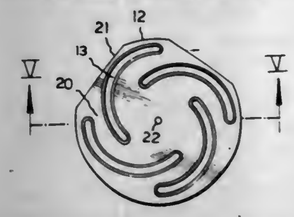
A food preparation station, comprising a fixed base having a flat upper surface, a low upright wall extending from said surface and defining an enclosed area adapted to receive a quantity of meal placed therein, an upright enclosed sifter mounted in a bin on the upper surface of said base rearwardly adjacent said enclosed area and having a discharge port co-planar with said upper surface and in communication with said area, a door-hinged over said port, a foraminous outer basket mounted for limited horizontal vibration within the upper portion of said bin, a foraminous inner basket removably mounted within said outer basket, a door hinged to the upper portion of said bin and covering both of said baskets, elongated tracks mounted horizontally along the sides of said bin, a plurality of rollers rotatably mounted to said outer basket and bearing on said tracks, a horizontally disposed bifurcated harness engaging said rollers, resilient loading means engaging said harness and said bin for pressure loading said rollers to said tracks, a drive shaft mounted adjacent said harness and co-planar therewith,

an inner race bearing assembly eccentrically mounted on said shaft, an axially adjustable connecting rod engaging the periphery of said assembly at one end and swivelly connecting said harness at its other end and power means for rotating said shaft to vibrate said baskets in a horizontal plane and thereby sift a charge of meal placed therein whereby the sifted meal is discharged to the bottom of said bin for transfer to said enclosed area.

3,129,168
CLEARING PLATE FOR SIFTER BOTTOM

Paul Eppenberger, Auenhofen, Amriswil, Switzerland, assignor to Gebrueder Buehler, Uzwil, Switzerland, a firm of Switzerland

Filed July 6, 1961, Ser. No. 122,323
Claims priority, application Switzerland July 6, 1960
4 Claims. (Cl. 209—379)

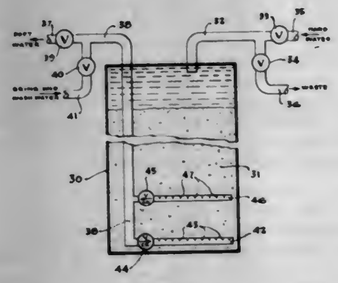


4. A sifter-bottom clearing plate comprising a freely movable and unattached substantially flat disc of flexible material having at least a portion of its periphery curvilinear, said disc being imperforate except for a series of longitudinally curved and relatively narrow slots each starting at an outer end adjacent the disc periphery and terminating at an inner end spaced inwardly from the periphery, said inner end of each slot overlapping longitudinally and being spaced inwardly of the outer end of the adjacent slot.

3,129,169
WATER SOFTENER REGENERATION METHOD AND APPARATUS

Nels A. Johnson, 154 W. Chicago Ave., Palatine, Ill., assignor of one-half to George M. Munson, West Chicago, Ill.

Filed Dec. 14, 1961, Ser. No. 159,308
7 Claims. (Cl. 210—32)



1. In the method of softening water in a bed of ion exchange material and regenerating said material with a brine, the improvement comprising: regenerating the bed by flowing brine therethrough; thereafter washing the regenerated material by introducing wash water at one end of the bed and withdrawing the wash water from the other end of the bed; and thereafter softening water by introducing the water to be softened into said material at said other end of the bed and withdrawing the softened water from said bed at an area in said bed spaced from said one end of the bed.

3,129,170
PROCESS FOR THE CLARIFICATION OF AN ACIDIC INORGANIC PHOSPHATIC SOLUTION

Rudolf Ittlinger, Lakeland, Fla., assignor to International Minerals & Chemical Corporation, a corporation of New York

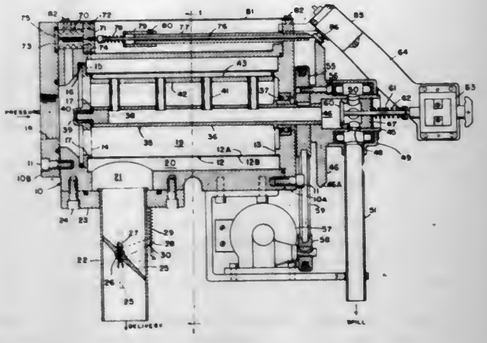
No Drawing. Filed Oct. 25, 1960, Ser. No. 64,720
16 Claims. (Cl. 210—54)

1. A process for the clarification of an acidic inorganic phosphatic solution containing suspended solid impurities which comprises mixing said solution with a clarification agent comprising an amine clarification agent selected from the group consisting of substantially water insoluble aliphatic amines, acid addition salts of aliphatic amines, quaternary ammonium salts of aliphatic amines, and mixtures thereof, said clarification agent being employed in a minor proportion effective to increase the settling rate of said suspended solids, and thereafter separating a clarified fraction.

3,129,171
FLUID FILTERING DEVICE

Oscar E. Rosaen, Grosse Pointe Farms, Mich., assignor to The Rosaen Filter Company, Detroit, Mich., a corporation of Michigan

Filed Sept. 19, 1960, Ser. No. 56,826
1 Claim. (Cl. 210—108)



In a fluid filtering device,

(*a*) a housing having a filter chamber,

(*b*) said housing being provided with an inlet and an outlet open to said chamber,

(*c*) a filter element disposed in said chamber intermediate said inlet and said outlet,

(*d*) a pressure responsive device carried in said housing operatively connected across said filter element and operable to respond to increases in the pressure differential across said filter element,

(*e*) a normally open switch operably connected with said pressure responsive device and operable to close upon the pressure differential across said filter element increasing to a predetermined value and to open again upon the pressure differential decreasing again to a value below said predetermined value,

(*f*) a motor electrically connected to said switch to be energized when said switch is closed,

(*g*) a collector element having a fluid conductor, an inlet connected therewith and disposed closely adjacent said filter element on the inlet side thereof, and a drain outlet connected with said conductor,

(*h*) said motor being operably connected with said collector element to rotate said collector element when said motor is energized to change the portion of said filter element closely adjacent said collector element inlet as said collector element rotates,

(*i*) a cam engaging said switch when in a closed position and being operable to prevent said switch from opening until said collector element has rotated through at least one complete revolution,

(*j*) a normally closed valve disposed in said drain outlet and operably connected to said switch to open when said switch closes, and

(*k*) means disposed in said outlet and operable to maintain a minimum fluid pressure on the outlet side of said filter element, said means comprising,

a valve member pivotally carried in said outlet and being operable to be pivoted toward an open position upon fluid pressure provided at said outlet, and

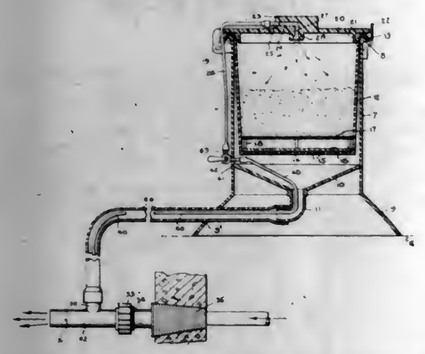
means urging said valve member toward a closed position.

3,129,172

AUTOMATIC SWIMMING POOL CHLORINATOR

James W. Dickey, Jr., 11 SW. 16th St., and Carl E. Malone, 2281 SW. 33rd Way, both of Fort Lauderdale, Fla.

Filed Aug. 22, 1960, Ser. No. 50,891
3 Claims. (Cl. 210—169)



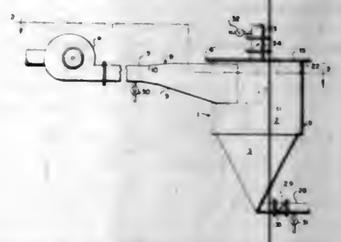
1. A chlorinator for use in furnishing a chlorine solution automatically to swimming pools that comprises in combination a filter device and a suction coupling, the suction coupling having means for detachable connection to a source of pressurized water, the filter device embodying an upstanding cylindrical shell open at its top and provided with a flaring bottom for resting engagement adjacent to the edge of a swimming pool, a closure cover hingedly conected to the upper end of the shell to close the open end, latch means for holding the cover in the closed position, the shell having a downwardly directed conical bottom that is provided with a centrally arranged outlet coupling, a filter basket in the shell and adapted to be supported upon the upper marginal edge of the shell, the basket having imperforate tapering side walls and a perforated bottom, filter means supported upon the perforated bottom, the said cover being provided centrally thereof with a downwardly directed spray nozzle that is axial to the basket, a relatively large flexible suction tube that is connected to the outlet coupling of the conical bottom and also to the suction coupling, the flow of water through the suction coupling creating a suction to the outlet coupling and a relatively slender flexible feed tube that is connected to the suction coupling to extend upwardly through the first-named tube and into the shell above the conical bottom, the last-named tube being extended through a side wall of the shell for connection with a cut-off valve, a feed tube connected to the valve and to the spray nozzle, the feed tube conducting water under pressure from the suction coupling to the spray nozzle for continuously spraying water upon a mass of granules supported in the basket to dissolve the granules and feeding a solution of chlorine through the perforated bottom to be withdrawn by the suction action of the suction tube.

3,129,173

CENTRIFUGAL TYPE LIQUID-SOLID SEPARATOR

William G. A. Schulze, Ontario, Calif.; Hertha M. Schulze, executrix of said William G. A. Schulze, deceased

Filed Aug. 1, 1960, Ser. No. 46,575
1 Claim. (Cl. 210—512)



An apparatus for separating solids from a liquid in which they are suspended comprising the combination of a closed vessel provided with a cover and an outer wall, conduit means for introducing a stream of liquid with solids in suspension into the upper part of said vessel, said conduit means including a nozzle projecting into said vessel and disposed tangentially to the outer wall thereof, said nozzle having a vertically elongated discharge orifice, baffle means, a substantial portion of which is in the form of an inverted cone having dependent therefrom a cylindrical section, the terminal portion of which is flared outwardly, disposed within said vessel in concentric relationship to said outer wall and affixed to and closed at its upper end by the vessel cover, said baffle means being of a shorter length than said outer wall and having an opening at the bottom thereof for receiving liquid separated from at least a major portion of the solids in the stream of liquid with solids in suspension that is initially introduced into said vessel, said baffle means also having a supplemental opening in the upper wall thereof adjacent the vessel cover and rearwardly of the discharge orifice for venting gases entrained in the stream of liquid with solids in suspension initially introduced into said vessel, and a central outlet in the vessel cover in open communication with the interior of the baffle through which said separated liquid and vented gases are discharged, the bottom opening of said baffle means being substantially larger than the top outlet therefrom, and outlet means at the bottom of the vessel for discharging the major portion of the solids removed from the stream of liquid with solids in suspension introduced into said vessel.

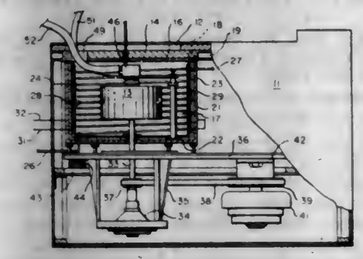
3,129,174

CONTINUOUS FLOW TYPE CENTRIFUGE AND FLUID TEMPERATURE CONTROL THEREFOR

Edward G. Pickels, Atherton, and Richard C. Stallman, San Carlos, Calif., assignors to Beckman Instruments, Inc., a corporation of California

Filed Sept. 30, 1960, Ser. No. 59,530
5 Claims. (Cl. 233—11)

3. A continuous flow centrifuge comprising a chamber, a centrifuge rotor disposed in said chamber, a stationary sample feeding and removal assembly in fluid communication with the rotor for feeding a sample into the same and removing the sample therefrom, a sample supply line in communication with the assembly for introducing the sample into the same, a sample removal line in communication with the assembly for removing the sample from the same, means disposed in said chamber for establishing the temperature of the same, temperature sensing means disposed in the sample in close proximity to the rotor to directly sense the temperature of the sample, said temperature sensing means forming a signal indicative of the temperature of the sample, control means connected to receive said signal and serving to



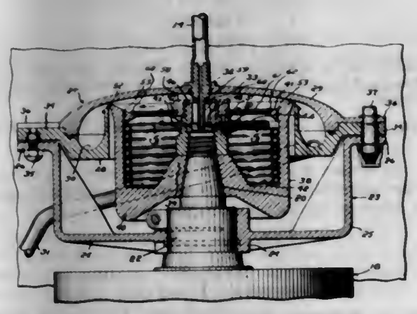
control said temperature establishing means to thereby maintain a predetermined temperature in the chamber, hollow tube means surrounding said sample supply and sample removal lines and spaced therefrom to form an annular passage, and means for circulating a heat exchange fluid substantially at the desired sample temperature through said passage.

3,129,175

CENTRIFUGES

Alan Richardson Jones, Sudbury, Robert J. Mitchell, Braintree, and David F. Mitchell, Tewksbury, Mass., assignors to International Equipment Company, Boston, Mass., a corporation of Massachusetts

Filed Dec. 31, 1959, Ser. No. 863,324
6 Claims. (Cl. 233—28)



4. In a centrifuge, a length of flexible, open-ended tubing arranged as a coil with axially spaced turns, an open mouth, smooth-surfaced, solid walled basket mounted for rotation about a vertical axis and including an axial supply conduit portion to which one end of the tubing is connected and an inwardly disposed shoulder adjacent said mouth defining a subjacent zone in which the coil is seated against the basket wall, the other end of the tubing opening in said subjacent zone, and said shoulder also defining an exit for the effluent from the other end of the tubing, said shoulder establishing the thickness of the effluent layer resulting from the discharge from the other end of said tube, said shoulder also having ports extending vertically therethrough, each spaced the same distance from the basket wall, the diameter of the tubing being greater than said distance.

3,129,176

NOVEL SILICEOUS AMINO COMPOUNDS AND PROCESS OF PREPARING THE SAME

Frederick J. Ihde, Jr., Mountain Lakes, N.J., assignor to Nopco Chemical Company, Newark, N.J., a corporation of New Jersey

No Drawing. Filed Jan. 17, 1962, Ser. No. 166,907
20 Claims. (Cl. 252—21)

1. A composition of matter prepared in an aqueous system by contacting (1) a material comprising a partial amide salt having at least one primary amine group thereon, with at least stoichiometric quantities of (2) a water-soluble silicate salt selected from the class consisting of sodium silicates, potassium silicates, and ammonium silicates and then (3) contacting at a pH at least just in excess of 7, the product of (1) and (2), with a second material selected from the class consisting of the elements of the periodic table of group I–B, group II–A having an atomic weight of up to about 25, group II–B, group III–A having an atomic weight of at least about 25, group III–B having an atomic weight of up to about 89, group IV–A having an atomic weight of at least about 50, group IV–B, group V–A having an atomic weight of between about 120 and 210, group V–B, group VI–B having an atomic weight of up to about 100, group VIII, manganese and rhenium, water-soluble inorganic salts of said elements, and water-soluble organic salts of said elements wherein said organic salt has up to about 4 carbon atoms.

3,129,177

NEW PROCESS FOR PREPARING SILICEOUS AMINO COMPOUNDS

Frederick J. Ihde, Jr., Mountain Lakes, and Siegfried Altscher, Union, N.J., assignors to Nopco Chemical Company, Newark, N.J., a corporation of New Jersey

No Drawing. Filed Sept. 18, 1961, Ser. No. 138,566
14 Claims. (Cl. 252—21)

1. In a process for preparing siliceous amino compounds by reacting partial amide salts with at least stoichiometric amounts of at least one water-soluble silicate salt selected from the class consisting of potassium silicates, ammonium silicates and sodium silicates and thereafter removing water from the resulting slurry, the improvement comprising utilizing as said partial amide salts, a mixture of salts of short chain partial amides and long chain partial amides, said short chain partial amide prepared by reacting a polyamine with a material selected from the group consisting of aliphatic monocarboxylic acids, acyl halides and glycerides containing the radical RCO—, said R representing a carbon chain length of from 3 to 4 carbon atoms and said long chain partial amide prepared by reacting a polyamine with a material selected from the group consisting of aliphatic monocarboxylic acids, acyl halides and glycerides containing the radical RCO—, said R representing a carbon chain length of at least 11 carbon atoms, said mixture of salts of short chain partial amide and long chain partial amide being formed from a mixture of from about one to nine parts by weight of said short chain partial amide to about nine to one part by weight of said long chain partial amide.

3,129,178

PROCESS FOR PREPARING MATERIALS HAVING IMPROVED PHYSICAL CHARACTERISTICS

Frederick J. Ihde, Jr., Mountain Lakes, N.J., assignor to Nopco Chemical Company, Newark, N.J., a corporation of New Jersey

No Drawing. Filed May 3, 1961, Ser. No. 107,320
24 Claims. (Cl. 252—21)

1. In a process for preparing a siliceous amino compound in an aqueous system by reacting (1) a material selected from the group consisting of partial amide salts, amine acid addition salts, imidazoline salts, oxazoline salts and quaternary ammonium salts with (2) at least

stoichiometric amounts of a water-soluble silicate salt selected from the class consisting of sodium silicates, potassium silicates and ammonium silicates, and thereafter recovering and drying the resultant siliceous amino compound, the improvement which comprises introducing at least one water-soluble aromatic compound selected from the class consisting of water-soluble salts of isophthalic acid and water-soluble salts of terephthalic acid, said aromatic compound being introduced at a point in time prior to the drying of said siliceous amino compound,

(*a*) with the proviso that when said water-soluble aromatic compound is present during formation of said siliceous amino compound and the corresponding aromatic acid of said water-soluble aromatic compound does not remain in said siliceous amino compound, maintaining the pH of said aqueous system from about 7 to about 9.5 during the formation of said siliceous amino compound and thereafter washing out said water-soluble aromatic compound,

(*b*) with the proviso that when said water-soluble aromatic compound is present during formation of said siliceous amino compound and the corresponding aromatic acid of said water-soluble aromatic compound remains in said siliceous amino compound, maintaining the pH of said aqueous system from 7 to about 9.5 during the formation of said siliceous amino compound and thereafter lowering said pH to from just below about 7 to about 3.0 whereupon the corresponding aromatic acid of said water-soluble aromatic compound precipitates in and around the particles of siliceous amino compound, and

(*c*) with the proviso that when said siliceous amino compound is formed in the absence of said water-soluble aromatic compound, maintaining the pH of said aqueous system from about 6.5 to about 9.5 during the formation of said siliceous amino compound and thereafter introducing said water-soluble aromatic compound and adjusting the pH of the system to from just below about 7 to about 3.0 whereupon the corresponding aromatic acid of said water-soluble aromatic compound precipitates in and around the particles of siliceous amino compound.

3,129,179
LUBRICANTS FOR GAS COMPRESSORS

Wieland Zacher, Hans Eilbracht, Heinrich Friedenreich, and Siebert Goebel, all of Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Mar. 7, 1961, Ser. No. 93,882
Claims priority, application Germany Mar. 10, 1960
4 Claims. (Cl. 252—39)

1. A colorless, liquid, lubricating oil for gas compressors consisting essentially of a colorless petroleum lubricating oil in which is uniformly dispersed 0.1 to 5% by weight of a hard wax containing polar groups.

3,129,180
ANTI-SEIZE COMPOSITION

Frank Hardy, Chatham, and Girard T. Kohman, Summit, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

No Drawing. Filed Dec. 1, 1960, Ser. No. 72,877
4 Claims. (Cl. 252—40.7)

1. An anti-seize composition comprising (*a*) 10–20% chlorinated naphthalene containing 40–67% of chlorine, (*b*) 30–50% of a microcrystalline wax having a melting point, using ASTM test method D–127, of 160–175° F., a penetration value, using ASTM test method D–1321, of 25–35 and a viscosity, using ASTM test method D–88, at 210° F. of 70–140, (*c*) 10–30% of grease containing approximately 10–30% of a calcium complex soap and the remainder a petroleum oil having an ASTM viscosity at 100° F. of 450–550, and (*d*) 15–35% of a petroleum oil having an ASTM viscosity at 100° F. of 500–600.

3,129,181
PROCESS FOR PREPARING MATERIALS HAVING IMPROVED PHYSICAL FORM

Frederick J. Ihde, Jr., Mountain Lakes, N.J., assignor to Nopco Chemical Company, Harrison, N.J., a corporation of New Jersey

No Drawing. Filed Aug. 26, 1959, Ser. No. 836,086
27 Claims. (Cl. 252—49.7)

1. A process for preparing a siliceous amino compound which comprises reacting (*a*) a salt of a nitrogen containing compound selected from the group consisting of lower carboxylic acid salts of unsubstituted higher aliphatic mono amines, mineral acid salts of unsubstituted higher aliphatic mono amines, quaternary ammonium salts of unsubstituted higher aliphatic mono amines and partial amide salts, the partial amide of said partial amide salt being the reaction product of an alkylene polyamine and a material selected from the group consisting of aliphatic monocarboxylic acids, their esters and their acyl halides containing the radical RCO—, wherein R represents a carbon chain length of from 5 to 21 carbon atoms, glycerides, naphthenic acid and tall oil and (*b*) of a water-soluble silicate salt selected from the group consisting of sodium silicates, potassium silicates and ammonium silicates said water-soluble silicate salt being present at least in an amount sufficient to neutralize all of the acid radicals of said nitrogen containing salt and introducing an organic liquid which is at least substantially water-insoluble in an amount of at least about 25% by weight of said siliceous amino compound, the pH of the reaction system being adjusted to between about 6.5 and 9.5 after said (*a*) and (*b*) are reacted thereby obtaining maximum adsorption of said organic liquid.

3,129,182
CUTTING FLUID

Francis Parker McLean, Seattle, Wash., assignor to The Boeing Company, Seattle, Wash., a corporation of Delaware

No Drawing. Filed Aug. 15, 1962, Ser. No. 216,974
2 Claims. (Cl. 252—54)

1. A cutting fluid consisting essentially of a mixture of approximately 40 parts trichlorotrifluoroethane and 1 part ethylene glycol monobutyl ether.

3,129,183
LUBRICATING OIL

Abraham Schneider, Overbrook Hills, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Nov. 7, 1957, Ser. No. 694,923
5 Claims. (Cl. 252—59)

1. A process for improving a petroleum lubricating oil containing isoparaffinic, aromatic and naphthenic components which comprises reacting said lubricating oil and an alkali metal alkyl containing from 1–12 carbon atoms under substantially anhydrous and oxygen-free conditions at a temperature in the range from ambient temperature to 200° C. whereby organo-metallic compounds of said lubricating oil components are formed, subsequently contacting the metallated oil at polymerization conditions with an alpha-olefin having from 2 to 8 carbon atoms and a polymerization catalyst selected from the group consisting of halides of titanium, zirconium, chromium, vanadium and molybdenum at a temperature in the range of from about 0° C. to about 250° C. at a pressure in the range of from about atmospheric to about 10,000 p.s.i.g. whereby the said alpha-olefin is polymerized and condenses with the lubricating oil, replacing the alkali metal.

3,129,184
METHOD FOR PRODUCING NON-METALLIC MAGNETIC MATERIALS

Christopher Nigel Kenney and Raymond Spencer Thornhill, Northwich, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed May 25, 1961, Ser. No. 112,535
Claims priority, application Great Britain May 31, 1960
4 Claims. (Cl. 252—62.5)

1. A process for the manufacture of a non-metallic magnetic compound having the general formula

$$xMO.yM'O.zM''O.Fe_2O_3$$

wherein M, M', and M'' represent divalent metals selected from the group consisting of magnesium, zinc, barium, manganese, nickel, and cobalt, O is oxygen, and *x*, *y* and *z* are numbers such that the ratio of divalent metal to said Fe_2O_3 is at least in the range of 1:6 to 1:1 which comprises mixing an oxygen containing derivative of at least one of said divalent metals selected from the group consisting of the oxide, carbonate, and hydroxide derivatives thereof, with an iron oxide defined as

$$\alpha\text{-}FeO(OH)$$

and heating the resulting mixture for from about 4 to about 20 hours at a pressure within the range of 10 to 100 atmospheres and a temperature within the range of 100° to 400° C. with a member of the group consisting of water and steam.

3,129,185
LUBRICATION OF REFRIGERATION EQUIPMENT

Carl J. Rizzuti, Bronx, N.Y., and Harold M. Brewster, Hillside, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Dec. 21, 1961, Ser. No. 161,236
11 Claims. (Cl. 252—68)

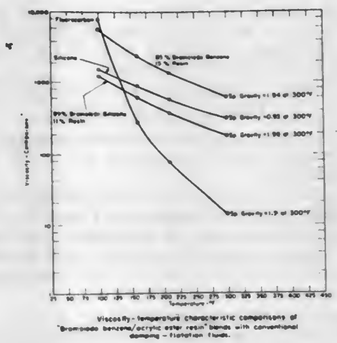
1. In the operation of refrigerator equipment employing a halohydrocarbon refrigerant and lubricant, the improvement which comprises the use of a lubricant comprising a major amount of a lubricating oil having a viscosity of from 65 to 600 SUS at 100° F. and 0.01 to 1.00 wt. percent of an oil-soluble metal soap selected from the class consisting of metal naphthenates and metal octoates wherein said metal is selected from the class consisting of sodium, copper, calcium, zinc, mercury, cadmium, aluminum, iron, cobalt and nickel.

3,129,186
DAMPING AND FLOTATION FLUID

David J. Boes, Monroeville, and James H. Freeman, Franklin Township, Westmoreland County, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Mar. 24, 1961, Ser. No. 98,021
7 Claims. (Cl. 252—78)

1. A dense viscous liquid damping composition adapted for prolonged service at elevated temperatures consisting essentially of from about 80% to about 93%, by weight, of a fluid monobromomonoiodobenzene and from about 7% to about 20%, by weight, of a polymeric acrylic ester selected from the group consisting of polymethylmethacrylate, polyethylmethacrylate and polyisobutylmethacrylate, said composition being characterized by specific gravities of about 1.94 to 2.05 and viscosities of about 75 to 600 centipoises at temperatures of about 300° F.



3,129,187
SYNTHETIC DETERGENT TOILET BAR

Elizabeth J. Meehan, Fort Washington, Pa., assignor to The Atlantic Refining Company, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Oct. 14, 1960, Ser. No. 62,528
6 Claims. (Cl. 252—155)

1. Synthetic detergent toilet bar consisting essentially of the following ingredients in weight percent based on the total weight of the bar:

Sodium alkyl benzene sulfonate	50–75
Stearyl alcohol	5–35
n-Paraffin wax, M.P. 125° F.–170° F	1–25
Monoethanolamide of saturated aliphatic carboxylic acid containing from 16 to 18 carbon atoms	2–25
Water	1–8

said sodium alkyl benzene sulfonate having from 12 to 15 carbon atoms in the alkyl group and having been prepared by alkylating benzene with a polypropylene fraction, sulfonating the thus produced alkylated benzene and neutralizing the sulfonated, alkylated benzene with sodium hydroxide.

3,129,188
CRYSTALLINE SPHERULES

Harold G. Sowman, Maplewood, and James R. Johnson, White Bear Lake, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Mar. 16, 1961, Ser. No. 96,081
7 Claims. (Cl. 252—301.1)

1. As articles of manufacture, spherules having a diameter in the range of about 10 microns to about 125 mils of crystalline material of the class consisting of uranium carbide, uranium (thorium) carbide and thorium carbide having a smooth, substantially spherical outer surface formed from the molten state by surface tension forces, and characterized by substantially void-free crystalline internal structure.

3,129,189

PROCESS FOR PREPARING A SILICA-MAGNESIA-FLUORINE HYDROCARBON CRACKING CATALYST

Charles P. Wilson, Jr., Cincinnati, Ohio, and Frank G. Ciapetta, Silver Spring, and James W. Elston, Jr., Baltimore, Md., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed June 8, 1960, Ser. No. 34,628
4 Claims. (Cl. 252—441)

1. A process for preparing a silica-magnesia hydrocarbon cracking catalyst containing 0.5 to 5% fluoride which comprises:

(*a*) diluting an alkali metal silicate solution to a silica to alkali metal oxide ratio of 1:1 to 4:1,

(*b*) gelling the silicate by the addition of a mineral acid thereto, wherein sufficient acid is added to neutralize 80 to 90% of the Na_2O present and adjust the slurry pH to 5 to 8,

(*c*) aging the silica gel at 80 to 150° F.,

(*d*) simultaneously adding calcined MgO and H_2SO_4 to the gelled silicate in an amount sufficient to provide 20 to 30% MgO in the final catalyst and to adjust the slurry pH to 7.5 to 8.5,

(*e*) aging at 175 to 185° F. for 1 to 3 hours,

(*f*) filtering the composite,

(*g*) adding a quantity of a solution of a soluble fluoride salt sufficient to provide 0.5 to 5% fluoride,

(*h*) spray drying, washing, redrying and recovering the product.

3,129,190

PRODUCTION OF ANHYDROUS FRIEDEL-CRAFTS CATALYST

Marion E. Hill, Palo Alto, Calif., assignor to the United States of America as represented by the Secretary of the Navy

No Drawing. Filed Mar. 31, 1961, Ser. No. 99,969
6 Claims. (Cl. 252—442)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. The process for producing an anhydrous Friedel-Crafts catalyst selected from the group consisting of $FeCl_3$, $AlCl_3$, and $GaCl_3$ and mixtures thereof which comprises adding the said catalyst, containing water of hydration, to carbon tetrachloride, refluxing the resulting admixture at a temperature of about 76.8° C., until the evolution of phosgene and hydrogen chloride ceases, sweeping the reaction mixture with dry air, cooling the reaction mixture and decanting the carbon tetrachloride and recovering the anhydrous catalyst, free from CCl_4.

3,129,191

DIELECTRIC FOAMS

Mortimer H. Nickerson, Winchester, and Herbert S. Schnitzer, Springfield, Mass., John Eliot Curtis, Amenia, N.Y., and George D. Patterson, Thompsonville, Conn., assignors, by mesne assignments, to De Bell & Richardson, Inc., Hazardville, Conn., a corporation of Connecticut

No Drawing. Filed Mar. 9, 1960, Ser. No. 13,707
1 Claim. (Cl. 260—2.5)

A composition of matter comprising a cured foam of a glycidyl polyether of a dihydric phenol having an epoxide equivalent weight in the range of 185 and 290 of substantially uniform density and containing uniformly dispersed aluminum powder having a particle size not substantially exceeding 25 microns, the composition having a substantially isotropic dielectric constant between 2 and 4 dependent on the density of the foam and the weight percentage of the aluminum powder.

3,129,192

ALKYD RESINS FROM COMPLEX ACIDS

Walter E. Kramer, Niles, and Louis A. Joo, Crystal Lake, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

No Drawing. Filed Sept. 12, 1960, Ser. No. 55,123
15 Claims. (Cl. 260—22)

1. The alkyd resin reaction product under esterification conditions of

(1) a carboxylic acid prepared from solvent extracts obtained in the solvent refining of mineral lubricating oils used a solvent selective for aromatic compounds, by reaction of said solvent extracts with an alkali metal to form the alkali metal adduct, carbonation of said aduct to form the corresponding alkali metal salt of a carboxylic acid and acidification of said salt to form the free acid, said carboxylic acid being thus characterized by having complex, polynuclear, aromatic, alkyl-aromatic and heterocyclic nuclei predominating in carbon and hydrogen, containing about 2.0 to 4.5% by weight of combined sulfur and also containing oxygen and nitrogen, having an average molecular weight of about 320 to 600, and having about 1.7 to 3.5 average number of aromatic rings per mean aromatic molecule, and

(2) a polyol having from 3 to 20 carbon atoms to the molecule and 3 to 7 hydroxyl groups to the molecule.

3,129,193

COMPOSITIONS COMPRISING A VINYL HALIDE POLYMER AND THE REACTION PRODUCT OF CASTOR OIL WITH A HALIDE OF A SULFUR GROUP ELEMENT

Rudolf Kern, Neustadt an der Weinstrasse, and Rudolf Punessen, Rohrhof Uber Schwetzinge, Germany, assignors to Rhein-Chemie, G.m.b.H., Mannheim-Rheinau, Germany

No Drawing. Filed Aug. 13, 1959, Ser. No. 833,396
12 Claims. (Cl. 260—23)

1. A composition comprising a polymeric material of a vinyl halide and intimately dispersed therewith in an amount sufficient to improve the compression strength, the recovery after removal of the load and the surface characteristics of said polymeric material, at least one reaction product of castor oil with a halide of a sulfur group element in which such halide is selected from the class consisting of fluorine, chlorine and bromine and said element is selected from the class consisting of sulfur, selenium and tellurium.

3,129,194

RESINOUS MOLDING COMPOSITION

John J. Kuplts, Newtown, Pa., assignor to Congoleum-Nairn Inc., Kearny, N.J., a corporation of New York

Filed Mar. 27, 1957, Ser. No. 648,912
8 Claims. (Cl. 260—28.5)

1. A resinous molding composition in the form of a plastigel having a fusion temperature of between about 325° F. and about 375° F. and characterized by a high tensile strength and the ability to be readily stripped after pressing from a hot platen maintained at a temperature below said fusion temperature and between about 270° F. and about 330° F. which comprises 30 percent to 60 percent of filler, 0.5 percent to 1.5 percent of a waxy substance having a softening point temperature below the temperature of said platen and the remainder a thermoplastic synthetic resinous binder and plasticizer therefor, 5 percent to 20 percent of said resinous binder being a rubbery copolymer of butadiene and acrylonitrile having a viscosity above 40 Mooney as a continuous film plasticized by said plasticizer thereby holding the composition in a unitary mass and the remainder of said binder being uniformly dispersed throughout the composition in the form of discrete unplasticized and unfused particles of vinyl resin having a particle size of from 0.02 to

2 microns and a specific viscosity between 0.17 and 0.31, said vinyl resin being a polymer of vinyl chloride containing at least 90 percent by weight polymerized vinyl chloride, said plasticizer comprising from 20 percent to 35 percent of the amount of said resinous binder plus plasticizer.

3,129,195

COPOLYMERS OF UNSATURATED ALDEHYDES AND —SO_3— CONTAINING MONOMERS AND THEIR PREPARATION

Ronald K. June, Pleasant Hill, Aldo De Benedictis, Berkeley, and Paul H. Williams, Orinda, Calif., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 8, 1962, Ser. No. 171,817
23 Claims. (Cl. 260—29.6)

3. A water soluble copolymer of an alpha,beta-ethylenically unsaturated aldehyde and a water soluble salt of an ethylenically unsaturated sulfonic acid.

3,129,196

ALKOXYLATED POLYVINYL ALCOHOL AND ALKOXYLATED AMIDE COMPOSITIONS

Philip L. Gordon, Lexington, Mass., assignor to The Borden Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed May 12, 1961, Ser. No. 109,484
7 Claims. (Cl. 260—32.6)

6. A plastic composition comprising an intimate blend of alkoxylated polyvinyl alcohol and the product of alkoxylation of a higher fatty acid amide with an alkylene oxide having an oxirane ring and 2–4 carbon atoms to the molecule, the amide being of the formula R—CO—NR'R'' in which R is selected from the group consisting of alkyl and alkenyl radicals having 11–19 carbon atoms each and R' and R'' are components selected from the group consisting of hydrogen, C_1–C_{10} alkyl and alkenyl groups, and hydroxy substituted C_2–C_4 alkyl groups, the proportions being about 1 to 10 parts by weight of the said amide for 100 parts of polyvinyl alcohol and 3–30 moles of the alkylene oxide for 1 mole of the said amide, and the polyvinyl alcohol being alkoxylated with 20–100 parts of the alkylene oxide for 100 parts of the said alcohol.

3,129,197

COMPOSITIONS AND PROCESS FOR MANUFACTURING MOLDED RUBBER ARTICLES

Walter O. Farrell, Indianapolis, Ind., and Louis S. Verde, Tuckahoe, N.Y., assignors to H. Muehlstein & Co., Inc., New York, N.Y.

No Drawing. Filed Jan. 23, 1961, Ser. No. 83,928
11 Claims. (Cl. 260—41.5)

1. A liquid hard rubber premix composition comprising from about 20 to about 50 parts of sulfur and from about .01 to about 300 parts of a filler non-absorptive for styrene-butadiene copolymer per 100 parts of a liquid styrene-butadiene copolymer having a viscosity in the range of 30–15,000 poises at 45° C. and a butadiene content from about 60 to about 95 percent by weight.

3,129,198

QUATERNARY MONOIMIDAZOLINE SALTS AS THERMOSETTING CATALYSTS FOR RESINOUS BLENDS COMPRISING POLYEPOXIDE POLYMERS AND ACRYLIC POLYMERS HAVING A PLURALITY OF CARBOXYL GROUPS THEREIN

Vernon G. Nix, Park Forest, Ill., assignor to The Sherwin-Williams Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed Feb. 8, 1960, Ser. No. 7,131
2 Claims. (Cl. 260—45.5)

1. A thermosettable fluid coating composition comprising in combination from 7% to not more than about 90% by weight of the total film-forming composition of a polyepoxide having an epoxy equivalent value ranging from 100 to less than 1000 and substantially the remainder of the composition is an acrylic interpolymer of two monomers minimally, at least in excess of 4% but not in excess of 25% of said polymer formed from an acid selected from the group consisting of acrylic acid, methacrylic acid, ethacrylic acid, phenylacrylic acid, crotonic acid, lower alkyl esters of such acids containing from 1 to 8 carbon atoms in the alkyl group, and another monomer interpolymerized therewith characterized by a single



group, and from 3 to 30 parts by weight for each weight part equivalent of said epoxide component of a 2 position aliphatic substituted halogen-free quaternary mono-imidazoline salt.

3,129,199

PROCESS FOR PREPARING HIGH IMPACT MATERIAL BY POLYMERIZING STYRENE IN THE PRESENCE OF DIENE RUBBER AND POLYSTYRENE

Hans E. Lunk, Oakland, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 30, 1961, Ser. No. 85,468
9 Claims. (Cl. 260—45.5)

1. A process of preparing a high impact resinous composition of polymerized vinyl aromatic compounds in which the monomers utilized in the resinous composition consist essentially of from about 2 to about 20 parts by weight of a conjugated diene and from 80 to 98 parts by weight of monovinyl aromatic compound, comprising the steps of mixing from about 2 to 20 parts of a rubber having a cis, 1,4 content above about 90% and which is a polymer of conjugated diene with a crosslinking agent and also with from about 1 to about 30 parts by weight of the monovinyl aromatic compound in polymerized form, milling the mixture for a time and temperature sufficient to disperse and crosslink the rubber, adding from about 50 to about 97 parts by weight of monomeric monovinyl aromatic compound to the mixture, agitating the mixture to form a solution of polymer in monomer, said solution containing dispersed rubber particles, and subjecting said solution to polymerizing conditions whereby substantially all of the monomer is polymerized.

3,129,200

POLYURETHANE PREPOLYMERS CURED WITH BUTENE OR BUTYNE DIOL

Erwin Müller, Leverkusen, Hans Holtschmidt, Cologne-Stammheim, and Konrad Ellegast, Leichlingen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Aug. 10, 1959, Ser. No. 832,483
Claims priority, application Germany Aug. 14, 1958
3 Claims. (Cl. 260—75)

1. A process for the preparation of a polyurethane which comprises:

(*a*) reacting an organic polyisocyanate selected from the group consisting of 4,4'-diphenyl methane diisocyanate and 1,5-naphthylene diisocyanate with an organic compound having a molecular weight of at least about 800 and having at least two reactive hydrogen atoms which are reactive with —NCO groups to form a polyurethane, obtaining thereby a polyurethane-prepolymer composition, said organic polyisocyanate being present in an amount of from about 300% to about 700% excess —NCO groups over that amount required to react one —NCO group with each active hydrogen atom of said organic compound, said organic compound being selected from

the group consisting of polyesters, poly(alkylene ether)glycols and poly(alkylene ether thioether) glycols; and

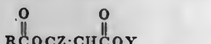
(*b*) mixing and reacting the resulting polyurethane-prepolymer composition with a glycol selected from the group consisting of butene diol and butyne diol, said glycol being present in an amount less than that required to reduce the —NCO content of said prepolymer composition to zero.

3,129,201
ALKYL 3-ACYLOXY-2-ALKENOATES AND HOMOPOLYMERS THEREOF

Lee A. Miller, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Oct. 30, 1959, Ser. No. 849,721
19 Claims. (Cl. 260—78.3)

1. The process which comprises heating a mixture consisting essentially of an alkyl 2-alkynoate of the formula $ZC{\equiv}COOY$ where Y is alkyl of from 1 to 5 carbon atoms and Z is selected from the class consisting of Y, hydrogen and hydrocarbon aryl of from 6 to 10 carbon atoms, and a monocarboxylic acid having a hydrogen ion concentration of less than 1.396×10^{-3}, an inert diluent and a basic catalyst, and recovering an alkyl 3-acyloxy-2-alkenoate of the formula



in which R is a radical corresponding to the carboxy-free residue of said carboxylic acid and Z and Y are as herein defined.

19. A compound of the formula



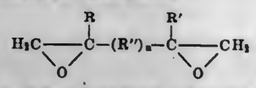
in which X is selected from the class consisting of alkenyl radicals of from 1 to 5 carbon atoms, and the naphthyl and fluorenyl radicals and Y is an alkyl radical of from 1 to 5 carbon atoms.

3,129,202
SYNTHETIC THERMOPLASTIC LINEAR POLYESTERS AND PROCESS

Alfred Johannes Porck, Tonawanda, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

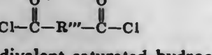
No Drawing. Filed Dec. 15, 1960, Ser. No. 75,906
12 Claims. (Cl. 260—78.4)

1. The process which comprises, in combination, the steps of (1) reacting an intimate mixture consisting essentially of stoichiometric equivalent amounts of (*a*) an organic diepoxide selected from the class consisting of organic diepoxides of the formula:



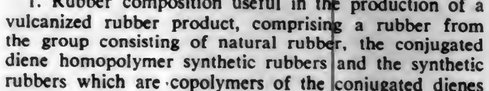
wherein R and R' are radicals selected from the group consisting of —H, and $—CH_3$, R'' is a divalent saturated hydrocarbon radical of from 1 to 8 carbon atoms and having no branches larger than $—CH_3$, and

n is a cardinal number of from 0 to 1 inclusive, and (*b*) an organic diacid chloride of the formula:



wherein R''' is a divalent saturated hydrocarbon radical of from 2 to 18 carbon atoms and having no branches larger than $—CH_3$, as reactants, and (*c*) a catalytic amount of a tertiary amine as catalyst; maintaining the reaction mixture at a temperature not above about 75° C. until polymerization has been initiated and the viscosity of the reaction mixture, measured at 60° C., is in the range of 600–800 poises; and (2) thereafter heating said reaction mixture at a temperature within the range of from about 90° C. to about 250° C. for a time sufficient to produce a film- and filament-forming polymer.

6. A thermoplastic linear polymer consisting essentially of recurring structural units of the general formula:



wherein R and R' are selected from the group consisting of —H and $—CH_3$ radicals, R'' is a divalent, saturated hydrocarbon radical of from 1 to 8 carbon atoms and having no branches larger than $—CH_3$, *n* is a cardinal number of from 0 to 1 inclusive, R''' is a divalent, saturated hydrocarbon radical of from 2 to 18 carbon atoms and having no branches larger than $—CH_3$, Y and Y' are monovalent radicals selected from the group consisting of —Cl and $—CH_2Cl$ radicals, *y* and *y'* are cardinal numbers of from 0 to 1 inclusive, and when Y is $—CH_2Cl$, *y* is 0 and when Y is —Cl, *y* is 1; and when Y' is $—CH_2Cl$, *y'* is 0 and when Y' is —Cl, *y'* is 1; said polymer when formed into films and filaments being capable of being cold drawn.

3,129,203
RESINS PREPARED FROM TERPENE OXYDATES AND MALEIC ANHYDRIDE

Fred W. Muncie, Lake Wales, Fla., assignor to Sunl-Citrus Products Company, Haines City, Fla., a corporation of Florida

No Drawing. Filed Feb. 8, 1960, Ser. No. 7,122
4 Claims. (Cl. 260—78.5)

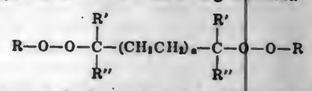
1. A process for the production of thermoplastic, alcohol-soluble resins which comprises passing oxygen through a bath of limonene at a temperature of about 40° to 100° C. until the optical rotation of the resulting mixture of limonene and limonene oxydate is between about +35° and +40°, mixing between about 30 to 40% by weight of maleic anhydride with said limonene oxydate mixture, heating the resulting mixture to reflux for at least about two hours, removing unreacted volatile material and recovering the resulting thermoplastic, alcohol-soluble resin.

3,129,204
VULCANIZATION OF NATURAL AND SYNTHETIC RUBBERS WITH BIS(TERT-ALKYLPEROXY)-ALKANE

Ernest R. Gilmont, Princeton, N.J., assignor to FMC Corporation, a corporation of Delaware

No Drawing. Filed Aug. 5, 1959, Ser. No. 831,702
18 Claims. (Cl. 260—83.3)

1. Rubber composition useful in the production of a vulcanized rubber product, comprising a rubber from the group consisting of natural rubber, the conjugated diene homopolymer synthetic rubbers and the synthetic rubbers which are copolymers of the conjugated dienes with monomers containing a vinyl group, and on the weight of the rubber, about 0.1 to 10% of a bis(tert-alkylperoxy)alkane of the following formula

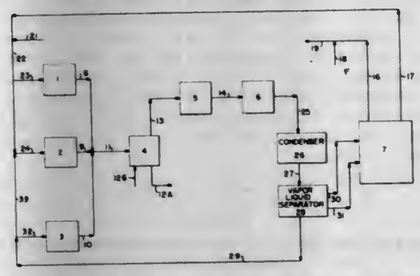


where *n* is 1 or 2, R is a tertiary alkyl radical, and R' and R'' are hydrocarbon radicals from the group consisting of individual unconnected hydrocarbon radicals and cycloalkylene radicals in which R' and R'' are alkylene radicals connected to form said cycloalkylene radicals.

3,129,205
REACTOR FLUSHING SYSTEM

Gilbert Rowe, Clark Township, Union County, John L. Bryan, Jr., Summit, Stanley E. Jaros, Watchung, and Bruce R. Tegge, Madison, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Nov. 3, 1958, Ser. No. 771,646
1 Claim. (Cl. 260—85.3)



In a polymerization process for the preparation of butyl rubber which includes polymerizing isobutylene with isoprene in a methyl chloride diluent in the presence of a Friedel-Crafts catalyst in solution at relatively low temperatures to provide a polymer slurry in volatile methyl chloride including small amounts of volatile unreacted isobutylene and isoprene, volatile catalyst solvent, and volatile C_4 purge, in a reaction zone; introducing said slurry into a flashing zone to flash off said volatile materials to provide a mixture of vapor and liquid; and passing said vapor and liquid mixture to a diluent recovery and fractionation system; the improvement which comprises: transporting said vapor and liquid mixture to a separating zone prior to its passage to the diluent recovery and fractionation system; separating the vapor from the liquid; passing said separated vapor into the diluent recovery and fractionation system; passing part of the separated liquid to said diluent recovery and fractionation system; maintaining the remaining part of the separated liquid as a reservoir in said separating zone; and periodically passing a portion of said reservoir as a flushing medium to said reaction zone; said process resulting in a 25% reduction of the required capacity of the diluent recovery and fractionation system.

3,129,206
POLYMERIZATION PROCESS

Andrzej Pajaczkowski, Harpenden, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Aug. 5, 1960, Ser. No. 47,615
Claims priority, application Great Britain Feb. 14, 1958
7 Claims. (Cl. 260—88.7)

1. In a process for the polymerization of a monomer selected from the group consisting of vinyl chloride, vinyl acetate, vinyl phthalimide, methyl methacrylate, methyl acrylate, acrylonitrile, styrene, diallyl esters, vinylidene chloride and butadiene, the improvement which comprises polymerizing said monomer in the presence of from 0.01% to 2.0% by weight of 3,5,5-trimethylhexanoyl peroxide.

3,129,207
PROCESS FOR THE POLYMERIZATION OF VINYL FLUORIDE

Virgil Eugene James, Buffalo, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 2, 1961, Ser. No. 92,763
10 Claims. (Cl. 260—92.1)

1. In the process for the polymerization of vinyl fluoride wherein vinyl fluoride, water and a water-soluble, free radical generating catalyst are introduced into a reactor, the pressure of the reactor is maintained at a pressure of 25–1,000 atmospheres and a temperature of 25°–250° C., the contents of the reactor are agitated, a slurry of a vinyl fluoride polymer and water is removed from the reactor, and the water is separated from the polymer, the improvement wherein at least a portion of the water separated from the polymer is introduced into the reactor with the vinyl fluoride and the water-soluble, free radical generating catalyst.

3,129,208
PROCESS FOR THE POLYMERIZATION OF ALPHA OLEFINS IN THE PRESENCE OF AN ALUMINUM SESQUIHALIDE, TITANIUM HALIDE, A LOWER ALKYLENE OXIDE AND HYDROGEN

James L. Jezl, Swarthmore, Habet M. Khelghatian, Springfield, and Louise D. Hague, Villanova, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Nov. 3, 1960, Ser. No. 66,935
6 Claims. (Cl. 260—93.7)

1. In a process for the polymerization of alpha olefins which comprises contacting a solution, in an inert hydrocarbon solvent, of an alpha olefin having from 2 to 20 carbon atoms free from branching at the 2-position with a catalytic composition consisting essentially of an aluminum sesquihalide selected from the group consisting of sesquichlorides and sesquibromides, an essentially amorphous titanium trichloride, and a lower alkylene oxide; wherein the mol ratio of aluminum sesquihalide to titanium trichloride is from 1:5 to 10:1 and the mol ratio of aluminum sesquihalide to lower alkylene oxide is from 10:1 to 5:4, the improvement which consists in conducting the polymerization in the presence of at least 5 parts by million by weight, based on the weight of the solvent, of hydrogen.

3,129,209
PROCESS FOR THE POLYMERIZATION OF ALPHA OLEFINS

Louise D. Hague, Villanova, and Habet M. Khelghatian, Springfield, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Nov. 14, 1960, Ser. No. 68,611
4 Claims. (Cl. 260—93.7)

1. In a process for the polymerization of alpha-olefins which comprises contacting an alpha-olefin free from branching at the 2-position with a catalytic composition consisting essentially of an aluminum sesquihalide having the formula $AlR_{1.5}X_{1.5}$ wherein R is a hydrocarbon radical having from 2 to 12 carbon atoms and X is selected from the group consisting of chlorine and bromine, an essentially amorphous titanium trichloride and methyl tetrahydrofuran suspended in an inert hydrocarbon solvent; wherein the mol ratio of aluminum sesquihalide to metal halide is from 1:5 to 10:1 and the mol ratio of aluminum sesquihalide to methyl tetrahydrofuran is from 10:1 to 5:4, the improvement which consists in conducting the polymerization in the presence of from 5 parts to 250 parts per million by weight, based on the weight of the solvent, of hydrogen.

3,129,210
PROCESS FOR POLYMERIZING N-VINYL LACTAMS

Frederick Grosser, Midland Park, and Marvin R. Leibowitz, Edison, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 9, 1960, Ser. No. 74,762
7 Claims. (Cl. 260—88.3)

1. In a process for the preparation of polymeric N-vinyl lactams, the improvement which comprises pro-

gressively adding a quantity of an N-vinyl lactam monomer at a substantially uniform rate over a period of at least ½ hour to an aqueous neutral to alkaline polymerizing medium maintained at boiling temperature, concurrently and progressively adding to said medium a quantity of azo polymerization catalyst amounting to 0.1 to 3% by weight of said monomer, and heating said mixture at polymerization temperature after said additions are complete until polymerization is substantially complete, the quantity of said aqueous polymerization medium being such as to yield a 30 to 60% solution of the resulting polymer in the final solution.

3,129,211
POLYMERIZATION CATALYST AND PROCESS

Gordon D. Brindell and Allan J. Lundeen, Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

No Drawing. Filed Nov. 5, 1959, Ser. No. 851,022
4 Claims. (Cl. 260—94.9)

3. A process for the preparation of low density, high molecular weight polyethylene which comprises contacting ethylene under polymerization conditions with a catalyst consisting essentially of an organo-sodium compound and a titanium tetrachloride characterized in that the mole ratio of organo-sodium to titanium tetrachloride is from about 30:1 to about 400:1.

3,129,212
POLYMERIZATION OF ETHYLENE IN THE PRESENCE OF A FREE RADICAL INITIATOR, A CHEMICAL MODIFIER, AND METHANE AS A PHYSICAL MODIFIER

George A. Mortimer, La Marque, Tex., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Dec. 30, 1960, Ser. No. 79,518
12 Claims. (Cl. 260—94.9)

1. A process for the polymerization of ethylene at a temperature in the range from about 100° C. to about 400° C. and the pressure in the range from about 15,000 p.s.i. to about 40,000 p.s.i. in the presence of a free radical initiator, a chemical modifier chosen from the group consisting of aliphatic hydrocarbons, alkyl aromatic hydrocarbons, cyclic hydrocarbons, halogen-substituted hydrocarbons, alcohols, ketones, ethers, esters and hydrogen, and methane as a physical modifier.

3,129,213
ORTHOALKYLPHENOL-SULFUR DICHLORIDE REACTION PRODUCTS

Calvin J. Worrel, Detroit, Mich., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Dec. 22, 1961, Ser. No. 161,357
11 Claims. (Cl. 260—137)

1. As a composition of matter a reddish-yellow polynuclear phenolic material containing 2 to 5 phenolic nuclei wherein each phenolic nucleus is mono-ortho-alkylated and contains one hydroxyl radical and one alkyl group of 3–8 carbon atoms ortho to said hydroxyl radical, said phenolic nuclei being linked together in a straight chain, each of said nuclei being linked to the adjacent nuclei through 1–6 sulfur atoms in sulphide linkages, said linkages being between carbon atoms of said nuclei selected from those carbon atoms ortho and para to said hydroxyl group, at least one of the terminal nuclei of said chain containing a chlorine atom, said phenolic material containing about 50 to 62 percent carbon, about 4.5 to 7.2 percent hydrogen, about 34 to 11 percent sulfur, and about 16 to 5 percent chlorine, said phenolic material having an average molecular weight of about 500 to 740, and said phenolic material being soluble in hydrocarbon mineral oil.

4. Process of preparing a sulfur and chlorine-containing phenolic material which comprises reacting (1) a mono-ortho-alkylated phenolic compound having, ortho to the phenolic hydroxyl group, an alkyl group of from 1–12 carbon atoms and (2) sulfur dichloride; conducting said reaction at a temperature and for such a time that at least one terminal nucleus of said phenolic material is substantially chlorinated and said phenolic material contains from 5–16 percent chlorine; there being at least about 1.0 mole of said sulfur dichloride per mole of phenolic compound as reactants.

3,129,214
METHOD FOR CRYSTALLIZING MONOSODIUM NOVOBIOCIN

William H. De Vries, Kalamazoo Township, Kalamazoo County, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Filed Oct. 26, 1961, Ser. No. 147,763
3 Claims. (Cl. 260—210)

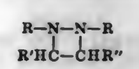
1. The process for preparing crystalline monosodium novobiocin which comprises neutralizing novobiocin dispersed in acetone containing from about 2% to about 25% water to produce monosodium novobiocin, crystallizing the thus-produced monosodium novobiocin by decreasing the concentration of water to about 1.5% by adding acetone, adding about ½ volume of an insert organic diluent, and recovering crystalline monosodium novobiocin.

3,129,215
CERTAIN 1,2-DIAZETIDINES AND THEIR PREPARATION

David Horvitz, Cheverly, Md., assignor, by mesne assignments, to FMC Corporation, New York, N.Y., a corporation of Delaware

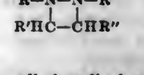
No Drawing. Filed May 14, 1958, Ser. No. 735,099
12 Claims. (Cl. 260—239)

1. A compound having the formula:



wherein R is a lower alkyl radical, and R′ and R″ are selected from the group consisting of hydrogen and a lower alkyl radical.

5. A process which comprises reacting a lower dialkyl substituted hydrazine and a lower alkyl vicinal dihalide in a mol ratio of said dialkyl substituted hydrazine to said alkyl dihalide of about 1 to 1 in the presence of an inert reaction medium and a mild alkaline reagent other than said dialkyl substituted hydrazine at a temperature ranging from room temperature up to about 150° C. to produce a reaction mixture containing at least one chemical compound having the formula:



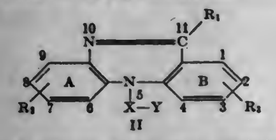
wherein R is a lower alkyl radical and R′ and R″ are selected from the group consisting of hydrogen and a lower alkyl radical.

3,129,216
5-BASIC SUBSTITUTED-5-DIBENZO-[b,e] [1,4]-DIAZEPINES

Jean Schmutz and Fritz Humziker, Bern, Switzerland, assignors to Dr. A. Wander, S.A., Bern, Switzerland, a corporation of Switzerland

No Drawing. Filed Oct. 31, 1961, Ser. No. 160,382
9 Claims. (Cl. 260—239)

1. A compound selected from the group consisting of: (A) the 5-dibenzo-[b,e][1,4]-diazepin derivatives, substituted in position 5, having the formula



II

wherein R_1 is a member of the class consisting of hydrogen, methyl, ethyl, propyl and isopropyl; R_3 and R_3 are members of the class consisting of hydrogen, chlorine, methyl, ethyl, methoxy, ethoxy, methylthio and ethylthio; X is a hydrocarbon chain containing between 2 and 3 inclusive carbon atoms; and Y is a member of the class consisting of dimethylamino, diethylamino, methyl-ethyl-amino, pyrrolidino, piperidino, morpholino, N′-methyl-piperazino, and N′-ethyl-piperazino; (B) the non-toxic therapeutically useful mono- and di-quaternary ammonium salts of (A) having an alkyl group as the organic substituent and having as the anionic substituent a group selected from the class consisting of sulfate, halide and sulfonate; and (C) the non-toxic therapeutically useful acid addition salts of (A) and (B).

2. 5-β-dimethylaminoethyl - 11 - methyl - 5 - dibenzo-[b,e][1,4]-diazepin.

3,129,217
DERIVATIVES OF 6-(9-ANTHRAMIDO) PENICILLANIC ACID

Frank Peter Doyle, Betchworth, Surrey, and John Herbert Charles Nayler, Dorking, Surrey, England, assignors to Beecham Group Limited, Brentford, England, a British company

No Drawing. Filed Aug. 16, 1960, Ser. No. 49,851
Claims priority, application Great Britain, Aug. 19, 1959
6 Claims. (Cl. 260—239.1)

1. A member selected from the group consisting of the acid 6-(9-anthramido) penicillanic acid and its sodium, potassium, calcium, aluminum and ammonium salts and its nontoxic substituted ammonium salts with an amine selected from the group consisting of tri(lower)alkylamines, procaine, dibenzylamine, N-benzyl-beta-phenethylamine, 1-ephenamine, N,N′-dibenzylethylenediamine, dehydroabietylamine, N,N′-bis-dehydroabietylethylenediamine and N-(lower)alkylpiperidine.

3,129,218
2-ALKOXYMETHYLENE STEROIDS OF THE ANDROSTANE AND PREGNANE SERIES

John Fried, Plainfield, Thomas B. Windholz, Westfield, and Ralph F. Hirschmann, Scotch Plains, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Nov. 1, 1961, Ser. No. 149,164
21 Claims. (Cl. 260—239.5)

1. The process which comprises reacting a 2-hydroxymethylene-steroid selected from the group consisting of 2-hydroxymethylene-3-keto-steroids of the androstane series and 2-hydroxymethylene - 3 - keto-17,20,20,21-bismethylenedioxy-steroids of the pregnane series with an alkanol and an acidic reagent to form the corresponding 2-alkoxymethylene-steroid.

2. The process which comprises reacting a 2-alkoxymethylene-steroid selected from the group consisting of 2-hydroxymethylene-3-keto-steroids of the androstane series and 2-hydroxymethylene - 3 - keto-17,20,20,21-bismethylenedioxy-steroids of the pregnane series with a monosubstituted hydrazine in an inert atmosphere to form a mixture of the corresponding 1′-substituted-steroidal-[3,2-c]pyrazole and the 2′-substituted-steroidal-[3,2-c] pyrazole, and separating said 1′-substituted-steroidal-[3,2-c]pyrazole and said 2′-substituted-[3,2-c]pyrazole by chromatography.

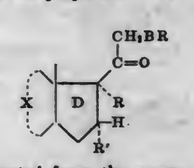
13. 2-alkoxymethylene - 17α,20,20,21 - bismethylenedioxy-11β-hydroxy-16α-methyl-4-pregnene-3-one.

3,129,219
PREPARATION OF 21-BROMINATED PREGNANES

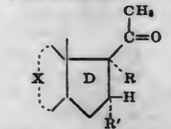
Robert Joly, Montmorency, Seine-et-Oise, Julien Warnant, Neuilly-sur-Seine, Jean Jolly, Fontenay-sous-Bois, Seine, Armand Guillemette, Noisy-le-Sec, Seine, and Bernard Goffinet, Paris, Seine, France, assignors, by mesne assignments, to Roussel UCLAF, S.A., Paris, France, a corporation of France

No Drawing. Filed Dec. 18, 1961, Ser. No. 160,294
Claims priority, application France Dec. 22, 1960
13 Claims. (Cl. 260—239.5)

1. A process for the preparation of a compound having the formula:



wherein R′ is selected from the group consisting of hydrogen and methyl, and wherein R is selected from the group consisting of hydrogen and hydroxy and X represents the A, B and C rings of a pregnane molecule selected from the group consisting of 5β-pregnanes, 5α-pregnanes and 4-fluoro-Δ^4-pregnenes which comprises reacting a compound having the formula



wherein R′, R and X have the above definitions with bromine in methanol in the presence of an enolization agent selected from the group consisting of p-toluene sulfonic acid, mineral acids, organic acid halides and inorganic acid halides to form the 21-bromo-pregnane and recovering the latter.

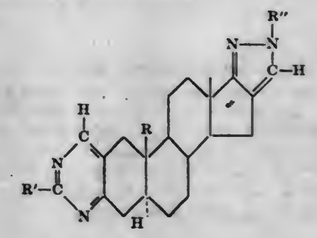
11. 3 - (N - pyrrolidyl) - $\Delta^{3,5}$ - pregnadiene - 17α - ol-11,20-dione.

3,129,220
STEROIDAL-PYRIMIDINE-PYRAZOLES

Pietro de Ruggieri and Carmelo Gandolfi, Milan, Italy, assignors to Ormonoterapia Richter S.p.A., Milan, Italy, a corporation of Italy

No Drawing. Filed Aug. 6, 1962, Ser. No. 214,847
Claims priority, application Italy Aug. 5, 1961
11 Claims. (Cl. 260—239.5)

1. A compound of the formula



wherein R is a member selected from the group consisting of H and CH_3, R′ is a member selected from the group consisting of H and NH_2 and R″ is a member selected from the group consisting of H and CH_3.

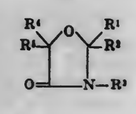
3,129,221
4-METHYL-6-EXOMETHYLENE STEROIDS AND PROCESSES
John Fried, Plainfield, and Anthony N. Nutile, Elizabeth, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed June 13, 1960, Ser. No. 35,455
8 Claims. (Cl. 260—239.55)

1. The process for the preparation of a mixture of 4-halomethyl Δ^4-steroid-3-one and 4-halomethyl-6-exomethylene-Δ^4-steroid-3-one compounds of the pregnane series which comprises reacting the corresponding Δ^4-steroid-3-one compound with halomethyl methyl ether.

8. 4-methyl - 6 - exomethylene - 17α,20,20,21-bis-methylenedioxy-4-pregnene-3,11-dione.

3,129,222
2,2,5-TRISUBSTITUTED-4-OXAZOLIDINONE COMPOUNDS
John B. Bicking, Lansdale, Pa., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed Dec. 1, 1960, Ser. No. 72,859
13 Claims. (Cl. 260—240)

1. 4-oxazolidinone having the formula:

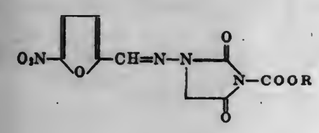


wherein R^1 and R^2 respectively is lower alkyl; R^3 and R^5 each is selected from the group consisting of hydrogen and lower alkyl; and R^4 is selected from the group consisting of phenyl-lower-alkyl, phenyl-lower-alkenyl, (halo-phenyl)-lower-alkyl, phenyl - lower - (alkoxyalkyl), phenyl - lower - alkyl, phenyl - mercapto - lower - alkyl and phenyl-lower-(alkylmercaptoalkyl).

2. 2,2 - di - (lower-alkyl)-5-(phenyl-lower-alkenyl)-4-oxazolidinone.

3,129,223
3-NITRO-FURANTOINCARBOXYLIC ACID ESTERS
Philip N. Gordon, Old Lyme, Conn., assignor to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Apr. 25, 1962, Ser. No. 189,997
9 Claims. (Cl. 260—240)

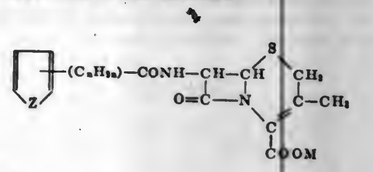
1. A compound of the formula:



wherein R is a member selected from the group consisting of alkyl having from one to ten carbon atoms, lower hydroxyalkyl, alkenyl containing up to eight carbon atoms, cycloalkyl having from three to eight carbon atoms, cycloalkylalkyl having from four to nine carbon atoms, benzyl, p-nitrobenzyl, β-phenylethyl, m-xylyl, p-chlorobenzohydryl, thenyl, furfuryl, phenyl, p-chlorophenyl, p-tolyl, α-naphthyl, β-naphthyl, thienyl and furyl.

3,129,224
ANTIMICROBIAL 3-METHYL-7-AMINODECEPHALOSPORANIC ACID DERIVATIVES
Bruce M. Collins, Philadelphia, Pa., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Filed Nov. 23, 1962, Ser. No. 239,802
7 Claims. (Cl. 260—243)

1. Compounds of the structure:



wherein

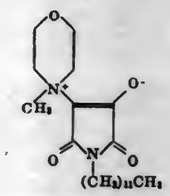
Z is a member selected from the group consisting of a divalent sulfur atom and divalent oxygen atom.

M is a cation form of a member selected from the group consisting of hydrogen, sodium, potassium, calcium, aluminum, N,N′-dibenzylethylenediamine, N,N′-bis-(dehydroabietyl)-ethylenediamine and N-methyl-1,2-diphenyl-2-hydroxyethylamine, and

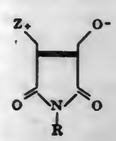
n is an integer from 0 to 3 inclusively.

3,129,225
NOVEL 4-OXY-3-MALEIMIDYL BETAINES
Seymour L. Shapiro, Hastings on Hudson, Louis Freedman, Bronxville, and Marvin J. Karten, Yonkers, N.Y., assignors to U.S. Vitamin & Pharmaceutical Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed June 7, 1961, Ser. No. 115,313
7 Claims. (Cl. 260—247.2)

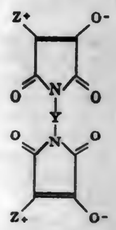
4. The compound



7. A compound selected from the group consisting of compounds of the structural formulae



and



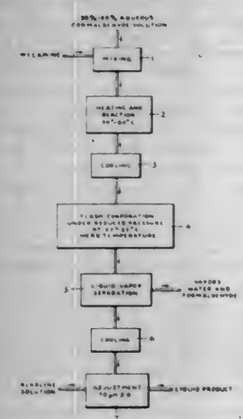
wherein

(*a*) R is selected from the group consisting of alkyl of from 1 to 18 carbon atoms, cycloalkyl of from 3 to 12 carbon atoms, carbethoxymethyl, hydroxyethyl, lauroxypropyl, phenyl-lower alkyl, allyl, halophenyl, lower alkoxyphenyl, trifluoromethylphenyl and naphthyl,

(*b*) Y is selected from the group consisting of xylylene, methylene and a polymethylene of from 2 to 10 carbon atoms, and

(*c*) Z is selected from the group consisting of compounds having the structure $(CH_3)_2NCH_2R_1$, wherein R_1 is selected from the group consisting of butyl and phenyl; and cyclic tertiary amines consisting of pyridine, imidazole, isoquinoline, pyrazine, N-methyl morpholine and substituted derivatives thereof wherein substituent is selected from the group consisting of lower alkyl, hydroxy, acetyl, formyl, carboxy, carbomethoxy, carbethoxy, —$CONH_2$, —$CON(C_2H_5)_2$, —$CONHNH_2$, amino, halogen, hydrazino, —CH=NOH, and mercapto.

3,129,226
SOLUTIONS OF MELAMINE-FORMALDEHYDE REACTION PRODUCTS AND PROCESSES FOR THEIR PRODUCTION
George K. Cleek, Hopewell, and Alexander Sadle, Petersburg, Va., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
Filed Oct. 13, 1958, Ser. No. 766,772
5 Claims. (Cl. 260—249.6)



1. The process for the production of a stable aqueous melamine-formaldehyde concentrate which comprises heating at temperatures above about 30° C. a mixture of about 30% to about 50% aqueous formaldehyde solution and melamine containing substantially 14 to 16 mols formaldehyde for every one mole of melamine until the free formaldehyde content of the mixture drops to about 62 to about 66 weight percent of the total formaldehyde, evaporating the resulting reaction product containing said free formaldehyde content under reduced pressure below atmospheric until the concentrated liquid contains about 75% to about 85% total formaldehyde and melamine and a mol ratio of formaldehyde to melamine about 12/1 to about 16/1, and adjusting the hydrogen ion concentration in the resulting concentrate to substantially pH 8–9, said concentrate neither gelling nor becoming thixotropic for a period of one month's storage at temperatures of 20° C. to 30° C. after its initial preparation.

3,129,227
CERTAIN 1,3-BIS(HETEROCYCLYLIMINO)-ISOINDOLINES
Daniël van Velzen, Amsterdam, Netherlands, assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Feb. 21, 1962, Ser. No. 174,678
Claims priority, application Netherlands Aug. 3, 1961
2 Claims. (Cl. 260—306.8)

1. The compound 1,3-bis-(3-isothiazolylimino)-isoindoline.

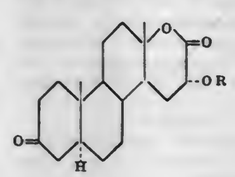
2. The compound 1,3-bis-(2-thiazolylimino)-isoindoline.

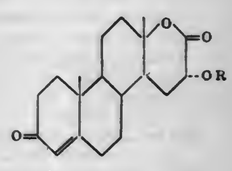
3,129,228
NOVEL PYRROLIDINEDIONES AND PROCESS FOR THE PRODUCTION THEREOF
Ernst Habicht, Schaffhausen, Switzerland, assignor to Cilag-Chemie Limited, Schaffhausen, Switzerland, a Swiss company
No Drawing. Filed July 6, 1960, Ser. No. 42,744
Claims priority, application Switzerland Aug. 14, 1957
11 Claims. (Cl. 260—326.5)

1. 1,2-diphenyl-4-lower alkyl-pyrrolidine-3,5-dione.

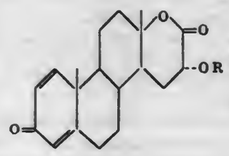
3,129,229
TESTOLOLACTONES
Robert S. Robison, North Brunswick, and Edward J. Becker, Princeton, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed Jan. 29, 1963, Ser. No. 254,611
10 Claims. (Cl. 260—343.2)

1. A compound selected from the group consisting of steroids of the formulae





and



wherein R is lower alkyl.

3,129,230
PROCESS FOR PRODUCING PHTHALIC ANHYDRIDE FROM ORTHOXYLENE
Mack F. Hughes, Albany, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
No Drawing. Filed Feb. 5, 1962, Ser. No. 171,251
5 Claims. (Cl. 260—346.4)

1. A process for the vapor-phase partial oxidation of orthoxylene which comprises contacting vaporized orthoxylene and molecular oxygen with a solid vanadium oxide catalyst in a reaction zone at about 1100°–1500° F. for a period of from 0.001 to 0.05 second, thereafter cooling the resulting reaction mixture to a temperature in the range 400–900° F. at a rate of not less than about 6.0×10^3 ° F. per second and recovering phthalic anhydride from said cooled reaction mixture.

3,129,231
ETHYLENE OXIDE ADDUCTS OF EPOXY-CONTAINING FATTY ALCOHOLS

Samuel W. Tinsley, South Charleston, and Paul S. Starcher, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Original application Sept. 22, 1958, Ser. No. 762,264, now Patent No. 2,998,432, dated Aug. 29, 1961. Divided and this application Feb. 21, 1961, Ser. No. 90,884

4 Claims. (Cl. 260—348)

1. Compositions of matter consisting of compounds of the formula:

$$(C_nH_{2n+1-2x}O_x)—CH_2—O—(CH_2CH_2O)_y—H$$

wherein $(C_nH_{2n+1-2x}O_x)$ is an epoxyalkyl group having n carbon atoms, $2n+1-2x$ hydrogen atoms and x oxygen atoms, n is a whole positive integer selected from the range of 11 to 18, x is a whole positive integer selected from the range of 1 to 3 and y is a positive integer in the range of from 5–15.

3,129,232
PROCESS FOR CONDENSING EPOXYALKYL HALIDES WITH HYDROXYL GROUP-CONTAINING COMPOUNDS

Henry C. Terford, Houston, and Willis D. Kinney, Pasadena, Tex., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed Aug. 8, 1961, Ser. No. 130,013

6 Claims. (Cl. 260—348.6)

1. In the production of glycidyl ethers in which

(1) a hydroxyl-group-containing compound selected from the group consisting of water, monohydric alkanols, polyhydric alkanols, monohydric phenols and polyhydric phenols, whose hydroxyl groups are capable of reacting with the epoxide group of epichlorohydrin, is reacted with a predetermined amount of

(2) epichlorohydrin, in the presence of

(3) an acidic catalyst selected from the group consisting of boron trifluoride, complexes of boron trifluoride, inorganic acids and salts,

the improvement which consists of carrying out the reaction in a reaction zone consisting of at least three reaction stages arranged for product flow in series without backmixing between stages, in the following manner:

(*a*) continuously passing said hydroxyl-group-containing compound exclusively into the first stage of said reaction zone,

(*b*) passing at least a substantial portion of epichlorohydrin and catalyst into said first reaction stage,

(*c*) passing the reaction mixture from each stage into the following stage,

(*d*) passing the remainder of epichlorohydrin and catalyst into at least one additional reaction stage,

(*e*) maintaining the temperature in each stage between 100° C. and 200° C. by indirect heat removal, and

(*f*) controlling the rate of flow through said reaction zone such that the contact time therein is in the range from 2 minutes to 60 minutes and does not substantially exceed the time required for completion of reaction at the temperature employed.

3,129,233
17β-ACETOXY-3-CHLORO-3,5-ANDROSTADIENE

Romano Deghenghi, Westmount, Quebec, Canada, assignor to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 28, 1961, Ser. No. 134,104

1 Claim. (Cl. 260—397.5)

17β-acetoxy-3-chloro-3,5-androstadiene.

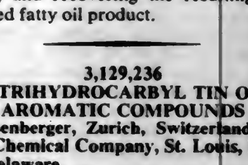
3,129,234
NEW HYDROXY-OESTRANE COMPOUNDS

Kyosuke Tsuda, Saitama-ken, Shigeo Nozoe, Kanagawa-ken, and Yutaka Okada, Tokyo, Japan, assignors to Sankyo Company, Limited, Chuo-ku, Tokyo, Japan

No Drawing. Filed July 5, 1962, Ser. No. 207,799

10 Claims. (Cl. 260—397.45)

3. Compounds of the formula:



in which

R_1 is selected from the group consisting of a lower alkyl group and an acyl radical and

R_2 is selected from the group consisting of an (H) acyloxy group and a keto group and acyl is derived from a member of the group consisting of sulfuric acid, phosphoric acid, and aliphatic, aromatic and araliphatic carboxylic acids containing from 1 to 30 carbon atoms.

3,129,235
PROCESS FOR PRODUCTION OF LOW-MELTING EDIBLE HARDENED OIL

Tsutomu Kuwata, Tokyo, Shizuo Takumi, Kamakura-shi, Kanagawa-ken, and Toshio Hashimoto, Yokohama-shi, Kanagawa-ken, Japan, assignors to Nikki Kagaku Kabushiki Kaisha, Tokyo, Japan, a corporation of Japan

No Drawing. Filed July 31, 1962, Ser. No. 213,615

Claims priority, application Japan Mar. 17, 1962

5 Claims. (Cl. 260—409)

1. A process for producing low-melting edible hardened fatty oil of superior stability by hydrogenation of a fatty oil which comprises hydrogenating said oil at a temperature of between about 130° C. and 200° C., under a hydrogenation pressure of from 1 to 10 atmospheres and for from ½ to 2 hours in the presence of about 2% by weight, based on the weight of said oil, of a copper-chromium-manganese oxide catalyst substantially devoid of free CuO, said catalyst being prepared by adding ammonia to a solution containing in solution, chromium salt, manganese salt and copper salt, the addition of ammonia being sufficient to precipitate the copper, manganese and chromium from said solution; separating the precipitate from the remaining liquid; washing the separated precipitate; drying the washed precipitate; drying and then calcining the precipitate at about 350° C.; and thereafter removing free CuO present in said calcined precipitate by treating said precipitate with a solution selected from the group consisting of acid, alkali and chromic acid; and recovering the resulting low-melting edible hardened fatty oil product.

3,129,236
BIS(TRIHYDROCARBYL TIN OXY) AROMATIC COMPOUNDS

Gustav Weissenberger, Zurich, Switzerland, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Jan. 2, 1962, Ser. No. 163,900

Claims priority, application Switzerland Dec. 31, 1960

9 Claims. (Cl. 260—429.7)

1. An organotin compound of the formula

$$RR'R''SnO—X—OY$$

wherein R, R' and R'' are hydrocarbon radicals having not more than 18 carbon atoms, X is selected from the class consisting of aromatic hydrocarbon radicals and aromatic ring halogenated derivatives of these radicals having not more than 25 carbon atoms, and Y is a RR'R''Sn group wherein R, R' and R'' are as defined hereinabove.

3,129,237
PROCESS FOR THE PREPARATION OF BIS-HYDROCARBON COMPOUNDS OF CHROMIUM

Lawrence G. Hess, Charleston, and Everett A. Mailey, St. Albans, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 16, 1960, Ser. No. 76,090

6 Claims. (Cl. 260—438)

1. The process for producing organo-chromium compounds which comprises reacting an organic aromatic hydrocarbon compound selected from the group consisting of an aromatic hydrocarbon compound having an isolated benzene ring and aryl substituted benzenes, said aromatic hydrocarbon compound having from 6 to 18 carbon atoms with chromous chloride, unalloyed aluminum, and aluminum chloride in the proportions of 1 mole of chromous chloride to from about 2 to about 25 moles of said aromatic hydrocarbon compound, to from about 0.4 to about 5 moles of aluminum, to from about 1 to about 4 moles of aluminum chloride at a temperature of from about 70° C. to about 110° C.

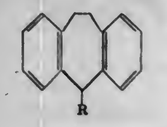
3,129,238
DIBENZOCYCLOHEPTADIENYL ISOCYANATE AND ACETYLUREAS

Martin A. Davis, Montreal, Quebec, Canada, assignor to American Home Products Corporation, New York, N.Y., a corporation of Delaware

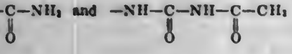
No Drawing. Filed July 20, 1962, Ser. No. 211,421

4 Claims. (Cl. 260—453)

1. A compound of the formula:



wherein R is selected from the group of radicals consisting of —N=C=O;



3,129,239
PRODUCTION OF ESTERS OF THIOBORIC ACID AND HYPOTHIOBORIC ACIDS

Konrad Lang, Leverkusen, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Mar. 8, 1960, Ser. No. 13,428

Claims priority, application Germany Mar. 10, 1959

9 Claims. (Cl. 260—462)

1. Process for preparing an organic boron sulfur compound of the general formula

$$H_nB(SR)_{3-n}$$

wherein n stands for an integer between 0 and 2, and R stands for a radical selected from the group consisting of alkyl containing 1 to 30 C-atoms, phenyl, naphthyl, alkylphenyl, halophenyl, nitrophenyl, alkoxyphenyl, lower alkoxyalkylphenyl, akylnaphthyl, halonaphthyl, nitronaphthyl, alkoxynaphthyl, and lower alkoxyalkylnaphthyl radicals by reacting an amine borane of the general formula $YN.BH_3$, wherein YN stands for an amine selected from the group consisting of primary, secondary and tertiary alkyl amines, aryl amines, mixed alkyl-aryl amines, cycloalkyl amines pyridine, quinoline, morpholine, pyrrolidine, piperidine, N-methylpyrrolidine, and N-methylpiperidine, with a mercaptan of the class consisting of aliphatic mercaptans of the formula

$$C_nH_{(2n+1)}SH$$

wherein n stands for a number between 1 to 30; and aromatic mercaptans of the formula

$$C_6H_{[6-(n+m)]}(SH_n(X)_m \text{ and } C_{10}H_{[8-(n+m)]}(SH)_n(X)_m$$

wherein X stands for a substituent of the class consisting of alkyl, halo-, nitro-, alkoxy- and lower alkoxyalkyl-radicals and m and n stand for integers between 0 and 5, the sum of n and m being not larger than 6, and recovering an ester of the group consisting of esters of thioboric acid and esters of a hypothioboric acid.

3,129,240
PREPARATION OF NITRILES

Lenze Hartstra, Amsterdam, Netherlands, assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 30, 1962, Ser. No. 183,722

Claims priority, application Netherlands Apr. 26, 1961

6 Claims. (Cl. 260—465)

1. A process for the preparation of 2,6-dichlorobenzonitrile which comprises mixing, at a temperature of from about 170° C. to about 300° C., 6-chloro-2-nitrobenzonitrile and chlorine, the mixture being maintained substantially free from iron and iron-containing compounds.

3,129,241
PREPARATION OF ACETONITRILE

Lawrence J. Krebaum, Texas City, Tex., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Aug. 9, 1960, Ser. No. 48,350

5 Claims. (Cl. 260—465.3)

1. A process for the preparation of acetonitrile which comprises passing hydrogen cyanide and methane together with from about 0.5 to about 7.5 mole percent of a compound chosen from the group consisting of propylene, and dimethyl ether through a reaction zone heated to a temperature within the range from about 600° to about 1000° C. at a rate such that the reaction time of said reactants in said reaction zone is in the range from about 0.01 to about 5 seconds.

3,129,242
METHYL 3β,5β-DIHYDROXY-B-NORCHOLESTANE-6β-CARBOXYLATE

Harold Russ Nace, Barrington, R.I., assignor to Richardson-Merrell Inc., a corporation of Delaware

No Drawing. Filed Dec. 28, 1961, Ser. No. 162,913

1 Claim. (Cl. 260—468)

Methyl 3β,5β-dihydroxy - B - norcholestane-6β-carboxylate.

3,129,243
PROCESS FOR THE PREPARATION OF SUBSTITUTED BENZENIC COMPOUNDS FROM ACETYLENES

Karl Walter Hübel, Brussels, Belgium, assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed May 13, 1958, Ser. No. 734,832

Claims priority, application Great Britain May 16, 1957

11 Claims. (Cl. 260—475)

1. A process for the preparation of substituted aromatic compounds which comprises heating at an elevated

temperature at least one acetylenic compound selected from the group consisting of R'—C≡C—R'' and R—C≡C—H, wherein R, R' and R'' represent members selected from the groups consisting of lower alkyl, phenyl, lower alkyl-phenyl, and the carboxyl, cyano, halogeno, and carbo- lower alkoxy substituted derivatives thereof; in the presence of an inducer selected from the class consisting of a transition metal carbonyl consisting of at least one carbonyl group and at least one metal selected from the group consisting of iron, nickel, cobalt, ruthenium, rhodium, palladium, osmium, iridium, platinum, manganese, rhenium, chromium, molybdenum, and tungsten, the mercury derivatives of metal carbonyls consisting of at least one carbonyl group and a metal selected from the group consisting of iron and cobalt, and a stable organo-metal carbonyl complex resulting from the reaction of an acetylenic compound with a transition metal carbonyl; said elevated temperature being higher than the decomposition temperature of said inducer and of the order of from about 50° C. to about 300° C.

3,129,244

METHOD OF SEPARATING NAPHTHOIC ACID ISOMERS

Thomas F. Johnson, Penn Hills, Pa., assignor to United States Steel Corporation, a corporation of New Jersey

No Drawing. Filed Oct. 5, 1961, Ser. No. 143,058

5 Claims. (Cl. 260—525)

1. In a method of separating alpha-naphthoic acid from beta-naphthoic acid in a mixture thereof, the steps comprising converting the acids to naphthoates by adding thereto an aqueous solution of material selected from the group consisting of sodium and potassium hydroxide, bicarbonate, carbonate and mixtures thereof to provide at least one stoichiometric equivalent of said material per equivalent of naphthoic acid, said material being present in a concentration of up to about 3% by weight in said solution, then precipitating the beta-naphthoate from the solution by adding thereto a solute selected from the group consisting of sodium and potassium hydroxide, bicarbonate, carbonate, halide, nitrate, sulphate and admixtures thereof to a concentration of said solute between about 3% by weight and a saturated solution thereof, and filtering the beta-naphthoate precipitated thereby from the alpha-naphthoate remaining in solution.

3,129,245

PURIFICATION OF CARBODIIMIDES

Sylvan E. Forman and Clifford A. Erickson, Mercer County, N.J., assignors to FMC Corporation, a corporation of Delaware

No Drawing. Filed May 29, 1961, Ser. No. 113,067

12 Claims. (Cl. 260—551)

1. The method of purifying a crude mixture containing a carbodiimide having the formula:

$$R—N=C=N—R'$$

in which R and R' are selected from the group consisting of alkyls of 1–8 carbon atoms, cycloalkyls of 6–8 carbon atoms, phenyl, carbocyclic alkaryls of 7–8 carbon atoms, and carbocyclic aralkyls of 7–8 carbon atoms and in which the sum of the carbon atoms in R and R' is at least 4, and sulfur-bearing impurities derived from the corresponding substituted thiourea which comprises treating said mixture with a solid alkali metal hydroxide for at least 5 minutes at a temperature of 40–180° C., and recovering the purified carbodiimide.

3,129,246

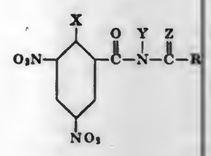
3,5-DINITROBENZOYLUREAS

Guy H. Harris, Concord, Calif., Patricia I. Traylor, Cambridge, Mass., and Bryant C. Fischback, Walnut Creek, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Continuation of application Ser. No. 770,580, Oct. 30, 1958. This application June 23, 1961, Ser. No. 119,031

4 Claims. (Cl. 260—552)

1. A compound corresponding to the formula



wherein X represents a member of the group consisting of hydrogen, methoxy, methyl and ethyl, Y represents a member of the group consisting of hydrogen, methyl and ethyl, Z represents a member of the group consisting of oxygen and sulfur, and R represents a member of the group consisting of amino and lower alkylamino.

4. 1,1-dimethyl-3-(3',5'-dinitrobenzoyl)-2-thiourea.

3,129,247

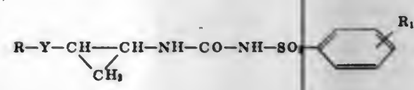
CYCLOPROPYL SULFONYL UREAS

Claude I. Judd, Mequon, Wis., assignor to Lakeside Laboratories, Inc., Milwaukee, Wis., a corporation of Delaware

No Drawing. Filed Apr. 5, 1962, Ser. No. 185,212

6 Claims. (Cl. 260—553)

1. Compounds of the formula



wherein R represents a member of the group consisting of phenyl, lower alkyl-phenyl, lower alkoxy-phenyl, halophenyl, hydroxyphenyl, aminophenyl, nitrophenyl, lower alkylenedioxyphenyl, Y represents a member of the group consisting of a single chemical bond and lower alkylene, and R_1 represents a member of the group consisting of hydrogen, lower alkyl, amino, nitro and halo groups.

2. N-(trans-2-phenylcyclopropyl) - N' - (p - toluenesulfonyl)urea.

3,129,248

PREPARATION OF FLUOROCYCLOBUTANONES

David C. England, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed July 18, 1960, Ser. No. 43,331

14 Claims. (Cl. 260—586)

1. The method of preparing a 3,3,4,4-tetrafluoro-2,2-dihalocyclobutanone which comprises (1) reacting, at a temperature of about 125–250° C., a 1,1-difluoro-2,2-dihaloethylene wherein all halogen is of an atomic number between 9 and 35, inclusive, and a perfluorovinyl hydrocarbyl ether wherein the hydrocarbyl radical is monovalent aliphatically saturated hydrocarbon of up to 7 carbons and (2) hydrolyzing the resultant 2,2-dihalo-1,3,3,4,4-pentafluorocyclobutyl hydrocarbyl ether with sulfuric acid of a strength of about 75–98% by weight at a temperature of about 125–300° C.

3,129,249

PROCESS FOR THE PRODUCTION OF BORON ARYLS

Roland Koster, Mulheim (Ruhr), Germany, assignor to Studiengesellschaft Kohle m.b.H., Mulheim (Ruhr), Germany

No Drawing. Filed Jan. 16, 1961, Ser. No. 82,697

Claims priority, application Germany Jan. 19, 1960

14 Claims. (Cl. 260—606.5)

1. The process for preparing boron aryls, which consists essentially of reacting a member selected from the group consisting of mixtures of N-trialkyl borazanes and boron alkyls, alkylated boron hydrides, mixtures of boron trialkyl and hydrogen, and mixtures of boron hydrides and boron alkyls with a substantially pure aromatic hydrocarbon selected from the group consisting of benzene, naphthalene, and benzene substituted with only methyl substituents, under moisture-free and air-free conditions, at a temperature between about 150 and 450° C. and recovering the boron aryl thereby formed.

3,129,250

THE PRODUCT PREPARED BY REACTING ACETYLENE WITH TRIFLUOROETHANOL

Francis E. Lawlor, Wyndmoor, and Milton Braid, Philadelphia, Pa., and John T. Barr, Needham, Mass., assignors to Pennsalt Chemicals Corporation, a corporation of Pennsylvania

No Drawing. Filed Nov. 27, 1956, Ser. No. 624,521

1 Claim. (Cl. 260—615)

A compound having the empirical formula

$$C_{10}H_{13}F_9O_3$$

and boiling in the range 190–195° C. formed by the process which comprises reacting 2,2,2-trifluoroethanol with acetylene in the presence of a catalyst consisting of a mixture of from about 1 to about 10 parts by weight of a strong mineral acid with 1 part by weight of yellow mercuric oxide at a temperature in the range of from about 30 to about 40° C. and separating said $C_{10}H_{13}F_9O_3$ from the reaction mixture.

3,129,251

PREPARATION OF POLYOLS FROM OLEFINS

Alfred J. Rutkowski, Colonia, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Jan. 28, 1960, Ser. No. 5,107

3 Claims. (Cl. 260—635)

1. Process for preparing a non-vicinal glycol from an acyclic C_4 to C_8 diolefin having one terminal and one internal double bond which comprises reacting 1 to 6 moles of said diolefin with 1 mole of boron hydride at 0 to 30° C. under substantially atmospheric pressure in the presence of 0.1 to 400 weight percent of a C_4 to C_6 organic ether, based on said boron hydride and said diolefin, for up to 10 hours thereby forming a polyorgano borane intermediate subjecting said intermediate to temperatures of about 150 to 200° C. for about 1 to 8 hours, contacting said intermediate compound with aqueous hydrogen peroxide at −10 to 100° C. for from a few minutes to 8 hours, under 1 to 3000 p.s.i.g. and recovering a glycol containing primary hydroxy groups.

3,129,252

PURIFICATION OF BUTYNEDIOL

David E. Graham and Eugene V. Hort, Westfield, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 29, 1960, Ser. No. 79,171

10 Claims. (Cl. 260—637)

1. A process for purifying a solution of 2-butyne-1,4-diol in a solvent therefor selected from the group consisting of water and monohydric and dihydric unsubstituted aliphatic alcohols of up to 6 carbon atoms and containing up to about 3% formaldehyde impurity by weight of the 2-butyne-1,4-diol comprising treating such impure solution, in the presence of a Raney-type nickel catalyst carrying about 3 to 25% of copper by weight of said catalyst, with about 0.2 to 0.5 mole of an alkaline substance selected from the group consisting of alkali metal hydroxides and alkaline earth metal hydroxides per mole of formaldehyde impurity, until the desired reduction in formaldehyde content is obtained.

3,129,253

HYDRATION OF OLEFINS

Raymond C. Odioso, Glenshaw, Bruce K. Schmid, McCandless Township, Allegheny County, and Robert C. Zabor, Glenshaw, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed July 7, 1958, Ser. No. 746,612

3 Claims. (Cl. 260—641)

1. A process for the hydration of olefin to alcohol comprising continuously passing olefin together with water in a water to olefin molal ratio between 1:1 and 40:1, said water being at least partially in the liquid phase, over a catalyst comprising the sulfide of at least one metal selected from the group consisting of group VI and group VIII metals at a temperature between 100° F. and 250° F. and a pressure of 500 to 10,000 pounds per square inch gauge for a throughput interval corresponding to the passage of from 1 to 50 liquid volumes of olefin per volume of catalyst, thereupon continuously passing over said catalyst olefin together with water which is at least partially in the liquid phase at a temperature of 325° F. to 600° F., a pressure of 500 to 10,000 pounds per square inch gauge and a water to olefin molal ratio between 1:1 and 40:1.

3,129,254

PREPARATION OF FLUORINATED OLEFINS

Richard F. Heine, White Bear Lake, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Jan. 23, 1961, Ser. No. 83,931

4 Claims. (Cl. 260—649)

1. A process for preparing a compound of the general structural formula

$$RCF=CF(CF_2)_{n-1}F$$

where R is an aryl radical selected from the group consisting of phenyl, tolyl, naphthyl and biphenyl radicals and *n* is an integer less than 20 which comprises contacting a perfluoroalkanesulfonyl fluoride of the formula

$$F(CF_2)_{n-1}CF_2CF_2SO_2F$$

where *n* is an integer less than 20 with an anhydrous solution of an aromatic lithium compound selected from the group consisting of phenyl lithium, tolyl lithium, naphthyl lithium and biphenyl lithium under anhydrous conditions, maintaining the reaction mixture at a temperature below 40° C., and recovering said compound from the reaction mixture.

3,129,255

ALKYLATION OF BENZENE WITH PROPYLENE IN THE PRESENCE OF $TiCl_4$ AND ALKYL ALUMINUM SESQUICHLORIDE

Russell G. Hay, Gibsonia, Leo F. Meyer, Pittsburgh, and Charles M. Selwitz, Pitcairn, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Dec. 1, 1959, Ser. No. 856,349

4 Claims. (Cl. 260—671)

1. A process for alkylating benzene which comprises reacting benzene with propylene in the presence of a

catalyst system consisting essentially of $TiCl_4$ and an alkyl aluminum sesquichloride wherein the alkyl substituent has from one to four carbon atoms at a temperature of at least about 55° C., the total amount of catalyst employed being at least about 0.1 millimol of catalyst per mol of said benzene, with said $TiCl_4$ and said alkyl aluminum sesquichloride being present in a molar ratio of about 1:1 to about 9:1.

3,129,256

ALKYLATION OF BENZENE WITH PROPYLENE IN THE PRESENCE OF A CATALYST CONTAINING TITANIUM TETRACHLORIDE, ALKYL ALUMINUM SESQUICHLORIDE, AND OXYGEN

Russell G. Hay, Gibsonia, Leo F. Meyer, Pittsburgh, and Charles M. Selwitz, Pitcairn, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Dec. 1, 1959, Ser. No. 856,351
3 Claims. (Cl. 260—671)

1. A process for alkylating an alkylatable aromatic hydrocarbon which comprises reacting benzene with propylene in the presence of a catalyst system containing titanium tetrachloride and an alkyl aluminum sesquichloride in a molar ratio of about 1:1 to about 9:1, wherein said alkyl substituent has from one to four carbon atoms, with the total amount of catalyst being at least about 0.1 millimol per mol of said alkylatable aromatic compound, and about 0.2 to about two mols of a material containing active oxygen selected from the group consisting of oxygen and carbon dioxide per mol of combined catalyst at a pressure of about atmospheric to about 500 pounds per square inch gauge, a temperature of about 20° to about 220° C. for a period of from about five minutes to about four hours.

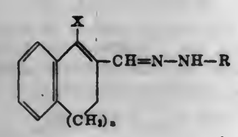
3,129,257

NOVEL SULFONYLHYDRAZONES OF CYCLIC HALOVINYL ALDEHYDES

Leo A. Paquette, Portage Township, Kalamazoo County, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

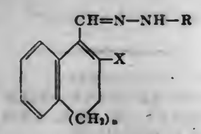
No Drawing. Filed Feb. 12, 1963, Ser. No. 257,864
3 Claims. (Cl. 260—556)

1. A compound selected from the group consisting of (1) compounds of the formula:



(I)

and compounds of the formula:



(IA)

wherein X is selected from the group consisting of chlorine and bromine, *n* is an integer of 1 to 2, and R is selected from the group consisting of loweralkanesulfonyl, benzenesulfonyl, and loweralkylbenzenesulfonyl, and (2) the alkali metal and alkaline earth metal salts thereof.

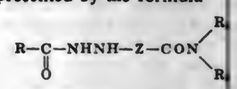
3,129,258

SUBSTITUTED HYDRAZINOAMIDES AS THERAPEUTIC AGENTS

Barry M. Bloom, Lyme, Conn., and Robert E. Carnahan, Evansville, Ind., assignors to Chas. Pfizer & Co., Inc., Brooklyn, N.Y., a corporation of Delaware

No Drawing. Continuation of application Ser. No. 808,919, Apr. 27, 1959, which is a division of application Ser. No. 784,083, Dec. 31, 1958, now Patent No. 2,894,972, dated July 14, 1959. This application June 1, 1961, Ser. No. 114,048
7 Claims. (Cl. 260—557)

1. A compound selected from the group consisting of compounds represented by the formula

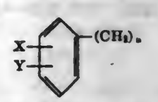


wherein

Z is alkylene containing 1 to 5 carbon atoms;

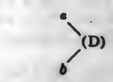
R_1 is selected from the group consisting of hydrogen and lower alkyl;

R_2 is selected from the group consisting of alkyl and alkenyl each containing up to 5 carbon atoms; cycloalkyl containing 3 to 6 carbon atoms, pyridyl, pyridylalkyl, furylalkyl and thienylalkyl in which the alkyl group is lower alkyl, and ring-substituted derivatives thereof in which each ring substituent is lower alkyl; aryl and aralkyl each represented by the formula:

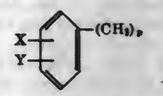


wherein X is selected from the group consisting of hydrogen, lower alkyl and halogen, Y is selected from the group consisting of hydrogen, lower alkyl, lower alkoxy, halogen, trifluoromethyl, cyano and alkanoyl containing 2 to 4 carbon atoms, and *n* is an integer from 0 to 4; and

R is selected from the group consisting of cycloalkyl containing 3 to 6 carbon atoms and ring-substituted derivatives thereof in which each substituent is lower alkyl;

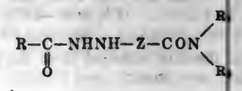


$E—(CH_2)_m—$, and



wherein D is selected from the group consisting of alkyl and alkenyl containing up to 20 carbon atoms; *a* and *b* are substituents each selected from the group consisting of hydrogen, amino, lower alkylamino, hydroxy, lower alkoxy, mercapto, lower alkylmercapto, halogen and alkanoylamino, alkanoyloxy and alkanoylmercapto in which the alkanoyl group contains 2 to 4 carbon atoms; E is selected from the group consisting of cycloalkyl containing 3 to 6 carbon atoms, pyridyl, furyl, thienyl, thiazolyl, oxazolyl, isoxazolyl and ring-substituted derivatives thereof in which each substituent is lower alkyl; *m* is an integer from 1 to 4; X and Y are as defined above and *p* is an integer from 1 to 4; and the acid addition salts thereof.

2. The compound of the formula:



wherein Z is alkylene containing two carbon atoms in the principal chain and a total of up to 5 carbon atoms, R_1 is hydrogen, R_2 is phenylalkyl containing up to four carbon atoms in the alkyl moiety and R is cycloalkyl containing 3 to 6 carbon atoms.

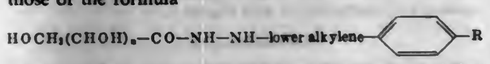
3,129,259

SUGAR ACID DERIVATIVES OF ARALKYLHYDRAZINES

Thomas Samuel Gardner, Rutherford, John Lee, Montclair, and Edward Wenis, Leonia, N.J., assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Sept. 29, 1959, Ser. No. 843,042
11 Claims. (Cl. 260—562)

1. A compound selected from the group consisting of those of the formula



wherein R represents a member of the group consisting of hydrogen and di-lower alkylamino, and *n* represents an integer from 3 to 4,

and medicinally acceptable acid addition salts thereof.

3,129,260

PREPARATION OF A BENZALDOXIME

John Yates, Chestfield, Whitstable, Trevor John Willcox and Derek Alexander Wood, Sittingbourne, and Pieter Ten Haken, Herne Bay, England, assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 29, 1961, Ser. No. 155,845
Claims priority, application Great Britain Jan. 30, 1961
5 Claims. (Cl. 260—566)

1. A process for preparing 2,6-dichlorobenzaldoxime which comprises mixing, at a temperature of from about 15° C. to about 70° C., and thereby effecting reaction between, a chloride of the group consisting of 2,6-dichlorobenzal chloride, 2,6-dichlorobenzyl chloride and mixtures thereof and hydroxylamine in the presence of a strong mineral acid, the amount of hydroxylamine being approximately the theoretical amount required to react with all of said chloride reactant, and the amount of said acid being from about one-half to about twenty times the weight of said chloride reactant.

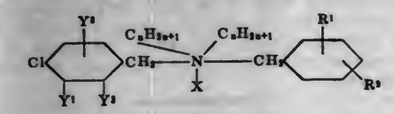
3,129,261

DIALKYLHALOBENZYLALKYLBENZYL NONPHYTOTOXIC QUATERNARY AMMONIUM COMPOUNDS

Chien-Pen Lo, Philadelphia, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed June 10, 1960, Ser. No. 35,112
6 Claims. (Cl. 260—567.6)

1. A compound of the formula



wherein R^1 is selected from the class consisting of hydrogen and alkyl groups of not over four carbon atoms, R^2 is an alkyl group of 9 to 15 carbon atoms, the total number of carbon atoms in R^1 and R^2 being not over 16 carbon atoms, Y^1 and Y^2 are selected from the class consisting of hydrogen and chlorine, at least one of these being chlorine, Y^3 is selected from the class consisting of hydrogen and chlorine, the total number of chlorine atoms on the phenyl group carrying the Y substituents being two to three, *n* is an integer with a value of one to two, and X is an anion from the class consisting of chloride and bromide.

3,129,262

REDUCTION OF ORGANIC THIOCYANATES

Robert J. Laufer, Pittsburgh, Pa., assignor to Consolidation Coal Company, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed Oct. 8, 1962, Ser. No. 229,213
12 Claims. (Cl. 260—578)

1. A process for converting an organic thiocyanate to a thiol which comprises reacting the organic thiocyanate with alkali metal-liquid ammonia solution to selectively cleave the carbon-sulfur bond of the thiocyanate to form the corresponding thiol.

3,129,263

PREPARATION OF HYDRAZINE DERIVATIVES

Julian Feldman and Orville D. Frampton, Cincinnati, Ohio, assignors, by mesne assignments, to FMC Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 21, 1958, Ser. No. 775,353
4 Claims. (Cl. 260—583)

1. A process for the preparation of unsymmetrical dimethylhydrazine which comprises reacting nitrosodimethylamine with hydrogen in the presence of a palladium catalyst at a temperature below about 60° C. and separating said catalyst from the resulting reaction product mixture, said reaction being conducted in the presence of deaerated water in an amount up to about 80%.

3,129,264

ALKYLATION OF AROMATIC COMPOUNDS

Mack W. Hunt, Ponca City, Okla., assignor to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

No Drawing. Filed Dec. 15, 1960, Ser. No. 75,908
12 Claims. (Cl. 260—671)

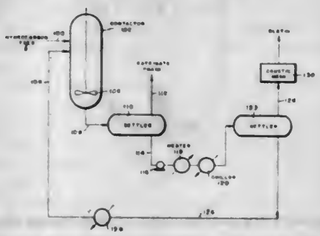
1. A process for the alkylation of aromatic compounds which comprises conducting an alkylation reaction in a system consisting essentially of an alkylatable aromatic compound and as an alkylating agent an aluminum alkoxide, in the presence of an alkylation catalyst under alkylation reaction conditions, hydrolyzing, and recovering alkylated aromatic compound.

3,129,265

REGENERATION OF FAT ACID EXTRACTS OF TERTIARY OLEFINS INCLUDING CHILLING OF THE REGENERATED ACID

William R. Edwards and Robert D. Wesselhoft, Baytown, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

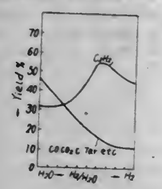
Filed June 7, 1961, Ser. No. 115,399
15 Claims. (Cl. 260—677)



2. A method of separating a tertiary 2-methylbutene from a fat acid extract thereof which comprises heating the fat acid extract to a temperature of about 160° F. to 220° F. to cause the release of said tertiary 2-methyl-

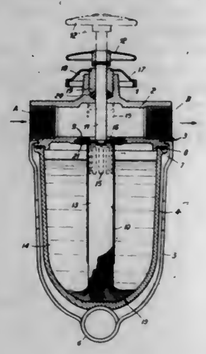
butene from said acid extract, whereby an acid-tertiary 2-methylbutene mixture is obtained, immediately after the release of the tertiary 2-methylbutene chilling the acid-tertiary 2-methylbutene mixture to a temperature not exceeding 90° F. after a residence time of not more than 15 seconds, whereby polymerization losses are minimized, and recovering said tertiary 2-methylbutene as a substantially pure product.

3,129,266
PROCESS FOR PRODUCTION OF ACETYLENE BY THERMAL DECOMPOSITION OF HYDROCARBONS
Taiseki Kunugi and Naoki Negishi, both of Tokyo, Japan, assignors to Messrs. Kogyokaihatsu, Kenkyusho, Tokyo, Japan
Filed Mar. 14, 1962, Ser. No. 179,573
Claims priority, application Japan Sept. 11, 1961
1 Claim. (Cl. 260—679)



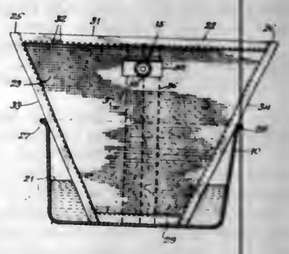
In a process for the production of acetylene by the regenerative thermal decomposition of hydrocarbons, the improvement wherein the hydrocarbon is mixed with a diluent consisting essentially of a mixture of hydrogen and steam, the molar ratio of hydrogen and steam being between 10:90 and 90:10, the so-obtained mixture of hydrocarbon and diluent being heated to a temperature above 850° C., thereby producing acetylene in high yields and concentrations.

3,129,267
ANTIFREEZE APPARATUSES FOR COMPRESSED AIR SYSTEMS, PARTICULARLY USED ON VEHICLES
Giuseppe Alfieri, Milan, Italy, assignor to Fabbrica Italiana Magneti Marelli S.p.A., Milan, Italy, a corporation of Italy
Filed Jan. 18, 1961, Ser. No. 83,586
Claims priority, application Italy Jan. 23, 1960
3 Claims. (Cl. 261—99)



1. Apparatus for introducing an antifreeze fluid into a gaseous medium, said apparatus comprising a body provided with a passage for said medium and including a flange beneath said passage, a container abutting said flange and defining with said body a chamber for said fluid, said body being provided with an opening coupling said chamber and passage, a tube extending through the opening into said chamber, means in said opening resiliently and slidably supporting the tube on said body in sealed relation therewith, a wick fixed in the tube for absorbing fluid in said chamber, said tube being provided with slits adjacent and below said opening, a rod coaxial with and connected to said tube, said rod extending through said passage and body, supporting means slidably supporting the rod in the body whereby to enable the drawing of the tube and the slits therein into said passage, said supporting means including a rubber-like washer between said body and rod above said passage, said rod being normally slidable through said washer and means threadably engaged in said body and adapted to compress the washer against said rod to hold the latter in position whereby said slits can be fixed relative to said passage with said wick in said chamber, and a spring clip means locking said container to said flange.

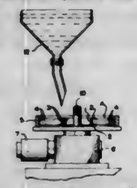
3,129,268
EVAPORATOR PANELS
Claude C. Evett, Northport, Mich., assignor to Standard Manufacturing Company, Cedar Falls, Iowa, a corporation of Iowa
Filed Dec. 12, 1961, Ser. No. 158,855
1 Claim. (Cl. 261—104)



An evaporator panel for a humidifier comprising, in combination, a thin, flat, relatively flexible self-supporting lamination comprising at least two layers of thin, stiff, open-mesh screen overlying each other and secured to each other at least partially around their peripheral edges; with at least one layer of unwoven, absorbent, high-wicking cotton fibre confined between the aforesaid layers of screen; with means for maintaining said fibre in partially compacted condition between the layers of screen consisting of edge bindings of fabric material spanning said layer of cotton fibre and said two layers of screen and overlapping the screen layers, said fabric being held by peripheral stitching extending substantially completely around the periphery of the evaporator panel and enclosing the edges of the screen layers thereof, together with additional stitching within the central area of said panel to facilitate vertical capillary action; said panel being substantially wider in its upper portions than in the lower portions thereof, with the opposite side edges of the panel relatively straight throughout the height of the panel and inwardly slanted at an acute angle with respect to each other.

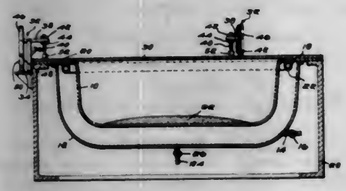
3,129,269
METHOD OF MAKING A BRUSH TYPE ROTARY TOOL
Vernon K. Charvat, Bay Village, Ohio, assignor to The Osborn Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Aug. 17, 1959, Ser. No. 834,091
11 Claims. (Cl. 264—45)

1. In a method for making a brush-like product, the steps which comprise maintaining an assembly of bristles in desired spaced apart relation by the action of centrifugal force, introducing into such assembly a body of hardenable liquid binder subject to the same force, where-



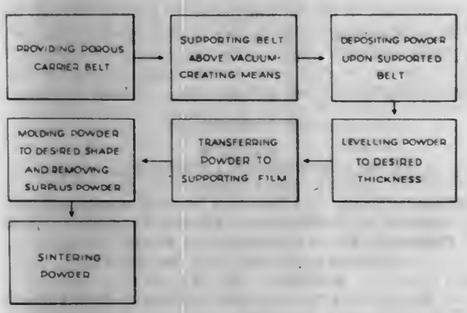
by such binder assumes the form of an annulus wherein said bristles are embedded, and then hardening said binder to desired degree.

3,129,270
METHOD OF MOLDING POLYURETHANE FOAM ARTICLES HAVING IMPROVED SURFACE CHARACTERISTICS
Bruce G. Hood, Marblehead, Mass., assignor to Davidson Rubber Company, Inc., Dover, N.H., a corporation of New Hampshire
Filed Apr. 5, 1962, Ser. No. 185,306
4 Claims. (Cl. 264—54)



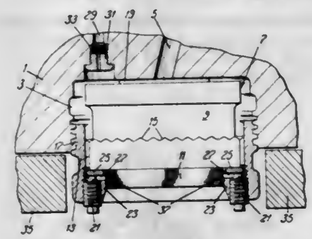
1. The method of molding polyurethane foams which comprises preparing a foam mixture in the liquid state, pouring said mixture prior to foaming into a mold in an amount sufficient to cover the bottom surface thereof, closing said mold, allowing said mixture to react and rise, thereby filling said mold with foam, and thereafter applying heat to said mold in order to cure said foam, said heat being applied first to the upper portion of said foam and then to the bottom portion thereof in a manner counter current to the rising foam, whereby a molded article of improved surface characteristics is obtained.

3,129,271
PROCESSING TECHNIQUES FOR FINE POWDERS
Charles L. Lightfoot, New Providence, N.J., assignor to Ethylene Corporation, Summit, N.J., a corporation of New Jersey
Filed Oct. 18, 1960, Ser. No. 63,439
1 Claim. (Cl. 204—56)



In a method of molding and sintering fine powder into a finished article, the steps of: (1) providing a flexible planar porous carrier belt; (2) supporting said carrier belt above a vacuum-creating means to provide a pressure differential between opposed surfaces of said belt; (3) depositing said powder upon said carrier belt whereby the same is at least partially compacted upon said belt; (4) leveling said partially compacted powder to desired thickness; (5) transferring said partially compacted and leveled powder to a non-porous, smooth surfaced supporting film; (6) subjecting said powder to the action of a mold to yield a compacted preform; (7) separating said compacted preforms from the unmolded surplus powders; (8) sintering said preforms.

3,129,272
MELT-SPINNING SYNTHETIC POLYMER FILAMENTS
Duncan Cameron Ferrier, Llan-yr-avon, Cwmbran, and William Geoffrey Parr, Abergavenny, England, assignors to British Nylon Spinners Limited, Pontypool, England
Filed Apr. 28, 1961, Ser. No. 106,340
Claims priority, application Great Britain May 19, 1960
3 Claims. (Cl. 264—85)



1. In a melt-spinning process of the type in which molten synthetic linear polymer is delivered from a source thereof to and through a spinneret pack which includes a spinneret plate having extrusion orifices therein, the improvement which comprises: supplying an inert gas under pressure to the exterior of said spinneret pack at a location upstream of said spinneret plate; guiding and dispersing the inert gas along said pack to the vicinity of said plate and around the periphery of said plate to form a substantially unbroken stream for flowing across the face thereof; and flowing the unbroken stream across the face of said plate to form and maintain a homogeneous and laterally unconfined shallow layer of the inert gas in contact with the entire surface area of said plate.

3,129,273
PROCESS OF PRODUCING NON-FIBRILLATING ACRYLONITRILE POLYMER FILAMENTS
Fred J. Lowes, Jr., Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Dec. 11, 1961, Ser. No. 158,593
5 Claims. (Cl. 264—182)

1. Method of preparing a non-fibrillating synthetic acrylonitrile polymer textile fiber which method comprises: (*a*) salt spinning a fiber-forming acrylonitrile polymer, which polymer contains in the polymer molecule at least about 85 weight percent of acrylonitrile, any balance being another monoethylenically unsaturated monomeric material that is copolymerizable with acrylonitrile, into an aquagel filamentary structure that contains between about 1 and 5 parts by weight of water to each part by weight of dry polymer therein;

(*b*) washing said aquagel structure substantially free from residual salt;

(c) physically elongating said aquagel structure by stretching it to an at least partially oriented condition;

(*d*) subjecting for from 2 minutes to about 4 hours the so-formed aquagel fiber to intimate contact with a homogeneous aqueous emulsion containing at least 1 weight percent of a substantially water-insoluble polyoxyalkylene glycol having an average molecular weight between about 1000 and 3000 and a viscosity at 100° F. between about 100 and 260 centistokes, said emulsion maintained at a temperature between about 60° C. and 100° C.; and

(*e*) subsequently irreversibly drying said aquagel fiber to a synthetic characteristically hydrophobic textile fiber structure.

ELECTRICAL

3,129,274

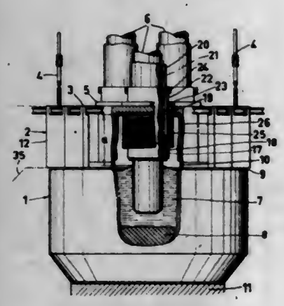
REDUCTION FURNACE PROVIDED WITH SUPERSTRUCTURE

Sven Edvard Lindblom, Trollhattan, and Stig Harald Tjernström and Karl Hugo Sture Hellman, Vargon, Sweden, assignors to Wargons Aktiebolag, Vargon, Sweden, and AB Svenska Maskinverken, Kallhall, Sweden, Swedish joint-stock companies

Filed Mar. 26, 1962, Ser. No. 182,233

Claims priority, application Sweden Mar. 29, 1961

5 Claims. (Cl. 13—9)



1. An electric reduction furnace for high temperature processing, of the type having a crucible into which electrodes extend downwardly, characterized by:

(A) a hood for the crucible having substantial height and having

(1) a charging inlet of substantial size, and

(2) an outlet of substantial size through which hot gases and dust can be withdrawn from the space beneath the hood;

(B) means suspending the hood over the crucible with the lower edge of the hood spaced above the upper edge of the crucible to provide an inlet all around the rim of the crucible through which air can be drawn into the space beneath the hood;

(C) means for withdrawing hot gases and dust through said outlet;

(D) cooling coils substantially covering the inside of the hood and through which fluid cooling medium can be circulated;

(E) a plurality of electrode holders supported by the hood and projecting a substantial distance downwardly into the space therebeneath; and

(F) cooling means through which fluid cooling medium can be circulated surrounding all of that portion of each electrode holder which is in the space beneath the hood.

3,129,275

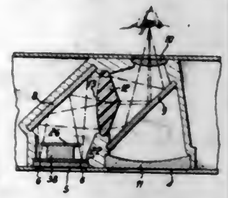
PHOTOGRAPHIC FINDER WITH IMAGE DEFINING FRAME

Fritz Determann, Braunschweig, Germany, assignor to Voigtlander A.G., Braunschweig, Germany, a corporation of Germany

Filed Apr. 3, 1962, Ser. No. 184,807

Claims priority, application Germany Apr. 24, 1961

4 Claims. (Cl. 88—1.5)



1. In a photographic finder of the type including an opaque plate positioned in a light ray path separate from the main light ray path through the finder and having light transmitting portions defining field frame markings, a partially light permeable mirror in the main light ray path, and optical means cooperable with said mirror to provide an image of the markings in the main light ray path: the improvement in which said optical means is a lens having a condensing surface effecting magnification of the images of the markings, and a four-sided pyamidal surface including four plane faces each providing an image of the markings with the respective images being relatively displaced in such a manner that the common border of the relatively displaced images defines an enlarged image of the markings; and means disposed between said opaque plate and said mirror for masking image portions within said common border so that substantially only said common border is visible as a marking image in the main light ray path, said masking means being a second opaque plate mounted in spaced parallel relation to the first opaque plate in the path of light rays passing through the light transmitting portions of said first opaque plate and downstream, with respect to the direction of entering light, from the first opaque plate; said second opaque plate having a periphery similar to that of said common border.

3,129,276

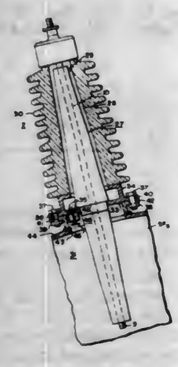
GAS FILLED TERMINAL BUSHING WITH PROTECTIVE CHECK VALVE

Gilbert J. Easley and James H. Frakes, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed May 29, 1959, Ser. No. 816,770

8 Claims. (Cl. 174—11)

2. An entrance-type terminal bushing at least partially filled with gas and including a grounded mounting flange, a terminal stud for the terminal bushing having a dielectric body disposed thereabout, a weather-proof casing of a ceramic material, a gas space between said weather-proof casing and said dielectric body, a barrier plate constituting a part of the terminal bushing and associated with said grounded mounting flange, said barrier plate



having an opening therethrough, and only normally open check valve means for controlling said opening for stopping flow of gas through said opening upon loss of pressure within said gas space.

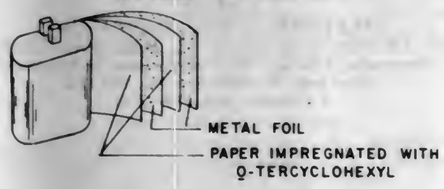
3,129,277

DIELECTRIC MEDIUM CONTAINING TERCYCLOHEXYL

Glenn R. Wilson, Cambridge, and George L. Ball III, Medford, Mass., assignors, by mesne assignments, to Monsanto Research Corporation, Everett, Mass., a corporation of Delaware

Filed May 17, 1961, Ser. No. 110,694

6 Claims. (Cl. 174—17)



1. Electrical apparatus comprising, in combination, metallic conducting elements disposed in spaced relationship to each other and exhibiting during operation of the apparatus, a difference in potential therebetween, and tercyclohexyl interposed between said elements and isolating them from each other.

3,129,278

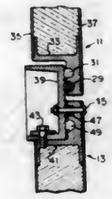
WEATHER SEALED AND SHIELDED DOUBLE DOOR CONSTRUCTION FOR RADIO FREQUENCY SHELTERS

Charles E. Watt, Jr., Chelmsford, and Charles J. Carson, Danvers, Mass., assignors to Craig Systems, Inc., Lawrence, Mass., a corporation of Massachusetts

Filed Jan. 30, 1963, Ser. No. 255,031

5 Claims. (Cl. 174—35)

3. Apparatus for sealing and electromagnetically shielding the junction of two adjacent conductive panels having abutting edges with a conductive member extending along an edge of each panel intersecting the abutting edges, comprising an outer flexible weather sealing strip around the edge of each panel in position to contact said conductive member, an inner strip of woven metal wire mesh around the edge of each panel within the weather strip and in position to contact said conductive member, a flexible weather bridge let into said conductive member and extending outwardly in position to contact both of said weather strips, a bridge member of woven metal wire mesh surrounding the weather bridge on three sides, let into said frame and extending outwardly in position to contact said wire mesh strips, and a second conductive



member fastened to the abutting edge of one of said panels overlying said strips, said second conductive member having a protruding edge adapted to contact the strips on the other panel and an end formed to contact said weather bridge.

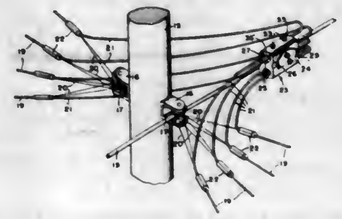
3,129,279

ELECTRICAL CONNECTING CLAMP ASSEMBLY

Arthur F. Barton, Harlan, Ky., assignor of one-fourth to J. Crawford Boston, Harlan, Ky.

Filed Feb. 12, 1960, Ser. No. 8,452

5 Claims. (Cl. 174—43)



1. An electrical connecting assembly for placing electric wires in circuit with power lines, including a one-piece body of conducting material with longitudinally extending internal channels and external channels, longitudinally coextensive with the length of said body, and pressure members adjustably mounted in the channels for exerting restraining forces on the electric wires and power lines, each of the pressure members of the internal channels comprising a bolt having an elongated head, the outer margins of which head issue into laterally extending arcuate pressure parts, said head being located in an internal channel, adapted for the reception of the free terminals of the service wires, and means engageable with the outer terminal of each bolt and the body for tightening said pressure parts against the service wires.

3,129,280

ELECTRONIC CIRCUIT BOARDS WITH WELDABLE TERMINALS

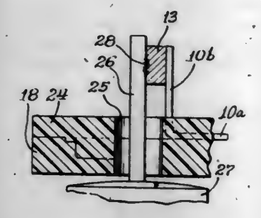
Vito D. Elarde, Downers Grove, Ill., assignor to Amphenol-Borg Electronics Corporation, Broadview, Ill., a corporation of Delaware

Filed Sept. 19, 1960, Ser. No. 56,974

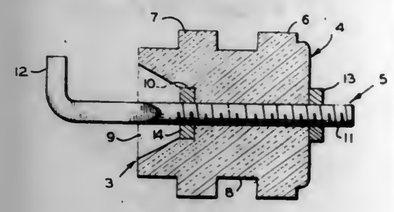
4 Claims. (Cl. 174—68.5)

4. As an article of manufacture, an electronic circuit board comprising a dielectric sheet carrying at least one metallic pattern conductor consisting of relatively ductile metal with terminal tabs of relatively hard metal formed integrally with each of said conductors at a plurality of

points thereon; with bends in the ductile portions of the conductors forming projecting brackets extending outwardly from the board and with the terminal tabs of the board spaced away from the dielectric sheet thereof.

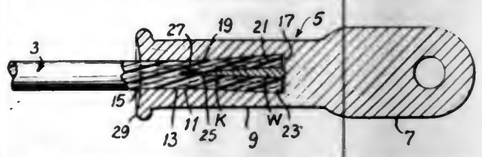


3,129,281
ELECTRIC FENCE INSULATOR AND POST
George W. Hardin, Union Hotel, Greeneville, Tenn.
Filed Sept. 25, 1962, Ser. No. 226,134
4 Claims. (Cl. 174—166)



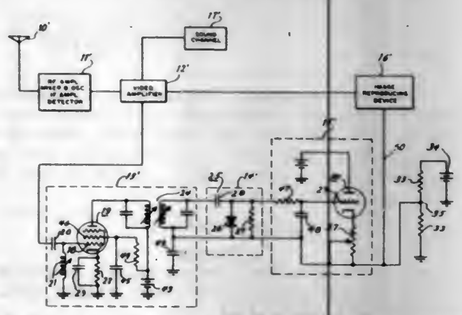
1. An insulator for use in combination with an electric fence post provided with a generally upright slot having an upper wide opening and a lower narrower opening connected with the upper opening, said insulator comprising a knob of non-conducting material having an intermediate portion of reduced rectangular cross section and a substantially central metallic fastener element having a shank protruding from one end of the knob and terminating in a hook of rectangular cross section rightangularly directed in a plane parallel to one of the sides of said rectangular portion of the knob and so proportioned with relation to said slot as to be penetrable therethrough when the hook is in vertical position and to be held securely and non-rotatably on the post with one of the sides of the rectangular portion of the knob disposed in a plane transverse to the length of the post when the hook is turned to horizontal position after being inserted through the slot, the end of the knob from which the hook protrudes, which is adapted to be disposed adjacent the post, being formed with a recess of rectangular shape having sides disposed in planes parallel to the sides of the rectangular portion of the knob and the shank of the fastener element being provided with an abutment fixed thereon complemental in shape to the recess, and being seated therein, and having two parallel side parallel to the plane of the hook, the end portion of the fastener element opposite the hooked end protruding from the other end of the knob, and a holding element engaged with said last named end portion of the fastening element and holding the abutment seated in the recess and securing the knob and the fastening element together against relative rotation and against axial separation.

3,129,282
STRAIN INSULATORS
Gordon L. Flynn, Trussville, Ala., assignor to Anderson Electric Corporation, Leeds, Ala., a corporation of Alabama
Filed Aug. 23, 1962, Ser. No. 218,909
7 Claims. (Cl. 174—177)



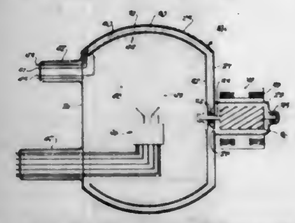
1. An insulator comprising an elongate resin-impregnated dielectric fiber rod, an attachment member having a socket for receiving and holding an end portion of said rod, said socket comprising a conico-cylindrical cavity with a cylindrical portion extending inwardly into the socket from the mouth thereof for a first distance and a conical portion extending outwardly for a second distance from the seat of the socket and tapering toward the cylindrical portion, said end portion of said rod having a diameter substantially equal to that of said cylindrical portion, said end portion of said rod having a kerf extending inwardly from the end of the rod along a longitudinal diametrical plane of said rod and having a length greater than said second distance, and a wedge engaged in said kerf separating and flaring out the portions of the rod on opposite sides of the kerf thereby forming an enlarged end portion of the rod engaging the surfaces of said conical portion, said wedge having a taper angle not less than that of said conical portion and a length less than that of said kerf, the entering end of the wedge being spaced from the inner end of the kerf.

3,129,283
TELEVISION TUNING INDICATOR
Sam Tarantur, River Grove, Ill., assignor to Admiral Corporation, Chicago, Ill., a corporation of Delaware
Filed July 30, 1958, Ser. No. 752,134
4 Claims. (Cl. 178—5.4)



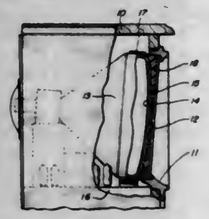
1. In a television receiver comprising circuit means for reproducing a composite video signal and a picture tube device including a cathode and a control grid and employing an intercarrier sound system of the type in which the frequency response curve at the output of said circuit means is characterized by a response of a large magnitude with respect to the video signal and a null with respect to the sound signal, means for selectively responding to the intercarrier sound signal to produce a D.-C. signal whose magnitude is proportional to the magnitude of said intercarrier signal, and means for supplying said D.-C. signal across the cathode and control grid of said picture tube to produce the brightest picture when the magnitude of said intercarrier sound signal is at its null point.

3,129,284
APPARATUS FOR REPRODUCING AND TRANSMITTING TRANSIENT IMAGES OF A SUBJECT MOVABLE RELATIVE TO THE APPARATUS
Ditmar H. Bock, Cheektowaga, N.Y., assignor to Cornell Aeronautical Laboratory, Inc., Buffalo, N.Y., a corporation of New York
Filed Jan. 8, 1962, Ser. No. 165,468
1 Claim. (Cl. 178—7.2)



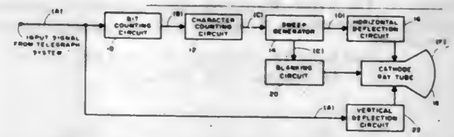
In apparatus for reproducing and transmitting transient images of a subject movable relative to said apparatus, the combination comprising a Schmidt optical system including a spherical concave specular surface, a continuous spherical convex photosensitive surface rotatable about an axis containing the center of generation of said photosensitive surface and which axis is arranged perpendicular to the direction of relative movement of the apparatus and subject, said photosensitive surface having a portion opposing said specular surface and arranged at the spherical focal plane of said system, vignetting stop means adjacent said photosensitive surface to provide a window exposing a portion of said photosensitive surface upon which an image of said subject is focused through said window, means for rotating said photosensitive surface about said axis at a rate equal to the rate of motion of said image to move successive portions of said photosensitive surface past said window, said window having first and last sight edges spaced from each other circumferentially in the direction of such rotation, and means for scanning said photosensitive surface after it passes said last sight edge of said window to produce a video output.

3,129,285
TELEVISION RECEIVER
Bertrand J. Miller, Mount Prospect, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Filed June 14, 1961, Ser. No. 117,038
5 Claims. (Cl. 178—7.82)



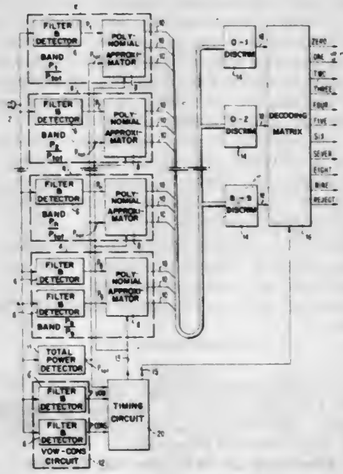
1. A television receiver comprising: a cabinet having a generally rectangular frontal opening; a cathode-ray picture tube enclosed in said cabinet and having a generally rectangular glass face plate in juxtaposition with said frontal opening, said face plate having substantial horizontal-plane and vertical-plane curvature; a uniform-thickness clear glass safety plate, having no substantial vertical-plane curvature, bonded to said glass face plate by transparent means having substantially the same index of refraction as said glass face plate and said glass safety plate; and said picture tube being tilted forwardly and downwardly with the front surface of said safety plate at an acute angle with the vertical dimensions of said cabinet, whereby internal ambient light reflections are substantially eliminated and external ambient light reflections are directed downwardly out of the normal viewing field of said receiver.

3,129,286
SIGNAL DISTORTION ANALYZER
Herbert Levick, Fairfield County, Conn., assignor to Stelma, Incorporated, Stamford, Conn., a corporation of Connecticut
Filed Jan. 23, 1961, Ser. No. 84,312
12 Claims. (Cl. 178—69)



11. Apparatus for analyzing information signals occurring in groups comprising means for counting said groups, means for generating a control signal for every Nth group counted, and signal display means responsive to both said information signals and said control signals for displaying every Nth group of said information signals; said means for generating a control signal including means for adjusting the value of N where N is any real, positive integer equal to or greater than 1, said counting means comprising a binary counter having a plurality of flip-flop stages; said control signal generating means comprising a logic gate having input terminals connected to output terminals of said binary counter, said logic gate generating an output in the absence of signals at its input terminals, the output of said logic gate being connected to control energization of said signal display means.

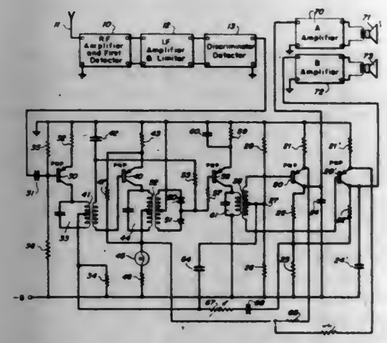
3,129,287
SPECIMEN IDENTIFICATION SYSTEM
Raimo Bakis, Ossining, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Mar. 20, 1961, Ser. No. 97,010
13 Claims. (Cl. 179—1)



7. An apparatus for providing an indication of the identity of a characteristic of a given function of a variable comprising in combination: first means for generating a second function of the variable which is dependent upon the given function; second means responsive to the output of said first means for integrating the second func-

tion; means for generating a function of the ratio of both the integral and a parameter derivable from the given function, said ratio function having a reduced dependence upon another characteristic of the given function; and third means responsive to the output of said second means for generating an indication of the identity of the characteristic from the ratio function.

3,129,288
FREQUENCY MODULATION RECEIVER
Adrian J. De Vries, Elmhurst, Ill., assignor to Zenith Radio Corporation, Chicago, Ill., a corporation of Delaware
Filed Sept. 10, 1962, Ser. No. 222,545
13 Claims. (Cl. 179—15)



1. A receiver for using a stereophonic program comprising a carrier frequency-modulated in accordance with the sum of two audio signals and also in accordance with a subcarrier signal which has been suppressed-carrier amplitude-modulated with the difference of said two audio signals, said receiver comprising:

a frequency-modulation detector responsive to said carrier for deriving a composite signal representing the modulation of said carrier;

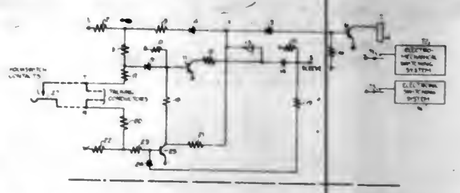
an amplitude-modulation detector including at least one transistor having three electrodes, a detecting circuit comprising one pair of said electrodes, and a phase-reversing circuit coupled to said detecting circuit and comprising another pair of said electrodes for reversing the polarity of the detected signal developed in said detecting circuit;

means for applying to said amplitude-modulation detector a demodulation signal corresponding to the carrier component of said subcarrier signal and said composite signal to develop in said phase-reversing circuit a combination of said audio signals;

and means for applying said composite signal to said phase-reversing circuit to matrix with said combination of said audio signals and derive a particular one of said audio signals separated from the other.

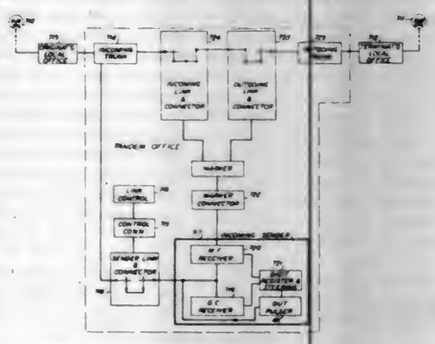
3,129,289
ELECTRONIC LINE CIRCUIT
Donald F. Seemann, Joliet, Ill., assignor to International Telephone and Telegraph Corporation, New York, N.Y., a corporation of Maryland
Filed June 26, 1959, Ser. No. 823,209
10 Claims. (Cl. 179—18)

1. An electronic line circuit comprising a pair of line conductors, a pair of transistors having complementary symmetry, one of said line conductors being coupled to apply biasing potential to one of said transistors, the other of said line conductors being coupled to apply biasing potential to the other of said transistors, means for switching said transistors between non-conductive and conductive states responsive to the completion or interruption of a loop across a pair of conductors, and means responsive to



said switching of said transistors to one of said conductive states for extending a seizure signal to operate a telephone system.

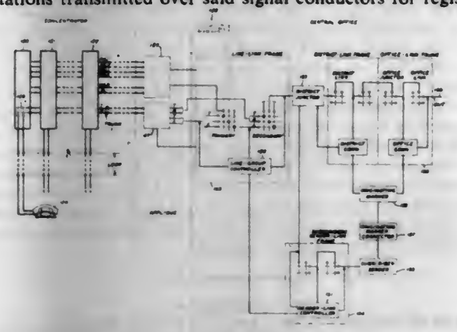
3,129,290
IMPULSE REGISTER
Amos E. Joel, Jr., South Orange, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed June 30, 1959, Ser. No. 823,987
27 Claims. (Cl. 179—18)



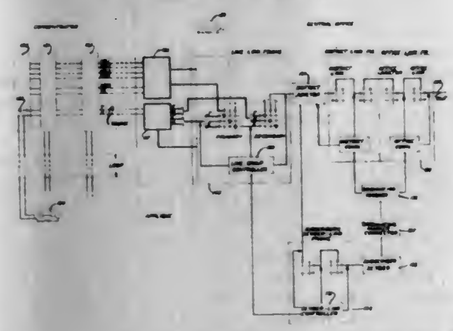
1. A register comprising a plurality of stages adapted to store coded signal information, said information including two distinct trains of signals, first and second channels for transmitting said trains of signals, each of said trains including a variable number of signals, the total number of signals in both of said trains remaining constant and equal in number to said plurality of stages, said signals in both of said trains collectively representing a single number or word, means in said register exclusively responsive to said signals in said first train transmitted over said first channel for storing said signals in the initial and succeeding stages of said register, and means in said register exclusively responsive to the signals of said second train transmitted over said second channel for storing the signals of said second train in the terminal and immediately preceding stages of said register.

3,129,291
REMOTE DISTRIBUTED TELEPHONE LINE CONCENTRATOR
Chester E. Brooks, Montvale, and James L. Henry, Madison, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 29, 1960, Ser. No. 79,384
22 Claims. (Cl. 179—18)

22. A telephone line concentrator system for connecting a plurality of remote substations over a smaller plurality of shared trunks and signal conductors to a telephone central office including means at said central office for extending connections to said substations, and additional means at said central office responsive to a plurality of service request indications at said remote substations transmitted over said signal conductors for registering the identity of said substations prior to the extension of a connection over said trunks to any of said substations.



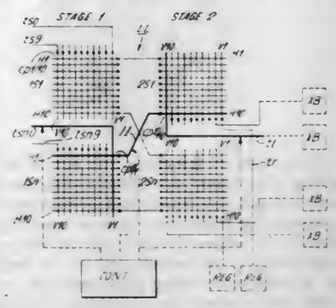
3,129,292
DISTRIBUTED TELEPHONE LINE CONCENTRATOR SYSTEM
Chester E. Brooks, Montvale, and William C. Sand, Chatham, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 29, 1960, Ser. No. 79,385
22 Claims. (Cl. 179—18)



22. A telephone switching system for connecting a plurality of units over a lesser plurality of shared channels to a telephone central office including applique means for coupling said channels to said office, and means in said applique means responsive to a specific service request indication for transmitting information representing the identity of said unit to said office including means for normalizing all information registrations in said applique means pertinent to said specific service request indication upon the transmission of said information to said office.

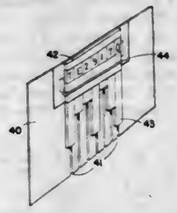
3,129,293
AUTOMATIC TELECOMMUNICATION SWITCHING SYSTEMS
Bloomfield James Warman, Charlton, London, England, assignor to Associated Electrical Industries Limited, London, England, a British company
Filed Aug. 30, 1961, Ser. No. 134,905
Claims priority, application Great Britain Sept. 1, 1960
7 Claims. (Cl. 179—22)

1. In a multi-stage relay cross-point switching system having its cross-points defined between multiples including control conductors and having its stages connected by links including corresponding control conductors, a relay for each cross-point having an operating winding and a make contact connected in series with each other between the control conductors of the multiples defining the cross-point, marking connection extending from the junction between the said winding of each relay and its said make contact and including a unidirectionally conductive device and control circuit means having said marking connections extending thereto and capable of controlling, in respect of any communication path through successive stages, the establishment by way of said control conductors and of the control conductors in the links



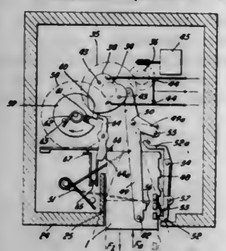
between these stages, of a control connection which includes the series-connected operating winding and make contact of a relay in each such stage with the winding of such relay in each case electrically nearer a particular end of the control connection than is the contact, said control circuit means comprising means for applying an operating potential to said particular end of said control connection, and means for applying to the marking connections of the relays involved in said control connection, in sequence from said ends, a marking potential of such polarity with respect to the operating potential that the unidirectionally conductive devices in the marked marking connections will permit a resultant flow of operating current for the relays.

3,129,294
CALL TRANSMITTING DEVICES
Reynold Henatsch, 300 E. 61st St., New York, N.Y.
Filed Feb. 26, 1958, Ser. No. 717,743
3 Claims. (Cl. 179—90)



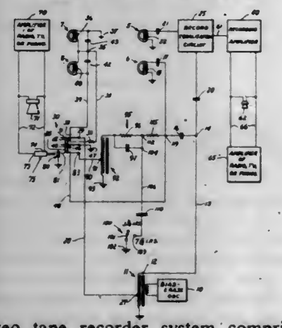
3. With an automatic telephoning device having mechanisms for producing electrical impulses and a plurality of adjustable levers being simultaneously set and sequentially released to actuate an impulse switch through a common cam shaft, an adjustable impulse control member being used for adjusting the set of the levers, said adjustable impulse control member comprising, in combination, a file card having a plurality of identical slots opening into one edge; a plurality of separate bar members of various lengths; and means for temporary attachment of the bars to the card in a manner which shortens the slots to various lengths according to the length of the bars.

3,129,295
AUTOMATIC TELEPHONE CALL DEVICE
Roger Charles Léon Crommen, Valence, France, assignor to Compagnie Crouzet, Valence, France, a company of France
Filed Dec. 21, 1959, Ser. No. 860,901
Claims priority, application France Dec. 22, 1958
7 Claims. (Cl. 179—90)



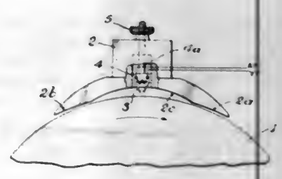
1. An automatic telephone call device for automatically calling a requested subscriber's telephone apparatus by means of a call key constituted by a support plate carrying, grouped in transverse series succeeding one another longitudinally, characteristic signs of the call-number of the apparatus to be called, one of the two longitudinal edges of said plate being provided with retaining teeth, said call device comprising: yielding expelling means for producing an expelling force on any call key introduced in the device; retaining means for cooperating with the retaining teeth of the key; a sweeping lever for controlling said retaining means, exploring the surface of the key, carrying detecting means and for translating call signals corresponding to the characteristic signs of the call-number; a rotatory control cam acting on said sweeping lever for oscillating the latter; an electric motor operatively connected to said cam for rotating the latter; switching means for said motor and adapted to be controlled by the key; a pivoting control lever for actuating said switching means; a control disc operatively connected to said electric motor for actuating said control lever; transmission means inserted between the motor and the control disc and comprising a gear wheel operatively connected to the motor and coaxial with said disc; and spring means for operatively and yieldingly connecting, with a rotatory clearance, said gear wheel and said disc.

3,129,296
STEREO TAPE RECORDER SYSTEM
Carl W. Claras, Western Springs, and Theodore Wickstrom, Skokie, Ill., assignors, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Oct. 10, 1960, Ser. No. 61,662
7 Claims. (Cl. 179—100.2)



1. A stereo tape recorder system comprising upper and lower record heads and cooperating upper and lower erase heads in respective alignment therewith and on the same sides thereof, a bias-erase oscillator connected to said record heads and one of said erase heads and adapted selectively to be connected also to the other of said erase heads, switch means selectively effecting said last connection, an internal input amplifier and associated first record equalization circuit connected to the record head which cooperates with said one erase head, and means applying equalized signals of proper intensity to the other record head, said last means including an input terminal adapted to receive signals from an external amplifier, transformer means connected to said input terminal and adapted to raise the voltage of said signals, and a second record equalization circuit connected between said transformer and said other record head.

3,129,297
AIR SUPPORTED HOLDER FOR RECORDING AND REPRODUCING HEADS
Kurt Schlichting, Kiel, Germany, assignor to Zeiss Ikon Aktiengesellschaft, Stuttgart, Germany
Filed Oct. 25, 1961, Ser. No. 147,619
Claims priority, application Germany Nov. 2, 1960
2 Claims. (Cl. 179—100.2)

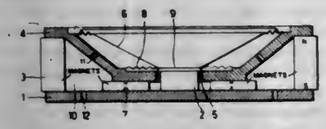


2. In combination with an air supported holder for recording and reproducing heads, particularly for impulse recording and impulse reproducing, a rotatable magnetic record carrier having a circular recording surface, in which the surface of said holder facing the circular recording surface of said record carrier is provided with a recess and projections which upon rotation of said record carrier produce in the gap formed between the latter and the holder zones of increased air pressure and of reduced air pressure, said recess being arranged in the central portion of the surface of the holder which faces the recording surface of said record carrier and being formed by a concave depression whose curvature is greater than that of said circular recording surface, while the end portions of said surface of the holder form said projections which have a curvature which is smaller than the curvature of said circular recording surface, and including a forked lever, means for pivotally mounting said holder in the fork of said lever, means for pivotally mounting the other end of said lever, and spring means attached to said lever for urging the latter in a direction in which said holder is moved away from said record carrier.

3,129,298
ELECTRO-DYNAMIC CONICAL LOUDSPEAKER
Wytze Hofman, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed May 8, 1961, Ser. No. 108,346
Claims priority, application Netherlands May 10, 1960
4 Claims. (Cl. 179—120)

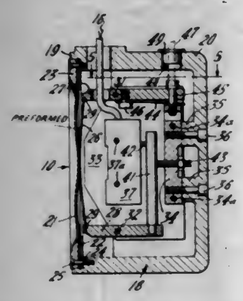
1. A loudspeaker comprising an axially polarized permanent magnet of annular configuration, a soft iron disc shaped foot plate supporting said magnet, a magnetizable core on said foot plate concentric with said magnet, a conical soft iron lid plate supported on said magnet, said lid plate having a central concavity extending toward said foot plate and spaced therefrom, a central aperture

in said lid plate defining an air gap with said core a voice coil within said air gap, a speaker diaphragm supporting said voice coil, said diaphragm secured to said lid plate and receivable within said central concavity, a



second magnet in the space between said foot plate and the adjacent portion of said lid plate having the same polarity as said annular magnet, and means for venting the space between said diaphragm and said lid plate.

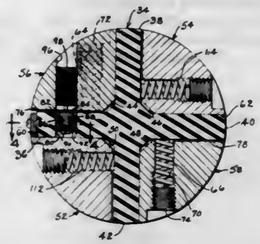
3,129,299
LEVEL CONTROL DEVICE WITH ELECTRICAL SWITCH MEANS
Joseph A. Bondkirch, Madison, N.J., assignor to Lee S. Heydenreich, Essex Fells, N.J.
Filed Aug. 31, 1960, Ser. No. 53,163
4 Claims. (Cl. 200—61.2)



3. Pressure control mechanism comprising a pressure-responsive member in the form of a flexible resilient sheet unsupported except at two opposite edges, supports for such member engaging these two respective edges, the central portion of the member being bowed between these edges and disposed to be moved by the pressure in a direction to flatten the resilient sheet, one of the supports being fixed and the other movable, a control device and means operatively connected with the movable support for actuating the device, the mechanism being characterized in that the flexible resilient sheet is preformed to a natural bowed shape and in unstressed condition so that no pressure of the supports against the opposite edges of the member is required to maintain the member in bowed condition.

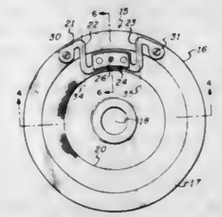
3,129,300
TORQUE SENSING COUPLING WITH CONTACT CARRYING SPACER ELEMENT
Charles Leo Moyles, Royal Oak, Mich., assignor to Champion Spark Plug Company, Toledo, Ohio, a corporation of Delaware
Filed Oct. 24, 1962, Ser. No. 232,806
3 Claims. (Cl. 200—61.46)

1. A torque sensing device for positioning between axially aligned rotatable driving and driven shafts, said torque sensing device comprising: first and second annular collars adapted to be secured to said driving and driven shafts respectively, said collars having axially projecting portions which overlie each other and which include generally parallel spaced apart side abutment surfaces which face each other and which extend along planes generally parallel to said shafts, an electrically non-conductive spacer member loosely secured between said side abutment surfaces, a first electrical contact supported by said spacer member facing one of said side abutment surfaces, a second electrical contact supported by said one of said side abutment surfaces in a position to be contacted by said first contact, spring means resiliently biasing said abutment surfaces a predetermined distance apart to oppose driving torque and normally provide clearance be-



tween said spacer member and one of said abutment surfaces, said contacts having open and closed positions and being biased to assume one of the two positions when said clearance is provided by said spring means, but movable to the other position upon predetermined yielding of said spring means, and electrically conductive means for sensing the position of said contacts, whereby transmitted torque above a predetermined value overcomes said spring means and actuates said contacts.

3,129,301
ANGULAR SPEED RESPONSIVE DEVICE
Frederick Saphra, Levittown, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Nov. 14, 1960, Ser. No. 68,895
1 Claim. (Cl. 200—80)



An angular speed responsive switch comprising a rotating member having an axis of rotation comprising a deflectable conditionally stable elastic column mounted for rotation with said rotating member, said column being relatively long along its longitudinal axis with respect to its cross-sectional area and having a non-linear elasticity characteristic whereby at a critical load associated with a critical angular speed of said member an appreciable increase in the rate of deflection versus load occurs, said longitudinal axis being disposed substantially in a plane perpendicular to said axis of rotation, load-producing means rotating with said member and effectively connected to an extremity of said column for applying a compressive load to said column in the direction of said longitudinal axis representative of the angular speed of said member to thereby abruptly deflect said column at said critical speed of said member, said load-producing means being disposed to move substantially parallel with respect to said axis of rotation, and switch means having one contact mounted on said rotating member and another contact mounted on said column whereby below said critical speed said contacts abut and above

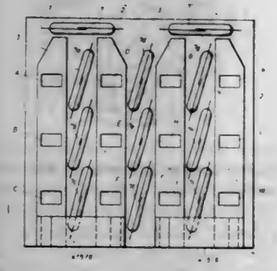
said critical speed said contacts are spaced, in the latter case due to the abrupt deflection of said column.

3,129,302

SWITCHING DEVICE COMPRISING REED CONTACTS OPERATED BY PERMANENT MAGNETS

Günter Postel, Madrid-Aravaca, Spain, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Filed Mar. 29, 1962, Ser. No. 183,632
Claims priority, application Germany Mar. 30, 1961
4 Claims. (Cl. 200—87)



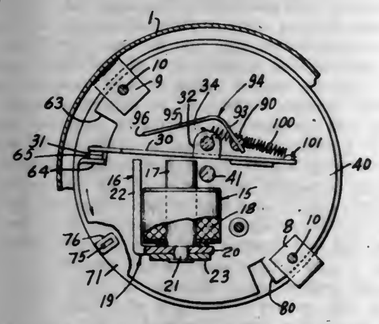
1. A switching device comprising a first pair of spaced-apart substantially parallel plates of magnetic material each having a plurality of apertures therein, first flux generating means positioned between said plates near one end thereof to establish a magnetic field in the plates of opposite polarity, first magnetically operable switch means positioned in flux linking relationship with the other end of said plates, a plurality of second magnetically operable switch means positioned adjacent respective ones of said apertures, and a plurality of selectively operable second flux generating means movable into and out of the confines of the associated apertures to vary the said magnetic field thereby operating and restoring the said first switch means and simultaneously movable into and out of flux-linking relationship with the associated second switch means thereby operating and restoring them concurrently with the operation and restoration of the said first switch means.

3,129,303

BALANCED WHEEL ELECTROMAGNETIC CIRCUIT INTERRUPTER

Alfred T. Schmidt, 5547 Vineland, North Hollywood, Calif.

Filed Feb. 17, 1961, Ser. No. 102,332
1 Claim. (Cl. 200—90)



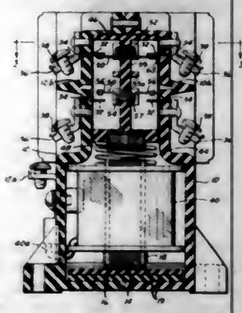
An electric circuit interrupter, as disclosed, including an electro magnet, an armature positioned adjacent the pole piece of said electro magnet, means pivotally mounting the armature, the armature being balanced on each side of the pivotal mounting means, one end of said armature provided with an electrical contact, a balanced disk positioned at one side of the electro magnet, means axially mounting the balanced disk for rotation, the disk provided with an electrical contact adapted to engage the electrical contact of the armature during rotation of the disk, a circuit including the electro magnet, the two contacts for making the circuit through the electro magnet to attract the armature towards the pole piece and induce rotation of the balanced disk to separate the two contacts and break the electrical circuit to the electro magnet, a pair of concentric rings both of which lie in the same plane and are positioned at one side of the balanced disk, the inner of said rings being held against movement and the outer ring being movable relative to the inner ring, a lug depending from the balanced disk and means carried by the movable ring in the path of movement of the lug of the balanced disk for adjustably limiting rotation of the balanced disk in one direction.

3,129,304

REVERSIBLE CONTACT MOLDED FRAME RELAY

Roy Hylnk, Wauwatosa, and Hector Kitscha and John A. Quaal, Milwaukee, Wis., assignors to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware

Filed Sept. 23, 1960, Ser. No. 58,008
13 Claims. (Cl. 200—104)



1. In an electromagnetically actuated switch:
(*a*) a molded insulating housing;
(*b*) a switch comprising stationary contacts and movable contacts and an electromagnet comprising a magnet frame having a sealing surface, an energizing coil and an armature for attraction to said sealing surface when said coil is energized thereby to actuate said movable contacts into engagement with said stationary contacts;
(*c*) and means for determining the wear allowance of the contacts and said switch comprising:
(*d*) means molded in said housing for positioning said stationary contacts and said sealing surface relative to one another to provide an accurate distance therebetween due to the inherent dimensional accuracy of the molded housing whereby manufacturing tolances of the magnet frame are eliminated in determining contact wear allowance thereby to reduce the tolerance of the contact wear allowance.

3,129,305

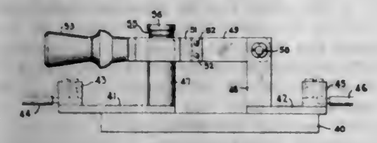
NON-ARCING SWITCH

Ralph L. Hurtle, West Hartford, Conn., assignor to General Electric Company, a corporation of New York

Filed Jan. 11, 1961, Ser. No. 82,106
2 Claims. (Cl. 200—114)

1. An electric switching device comprising:
(*a*) an insulating support;

(*b*) a first generally cylindrical stationary contact member supported on said support;
(*c*) a current limiting device mounted on said first stationary contact member and comprising a pair of generally disc-shaped conductive members spaced apart by a generally disc-shaped insulating spacer having a hole therethrough centrally thereof and a quantity of mercury filling said hole and interconnecting said conductive members;
(*d*) a second generally cylindrical stationary contact member supported on said current limiting device;
(*e*) said first and second stationary contact members and said current limiting device being stacked in substantial axial alignment;



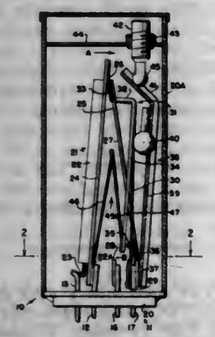
(*f*) a movable contact blade pivotally supported on said support on a pivot pin extending at right angles to the axis of said stationary contact members, said movable contact blade having at least a portion thereof comprising spaced-apart side portions disposed and arranged to engage opposite side portions of said first and second stationary contacts respectively;
(*g*) said movable switch blade being movable from a closed circuit position in which it is in engagement with said first stationary contact to an open circuit position in which it is electrically disconnected from both said first and second stationary contacts;
(*h*) the width of said side portions of said movable contact blade being greater than the spacing between said first and second stationary contact members so as to cause said movable switch blade to bridge said first and second stationary contact members in at least one position of said blade as said blade is moved from said closed to said open circuit position.

3,129,306

THERMAL TIME-DELAY RELAY

Herbert M. Perkins, Livingston, and William Chakeres, Newark, N.J., assignors to Thermal Controls, Inc., Arlington, N.J., a corporation of New Jersey

Filed Aug. 1, 1960, Ser. No. 46,558
17 Claims. (Cl. 200—122)



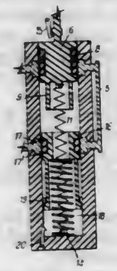
1. A thermal relay comprising a base, a fixed contact on said base, an elongated thermally expansible member upstanding from said base with one end thereof anchored to said base, an elongated compensating member upstanding from said base with one end thereof anchored to said base in displaced relation to the one end of said expansible member, hinge means interconnecting the other ends of said expansible and compensating members, an elongated contact arm hingedly connected at one end thereof to the interconnected portions of said expansible and compensating members, a movable contact, means on said contact arm for mounting said movable contact at a point beyond the free end of said contact arm and in opposed relation to said fixed contact, the interconnected portions of said expansible and compensating members and said contact arm being movable laterally in one direction in response to thermal expansion of said expansible member, and fulcrum means operatively related to said contact arm for pivoting said contact arm and the associated contact mounting means in response to the movement of the interconnected portions of said expansible and compensating members whereby to move said movable contact laterally in a direction opposite to said one direction and toward said fixed contact.

3,129,307

DEVICE FOR ACCELERATING THE DISCONNECTION OF ELECTRIC SWITCHES AND FOR EXTINGUISHING THEIR ARC

Jose Muñoz de Vargas, Calle San Pablo 1, Seville, Spain

Filed Apr. 12, 1961, Ser. No. 102,418
Claims priority, application Spain Apr. 13, 1960
10 Claims. (Cl. 200—144)



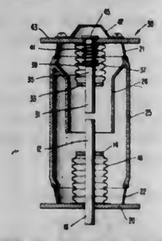
1. A device for accelerating electric switching and preventing the formation of an arc comprising, in combination,
current conducting means;
movably supported switch means;
a current conducting switch member supported by said switch means in a manner whereby said current conducting switch member is positioned in contact with and closes circuit with said current conducting means in a first position of said switch means;
substantially elastic electrical insulating material immovably supported adjacent said current conducting switch member by one of said means in a manner whereby in a second position of said switch means said substantially elastic electrical insulating material is positioned in compressed state between said current conducting means and said current conducting switch member so as to prevent formation of any arc and forms a substantially tight seal between the same;
and control means for automatically moving said switch means from its first to its second position instantaneously so that said substantially elastic electrical insulating material instantaneously replaces said current conducting switch member in position between said current conducting means and said current conducting switch member upon movement of said switch means from its first to its second position.

3,129,308

VACUUM CIRCUIT BREAKER HAVING BUFFERING MEANS IN RELATIVELY STATIONARY ELECTRODE STRUCTURE

Masami Yokoyama and Toshio Kagoshima, Tokyo, Japan, assignors to Nippon Electric Company, Limited, Tokyo, Japan, a corporation of Japan

Filed Apr. 23, 1962, Ser. No. 189,398
Claims priority, application Japan Apr. 22, 1961
2 Claims. (Cl. 200—144)



1. A vacuum switch for electric power comprising a vacuum envelope, said envelope having opposed end members each provided with an aperture,

a movable electrode assembly provided at one end of said envelope and adapted for mechanical connection with an actuating mechanism for moving said assembly to thereby close and open said switch,

said assembly including a first electrode and a first conductive rod-like member substantially in axial alignment therewith, said rod-like member being slidably positioned in one of said apertures,

a buffer electrode assembly substantially in axial alignment with said movable electrode assembly and being disposed at the opposite end of said envelope from said movable assembly,

said buffer assembly including a second electrode and a second conductive rod-like member substantially in axial alignment therewith, said second rod-like member being slidably positioned in the other of said apertures,

a first bellows connected in an airtight manner between said movable electrode assembly and the end member associated therewith,

a second bellows connected in an airtight manner between said buffer electrode assembly and the end member associated therewith, a flexible stopping member disposed at said opposite end of said envelope in a position to be engaged by the end of said second rod-like member when said switch is closed,

a helical compression spring connected between said buffer electrode assembly and the end member associated therewith for providing buffering action upon engagement of said first electrode with said second electrode when said switch is closed, and a stop means mounted on said buffer electrode assembly for abruptly arresting the movement of said buffer assembly as said electrodes are moved together when said switch is opened, the velocity of separation of said electrodes at the point of initial disengagement thereof being a value greater than zero.

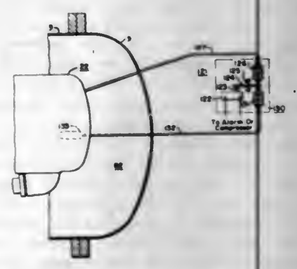
3,129,309

TEMPERATURE-COMPENSATED PRESSURE SWITCHES FOR CONTROLLING GAS BLAST CIRCUIT INTERRUPTERS

Daniel H. McKeough, Burlington, Ontario, and Karl K. Franz, Hamilton, Ontario, Canada, assignors to Canadian Westinghouse Company, Limited, Hamilton, Ontario, Canada

Filed Apr. 12, 1960, Ser. No. 21,681
5 Claims. (Cl. 200—148)

1. A dual-pressure closed-cycle-system compressed-gas circuit interrupter operable over a relatively wide ambient temperature range including a tank structure having a pair of terminal bushings extending therein, an arc-extinguishing assemblage including separable contact means disposed within the tank structure and at least partially supported by the interior ends of the terminal bushings, a high-pressure tank associated with said arc-extinguishing assemblage, blast-valve means synchronized with the separation of said separable contact means to release a blast of gas from said high-pressure tank to assist in arc extinction, the exhausted gas collecting within the general interior of said tank structure, the tank pressure being lower than the pressure within said high-pressure tank, the interrupting ability of the circuit interrupter being dependent upon both the pressure and density of the stored gas, the pressure-temperature characteristics of the interrupting gas causing an increased pressure of the gas at the higher ambient operating temperatures, compressor means for recompressing the exhausted gas within the tank structure and forcing the recompressed gas back into the high-pressure tank for subsequent opening operations of the interrupter, gas-pressure control means including a constant-density gas-control switch for sensing the density of the interrupting



controlled gas over said relatively wide ambient temperature range and for regulating the operation of said compressor means, said switch having a pair of cooperable contacts at least one of which is movable, a movable switch member for actuating said one movable switch contact, pressure-responsive means including a pressure connection leading to the high-pressure tank for urging motion of said movable switch member to close the switch contacts upon a drop of pressure of the controlled gas, temperature-compensating means for said pressure-responsive means for providing a lower pressure spread at the higher ambient temperatures to effect switch contact closure than would otherwise be obtained by mere use of a constant pressure switch, said temperature-compensating means including a thermal bulb disposed in temperature-responsive relation with the controlled gas, said thermal bulb containing a fluid having a pressure-temperature characteristic curve or a volumetric expansion-temperature curve suitable for the desired rapid compensating response at the higher ambient temperatures, whereby pressure and density control of the interrupting gas is obtained over the relatively wide ambient temperature range for effective interrupter operation.

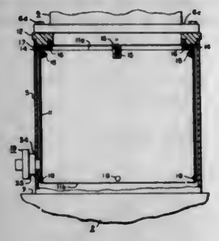
3,129,310

POTENTIAL-TAP ASSEMBLY FOR RELATIVELY HIGH-VOLTAGE EQUIPMENT

James H. Frakes, Penn Township, Allegheny County, and Robert E. Friedrich, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed June 1, 1961, Ser. No. 114,145
5 Claims. (Cl. 200—148)

2. In combination, tank-mounted relatively high-voltage equipment including a terminal bushing extending into a grounded tank, an independent conducting potential cylinder at least partially encompassing said terminal bushing and constituting a separate entity, means insulating said potential cylinder from the tank, and voltage-tap connecting means making electrical connection to said conducting potential cylinder.

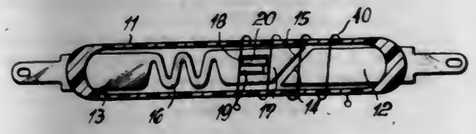


3,129,311

DAMPING MEANS FOR MAGNETIC REED CONTACT

Georg Bergsträsser, Frankfurt am Main, Germany, assignor to Telefonbau und Normalzeit G.m.b.H., Frankfurt am Main, Germany, a firm of Germany

Filed Mar. 26, 1962, Ser. No. 182,411
Claims priority, application Germany May 20, 1961
13 Claims. (Cl. 200—166)



1. A switching structure controlled by magnetic field action comprising:

a pair of cooperating switching elements of magnetizable material arranged substantially in a common plane, at least one of said pair of elements having a zone of reduced cross-section imparting freedom of relative motion within said common plane to portions of said one of said pair of elements situated to opposite sides of said zone of reduced cross-section, one of said portions of said one of said pair of elements defining a perforation;

a pair of cooperating contact surfaces selectively engaged and disengaged by said relative motion of said portions of said one of said pair of elements;

a housing enclosing said pair of elements and having an inner wall;

and damping means loosely arranged within said perforation engaged by said inner wall of said housing and maintained within said perforation by said inner wall of said housing.

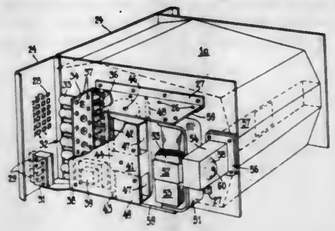
3,129,312

APPARATUS FOR DIELECTRIC HEATING

Göran Axel Runo Öjelid, Huskvarna, Sweden, assignor to Husqvarna Vapenfabriks Aktiebolag, Huskvarna, Sweden

Filed Mar. 1, 1961, Ser. No. 92,688
Claims priority, application Sweden Mar. 4, 1960
4 Claims. (Cl. 219—10.55)

1. In an apparatus for dielectric heating, by means of micro-waves, metal means forming an oven space, a magnetron type micro-wave generator, a transmission line for micro-waves coupling said micro-wave generator to said oven space and comprising a capacitive member constituting a galvanic insulation between said oven space and said micro-wave generator; a voltage converter coupled to said micro-wave generator and to a main electric supply system, said converter comprising a galvanic connection interconnecting said micro-wave generator and



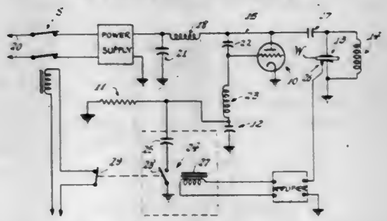
said electric supply system; a grounded, protective casing for said micro-wave generator and said voltage converter, cooling means for said micro-wave generator; and supporting means carrying said micro-wave generator and insulating it galvanically from said protective casing.

3,129,313

METHOD AND APPARATUS FOR RAPID CUTOFF OF OSCILLATIONS

Milton Rothstein, East Williston, N.Y., assignor to Wilcox & Gibbs Sewing Machine Co., New York, N.Y., a corporation of New York

Filed Dec. 7, 1960, Ser. No. 74,395
18 Claims. (Cl. 219—10.77)



18. In the method of cutting off harmonic oscillations in an oscillating circuit including an oscillator tube having a grid circuit provided with a grid-leak resistor and a capacitor in which the time constant of the grid circuit is not greater than the order of the time constant of the oscillating circuit, the step of rendering a separate capacitor circuit in parallel with said grid-leak resistor conductive to alter the time constant of the grid circuit to a value substantially greater than the time constant of the oscillating circuit to shift said circuit to intermittent operations in which the oscillations quickly cut off periodically.

3,129,314

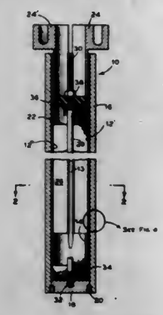
ELECTRIC HEATER

William T. Hage, Alliance, Johannes H. Ammon, Barberton, and Frederick J. Hartwig, Alliance, Ohio, assignors to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey

Filed Aug. 1, 1960, Ser. No. 46,755
4 Claims. (Cl. 219—19)

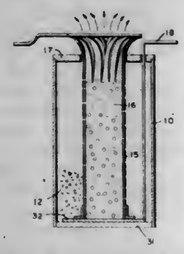
1. An electric heater comprising an electric resistance element, a covering sheath adapted to enclose said resistance element, a thin and coherent film of dielectric material disposed between said resistance element and said covering sheath, said resistance element formed of at least two longitudinally contiguous arcuate members connected together at one end to form a longitudinally slotted cylinder, means for connecting each section of

said resistance element to a source of electric power, a body of compressible electrical insulating material filling said slotted cylinder, and means coaxial with and interior



of said cylinder for compacting said insulating material to urge and maintain said resistance element in intimate contact with said covering sheath.

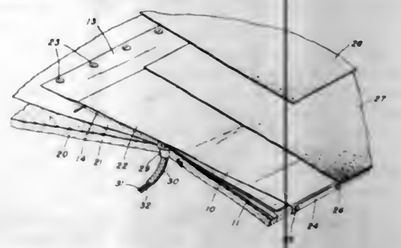
3,129,315
VACUUM VAPORIZING FIXTURE
Richard P. Radke, Northridge, and William E. Blair, Redondo Beach, Calif., assignors to Lear Siegler, Inc., Santa Monica, Calif., a corporation of Delaware
Filed Dec. 26, 1961, Ser. No. 162,048
2 Claims. (Cl. 219—19)



1. In combination:
a cylindrical filament having an opening at one end and a plurality of perforations distributed over the length of the walls thereof,
a cylindrical housing having an open end to accommodate said filament such that a space exists between the outside of said filament and the inside of said housing,
cover means comprising a heat resistant plate having a first opening therein to accommodate said perforated filament and a second opening to accommodate an electrical lead to said filament, and
wherein said filament is capable of being heated so that the material placed in the space between said housing and said filament is vaporized and such vapor is capable of passing through said perforations and out at open end of said filament.

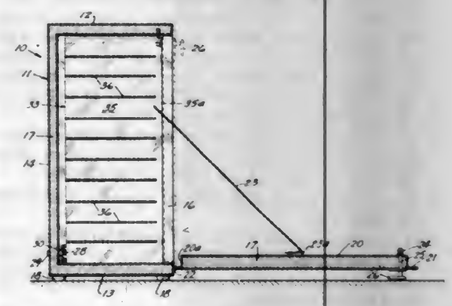
3,129,316
HEATING ELEMENT FOR ELIMINATING ICE FROM A ROOF
Ferris N. Glass, 4100 Park Lane Road, and Lloyd J. Kreiser, 2650 Holiday Hills Road, both of Traverse City, Mich.
Filed July 30, 1962, Ser. No. 213,182
1 Claim. (Cl. 219—19)

In combination with the eave portion of a roofing assembly which includes overlapped covering pieces of standard width secured in position by parallel rows of nails, said eave portion having a hole traversing the substructure thereof, a heating device comprising:
a sheet of aluminum of substantial thickness and a hardness selected to accept nails driven through the same;



an insulated electric resistance heating element secured to the underside of said sheet throughout the length of said element along a serpentine path, said sheet having continuous opposite marginal portions unoccupied by said heating element and disposed to receive said nails, said heating element being disposed in the space between said rows of nails,
said marginal portions being marked on said sheet;
circuit means supplying an electric potential to said heating element,
said circuit means including connector means disposed opposite said hole; and
a foil cover for said heating element, said cover being secured to said sheet, and said heating element being interposed between said cover and said sheet.

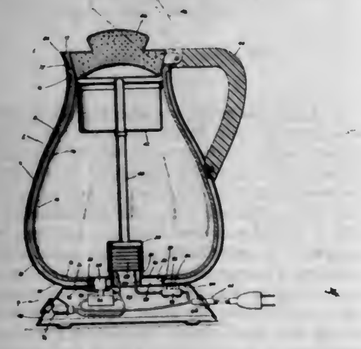
3,129,317
HEATED DINNER TRANSPORT APPARATUS
Oscar Curtis Howard, 4317 Oakland Ave. S., Minneapolis, Minn.
Filed June 11, 1963, Ser. No. 287,066
3 Claims. (Cl. 219—35)



1. Heated transport apparatus for use in transporting a plurality of food-containing receptacles, said apparatus comprising
a generally rectangular shaped housing having a top, bottom and side walls and having an open front side, said housing defining a generally rectangular chamber therewithin,
an electrical heating element mounted within said chamber and being connectible to a source of electrical current to permit ready heating of said chamber,
a generally rectangular shaped article supporting shelf structure removably mounted within and substantially filling the volumetric space defined by said chamber,

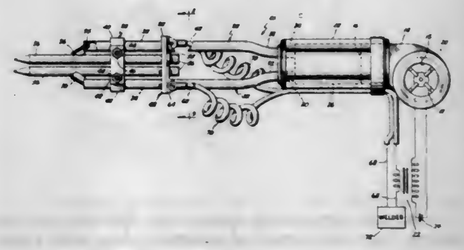
said shelf structure including a centrally located vertical support plate member having a plurality of substantially similar vertically spaced-apart, horizontally oriented supporting shelf members affixed thereto and projecting laterally from opposite sides thereof, said vertical support plate member traversing the interior of said chamber and having one edge thereof positioned closely adjacent the open side of said housing and projecting beyond the adjacent edges of said shelf members,
a closure panel for closing said open front side of the housing,
hinge means hingedly connecting said closure panel along its lower edge to said housing to permit vertical swinging movement of said panel about a horizontal transverse axis between open and closed positions with respect to said open side,
means extending between and interconnected with said housing and said closure panel to retain the latter in substantially horizontal relation when in the open position whereby said closure panel defines a serving table, the lower edge of said closure panel being disposed in substantially obstructing relation with respect to said vertical plate when said panel is in the open position, and said closure panel having the inner surface thereof disposed in abutting relation with said vertical support plate when said panel is in the closed position to clamp the supporting shelf structure against movement within the housing and spacing the front edges of said shelf members from said closure panel.

3,129,318
COFFEE PERCOLATOR
James L. D. Morrison, 7551 Melrose Ave., Los Angeles, Calif.
Filed May 22, 1961, Ser. No. 111,605
4 Claims. (Cl. 219—43)



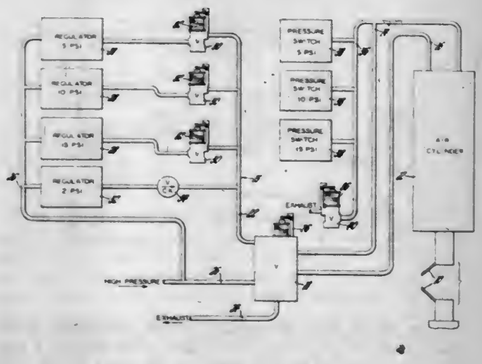
1. In a coffee percolator: a pot having an imperforate outer wall formed of relatively thin sheet metal and having a bottom wall portion and a side wall portion which defines an open top; an inner wall formed of glass within said outer wall and closely spaced therefrom, said inner wall having a bottom wall portion with an annular center opening therethrough; said bottom portion of said outer wall having an outer annular section and a first annular re-entrant portion extending upwardly therefrom through said annular center opening in said bottom wall portion of said inner wall and being sealed thereto, said bottom wall portion of said inner wall being closely spaced from said outer annular section of said bottom wall portion of said outer wall, said inner wall having an upper extremity joined to said side wall portion of said outer wall adjacent said open top thereby defining an insulating space; said bottom wall portion of said outer wall having a second re-entrant portion of smaller diameter than said first re-entrant portion and joined thereto by an annular intermediate wall portion, said second re-entrant portion extending upwardly into the interior of said pot; and an electrical heating element positioned within said second re-entrant portion and in close proximity thereto.

3,129,319
WELDING TORCH
Thore C. Hawk, 425 W. 3rd St., Rugby, N. Dak.
Filed Mar. 6, 1963, Ser. No. 263,167
9 Claims. (Cl. 219—75)



1. A welding torch comprising:
(*a*) a pair of tubular members terminating in a pair of laterally spaced openings for discharging gas into a welding zone, and
(*b*) means movable with respect to said tubular members for supporting a pair of elongated carbon electrodes in a parallel relationship with each other and for advancing said electrodes between said laterally spaced openings to compensate for consumption of said electrodes.

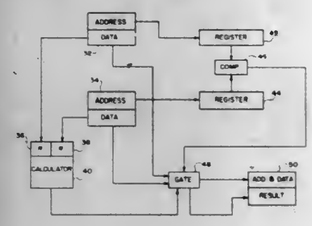
3,129,320
WELDING CONTROL
Henry N. Capaldo, Greendale, Henry G. Dombrowski, Hales Corners, and Charles M. Shannon, Milwaukee, Wis., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 13, 1961, Ser. No. 102,767
11 Claims. (Cl. 219—89)



1. A welding control comprising an electrode pressure control system, a welding current control system, means for selecting the desired combination of pressure and current by a single manual operation and a signal means re-

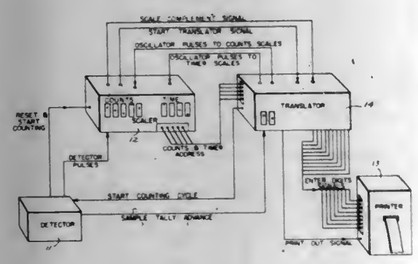
sponsive to current and pressure for indicating when the selected current and pressure have failed.

3,129,321
DATA COLLATING SYSTEM
Edward Rogal, North Scituate, Mass., assignor to Universal Controls, Inc., New York, N.Y., a corporation of Maryland
Filed Jan. 26, 1960, Ser. No. 4,647
4 Claims. (Cl. 235—61.7)



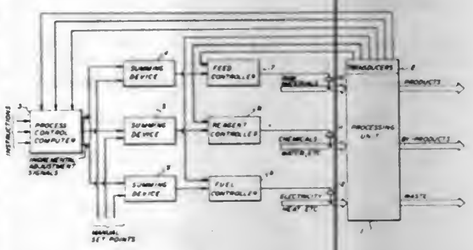
1. A data processing system for collating separate source data into combined summary data, said system comprising a plurality of source stations for producing source signals corresponding to a plurality of source records, a first plurality of registers and calculator means for receiving signals from said source stations and performing calculations thereon in order to produce result signals, a second plurality of registers and a comparator for permitting said first plurality of registers and said calculator means to operate after receiving certain source signals from said plurality of source stations, and a gate for permitting the passage of said source signals from said source stations and said result signals from said calculator in response to said signals from said comparator, whereby a summary station may produce a summary record representing signals transmitted through said gate.

3,129,322
DIGITAL DATA PROCESSING SYSTEM
Everett R. Sarratt, Baltimore, Md., assignor, by mesne assignments, to Laboratory For Electronics, Inc., Boston, Mass., a corporation of Delaware
Filed Apr. 7, 1960, Ser. No. 20,742
5 Claims. (Cl. 235—92)



2. A digital data processing system comprising scaler means adapted to accumulate digital information; a plurality of cascaded scaling elements included within said scaler means, each of said scaling elements having a predetermined maximum digital capacity; printing means adapted to store a plurality of serially entered digits and subsequently to print out said plurality of serially entered digits simultaneously in parallel form in repsonse to an applied stimulus; a transfer scaler having the same maximum digital capacity as each of said plurality of scaling elements; address means adapted to select independently and sequentially each of said scaling elements; circuit means adapted to supply pulses simultaneously to the respective selected scaling element and said transfer scaler until said selected scaling element is filled, said transfer scaler being adapted to provide as an output a digit entry representative of the complement of the number of pulses accumulated in said transfer scaler when said selected scaling element is filled; actuator means operative upon the filling of said selected scaling element to enter said representative digit into said printing means, said circuit means acting upon completion of said digit entry to supply pulses to said selected scaling element and to said transfer scaler until said transfer scaler is filled, whereby said transfer scaler and said selected scale are returned to their initial digital storage condition; control means adapted to provide an applied stimulus to said printing means after a predetermined number of said digit entries.

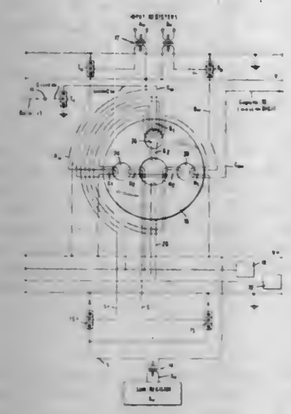
3,129,323
FAIL-SAFE PROCESS CONTROL SYSTEM
Thomas M. Stout and Charles G. Laspe, Rolling Hills, Calif., assignors, by mesne assignments, to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Mar. 26, 1958, Ser. No. 724,110
9 Claims. (Cl. 235—151)



1. A process control system including the combination of a process unit having at least one process variable, means coupled to the process unit for adjusting the process variable to control the operation of the process, means for sensing at least one process variable, a controller coupled to the adjusting means for establishing a process variable at a predetermined level in accordance with the comparison of a controllable set point signal and a signal representing a measurement of at least one process variable, a summing device connected to the controller for providing a controllable set point signal, said summing device having one input circuit for receiving a manual set point signal and a second input circuit for receiving an incremental adjustment signal, and a computer connected to the second input circuit of the summing device to provide an incremental adjustment signal to the summing device which is combined with the manual set point signal to provide a controllable set point signal to the controller for establishing the process variable at a desired level of operation.

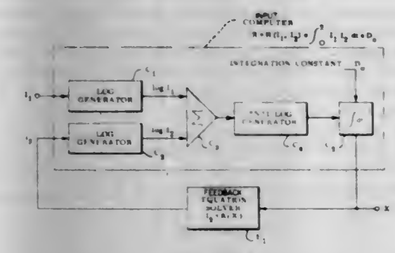
3,129,324
ARITHMETIC SYSTEM
Hua-tung Lee, Peekskill, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Nov. 19, 1959, Ser. No. 854,056
17 Claims. (Cl. 235—175)

1. A binary full adder circuit comprising a first and a second digit input line and a carry input line, a carry output line and a sum output line, means magnetically coupling said input and output lines responsive to the random energization of said input lines in any time sequence to



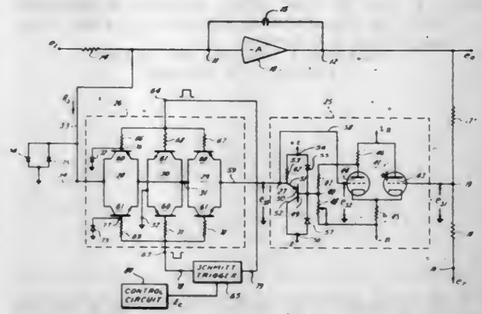
provide an impulse on said carry output line when any two of said input lines are energized and to provide an impulse on said sum output line when only one or all three of said input lines are energized.

3,129,325
EQUATION SOLVER
Donald C. Thomas and Thomas C. Horth, Los Angeles County, Calif., assignors to Tasker Instruments Corporation, Hollywood, Calif.
Filed May 25, 1959, Ser. No. 815,735
10 Claims. (Cl. 235—180)



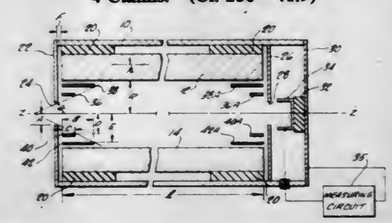
1. In a system of the character described, the combination comprising: an input computer responsive to input signals representing variables $I_1 \ldots I_N$ for producing an output signal in accordance with the function $F(I_1 \ldots I_N)$, said computer including at least two log generators, means for adding the output signals of said two log generators, and means for generating the anti-log function of the output signal of the adding means, thereby to generate a product function of at least two of said input signals; and a feedback equation solver responsive to said output signal for producing at least one of said input signals, but no more than $N-1$ thereof, said feedback equation solver including a plurality of networks for producing a corresponding plurality of signal segments to represent a predetermined part of the functional relationship between said output signal and each of the input signals which is to be developed thereby.

3,129,326
RESET OPERATIONAL AMPLIFIER
Philip Balaban, Colonia, N.J., assignor to Computer Systems, Inc., Monmouth Junction, N.J., a corporation of New York
Filed Nov. 21, 1961, Ser. No. 154,402
9 Claims. (Cl. 235—183)



1. In an analog computer having a first input terminal for receiving information signals, a second input terminal for receiving initial-condition signals, and an output terminal: a high-gain amplifier connected between said output terminal and an input summing junction, a resistive impedance connected between said first input terminal and said input summing junction, a reactive impedance connected between said output terminal and said input summing junction, a resistive impedance connected between said output terminal and said second input terminal, and a T-type switching system connected between a point on said resistive impedance and said input summing junction for selectively causing said output terminal to become responsive to said information signals and said initial condition signals.

3,129,327
AUXILIARY ELECTRODES FOR QUADRUPOLE MASS FILTERS
Wilson M. Brubaker, Arcadia, Calif., assignor, by mesne assignments, to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed Dec. 12, 1961, Ser. No. 158,697
4 Claims. (Cl. 250—41.9)



1. In a multi-pole mass filter having a plurality of substantially parallel and co-extensive primary electrodes spaced symmetrically about a central axis, means for applying a D.C. voltage to the primary electrodes to produce a static multi-pole electric field component between the primary electrodes and means for applying an A.C. voltage to the primary electrodes to produce an alternating multi-pole electric field component between the primary electrodes, the improvement which comprises a plurality of auxiliary electrodes spaced about the filter axis adjacent an end of the primary electrodes, and means for controlling the auxiliary electrodes to produce a decrease in the ratio of the static to the peak alternating

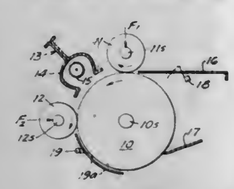
electric field component in the vicinity of said end of the primary electrodes.

3,129,328

THERMOGRAPHIC COPY MACHINE COMPRISING MEANS TO TENSION THE SHEET COMPOSITE IN THE IRRADIATION ZONE

Erwin Wedel, St. Paul, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed May 4, 1960, Ser. No. 26,849
5 Claims. (Cl. 250—65)



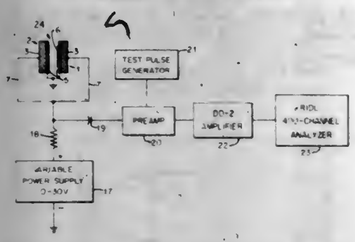
1. A thermocopying machine comprising a printing roller, a first drive roller and a second drive roller each axially parallel to said printing roller, a radiation source for directing a narrow intense beam of radiation along a generatrix of said printing roller between said first and second drive rollers, means for urging said drive rollers toward said printing roller, means for rotating said first drive roller and said printing roller at the same surface speed, and means for rotating said second drive roller at a surface speed somewhat greater than that of said printing roller.

3,129,329

FAST NEUTRON SPECTROMETER USING SPACED SEMICONDUCTORS FOR MEASURING TOTAL ENERGY OF NEUTRONS CAPTURED

Temple A. Love and Richard B. Murray, Oak Ridge, Tenn., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed Mar. 10, 1961, Ser. No. 94,949
10 Claims. (Cl. 250—83.1)



2. A spectrometer for fast neutrons comprising a pair of spaced semiconductor detectors, an element interposed between said detectors responsive to neutrons for producing a pair of charged particles for each neutron captured by said element, each of said detectors being adapted to receive one of said charged particles, and means coupled to the detectors for combining signals and measuring them.

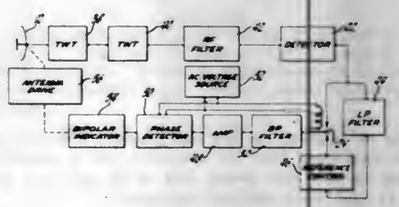
3,129,330

MICROWAVE RADIOMETER SYSTEM

Theodore V. Seling, Davison, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed June 30, 1958, Ser. No. 745,760
14 Claims. (Cl. 250—83.3)

10. A system for producing a thermal map of targets within a background area and adapted to be carried on a vehicle comprising a radiometer including a receiving antenna, an amplifier coupled with the antenna for developing a voltage corresponding to the radiated power incident upon the antenna, a detector having input connected with the output of the amplifier for developing a direct signal voltage corresponding in amplitude to the power applied by the amplifier to the detector, a reference voltage generator including a low pass filter having an input connected with the output of the detector and having a cut-off frequency corresponding to the frequency occurrence of targets within the background area to develop a reference voltage corresponding to the power radiated from the background area in the absence of a target and the amplifier noise power, a modulator having one input connected with the output of the detector and having another input connected with the output of said reference voltage generator and combining the voltages therefrom differentially for developing a signal voltage corresponding to the magnitude and sense of change in received power due to the presence of a target within



the background area, a bandpass filter connected with the output of the modulator and having its maximum response at the frequency of the modulator and having a bandwidth corresponding to the ratio of the rate of target occurrence within the beam pattern of the antenna to the beam width of the antenna, a phase detector having an input connected with the output of the modulator, means for energizing the modulator and phase detector in synchronism, a drive mechanism connected with the antenna to impart motion thereto for scanning a selected background area, a facsimile recorder including a recording medium and recording element, means for advancing the recording medium at a rate proportional to vehicle velocity, means connecting the recording element with said drive mechanism for displacement thereof in synchronism with said antenna motion, and energizing means for the recording element connected between the phase detector and the recording element and responsive to the signal voltage for varying the record intensity in accordance with the magnitude and sense of the change in received power.

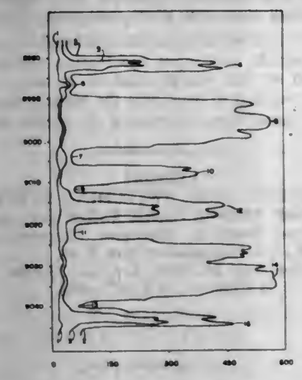
3,129,331

METHOD OF RADIOLOGICAL WELL LOGGING USING A RADIOACTIVE TRACER WITH A CARRIER

Henry A. Bourne, Jr., Earl W. Sutton, Francis R. Conley, and James C. Albright, all of Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

Filed Sept. 26, 1960, Ser. No. 58,485
12 Claims. (Cl. 250—83.3)

1. A method for locating and identifying fluid-producing formations of a subterranean reservoir traversed by a well bore with a radioactivity detection means which comprises passing said detection means through the well bore and recording the measurement of radioactivity of the naturally occurring radioactive material within the reservoir, introducing a radioactive material into said well bore, injecting a fluid to displace said radioactive material into the reservoir formations, passing said detection means through the well bore and recording the measurement of radioactivity, returning the reservoir to normal production, passing said detection means through the well bore upon the production fluids becoming substantially free of radioactive material and recording the measurement of radioactivity, and correlating said measurements with measurements of depth.

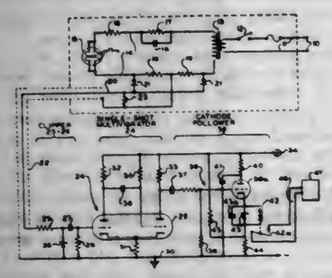


3,129,332

ULTRA-VIOLET DETECTOR SYSTEMS

Albert Leen, West Caldwell, N.J., assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware

Filed July 10, 1961, Ser. No. 122,774
10 Claims. (Cl. 250—83.3)



1. A U-V detecting system comprising a U-V detector tube having electrodes in an adjacent relationship providing a working region responsive to incident photons when a firing voltage is applied across said electrodes to trigger a glow discharge, means for applying successive pulses of a firing voltage across said electrodes of which each pulse falls below the extinction voltage at which a discharge then existing is quenched before the next voltage pulse is applied, a pulse forming means effective when triggered by an input voltage to produce a single output pulse of predetermined magnitude and predetermined duration, means connecting the input of said pulse forming means in circuit with said U-V detector tube, and a utilization device connected to the output of said pulse forming means.

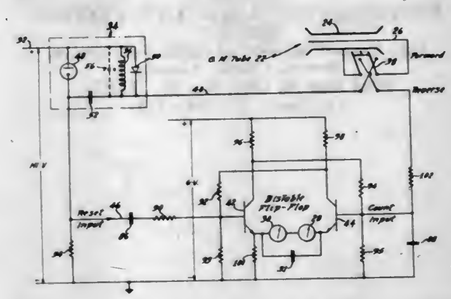
3,129,333

BROAD RANGE RADIATION METER CIRCUIT

Elmo J. Di Ianni, Mountain Lakes, N.J., assignor to Nuclear Corporation of America, Denville, N.J., a corporation of Delaware

Filed Sept. 16, 1960, Ser. No. 56,485
2 Claims. (Cl. 250—83.6)

1. A radiation detector, comprising a Geiger-Müller type tube having one electrode which has a much larger area than the other, said tube having a predetermined threshold biasing level for the reverse voltage direction, means for biasing said tube in the reverse direction with the small area electrode negative with respect to the larger



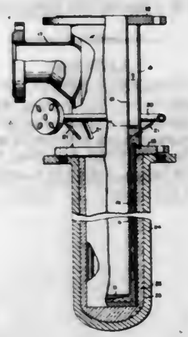
area electrode at a voltage level below said predetermined threshold level, and means for superposing pulses on said biasing voltage periodically to drive said smaller area electrode to a voltage level above said reverse voltage direction threshold level.

3,129,334

TEMPERATURE CONTROLLED RADIATION GAGE

Claude A. Loflin, Wilmington, Del., and Charles B. Moore, Parkersburg, W. Va., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

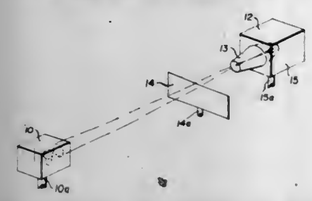
Filed Oct. 6, 1961, Ser. No. 143,510
2 Claims. (Cl. 250—89)



1. In a gamma radiation gage adapted to use within an enclosure maintained at a relatively high temperature level, a gamma radiation source provided with a gamma radiation detector in line with said source but separated therefrom by a space reserved for the reception of material a condition of which it is desired to evaluate as a function of radiation absorption, a gamma radiation-permeable jacket hermetically enclosing said gamma radiation detector and defining therewith a cooling reservoir of a preselected capacity such as to absorb heat transmitted to said detector from said enclosure as latent heat of vaporization of a liquid coolant supplied to said cooling reservoir, said liquid coolant being a saturated hydrocarbon containing up to two carbon atoms having free valence bonds substantially completely saturated wtih fluorine plus one other halogen element from the group consisting of chlorine and bromine, said coolant being substantially non-absorptive of gamma radiation emitted by said source and stable under gamma irradiation, and coolant condensing means in communication with said

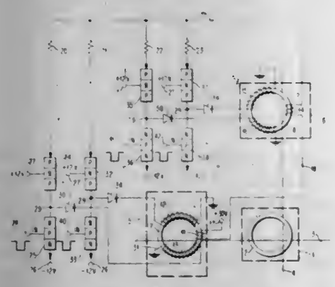
cooling reservoir receiving vaporized coolant and recycling condensed coolant to said reservoir.

3,129,335
PHOTOSENSITIVE RAILROAD SURVEYING SYSTEM
John Kenneth Stewart, 60 Ballantyne Terrace, Dorval, Quebec, Canada
Filed June 30, 1961, Ser. No. 121,074
4 Claims. (Cl. 250—215)



1. A system for railroad surveying, comprising a light transmitter adapted to transmit a beam of light, mounted for movement along a railroad track, a light beam receiver mounted for movement along the track, shadow board means mounted for movement along the track between transmitter and receiver and adjacent the receiver, means responsive to beam reception to indicate the condition of the track surface, said light beam receiver including a parabolic reflector oriented to receive the transmitted light beam, a photoelectric cell located at the focal point of the reflector, masking means to mask off between at least one-quarter and less than one-half of the upper part of the reflector when looking in the direction of the transmitted beam and a light filter in the path of the beam in front of the reflector.

3,129,336
MATRIX SWITCH
Gregory Constantine, Jr., Arlington, Mass., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Sept. 6, 1960, Ser. No. 54,262
6 Claims. (Cl. 307—88)



2. A matrix switch comprising a magnetic core having a plurality of input windings, an output winding and a biasing winding, circuit means for continuously energizing the biasing winding with a direct electric current sufficient to bias the core beyond saturation in one sense, a plurality of signal input means corresponding in number to said input windings, each said input means including one input winding and means effective in response to an input signal to supply to said one input winding a predetermined proportion of the current flowing in the biasing winding, said input windings being arranged so magnetomotive forces produced by the currents flowing therein are opposed to the magnetomotive force of the biasing winding, said input and biasing windings having numbers of turns inversely proportioned to said predetermined proportion, so that variations between input signals in the biasing winding current do not cause corresponding variations in the output winding current produced in response to said input signals, said input and biasing windings being proportioned so that energization of at least two input windings is required to overcome the biasing winding and produce an output signal current in the output winding.

3,129,337
MAGNETIC CORE SWITCHING SYSTEM
Jakob H. Hohl, Adliswil, Zurich, Switzerland, assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Apr. 20, 1960, Ser. No. 23,528
3 Claims. (Cl. 307—88)

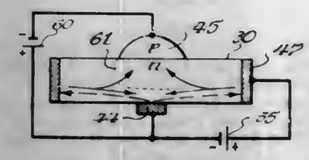


1. A switching system adapted to progressively transfer data coded in binary form from one group of bistable elements to succeeding groups of bistable elements comprising; *n* groups of bistable magnetic cores, consisting of odd-numbered groups and even-numbered groups, means for setting all cores of said odd-numbered groups to one datum stable state and all cores of said even-numbered groups to an opposite stable state, a group of first transfer circuits corresponding to each odd-numbered group of cores each circuit of each said group of first transfer circuits coupling corresponding cores in a said odd-numbered group of said cores and in a succeeding said even-numbered group of said cores in one sense, and a group of second transfer circuits corresponding to each even-numbered group of cores, each circuit of each said group of second transfer circuits coupling corresponding cores in a said even-numbered group of said cores and in a succeeding said odd-numbered group of said cores in said one sense, said first transfer circuits coupling cores of said odd-numbered groups to a greater degree than corresponding cores of said even-numbered groups and said second transfer circuits coupling cores of said even-numbered groups to a greater degree than corresponding cores of said odd-numbered groups, said first and second groups of transfer circuits coupling successive groups of cores adapted for successive energization with impulses of one polarity applied to said first transfer circuits and impulses of opposite polarity applied to said second transfer circuits to transfer data retained in one group of cores progressively to succeeding groups of cores.

3,129,338
UNI-JUNCTION COAXIAL TRANSISTOR AND CIRCUITRY THEREFOR
Robert G. Pohl, Chicago, Ill., assignor to The Rauland Corporation, a corporation of Illinois
Filed Jan. 30, 1957, Ser. No. 637,150
19 Claims. (Cl. 307—88.5)

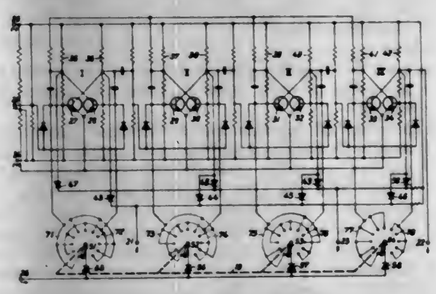
1. Semi-conductor apparatus comprising: a body of semi-conductive material of predetermined conductivity type; means, including a region forming a diode contact with said body on a first surface portion thereof, for developing, upon the application thereto of a predetermined potential, a depletion region effectively terminating

in a second body surface portion of predetermined area and opposite said first surface portion; a first electrode in ohmic contact with said body but only within said second body surface portion; a second electrode in electrical contact with said body but only within a third



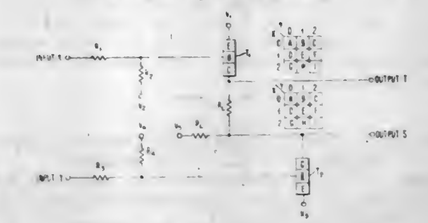
surface portion on said body spaced from said first and second surface portions; and means, including an impedance of predetermined magnitude coupled in series with said diode contact, for establishing a negative resistance between said first and second electrodes.

3,129,339
PULSE CONTROLLED ELECTRONIC VOLTAGE CONTROL SYSTEM
Wilfried Fritzsche and Hans Langheinrich, Berlin-Charlottenburg, Germany, assignors to Licentia Patent-Verwaltungs-G.m.b.H., Hamburg, Germany
Filed Feb. 16, 1959, Ser. No. 793,423
Claims priority, application Germany Apr. 23, 1958
2 Claims. (Cl. 307—88.5)



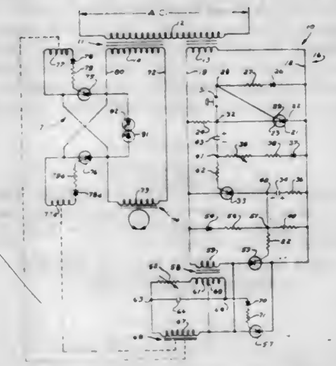
1. Pulse controlled electronic voltage control system comprising: a plurality of *n*, bistable multivibrators each having two transistors, each transistor having an input terminal and an output terminal for each multivibrator; circuit means for interconnecting said terminals so as to define a binary counting circuit having a main input and a main output terminal whereby each combination of conduction and blocking of said counting circuit represents a number; a plurality of *n* diodes, each diode being connected to one terminal of a multivibrator; circuit means combining said diodes to a logic "and" circuit producing an output voltage appearing in between two pulses applied to said main input terminal changing the state of the counter to successive number; *n*, ganged, rotating selector switches, each having one input terminal, two output terminals and means for selectively connecting the input terminal of each switch to one output terminal thereof; circuit means for connecting said two terminals of each multivibrator to said two output terminals of a switch whereby with each setting of said selector switches, the input terminals thereof are connected to a different combination of terminals of said multivibrators; and circuit means including diodes for connecting said main output terminal to all of said input terminals of said selector switches.

3,129,340
LOGICAL AND MEMORY CIRCUITS UTILIZING TRI-LEVEL SIGNALS
Herbert B. Baskin, Peekskill, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Aug. 22, 1960, Ser. No. 51,162
8 Claims. (Cl. 307—88.5)



1. A ternary logical circuit comprising a plurality of interconnected active elements, operable in either the high current or the low current state, and each having an input for receiving signals of three different amplitude values, each signal value corresponding to only a single one of three different digital values, means for regulating the states of each of said active elements responsive to the variation among said three values of input signals at the respective inputs, output means common to said active elements for providing three different amplitude values of output signals corresponding in value to the different values of input signals in accordance with the combination of states of said active elements, said output means including a power source and a load impedance means, said load impedance means having a midpoint, and means connecting one of said active elements to said midpoint.

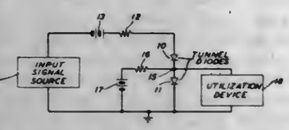
3,129,341
SYNCHRONOUS WELD TIMER USING SEMICONDUCTOR CONTROLLED RECTIFIERS
Stuart C. Rockafellow, Plymouth, Mich., assignor to Robotron Corporation, Detroit, Mich., a corporation of Michigan
Filed Sept. 6, 1960, Ser. No. 53,975
6 Claims. (Cl. 307—88.5)



1. A circuit for controlling supply of energy to a load comprising: a source of alternating potential; a pair of semiconductor, controlled rectifiers connected in parallel to said source; a biasing source associated with each of said rectifiers and connected to the gate thereof for applying a positive potential thereto when the anode thereof is positive; a capacitor connected at one side thereof

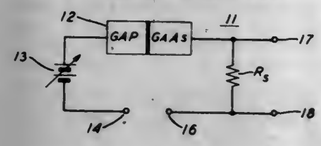
in circuit with one of said rectifiers and connected at the other side to the gate of the other rectifier whereby said capacitor is charged when said rectifiers are conductive; means for placing the gate of said one rectifier at the potential of the cathode thereof whereupon said one rectifier becomes nonconductive at the beginning of the next half-cycle of said source, the charge on said capacitor thereupon rendering the other rectifier nonconductive; and means for draining the charge on said capacitor at a controlled rate so that said other rectifier becomes conductive a predetermined time after it is rendered nonconductive.

3,129,342
SQUARING CIRCUIT UTILIZING TWO NEGATIVE RESISTANCE DIODES IN SERIES
Reginald A. Kaenel, Murray Hill, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 10, 1961, Ser. No. 130,608
1 Claim. (Cl. 307—88.5)



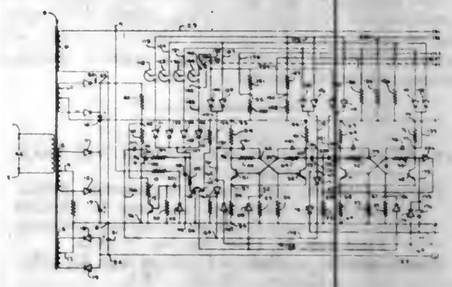
In combination in a substantially hysteresis-free squaring circuit, two voltage-controlled negative resistance diodes connected in series-aiding, first constant value direct-current means connected in series with said diodes for biasing each of them at an operating point on the relatively low voltage positive resistance region of its characteristic curve below the peak point thereof, second constant value direct-current means including a voltage source having a value intermediate the voltage values respectively associated with the peak and valley points of said characteristic curve, said second direct-current means being connected in parallel with one of said diodes for causing sufficient additional current to flow therethrough to bias the one diode at its peak point under steady state conditions in the absence of an input signal being applied to said circuit, and input signal means connected in series with said diodes for applying thereto a bipolar signal whose positive amplitude is sufficient to drive the one diode and then the other diode to operating points on the relatively high voltage positive resistance regions of their respective characteristic curves and whose negative amplitude is sufficient to sequentially drive said diodes from said relatively high voltage operating points to respective operating points on the relatively low voltage positive resistance regions of their characteristic curves.

3,129,343
LOGARITHMIC FUNCTION GENERATOR
Ralph A. Logan, Morristown, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 13, 1961, Ser. No. 159,064
3 Claims. (Cl. 307—88.5)



1. A logarithmic function generator comprising a heterojuncion device formed of materials of the same conductivity type, one of said materials having a larger energy gap than the other, means connected in circuit with said device for applying a positive voltage to the material having the larger energy gap, said voltage varying in accordance with one applied input signal, and means connected to series with said device for extracting an output signal which is a logarithmic function of the applied input signal.

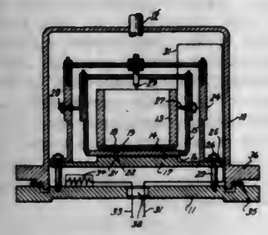
3,129,344
SWITCHING CIRCUIT EMPLOYING BISTABLE DEVICES TO SELECTIVELY CONTROL THE CHARGE TIME FOR SWITCHING
John W. Lemon, Jr., Berkley, Mich., assignor to Robotron Corporation, Detroit, Mich., a corporation of Michigan
Filed Apr. 11, 1962, Ser. No. 187,165
12 Claims. (Cl. 307—88.5)



1. In a switching circuit, the combination comprising:
a pair of source terminals connectible to a source of constant potential;
a load;
at least two bi-stable circuits connected in parallel relationship to each other between said source terminals;
a plurality of junction points arranged respectively serially with each of said bi-stable circuits and which junction points are positioned between said bi-stable circuits and one side of said source, whereby the potential of said junction points varies from a relatively low to a relatively high value depending upon whether the portion of the bi-stable circuit with which said junction point is associated is conductive or nonconductive, respectively;
connections from at least one of said junction points to said load for energizing and de-energizing same according to the potential on said junction point;
an energy storage means and a plurality of charging circuits associated therewith, each of said charging circuits being associated with one of said junction points, whereby said charging circuits are energized according to whether said junction points are at a high or a low potential;
a discharge circuit for said energy storage means;
means responsive to activation of said discharge circuit for producing a triggering pulse; and
means applying said pulse to at least one of said bistable circuits for effecting a reverse condition thereof.

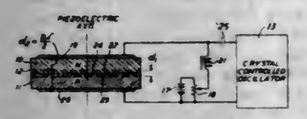
3,129,345
PROCESS AND APPARATUS FOR CONVERTING THERMAL ENERGY INTO ELECTRICAL ENERGY
George N. Hatsopoulos, Lexington, and John Psaroudakis, Arlington, Mass., assignors to Thermo Electron Engineering Corporation, a corporation of Delaware
Filed Nov. 5, 1959, Ser. No. 851,124
15 Claims. (Cl. 310—4)

1. A process of converting thermal energy into electrical energy comprising maintaining under vacuum two electron emissive surfaces parallel to each other, one of said surfaces being an emitter and the other a collector, with at least one electron emissive member interposed between the emitter and collector, said interposed member having electron emissive material on the opposite sides thereof and being spaced from the immediately adjacent



electron emissive surfaces on the opposite sides thereof a distance not more than 0.002 inch, heating the emitter to a temperature of at least 350° F. higher than that of the collector and maintaining said interposed member at an equilibrium temperature between the temperature of the emitter and that of the collector, and taking off current from the emitter and collector.

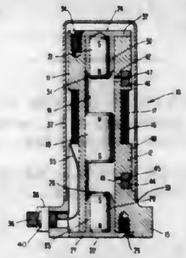
3,129,346
FREQUENCY AND TIME CONTROL
Donald L. White, Mendham, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 22, 1961, Ser. No. 161,565
9 Claims. (Cl. 310—8)



1. An electromechanical resonator for producing resonance in a predetermined frequency range comprising a thin flat body of dimensions for which said body is mechanically resonant at a sub-harmonic of said predetermined frequency, means for forming within said body a piezoelectric region that extends transversely with respect to the thickness of said body, the thickness of said region being a small fraction of the thickness of said body, and electrical circuit means for coupling with a piezoelectric field in said region.

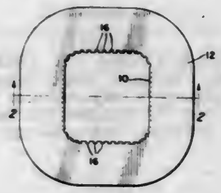
3,129,347
MAGNETO-ELECTRIC MOTION DETECTING TRANSDUCER
Tullio Tognola, Sidney, N.Y., assignor to The Bendix Corporation, Sidney, N.Y., a corporation of Delaware
Filed July 20, 1960, Ser. No. 44,138
14 Claims. (Cl. 310—15)

1. A vibration-detecting transducer, which comprises an elongated cylindrical non-magnetic tubular housing, means fixedly mounting an annular pick-up coil coaxial of the housing and intermediate the length of the housing, a circular permanent magnet fitting within the housing and slidable longitudinally therewithin substantially free of mechanical restriction of such sliding movement, said movable magnet being flux coupled to the coil and having opposite poles at opposite ends thereof, two circular permanent magnets beyond the opposite ends of the movable magnet and fixedly connected to the housing, the ends of the fixed magnets confronting the ends of the movable magnet being spaced from the ends of the mov-



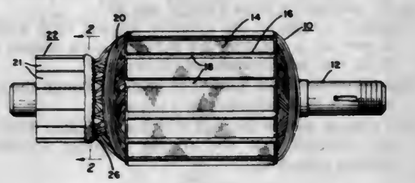
able magnet and being poles of the same polarity as the ends of the movable magnet which they confront.

3,129,348
COIL SPOOL CONSTRUCTION
Milton E. Simmons, Rochester, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 19, 1961, Ser. No. 111,264
7 Claims. (Cl. 310—194)



1. A bobbin for supporting an electric coil comprising, a core of insulating material having a pair of end flanges, said core having oppositely disposed axially slotted side walls so that said core is flexible in a plane parallel to said side walls and substantially inflexible in a plane normal thereto.

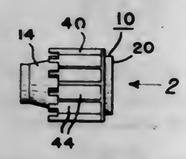
3,129,349
COMMUTATOR AND COMMUTATOR CONNECTIONS CONSTRUCTION
William W. Ervin, Alexandria, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 16, 1960, Ser. No. 56,423
10 Claims. (Cl. 310—234)



8. An armature for a dynamoelectric machine comprising, a shaft, a slotted armature core carried by said shaft, a commutator carried by said shaft including a plurality of metal commutator segments each formed with a commutator slot, an armature winding carried by said armature core having end conductors press-fitted within said commutator slots to tightly engage the internal walls of said commutator slots, and an annular mass of plastic material encompassing said armature conductors adjacent the end faces of said commutator segments and

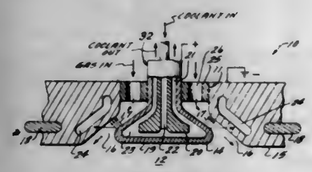
at least partially filling said commutator slots to bond said armature conductors to the internal walls of said commutator slots, said mass of plastic material forming the sole bonding means for securing the conductors to said commutator segments.

3,129,350
COMMUTATOR WITH OIL SLINGER
Joseph P. Clark, Rochester, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 25, 1961, Ser. No. 147,642
7 Claims. (Cl. 310—235)



1. A commutator comprising, a core of synthetic resinous material, segments on at least a portion of the exterior of said core, and an axially extending rim integral with said core having its edge spaced axially from said segments and constituting an integral oil slinger for said commutator.

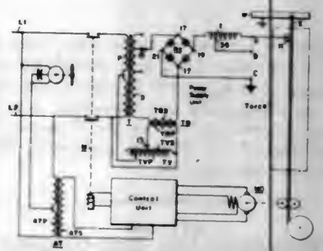
3,129,351
MULTIELECTRODE ARC ASSEMBLY
Frank Martinek, Cincinnati, Ohio, assignor to General Electric Company, a corporation of New York
Filed Dec. 21, 1961, Ser. No. 161,176
8 Claims. (Cl. 313—32)



1. A multielectrode arc assembly comprising;
a cylindrical segment electrode,
said cylinder forming a plenum chamber therein and, having a plurality of radially directed apertures through the cylinder and peripherally spaced around the cylinder,
a plurality of central electrodes spaced from and extending one through each aperture to the inner cylinder surface to form a single arc unit,
magnetic means in the cylinder around each aperture to provide a rotating arc between each central electrode and said cylindrical electrode,
and means to direct fluid to be heated through the space between the electrodes in each unit,
and passage means through which said heated fluid may exit through one end of the cylinder forming a plenum chamber.

3,129,352
ARC WELDING POWER SUPPLY
Floyd E. Adamson, Kenmore, and Martin Rebuffoni, Williamsville, N.Y., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 27, 1958, Ser. No. 757,513
5 Claims. (Cl. 314—75)

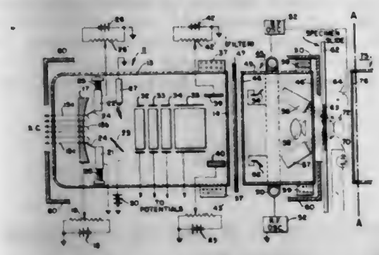
1. Arc welding apparatus for welding work with an electrode comprising conductors for supplying single-phase alternating current, a main transformer having primary and secondary winding means, means connecting said primary winding means to said conductors, a booster transformer having primary and secondary winding means, a variable transformer having primary and secondary winding means, means connecting said primary winding means of said variable transformer to said conductors, means connecting said secondary winding means of said variable transformer to said primary winding means of said booster transformer, rectifier means having input alternating current terminals and output direct current terminals, means connecting in series said secondary means of said main transformer, said secondary means of said booster transformer, and said input terminals, reactance means, and means connected to said reactance means and to said output terminals for connecting in series said output terminals, said reactance means, said electrode and said work.



4. Arc welding apparatus particularly for welding thin-gauge work including said work, a consumable electrode, means connected to said electrode for advancing said electrode into arc welding relationship with said work, power-supply means connected between said electrode and work for producing a welding arc between said electrode and work, means for supplying a protective gas to shield said arc, said electrode conducting, and its tip being melted by, the current of said arc, the said power-supply means comprising a direct-current power-supply unit of the low-impedance type, said unit having output terminals from which direct current for welding is derivable and means connected to said terminals for connecting said terminals respectively to said electrode and said work, said connecting means including inductance reactance means, and means connected to said reactance means for selectively setting the reactance of said reactance means at a higher magnitude at which the current-density of the arc current through said electrode is of such low magnitude that the deposit of melted metal from said electrode is of the droplet type, but spatter of metal is suppressed by the reactive action of said inductor, and at a lower magnitude at which the current density of the arc current through said electrode is of such high magnitude that the deposit of melted metal from said electrode is of the spray type.

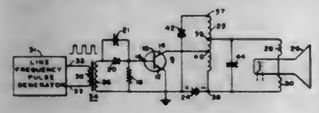
3,129,353
MULTIPLE RADIATION SOURCE MICROSCOPE
Elmer Pierre Nemes, % Mrs. Jennings, 6911 Oakwood Ave., Los Angeles, Calif.
Filed May 17, 1960, Ser. No. 29,641
18 Claims. (Cl. 315—10)

1. In a microscope for the examination of a specimen the combination including a plurality of sources for simultaneously producing electromagnetic energies of different character in the range including the frequency band from ultra-violet down to and including the radio frequency range and for producing energy in the form of alpha, beta and gamma rays, the various energies being directed onto said specimen whereby said specimen emits radiation which is characteristic of its nature, said radiation emitted by said specimen modulating the other



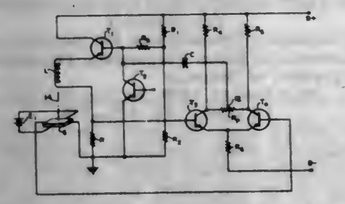
energies to form a composite radiation pattern, and means for converting said composite radiation pattern into a visible image.

3,129,354
TRANSISTOR CIRCUIT
Melbourne J. Hellstrom, Watchung, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 12, 1960, Ser. No. 49,200
6 Claims. (Cl. 315—27)



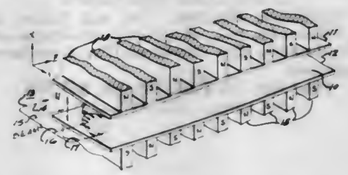
1. A controllable switching circuit comprising in combination a transistor including base emitter and collector electrodes, with the base-emitter junction thereof exhibiting storage of minority carrier charge when forwardly biased and requiring removal of said charge as a precedent to turning off the collector current, an asymmetrically conducting diode connected in series with and poled in the same direction as said junction to normally provide a low resistance path for base emitter current, control signal input means connected across the series combination of said junction and said diode for periodically providing reverse biasing voltage pulses having amplitudes exceeding the reverse breakdown voltage of said junction, and said diode having a minority carrier recovery time of the same order of magnitude as the minority carrier recovery time of said base-emitter junction.

3,129,355
LINEAR MAGNETIC SWEEP GENERATOR
Kenneth E. Wood, Severna Park, Md., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 7, 1961, Ser. No. 122,458
8 Claims. (Cl. 315—27)



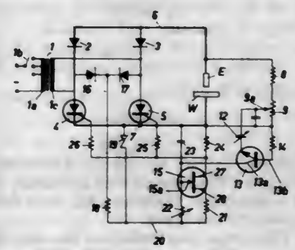
1. A sweep generator including, amplifying means having a feedback loop and substantially unity gain, an inductor operatively connected in said feedback loop, sweep means operatively connected across said inductor and said amplifying means and being operative to effect the starting and stopping of a sweep cycle to provide a voltage, Hall generator means disposed in the magnetic field of said inductor and being operative to provide an output voltage proportional to the magnetic field applied thereto, and differencing means to supply said amplifying means with the difference voltage between the voltage developed during the sweep cycle and the output voltage provided by said Hall generator means.

3,129,356
FAST ELECTROMAGNETIC WAVE AND UNDULATING ELECTRON BEAM INTERACTION STRUCTURE
Robert M. Phillips, Redwood City, Calif., assignor to General Electric Company, a corporation of New York
Filed May 28, 1959, Ser. No. 816,540
25 Claims. (Cl. 315—39.3)



1. A high frequency energy interchange device including in combination a waveguide structure adapted to propagate high frequency electromagnetic waves having a transverse electric ON type mode, means for causing propagation of electromagnetic waves along said waveguide structure in said transverse electric ON type mode, electron gun means positioned for directing a stream of electrons down the length of said waveguide, and periodic electron stream focusing means for causing the electrons to have a periodic undulatory motion along the electric flux lines of transverse electric field of the said electromagnetic waves, said electron gun means directing the electron stream down said guide at such a velocity that the electron stream progresses down said waveguide one period while said electromagnetic wave is propagated substantially one period plus one wave length.

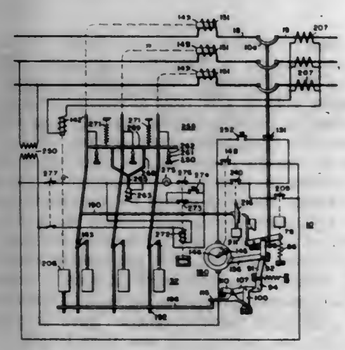
3,129,357
VOLTAGE GENERATOR FOR ELECTROLYTIC EROSION PROCESSES
Werner Ullmann and Fritz Grauert, Locarno, Switzerland, assignors to Agie A.G. fur Industrielle Elektronik, Losone-Locarno, Switzerland, a corporation of Switzerland
Filed Dec. 5, 1960, Ser. No. 73,566
Claims priority, application Switzerland Dec. 9, 1959
8 Claims. (Cl. 315—205)



7. Voltage generator for electrolytic erosion process comprising rectifier means including controlled semi-

conductor rectifier components, control circuit means in circuit with said semiconductor rectifier components for controlling rectification of at least one phase alternating current, said control circuit means including delay means for delaying the ignition point of said semiconductor rectifier components, said rectified direct current being adapted to be applied across a gap defined by a workpiece electrode and tool electrode, an integrating network electrically coupled with said gap to produce a signal indicative for the occurrence of an arc or spark discharge between these electrodes, said integrating network being electrically connected to said control circuit such that the ignition of the semiconductor components is delayed upon occurrence of arc or spark discharges, to thereby reduce the direct current voltage appearing at the gap.

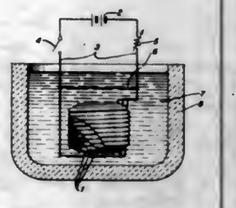
3,129,358
COLD LOAD PICK-UP APPARATUS FOR AN AUTOMATIC RECLOSER
Jack R. Harbaugh, Houston, Tex., and Robert J. Lawrence, Ellettsville, Ind., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 20, 1959, Ser. No. 847,595
8 Claims. (Cl. 317—22)



7. In an automatic recloser: separable contacts in the circuit; means operable to separate and reclose the contacts in response to current in the circuit in excess of a predetermined minimum value; means operable to lock open the contacts after a predetermined number of contact separation operations occurring within a predetermined time; manually operative means to reclose the recloser after lock-out; means operable to bias against the operation of the contact separation means; means operable in response to loss of source voltage in the circuit to set the biasing means for operation when the source voltage is restored; and manually operable switch means for operating the biasing means after a lock-out separation operation and before operation of the manually operative reclosing means.

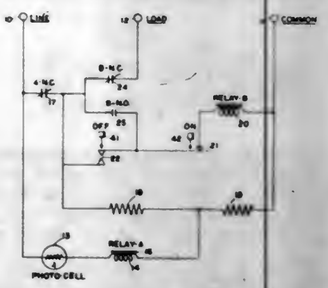
3,129,359
SUPERCONDUCTING MAGNET CONFIGURATION
John E. Kunzler, Washington, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 19, 1960, Ser. No. 56,748
6 Claims. (Cl. 317—123)

4. A superconducting magnet including a multiplicity of concentric coils of a superconducting wire, at least two of said coils being electrically connected in parallel, leads connecting said coils with a power source, and a shunt connecting said leads, together with means sufficient to



reduce the temperature of said coils to a temperature below their critical temperature.

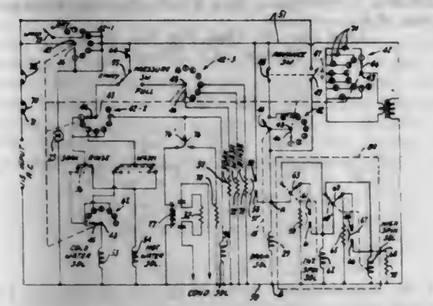
3,129,360
PHOTOSENSITIVE CONTROL CIRCUIT WITH AUTOMATIC REARMING
Philip Garnick, Needham, Winfield H. Benner, South Braintree, and Leslie G. Wynne, Westwood, Mass., assignors to Sigma Instruments, Inc., a corporation of Massachusetts
Filed Apr. 11, 1960, Ser. No. 21,291
8 Claims. (Cl. 317—124)



1. A control circuit comprising a pair of current supply terminals, a photo-conductor and an electromagnetic relay having a winding connected in series with the photo-conductor between said terminals, a load, said relay having a pair of normally closed contacts connected in series with said load between said terminals, a second relay having a winding and a pair of normally open contacts both connected in series with said normally closed contacts between said terminals, said second relay having a pair of normally closed contacts connected in series with the load and the normally closed contacts of the first relay, whereby the load is disconnected when either relay is energized sufficiently, and a normally open manually operable switch connected in parallel with the normally open contacts of the second relay.

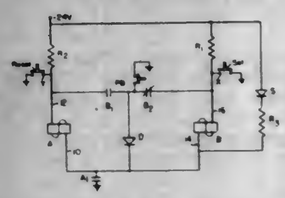
3,129,361
CONTROL MECHANISM FOR LAUNDERING EQUIPMENT
Arthur Berenbaum, Philadelphia, Pa., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Feb. 12, 1959, Ser. No. 792,731
3 Claims. (Cl. 317—139)

1. In laundry apparatus, control circuitry comprising: a multiposition switch mechanism; electrically-energizable, thermally-controlled relays connected in circuit with said switch mechanism for successive activation thereby and each operatively connected to said apparatus for controlling the duration of a laundering operation on its activation by said switch mechanism; a bank of electrically-energizable, thermally-responsive, delay relays connected for cascade operation with each of the mentioned switch-actuated relays on activation thereof by said switch mechanism, the arrangement being such that the thermal delay element of one relay is connected in circuit with the switch means of a preceding relay and operatively connected to said apparatus to control the duration of a laundering operation for the thermal delay period of said relay and thereafter sequentially to initiate



a successive laundering operation on operation of associated switch means; and solenoid means connected in operative relation with one of said relays for conditioning said switch mechanism for advance to a successive switching position on completion of a sequence of laundering operations thereby to provide automatic programming of a multiphase laundering cycle.

3,129,362
RELAY CONTROL CIRCUITS
Herbert Gilbert, Berkeley, Calif., assignor to SCM Corporation, a corporation of New York
Filed Dec. 5, 1960, Ser. No. 73,859
5 Claims. (Cl. 317—140)



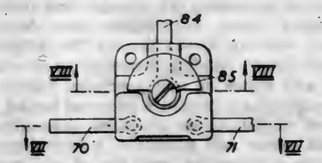
1. In a relay control circuit:
(*a*) two relays each having a winding with the first relay operating a pair of switch contact sets, one of said contact sets being normally open and one of said contact sets being normally closed and the second relay operating a normally open set of contacts;
(*b*) a conducting device having unidirectional current carrying characteristics, and being provided with two terminals;
(*c*) means connecting one of said terminals to both the normally closed contact set and the normally open contact set of said first relay and means connecting said one terminal through momentary switch means to an output terminal of a power supply;
(*d*) means connecting one contact of the normally open contact set of said first relay to one terminal of the winding of the second relay and means connecting one contact of the normally closed contact set of said first relay to one terminal of the winding of said first relay;
(*e*) means connecting the other terminal of the conducting device to the other terminal of the winding on each relay and means connecting said other terminal of the conducting device to said output terminal of the power supply through the normally open contact set of said second relay; and
(*f*) means connecting the first mentioned terminal of each relay winding through a respective resistance to a reference terminal of the power supply.

3,129,363
ARMATURE HINGE CONSTRUCTION FOR ELECTROMAGNETIC DEVICES
Edward E. Sebesta, Edina, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Aug. 31, 1961, Ser. No. 135,256
4 Claims. (Cl. 317—198)



1. In an electromagnetic actuating device having a magnetic circuit including a magnetic member, means for inducing magnetic flux in the magnetic circuit, and a movable armature member hinged on one end of the magnetic member and completing the magnetic circuit, the improved armature hinge construction comprising: a plurality of projections each having at least two substantially parallel sides and extending from said one end of said magnetic member; a like plurality of corresponding apertures in said armature, each receiving one of said projections; and a pair of rounded portions of small radius extending inwardly from opposite sides of each of said apertures and cooperating with said two substantially parallel sides of the corresponding projection on said magnetic member and providing substantially point contact engagement therewith to afford hinge action between said armature and said magnetic member.

3,129,364
ADJUSTABLE ROTARY CONDENSERS
Robert Frederick Oxley, Priory Park, Ulverston, England
Filed Feb. 20, 1961, Ser. No. 90,419
Claims priority, application Great Britain Oct. 28, 1960
1 Claim. (Cl. 317—253)



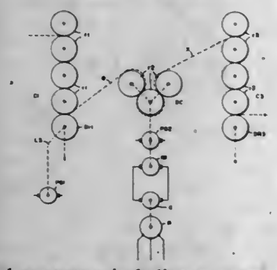
A stator assembly for an adjustable variable-capacity air-dielectric condenser comprising a stator consisting of two end plates and at least one intermediate plate, the said plates each having a generally rectangular boundary consisting of two long edges and two short edges, the said plates being parallel, arranged side-by-side in spaced relationship, connecting ribs extending between and joining relatively adjacent plates at the corners of the respective plates lying at opposite ends of one of said long edges, the stator being of integral homogenous metal construction comprising a solid metal bar of generally rectangular cross-section having a plurality of parallel slots

therein extending transversely to said ribs to define said spaced plates, a thin generally rectangular base member of insulating material adjacent one of the said end plates and having one edge equal in length to each of said long edges of said plates and lying in a common plane with the said long edges extending between said ribs, said base member having a pair of apertures therethrough each inwardly spaced from a corner at one end of said one edge of said base member, a rotor including relatively spaced parallel plates, a shaft rotatably journalled in said base member and supporting said rotor plates for rotary movement between and parallel to the respective stator plates, said rotor plates having marginal arcuate edges concentric to said shaft, and a pair of studs fixedly secured to said one end plate on the side of said one end plate remote from the other of said end plates and extending perpendicularly to the plane in which said one end plate lies, said studs being inwardly spaced from the periphery of said one end plate, and said studs being secured in said apertures.

3,129,365
DRIVE

Donald V. Bennett, Tonawanda, N.Y., and Sylvester J. Campbell, Penn Hills, and Albert G. Oglesby, Gibsonia, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Aug. 30, 1960, Ser. No. 52,924
2 Claims. (Cl. 318—6)

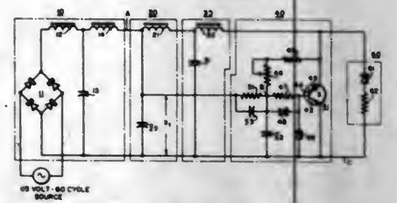


1. Control apparatus including a motor, a generator, means connected to said generator for connecting said motor and generator in power-interchange relationship, means connected to said motor for deriving from said motor a potential dependent on the speed of said motor, means connected to said generator for deriving a potential dependent on the loading of said generator by said motor, magnetic amplifier means including output winding means, current-limit winding means, and reference winding means, the ampere turns through said reference winding means controlling the ampere turns through said output winding means, and ampere turns through said current-limit winding means varying the ampere turns through said output winding means so as to reduce the loading of said motor on said generator, current supply means for supplying a reference potential having alternatively a first magnitude for producing generative operation of said motor and generator, a second magnitude for producing regenerative operation of said motor and generator and a third magnitude intermediate said first and second magnitudes for accelerating said motor, means connecting said reference potential and said speed responsive potential in balancing relationship to said reference winding means, additional current supply means for supplying a blocking potential having alternatively a first magnitude corresponding to generative operation of said motor and generator, a second magnitude corresponding to regenerative operation of said motor and generator, and a third potential having an absolute magnitude substantially higher than said last-named first and second magnitudes corresponding to operation of said motor and generator in accelerating said motor, and means connecting said loading dependent potential in overriding relationship with said blocking potential to said current-limit winding means.

3,129,366
POWER SUPPLY FOR AN ELECTRO-MECHANICAL VIBRATING TRANSDUCER

Warren C. Fry, Cheswick, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Dec. 19, 1960, Ser. No. 76,963
16 Claims. (Cl. 318—114)

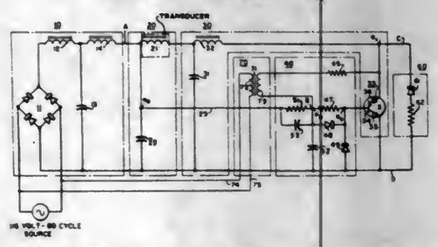


1. In combination, a vibrating transducer, an L-C network, a source of direct current for charging said network, a phase shifting network including the reactance of said transducer operatively connected to said L-C network for producing a trigger signal having a frequency dependent on the equivalent electrical characteristics of said transducer, and switch means responsive to said trigger signal to periodically provide a discharge path for said L-C network.

3,129,367
TRANSDUCER ULTRASONIC POWER SUPPLY

Chuck F. Der, Baltimore, Md., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed May 31, 1961, Ser. No. 113,903
6 Claims. (Cl. 318—130)



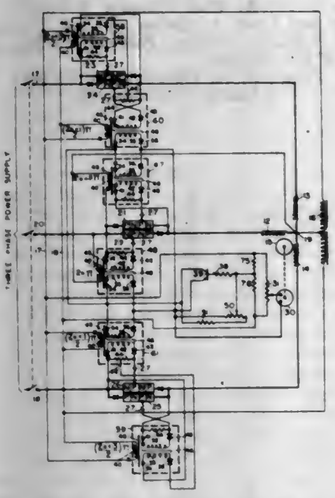
1. In combination a vibrating transducer including a reactance element, an LC network, a source of direct current for charging said network, a phase shifting network including said transducer reactance element operatively connected to said LC network for producing a trigger signal having a frequency dependent upon the equivalent electrical characteristic of said transducer, switch means operably connected to both said networks and responsive to said trigger signal to periodically provide a discharge path for said LC network, and means for automatically varying the frequency of said trigger signal.

3,129,368
SMOOTH CONTROL OF POLYPHASE INDUCTION MOTORS

James H. Burnett, Pasadena, Calif., assignor to General Signal Corporation, a corporation of New York

Filed Apr. 4, 1960, Ser. No. 19,544
5 Claims. (Cl. 318—227)

1. A control system for operating from a three terminal source of a three phase power supply, a two phase alternating current motor having a main phase winding and two opposed control phase windings with means for deriving from the supply a main phase voltage and a control phase voltage in relative phase quadrature, said motor windings each being fed from the power supply through a respective pair of gatable rectifiers, each said pair of rectifiers being connected in anti-parallel relation to provide a full wave A.C. voltage, said system comprising a pair of resettable magnetic amplifiers for each pair of gatable rectifiers, means connecting the input of each pair of magnetic amplifiers to the phase of the voltage source for its respective motor winding to govern each amplifier of its respective pair to conduct and reset in mutual phase opposition with respect to each other, means connecting the output of each pair of magnetic amplifiers to its respective pair of gatable rectifiers to govern the conduction of each one of the pair in adjacent half cycles during the conducting half cycles of its



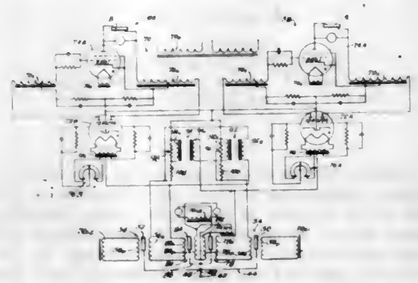
respective amplifier, said magnetic amplifiers each having a reset voltage of sufficient magnitude to produce no output during conduction half cycles, means to apply an A.C. voltage in phase with one of the control windings and in phase quadrature with the main phase winding to subtract from the normal magnitude of the reset voltage of the magnetic amplifiers for the main phase winding during a portion of each reset cycle and to subtract from the reset voltage of the magnetic amplifiers for one control winding during each complete reset cycle and to add to the reset voltage of the magnetic amplifiers for the other control winding during each complete reset cycle to produce an output to gate the rectifiers during each conduction cycle for the main phase winding and said one control winding only, and means to vary the magnitude of the control voltage to govern the time for gating the respective rectifiers during each conduction cycle to control the average current to the motor windings.

3,129,369
AUTOMATIC MOTOR REVERSING AT LIMIT OF TRAVEL BY VARIABLE TRANSFORMER MEANS

Arthur K. Littwin, Lincolnwood, Ill., assignor to Arthur K. Littwin, Robert L. Littwin, and Horace A. Young, as trustees, Chicago, Ill.

Filed July 5, 1960, Ser. No. 40,877
9 Claims. (Cl. 318—282)

2. Control apparatus for a machine having a member alternately movable in opposite directions through a predetermined maximum range, comprising electrically controlled reversible means for driving the movable member in each of opposite directions, main transformer means corresponding to each direction of movement of the movable member, an armature in each main transformer means and continuously actuated by the movable member in the corresponding direction of movement thereof and operative for controlling voltage in the corresponding transformer continuously throughout the range of movement of the movable member, in accordance with the position of the movable member in its range of move-

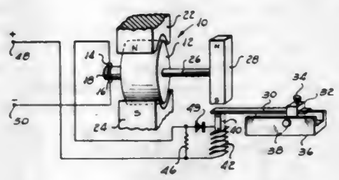


ment, means operative upon development of voltage of predetermined value in each main transformer means for reversing the driving means, and manually settable means including over run transformer means corresponding to each direction of movement of the movable member, each being controlled by the voltage developed in a corresponding one of said main transformer means and imposing it in additive effect on the other, and being thereby operative in any given setting thereof for varying the voltage value in the corresponding said main transformer means for all positions of the movable member throughout its movement in the corresponding direction.

3,129,370
INDUCTION SPEED GOVERNOR

Jules Helfner, Massapequa, and Paul Feuster, Brooklyn, N.Y., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Dec. 20, 1960, Ser. No. 77,089
6 Claims. (Cl. 318—343)

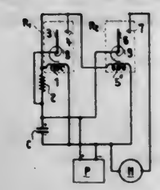


1. An induction speed governor for a motor having a shaft and having an input circuit for applying a voltage to said motor including in combination an element having a natural frequency of vibration, means responsive to rotation of said shaft for vibrating said element at a frequency in the region of said natural frequency, means responsive to vibration of said member for generating a voltage and means for applying said generated voltage to said motor in a sense to oppose said input voltage.

3,129,371
DEVICE FOR CONVERTING LIGHT ENERGY INTO MECHANICAL ENERGY

Jules-Florent-Joseph Bourguignon, Seilles, Belgium, assignor to Baumgartner Frères S.A., Grenchen, Switzerland

Filed Jan. 30, 1961, Ser. No. 85,818
Claims priority, application Switzerland June 9, 1960
8 Claims. (Cl. 318—480)

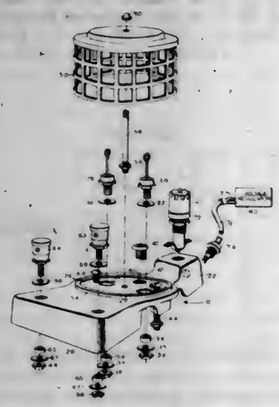


2. A device for converting light energy into mechanical energy, comprising at least one photo-electric cell adapted to be exposed to said light energy, charging-condenser means connected to said photo-electric cell, said charging-condenser means being charged by said photo-electric cell when the latter is exposed to said light energy, an electro-mechanical transducer, and relay means connected to said charging-condenser means, said relay means being operable when the charge of said charging-condenser means has reached a predetermined level for interconnecting said charging-condenser means and said electro-mechanical transducer for discharging said charge through said electro-mechanical transducer, and means for maintaining said relay means in a condition for interconnecting said charging-condenser means and said electro-mechanical transducer during discharge of the charging-condenser means.

3,129,372
ELECTRICAL ENERGY ALLOCATOR

William W. Warren, Bell Spring P.O., Blue Rock Ranch, Calif.

Filed Aug. 7, 1961, Ser. No. 129,734
2 Claims. (Cl. 320—15)

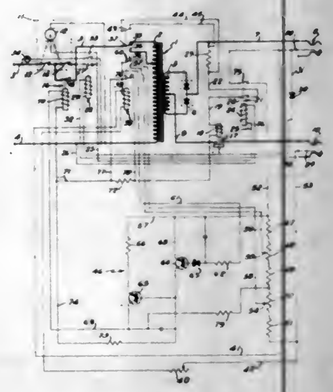


1. Means for distributing charging currents from an electrical generator to a plurality of storage batteries comprising, a frame having a massive central portion thereon to serve as a heat sink, a plurality of electrically isolated rectifiers mounted on the central portion of said frame in heat-conducting relationship thereto, a vented cage-like enclosure secured to the central portion of said frame to enclose and protect said rectifiers and to dissipate heat therefrom, an input terminal on said frame for connection to a source of-electrical charging currents, a plurality of output terminals on said frame for connection to respectively separate storage batteries, and a plurality of electrical distribution circuits, each connected between said input terminal and a respective one of said rectifiers poled in a direction to permit only unidirectional charging currents to flow in each of said distribution circuits, whereby reverse flow of discharge currents from any one of the said storage batteries into any other of said storage batteries is prevented.

3,129,373
BATTERY CHARGERS

James B. Godshalk, West Pikeland Township, Chester County, and Lewis A. Medlar, Oreland, Pa., assignors to Fox Products Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed Oct. 18, 1960, Ser. No. 63,343
5 Claims. (Cl. 320—25)

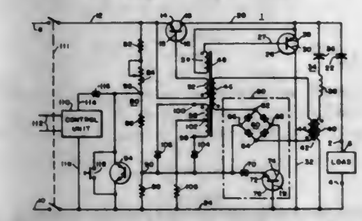


3. In a battery charger, the combination of charging circuit means including a transformer having a primary and a secondary winding, a rectifier connected to said secondary winding, a pair of D.C. charging leads connected to receive current from said rectifier, and a pair of A.C. leads connectable to said primary winding; two pivoted jaw terminal clamps each including a pair of jaw portions which are electrically insulated from each other and arranged to cooperate to clamp a terminal of the battery to be charged, each of said D.C. leads being electrically connected to one of said jaw portions of a different one of said clamps; a relay having contacts connected to establish a primary circuit comprising said primary winding and said A.C. leads with said primary circuit selectively including different portions of said primary winding to provide different outputs for charging batteries of different known voltage ratings, said relay also including an actuating winding; and control circuit means connected between the others of said jaw portions to receive current from the battery when said clamps are connected to the terminals of the battery to be charged, said control circuit means being connected to the actuating winding of said relay to energize the same selectively in accordance with the voltage of the battery to which said clamps are connected.

3,129,374
SEMICONDUCTOR PROTECTION CIRCUIT

Alfred E. Relation, Monroeville, Rudy P. Putkovich, Franklin Township, Westmoreland County, and Thomas M. Corry, Monroeville, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Dec. 7, 1960, Ser. No. 74,388
18 Claims. (Cl. 321—14)

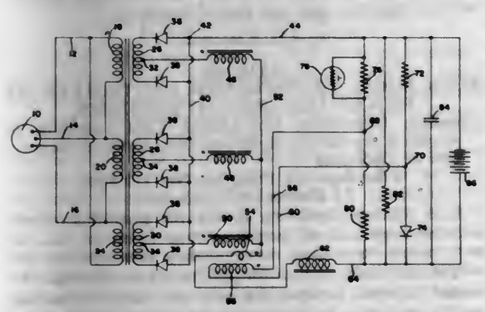


1. In a switching network for controlling flow of electrical energy, a first current flow controlling device having a main circuit and a control circuit operable upon being energized to render said main circuit conductive, an energizing network having a first output connected to said control circuit, said network including a second current flow controlling device, said second current device having a main current path operably connected to control the energized condition of said first output, said second current device having a pair of energizable electrodes operable to control the energized condition of said main current path, said network being arranged to energize said first output and thereby render said control circuit effective to initiate current flow through said main circuit in response to a first operating condition of said second current device, first circuit means connected to said energizable electrodes and normally effective to maintain said electrodes in a first energized condition whereby said second current device is placed in its said first operating condition, means for rendering said first circuit means ineffective to maintain said electrodes in their first energized condition, and second circuit means connected to said energizable electrodes and effective to maintain said electrodes in their said first energized condition to maintain current flow in said main path irrespective of the rendering of said first circuit means ineffective.

3,129,375
POWER SUPPLY UTILIZING A MAGNETIC AMPLIFIER FOR D.C. CONTROL

Gerald O. Huntzinger, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed May 24, 1960, Ser. No. 31,366
6 Claims. (Cl. 321—16)

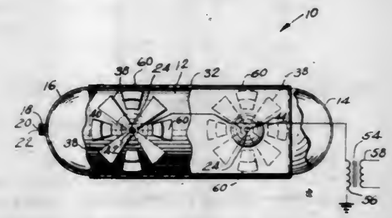


1. A power supply system comprising a source of A.C. voltage, a direct current load circuit, rectifier and reactor means connected between said voltage source and said load circuit for converting said A.C. voltage to regulated direct current applied to said load circuit, said reactor means including first and second control winding means, a first circuit connected across said load circuit including a pair of resistors having a common junction, a second circuit connected across said load circuit including a resistor and a Zener diode having a common junction, means connecting said first control winding means across said junctions, and means connecting said second control winding means directly in series with said load circuit, said first and second control winding means controlling the saturation of said reactor means and opposing each other.

3,129,376
ELECTRIC GENERATOR

John M. McCarthy, P.O. Box 2, Janesville, Wis.

Filed Feb. 26, 1962, Ser. No. 175,452
1 Claim. (Cl. 321—50)



An improved generator comprising in combination a substantially elongated and tubular cylinder, a plug fixedly received within a projection of one end of said cylinder, a plurality of longitudinally and circumferentially spaced apart projections carried by said cylinder near one end and a plurality of longitudinally and circumferentially spaced apart projections on the other periphery of said cylinder near its other end, a pair of shafts of fiberglass material extending outwardly from the center between said longitudinally and circumferentially spaced apart projections and a substantially elongated fiberglass sleeve secured to the outer periphery of said cylinder, said sleeve projecting outwardly from said cylinder forming a projection having a front wall of substantially rectangular configuration and a top and bottom wall of rectangular configuration, said front wall having a pair of parallel, spaced apart substantially circular openings receiving a shaft of fiberglass material, said shaft being statically received within a circular opening through an internal wall within said projection, said wall of rectangular configuration being parallel with said front wall of said projection and being secured between said top and said bottom walls of said projection, a hub of circular configuration having a plurality of triangular vanes being fixedly secured to said shaft forwardly thereof, said inner wall of said projection and said shaft receiving a substantially circular collector ring having a forwardly positioned and substantially circular flange, said collector rings being slidable and rotatable within a continuous conductor, said conductor extending outwardly from said projection of said sleeve and terminating in a primary winding of a transformer, said transformer being grounded at the end of said primary winding, a secondary winding of said transformer forming the output for the A.C. to a load, said driving means for said shafts comprising a pair of V-pulleys, said pulleys being driven by an external power source and vanes on hubs being rotated by said pulley, said cylinder having projecting

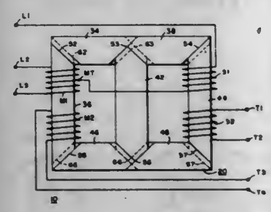
electrodes which are rearwardly from said inner wall of said projection, said projection housing said electrodes, said projections forming said electrodes being covered substantially at their pointed tips by rubber and said vanes passing said electrodes picking up a charge on said cylinder consummating a cycle each time a vane passes said electrodes producing alternating current to said transformer.

3,129,377

TRANSFORMER FOR CONNECTING A THREE-PHASE SYSTEM TO A TWO-PHASE SYSTEM

Gordon R. Monroe and George F. Mitchell, Jr., Hickory Township, Mercer County, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Nov. 14, 1960, Ser. No. 69,089
3 Claims. (Cl. 321—57)



1. A transformer having two magnetic circuits ninety degrees out of phase providing uniform flux density, said transformer comprising a magnetic core including a plurality of stacked layers of laminations formed from magnetic strip material having at least one preferred direction of magnetic orientation substantially parallel to the longitudinal dimension of said strip material, each of said layers including first and second outer leg laminations which form first and second outer leg portions when stacked, an intermediate leg lamination and yoke laminations connecting the ends of said leg laminations assembled around two suustantially rectangular windows, the joints between the leg and yoke laminations of each layer being diagonal but joints with respect to the longitudinal dimension of the strip material from which the laminations are formed, the corresponding joints in alternate layers being offset from one another to provide an area of overlap between the respective joints, the width of the intermediate leg lamination in each layer being substantially 1.4 times the width of each outer leg lamination in said layer and first and second windings disposed on each of the first and second outer leg portions only, respectively, one end of the first winding on one outer leg portion being connected substantially to the mid-point of the first winding on the other outer leg portion.

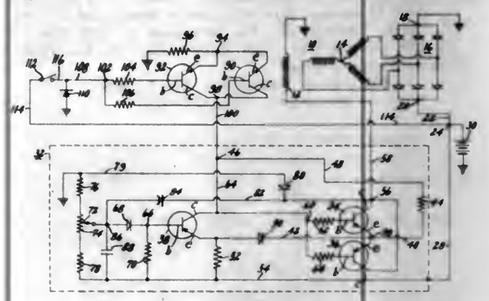
3,129,378

VEHICLE ELECTRICAL SYSTEM INCLUDING SEMICONDUCTOR REGULATOR AND SWITCH MEANS

Louis J. Raver and Robert L. Larson, Anderson, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Nov. 9, 1959, Ser. No. 851,755
4 Claims. (Cl. 322—28)

1. In combination, a direct current power source having a control winding, voltage regulating means including a transistor having an emitter-collector circuit connected with said power source and with said control winding for controlling the current flow through said control winding as a function of output voltage of said power source, a base circuit for connecting the base electrode of said transistor to one side of said power source, said base circuit including the emitter-collector circuit of a second transistor, and manually operable means for controlling the conduction of said second transistor.

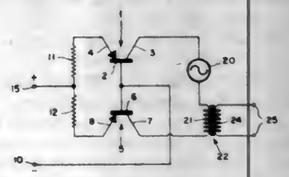


3,129,379

D.C. TO A.C. CONVERTER

William F. Cormier, Middletown, R.I., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Feb. 28, 1962, Ser. No. 176,323
4 Claims. (Cl. 323—22)



1. A signal modulator consisting of a first transistor, a second transistor, means connecting together the base electrodes of said first and said second transistors, a source of alternating-current signals, a load means, circuit means connecting said source and said load in series between the collector electrodes of said first and said second transistors, a pair of input terminals arranged to be connected to a source of a direct-current control signal, and input circuit means connecting the emitter electrodes of said first and said second transistors to each other and to one of said pair of input terminals and connecting said base electrodes to the other of said input terminals whereby to apply an input signal between the base electrode and emitter electrode of each of said transistors said input means including input signal dividing resistors connected to divide an input signal applied to said input terminals equally between said first and said second transistor.

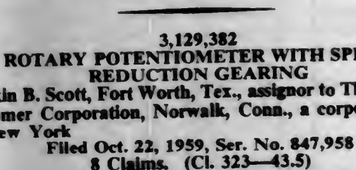
3,129,380

BUCK BOOST TRANSFORMER CONTROLLED BY SILICON CONTROLLED RECTIFIER

Abraham Lichowsky, San Carlos, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California

Filed June 23, 1961, Ser. No. 119,190
14 Claims. (Cl. 323—45)

1. A voltage regulating circuit for providing a preselected magnitude of output voltage from an A.C. input voltage comprising corresponding sets of input and output terminals, a transformer having a winding connected in series between the input and output terminals, means connected in shunt with the output terminals for developing a voltage across the winding of the transformer to compensate for variable deviations of the output voltage from the preselected value including a silicon controlled rectifier serially connected to a second winding of the transformer, a free-running oscillator for triggering the silicon controlled rectifier in synchronism therewith, and means for controlling the repetition rate of the free-running oscillator in response to fluctuations of the output voltage.

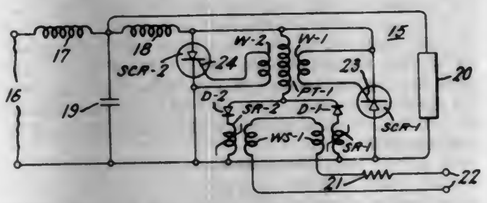


3,129,381

MAGNETIC AMPLIFIER WITH SHUNT-LOAD AND AMPLITUDE CONTROLLED OUTPUT VOLTAGE

Erich W. Manteuffel, Ithaca, N.Y., assignor to General Electric Company, a corporation of New York

Filed Feb. 4, 1960, Ser. No. 6,733
12 Claims. (Cl. 323—89)



10. In a shunt loaded magnetic amplifier circuit having access to a source of alternating voltage, a series circuit comprising first inductive means and a capacitor connected to draw current from said source, load means connected across the plates of said capacitor, a pair of oppositely poled controlled rectifiers in parallel arrangement connected in series with second inductive means, said series parallel circuit connected in shunt with said capacitor and said load means, and means including at least two saturable reactors to gate said rectifiers from the nonconductive to the conductive state alternately at half cycles of the supply frequency.

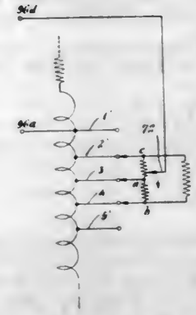
3,129,382

ROTARY POTENTIOMETER WITH SPEED REDUCTION GEARING

Larkin B. Scott, Fort Worth, Tex., assignor to The Perkin-Elmer Corporation, Norwalk, Conn., a corporation of New York

Filed Oct. 22, 1959, Ser. No. 847,958
8 Claims. (Cl. 323—43.5)

1. In electrical apparatus having a series of terminals, one of which is a reference terminal, means for maintaining a reference voltage on the reference terminal and voltages of predetermined values relative to the reference voltage on the respective other terminals along the series, means for deriving voltages intermediate those on the terminals including a continuous electrical path in the form of a closed loop of distributed impedance subdivided into sections by taps at at least three substantially equally spaced points thereon, switching means for connecting pairs of adjacent taps in rotation across successive pairs of adjacent terminals along the series, and a contact movable along that section of the impedance loop between the taps on said section connected to a first and second terminal, the improvement comprising switching means having at least three first conductive elements; each connected to one of said taps, a plurality of second conductive elements, each connected to one of said terminals, said first and second terminals comprising at least a portion of the surface of a substantially cylindrical drum; and electrical bridging means movable to interconnect each of said first conductive elements with one of said second conductive elements.

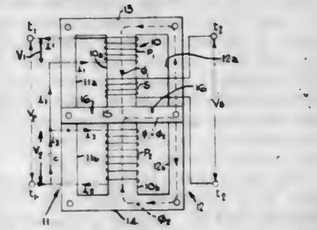


3,129,383

VOLTAGE STABILIZING ELECTRICAL TRANSFORMERS

David Karo, 53 Sandy Road, Norton, near Stourbridge, England

Filed Nov. 3, 1960, Ser. No. 67,036
Claims priority, application Great Britain Nov. 14, 1959
13 Claims. (Cl. 323—48)

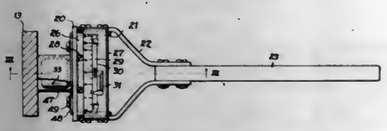


1. A voltage stabilizing transformer comprising a core structure of magnetically conductive material including a main branch joined at its ends by a connecting branch, and including a shunt branch extending from said main branch at a position in between its ends to the connecting branch to form three magnetic circuits of which two have the shunt branch in common, the first of these two latter magnetic circuits carrying a first portion of a primary winding and a secondary winding, both on said main branch at one side of said shunt branch with at least part of said secondary winding nearer to said shunt branch than is said first portion of said primary winding, and the second of these magnetic circuits carrying a second portion of said primary winding on said main branch at the opposite side of said shunt branch, the first and second portions of said primary winding being connected electrically in a primary circuit to assist each other magnetomotively in setting up a magnetic flux through said shunt branch, and thereby establishing a magnetic saturation in said first magnetic circuit to stabilize to some extent the magnitude of the flux interlinking said secondary winding and hence the voltage induced therein, while also acting in magnetomotive opposition in the third magnetic circuit comprising said main branch and connecting branch, one of said portions of said primary winding having a capacitor connected in parallel therewith of a value such that at least a part of the primary circuit forms a circuit operating beyond the point of resonance to assist in attaining magnetic saturation in said first magnetic circuit.

3,129,384
PERMANENT MAGNET ROTOR TYPE AMMETER RESPONSIVE TO THE FLUX OF A CONDUCTOR CARRYING CURRENT TO BE MEASURED

Max J. Kramer, Parma, Ohio, assignor to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania

Filed June 18, 1962, Ser. No. 203,201
5 Claims. (Cl. 324—146)



1. An ammeter for measuring anode bar current of electrolytic reduction cells and the like comprising,

(*a*) a mounting plate provided with a probe in the form of a tube projecting from its rear face and with a cover box on its front face and with an elongated handle extending forwardly of its front face for placement of the outer end of the probe against a vertical anode bar with the plate in upright position, both plate and tube being of non-magnetic material,

(*b*) a shafted cylindrical permanent magnet rotor polarized across a diameter and coaxially rotatably mounted within said tube in proximity to the outer end thereof and having its shaft extending into said cover box,

(*c*) a radial pointer on said shaft adapted to cooperate with a graduated scale on said plate, at least a portion of said box being transparent for scale visibility,

(*d*) a pair of essentially semi-circular, magnetic stator poles of uniform thickness secured to the inner wall of said tube in encircling relation to said rotor and separated by narrow air gaps at their opposed peripheral edges, whereby the rotor is magnetically held and restrained to remain in zero pointer scale indicating position by its own flux with its flux line in alignment with the center of said air gaps,

(*e*) said stator poles having a fixed position with respect to a transverse plane across said plate which disposes said air gaps in perpendicular relation to and the center line of said poles in parallelism with said plane for providing a substantially corresponding relationship of said rotor and stator poles with respect to the annular magnetic field around the anode bar when the ammeter is in current measuring position against the bar,

(*f*) and a return spring secured between said shaft and said plate for lightly biasing said rotor to return to its zero position and producing scale linearity by compensating for loss of air-gap restraint with increasing current,

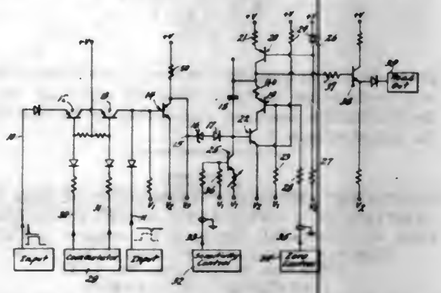
(*g*) said stator poles having a thickness of about 1/16 inch for minimum mass and to remain magnetically unsaturated so as to continuously effectively shield said rotor from stray magnetic field lines inherently present at said cell, and the width of said air gaps being less than 3/32 inch to minimize stray field lines passing therethrough to the rotor.

3,129,385
COMPENSATED PULSE WIDTH DEMODULATOR

Neil E. Maestre, Levittown, N.J., assignor to Vector Manufacturing Company, Incorporated, a corporation of Pennsylvania

Filed Nov. 3, 1961, Ser. No. 150,066
9 Claims. (Cl. 325—38)

1. A pulse width demodulator circuit comprising: a transistor switch means operable at the beginning and ending of each width modulated impulse, a storage capacitor, a second switching transistor, and means including a regulating transistor in parallel circuit connection with the storage capacitor, a constant current producing means for energizing said parallel circuit, means interconnecting said first and second switching transistors to normally maintain said second transistor conducting and trigger said second transistor into nonconducting condition at the beginning of each width modulated impulse and restore said transistor into conducting condition at the

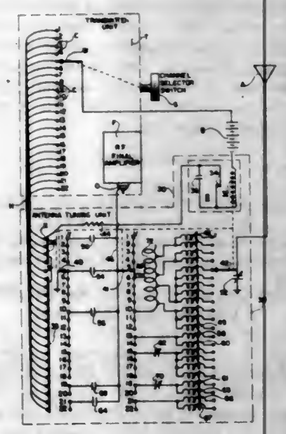


end of each impulse, means including a second regulating transistor in the charging circuit to said capacitor, means responsive to a first error correcting signal to vary the conductivity of said first mentioned regulating transistor thereby to establish an initial voltage across said capacitor, and means responsive to a second error correcting signal to vary the conductivity of the second regulating transistor thereby to control the rate of charging of said capacitor.

3,129,386
AUTOMATIC ANTENNA IMPEDANCE MATCHING AND LOADING UNIT

Carl C. Daly, Fort Lauderdale, Fla., assignor to Sunair Electronics, Inc., a corporation of Florida

Filed May 21, 1962, Ser. No. 196,234
5 Claims. (Cl. 325—174)



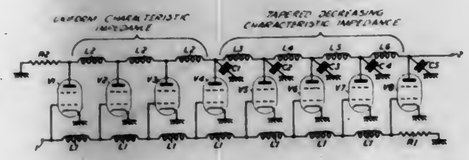
5. As an article of manufacture, a matching unit for matching a fixed antenna to a multiple channel transmitter covering a wide frequency range, comprising in said unit input and output terminals; a plurality of adjustable impedance elements; switch means having positions corresponding with each of said channels for selectively interconnecting some of said elements to form a pi-network between said terminals pre-adjusted to match said antenna to the transmitter at the frequency of the

channel selected; and electrically operated step-by-step actuator means operatively connected to said switch means to step said switch means from channel to channel when energized.

3,129,387
WIDE-BAND DISTRIBUTED AMPLIFIERS

Boleslaw Marian Sosin, Essex, England, assignor to The Marconi Company Limited

Filed June 19, 1959, Ser. No. 821,560
Claims priority, application Great Britain July 23, 1958
6 Claims. (Cl. 330—54)

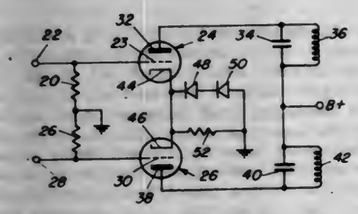


1. A distributed amplifier comprising an input filter line including a plurality of filter sections each having a pre-determined pass band; an output filter line having a pre-determined pass band which includes a band of frequencies which is also included in the pass band of the input filter line; a load connected to said output filter line; said output filter line including a plurality of filter sections nearer the load of characteristic impedance decreasing stepwise towards the load and a plurality of filter sections farther from the load of uniform characteristic impedance; a plurality of valves having their control electrodes connected to different filter sections along said input filter line and their anodes connected to different filter sections of uniform impedance and a second plurality of valves having their control electrodes connected to different filter sections along said input filter line and their anodes connected to different filter sections of decreasing impedance along said output filter line, wherein the delays between said anodes are substantially the same as the delays between the corresponding control electrodes; means for applying signals to said input filter line; and means for taking output from said output filter line.

3,129,388
CATHODE BIAS CLAMP

Richard E. Lang, Concord, and Charles H. Smith, Attleboro, Mass., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Dec. 29, 1960, Ser. No. 79,476
1 Claim. (Cl. 330—123)

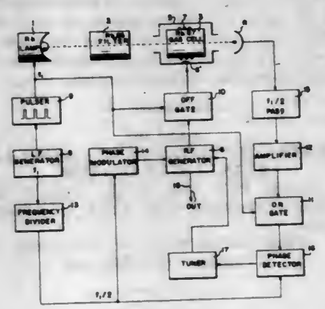


An electron amplification system of push-pull configuration comprising a first and a second discharge device each having an anode, a cathode, and a control electrode, input terminals connected to each of said control electrodes, a center tapped resistive means connecting the control electrodes of the first and second discharge devices to ground, a first and a second shunt combination of a capacitive means and an inductive means connecting the anode of said first and second discharge devices respectively to a potential source, a common connection of the cathode elements of said discharge devices, a circuit consisting of a series combination of plural diode means and a resistive means connected in parallel with said plural diode means, said circuit connecting said common connection to ground whereby self bias is provided which is substantially unaffected by low frequency signals and changes in plate current.

3,129,389
QUANTUM RESONANCE STABILIZED FREQUENCY SOURCE

Martin E. Packard and Arnold L. Bloom, Menlo Park, and William E. Bell, Palo Alto, Calif., assignors to Varian Associates, Palo Alto, Calif., a corporation of California

Filed Aug. 7, 1961, Ser. No. 129,873
14 Claims. (Cl. 331—3)



5. A quantum resonance stabilized frequency source comprising: a sample of quantum mechanical particles; a radio frequency generator for effecting radio frequency sublevel transitions in said sample; means for irradiating said sample with optical radiation; means periodically pulsing said optical irradiation means at a low frequency for reducing undesired interaction between said optical radiation and said radio frequency transition; means for optically detecting the amount of interaction between said optical irradiation and said sample; and means for controlling the frequency of said radio frequency generator in response to the detected interaction; and means for decoupling said radio frequency generator when said optical irradiation means is pulsed on.

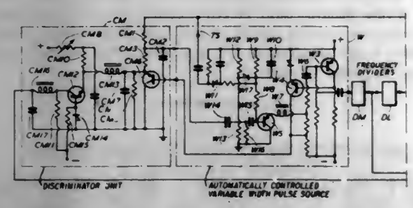
3,129,390
AUTOMATIC FREQUENCY CONTROL SYSTEMS FOR OSCILLATION GENERATORS

Roy Collins March, Chelmsford, England, and John Henry Howe, Auckland, New Zealand, assignors to The Marconi Company Limited, a British company

Filed Aug. 29, 1960, Ser. No. 52,593
Claims priority, application Great Britain Nov. 10, 1959
7 Claims. (Cl. 331—8)

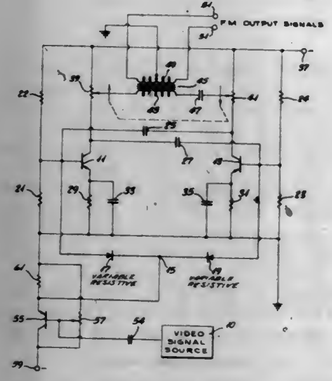
1. An automatic frequency control system for an oscillation generator adapted to be controlled in frequency by a control potential supplied thereto, said system comprising said oscillation generator, a pulse source coupled to the output of said generator and adapted to provide a train of output pulses having any of a plurality of different widths inter se, a switch device coupled to said pulse

source to cause said pulse source to generate one or other of the different widths of output pulse in dependence upon the condition of said switch device, a reference frequency source means coupled to said switch and to said reference frequency source and responsive to a wave derived from said reference frequency source for actuating said switch device to cause said pulse source to generate the narrowest pulse width of said output pulses when the phase rela-



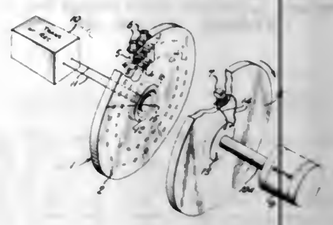
tion between the reference source and the generator output approaches synchronization and means responsive to the phase relation between the selected pulses from said pulse source and a wave derived from said reference frequency source for producing a control potential and means for applying the same to said generator to control the frequency thereof to a value at which the wave derived from the generator output and the wave derived from the reference frequency source are synchronized.

3,129,391
WIDE DEVIATION FREQUENCY MODULATION SIGNAL GENERATOR
Louis J. Kabell, Palo Alto, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed Jan. 28, 1960, Ser. No. 5,165
7 Claims. (Cl. 332—16)



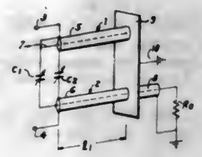
1. A frequency modulated signal generator comprising an oscillation generator circuit having a nominal operating frequency and including a pair of cross-coupled amplifier devices, said amplifier devices each having an output element and a control element, means for applying a modulating signal to each of said amplifier devices simultaneously including forward biased semi-conductor diodes coupled to the control elements of the amplifier devices, and bias means connected to said means for applying a modulating signal to provide a selected forward bias in the absence of the modulating signal; said forward bias being so selected that the change thereof effected by said modulating signal alters the resistance of said diodes and thus the operating frequency of said signal generator.

3,129,392
COMMUTATOR
Paul G. Hansel, Greenvale, Frederick G. Richter, Great Neck, and William H. Paulstich, Merrick, N.Y., assignors to Servo Corporation of America, New Hyde Park, N.Y., a corporation of New York
Filed Jan. 27, 1959, Ser. No. 789,366
14 Claims. (Cl. 333—7)



1. A commutator for applying electrical energy successively between a plurality of antennas and an electrical circuit, comprising a stator member of non-magnetic material having a planar surface, a plurality of magnetic transformer sections, one for each of the antennas, secured in said stator member, the transformer sections being positioned in circular array and each having an end terminating flush with said planar surface, and means for scanning said transformer sections comprising a rotor member having a planar surface in contiguous relation to the planar surface of said stator member, and a complementary magnetic transformer section secured in said rotor member having an end terminating flush with the rotor planar surface.

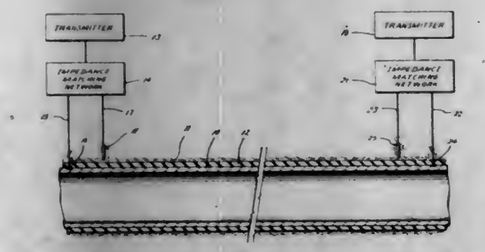
3,129,393
BALUN TRANSFORMER WITH VARIABLE TRANSFORMATION RATIO
James T. Coleman, Moorestown, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Mar. 30, 1961, Ser. No. 99,646
11 Claims. (Cl. 333—26)



1. A balun transformer comprising, in combination, a pair of coaxial lines of unequal length, a conducting plate connecting the outer conductors of said coaxial line together at a given distance from one end of each coaxial line, said conducting plate being grounded and short-circuiting the inner and outer conductors of the shorter coaxial line at the other end thereof, means connecting the inner and outer conductors of the shorter coaxial line together at said one end thereof, first and second variable capacitors, said first capacitor being connected between the inner conductors of said coaxial lines at said one end thereof, said second capacitor being connected between the outer conductors of said coaxial lines at said one end thereof, means for coupling a radio frequency signal across the outer conductors of said coaxial lines at said one end thereof, the output of said transformer being

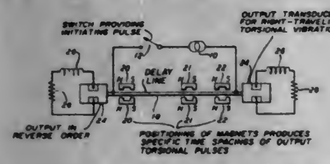
taken across the inner and outer conductors of the longer coaxial line at the other end thereof.

3,129,394
COAXIAL MODE TRANSMISSION OF CARRIER CURRENTS USING INSULATED BURIED PIPE AND SURROUNDING EARTH
Francis V. Long, Shreveport, La., assignor to Texas Eastern Transmission Corporation, Shreveport, La., a corporation of Delaware
Filed Mar. 17, 1958, Ser. No. 722,019
9 Claims. (Cl. 333—27)



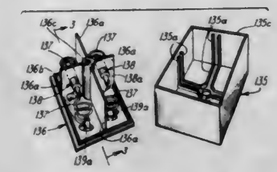
8. The method of transmitting signals along an insulated fluid transmission conductive pipe line buried in the ground comprising, transmitting an A.C. signal along the pipe and simultaneously transmitting the same signal along the ground immediately surrounding the pipe whereby the pipe, insulation, and ground will function as a co-axial cable.

3,129,395
PULSE GROUP GENERATOR PRODUCING TIME SPACED OUTPUT PULSES IN DEPENDENCE ON SPATIAL DISTRIBUTION OF MAGNETIC TRANSDUCERS ALONG DELAY LINE
Warren P. Mason, West Orange, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 13, 1959, Ser. No. 852,725
1 Claim. (Cl. 333—30)



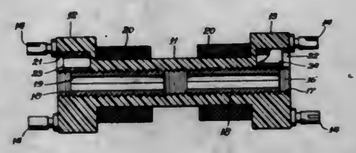
In combination, an elongated wire of magnetostrictive material, a plurality of means for unidirectionally magnetizing a like plurality of short lengths of the wire spaced along the wire intermediate its ends, means for transmitting an alternating current pulse along a portion of the wire which includes all of the unidirectionally magnetized short lengths of the wire, means mechanically connected to a first end of the wire and responsive to torsional vibratory energy pulses to generate electrical pulses, and a second means mechanically connected to the other end of the wire and responsive to torsional vibratory energy pulses to generate electrical pulses, the said responsive means at each end of the wire having a mechanical impedance matching the mechanical impedance of the wire, the magnetized length of the magnetostrictive wire in each instance being substantially one-half wavelength long with respect to the wavelength of the vibratory torsional acoustic wave in the wire.

3,129,396
ELECTRICAL FILTER APPARATUS
Jack Germain, Chicago, and Robert L. Evans, Evanston, Ill., assignors to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Original application July 27, 1959, Ser. No. 829,868, now Patent No. 3,059,184, dated Oct. 16, 1962. Divided and this application July 21, 1960, Ser. No. 44,414
4 Claims. (Cl. 333—70)



1. A harmonic filter including in combination, a first conducting box-like member having five closed sides and one open side, a second conducting member including a cover portion and two intersecting right angle partition portions which extend therefrom, said members when assembled with said cover portion closing said open side of said box-like member forming four separate shielded cavities, said members being die cast and having ribs to provide interlocking fit therebetween, four inductance elements supported on said second member so that one is positioned in each of said cavities when said members are assembled, three feedthrough capacitors in said partition portions interconnecting said inductance elements in series and forming shunt capacitors of a filter circuit, and terminal means extending through said cover portion and connected to said inductance elements to form end terminals of the filter circuit.

3,129,397
INTERNALLY THREADED COIL FORM FOR SECURING THREADED CORE THEREIN
George A. Scherry, Berkeley, Ill., assignor, by mesne assignments, to Grayhill Moldtronics, Inc., Clarendon Hills, Ill., a corporation of Illinois
Filed Oct. 27, 1960, Ser. No. 65,527
6 Claims. (Cl. 336—136)

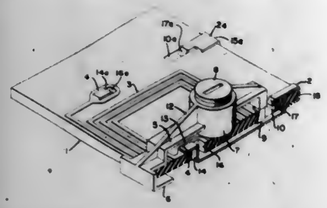


1. A coil form assembly for supporting an inductance coil comprising an elongated member having an internally threaded longitudinal center hole adapted to receive an externally threaded core for axial adjustment therein, said elongated member having a coil receiving portion and a radially extending flange portion at one end thereof, said flange portion having an elongated recess therein, said recess extending from the outer end of said member substantially parallel to said center hole and axially offset therefrom, with the peripheral surface of said recess intersecting the peripheral surfaces of said center hole to form an opening therebetween, and a resilient insert positioned in said recess and having a press fit therein with a portion of said insert projecting into said center hole for resilient interference engagement with the external threads of the core to hold the core and permit fine adjustment thereof.

3,129,398
PRINTED COIL WITH REMOVABLE CORE SUPPORT AND CORE

Claude Lheureux, Coubron, France, assignor to Compagnie Francaise Thomson-Houston, Paris, France, a corporation of France

Filed Jan. 2, 1962, Ser. No. 163,607
Claims priority, application France Jan. 13, 1961
3 Claims. (Cl. 336—136)

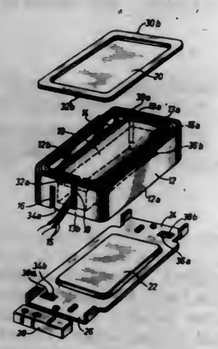


1. An adjustable inductance comprising: a mounting board comprised of an electrical insulating material and including an aperture and an edge, an electrical inductor comprised of a printed wire positioned on said mounting board and arranged in a loop of multiple turns in a same plane, a cylindrical shaped magnetic core including a threaded portion on an outer surface of said core, and a support for said core centered with respect to said loop and having a substantial portion thereof disposed above said plane of said loop, said support including a U-shaped section engaging said edge of said board, a lug portion having a surface binding said support to said board when said lug engages said aperture, and a threaded cylindrical recess, said cylindrical recess being disposed above said plane of said loop and receiving said core for adjustable positioning of said core relative to said wire loop.

3,129,399
PLURAL PART CORE WITH EXPOSED WOUND-CORE PORTION

Hans Christian Hansen, 14 Christiansholmsvej, Klampenborg, Denmark

Filed Feb. 11, 1960, Ser. No. 8,185
30 Claims. (Cl. 336—212)

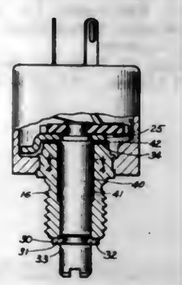


18. An induction coil comprising a straight magnetic core, having end surfaces, a coil winding encircling said straight core leaving its end surfaces exposed, a laminated tubular core structure having a plurality of layers of strip material arranged with their broad sides facing the interior of said tubular core structure, means supporting said straight core as an interior leg inside the space of said tubular core, and slots in a plurality of said tubular core strips at the orbit of said straight core end surfaces.

3,129,400
VARIABLE RESISTOR WITH HIGH TORQUE ADJUSTMENT

Clinton W. Hartman, Elkhart, Ind., assignor to CTS Corporation, Elkhart, Ind., a corporation of Indiana

Filed Jan. 2, 1962, Ser. No. 163,554
13 Claims. (Cl. 338—162)

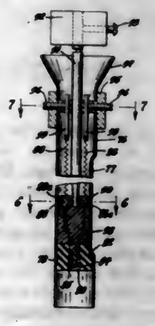


1. A variable resistor comprising in combination, a housing with a resistive strip and a conductive strip mounted therein;
a movable shaft member mounted in the housing;
contact means mounted on said shaft member for moving along the strips; and
brake means for resisting the movement of the shaft, comprising:
a resilient friction sleeve of substantially uniform wall thickness surrounding the shaft and uniformly compressed between the shaft and the housing to the extent that its wall thickness is reduced from about 15% to about 50%.

3,129,401
HEATING UNIT MANUFACTURE

Chester F. Louthan, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Original application Nov. 14, 1957, Ser. No. 696,414, now Patent No. 3,082,511, dated Mar. 26, 1963. Divided and this application Nov. 13, 1961, Ser. No. 151,987
3 Claims. (Cl. 338—273)

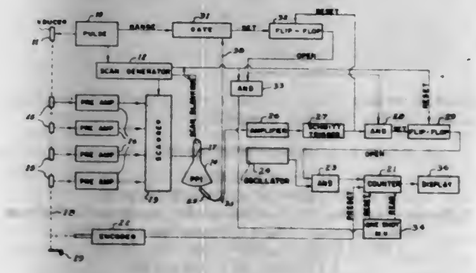


1. The method of holding a plurality of independent heating elements and a plug with a tapered opening in a tubular sheath prior to filling the sheath with a finely divided insulating material comprising, threading said heating elements through the tapered opening of said plug, folding one end of one of said heating elements over the other, pulling said folded over end of said one heating element and said other heating element into tight engagement with the narrow end of said tapered opening whereby said heating elements are electrically engaged, placing said plug within one end of said tubular sheath and in contact therewith, retaining said plug in said tubular sheath through the tight engagement of said heating elements with said plug, and holding the opposite ends of said heating elements in fixed relation with said tubular sheath.

3,129,402
DIGITAL BEARING READOUT FOR SECTOR SCAN SONAR

Alfred M. Henne, Panama City, Fla., assignor to the United States of America as represented by the Secretary of the Navy

Filed Oct. 30, 1962, Ser. No. 234,583
4 Claims. (Cl. 340—3)
(Granted under Title 35, U.S. Code (1952), sec. 266)



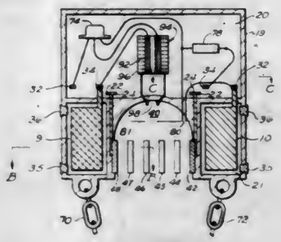
1. In a sector scan pulse sonar system in which energy pulses are periodically transmitted and echoes of the transmitted pulses returned by a distant target are utilized to brighten a spot on the viewing screen of a cathode ray tube in an azimuthal position corresponding to the bearing of the target and along a scan line having leading and trailing edges controlled in time by a scan generator and of known bearings,
bearing readout apparatus including:
a counter,
means operative under the control of the scan generator to read into the counter the bearing of one of the edges of said scan line,
a fixed frequency oscillator,
a hand manipulated light sensitive probe operative when placed over a brightened spot on said screen to provide a control pulse, and
means under the joint control of said scan generator and said control pulse for connecting said counter to said oscillator during the time interval between the occurrence in time of said one of said scan line edges and of said control pulse.

3,129,403
AUTOMATIC MARINE BEACON

James R. R. Harter, 4953 Brandywine St. NW., Washington, D.C.

Filed Sept. 2, 1959, Ser. No. 837,684
4 Claims. (Cl. 340—12)

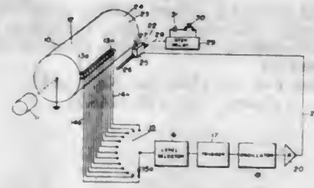
1. In a device of the character described, a sealed housing containing a first set of electrodes capable to form a current source when immersed into electrolytic water, at least one water soluble seal mounted in the wall of the housing, the housing forming an open cavity, which cavity contains means for electrolytically decomposing the water content in the cavity into an explosive gas mixture and energized by the current source, the cavity containing a second set of electrodes mounted therein and connected to form an electrical circuit with the current source, and means within the cavity for igniting the gas mixture produced therein.



3,129,404
METHODS AND APPARATUS FOR SEISMIC SECTION RECORDING

Goethe M. Groenendyke, Dallas, Tex., assignor, by mesne assignments, to Socony Mobil Oil Company, Inc., New York, N.Y., a corporation of New York

Filed June 25, 1959, Ser. No. 822,849
10 Claims. (Cl. 340—15.5)



1. The method of producing a duo-density recording of a seismic wave whose noise component is attenuated, comprising the steps of generating along a time base a first signal whose amplitude varies with variation in the amplitude of said seismic wave, establishing a reference level whose amplitude is related to the noise component, comparing the amplitude of said first signal with said reference level, and recording along said time base a mark of distinctive character each time said first signal exceeds said reference level and of a length corresponding with the duration that the first signal exceeds said reference level along said time base.

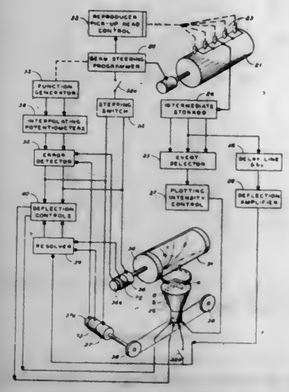
3,129,405
VERY FAST SERVO PLOTTER

William E. Shoemaker, Fullerton, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

Filed Sept. 28, 1959, Ser. No. 842,844
5 Claims. (Cl. 340—15.5)

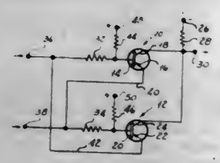
1. In a seismic section plotting means including a drum display surface rotatable about an axis longitudinal of said drum, a cathode ray tube movable parallel of the axis of rotation of said drum, and a preprogramed energization means for said plotting means for causing movement of said drum and cathode ray tube to plot seismic data on said display surface, the improvement comprising means for sensing the instantaneous position of said drum and said cathode ray tube, means for comparing said sensed instantaneous positions to said preprogramed energization including means for establishing an indication of error therebetween, and means for

deflecting the beam of said cathode ray tube in accordance with said error indication to eliminate the effect



of inertia in said drum and cathode ray tube from said plotting of seismic data on said display surface.

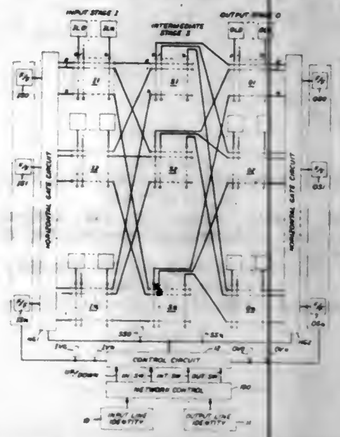
3,129,406
DIGITAL SIGNAL COMPARISON CIRCUIT
Richmond Perley, Glastonbury, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Feb. 29, 1960, Ser. No. 11,617
1 Claim. (Cl. 340—146.1)



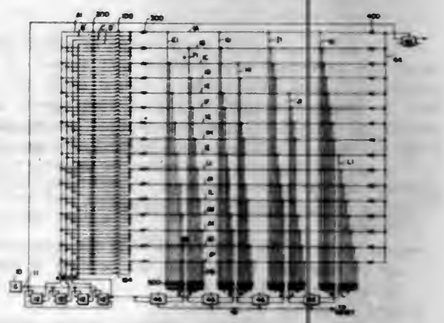
A parity checking circuit including in combination a first and a second source of two-state voltage, a first and a second transistor each having a base and an emitter and a collector, means connecting both collectors to provide an output, first low resistance means connecting the first source to the emitter of the first transistor, second low resistance means connecting the second source to the emitter of the second transistor, first high resistance means independent of any fixed biasing source for connecting the first source to the base of the second transistor, and second high resistance means independent of any fixed biasing source for connecting the second source to the base of the first transistor.

3,129,407
SWITCHING NETWORK CONTROL SYSTEM
Marvin C. Paull, Denville, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 24, 1961, Ser. No. 154,477
20 Claims. (Cl. 340—147)

1. In a system comprising switching apparatus arranged in a multistage network, control means comprising means for operating the switching apparatus to establish a plurality of line-to-line connections through the network, means for detecting the presence of a blocking condition in the network with respect to a potential connection and means for operating the switching apparatus while said established connections are active to effect a rearrangement of certain of said plurality of established connections to remove the blocking condition.

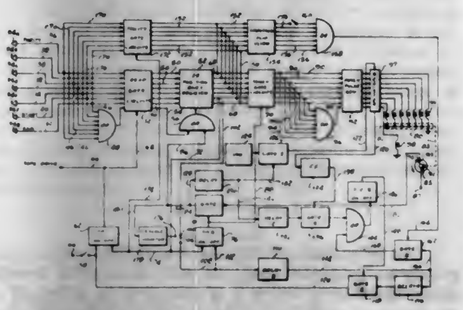


3,129,408
ELECTRONIC COMMUTATOR
Valentine Hechler IV, Northfield, Ill., assignor to Webcor, Inc., Chicago, Ill., a corporation of Illinois
Filed Sept. 19, 1960, Ser. No. 56,783
15 Claims. (Cl. 340—166)



1. An apparatus for selectively commutating sequential electrical pulses to a common output including a matrix having a series of network lines terminating into a common output, an input line for said matrix over which a pulse train is transmitted, means in said input line for interrupting the pulse train and sequentially distributing the pulses thereof in a predetermined value pattern over certain lines of said network, said certain lines serially connected to a plurality of network output lines with said network output lines terminating into the common output including a gate, a plurality of binary counters each having a set of output lines over which passes pulses of different predetermined values, with each output line of each set connected in a predetermined pattern to each of said plurality of network output lines, means in said network lines and said binary counter output lines for combining the pulses of different values transmitted thereover and for determining the value of the pulse to be transmitted to said common output, means for supplying said pulse train directly to said gate, and means in said certain lines for selectively controlling the transmission of pulses over said network output lines.

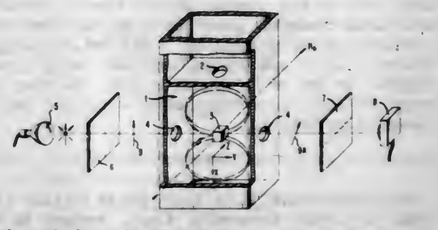
3,129,409
MAGNETIC TAPE TO PERFORATED TAPE DIGITAL INFORMATION CONVERTER
Richmond Perley, Glastonbury, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed May 5, 1959, Ser. No. 811,179
2 Claims. (Cl. 340—172.5)



1. Apparatus for converting a magnetic record made up of blocks of characters having recorded pulses in various respective channels in which each block has a parity channel whereby the number of pulses in each character is a number having a given characteristic and in which each block has a parity character whereby the number of pulses in each channel is a number having a certain characteristic to a perforated record including in combination means for reading said magnetic record to produce respective groups of pulses representing said characters, a storage register for storing said groups of pulses and shifted in response to a shift pulse to shift said characters serially out of said register, means coupling said reading means to said storage register, punching mechanism comprising means energized to condition said mechanism to punch predetermined characters and comprising means for producing a synchronizing pulse on each operation of the punching mechanism, means for coupling said synchronizing pulses to said register as shift pulses to shift the stored characters out of the register, means responsive to a certain pulse in the first character of a record block for enabling said synchronizing pulse coupling means, means responsive to the groups of pulses shifting out of said register for energizing said punching mechanism conditioning means, means responsive to a pulse at the end of a record block for disabling said coupling means and for enabling said reading means, first means for counting the number of pulses in each character, second means for counting the number of pulses in each channel and means responsive to said first and said second counting means for disabling said means responsive to a pulse at the end of a record when the number of pulses in any character is a number which differs from a number having said given characteristic and when the number of pulses in any channel is a number which differs from a number having said certain characteristic.

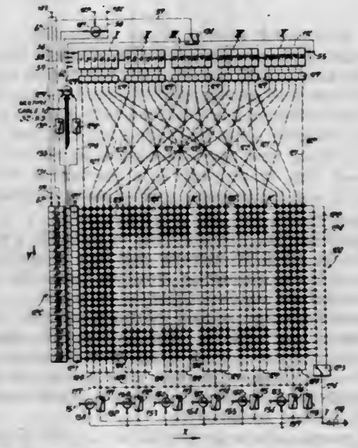
3,129,410
ELECTRON SPIN ECHO MEMORY SYSTEM
Peter P. Sorokin, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Aug. 25, 1959, Ser. No. 835,891
2 Claims. (Cl. 340—173)

1. An electron spin echo information storage system comprising a microwave resonant element having a microwave input port and light input and output ports and in which is placed an electron spin sample, magnetic field means to align substantially all the spins in the sample in a given plane, writing means to supply microwave input pulses to said element to generate electron spin echo components of magnetization transverse to said plane, optical interrogation means comprising means to supply



linearly polarized light parallel to said transverse component of magnetization through said light input port and detection means associated with said light output port to sense changes in the angle of polarization caused by interaction between said light and said transverse component of magnetization.

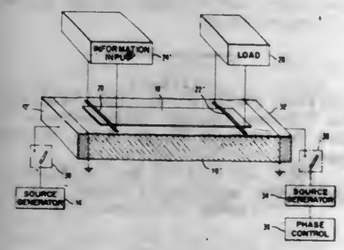
3,129,411
MATRIX SWITCHING ARRANGEMENT
Friedrich Wilhelm Albrecht, Wilhelmshaven, Germany, assignor to Olympia Werke A.G., Wilhelmshaven, Germany
Filed July 11, 1960, Ser. No. 41,949
Claims priority, application Germany July 15, 1959
9 Claims. (Cl. 340—174)



8. In a switching apparatus for a storage matrix in which words made up of bits of information are stored along at least two different geometrical dimensions, in combination, first shift register means divided into register groups, each of said register groups in turn being divided into a plurality of register group stages, the number of stages in each register group being equal to the number of bits of information in each word to be stored in the matrix; a plurality of writing conductors connected at one of their respective ends to portions of the matrix arranged along a first geometrical direction, the other ends of said conductors being respectively connected to one of said register group stages, said conductors being arranged in conductor groups equal to the number of bits of information in each word to be stored in the matrix, the number of conductors in each conductor group being equal to the number of said register groups, each of said

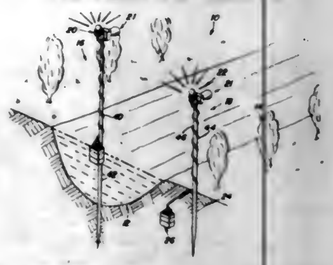
register groups thereby having a stage connected to each of said conductor groups; a plurality of reading conductors, each of said reading conductors being respectively connected at one of its ends to one of said portions of the matrix, and at the other of its ends to the same register stage as the writing conductor connected to said portion; each of said portions of said matrix connected to said same conductor group being further connected to a sensing conductor to provide a plurality of sensing conductors, each of said sensing conductors being connected together at one of its respective ends, the other of its respective ends being connected to a common output by means of an "OR" gate.

3,129,412
MAGNETOSTRICTIVE THIN FILM DELAY LINE
John E. Lovell, Greenwich, Conn., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Aug. 27, 1962, Ser. No. 219,585
11 Claims. (Cl. 340—174)



1. An information control circuit comprising:
an elongated planar anisotropic thin magnetic film having an easy axis of remanent flux orientation which is transverse with respect to the longitudinal axis thereof and exhibiting, a first mechanically induced anisotrophy directed along its longitudinal axis, and a second induced anisotropy directed along the easy axis of said film, in response to a mechanical wave of tension and compression applied along its longitudinal axis;
said magnetic film being affixed to a planar nonmagnetizable substrate member which is responsive to acoustical signals applied along its longitudinal axis to expand and contract along the same axis;
first means coupled to said substrate member at one extremity for applying acoustical signals along its longitudinal axis having a repetition frequency (*fo*) and a magnitude sufficient to cause orientation of the magnetization of said film along the axis of mechanically induced anisotropy;
circuit means inductively coupled to said film for entering and providing an output for a binary value comprising:
an input circuit for applying a field, to a first portion of said film coupled, directed along the longitudinal axis thereof, when the first portion of said film exhibits said first mechanically induced anisotropy to conjointly establish the magnetization of said first portion in one or the other direction along the first axis of induced anisotropy and thereby designate different binary values;
second means coupled to said substrate member at an opposite extremity for applying similar acoustical signals along the longitudinal axis of said substrate member having a repetition frequency (*fo*); and
means for controlling the phase of the signals applied by said second means relative to the signals applied by said first means to control a stop, forward, and reverse propagation of said binary values.

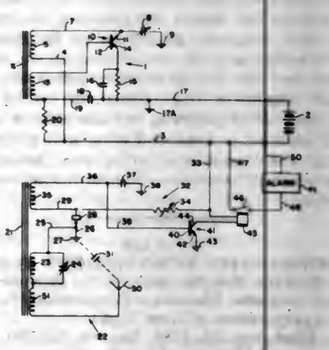
3,129,413
IRRIGATION SIGNAL DEVICE
Jere H. Watson, Yuma, Ariz.
(821 Centinela Ave., Inglewood, Calif.)
Filed Aug. 27, 1962, Ser. No. 219,621
12 Claims. (Cl. 340—235)



6. An irrigation signal system for irrigated fields, comprising an irrigation signal standard situated at a point within the field at which it is desired to be informed of the degree of saturation of the soil by the irrigation water flowing in such field, said signal standard projecting above the surrounding crops a sufficient height to be seen at a distance, an electric lamp and an electric horn mounted adjacent the top of the standard, and an immersion battery electrically connected to the lamp and horn, for energization thereof in response to absorption of water, said battery being secured to said standard at a desired level above the soil to provide a signal indicating the presence of irrigation water at a predetermined depth equal to the height of the battery above the soil.

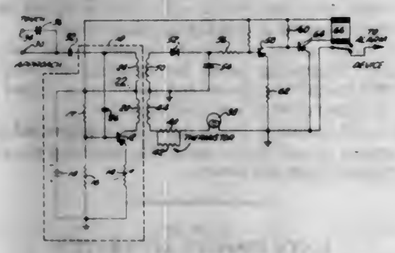
10. An irrigation signal system for fields upon which irrigated crops are grown, comprising an irrigation signal standard supported in the soil and projecting above the crops, an electric signalling means mounted on the top of the standard and an immersion battery electrically connected to the signalling means for energization thereof in response to absorption of water, said battery being mounted adjacent said standard and below the surface of the soil to indicate saturation of the soil by irrigation water.

3,129,414
TRANSISTOR TYPE CAPACITY OPERATED RELAY
Robert B. Rice, 3108 12th Ave., Chattanooga 7, Tenn.
Filed Dec. 5, 1960, Ser. No. 73,913
2 Claims. (Cl. 340—258)



1. A system for the protection of an object from intruders comprising an oscillator circuit including a first transistor and first and second inductances; a source of direct current energizing the oscillator circuit; a first magnetic core coupled to said inductances; a second magnetic core loosely coupled to the first magnetic core; a parallel tuned capacitance detector circuit including a third inductance coupled to said second magnetic core and an antenna; a relay operating circuit including a relay coil energized by said source of direct current, a second transistor controlling the current to said relay coil and a fourth inductance coupled to said second magnetic core controlling said second transistor; a rectifier connecting said detector circuit with said fourth inductance in said relay operating circuit; an alarm circuit including an alarm device, connections to said source of direct current and a switch operable by said relay coil; a change of capacitance in said detector circuit decreasing the power to said fourth inductance and thereby permitting more current to flow through said second transistor and through said relay coil to close said switch and thereby to actuate said alarm device.

3,129,415
PROXIMITY DETECTOR
William Earle McKnight, San Fernando, Calif., assignor, by mesne assignments, to Westinghouse Electric Corporation, a corporation of Pennsylvania
Filed Jan. 3, 1961, Ser. No. 80,299
8 Claims. (Cl. 340—258)



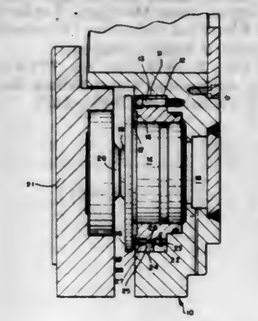
1. A proximity detector comprising a feedback oscillator circuit including a transistor, a center-tapped winding having inductance connected at one end to the collector electrode of the transistor, a feedback capacitor connecting the other end of the winding to the base electrode of the transistor, a voltage divider connected across a potential source, one end of the voltage divider being connected to the center-tap of the winding, a tap on the voltage divider being connected to the base electrode and a variable resistor connecting the emitter electrode to the other end of the voltage divider; a compensating load circuit including a winding inductively coupled to the winding in the oscillator circuit, a tungsten filament bulb connected acros the winding, the bulb having a resistance that varies with the temperature, and ambient temperature compensating means connected in circuit relation with said bulb; and an antenna including a length of wire and a blocking capacitor connecting one end of the wire to said other end of the winding in the oscillator circuit.

3,129,416
SPEED ALARM FOR DIAL SPEEDOMETER
Louis H. Freedman, 1416 Continental Life Bldg., Fort Worth 2, Tex.
Filed Oct. 17, 1960, Ser. No. 63,184
6 Claims. (Cl. 340—263)

6. In combination with a dial type speedometer including a case and having a movable pointer arm within said case, a speed alarm comprising a light bulb mounted in said case to move with said pointer arm, means in said case activating said light bulb, an arcuate photosensitive strip positioned within said case in proximate spaced relationship to the path of said bulb, an electrical warning signal, and means electrically connecting said signal with said photosensitive strip.



3,129,417
INDICATOR SYSTEMS FOR USE IN THRUST BEARINGS HAVING RESONANCE CHANGER PISTONS
Jerome M. Gruber, Waukesha, and Willis W. Gardner, New Berlin, Wis., assignors to Waukesha Bearings Corporation, Waukesha, Wis., a corporation of Wisconsin
Filed Nov. 13, 1962, Ser. No. 237,008
5 Claims. (Cl. 340—282)

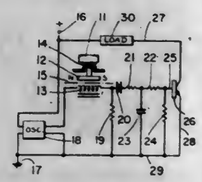


1. In a thrust bearing of the resonance changer type having a plurality of shoes adapted to receive thrust and having a base ring with pistons which are provided with heads to which thrust is transmitted from said shoes, and there being fluid pressure means for adjusting said pistons from a hard-down position to a floating position, an electric switch confined in said thrust bearing base ring and having a movable plunger with an end projecting from the base ring and positioned to be actuated by a piston head in response to movement of the latter, an electric circuit for said switch having an externally extending portion, an electric signal in said external portion of said circuit for indicating when said piston is hard-down, and an electric signal in said external portion of said circuit for indicating when said piston is floating.

3,129,418
ELECTRONIC KEYBOARD
Roger Boy de la Tour, Los Angeles, Calif., assignor, by mesne assignments, to Teledyne, Inc., a corporation of California
Filed Aug. 4, 1960, Ser. No. 47,456
4 Claims. (Cl. 340—345)

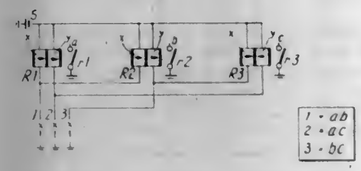
1. An electronic keyboard comprising, in combination: a plurality of manually operable key means, each key means including: a key member; a magnet movable between first and second positions in response to movement of said key member, an inductance including a magnetizable core stationarily positioned adjacent to said second

position; barrier means disposed between said magnet and inductance preventing physical contact of said magnet with said inductance; and an electric circuit including means for generating an electric signal, and including said inductance, said circuit having an output, said inductance



having its impedance reduced to a low value in response to movement of said magnet to said second position to pass said electrical signal to said output and having its impedance increased to a high value in response to movement of said magnet to said first position to substantially block said electrical signal from said output.

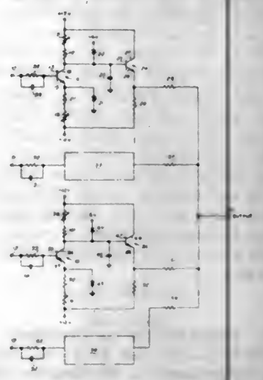
3,129,419
ELECTROMAGNETIC CODE CONVERSION ARRANGEMENTS
John Brownlie Clark, Bexleyheath, and Percy William Hicks, Wilmington, near Dartford, England, assignors to Associated Electrical Industries (Woolwich) Limited, London, England, a British company
Filed Dec. 3, 1958, Ser. No. 777,910
Claims priority, application Great Britain Dec. 9, 1957
5 Claims. (Cl. 340—347)



1. A code conversion circuit comprising n electromagnetic devices, n being greater than two, at least $n-1$ activating windings on each of said devices, and connections by which each of said $n-1$ windings of each device is paired for contemporaneous energization with one of the activating windings of one of the other devices, said connections being organized in such manner that the windings with which the $n-1$ windings of each device are respectively paired belong to separate ones of the other devices and that as regards any three of said devices taken as a group, and considering in respect of each device in such group the two activating windings thereof which are paired with activating windings of the other two devices of the group, said two windings are differentially connected with respect to each other in an odd number of the three devices of the group and are non-differentially connected in each of the remaining devices of the group.

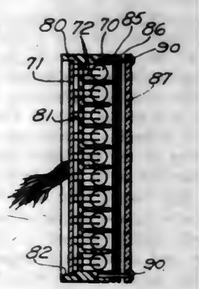
3,129,420
FIVE LEVEL WAVEFORM SYNTHESIZER
John Marez, 3407 Lockwood Drive, San Diego 23, Calif.
Filed Oct. 25, 1962, Ser. No. 233,164
4 Claims. (Cl. 340—347)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A five level digital-to-analogue waveform synthesizer comprising:
(*a*) four waveform generating sections;
(*b*) each waveform generating section comprising, input means for receiving digital information;
(*c*) a source of voltage;
(*d*) switching means operatively connected to said input means and said voltage source for turning on and off said voltage source in response to digital information coupled to said switching means;



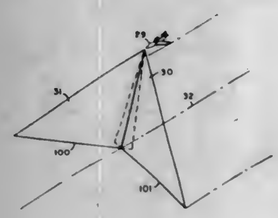
(*e*) integrating means connected to the output of said switching means for integrating the output from said switching means, thereby generating a substantially linear waveform when said switch is turned off and on in response to said digital information;
(*f*) buffer means operatively coupled to the output of said integrating means for isolating the output of said integrating means and providing a higher level of output drive to a succeeding stage;
(*g*) and summing means operatively connected to the output of said buffer means for summing the output voltage from said means.

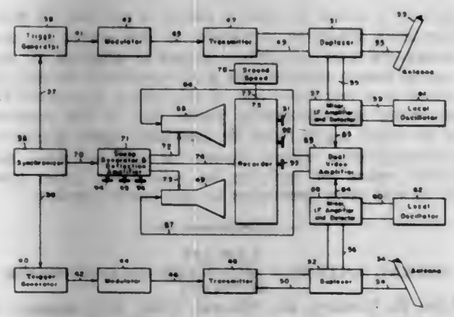
3,129,421
DATA DISPLAY APPARATUS
Melvin B. Freedman, Waltham, Mass., assignor, by mesne assignments, to Laboratory for Electronics, Inc., Boston, Mass., a corporation of Delaware
Filed July 15, 1959, Ser. No. 827,344
2 Claims. (Cl. 340—378)



2. A rectilinear readout display comprising, a plurality of neon lamps mounted on a printed circuit board, a grating disposed in front of said board over said neon lamp array, said grating being formed with a plurality of compartments, said compartments being open on the front face of said grating and being formed with openings on the back face thereof, said openings on the back face being sufficiently large so that said neon lamps can be inserted therein in an upstanding position, said neon lamps thereafter being disposed in a horizontal position whereby maximum illumination is provided at the front face of said compartments, the inner surfaces of said compartments and the front face of said printed circuit board being formed of optical reflecting material, whereby the illumination from said neon lamps is increased at the said front face of said grating.

3,129,422
OBLIQUE-LOOK RECONNAISSANCE SYSTEM
Roy C. Fox, Baltimore, Md., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 30, 1959, Ser. No. 830,676
19 Claims. (Cl. 343—5)

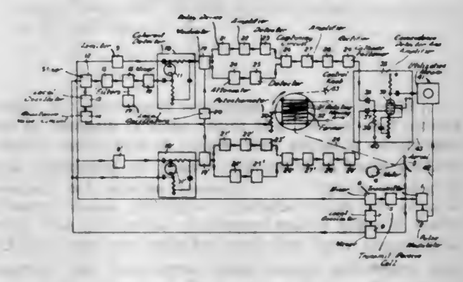




1. In reconnaissance apparatus adapted to be carried by a vehicle for producing a map of the terrain adjacent the ground track of the vehicle, in combination, means for producing first and second recurrent fan-shaped beams of wave energy directed toward the ground at an area forward of the vehicle, the wave energy beams each being at an oblique angle with respect to the flight path of the vehicle and at an angle with respect to each other, cathode ray tube means including means for producing first and second electron beams and first and second recurrent substantially linear traces, means operatively connected to the cathode ray tube means for utilizing echoes returned from the terrain to intensity modulate the electron beams, each of the traces being intensity modulated over its length in accordance with variations in the amplitude of reflected energy as a fan-shaped wave energy beam arrives at successive points along the terrain, and means disposed adjacent and operatively connected to said cathode ray tube means for recording said first and second traces at an angle with respect to each other corresponding to the angle between the ground intercepts of said first and second fan-shaped wave energy beams, successive recurrences of each trace being recorded as adjacent parallel lines by said recording means to thereby provide a map of the terrain adjacent the ground track of the vehicle.

7. In reconnaissance apparatus adapted to be carried by a vehicle for providing a map of the terrain adjacent the ground track of the vehicle, in combination, means for producing first and second pulsed fan-shaped beams of wave energy, incident upon said terrain in illuminated patterns of the same shape as said beams, said first and second beams of wave energy being directed toward the terrain in an area in advance of the position of the vehicle, each of said first and second wave energy beams lying at an oblique angle with respect to the flight path of the vehicle, said wave energy beams being at a predetermined angle with respect to each other, reflected energy receiving means, and recording means including a moving recording element, means for moving said recording element in accordance with the ground speed of said vehicle, said recording means being operatively connected to said receiving means for producing on said recording element first and second series of adjacent line recordings bearing the same relation to each other as the relation between said illuminated patterns and being intensity modulated over their lengths in accordance with variations in the instantaneous value of reflected energy from said illuminated patterns as the wave energy beams strike successive points on the terrain.

3,129,423
TARGET CANCELLING RADAR SYSTEMS
Wilfrid Sinden Mortley, Essex, England, assignor to The Marconi Company Limited, London, England, a British company
Filed Oct. 5, 1956, Ser. No. 614,317
Claims priority, application Great Britain Oct. 21, 1955
7 Claims. (Cl. 343—7.7)

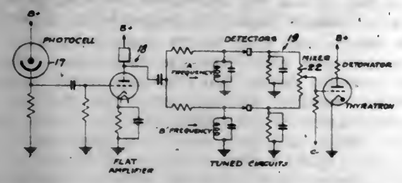


1. A radar system having a receiver portion including at least two signal channels with their inputs in parallel, means in one of said channels for substantially cancelling signals due to targets having one pre-determined velocity with reference to the system, means in another of said channels for substantially cancelling signals due to targets having another pre-determined velocity with reference to said system, detector means fed with the outputs from said channels, said detector means being adapted to provide zero output when any of the inputs thereto is zero, and means for utilising the output from said detector means.

3,129,424
DISTANCE RESPONSIVE DEVICE
Jacob Rabinow, Takoma Park, Md., assignor to the United States of America as represented by the Secretary of the Army
Filed Aug. 5, 1949, Ser. No. 108,831
4 Claims. (Cl. 343—12)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A distance-responsive device comprising in combination: a source of radiant energy; means for projecting from said source first and second separate overlapping beams modulated at first and second frequencies; a receiving lens which collects reflected radiant energy from both of said first and second beams; a photoelectric cell upon which said lens focuses the reflected energy; an amplifier to which the output of said photoelectric cell is fed, said amplifier having first and second band-pass filters, said first filter being designed to pass energy of said first fre-

quency and said second filter being designed to pass energy of said second frequency; and a comparison circuit to which the outputs of said first and second band-pass



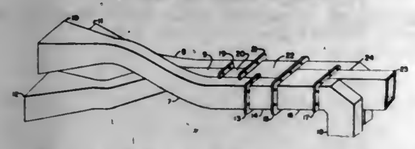
filters are fed, said comparison circuit determining distance by the relationship between the outputs of said first and second band-pass filters.

3,129,425

THREE BEAM MONOPULSE RADAR SYSTEM AND APPARATUS

George E. Sanner, Baltimore, Md., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Sept. 27, 1957, Ser. No. 687,599
9 Claims. (Cl. 343—16)



1. Monopulse radar apparatus comprising, in combination, first, second, and third radiators disposed in predetermined positions with respect to each other about a predetermined radiation axis, means for generating radio frequency energy of a frequency suitable for transmission by the three radiators, connecting means including power dividing means operatively connecting said generating means to all said three radiators, the three radiators and connecting means being constructed and arranged whereby there are simultaneously transmitted three mutually overlapping in-phase beams of radiant energy of the same radio frequency, of substantially equal power and substantially similar patterns about said radiation axis, and receiving means including said three radiators and power dividing means and including means for comparing the energy received by the three radiators resulting from reflection from a target in all three of the transmitted beams, said three radiators and receiving means being constructed and arranged whereby the energy received by the first radiator is compared with one-half the sum of the energies received by the second and third radiators to provide information about the location of the target in one plane, and the energy received by the second radiator is compared with the energy received by the third radiator to provide information about the location of the target in another plane substantially perpendicular to the first-named plane, the radiation axis lying in both said planes.

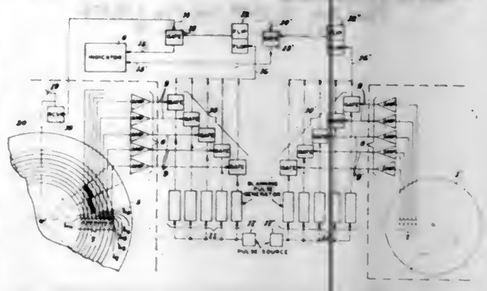
3,129,426

DISPLAY-MODIFYING APPARATUS FOR RADAR SYSTEMS

Voldemar A. Altovsky, Pierre R. J. Mondon, and Pierre L. J. L. Camerini, Paris, France, assignors to Societe Nouvelle d'Electronique, a corporation of France

Filed Jan. 9, 1959, Ser. No. 785,895
Claims priority, application France Jan. 17, 1958
5 Claims. (Cl. 343—17.1)

1. In a radar system provided with means including a rotary directive antenna for transmitting high-frequency pulses and receiving their echoes to control a display indicator, the combination therewith of an apparatus for modifying the operation of said indicator to create zones of artificially altered echo characteristics on the display thereof; said apparatus comprising a program carrier displaceable in synchronism with said directive antenna, a plurality of signal generators independently controlled by said carrier for producing a plurality of relatively staggered output signals in timed relationship with the sweep of said antenna in predetermined azimuthal positions



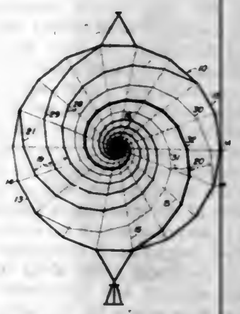
thereof, a source of control pulses, a plurality of pulse generators connected in parallel to said source for producing trains of rectangular pulses in response to said control pulses, each of said pulse generators being connected to a respective one of said signal generators for producing said rectangular pulses only in the presence of an output signal from the associated signal generator, pulse-responsive control means for said indicator, and circuit means for applying the rectangular pulses from all of said pulse generators to said control means.

3,129,427

SPIRAL ANTENNA MOUNTED ON OPENWORK SUPPORT

John H. Dunlavy, Jr., Mineral Wells, Tex., assignor to All Products Company, Mineral Wells, Tex., a corporation of Texas

Filed May 25, 1960, Ser. No. 31,717
6 Claims. (Cl. 343—895)



6. In an antenna including a peripheral frame, elongate flexible supports of non-conductor material extending in tension radially in regular angular spacing from one another across the area of and connected to said peripheral frame, a first flexible strand connected adjacent one end thereof to one of said elongate flexible supports forming a first connection and extending directly outward and angularly therefrom to successive points of connection on successively next adjacent elongate flexible supports in successive orientations such that $r_n = r_{n+1}k$, where r is the distance from the point of origin of said support to a respective point of connection and n is an integer

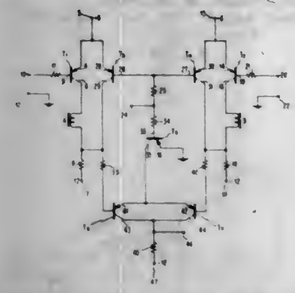
representing the number of connections to said supports from said first point of connection to said respective point of connection and k is a proportionality constant having a value between 0 and 1.

3,129,428

SAFETY CIRCUIT FOR TRANSISTOR AMPLIFIER

Allen B. Chase, San Jose, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Nov. 16, 1959, Ser. No. 853,334
2 Claims. (Cl. 346—74)



2. In a magnetic recording system having a transducer winding for coacting with a magnetizable recording medium,

a first transistor having a pair of output electrodes and a control electrode,

means connecting one of said first transistor output electrodes to said winding to form a series circuit including said winding and said output electrodes,

protective means comprising a second transistor having first, second and third electrodes,

circuit means connecting said first and second electrodes to the extremities of said series circuit,

means for applying a protective signal to said third electrode to provide a low impedance condition between said first and second electrodes to limit the current through said series circuit to a value less than that required to alter the condition of said recording medium,

means for indicating the failure of said second transistor to respond to said protective signal comprising

circuit means for developing an alarm signal in response to predetermined input signals,

means connecting said circuit means to be responsive to said protective signal as an input signal,

means connecting said circuit means to be responsive to the potential of a check point on said series circuit as an input signal,

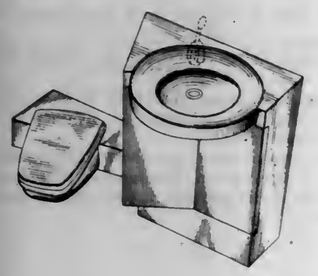
said check point being located to provide a predetermined potential in response to conduction through said second transistor,

said circuit means being operative to develop said alarm signal in response to simultaneous presence of said protective signal and said predetermined potential at said check point.

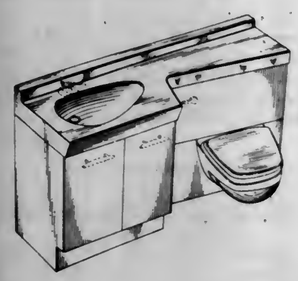
DESIGNS

APRIL 14, 1964

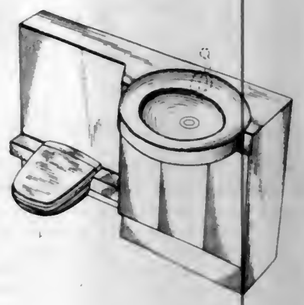
197,944
COMBINED LAVATORY, WATER CLOSET AND CABINET
James A. Tiller, Louisville, Ky., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 8, 1961, Ser. No. 66,240
Term of patent 14 years
(Cl. D4—2)



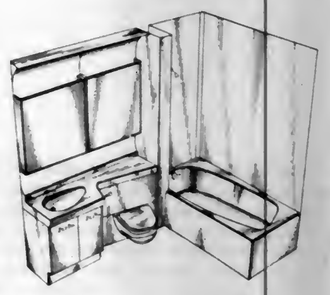
197,945
COMBINED LAVATORY, WATER CLOSET AND CABINET
James Alexander Tiller, Louisville, Ky., and Nicholas L. Maczkov, Darien, Conn., assignors to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 8, 1961, Ser. No. 66,250
Term of patent 14 years
(Cl. D4—2)



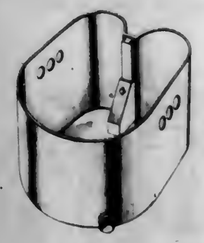
197,946
COMBINED LAVATORY, WATER CLOSET AND CABINET
James A. Tiller, Louisville, Ky., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 8, 1961, Ser. No. 66,255
Term of patent 14 years
(Cl. D4—2)



197,947
BATHROOM UNIT
James Alexander Tiller, Louisville, Ky., and Nicholas L. Maczkov, Darien, Conn., assignors to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 8, 1961, Ser. No. 66,254
Term of patent 14 years
(Cl. D4—4)



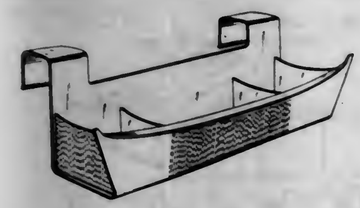
197,948
FOOT BATH
Joan Barker, 741 N. Beatty St., Pittsburgh, Pa.
Filed July 23, 1963, Ser. No. 75,937
Term of patent 14 years
(Cl. D4—4)



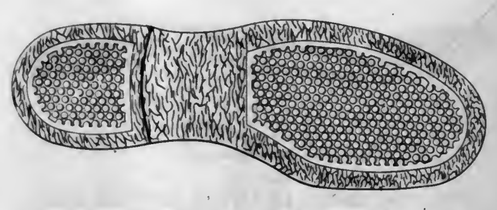
197,949
CHILD'S TRAINING TOILET
Fred O. Forsman, Thousand Oaks, Calif., assignor to Westland Plastics, Inc., Newbury Park, Calif., a corporation of California
Filed Sept. 4, 1962, Ser. No. 71,548
Term of patent 14 years
(Cl. D4—5)



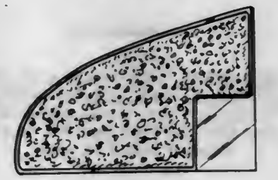
197,950
ATTACHMENT TRAY FOR A CRIB OR THE LIKE
Clara Virginia Eicholtz, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Aug. 3, 1962, Ser. No. 71,158
Term of patent 14 years
(Cl. D5—2)



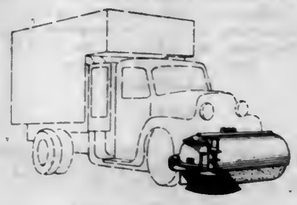
197,951
COMBINED SHOE SOLE AND HEEL
Frederick A. Wilmanns, Milwaukee, Wis., assignor to Textron Inc., Providence, R.I., a corporation of Rhode Island
Filed Mar. 4, 1963, Ser. No. 73,804
Term of patent 14 years
(Cl. D7—5)



197,952
FINGER COT
Herbert Spencer Lutz, New York, N.Y., assignor to International Process & Product Development Corporation, a corporation of New York
Filed Feb. 7, 1962, Ser. No. 68,711
Term of patent 14 years
(Cl. D9—2)



197,953
STREET SWEEPER
Carl A. Desens, 1110 Woodman Road, Janesville, Wis.
Filed Feb. 18, 1963, Ser. No. 73,618
Term of patent 3½ years
(Cl. D9—2)



197,954
PULL FOR DOORS, DRAWERS, AND THE LIKE
Don Heyer, Fullerton, Calif., assignor to Hyer Hardware Mfg. Co., Anaheim, Calif., a corporation of California
Filed Sept. 10, 1963, Ser. No. 76,530
Term of patent 14 years
(Cl. D10—8)



197,955
PULL FOR DOORS, DRAWERS, AND THE LIKE
Don Heyer, Fullerton, Calif., assignor to Hyer Hardware Mfg. Co., Anaheim, Calif., a corporation of California
Filed Sept. 10, 1963, Ser. No. 76,531
Term of patent 14 years
(Cl. D10—8)



197,956
PULL FOR DOORS, DRAWERS, AND THE LIKE
Don Heyer, Fullerton, Calif., assignor to Hyer Hardware Mfg. Co., Anaheim, Calif., a corporation of California
Filed Sept. 10, 1963, Ser. No. 76,532
Term of patent 14 years
(Cl. D10—8)



197,957
PULL FOR DOORS, DRAWERS, AND THE LIKE
Don Heyer, Fullerton, Calif., assignor to Hyer Hardware Mfg. Co., Anaheim, Calif., a corporation of California
Filed Sept. 10, 1963, Ser. No. 76,533
Term of patent 14 years
(Cl. D10—8)

197,958
PULL FOR DOORS, DRAWERS, AND THE LIKE
Don Heyer, Fullerton, Calif., assignor to Hyer Hardware Mfg. Co., Anaheim, Calif., a corporation of California
Filed Sept. 10, 1963, Ser. No. 76,536
Term of patent 14 years
(Cl. D10—8)



197,959
PULL FOR DOORS, DRAWERS, AND THE LIKE
Don Heyer, Fullerton, Calif., assignor to Hyer Hardware Mfg. Co., Anaheim, Calif., a corporation of California
Filed Sept. 10, 1963, Ser. No. 76,540
Term of patent 14 years
(Cl. D10—8)

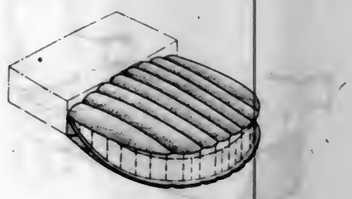


197,960
KNOB FOR DOORS, DRAWERS, AND THE LIKE
Don Heyer, Fullerton, Calif., assignor to Hyer Hardware Mfg. Co., Anaheim, Calif., a corporation of California
Filed Sept. 10, 1963, Ser. No. 76,551
Term of patent 14 years
(Cl. D10—8)

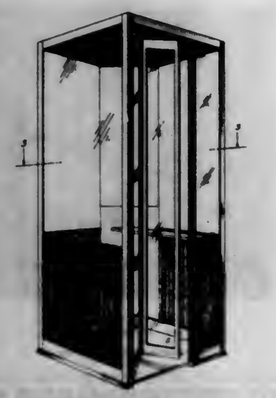


197,961
PULL FOR DOORS, DRAWERS, AND THE LIKE
Don Heyer, Fullerton, Calif., assignor to Hyer Hardware Mfg. Co., Anaheim, Calif., a corporation of California
Filed Sept. 10, 1963, Ser. No. 76,552
Term of patent 14 years
(Cl. D10—8)

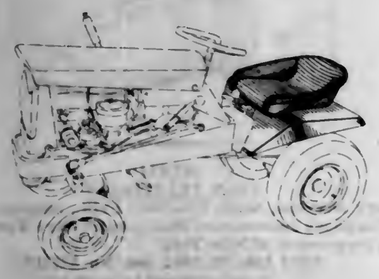
197,962
RESTAURANT BUILDING OR THE LIKE
Oscar F. Stone, 9048 Alcott St., Los Angeles 35, Calif., and Cecil E. Child, Venice, Calif.; said Child assignor to said Stone
Filed May 16, 1962, Ser. No. 70,168
Term of patent 7 years
(Cl. D13—1)



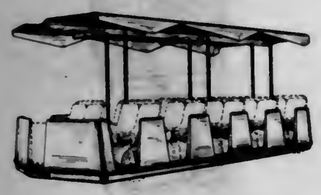
197,963
TELEPHONE BOOTH
Herman R. Bruns, Jersey City, Kenneth H. Melick, Boonton, and Alfred F. Muscari, West Englewood, N.J., assignors to American Telephone and Telegraph Company, New York, N.Y., a corporation of New York
Filed Aug. 2, 1962, Ser. No. 71,140
Term of patent 14 years
(Cl. D13—1)



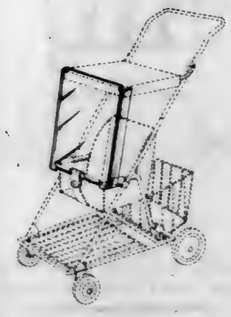
197,964
TRACTOR
Nolan Rhoades, Beloit, Wis., assignor to Simplicity Manufacturing Company, Port Washington, Wis., a corporation of Wisconsin
Filed May 29, 1963, Ser. No. 75,115
Term of patent 14 years
(Cl. D14—3)



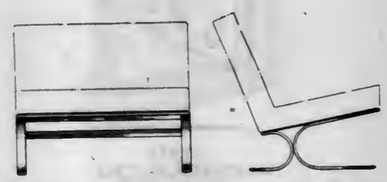
197,965
PASSENGER CARRIER
Dominic A. Saporito and Samuel M. Highberger, Birmingham, Mich., assignors to Clark Equipment Company, a corporation of Michigan
Filed Nov. 4, 1963, Ser. No. 77,269
Term of patent 14 years
(Cl. D14—3)



197,966
WINDSHIELD FOR CARRIAGES OR THE LIKE
Mary E. Willard, El Paso County, Colo. (1126 N. Nevada Ave., Colorado Springs, Colo.)
Filed Dec. 19, 1961, Ser. No. 67,962
Term of patent 3½ years
(Cl. D14—14)



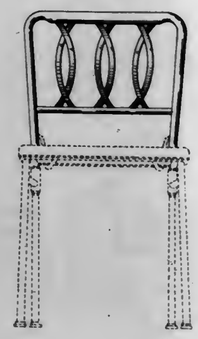
197,967
CHAIR
Simon Waltzman, 195 Hicks St., Brooklyn, N.Y.
Filed Nov. 16, 1961, Ser. No. 67,563
Term of patent 7 years
(Cl. D15—1)



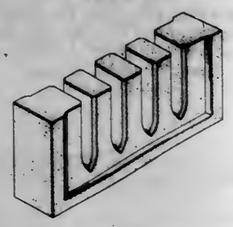
197,968
CHAIR
Robert C. Leachman, Jr., 4905 Grand Ave., Des Moines, Iowa
Filed Jan. 4, 1962, Ser. No. 68,188
Term of patent 14 years
(Cl. D15—1)



197,969
CHAIR
Earl F. Hamilton, Columbus, Ind., assignor to Hamilton Cosco, Inc., Columbus, Ind., a corporation of Indiana
Filed Sept. 10, 1962, Ser. No. 71,633
Term of patent 14 years
(Cl. D15—1)



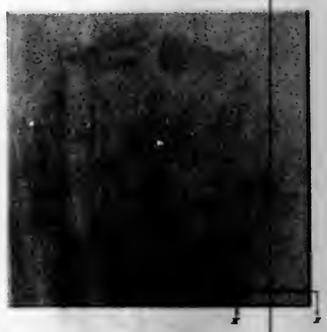
197,970
WALL BLOCK
Raymond W. Clanton, 9735 Orcas Ave., Sunland, Calif.
Filed Nov. 4, 1963, Ser. No. 77,282
Term of patent 14 years
(Cl. D18—2)



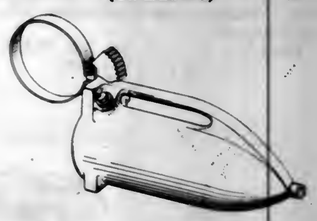
197,971
ACOUSTICAL TILE
Merritt W. Seymour, Jr., Leola, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania
Filed Nov. 14, 1963, Ser. No. 77,437
Term of patent 14 years
(Cl. D18—2)



197,972
ACOUSTICAL TILE
Merritt W. Seymour, Jr., Leola, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania
Filed Nov. 14, 1963, Ser. No. 77,438
Term of patent 14 years
(Cl. D18—2)



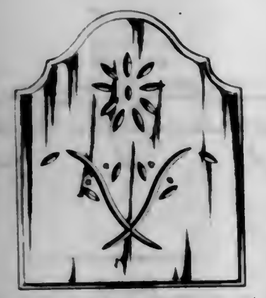
197,973
REMOTE INDUCTION HEAD FOR WELDING THERMOPLASTIC PIPE
George P. Savko, 1051 Bernardo Ave., Sunnyvale, Calif.
Filed Aug. 5, 1963, Ser. No. 76,116
Term of patent 14 years
(Cl. D26—1)



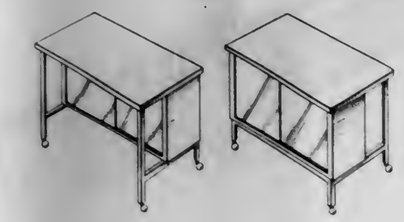
197,974
COIN TELEPHONE
Henry Dreyfuss, South Pasadena, Calif., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed July 31, 1962, Ser. No. 71,117
Term of patent 14 years
(Cl. D26—14)



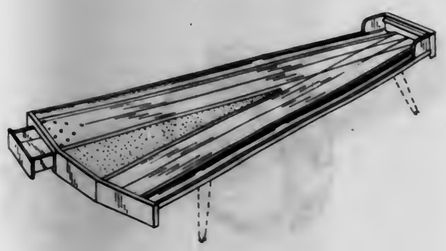
197,975
FURNITURE PANEL OR SIMILAR ARTICLE
Melbourne F. Smith, Lenoir, N.C., assignor to Broyhill Furniture Factories, Lenoir, N.C., a partnership
Filed Oct. 12, 1962, Ser. No. 72,093
Term of patent 14 years
(Cl. D33—1)



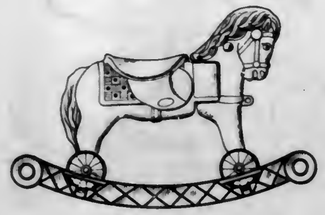
197,976
COMBINED ROOM DIVIDER AND BUFFET OR SIMILAR ARTICLE
Alexander C. Chalfis, Cherry Hill, N.J.
(Box 294, Maple Shade, N.J.)
Filed July 1, 1963, Ser. No. 75,590
Term of patent 14 years
(Cl. D33—19)



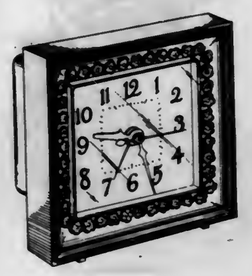
197,977
BOWLING GAME TABLE
Ernest A. Lakamp, Forest Lake, Minn.
Filed Oct. 2, 1962, Ser. No. 71,959
Term of patent 14 years
(Cl. D34—5)



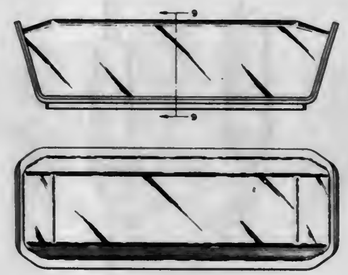
197,978
HOBBY HORSE
Stanley Goldfarb, 98 Havilands Lane, White Plains, N.Y.
Filed Jan. 31, 1963, Ser. No. 73,388
Term of patent 14 years
(Cl. D34—15)



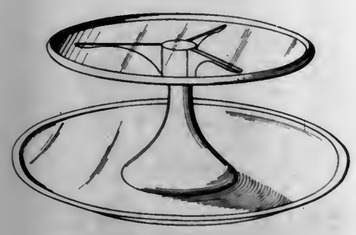
197,979
CLOCK OR SIMILAR ARTICLE
William V. Judson, Westport, Conn., assignor to General Electric Company, a corporation of New York
Filed Mar. 12, 1963, Ser. No. 73,931
Term of patent 14 years
(Cl. D42—7)



197,980
BUTTER DISH OR SIMILAR ARTICLE
Thomas E. Brown, Woonsocket, R.I., assignor to Rexall Drug and Chemical Company, Los Angeles, Calif., a corporation of Delaware
Filed Oct. 10, 1963, Ser. No. 76,939
Term of patent 14 years
(Cl. D44—5)



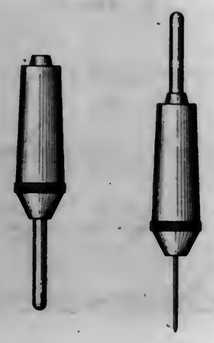
197,981
COMPOTE OR THE LIKE
Willie Mae Miller, Lake Leelanau, Mich.
Filed Oct. 17, 1963, Ser. No. 77,020
Term of patent 14 years
(Cl. D44—10)



197,982
ICE BUCKET
Bennett H. Stayman, 23 Ascenta Terrace, West Newton, Mass.
Filed Oct. 7, 1963, Ser. No. 76,884
Term of patent 14 years
(Cl. D44—15)



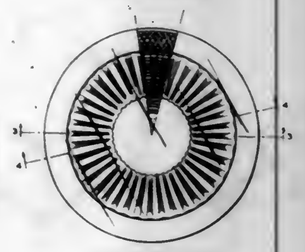
197,983
GAS PRESSURE OPERATED CORK REMOVER
Serge Mourreau, 7 Chemin des Palettes, Grand-Lancy, Geneva, Switzerland, and Marcel Gonnet, 12 Blvd. Georges Favon, Geneva, Switzerland
Filed Apr. 26, 1963, Ser. No. 74,624
Claims priority, application Switzerland Oct. 26, 1962
Term of patent 14 years
(Cl. D44—29)



197,984
CANDLESTICK
Florence C. Ellis, 420 N. Manlius St., Fayetteville, N.Y.
Filed Aug. 6, 1962, Ser. No. 71,181
Term of patent 14 years
(Cl. D48—2)



197,985
LENS FOR HAZARD WARNING LAMPS, VEHICLE LAMPS AND SIMILAR ARTICLES
Robert E. Dawson, Huntingdon Valley, Pa., assignor to R. E. Dietz Company, Syracuse, N.Y., a corporation of New York
Filed Feb. 26, 1962, Ser. No. 68,968
Term of patent 14 years
(Cl. D48—32)



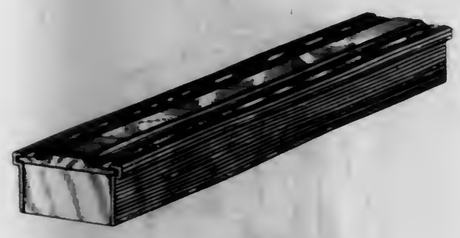
197,986
DOOR KNOB
Ernest L. Schlage, Burlingame, Calif., assignor to Schlage Lock Company, a corporation
Filed May 2, 1962, Ser. No. 69,933
Term of patent 14 years
(Cl. D50—3)



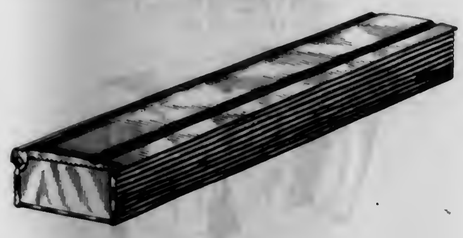
197,987
PORTABLE POWER SHEAR FOR SHEET MATERIAL
Melford H. Docken, Minneapolis, Minn., assignor to W.P.B. Industrial Products, Inc., Skokie, Ill., a corporation of Illinois
Filed Sept. 23, 1958, Ser. No. 52,738
Term of patent 14 years
(Cl. D54—14)



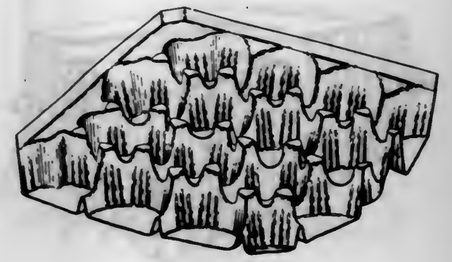
197,988
BOX
Leo R. Slaton, Chicago, Ill., assignor to Swiss Harmony, Inc., Chicago, Ill., a corporation of Illinois
Filed May 9, 1963, Ser. No. 74,825
Term of patent 7 years
(Cl. D58—12.6)



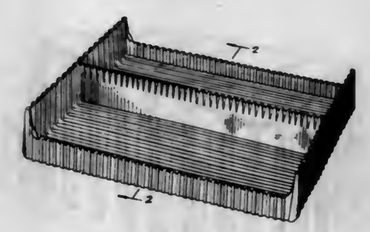
197,989
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Leo R. Slaton, Chicago, Ill., assignor to Swiss Harmony, Inc., Chicago, Ill., a corporation of Illinois
Filed June 28, 1963, Ser. No. 75,568
Term of patent 7 years
(Cl. D58—12.6)



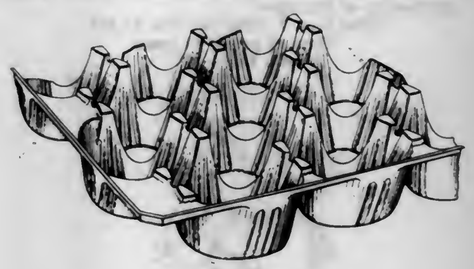
197,990
FRUIT PACKING TRAY
Hugh R. Weiss, Montclair, N.J., assignor to The Pantasote Company, Passaic, N.J., a corporation of New Jersey
Filed Dec. 5, 1961, Ser. No. 67,809
Term of patent 14 years
(Cl. D58—13)



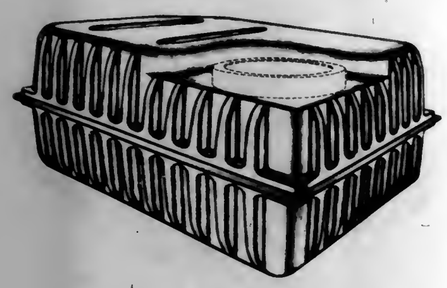
197,991
PACKAGING TRAY
Carlo Caprioli, Montreal, Quebec, Canada, assignor to Plastic Packaging Products Limited, Montreal, Quebec, Canada
Filed Sept. 4, 1962, Ser. No. 71,527
Term of patent 14 years
(Cl. D58—13)



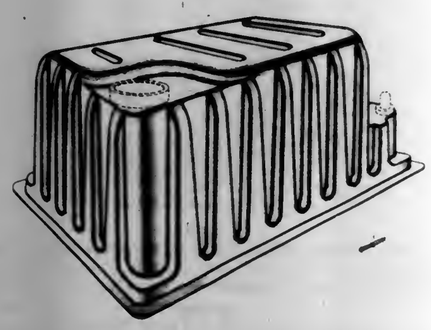
197,992
PACKAGING TRAY FOR PRODUCE
Hugh R. Weiss, Montclair, N.J., assignor to The Pantasote Company, Passaic, N.J., a corporation of New Jersey
Filed Mar. 15, 1963, Ser. No. 73,987
Term of patent 14 years
(Cl. D58—13)



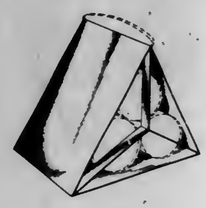
197,993
MILK CARTON OR THE LIKE
Albert B. Mojonnier, Chicago, Ill., assignor to Albert Mojonnier, Inc., Franklin Park, Ill., a corporation of Illinois
Filed Aug. 29, 1963, Ser. No. 76,397
Term of patent 14 years
(Cl. D58—17)



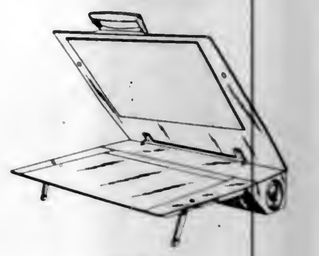
197,994
MILK CARTON OR THE LIKE
Albert B. Mojonnier, Chicago, Ill., assignor to Albert Mojonnier, Inc., Franklin Park, Ill., a corporation of Illinois
Filed Aug. 29, 1963, Ser. No. 76,398
Term of patent 14 years
(Cl. D58—17)



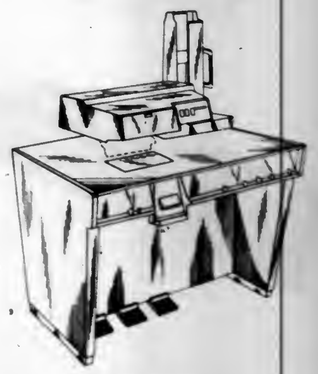
197,995
CYLINDRICAL CONTAINER CARRIER
Clifford R. Keeslar, Kalamazoo, Mich., assignor to Wm. John Upjohn Associates, Kalamazoo, Mich., a proprietorship of Michigan
Filed Sept. 7, 1962, Ser. No. 71,590
Term of patent 14 years
(Cl. D58—26)



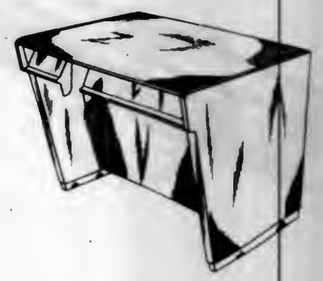
197,996
PHOTOCOPY EXPOSURE UNIT
Chester J. Abend, Camillus, and Karl E. Kober, Syracuse, N.Y., assignors to SCM Corporation, a corporation of New York
Filed Dec. 26, 1962, Ser. No. 72,966
Term of Patent 14 years
(Cl. D61—1)



197,997
PRINTING MACHINE
John J. Van Acker, Chesterland, Ohio, assignor to Addressograph-Multigraph Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Apr. 25, 1962, Ser. No. 69,842
Term of patent 14 years
(Cl. D64—11)



197,998
MACHINE STAND OR THE LIKE
John J. Van Acker, Chesterland, Ohio, assignor to Addressograph-Multigraph Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Apr. 25, 1962, Ser. No. 69,843
Term of patent 14 years
(Cl. D64—11)

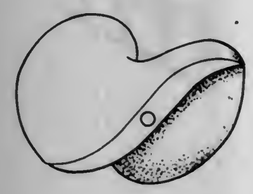


197,999
PUMP FOR THE TREATMENT OF WATER WITH CHEMICALS OR THE LIKE
Nat Cordis, Crown Farm, Silver Lake, Wis.
Filed June 12, 1961, Ser. No. 65,545
Term of patent 14 years
(Cl. D65—1)

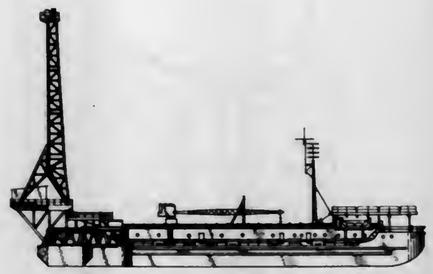


198,000
REFRIGERATOR
Joel D. Fogel, 5400 Eadom St., and Daniel J. Mangini, 2824 Nature Road, both of Philadelphia, Pa.
Filed July 16, 1962, Ser. No. 71,001
Term of patent 7 years
(Cl. D67—3)

198,001
PROPELLER
Raymond L. Mulvane, Box 5266, Los Angeles 55, Calif.
Filed Mar. 2, 1962, Ser. No. 69,143
Term of patent 14 years
(Cl. D71—1)



198,002
OFFSHORE DRILLING VESSEL
Charles Edward Thornton, 2121 E. 26th Place, Tulsa 14, Okla., and George Lamont Temple, 2217 Troon Road, Houston 19, Tex.
Filed Dec. 3, 1962, Ser. No. 72,698
Term of patent 14 years
(Cl. D71—1)



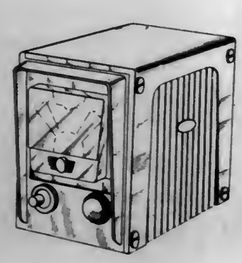
198,003
AIRCRAFT
Lawrence Bernard Rellis, Morton Grove, Ill. (7932B La Mesa Blvd., La Mesa, Calif.)
Filed Mar. 28, 1963, Ser. No. 74,176
Term of patent 14 years
(Cl. D71—1)



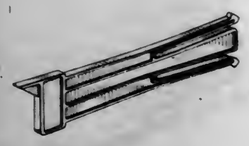
198,004
BOAT
Thomas L. Faul, Skaneateles, N.Y., assignor to Lone Star Boat Company, Plano, Tex., a corporation of Texas
Filed July 22, 1963, Ser. No. 75,917
Term of patent 14 years
(Cl. D71—1)



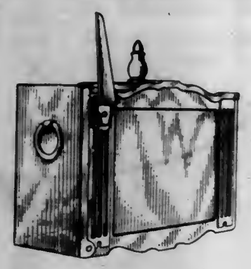
198,005
ALARM UNIT
Nathan Verger, Brooklyn, N.Y., assignor, by mesne assignments, to Pittsburgh Railways Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed June 28, 1962, Ser. No. 70,721
Term of patent 14 years
(Cl. D72—1)



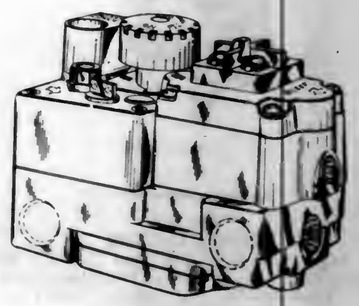
198,006
PAPER CLIP HOLDER
Curt E. Nyberg, 760D Main St., Antioch, Ill.
Filed Jan. 15, 1963, Ser. No. 73,184
Term of patent 14 years
(Cl. D74—1)



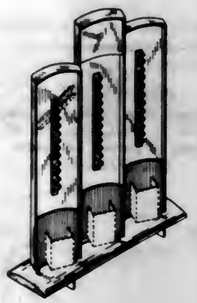
198,007
MAILBOX
Alan W. Duncan, Itasca, and Joseph A. Burlini, Morton Grove, Ill., assignors to Sears, Roebuck and Co., Chicago, Ill., a corporation of New York
Filed Apr. 22, 1963, Ser. No. 74,544
Term of patent 14 years
(Cl. D74—9)



198,008
MANIFOLD GAS VALVE OR THE LIKE
William R. Dunn, Los Angeles, and William F. H. Purcell, Pasadena, Calif., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Sept. 11, 1961, Ser. No. 66,676
Term of patent 14 years
(Cl. D78—1)



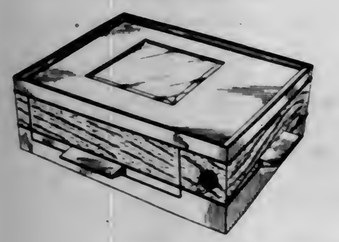
198,009
DISPLAY STAND
Roger F. Rex, Hales Corners, Wis., assignor to Display Corporation, Milwaukee, Wis, a corporation of Wisconsin
Filed June 21, 1963, Ser. No. 75,471
Term of patent 7 years
(Cl. D80—9)



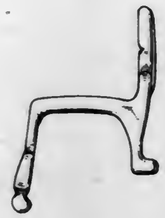
198,010
GAS BURNER BODY
Robert E. Schreter, Malverne, N.Y., and John J. O'Hara, Glen Ridge, N.J., assignors to Hauck Manufacturing Company, Brooklyn, N.Y., a corporation of New York
Filed Oct. 17, 1962, Ser. No. 72,161
Term of patent 7 years
(Cl. D81—10)



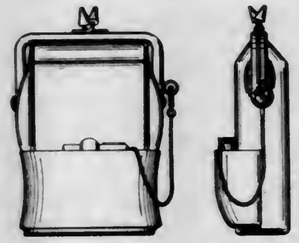
198,011
PORTABLE ELECTRIC BAKING OVEN
Daniel D. Dillingham and Richard F. Dillingham, Abilene, Tex., assignors to Master Corporation of Texas, Abilene, Tex., a corporation of Texas
Filed July 1, 1963, Ser. No. 75,610
Term of patent 14 years
(Cl. D81—10)



198,012
HANDBAG CLOSURE CLASP
Etienne Aigner, 217 Haven Ave., New York, N.Y.
Filed Oct. 16, 1963, Ser. No. 77,004
Term of patent 14 years
(Cl. D87—2)



198,013
COMBINED CIGARETTE PACKAGE CASE AND LIGHTER
Arthur A. Noymer, Marblehead, Mass., assignor to Noymer Manufacturing Company, Boston, Mass.
Filed Jan. 17, 1961, Ser. No. 63,591
Term of patent 14 years
(Cl. D87—3)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 14TH DAY OF APRIL, 1964

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Bell Intercontinental Corp.: *See*—
Lellaert, Raymond M. Re. 25,554.

Bers, Max. Ring and roller pulverizing apparatus. Re. 25,552, 4–14–64, Cl. 241—118.

Budzich, Tadeusz, to The Weatherhead Co. Pump. Re. 25,553, 4–14–64, Cl. 103—37.

Foster, Berry W. Vacuum pump. Re. 25,555, 4–14–64, Cl. 230—95.

Lellaert, Raymond M., to Bell Intercontinental Corp. Method and means for deflashing or trimming molder rubber parts. Re. 25,554, 4–14–64, Cl. 51—13.

Weatherhead Co., The: *See*—
Budzich, Tadeusz. Re. 25,553.

LIST OF PLANT PATENTEES

Ball, George J., Inc.: *See*—
Dunham, Orville O. 2,389.
Dunham, Orville O. 2,390.

Dunham, Orville O., to George J. Ball, Inc. Chrysanthemum plant. 2,389, 4–14–64, Cl. 77.

Dunham, Orville O., to George J. Ball, Inc. Chrysanthemum plant. 2,390, 4–14–64, Cl. 79.

LIST OF DESIGN PATENTEES

Abend, Chester J., and K. E. Kober, to SCM Corp. Photocopy exposure unit. 197,996, 4–14–64, Cl. D61—1.

Addressograph-Multigraph Corp.: *See*—
Van Acker, John J. 197,997.
Van Acker, John J. 197,998.

Aigner, Etienne. Handbag closure clasp. 198,012, 4–14–64, D87—2.

American Radiator & Standard Sanitary Corp.: *See*—
Tiller, James A. 197,944.
Tiller, James A. 197,946.
Tiller, James A., and Maczkov. 197,945.
Tiller, James A., and Maczkov. 197,947.

American Telephone and Telegraph Co.: *See*—
Bruns, Herman R., Melick, and Muscari. 197,963.

Armstrong Corp Co.: *See*—
Seymour, Merritt W., Jr. 197,971.
Seymour, Merritt W., Jr. 197,972.

Barker, Joan. Foot bath. 197,948, 4–14–64, Cl. D4—4.

Bell Telephone Laboratories, Inc.: *See*—
Dreyfuss, Henry. 197,974.

Brown, Thomas E., to Rexall Drug and Chemical Co. Butter dish or similar article. 197,980, 4–14–64, Cl. D44—5.

Broyhill Furniture Factories: *See*—
Smith, Melbourne F. 197,975.

Bruns, Herman R., K. H. Melick, and A. F. Muscari, to American Telephone and Telegraph Co. Telephone booth. 197,963, 4–14–64, Cl. D13—1.

Burlini, Joseph A.: *See*—
Duncan, Alan W., and Burlini. 198,007.

Caprioli, Carlo, to Plastic Packaging Products Ltd. Packaging tray. 197,991. 4–14–64, Cl. D58—13.

Challis, Alexander C. Combined room divider and buffet or similar article. 197,976, 4–14–64, Cl. D33—19.

Child, Cecil E.: *See*—
Stone, Oscar F., and Child. 197,962.

Clanton, Raymond W. Wall block. 197,970, 4–14–64, Cl. D18—2.

Clark Equipment Co.: *See*—
Saporito, Dominic A., and Highberger. 197,965.

Cordis, Nat. Pump for the treatment of water with chemicals or the like. 197,999, 4–14–64, Cl. D65—1.

Dawson, Robert E., to R. E. Dietz Co. Lens for hazard warning lamps, vehicle lamps and similar articles. 197,985, 4–14–64, Cl. D48—32.

Desens, Carl A. Street sweeper. 197,953, 4–14–64, Cl. 9—2.

Dietz, R. E., Co.: *See*—
Dawson, Robert E. 197,985.

Dillingham, Daniel D., and R. F., to Master Corp. of Texas. Portable electric baking oven. 198,011, 4–14–64, Cl. D81—10.

Display Corp.: *See*—
Rex, Roger F. 198,009.

Docken, Melford H., to W.P.B. Industrial Products, Inc. Portable power shear for sheet material. 197,987, 4–14–64, Cl. D54—14.

Dow Chemical Co., The: *See*—
Eicholtz, Clara V. 197,950.

Dreyfuss, Henry, to Bell Telephone Laboratories, Inc. Coin telephone. 197,974, 4–14–64, Cl. D26—14.

Duncan, Alan W., and J. A. Burlini, to Sears, Roebuck and Co. Mailbox. 198,007. 4–14–64, Cl. D74—9.

Dunn, William R., and W. F. H. Purcell, to Minneapolis-Honeywell Regulator Co. Manifold gas valve or the like. 198,008, 4–14–64, Cl. D78—1.

Eicholtz, Clara V., to The Dow Chemical Co. Attachment tray for a crib or the like. 197,950, 4–14–64, Cl. D5—2.

Ellis, Florence C. Candlestick. 197,984, 4–14–64, Cl. D48—2.

Faul, Thomas L., to Lone Star Boat Co. Boat. 198,004, 4–14–64, Cl. D71—1.

Fogel, Joel D., and D. J. Mangini. Refrigerator. 198,000, 4–14–64, Cl. D67—3.

Forsman, Fred O., to Westland Plastics, Inc. Child's training toilet. 197,949, 4–14–64, Cl. D4—5.

General Electric Co.: *See*—
Judson, William V. 197,979.

Goldfarb, Stanley. Hobby horse. 197,978, 4–14–64, Cl. D34—15.

Gonnet, Marcel: *See*—
Mourreau, Serge, and Gonnet. 197,983.

Hamilton Cosco, Inc.: *See*—
Hamilton, Earl F. 197,969.

Hamilton, Earl F., to Hamilton Cosco, Inc. Chair. 197,969, 4–14–64, Cl. D15—1.

Hauck Mfg. Co.: *See*—
Schreter, Robert E., and O'Hara. 198,010.

Heyer, Don, to Hyer Hardware Mfg. Co. Pull for doors, drawers, and the like. 197,954, 4–14–64, Cl. D10—8.

Heyer, Don, to Hyer Hardware Mfg. Co. Pull for doors, drawers, and the like. 197,955, 4–14–64, Cl. D10—8.

Heyer, Don, to Hyer Hardware Mfg. Co. Pull for doors, drawers, and the like. 197,956, 4–14–64, Cl. D10—8.

Heyer, Don, to Hyer Hardware Mfg. Co. Pull for doors, drawers, and the like. 197,957, 4–14–64, Cl. D10—8.

Heyer, Don, to Hyer Hardware Mfg. Co. Pull for doors, drawers, and the like. 197,958, 4–14–64, Cl. D10—8.

Heyer, Don, to Hyer Hardware Mfg. Co. Pull for doors, drawers, and the like. 197,959, 4–14–64, Cl. D10—8.

Heyer, Don, to Hyer Hardware Mfg. Co. Pull for doors, drawers, and the like. 197,960, 4–14–64, Cl. D10—8.

Heyer, Don, to Hyer Hardware Mfg. Co. Pull for doors, drawers, and the like. 197,961, 4–14–64, Cl. D10—8.

Highberger, Samuel M.: *See*—
Saporito, Dominic A., and Highberger. 197,965.

Hyer Hardware Mfg. Co.: *See*—
Heyer, Don. 197,954–61.

International Process & Product Development Corp.: *See*—
Lutz, Herbert S. 197,952.

Judson, William V., to General Electric Co. Clock or similar article. 197,979, 4–14–64, Cl. D42—7.

Kesslar, Clifford R., to Wm. John Upjohn Associates. Cylindrical container carrier. 197,995, 4–14–64, Cl. D58—26.

Kober, Karl E.: *See*—
Abend, Chester J., and Kober. 197,996.

Lakamp, Ernest A. Bowling game table. 197,977, 4–14–64, Cl. D34—5.

Leachman, Robert C., Jr. Chair. 197,968, 4–14–64, Cl. D15—1.

Lone Star Boat Co.: *See*—
Faul, Thomas L. 198,004.

Lutz, Herbert S., to International Process & Product Development Corp. Finger cot. 197,952, 4–14–64, Cl. D9—2.

Maczkov, Nicholas L.: *See*—
Tiller, James A., and Maczkov. 197,945.
Tiller, James A., and Maczkov. 197,947.

Mangini, Daniel J.: *See*—
Fogel, Joel D., and Mangini. 198,000.

Master Corp. of Texas: *See*—
Dillingham, Daniel D. and R. F. 198,011.

Melick, Kenneth H.: *See*—
Bruns, Herman R., Melick, and Muscari. 197,963.

Miller, Willie M. Compote or the like. 197,981, 4–14–64, Cl. D44—10.

Minneapolis-Honeywell Regulator Co.: *See*—
Dunn, William R., and Purcell. 198,008.
Mojonnier, Albert B., to Albert Mojonnier, Inc. Milk carton or the like. 197,993, 4–14–64, Cl. D58—17.
Mojonnier, Albert B., to Albert Mojonnier, Inc. Milk carton or the like. 197,994, 4–14–64, Cl. D58—17.
Mojonnier, Albert, Inc.: *See*—
Mojonnier, Albert B. 197,993.
Mojonnier, Albert B. 197,994.
Mourreau, Serge, and M. Gonnet. Gas pressure operated cork remover. 197,983, 4–14–64, Cl. D44—29.
Mulvane, Raymond L. Propeller. 198,001, 4–14–64, Cl. D71—1.
Muscari, Alfred F.: *See*—
Bruns, Herman R., Melick, and Muscari. 197,963.
Noymer, Arthur A., to Noymer Mfg. Co. Combined cigarette package case and lighter. 198,013, 4–14–64, Cl. D87—3.
Noymer Mfg. Co.: *See*—
Noymer, Arthur A. 198,013.
Nyberg, Curt E. Paper clip holder. 198,006, 4–14–64, Cl. D74—1.
O'Hara, John J.: *See*—
Schreter, Robert E., and O'Hara. 198,010.
Pantasote Co., The: *See*—
Weiss, Hugh R. 197,990.
Weiss, Hugh R. 197,992.
Pittsburgh Railways Co.: *See*—
Verger, Nathan. 198,005.
Plastic Packaging Products Ltd.: *See*—
Caprioli, Carlo. 197,991.
Purcell, William F. H.: *See*—
Dunn, William R., and Purcell. 198,008.
Reilly, Lawrence B. Aircraft. 198,003, 4–14–64, Cl. D71—1.
Rex, Roger F., to Display Corp. Display stand. 198,009, 4–14–64, Cl. D80—9.
Rexall Drug and Chemical Co.: *See*—
Brown, Thomas E. 197,980.
Rhoades, Nolan, to Simplicity Mfg. Co. Tractor. 197,964, 4–14–64, Cl. D14—3.
SCM Corp.: *See*—
Abend, Chester J., and Kober. 197,996.
Saporito, Dominic A., and S. M. Highberger, to Clark Equipment Co. Passenger carrier. 197,965, 4–14–64, Cl. D14—3.
Savko, George P. Remote induction head for welding thermoplastic pipe. 197,973, 4–14–64, Cl. D26—1.
Schlage, Ernest L., to Schlage Lock Co. Door knob. 197,986, 4–14–64, Cl. D50—3.
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Schreter, Robert E., and J. J. O'Hara, to Hauck Mfg. Co. Gas burner body. 198,010, 4–14–64, Cl. D81—10.
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Seymour, Merritt W., Jr., to Armstrong Cork Co. Acoustical tile. 197,971, 4–14–64, Cl. D18—2.
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Slaton, Leo R., to Swiss Harmony, Inc. Box. 197,988, 4–14–64, Cl. D58—12.6.
Slaton, Leo R., to Swiss Harmony Inc. Box. 197,989, 4–14–64, Cl. 58—12.6.
Smith, Melbourne F., to Broyhill Furniture Factories. Furniture panel or similar article. 197,975, 4–14–64, Cl. D33—1.
Stayman, Bennett H. Ice bucket. 197,982, 4–14–64, Cl. D44—15.
Stone, Oscar F., and C. E. Child; said Child assor. to said Stone. Restaurant building or the like. 197,962, 4–14–64, Cl. D13—1.
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Textron Inc.: *See*—
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Tiller, James A., to American Radiator & Standard Sanitary Corp. Combined lavatory water closet and cabinet. 197,944, 4–14–64, Cl. D4—2.
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Tiller, James A., and N. L. Macskov, to American Radiator & Standard Sanitary Corp. Combined lavatory water closet and cabinet. 197,945, 4–14–64, Cl. D4—2.
Tiller, James A., and N. L. Macskov, to American Radiator & Standard Sanitary Corp. Bathroom unit. 197,947, 4–14–64, Cl. D4—4.
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Van Acker, John J., to Addressograph-Multigraph Corp. Machine stand or the like. 197,998, 4–14–64, Cl. D64—11.
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Weiss, Hugh R., to The Pantasote Co. Fruit packing tray. 197,990, 4–14–64, Cl. D58—13.
Weiss, Hugh R., to the Pantasote Co. Packaging tray for produce. 197,992, 4–14–64, Cl. D58—13.
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Willard, Mary E. Windshield for carriages or the like. 197,966, 4–14–64, Cl. D14—14.
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Krause, Ira J. 3,128,917.
Scislowicz, Henry M. 3,128,769.
Abild, Robert N., to United Aircraft Corp. Pre-burner rocket control system. 3,128,601, 4–14–64, Cl. 60—35.6.
Abrams, Josef S. Money saving device. 3,128,942, 4–14–64, Cl. 232—5.
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King, James L. 3,128,638.
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Agnon, Shmuel, to The State of Israel, Ministry of Defense. Emergency sealing devices. 3,128,901, 4–14–64, Cl. 220—57.
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Bachelet, Gilbert H., and Bruiet. 3,128,810.
Albrecht, Friedrich W., to Olympia Werke A.G. Matrix switching arrangement. 3,129,411, 4–14–64, Cl. 340—174.
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Bourne, Henry A., Jr., Sutton, Conley, and Albright. 3,129,331.
Alexander, Guy B., and P. C. Yates, to E. I. du Pont de Nemours, and Co. Process for producing a composite metal oxide particle in a colloidal aquasol. 3,129,093, 4–14–64, Cl. 75—.5.
Alfieri, Giuseppe, to Fabbrica Italiana Magneti Marelli S.p.A. Articulated parallelogram supporting device for supporting blades or similar parts in automotive vehicle wipers. 3,128,490, 4–14–64, Cl. 15—250.23.
Alfieri, Giuseppe, to Fabbrica Italiana Magneti Marelli S.p.A. Device for braking either rear wheel of a vehicle when taking a curve. 3,129,035, 4–14–64, Cl. 303—6.
Alfieri, Giuseppe, to Fabbrica Italiana Magneti Marelli S.p.A. Antifreeze apparatuses for compressed air systems, particularly used on vehicles. 3,129,267, 4–14–64, Cl. 261—99.
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All Products Co.: *See*—
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Allen, Opal: *See*—
Petermann, Ursula A., and Allen. 3,128,470.
Alles, Francis P., to E. I. du Pont de Nemours, and Co. Machine for forming images. 3,128,497, 4–14–64, Cl. 18—1.
Alles, Francis P., to E. I. du Pont de Nemours, and Co. Image-forming machine. 3,128,498, 4–14–64, Cl. 18—1.
Alley, David W. Clothespin. 3,128,517, 4–14–64, Cl. 24—137.
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Allingham, William D. Method of making a panel. 3,128,544, 4–14–64, Cl. 29—420.
Alligham, William D. Turbine overspeed control. 3,128,989, 4–14–64, Cl. 253—59.
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Benjey, William G., and Reynolds. 3,128,523.
Alter, Raymond. Nibbler valve. 3,128,745, 4–14–64, Cl. 119—75.
Altovsky, Voldemar A., P. R. J. Mondon, and P. L. J. L. Camerini, to Societe Nauvelle d-Electronique. Display-modifying apparatus for radar systems. 3,129,426, 4–14–64, Cl. 343—17.1.
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Kramer, Max J. 3,129,384.
Alvarez-Calderon, Alberto. High lift system for aircraft wings. 3,128,966, 4–14–64, Cl. 244—42.
Amadon, Frank W., and A. A. Zalis, to Warren Pumps, Inc. Pump. 3,128,715, 4–14–64, Cl. 103—128.
Ambrogi, William P., and D. O. Nicodemus, to Rohm & Haas Co. Mixer-settler apparatus. 3,129,066, 4–14–64, Cl. 23—288.
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Anagnostou, George N. Rope ladder. 3,128,843, 4–14–64, Cl. 182—198.
Anania, James A., 33% to F. C. Holle, 33% to O. Sass, and 10% to W. J. Matt, Jr. Cutter tool assembly. 3,128,535, 4–14–64, Cl. 29—98.
Andersen, Raymond C., deceased, by J. K. Peterson, administratrix, to Flexonics Corp. Corrugator for metal tubing. 3,128,821, 4–14–64, Cl. 153—71.
Andersen, Reidar E. Ball projector having clutch and spring means causing a striker head to contact a ball in its path of travel. 3,128,752, 4–14–64, Cl. 124—16.
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Arlewitz, Daniel, to Westinghouse Electric Corp. Volume controls for fans. 3,128,938, 4–14–64, Cl. 230—114.
Arkless, George F., and F. T. Randell, to G. & J. Weir, Ltd. System for pumping liquids into and out of tanks. 3,128,709, 4–14–64, Cl. 103—5.
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Avila, Arthur J., S. J. Buzash, and R. E. Thomas, to Western Electric Co., Inc. Bonding device for joining a wire-like member to a part. 3,128,649, 4–14–64, Cl. 78—82.
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Bartone, John. Trailer hitch. 3,129,019, 4–14–64, Cl. 280—485.
Baskin, Herbert B., to International Business Machines Corp. Logical and memory circuits utilizing tri-level signals. 3,129,340, 4–14–64, Cl. 307—88.5.
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Packard, Martin E., Bloom, and Bell. 3,129,389.
Bloom, Barry M., and R. E. Carnahan, to Chas. Pfizer & Co., Inc. Substituted hydrazinoamides as therapeutic agents. 3,129,258, 4–14–64, Cl. 260—557.
Bloom, Leslie C., to Lubrillite Corp. Illuminating grease gun. 3,128,932, 4–14–64, Cl. 240—6.46.
Bock, Ditmar H., to Cornell Aeronautical Laboratory, Inc. Apparatus for reproducing and transmitting transient images of a subject movable relative to the apparatus. 3,129,284, 4–14–64, Cl. 178—7.2.
Boeing Co., The: *See*—
Gulbert, Martin M., and Skinner. 3,128,577.
McLean, Francis P. 3,129,182.
Boes, David J., and J. H. Freeman, to Westinghouse Electric Corp. Damping and flotation fluid. 3,129,186, 4–14–64, Cl. 252—78.
Bolick, Paul E.: *See*—
Harvey, John K., and Bolick. 3,129,064.
Bondkirch, Joseph A., to Lee S. Heydenreich. Level control device with electrical switch means. 3,129,299, 4–14–64, Cl. 200—61.2.
Bongiovanni, John C., H. O. Hill, C. T. Whitacre, and C. H. Anderson, Jr., to Hyde Park Foundry and Machine Co. Expandable tension reel. 3,128,958, 4–14–64, Cl. 242—72.1.
Boos, Alfred J.: *See*—
Calvert, Henry O., Boos, and Mullis. 3,128,592.
Borah, John E. Power operated multiple press. 3,128,501, 4–14–64, Cl. 18—17.
Borden, Arthur R., to General Motors Corp. Tool and method for measuring the proper angle between angularly disposed shafts. 3,128,554, 4–14–64, Cl. 33—1.
Borden Co., The: *See*—
Gordon, Philip L. 3,129,196.
Borg-Warner Corp.: *See*—
Dahl, Einar S., and Whalen. 3,128,751.
Zeidler, Reinhold C. 3,128,640.
Borman, William T. Apparatus to prevent freezing of ice fishing holes. 3,128,757, 4–14–64, Cl. 126—271.1.
Börner, Gerhard: *See*—
Trankner, Werner, Jurenz, and Börner. 3,128,684.
Boston, J. Crawford: *See*—
Barton, Arthur F. 3,129,279.
Bottom, Theodore J. Roll-forming machine. 3,128,818, 4–14–64, Cl. 153—2.
Boucher, Donald F., and B. C. Sakiadis, to E. I. du Pont de Nemours and Co. Fluid flow inverter. 3,128,794, 4–14–64, Cl. 138—37.
Bourguignon, Jules-Florent-Joseph, to Baumgartner Freres S. A. Device for converting light energy into mechanical energy. 3,129,371, 4–14–64, Cl. 318—480.
Bourne, Henry A., Jr., E. W. Sutton, F. R. Conley, and J. C. Albright, to Continental Oil Co. Method of radiological well logging using a radio-active tracer with a carrier. 3,129,331, 4–14–64, Cl. 250—83.3
Bowen, Philip E., to FMC Corp. Magnetic 6 pack turning device. 3,128,868, 4–14–64, Cl. 198—33.
Bradley, Stephen D., to Detroit Macoid Corp. Waterstop. 3,128,576, 4–14–64, Cl. 50—346.
Bradshaw, Harold G., M. I. Sanderson, and H. H. Shaw, to Cochran Equipment Co. Apparatus for the field cleaning of vegetables. 3,128,485, 4–14–64, Cl. 15—3.14.
Braid, Milton: *See*—
Lawlor, Francis E., Braid, and Barr. 3,129,250.
Brandt, Carl D., to Whitin Machine Works. Method of preparing laps for combing machines. 3,128,506, 4–14–64, Cl. 19—115.
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Brede, Albert. Saw with reciprocating arbor assembly. 3,128,801, 4–14–64, Cl. 143—47.
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Rively, Clair M., and Brenneck. 3,129,043.
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Briggs, Peter R. A., to Davy and United Engineering Co. Ltd. Measurement and control of thickness in the production of sheet and strip material. 3,128,630, 4–14–64, Cl. 73—432.
Brindell, Gordon D., and A. J. Lundeen, to Continental Oil Co. Polymerization catalyst and process. 3,129,211, 4–14–64, Cl. 260—94.9.
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Ferrier, Duncan C., and Parr. 3,129,272.
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Brockbank, Robert A., and E. F. S. Clarke, to Her Majesty's Postmaster General. Grapnels for submarine cables. 3,129,030, 4–14–64, Cl. 294—66.
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Brooks, Chester E., and J. L. Henry to Bell Telephone Laboratories, Inc. Remote distributed telephone line concentrator. 3,129,291, 4–14–64, Cl. 179—16.
Brooks, Chester E., and W. C. Sand, to Bell Telephone Laboratories, Inc. Distributed telephone line concentrator system. 3,129,292, 4–14–64, Cl. 179—18.
Brooks, Dewey H., Jr., and O. W. Jacobs, to The Sheffield Corp. Wheel manufacture. 3,128,539, 4–14–64, Cl. 29—159.
Brooks, Ernest A., and L. S. DeMart, to Diamond Power Specialty Corp. Self-aligning connector for stud tensioners. 3,128,990, 4–14–64, Cl. 254—29.
Broussard, Garfford J., to Williams Gold Refining Co., Inc. Orthodontic appliance. 3,128,552, 4–14–64, Cl. 32—14.
Brown, Boveri & Cie, Aktiengesellschaft: *See*—
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Brown, Cicero C. Well packer assemblies. 3,128,826, 4–14–64, Cl. 166—134.
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Shaver, Elijah C. 3,128,817.
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Browning, Bruce W., to Browning Industries, Inc. Safety and dry-firing device for pistols. 3,128,570, 4–14–64, Cl. 42—70.
Browning Industries, Inc.: *See*—
Browning, Bruce W. 3,128,570.
Brownlee, Hugh M., and N. H. Liberty, to FMC Corp. Apparatus for packing elongate articles. 3,128,585, 4–14–64, Cl. 53—236.
Brubaker, Wilson M., to Bell & Howell Co. Auxiliary electrodes for quadrupole mass filters. 3,129,327, 4–14–64, Cl. 250—41.9.
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Brundage, Robert W. Multiple discharge hydraulic pump. 3,128,707, 4–14–64, Cl. 103—2.
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Bryan, Paul J., to E. I. du Pont de Nemours and Co. Water imperuious detonator. 3,128,703, 4–14–64, Cl. 102—28.
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Bult, John E. and D. D. 3,128 844.
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Malla, Austin P., and Wiles. 3,128,647.
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Bureau d'Etudes Nucleaires en abrege B.E.N.: *See*—
Erkes, Pierre A. 3,128,963.
Burgin, Kermit H., 80% to F. B. Cline. Water jet drive. 3,128,740. 4–14–64, Cl. 115—12.
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Kay, John D. 3,128,525.
Burlison, Garry L., and J. P. Savok. Ventilated boot. 3,128,566, 4–14–64, Cl. 36—3.
Burman, Joseph O., Jr., to Progressive Machinery Corp. Hinged box construction. 3,128,898, 4–14–64, Cl. 220—65.
Burndy Corp.: *See*—
Dupre, Henry P., and Osborn. 3,129,050.
Burnel, Philippe. Circular loom. 3,128,795, 4–14–64, Cl. 139—13.
Burnett, James H., to General Signal Corp. Smooth control of polyphase induction motors. 3,129,368, 4–14–64, Cl. 318—227.
Burnham, Charles E. Window well cover. 3,128,508, 4–14–64. Cl. 20—1.
Burnham, John B., Jr., and J. G. Darrah, to General Motors Corp. Nuclear reactor fuel element and process for making same. 3,129,141 4–14–64, Cl. 176—69.
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Bussert, Jack F., and F. K. Kawabara, to Standard Oil Co. Motor fuel. 3,129,074 4–14–64, Cl. 44—69.
Buter, Adrian E., to Allied Chemical Corp. Granular urea-form fertilizer. 3,129,091, 4–14–64, Cl. 71—28.
Butterworth, Archibald J. Control devices for hydraulically actuated jacking or parking mechanism. 3,128,839, 4–14–64, Cl. 180—1.
Buzash Steven J.: *See*—
Avila, Arthur J., Buzash, and Thomas. 3,128,649.
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California Research Corp.: *See*—
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Callinan, Thomas D., J. S. Crimi, H. L. McGee, A. M. Parks, and P. M. Schwartz, to International Business Machines Corp. Synthetic wax substitutes for carnauba wax and transfer ink compositions containing such substitutes. 3,129,104, 4–14–64, Cl. 106—31.

Calmec Mfg. Co.: *See*—
Green, Leland W. 3,128,632.

Calvert, Henry O., A. J. Boos, and J. E. Mullis, to Insulating Fabricators, Inc. Ring frame traverse device. 3,128,592, 4–14–64, Cl. 57—136.

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Camerini, Pierre L. J. L.: *See*—
Altovsky, Voldemar A., Mondon and Camerini. 3,129,426.

Cameron, Colin E. Power transmission. 3,128,742, 4–14–64, Cl. 115—37.

Cameron and Jones, Inc., The: *See*—
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Cameron, Russell J., to The Cameron and Jones, Inc. Method of treating and pipelining of crude shale oil-coal slurries. 3 129,164, 4–14–64, Cl. 208—8.

Campbell, Sylvester J.: *See*—
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Campbell, Thomas, to Joseph Lucas (Industries), Ltd. Rotary shaft seal with drainage means. 3,129,011, 4–14–64, Cl. 277—59.

Canadian Westinghouse Co., Ltd.: *See*—
McKeough, Daniel H., and Franz. 3,129,309.

Capaldo, Henry N., H. G. Dombrowski, and C. M. Shannony, to General Motors Corp. Welding control. 3,129,320, 4–14–64, Cl. 219—89.

Carlevato, Harold G., to E. I. du Pont de Nemours, and Co. Blasting composition. 3,129,126, 4–14–64, Cl. 149—29.

Carnahan, Robert E.: *See*—
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Carr, Donald E., to Phillips Petroleum Co. Solid-fluid rocket propellant system. 3,128,599, 4–14–64, Cl. 60—35.6.

Carrillo, Andres M., to Rotat-Coffee, Inc. Infusion machine. 3,128,691, 4–14–64, Cl. 99—293.

Carson, Charles J.: *See*—
Watt, Charles E., Jr., and Carson. 3,129,278.

Carter, Andrew G., and H. G. Alofs, to A. G. and H. J. Carter, d.b.a. Carter Engineering Co. Clamped sister-hook terminal coupling for safety belts. 3,128,520, 4–14–64, Cl. 24—242.

Carter Engineering Co.: *See*—
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Carter, Harriett J.: *See*—
Carter, Andrew G., and Alofs. 3,128,520.

Carter, Norman W., to Beckman Instruments, Inc. Densitised glass membrane and the method and composition for producing the same. 3,129,160, 4–14–64, Cl. 204—195.

Cash, Burns A., to United States of America, Air Force. Metering device for molten metal. 3,128,912, 4–14–64, Cl. 222—52.

Casson, Nicholas V. Saw guide for cutting flexible conduit. 3,129,000, 4–14–64, Cl. 269—2.

Castle, John E., to E. I. du Pont de Nemours, and Co. Dispersions of organic dyes and pigments in fluoroalcohols. 3,129,053, 4–14–64, Cl. 8—93.

Certain-Teed Products Corp.: *See*—
Johnson, Helge C., and Robinson. 3,128,889.

Chaboche, Miguel, to Remy, Pierre, & Cie, Etablissements. Stoppers for containers. 3,128,900, 4–14–64, Cl. 220—54.

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Morris, John M., and Evans. 3,128,911.

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Perkins, Herbert M., and Chakeres. 3,129,306.

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Champion Spark Plug Co.: *See*—
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Charlton, Joseph W., and J. L. Cotsworth. Moldless metal casting process. 3,128,513. 4–14–64, Cl. 22—200.1.

Charnock, Warren P., to Combustion Engineering, Inc. Fuel element. 3,129,142, 4–14–64, Cl. 176—69.

Charvat, Vernon K., to The Osborn Mfg. Co. Method of making a brush type rotary tool. 3,129,269, 4–14–64, Cl. 264—45.

Chase, Allan B., to International Business Machines Corp. Safety circuit for transistor amplifier. 3,129,428, 4–14–64, Cl. 346—74.

Chell, Glenn J., B. Buderus, and R. Palmer. Prefabricated building wall construction. 3,128,852, 4–14–64, Cl. 189—34.

Chelwin Productions, Inc.: *See*—
Winchell, Paul. 3,128,477.

Chemical Construction Corp.: *See*—
Konlewles, Paul, and Korwin. 3,129,065.

Chernock, Warren P., to Combustion Engineering, Inc. Fuel element. 3,129,142, 4–14–64, Cl. 204—193.2.

Childs, John E., to Rolfes Electronics Corp. Remote bin level-indicating device. 3,128,557, 4–14–64, Cl. 33—126.6.

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Christoff, Chris A., to Clary Corp. Printer. 3,128,695, 4–14–64, Cl. 101—93.

Christopher, Albert J., to Alkirk, Inc. Tripod head. 3,128,982, 4–14–64, Cl. 248—183.

Christopher, Glenn B., to Jet Research Center, Inc. Shaped charge perforating unit and all perforating apparatus employing the same. 3,128,702, 4–14–64, Cl. 102—20.

Ciapetta, Frank G.: *See*—
Wilson, Charles P., Jr., Ciapetta, and Elston. 3,129,189.

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Claesson, Per H. E.: *See*—
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Clagett, Robert P., to Western Electric Co., Inc. Apparatus for joining metal leads to semiconductive devices. 3,128,648, 4–14–64, Cl. 78—82.

Claras, Carl W., and T. Wickstrom, to Minnesota Mining and Mfg. Co. Stereo tape recorder system. 3,129,296, 4–14–64, Cl. 179—100.2.

Clark, Harold E., and R. W. Gundlach, to Xerox Corp. Xerographic developing apparatus. 3,129,115, 4–14–64, Cl. 118—637.

Clark, James L., to Mark-Clark, Inc. Method for forming gloves from vinyl film or sheeting. 3,128,473, 4–14–64, Cl. 2—169.

Clark, John B., and P. W. Hicks, to Associated Electrical Industries (Woolwich) Ltd. Electromagnetic code conversion arrangements. 3,129,419, 4–14–64, Cl. 340—347.

Clark, Joseph P., to General Motors Corp. Commutator with oil slinger. 3,129,350, 4–14–64, Cl. 310—235.

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Brockbank, Robert A., and Clarke. 3,129,030.

Clary Corp.: *See*—
Christoff, Chris A. 3,128,695.

Clausen, Sigurd, to International Cigar Machinery Co. Toscani cigar machine. 3,128,774, 4–14–64, Cl. 131—91.

Clausing, Paul. Locking means for belt type stamp imprinting devices. 3,128,697, 4–14–64, Cl. 101—111.

Clearasite Headwear, Inc.: *See*—
Feldman, Samuel. 3,128,474.

Cleek, George E., and A. Sadle, to Allied Chemical Corp. Solutions of melamine-formaldehyde reaction products and processes for their production. 3,129,226, 4–14–64, Cl. 260—249.6.

Cline, Frederick B.: *See*—
Burgin, Kermit H. 3,128,740.

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Rinehart, John S., and Cocanower. 3,128,701.

Cochran Equipment Co.: *See*—
Bradshaw, Harold G., Sanderson, and Shaw. 3,128,485.

Coda, Alfred. Photographic background roller assembly. 3,128,688, 4–14–64, Cl. 95—88.

Codignola, Franco, to Societa' Italiana Resine. Recovery of acetone by distillation in the presence of sodium peroxide. 3,129,147, 4–14–64, Cl. 202—59.

Coleman, James T., to United States of America, Navy. Balun transformer with variable transformation ratio. 3,129,393, 4–14–64, Cl. 333—26.

Colgate-Palmolive Co.: *See*—
Kuster, John J. 3,128,922.

Collins, Bruce M., to Smith Kline & French Laboratories. Antimicrobial 3-methyl-7-aminodecephalosporanic acid derivatives. 3,129,224, 4–14–64, Cl. 260—243.

Collins, John O., Jr.: *See*—
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Collinson, James A., and R. W. Nottorf, to E. I. du Pont de Nemours and Co. Photographic negatives and their preparation. 3,129,096, 4–14–64, Cl. 96—27.

Colpo, Jesse, to Colpo Safety Wheel Inc. Tractor-trailer connecting device. 3,129,018, 4–14–64, Cl. 280—438.

Colpo Safety Wheel Inc.: *See*—
Colpo, Jesse. 3,129,018.

Combustion Engineering, Inc.: *See*—
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Ganchar, Leonard N., and Petro. 3,128,674.

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Cone, Carroll: *See*—
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Baker, Robert S. 3,128,666.

Cone, Douglas P.: *See*—
Baker, Robert S. 3,128,521.
Baker, Robert S. 3,128,666.

Cone, Julian L., Jr.: *See*—
Baker, Robert S. 3,128,521.
Baker, Robert S. 3,128,666.

Congoleum-Nairn Inc.: *See*—
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Conley, Francis R.: *See*—
Bourne, Henry A., Jr., Sutton, Conley, and Albright. 3,129,331.

Conmar Products Corp.: *See*—
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Consaul, John G., and E. Velten, to Art Color Printing Co. Method of gravure reproduction. 3,129,099, 4–14–64, Cl. 96—43.

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Brindell, Gordon D., and Lundeen. 3,129,211.
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Manno, Peter J., and Snavely. 3,129,156.

Cook, Eugene A., and C. Cone, to Midland-Ross Corp. Heat transfer apparatus for continuously moving strip. 3,129,072, 4–14–64, Cl. 34—54.

Cook, Lester E.: *See*—
Johnson, Lester C., and Cook. 3,128,573.

Cooper, Theodore W., to Hughes Aircraft Co. Bonding oxidized materials. 3,128,545, 4–14–64, Cl. 29—472.7.

Cordis, Nat. Poultry feeder with reciprocable conveyor. 3,128,877, 4–14–64, Cl. 198—224.

Cormier, William F., to Minneapolis-Honeywell Regulator Co. D.C. to A.C. converter. 3,129,379, 4–14–64, Cl. 323—22.

Cornell Aeronautical Laboratory, Inc.: *See*—
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Corning Glass Works: *See*—
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Katona, Gabriel P. 3,129,108.

Corry, Thomas M., to Westinghouse Electric Corp. Thermoelectric device. 3,129,116, 4–14–64, Cl. 136—4.

Corry, Thomas M.: *See*—
Relation, Alfred E., Putkovich, and Corry. 3,129,374.

Cotsworth, John L.: *See*—
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Cowles, Warren H., and J. E. Smith, to Holley Carburetor Co. Bypass valve with limited reset. 3,128,783, 4–14–64, Cl. 137—117.

Cox, Herbert F., Jr., to Inland Container Corp. Preformed wire tie. 3,128,515, 4–14–64, Cl. 24—30.5.

Cox, Robert N.: *See*—
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Craig Systems, Inc.: *See*—
Watt, Charles E., Jr., and Carson. 3,129,278.

Crimi, Joseph S.: *See*—
Callinan, Thomas D., Crimi, McGee, Parks, and Schwartz. 3,129,104.

Crisci, Victor E., to Mammoth Plastics, Inc. Snap-over cover. 3,128,903, 4–14–64, Cl. 220—60.

Croft, Richard D.: *See*—
Veatch, Franklin, Alford, and Croft. 3,129,086.

Crommen, Roger C. L., to Compagnie Crouzet. Automatic telephone call device. 3,129,295, 4–14–64, Cl. 179—90.

Crompton & Knowles Corp.: *See*—
Bergstrom, Carl P., and Dion. 3,128,796.
Pearson, Lincoln E. 3,128,507.

Cropp, David L., C. C. Jordan, and R. W. Lingo, to Saegertown Glasseals, Inc. Machine for assembling electrical components. 3,128,520, 4–14–64, Cl. 29—25.2.

Crown, James A., to Philip Morris, Inc. Adjustable injector razor. 3,128,551, 4–14–64, Cl. 30—63.

Cull, Neville L., and G. P. Hammer, to Esso Research and Engineering Co. Mixtures of resins from oxidised aromatic extracts and oxidised liquid diolefin polymers. 3,129,107, 4–14–64, Cl. 106—285.

Cummins Engine Co., Inc.: *See*—
Schmidt, Robert C. 3,128,750.

Cunningham, Wallace, to Winget Ltd. Mobile material mixers and agitators, particularly concrete mixers and agitators. 3,128,631, 4–14–64, Cl. 74—15.84.

Cunningham, William, to Imperial Chemical Industries Ltd. Apparatus for cutting continuously extruded material. 3,128,500, 4–14–64, Cl. 18—12.

Curtis, John E.: *See*—
Nickerson, Mortimer H., Schnitzer, Curtis, and Patterson. 3,129,191.

Curtiss-Wright Corp.: *See*—
Hammond, James W. 3,128,591.
Hungerford, Philip C., Jr., and Tomko. 3,128,864.
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Cutler-Hammer, Inc.: *See*—
Hylak, Roy, Kitscha, and Quaal. 3,129,304.

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Gordon, Philip N., to Chas. Pfizer & Co., Inc. 3-nitrofurantoincarboxylic acid esters. 3,129,223, 4–14–64, Cl. 260—240.

Gordon, Richard E., to Ex-Cell-O Corp. Afterburner fuel control. 3,128,598, 4–14–64, Cl. 60—35.6.

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Hoyt, Robert L., and C. L. Knutson, to Western Electric Co., Inc. Apparatus for curling an end of a wire. 3,128,820, 4–14–64, Cl. 153—2.

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Hübel, Karl W., to Union Carbide Corp. Process for the preparation of substituted benzenic compounds from acetylenes. 3,129 243, 4–14–64, Cl. 260—475.

Huber, William J., to Goodman Mfg. Co. Transportable flexible belt conveyor. 3,128,871, 4–14–64, Cl. 198—184.

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Ihde, Frederick J., Jr., and S. Altscher, to Nopco Chemical Co. New process for preparing siliceous amino compounds. 3,129,177, 4–14–64, Cl. 252—21.
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Johnson, Nels A., ½ to G. M. Munson. Water softener regeneration method and apparatus. 3,129,169, 4–14–64, Cl. 210—32.
Johnson, Roy W. and B. H., to Johnson Farm Machinery Co. Planting and cultivating device. 3,128,833, 4–14–64, Cl. 172—245.
Johnson, Thomas F., to United States Steel Corp. Method of separating naphthoic acid isomers. 3,129,244, 4–14–64, Cl. 260—525.
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Joly, Robert, J. Warnant, J. Jolly, A. Guillemette, and B. Goffinet, to Roussel UCLAF, S.A. Preparation of 21-brominated pregnanes. 3,129,219, 4–14–64, Cl. 260—239.5.
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Kay, John D., to Burke Concrete Accessories, Inc. Clamp bracket for concrete forms. 3,128,525, 4–14–64, Cl. 25—131.
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La Valley, Leslie D. Fabric edger. 3,128,797, 4–14–64, Cl. 139—266.

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Lehnert, Gunther, to Hackethal Draht und Kabel Werke AG. Apparatus for making thin walled corrugated metal tubing. 3,128,930, 4–14–64, Cl. 226—173.

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Muncie, Fred W., to Sunl-Citrus Products Co. Resins prepared from terpene oxydates and maleic anhydride. 3,129,203, 4–14–64, Cl. 260—78.5.

Munekata, Eiji, and A. Suzuki, to Asahi Kasei Kogyo Kabushiki Kaisha. Method of producing a slag having the low melting point in the manufacture of metallic magnesium by reduction of magnesia with ferrosilicon. 3,129,094, 4–14–64, Cl. 75—67.

Munoz de Vargas, Jose. Device for accelerating the disconnection of electric switches and for extinguishing their arc. 3,129,307, 4–14–64, Cl. 200—144.

Munson, George M.: *See*—
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Murray, Gilbert. Packaging machine. 3,128,583, 4–14–64, Cl. 53—119.

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Muskat, Louis R., and K. L. Klopfenstein, to Triangle Package Machinery Co. Method of and machine for automatically wrapping articles. 3,128,584, 4–14–64, Cl. 53—184.

Musser, C Walton, to United Shoe Machinery Corp. Power transmission. 3,128,641, 4–14–64, Cl. 74—640.

Nace, Harold R., to Richardson-Merrell Inc. Methyl 3β,5β-dihydroxy-B-norcholestane-6β-carboxylate. 3,129,242, 4–14–64, Cl. 260—468.

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National Cleaning Equipment Corp.: *See*—
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National Dairy Products Corp.: *See*—
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National Research Development Corp.: *See*—
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Nelle, Rudolf, to Norddeutsche Seekabelwerke Aktiengesellschaft. Protective wrappers for breakable articles. 3,128,895, 4–14–64, Cl. 215—12.

Nelson, Robert L. End gate mounted grain auger. 3,128,894, 4–14–64, Cl. 214—509.

Nemes, Elmer P. Multiple radiation source microscope. 3,129,353, 4–14–64, Cl. 315—10.

Nenstiel, Richard F.: *See*—
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Newbrander, Stanley M., and E. J. and J. R. Smith, to National Steel Corp. Method of continuously producing heat treated electrolytic tinplate. 3,129,150, 4–14–64, Cl. 204—37.

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Rouse, Robert L., Wakefield, Willis, Bullough, and Newman. 3,129,119.

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N.H.K. Spring Co., Ltd.: *See*—
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Nicholl, Thomas H. Emergency signal lamp device. 3,128,951, 4–14–64, Cl. 240—6.4.

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Nickerson, Mortimer H., H. S. Schnitzer, J. E. Curtis, and G. D. Patterson, to DeBell & Richardson, Inc. Dielectric foams. 3,129,191, 4–14–64, Cl. 260—2.5.

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Lutswelt, Walter F., and Niemi. 3,129,113.

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Nix, Vernon G., to The Sherwin-Williams Co. Quaternary monoimidazoline salts as thermosetting catalysts for resinous blends comprising polyepoxide polymers and acrylic polymers having a plurality of carboxyl groups therein. 3,129,198, 4–14–64, Cl. 260—45.5.

Noddin, George A., and J. P. Swed, to E. I. du Pont de Nemours, and Co. Pressure responsive initiator. 3,128,704, 4–14–64, Cl. 102—70.

Nolan, James J. Vaginal tampon device incorporating membrane for substantially blocking inflow of water. 3,128,767, 4–14–64, Cl. 128—285.

Nonnamaker, William M., to The Mohawk Rubber Co. Sidewall and pneumatic tire combination. 3,128,815, 4–14–64, Cl. 152—353.

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Ihde, Frederick J., Jr. 3,129,181.

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Norddeutsche Seekabelwerk Aktiengesellschaft: *See*—
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Norris, William C., W. Rupinski, and K. S. Svendsen, to Combustion Engineering, Inc. Raising-supporting-aligning jig for tubular wall construction. 3,128,736, 4–14–64, Cl. 113—102.

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Kohler, Jacob W. L. 3,129,080.
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Northern Electric Co., Ltd.: *See*—
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Collinson, James A., and Nottorf. 3,129,096.

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O'Connor, Hugh W., to Walworth Co. Non-lubricated plug valve with plastic liner. 3,128,987, 4–14–64, Cl. 251—312.

O'Connor, Neal E., and T. W. Shearer, Jr., to General Motors Corp. Welding electrode dressing means. 3,128,672, 4–14–64, Cl. 90—12.

Odioso, Raymond C., B. K. Schmid, and R. C. Zabor, to Gulf Research & Development Co. Hydration of olefins. 3,129,253, 4–14–64, Cl. 260—641.

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Olsen, Andrew H., and D. G. Trutner, to Duro-Test Corp. Method for forming spiral lamp tubes. 3,129,085, 4–14–64, Cl. 65—109.

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Ongkiehong, Leo. A. Bijl, and A. Schuringa, to Shell Oil Co. Flame ionization detector. 3,129,062, 4–14–64, Cl. 23—255.

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Onsrud, Rudolph F.: *See*—
Karlovitz, John E., and Onsrud. 3,128,534.

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Kay, John G., and Osinski. 3,128,876.

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Owens-Illinois Glass Co.: *See*—
Torok, Julius J. 3,129,089.
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Oxley, Robert F. Adjustable rotary condensers. 3,129,364, 4–14–64, Cl. 317—253.

Packard Instrument Co., Inc.: *See*—
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Packard, Martin E., A. L. Bloom, and W. E. Bell, to Varian Associates. Quantum resonance stabilized frequency source. 3,129,389, 4–14–64, Cl. 331—3.

Page, Robert Z., and J. W. Terrill. Biological detection equipment. 3,129,144, 4–14–64. Cl. 195—127.

Paisley, John, to Eastwoods Ltd. Apparatus for stacking or setting up bricks. 3,128,890, 4–14–64, Cl. 214—6.

Pajaczkowski, Andrzej, to Imperial Chemical Industries Ltd. Polymerisation process. 3,129,206, 4–14–64, Cl. 260—88.7.

Palm, Felix L. Container holder and blank. 3,128,984, 4–14–64, Cl. 248—311.

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Magel, Bernard, Matray, Palmer, and Tanner. 3,128,528.

Palmer, Robert: *See*—
Chell, Glenn J., Buderus, and Palmer. 3,128,852.

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Parker, Kenneth, and D. W. Doman, to The Parker Pen Co. Writing instrument releasable securing means. 3,128,514, 4–14–64, Cl. 24—11.

Parker, Otis J., to United States of America, National Aeronautics and Space Administration. Despin weight release. 3,128,845, 4–14–64, Cl. 188—1.

Parker Pen Co., The: *See*—
Parker, Kenneth, and Doman. 3,128,514.

Parks, Ann M.: *See*—
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Patterson, Morehead, to American Machine & Foundry Co. Cigarette making machine. 3,128,773, 4–14–64, Cl. 131—62.

Paul, Tadeusz. Handle soap sponge. 3,128,498, 4–14–64, Cl. 15—542.

Paull, Marvin C., to Bell Telephone Laboratories, Inc. Switching network control system. 3,129,407, 4–14–64, Cl. 340—147.

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Payne, John H., Jr. Wheel alignment gage. 3,128,561, 4–14–64, Cl. 33—203.2.

Paynter, Allison L., and C. W. Gipe, to The Ryan Aeronautical Co. Means and method for explosive forming materials at high temperatures. 3,128,732, 4–14–64, Cl. 113—44.

Pearson, Lincoln E., to Crompton & Knowles Corp. Method of depositing fibers from one tow onto another tow inclined to forming a nonwoven web. 3,128,507, 4–14–64, Cl. 19—155.

Pease, Lionel. Power takeoff unit. 3,128,860, 4–14–64, Cl. 192—4.

Pegson Ltd.: *See*—
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Pelson, Ernest. Reel construction. 3,128,959, 4–14–64, Cl. 242—74

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Lawlor, Francis E., Braid, and Barr. 3,129,250.
Schuster, Ludwig K., and Baldi. 3,128,546.

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Perley, Richmond, to United Aircraft Corp. Digital signal comparison circuit. 3,129,406, 4–14–64, Cl. 340—146.1.

Perley, Richmond, to United Aircraft Corp. Magnetic tape to perforated tape digital information converter. 3,129,409, 4–14–64, Cl. 340—172.5.

Perry, Lyle R.: *See*—
Mueller, Alvin W., and Perry. 3,129,003.

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Le Guennec, Rene, and Pesenti. 3,128,887.

Petermann, Ursula A., and O. Allen. Article of neckwear. 3,128,470, 4–14–64, Cl. 2—145.

Peterson, Edward T., to Birdsboro Corp. Cooling bed. 3,128,651, 4–14–64, Cl. 80—42.

Peterson, Jessie K.: *See*—
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Phillips, Robert M., to General Electric Co. Fast electromagnetic wave and undulating electron beam interaction structure. 3,129,356, 4–14–64, Cl. 315—39.3.

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Pickels, Edward G., and R. C. Stallman, to Beckman Instruments, Inc. Continuous flow type centrifuge and fluid temperature control therefor. 3,129,174, 4–14–64, Cl. 233—11.

Picot, Bernard T. E., to Christian Dior Parfums. Spray with refill aerosols. 3,128,916, 4–14–64, Cl. 222—183.

Pillman, Arthur H. Double drum hoists. 3,128,991, 4–14–64, Cl. 254—185.

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Pitman Mfg. Co.: *See*—
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Pitman, Raymond F., D. E. Broderson, and H. W. Gronemeyer, Jr., to Pitman Mfg. Co. Swingable boom turret structure for mobile vehicles. 3,128,883, 4–14–64, Cl. 212—68.

Pittsburgh Plate Glass Co.: *See*—
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Plant, Leland G., deceased; P. L. M. Plant, executrix, to M. H. Lane, trustee. Means for evacuating cars of the hopper type. 3,128,892, 4-14-64, Cl. 214—64.2.

Plant, Pattie L. M.: *See*—
Plant, Leland G. 3,128,892.

Plastock, Irving. Fabric fringe fraying device. 3,128,526, 4-14-64, Cl. 28—18.

Platte, Jerome A., R. V. Wright, and V. M. Marcy, to Calgon Corp. Device for commingling slowly flowing fluids. 3,128,993, 4-14-64, Cl. 259—4.

Pogge, Raymond C.: *See*—
Dale, Lamar B., Jr., Christenson, and Pogge. 3,129,139.

Pohl, Robert G., to The Rauland Corp. Uni-junction coaxial transistor and circuitry therefor. 3,129,338, 4-14-64, Cl. 307—88.5.

Pohlenz, Jack B., to Universal Oil Products Co. Control of conversion in a catalytic hydrogen producing unit. 3,129,060, 4-14-64, Cl. 23—212.

Poirette Corsets, Inc.: *See*—
Laguzzi, Mario, Martelli, and Robbins. 3,128,770.

Politzer, Eugène J. Device for the automatic throwing of balls for training for certain sports. 3,128,753, 4-14-64, Cl. 124—26.

Porch, Alfred J., to E. I. du Pont de Nemours and Co. Synthetic thermoplastic linear polyesters and process. 3,129,202, 4-14-64, Cl. 260—78.4.

Postel, Günter, to International Standard Electric Corp. Switching device comprising reed contacts operated by permanent magnets. 3,129,302, 4-14-64, Cl. 200—87.

Postmaster General, Her Majesty's: *See*—
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Price, Earl R., and R. H. Long, to The Bendix Corp. Automatic braking system. 3,129,036, 4-14-64, Cl. 303—31.

Price, Erwin R.: *See*—
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Puetsch, William F., and C. M. Herington. Hold-down device for cans and lids. 3,128,981, 4-14-64, Cl. 248—146.

Pullman Inc.: *See*—
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Trautman, Bernard J., Shaver, and Thompson. 3,128,884.

Punessen, Rudolf: *See*—
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Pure Oil Co., The: *See*—
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Putkovich, Rudy P.: *See*—
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Quaal, John A.: *See*—
Hyink, Roy, Kitscha, and Quaal. 3,129,304.

Rabinow, Jacob, to United States of America, Army. Distance responsive device. 3,129,424, 4-14-64, Cl. 343—12.

Rabinowitz, S. M., & Co., Inc.: *See*—
Simon, Jack. 3,128,730.

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Radke, Richard P., and W. E. Blair, to Lear Siegler, Inc. Vacuum vaporizing fixture. 3,129,315, 4-14-64, Cl. 219—19.

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Fanello, Dominick C., and Rado. 3,128,510.

Rains, Sidney A.: *See*—
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Rainwater, Orman M. Tubular foldable frame. 3,128,727, 4-14-64, Cl. 108—129.

Randell, Forrest T.: *See*—
Arklese, George F., and Randell. 3,128,709.

Randolph, August: *See*—
Grabhofer, Herbert, Schuler, Ulrich, and Randolph. 3,129,100.

Raney, Florence M., now by marriage F. M. Kinney. Hand protective device. 3,128,472, 4-14-64, Cl. 2—159.

Ratowsky, Fred, to National Cleaning Equipment Corp. Coin-operated locker cabinet. 3,128,866, 4-14-64, Cl. 194—16.

Rauland Corp., The: *See*—
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Raven Industries, Inc.: *See*—
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Raymond, Samuel and R. H. Process for gel electrophoresis. 3,129,158, 4-14-64, Cl. 204—180.

Rebuffoni, Martin: *See*—
Adamson, Floyd E., and Rebuffoni. 3,129,352.

Reece Folding Machine Co.: *See*—
Rogers, William H., G. B. and A. G. Gilbert, and Dinarello. 3,128,484.

Reese, Elmer E., to General Motors Corp. Windshield wiper blade assembly. 3,128,491, 4-14-64, Cl. 15—250.42.

Reggiani S.p.A.: *See*—
Giani, Adolfo. 3,128,616.

Reifers, Richard F., to Diamond National Corp. Molded egg carton. 3,128,932, 4-14-64, Cl. 229—2.5.

Reilly, Hugh A. Container and readily removable liners therefor. 3,128,904, 4-14-64, Cl. 220—65.

Reinforced Plastic Container Corp.: *See*—
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Relation, Alfred E., R. P. Putkovich, and T. M. Corry, to Westinghouse Electric Corp. Semiconductor protection circuit. 3,129,374, 4-14-64, Cl. 321—14.

Remington Arms Co., Inc.: *See*—
Service, Robert J., and Haskell. 3,128,653.

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Renius, Robert G.: *See*—
Hein, Joseph F., and Renius. 3,128,639.
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Reynolds Metals Co.: *See*—
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Deridder, Ernst J., and Weiler. 3,128,851.
Jacke, Raymond E. 3,128,934.
Manning, Clarence F., Staley, and Lewis. 3,128,547.

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Benjey, William G., and Reynolds. 3,128,523.

Rhein-Chemie, G.m.b.H.: *See*—
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Rhodes, Stanley J., and A. F. Zeman. High pressure pump. 3,128,718, 4-14-64, Cl. 103—153.

Ricca, Anton, to Alford Cartons Division, Continental Paper Co. Carton with separable tray. 3,128,935, 4-14-64, Cl. 229—19.

Ricci, Robert F. J., and A. J. Gaudio. Hair-treating device. 3,128,778, 4-14-64, Cl. 132—9.

Rice, Ernest G., and J. G. Walser, Jr. Combination garment and method of making same. 3,128,475, 4-14-64, Cl. 2—224.

Rice, Robert B. Transistor type capacity operated relay. 3,129,414, 4-14-64, Cl. 340—258.

Richardson-Merrell Inc.: *See*—
Dale, Lamar B., Jr., Christenson, and Pogge. 3,129,139.
Nace, Harold R. 3,129,242.

Richoux, Raymond. Flexible control device. 3,128,637. 4-14-64, Cl. 74—501.

Richter, Frederick G.: *See*—
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Rinehart, John S., and R. D. Cocanower, to The Western Co. of North America. Shaped charge perforating apparatus. 3,128,701, 4-14-64, Cl. 102—20.

Ring, Bernard. Flint package seal for lighter fuel containers. 3,128,878, 4-14-64, Cl. 206—42.

Ritter, George F., Jr., to Libbey-Owens-Ford Glass Co. Bent glass sheet handling. 3,129,088, 4-14-64, Cl. 65—260.

Ritzler, George A. Gaming device comprising aligned word-forming discs rotatable in opposite directions. 3,129,004, 4-14-64, Cl. 273—143.

Rively, Clair M., and W. A. Brenneck, to Westinghouse Electric Corp. Automatic manufacturing machine. 3,129,043, 4-14-64, Cl. 316—31.

Rizzuti, Carl J., and H. M. Brewster, to Esso Research and Engineering Co. Lubrication of refrigeration equipment. 3,129,185, 4-14-64, Cl. 252—68.

Robbart, Edward. Method of treating wool with organic silicon halides to render same water repellent. 3,129,054, 4-14-64, Cl. 8—128.

Robbins, Jack E.: *See*—
Laguzzi, Mario, Martelli, and Robbins. 3,128,770.

Roberts, Willard A.: *See*—
Bauman, Edward E., and Roberts. 3,128,950.

Robertson, Jack H. Roll dispensing device. 3,128,927, 4-14-64, Cl. 225—38.

Robinson, Norman M.: *See*—
Johnson, Helge C., and Robinson. 3,128,889.

Robison, Robert S., and E. J. Becker, to Olin Mathieson Chemical Corp. Testololactones. 3,129,229, 4-14-64, Cl. 260—343.2.

Robotron Corp.: *See*—
Lemon, John W., Jr. 3,129,344.
Rockafellow, Stuart C. 3,129,341.

Rockafellow, Stuart C., to Robotron Corp. Synchronous weld timer using semiconductor controlled rectifiers. 3,129,341, 4-14-64, Cl. 307—88.5.

Rockola, David C., to Rock-Ola Mfg. Corp. Automatic phonograph. 3,129,005, 4-14-64, Cl. 274—10.

Rock-Ola Mfg. Corp.: *See*—
Rockola, David C. 3,129,005.

Rockwell Mfg. Co.: *See*—
Diehl, John H., Wetkart, and Nenstiel. 3,128,601

Rockwell-Standard Corp.: *See*—
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Rodzewich, Edward A., to Amchem Products, Inc. Phosphate coating solution and method of coating ferriferous metal. 3,129,121, 4-14-64, Cl. 148—6.15.

Rodzewich, Edward A., to Amchem Products, Inc. Solution for and method of coating ferriferous surfaces. 3,129,122, 4-14-64, Cl. 48—6.15.

Rodzewich, Edward A., to Amchem Products, Inc. Method and solution for applying a phosphate conversion coating on ferriferous surfaces. 3,129,123, 4-14-64, Cl. 148—6.15.

Rogal, Edward, to Universal Controls, Inc. Data collating system. 3,129,321, 4-14-64, Cl. 235—61.7.

Rogers, C. E., Co.: *See*—
Henszey, Richard R. 3,129,131.

Rogers, William H., G. B. Gilbert, A. G. Gilbert, and J. V. Dinarello, to Reece Folding Machine Co. Machine for making flexible book covers or similar articles. 3,128,484, 4-14-64, Cl. 11—2.

Rohland, Johannes, to Och, Anny, née Eger. Resilient wheel. 3,128,914, 4-14-64, Cl. 152—41.

Rohm & Haas Co.: *See*—
Ambrogi, William P., and Nicodemus. 3,129,066.
Lo, Chien-Pen. 3,129,201.

Rohr Corp.: *See*—
Herbert, Thomas A., Jr. 3,128,734.

Rolfes Electronics Corp.: *See*—
Childs, John E. 3,128,557.

Romeo, Anthony. Means for removing moisture in smoking pipes. 3,128,777, 4-14-64, Cl. 131—211.

Roozendaal, Klaas, to North American Philips Co., Inc. Column for fractionating gas mixture. 3,129,082, 4-14-64, Cl. 62—42.

Rosaen Filter Co., The: *See*—
Rosaen, Oscar E. 3,129,171.

Rosaen, Oscar E., to The Rosaen Filter Co. Fluid filtering device. 3,129,171, 4-14-64, Cl. 210—108.

Rosemount Engineering Co.: *See*—
Geistauts, Mikells. 3,128,768.

Rotat-Coffee, Inc.: *See*—
Carrillo, Andres M. 3,128,691.

Rothstein, Milton: *See*—
Lerner, Bernard, Rothstein, Kaplan, and Hramoff. 3,129,130.

Rothstein, Milton, to Willcox & Gibbs Sewing Machine Co. Method and apparatus for rapid cutoff of oscillations. 3,129,313, 4-14-64, Cl. 219—10.77.

Roto Actuator Corp.: *See*—
Trendle, Carl F. 3,128,679.

Rouse, Robert L., J. Wakefield, and R. C. Newman, to Associated Electrical Industries Ltd. Production of P.N. junctions in semiconductor material. 3,128,530, 4-14-64, Cl. 29—25.3.

Rouse, Robert L., J. Wakefield, J. B. Willis, R. Bullough, and R. C. Newman, to Associated Electrical Industries Ltd. Production of P.N. junctions in semiconductor material. 3,129,119, 4-14-64, Cl. 148—1.5.

Rousseau, Thomas C.: *See*—
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Roussel UCLAF, S.A.: *See*—
Joly, Robert, Warnant, Jolly, Guillemette, and Goffinet. 3,129,219.

Rowe, Gilbert, J. L. Bryan, Jr., S. E. Jaros, and B. R. Tegge, to Esso Research and Engineering Co. Reactor flushing system. 3,129,205, 4-14-64, Cl. 260—85.3.

Rubin, Daniel, to Xerox Corp. Xerographic apparatus. 3,128,683, 4-14-64, Cl. 95—1.7.

Rule, Clinton, to Atwood & Morrill Co. Three-way valve. 3,128,792, 4-14-64, Cl. 137—625.5.

Rumbel, Keith E., to Atlantic Research Corp. Monopropellant grains. 3,128,706, 4-14-64, Cl. 102—98.

Runo, Gordon B. Venting device. 3,128,899, 4-14-64, Cl. 220—44.

Rupinski, Waldemar: *See*—
Norris, William C., Rupinski, and Svendsen. 3,128,736.

Rutkowski, Alfred J., to Esso Research and Engineering Co. Preparation of polyols from olefins. 3,129,251, 4-14-64, Cl. 260—635.

Ruud, Gunnar. Method and apparatus for the removal of waste in the preparation of container blanks of sheet formed material. 3,128,929, 4-14-64, Cl. 225—103.

Russa, Henry G. Device for laying bricks. 3,129,029, 4-14-64, Cl. 294—62.

Ryan Aeronautical Co., The: *See*—
Paynter, Allison L., and Gipe. 3,128,732.

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Luce, Walter A., Jackson, Ryder, and Fontana. 3,129,005.

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Cleek, George K., and Sadle. 3,129,226.

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Cropp, David I., Jordan, and Lingo. 3,128,529.

Sakiadis, Byron C.: *See*—
Boucher, Donald F., and Sakiadis. 3,128,794.

Salemka, Robert M., to The Bendix Corp. Thrust vector control. 3,128,602, 4-14-64, Cl. 60—35.54.

Sand, William C.: *See*—
Brooks, Chester E., and Sand. 3,129,292.

Sandberg, William A. Off shore drilling rig. 3,128,604, 4-14-64, Cl. 61—46.5.

Sanders, Judson H., to The Procter & Gamble Co. Stabilized peanut butter and method of producing the same. 3,129,102, 4-14-64, Cl. 99—128.

Sanderson, Martin I.: *See*—
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Sandven, Joel N., and S. H. Haunsperger, to J. N. Sandven. Soft ice cream dispensing system. 3,128,918, 4-14-64, Cl. 222—205.

Sandven, Joel N.: *See*—
Sandven, Joel N., and Haunsperger. 3,128,918.

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Sanner, George E., to Westinghouse Electric Corp. Three beam monopulse radar system and apparatus. 3,129,425, 4-14-64, Cl. 343—16.

Saphra, Frederick, to Sperry Rand Corp. Angular speed responsive device. 3,129,301, 4-14-64, Cl. 200—80.

Sarratt, Everett R., to Laboratory For Electronics, Inc. Digital data processing system. 3,129,322, 4-14-64, Cl. 235—92.

Sass, Otto: *See*—
Anania, James A. 3,128,535.

Satrum, Clarence. Collapsible adjustable scaffold. 3,128,842, 4-14-64, Cl. 182—149.

Saunders, Jack N., to Warmac Ltd. Heating systems. 3,128,947, 4-14-64, Cl. 237—8.

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Burlison, Garry L., and Savok. 3,128,566.

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Damello, Maurice M. 3,128,979.

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Kehoe, Norman T., and Scantland. 3,128,579.

Schaaf, Edward M., Jr., to Philip Morris, Inc. Method of forming cigarette filter. 3,128,680, 4-14-64, Cl. 93—1.

Schad, Robert D., to Valden Co. Plastic brush. 3,128,488, 4-14-64, Cl. 15—187.

Scherry, George A., to Gray Hill Moldtronics, Inc. Internally threaded coil form for securing threaded core therein. 3,129,397, 4-14-64, Cl. 336—136.

Scheurer, Robert S. Golfing equipment. 3,128,812, 4-14-64, Cl. 150—1.5.

Schinske, William G., to Ideal Industries, Inc. Adjustable wire stripper. 3,128,652, 4-14-64, Cl. 81—9.5.

Schlage Lock Co.: *See*—
De Vines, Hollis L. 3,128,618.

Schlichting, Kurt, to Zeiss Ikon Aktiengesellschaft. Air supported holder for recording and reproducing heads. 3,129,297, 4-14-64, Cl. 179—100.2.

Schlumberger Well Surveying Corp.: *See*—
Blagg, Leon. 3,128,825.

Schmid, Bruce K.: *See*—
Odioso, Raymond C., Schmid, and Zabor. 3,129,253.

Schmidt, Alfred T. Balanced wheel electromagnetic circuit interrupter. 3,129,303, 4-14-64, Cl. 200—90.

Schmidt, Robert C., to Cummins Engine Co., Inc. Fuel control. 3,128,750, 4-14-64, Cl. 123—140.

Schmitt, Regis V., to Lord Mfg. Co. Resilient mounting. 3,128,999, 4-14-64, Cl. 267—1.

Schmitz, Harry W., to General Motors Corp. Hydraulically operated windshield wiper actuating mechanism. 3,128,594, 4-14-64, Cl. 60—10.5.

Schmutz, Jean, and F. Humziker, to Dr. A. Wander, S.A. 5-basic substituted-5-dibenzo-[b,e][1,4]-diazepines. 3,129,216, 4-14-64, Cl. 260—239.

Schneider, Abraham, to Sun Oil Co. Lubricating oil. 3,129,183, 4-14-64, Cl. 252—59.

Schnier, Robert F. Bottle closure. 3,128,896, 4-14-64, Cl. 215—48.

Schnitzer, Herbert S.: *See*—
Nickerson, Mortimer H., Schnitzer, Curtis, and Patterson. 3,129,191.

Schou, Carl E., to Rockwell-Standard Corp. Selector valve. 3,128,793, 4-14-64, Cl. 137—625.23.

Schrode, Hans, H. Grotjahn, and K. Heuer, to American Enka Corp. Method for preparing synthetic tire cord fabric. 3,129,129, 4-14-64, Cl. 156—161.

Schuessler, Charles J., and H. Wilsig, to Triangle Brass Mfg. Co. Door holding device. 3,129,024, 4-14-64, Cl. 292—15.

Schüler, Horst: *See*—
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Schultz, Paul A. Combined propelling and breathing device for skin divers. 3,128,739, 4-14-64, Cl. 115—6.1.

Schulz, Francis, K. Jarnell, and A. M. G. Kinnear, to Imperial Chemical Industries Ltd. Process for making fabric from bulked yarn. 3,128,527, 4-14-64, Cl. 28—72.

Schulze, Hertha M.: *See*—
Schulze, William G. A. 3,129,173.

Schulze, William G. A., deceased; H. M. Schulze, executrix of said W. G. A. Schulze. Centrifugal type liquid-solid separator. 3,129,173, 4-14-64, Cl. 210—512.

Schümann, Heinrich. Winding machines for electrical coils. 3,128,956, 4-14-64, Cl. 242—9.

Schuringa, Albertus: *See*—
Ongkiehong, Leo, Bijl, and Schuringa. 3,129,062.

Schuster, Ludwig K., and A. L. Baldi, Jr., to Pennsalt Chemicals Corp. Method and flux for soldering chromium oxide coated steel members. 3,128,546, 4-14-64, Cl. 29—495.

Schwabe, Harold C. Ice hole maker. 3,128,758, 4-14-64, Cl. 126—360.

Schwartz, Paul M.: *See*—
Callinan, Thomas D., Crimi, McGee, Parks, and Schwartz. 3,129,104.

Schwartz, Walter M., Jr., to Proctor Mfg. Corp. Steam iron with water spray. 3,128,568, 4-14-64, Cl. 38—78.

Schweitzer, Howard V.: *See*—
Knight, Howard R. J. 3,128,787.

Schwengel, Harold W., to Modern Equipment Co. Cupola charging apparatus. 3,128,891, 4-14-64, Cl. 214—19.

Scislowicz, Henry M., to Abbott Laboratories. Catheter assembly. 3,128,769, 4-14-64, Cl. 128—348.

SCM Corp.: *See*—
Gilbert, Herbert. 3,129,362.

Scott, Hartwell T. Inserted-tooth saw bit. 3,128,804, 4-14-64, Cl. 143—141.

Scott, Larkin B., to The Perkin-Elmer Corp. Rotary potentiometer with speed reduction gearing. 3,129,382, 4-14-64, Cl. 323—43.5.

Scott, Robert C. Horizontal hardness tester. 3,128,621, 4-14-64, Cl. 73—81.

Scully-Jones & Co.: *See*—
Anthony, Myron L. 3,128,645.

Sebesta, Edward E., to Minneapolis-Honeywell Regulator Co. Armature hinge construction for electromagnetic devices. 3,129,363, 4-14-64, Cl. 317—198.

Seemann, Donald F., to International Telephone and Telegraph Corp. Electronic line circuit. 3,129,289, 4-14-64, Cl. 179—18.

Seidenfeld, Benjamin A., to Merit Automotive Parts, Inc. Seals. 3,129,012, 4-14-64, Cl. 277—61.

Seling, Theodore V., to General Motors Corp. Microwave radiometer system. 3,129,330, 4-14-64, Cl. 250—83.3.

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Hay, Russell G., Meyer, and Selwitz. 3,129,255.
Hay, Russell G., Meyer, and Selwitz. 3,129,256.

Sence, Leonard H., to Allis-Chalmers Mfg. Co. Canned motor pump. 3,128,712, 4–14–64, Cl. 103—87.

Servel, Inc.: *See*—
Wilke, Milton E., and Loverude. 3,129,118.

Service, Robert J., and P. R. Haskell, to Remington Arms Co., Inc. Explosively actuated tool. 3,128,653, 4–14–64, Cl. 81—15.

Servo Corp. of America: *See*—
Hansel, Paul G., Richter, and Paulstich. 3,129,392.

Seyffarth, Richard. Roller support and guide mechanism for strip and sheet materials. 3,128,931, 4–14–64, Cl. 226—199.

Shaeffer, Paul F., to General Motors Corp. Portable mixing machine. 3,128,995, 4–14–64, Cl. 259—23.

Shannony, Charles M.: *See*—
Capaldo, Henry N., Dombrowski, and Shannony. 3,129,320.

Shapiro, Seymour L., L. Freedman, and M. J. Karten, to U.S. Vitamin & Pharmaceutical Corp. Novel 4-oxy-3-maleimidyl betaines. 3,129,225, 4–14–64, Cl. 260—247.2.

Shavair of America, Inc.: *See*—
Hubbartt, James E., Silver, and Inman. 3,128,549.

Shaver, Elijah C., to Brown & Root, Inc. Apparatus for forming threads on pipe ends. 3,128,817, 4–14–64, Cl. 153—2.

Shaver, William R.: *See*—
Trautman, Bernard J., Shaver, and Thompson. 3,128,684.

Shaw, Hugh H.: *See*—
Bradshaw, Harold G., Sanderson, and Shaw. 3,128,485.

Shearer, Thomas W., Jr.: *See*—
O'Connor, Neal E., and Shearer. 3,128,672.

Sheffield Corp., The: *See*—
Brooks, Dewey H., Jr., and Jacobs. 3,128,539.

Shell Oil Co.: *See*—
Doyle, Marshall E., and Nicholsen. 3,129,133.
Hartstra, Lenze. 3,129,240.
Jongbloed, Lodewijk J. S., and Vos. 3,128,719.
June, Ronald K., De Benedictis, and Williams. 3,129,195.
Lunk, Hans E. 3,129,199.
Ongkiehong, Leo, Bijl, and Schuringa. 3,129,062.
Terford, Henry C., and Kinney. 3,129,232.
Van Velzen, Daniël. 3,129,227.
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Shield, Lansing P., and G. A. Just, to Grocerette Vending Machines, Inc. Variable control means for dispensing equipment. 3,128,909, 4–14–64, Cl. 221—129.

Shields, Dean W., to Budow Mfg. Co., Inc. Arm biasing construction for ring type debarkers. 3,128,806, 4–14–64, Cl. 144—208.

Shiloh Tool & Die Mfg. Co.: *See*—
Fanello, Dominick C., and Rado. 3,128,510.

Shoemaker, William E., to California Research Corp. Very fast servo plotter. 3,129,405, 4–14–64, Cl. 340—15.5.

Shwayder Bros., Inc.: *See*—
Axtell, Willard G. 3,128,856.

Sibley, John R., to Joy Mfg. Co. Scroll type full face continuous miner. 3,128,998, 4–14–64, Cl. 262—9.

Sigma Instruments, Inc.: *See*—
Garnick, Philip, Benner, and Wynne. 3,129,360.

Silver, Irving: *See*—
Hubbartt, James E., Silver, and Inman. 3,128,549.

Silver, Julian, to Marx, Louis & Co., Inc. Electric motor-driven convertible wood machine shop toy. 3,128,805, 4–14–64, Cl. 144—1.

Simmons, Milton E., to General Motors Corp. Coil spool construction. 3,129,348, 4–14–64, Cl. 310—194.

Simon, Jack, to S. M. Rabinowitz & Co., Inc. Sewing machine for feeding, sewing and cutting sections of tape. 3,128,730, 4–14–64, Cl. 112—2.

Simpson, Harry E., to Dresser Industries, Inc. Hydraulic line wiper. 3,129,009, 4–14–64, Cl. 277—4.

Skinner, Curtis S., Jr.: *See*—
Guibert, Martin M., and Skinner. 3,128,577.

Skinner, Derwood U., to Houston Oil Field Material Co., Inc. Collar finder. 3,128,828, 4–14–64, Cl. 166—214.

Small, Charles L., to Hendrickson Mfg. Co. Tandem axle suspension. 3,129,016, 4–14–64, Cl. 280—104.5.

Smith, Charles H.: *See*—
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Smith, Edwin J.: *See*—
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Smith, Everett, Jr.: *See*—
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Smith, John E.: *See*—
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Smith, John O., and K. W. Easley, to Monsanto Research Corp. Isolated polycycloalkyl hydrocarbons and use as high energy fuels. 3,128,597, 4–14–64, Cl. 60—35.4.

Smith, John R.: *See*—
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Smith Kline & French Laboratories: *See*—
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Smith, Raymond, and C. O. Tarr, to United States Steel Corp. Stainless steel resistant to nitric acid corrosion. 3,129,120, 4–14–64, Cl. 148—38.

Smith, Robert D. Roller-massaging machine. 3,128,761, 4–14–64, Cl. 128—58.

Smolenski, Wilfried H., to Western Electric Co., Inc. Molding apparatus. 3,128,499, 4–14–64, Cl. 18—2.

Snavely, William H., Jr.: *See*—
Manno, Peter J., and Snavely. 3,129,156.

Societa' Italiana Resine: *See*—
Codignola, Franco. 3,129,147.

Societe Bertain & Cie: *See*—
Bertin, Jean H. 3,128,633.

Societe Nauvelle d'Electronique: *See*—
Altovsky, Voldemar A., Mondon, and Camerini. 3,129,426.

Socony Mobil Oil Co., Inc.: *See*—
Groenendyke, Goethe M. 3,129,404.

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Somerville Industries Ltd.: *See*—
Miller, Frederick E. 3,128,681.

Sopp, Albert: *See*—
Tinapero, Aibal A., and Sopp. 3,128,970.

Sorokin, Peter P., to International Business Machines Corp. Electron spin echo memory system. 3,129,410, 4–14–64, Cl. 340—173.

Sosin, Boleslaw M., to The Marconi Co. Ltd. Wide-band distributed amplifiers. 3,129,387, 4–14–64, Cl. 330—54.

Sowards, Donald M.: *See*—
Berry, Kenneth L., and Sowards. 3,129,105.

Sowder, Tony R. Mechanism hanger for wire rope. 3,128,722, 4–14–64, Cl. 104—201.

Sowman, Harold G., and J. R. Johnson, to Minnesota Mining and Mfg. Co. Crystalline spherules. 3,129,188, 4–14–64, Cl. 252—301.1.

Spacelabs, Inc.: *See*—
Mandrolan, Harold. 3,128,988.

Space Technology Laboratories, Inc.: *See*—
Meyer, Rudolf X. 3,128,995.
Ziemer, Richard W. 3,128,965.

Specht, John K. Hand luggage. 3,128,854, 4–14–64, Cl. 190—41.

Specialties Inc.: *See*—
Hays, Robert F., Jr. 3,128,967.

Specketer, Hellmut, to Pantaplast G.m.b.H. Container spout having its outlet passage sealed by a wall of the container. 3,128,913, 4–14–64, Cl. 222—107.

Sperry Rand Corp.: *See*—
Goid, Theodore. 3,128,623.
Kaufman, Lawrence, and Moore. 3,128,968.
Saphra, Frederick. 3,129,301.

Sprosty, Allan E. Heat sealable container. 3,128,936, 4–14–64, Cl. 229—62.

Stad, Andrew N.: *See*—
Gegenheimer, Harold W., and Stad. 3,128,699.

Staley, John: *See*—
Manning, Clarence F., Staley, and Lewis. 3,128,547.

Staley, John C., to The Vendo Co. Visible product vending machine. 3,129,039, 4–14–64, Cl. 312—97.1.

Stallman, Richard C., and W. M. Oates, to Beckman Instruments, Inc. Peristaltic pump. 3,128,716, 4–14–64, Cl. 103—149.

Stallman, Richard C.: *See*—
Pickels, Edward G., and Stallman. 3,129,174.

Standard Mfg. Co.: *See*—
Evett, Claude C. 3,129,263.

Standard Oil Co.: *See*—
Bussert, Jack F., and Kawahara. 3,129,074.

Standard Oil Co., The: *See*—
Veatch, Franklin, Alford, and Croft. 3,129,086.

Stanetzki, Lothar, to Markes & Co., Kommanditgesellschaft. Toy robot and actuating means therefor. 3,128,575, 4–14–64, Cl. 46—120.

Starcher, Paul S.: *See*—
Tinsley, Samuel W., and Starcher. 3,129,231.

Steinbrecher, Lester, D. Y. Dollman, D. E. Bucakowski, and J. W. Harrison, to Amchem Products, Inc. Method and apparatus for measuring fluoride activity. 3,129,148, 4–14–64, Cl. 204—1.

Steingrübner, Arthur, to Wahl Brothers. Zipper. 3,128,518, 4–14–64, Cl. 24—205.13.

Stelsslinger, Kurt, to Eastman Kodak Co. Camera with automatic diaphragm control. 3,128,669, 4–14–64, Cl. 88—16.

Stella, Frank A., to The Hubley Mfg. Co. Holster for firearms. 3,128,926, 4–14–64, Cl. 224—2.

Stelma, Inc.: *See*—
Levick, Herbert. 3,129,286.

Stelzer, William, to Kelsey-Hayes Co. Vehicle wheel brake having torque responsive weight transfer compensating means. 3,128,840, 4–14–64, Cl. 188—78.

Sterling Drug Inc.: *See*—
Gorman, William G. 3,128,924.

Stern, Milton, and H. Wissenberg, to Union Carbide Corp. Anode for electrolytic cell. 3,129,163, 4–14–64, Cl. 204—290.

Stewart, Alfred W., to Varifab Inc. Coding machine. 3,128,943, 4–14–64, Cl. 234—37.

Stewart, John K. Photosensitive railroad surveying system. 3,129,335, 4–14–64, Cl. 250—215.

Stohr, Jacques-Andre, and M. Gauthron, to Commissariat a l'Energie Atomique. Fuel elements for nuclear reactors. 3,129,140, 4–14–64, Cl. 176—76.

Storm-Vulcan, Inc.: *See*—
Winther, Kjeld C. 3,128,582.

Stotz, Ottmar. Window frame structure. 3,128,509, 4–14–64, Cl. 20—11.

Stout, Thomas M., and C. G. Laspe, to Thompson Ramo Wooldride Inc. Fail-safe process control system. 3,129,323, 4–14–64, Cl. 235—151.

Stover, Edward R.: *See*—
Westbrook, John H., and Stover. 3,129,070.

Stratienko, Andrew, to Philadelphia Gear Corp. Shaft seal assembly. 3,129,010, 4–14–64, Cl. 277—9.

Strawn, L. T. Tool for installing vehicle coil springs. 3,128,542, 4–14–64, Cl. 29—227.

Stroble, Howard G.: *See*—
Martel, Robert W., and Stroble. 3,129,103.

Strominski, Denzel L. Cleaning and scouring rotary attachment device. 3,128,489, 4–14–64, Cl. 15—230.

Studiengesellschaft Kohle m.b.H.: *See*—
Koster, Roland. 3,129,249.

Stütz, Gerhart, to International Business Machines Corp. Device for winding annular cores. 3,128,955, 4–14–64, Cl. 242—4.

Sun Oil Co.: *See*—
Hague, Louise D., and Kheighatian. 3,129,209.
Jeal, James L., Kheighatian, and Hague. 3,129,208.
Schneider, Abraham. 3,129,183.

Sunair Electronics, Inc.: *See*—
Daly, Carl C. 3,129,386.

Sunl-Citrus Products Co.: *See*—
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Swift, Harvey C., to Kelsey-Hayes Co. Automatic brake adjusting mechanism. 3,128,849, 4–14–64, Cl. 188—79.5.

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U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

April 14, 1964 Volume 801 Number 2

TRADEMARKS

NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 179,743 (ENCO), The Engineer Company, Oil burners, balanced draft equipment for furnaces, stoker-control equipment, and baffle-wall constructions; **Reg. No. 760,570**, same, Humble Oil & Refining Company, Storage batteries; **Reg. No. 712,750**, same, Refined, semirefined and unrefined oils made from petroleum, both with and without admixture of animal, vegetable or mineral substances for illuminating, burning, power, fuel, and lubricating purposes, and lubricating greases; **Reg. No. 712,965**, same, Synthetic rubber and rubber-like materials and compounding agents (for use in rubber, plastics, coating compositions, etc.), for use in the industrial arts, but exclusive of use by the graphic arts industry, the office machine reproduction field, the engineering reproduction field, and the field of photographic and transfer reproduction; **Reg. No. 712,994**, same, Polishing materials in semi-solid and liquid form for general use, but exclusive of use by the graphic arts industry, the office machine reproduction field, etc.; **Reg. No. 712,997**, same, Adhesives in semi-solid and liquid form, sold as such for general use, but exclusive of use by the graphic arts industry, the office machine reproduction field, etc.; **Reg. No. 713,000**, same, Insecticides, and hydrocarbon solvents, rust preventatives and corrosion inhibitors for general use, but exclusive of use by the graphic arts industry, the office machine reproduction field, etc.; **Reg. No. 713,030**, same, Pigmented, unpigmented, transparent, plastic and semi-plastic, ready mixed, paste and dry metallic, etc. for general use, but exclusive of use by the graphic arts industry, the office machine reproduction field, etc.; **Reg. No. 713,163**, same, Oil filters and oil filter elements; **Reg. No. 713,355**, same, Asphalt surfacing materials; **Reg. No. 713,526**, same, Tires and tubes; **Reg. No. 746,477**, same, Pharmaceutical grade petrolatum; **Reg. No. 746,761**, same, Construction of airplane hangars and other buildings, filed Nov. 1, 1963, D.C., S.D.N.Y., Doc. 63/3237, *The Engineer Company* v. *Humble Oil & Refining Co.*

Erratum

In the OFFICIAL GAZETTE, issue of Feb. 11, 1964, vol. 799, p. TM 32, under Trademark Suits, line 10, after "same", first occurrence, insert *Reg. No. 707,821, same; Reg. No. 707,822, same;*.

Notice of Daylight Saving Time

The Patent Office will operate on Daylight Saving Time from April 27, 1964, through October 24, 1964.

CONDITION OF TRADEMARK APPLICATIONS AS OF FEBRUARY 29, 1964

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)] 15,213
Date of oldest new application ..... July 15, 1963
Date of oldest amended application ..... July 3, 1963

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 3, 4, 5, 8, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 39, 41, 42, 43, 44	8-6-63	8-1-63
(II) H. E. KASCHUB, Classes 1, 3, 6, 7, 9, 10, 18, 22, 27, 38, 40, 45, 46, 47, 48, 49, 50, 51, 52; Service Marks, Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	7-15-63	7-3-63
Renewals (All Classes)	2-4-64	2-14-64
Sec. 12 (c) Publications (All Classes)	2-10-64	

Applications filed during the month of February 1964— 1,922

Registrations Issued ..... 265—No. 768,052 to No. 768,316
Renewals Issued 50

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington, D. C., 20402 to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington, D.C., 20231.

Changes in Address or Designation of Domestic Representative in Trademark Registered Files

In the future communications advising of a change of address of an original registrant or assignee, or a change of name of a domestic representative of a registrant who resides in a foreign country will be acknowledged by the Patent Office and appropriate notation entered on the file jacket of the registration.

This supersedes the notice entitled "Change of Address" appearing in 706 O.G. 1.

HORACE B. FAY, JR.,
Assistant Commissioner.

March 16, 1964.

Notice of Tentative Recordation of a Trade Name

[T.D. 56122]

Tentative recordation of trade name under section 42, Trademark Act of 1946, and section 11.16, Customs Regulations

TREASURY DEPARTMENT,
OFFICE OF THE COMMISSIONER OF CUSTOMS,
Washington, D.C.

To Collectors of Customs and Others Concerned:

An application has been filed in the Treasury Department for the recordation of the following described trade name under the provisions of section 42, Trademark Act of 1946, and section 11.16, Customs Regulations:

"BARBAN CREATIONS," owned by Herman Pecker and Co., Inc., a corporation organized under the laws of the State of New York, located and doing business at 28 West 36th Street, New York City, which trade name is used in connection with stuffed animals and dolls, Christmas novelties, casual slippers, shoe backs, luggage and general merchandise manufactured in Japan, Hong Kong, and the United States.

Any person who desires to file an opposition to the recordation of this trade name shall notify the Commissioner of Customs, Bureau of Customs, Washington, D.C., before the expiration of 30 days after April 15, 1964, of his intent to oppose the recordation. If a notice of opposition is filed, the opposer will be furnished with a copy of the application for recordation of the trade name, together with its supporting documents and instructions as to the procedure to be followed. The customs officers concerned will be given notice within 45 days after April 15, 1964, of any opposition proceeding.

Until 45 days after April 15, 1964, all articles of foreign manufacture bearing names or marks which copy or simulate the above-mentioned trade name shall be detained, but not seized, and thereafter, shall receive the treatment provided for in section 11.17, Customs Regulations, unless a notice is received that an opposition has been filed, in which case such articles shall continue to be detained until a final determination is made concerning the right of the applicant to the trade name.

(Signed) PHILIP NICHOLS, JR.,
Commissioner of Customs.

March 4, 1964.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 129,369. Kentucky Valley Farms, Jersey City, N.J. Filed Oct. 6, 1961.

ZOY-GREEN

For Grass Seed Mixture, a Portion of Which Is Zoysia Seed.
First use Aug. 31, 1961.

SN 148,371. Dril-Kem, Inc., Houston, Tex. Filed July 5, 1962.

FLOC SEAL

No claim is made to the word "Seal" apart from the mark.
For Finely Ground Paper for Use as a Lost Circulation Material, in the Drilling of Wells for Stopping Mud and Water Seepage in Oil and Gas Wells.
First use Jan. 2, 1961.

SN 170,925. Marine Exhibition Corporation, Miami, Fla. Filed June 13, 1963.

MIAMI SEAQUARIUM

The exclusive right to use the name "Miami" is disclaimed apart from the mark as shown.
For Live Tropical Fish.
First use during 1957.

SN 172,911. International Paper Company, New York, N.Y. Filed July 12, 1963.

MODUCELL

For Refined Wood Pulp.
First use Apr. 3, 1963.

SN 173,028. Monsanto Chemical Company, St. Louis, Mo. Filed July 15, 1963.

COLACRIL

For Fiber and Filaments.
First use June 28, 1963.

SN 173,029. Monsanto Chemical Company, St. Louis, Mo. Filed July 15, 1963.

SPECTRAN

Owner of Reg. Nos. 711,926 and 718,405.
For Fiber and Filaments.
First use June 28, 1963.

SN 173,653. Hysol Corporation, Olean, N.Y. Filed July 24, 1963.

HYSOL FORMITT

Owner of Reg. No. 640,187.
For Moldable Synthetic, Clay-Like Material Setting to a Solid Which Can Be Worked Like Wood.
First use May 23, 1963.

SN 175,261. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Aug. 19, 1963.

NOMEX

For Man-Made Fibers and Sheet Structures for General Use in the Industrial Arts, and for Various Military Applications.
First use Aug. 1, 1963.

Class 2—Receptades

SN 160,999. Caddy Corporation of America, Secaucus, N.J. Filed Jan. 21, 1963.

GRIP-N-STACK

For Distinctive Rim Features of Dishes and Similar Containers for Foods, and Covers Therefor, All Made of Plastic Materials.
First use Oct. 15, 1962.

SN 161,022. The Dow Chemical Company, Midland, Mich. Filed Jan. 21, 1963.

MIRRO-BAG

For Containers—Namely, Plastic Bags, and Pouches.
First use Nov. 2, 1962.

SN 164,786. Aladdin Industries, Incorporated, Chicago, Ill. Filed Mar. 18, 1963.

TOPSALL

For Lunch Boxes, Lunch Kits, and Vacuum Bottles.
First use on or about Oct. 18, 1962.

SN 168,100. Newspaper Enterprise Association, Inc., Cleveland, Ohio. Filed May 3, 1963.

PERMATUBE

For Containers for Home Delivered Newspapers, Magazines and Like Articles.
First use Oct. 15, 1959.

SN 169,833. Crescent Box Corporation, Philadelphia, Pa. Filed May 28, 1963.

WING LOCK

For Cardboard Boxes.
First use Feb. 17, 1963.

SN 172,371. Columbian Steel Tank Company, Kansas City, Mo. Filed July 3, 1963.

RED BOTTOM

Owner of Reg. No. 410,173.
For Sheet Metal Tanks.
First use on or about Mar. 1, 1922.

SN 172,691. The Stellar Corporation, Mobile, Ala. Filed July 9, 1963.

HY-LO THERM

For Self-Insulating All Plastic Disposable Drinking Cups.
First use Apr. 3, 1961.

SN 179,019. Betty Machine Company, Inc., Nashville, Tenn. Filed Oct. 15, 1963.

TOTEM POLE

For Trash Can Holders for Outside Use.
First use Oct. 4, 1963.

Class 5 — Adhesives

SN 142,606. The Carter's Ink Company, Cambridge, Mass. Filed Apr. 19, 1962.

Nu-Glu

For Household Adhesive Cement.
First use October 1956.

SN 158,225. Chemplast Inc., East Newark, N.J. Filed Nov. 30, 1962.

CHEMGRIP

For Epoxy Cements and Industrial Adhesives for Treated Polytetrafluorethylene and Other Fluorocarbons.
First use July 11, 1962.

SN 164,757. United States Plastics, Inc., Hialeah, Fla. Filed Mar. 15, 1963.

US PLASTICS

For Contact Adhesives.
First use June 1, 1962.

SN 166,711. Gross Manufacturing Company, Inc., Monrovia, Calif. Filed Apr. 15, 1963.

MAGICURE

For Liquid Cement and Activator for Repairing Rubber Goods.
First use June 15, 1956.

SN 179,054. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Oct. 15, 1963.

GREEN PLAID

Owner of Reg. No. 741,467.
For Adhesive Tape.
First use Sept. 23, 1963.

Class 6 — Chemicals and Chemical Compositions

SN 134,412. Sun Oil Company, Philadelphia, Pa. Filed Dec. 20, 1961.

DM-2,6-N

For Dimethyl Ester of 2,6-Naphthalene Dicarboxylic Acid.
First use Sept. 6, 1961.

SN 158,225. Chemplast Inc., East Newark, N.J. Filed Nov. 30, 1962.

CHEMGRIP

For Active Sodium Complex Agents in an Organic Carrier for Rendering the Surface of Polytetrafluorethylene and Other Fluorocarbons Receptive to Modern Adhesive Bonding.
First use July 13, 1962.

SN 163,325. Cosden Oil & Chemical Company, Big Spring, Tex., assignee of Cosden Petroleum Corporation, Big Spring, Tex. Filed Feb. 25, 1963.

COSDEN

For Solid and Liquid Chemical Products—Namely, Xylene, Styrene, Polymers and Copolymers of Styrene, Polymers of Isobutylene and Solutions, Suspensions and Emulsions of Isobutylene.
First use June 14, 1956.

SN 170,901. Faultless Starch Company, Kansas City, Mo. Filed June 13, 1963.

F

Owner of Reg. Nos. 745,632 and 753,580.
For Laundry Starch and Laundry Preparations Used for Softening Fabrics.
First use March 1959 on laundry starch.

SN 171,407. Virginia Chemicals & Smelting Company, West Norfolk, Va. Filed June 19, 1963.

VIROX

Owner of Reg. Nos. 526,525, 617,332, and others.
For Zinc Oxide.
First use May 24, 1963.

SN 172,254. Sparkmaster Manufacturing Company, Salt Lake City, Utah. Filed July 1, 1963.

Sparkmaster

For Cigarette Lighter Fuel.
First use on or about Mar. 9, 1963.

SN 173,799. West Chemical Products, Inc., Long Island City, N.Y. Filed July 25, 1963.

SANIQUAT

For Liquid Disinfectant.
First use June 27, 1963.

SN 176,801. Imperial Type Metal Company, Philadelphia, Pa. Filed Sept. 12, 1963.

VITACARD

Owner of Reg. Nos. 290,722, 716,614, and others.
For Mixture of Sulfated Oils and Aromatic Solvents Used in Powderless Etching Machines in Combination With Water and Nitric Acid for the Powderless Etching of Photoengraving Zinc.
First use Dec. 27, 1961.

SN 176,803. Imperial Type Metal Company, Philadelphia, Pa. Filed Sept. 12, 1963.

VITACOAT

Owner of Reg. Nos. 290,722, 716,614, and others.
For Polyvinyl Alcohol Made Light Sensitive by the Addition of Ammonium Dichromate Solution, Which Is Applied to a Sheet of Photoengraving Metal as a Liquid and Is Dried.
First use July 7, 1959.

SN 176,806. Imperial Type Metal Company, Philadelphia, Pa. Filed Sept. 12, 1963.

VITASOLV

Owner of Reg. Nos. 290,722, 716,614, and others.
For Mixture of Sulfated Oils and Aromatic Solvents Used in Powderless Etching Machines in Combination With Water and Nitric Acid for the Powderless Etching of Photoengraving Zinc.
First use May 16, 1957.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

SN 146,367. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed June 7, 1962.

LEDCORE

For Detonating Devices.
First use Apr. 4, 1962.

Class 12 — Construction Materials

SN 132,975. Cellular Products Company, Los Angeles, Calif. Filed Nov. 29, 1961.

AEROFILL

For Lightweight Thermal Insulating Aerated Concrete and Ingredients Sold for Use in Making Such Concrete.
First use Aug. 5, 1954.

SN 149,909. Automated Building Components, Inc., Miami, Fla. Filed July 27, 1962.

ABC

For Metal Web Members.
First use Oct. 1, 1961.

SN 152,567. Crawford Door Company, Detroit, Mich. Filed Sept. 6, 1962.

Crawford DOR-SEAL

Applicant makes no claim to the words "Dor-Seal" or to the phonetic equivalent thereof apart from the composite mark. Owner of Reg. No. 548,706.
For Resilient Pads for Loading Docks and Doorways.
First use Nov. 6, 1959.

SN 159,378. Arketex Ceramic Corporation, Brazil, Ind. Filed Dec. 19, 1962.

ACCURATILE

The word "Tile" and the representation of the goods are disclaimed apart from the mark as shown.
For Structural Ceramic Tile.
First use Nov. 16, 1962.

SN 159,873. Cincinnati Industrial Products Co., Cincinnati, Ohio. Filed Dec. 28, 1962.

CIPCO

For Maintenance and Construction Material—Namely, Floor, Wall and Patio Tiles and Translucent Panels.
First use Nov. 8, 1960.

SN 160,274. Contact Lumber Company, Portland, Oreg. Filed Jan. 7, 1963.

STRAIGHT LINE

The upright design portion of the drawing is lined for red but no claim is made to a specific color therefor.
For Door Frame Unit Parts, Including Inside Door Jambs, Outside Door Frames, Cut-To-Length Casings and Other Door Frame Parts.
First use Dec. 21, 1962.

SN 163,512. Burris R. Allen, d.b.a. Park Heating Specialties, St. Louis Park, Minn. Filed Feb. 27, 1963.

IN·SIL·ATOR

The mark includes the letter "A" as a part thereof.
For Draft Stop Consisting of Cardboard Barrier With Insulation Thereon for Use Between Joists on Masonry or Other Foundations.
First use Feb. 1, 1960.

SN 163,668. William F. Stillman, Los Angeles, Calif. Filed Feb. 28, 1963.

REAL SEAL

The word "Seal" is disclaimed except when used with the word "Real."
For Vinyl Moldings Having a Pressure Sensitive Adhesive Attaching Strip Thereon for Providing Water-Tight Seals Around Bathtubs and the Like for Use in Lieu of a Calking Compound.
First use May 2, 1962.

SN 169,756. Pan-Am Ceramic Sales Corporation, Brownsville, Tex. Filed May 27, 1963.

CHALLENGER

For Glazed and Clay Ceramic Tile.
First use Nov. 24, 1959.

SN 172,856. United Africa Company (Timber) Limited, London, England. Filed July 11, 1963.



No claim is made to the exclusive right to use the word "Marine" apart from the mark as shown. Owner of British Reg. No. 839,893, dated Oct. 2, 1962; and U.S. Reg. No. 536,764.
For Plywood Blockboards (Being Veneered Panels of Wood), Laminated Boards and Composition Boards, All for Use in Marine Building Construction.

SN 174,729. Zavody V. I. Lenina Plzen, Narodni Podnik, Plzen, Czechoslovakia. Filed Aug. 8, 1963.

SKODAWORKS

Owner of Czechoslovakian Reg. No. 111,446, dated Aug. 28, 1936; and U.S. Reg. Nos. 672,179, 675,566, and others.
For Steel Constructions, Steel Piling, Steel Bridges, Steel Shelters, Hangers, Prefabricated Steel Structures, and Parts and Components of Said Goods.

SN 175,713. Battenfeld Grease & Oil Corporation, Inc., Kansas City, Mo. Filed Aug. 26, 1963.

ULTRA-SEAL

Owner of Reg. No. 737,760.
For Sealants for Plug Valves.
First use on or before June 27, 1963.

SN 177,221. Armstrong Cork Company, Lancaster, Pa. Filed Sept. 18, 1963.

CONCLAD

For Asbestos-Cement in Sheet Form.
First use Aug. 15, 1963.

SN 177,751. Edward S. Baldwin Extruded Products, Inc., Downey, Calif. Filed Sept. 26, 1963.

ORGANIT

For Plastic Panels and Sheets Used in Construction for Glazing, Ceilings, and Side Panels.
First use Sept. 3, 1963.

SN 177,959. The William L. Bonnell Company, Inc., Newnan, Ga. Filed Sept. 30, 1963.

BANNER 3

Owner of Reg. No. 752,751.
For All-Purpose Finished Aluminum Mouldings for Use as Trim—Namely, Thresholds, Stair Nosings, Inside and Outside Corners, Seam and Edge Bindings and Mouldings, Carpet Bindings, Coves, Overlap and Concealed Flange Nosings, Dividers, Flats Ovals, Snap on Mouldings, Tub Mouldings, Weatherstrip and Other Miscellaneous Mouldings.
First use on or about June 8, 1962.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 149,909. Automated Building Components, Inc., Miami, Fla. Filed July 27, 1962.



For Construction Equipment and Supplies—Namely, Metal Connector Plates for Wooden Joints.
First use Oct. 1, 1961.

SN 150,685. Earnest Machine Products Company, Cleveland, Ohio. Filed Aug. 7, 1962.

WHITE DIAMOND

For Cap Screws, Plow Bolts, Bucket Tooth Bolts, Track Shoe Bolts, Rope Clips, Spacers, Bushings, Sprocket Rims, Roller Seals, Drive Seals, Grouser Steel, Etc.
First use on or about Feb. 1, 1961.

SN 151,586. Hague & McKenzie Limited, Birmingham, Warwick, England. Filed Aug. 21, 1962.

PYRAMID

Owner of British Reg. Nos. 554,632, dated Oct. 10, 1934, and 836,105, dated June 22, 1962.
For Small Domestic Utensils and Containers (Not of Precious Metal or Coated Therewith).

SN 156,446. Jerren Affiliated Companies Limited, Toronto, Ontario, Canada. Filed Nov. 1, 1962.

SILUX

Priority claimed under Sec. 44(d) on Canadian application filed May 4, 1962; Reg. No. 129,265, dated Dec. 28, 1962.
For Plumbing Specialties—Namely, Shower Heads and Parts Therefor.

SN 156,801. Cuyahoga Products Corporation, Charlotte, N.C. Filed Nov. 7, 1962.

Keystone

For Clamping Rings, Hose Clamps, and Special Tightening and Shaping Assembly Tools Therefor.
First use October 1961.

SN 158,157. Eduard Hobrecker G.m.b.H., Hamm, Westphalia, Germany. Filed Nov. 29, 1962.

SECUTRONIC

Owner of German Reg. No. 763,852, dated July 13, 1962.
For Wire Netting.

SN 158,414. Adams Pipe Repair Products, South El Monte, Calif. Filed Dec. 4, 1962.

220

For Pipe Leak Repair Clamps of Flexible Band Type.
First use about 1948.

SN 159,674. Air Space Devices, Inc., North Hollywood, Calif. Filed Dec. 26, 1962.

SAF-T-LIFELINE LOK

For Accident Prevention Equipment, Including Safety Belts and Harnesses and Devices for Slidably Attaching Same to Auxiliary Lines Used in Connection With Scaffolds and the Like.
First use July 5, 1962.

SN 161,128. Yale & Towne, Inc., New York, N.Y., assignee of The Yale and Towne Manufacturing Company, New York, N.Y. Filed Jan. 21, 1963.

DOORTENDER

Owner of Reg. No. 664,661.
For Door Controllers.
First use November 1962.

SN 163,235. Grip Nut Company, South Whitley, Ind. Filed Feb. 21, 1963.

GN

Owner of Reg. No. 706,203.
For Self-Locking Nuts, Weld Nuts, Clinch Nuts and Nut Fasteners.
First use June 29, 1962.

SN 170,242. True Temper Corporation, Cleveland, Ohio. Filed June 3, 1963.

TT

For Lawn Sprinklers.
First use Aug. 28, 1962.

SN 173,387. Sea Chrome Inc., Los Angeles, Calif. Filed July 19, 1963.

SEAMARBLE

Owner of Reg. Nos. 682,749 and 750,008.
For Builders' Hardware.
First use June 1, 1963.

SN 173,642. The Youngstown Sheet and Tube Company, Boardman, Ohio. Filed July 24, 1963.

TRANSOL

For Metal Pipe.
First use Apr. 15, 1963.

SN 173,807. Associated Aircraft Industries, Inc., Memphis, Tenn. Filed July 26, 1963.

STUKE LOCK

For Turnbuckle Assemblies and Turnbuckle Parts, Including Barrels, Terminals, End Pieces, and Locking Members Therefor.
First use July 5, 1955.

SN 174,085. Cole-Sewell Engineering Company, St. Paul, Minn. Filed July 31, 1963.

MARBLECAST

For Vanity Top as an Integral Part of a Lavatory.
First use May 3, 1963.

SN 174,395. Long-Lok Corporation, Los Angeles, Calif. Filed Aug. 5, 1963.

SHORT-LOK

Owner of Reg. No. 666,468.
For Self-Locking Screws.
First use July 12, 1963.

SN 174,859. GEA Luftkuhlgesellschaft Happel G.m.b.H. & Co. K.G., Bochum, Germany. Filed Aug. 12, 1963.

GEA

Owner of German Reg. No. 756,403, dated Dec. 20, 1961.
For Tubes and Pipes.

SN 176,586. Union Tank Car Company, Chicago, Ill. Filed Sept. 9, 1963.

GRAVER

Owner of Reg. No. 763,692.
For Liquid Treating Products, Including: Filters, Degasifiers, Deaerating Heaters, Clarifiers, Apparatus for Chemically Treating Water by Precipitation, Valves, Dialyzers, Apparatus for Adsorbing Impurities, Content Analyzers, Ion Exchangers, Boiler Blowoff Heat Recovery Units, and Chemicals Relating Thereto.
First use February 1963.

SN 176,605. Akron Brass Company, Wooster, Ohio. Filed Sept. 10, 1963.

ROLAKS

For Hose Couplings.
First use Feb. 13, 1963.

SN 179,601. The Bomar Company, Inc., Boston, Mass. Filed Oct. 23, 1963.

SANIFLO

For Baby Bottle Accessories—Namely, Funnels and Strainers.
First use August 1961.

SN 181,855. A. W. Cash Company, Decatur, Ill. Filed Nov. 26, 1963.

cashco

For Valves.
First use June 28, 1963.

Class 14—Metals and Metal Castings and Forgings

SN 138,328. Small Parts, Inc., Logansport, Ind. Filed Feb. 20, 1962.

SPI

For Metal Stampings.
First use Oct. 15, 1958.

SN 173,521. Specialloy, Inc., Chicago, Ill. Filed July 22, 1963.

ALUMININGOT

For Alloy of Electrolytic Manganese and Aluminum.
First use June 11, 1963.

SN 174,730. Zavody V. I. Lenina Plzen, Narodni Podnik, Plzen, Czechoslovakia. Filed Aug. 8, 1963.

SKODAWORKS

Owner of Czechoslovakian Reg. No. 111,446, dated Aug. 28, 1936; and U.S. Reg. Nos. 672,179, 675,566, and others.
For Steels, Including Die and Tool Steel; Ingots; Iron, Steel and Other Metal Castings, Forgings and Pressings; Die Castings; Spring Steel; Steel and Other Metal Plates, Bars and Sheets; Tubular Steel; Metallic Alloys; Bearing Alloys; Magnetic Steel and Alloys; Metallic Welding Bars; Metallic Springs; Iron and Steel Rails; Rail Switches, and Other Cast or Forged Railroad Equipment; Marine Anchors; Metallic Tubes and Wire; and Printing Type.

SN 176,759. Union Carbide Corporation, New York, N.Y. Filed Sept. 11, 1963.

UNION CARBIDE

Owner of Reg. No. 703,799.
For Refractory Hard Metals Being Compounds Formed by Reacting Boron, Carbon, Nitrogen or Silicon With Each Other or With Transition Metals, Such as Titanium, Vanadium, Chromium, Zirconium, Columbium Molybdenum, Hafnium, Tantalum and Tungsten.
First use Oct. 30, 1962.

Class 15—Oils and Greases

SN 137,406. Turtle Wax, Inc., Chicago, Ill. Filed Feb. 6, 1962.

GO

For Gas-Line Anti-Freeze Composition.
First use Nov. 1, 1947.

SN 149,784. Tenneco Oil Company, Houston, Tex. Filed July 25, 1962.

FOUR SEASONS

For Lubricating Oil.
First use June 30, 1961.

SN 161,588. Bel-Ray Company, Inc., Farmingdale, N.J. Filed Jan. 29, 1963.

TERMALENE

For Greases.
First use May 1958.

SN 177,211. Agip Societa per Azioni, Rome, Italy. Filed Sept. 18, 1963.

AGIP

Owner of Italian Reg. No. 116,867, dated Apr. 16, 1954.
For Petroleum and Liquid Fuels—Namely, Gasoline, Solvents, Mineral Oils and Fats Destined to Combustion and Lubrication in Motor Car Engines, Electric Motors, Marine Engines and the Like.
First use on or about July 9, 1953.

SN 177,426. Hudson Oil Company, Kansas City, Kans. Filed Sept. 20, 1963.

LLL

The drawing is lined for the color green.
For Lubricating Oil.
First use during August 1960.

SN 180,456. Skil Corporation, Chicago, Ill. Filed Nov. 4, 1963.

SKIL

Owner of Reg. No. 198,104.
For Lubricants and Oils for Tools and Accessories.
First use on or about Jan. 1, 1950.

SN 181,343. Everlube Corporation of America, d.b.a. Everlube Corporation, North Hollywood, Calif. Filed Nov. 18, 1963.

SLIK JEL

Owner of Reg. No. 715,293.
For Molybdenum Disulfide Lubricant Composition.
First use Nov. 6, 1963.

SN 181,822. Herman L. Adams, d.b.a. Adams Oil Company, Waco, Tex. Filed Nov. 26, 1963.

"CREEPO"

For Canned Penetrating Oils.
First use Jan. 5, 1952.

SN 181,905. Lou Bob Company, Chicago, Ill. Filed Nov. 26, 1963.

NINE POINT

For Lubricating Oils.
First use July 14, 1937.

SN 181,999. Southwest Grease & Oil Co., Inc. Wichita, Kans. Filed Nov. 27, 1963.

Sportsman A-1

For Penetrating Oil.
First use Nov. 4, 1963.

SN 182,110. Olo Paint, Incorporated, Cleveland, Ohio. Filed Nov. 29, 1963.

DENTONITE

For Motor Fuel Additives.
First use March 1961.

Class 16—Protective and Decorative Coatings

SN 152,469. Ultra-Violet Products, Inc., San Gabriel, Calif. Filed Sept. 4, 1962.

BLAK-RAY

Owner of Reg. No. 643,531.
For Fluorescent Paints, Colors and Lacquers.
First use at least as early as 1954.

SN 169,005. Cadar Paint Corporation, Baltimore, Md. Filed May 16, 1963.

CADAR

Owner of Reg. No. 643,835.
For Paint.
First use July 18, 1956.

SN 173,196. Spangles, Inc., Topeka, Kans. Filed July 17, 1963.

SPANGLES

For Granulated or Flake Type Dance Floor Lubricant for All Types of Dance Floors.
First use Apr. 22, 1963.

SN 174,304. Wemco Manufacturing Company, Sutherland, Nebr. Filed Aug. 2, 1963.



For Wall and Ceiling Paints.
First use May 14, 1963.

SN 177,619. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Sept. 24, 1963.

CADMOFIXE

Owner of German Reg. No. 604,420, dated Jan. 23, 1951.
For Pigments for Coloring of Paints, Lacquers, Enamels, Plastics, Rubber, Glass, Ceramic and Like Products.

SN 178,654. Tamms Industries Co., Chicago, Ill. Filed Oct. 9, 1963.

Tamms

Owner of Reg. No. 716,744.
For Penetrating Sealer for Concrete, Stucco and Brick Masonry Surfaces and the Like.
First use on or about Jan. 1, 1961.

Class 17—Tobacco Products

SN 171,656. HMH Publishing Co., Inc., Chicago, Ill. Filed June 24, 1963.

PLAYBOY

For Cigarettes.
First use on or about Jan. 2, 1963.

SN 171,657. HMH Publishing Co., Inc., Chicago, Ill. Filed June 24, 1963.



For Cigarettes.
First use on or about Jan. 2, 1963.

SN 171,791. Philip Morris Incorporated, New York, N.Y. Filed June 25, 1963.

GAYLORD

For Cigarettes.
First use June 17, 1963.

SN 175,851. General Cigar Co., Inc., New York, N.Y. Filed Aug. 27, 1963.

WILLOWS

For Cigars—Namely, Cigarillos.
First use May 2, 1963.

Class 18—Medicines and Pharmaceutical Preparations

SN 149,369. Charles A. Crete, d.b.a. Pharmaceutical Associates, San Francisco, Calif. Filed July 19, 1962.

DELICOTE

For Medicated Baby Lotion.
First use June 29, 1962.

SN 168,279. Bristol-Myers Company, New York, N.Y. Filed May 7, 1963.

SUPERVESS

For Medicinal and Pharmaceutical Preparation for Relief of Headache.
First use Dec. 27, 1962.

SN 168,459. International Chemical Corporation, New York, N.Y. Filed May 7, 1963.

LESCO

For Pharmaceutical and Medicinal Preparations—Namely, Vitamins, Minerals, Steroids, Hormones, Sulpha Drugs and Antibiotics.
First use Oct. 23, 1961.

SN 169,465. Joaquin Ferreira de Brito Martins, d.b.a. Jack Martin, Tracy, Calif. Filed May 22, 1963.

MARTIN'S DERMA SALVE

The word "Salve" is disclaimed apart from the mark as shown.
For Medicated Salve for the Treatment of Eczema, Minor Skin Irritations, and Athlete's Foot.
First use May 9, 1963.

SN 169,898. Ainsworth Laboratories Inc., Perryton, Tex. Filed May 29, 1963.

TO-LAX

For Pharmaceutical Preparations—Namely, Laxative Products.
First use Mar. 14, 1963.

SN 169,899. Ainsworth Laboratories Inc., Perryton, Tex. Filed May 29, 1963.

CHILD STAR

For Pharmaceutical Preparations—Namely Laxative Products.
First use Mar. 14, 1963.

SN 171,204. Vesper Drug Company, Inc., Chicago, Ill. Filed June 17, 1963.

VESPERDEX

For Pharmaceutical Preparation for Obesity.
First use Sept. 12, 1962.

SN 171,244. Etablissements Kuhlmann, Societe Anonyme, Paris, France. Filed June 18, 1963.

ERGADDYL

Owner of French Reg. No. 488,987, dated June 24, 1960 (Paris); Natl. Inst. No. 146,677.
For Relaxant and Refreshant for Relieving Fatigue, Nervous Strain and Tension, Muscular Debility and Pain and Cramps.

SN 171,441. Drug Development Corporation, Brooklyn, N.Y. Filed June 20, 1963.

ATTAPECTIN

For Pharmaceutical Preparation for the Treatment of Diarrhea.
First use May 14, 1963.

SN 173,952. Chas. Pfizer & Co., Inc., New York, N.Y. Filed July 29, 1963.

VIT-A-SPERSE

For Vitamin Preparation.
First use June 17, 1963.

SN 175,213. Robert I. Schattner, d.b.a. The R. Schattner Company, Washington, D.C. Filed Aug. 16, 1963.

GYNASEPTIC

For Vaginal Germicide.
First use January 1961.

SN 175,520. Sterling Drug Inc., New York, N.Y. Filed Aug. 21, 1963.

DR. CALDWELL'S

Owner of Reg. Nos. 61,686, 387,045, and 404,008.
For Laxative Preparation.
First use 1940.

SN 176,063. American Home Products Corporation, New York, N.Y. Filed Aug. 30, 1963.

NEOMAGMA

Owner of Reg. Nos. 306,187 and 656,013.
For Medicinal Preparation for the Treatment of Gastro-Intestinal Disorders.
First use Aug. 20, 1963.

SN 176,127. William T. Thompson Company, Los Angeles, Calif. Filed Aug. 30, 1963.

DECA-TAB

For Vitamins.
First use Oct. 25, 1959.

SN 176,850. Vantorex Limited, d.b.a. Riker Laboratories, Loughborough, England. Filed Sept. 12, 1963.

RIKOSPRAY

Owner of British Reg. No. 801,625, dated Feb. 12, 1960.
For Medicinals in Aerosol Form for Topical Application.

SN 176,970. Sternco Industries, Inc., Allendale, N.J. Filed Sept. 13, 1963.

ICH OUT

For Medical Preparation for Aquarium Fish.
First use Mar. 8, 1963.

SN 177,043. Hudson Vitamin Products, Inc., New York, N.Y. Filed Sept. 16, 1963.

PODIA-MIST

For Medicated Foot Powder.
First use Sept. 5, 1963.

SN 178,068. The Wander Company, Chicago, Ill. Filed Sept. 30, 1963.

DECTEINE

For Anti-Inflammatory Agent for Use in Chronic Respiratory Conditions Such as Bronchitis, Emphysema and Bronchiectasis.
First use Sept. 18, 1963.

SN 178,414. Carter Products, Inc., New York, N.Y. Filed Oct. 7, 1963.

CAPLARIL

Owner of Reg. Nos. 728,780, 264,162, and others.
For Pharmaceutical Preparation—Namely, a Combination of an Antihypertensive and a Diuretic for the Treatment of Mild to Moderate Hypertension.
First use Oct. 9, 1961.

SN 178,434. Eli Lilly and Company, Indianapolis, Ind. Filed Oct. 7, 1963.

ANHYDRON

Owner of Reg. No. 757,200.
For Diuretic Agent.
First use Jan. 30, 1963.

SN 179,581. American Home Products Corporation, New York, N.Y. Filed Oct. 23, 1963.

TRO-HIB

For Medicated Throat Lozenges.
First use Oct. 15, 1963.

SN 179,595. C. H. Boehringer Sohn, Ingelheim (Rhine), Germany. Filed Oct. 23, 1963.

TELGAL

Owner of German Reg. No. 479,314, dated Oct. 9, 1935.
For Medicinal Preparations for the Treatment of Asthma and Other Diseases of the Respiratory Organs.

SN 179,596. C. H. Boehringer Sohn, Ingelheim (Rhine), Germany. Filed Oct. 23, 1963.

BEROLEVIN

Owner of German Reg. No. 747,366, dated Apr. 10, 1961.
For Appetite-Controlling Agent.

SN 179,600. C. H. Boehringer Sohn, Ingelheim (Rhine), Germany. Filed Oct. 23, 1963.

DIUGARON

Owner of German Reg. No. 764,898, dated Aug. 29, 1962.
For Diuretic Agent.

SN 179,608. Carter Products, Inc., New York, N.Y. Filed Oct. 23, 1963.

MILTOWN

Owner of Reg. Nos. 605,387 and 648,127.
For Pharmaceutical Preparation—Namely, an Antibiotic Solution for the Prevention of Infection in Minor Cuts and Abrasions.
First use June 26, 1963.

SN 179,971. Warren-Teed Pharmaceuticals Inc., Columbus, Ohio. Filed Oct. 28, 1963.

VENTILADE

For Medicines and Pharmaceuticals—Namely, a Drug Preparation for Improvement of Respiratory Function.
First use Apr. 4, 1956.

SN 181,387. The National Laboratories, Corporation, Kansas City, Mo. Filed Nov. 18, 1963.

ANALATE

For Medicines and Pharmaceutical Preparations—Namely, an Analgesic, Antipyretic and Antispasmodic Preparation for Veterinary Use.
First use on or about June 25, 1963.

SN 181,757. Daywell Laboratories Corporation, Fairfield, Conn. Filed Nov. 22, 1963.

VERGO

For Pharmaceutical Preparation for the Treatment of Warts and Corns.
First use Oct. 11, 1954.

SN 181,767. First Texas Pharmaceuticals, Inc., Dallas, Tex. Filed Nov. 22, 1963.

PUBERTONE

For Preparation for the Treatment of Thyroid Imbalance.
First use Nov. 1, 1963.

SN 181,982. Hobart Laboratories, Inc., Chicago, Ill. Filed Nov. 27, 1963.

PRIMARUB

For Ointment With Inhalent Properties for the Relief of Nasal and Chest Congestion, and for Skin Irritations.
First use Oct. 24, 1963.

Class 19—Vehicles

SN 154,379. W. D. Schock, d.b.a. W. D. Schock Company. Santa Ana, Calif. Filed Oct. 2, 1962.



For Sailboats.
First use Nov. 3, 1957.

SN 159,036. Armstrong Patents Co. Limited, Eastgate, Beverley, England. Filed Feb. 4, 1964.

SELECTRAULIC

Owner of British Reg. No. 825,643, dated Sept. 26, 1961.
For Shock Absorbers for Vehicles.

SN 163,701. The Birmingham Small Arms Company Limited, Birmingham, England. Filed Mar. 1, 1963.



Owner of British Reg. No. 327,057, dated Sept. 21, 1910; and U.S. Reg. Nos. 50,890 and 69,725.
For Motorcycles and Parts Thereof.

SN 167,136. Foresight Ventures, Inc., Oakland, Calif. Filed Apr. 19, 1963.

INDY 500

For Metal Automobile Wheels.
First use Feb. 1, 1963.

SN 174,731. Zavody V. I. Lenina Plzen, Narodni Podnik, Plzen, Czechoslovakia. Filed Aug. 8, 1963.

SKODAWORKS

Owner of Czechoslovakian Reg. No. 111,446, dated Aug. 28, 1936; and U.S. Reg. Nos. 672,179, 675,566, and others.
For Automobiles, Buses, Trolley Cars, Motorized Road and Railroad Vehicles, Motorized Road Rollers, Trucks, Truck Tractors, Trailers, Railroad Coaches and Freight Cars, Ships and Boats, Airplanes, and Parts and Components of Said Goods.

SN 178,296. Northeastern Distributors, Inc., Cambridge, Mass. Filed Oct. 3, 1963.



For Small Boats—Namely, Sailboards.
First use April 1963.

SN 178,433. Explorer Research Company, San Jose, Calif. Filed Oct. 7, 1963.

FLEXOBRAKE

For Air Brake Actuating Mechanism for Automotive Vehicles.
First use Mar. 26, 1962.

SN 178,584. Butler Manufacturing Company, Kansas City, Mo. Filed Oct. 9, 1963.

PORTA-BULK

For Tank Trailers.
First use Sept. 4, 1963.

SN 178,587. Cardwell Westinghouse Company, Chicago, Ill. Filed Oct. 9, 1963.



Owner of Reg. No. 718-359.
For Railway Draft Gear and Snubbers.
First use Aug. 21, 1963.

SN 179,209. Delbar Products, Incorporated, Perkasie, Pa. Filed Oct. 17, 1963.

SWING LOCK

For Rear View Truck Mirrors Including Brackets Supporting the Same.
First use Mar. 8, 1962.

SN 179,242. Lone Star Boat Company, Plano, Tex. Filed Oct. 17, 1963.

Reliant

For Boats.
First use Sept. 12, 1963.

SN 179,346. Lincoln Fiberglass, Inc., Concord, Mass. Filed Oct. 18, 1963.



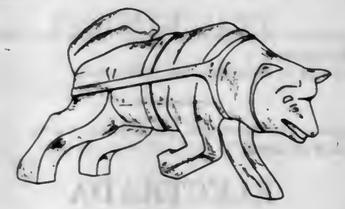
For Canoes and Kayaks.
First use Mar. 20, 1963.

SN 179,417. D. P. Harris Hardware & Manufacturing Co. Inc., New York, N.Y. Filed Oct. 21, 1963.

LIGHT BRIGADE

For Bicycles.
First use July 24, 1963.

SN 179,433. Mack Trucks, Inc., Plainfield, N.J. Filed Oct. 21, 1963.



For Motor Trucks and Buses.
First use during 1958.

Class 20—Linoleum and Oiled Cloth

SN 168,726. L. Farber Company, Worcester, Mass. Filed May 13, 1963.

FARBERIZED

For Leather Floor and Wall Tiles Which Are Subjected to a Special Process During Manufacture.
First use Jan. 2, 1963.

SN 169,508. American Biltrite Rubber Co., Inc., Trenton, N.J. Filed May 23, 1963.

Amtico
BROCADE

No claim is made to the word "Brocade" apart from the mark as shown. Owner of Reg. Nos. 385,018 and 731,771.
For Vinyl Flooring.
First use Mar. 28, 1963.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 130,926. Maxson Electronics Corporation, New York, N.Y. Filed Oct. 30, 1961.



For Stabilized Electric Drives, Electric Acceleration Switches, Electronic Power Supplies and Power Drives, Power Oscillators and Rectifiers.
First use Oct. 1, 1958.

SN 137,855. Jeffrey Galion Manufacturing Company, Columbus, Ohio. Filed Feb. 13, 1962.

TRANSITROL

For Electrical Time Interval Delay Device for Underground Mining Equipment.
First use on or about Jan. 26, 1962.

SN 144,244. The Electrada Corporation, Culver City, Calif. Filed May 10, 1962.

ELECTRADA

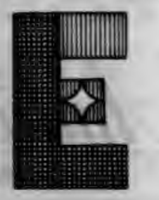
For Equipment for Visually Displaying Received and Transmitted Messages.
First use Mar. 16, 1962.

SN 153,092. Marco Electronic Products, Inc., Sonoma, Calif. Filed Sept. 13, 1962.

MODUPLEX

For Communication Systems—Namely, Two-Way Radio Receiving and Transmitting Equipment.
First use Apr. 20, 1961.

SN 153,636. El-Tronics, Inc., Warren, Pa. Filed Sept. 20, 1962.



The colors black and red as shown by the lining on the drawing are claimed as integral portions of the mark.
For Fluorescent Lamps, Negative Glow Lamps, Incandescent Lamps, Photoflash Lamps and Electrical Fuses.
First use Sept. 5, 1962.

SN 153,801. Samuel M. Neely, d.b.a. Commercial Lighting Equipment Company, Los Angeles, Calif. Filed Sept. 24, 1962.

CLECO

For Incandescent Lamps, Bulbs; Fixtures for Incandescent Lamps, Bulbs; Fluorescent Tubes, Fluorescent Light Fixtures, Fluorescent Starters, Fluorescent Lamp Holders, Cluster Boxes, and Floodlight Pointing.
First use Sept. 15, 1952.

SN 156,389. Electronic Component Importers, Inc., Englewood, N.J. Filed Nov. 1, 1962.

TUNGSRAM

For Electron Tubes Used in Radios, Television, Etc.
First use May 10, 1961.

SN 156,520. Rauland-Borg Corporation, Chicago, Ill. Filed Nov. 2, 1962.

AMPLICALL

For Wire and Radio Communications Systems Used for Telephonic and Radio Amplified Voice Reinforcement in Voice Communications, Voice Call and Voice Paging Systems and Components Thereof for Use Within, About and Outside of Industrial, Commercial, Office and Institutional Establishments and Buildings and the Like.
First use 1933.

SN 163,826. The Electric Auto-Lite Company, Toledo, Ohio. Filed Mar. 4, 1963.

UDS

For Electric Storage Batteries, Generators, Alternators, Motors, Spark Plugs, Relays, Wire and Cable; Electric Generating, Engine Starting Ignition, Indicating and Regulating Apparatus, Wiring, Switching and Controlling Devices, Components and Accessories Therefor, Particularly Adapted for Automotive Engines; Vehicle Equipment Actuating Apparatus—Namely, Electrically Operated Windshield Wipers, Window Actuators, Top Lifts, Hood and Deck Lifters, Door Actuators, Trunk, Hood and Door Locking Devices, Heating Devices, Air Conditioning and Car Cooling Devices, Engine Governors, Transmission Controllers and Fuel and Hydraulic Pumps; Electric Lighting Devices, Electrically Actuated Apparatus for Producing Visual, Audible, Warning and Direction Signals Particularly Adapted for Use With Self-Propelled Vehicles.
First use Jan. 6, 1960, on electric storage batteries.

SN 164,227. The Electro-Pak Corporation, Mohnton, Pa. Filed Mar. 8, 1963.

ELECTRO-PAK

For Electric Hot Water Heaters.
First use June 24, 1960.

SN 164,542. Mercil Plating Equipment Company, Chicago, Ill. Filed Mar. 13, 1963.

MERCIL

For Electroplating Equipment and Parts Thereof.
First use during or about 1927.

SN 164,760. Warner Electric Brake & Clutch Company, South Beloit, Ill. Filed Mar. 15, 1963.

STATI-GRIP

For Electric Field Responsive Work Holders.
First use at least as early as Nov. 30, 1962.

SN 165,586. Electric Regulator Corporation, Norwalk, Conn. Filed Mar. 28, 1963.

REVOHM

Owner of Reg. No. 633,529.
For Electrical Speed Controlling Units for Electric Motors.
First use Feb. 18, 1963.

SN 167,718. Far Eastern Commerce Corporation, New York, N.Y. Filed Apr. 29, 1963.

XXX

For Flashlights and Lanterns.
First use Apr. 11, 1963.

SN 167,839. Charles W. Ross, Moline, Ill. Filed Apr. 30, 1963.

FARMAG

For Magnetic Separators Used in Agricultural Machines Including Hammer Mills, Roller Mills, Burr Mills and Other Material Treating and Reducing Machines Used Primarily on Farms for Separating Ferrous Materials Passing Into the Agricultural Machines.
First use Mar. 12, 1963.

SN 170,904. General Services Co., Corvallis, Oreg. Filed June 13, 1963.

LOAD CEL

For Electric Motor Speed Control Devices—Namely, Liquid Rheostats.
First use Feb. 28, 1963.

SN 171,115. Eriez Manufacturing Co., Erie, Pa. Filed June 17, 1963.



The word "Magnetics" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 540,162, 700, 451, and others.
For Magnetic Separators for Industrial Use for Separating Magnetic Particles From Non-Magnetic Solids and Liquids, Magnetic Conveyors, Magnetic Vibrators and Magnetic Feeders.
First use Jan. 2, 1962.

SN 174,144. The Electric Storage Battery Company, Philadelphia, Pa. Filed July 29, 1963.

WORKMAN

Owner of Reg. No. 625,764.
For Dry Cell Batteries.
First use Apr. 27, 1961.

SN 174,746. Channel Master Corporation, Ellenville, N.Y. Filed Aug. 9, 1963.

CONTURA-16

For Television and Radio Antennas.
First use July 19, 1963.

SN 175,262. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Aug. 19, 1963.

NOMEX

For Flexible Sheet for Electrical Insulation.
First use Aug. 1, 1963.

SN 175,676. The Pyle-National Company, Chicago, Ill. Filed Aug. 23, 1963.

ENTRALITER

For Mercury Vapor and Incandescent Lights.
First use Aug. 12, 1963.

SN 176,984. AMP Incorporated, Harrisburg, Pa. Filed Sept. 16, 1963.

TERMI-POINT

For Electrical Connectors.
First use Sept. 6, 1963.

SN 179,221. General Devices, Inc., Princeton, N.J. Filed Oct. 17, 1963.



For Electromechanical Commutators and Switches.
First use Aug. 8, 1963.

SN 179,250. The Paramount Paper Tube Corporation, Fort Wayne, Ind. Filed Oct. 17, 1963.

PARAMOUNT

Owner of Reg. No. 355,195.
For Paper Tubing Used in the Manufacture of Magnet Coils and Other Electrical Apparatus.
First use September 1933.

SN 179,586. Amplex Corporation, Carle Place, N.Y. Filed Oct. 23, 1963.

AMPLEX E-Z-GLIDE

Owner of Reg. Nos. 710,196 and 712,490.
For Incandescent and Fluorescent Lamps.
First use Aug. 13, 1963.

SN 179,677. Topp Import & Export, Inc., Miami, Fla. Filed Oct. 23, 1963.



For Radios, Inter-Com Systems, Television Sets, Toasters, Electric Fans and Tape Recorders.
First use May 15, 1961.

Class 22 — Games, Toys, and Sporting Goods

SN 151,286. Ainsworth Consolidated Industries Pty. Ltd., Rosebery, New South Wales, Australia. Filed Aug. 16, 1962.

ARISTOCRAT

Owner of Australian Reg. No. 154,646, dated July 1, 1959.
For Coin-Freed Apparatus, Coin-Freed Automatic Machines, Coin-Freed Automatic Distributors.

SN 174,720. Tofa, Narodni Podnik, d.b.a. Tofa, National Corporation, Semily, Czechoslovakia. Filed Aug. 8, 1963.



Owner of Czechoslovakian Reg. No. 151,904, dated Feb. 4, 1955.
For Educational, Mechanical and Recreational Games and Toys, Indoor and Outdoor Games and Game Equipment, Dolls, Toy Figures and Toy Animals, Toy Jewelry, Jigsaw Puzzles, Sporting Goods, Amusement Devices and Parts of Said Goods.

SN 176,098. The Hubley Manufacturing Company, Lancaster, Pa. Filed Aug. 30, 1963.



For Toy Player Piano.
First use May 16, 1963.

SN 176,244. A. G. Spalding & Bros., Inc., Chicopee, Mass. Filed Sept. 3, 1963.

PINSPLITTER

For Golf Balls and Golf Clubs.
First use July 31, 1963.

SN 176,245. A. G. Spalding & Bros., Inc., Chicopee, Mass. Filed Sept. 3, 1963.

FOCAL POWERED

For Golf Clubs.
First use July 31, 1963.

SN 176,386. Moneymakers, Inc., Kansas City, Mo. Filed Sept. 5, 1963.

BOUND-A-ROUND

For Ball Rolling Toy.
First use Aug. 26, 1963.

SN 176,434. Eldon Industries, Inc., Hawthorne, Calif. Filed Sept. 6, 1963.

ELDON

For Toys—Namely, Boats, Submarines, Trucks, Constructional Equipment, Pails, Shovels, Blocks, Globes, Locks, Guns, Targets, Furniture, Household Utensils, Measuring Implements, Banks, Puppets, Animals, Block Sets, Woodburning Sets, Cameras, Animated Figures, Electric Race Sets and Parts Therefor and Games.
First use about February 1954.

SN 176,442. Ames Harris Neville Co., Portland, Oreg. Filed Sept. 6, 1963.

WIKIUP

For Sleeping Bags and Tents for Outdor and Sportsmen's Use.
First use Dec. 13, 1962.

SN 176,509. The Enterprise Manufacturing Company, Akron, Ohio. Filed Sept. 9, 1963.

SEA STAR

Owner of Reg. No. 76,045.
For Fishing Reels.
First use Oct. 7, 1955.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

SN 138,510. Lilliston Implement Company, Albany, Ga. Filed Feb. 23, 1962.



For Rotary Hoe Type Cultivators.
First use on or about Feb. 20, 1961.

SN 140,075. American Parts Company, Inc., Houston, Tex. Filed Mar. 19, 1962.

"POWERIDE-LINE"

For Automatic Transmission Parts, Engine Parts and Chassis Parts for Tractors and Road Construction and Maintenance Equipment, and Engine and Drive Parts for Automobiles and Trucks, Such as Transmission Housings, Shafts, Universal Joints, Clutch Plates, Timing Gears, Timing Chains, Sprockets, Pin Assemblies, Valve Assemblies, Pumps, Governors, Mufflers, and Similar Products.
First use Jan. 28, 1962.

SN 149,909. Automated Building Components, Inc., Miami, Fla. Filed July 27, 1962.



For Presses and Jigs for Fabricating Wooden Joints With Metal Connector Plates.
First use Oct. 1, 1961.

SN 150,684. Earnest Machine Products Company, Cleveland, Ohio. Filed Aug. 7, 1962.

BLACK DIAMOND

For Machinery Parts Comprising Cap Screws, Plow Bolts, Bucket Tooth Bolts, Track Shoe Bolts, Rope Clips, Spacers, Bushings, Sprocket Rims, Roller Seals, Drive Seals and Grouser Steel.
First use on or about Apr. 1, 1953.

SN 154,003. R. M. Willis, d.b.a. Keystone Engineering & Products Co., Seattle, Wash. Filed Sept. 26, 1962.



For Apparatus for Use in Fluoridating Liquids.
First use Sept. 28, 1961.

SN 158,591. FIMA S.p.A., Varese, Italy. Filed June 24, 1963.



Owner of Italian Reg. No. 159,169, dated May 15, 1962.
For Office Machines, Addressing Machines, Devices and Parts for Said Machines; Printing Machines, Marks and Marking Machines, Embossing Machines, Punched Card Machines, Plates for Addressing Machines, Tabs for Said Plates; Metallic and Non-Metallic Plates; Cash Registers, Machines and Devices for the Reproduction of Documents, Duplicating Machines, Mailing Machines, Folding Machines, Collators, Stamping Machines, Cutting Machines for Continuous Forms, Carbon Paper Deleaving Machines for Continuous Forms, Printing Machines for Continuous Forms, Office Furniture.

SN 159,301. Clyde L. Taylor, d.b.a. Taylor's Welding Works, Visalia, Calif. Filed Dec. 17, 1962.

HYDRA-DOR

For Automatic Pressure Door Control for Cotton Pickers.
First use Nov. 17, 1961.

SN 160,996. Beckman Instruments, Inc., Fullerton, Calif. Filed Jan. 21, 1963.

ACCU-FLO

For Precision Pumps for Accurate and Reproducible Small Volume Fluid Movement.
First use Oct. 12, 1962.

SN 161,057. Hi-Shear Corporation, Torrance, Calif. Filed Jan. 21, 1963.

STRUTMASTER

For Agricultural Spray and Dusting Equipment.
First use Dec. 10, 1962.

SN 161,525. Krause Corporation, Inc., Hutchinson, Kans. Filed Jan. 28, 1963.

PENETRATOR

For Farm Machinery—Namely, Tilling Implements.
First use Jan. 2, 1962.

SN 161,600. Gilson Bros. Co., Plymouth, Wis. Filed Jan. 29, 1963.

PLYMOUTH

For Rotary Tillers, Mowers, and Internal Combustion Engine Driven Lawn Vacuum Cleaners.
First use in September 1958 on rotary tillers.

SN 162,458. Little Giant Corporation, Oklahoma City, Okla. Filed Feb. 11, 1963.



Owner of Reg. Nos. 393,561, 738,233, and others.
For Steam Cleaners for Automotive and Industrial Cleaning.
First use Jan. 18, 1963.

SN 166,673. Veb Tullmaschinenbau Karl-Marx-Stadt, Karl-Marx-Stadt, Germany. Filed Apr. 12, 1963.



For Looms for Tulle, With or Without Jacquard Equipment, Looms for Curtains and Lace, Multiple Needle Sewing Machines, Chain Knitting Machines and Sewing Knitting Machines, Machines for Inserting and Removing Bobbins, Machines for Winding Bobbins and Parts of the Above Machines.
First use Mar. 10, 1959; in commerce Aug. 31, 1962.

SN 168,101. Newspaper Enterprise Association, Inc., Cleveland, Ohio. Filed May 3, 1963.

PERMAVEND

For Vending Machines for Newspapers, Magazines, Etc.
First use Oct. 15, 1959.

SN 168,556. Viber Company, Burbank, Calif. Filed Apr. 29, 1963.

YELLOW JACKET

For Tip for Tubular Vibratory Machines for Insertion in Unset Concrete.
First use on or about Nov. 1, 1962.

SN 171,018. Industrial Tectonics, Inc., Hicksville, N.Y. Filed June 14, 1963.

equafilm

For Bearings.
First use Apr. 25, 1963.

SN 172,061. The Gillette Company, Boston, Mass. Filed June 28, 1963.

WALLKIT

Owner of Reg. No. 398,927.
For Safety Razor Sets Including Safety Razors and Safety Razor Blades.
First use Oct. 16, 1941.

SN 172,171. Dyna Corporation, Dayton, Ohio. Filed July 1, 1963.

DYNA DRIVE

Owner of Reg. Nos. 554,362 and 710,515.
For Speed Changing Mechanisms.
First use June 20, 1963.

SN 172,588. Griffwood, Inc., Lake City, Fla. Filed July 8, 1963.

GRIFFSAW

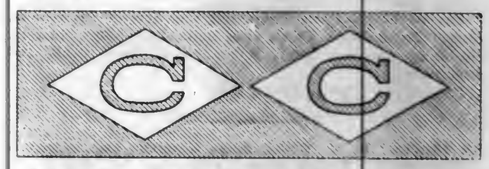
For Lumber Manufacturing Machinery.
First use Mar. 29, 1963.

SN 173,199. Stone Conveyor Co., Inc., Honeoye, N.Y. Filed July 17, 1963.



For Portable Concrete Mixers and Material Handling Conveyor Systems and Parts Thereof.
First use May 28, 1963.

SN 173,217. Cal-Cube, Inc., Woodland, Calif. Filed July 18, 1963.



The drawing is lined for the color green.
For Pelletizing Equipment for Animal Foods.
First use May 3, 1963.

SN 174,498. The Ducon Company, Inc., Mineola, N.Y. Filed Aug. 6, 1963.

DUO/veyor

For Pneumatic Conveying Apparatus.
First use May 27, 1963.

SN 174,733. Zavody V. I. Lenina Plzen, Narodni Podnik, Plzen, Czechoslovakia. Filed Aug. 8, 1963.

SKODAWORKS

Owner of Czechoslovakian Reg. No. 111,446, dated Aug. 28, 1936; and U.S. Reg. Nos. 672,179, 675,566, and others.
For Industrial, Metallurgical, Agricultural and Mining Machinery, Equipment and Apparatus; Mill Trains; Rolling Mills; Drawing and Hoisting Machines; Cranes; Pulley Blocks; Winches; Conveyors; Separators; Shakers; Sifters; Stirrers and Agitators; Crushers; Grinders; Mixers; Kneaders; Foundry Equipment; Foundry Riddles; Foundry Sieves; Molding and Forming Machines; Mechanical Hydraulic and Pneumatic Presses Including Forging Presses, Flanging Presses, Extrusion Presses and Vulcanizing Presses; Sandblast Machines; Sandslingers; Cutting, Straightening, Polishing, Grading, Screening, Gauging, Coiling and Packaging Machines, Apparatus and Installations; Road Rollers; Excavators; Dredges; Tractors; Compressors; Blowers; Hydro-Pneumatic Accumulators; Machines and Apparatus for the Production and Treatment of Industrial Gases; Coke; Chemicals, Alcohol Fertilizers, Sugar, Beer, Yeast, Malt, Starch, and Synthetic Plastics; Machines and Apparatus for the Manufacture and Treatment of Paper and Paper Articles; and of Leather; Tobacco Processing and Cigarette Making Machines; Tools and Machine Tools for Working Metal, Wood and Stone; Steam and Combustion Engines Including Turbines and Diesel Motors; Aircraft Engines; Steam and Diesel Locomotives; Machines and Apparatus for Nuclear Power Stations; Machine Shafts; Crank Shafts; Gear Wheels; Gear Boxes; and Parts of Said Goods.

SN 175,655. General Auto Wash Systems, Inc., Grand Rapids, Mich. Filed Aug. 23, 1963.

RAINBOW

For Automobile Washing Equipment.
First use June 1962.

SN 175,787. Petroleum Engineering Co., Inc., Baltimore, Md. Filed Aug. 26, 1963.

RE NEW STYL ED

For Gasoline Pump Casings.
First use Aug. 1, 1963.

SN 179,226. Hyde Manufacturing Company, d.b.a. Hyde Tools, Southbridge, Mass. Filed Oct. 17, 1963.

STRIP-ZUM

For Scraping Tool for Wallpaper and Paint.
First use Sept. 30, 1963.

SN 179,229. Hyde Manufacturing Company, d.b.a. Hyde Tools, Southbridge, Mass. Filed Oct. 17, 1963.

PRY-ZUM

For Wrecking Bar and Prying Tool.
First use Sept. 30, 1963.

SN 179,488. Walker Manufacturing Company, Racine, Wis. Filed Oct. 21, 1963.

SMOG BLOK

For Crankcase Ventilation Control Systems.
First use Sept. 10, 1963.

SN 181,587. Asbestos Grading Equipment Company (S.A) (Proprietary) Limited, Johannesburg, Republic of South Africa. Filed Nov. 20, 1963.

COBRA

Owner of South African Reg. No. 62/0702, dated Mar. 7, 1962.
For Grinding Mills.

SN 181,689. Soderhamn Machine Manufacturing Company, Talladega, Ala. Filed Nov. 21, 1963.

RO-VAC

For Machines for Removing Bark From Logs.
First use Aug. 5, 1960.

Class 24 — Laundry Appliances and Machines

SN 164,344. Glover Industries, Inc., Kansas City, Mo. Filed Mar. 11, 1963.

RESIST STAPH

For Washing Machines.
First use Sept. 10, 1962.

SN 177,203. Diamond National Corporation, New York, N.Y. Filed Sept. 10, 1963.



For Clothespins.
First use Jan. 13, 1956.

Class 25 — Locks and Safes

SN 158,157. Eduard Hobrecker G.m.b.H., Hamm, Westphalia, Germany. Filed Nov. 29, 1962.

SECUTRONIC

Owner of German Reg. No. 763,352, dated July 13, 1962.
For Safes, Vaults, Vault Doors, Safety Locks and Metal Boxes.

Class 26 — Measuring and Scientific Appliances

SN 116,882. Fotorite, Inc., Chicago, Ill., assignee of Geiss-America, Chicago, Ill. Filed Mar. 31, 1961.

FOTORITE

For Photographic Print Processing Apparatus—Namely, Desk-Top Units for Processing Exposed Photographic Sensitized Materials.
First use Mar. 10, 1961.

SN 130,926. Maxson Electronics Corporation, New York, N.Y. Filed Oct. 30, 1961.

MAXSON

For Electronic Test Consoles, Droppable Electronic Systems, Precision Phase Meters, Statistical Recorders, Accelerometers, Fire Control Computers, Bombing and Navigation Computers and Navigation Equipment.
First use Oct. 1, 1958.

SN 143,634. K.G.M. Electronics Limited, Richmond, England. Filed May 2, 1962.

NUMERIK

For Electrically Operated Counting Indicators for Use in Connection With Electronic Counters, Data Processing Equipment and the Like To Display Illuminated Digits, Letters, Words and Symbols.
First use on or about Mar. 1, 1962: in commerce on or about Mar. 20, 1962.

SN 145,432. American Electronics, Inc., Fullerton, Calif. Filed May 25, 1962.

AEI

For Electrical and Mechanical-Electrical Components and Sub-Assemblies for Scientific Appliances, Principally Air and Space Appliances, Employed for Controlling Flight, Computing Data Obtained in Flight, and Translating Such Data Into Other Forms, and Including Precision Resolvers for Co-Relating the Position of a Shaft and an Electrical Signal, Motor Tachometers, Servos, and Synchros, High Power Servo Amplifiers for High Power Electronic Control of High Inertia Load, Frequency Tuners, Sequence Programmers, Range Computers, Mechanical Integrators, and Trim Tab Synchronizers.
First use May 8, 1961.

SN 147,240. Symington Wayne Corporation, Salisbury, Md. Filed June 19, 1962.

TELEMATIC

For Quantity and Cost Indicating and Registering System Associated With Fluid Dispensers, Particularly a Remote Indicating Form of Such a System Associated With Gasoline Dispensers in Automobile Service Stations.
First use May 15, 1962.

SN 156,308. Alfred J. Levit, Inc., Nashville, Tenn. Filed Oct. 31, 1962.

LEVCO

For Changing Bags and Aprons for Use in Photographic Dark Room, Camera Flash Adapter and Flash Cords, Camera Tripods, Slide Files, Chests and Trays for Photographic Use, Camera Cases, Lighting Reflectors for Photographic Use; and Dark Room Accessories—Namely, Take-Up Reels and Boxes, Flash Cords for Cameras, Adapter for Flash Bulbs.
First use Sept. 5, 1956.

SN 157,419. Trub, Tauber & Co. Aktiengesellschaft, Fabrik Elektrischer Messinstrumente und Wissenschaftlicher Apparate, Zurich, Switzerland. Filed Aug. 7, 1963.

METIOSCOPE

Owner of Swiss Reg. No. 193,161, dated July 13, 1962.
For Electron Emission Microscope.

SN 158,157. Eduard Hobrecker G.m.b.H, Hamm, Westphalia, Germany. Filed Nov. 29, 1962.

SECUTRONIC

Owner of German Reg. No. 763,352, dated July 13, 1962.
For Electronically and Automatically Operating Alarm and Time Alarm Devices, and Fire and Burglar Alarm Devices.

SN 159,136. Westinghouse Electric Corporation, Buffalo, N.Y. Filed Dec. 13, 1962.

ROTRAC

For Rotary Pulse Generator for Use as a Velocity or Position Indicating Transducer for Use in Control Systems.
First use on or about Mar. 2, 1960.

SN 162,007. Mojonnier Bros. Co., Chicago, Ill. Filed Feb. 4, 1963.

CARBO-MIX

For Combined Proportioner, Blender and Carbonator for Carbonated Beverages.
First use Dec. 1, 1958.
Subj. to Intf. with SN 162,698.

SN 162,698. Carbo-Mix Dispensers, Inc., Los Angeles, Calif. Filed Feb. 14, 1963.

CARBO-MIX

For Automatic Metering Beverage Dispensers.
First use at least as early as May 1958.
Subj. to Intf. with SN 162,007.

SN 163,332. Data Technology, Inc., Cambridge, Mass. Filed Feb. 25, 1963.

VERNISYN

For Encoders Providing Angular or Linear Position Information in Digital Signal Form.
First use Sept. 29, 1962.

SN 163,504. Universal Optical Company, Inc., Providence, R.I. Filed Feb. 26, 1963.

QUEEN OF HEARTS

For Eyeglass Frames and Parts Thereof.
First use Feb. 15, 1963.

SN 164,508. Columbian Bronze Corporation, Freeport, N.Y. Filed Mar. 13, 1963.

SCENTRY

For Gasoline Vapor Detectors.
First use Feb. 15, 1963.

SN 164,889. Rinshed-Mason Company, Detroit, Mich. Filed Mar. 18, 1963.

TINTOMETER

For Apparatus for Proportional Mixing of Paints.
First use Dec. 8, 1948.

SN 166,963. American Desk Manufacturing Company, Temple, Tex. Filed Apr. 18, 1963.

AMDESK PERMALAB

For Consoles and Booths Fitted With Electronic Equipment for Use in Instruction in Schools and the Like.
First use Mar. 28, 1963.
Subj. to Intf. with SN 178,812.

SN 167,369. AEL Products, Inc., Colmar, Pa., by change of name from Chemical Electronics, Inc., Colmar, Pa. Filed Apr. 23, 1963.

KLENZOTROL

For Electronic Controls for Measuring, Mixing and Dispensing.
First use Dec. 1, 1962.

SN 167,391. Maremont Corporation, Chicago, Ill. Filed Apr. 23, 1963.

CALIBRAKE GAGE

No claim to the word "Gage" is made apart from the other features of the mark as shown.
For Tool Used to Measure the Thickness of Brake Linings and the Diameter of Brake Drums.
First use Jan. 19, 1963.

SN 167,543. Nexus Research Laboratory, Inc., Canton, Mass. Filed Apr. 25, 1963.

NEXUS

For Operational Amplifiers for Use With Scientific and Measuring Equipment, Such as Medical Research Instrumentation, Satellite Instrument Packages, Data Processing Devices, Oceanographic Instrumentation, and the Like.
First use Mar. 27, 1962.

SN 168,452. Felix E. Uithoven, West Hempstead, N.Y. Filed May 8, 1963.

TINI CHEKR

For Device for Measuring and Indicating the Current Density of an Electrolyte in Solution for Measuring and Indicating the Ratio of Vermouth to Gin in a Martini Drink.
First use Mar. 11, 1963.

SN 170,496. Beckman Instruments, Inc., Fullerton, Calif., assignee of Sharp Laboratories, Inc., San Diego, Calif. Filed June 6, 1963.

SHARP

Owner of Reg. No. 747,844.
For Radioactivity Measuring and Detection Systems and Components Thereof, Including Detectors, Amplifiers, Spectrometers, Pulse Generators, Shields and Counters.
First use April 1960.

SN 173,101. Dura Corporation, Oak Park, Mich. Filed July 16, 1963.

SIGN·ALIGN

For Wheel Alignment Equipment.
First use April 1963.

SN 173,312. Abbott Laboratories, North Chicago, Ill. Filed July 19, 1963.

TRIOSORB

For Combination Package of Resin-Sponge and Test Kit for Use in the Laboratory in Testing of Body Fluids.
First use Oct. 26, 1961.

SN 173,478. Monroe Calculating Machine Company, Orange, N.J. Filed July 22, 1963.

TRUE-TOUCH

For Key Tops and Key Caps for Business Machine Keyboards, Particularly for Cash Register Keyboards.
First use on or about July 2, 1963.

SN 173,613. Ace Glass Incorporated, Vineland, N.J. Filed July 24, 1963.

TRUBORE

For Laboratory Glassware in the Nature of Tubing, Test Tubes, Flasks, Stirrers and the Like.
First use July 1941.

SN 174,062. Vapor Corporation, Chicago, Ill. Filed July 30, 1963.

VAPOR reef-Air TEMPERATURE CONTROL

Applicant disclaims the term "Temperature Control."
For Thermostats and Temperature Control Equipment.
First use July 12, 1963.

SN 174,539. The Singer Company, New York, N.Y. Filed Aug. 6, 1963.

PANORAMIC

Owner of Reg. Nos. 418,327, 425,495, and others.
For Communications Analyzers and Monitors, Radio Frequency Interference Measuring Instruments, Oscillators, and Spectrum Analyzers.
First use as early as Apr. 8, 1959.

SN 174,628. Waters Manufacturing, Inc., Wayland, Mass. Filed Aug. 7, 1963.

LITTLE DIPPER

For Electronic Test Equipment—Namely, Oscillators.
First use June 28, 1963.

SN 174,738. Asahi Optical Company, Ltd., Chuo-ku, Tokyo, Japan. Filed Aug. 9, 1963.

SPOTMATIC

Owner of Japanese Reg. No. 589,658, dated June 15, 1962.
For Photographic Instruments, Optical Instruments, Cinematographic Instruments and Accessories Therefor.

SN 174,981. SCM Corporation, New York, N.Y. Filed Aug. 13, 1963.

WEDGELITE

For Device for Copying the Pages of Books.
First use Mar. 15, 1963.

SN 174,988. Spectra-Physics, Inc., Mountain View, Calif. Filed Aug. 13, 1963.



For Gas Lasers (Used for Light Propagation Studies, Light Scattering Experiments, Photo-Elastic Stress Analysis, Optical Communications, Long-Path Interferometry, Magnetic and Electric Field Studies, Plasma Diagnostics, Optical Testing and Alignment, Precision Ranging and Velocity Determinations, Optical Data Processing, Spectroscopy, Micro-Heating, Coherent-Light Photography, and the Like) and Discharge Exciters Therefor.
First use July 12, 1963.

SN 174,989. Spectra-Physics, Inc., Mountain View, Calif. Filed Aug. 13, 1963.

SPECTRA-PHYSICS

For Gas Lasers (Used for Light Propagation Studies, Light Scattering Experiments, Photo-Elastic Stress Analysis, Optical Communications, Long-Path Interferometry, Magnetic and Electric Field Studies, Plasma Diagnostics, Optical Testing and Alignment, Precision Ranging and Velocity Determinations, Optical Data Processing, Spectroscopy, Micro-Heating, Coherent-Light Photography, and the Like) and Discharge Exciters Therefor.
First use July 12, 1963.

SN 175,471. Conolite, Inc., Carpentersville, Ill. Filed Aug. 21, 1963.



For Laboratory Counter Tops, Cupboards and Shelves.
First use July 31, 1963.

SN 175,755. Howe Richardson Scale Company, Clifton, N.J. Filed Aug. 26, 1963.



For Weighing Apparatus and Systems and Components Thereof.
First use in or about November 1962.

SN 175,857. Linear Alpha, Inc., Evanston, Ill. Filed Aug. 27, 1963.

SYNTEC

For Data Processing Equipment.
First use Aug. 19, 1963.

SN 175,904. Comptone Company, Ltd., New York, N.Y. Filed Aug. 28, 1963.

DUO-MATIC

For Eye Glasses, Sun Glasses, Spectacles, Frames and Parts Thereof, Including Lenses.
First use July 12, 1956.

SN 175,959. Vernon Photographic Corp., Mount Vernon, N.Y. Filed Aug. 28, 1963.

VERNON

Owner of Reg. No. 750,149.
For Motion Picture Cameras and Accessories Therefor.
First use at least as early as Apr. 2, 1963.

SN 175,987. Edwin A. Fisher, d.b.a. Astec Engineering Co., Lebanon, N.J. Filed Aug. 29, 1963.

MINITEST

For Testing Instruments Used in Testing Radios, Television and Other Electronic Sound and/or Signal Devices.
First use Oct. 15, 1962.

SN 176,064. Bausch & Lomb Incorporated, Rochester, N.Y. Filed Aug. 30, 1963.

Flexiscope

For Fiber Optics Probe.
First use Aug. 14, 1963.

SN 176,257. Webster Controls, Inc., Lynchburg, Va. Filed Sept. 3, 1963.

ZONE MASTER

For Selective Temperature Controllers for Air Conditioning and Heating Systems.
First use July 9, 1963.

SN 176,444. Hoffmann Company, Hollis, N.Y. Filed Sept. 6, 1963.

FUEL-O-VAC

For Vacuum and Fuel Pump Testers.
First use Oct. 31, 1960.

SN 176,499. Curtiss-Wright Corporation, Wood-Ridge, N.J. Filed Sept. 9, 1963.

VISULATOR

For Flight Simulating Equipment for Training Aircraft Personnel in Landing Maneuvers.
First use June 15, 1959.

SN 176,731. The Hallicrafters Co., Chicago, Ill. Filed Sept. 11, 1963.

RADIR

For Microfilm Cartridges.
First use Aug. 14, 1963.

SN 176,845. Taylor Instrument Companies, Rochester, N.Y. Filed Sept. 12, 1963.

MAG-PIPE

For Magnetic Induction Flowmeters.
First use October 1961.

SN 176,944. Pacific Scientific Company, San Francisco, Calif. Filed Sept. 13, 1963.



For Machine for Testing Tension, Compression and Flexure of Members.
First use May 21, 1952.

SN 177,198. Therm-O-Disc, Incorporated, Mansfield, Ohio. Filed Sept. 17, 1963.

POSIGRIP

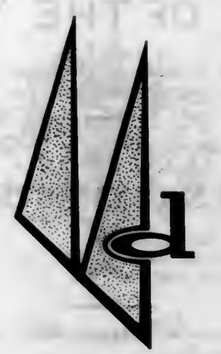
For Thermostatic Controls.
First use Sept. 3, 1963.

SN 177,266. Mark Systems, Inc., Santa Clara, Calif. Filed Sept. 18, 1963.

SPAN

For Photographic Film Magazines and Equipment for Processing Film.
First use Aug. 24, 1963.

SN 177,341. Delcon Corporation, Palo Alto, Calif. Filed Sept. 19, 1963.



Owner of Reg. No. 729,118.
For Electrical Measuring Appliances Used in Detecting and Measuring Ultrasonic Mechanical Vibrations, Such as Those Caused by Inaudible Leaks.
First use Mar. 21, 1960.

SN 177,363. Medic-Made, Inc., Minneapolis, Minn. Filed Sept. 19, 1963.

OXY-LARM

For Device for Sensing and Audibly Indicating Low Gas Pressure.
First use Aug. 23, 1963.

SN 177,398. David P. Bushnell, Altadena, Calif. Filed Sept. 20, 1963.

SPORTVIEW

For Binoculars.
First use Apr. 8, 1952.

SN 177,404. Dependable Relay Company Limited, London, England. Filed Sept. 20, 1963.

DEPENDATHERM

Owner of British Reg. No. 837,596, dated Aug. 1, 1962.
For Thermometers.

SN 177,510. Eastman Kodak Company, Rochester, N.Y. Filed Sept. 23, 1963.

CAVALCADE

Owner of Reg. No. 627,361.
For Photographic Copying Apparatus.
First use Aug. 9, 1963.

SN 177,545. Radiation Instrument Development Laboratory, Melrose Park, Ill. Filed Sept. 23, 1963.

SCINTI-MATIC

For Radiation Detection and Measuring Apparatus.
First use on or before Aug. 19, 1963.

SN 177,546. Radiation Instrument Development Laboratory, Melrose Park, Ill. Filed Sept. 23, 1963.

TIME OF THE YEAR

For Radiation Detection and Measuring Apparatus.
First use on or before Aug. 19, 1963.

SN 177,548. SCM Corporation, New York, N.Y. Filed Sept. 23, 1963.

TENKEYMASTER

Owner of Reg. No. 703,952.
For Calculating Machines.
First use June 28, 1963.

SN 177,820. Universal Optical Company, Inc., Providence, R.I. Filed Sept. 26, 1963.

COVER GIRL

For Eyeglass Frames and Parts Thereof.
First use Aug. 23, 1963.

SN 178,052. Spiratone, Inc., Flushing, N.Y. Filed Sept. 30, 1963.

TELXTENDER

For Photographic Lenses.
First use June 3, 1963.

SN 178,125. Kanematsu New York, Inc., New York, N.Y. Filed Oct. 1, 1963.

PEARL

For Cash Registers.
First use June 1963.

SN 178,812. Permalab-Metalab Equipment Corporation, Los Angeles, Calif. Filed Oct. 11, 1963.

·PERMALAB·

For Metal Furniture for Use in Scientific Laboratories.
First use Jan. 29, 1960.
Subj. to Intf. with SN 166,963.

Class 27 — Horological Instruments

SN 179,913. Mattel, Inc., Hawthorne, Calif. Filed Oct. 28, 1963.

BARBIE

For Time Pieces, Specifically Wrist Watches.
First use Apr. 3, 1963.

Class 29 — Brooms, Brushes, and Dusters

SN 172,767. Ox Fibre Brush Company, Inc., Frederick, Md. Filed July 10, 1963.

SANITANKER

Owner of Reg. No. 677,687.
For Cleaning Brushes for Tanks, Vats, Kettles, and Walls.
First use at least as early as October 1959.

Class 30 — Crockery, Earthenware, and Porcelain

SN 141,545. Royal Saxe Corporation, New York, N.Y. Filed Apr. 4, 1962.

Prince de Saxe

For Tea and Dinnerware Sets Made of Porcelain or China—Namely, Plates, Cups and Saucers, Glasses and Decorative Serving Tea Tiles.
First use Oct. 20, 1952.

SN 145,767. Castleton China, Inc., New Castle, Pa. Filed May 31, 1962.

VICTORIA ROSE

The word "Rose" is disclaimed apart from the mark.
For China Dinnerware.
First use May 11, 1962.

SN 171,911. Onondaga Pottery Company, Syracuse, N.Y. Filed June 26, 1963.

GRACE

For Dinnerware and Tableware Made of China.
First use Mar. 22, 1963.

SN 175,054. Nichimen Co., Inc., New York, N.Y. Filed Aug. 14, 1963.

PERMASTONE

For Chinaware—Namely, Plates, Cups, Saucers, Platters, and Other Dinnerware Items.
First use Aug. 2, 1963.

Class 31 — Filters and Refrigerators

SN 160,720. Precious Metals Recovery Corporation, Nutley, N.J. Filed Jan. 15, 1963.

AURION-X

For Ion-Exchange Apparatus for the Recovery of Gold From Solutions Thereof.
First use March 1961.

Class 32 — Furniture and Upholstery

SN 144,979. Rapid Printing Company, Dayton, Ohio. Filed May 18, 1962.

CHEC-K-IT

For Index File or Box for the Storage of Records.
First use Mar. 28, 1962.

SN 160,877. Mengel Wood Industries, Inc., Louisville, Ky. Filed Jan. 17, 1963.

MENGEL

Owner of Reg. Nos. 431,008, 735,861, and others.
For Vanitories.
First use Oct. 24, 1962.

SN 161,165. Fash-N-Home Furniture Stores, Inc., Brooklyn, N.Y. Filed Jan. 22, 1963.



Without Waiving any common-law rights, applicant disclaims the outline of the map of the United States apart from the mark as shown.
For Bedroom, Dining Room and Living Room Furniture as Follows: Beds, Cribs, Folding Cots, Chests, Dressers, Chairs, Nite Tables, Buffets, China Closets, Breakfronts, Dining Room Tables, Table Pads, Hutch Cabinets, Sofas, Studio Couches, Chair Beds, End Tables, Lamp Tables, Cocktail Tables, Extension Tables, T.V. Tables, Mirrors, and Cocktail Bars.
First use on or about Jan. 4, 1963, on bedroom furniture.

SN 166,692. Bunny Bear, Inc., Everett, Mass. Filed Apr. 15, 1963.

PRINCE 'N PRINCESS

For Crib Mattresses and Pads, Travel Seats and Travel Beds, Baby Lounges and Carry Cribs.
First use Jan. 25, 1963.

SN 167,410. The Pear Tree, Inc., Bryn Mawr, Pa. Filed Apr. 23, 1963.



For Antique Furniture, Other Occasional Furniture Such as Tables and Mirrors.
First use Sept. 8, 1960.

SN 167,992. Futorian Manufacturing Company, Chicago, Ill. Filed May 2, 1963.

PAVILION GROUP

For Upholstered Furniture, Sofas, Chairs and Sectionals.
First use Mar. 11, 1963.

SN 178,483. Rockaway Metal Products Corp., Inwood, N.Y. Filed Oct. 7, 1963.

Steeltrend

For Metal Files, Stationery Boxes, Safes, and Filing Cabinets.
First use July 20, 1963.

SN 178,517. Wolff Appliance Corp., Long Island City, N.Y. Filed Oct. 7, 1963.

COLOR DUET

For Bathroom Shelves, Combined Bathroom Shelves and Towel Bars, Three-Tier Corner Shelves and Combined Cabinets and Shelves.
First use June 4, 1963.

SN 178,539. Factory Agencies, Chicago, Ill. Filed Oct. 8, 1963.

DURA-SPAN

For Steel Wire Shelving and Parts Thereof.
First use July 1958.

Class 33 — Glassware

SN 178,821. The Seco Company, Houston, Tex. Filed Oct. 11, 1963.



For Convex Glass Reflectors.
First use Apr. 15, 1962.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 104,031. Hydrotherm, Inc., Northvale, N.J. Filed Sept. 7, 1960.

HYDRO CHILLER

Owner of Reg. Nos. 352,344, 670,248, and others.
For House, Office or Loft Air Conditioning Unit for Circulating Cool and Conditioned Air Used in Combination With a Hot Water Heating System and Including a Condenser, Compressor and Evaporator and Using a Volatile Halogenated Hydrocarbon as the Active Agent.
First use Jan. 15, 1955.

SN 158,482. Southern Schuylkill Manufacturing Corporation, Orwigsburg, Pa. Filed Dec. 4, 1962.

YELLOW FLAME

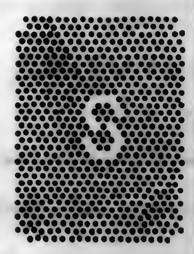
The word "Flame" is disclaimed.
For Boiler and Furnace Stoker Units.
First use June 1, 1958.

SN 160,214. Pan American Metal Products Co., Inc., Miami, Fla. Filed Jan. 4, 1963.

PERMALITE

For Self-Contained Butane Candles or Petroleum Distillate Burning Candles.
First use Jan. 14, 1955.

SN 163,280. Schwank Gasgeräte Gesellschaft mit beschränkter Haftung, Cologne-Niehl, Germany. Filed Feb. 21, 1963.



The dots on the drawing represent orifices in a burner plate and are disclaimed. The mark represents the letter "S" only.
For Ceramic Burner Plates.
First use March 1950; in commerce July 1955.

SN 166,352. Allcraft Manufacturing Company, Inc., Cambridge, Mass. Filed Apr. 9, 1963.

COPPER XO CRAFT

For Hot Water Heating Tanks.
First use Feb. 4, 1963.

SN 168,324. Hupp Corporation, Cleveland, Ohio. Filed May 7, 1963.

ThD/B

For Heat Pumps and Air Conditioners.
First use Feb. 18, 1963.

SN 170,572. Vapor Corporation, Chicago, Ill. Filed June 7, 1963.

VAPOR intransit

For Heaters for Railroad Cars.
First use May 7, 1963.

SN 170,669. Polyplastic Forms, Inc., Farmingdale, N.Y. Filed June 10, 1963.

SUN GUN

For Propane Gas Heaters.
First use Dec. 1, 1962.

SN 171,413. Worthington Corporation, Harrison, N.J. Filed June 19, 1963.

SENTRY

For Liquid Chillers, Watercoolers, Absorption Refrigeration Units; Reciprocating and Rotary Compressors; Heat Exchangers, Condensers; Apparatus for Washing, Humidifying, Cleaning and Conditioning Circulating Air, All for Use in Air Conditioning Units and Systems for Conditioning Houses, Buildings and Enclosures; and Air Conditioning Apparatus and Components Thereof.
First use May 20, 1963.

SN 172,601. Miller-Picking Corporation, Johnstown, Pa. Filed July 8, 1963.

MP PLAN'D-AIRE

For Air Conditioning Units, Heating Units, and Combination Heating and Air Conditioning Units.
First use Jan. 15, 1963.

SN 172,862. Aktiebolaget Orrefors Blasbruk, Orrefors, Sweden. Filed July 12, 1963.



The word "Sweden" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 426,200, 575,928, and others.
For Lamp Globes, Lamp Shades, and Lamp Lenses, Bodies, Pendants, and Decorative Prisms.
First use May 21, 1960; in commerce May 31, 1960; prior to 1931 as to the word "Orrefors."

SN 174,007. Verlin A. Bloxham, d.b.a. Bloxham Drying Systems, San Francisco, Calif. Filed July 30, 1963.

BLOXHAM

For Hop Drying System.
First use 1947.

SN 178,180. Dean Products, Inc., Brooklyn, N.Y. Filed Oct. 2, 1963.

HYFLODEAN

Owner of Reg. No. 553,674.
For Heating Platens and Plates, Emersion Heaters, Heating Ovens, Etc.
First use Sept. 9, 1963.

SN 180,253. Wall Colmonoy Corporation, Detroit, Mich. Filed Oct. 31, 1963.

NICROBRAZ

Owner of Reg. No. 590,737.
For Brazing Aids Including Fluxes, Plastic Cements and Refractory Metal Oxides To Prevent the Brazing of Mating Parts.
First use Nov. 13, 1953.

SN 180,323. Rose-Derry Company, Newton, Mass. Filed Nov. 1, 1963.

POKETPAK

For Chemically-Actuated Heat Pad.
First use Oct. 10, 1963.

SN 180,423. Matsushita Seiko Co., Ltd., Joto-ku, Osaka, Japan. Filed Nov. 4, 1963.

KDK

Owner of Japanese Reg. No. 550,539, dated Mar. 25, 1960.
For Electric Ventilating Fans and Electric Air Cleaner for Use in Ventilating Ducts.

SN 180,825. Banson Products, Inc., Kansas City, Mo. Filed Nov. 12, 1963.

Humidi-master

For Humidifier.
First use June 1, 1960.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 141,445. Hydro-Line Manufacturing Co., Rockford, Ill. Filed Apr. 3, 1962.

"DURATON"

For Seals for Preventing Passage of Pressure Fluid.
First use Mar. 26, 1962.

SN 171,015. Gulf Oil Corporation, Pittsburgh, Pa. Filed June 14, 1963.

PACER

For Automobile Tires.
First use about Jan. 9, 1963.

SN 175,276. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Aug. 19, 1963.

ACALA

For Hose Composed Wholly or Principally of Rubber.
First use Apr. 14, 1960.

SN 177,576. Topco Associates, Inc., Skokie, Ill. Filed Sept. 23, 1963.

TOPCO

For Garden Hose.
First use Feb. 26, 1960.

SN 177,702. Jarrow Products, Inc., Chicago, Ill. Filed Sept. 25, 1963.

JARROW

The lining shown on the drawing forms a part of the mark and does not represent color. Owner of Reg. No. 706,359.
For Gaskets and Gasket Parts for Doors, Windows, and the Like.
First use on or about June 26, 1963.

SN 178,840. Vogue Rubber Company, Chicago, Ill. Filed Oct. 11, 1963.

TWIN AIR LIFE PRESERVER

Owner of Reg. Nos. 673,315 and 743,445.
For Automobile Tires.
First use Sept. 20, 1963.

Class 36 — Musical Instruments and Supplies

SN 147,947. Elise Ruth Moennig, d.b.a. Moennig Music Company, Temple City, Calif. Filed June 28, 1962.

GEBR. MOENNIG

"Gebr. Moennig" is a fictitious name, translated from German, it means "Moennig Brothers."
For Woodwind Instruments.
First use at least as early as Dec. 31, 1918.

SN 147,948. Elise Ruth Moennig, d.b.a. Moennig Music Company, Temple City, Calif. Filed June 28, 1962.

MOENNIG

For Woodwind Instruments.
First use at least as early as Dec. 31, 1918.

SN 147,949. Elise Ruth Moennig, d.b.a. Moennig Music Company, Temple City, Calif. Filed June 28, 1962.

MOENNIG BROS

For Woodwind Instruments.
First use at least as early as Dec. 31, 1918.

SN 171,924. Standard Pneumatic Action Co. Inc., New York, N.Y. Filed June 26, 1963.

STANDARD PLAYER ACTION

Applicant disclaims the exclusive right to the use of the words "Player Action" apart from the mark as shown.
For Component Parts of Player Pianos Consisting of the Piano Actions Which Transmit Impulses From Piano Rolls to the Piano Strings.
First use Feb. 1, 1963.

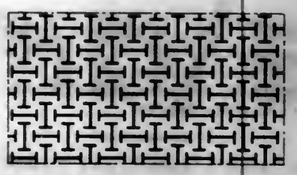
Class 37 — Paper and Stationery

SN 144,668. Bergstrom Paper Company, Neenah, Wis. Filed May 16, 1962.



For Blank Sheets Used in the Preparation of Negotiable Instruments and Check Vouchers.
First use November 1956.

SN 144,670. Bergstrom Paper Company, Neenah, Wis. Filed May 16, 1962.



For Blank Sheets Used in the Preparation of Negotiable Instruments and Check Vouchers.
First use in or before April 1957.

SN 149,930. Shohachi Fukui, Nara, Japan. Filed July 27, 1962.

SUPIDOL PALACE

For Marking Pen With a Felt Tip.
First use Aug. 1, 1960; in commerce Jan. 1, 1962.

SN 152,470. Ultra-Violet Products, Inc., San Gabriel, Calif. Filed Sept. 4, 1962.

BLAK-RAY

Owner of Reg. No. 643,531.
For Fluorescent Pencils, Crayons, Chalk, and Mechanical Pencils for Fluorescent Marking.
First use at least as early as 1954.

SN 158,205. The Wall Paper Manufacturers Limited, Manchester, England. Filed Nov. 26, 1962.

COURIER

Priority claimed under Sec. 44(d) on British Reg. No. 836,734, dated July 11, 1962.
For Wall Paper.

SN 165,113. Business Supplies Corporation of America, Princeton, N.J. Filed Mar. 21, 1963.

BSC

For Tabulating Cards.
First use Jan. 16, 1963.

SN 165,269. The Drawing Board, Inc., d.b.a. The Drawing Board, Dallas, Tex. Filed Mar. 22, 1963.

TIMEXPENSE

For Record Keeping Notebook.
First use Dec. 24, 1962.

SN 166,987. Eureka Specialty Printing Company, Scranton, Pa. Filed Apr. 18, 1963.

MARPUNCH

For Perforated Strips of Blank Paper Labels.
First use Jan. 8, 1963.

SN 167,531. Commonwealth Pencil Company, Inc., Shelbyville, Tenn. Filed Apr. 25, 1963.

PEN-CEL-PEN

Owner of Reg. No. 619,665.
For Fountain Pens, Ball Point Pens, Ink Pencils, Ink Cartridges, and Ball Point Pen Ink Refills.
First use May 14, 1954.

SN 167,708. Crown-Bremson Industries, Inc., Kansas City, Mo. Filed Apr. 29, 1963.

PICTURE POCKET

For Photographic Albums and Pages Therefor.
First use Dec. 3, 1962.
Subj. to Intf. with SN 169,628.

SN 169,628. General Binding Corporation, Northbrook, Ill. Filed May 24, 1963.

PICTURE POCKET

For Album Pages.
First use Mar. 19, 1963.
Subj. to Intf. with SN 167,708.

SN 170,081. Lowe Paper Company, Ridgefield, N.J. Filed May 31, 1963.

CONTEMPERA

For Colored Coated Papers, Paper Boards and Box Boards Which Are Glueable and Printable and Capable of Being Embossed and Stamped for Advertising, Packaging, and the Like.
First use Mar. 29, 1963.

SN 170,594. American Can Company, New York, N.Y. Filed June 10, 1963.

ENGRAVED

For Paper Napkins.
First use Feb. 25, 1963.

SN 171,696. Papertronics, Inc., Oswego, N.Y. Filed June 24, 1963.

PAPERTRONICS

For Paper Tape for Communications and Computer Use, Including Adding Machine Rolls, Cash Register Receipt and Detail Rolls, Bookkeeping, Tabulating, and Accounting Machine Rolls, Computer Rolls and Tapes, Electrostatic Copy Rolls, Oiled and Non-Oiled Perforator Tapes, Single and Multi-Copy Teleprinter Rolls, Typesetter Tapes, Ticker Tapes, Telegraph Tapes, Police and Fire Alarm Signal Tapes, Radio and Cable Tapes, Telautograph Rolls, Automatic Typewriter Tapes, Carbon Interleaved and Carbonless Rolls, Folded Tapes and Packs, Machine Control Tapes, Data Processing Perforator Tapes and Output Rolls, Poster Blanking Rolls, Medical Examination Rolls, Galley Proof Rolls, Mailing List Papers, Product Packaging Rolls, and Other Custom-Tailored Rolls, Packs, and Tapes.
First use Apr. 12, 1963.

SN 174,032. Inn Keepers Supply Co., Memphis, Tenn. Filed July 30, 1963.



For Toilet and Facial Tissue.
First use June 28, 1963.

SN 174,669. Kimberly-Clark Corporation, Neenah, Wis. Filed Aug. 8, 1963.

KAROLTON X-PENSACOUNT

For Business Forms.
First use Apr. 2, 1963.

SN 175,618. Stoffel Seals Corporation, Tuckahoe, N.Y. Filed Aug. 22, 1963.

PageOmatic

For Book Mark.
First use Dec. 22, 1960.

SN 179,130. General Aniline & Film Corporation, New York, N.Y. Filed Oct. 16, 1963.

OZAMASTER

Owner of Reg. No. 572,874.
For Translucent Bond Paper.
First use July 2, 1957.

Class 38—Prints and Publications

SN 125,285. The Curtis Publishing Company, Philadelphia, Pa. Filed Aug. 3, 1961.

DIZ AND LIZ

For Cartoon Strip or Story Feature for Children, Published From Time to Time.
First use Apr. 28, 1961.

SN 131,840. The Industrial Publishing Corporation, Cleveland, Ohio. Filed Nov. 13, 1961.

SCHOOL PRODUCT NEWS

For Trade Magazine.
First use on or about Nov. 1, 1961.

SN 171,941. West Virginia Pulp and Paper Company, New York, N.Y. Filed June 26, 1963.

PAK-FAX

For Leaflets Published Periodically Containing Technical Information Relating to the Packaging Industry.
First use Feb. 27, 1963.

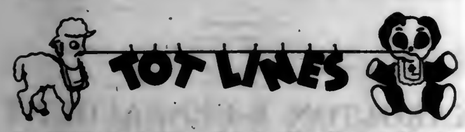
Class 39—Clothing

SN 119,120. Fit-Rite Pants Company, Inc., New York, N.Y. Filed May 2, 1961.

MAN-BAIT

Owner of Reg. No. 724,246.
For Ladies' Slacks.
First use Apr. 24, 1961.

SN 124,956. Tot Lines, Inc., Kirkland, Wash. Filed July 28, 1961.



For Children's Clothing—Namely, Bibs, Sleepers, Sweaters, Underpants and Waterproof Pants.
First use July 1946.

SN 128,806. Diplomat Tie Company, Baltimore, Md. Filed Sept. 28, 1961.

FASHION-GUIDE

Owner of Reg. No. 702,017.
For Neckties.
First use on or about Sept. 11, 1956.

SN 134,151. F. Jacobson & Sons, Inc., New York, N.Y., by mesne assignment and change of name from Peerless Mills Corporation, New York, N.Y. Filed Dec. 15, 1961.

PERTH LTD.

For Men's Dress, Negligee and Sport Shirts.
First use Nov. 16, 1961.

SN 134,971. W. R. Grace & Co., Cambridge, Mass. Filed Jan. 2, 1962.

Δ Delta

For Shoe Insoles.
First use Nov. 9, 1961.

SN 136,966. Edison Brothers Stores, Inc., St. Louis, Mo. Filed Jan. 31, 1962.

INTAGLIO

For Women's Shoes.
First use December 1960.

SN 141,814. Celanese Corporation of America, New York, N.Y. Filed Apr. 9, 1962.

DATESETTER

For Women's and Misses' Dresses.
First use at least as early as November 1960.

SN 142,456. Eric Saffir, Port Chester, N.Y. Filed Apr. 17, 1962.

APRÉS SPORT

The word "Sport" is disclaimed apart from the mark as shown. The English translation of the word "Aprés" is after.
For Sweaters.
First use Mar. 9, 1962.

SN 145,839. National Shoes, Inc., New York, N.Y. Filed May 31, 1962.

DATE MATES

For Shoes for Women.
First use Apr. 14, 1960.

SN 146,665. Rugby Knitting Mills Inc., Buffalo, N.Y. Filed June 11, 1962.

Rugby
Super MIRATWILL

Owner of Reg. No. 716,538.
For Sportswear—Namely, Boys', Ladies' and Misses' Jackets.
First use Dec. 18, 1961.

SN 149,158. Alba-Waldensian, Inc., Valdese, N.C. Filed July 17, 1962.

MY BUDDY

For Hosiery.
First use 1935.

SN 154,244. P. H. Hanes Knitting Company, Winston-Salem, N.C. Filed Oct. 1, 1962.

HANES
JANIE HANES

"Janie Hanes" is fanciful. Owner of Reg. Nos. 506,197, 702,013, and others.
For Underwear, Sleepers and Outerwear for Infants, Girls and Women, and Socks for Girls in Foot Sizes Smaller Than Eight and One-Half (8½).
First use Aug. 30, 1962.

SN 154,376. Raleigh Manufacturers, Inc., New York, N.Y. Filed Oct. 2, 1962.

CADILLAC CLUB

For Men's Suits and Coats.
First use Sept. 4, 1962.

SN 156,694. Albert Lee Van Slyke, Redding, Calif. Filed Nov. 5, 1962.

LITTLE VAN ELI

For Shoes.
First use in or about August 1962.

SN 157,652. Robby Len, Inc., New York, N.Y., assignee of Teen Age Beachwear Corp., New York, N.Y. Filed Nov. 20, 1962.

FOLLOW THE SUN

For Swimwear.
First use Nov. 1, 1962.

SN 158,725. Oxford Manufacturing Company, Inc., Atlanta, Ga. Filed Dec. 7, 1962.

AIRFLEX

For Men's and Boys' Jackets.
First use Nov. 19, 1962.

SN 160,454. Trans World Shoe Corporation, New York, N.Y. Filed Jan. 9, 1963.

NOBILITAS

For Shoes.
First use Dec. 27, 1962.

SN 160,665. Robert Hosiery Mills, Inc., Collegeville, Pa. Filed Jan. 14, 1963.

SKAMPS

Owner of Reg. No. 597,417 and others.
For Washable Vinyl Covered Slippers for Men, Women and Children.
First use Apr. 8, 1959.

SN 161,817. Plasticsmith, Inc., Pittsburg, Calif. Filed Jan. 31, 1963.

HANDGARD

For Disposable Plastic Gloves.
First use at least as early as Apr. 3, 1958.

SN 162,297. Societe Rhodiaceta, Paris, France. Filed Feb. 7, 1963.

RHODIA

Owner of French Reg. No. 478,973, dated Mar. 12, 1959 (Paris); Natl. Inst. No. 122,448; and U.S. Reg. Nos. 182,400, 586,069, and others.
For Wearing Apparel for Men, Women and Children—Namely, Suits, Vests, Slacks, Shirts, Skirts, Pajamas, Lingerie and Undergarments, Pullovers and Cardigans, Blouses, Dresses, Robes, Shawls, Stoles, Scarfs, Handkerchiefs, Gloves, Ties, Belts, Jackets, Suspenders, Hosiery, Layette Articles, and Slippers.

SN 162,340. Giant Key Corp., Lynn, Mass. Filed Feb. 8, 1963.

Kent McCray

The mark "Kent McCray" is a fictitious name.
For Men's Coats and Jackets.
First use Oct. 9, 1962.

SN 163,793. Battelstein's, Inc., Houston, Tex. Filed Mar. 4, 1963.

STRATFORD

Owner of Reg. Nos. 665,789 and 679,334.
For Men's Pajamas.
First use Nov. 1, 1962.

SN 164,001. Alpha Mills Corporation, Schuylkill Haven, Pa. Filed Mar. 6, 1963.

BARTONETTES

For Blouses, and Ladies' T-Shirts and Undershirts.
First use July 17, 1941.

SN 164,002. Alpha Mills Corporation, Schuylkill Haven, Pa. Filed Mar. 6, 1963.

PATTER TOGS

No claim is made to the word "Togs" apart from the mark as shown.
For Children's T-Shirts, Children's Pants and Jackets, Creepers, Girls' Underwear, and Ladis' Underwear.
First use Oct. 7, 1942.

SN 164,358. May Hosiery Mills, Nashville, Tenn. Filed Mar. 11, 1963.

Sunliners

For Sunsocks.
First use Jan. 2, 1963.

SN 164,564. Slumbertogs, Inc., New York, N.Y. Filed Mar. 13, 1963.

SLUMBERTOGS
DESIGNED BY Jule

Owner of Reg. Nos. 530,027, 688,014, and others.
For Misses', Girls', and Children's Pajamas, Nightgowns, Bath Robes, Lounging Robes, Slips, Half-Slips, Petticoats, and Panties.
First use December 1953.

SN 165,203. The Bossong Hosiery Mills, Inc., Asheboro, N.C. Filed Mar. 22, 1963.

Circle 5-4500

For Ladies' Hosiery.
First use Feb. 1, 1963.

SN 165,918. Geri-Chase, Inc., New Canaan, Conn. Filed Apr. 2, 1963.

geri-chase INC.

For Dresses, Slacks, Shirts, Shorts, Blouses, Sweaters, Jackets, Hats and Caps.
First use Feb. 28, 1963.

SN 166,921. The Oak Rubber Company, Ravenna, Ohio. Filed Apr. 17, 1963.

handies

For Disposable Plastic Gloves.
First use Apr. 3, 1963.

SN 167,384. Rae Heneson, Baltimore, Md. Filed Apr. 22, 1963.

SCULPTURESQUE

For Bras, Brassieres, Girdles, Panty Girdles, Corselettes, Lingerie and Robes.
First use Apr. 1, 1963.

SN 170,735. Craft Hosiery, Inc., Jackson, Miss. Filed June 11, 1963.

Craft's

For Hosiery for Men, Women and Children.
First use Nov. 1, 1949.

SN 171,159. Michaels Stern & Company, Incorporated, Rochester, N.Y. Filed June 17, 1963.

PRECEDO

For Men's and Young Men's Clothing—Namely, Suits, Slacks, Coats, Topcoats.
First use May 9, 1963.

SN 171,168. J. J. Newberry Co., New York, N.Y. Filed June 17, 1963.

WAVE-WALKER

For Men's and Women's Latex Foam Insoles.
First use May 8, 1963.

SN 171,297. Rockford Textile Mills, Inc., McMinnville, Tenn. Filed June 18, 1963.

MR. CLING-TOP

No claim is made to the representation of the sock apart from the mark as shown.
For Hosiery.
First use Feb. 19, 1963.

SN 172,448. Alps Sportswear Manufacturing Co., Inc., Boston, Mass. Filed July 5, 1963.

SHAG-A-MO

For Sweaters for Men and Women.
First use Feb. 16, 1963; at least as early as July 1958 as to the trademark "Shagamo."

SN 173,039. Par-Knit Mills, Inc., Mifflinburg, Pa. Filed July 15, 1963.

KOOL-TEX

For Men's, Women's and Children's Underwear, Children's Kimonos, Men's, Women's and Children's Pajamas and Polo Shirts.
First use 1912.

SN 173,645. Felix Lilienthal & Co., Inc., New York, N.Y. Filed July 24, 1963.

BREATH OF THE AVENUE

Owner of Reg. No. 352,005.
For Ladies' Dresses, Coats, Suits, Hats, Blouses, Outer Skirts, Sweaters, Bathing Suits, Pajamas, Nightgowns, Slips, Panties, Brassieres, and Chemises.
First use January 1937.

SN 174,933. Abercrombie & Fitch Company, New York, N.Y. Filed Aug. 13, 1963.

WORKROOM

For Women's Slacks, Skirts, Dresses, Blouses and Culottes.
First use July 29, 1963.

SN 175,029. Gold Seal Rubber Company, Boston, Mass. Filed Aug. 14, 1963.

SPORTO

For Rubber and Rubber and Canvas Shoes for Men, Women and Children.
First use February 1951.

SN 175,030. Gold Seal Rubber Company, Boston, Mass. Filed Aug. 14, 1963.

SPORT-O-MATIC

For Rubber and Rubber and Canvas Shoes for Men, Women and Children.
First use July 3, 1963.

SN 175,584. The L. C. King Manufacturing Co., Bristol, Tenn. Filed Aug. 22, 1963.

Carolina BILL

Owner of Reg. No. 562,603.
For Men's and Boys' Dungarees.
First use in 1952.

SN 175,986. Fin-Dell Hosiery Co., San Francisco, Calif. Filed Aug. 29, 1963.

FIN-DELL

For Ladies' Hosiery.
First use June 22, 1959.

SN 176,417. Aldens, Inc., Chicago, Ill. Filed Sept. 6, 1963.

ST. CROIX

For Men's Sport Shirts, Pajamas and Knit Shirts.
First use Apr. 17, 1963.

SN 176,787. Frackville Pajama Corp., New York, N.Y. Filed Sept. 12, 1963.

King Comfort

For Men's and Boys' Pajamas.
First use 1935.

SN 176,928. Marlboro Shirt Co., Inc., New York, N.Y. Filed Sept. 13, 1963.

Marlboro JUNIOR

Without derogation of common law rights applicant disclaims the word "Junior" apart from the mark as a whole.
Owner of Reg. Nos. 440,768, 698,210, and others.
For Women's and Misses' Wearing Apparel—Namely, Shirts, Jackets, Pants, Shorts, Slacks, Slack Suits, Underwear, Sleepwear, Loungewear and Pajamas.
First use July 1, 1963.

SN 177,880. William Green & Son (Grenson) Limited, Rushden, England. Filed Sept. 27, 1963.

Footmaster

Owner of British Reg. No. 776,900, dated Apr. 25, 1958.
For Boots, Shoes, Slippers, and Sandals.

SN 178,249. Baklee Sportswear Co., New York, N.Y. Filed Oct. 3, 1963.

IT'S A PLEATNIK

For Dresses and Skirts.
First use Feb. 5, 1963.

SN 178,938. Mason Shoe Manufacturing Company, Chippewa Falls, Wis. Filed Oct. 14, 1963.

MASON-FLEX

Owner of Reg. No. 731,581.
For Footwear Made Wholly or Partly of Leather—Namely, Shoes, Oxfords, Slippers, and Boots.
First use Sept. 23, 1963.

Class 40—Fancy Goods, Furnishings, and Notions

SN 153,963. I. B. Kleinert Rubber Company, New York, N.Y. Filed Sept. 26, 1962.

DEMI

For Dress Shields.
First use in or about January 1925.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 99,480. Asahi Kasei Kogyo Kabushiki Kaisha, Kita-ku, Osaka, Japan. Filed June 22, 1960.

KASEILON

Priority claimed under Sec. 44(d) on Japanese applications filed Apr. 30, 1960; Reg. Nos. 598,389, dated Oct. 2, 1962, and 612,386, dated May 15, 1963; and U.S. Reg. No. 680,505.
For Knitted, Textile, Lace and Embroidered Fabrics, Bed Sheets, Blankets, Quilts and Comforters, Textile Carpets and Rugs, Curtains, Covers for Blankets, Covers for Pillows, Covers for Quilts and Covers for Chairs.

SN 160,077. Stevcoknit Textile Company, New York, N.Y. Filed Jan. 2, 1963.

STEVCOSET

Owner of Reg. No. 749,455.
For Textile Fabric in the Piece Made of Acrylic Fiber and Having a Special Finish.
First use Sept. 28, 1962.

SN 164,831. A. J. Greberman and Son, Inc., Philadelphia, Pa. Filed Mar. 18, 1963.

SILRAY FABRIC

The term "Fabric" is disclaimed apart from the mark as shown.
For Woven Fabrics of Silk, Rayon, Cotton, Synthetic Fibres and Combinations of the Same for Making Into Draperies, Curtains, Upholstery, Casket Linings and the Like.
First use December 1945.

SN 171,364. Herman Miller, Inc., Zeeland, Mich. Filed June 19, 1963.

HERMAN MILLER

"Herman Miller" is not the name of any particular living individual. Owner of Reg. No. 733,770.
For Fabrics for Draperies and Upholstery.
First use in or about June 1952.

SN 172,124. Woolmark Corporation, New York, N.Y. Filed June 28, 1963.

STRETCHMOOR

For Stretch Fabrics Used in Making Ladies' and Men's Pants and Slacks, as Well as Other Articles of Apparel for Men, Women and Children.
First use Mar. 25, 1963.

SN 172,846. Glen Raven Mills, Inc., New York, N.Y. Filed July 11, 1963.

TWILL CREST

No registration rights are claimed for the word "Twill" apart from the mark as shown.
For Fabrics Made of Synthetic Fibers.
First use Jan. 10, 1963.

SN 174,025. Gordon Mills, Inc., Calhoun, Ga. Filed July 30, 1963.



FORREST

The drawing is lined for green and blue.
For Carpets and Rugs.
First use June 21, 1963; in March 1954 as to the word "Forrest."

SN 174,503. Fieldcrest Mills, Inc., Spray, N.C. Filed Aug. 6, 1963.

Lavalier

For Textile Rugs and Carpeting.
First use July 25, 1963.

SN 174,694. Mohasco Industries, Inc., Amsterdam, N.Y. Filed Aug. 8, 1963.

Alexander Smith

Alexander Smith, an individual now deceased, was first president of applicant. Owner of Reg. Nos. 514,770, 514,773, and others.
For Rugs and Carpets, and Carpet Cushions.
First use Jan. 2, 1873.

SN 174,940. Bernard G. Blum, d.b.a. B. G. Blum Associates, New York, N.Y. Filed Aug. 13, 1963.



For Rugs and Carpets.
First use Feb. 4, 1963.

SN 175,347. M. C. Weeks, Inc., Collegeville, Pa. Filed Aug. 19, 1963.

YORKTOWNE

For Rugs.
First use April 1961.

SN 175,377. Joseph Bancroft & Sons Co., Rockford, Wilmington, Del. Filed Aug. 20, 1963.

BANEVER

For Cotton Piece Goods.
First use on or about June 3, 1963.

SN 175,419. M. Lowenstein & Sons, Inc., New York, N.Y. Filed Aug. 20, 1963.

HUGGAMATIC

For Textile Piece Goods of Cotton and Synthetic Fibres and Mixtures Thereof, for Making Articles of Wearing Apparel, Including Blouses, Dresses, Shirts, Skirts and the Like.
First use Feb. 27, 1963.

Class 43—Thread and Yarn

SN 99,481. Asahi Kasei Kogyo Kabushiki Kaisha, Kita-ku, Osaka, Japan. Filed June 22, 1960.

KASEILON

Priority claimed under Sec. 44(d) on Japanese application filed Apr. 30, 1960; Reg. No. 680,076, dated Nov. 28, 1963. Owner of U.S. Reg. No. 680,515.
For Threads and Yarns Made of Artificial Silk and Those Made of Synthetic Fibers.

SN 173,926. The Kendall Company, Walpole, Mass. Filed July 29, 1963.

RAPP'ON

For Textured Novelty Yarn.
First use Jan. 23, 1963.

SN 175,263. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Aug. 19, 1963.

NOMEX

For Yarns of Man-Made Fibers.
First use Aug. 1, 1963.

Class 44—Dental, Medical, and Surgical Appliances

SN 140,497. Superma Limited, London, England. Filed Mar. 22, 1962.

BRUSHWAVE

Owner of British Reg. No. B772,213, dated Dec. 12, 1957.
For Hair-Waving Appliances—Namely, Hair Rollers and Retaining Clips for Exothermic Activators Used in Conjunction With Hair-Waving Lotions and Creams.

SN 156,098. E. P. Company, Inc., d.b.a. The Evenpressure Company, Tuscaloosa, Ala. Filed Oct. 29, 1962.

Golden Fleece

No claim is made to the word "Fleece" apart from the mark.
For Sheepskins and/or Synthetic Substitutes Therefor Which Are Used for Patients To Lie on To Prevent Bed Sores.
First use May 2, 1962.

SN 158,441. Warren E. Gilson, Md., d.b.a. Gilson Medical Electronics, Middleton, Wis. Filed Dec. 4, 1962.

MACRO-POLYGRAPH

For Apparatus for Measuring, Indicating and Recording Electrical Currents in the Brain and Length and Duration of Heartbeat and Other Phenomena.
First use July 31, 1958.

SN 160,930. Ethicon, Inc., Bridgewater Township, N.J. Filed Jan. 18, 1963.

CELO-SORB

Owner of Reg. No. 644,254.
For Surgical Sponges.
First use Nov. 30, 1962.

SN 168,915. David Feinson, Inc., New York, N.Y. Filed May 15, 1963.

RE-PRO-DENT

For Dental Products and Supplies, Comprising Bridgework, Jackets, Crowns, Veneer Facings, Dentures, Artificial Teeth, and Base Materials for Dentures and Denture Fillings.
First use Jan. 2, 1963.

SN 169,389. Revlon, Inc., New York, N.Y. Filed May 21, 1963.

PERFECTWEEZE

For Manicure Implements, Specifically Tweezers and Scissors.
First use May 7, 1963.

SN 171,922. Schritthelf GmbH, Bad Homburg, Germany. Filed June 26, 1963.

NOVAL

Owner of German Reg. No. 768,447, dated Dec. 13, 1962.
For Orthopedic Foot Supports.

SN 173,335. Howard B. Bymel, d.b.a. Medical Industries, Chatsworth, Calif. Filed July 19, 1963.

MEDI-CAGE

For Cages for the Care and Treatment of Animals.
First use on or before Jan. 2, 1963.

SN 175,178. Dynapower Systems Corporation, Los Angeles, Calif. Filed Aug. 16, 1963.

THERAMATIC

For Device for Producing High Frequency Pulse Therapy to Body Organs, Muscles and Tissues.
First use Sept. 1, 1960.

SN 177,083. Peccia and Carnese, Portland, Oreg. Filed Sept. 16, 1963.

RELAXADENT

For Dental Chairs and Dental Stools.
First use in April 1961.

SN 178,736. Ramn, Inc., Wichita, Kans. Filed Oct. 10, 1963.

PULMO-VENT

For Aspirators and Pressure Lung Ventilating Apparatus.
First use Sept. 11, 1963; on or about Aug. 9, 1963, in a different form.

SN 179,666. A. Smith & Son, Incorporated, Philadelphia, Pa. Filed Oct. 23, 1963.

REEVES

Owner of Reg. No. 403,574.
For Litter-Type Stretchers for Carrying Injured, Sick and Dead Persons.
First use March 1903.

SN 181,758. Densco, Incorporated, Denver, Colo. Filed Nov. 22, 1963.

Airvac

For Dental Aspirators and Apparatus of Dental Equipment Used in the Dental Profession.
First use on or about Feb. 6, 1963.

Class 45—Soft Drinks and Carbonated Waters

SN 176,367. General Foods Corporation, White Plains, N.Y. Filed Sept. 5, 1963.

D-ZERTA

Owner of Reg. No. 175,564.
For Soft Drink Mix.
First use July 17, 1963.

Class 46—Foods and Ingredients of Foods

SN 126,730. Blevins Popcorn Company, Inc., Nashville, Tenn. Filed Aug. 28, 1961.

PRESTO-POP

Owner of Reg. Nos. 631,687, 606,145, and others.
For Expansible Popcorn Package Containing Unpopped Popcorn and Oil.
First use June 8, 1961.

SN 140,461. La Pie Qui Chante, Wattignies, Nord, France. Filed Mar. 22, 1962.

la pie qui chante



The English translation of "La Pie Qui Chante" is "the singing magpie." Owner of French Reg. Nos. 26,403, dated Dec. 10, 1959 (Lille); Natl. Inst. No. 137,592, and 26,405, dated Dec. 10, 1959 (Lille); Natl. Inst. No. 137,594.
For Articles of Confectionery—Namely, Candy.
First use 1951; in commerce Oct. 9, 1957.

SN 144,797. Clifford Allen, Brawley, Calif. Filed May 17, 1962.

CLIFF HOUSE

For Fresh Vegetables.
First use Dec. 1, 1959.

SN 146,354. Brookshire Ice Cream Company, d.b.a. Brookshire's Dairy Products Co., Meridian, Miss. Filed June 7, 1962.

STREAMLINE

For Skim Milk.
First use May 16, 1962.

SN 147,131. Merco Stores, Inc., Jamaica, N.Y. Filed June 18, 1962.

MERCO

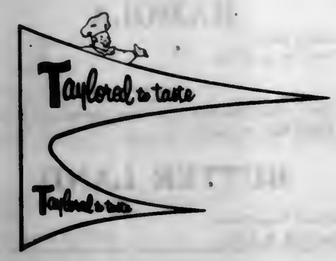
For Raw Fresh Meats, Raw Frozen Fresh Meats, Cooked Meats, Cooked Ham, Frankfurters, Corned Beef, Pastrami, Salami and Rolled Beef.
First use Aug. 1, 1961.

SN 149,520. Anderson Industries, Inc., d.b.a. W. I. Anderson & Co., Greensboro, N.C. Filed July 23, 1962.

MR. A

For Frozen Meats, Frosen, Canned, and Fresh Fruits and Vegetables.
First use July 6, 1962.

SN 168,545. Taylor Biscuit Company, Raleigh, N.C. Filed May 9, 1963.



Owner of Reg. Nos. 649,054 and 654,854.
For Cracker Sandwiches, Shelled Salted Peanuts, Unshelled Roasted Peanuts, Cookies, Popcorn, Processed Corn Meal Cheese Flavored Tidbits, Potato Chips, Candy.
First use July 15, 1958.

SN 168,548. Thrifty Caf Company, Minneapolis, Minn. Filed May 9, 1963.

Thrifty Caf

For Feed Formula for Calves.
First use Mar. 29, 1963.

SN 171,530. California Olive Packers, Incorporated, Corning, Calif. Filed June 21, 1963.

Franciscan

For Canned Olives.
First use at least as early as 1938.

SN 171,997. Lake Wales Citrus Growers Association, Lake Wales, Fla. Filed June 27, 1963.



The lines shown are part of the mark and do not represent color. The figure shown and the wording "King Wales" do not represent any particular living individual.
For Fresh Citrus Fruits.
First use September 1923.

SN 172,216. National Biscuit Company, New York, N.Y. Filed July 1, 1963.

CANDLELIGHT

For Cookies.
First use June 18, 1963.

SN 173,200. Suchard Holding Societe Anonyme, Lausanne, Switzerland. Filed July 17, 1963.



Applicant disclaims the words "of Switzerland" and "Deluxe" apart from the mark as shown. Owner of Reg. Nos. 54,480, 655,576, and others.
For Prepared Edible Chocolate.
First use May 12, 1958; in commerce on or about Dec. 3, 1962; 1861 as to "Suchard."

SN 173,516. The Smithfield Packing Co., Inc., d.b.a. Virginia Packers, Smithfield, Va. Filed July 22, 1963.

VIRGINIA PLANTATION

Owner of Reg. No. 637,265.
For Sliced Bacon and Smoked Hams.
First use Nov. 2, 1955.

SN 175,344. United Salt Corporation, Houston, Tex. Filed Aug. 19, 1963.

LICK'N GOOD

For Mineral and Salt Blocks.
First use Mar. 19, 1963.

SN 175,567. Eskimo Pie Corporation, Richmond, Va. Filed Aug. 22, 1963.

SNOWMAN

Owner of Reg. Nos. 279,732, 302,649, and others.
For Frozen Formed Desserts Made of Ice Cream, Frozen Custard, Ice Milk, Sherbet and Ices.
First use at least as early as Apr. 25, 1933.

SN 176,592. Weis Markets, Inc., Sunbury, Pa. Filed Sept. 9, 1963.

DUTCH VALLEY

Owner of Reg. No. 701,482.
For Apple Butter, Bacon, Frankfurters, Butter, and Potato Chips, Sauerkraut and Cheese.
First use Sept. 22, 1959.

SN 177,366. Otis McAllister Export Corporation, San Francisco, Calif. Filed Sept. 19, 1963.

PICA PICA

For Canned Fish.
First use 1950.

SN 178,203. Don Juan Foods, Inc., Brooklyn, N.Y. Filed Oct. 2, 1963.

don Juan

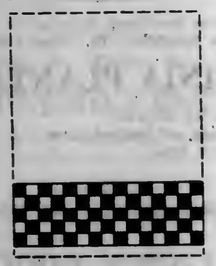
Owner of Reg. Nos. 336,960 and 340,106.
For Olives, Olive Oil, Capers, Bottled Cherries, Cocktail Onions and Canned Fish.
First use at least as early as Sept. 30, 1935, on olives.

SN 179,609. Carter Products, Inc., New York, N.Y. Filed Oct. 28, 1963.

MILTOWN

Owner of Reg. Nos. 605,887 and 648,127.
For Chewing Gum.
First use July 11, 1963.

SN 179,927. Ralston Purina Company, St. Louis, Mo. Filed Oct. 28, 1963.



Owner of Reg. Nos. 102,844, 582,371, and others.
For Feeds for Cats and Birds.
First use Jan. 26, 1962.

SN 179,928. Ralston Purina Company, St. Louis, Mo. Filed Oct. 28, 1963.

PURINA

Owner of Reg. Nos. 61,064, 523,420, and others.
For Feeds for Cats and Birds.
First use Jan. 26, 1962.

SN 180,179. Caravetta Foods Co., Chicago, Ill. Filed Oct. 31, 1963.

CARAVETTA

For Cheese.
First use Jan. 3, 1954.

SN 180,204. Hygrade Food Products Corporation, Detroit, Mich. Filed Oct. 31, 1963.

AMOLA

For Cooked Ham.
First use Oct. 8, 1963.

SN 180,205. Hygrade Food Products Corporation, Detroit, Mich. Filed Oct. 31, 1963.

HAMOLA

For Cooked Ham.
First use Oct. 8, 1963.

SN 180,428. Oconomowoc Canning Company, Oconomowoc, Wis. Filed Nov. 4, 1963.

BUTTER LAND

For Canned Vegetables.
First use Oct. 8, 1963.

SN 180,563. Chesterton Candy Company, d.b.a. Orchard Hill Farms Candy Co., Chicago, Ill. Filed Nov. 6, 1963.

ORCHARD HILL FARMS

For Candy.
First use Sept. 1, 1961.

SN 180,595. Mitchell Foods, Inc., Fredonia, N.Y. Filed Nov. 6, 1963.

PERX

For All Vegetable Fat Cream Substitute.
First use Oct. 21, 1963.

SN 180,604. National Dairy Products Corporation, New York, N.Y. Filed Nov. 6, 1963.

CHIPNICS

For Potato Chips.
First use on or about Aug. 19, 1963.

SN 180,659. Foremost Dairies, Inc., d.b.a. Western Condensing Company, San Francisco, Calif. Filed Nov. 7, 1963.

Peebles'

PIGROW

Owner of Reg. Nos. 362,725, 736,500, and others.
For Modified Dried Whey for Animal Consumption and Especially for Feeding Pigs.
First use Oct. 15, 1959; Mar. 15, 1960, as to "Peebles"; Oct. 15, 1937, as to "Pigrow."

SN 180,700. The Great Atlantic & Pacific Tea Company, Inc., New York, N.Y. Filed Nov. 8, 1963.

Diadems

The drawing is lined for the color red.
For Candy.
First use Sept. 6, 1963.

Class 47 — Wines

SN 172,393. Mediterranean Importing Co., Inc., Long Island City, N.Y. Filed July 8, 1963.

RUSTEGO

For Wine.
First use Mar. 1, 1963.

SN 173,070. Western Liquor Distributors, Inc., Culver City, Calif. Filed July 15, 1963.

Bon Soir

The English translation of "Bon Soir" is "good evening."
For Wines and Champagnes.
First use Apr. 4, 1963.

SN 173,089. Armando Wines, d.b.a. The Armando Winery, New York, N.Y. Filed July 16, 1963.

RUBINELLO

For Wines.
First use June 1, 1963.

Class 48 — Malt Beverages and Liquors

SN 172,444. Mt. Carbon Manufacturing and Supply Co., d.b.a. Mount Carbon Brewery, Pottsville, Pa. Filed July 1, 1963.

MT. CARBON
Old Bohemian Beer

Applicant disclaims the words "Old Bohemian Beer" except in conjunction with the entire mark, without however abandoning any common law rights therein. Owner of Reg. No. 402,041.
For Beer.
First use Apr. 25, 1942.

Class 49 — Distilled Alcoholic Liquors

SN 173,937. E. Martinoni Company, d.b.a. National Bottlers Ltd., San Francisco, Calif. Filed July 29, 1963.

SILVER CROWN

For Vodka.
First use Oct. 3, 1962.

SN 174,109. McKesson & Robbins, Incorporated, New York, N.Y. Filed July 31, 1963.

NEWPORT

Owner of Reg. Nos. 311,971, 725,709, and 753,434.
For Rum.
First use Apr. 24, 1963.

SN 176,129. The Viking Distillery, Inc., Albany, Ga. Filed Aug. 30, 1963.

GEORGIA PRIDE

For Whiskey.
First use Aug. 16, 1963.

Class 50 — Merchandise Not Otherwise Classified

SN 139,581. Gordon W. Boudreau, d.b.a. Bio-Sonics Control Co., Phoenix, Ariz. Filed Mar. 12, 1962.

bio-sonics

For Pest Controlling Apparatus Comprising Sound Reproductions in the Form of Tapes.
First use Feb. 17, 1962.

SN 170,926. Marine Exhibition Corporation, Miami, Fla. Filed June 13, 1963.

MIAMI SEAQUARIUM

The exclusive right to use the name "Miami" is disclaimed apart from the mark as shown.
For Molded Plastic Souvenirs.
First use during December 1962.

SN 171,435. Crylor, Paris, France. Filed June 20, 1963.

Crylor

Owner of French Reg. No. 493,283, dated Jan. 13, 1961 (Paris); Natl. Inst. No. 156,947; and U.S. Reg. Nos. 609,640, 736,865, and others.
For Streamers, Flags and Banners.

SN 173,305. R. D. Werner Co., Inc., Greenville, Pa. Filed July 18, 1963.

REDDY-LOK

For Ladders, Extension Ladders, Stepladders and Platform Ladders.
First use June 1952.

Class 51 — Cosmetics and Toilet Preparations

SN 148,747. Ernest R. Neyhard, Washington, D.C. Filed July 10, 1962.

PERKIES

For Absorbent Pads Impregnated With a Cleansing Agent, More Specifically, Witch Hazel Pads.
First use July 6, 1962.

SN 154,225. Faberge, Inc., New York, N.Y. Filed Oct. 1, 1962.

EXTRAORDINAIRE

The translation of "Extraordinaire" is "extraordinary" or "out of the ordinary."
For Colognes, Lipsticks, Hand Lotion, Shaving Cream, Astringent Cleanser for the Skin, Makeup Remover, Nail Polish, Nail Polish Remover and Cuticle Remover.
First use 1938 on colognes.

SN 157,514. Jerant Company, Inc., d.b.a. The Jerant Co., Inc., Los Angeles, Calif. Filed Nov. 19, 1962.

JERANTS

6 Minute

For Nail Conditioning, Polishing, and Growth Promoting Cream.
First use Aug. 21, 1962.

SN 169,365. Julius Garfinckel & Co., Incorporated, Washington, D.C. Filed May 21, 1963.

"346"

Owner of Reg. Nos. 378,603, 590,034, and others.
For Lime Lotion, Spray Deodorant, Lavender Water, Hair Dressing and Mouthwash.
First use in April 1963.

SN 171,461. Luzier Incorporated, Kansas City, Mo. Filed June 20, 1963.

MATTE MAGIC

Applicant disclaims "Matte" apart from the mark as shown.
For Cosmetic and Toilet Preparations.
First use Apr. 25, 1963.

SN 173,118. Maradel Products, Inc., New York, N.Y. Filed July 16, 1963.

MARADEL

For Lipstick; Eye Make-Up; Facial Make-Up; Deodorants; Hair Preparations—Namely, Shampoos, Rinses, Sprays, Permanent Waves, Conditioners, Sets, and Color Rinses; Make-Up Removers; Skin and Face Creams; Hand Lotions; Cleansing Creams and Manicuring Preparations.
First use July 10, 1963.

SN 173,160. Fairfield Laboratories, Inc., d.b.a. Econo Laboratories, Pasadena, Calif. Filed July 17, 1963.

PETITE COIFFURE

For Hair Spray.
First use about June 24, 1963.

SN 174,676. Maradel Products, Inc., New York, N.Y. Filed Aug. 8, 1963.

MED-A-LIP

For Combination Lipstick and Lip Balm.
First use Aug. 5, 1963.

SN 174,829. Chesebrough-Pond's Inc., New York, N.Y. Filed Aug. 12, 1963.

Pond's

Dreamflower

Owner of Reg. Nos. 400,360, 528,524, and 693,607.
For Talcum Powder.
First use May 27, 1963.

SN 175,981. Dusharme Products, Inc., Minneapolis, Minn. Filed Aug. 29, 1963.

DuSharme

Owner of Reg. No. 383,811.
For Hair Creme, Hair Spray, and Hair Set.
First use Aug. 21, 1963.

SN 176,147. Theodore G. Barnes, d.b.a. Solace of Miami, Miami, Fla. Filed Sept. 3, 1963.

COVER GUARDS

For Cosmetic Pastes for Protection Against Sunburn and Windburn.
First use Aug. 10, 1963.

SN 176,219. The Mitchum Company, Paris, Tenn. Filed Sept. 3, 1963.

GENAVA

For Cosmetic Creams.
First use Aug. 15, 1961.

SN 176,283. Daly Laboratories, Inc., Oak Park, Ill. Filed Sept. 4, 1963.

GLO-AID

For Fingernail Protective To Prevent Dryness, Brittleness, Splitting, and Shattering.
First use Aug. 1, 1963.

SN 176,326. Sunstar Dentifrice Co., Ltd., Takatsuki-shi, Osaka, Japan. Filed Sept. 4, 1963.

SUNSTAR

For Toothpaste and Similar Dentifrices.
First use in 1944; in commerce Aug. 1, 1963.

SN 176,396. Quality Chemists, Inc., St. Louis County, Mo. Filed Sept. 5, 1963.

COLORCOOL

For Counter-Irritant for Hair Bleaches.
First use July 29, 1963.

SN 183,478. Sunstar Dentifrice Co., Ltd., Takatsuki-shi, Osaka, Japan. Filed Dec. 23, 1963.

SUN STAR

For Toothpaste and Similar Dentifrices.
First use in 1944; in commerce May 6, 1963.

Class 52 — Detergents and Soaps

SN 169,365. Julius Garfinckel & Co., Incorporated, Washington, D.C. Filed May 21, 1963.

"346"

For Hair Shampoo.
Owner of Reg. Nos. 378,603, 590,034, and others.
First use April 1963.

SN 171,637. Joseph Francis Fasio, d.b.a. Standard Cem-Way Company, Los Angeles, Calif. Filed June 24, 1963.

CLEAR ALL

For Drain Opening Composition.
First use Dec. 11, 1959.

SN 173,183. The Procter & Gamble Company, Cincinnati, Ohio. Filed July 17, 1963.

PRAXI

For Household Sudsing Cleaner, Cleanser and Detergent.
First use June 11, 1963.

SN 173,689. The Procter & Gamble Company, Cincinnati, Ohio. Filed July 24, 1963.

SLALOM

For Toilet Soap and General Purpose Detergent.
First use May 28, 1963.

SN 174,128. The Tanatex Chemical Corporation, Kearny, N.J. Filed July 31, 1963.

AMFOCIDE

For Cleaning Agents and Detergents for Industrial Use.
First use Feb. 11, 1963.

SN 174,560. American Home Products Corporation, New York, N.Y. Filed Aug. 7, 1963.

ONCE A WEEK

For Floor Cleaner.
First use July 15, 1963.

SN 174,565. Avon Products, Inc., New York, N.Y. Filed Aug. 7, 1963.

TRIBUTE

For Toilet Soap.
First use July 23, 1963.

SN 175,499. Benjamin F. Flefot, d.b.a. Bennie's Coin Shop, Dayton, Ohio. Filed Aug. 21, 1963.

THIN'S

For Mediums for Cleaning, Protecting and Preserving Coins.
First use June 14, 1962.

SN 176,258. Winfield Brooks Company, Inc., Woburn, Mass. Filed Sept. 3, 1963.

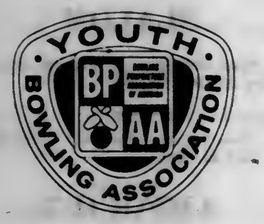
INSTANT-OFF

For Cleaner for Grills and Ovens, Deep Fryers, Exhaust Fans, Canopies, Coffee Urns, Ceramic Tile and Chrome.
First use July 5, 1963.

SERVICE MARKS

Class 100 — Miscellaneous

SN 173,556. Bowling Proprietors' Association of America, Inc., d.b.a. Youth Bowling Association, Park Ridge, Ill. Filed July 23, 1963.



Owner of Reg. Nos. 713,957 and 713,971.
For Association Services—Namely, Promotion of the Interests of the Propietors of Bowling Alleys.
First use Mar. 15, 1963.

Class 101 — Advertising and Business

SN 151,332. Jewel Tea Co., Inc., Melrose Park, Ill. Filed Aug. 16, 1962.

Turnstyle
FAMILY CENTER

For Department Store Services.
First use Feb. 22, 1962.

SN 154,563. Compar Corporation (California corporation), Burlingame, Calif., assignee of Compar Corporation (Washington corporation), Seattle, Wash. Filed Oct. 5, 1962.

COMPAR

For Manufacturers' Representative and Distributor Services in the Field of Electronic Components, Parts and Systems.
First use in December 1959.

Class 102 — Insurance and Financial

SN 169,495. The Union Commerce Bank, Cleveland, Ohio. Filed May 22, 1963.

Enterprise Loans

The descriptive word "Loan" is hereby disclaimed apart from the mark as shown.
For Loan Service for Manufacturers, Business and Professional Men.
First use Apr. 22, 1963.

SN 173,900. Continental American Life Insurance Co., Houston, Tex. Filed July 29, 1963.

CALICO

Owner of Reg. No. 660,872.
For Underwriting and Servicing Insurance.
First use Apr. 14, 1952.

Class 103 — Construction and Repair

SN 144,511. Livengood Industries, Inc., Denver, Colo. Filed May 14, 1962.

CINDERELLA

For Installation of Roofing Tile.
First use Apr. 2, 1962.

SN 150,093. Erwin L. Moore, Oakland, Calif. Filed July 30, 1962.

LUMOR

For Construction of Terrazzo Floors.
First use May 1961.

SN 174,030. Ingersoll-Rand Company, New York, N.Y. Filed July 30, 1963.



The words "Factory Standard," "Tool Repair Service" and "Coast-to-Coast," as well as the representation of the continental part of the United States, are disclaimed apart from the mark as shown. Owner of Reg. Nos. 580,703, 572,901, and 149,117.
For Servicing of Tools—Namely, Inspection, Maintenance, and Repair of Power-Operated Tools and Hoists.
First use May 14, 1962.

SN 174,031. Ingersoll-Rand Company, New York, N.Y. Filed July 30, 1963.

6 STAR

For Servicing of Tools—Namely, Inspection, Maintenance, and Repair of Power-Operated Tools and Hoists.
First use May 14, 1962.

Class 105 — Transportation and Storage

SN 153,855. National Alcar, Inc., Washington, D.C., assignee of Allegheny Ventura Corporation, Washington, D.C. Filed Sept. 25, 1962.

ALCAR

For Renting and Leasing of Vehicles.
First use Feb. 1, 1962.

Class 106 — Material Treatment

SN 171,301. Astro Dye Works, Inc., Calhoun, Ga. Filed June 19, 1963.

ASTRODYED

For Dyeing of Yarns Owned by Others.
First use Apr. 2, 1963.

SN 173,288. Charles Scharf, d.b.a. Bell Photo Service, Bell Photos, and Bell Color Labs., Englewood, N.J. Filed July 18, 1963.



The words "Photo Service" are hereby disclaimed. Owner of Reg. No. 570,014.
For Services of Photo Finishing.
First use Nov. 1, 1935.

TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

768,052. TOMLINSONI. Select Nurseries, Inc. SN 150,634. Pub. 1–28–64. Filed 8–6–62.

768,053. JUSTRITE. The R. T. French Company. SN 159,482. Pub. 1–28–64. Filed 12–20–62.

768,054. STRIP PLECKS AND DESIGN. Universal Plastics Co. SN 162,042. Pub. 1–28–64. Filed 2–4–63.

768,055. TALIAN KIP. Armour and Company. SN 167,973. Pub. 1–28–64. Filed 5–2–63.

768,056. HUNTING. Dreher Leather Mfg. Corp. SN 168,398. Pub. 1–28–64. Filed 5–8–63.

768,057. GLASSROOT. Pittsburgh Plate Glass Company. SN 170,945. Pub. 1–28–64. Filed 6–13–63.

768,058. PARAGON. Paul E. Gardent, Jr. SN 171,125. Pub. 1–28–64. Filed 6–17–63.

768,059. BOURBON. McCormick Distilling Co. SN 171,153. Pub. 1–28–64. Filed 6–17–63.

Class 2 — Receptacles

768,060. TRISPRAY. Finishine Laboratories, Inc. SN 139,065. Pub. 1–28–64. Filed 3–5–62.

768,061. SAN-O-FORM. Pre-O-Form Corporation. SN 147,310. Pub. 7–9–63. Filed 6–20–62.

768,062. CON BLAN. Continental Can Company, Inc. MULTIPLE CLASS (Classes 2 and 37). SN 158,056. Pub. 1–28–64. Filed 11–28–62.

Class 4 — Abrasives and Polishing Materials

768,063. HARD SHELL FINISH. Turtle Wax, Inc. SN 166,326. Pub. 1–28–64. Filed 4–8–63.

768,064. GLOW IT. Glow-It Chemical Corporation. SN 168,734. Pub. 10–15–63. Filed 5–13–63.

Class 6 — Chemicals and Chemical Compositions

768,065. CHEMCOR AND DESIGN. Chemical Corporation of America. SN 115,122. Pub. 1–28–64. Filed 3–8–61.

768,066. BELFASIN. Bohme Fettchemie GmbH. SN 126,432. Pub. 11–27–62. Filed 8–22–61.

768,067. HY TEMP. Fuelgas Co., Inc. SN 149,649. Pub. 1–28–64. Filed 7–24–62.

768,068. CRESTWOOD. Chemetron Corporation. SN 149,918. Pub. 1–28–64. Filed 7–27–62.

768,069. NEVSOLV. The Neville Chemical Company. SN 158,552. Pub. 1–28–64. Filed 12–5–62.

768,070. RONSON. Ronson Corporation. SN 159,427. Pub. 1–28–64. Filed 12–19–62.

768,071. MR. TURF'S. N. S. Koos & Son Co. MULTIPLE CLASS (Classes 6 and 10). SN 159,894. Pub. 1–28–64. Filed 12–28–62.

768,072. BOROCHLOR. H. Kohnstamm & Co., Inc. SN 169,551. Pub. 12–10–63. Filed 5–23–63.

768,073. CASTECH AND DESIGN. Castech, Inc. SN 170,167. Pub. 1–28–64. Filed 6–3–63.

768,074. IRGAPHOR. Geigy Chemical Corporation. SN 172,304. Pub. 1–28–64. Filed 7–2–63.

768,075. IRGASTYROL. Geigy Chemical Corporation. SN 172,305. Pub. 1–28–64. Filed 7–2–63.

768,076. TINOFIL. Geigy Chemical Corporation. SN 172,306. Pub. 1–28–64. Filed 7–2–63.

768,077. SULFAMEX. Sel-Rex Corporation. SN 172,420. Pub. 1–28–64. Filed 7–3–63.

768,078. HALAD. Halliburton Company. SN 172,489. Pub. 1–28–64. Filed 7–5–63.

768,079. HYDROLASTIC. Moulton Developments Limited. SN 172,675. Pub. 1–28–64. Filed 7–9–63.

768,080. AQUA-BROM. Great Lakes Chemical Corporation. SN 172,987. Pub. 1–28–64. Filed 7–15–63.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

768,081. SUPER SPATTERPRUF ON W AND DESIGN. Olin Mathieson Chemical Corporation. SN 153,205. Pub. 1–28–64. Filed 9–14–62.

768,082. AMCEL. Celanese Corporation of America. SN 158,959. Pub. 1–28–64. Filed 12–12–62.

768,083. ZERO-ZERO AND DESIGN. Rocket Power, Inc. SN 163,407. Pub. 1–28–64. Filed 2–25–63.

Class 10 — Fertilizers

768,071. See Class 6 for this trademark.

768,084. DUNG HO! AND DESIGN. Robert Mann. SN 152,226. Pub. 1–28–64. Filed 8–30–62.

768,085. ZIRATE. Tennessee Corporation (Delaware corporation), assignee of Tennessee Corporation (New York corporation). SN 157,948. Pub. 7–2–63. Filed 11–26–62.

768,086. L & G. Hoosier Soil Service, Inc., d.b.a. Specialty Products Company. SN 169,184. Pub. 1–28–64. Filed 5–17–63.

Class 12 — Construction Materials

768,087. FAR-GO AND DESIGN. Tombill Corporation. SN 157,577. Pub. 10–8–63. Filed 11–19–62.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

768,088. SAF-T-BRAKE. Saf-T-Brake Valve Company. SN 150,280. Pub. 1–28–64. Filed 8–1–62.

768,089. VAN CREST. Vance Industries, Inc. SN 152,176. Pub. 1–28–64. Filed 8–29–62.

768,090. DOUBLE DURABILITY. Elastic Stop Nut Corporation of America. SN 152,885. Pub. 1–28–64. Filed 9–11–62.

768,091. TALON ZEPHYR AND DESIGN. Talon, Inc. SN 164,401. Pub. 1–28–64. Filed 3–8–63.

768,092. UNION CARBIDE AND DESIGN. Union Carbide Corporation. SN 166,668. Pub. 1–28–64. Filed 4–12–63.

Class 15 — Oils and Greases

768,093. TRI S AND DESIGN. Tri S Service Stations, Incorporated. SN 148,544. Pub. 9–24–63. Filed 7–6–62.

768,094. TOTAL AND DESIGN. Compagnie Francaise de Raffinage, and Compagnie Francaise des Petroles (joint owners). SN 167,082. Pub. 1–28–64. Filed 4–11–63.

Class 16 — Protective and Decorative Coatings

768,095. XYLITE. The Firestone Tire & Rubber Company. SN 150,545. Pub. 12–17–63. Filed 8–6–62.

768,096. MM PAINTS IN SHIELD DESIGN. Master Made Paints, Inc. SN 155,624. Pub. 1–28–64. Filed 10–22–62.

768,097. MIL-CRAFT. Milway, Inc. SN 157,748. Pub. 1–28–64. Filed 11–2–62.

768,098. NW NEW MASTERS ETC. AND DESIGN. California Products Corporation. SN 168,804. Pub. 1–28–64. Filed 5–14–63.

Class 17 — Tobacco Products

768,099. COOL-FLO. Bayuk Cigars Incorporated. SN 159,554. Pub. 1–28–64. Filed 12–21–62.

Class 18 — Medicines and Pharmaceutical Preparations

768,100. PARATYFOL. Cutter Laboratories, Inc. SN 170,523. Pub. 1–28–64. Filed 6–7–63.

768,101. SOLACIN. Carter Products, Inc. SN 170,607. Pub. 1–28–64. Filed 6–10–63.

768,102. TITRABELL. The Denver Chemical Manufacturing Company, d.b.a. Wampole Laboratories. SN 171,099. Pub. 1–28–64. Filed 6–17–63.

Class 19 — Vehicles

768,103. BIMCO TRUCK EQUIPMENT AND DESIGN. Dale Snyder, d.b.a. Bloomfield Iron and Manufacturing Company. SN 165,847. Pub. 1–28–64. Filed 4–1–63.

768,104. AIRPORT CHIEF. Sterling Precision Corporation. SN 171,711. Pub. 1–28–64. Filed 6–24–63.

Class 21 — Electrical Apparatus, Machines, and Supplies

768,105. AMPLI-VOX. Kaufman and Spanier. SN 135,686. Pub. 10–23–62. Filed 1–12–62.

768,106. SPEED-O-TRIM. A. C. Weber & Co. Inc. SN 138,827. Pub. 5–21–63. Filed 2–28–62.

768,107. M AND DESIGN. Miniquip, Inc. SN 142,647. Pub. 1–28–64. Filed 4–19–62.

768,108. WAFER. Koonts-Wagner Electric Co., Inc. SN 143,242. Pub. 11–5–63. Filed 4–27–62.

768,109. TELE-LOG AND DESIGN. Electric Specialties, Inc. SN 149,724. Pub. 1–28–64. Filed 7–25–62.

768,110. ELECTRA PAL AND DESIGN. Electra Sales, Inc. SN 151,029. Pub. 1–28–64. Filed 8–13–62.

768,111. ADDRESS-O-LITE. Madigan Electronic Corporation. SN 157,384. Pub. 1–28–64. Filed 11–16–62.

768,112. RCL AND DESIGN. Kabushiki Kaisha Toko Radio Coil Kenkyusho, d.b.a. Toko Radio Coil Laboratories, Ltd. SN 157,818. Pub. 1–28–64. Filed 11–23–62.

768,113. NEOLINE. Neoline, Inc. SN 158,923. Pub. 1–28–64. Filed 12–11–62.

768,114. NEOLINE AND DESIGN. Neoline, Inc. SN 159,322. Pub. 1–28–64. Filed 12–11–62.

768,115. PYROSWITCH. Pyrotel Corporation. SN 161,221. Pub. 1–28–64. Filed 1–4–63.

768,116. STAR LETTER S AND DESIGN. Star-Tronics, Inc. SN 161,910. Pub. 1–28–64. Filed 2–1–63.

768,117. SS AND DESIGN. Solar Systems, Inc. SN 163,420. Pub. 12–31–63. Filed 2–25–63.

768,118. NEC. N-E-C Radios, Inc. MULTIPLE CLASS (Classes 21 and 36). SN 164,058. Pub. 11–26–63. Filed 3–6–63.

768,119. TD AND DESIGN. Terminal Designs, Inc. SN 164,191. Pub. 12–24–63. Filed 3–7–63.

768,120. DIAL 2 PAGE AND DESIGN. Shepherd Machinery Co. SN 165,842. Pub. 1–28–64. Filed 4–1–63.

768,121. CATALINA. White Stores, Inc. MULTIPLE CLASS (Classes 21 and 36). SN 166,232. Pub. 1–28–64. Filed 4–5–63.

768,122. MAGNEFIX. Naamloze Vennootschap Fabriek van Electrische Apparaten Voorheen F. Hasemeyer & Co. SN 167,677. Pub. 1–28–64. Filed 4–25–63.

768,123. MASTER SAFETY. Clear-View Plastics. SN 167,869. Pub. 1–28–64. Filed 5–1–63.

768,124. MICRO-DUCER. Dudley B. Clark, d.b.a. Clark Electronic Laboratories. SN 168,297. Pub. 1–28–64. Filed 5–7–63.

768,125. S AND DESIGN. The Singer Company, by change of name from The Singer Manufacturing Company. SN 169,392. Pub. 1–28–64. Filed 5–21–63.

768,126. A.B.C. Salomon A. Dwek, d.b.a. A.B.C. Import and Export Co. SN 169,709. Pub. 1–28–64. Filed 5–27–63.

768,127. UNIMARK. Unimark Corporation. SN 170,126. Pub. 1–28–64. Filed 5–31–63.

768,128. MISCELLANEOUS DESIGN. Dytronics, Incorporated. SN 170,179. Pub. 1–28–64. Filed 6–3–63.

768,129. SS AND DESIGN. Squires-Sanders, Incorporated. SN 170,505. Pub. 1–28–64. Filed 6–6–63.

768,130. SAF-T-GAP. Bridges Electrical Equipment Corporation. SN 170,518. Pub. 1–28–64. Filed 6–7–63.

768,131. ASTATIPHONE. The Astatic Corporation. SN 170,878. Pub. 1–28–64. Filed 6–13–63.

768,132. MICRONAL. Atlas Supply Company. SN 170,879. Pub. 1–28–64. Filed 6–13–63.

Class 22 — Games, Toys, and Sporting Goods

768,133. TREE SPOTTER. Ed-U-Cards Mfg. Corp. SN 68,382. Pub. 1–28–64. Filed 2–25–59.

768,134. "OLD 'HI'S' FAVORITE." Horrocks-Ibbotson Company. SN 153,285. Pub. 1–28–64. Filed 9–17–62.

768,135. PORT-A-PAR. Nicewood Corp. SN 153,420. Pub. 1–28–64. Filed 9–18–62.

768,136. ACE JET STAR AND DESIGN. Amerace Corporation. SN 162,611. Pub. 1–28–64. Filed 2–13–63.

768,137. ACE HAWK AND DESIGN. Amerace Corporation. SN 162,690. Pub. 1–28–64. Filed 2–14–63.

768,138. ACE STARLET AND DESIGN. Amerace Corporation. SN 162,891. Pub. 1–28–64. Filed 2–18–63.

768,139. LITTLE SHAVERS. Alexander Doll Company, Inc., d.b.a. Madame Alexander. SN 165,401. Pub. 1–28–64. Filed 3–26–63.

768,140. HUGGUMS. Alexander Doll Company, Inc., d.b.a. Madame Alexander. SN 165,403. Pub. 1–28–64. Filed 3–26–63.

768,141. SHUR-LINE AND DESIGN. Martin E. Quast. SN 166,487. Pub. 1–28–64. Filed 4–10–63.

768,142. STATESIDE. Robert E. Swain. SN 166,665. Pub. 1–28–64. Filed 4–12–63.

768,143. MILLCO AND DESIGN. Millco Manufacturing Co. SN 167,924. Pub. 1–28–64. Filed 5–1–63.

768,144. MONOGRAM. Monogram Models, Inc. SN 168,521. Pub. 1-28-64. Filed 5-9-63.

768,145. BEAU. Uneeda Doll Co., Inc. SN 170,963. Pub. 1-28-64. Filed 6-13-63.

768,146. LIBBY LITTLECHAP. Remco Industries, Inc. SN 171,799. Pub. 1-28-64. Filed 6-25-63.

768,147. DR. JOHN LITTLECHAP. Remco Industries, Inc. SN 171,800. Pub. 1-28-64. Filed 6-25-63.

768,148. THE LITTLECHAP FAMILY. Remco Industries, Inc. SN 171,804. Pub. 1-28-64. Filed 6-25-63.

768,149. OXFORD. Milton Bradley Company. SN 171,845. Pub. 1-28-64. Filed 6-26-63.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

768,150. SLOAN-ASHLAND. Ziff-Davis Publishing Company. SN 135,932. Pub. 1-28-64. Filed 1-16-62.

768,151. TRICONE. Hardinge Company, Inc. SN 151,821. Pub. 11-26-63. Filed 8-24-62.

768,152. REPRESENTATION OF GEAR, DRILL, DIE (DESIGN). Universal American Corporation. SN 152,171. Pub. 1-28-64. Filed 8-29-62.

768,153. RELIANCE STAINLESS U.S.A. Oneida Ltd. SN 153,208. Pub. 1-28-64. Filed 9-14-62.

768,154. DUTCH SHOE. Re-Nu Mfg. Co., Inc. SN 154,059. Pub. 1-28-64. Filed 9-27-62.

768,155. SWIVEL STEER. Mixermobile Manufacturers, Inc. SN 155,517. Pub. 1-28-64. Filed 10-19-62.

768,156. ASTOR AND DESIGN. Firma Otto Berning & Co. SN 155,980. Pub. 1-28-64. Filed 10-26-62.

768,157. MEDALLION. Goerlich's, Inc. SN 156,970. Pub. 10-1-63. Filed 11-9-62.

768,158. MAC GREGOR. MacGregor Men's Toiletries, Inc. SN 160,868. Pub. 1-28-64. Filed 1-17-63.

768,159. EDELBROCK ISOMITE AND DESIGN. Edelbrock Equipment Company. SN 161,838. Pub. 1-28-64. Filed 1-31-63.

768,160. RAYBEARING. Raybestos-Manhattan, Inc. SN 163,871. Pub. 1-28-64. Filed 3-4-63.

768,161. HUBERTROL. J. M. Huber Corporation. SN 164,725. Pub. 1-28-64. Filed 3-15-63.

768,162. JET-SPRED. American Agricultural Chemical Company, assignee, by mesne assignments, of The American Agricultural Chemical Company. SN 172,708. Pub. 12-17-63. Filed 7-10-63.

768,163. PNEUMAPUMP. Newaygo Engineering Company. SN 173,276. Pub. 1-28-64. Filed 7-18-63.

768,164. TORNADO (DESIGN). Newaygo Engineering Company. SN 173,277. Pub. 1-28-64. Filed 7-18-63.

Class 26 — Measuring and Scientific Appliances

768,165. "POLIOPTICON." D. F. Vasconcellos S/A. Optica e Mecanica de Alta Precisão. SN 139,974. Pub. 1-28-64. Filed 3-15-62.

768,166. GILFORD AND DESIGN. Gilford Instrument Laboratories, Inc. SN 141,919. Pub. 7-16-63. Filed 4-4-62.

768,167. "SYN-TRAC." Syntronics, Inc. SN 144,557. Pub. 1-28-64. Filed 5-14-62.

768,168. SONICORE. Sonic Development Corporation of America. SN 151,617. Pub. 3-19-63. Filed 8-21-62.

768,169. F & M AND DESIGN. F & M Scientific Corporation. SN 155,054. Pub. 7-9-63. Filed 10-12-62.

768,170. CROWNFAX. Crown Zellerbach Corporation. SN 163,034. Pub. 1-21-64. Filed 2-19-63.

768,171. SCOTT. Scott Aviation Corporation. SN 164,895. Pub. 9-10-63. Filed 3-18-63.

768,172. SCOTT. Scott Aviation Corporation. SN 164,897. Pub. 9-10-63. Filed 3-18-63.

768,173. AKRA-SUM. Siltronics, Inc. SN 167,584. Pub. 1-28-64. Filed 4-25-63.

768,174. SCALE DESIGN. Hanson Scale Company. SN 168,002. Pub. 1-28-64. Filed 5-2-63.

768,175. GEOMETRIC DESIGN. Spectronics Corporation. SN 168,240. Pub. 1-28-64. Filed S.R. 5-6-63; Am. P.R. 11-20-63.

768,176. S AND DESIGN. The Singer Company, by change of name from The Singer Manufacturing Company. SN 169,393. Pub. 1-28-64. Filed 5-21-63.

Class 27 — Horological Instruments

768,177. STELLA. Handels- en Industriele Ondernemingen Justin Heygele-Stella N.V. SN 160,181. Pub. 1-28-64. Filed 12-31-63.

768,178. TRIANGLE WITH DOT (DESIGN). Benrus Watch Company, Inc. SN 169,820. Pub. 1-28-64. Filed 5-28-63.

Class 28 — Jewelry and Precious-Metal Ware

768,179. ACCENT ON VALUE. Herbert Rosenthal Jewelry Corp. SN 147,634. Pub. 12-25-62. Filed 6-25-62.

768,180. MARVA-STAR. Marvella Inc. SN 173,264. Pub. 1-28-64. Filed 7-18-63.

768,181. MARVELLESCENCE. Marvella Inc. SN 173,310. Pub. 1-28-64. Filed 7-18-63.

768,182. CHAMPION-FLEX. Jacoby-Bender, Inc. SN 173,919. Pub. 1-28-64. Filed 7-29-63.

768,183. LA BELLE. Coro, Inc. SN 174,013. Pub. 1-28-64. Filed 7-30-63.

768,184. FIRE BIRD. Coro, Inc. SN 174,014. Pub. 1-28-64. Filed 7-30-63.

768,185. RAVEN. Coro, Inc. SN 174,015. Pub. 1-28-64. Filed 7-30-63.

768,186. SHIELD DESIGN. Saint Joseph's College. SN 174,480. Pub. 1-28-64. Filed 8-2-63.

Class 31 — Filters and Refrigerators

768,187. FROST QUEEN. Universal Supply, Inc. SN 146,847. Pub. 12-3-63. Filed 6-13-62.

Class 32 — Furniture and Upholstery

768,188. WALL-A-BED. Simmons Company. SN 176,753. Pub. 1-28-64. Filed 9-11-63.

Class 36 — Musical Instruments and Supplies

768,118. See Class 21 for this trademark.

768,121. See Class 21 for this trademark.

768,189. ZERO-START SAZS AND DESIGN. Sanders Associates, Incorporated. SN 121,323. Pub. 1-28-64. Filed 6-2-61.

Class 37 — Paper and Stationery

768,062. See Class 2 for this trademark.

768,190. TEXOBOND. R. A. Brand & Company Limited. SN 131,798. Pub. 1-28-64. Filed 11-13-61.

768,191. AMERICAN AND DESIGN. American Paper & Plastic Products, Inc. SN 139,008. Pub. 1-28-64. Filed 3-5-62.

768,192. LEADING LADY. Hudson Pulp & Paper Corp. SN 153,710. Pub. 1-28-64. Filed 9-7-62.

768,193. COLTAC AND DESIGN. Billingsfors Handels Aktiengesellschaft. SN 154,553. Pub. 1-28-64. Filed 10-5-62.

768,194. F AND DESIGN. Fitchburg Paper Company. SN 158,810. Pub. 1-28-64. Filed 12-10-62.

768,195. TRUE MERIT A PRODUCT OF DISTINCTION AND DESIGN. Associated Dry Goods Corporation. SN 166,151. Pub. 1-28-64. Filed 4-5-63.

768,196. SABRE. Champion Papers Inc. SN 167,213. Pub. 1-28-64. Filed 4-22-63.

768,197. WYNDIE KRAFT. Union Bag-Camp Paper Corporation. SN 168,778. Pub. 1-28-64. Filed 5-13-63.

768,198. WHIRLY-BIRDS. Commonwealth Pencil Company, Inc. SN 170,890. Pub. 1-28-64. Filed 6-13-63.

768,199. MORGAN HYGIENIC. Morgan Paper Company, Inc. SN 170,941. Pub. 1-28-64. Filed 6-13-63.

Class 38 — Prints and Publications

768,200. BE OUR GUEST. Major Sports Associates, Inc. SN 113,254. Pub. 1-22-63. Filed 2-6-61.

768,201. GOODSTIX COUNTER FOAMAT. Goodren Products Corporation. SN 144,714. Pub. 1-28-64. Filed 5-16-62.

768,202. DRI CAL. Display Corporation of America. SN 162,828. Pub. 1-28-64. Filed 2-15-63.

768,203. INTERNATIONAL HARVESTER FARM. International Harvester Company. SN 164,448. Pub. 1-28-64. Filed 3-12-63.

768,204. WHERE PEOPLE WORK. Calahan Company. SN 166,774. Pub. 1-28-64. Filed 4-12-63.

768,205. NATION'S CITIES. American Municipal Association. SN 166,964. Pub. 1-28-64. Filed 4-18-63.

768,206. ROUND THE LANES AND DESIGN. David M. Lashin. SN 169,553. Pub. 1-28-64. Filed 5-23-63.

Class 39 — Clothing

768,207. CAPER KNITS. The Caper-Mates Company, Inc. SN 120,077. Pub. 1-28-64. Filed 5-16-61.

768,208. PEBBLE BEACH. Budd & Votaw. SN 123,962. Pub. 1-28-64. Filed 7-14-61.

768,209. TEE MATES AND DESIGN. Dexter Shoe Company. SN 130,436. Pub. 1-28-64. Filed 10-23-61.

768,210. MR. SOX AND DESIGN. Betterwear Hosiery Mill, Inc. SN 144,299. Pub. 1-28-64. Filed 5-11-62.

768,211. MISS AMERICA. Miss America Brassiere Company, Inc. SN 144,516. Pub. 12-3-63. Filed 5-14-62.

768,212. DEVILLE AND DESIGN. Imperial Shirt Corp. SN 150,834. Pub. 4-30-63. Filed 7-5-62.

768,213. LISA SHORE. Conrad's, Inc. SN 150,925. Pub. 1-28-64. Filed 8-10-62.

768,214. FURTIME. Suitime Inc. SN 151,440. Pub. 1-28-64. Filed 8-17-62.

768,215. STEDMAN. Stedman Manufacturing Company. SN 155,109. Pub. 1-28-64. Filed 10-12-62.

768,216. JIMMIE DUGAN. Higginbotham-Bailey Company. SN 155,612. Pub. 1-28-64. Filed 10-22-62.

768,217. BEAR DESIGN. Revere Knitting Mills, Inc. SN 155,651. Pub. 1-28-64. Filed 10-22-62.

768,218. THE GOLDEN BEAR. Revere Knitting Mills, Inc. SN 155,652. Pub. 1-28-64. Filed 10-22-62.

768,219. CATHEDRAL STUDIO. Stephen C. May, executor of the estate of Katherine L. May. SN 160,548. Pub. 1-28-64. Filed 1-11-63.

768,220. DE VILLE PREP. Imperial Shirt Corp., assignee of The Boys-Tone Shirt Co., Inc. SN 161,232. Pub. 4-30-63. Filed 1-23-63.

768,221. TAILORED BABY AND DESIGN. Tailored Baby Inc. SN 162,502. Pub. 1-28-64. Filed 2-11-63.

768,222. BOXWOOD. Guy L. Hensley Hosiery Mill, Inc. SN 163,630. Pub. 1-28-64. Filed 2-28-63.

768,223. LEVI'S S-T-R-E-T-C-H AND DESIGN. Levi Strauss & Co. SN 166,294. Pub. 1-28-64. Filed 4-8-63.

768,224. TUF-DUK. Edmont Inc. SN 166,371. Pub. 1-7-64. Filed 4-9-63.

768,225. USS. Southland Manufacturing Co., Inc., d.b.a. U.S. Shirt Co. SN 166,502. Pub. 1-28-64. Filed 4-10-63.

768,226. STUDENT STYLES AND DESIGN. Smith Brothers Manufacturing Co. SN 167,332. Pub. 1-28-64. Filed 4-22-63.

768,227. ZIPPIES AND DESIGN. Stayon Products, Incorporated. SN 167,660. Pub. 1-28-64. Filed 4-26-63.

768,228. EMBASSY. F. W. Woolworth Co. SN 167,784. Pub. 11-5-63. Filed 4-29-63.

768,229. NATALIE GREEN. Suitime Inc. SN 168,447. Pub. 1-28-64. Filed 5-8-63.

768,230. S AND DESIGN. Smith Brothers Manufacturing Co. SN 168,639. Pub. 1-28-64. Filed 5-10-63.

768,231. LANTILLA. Fleetwood Sportwear, Inc. SN 169,244. Pub. 1-28-64. Filed 5-20-63.

768,232. FRISKO. Eloesser-Heynemann Company. SN 170,628. Pub. 1-28-64. Filed 6-10-63.

768,233. JET ZIP PED. Perfect Knit Togs, Inc. SN 170,760. Pub. 1-28-64. Filed 6-11-63.

768,234. PRIMSTYLE. F. W. Woolworth Co. SN 172,029. Pub. 1-28-64. Filed 6-27-63.

Class 40 — Fancy Goods, Furnishings, and Notions

768,235. PERMACLIP. H.R.C., Inc. SN 155,987. Pub. 1-28-64. Filed 10-26-62.

768,236. BAN-ROL. Textile Sales Company. SN 156,683. Pub. 12-3-63. Filed 11-5-62.

768,237. PLASTI-LIP. Talon, Inc. SN 156,839. Pub. 1-28-64. Filed 11-7-62.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

768,238. TRICON. A. Wimpfheimer & Bro. Inc. SN 154,655. Pub. 11-26-63. Filed 10-5-62.

768,239. DECRO-LON. The Rockland Bleach & Dye Works Co. SN 169870. Pub. 12-24-63. Filed 5-28-63.

Class 46 — Foods and Ingredients of Foods

768,240. COFFEETONE. Morning Coffee, Inc., d.b.a. Courtesy Products. SN 131,223. Pub. 1-28-64. Filed 11-2-61.

768,241. SALADA. Salada Foods Inc., by change of name from Salada-Shirriff-Horsey Inc. SN 137,565. Pub. 1-28-64. Filed 2-8-62.

768,242. ZALOOM. Jos. A. Zaloom & Co. Inc. SN 138,342. Pub. 7-31-62. Filed 2-20-62.

768,243. BLACKBURN-MILLER X-45. Blackburn-Miller Feed Service. SN 140,327. Pub. 1-28-64. Filed 3-21-62.

768,244. GLORI-FRIED. Potato Service, Inc. SN 145,403. Pub. 1-28-64. Filed 5-24-62.

768,245. BRANDED BY QUALITY MACK BROS. AND DESIGN. Mack Bros. Ltd. SN 150,264. Pub. 1-28-64. Filed 8-1-62.

768,246. SALADA. Salada Foods Inc. SN 154,855. Pub. 1-28-64. Filed 10-9-62.

768,247. VEND/BLEND AND DESIGN. Eppens, Smith Company. SN 156,733. Pub. 1-28-64. Filed 11-6-62.

768,248. PEPPER ACE. McCormick & Company, Incorporated. SN 157,231. Pub. 1-28-64. Filed 11-14-62.

768,249. MRS. SNYDER'S. Fannie May Candy Shops, Inc. SN 159,478. Pub. 1-28-64. Filed 12-20-62.

768,250. MONTE CARLO. Minute Maid Groves Corporation. SN 161,190. Pub. 1-28-64. Filed 1-22-63.

768,251. ELLSWORTH BUTTER RICH. Central Cooperative Turkey Producers. SN 163,318. Pub. 1-21-64. Filed 2-25-63.

768,252. PERSHELL. Shell Oil Company. SN 167,172. Pub. 1-28-64. Filed 4-19-63.

768,253. CITRALAGE. A. O. Smith Harvestore Products, Inc. SN 170,693. Pub. 1-28-64. Filed 6-10-63.

768,254. BONUS. General Mills, Inc. SN 171,005. Pub. 1-28-64. Filed 6-14-63.

768,255. NW NORTHWOOD AND DESIGN. Northwood Fruit Cooperative, Inc. SN 172,220. Pub. 1-28-64. Filed 7-1-63.

768,256. ARLINGTON. Joseph Ogasapian, d.b.a. Arlington Candy Co. SN 172,221. Pub. 11-26-63. Filed 7-1-63.

768,257. MIRRA-COAT. The Borden Company. SN 175,715. Pub. 1-28-64. Filed 8-26-63.

768,258. SAUSASE. Chas. Pfizer & Co., Inc. SN 175,864. Pub. 1-28-64. Filed 8-27-63.

768,259. PERZYME. Chas. Pfizer & Co., Inc. SN 175,865. Pub. 1-28-64. Filed 8-27-63.

Class 47 — Wines

768,260. RHINE GARTEN. E. & J. Gallo Winery, d.b.a. Gallo Vineyards. SN 170,256. Pub. 1-28-64. Filed 6-3-63.

Class 48 — Malt Beverages and Liquors

768,261. MOUNTAIN WATER MAKES THE DIFFERENCE. The Cumberland Brewing Company of Allegany County, Maryland. SN 130,484. Pub. 1-28-64. Filed 10-23-61.

Class 49 — Distilled Alcoholic Liquors

768,262. MOCHA RIO. Arrow Liqueurs Corporation. SN 151,874. Pub. 1-28-64. Filed 8-27-62.

768,263. CAPUCINE. Herman Jansen N.V. SN 164,842. Pub. 1-28-64. Filed 11-20-63.

768,264. BLACKHEATH. Andrew D. Thomson & Co. Limited. SN 169,789. Pub. 1-28-64. Filed 5-27-63.

Class 50 — Merchandise Not Otherwise Classified

768,265. CERTIFIED COMAT DRY MATS ETC. AND DESIGN. Certified Dry Mat Corporation. SN 125,886. Pub. 1-28-64. Filed 8-14-61.

768,266. RIPPLE-LITE. Wind-O-Lite Corporation. SN 163,443. Pub. 1-28-64. Filed 2-25-63.

768,267. SKELETON. Queen Manufacturing Co. Inc. SN 169,657. Pub. 1-28-64. Filed 5-24-63.

Class 51 — Cosmetics and Toilet Preparations

768,268. BUNNIE. Whink Products Company. SN 146,132. Pub. 1-29-63. Filed 6-4-62.

768,269. CONDITIONOL. Helene Curtis Industries, Inc. SN 158,232. Pub. 7-9-63. Filed 11-30-62.

Class 52 — Detergents and Soaps

768,270. HY-CON. Pennsalt Chemicals Corporation. SN 143,754. Pub. 1-28-64. Filed 5-3-62.

768,271. BUNNY. Whink Products Company, assignee of Wilbert Products Company Inc. SN 150,661. Pub. 3-12-63. Filed 8-6-62.

768,272. SHAKE A LITTLE. Martin Yasersky, d.b.a. Medbeg Products. SN 151,283. Pub. 1-28-64. Filed 8-15-62.

768,273. FAMILY FARE. Jobbers Service, Incorporated. SN 164,628. Pub. 1-28-64. Filed 3-14-63.

768,274. GUILD. James H. Jarrett, Sr., d.b.a. American Guild Products. SN 170,200. Pub. 1-28-64. Filed 6-3-63.

768,275. HARRIS-SOL. Harrison M. Thorpe, Jr., d.b.a. Harris-Sol Products. SN 170,500. Pub. 1-28-64. Filed 6-6-63.

768,276. AMMONIA-D. The Drackett Company. SN 170,625. Pub. 1-28-64. Filed 6-10-63.

768,277. HAPCO. John T. Frederick, d.b.a. Havenly Products Company. SN 171,003. Pub. 1-28-64. Filed 6-14-63.

Service Marks

Class 100 — Miscellaneous

768,278. JAHN'S. Jahn's Since 1897, Inc. SN 116,233. Pub. 1-28-64. Filed 3-22-61.

768,279. FULLER'S ROCKET POWER-VAC HI/LO AND DESIGN. Rocket Power-Vac Corp. SN 124,760. Pub. 1-28-64. Filed 7-26-61.

768,280. VILLAGE INN. Village Inn Pancake House, Inc. SN 153,844. Pub. 4-30-63. Filed 9-24-62.

768,281. MISCELLANEOUS DESIGN. Michigan Wisconsin Pipe Line Company. SN 154,423. Pub. 1-28-64. Filed 10-3-62.

768,282. MISCELLANEOUS DESIGN. Michigan Wisconsin Pipe Line Company. SN 154,424. Pub. 1-28-64. Filed 10-3-62.

768,283. COPLEY NEWS SERVICE. The Copley Press, Inc. SN 160,096. Pub. 1-28-64. Filed 1-3-63.

768,284. THE AMERICAN WAY. The American Oil Company. SN 164,789. Pub. 1-28-64. Filed 3-18-63.

Class 101 — Advertising and Business

768,285. SALLY OWENS. Humble Oil & Refining Company. SN 117,869. Pub. 1-28-64. Filed 4-14-61.

768,286. C/M. Domino Industries, Inc. SN 152,288. Pub. 1-28-64. Filed 8-31-62.

768,287. PERSPECTIVE AND DESIGN. Perspective Employment Inc. SN 158,369. Pub. 1-28-64. Filed 12-3-62.

Class 102 — Insurance and Financial

768,288. BETTER THAN MONEY. First National City Bank. SN 152,888. Pub. 1-28-64. Filed 9-11-62.

768,289. FANCIFUL DESIGN OF THREE "A's." New England Reinsurance Corporation. SN 160,127. Pub. 1-28-64. Filed 1-3-63.

Class 103 — Construction and Repair

768,290. ABLE AND DESIGN. Maxwell Laureaque Stewart. SN 146,119. Pub. 1-28-64. Filed 6-4-62.

768,291. DIRCO. Dairy Industry Refrigeration Company. SN 162,538. Pub. 1-28-64. Filed 2-12-63.

Class 105 — Transportation and Storage

768,292. ABCD ETC. AND DESIGN. Hector Jimenez, d.b.a. Jimenez Travel Agency. SN 145,268. Pub. 1-28-64. Filed 5-23-62.

768,293. DIRECT PAC DFC AND DESIGN. Davidson Forwarding Company. SN 161,013. Pub. 1-28-64. Filed 1-21-63.

Class 107 — Education and Entertainment

768,294. COUNCIL FOR INDIVIDUAL FREEDOM—TRUTH-UNDERSTANDING-CO-OPERATION AND DESIGN. Council for Individual Freedom, Inc. SN 102,902. Pub. 1-28-64. Filed 8-18-60.

768,295. WILDCAT. Wildcat Recreation Association, Inc. SN 148,258. Pub. 1-28-64. Filed 7-2-62.

768,296. STRING-A-LONGS. McCormack and De Cordova. SN 161,800. Pub. 1-28-64. Filed 1-31-63.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 12 — Construction Materials

768,297. Unistrut Corporation, Wayne, Mich. SN 161,120. Filed P.R. 1-21-63; Am. S.R. 1-9-64.

HOLOSPAR

For Metallic Construction Members, Telescoping and Perforated Tubing, and Fittings and Connections Therefor, Adapted To Serve as Framing and Supporting Means for Temporary and Permanent Construction of Buildings and Other Structures—Namely, Ceiling, Wall and Roofing Panels, Racks, Scaffolding, Ladders, Rails, Shelving, Benches, Signs and Billboards, Awnings, Fences and the Like.
First use Jan. 8, 1963.

Class 17 — Tobacco Products

768,298. Gallaher Limited, Belfast, Northern Ireland. SN 161,985. Filed P.R. 2-4-63; Am. S.R. 1-20-64.

GALLAHER'S RICH DARK HONEYDEW

Owner of U.S. Reg. Nos. 164,811, 213,800 and 274,670.
For Smoking Tobacco.
First use October 1894.

Class 26 — Measuring and Scientific Appliances

768,299. Flow Measurements Corp., Kensington, Md. SN 128,883. Filed P.R. 7-13-61; Am. S.R. 2-13-64.

FLOW MEASUREMENTS CORP.

For Measuring Equipment—Namely, Flowcells and Flowmeters for Measuring the Flow of Fluid in a Pipe Line.
First use Jan. 22, 1960.

Class 31 — Filters and Refrigerators

768,300. Beverage-Air Sales Company, Spartanburg, S.C. SN 122,755. Filed P.R. 6-26-61; Am. S.R. 2-20-64.

BAR MOBILE

For Portable Cabinet for Storing, Cooling and Dispensing Draft Beer.
First use Apr. 12, 1961.

Class 37 — Paper and Stationery

768,301. Ampex Corporation, Redwood City, Calif. SN 135,318. Filed P.R. 1-8-62; Am. S.R. 9-30-63.

SIGNATURE BINDING

For Identification Labels of the Foil Transfer Type.
First use July 8, 1960.

Class 38 — Prints and Publications

768,302. Western Aviation Magazine, Inc., Los Angeles, Calif. SN 138,906. Filed P.R. 8-1-62; Am. S.R. 1-30-64.

western aerospace

For Monthly Magazine.
First use Feb. 22, 1962.

768,303. Hitchcock Publishing Company, Wheaton, Ill.. SN 150,559. Filed P.R. 8-6-62; Am. S.R. 2-5-64.

QUALITY ASSURANCE

For Trade Magazine.
First use July 27, 1962.

768,304. Market News Publishing Corp., New York, N.Y. SN 161,623. Filed 1-29-63.

FIBRE MARKET NEWS

For Daily Trade Newspaper.
First use Jan. 16, 1963.

768,305. Chilton Company, Philadelphia, Pa. SN 167,530. Filed 4-25-63.

MARINE PRODUCTS

For News Magazine for the Trade Denoted to the Pleasure Marine Industry.
First use Oct. 13, 1960.

768,306. Chariot Publishing Co., Stamford, Conn. SN 172,975. Filed P.R. 7-15-63; Am. S.R. 2-19-64.

SPECIAL REPORT ON ELECTRONICS

For Trade Magazine.
First use Sept. 17, 1962.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

768,307. Ehniger Mills, Inc., New York, N.Y. SN 163,343. Filed P.R. 2-25-63; Am. S.R. 1-29-64.

SHAGGI

For Piece Goods of Wool for Coats and Suits.
First use Dec. 15, 1962.

768,308. Stephen-Leedom Carpet Company, Inc., New York, N.Y. SN 168,366. Filed P.R. 5-7-63; Am. S.R. 1-28-64.

MOROCCO

For Woven Textile Rugs and Carpets.
First use April 1953.

Class 46 — Foods and Ingredients of Foods

768,309. John Morrell & Co., Chicago, Ill. SN 139,313. Filed P.R. 3-7-62; Am. S.R. 1-31-64.



For Dry Cat Food.
First use Oct. 11, 1961.

768,310. Land O'Lakes Creameries, Inc., Minneapolis, Minn. SN 143,411. Filed P.R. 4-30-62; Am. S.R. 7-19-63.

EGG FORMULA "ONE-THREE"

For Concentrated Poultry Feeds.
First use Dec. 4, 1961.

768,311. Hillmon S. Scott, Macon, Ga. SN 151,695. Filed P.R. 8-22-62; Am. S.R. 1-30-64.

HILLMON S.
Scott's

For Barbecue Sauce.
First use May 1947.

768,312. Red Owl Stores, Inc., Hopkins, Minn. SN 163,077. Filed P.R. 2-19-63; Am. S.R. 2-20-64.

FINNAZIO'S

For Italian-Style Bread.
First use Feb. 6, 1963.

Class 51 — Cosmetics and Toilet Preparations

768,313. Physicians Formula Cosmetics, Inc., Los Angeles, Calif. SN 110,885. Filed P.R. 12-27-60; Am. S.R. 1-31-64.

PHYSICIANS FORMULA

For Skin Lotions, Skin Freshener, Skin Cleanser, Skin Creams, Make-Up Base, Lipsticks, Mascara, Face Powder, Facial Masque, Eyebrow Pencils, Eye Liners, Eye Shadow, Eye Cream, Body Oil, Rouge, Cologne, Cologne Deodorant, Lip Cream, Hair Dressing, After Shave Lotion, Hand Protective Lotion, Sun Tan Preparations and Shampoo.
First use Mar. 17, 1937.

768,314. Hazel Bishop Inc., New York, N.Y. SN 123,959. Filed P.R. 7-14-61; Am. S.R. 7-16-64.

CREME 'N POWDER

For Cosmetic Composition Comprising a Foundation Preparation With Powder.
First use Jan. 19, 1961.

768,315. Texas Pharmacal Company, San Antonio, Tex. SN 176,126. Filed 8-30-63.

SUN STICK

For Lip and Skin Pomade for Protection Against Sunburn and To Prevent and Relieve Chapping.
First use at least as early as May 29, 1952.

Service Mark

Class 103 — Construction and Repair

768,316. Wallens & Co., Inc., Cincinnati, Ohio. SN 154,181. Filed 9-28-62.

VIOLET-SPRAY

No claim being made to the exclusive right to the use of the word "Spray" separate and apart from the mark as shown.
For Washing Automobiles.
First use June 28, 1962.

TRADEMARK REGISTRATIONS RENEWED

23,727. UHCO AND CLOVER LEAF DESIGN. Cl. 22. 10-17-1893.
24,507. BRITISH THISTLE WITHIN A CIRCLE. Cl. 46. 4-10-1894.
179,687. L. B. FOSTER CO. AND DESIGN. Cl. 14. 2-12-24.
179,688. FOSTER AND DESIGN. Cl. 14. 2-12-24.
179,849. BENNETT'S PROPERTY LIFE INSURANCE AND DESIGN. Cl. 16. 2-19-24.
180,056. METROPOLITAN. Cl. 39. 2-19-24.
180,233. Q-TOL AND DESIGN. Cl. 18. 2-26-24.
180,317. BADGER AND DESIGN. Cl. 36. 2-26-24.
180,501. FLATTERIE. Cl. 51. 3-4-24.
180,609. ODYLEN. Cl. 18. 3-4-24.
180,618. ARICYL. Cl. 18. 3-4-24.
180,894. COOLSPUN. Cl. 39. 3-11-24.
181,329. THE STETSONIAN. Cl. 39. 3-18-24.
182,378. JOACHIM. Cl. 36. 4-8-24.
183,800. GRANDMA'S WONDER. Cl. 46. 5-6-24.
183,801. FIT FOR A KING. Cl. 46. 5-6-24.
185,759. ONEIDA COMMUNITY. Cl. 28. 6-24-24.
405,493. HALAPAN. Cl. 18. 2-1-44.
405,605. HALADEE. Cl. 18. 2-8-44.
405,680. DUV-BLOOM AND DESIGN. Cl. 42. 2-15-44.
405,688. DESIGN OF ELECTRIC WALL OUTLET. Cl. 38. 2-15-44.
405,696. DESIGN OF HUMAN HAND AND ELECTRIC WALL SWITCH. Cl. 38. 2-15-44.
405,750. SPEKLEEN. Cl. 4. 2-22-44.
405,753. AQUIFLUX AND DESIGN. Cl. 34. 2-22-44.
405,755. SMUTBATH. Cl. 6. 2-22-44.
405,827. REPRESENTATION OF LION. Cl. 11. 2-22-44.
406,050. GREEN HARP. Cl. 46. 3-7-44.
406,058. VALERIANETS. Cl. 18. 3-7-44.
406,126. PAN-CAKE-MAKE-UP. Cl. 51. 3-14-44.
406,318. PHILCUP. Cl. 15. 3-28-44.
406,354. KELLOGG'S VARIETY. Cl. 46. 3-28-44.
406,357. WESTAN. Cl. 46. 3-28-44.
406,720. NEO-SYNEPHRINE. Cl. 18. 4-18-44.
406,838. FABSEAL. Cl. 12. 5-2-44.
406,905. REPRESENTATION OF A FISH. Cl. 26. 5-9-44.
406,916. STERI-PAD. Cl. 44. 5-9-44.
406,928. NOPCOWITE. Cl. 6. 5-9-44.
406,943. ESSENAMINE. Cl. 18. 5-9-44.
407,054. NOPCOLENE. Cl. 6. 5-16-44.
407,264. FAIRHILL. Cl. 46. 5-23-44.
407,493. GRANDMOTHER'S. Cl. 45. 6-6-44.
407,504. REDDYBOX. Cl. 38. 6-6-44.
407,505. REDDYBOX AND DESIGN. Cl. 38. 6-6-44.
407,615. YARDMASTER. Cl. 23. 6-13-44.
407,981. NORTHCOOL AND DESIGN. Cl. 39. 7-11-44.
408,078. PINTAIL AND DESIGN. Cl. 46. 7-18-44.
408,122. ROCAVIT. Cl. 18. 7-18-44.
408,192. STEINLITE. Cl. 26. 7-25-44.
408,285. GENERAL MILLS, INC. AND DESIGN. Cl. 46. 8-1-44.
408,340. NORDEN AND DESIGN. Cl. 18. 8-8-44.

TRADEMARK REGISTRATIONS CANCELED

Section 8

351,557. HERCOSETT. Cl. 6. 11-2-37.
353,399. STUDIES IN HARMONY. Cl. 37. 1-4-38.
354,916. 'HOMOHIDE.' Cl. 35. 3-1-38.

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Kenny, Richard L., Stamford, Conn. 658,741, canc. Cl. 21.
Kohnstamm, H., & Co., Inc., New York, N.Y. 768,072, pub. 12–10–63. Cl. 6.
Koontz-Wagner Electric Co., Inc., South Bend, Ind. 768,108, pub. 11–5–63. Cl. 21.
Koos, N. S., & Son Co., Kenosha, Wis. 768,071, pub. 1–28–64. Multiple Class (Classes 6 and 10).
Kozma, J. A., Co.: *See*—
Kozma, Joseph A., Sr.
Kozma, Joseph A., Sr., d.b.a. J. A. Kozma Co., Dearborn, Mich. 658,812, canc. Cl. 34.
Laboratories Millot, Societe a Responsabilite Limitee, Paris, France. 658,703, canc. Cl. 18.
Land O'Lakes Creameries, Inc., Minneapolis, Minn. 768,310. Cl. 46.
Lashin, David M., Bridgeport, Conn. 768,206, pub. 1–28–64. Cl. 38.
Laub, George M., New York, N.Y. 413,635, canc. Cl. 26.
Levey, Fred'k H., Co., Inc., New York, N.Y. 405,827, ren. 4–14–64. Cl. 11.
Lewis, Henry L., St. Louis, Mo. 658,835, canc. Cl. 46.
Lewis, William, and Son, Chicago, Ill. 182,378, ren. 4–14–64. Cl. 36.
Lindsey-Robinson & Co., Inc., Roanoke, Va. 658,882, canc. Cl. 46.

Lucy Frock, Inc., Hillsboro, Kans. 658,832, canc. Cl. 39.
MacGregor Men's Toiletries, Inc., New York, N.Y. 768,158, pub. 1–28–64. Cl. 23.
Mack Bros. Ltd., Goshen, N.Y. 768,245, pub. 1–28–64. Cl. 46.
Madame Alexander: *See*—
Alexander Doll Co., Inc.
Madigan Electronic Corp., Carle Place, N.Y. 768,111, pub. 1–28–64. Cl. 21.
Major Sports Associates, Inc., Chicago, Ill. 768,200, pub. 1–22–63. Cl. 38.
Mann, Robert, New York, N.Y. 768,084, pub. 1–28–64. Cl. 10.
Marion Laboratories, Inc., Kansas City, Mo. 658,733, canc. Cl. 18.
Market News Publishing Corp., New York, N.Y. 768,304. Cl. 38.
Marvella, Inc., New York, N.Y. 768,180–1, pub. 1–28–64. Cl. 28.
Master Made Paints, Inc., Joplin, Mo. 768,096, pub. 1–28–64. Cl. 16.
Mattel, Inc., Los Angeles, Calif. 658,750, canc. Cl. 22.
Max Factor & Co., Hollywood, Calif. 406,126, ren. 4–14–64. Cl. 51.
May, Katherine L.: *See*—
May, Stephen C.
May, Stephen C., executor of the estate of Katherine L. May, Atlanta, Ga. 768,219, pub. 1–28–64. Cl. 39.
McCormack and de Cordova, Plainview, Tex. 768,296, pub. 1–28–64. Cl. 107.
McCormick & Co., Inc., Baltimore, Md. 768,248, pub. 1–28–64. Cl. 46.
McCormick Distilling Co., Weston, Mo. 768,059, pub. 1–28–64. Cl. 1.
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McManus, William J., d.b.a. McManus Mfg., Hollywood, Calif. 658,924, canc. Cl. 13.
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Yaxersky, Martin.
Metabolic Products Corp., Boston, Mass. 658,705, canc. Cl. 18.
Michigan Wisconsin Pipe Line Co., Detroit, Mich. 768,281–2, pub. 1–28–64. Cl. 100.
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Milway, Inc., Milwaukee, Wis. 768,097, pub. 1–28–64. Cl. 16.
Miniquip, Inc., Reno, Nev. 768,107, pub. 1–28–64. Cl. 21.
Minute Maid Groves Corp., Orlando, Fla. 768,250, pub. 1–28–64. Cl. 46.
Miss America Brassiere Co., Inc., Chicago, Ill. 768,211, pub. 12–3–63. Cl. 39.
Mixermobile Manufacturers, Inc., Portland, Oreg. 768,155, pub. 1–28–64. Cl. 23.
Modease Shoes, Inc., New York, N.Y. 336,466, canc. Cl. 39.
Monarch Specialties Co., Fayetteville, N.C. 718,271, canc. Cl. 39.
Monogram Models, Inc., Morton Grove, Ill. 768,144, pub. 1–28–64. Cl. 22.
Morgan Paper Co., Inc., Lititz, Pa. 768,199, pub. 1–28–64. Cl. 37.
Morning Coffee, Inc., d.b.a. Courtesy Products, San Diego, Calif. 768,240, pub. 1–28–64. Cl. 46.
Morrell, John, & Co., Chicago, Ill. 768,309. Cl. 46.
Moulton Developments Ltd., Bradford-on-Avon, England. 768,079, pub. 1–28–64. Cl. 6.
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Murphy, H. B.
Murphy, H. B., to H. B. Murphy Co., Brawley, Calif. 406,050, ren. 4–14–64. Cl. 46.
Murray Corp. of America, The, Detroit, Mich. 658,780, canc. Cl. 24.
N-E-C Radios, Inc., Chicago, Ill. 768,118, pub. 11–26–63. Multiple Class (Classes 21 and 36.)
Naamloze Vennootschap Fabriek Van Electrische Apparaten Voorheen F. Hazemeyer & Co., Hengelo, Netherlands. 768,122, pub. 1–28–64. Cl. 21.
National Export Packing Corp., New York, N.Y. 658,917, canc. Cl. 100.
National Oil Products Co., Harrison, N.J., to Nopco Chemical Co., Newark, N.J. 406,928, ren. 4–14–64. Cl. 6.
National Oil Products Co., Harrison, N.J., to Nopco Chemical Co., Newark, N.J. 407,054, ren. 4–14–64. Cl. 6.
Neoline, Inc., Cornwall Bridge, Conn. 768,113–4, pub. 1–28–64. Cl. 21.
Neville Chemical Co., The, Pittsburgh, Pa. 768,069, pub. 1–28–64. Cl. 6.
Newaygo Engineering Co., Newaygo, Mich. 768,163–4, pub. 1–28–64. Cl. 23.
New England Reinsurance Corp., Boston, Mass. 768,289, pub. 1–28–64. Cl. 102.
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Nordmark-Werke Gesellschaft mit beschraenkter Haftung, Hamburg, Germany. 658,701, canc. Cl. 18.
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Northwood Fruit Cooperative, Inc., Grand Rapids, Mich. 768,255, pub. 1–28–64. Cl. 46.
Norton & McElroy Produce, Inc., Glendale, Ariz. 658,847, canc. Cl. 46.
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Olin Mathieson Chemical Corp., East Alton, Ill. 768,081, pub. 1–28–64. Cl. 9.
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Oneida Community, Ltd.
Oneida Ltd., Oneida, N.Y. 768,153, pub. 1–28–64. Cl. 23.
Panama Cooperative Fisheries, Inc.: *See*—
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Para Laboratories, New York, N.Y. 658,903, canc. Cl. 51.
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Reddy Kilowatt, Inc.: *See*—
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Roulette Records, Inc., New York, N.Y. 658,814, canc. Cl. 36.
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Stearns, Frederick, & Co., Detroit, Mich., to Sterling Drug Inc., New York, N.Y. 406,943, ren. 4–14–64. Cl. 18.
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PATENTS
NOTICES

Board of Appeals Decisions Rendered in the Month of March 1964

Examiner affirmed	360
Examiner affirmed in part	58
Examiner reversed	119
Total	537

Notice of Daylight Saving Time

The Patent Office will operate on Daylight Saving Time from April 27, 1964, through October 24, 1964.

PATENT AND TECHNICAL DATA CONTROLS

Export Control Regulations

The Department of Commerce is announcing the amendment effective April 1, 1964, of its Export Control Regulations governing the export of patent information or technical data from the United States, and the Office of Foreign Assets Control hereby announces corresponding changes in certain Treasury Regulations. After April 1, 1964, persons subject to the jurisdiction of the United States who license foreign firms to use patents or technical data will no longer be required by the Office of Foreign Assets Control to incorporate in the license agreements certain restrictions on the disposition of commodities produced abroad under such license agreements.

Heretofore, the Office of Foreign Assets Control has under the Foreign Assets Control Regulations (31 CFR Part 500) required that licensors include in licensing agreements undertakings by the foreign licensees not to sell any item produced under the license to Communist China or North Korea or their nationals, without prior permission from the licensor. Such permission could not be given in the absence of a license granted by the Treasury to the licensor authorizing the specific transaction. Similarly, under the Transaction Control Regulations (31 CFR Part 505), American licensors have been required to incorporate in licensing agreements undertakings by the foreign licensees not to sell any strategic item produced under the license to European Soviet Bloc nations, without prior permission of the licensor. Again, such permission could not be given in the absence of a license granted by the Treasury to the licensor.

These undertakings are no longer required so far as licensing agreements entered into on or after April 1, 1964, are concerned. The restrictions contained in licensing agreements entered into before April 1, 1964, should continue to be enforced by the licensor. However, if the licensee signs a certification which meets the requirements of General License GTDU of the Export Control Regulations administered by the Department of Commerce, as now amended, this certification will be acceptable evidence that the requirements of the Treasury Regulations applicable to such prior licensing agreements have been complied with.

Attention is directed to the fact that the restrictions of the Treasury Regulations remain in full force and effect insofar as they involve foreign firms which are directly or indirectly controlled by persons subject to the jurisdiction of the United States in any way other than by licensing agreements. For example, foreign subsidiaries of U.S. firms and foreign firms which are joint ventures by a U.S. firm and a foreign firm continue to be affected by the restrictions of the Treasury Regulations.

[SEAL] MARGARET W. SCHWARTZ,
Director Office of Foreign Assets Control.

[F.R. Doc. 64–2563; Filed, Mar. 16, 1964; 8:50 a.m.]

Published in 29 F.R. 3443, Mar. 17, 1964

Disclaimers

2,976,934.—*Hartley K. Todee*, Houston, Tex. SUBSURFACE MULTIPLE ZONE PRODUCTION APPARATUS. Patent dated Mar. 28, 1961. Disclaimer filed Jan. 29, 1964, by the assignee, *Baker Oil Tools, Inc.*

Hereby enters this disclaimer to claims 1 and 2 of said patent.

2,983,318.—*John R. Baker*, Pasadena, and *Theodore H. Schorr*, Los Angeles, Calif. SUBSURFACE MULTIPLE ZONE WELL PRODUCTION APPARATUS. Patent dated May 9, 1961. Disclaimer filed Jan. 29, 1964, by the assignee, *Baker Oil Tools, Inc.*

Hereby enters this disclaimer to claims 1 and 8 of said patent.

2,999,543.—*William D. Myers*, Norwalk, Calif. PARALLEL TUBULAR STRING APPARATUS FOR WELL BORES. Patent dated Sept. 12, 1961. Disclaimer filed Jan. 29, 1964, by the assignee, *Baker Oil Tools, Inc.*

Hereby enters this disclaimer to claims 1 and 4 of said patent.

Correction in Index of Patentees

In the OFFICIAL GAZETTE for March 24, 1964, the section pertaining to the List of Patentees beginning on page iv, should begin on page ii, column 2, line 22.

New Applications Received During February 1964

Patents	6,442
Designs	362
Plant Patents	16
Reissues	18
Total	6,838

Issue—April 21, 1964

Patents	984—No.	3,129,429 to No.	3,130,412, incl.
Designs	57—No.	198,014 to No.	198,070, incl.
Plant Patents	2—No.	2,391 to No.	2,392, incl.
Reissues	6—No.	25,556 to No.	25,561, incl.
Total	1049		

Chapter III—Bureau of International Commerce, Department of Commerce

SUBCHAPTER B—EXPORT REGULATIONS

[9th General Rev., Export Regs., Amdt. No. 81]

PART 370—SCOPE OF EXPORT CONTROL BY DEPARTMENT OF COMMERCE

PART 385—EXPORTATION OF TECHNICAL DATA

Miscellaneous Amendments

1. Section 370.2 *Prohibited exportations*, paragraph (a) *General provisions*, subparagraph (1) is amended to read as follows:

§ 370.2 *Prohibited exportations.*

(a) *General provisions.* • • •

(1) Any exportation to Canada (see § 370.3 except:[1]

(i) Sugar, beet and cane, Schedule B No. 16190;

(ii) Walnut logs, bolts, and hewn timber, Schedule B No. 40040; and

(iii) The types of technical data described in § 385.2(c)(5) of this chapter.

• • • • • • • •

2. Part 385—Exportation of Technical Data is amended in the following respects:

a. Sections 385.1 and 385.2 are amended to read as follows:

§ 385.1 *Definitions.*

(a) *Technical Data.*—"Technical Data" means any professional, scientific or technical information, including any model, design, photograph, photographic film, document or other article or material, containing a plan, specification, or descriptive or technical information of any kind which can be used or adapted for use in connection with any process, synthesis, or operation in the production, manufacture, utilization, or reconstruction of articles or materials. The provisions of this Part 385—*Technical Data*, do not apply to "classified" technical data, i.e., technical data, which have been officially assigned a security classification, i.e.: "top secret," "secret," or "confidential," by an officer or agency of the United States Government. The exportation of classified technical data is controlled by the Office of Munitions Control, Department of State, Washington, D.C., 20520 (see § 370.5 of this chapter).

(b) *Exportation of Technical Data.*[2] [3]—"Exportation of Technical Data" is defined as any release of unclassified technical data for use outside the United States. It includes the actual shipment out of the United States as well as the furnishing of data in the United States to persons with the knowledge or intention that the persons to whom it is furnished will take such data out of the United States.

§ 385.2 *General licenses.*

(a) *Which general license may be used*—(1) *Scientific and educational technical data.*—Unclassified scientific or educational technical data, as described in paragraph (d) of this section, may be exported under the provisions of General License GTDS in either published or unpublished form. At the discretion of the exporter, scientific or educational technical data may be exported under General License GTDP or GTDU if the specified provisions of either of these general licenses are met (see paragraphs (b) and (c) of this section).

(2) *Other types of technical data.*—Unclassified technical data which do not fall within the definition of "scientific" or "educational" as defined in paragraph (d) of this section, may be exported as follows:

(i) Under the provisions of general License GTDP if it is generally available in published form (see paragraph (b) of this section).

(ii) Under the provisions of General License GTDU if it is not generally available in published form (see paragraph (c) of this section).

A validated export license is required if the technical data are not exportable under the provisions of General License GTDS, GTDP, or GTDU.

(b) *General License GTDP; Published technical data.*—A general license designated GTDP is hereby established authorizing the exportation to all destinations of unclassified technical data generally available in published form. Technical data are considered as generally available in published form if they are:

(1) Sold at newstands or bookstores;

(2) Available by subscription or purchase without restrictions to any person or available without cost to any person; or

(3) Freely available at public libraries.

(c) *General License GTDU; Unpublished technical data*—(1) *Applicability.*—A general license designated GTDU is hereby established authorizing the exportation of unclassified technical data, which is either unpublished or not generally available in published form (that is, technical data not exportable under the provisions of General License GTDP) subject to the other provisions and limitations set forth in this paragraph (c).

(2) *Destination restrictions.*—This general license shall not be applicable to any exportation of technical data directly or indirectly to any Subgroup A destination, Poland (including Danzig), or Cuba; except that technical data such as manuals, instruction sheets, or blueprints may be exported to any destination other than Communist China, North Korea, or the Communist-controlled area of Viet-Nam, provided that such technical data are:

(i) Sent as part of a transaction involving, and directly related to, a commodity licensed for export from the United States to the same consignee and destination to which the commodity was or will be exported;

(ii) Sent no later than one year following the shipment of the commodity to which the technical data are related;

(iii) Of a type normally delivered with the commodity;

(iv) Necessary to the assembly, installation, maintenance, repair, or operation of the commodity; and

(v) Not related to the production, manufacture, or construction of the commodity.

(3) *Restriction relating to types of technical data.*—This general license shall not be applicable to technical data relating to the commodities described in this subparagraph (3). The limitations set forth in this subparagraph (3) do not apply to the exportation of operating and maintenance instructional material or to technical data included in an application for foreign filing of a patent, provided such foreign filing of a patent application is in accordance with the regulations of the United States Patent Office.

(i) Civil aircraft, civil aircraft equipment, parts, accessories, or components listed on the Positive List of Commodities (§ 399.1 of this chapter); or

(ii) The following electronic commodities listed on the Positive List of Commodities (§ 399.1 of this chapter):

(a) Electrical and electronic instruments, Schedule B Nos. 70372 and 70379, specially designed for testing or calibrating the airborne direction finding, navigational and radar equipment described in Schedule B Nos. 70797 and 70867.

(b) Airborne transmitters, receivers, and transceivers, Schedule B No. 70779.

(c) Airborne direction finding equipment, Schedule B No. 70797.

(d) Airborne electronic navigation apparatus and airborne radar equipment, Schedule B No. 70867.

(iii) Neutron generators employing the electrostatic acceleration of ions and designed for operation without an external vacuum system, and specially fabricated parts and

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[1] See § 379.1(d) regarding the requirement of a Shipper's Export Declaration for certain exportations to Canada.

[2] License applications for, or questions as to, the exportation of unclassified technical data relating to commodities which are licensed by government agencies other than the Department of Commerce shall be referred to the appropriate government agency for consideration.

[3] In addition to the regulations issued by the U.S. Patent Office, technical data contained in or related to inventions made in foreign countries or in the United States, are subject to the Department of Commerce regulations covering the exportation of technical data, in the same manner as the exportation of other types of technical data. Patent attorneys and others are advised to consult with the U.S. Patent Office, Department of Commerce, Washington, D.C., 20231, relative to the U.S. Patent Office regulations concerning the filing of patent applications or amendments in foreign countries.

accessories for such neutron generators; Schedule B No. 70999.

(4) *Requirement of written assurance for certain data, services, materials and equipment.*—No exportation of technical data of the kind described in (i) and (ii) of this subparagraph (4) may be made under the provisions of this General License GTDU until the exporter has received written assurance from the importer than neither the technical data nor the direct product[4] thereof is intended to be shipped either directly or indirectly to a Subgroup A country, Poland (including Danzig), or Cuba, except as provided in subdivision (iii) of this subparagraph (4). The required assurance may be in the form of a letter or other written communication from the importer evidencing such intention, or a licensing agreement which restricts disclosure of the technical data to use only in a country other than Subgroup A, Poland (including Danzig), or Cuba, and prohibits shipment of the direct product[4] thereof by the licensee to a Subgroup A country, Poland (including Danzig), or Cuba. An assurance included in a licensing agreement will be acceptable for all exportations made during the life of the agreement. If such assurance is not received, this general license is not applicable and a validated export license is required. An application for such validated license shall include an explanatory statement setting forth the reasons why such assurance cannot be obtained. In addition this general license is not applicable to any exportation of technical data of the kind described in subdivisions (i) and (ii) of this subparagraph (4) if, at the time of exportation of the technical data from the United States, the exporter knows or has reason to believe that the direct product[4] to be manufactured abroad by use of the technical data is intended to be exported directly or indirectly to a Subgroup A destination, Poland (including Danzig) or Cuba.

(i) Technical data and services listed in (a) below for the plants, processes, and equipment listed in (b) below:

(a) Type of technical data and services:

(1) Proprietary research and the results therefrom;

(2) Processes developed pursuant to research (including technology with regard to component equipment items);

(3) Catalyst production, activation, utilization, reactivation and recovery;

(4) Plant and equipment design and layout to implement the processes; and

(5) Construction and operations of plant and equipment.

(b) Types of plants, equipment, and processes:

The following plants, equipment, or processes usable in the treatment of petroleum or natural gas fractions or of products derived directly or indirectly therefrom;[5]

alkylation	halogenation	oxo process
aromatization	hydrogenation	ozonolysis
cracking	isomerization	polymerization
dehydrogenation	nitration	reduction
desulfurization	oxidation	reforming

(ii) Technical data relating to the following materials and equipment:

(a) Steel line pipe of a size greater than 19 inches o.d. and having a yield strength greater than 40,000 p.s.i. as determined by API test (Schedule B Nos. 60627 and 60630);

(b) Forged steel pipe fittings having a pipe size connection greater than 19 inches o.d. and having a yield strength greater than 40,000 p.s.i. as determined by API test (Schedule B No. 61857);

(c) Centrifugal pumps designed for an internal pump-case working pressure of over 300 p.s.i. and a power input greater than 1,000 hp., and specially fabricated parts and accessories (Schedule B Nos. 77101 and 77119);

(d) Air and gas compressors, reciprocating, centrifugal, axial flow and mixed flow types, capable of receiving a power input greater than 2,000 hp. and designed for a discharge greater than 300 p.s.i. and specially fabricated parts and accessories (Schedule B Nos. 77046, 77073, 77076, and 77078);

(e) Steel valves, with an inlet or outlet dimension 17 inches or greater and designed for a working pressure of over 300 p.s.i. and specially fabricated parts and accessories (Schedule B Nos. 77450, 77460, and 77465);

(f) O-ing and U-ing presses specially designed for the manufacture of steel pipe of a size greater than 19 inches o.d., and specially fabricated parts and accessories (Schedule B Nos. 74459 and 74468);

(g) Straightener-expander for pipes or tubes of a size greater than 19 inches o.d., and specially fabricated parts and accessories (Schedule B Nos. 74459 and 74468);

(h) Portable pneumatic and hydraulic drilling machines capable of tapping steel line pipe of a size greater than 19 inches o.d. without interruption of flow (Schedule B Nos. 74570 and 74601);

(i) Meters with inlet or outlet diameter 10 inches or larger specially designed to measure flow in petroleum and/or natural gas pipe line (Schedule B No. 76680);

(j) Valves specially designed for temporarily stopping off or plugging a section of steel line pipe of a size greater than 19 inches o.d. (Schedule B No. 77450); and

(k) Automatic pipe welding machines capable of welding the joints of steel line pipe of a size greater than 19 inches o.d., and specially fabricated parts and accessories (Schedule B Nos. 70106 and 70108);

(l) Pipe mills specially designed for the manufacture of steel pipe of a size greater than 19 inches o.d., and specially fabricated parts and accessories (Schedule B No. 74480);

(m) Molecular sieves (for example, crystalline calcium alumino-silicate; crystalline sodium alumino-silicate; crystalline alkali metal alumino-silicates, etc.) (Schedule B Nos. 83799 and 83990).

(n) Pyrolitic graphite (i.e., graphite and doped graphites produced by vapor deposition) in any form (Schedule B No. 54809); semi-finished or finished materials or products containing pyrolitic graphite as a standing body, a coating, a lining, or a substrate (Schedule B Nos. 54730, 54805, and 54809).

(o) Electric industrial melting and refining furnaces and metal heat-treating furnaces specially designed for the production or processing of vapor deposited (pyrolitic) graphite or doped graphites whether as standing bodies, coatings, linings or substrates (Schedule B Nos. 70741 and 70744).

(iii) The limitations set forth in this subparagraph (4) do not apply to the exportation of technical data included in an application for the foreign filing of a patent, provided such foreign filing of a patent application is in accordance with the regulations of the United State Patent Office.

(5) *Requirements of written assurance for certain additional products and destinations.*—(i) Except for technical data requiring a written assurance in accordance with the provisions of subparagraph (4) of this paragraph, and except as provided in subdivision (v) of this subparagraph; no exportation of technical data relating to the commodities described in this subdivision (i) may be made under the provisions of this General License GTDU, until the United States exporter has received a written assurance from the foreign importer (including any Canadian importer) that, unless prior authorization is obtained from the Office of Export Control, the importer will not knowingly:

(a) Reexport, directly or indirectly, to any Subgroup A, destination, to Poland (including Danzig) or to Cuba, any technical data relating to commodities listed on the Positive List of Commodities, § 399.1 of this chapter or in § 371.52 of this chapter;

(b) Export, directly or indirectly, to Communist China, North Korea, the Communist-controlled area of Viet-Nam, or Cuba, any direct product[7] of the technical data if such direct product[7] is listed on the Positive List of Commodities, § 399.1 of this chapter, or in § 371.52 of this chapter;

(c) Export, directly or indirectly, to any destination in the European Soviet[6] bloc or to Poland (including Danzig) any direct product[7] of the technical data if such direct product[7] is identified on the Positive List of Commodities by the symbol "A."

(ii) If the direct product[7] of any technical data is a complete plant or any major component of a plant which is capable of producing a commodity shown on the Positive List of Commodities, or in § 371.52 of this chapter, or in the United States Munitions List, a written assurance by the person who is or will be in control of the distribution of the products of the plant (whether or not such person is the importer) shall be obtained by the United States exporter (via the foreign importer, stating that, unless prior authorization is obtained from the Office of Export Control, such person will not knowingly:

(a) Reexport, directly or indirectly, to any Subgroup A destination, to Poland (including Danzig), or to Cuba the technical data relating to the plant or the major component of a plant;

(b) Export, directly or indirectly, to Communist China, North Korea, the Communist-controlled area of Viet-Nam, or Cuba, the plant, or the major component of a plant (depending upon which is the direct product[7] of the technical data), or any product of such plant, or of such major component, if such product is listed on the Positive List of Commodities, or in § 371.52 of this chapter, or in the United States Munitions List; or

(c) Export, directly or indirectly, to the European Soviet bloc,[6] or to Poland (including Danzig) the plant, or the major component of a plant (depending upon which is the direct product[7] of the technical data), or any product of such plant, or of such major component, if such product is identified on the Positive List of Commodities by the Symbol "A" or in the United States Munitions List.

(iii) The required assurance may be in the form of a letter or other written communication from the importer or, if applicable, the person in control of the distribution of the products of a plant; or the assurance may be incorporated into a licensing agreement which restricts disclosure of the technical data to use only in authorized destinations, and prohibits shipment of the direct product[7] thereof by the licensee to any unauthorized destination. An assurance included in a licensing agreement will be acceptable for all exportations made during the life of the agreement. If such assurance is not received, this general license is not applicable and a validated export license is required. An application for such validated license shall include an explanatory statement setting forth the reasons why such assurance cannot be obtained.

(iv) In addition, this general license is not applicable to any exportation of technical data of the kind described in this subparagraph (5) if, at the time of exportation of the technical data from the United States, the exporter knows or has reason to believe that the direct product[7] to be manufactured abroad by use of the technical data is intended to be exported directly or indirectly to any unauthorized destination.

(v) The limitations set forth in this subparagraph (5) do not apply to the exportation of technical data included in an application for the foreign filing of a patent, provided such foreign filing of a patent application is in accordance with the regulations of the United States Patent Office.

NOTE.—A written assurance is not required for the exportation under this General License GTDU of any technical data which does not fall within the description set forth in subparagraphs (4) or (5) of this paragraph.

(d) *General License GTDS; Scientific and educational technical data.* A general license designated GTDS is hereby established authorizing the exportation to all destinations of unclassified scientific and educational technical data involving:

(1) Dissemination of information not directly and significantly related to design, production and utilization in industrial processes, including such dissemination by correspondence and attendance at, or participation in, meetings; or

(2) Instruction in academic institutions and academic laboratories. "Instruction" is interpreted not to include research under contract where the research relates directly and significantly to design, production, and utilization in industrial processes.

b. Section 385.4 *Exportation under a validated license, paragraph (c) completion of application form and application processing card,* subparagraph (2) *Special provisions for certain commodities* is amended by redesignating (iii) as (iv), adding a new (iii) and amending redesignated (iv) to read as follows:

§385.4 *Exportation under a validated license.*

* * * * * * *

(c) *Completion of application form and application processing card.* * * *

(2) *Special provisions for certain commodities.* * * *

(iii) Neutron generators employing the electrostatic acceleration of ions and designed for operation without an external vacuum system, and specially fabricated parts and accessories for such neutron generators; Schedule B No. 70999.

(iv) For all license applications covering technical data relating to any of the commodities in subdivisions (i), (ii), (iii) of this subparagraph for export to any destination other than Poland (including Danzig), a Subgroup A destination, Cuba, or the Republic of the Congo (Leopoldville), an applicant shall attach to the license application a written statement of assurance from his foreign consignee that the technical data will not be reexported directly or indirectly to any country without prior authorization from the Office of Export Control. The statement shall also show that the direct product[6] produced by use of the technical data will not be exported directly or indirectly to Poland (including Danzig), a Subgroup A destination, Cuba, or the Republic of the Congo (Leopoldville) without prior authorization from the Office of Export Control. For a license application for a shipment of such technical data to the Republic of the Congo (Leopoldville), the same written statement is required except that the list of destinations set forth thereon to which the direct product[6] may not be exported shall omit the Republic of the Congo (Leopoldville). However, if the United States exporter is not able to obtain the required statement, or the consignee is unwilling to furnish assurances with respect to all of the requirement, the exporter may attach an explanatory statement to his license application setting forth the reasons therefor.

* * * * * * * *

This amendment shall become effective April 1, 1964, except that until June 30, 1964, the exportation of any product of United States technical data made abroad pursuant to a licensing agreement entered into prior to April 1, 1964, in compliance with the Treasury Department regulations and which remain in effect until June 30, 1964, may be made under the previous provisions of this General License GTDU without regard to the new requirement for an assurance. After June 30, 1964, any exportations of technical data not meeting these new requirements of General License GTDU will require a validated export license.

(Sec. 3, 63 Stat. 7; 50 U.S.C. App. 2023; E.O. 10945, 26 F.R. 4487; E.O. 11038, 27 F.R. 7003)

FORREST D. HOCKERSMITH,
Director,
Office of Export Control.

[F.R. Doc. 64-2621; Filed, Mar. 16,1964; 8:53 a.m.]

Published in 29 F.R. 3421-24, Mar. 17, 1964

[4] The term "direct product" used in this sentence and in this context only is defined to mean the immediate product (including processes and services) produced directly by use of the technical data, except that petroleum or chemical products other than molecular sieves or catalysts are not included in this definition. The coverage of the term does not extend to the results of the use of such "direct product." An example of the direct product of technical data is reforming process equipment designed and constructed by use of the technical data exported, but the aromatics produced by the reforming process equipment are not immediate or direct products of these technical data. However, if the technical data are a formula for producing aromatics; the aromatics, although they are immediate products of the data, are not included in this definition of direct product, since they are petroleum products. Conversely, if the technical data are a formula for producing either molecular sieves or catalysts, the foreign-produced molecular sieves and catalysts are included in the definition of direct product.

[5] This includes plants, equipment, or processes for the production, extraction, and purification of petroleum products, petro-chemical products, and products derived therefrom. Examples of petrochemical products include methane, ethane, propane, butane and other aliphatics, as well as olefins, aromatics, naphthenes, and elements and other compounds.

[6] The term "European Soviet bloc," as used in this subparagraph (5), means the following destinations: Albania, Bulgaria, Czechoslovakia, East Germany (Soviet Zone of Germany and the Soviet Sector of Berlin), Estonia, Hungary, Latvia, Lithuania, Outer Mongolia, Rumania, and the Union of Soviet Socialist Republics.

[7] The term "direct product" used in this sentence and in this context only is defined to mean the immediate product (including processes and services) produced directly by use of the technical data.

[6] The term "direct product" used in this sentence and in this context only, is defined to mean the immediate product (including processes and services) produced directly by use of the technical data. The coverage of the term does not extend to the results of the use of such "direct product." For example, if the technical data relate to the design of a new or improved airborne transmitter, the airborne transmitter produced from such data is a direct product of the data. However, if the technical data relate to the design of equipment which will be used for the production of airborne transmitters, then the equipment rather than the transmitter is the direct product of the technical data.

CURRENT COMPACT PROSECUTION PRACTICE

On March 18, 1964, the memorandum reproduced below was distributed to the Patent Examining Corps. It is presented here for the information of all applicants and their representatives.

Optimum Examining Procedure—Memorandum #3

Compact prosecution has been official policy since issuance of the Commissioner's Order, "New Examining Procedure," dated July 26, 1962, 781 O.G. 1.

The underlying basic policy of this practice requires that both the applicant and the examiner use thorough forethought and care to do everything essential in every case as early as possible, so that each application may be brought to a proper and equitable conclusion in the minimum total time. Since the practice was adopted, problems during the transition to full enforcement of the new practice have been minimized by flexibility and continuing search for solutions of any problems which emerged. With increasing understanding and use of the practice, increasing benefits are emerging.

This basic policy *now applies to all applications*, and will be cooperatively but rigorously enforced.

The following paragraphs supplement earlier directions by describing particular problem solutions which have yielded increased benefits from compact prosecution procedures.

1. *Loss of opportunity to enter amendments through rigorous enforcement of Rules 112 and 116.*

Experience has shown that adoption of the suggestion of the sixth paragraph of the notice "Practice under Rule 112," 791 O.G. 2, will avoid any loss of rights caused by denial of entry of an amendment under Rule 112.

Nearly all amendments formerly proposed after final rejection (Rule 116), including after appeal (Rules 196 through 198) or after allowance (Rule 312), can *with adequate forethought* be submitted earlier, during the "conference period" discussed below, with no loss of rights.

Trivial informalities, often the subject of Rule 312 amendments, seldom affect significantly the vital formal requirements of any patent, namely (1) that its disclosure be adequately clear, and (2) that any invention present be defined with sufficient clarity to form an adequate basis for an enforceable contract. If important, they should be corrected during the conference period.

For *extreme* cases where an appropriate showing can be made, Rule 116 provides a specific escape route.

If despite the above there are any significant and substantive rights still unprotected, the applicant always has the right to file a continuing application, defining therein such additional rights as he deems necessary. Despite expectations, a continuing check reveals no evidence that compact prosecution has brought any increase in continuation applications, perhaps because proposed changes seldom prove upon investigation to be important enough to justify further expense.

2. *Foreign applications.*

It has been stated that some foreign applicants might be deprived of substantive rights through early closing of prosecution.

Substantive rights for all applicants, domestic or foreign, are always subject to compliance with laws and rules of procedure. Notice currently given by attorneys to foreign clients that protection of their substantive rights requires putting each application in proper condition *prior to* the first action, preferably immediately following filing, has afforded foreign applicants who followed the suggested procedure full protection of their substantive rights.

3. *The Conference Period.*

The "Conference Period," as used here, is the time between the filing of applicant's thorough first response and a concluding action by the examiner. Its intensive use has proved an open sesame to satisfactory and time-saving early conclusion of many cases.

The concept which underlies this practice is that an interview between an applicant or attorney and an examiner, whether in person or by telephone, is not an adversary proceeding. It is a joint and cooperative voyage of discovery, to reveal and define the proper boundary between the applicant's invention and the public right. It calls for maximum cooperation, followed promptly by a supplemental amendment which embodies all areas of agreement, to prepare the case for final action.

To many within and outside of the Office, the saving in time and expense through maximum cooperative use of this "Conference Period" for interviews has been a revealing and pleasant surprise.

4. *Interview practice.*

The availability of personal interviews in the "Conference Period" for attorneys resident or frequently in Washington is obvious. For others more remote, authorization for collect telephone calls has saved much time. If an attorney's "Remarks" request a collect call whenever the examiner considers the case is ready for final disposition other than by allowance, the examiner should call the attorney as requested, regardless of what he plans to do about the case, and inform him of the planned action.

For example, the examiner might simply state that an interview would be useless. More hopefully, he might suggest minor, probably quickly acceptable changes which would result in allowance. If there are major questions or suggestions, the call might state them concisely, and suggest a further telephone or personal interview, at a prearranged later time, giving applicant more time for consideration before discussing the points raised.

For an interview with an examiner who does not have negotiation authority, arrangements should always include an examiner who does have such authority, and who has familiarized himself with the case, so that authoritative agreement may be reached at the time of the interview.

For attorneys remote from Washington who prefer personal interviews, the *grouped interview* practice is effective.

The cases they wish to discuss may include some applications which will not be up for action for many months. If in any such case there is a prearranged interview, *with agreement to file a prompt supplemental amendment putting the case as nearly as may be in condition for concluding action,* prompt filing of the supplemental amendment gives the case special status, and brings it up for immediate special action. Such interviews, promptly followed by supplemental amendments, are richly rewarding time savers for both applicants and examiners.

H. B. WHITMORE,
Superintendent of the Examining Corps.

Mar. 18, 1964.

PATENT EXAMINING CORPS

H. B. WHITMORE, Superintendent

PATENT EXAMINING OPERATIONS AND GROUPS	Oldest Application	
	New	Amended
CHEMICAL EXAMINING OPERATION—P. E. MANGAN, Director.		
GENERAL CHEMISTRY, GROUP 110—R. L. CAMPBELL, Supervisory Examiner Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries.	3-16-62	4-30-62
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Supervisory Examiner Heterocyclic; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids.	6-1-62	7-18-62
PETROLEUM CHEMISTRY, GROUP 130—J. R. LIBERMAN, Supervisory Examiner Hydrocarbons; Halogenated Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices; Organic Chemistry (Part) e.g.: Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhydrides; Acid Halides.	8-10-62	7-23-62
HIGH POLYMER CHEMISTRY, GROUP 140—M. STERMAN, Supervisory Examiner Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins: Reclaiming; Pore-Forming.	3-16-62	5-1-62
COMPOSITIONS AND MOLDING, GROUP 150—L. H. GASTON, Supervisory Examiner Compositions (Part) e.g.: Coating; Molding; Adhesive Compositions; Abrading; Liquid Purification or Separation; Gas Separation; Special Utility; Molding Processes.	6-4-62	4-19-62
COATING AND LAMINATING, GROUP 160—J. REBOLD, Supervisory Examiner Coating: Processes, Apparatus and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Ornamentation; Adhesive Bonding; Special Manufactures.	4-2-62	3-20-62
SPECIALIZED CHEMICAL ARTS AND INDUSTRIES, GROUP 170—W. B. KNIGHT, Supervisory Examiner Bleaching and Dyeing; Fertilizers; Foods; Fermentation; Photography; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Metallurgical Apparatus; Gas, Heating and Illuminating; Cleaning Processes; Liquid Purification; Thermolytic Distillation; Preserving.	4-26-62	4-17-62
CHEMICAL ENGINEERING, GROUP 180—G. D. MITCHELL, Supervisory Examiner Gas, Liquid and Solid Separation; Centrifugal Bowl Separators; Gas and Liquid Contact Apparatus; Distillation; Drying; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	7-10-62	7-6-62
ELECTRICAL EXAMINING OPERATION—N. H. EVANS, Director.		
POWER, GROUP 210—M. L. LEVY, Supervisory Examiner Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art.	7-2-62	6-1-62
SECURITY, GROUP 220—S. BOYD, Supervisory Examiner Ordnance, Firearms and Ammunition; Radar, Sonar, Directional Radio, Torpedoes, Seismic Exploring, Radio-Active Batteries; Nuclear Reactors, Powder Metallurgy, Rocket Fuels; Radio-Active Material.	8-1-62	8-6-62
INFORMATION TRANSMISSION, GROUP 230—S. W. CAPELLI, Supervisory Examiner Communications; Multiplexing Techniques; Facsimile and Related Art.	9-10-62	9-6-62
INFORMATION STORAGE AND RETRIEVAL, GROUP 240—W. W. BURNS, Supervisory Examiner Data Processing, Computation and Conversion; Storage Devices and Related Art.	3-8-62	4-4-62
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—B. G. MILLER, Supervisory Examiner Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks.	6-22-62	6-6-62
RADIATION AND INSTRUMENTS, GROUP 260—F. M. STRADER, Supervisory Examiner Optics; Radiant Energy; Measuring.	6-14-62	6-13-62
ELEMENTS, GROUP 270—E. J. SAX, Supervisory Examiner Conductors; Switches; Miscellaneous.	8-21-62	8-28-62

CONDITION OF PATENT APPLICATIONS AS OF FEBRUARY 29, 1964

Total number of pending applications (excluding Designs)	205,093
Total number of Design applications pending	5,775
Total number of applications awaiting action (excluding Designs)	124,525
Total number of Design applications awaiting action	2,043
Date of oldest new application awaiting action	Mar. 8, 1962
Date of oldest amended application awaiting action	Mar. 20, 1962

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during April 1964, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*

Patents ..... Numbers 2,418,100 to 2,419,982, inclusive

Plant Patents ..... Numbers 733 and 734, inclusive

PATENT EXAMINING OPERATIONS AND GROUPS (Continued)	Oldest Application	
	New	Amended
MECHANICAL ENGINEERING EXAMINING OPERATION—R. A. WAHL, Director.		
MATERIAL OR ARTICLE HANDLING AND DISPENSING, GROUP 310—A. BERLIN, Supervisory Examiner Material or Article Handling and Dispensing; Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Fluid Sprinkling and Fire Extinguishers; Coin Handling and Check Controlled Apparatus; Classifying and Assorting Solids.	1-7-63	1-21-63
METAL AND PLASTICS WORKING, GROUP 320—N. BERGER, Supervisory Examiner Metal Bending, Drawing, Extruding, Forging, Rolling; Sheet Metal Working; Wireworking; Chain, Staple, Horseshoe Making; Metal Founding; Wire Fabrics; Plastic Working Apparatus; Plastic Block, Earthenware Apparatus.	10-30-62	10-15-62
MANUFACTURING AND ASSEMBLING MISCELLANEOUS ARTICLES, GROUP 330—A. M. HORTON, Supervisory Examiner Special Article Making; Assembling, Tool and Implement Making; and Metal Working.	7-12-62	8-9-62
MACHINE TOOLS, MECHANISMS AND ELEMENTS, GROUP 340—F. H. BRONAUGH, Supervisory Examiner Machine Tools for Shaping or Dividing Involving Cutting or Breaking; Machine Elements Including Power Transmission Components, Work and Tool Holders.	10-17-62	7-17-62
HARDWARE, TOOLS AND JOINTS, GROUP 350—T. J. HICKEY, Supervisory Examiner Miscellaneous Hardware; Tools; Joints; Cutlery; Locks; Fasteners; Rod Pipe and Electrical Connectors; Buckles; Buttons, Clasps, Etc.; Pushing and Pulling.	6-4-62	8-1-62
FLUID HANDLING, GROUP 360—E. PAUL, Supervisory Examiner Fluid Handling; Valves; Pipes and Tubular Conduits; Fluent Material Handling; Lubrication; Baths, Closets and Sinks; Joint Packing.	9-26-62	11-29-62
POWER PLANTS, MOTORS AND PUMPS, GROUP 370—C. F. GAREAU, Supervisory Examiner Power Plants, Combustion Power Plants, Expansible Chamber Motors, Rotary Motors and Rotary Expansible Chamber Motors, Expansible Chamber Devices and Internal Combustion Engines, Pumps and Pump Regulation.	9-24-62	10-16-62
HEATING, COOLING AND VENTILATING, GROUP 380—P. L. PATRICK, Supervisory Examiner Furnaces, Liquid Heaters and Vaporizers, Burners, Heat Exchange, Automatic Temperature and Humidity Regulation, Refrigeration, Ventilation, and Illumination.	11-15-62	10-22-62
GENERAL ENGINEERING AND INDUSTRIAL ARTS EXAMINING OPERATION—J. A. MANIAN, Director.		
AGRICULTURE, GROUP 410—A. RUEGG, Supervisory Examiner Animal Husbandry; Butchering; Fishing, Trapping and Vermin Destroying; Plant Husbandry; Tobacco, Earth Working.	12-21-62	1-25-63
CIVIL ENGINEERING, GROUP 420—B. BENDETT, Supervisory Examiner Building Structures; Bridges, Closures; Closure Operators; Safes; Earth Engineering; Drilling; Mining.	10-5-62	10-11-62
PHYSICS, GROUP 430—R. L. EVANS, Supervisory Examiner Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.	9-25-62	8-24-62
TEXTILES AND APPAREL, GROUP 440—R. C. MADER, Supervisory Examiner Textiles; Winding and Reeling; Tying Strands; Apparel; Boot and Shoe Making; Sewing Machines.	11-23-62	11-19-62
TRANSPORTATION, GROUP 450—P. ARNOLD, Supervisory Examiner Railways and Rolling Stock; Brakes; Land Vehicles; Aeronautics; Ships.	12-3-62	12-4-62
FURNITURE AND RECEPTACLES, GROUP 460—W. S. COLE, Supervisory Examiner Furniture; Supports; Cabinet Structures; Receptacles; Baggage.	12-4-62	1-14-63
PRINTING, STATIONERY AND MATERIAL TREATMENT, GROUP 470—L. W. VARNER, Supervisory Examiner Printing; Typewriters; Stationery; Material Treatment.	11-16-62	9-17-62
PERSONAL TREATMENT, ADORNMENT AND AMUSEMENTS, GROUP 480—L. R. PRINCE, Supervisory Examiner Surgery; Dentistry; Artificial Body Members; Toiletry; Amusement Devices; Jewelry; Mechanical Guns; Projectors.	11-28-62	12-4-62
DESIGNS, GROUP 490—J. A. MANIAN, Supervisory Examiner Industrial Arts; Household, Personal and Fine Arts.	9-6-63	9-4-63

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

OWENS-ILLINOIS GLASS COMPANY *v.* CLEVITE CORPORATION

No. 7028. Decided December 12, 1963

[51 CCPA —; 324 F.2d 1010; 139 USPQ 505]

1. TRADEMARK—CONFUSING SIMILARITY—SYMBOLIC MARKS.

On the issue of confusing similarity between appellant's registered mark, "I" within an "O", and appellee's mark, "I" within a hexagon, *Held* that "Here * * * the prospective consumer is faced with two symbols as trademarks, both of which leave a similar and dominant impact on his mind, and both of which are arbitrary in their application as trademarks for the goods of the respective parties"; that "While there are specific differences between the marks in issue which are apparent in a side-by-side comparison, this court does not consider such differences as being determinative of the issue of likelihood of confusion, mistake or deception of purchasers"; that "We think it only reasonable to require that appellee, as the late comer in the field, should have the burden, in selecting a trademark, of maintaining such a clear degree of distinctiveness that confusion, mistake or deception would not be likely"; and that "We find the marks in issue so similar that we think a prospective customer of appellee's goods marked with its symbol would be likely to associate such symbol with appellant's mark and would be likely to consider that appellant was the source of goods so marked."

APPEAL from the Patent Office. Opposition No. 39,073.

REVERSED.

Francis C. Browne, Spencer L. Blaylock, Jr. (*William E. Schuyler, Jr., Andrew B. Beveridge* and *Joseph A. DeGrandi* of counsel) for appellant.

John S. Walker, Jones, Day, Cockley & Reavis, for appellee.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, JR., *Associate Judges*

SMITH, *J.*, delivered the opinion of the court.

The Trademark Trial and Appeal Board dismissed appellant's opposition to the registration of appellee's mark. 134 USPQ 144. The marks in issue are:



Appellee-Applicant [1]



Appellant-Opposer [2]

Appellee is the newcomer and asserts use since September 30, 1958.

The record establishes that appellant's mark, as shown in Registration No. 620,864, in addition to its use as a trademark on the goods named in its registrations, has been used extensively in printed matter of various types, including pamphlets mailed to its shareholders. It has been incorporated in appellant's annual reports for the years 1953 and 1955 and has been employed both as a corporate symbol and as a trademark in connection with promotional material directed to industrial consumers. The mark has been a part of an extensive educational campaign by appellant to familiarize the public and industry with this corporate symbol and mark as an indication of

[1] Ser. No. 63,809 for transistors and diodes.

[2] Reg. No. 620,864, Feb. 7, 1956 for bottles, jars, jugs, decanters, drinking glasses and cruets all made of glass. Reg. No. 621,597, Feb. 21, 1956 for plywood panels. Reg. No. 622,885, Mar. 13, 1956 for glass building blocks. Reg. No. 625,122, Apr. 10, 1956, for caps or closures for containers.

origin of the goods on which it is used. It was stipulated that witnesses would, if called, testify that appellant is conducting research and development work in the electronics field which is expected to lead to further extension of use of its mark to additional items made in whole or in part of glass or plastic, including resistors and electronic tube components.

Appellee did not take testimony or present evidence.

We think the Board was in error in dismissing the opposition, since we are unable to accept (1) the finding of the Board that the goods of the respective parties "are of such nature that they would not be supposed to originate with a single source," and (2) the finding of the Board that "the marks are distinctly different in appearance."

The record does not support the rationale of the Board's decision. It is clear from the stipulation of facts that appellant had applied its mark to a wide variety of goods prior to the date asserted by appellee for use of its mark. As we pointed out in *Hollywood Water Heater Co.* v. *Hollymatic Corp.*, 47 CCPA 782, 784, 274 F.2d 679, 124 USPQ 452:

> Section 2(d) of the Trademark Act of 1946 and the unquestioned weight of modern authority in this field does not require a finding of confusing similarity of goods as the basis for sustaining a trademark opposition but instead requires us to determine whether it is "likely" that the mark when applied to the goods of the applicant will cause confusion or mistake or deceive purchasers.

At the time appellee adopted its mark for transistors and diodes, appellant's registered mark was well known, not only as a mark applied to specific goods but also as its corporate symbol. Appellee, as the late comer, adopted as its mark a symbol which so closely resembles appellant's registered mark that we think it likely that a purchaser would attribute a common source or origin to goods marked with the respective marks. As this court said in *Jerry Finn* v. *Cooper's Incorporated*, 48 CCPA 1132, 1136, 292 F.2d 555, 130 USPQ 269:

> In dealing with such marks, we must consider the visual impact of the marks on the minds of the prospective purchasers who view them. Such symbols are readily recognized by both literate and illiterate prospective purchasers and are as readily associated with particular goods by children as it is by adults. It requires no translation into the words of other languages before it can be recognized as a symbol indicating source or origin of the goods with which it is used. Symbolic marks speak a universal language; they lend themselves to effective display in advertising and sales promotional activity and can thus become the dominant part of the mark on labels, packages, and point of purchase displays. They can catch the eye of the customer and create a lasting general impression. * * *

[1] Here, as in the *Jerry Finn* case, supra, the prospective consumer is faced with two symbols as trademarks, both of which leave a similar and dominant impact on his mind, and both of which are arbitrary in their application as trademarks for the goods of the respective parties.

While there are specific differences between the marks in issue which are apparent in a side-by-side comparison, this court does not consider such differences as being determinative of the issue of likelihood of confusion, mistake or deception of purchasers. See *Rex Shoe Co., Inc.* v. *The Juvenile Shoe Corp.*, 47 CCPA 748, 273 F.2d 179, 124 USPQ 173; *Jerry Finn* v. *Cooper's Incorporated*, supra.

We think it only reasonable to require that appellee, as the late comer in the field, should have the burden, in selecting a trademark,

of maintaining such a clear degree of distinctiveness that confusion, mistake or deception would not be likely.

We find the marks in issue so similar that we think a prospective customer of appellee's goods marked with its symbol would be likely to associate such symbol with appellant's mark and would be likely to consider that appellant was the source of goods so marked.

We therefore reverse the decision of the Trademark Trial and Appeal Board.

REVERSED.

ALMOND, *J.* (dissenting):

It is with deference that I find myself in dissent from the views expressed by the majority opinion.

The respective marks are obviously different. I have difficulty construing the border around the "I" in appellee's mark as an "O". It seems to be what it is alleged to be—a decorative border. Appellee has explained that the "I" is derived from "Intermetall G.m.b.H.," a German affiliate, which would negative any assumption of an intent to palm off appellee's goods as those of appellant.

The respective goods are different. Appellant's products are primarily glass, but include plywood panels. The closest similarity in goods is between appellant's glass envelopes for vacuum tubes and the semi-conductor transistors and diodes of appellee. There is no evidence in the stipulated testimony to show that the date of first use by appellant on vacuum tubes precedes appellee's date. But even if appellant is the first user, semi-conductors are so vastly different from tubes requiring glass envelopes that a purchaser would not be likely to be confused or mistaken as to origin.

The purchasers are discriminating in this field. Those who purchase glass envelopes from appellant would be manufacturers of vacuum tubes. Purchasers from these manufacturers would be discriminating enough to know the difference between vacuum tubes and transistors.

The majority appears to rely on the testimony of appellant to the effect that its research and development effort is expected to extend the use of glass and plastic in electronic fields. While appellant may reasonably extend its mark into related fields, there is nothing to indicate even an interest in semi-conductor components. The record does not show that glass envelopes and plastic bases are used in semi-conductor devices, a protective vacuum apparently not being required. Moreover, the record fails to show that glass and plastic, the materials on which research and development are directed, are used in transistors or diodes of the type used by appellee.

I would affirm.

U.S. Court of Customs and Patent Appeals

IN RE JOHN FERGUSON HARRIS, JR., AND DONALD IRWIN MCCANE

No. 7017. Decided November 14, 1963

[51 CCPA —; 324 F.2d 316; 139 USPQ 292]

1. PATENTABILITY—POLYMERS OF PERFLUOROVINYL ETHERS—ORDINARY SKILL OF THE ART.

"The products described in the specification as monomers are claimed in such a manner as to include the fluorovinyl ethers prepared by the novel method of the other part of the specification, which admittedly includes

appellants' monomers. Even if there is a division, it appears to us that the use of the fluorovinyl ethers of one part of the specification in the same manner as that disclosed for the fluorovinyl ethers in the other part of the specification would take no more than ordinary skill in the art. The division of the Croix et al. patent that is urged by appellants is artificial, and we prefer to consider the specification as a unitary whole, as it appears to have been intended to be read. On reading the patent as a whole, we think it fairly suggested that perfluorovinyl ethers could be polymerized."

2. SAME—SAME—NON-OBVIOUS SUBJECT MATTER—EVIDENCE NEGATIVE IN NATURE INSUFFICIENT.

"What might appear to be obvious to one skilled in the art may well be shown to be non-obvious subject matter by a clear showing of obstacles which the art had theretofore found insurmountable. Such is not the case here, however. Apellants seek to illustrate the difficulties which the prior art experienced in polymerizing other related compounds as evidence of the fact that the art would expect difficulty in polymerizing the monomers in issue here. But the evidence introduced is negative in nature and does not suggest a relationship to the monomers polymerized by appellants."

3. SAME—SAME—SAME—SAME.

"The Adams and Bovey article * * * states that the authors were not able to produce homopolymers from perfluoroolefins having three or more carbon atoms. We are not persuaded by the Adams and Bovey article that one skilled in the art would not find it obvious to polymerize alkyl perfluorovinyl ethers. The compounds in the article are related, but clearly different. One might well expect different reactions with an olefin and a vinyl ether. The fact the olefin does not polymerize is not conclusive that the vinyl ether will not. For a negative disclosure like that of Adams and Bovey to show unobviousness of a reaction, a much clearer correlation between the materials used, the reaction conditions, the type of reaction, etc. should be presented. Failure to polymerize could result for a number of reasons, many of which would have no relationship to the number of fluorine atoms in the vinyl group. Different reaction conditions might result in a failure to produce a particular product."

4. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—MATTER BEFORE COURT—RULE 14—PARTIES CANNOT DISPENSE WITH RULE BY STIPULATION.

With respect to reproductions, given to the court during oral argument, of a published article not in the printed record, *Held* that "while this procedure is improper under our rules (see Rule 14), the Adams and Bovey article was considered by the Examiner and the Board and was submitted here through the efforts of counsel for both parties who agreed that the references are properly before the court"; and that "Rules of court may not be dispensed with by stipulation of parties, but the result is the same whether or not the article is considered, in the view we take of the case."

5. PATENTABILITY—POLYMERS OF PERFLUOROVINYL ETHERS—NON-OBVIOUS SUBJECT MATTER—EVIDENCE INCONCLUSIVE.

"The Adams and Bovey article dos not purport to be an effort to produce homopolymers of alkyl perfluorovinyl ethers. There is no reason to assume that Adams and Bovey would not be successful had they attempted to polymerize alkyl perfluorovinyl ethers. * * * the fact that higher perfluoroolefins had not been homopolymerized by Adams and Bovey does not suggest that perfluoroethylene derivatives, as shown in Croix et al., could not be homopolymerized. The failure of Adams and Bovey is inconclusive on the issue of obviousness here presented."

6. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—MATTER BEFORE COURT—EVIDENCE NOT BEFORE BOARD OF APPEALS NOT CONSIDERED.

With respect to patent to Keel et al., "we will not consider this reference because it was not considered by the Board of Appeals. The new arguments based on Keel et al., were not before the tribunal whose decision is appealed and hence will not be considered here."

7. SAME—SAME—SAME.

"By the same token, the Miller affidavit will not be considered because it was presented with the request for reconsideration after the decision of the Board of Appeals. We do not have the benefit of the views of the Examiner or the Board on the affidavit."

8. PATENTABILITY—POLYMERS OF FULLY FLUORINATED VINYL ETHERS—UNOBVIOUSNESS.

"The contention that issuance of the Dixon patent is evidence of the unobviousness of polymerizing fully fluorinated vinyl ethers where only partially fluorinated vinyl ethers are disclosed as polymerizable is not persuasive. We see no connection between the ability to form an ether from an alcoholate and the ability to polymerize a perfluorinated compound. Moreover, the court does not, as a general rule, consider allowed claims in other patents which are not the basis of the rejection in question."

9. SAME—PARTICULAR SUBJECT MATTER—HOMOPOLYMER OF AN ALKYL PERFLUOROVINYL ETHER.

The decision of the Board of Appeals refusing certain claims to a homopolymer of an alkyl perfluorovinyl ether, as unpatentable over the prior art, is affirmed.

APPEAL from the Patent Office. Serial No. 618,435.

AFFIRMED.

Bernd W. Sandt, for appellants.

Clarence W. Moore (*Raymond E. Martin* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, JR., *Associate Judges*

ALMOND, JR., *J.*, delivered the opinion of the court.

This appeal is from the decision of the Board of Appeals which affirmed the rejection by the Examiner of claims 2, 4, 7 and 8 of appellants' patent application.[1] Claims 3, 5 and 6, the only other claims remaining in the application, were allowed by the Examiner.

The invention to which the rejected claims are drawn relates to a homopolymer of an alkyl perfluorovinyl ether, which was "developed in the search for plastics which combine the outstanding physical properties of polytetrafluoroethylene with high enough melt flow to allow their fabrication by melt extrusion or injection molding."

The chemical formula and physical properties of importance are set forth in claim 2, which reads:

2. A normally solid homopolymer of an alkyl perfluorovinyl ether having the general formula $CF_2{=}CF{-}OR$ wherein R is a member of the class consisting of alkyl radicals and fluorinated alkyl radicals having from 1 to 5 carbon atoms, said homopolymer having an inherent viscosity, as measured in dimethyl formamide at 35° C., of at least 0.11.

As noted in appellants' brief, "The polymeric materials claimed by appellants are formed through addition polymerization of the trifluorovinyl group, $CF_2{=}CF{-}$, to give polymers which contain recurring structural units having the formula

$$-CF_2-\underset{\displaystyle OR}{CF}-$$

The specification indicates that the polymer is formed by initiating the polymerization of alkyl perfluorovinyl ethers with a free radical catalyst under conditions varying over a wide range. The polymerization may be carried out in bulk or in the presence of an inert diluent such as water or a perfluorinated solvent. Among the suggested uses for the polymers are tubing, film, fibers and wire coating.

The references included in the record are:

Keel et al., 2,784,175, March 5, 1957.
Croix et al., 2,799,712, July 16, 1957.
Dixon, 2,917,548, December 15, 1959.
McCane, 2,982,786, May 2, 1961.

[1] Serial No. 618,435, filed October 26, 1956, for "Polymers of Perfluorovinyl Ethers."

The Examiner advanced two separate rejections of the claims. The first is based on the Croix et al. patent, and the second is based on the claims of the Dixon patent. The other references of record were incorporated by appellant and were not used as grounds for rejection.

The Croix et al. patent relates to the preparation of fluorinated vinyl ethers by the reaction of an alkali metal alcoholate with a polyfluoroethylene. The alkali metal alcoholates disclosed are of the formula ROM in which R is a radical selected from the group consisting of alkyl, fluoroalkyl and phenyl, and M is an alkali metal. The polyfluoroethylene used "may be represented by the structural formula: $CF_2{=}CXX'$, where X and X′ are selected from the group consisting of H, F and Cl." The claims of Croix et al. also contain the quoted formula, which indicates that it is contemplated that, as one possibility, only fluorine would be attached to the carbon atoms, with no hydrogen or chlorine. However, the specific examples in Croix et al. all relate to vinyl ethers having at least one chlorine or hydrogen atom attached to the carbons at the double bond.

In describing one embodiment of the vinyl ethers where a fluoroalkyl radical is attached at the ether linkage, the following structural formula is given:

$$CF_3CH_2OCF{=}CXX'$$

where X is selected from the group consisting of H, F, and Cl; and X′ is selected from the group consisting of H and Cl.

From this it will be seen that X can be fluorine but X′ cannot. Therefore, perfluorovinyl ethers are precluded from this embodiment. Among the uses of the fluoroalkyl compounds of this embodiment are as "monomeric materials which can be used to form highly fluorinated polymers that are thermally stable, resistant to solvents, and useful as adhesives, coatings, etc."

The Dixon patent is assigned to appellants' assignee. The claims are drawn to a process for preparing trifluorovinyl ethers and to the resulting compounds. Among the compounds produced are alkyl trifluorovinyl ethers, which are the monomers appellants employ as starting materials.

The Examiner and the Board each made reference to a Berry patent which was not included in the record on appeal. The Solicitor states, without challenge by appellants, that Berry also shows that trifluorinated vinyl compounds may be polymerized.

In addition to the references relied on by the Board, the patents to Keel and McCane are included in the record on appeal, although they were not before the Board until the Petition for Reconsideration.

The Keel patent discloses 1-fluoro-2,2-dichlorovinyl methyl ether. Appellants placed this reference in the record on appeal apparently because the patent states: "Considerable difficulty occurred in attempts to polymerize this unsaturated ether using standard polymerization techniques."

Appellants placed the McCane patent in the record here to show "that useful products can be formed from the perfluorovinyl ethers disclosed and claimed by Dixon which are outside the scope of the polymeric materials claimed by appellants. These dimers are formed, not through addition polymerization, but through a condensation which does not require the action of a catalyst." This patent discloses fluorinated cyclic compounds having the formula $C_4F_6(OR)_2$ where R is an alkyl group or a fluoroalkyl group.

Appellants also rely heavily in their brief on an article by Adams and Bovey in the Journal of Polymer Science. This article states that the authors were unsuccessful in homopolymerizing perfluorinated monoolefins having 3 or more carbon atoms.

The Board of Appeals affirmed the rejection based on Croix et al., stating:

> • • • The polymerizable monomers of Croix et al. thus encompass those employed by appellants to obtain their polymers and the fact that appellants' specific monomers may not be named *per se* is of no moment. *In re Rosicky*, 47 CCPA 859, 1960 C.D. 197, 755 O.G. 929, 276 F.2d 656, 125 USPQ 341.

The Board refused to draw the inference that since the perfluorovinyl ethers in question here had not been polymerized in Croix et al., although other monomers were shown to polymerize in the patent, it is unlikely that the patentees had been able to polymerize them. Rather, the Board found no distinction disclosed in Croix et al. in ability to polymerize between any of the "highly fluorinated" monomers. In addition, the Board stated:

> • • • no reason appears why the identical monomers differing only in the halogen atom would not each be polymerizable due to the presence of the vinyl group. Appellants have cited an article of Adams et al. allegedly supporting their position, but for the reasons stated by the Examiner, with which we agree, appellants' views are not aided thereby. In fact, the Berry patent in column 16 expresses the concept of monomers of the type herein issue and since the monomers belong to a class known to polymerize, the claimed polymers are considered obvious from the monomers. *Ex parte Ladd et al.*, 112 USPQ 337. • • • The relevant factual situation in the decision *In re Michalek*, 34 CCPA 1124, 1947 C.D. 458, 604 O.G. 223, 162 F.2d 229, 74 USPQ 107, as noted by the Examiner, however, appears apposite here.

The reasons advanced by the Examiner as to why the Adams and Bovey article "does not aid applicants" were:

> (1) The citation deals with perfluorohydrocarbons and the claims are concerned with ethers.
>
> (2) Applicants cannot deny that trifluorotrichloroethylene [sic] and tetrafluoroethylene, both of which have the $CF_2{=}CF-$ structure have been homopolymerized.
>
> (3) The citation states on page 490 that the perfluoroolefin radical will react with itself showing the homopolymerization ability.
>
> (4) The citation clearly has a concept of homopolymerization ability.
>
> (5) The date of the citation is about four years before the filing date of this case. Applicants have failed to show that the art since then does not contain disclosures of homopolymerization of perfluoroolefins.
>
> (6) The reference Croix et al. does not require or mention co-polymerization.
>
> (7) Claim 8 on appeal is not limited to homopolymers.

The argument advanced by appellants is that "Croix et al. is strictly limited to the *preparation* of the vinyl ethers and has absolutely no bearing on the chemical reactivity of the resulting vinyl ethers or their ability to form polymeric products." The patentees in Croix et al., argue appellants, distinguished between perfluorovinyl ethers (fully fluorinated at the double bond), which were *prepared* within the teaching of the patent, and *partially* fluorinated vinyl ethers which were *polymerized* in the patent. Appellants state "this reference [Croix et al.] can actually be divided into two parts, one relating to the preparation of the vinyl ethers, the other relating to the vinyl ethers as novel products." Moreover, appellants contend, the distinction between fluorovinyl ethers which are fully fluorinated at the double bond and those which are only partially fluorinated at the double bond has been recognized by the granting of both the Dixon and the Croix et al. patents which claim the distinct compounds. If one kind of fluorinated vinyl ether is not obvious in view of the other, then the polymers of each kind should also be patentably distinct, according to appellants. They state that because of "the well established principle that catalytic activity, which is required to form appellants' polymeric materials, is not predictable," it is not predictable that one type of fluorovinyl ether is polymerizable from the fact that another type may be polymerized.

We are of the opinion that the claims are properly rejected on Croix et al. There is no question that the patent states that the fluorovinyl ethers derived from the reaction of trifluoroethanol and polyfluoroethylenes which are partially fluorinated at the double bond are monomers which form "highly fluorinated polymers." One skilled in the art would be likely to assume that the substitution of another fluorine atom for hydrogen or chlorine at the double bond would not impair polymerizability. This is particularly true in view of the fact that throughout the specification and claims of Croix et al. the symbols "$-CF{=}CXX'$" are used in describing the vinyl portion of the compounds. In all but one of these structural illustrations, X and X′ are said to be "selected from the group consisting of H, F and Cl." In the only paragraph where this description is not used, the symbol "X′" is said to be "selected from the group consisting of H and Cl." The only statement of utility in the patent, including the use in forming polymers, is in this same paragraph. One looking for a use for the compounds where X′ in the formula is fluorine would find nothing in the patent. Were it true that the patent is intentionally divided into two parts, as alleged by appellants, it is likely that some statement of utility for the *other* fluorovinyl ethers would have been included.

We find no clear division in the patent between polymerizable fluorovinyl ethers in one part of the specification and a method of preparing other fluorovinyl ethers in another part of the specification. [1] The products described in the specification as monomers are claimed in such a manner as to include the fluorovinyl ethers prepared by the novel method of the other part of the specification, which admittedly includes appellants' monomers. Even if there is a division, it appears to us that the use of the fluorovinyl ethers of one part of the specification in the same manner as that disclosed for the fluorovinyl ethers in the other part of the specification would take no more than ordinary skill in the art. The division of the Croix et al. patent that is urged by appellants is artificial, and we prefer to consider the specification as a unitary whole, as it appears to have been intended to be read. On reading the patent as a whole, we think it fairly suggested that perfluorovinyl ethers could be polymerized.

[2] What might appear to be obvious to one skilled in the art may well be shown to be non-obvious subject matter by a clear showing of obstacles which the art had theretofore found insurmountable. Such is not the case here, however. Appellants seek to illustrate the difficulties which the prior art experienced in polymerizing other related compounds as evidence of the fact that the art would expect difficulty in polymerizing the monomers in issue here. But the evidence introduced is negative in nature and does not suggest a relationship to the monomers polymerized by appellants.

[3] The Adams and Bovey article is not in the printed record, but reproductions were prepared by appellant and given to the court by

the Solicitor at oral argument.[2] The article states that the authors were not able to produce homopolymers from perfluoroolefins having three or more carbon atoms. We are not persuaded by the Adams and Bovey article that one skilled in the art would not find it obvious to polymerize alkyl perfluorovinyl ethers. The compounds in the article are related, but clearly different. One might well expect different reactions with an olefin and a vinyl ether. The fact the olefin does not polymerize is not conclusive that the vinyl ether will not. For a negative disclosure like that of Adams and Bovey to show unobviousness of a reaction, a much clearer correlation between the materials used, the reaction conditions, the type of reaction, etc. should be presented. Failure to polymerize could result for a number of reasons, many of which would have no relationship to the number of fluorine atoms in the vinyl group. Different reaction conditions might result in a failure to produce a particular product. See *In re Jacobs et al.*, 50 CCPA 1316, 318 F.2d 743, 137 USPQ 888.

[5] The Adams and Bovey article does not purport to be an effort to produce homopolymers of alkyl perfluorovinyl ethers. There is no reason to assume that Adams and Bovey would not be successful had they attempted to polymerize alkyl perfluorovinyl ethers. There is no indication that the reason Adams and Bovey failed to polymerize somewhat similar compounds was because of a problem here solved by appellants. Indeed, we have no showing here of any problem or any solution, merely that polymerization occurred. We recognize that an applicant need not theoretically explain his invention, but, on the other hand, we find no compelling reason to find appellants succeeded in solving a problem which caused the failure of Adams and Bovey.

Since perfluoroethylene had been homopolymerized, according to the unchallenged statement of the Examiner, "the fact that higher perfluoroolefins had not been homopolymerized by Adams and Bovey does not suggest that perfluoroethylene derivatives, as shown in Croix et al., could not be homopolymerized. The failure of Adams and Bovey is inconclusive on the issue of obviousness here presented."

We believe that the Examiner's reasoning is sound, as quoted above, and that the Adams and Bovey article fails to rebut the showing of obviousness in view of the Croix et al. patent.

[6] While the remarks concerning the merits of the Adams and Bovey article might be applied to the patent to Keel et al., we will not consider this reference because it was not considered by the Board of Appeals. The new arguments based on Keel et al. were not before the tribunal whose decision is appealed and hence will not be considered here. See *In re Phillips*, 50 CCPA 1223, 315 F.2d 943, 137 USPQ 369.

[7] By the same token, the Miller affidavit will not be considered because it was presented with the request for reconsideration after the decision of the Board of Appeals. We do not have the benefit of the views of the Examiner or the Board on the affidavit.

The contention that issuance of the Dixon patent is evidence of the unobviousness of polymerizing fully fluorinated vinyl ethers where only partially fluorinated vinyl ethers are disclosed as polymerizable

[4] [2] While this procedure is improper under our rules (see Rule 14), the Adams and Bovey article was considered by the Examiner and the Board and was submitted here through the efforts of counsel for both parties who agreed that the references are properly before the court. Rules of court may not be dispensed with by stipulation of parties, but the result is the same whether or not the article is considered, in the view we take of the case.

is not persuasive. We see no connection between the ability to form an ether from an alcoholate and the ability to polymerize a perfluorinated compound. Moreover, the court does not, as a general rule, consider allowed claims in other patents which are not the basis of the rejection in question. *In re Atwood*, 46 CCPA 901, 267 F.2d 954, 122 USPQ 378.

The fact that a catalyst is used to form the high molecular weight polymers claimed does not make the formation of polymers from the Croix et al. products unobvious. No catalysts are claimed here, so "the well-established doctrine that catalytic activity is not predictable" has no application here. No method of polymerizing is claimed. There is no allegation that anything other than conventional polymerization with conventional catalysts under conventional conditions takes place.

Appellants cite four Board of Appeals decisions in support of their argument that it would be unobvious to polymerize perfluorovinyl ethers. They are: *Ex parte Blumenthal*, 114 USPQ 512; *Ex parte Teter and Bauer*, 105 USPQ 191; *Ex parte Boyd and Walter*, 105 USPQ 451; *Ex parte Williams and Neal*, 39 USPQ 125. Each one of those cases involved "closely related" compounds, including homologs or analogs. In the instant case, there is no issue of homology or structural similarity because the precise compounds appellants employ as monomers are admittedly disclosed in Croix et al. We agree with the Board of Appeals that polymerization of the monomers disclosed in Croix et al. is obvious to one skilled in the art and that our decision in *In re Michalek*, supra, is more in point. That case related to the patentability of a thermoplastic resin formed from nuclear substituted dichlorostyrene. Appellants argue a factual distinction between this case and Michalek because there the prior art patent stated: "It sometimes is desirable to have present in the reacting mixture an agent which will inhibit polymerization of the vinyl-aromatic process and that such agent may be used in practicing the invention." We do not find mention of a polymerization inhibitor in Michalek distinguishing, since there is a clear suggestion of polymerizability in the Croix et al. patent here from the fact that other polyfluorovinyl ethers polymerize.

Having found the claims to be unpatentable over Croix et al., it is unnecessary to consider the other rejection based on the claims of the Dixon patent. *In re Fridolph*, 50 CCPA 745, 309 F.2d 509, 135 USPQ 319.

[7] For the reasons stated, the decision appealed from is affirmed.

AFFIRMED.

SMITH, *J.*, concurs in result.

REISSUES

APRIL 21, 1964

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

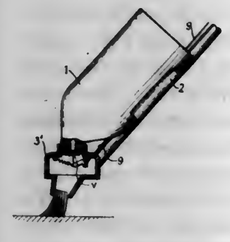
25,556
FLOOR CLEANING AND POLISHING DEVICE

Egon Nohl and Gertrud Nohl, Wiener Neustadt, Austria, assignors to Friedrich Hobiger, Vienna, Austria, and Leopold Hobiger, Vienna, Austria

Original No. 3,081,481, dated Mar. 19, 1963, Ser. No. 821,157, June 18, 1959. Application for reissue Oct. 8, 1963, Ser. No. 314,825

Claims priority, application Austria June 25, 1958

5 Claims. (Cl. 15—546)



5. A cleaning and polishing device comprising, in combination,

an elongated handle shaft with

a cleaning and polishing element attached to one end of said device,

a container of resilient material and having a cross-section substantially symmetrical relative to its longitudinal axis,

said container having an external groove disposed substantially axially for at least a part of its axial length for wedging attachment of said container to said handle shaft and resiliently and frictionally encircling said handle shaft over an arc of at least 180° of its circumference, and

said groove extending axially along the periphery of said container and within an imaginary body enveloping closely said container, to be disposed within said substantially symmetrical cross-section of said container.

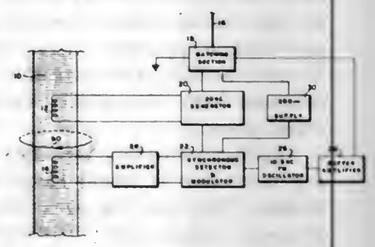
25,557
ELECTROMAGNETIC WELL LOGGING SYSTEM INCLUDING PHASE SENSITIVE SYNCHRONOUS DETECTOR AND MODULATOR MEANS

Richard H. Huddleston, Jr., Houston, Tex., assignor to Halliburton Company, a corporation of Delaware

Original No. 2,928,038, dated Mar. 8, 1960, Ser. No. 614,194, Oct. 5, 1956. Application for reissue Oct. 30, 1961, Ser. No. 150,854

14 Claims. (Cl. 324—1)

12. An electromagnetic logging system having an exciting coil excited at a predetermined frequency and constant current, a separately spaced receiver coil adapted to have induced therein a composite voltage containing both directly induced and secondarily induced voltages, and a phase sensitive synchronous detector and modulator adapted to detect a particular phase component of said induced voltage and transform such phase component to a proportional voltage of a lower predetermined frequency, said phase sensitive synchronous detector and modulator including signal detection means to provide a direct current potential responsive to the amplitude variation of said phase component, and a low frequency



switching means to convert said direct current potential to said low frequency voltage.

25,558
PYROPHORIC ALLOYS WITHOUT IRON

Walter Bungardt, Essen-Bredeney, Germany, assignor to Ronson Metals Corporation, Newark, NJ.

No Drawing. Original No. 2,978,322, dated Apr. 4, 1961, Ser. No. 712,307, Jan. 31, 1958. Application for reissue Mar. 20, 1963, Ser. No. 267,884

Claims priority, application Germany Feb. 8, 1957

2 Claims. (Cl. 75—152)

1. A pyrophoric mass suitable for extrusion to produce finished flints in rod formation; consisting essentially of [cerium (misch metal)] *cerium mischmetal* with zinc ranging from 5% to 25% by weight, and having an addition of at least one of the elements selected from the group consisting of copper, cadmium, antimony, bismuth and manganese, said addition ranging from [2% to 6%] *about 0.5% to about 8%* by weight, and a further addition of magnesium amounting to about .5% to 5% by weight [to adjust the extrusion pressure to at least 4,100 kg./cm.^{2}], the balance being cerium [(misch metal)] *mischmetal.*

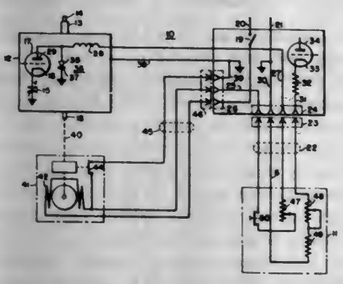
25,559
REMOTE CONTROL APPARATUS

Lawrence R. Travis, Melrose Park, Pa., and William R. Petrick, Kenilworth, N.J., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Original No. 2,905,014, dated Sept. 22, 1959, Ser. No. 591,728, June 15, 1956. Application for reissue Mar. 27, 1961, Ser. No. 98,727

14 Claims. (Cl. 74—472)

4. In an arrangement for remote control of the tuning control shaft of a television receiver, said control shaft adapted to be actuated to a plurality of predetermined positions, the combination of a first rotary shaft coupled *to said control shafts, a wheel rotatable with said first* [to said control shaft, a member rotatable with said first] shaft having a plurality of radially spaced tabs extending from one side thereof and corresponding in number to the number of said predetermined positions, a second rotary shaft carrying a gearing, said second shaft also carrying cam means for successively contacting said tabs to move said first shaft and said control shaft to a particular one of said predetermined positions, said gearing and said *cam* [contacting] means being rotatable with said second shaft, an electric motor having a motor shaft axially movable to a predetermined limit of travel upon operation of said motor, *engaging* means carried by said motor shaft for engaging said gearing when said motor shaft reaches said predetermined limit of travel, a circuit for said motor having means located at a point remote from said receiver for initiating the operation of said motor, a holding circuit for said motor, cam follower switch means in contact with said [contacting] *cam* means for closing said hold-



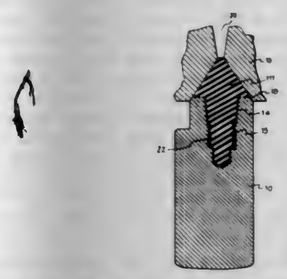
ing circuit in response to a particular actuation of said engaging means[, said last-mentioned means also including means for] *and subsequently* making said holding circuit ineffective in response to a further actuation of said *cam* [contacting] means [and] for locating said control shaft at said one predetermined position after said holding circuit is made ineffective, and means for automatically disengaging the *said engaging* means [carried by said motor shaft] from the gearing on said second shaft after said holding circuit is made ineffective.

25,560
METHOD OF MAKING A RIGID RESILIENT TIPPED NEEDLE VALVE ELEMENT

Robert T. Gifford, 322 N. High St., Yellow Springs, Ohio

Original No. 3,090,108, dated May 21, 1963, Ser. No. 245,718, Dec. 19, 1962, which is a division of Ser. No. 76,359, Dec. 16, 1960. Application for reissue May 23, 1963, Ser. No. 284,287

8 Claims. (Cl. 29—156.7)



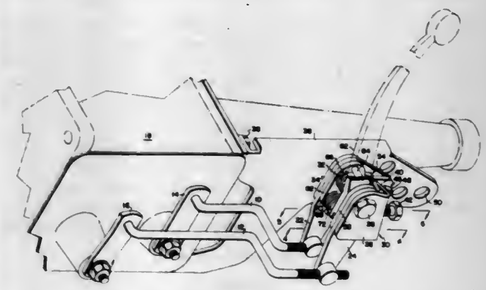
7. A method of making a composite substantially conical valve element having a rigid body and an attached undistorted resilient tip, the body and tip configuration being such as to provide for minimal turbulence and flow restriction in use, which method comprises the steps of providing a rigid body, placing said body in contact with the inner surface of a mold for said resilient tip, providing means for attaching said tip to said body, causing the mold to engage said body so as to swage the exterior periphery of the body into what will be an uninterrupted continuation of the configuration of the tip to be formed, and then injecting resilient material into said mold to form said tip, whereby the body constitutes an uninterrupted continuation of the configuration of the tip and whereby no substantial amount of the injected resilient material can escape between the mold and body to form any material amount of flash which would require removal.

25,561
GEAR SHIFTING MECHANISM

George H. Hurst, Jr., Ambler, and William G. Campbell, Chalfont, Pa. (both of 341 W. Glenside Ave., Glenside, Pa.)

Original No. 3,052,135, dated Sept. 4, 1962, Ser. No. 98,051, Mar. 24, 1961. Application for reissue Apr. 3, 1963, Ser. No. 271,553

7 Claims. (Cl. 74—473)



1. A gear shifting mechanism including a first actuating lever movable to a first position to shift to low gear and to a second position to shift to reverse gear, a second actuating lever movable to a third position to shift to second gear and to a fourth position to shift to high gear, [and] *an* operating handle having a neutral position, an engaging pin freely movable transversely of said handle for selective engagement with said first and said second actuating levers for selectively operatively connecting said handle with said first and second levers, means operable upon movement of said handle in first, and reverse, gear shifting direction for engaging said pin with said first actuating lever and means for automatically moving said pin toward said second actuating lever as soon as said handle is released and independently of the movement of said handle toward said neutral position whereby said pin is in a position to engage said second actuating lever during rapid movement of said handle from low to second gear shifting direction.

PLANT PATENTS

GRANTED APRIL 21, 1964

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing

2,391
MANGO
David Sturrock, 1020 Camellia Road, West Palm Beach, Fla.
Filed Aug. 20, 1962, Ser. No. 218,190
1 Claim. (Cl. Plt.—33)

The variety of mango as described and shown herein.

2,392
PECAN TREE
Frederic W. Anderson, Merced, Calif., assignor to Stribling's Nurseries, Inc., Merced, Calif., a corporation of California
Filed Mar. 22, 1963, Ser. No. 267,373
1 Claim. (Cl. Plt.—31)

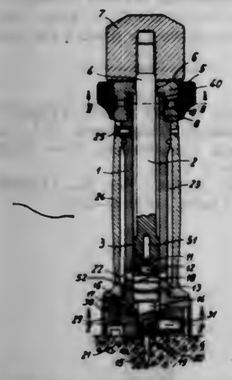
A new and distinct variety of pecan tree, substantially as illustrated and described, characterized by its ability to grow successfully and to produce commercial crops of nuts under soil and climatic conditions comparable to those of the Central Valley of California; and further characterized, in comparison to the Caloro, by a regular bearing tree which is more productive, by excellent-flavored nuts which are better filled, by a harvest which is approximately three weeks earlier than said Caloro, and by leaves remaining largely on the trees until after completion of harvest; and still further characterized by a harvest which is approximately three weeks earlier than the Stuart and Success; and additionally characterized by early production, of commercially acceptable crops, beginning in the third year and becoming progressively greater year by year through at least the eighth year.

PATENTS

GRANTED APRIL 21, 1964

GENERAL AND MECHANICAL

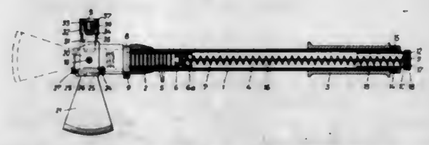
3,129,429
STUD DRIVING TOOL
Martin Hilti, Vaduz, Liechtenstein, assignor to Anstalt für Montage-Technik, Vaduz, principality of Liechtenstein
Filed Feb. 26, 1959, Ser. No. 795,819
Claims priority, application Germany Feb. 27, 1958
15 Claims. (Cl. 1—44.5)



1. In an explosively-actuated tool of the character described for driving studs of various lengths into a work piece consisting of hard material, first means having a work engaging surface and a stud receiving bore with an open mouth at the lower end thereof, second means extending up from and fixed to said first means and having an elongated cylindrical piston bore of uniform cross-section in axial alignment with said stud bore, a piston member axially slidable within said piston bore, said piston member having a portion projecting out of said piston bore adapted to receive a manually struck blow on an upper end thereof, a hammer member in said piston bore below said piston member, said hammer member being slidable in said piston bore for movement with said piston member, said hammer member having a driving end to contact the rear end of a stud in said stud bore with its tip in position to contact the work; one of said slidable members having a recess to receive a cartridge with its base adjacent the other member, said other member having firing means to impact against said cartridge base to fire the cartridge upon said piston member being struck while a stud is in said stud chamber with its tip against the work, thus explosively forcing said hammer member toward said lower end to drive said stud into the work; said piston bore providing guide means to accommodate axial movement of both said members and said cartridge as a unit into firing position and to guide said hammer member to drive the stud into the work following the firing of said cartridge.

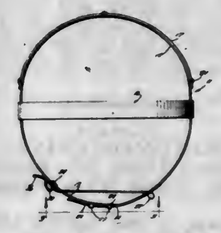
3,129,430
MARKING AND NUMBERING TIMBER
Kajetan Latschbacher, 20 Zirerstrasse, Steyr, Upper Austria, Austria
Filed July 29, 1960, Ser. No. 46,195
Claims priority, application Austria Nov. 14, 1959
7 Claims. (Cl. 1—46)

1. In a tool for applying plates to articles, a forked head, a tubular helve having a longitudinal first axis and fixed to said forked head, said helve having one end opening between the tines of said forked head, a tubular member having a longitudinal second axis and journaled between the tines of said forked head for pivoting about a third axis normal to said first and second axes, from a first position wherein said first and second axes are aligned, to a second position wherein said first and second axes are mutually normal, a striker reciprocable in said member along said second axis and adapted to receive a plate from said helve when said member is in first position, spring means in said member urging said striker into



extended position to emplace a plate held therein, manually operable means connected with said member to pivot the same between said first and second positions, means responsive to operation of said manually operable means to first retract said striker within said member to stress said spring means and subsequently to release said striker as said member moves into second position, and latch means normally preventing egress of plates from said open end of said helve, said latch means being released only by and in response to movement of said member to first position to effect release of a plate into said striker.

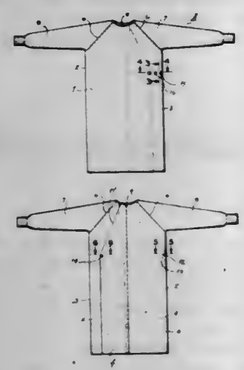
3,129,431
WELDER'S HELMET
Arthur L. Haney, Powell, Wyo. (Box 124, Bridger, Mont.)
Filed Oct. 30, 1962, Ser. No. 234,049
4 Claims. (Cl. 2—8)



1. A welder's helmet comprising a head band shaped to surround a person's head, said head band having overlapping end portions, said head band being of resilient strip material and being formed at one end portion with a tongue and being provided at its other end portion with a plurality of spaced loops adapted to slidably receive said tongue, a vertical mask member secured to the forward portion of said head band, a cross strap connecting the sides of said head band, an elastic strap secured to said one end portion laterally adjacent said tongue and extending across the rear portion of the head band inside the head band, the other end portion of the head band being formed with a vertical slot spaced laterally from said loops through which said strap passes, and clip means mounted

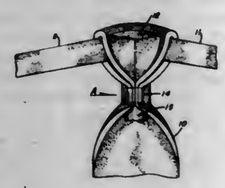
externally on said other end portion and frictionally engaging said strap to retain the strap in an adjusted position, holding said tongue slidably in said loops, said strap being engageable with and being resiliently conformable with the contour of the rear portion of the wearer's head, thereby preventing the head band from falling off the wearer's head.

3,129,432
SURGEON'S GOWN
Nathan L. Belkin, Olivette, Mo., assignor to Angelica Uniform Company, St. Louis, Mo., a corporation of Missouri
Filed Apr. 23, 1962, Ser. No. 189,394
6 Claims. (Cl. 2—114)



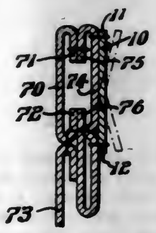
1. A garment comprising a front section having vertical side edges, first and second rear sections engaged to said front section along opposite side edges thereof, said first and second rear sections defining a rear line of opening, a fastener element mounted on said first rear section proximate the rear line of opening, a first cooperating fastener member carried on said first rear section spacedly from said fastener element and in the region proximate the front section, and at least one second cooperating fastener member mounted on said front section proximate said second rear section, said first and second cooperating fastener mmebers being presented outwardly for selected engagement by said fastener element for respectively maintaining said rear line of opening in open and closed condition.

3,129,433
READY-MADE CRAVAT
John E. Cosgrove, Union, N.J., assignor to Foam Products, Inc., Newark, N.J., a corporation of New Jersey
Filed Sept. 11, 1961, Ser. No. 137,201
1 Claim. (Cl. 2—150)



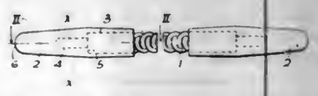
A ready-made cravat comprising,
(*a*) an elongated neck piece,
(*b*) a substantially rectangular piece of material having an end folded over the neck piece and upon itself to form a double layer of the material, the folded over portion constituting a front piece of relatively short axial length,
(*c*) a solid, elongated insert piece of compressible material positioned against the rear surface of the material, said insert piece being coaxial of and substantially coextensive with the said front piece, and
(*d*) means securing together side portions of the front piece and corresponding side portions of the underlying layer of material at a region proximate to the end of the front piece, the said side portions being folded back to encircle and radially compress the lower portion of the insert piece, thereby forming a substantially cylindrical portion having a lower end defined by the end of the front piece and an upper end which flares outwardly toward the neck piece.

3,129,434
REINFORCING WAIST BAND STRUCTURE
Jay Richard Weemhoff, Ridgewood, N.J., assignor to Collins & Aikman Corporation, New York, N.Y., a corporation of New York
Filed June 20, 1961, Ser. No. 118,288
1 Claim. (Cl. 2—236)



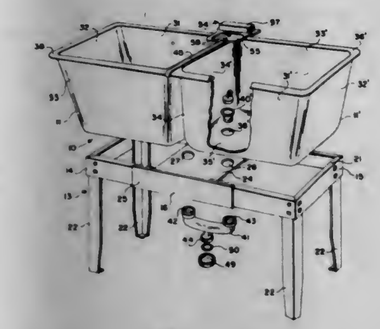
In a waist band construction including an outer fabric and an inner fabric secured to one another, a reinforcing waist band structure comprising an elongated flexible band of thermosetting material secured to the inward side of said inner fabric at opposite lateral edges thereof, said band of thermosetting material having a relaxed permanently set generally concave configuration and said concave surface facing inwardly of said garment, whereby upon being distorted from said concave configuration said band of thermosetting material tends to turn said opposite lateral edges of said inner fabric inwardly.

3,129,435
GARMENT STIFFENER TIPS
Nevil A. Spence, Leicester, England, assignor to Steels & Busks Limited, Leicester, England, a British company
Filed Feb. 27, 1961, Ser. No. 91,923
Claims priority, application Great Britain Feb. 29, 1960
3 Claims. (Cl. 2—257)



1. For mounting on at least one end of a stiffener strip to form a garment stiffener, a flexible tip for a strip form garment stiffener comprising a strip-like, flat, smooth faced body of flexible plastic provided with an internal bore extending axially part-way through its length from one end, leaving a substantial part of the body imperforate, this bore being of stepped cross sectional size for a part of the length and constituting a pocket of uniform cross-section at the open end of the bore followed by a narrower channel of uniform width and substantially smaller than the width of the pocket, the junction between said pocket and said channel being defined by shoulders of the body to locate a stiffener strip, inserted in the pocket, against penetration into said channel, whereby the zone of natural bending of said tip is displaced along said channel away from said shoulders.

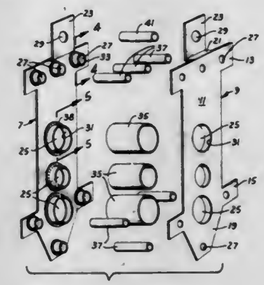
3,129,436
UTILITY TUB CONSTRUCTION
Bernard E. Mustee, Cleveland, Ohio, assignor to E. L. Mustee & Sons, Inc.
Filed Dec. 7, 1962, Ser. No. 243,012
7 Claims. (Cl. 4—183)



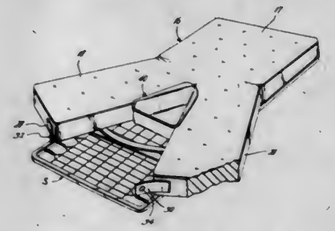
4. A utility tub assembly comprising:
(*a*) a base;
(*b*) a plurality of tubs disposed on said base;
(*c*) each of said tubs including side walls and a bottom wall;
(*d*) each of said bottom walls having a drain outlet formed adjacent one side wall;
(*e*) said tubs being arranged on said base so that said drain outlets are closely adjacent;
(*f*) a waste fitting having portions defining a plurality of drain inlets;
(*g*) drain plugs in said drain outlets, said drain plugs connecting with the portions defining said inlets so that said outlets and inlets are aligned; and
(*h*) said base including a hold-down portion having openings receiving said drain plugs, and the hold down openings being aligned with said outlets when said drain plugs connect with said waste fitting to securely lock said tubs to said base.

3,129,437
PLUMBING INSTALLATION DEVICE
William F. McClenahan, 778 Burlway Road, Burlingame, Calif.
Filed Feb. 20, 1962, Ser. No. 174,470
2 Claims. (Cl. 4—252)

1. A construction adapted for the installation of a plumbing fixture against a wall comprising:
(*a*) a pair of vertical plates adapted to be separated by concrete;
(*b*) a plurality of cylindrical collars integral with each of said plates, said collars on each plate being of corresponding sizes, in corresponding positions, and each extending toward one another when said plates are parallel and placed in opposition to one another;
(*c*) a plurality of openings through said plates defining passageways into the interior of each of said collars;
(*d*) and a plurality of sleeves bridging the distance from each of the said collars to another corresponding collar, each sleeve telescoping with two opposed collars, said sleeves defining passageways between corresponding cylindrical collars.



3,129,438
ADJUSTABLE MATTRESS AND BED PAN FOR USE THEREWITH
Rex Credell Hall, 1922 West Ave. J, San Angelo, Tex.
Filed Oct. 30, 1961, Ser. No. 148,326
3 Claims. (Cl. 5—90)

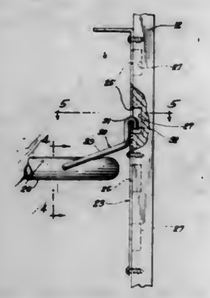


1. In combination a mattress of generally rectangular shape formed with two laterally adjacent, longitudinally extending sections whose adjacent sides are connected together at one end to permit the sections to be moved horizontally to position the sections with the adjacent sides of the sections in angularly spaced relation and a bed pan having side portions of substantially the same height as the thickness of the mattress which converge toward the forward end of the pan adapted to be positioned between the sections with said forward end directed toward said one end of said sides in position for engagement with said sides to hold the sections apart, said pan also having a continuous external rim at the top of the pan formed with portions which are laterally widened toward said forward end in position to extend over the upper surfaces of the sections.

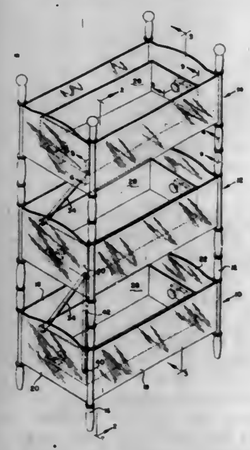
3,129,439
BABY CRIB
James Michal, Chicago, Ill., assignor to Storkline Corporation, Chicago, Ill., a corporation of Illinois
Filed July 20, 1961, Ser. No. 125,395
10 Claims. (Cl. 5—93)

1. In the combination of a crib having corner posts with an apertured plate therein and a mattress supporting frame, means for detachably supporting the frame on said posts comprising a link secured adjacent each corner of the frame, each link having an intermediate portion and two end portions, said intermediate portion normally extending diagonally downwardly from a post with one end portion secured to the frame and disposed at an angle to

said intermediate portion, the other end portion being substantially of U-formation with opposed generally parallel legs, the one end portion and the intermediate portion lying in one plane and the other end portion and the intermediate portion lying in a plane disposed at a substantial angle to said first plane, said other end portion being hooked in said aperture with said legs in wedging engagement with the opposite faces of said plate.

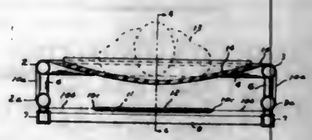


3,129,440
ROCKING CRIB OR CRADLE
Howard F. Martin, 215 S. Nelson, Wilmington, Ohio
Filed Feb. 15, 1962, Ser. No. 173,505
6 Claims. (Cl. 5—109)



1. In a rocking crib; a frame, a bassinet rockably supported in the frame on a horizontal axis, a drive motor in the frame; a first magnet in the frame mounted for rotation on a horizontal axis parallel to the first mentioned horizontal axis and beneath said bassinet and operatively connected to said motor to be driven in rotation thereby, the magnetic poles of said first magnet being circumferentially spaced in a plane normal to said axes, and a second magnet mounted on the bottom of the bassinet substantially in said plane and having poles spaced in said plane and spaced from the poles of said first magnet, said poles of the second magnet being spaced from the poles of the first magnet in all rotated positions of said first magnet and all tilted positions of said bassinet, whereby rotation of said first magnet by said driving motor will cause rocking of the bassinet in said frame.

3,129,441
YIELDABLE CONTOURING BODY SUPPORTING STRUCTURE
Rudolph J. Zastera, Glen Ellyn, William R. Weir, Rolling Meadows, and Henry M. Peraini, Chicago, Ill., assignors to the United States of America as represented by the Secretary of the Air Force
Filed Apr. 29, 1963, Ser. No. 276,675
7 Claims. (Cl. 5—233)

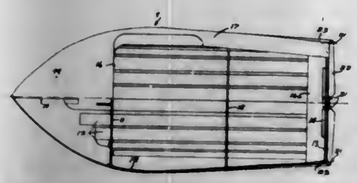


1. A body contour conforming structure comprising an elongated rigid rectangular frame having vertically-spaced pairs of parallel elongated round side frame members fixed in horizontally-spaced parallel relation to each other, a plurality of closely-spaced side-by-side individual substantially nonstretchable strand members extending across the tops of the upper round side frame members in parallel relation to each other, perpendicular to the axes of said upper round side frame members, substantially from end-to-end thereof, said strands then extending downwardly and around the lower parallel side frame members and toward each other with their ends terminating in materially-spaced relation to each other at opposite sides of the longitudinal axis of the elongated rectangular frame, an elongated rectangular resilient foam rubber-like pad member supported on said strands with its sides and ends disposed in adjacent parallel spaced relation to the sides and ends of said rectangular frame, a rectangular jacket of braided fabric disposed between the opposite extremities of all of said strands and secured thereto to limit separation of said extremities upon downward displacement of said strands between the upper round side frame members, and individual rubber-like elastic connecting strands under tension woven in said knitted jacket, each having its opposite ends connected to the opposite extremities of each of said nonstretchable strands for maintaining a predetermined tension on each of the nonstretchable strands between the upper round side frame members.

3,129,442
STENCIL PRINTING OF THICK FABRICS
Thomas Liddle Leckie, Prestwich, near Manchester, England, assignor to The Bradford Dyers' Association Limited
Filed July 13, 1960, Ser. No. 42,655
Claims priority, application Great Britain July 14, 1959
7 Claims. (Cl. 8—149.1)

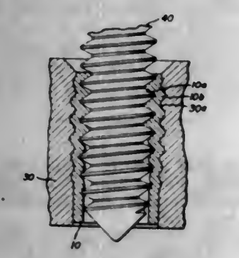
1. A method of stencil-printing a pile fabric in continuous lengths by moving the fabric horizontally in stepwise fashion through a plurality of printing stations which comprises skimming lint and fluff from the surface of the fabric while it is moving without deeply penetrating it; printing the fabric in each printing station through a stencil by free-flowing liquid coloring matter passing directly through the stencil from a bottomless container in engagement with the stencil while applying suction to the underside of the fabric so as to maintain an optimum pressure difference across the stencil and fabric, and maintaining said pressure difference substantially constant whereby a penetration of the pile occurs with a minimum of objectionable lateral spreading of the coloring matter so as to produce a commercially acceptable stencil printed fabric; forming a loop in the fabric; moving the fabric forward continuously from the loop; steaming the fabric while it is still wet and fixing the color in it; and passing the fabric through a washing liquid.

3,129,443
CONVERTIBLE BOAT HULL
Rodolphe Gérard Maturi, 136 Rue Lamarck, Paris 18, France, and Christian Bellotti, 15 Rue du Val de Grace, Paris 5, France
Filed Jan. 10, 1961, Ser. No. 81,798
Claims priority, application France Jan. 12, 1960
4 Claims. (Cl. 9—2)



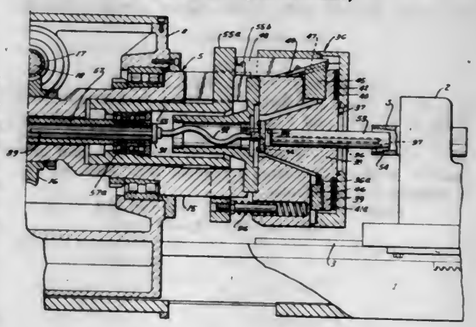
1. A convertible boat hull comprising a plurality of sections, one of said sections forming an end of a sailboat hull, means for releasably connecting said sections together to form a sailboat hull and for removing said one section to form an outboard motor boat hull, and said sections being shaped for varying the distribution of static and dynamic loads in such a manner that optimum hydrodynamic results are obtained from the outboard motor boat hull and from the sailing boat hull.

3,129,444
METHODS OF PRODUCING STRONG THREADED ANCHORAGES IN WORKPIECES AND FERRULES FOR USE IN SUCH METHODS
Simon S. Kahn, Glen Ridge, N.J., assignor to General American Transportation Corporation, Chicago, Ill., a corporation of New York
Filed Apr. 2, 1962, Ser. No. 184,320
5 Claims. (Cl. 10—86)



1. The method of producing a strong threaded anchorage in a workpiece formed of relatively soft metal, comprising providing a bore in said workpiece, providing a ferrule formed of relatively hard metal characterized by plastic flow under swaging pressure, wherein the outer casing of said ferrule has been prehardened with respect to the core thereof, securing said ferrule in place in said bore, and subjecting the interior surface of said ferrule to swaging pressure with an extremely hard thread-swaging member so as simultaneously to swage an internal thread upon the interior surface of said ferrule and to swage an external thread-like structure upon the exterior surface of said ferrule and to compress an internal thread-like structure upon said workpiece interiorly of said bore, wherein said thread-like structures are complementary and said external thread-like structure is swaged into interlocked frictional engagement with said internal thread-like structure so as securely to anchor said ferrule in place in said bore, and wherein the outer casing of said ferrule being harder than the core thereof minimizes longitudinal creep of said ferrule in said bore in said step of subjecting the interior surface of said ferrule to swaging pressure, said internal thread being adapted to receive and to engage a cooperating external thread carried upon the shank of a screw, or the like.

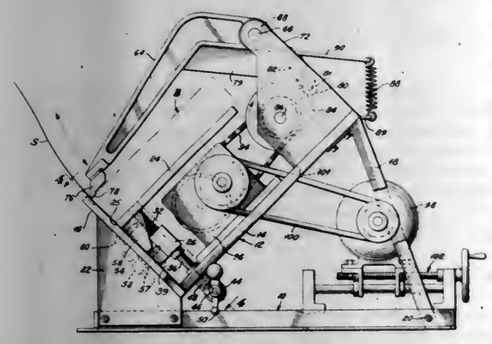
3,129,445
APPARATUS FOR CONTOUR BORING ELONGATED SLEEVES OF SMALL INTERNAL DIAMETER
Edward E. Jennings, Cleveland, Ohio, assignor to The Pipe Machinery Company, Wickliffe, Ohio, a corporation of Ohio
Filed Feb. 9, 1961, Ser. No. 88,167
5 Claims. (Cl. 10—129)



1. An apparatus for internally machining elongated internal walls of bores of small diameter and comprising a rotatable power driven spindle head, a chuck to hold a workpiece having a bore with the bore coaxial with the spindle head, a carrier mounted on the head for guided movement in opposite directions relative to the head along a predetermined path which extends transversely of the axis of rotation, and is parallel to a plane normal to the axis of rotation, said carrier having a rigid body portion, a single elongated tool arm having one end rigid with, and in fixed relation to, the body portion, said arm extending outwardly beyond the carrier endwise of the axis of rotation, in a direction toward the chuck, cutting means mounted in fixed position on the outer end portion of the arm and extending laterally therefrom so that the cutting means can be supported by the arm rigidly in cutting relation to the bore wall, during relative axial movement of the chuck and spindle head toward each other, said cutting means being capable when so supported, during said relative advance axially of the sleeve, of making a spiral cut along the bore at high speed, means for causing said relative axial movement of the chuck and spindle head, mechanical power transmitting means connected to the carrier and rendered operative in preselected relation to said relative axial movement to move the carrier along its said path in predetermined relation to the relative axial movement, said carrier having a radially extending flange portion with front and rear planar surface portions in planes normal to the axis of rotation, said head having front planar bearing face portions parallel to, facing toward, and spaced rearwardly from, the rear surface portions, retaining means on the head and having rear planar bearing face portions parallel to, facing toward, and spaced forwardly from, the front surface portions, anti-friction rolling elements interposed between said rear surface portions and said front face portions and between said front surface portions and said rear face portions, said elements being rotatable about axes which are parallel to each other and to said surface portions, and said axes extend

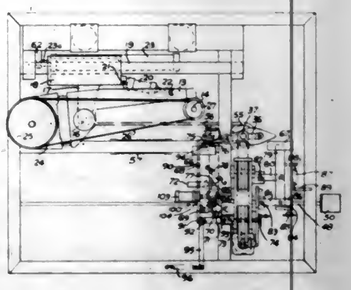
transversely of said path of movement of the carrier relative to the head, and said elements, surface portions, and face portions cooperating to support the carrier for anti-friction movement along its said path relative to the head, said elements being spaced outwardly radially from the axis of rotation and so distributed about the axis of rotation at said front and rear surface portions that turning moments imposed on the carrier by reactionary forces on the tool acting through the arm about axes extending transversely of the axis of rotation are resisted by reactionary forces imposed in one direction on the rear surface portions at one side of the axis of rotation by said front face portions acting through some of the elements and by reactionary forces imposed in an opposite direction on the front surface portions at the opposite side of the axis of rotation by said rear face portions acting through some of the others of said elements.

3,129,446
BOOKBINDING OPERATIONS
Lawrence D. Sibert and Robert F. Sibert, Jacksonville, and John F. Moffett and Frank E. Moffett, Batavia, Ill., assignors of one-half to New Method Book Bindery, Inc., Jacksonville, Ill., a corporation of Delaware, and one-half to Moffett Precision Products, Inc., Batavia, Ill., a corporation of Illinois
Filed Nov. 28, 1961, Ser. No. 155,414
3 Claims. (Cl. 11—1)



1. A bookbinding machine comprised of a frame, a support mounted on said frame, a book-supporting platform, means adjustably mounting said platform on said support, a clamp for selectively locking said adjustable mounting means relative to said support, resilient means connecting said platform to said adjustable mounting means, said platform being disposed perpendicular to said support and having an edge slidably engaging a portion of said support whereby said support portion forms a stop member for said platform, said platform being adapted to support a book thereon in abutting relation with said stop member, an arm pivotally mounted on said support for movement from a position spaced above said platform to a position adjacent said platform and said support, sealing means including a heating element carried by said arm, said arm being of a length to position said sealing means adjacent said stop member forming a space therewith to permit a sheet of paper to extend therethrough whereby when said arm is adjacent said platform said sealing means will engage the top sheet of the end papers of a book on said platform for folding said top sheet and sealing an edge of said top sheet to the adjacent portion of the end papers of said book.

3,129,447
MACHINES FOR OPERATING ON EDGE PORTIONS OF WORKPIECES
George Trevor Ralphs, "Brooklands," The Fairway, Oadby, Leicestershire, England
Filed Apr. 30, 1962, Ser. No. 191,364
10 Claims. (Cl. 12—86.65)



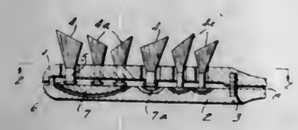
10. In a machine for operating on an edge portion of a workpiece, the combination comprising a template mounting, means for supporting a workpiece in fixed relation to the template mounting, a follower for engaging a template on the template mounting, an operating tool for engaging with the workpiece, a support carrying said follower and operating tool, means for supporting the template mounting and said support in such relation as to permit relative movement between them to effect relative traversing movement between the follower and an edge of the template and between the tool and a corresponding edge of the workpiece, means for retaining the template and the work support against turning during the traversing movement, means for urging the follower into engagement with the edge of the template, and means supporting the template mounting and workpiece supporting means to permit them to turn together bodily about an axis at right angles to the plane of a template on the mounting whereby different parts of the periphery of the workpiece may be presented to the tool.

3,129,448
BRUSH FOR FABRIC AND THE LIKE
Emanuel Mittman, Forest Hills, N.Y., assignor to Elm Coated Fabrics Company, Inc., Brooklyn, N.Y., a corporation of New York
Filed July 10, 1961, Ser. No. 122,726
5 Claims. (Cl. 15—1.5)



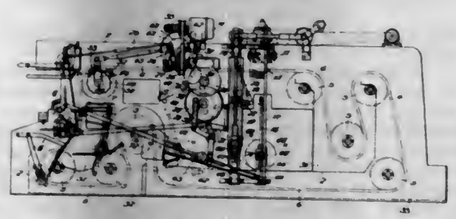
1. A brush for fabric and the like comprising a brushing head made of electrically non-conductive, substantially rigid plastic material having on one side as the brushing surface a plurality of closely packed, substantially rigid, substantially conically shaped fibrils having a base diameter in the range 0.002–0.02 inch and a height in the range 0.002–0.2 inch and extending substantially perpendicularly with respect to and integral with said brushing head, said brushing surface having a fibril density in the range 12,000–25,000 fibrils per square inch of brushing surface, and holding means fixed to the other side of said brushing head.

3,129,449
TOOTHBRUSH WITH SHUTTINGLY OSCILLATINGLY AND ROTATINGLY MOVABLE CLEANING AND MASSAGING ELEMENTS
Bernard Cyzer, Amidar 10, Hadar Joseph, Tel Aviv, Israel
Filed Sept. 11, 1961, Ser. No. 137,169
Claims priority, application Israel Sept. 13, 1960
3 Claims. (Cl. 15—28)



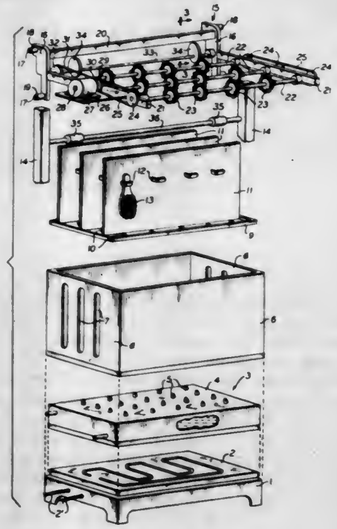
1. A toothbrush comprising a handle and a bristle carrying head; said head formed of a first and second oblong cup generally extending in a first direction, and so assembled to provide an inner space between opposed surfaces thereof; said first oblong cup containing cylindrical apertures having axes substantially perpendicular to said first direction, through which a plurality of bristle assemblies project their bristles outwardly with respect to said inner space; each of said bristle assemblies comprising a plurality of bristles held together at one of their ends by a cylindrical sleeve; said cylindrical sleeve having a base terminated by a convex base surface; said convex base surface operatively positioned to be freely movable about the bottom of said inner space; said bottom of said inner space being the inner surface of said second oblong cup; said cylindrical aperture having a significantly greater diameter than said sleeve to provide a substantial clearance whereby said bristle assembly freely oscillates about its respective one of said axes; said base including a portion extending perpendicular to its respective axis and dimensionally greater than said internal aperture diameter, whereby said base is kept within said inner space; at least one disc being disposed in a hollow part of said bottom of said inner space, facing at least one of said apertures, and at least one of said convex base surfaces resting on said disc; said disc having first and second surfaces communicating with said convex base surface and bottom of said inner space respectively, to facilitate said oscillating movement of said base about said axis.

3,129,450
MACHINES FOR WASHING BOTTLES
Hiroshi Kusumoto, 57 1-chome, Seifuso, Toyonaka-shi, Osaka-fu, Japan
Filed July 19, 1960, Ser. No. 43,884
Claims priority, application Japan Dec. 19, 1959
1 Claim. (Cl. 15—61)



In a machine for washing bottles, wherein said machine includes a plurality of buckets supporting a plurality of bottles, said buckets being carried by a pair of endless chain conveyors, and wash means including brush means for washing said bottles, an improved drive means for intermittently driving said endless chain conveyors and actuating said wash means in correlation with the intermittent movement of said endless chain conveyors, said drive means including a drive shaft, a pair of gear wheels mounted on said first shaft, a pair of rachets secured to opposite ends of said first shaft, a second rotatable shaft, crank discs mounted on opposite ends of said second rotatable shaft, a gear wheel mounted on said second rotatable shaft adjacent one of said crank discs, said adjacent crank disc being integrally secured to the face of said gear wheel on said second rotatable shaft, said rachets being secured to said crank discs by means of a connecting rod, a pair of pawls, said pawls being effective to impart intermittent rotation to said rachets, adjustment means for varying the effect of said pawls upon said rachets, including relatively stationary, movable cam track means and roller members connected to said pawls and engaging said cam track means, a motor and gear trains for driving said latter gear wheel, a single lever for brushing bottles, said motor actuating said single lever, a crank lever connected to said single lever, push-up rods operatively connected to said single lever for raising the bottles out of said conveyor, and another crank lever having hollow rods operatively connected to brushes for sequentially cleaning the interior of said bottles.

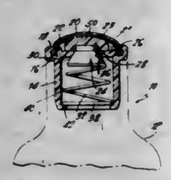
3,129,451
BRUSH CLEANING DEVICE
Thomas Colaianni, 88—32 20th Ave., Brooklyn 14, N.Y.
Filed Dec. 4, 1962, Ser. No. 242,265
5 Claims. (Cl. 15—303)



1. A cleaning device for hair brushes or the like, comprising
a platform,
at least two substantially vertical posts disposed laterally at said platform,
at least one substantially vertical board mounted on said platform,
means adapted to releasably retain a plurality of hair brushes on said board along an imaginary horizontal line spaced apart at a predetermined distance from each other,
a supporting member including two oppositely disposed carriers connected by a connecting bar,

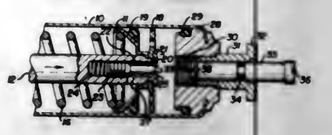
said carriers including rollers running along corresponding opposite faces of said posts and the latter forming tracks for said carriers,
an arm projecting forwardly from each of said carriers,
an electric motor supported by one of said arms,
at least one first shaft disposed crosswise between said arms,
a plurality of rotary brushes keyed to said shaft and axially spaced apart from each other for a distance equal with the distance between said retaining means for said hair brushes,
a second shaft rotatably mounted between said carriers,
at least one cam disc keyed to said second shaft,
an axle rigidly secured between said posts,
the longitudinal axis of said axle being disposed in a substantially vertical plane including the longitudinal axis of said second shaft,
a follower roller turnably mounted on said axle and engaging continuously the peripheral face of said cam disc,
means for rotating said first shaft and said second shaft by said electric motor,
so that upon start of said motor said cam disc and said rotary brushes are subjected to rotation and said entire supporting member performs a lifting stroke along said posts by operation of said cam disc and a downward stroke by the weight of said supporting member.

3,129,452
DAUBER HAVING AN INTERNAL COMPRESSED BODY
Gilbert Schwartzman, Scarsdale, N.Y., assignor to Glide-O-Matic Corp., Yonkers, N.Y., a corporation of New York
Filed Dec. 3, 1962, Ser. No. 241,862
2 Claims. (Cl. 15—566)



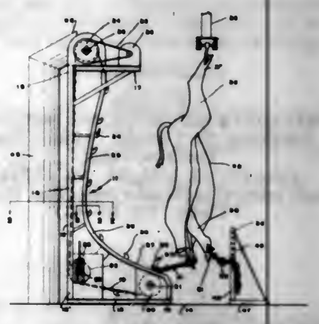
1. A dauber comprising a fluid container having a neck terminating in an open end, a retainer ring having a retaining flange and having a projecting portion fitted in said neck, a resilient two ply cover of laminated nylon knitted brushed fabric and coarse polyurethane foam secured to said ring by said flange outwardly of said container, said ring having a tapered opening therein forming a valve seat, a valve member movable with respect to said valve seat to control fluid flow through said opening from said container to said cover, said valve member including a helical coil spring secured to said projecting portion and a conical valve head extending into said opening and adapted to extend through said opening, and a resilient cylindrical porous body of polyurethane foam disposed in the space between said cover and said ring through said opening from therebelow with said body being continuously under compression, said body when not compressed being of such dimensions that said body is thicker than the space between said cover and said ring, said body having a diameter substantially greater than said opening, said spring means pressing said valve head against said body, said body being deformable so that said cover may be depressed urging a portion of said body toward said opening to depress said valve head away from said valve seat against the force exerted by said spring means.

3,129,453
HYDRAULIC DOOR CLOSER
Walter S. Turner, Youngstown, Ohio, assignor to Marlboro Manufacturing, Inc., Marlboro, Ohio
Filed May 1, 1961, Ser. No. 106,916
2 Claims. (Cl. 16—52)



1. A hydraulic door closer comprising a cylindrical body member having apertured fittings closing its opposite ends, a piston rod positioned through one of said apertured fittings and having a piston on its inner end, a coil spring positioned between said apertured fitting and said piston inwardly of said cylinder, said piston rod having a bore in its inner end and a solid adjustment valve threadably positioned in said bore and arranged to control an orifice communicating with said bore at a point outwardly of said solid adjustment valve therein and with the piston rod containing portion of said cylinder, a portion of smaller diameter of said solid adjustment valve extending axially of and beyond said bore in spaced relation thereto and beyond said piston, a plunger movably positioned in the other of said apertured fittings, said plunger having a transverse slot in its inner end arranged to be moved into engagement with said extending portion of said solid adjustment valve to rotate the same.

3,129,454
HIDE PULLER
Edward Arvid Johnson, Transcona, Manitoba, Canada, assignor to Johnson Bros. Mfg. Ltd., Manitoba, Canada
Filed Mar. 20, 1963, Ser. No. 266,598
12 Claims. (Cl. 17—21)

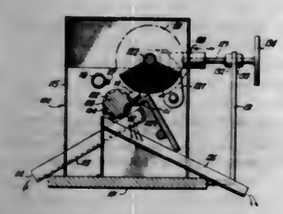


1. A hide puller for stripping hides from cattle and the like that are suspended from the hind legs thereof from an overhead conveyor rail; comprising in combination a substantially vertically extending, supporting framework, a conveyor mounted in said framework, said conveyor including an endless conveyor chain and means mounting said conveyor chain for movement within said framework, said conveyor chain including an upwardly moving front run and a downwardly moving return run, conveyor front run guide means forming part of said framework, said guide means cooperating with said front run to control the directional characteristics of said front run, said conveyor guide means including an upwardly and rearwardly extending lower portion, a forwardly and upwardly inclined upper portion, and a concavo-convexly curved transitional portion connecting said upwardly and rearwardly extending portion to said forwardly and upwardly extending portion, and means on said conveyor chain selectively connectable with the hide of said cattle adjacent the front legs of said cattle, whereby, after said hide has been rimmed back and detached from the legs of the cattle, said hide is stripped off said cattle as said means moves upwardly with the front run of said conveyor chain, means to selectively anchor the front legs of said cattle and a source of power for said conveyor.

3,129,455
MEAT PRODUCT
Louis J. Huber, Minneapolis, Minn., assignor to General Mills, Inc., a corporation of Delaware
No Drawing. Filed Oct. 26, 1961, Ser. No. 147,746
2 Claims. (Cl. 17—45)

1. A process for deboning fowl which comprises subjecting said fowl to pressures in the range of 50 to 150 p.s.i. and temperatures in the range of 300 to 450° F. for a period of 10 to 600 seconds, suddenly releasing said pressure, thereby substantially separating the meat of said fowl from the bones of said fowl and removing said bones.

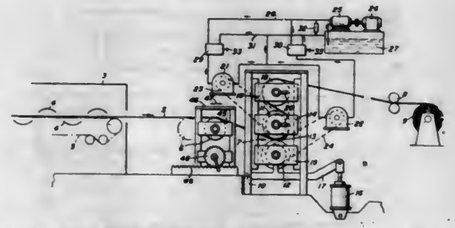
3,129,456
METHOD OF EVISCERATING SCALLOPS
Lester C. Renfroe, 5514 Floral Bluff Road, Jacksonville, Fla.
Original application Mar. 20, 1961, Ser. No. 96,991. Divided and this application May 28, 1962, Ser. No. 208,159
3 Claims. (Cl. 17—45)



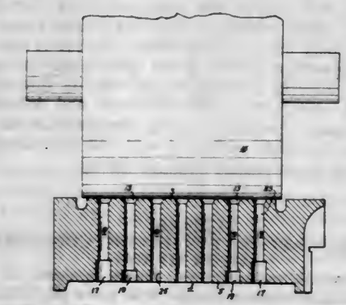
1. The method of eviscerating scallops which comprises the steps of feeding a generally cylindrical viscera bearing scallop muscle in an axial direction, continuously and cleanly severing the viscera from a longitudinal portion of the muscle periphery without damaging the muscle while rotating the muscle about its axis until all of the viscera is removed.

3,129,457
METHOD AND APPARATUS FOR EMBOSSING PLASTIC COATED STRIP
Daniel T. Carter, Trafford, and George H. Rendel, Pittsburgh, Pa., assignors to United States Steel Corporation, a corporation of New Jersey
Filed Apr. 13, 1960, Ser. No. 21,908
8 Claims. (Cl. 18—10)

4. An apparatus for embossing a thermoplastic coating on one side of metal strip comprising, the combination with a furnace through which said strip travels over a horizontal path with said coating facing upwardly, of an embossing roll set comprising an upper steel embossing roll, a lower rubber back-up roll, means mounting said rolls for rotational movement about parallel axes with said embossing roll compressed against said rubber roll and cooperating therewith to form an embossing pass of arcuate shape having strip entry and exit ends at circumferentially spaced points about said embossing roll, said embossing pass being located at a vertical level below said horizontal path, a guide roll between said furnace and embossing pass and having the upper portion of its periphery at the same vertical level as said horizontal path and in rolling engagement with strip moving from said furnace to said roll set, said guide roll operating in conjunction with said embossing roll to guide the movement of said strip out of said horizontal path and in a downwardly inclined direction tangential to said embossing roll so that said coating engages said embossing roll at a point in advance of its movement into the said strip entry end of said embossing pass, means for adjusting the horizontal position of said guide roll relative to said embossing roll to thereby change the point at which said coating has initial engagement with said embossing roll, means for drawing the strip through said embossing pass, a drive means independent of said drawing means for rotating said embossing roll, and means for adjusting the torque applied by said drive means to said embossing roll to a value such that it is ineffective to impart relative linear movement to the plastic coating on said strip during its movement by said drawing means through said embossing pass.



3,129,458
PELLET MILL DIE AND METHOD OF FORMING SAME
Jack L. Mitchell, Muscatine, Iowa, assignor to California Pellet Mill Company, a corporation of California
Filed May 15, 1961, Ser. No. 110,167
2 Claims. (Cl. 18—12)

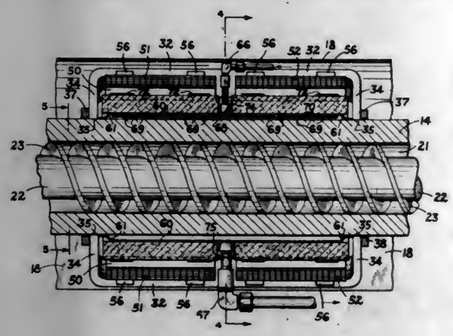


2. A pellet mill die having a compression side adapted to be traversed by an extrusion roll, a discharge side, and a plurality of die holes through said die from said compression side to said discharge side and of like diameter at the compression ends thereof, said die being of uniform thickness between its compression side and its discharge side, and the holes in said die traversed by an edge portion of such roll being counter-bored at their discharge ends to reduce the resistance to extrusion of material thereto as compared to the resistance offered by other of said holes traversed by an intermediate portion of said roll.

3,129,459
INDUCTION HEATED EXTRUDER

Gilbert V. Kullgren, Daniel W. Stephenson, Winchel J. Goodwin, and Harold G. Bailey, Akron, and Robert J. Schroyer, Cuyahoga Falls, Ohio, assignors, by mesne assignments, to Blaw-Knox Company, Pittsburgh, Pa., a corporation of Delaware

Filed May 16, 1961, Ser. No. 110,502
6 Claims. (Cl. 18—12)



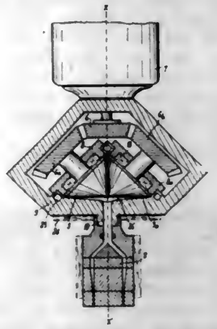
2. A plastic extruder comprising a barrel formed of metal susceptible to heating by eddy currents, a screw rotatably received in said barrel for delivery of plastic therethrough under pressure to an extruder nozzle, means for controlling the temperature of the plastic within said barrel including a plurality of laminated flux guides disposed about said barrel with inwardly turned legs having ends shaped to conform to the outer surface of said barrel, means securing said guide ends in intimate contact with the outer surface of said barrel including a pair of split rings, connecting means securing said legs to said rings and serving to prevent delamination of said guides due to the heat of said barrel, means clamping said rings together in encircling relation to said barrel, an alternating current inductive heating coil positioned about said barrel adjacent the inner surface of said guides, means supporting said coil at the outer periphery thereof adjacent the inside surface of said flux guides leaving the inner periphery thereof unsupported and free of heat conductive connection to said barrel and an annular pad of insulating material secured in surrounding relation adjacent the outer surface of said barrel and defining an open air space between the outer dimension of said material and the inside surface of said coil to insulate said coil against excessive heat from said barrel.

3,129,460
EXTRUSION APPARATUS HAVING CONE-SHAPED ROTOR MEANS

Pierre Berger, Firminy (Loire), France, assignor to Compagnie des Ateliers et Forges de la Loire (St. Chamond-Firminy-St. Etienne-Jacob-Holtzer), Paris, France, a society of France

Filed Sept. 18, 1961, Ser. No. 138,819
Claims priority, application France Sept. 23, 1960
8 Claims. (Cl. 18—12)

1. Extrusion apparatus comprising a casing formed with at least a pair of intersecting cavities, inlet means connecting with said cavities for supplying extrudable material thereinto, an extrusion orifice spaced from said inlet means and connected with said cavities for extruding the material from the casing, rotor members positioned in the respective casings in the general form of conical surfaces mounted for rotation about their respective axes in substantially tangential relationship and having their larger ends positioned adjacent said inlet means and their smaller ends positioned adjacent said extrusion orifice, and means

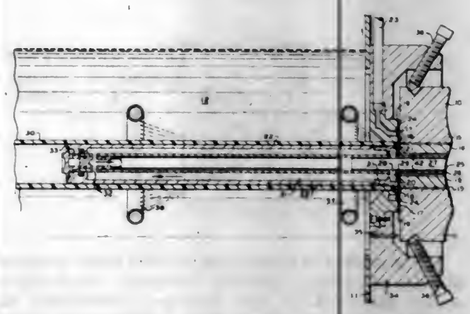


for simultaneously rotating said members for milling the material and extruding it through said office.

3,129,461
EXTRUSION OF THERMOPLASTIC TUBES

Fredrick J. Zavasnik, Bartlesville, Okla., and Ronald Holt, Battle Creek, Mich., assignors to Phillips Petroleum Company, a corporation of Delaware

Filed Dec. 19, 1960, Ser. No. 76,898
6 Claims. (Cl. 18—14)

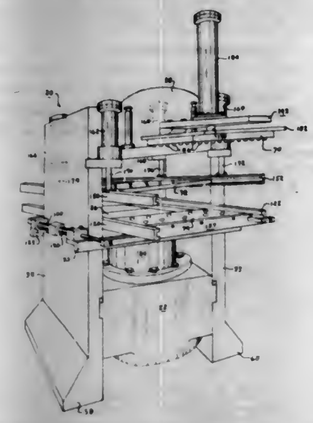


6. The method of fabricating continuous, self-supporting, tubular thermoplastic articles which comprises passing molten thermoplastic material through a first annular die, across a thermal barrier and through a second annular die of greater cross-sectional area than that of said first annular die; contacting the internal surface of the extruded tube with a support mandrel to reduce the linear speed of the extruded tubular thermoplastic material emerging from said second annular die so that the extruded tube is forced to assume the shape of the second die thereby forming a liquid-tight seal between the extruded tube and the second die; continuously contacting the internal surface of the extruded tube with said mandrel until the extruded tube has become self-supporting; passing cooling liquid through the mandrel in indirect heat exchange with the extruded tube and then into direct contact with the internal surface of the tube; contacting the exterior of the extruded tube with cooling liquid immediately as it emerges from said second die; maintaining the interior and exterior surfaces of said tube in contact with cooling liquid until said tube is cooled to below its softening point; and recovering said tube as said tubular article.

3,129,462
PRESS AND MOLD OPERATING APPARATUS

John E. Borah, 815 Mishawaka Ave., Mishawaka, Ind.

Filed Nov. 18, 1960, Ser. No. 70,156
5 Claims. (Cl. 18—16)



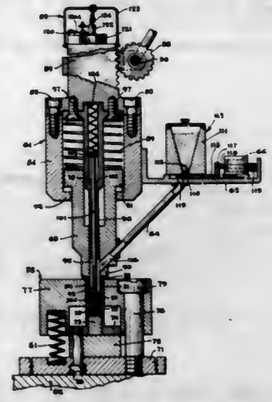
5. In a mold operating apparatus for use in conjunction with a press having a vertically movable ram, a stationary head above the ram, and with a pair of compression molds having upper, intermediate and lower sections with cavities extending through the intermediate section, said apparatus comprising a pair of spaced parallel rails mounted on opposite sides of said ram and extending from the press on opposite sides, members connected to the lower section of each mold and engaging said rails, power means disposed along each side of the press and connected to each lower mold section for moving said sections from the press along said rails on opposite sides, a pair of horizontally disposed vertically movable rails above said first pair of rails spaced laterally from one another and extending from the press on opposite sides, members supporting both said intermediate and upper mold sections connected to the intermediate section of each mold and engaging said second mentioned rails for movement therealong into and from the press, a pair of vertical shafts spaced along each of said second mentioned rails, and power units connected to each of said shafts for urging the respective rails downwardly.

3,129,463
COMPACTING PRESS

Robert F. Gill, Jr., La Grange, and Roland E. Krieger, Hinsdale, Ill., assignors to Scully-Anthony Corporation, La Grange, Ill., a corporation of Illinois

Filed Sept. 28, 1961, Ser. No. 141,348
7 Claims. (Cl. 18—16)

1. A compacting press, for use in the manufacture of a compressed powder element of predetermined size and configuration at a given location on a base member, comprising: means for mounting the base member in predetermined position; a guide member, having a guide aperture therein, movable between an initial position displaced from the base member and a second position in which the guide member effectively engages the base member to afford a closed passageway comprising said guide aperture aligned with said given location on the base member; depositing means connected to said guide aperture for depositing a predetermined quantity of powder at said given location on said base member through a given portion of said guide aperture of said guide member; operating means for operating said depositing means; a compression ram, movable through said guide aperture between an initial position displaced from the base member and a compression position in which the ram engages the powder to compress all of the powder in situ on said base member; and actuating means for moving said guide

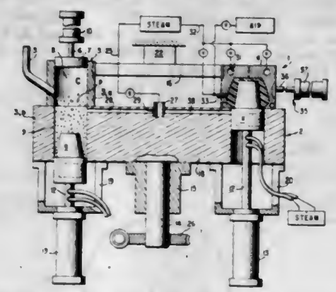


member to its second position, actuating said operating means for operating said depositing means, and moving the compression ram to its compression position, in the recited sequence.

3,129,464
MOLDING APPARATUS

James E. Helder, Princeton, N.J., assignor to Owens-Illinois Glass Company, a corporation of Ohio

Filed Nov. 15, 1960, Ser. No. 69,308
4 Claims. (Cl. 18—20)



1. An apparatus for molding articles from expandable plastic beads comprising a chamber for receiving said beads having a first member and a second member, said first member including a plunger therein for compressing the beads and forcing the beads into said second member, a plug in said second member, a female mold member adapted to cooperate with said plug, means for moving said second member into molding relationship with said female mold member; means for reciprocating said plug in and out of said female mold member, and means for heating said male mold member.

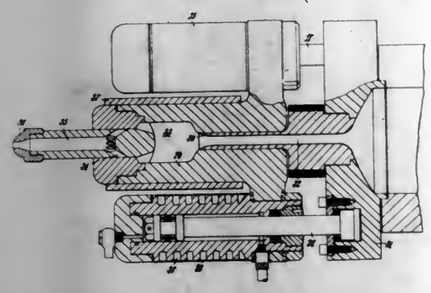
3,129,465
MACHINES OR APPARATUS FOR THE INJECTION MOULDING OF PLASTIC MATERIAL

William Francis Poyner, Blackburn, England, assignor to Foster, Yates & Thom Limited, Blackburn, England

Filed Dec. 21, 1961, Ser. No. 160,988
5 Claims. (Cl. 18—30)

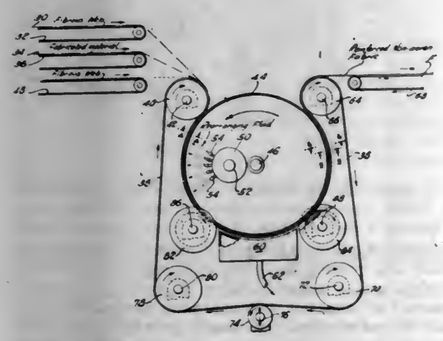
1. In an injection moulding apparatus, stationary tubular means for supplying moulding material under pres-

sure from a feed chamber, a telescopic structure including a chambered body disposed between said feed chamber and the mould and mounted to move axially on said tubular member, an injection nozzle forming part of said telescopic structure extending axially from said chambered body, means for moving said telescopic structure on said tubular member in one direction to bring said nozzle into engagement with a mould orifice and moving



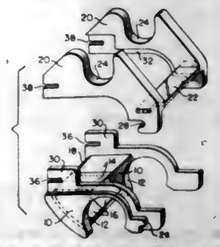
said telescopic structure in the other direction for withdrawing said nozzle from the mould, said nozzle telescoping into said structure upon further axial movement of said chambered body after engagement of the nozzle with said mould orifice has taken place, said nozzle including valve means for controlling the supply of moulding material to said nozzle, said valve means being automatically opened by said displacement action to permit the discharge of the moulding material through said nozzle.

3,129,466
REINFORCED NONWOVEN FABRICS AND METHODS AND APPARATUS OF MAKING THE SAME
Paige Drake L'Hommedieu, New Brunswick, N.J., assignor, by mesne assignments, to Johnson & Johnson, New Brunswick, N.J., a corporation of New Jersey
Filed Sept. 19, 1958, Ser. No. 762,070
5 Claims. (Cl. 19—145)



1. A method of producing a coherent reinforced nonwoven fabric which comprises: superimposing in contacting relationship a layer of fibers which individually are capable of movement under the influence of an applied fluid force and a reinforcing fabricated material containing textile strands to form an assemblage, introducing the assemblage between flexible foraminous means and means defining longitudinally and transversely spaced apertures, with the opposite sides of said assemblage in contact one with the flexible means and the other with the spaced apertured means; and projecting a liquid with force through said apertured means and said assemblage, so that the liquid strikes said flexible foraminous means and provides a rearranging zone between the apertured means and the foraminous means, thus effecting movement of fibers in the said layer of fibers under the influence of the liquid force, thereby causing these fibers to intertwine with and about the textile strands of said fabricated material to form the said reinforced fabric.

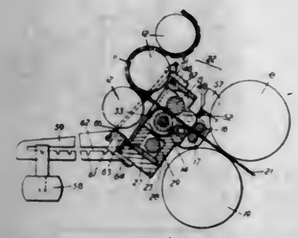
3,129,467
TOP ROLL CRADLE
Kenneth P. Swanson, Abington, Mass., assignor to Progressive Engineering, Inc., Rockland, Mass., a corporation of Massachusetts
Filed Nov. 29, 1962, Ser. No. 240,988
8 Claims. (Cl. 19—255)



4. In combination with a spinning frame including opposed, separable bottom and top rolls having an apron hung on each roll, a top roll cradle comprising a pair of lower side plate members independent from one another, each lower side plate member having a recess formed to engage the bottom roll, a pair of apron guide members fixed to opposed portions of the lower side plates and opposing one another when the recesses in the lower side plates engage the bottom roll, said guide members extending within the apron hung on the bottom roll from said side plates to a position adjacent one another and together forming a flat table surface generally tangential to the top of the bottom roll to guide the apron away from the bottom roll, a rounded nose surface merging with the table surface and spaced farthest from the bottom roll to guide and tension the apron, and a convex guide surface merging with the nose surface and guiding the apron back to the bottom roll, the portion of the guide surface adjacent the bottom roll extending generally tangentially to the bottom roll, a pair of upper side plates fixed in spaced parallel relation to one another, each plate having a recess formed to receive the top roll, the lower side plates including portions extending above the table surface of the guide members and overlapping with adjacent portions of the upper side plates, said overlapping portions of the upper and lower side plates including aligned slots, a top apron guide bar having a notch adjacent each end, said guide bar notches interlocking with the slots in the upper and lower side plates to interlock the side plates, and means interlocking the upper and lower side plates on the side of the bottom roll recess generally opposite the guide bar, whereby the fixed upper side plates hold the independent lower side plates in a predetermined relation.

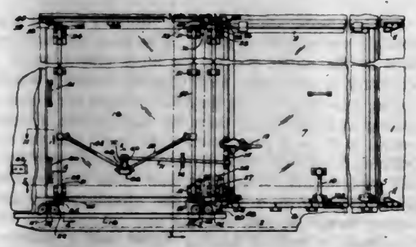
3,129,468
WORSTED DRAWING MACHINES
Geoffrey Hill Ambler, Ilkley, England, assignor to Ambler Superdraft Limited, Ilkley, England, a British company
Filed Dec. 9, 1958, Ser. No. 779,136
6 Claims. (Cl. 19—283)

1. An intermediate unit for a drawing apparatus of the kind including feed rollers, drafting rollers between which a roving or sliver may pass and a driving shaft, said intermediate unit comprising a main body adapted for attachment to the drawing apparatus between the feed and drafting rollers, said main body including two pairs of intermediate rollers in the main body spaced from each other along a line extending between the drafting and feed rollers, each pair consisting of an upper and a lower roller, said intermediate rollers being considerably smaller in diameter than the feed and drafting rollers and being secured to shafts rotatably mounted in the main body, a gear at one end of each of the lower roller shafts, an intermediate gear connecting the two lower roller gears and secured to one end of a common intermediate shaft,



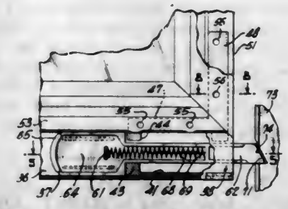
a gear at the opposite end of each of the upper roller shafts, a further intermediate gear secured to the opposite end of the common intermediate shaft and connected to the two upper roller gears through an idler gear, gearing for connecting the gear trains thus formed to the driving shaft of the drawing apparatus, and individual weighting means for supplying pressure at the nip of each pair of intermediate rollers, the weighting means for the pair of intermediate rollers nearest the rear end of the main body being adapted to exert a greater pressure on the roving or sliver than that exerted by the other pair of intermediate rollers.

3,129,469
DOOR STRUCTURE
Gerard T. Uphues, Chicago, and Thomas C. Soddy, Downers Grove, Ill., assignors, by mesne assignments, to American Seal-Kap Corporation of Delaware, New York, N.Y., a corporation of Delaware
Filed Feb. 15, 1961, Ser. No. 99,332
13 Claims. (Cl. 20—23)



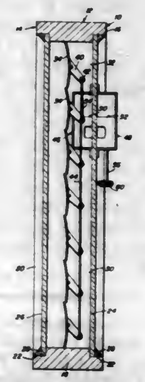
12. In combination with a wall having a door opening and a door for closing the same, a track alongside the opening, antifriction elements mounted on the track, an elongated carriage carried on said elements and holding them in substantially fixed predetermined relation to each other lengthwise of the door, and a horizontal crank arm near each end of the door and supporting the same from said carriage and having an upright trunnion journaled on the door and a depending trunnion journaled on the carriage and providing for movement of the door horizontally relative to the carriage and track, there being a keeper on the wall having an inclined open end slot receiving an upright trunnion on one of the crank arms when the door is moved to closed position to shift the door inwardly.

3,129,470
WINDOW SASH LATCH CONSTRUCTION
Michael Schneider, Hewlett Harbor, N.Y., assignor to Seasonmaster, Inc., Westbury, N.Y., a corporation of New York
Filed Nov. 14, 1960, Ser. No. 68,806
4 Claims. (Cl. 20—52)



1. A window construction having a master frame and a sash frame movable within said master frame and comprising a latch housing connected to said sash frame, a retractable latch movable within said housing, a channel in said latch, a spring captive in said channel, a tab formed integrally with said housing and extending inwardly into said channel, the major portion of said spring being recessed within said channel, one end of said spring engaging said tab, the other end of said spring engaging an inner wall of said channel, said spring normally urging said latch into locking engagement with said master frame, said latch being retractable against the action of said spring for releasing said latch from said master frame and permitting movement of said sash frame within said master frame, a hole in said housing located near said tab, said hole accommodating an insertable element extending into said channel to act as a substitute retainer for said spring when said tab is broken from said housing.

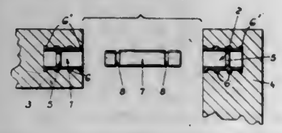
3,129,471
MAGNETICALLY OPERATED SHUTTER
Zyril A. Johnson, 437 S. 1st W., Logan, Utah, and De Lamar J. Gibbons, Box 35, Lewiston, Utah
Filed Oct. 24, 1961, Ser. No. 147,244
2 Claims. (Cl. 20—56.5)



1. In a window including an upright frame having a pair of upright and spaced-apart panes mounted therein, a shutter assembly mounted in said frame between said panes and including a plurality of movable slats at least some of which are operatively connected to a first actua-

tor, means mounting said first actuator for guided movement up and down along and in sliding contacting relation with the inner surface of one of said panes, a second actuator, means mounting said second actuator for movement up and down along and in sliding contacting relation with the outer surface of said one pane, said first and second actuators being magnetically responsive and at least one of said actuators having magnetic properties, said means mounting said actuators for movement comprising guides bonded to opposite sides of said one pane, said guides each comprising a body generally U-shaped in cross-section including a pair of generally parallel legs interconnected at corresponding ends by means of a bight portion and define a recess between the legs opening toward the adjacent side of said one pane, the free ends of the legs of each body being bonded to the corresponding side of said one pane with the bight portion of each body extending up and down said one pane.

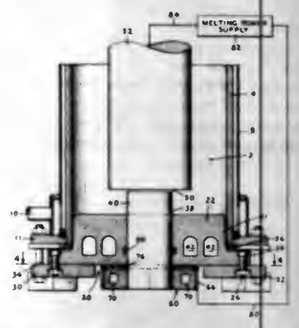
3,129,472
FITTING FOR DETACHABLY CONNECTING WOODEN PARTS OF ARTICLES OF FURNITURE
Erich Hensel, Richthofenstrasse 77, Detmold, Germany
Filed Jan. 22, 1959, Ser. No. 788,367
Claims priority, application Germany Jan. 25, 1958
9 Claims. (Cl. 20—92)



1. A fitting for detachably connecting wooden parts in knock-down furniture and the like, comprising an elongated sleeve member made of a resilient material and dimensioned at its outer surfaces to be insertable in a hole provided in one of said wooden parts for close association with the wall of said hole, said outer surfaces providing at least one outwardly extending annular elevation for engagement with said wall, a bonding agent being disposed between said wall and said sleeve member to immobilize the latter with respect to said one wooden part against axial torsion forces applied thereto after having been inserted in said one wooden part, said sleeve member being formed with an opening and at least one internal projection, and a prismatic bolt member made of a resilient material disposed in said opening and being formed with a groove therein, said projection having a nose bevelled on one side and engaging said groove so as to resist axial torsion forces applied to said bolt member, said bolt member having a cutaway area on the side thereof opposite said groove, said one wooden part being provided with a slot communicating with said hole in the region of said cutaway area when said bolt member is inserted therein so that extraneous manual force can be applied through said slot on said bolt member to disengage said nose from said groove and make said bolt member removable from said sleeve member.

3,129,473
THROUGH-PLUG MOLD STOOL
John W. Veil, Jr., Wyomissing, Pa., assignor to The Carpenter Steel Company, Reading, Pa., a corporation of New Jersey
Filed Nov. 9, 1960, Ser. No. 68,211
5 Claims. (Cl. 22—57)

1. A mold for electric arc casting of an ingot comprising, a vertically extending wall forming an opened end mold cavity, a base for receiving said wall and forming a closure at the bottom of said mold cavity, a hole in said base forming an opening through said base communicating with said cavity, a plug in said hole extending, at



one of its ends, into said cavity and means at the opposite end of said plug for attaching an electrical lead to said plug.

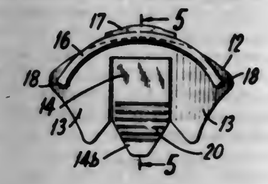
3,129,474
APPARATUS IN CONTINUOUS CASTING MACHINES HAVING A RECIPROCATING MOLD
Erik Allan Olsson, Zurichstrasse 66, Kusnacht, Zurich, Switzerland
Filed Nov. 22, 1961, Ser. No. 154,284
Claims priority, application Sweden Jan. 3, 1961
2 Claims. (Cl. 22—57.2)

1. The combination with a continuous casting machine having a reciprocating mold, of at least one cooling element at the outlet end of the mold and movable independently of the mold, said cooling elements wholly enclosing a casting leaving the mold, means for moving said cooling elements faster than the mold in the direction of casting to form a gap between the mold and the cooling elements, means for stopping said cooling elements to close said gap, means for moving said mold and cooling elements together as a unit in the direction opposite said casting direction, and at least one cooling water nozzle positioned to project cooling water onto a portion of a casting exposed by said gap during said movement of the mold and the cooling elements in the casting direction.

3,129,475
NECKTIE HOLDING DEVICE
Bernard R. Hodge, 752 West End Ave., New York 25, N.Y.
Filed July 19, 1961, Ser. No. 125,226
4 Claims. (Cl. 24—49)

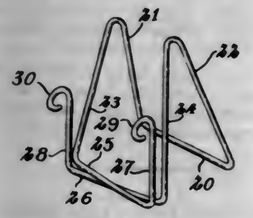
1. A necktie holder for attachment to a collar band, which comprises a molded plastic unit forming front and rear sections integral with each other, said rear section having a central portion and also having a pair of lateral

wings extending rearwardly from said central portion, the rear section also having an intermediate holding tab depending from said central portion and integral therewith, said wings being engageable with the outside of the collar band, the holding tab having a depending portion displaced rearwardly relative to said central portion of the rear section and being engageable with the inside of the collar band to secure the holder to said band, said front section being in the form of a bail rigidly connected at its opposite ends to said wings of the rear section to hold the bail in fixed relation to and directly in front of the rear



section, the bail and rear section curving rearwardly from their central portions toward said opposite ends but with the radius of said curvature of the rear section being substantially greater than the radius of said curvature of the bail, whereby the bail defines with the rear section a generally horizontally extending, fixed slot of crescent shape located in front of the rear section, said slot having a length substantially greater than its width and being of sufficient size for passage of a necktie therethrough in front of said rear section, whereby the slot is adapted for securing a necktie in knotted form on said bail.

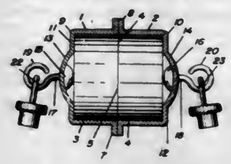
3,129,476
SPRING CLIP FOR GROUND GLASS TUBING JOINTS
Carl E. Sindlinger, Pagedale, Mo., assignor to Brunswick Corporation, a corporation of Delaware
Filed Apr. 12, 1962, Ser. No. 187,086
6 Claims. (Cl. 24—73)



1. A spring clip for ground glass tubing joints comprising two U-shaped wire portions having straight sides adapted to engage projections of a tubing joint and straight bottoms, said bottoms normally crossing each other, and a third U-shaped wire portion joining the two portions to form a continuous wire, said third U-shaped wire portion lying in a plane which forms substantial angles with said two U-shaped wire portions.

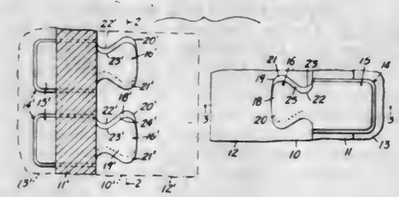
3,129,477
MAGNETIC CLASP
Mitsuo Mizuno, Osaka, Japan, assignor to New Kyoei Incorporation, Osaka, Japan
Filed June 21, 1962, Ser. No. 204,175
2 Claims. (Cl. 24—201)

1. A magnetic clasp coupling for jewelry, comprising a pair of opposed magnet holding clasp members each having a flat surface opposed to the flat surface on the other member and each having a recess therein opening out of the flat surface and opposed to the recess in the other member, said recesses each having a substantially flat bottom with a centrally located hollow therein, a magnet in each recess, the magnets each having a flat surface aligned with the flat surface on the clasp member and with the north pole of one magnet at the flat surface of one of the clasp members and the south pole of the other magnet at the flat surface of the other clasp member, and each



clasp member having a hole therethrough from said hollow in the bottom of said recess through the clasp member in a direction opposite to the direction in which the recess opens out of the flat face, and an engaging member extending through the hole in each clasp member and having means on the end thereof within said hollow for preventing the engaging member from being withdrawn through the hole and permitting limited pivoting and swiveling movement of said engaging member.

3,129,478
SEPARABLE FASTENER
Louis H. Morin, Bronx, N.Y.
(125 Beechwood Ave., New Rochelle, N.Y.)
Filed Feb. 2, 1962, Ser. No. 170,647
1 Claim. (Cl. 24—205.12)

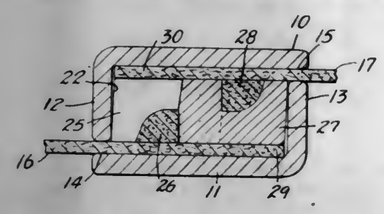


A separable fastener of the character defined comprising a pair of stringers, each stringer having a bead on one surface of the tape thereof, scoops secured to said bead and said surface of the tape in spaced relationship longitudinally of the stringer, each scoop including a mounting end portion engaging the bead of the stringer to which it is attached, a coupling end portion projecting in a direction parallel to the plane of the tape beyond said bead and comprising male and female coupling portions, means permitting said stringers to engage and disengage each other only when moving in a plane parallel to the plane of the tape of said stringer and the tape of each stringer including a portion projecting beyond the coupling end of the scoop sufficiently to cover the scoop of a companion stringer when the stringers are coupled together, said projetcing cover portion of the tape lying in the plane of the tape to which the scoops are attached.

3,129,479
SLIDE FASTENER
Louis H. Morin, Bronx, N.Y.
(125 Beechwood Ave., New Rochelle, N.Y.)
Filed Feb. 2, 1962, Ser. No. 170,648
5 Claims. (Cl. 24—205.12)

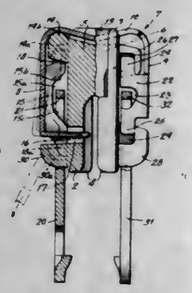
1. A slider for separable fastener stringers, said slider comprising a body having spaced walls having a flange at one side of each wall and having a wide flared end

portion and a contracted end portion, a web having an inner contracted end uniting said walls centrally of the wide flared end portion of said body, said flanges, in combination with said web, dividing the slider body into a double channel end at said wide end portion of the body, uniting in a single channel end at the contracted end portion of said body, said web having grooves at side portions thereof crossing each other at an inner contracted end of said web, one groove being arranged adjacent one wall of the slider body, the other groove being adjacent



the other wall of the slider body, the stringers for coupling and uncoupling by said slider body having scoops disposed on one surface only of each stringer, each stringer including an extended cover portion adapted to overlie scoops of a companion stringer when said stringers are coupled together in providing complete coverage of scoops of the coupled stringers, and said extended cover portions of the stringers being guided through the double channel end of the slider body by passage of said extended cover portions through said grooves in said web.

3,129,480
AUTOMATIC LOCK SLIDER
Alfred E. Carlile, Meadville, Pa., assignor to Talon, Inc., a corporation of Pennsylvania
Filed Feb. 28, 1963, Ser. No. 261,591
8 Claims. (Cl. 24—205.14)



1. In a slider for slide fasteners having a pair of spaced-apart wing portions connected at one end by a neck portion,

a substantially U-shaped member made of relatively thin resilient metallic material so as to provide a pair of spaced-apart attaching portions interconnected at one end by a transversely extending portion,

said member disposed around said slider with one attaching portion positioned on the outer side of each of said wing portions and with the transversely extending portion positioned adjacent the outer side of said neck portion,

at least one of said attaching portions having spaced-apart side walls having an irregular-shaped opposed openings therein centrally thereof,

a locking prong arranged on the outer end of one of said attaching portions,

one of said wing portions having an aperture therein into and through which said locking prong extends,

means for pivotally connecting one of said attaching portions to one of said wing portions,

a pair of spaced-apart outwardly extending lug-like portions arranged on the other of said wing portions,

said last attaching portion straddling said lug-like portions so that the side walls thereof are positioned to either side of the lug-like portions,

means carried by the side walls of said last attaching portion for slidably engaging the lug-like portions so as to permit longitudinal movement of said last attaching portion relative to said wing portion, and

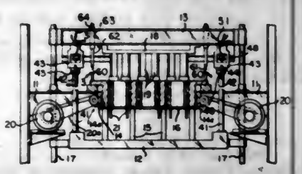
a pull member arranged on the outer side of each of said wing portions with each having a trunnion portion on one end thereof which is positioned in the respective openings in the respective side walls of the respective attaching portions between the same and respective wing portions.

3,129,481
DEVICE FOR CONSTRUCTING AND ERECTING BUILDING WALLS
Robert Joseph Sullivan, 1223 Cadieux, Grosse Pointe 30, Mich.
Filed Apr. 3, 1962, Ser. No. 184,900
8 Claims. (Cl. 25—1)



1. In a device for constructing and erecting a wall of a building, a platform having edge members disposed at the top, bottom and two sides thereof, supporting means disposed substantially along the longitudinal central portion of the platform, means rotatably retaining said supporting means for tilting the platform from horizontal to vertical position, spaced flange members abutting the inner face of said bottom edge member, and means secured to the supporting means and to said flange members for directly connecting the bottom of the wall to the supporting means.

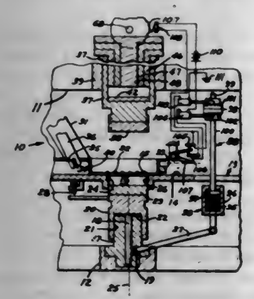
3,129,482
CONTROL SYSTEM FOR A CONCRETE BLOCK FORMING MACHINE
Harry A. Wellnitz, 231 N. Princeton Ave., Columbus 22, Ohio
Filed May 9, 1962, Ser. No. 193,565
2 Claims. (Cl. 25—41)



1. A block forming machine having a mold open at its top and bottom and means to vibrate the mold until block-forming material supplied thereto reaches a predetermined level, a pallet below the mold on which the block formed from the material rests, a pallet support frame to position the pallet to close the bottom of the mold, and

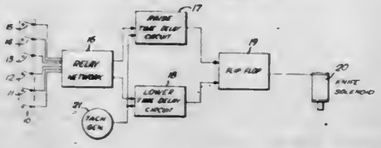
a pressure stripper head frame having a pressure stripper head movable downwardly and relatively to the pallet support frame to compact said material to the said level, block height sensing means on said pressure stripper head frame and said mold movable relative to each other during the compacting operation to measure the block height from the top of the pallet, first push rod means on said support frame, second push rod means on the pressure stripper head frame vertically disposed and projecting toward each other, one of said rod means being mounted on its associated frame for sliding movement relatively to the other rod means, and coupling means on the machine normally permitting said relative sliding movement of the said rod means and capable of coupling said rod means to prevent said relative sliding movement, said coupling means comprising a fluid-actuated cylinder and piston unit mounted on said frame coaxial with said sliding rod means, said cylinder and piston unit including a piston rod projecting therefrom toward an axially aligned end of said slidable rod means, control means mounted on the machine including said height sensing means, timed to actuate, upon said level being reached, the cylinder and piston unit to couple said push rod means and accordingly said pressure stripper head and pallet support frames against relative vertical movement and to unitarily move such coupled pressure head and pallet frame vertically relative to the mold, whereby the height of the formed block is not affected by the thickness of the pallet, said control means including a control valve for actuating said cylinder and piston unit, said slidable rod means comprising a rod slidably mounted in a bracket on said pressure stripper head frame, a bushing adjustably mounted in the bracket for slidably receiving the upper end of the rod, means for slidably retaining the rod in the bushing, said cylinder and piston unit being carried by the bracket with its piston rod projecting downwardly in coaxial alignment with the upper end of the rod, and a stop on the rod for engaging the lower end of said bushing.

3,129,483
TILE PRESS
Paul J. Weaver, Pasadena, Calif., assignor to True-Trace Corporation, El Monte, Calif., a corporation of Connecticut
Filed Mar. 1, 1963, Ser. No. 262,086
14 Claims. (Cl. 25—92)



1. A tile press comprising: an upper ram adapted to reciprocate along a vertical axis; a plurality of weights adapted to be sequentially dropped along said axis to impact on said upper ram; a lower die, a lower ram axially aligned with the upper ram and adapted to reciprocate the lower die along said axis; a sidewall which, with the lower die, forms an open-topped die cavity, the upper ram being so shaped as to enter the cavity to compact material therein; upper ram actuating means for lifting and forcing down the upper ram; lower ram actuating means for adjustably positioning the lower ram on the axis; a filler tray adapted to be moved laterally relative to the axis and over the cavity in order to fill the cavity with material to be compacted; tray actuating means for reciprocating the tray between positions over and away from the cavity; and weight actuating means for sequentially releasing the weights to fall upon the upper ram.

3,129,484
SEAM JUMPER CONTROL FOR CLOTH SHEARS
Lawrence Creigh Nickell, Ronceverte, and Raymond Baines Fertig, St. Albans, W. Va., assignors to Appalachian Electronic Instruments, Inc., Ronceverte, W. Va., a corporation of West Virginia
Filed May 15, 1962, Ser. No. 194,851
12 Claims. (Cl. 26—17)

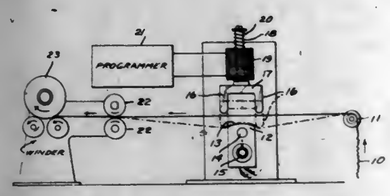


1. In a cloth shear of the type having means for propelling and guiding a seamed web of cloth, shearing means at a shearing zone in the path of travel of the cloth normally urged to a cloth shearing position, and shearing-suspending means for positioning the shearing means to suspend shearing action upon activation thereof; means for detecting the approach of a seam to the shearing zone and controlling said shearing-suspending means in timed relation thereto comprising a plurality of seam detecting elements aligned transversely of the cloth web at laterally spaced locations in the path of travel at a sensing zone spaced from the shearing zone to be momentarily actuated responsive to passage of a seam, a plurality of detector relays each connected to one of the seam detecting elements to be energized upon actuation of their associated seam detecting elements, a bistable multivibrator circuit having first and second stable states, means responsive to said first stable state for activating said shearing-suspending means to suspend shearing during the period of said first stable state, first and second time delay stages each including a one-shot multivibrator responsive to triggering signals to assume an unstable state and operative to automatically switch to a stable state a time delay interval following such triggering signals, means responsive to energization of any one of said detector relays for triggering the first time delay multivibrator to said unstable state, means for shifting said bistable multivibrator to said first stable state to activate said shearing-suspending means responsive to switching of said first time delay multivibrator to its stable state, means responsive to energization of all said detector relays and return of said seam detecting elements to non-actuated condition for triggering said second time delay multivibrator to its unstable state, means for shifting said bistable multivibrator to said second stable state responsive to switching of said second time delay multivibrator to its stable state, and adjustable resistance means for each of said time delay multivibrators for regulating the time interval between triggering thereof to their unstable states and switching to their stable states.

3,129,485
PRODUCTION OF NOVELTY BULKED YARN
Ewart H. Shattuck, Wilmington, Del., assignor to Joseph Bancroft & Sons Co., Wilmington, Del., a corporation of Delaware
Filed June 30, 1961, Ser. No. 121,021
9 Claims. (Cl. 28—1)

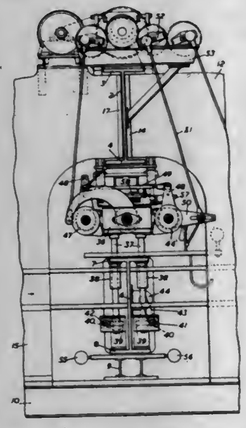
1. The method of making a variably bulked yarn composed of continuous filaments of a heat-settable material,

which comprises imparting an artificial crimp to said filaments, heat-setting said crimp in said filaments, placing said filaments under a tension adapted to substantially pull out the crimp and bring the filaments to straight form, temporarily setting the filaments in straight form under conditions such that the crimp is restored when the temporary straight set is relaxed, and heating selected areas only of said filaments while in such straight form



to a temperature adapted to effect a permanent set suited to cause the filaments to remain permanently in straight form and thereafter subjecting said filaments to a temperature less than said last mentioned temperature, but sufficiently high to relax the filaments and remove said temporary straight set in the nonselected areas whereby the crimp is restored in said non-selected areas while the filaments remain in straight form in said selected areas.

3,129,486
NEEDLE PUNCHING MACHINES
Brendan O'Byrne, Batley, England, assignor to William Bywater Limited, Leeds, England
Filed Feb. 21, 1962, Ser. No. 174,782
5 Claims. (Cl. 28—4)

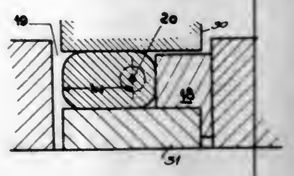


1. In a needle punching machine on a foundation base having a needle bed onto which an endless material to be needled is fed and above which a needle board is supported and arranged to be reciprocated relative to said bed to perform the needling operation, the combination of a top beam and a bottom beam extending the one above the other widthwise of the machine, a plurality of end frame assembly members of cantilever form each having their upper arms secured to the ends of said top beam with two of said end frame members at one end of the machine being opposed to one another and extending forwardly and rearwardly of said beams while another of said frame members at the other end of the machine extends rearwardly only to leave the front of the machine clear for insertion and removal of extra wide pieces of said endless material, means carried on said top beam for supporting said needle board and for reciprocating it vertically, and means carried on said bottom beam for supporting said needle bed.

3,129,487
GAS PLATING ELECTRICALLY CONDUCTIVE METALS ON FIBERS FOR ANTISTATIC PURPOSES
John R. Whitacre, Dayton, and Jack J. Bulloff, Columbus, Ohio, assignors to The Commonwealth Engineering Company of Ohio, Dayton, Ohio
No Drawing. Filed Apr. 12, 1961, Ser. No. 102,379
2 Claims. (Cl. 28—75)

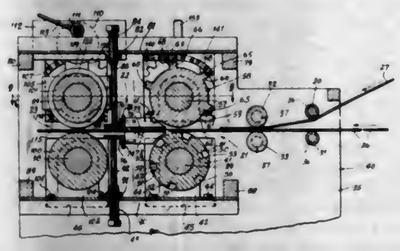
1. A method of treating fiber material having a tendency to accumulate static electric charges during weaving of the same into fabric, said method comprising depositing a thin continuous coating film of metal on said fiber, weaving the resultant treated fiber into a woven fiber product, and then subjecting the said woven fiber product to gaseous carbon monoxide while the fiber product is heated to between about 60 and 70° C. and under a pressure of approximately 50 atmospheres to convert the thin film of metal on the fibers to gaseous metal carbonyl and withdrawing the same to provide a metal free fiber product.

3,129,488
PROGRESSIVE FORGING OF MULTI-THROW CRANKSHAFTS
Helmut Robra, Mulheim (Ruhr), and Karl Heinz Deneke, Bochum, Germany, assignors to Schloemann Aktiengesellschaft, Dusseldorf, Germany
Filed May 4, 1961, Ser. No. 107,853
Claims priority, application Germany May 20, 1960
1 Claim. (Cl. 29—6)



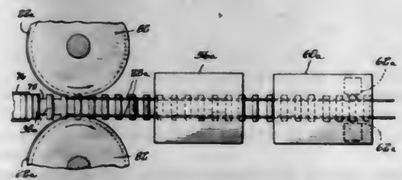
A method of progressively forging a crank-shaft from a round shaft blank having spaced journals and an enlarged portion therebetween, said method comprising the steps of clamping said journals to prevent radial movement thereof, engaging said enlarged portion with a punch at one side and substantially midway between said journals and displacing said enlarged portion from said one side radially in the direction of a crank throw a distance less than the final length of a crank throw and less than a distance causing deformation at the point of juncture between said journals and said enlarged portion on said one side, removing said punch and engaging said one side with a fixed abutment, pressing said enlarged portion from opposite sides in a direction at right angles to the direction of a crank throw to displace said enlarged portion substantially only in the direction of a crank throw and provide flats on opposite sides of said enlarged portion and rough finish the crank webs of the crank throw, confining the axially opposite sides of said crank webs, engaging said one side and said flats midway between said journals with a forked punch having a thickness substantially equal to the length of a crank pin and displacing the material engaged by said forked punch into engagement with a fixed die to substantially form a crank pin with the excess displaced material flowing into said crank webs to finish the same.

3,129,489
SPLICER
Harry Nelson, St. Louis, Mo., assignor, by mesne assignments, to Enamel Products, McKeesport, Pa., a corporation of Pennsylvania
Filed Mar. 16, 1959, Ser. No. 799,754
8 Claims. (Cl. 29—21.1)



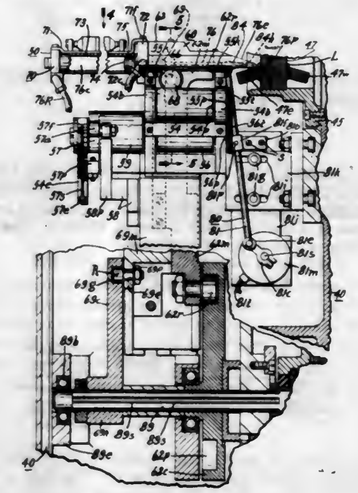
1. A splicing mechanism for splicing together a plurality of moving sheets of metal comprising; a pair of rollers between which the sheets pass; one of the rollers having a plurality of cutting teeth and the other a corresponding plurality of cutting cavities; said teeth and said cavities cooperating to cut tabs into the sheets and to bend the tabs toward the cavities; a pair of wipers between which the tabs pass which fold the tabs toward the metal; and a second pair of rollers between which the folded tabs pass for pressing the folds, the roller of the second pair which is on the same side of the sheets as the toothed roller having a plurality of grooves encircling its periphery the number and positions of which correspond to the number and positions of the rows of cutting teeth, and means for moving the second pair of rollers relative to one another.

3,129,490
CAPACITOR AND METHOD OF MAKING SAME
Karl E. Rollefson, Evanston, Ill., assignor to The Muter Company, Chicago, Ill., a corporation of Illinois
Filed Jan. 30, 1957, Ser. No. 637,189
6 Claims. (Cl. 29—25.42)



1. The process of manufacturing electric circuit elements which comprises positioning a succession of discrete elongated impedance elements in side-by-side spaced apart coterminous parallel relation, positioning a strip of material having transverse terminals integal therewith adjacent corresponding ends of said elongated impedance elements and transverse of the respective elements, positioning a like second strip having transverse terminals integral therewith displaced from the opposite corresponding ends of said impedance elements and parallel to the first-mentioned strip, all of said terminals thereby being precisely positioned parallel to one another and transverse of said impedance elements, the terminals attached to the two strips corresponding in number and spacing, aligning the terminals of the opposite strips with one another and with the impedance elements, and moving the strips and aligned terminals toward one another to assemble the aligned terminals with said impedance elements endwise thereof, and severing terminals from the strips subsequent to the assembly of the terminals with the impedance elements.

3,129,491
STATOR WINDING MACHINE MEANS
Paul B. Greene, Miamisburg, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 29, 1960, Ser. No. 11,654
10 Claims. (Cl. 29—33)



1. For use on stator coil winding machine means adapted to effect placement of coil wire into radially extending slots of dynamoelectric structure, mechanism for feeding insulating material as slot-closure means, pegging and the like into the slots previously fitted with coil wire therein, comprising, a head reciprocally movable into and out of a position adjacent to the radially slotted structure continuously supported on the coil winding machine means and having a channel extending longitudinally therein to an open end with a predetermined twist on sides thereof to be in alignment with at least one of the slots, a feeder rod means reciprocable in the channel for transfer of insulating material to the slot, and actuator means carried by said head such that operation thereof can effect movement of said feeder rod means for forcing the insulating material along said twist sides to facilitate transfer thereof to the slot as well as retracting movement of the feeder rod means away from the slot.

3,129,492
MILLING CUTTER
Albert Strasmann, Remscheid-Ehringhausen, Germany, assignor to Albert Strasmann, Präzisions-Werkzeug- und Maschinenfabrik, Remscheid-Ehringhausen, Germany
Filed Apr. 16, 1962, Ser. No. 187,680
Claims priority, application Germany Apr. 25, 1961
6 Claims. (Cl. 29—103)

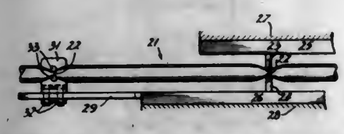
1. A milling cutter with relieved teeth, in which the teeth are arranged in circumferentially spaced groups of teeth, each of said groups of teeth comprising roughening teeth with a rounded crown and finishing teeth with a flat crown arranged alongside each other so that in each of said groups said roughening teeth and said finishing teeth alternate with each other, each tooth hav-

ing a cutting edge, the cutting edge of said roughening teeth respectively being located along helical lines and



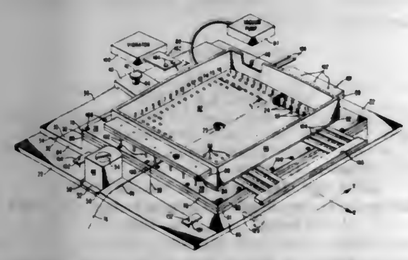
also the cutting edge of said finishing teeth respectively being located along helical lines.

3,129,493
METHODS FOR THE MANUFACTURE OF LIGHTWEIGHT STRUCTURAL MEMBERS
Lewis William Grubb, West Hobart, Tasmania, Australia, assignor to Charles Davis Limited, Hobart, Tasmania, Australia, a company of Australia
Filed June 20, 1961, Ser. No. 118,433
6 Claims. (Cl. 29—155)



1. A method of producing structural members of the kind specified comprising the steps of crimping a length of tubing at spaced intervals, flattening the tube at converging angles on each side of the crimps, bending the tube in alternate directions on said crimps to form a zig-zag lattice, inserting the bent and flattened portions on each side of the lattice, between the sides or previously formed chord members, and finally attaching the sides of the chord members to the flattened portions of the lattice to complete the assembly of the structure.

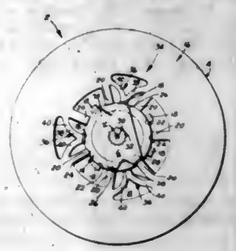
3,129,494
METHOD AND APPARATUS FOR WINDING MAGNETIC CORES
Norwood K. Perkins, Lexington, Ky., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed July 6, 1960, Ser. No. 41,165
10 Claims. (Cl. 29—155.5)



6. A device for supporting apertured magnetic cores for assembly with filaments inserted through the apertures of said cores to form a core plane, comprising a base plate, a plurality of support members individually rotatably mounted on axes normal to said base plate, the axes being located at the intersections of coordinate lines, each said support member having means for holding a core thereon in a position with the core aperture exposed for insertion of filaments therethrough parallel to the surface of said base plate, and means for simultaneously rotating a first group of said plurality of support members in a clockwise direction and a second group of said plurality of support members in a counterclockwise direction from a position in which the apertures of said cores thereon are aligned along the coordinate lines in one direction to a position in which said apertures are aligned along the cordinate lines in the other direction.

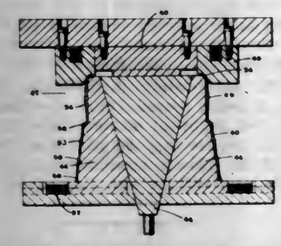
7. The method of assembling a plurality of magnetic cores and a plurality of coordinate windings to form a magnetic core array, each said core having at least one aperture therein, comprising the steps of supporting each of said cores on individual rotatable supporting members of a plurality of said members being relatively positioned to form a matrix of first and second coordinate intersecting rows, each said member being common to two of said intersecting rows, rotaing said members to align said core apertures in a first coordinate direction, threading first coordinate windings through said core apertures, rotating selected ones of said plurality of supporting members in a clockwise direction and the others of said plurality in a counterclockwise direction to align said threaded core apertures in a second coordinate direction, and threading second coordinate windings through said core apertures so that each said core is threaded with said first and second coordinate windings to form a core memory array.

3,129,495
MOTOR FIELD UNIT AND METHOD OF MAKING IT
Walter Kohlhagen, 818 Oakley Ave., Elgin, Ill.
Original application Apr. 26, 1960, Ser. No. 24,827, now Patent No. 3,068,375, dated Dec. 11, 1962. Divided and this application June 1, 1961, Ser. No. 114,213
5 Claims. (Cl. 29—155.56)



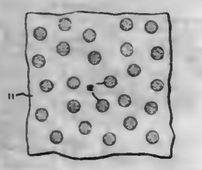
1. The method of forming from a flat plate of magnetic stock a polar unit of two integrated inner and surrounding outer field plates spaced apart in the direction of a rotor axis and with their respective outer and inner field poles coordinated with respect to said axis, which comprises, in a cutting die dividing and shaping the plate about a reference rotor axis thereof into flat inner and surrounding outer blanks of the outlines of the respective inner and outer field plates and with one blank also having spaced arms extending toward and into the other blank and being therewithin blanked from the latter to define conforming slots in said other blank; and forming the blanks into the spaced field plates and coordinating and permanently fixing the coordination of their poles, by relatively displacing in a forming die the blanks in the direction of said reference axis and also drawing the arms into coextension with and firmly jamming ends thereof in the conforming slots in the respective field plate to integrate both field plates, whereby the fixed pole coordination is accurate within die tolerance.

3,129,496
METHOD OF PRODUCING IMPROVED VEHICLE WHEELS
Darwin S. Cox, 10712 S. Bell Ave., Chicago 43, Ill.
Filed Dec. 8, 1959, Ser. No. 858,216
5 Claims. (Cl. 29—159.01)



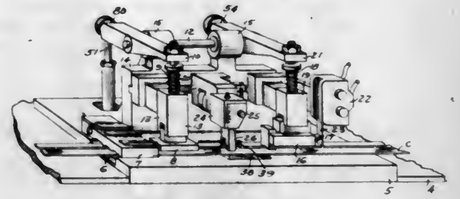
1. A method of forming a disk type vehicle wheel with integral tire supporting rim which comprises the steps of rolling a strip of metal between mill rolls of such determined surface configuration as to produce desired varied thicknesses throughout the strip width; said varied thicknesses being produced in the strip with a view to providing greater strength and thickness at the annular bend lines of the rim portion and desired thicknesses and tapers in determined areas of the disk portion of the wheel; thereafter cutting the strip to determined length, forming it into a cylinder with abutting edges, welding the abutting edges, trimming and normalizing the weld; radially expanding, by application of radially outward pressure, one end and a large portion of the axial length of the cylinder to a determined generally stepped and slightly conical form having its largest diameter adjacent said one end; said expanding so forming this portion of the cylinder, which later becomes the rim portion, as to place its thicker annular areas at the determined steps of the expanded portion and provide a shape which can be readily located and firmly held in position during subsequent forming, yet easily removable from subsequent forming die, then while firmly holding and confining the inner and outer surfaces of the expanded portion force the other end and remaining portion of the cylindrical blank to gather arcuately inwardly between pressure yielding die surfaces and into a plane generally surrounding and perpendicular to the axis of the cylindrical blank to reduce its diameter to within approximately 25% to 35% of the final desired center hole diameter, annealing the severely cold worked areas of the blank, then further gathering the material of said other end the remaining amount of approximately 25% to 35%, further forming the inwardly gathered portion and conically expanded portion to the desired wheel dimensions.

3,129,497
BERYLLIUM METAL PRODUCTS
Thomas L. Johnston and Choh Hsien Li, Hopkins, Minn., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed May 12, 1960, Ser. No. 28,732
4 Claims. (Cl. 29—182.5)



1. A beryllium metal product comprising a fine grained beryllium metal and from about 2% up to about 8% by volume of said beryllium metal of insoluble, non-reactive to beryllium at its sintering temperature, substantially spheroidized refractory particles, said particles being less than 10 microns in diameter, said product characterized in possessing greater strength, ductility, and machinability than beryllium metal of substantially the same chemical composition.

3,129,498
APPARATUS FOR GAPPING SLIDE FASTENER CHAIN
George W. Runnels, Meadville, Pa., assignor to Talon, Inc., a corporation of Pennsylvania
Filed May 9, 1962, Ser. No. 193,469
24 Claims. (Cl. 29—200)



1. Apparatus for gapping slide fastener chain having a pair of mated continuous interlocking filaments secured to the opposed edges of a pair of stringer tapes and having a series of gap spaces and a severed section of mated filament arranged therein at spaced apart intervals throughout the length of the chain with an end stop member secured to end of the mated filament at one end of each of said gap spaces comprising

a support,

means arranged on said support for securely clamping the chain intermittently as it passes therealong,

means for actuating said clamping means,

means for guiding and conveying the fastener chain into and through the apparatus along said clamping means,

means arranged on said support at a spaced distance from said clamping means, which cooperates with the end stop members as they pass successively therealong,

said last mentioned means adapted to control the actuation of said clamping means,

an oscillating member arranged on said support between said clamping means and said last means,

means for oscillating said member in timed relation with said clamping means,

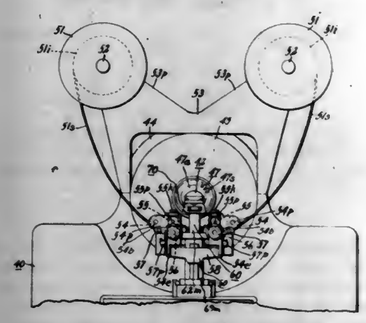
means carried by said oscillating member for gripping a severed section of mated coil and pulling it from the edges of the opposed tapes,

and means of actuating said gripping means in timed relation with said clamping means.

3,129,499
STATOR WINDING MACHINE MEANS
Paul B. Greene, Miamisburg, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application Feb. 29, 1960, Ser. No. 11,654. Divided and this application Oct. 16, 1961, Ser. No. 145,418
10 Claims. (Cl. 29—205)

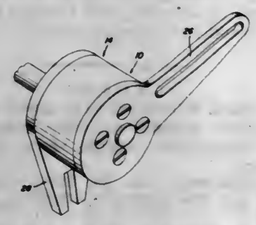
1. A stator winding machine means for placement of coil wire and slot closure means relative to a slotted lamination assembly, comprising, a machine base having a portion to support the slotted lamination assembly in predetermined positioning, a winding head portion carried by said base and including a frame means that extends laterally therefrom into a location axially adjacent

to the slotted lamination assembly, sprocket means journalled and supported by said frame means, a continuous chain including an eyelet portion to aid in wire distribution and operatively connected for powered movement in a loop path in either of reverse directions due to permanent, positive engagement of said sprocket means with said chain as supported by said frame means, a wire-feeding snorkel member journalled and supported also by said frame means so as to be movable about its own axis in a location centrally relative to said chain, a gear means positively interconnecting said sprocket means and said snorkel member for concurrent powered movement thereof, guide shoe means journalled by said snorkel member and including contoured end portions adapted



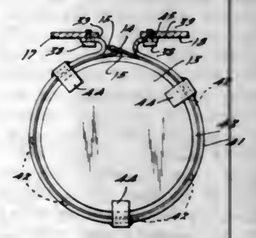
to fit on opposite sides of the slotted lamination assembly in a location corresponding substantially with path of powered movement of said eyelet portion of said continuous chain for powered placement of wire into predetermined pairs of slots, and an insulation inserting mechanism provided on said base power shiftable into a location longitudinally adjoining said frame means as well as axially on one side of the slotted lamination assembly such that a reciprocal feeder head of the mechanism can be positioned in longitudinal alignment with at least one slot into which slot closure means can be forced from said feeded head by a fluid-actuated shot-like direct axial shift thereof to force said slot closure means into the slot longitudinally to cover coil wire fitted therein.

3,129,500
JIG FOR ASSEMBLING RATCHET MECHANISMS
Marvin L. Brown, Graham, N.C.
(R.R. 1, Sanford, N.C.)
Filed Aug. 29, 1960, Ser. No. 52,519
3 Claims. (Cl. 29—256)



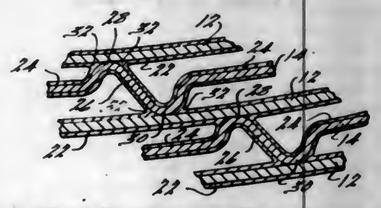
1. An assembly jig for use in connection with an object having side surfaces about which are spaced and mounted a plurality of extension elements for guided movement between retracted positions and outwardly extending positions projecting outwardly beyond the side surfaces of said object, said assembly jig including a frame-like body defining an opening adapted to receive said object when said extension elements are in their extended positions, said body including a plurality of abutment members disposed about said opening, means adjustably mounting said abutment members for guided movement between positions recessed at least partially in said body and positions spaced inwardly of said opening from said recessed positions, the direction of movement of said abutment members adapted to substantially coincide with the movement of said extension elements whereby the latter may be adjustably positioned and retained in retracted positions, and a transversely extending opening formed in said frame member communicating with the upper surfaces thereof and extending downwardly to a point spaced below the horizontal plane containing said abutment members wherein an arm carried by said objects may be positioned in said jig assembly with the objects projecting upwardly above the plane of the arm and the arm may extend through said opening.

3,129,501
BAND TYPE PISTON RING COMPRESSOR
John G. Wassner, Pontiac, Ill., assignor to Rebuilt Engine Products Company, Detroit, Mich., a corporation of Michigan
Filed May 8, 1961, Ser. No. 108,455
5 Claims. (Cl. 29—269)



1. In a device for applying a band to the head end of a piston for retaining the rings thereof collapsed within the annular grooves thereabout, a cylindrical collar having ends which are spaced apart, a pair of arms pivoted at one end and having attaching means at the other end for engaging the spaced ends of the collar, cam means on said arms for moving said arms together for drawing the ends of the collar toward each other and reducing the diameter thereof, means for adjusting said arms relative to each other for controlling the spacing thereof, and a band disposed within the collar with the ends at the opening, said ends having interlocking portions which may be engaged when the band is reduced in diameter sufficiently to collapse the piston rings.

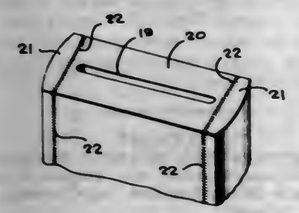
3,129,502
PROCESS FOR JOINING METALLIC PARTS
John H. Olson, Birmingham, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed Apr. 21, 1954, Ser. No. 424,680
13 Claims. (Cl. 29—470)



2. A process for joining metallic parts by a metallic bond comprising bringing said parts into joint forming

relationship whereby an elongated recess is formed between said parts having its apex in said joint, electroless metal plating said parts contiguous said joint in the presence of a catalytic metal comprising said parts by catalytic chemical reduction from an aqueous solution containing as essential active ingredients a nickel salt and a hypophosphite while maintaining said parts in said relationship and in contact with said solution whereby to substantially plate and bond said parts by the metal of said plating, said plate forming a substantially uniform and continuous deposit extending over the apex forming surfaces of said parts in said recess and forming a substantially fillet-like deposit in the apex of said recess, said plate metal bond consisting essentially of a nickel phosphorous alloy and said plate having a thickness of at least about 0.0003".

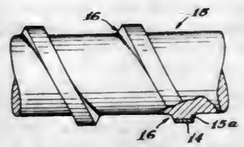
3,129,503
MINIMIZING EDGE CRACKING LOSSES
Edward J. Ripling, Flossmoor, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed Feb. 26, 1960, Ser. No. 11,213
4 Claims. (Cl. 29—528)



1. The method of producing a laminate metal strip having surface laminations separated from one another by an internal discontinuity extending parallel to the opposite surfaces of the strip, and having integral metal connections between said laminations at the marginal edge portions of the strip, which comprises providing wrought edge pieces of relatively ductile metal, providing a channel-forming core between the edge pieces, casting a less ductile metal between the edge pieces to become integrally bonded therewith and around the core whereby the core forms an internal channel in the billet extending along the same and in the direction from one edge portion toward the other and with the lateral edges of the channel being laterally spaced from the edge pieces, rolling the composite billet with a material in said channel to prevent welding together of the surface laminations being formed from the cast metal, wherewith the edge pieces provide integrated marginal portions of the metal strip and the cast metal portions therebetween provide said surface laminations nad integrated portions connecting the surface laminations, and removing marginal portions from the rolled strip along longitudinal lines spaced from and between the longitudinal edges of the rolled strip and the respective adjacent longitudinal edge of the rolled residue of said channel.

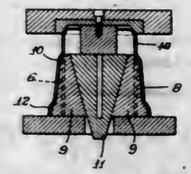
3,129,504
METAL FABRICATION
Joseph S. Ivan, Midland, Lawrence A. Gould, Bay City, and Robert C. Austin, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Oct. 24, 1960, Ser. No. 64,399
3 Claims. (Cl. 29—529)

1. A method of preparing a screw having at least one helically disposed hard surfaced land comprising (*a*) in a cylindrical metal bar having a diameter about as large as the desired screw, forming a helical groove in the cylindrical surface of said bar, said groove corresponding generally in size and location to the desired land; (*b*) depositing in said groove by a welding method a hard



surfacing alloy; (*c*) removing a sufficient portion of the metal bar and any undesired hard surfacing alloy to form a screw having a hard surfaced helical land, said land extending generally radially outward from the surface of the bar.

3,129,505
PROCESS OF MANUFACTURING ONE PIECE BRAKE DRUM SHELLS
Darwin S. Cox, 10712 S. Bell Ave., Chicago 43, Ill.
Filed May 9, 1961, Ser. No. 110,303
6 Claims. (Cl. 29—534)

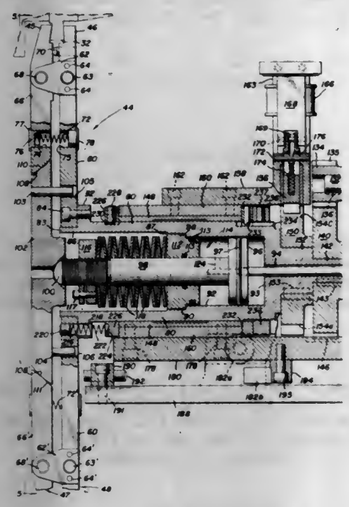


1. In a method of manufacturing brake drum shells, the steps of providing a rectangular plate, wrapping the plate into a cylinder having abutting edges, welding the abutting edges, trimming the weld, taper-expanding and thinning a large portion of the total blank length and inwardly curling and reducing the diameter of the remaining portion of said blank length to thicken same, said curling being accomplished by confining and firmly holding said taper-expanded portion while forcing said remaining portion inwardly between generally arcuately curved die surfaces and maintaining a yielding pressure on the portion being curled and thereafter flattening said curled portion into a substantially common plane perpendicular to the axis of the blank and forming a substantial segment of said large tapered and expanded portion into a generally cylindrical form surrounding said blank axis.

3,129,506
TRANSFER ARM FOR AUTOMATIC TOOL CHANGING SYSTEMS
Edward Hain, Chicago, Ill., assignor to Scully-Anthony Corporation, La Grange, Ill., a corporation of Illinois
Filed July 2, 1962, Ser. No. 206,938
13 Claims. (Cl. 29—568)

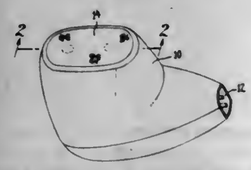
10. For use in an automatic tool changing system for transferring tools or the like from one position to another, a transfer arm assembly comprising a carriage movable axially between forward and rearward positions, a housing fixedly mounted on said carriage, a shaft rotatable within said housing, a transfer arm having a gripping member at each end thereof, said arm being secured to said shaft for rotation therewith about a fixed transverse axis midway between said gripping members, each of said gripping members comprising a pair of jaws adapted to be closed to grip a portion of a tool holder therebetween, actuating means for producing relative movement between

said jaws in a direction generally parallel to said transverse axis to effect gripping and release of a tool holder,



means for rotating said shaft and means for moving said carriage forwardly and rearwardly.

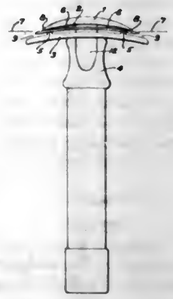
3,129,507
ORBITAL DRY SHAVER AND CUTTING HEAD THEREFOR
Ralph L. Tweedale, 29200 Wildbrook Drive, Southfield, Mich.
Filed Feb. 29, 1960, Ser. No. 11,522
4 Claims. (Cl. 30—43)



1. A self supporting removable cutting head for an electric shaver having a rotary driving means for the head comprising an oblong frame and a pair of bearings spaced apart along the longitudinal mid-line of the frame, a substantially flat guard plate secured to the frame, a mating cutter plate slidable along the guard plate, and a pair of cranks rotatable in said bearings and connected to impart orbital motion to the cutter plate and at the same time hold the cutter plate in association with the guard, and means forming a driving connection for each crank.

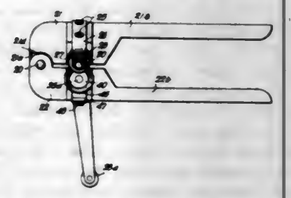
3,129,508
SAFETY-RAZOR HAVING COOPERATING MEANS ON THE CAP AND GUARD TO ADJUST THE BLADE CUTTING EDGES
Norman Leslie Dootson, P.O. Box 1622, San Francisco, Calif., assignor of one-fourth to Winifred M. Colombo, San Francisco, Calif.
Filed May 25, 1962, Ser. No. 197,622
1 Claim. (Cl. 30—73)

In a safety razor of the conventional type having a handle carrying a lower guard plate and a cap, between which a thin flexible double-edged razor blade is clamped by the handle, with the cutting edges of the blade extending outward beyond the cap; the improvement which comprises a pair of narrow fulcrum ridges on the lower guard plate spaced back of and parallel to the cutting edges of the blade, said cap having side edges overhanging said ridges and bearing upon the blade outward of said ridges, and a pair of longitudinally extending nar-



row fulcrum ridges on the under side of said cap projecting downwardly and spaced inward of and parallel to the lower fulcrum ridges, all whereby upon variously clamping the cap and lower guard plate together the blade may be convexly curved transversally to adjust the angle of its cutting edges.

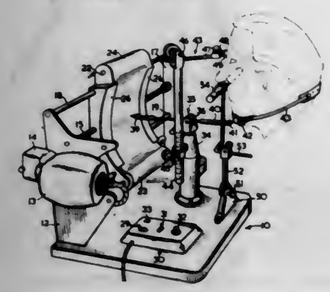
3,129,509
WEDGE ACTION CAN OPENER IMPROVEMENT
Robert E. McLean, Raytown, Mo., assignor, by mesne assignments, to Rival Manufacturing Company, a corporation of Missouri
Filed Mar. 13, 1962, Ser. No. 179,398
11 Claims. (Cl. 30—15.5)



1. In a can opener of the rotary drive wheel type, a first bearing means carried by a first can opener body portion, a first shaft carried by the first bearing means, a disc cutter carried on said first shaft in spaced relationship to the first bearing means, a first cone on the first shaft slightly spaced from the disc cutter and between it and the said first can opener body portion, a second bearing means carried by a second can opener body portion, a second shaft rotatably carried by the second bearing means, the second shaft having a slight longitudinal play in its bearing means, a cam rim engaging wheel carried on one end of the second shaft adjacent to the disc cutter, a second cone on the second shaft coaxial with and adjacent the can rim engaging wheel and between it and the second can opener body portion, the first and second cones having their cone faces oppositely disposed whereby to be engageable with one another when the first and second bearing means are adjacent one another, at least one of the bearing means movable toward and away from the other to permit insertion of a can rim between the wheel and cutter, and means for moving at least one of said bearing means relative to the other and engaging and disengaging a can rim between the disc cutter and can rim engaging wheel and the first and second cones with one another, the second cone positioned next to the can rim engaging wheel

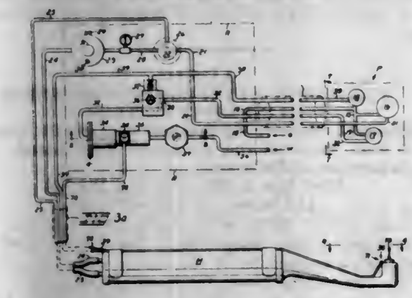
and normally receiving at least a portion of same in a recess in the face thereof.

3,129,510
MEANS FOR RECORDING ORAL PROPRIOCEPTION
Clifford John Griffin, Neutral Bay, New South Wales, Australia, assignor, by mesne assignments, to Fiscul Pty. Limited, Sydney, New South Wales, Australia, a company of New South Wales
Filed July 16, 1962, Ser. No. 210,051
16 Claims. (Cl. 32—19)



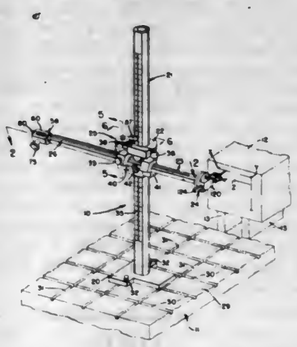
1. Apparatus for recording oral proprioception comprising a base plate, supports for a carriage mounted thereon, a carriage mounted for horizontal movement upon such supports, means on one of said supports to impart the said horizontal movement to said carriage, a surface moveable with the said carriage which is concavely curved about a horizontal axis, means on said carriage to mount a record sheet upon the said curved surface, a support, a marking member mounted upon the said support and adapted to make marks upon the said record sheet, said support being supported at or near the center of curvature of the curved surface for pivotal movement about both vertical and horizontal axes and extending beyond said pivot, a further member telescopically interengaging with an extended portion of the said marking member support, a chin clamp pivotally mounted upon the said further member for pivoting about a horizontal axis and adapted to be secured to the chin of a patient, and adjustable means mounted upon the said base plate adapted to locate the skull of said patient in position.

3,129,511
CONTROL SYSTEM
Norman C. Williams, Portland, Oreg., assignor to Power Brake Equipment Company, a corporation of Oregon
Filed Dec. 20, 1960, Ser. No. 77,082
7 Claims. (Cl. 32—28)



1. A system substantially as described for controlling the operation of an ultra high speed air turbine driven dental drill, said system including in combination a handpiece for rotatably supporting a dental drill, an air turbine within said handpiece for driving said drill, air jet means supported on said handpiece for projecting a jet of air at the burr end of said drill outside said handpiece, water jet means supported on said handpiece adjacent said air jet means for projecting a jet of water at the burr end of said drill outside said handpiece, a source of air under a sufficient pressure to drive said turbine or atomize said jet of water, a source of water under a sufficient pressure to cool or clean the teeth being worked on by said drill, a first air conduit connecting said turbine to said source of air, a water conduit connecting said water jet means to said source of water, water under pressure from said source thereof to said water jet means, a second air conduit for conducting air under pressure from said source thereof to said air jet means, a third air conduit for conducting air under pressure from said source to said second air conduit, said water conduit including in series between said source of water and said water jet means an adjustable water valve for setting the rate of flow of water therethrough and an on and off water valve for starting and stopping the flow of water therethrough, said third air conduit including in series between said source of air and said second air conduit an adjustable air valve for setting the rate of flow of air therethrough and a check valve to prevent any return flow of air from said second air conduit to said third air conduit, said first air conduit between said source of air and said air turbine including a filter for said air, means for putting oil in said air to oil said turbine and a lever operated reaction type air pressure modulating valve to increase the air pressure at said turbine and the speed of said drill in response to the movement in one direction of said lever, said second air conduit including between its junction with said third air conduit and said air source an on and off air valve operable in response to movement in the other direction of said lever when said modulating valve is closed to admit air under pressure from said source to said air jet means.

3,129,512
THREE DIMENSIONAL LAYOUT DEVICE
Frederick S. Schiller, Cuyahoga Falls, Ohio, assignor to Portage Machine Company, Akron, Ohio, a corporation of Ohio
Filed July 27, 1959, Ser. No. 829,936
3 Claims. (Cl. 33—18)



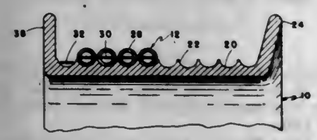
2. A layout device for use on a surface table of the character described, comprising:

(A) a base having a planar surface that is slidably supported on said surface table;

(B) an elongate upright standard fixed to and projecting from said base at right angles to said planar surface;

(C) a mounting bracket carried on said standard in longitudinally shiftable relationship therewith;
(D) an elongate cross arm carried by said bracket in longitudinally shiftable relationship therewith;
(E) scribing means carried by said cross arm adjacent one end thereof and including
(1) a socket head rotatable around the longitudinal axis of said cross arm relatively of said cross arm,
(2) an elongate shank
(*a*) carried by said socket head in a shiftable radially projecting condition with respect to the axis of said cross arm,
(3) a scribing instrument
(*a*) carried by the projecting end of said shank
(1) whereby said scribing instrument may pass through concentric circles having varying diameters with respect to the axis of said cross arm upon rotation of said socket head,
(4) first indicia carried by said shank
(*a*) whereby the diameter of said concentric circles can be predetermined,
(5) second and third indicia carried by said cross arm and said socket head respectively on adjacent edges thereof
(*a*) whereby the amount of arcuate movement of said scribing instrument can be measured upon rotation of said socket head.

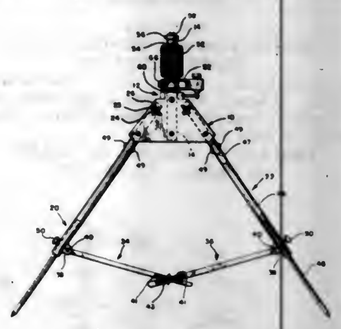
3,129,513
REEL AND SELF-DRAINING SAMPLER TUBE ASSEMBLY
John S. Porter, Escondido, Calif.
(14134 Midland Ave., Poway, Calif.)
Filed June 5, 1957, Ser. No. 663,663
7 Claims. (Cl. 33—126.4)



1. A liquid sampler and reel assembly comprising: a cylindrical spool reel having an external curved surface with a spiral groove thereon; a liquid measuring tube wound on said reel with its convolutions in said groove; said tube being transparent and having a calibrated element therein extending throughout the length of the tube; said groove being of sufficient length to accept the total length of said tube; one end of said reel having insignia thereon indicating that that end is the top of the reel when properly laid down for draining; and the other end of the reel defining a base extending in a plane normal to the axis of the spiral groove; one end of said tube being secured to said reel at a point in said groove remote from said base, whereby the tube is self-draining when the reel, with the tube wound thereon, is laid down with said base on a horizontal surface.

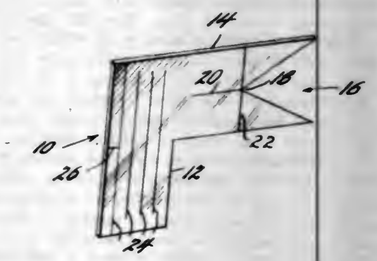
3,129,514
LAND MEASURING CALIPER
Orval D. Lintner, Rensselaer, Ind.
Filed Sept. 29, 1961, Ser. No. 141,706
1 Claim. (Cl. 33—149)

A registering caliper, comprising: a pair of legs; fastening means connecting one end of said legs together; handle means rotatably mounted on said fastening means; abutment means connected to said fastening means, said abutment means being spaced outwardly from the rotational axis of said handle means; a counter fastened to said handle means; and a tongue pivotally mounted on said counter, said tongue actuating said counter whenever said



pivotal movement occurs, and said tongue contacting said abutment means to pivot said tongue and thereby actuate said counter at least once during each complete revolution of said handle means with respect to said fastening means.

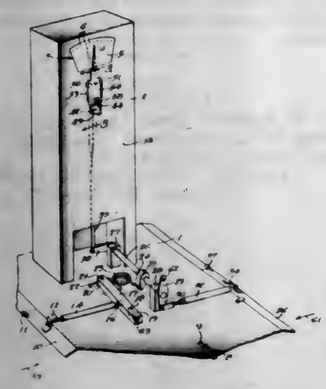
3,129,515
GUIDE FOR EMPLACEMENT OF INSIGNIA
Charles Edmund Best, Ironwood, Mich., assignor to Atlas Crystal Works, Covington, Tenn., a corporation of Tennessee
Filed June 19, 1962, Ser. No. 203,576
11 Claims. (Cl. 33—180)



7. A template for spotting insignia on articles of uniform, comprising an L-form, transparent, planiform element, having a first leg, and a second leg, each having parallel sides and of constant width, and arranged in mutually perpendicular relationship, said second leg having a V notch in its outer end edge with edges meeting the side edges of said second leg in acute angles, and meeting in a vertex located midway of the width of said second leg.

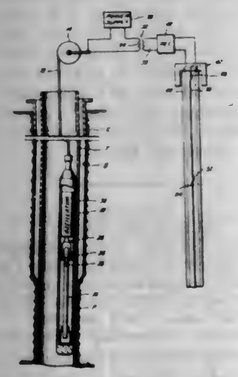
3,129,516
RECORDING ATTACHMENT FOR WHEEL ALINEMENT TESTERS
Maurice D. McCormick, Prospect Heights, Ill., assignor to Bear Manufacturing Company, Rock Island, Ill., a corporation of Delaware
Filed Apr. 2, 1962, Ser. No. 184,328
11 Claims. (Cl. 33—203.14)

1. In vehicle wheel scuff testing means having scuff determining means engageable by the vehicle wheels and reset means engageable by the vehicle wheels in advance of the determining means for resetting the same to zero; the improvement comprising a record card holder having operative drive connection with the scuff determining means for movement therewith from a zero position to scuff indicating positions, recording means adjacent the path of movement of said holder and located at a zero position relative thereto when the determining means and said holder are set to zero, and actuating means for



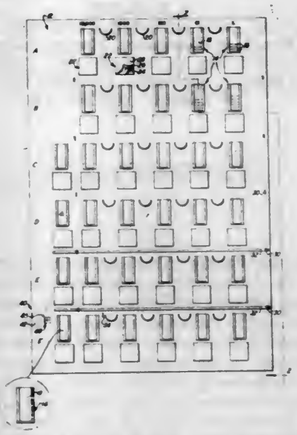
said recording means engageable by the vehicle wheels after their engagement with the determining means for causing said recording means to record the determined scuff on a card held by said holder.

3,129,517
MEANS FOR DETERMINING THE INCLINATION OF WELL PIPES
Cullen J. McWhorter, Houston, Tex., assignor to Houston Oil Field Material Company, Inc., Houston, Tex., a corporation of Delaware
Original application June 25, 1959, Ser. No. 822,903, now Patent No. 3,039,544. Divided and this application Sept. 6, 1960, Ser. No. 59,134
5 Claims. (Cl. 33—205)



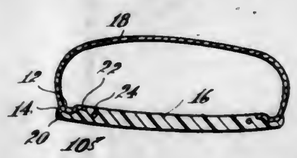
1. An inclinometer comprising:
(*a*) an elongate liquid container,
(*b*) a non-compressible liquid positioned in said container,
(*c*) a first gaseous pressure means acting on the top of said liquid in the container,
(*d*) a second gaseous pressure means acting against the second end of said liquid in the container, said second pressure means being greater than the first pressure means whereby the liquid has a substantially constant vertical head, and
(*e*) an electrical means for indicating a change in the angular position of said container relative to the vertical.

3,129,518
METHOD OF AND APPARATUS FOR TEACHING MATHEMATICS
Robert E. Burris, 14121 London Lane, Rockville, Md.
Filed Sept. 21, 1961, Ser. No. 139,643
9 Claims. (Cl. 35—31)



1. A mathematics visual teaching aid comprising a base member, a plurality of receptacles carried on said base member, and a plurality of equally dimensioned stackable pieces, each of said receptacles being disposed on said base member in horizontally and vertically aligned spaced relation to other of said receptacles to provide a plurality of horizontal and vertical rows of receptacles, each of said receptacles having a longitudinally disposed elongate opening therein, each of said receptacles being dimensioned to receive a maximum of nine pieces in stacked relation, and a plurality of retaining means for supporting at least one of said pieces, each of said retaining means being disposed adjacent a different two of said receptacles disposed in side-by-side relation to serve as memory devices for retaining a piece indicative of a number to be carried-over during a mathematical operation.

3,129,519
SHOE SOLE ATTACHING MEANS
Henry Hardy, Cambridge, Mass., assignor to International Vulcanizing Corporation, Boston, Mass., a corporation of Massachusetts
Filed Mar. 20, 1961, Ser. No. 96,869
3 Claims. (Cl. 36—14)



1. A shoe comprising an upper and bottom element bonded thereto, said bottom element being comprised of a moldable composition of substantially uniform thickness, said bottom element having an integral marginal flange, the lower surface of which is a continuation of the lower surface of the bottom element, said flange having an upper surface situated in a plane between the upper and lower surfaces of the bottom element, the peripheral edge of said flange forming a narrow feather-like face portion, and said upper extending downwardly to the upper surface of the flange and having a turned

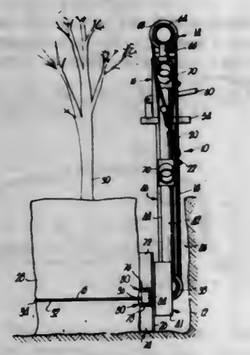
in portion secured to said upper surface of the flange, leaving only the narrow feather-like face portion of the flange exposed, said turned in portion of the upper being situated below the upper surface of the bottom element.

3,129,520
ONE-PIECE MOLDED SOLE FOR WELT SHOES
Herbert Funck, Haidelweg 20, Munich-Pasing, Germany
Filed Dec. 19, 1960, Ser. No. 76,672
Claims priority, application Germany Dec. 17, 1959
10 Claims. (Cl. 36—28)



1. In a shoe having an outsole, an upper and a welt for securing the outsole to the upper, said welt having upper and lower surfaces, an inturned lower margin on said upper attached to the upper surface of the welt, said outsole comprising a one-piece body of flexible material having a fore part, a shank and a heel, at least the fore part of said outsole being provided with a peripheral portion and a central prominence lying within said peripheral portion and coextensive therewith and constituting a downwardly opening cavity, said peripheral portion and central prominence each having upper and lower surfaces, the lower surface of the welt being attached to the upper surface of the peripheral portion, the distance between the upper surface of said central prominence and the upper surface of said peripheral portion being substantially equal to the combined thickness of the welt and the inturned margin of the upper, and a plurality of downwardly extending projections located within said cavity and secured to the lower surface of the central prominence for supporting the shoe on the ground.

3,129,521
APPARATUS FOR USE IN REMOVING PLANTS FROM THE SOIL
Allen E. Pollock, 3517 Holmes, Kansas City, Mo.
Filed Dec. 26, 1962, Ser. No. 247,241
4 Claims. (Cl. 37—2)



1. Multiple purchase block and tackle structure for severing a column of earth comprising:

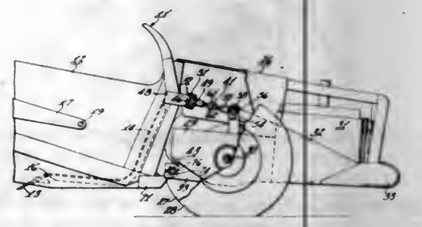
a support;

a standing block and a running block carried by said support, each provided with sheave means;

a fall provided with a bight, a pair of running ends rove over said sheave means and secured to the support; and

jack mechanism carried by the support and coupled with the running block for shifting the latter to haul on said fall, whereby to constrict said bight and thereby pull the latter through the column transversely thereof when said bight is looped around the column and said support is in engagement with the latter.

3,129,522
EARTH MOVER
Harvey W. Rockwell, Cedar Rapids, and Dale W. Hawk, Marion, Iowa, assignors to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Dec. 22, 1961, Ser. No. 161,481
16 Claims. (Cl. 37—129)

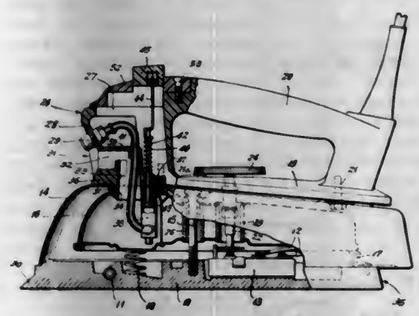


15. An earthmover comprising: a bowl unit having a transverse cutting edge, a draft frame having longitudinally extending legs at opposite lateral sides of said bowl unit, means pivotally connecting said legs to said bowl unit for relative pivotal movement about a first transverse axis between raised and excavating positions, a single axle unit at the rear of said bowl unit having a pair of wheels mounted thereon for rotation about a second transverse axis spaced rearwardly of said first axis, a push block secured to said single axle unit and extended to the rear thereof, a pair of upper fastening means interconnecting said units, a pair of lower fastening means interconnecting said units, one of said pair of fastening means including pivot connections connecting said units on a third transverse pivot axis intermediate said first and second axes, the other of said pair of fastening means each including an adjustable link operable to adjust the elevation of said push block by pivoting said single axle unit relative to said bowl unit about said third transverse axis independently of relative pivotal movement of said bowl unit and draft frame about said first axis.

3,129,523
ELECTRIC IRONS
Lloyd F. Taylor, Fairfield, Conn., assignor, by mesne assignments, to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut
Filed Aug. 24, 1962, Ser. No. 219,275
2 Claims. (Cl. 38—78)

1. An electric iron comprising a soleplate; a hollow casing secured to the soleplate; a water reservoir suspended in the casing substantially out of good heat-conducting relation with the soleplate and the casing; a superstructure secured to the casing and having a handle section and a forward section, the latter having a neck extending through aligned apertures in the casing and the reservoir into the reservoir, and an enlarged portion seating on the casing, the forward section having a passage open at the front of the iron and extending into the reservoir to receive and guide water to the reservoir; a vertically disposed pump cylinder carried by said forward section, extending into the reservoir, and having adjacent the bottom thereof an intake opening provided with a check valve and a delivery opening; a forwardly and downwardly directed spray nozzle carried by an external wall of said forward section; a conduit connecting said delivery

opening in the pump cylinder with said spray nozzle; a vertically movable piston in said cylinder; and means for operating said piston comprising a finger piece slidably mounted in said superstructure, means for connecting the finger piece with the piston for movement in one direction, and a spring for moving the piston in return direc-



tion, the forward section having an opening at the top whereby the nozzle, conduit, pump cylinder and piston may be conveniently assembled on the forward section which may then be mounted as a unit on the casing, and a cover plate secured to the handle section for closing the open top of said forward section.

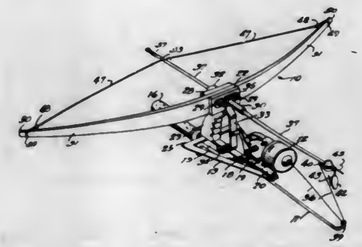
3,129,524
PICTURE FRAME
Lamar E. Hayslett, 405 Lafayette St., Shelbyville, Tenn.
Filed Aug. 25, 1961, Ser. No. 133,946
17 Claims. (Cl. 40—152.1)



1. A free-standing structure for displaying a picture or the like, said structure comprising: parallel-disposed, spaced apart rocker elements; frame-defining means between said elements; back means between said rocker elements parallel to said frame-defining means and spaced rearwardly therefrom to define a picture-receiving slideway; a bottom element between said rocker elements, said rocker elements, said frame-defining means, said back means and said bottom element being formed from a single piece of foldable sheet material; and a horizontal brace of substantial mass relative to the mass of the remainder of said structure secured in said structure between said rocker elements and enclosed by said bottom element at or below the rocking center of the remainder of said structure and rearwardly of the plane defined by said slideway.

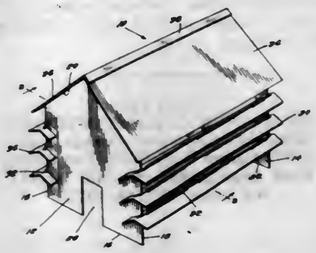
3,129,525
BOW CASTING DEVICE
Roy K. Lewis, 3530 Cedar Springs, Dallas, Tex.
Filed Nov. 22, 1961, Ser. No. 154,197
2 Claims. (Cl. 43—19)

1. In a fishing line casting device adapted for attachment to a conventional fishing rod having a handle and a reel seat on said handle, in combination, a frame having a supporting bracket detachably secured to said reel seat, the said frame lying in a plane parallel to said rod and extending forwardly of said reel seat, a fishing reel having a line wound thereon mounted on the forward end of said frame above said rod in normal operative position, a line guide mounted on the rod, a grip handle secured to said frame rearwardly of said reel and having its axis perpendicular to said frame, an archer's bow rigidly attached to the upper end of said grip handle and



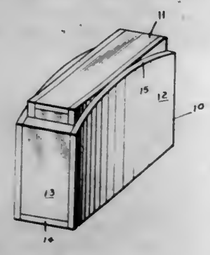
transversely thereof, the said bow being braced by a bow string for projecting a shaft therethrough intermediate its ends, a tubular guide for a shaft extending through said bow, and a shaft in said guide having means on one end for engagement by the bow string and means on its opposite end for attaching a fishing lure connected to said line, the said line passing from the reel thru the line guide to its attachment on the shaft.

3,129,526
TOY HOUSE CONSTRUCTION
Gladys Pamula, 123 1st St., East Providence, R.I.
Filed Oct. 23, 1961, Ser. No. 146,966
1 Claim. (Cl. 46—21)



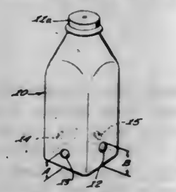
A toy house construction comprising a pair of spaced uniplanar end walls, each having a bottom edge, side edges and a top edge, each of said end walls having a plurality of slots extending inwardly and downwardly from each side edge, said slots each being of substantially the same length with the slots of one end wall in registry with the slots of the other end wall, a plurality of elongated louvers slidably engaged in said slots with each louver extending from one slot in one end wall to the registered slot in the other end wall, said louvers each being downwardly bent along a longitudinal axis located substantially at the side edges of said end walls, whereupon said louvers assume an inverted V-shape configuration in transverse cross section, and a roof gravitationally positioned on the top edges of said end walls to cover said house.

3,129,527
TURKEY CALL
Taylor Z. Williams, 401 James St., Flemington, Pa., assignor, by mesne assignments, to Taylor Z. Williams and Wilbur Williams, Flemington and Smethport (respectively), Pennsylvania
Filed Sept. 16, 1960, Ser. No. 56,460
1 Claim. (Cl. 46—177)



A bird call comprising a first open, generally rectangular box and a second open, generally rectangular box made of sheets of cedar wood, the side edges of said boxes being curved upwardly and having sharp edges, and a piece of slate, said slate being adapted to be held in a hand and drawn over said sharp edges on said first box to imitate the sound of an adult turkey, said second box being adapted to closely interfit into said first box with the outer edges of the sides and ends of said second box in close proximity to the inside edges of the sides and ends, respectively, of said first box and the curved edges of said second box disposed in close proximity to the inside surface of the bottom of said first box and the outside surface of the bottom of said second box being substantially tangent to said curved edges of said first box, thereby forming a carrying case, said slate being adapted to be disposed in said carrying case, said second box being adapted to be used alternately with said first box, said second box vibrating at a higher frequency when said slate is rubbed over said sharp edges on said second box than said first box vibrates when said slate is rubbed thereon, producing a higher pitched sound imitating the call of a young or female turkey.

3,129,528
CONTAINER CAP AND WHISTLE
Richard L. Gausewitz, Orange, Calif. (11592 Forum Way, Santa Ana, Calif.)
Filed Aug. 2, 1962, Ser. No. 216,012
4 Claims. (Cl. 46—178)

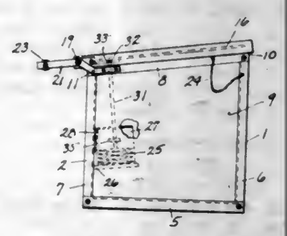


4. A whistle cap, comprising a screw cap having a generally radial wall and an internally-threaded skirt portion, and a disc disposed in said cap adjacent said wall and having a diameter larger than the inner diameters of the threads in said skirt, said disc being unconnected to said cap, said cap and disc being shaped to define a whistle chamber therebetween and having registered central openings communicating with said chamber.

3,129,529
PROCESS OF TREATING TREES
Joseph F. Rumsey, Jr., 1708 W. Main St., Oklahoma City, Okla., and Floyd Trimble, Oklahoma City, Okla. (3324 Homewood Drive, Memphis 8, Tenn.)
No Drawing. Filed Apr. 3, 1961, Ser. No. 99,993
4 Claims. (Cl. 47—2)

1. A method of treating a plant to protect the same from frost damage which comprises coating said plant with an emulsion of wax dissolved in an organic solvent selected from the group consisting of petroleum hydrocarbons having a boiling range in the kerosene range and aliphatic alcohols containing from 5 to 9 carbon atoms, water, and a surface active agent, wherein the surface active agent varies from 1.0 to 10.0 percent based upon the amount of organic solvent present, characterized further in that the wax has a melting point varying from 70 to 120° F.

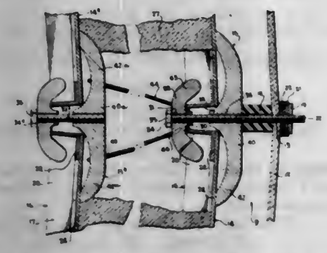
3,129,530
AUTOMATIC HOT BED
Frank R. Anderson, % The Richard Co., Baldwin St. Extension, Meadville, Pa.
Filed Jan. 24, 1962, Ser. No. 168,372
1 Claim. (Cl. 47—19)



A hot bed having front, back and side walls, the side walls being glassed and having upper edges inclined upwardly from front to back with the ends substantially flush with the upper edges of the front and back walls, the back wall being higher than the front wall and both the back and front walls being solid, a glassed top frame closing against the upper edges of the front, back and side walls, means hinging the top frame about an axis offset to the front of the upper edge of the front wall, a thermostat bellows within the hot bed adjacent the front wall, brackets fixed to the top frame and projecting in front of the hinge means, a counter balance weight carried by the brackets in front of the hinge means, and a connection from the thermostat bellows to the top frame for positioning the top frame relative to the upper edges of the walls.

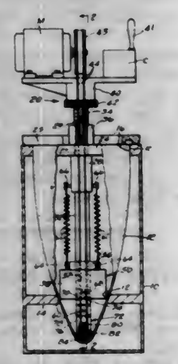
3,129,531
REINFORCED BUILDING STRUCTURE
Robert Connor, 649 Hackensack St., Carlstadt, N.J.
Filed Nov. 14, 1961, Ser. No. 152,281
5 Claims. (Cl. 50—52)

2. A shelter construction comprising outer, intermediate and inner generally hemispherical walls disposed concentrically one within the other and spaced from each other, each of said intermediate and inner walls comprising a plurality of triangular box-like members, each of said members including a triangular plate, a triangular frame formed of angle bars joined at their ends, said plate being secured to coplanar sides of said bars with other sides of said bars defining side walls of said member, said members being disposed in a generally hemispherical array, clamping assemblies joining the several members together, cables joining the clamping assemblies in the inner wall to respective flexible clamping assemblies in the inner wall, a third hemispherical wall made of sheet material concentrically surrounding the first wall, and spacer means securing the first and



third walls together, said clamping assemblies being arranged to absorb vertical, horizontal and in-between shocks.

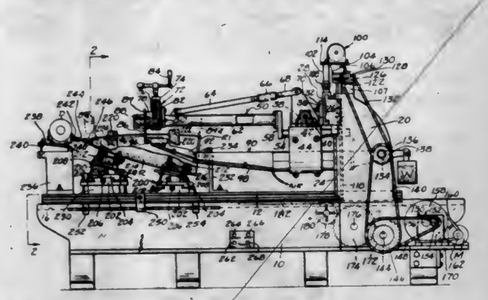
3,129,532
GRINDING MACHINE
Frank Cooke, North Brookfield, Mass., assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts
Filed Jan. 31, 1962, Ser. No. 170,089
6 Claims. (Cl. 51—98)



1. Apparatus for machining a portion of the inner surface of a radome open at one end and having a circular cross section reduced to the other end to a nose portion with a substantially spherically contoured inner surface, said apparatus comprising a rotatably mounted circular cutting tool convexly shaped transversely of its peripheral surface, spaced coaxial positioning means adapted to engage the internal surface of a radome, means slidable relative to and rotatable within said spaced coaxial positioning means for supporting said cutting tool, means operable to feed said cutting tool toward the spherically contoured inner surface of a radome, and drive means operable to rotate said cutting tool.

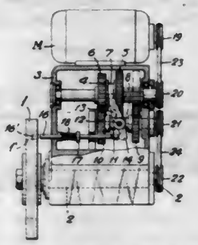
3,129,533
GRINDING MACHINE
Frank Cooke, North Brookfield, Mass., assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts
Filed Jan. 31, 1962, Ser. No. 170,067
10 Claims. (Cl. 51—101)

1. Apparatus for machining the internal surface of a hollow thin walled elongate workpiece symmetrical about a central axis and having a longitudinally curved external surface, comprising means for supporting such a workpiece with its central axis in a fixed predetermined attitude, means for rotating such a workpiece about its central axis, a supporting pivot movable transversely relative to an elongate workpiece supported upon said means for supporting a workpiece, a supporting member pivotally mounted upon said supporting pivot including first and second elongate portions projecting therefrom, a cutter means mounted at the outer extremity of the first said portion, a follower means mounted at the outer extremity of the second said portion spaced from



and in opposed relation to said cutter means, a drive means operable to produce relative longitudinal movement between a workpiece and said cutter means and coordinated relative transverse movement between a workpiece and said supporting pivot for said pivotally mounted supporting member, whereby the internal surface of a workpiece may be finished by said cutter means to provide a workpiece wall of uniform predetermined thickness.

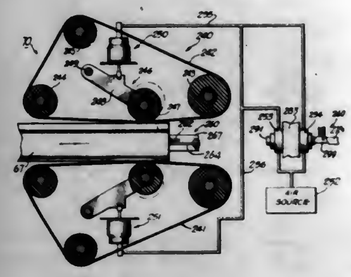
3,129,534
SAFETY APPARATUS FOR GRINDING MACHINE
Shigekichi Miyabayashi, Nagoya-shi, Aichi-ken, Japan, assignor to The Nippon Toki Kaisha Ltd., Nagoya-shi, Aichi-ken, Japan, a corporation of Japan
Filed Oct. 5, 1962, Ser. No. 228,661
Claims priority, application Japan Oct. 10, 1961
1 Claim. (Cl. 51—134.5)



In a grinding machine, a gear box, a vertical grinding wheel rotatably mounted on said box, a driven shaft with at least two gears thereon operatively connected to said wheel to rotate it, a splined drive shaft with an integrated gear body slidably mounted thereon for engaging one of said two gears at one time, and the other of said two gears at another time to vary the speed of said wheel, a motor drive operatively connected to said splined shaft to drive it, a lever shaft, a gear change lever arm for sliding said gear body on said splined shaft pivotally connected to said lever shaft to swing in a vertical plane, said arm having an upper end adapted to engage said gear body and a lower free end, a horizontal safety pin with an outer end adapted to intercept the vertical plane of said wheel and an inner end adapted to engage the lower free end of said arm, biasing means urging said inner end against said lower end, and handle means operatively connected to said lever arm to simultaneously pivot its

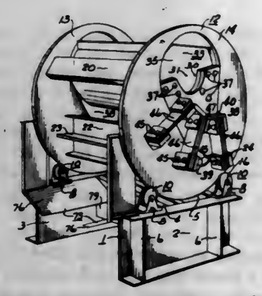
upper end in a direction away from said wheel and its lower end toward said wheel to position the pin outer end across the outer circumference of said wheel.

3,129,535
METHOD AND APPARATUS FOR GRINDING RAILS
Robert E. Slattery, Rockford, Ill., assignor to Chemetron Corporation, Chicago, Ill., a corporation of Delaware
Continuation of application Ser. No. 808,200, Apr. 22, 1959. This application Apr. 25, 1962, Ser. No. 193,036
32 Claims. (Cl. 51—140)



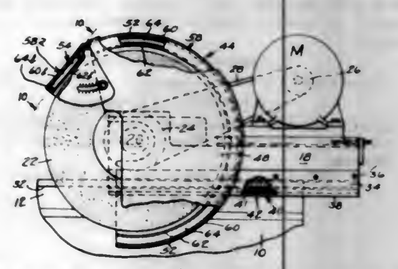
1. Apparatus for cleaning spaced apart portions located near its opposed ends of a rail section moving along its longitudinal axis, said apparatus comprising a fixedly positioned grinding device, control means for rendering said grinding device alternately effective and ineffective to grind the rail, means actuated by movement of the leading end of said rail section to the grinding device for actuating the control means so that the grinding device is rendered effective for a predetermined period to grind a portion of the rail section located near its leading edge, said predetermined period being much shorter than the time required for the rail section to move past the grinding device, and means actuated by movement of the trailing end of the rail section to the grinding device for actuating the control means in order to render the grinding device effective to grind a portion of the rail section near its trailing end.

3,129,536
ROTARY TUMBLER
William V. Spurlin, Indiana, Pa., assignor, by mesne assignments, to Link-Belt Company, Chicago, Ill., a corporation of Illinois
Filed May 4, 1961, Ser. No. 114,590
15 Claims. (Cl. 51—163)



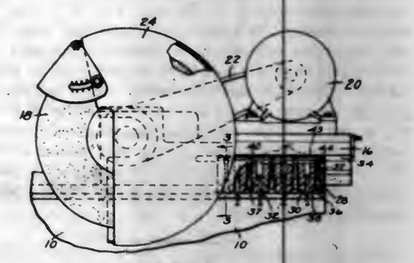
1. A rotary tumbler consisting of a connected pair of wheels to provide a base means, vibratory isolating means carrying said wheels, frame means, a barrel supported on said frame means and having a mouth through which to charge and discharge materials to be tumbled in loading and unloading said barrel, vibratory motor means having at least one portion secured to said frame means to produce vibratory reciprocation of said barrel, and tuned spring guide means supporting said frame means from said wheels to position said barrel for vibratory arcuate reciprocation about an axial center spaced from the center of said wheels and said barrel to tumble material therein.

3,129,537
PROTECTIVE DEVICE FOR GRINDING MACHINES
William R. Backer, Holden, Mass., assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts
Filed July 31, 1961, Ser. No. 127,956
35 Claims. (Cl. 51—166)



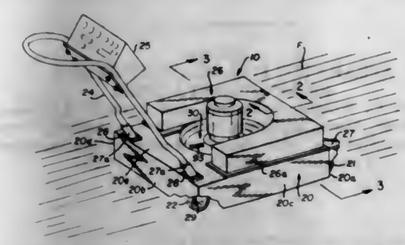
1. In a grinding machine, a support, a wheel slide mounting a wheel and a hood therefor, ways on the support supporting the wheel slide for translational movement relative to the work, spaced parallel interlapping guides on the wheel slide and support and a cushion element disposed between the parallel portions of the guides, yieldable under pressure in response to forces tending to lift the slide from its ways.

3,129,538
PROTECTIVE DEVICE FOR GRINDING MACHINES
William R. Backer, Holden, Mass., assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts
Filed July 31, 1961, Ser. No. 128,077
14 Claims. (Cl. 51—166)



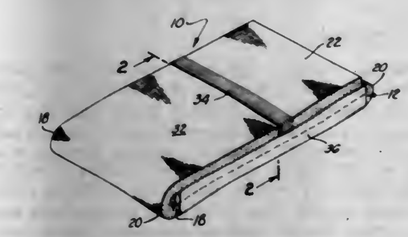
1. In a machine having a base with a wheel slide supported thereon, a wheel on the slide and a hood housing the wheel; interlapping guides, one of which is on the slide, and means connecting the other guide to the base, said means supporting said other guide in spaced parallel relation to the one so that they do not interfere with free sliding movement of the slide on the base, and said means including tension elements operating, by deformation in tension due to abnormal forces operating to lift the slide from the base, to dissipate said forces after the slide is lifted sufficiently from the base to bring the spaced interlapping guides into mutual engagement.

3,129,539
SURFACE SANDER HAVING AUTOMATIC LEVELING PROPERTIES
Nicholas L. Tempero, 1039 N. Howard St., Akron 10, Ohio
Filed Dec. 26, 1962, Ser. No. 247,403
14 Claims. (Cl. 51—177)



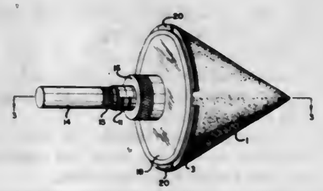
1. A self leveling finishing machine for use on surfaces of the character described, comprising: a main housing having surface engaging anti-friction means secured thereto; an auxiliary housing shiftably supported by said main housing; surface finishing means rotatably carried by said auxiliary housing and being disposed for rotational contact with said surface with said auxiliary housing and said surface finishing means shifting relatively of said main housing in unison; sensing means carried by said main housing for engagement with said floor surface and being shiftable relatively of said main housing and said auxiliary housing in response to contact with surface irregularities encountered by said anti-friction means during movement thereof across said surface being finished; and leveling means responding to movement of said sensing means relatively of said main housing and maintaining said auxiliary housing and said surface finishing means in substantial parallelism with said surface, notwithstanding shifting of said main housing upon encountering said irregularities.

3,129,540
FLEXIBLE SANDING BLOCK
Fred G. Valles, 14372 Purdy St., Westminster, Calif.
Filed Nov. 27, 1961, Ser. No. 155,012
1 Claim. (Cl. 51—187)



A flexible sanding block which includes:
a base of rectilinear shape formed of a flexible resilient material, said base having front and back surfaces, side edges and end edges;
a holding strap of general rectilinear configuration formed of a flexible resilient material, said holding strap having front and back surfaces, side edges and end edges,
said base and said holding strap being formed of the same piece of flexible resilient material so that one of the end edges of said strap is continuous with one of the end edges of said base, said holding strap being as wide as said base and being no longer than said base, said holding strap being folded over said base so that said back surface of said holding strap faces and is substantially parallel to said back surface of said base:
additional flexible resilient material secured to said base so that said base is substantially thicker than said strap;
a fabric layer secured to said front surface of said base and to said front surface of said holding strap and extending around the fold therebetween; and
an elastic band fitted around said holding strap and resiliently engaging said holding strap, said elastic band being deformable, said elastic band providing easy manual retention of said flexible sanding block.

3,129,541
ABRASIVE TOOLS
Albert Field, 1706 Salem Ave., Dayton, Ohio
Filed Oct. 29, 1962, Ser. No. 233,777
2 Claims. (Cl. 51—194)



1. In combination, a conically shaped support member of moldable material, a threaded opening therein, a rod threaded into said opening, a covering of abrasive sheet material over the support member and having extensions of limited width which extend away from the covering, said extensions being folded over the base of said member and in contact therewith, a flange on said rod entering into a recess in the support member when the rod is screwed therein, said rod having a threaded portion at the end remote from the base of said support member, a nut received by the threaded portion of the rod, a disk loosely mounted on said nut at the end thereof nearer the support member whereby as the nut is tightened pressure is applied against the disk, which in turn serves to clamp the extensions of the covering directly against the base of the support member, and when the nut is loosened the disk is moved away from said base in order that the covering can be removed from the support member and a new covering applied, and a mandrel attached to and forming part of said rod in order to rotate the support member and its covering of abrasive sheet material after the nut has been tightened and the disk is pressed against the said extensions of the covering.

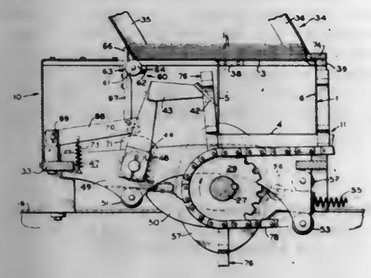
3,129,542
DISPLAY CARTON PACKING APPARATUS
Wolfgang B. Fahrenbach, Oakland, Calif., assignor, by mesne assignments, to Andre-Matic Machinery Company, San Leandro, Calif., a corporation of California
Filed June 9, 1955, Ser. No. 514,150
9 Claims. (Cl. 53—48)

8. Apparatus for packing articles in a carton of the type having foldably connected top and bottom panels and opposite end panels and panel extensions and flap extensions respectively foldably connected to the side edges

of said top and bottom panels and said end panels, said apparatus comprising:

(*a*) a magazine for supporting a generally vertically extending stack of such cartons in flat, collapsed condition, each with its top panel and one end panel in overlying engagement with its bottom panel and opposite end panel and with said panel extensions and said flap extensions respectively coplanar therewith;

(*b*) conveying means for successively feeding the lowermost carton from said stack away from said magazine in a direction extending longitudinally of said side edges;



(*c*) means for initiating expansion of said carton to an open condition, including

(1) means movable generally in said direction and engageable with the trailing end of said carton for separating its top and bottom panels from each other, and

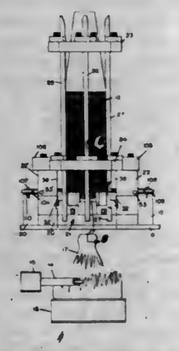
(2) stationary means engageable under the panel extensions on said top panel for supporting said top panel during such separating;

(*d*) said conveying means including means for conveying said carton in rectangular, fully open condition;

(*e*) article feeding means for delivering articles to and filling said carton in said fully open condition through an open side thereof; said,

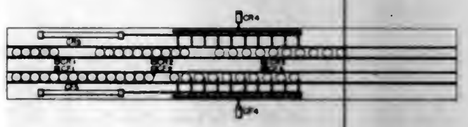
(*f*) means for folding said panel extensions and said flap extensions to close said open sides of said carton.

3,129,543
CAP APPLICATOR
Henry G. Paulus, 50 Bilodeau Court, Burlington, Vt.
Filed Oct. 16, 1961, Ser. No. 145,074
3 Claims. (Cl. 53—67)



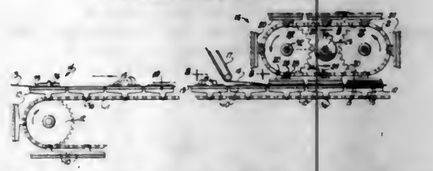
2. Apparatus for singly dispensing objects from the lower end of a stack of like objects, comprising: a frame having an elongated stack aligning means; at least two separator means each including a stack supporting shelf peripherally engaging said stack; normally closed valve means within said separator means and means for periodically causing said valve means to open momentarily to release an air blast; a deforming member connected to said valve means having a normal position adjacent said shelf and adapted to traverse said shelf in response to the movement of said valve thus deforming the bottom object in said stack to bend said bottom object away from said stack prior to and during the release of said air blast; and an air passage connected with said valve means and vented through the surface of said shelf, said passage being in position to direct said air blast between the deformed bottom object and the remainder of the stack.

3,129,544
APPARATUS FOR CONVEYING AND FILLING CONTAINERS
Michael C. Klapes, Lynnfield, and Eric G. Cleveland, Melrose, Mass., assignors to Delta Engineering Corporation, Melrose, Mass., a corporation of Massachusetts
Filed June 28, 1960, Ser. No. 39,297
16 Claims. (Cl. 53—64)



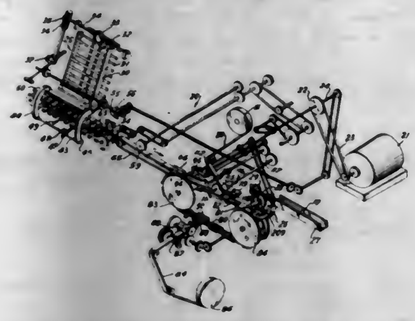
7. Apparatus for spacing articles comprising a longitudinally expandable lazy-tongs assembly having a series of laterally-projecting evenly-spaced fingers, a carriage on which said assembly is mounted for lateral movement, means for moving said carriage laterally along a path parallel to said fingers, and means for expanding said assembly whereby to increase the spacing between said fingers without disturbing the uniformity of said spacing.

3,129,545
PACKAGE FORMING APPARATUS AND COMPONENTS THEREOF
Edward C. Sloan, Augustus H. Eberman, and Hans A. Jensen, Madison, Wis., assignors to Oscar Mayer & Company, Inc., Chicago, Ill., a corporation of Illinois
Filed Oct. 11, 1960, Ser. No. 61,993
34 Claims. (Cl. 53—112)



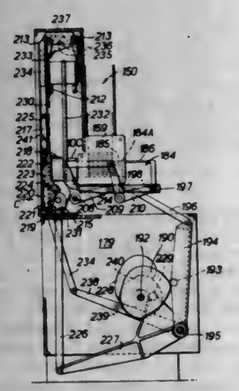
1. Package forming apparatus for use with polyvinylidene chloride film in its supercooled state, said apparatus comprising die forming means including cooperating die plates and conveyor means for moving said plates into and out of temporary package forming association, at least one of said die plates having a product receiving die cavity portion, means for delivering a first film to said one die plate in covering relation with said cavity portion, first die plate vacuumization means operable relative to said one die plate to peripherally seal said first film to said plate and draw said film centrally into said cavity portion, means mounting and operating said first die plate vacuumization means relative to said one die plate and the conveyor means therefor for reciprocation into and out of operative engagement with said one die plate, further means for delivering a second film to the other of said die plates for use thereby in forming a product enclosing package when said die plates are moved into package forming association, and second die plate vacuumization means operable with each of said die plates during package forming association thereof to draw the portions of the films enclosed by said plates into product enclosing sealed relation.

3,129,546
BUTTER CUTTING AND PACKAGING MACHINE
Sanford Redmond, New York, N.Y., assignor to B. Redmond & Son, Inc., New York, N.Y., a corporation of New York
Filed Apr. 28, 1961, Ser. No. 106,304
10 Claims. (Cl. 53—122)



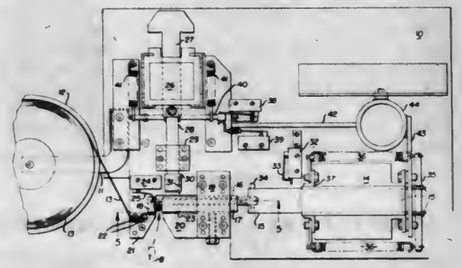
1. In a machine for segmenting plastic material and packaging the same, means for cutting the material into predetermined size strips, conveyor means for moving said strips at a predetermined rate, means for cutting and crimping cardboard into trays, means for moving said trays under said strip of material, means for cutting said material into segments and depositing each segment upon a tray, means for covering said segments with paper to form complete packages and means to assemble said packages.

3,129,547
COLLECTION OF CIGARETTES FOR PACKING
Desmond Walter Mollns, Deptford, London, England, assignor to Mollns Machine Company Limited, London, England, a British company
Filed Oct. 23, 1961, Ser. No. 146,801
Claims priority, application Great Britain Oct. 25, 1960
2 Claims. (Cl. 53—151)



1. Apparatus for use in an automatic cigarette making and packing plant comprising a cigarette machine having a catcher band, a cigarette feeding hopper positioned to receive cigarettes from said band, said hopper having a number of slots in its base through which cigarettes can pass out of the hopper, means below the hopper to support the cigarettes in the slots, a pusher movable through the slots to remove batches of cigarettes therefrom by endwise movement, a rigid multi-cellular portable charger, support means for holding said charger in position to receive the batches in the charger cells, a conveyor system for removing filled chargers from said position and delivering the same to a packing machine for conveying emptied chargers from the packing machine to said support means, and a pusher movable through a cell of a charger adjacent said packing machine to transfer a batch to the packing devices of said packing machine.

3,129,548
BAG TYING MACHINE
Chester R. Gibbons, Guide Bldg., Canfield, Ohio
Filed July 6, 1961, Ser. No. 122,260
4 Claims. (Cl. 53—198)

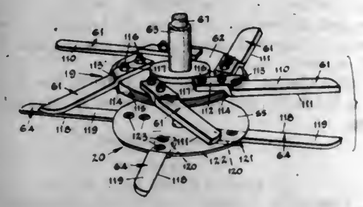


1. A bag tying machine comprising a device having a pair of relatively movable jaws, one of which is elongated and has an opening axially therethrough and the other of which comprises a rod movably positioned through said opening with a member on the outer end thereof, and means for moving said jaws in a reciprocal manner relative to one another and relative to said machine, a supply of adhesive tape and a member adjacent said jaws having a flat surface against which a portion of said adhesive tape is normally adhered, said device arranged to receive bags to be tied between said relatively movable jaws and across the path of said adhesive tape, a knife positioned for movement transversely of the position normally occupied by said jaws and said tape for severing said tape and means for moving said knife responsible in operation to the position of said jaws.

3,129,549
POWER MOWING MACHINE
Andrew Dillon Stauffer, R.F.D. 3, Columbus Grove, Ohio
Continuation of application Ser. No. 842,403, Sept. 25, 1959. This application Jan. 29, 1962, Ser. No. 172,041
7 Claims. (Cl. 56—25.4)

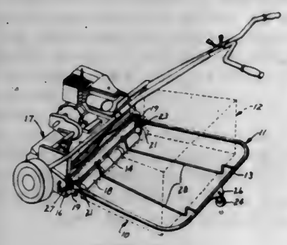
1. In a rotary type lawn mower, a cutting assembly comprising a vertically disposed rotatable shaft, a first disc non-rotatably and concentrically attached to the lower end of said shaft and having top and bottom surfaces, a plurality of elongated cutter blades carried by said disc, each cutter blade comprising a cutting portion having a cutting edge and a mounting portion offset with respect to the cutting portion, means for securing the mounting portion of each cutter blade to the bottom surface of said disc to position the cutting edge of said cutter blade in parallel relation to a diametric line through the axis of said disc and in a plane parallel with the top surface of said disc, a hollow hub rotatably received upon

said shaft, a second disc non-rotatably and concentrically attached to the lower end of said hub, said second disc being of the same diameter as said first disc and having top and bottom surfaces, a plurality of elongated cutter blades carried by said second disc, each cutter blade comprising a cutting portion having a cutting edge and a mounting portion offset with respect to the cutting portion, means for securing the mounting portion of each of



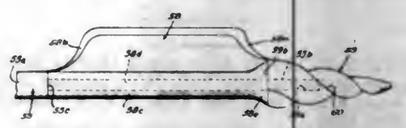
said second-mentioned cutter blades to the top surface of said second disc to position the cutting edge of said cutter blade in angular relation to a diametric line through the axis of said second disc and in a plane parallel with the bottom surface of said second disc, and means for driving said shaft and hub to rotate said first and second discs in opposite directions to effect a scissor-like action between the cutting edges of the cutter blades carried by said first and second discs.

3,129,550
GRASS CATCHER ASSEMBLY FOR REEL-TYPE LAWN MOWERS
Norman A. Waag, Minneapolis, Minn., assignor to J. Gordon Campbell, Incorporated, Minneapolis, Minn., a corporation of Minnesota
Filed Dec. 10, 1962, Ser. No. 243,286
10 Claims. (Cl. 56—199)



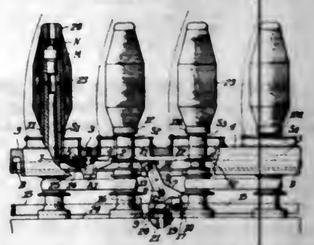
1. In a grass catcher frame for a reel-type lawn mower,
(*a*) a horizontally disposed generally U-shaped frame element,
(*b*) a tie rod mounted across the ends of said U-shaped element,
(*c*) means for securing said tie rod to the frame of a lawn mower,
(*d*) carriage means depending from said U-shaped frame element adapted to support the rear portion of said U-shaped frame element in spaced relationship to the ground,
(*e*) support means extending across said U-shaped frame element and cooperating with said frame element to form an upwardly opening recess whose bottom portion is below the plane of said U-shaped element, and
(*f*) a basket supported by said frame.

3,129,551
HARD FRUIT PICKER
Fred D. Lasswell, Jr., 329 Bayshore Blvd., Tampa, Fla.
Filed June 15, 1960, Ser. No. 36,448
9 Claims. (Cl. 56—328)



1. A spindle arrangement for harvesting elements including a support positionable in proximity to a crop to be harvested, a first spindle journally mounted in said support, a single paddle on said first spindle a second parallel spindle journally mounted in said support adjacent said first spindle, and two paddles on said second parallel spindle.

3,129,552
DOFFING MECHANISM FOR TEXTILE MACHINES
Eizaburo Negishi, No. 3 of 9 Oaza Nakasato, Yono-shi, Saitama-ken, Japan
Filed Sept. 24, 1962, Ser. No. 225,536
Claims priority, application Japan Oct. 30, 1961
4 Claims. (Cl. 57—52)

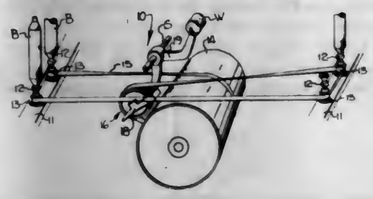


1. In a textile machine of the type having a row of bobbin spindles, a vertically movable thread guide rail and a spindle rail, a bobbin doffing mechanism comprising a plurality of arms, each arm being rotatably mounted on the lower surface of said guide rail between adjacent spindles of a pair, each arm having symmetrical ends with a length and height providing hooks which are movable from an inoperative position in which the longitudinal axis of each arm is substantially at right angles to the row of spindles to an operative position in which the longitudinal axis of each arm is substantially in alignment with the row of spindles, said hooks in the operative position being disposed below the bobbins on each pair of spindles, and automatically operable means for actuating said arms to and from said two positions, whereby with said arms in said operative position upon upward movement of said guide rail said hooks will engage and doff the bobbins from each pair of spindles.

3,129,553
MEANS FOR PREVENTING THE ACCUMULATION OF LINT ON SPINDLE DRIVE TAPES
Theron R. Weaver, 421 Burge St., High Point, N.C., assignor of fifty percent to Pickett Cotton Mills, High Point, N.C., a corporation of North Carolina
Filed June 12, 1962, Ser. No. 201,912
3 Claims. (Cl. 57—56)

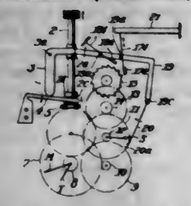
2. In a yarn processing machine such as a spinning frame having banks of rotatable spindles disposed on opposite sides thereof, a rotatable driving drum disposed between said banks of spindles and substantially equidistant therefrom, and driving tapes disposed around said driving drum and said spindles for rotating said spindles

in response to rotation of said driving drum; the combination of an idler roll for each of said tapes rotatably mounted adjacent said driving drum and having the periphery thereof engaging the tape, the periphery of each of said idler rolls having knurls for removing lint particles from said tapes as the same pass in engagement there-



with to prevent accumulation of lint on said tapes, said tapes being positioned around said idler rolls on the opposite sides thereof from said driving drum to cause the lint removed from the tapes to be thrown toward said driving drum to thereby prevent such lint from being thrown into the yarn being processed.

3,129,554
ELECTRIC TIMEKEEPER
Hideaki Yasukawa, Suwa-shi, Nagano-ken, Japan, assignor to Kabushiki Kaisha Suwa Seikosha, Suwa-shi, Nagano-ken, Japan, a joint-stock company of Japan
Filed Feb. 27, 1962, Ser. No. 176,069
Claims priority, application Japan Mar. 6, 1961
4 Claims. (Cl. 58—23)



1. In an electric timekeeper of the type having an oscillating member which is electrically oscillated and provided with a driving pawl which drives a ratchet wheel which, in turn, drives a wheel train for time indication operation; an improvement comprising a winding stem reciprocably mounted on the timekeeper, means to normally prevent retrograde movement of the ratchet wheel, lever means pivotally mounted on the timekeeper and having one end thereof in engagement with said winding stem, lock means on the other end of said lever means, said winding stem adapted to be drawn outwardly relative to the timekeeper to pivot said lever means and cause engagement of said lock means with a part of the wheel train to lock the same, and means on said lever intermediate the ends thereof to effect disengagement of the driving pawl from the ratchet wheel and disengagement from the ratchet wheel of the means which normally prevents retrograde movement of the same.

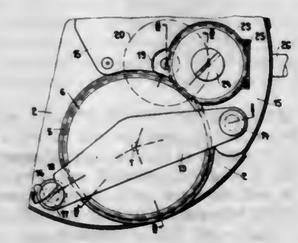
3,129,555
TIME PIECE SHOWING THE DAYS OF THE MONTHS
Pierre Mathys, Villeret, Canton of Berne, Switzerland, assignor to Holding Favre-Leuba S.A., Zug, Switzerland, a Swiss firm
Filed Oct. 5, 1961, Ser. No. 143,228
Claims priority, application Switzerland Oct. 14, 1960
2 Claims. (Cl. 58—58)

1. In a watch, in combination, a plate support, an hour hand shaft, an hour hand gear operably connected to said shaft and rotatably driven, a gear driven directly by said hour gear and having a concentric pinion secured thereto and disposed adjacent said plate support, a watch dial disposed overlying said gears and plate support and having an eccentric gate for viewing therein indicia representative of the days of the month, a ring gear having the last mentioned indicia disposed angularly spaced thereon, viewable through said gate individually and disposed for rotation between said plate support and said dial, said ring gear being disposed for rotation substantially in the same plane as said gear driven by said hour gear, a control gear driven from said hour hand gear rotatably one



revolution in twenty-four hours and disposed for rotation on said plate support between said plate support and said dial, said control gear being disposed operably meshing said ring gear and said pinion of said gear driven by said hour gear, said control gear being disposed inclined toward said plate support and inclined away from said plane, said ring gear being disposed circumferentially of all of said gears and having internal teeth and said control gear having peripheral teeth for cooperating with said internal teeth of said ring gear rotating said ring gear once a day an angular distance sufficient to cause the indicia to indicate a next successive day.

3,129,556
WATCH MOVEMENT
Raymond Beaumann, Les Bois, Switzerland, assignor to Derby S.A., Canton of Neuchatel, Switzerland
Filed Feb. 26, 1962, Ser. No. 175,439
Claims priority, application Switzerland Mar. 2, 1961
4 Claims. (Cl. 58—59)



1. A watch movement comprising
(*a*) a supporting frame including a pillar plate,
(*b*) a barrel axle fixedly secured to said plate and axially projecting therefrom, said axle being stepped, having a free end, and forming a first and second bearing section, said first bearing section being on the side of said plate, said second bearing section being near said free end and having a diameter smaller than that of said first bearing section, said two bearing sections being spaced from each other by an intermediate portion of said axle having a diameter substantially equal to that of said second bearing section,
(*c*) a tubular barrel hub having a first and a second bore, said first bore having adjacently to each other a bearing portion and a free portion, said bearing portion corresponding to and supporting said first bearing section, said second bore corresponding to and supporting said second bearing section, said free portion being intermediate said second bore and said bearing portion, said barrel hub being rotatably

mounted on said two bearing sections, said intermediate axle portion and said intermediate free portion of said first bore defining a free annular space,

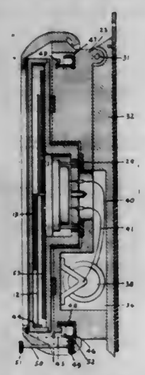
(*d*) a barrel rigidly connected with said barrel hub,

(*e*) a barrel core rotatably mounted on said barrel hub,

(*f*) a winding ratchet wheel constituting a barrel cover and being fixedly secured to said barrel core, said barrel, barrel hub, barrel core, and barrel cover constituting a barrel assembly, and

(*g*) a retaining member mounted to hold said barrel assembly in a fixed axial position, removal of said retaining member permitting said barrel assembly to be taken out of the watch movement by moving said barrel assembly first axially away from said plate, then laterally within said free annular space, and finally again axially away from said plate.

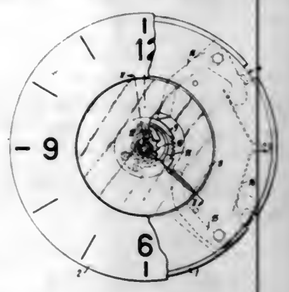
3,129,557
SETTING MEANS FOR WATERTIGHT CLOCK
Rene A. Fiechter, 137 Hollywood Ave., Douglaston, N.Y.
Filed Oct. 18, 1960, Ser. No. 63,312
5 Claims. (Cl. 58—85.5)



1. In clock apparatus, the combination of a sealed envelope, clock means in said envelope and having a minute hand and an hour hand, at least a part of said minute hand being made of magnetic material and lying adjacent the side wall of said envelope, and at least a portion of said envelope being transparent so that said minute hand and said hour hand are visible therethrough, magnet means normally maintained away from said envelope and movable in proximity to said envelope along a path closely adjacent the path followed by said minute hand magnetic portion, and manually operable means for positioning said magnetic means in proximity to said envelope and for moving it along said path to move said minute hand.

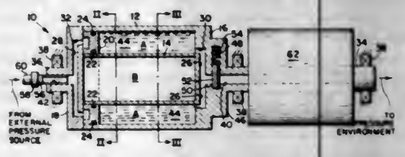
3,129,558
INDICATOR SETTING MEANS FOR TIMEPIECE SHOWING THE TIME IN TWO TIME-BELTS
Georges Albert Ruch, 65 Ave. Reuchenette, Bienne, Switzerland
Filed July 11, 1961, Ser. No. 123,217
Claims priority, application Switzerland Aug. 10, 1960
1 Claim. (Cl. 58—85.5)

In a time-piece including a clockwork and adapted to provide the simultaneous reading of time in at least two time-belts, the combination of an hour wheel driven by said clockwork and provided with a pipe, an hour hand rigid with the hour wheel, a flat annular dial provided with an hour scale cooperating with the hour hand, a disc revolvably carried by said hour wheel pipe inside the inner periphery of the dial and provided with a reference mark registering with the hour scale, a star-shaped member coaxially rigid with the disc underneath the latter and including a number of arms equal to the number of subdivisions of the hour scale, a yoke pivotally carried by the hour wheel and adapted to engage selectively the intervals between the arms of the star-shaped member thereby to make the disc follow the rotation of the hour hand with a predetermined angular spacing between the latter and the reference mark on the disc, a spring urging said yoke into engagement with said star-shaped member, a



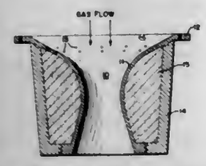
toothed wheel coaxially rigid with and surrounding the upper part of the star-shaped member and including an annular projection facing away from and lying outside the star-shaped member and bearing against a cooperating annular section of the lower surface of the disc, a washer fitted between said disc and the star-shaped member over the part of the toothed wheel lying inside the projection on the latter and frictionally engaging the hour wheel pipe and manually operated catch means engaging said toothed wheel to shift same in the desired direction by the desired amount.

3,129,559
SELF-SUSTAINING MOMENTUM MOTOR
Lyle E. Matthews, 3412 Minna St., Oxnard, Calif.
Filed Dec. 22, 1961, Ser. No. 161,747
14 Claims. (Cl. 60—1)
(Granted under Title 35, U.S. Code (1952), sec. 266)



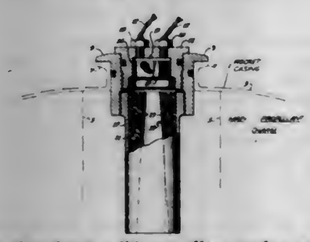
1. A momentum device comprising a container exposed to an exterior pressure environment, said container having an axis of rotation and adapted to contain a fluid, said container upon rotation being capable of rotating the fluid about said axis when the fluid is disposed within the container, said container having conduit means directed inwardly toward said axis of rotation for exhausting the fluid to said pressure environment and means including at least one member movable within said container and capable of being in direct contact with the fluid for applying a pressure thereto which is sufficient to force the fluid to flow inwardly through said conduit means toward said axis of rotation, whereby upon disposing fluid within the container and rotating the container and the fluid about the axis the inward flow of said fluid will give up kinetic energy to the container to maintain the container in a rotating state.

3,129,560
CONVECTIVELY COOLED ROCKET NOZZLE
Stanley P. Prosen, Lanham, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed June 13, 1960, Ser. No. 35,851
8 Claims. (Cl. 60—35.6)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A converging-diverging rocket nozzle comprising an inner annular gas-tight wall of a heat-resistant material which is shaped internally according to the requirements of nozzle design; an outer annular gas-tight wall joined to said inner wall so as to form an annular container, said container being gas-tight at the points of joinder of said walls and having apertures communicating with the exterior of said container through the walls thereof and a solid fusible and vaporizable material having a lower vaporization point than the melting point of said heat resistant material positioned in and substantially filling said container, said material being selected from the group consisting of boron, nickel, antimony trioxide, lithium fluoride, zinc, iron, alumina and silica.

3,129,561
ROCKET ENGINE IGNITER
Joseph J. Priapi, Menlo Park, Calif., assignor to United Aircraft Corporation, a corporation of Delaware
Filed Sept. 9, 1960, Ser. No. 54,966
4 Claims. (Cl. 60—35.6)



1. An igniter for a solid propellant rocket engine, said engine having a combustion chamber confining a solid propellant, said propellant having a passage extending therethrough co-axially with the axis of the engine, said passage extending the length of the engine so as to define an internal burning charge, said igniter comprising:

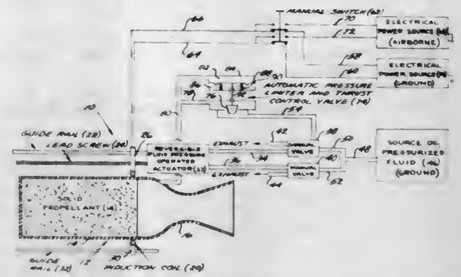
(*a*) an open-ended cylindrical chamber positioned at one end of said passage, said open end of said chamber being directed down the passage;

(*b*) a matrix of a solid rocket propellant comprising a mixture of a fuel binder and an oxidizer having dispersed therein solid pellets, said pellets comprising finely divided metal and an oxidizer therefor, all of said pellets being dispersed within and surrounded by said matrix, said matrix being confined by said cylindrical open-ended chamber, said matrix having a passage extending therethrough co-axially with the axis of the engine;

(*c*) ignition means for said matrix positioned at one end thereof; and

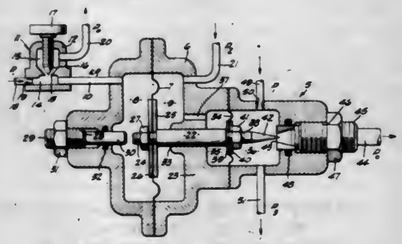
(*d*) said igniter providing a subsonic flow of hot gas having hot metallic particles therein for the ignition of the solid propellant of the rocket engine.

3,129,562
METHOD AND MEANS FOR IMPROVING COMBUSTION CHARACTERISTICS OF SOLID PROPELLANTS
Donald K. Kuehl, Manchester, and Richard L. Vasquez, Wethersfield, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Oct. 21, 1960, Ser. No. 64,024
3 Claims. (Cl. 60—35.6)



1. In a solid propellant rocket motor or the like, the combination of an elongated generally cylindrical housing having an exhaust nozzle at a rear end portion, a generally cylindrical charge of a solid propellant containing electrically conductive particles disposed in said housing and adapted to be ignited at a rear end portion and to burn forwardly, an induction coil disposed around said housing so as to provide an electromagnetic field in a substantially radially extending layer of the propellant charge at said rear end portion thereof, an electrical power source connected with said coil and energizing the same so that the intensity and frequency of the electromagnetic field are such that the electrically conductive particles in the affected layer of the propellant charge are inductively heated to heat the propellant in said layer, and drive and control means for moving said induction coil longitudinally forwardly along the housing to heat successive substantially radial layers of the propellant charge as preceding layers of the charge are burned and to thereby accelerate the burning rate of the charge.

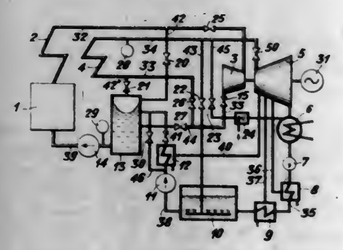
3,129,563
PRESSURE RATIO SENSING DEVICE
Henry A. Long, Van Nuys, Calif., assignor to The Marquardt Corporation, a corporation of California
Filed Feb. 2, 1955, Ser. No. 485,760
5 Claims. (Cl. 60—39.28)



1. A device for controlling the flight Mach number of an aircraft propelled by a jet engine comprising means for sensing a first engine pressure which is proportional to engine air flow, means for sensing a second engine pressure whose ratio to said first pressure is proportional to flight Mach number, means responsive to said first and second pressures for producing a control pressure whose

ratio to said first pressure varies as a straight line function of the ratio between said first and second pressure and means responsive to said control pressure and said first pressure for controlling the fuel flow to said engine in accordance with the ratio of said control pressure to said first pressure, the thrust output of said engine being proportional to said last mentioned ratio and to flight Mach number.

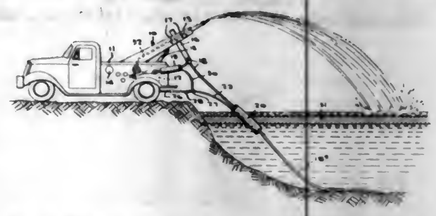
3,129,564
FORCED FLOW STEAM GENERATING PLANTS INCLUDING A REHEATER
Alfred Brunner, Winterthur, Switzerland, assignor to Sulzer Freres, S.A., Winterthur, Switzerland, a corporation of Switzerland
Filed Dec. 20, 1961, Ser. No. 160,813
Claims priority, application Switzerland Dec. 28, 1960
4 Claims. (Cl. 60—67)



1. A steam plant comprising in combination:
a forced flow steam generator,
a live steam pipe receiving steam from said generator,
a steam turbine including a high pressure part connected to said live steam pipe for receiving steam therefrom,
a reheater,
a medium pressure steam pipe connecting said high pressure part and said reheater for supplying medium pressure steam to said reheater,
a water separator having a substantial steam and water space effecting a substantial heat storage capacity,
a by-pass pipe interconnecting said live steam pipe and said water separator,
a feedwater supply pipe connected to said steam generator for supplying feedwater thereto, said water separator being interposed in said feedwater supply pipe for accumulating feedwater,
a conduit connecting said high pressure part and said separator for supplying medium pressure steam thereto,
flow control means interposed in said last mentioned conduit for controlling the rate of flow of medium pressure steam to said separator,
a conduit means connecting the steam space of said separator and said medium pressure steam pipe, and
a flow control means interposed in said conduit means.

3,129,565
APPARATUS FOR CONTROL OF WATER BENEATH ICE SURFACES
Clifford A. Bellamy, 533 S. 7th St. E., Salt Lake City, Utah
Original application June 27, 1960, Ser. No. 39,025. Divided and this application July 25, 1961, Ser. No. 127,455
2 Claims. (Cl. 61—1)

1. In an apparatus that is adapted to control water beneath ice surfaces of a body of water, in combination a source of heat, an intake conduit within said body of water, pump means, said pump means being provided with a suction and a discharge port, said intake conduit being connected to said suction port, a discharge conduit connected to the discharge port of the pump, said discharge conduit adapted to discharge water upon the upper



surface of said ice surface to expose said water to below freezing temperatures, heating means connected to said source of heat, and said heating means positioned in a suitable opening formed in the ice surface and encasing said intake conduit for maintaining flow of water through the intake conduit to the pump.

3,129,566
LOW TEMPERATURE HEAT ENGINE AND AIR CONDITIONER
Donavon Lee Favre, Washington, D.C.
(7403 Arcadia Road, Parklawn Area, Alexandria 12, Va.)
Filed Aug. 17, 1959, Ser. No. 834,271
4 Claims. (Cl. 62—88)

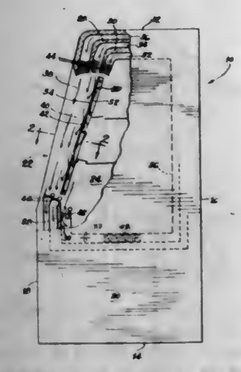


1. A method of conditioning the air in a space which comprises increasing the velocity of an airstream, adding water to the airstream, passing the airstream through a heat exchanger, using the airstream to drive a turbine, blowing a second airstream through the heat exchanger, transferring heat from the second airstream into the first airstream, absorbing the undesirable gases in the second airstream into a sodium hydroxide solution, circulating the sodium hydroxide solution through a second compartment, providing a vacuum in the second compartment to desorb the undesirable gases in the sodium hydroxide solution, driving a turbine with the second airstream, and allowing the second airstream to enter the space to be conditioned.

3,129,567
REFRIGERATION SYSTEM
Sterling Beckwith, Libertyville Township, Ill., assignor, by mesne assignments, to Dual Jet Refrigeration Company, a corporation of Illinois
Filed May 31, 1962, Ser. No. 198,961
4 Claims. (Cl. 62—256)

1. In a refrigerated cabinet of the type which defines an access opening in one wall communicating an otherwise enclosed space with the ambient atmosphere, and which is provided with at least one inner cold air inlet and at least one outer warmer air inlet, at least one inner cold air nozzle and at least one outer warm air nozzle, said inlets and nozzles extending in side-by-side relationship across opposite edges of said access opening, passages communicating each of the corresponding inlets and nozzles, circulating means in at least some of the passages for forcing air through the passages in the form of panels

across said access opening, and refrigeration means disposed in at least some of said passages and adapted to refrigerate at least the innermost of said panels, the improvement comprising deflector means for confining the panels when passing across said access opening, said deflector means comprising a relatively narrow deflector wall portion extending between said nozzles and inlets



and protruding a short distance inwardly from the opposite side walls of said enclosure, whereby the deflector wall portions are located on either side of the path of movement of said innermost panel, and wherein the combined width of said deflector wall portions is small compared to the size of the access opening defined therebetween.

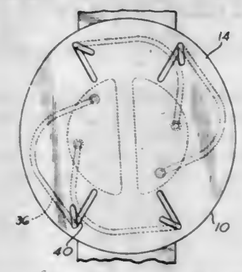
3,129,568
UPRIGHT ICE CUBE TRAY
Bonnie Knepper, 406 11th St., De Witt, Iowa
Filed Nov. 16, 1962, Ser. No. 238,130
1 Claim. (Cl. 62—359)



An upright ice cube tray comprising a disposable upright container including upright side walls interconnected by means of a bottom wall, the juncture between adjacent side walls defining corners, said container being constructed of tearable material, an elongated flexible tear member in each of a plurality of said corners secured at its lower end to the bottom portion of said container and extending upwardly along the inner surfaces of said container defining said plurality of corners to the top of said container whereby said container may be torn along said plurality of corners to gain access to an ice cube separator disposed in said container, a compartment forming divider member constructed of a material having good heat transferring properties snugly and removably received within said container, said divider member comprising an elongated small diameter tubular center upright member having a bottom wall closing the lower end thereof and seated against the bottom wall of said container, a plurality of horizontal panel-like divider plates secured to said upright tubular member at points spaced longitudinally therealong and from the opposite ends thereof, said divider plates extending outwardly from all sides of said tubular member at points spaced longitudinally therealong and from the opposite ends thereof and each being of a plan shape and size snugly received within said container, the corners of said divider plates each including a recess in which the corresponding tear member is snugly received, said divider member including a plurality of upright webs extending between adjacent ones of said divider plates and between the upper and lowermost divider plates and the adjacent ends of said tubular member, said webs radiating outwardly from said upright tubular member to the corners of said divider plates and being secured at their inner ends to said upright tubular member, the upper end of said upright tubular member being substantially flush with the upper end of said container, each of said divider plates having at least one aperture formed therein between adjacent ones of said webs for the passage of water between adjacent compartments formed in said container by said divider member

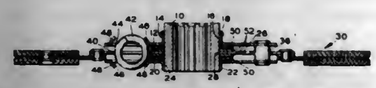
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3,129,569
BASE WITH RADIALLY MOVABLE CLAMP FOR DETACHABLY MOUNTING STONES
Bob B. Ballantyne, Rte. 1, Box 1044, Sandy, Oreg.
Filed Sept. 25, 1961, Ser. No. 140,478
3 Claims. (Cl. 63—29)



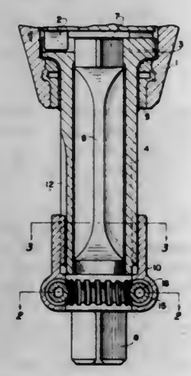
1. A mounting base for gem stones comprising a base member having a supporting surface for a stone, a locking member secured rotatably to the base on the side opposite that of the stone supporting surface, and having a center of rotation with respect to said base member and flexible resilient spring clamp arms each respectively secured at one end to the locking member and having at the other end clamp means projecting through one of a plurality of radially elongated slots in the stone supporting surface for engagement with a stone, the slots being disposed radially outward from an axis of rotation passing through said center of rotation and said base and the arms being curved about said axis of rotation and secured to the locking member at points radially outward from said center and spaced therearound, each said arm defining a line subtending the curve of said each arm between the respective point and slot associated therewith, said base, locking member and arms being constructed and arranged so that said locking member is rotatable with respect to said base member sufficiently to move said arms so that their respective subtending lines are movable each from a given side of said axis to the other side and so that their respective clamp means are movable simultaneously radially inward of said center, the spring clamp arms being flexed upon rotation of the locking member relative to the base member in the locking direction to move the clamp means into overlying engagement with a stone on the stone supporting surface.

3,129,570
CLUTCH DRIVEN MEMBER
John R. Ludwig, Swanton, Ohio, assignor to Dana Corporation, Toledo, Ohio, a corporation of Virginia
Filed June 2, 1960, Ser. No. 33,411
7 Claims. (Cl. 64—23)



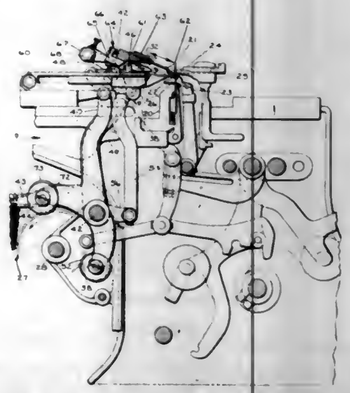
2. In a clutch member the combination comprising a pair of plates each having a central opening, a hub member having a projection-free, substantially regular external surface disposed in said central openings, a disk rotatably mounted on said hub member between said plates and extending radially outwardly beyond the periphery thereof, means rigidly securing at least one of said plates to said hub member, means securing said plates to each other in spaced apart relationship, and axially yieldable means disposed between each of said plates and said disk for yieldably positioning said disk axially relative to said hub.

3,129,571
IMPACT TOOL TORQUE LIMITING CONTROL
Harold C. Reynolds, Athens, Pa., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey
Filed Jan. 3, 1962, Ser. No. 164,072
6 Claims. (Cl. 64—27)



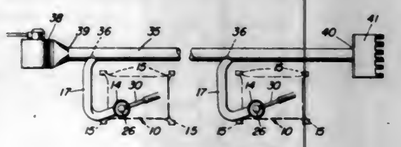
1. In a rotary impact tool including a rotary anvil and a rotary hammer adapted to periodically strike the anvil, a coupling for transmitting the rotary hammer impacts from the anvil to a workpiece and limiting the maximum torque of the transmitted impacts to a selected predetermined value of torque which can be readily adjusted, said coupling comprising: a torsion spring having one end non-rotatably connected to said anvil and adapted to have its other end connected to a workpiece; an adjustment member mounted on the other end of said torsion spring; and engagement means interconnecting said adjustment member to both said spring and to said anvil for locking said adjustment member against rotation relative to said spring and anvil in at least one rotary direction, said engagement means including a worm screw engaging a series of worm gear teeth for rotating the opposite ends of said spring relative to each other and winding the spring to a pre-stressed torque as said worm screw is rotated.

3,129,572
LATCH OPENER MECHANISM FOR KNITTING MACHINES
Harry O. Werner, Philadelphia, Pa., assignor to Wildman Jacquard Co., Norristown, Pa., a corporation of Pennsylvania
Filed Aug. 1, 1962, Ser. No. 214,077
5 Claims. (Cl. 66—111)



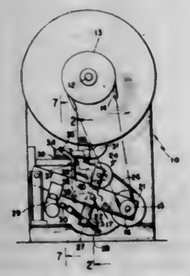
1. A needle latch opener mechanism for flat knitting machines having a bar of latch needles adapted to knit rib fabric in combination with a bar of spring beard needles, a latch hook bar having in combination a plurality of latch opener hooks protruding from one side of said hook bar and equally spaced along the length thereof, a cam means for automatically moving said hook members into contact with said latch needles and for opening all the latches of said needles simultaneously.

3,129,573
HOSIERY DELIVERY APPARATUS AND METHOD
Claude C. Sampson, Springfield, and Jones C. Beene, Athens, Tenn., assignors to Morpul Research Corporation, Greensboro, N.C.
Filed June 21, 1961, Ser. No. 118,597
3 Claims. (Cl. 66—147)



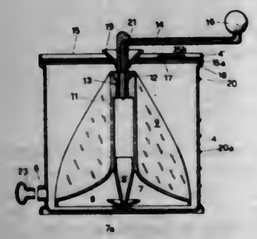
1. The method of continuously knitting and conveying circular knit stockings knit on a plurality of aligned circular knitting machines comprising the steps of knitting stockings continuously on individual knitting machines independent of each other, drawing the stockings downwardly during knitting on each machine, subjecting each knitted stocking to a blast of air to convey the stocking along a first directed path of travel to a location spaced from the machine, discharging all knitted stockings from the first directed path of travel into a main air stream moving in a rectilinear direction which first directed path of travel is at an acute angle with the main air stream, at least partially baffling individual stockings entering the main air stream from stockings in the main air stream, commingling and conveying pneumatically all stockings entering the main air stream, and depositing and collecting the stockings at the end of travel in the main air stream.

3,129,574
WASHER-EXTRACTOR HAVING A DUMP VALVE OPERATED BY THE MEANS THAT EFFECTS THE CHANGE OF BASKET SPEED
Kenneth H. Wolverton, Moline, Ill., assignor to Ametek, Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 16, 1962, Ser. No. 238,088
6 Claims. (Cl. 68—24)



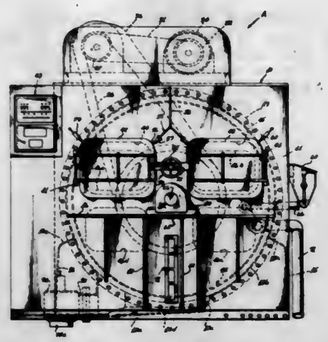
1. In a washer-extractor, a housing; a basket rotatably mounted within said housing; a drain for said housing including a section of flexible tubing located in cooperating position relative to anvil means; a dump valve for said drain comprising shoe means adapted to be moved toward and from said flexible tubing to effect its collapse against said anvil means; a variable speed transmission for rotating said basket, said transmission including a member adapted to be moved about a pivot to vary the speed of rotation of said basket; and means responsive to the pivoting of said member for moving said shoe means against said flexible tubing to effect its collapse against said anvil means.

3,129,575
COMPACT HAND-OPERATED FAMILY TYPE WASHING MACHINE
Ettore Biffani, Via G. B. De Rossi 32, Rome, Italy
Filed Oct. 10, 1962, Ser. No. 229,560
Claims priority, application Italy July 12, 1962
2 Claims. (Cl. 68—132)



1. A portable hand-operated washing machine comprising, a generally square-shaped tub having upstanding vertical side walls, said tub being made of a flexible resilient material, a drain aperture located in the lower portion of one of said walls, a thrust bearing integrally and centrally mounted in the bottom portion of said tub, a cover adapted to close the top opening of said tub, a bearing integrally and centrally mounted in said cover, an agitator located within said tub having a cylindrical central hollow shaft member flaring out in its lower end to form a bell bottom portion, a tapered bearing extending coaxially downwardly from said shaft and adapted to bear within said thrust bearing to position said agitator centrally of said tub, three flexible radially extending vanes mounted upon and spaced uniformly equidistant about said shaft member and bell bottom portion wherein the radial-most edge of said vanes define an arch shaped curvature with respect to said shaft member, a handle having one end extending through said cover bearing and positioned within said shaft member to effect movement of said agitator wherein said vanes describe an arc to converge said vanes upon said vertical walls whereby the contents of said tub may be alternately squeezed and released between said flexible vanes and said flexible vertical tub walls.

3,129,576
LAUNDRY MACHINE WITH IMPROVED DRAIN CONSTRUCTION
Howard J. Werner and Max Hertig, Onondaga, and William L. Du Pree, Syracuse, N.Y., assignors to G. A. Braun, Inc., Syracuse, N.Y.
Filed Aug. 12, 1960, Ser. No. 49,361
1 Claim. (Cl. 68—143)

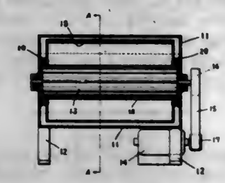


In a laundry machine, a casing forming a tub and having front and rear support walls, a drum journaled in said casing for rotation on a horizontal axis, said drum having secured therein a plurality of substantially radially extending imperforate walls dividing the drum interior into separate compartments, a sump at the bottom of said tub including a curved portion spaced outwardly of said drum, a curved plate on one side of the tub extending between the front and rear support walls and extending generally outwardly away from said tub and then downwardly into connected relation with said curved portion of said sump and means forming a discharge outlet in general register with a tangent drawn to the curved portion of the sump, said drum having a foraminous outer peripheral wall permitting the radially extending imperforate walls of the drum to develop a pumping action such as to empty the tub at a high rate of discharge.

3,129,577
WASHING MACHINES
Yoshikazu Yamanaka, Higashisumiyoshi-ku, Osaka City, Japan, assignor to Daiwa Kikai Kabushiki Kaisha, Wakayama City, Japan
Filed Sept. 4, 1962, Ser. No. 221,057
Claims priority, application Japan Sept. 5, 1961
1 Claim. (Cl. 68—184)

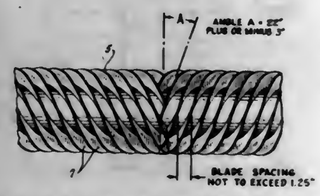
A washing machine, comprising a tank, a rotor rotatably mounted for rotation around a horizontal axis in said tank, said rotor being a solid member having a plurality of outwardly convex bulges on the peripheral surface thereof extending from one end of the rotor to the other and parallel to the axis of rotation, and a perforated cover over the rotor, said perforated cover being circular in a cross section perpendicular to the rotor axis and fitting closely to said rotor with the apexes of the bulges sweeping closely adjacent the interior surface of the cover during rotation of the rotor, whereby said rotor

and cover cooperate to produce an alternate movement of washing liquid outwardly of the axis of rotation of the rotor from the side of the bulges facing the direc-



tion in which the rotor is rotating and inwardly of the axis of rotation of the rotor from the side of the bulges facing away from the direction in which the rotor is rotating.

3,129,578
LEATHER SHAVING MACHINE
Arthur H. Horn, Waukesha, and Henry W. Bode, Milwaukee, Wis., assignors to Chas. H. Stehling Co., Milwaukee, Wis., a corporation of Wisconsin
Filed Apr. 20, 1962, Ser. No. 189,048
3 Claims. (Cl. 69—42)



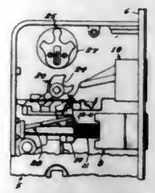
1. In a leather shaving machine having a cutting cylinder with helical blades thereon pitched in opposite directions from the center of the cylinder towards the ends thereof, a backup member having a solid unyielding work engaging surface to hold the portion of a side of leather being "acted" upon against the blades of the cutting cylinder, and means to rapidly revolve the cutting cylinder in the direction to draw a side of leather placed between the cylinder and the backup member into the machine and at the same time spread the side out towards the ends of the cylinder, the cylinder and the backup member being separable to allow a side of leather to be removed from the machine after the shaving operation, the improvement which enables the cutting cylinder to be long enough to accommodate the full width of a side and to act thereon without applying more tension upon the side than an operator can readily resist and control, and which improvement comprises the following critical angle and spacing of the blades and cutting cylinder:

(A) the angle which the blades form to a plane normal to the axis of the cylinder, is 22° plus or minus 3°; and

(B) the spacing between adjacent blades does not exceed 1.25 inches, and is not greatly less than one inch.

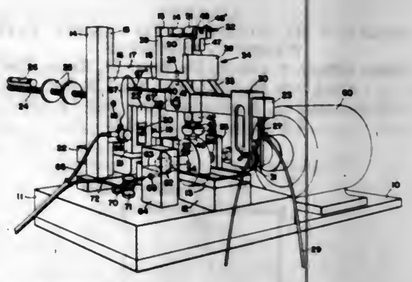
3,129,579
LATCHBOLT HOLDBACK FOR DOORLOCKS
Morris P. Bellantuono, Plainville, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a corporation of Connecticut
Filed Feb. 1, 1962, Ser. No. 170,348
18 Claims. (Cl. 70—107)

1. In a door lock including a latchbolt movable between a projected, latching position and a retracted, unlatched position, spring means biasing said latchbolt toward projected position and an abutment on said latchbolt; the combination of: a holdback member movable between a normal position clear of said abutment and a latchbolt holdback position engaged with said abutment when said latchbolt is retracted for holding said latchbolt in retracted position against the bias of said spring means, means biasing said holdback member toward latchbolt holdback position, stop means for retaining said holdback



member out of latchbolt holdback position to permit normal operation of said latchbolt, said holdback member being movable relatively to said stop means to permit disengagement thereof from said stop means and movement of said holdback member into latchbolt holdback position under the influence of said biasing means, and means for so moving said holdback member.

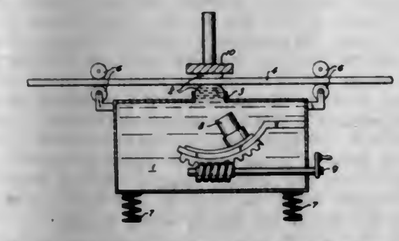
3,129,580
APPARATUS FOR MEASURING FRICTION AND CONTACT BETWEEN SLIDING LUBRICATED SURFACES
Michael J. Furey, Berkeley Heights, and James A. Wilson, Lake Lackawanna, Stanhope, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Jan. 3, 1961, Ser. No. 80,474
5 Claims. (Cl. 73—10)



1. An apparatus useful for simultaneously measuring friction and effectiveness of lubricants in preventing direct metal-to-metal contact between sliding metallic surfaces which comprises: a supporting means including a horizontal base, a vertical upright supported by said base, and a horizontal arm pivoted on said upright; a vertical arm having upper and lower ends pivotally mounted between said ends on said horizontal arm; a metal ball fixed to the lower end of said vertical arm; a lubricant reservoir mounted on said horizontal base; a rotatable metal cylinder having its lower portion within said reservoir and its upper portion in bearing engagement with said metal ball, whereby a lubricant film is formed between said rotatable cylinder and said metal ball when said cylinder is rotated and when said reservoir contains lubricant; means for applying a load to said vertical arm whereby said ball is urged into pressure engagement with said rotatable cylinder and whereby an electrical circuit is formed by said vertical arm, said ball and said cylinder; a first measuring means for measuring the average electrical resistance between said ball and said rotatable cylinder as a function

of time upon passing an electrical current through said circuit; and a second measuring means for simultaneously measuring the amount of deflection of said vertical arm caused by drag exerted upon said ball by said cylinder when said cylinder is rotated in lubricated bearing engagement against said ball, said second means including a differential transformer fixed to said horizontal arm, and an iron core having ends and fixed proximate the upper end of said pivotedly mounted vertical arm, said iron core having one end extending into said differential transformer whereby pivotal movement of said vertical arm varies the position of said core within said transformer to thereby cause variation in the electrical output of said transformer.

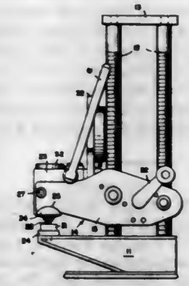
3,129,581
MATERIAL TESTING PROCESS AND APPARATUS
Hans-Wilhelm Bande, Heppenheim an der Bergstrasse, Germany, assignor to Dr. Lehfeldt & Co. G.m.b.H., Heppenheim an der Bergstrasse, Germany
Filed Feb. 16, 1960, Ser. No. 9,020
Claims priority, application Germany Feb. 17, 1959
12 Claims. (Cl. 73—67.8)



1. In an apparatus for testing elongated pieces such as wires, bands, bars, and the like, in combination, an enclosure adapted to be filled with a liquid, said enclosure having a top wall formed with an opening having a cross-sectional area adapted to form the liquid in the container into a meniscal bulge extending to an elevation slightly higher than said opening; guide means for guiding the test piece along a path passing through said meniscal bulge so that the test piece engages the liquid at said meniscal bulge thereof; means for supplying into said enclosure at least such a quantity of liquid that a meniscal bulge is maintained in said opening during movement of the test piece; an electro-ascoustic transducer in said container submerged in the liquid adjacent said opening; and adjustable support means supporting the transducer at an angle directing waves from the transducer to said meniscal bulge into contact with the test piece engaging the meniscal bulge.

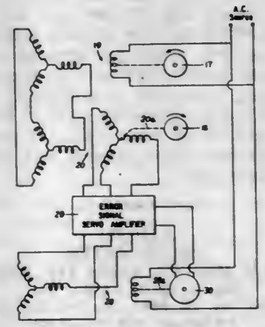
3,129,582
PORTABLE HARDNESS TESTER
Roland D. Borgersen, Wynnewood, Pa., assignor to King Tester Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Feb. 20, 1963, Ser. No. 259,962
3 Claims. (Cl. 73—81)

1. In a portable hardness tester, a test head comprising a unitary test block having a pump, pressure relief valve, and pressure release valve, a gauge mounted on said block, said block having a ram cylinder, pump cylinder, relief valve chamber, and release valve chamber formed therein, an oil sump having a cup-like casing positioned in said ram cylinder and having only one exit port and one return port, a flexible sac sealing off the top of said oil lamp, a cup-like ram positioned in said ram cylinder and having a ram pressure chamber formed between the interior of said ram and exterior of said oil sump casing, a low pressure valve having a chamber formed in said block and having an entrance port with a ball check urged toward closed position by one end of a spring which has its other end abutting a screw which is threaded into the outside wall of said block, a passageway connecting the exit port of said sump to the entrance port of said low pressure valve, a pump passageway extending between the low pressure valve chamber and the pump cylinder, a high pressure valve having a chamber formed in said block and having an entrance port with a ball check urged toward closed position by one end of a spring which has its other end abutting a screw which is threaded into the outside wall of said block, a passageway connecting



the low pressure valve chamber to the entrance port of the pressure valve whereby oil is adapted to be pumped from the pump cylinder into the low pressure valve chamber and then to the high pressure valve, a passageway connecting the high pressure valve chamber to the pressure relief valve, a passageway connecting the high pressure valve chamber to the pressure release valve, a passageway connecting the high pressure valve chamber to the gauge, a passageway connecting the high pressure valve chamber to the ram pressure chamber, and a diagonal return passageway connecting the relief and release valve chambers to the oil sump through the return port.

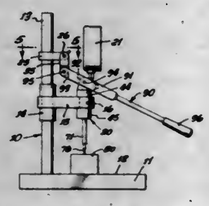
3,129,583
EXTENSOMETER FOR TENSILE TESTING OF NON-RIGID MATERIALS
Robert R. Cosner, South Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York
Filed June 10, 1960, Ser. No. 35,218
4 Claims. (Cl. 73—89)



1. For use with a materials load testing machine having a fixed frame, a moveable portion adapted to move reciprocally on said fixed frame and controllably driven means for continuously recording load data, an extensometer comprising, in combination, a body; a pair of spaced measuring rollers rotatably mounted in said body

arranged to tangentially contact a material specimen undergoing test; a first electrical servo generator unit; gear means operably connecting respective shafts of said first electrical servo generator unit; and a first roller of said pair of rollers; an electrical servo differential unit; further gear means operably connecting respective shafts of said electrical servo differential unit and a second roller of said pais of rollers; circuit means connecting said electrical servo differential unit and said first electrical servo generator unit; a second electrical servo generator unit rotatably driven by said controllably driven means for continuously recording load data; an electrical servo error signal amplifier adapted to sum opposed phase signals from said electrical servo differential unit and said second electrical servo generator unit and apply a control signal proportional to such sum to said controllably driven means for continuously recording load data; and further circuit means connecting said electrical servo error signal amplifier with said electrical servo differential unit, said second electrical servo generator unit and said controllably driven means for continuously recording load data.

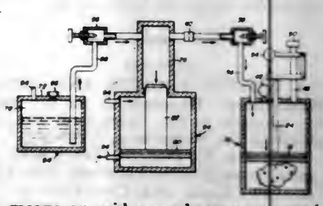
3,129,584
FORCE MEASURING DEVICE
Richard H. Canning and James E. Cordner, Los Angeles, Calif., assignors to Cannon Electric Company, Los Angeles, Calif., a corporation of California
Filed Mar. 10, 1961, Ser. No. 94,741
5 Claims. (Cl. 73—141)



1. The combination of: a cylinder, a piston reciprocable in the cylinder and being of a diameter sufficiently less than the diameter of the interior of said cylinder to minimize frictional engagement between the piston and cylinder walls, rigid means extending from one end of the piston to pressurably engage an element for exerting a force axially of the piston in one direction and in line with said piston, a fluid actuated force gage, means providing a fluid chamber between the opposite end of the piston and the force gage, and means providing fluid communication between said chamber and said force gage, the means providing the fluid chamber including a flexible fluid impervious diaphragm reposing in the cylinder closing said chamber and an external portion of said diaphragm being engageable by said piston, and a body of substantially noncompressible fluid in said chamber, whereby application of force upon said rigid means is transmitted by said piston through said fluid body to actuate said force gage.

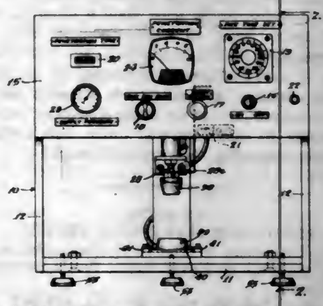
3,129,585
PYCNOMETER
Edward R. Hamilton, Austin, Tex., assignor to Don A. Hart, Austin, Tex.
Filed Jan. 15, 1962, Ser. No. 166,163
5 Claims. (Cl. 73—149)

1. In a pycnometer for measuring under pressure the volume of a substance, a first pressure vessel having a freely slidable piston disposed therein defining a measuring chamber on one side thereof adapted to receive a sample of said substance immersed in a liquid, and defining a pressure applying chamber on the other side thereof adapted to receive a pressurizing medium, a detachable cover member on said first pressure vessel permitting said piston to be withdrawn from the first pressure vessel, means on said first pressure vessel for operably connecting pressure applying means to said pressure applying chamber, said pressure applying means comprising a second pressure vessel having a cylindrical air chamber and an inner cylindrical liquid chamber, said liquid chamber being substantially smaller in cross section than said air chamber, first and second pistons in said second pressure vessel, said first piston slidable in said air chamber and said second piston slidable in said liquid



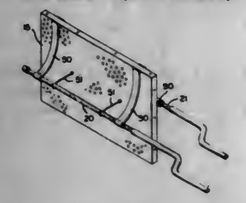
chamber, means on said second pressure vessel for communicating said liquid chamber with said pressure applying chamber of said first pressure vessel, means on said second vessel for attaching a supply of compressed air to said air chamber, and indicator means on said first pressure vessel for measuring the length of travel of said piston, whereby the admission of compressed air at a given pressure to said air chamber will produce a greater pressure in said liquid chamber and whereby the application of pressure to said pressure applying chamber, said piston of said first pressure vessel is displaced axially for substantially filling the voids in said sample with said liquid to measure the volume of the sample.

3,129,586
APPARATUS FOR TESTING CERTAIN CHARACTERISTICS OF PAPER AND THE LIKE
Irving C. Allen, Don C. Nepper, and Frank F. Oehme, Wisconsin Rapids, Wis., assignors to Consolidated Papers, Inc., a corporation of Wisconsin
Filed Mar. 8, 1961, Ser. No. 94,374
16 Claims. (Cl. 73—159)



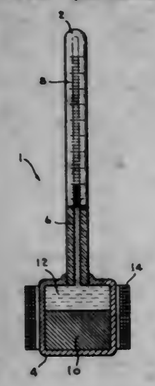
1. Testing apparatus comprising a pair of pads between which a medium to be tested may be located, means on one of said pads for adherent engagement with one side of the medium, means for moving said pads toward one another for engagement with the opposite sides of the medium and for moving said pads away from one another at high speed for applying a picking force to the side of the medium opposite said one side, a timer coupled to said pad moving means for maintaining said pads in engagement with the medium for a selected time interval and for then causing said pad moving means rapidly to move said pads away from one another, and control means for said timer actuated by said pads for energizing the timer upon engagement of said pads with the medium.

3,129,587
FLOW SENSING DEVICE
Erling C. Hallanger, St. Paul, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Oct. 11, 1960, Ser. No. 61,893
2 Claims. (Cl. 73—211)



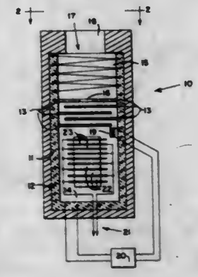
1. An apparatus adapted to measure the velocity of air moving in a duct, an air flow restriction means adapted to be placed into a duct whereby said restriction means partially restricts the flow of air through the duct to provide a measurable pressure drop, a first and a second pressure sensing means, means pivotally connecting and supporting one of said sensing means on said air flow restriction means whereby said sensing means can be moved to an active position adjacent said air flow restriction means after said restriction means is mounted in a duct, means connecting the other of said sensing means on said air flow restriction means, said first and second sensing means when mounted on said restriction means forming an assembly with said first sensing means upstream said restriction means and said second sensing means downstream said restriction means, means adapted to hold said assembly in the duct, pressure differential responsive means providing a signal indicative of the difference in pressure between two pressure sources, and means for connecting said differential responsive means to said first and second sensing means whereby the difference between the upstream and downstream air pressures provides a signal indicative of the velocity of the air flow in said duct and through said restriction means.

3,129,588
INDICATING DEVICE
John R. Martin, 1027 E. Hampton Ave., Milwaukee, Wis.
Filed Sept. 7, 1961, Ser. No. 136,614
7 Claims. (Cl. 73—362)



1. A temperature indicating device comprising, in electrical series circuit relationship, an electrical coil, a source of electrical current, a variable resistor adjustable to preset said circuit to a predetermined initial flow of current through said coil, and a thermistor adapted to be exposed to unknown temperatures so that the current supplied to said coil is controlled by said thermistor and corresponds to said unknown temperatures; a magnetostrictive material positioned in the field of said coil; a sealed enclosure for said magnetostrictive material including a first portion containing said magnetostrictive material and a second portion of reduced cross sectional area; and a liquid filling said first portion of said enclosure and extending into said second portion of said enclosure.

3,129,589
PRESSURE RESPONSIVE INSTRUMENT
David Tatum, Bala-Cynwyd, and Martin S. Maltenfort, Upper Darby, Pa., assignors to Ametek, Inc., New York, N.Y., a corporation of Delaware
Filed Apr. 1, 1960, Ser. No. 19,382
4 Claims. (Cl. 73—398)

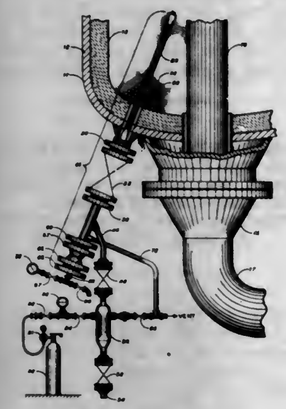


1. Apparatus comprising in combination, a chamber; an orifice leading to said chamber; a heating shell surrounding said chamber and adapted to supply heat to said chamber; insulation surrounding said shell; temperature sensitive means within said chamber; a heat balancing circuit controlled by said temperature sensitive means for supplying power to said heating shell to maintain said chamber at substantially a constant temperature; a mass including an elastomeric body comprising a polymer and a fluid within said chamber; and contacts adapted to be actuated by the variation in volume of said elastomeric body due to the ambient pressure reaching the boiling pressure of said fluid.

3,129,590
PARTICULATE SOLID SAMPLING DEVICE
John R. B. Ellis, Kentfield, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Filed Mar. 3, 1961, Ser. No. 93,091
2 Claims. (Cl. 73—424)

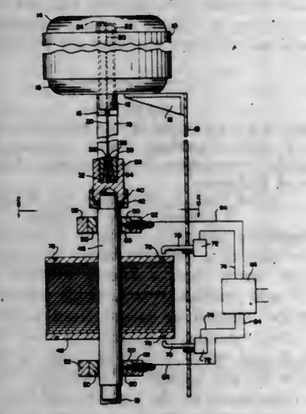
2. Apparatus insertable through a valved opening in the lower part of a reaction vessel to remove a sample of catalyst beads from a known location adjacent the center of said reaction vessel, which comprises an elongated probe adapted to extend from a point exteriorly of the valved opening in a reaction vessel into a central location in said vessel and away from the walls thereof, said probe having a restricted diameter to prevent substantial disturbance of the catalyst and fluid flow in said vessel adjacent said known sampling point, said probe including an elongated solid pipe having its end closed and a side opening port adjacent said closed end to permit entry of catalyst beads by gravity flow from said known location into the interior thereof, an elongated chamber member rotatably mounted within said pipe, said chamber member having a pair of openings adjacent

its opposite ends, one of said openings being registrable with said side opening port of said probe and the other of said openings being registrable with a port in said probe member exterior to said vessel, said openings to said chamber member being at the same side so that the interior of said sample chamber may be selectively connected to collect a sample and to discharge it without



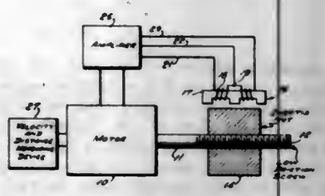
direct communication between the interior of said vessel and the exterior of said vessel, and the length of said chamber member being substantially coextensive with the length of said pipe and limited in diameter to permit all of a small sample of said catalyst beads to be taken directly at said known sampling point, and means for rotating said sample chamber between said sample filling and sample discharge positions.

3,129,591
BALANCING APPARATUS
Everett P. Larsh, Montgomery County, Ohio
(124 E. Monument Ave., Dayton 2, Ohio)
Filed Aug. 11, 1960, Ser. No. 48,902
8 Claims. (Cl. 73—472)



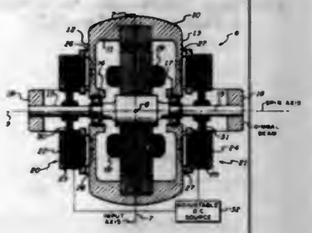
1. Apparatus for dynamically balancing a rotatable member comprising a motor provided with a vertically disposed hollow rotatable drive shaft which extends through the motor, a wire attached to the upper end of the shaft at the center thereof and extending downwardly through the shaft and suspended below the shaft, the wire being connected to the shaft for rotation therewith, and coupler means connected to the lower end of the wire and to the rotatable member so that the coupler means rotates with rotation of the wire as the wire rotates with rotation of the shaft, the coupler means thus being freely suspended at the lower end of the wire for movement at a distance from the upper end of the motor drive shaft which distance is equal to the length of the wire while the coupler means is suspended at a distance from the motor which is less than the length of the wire.

3,129,592
INERTIAL INTEGRATING ACCELEROMETERS
Michael Bracutt, East Orange, N.J., assignor to Maxson Electronics Corporation, a corporation of New York
Filed Nov. 10, 1958, Ser. No. 773,026
9 Claims. (Cl. 73—490)



1. An integrating accelerometer comprising an electric motor, a screw connected to be driven by said motor, a nut mounted free running on said screw, sensing means responsive to the position of said nut on said screw, an amplifier having its output connected to said motor for controlling the direction and speed of rotation of the motor, said sensing means being connected to the input of said amplifier for controlling the output thereof in accordance with the position of said nut, and means connected to said screw for measuring its motion.

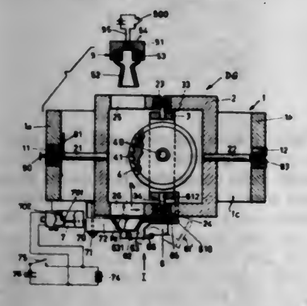
3,129,593
ANISOELASTICITY COMPENSATOR FOR GYROSCOPIC INSTRUMENTS
Robert H. Bolton, Huntington, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Oct. 27, 1961, Ser. No. 148,063
2 Claims. (Cl. 74—5)



1. A gyroscope that is subject to anisoelastic effects having input, output and spin axes comprising a rotor having an enlarged rim portion and first and second web portions, first and second spaced ball bearing means cooperative with said first and second web portions of said rotor for rotatably supporting said rotor for spinning around said spin axis, said first and second ball bearing means having an initial preload, first and second electromagnet means cooperative with said first and second web portions and said first and second ball bearing means

respectively and adapted to adjust said preload to render the elasticity of said gyroscope with respect to said spin axis substantially equal to that with respect to said input axis by exerting first and second forces on said first and second web portions respectively, said first and second forces being equal in magnitude and opposite in direction with respect to each other, and adjustable means for varying the energization of said first and second electromagnet means for adjusting said first and second forces whereby to render said gyroscope substantially isoelastic with respect to said input and spin axes.

3,129,594
DIRECTIONAL GYROSCOPE
Rudolf Hösli, Glattbrugg, Switzerland, assignor to Contraves AG, Zurich, Switzerland
Filed Sept. 17, 1959, Ser. No. 840,646
Claims priority, application Switzerland Sept. 26, 1958
6 Claims. (Cl. 74—5.12)



1. A directional gyroscope for moving systems comprising, in combination: a gyro frame; an outer gimbal frame rotatably mounted in the gyro frame, said outer gimbal frame having an inlet passage and an aligned discharge passage; an inner gimbal frame rotatably mounted in the outer gimbal frame; a gyro rotor comprising a vane ring and rotatably mounted in said inner gimbal frame; means stationary with respect to said gyro rotor for generating a jet of gases and for directing the jet of gases through said inlet passage, tangentially toward said vane ring and through said discharge passage whereby to set the gyro rotor in angular motion; and means for releasably locking said gimbal frames, said locking means comprising a lever pivotably supported by the gyro frame for movements between a first position in which it simultaneously locks both said gimbal frames and a second position in which it unlocks the gimbal frames, baffle means located in the path of gases passing through said discharge passage and comprising carrier means articulately connected to said gyro frame, means carried by the gyro frame and defining a slideway for said carrier means, and resilient means for constantly urging said baffle means in a direction counter to the direction of the jet of gases passing through said discharge passage and for constantly urging said carrier means into abutment with said lever for pivoting the lever into said second position, said slideway comprising a first slot for permitting movements of said carrier means in a direction to move the baffle means toward and away from said discharge passage and a second slot communicating with said first slot and permitting movements of the carrier means in a direction to pivot the lever into said second position, the baffle means being moved in the first slot and against the action of said resilient means by the gases passing through said discharge passage, and the resilient means moving the carrier means into the second slot when the generation of gases is terminated whereby the carrier means pivots the lever and the latter unlocks said gimbal frames.

3,129,595
INTERMITTENT GRIP TYPE MECHANICAL MOVEMENT
Tomás del Pino Suárez, 204 21st St., Brooklyn, N.Y.
Filed Dec. 8, 1960, Ser. No. 74,716
1 Claim. (Cl. 74—120)

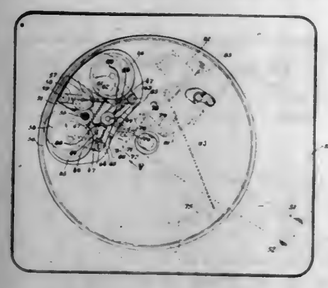


In a machine for converting electrical power to mechanical power, the combination of a hollow casing having side walls, a drive shaft journalled in the side walls with one end extending outwardly from the casing, a wheel on the extension of the shaft, a motor operatively connected to the wheel for rotating the drive shaft, a driven shaft similarly mounted inwardly of the drive shaft, an extension on said driven shaft and driven thereby for useful work, and mechanism transmitting the drive from the drive shaft to the driven shaft including tappet devices fixed on the drive shaft offset angularly from each other around the shaft, rollers carried on the ends of said tappet devices, rack bars slidably mounted in the casing, said rack bars having heads on one end thereof in the path of movement of the tappet devices and moved thereby, idler toothed wheels loosely mounted on said driven shaft in mesh with said rack bars and movable thereby, ratchet wheels fixed on said driven shaft alongside the wheels, spring-pressed pawls fixed on the wheels and interlocked with the teeth on the ratchet wheels for turning the ratchet wheels, said rack bars on each including an elongated stem, a collar at the juncture of the body of the rack bar and its stem, a block slidably mounted in the casing at one end thereof, said block having threaded openings therethrough adjacent one end thereof, a retractile spring coiled around each stem, one end of the spring seated against the collar and its other end impinging against the block, said retractile springs adapted to retract said rack bars upon release of pressure of the tappet devices thereupon, a pair of feed screws supported in the casing outwardly of the rack bars, one end of said screws extending through the threaded openings in the block and coacting therewith to move said block, and means actuated from outside of the casing for turning said feed screws whereby the tension of the retractile springs may be adjusted, including worm gears fixed on one end of the feed screws and a worm shaft meshing with the worm gears, said worm shaft having a portion extending outwardly of the casing and a handle on the outwardly extending portion for turning the worm shaft.

3,129,596
SOUND REPRODUCING MACHINES
Ronald Rudland, London, England, assignor to Foster-Mallard Limited, London, England
Filed May 10, 1960, Ser. No. 28,142
5 Claims. (Cl. 74—190)

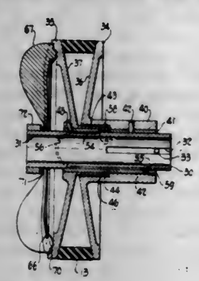
1. Driving mechanism for the turntable of a sound reproducing machine of the character described wherein the turntable has a rim and is driven by an electric motor provided with a shaft; said mechanism comprising friction gearing including two friction wheels engageable with said rim, one of said friction wheels being effective to drive said turntable in one direction and the other of said friction wheels being effective to drive said turntable in the opposite direction, means for stopping and starting said electric motor, means carrying said friction wheels, said rim and said shaft constituting the members between

which said wheels transmit motion, both said means being so coupled that said friction wheels are disengaged from said members when said motor is stopped, a drive wheel rotatable with said shaft, both said friction wheels engaging directly with said drive wheel, said means carrying said friction wheels comprising a pair of pivoted articulate



arms on each of which one of said friction wheels is mounted, a tension spring extending between said arms acting to urge said friction wheels into engagement with said turntable rim, and means to move said arms against the spring load of said spring to disengage said friction wheel from said rim.

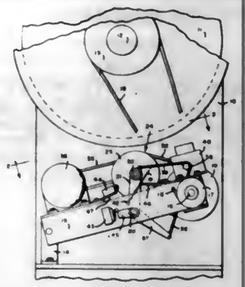
3,129,597
PULLEYS
William C. Prior, Chagrin Falls, Ohio, assignor to Speed Selector, Inc.
Filed Feb. 16, 1962, Ser. No. 173,625
15 Claims. (Cl. 74—230.17)



1. A variable pitch pulley comprising a shaft, a pair of opposed pulley halves on said shaft, at least one of said pulley halves being mounted for axial sliding movement, and spring biasing means for urging said one pulley half toward one end of said shaft, said spring biasing means including a plurality of separate lever fingers having inner fulcrum ends contiguous to said shaft and bearing portions operatively engaging said one pulley half, and a disc spring carried by said lever fingers, said disc spring being movable relative to said fingers so that said spring is free to deflect without distorting said fingers.

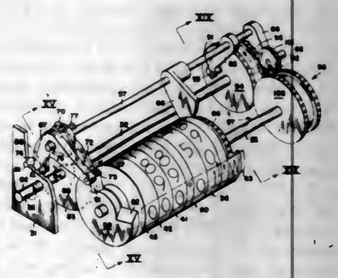
3,129,598
LAUNDRY MACHINES
Benjamin Alvin Buss, East Moline, Ill., assignor to Ametek, Inc., East Moline, Ill., a corporation of Delaware
Filed May 3, 1962, Ser. No. 192,179
3 Claims. (Cl. 74—230.17)

1. In a laundry machine, a housing; a shaft journaled in said housing and supporting a basket for rotation within said housing, said shaft extending to the exterior of said housing; pulley means on the end of said shaft exteriorly of said housing; a base mounted in close proximity to said housing; motor means mounted at one end, and driven shaft means mounted at the other end of said base; lever means mounted on said base for oscillatable movement; a rotatable shaft mounted at one end of said lever means; oppositely facing, conical disk means fixed in spaced relation to said oscillatably mounted shaft; other oppositely facing, conical disk means journaled on



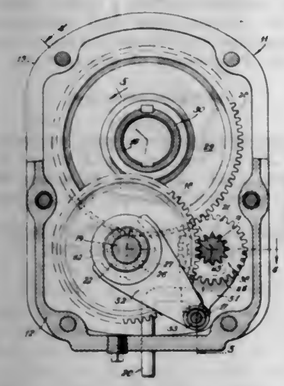
said oscillatably mounted shaft between said fixed conical disks, providing therewith an oscillatable, expansible pulley means; belts connecting said motor means and said driven shaft means to said expansible pulley means; belt means connecting said driven shaft means to the pulley exteriorly of said housing; reversible stall motor means mounted on said base; and flexible band means having separate ends connected to said lever means and also connected to said stall motor means for oscillating said expansible pulley means.

3,129,599
REVERSING COUNTER
Herbert H. Olson, Glenolden, Pa., assignor, by mesne assignments, to Litton Industries, Inc., Beverly Hills, Calif., a corporation of Delaware
Filed June 20, 1960, Ser. No. 37,477
7 Claims. (Cl. 74—319)



1. A reversing counter comprising a frame, a rotatable input shaft mounted in the frame, a rotatable counter shaft also mounted in the frame, transfer means connected between the input and counter shafts for transferring the rotation of the input shaft to the counter shaft, reversing means operatively connected to said transfer means and actuated by said counter shaft for changing the operation of the transfer means to reverse the rotation of the counter shaft relative to said input shaft, and means actuated by said reversing means for bringing said counter shaft into synchronism with said input shaft to compensate for any lack of synchronism occurring during such reversal.

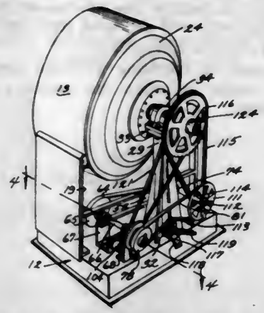
3,129,600
TWO-SPEED SPEED REDUCER
Jackson Chung, Mishawaka, Ind., assignor to Dodge Manufacturing Corporation, Mishawaka, Ind., a corporation of Indiana
Filed July 29, 1960, Ser. No. 46,308
5 Claims. (Cl. 74—361)



1. A speed-reducing gear transmission including an input shaft, teeth carried thereon forming a pinion and having ends exposed in one direction forming a clutch half, an axially shiftable assembly on said shaft and including a mating clutch half and a pinion rotating therewith, an output shaft, a gear on said output shaft constantly meshing with the pinion of the shiftable assembly, a countershaft, an intermediate gear on said countershaft constantly meshing with said teeth and slideable axially thereon and on the countershaft, a clutch half rotating with said intermediate gear and forming with it a second shiftable assembly, teeth on said countershaft constantly meshing with the first named gear and having ends exposed in the opposite direction forming a clutch half mating with the last named clutch half, and shift means for jointly moving said shiftable assemblies to engage one clutch when shifted in one direction from neutral and the other clutch when shifted in the opposite direction from neutral.

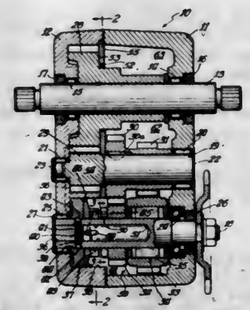
3,129,601
WASHER DRYER DRIVE MECHANISM
Charles F. Edwards, 6120½ N. Northwest Highway, Chicago 31, Ill., assignor of three-fourths to David Tann and Herman Tann, both of Detroit, Mich., and Sadie Powers Davis, Milwaukee, Wis.
Original application Jan. 21, 1958, Ser. No. 710,296, now Patent No. 2,963,892, dated Dec. 13, 1960. Divided and this application Oct. 14, 1960, Ser. No. 64,680
4 Claims. (Cl. 74—368)

1. In a fabric laundering machine, a frame, a jack shaft rotatably mounted on said frame, prime mover means for rotating said jack shaft, a driven shaft rotatably mounted on said frame, overrunning clutch means operatively connected to said driven shaft, a low speed drive train operatively connecting said jack shaft to said overrunning clutch means, said low speed drive train including a variable speed element movable between low speed and intermediate speed positions, a high speed drive train rotatably connected to said jack shaft and drivingly connected to said driven shaft, clutch means movable between a first position disengaging said high speed drive train and a second position engaging said high speed drive train with said low speed drive train, and means responsive to movement of said clutch means from its first to its second posi-



tions for moving said variable speed element from its low speed position to its intermediate speed position.

3,129,602
AUTOMATIC TWO SPEED TRANSMISSION
Robert W. Halberg, Des Plaines, and Milton R. Nielsen, Glen Ellyn, Ill., assignors to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Dec. 22, 1960, Ser. No. 77,709
7 Claims. (Cl. 74—368)



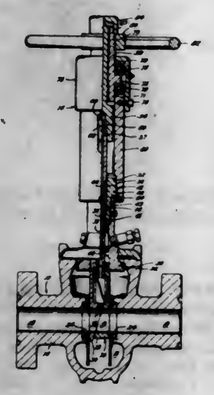
1. In a transmission, the combination of a driving element, a driven element, means affording a low speed power train between said elements, means affording a high speed power train between said elements, said last named means including a pair of meshed gears disposed in a chamber portion thereby forming a fluid pump and a fluid pressure actuated engaging device for rendering the high speed power train effective, the said pump being effective to supply fluid pressure to said engaging device whereby said high speed power train is made effective at a predetermined speed.

3,129,603
TEMPORARY HANDWHEEL OPERATOR
Paul J. Natho, Houston, Tex., assignor to ACF Industries Incorporated, New York, N.Y., a corporation of New Jersey
Filed May 1, 1961, Ser. No. 106,639
8 Claims. (Cl. 74—424.8)

8. A temporary handwheel operator for a rising stem gate valve to permit expeditious installation of a high-low control valve on the gate valve, said valve having a reciprocating valve member, a reciprocating stem passing through a passage in a bonnet attached to the valve body, said operator comprising:

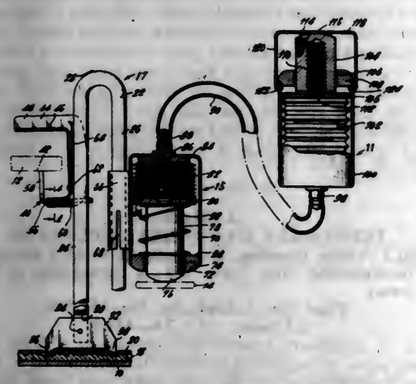
(1) adapter means attached to a bonnet of the valve and having provisions for having an external operator attached thereto;

(2) a non-rotating auxiliary stem connected to a stem extending from the valve and having its axially outer end provided with external threads;
(3) a collar attached to the adapter surrounding the protruding portion of the valve stem and the axially inner end of the auxiliary stem,
(a) means co-operating with the auxiliary stem and collar to retain the auxiliary stem non-rotative;



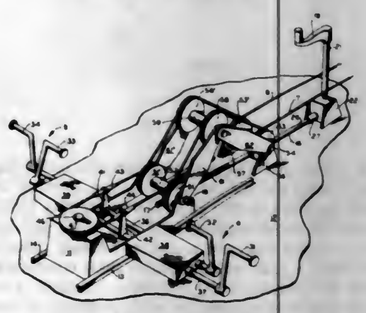
(4) a rotatable bushing having internal threads which are threadedly engaged with the external threads of the auxiliary stem and having a shoulder around its outer periphery;
(5) a cap having a central passage for the bushing covering the shoulder of the bushing and being non-rotatively attached to the axial outer end of the collar;
(6) a handwheel attached to the extending portion of the bushing.

3,129,604
REMOTE CONTROL DEVICE FOR ACCELERATOR PEDAL
Alfred H. Hanson, Garrison, N.Y.
Filed Jan. 17, 1961, Ser. No. 83,281
10 Claims. (Cl. 74—482)



1. A remote control device for selectively actuating the accelerator pedal of a vehicle provided with a brake pedal adjacent the accelerator pedal, comprising a substantially inverted U-shaped support member including a first leg and a second leg spaced from said first leg, foot means connected to said first leg for engaging the floor of the vehicle, mounting means movably secured to said first leg for engaging and pressing against the underside of the brake pedal so that support member is rigidly held in upright position between the vehicle floor and the underside of the brake pedal, a first cylinder, means adjustably securing said first cylinder to said second leg and in overlying position relative to the accelerator pedal for sliding movement of said first cylinder on said second leg, a piston in said first cylinder and having a ram attached thereto extending outwardly of said cylinder for engaging the accelerator pedal, a second cylinder remote from said first cylinder, and fluid transmission means interconnecting said first cylinder and said second cylinder for controlling the position of said ram and accelerator pedal.

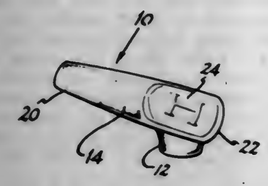
3,129,605
ADJUSTABLE CONTROL SYSTEM
Alfred Bonnell, Jr., Los Altos, and Wayne F. Rossiter, Menlo Park, Calif., assignors, by mesne assignments, to Eltra Corporation, Brooklyn, N.Y., a corporation of New York
Filed Sept. 7, 1961, Ser. No. 136,503
8 Claims. (Cl. 74—501)



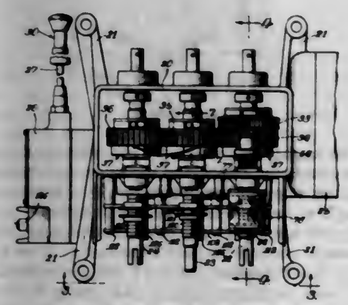
1. A control cable system comprising control means, a mounting slide on which said control means is operatively mounted, drive means for selectively advancing or retracting said slide with said control means thereon relative to a reference location, a control cable operatively connected with said control means, and mechanism interposed between said slide and said reference location for maintaining a generally constant degree of tautness on said cable irrespective of the position of adjustment of said slide relative to said reference location; said mechanism comprising a first pulley mounted on said slide, a second pulley mounted independently of said slide, a third pulley interposed generally between said first and second pulleys, and link means movable in scissors fashion operatively interconnecting said three pulleys, said cable passing over each of said three pulleys; movement of said slide toward said reference location resulting in said link means being contracted in scissors fashion, and vice versa, whereby said third pulley is reoriented towards or away from said other two pulleys, depending upon the direction of movement of said slide, to maintain generally unchanged the degree of tautness on said cable during and following such adjusting movement.

3,129,606
HANDLE
Millard F. Harty, Jr., Mount Clemens, Mich., assignor to Michigan Brass Company, Grand Haven, Mich., a corporation of Michigan
Filed Mar. 27, 1961, Ser. No. 98,584
2 Claims. (Cl. 74—543)

1. A faucet handle comprising a neck of generally circular cross section and concentric about a vertical axis around which the handle is adapted to be rotated, a handle portion of substantially greater width than thickness and inclined at approximately 45° to said vertical axis and having a central straight longitudinal axis extending generally horizontally and perpendicular to said vertical axis, said handle portion comprising a finger grip portion of oval cross section and adapted to be gripped by the fingers of one hand of the person operating the handle and a thumb receiving portion adapted to receive a thumb of said hand, the lower end of said neck having a recess therein concentric with said vertical axis for receiving a vertical valve stem, the upper end of said neck being integrally secured to said thumb receiving portion, said thumb receiving portion having an upper concave curved surface adapted to comfortably receive and fit said thumb and located between upper and lower surfaces of said finger grip portion, said upper concave curved surface being substantially centered about said vertical axis.

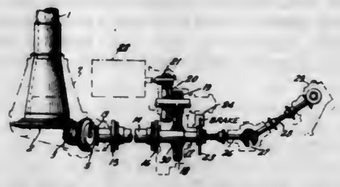


3,129,607
DRIVE UNIT AND CONTROL
Edward J. Schaefer, Bluffton, Ind., assignor to Franklin Electric Co., Inc., Bluffton, Ind., a corporation of Indiana
Filed July 5, 1960, Ser. No. 40,959
35 Claims. (Cl. 74—665)



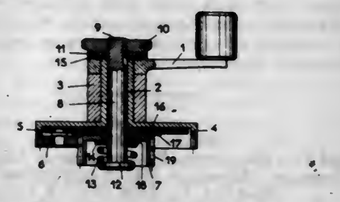
6. A drive unit comprising a reversible electric motor having a drive shaft, a plurality of parallel driven shafts, a plurality of drive gears respectively mounted on said driven shafts, said drive gears being in meshing relation to form a gear train and each being rotatively mounted on its associated shaft, one of said drive gears having a driving connection with said drive shaft, a plurality of clutch means for connecting the respective drive gears to their associated driven shafts, each clutch means including a member shiftable between a neutral non-driving position to a drive position providing a drive connection between the associated drive gear and its associated shaft, and a manually controlled means for selectively shifting said members between said positions, said manually controlled means including switch means connected in circuit with said motor to control the operation and direction of rotation of said motor.

3,129,608
MECHANICAL GEARING
Kenneth Watson, Woolston, Southampton, England, assignor to Westland Aircraft Limited, Yeovil, England
Filed Nov. 25, 1960, Ser. No. 71,502
Claims priority, application Great Britain Dec. 4, 1959
9 Claims. (Cl. 74—665)



1. A mechanical power transmission having a power input and a power output, comprising a power output bevel wheel, a pair of resilient quill shafts, two bevel pinions, a single bevel pinion being mounted on each of said quill shafts, said bevel pinions meshing with said bevel wheel and rotating upon axes converging towards the center of said bevel wheel, an outer bevel wheel mounted on each of said quill shafts and a central pinion receiving said power input meshing with said outer bevel wheels.

3,129,609
CRANK DRIVE WITH TORQUE-REDUCING DEVICE
Michel Rouanet, 27 Rue des Girondins, Saint-Cloud, Seine-et-Oise, France
Filed Jan. 30, 1961, Ser. No. 85,836
Claims priority, application France Feb. 4, 1960
7 Claims. (Cl. 74—751)

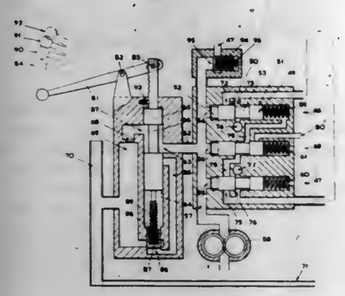


1. A driving device including an axial shaft, a hollow shaft mounted to rotate about said axial shaft, a crank and a crown wheel having internal teeth respectively disposed at the extremities of and solid in rotation with said hollow shaft, a satellite carrier and a sun wheel mounted to rotate freely about said axial shaft, at least one satellite carried by said carrier and meshing with said crown wheel and said sun wheel, a first friction washer disposed between said crown wheel and said carrier, a second washer disposed between said carrier and said sun wheel, abutment means on said axial shaft, spring means disposed between said abutment means and said sun wheel and control means to control the tension of said spring means, whereby the washers are firmly maintained in frictional engagement with said crown wheel and said carrier, and with said carrier and said sun wheel respectively.

3,129,610
MULTI-RATIO TRANSMISSION MECHANISMS FOR VEHICLES
Herbert Edward Ashfield, Meltham, Huddersfield, England, assignor to David Brown Tractors Limited
Filed Mar. 20, 1961, Ser. No. 97,073
10 Claims. (Cl. 74—752)

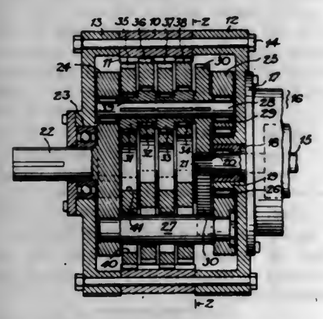
1. In a vehicle transmission mechanism, multi-ratio gear transmission means comprising a plurality of gear

reduction sets connected together in series and having an output member driven thereby and connected to drive means for the vehicle wheels, and hydraulic mechanism operative to effect changes of gear ratio in said transmission means only in response to changes of speed of said output member, said hydraulic mechanism comprising clutch means for rendering individual reduction sets inoperative, fluid pressure responsive means for actuating said clutch means, means including a pump for supplying fluid under pressure to said fluid pressure responsive means for actuating said clutch means, means including



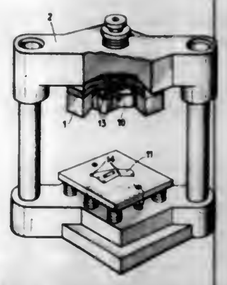
a plurality of valves responsive to pressure of fluid supplied by said pump for controlling the supply of fluid to said fluid pressure responsive means, means whereby said valves open in response to different predetermined fluid pressures and in predetermined sequence to supply fluid to said pressure responsive means, and means for driving said pump at a speed proportional to that of said output member for increasing and decreasing the pressure of supplied fluid respectively with increases and decreases in the speed of said output member to thereby control the actuation of said clutch means in accordance with the speed of said output member.

3,129,611
SPEED REDUCERS
Royal Lee, Elm Grove, Wis., assignor to Lee Engineering Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Oct. 14, 1960, Ser. No. 62,591
2 Claims. (Cl. 74—804)



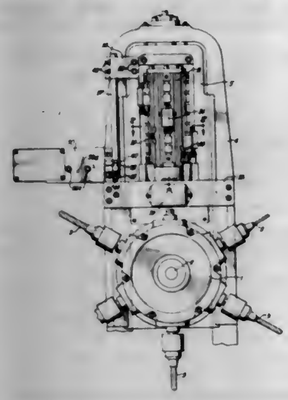
1. A speed reducer comprising a pair of meshing internal and externally toothed gears having parallel axes and further having a small tooth number difference between them, one of said gears being stationary and the other having a rolling motion about the stationary gear, a rotatable driven member coaxial with the stationary gear, housing means in which said driven member is rotatably mounted, a plurality of driving eccentrics for the movable gear rotatably carried by said driven member to turn about parallel axes spaced from the driven member axis, said eccentrics having the same orientation and being rotatable in the same direction, said eccentrics being journaled in and carrying said movable gear for effecting a rolling travel of said movable gear on said stationary gear, input gearing means for synchronously rotating said eccentrics, said input gearing means including spur gears coaxially coupled to the respective eccentrics and meshing with a smaller driving pinion coaxial with said stationary gear, said housing means including an end cover member adjacent to said spur gears and having an opening coaxial with said driven member, and a frame rotatably carrying said driving pinion, said frame being rigidly but detachably secured to said cover member and having a projecting part slidably fitting in said opening, and said frame-carried pinion being axially insertable through said end cover opening into meshing engagement with said spur gears and being axially guided into said meshing engagement by the sliding fit of said projecting frame part in said opening.

3,129,612
MANUFACTURING COMPOUND PRESS TOOLS
Rolf Erik Annerén, Atvidaberg, and Johan Bertil Gustafsson, Bjorsater, Sweden, assignors to Aktiebolaget Atvidaberg-Facit, Atvidaberg, Sweden, a joint-stock company of Sweden
Filed Feb. 15, 1961, Ser. No. 89,576
Claims priority, application Sweden Feb. 15, 1960
2 Claims. (Cl. 76—107)



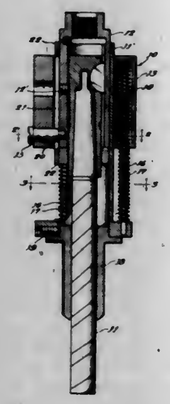
1. The method of manufacturing compound press tools such as compound punch and die tools, said method comprising the steps of making a die in a known manner, grinding flat the end faces of a blank for a punch and ejector member, mounting said die and said blank in a pillar stand, coating the face of said die, forcing said die and said blank together to mark the die contour on the face of said blank, machining said punch blank sides to substantially the outline of said marking, securing a metal plate to one said end face, remounting said die and said punch blank in the pillar stand in their original positions, forcing said die and said punch blank together to impress the die contour into said metal plate, cutting said blank along a plane parallel to said flat surface to form a punch member and an ejector member, jig boring said ejecting member while located in said die by said metal plate to form desired openings therein, mounting said die with said ejecting member in position therein in one member of the pillar stand and the punch member in the other member of the pillar stand, forcing said cut faces of said ejecting member and punch member together, fastening said members together in the thus secured original relationship, using said ejecting member as a jig for drilling and boring said punch member and thereafter grinding the sides of said ejecting and punch members to the die contour marked on said metal plate.

3,129,613
RECIPROCATING FEED DEVICE FOR MACHINE TOOLS
Joseph L. Burg, Los Angeles, Calif., assignor to Burgmaster Corporation, Los Angeles, Calif., a corporation of California
Filed Sept. 1, 1961, Ser. No. 135,673
1 Claim. (Cl. 77—25)



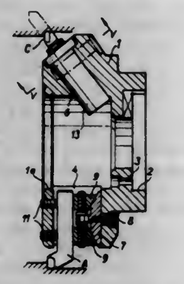
In a machine tool of the class including a frame, a carriage mounted on the frame for reciprocating movement in a path; said carriage having a limited retracted position; a head mounted on the carriage for indexing movement about an axis transverse to said path; angularly spaced rotary tool holders arranged about the axis of adjustment of the head whereby tools may be selectively placed in operating position; a support mounted on the carriage for adjustment about an axis, and synchronously coupled to said head whereby the support is indexed with the head; a down relay for causing the carriage to move away from its retracted position; an up relay for causing the carriage to return toward its retracted position; a slow rate relay for causing the carriage to move at a reduced rate; a pair of circuit controllers carried by the frame, one of said circuit controllers having normally closed contacts and normally open contacts, and the other of said circuit controllers having normally open contacts; a number of pairs of cams for said circuit controllers and adjustably mounted on said support so that successive pairs of cams are positioned for movement in paths respectively to operate said circuit controllers corresponding to successive indexed positions of said head, said one of said circuit controllers being operated as the tool substantially clears the works, and the other circuit controller being operated when the tool closely approaches the work and in accordance with the setting of said cams; a depth limit switch having normally closed contacts and normally open contacts; a number of depth cams adjustably mounted on said support so that successive depth cams are positioned for movement in a path to operate said depth switch corresponding to successive indexed positions of said head; a normally closed up limit switch moved to open position when the carriage is in its retracted position; an energization circuit for said down relay including a normally open start switch; a holding branch paralleling said start switch including, in series, said normally closed contacts of said depth limit switch and a normally open circuit controller closed by said down relay; an energization circuit for said up relay including, in series, a normally closed circuit controller opened by said down relay, said normally open contacts of said depth limit switch and said normally closed up limit switch; a holding branch paralleling said normally open contacts of said depth limit switch including normally open contacts closed by said up relay; an energization circuit for said slow rate relay, including, in series, the normally closed contacts of said one of said pair of circuit controllers, the normally open contacts of said other of said pair of circuit controllers, and normally open contacts closed by said down relay; a holding circuit for said slow rate relay paralleling said normally open contacts of said other of said pair of circuit controllers and said normally open contacts closed by said down relay, said holding circuit being dependent upon said normally closed contacts of said one of said pair of circuit controllers, the combination therewith of: a depth sensing structure including a first part mounted on the carriage, a second part yieldingly gripped by the first part, and an abutment mounted on the frame and in the path of movement of the second part as the carriage is advanced to cause the parts to move with respect to each other whereby the relative position of said parts senses the previous tool penetration; a stop relay; a reciprocating feed relay; an energization circuit for the reciprocating feed relay including a switch for selecting reciprocating feed, normally open contacts closed by said slow rate relay and normally closed contacts of said stop relay; a holding circuit for said reciprocating feed relay paralleling said normally open contacts of said slow rate relay, and including normally open contacts closed by said reciprocating feed relay; an electrically energizable timer reset upon deenergization thereof; an energization circuit for said timer including, in series, normally open contacts closed by said reciprocating feed relay and normally open contacts closed by said slow rate relay; normally closed contacts opened by said timer after the passage of a time interval following continued energization thereof and serially inserted in the holding branch for said down relay; normally open contacts closed by said timer after the passage of time following continued energization thereof and paralleling said normally open contacts of said depth limit switch; first normally closed contacts opened by said reciprocating feed relay serially associated with said normally closed contacts of said one of said pair of circuit controllers and upon which said holding circuit for said slow rate relay is dependent; second normally closed contacts opened by said reciprocating feed relay serially associated with the normally open contacts of said other of said pair of circuit controllers and paralleled by said holding circuit for said slow rate relay; a supplemental energization circuit for said down relay, including said normally open contacts of said one of said pair of circuit controllers and normally open contacts closed by said reciprocating feed relay, said supplemental energization circuit being dependent upon said normally closed contacts of said depth limit switch; a supplemental energization circuit for said slow rate relay including normally open contacts closed upon movement of said second part against said abutment, normally closed contacts opened by said up relay and paralleling said normally closed contacts of said one of said pair of circuit controllers with its serially associated normally closed contacts opened by said reciprocating feed relay, said supplemental energization circuit further including normally open contacts closed by said reciprocating feed relay; an energization circuit for said stop relay, including, in series, normally open contacts of said depth limit switch, the normally open holding contacts of said reciprocating feed relay and said selector switch; a holding circuit for said stop relay paralleling said normally open contacts of said depth limit switch, including normally open contacts closed by said stop relay; and means for confining said second part against said abutment only when said reciprocating feed relay is deenergized.

3,129,614
TOOL GUIDE
William J. Dowdakin, Rockford, Ill., assignor to Sundstrand Corporation, a corporation of Illinois
Filed Dec. 22, 1961, Ser. No. 161,655
5 Claims. (Cl. 77—55)



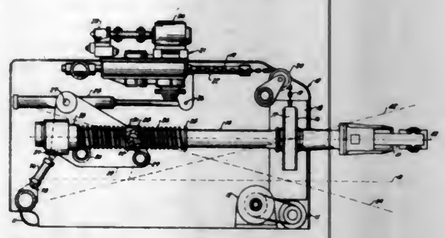
1. A tool guide assembly to fit around a drive spindle and tool, comprising: a spring retaining block affixed to said drive spindle by a plurality of shoulder screws, a guide bushing retainer having a pluralty of elongated longitudinal slots therein mounted for reciprocal movement in said spring retaining block, means including said shoulder screws to limit said movement, a plurality of springs urging the guide bushing retainer apart from the spring retaining block, and a tool guide bushing affixed to said guide bushing retainer to substantially completely house the tool when the guide bushing retainer is apart from the spring retaining block.

3,129,615
MULTIPLE-TOOL BORING MACHINE HEAD
Salvatore Lombardo, Milan, Italy, assignor to Innocenti Soc. Gen. per l'Industria Metallurgica e Meccanica, Milan, Italy
Filed Oct. 16, 1961, Ser. No. 145,122
Claims priority, application Italy Oct. 24, 1960
2 Claims. (Cl. 77—58)



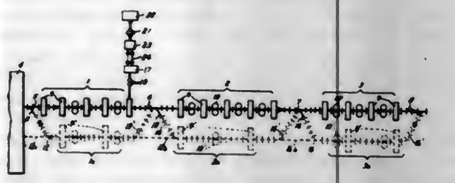
1. Multiple-tool boring head comprising a plurality of radially extending and circumferentially spaced tool-shank receiving slots in the tool head body, each of said slots being elongated in axial direction of said body and being defined by two side walls and two end walls formed by portions of said body, at least two axially adjustable and axially spaced abutments in each of said slots, means for supporting each of said abutments in said end walls of each slot and externally operated means for adjustment of the axial position of each of said abutments in each slot relative to said body so that in each of said slots a tool shank can be clamped between said abutments in radially and axially different positions relative to the boring head and of other tool shanks in other slots.

3,129,616
PEEL CONTROL
George Hays Bell, Jr., Salem, Ohio, assignor to The Morgan Engineering Co., Alliance, Ohio, a corporation of Ohio
Filed Mar. 1, 1962, Ser. No. 176,708
9 Claims. (Cl. 78—96)



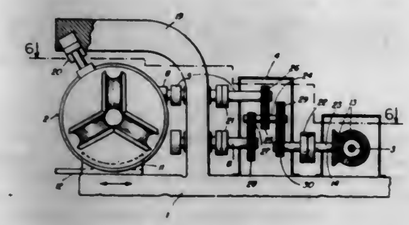
1. In a forging manipulator the combination of a peel having one forward support point and one rearward support point, means including a hydraulic motor for movably supporting said peel at one of said points, crank means for movably supporting said peel at the other of said points, means anchoring said motor on said crank means for moving said motor when said other support point is moved, and means independent of said motor for moving said crank.

3,129,617
MULTIPLE-STAND CONTINUOUS ROLLING MILLS FOR THE PRODUCTION OF WIRE, LIGHT-SECTION STEEL PRODUCTS AND THE LIKE
Erich Schulte, Dusseldorf-Oberkassel, Germany, assignor to Siemag Siegener Maschinenbau G.m.b.H., Dahlbruch, Germany
Filed Jan. 7, 1960, Ser. No. 1,005
Claims priority, application Germany Jan. 7, 1959
13 Claims. (Cl. 80—35)



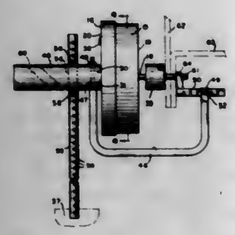
1. In a rolling mill for the processing of wire rods and like materials, in combination, a plurality of roll lines each including a plurality of roll stands; conveyor means for moving the materials toward and between said roll lines; means for reciprocating the stands of said roll lines substantially transversely to the direction in which the materials are moved by said conveyor means; and material guiding means connected with each of said roll stands and movable by said reciprocating means into the respective roll lines when the corresponding roll stands are removed from the roll lines, the roll stands moved from said roll lines by the respective reciprocating means constituting a plurality of second roll lines.

3,129,618
CONTINUOUS ROLLING MILL DRIVE
Gerhard Hergeth, Monchen-Gladbach, Germany, assignor to Mannesmann-Meer Aktiengesellschaft, Monchen-Gladbach, Germany, a corporation of Germany
Filed May 23, 1961, Ser. No. 111,954
2 Claims. (Cl. 80—35)



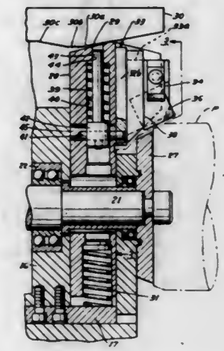
1. Continuous rolling mill apparatus permitting change from one speed range to another comprising a frame, a plurality of stands in said frame individually removable therefrom, the stands being arranged to provide a common mill pass center line, a common input drive shaft for said stands, and two spindles on the frame driven from the common input drive shaft of each stand, one to drive its stand when one side up and the other to drive the stand when turned 180°, in combination with gears associated with each drive spindle in each stand providing a different speed range compared to the other spindle; whereby the mill can cover an increased range of speeds merely by turning the stands 180°.

3,129,619
EXPLOSIVELY ACTIVATED BOLT-HOLDING WRENCH
Robert A. Harrison, Washington, D.C.
(955 S. Columbus St., Arlington 4, Va.)
Filed Feb. 3, 1961, Ser. No. 86,993
10 Claims. (Cl. 81—52.3)



1. In a tool for operating threaded fasteners of the character wherein two elements are rotatable with respect to each other, the combination including a closed cylindrical chamber having parallel end walls, a rotatable shaft projecting outwardly from said chamber normal to said walls, a movable vane piston extending between said parallel walls and fixed to said shaft, a radially extending wall forming with said vane piston an expansible chamber, means to removably position an explosive cartridge means in said expansible chamber, means to secure said cylindrical chamber to one element of said fastener, means to secure said shaft to the other fastener element, and means to ignite said explosive charge in said closed chamber to move said vane.

3,129,620
FLOATING TOOL FOR REMOVING BURRS FROM MACHINED SURFACES
Donn W. Muehlhauser, Euclid, Ohio, assignor to The Pipe Machinery Company, Wickliffe, Ohio, a corporation of Ohio
Filed Aug. 24, 1960, Ser. No. 51,579
4 Claims. (Cl. 82—20)

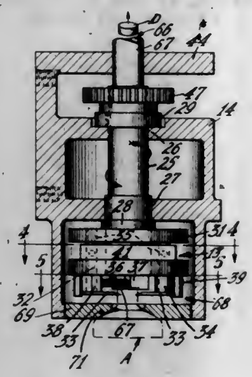


1. An apparatus for removing a circumferentially extending burr from a machined cylindrical surface of a workpiece and comprising a tool carriage, a chuck for supporting a workpiece having a circumferentially extending burr and to be deburred, means supporting the carriage and chuck for relative rotation about a predetermined axis and lateral movement of the carriage toward and away from said axis, means to effect said relative rotation, means to effect said relative lateral movement during said relative rotation, a tool support, a cutting tool thereon, means connecting the support to the carriage for movement relative to the carriage along a predetermined path toward and away from said axis, respectively, said tool having a cutting edge adapted to be applied by the support so as to engage and remove a circumferentially extending burr from the machined surface as the tool is advanced by the carriage and to engage the deburred machined surface with little or no front clearance after the tool has removed the burr, and said cutting edge being elongated endwise of the machined surface so as to engage the machined surface after deburring for substantial distance lengthwise of the surface, resilient means carried by the carriage and yieldably urging the support relative to the carriage toward the axis with an effective force great enough to cause the tool to cut off the burr from the machined surface of the member, and insufficient to cause the tool to cut into the machined surface upon engagement of the tool with the machined surface.

3,129,621
CUTTER
Alexander George Makowski, Fayville, Mass., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Mar. 31, 1959, Ser. No. 803,248
5 Claims. (Cl. 82—59)

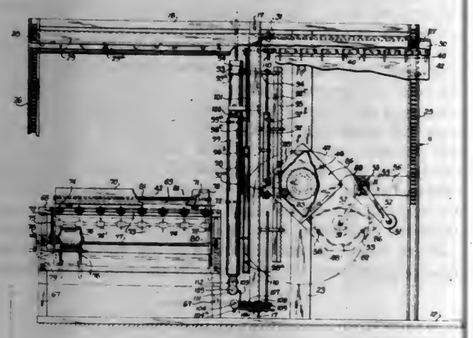
3. Apparatus for trimming the end of an article, comprising a support for receiving an article to be severed, a frame located adjacent said support, a cutter head housing slidably carried on said frame, a spindle rotatably mounted in said housing and having a disc adjacent one end thereof, a shaft passing through said disc and rockably carried thereby, a cutting knife attached to one end of said shaft adjacent one face of said disc and radially swingable movable into and out of article cutting position, means for slidably moving said cutter

head housing along said frame, actuating means responsive to said moving means and capable of rotating said spindle and cutting knife first at a normal non-trimming speed and then at an increased speed for a cutting operation, resilient means for retaining said cutting knife



in a normal non-cutting position when said spindle is rotated at non-trimming speed, and a weight element carried on the other end of said shaft adjacent the other face of said disc and moving said knife into a cutting position when said spindle is rotated at said increased speed.

3,129,622
BLANK FORMING MACHINE AND METHOD OF DIE CUTTING BLANKS
Lewis C. Pearce, Columbia Station, Ohio, assignor to The Standard Envelope Manufacturing Co.
Filed Apr. 24, 1961, Ser. No. 105,078
16 Claims. (Cl. 83—36)



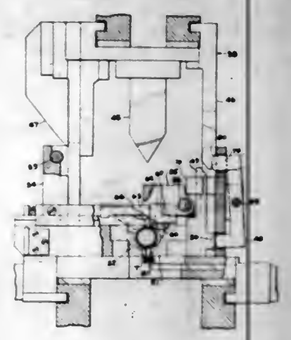
1. The method of cutting blanks from a pile of sheets of paper or the like comprising the steps of suspending a pile of said sheets from one edge of the pile to hang freely in a vertical plane, providing vertically disposed backing, recurrently pressing a cutting die into said pile and against said backing without comprising said pile below said one edge at different locations to cut blanks therefrom at each of said locations, and shifting said pile horizontally and vertically in said vertical plane to align the die with successive of said different locations between recurrent pressing actions of said cutting die into said pile while permitting the uncompressed pile to adjust itself by gravity to the distortions caused by the pressing of the cutting die into said pile.

3,129,623
PLURAL DIE ELEMENTS SURROUNDED BY SINGLE STRIPPER PAD MEANS WITH WORK GAUGE OVERLYING STRIPPER
John O. Lowell, Kirkwood, Mo., assignor, by mesne assignments, to Ripley Industries, Inc., St. Louis, Mo., a corporation of Delaware
Filed July 3, 1956, Ser. No. 595,763
1 Claim. (Cl. 83—133)



A die comprising a base having two openings therein, a bridge between the openings, two rigid plates smaller than and of less thickness than the base, and of a shape to engage the sides of the openings and to be positioned thereby, the plates being removably inserted in said openings, at least one tubular die element mounted in each plate, means limiting the movement of the plates in the openings to locate them with their upper faces generally flush with the upper face of the base and their bottom faces above the bottom of the base; stripper means in the form of cushion pad material of uniform thickness mounted on and covering the flush upper faces of the base, the bridge, and the two plates, and having openings through it to receive the die elements on the two plates, the die elements projecting from the plate through the openings in the stripper means, and a work gauge removably mounted on the bridge above the stripper pad.

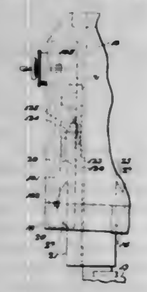
3,129,624
CUT-OFF DEVICE FOR TUBE MAKING MACHINE OF CONTINUOUS TYPE
Louis J. Auer, 1200 E. Square Lake Road, Birmingham, Mich.
Filed Oct. 24, 1960, Ser. No. 64,431
7 Claims. (Cl. 83—300)



1. In a cut-off device for a tube in continuous longitudinal motion, a carriage having said tube threaded through it and movable in a straight reciprocal path of a predetermined length substantially parallel to the tube, the movement of said carriage from its starting position to the forwardmost position and its return to the starting position forming one cutting cycle of the device, locking means carried by said carriage and operable to lock said carriage to the tube at the beginning of the cycle for having the carriage move with the tube to the forward terminal point of said path and to release the carriage from the tube at said terminal point, spring means returning the carriage to its original position upon release of the tube by said locking means; two cutters, each carried by said carriage and separately movable therein

transversely of the tube through a cutting stroke and a return stroke, means to move the first of said cutters through its cutting stroke to cut a notch through the thickness of the tube wall and to proceed further in the forward direction toward a position completely out of the way of the second cutter and to remain stationary in such position while the second cutter moves at least until said second cutter entered said notch; and means to move said second cutter through said notch and the remaining portion of the tube cross section to cut off the tube and to return said second cutter to its original position in the carriage.

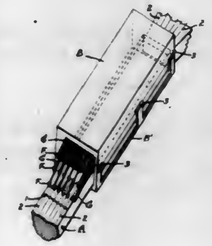
3,129,625
LEVEL AND SLOPE CONTROL FOR RECIPROCATING MACHINES
Clarence O. Jones, Jr., Eggertsville, N.Y., assignor to Niagara Machine & Tool Works, Buffalo, N.Y.
Filed Jan. 7, 1963, Ser. No. 249,712
8 Claims. (Cl. 83—624)



1. In a slope control mechanism for a power squaring shear having a reciprocable shear knife and a pair of hydraulic motor devices adjacent to opposite ends thereof for effecting working and return strokes of the shear knife, a generally upright member movable with said shear knife and pivoted at one end relative thereto on an axis generally perpendicular to the plane of reciprocation of said shear knife, fluid circuit means for reciprocating said hydraulic motor devices, means for adjusting said upright member on said pivot to vary the angle between said member and said shear knife, fluid means for variably transferring operating fluid to and from said circuit means to advance or retract one of said motor devices relative to the other to adjust the angular disposition of said shear knife, valve means for said fluid transfer means having a control member adjacent to said upright member and engageable against an edge thereof, said edge being normally parallel to the direction of reciprocation of said shear knife whereby under normal conditions said control member remains relatively stationary, said control member being moved in one direction or the other by reason of said edge engagement when said upright member assumes an oblique position relative to said direction of reciprocation, said valve means being actuable by said control member movement to transfer fluid and thereby adjust said shear knife angularly and thus restore said upright member to said parallel relation with respect to the direction of reciprocation.

3,129,626
CHORD-FORMING ATTACHMENT FOR STRINGED MUSICAL INSTRUMENT
Emil J. Granius, 1969 Tyler St., San Pablo, Calif.
Filed Nov. 26, 1962, Ser. No. 240,102
6 Claims. (Cl. 84—317)

1. A device of the type described comprising:
(*a*) a housing adjustable along the neck of a stringed instrument;
(*b*) means for securing said housing to said neck in adjusted position;
(*c*) a plurality of levers having their greater portions enclosed within and extending along the length of said housing and having their ends projecting beyond an end of said housing and provided with keys;
(*d*) means within said housing for pivotally supporting said levers;
(*e*) a plurality of flat springs carried by said housing and spaced above the strings of the instrument and positioned so as to lie adjacent to the side of the frets on the instrument neck facing toward the tuning end of the neck when said housing is secured to said neck in a predetermined position;

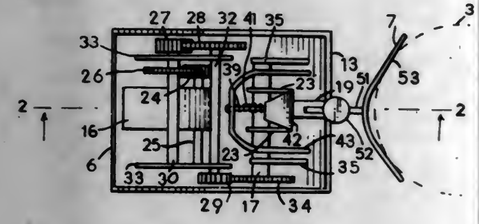


(*f*) a plurality of spring-depressing members having downwardly extending tabs arranged in a predetermined order for forming chord combinations and resting on said flat springs; said flat springs normally holding said spring-depressing members in raised position;
(*g*) said spring-depressing members having upwardly extending projections arranged in a predetermined order for providing different chord combinations, said projections being positioned under certain levers so as to be contacted thereby when said levers are manually depressed;
(*h*) whereby a manual depressing of a selected lever will move downwardly the one or more spring-depressing members whose upwardly extending projections are in contact with the lever and will cause the tabs of these members to depress the flat springs contacted by them and to press the strings associated with the depressed flat springs at the same distance from and down upon the adjacent frets for varying the effective lengths of the strings contacted by said flat springs.

3,129,627
VOICE DEVELOPING DEVICE
Ernest Camerino, 1144 N. Federal Highway, Fort Lauderdale, Fla.
Filed Feb. 12, 1962, Ser. No. 172,539
8 Claims. (Cl. 84—466)

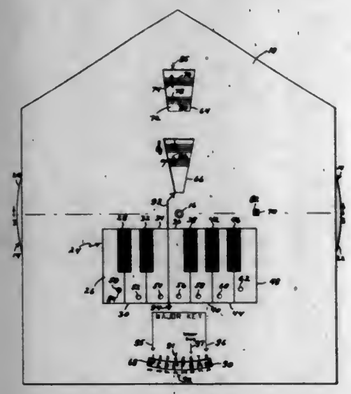
1. A device to be used in association with the throat of a person for imparting to the voice a tremulous effect, comprising a casing, a motor supported therein, a rotatable shaft, a gear train drivingly connecting the shaft with the motor, an upstanding bar member disposed rearwardly of the shaft having a hinged support at its bottom end in the casing, an arcuate member mounted atop the bar externally of the casing positionable about the front area of the throat, a cam carried by the shaft arranged for intermittent camming action against the bar as the shaft rotates, the bar having a rearward cammed position at the high end of the cam and having a returned forward position at the low end of the cam, and means for supporting the device relative to the throat in the vicinity

of the larynx in such manner that the arcuate member presses against the larynx in the cammed position of the



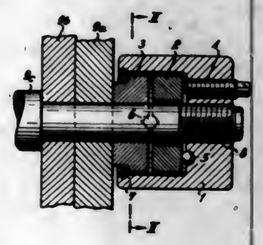
bar and the bar is held in its returned position in a relaxed condition of the larynx relative to the arcuate member.

3,129,628
MUSIC TEACHING DEVICE
Roy Hall, 2617 W. 60th St., Minneapolis 10, Minn.
Filed June 13, 1961, Ser. No. 116,745
9 Claims. (Cl. 84—471)



1. A music teaching device comprising a panel provided with a simulated, rectangular, piano keyboard on one side thereof including a plurality of keys and having apertures located in at least some of the keys of said keyboard, said panel also having a window spaced from said keyboard and an opening spaced from said window, and a rotatable disc confronting the other side of said panel having a plurality of staff and note designations at angularly disposed intervals so as to be selectively movable into registry with said window, said disc also having letter designations at angularly disposed intervals for identifying said note designations and movable into registry with said opening in correspondence with the particular note designation then appearing in said window, and said disc also having thereon discernible marks at spaced angular intervals located so that a mark will appear in the aperture located in the proper key for the particular note then appearing in said window to thereby indicate the key corresponding to said displayed note, said keyboard possessing the ability to operate as described with said plurality of keys consisting of seven white keys and five black keys, said keyboard being located between the axis of rotation of said disc and one edge of said panel and extending substantially an equal distance toward each side edge of said panel.

3,129,629
TIGHTENING DEVICE FOR DETACHABLY CONNECTED MACHINE ELEMENTS
Alfred Hartig, Kotzenhof, Lauf (Pegnitz), Germany, assignor to Rudolf Spieth, Esslingen (Neckar)-Kennenburg, Germany
Filed Oct. 3, 1958, Ser. No. 765,191
3 Claims. (Cl. 85—32)

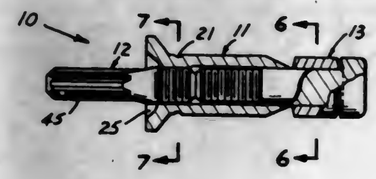


1. An arrangement for detachably interconnecting and tightening machine elements, one of which has a threaded shank, which includes: a main cup-shaped body having a threaded portion threadedly engaging said threaded shank, said main body also being provided with a threaded bore located eccentrically with regard to said threaded portion, tiltable disc means arranged around said shank and interposed between said main body and another one of said machine elements, a pressure screw extending through said eccentrically located threaded bore of said main body and operable to engage said disc means adjacent the periphery thereof and to exert pressure thereon, first means interposed between said main body and said disc means at a point diametrically opposite the point where said pressure screw is adapted to engage said disc means to allow said disc means to tilt about said first bearing means in response to the exertion of a certain pressure upon said disc means by said pressure screw, a pressure conveying member interposed between said other machine element and said disc means for conveying pressure to said other machine element, and two additional bearing means arranged diametrically opposite each other and interposed between said pressure conveying member and said disc means for conveying the pressure exerted upon said disc means in response to a tilting movement of the latter to said pressure conveying member and thence to said other machine element, the connecting line between said two additional bearing means being arranged at a right angle with regard to the connecting line between said first bearing means and the point of engagement of said pressure screw with said disc means, said last mentioned connecting line intersecting the projection of said first mentioned connecting line upon said last mentioned connecting line in axial direction of said main body and intersecting said projection at the midway point thereof.

3,129,630
BLIND FASTENER UTILIZING A DISTORTABLE COLLAR AND HAVING AUXILIARY LOCKING MEANS
George S. Wing, Palos Verdes Estates, and Michael M. Schuster, Inglewood, Calif., assignors to Hi-Shear Corporation, Torrance, Calif., a corporation of California
Filed Dec. 14, 1960, Ser. No. 75,744
1 Claim. (Cl. 85—40)

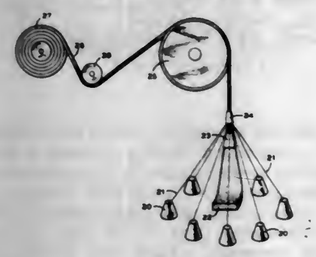
A blind fastener comprising: a sleeve including a substantially cylindrical shank, a head at one end of the shank, a plurality of torque tool receiving recesses in said end, each of said recesses being relatively shallow and having a wall adapted to make driving, surface contact with the torque tool, an exterior chamfer at the other end

of said shank forming a sharp point, said sleeve having an axial passage extending from end to end thereof, and an internal thread in said passage adjacent to the headed end of the sleeve, said thread being inwardly radially distorted at at least one axial location adjacent to the head; a mandrel having a head adjacent one end thereof, said head having an inclined undercut in a radial face thereof, a cylindrical section on said mandrel contiguous to the undercut face and extending away therefrom, an exterior thread on said mandrel contiguous to the cylindrical section, a shear groove in said mandrel along said thread, and a splined section adjacent to the thread for receiving a torque tool, said sharp pointed end of the sleeve closely fitting the cylindrical section of the mandrel; and a substantially cylindrical collar adapted to fit closely upon the cylindrical section of the mandrel and abut the undercut face, a pair of chamfers at each end of the collar, the



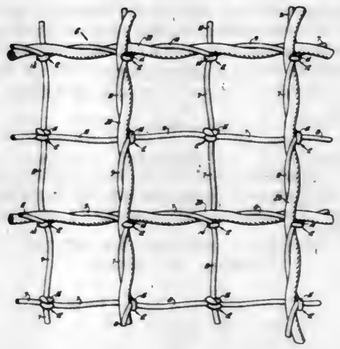
innermost and outermost of the chamfers intersecting at a medial line disposed between the inner and outer walls of the collar, each pair of chamfers forming a convex surface on each opposite end of the collar, said outermost chamfers having substantially the same slope as said inclined undercut and being longer than said innermost chamfers, whereby with the threads of the mandrel and the sleeve in threaded engagement the fastener may be passed through a hole in an object with the sleeve head bearing against one side thereof, counter-rotative torque applied between the sleeve and the mandrel drawing the collar at least partially over the sleeve to form an expanded head on the other side of the objects, the radial distortion of the sleeve threads causing the sleeve to grip the mandrel and hold it against unthreading, that portion of the mandrel bearing the torque tool engaging means being sheared off by application of sufficient torque to shear the mandrel section at the groove.

3,129,631
BRAIDED ARTICLE AND METHOD OF MAKING SAME
Earl W. Hill and Wayne W. Beck, High Point, N.C., assignors to Unipoint Industries Inc., High Point, N.C., a corporation of North Carolina
Filed Sept. 26, 1961, Ser. No. 140,948
5 Claims. (Cl. 87—6)



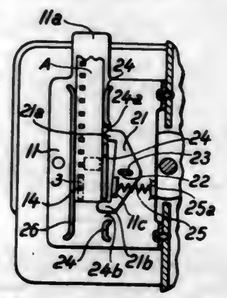
1. A method of forming a braided strip comprising a flexible resilient filler element and a braided covering therefor comprising passing a strip of polyurethane foam of polygonal cross section in a tensioned condition through a braiding device, compressing said tensioned strip to a cross section of arcuate outline, and braiding filamentary material about the peripheral surface of said compressed and tensioned strip to retain said converted section.

3,129,632
NET
Robert J. Starr, 23 Edgerton St., East Hampton, Conn.
Filed Jan. 8, 1963, Ser. No. 250,102
8 Claims. (Cl. 87—12)



1. In a net including a plurality of rows of aligned mesh bars intersecting a second plurality of rows of aligned mesh bars and means fastening the mesh bars together at points of intersection thereof, means reinforcing the rows of aligned mesh bars comprising elongated reinforcing members formed of elastic material helically wrapped around a preselected number of said rows of aligned mesh bars, said reinforcing mesh bars being unknotted intermediate the ends thereof and being held in uniformly distributed position throughout the net by means of the wrapped relationship with the rows of members.

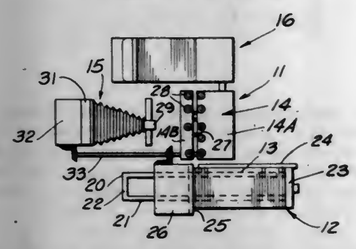
3,129,633
FILM GUIDE MEANS FOR CINEMATOGRAPHIC PROJECTORS
Robert Mees, Wissmar, Germany, assignor to Ernst Leitz Gesellschaft mit beschrankter Haftung, Wetzlar (Lahn), Germany
Filed Sept. 23, 1960, Ser. No. 57,934
Claims priority, application Germany Sept. 24, 1959
4 Claims. (Cl. 88—17)



1. In a cinematographic projector guide means for a film strip comprising a guide plate, a pair of guide rails on said guide plate defining a path for a film strip, there being an image aperture and a second aperture in said guide plate, gripper means projecting through said second aperture and engaging the film strip for moving the film

strip on said guide plate, a pressure member pivotally mounted at its central portion on said guide plate and having a first contact portion at one of its ends and a second contact portion at its opposite end, said second contact portion being located beyond said gripper means in the direction of travel of said film strip, said pressure member having a resting position and an operative position, and resilient means urging said pressure member towards the path of the film strip so that said second contact portion, in said resting position, projects into the path of the film strip in the absence of the latter, said second contact portion being moved back against the influence of said resilient means by the travelling film strip into said operative position wherein said first contact portion and said second contact portion are in pressure contact with the film strip so as to maintain the same on said path defined by said guide rails.

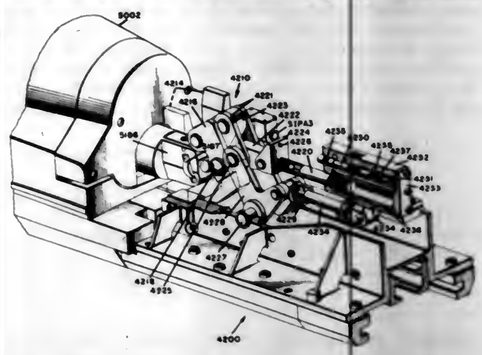
3,129,634
PHOTOCOMPOSING MACHINE
Le Roy H. Sargent, Staten Island, N.Y., assignor to Varityper Corporation, Newark, N.J., a corporation of Delaware
Filed July 5, 1962, Ser. No. 207,732
7 Claims. (Cl. 88—24)



1. A selective masking apparatus for a cyclically operable photocomposing machine comprising means for sequentially positioning a series of data instruments bearing exposure data in a given field, at an exposure station, at least some of said instruments carrying control indicia, and camera means for photographing the data from said instruments, said selective masking apparatus comprising:
an adjustable fixed mask positioned in the focal plane of said camera means;
an auxiliary mask positioned immediately adjacent said focal plane mask and movable between first, second, and third positions in which different portions of the data fields on instruments positioned at said exposure station are exposed through the combination of said masks;
sensing means for sensing the control indicia on said instruments;
and selective control means, connected to said sensing means, for actuating said auxiliary mask to said second and third positions in successive machine cycles in response to sensing of said control indicia to modify the arrangement of data photographed by said camera means relative to that obtained when said auxiliary mask is maintained in its first position.

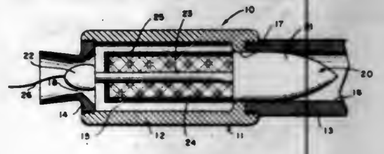
3,129,635
SPAN TRACK-TO-GUIDE ARM LATCH
Richard C. Wilson, Champlin, Minn., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Original application Oct. 22, 1959, Ser. No. 848,163. Divided and this application Dec. 21, 1959, Ser. No. 861,161
7 Claims. (Cl. 89—1.7)

6. In a missile launching system having a missile launcher, arms on the missile launcher operable to support missiles in a launching position, first tramway means mounted on said arms, a missile storage means, second tramway means for conveying missiles from the storage means, the combination with said system of a spanner rail operable to be moved to a connected position wherein a continuous tramway is provided between said first and second tramway means, said spanner rail operable to be moved to a disconnected position wherein said first tramway means is disconnected from said spanner rail, a latch mounted on said spanner rail, a latch block mounted on said arm, said latch operable to engage said latch block



when said spanner rail is in said connected position, a motor operable to effect movement of said latch to cause engagement or disengagement therewith, control means operable to control the operation of said motor, a projection on said latch operable to contact said arm when said spanner rail is moved into said connected position, said projection being operable upon said contact to actuate said control means thereby causing operation of said motor to effect latching of said latch and said latch block, and mating guide means on said spanner rail and said arm to insure alignment of said spanner rail and said arm when in said connected position.

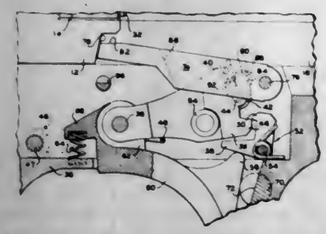
3,129,636
MEANS FOR LAUNCHING PROJECTILES
Richard G. Strickland, Stewartstown, Pa., and Arthur J. Wennerstrom, Zurich, Switzerland, assignors to Aircraft Armaments, Inc., Cockeysville, Md., a corporation of Maryland
Filed Sept. 28, 1960, Ser. No. 59,014
3 Claims. (Cl. 89—1.7)



1. The combination with a recoilless gun having a tubular barrel, a combustion chamber attached to the barrel, and a balancing nozzle attached to the combustion chamber, said nozzle having a restriction defining a throat smaller in cross-section than said combustion chamber, of a projectile configuration for use with said gun, said configuration comprising a main body portion, said portion having an axial boom attached thereto, said configuration being inserted in the gun with the body portion supported by the barrel when the boom is in the combustion chamber, a propelling charge surrounding said boom, ignition of said propelling charge causing the same to produce propellent gases in the combustion chamber which

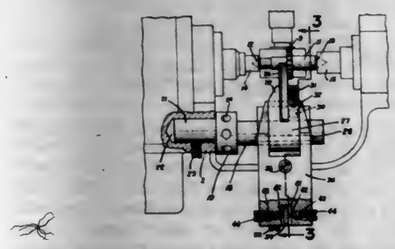
propel the body and boom along the barrel in one direction, a portion of said gases expanding through the throat of said nozzle in the opposite direction whereby the forces acting on the gun in both directions are substantially equal and there is no recoil, and a rigid plug on the free end of said boom, said plug substantially blocking said throat before ignition of said charge and being nonfrangible against the effects of propellent gases produced after ignition so that said body, boom and plug are movable along said barrel as a unit in said one direction in response to said gases, said plug serving to prevent substantial gas flow through said throat only until after predetermined movement of said unit in said one direction.

3,129,637
SAFETY SEAR MECHANISM FOR BLOW BACK BREECH ACTION
Charles F. Packard, East Longmeadow, Mass., assignor to the United States of America as represented by the Secretary of the Army
Filed Sept. 17, 1963, Ser. No. 309,579
7 Claims. (Cl. 89—154)
(Granted under Title 35, U.S. Code (1952), sec. 266)



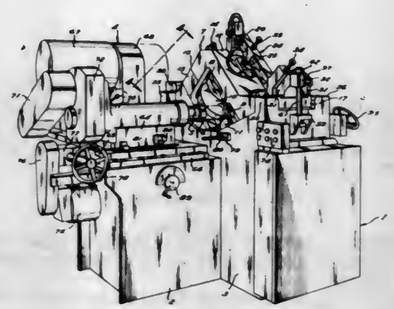
1. In a firearm having a reciprocal bolt adapted to be unlocked in battery position, a firing pin slidably mounted in the bolt, and a spring-biased hammer mounted for pivotal movement between a fired position in contact with the firing pin and a cocked position imparted thereto by the recoil movement of the bolt, the improvement of a lever pivotally mounted at one end thereof in position to retain the hammer in the cocked position until the bolt reaches battery position and frees the opposite end of said lever for movement into the recoil path of the bolt and out of cocking engagement with the hammer, and means on the hammer for camming said lever out of the recoil path of the bolt during the firing movement of the hammer.

3,129,638
DEBURRING ATTACHMENT FOR GEAR CUTTERS
Marvin A. Husby, Minneapolis, Minn., assignor to Washington Scientific Industries, Inc., Minneapolis, Minn., a corporation of Minnesota
Filed Oct. 14, 1960, Ser. No. 62,699
4 Claims. (Cl. 90—1.4)



1. A gear deburring attachment for gear cutting machines comprising a supporting member having means for adjustably securing it to the frame of the gear cutting machine, a second member pivoted to said supporting member and adapted for swinging movement thereon about a vertical axis, said second member having an enlarged upwardly directed open ended recess at its forward end, a tool holder mounted in said recess and adapted for pivotal movement about a horizontal axis, a deburring tool pivoted in said tool holder and having one end projecting therefrom into deburring relation to a gear blank supported in the gear cutting machine, means for raising or lowering the deburring tool to accurately position it with respect to the gear blank, and means for holding the deburring tool in engagement with the gear blank with a very light pressure.

3,129,639
ROLL GROOVE MILLING MACHINE
Joseph P. Wadleck, Ellwood City, Pa., assignor to Blaw-Knox Company, Pittsburgh, Pa., a corporation of Delaware
Filed June 22, 1961, Ser. No. 118,976
11 Claims. (Cl. 90—11)

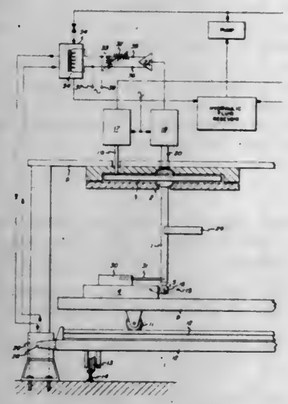


1. The method of cutting circumferential grooves, each of uniform cross section throughout its circumferential length, in a pair of mill rolls which in use rotate and work on a workpiece located on a pass line extending between a pair of matched circumferential grooves in said pair of rolls, which method comprises simultaneously positively rotating said mill rolls about axes having the same relative positions as when the mill rolls are used to work on the workpiece, rotating a generally circular cutter of the end mill type at machining speed about an axis essentially coincident with the location of said pass line relatively to said rolls, said mill rolls being completely rotated in opposite directions at a substantially lower angular speed than that of the cutter so that at a bite of said rolls the surfaces of both rolls travel toward the cutter, and causing relative movement between the cutter and the pair of rolls independently of the rotation of said rolls along said axis of rotation of the cutter so that the cutter engages the rolls and cuts therein matched circumferential grooves of uniform cross section as the cutter rotates and both rolls completely rotate.

3,129,640
AUTOMATIC COPYING MACHINES
Benjamin Quesenbury Bertram, Ashford, England, assignor to The Sperry Gyroscope Company Limited, Brentford, England, a company of Great Britain
Filed Mar. 6, 1961, Ser. No. 93,670
Claims priority, application Great Britain Mar. 10, 1960
4 Claims. (Cl. 90—13)

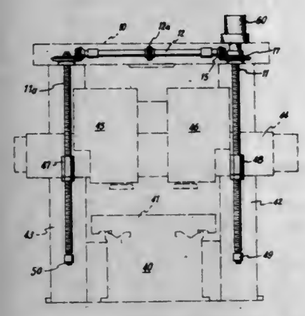
1. An automatic copying machine comprising a main template, an auxiliary template, a tiltable probe, means for biasing said probe, said probe contacting said main

template and being controlled by said auxiliary template whereby the direction in which said probe is biased relative to the local tangent of the surface of said main template at the point where said probe contacts said main



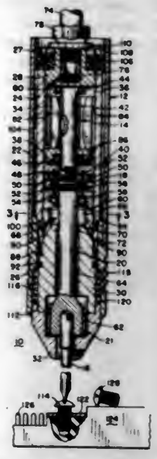
template is determined by said auxiliary template, said probe tilting an amount determined by the direction in which said probe is biased, and means for controlling the cutting speed of said machine in accordance with the amount of tilt of said probe.

3,129,641
LEVEL ADJUSTING MECHANISM FOR THE CROSS-RAIL OF A PLANAR TYPE MACHINE TOOL
John M. Walter, Cincinnati, Ohio, assignor to The G. A. Gray Company, Cincinnati, Ohio, a corporation of Ohio
Filed June 6, 1960, Ser. No. 34,325
12 Claims. (Cl. 90—16)



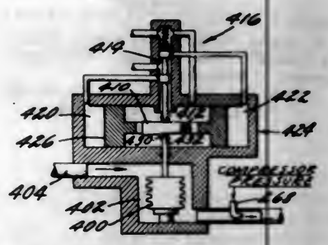
1. In a machine tool having spaced columns and a cross-rail extending therebetween, said rail being arranged for vertical movement with respect to said columns on cooperating ways by means of an elevating screw in each of said columns, a nut on each end of said rail in operative relation with a respective one of said elevating screws, said screws and nuts being normally restrained against axial movement, and means for concurrently producing relative rotation between the respective screws and nuts; level adjusting means for said rail, comprising means associated with one of said elevating screws for moving said one screw axially.

3,129,642
PNEUMATICALLY OPERATED TOOL
Clarence A. Sorensen, Fruitport, and William Workman, Jr., Muskegon, Mich., assignors to Gardner-Denver Company, a corporation of Delaware
Filed June 26, 1961, Ser. No. 119,395
2 Claims. (Cl. 91—121)



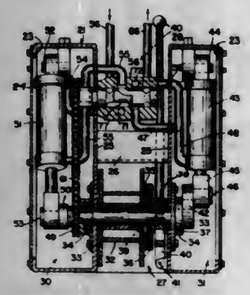
1. In a power tool: inner and outer telescoping tubular members respectively extending substantially the full length of said tool; pressure fluid motor means disposed within said inner member; axially spaced motor exhaust receiving chambers defined by and between said members; and, an exhaust choke valve disposed between said chambers to control the flow of exhaust therebetween and operable for starting and stopping said motor means in response to telescoping movement of said members.

3,129,643
SERVO MOTOR
Robert D. Porter, Simsbury, Conn., and Charles F. Stearns, East Longmeadow, Mass., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Original application June 3, 1960, Ser. No. 33,822. Divided and this application Oct. 22, 1962, Ser. No. 237,428
11 Claims. (Cl. 91—382)



8. In a servo system, a cylinder having at least one port for admittance of control fluid, a piston axially movable in response to the pressure of said fluid, a control valve controlling said piston and having fluid connections communicating with said port, means responsive to a temperature variation for producing an input signal, a cam pivotally mounted on said piston adapted to receive said signal for positioning said control valve, a movable member, means connecting said piston to said member for positioning said member in accordance with the position of said piston, and feedback means carried by said cam for varying the effect of said control valve.

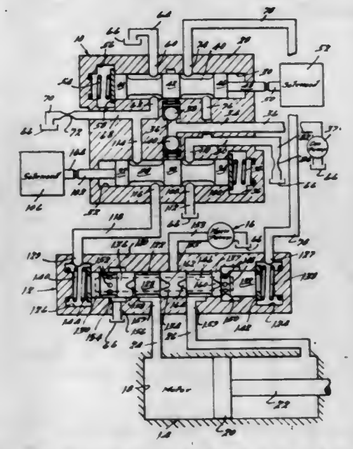
3,129,644
VALVES FOR HYDRAULIC SYSTEMS
Thomas K. Andersen, Portland, Maine, assignor to Maine Steel Corp., South Portland, Maine, a corporation of Maine
Original application Nov. 5, 1958, Ser. No. 772,047. Divided and this application Oct. 26, 1960, Ser. No. 65,087
4 Claims. (Cl. 91—413)



4. In combination a plurality of hydraulic cylinder-piston units each of whose cylinders has first and second conduits in communication with opposite sides of its piston, and a valve for controlling the delivery of liquid under pressure to said units, said valve comprising a body having a cylindrical chamber and a valve element rotatable therein, said body having a pump delivery port adjacent one end of its chamber, a pump return port adjacent the other end thereof, and intermediate pairs of diametrically alined cylinder ports, each pair of cylinder ports being for a respective one of said units and each cylinder port of that pair being for an appropriate one of the cylinder conduits of the unit, corresponding cylinder ports of the pairs arranged side-by-side, and said valve element having angularly spaced pairs of transversely alined channels arranged at right angles to its axis, each pair being for one of said pairs of cylinder ports and registerable therewith as said element rotates and spaced 90° from the channels of the other pair, said valve element also having annular grooves, one for each main port and in communication therewith, and connecting passages between each annular groove and a corresponding channel of each of the angularly spaced pairs thereof.

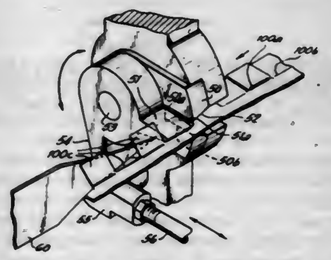
3,129,645
ELECTRICALLY MODULATED FLUID VALVE
Peter B. Olmsted, Ann Arbor, Mich., assignor to Double A Products Co., Manchester, Mich., a corporation of Michigan
Filed May 2, 1962, Ser. No. 191,768
6 Claims. (Cl. 91—461)

1. Means for remotely controlling the direction and speed of a fluid motor, comprising: a pump adapted to supply fluid under pressure; a fluid reservoir; a four-way throttling valve operatively interconnecting said fluid motor, reservoir and pump and having a normally centered valve spool therein adapted to be selectively positioned to control the direction and speed of said fluid motor, said spool when centered adapted to prevent fluid from said pump from driving said motor; first pressure-responsive means for moving said spool in one direction; second pressure-responsive means for moving said spool in the opposite direction; means for supplying fluid under control pressure; first valve means for supplying fluid under control pressure to said first pressure-responsive means; second valve means for supplying fluid under control pressure to said second pressure-responsive means; said first and second valve means being arranged in such a way that when neither valve means is actuated said four-way valve is centered and fluid from said pump is prevented from driving said motor, when said first valve means is actuated said first pressure-responsive means is supplied with fluid under control pressure and said second pressure-responsive means is placed in restricted communication with said reservoir whereby said spool will be forced slowly in one direction to accelerate said



motor in one direction or decelerate it in the opposite direction, when said second valve means is actuated said second pressure-responsive means is supplied with fluid under control pressure and said first pressure-responsive means is placed in restricted communication with said reservoir whereby said spool will be forced slowly in the opposite direction to accelerate said motor in the opposite direction or decelerate it in said one direction, and when both said valve means are actuated control pressure is supplied to both said pressure-responsive means to fluid lock said spool in place and thus maintain said motor at a constant speed or at zero speed if said spool is centered.

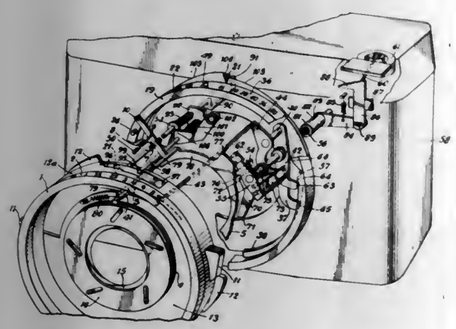
3,129,646
PROCESS AND APPARATUS FOR MAKING BAG CLOSURES
Clinton R. Hollis, Camden, Ark., assignor to International Paper Company, New York, N.Y., a corporation of New York
Filed Jan. 8, 1963, Ser. No. 250,131
22 Claims. (Cl. 93—27)



6. An apparatus for making a closure on one end of a tube having opposing surfaces comprising means for

travelling the end laterally, means for slitting the end longitudinally at spaced intervals to define a plurality of tongues, and means for folding each alternate tongue toward one of the opposing surfaces.

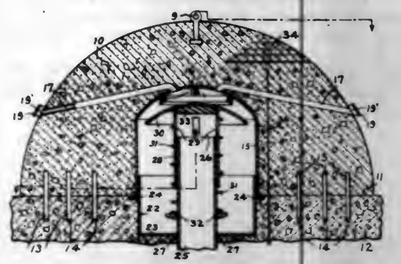
3,129,647
PHOTOGRAPHIC CAMERA OR SHUTTER PROVIDED WITH AN INTERCHANGEABLE OBJECTIVE
Heinz Köppen, Stuttgart, and Willi Gunther, Stuttgart-Mohringen, Germany, assignors to Zeiss Ikon Aktiengesellschaft, Stuttgart, Germany
Filed July 24, 1962, Ser. No. 212,019
Claims priority, application Germany July 26, 1961
14 Claims. (Cl. 95—10)



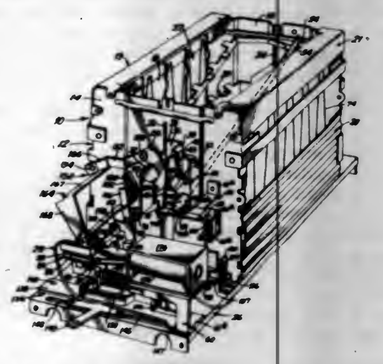
1. In a photographic camera, an interchangeable lens system, a distance adjusting ring arranged concentrically about the optical axis of said lens system, an adjustable diaphragm, means providing for flash bulb operation, a manually operable actuating ring for rendering said flash bulb operation effective, said actuating ring being provided on its outer circumference with a serially arranged guide number scale and on its inner circumference with cam means for operating pivotally mounted intermediate members which in response to an adjustment of said actuating ring control the adjustment of said adjustable diaphragm, the improvement comprising means for limiting the rotative adjustment of said distance adjusting ring, said limiting means including abutment steps on said distance adjusting ring, an element between the abutments of the distance adjusting ring and the actuating ring which is provided on one side facing the abutments with a catch end and on the other side facing away from the abutments forms a scanning member, and a deflection cam on said actuating ring, whereby the scanning end of said element engages the deflection cam of the actuating ring and is controlled by the latter so that the catch end in dependence of the adjusted guide number is caused to engage movement limiting abutments on said distance adjusting ring.

3,129,648
BLAST PRESSURE CONTROL AND AIR FILTER MEANS FOR UNDERGROUND SHELTERS
Glenn A. Hoff, 1019 W. 65th St., Seattle 7, Wash.
Filed Nov. 10, 1961, Ser. No. 151,477
9 Claims. (Cl. 98—119)

1. In air blast control means, a substantially semi-spherical heavy concrete blast dome capable of being supported substantially at ground level with its convex side uppermost, said blast dome having in its lower central portion an air chamber adapted for communicative connection with an underground air circulation conduit; a plurality of radially disposed substantially uniformly spaced apart air tubes of small diameter embedded in said dome and extending between said air chamber and the exterior wall of said dome providing a plurality of small air intake openings distributed around said dome and terminating in generally upright portions of the external wall of said dome, said air chamber being of much smaller cross sectional area than the dome and the dome walls surrounding the air chamber being solid and massive and free from openings except for said air tubes; said air tubes being inclined downwardly in outward directions; and a U-shaped shield carried by and arched over the outer end of each air tube.

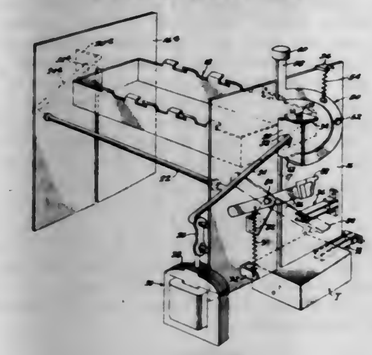


3,129,649
AUTOMATIC TOASTER
Charles D. Visos, St. Louis, Mo., assignor to Knapp-Monarch Company, St. Louis, Mo., a corporation of Delaware
Filed Oct. 3, 1960, Ser. No. 59,931
15 Claims. (Cl. 99—327)



15. A fully automatic toaster comprising, in combination: bread toasting means, a loadable bread carrier cyclically movable relative to said bread toasting means from a non-toasting position to a toasting position and then back to said non-toasting position, a pivotable lever mounted on said carriage and normally biased toward an unloaded position, said lever being adapted to be engaged by a slice of bread entered onto said carriage to pivot to a loaded position and to effect release of the carriage from non-toasting position, means for moving the released carrier to toasting position, at which the bread is toasted, and then back at substantial velocity toward said non-toasting position at which the carriage is to be again restrained, the movement of the carriage with bread loaded thereon, at substantial velocity toward the non-toasting position, having the tendency to effect automatic recycling of the carriage movements, and pivotable cam means for engaging the carriage as the carriage moves toward non-toasting position to swing a barrier across the path of movement of the lever away from the lever's loaded position, thereby preventing movement of the lever that may initial re-cycling of the carriage's movements.

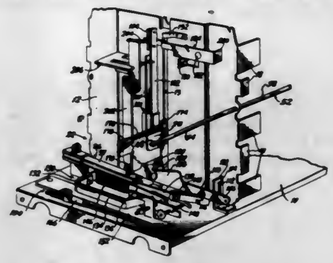
3,129,650
MANUAL RELEASE FOR AUTOMATIC TOASTER
Charles D. Visos, St. Louis, Mo., assignor to Knapp-Monarch Company, St. Louis, Mo., a corporation of Delaware
Filed Aug. 17, 1959, Ser. No. 834,201
6 Claims. (Cl. 99—329)



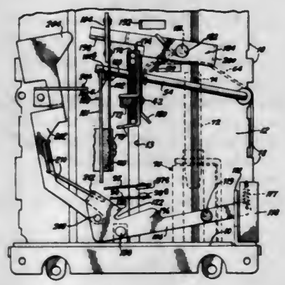
3. An automatic toaster comprising, in combination, stationary structure defining a toasting chamber, a movable bread carrier in said toasting chamber having a control portion extending outwardly of said toasting chamber, bread-toasting means in said toasting chamber, elongated lever arm means pivoted intermediate its ends to the stationary structure outside of said toasting chamber and to one side of said control portion, one end of said arm means being operatively connected with said carrier through said control portion and the other end of said arm being connected to motor means, a normally open switch in circuit with said bread toasting means and positioned to be closed by the control portion of said bread carrier when the bread carrier is down in toasting position, toasting-cycle-terminating means-operable to energize said motor and to move said bread carriage through said lever arm to up position upon completion of the toasting operation, movable latch means positioned to engage said control portion for maintaining the bread carrier in raised position, a first manual control for moving said latch means out of a latching position to permit the bread carrier to move to said toasting position, and a second manual control for raising the bread carrier, prior to the bread carrier being raised by said motor, to selected elevations.

3,129,651
AUTOMATIC TOASTER
Charles D. Visos, St. Louis, Mo., assignor to Knapp-Monarch Company, St. Louis, Mo., a corporation of Delaware
Filed Dec. 6, 1960, Ser. No. 74,162
4 Claims. (Cl. 99—329)

2. A toaster comprising, in combination: a bread carrier movable between a raised, non-toasting, position and a lowered, toasting, position; first means for normally holding the bread carrier in raised position; second means for holding the carrier in lowered position; electromotive means for moving said bread carrier from raised position to lowered position; said first means including potentialized spring means urging the carrier from lowered position toward raised position; an energizing circuit for said electromotive means, said circuit having therein a control switch which is normally urged toward a closed position; latch means for maintaining said control switch open when either said first or second means is operative to maintain the carrier in one of the carrier's said positions; and said first means comprising a pivotally mounted elongated lever arm having a portion thereof, distal from the pivot axis of said lever, slidably engaging a portion of the bread carrier, the potentialized spring means engaging said lever arm to bias the carrier toward raised position, and the electromotive means including a solenoid plunger directly engaging the lever arm and providing a sliding connection thereat between the pivot axis of the lever arm and the portion of the lever arm that slidably engages the bread carrier.



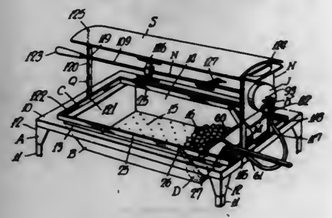
3,129,652
AUTOMATIC TOASTER
John J. Kueser, St. Louis, Mo., assignor to Knapp-Monarch Company, St. Louis, Mo., a corporation of Delaware
Filed Dec. 8, 1960, Ser. No. 74,540
3 Claims. (Cl. 99—329)



3. In a toaster of the type wherein an electromotive means is energized responsive to the deposit of a bread slice in a toaster carriage for lowering said carriage to a bread-toasting position and wherein means are provided both for latching the carriage in the lowered position and for de-energizing the electromotive means, the improvement comprising a movable latch member operated in response to movement of said carriage into lowered position for engaging and latching said carriage in said bread-toasting position, and a circuit de-energizing means including a switch, and a switch-engaging member carried by said movable latch member and resilient means interconnecting the latch member and switch-engaging member, to bias said members toward a first selected attitude relative to each other in which said switch-engaging member is engageable with said switch when said latch member is in its latching position, said switch-engaging member being pivotally mounted on said latch member to permit of relative movement between itself and said latch member away from said first attitude against the bias of said resilient means upon movement of said latch member being initially effected upon engagement of the latch

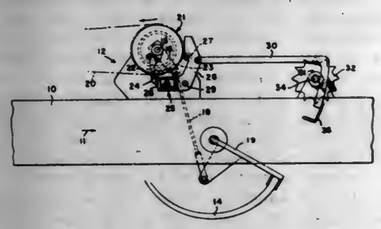
member by the carriage, said switch-engaging member thereby operating at a time slightly later than movement of said latch member into latching engagement with the carriage, for thereafter moving under bias of said resilient means toward said first attitude relative to said latch member and into position for opening the circuit to said electromotive means.

3,129,653
STEAM DRIVEN SPIT FOR CHARCOAL GRILLS
Carl Kertesz, Westbury, N.Y., assignor to Wallace Krakauer, Rockaway Park, N.Y.
Substituted for abandoned application Ser. No. 558,489, Jan. 11, 1956. This application June 22, 1960, Ser. No. 38,077
8 Claims. (Cl. 99—421)



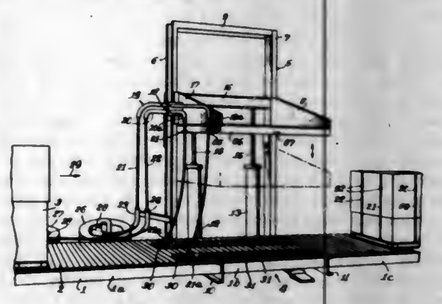
8. A charcoal grill having a steam driven spit having an elongated receptacle for a bed of glowing charcoal, a vertically reciprocable cylindrical water container steam generator having an axis transverse to the elongated direction of the receptacle, swinging mounting means for said generator to lower the generator into one end of the receptacle to rest upon the glowing charcoal, a horizontal rectangular frame for carrying the mounting means to rest on top of the elongated receptacle, upstanding vertical frame members at the ends of the rectangular frame, an elevated rotating spit positioned in said frame member midway of their vertical height, a cover for the receptacle mounted at the upper ends of the frame member, a piston cylinder engine mounted on the vertical members to drive the spit and an oscillating disk valve steam supply arrangement connected to the generator and supplying steam from the generator to the engine through the disk valve.

3,129,654
TIER
Gerhard Locker, New Holland, Peter L. Sturia, Churchtown, and Otto W. Luck, New Holland, Pa., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed June 24, 1963, Ser. No. 290,005
2 Claims. (Cl. 100—4)



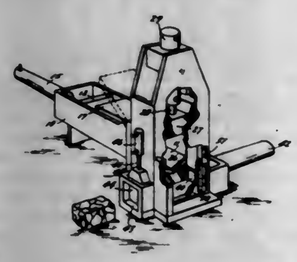
1. In a hay baler, an elongated bale case, a timer shaft rotatably supported on said bale case and extending transverse thereto, a source of rotatable power, a clutch for connecting said power source to said timer shaft, needle means for projecting a tying medium across said bale case, a crank arm connected to said timer shaft and rotatable therewith, a connecting rod linking said crank arm to said needle means, said crank arm and connecting rod being pivotally connected and forming an angle when the timer shaft is at-rest, and means for controlling the engagement of said clutch comprising a pivoted pawl extending radially outwardly of said clutch, spring means biasing said pawl to pivot in one direction, a stop member normally engaging said pawl and preventing pivotal movement of the pawl by said spring means, a control member pivotally supported on said bale case and being freed to move relative thereto responsive to the formation of bales in said bale case, said stop member being carried on said control member for movement therewith to a location out of engagement wth said pawl, one of said members having a first slot extending generally in the same direction as said pawl when the pawl is engaging the stop member, the other of said members having a second slot crossing said first slot, fastening means extending through said slots to releasably connect the stop member to the control member, the position of said stop member on said control member being variable in plural directions and providing precise contro. of the disengagement of said pawl and the position of the pawl when in engagement with the stop member whereby a proper angular relationship of said crank arm and connecting rod may be maintained.

3,129,655
STRAPPING MACHINE
Paul W. Fawcett, Western Springs, and David Allfree, Blue Island, Ill., assignors to Acme Steel Company, Chicago, Ill., a corporation of Illinois
Filed Jan. 3, 1962, Ser. No. 164,061
9 Claims. (Cl. 100—18)



1. Strapping apparatus for encircling a flexible strap around a load supported on a pallet of a type having two parallel faces provided with a space therebetween comprising, support means at a strapping station, strap guide means for directing a strap downwardly in a suspended substantially vertical position at the strapping station in the path of said pallet, a tine being positioned to extend above the level of the support means and approximately parallel to it, said tine being provided with gripping means for temporarily gripping the leading end of a strap suspended from the strap guide means so that movement of the pallet toward the suspended strap causes the tine and the strap end it grips to be inserted into the space between the two parallel faces of the pallet and causes the strap to bulge in the direction of movement of the pallet and be wrapped along the bottom of the upper face of the pallet and the forward and upper surfaces of the load supported on the pallet, said tine having a first latch and a second latch each latch having a portion releasably engaging the support means at one of two regions spaced apart from each other along the direction of the path of travel of the pallet along the support means in order to prevent longitudinal displacement of the tine in said direction as the pallet is moved to cause insertion of the tine into the space between the two parallel faces of the pallet.

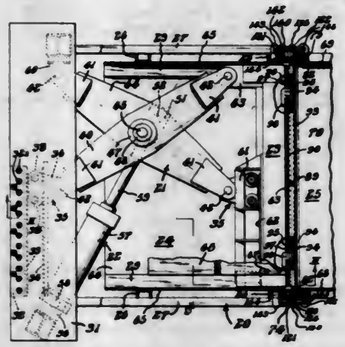
3,129,656
MULTIPLE COMPRESSION BALING PRESS AND SHEAR
Sebastian F. Judd, 2437 N. 91st St., Milwaukee, Wis.
Filed Sept. 3, 1958, Ser. No. 758,758
5 Claims. (Cl. 100—98)



3. Apparatus for working scrap metal comprising: a vertically movable shear head having a shear blade along a lower edge thereof; a horizontal feed bed terminating in a fixed shear blade cooperating with said movable shear blade; means including said shear head defining a baling chamber beneath said head for receiving scrap metal sheared by said blades; means separate from said head movable inwardly of said chamber for compacting scrap metal therein; a gate movable between an operative closed baling position wherein it defines the wall of said chamber opposite said fixed shear blade and an open position wherein said apparatus serves only as a shear, and a movable discharge door for the chamber.

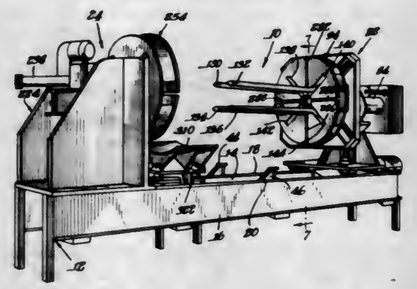
3,129,657
COMBINATION TRANSFER AND COMPACTING APPARATUS
Arthur C. Farley, Philadelphia, Harley E. Kelchner, King of Prussia, Joseph W. Lee, Philadelphia, and Earl C. Alcott, Jr., Lansdale, Pa., assignors to North American Compactor Corporation, Hatfield, Pa., a corporation of Pennsylvania
Filed May 29, 1963, Ser. No. 284,162
5 Claims. (Cl. 100—214)

1. A compaction and transfer apparatus for compressible refuse including, in combination, a framework, chamber means supported by said framework and comprising a substantially flat bottom wall and a pair of upwardly extending side walls, pusher plate means comprising a generally flat member having dimensions substantially those of the cross-sectional area defined by said bottom and side walls, and adapted to fit loosely within said chamber, driving means supported by said framework and adapted to support said pusher plate means substantially perpendicular to said bottom wall and side walls and also adapted to drive said pusher plate means through the spatial locus within said chamber means and to cyclically withdraw said pusher plate through said spatial locus; a transfer container having a single opening formed therein, said opening having dimensions at least as great as the dimensions of the overall area defined by said bottom and side walls of said chamber means, hinged partial closure means adapted to partially cover said container opening, transfer plate means comprising a generally flat member complementally configured to said pusher plate means, said partial closure means being adapted to complementally, in juxtaposition with said transfer plate means, form a substantially complete closure for said end opening of said transfer container, said pusher plate means being adapted to engage said transfer plate means in coplanar locking engagement therewith, said partial closure means and said transfer container being adapted to releasably engage



said transfer plate means, and means mounted on said transfer plate means which is adapted to alternately engage said pusher plate means, and said partial closure means and said transfer container; and means for holding said framework and said transfer container in abutting relaionship whereby said partial closure means and said transfer plate means may be placed in closing registration with respect to said transfer container.

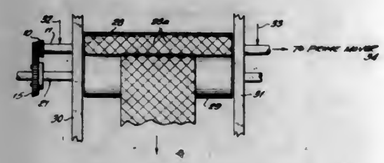
3,129,658
COMPACTING APPARATUS
Raymond L. Valente, Oak Lawn, Ill., assignor to Manco Manufacturing Company, Bradley, Ill., a corporation of Illinois
Filed Jan. 23, 1963, Ser. No. 253,450
12 Claims. (Cl. 100—218)



1. An apparatus of the type described comprising first and second opposing head means, mandril means extending between said first and second head means for supporting a workpiece to be processed, means for relatively moving said head means toward each other for compacting a workpiece under pressure on the mandril means therebetween, means connected with said head means for indexing both of said head means while the workpiece is supported therebetween, said mandril means comprising a plurality of generally axially extending elements mounted for general radial movement for providing an expandable mandril, and means connected with said ele-

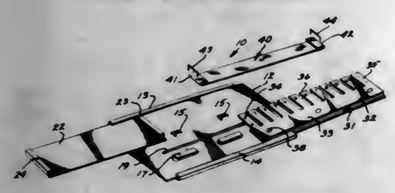
ments for radially shifting said elements and selectively expanding and collapsing the mandril.

3,129,659
EMBOSSING APPARATUS
George H. Lauer, Andalusia, Pa., assignor to International Paper Company, New York, N.Y., a corporation of New York
Filed Feb. 15, 1963, Ser. No. 258,769
2 Claims. (Cl. 101—23)



1. In an apparatus for embossing paper webs and sheets, in combination with a rotatable engraved embossing roll having a centrally disposed shaft and a rotatable backing roll having a centrally disposed shaft and having a relatively softer surface than the embossing roll, means to dispose the embossing roll and the backing roll parallelly, means to hold the embossing roll in intimate contact with the backing roll, means to rotate the embossing roll, roll registration securing means comprising, a first bevelled gear disposed on one shaft means to adjust the disposition of the first bevelled gear along the one shaft in order to compensate for a reduction in diameter of the backing roll, and a second bevelled gear fixedly disposed on the other shaft and in engagement with the first bevelled gear wherein the first bevelled gear and the second bevelled gear are oppositely bevelled.

3,129,660
PORTABLE IMPRINTING DEVICE
John J. Miller, 3110 Dorais Drive NE., Grand Rapids, Mich.
Filed Mar. 22, 1961, Ser. No. 97,682
2 Claims. (Cl. 101—103)



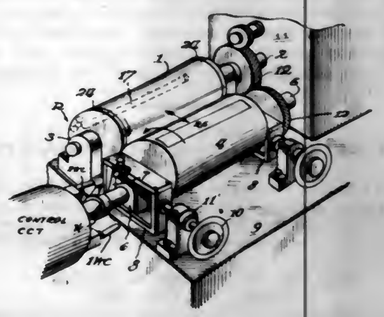
1. A recording device comprising: platen means having rolled side edges; guide lips formed from said platen inwardly of one of said rolled side edges; a marker including a slide block and slide; said slide having edges received by said guide lips and one rolled edge and being slidably guided thereby; said marker also including a print strip having print fingers; indicia impressions formed in said print fingers; an endless inked ribbon underlying said indicia impressions; retainer tabs formed from said platen and cooperating with said other rolled edge to slidably receive a carriage; said carriage carrying paper positionable under said print fingers; said print fingers being flexible to imprint indicia on said paper; and said platen having a slot therein so positioned that said paper may be passed from an imprinting area on said platen through said slot and underneath said slide block to permit unlimited transverse movement of said paper.

3,129,661
NOVEL DUPLICATING PROCESSES
Douglas A. Newman, Glen Cove, N.Y., assignor to Columbia Ribbon and Carbon Manufacturing Co., Inc., Glen Cove, N.Y., a corporation of New York
Filed Mar. 31, 1960, Ser. No. 18,909
5 Claims. (Cl. 101—149.2)

1. The process of preparing duplicate copies from an imaged original sheet having thereon images containing material which is infrared radiation-absorbing heat-generating, which comprises the steps of (1) placing in surface contact the imaged original sheet, a copy sheet and a transfer sheet, the transfer layer of which comprises a thermoplastic resin composition; (2) subjecting the superposed sheets to infrared radiation for a period of time sufficient to fuse the transfer layer to the copy sheet in areas corresponding to the imaged areas of the original sheet; (3) separating the sheets to produce the copy sheet which is imaged with the thermoplastic resin composition in said areas; (4) placing said resin-imaged copy sheet in surface contact with the colored wax-base transfer layer of a transfer sheet; (5) treating said sheets to render the thermoplastic resin composition adhesive and cause it to bond to said transfer layer; and (6) separating the sheets to produce the copy sheet bearing the colored transfer layer overlying the resin images.

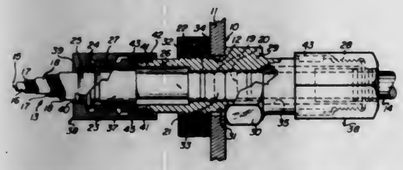
3. The process of claim 1 in which the colored transfer layer contains planographic pigments and the final copy sheet is a planographic master sheet.

3,129,662
TEST DEVICE
Sanford B. Pinkerton, Sylacauga, Ala., assignor, by mesne assignments, to Kimberly-Clark Company, Neenah, Wis., a corporation of Wisconsin
Filed Nov. 15, 1961, Ser. No. 152,504
6 Claims. (Cl. 101—218)



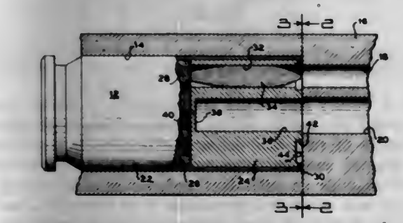
5. In a rotary print test device, a plurality of cylinders having their axes in parallel alignment in a common plane and said cylinders forming pressure nips, one of said cylinders serving as an impression cylinder, another of said cylinders serving as a plate cylinder, and a third one of said cylinders serving as a transfer cylinder, said plate cylinder having a printing plate which is normally recessed from printing position and said impression cylinder having means for removably securing therearound a sheet to be printed; means for effecting continuous driving of said plurality of cylinders in rotation at a pre-determined test speed; first power operated means connected to said printing plate for moving said printing plate to and from printing position; other reversibly operable power operated means retaining said impression cylinder in position to form one of said pressure nips with an adjacent transfer cylinder; and means to cycle the actuation of said first and said other power operated means successively at said predetermined test speed such that said printing plate is in printing position for only one pass of said printing nip and said impression cylinder is withdrawn from said nip position after said sheet receives one print impresson.

3,129,663
FITTINGS FOR LOW ENERGY DETONATING CORD
Robert W. Schnepfe, Jr., Timonium, Md., assignor to Aircraft Armaments, Inc., Cockeysville, Md., a corporation of Maryland
Filed Aug. 11, 1961, Ser. No. 130,931
1 Claim. (Cl. 102—27)



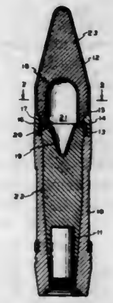
In combination, a length of LEDC, a booster cup attached to an end of said length, a ferrule crimped to said length at a point spaced from said end, said ferrule having a circumferential flange, and a coupling to which said length is attached, said coupling comprising: a body having an axial bore that is smaller in diameter than said flange but slightly larger in diameter than the diameter of said length, said end being inserted into said bore until one side of said flange abuts said body, a cap having a hole therethrough that is smaller in diameter than said flange, said cap being attached to said body so that said length passes through said hole and said cap abuts the other side of said flange for retaining a portion of said length in said bore, pressure relief hole means in said body connecting the exterior thereof with said bore, said hole means being located between said cap and said ferrule when said portion is retained in said bore, and means resiliently blocking said hole means.

3,129,664
MULTIPROJECTILE CARTRIDGE WITH GAS TAPPING MEANS
Frederick P. Reed, Ludlow, Mass., assignor to the United States of America as represented by the Secretary of the Army
Filed Mar. 14, 1963, Ser. No. 265,603
4 Claims. (Cl. 102—38)
(Granted under Title 35, U.S. Code (1952), sec. 266)



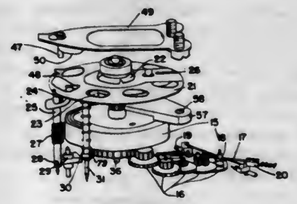
1. In cooperation with a gun barrel having a cartridge receiving chamber and an axial conduit and a plurality of bores extending therefrom, a cartridge having a case, an insert received by the front section of said case, a plurality of holes equal to the number of said bores extending through said insert, said holes being arranged so as to be coaxially alignable with said bores, a projectile received by each of said holes, a compartment formed in said case rearwardly of said insert for receiving a propellent, a means in said insert for discharging gases at peak pressure from the cartridge into said conduit, and including pneumatic means which aid in retaining said insert in said case against residual gas pressure in said compartment during ejection of said case from said chamber.

3,129,665
SHELL WITH PLASTIC EXPLOSIVE AND HOLLOW LINER
John O. Evans, Jr., Washington, D.C. (3121 Westcliff Road W., Fort Worth, Tex.)
Filed Feb. 7, 1951, Ser. No. 209,770
4 Claims. (Cl. 102—56)



4. An explosive shell comprising an elongated enclosed hollow casing having a nose portion the walls of which are deformable upon impact of the shell against a target, enclosed hollow liner means supported within said casing and spaced from the walls of said casing, the rearward portion of said liner means having the form of a cone pointing rearwardly, explosive composition substantially filling the space between said liner means and the walls of said casing, at least a substantial part of the explosive composition in the nose portion of said casing being plastic, and base fuze means for initiating detonation of said explosive composition.

3,129,666
MECHANICAL TIME FUZE
Benjamin D. Nabreski, Pennsauken, and Robert L. Maher, Palmyra, N.J., and Richard J. Mott, Philadelphia, Pa., assignors to the United States of America as represented by the Secretary of the Army
Filed Dec. 14, 1962, Ser. No. 244,843
1 Claim. (Cl. 102—84)
(Granted under Title 35, U.S. Code (1952), sec. 266)



In a fuze adapted to be set into rotation upon being fired from a rifle, the combination of

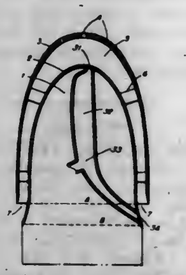
a timing assembly including a clock mechanism having a mainspring shaft,

locking means operated by a centrifugal force incident to the spin of said fuze for releasing said shaft for rotation,

a timing disk rotatable by said shaft and having a firing notch,

a frictional coupling between said shaft and said timing disk for adjusting said timing disk to establish different timing periods,
means including a safety disk fixed to said shaft and having an extension for limiting the setting of said timing periods above a predetermined minimum,
a firing arm having at one end a D-shaped section and at the other end of an off-center extension biased against the edge of said timing disk and adapted to enter said notch,
a safety plate pivoted to engage the rounded part of said D-shaped section,
a firing pin,
means biasing said firing pin against said safety plate, said firing pin being releasable from said safety plate upon entrance of said off-center extension into said firing notch and the rotation of said rounded part of said D-shaped section away from said safety plate, and
means including a delay arming assembly geared to said shaft and operated under the control of said timing mechanism for inserting a primer into the path of said firing pin immediately prior to its release, said delay arming assembly including a rotatable member bearing a primer, means for maintaining said rotatable member in a position to displace said primer from the path of said firing pin, and a pair of centrifugal members geared to said shaft and rotatable to release said maintaining means for rotation of said primer into the path of said firing pin.

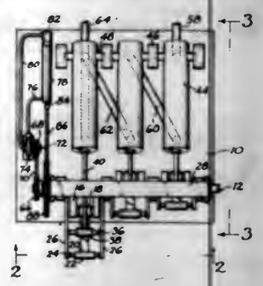
3,129,667
HYPERSONIC COOLING DEVICE
Lian-Tong Wen, 601 W. 112th St., New York 25, N.Y.
Filed Aug. 29, 1960, Ser. No. 52,490
2 Claims. (Cl. 102—92.5)



1. An air cooling device for the interior portion of an air vehicle which comprises in combination, a leading portion having a rearwardly extending outer surface, a rearwardly extending conduit positioned in the interior of said leading portion, said leading portion having at least one orifice positioned in the forward extremity of said leading portion communicating air in front of the leading portion to said conduit, said conduit having an exhaust opening communicating with the interior portion of the air vehicle and with the atmosphere rearwardly of said leading portion.

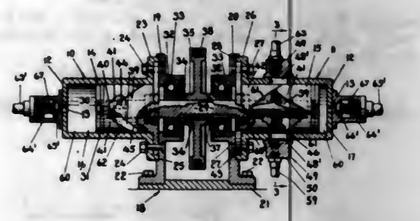
3,129,668
VARIABLE CAPACITY FLUID PUMP
Elmer W. Manke, 1909 Patterson St., Charles M. Manke, 307 West G St., and Virgil F. Manke, 309 West G St., all of Shelton, Wash.
Filed Dec. 19, 1960, Ser. No. 76,581
3 Claims. (Cl. 103—38)

1. A variable capacity pump comprising, a plurality of pivotally supported fluid cylinders fluid connected in series, piston means operative in each of the cylinders for producing a pumping function, a piston rod extending from each piston, a crank shaft, a plurality of lever means one connected pivotally to each piston rod, link means pivotally connecting each lever means to the crank shaft, each lever means being driven in oscillating motion by the crank shaft to operate the piston rods reciprocally in the cylinders, a rotatable carrier, means pivotally inter-



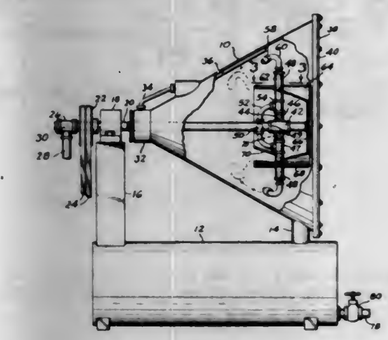
connecting the carrier and said plurality of lever means, and means operatively connected to the carrier for rotating the latter to pivot the lever means and the fluid cylinders selectively and adjust the angular relation between the piston rods and the lever means whereby to change the stroke length of the piston rods and vary the volume of fluid delivered by the cylinders at a constant speed of the drive shaft.

3,129,669
ROTARY COMPRESSORS, PUMPS AND THE LIKE
George Striegl, 234 Hampton Heath, Burlington, Ontario, Canada
Filed July 2, 1962, Ser. No. 206,733
12 Claims. (Cl. 103—157)



1. A rotary apparatus comprising a cylinder fixedly supported and having an open end, a drive shaft disposed co-axially of said cylinder and extending into said open end thereof, supporting means for said shaft permitting it to rotate with an attendant endwise motion, means for driving said shaft and permitting it to have an attendant endwise motion, a fluid impinging piston operably disposed in said cylinder and rigid with said shaft, said piston provided with V-shaped recesses extending inwardly from an end thereof and provided with alternate V-shaped cam heads, said recesses having helical camming faces, a stator fixed in said cylinder and having cam heads and intervening substantially V-shaped recesses with helical complementary camming faces converging to an apex and conforming dimensionally with said recesses in said piston for camming engagement therewith in the rotation of said piston, whereby to produce displacement chambers, fluid passages for said chambers, valve means for said fluid passages, and means for effecting interengagement of the camming faces of said piston with those of the said stator.

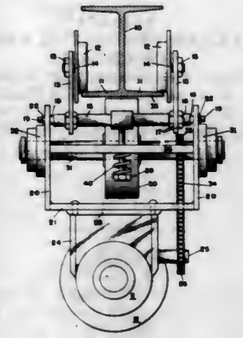
3,129,670
HIGH PRESSURE CENTRIFUGAL PUMP
Elmer W. Manke, 1909 Patterson, Shelton, Wash.
Filed Sept. 24, 1962, Ser. No. 225,732
9 Claims. (Cl. 103—223)



1. A centrifugal pump comprising:
(*a*) a pump chamber,
(*b*) a driven rotary shaft extending into the pump chamber,
(*c*) a pair of opposed hollow eduction arms radiating from the shaft for rotation therewith and having open outer ends,
(*d*) liquid inlet means extending through the pump chamber and communicating the hollow eduction arms with a source of liquid,
(*e*) a pressure tank below the pump chamber,
(*f*) conduit means communicating the pressure tank with the pump chamber below the open outer ends of the eduction arms, whereby the eduction arms rotate in an air space to draw liquid through the inlet means and forcefully eject it through the open ends of the induction arms,
(*g*) the pump chamber and pressure tank forming a closed system whereby the forceful ejection of liquid thereinto pressurizes the pump chamber and pressure tank.

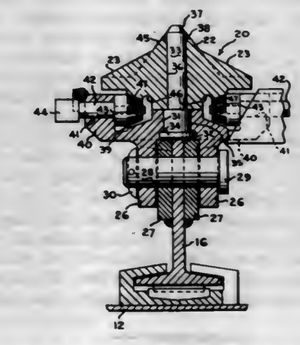
3,129,671
MONORAIL TRACTOR
Alfred G. Vanderbeck, Colonial Village, Pa., assignor to Aircraft Armaments, Inc., a corporation of Maryland
Filed Aug. 21, 1961, Ser. No. 132,828
7 Claims. (Cl. 105—153)

1. In combination with an overhead beam providing opposed upper roller surfaces and a lower traction surface, a pair of vertically disposed roller frames arranged in parallel relation and each of said frames having at least one roller journalled thereon, a first tie rod between the frames adjacent one end and a second tie rod between the frames adjacent the opposite end, said tie rods spacing the rollers for reception on the upper surfaces of the overhead beam, a pair of vertically disposed traction wheel supports, one support arranged in spaced parallel relation exteriorly of one of the roller frames and the other support arranged in spaced parallel relation exteriorly of the other of the roller frames, means pivotally mounting the traction wheel supports to the roller frames adjacent one end, a transverse brace securing the opposite end of the traction wheel supports together, spring means secured between the second tie rod and said transverse brace, an axle rotatably mounted in said traction wheel supports having a traction wheel disposed beneath the lower surface of the overhead beam, said spring means biasing the traction wheel in contact with the lower traction surface of said overhead beam and operating means including a motor carried by the



traction wheel supports for rotating the traction wheel, the longitudinal axis of said motor being aligned with the longitudinal axis of said overhead beam, and the housing of said motor being disposed substantially within the limits of the vertical planes in which said traction wheel supports lie.

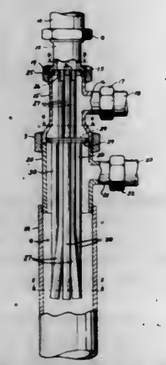
3,129,672
CONTAINER LOCKING DEVICES AND ASSEMBLIES
Jack E. Gutridge, Dyer, Ind., and Ralph B. Bergstrand, Homewood, Ill., assignors to Pullman Incorporated, Chicago, Ill., a corporation of Delaware
Filed May 14, 1962, Ser. No. 194,440
6 Claims. (Cl. 105—366)



1. Lading attachment means for vehicle mounting, said attachment means comprising a base member supporting vertically thereon a locking head which is rotatable about a vertical axis relative to said base member, means interconnecting said base member and locking head to permit rotation of said locking head, said locking head including a generally cone-shaped top portion and an enlarged base portion, said locking head being provided with at least one horizontally projecting locking flange for locking engagement with lading upon selected rotation of said locking head, rotation imparting means carried by said locking head in the area of said base portion and concentric to

the vertical axis of rotation of said locking head, and drive means journaled in said base member transversely thereof and in engagement with said rotation imparting means, said drive means being confined in said base member relative to said locking head with said locking flange projecting substantially outwardly of said drive means in the selectively rotated locking position of said locking head.

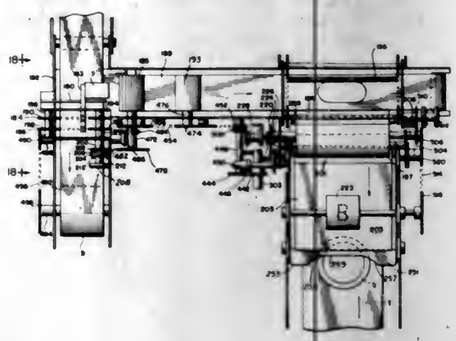
3,129,673
APPARATUS FOR PRODUCING VARIEGATED ICE CREAM
Morris F. Stanley, Oconomow, and Morris W. Stanley, Milwaukee, Wis., assignors to Ho-Maid Products Co., Milwaukee, Wis., a corporation of Wisconsin
Filed Mar. 14, 1962, Ser. No. 179,558
4 Claims. (Cl. 107—1)



1. An apparatus for producing a comestible having two flavoring materials therein in continuous ribbon-like form, comprising: an elongated conduit having a lower discharge end; a first set of elongated deflectable tubes having upper and lower ends and extending longitudinally within said conduit toward the discharge end thereof, said tubes being adapted to carry moving streams of a first edible flavoring material directed into the upper portion of said conduit; a transverse conduit sealing member on and surrounding said tubes below their upper ends; and a second set of elongated deflectable tubes opening in and extending longitudinally from said sealing member toward the discharge end of said conduit, said second tubes being adapted to carry moving streams of a second edible flavoring material directed into said conduit between the upper ends of said first tubes and said sealing member; some of said elongated tubes being deflected from their longitudinal axes to provide uniformly-spaced alternate first and second flavoring tubes, whereby the first and second flavoring materials emitted from the lower ends of said tubes will be spaced uniformly and alternately in ribbon-like form in a comestible directed into and through said conduit below said sealing member.

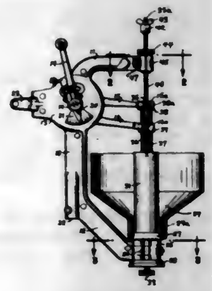
3,129,674
AUTOMATIC PIE MACHINE
Marion C. Jahn, Chicago, Ill., assignor to Colborne Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed Aug. 3, 1959, Ser. No. 831,165
10 Claims. (Cl. 107—12)

1. In a cross sheeter for forming and delivering dough sheets onto pie plates moving on a main conveyor and including two opposed pressure rollers mounted in a frame, the combination of a delivery conveyor extending forwardly from said rollers to receive dough sheets therefrom, and a drag plate secured relative to said frame to extend forwardly and downwardly from the distal end of said delivery conveyor toward said main conveyor, said



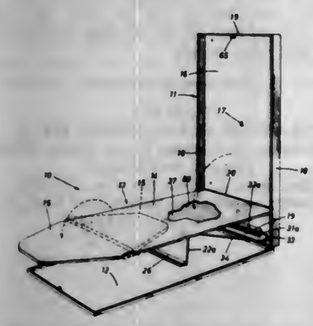
drag plate having a cut out portion permitting said drag plate to straddle said pie plates moving on said conveyor.

3,129,675
RAISED DOUGHNUT FORMING MACHINE
Thomas E. Belshaw, 1772 22nd Ave. S., Seattle, Wash.
Filed May 3, 1961, Ser. No. 107,544
1 Claim. (Cl. 107—14)



A dough dispensing machine comprising, an upright dough hopper having a forming chamber at its lower end for discharge of dough, an open-ended metering sleeve in said hopper coacting with said chamber and axially alined therewith, said sleeve and chamber being relatively movable axially into and out of close adjacency with one another, and said sleeve extending above the level of dough in said hopper when the sleeve is closely adjacent said chamber, a mandrel slidably mounted in said chamber and having a mandrel rod extending through and above said sleeve, a metering piston slidably mounted in said sleeve and slidable on said mandrel rod, piston rod means connected to said metering piston and projecting above said sleeve to a level below the upper end of said mandrel rod, sleeve rod means extending upwardly from said metering sleeve, and bridge means interconnecting said sleeve rod means and said mandrel rod for unitary axial movement of said sleeve and mandrel, said mandrel rod being detachably connected to said bridge means, and edible sealing liquid located in said metering sleeve above said metering piston.

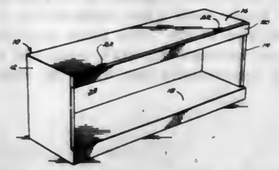
3,129,676
SELF-STORING STRUCTURES
Sanford Brooks, 226 Maxwell St., Downsview, Ontario, Canada; Jerry Brooks, 23 Claxton Blvd., Toronto, Ontario, Canada; and John E. Lee, 631 Evans Ave., Toronto 14, Ontario, Canada
Filed Mar. 19, 1962, Ser. No. 180,709
8 Claims. (Cl. 108—33)



1. In combination, a casing having an open side, a platform member comprised of at least a first section which is connected to said casing for swinging movement and a second section hingedly connected to said first section for movement from a position flatwise in overlying relation to said first section to an extended position in substantially co-planar relation therewith, means defining a stop for said second section in said extended position, said platform member being adapted for swinging movement with said second section arranged in flatwise overlying relation thereto from a position within said casing, through said open side to an extended position at substantially 90° from said position within said casing, a closure member for the open side of said casing, means connecting said closure member to said casing for swinging movement flatwise on an axis parallel to the swinging axis of said platform member and in the same direction from a position closing the open side of said casing to an extended position and spaced in relation to said platform member, means defining a stop for said closure and platform members in the extended position, said first section including a supporting flange formation at the outer end thereof to seat said second section thereon in the extended position thereof with the ends of said first and second sections in abutting relation, and link means connected between said first and second sections and bridging the juncture thereof at opposite edges, said link means having an effective length exceeding the depth dimensions of said first and second sections, whereby said second section can be swung clear of said first section in moving from a flatwise overlying position to the co-planar extended position and reversely.

3,129,677
BOOKCASE DEVICE
Donald H. Zarley, 4024 Adams, Des Moines, Iowa
Filed Sept. 15, 1961, Ser. No. 138,401
12 Claims. (Cl. 108—50)

1. In a bookcase device, a bookcase structure comprised of two vertical ends,
a horizontal top secured to the tops of said two ends,
and a horizontal bottom secured to the bottoms of said two ends;
an elongated slat extending along the top front edge of the top of said bookcase and extending partially downwardly over the open front thereof,
means pivotally securing said slat to said top whereby said slat can be pivotally moved away from the front edge of the top of said bookcase,
and a flexible sheet having its forward edge secured to the lower inside surface of said slat and its rearward edge secured to the upper rearward portion of said bookcase structure, whereby a book resting in



an upright position on the bottom of said bookcase structure and having its top extending above the level of the lower edge of said slat will have its top portion engaging said flexible sheet and covered by said flexible sheet.

3,129,678
FURNACE ROOF
William L. Murray, Duluth, Minn., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Oct. 3, 1961, Ser. No. 142,591
1 Claim. (Cl. 110—99)



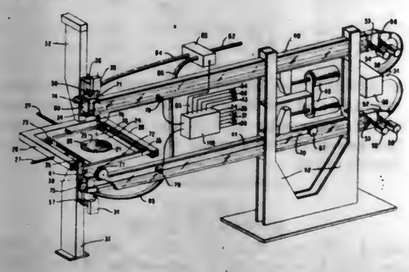
A furnace roof comprising a refractory arch, a plurality of hold down beams extending transversely of the span of the arch in spaced apart relationship on each side of the crown of the arch, each of said beams having a lower flange spaced from the top of said arch, means supporting each of said beams in a substantially fixed vertical position, a plurality of wedges secured to the bottom of the lower flange of each of said beams in spaced apart relationship longitudinally of said beams, each of said wedges having a thick end and a thin end connected with a sloping surface extending longitudinally of the span of the arch, the thin end of each wedge being located on the side of the associated beam toward the crown of said arch, each of said wedges being so dimensioned as to provide a space between the bottom thereof and the top of said arch, and a wedge in said space associated with each of said first named wedges with its thick end being located on the side of the associated beam toward the crown of said arch, the sloping surfaces of the associated wedges engaging one another and the second named wedge being movable with respect to said first named wedge.

3,129,679
HANDLING DEVICE FOR STRAND MATERIAL
Harry L. Gerth, Fishkill, and Robert L. Judge, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 23, 1960, Ser. No. 77,931
5 Claims. (Cl. 112—173)

1. Apparatus for providing temporary storage of wire or the like in a device wherein wire of substantial length is to be passed back and forth through a work piece in a sewing manner such that the free end of the wire is always available, after being drawn through the work

piece and stored, to be passed back through the work piece to the opposite side to form either a running stitch or a plurality of loops on the work piece comprising in combination:

means on each side of the work piece to anchor the free end of a wire, the terminal end of which is attached to the work piece, said anchor means positioned relative to the work piece such that the run of the wire between the work piece and said anchor means is substantially less than the total length of the wire,



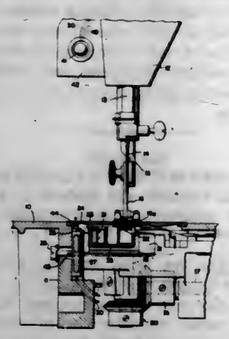
first and second hollow tracks of rectangular cross-sections mounted on opposite sides of the work piece extending perpendicular to and in the same plane with the run of wire between the work piece and said anchor means, said first and second tracks being positioned such that the run of wire between the work piece and said anchor means crosses the hollow portion of said tracks at one end of said tracks open to the atmosphere,

means connected to the other end of each of said tracks for creating a vacuum in said tracks,

control means,

and means including valve means mounted between each of said hollow tracks and said vacuum means, responsive to said control means for opening said other end of said second track to the atmosphere and opening said other end of said first track to said vacuum means whereby a bight of the remaining free end of the wire is pulled into said second track to pull the wire tight at the work piece.

3,129,680
BOBBIN THREAD DEPLETION DETECTOR FOR SEWING MACHINES
Ernest H. Doerner, Morris Plains, N.J., assignor to The Singer Company, a corporation of New Jersey
Filed May 23, 1962, Ser. No. 197,151
4 Claims. (Cl. 112—218)



1. A bobbin thread depletion detector for sewing machines comprising a bobbin, a magnetic reed switch mounted adjacent to said bobbin, a biasing magnet mounted in fixed relation to said switch and providing a flux field for said switch sufficient to hold it closed, if closed, but insufficient to close it, if open, a magnet rotatable with said bobbin and normally restrained in a first path in which it has no operative effect on said swtich but movable responsively to near-exhaustion of said bobbin thread supply to a second path in which it causes closure of said switch, and a reset magnet movable to a position adjacent said reed switch and of such polarity as to oppose the holding field of the biasing magnet and effect opening of said reed switch.

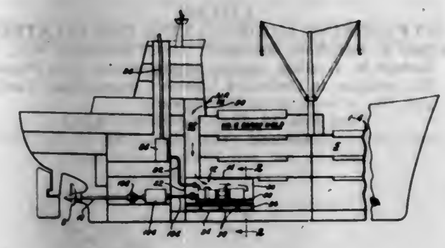
3,129,681
PLEASURE SUBMERSIBLE BOAT
Roger Bajulaz, 13 Chemin Pierre Grise, Genthod, Geneva, Switzerland
Filed Sept. 4, 1962, Ser. No. 221,015
Claims priority, application Switzerland Sept. 22, 1961
15 Claims. (Cl. 114—16)



1. A pleasure submersible boat comprising a watertight cabin, operating members housed in said cabin for controlling said submersible boat, safety means including a float located at least partially above the water and at least one deformable parallelogram comprising two arms connecting said cabin to said float, said submersible boat comprising further a lever arm fast with at least one of the arms of said deformable parallelogram and extending beyond the point at which said one parallelogram arm is pivoted on said float; at least one motor driven winch carrying a wire rope which cooperates with the free extremity of said lever arm to produce angular displacements of the deformable parallelogram with respect to said float; a ballast comprising a drainable water tank mechanically connected to said parallelogram and mounted for rotation therewith, apertures provided in one face of said water tank, rotation of said water tank by 180° away from its rest position causing the immersion of one of said apertures and the filling of said tank with water, the rotation of said water tank being controlled by means of said motor driven winch; the angular displacement of said deformable parallelogram out of its rest position, controlled by said motor driven winch, being effected against the combined action of said buoyancy thrust of said cabin and the weight of said ballast, said angular displacement causing the immersion of said cabin and the displacement of said ballast upward and toward the buoyancy thrust of said cabin to compensate said thrust.

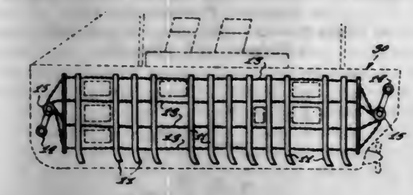
3,129,682
PROPULSION ARRANGEMENT FOR MERCHANT SHIP
Norman W. Penney, Ridgewood, N.J., assignor to John J. McMullen Associates, Inc., New York, N.Y., a corporation of New York
Filed Dec. 13, 1961, Ser. No. 158,987
1 Claim. (Cl. 114—65)

The combination comprising a merchant ship characterized by a pair of main structural bulkheads extending fore and aft in the ship from bow to stern and forming an integral part of the girder system of the ship, means cooperating with said pair of main structural bulkheads defining a plurality of cargo holds arranged fore and aft in the ship, a drive shaft protuding from the stern of the ship, a propeller mounted on the protruding portion of said drive shaft, a compartment defined between said pair of main structural bulkheads and located partially below the after cargo hold of the ship, a first frame support fixed to the bottom of said compartment, said first frame comprising a pair of parallel spaced rails extending along the longitudinal axis of the ship and a plurality of apertured, lesser bulkheads extending transversely to said rails and



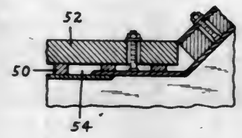
mounted between said main structural bulkheads, a propulsion system composed of a second frame support, and compressor means, combustion chamber means and turbine means operatively interconnected and all mounted on said second frame support, means detachably securing said second frame support on said first frame support, means operatively disengageably connecting the output of said turbine means to said drive shaft, and removable means defining in common a portion of the floor of said after cargo hold and the top of said compartment which when removed defines an opening large enough to enable said entire propulsion system to be extracted from the ship as a unit through the after cargo hold.

3,129,683
SAFETY EQUIPMENT HOUSING FOR SHIPS AND AIRPLANES
Robert D. Smith, 2742 E. Tremont Ave., Bronx, N.Y.
Filed Apr. 17, 1963, Ser. No. 273,688
4 Claims. (Cl. 114—68)



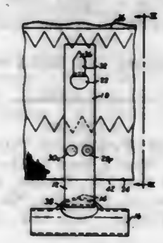
1. In a craft for flight or movement on the surface of the sea, the combination of a hull, a plurality of spaced apart chambers recessed into the outer side of said hull, each of said chambers having a door, said door in a closed position of said chamber forming an unbroken continued streamlined contour of the outer side of said hull, each of said doors being slideable in a singular angular direction respective to the said outer side, said direction being inwardly within the outline of said hull, and means for sliding said doors.

3,129,684
INSULATED SHIP HULL
Clifford M. Cockrell, New Orleans, La., assignor to Freeport Sulphur Company, New York, N.Y., a corporation of Delaware
Filed Feb. 6, 1962, Ser. No. 171,367
5 Claims. (Cl. 114—74)



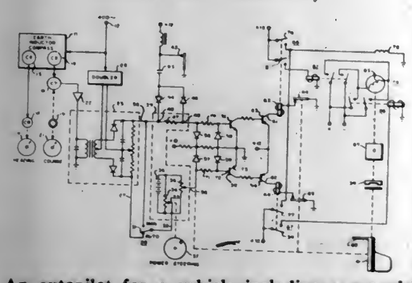
1. A ship for transporting hot, liquid sulphur, comprising a hull, a tank in said hull for receiving hot, liquid sulfur, said tank having on its inner vertical and bottom surfaces for engagement with said sulphur a lining of abutting wood planks, and a cover of sheet metal over said planks on said inner vertical surfaces, said lining on said bottom surface including wooden sleepers extending at spaced intervals along said bottom surface, said abutting wood planks on said bottom surface extending in abutting contact in a direction substantially transverse to said sleepers, the spaced intervals between said sleepers being substantially filled with sulphur.

3,129,685
SAIL SLIDE FASTENER
Vincent Kanser, 59 Forest Ave., Glen Ridge, N.J.
Filed Nov. 21, 1960, Ser. No. 70,676
12 Claims. (Cl. 114—108)



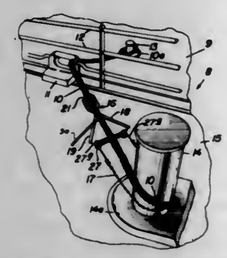
1. In combination, a sail including a reinforcement along an edge thereof, a sail slide, and a fastener connecting said slide to a portion of said reinforced edge, said fastener comprising a pair of elongated legs integrally connected at a head portion, said legs being initially formed with a uniform divergence from said head portion and then deformed to lie flat against opposite sides of said reinforced edge, said head portion being outwardly rounded with an effective diameter exceeding the space between said legs and embracing a part of said slide adjacent said edge, first and second securing means carried respectively by said legs adjacent their free ends and including a member passing through and clamping said legs against said reinforced edge, and further securing means carried by said legs and located intermediate said head portion and said first and second securing means, said further securing means including a pointed member projecting from the body of one of said legs inwardly into biting engagement with said reinforced edge, whereby said fastener is so securely anchored to said reinforced edge as to avoid oscillation about and movement away from said member.

3,129,686
MARINE AUTOPILOT
Paul J. Sakson, Yorktown Heights, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Filed July 19, 1962, Ser. No. 210,909
3 Claims. (Cl. 114—144)



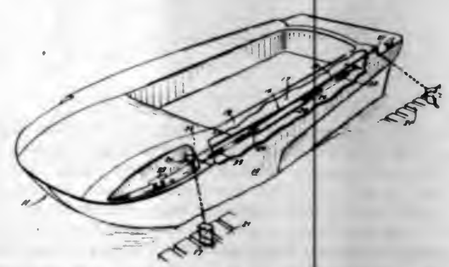
1. An autopilot for a vehicle including a propulsion engine and a rudder comprising,
compass means for determining the direction of north relative to the longitudinal axis of said vehicle,
means developing a heading angle signal from said compass means,
means for generating a course angle signal,
means for subtracting said heading and course signals to generate an error signal,
a motor connected to said rudder to steer the vehicle,
means applying said correction signal to said motor,
means deriving a telltale signal from the position of said rudder having an amplitude and sense directly representing the amplitude and sense of rudder angle,
means combining said telltale signal with said correction signal,
an engine timer operated by said engine at a rate proportional to the speed thereof,
means for deriving a signal from said engine timer having an amplitude proportional to the speed of said motor.
and means combining said signal with said correction signal.

3,129,687
LINE STOPPERS OR THE LIKE
Joe T. Weeks, Port Neches, Tex.
(202 Easty St., Silsbee, Tex.)
Filed Dec. 21, 1961, Ser. No. 161,097
10 Claims. (Cl. 114—199)



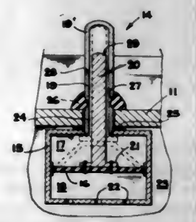
1. A mooring cable stopper or the like comprising a pair of crossed levers, pivot means connecting said levers adjacent one end whereby to provide opposed short cable-adjacent pinching means and long actuating arms, opposed cable-gripping portions carried by said short arms, a pulley carried by the free end of each operating arm, a flexible connection passed about each of said pulleys and connecting the same, so that the pulleys will be substantially spaced from opposite sides of a cable when the cable-gripping portions are in operative position, and a rearwardly extending U-portion provided by said flexible connection for anchoring engagement to a bit or other fixed object, and said cable-gripping portions comprising separable members having opposed and longitudinally coextensive concaved cable opposing surfaces and a series of friction-providing facing strips of substantial width transversely secured to the concaved faces of the respective cable gripping portion-providing members and said facing strips of each series being laterally spaced, L-form cleats having one flange secured to the backs of said gripping portions, and means pivoting the other cleat flange to the related short lever arm and in substantially flat contact with one of the top and bottom faces of the latter.

3,129,688
SELF-STORING MOORING LINE INSTALLATION
Albert E. Buchholz, deceased, late of Kenosha, Wis., by Robert K. Gerling, special administrator, Des Plaines, Ill., assignor to Outboard Marine Corporation, Waukegan, Ill., a corporation of Delaware
Filed Feb. 19, 1962, Ser. No. 174,312
7 Claims. (Cl. 114—230)



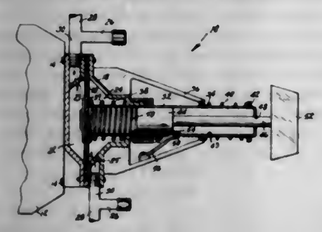
7. A boat mooring installation including support means defining an opening on said support means, a pulley, a mooring line extending through said opening and trained around said pulley, means securing one end of said mooring line to said support means, means on said support means including a spring connected to said pulley and acting at all times to bias said pulley for linear movement so as to fully retract said line through said opening, and means at the other end of said mooring line for co-operation with said opening to prevent full retraction of said mooring line through said opening.

3,129,689
TIRE PRESSURE INDICATOR
Henry C. Henderson and Paul W. Heath, both of 332 Standard, El Segundo, Calif.
Filed Nov. 23, 1962, Ser. No. 239,568
4 Claims. (Cl. 116—34)



1. A tire pressure indicator for a tubeless tire mounted on a rim in which there is provided an opening through said rim to the interior of said tire, said indicator comprising, in combination: an enclosure; an internal diaphragm dividing the interior of said enclosure into first and second chambers; an extending portion connected to said enclosure and communicating with said first chamber, said portion being at least partly transparent and adapted to pass through said opening when said enclosure is positioned within said tubeless tire so that said portion is visible from the exterior of said tire; and an indicating rod having one end secured to said diaphragm for movement therewith and its other end projecting into said extending portion so as to be visible therethrough when said diaphragm is in a first position, said first chamber being hermetically sealed under a given pressure corresponding to normal tire pressure, said given pressure acting against one side of said diaphragm, and said second chamber being in fluid communication with the interior of said tire so that actual tire pressure acts on the other side of said diaphragm whereby a change in said actual tire pressure moves said diaphragm to vary the position of said rod within said extending portion.

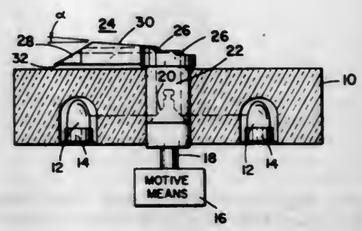
3,129,690
WARNING DEVICE
William O. Nygard, Rte. 1, Box 27, Meadowlands, Minn.
Filed June 28, 1963, Ser. No. 291,542
3 Claims. (Cl. 116—34)



1. Apparatus for signalling imbalance of air pressure in dual mounted vehicle tires comprising, in combination, a casing for attachment to the hub of an outboard dual mounted wheel, a signal indicator carried by said casing normally confined within the outline of the outboard wheel and extensible to an outwardly exposed position to visually signal the driver of the vehicle, detent means acting between said casing and said indicator releasably securing said indicator in an inwardly retracted position, pressure balance sensing means carried by said casing in communication with the interior of both dual mounted tires, and release means responsive to an imbalance in the pressure of both tires to release said detent means to allow said indicator to move outwardly into a signal position, said pressure balance sensing means comprising a diaphragm dividing the interior of said casing into two compartments each in communication with one of the dual mounted tires, said spring means comprising an outwardly extending cylinder carried by said diaphragm, a compression coil spring mounted within the inner end of said cylinder, said indicator comprising a shaft having a piston at one inner end slidably carried by said cylinder and a flag carried by the opposite outer end, and said compression coil spring acting between said piston and said cylinder yieldably urging said shaft outwardly.

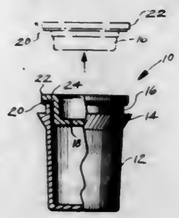
3,129,691
ILLUMINATED DIAL POINTER
Dayton J. Walker, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Apr. 6, 1962, Ser. No. 185,621
10 Claims. (Cl. 116—129)

1. A dial pointer assembly adapted for use with indirectly lighted instruments comprising:
shaft means adapted to be rotated;
reflector means rotating with and attached to said shaft means, said reflector means having a conical surface and having a predetermined diameter at the outermost portion of said conical surface;



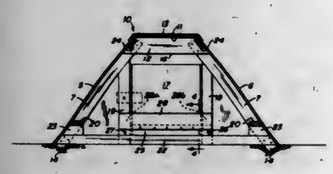
translucent means attached to said reflector means, said translucent means including a generally wedge-shaped portion and also including light distributing means adapted to distribute light throughout said generally wedge-shaped portion, said wedge-shaped portion of said translucent means being of a thickness less than said predetermined outermost diameter of said conical surface, and said wedge-shaped portion increasing in width and thickness from the end attached to said shaft means toward the outermost portion of said wedge-shaped portion before converging to a point at the extremity of said translucent means;
and reflective coating means attached uniformly on portions of said translucent means, said reflective coating aiding said distributing means in the distribution light within said generally wedge-shaped portion.

3,129,692
WORM POT OR HABITAT
Voris R. Sanderson, 1006 Main St., Murray, Ky.
Filed Apr. 1, 1963, Ser. No. 269,353
3 Claims. (Cl. 119—15)



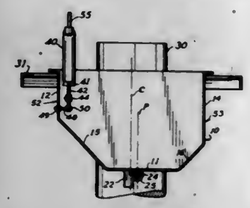
1. A worm habitat comprising, in combination, a container of porous clay material and having a bottom and tapered walls, said container having a top edge and a thickened portion forming an annular ledge having an upper horizontal surface spaced below said top edge and adapted to facilitate emptying the contents of the container, a cover member having a main cup-shaped body portion providing tapered walls and a bottom wall positioned in the container and flange means supported on the top edge of the container, and a washer interposed between the top edge and the flange means, said main body portion of the cover being provided with openings in the bottom wall to provide for aeration and admittance of moisture for worms in the container.

3,129,693
HOG FARROWING HUT
Jasper De Vore, R.R. 3, Arkansas City, Kans.
Filed Oct. 29, 1962, Ser. No. 233,564
2 Claims. (Cl. 119—16)



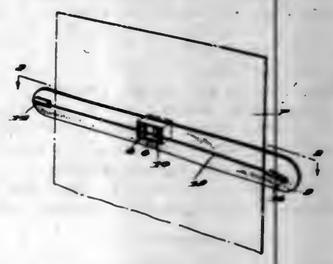
1. In a hog farrowing hut, door frame members in one wall thereof forming a doorway, a door for said doorway, an auxiliary closure rail pivoted at one end to one frame member adjacent the lower portion of the latter and swingable from a vertical position clear of the doorway, to a horizontal position closing the lower area of the doorway, an upstanding strip of flexible material of self-sustaining rigidity secured along its lower longitudinal edge only, to said rail and extending across the full width of said doorway with its longitudinal extremities in inwardly spaced relation to the adjacent door frame members, whereby the upper portion of said strip may be readily flexed along its full length, inwardly of said doorway, but its outward flexing is minimized by contact of its ends with the adjacent door frame members.

3,129,694
WATERING TROUGHS
Richard H. Arrington, 492 S. Court St., Montgomery 4, Ala.
Filed Dec. 1, 1960, Ser. No. 73,134
6 Claims. (Cl. 119—81)



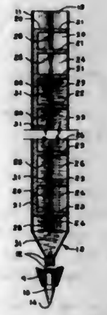
1. A watering trough assembly comprising an elongated trough for supporting water, pivot means below said trough and supporting the same for pivotal movement about an axis parallel to the longitudinal axis of the trough, means for limiting the pivoting of said trough in directions generally perpendicular to the longitudinal axis of the trough such that said trough is maintained in substantially an upright position at all times, means for feeding water into said trough, means for arresting the flow of water to said trough from said means for feeding water, control means actuated by pivotal movement of said trough for controlling said means for arresting said flow of water, said trough being so dimensioned that the center of gravity of said trough shifts from one side to the other over said pivot means during the filling of said trough and shifts from said other side to said one side after a substantial amount of said water has been removed from said trough, and a vertically adjustable stop adjacent each side of the trough with one stop limiting tilting of the trough in one direction and the other stop limiting tilting of the trough in the opposite direction.

3,129,695
LINE GUIDE
Pauline F. Adelman, 8500 Manchester Road, Silver Spring, Md.
Continuation of application Ser. No. 20,086, Apr. 5, 1960. This application Sept. 21, 1962, Ser. No. 226,482
2 Claims. (Cl. 120—33)



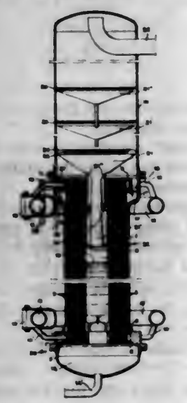
1. A self-contained line marker comprising an elongated strip member having front and rear faces, a permanent magnet having poles secured to the front face of said strip member and having a portion thereof extending beyond the front face of said strip member to serve as a handle therefor, and a flexible elongated ferro-magnetic member having one of its ends secured to said strip member adjacent one end thereof and the other of its ends unsecured to said strip member, said ferro-magnetic member extending along the rear face of said strip member and underlying said permanent magnet, said permanent magnet being positioned on said strip between the ends thereof, the unsecured end portion of said ferro-magnetic member being flared rearwardly away from the rear face of said strip member, said permanent magnet having its poles facing said ferro-magnetic member so that magnetic attraction will maintain said strip member and ferro-magnetic member in close proximity to each other to frictionally engage a piece of paper.

3,129,696
BALL POINT FOUNTAIN PEN
Jack Makler, 73—17 164th St., Flushing, N.Y., assignor of one-half to Samuel Sklar, New York, N.Y.
Filed Apr. 12, 1960, Ser. No. 21,667
1 Claim. (Cl. 120—42.4)



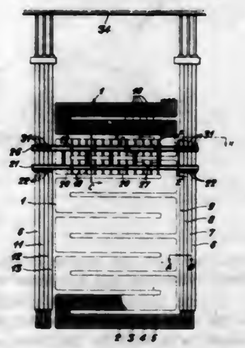
In a ball-point fountain pen, an elongated ink casing having an air opening at the rear end opposite the writing ball, the interior casing space of said ink casing having a relatively large cross-sectional area greater than that which would permit the ink-air surface film to be retained only by the casing side walls, an integral baffle structure insertible as a unit through said air opening into said casing space, said baffle structure having a plurality of at least eight baffle plates extending transversely to the axis of and subdividing the casing space into a column of at least six compartments bounded by said baffle plates, each of said baffle plates having a capillary channel passage and all of said channel passages being substantially aligned along a common longitudinal casing axis for causing ink from a continuous column of ink held in at least four of said compartments to flow continuously from said compartments to the ball as it withdraws ink, the axial length of at least the first, second, third and fourth of said compartments adjoining successively the rear end of said baffle structure being at most about .175", for causing ink entering from said third compartment to said second compartment to be retained in said compartments by ink-body portions held in said capillary channel passages and thereby minimize escape of ink from the channel passage of the baffle plate overlying said first compartment when the casing is held in other than writing position, the axial length of other of said casing compartments being at most about .300", said baffle plates being integrally joined to each other by an elongated junction member extending along aligned portions of said baffle plates; said baffle plates being joined to each other by two elongated junction members extending axially generally parallel along opposite sides of their aligned baffle openings, said two elongated junction members being formed of two integrally joined complementary member sections which constitute parts of two complementary baffle sections which are integrally joined to each other along complementary mating surfaces subdividing each of said baffle structures and its said two elongated junction members into said complementary baffle sections.

3,129,697
HEAT EXCHANGER AND BOILER, PARTICULARLY TO USE THE HEAT GIVEN OFF BY NUCLEAR REACTORS
Georges Trepaud, 17 Rue Legendre, Paris, France
Filed Jan. 12, 1960, Ser. No. 5,564
Claims priority, application France Jan. 14, 1959
12 Claims. (Cl. 122—34)



1. A boiler adapted to have circulated through it a hot fluid under a pressure substantially above atmospheric pressure, comprising concentrically-disposed inner and outer thin vertically-elongated envelopes with the walls of said envelopes in radially spaced-apart relationship, and closure means extending between the walls of said envelopes at both ends thereof to define and enclose an annular chamber between said walls, a nest of tubes vertically disposed in said annular chamber, means defining two vertically spaced-apart annular distribution chambers at both ends of said annular chamber, the ends of said tubes of said nest being connected to said distribution chambers, whereby a flow path for the fluid under pressure is formed to extend from one of said distribution chambers through the tubes of said nest to the other of said distribution chambers, inlet pipes for the hot fluid under pressure communicating with one of said distribution chambers, outlet pipes for the removal of said fluid from the other of said distribution chambers, means for maintaining the liquid to be vaporized at a constant level within the inner envelope, means defining input passages at the base of said inner envelope to provide communication between the interior of said inner envelope and said annular chamber, means defining peripherally disposed output passages at the upper end of said annular chamber, whereby the liquid to be vaporized contained in the inner envelope is free to flow therefrom through said input passages into the annular chamber, and to flow in an upward direction towards said peripherally disposed output passages, while sweeping obliquely the nest of tubes disposed in said annular chamber and having the fluid under pressure flowing through them, whereby a strong heat exchange results which brings the temperature of said liquid to its boiling point, and separating means at the upper end of said annular chamber to separate the liquid mixed with the vapor discharged through the output passages, and to return said liquid in the upper end of the inner envelope.

3,129,698
FORCED FLOW STEAM GENERATOR
Reginald Frank Davis, Littleover, Derby, England, assignor to Sulzer Freres, S.A., Winterthur, Switzerland, a corporation of Switzerland
Filed Mar. 15, 1961, Ser. No. 96,015
Claims priority, application Great Britain Mar. 18, 1960
8 Claims. (Cl. 122—510)



1. In a forced-flow steam generator comprising a combustion chamber of angular horizontal cross section and having a plurality of side walls and corners therebetween, a supporting framework, substantially vertical tubes placed in each corner of said combustion chamber and hung on said framework, a plurality of said vertical tubes being placed in the plane of one of the side walls extending from the corner and a plurality of said vertical tubes being placed in the plane of the second side wall extending from said corner:

tubes bent in serpentine fashion placed in planes and forming tube panels forming the parts of said side walls between said vertical tubes,

at least one horizontal support frame for each side wall,

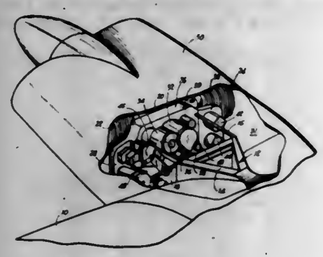
each of said support frames comprising a horizontal structural steel element at the upper end of the frame, a horizontal structural steel element at the lower end of the frame, and a steel plate placed between said structural steel elements.

support brackets connected to said vertical tubes outside of the combustion chamber for supporting one of said structural steel elements,
sliding connections vertically slidably connecting the second of said structural steel elements to said vertical tubes,
vertically slidable connections between said tube panels and one of said structural steel elements, and
horizontally slidable connections between said tube panels and the second of said structural steel elements.

3,129,699
DIESEL FUEL CONTAINING A HETEROCYCLIC POLYAMINE SALT
Allen F. Millikan, Crystal Lake, Ill., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
No Drawing. Filed Nov. 24, 1961, Ser. No. 154,873
15 Claims. (Cl. 123—1)

11. An improved method of operating a diesel engine which comprises feeding to said diesel engine a fuel composition comprising a major portion of a petroleum diesel fuel oil and at least one oil-soluble heterocyclic polyamine salt of an organic acid in an amount sufficient to increase the cetane number of said oil, where the heterocyclic polyamine is selected from the group consisting of hexamethylenetriamine, cyclotrimethylenetriamines, piperazine, alkyl-substituted piperazine, and alkylisomelamines.

3,129,700
ENGINE ACCESSORY CASE
David G. Peterson, P.O. Box 2355, Oakland, Calif.
Filed Jan. 19, 1959, Ser. No. 787,476
3 Claims. (Cl. 123—56)

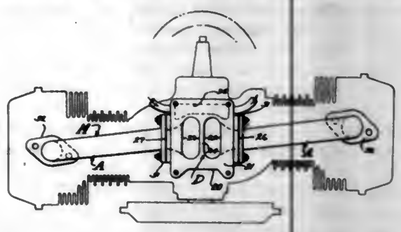


1. In combination with an engine having horizontally disposed opposed cylinders and mounted in the wing of an aircraft, an engine accessory case comprising a housing secured to the rear portion of the engine, a plurality of engine accessories carried by the housing and extending rearwardly therefrom, said engine accessories contained within the confines of a cross-sectional area determined by the outer periphery of the crank case and the opposed pistons of the engine, and means disposed within the housing for transmitting power from the engine to the engine accessories.

3,129,701
FUEL INDUCTION MANIFOLD
Raoul F. Balcaen III, 1506 S. Bently, Los Angeles, Calif.
Filed June 29, 1962, Ser. No. 206,400
2 Claims. (Cl. 123—56)

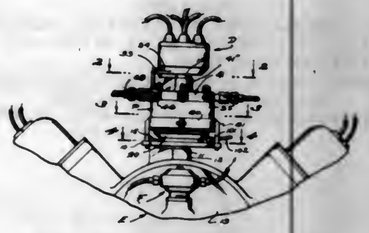
1. A fuel induction manifold assembled of distinguishably manufactured parts and for distributing fuel-air mixture to separate cylinder banks of an internal combustion engine, said cylinder banks being identically offset in opposite directions longitudinally of the engine, and including:

(*a*) one of said parts being a divider part for reception of fuel-air mixture from a carburetor and centrally located between said cylinder banks of the engine,



(*b*) said divider part being chambered to receive fuel-air mixture on a central vertical axis and to divert the mixture bilaterally from opposite vertically disposed side faces,
(*c*) and the other of said parts being a pair of identical tubular arm parts separable from said divider part and angularly engaged with and secured to the divider part to extend laterally from the opposite vertically disposed side faces of the divider part and then downward to said separate banks of the engine.

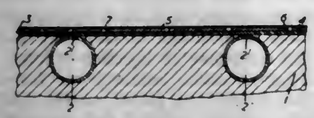
3,129,702
VARIABLE DELIVERY PUMP
Thomas V. Arbanas, Cheyenne, Wyo.
(% Marion Arbanas, Rte. 1, Mattawan, Mich.)
Filed June 26, 1962, Ser. No. 205,417
9 Claims. (Cl. 123—139)



1. A variable displacement pump including
(1) a stationary base plate,
(2) a driven shaft rotatably carried by the base plate,
(3) a rotary arm carried by the shaft,
(4) a roller on the arm,
(5) a screw element rotatably carried by the base plate,
(6) a cylinder block arranged in axial alignment with the shaft in spaced relationship from said base plate and arm and having a plurality of circumferentially spaced axially extending cylinder bores,
(7) a part on the block engaged with said rotatable screw member on the base plate,
(8) indexing means carried by the block and engaging the plate to prevent relative rotation between the plate and the block and for free axial shifting therebetween,
(9) a piston in each cylinder bore,
(10) spring means normally yieldingly urging the pistons toward the base plate,
(11) a keeper on the block closing the ends of the bores adjacent the base plate,
(12) tappets slidably carried by the keeper to engage the pistons and projecting axially from the keeper toward the base plate and arm,
(13) a swash plate arranged between the tappets and the base base plate and rotary arm and engaged by the tappets and roller on the arm,

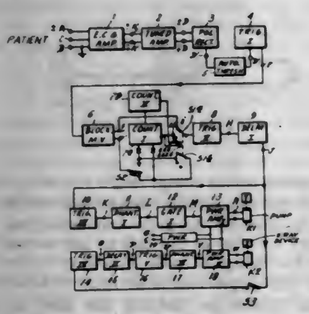
(14) hanger means carried by the block and supporting the swash plate for limited universal movement,
(15) a head on the block closing the other ends of the cylinder bores and having inlet and outlet ducts communicating with said bores,
(16) check valves at said ducts restricting reverse flow therethrough,
(17) and actuating means connected with said screw element to rotate said element relative to the base plate and block and effect axial shifting of the block relative to the base plate and to thereby vary the stroke of the pistons and the volumetric delivery of the pump.

3,129,703
SURFACES FOR COLLECTORS OF SOLAR RADIATION
Harry Zvi Tabor, Beth Hakerem, Jerusalem, Israel, assignor to the Government of Israel on behalf of the State of Israel, Jerusalem, Israel
Filed Apr. 11, 1960, Ser. No. 21,257
Claims priority, application Israel Apr. 16, 1959
4 Claims. (Cl. 126—270)



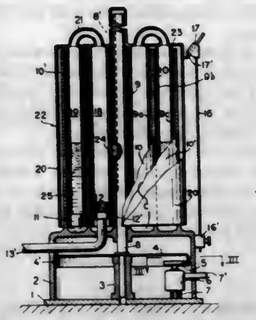
1. A solar heater comprising a receiver constituted by a thin flexible metallic foil and means defining a surface coating on said foil in face to face heat conducting relation therewith, the receiver being flexible and adapted for being wound in a roll, said heater further comprising a heat transfer body, and adhesive means joining the receiver in heat conducting relationship to the heat transfer body, said surface coating being light absorptive, heat transparent and non radiant of heat to confer a substantially low heat emissivity for said receiver in order that impinging light energy is absorbed in said coating and is transferred in the form of heat to said foil with comparatively small losses of heat by re-radiation from said foil, said foil, by virtue of the heat conducting relation established with the body being operative to transfer heat to said heat transfer body whereat accumulation of heat may be effected while said receiver prevents emission of heat from said body.

3,129,704
ELECTRONIC CARDIAC PROGRAMMER
William G. Bart, Jr., Weston, Mass., assignor to Cordis Corporation, Miami, Fla., a corporation of Florida
Filed Aug. 25, 1960, Ser. No. 51,988
20 Claims. (Cl. 128—2.1)



1. Electrical apparatus for controlling external equipment for treatment of a patient in timed relation to the patient's electrical cardiac signal occurring in a cardiac interval, said apparatus comprising a channel for modifying the cardiac signal so as to produce a modified signal having a prominent portion, means generating an output signal having a predetermined time relation to said cardiac signal for controlling an external device for treating a patient, a channel for transmitting said modified signal to said generating means including means to delay the occurrence of the output signal for a predetermined interval after the modified signal and including means to suppress noise during a substantial portion of the time between the occurrence of said modified signal and the occurrance of said output signal, said delay means having a time constant means limiting said delay to a fraction of the cardiac interval.

3,129,705
RECORDING SPIROMETER
Jaroslav Němec, Kanice, and Jaroslav Ječmínek and Oldřich Caha, Brno, Czechoslovakia, assignors to Presná mechanika, národný podnik, Stara Gura, Czechoslovakia
Filed Aug. 15, 1962, Ser. No. 217,004
8 Claims. (Cl. 128—2.07)



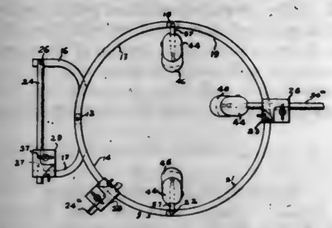
1. A recording spirometer comprising, in combination:
(*a*) a container adapted to hold a liquid therein;
(*b*) a bell mounted in said container for rotation about a fixed longitudinal axis, said bell being axially movable in said container while floating on said liquid, and defining a cavity therein arranged for communication with said liquid;
(*c*) means on said bell defining a cylindrical surface about said axis;
(*d*) drive means for rotating said bell about said axis at a predetermined speed;
(*e*) a pen secured to said container for recording contact with a recording medium on said cylindrical surface; and
(*f*) mouthpiece means communicating with said cavity.

3,129,706
SURGICAL RETRACTOR
Walker Reynolds, Jr., 212 Medical Arts Bldg., Anniston, Ala.
Filed Nov. 13, 1962, Ser. No. 236,993
3 Claims. (Cl. 128—20)

1. A surgical retractor comprising:
(*a*) a supporting member adapted to surround an incision made in a patient,
(*b*) at least one bracket adapted for attachment to said supporting member,
(*c*) an elongated rack,
(*d*) guide means carried by said bracket supporting said rack transversely of said supporting member,
(*e*) a pinion carried by said bracket in position to engage and move said rack to selected positions,

(*f*) a retracting element having an opening therein for receiving the end of said rack inwardly of said supporting member,

(*g*) the inner portion of said opening and the inner portion of said rack being generally round as viewed in transverse cross section whereby said retracting element is adapted for rotation relative to said rack while in one axial position relative to said rack,

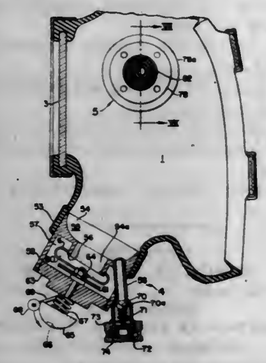


(*h*) there being an out of round portion on said rack adjacent and outwardly of said inner, round portion adapted to engage a part of said retracting element to limit rotation of said retracting element relative to said rack while said out of round portion is moved axially into engagement with said part of the retracting element,

(*i*) means to hold said retracting element selectively in said one axial position relative to said rack and in another axial position relative to said rack to position said out of round part in engagement with said part of the retracting element, and

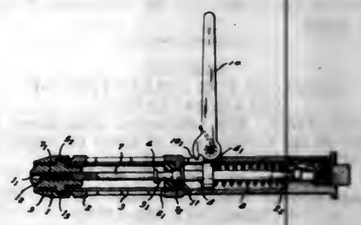
(*j*) releasable drive means for said pinion disposed to hold said pinion against rotation while in one position and to drive said pinion while in another position whereby said retracting element carried by the rack is held in selected positions.

3,129,707
BREATHING APPARATUS
Earl M. Becker, Pittsburgh, and John J. Bridge, Turtle Creek, Pa., assignors to Mine Safety Appliances Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 12, 1954, Ser. No. 468,432
1 Claim. (Cl. 128—142)



Breathing apparatus comprising a face mask, a housing secured to and in fluid communication with said mask, inhalation and exhalation fluid passage means connected to said housing, valve means interposed between said passage means and mask for opening and closing fluid communication between said passage means and mask, said valve means comprising a valve head biased to the open position and means having a curved surface for actuating said valve head, and pivoted locking means operable against said curved surface for releasably locking said valve means in the closed position.

3,129,708
INTRA-DERMIC INJECTOR
Alfred Krantz, 3 Rue Faget-de-Baure, Pau, France
Filed Sept. 26, 1960, Ser. No. 58,532
Claims priority, application France Sept. 26, 1959
1 Claim. (Cl. 128—173)



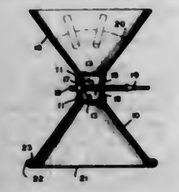
An intra-dermic injector havig a fluid reservoir, a head portion at the forward end of said fluid reservoir, said head portion containing an injection cylinder, said head portion having an orifice nozzle at the forward end of said injection cylinder, a piston axially slidable within said cylinder between forward and rearward positions, said piston extending rearwardly through said reservoir, duct means within said piston adapted to admit the fluid from said reservoir to said cylinder when said piston is in the rearward position, said duct means being closed when said piston is moved to the forward position to force fluid within said injection cylinder through said orifice nozzle, an opening in the rearward wall of said reservoir adapted to receive the rearward extension of said piston therethrough, said opening having a diameter greater than that of said piston to provide a passage for air from the exterior into said reservoir, seal means spaced along the rearward extension of said piston to alternately close said opening when said piston is in the forward position and in the rearward position, spring means adapted to force said piston from the rearward position to the forward position, and means to retract said piston from the forward position to the rearward position against said spring means.

3,129,709
TRAINING DEVICE
Joseph D. Roumtree, 1906 St. Clair Ave., East St. Louis, Ill.
Filed Mar. 29, 1961, Ser. No. 99,102
3 Claims. (Cl. 128—360)



1. A training device comprising a sleeve having a recess in it, a slide movable axially within the recess in the sleeve, a nipple attached to the slide and extending therefrom substantially parallel to the axis of the sleeve, the depth of the recess being at least as great as the combined lengths of the nipple and slide measured axially of the recess, and means for moving the slide to move the nipple between positions of extension and retraction relative to the sleeve.

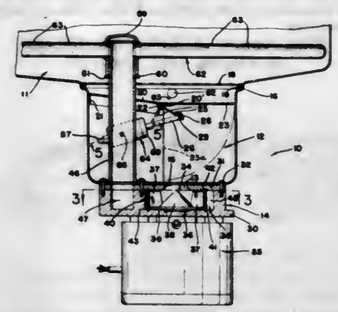
3,129,710
SAND SCREENING ASH TRAY
Maurice H. Wickliff, 722 Killian Drive, Beech Grove 3, Ind.
Filed Apr. 13, 1961, Ser. No. 102,768
4 Claims. (Cl. 131—235)



1. An ash tray comprising upper and lower receptacles having open ends, one end of each receptacle terminating in a relatively small cylindrical sleeve, an additional sleeve having the opposed ends thereof disposed within said small sleeves and connecting said receptacles and providing communication therebetween, a pair of circular screens each having positioning means thereon and disposed transversely of said sleeves, said screens being located at opposite ends of said additional sleeve and each screen having a dished portion extending inwardly toward said additional sleeve so as to be substantially coplanar with the ends of said positioning means, a substantially flat planar valve member rotatably mounted within said additional sleeve and between said screens, said valve member being of a diameter slightly less than the inside diameter of said additional sleeve, said additional sleeve being of a length slightly longer than the diameter of said valve member, an operating handle for said valve member projecting radially outwardly from said additional sleeve, a cover removably mounted on the lower receptacle and providing a base for supporting the ash tray, and granular material disposed within the upper container when the valve member is disposed generally normal to the axis of said additional sleeve, whereby when the valve member is rotated to a position other than generally normal to the axis of said sleeve the granular material will gravitate through said screens and said additional sleeve into the lower receptacle and debris will be filtered out by said screens.

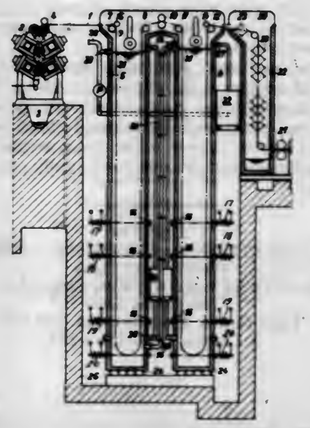
3,129,711
DISHWASHER RECIRCULATING ASSEMBLY
John G. Schmitt-Matzen, Bellville, Ohio, assignor to Gorman-Rupp Industries, Inc., Bellville, Ohio, a corporation of Ohio
Original application Sept. 29, 1960, Ser. No. 59,295, now Patent No. 3,103,225, dated Sept. 10, 1963. Divided and this application May 1, 1963, Ser. No. 280,186
8 Claims. (Cl. 134—56)

1. An automatic dishwasher having a washwater circulating cycle and a drain cycle comprising, a dish-receiving cabinet having a sump section, a drain, means to spray said washwater into said cabinet, a pump having an inlet communicating with the base of said sump section and a pump outlet passage, means to macerate the food particles entering said pump, valves means selectively to connect the outlet of said pump to the washwater spray means during the circulating cycle and to said drain during said drain cycle, movable screening means in advance of said pump inlet, pressure responsive means operatively connected to said movable screening means to position said screening means to remove the food particles from said washwater during the circulating cycle and to displace said screening means to release the retained food particles into said pump inlet during said drain cycle, and means for communicating the pressure



of the washwater in said spray means with said pressure responsive unit.

3,129,712
CONTINUOUS SCALING DEVICE FOR METAL BANDS
Erich Thomas, Essen, Germany, assignor to Beteiligungs- und Patentverwaltungsgesellschaft mit beschrankter Haftung, Essen, Germany, a corporation of Germany
Filed June 13, 1960, Ser. No. 35,645
Claims priority, application Germany June 18, 1959
5 Claims. (Cl. 134—57)

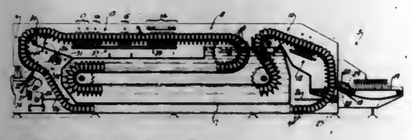


1. A device for continuous scaling of a metal band comprising at least one longitudinal container adapted to be filled with acid and disposed in vertical direction and having side walls, a vertical shaft receiving said container, a driving apparatus disposed at the entrance and at the exit, respectively, of said container for feeding said metal band through said container, said metal band forming a loop hanging freely downwardly in said container, means forcibly guiding said loop downwardly into said container, measuring devices secured within said side walls of said container and protected by the inner surface of said side walls from the acid, as well as disposed vertically spaced apart from each other in planes at different levels and adapted to measure the length of said loop, said measuring devices including means for determination of passing said loop of said metal band through any one of said planes, and means connecting operatively said measuring devices with said driving apparatus.

3,129,713
BOTTLE WASHING MACHINE WITH IMPROVED RINSING MEANS

Philip C. Read, Elm Grove, Wis., assignor to Dostal & Lowey Co., Inc., Menomonee Falls, Wis., a corporation of Wisconsin

Filed Apr. 4, 1963, Ser. No. 270,684
10 Claims. (Cl. 134—73)



7. In a bottle washing machine,

(A) a conveyor having bottle receiving pockets to loosely receive bottles and to carry them inverted as the conveyor moves along a substantially horizontal stretch,

(1) the pockets being equispaced along the length of the conveyor;

(B) a lower spray head mounted below said stretch of the conveyor for back and forth movement along a path substantially parallel to said stretch of the conveyor,

(1) said lower spray head having upwardly facing nozzles to project streams of cleansing liquid into bottles, the mouths of which are aligned with the nozzles, said nozzles being spaced apart lengthwise of the conveyor the same distance as are the pockets, and being arranged in at least two groups;

(C) bottle positioning means at each of said nozzles to engage the mouths of bottles thereabove and align the same with the nozzles,

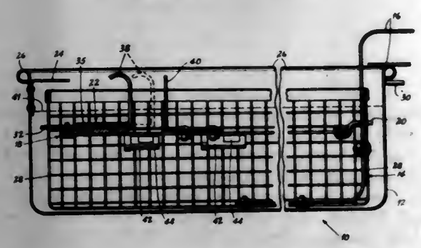
(1) said bottle positioning means at said groups of nozzles being disposed to tilt the bottles engaged thereby, in opposite directions; and

(D) upper spray nozzles mounted above said stretch of the conveyor, said upper spray nozzles being arranged to project streams downwardly onto the tilted bottles.

3,129,714
APPARATUS FOR REMOVING LABELS FROM BOTTLES

Edward M. Schaefer, 4300 Grace Ave., St. Louis, Mo.

Filed Oct. 4, 1962, Ser. No. 228,367
2 Claims. (Cl. 134—201)



1. A device for removing gummed labels from buoyant bottles comprising a container adapted to be filled with a degumming solvent, a perforate tray having a handle extending outside said container, said tray having side walls of substantial depth and receiving a plurality of labeled bottles therein and a tray lid having means attachable to the tray in vertically adjustable relation, means for maintaining the tray in submerged relation in the container when filled with solvent against the buoying action of buoyant bottles within the tray, said means comprising an inwardly extending shelf at one end of the container adapted to serve as an overhanging stop member for the tray when inserted in the container thereunder and a spring biased latch means supported from the lid handle and adapted to engage the exterior of the container at an end opposite to said shelf end to limit the vertical movement of the tray, said tray being immersible in solvent in the container with said bottles being kept immersed in the solvent.

3,129,715
MOTOR DRIVEN WINDING MECHANISM

Vincent Militano, Bethpage, and Henry Fleischer, North Bellmore, N.Y., assignors to Finkel Outdoor Products, Inc., New York, N.Y., a corporation of New York

Filed Aug. 15, 1961, Ser. No. 131,665
13 Claims. (Cl. 135—20)



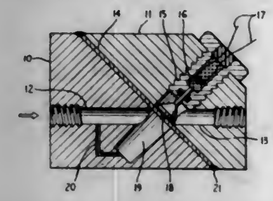
1. A device for winding-up and paying-out a flexible member, comprising, in combination, a screw threaded wind-up member rotatable about its longitudinal axis and having one end of the flexible member secured thereto, guide means in threaded engagement with said wind-up member, means for preventing said guide means from rotating on said wind-up member and thus effecting movement of said guide means longitudinally along said wind-up member in response to rotation thereof, said guide means engaging the flexible member and directing the latter from said wind-up member into a path substantially parallel to the axis of the latter, and a reversible motor connected with said wind-up member for selectively rotating the latter in one direction, whereby the elongated flexible member is wound on the wind-up member to exert a pull along said path, and in the opposite direction, whereby the flexible member is unwound from the wind-up member and payed-out along said path.

3,129,716
EXPLOSIVE ACTUATED VALVE

Harvey Fox, Rockaway, N.J., assignor to Thiokol Chemical Corporation, Bristol, Pa., a corporation of Delaware

Filed Feb. 5, 1962, Ser. No. 171,076
2 Claims. (Cl. 137—68)

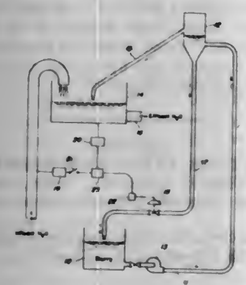
1. A valve comprising a mating upstream portion and a mating downstream portion, means for attaching said mating portions, a flow passage in each portion in substantial alignment with that in the other, an hermetically-sealed diaphragm interposed between said upstream and downstream portions and blocking the flow passages, said diaphragm being inclined with respect to the flow passage, a closed charge retaining chamber in said downstream portion exposed to said diaphragm at that area thereof which blocks the flow passage, an explosive charge in the charge retaining chamber, a ram in said chamber between the charge and the diaphragm, a tapered receiving chamber in the upstream body portion in substantial alignment with the ram and charge chamber, and large enough to wholly contain both the removed part of the diaphragm and the ram, vent means for said receiving chamber, and means for exploding said charge.



3,129,717
SYSTEM FOR AUTOMATICALLY ADDING A LIME SLURRY TO WATER

Earl L. Main, Nixon, and William L. Mann, Jr., Plainfield, N.J., assignors to National Lead Company, New York, N.Y., a corporation of New Jersey

Filed May 23, 1960, Ser. No. 31,054
1 Claim. (Cl. 137—93)

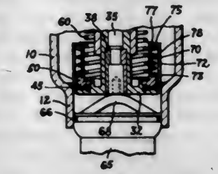


A system for automatically adding a lime slurry to water to remove the iron values therefrom comprising; gravity feed means, a lime slurry supply source, a supply pipe connecting said supply source to said gravity feed means, means arranged to support said gravity feed means in an elevated position with respect to said supply source and said water, a pump connected in said supply pipe arranged to continuously pump said lime slurry from said supply source to said gravity feed means, a feed pipe from said gravity feed means to said water, said feed pipe being connected to said gravity feed means above the connection of said supply pipe to said gravity feed means, a return pipe connected to said gravity feed means below the connection of said supply pipe to said gravity feed means, valve means in said return pipe constructed and arranged to be operated periodically in response to the pH of said water to interrupt the gravity return of said lime slurry from said gravity feed means to said supply source thereby to raise the level of the lime slurry in said gravity feed means to the level of the feed pipe connection thereto thereby feeding said lime slurry by spurts and solely by gravity feed to said water, and pH testing means responsive to the pH of said water constructed and arranged to periodically actuate said valve means.

3,129,718
VALVE WITH MEANS FOR LIMITING SEAL FLEXURE

Albert L. Schlensker, Noblesville, Ind., assignor to Curtis Automotive Devices, Inc., Westfield, Ind., a corporation of Ohio

Filed Dec. 28, 1959, Ser. No. 862,157
4 Claims. (Cl. 137—327)

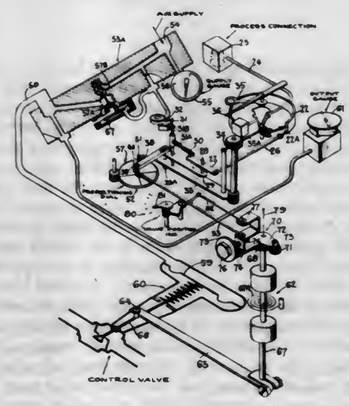


1. A quick disconnect valve operable over a wide range of temperature conditions and capable of presenting an essentially continuous surface across the inlet thereof in fully closed position, comprising a tubular valve body terminating in a cylindrical valve seat having an outer end forming the inlet, a valve head adapted to fit closely within said seat, means mounting said valve head in said body for reciprocating movement into and out of said seat for controlling flow through said inlet, biasing means connected to move said valve head to a normally closed position wherein said head extends across said outer end of said seat forming an essentially continuous surface therewith at the inlet, a seal of flexible material carried on said valve head extending radially therefrom for sealing contact with said seat in the closed position, means on said head forming a backing surface for said seal spaced from said seal to provide for limited flexure of said seal against said seat during closing movement of said head, and means surrounding said backing surface and receivable in said seat providing a yieldable biasing force against said seal to urge it away from said backing surface into sealing engagement with said seat in the closed position of said valve.

3,129,719
PILOT POSITIONER

Milton Mollick, Allentown, Pa., assignor to Ametek, Inc., New York, N.Y., a corporation of Delaware

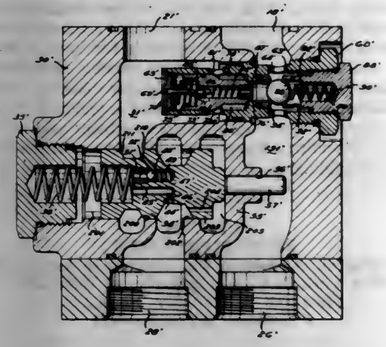
Filed Feb. 2, 1960, Ser. No. 6,279
2 Claims. (Cl. 137—489)



1. A combined pneumatic control and positioning apparatus comprising a housing having therein a nozzle

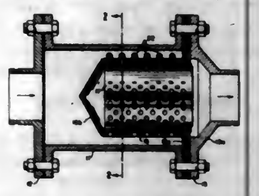
device and a flapper device, said devices being movable relative to each other to control output pressure, a variable condition responsive means, a differential carriage oscillatable about an axis, device operating means pivotally mounted on said carriage and connected to said condition responsive means for operation thereby, the pivot of said device operating means being spaced from the axis of said carriage, one of said devices being rotatable about the axis of said carriage, an adjustable carrier pivotally mounted on an axis, the other of said devices being mounted on said carrier so that said devices can be moved relative to each other; a pneumatic relay for putting out a variable control pressure in response to the relative position of said differential carriage and said devices; a pneumatically operated control valve for controlling the variable in response to output control pressures from said relay, said housing being mounted directly on said valve; and a mechanical feedback indication to be combined with the indication of said variable condition responsive means, said feedback linkage including a proportional valve band adjusting means interposed between the indication of valve position and said differential carriage; and valve bias and stroke adjusting means.

3,129,720
FLOW CONTROL VALVE
John D. Allen, South Euclid, and Donald A. Stremple, Northfield Center, Ohio, assignors to Fawick Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Apr. 7, 1961, Ser. No. 101,445
4 Claims. (Cl. 137—490)



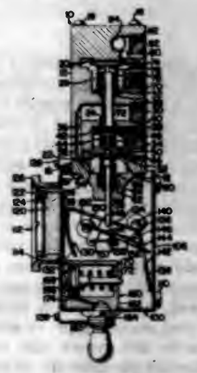
1. A valve comprising a housing body having a pair of passages and a valve seat between said passages, said housing body having an additional passage separate from said pair of passages, a valve member movable between a closed position at said valve seat for preventing the flow of fluid between said pair of passages and an open position away from said valve seat for permitting the flow of fluid between said pair of passages, said valve member having means for pressure balancing it by the fluid pressure in one of said pair of passages when in its closed position, spring means biasing said valve member to its closed position, said valve member having means, separate from and independent of said additional passage, for pressure unbalancing it to move it to its open position in response to fluid pressure at the other of said pair of passages, and a plunger, separate from and independent of said last-mentioned means, exposed to the pressure in said additional passage and engageable with said valve member to move the latter to its open position against the bias of said spring means when the fluid pressure in said additional passage rises to a predetermined value.

3,129,721
CHECK VALVE
Roy D. Nealley, Lark, Utah, assignor to United States Smelting, Refining and Mining Company, Boston, Mass., a corporation of Maine
Filed June 6, 1961, Ser. No. 115,251
12 Claims. (Cl. 137—516.11)



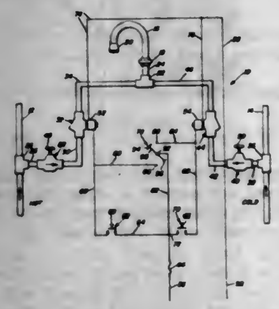
1. In a fluid check valve, a valve body having an inlet and an outlet, and means for permitting fluid flow through the valve in one direction and precluding flow through the valve in the other direction including a pair of elongated hollow perforated members disposed one within the other, the perforations in one member forming a portion of the flow path through the valve in said one direction, the side of the other of said members remote from said one member being in flow communication with said outlet, and a deformable imperforate member disposed between the perforated portions of said members, the imperforate member and the one member defining a portion of the flow path through the valve, said deformable member being movable in a direction laterally of said members by fluid flow through said perforations and being engageable with said one member in a closed valve position to seal the perforations in said one member, and being engageable with said other member in an opened valve position to seal the perforations in said other member, the surfaces of said perforated members engageable by said valve member characterized by having circumferences of approximately equal dimensions.

3,129,722
PNEUMATIC INDICATING AND RELAY DEVICES
Joseph P. Wagner, Knoxville, Tenn., assignor to Robertshaw Controls Company, a corporation of Delaware
Filed Feb. 15, 1961, Ser. No. 89,429
18 Claims. (Cl. 137—557)



1. In a pneumatic indicating device, the combination comprising a valve body having an inlet pressure chamber adapted to be connected to a pneumatic supply and a transmitter pressure chamber adapted to be connected to a condition responsive transmitter, means including a restricted orifice to establish communication between said inlet pressure chamber and said transmitter pressure chamber, differential pressure responsive actuating means carried by said valve body, a passageway communicating with said inlet pressure chamber and establishing a first pressure for said pressure responsive means, a second passageway communicating with said transmitter pressure chamber and establishing a second pressure for said pressure responsive means, indicating means operatively disposed for movement by said pressure responsive actuating means to a position to indicate the existence of a differential pressure acting on said pressure responsive means, and reset means for returning said indicating means to a position to indicate the existence of equal pressure on said pressure responsive means.

3,129,723
HOT AND COLD WATER CONTROL SYSTEM
Charles E. Straka, 1007 E. 5th St., West Frankfort, Ill.
Filed Nov. 2, 1961, Ser. No. 149,696
1 Claim. (Cl. 137—607)

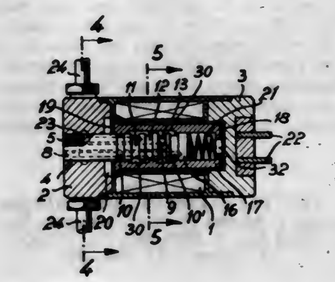


A water control system comprising a hot water supply, a cold water supply, an outlet, first conduit means including a solenoid controlled valve connecting said hot water supply to said outlet, second conduit means including a second solenoid controlled valve connecting said cold water supply to said outlet, foot operated control means operatively connected to said first and second solenoid controlled valves comprising first and second switches each connected in series with a different one of said solenoids, hand operated control means operatively connected to said first and second solenoid controlled valves and located above said foot operated control means, including rotatable switch means for rendering operative each of said solenoids by two circuits each of which are in parallel with one of the foot operated switch circuits, said switch means including contact means for rendering operative said first solenoid upon rotation of said switch means in one direction from an off position by connecting one of said circuits to said first solenoid, continued rotation of the switch means in the same direction rendering operative said first and second solenoids simultaneously by connecting the remaining circuit to said second solenoid and rotation of said switch means in the opposite direction from said off position rendering operative said second solenoid alone by connecting the other of said circuits to said second solenoid.

3,129,724
SOLENOID CONTROLLED DISTRIBUTING VALVE
Manfred Härtwig, Nellingen, near Esslingen, Germany, assignor to Erich Herion, Stuttgart-Frauenkopf, Wurttemberg, Germany
Filed Aug. 9, 1961, Ser. No. 130,294
Claims priority, application Germany Aug. 13, 1960
9 Claims. (Cl. 137—625.48)

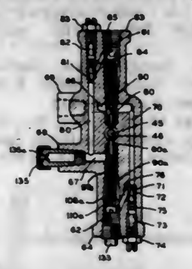
1. An electrically operated slide valve comprising:

(*a*) a valve housing defining a cavity therein, said housing being of magnetizable material, and said cavity having an axis;
(*b*) a plunger member fixedly mounted on said housing and axially projecting therefrom into said cavity, the projecting portion of said plunger member and said housing defining an annular space in said cavity;
(*c*) a sleeve member of magnetizable material axially slidable on said plunger member in said annular space, said sleeve member sealingly engaging said plunger member;



(*d*) solenoid means interposed between said sleeve member and said housing in said annular space and energizable for actuating axial sliding movement of said sleeve member on said plunger member between a plurality of axial positions,
(*e*) said plunger member being formed with a plurality of spaced recesses facing said sleeve member, and
(*f*) said sleeve member being formed with a recess facing said plunger member and simultaneously alignable with said spaced recesses in a selected one of said axial positions; and
(*g*) a plurality of conduits respectively communicating with said spaced recesses, whereby communication between said conduits is controlled by said solenoid means.

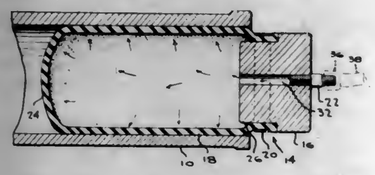
3,129,725
LEVELING VALVE
Robert Lapsley, Buchanan, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Filed Feb. 8, 1957, Ser. No. 639,034
16 Claims. (Cl. 137—627.5)



1. In a leveling valve for controlling the admission and venting of air to bellows of an air suspension system and the like, the combination comprising, a valve housing, opposed chambers formed in said housing, valve means in each of said chambers, inlet and outlet means at opposite ends of each of said chambers, passageway means communicating between the outlet end of one of said chambers and the inlet end of the other of said chambers, oscillatable actuator means disposed between the said

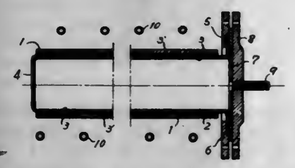
two chambers, means extending between said actuator means and each of said valve means and constituting a lost-motion connection therebetween for operating the said valve means alternately in response to pretermined oscillation of said actuator means, means dampening the oscillations of said actuator means, oscillatable operator means spaced from said actuator means, a torsion spring connecting said operator means to said actuator means for transferring torsional force from said operator means to said actuator means, the inlet of said one chamber being supplied with pressurized air and the outlet thereof adapted to communicate with a suspension means to be operated and vent means communicating with the outlet of said other chamber, operation of the valve means in said one chamber permitting passage of pressurized air to the outlet thereof and said first passageway means such that the subsequent operation of the valve means in the other of said chambers serves to vent the pressurized air to atmosphere.

3,129,726
TEST PLUG FOR FLUID SYSTEMS
John F. Moore, Drawer M, Kermit, Tex.
Filed Apr. 6, 1962, Ser. No. 185,604
3 Claims. (Cl. 138—90)



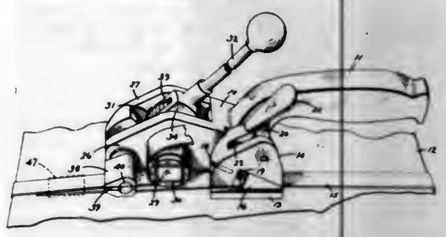
1. A closure plug for the pressure testing of fluid systems, comprising a cylindrical plug with a reduced neck on one end, and having an axial bore, a nipple with a pneumatic valve threaded in said bore on the end of the head opposite said neck, a tubular bag made of rubbery material, of uniform diameter, and having a rounded, closed bottom, and an open end having said uniform diameter received on said neck, a metal strap surrounding said bag in the region of said neck, and means securing said strap in ring form in compressing relation to said bag.

3,129,727
METALLIC PIPE LINED WITH GLASS SUBJECT TO SUBSTANTIALLY NO COMPRESSIVE STRESS AND PROCESS FOR THE MANUFACTURE THEREOF
Shoichiro Tanaka, Sumiyoshi-ku, Osaka City, Japan, assignor to Sanyo Tokushu Seiko Kabushiki Kaisha, Himeji City, Japan, a corporation
Filed May 19, 1960, Ser. No. 30,161
Claims priority, application Japan June 18, 1959
4 Claims. (Cl. 138—143)



1. A glass lined metallic pipe of the character described comprising a metallic pipe, a glass pipe positioned interiorly of said metallic pipe in coaxial relationship therewith and an inorganic heat resistant buffer layer interposed between the inner and outer surfaces of the metallic and glass pipes, respectively, the metallic pipe, buffer layer, and glass pipe being fused to each other at said surfaces whereby a relatively low compressive stress is imparted to the glass pipe by the metal pipe, the buffer layer having a lower fusing point than that of the metallic and glass pipes and including an oxide selected from the group consisting of boron oxide and lead oxide.

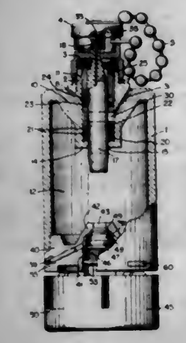
3,129,728
STRAP TENSIONING TOOL
Alexander Sharko, Montreal, Quebec, Canada, assignor, by mesne assignments, to FMC Corporation, San Jose, Calif., a corporation of Delaware
Filed Dec. 28, 1961, Ser. No. 162,801
2 Claims. (Cl. 140—93.2)



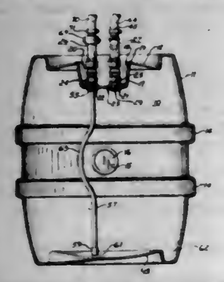
1. A strap tensioning tool comprising gripping means for gripping an end portion of a flexible strap, a slotted windlass for engaging another portion of the strap, a rotatably mounted shaft supporting said windlass, a ratchet wheel fixed to said shaft, a lever pivotally mounted on said shaft, pawl means on said lever, a spring urging said pawl means into engagement with said ratchet wheel and said pawl means and ratchet wheel being constructed and arranged to impart rotation to said shaft and said windlass when said lever is moved in a first direction, a strap guiding element for guiding the strap into engagement with said windlass, a cutter member rockably mounted in said strap guiding element, spring means urging said cutter member to an inactive position, stop means defining said inactive position and cooperating means on said cutter member and said lever, said cooperating means defining a normal stopping position for said lever when said lever is moved in a second direction and serving to rock said cutter member when said lever is moved past said normal stopping position.

3,129,729
LEAK STANDARD
John A. Roberts, Lynnfield Center, Mass., assignor to General Electric Company, a corporation of New York
Filed Aug. 31, 1961, Ser. No. 135,319
5 Claims. (Cl. 141—18)

1. A rechargeable leak standard comprising: an enclosure, a discharge tube passing into said enclosure, said discharge tube having a predetermined leak rate when the contents of said enclosure are under a predetermined pressure, an aperture passing into said enclosure, said aperture having an outer threaded portion and an inner portion, a charging passageway extending from the exterior of said enclosure to intersect said aperture at a point intermediate said inner and outer portions, and a threaded pressure gauge assembly threaded into and cooperating with said threaded portion for selective movement toward and away from the interior of said enclosure, said pressure gauge assembly having means cooperating with said inner portion to selectively connect said charging passageway to the interior of said enclosure when said assembly is rotated so that said means moves out of contact with said inner portion during charging and to selectively close said connection when said assembly is rotateed so that said means is in contact with said inner portion after charging, said connecting means having means to put the pressure gauge in communication with the interior of said enclosure to thereby indicate the leak rate through said discharge tube.

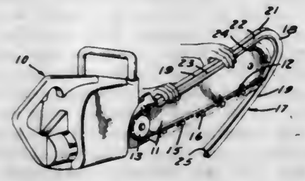


3,129,730
TAPPING SYSTEM FOR LIQUID CONTAINER OR THE LIKE
John F. Simon, Shaler Township, Allegheny County, Pa. (356 Marzolf Road, Pittsburgh 9, Pa.)
Filed July 14, 1961, Ser. No. 124,220
5 Claims. (Cl. 141—286)



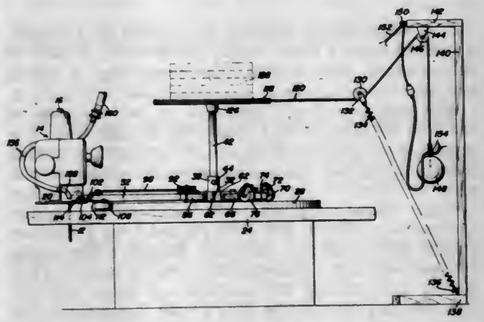
1. A tapping system for liquid containers, comprising in combination, a liquid container having an opening through which said container may be filled, a well chamber in the surface of said container, said chamber being generally cup-shaped having an outer peripheral portion joined to the adjoining portion of the surface of said container, a pair of quick-connected axial movement couplings each having parts respectively comprising a male fitting and a female fitting, each of said fittings of a coupling having a self-closing valve therein automatically operative upon separation of said parts, one of said fittings in each coupling being mounted in said chamber and extending respectively through the bottom thereof into communication with the interior of said container, the outer ends of said respective last-named fittings being wholly within said chamber, a discharge pipe within said container connected to one of said last-named fittings and extending substantially to the opposite inside surface of said container, said discharge pipe having screen means therein and a bend in a plane normal to the axis of said opening, each of the other of said fittings in each coupling being adapted to be connected to flexible hose conduits respectively connected to a dispenser for said liquid and to a gas pressure source exteriorly of said liquid container, a sight tube connected at least to the coupling adapted to lead to said dispenser at one end and said discharge pipe at the other, and a check valve positioned in operative association with said coupling leading to said gas pressure source to prevent fluid flow toward said source.

3,129,731
CHAIN SAW PROTECTOR
Vincent C. Tyrrell, Torrance, Calif., assignor to McCulloch Corporation, Los Angeles, Calif., a corporation of Wisconsin
Filed Oct. 17, 1960, Ser. No. 63,186
2 Claims. (Cl. 143—32)



1. A chain saw guard comprising:
(*a*) an elongated, resilient body having a substantially semicircular end portion and two spaced elongated portions extending from said semicircular end portion;
(*b*) each of said elongated portions having an outer peripheral portion from which extends a pair of opposite, facing depending side wall portions;
(*c*) each of said side wall portions being spaced from each other so that a saw chain on a chain saw will fit snugly therebetween,
(*d*) said side wall portions having parts thereof converging and resiliently biased toward each other to frictionally engage a saw chain and bar upon which the chain travels; and
(*e*) flange portions extending angularly laterally outwardly from said converging parts to form an approximate V in cross section,
(*f*) said flange portions having inwardly facing sides,
(*g*) the inwardly facing sides of said flange portions being spaced from each other at the widest part of the V a distance approximately equal to that of the space between said side wall portions and at least equal to the width of the saw chain.

3,129,732
IRREGULAR CURVE CUTTING SAW AND EDGER
Clay C. Moore, Jr., 1904 N. Water St., Corpus Christi, Tex.
Filed Mar. 10, 1961, Ser. No. 94,881
7 Claims. (Cl. 143—76)



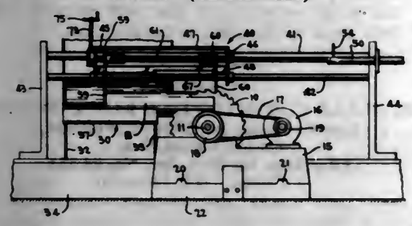
1. A saw for cutting a curved kerf comprising an elongated arm, a pointed member adjustably mounted on one

end of said arm for engagement with the center of curvature of the kerf, a saw assembly mounted on the other end of said arm for movement about the center of the pointed member, said saw assembly including a reciprocating blade for forming a saw kerf, said pointed member being provided with an upwardly opening socket, a shaft detachably mounted and secured in the socket, an enlarged grooved pulley on the upper end of said shaft, and a tensioned flexible line attached to the grooved pulley and wound thereon whereby the tension line turns the shaft and the arm thereby moving the saw assembly about the center formed by the pointed member, weights disposed on the pulley for holding the pointed member in the socket, said pointed member being provided with a transverse sleeve adjustably receiving the arm, graduated indicia on said arm for indicating the radius of movement of the saw, radially extending sleeves rigid with the arm receiving sleeve on the pointed member, arms in each of said sleeve, and castering rollers carried by each of the arms for engaging a supporting surface for stabilizing the enlarged pulley and saw assembly, additional sleeves mounted on the transverse arm receiving sleeve, arms disposed in each of the additional sleeves, a spring loaded reel carried by each of the last mentioned arms, and a flexible line connected to each of the spring loaded reels and extending to and connecting to the saw assembly for biasing the saw assembly inwardly toward the center point, and a template encircling the pointed member, said saw assembly including roller followers disposed inwardly thereof engaging the periphery of the template for causing the same assembly to move in accordance with the configuration of the periphery of the template.

3,129,733
MACHINE FOR FORMING A CYLINDRICAL BILLET WITH A PLANE SURFACE SUBSTANTIALLY PARALLEL TO THE BILLET AXIS

Ervin E. Dargan, Conway, and William A. Barber, Myrtle Beach, S.C., assignors, by mesne assignments, to The Terrell Machine Company, Charlotte, N.C., a corporation of North Carolina

Filed Feb. 5, 1962, Ser. No. 171,019
2 Claims. (Cl. 143—117)

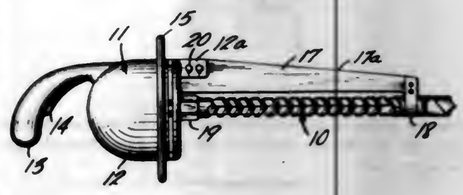


2. A woodworking machine for forming on a roughly cylindrical billet a plane surface substantially parallel to the cylindrical axis of said billet, comprising: a cutting tool disposed for cutting in a predetermined cutting plane, a billet positioner fixedly supported on the infeed side of said tool for positioning a billet with its cylindrical axis parallel to said cutting plane, and with said plane chordally intersecting said billet, a magazine for feeding a plurality of billets in succession to said positioner, a feed carriage, means supporting said carriage for operative movement parallel to said cutting plane from a retracted position abreast of said positioner through a feed stroke past said tool and a return stroke, gripping members carried by said carriage for operative movement into and from gripping engagement with a billet supported in said positioner, for fixedly supporting said billet on the carriage during said feed stroke in its axial position with respect to said cutting plane as determined by said positioner, said gripping members being releasable from the billet at the end of said feed stroke for return with the carriage to its retracted position, said gripping members being mounted on the carriage for movement from an operative position in alignment with the ends of a billet in said positioner, to a retracted position out of alignment therewith, whereby to clear a billet operatively held in said positioner on the return stroke of said carriage.

3,129,734
POWER DRIVEN CHUCK AND ROTARY SAW BIT THEREFOR

Frank J. Bobryk, 35 Boswell St., Stratford, Conn.

Filed Mar. 11, 1960, Ser. No. 14,462
14 Claims. (Cl. 143—133)



1. A rotary saw bit comprising a shank having a plurality of cutting teeth thereon arranged in longitudinal rows around the shank, said teeth having faces defined at least in part by an inner root and an outer cutting edge, the faces of said teeth extending at an angle to the axis of rotation of the saw bit, the roots of the teeth in any row lying in a plane, the angle defined between said plane and the face of a tooth adjacent said root being relatively uniform throughout the length of the face of the tooth from the leading end to the trailing end thereof so that, when viewed in cross-section on a plane perpendicular to the axis of rotation, the angle defined by the portion of the face adjacent the cutting edge and a radial line passing through the axis of rotation of the saw bit and the cutting edge of the tooth varies from the leading end of the tooth to the trailing end of the tooth, becoming a more positive angle toward the trailing end of the tooth.

3,129,735
CUTTING WOOD BY THE FORMING PROCESS

Corlise M. Sweet, 1000 E. Montana St., Milwaukee, Wis.

Filed Nov. 21, 1960, Ser. No. 70,474
1 Claim. (Cl. 143—133)

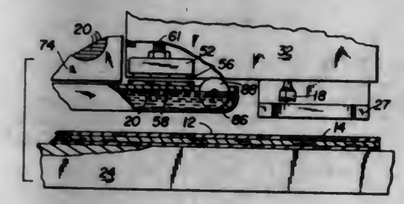


A blade that will reduce the amount of saw dust cut in cutting one section of wood from another section of wood, comprising a blade that has cutting and forming teeth, said cutting teeth to be located on the edge of said blade, said forming teeth to be located each a short distance inwardly from the line that connects the tops of two adjacent cutting teeth, each said forming tooth having a sloping surface that compresses the sides of the kerf due to the forming tooth being thicker at its rear than at its front end, said forming tooth having its longitudinal dimension extending generally in the direction of cut with a slight angle to said line that connects the tops of two cutting teeth, the front part of said forming tooth being closer to said line than the back part of said tooth thereby causing said forming tooth to exert a force that will assist in pushing the cutting teeth into the wood.

3,129,736
PLYWOOD PANEL PATCHING MACHINE

Emil A. Herman, Westfir, Oreg., assignor to Western Machinery Corporation, Portland, Oreg., a corporation of Oregon

Filed Nov. 27, 1961, Ser. No. 155,032
11 Claims. (Cl. 144—2)



1. A machine for patching a surface ply of a plywood panel with an elongate patch of predetermined size, having a thickness of one-ply and having rounded ends and straight sides, the width of said patch being substantially greater than the said thickness, said machine comprising:
(*a*) a frame, including a panel support;
(*b*) means on said frame for selectively clamping a panel to said support;
(*c*) a horizontally movable carriage on said frame;
(*d*) a cutter element depending from said carriage, having a width substantially equal to that of said patch;
(*e*) means on said carriage for moving said cutter element vertically into said panel a predetermined distance of one-ply thickness;
(*f*) storage means on said frame above said panel support for storing a supply of said patches;
(*g*) means on said frame for feeding a patch from said storage means horizontally to a pickup station adjacent said carriage;
(*h*) vertically movable vacuum means on said carriage for picking up said patch from said pickup station;
(*i*) means for moving said carriage horizontally from a first limit position wherein said vacuum means is in vertical alignment with said pickup station, an initial distance substantially equal to the length of said patch while said cutter element is in said panel to a predetermined intermediate position, means for elevating said cutter element above said panel at said intermediate position and thereafter moving said carriage a further distance to a second limit position wherein said vacuum means is in vertical alignment with the recess formed by said router;
(*j*) and means on said carriage in cooperation with said vacuum means for inserting said patch into said recess when said carriage is in said second limit position.

3,129,737
HAMMER WITH DETACHABLE HEAD

Armand Citroen, 96 Boulevard Maurice Barres, Neuilly-sur-Seine, France

Filed Nov. 27, 1962, Ser. No. 240,216
Claims priority, application France Dec. 7, 1961
6 Claims. (Cl. 145—29)

1. A hammer with detachable head comprising; a handle having upper and lower ends, said handle being of resilient composition and having walls forming a co-axial cavity in the lower end thereof, said cavity being open at its lower end; an anchor post embedded in the upper end of said handle and extending therefrom; a hammer head having a passageway therethrough dimensioned and arranged to receive said anchor post, said hammer head

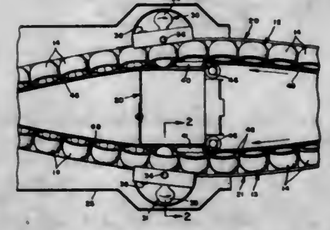


mounted on said handle over said anchor post; means at the upper end of said handle for preventing the rotation of said hammer about said anchor post; and means for fastening said hammer head to said handle, said fastening means engaging said anchor post and removably fixed thereto.

3,129,738
CUTTER FOR CITRUS PEEL HALVES

Franklin K. Holbrook, Whittier, Calif., assignor to Brown Citrus Machinery Corporation, Whittier, Calif., a corporation of California.

Filed Feb. 21, 1961, Ser. No. 90,829
3 Claims. (Cl. 146—3)



3. In a citrus juice extracting machine, a frame, a conveyor on said frame carrying a plurality of slotted cups, each cup adapted to contain a fruit peel half, means mounted on said frame and insertable through said slots to eject fruit peel halves contained in said cups, and a knife mounted on said frame and operably associated with said cups and said means to cut peel halves as they are ejected from the cups by said means.

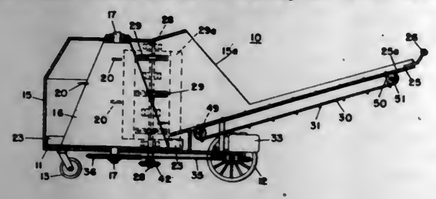
3,129,739
PORTABLE HAY SHREDDING MACHINE FOR BEDDING COWS OR THE LIKE

Harvey M. Wenger, Terre Hill, Pa., assignor to Farmers National Bank and Trust Company, New Holland, Pa., a national banking corporation

Filed Jan. 9, 1961, Ser. No. 81,345
4 Claims. (Cl. 146—70.1)

1. A portable hay shredding machine comprising a main frame, wheel means supporting said main frame for movement thereof, a conical shredder drum supported by said main frame for rotation about a vertical axis, said conical shredder drum tapering from a larger diameter at the lower end thereof to a smaller diameter at the top, a plurality of cutters carried by said drum and projecting

from the surface thereof at predetermined locations, platform means carried by said main frame and inclined downwardly towards said conical shredder drum for supporting a bale of hay with the leading end thereof adjacent said conical shredder drum for contact with said cutters, means for rotating said conical shredder drum to move said cutters across the leading end of the bale of



hay to transform the hay from a packed, baled condition to a loose condition, a housing surrounding said cutter means, said housing having an entrance for receiving a leading end of the bale of hay and a discharge opening spaced therefrom, and fan means carried by said conical shredder drum at the lower end thereof and positioned with respect to said discharge opening for blowing the hay loosened from the bale through said discharge opening.

3,129,740
MODIFIED TORIC FREE DROP CONTAINER
Jess H. Nourse, Ypsilanti, Mich., and William B. Crawford, Mishawaka, Ind., assignors to the United States of America as represented by the Secretary of the Army
Filed June 18, 1962, Ser. No. 203,412
7 Claims. (Cl. 150—.5)



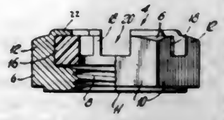
1. In a free drop container, a hollow toric fluid container formed of flexible sheet material, an inverted frustoconical skirt surrounding said container concentrically thereof to provide an annular fin, said fin being hollow and being defined by upper and lower walls converging in upward and outward directions, and said walls being formed of flexible sheet material.

3,129,741
SAFETY ATTACHMENTS FOR WALLETS
Erich Krause, Rte. 28A, West Shokan, N.Y.
Filed Jan. 30, 1963, Ser. No. 255,050
1 Claim. (Cl. 150—47)



In combination with a wallet having a lengthwise pocket open at the top and adapted to be folded about a center fold line into two flaps, a safety attachment comprising a flat envelope of approximately the demensions of the wallet pocket insertible thereinto, the envelope having in each end thereof a thin flat rigid rectangular guide member extending between the top and bottom edges of the envelope, the guide members each comprising two parallel plates joined together along their top and bottom edges and along their outermost side edges thereby providing in the members pockets between the plates thereof having the entrances to the pockets thereof facing toward the fold line of the wallet, the envelope having mounted therein an arched resilient spring wire of a length greater than the length of the envelope with the ends of the wire registering in the guide pockets and slidably engaging the walls of the pockets remote from said entrances and with the bulge of the wire engaging the bottom edge of the envelope, one of the plates of each guide member having a greater width measured lengthwise of the envelope than the other plate thereof, the plates of greater width being cemented to one wall of the envelope and the other plates being cemented to the opposite wall of the envelope.

3,129,742
SELF LOCKING NUT HAVING SLOTS TO ACCOMMODATE A COTTER PIN
Charles C. Faroni, Summit, Ellsworth M. Gunther, Irvington, and Robert A. Degen, Plainfield, N.J., assignors to Elastic Stop Nut Corporation of America, Union, N.J., a corporation of New Jersey
Filed Apr. 11, 1961, Ser. No. 102,286
1 Claim. (Cl. 151—5)



A self-locking castellated nut of the prevailing torque type comprising a metallic nut body having an internally threaded portion defining an axis and an even number of posts extending axially from a first axial end of said threaded portion, said posts circumferentially spaced and having substantially parallel sides to define diametrically opposite slots therebetween, said slots adapted to accommodate a cotter pin, and a self-locking collar of nonmetallic resilient material in said nut body and having a circumferentially continuous portion surrounding said axis at said first axial end of said threaded portion which is adapted to be engaged by the threads of a corresponding bolt, said collar having a like number of posts extending axially from said circumferentially continuous portion and axially and radially aligned with said posts of said nut body, said posts of said nut body engaging said collar to maintain their relative positioning, said posts of said collar circumferentially spaced from each other to provide a slot between each circumferentially adjacent pair of said posts of said collar, said slots of said collar radially aligned with said slots of said body and the bottoms of said slots of said collar and the bottoms of said slots of said nut body being located substantially the same axial distance from said first axial end of said threaded portion.

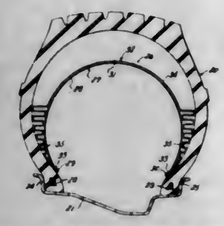
3,129,743
PUNCTURE SEALANT-SAFETY DIAPHRAGM MEANS FOR PNEUMATIC TIRES AND COMBINATIONS THEREOF WITH PNEUMATIC TIRES
William M. Nonnamaker, Akron, Ohio, assignor to The Mohawk Rubber Company, Akron, Ohio, a corporation of Ohio
Filed June 27, 1962, Ser. No. 205,626
7 Claims. (Cl. 152—341)

1. A pneumatic sealing safety diaphragm means for use in a pneumatic tire and comprising

an open annular carrier frame for positioning internally of a tire and made from a plurality of separate annular members at least some of which are spaced radially from each other and a plurality of separate circumferentially spaced radially extending hoop means secured to and extending between said annular members,

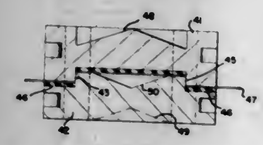
a pair of said annular members forming base means for said carrier frame to engage tire sidewalls, and

a flexible thin plastic sheet secured at its lateral margins to said base means and extending loosely over the radially outer portions of said hoop means,



said plastic sheet having apertures in its only adjacent lateral portions to enable air to pass therethrough into an outer chamber provided in a tire with which the safety diaphragm means is operatively associated and having an impervious center section which can be forced radially outwardly against the circumference of a tire surface upon tire failure for sealing action.

3,129,744
SHEET MATERIAL STAMPING DIE
Albert E. Payne, Jamestown Road, Rte. 4, Springfield, Ohio
Filed June 26, 1959, Ser. No. 823,173
3 Claims. (Cl. 153—2)



1. A composite die structure for blanking and forming sheet metal comprising; a pair of first and second metal die shoes aligned together, said first shoe having a male die portion projecting upwardly from and integrally formed with said first shoe, said second shoe having a female die portion integrally formed with said second shoe and having a recess formed therein for receiving the said male die for cutting sheet metal, and said male and female die portions each having a forming die portion integrally formed therewith and selectively cooperable for use in a forming operation subsequent to the cutting operation performed by the said male and female die portions, said shoes, said male and female die portions, and said forming die portions all having the same heat treatment characteristics prior to using said die structure.

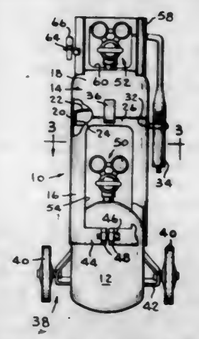
3,129,745
SAFETY DEVICE FOR POWER LEAF BRAKE
Henry Hadden, Bedford, Ohio, assignor to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio
Filed Aug. 10, 1961, Ser. No. 130,557
1 Claim. (Cl. 153—39)

In a power leaf brake disposed partially in a floor well and having a leaf member which moves to and from a substantially vertical condition at one side of the brake in normal use of the same, with the bottom of said leaf member swinging out of and into the well below the floor, a safety foot guard pivotally attached to said leaf member at areas spaced from the bottom of said leaf member for movement therewith and relative thereto, said guard comprising a horizontally elongated grill provided at its bottom with a horizontal bar member having a cylindrical roller mounted thereon, said roller providing smooth rolling movement of said guard on said floor adjacent said well, said foot guard extending partially beyond the bottom of the leaf member when the latter is elevated above the floor to provide an effective extension thereof with the guard engaging the floor adjacent the well at such side of the brake as the leaf member swings



from its raised to its lowered condition, the pivotal attachment of the guard providing for partial arrest of the same as a result of such engagement with the floor and consequent movement relative to the leaf member whereby said guard bridges the opening between said floor well and said leaf member in the lowered condition of the latter, said guard thereby preventing the insertion of objects through said opening during said lowering movement of said leaf member and the guard member to the lowered condition of the latter.

3,129,746
WELDING APPARATUS
Milton F. Kroesch, Waukesha, Wis., assignor to Pressed Steel Tank Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Feb. 2, 1962, Ser. No. 170,714
9 Claims. (Cl. 158—27.4)

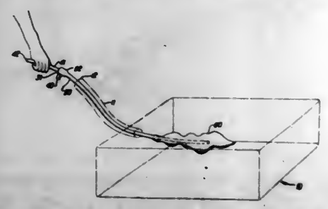


9. The combination comprising, first and second relatively vertically spaced tanks, support means extending between and engaging said first and second tanks for fixedly supporting said tanks in said relative vertical spaced relation, flow control means connected to each of said first and second tanks with one of said flow control means positioned within and protected by said support means, and means for supporting the combination.

3,129,747
AUXILIARY FUEL SUPPLY DEVICE
Glenn M. Warner, Norco, Calif., assignor to Briles Manufacturing, El Segundo, Calif., a partnership
Filed Dec. 19, 1961, Ser. No. 160,579
1 Claim. (Cl. 158—46.5)

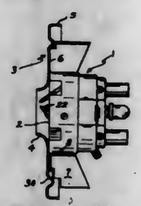
An auxiliary fuel supply device which comprises: a flexible, collapsible bladder adapted to be inserted in a

fuel tank through a filler pipe for said tank, and to contain an auxiliary supply of fuel after insertion in said fuel tank; a flexible hose connected to said bladder, said hose being adapted to be disposed in said fuel tank filler pipe, to provide fuel access to said bladder, and to serve as a handle for the withdrawal of the bladder from the fuel tank; clamp means for releasably retaining said hose in said pipe; a relatively thin wall section of said bladder, disposed on said bladder substantially opposite the connection of said hose to said bladder, said thin wall sec-



tion being adapted to retain said auxiliary fuel supply in said bladder when said bladder is disposed in said fuel tank, and to rupture and release said auxiliary fuel supply from said bladder upon engagement of the bladder with the filler pipe when the bladder is being withdrawn from said fuel tank through said filler pipe; and a relatively flexible, elongate rod of rigid material removably insertable in the hose and adapted to dispose the hose in the filler pipe and insert the bladder in the fuel tank by engaging the thin wall section of the bladder without effecting rupture thereof.

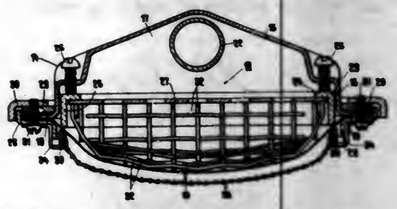
3,129,748
OIL BURNER
Harold E. Varvel, Dayton, Ohio, assignor to Master Consolidated Inc., a corporation of Ohio
Filed June 15, 1961, Ser. No. 117,345
8 Claims. (Cl. 158—76)



1. A burner assembly comprising, a burner body having an operating face, plate means capping said face and projecting outwardly therefrom in a peripheral sense, an aperture in said plate means, means fixed in said body defining a siphon nozzle arranged to deliver fuel through said aperture in an atomized condition, means defining recesses in said face spaced about said nozzle and having openings therefrom in direct communication with the aperture in said plate means, and means for creating a swirling flow of air in said recesses to cause the air to exit therefrom in a turbulent swirl passing immediately about said nozzle and through said aperture.

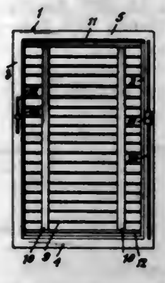
3,129,749
RADIATING GAS BURNER
Guido Hönger, Zuchwil-Solothurn, Switzerland, assignor to Schweiz. Gasapparatefabrik Solothurn, Solothurn, Switzerland
Filed Mar. 1, 1960, Ser. No. 12,140
Claims priority, application Switzerland Nov. 16, 1953
7 Claims. (Cl. 158—114)

2. A radiating gas burner wherein the combustion of a gas-air mixture heats an external diaphragm to incandescence, the said external diaphragm comprising at least two wire nets superposed in substantially parallel position, a burner body having a burner opening and clamping means round the said burner opening for tightly clamping and securing the said wire nets along the said burner opening, a latticed supporting structure within the said burner



body at the inner side of said external diaphragm, means for pressing the said supporting structure against the said external diaphragm for stretching it, a pull thereby set up in the external diaphragm being taken up in said clamping means, the supporting structure being a coarse wire mesh which is larger than the mesh of said wire nets.

3,129,750
VENETIAN BLINDS
Charles I. Brandin, Bellerose, N.Y., assignor to Charles I. Brandin, Inc., New York, N.Y., a corporation of New York
Filed Nov. 16, 1962, Ser. No. 238,084
4 Claims. (Cl. 160—168)

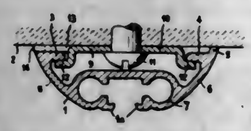


1. A Venetian blind construction comprising, a frame for mounting in a window, said frame containing a Venetian blind, cords in said blind for raising the same, a channel provided in the frame around its perimeter, a continuous uninterrupted wire loop located in the channel and movable lengthwise in the same, the cords being attached to said wire so that movement of the wire in one direction will raise the cords and consequently raise the blind, a handle projecting out of the frame, said handle having means disposed within the channel for either gripping the wire or releasing the same so that said handle, when engaging the wire, and moved along within the channel will move the wire and cause it to actuate the blind-lifting cords.

3,129,751
TRACK ASSEMBLY
Alexander Weber, Zollikofen, near Bern, Switzerland, assignor to Dr. Hans Beer, Bern, Switzerland, and Mrs. Emma Weber-Horisberger, trading as AWEPA, Zollikofen, near Bern, Switzerland
Filed May 18, 1959, Ser. No. 813,841
Claims priority, application Switzerland May 21, 1958
5 Claims. (Cl. 160—345)

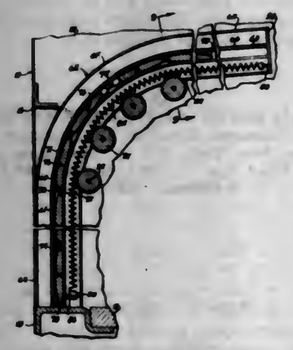
1. A track assembly for supporting draw curtains or the like comprising, in combination, an elongated chan-

nel having an exterior track portion and a pair of opposed side wall portions respectively terminating in free edges which are adapted to be located adjacent a surface of a support to which the channel is to be connected with the hollow interior thereof directed toward the support surface, said side wall portions of said channel fixedly carrying in the interior of said channel a pair of flanges, respectively, which extend longitudinally of said channel and having inner free edges spaced from each other in a direction transverse to the longitudinal direction of said channel a predetermined distance; and rotary rigid fastener means adapted to be turnably connected to said support at said surface thereof and having a pair of opposed wings having each a width smaller than said predetermined distance and having respectively



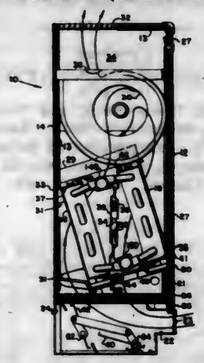
free end edges spaced from each other a distance greater than said predetermined distance so that said wings are adapted to be turned from a position in which said wings are located between the inner free edges of said flanges to a position in which said wings engage said flanges at the sides thereof which are directed away from said support surface upon manual turning of said rotary fastener means after the latter is fixed to said support and said fastener means including an operating portion fixed to said wings, and extending laterally beyond one of said side wall portions outwardly of said channel for manually turning said wings, so that said channel will then be held by said fastener means on said support with said fastener means housed, at least in part within said channel.

3,129,752
SLIDING DOOR
Theo C. Whiting, Akron, N.Y., assignor to T. Whiting Mfg. Inc., Akron, N.Y., a corporation of New York
Filed Nov. 25, 1960, Ser. No. 71,828
7 Claims. (Cl. 160—363)



1. A door for the doorway in a structure, comprising a pair of parallel metal rails arranged along opposite sides of said doorway and having parallel portions curving away from said doorway, said rails being of channel form in cross-section to provide channels extending substantially the full length thereof with the open mouths of said channels being in opposed relation to each other, a laterally manually flexible sheet which is rigid in the planar direction of its broad faces and has opposite generally parallel edge portions contained in said channels, bearings fixed to each rail along each side of its mouth and extending substantially the full length of its rail and slidingly supporting and guiding said end portions of said sheet to travel lengthwise of said rails, horizontal bars fixed to opposite ends of said sheet along the leading and trailing edges thereof, and thrust bearings secured to opposite ends of said horizontal bars and engaging opposing external sides of said rails to maintain said sheet in centered relation to said rails.

3,129,753
HEATING AND COOLING APPARATUS
James R. Davis and Marcus C. Doolittle, La Crosse, Wis., assignors to The Trane Company, La Crosse, Wis., a corporation of Wisconsin
Filed Apr. 3, 1959, Ser. No. 803,884
3 Claims. (Cl. 165—36)

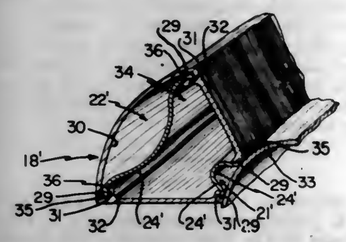


1. An air conditioning apparatus comprising a casing with a top, front, two sides, and a back, air outlet means adjacent the top of said casing, air inlet means adjacent the bottom of said casing, a pair of heat exchangers mounted in said casing substantially parallel to and spaced from one another and inclined at an angle to a plane parallel to said front panel, one corner of one of said heat exchangers being adjacent said front panel and the diagonally opposite corner of said other heat exchanger being adjacent the back of said casing, means substantially sealing the space between said casing and said heat exchanger corners whereby air passing from said air inlet means to said air outlet means will pass either through the heat exchangers or through the space therebetween, air moving means between said air inlet means and said air outlet means for circulating air through said air inlet means and out said air outlet means, and bypass damper means operably associated with said heat exchangers to bypass the incoming air so that the incoming air does not pass through the heat exchangers and to direct the bypass air through the space between said heat exchangers.

3,129,754
HEAT TRANSFER UNIT
Donald H. Menzel, 32 Hubbard Park, Cambridge, Mass.
Filed June 17, 1959, Ser. No. 820,973
2 Claims. (Cl. 165—83)

1. In a heat transfer system of the surface type adapted to transfer heat through a liquid heat transfer medium from a heat source providing a radiating surface, a tubular section for conducting the liquid medium in direct contact with a curved radiating surface, said tubular section constituting a relatively flat, curved portion of resilient material including flat rim portions extending outwardly along each side thereof and spaced projections on the inside of said radiating surface being disposed for sealed

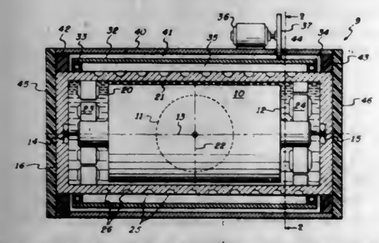
engagement with said rims in such a way that said rims are free to slide in relation to the projections while maintaining sealed engagement therewith to provide for expansion of said curved portion to an increased internal area in the event of expansion of the liquid medium.



3,129,755
TEMPERATURE GRADIENT ATTENUATING DEVICE

Herbert H. Gould, Great Neck, and Norman F. Toda, Westbury, N.Y., assignors to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware

Filed May 2, 1960, Ser. No. 26,029
7 Claims. (Cl. 165—89)



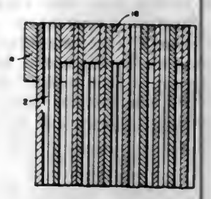
1. In a device having a sensitive element, containing means for enclosing said sensitive element, a fluid contained within said containing means and surrounding said sensitive element whereby diametral temperature gradients within said fluid, if present, cause said fluid to undesirably coerce said sensitive element, heat absorbing and dissipating means adjacent to and surrounding at least a portion of said containing means for maintaining a uniform diametral temperature within at least said portion of the containing means in spite of temperature gradients external to said containing means, and means for moving said heat absorbing and dissipating means relative to said containing means and said external temperature gradients for maintaining a uniform diametral temperature within said containing means.

3,129,756
TUBE ELEMENTS

Torsten Raménius, Drottninggatan 71C, Stockholm, Sweden

Filed Nov. 12, 1959, Ser. No. 852,382
Claims priority, application Sweden June 30, 1959
2 Claims. (Cl. 165—157)

1. A heat exchanger comprising a cylindrical casing having at least two sets of inlets and outlets for two different fluids which are to undergo heat exchange in the heat exchanger, a set of flat, substantially rectangular hollow elements within said casing and in communication with one set of said inlets and outlets for the passage therethrough of one fluid, said elements being disposed in parallel relationship and parallel to the axis of said casing and spaced apart from each other and the other set of said inlets and outlets being in communication with the spacers about said elements with the other fluid being passed between and around said elements, each of said elements being composed of plates arranged in coplanar spaced relation and having longitudinal sides in sealing engagement with one another to define hollow tube elements therebetween, said hollow tube elements being arranged in parallel array diametrically across the casing, certain of said hollow tube elements having different



transverse dimensions whereby each hollow element within said casing is made up of said tube elements in a manner so as to substantially fill the chordal extent of the casing in the curved cross section in the casing along which the elements extend, the longitudinal edges of adjoining tube elements being secured together at longitudinally spaced points to define slots therebetween for cross flow of said other fluid.

3,129,757
MISCIBLE FLUID DISPLACEMENT METHOD OF PRODUCING AN OIL RESERVOIR

Lorld G. Sharp, Irving, Tex., assignor to Socony Mobil Oil Company, Inc., a corporation of New York

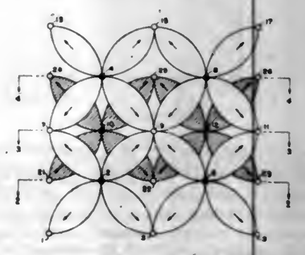
No Drawing. Filed May 13, 1960, Ser. No. 28,830
8 Claims. (Cl. 166—11)

2. In a method of producing oil from a reservoir penetrated by at least one injection well and one production well the steps which comprise heating a portion of said oil within said reservoir around said injection well to a temperature within the range of about 500° F. to about 750° F. and for a time sufficient to crack said oil to provide in-situ a miscible fluid slug comprising intermediate low molecular weight hydrocarbons, introducing into said injection well a driving fluid at least partially miscible with said fluid slug and substantially free of uncombined oxygen, driving said miscible slug through said reservoir to said production well by means of said driving fluid, and producing fluids from said production well including said oil and said miscible slug.

3,129,758
STEAM DRIVE OIL PRODUCTION METHOD

Philip J. Closmann, Houston, Tex., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed Apr. 27, 1961, Ser. No. 106,115
4 Claims. (Cl. 166—11)



1. A method of recovering oil from an underground oil-bearing formation which is penetrated by a plurality of alternately-disposed wells which may be divided into

steam-input wells, condensate-removal wells and oil-output wells, said method comprising establishing communication between both the input wells and the condensate removal wells with the oil-bearing formation at one level thereof, establishing communication between the oil output wells and the oil-bearing formation at a level substantially below that of the other wells, horizontally fracturing the oil-bearing formation from said input and condensate removal wells at one level of the oil-producing formation and in a manner such that the fractures are in open communication with each other, horizontally fracturing the oil-bearing formation from oil outlet wells at a lower level than said first fracture and in a manner such that the lower horizontal fractures are in open communication with each other, continuously injecting steam through said input wells while continuously removing condensate from the condensate removal wells and injecting steam through some of the oil outlet wells while removing condensate from other of the oil outlet wells for a time sufficient to preheat the zone of said oil-bearing formation between the upper and lower fractures, subsequently discontinuing the injection of steam into the oil output wells, injecting steam into the upper portion of said oil-bearing formation through said input wells to produce oil by a downward steam drive to said oil output wells, and recovering said produced oil from said oil output wells.

3,129,759
CASING ALIGNMENT AND CEMENTING TOOL AND METHOD

Bill J. Tillman, Midland, Tex., assignor to Halliburton Company, Duncan, Okla., a corporation of Delaware

Filed Apr. 5, 1961, Ser. No. 100,980
2 Claims. (Cl. 166—14)



1. In a method of aligning parted sections of a casing string in a well bore, the steps comprising: assembling an aligning tool beneath an expandable packer on the lower end of and in axial alignment with a pipe string, said aligning tool having a lower end of generally conical configuration, a tubular aligning wall of less diameter than said casing extending axially upward from said lower end, an axially extending passage communicating with the interior of said pipe string, and a plurality of radially extending openings providing fluid communication between said passage and the exterior of said tool; lowering said aligning tool into said casing string to allow said conical end to guide said tool into the lower parted section of said casing string; positioning said aligning tool so that the aligning wall extends into and substantially aligns adjacent ends of said parted sections; expanding said packer into sealing engagement with the inner wall of the upper parted section of said casing string; forcing fluid cement under pressure downwardly through said pipe string into said passage of said aligning tool whereby it may pass through said radially extending openings, between adjacent ends of said parted sections, and into the annular space between said parted sections and the adjacent well bore wall; allowing said cement to rigidify in said annular space; disconnecting said pipe string from said packer and tool and withdrawing it from said casing string; and thereafter drilling out said packer and tool.

3,129,760
HOT CAUSTIC TREATMENT OF EARTH FORMATIONS

Marvin Gambill, 1300 Lano Drive, Hobbs, N. Mex.

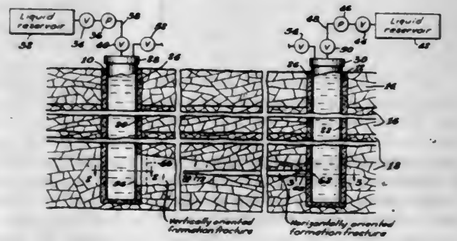
No Drawing. Filed Dec. 30, 1957, Ser. No. 705,795
7 Claims. (Cl. 166—38)

1. The method of treating earth formations to induce fractures therein to promote flow of oil which comprises, injecting into such formations under high pressure sufficient to induce fracture of said formation a liquid characterized by its carrying solid aluminum particles suspended therein, maintaining said pressure for a predetermined interval of time, to cause aluminum particles to enter said formation, introducing thereafter an aqueous caustic alkali solution under high pressure to contact said aluminum particles, thereby to induce an exothermic gas generating reaction in said earth formation, and, thereafter, releasing said pressure.

3,129,761
METHOD OF ESTABLISHING COMMUNICATION BETWEEN WELLS

Harold E. Staadt, Tulsa, Okla., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Jan. 23, 1963, Ser. No. 253,353
11 Claims. (Cl. 166—42)



1. A method of establishing subsurface communication between first and second earth wells which are spaced apart by a predetermined distance, each of which penetrates a particular earth formation, comprising notching said formation of said first well along a predetermined depth range and in a vertically disposed plane which extends generally towards said second well with which communication is to be established, notching said formation of said second well in a horizontally disposed plane which, if extended, would intersect, the vertically disposed notch of said first well, and hydraulically fracturing said particular earth formation from both wells through said notches until said fractures meet.

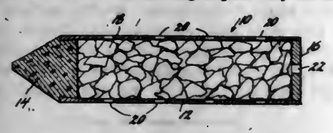
3,129,762
OIL WELL CIRCULATION DEVICE

Warren H. Cooper, Midland, Tex. (Odessa, Tex.), and Gerald M. Cooper, Midland, Tex.

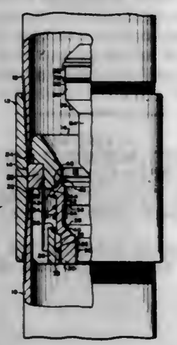
Filed June 13, 1960, Ser. No. 35,600
1 Claim. (Cl. 166—117)

A bore hole circulation control device comprising an elongated rigid frangible substantially cylindrical container having an overall specific gravity greater than unity,

particulate circulation controlling material in said container, a substantially conical member on one end of said container, said container having a plurality of fluid pressure equalizing passages therein, wherein said container is formed of laminated material and wherein said substantially conical member is formed of cementitious material.



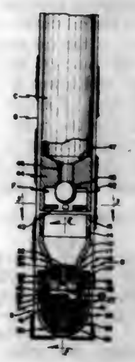
3,129,763
VALVE FOR WELL OPERATION
Robert S. Hoch, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed May 26, 1961, Ser. No. 112,904
10 Claims. (Cl. 166—224)



1. A fill valve useful in cementing operations in a well comprising, in combination, an annular main body member having an axial bore and a downwardly facing valve seat at the lower end of said bore; an annular sleeve support dependably attached to said body member providing a sleeve-supporting collar spaced from said member, said body member and said sleeve support forming an assembly having means for sealably attaching said assembly to a casing string; an upwardly facing shoulder on the inner wall of said collar; an axial sleeve positioned within said body member and said sleeve support slidable axially therein and provided with an axial bore forming an orifice at its lower end; an annular passageway between said sleeve and said support communicating with said valve seat; a passageway thru said sleeve support connecting with said annular passageway; a matching valve surface for said valve seat on the upper end of said sleeve; a matching shoulder on the outer surface of said sleeve for engaging aforesaid upwardly facing shoulder to provide a stop for said sleeve; a downwardly facing shoulder on the wall of the bore of said sleeve intermediate its ends; an upwardly facing shoulder on the wall of the bore of said sleeve below said downwardly facing shoulder; and means for spring biasing said sleeve against said valve seat.

3,129,764
VALVED SHOE FOR PRESSURE TESTING APPARATUS
John E. Stein, 3565 Ivy St., Denver, Colo.
Filed Apr. 16, 1959, Ser. No. 806,930
3 Claims. (Cl. 166—226)

1. A casing shoe for attachment to the lower end of a casing string comprising, a generally cylindrical connector element converging into a reduced lower end portion with an external circular ledge projecting from the outer wall of said lower end, said connector including an annular plate at said lower end and an axial fluid passage extending therethrough into communication with a downwardly facing valve seat in said plate, a nose element of generally cup-shaped configuration including a valve plate positioned in said nose above its lower end carrying a valve element on its upper surface disposed for movement with said nose into and out of flush engagement with said valve seat, said nose including a sleeve extending upwardly from said valve plate in outer concentric relation over said ledge with an inwardly disposed abutment ring connected to the inner wall of said nose above said ledge to normally limit the downward movement of said nose as

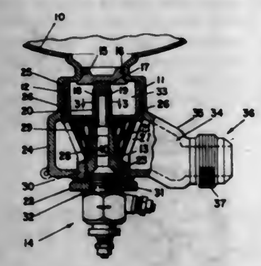


said valve element moves out of contact with said valve seat, and said nose being provided with at least one fluid passage extending downwardly therethrough in offset relation to the passage in said connector, resilient means interconnecting the opposing surfaces of said plates, and shear means interconnecting said abutment ring and said sleeve to permit relative axial movement therebetween and being adapted to be broken away at a predetermined pressure level to thereby permit separation between said nose and said connector elements in the event of interruption of the flow of fluid through said passages, the shearing of said shear means being prevented as said elements move together by the abutment of said valve element and valve seat, whereby said shear means will be sheared only when said elements are moving apart.

3,129,765
EXPLOSIVE ACTUATED VALVE FOR PRESSURIZED RECEPTACLES
Louis S. Wait, Encino, Calif., assignor, by mesne assignments, to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed June 18, 1962, Ser. No. 203,401
2 Claims. (Cl. 169—9)

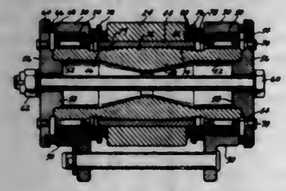
1. The combination with a vesel for pressurized fluid, of an explosively-operated, valve structure comprising:
(*a*) a fitting secured to said pressure vessel and including a reduced neck portion forming a cylindrical valve-sealing surface and an enlarged internally screw-threaded portion;
(*b*) a tubular member including an enlarged end screw-threaded into said screw-threaded portion, a conical perforated intermediate portion, and a reduced internally screw-threaded extended end;
(*c*) a hollow swivel member having coaxial spaced apertures sealingly engaging said tubular member adjacent said fitting and adjacent said extended end, and a laterally directed outlet;

(*d*) a squib housing screw-threaded into the extended end of said tubular member and including a flange for retaining said swivel member on said tubular member, and a rupturable extremity directed toward said fitting within said tubular member;



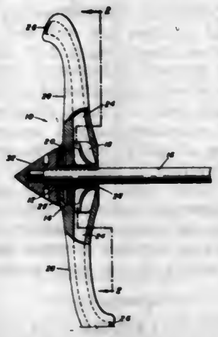
(*e*) a valve disk sealingly engaging the sealing surface within said fitting and retained therein by said rupturable end, said valve disk being substantially smaller than the enlarged end of said tubular member;
(*f*) and an explosive charge with said squib housing operable to destroy said rupturable end, whereby pressure fluid in said tank forces said valve disk into the perforated intermediate portion of said tubular member for retention therein, and to permit free flow of said fluid through said laterally directed outlet.

3,129,766
ROTOR BLADE RETENTION MEANS
Rene F. Pertusio, Springfield, Mass., and Alex Berman, Bloomfield, Conn., assignors to Kaman Aircraft Corporation, a corporation of Connecticut
Filed Apr. 27, 1961, Ser. No. 106,048
13 Claims. (Cl. 170—160.51)



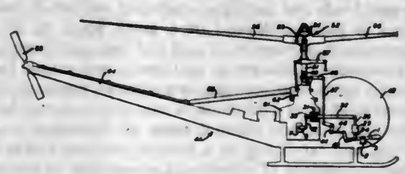
1. In a rotor assembly, the combination comprising a hub adapted for rotation about a given axis, a blade extending generally radially outwardly from said hub, and means connecting the inboard end of said blade to said hub for imparting the rotation of said hub to said blade and for permitting lead and lag swinging motion of said blade relative to said hub in the path of the blade rotation, said connecting means including means for resisting transverse movement of said inboard blade end relative to said hub and further including means defining a generally outwardly facing bearing surface fixed relative to said blade and a generally inwardly facing bearing surface fixed relative to said hub which bearing surfaces coengage to restrain said inboard blade end against radial outward movement relative to said hub, at least one of said bearing surfaces being curved in the path of blade rotation and by a degree different from the other surface so that movement of said blade in one direction relative to said hub and in said plane of rotation causes one of said bearing surfaces to roll over the other and thereby shifts the momentary lead and lag pivot axis in the opposite direction relative to said hub and about said given axis in direct relation to the movement of said blade relative to said hub.

3,129,767
TORQUE CONVERTING PROPELLER
William B. McLean, 510 Lexington St., China Lake, Calif., assignor of fifty percent to Walter G. Finch, Baltimore, Md.
Filed Jan. 12, 1962, Ser. No. 165,862
8 Claims. (Cl. 170—135.4)



1. A torque converting propeller system, comprising, a drive shaft, an impeller secured to and rotatable with said drive shaft, a propeller having a chambered hub encompassing said impeller with an annular clearance for free rotation about said impeller, said chambered hub having a fluid inlet passage on one side arranged in close proximity to said drive shaft for passing fluid to said impeller, said annular clearance between said impeller and chambered hub of said propeller forming a fluid rotary bearing created by flow of said fluid under pressure from said impeller, said propeller having at least one blade with a passageway therein communicating between the chambered hub and a rearwardly directed orifice in the tip of said blade, whereby fluid is passed from said fluid inlet passage in said chambered hub through said impeller to said passageway and orifice in said propeller to rotate said blade.

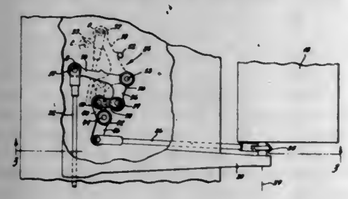
3,129,768
HELICOPTER POWER REQUIREMENT ANTICIPATOR AND THROTTLE GOVERNOR DAMPER
Richard D. Collins, Menlo Park, Calif., assignor, by mesne assignments, to Eltra Corporation, Brooklyn, N.Y., a corporation of New York
Filed May 3, 1961, Ser. No. 107,495
2 Claims. (Cl. 170—135.73)



1. A helicopter comprising an engine having a throttle valve therein, rotor blades rotatably mounted on said helicopter and drivingly connected to said engine, and a control system for said helicopter; said control system comprising a governor, means between said governor and said throttle valve of said engine operatively connecting said governor and said valve together, said governor normally automatically regulating the setting of said throttle valve in response to changing flight conditions of said helicopter, and pilot operable mechanism superimposable on said governor for selectively and rapidly modifying the setting of said throttle valve independently of said

governor during the time normally required by said governor to sense changing flight conditions and to effect a valve setting change in response thereto during flight of said helicopter; said mechanism comprising a pilot operable collective pitch control member operatively connected with the rotor blades of said helicopter for changing collectively the pitch thereof, and linear fluid coupling means operatively interconnecting said control member with said governor and with said throttle valve, said coupling means comprising a fluid dash pot operatively interposed between said control member and said means which operatively connects said governor with said throttle valve, said dash pot being effective in direct response to rapid movement of said control member to modify the setting of said throttle valve during the interval while said governor is responding to the change in flight conditions which result from such movement, said dash pot being generally ineffective upon gradual movement of said control member to modify the setting of said throttle valve so that said governor exclusively controls said valve setting during such gradual movement.

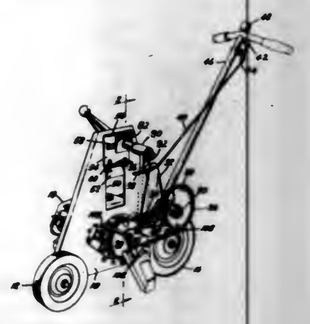
3,129,769
FAIL SAFE DEVICE FOR SERVO FLAP CONTROLLED ROTOR BLADES
Casper E. Hofbauer, Winter Park, Fla., and Edward E. Swanson, Windsor, Conn., assignors to Kaman Aircraft Corporation, a corporation of Connecticut
Filed Sept. 21, 1962, Ser. No. 225,205
10 Claims. (Cl. 170—160.1)



1. In a helicopter rotor, the combination comprising a hub adapted for rotation about a central axis, a blade connected with said hub and extending generally radially outwardly therefrom, a servo flap connected with said blade and adjustable relative thereto about a generally radially extending pivot axis for aerodynamically positioning said blade about a spanwise blade pitch changing axis relative to said hub, a rod extending spanwise of said blade, said rod having a normal range of movement relative to said blade and having an outboard end which outboard end is located inboard of a given point on said blade throughout movement of said rod over said normal range of movement relative to said blade, and means for moving said servo flap between two extreme positions of adjustment relative to said blade as said rod is moved between the limits of said normal range of movement and for moving said servo flap to a neutral position between said extreme positions of adjustment in response to movement of said outer end of said rod radially outwardly beyond said given point.

3,129,770
POWERED TURF EDGING MACHINE
Francis J. Ditter, Minneapolis, Minn., assignor to Federal Aircraft Works, Incorporated, a corporation of Minnesota
Filed Nov. 29, 1961, Ser. No. 155,559
9 Claims. (Cl. 172—15)

5. A turf edging machine comprising a support constituting a vertical plate member adapted to be moved along the ground relative to the turf to be edged, an edging blade, means mounting said blade for forward and backward movement with respect to said support along one side thereof, a motor on said support at the other side thereof, means connecting said motor to said blade mount-



ing means for causing said forward and backward movement of said blade, and clamping means engaging opposite sides of said support for fixedly adjusting said blade mounting means horizontally and vertically to vary the angle and depth of turf cut.

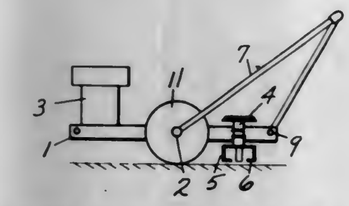
3,129,771
CULTIVATING TOOL
Clifford G. Lidstone, 356 Anthony St., Sudbury, Ontario, Canada
Filed Aug. 2, 1961, Ser. No. 128,769
2 Claims. (Cl. 172—25)



1. A cultivating tool comprising a shank having at one end thereof a free chuck-receiving portion and at the other end thereof a free soil-engageable portion, a pair of arms fixed to said shank in spaced adjacent relation to said soil-engageable portion and extending radially from said shank, a tine fixed to and depending from the outer end of each said arm, each said tine having parallel inner and outer edges throughout the length of each tine, each of said edges lying in a separate plane parallel to a plane perpendicular to said arms and passing through the axis of said shank, each said tine having a free soil-engageable end disposed in a common plane normal to and intersecting the axis of said shank at a point spaced from said soil-engageable portion of said shank, each said tine having a straight leading edge between said inner edge and said

outer edge extending throughout the entire length thereof, each said leading edge being inclined at an acute angle to a plane passing through said pair of arms and the axis of said shank, said last mentioned plane being normal to the plane that is perpendicular to said arms and passes through the axis of said shank, said tines being in uniformly radially spaced relation to said shank, said shank having a frusto-conical portion extending solely from said common plane of said soil-engageable ends of said tines to the juncture of said arms with said shank, said frusto-conical portion being of gradually increasing diameter from said last mentioned plane.

3,129,772
HOEING MACHINE
Frank R. Anderson, % The Richard Co., Baldwin St. Extension, Meadville, Pa.
Filed Nov. 16, 1960, Ser. No. 69,663
5 Claims. (Cl. 172—42)



4. A hoeing machine comprising a frame, an axle supported by the frame, a pair of wheels on the axle, a motor on the frame, two counter shafts mounted on the frame and respectively driven in opposite directions by the motor, a drive from each counter shaft to one of the wheels, each drive including a selectively manually operable clutch, the other wheel being idle and free to turn so the frame may pivot first in one direction and then in the opposite direction about the driven wheel, a vertical shaft spaced from the driven wheel and mounted on the frame on the same side as the driven wheel, a power drive for the vertical shaft, and a rotary hoe having a hub concentric with and drivingly connected to the vertical shaft, said hub having vertical depending arms spaced about the axis of the vertical shaft with blades at the lower ends of said arms projecting radially inwardly toward the axis of the hub in a generally horizontal plane, said blades having radially extending horizontal cutting edges slicing horizontally through the soil and turning in a circle projecting outside the driven wheel so the wheel does not run over plants as the blades hoe next to the plants.

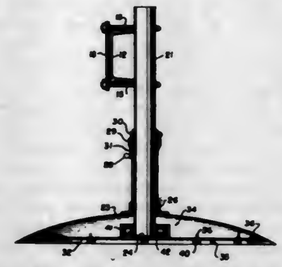
3,129,773
MOUNTING MEANS FOR A HORIZONTAL DISC CULTIVATOR
Louis O. Freeman, Rte. 1, Eads, Colo.
Filed July 15, 1963, Ser. No. 295,010
9 Claims. (Cl. 172—522)

1. In combination with the cultivator frame and a shaft depending therefrom, a horizontal disc-type cultivator member affixed to the base of the shaft and comprising:

(*a*) an inverted dished disc having its peripheral edge defining a horizontally disposed cultivating base edge at the bottom of the member and having an axially centered passageway through the crown of the disc, thereabove, through which the lower portion of said shaft extends;

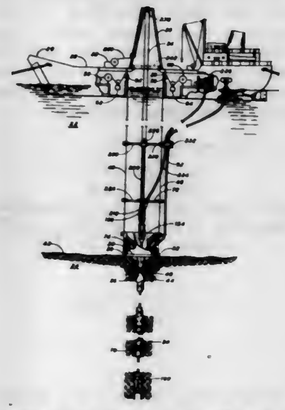
(*b*) a substantially flat floor plate adjacent to the peripheral base edge of the disc affixed to and enclosing the underside of the dished disc and thereby forming an enclosed cavity therein, and;

(*c*) a bearing-holding means affixed to the center of said floor plate and the bottom of said shaft whereby



to retain the cultivator member on the shaft and to permit it to rotate about the shaft, and to withstand lateral thrust imposed against the edge of the disc.

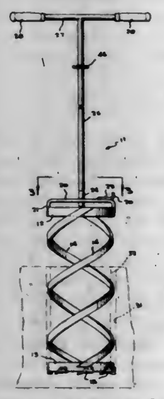
3,129,774
METHOD AND APPARATUS FOR DRILLING AND WORKING IN OFFSHORE WELLS
Robert A. Armstrong, Laguna Beach, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Filed Sept. 9, 1960, Ser. No. 54,981
11 Claims. (Cl. 175—7)



1. The method of drilling an off-shore well comprising anchoring a drilling vessel on the surface of a body of water above a submerged well site, cementing a length of casing vertically in the submerged earth at said well site with the top end of said casing positioned adjacent the surface of said submerged earth, attaching a flexible guiding means between the said top end of said casing and the said drilling vessel, operatively connecting a sectional drill string including a drill bit attached to the lower end thereof to a rotary motor unit which is within a motor assembly proportioned to fit within the upper end portion of said casing in sliding relationship, suspending said motor assembly from said drilling vessel by lifting and lowering lines which enable said motor assembly with the said drill string extending downwardly therefrom to be lowered from said drilling vessel and into the said top end of said casing and to be raised from said casing to said drilling platform, connecting said rotary motor unit to a source of motive power therefor on said drilling vessel by power-transmitting flexible lines, lowering said motor assembly and said drill string from said drilling vessel and guiding said drill bit and said drill string into said top end of said

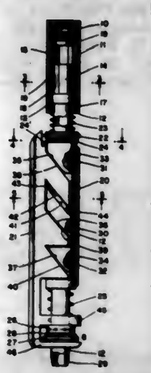
casing, continuing lowering said motor assembly and said drill string from said drilling vessel until said drill bit is in contact with the subterranean formations below said casing and said motor assembly is positioned within the upper end portion of said casing and supported therein by said lifting and lowering lines, providing means to prevent a relative rotation between said motor assembly and said casing, actuating said rotary motor unit by remote control from said source of motive power on said drilling vessel to rotate said drill string and said drill bit, drilling a well bore by lowering said motor assembly within the said upper portion of said casing by manipulation of said lifting and lowering lines from said drilling vessel to maintain contact between said drill bit and said subterranean formations while rotating said drill string by said rotary motor unit, lifting said motor assembly and the attached said drill string from said casing and through said body of water to place said motor assembly and the upper portion of said drill string at said drilling vessel, connecting an additional section to said drill string below said motor assembly to increase the length of said drill string, again lowering and guiding said motor assembly and the attached said drill string into said casing to dispose said motor assembly within the said upper portion of said casing and with said drill bit in contact with the bottom of said well bore, actuating said rotary motor unit to rotate said drill string and said drill bit while further lowering said motor assembly by said lifting and lowering lines to deepen said well bore, and positioning a blowout preventer assembly at the open upper end of said casing connecting said blowout preventer assembly to said drilling vessel by power transmitting flexible lines and operating said blowout preventer assembly from said drilling vessel by remote control to prevent the blowout through said casing of well fluids from said subterranean formations.

3,129,775
ICE AUGER
Richard D. Connelly, R.F.D. 2, Graceville, Minn.
Filed Feb. 9, 1962, Ser. No. 172,259
4 Claims. (Cl. 175—18)



1. An ice auger comprising a top ring, a bottom ring, a plurality of helical bar members rigidly connecting said top ring in coaxial spaced relation to said bottom ring, a plurality of depending downwardly inclined cutting teeth secured to said bottom ring, each of said cutting teeth comprising a substantially U-shaped main body which snugly receives and is rigidly secured to the lower marginal portion of the bottom ring, and which is formed with a downwardly inclined tapered tooth portion which terminates in a transversely extending straight cutting edge, a bracket member rigidly secured to said top ring and extending transversely thereacross, a rod member secured at its bottom end centrally to said bracket member and arranged coaxially with said top and bottom rings, and a transverse handle bar secured rigidly to the top end of said rod member.

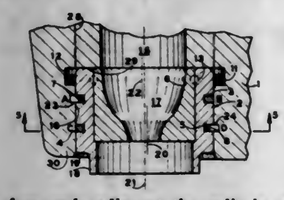
3,129,776
FULL BORE DEFLECTION DRILLING APPARATUS
William L. Mann, 2245 E. Foothill Blvd., Pasadena, Calif.
Filed Mar. 16, 1960, Ser. No. 15,294
8 Claims. (Cl. 175—76)



1. A full bore deflection drilling apparatus for insertion in a string of drill pipe, comprising, in combination: an upper pipe section for connection to said drill pipe; a mandrel having one end adapted to be telescoped within the lower end of said upper pipe section; means for connecting the other end of said mandrel to a drilling means, said first mentioned means preventing downward longitudinal movement of said mandrel relative to said drilling means; a pad actuating sleeve surrounding said mandrel and mounted for longitudinal movement relative to said mandrel; connecting means connecting the upper end of said pad actuating sleeve to the lower end of said upper pipe section; a pad member coupled to said sleeve for lateral movement in a direction normal to the axis of said pad actuating sleeve and mandrel; guide means between said mandrel and pad member, said guide means limiting relative longitudinal movement therebetween; and a retracting spring positioned to exert a force on said pad actuating sleeve relative to said mandrel, said pad actuating sleeve and pad member including inclined cooperating surfaces in engagement with each other and forming an angle between said axis and the normal thereto, whereby downward force of said drill pipe string on said pipe section telescopes said pipe section over the upper end of said mandrel and longitudinally slides said pad actuating sleeve along said mandrel to cam said pad member laterally away from said pad actuating sleeve to an expanded position, said retracting spring retracting said pad member upon cessation of said downward force.

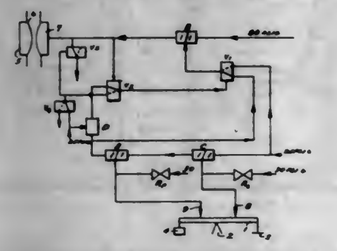
3,129,777
REPLACEABLE NOZZLE HAVING COMPLETELY SHROUDED RETAINER
John C. Haspert, San Francisco, Calif., assignor to Hughes Tool Company, Houston, Tex., a corporation of Delaware
Filed Aug. 7, 1962, Ser. No. 215,315
22 Claims. (Cl. 175—340)

11. A nozzle adapted for sealable mounting in a boss having a flushing passageway therethrough at least the lower end of which is a cylindrical surface having at least one circumferential groove therein, said nozzle having a flushing passageway therethrough and an outer cylindrical surface adapted to face such boss cylindrical surface with only sufficient clearance to permit relative axial and rotary movement without appreciable wobbling, said nozzle surface having a circumferential groove therein for each said boss groove and adapted to register therewith to form a pair of ring receiving grooves one of which is concentric with said cylindrical surface and the other of which is eccentric thereto, said concentric groove being adapted to receive all portions of a split retaining ring under the influence of a radial force and to partially



receive the free ends adjacent the split in said ring in their relaxed condition, said retaining ring being otherwise disposable in said concentric groove in non-rotatable relationship therewith, said eccentric groove having a zero depth portion and a maximum depth portion approximately a half-turn from said zero depth portion adapted to receive said free ends of said retaining ring at one rotary position of said nozzle with respect to said boss to lock said nozzle to said boss, said zero depth portion of said eccentric groove being adapted to force said retaining ring wholly into said concentric groove as said nozzle is rotated into a second position approximately a half-turn from the first, thereby unlocking the nozzle from the boss.

3,129,778
AUTOMATIC CONTROL OF AUTOMATIC WEIGHING AND FEEDING MACHINES
Arthur Kenneth Lloyd, Welwyn, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
Filed Oct. 14, 1960, Ser. No. 62,764
Claims priority, application Great Britain Oct. 14, 1959
1 Claim. (Cl. 177—81)



Automatic feed controlling apparatus for use with weighing equipment comprising a material holding container, a sleeve valve for controllably feeding material from said container, said sleeve valve including an outer annular rigid casing and an elastic tubular inner wall together defining an annular chamber, a source of constant pressure air in communication with said sleeve valve annular chamber through a first pneumatic relay, a small air chamber, a source of constant pressure air communicating with said air chamber through a restriction, said air chamber having at least one small opening from which air issues, a weight measuring element movable in accordance with weight upon the weighing machine, said air chamber being mounted adjacent said weight measuring element in such manner that air issuing from said air chamber opening impinges on said weight measuring element during at least a part of the movement thereof, movement of said weight measuring element over a predetermined range of weights upon the weighing machine being effective to progressively reduce the free space near said opening and cause progressive increasing back pressure in said air chamber, and means controlling said first pneumatic relay in accordance with the back pressure in said air chamber, whereby between predetermined lower and upper limits of said progressively increasing back pressure the rate of feed of material through said sleeve valve is progressively reduced as the back pressure increases until at said predetermined upper limit the sleeve valve is closed and the feed is caused to stop, said controlling means comprising a second pneumatic relay under the direct control of said back pressure and providing an output pressure which controls the operation of said first pneumatic relay, means for separately providing a further control signal for said first pneumatic relay when said back pressure reaches said predetermined upper limit, said further control signal being of higher value than the control signal provided by said back pressure.

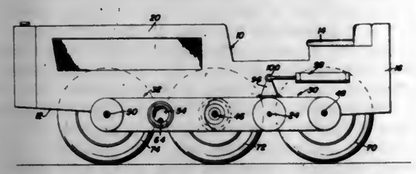
3,129,779
WEIGHING AND DISCHARGE APPARATUS
Ernest L. Clements, 37350 Sequoia Road, P.O. Box 667, Fremont, Calif.
Filed Oct. 16, 1959, Ser. No. 847,008
3 Claims. (Cl. 177—114)

1. In a mixing system of the type described, apparatus including, in combination, an elongated mixer, and discharge apparatus for measuring a predetermined weight of liquid and evenly discharging the measured liquid into said mixer, said discharge apparatus comprising a pair of elongated kettles mounted above and overlying said mixer in parallel relation thereto, means supporting said kettles for vertical weighing movement and for rotation about their longitudinal axes, drive mechanism coupled to said kettles to rotate same about their longitudinal axes in opposite directions wherein the tops of said kettles rotate respectively away from each other to discharge the contents thereof into and distribute same along the length of said mixer, and fluid transfer means for delivering fluid into said kettles.

3,129,780
WHEELED TRACTOR CONSTRUCTION
William I. Uyehara, 2522 Date St., Honolulu 14, Hawaii
Filed Apr. 11, 1961, Ser. No. 102,252
11 Claims. (Cl. 180—23)

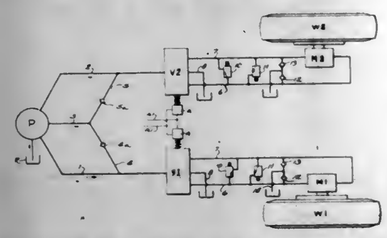
1. A wheeled tractor construction comprising a longitudinal extending frame, front and rear longitudinally extending support beams defining one pair of beams on

each side of said frame, first means pivotally securing adjacent ends of the front and rear beams of each pair of beams together, second means pivotally securing one set of corresponding beams of said pairs of beams to the corresponding sides of said tractor frame for rotation about axes extending transversely of the midportions of said one set of beams intermediate their opposite ends and third means pivotally securing the other set of corresponding beams of said pairs of beams to said frame for rotation about axes fixed relative to said frame against



shifting longitudinally of said frame and extending transversely of the midportions of said pairs of beams intermediate their opposite ends, a support wheel rotatably supported from each of the remote ends of said pairs of front and rear beams and from each pair of adjacent ends of said beams for rotation about axes extending transversely of said beams, at least one of said wheels carried by each pair of said beams comprising a drive wheel, said second means including means enabling displacement of the axes of rotation of said one set of beams longitudinally of said frame.

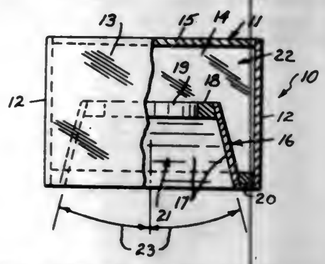
3,129,781
HYDROSTATIC DIFFERENTIAL TRANSMISSION
Gary Stein, New Berlin, Wis., assignor to Applied Power Industries Inc., Milwaukee, Wis., a corporation of Wisconsin
Filed Nov. 16, 1962, Ser. No. 238,837
8 Claims. (Cl. 180—44)



1. In a driving arrangement for a vehicle having a pair of traction wheels, a hydrostatic differential transmission including, a fluid motor drivingly connected to each of said traction wheels; two independent fluid supply sources, one for each of said motors for furnishing driving fluid thereto; a third independent fluid supply source for furnishing fluid to each of said motors; and a one-way check valve between said third source and each of said motors whereby said third source delivers fluid independently and separately to each of said motors.

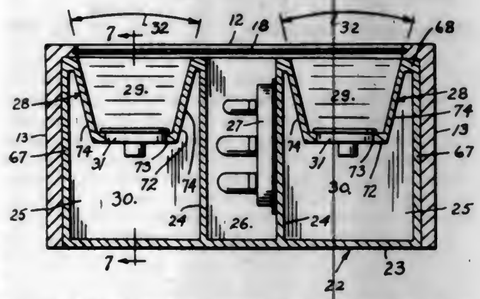
3,129,782
PUBLIC ADDRESS APPARATUS
Nathan J. Stowell, Jackson, Miss., assignor to James Willis Hughes, Jackson, Miss.
Filed May 4, 1961, Ser. No. 107,784
2 Claims. (Cl. 181—31)

1. A housing and mount for loudspeakers, comprising a box-shaped housing proper having an open front and being otherwise closed, and a re-entrant mount proper provided in said housing proper, said mount proper including a set of mutually convergent wall panels extending inwardly from the borders of the open front and joined thereto, a speaker support plate secured to the convergent edges of said wall panels, and a pair of spaced partition panels extending between said wall panels and coacting therewith and with said support plate to provide a pair of spaced sound transmitting chambers in said mount proper, said sound transmitting chambers having



an open front at the open front of said housing proper, a pair of apertures in said support plate each opening into a respective one of said sound transmitting chambers and loudspeakers mounted in said apertures and facing said open front, and the interior of the housing proper rearwarding and at the sides of said mount proper defining a substantially anechoic static air chamber, said sound transmitting chambers and said static air chamber providing symmetrical front and rear loading for said speakers.

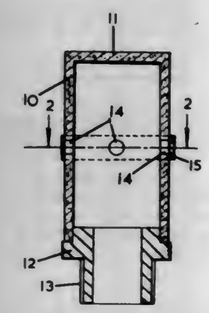
3,129,783
HOUSING AND MOUNT FOR LOUD SPEAKERS
Nathan Jerome Stowell, Jackson, Miss., assignor to James W. Hughes, Jackson, Miss.
Original application Oct. 26, 1960, Ser. No. 65,084, now Patent No. 3,115,548. Divided and this application July 26, 1961, Ser. No. 134,797
9 Claims. (Cl. 181—31)



1. In a loud speaker system, the combination of an outer casing defining at least one speaker compartment, of a hollow parallelepiped configuration having a back panel, a top panel, a bottom panel, a pair of opposite side panels and a front wall haivng a sound emitting opening symmetrically arranged within said front wall, said speaker compartment being otherwise closed, a speaker support of a hollow box-shaped configuration provided in said compartment, said speaker support having a rear wall with an aperture symmetrically arranged therein, side walls diverging forwardly from said rear wall, and an open front at the terminus of said side walls opposite said rear wall, said open front coinciding with the sound emitting opening in said casing, said speaker support defining a sound transmitting chamber therewithin having

an open front and a static air chamber within said compartment separate from and rearwardly of said sound transmitting chamber, and a speaker mounted in said aperture in said rear wall of said support with its sound emitting mechanism oriented forwardly into said sound transmitting chamber and its energizing mechanism disposed in said static air chamber.

3,129,784
SAFETY VALVES
Cosby D. P. Smallpeice, "Flagstaff," Swanwick Shore, near Southampton, Hampshire, England, assignor of one-half to Nuquip Limited, Richmond, Surrey, England
Filed Oct. 31, 1960, Ser. No. 66,172
Claims priority, application Great Britain Mar. 22, 1960
6 Claims. (Cl. 181—37)



4. A silencer for a gas exhaust comprising a cylindrical porous body provided with an inlet for the gas, said body pervious to the gas, said body having at least one outlet port in its cylindrical wall, and a circumferentially contractile member engaged around the exterior of said cylindrical wall and positioned over said outlet port to seal said outlet port, the contractile effort of said contractile member adapted to be overcome when matter suspended in said gas clogs the pores of said porous body to an extent which will cause the gas pressure within said body to rise to a value at which it will act through said port to displace said contractile member out of its sealing position, and said contractile member free to move axially on said cylindrical body so that said contractile member is adapted to be displaced axially of said body by fluid escaping from said outlet port whereby afterwards to leave it at least partially uncovered.

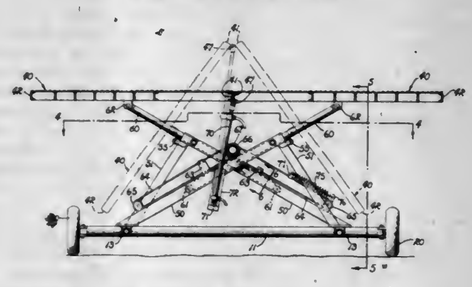
3,129,785
COLLAPSIBLE LADDER
Herbert A. Keith, 64 Brookdale Ave., Toronto, Ontario, Canada
Filed Feb. 11, 1963, Ser. No. 257,612
3 Claims. (Cl. 182—24)

1. A collapsible ladder comprising a first section, a second section, a third section, a first platform member and a second platform member; said first section and said second section being hingedly joined at their upper ends; said first section includes two side rails held in parallel spaced apart relationship by a plurality of rungs and rectangular steps, said rungs and said steps extending transversely therebetween and in parallel spaced apart relationship to each other; said side rails terminating in an upper section having neither rungs nor steps; said second section including two side rails held in parallel spaced apart relationship by a plurality of rungs, said rungs extending transversely therebetween and in parallel spaced apart relationship to each other; a cross piece pivotally retained at one end thereof to the upper end edge of one of said side rails of said second section, the opposite end of said cross piece being located within a U hook, said U hook being rigidly affixed on the upper end edge of the other of said side rails of said second section, said cross piece being parallel with said plurality of rungs; said third section including two side rails held in parallel spaced apart relationship by a plurality of rungs, said rungs extending transversely therebetween and in parellel spaced apart relationship to each other, said third section being substantially shorter than each of said first and second sections; said third section being pivotally retained at the upper ends of its said side rails upon an upper rung of said second section, the lower ends of said side rails terminating in hooked sections, said hooked sections projecting longitudinally outwardly therefrom, said side rails



of said third section being so spaced apart as to fit within the inner limits of said side rails of said first and said second sections; said hooked sections of said side rails of said third section being located about said lower rung of said first section said first platform member and said second platform member hingedly joined at adjacent edges; said second platform having at least one lug, said lug being located on the underside thereof and projecting perpendicularly downwardly therefrom, said lug having a cut out section formed therein, said cut out section receiving said cross piece said first platform member having the edge opposite the hinged edge pivotally attached to an upper rung of said first section; said first platform depending angularly downwardly between said second platform and said upper rung of said first section; and said second platform being horizontally disposed.

3,129,786
MOBILE COLLAPSIBLE SCAFFOLD
Kazuo Hiyama, 8184 E. Adams, Fowler, Calif.
Filed Jan. 15, 1962, Ser. No. 166,273
9 Claims. (Cl. 182—131)



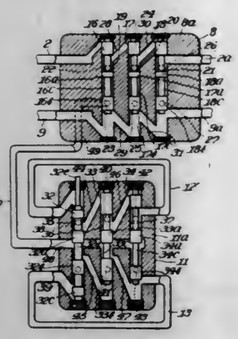
1. A scaffold comprising an elongated mobile frame; a pair of elongated platforms having inner edges in juxtaposition and disposed longitudinally of the frame; pivot

means interconnecting the platforms adjacent to said inner edges; first extensible strut means interconnecting the frame and said platforms at a point adjacent to said inner edges; second extensible strut means interconnecting the frame and each of said platforms respectively at points spaced from said inner edges; power means to effect extension and retraction of said first strut means; and means to synchronize extension and retraction of said second strut means.

3,129,787
LUBRICANT SUPPLY DEVICE

Nobuo Sensui, Tsurumi-ku, Yokohama-shi, Shigeru Aoki, Shibuya-ku, Tokyo-to, and Tadashi Yoshikawa, Tsurumi-ku, Yokohama-shi, Japan, assignors to Shibaura Kyodokogyo Kabushiki Kaisha (known as Shibaura United Engineering Co., Ltd.), Yokohama-shi, Japan, a joint-stock company of Japan

Filed June 19, 1961, Ser. No. 117,916
1 Claim. (Cl. 184—7)

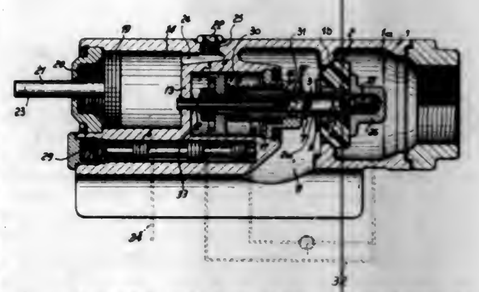


A lubricant supply device comprising the combination of a primary lubricant supply device and a secondary lubricant supply device, said primary lubricant supply device comprising a casing, a plurality of spaced parallel cylinders disposed in said casing and including a first cylinder and a last cylinder, each of said cylinders being provided with a pair of axially-spaced lubricant outlet ports disposed in a central portion thereof, a distributing valve slidably disposed in each of said cylinders, each distributing valve comprising a piston rod supporting in tandem a plurality of axially-spaced pistons, a pair of axially-spaced inclined lubricant conduits between adjacent cylinders each having one end opening into the central portion of the preceding cylinder and an opposite end opening into the opposite ends of the succeeding cylinder, a second pair of inclined lubricant conduits each having one end opening into the opposite ends of said first cylinder and having an opposite end communicating with a source of lubricant supply outside of said casing, and a third pair of lubricant conduits each having one end opening into the central portion of said last cylinder and an opposite end opening to the outside of said casing, said secondary lubricant supply device comprising a casing, a plurality of spaced parallel secondary cylinders disposed in said casing and connected in a closed circuit and including a first secondary cylinder and a last secondary cylinder, a pair of lubricant outlet ports provided for each secondary cylinder in axially-spaced relationship in a central portion thereof, a pair of axially-spaced inclined lubricant conduits between adjacent secondary cylinders each having one end opening into the central portion of a preceding secondary cylinder and an opposite end opening into the opposite ends of the succeeding secondary cylinder, a lubricant inlet port communicating with the central portion of the respective secondary cylinders, a second pair of lubricant conduits each having one end opening axially spaced away from the central portion and outwardly of said outlet ports of the last secondary cylinder and an opposite end opening into the opposite ends of the first secondary cylinder, a combined change-over and distributing valve slidably disposed in one of said secondary cylinders, and a plurality of distributing valves each slidably disposed in each of the other secondary cylinders, each of said distributing valves of said secondary device comprising a piston rod supporting in tandem a plurality of axially-spaced pistons, said distributing valves of both of said devices being operable in operation to two positions alternately for blocking off communication to one of said inclined conduits of a given pair and providing communication with the other inclined conduit of said given pair, and means to connect said lubricant inlet port of the secondary lubricant supply device with one of the lubricant outlet ports of the primary lubricant supply device, with said inlet port communicating with each of said secondary cylinders between said outlet ports of said secondary cylinders.

3,129,788
AUTOMATIC LUBRICATING DEVICE FOR COMPRESSED AIR STARTERS

Heinz Heckt, Sprockhovel (Westphalia), Germany, assignor to G. Dusterloh, Fabrik fur Bergwerksbedarf G.m.b.H., Sprockhovel (Westphalia), Germany

Filed Oct. 26, 1962, Ser. No. 233,390
Claims priority, application Germany Nov. 7, 1961
6 Claims. (Cl. 184—55)

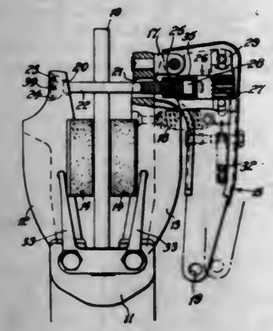


1. An automatic lubricating device for compressed air operable starters which includes: a housing having compressed air inlet chamber means and compressed air outlet chamber means, main passage means for establishing communication between said inlet and outlet chamber means, main valve means normally closing said main passage means, auxiliary passage means having a diameter considerably reduced relative to the diameter of said main passage means and adapted to establish communication between said inlet chamber means and said outlet chamber means, auxiliary valve means normally closing said auxiliary passage means, a reservoir for receiving and storing a lubricant, and fluid operable pump means communicating with said reservoir and comprising a reciprocable member having provided therein said auxiliary passage means and operatively connected to said main and auxiliary valve means and operable when moving in a first direction successively to move said auxiliary and main valve means into open position for permitting the passage of compressed air therethrough from said inlet to said outlet chamber means, said reciprocable member also being operable when moving in a second direction successively to move said auxiliary valve means and said main valve means into closing position for substantially preventing the passage of compressed air from said inlet chamber means to said outlet chamber means, said pump means being operable automatically in response to the movement of said reciprocable member in said first direction to inject lubricant from said reservoir into said outlet chamber means.

3,129,789
BRAKES AND WEAR COMPENSATING MECHANISM FOR BRAKES

Harold Hodkinson, Coventry, England, assignor to Dunlop Rubber Company Limited, a British company

Filed June 12, 1961, Ser. No. 116,316
Claims priority, application Great Britain June 25, 1960
8 Claims. (Cl. 188—72)



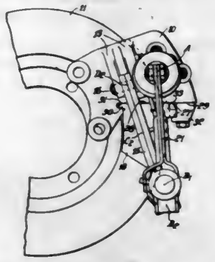
1. A disc brake having a wear compensating mechanism and comprising a rotatable disc, a first pressure plate mounted on one side of said disc, a second pressure plate mounted on the opposite side of the disc, each said pressure plate having a friction element facing the opposed side of the disc, means pivotally supporting said pressure plates so as to permit their respective friction elements to frictionally engage the opposed sides of the disc, an actuating lever pivotally mounted on said second pressure plate, a trunnion box pivoted on the actuating lever, a tie rod non-rotatably secured to said first pressure plate and projecting beyond the periphery of the disc through the trunnion box, the portion of the tie rod projecting through the trunnion box being screw-threaded, a nut threaded onto the screw-threaded portion of the tie rod in abutment with the trunnion box, a latching member mounted on said lever for sliding movement relative thereto and positioned upon movement of the actuating lever from its inoperative position, beyond a predetermined amount, to engage said nut so that upon the return of the lever to its inoperative position the nut is rotated on the tie rod to shorten the length of the tie rod between the pressure plates.

3,129,790
CALIPER-TYPE DISC BRAKES

John Walter Davis, Kings Norton, Birmingham, England, assignor to Dunlop Rubber Company Limited, County of London, England, a British company

Filed Aug. 28, 1962, Ser. No. 219,885
Claims priority, application Great Britain Sept. 6, 1961
12 Claims. (Cl. 188—73)

1. A disc brake comprising a rotatable disc, a pair of friction elements, one adjacent each radial face of the disc, a non-rotatable caliper straddling a periphery of the disc, a pair of pressure members attached to the caliper one on each side of the disc and tiltable in planes intersecting in a line normal to the plane of said disc, each pressure member bearing against the friction element on the same side of the disc and in the line of intersection of said planes to urge said friction element into frictional engagement with the adjacent face of the disc, and brake actuating means tiltable in a plane intersecting the planes of tilting of said pressure members, said brake actuating

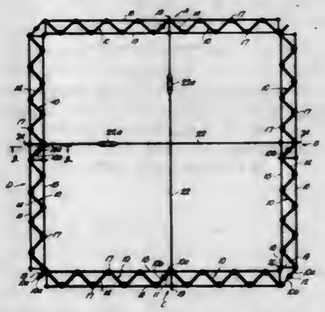


means being connected to said pressure members on the lines of intersection of the planes of tilting of said pressure members with the plane of tilting of said brake-actuating means.

3,129,791
RECTANGULAR BOLTED STORAGE STRUCTURE

Pelayo R. Gumucio, Blue Springs, and Harold G. Simpson, Raytown, Mo., assignors to Butler Manufacturing Company, Kansas City, Mo., a corporation of Missouri

Filed Feb. 8, 1960, Ser. No. 7,180
5 Claims. (Cl. 189—34)



1. In an upright rectangular storage structure made up of a plurality of interconnected panels which define the vertical side walls of the structure, the panels having vertical corrugations, the improvement which comprises a reinforcing assembly extending around the structure intermediate the upper and lower ends theref, said reinforcing assembly including horizontally disposed relatively narrow width girt members substantially spanning the respective side walls, each girt member having corrugations similar in shape to and which interfit with the corrugations of the adjacent side walls, inner and outer plate members of substantially the same width as the girt members aligned with and sandwiching therebetween the girt members and portions of the side wall covered by said girt members and respectively contacting the ridges of the corrugations of the wall and girt members, and detachable fastener elements securing the plates, girts and wall to one another at the places where the plate members contact the ridges of the corrugations.

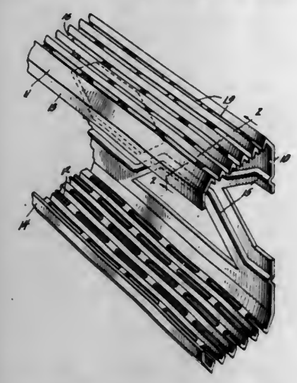
3,129,792
NAILABLE METAL STRUCTURAL MEMBERS

Jacob M. Gwynne, Pipersville, Pa.
(11 Hazelwood Circle, Levittown, N.J.)

Filed Aug. 31, 1960, Ser. No. 53,291
1 Claim. (Cl. 189—34)

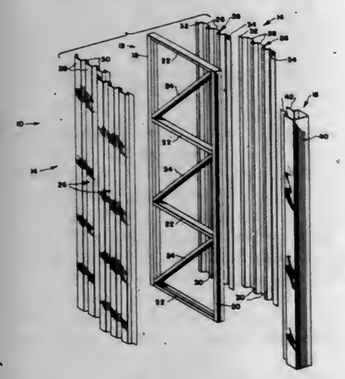
A nailable metal structural member comprising a one-piece rolled section having an elongated flange integral

therewith and extending longitudinally thereof, said flange being formed of a single thickness of metal with a plurality of spaced, parallel nailing grooves substantially covering and each extending continuously in its outer surface, the metal of said flange being weakened in a plu-



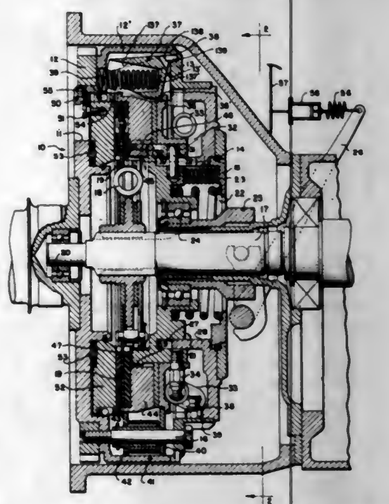
rality of areas spaced along the bottom of each said nailing groove, said weakened areas of each groove being staggered relative to the weakened areas of adjacent grooves, said weakened areas consisting in portions of said groove bottom formed of metal of lesser thickness than the other portions of said flange.

3,129,793
SUNSHADE PANEL UNIT
Russell A. Ferrell, Pittsburgh, Pa., assignor to H. H. Robertson Company
Filed Dec. 15, 1960, Ser. No. 76,044
8 Claims. (Cl. 189—34)



7. A sunshade assembly for windows disposed in an exterior face of a building wall, comprising a plurality of spaced vertical sunshade panel units projecting outwardly from said exterior face, said panel units comprising an internal unitary grid structure including a first continuous grid element and a second continuous grid element, and a plurality of brace elements extending between the said first and second grid elements whereby the said second grid element is maintained in a fixed, outwardly spaced, parallel relationship with said first grid element, said panel units further including two opposed, correlative, corrugated facing sheets, said facing sheets being substantially coextensive with said grid structure and secured at their peripheral edges to the sides of said internal unitary grid structure, said facing sheets having their corrugations aligned with the said first and second grid elements, a cap member including spaced flanges which embrace the said second grid element, said flanges being secured to said second grid element with the peripheral edges of said facing sheets therebetween, and means for securing said first grid element to said exterior face in fixed upright relation therewith whereby said panel units are maintained in shading relation with the said windows.

3,129,794
CLUTCH CONSTRUCTION
Werner E. Altmann, Stuttgart, Kurt Enke, Fellbach, Stuttgart, and Manfred H. Burckhardt, Waiblingen, Germany, assignors to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Sept. 14, 1960, Ser. No. 56,047
Claims priority, application Germany Sept. 16, 1959
43 Claims. (Cl. 192—.07)

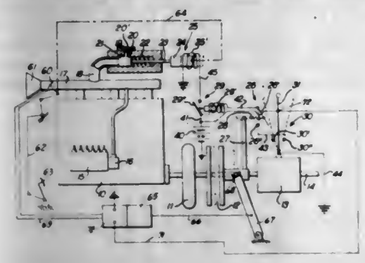


1. A disengageable, force-locking clutch, comprising driving clutch means and driven clutch means, axially movable means arranged adjacent one of said clutch means and adapted to be selectively connected with the other clutch means, and synchronizing and blocking means intermediate said driving and driven clutch means for establishing synchronism therebetween and for preventing the force-locking engagement essentially until synchronism is attained between said two clutch means, said last-named means being constituted in part by inclined engaging surfaces on said axially movable means and said one clutch means for producing an axial thrust in the engaging direction of said axially movable means from the friction moment, and spring means keeping said inclined surfaces in essentially constant abutment with each other.

3,129,795
CONTROL ARRANGEMENT FOR INTERNAL COMBUSTION ENGINES
Karl-Heinz R. Goeschel and Guenter Perrin, Stuttgart-Unterturkheim, Germany, assignors to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Nov. 10, 1958, Ser. No. 772,976
Claims priority, application Germany Nov. 15, 1957
19 Claims. (Cl. 192—.062)

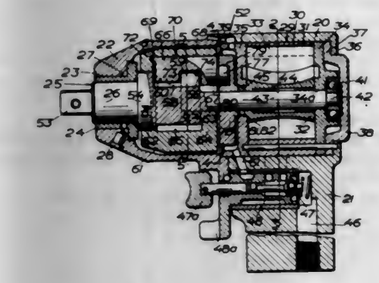
1. An installation for controlling an internal combustion engine for motor vehicles having control means for

normally controlling the operation thereof and in which the torque from the engine is transmitted to drive shaft means over a separating clutch adapted to be engaged and disengaged, comprising adjusting means for adjusting the engine output, and additional control means operatively connected with said separating clutch and with said ad-



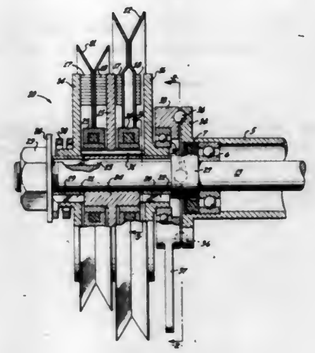
justing means for automatically increasing the torque produced by said engine essentially at the instant of engagement of said separating clutch, said motor vehicle further comprising a hydro-dynamic device having slippage operatively connected between said engine and said separating clutch.

3,129,796
IMPACT CLUTCHES
Karl Gösta Kårdén, Nacka, Sweden, assignor to Atlas Copco Aktiebolag, Nacka, Sweden, a corporation of Sweden
Filed Oct. 18, 1960, Ser. No. 63,309
9 Claims. (Cl. 192—30.5)



1. In an impact clutch having rotating driving means and a rotatable anvil member, the combination for torque transmission therebetween which comprises a rotatable hammer mass mounted in said clutch coaxially with said anvil member, means forming a driving engagement between said driving means and said hammer mass for rotation thereof, a generally cylindrical impact dog, means for mounting said dog in said hammer mass for rotation therewith and angular movement with respect thereto about the axis of said dog in both clutching and declutching directions, the axis of said dog being radially offset from but parallel with the axis of rotation of said anvil member and said hammer mass, the radially inwardly disposed side of said dog facing said anvil member being recessed to form axially and angularly offset oppositely directed impact edge portions a different one of which transmits impact to said anvil member in each direction of rotation of said hammer mass, cam means on said anvil member for engaging in each direction of rotation one of said impact edge portions other than the one which transmits impact in that direction of rotation effecting angular movement of said dog in said clutching direction, means for moving said dog in said declutching direction, and a bearing surface on said hammer mass for engaging the radially outwardly disposed side of said dog substantially throughout the entire length thereof.

3,129,797
SELECTIVE DRIVE TRANSMISSION
Dale C. Orcutt, 291 E. State St., and Claud J. Dry, 76 S. Shannon Ave., both of Athens, Ohio
Filed Feb. 9, 1962, Ser. No. 172,189
6 Claims. (Cl. 192—48)

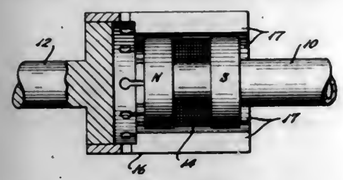


1. A selective drive mechanism comprising:
(*a*) a rotatably mounted shaft;
(*b*) first, second and third clutch plates coaxially mounted and keyed to said shaft in axially spaced relationship for simultaneous rotation with said shaft, the second clutch plate being intermediate the first and third clutch plates and secured against axial movement, the first and third clutch plates being movable axially of said shaft;
(*c*) a first pulley coaxially mounted upon said shaft and intermediate said first and second clutch plates, a second pulley coaxially mounted upon said shaft and intermediate said second and third clutch plates, said first and second pulleys each being freely rotatable on said shaft and having clutching discs mounted on both sides thereof and matable with adjacent clutch plates;
(*d*) means for simultaneously urging said first and third clutch plates in one axial direction, placing said first clutch plate into engagement with its associated first pulley clutching disc and placing the third clutch plate out of engagement with its associated second pulley clutching disc; and
(*e*) manually operable means for moving said first and third clutch plates in the opposite axial direction, placing the third clutch plate into engagement with its associated second pulley clutching disc and placing the first clutch plate out of engagement with its associated first pulley clutching disc.

3,129,798
CYLINDER CLUTCH
Jacob Rabinow, Bethesda, Md., assignor to Rabinow Engineering Co., Inc., Takoma Park, Md.
Filed May 29, 1961, Ser. No. 113,348
13 Claims. (Cl. 192—84)

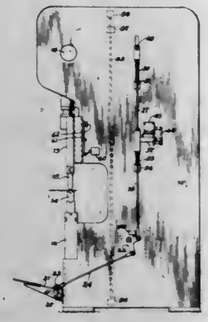
1. An electromagnetic coupling comprising a cylindrical electromagnet provided with a surface, and a cylindrical device having a plurality of flexible elastic fingers provided with inner ends, said fingers being of a length at least twice the diameter of said device and flexible from the inner end of each finger to move easily toward and away from said electromagnet, said electromagnet and

device being nested, means for energizing said electromagnet and thereby magnetically attracting the fingers



and flexing them against the electromagnet to establish a frictional drive connection between the electromagnet and said device.

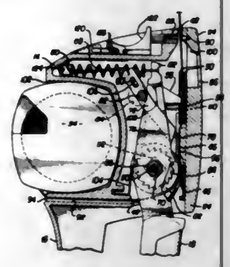
3,129,799
RAM ARRESTER FOR PRESS BRAKES
Reeve W. Dean, East Aurora, and Willard J. Short, Tonawanda, N.Y., assignors to Niagara Machine & Tool Works, Buffalo, N.Y.
Filed Oct. 4, 1961, Ser. No. 142,955
6 Claims. (Cl. 192—129)



1. In a power operated press brake having a ram and power means for reciprocating said ram to effect working and return strokes, a manually operable member and a control member for rendering said power means selectively operable and inoperable, each of said members having off and on positions and each being resiliently biased to off position, yieldable means normally connecting said members for joint movement between off and on positions but releasable under the force normally required to move said control member to on position and hold the same thereat, electromagnetic means and a circuit therefor normally energized to prevent release of said members, limit switch means actuatable by said ram at a predetermined point in its working stroke to open said circuit whereby said yieldable connection releases and said control member returns to off position, and alternative circuit means for said electromagnetic means energizable by return of said manual member to off position, whereby return of said manual member to off position establishes reconnection of said members and energization of said electromagnetic means whereby subsequent movement of said manual member to on position moves said control member to on position to complete a working stroke.

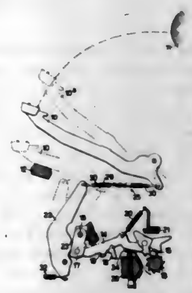
3,129,800
STRIP EMBOSSING IMPLEMENT
Benedict E. Bogeaus, 10350 Sunset Blvd., Los Angeles, Calif.
Filed Mar. 18, 1963, Ser. No. 265,725
14 Claims. (Cl. 197—6.7)

1. A tape embossing implement of the character adapted to include a rotary embossing die and comprising: a body having a handle member extension affixed rigidly thereto; a movable handle disposed in a single hand grip relationship with said handle extension and being pivoted about a first fulcrum formed by a pivot axis carried by said body, said handle including a forward portion extending beyond said fulcrum and within said body; punch anvil means carried by said forward portion of said handle and adapted to move in a first direction to actuate a predetermined character impressing portion of said die when said handle is pivotally displaced toward said handle extension; spring biasing means for



urging said forward portion oppositely from said first direction; an action multiplier-bar pivoted about a second pivot axis carried by said body forwardly of said first pivot axis, said multiplier-bar having a fulcrum forward end engaged by said second pivot axis and a rear pawl end, said multiplier-bar having a mid portion disposed and adapted to be engaged by said forward portion of said handle and moved thereby in said first direction when said handle is pivotally displaced toward said handle extension and in said opposite direction when said handle is released.

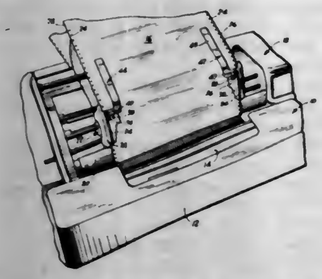
3,129,801
POWER OPERATED TYPEWRITER
John F. Heyer, West Hartford, Conn., assignor to Underwood Corporation, New York, N.Y., a corporation of Delaware
Filed May 1, 1962, Ser. No. 191,505
7 Claims. (Cl. 197—17)



1. A spring link motion transmitting assembly comprising in combination,
(*a*) two wire rods extending toward each other in a straight line and including portions of generally complemental fractional cross section extending in a lengthwise overlapping relationship and slidably parallel to each other,

(*b*) and a distensible spring coil being placed axially parallel upon said wire rods with at least said overlapping rod portions slidably and stiffly contained therein and with the spring coil at opposite locations beyond said rod portions having impositive anchoring attachment on said rods through some end-turns thereon having a diametrically contracting friction hold thereon,
(*c*) the said rods embodying abutment means for said spring coil by its ends to locate oppositely thereagainst through shock movements of the spring coil ends lengthwise from each other when the spring coil turns compact against each other after the spring link assembly has transmitted motion.

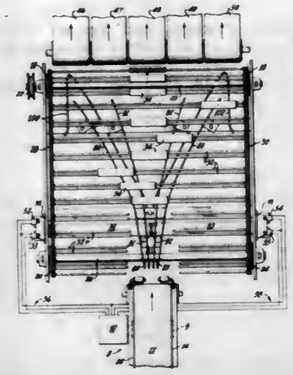
3,129,802
PAPER HOLDING MECHANISM FOR OFFICE MACHINES
Oliver C. Engle, 1624 S. Gary Ave., Tulsa, Okla.
Filed Sept. 27, 1961, Ser. No. 141,046
2 Claims. (Cl. 197—139)



1. In combination with a data processing machine including a form-aligner device and having a web of paper moving therethrough at a high speed, paper holding means adapted to be secured to the form-aligner device of the machine and comprising a pair of substantially identical oppositely disposed holder members, each of said holder members comprising a relatively short leg and a relatively long leg disposed at substantial right angles with respect to each other, each of said short legs provided with apertures for facilitating securing of the holder members to the form-aligner whereby the holder members are disposed slightly inwardly therefrom, detent means provided on each short leg for cooperation with the form-aligner to stabilize the holder members against vibration of the machine during operation thereof, said short legs being slightly bent along the longitudinal center line thereof to preclude hindrance of the operating portions of the machine, each of said long legs being bent with respect to the associated short leg whereby the long leg extends upwardly from the machine a short distance and being further bent whereby the greater portion thereof extends rearwardly of said short legs a sufficient distance for precluding back-folding of the paper being processed in the machine due to passage of the paper over the rear portions of the machine.

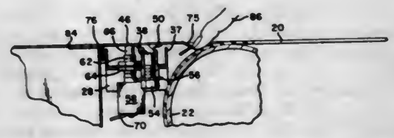
3,129,803
REJECTION SYSTEM
Joe D. Giulie, Los Altos, and Charles F. Peasley, San Jose, Calif., assignors to Illumitronic Systems Corporation, a corporation of California
Filed May 10, 1962, Ser. No. 195,658
2 Claims. (Cl. 198—31)

1. A segregation device comprising:
(*a*) an endless conveyor;
(*b*) means for driving said conveyor in a single direction;
(*c*) a plurality of carriers slidably mounted on said conveyor for movement laterally thereof perpendicular to the direction of movement of said conveyor, each of said carriers having a cam follower thereon;
(*d*) first cam means comprising at least two blades below and adjacent said conveyor, said blades being supported at one end and being flexible and capable of being deflected so as to contact the said cam followers of the said carriers whereby slightly to divert the said carriers from their paths;



(*e*) means for actuating said blades, said means comprising a first push rod adapted to actuate only one of said blades and a second push rod adapted to push the second of said blades into contact with the first whereby to actuate the said blades in unison whereby the second push rod may control both of the said blades;
(*f*) means for sliding the push rods;
(*g*) second cam means positioned adjacent the said conveyor at a point along the path of travel thereof subsequent to the said blades, said second cam means being so positioned that the cam follower of a diverted follower passing thereby will be contacted and will be further diverted from its path as the conveyor moves and a non-diverted carrier will not be contacted and diverted;
(*h*) and a loading station for said conveyor at a point along the path of conveyor travel subsequent to the said blades.

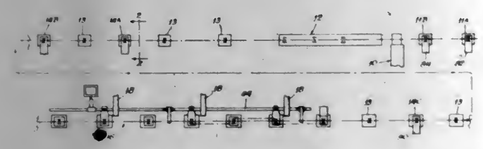
3,129,804
STORE FIXTURE
Richard A. Niekamp, Montgomery County, Ohio, assignor to Standard Dayton Corporation, Dayton, Ohio, a corporation of Ohio
Filed June 22, 1960, Ser. No. 37,932
11 Claims. (Cl. 198—37)



1. A conveyor assembly of the type having support structure, a rotatable support roller carried by the support structure, and a belt movable upon the roller with rotation thereof, comprising a shelf disposed adjacent the

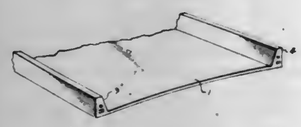
roller and the belt, the shelf having a pair of opposed edges, resilient means carried by the support structure in supporting relation to the shelf at the central portion thereof, guide means attached to the shelf in spaced relation from said edges thereof, guide means attached to the support structure, there being loose connection between said guide means, there thus being limited up and down movement of said edges of the shelf with respect to the support structure and limited pivotal movement of the shelf about any axis, and control means engaging the shelf for operation with movement of the shelf.

3,129,805
TAKE-OFF CONVEYOR
Leo G. Krahn, Chicago, and Ernest Grossich, River Grove, Ill., assignors to Amsted Industries Incorporated, Chicago, Ill., a corporation of New Jersey
Filed Dec. 14, 1961, Ser. No. 159,369
6 Claims. (Cl. 198—127)



1. A conveyor arrangement for transporting, from a first treating station to a second treating station along a path, a plurality of axially aligned substantially abutting elongated articles comprising: a plurality of spaced rollers; individual means for driving each of said rollers at a predetermined speed; control means responsive to an article passing over at least one roller for increasing the speed of said one roller and all other rollers between said first and said second treating station, said control means being responsive to the trailing end of an article passing an associated roller for decreasing the speed of the associated roller to said predetermined speed.

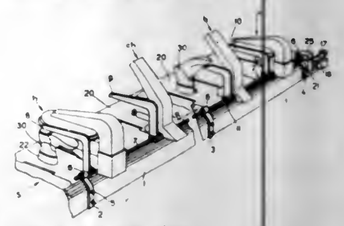
3,129,806
PRESTRESSED CONVEYOR BELTING
Marshall A. Stiltner, Piedmont, Calif., assignor, by mesne assignments, to The Monobelting Corp., Oakland, Calif., a corporation of California
Filed Nov. 16, 1959, Ser. No. 853,295
11 Claims. (Cl. 198—193)



1. Fabric-reinforced elastomer conveyor belting prestressed and cured with a transverse crown, the fabric of said belting being held under tension by the elastomer of the belting, said tension having a transverse gradient diminishing from the center line of the belting to its edges.

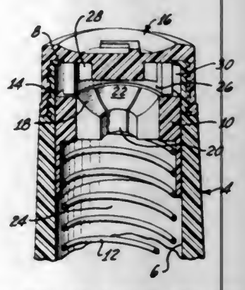
8. The method of making prestressed conveyor belting comprising: stretching an uncured length of fabric-reinforced belting carcass lengthwise with a transverse stretch gradient diminishing from the center line of said carcass to its edges and then curing the carcass as so stretched whereby the fabric of the cured carcass will be held under tension by the elastomer of the carcass.

3,129,807
SAFETY DEVICE FOR A MANUFACTURING CONVEYOR
Jiri Richter and Karel Černoch, Gottwaldov, Czechoslovakia, assignors to Svit, narodni podnik, Gottwaldov, Czechoslovakia
Filed Dec. 27, 1961, Ser. No. 162,514
Claims priority, application Czechoslovakia Dec. 29, 1960
4 Claims. (Cl. 198—232)



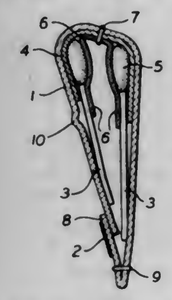
1. In a conveyor arrangement,
(*a*) a frame;
(*b*) elongated endless belt means on said frame;
(*c*) electric drive means for actuating movement of said belt means on said frame in a longitudinal direction;
(*d*) means defining a plurality of work stations adjacent said belt means and spaced from each other in said direction;
(*e*) means for securing a work piece on said belt means for movement therewith in a predetermined path;
(*f*) a plurality of sensing arms spacedly mounted on said frame closely adjacent said path for limited movement in said direction, each of said arms being associated with one of said stations; and
(*g*) switch means in circuit with said drive means and responsive to said limited movement of each of said sensing arms to stop said drive means.

3,129,808
CAP
Robert H. Amen, Fremont, Calif., assignor, by mesne assignments, to Barnes-Hind International, Inc., a corporation of California
Filed May 3, 1961, Ser. No. 107,545
1 Claim. (Cl. 206—5)



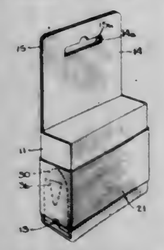
In a contact lens case wherein said case has a tubular structure with an externally threaded end with a movable piston mounted within said tubular structure, said piston having a concave portion adapted to receive a contact lens and a rim at the edge of said concave portion, said tubular structure having an inturned lip which bears against a portion of said rim to prevent the piston from coming out of the tubular structure, the improvement comprising a single piece cap having a round end portion, a first downturned annular skirt at the periphery of the end portion, said first skirt having internal threads thereon adapted to mate with the external threads of the tubular structure and a second annular skirt of smaller diameter than the first skirt and concentric therewith, said skirt extending downwardly from said end portion and having a length slightly shorter than the first skirt, said second skirt being adapted to press against the rim of the piston and depress the same, and a passage in the second skirt, said passage linking the annular area formed between the first and second skirts and the internal circular area defined by the second skirt whereby liquid can pass through said passage while said second skirt is in contact with said rim.

3,129,809
MATCH BOOK
Martin M. Sternau, 67—50B 188th St., Flushing 65, N.Y., assignor of thirty-three and one-third percent to Leo Stanger, Summit, N.J.
Filed Dec. 19, 1960, Ser. No. 76,816
9 Claims. (Cl. 206—29)



1. A book of matches comprising:
(*a*) a foldable book-like enclosure adapted to be opened and closed; and
(*b*) a plurality of adjacent matches adapted to be enveloped by said enclosure when said enclosure is closed and having striking heads at the ends thereof;
(*c*) said enclosure having adhesive protecting means in contact with said heads for covering said heads when said enclosure is open.

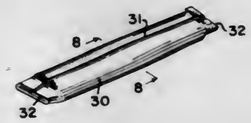
3,129,810
REPLACEMENT BLADE PACKAGE
August P. Wilkens, Leonia, N.J., assignor to Evans Rule Co., Elizabeth, N.J., a corporation of New Jersey
Filed Aug. 21, 1961, Ser. No. 132,776
3 Claims. (Cl. 206—46)



1. A replacement tape package comprising a paper box, a coiled spring metal tape blade in said box, said box having opposed open ends closed by integral folded flaps defining end walls, front and rear integral sides with at least one of said sides having an opening through which is insertable a tape coiling spindle for coiling said spring metal tape blade within the box, said coiled spring metal tape blade within said box pressing forcefully against said flaps to push said flaps outwardly with an end of the tape blade positioned outwardly of the box through an

aperture just at the lower edge of one of the flaps, and a relatively wide loop slidably fitted about the box in contact with said opposed flaps and said front and rear sides for closing said opening and holding said flaps in box closing position against the pressure of said tape and simultaneously maintaining said end of the tape folded against the outer face of one of the flaps in opposition to the flexing pressure exerted by said folded end, said spring metal tape end in turn holding said loop yieldingly against sliding relatively to said box.

3,129,811
PACKAGE FOR TREATING AGENTS AND DISPOSABLE APPLICATOR FORMING A PART THEREOF
Ross Ransom Williams, Winsted, Conn., assignor, by mesne assignments, to Canaan Products, Inc., Canaan, Conn., a corporation of Delaware
Application Nov. 18, 1959, Ser. No. 853,830, now Patent No. 3,057,467, dated Oct. 9, 1962, which is a continuation of application Ser. No. 411,815, Feb. 23, 1954. Divided and this application Sept. 28, 1962, Ser. No. 226,827
5 Claims. (Cl. 206—46)



1. A cleansing kit comprising: an applicator made of a substantially rectangular flexible sheet of absorbent unwoven fibrous material large enough in unfolded condition to serve as a washing and drying implement free of any backing, said sheet being folded and rolled tightly to provide a readily unrollable and unfoldable, compact, cylindrical, multi-ply pad structure; a liquid impregnating and saturating said folded and rolled applicator, said liquid comprising a cleansing agent in a volatile vehicle of water and alcohol; the impregnated applicator having a sufficient strength to resist disintegration upon storage over a long period of time and to resist tearing upon unrolling and unfolding thereof just prior to use and during application of the liquid in use; and an envelope slightly larger in size than the folded and rolled applicator conforming to the shape thereof encasing and protecting the applicator and liquid, said envelope being sealed and being made of a flexible, tearable laminated sheet material, said laminated material comprising an inner layer which seals upon the application of heat and an outer layer of nonplastic material bonded thereto so that the envelope may be opened by tearing the laminated envelope material, said laminated material being substantially unaffected by and substantially impermeable to the liquid and the vapors thereof which are enclosed therein and being of the strength to resist the vapor pressure thereof at normal atmospheric temperature.

3,129,812
PACKAGED FLANGED COUPLING ADAPTER ASSEMBLY
John H. Deasy, Daly City, Calif., assignor to Smith-Blair, Inc., South San Francisco, Calif., a corporation of California
Filed Apr. 17, 1961, Ser. No. 103,451
1 Claim. (Cl. 206—47)

A packaged flanged coupling adapter assembly, including in combination:
(*a*) a one-piece flange-adapter having a cylindrical sleeve with an integral flange at one end and a frustoconical gasket seat at the other end,

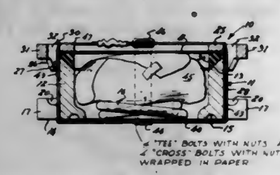
said flange having a face with an annular gasket-receiving recess, a periphery with more than two pairs of radially inwardly extending diametrically opposite slots, and a rear side having an annular bolt-head receiving recess;

(*b*) a first gasket seated in said frusto-conical gasket seat;

(*c*) a pair of stiff, flat, end-closure members each shaped with a circular disc portion having diametrically opposite pairs of radially outwardly extending tabs, said disc portion being substantially the same outer periphery as said sleeve,

a first said closure member being seated over said first gasket and the gasket-seat end of said sleeve with its tabs bent axially toward said flange and aligned with but spaced axially from some selected said slots,

a second said closure member being seated over said flange face with its tabs bent axially into said selected slots;



(*d*) a second gasket for insertion in said gasket-receiving recess, folded and located inside said sleeve between said closure members;

(*e*) a package of bolts and nuts, one each for each slot, inside said sleeve between said closure members;

(*f*) a follower having an axially extending tubular cylindrical portion with an inner periphery larger than the outer periphery of said sleeve and end lug portions providing bolt openings alignable in diametrically opposite pairs with some of the pairs of said slots and at substantially the same radius,

said follower being placed over said first closure member with its bolt openings aligned with said tabs of said closure members; and

(*g*) a plurality of closed straps passing around said packaged assembly, passing across said first closure member and crossing each other there, passing through the bolt openings of said follower and over said tabs of said first closure member, through the slots over the tabs of said second closure member and across said second closure member there, crossing each other there,

whereby a complete package is provided containing all the parts needed for assembly and providing a compact and easily handled unit.

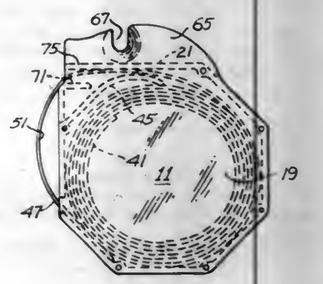
3,129,813

TAPE STORAGE AND DISPENSING MAGAZINE

Ralph E. Norvelle, Pleasant Hill, Calif., assignor to Dashew Business Machines, Inc., Los Angeles, Calif., a corporation of Delaware

Filed Sept. 11, 1961, Ser. No. 137,172
5 Claims. (Cl. 206—52)

1. In combination, a tape storage and dispensing magazine comprising a pair of spaced side walls having corresponding peripheral edges for at least a substantial portion of the periphery of the side walls; edge wall means connecting said peripheral edges and forming with said side walls a magazine chamber for a roll of tape; a coiled tape roll freely disposed within said magazine chamber and having contact with the edge wall means; said edge wall means having an opening for dispensing tape from said chamber, and having a slot means spaced from said opening, the free end of said coiled tape roll passing through said opening and over a portion of said edge wall means, and passing through said slot means and between internal surfaces of the edge wall means and



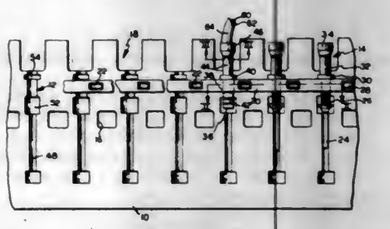
the remainder of the tape roll for frictionally positioning and holding of the tape end by pressure of said tape roll against said free end and internal surfaces.

3,129,814

PORTABLE FEED TAPE

Ernest L. Cheh, Norwalk, and Charles C. Stratton, South Norwalk, Conn., assignors to Burndy Corporation, a corporation of New York

Filed Jan. 23, 1961, Ser. No. 84,301
1 Claim. (Cl. 206—56)



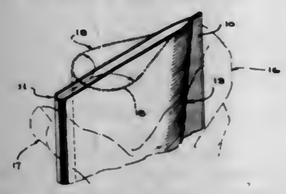
A tape assembly for storing and transporting articles through a machine for processing, which comprises: a flexible supporting tape having a plurality of article supporting portions, said portions being aligned parallel to one another; a plurality of elongate articles each disposed in one of said article supporting portions with the longitudinal axis of each at right angles to the longitudinal axis of said supporting tape; the edge of said tape at each said article supporting portion being cut out to permit one end of each article to extend free of said tape for processing; each said article supporting portion having a part thereof recessed below the surface of said tape to support the article therein supported with the longitudinal axis of said article lying substantially in the same plane as said tape and with a portion of said article projecting above the plane of the tape; means integral with the tape to cooperate with a feed mechanism on said machine; a holding strip extending the length of said tape and having a width less than the width of said tape and less than the length of said article; said strip being disposed over the projecting portion of each article and being fixedly secured to said tape intermediate said articles at points substantially spaced from one side of each to form a strip portion positioned for engagement by a shearing device operating substantially normally to the plane of said tape, whereby a shearing device may sever said strip to free said articles individually from said tape while retaining the severed portions of said strip secured to said tape.

3,129,815

SPECIAL PACKAGE

Thomas R. Baxter, Mount Vernon, Ohio, assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed Apr. 20, 1961, Ser. No. 104,431
7 Claims. (Cl. 206—56)



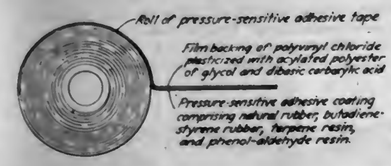
1. A special package of the character described having generally flat rectangular walls in spaced opposing parallelism about a base powder fill and having at one side a springy well rounded fold, at its other side a heat sealed margin, at its bottom another heat sealed margin, and at its top another heat sealed margin, whereby, upon removal of the top and the incidental provision of an open mouth, a grasping of the sides between the fingers and thumb of a user and application of pressure against said sides, said fold will by it springy nature facilitate separation of the spaced opposing parallel walls adjacent the fold and initiate the provision of a wide opening of the package mouth for the receiving of water for admixture with the powder.

3,129,816

PRESSURE-SENSITIVE ADHESIVE TAPE WITH PLASTICIZED POLYVINYL CHLORIDE BACKING

Herbert M. Bond, Stillwater Township, Washington County, and Werter Pierce Smith, Richfield, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Continuation of application Ser. No. 174,650, Feb. 7, 1962. This application Oct. 31, 1963, Ser. No. 320,279
17 Claims. (Cl. 206—59)



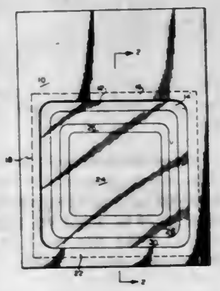
1. A pressure-sensitive adhesive tape capable of being wound upon itself in roll form and of being readily unwound at any ambient temperature including temperatures as low as —20° C. without splitting or offsetting of the adhesive and then wrapped around splices and wires, and having sufficient elasticity, retractility and adhesion at any such temperature to remain tightly and snugly in place, while providing effective electrical insulation of the splices and wires over at least the range of —20° C. to 87° C., said adhesive tape comprising: (1) a soft and pliable film backing consisting essentially of a stable blend of (*a*) 100 parts by weight of a film-forming polymer of monomer comprising at least about 90% vinyl chloride and (*b*) about 45–75 parts of plasticizer, the primary constituent of which is a soft viscous polyester compatible with the vinyl polymer in said amount and stable against substantial exudation from the vinyl polymer, said polyester having a number average molecular weight of about 750–2500 and containing hydrocarbon chains between ester groups, and further containing terminating hydrocarbon chains, said chains having an average length providing in said plasticized film an elongation at break of at least 100% at —20° C.; and (2) a normally tacky and pressure-sensitive adhesive coating of a firm-type rubber resin composition firmly united to one face of said backing, the rubber resin components of said adhesive composition having a cohesive energy density of less than 75 calories per cubic centimeter; said plasticizer in said film backing being in permanent equilibrium with said pressure-sensitive adhesive coating so as to avoid pastiness or loss of tack of the adhesive coating and diminution of the flexibility of the film backing; and said adhesive tape being originally stretchable in widths of about one inch by simple hand pulling to an extent of at least 100% at room temperature and being substantially completely retractable from an elongation of 50% in seconds or minutes.

3,129,817

ORNAMENTAL AND PROTECTIVE BLISTER PACKAGE

Howard A. Robdin, 397 Forest Ave., Glen Ridge, N.J.

Filed June 1, 1961, Ser. No. 114,157
1 Claim. (Cl. 206—78)



A blister type package comprising: a front wall of relatively rigid material, said front wall having a die cut window formed therein; a sheet of plastic material secured to the rear of said front wall and substantially coplanar therewith; a second sheet of plastic material secured to the rear of said first named sheet; a contents receiving blister formed in said second named sheet, the external dimensions of said blister being substantially less than those of said window, and a ridge formed in said second named sheet and substantially surrounding said blister, there being a plane area between said ridge and said blister and between said ridge and the margin of said window both of said plane areas being substantially coplanar with the rear surface of said first named sheet.

3,129,818

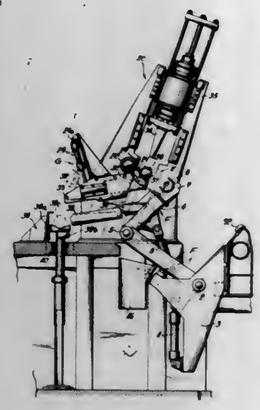
MEANS FOR SEVERING FROM AN EXTRUDED PRODUCT A PACK EXPELLED BY A PRESS RAM FROM THE CONTAINER OF A METAL EXTRUSION PRESS

Otto Behrendt, Dusseldorf, and Josef Schiffers, Rheindahlen, Germany, assignors to Schloemann Aktiengesellschaft, Dusseldorf, Germany

Filed Feb. 9, 1961, Ser. No. 88,058
Claims priority, application Germany Feb. 26, 1960
10 Claims. (Cl. 207—1)

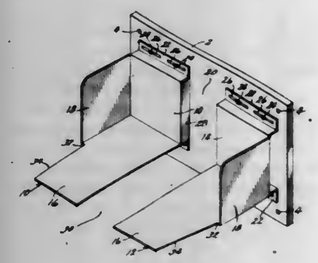
1. Means for removing an extrusion disc from a pack expelled from the container of an extrusion press, the pack comprising an extrusion residue, an extrusion disc, a shell enclosing the extrusion disc, an extrusion skirt, a cleaning disc, and in some cases also an extrusion stump, and the removing means comprising: a stationary prism, a prism movable into and out of a position adjacent to the stationary prism, in which the prisms support the pack with the extrusion residue resting on the stationary prism and

with the extrusion skirt and the cleaning disc resting on the movable prism, and a severing ram adapted to act radially upon the shell and the extrusion disc within it



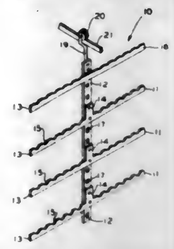
while the pack is thus resting upon the prisms, so as to thrust the extrusion disc out of the pack into the space between the prisms.

3,129,819
NEWSPAPER STORAGE AND BALING RACK
James H. Chandler, 3917 W. 62nd St., Fairway, Kans.
Filed Aug. 27, 1962, Ser. No. 219,579
6 Claims. (Cl. 211—50)



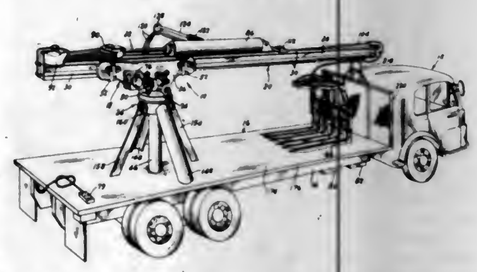
1. A newspaper storage and baling rack comprising:
(*a*) a planar support panel disposed in a vertical plane,
(*b*) a pair of horizontal coplanar shelves each affixed at its rearward edge to said panel and extending forwardly therefrom, said shelves being horizontally spaced apart whereby to define a slot therebetween extending from said panel to the forward edges of said shelves,
(*c*) a pair of vertical back walls each affixed at its lower edge to one of said shelves and being of a width equal to and coextensive with said shelf, said back wall being parallel to but spaced forwardly from said support panel, and
(*d*) a vertical guard wall fixed to the vertical edge of each of said back walls adjacent the other of said back walls, said guard wall extending the full height of the associated back wall and being disposed in a plane at right angles to said back wall, and extending from said vertical edge of said back wall rearwardly to said support panel.

3,129,820
ADJUSTABLE SMOKEHOUSE TREE
Howard Stulman, 7624 Algon Ave., Philadelphia, Pa.
Filed Dec. 16, 1960, Ser. No. 76,836
1 Claim. (Cl. 211—117)



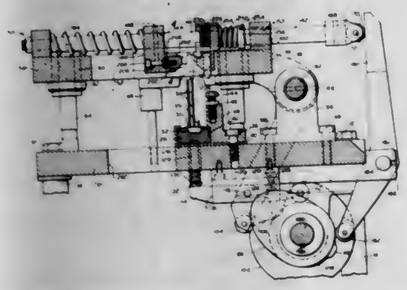
A vertically adjustable, horizontally movable smokehouse tree comprising in combination a vertically adjustable product supporting rack and at least one horizontally movably mounted, vertically extending bracket therefor, said rack comprising a horizontal supporting arm, and a vertical supporting arm perpendicular thereto, thereby assuming the configuration of an inverted T, said horizontal rack arm including a plurality of spaced notches each adapted to support a product suspended therefrom, said rack including on one surface thereof hooked hanging means, said bracket comprising at least one elongated body member having vertically spaced apertures formed therein, said bracket and said vertical rack arm being in surface contact, said bracket having a wheel extending therefrom for rolling movement in a horizontal track, whereby said product supporting rack is adapted to releasably interfit at vertical intervals within at least one of said bracket apertures to obtain the desired height thereof above ground, and whereby said rack is also horizontally adjustable as said wheel is moved in said horizontal track.

3,129,821
HOIST FOR VEHICLE
Frank A. Graham and John A. Geubtner, York, Pa., assignors to Side-O-Matic Unloader Corporation, York, Pa., a corporation of Pennsylvania
Filed June 20, 1960, Ser. No. 37,376
11 Claims. (Cl. 212—55)



1. A hoist of the type attachable to the bed of a vehicle to lift loads to and from said bed and comprising in combination, a substantially T-shaped head having an elongated channel-like passage extending longitudinally of the upper portion of said head in a normally horizontal direction and open longitudinally along the top of said head, means on the lower portion of said head connectable to supporting means permitting rotation of said head about a normally substantially vertical axis, an elongated boom mounted within said channel-like passage of said head and comprising an I-beam positioned with the web of the beam substantially vertically and the top and bottom flanges thereof being substantially horizontal in use, bracing means fixed to said I-beam and extending longitudinally thereof to brace the same against appreciable deflection when sustaining a load, supporting rollers carried by said head and engaging said boom to support the same for movement longitudinally of said head, elongated load hoisting means carried by the top of said boom intermediately of the ends thereof and extending above said head, said hoisting means being movable through the longitudinal open top of said head as said boom is moved longitudinally of said head, and means engaging said boom and operable to move the same selectively in opposite directions longitudinally of said head.

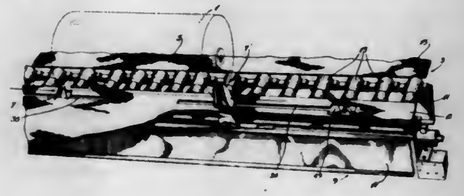
3,129,822
ARTICLE HANDLING
Richard R. Bower, Palo Alto, Calif., assignor, by mesne assignments, to Raytheon Company, Lexington, Mass., a corporation of Delaware
Filed Mar. 6, 1961, Ser. No. 93,692
3 Claims. (Cl. 214—1)



1. Apparatus for removing articles from a transfer station on an elongated horizontal conveyor, upright guide posts mounted adjacent the transfer station to extend above it, a movable frame mounted on the guide posts, at least one rod mounted on the frame above the transfer station to be movable axially in a direction transverse to the guide posts, a first jaw rigidly mounted on the rod to be movable with it, a second jaw mounted on the rod to face the first jaw, the second jaw being mounted to slide along the rod toward and away from the first jaw, a spring urging the second jaw toward the first jaw, latch means on the rod for engaging the second jaw to prevent it from moving along the rod toward the first jaw, means for moving the frame on the guide posts down from an upper position and a lower position over the transfer station, means for releasing the latch means independently of axial movement of the rod as the frame is moved from the upper to the lower position to release the latch means so the second jaw is urged by the spring to move toward the first jaw and grip an article between the jaws at the transfer station, means for raising the frame on the guide posts from the lower to the upper position with the jaws engaging and lifting the article from the conveyor, means for moving the rod axially when the frame is in the upper position to transfer the jaws and article from over the transfer station, and means for spreading the jaws apart as they move away from the transfer station to release the article.

3,129,823
CENTERING MECHANISM FOR PAPER ROLLS AND THE LIKE
Georges A. Bilocq, Plessiville, Quebec, Canada, assignor to Forano Limited, Plessiville, Quebec, Canada
Filed Nov. 15, 1961, Ser. No. 152,536
2 Claims. (Cl. 214—1)

1. A centering and rejecting device for paper rolls or the like, comprising:
(*a*) a conveying table formed of a plurality of central conveyor rollers distributed axially of the table and of a longitudinal apron along each side of said conveyor rollers; said rollers being narrower than the diameter of the paper rolls adapted to be displaced thereover so that said rolls overlie a portion of each side apron;
(*b*) said table including a section pivotable about an axis parallel to and offset from the axis of the table and comprising some of the conveyor rollers and the adjacent part of one side apron;
(*c*) lifting means connected to said part of said one side apron and acting to pivot said section to reject a paper roll located on said some of the conveyor rollers;
(*d*) the apron located across said lifting means being provided with groove means alongside said conveyor rollers and at a distance thereof such that the groove means will lie underneath passing paper rolls;



(*e*) two pusher dogs having upstanding webs projecting through said groove means and upstanding abutting surfaces facing one another above the apron and adapted to abut the ends of a paper roll to be centered;
(*f*) endless chord means, below said apron, having upper and lower strands moving in reverse directions and interconnecting said dog means with one dog connected to the upper strand and the other dog to the lower strand;
(*g*) power means driving said endless chord means for displacing the dog towards and away from one another through said endless chord means;
(*h*) said dogs being disposed at equal distances from said pivotable sections and each being mounted on a displaceable carrier;
(*i*) said carrier being fixed to the chord of said endless chord means whereby a passing paper roll is first centered in relation to said pivotable section by said movable pusher dogs and then rejected by said pivoting means by being pushed off said table.

3,129,824
ARTICLE HOLDER AND CONVEYOR SYSTEM
Maurice M. Levy, Ottawa, Ontario, Canada, and Bela Adolf Arnoti, Concord, N.H., assignors to Her Majesty The Queen in the right of Canada as represented by the Postmaster General, Ottawa, Ontario, Canada
Filed Sept. 19, 1960, Ser. No. 56,925
15 Claims. (Cl. 214—6)



1. An article holder comprising
(*a*) a carriage including means defining orientation of said carriage for travel along a conveyor,
(*b*) a jaw assembly for holding a flat article for travel with the holder,

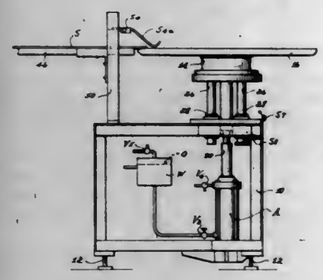
(c) means mounting said jaw assembly on said carriage for movement generally transversely of the direction of travel of said carriage between a withdrawn position and a projecting position,

(d) said jaw assembly including a pair of individual jaw members relatively movable between an open, article-receiving position and a closed, article-conveying position,

(e) locking means associated with said jaw assembly for movement between a first condition in which an article held within closed jaw members is firmly engaged and retained therein and second condition in which said article is gently engaged while still retained therein,

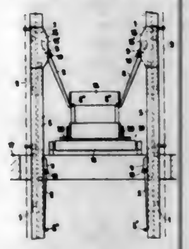
(f) and means interconnecting said locking means and jaw assembly for moving said locking means to its second condition upon achievement by said jaw assembly of its projecting position.

3,129,825
STACKING AND UNLOADING APPARATUS
Harold W. Lamb, Washington Crossing, N.J., assignor to Crossley Machine Company, Inc., a corporation of New Jersey
Original application Apr. 3, 1959, Ser. No. 804,009, now Patent No. 3,013,671, dated Dec. 19, 1961. Divided and this application June 29, 1961, Ser. No. 120,692
1 Claim. (Cl. 214—6)



In apparatus of the character described having a base and a sheet supporting platform mounted for vertical movement thereon and having means on said base cooperative with sheets stacked thereon to effect the lowering and raising of said platform, said means including a hydro-pneumatic cylinder vertically mounted on said base and having a piston rod connected to said platform, said cylinder also having an electrical combination air pressure and relief valve communicating with a source of air pressure and the top of said cylinder, said means also including a well partially filled with liquid, and a conduit communicating with the bottom ends of said cylinder and well, an electrical flow control valve in said conduit, and an electrical combination air pressure inlet and relief valve communicating with a source of air pressure and the top of said well; an electrical retarded action switch mounted on said base and having an actuating lever, the actuation of said switch being effected by the forcible lifting of said lever responsive to the thickness of sheets in slidable contact thereunder between said lever and platform, said switch being in an electrical circuit with said flow control valve and comprising the sole switch means for actuating said valve to permit a sufficient flow of liquid between said well and cylinder to effect vertical movement of said piston rod and platform in one direction a distance equal to the thickness of a sheet actuating said electrical switch; and a pair of vertically spaced switches on said base connected in the electrical circuit with said liquid flow control valve and with said combination air pressure inlet and relief valves for the actuating of said valves; and abutment means carried by said platform for actuating said switches in cooperative opening and closing of said valves at the end of each stroke of said piston rod in effecting vertical movements of said platform in either direction.

3,129,826
ELEVATORS FOR ARTICLES
Samuel Rohrbach, Weissenburg, Switzerland, assignor to Weissenburg-Mineralthermen AG., Weissenburg, Switzerland
Filed June 6, 1961, Ser. No. 141,931
Claims priority, application Switzerland June 11, 1960
2 Claims. (Cl. 214—6)



1. An elevator comprising

(1) a pair of spaced endless chains supported to move in parallel planes,

(2) stationary guide rails,

(3) pairs of opposite carrying members spacedly secured to said chains for swinging movements parallel to said planes,

(4) a shaft rotatably fixed to each of said members to extend parallel to said planes,

(5) pairs of opposite cam means spacedly supported by said guide rails,

(6) at least a single unit of grabbing means for each of said members,

(a) said unit of grabbing means being constituted by two grabbing arms and a third arm, said grabbing arms and said third arm forming a two-armed lever, said lever being keyed to said shaft to pivot thereabout for lateral movements from an outward or inoperative and nonobstructing position to an inward or operative position, and vice versa,

(b) said pairs of cam means being formed to cause said grabbing means to carrying out lateral swinging movements from said outward into said inward position,

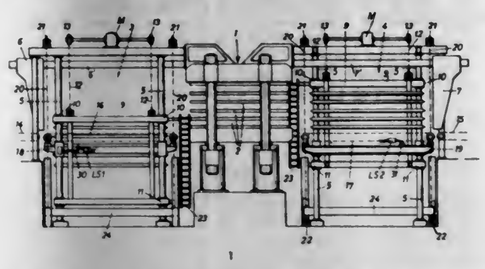
(7) feeler means provided at the free end of said third arm to recurrently cooperate with said pairs of cam means, and

(8) resilient tension means connecting said members and grabbing means and normally urging said grabbing means into said outward position.

3,129,827
DEVICE FOR CHARGING AND UNLOADING MULTI-PLATE PRESSES
Wilhelm Hütter, Krefeld, Germany, assignor to Niederrheinische Maschinenfabrik Becker & van Hüllen, Krefeld, Rhineland, Germany
Filed Nov. 7, 1960, Ser. No. 67,791
Claims priority, application Germany, Nov. 9, 1959
1 Claim. (Cl. 214—16.4)

In combination; a multi-plate press having vertically spaced superimposed plates, and a feeding and discharging arrangement for loading and unloading said press,

said arrangement comprising frame means at each side of the press and attached thereto, multi-shelf elevator means vertically slidably mounted in each said frame means for upward and downward movement, motor means on each frame means connected to the pertaining elevator means to move the elevator means vertically, two rows of roller means respectively mounted on opposite sides of each of said elevator means with one row of roller means spaced in horizontal direction from the other row of roller means, each of said rows comprising a plurality of roller means arranged one above the other and spaced in vertical direction from each other in conformity with the spacing of the plates of said multiplate press, horizontal conveyor means for each elevator means vertically movable in the space between said rows of roller means of the pertaining elevator means, support frame means supporting each said conveyor means and vertically slidably mounted in the pertaining one of said frame means and movable in said frame means independently of said elevator means therein and also together with said elevator means, pulley means



carried by said frame means, suspending means passing over said pulley means and having one end connected to the said support frame means of said conveyor means, counter-weight means connected to the other end of said suspending means, abutment means beneath said counter-weight means to stop the counter-weight means so the conveyor means is yieldably supported at a predetermined level slightly below the lowermost of said rows when the elevator means is in its uppermost position, means movable horizontally in the space between said rows of roller means and above said conveyor means for moving articles from the elevator on one side of the press into the press and for moving articles from the press into the elevator on the other side of the press, supply and discharge conveyors leading to the conveyor means on the one side of the press and from the conveyor means on the other side of the press, and limit switch means operatively associated with said conveyor means and normally engaged thereby and operable for causing the conveyor means to become inoperative for conveying when said conveyor means is moved downwardly from said predetermined level.

3,129,828
TOP LEVELER FOR GRAIN STORAGE BINS AND THE LIKE
William H. Lusk, Louisville, Ky., assignor to Clayton & Lambert Manufacturing Company, Buckner, Ky., a corporation of Delaware
Filed Jan. 14, 1963, Ser. No. 251,321
1 Claim. (Cl. 214—17)

A top leveler of the type adapted to be lowered into contact with the top surface of a column of material in a grain storage bin, silo or like structure, comprising:

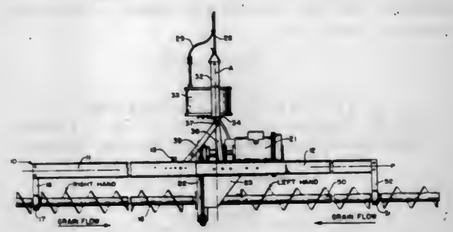
(A) a horizontally elongate frame;

(B) means for rotationally suspending the frame in a horizontally balanced condition of desired horizontal level;

(1) said suspension means including

(a) a swivel having a vertical axis, a stationary part adapted to be suspended from said structure and a relatively rotatable part mounted on said stationary part for rotation about said axis, and

(b) means interconnecting the rotatable part with the frame to suspend the frame therefrom for rotation therewith about said axis; and



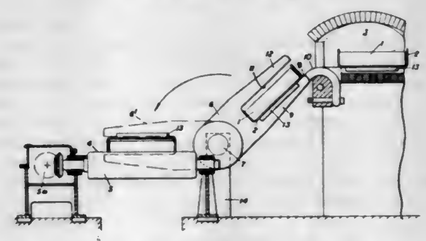
(C) means for rotating said frame, rotary swivel part and interconnecting means as a unit horizontally about said vertical swivel axis when the leveler is lowered into contact with the top surface of a column of material,

(1) said means including a pair of differential torque augers horizontally mounted on the frame to extend outwardly from the vicinity of said axis,

(a) one auger being operative, when rotated to feed said material along its length in one radial direction relative to said axis, to tend to rotate the top leveler horizontally forward at one speed and

(b) the other auger being operative, when rotated to feed said material along its length in the same radial direction relative to said axis, to tend to rotate the top leveler horizontally backward at a different speed.

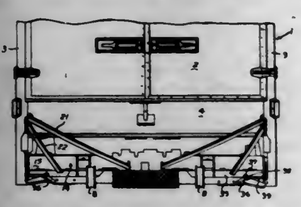
3,129,829
TRANSFER OF HOT BODIES FROM FURNACES
Hugh Crawford Ferguson, Glasgow, Scotland, assignor to Davy and United Engineering Company Limited, Sheffield, England
Filed Apr. 25, 1961, Ser. No. 105,354
Claims priority, application Great Britain Apr. 29, 1960
2 Claims. (Cl. 214—18)



1. In combination with a slab-heating oven having an exit opening; a plurality of open-topped slab-receiving wrappers; a downwardly-inclined skid located at said exit opening over which said wrappers with their slabs slide, an open-ended member having two spaced apart opposed support surfaces for receiving between said surfaces a wrapper and slab, said wrappers including legs that engage with said member and serve to position the slab when received by said member, means for pivotally

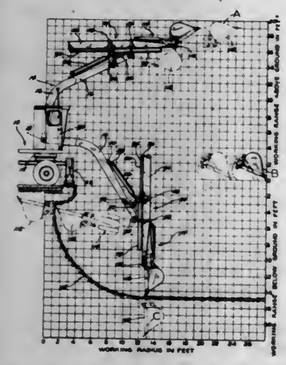
mounting said member about a horizontal pivot axis spaced from the open end of said member, and a roller table extending parallel to said pivot axis spaced from and at an elevation different from the elevation of said oven, said member being spaced between said oven and said roller table and movable about said axis between a first position in which said opposed surfaces are inclined to the horizontal and one of said support surfaces is aligned with the extremity of said skid and a second position in which said opposed surfaces are substantially horizontal and the other of said support surfaces is adjacent said roller table.

3,129,830
ARTICULATED ARM ASSEMBLY
John W. Kappen, Dayton, Ohio; Frieda E. Kappen, administratrix of said John W. Kappen, deceased
Filed Nov. 9, 1960, Ser. No. 68,301
3 Claims. (Cl. 214—84)



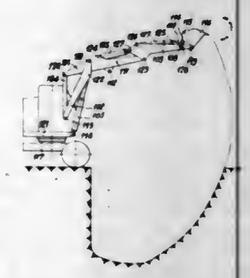
3. A material handling unit including an elevatable support bar, a pair of elongated arms pivotally mounted to its respective extremities, said support bar having means defining recesses therein positioned to respectively align with said arms when said arms are substantially perpendicular thereto, means pivotable on said arms from an overlying position to a position providing an extension thereof and in the latter position adapted, when said arms are perpendicular to said support bar, to nest in said recesses and lock said arms in their perpendicular orientation and means on said arms for pivoting said extension means from said recesses to free said arms for free swinging movement on said support bar.

3,129,831
DIPSTICK ASSEMBLIES FOR MATERIAL HANDLING EQUIPMENT
Elmer V. Mrozek, 1036 Summit Ave., Waukesha, Wis.
Filed Aug. 22, 1961, Ser. No. 133,265
3 Claims. (Cl. 214—137)



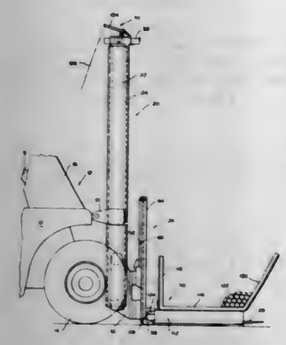
1. In a material handling machine having a boom extending therefrom and having an implement, a dipstick assembly comprising a relatively short pivot frame carried on a transverse pivot on the outer end of said boom, power means connected between said boom and said pivot frame to tilt the latter, a dipstick carried in said pivot frame and projecting from both ends thereof for longitudinal sliding travel and rotation therein and carrying said implement at an end thereof, said pivot frame including a pair of spaced bearing rings surrounding the exterior of said dipstick in longitudinally spaced relationship therealong, dipstick supported discs journalled in said rings and having apertures slidably and non-rotatably guiding said dipstick for its sliding movement, power means connected between one of said discs and said dipstick to move the latter longitudinally relative to said discs, and power means located close to that end of the boom which supports the dipstick and connected between said pivot frame and one of said discs through which the dipstick slides to rotate the latter and said dipstick with respect to the pivot frame.

3,129,832
MULTIPLE-PURPOSE POWER SHOVEL
Roger Metailler, Paris, France, assignor to Societe Auxiliaire de l'Entreprise (Auxen), Paris, France
Filed May 12, 1961, Ser. No. 109,613
Claims priority, application France May 18, 1960
2 Claims. (Cl. 214—138)



1. A multiple purpose power shovel comprising
(*a*) a self-powered frame structure;
(*b*) a rotary platform;
(*c*) a compound boom structure including
(i) a mounting link having one end pivoted at one point of said platform,
(ii) a boom arm having one end pivoted on said mounting link and a plurality of control pivots positioned intermediate said one end and the opposite end of said arm, and
(iii) a boom structure control link having one end pivoted on said platform at the same point as said one end of said mounting link and an opposite end pivoted to one of said control pivots on said boom arm, the mounting link, the boom arm and the boom structure control link defining a triangular compound boom structure;
(*d*) a fluid actuated cylinder for controlling said boom structure, said fluid actuated cylinder having one bearing end pivoted on said platform and an operative end pivoted on said boom structure control link;
(*e*) an operating arm having a pair of branch members pivoted on said opposite end of the boom arm;
(*f*) an arm control cylinder having one bearing end pivoted on said boom arm and an operative end pivoted between the two branch members of said operating arm;
(*g*) a shovelling bucket pivotally supported by said operating arm; and
(*h*) a bucket control cylinder disposed between said two branch members of said operating arm and having a bearing end pivoted between said two branch members and an operative end for actuating said bucket.

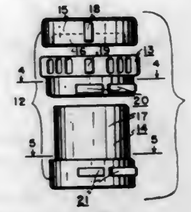
3,129,833
INDUSTRIAL TRUCK ATTACHMENT
Walter J. Townsend, Delton, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Filed Dec. 29, 1960, Ser. No. 79,200
2 Claims. (Cl. 214—317)



2. In an industrial truck having an outer fixed upright mounted at one end of the truck, an inner movable upright telescopical within the outer fixed upright, motor means for elevating the movable upright in the fixed upright and a load supporting carriage mounted in the movable upright for raising and lowering movement relative thereto, the combination comprising latching means secured to the movable upright, load engaging means projecting from the load supporting carriage, and an auxiliary upright assembly mounted on the load supporting carriage and extending upwardly therefrom including an outer fixed assembly, an inner slide assembly having means engageable with said latching means and a load engaging member projecting therefrom in normally horizontal adjacent relation to said load engaging means, said auxiliary upright assembly being of substantially less collapsed height than said outer and inner uprights and being elevatable in the inner movable upright to a location wherein said latching means is actuatable to engage said inner slide assembly, whereupon said load supporting carriage may be lowered in the movable upright for causing the load engaging means to be actuated downwardly away from the load engaging member.

3,129,834
SAFETY CONTAINER
Rollow D. Kimball, Granger, Utah, assignor to Technic Research Corporation, a corporation of Utah
Filed Dec. 4, 1961, Ser. No. 156,760
6 Claims. (Cl. 215—9)

1. A safety container including, in combination, a container member, a cap cooperable with said container member and having a cap member and a tumbler ring interlockingly engaged therewith, said cap member and said tumbler ring being freely rotatable with respect to each other and individually accessible for individual, manual rotation, said cap member and tumbler ring having individual, arcuate, transversely oriented rib segment means mutually spaced by an arcuate groove therebetween, the spacing between extremities of the individual rib segment means defining gaps, said container member having a pair of mutually spaced, transversely oriented, aligned, arcuate rib segment means mutually spaced by an arcuate groove, the individual extremities of said rib segment means respectively defining aligned gaps, the rib segment means of said cap, when and only when mutually aligned, being dimensioned to pass through the said gaps of said container member when aligned therewith when said cap is advanced toward to engage said container member and being dimensioned for interlocking at said grooves with said rib segment means of said container member upon the subsequent rotation of said cap member with respect to said container member, the rib segment means of one of said container member and said cap, as provided by said cap member and said tumbler ring, protruding outwardly, and the rib segment means of the remaining of said container member and said cap protruding inwardly, said container member and said cap member and tumbler ring having alignment indicia disposed in mutual, rectilinear alignment when said rib segment means of said cap and said container member are disengaged so as to permit the withdrawal of said cap from said container member.



3,129,835
FOOD PRESERVATION
William S. Collens, 123 8th Ave., Brooklyn, N.Y.
Filed Apr. 30, 1962, Ser. No. 191,211
4 Claims. (Cl. 215—56)

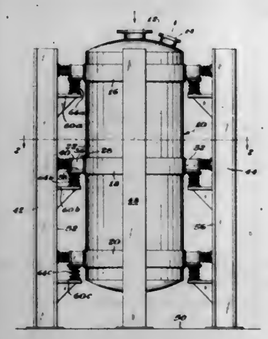


1. A device for assisting in the preservation of food comprising a container body having a threaded neck and a removable cover therefor having threads engaging said neck, said cover having an aperture therethrough communicating with the interior of the container body, a one-way valve mounted over said aperture to permit air to pass only out of the container, a hemispherical elastic dome member secured on said cover and provided with a one-way valve permitting air to pass only out of said dome, whereby upon successive compressions and expansions of said dome a partial vacuum is created in said container.

3,129,836
SUPPORTING STRUCTURE FOR REACTOR VESSELS
Ludo K. Frevel, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Feb. 4, 1963, Ser. No. 255,870
7 Claims. (Cl. 220—1)

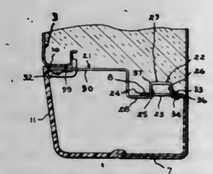
1. A reaction vessel assembly comprising an elongated walled hollow vessel having inlet and outlet means, an

array of girdles, each girdle encircling said vessel and being disposed substantially perpendicularly with respect to the longitudinal axis of the vessel, each of said girdles having an array of support brackets extending outwardly therefrom, the brackets on each array of brackets being radially aligned with the brackets on the other arrays of brackets, an array of supporting columns, said columns being fixedly vertically disposed and generally aligned with respect to the longitudinal axis of said vessel, said columns



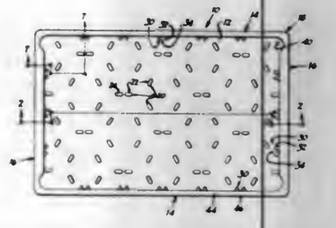
being equal in number to the number of brackets on each of said girdles, each of said columns having a vertically disposed array of support elements facing said vessel, each of said support elements being disposed in a predetermined spatial relationship with one of said support brackets, and a plurality of arrays of generally vertically disposed springs, one spring of each array being operatively engaged with each of the support brackets and support elements which are disposed in a predetermined spatial relationship with respect to each other.

3,129,837
REFRIGERATOR CABINET INCLUDING IMPROVED SPACER MEANS
Daniel B. Dawley, Anchorage, Ky., assignor to General Electric Company, a corporation of New York
Filed Dec. 5, 1962, Ser. No. 242,435
3 Claims. (Cl. 220—15)



2. A refrigerator cabinet having an access opening at the front thereof and comprising an outer shell and an open faced liner spaced from the outer shell and forming a storage compartment within said cabinet,
said liner having an outwardly extending side flange on the front edge of a side wall thereof,
said shell including an inwardly extending side flange substantially opposite and spaced from said liner flange,
said shell flange including a rectangular slot therein intermediate the ends thereof,
means securing the top and bottom end portions of said liner edge and in spaced relationship with said shell,
and means for maintaining said liner and shell in spaced relation adjacent said slot comprising;
a bracket formed to provide a flat portion for engaging the surface of said shell flange between said rectangular opening and the inner of said shell flange,
a projecting rectangular portion adjacent one end of said bracket adapted to be loosely received in said rectangular slot and including opposed sides for engaging opposite side edges of said slot, and
a split end portion forming fingers for engaging both the front and rear surfaces of said shell flange adjacent said slot for anchoring said bracket in said slot,
and means for rigidly securing the other end of said bracket to said liner flange.

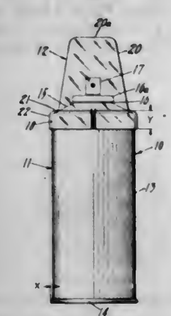
3,129,838
BEVERAGE BOTTLE CASE
Clark C. Wormer III, 25389 Meridian, Grosse Ile, Mich.
Filed Apr. 6, 1961, Ser. No. 101,159
2 Claims. (Cl. 220—21)



1. A unitary molded case for beverage bottles and the like comprising in combination a flat rectangular base with flat side walls and flat end walls extending substantially perpendicularly from the base, said base and walls being substantially of uniform thickness, pairs of ridges formed integrally with the walls and projecting inwardly therefrom for holding the ends of separator elements, integral projections on the inner surface of the base for supporting the bottoms of glass bottles above the base, integral flange means around the top edges of all the walls including side flanges projecting outwardly from the side walls and end flanges projecting outwardly from the end walls, the end flanges being materially thicker than the side flanges and projecting materially further from the end walls than the side flanges project from the side walls, each corner at the juncture of an end wall and a side wall being formed as a vertical cylindrical section projecting radially beyond the end walls approximately the same distance as the end flanges, said cylindrical section having an inner surface tangential to the inner surface of the side wall and projecting outwardly beyond the inner surface of the end wall.

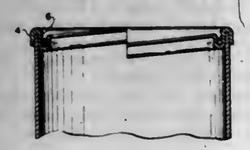
3,129,839
CONTAINER CAP
Arvid Kjellsen Grimsley, Lake Telemark, Rockaway, N.J., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Dec. 1, 1961, Ser. No. 156,266
6 Claims. (Cl. 220—42)

1. A one-piece exteriorly stepped thermoplastic cap for use with a deformable container having a peripheral bead at one end, a smoothly rounded breast adjacent the opposite end thereof, and a smooth-surfaced shoulder between said ends susceptible to damage; comprising a generally dome-shaped head portion, a ledge portion integral therewith and extending generally radially outwardly and downwardly from said head portion for engagement with the container breast, and a cushioning skirt portion depending from said ledge portion and embracing the container shoulder in close hugging contact therewith, said skirt portion being so dimensioned relative to the con-



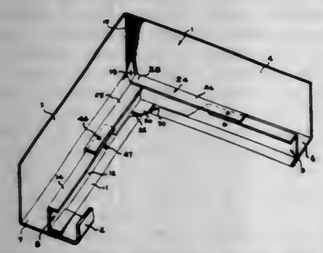
tainer shoulder so as to be readily slidable thereon and yet resistive to accidental dislodgment therefrom.

3,129,840
CONTAINER FOR LIQUIDS
Joel Halpern, 29 Elmwood Court, Plainview, N.Y.
Filed Mar. 4, 1963, Ser. No. 262,611
9 Claims. (Cl. 220—42)



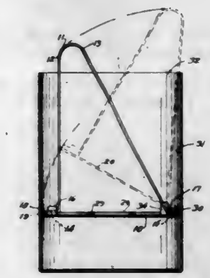
1. A container for liquids comprising a generally cylindrical body having a bottom closure at one end and having the inside surface of the other end provided throughout substantially its entire circumferential extent with an upwardly facing and helically extending open-ended channel, said channel being adapted to receive in sealing relationship therewith a mating bead projection on the container cover.

3,129,841
CABINET CONSTRUCTION
Henry J. Loewenthal and Earl H. Magester, Louisville, Ky., assignors to General Electric Company, a corporation of New York
Filed Nov. 13, 1962, Ser. No. 236,990
2 Claims. (Cl. 220—62)



1. A shell member for a cabinet comprising a single sheet of material bent to form at least two outer walls of said cabinet,
said walls having inwardly extending flanges along the front edges thereof defining a portion of the cabinet face,
said flanges forming a generally mitered joint at the corner of said cabinet between said walls, said joint including a double layer web portion of said sheet material extending rearwardly from said flanges and terminating short of the inner edges of said flanges,
a weld joining the layers of said double layer web portion adjacent said flanges,
each of said flanges having a stiffening channel section extending along the inner edge and on the rear side thereof,
said channel sections terminating short of the corner joints,
an angle bracket for reinforcing each of said corner joints positioned between said double layer web portion and said channel sections and including arms respectively engaging and welded to the channel sections,
said angle bracket including a tab at the junction of said arms and formed integrally with one arm thereof, said tab overlying the inner edges of said flanges adjacent the corner of said cabinet and bridging the space between the front walls of said channel sections to form a backing member for braze material joining the adjacent portions of said flanges at said corner.

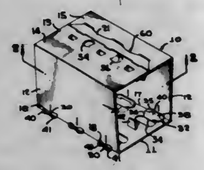
3,129,842
ADJUSTABLE CONTAINER SEAL COVER
Raymond J. Siebelt, 229 Velma Drive, Largo, Fla.
Filed Apr. 4, 1962, Ser. No. 185,037
3 Claims. (Cl. 220—93)



3. In a container assembly, the combination which comprises a container having a continuous wall and a bottom, the lower edge of the wall being secured to the bottom and integral therewith, the upper end of the container being open, a cover fitted in said container and positioned with the periphery thereof substantially in sealing relation with the inner surface of the wall of the container, said cover having an opening therethrough, a valve mounted on the cover and positioned to close said opening, a valve stem extended from said valve and positioned to, selectively, open or close the opening through the cover, open aligned sockets on the upper surface of the cover, and an inverted U-shaped handle having a vertical leg and an inclined leg and having aligned ends extended from the ends of the legs at the open end of the handle, said aligned ends of the legs being positioned in a plane normal to the vertical leg of the handle, said ends of the legs of the handle being positioned to extend into said open sockets on the cover, and one of said open sockets being provided with spaced wings positioned to straddle the leg extended into the socket for retaining the handle in a position normal to the cover, said handle being freely removable from the sockets by squeezing the legs together, and said inclined leg of the handle permitting the handle

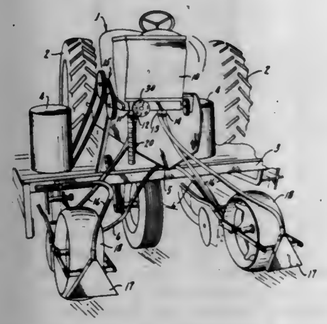
to actuate the cover to a sloping position to facilitate inserting the cover in the container and removing the cover from the container.

3,129,843
CARTON
Arthur J. Weiss, Bergenfield, N.J., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed May 9, 1963, Ser. No. 279,169
16 Claims. (Cl. 220—112)



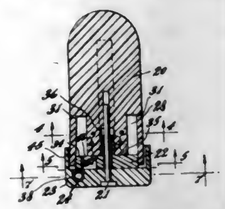
1. An open ended carton for containers, said carton having a pair of side walls and a second pair of walls for engaging opposite end portions of containers disposed in two rows, one wall of said second pair of walls having overlapped secured together portions, an inner one of said overlapped portions being inwardly folded to define an inwardly projecting keel for interlocking engagement by containers, and the outer one of said overlapped portions having a stabilizing tab projecting into said keel.

3,129,844
CALIBRATORS
Emil A. Madison, Sac City, Iowa, assignor to Noble Manufacturing Company, Sac City, Iowa, a corporation of Iowa
Filed Nov. 2, 1961, Ser. No. 149,699
2 Claims. (Cl. 222—1)



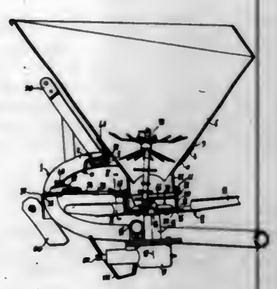
1. The method of maintaining a predetermined distribution rate of chemicals or other materials upon a ground area, which includes moving a dispensing device in a trial run over said surface area through a predetermined linear distance, with an initial material delivery setting of the dispensing device, receiving the discharge of material from the dispensing device, during the trial run, in a container, comparing the quantity of material so received with the predetermined quantity for such linear distance, increasing or decreasing the delivery setting, as indicated by the relation of the material received to the desired quantity, repeating the trial run if and as necessary, removing the container when the desired setting is reached, and thereafter employing such a setting in the distribution of the material upon the surface area, while maintaining the rate of movement of the dispensing device over the ground at substantially the trial run rate.

3,129,845
TIMING DEVICE AND DISPENSER
C Walton Musser, Beverly, Mass.
(928 Via Panorama, Palos Verdes Estates, Calif.)
Filed Mar. 17, 1961, Ser. No. 96,483
10 Claims. (Cl. 222—41)



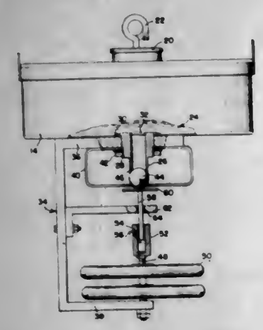
1. In a device, a timing element, brake means including a plastic material which undergoes cold flow for retarding the movement of the brake means and the motion of said timing element, means for biasing said timing element to move and thereby causing cold flow to increase in the plastic material of said brake means, and means for indicating movement of said timing element to a position at which cold flow of said plastic material has taken place.

3,129,846
IMPLEMENTS FOR SPREADING POWDERED OR GRANULAR MATERIALS
Cornelis van der Lely, Zug, Switzerland, and Ary van der Lely, Maasland, Netherlands, assignors to C. van der Lely N.V., Maasland, Netherlands, a limited-liability company of the Netherlands
Filed July 26, 1960, Ser. No. 45,488
Claims priority, application Netherlands Oct. 26, 1959
2 Claims. (Cl. 222—48)



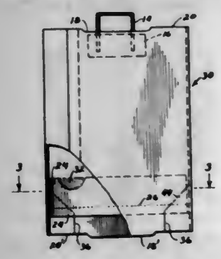
1. An implement for spreading powdered or granular materials comprising a supporting frame including coupling means for connection to a tractor, a container carried by said frame, a lower cylindrical portion on said container, a horizontally disposed rotatable materials ejector disc rotatably carried by said frame under said container, a circular raised portion on the central upper surface of said disc, a plurality of radially extending distributing arms attached around said disc's periphery, a vertical shaft centrally connected to the underside of said disc, a cylindrical annulus around said lower portion of said container and bearing on said disc around said circular raised portion, outlet ports in said annulus, sealing ridge means incorporated on the inside of said annulus, power means comprising means to connect to the power take-off of a tractor interconnected to said shaft rotating said disc, ring means snugly embracing said annulus and including shutter plates bearing on said disc and selectively covering portions of said outlet ports, the lower edges of said annulus and said shutter plates being beveled, outlet control means for rotating said ring and said annulus relative to each other including rod means to rotate said annulus, arm means to rotate said ring, a scale associated with said arm means, clamp means selectively clamping said rod means and said arm means together at a position registered on said scale, releasable securing means securing said rod means and said arm means to said frame, whereby the dimensions of said outlet openings and their position relative to said frame is controllable, and agitation means extending upwardly from said disc.

3,129,847
PRESSURE CONTROLLED BALLASTER
David A. Church, Coon Rapids, Minn., assignor, by mesne assignments, to Litton Systems, Inc., Beverly Hills, Calif., a corporation of Maryland
Filed May 16, 1961, Ser. No. 110,579
9 Claims. (Cl. 222—52)



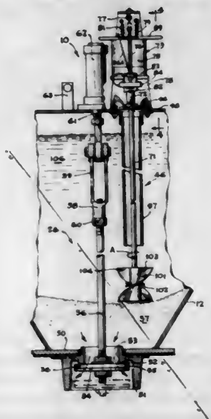
1. A pressure controlled ballaster comprising in combination a container for holding a fluid medium, outlet means in said container, means for controlling the passage of fluid medium through said outlet means, pressure responsive means, and coupling means between said pressure responsive means and said fluid controlling means, said coupling means including an elongated sleeve attached to said pressure responsive means, an elongated shaft adapted to be inserted in said sleeve and movable relative thereto, and biasing means for urging said shaft out of said sleeve and against said fluid controlling means.

3,129,848
REENFORCED SHOPPING BAG
Leonard E. Canno, New York, N.Y., assignor to Equitable Paper Bag Co. Inc., Long Island City, N.Y., a corporation of New York
Filed Nov. 29, 1961, Ser. No. 155,751
11 Claims. (Cl. 229—55)



1. A shopping bag having a reenforced bottom, the bag comprising a tubular element having side walls and being open at one end and folded to form a flat bottom at the other end, handle portions at the open end of the bag, a reenforcing strip on the inside of the bag and bonded to the tubular element and extending part way across, but only part way across the bottom of the bag from all sides of the bag, the reenforcing strip extending around the corners where the side walls meet the bottom and part way up the side walls.

3,129,849
CONTROL DEVICE FOR CONTROLLING DISCHARGE OF SETTLINGS FROM A WATER SCALPING TANK OR THE LIKE
Clement B. Cochran, Des Moines, Iowa, assignor to Eagle Iron Works, Des Moines, Iowa, a corporation of Iowa
Filed Mar. 16, 1962, Ser. No. 180,302
7 Claims. (Cl. 222—64)

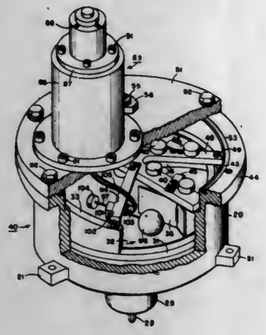


1. A sensing and control device for controlling the discharge of settlings from a water scalping tank or like apparatus in which material is settled out of a fluid medium, and including a discharge valve, said device comprising:
a sensing rotor shaft extending into said fluid in said tank;
drive means for rotating said shaft in a given direction, said drive means applying a predetermined drive torque to said shaft;
sensing rotor means, mounted on said shaft at a predetermined level relative to said discharge valve, for applying a reaction torque to said shaft, opposed to said drive torque, sufficient to interrupt rotation of said shaft whenever settled material exceeds said level, said sensing rotor means having a configuration such that it applies a restoring torque to said shaft, in aiding relation to said drive torque, in response to an outward discharge through said valve;
and control means for sensing interruption in rotation of said shaft and for actuating said discharge valve in response thereto.

3,129,850
POWDER CLOUD GENERATING APPARATUS
Carl B. Kaiser, Rochester, N.Y., assignor to Xerox Corporation, a corporation of New York
Filed May 17, 1961, Ser. No. 110,805
3 Claims. (Cl. 222—67)

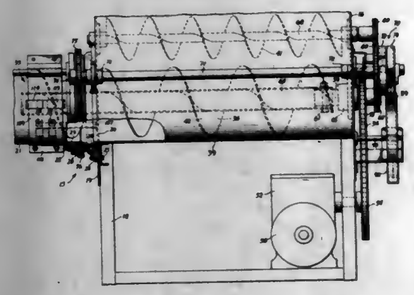
1. A powder cloud generator including an enclosure, a powder carrier means rotatably journaled in said enclosure, at least one metering blade connected to said enclosure in closely spaced relation above said powder carrier means for metering a quantity of a powder thereon, an inlet duct in said enclosure adapted to be con-

nected to a source of compressed aeriform fluid, an output means connected to said enclosure with one end of said output means positioned in closely spaced relation above said powder carrier means, the opposite end of said output means being connectable to a discharge conduit, a powder inlet duct in said enclosure positioned above said powder carrier means in front of said metering blade with respect to the direction of rotation of said powder carrier means, a powder dispenser connected to said enclosure and positioned over said powder inlet duct for feeding powder through said powder inlet duct onto said powder carrier means, drive means connected to said powder dispenser for driving said powder dispenser, a



switch positioned within said enclosure and operatively connected to said drive means for controlling the operation of said drive means, a lever pivotally mounted within said enclosure and positioned above said powder carrier means in front of said metering blade, a level sensing means connected to one end of said lever and positioned in front of said metering means and operatively connected to said switch, said level sensing means being adapted to ride on a pile of powder retained by said metering blade on said powder carrier means to effect the opening and closing of said switch as said level sensing means is moved by changes in the amount of powder retained on said powder carrier element by said metering means.

3,129,851
FEEDER FOR STOCK ANIMALS
Shaun A. Seymour, New Holland, William Hobbs, Jr., Lancaster, and Daniel C. Heltshu, Shippensburg, Pa., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Jan. 23, 1962, Ser. No. 168,071
17 Claims. (Cl. 222—76)



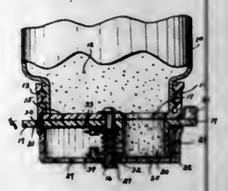
1. A fill and dump stock feeder comprising, in combination, a feed hopper having a discharge outlet, an elongated container communicating with said outlet to receive feed from the hopper, said container extending in a horizontal direction and having rectilinear slot means along a major portion of its length, means mounting said container for rotation about its longitudinal axis, means conveying and distributing feed taken from said hopper along the length of said container, drive means rotating said container to locate said slot means in an up position when feed is being conveyed and distributed in the container and in a lower position to dump feed from the container, means stopping rotation of said container with said slot means in an up position, means stopping rotation of said container at the end of an operating cycle with said slot means in a down position, means operating said stopping means, and means mounted on the feeder and operatively associated with said operating means to control said stopping means.

3,129,852
AGRICULTURAL DISPENSER
George A. Mower, 80 E. 1st N., Farmington, Utah
Filed May 7, 1962, Ser. No. 192,756
2 Claims. (Cl. 222—178)



2. As a dispenser of dry, granular, agricultural materials including dusts, in combination, a nominally vertically disposed, closed bin; structure defining an exhaust passageway communicatively disposed beneath said bin and oriented in a transverse direction with respect to said bin; adjustable, elongate gate means disposed between said bin and said exhaust passageway for metering contents of said bin into said passageway, said bin being provided with air-flow, auxiliary passageway means disposed proximately above said gate means and oriented in a direction nominally parallel to and across said gate means; and means for blowing air directly through said structure to exhaust contents of said passageway and also for blowing metered air through said auxiliary passageway means in a shunting path, disbursing possible material accumulations at said gate means, which path joins said passageway defined by said structure by flowing through said gate means.

3,129,853
GRANULAR MATERIAL DISPENSING DEVICE
Walter E. Hoskins, 3313 Marylynn Drive, Des Moines, Iowa
Filed June 16, 1961, Ser. No. 117,678
3 Claims. (Cl. 222—339)



1. A dispenser for granular material and the like comprising in combination:
- a container closed at the top and having an opening at the bottom thereof defined by an externally threaded neck portion;

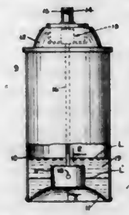
- an upper cap having an internally threaded circular wall threadably engaged with said neck portion, and having further a cover wall extended over said opening, said cover wall having a circular first opening formed therein and offset from the center of said cover wall;
- an elongated center post secured at its upper end to said cover wall at the center thereof and extended normally downwardly therefrom on the longitudinal axis of said container;
- a substantially circular plate rotatably mounted at its center to said center post and mounted contiguous to said cover wall, said plate having an arcuate slot formed therein concentrically with said center post, and having also formed therein an opening separate from said slot and of a size similar to said first opening, said plate having further a tubular collar integral therewith and in registration with said plate opening;
- a lower cap having a circular wall having a diameter similar to that of said upper cap wall and adapted for placement contiguous to said plate, said lower cap having a bottom wall through the center of which said center post extends, said bottom wall having a second opening formed therein radially offset from said cover wall first opening, the upper surface of said bottom wall contiguous with the lower edge of said collar;
- means extended through said arcuate slot for connecting said upper cap and said lower cap together and whereby said plate is rotatable relative thereto, said means providing a limit for rotation of said plate upon engagement of said means by said plate at either end of said arcuate slot; and
- spring means connected between said plate and said lower cap for biasing said plate toward a first position wherein said plate opening and collar register with said first opening, said plate being rotatable against the bias of said spring means to a second position wherein said plate opening and collar register with said second opening.

3,129,854
DISPENSING DEVICE
John F. Boehm, Cincinnati, Ohio, and Douglas F. Corsette, Los Angeles, Calif., assignors to The Drackett Company, Cincinnati, Ohio, a corporation of Ohio
Filed Aug. 21, 1961, Ser. No. 132,892
4 Claims. (Cl. 222—383)



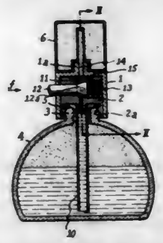
1. A dispensing device comprising a generally cylindrical and substantially rigid pump barrel adapted for reception in the outlet opening of a container, and including a radially outwardly projecting flange for limiting its movement into and for covering said opening, and radially inwardly yieldable adaptor means carried by said berrel beneath the flange for centering and frictionally retaining said barrel in an outlet opening of substantially larger diameter than said barrel, said adaptor means comprising a plurality of resiliently flexible fins, each extending generally axially of the barrel and having a rectilinear inner edge connected thereto, said fins normally extending outwardly from said barrel in generally tangential directions and having outer edges normally disposed on a common surface of revolution, the outer edge of each said fin being displaced circumferentially of the barrel from its said inner edge for inward folding generally about said inner edge toward the barrel when the latter is inserted into an opening of a diameter smaller than the maximum diameter of said surface of revolution.

3,129,855
AEROSOL PACKAGE
Meyer Malakoff, Franklin Park, Morton W. Scott, Palisades Park, and Martin M. Rieger, West Englewood, N.J., assignors to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware
Filed July 17, 1961, Ser. No. 124,697
3 Claims. (Cl. 222—394)



1. In a pressurized aerosol package comprising a closed container, a liquid in said container, a volatile propellant for said liquid and a discharge valve for controlling the discharge of said liquid from said container under the pressure of said propellant, the combination with a dip tube connecting said valve with the liquid at the base of said container of an enlarged and enclosed hollow chamber located at and communicating with the lower end of said dip tube, said chamber being provided with an opening above the level of the base of the chamber to form an inlet through which the liquid communicates with said chamber and is discharged through said dip tube and valve.

3,129,856
SPRAYER ATTACHMENT
Sonia Boris, nee Jokelson, Paris, France, assignor to Societe Technique de Pulverisation (par abréviation S.T.E.P.), Boulogne-sur-Seine, France, a French company
Filed Feb. 12, 1962, Ser. No. 172,632
Claims priority, application France Feb. 11, 1961
4 Claims. (Cl. 222—399)



1. A sprayer assembly for attachment to a liquid container having a neck extending around a discharge opening, said sprayer assembly comprising

a body having a recess with a side wall surface diametrically dimensioned to fit over the container neck for attaching said body to the container;

a pressure gas reservoir connected to said body;

a dipper tube secured to said body centrally within said recess and projecting axially from the latter to extend into the container through the discharge opening of the latter upon reception of the container neck in said recess, said dipper tube having an outer diameter substantially smaller than the diametrical dimension of said recess so as to provide a radial clearance between said dipper tube and the container neck when the dipper tube extends through the discharge opening;

a spray outlet nozzle opening outwardly of said body;

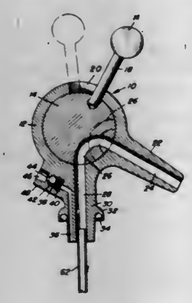
said body having passage defining means connecting said nozzle with said dipper tube;

manually operable valve means interposed in said passage defining means and controlling the flow of fluid through the latter;

additional passage defining means in said body extending from said reservoir and opening axially in said recess at an eccentric location spaced radially outward from said dipper tube and adjacent said side wall surface of the recess so as to communicate with the interior of the container through the discharge opening of the latter upon reception of the container neck in said recess, said additional passage defining means having a seat therein facing generally axially away from said recess; and

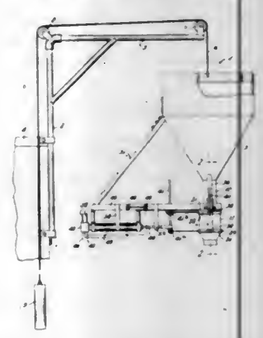
additional valve means spring urged against said seat so as to normally seal said additional passage defining means and including a valve stem projecting axially from said opening of the additional passage defining means into said recess when said additional valve means engages said seat and being engaged, and axially displaced by the container neck upon reception of the latter in said recess thereby to automatically unseat said additional valve means and permit the escape of gas from said reservoir into the container.

3,129,857
BEVERAGE DISPENSER AND PUMP
Fred E. Croy, 814 Tyler Ave., and Raymond D. Lochner, 37 Maryland Ave., both of Annapolis, Md.
Continuation of application Ser. No. 10,455, Feb. 23, 1960. This application Nov. 24, 1961, Ser. No. 157,030
1 Claim. (Cl. 222—400.8)



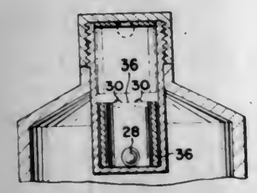
A fluid dispenser for a container having a mouth provided therein for dispensing fluid therethrough from said container, comprising, a unitary structure consisting of a body, an adjustable cork type stem extending downwardly from said body and adapted to be fitted in said mouth of said container and having a formed cap flange fitting over the mouth of said container, and a spout extending from said body angularly with respect to said stem, said spout and said stem each having a passageway extending therethrough, said body having a recess and a slotted opening provided therein, a cylindrical valve plug rotatably mounted in said recess and having a curved re-entrant passageway therein, said spout and stem having their respective passageways terminating at said valve plug, said curved re-entrant passageway being arranged to communicate with the respective passageways in said spout and stem so as to form a smooth continuation one of the other when said valve plug is in an operative position in said fluid dispenser, handle means connected to said valve plug and extending through the slotted opening in said body for rotating said valve plug, the opposite ends of said slotted opening stopping said handle means when said valve plug is in said operative position and in an inoperative position, respectively, a pressure supply passageway extending through said stem and terminating at a point on the exterior of said body, means including a pump for pressurizing fluid in said container through said pressure supply passageway, and check valve means arranged within said pressure supply passageway to maintain pressure within said container, whereby when the curved re-entrant passageway of said valve plug is arranged as a continuation of the respective passageways in said spout and stem, fluid is dispensed in a smooth flow from said container.

3,129,858
MEASURING AND DISPENSING APPARATUS
Theodore A. Miller, 861 Chestnut Blvd., Cuyahoga Falls, Ohio, and Herbert L. Fowler, Mogadore, Ohio; said Fowler assignor to said Miller
Filed Aug. 17, 1961, Ser. No. 132,176
1 Claim. (Cl. 222—439)



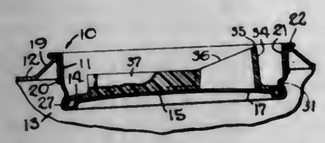
Apparatus for measuring and dispensing flowable, thermoplastic materials including a hopper, a vertically telescoping compartment secured to the bottom of the hopper, a first slide positioned substantially horizontally between the hopper and the compartment, said first slide having an opening therethrough in a compartment charging position of the slide, a second slide positioned substantially horizontally and closing the bottom of the compartment, said second slide having an opening therethrough in a compartment discharging position of the slide, the openings in the slides being horizontally offset from each other, a substantially vertically extending rod secured to one slide and passing in sliding engagement through the other, means for vertically adjusting the height of the compartment and thereby its size and to change the vertical distance between the slides, means engaging the rod regardless of the vertical distance between the slides to move the rod laterally to operate the slides simultaneously to and from compartment charging and compartment discharging positions, and positioning means for each slide which slidably engage with the sides of each slide at only three points, namely, the side edge of each slide, the top of the slide on a line parallel to the side edge but spaced laterally therefrom, and on the bottom of the slide on a line opposed to the last-mentioned line whereby recesses are provided adjacent the compartment at the top and botom surfaces of said slides and the side edges of each slide are not in contact with material in the compartment so that low resistance to movement of the slides by the material being dispensed is obtained.

3,129,859
MEASURING DISPENSER WITH A GRAVITY OPERATED VALVE
Story F. Chappell, 9 Knoll St., Riverside, Conn.
Filed July 19, 1960, Ser. No. 43,885
1 Claim. (Cl. 222—456)



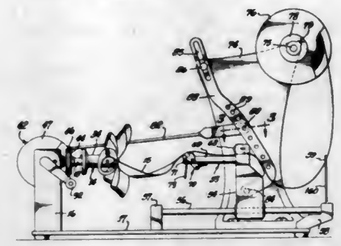
A viscous liquid dispenser for use with a container having an opening therein, said dispenser comprising a casing adapted to be fitted into the container opening and a slidable open sleeve and ball valve within said casing, said casing having side walls, a bottom wall and a valve seat opening in the top portion of said casing, an opening in said side walls approximately intermediate between said valve seat and said bottom, said sidewalls being imperforate except for said openings whereby a measured amount of liquid may be retained in said casing below said side wall openings when said container is in an upright position, said slidable sleeve extending up to and partially obstructive of the opening in the side wall when the dispenser is in an upright position, whereby the sleeve will obstruct said side wall opening when the dispenser is inverted and prevent flow of liquid into said casing until the ball valve has engaged the valve seat and cut off the flow of liquid from said dispenser.

3,129,860
CLOSURE CONSTRUCTION FOR SIFTING CONTAINERS
John A. Foster, Rockford, Ill., assignor to J. L. Clark Manufacturing Co., Rockford, Ill., a corporation of Illinois
Filed Nov. 14, 1962, Ser. No. 242,032
6 Claims. (Cl. 222—512)



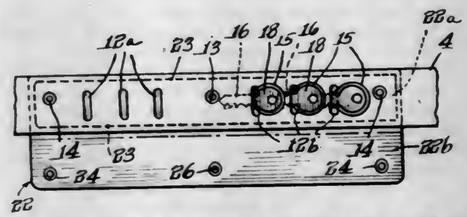
1. A sifter top for a dispensing container comprising a rigid sheet metal top wall defining an annular rigid dome having a top surface of pronounced convex curvature and a hole therethrough offset laterally from the axis of the dome, an upright wall larger than said dome and surrounding the latter to form an annular upwardly opening intervening groove below the periphery of the dome, a disk of resiliently yieldable plastic larger than and lying against the top of said dome and molded to an initial curvature less than that of said dome surface, and means formed out of said upright wall and overlying the edge of said disk to bend the overhanging margin thereof downwardly to and against the peripheral edge of said dome and hold the disk in tight face to face contact with said dome surface while permitting turning of the disk about its axis, said disk having a perforation therein adapted to register with said hole in one angular position of said dome and to be covered by the latter in other positions.

3,129,861
RIBBON BOW-FORMING MACHINE
Ray P. Napier, 6143 Bellflower Blvd., Lakewood, Calif.
Filed Aug. 21, 1961, Ser. No. 132,861
12 Claims. (Cl. 223—46)



1. In a machine for forming a bow of ribbon upon a ribbon pin having a base end and a head end: a holder angularly movable about an axis, and having provisions for releasably engaging the base end of said pin; a member guided for movement in a path substantially parallel to said axis; a friction ring of rubber-like material mounted on the end of said member and encompassing said holder provisions for engaging the first layers of the ribbon on opposite sides of the pin; means determining a limit to movement of the guided member in which the friction ring is located forwardly of the holder pin engaging provisions; and yielding means for urging the guided member toward said limit to provide a substantially continuous grip upon the ribbon layers.

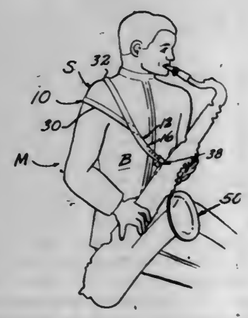
3,129,862
KEY HOLDING APPAREL BELT
Melvin R. Cone, 1527 W. Pratt St., Chicago, Ill.
Filed Nov. 2, 1959, Ser. No. 850,344
1 Claim. (Cl. 224—5)



In combination, an elongated apparel belt comprising a belt body adapted to extend around the user's abdomen, a series of longitudinally spaced key shank-receiving apertures formed in the internal portions of said belt body adjacent to one end thereof so as to be located at the front portion of the user's body, a backing panel of substantially imperforate material secured behind the portion of said belt body including said key shank-receiving apertures so as to close off the rear thereof, said panel of material being permanently secured to said belt body only at the longitudinal margins of the belt body and the transverse ends of said panel, whereby the panel is unsecured to the belt body in the internal portion thereof

where said key shank-receiving apertures are located, to provide clearance spaces for the shanks of keys passing through said apertures from the outside of the belt, said apertures having lengths transversely of the belt which are less than the widths of the enlarged head portions of keys to be used therewith so that the heads of the keys will remain on the outside of the belt, said backing panel including a flap extendable downwardly from said belt body and being foldable over said key shank-receiving apertures from the bottom of the belt, and cooperating fastening means on said cover flap and the belt body on opposite sides of said key shank-receiving apertures for releasably holding said cover flap in its key covering position.

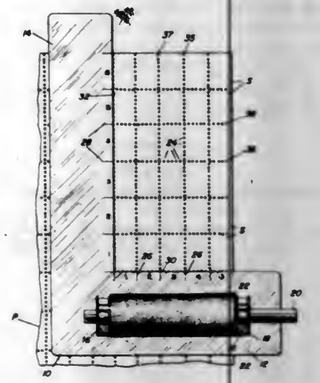
3,129,863
SHOULDER STRAP FOR MUSICAL INSTRUMENTS
Puben G. Haugen, 8019 W. 26th St., Minneapolis, Minn., and Michael W. Holtz, Box 153, Galva, Iowa
Filed Apr. 6, 1962, Ser. No. 185,574
4 Claims. (Cl. 224—5)



1. A strap for musical instruments adapted to place the weight of the instrument on the outer shoulder area and upper arm area of the wearer, the strap comprising:
(*a*) a front flight having a free outer end and an opposite inner end;
(*b*) a rear flight having a free outer end and an opposite inner end;
(*c*) adjustable buckle means releasably securing the free outer ends of the front and rear flights to one another;
(*d*) means securing the inner end of the front flight to the rear flight intermediate the ends of the latter whereby an outer shoulder loop is provided;
(*e*) means securing the inner end of the rear flight to the front flight intermediate the ends of the latter whereby an upper arm loop is provided; and
(*f*) instrument securing means secured to the front flight intermediate its ends.

3,129,864
GUMMED PAPER MEASURING, TEARING AND MOISTENING TOOL
Lois D. Elkins, 1603 Caroline St., Fredericksburg, Va.
Filed Aug. 7, 1963, Ser. No. 300,610
3 Claims. (Cl. 225—91)

1. A combination tool for use with a gummed paper sheet perforated to define individual stamps comprising, in combination, a flat body including a pair of elongated legs disposed at right angles to each other to define a single corner and the outer edges of a predetermined number of the stamps, the inner edges of said legs comprising tearing edges for the removal of said predetermined number of stamps from the perforated sheet, and a sponge roller mounted on one of said legs and coextensive therewith for simultaneously moistening the gummed surface of the defined predetermined number of



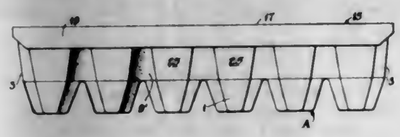
stamps when torn from the perforated sheet along said tearing edges.

3,129,865
CHAIN RECEIVING AND ENGAGING MEANS FOR A PARTING TOOL
Sanford E. Coblitz, 567 Knollwood Ave., Ashtabula, Ohio
Filed July 24, 1962, Ser. No. 211,978
4 Claims. (Cl. 225—103)

1. A cutter for parting a fracturable member which comprises in combination, a cutting chain having first and second ends adapted to be placed around said fracturable member and to exert a parting pressure thereto without rotation or oscillation of said chain thereabout, said comprising chain links, laterally extending pins interconnecting said chain links and parting members for engaging and parting said fracturable member mounted on said pins between said chain links, said pins extending laterally from the sides of the links, and a pressure clamp means including a first pressure clamp jaw secured to said first end of said chain and a second pressure clamp jaw having chain receiving and engaging means thereon to receive and engage said pins at a location dictated by the size of said fracturable member, said second pressure clamp jaw comprising two spaced jaw members spaced apart at a distance greater than the length of the pins, said spaced jaw members having respectively internal laterally-extending boss means having opposed faces laterally spaced apart from each other for a distance less than the length of the pins and greater than the width of the chain links, said spaced jaw members and said boss means defining chain receiving and engaging means whereby said chain may be wrapped around said fracturable member with the second end pulled through said chain receiving and engaging means, said boss means respectively having first and second sockets, said first sockets being in transverse alignment with each other to receive said pins, said second sockets being in transverse alignment

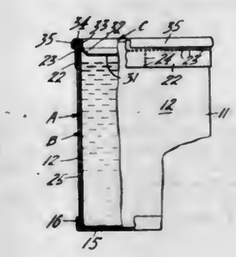
with each other to receive said pins, said first sockets having respectively a first edge and a second edge with a dwell surface therebetween, said first edge of said first sockets constituting a pin entrance edge and said second edge constituting a pin exit edge, said dwell surface of said first sockets having a depth measured with respect to the pin exit edge which is less than the radius of the pins, said second sockets having respectively a first edge and a second edge and a dwell surface therebetween, said first edge of said second sockets constituting a pin entrance edge, said dwell surface of said second sockets having a depth measured with respect to the pin entrance edge which is less than the radius of the pins, said boss means having respectively a pin guide wall surface extending from the pin exit edge of said first sockets and towards the pin entrance edge of said second sockets, whereby said cutting chain upon being wrapped around said fracturable member may be pulled through said chain receiving and engaging means and then drawn tight about said fracturable member with said pins riding over said pin entrance edge of said first sockets, said dwell surfaces therein, and said pin exit edge thereof, and then along said pin guide wall towards said second sockets without catching the pins, said first sockets and said second sockets being positioned with respect to each other than the distance between the center of a pin in the first socket and the center of a pin in the second socket is greater than the distance between two adjacent pins and less than three adjacent pins, engagement of a pin in said second sockets and the intermediate positioning of a first adjacent pin between said first and second sockets placing a second adjacent pin in a position to engage the dwell surface of said first sockets, the distance between the center of said first adjacent pin and the inside surface of the circumferential surface of the pin in the first sockets being less than the distance between the center of the first adjacent pin and the pin entrance edge of said first sockets whereby said pin in said first sockets is held therein, said dwell surface of said first sockets meeting with said pin exit edge thereof and defining a non-catchable slope which makes an included obtuse angle with respect to a line passing through the center of said pin in said first sockets and the center of the first adjacent pin.

3,129,866
EGG CARTON
Charles E. Wade, Jr., P.O. Box 1591, Roanoke, Va.
Filed July 19, 1961, Ser. No. 125,170
9 Claims. (Cl. 229—2.5)



1. A molded egg carton comprising end walls, side walls and a bottom portion, a plurality of spaced-apart egg supporting posts extending upwardly from the bottom portion and positioned to define individual egg receiving pockets within said carton, said supporting posts including inwardly extending half posts positioned along the side and end walls of the carton, said end and side walls extending to such a height above the bottom portion that the top edges of said walls extend to at least the top ends of eggs when positioned within said egg receiving pockets, a cover member for said carton, said cover member including a top portion of substantially the same dimensions outlined by the top edges of said end and side walls and a downwardly and inwardly depending skirt extending from each of two opposite edges of said top portion, each said skirt being sealed, on initial carton closure, to its adjacent carton wall at points lying between said half posts and terminating at a point above said bottom portion at a position overlying at least the upper ends of adjacent half posts whereby the seal of one of said skirts may be broken for carton opening by fingertip pressure on insertion into adjacent half posts underneath the edge of said sealed skirt.

3,129,867
LINED CONTAINER
George Oscar Schroeder, Palatine, Ill., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Jan. 30, 1961, Ser. No. 85,607
4 Claims. (Cl. 229—14)

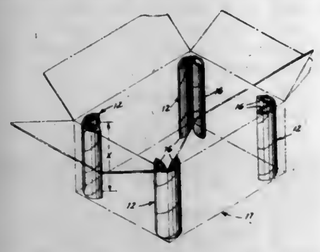


1. A lined container for fluid products, comprising: a fibre container body having a fibre bottom end member secured thereto; a liner bag formed of thermoplastic film disposed within the container and having an open end overlapping the rim at the mouth of the container; a top end member secured to the overlapped portions of said liner bag for closing and sealing the open end of said bag in an end seam joint at the mouth of said container; a continuous line of weakness in the overlapping marginal edge portion of said bag bordering and spaced from the end seam joint of the sealed container and another line of weakness extending transversely of and terminating at said first line of weakness at one side of the container, whereby said marginal edge portion may be initially torn inwardly from the edge of the liner bag toward said end seam to provide a tearing tongue, which facilitates removal of the marginal edge portion from the sealed container and subsequent flame treatment along said line of weakness to remove the same and provide a smooth edge along said end seam joint.

3,129,868
CORNER POST CONSTRUCTION
Robert L. Jenk, Cincinnati, Ohio, assignor to The Mead Corporation, Dayton, Ohio, a corporation of Ohio
Filed Apr. 3, 1961, Ser. No. 100,350
9 Claims. (Cl. 229—14)

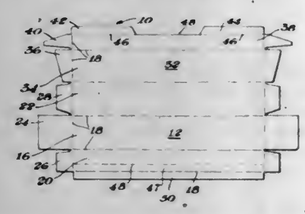
7. In combination, a rectangular container having side, top and bottom walls, a rectangular article packed in said container, and protective cushioning means embracing certain corners of said article and bridging adjacent corners of said container, each of said cushioning means comprising a piece of at least somewhat resilient sheet material having a portion cylindrically curved about its longitudinal axis through an arc of the order of 180° and having a pair of integral outwardly convex cushioning portions extending inwardly from the edges of said cylindrically curved portion and at least to substantially the mid portion of the inner surface thereof, whereby said cushioning portions may protectively resiliently embrace

a corner of said article while said cylindrically curved portion protectively resiliently bridges a corner of said container, said sheet material having spaced inner and outer



plies and a filling of compressible granular material therebetween, and said granular material being an expanded plastic material.

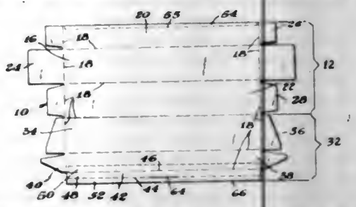
3,129,869
DISPENSING CONTAINER
Lewis E. Kirkwood and Harry W. Bull, Midland, and David D. Cornell and Kenneth T. Buttery, Kalamazoo, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Feb. 19, 1962, Ser. No. 173,963
3 Claims. (Cl. 229—51)



1. A dispensing container comprising a hollow body portion including a front panel and a rear panel, a lid member hingedly attached to said rear panel and including a top panel having a flange overlapping said front panel, said flange extending a given distance downwardly from the top of said front panel, a lengthy portion of said flange being cut away intermediate its ends from the bottom thereof and to a heighth less than said given distance to divide the part of the flange overlapping said front panel into a plurality of spaced lips joined by a remaining connecting portion of said flange, a perforated tearing seam along the length of each of said lips, said lips below said seam being secured to said front panel, whereupon pressure applied to said connecting portion of said flange in a direction generally away from said front panel results in a separation of the lid member from the body portion along said seams.

3,129,870
DISPENSING CONTAINER
Lewis E. Kirkwood, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Feb. 19, 1962, Ser. No. 173,978
6 Claims. (Cl. 229—51)

1. A dispensing container comprising a hollow body portion including a front panel and a rear panel, a lid member hingedly attached to said rear panel and including a front flange overlapping said front panel, a reversely directed front flap extending from the bottom of said front flange, a lip forming an upper portion of said flap and being at least partially secured to the upper portion of said front panel, said lip separated from the rest of said flap by a perforated seam, whereby tearing of said



perforated seam separates said lid member from said body portion for opening of the container.

ERRATUM

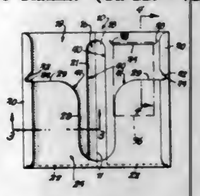
For Class 229—55 see:
Patent No. 3,129,848

3,129,871
BAGS
Arnold F. Becker, San Pedro, Calif., assignor to Bemis Bro. Bag Company, St. Louis, Mo., a corporation of Missouri
Filed Sept. 26, 1961, Ser. No. 140,810
2 Claims. (Cl. 229—62.5)



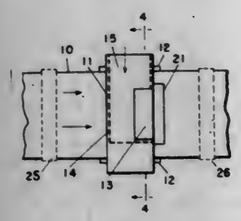
1. A valve bag having a closure at one end comprising inwardly directed end flaps and first and second side flaps, one of said end flaps constituting a valve flap, a tuck-in valve sleeve comprising a flat tube overlying said valve flap, said first side flap being folded over upon the outer wall of said tube and the other end flap and being adhered thereto, said second side flap being folded over upon said first side flap and adhered thereto, said tube having a pair of cuts located in its outer wall extending inward from one end thereof defining a cuff, said cuff being folded back on the outside of the tube and extending from one cut around one side edge of the tube, across the inner wall of the tube, and around the other side edge of the tube to the other cut, said tube being positioned on said valve flap with said cuff overlying the margin of the valve flap at the inner end of the valve flap with the tube extending outward over the valve flap, and said cuff being adhered to the valve flap.

3,129,872
PORTFOLIO MADE OF PAPER
Wilton J. Lutwack, 701 Seneca St., Buffalo, N.Y.
Filed June 1, 1962, Ser. No. 199,413
6 Claims. (Cl. 229—72)



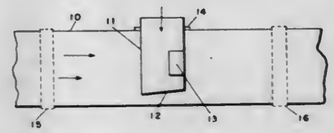
1. A portfolio of the character described, comprising
(A) a single sheet of paper folded to provide
(*a*) a first rectangular panel,
(*b*) a second rectangular panel connected to said first rectangular panel by a first fold line forming a hinge,
(B) an inner pocket forming flap forming a continuation of both of these panels in the direction of said hinge line and connected to said panels by a second fold line, said inner pocket forming flap
(1) having a central recess in line with said hinge line extending from the outer end edge thereof to a point close to said second fold line and
(2) being of a length from said outer end edge thereof to said second fold line slightly less than the dimension of said panels lengthwise of their said hinge line,
(C) an outer pocket forming flap forming a continuation of both of said panels in the direction opposite from said inner pocket forming flap and connected to said panels by a third fold line, said outer pocket forming flap
(1) having a central recess in line with said hinge line extending from the outer edge thereof to a point close to said third fold line and
(2) being of a length from its said outer edge to said third fold line substantially less than the said length of said inner pocket forming flap,
(D) a narrow flap forming a continuation of that edge of each panel parallel with said hinge line and connected to said panels by additional fold lines, and
(E) a layer of glue on one face of each of said narrow flaps,
said flaps being folded so that said inner pocket forming flap is in face-to-face relation with said panels and extends substantially to said third fold line; said outer pocket forming flap is in face-to-face relation with said inner pocket forming flap and extends partway to said second fold line, and said narrow flaps are in face-to-face relation with both said inner pocket forming flap and said outer pocket forming flap with said layer of glue adhered thereto thereby to provide a pair of inner pockets extending substantially the full extent of said panels lengthwise of said hinge line and having mouths opening toward said hinge line and a pair of outer pockets having L-shaped mouths opening toward said hinge line and also toward said second fold line, and whereby the fold for said outer pocket forming flap at said third fold line forms an edge closure, integral with said sheet of paper, both for the adjacent end of each of said inner pockets as well as the corresponding end of each of said outer pockets, and whereby said glued narrow flaps form edge closures, integral with said sheet of paper, for both the inner and outer pockets.

3,129,873
SUCTION PUMP MEANS HAVING LONGITUDINALLY DIVIDED SUCTION TUBES
Georg S. Mittelstaedt, 274 73rd St., Brooklyn, N.Y.
Filed Feb. 26, 1962, Ser. No. 175,471
8 Claims. (Cl. 230—92)



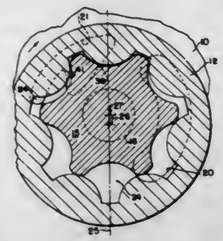
1. Suction pump means comprising a flow tube, an open-ended suction tube extending across the flow tube, the ends of the suction tube extending at least to the outside of the flow tube, said suction tube producing in the flow tube an increasing-decreasing constriction of flow, an opening in the wall of the suction tube downstream of the greatest constriction of flow, and a longitudinal partition dividing the suction tube and dividing said opening, providing sidewise arranged, separate peripheral openings in the suction tube, said partition with the suction tube forming channels in the suction tube leading from said separate peripheral openings to opposite ends of the suction tube; said constriction of flow producing a low pressure area, resulting in fluid being drawn through the suction tube into the flow tube.

3,129,874
SUCTION PUMP MEANS HAVING SUCTION TUBES WITH TRANSVERSAL AND PERIPHERAL OPENINGS
Georg S. Mittelstaedt, 274 73rd St., Brooklyn, N.Y.
Filed Feb. 26, 1962, Ser. No. 175,640
6 Claims. (Cl. 230—92)



1. Suction pump means comprising a flow tube, a suction tube extending partly across the flow tube and producing an increasing-decreasing constriction of flow therein, a transversal slanted opening at the inner end of the suction tube, the side of the suction tube upstream of the greatest constriction of flow extending further into the flow tube than the opposite side, and a perimetrical opening in the suction tube immediately downstream of the greatest constriction of flow; said constriction of flow producing a low pressure area, resulting in fluid being drawn through the suction tube and both the transversal and perimetrical openings into the flow tube.

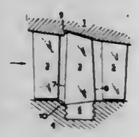
3,129,875
ROTARY GAS COMPRESSOR
John Cirillo, Kings Park, N.Y., assignor to Fairchild Stratos Corporation, Hagerstown, Md., a corporation of Maryland
Filed Feb. 20, 1962, Ser. No. 174,429
4 Claims. (Cl. 230—141)



1. In a "Gerotor" compressor of the type having a lobed female rotor, a lobed male rotor having one less lobe than said female rotor, a housing member having a bore in which said female rotor is rotatably mounted, closure members at the sides of said housing member, said closure members carrying a shaft on which said male rotor is mounted, said bore and said male rotor shaft mounting being eccentric with respect to each other, the center of one of said rotors being concentric to said shaft and the center of the other rotor being eccentric to said

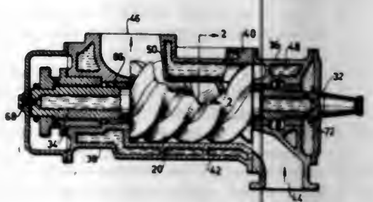
shaft, all lobes of one of said rotors being in sealing contact with the lobes of the other of said rotors at least one of said closure members having an inlet port of usual kidney shape; the improvement which comprises providing a discharge port in at least one of said closure members which is substantially the projection of a figure bounded by a line extending from a point lying on a circle arc having the root radius of said female rotor, laid off about a center coinciding with the center of the concentrically mounted rotor, said point being removed in the direction of rotation from a diameter extending through the center of the male and female rotor lobe space which is filled at the start of compression, and through the centers of said male and female rotors at that position, by an arc comprising the arc subtended by an angle measured about the center of said eccentrically mounted rotor which angle is equal to the ratio of the number of lobes in the male rotor to the number of lobes in the female rotor multiplied by the angle measured about the center of the concentrically mounted rotor at which the desired compression ratio occurs, and the arc of said root radius circle subtended by a chord equal to the eccentric distance; thence inwardly along a line parallel to the radial line defining said first mentioned angle to a point on a second circle arc having a radius equal to the outer radius of the male rotor, said arc being struck about the center of the concentrically mounted rotor; thence in the direction of rotation along said second circle arc to a point at which that arc is intersected by an arc of the male rotor lobe radius struck from the point on said first circle arc angularly spaced from said center line by said desired compression ratio angle; thence along said male rotor lobe radius arc in a direction generally counter to the direction of rotation to the intersection of said arc with the radial line extending to the center of said concentrically mounted rotor from the point from which said arc was struck; thence through a point at which the female lobe and male lobe space are in substantially complete engagement to a point on said first circle arc removed substantially 180° in the direction of rotation from the center line of said filled rotor lobes; and thence along said first circle arc to the place of beginning.

3,129,876
HIGH SPEED AXIAL FLOW COMPRESSORS
Vincent Trevor Forster, Rugby, England, assignor to The English Electric Company Limited, London, England, a British company
Filed Oct. 19, 1961, Ser. No. 146,182
1 Claim. (Cl. 230—120)



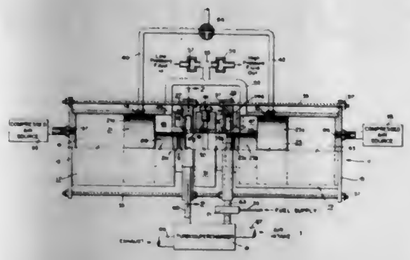
A subsonic multi-stage axial-flow compressor comprising a stator and a rotor defining respectively outer and inner boundaries of an annularly converging working fluid pasasge, a row of stator blades mounted in said stator, rotor blades mounted in said rotor and downstream of said stator blades, each rotor blade having a root and a tip, said passage having a diverging portion forming recesses adjacent the root and tip respectively of the leading edges of the rotor blades and being longer than the radial dimension of the adjacent stator blade, whereby the cross-sectional area of the passage at the leading edge is greater in magnitude than the cross-sectional area at the trailing edge of the adjacent stator blade.

3,129,877
ROTARY PISTON, POSITIVE DISPLACEMENT COMPRESSOR
Hans Robert Nilsson, Ektorp, and Bengt Bertil Wahlsten, Stockholm, Sweden, assignors to Svenska Rotor Maskiner Aktiebolag, Nacka, Sweden, a corporation of Sweden
Continuation of application Ser. No. 655,843, Apr. 29, 1957. This application Dec. 22, 1961, Ser. No. 161,576
Claims priority, application Sweden May 17, 1956
4 Claims. (Cl. 230—143)



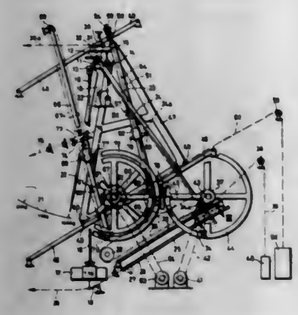
1. A rotary piston, positive displacement, elastic fluid compressor comprising a casing structure providing a barrel portion having intersecting bores with co-planar axes and further providing spaced apart ports communicating with said bores and comprising a high pressure port at least the major portion of which is located to one side of the plane of said axes and a low pressure port at least a major portion of which is located on the opposite side of said plane, rotors provided with helical lands and grooves having an effectiye wrap angle of less than 360° rotatably mounted in said bores and comprising a male rotor having lands and intervening grooves the major portions of which lie outside the pitch circle of the male rotor and a female rotor having lands and intervening grooves the major portions of which lie inside the pitch circle of the female rotor, the lands and grooves of said rotors intermeshing to form with the confronting portion of the casing structure chevron-shaped working chambers each composed of communicating portions of a male rotor groove and a female rotor groove joining at the apex end of the chamber and said apex end moving axially towards said high pressure port as the rotors revolve to decrease the volume of the chamber and effect compression of the fluid contents thereof, the lands of said male rotor having convexly curved profiles the outer portions of which lie peripherally within the lines of a land having a root of the same peripheral width and flanks generated by points on the pitch circle of said female rotor and the profile of the grooves of said female rotor being the envelopes developed by the convex lands of said male rotor in passing into and out of mesh with said female rotor, whereby a series of gaps is created in the sealing lines of normal clearance between the cooperating parts defining the perimeters of said compression chambers, said gaps extending axially of the line of intersection between said bores on the high pressure side of the bores and said gaps traveling axially of said line of intersection toward said high pressure port as the rotors revolve, and means for sealing the clearance between the parts defining the perimeters of said chambers inclusive of said gaps and for cooling the fluid being compressed therein comprising a plurality of openings in the barrel portion of said casing structure for injecting liquid into said chambers, said openings being distributed lengthwise of said barrel portion of the casing structure in the area thereof adjacent to and inclusive of said line of intersection.

3,129,878
MECHANICAL APPARATUS
Harold Kosoff, 1203 Hale St., Philadelphia 11, Pa.
Filed Jan. 29, 1962, Ser. No. 169,311
25 Claims. (Cl. 230—56)



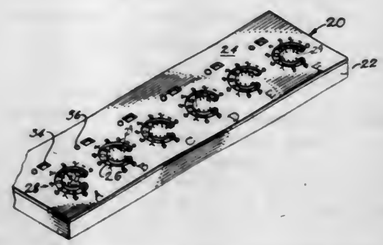
1. A free-piston engine comprising:
(*a*) first integral means having apertures therein and including a combustion region,
(*b*) a selected number of means having at least respective portions thereof which interfit the apertures in said first means, said selected number of means having axial bores therein, and
(*c*) a selected number of piston members respectively disposed within said bores for axial movement therein, each of said piston members having its peripheral portions arranged for movement substantially only adjacent the wall of said bore in which it is disposed, and
(*d*) means for maintaining said interfitting portions pressed into said apertures.

3,129,879
INCLINATION BALANCE WITH WEIGHT-SENSING DEVICE
Ernst Kuhnle and Josef Schwarz, Balingen, Wurttemberg, Germany, assignors to Bizerba-Werke, Wilhelm Kraut KG., Balingen, Wurttemberg, Germany
Filed Sept. 12, 1962, Ser. No. 223,072
Claims priority, application Germany Sept. 21, 1961
15 Claims. (Cl. 235—61)



1. An inclination balance having a cabinet, a pivotable double-arm balance beam, a first platform for goods to be weighed, a second platform for applying tare weights to be deducted from individual gross-weight values established from said first platform, so as to obtain net-weight values therefrom, each platform being operatively connected to a respective arm of said beam, an inclination pendulum secured to said beam for simultaneous oscillation therewith, a tangential weight-sensing device for magnified weight indication and printing at a blocked, deflected position of said pendulum, comprising, in combination, a sensing edge extending along at least part of said pendulum and adapted to be engaged by co-operating elements of said weight-sensing device, said sensing edge being parallel to but a small distance apart from the theoretical sensing line of said pendulum when the latter is in a position corresponding to zero weight, a stationary first sensing rail mounted in said cabinet parallel to the plane of oscillation of said pendulum and substantially perpendicular to an intermediate position of said sensing edge, said tangential weight-sensing device including a first sensing element movable along said first sensing rail and adapted to abut said sensing edge, a stationary second sensing rail mounted parallel to said first sensing rail, a sensing slide movable along said second sensing rail, biasing means for separately urging said first sensing element and said sensing slide in a direction toward said sensing edge, a first adjusting rail supported by said sensing slide parallel to said theoretical sensing line, said tangential weight-sensing device further including a second sensing element slidably supported by said first adjusting rail, a stationary second adjusting rail mounted substantially parallel to said first adjusting rail, a follower slide slidably supported by said second adjusting rail, first, second and third dial means for respectively displaying said net-weight values, pre-set unit prices applicable to said goods and respective total prices of the latter, said tangential weight-sensing device further including means for introducing said unit prices, said follower slide and said second sensing element being adapted to move along said first adjusting rail into a specific vertical position corresponding to said unit prices, means for immobilizing said second sensing element with respect to said first adjusting rail, means for immobilizing said pendulum in said deflected position corresponding to a specific one of said net-weight values, and means for operatively coupling together said second sensing element and said follower slide, said tangential weight-sensing device also including means for actuating said first and said third dial means for displaying said net-weight values and said total prices of the goods upon completion of each weighing operation.

3,129,880
CALCULATORS
Patrick J. McGinn, 40 Pryor St. Bldg. SW., Atlanta 3, Ga.
Filed Aug. 14, 1962, Ser. No. 216,777
4 Claims. (Cl. 235—74)

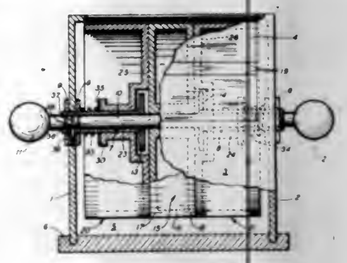


1. In a stylus-operated portable calculator of the type described,
(*a*) a calculator base adapted to be formed in a three-dimensional shape from plastic or the like, with a flat upper surface,
(*b*) circular indentations formed across the upper surface of said base having the centers thereof in a straight line and each intersecting the next successive indentation,

(*c*) a second group of circular indentations formed beneath said first group of indentations and having the centers thereof in a stright line with the second indentations each intersecting two of the first indentations located thereabove,
(*d*) center post formed at each of said first and second indentations,
(*e*) a spring slot formed across the bottom of said base below said second group of indentations,
(*f*) each of said first group of indentations having an answer gear positioned therein,
(*g*) each of said second group of indentations having a stylus-operated input gear located thereon,
(*h*) each of said stylus-operated input gears being of substantially solid disc-like construction having a plurality of teeth formed on the underside thereof and being identified with the indicia of the digits "0" through "9" adjacent a respective gear tooth on the calculator,
(*i*) each of said stylus-operated gears having a stylus opening formed adjacent a respective gear tooth and each of said stylus-operated gears intersecting with a respective answer gear located thereabove whereby movement of said stylus-operated gear operates a respective answer gear in mesh therewith,
(*j*) a ratchet spring mounted in said spring slot and there being a plurality of springs each having a bent portion engaging between respective gear teeth on said stylus-operated gears whereby said ratchet spring bends and snaps from one gear position to the next as said stylus-operated gears are moved,
(*k*) each of said answer gears having indicated thereon the numbers "0" through "9" corresponding with respective numbers on said stylus-operated gears,
(*l*) each of said answer gears having a carry-over arm protruding therefrom for the purpose of advancing the next successive answering gear when said gear passes the number "9,"
(*m*) and each of said first group of indentations having a cam therein adapted to raise said carry-over arm on said answer gear to bring same into engagement with said next successive answer gear at the proper time when said answer gear is about to pass the number "9" so as to advance said next successive gear one digit,
(*n*) and a thin cover member adapted to cover said base and said answer gears and said stylus-operated gears,
(*o*) said cover having respective stylus-tracks formed therein in alignment with and corresponding to the stylus openings formed in each of said stylus-operated gears whereby a stylus may be inserted through said cover and into a respective stylus hole in said gear.

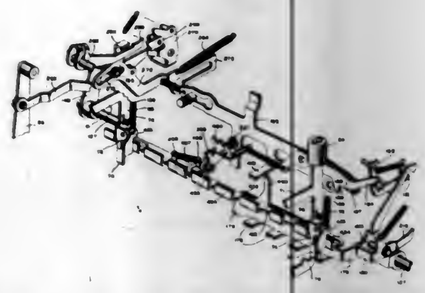
3,129,881
ROTARY SLIDE RULE
Samuel Wasserman, 291 Alta Loma Ave., Daly City, Calif.
Filed Apr. 22, 1963, Ser. No. 274,669
7 Claims. (Cl. 235—79.5)

7. A rotary slide rule comprising:
(*a*) a pair of coaxial drums having graduations on their outer peripheries adapted to be moved into alignment upon relative rotation of said drums;
(*b*) a pair of coaxial, stationary, hollow bearing elements supporting said drums for rotation thereon and for axial movement relative thereto in opposite directions;
(*c*) means supporting said elements stationary and spaced apart;
(*d*) a shaft coaxial with said elements supported thereby for rotation and for reciprocation axially thereof;
(*e*) a member rigid with said shaft positioned between said drums;
(*f*) a pair of yieldable means in operative engagement with said pair of drums respectively, yieldably urging said drums toward each other and into into frictional engagement with said member whereby rotation of said shaft will effect rotation of said drums;
(*g*) a pair of stop means respectively adjacent to each drum and stationary relative to said bearing elements;



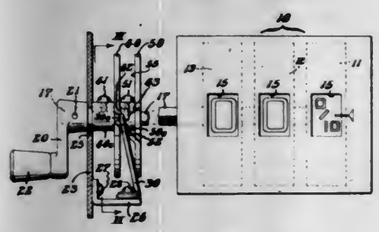
(*h*) a pair of separate rigid means rigid with each drum of said pair;
(*i*) means supporting said pair of stop means in positions for engaging the said rigid means on the trailing drum of said pair upon movement of said shaft in one direction or the other for holding said trailing drum against axial movement thereof with the leading drum under the influence of said member whereby said drums will be separated to enable rotation of said leading drum relative to said trailing drum upon rotation of said shaft.

3,129,882
KEY INTERLOCK MECHANISM FOR CALCULATING MACHINES
Bruce Harrison Tingley, Pine City, N.Y., assignor, by mesne assignments, to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Application Sept. 27, 1960, Ser. No. 58,814, which is a division of application Ser. No. 429,277, May 12, 1954, now Patent No. 2,984,411, dated May 16, 1961. Divided and this application Nov. 13, 1962, Ser. No. 241,462
4 Claims. (Cl. 235—130)



1. In a machine of the class described having a pin carriage reciprocable along a predetermined path of travel and a plurality of depressable multiplier keys, each one of which keys is provided with a dependent stem, a key lock slide having spaced keys limiting ears, one for each of said keys, a spring for said slide biasing said slide for movement in a certain direction parallel to said predetermined path of carriage travel, a pawl on said slide, a projection on said pin carriage engaging said pawl to hold said slide in a first position against the biasing force of said spring under conditions where said carriage is in a first position, said ears of said slide being configurated and spaced along said slide so as to be disposed beneath their respective associated key stems preventing depression of such associated respective keys under conditions where said pin carriage is in said first position, said configuration and spacing of said ears being predetermined to position the space between adjacent ears below said key stems under conditions where said pin carriage is moved a predetermined distance in said certain direction causing said biasing spring also to urge said slide said certain distance.

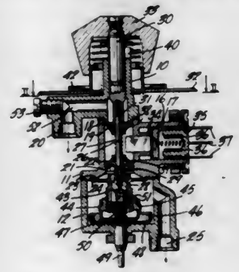
3,129,883
REGISTER RESETTING MECHANISM
Ronald M. Wilson, Ambler, Pa., assignor to William M. Wilson's Sons, Inc., Lansdale, Pa., a corporation of Pennsylvania
Filed Apr. 9, 1962, Ser. No. 186,151
14 Claims. (Cl. 235—144)



11. In a resettable register having count indicating elements, means for returning the count indicating elements to a zero position comprising a shaft supporting a plurality of count indicating elements, resetting limit means mounted on the shaft for rotation, means connecting the resetting limit means and the count indicating elements for rotating said elements in the resetting direction when the resetting limit means is rotated, said resetting limit means including means forming a channel extending transverse to the shaft, an inclined substantially axially directing displacing means extending into said channel from one side thereof and a stop positioned proximate said displacing means and extending into said channel from the side opposite to that of the displacing means, means for rotating said resetting limit means, and limit means being stationarily mounted independent of said resetting limit means, said independent limit means having a portion thereof positioned within said channel free from contact with the resetting limit means whereby said portion remains within the channel as the resetting limit means is rotated until said portion is displaced axially by the displacing means against said stop thereby preventing further rotation of the resetting limit means.

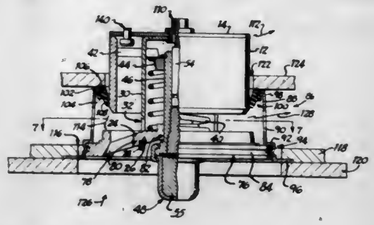
3,129,884
VALVE DEVICE FOR GAS SUPPLY TO TWO DIFFERENT POINTS OF CONSUMPTION
Johannes Vagn Baatrup, Sonderborg, Denmark, assignor to Danfoss ved ing. M. Clausen, Nordborg, Denmark, a company of Denmark
Filed June 22, 1961, Ser. No. 118,861
Claims priority, application Germany June 22, 1960
9 Claims. (Cl. 236—1)

1. A valve device for supplying gas to two different points of consumption and adapted to be controlled by a single inlet safety device, which comprises means defining a gas inlet chamber, means defining a pair of axially-spaced-apart valve seats in said chamber, each communicating with one of said points of consumption, a pair of axially-spaced-apart valve disks each cooperating with one of said valve seats, a common stem slidably extending through both of said valve disks, resilient means normally biasing said valve disks away from each other and toward their respective seats, means carried by said common stem for displacing one of said valve disks away from its seat in one direction of movement of said stem and second means carried by said stem for displacing the other of said valve disks away from its seat in the opposite direction of movement of said stem, a common



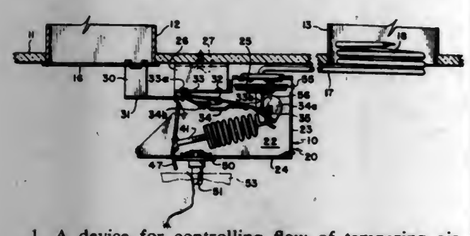
operating knob for displacing said stem in each of said two directions, means defining a gas inlet to said chamber intermediate said valve disks, and thermally actuated safety means for regulating the flow of gas through said inlet and thereby regulating the flow of gas to either one or the other of said different points of consumption, depending upon the position of the downstream valve disks.

3,129,885
FLUID LINE THERMOSTAT
John S. Freismuth, Arlington Heights, Ill., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Apr. 30, 1962, Ser. No. 191,173
9 Claims. (Cl. 236—34.5)



8. In a thermostatic valve,
first and second spaced walls defining first and second spaced valve seats,
means connecting said walls to maintain then in spaced relation to each other,
a hollow, open-ended valve element axially movable in the space between said seats to close against one or the other of said seats,
thermostatic means, comprising
a rod connected to said second wall and extending toward said first wall,
and a sleeve slidably mounted on said rod,
and heat-responsive power means connected at one end to said sleeve to relatively move said sleeve and rod,
means connecting said sleeve to said valve,
and means biasing said valve toward said second wall.

3,129,886
THERMOSTATIC AIR FLOW CONTROL DEVICE
John Liebermann, Columbus, Ohio, assignor to Ranco Incorporated, Columbus, Ohio, a corporation of Ohio
Filed June 11, 1962, Ser. No. 201,629
2 Claims. (Cl. 236—49)



1. A device for controlling flow of tempering air in accordance with temperatures in a space to be tempered, said device comprising:

(*a*) a housing having side walls,

(*b*) a lever pivoted between said side walls for movement about a first axis, said lever having a free end,

(*c*) a thermally expansible power element mounted on said housing and engageable by said lever,

(*d*) a first spring urging said lever about said first axis for following engagement with said power element,

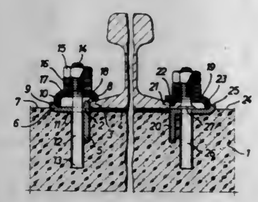
(*e*) an arm extending from said housing and having one end pivoted between said walls for movement of said arm about a second axis, one end of said arm being engageable with said free end of said lever,

(*f*) an air baffle mounted at the other end of said arm for movement therewith,

(*g*) a second spring urging said arm about said second axis for following engagement with said free end of said lever,

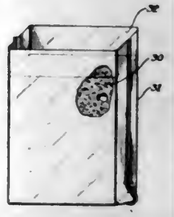
(*h*) said lever being movable away from said arm by by said power element when said baffle is restrained against movement in one direction, and said power element being movable away from said lever when said baffle is restrained against movement in the opposite direction.

3,129,887
RAIL ANCHORAGE
Hermann Meier, Asgardstrasse 37, Munich, Germany
Filed May 23, 1962, Ser. No. 197,025
Claims priority, application Germany May 27, 1961
6 Claims. (Cl. 238—265)



1. An anchorage assembly for securing a rail to a concrete tie having at least two apertures extending deeply thereinto arranged directly adjacent to opposite lateral edges of the base of said rail when said rail is in its secured position, comprising a pair of angular steel supporting elements mounted on opposite sides of the rail, each of said supporting elements including a substantially horizontal web and a substantially perpendicular web, each said perpendicular web extending into a respective one of said apertures in the concrete tie and being arranged within a plane directly adjacent to the lateral side of the base of the rail, an adhesive bonding said perpendicular web within said aperture to said tie, each said horizontal web extending outwardly away from the rail and having an upwardly extending projection on its outer end, said horizontal web further having an aperture therein and being bonded by said adhesive to the upper surface of the tie, an anchor bolt associated with each supporting element, each said anchor bolt extending from the outside through said aperture in said horizontal web and into the respective aperture in the tie substantially parallel to said perpendicular web, said anchor bolt being bonded by said adhesive to said tie within said last-mentioned aperture, a clamping member arranged on said bolt and having a downwardly projecting outer end adapted to bear upon said horizontal web and against the inner side of said projection, and an inner end adapted to bear from above upon the base of the rail, and means threadably secured on the upper end of said bolt for pressing said clamping member upon said horizontal web and said rail base, said adhesive being capable of softening when heated to permit said angular elements and said bolts to be removed and replaced when necessary.

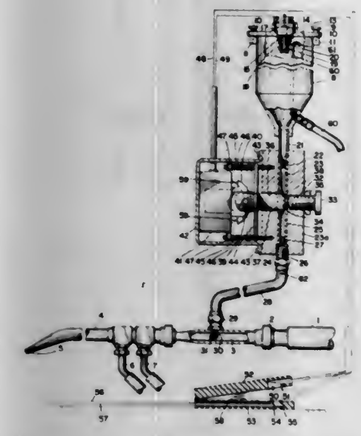
3,129,888
AIR ODOR CONTROL DEVICE
Elwin Clarence O'Hagan, Chicago, Ill., assignor to Interstate Sanitation Corporation
Filed May 19, 1959, Ser. No. 814,285
1 Claim. (Cl. 239—55)



An air odor control device consisting of a polyethylene plastic bag having a flexible sponge disposed therein, said sponge being saturated with optically active limonene liquid which is vaporizable at ordinary room temperature, said plastic bag being sealed during storage, said bag being sealed along the top edge portion and which is adapted to be severed and the plastic bag opened to expose a limited surface of said sponge for contact of air therewith and evaporation of said limonene liquid whereby controlled release of said limonene in vaporous form into the surrounding atmosphere is provided, said limonene liquid consisting of a gelled liquid composed of limonene and bentonite clay particles.

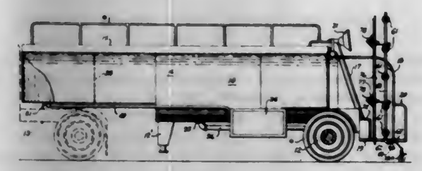
3,129,889
APPARATUS FOR DEPOSITING POWDERED METALS
Arthur T. Cape, Monterey, Calif., assignor to Powder Melting Corporation, Monterey, Calif., a corporation of California
Filed Sept. 15, 1960, Ser. No. 56,317
2 Claims. (Cl. 239—85)

1. Apparatus of the character described, comprising a powder gun having a handle portion and a nozzle disposed at a substantial distance from said handle portion, said gun having a passageway from said handle portion to said nozzle for passage of a combustible gas under pressure, means for supplying a combustible gas under pressure through said passageway and to said nozzle, a hopper for metal powder disposed above said gun, means for flowing said powder gravitationally from said hopper to said passageway, said means including a tube disposed above the gun and having an orifice in its wall which is open to the atmosphere, said tube communicating through the wall of said passageway with said passageway at a point in said passageway which is adjacent said handle portion and remote from said nozzle, whereby said power enters said passageway at said point, and means disposed above said orifice for shutting off the flow of said powder,



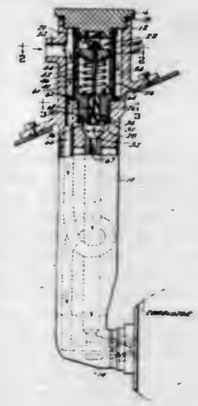
whereby, when the flow of powder is cut off by said last-named means, said combustible gas mixture will enter said tube from said point, pass upwardly through said tube and leak out through said orifice, creating a back pressure in said tube which prevents powder from falling into said tube.

3,129,890
EMERGENCY RUNWAY FOAMER
Jean M. Britton, 102 Lexington N.A.S., and Reed F. Calhoun, 714 Craig St., both of Corpus Christi, Tex.
Filed Oct. 23, 1962, Ser. No. 232,352
10 Claims. (Cl. 239—127)



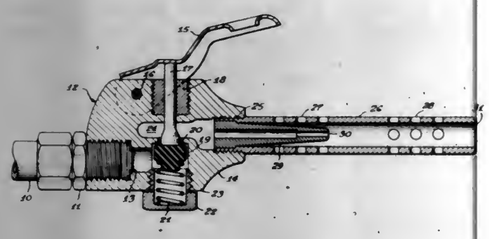
1. Apparatus for applying foam to aircraft runways comprising, in combination, a tank vehicle having a body with a foam tank and a water tank therein, a pressure pump carred by said body, a motor for said pump, a connection between said foam tank and said pump, a second connection between said water tank and said pump, a common outlet from said pump, a main discharge pipe carried transversely across the rear of said vehicle, auxiliary discharge pipes pivotally connected to the ends of said main pipe, foam nozzles carried by said main and auxiliary discharge pipes, spreader plates suspended rearwardly from said auxiliary discharge pipes, a spreader plate suspended rearwardly of said main discharge pipe, and pivot means securing said spreader plates rearwardly of said auxiliary discharge pipes and said main discharge pipe, respectively, said spreader plates being movable about said pivot means between an out-of-the-way position and an operative position.

3,129,891
FUEL NOZZLE
John W. Vdoviak, Cincinnati, Ohio, assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Air Force
Filed July 26, 1961, Ser. No. 128,324
2 Claims. (Cl. 239—405)



2. A dual-flow fuel nozzle having a head end and a fuel discharge end, primary and secondary fuel outlet passages in said nozzle for discharging fuel from said fuel discharge end, a cylindrical swirl chamber in said head end having a circumferential restricted fuel delivery slot in the bottom thereof adjacent the inner wall of said chamber in flow communication with said primary fuel outlet passage. said chamber having a tangential fuel inlet passage in the upper portion thereof for discharging fuel tangentially into said chamber to create a vortical fuel flow in said swirl chamber, concentric cylindrical flow dividing means in said swirl chamber separating fuel delivery from said inlet passage into said primary and secondary fuel outlet passages, said flow-dividing means including an inner concentric cylindrical chamber spaced materially inwardly from the aforesaid inner wall of said swirl chamber having a plurality of fuel delivery openings therethrough, having a valved passage therein in communication with said secondary fuel outlet passage, valve means in said valve passage opening downstream toward said secondary fuel outlet passage, a piston in said concentric cylindrical chamber, means connecting said piston to said valve means, spring means in said cylindrical chamber biasing said piston for yieldably closing said valve means to control fuel delivery to said secondary fuel outlet passage, a cylindrical filter element surrounding said concentric cylindrical chamber in materially inwardly spaced relation to said circumferential restricted fuel delivery slot, said slot being sized to retrict predetermined relatively large heavier fuel borne particles driven outwardly in the vortical flow in said swirl chamber by centrifugal action from passing into said primary fuel outlet passage, concentric swirl-inducing guide vanes between said valve means and said piston for inducing swirl of fuel passing said valve means, for preventing periodic build up of relatively small contaminant particles in the fuel passing through said filter element on said valve means to permit complete closing thereof.

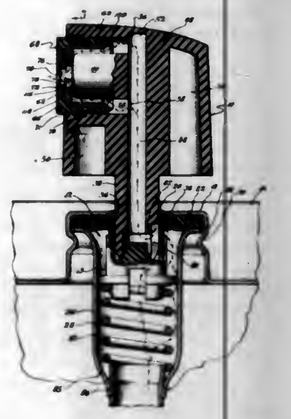
3,129,892
PRESSURE REDUCING BLOW GUN
John E. Tillman, 305 Tulane Drive SE., Albuquerque, N. Mex.
Filed June 26, 1961, Ser. No. 119,582
3 Claims. (Cl. 239—407)



1. In a pressure reducing blow gun including an inlet for compressed gas and a valve for controlling the entry of compressed gas from said inlet to the gun, outlet means for discharge of compressed gas from the gun comprising: a tube having an inner end and an outer end provided with a discharge opening therethrough for discharge of compressed gas from the gun; a nozzle mounted within the inner end of said tube extending a distance axially thereinto and being provided at its inner end with a discharge orifice for discharge of compressed gas therethrough into said tube; said nozzle being formed and mounted to receive compressed gas from said valve for discharge through said orifice and being shaped to form in combination with said tube a venturi therearound within said tube; said tube being provided with a first set of perforations therethrough spaced apart therearound and spaced apart longitudinally therealong in the region of and around said venturi for aspiration of air therethrough into said tube by the action of said venturi; said nozzle being mounted with said discharge orifice thereof located within that portion of the interior of said tube surrounded by said first set of perforations; said tube being provided with a second set of perforations independent of said first set of perforations and being located adjacent said discharge in the outer end of said tube; and said second set of perforations being spaced a distance longitudinally along said tube remote from and independent of said first set of perforations for aspiration of air into said tube adjacent the discharge end of the latter by the flow of compressed gas through said tube and for pressure releasing reverse flow of compressed gas outwardly therethrough upon blocking of said discharge from said tube.

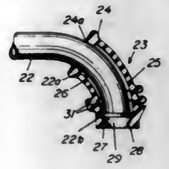
3,129,893
SPRAY HEAD FOR SWIRLING SPRAY
Edward Howard Green, 11 Army Trail, Addison, Ill.
Filed May 31, 1962, Ser. No. 198,802
10 Claims. (Cl. 239—490)

1. A spray head for dispersion of a heavy material in a pressurized mixture and comprising a push button body member having a vertical conduit to be coupled to a source of said pressurized mixture, a plurality of passageways connected with said conduit and being circumferentially spaced about an axis which is at a substantial angle relative to said conduit and generally comprising the axis along which said spray head is adapted to discharge said mixture, a swirl-forming chamber in said body member, and each passageway having a feeder channel located outside of said swirl-forming chamber and leading into said chamber and each channel entering the swirl-forming chamber tangential thereof and at the periphery thereof, said chamber being perpendicular to and coaxial with said axis, and a discharge orifice axially spaced from said chamber and means in said chamber



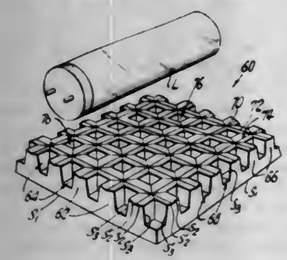
providing an annular communication between said chamber and said discharge orifice.

3,129,894
COMBINED NOZZLE AND GUARD FOR FAUCET SPOUTS
Clarence E. Schermerhorn, Lincoln Hotel, Apt. 310, La Porte, Ind.
Filed Sept. 21, 1961, Ser. No. 139,641
3 Claims. (Cl. 239—602)



1. A combined faucet guard and flow volume and character control nozzle for exterior and surrounding application to the discharge portions of faucet spouts and comprising a body of elastic material providing a fluid passage extending therethrough at least the outer end portion of said body being longitudinally adjustable on a spout to at least an innermost and an outermost position, said outer end portion having an exterior buffer-portion which serves as a guard for the discharge end of the spout in said innermost and outermost as well as in intermediate positions of adjustment of said outlet end portion on said spout, said passage providing inlet and outlet portions with the outlet portion having a substantially restricted normally open outlet, at least the inner end of the inlet portion of said passage adapted for frictional gripping against a spout, the outlet portion of said passage embracing said spout in its innermost position of adjustment thereon whereby to spread the restricted passage outlet and admit of substantially unrestricted fluid flow therethrough, and the cross-section of said passage between its spout-gripping inner end and outlet portions being greater than exterior faucet diameter whereby to provide an annular fluid seepage-receiving space when the outlet-providing body end is in a fluid flow-restricting position on the spout.

3,129,895
SHIELDING PRISM
Kurt Franck, Newark, Ohio, assignor to Holophane Company, New York, N.Y., a corporation of Delaware
Filed Aug. 22, 1957, Ser. No. 679,609
8 Claims. (Cl. 240—106)

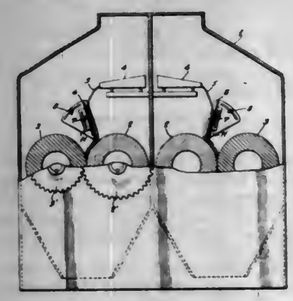


4. Means for controlling the direction of emitted light rays for use with a linear light source, said means comprising a transparent refractor, said refractor having a light incident side for facing the light source, a plurality of prisms forming said light incident side, each of said prisms comprising a truncated tower having four sides, each side extending above a base plane of said each prism, said prisms being interconnected adjacent their corners, the sides of said prisms extending from the base plane sufficiently for shielding the light emitted from said light source in both longitudinal and transverse directions.

3,129,896
SEPARATION OF HEAVY METAL CONSTITUENTS OF TIN SLAG
Sidney M. Heins, Chicago, Ill., assignor to Chemical Products Corporation, Chicago, Ill., a corporation of Illinois
No Drawing. Filed June 18, 1962, Ser. No. 202,947
8 Claims. (Cl. 241—22)

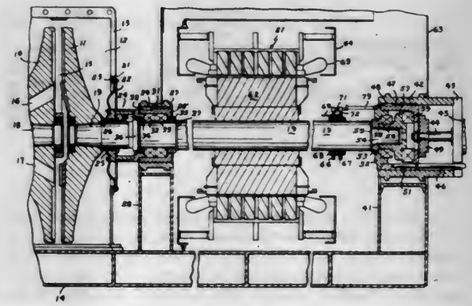
1. The method of preparing slag for the recovery of its metallic constituents which comprises the steps of comminuting the slag to a maximum particle size of about 100 mesh, fusing the comminuted slag with a salt to render the slag electrically conductive, and then comminuting the fused slag to a fineness of about 100 mesh.

3,129,897
ROLLER MILLS FOR GRINDING CEREAL PRODUCTS
Thomas J. A. Brown, Buxton, and Frederick England, Cheadle, England, assignors to Henry Simon Limited, Cheadle Heath, Stockport, England, a British company
Filed June 11, 1962, Ser. No. 201,653
Claims priority, application Great Britain June 30, 1961
5 Claims. (Cl. 241—143)



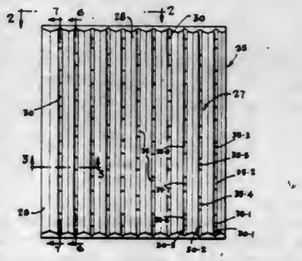
1. A rollermill for grinding cereal products or the like comprising a pair of parallel grinding rolls mounted on a common substantially horizontal plane, roll driving means whereby one roll rotates at a faster peripheral speed than the other, feeding means whereby material to be ground is fed to the rolls as a continuous curtain of constant density, and deflector means arranged to intercept the falling curtain of material and re-direct it in the form of a continuous layer of constant density to the surface of one of the grinding rolls at a position which is parallel to and rotationally in advance of the nip of the rolls by an amount in the angular range between 10° and 42°.

3,129,898
REFINER CONSTRUCTION
Donald P. Michel and Herman W. Steiniger, both of Springfield, Ohio, assignors to The Bauer Bros. Co., Springfield, Ohio, a corporation of Ohio
Filed Apr. 18, 1961, Ser. No. 103,905
7 Claims. (Cl. 241—256)



1. A refiner or like device, including a main support; relatively stationary bearing mounts occupying spaced apart locations on said support; bearing units contained in said mounts adapted for relative longitudinal motion; a shaft rotatable in said bearing units and connected thereto for unison longitudinal motion; a refiner disc on said shaft; electro-motive means for rotating said shaft including a rotor and collector rings connected to the shaft for motion therewith, brushes mounted to one of said bearing units to contact said rings and means in connection with said shaft through the medium of at least one of said bearing units arranged to accommodate end thrusts thereon on operation of said disc.

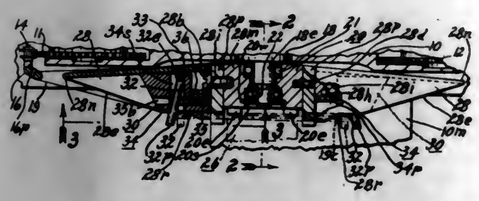
3,129,899
CRUSHER FACE PLATE
Thomas A. Ratkowski, Chicago Heights, Ill., assignor to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Filed Sept. 17, 1962, Ser. No. 224,060
3 Claims. (Cl. 241—291)



1. In a jaw crusher having reciprocal crusher jaws, a jaw plate comprising a back adapted to engage a sup-

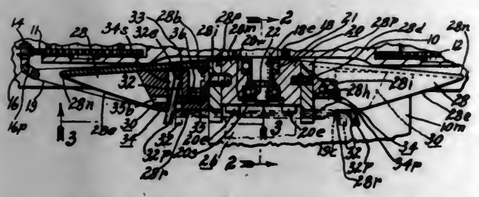
port in the crusher and a working face adapted to cooperate with the face of an opposed plate to apply crushing forces to rocks and the like fed to the jaw of the crusher, said working face being characterized by a plurality of spaced elongated crusher ribs separated by peening slots, and said ribs being joined to one another by transverse tie bars located in spaced relation to one another in rows within said slots, said tie bars being of less height than said ribs so as to be confined below the working surfaces of said ribs.

3,129,900
COIL FORMING MEANS FOR STATOR WINDING MACHINE
Paul B. Greene, Miamisburg, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 28, 1960, Ser. No. 18,125
3 Claims. (Cl. 242—1.1)



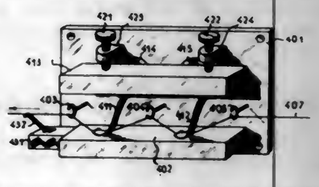
1. A coil forming device for use in combination with a wire feeding means to wind coils on a slotted member of a dynamoelectric machine, said coil forming device comprising a central body portion adapted to be journalled to said wire feeding means and having extensions formed thereon and receivable in slots of said slotted member, and wire guide means comprising a pair of tapered end portions secured to opposite ends of said body portion, said wire guide means including elongated wire engaging means pivotally mounted thereon and pivotally movable upon engagement by wire from a first position wherein the free ends of said elongated means extend in a generally outwardly direction toward the ends of said tapered portions to a second position wherein said elongated means are substantially parallel so that the distance between said free ends is decreased, and means for returning said elongated means from said second position to said first position.

3,129,901
COIL FORMING MEANS FOR STATOR WINDING MACHINE
Paul B. Greene, Miamisburg, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application Mar. 28, 1960, Ser. No. 18,125. Divided and this application Oct. 16, 1961, Ser. No. 145,417
7 Claims. (Cl. 242—1.1)



1. For use on a stator winding machine means having a winding head portion including a chain-mounted eyelet to feed coil wire to a slotted dynamoelectric machine structure, a coil forming means, comprising, a central body portion adapted to be carried by the winding head portion, shoe-like wire guide portions provided on each of opposite sides of said central body portion and longitudinally spaced from each other, and at least one pivotally supported as well as resiliently deflectable member on each wire guide portion supplemental thereto for progressive though sequential placement of coil wire and formation of coil end turns thereby relative to the slotted structure as the wire passes by way of the chain-mounted eyelet around said shoe-like guide portions as well as around said pivotally supported member engaged and resiliently deflectable by the coil wire itself during coil formation, only a pair of said pivotally supported members being located on each side of said central body portion, said members having a normally laterally spread apart relation to each other though being deflectable laterally inwardly for equalization of slot fill by coil wire subject to resilient urging by said members though movable longitudinally and laterally thereof during guidance thereof axially into the slotted dynamoelectric machine structure.

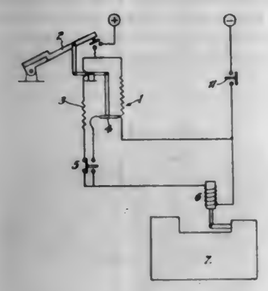
3,129,902
THREAD FEED CONTROL DEVICE FOR TEXTILE MACHINERY
Yves Juillard, Mulhouse, Haut-Rhin, France, assignor to Societe Alsacienne de Constructions Mecaniques, Mulhouse, Haut-Rhin, France, a company of France
Filed Mar. 20, 1962, Ser. No. 181,102
Claims priority, application France Mar. 22, 1961
2 Claims. (Cl. 242—149)



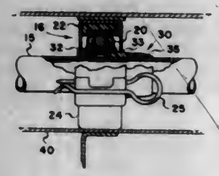
1. A tension device for a weft thread to be supplied to a shuttleless weaving loom, comprising a stationary base plate, a table portion projecting from said baseplate and providing a smooth even surface normal to said baseplate, a plurality of guide members projecting from said baseplate and engageable with a thread to define a straight path of thread displacement extending in spaced parallel relationship to said smooth even surface, an adjustable bar member supported from said baseplate above said guide members, said bar member having a face opposite said smooth even surface of said table portion, a pair of leaf springs of light spring rate having one of their ends attached to longitudinally spaced points of said face of said bar member and having their free ends projecting toward said smooth even surface between two successive guide members, said leaf springs having rounded free end portions engageable with said thread whereby to urge the thread sections extending between the individual guide members toward said smooth even surface and force the thread to follow a sinuous path, and means for adjusting the position of said bar member both in over-all spacing relative to said smooth even surface and in angular relation with respect thereto.

3,129,903
AIRCRAFT BRAKING SYSTEM
Douglas Dewar, Wolston, near Coventry, Frank Radcliffe Mortimer, Styvechale, Coventry, and Glyn Phillip Reginald Farr, Earlsdon, Coventry, England, assignors to Dunlop Rubber Company Limited, London, England, a British company
Filed Jan. 3, 1962, Ser. No. 164,090
Claims priority, application Great Britain Jan. 12, 1961
6 Claims. (Cl. 244—111)

1. An electrically controlled braking system for an aircraft provided with a nose wheel which comprises a brake control unit, an electric circuit connected to said control unit and having two branches in parallel, a resistor in the first of said branches to permit a low power supply to said control unit, a power control means in the second of said branches to permit a controlled supply of power to said control unit, and a switch normally closing said first branch and controlled by the deflection of the nose wheel gear under load to open said first branch and close said second branch.



3,129,904
HELICOPTER TAIL BOOM AND TAIL ROTOR DRIVE SHAFT SUPPORTS
Thomas Francis Hanson, Chatsworth, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Jan. 29, 1962, Ser. No. 169,542
3 Claims. (Cl. 244—17.19)



1. In a helicopter, an improvement in the means for transmitting power from motive means in the body to a tail rotor in the tail boom, said improvement comprising:

(*a*) a drive shaft extending from the motive means to the tail rotor along the upper portion of the tail boom;

(*b*) a plurality of bearing assemblies on said shaft, each of said assemblies being adapted to fit on the shaft at any desired bearing point without reduction in shaft diameter and comprising:

a sleeve of low friction material fitting on said shaft;

an annular recessed portion on the exterior of said sleeve;

an annular bearing member fitting into said recessed portion;

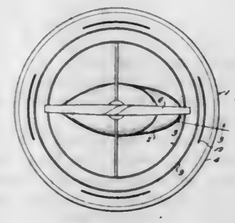
a resilient collar around said bearing member; and

a split housing member for retaining said collar and bearing on said sleeve;

(*c*) a trough-shaped member in the boom extending substantially the length of the shaft and supporting the bearing assemblies; and

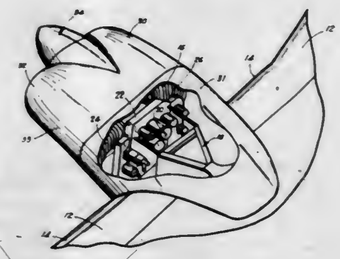
(*d*) a cover member co-extensive with the trough-shaped member and adapted to hold the bearing assemblies firmly against the trough-shaped member, said cover member being hinged to the boom and forming a portion of the upper surface thereof.

3,129,905
AIRCRAFT HAVING WING WITH ARCUATE SHAPED TRAILING EDGE
Bruce G. Taylor, R.D. 3, Short Road, Alliance, Ohio
Filed Oct. 24, 1956, Ser. No. 617,951
7 Claims. (Cl. 244—42)



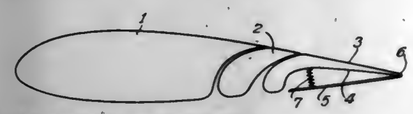
7. An aircraft comprising an annular wing having a substantially standard uniform air foil section throughout and having an unobstructed radially inner trailing edge of 360° extent and of lesser thickness than the leading edge for free flow of air thereover, a fuselage secured to said wing and positioned below and spaced therefrom, and driven propeller means adjacent and above the trailing edge of said wing and positioned on said fuselage for forcing air against and downwardly past only a portion of said wing including said trailing edge and for causing only induced air flow over the leading edge of the wing.

3,129,906
ENGINE NACELLE
David G. Peterson, P.O. Box 2355, Oakland, Calif.
Filed Jan. 19, 1959, Ser. No. 787,429
1 Claim. (Cl. 244—42)



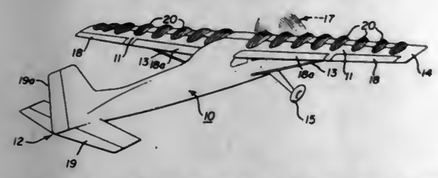
In an aircraft having wings of an airfoil configuration provided thereon, a horizontally opposed piston engine carried by each of the wings, the engine accessories mounted rearwardly of the engine to provide a substantially reduced overall depth for the engine, an attenuated nacelle structure encasing each of the engines and secured to the respective wing, the nacelle having a forward portion of substantially constant transverse depth, said nacelle increasing in depth as it approaches the leading edge of the wing and decreasing in depth thickness as it approaches the trailing edge of the wing, said maximum depth of the nacelle maintained substantially equal to the thickness of the wing, and outlet passageways provided in the upper rear portion of the nacelle for discharging exhaust gases and the intake air over the top of the wing for increasing the lift thereof.

3,129,907
AIRPLANE WING FLAP
Silvius Dornier and Josef Hueber, Friedrichshafen, Germany, assignors to Dornier-Werke G.m.b.H., Friedrichshafen, Germany, a firm
Filed Aug. 11, 1961, Ser. No. 130,785
Claims priority, application Germany Aug. 18, 1960
15 Claims. (Cl. 244—42)



1. An airplane wing comprising:
a main portion having a trailing edge,
a protractable first flap adjacent to and behind said trailing edge,
a protractable second flap placed behind and adjacent to the first flap, when the flaps are in retracted position and when they are in protracted position,
said flaps being operatively interconnected for interdependent protraction and retraction,
said second flap having a vaulted bottom surface and the bottom surfaces of said flaps forming a continuously flexed rear portion of the bottom surface of the wing for deflecting the propeller slip stream for directly using the propeller thrust to produce lift when said flaps are in protracted position,
the top side of the rearmost flap being close to the bottom side of the rearmost flap, and
said top side and said bottom side being placed at a very acute angle adjacent to the rear edge of said rearmost flap.

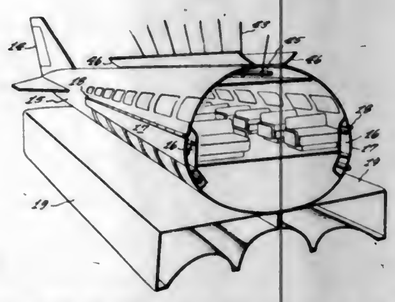
3,129,908
DEVICE FOR SELECTIVELY ALTERING LIFT CHARACTERISTICS OF AN AIRFOIL
Richard G. Harper, 330 E. 10th Ave., Apt. 609, Denver 3, Colo.
Filed Aug. 25, 1961, Ser. No. 133,948
9 Claims. (Cl. 244—44)



1. In an aircraft including an airfoil surface of predetermined normal camber, an apparatus for altering the airfoil configuration to increase the camber thereof for securing greater lift at high angles of attack, said apparatus comprising an extensible device mounted on the airfoil in the zone of greatest departure of the curvature of the airfoil from the chord thereof, said device comprising an inflatable diaphragm of teardrop shape constructed to form when inflated an airfoil extension of smoothly curved dome-like teardrop configuration having its longitudinal axis in the direction of normal air flow over the airfoil surface, and shaping means for controlling the configuration of said diaphragm in its deflated condition to minimize drag during normal flight of the aircraft.

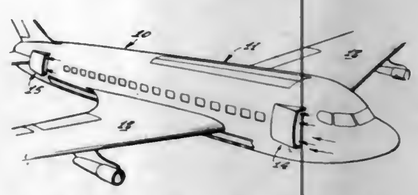
3,129,909
DIVIDED SAFETY EQUIPMENT FOR AIRCRAFT
Robert D. Smith, 2742 E. Tremont Ave., Bronx, N.Y.
Filed Nov. 23, 1962, Ser. No. 239,512
2 Claims. (Cl. 244—107)

1. In an airplane, the combination with a fuselage, a safety apparatus comprising a pair of inflatable foldable air blanket components, means for storage of each one of said air blanket components on each one longitudinal side of said fuselage and means for drawing each of said air blanket components down on opposite undersides of said fuselage, said storage means comprising a longitudinal compartment on each side of said fuselage, a hinged access door to each of said compartments, and a rotatable drum on each opposite side of said fuselage, a plurality of transverse grooves on the underside of said fuselage, a pair of



cords extending through each of said grooves, one of said cords operative with one of said air blanket components and the other of said cords operative with the other of said air blanket components, one end of each of said cords connected to a leading edge of one of said air blanket components and the other end of each of said cords connected to one of said drums, said cords in operative use moving in opposite directions through each one of said grooves.

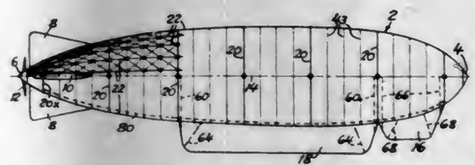
3,129,910
AIRCRAFT AIR SCOOP FOR INFLATABLE AIR BLANKET SAFETY EQUIPMENT
Robert D. Smith, 2472 E. Tremont Ave., Bronx, N.Y.
Filed Dec. 18, 1962, Ser. No. 245,468
1 Claim. (Cl. 244—107)



In an airplane including a fuselage and airfoils for providing lift and further including inflatable air blanket safety equipment, the combination of a plurality of air scoops on each opposite side of said fuselage, conduits between said scoops and said air blankets, means for retracting said scoops adjacent said fuselage and means for projecting said scoop into said airstream for scooping up air in the path of said airplane, each of said air scoops comprising an upper and lower panel, an interconnecting vertical panel therebetween, a vertical shaft at one end of said scoop, the opposite end forming an air entry into said scoop, and mechanical means for rotating said shaft to retract or project said scoop relative to said air stream, said fuselage side including a depression for receiving said interconnecting vertical panel of said scoop when in retracted position, said fuselage side having slots therethrough, and said depression having a plurality of openings therethrough communicating with said conduit, each of said scoops in projected position forming a mouth at one end and a constricted throat at the opposite end, said

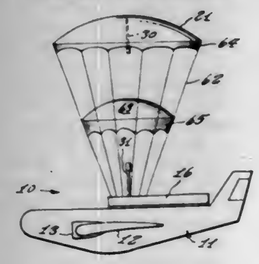
plurality of openings comprising three openings in adjacent relationship, one of said openings being relatively close to said constricted throat and another of said openings being furthermost away from said throat and relative close to said mouth, causing a greater air pressure at the opening adjacent said throat and a lesser air pressure at the opening adjacent said mouth, thus causing currents of varied air pressure within said conduit, the currents thus tending to assimilate causing cross conduit movement of air through the longitudinal portion of said conduit.

3,129,911
FRAMEWORK FOR RIGID AIRCRAFT
John R. Fitzpatrick, Levittown, Pa., assignor to Aereon Corporation, King of Prussia, Pa.
Filed Jan. 31, 1962, Ser. No. 170,068
9 Claims. (Cl. 244—125)



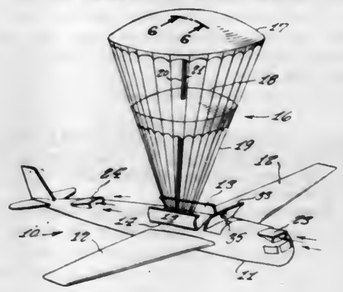
5. A rigid-type lighter-than-air craft having an elongated envelope, a framework located within said envelope and including ring-shaped assemblies centered with respect to the longitudinal axis of the envelope, flexible tension elements connected to said ring-shaped assemblies and extending radially inward therefrom toward said axis, said tension elements having their inner ends connected to common means located adjacent said axis, and load supporting means other than said tension elements having one part thereof connected to said common means and having another part thereof connected to a load to be carried by the craft.

3,129,912
SAFETY PARACHUTE FOR AIRCRAFT
Robert D. Smith, 2742 E. Tremont Ave., Bronx 61, N.Y.
Filed Dec. 5, 1962, Ser. No. 242,384
2 Claims. (Cl. 244—139)



1. In an airplane the combination of a fuselage and airfoils, said fuselage having a compartment within the upper portion thereof, said compartment containing in retracted position a parachute device comprising a pair of canopies, said compartment having a pair of upwardly opening doors to permit movement of said parachute device therethrough into an operative position, said parachute device further comprising a shaft supported pivotally free about its one end within said compartment for movement between an inoperative horizontal position within said compartment and an operative vertical position above said fuselage, a plurality of radially extendable rods pivotally attached at their one ends to the upper end of said shaft, said rods supporting one of said canopies, said shaft being comprised of an upper and lower element attached together, means for detaching said shaft elements, said canopy supported on said rods having a plurality of shrouds affixed to the periphery thereof, said shrouds being affixed at their other ends to said fuselage, the other of said canopies being affixed at its periphery to said shrouds between said first canopy and said fuselage, said shaft elements each comprising a hollow tube having a central chamber, the upper of said elements having an inward flange at its lowermost end slidably receivable within the upper end of the lower of said elements, the upper end of said flange having a square shoulder on the inner side of said upper element, a locking mechanism affixed within the lower element chamber, said locking mechanism comprising a plurality of circumferentially spaced apart generally vertical arms attached pivotally free at their lower ends to the wall of said lower chamber, the upper ends of said arms each having a radially outwardly extending hook for engagement over the said square shoulder of said upper element, spring means between said upper ends normally urging said hooks into said engagement over said square shoulder, a link attached pivotally free to each of said vertical arms between the said lower and upper ends, said links extending radially inward within the said chamber, and the radially inwardly converged ends of said links being attached to a common cable extending longitudinally downward through the lower portion of said lower element chamber to a motor-driven winch on said fuselage for selectively pulling said cable when said shaft elements are to be detached.

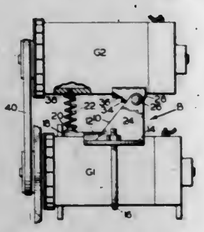
3,129,913
AIRCRAFT PARACHUTE
Robert D. Smith, 2742 E. Tremont Ave., Bronx 61, N.Y.
Filed Dec. 24, 1962, Ser. No. 246,702
1 Claim. (Cl. 244—139)



In an airplane having a fuselage and airfoils, the combination of a compartment within said fuselage, sideward opening access doors to said compartment, said doors being on the upper side of said fuselage, a parachute assembly retained in folded position within said compartment, means for opening said doors, means for shielding inflow of outer air into said compartment when said doors are opened, and means for delivering a quantity of air to said parachute assembly in said compartment, said means for shielding comprising a shield on the upper side of said fuselage adjacent the forward edge of said access doors, a hinge on the rear edge of said shield affixed to said fuselage and a hydraulic piston affixed between said fuselage and the forward portion of said shield, said means for opening said doors comprising a singular control switch which simultaneously operates said shield piston and said means for delivering a quantity of air, said means for delivering a quantity of air comprising a plurality of air scoops on the upper side

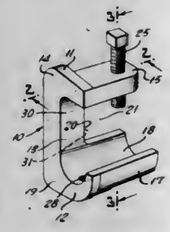
of said fuselage, and air hoses between said scoops and said parachute assembly, said parachute assembly comprising a plurality of canopies in alignment one over the other in spaced apart relationship, shrouds between said canopies and said fuselage, and said air hoses extending through the apex of the lower of said canopies to the underside of the upper of said canopies, the terminal ends of said hoses being open and attached to the apex of said upper canopy.

3,129,914
ALTERNATING CURRENT GENERATOR MOUNTING
Raymond Edwin Wedge, 3101 SE. 157th Ave., Portland, Oreg.
Filed July 10, 1962, Ser. No. 208,720
5 Claims. (Cl. 248—16)



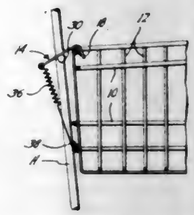
1. A device for mounting an auxiliary generator on an automobile generator comprising a transversely curved saddle plate adapted to seat on one side of the automobile generator, a transverse U-bolt adjustably connected at its ends with said saddle plate and arranged to encircle the opposite side of the automobile generator, a pair of upstanding ears on opposite sides of said saddle plate, a transversely curved saddle plate for the auxiliary generator, means for securing the auxiliary generator to said last saddle plate, a pair of downturned ears on opposite sides of said last saddle plate, and transverse pivot means interconnecting said two pairs of ears for supporting the auxiliary generator approximately parallel with the automobile generator.

3,129,915
PARALLEL AND RIGHT ANGLE BEAM CLAMP
Joseph F. Budnick, Bellerose, N.Y., assignor to Electrical Fittings Corporation, East Farmingdale, N.Y., a corporation of New York
Filed Dec. 15, 1961, Ser. No. 160,971
1 Claim. (Cl. 248—72)



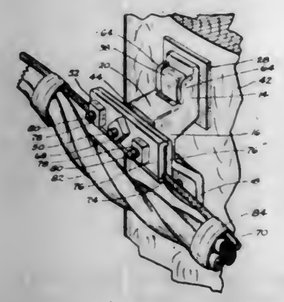
A beam clamp for fastening a conduit to a beam structure comprising, a C-shaped clamp body having a straight lengthwise web extending between upper and lower ends of said body, said web having first and second straight lengthwise and substantially flat surfaces forming a lengthwise straight edge at the common corner of said surfaces, said flat surfaces being in substantially right angle relationship with respect to each other, the first of said surfaces defining the width of said web, an arm projecting laterally from the upper end of said body, a cradle projecting laterally from the lower end of said body, both said arm and cradle extending in dimension in like directions from both of said flat surfaces to form relief regions orthogonal to the planes of said first and second flat surfaces for clearing a beam structure, said cradle having an axially curved surface confronting said arm for seating the conduit therein with the axis of said conduit aligned with the axis of said cradle surface, said cradle surface coextending the width of said web and axially beyond said second web surface wherein the axial length of said cradle surface being longer than the width of said web, an axial stud carried by said arm, said stud being laterally off-set with respect to said web and extending axially in a direction orthogonal to said cradle axis to engage the beam structure in clamped relationship as said conduit nests in said cradle surface to clamp said conduit firmly and directly to said beam structure, the first of said flat web surfaces being equipped to provide a bearing surface against which a lengthwise portion of said beam abuts when the axis of said beam is aligned with the axis of the nested conduit to effect parallel relation clamping, the second flat web surface being equipped to provide a bearing surface against which a lengthwise portion of said beam abuts when the axis of said beam is orthogonal with respect to the axis of said nested conduit to effect right angle relation clamping, and said web common corner edge being equipped to provide a bearing surface against which said beam abuts when the axis of said beam relative to the axis of said clamp conduit is an angular relationship between parallel and right angle clamping, wherein a single beam clamp is equipped to effect parallel position clamping, right angle position clamping and clamping of said conduit to beam structure for any angular position of the conduit axis relative to the beam axis between parallel and right angle clamping, said conduit being nested in said cradle surface for the full axial length of said cradle surface for all clamp positions of the conduit relative to the beam.

3,129,916
HANDLED IMPLEMENT HOLDER FOR SHOPPING CARTS
Harry F. Patterson, 1731 Stonecrest St., Houston 18, Tex., and Thomas E. Little, 2610 Nicholson, Houston 8, Tex.
Filed Mar. 30, 1962, Ser. No. 183,971
4 Claims. (Cl. 248—113)



1. In a holder for use on a shopping cart to hold a handled implement in an upright position thereon a plate-like body having a central opening therethrough and a slot through which a handle may be inserted to position the handle to extend through the opening, means for supporting the body on a shopping cart for vertical swinging movement into and out of a substantially horizontal plane externally of the cart to position the body for the insertion of a handle in an upright position through the slot into the horizontal position to engage the body with the handle in the opening to hold the handle upright, and means on the body positioned for engagement with the handle upon such downward movement of the body with the handle in the opening to hold the handle against tilting movement away from said upright position.

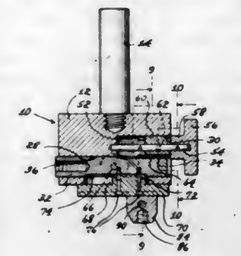
3,129,917
SUPPORT FOR AN AERIAL CABLE SUSPENSION CLAMP
Owen R. Huggins, New Canaan, Conn., assignor to Malleable Iron Fittings Company, Branford, Conn., a corporation of Connecticut
Continuation of application Ser. No. 47,448, Aug. 4, 1960. This application Nov. 27, 1962, Ser. No. 243,698
1 Claim. (Cl. 248—221)



A clamp support for attaching an aerial cable clamp to a utility pole having a pre-existing cable clamp installation at one side of the pole in which a through-bolt is passed through the pole, said clamp support comprising a substantially vertically disposed upper and rearward portion formed with an opening therein shaped to form an enlarged aperture with a narrower elongated slot at the upper side thereof whereby said clamp support may be slidably dropped over the head end of the said through-bolt and securely clamped against the pole upon the tightening of said through-bolt, said rearward portion having a pair of parallel guard walls adjacent the elongated slot and disposed on opposite sides thereof, said guard walls being so spaced as to prevent the head of the through-bolt from turning during the tightening of the bolt, a substantially vertically disposed forward portion laterally displaced from said rearward portion and formed with an opening therein, said forward and rearward portions being joined by webs parallelly disposed adjacent said last-mentioned opening, a short clamping bolt in said last-mentioned opening for joining a clamp to said support, said clamping bolt having a head end which lies between the webs joining the forward and rearward portion the webs being so spaced as to prevent the head of the clamping bolt from turning during the tightening of the bolt, said clamping bolt having a threaded end which extends outwardly through the last-mentioned opening in the forward portion to receive a cable clamp, a lower rearward pole-engaging portion joined to said forward portion, said pole-engaging portion being provided with means for resisting upward displacement of the support relative to the pole, and locking means for preventing the support from slipping upwardly off the through-bolt on the utility pole, said locking means comprising a locking plate formed to fit on the clamping bolt and having one part bearing against said vertically disposed upper and rearward portion and another part extending underneath the head end of the through-bolt.

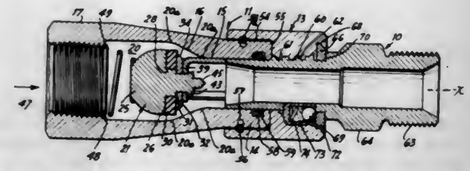
3,129,918
ADJUSTABLE INDICATOR HOLDER
Owen Bradley, Box 2190, Rte. 2, Browns Mills, N.J.
Filed Mar. 28, 1963, Ser. No. 268,793
10 Claims. (Cl. 248—276)

1. An adjustable indicator holder of the character described comprising, in combination, a solid body member having means for attaching it to a support, a through opening in said body member and a plunger axially mounted in said opening, said plunger having a row of worm teeth extending from one end a substantial distance along its longitudinal edge, said plunger having means at its other end for attachment thereto of an elongated horizontal indicator supporting member, said body member having a bore extending partially therethrough in



perimetrically contiguous relation with said through opening; and a worm axially mounted in said partial bore in engagement with said worm teeth for effecting axial movement of said plunger together with said indicator supporting member in either direction, said worm having an operating shaft projecting axially and outwardly from the open end of said partial bore, said shaft being provided with manually operable means for rotating it together with said worm in either direction.

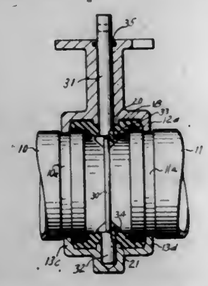
3,129,919
VALVED QUICK COUPLER
Jack M. Evans, Englewood, Colo., assignor to Band-It Company, Denver, Colo., a corporation of Delaware
Filed Sept. 8, 1961, Ser. No. 136,845
5 Claims. (Cl. 251—89.5)



1. A valve mechanism in a quickly coupled and uncoupled coupler of the class described which comprises a hollow female part and a hollow male part; said female part comprising means to secure it to a length of conduit, a hollow valve housing portion, an axially aligned hollow neck portion and a rotatable sleeve rotatably mounted on said neck portion, the internal surface of said valve housing portion being flared outwardly from the end of said neck portion to provide an annular tapered valve seat, and said male part comprising means to secure it to a length of conduit and a hollow stem portion having a forward end insertable into said sleeve and said neck portion of said female part, said male and female parts being coupled when said hollow stem is moved forward in said hollow neck to coupled position; said valve mechanism comprising, a ball valve in said valve housing movable in a direction away from said valve seat to open position and toward said seat into engagement therewith to closed position, resilient spring means in said valve housing urging said valve toward said valve seat, said valve having guide means and having an annular resilient gasket and a stop ring of rigid material engaging said gasket; said valve having a spheroidal crown portion engaged by said spring means, said resilient gasket lying between said crown portion and stop ring, said guide means including a flat ring

portion and a plurality of circumferentially spaced, coaxially disposed guide legs, said guide legs extending into and being slidable with a snug fit in the neck portion of said female part and being engageable by said hollow stem of said male part, said flat ring portion of said guide means being fixed to said ball valve and maintaining said resilient gasket and said stop ring in fixed position on said valve, the peripheral edge of said stop ring being tapered at the same angle as the angle of flare of said annular valve seat, the peripheral edge of said resilient gasket and the tapered peripheral edge of said stop ring engaging said flared valve seat when said valve is in closed position, said valve being moved to open position when said hollow stem is inserted into said neck portion of said female part into engagement with said guide legs and said male and female parts are in coupled position, said hollow stem maintaining said valve in open position when said male and female parts are in coupled position and said valve being moved to closed position by said spring when the forward end of said hollow stem is retracted to a position out of engagement with said guide legs and said coupler is uncoupled.

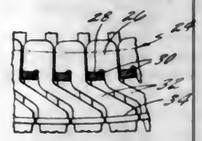
3,129,920
CONDUIT CONNECTION AND VALVE
Crawford K. Stillwagon, 5325 Kirby Drive, Houston, Tex.
Filed July 31, 1961, Ser. No. 127,996
6 Claims. (Cl. 251—148)



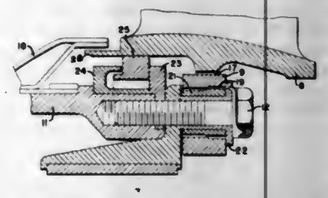
1. A butterfly valve adapted for direct connection between two aligned pipes having grooves in their outer surfaces adjacent their confronting ends, comprising separable body parts, each body part being formed with inturned flanges at their edges providing a trough therebetween and adapted to fit grooves in the pipe ends for assembly in a pipeline; a sleeve of resilient sealing material within the trough; parts formed on the inner central part of the sleeve for engaging the pipe end edges with an interference fit providing a pressure-energized type seal therewith, said sleeve having parts formed on the inner surface adjacent each end providing an interference fit with the outer surface of pipe ends providing a pressure-energized seal therewith; means for assembling and holding the body parts in a circular configuration with the sleeve in the trough provided by the body parts; and a valve disc with stems extending through the sleeve and journaled in the body parts, said disc engaging the sleeve to provide a seal therewith when in closed position.

3,129,921
BLADE DAMPING DEVICE
Thornton G. Woodwell, West Hartford, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed July 6, 1962, Ser. No. 207,929
9 Claims. (Cl. 253—77)

1. A rotor construction for compressors or turbines including a disc, a row of blades mounted on and extending substantially radially from the periphery of the disc, each blade presenting a circumferentially extending surface and having a platform thereon, said blades having end surfaces in a radial plane, a coverplate for attachment to one side of the disc in overlying relation to a part of each of the blades, and damping means including a plurality of circumferentially spaced lugs on the inside of the coverplate, and damping elements, one for each blade, positioned in part between the coverplate and the end surfaces of the blades and guided by said coverplate and said end surfaces of the blades for substantially radial movement under centrifugal force, each element having a surface frictionally engaging with one of said lugs and another surface frictionally engageable with the surface on the platform on one of the blades.



3,129,922
SELF CENTERING RING SEAL
Frederick A. Rosenthal, Export, Pa., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Nov. 27, 1961, Ser. No. 155,222
7 Claims. (Cl. 253—78)



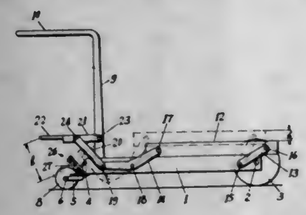
1. In a turbojet engine, the combination of an engine inner support, a radially inner nozzle vane shroud having an inner cylidrical surface and a support therefor secured to said inner engine support, said radially inner nozzle vane shroud support and said radially inner nozzle vane shroud having a leakage path therebetween, and a ring sealing assembly secured to the inner support, said ring sealing assembly having means frictionally engaging said cylindrical surface for sealing the leakage path, said means comprising a retaining ring, means securing said retaining ring to the inner support, and a split resilient sealing ring movably disposed within said retaining ring in such a manner as to tightly abut said retaining ring in sealed relation therewith and be radially compressed against the cylindrical surface of the radially inner shroud to form a seal between said retaining ring and the shroud.

3,129,923
CLAMPING DEVICE FOR A LOAD LIFTING FRAME
Takefusa Kikuchi, Tokyo, Japan, assignor to Taiyu Shoji Kabushiki Kaisha, Tokyo, Japan
Filed Jan. 30, 1962, Ser. No. 169,898
1 Claim. (Cl. 254—10)

In a hand truck with a load lifting frame, and a foot pedal for raising the lifting frame through a mechanical linkage, an improved clamping device for locking the foot pedal of the hand truck in a position corresponding to the raised position of the lifting frame comprising:

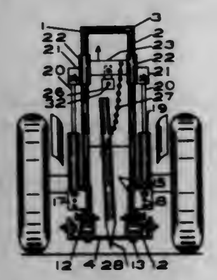
(*a*) a latch having a C-shaped upper end for locking the foot pedal and a longitudinally slotted lower end;

(*b*) a pivot pin slidably mounted in the slotted lower end of the latch and pivotally connecting the latch to the truck;



(*c*) a spring connected at one end to the truck and at the other end to the latch adjacent a central portion of the longitudinal slot, so that the spring urges the latch to a locking position with respect to the foot pedal when the pivot pin is in the upper half of the longitudinal slot, and to an unlocking position when the pivot pin is in the lower half of the longitudinal slot.

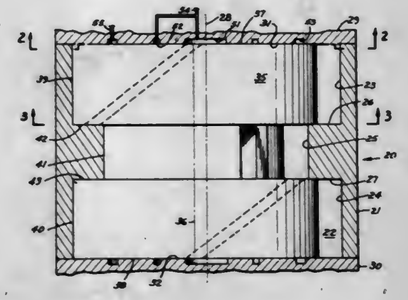
3,129,924
POST PRESS AND PULLER
John Max Froh, Box 40, Khedive, Saskatchewan, Canada
Filed Apr. 16, 1962, Ser. No. 187,513
1 Claim. (Cl. 254—29)



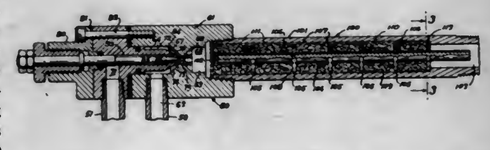
In a post pressing and pulling attachment for tractors, a supporting base frame, means mounting the base frame fixed on the tractor, a post pressing and pulling frame comprising a pair of tubular guide bars having a top bar connecting the side bars spaced apart, means pivotally mounting the guide bars upstanding on the base frame to move forward and backward thereon, a pair of hydraulic elements, means mounting the hydraulic elements fixed at their lower ends to the side bars, said hydraulic elements including piston rods, a press head mounted movable up and down on the guide bars, means attaching the piston rods to the press head for moving the press head on the guide bars, and a post engaging cap attached depending from the press head.

3,129,925
VIBRATOR WITH SEPARATE BEARING AND COMPARTMENT-FORMING SURFACES
George L. Malan, 554 S. Barranca, Apt. 14, Covina, Calif.
Filed Apr. 5, 1962, Ser. No. 185,479
16 Claims. (Cl. 259—1)

1. A fluid-powered vibrator comprising: a case having an internal cylindrical race with a first diameter and a central axis; a cylindrical compartment-forming surface on the inside of the case having a second diameter which differs by an increment from the first diameter, the race and compartment-forming surface being concentric; a rotor within the case having a central axis, the axes being parallel and normally displaced from one another; a cylindrical bearing surface on the rotor adapted to roll along the race, the bearing surface having a third diameter; a cylindrical compartment-forming surface on the rotor having a fourth diameter which differs from the third diameter by substantially the same increment, the bearing surface and the compartment-forming surface on the rotor being concentric; a vane carried by the rotor which is reciprocable within, extensible beyond, and axially coextensive with, the compartment-forming surface on the rotor, and thereby being adapted to form a compartment between the vane and the two compartment-forming surfaces; and fluid supply and exhaust means for causing rolling movement of the rotor within the case by periodically placing compartments under greater and lesser pressures, the race and bearing surfaces being in constant rolling contact with each other during said rolling movement.

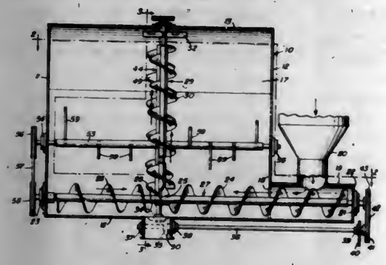


3,129,926
DEVICE FOR MIXING CHEMICALLY REACTIVE INGREDIENTS
William C. Hodges, Palo Alto, Calif., assignor to Hodges Chemicals Company, a corporation of California
Filed June 20, 1960, Ser. No. 37,464
1 Claim. (Cl. 259—4)



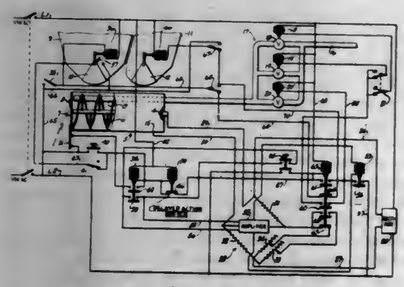
A mixing chamber comprising a tube, a spindle within said tube, a plurality of baffles mounted along said spindle, the outer peripheries of said baffles having a narrow clearance away from the inner surface of said tube, said baffles also having small passageways intermediate said spindle and said outer peripheries, and sharp-edged continuous packing means said continuous packing means consisting of threaded metal ribbons intertwined loosely filling the spaces between baffles and between said spindle and said inner periphery of said tube, and extending around the baffles from space to space, so that when viscous material is forced from one end of said tube to the other, it is forced to flow radially outwardly by said spindle and by said baffles to the peripherial clearances and said passageways and is forced to fold in, divide, and mix together by said packing means while said baffles prevent the packing means from being forced out of said chamber.

3,129,927
MIXING APPARATUS FOR FLUENT MATERIAL
Aquila D. Mast, 1316 Clayton Road, Lancaster, Pa.
Filed Nov. 3, 1960, Ser. No. 66,954
5 Claims. (Cl. 259—6)



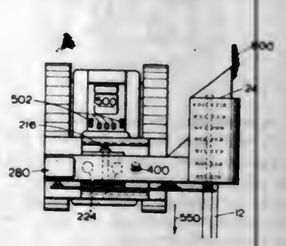
5. Mixing apparatus for fluent material, said apparatus comprising an elongated tank having end walls, sidewalls and a bottom wall, said bottom wall and adjacent sidewalls providing a trough, a horizontal screw conveyor disposed in said trough, the vane on one end of said conveyor terminating at an intermediate point in said tank for feeding material thereto, the vane on the other end of said conveyor extending from said intermediate point toward the adjacent end wall and having a twist opposite to that on said one end to convey material from said adjacent end wall toward said intermediate point, a vertically extending spiral conveyor at said intermediate point disposed on one side of said horizontal conveyor for conveying material upwardly, a discharge chute in said tank at said intermediate point on the opposite side of said horizontal conveyor from said vertical conveyor, a slide in said chute for closing the same, a second vertically extending spiral conveyor at said intermediate point disposed directly above and in axial alignment with said chute on the opposite side of said horizontal conveyor from said first vertical conveyor for conveying material upwardly, the lower end of said second vertical conveyor terminating adjacent the upper surface of said slide to reduce the dead weight load of fluent material on said slide and means to drive said conveyors.

3,129,928
WATER FEED CONTROL SYSTEM FOR CONCRETE MIXERS
Chester D. Huntington, Waukesha, Wis., assignor to Butler Bin Company, Waukesha, Wis., a corporation of Wisconsin
Filed June 16, 1961, Ser. No. 117,689
3 Claims. (Cl. 259—154)



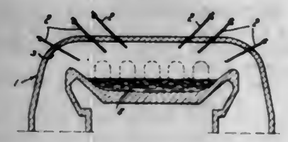
1. A water feed control system for feeding all but a final small percentage of the required amount of water into a batch of dry aggregates in a concrete mixer, at a fast flow rate, feeding the remainder of the required water into the batch at a slow flow rate, and accurately terminating the flow of water into the mixer when the correct amount has been fed to the batch, said system comprising: means to feed water from a source thereof into the mixer including valve means by which water may be admitted into the mixer at either a pre-selected fast or slow flow rate; a single pair of contacts positioned to be electrically bridged by the contents of the mixer with a resistance which decreases as the mixer contents become wetter; a bridge circuit having two fixed legs, a variable leg which has said pair of contacts connected in it so that the conductivity of the mixer contents between said contacts determines the resistance of said variable leg, and a fourth leg which comprises one or the other of two adjustable resistors by one of which the bridge circuit may be adjusted to balance when the admission of water at the fast flow rate should be stopped, and by the other of which the bridge circuit may be adjusted to balance when the amount of water in the batch is correct; means operatively connected with the bridge circuit and responsive to the attainment of a balanced condition therein when its fourth leg comprises the first of said adjustable resistors to effect actuation of the valve means to stop fast flow of water into the mixer and to substitute the second resistor for said first resistor in the fourth leg of the bridge circuit; and means connected with said bridge circuit and responsive to the attainment of a balanced condition therein when its fourth leg comprises the second adjustable resistor, to effect closure of the valve means and termination of all flow of water into the mixer.

3,129,929
ROTARY IMPACT CURB BREAKER
A. I. George Calvert, P.O. Box 9, Council Bluffs, Iowa
Filed June 12, 1961, Ser. No. 118,228
3 Claims. (Cl. 262—14)



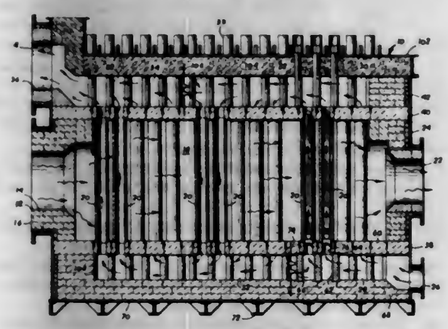
1. A curb breaking machine comprising a wheeled vehicle, a hammer assembly comprising: a rotor, said rotor having an axis extending generally longitudinally of the line of draft of said vehicle, a plurality of hammers mounted on said rotor, said hammers being spaced apart along the axis of said rotor, whereby as said vehicle is moved longitudinally of a curbing said hammers will move transversely of said curbing for striking said curbing to break away upwardly protruding portions of said curbing, hammers disposed forwardly along said axis striking said curbing first and hammers disposed progressively rearwardly along said axis for progressively striking said curbing, means for rotatably driving said rotor and said vehicle whereby as said vehicle continuously moves, said curbing is continuously broken, said rotor and its hammers being arranged such that substantially all of said hammers successively reach curbing striking position whereby vibration of the machine is minimized.

3,129,930
MOBILE ROOF BURNER SYSTEM FOR HEATING OF OPEN HEARTH FURNACES OR THE LIKE
André Pierre Honoré Labat-Camy, Saint-Mande, France, assignor to Etablissement Brulex, Etude et Exploitation Pour Chauffage des Fours, Vaduz, Liechtenstein, a corporation of Liechtenstein
Filed Sept. 23, 1960, Ser. No. 58,096
Claims priority, application France Dec. 12, 1956
28 Claims. (Cl. 263—15)



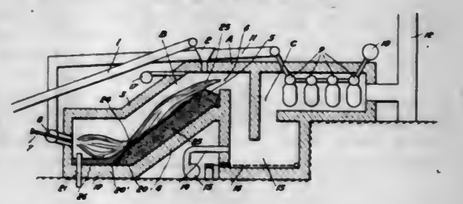
12. A direct heating furnace, comprising, in combination, a furnace chamber for material to be heated, a roof in said furnace positioned above said material, a plurality of direct flame heating means movable between a position adjacent but below said roof and a position above but adjacent said material, means for moving said direct heating means to maintain the surface of said material during heating subject to the maximum heating action of said flames of said heating means substantially over the surface of said material irrespective of the selected quantity of fuel fed to said heating means, means providing for the generation of a predetermined heat output by said heating means in any adjusted position of said heating means within said chamber, means indicating the position of the surface of said material to be heated and means for selective movement of said heating means in correspondence with any movement of said surface.

3,129,931
RECUPERATOR
Kenneth W. Stookey, Markle, Ind.
Filed June 27, 1961, Ser. No. 119,893
7 Claims. (Cl. 263—20)



1. A recuperator including upper and lower intermediate walls forming a chamber for elevated temperature gas from which heat is to be abstracted and including means forming an inlet and means forming an outlet, said upper intermediate wall and a lower intermediate wall each being formed of a plurality of ceramic blocks having spacings and sealing means therebetween providing substantially free expansion of each block toward and away from its contiguous blocks, a plurality of conduits vertically disposed within said chamber and each having sealing engagement at its opposite ends with vertically aligned pairs of said blocks in said upper and lower walls respectively, means defining a plurality of compartments for gas to be heated by the elevated temperature gas and including in part the exterior surfaces of said upper wall and said lower wall, means defining passages extending through said blocks to provide communication from one compartment to the next through said conduits, means forming a barrier to gaseous communication between said compartments except through said conduits whereby said compartments are serially connected for passage of gas from one to the next only by travelling across said heated gas chamber through said conduits, and means for yieldably biasing each of said blocks forming said upper intermediate wall into engagement with its associated conduit to maintain a sealed relationship of said conduits at the opposite ends thereof with their associated blocks during temperature induced dimensional changes of said conduits and blocks.

3,129,932
MEANS FOR CONTINUOUSLY TREATING DIVIDED MATERIALS
Pierre Joseph Gabriel Richaud, Martigues, France, assignor to Ciments Lafarge, Paris, France, a corporation of France
Filed Dec. 22, 1961, Ser. No. 161,550
Claims priority, application France May 5, 1961
2 Claims. (Cl. 263—27)

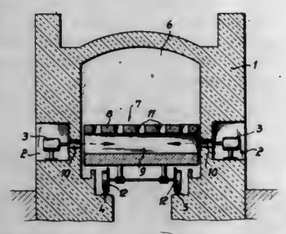


1. Apparatus for continuously heating divided materials including fines and coarser fractions comprising means for supporting a bed of said material, said bed having a freely sloping surface, means for applying heat to said surface of the bed in a region beginning substantially below the top of the bed and extending to the top of the bed to melt the material in said region and to cause it to flow down said sloping surface and prevent loss of fines and other materials from escaping through the gases of combustion, means for withdrawing treated materials from the foot of said sloping surface, means for supplying said material to the top of the bed at a rate corresponding substantially to the rate of withdrawal of said material, an enclosure about said supporting means, heating means and removing means, means defining an opening in a top wall of said enclosure to admit the material supplied by said supplying means, means defining a passage in an end wall of said enclosure for discharging the exhaust gases from said enclosure, an intermediate chamber adjacent said enclosure and communicating therewith through said means defining a passage, means in said intermediate chamber for withdrawing therefrom fine particles of material carried into said intermediate chamber by the exhaust gases, a heat exchange chamber, means for admitting the exhaust gases to said heat exchange chamber from said enclosure, and heat exchange means in said chamber heated by the exhaust gases.

3,129,933
TUNNEL FURNACE ARRANGEMENT
Gottfried Cremer, 6 Steyrer Weg, and Heinz Behrens, 19 am Weidenpesch, both of Cologne-Junkersdorf, Germany
Filed Oct. 6, 1959, Ser. No. 844,759
Claims priority, application Germany July 23, 1959
10 Claims. (Cl. 263—28)

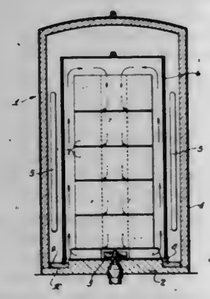
1. A furnace arrangement, comprising, in combination: a tunnel furnace having a longitudinal axis; inter-

mittently operated impulse burners arranged at at least one side of said tunnel furnace for spraying oil in a horizontal direction transverse to said longitudinal axis; and carrier means arranged for movement through said tunnel furnace in the direction of said longitudinal axis thereof, said carrier means being formed with a support having a support surface for supporting material to be heated and upwardly extending passages leading to and opening at said support surface, and with combustion chambers arranged below said support surface and ex-



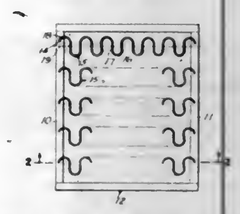
tending throughout the entire width of said carrier means, said combustion chambers communicating with said upwardly extending passages leading to and opening at said support surface, said combustion chambers being otherwise open only laterally of said carrier means for allowing said impulse burners to spray oil into said combustion chambers, whereby the combustion of oil and air takes place in said combustion chambers, said combustion chambers being bounded by vertical partition walls having lateral edges bevelled in at least one direction.

3,129,934
CAST SAND SEAL SKIRT RINGS
John A. Wilson, Orillia, Ontario, Canada, assignor to Fahralloy Canada Limited, Orillia, Ontario, Canada
Filed Aug. 8, 1960, Ser. No. 48,138
1 Claim. (Cl. 263—49)



A unitary inner cover for an annealing furnace, comprising, a circumferentially-continuous cylindrical wall having a vertical axis of symmetry and a top secured to and closing the upper end of said wall, and a circular skirt ring reinforcing the open circular lower end of said wall, said ring comprising first and second portions integral with each other, said first portion being a horizontally planar annulus coaxial of said axis and having an outer diameter slightly greater than the corresponding diameter of said wall, the lower edge of said wall being fixed to and supported on said first portion, said second portion being a cylindrical skirt depending vertically from the outer periphery of said first portion normally thereto, said ring forming the sole support for said cylindrical wall, the walf of said second portion being continuously vertically corrugated throughout its peripheral extent, said skirt ring being formed from a plurality of cast metal segments integrally united in end-to-end relation to form a continuous circular ring, and a plurality of vertical, reinforcing plates disposed generally radially of said axis and in equiangularly-spaced relation thereabout, each said plate being integrally connected with the inner surfaces of said first and second portions, respectively.

3,129,935
SINUOUS SPRING STRUCTURE
C. Leonard Krakauer, Roslyn Heights, N.Y., assignor to Kay Manufacturing Corp., New York, N.Y., a corporation of New York
Filed Apr. 3, 1962, Ser. No. 184,753
2 Claims. (Cl. 267—111)

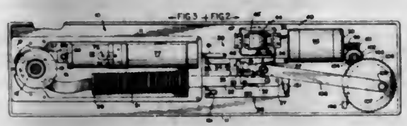


1. A flat sinuous spring having straight cross bars joined by
alternating loops,
the loops and cross bars being coplanar,
the end loop at each planar end portion of the spring being arcuate throughout the entire length thereof and terminating at a point in transverse spaced relation to the longitudinal center line of the spring and
substantially diametrically opposite the other end of said end loop, there being a space between said point and the longitudinal center line of the spring not less in length than half the length of a straight cross bar,
a substantially straight tip
integral with and depending laterally from the terminal point of each end loop and thereby being arranged perpendicularly to the general plane of the loops and bars and in transverse spaced relation to the longitudinal center line of the spring and in longitudinal spaced relation to and substantially diametrically opposite said other end of said end loop, and
a bend of relatively small radius integrally joining the upper end of the tip to said end point of the end loop,
the length of the straight cross bars being less than the diameter of the loops,
the tips being on the same side of the center line and lying in a plane spaced from and parallel to the longitudinal center line of the spring,
the aforesaid space excluding excessive torsional stress upon the planar end portions of the spring when the spring is normally loaded and unloaded, and
the aforesaid bend spacing the planar end portions laterally away from the surfaces of a seat frame into which the tips are inserted.

3,129,936
AUTOMATIC DOOR OPERATOR
Martin Carlson, 9122 30th St., Brookfield, Ill.
Filed Dec. 23, 1960, Ser. No. 78,086
10 Claims. (Cl. 268—34)

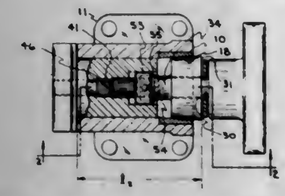
1. A door operating mechanism comprising a rotatable spindle adapted to support a door for swinging movement and to have a driving connection therewith, a normally

tensioned spring in driving relation with said spindle and adapted to release its stored energy to turn said spindle in a door opening direction, motor means for turning said spindle in a door closing direction and loading said spring for a subsequent door opening operation, latch means for holding said spindle in door closed position against the tension of said spring, and circuit means for controlling



the movement of said door in both door opening and door closing directions; said circuit means including actuating means for releasing said latch means and said spring for door opening operation, means for operating said actuating means, and means for preventing the turning of said spindle in the door opening direction under the force of said spring and upon release of said latch means when a person is in the swing path of the door.

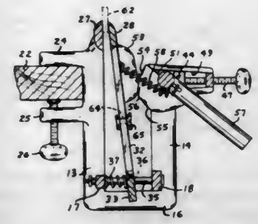
3,129,937
ANGULARLY ADJUSTABLE LOCKING TRUNNION
Orville C. Miller, Maplewood, Mo., assignor to Carr Lane Manufacturing Co., Maplewood, Mo., a corporation
Filed June 20, 1962, Ser. No. 203,902
7 Claims. (Cl. 269—74)



1. An angularly adjustable twist-resisting trunnion, comprising
a housing including a mounting portion and an internal cylindrical bearing surface therein, a thrust-resisting face at the axially-inner end thereof, and a conical twist-resisting seat at the axially-outer end thereof,
together with a rotative member including a shaft having a cylindrical bearing surface within the housing, and having at its axially-inner end a workpiece-mounting flange including an annular thrust face presented to bear against the thrust face of the housing,
together further with a locking assembly including a truncated cone having a surface complementary to the conical seat of the housing,
tang-and-slot connector means between the cone and shaft, and
manual adjusting means to bring the tang-and-slot connector means into deeper engagement, thereby tightening the cone within its seat.

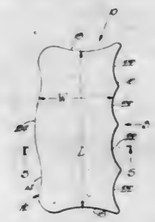
3,129,938
QUICK ACTING VISE
Bert M. Riley, R.R. 2, Box 75, Sayers Road, Troy, Ohio
Filed Dec. 21, 1961, Ser. No. 161,101
9 Claims. (Cl. 269—157)

4. A vise comprising a body, a pair of relatively opposed vise jaws on said body, one having a floating mount for bodily shifting and tilting movements relative the other, oscillatory cam means on said body maintained in contact with and operative, on movement in one direction, to induce the bodily sliding and tilting movement of said one jaw relative the other to accommodate and clamp an article therebetween, means to oscillate said cam means,



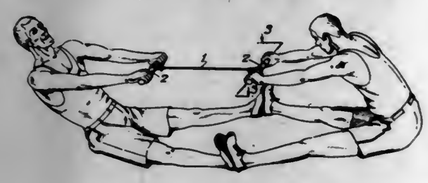
said cam means being operative, on movement to an opposite direction, to accommodate a retraction of said one jaw relative the other and means forming a yielding connection between said one jaw and said cam means stressed on movement of said cam means in said opposite direction to effect a retraction of said one jaw relative the other.

3,129,939
EXERCISING GRIP CONSISTING OF A RECTANGULAR PAD OF RESILIENTLY COMPRESSIBLE MATERIAL
Herman E. Stock, 395 St. Ronan St., New Haven, Conn.
Filed Feb. 26, 1962, Ser. No. 175,425
2 Claims. (Cl. 272—68)



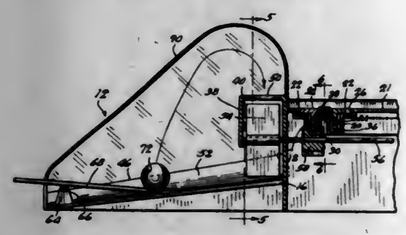
1. An exercising grip, comprising a pad of resiliently compressible material being of a length, width and thickness substantially to span only the fingers other than the thumb, the distance between the palm and fingers to their first joints, and the distance between the first and second joints of the fingers, respectively, corresponding to those of a human hand, the opposite faces of the pad spaced in the direction of its thickness lying throughout in first parallel planes, the widthwise spaced side faces of the pad lying substantially in second parallel planes normal to said first planes, with one of said side faces having over its length four successive, substantially identical depressions suggesting finger rests and the other side face being over its length less wavy than the palm of a human hand, and the lengthwise spaced end faces of the pad also lying substantially in parallel planes normal to said first and second planes and being of identical outline so that either may serve as a thumb rest, the pad being symmetrical about an axis normal to said second planes and midway of its length and all of said faces meeting at sharp corners.

3,129,940
ISOMETRIC CONTRACTION EXERCISER HAVING HANDLES AT EACH END WITH HANDGRIPS SHAPED TO THE FINGERS
William M. Lauro, 1823 E. 33rd St., Brooklyn, N.Y.
Filed Jan. 23, 1962, Ser. No. 168,125
1 Claim. (Cl. 272—79)



In an exerciser of the class described, the combination comprising an elongated flexible inelastic connecting cable, handle bars transversely disposed at the extremities of said cable; a collar mounted centrally on each of said handle bars, a circumferential slot in said collar, a loop provided by doubling back and clamping the end of said cable, the free end of said cable being spliced to the main portion thereof, said loop mounted in said slot to form a pivotal connection, individual hand grips mounted on the extremities of said handle bars respectively, each of said hand grips being provided with a plurality of finger positioning grooves spaced one from the other a distance substantially equal to the finger spacing of a human hand.

3,129,941
RACING GAME APPARATUS
Charles Pearson, Jr., 396 Huntington Lane, Elmhurst, Ill.
Filed Sept. 19, 1960, Ser. No. 57,026
3 Claims. (Cl. 273—86)



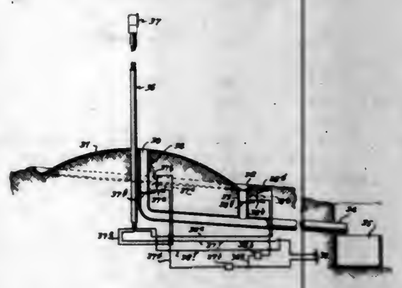
1. A toy racing game comprising a supporting member, a plurality of ring-like members rotatably supported on said supporting member, a plurality of play stations secured to said supporting member, said play stations extending exteriorly of said ring-like members and positioned in diametrically opposed relation circumferentially with respect to said ring-like members, there being one play station for each ring-like member, a rotatable member supported in each said play station, means mechanically connecting each said rotatable member with a respective ring-like member for rotating same, an apertured member in each play station, a hand operated flipper supported in each play station, a ball-like member adapted to be flipped through said aperture by said flipper to engage the rotatable member to rotate same and through said means to rotate said respective ring-like member, said rotatable member comprising a paddle wheel having paddles thereon at equal angular distances, said wheel being constructed and arranged so that said paddles are successively moved into direct alignment with said aperture and the spacing of said paddles being such as to cause the displacement of one paddle by said ball-like member to move the next paddle into direct alignment with said aperture, said flipper being pivotally supported intermediate its opposite ends so that the ball-like member will rest on the inner end of the flipper and the outer end may be manually depressed to pivot said flipper and project the ball-like member into the aperture.

3,129,942
ONE-PIECE FRAME FOR GAME BOARD OR THE LIKE
George H. Calverley, Racine, Wis., assignor to Whitman Publishing Company, Racine, Wis., a corporation of Wisconsin
Filed Dec. 23, 1960, Ser. No. 78,097
5 Claims. (Cl. 273—136)



3. A polygonally shaped frame and game board, comprising a game board, an endless frame of a flexible material and including sides and corners constituting an endless wall extending throughout said frame in the plane of said board and being transverse thereto and defining an open interior for the reception of said board, said sides including spaced-apart portions extending on opposite faces of said board and projecting toward the center of said open interior for supporting the peripheral edges of said board therebetween, at least one of said portions being of a limited length shorter than the length of the one of said sides containing said one of said portions and being spaced from said corners disposed to opposite ends of said one of said sides a distance so related to the flexibility of said frame that said one of said sides can be twisted for displacement of said one of said portions upon twisting of same for movement over the corresponding one of said edges of said board.

3,129,943
GOLF COURSES
James B. McKee, 3615 Townsend Drive, Dallas 29, Tex.
Filed Sept. 21, 1961, Ser. No. 139,665
2 Claims. (Cl. 273—176)



1. A golf course having a hitting area; a plurality of fairways extending in radial directions from said hitting area, said fairways being divided into zones, each of said zones being assigned a particular scoring value; and means on said fairways marking the boundaries of said zones whereby a golf drive made to one of said fairways by a player in the hitting area may be assigned a score as determined by the scoring value of the zone to which he has succeeded in driving his ball, one of said zones having assigned an extreme scoring value and being provided with a target area having a downwardly extending hole therein into which a ball may pass and having a surface sloping downwardly outwardly from said hole and to a gutter provided at the periphery of the target area, said hole and said gutter being provided with conduits into which balls falling into the hole rolling into the gutter may pass by gravity to a collecting station; and means operatively associated with said conduits and energized by the passage of balls through the conduits for giving visual indication of the passage of a ball through each of the conduits.

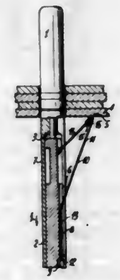
3,129,944
GOLF MAT COMPOSED OF A PLURALITY OF PARALLEL BRUSH STRIPS
Howard V. Amos, Hartford, and Stephen A. Pierz, Thompsonville, Conn., assignors to The Fuller Brush Company, East Hartford, Conn., a corporation of Connecticut
Filed Aug. 24, 1961, Ser. No. 133,617
6 Claims. (Cl. 273—195)



1. A golf mat comprising a plurality of similar parallel horizontal brush strips each including an upright channel with a core wire disposed therein and a layer of fibers folded about the core wire within the channel and projecting upwardly from the channel, said brush strips being uniformly and closely spaced so that the upper end surfaces of the fibers thereof form a substantially flat horizontal ball support surface, and each of said brush strips having opposite end portions with fibers terminating below said ball supporting surface and approximately in the plane of the upper edge surfaces of the associated channel, a transverse center support member disposed beneath said brush strips and engaging and securing each of them against sidewise movement, and first and second transverse end support members engaging and securing each of said brush strips against sidewise and endwise movement, each of said end support members including a cap strip which overlays one of said opposite end portions of each brush strip and secures the brush fibers and core wires against upward movement relative to their channels.

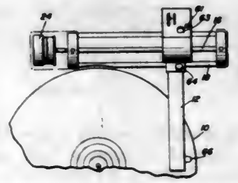
3,129,945
AUTOMATIC DEVICE FOR THE PLACING IN PLAYING POSITION OF RECORDS OF A RECORD CHANGER
Louis Thevenaz, Les Rasses, Switzerland, assignor to Thorens S.A., Sainte-Croix, Switzerland, a corporation of Switzerland
Filed May 1, 1961, Ser. No. 106,737
Claims priority, application Switzerland May 5, 1960
12 Claims. (Cl. 274—10)

1. In an automatic record changer comprising a turntable, a spindle centrally mounted with respect to said turntable, record supporting means provided on said spindle to hold a stack of records on said spindle above said turntable, lowering means associated with said supporting means to lower said records individually onto said turntable, said record supporting means comprising a plurality of supporting members angularly disposed around and articulated on said spindle for free movement between an active open position in which their upper extremities are situated at a distance from the axis of said spindle substantially larger than the diameter of said spindle and in a vertical plane with respect to said axis,



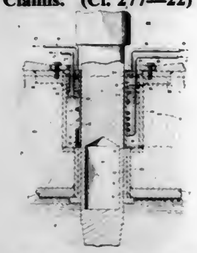
and an inactive closed position in which said supporting members are retired inside of said spindle to allow a record to freely fall along said spindle onto said turntable, each of said supporting members comprising at least two distinct members displaceable the one with respect to the other approximately situated in the same axial plane of said spindle and each adapted to support a part of the weight of the records resting on said supporting means.

3,129,946
PHONOGRAPH ARM
Jacob Rabinow, Takoma Park, Md., assignor, by mesne assignments, to Control Data Corporation, Minneapolis, Minn., a corporation of Minnesota
Filed Nov. 30, 1961, Ser. No. 156,057
21 Claims. (Cl. 274—23)



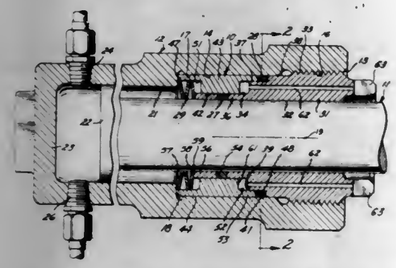
21. In a record player having a turntable to support a record which has a groove, and having a tone arm provided with a stylus, the improvement comprising: means to support said tone arm for translation and for angular pivotal movement, means operatively associated with said support means and with said tone arm for translating said tone arm and including mechanical servo means responsive to the pivot angle between said arm and said support means to apply a component of translation motion to said tone arm in a first direction to restore the pivot angle between said tone arm and said support means to a predetermined angular relationship in response to angular deviation therebetween in a first direction, and selectively to apply a component of translation motion to said tone arm in a second direction to restore the pivot angle between said tone arm and said support means to a predetermined angular relationship in response to angular deviation therebetween in a second direction.

3,129,947
LIQUID METAL FREEZE-TYPE SEAL
Frederick O. Streck, Costa Mesa, Calif., assignor to North American Aviation, Inc.
Filed Dec. 23, 1960, Ser. No. 78,059
8 Claims. (Cl. 277—22)



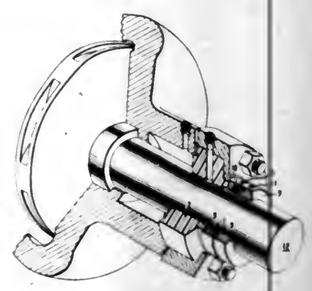
1. A freeze-type shaft seal for a liquid metal system, comprising channel means for receiving shaft leakage liquid metal from said system contiguous to the shaft and parallel to its axis; means for freezing a first portion of the shaft leakage in said channel around said shaft; and means for maintaining a second portion of said shaft leakage in said channel in the molten state, said second portion being between the frozen region and the shaft source of liquid metal leakage.

3,129,948
PACKING GLAND
Giles A. Kendall, Van Nuys, Calif., assignor to Menasco Manufacturing Company, Burbank, Calif., a corporation of California
Filed Nov. 2, 1961, Ser. No. 149,627
17 Claims. (Cl. 277—27)



1. A packing gland for sealing a movable rod relative to a cylinder adapted to contain fluid under pressure, comprising: means defining a counterbore in said vessel adjacent to an open end thereof and communicating between the interior of said vessel and said open end; an annular member fitting said counterbore and bottomed in said counterbore and defining an annular space surrounding said movable rod; a gland nut retaining said annular member in said counterbore, said gland nut having a threaded connection to said cylinder and a circumferentially reduced end fitting in said annular space; a first annular sealing ring of compressible material in said annular space and adjacent to said reduced end of said gland nut; an annular sleeve member movable in said annular space and having one end bearing against said annular seal ring; spring means in said counterbore and biasing said one end of said annular sleeve to bear against said first annular sealing ring, said first sealing ring being responsive to addition of said spring means to the pressure applied by the fluid under pressure against the differential area between the outer area of said sleeve and the outer diameter of said rod for sealing said annular space; and second sealing means for sealing said gland nut to said counterbore of said cylinder.

3,129,949
BALANCED SHAFT SEAL
Roy John Laux, Newark, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Nov. 22, 1961, Ser. No. 154,156
5 Claims. (Cl. 277—27)

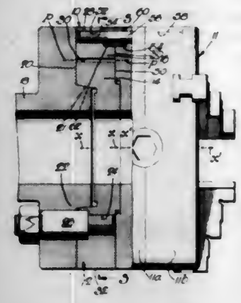


1. An improved seal arrangement for preventing escape of hot, high pressure liquids of varying temperatures and varying pressures along a rotating shaft, past a stationary wall structure, said arrangement comprising, in combination: a stationary annular bearing element having an annular sealing surface and adapted to be secured to a stationary wall structure and further adapted to surround a rotating shaft, an elongated rotatable bushing element having an annular sealing surface and adapted to surround a rotating shaft and positioned in axial alignment and having its sealing surface in abutment with the sealing surface of said annular bearing element, a rotatable collar element in axial alignment with and spaced a limited distance from the other end of said bushing element and adapted to surround and be fixedly attached to a rotating shaft, said bushing element operatively linked to said collar element for rotary movement therewith and for axial movement with respect thereto, a liquid sealing means positioned between said bushing element and said collar element, a resilient means positioned between said bushing element and said sealing means to urge said bushing element against said stationary element with a predetermined force and said sealing means into engagement with said bushing element and said collar element, said bushing element provided with a pressure surface opposed to its annular sealing surface and constructed and arranged to be in communication with its annular sealing surface, said annular sealing surface having about twice the effective area as the opposed pressure surface to balance the forces of a high pressure liquid of varying temperature and pressure which is contained within said seal arrangement and maintain the force substantially constant at its predetermined level.

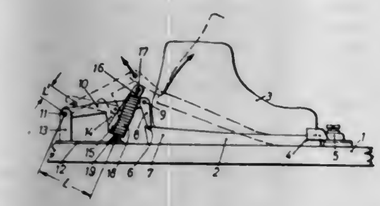
3,129,950
CENTER-ADJUSTABLE CHUCK ADAPTER
Edward A. Galler, Windsor, Conn., assignor to The Cushman Chuck Company, Hartford, Conn., a corporation of Connecticut
Filed July 16, 1962, Ser. No. 210,143
9 Claims. (Cl. 279—1)

1. An adjustable chuck adapter, comprising a steel body with an axis having integral inner and outer parts about said axis of which one part provides more than two angularly spaced cantilever arms extending lengthwise in a common plane normal to said axis and being resiliently flexible toward and away from said axis, each of said arms having a chuck anchor formation about an axis parallel to said body axis and the other part having provisions for its releasable attachment to a chuck

mounting spindle; and connections between said other part and said arms, respectively, spaced from the respective anchor formations lengthwise of said arms and operative to flex said arms.

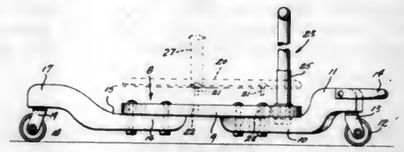


3,129,951
SAFETY SKI BINDINGS
Robert Lusser, Steinhauserstr. 27, Munich, Germany
Filed Sept. 13, 1962, Ser. No. 223,394
Claims priority, application Germany Sept. 18, 1961
12 Claims. (Cl. 280—11.35)



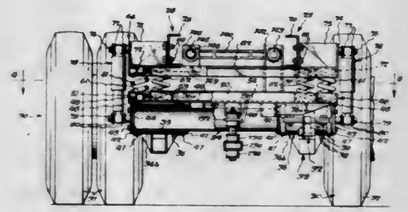
1. A safety binding for holding a ski to a boot, including means for holding the toe of the boot to the ski, pressure means adjacent the rear of the boot and above the ski adapted to engage and press upon the heel of the boot, lever means pivotally mounted to the ski to lie above the ski and swingable in a vertical longitudinal plane, means pivotally mounting the pressure means to the lever means for swinging movement in the same plane as the lever means, a selector lever pivotally mounted to one of said means and movable between a position nearer the pivotal mounting of the lever means to the ski and a position remoter from the pivotal mounting of lever means to the ski, spring means operably coupled at one end to the selector lever and at the other end to the ski, the pivotal mountings of the selector lever being so disposed that said spring means loads the selector lever when the selector lever is in the position remoter from the pivotal mounting of the lever means to the ski for a downhill run with said pivotal mounting of the selector lever passing across a line extending between the coupling points of the spring means to the selector lever and the ski when the heel of the boot being raised from the ski exceeds a predetermined distance whereby the selector lever upon exceeding such predetermined distance automatically moves to the position nearer the pivotal mounting of the lever means to the ski for climbing and cross-country travel with said pressure means pressing upon the heel with lesser pressure in such latter position.

3,129,952
CHILD'S BABY CRAWLER TYPE VEHICLE
Frances B. Rivers, 339 Delmar Place, Covington, Ky.
Filed Dec. 7, 1962, Ser. No. 242,956
1 Claim. (Cl. 280—87.02)



A child's vehicle of the character described, comprising a flat oblong horizontally disposed platform, having a pair of spaced, and angularly, and outwardly disposed bars secured to the front end and underside thereof, each bar having its outer end raised for the reception of a caster swively supporting a wheel and a third bar, having its front end secured to the center, underside, and rear portion of the said oblong platform, the said third bar also having its rearmost end raised for the reception of a caster swively supporting wheel, and an oblong foam rubber pad covered with plastic, the same shape and size as that of the said oblong platform to which it is removably secured by a pair of screws and wing nuts, and a hollow vertically disposed socket centrally located on the front end of the said oblong platform, and a T-shaped handle removably secured in the said socket, the said T-shaped handle being adjustable in height and rising vertically from the said vehicle, and a safety belt secured to the oblong pad, thereby providing a means of keeping an infant from falling off the said vehicle when lying prone on its stomach on the same.

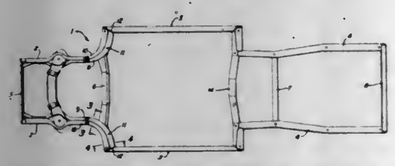
3,129,953
TANDEM AXLE SPRING SUSPENSION
Albert F. Hickman, Eden, N.Y.
Filed Feb. 23, 1961, Ser. No. 91,101
2 Claims. (Cl. 280—104.5)



1. A tandem axle spring suspension adapted to be interposed between a vehicle frame and a pair of tandem axles each having rubber tired wheels journalled at the ends thereof, comprising a vertically movable bolster arranged under said frame between said axles and projecting outwardly from below the opposite sides of said vehicle frame, said bolster comprising a vertically thin and horizontally broad rigid body having end portions projecting between the tires of said wheels at each side of the frame, a cross rod fixed to the underside of said bolster generally parallel with said axles and having end portions arranged under and in vertically spaced relation to said end projecting portions of said bolster, a walking beam arranged at each side of said frame and extending lengthwise thereof and journalled at its center on and supporting the corresponding end portion of said cross rod, a frame bracket above each projecting end portion of said bolster, at least one vertical helical compression spring arranged outboard of the space directly above said walking beam and within the space directly between the

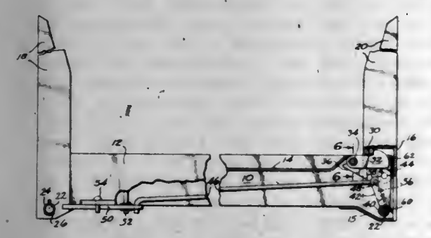
tires of the wheels at each side of the frame and having its lower end seated on the corresponding end portion of said bolster and its upper end supporting the corresponding frame bracket, means connecting each end of each walking beam to a corresponding axle end in a vertical plane between said frame and wheels, and guide means operatively interposed between said frame and bolster and constraining said frame to move in a substantially vertical path.

3,129,954
WIDE-HIPPED FRAME HAVING INTEGRAL TORQUE BOX
John J. Duero, Milwaukee, and Glyn C. Traub, Hartford, Wis., assignors to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Sept. 12, 1962, Ser. No. 223,087
2 Claims. (Cl. 280—106)



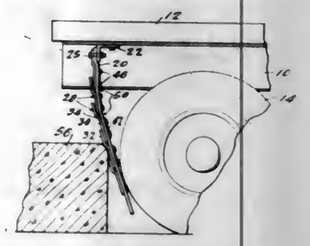
1. A wide-hipped vehicle frame for use in a vehicle having front and rear wheels and having a passenger floor level generally coinciding with the lowest portion of the frame, said frame having a front narrow portion, a wide intermediate portion having a front end immediately adjacent said front narrow portion, and a narrow rear portion, said front narrow portion including a pair of tubular front inner side rails, and a pair of front torque boxes comprising continuous, outwardly curving extensions of said tubular front inner side rails, said torque boxes progressively increasing in horizontal cross sectional dimension while simultaneously decreasing in vertical cross sectional dimension while curving abruptly outwardly on a line extending transversely of said frame through the front end of the wide intermediate portion of the frame, said torque boxes connecting the front narrow portion to the wide intermediate portion of the vehicle frame, whereby said torque boxes provide clearance between the frame, the dash area of the vehicle, and the adjacent wheels of the vehicle.

3,129,955
LOG BUNK AND STAKE ASSEMBLY WITH POSITIVE LATCH AND LATCH RELEASE
Dennis R. Hassell, P.O. Box 91, Ashland, Oreg.
Filed May 5, 1961, Ser. No. 108,086
5 Claims. (Cl. 280—145)



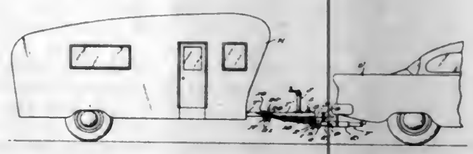
1. A log bunk and stake assembly comprising a frame, a stake, pivot means pivoting the stake to an end of the frame for angular movement of the stake between raised and lowered positions, a latch, pivot means pivoting the latch to the said end of the frame for angular movement of the latch between latched and unlatched positions, lock means positioned for releasably locking the latch in latched position, the lock means being shiftable between locked and unlocked stations, and abutment means on the latch projecting into the path of movement of the lock means for engagement and tripping of the latch by the lock means as it moves to its unlocked station.

3,129,956
SPLASH GUARD
William C. Eaves, 407 S. Dearborn St., Chicago 5, Ill.
Filed Oct. 16, 1959, Ser. No. 846,982
4 Claims. (Cl. 280—154.5)



1. A splash guard for vehicles including a sheet of flexible nonmetallic material, a plurality of metal members arranged longitudinally on one surface of the sheet, each of said members of lesser width than the sheet of material and having a planar base portion and an offset portion, means securing the base portions of said members to the sheet with the members in longitudinally aligned relation, the offset portion of each member being disposed contiguous with the planar base portion of the adjacent member to restrain flexing movement of the sheet in one direction normal to the plane of the sheet but providing for flexing movement of the sheet in the opposite direction.

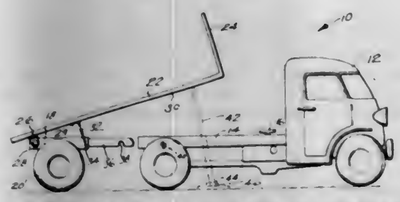
3,129,957
TRAILER HITCH LOAD DISTRIBUTING MEANS
Herbert J. Bernard, 11851 Stagg St., and Joseph A. Morgan, 12021 Stagg St., both of North Hollywood, Calif.
Filed Nov. 23, 1962, Ser. No. 239,758
8 Claims. (Cl. 280—406)



1. The combination with a trailer hitch of the type comprising a ball component carried by a drawbar extending rearwardly from the towing vehicle and detachably engaging complementary socket means carried by a trailer tongue of means for distributing the load imposed by the trailer on the towing vehicle frame; said load distributing means comprising a head element mounted on the towing vehicle drawbar for pivotal movement about a horizontal axis extending transversely of the drawbar and carrying the ball component of the trailer hitch, a pair of leaf spring elements disposed one each at each side of the ball and each having one end thereof attached to said head element in fixed vertical relation to said ball, said leaf spring elements thence extending rearwardly along the respective sides of the trailer tongue, a pair of spring supporting means carried by opposite sides of the trailer tongue rearwardly of the ball engaging socket thereof and supporting the other ends of said leaf spring elements, and

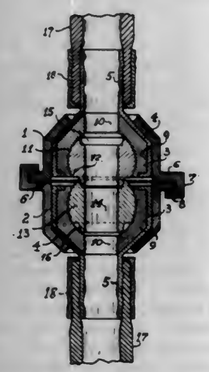
means for rocking said head element about the said horizontal axis to a desired extent in a direction operative to cause said leaf spring elements to impose a downward bias on said spring end supporting means of sufficient magnitude to cause the reaction to said bias to transfer a significant proportion of the downward load of the trailer on the hitch and the rear end of the towing vehicle frame to the forward end of that frame and the front wheels of the towing vehicle through the spring system of the towing vehicle.

3,129,958
COMBINATION TRUCK
Lars S. Mortensen, 84 Orchard St., Helper, Utah
Filed Nov. 24, 1961, Ser. No. 154,446
4 Claims. (Cl. 280—418)



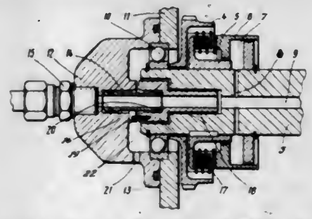
1. A combination truck comprising, in combination, a cab, a chassis secured to said cab, a sub-chassis assembly supported by wheel means, said sub-chassis received within said main chassis, said main chassis receiving said sub-chassis comprising a pair of spaced apart locking pins perpendicular to said chassis, said locking pins receiving a pair of spaced apart semi-circular openings in locking engagement with said sub-chassis, a substantially raised cross bar between side channel members of said main chassis supporting in abutment therewith a flat bed, said flat bed having an upwardly substantially vertical back member, said flat bed receiving at its rearmost underside a pair of parallel spaced apart brackets, said brackets pivotable about a pair of external pins on said sub-chassis, said pivotable brackets being located rearward of said wheel means.

3,129,959
HOSE COUPLING
John J. Kuzma, 49 Beach St., North Haven, Conn.
Filed Aug. 1, 1961, Ser. No. 128,510
2 Claims. (Cl. 285—74)



1. A detachable self sealing hose coupling composed of two identical mating parts, each comprising a shell; a tubular shank secured to one end of said shell for the connection of the hose; a flange secured to the opposite end of said shell and having opposing interlocking sections forming a bayonet type lock when joined to the flange of the other mating part of the coupling; a socket mounted within said shell and having a smooth surfaced spherical cavity, communicating with the said tubular shank by means of an axial passage, opposite to this passage said cavity has a circular open end the diameter of which is smaller than the maximum diameter of said cavity; a globular mating element mounted within said cavity and having a hermetically sealing spherical surface adjacent to the wall of the said cavity, permitting the rotation of said element within said cavity, said mating element has a central passage, with a concave conical mating surface at one end of said central passage and a corresponding convex conical mating surface at the other end of said central passage, so arranged that, when said rotatable mating element is positioned so as to expose one of these mating surfaces, it will mate the opposite mating surface of the other mating part of the coupling.

3,129,960
DEVICE FOR FEEDING PRESSURE FLUIDS FROM A STATIONARY BEARING COVER INTO THE OUTER END OF A ROTATING SHAFT
Rudolf Schrodt, Kronberg, Taunus, Germany, assignor to Reimers-Getriebe K.G., Ascona, Switzerland, a Swiss firm
Filed Sept. 23, 1960, Ser. No. 58,071
Claims priority, application Germany Oct. 1, 1959
5 Claims. (Cl. 285—95)

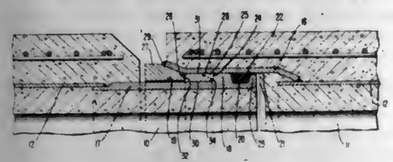


1. In combination, a frame, a shaft having one end mounted in the frame for rotation about an axis and having at least one bore therein opening in said end, a sealing element part concentric and interfitting with the shaft and having a bore therethrough, said sealing element part being nonrotatable with respect to the frame, the interfitting sections of said shaft and said sealing element part having opposed slightly spaced cylindrical surfaces to form a noncontacting sealing joint, a sealing member part concentric with the shaft and in alignment with said sealing element part having a bore therethrough communicating with said bores of the two other parts, said sealing element part and said sealing member part interfitting with each other, elastically deformable sealing ring means engaged between the parts mounting the sealing member part rockably with respect to said sealing element part at a point spaced in the direction of the longitudinal axis of the sealing element part from the area of said sealing joint, and means rockably mounting said sealing member part in said frame, whereby to prevent disturbance of said sealing joint by longitudinal eccentric and wobbling motions of said shaft.

3,129,961
MEANS FOR HARNESSING PIPE JOINTS
Nicholas S. Danko, Livingston, John A. Shaw, West Orange, and John T. McCall, Mountain Lakes, N.J., assignors to International Pipe and Ceramics Corporation, East Orange, N.J., a corporation of Delaware
Filed Jan. 10, 1961, Ser. No. 81,730
7 Claims. (Cl. 285—230)

1. In a joint for pipe sections having steel bell and spigot joint rings at adjacent ends of the pipe sections,

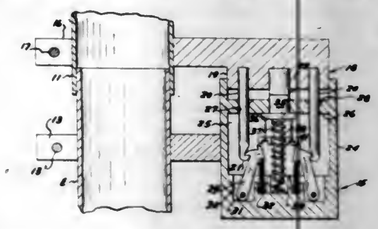
the combination of an outer joint ring of steel having a substantially cylindrical interior surface and a distal end surface flaring outwardly from said cylindrical interior surface to the mouth of said outer joint ring; a spigot joint ring of steel extending from without the mouth of the outer joint ring to within said outer joint ring and thereby providing overlapping portions of the respective joint rings, said spigot joint ring having a longitudinal sectional profile providing a stepped outer surface disposed opposite to said cylindrical interior surface of said outer joint ring, said stepped outer surface formed in part by a flange adjacent the distal end of the spigot joint ring, a rib spaced axially from said flange and providing a circumferential recess disposed to the side of said rib facing said flange, and a substantially cylindrical exterior surface disposed to the other side of said rib and extending axially from the rib to beyond the mouth of said outer joint ring and continuing toward the base end of said spigot joint ring; said rib extending radially outwardly from said cylindrical exterior surface of said spigot joint ring to adjacent the cylindrical interior surface of said outer joint ring and thereby de-



fining a wall at one end of an annular space around said cylindrical exterior surface of said spigot joint ring and between said joint rings; sealing means contained in said circumferential recess; a ring of deformable material encircling said cylindrical exterior surface of said spigot joint ring; means for retaining said ring of deformable material adjacent to said rib, said retaining means including a steel ring overlying the cylindrical exterior surface of said spigot joint ring with its inner periphery leaving a clearance between the steel ring and said exterior cylindrical surface of said spigot ring and thereby allowing for lateral deflection of one joint ring relatively to the other and means for fixedly attaching said steel ring in positive locking engagement to said outer joint ring, said ring of deformable material having a solid content of less volume than the volume of said annular space and being substantially free from stress in the absence of fluid pressure within the joined pipe sections, whereby the action of an axial thrust from one of said joint rings to the other due to reaction from fluid pressure within the joined pipe sections is transmitted through said ring of deformable material.

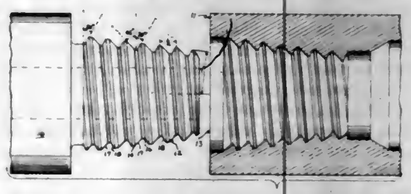
3,129,962
RELEASABLE CLAMP FOR VEHICLE MUFFLER
Arthur Cohen, 250 Merton Road, Apt. 305, Detroit, Mich.
Filed Dec. 11, 1962, Ser. No. 243,843
4 Claims. (Cl. 285—317)

4. A means for removably securing together a pair of registering elements in assembled relation comprising a pair of aligned complemental locking elements respectively bracketed to said registering elements, one locking element including a housing, a pair of spring biased detents pivotally mounted at their one ends within said housing and at their other ends including retaining means, the other locking element including a base adapted to slidably nest within said housing, a pair of parallel locking prongs projecting from said base extending into said housing and at the ends of said prongs interlocked with said retaining means, a plunger axially and movably mounted within said housing and normally spring biased to an inoperative position, a detainer depending from said plunger normally spaced from said detent, inward movement of said base relative to the housing causing said prongs to



cam against and disengage said detents and prongs and to move said detainer inward to retainingly engage said detents in released position against their spring bias, facilitating retraction of said prongs free of said detents to disassemble said registering elements.

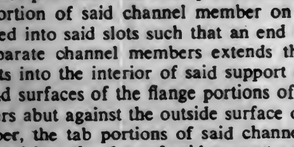
3,129,963
LOW RELEASE TORQUE THREADED JOINT
Davis B. Robbins, % Robbins Machine & Mfg. Co., Oneonta, Ala.
Filed June 30, 1960, Ser. No. 39,884
4 Claims. (Cl. 285—334)



1. A threaded joint for drill pipes comprising two cylindrical members having substantially complementary cooperating tapered surfaces with single threads thereon, the threads having a pitch of approximately one-half inch and having crests and roots connected on the sides facing the smaller end of the tapered surfaces by flanks which form an included angle ranging from approximately 40° to 50° with a plane extending through an adjacent root and normal to the axial center line of said cylindrical members and connected on the sides thereof facing the larger end of the tapered surfaces by flanks which form an included angle ranging from approximately 25° to 35° with a plane extending through an adjacent root and normal to the axial center line of said cylindrical members.

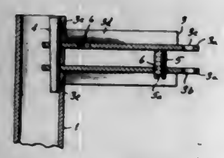
3,129,964
COUPLING FOR LIQUID ABSORBENT CONDUIT HAVING A CRUSHABLE SPACER
Manford McNeil, Bellevue, Wash., assignor, by mesne assignments, to Certain-Teed Products Corporation, Ardmore, Pa., a corporation of Maryland
Filed June 8, 1960, Ser. No. 34,715
2 Claims. (Cl. 285—369)

1. In combination with a coupling assembly comprising a sleeve type coupling member and a conduit element serving to convey a liquid, said conduit element being made of a material which absorbs said liquid and undergoes substantial axial expansion after being placed in service, said coupling member having a bore of diameter such that the end portion of said conduit element is freely slideable therein, the conduit element having abutment means spaced from the coupling end thereof a predetermined distance, a spacing means mounted on the coupling end of the conduit element against said abutment means, the spacing means having a dimension transverse the conduit element which is greater than that of the bore in the coupling member to provide for abutment of the spacing means against the coupling member during telescopic assembly of the conduit element and coupling member, the spacing means being of a material capable of withstanding normal assembly force and thereby serving to limit normal assembly of the conduit element and coupling member and crushable by the force generated by



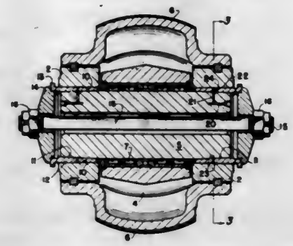
axial expansion of said conduit element due to absorption of liquid, said spacing means, when subjected to the axial expansion force, assuming a collapsed condition of permanent deformation due to the application of crushing force beyond the yield point, and said spacing means in collapsed condition being incapable of exerting any appreciable force resisting the axial expansion force, the axial dimension of the spacing means being selected so that the axial expansion exhibited by the conduit element during maximum liquid absorption is accommodated by free travel of the coupling end of the conduit element axially into the bore of the coupling member.

3,129,965
CONNECTOR
Forest G. Stark, Jamestown, N.Y., assignor to Art Metal, Inc., Jamestown, N.Y., a corporation of New York
Filed Sept. 22, 1960, Ser. No. 57,769
3 Claims. (Cl. 287—54)



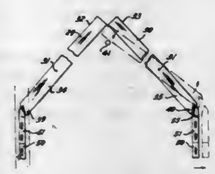
1. A connector assembly comprising a hollow support member provided with two vertically spaced, horizontally disposed slots communicating with the interior of said support member, one of said slots being directly above the other of said slots, separate, independent channel members each provided with a tab portion extending from the web portion of said channel member on either end thereof fitted into said slots such that an end tab portion of said separate channel members extends through one of said slots into the interior of said support member so that the end surfaces of the flange portions of said channel members abut against the outside surface of said support member, the tab portions of said channel members being inserted into the slots of said support member, one above the other, such that the upper channel member is positioned with its flange portions upwardly directed and the bottom channel member with its flange portions downwardly directed and a tapered pin located within the interior of said hollow support member and inserted through holes provided in the tab portions of said upper and lower channel members.

3,129,966
CROSSHEAD WRIST PIN ASSEMBLY
Charles E. Blank, Painted Post, N.Y., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey
Filed Oct. 9, 1961, Ser. No. 143,816
3 Claims. (Cl. 287—100)



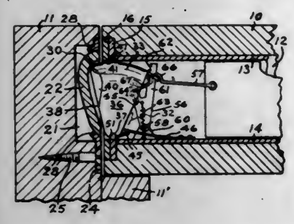
1. A crosshead assembly comprising: a bifurcated crosshead body having a pair of spaced branch legs interconnected by a bight and adapted to be connected to a piston rod, said branch legs containing a pair of axially aligned cylindrical crosshead bores; a connecting rod having an end portion located between said branch legs and containing an opening which is axially aligned with the crosshead bores; a hollow wrist pin extending through the aligned crosshead bores and the opening in the connecting rod and being rotatively mounted in said opening in said connecting rod, the outer portions of said wrist pin which extend through said crosshead bores being tapered in opposite directions to each other and at angles converging outwardly away from the ends of the wrist pin; a sleeve having a cylindrical non-tapered outer periphery snugly fitting in each crosshead bore and having an internally tapered interior periphery receiving and interfitting with the adjacent tapered outer portion of said wrist pin; and means to move each sleeve inward toward the other sleeve and relative to said wrist pin to wedge and lock the sleeves on said wrist pin and in said crosshead bores.

3,129,967
DOUBLE ACTING DOOR LOCK
Harold Shoenfeld, Brooklyn, N.Y.
Filed Jan. 2, 1962, Ser. No. 163,544
4 Claims. (Cl. 292—25)



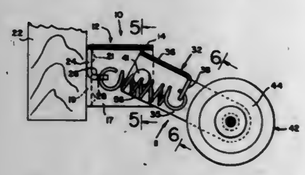
1. A locking mechanism for cabinet doors, comprising, in combination, a first and a second door oppositely disposed, twin locking bars pivotally connected between said first and said second doors, and catch means on each of said doors, each of said catch means positioned to intersect the external end of one of said twin locking bars, each of said catch means urging its twin locking bar towards a first position only when its door is closed whereby when said door is open said twin locking bar will be urged toward a second position, each of said twin locking bars being of sufficient length and positioned to interfere with any movement of said other twin locking bar when in said second position.

3,129,968
LATCHES AND LOCKS
Percy R. Graham, 7342 24th Ave. NW., Seattle 7, Wash.
Filed Mar. 15, 1961, Ser. No. 105,251
5 Claims. (Cl. 292—201)



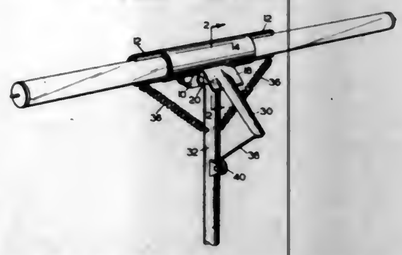
1. Lock means for use with a door which is swingingly movable relative to a door jamb having a stop member, comprising a latch housing disposed within the door and having a bolt accommodation opening flush with an edge of the door; a latch bolt composed at least partly of magnetic material having one end portion thereof pivotally supported by said housing adjacent said bolt accommodation opening for swinging movement of at least part of the other end portion of said latch bolt into and out of said housing through said bolt accommodation opening; a permanently magnetized strike member embedded in the door jamb and registering with the latch bolt when the door is fully closed, said strike member having a concave outer side the curvature of which recedes sharply adjacent its forward edge forming a concave shoulder positioned for engagement by the swingingly movable forward end of the latch bolt, the wedging pressure exerted by said latch bolt when it is urged against said shoulder by the magnetic pull of said strike member holding the door in tightly closed rattle free engagement with the stop member of said door jamb; latch bolt holding means capable of yieldingly holding said latch bolt in a retracted position, the magnetic pull of said strike member being capable of overcoming the force of said latch bolt holding means and holding said latch bolt in engagement with said strike member when said strike member and said latch bolt are aligned with each other; releasable bolt locking devices capable of locking said latch bolt in engagement with said strike member; and latch bolt retracting means connected with said latch bolt and locking devices operable in first unlocking said locking devices and then retracting said latch bolt.

3,129,969
COMBINATION DOOR HOLDER AND STOPPER
Chi Sheng Kuo, 10 Tunis Ave., Yonkers, N.Y.
Filed Dec. 29, 1961, Ser. No. 163,141
1 Claim. (Cl. 292—338)



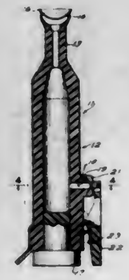
A combination door holder and stopper device comprising a unitary mounting bracket having a top wall, side walls extending downward from said top wall, mounting flanges extending outward from the rearwardly disposed edges of said side walls whereby the device is adapted to be attached to a door with said side walls in substantially vertical position, and a rear wall extending downward from the rear edge of said top wall, a unitary roller support member including an upper portion, elongated side arms extending downward from the longitudinal edges of said upper portion and extending forward beyond the front edge of said upper portion, two aligned fastening members pivotally securing the rearwardly disposed portions of said side arms to the roller support member between the side walls of said mounting bracket, a roller having a yieldable outer surface, bushings disposed between the sides of said roller and the inner surfaces of said side arms, a roller shaft extending through said bushings and said roller rotatably mounting the roller between said side arms, and a tension spring connected at one end to said rear wall, said upper portion of the roller support member having a plate extending downward from the front edge thereof, the other end of the tension spring being connected to said plate, said tension spring maintaining said roller support member selectively in a downwardly extending position in which the roller is adapted to contact the floor below the door and in an upwardly extending position in which the top surface of said upper portion of the roller support member rests against the front edge of said top wall of the mounting bracket, said plate extending downward to a depth approximately equal to one-half of the depth of said side arms of the roller support member and having an aperture therein near the lower end thereof, said rear wall of the mounting bracket extending downward to a depth approximately equal to one-half of the depth of said side walls and having a nose on its lower end extending forward therefrom and provided with an aperture, said tension spring having said one end thereof hooked in said nose aperture and having said other end thereof hooked in said plate aperture, the top wall, the side walls and the rear wall of the mounting bracket and the upper portion and the side arms and said plate of the roller support member thereby providing protective cover means open only at the bottom within which the tension spring is confined to protect the tension spring in both of said positions of the roller support member from precipitation and dust falling upon or against the sides of the device.

3,129,970
DEVICE FOR INSTALLING AND REMOVING FLUORESCENT LIGHT TUBES
Glen A. St. John, 2134 SE. Harney, Portland, Oreg.
Filed Feb. 12, 1962, Ser. No. 172,456
2 Claims. (Cl. 294—20)



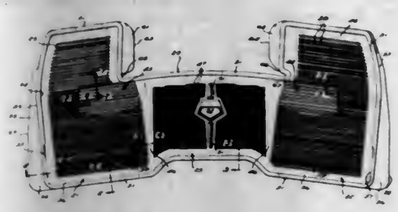
1. A device for engaging fluorescent light tubes for moving the tubes into and out of light sockets, comprising a handle, a base support, means pivotally interconnecting said base support laterally on one end of said handle and arranged to permit pivotal movement of the base support in either direction relative to the handle, a pair of arcuate clamping jaws on said base support for receiving a light tube therebetween, one of said jaws being stationary and the other jaw being hingedly connected to the base support for movement to a closed position relative to the stationary jaw and an open light tube receiving position, spring means engageable with said hinged jaw for normally maintaining the latter in closed position, resilient means engageable with said base support for maintaining the latter in a right angle position relative to the handle but allowing it to pivot in either direction, said resilient means being arranged to allow pivotal movement of said base support by interengagement of the latter with a light tube, and means connected to said hinged jaw for opening the latter against the force of said spring means.

3,129,971
CONTACT LENS APPLICATOR
Arnold J. Kobler, 706 Clay St., Fairbanks, Alaska
Filed Feb. 13, 1961, Ser. No. 88,702
8 Claims. (Cl. 294—64)



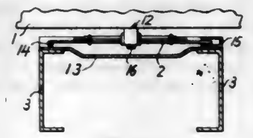
1. A contact lens applicator comprising a tube having one end closed and transparent and the other end open to receive a contact lens in closing relationship, means for establishing a vacuum in said tube, and means communicating with said tube to selectively vent same to outside atmosphere said last named means including a valve member normally closing a vent passage extending exteriorly from the interior of said tube and a stem secured to said valve member and operable under finger pressure to urge said valve member to an open position relative to said passage.

3,129,972
AUTOMOBILE FLOOR MAT
Victor H. Vodra, 715 Kieffer St., Wooster, Ohio
Filed Feb. 12, 1962, Ser. No. 172,741
5 Claims. (Cl. 296—1)



1. A flexible one-piece automobile floor mat composed of an elastomeric material and adapted to fit on top of the original floor covering on the front floor of an automobile, comprising a center section adapted to fit over the transmission hump and a pair of side sections adapted to lie on the floor on each side of the hump, each of said side sections having a forward portion extending beyond the front edge of said center section to lie along the inclined toe board portion of the floor, said mat having a substantially flat under surface, a peripheral dam projecting above the upper surface and extending unbrokenly around the periphery of said center and side sections, a thin flexible flap portion along the outer edge of each side section extending outwardly beyond said peripheral dam and having a thickness substantially less than that of said dam, the portion of the mat within said peripheral dam having a thickness substantially less than that of said dam and greater than that of said flap portions, a plurality of ribs extending transversely across said side sections and projecting above the upper surface of said mat, said ribs being spaced away from said peripheral dam along the outer edges by a margin portion having a substantially smooth upper surface, said margin portion being substantially thinner than said ribs.

3,129,973
ELASTIC MOUNTING OF DRIVER'S CAB OF TRUCK
Herbert F. W. Maruhn, Stuttgart-Uhlbach, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Nov. 1, 1961, Ser. No. 149,252
Claims priority, application Germany Nov. 5, 1960
2 Claims. (Cl. 296—35)

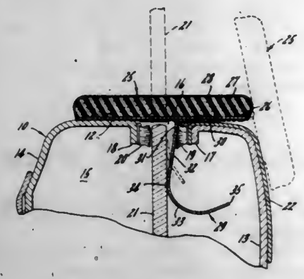


1. In a truck or tractor having a frame and a driver's cab defined by the radiator grill and a rear wall, the improvement consisting essentially of an elastic mounting means for supporting said cab on said frame comprising a pair of resilient bearings supporting said cab on said frame approximately midway between said grill and said rear wall, said frame including a pair of bearer members extending longitudinally of said truck and a substantially U-shaped rail extending transverse to the longitudinal axis of said frame and connecting said longitudinal bearer members, said rail being arranged adjacent said rear wall, and spring means arranged adjacent said rear wall and including a leaf spring extending transverse to the longitudinal axis of said frame and disposed within said U-shaped rail, said leaf spring consisting of a plurality of flat superimposed spring leaves of increasing length, one outer end of the spring leaf of greatest length being fixed on said frame and the other end thereof being mounted on said frame so as to be slidable in the longitudinal direction of said spring, means for securing said slidable end so as not to be lifted off said frame, and means for rigidly securing said cab to the central part of said spring.

3,129,974
CAR WINDOW CUSHION
Zoma Vaughn Carter, 2505 W. Main St., Muncie, Ind.
Filed Feb. 14, 1963, Ser. No. 258,963
1 Claim. (Cl. 296—49.2)

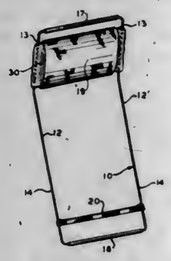
For use with an automobile door having a window opening defined partially by a sill interrupted by a pane socket formed to provide a mouth opening through said sill and defined between an inner lip and an outer lip spaced respectively from the inner and outer walls of said door, and a window pane receivable in said socket and elevatable through said socket mouth to close said window opening; the invention which comprises an elongated, padded plate provided with a resilient hook depending from the bottom of said plate at a point near the median longitudinal line of said plate, said hook including an outwardly and downwardly inclined portion merging with an inwardly curved portion terminating in a toe rising toward said plate, said hook being so proportioned and

arranged that, when said plate is disposed flatly on such a sill to span the socket mouth thereof with said hook entered in the socket between the pane and the inner lip of such socket, said hook, adjacent the point of mergence between said inclined portion and said curved portion, will engage such pane to flex said inclined portion inwardly and



said toe will underlie said inner lip; and when said pane is elevated it will engage and rock said plate inwardly relative to said sill to a position in which an intermediate part of said hook curved portion will engage said pane, with said toe disposed within said socket and extending away from said pane toward the inner wall of said door.

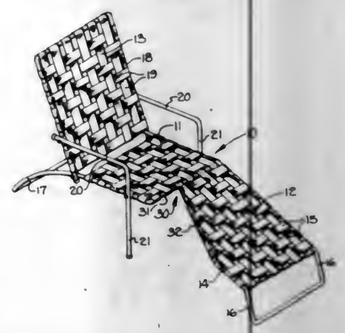
3,129,975
HEAD RESTS
William M. Emery, New Providence, N.J., assignor to Better Sleep Mfg. Co., Berkeley Heights, N.J., a corporation of New Jersey
Filed Sept. 18, 1962, Ser. No. 224,318
6 Claims. (Cl. 297—397)



1. A head rest comprising a substantially four sided frame including two upright support sections and at least one spacer member therebetween, interlocking means effective between said sections and said member, and an inflatable and deflatable bladder mounted on said sections toward one end thereof, said bladder, said upright sections and at least one of said spacer members being so proportioned and arranged that responsive to longitudinal contraction of said bladder due to inflation thereof said support sections are drawn together in a locking relationship with said spacer member in conjunction with said interlocking means.

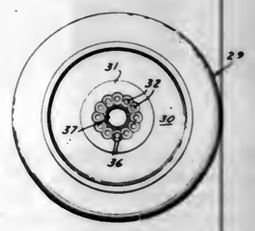
3,129,976
LOUNGE-TYPE CHAIR
Charles T. Barker, 4503 Tenella Road, and Thomas O. Gray, 2611 Trent Road, both of New Bern, N.C.
Filed Oct. 17, 1961, Ser. No. 145,606
4 Claims. (Cl. 297—423)

1. A lounge-type chair comprising
(*a*) an elongate seat member of undivided unitary construction and having a length of sufficient dimension to accommodate the torso and legs of a person in a comfortable supported position,
(*b*) a back connected to said seat member and extending upwardly therefrom,
(*c*) means depending below said seat member for supporting the chair in a stable stationary position on the surface on which it is placed with at least a portion of said seat member being elevated above the surface on which the chair is placed,
(*d*) said seat member being provided with a notch in one side thereof intermediate its ends,
(*e*) the other side of said seat member extending in a substantially straightforward continuous manner between the ends of said seat member,



(*f*) said notch being located in the region defining the juncture between a torso-accommodating portion of the seat member and a leg supporting portion of the seat member and having a depth of sufficient size to accommodate the legs of a person therein when the person is in a position other than occupying the chair with his legs supported by said seat member, and
(*g*) the width of said seat member at the point of deepest penetration of said notch being sufficient to support both legs of a person seated in the chair,
(*h*) whereby a person can conveniently seat himself in and arise from the chair by initially positioning his legs within said notch.

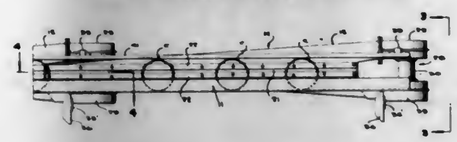
3,129,977
AUTOMATICALLY INDEXING WHEEL AND HUB
John B. Baldwin, South Pasadena, Calif., assignor to Schulz Tool and Manufacturing Co., San Gabriel, Calif., a corporation of California
Filed Mar. 14, 1962, Ser. No. 179,714
9 Claims. (Cl. 301—9)



1. A wheel for mounting on a hub,
(*a*) said wheel having a central portion;
(*b*) an opening in said central portion for fitting on an axle extending from a hub;
(*c*) holes through said central portion for fitting on studs extending from said hub, said holes being circumferentially spaced around said opening;

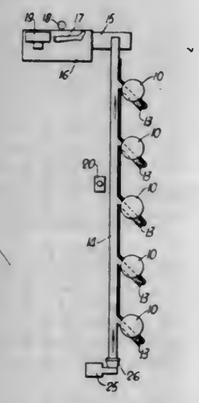
(*d*) and guide means circumferentially arranged on said central portion around said opening and adjacent said holes for automatically registering said holes with said studs if said central portion makes contact with said studs when said wheel is slipped onto said axles and said central portion has been moved axially for the purpose of fitting said holes onto said studs.

3,129,978
AIR CONVEYOR FOR CAN BODIES
Richard R. Szatkowski, Western Springs, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed Feb. 20, 1961, Ser. No. 90,489
11 Claims. (Cl. 302—2)



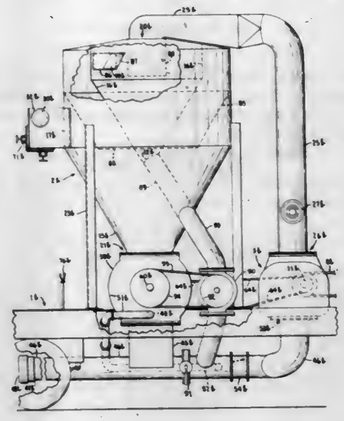
1. A conveyor for can bodies comprising a track for receiving open ended can bodies for rolling movement therealong, said track being substantially horizontally disposed, and an air duct extending alongside said track generally the full length thereof, said air duct having an elongate air discharge slot disposed generally in a vertical plane for the horizontal discharge of air generally longitudinally of said track and into open ends of can bodies.

3,129,979
MEANS FOR DELIVERING LIGHT ARTICLES FROM ONE POINT TO ANOTHER
Cyril Hartsborn, Heanor, England, assignor to Morpul Research Corporation, Greensboro, N.C.
Filed July 6, 1961, Ser. No. 123,379
6 Claims. (Cl. 302—2)



1. A pneumatic transmission system comprising a main tube, means for blowing air into one end of the tube, an examining station at the other end of the tube, a plurality of branch tubes leading into the main tube at intermediate points along its length, means for directing a jet of air through each branch tube towards the main tube, and means for operating the said air jets concurrently with receipt by the respective branch tube of an article requiring transmission to the examining station, each branch tube is associated with one of a group of knitting machines, and in which the operation of the air jets is effected by electrical circuitry and valve means associated with each branch tube in the system, and each air jet is operated through the medium of an electrical switch operated by a cam synchronized with the working cycle of the associated knitting machine.

3,129,980
PNEUMATIC CONVEYING APPARATUS
Charles W. Kiesbar and Leo G. Weller, Catasauqua, Pa., assignors to Fuller Company, a corporation of Delaware
Filed Dec. 5, 1960, Ser. No. 73,840
3 Claims. (Cl. 302—23)

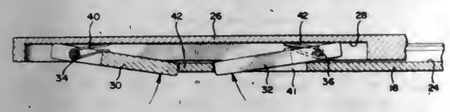


1. Apparatus for transferring bulk materials comprising a gas-material separator having a first separator stage and a second separator stage, each separator stage having an inlet, a gas outlet and a material outlet, the inlet of the second separator stage being in communication with the gas outlet of the first separator stage, a blower having an inlet and an outlet, an exhaust conduit extended from the gas outlet of the second separator stage to the inlet of the blower, a gas supply duct extended from the outlet of the blower to receive a stream of gas therethrough and connected to deliver the gas stream to a discharge assembly comprising a material feeder communicating with the material outlet of the first separator stage, the inlet of the second separator stage and the gas outlet thereof both being in the upper portion of said stage, a gas-impermeable baffle extending across the second separator stage between the inlet and outlet thereof and extending downwardly from the top thereof to a level below that of the lower portion of both the inlet and outlet thereof, so that gas-material introduced into said second separator stage is caused to travel in a U-shaped path from the inlet to the outlet, whereby separation of material entrained by the gas in said second separator stage is facilitated, a conveying duct positioned to receive material from the discharge of the material feeder, and means for driving the blower from the material feeder.

3,129,981
QUICK DISCONNECT SLIDE FOR DRAWERS AND THE LIKE
John C. Meyer, Fullerton, Calif., assignor to Jonathan Manufacturing Company, Fullerton, Calif., a corporation of California
Filed Aug. 11, 1960, Ser. No. 48,995
4 Claims. (Cl. 308—3.6)

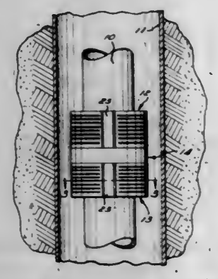
1. A support structure for drawers and the like comprising: a channeled member, said member having a win-

dow adjacent one end thereof, a second member sliding within said channeled member, a pair of spring urged opposed latch elements mounted upon said second mem-



ber and spaced from one another so that the portion of said channeled member between the window and end thereof may fit between the adjacent ends of said latch elements.

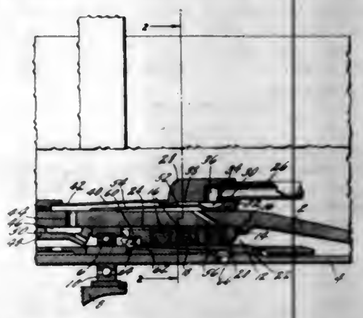
3,129,982
OIL WELL PIPE AND CASING PROTECTOR
Thomas L. Fawick, Cleveland, Ohio, assignor to Fawick Corporation, Cleveland, Ohio, a corporation of Michigan
Filed July 5, 1960, Ser. No. 40,895
3 Claims. (Cl. 308—4)



1. In combination with an oil well pipe inside a casing, a protector assembly comprising upper and lower split rings of rubber-like material extending around the outside of the pipe, each of said split rings having a plurality of axially spaced internal grooves therein which run circumferentially around the inside of said split ring and which are open thereat, and retaining means detachably mounted on each split ring and holding the latter contracted against the pipe, the lower split ring having upwardly facing recesses in its upper end, and a pair of half rings engaged between the lower end of the upper split ring and the upper end of the lower split ring, said half rings having depending lugs which are snugly received in said recesses in the upper end of the lower split ring.

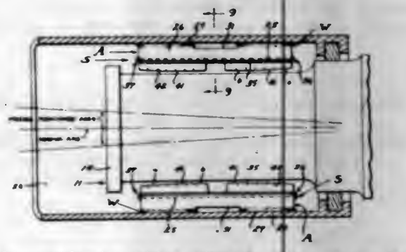
3,129,983
OIL DIVIDER
Horace A. May, Glastonbury, and Guy W. Miller, Vernon, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed July 6, 1962, Ser. No. 207,870
6 Claims. (Cl. 308—36.1)

5. In an oil divider, a hollow shaft, a bearing surrounding and supporting said shaft, a seal adjacent to said bearing and surrounding said shaft, said seal having an axially extending passage between it and the shaft and said shaft having a supply passage therethrough communicating with said axial passage, a ring within and spaced from said shaft and a divider sleeve positioned between said shaft and ring and engaging with both, said sleeve being spaced in part from said shaft to define a first chamber therebetween communicating with said supply passage, a plurality of axial grooves formed on the inner surface of said sleeve and communicating at one end with a supply of fluid and at the other end with a second chamber between said sleeve and ring and at least



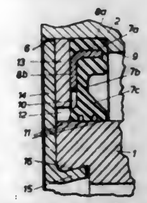
one passage through said sleeve communicating with one groove and with the first chamber.

3,129,984
JOURNAL STOP AND ADAPTER THEREFOR
Stanley M. Houston, Jr., Orinda, Calif., assignor to Do Company, a partnership composed of Stanley M. Houston, Jr., and Elon E. Packard, Oakland, Calif.
Filed June 16, 1961, Ser. No. 117,649
7 Claims. (Cl. 308—38)



1. In combination with a railroad car journal box housing having a vertically disposed side wall, a journal stop including, an elongate mounting plate, there being a pair of abutments of resilient bearing material inclined oppositely away from the center of the stop and secured to the said plate and each having a face juxtapositioned to the periphery of the journal operating within the housing and thereby to have progressively increased area of contact with the journal as the journal is pressed against said abutments.

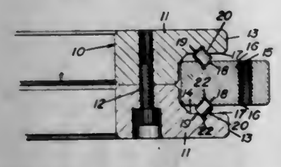
3,129,985
SEALS FOR BALL AND ROLLER BEARINGS
William L. Watson, Pontefract, England, assignor to Pollard Bearings Limited, Knottingley, England
Filed Oct. 18, 1962, Ser. No. 231,361
Claims priority, application Great Britain Nov. 11, 1961
6 Claims. (Cl. 308—187.1)



1. In combination with a bearing having an inner and an outer race between which rolling elements are located,

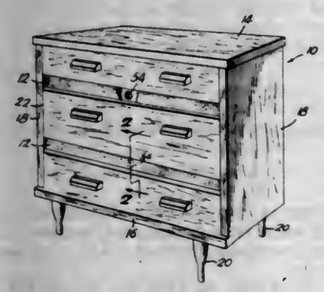
a seal for retaining pre-packed lubricant in said bearing between the inner race and the outer race comprising an annular sealing medium of labyrinth form which contacts said inner race and is located axially inwardly of said outer race, a fibrous washer of substantially the same diameter as that of said sealing medium and located axially outwardly thereof, and an outer cover ring which is secured to one of said races and presses said washer against said sealing medium, thereby forming a unitary structure of seal and ring with the bearing.

3,129,986
DOUBLE-THRUST BEARING
Maximilien Strassberg, Joinville, France
(4 Rue de Volze, Neuilly-Plaisance, France)
Filed Aug. 13, 1962, Ser. No. 216,670
Claims priority, application France Sept. 2, 1961
1 Claim. (Cl. 308—222)



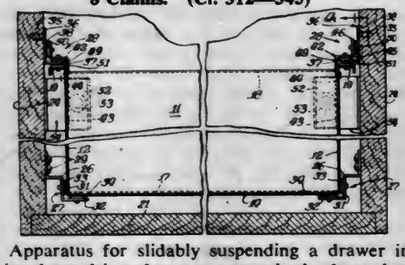
A double-thrust bearing comprising a ring having a U-shaped slot opening radially outwardly therefrom, an annular crown located in said slot coaxial with the ring with parallel opposite flat sides of the crown respectively facing in parallelism parallel opposite flat sides of the slot, said facing sides of the slot and crown each including a circular groove having a section in the shape of a right-angled isosceles triangle whose bisector line is parallel to the axis of rotation of the bearing, the grooves in the facing sides being vertically aligned and forming between the ring and the crown two circular channels of square section, and two series of cylindrical rollers being disposed in said channels, the axes of alternate rollers in each channel being perpendicular one to one face of one of the grooves forming the channel and one to the other face of the same groove, the diameter of each roller being equal to the length of a side of the square section of the channel and the axial height of each roller being slightly less than the length of a side of the square section of the channel.

3,129,987
CASE PIECE
James Hardin Hill, Roanoke, Va., assignor to Johnson-Carper Furniture Company, Inc., Roanoke, Va., a corporation of Virginia
Filed Mar. 9, 1962, Ser. No. 178,609
2 Claims. (Cl. 312—204)



1. A case piece comprising a top, bottom and side and rear outside panels forming an open front, a cross rail secured to said side outside panels of said case piece and extending across said front, drawer slides secured to the interior of said side outside panels, said cross rail being connected to said drawer slides, drawers slidably positioned on said slides, said cross rail being provided with a plurality of mutually facing vertically disposed grooves for receiving and supporting a decorative panel, said grooves being displaced rearwardly from the edge of said front and being closed by said outside panels, each said groove having a base and lip portion, the lip portion of one groove being of greater extent than the lip portion of the other groove, backing means adjacent and rearwardly disposed to said grooves and integral with said cross rail, at least one opening in said backing means and through said cross rail to provide communication between the interior and exterior of the case piece, and a decorative panel supported by said backing means, access to said decorative panel from the interior of said case piece being through said opening.

3,129,988
DRAWER SUPPORT
Claude G. Kanzelberger, Two Rivers, Wis., assignor to Hamilton Manufacturing Company, Two Rivers, Wis., a corporation of Wisconsin
Filed Jan. 22, 1962, Ser. No. 167,521
8 Claims. (Cl. 312—345)

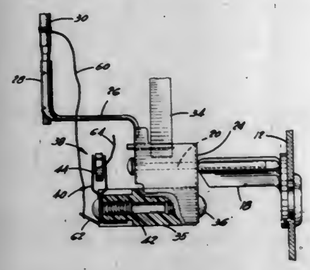


5. Apparatus for slidably suspending a drawer in an opening formed in a frame structure in the front thereof, the upper side edges of the drawer having outwardly extending horizontal flanges formed thereon, comprising a pair of front brackets adapted to be fixed to said frame structure adjacent said opening, said front brackets being adapted to be positioned on opposite sides of the drawer and having portions adapted to extend underneath the drawer and provide bottom bearing surfaces for the drawer, and a pair of rear supports adapted to slidably connect the upper side edges of the drawer to the frame structure, said rear supports including a run adapted to be fixed to the frame structure on each side of the drawer, each of said runs having a substantially horizontal portion adapted to extend longitudinally of the drawer adjacent an upper side edge of the drawer, said rear supports further including a rear bracket adapted to be secured to each upper side edge of the drawer adjacent said runs, said rear brackets having portions adapted to extend outwardly from the sides of the drawer over the upper surface of said horizontal portions of said runs, said horizontal portions of said runs projecting between said outwardly extending portions of said rear brackets and the horizontal flanges formed on the sides of the drawer.

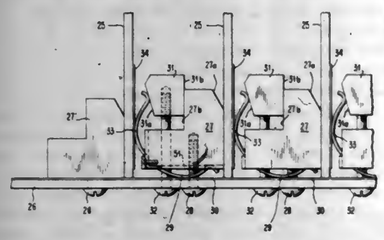
3,129,989
ROTATABLE ELECTRICAL CONNECTION FOR POINTER
Donald O. Myers, Elk Grove Village, Ill., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Filed Sept. 23, 1960, Ser. No. 58,122
3 Claims. (Cl. 339—2)

2. A contact arrangement for a pointer supported by pointer support structure to rotate about a fixed rotational

axis and electrically connected to the pointer support structure, comprising a pair of resilient electroconductive arms each connected to but electrically insulated from the pointer support structure and each having a free end on the axis movable toward and away from each other along the axis against the resiliency of the arm, mutually facing aligned convex surfaces on the free ends each defined as a segment of a sphere with its center on the rotational axis and having a given diameter, an elongated plate member disposable between the free ends and having aligned concave surfaces on opposite sides thereof each defined as a segment of a sphere of a given diameter, with the diameter of the sphere defining the concave surfaces being slightly larger than the diameter of the sphere defining the convex surfaces, so that said pairs of surfaces engage on substantially point contacts on the rotational axis and electroconductive means between the pointer and the arms effective to define an electrically complete path through the plate member, arms, pointer and the pointer support structure.

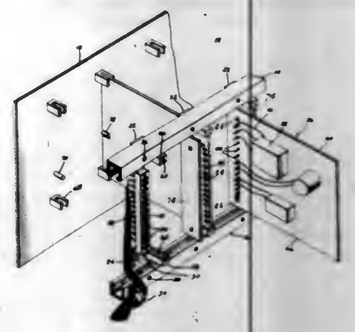


3,129,990
CIRCUIT BOARD ASSEMBLY
Rex Rice, Poughkeepsie, and John J. Shea, Highland, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 1, 1960, Ser. No. 73,053
8 Claims. (Cl. 339—17)



2. An assembly comprising a base board, a plurality of subassembly boards, said subassembly boards being disposed adjacent to and substantially perpendicular to said base board, electrical circuitry on said base board and on said subassembly boards, a plurality of elongated blocks; one for each of said subassembly boards; means for urging said elongated block towards said base board; a plurality of electrical connectors for each elongated block, each connector having first and second interconnected resilient fingers, said first resilient fingers positioned between the associated elongated block and the circuitry on said base board, whereby said elongated block presses the associated first resilient fingers into engagement with the circuitry on said base board; an elongated wedge means for each of said elongated blocks, said elongated wedge means positioned between the associated elongated block and the associated subassembly board; said second resilient fingers positioned between the associated elongated wedge and the circuitry on the associated subassembly board; and means urging said elongated wedge means between the associated elongated blocks and the associated subassembly boards to force said second resilient fingers into engagement with the circuitry on said subassembly boards.

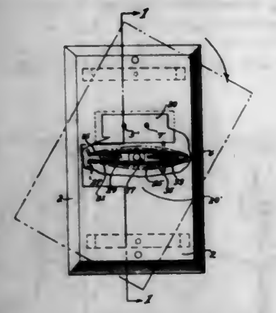
3,129,991
PRINTED CIRCUIT CARD RACK ASSEMBLY
William D. Schmitz, Fort Wayne, Ind., assignor to International Telephone and Telegraph Corporation
Filed Dec. 14, 1960, Ser. No. 75,785
15 Claims. (Cl. 339—17)



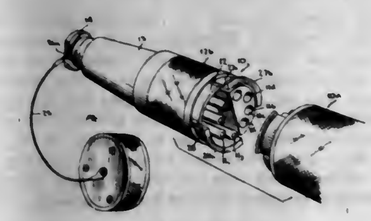
1. A circuit card rack assembly comprising: a frame including a vertically disposed rear frame member and a pair of vertically spaced parallel members respectively spaced from said rear frame member; first elongated multiple contact connector means extending vertically between said parallel members and secured thereto and having opposite sides, said first connector means having a plurality of vertically spaced contact elements in at least one of said opposite sides; a flat generally rectangular circuit card for supporting circuit elements; second elongated multiple contact connector means secured to one side of said circuit card parallel with one end thereof and having opposite sides, said second connector means having a plurality of contact elements in at least one side thereof in spaced parallel relationship with said one side of said card for respectively removably engaging the contact elements of said first connector means; one of said connector means having its contact elements respectively in both opposite sides thereof; and guide means on said parallel members respectively adjacent said first connector means for supporting said circuit card in a first position extending transversely from said parallel members toward said rear frame member with the contact elements on one side of said one connector means respectively engaging the contact elements of the other connector means, and in a second position extending transversely from said parallel members away from said rear frame member with the contact elements on the opposite side of said one connector means respectively engaging the contact elements of the other connector means.

3,129,992
ELECTRICAL CONNECTOR LOCKING SYSTEM
Isaac S. Blonder, West Orange, N.J., assignor to Blonder-Tongue Electronics, Newark, N.J., a corporation of New Jersey
Filed Nov. 30, 1960, Ser. No. 72,706
14 Claims. (Cl. 339—37)

1. An electrical connector having, in combination, fixed electric terminal means; a cover permanently mounted in front of the electric terminal means and orientable about the permanent mounting between two positions; a locking pin; cover-position-locking means which, when locked, causes the locking pin to maintain the cover against orientation, the cover-position-locking means having a key-receiving region for receiving a key to unlock the same; the cover being provided with aperture means and a solid-surface region for respective alignment with the electric terminal means in order to permit and to block access thereto, respectively, when the cover respectively occupies its two positions, and the cover having openings disposed to provide an opening aligned with each of the said locking pin and key-receiving region when the cover is oriented into each of its said positions.

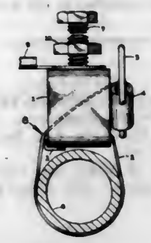


3,129,993
HERMAPHRODITIC ELECTRICAL CONNECTORS
Joseph I. Ross, 4 Ridge Rock Lane, East Norwich, N.Y.
Filed Mar. 8, 1961, Ser. No. 94,368
3 Claims. (Cl. 339—49)



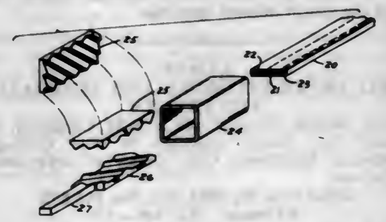
1. An electrical connector comprising:
(*a*) a drum-shaped insulating block having a diametrical cut-out defining a semi-circular raised segment and a semi-circular depressed segment,
(*b*) said raised segment having a plurality of holes formed longitudinally therein,
(*c*) a contact pin concentrically mounted within each of said holes and protectively disposed therein,
(*d*) said depressed segment having longitudinally projecting insulating columns formed thereon equal in number to said holes and symmetrically arranged with respect thereto,
(*e*) a contact receptacle protectively disposed in each of said columns, and
(*f*) a plurality of jumper bars disposed within said insulating block each of which interconnects a respective contact pin and the correspondingly positioned contact receptacle to render said connector electrically non-reversible, whereby when two such connectors are intercoupled the columns of one are received within the holes of the other and the contact pins in said holes engage the contact receptacles in said columns, and when the two connectors are uncoupled the contact pins and contact receptacles are protected from human contact.

3,129,994
ELECTRIC CONTACT CLAMP
James R. Harmon, 6845 SW. 17th St., Miami, Fla., and Harold G. Schneider, 8867 Carlyle Ave., Surfside, Fla.
Filed May 31, 1962, Ser. No. 198,867
3 Claims. (Cl. 339—95)



1. An electric ground clamp for a conduit for retaining a conductor comprising a terminal screw with one end thereof terminating in a piercing point and the opposite end thereof terminating in a head,
a hollow rectangular body member threaded through opposite sides thereof and adapted to adjustably retain said screw for axial movement therethrough into contact with said conduit when driven by said head,
a flexible band having one end thereof secured to said member and adapted to encircle said conduit with the opposite end portion thereof positioned through and extending from said member between the threaded sides thereof and in overlapping position with respect to said one end,
a key means having an axial slot therein engaged with the said opposite end of said band transverse thereto whereby the manual finger rotation of said key will wind said band thereon in oblique position against one side of said member and tension said band around said conduit and whereby said point of said screw will pierce said opposite end portion of said band and engage said conduit for securing said clamp to said conduit when said head is driven.

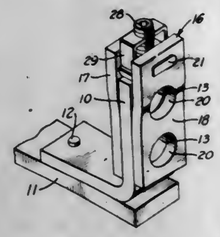
3,129,995
ELECTRICAL CONNECTOR
Clarence K. Brown, Bellflower, Calif., assignor to Hi-Shear Corporation, Torrance, Calif., a corporation of California
Filed Nov. 14, 1960, Ser. No. 68,903
18 Claims. (Cl. 339—97)



1. A conductive connection comprising: an electrical conductor of the class wherein a conductive metallic strip is enclosed by an insulating cover; and a pair of metallic grid plates, each plate having a plurality of parallel striations in one face thereof, said striations being formed as troughs having bounding shoulders, a plurality

of crests formed by adjacent shoulders, said crests being of substantial length, and the crests of each plate lying in the same respective plane, whereby the conductor may be sandwiched between the grid plates with said faces against it and with the striations of the two plates disposed so as to criss-cross each other, whereby when the plates are forced toward each other, the crests simultaneously displace portions of the insulating cover and simultaneously contact the metallic strip by pressure between the grid plates and strip, causing cold-welding between them to form a conductive contact at the points where the striations cross.

3,129,996
CABLE CONNECTOR
Ross E. Locher, South Pasadena, Calif., assignor to Zinsco Electrical Products, Los Angeles, Calif., a corporation of California
Filed Apr. 6, 1962, Ser. No. 185,728
2 Claims. (Cl. 339—249)



2. In a connector for electrical cables, the combination of:

a terminal member having a plurality of cable-receiving openings therethrough adjacent an end thereof with the axes of said openings parallel;

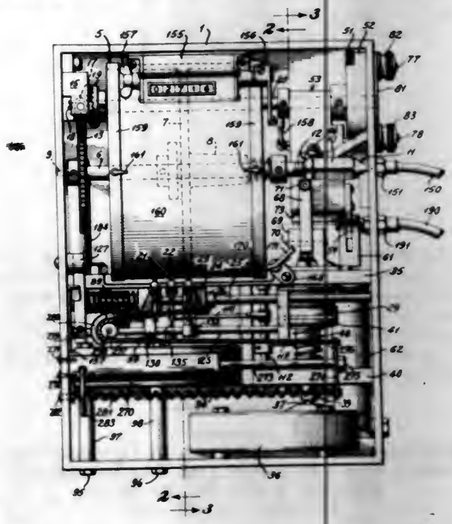
a U-shaped sliding member positioned over said terminal member with the bight of said U at said end of said terminal member, with the arms of said sliding member having aligned cable-receiving openings therethrough and alignable with cable-receiving openings of said terminal member to provide a plurality of sets of aligned openings, said sliding member comprising first and second arm units and a nut unit positioned between said arm units and having end portions engaging mating openings in said arm units;

a retainer coupled to said nut and to said terminal member for retaining said members together; and

a screw carried in a threaded opening in said nut unit for applying a force on said end of said terminal member for moving said sliding member relative to said terminal member and clamping a cable in each of the sets of aligned openings.

3,129,997
WELL DEPTH RECORDER AND ASSOCIATED PEN RETURN
James O. Melton, Norman, and Irvin M. Carpenter, Oklahoma City, Okla., assignors to The Geolograph Company, Oklahoma City, Okla., a corporation of Oklahoma
Filed June 20, 1962, Ser. No. 203,852
8 Claims. (Cl. 346—33)

1. A drilling recorder comprising a frame, a chart mounted within said frame, means mounted within said frame for supporting said chart and for moving said chart over a predetermined path, means for moving said chart supporting means step-wise, a recording element mounted within said frame and being engageable with said chart for marking a record thereon, means for moving said recording element from a given reference position across said chart in a direction transverse to the path movement of said chart, resilient means connected to the means for moving said recording element for urging the latter away from said reference position in said transverse direction, a constant speed driving means mounted within said frame, a clutch means interconnected between said constant speed driving means and the means for moving said recording element for timing the movement of said recording element across said chart at a constant rate of speed, a clutch operating means for engaging and disengaging said clutch means, return means for driving said

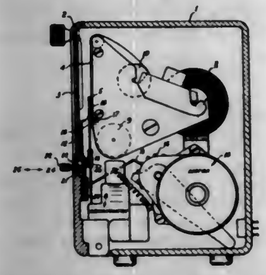


recording element towards its reference position when said clutch means is disengaged, and a reciprocating means mounted within said frame connected in driving relation with the means for moving said chart supporting means and with the means for engaging and disengaging said clutch means, said return means and said reciprocating means both being movable in response to the completion of a given increment of drilling whereby said chart is advanced step-wise and said recording element is simultaneously returned to its reference position.

3,129,998
CONTROLLING RECORDING DEVICES
Samuel K. Lackoff, Manchester, N.H., assignor to Rustrak Instrument Co. Inc., a corporation of New Hampshire
Filed Jan. 22, 1962, Ser. No. 167,546
2 Claims. (Cl. 346—78)

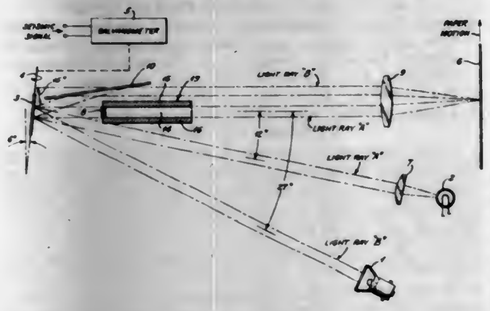
1. In a recording device, a pressure sensitive recording strip, means for moving said strip along a predetermined path; said path including a curved portion; percussion means arranged facing said strip on the concave side of said curved portion; said percussion means having a lower edge forming a rotary axis extending across said path, and another parallel upper edge rotatable about said axis so as to move said percussion means to and fro with respect to said strip; a galvanometer needle arranged between said strip and said percussion means so as to move substantially in a plane tangential with respect to said curved strip portion, means forming an extension of said percussion means at said rotary edge on one side thereof forming a lever to cause said percussion means to press its upper edge to and from said strip thereby causing said needle selectively and momentarily to press or not to

press against said strip, and to produce or not produce a visible point shaped mark on said strip; and means arranged on the other side of said percussion means selectively to hold said percussion means in a fixed position out of engagement with said strip; said holding means including a flat leaf spring attached to said door below the lower edge of said percussion means, and arranged to press in its operative position against the back of said percussion means thereby pressing said percussion means



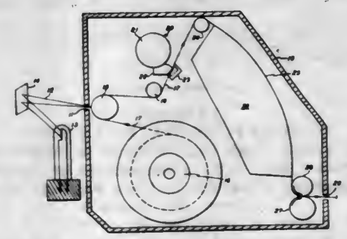
against the back of the door and out of contact with said needle and said strip; and means on the front of said door for selectively pushing said spring back out of contact with said percussion means thereby permitting said percussion means to move to and fro to produce point-shaped recording marks on said pressure sensitive strip along a linear portion of said strip at that part of said curved portion facing the needle which forms an intersection of said needle and said upper edge of said percussion means.

3,129,999
OSCILLOGRAPHIC RECORDER
Lee Roy Brown and Paul W. Geery, Houston, Tex., assignors to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed July 7, 1960, Ser. No. 41,287
10 Claims. (Cl. 346—109)



1. Apparatus for simultaneously recording a variable amplitude and a variable density representation of a variable voltage on a single moving photo-sensitve record member, comprising a mirror galvanometer whose mirror position is oscillatable about an axis proportionally to the amplitude of a variable voltage supplied to the galvanometer, first and second substantially line-sources of light substantially perpendicular and spaced with respect to each other and both operable to direct light rays onto said mirror, first means positioned between the mirror and the record member for forming the light rays which reach it into a first bundle of light rays directed toward the record member, said mirror and the first one of said light sources being positioned such as to reflect portions of the light rays from said first source which strike it onto said first means and therefore toward the record member, such portions being variable with the instantaneous position of the mirror, second means positioned between the mirror and the record member for forming light rays which reach it into a second bundle of light rays directed toward the record member, said second means being so positioned with respect to the second light source and the mirror as to receive rays reflected by the mirror from the second source, and third means positioned between the record member and said first and second means for forming said first bundle of light rays into a substantially line image on the record member and extending generally perpendicular to the direction of movement thereof and for simultaneously forming said second bundle of light rays into a substantially spot image on the record member.

3,130,000
RECORDER APPARATUS FOR RAPID PHOTOGRAPHIC DEVELOPING
Charles F. Robinson, Pasadena, and John H. Jacobs, Altadena, Calif., assignors to Consolidated Electrodynamics Corporation, Pasadena, Calif., a corporation of California
Original application Sept. 3, 1957, Ser. No. 681,804. Divided and this application Aug. 1, 1961, Ser. No. 128,593
5 Claims. (Cl. 346—109)



1. An oscillographic recorder including a record magazine having a window for receiving a light stimulus to be recorded and a camera associated with the magazine for developing such stimulus, the record magazine comprising a housing, a roll of photographic paper, paper drive means for carrying the paper continuously past the window for exposure to the light stimulus, means operable to apply to the emulsion surface of the paper immediately after exposure a film of process solution not in excess of about .0005 inch thick, a heated platen having a curved outer face, means for drawing the paper carrying the film across the curved face of the platen with the back surface of the paper in contact therewith, means for maintaining the platen above about 90° C., and means to discharge the paper from the magazine.

CHEMICAL

3,130,001
PROCESS FOR THE PRODUCTION OF DYED CELLULOSIC TEXTILE MATERIALS WITH WET AND DRY WRINKLE RESISTANCE

Terrence W. Fenner, Robert M. Reinhardt, and John D. Reid, New Orleans, La., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed Nov. 22, 1961, Ser. No. 154,376
4 Claims. (Cl. 8—17)

4. A process for producing a dyed cellulosic textile material that exhibits both wet wrinkle resistance and dry wrinkle resistance comprising the following steps carried out in sequence:

(*a*) treating a cellulosic textile material with an aqueous solution containing an aldehyde selected from the group consisting of formaldehyde and glutaraldehyde and a strong mineral acid as a catalyst;

(*b*) removing unreacted aldehyde and acid from the aldehyde and acid treated product of step (*a*);

(*c*) dyeing the product of step (*b*) with a cotton dye;

(*d*) removing unreacted dye reagents from the dyed product of step (*c*);

(*e*) impregnating the product of step (*d*) with an aqueous solution containing from .05% to 8.0% by weight of an acidic catalyst to a wet pickup of about from 60% to 150%, based on the original weight of the cellulosic textile material;

(*f*) drying the catalyst impregnated product of step (*e*) at a temperature not exceeding 60° C.;

(*g*) baking the dried product of step (*f*) at a temperature of about from 100° C. to 180° C. for periods of from eight minutes to 30 seconds, the shorter time intervals being employed with the higher temperatures; and

(*h*) removing residual acidic catalyst from the dried and baked product of step (*g*).

3,130,002
SODIUM PHOSPHATE GLASSES

Robert J. Fuchs, Clark, N.J., assignor to FMC Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 5, 1961, Ser. No. 143,056
3 Claims. (Cl. 21—2.7)

1. The method of inhibiting the corrosion of metal in contact with water which comprises adding to said water a sodium polyphosphate glass having improved resistance against reversion to sodium orthophosphate, said sodium polyphosphate glass having a mole ratio of

$$\frac{(Na_2O+H_2O)}{P_2O_5}$$

of 1.10 to 1.065, a weight percent P_2O_5 of 68.5 to 69.5%, and possessing terminal groups on the polyphosphate chain having no less than 75 mole percent OH with the remainder being ONa groups.

3,130,003
COCRYSTALLIZED CATALYST PREPARATION PROCESS

Erik Tornqvist, Westfield, and Arthur W. Langer, Jr., Watchung, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Apr. 1, 1960, Ser. No. 19,176
8 Claims. (Cl. 23—87)

1. The process for the preparation of a catalyst component useful in the polymerization of alpha olefins comprising intensely milling together in the absence of diluent and with a grinding medium having an effective density higher than 3 g./ml., a mixture which consists essentially of a partially reduced transition metal halide of the transition metals of groups IVB, VB, VIB, and VIII of the periodic system and a metal halide of a metal of groups II or III of the periodic system; from 0.05 to 1.0 mole of the metal halide of groups II and III being employed per mole of partially reduced transition metal halide.

3,130,004
PROCESS FOR THE PURIFICATION AND ACTIVATION OF TITANIUM TRICHLORIDE

Erhard Siggel, Laudenbach (Main), Gerhard Meyer, Obernburg (Main), and Wolfgang Rösener, Erlenbach (Main), Germany, assignors to Vereinigte Glanzstoff-Fabriken AG, Wuppertal-Elberfeld, Germany

No Drawing. Filed Sept. 5, 1961, Ser. No. 135,789
Claims priority, application Germany Sept. 7, 1960
3 Claims. (Cl. 23—87)

1. In a process for purifying, activating, and improving the catalytic properties of titanium trichloride which has been produced by the reduction of titanium tetrachloride and is contaminated with titanium tetrachloride and which has been washed with an inert hydrocarbon, the improvement which comprises: heating said titanium trichloride in the absence of olefin in a vessel at a temperature not exceeding 100° C. with an organic solvent saturated with water for a period of from 0.5 minute to 3 hours, the amount of water in said vessel being from 0.1 to 20 mol percent based on the amount of titanium trichloride that is present in the vessel, syphoning off the organic solvent containing said water, and washing the titanium trichloride once again with an inert hydrocarbon, whereby an activated and substantially moisture and titanium tetrachloride free catalyst is obtained.

3,130,005
PROCESS FOR THE PURIFICATION AND ACTIVATION OF TITANIUM TRICHLORIDE

Erhard Siggel, Laudenbach (Main), Gerhard Meyer, Obernburg (Main), and Wolfgang Rösener, Erlenbach (Main), Germany, assignors to Vereinigte Glanzstoff-Fabriken AG, Wuppertal-Elberfeld, Germany

No Drawing. Filed Sept. 5, 1961, Ser. No. 135,793
Claims priority, application Germany Sept. 7, 1960
2 Claims. (Cl. 23—87)

1. In a process for purifying, activating and improving the catalytic properties of titanium trichloride which has been produced by the reduction of titanium tetrachloride with hydrogen and is contaminated with titanium tetrachloride and which has been washed with an inert hydrocarbon, the improvement which comprises: heating said titanium trichloride at a temperature not exceeding 100° C. in the presence of a homogeneous alcohol-inert hydrocarbon mixture containing at least 0.01 mol percent alcohol but in the absence of olefin, the amount of alcohol in the reaction mixture being from 0.2 to 50 mol percent based on the quantity of titanium trichloride, said alcohol being selected from the group consisting of methanol, ethanol, propanol, 1-butanol, 2-methyl-1-propanol, 2-butanol, 2-methyl-2-propanol, 1-pentanol, 3-methyl-1-butanol, 2-pentanol, 3-butanol, hexanol, octanol, nonyl alcohol, dodecyl alcohol, cetyl alcohol, 1,2-ethanediol, 1,2-propanediol, 1,3-propanediol, 1,4-butanediol, 1,5-pentanediol, 1,6-hexanediol, 1,2,3-propanetriol, 1,2,3-butanetriol, cyclopentanol, cyclohexanol, cycloheptanol, and benzyl alcohol, separating off said alcohol-inert hydrocarbon mixture and thereafter washing the titanium trichloride once again with an inert hydrocarbon whereby

an activated and substantially moisture and titanium tetrachloride free catalyst is obtained.

3,130,006
DECATIONIZED MOLECULAR SIEVE COMPOSITIONS

Jule A. Rabo, Buffalo, Paul E. Pickert, North Tonawanda, and James E. Boyle, Buffalo, N.Y., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 30, 1959, Ser. No. 862,764
18 Claims. (Cl. 23—110)

1. A decationized aluminosilicate zeolitic molecular sieve having a crystalline structure, a silicon dioxide to aluminum trioxide molar ratio greater than about 3.0, a pore size sufficient to adsorb benzene, and a metal-cation-to-aluminum atomic ratio of less than about 0.9, less than 90 percent of the aluminum atoms being associated with cations.

4. A process for the preparation of a crystalline decationized zeolitic aluminosilicate, which comprises ion-exchanging a substantial portion of a metal aluminosilicate zeolite having a silicon dioxide to aluminum trioxide ratio of greater than about 3.0 and a pore size sufficient to adsorb benzene, with ammonium ions, followed by thermal treatment at temperatures of between 350° C. and 600° C.

3,130,007
CRYSTALLINE ZEOLITE Y

Donald W. Breck, Tonawanda, N.Y., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed May 12, 1961, Ser. No. 109,487
30 Claims. (Cl. 23—113)

1. A synthetic, crystalline, zeolitic sodium aluminosilicate of the molecular sieve type having a composition, expressed in terms of oxide-mole-ratios, as follows:

$$0.9\pm0.2\ Na_2O:Al_2O_3:w\ SiO_2:x\ H_2O$$

wherein "*w*" is a value greater than 3 and up to about 6 and "*x*" may be a value up to about 9, said sodium aluminosilicate having an X-ray powder diffraction pattern essentially the same as that shown in Table A.

9. A process for preparing zeolite Y which comprises preparing an aqueous sodium aluminosilicate mixture having a composition, expressed in terms of oxide-mole-ratios falling within the following range:

Na_2O/SiO_2	0.20 to 0.40
SiO_2/Al_2O_3	10 to 40
H_2O/Na_2O	25 to 60

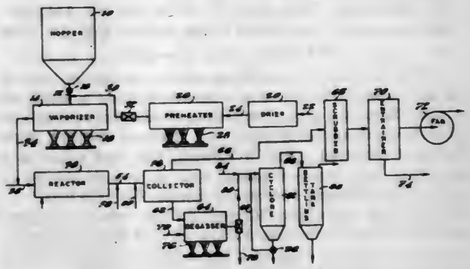
wherein the major source of silica in said mixture is selected from the group consisting of an aqueous colloidal silica sol and a reactive amorphous solid silica; maintaining said mixture at a temperature in the range of from about 20° C. to about 125° C. until crystals are formed; and separating the crystals from the mother liquor.

3,130,008
METHOD OF PREPARING METALLIC OXIDES BY HYDROLYSIS OF METALLIC HALIDES

Charles A. Stokes, Wellesley Hills, and George B. Kistiakowsky, Lincoln, Mass., and George E. Engelson, 34 Stafford Road, Kenberma, Mass.; said Stokes and said Kistiakowsky assignors, by mesne assignments, to Cabot Corporation, Boston, Mass., a corporation of Delaware

Filed Nov. 23, 1949, Ser. No. 129,089
15 Claims. (Cl. 23—140)

1. The process of producing finely divided oxides of a metal selected from the group consisting of aluminum, titanium, silicon, zinc, antimony, chromium, beryllium, zirconium, cobalt, nickel, cadmium, molybdenum and vanadium, which comprises vaporizing a halide of said metal, introducing said halide vapor free from contamination by hydrocarbon gas as a non-ignitable stream into an elongated reaction zone, simultaneously surrounding said stream with an annular flame containing water vapor formed therein as one of the combustion products and



causing said stream to become intimately admixed with the combustion products in said flame, thereby hydrolyzing the metal halide vapor to the corresponding metal oxide by reaction with the water produced in said flame, and recovering the resulting pigment.

3,130,009
METHOD FOR PREPARING TETRAHYDROXYDIBORON

Robert J. Brotherton, Fullerton, Calif., assignor to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada

No Drawing. Filed Sept. 21, 1959, Ser. No. 841,019
1 Claim. (Cl. 23—149)

The method of producing tetrahydroxydiboron which comprises reacting a material selected from the class consisting of tetraalkylaminodiborons derived from primary and secondary amines, said alkyl groups having from 1–6 carbon atoms and tetraarylaminodiborons derived from primary and secondary amines, said aryl groups selected from the class consisting of benzene, methyl substituted benzene and naphthalene, with hydrochloric acid in the presence of water, said water present in excess of the stoichiometric requirements in an amount sufficient to dissolve the amine hydrochloride formed during said reaction, and separating tetrahydroxydiboron from the reaction mass.

3,130,010
PROCESS FOR PRODUCTION OF HIGH PURITY CESIUM METAL AND CESIUM COMPOUNDS

Robert J. Moolenaar and Paul R. Jackniess, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Dec. 4, 1962, Ser. No. 242,855
5 Claims. (Cl. 23—184)

1. The method of producing a high purity cesium compound consisting essentially of the steps of:

(1) reacting pollucite in an inert gas atmosphere with a reductant selected from the class consisting of lithium, potassium, and sodium at a temperature above the vaporization temperature of cesium metal and below the vaporization temperature of the reductant employed to distil off a cesium product consisting of cesium metal containing certain contaminants;

(2) redistilling the cesium product so obtained to separate cesium from contaminants to produce a substantially pure cesium metal;

(3) intermixing the so obtained substantially pure cesium metal with mercury to form cesium amalgam;

(4) hydrolyzing the amalgam so made to form high purity cesium hydroxide.

3,130,011
PRODUCTION OF SILICON HALIDES

Arthur Wallace Evans, Nunthorpe, and Kenneth Arkless, Stockton-on-Tees, England, assignors to British Titan Products Company Limited, Durham, England, a company of Great Britain

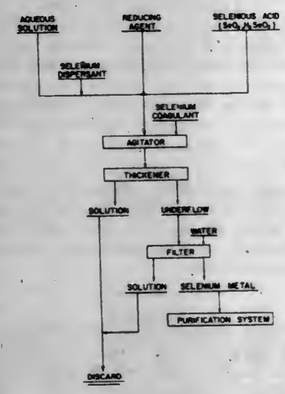
No Drawing. Filed Aug. 31, 1959, Ser. No. 836,940
Claims priority, application Great Britain Sept. 17, 1958
10 Claims. (Cl. 23—205)

1. The process of producing silicon tetrahalide consisting substantially in forming a molten bath of a metal salt selected from the group consisting of alkali metal halides, alkaline earth metal halides, and mixtures thereof; introducing a reducing agent, a halogen gas, and silica of at least 25% SiO_2 purity into said bath to be well distributed therein for reaction at between about 600 and 1100° C.; withdrawing the silicon tetrahalide and other vapourous products from above the surface of said bath and recovering the silicon tetrahalide; the weight of said metal salt in said bath being kept substantially in excess of the weight of SiO_2 in said bath.

3,130,012
HANDLING OF SOLUTIONS CONTAINING SELENIUM VALUES

John D. Prater, Salt Lake City, Archibald W. Maynard, Tooele, and William M. Tuddenham and Clifford E. Selin, Salt Lake City, Utah, assignors to Kennecott Copper Corporation, New York, N.Y., a corporation of New York

Filed July 8, 1960, Ser. No. 41,658
6 Claims. (Cl. 23—209)

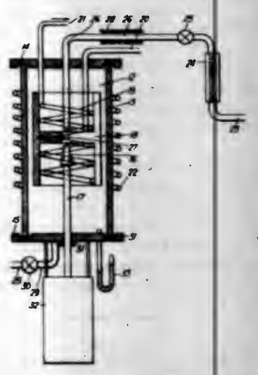


1. A process for the recovery of selenium from flue gas which precludes the build-up of selenium agglomerates on scrubber apparatus, comprising the steps of adding acid-stable dispersant for elemental selenium to an aqueous solution in a scrubbing tower in sufficient quantity to effectively retain elemental selenium in said aqueous solution; passing flue gas containing water soluble elements including selenium dioxide, sulfur dioxide, and sulfuric acid from a fusion furnace through said scrubbing tower; and passing said aqueous solution in contacting relationship with said flue gas, so that said aqueous solution takes up said water soluble elements from said flue gas, rendering it acidic, whereby said selenium dioxide forms selenious acid, which subsequently is reduced to elemental selenium by said sulfur dioxide and said elemental selenium is retained in suspension in said aqueous solution by reason of the presence of said selenium dispersant.

3,130,013
METHODS OF PRODUCING SILICON OF HIGH PURITY

Jack McCreath Wilson, London, and Jack Augustus Radley and Eileen Dulcie Kahn, Reading, England, assignors to International Standard Electric Corporation, New York, N.Y.

Filed May 28, 1957, Ser. No. 662,298
Claims priority, application Great Britain Sept. 25, 1953
4 Claims. (Cl. 23—223.5)

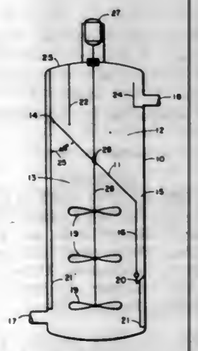


2. A process of manufacture of substantially pure silicon which comprises positioning a crystal of silicon within a chamber, heating a surface of said crystal to a temperature of 800° C. or higher, continuously directing a stream containing substantially pure silane having a partial pressure between 0.25% and 2.0% of normal atmospheric pressure at said decomposition temperature onto said heated surface, whereby silicon and hydrogen result from the decomposition, drawing the silicon formed by the decomposition steadily away from said zone, and removing the resultant hydrogen from said chamber.

3,130,014
CONTACTING APPARATUS

Emmanuel J. Stanton, Flossmoor, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Filed July 25, 1961, Ser. No. 126,657
1 Claim. (Cl. 23—288)

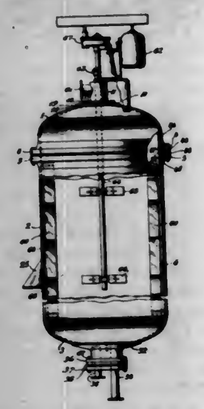


An apparatus for intimately contacting liquid with particulate insoluble solid which apparatus comprises in combination an enclosed substantially cylindrical pressure vessel having the longitudinal axis thereof in a substantially vertical position; a single partition positioned within said vessel to divide said vessel into an upper quiescent portion and a lower turbulent portion, which partition has a uniform slope at an angle within the range of about 30–60° from the vertical; said partition being provided with a first opening in the upper part of said partition for passage of liquid-solid stream from said lower portion to said upper portion of said vessel; and said partition being provided with a second opening positioned off center of said vessel, spaced from said first opening and in the lower part of said partition immediately adjacent to the wall of said vessel at the lowest part of said partition; a dip-leg attached to said partition about said second opening for passage of a thickened liquid-solid stream from said upper portion into said lower portion, a portion of the inner wall of said vessel forming an integral part of said dip-leg, said dip-leg being provided with a flapper-valve at the lower extremity thereof; said vessel being provided with an inlet opening for admitting a fluid stream into the lower portion of said vessel and an outlet opening for withdrawing a fluid stream from the upper portion of said vessel; a vertical baffle positioned between said first opening and said second opening in said sloping partition, and dependent from the top of said vessel and ending in spaced relation from said sloping partition; said vessel being provided with a plurality of swirl-reducing baffles positioned at the interior vessel wall; and agitating means for intermingling the contents of said lower portion.

3,130,015
HIGH PRESSURE REACTOR

Paul S. Monroe, Chatham, N.J., assignor to Mid-Century Corporation, Chicago, Ill., a corporation of Delaware

Filed Oct. 31, 1958, Ser. No. 771,018
4 Claims. (Cl. 23—290)



1. A large size, replaceably lined, pressure vessel adaptable for conducting reactions involving corrosive fluids at elevated pressures at temperatures, which vessel comprises in combination:

(1) a pressure-resistant outer shell having a cylindrical portion and head portions at each end of said cylindrical portion,

(*a*) said outer shell being circumferentially divided into at least two segments,

(*b*) at least one of said head portions having an opening therein;

(2) a relatively-thin corrosion-resistant liner of unitary construction disposable within said shell and constructed of a metal requiring heat treating after extensive welding,

(*a*) said liner covering all internal portions of said shell,

(*b*) said liner being initially loose-fitting with respect to said outer shell but expansible under service conditions of pressure and temperature to provide an abutting relationship with said shell,

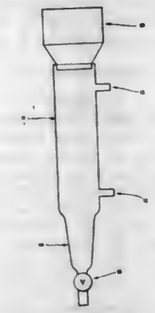
(*c*) said liner having a massive pressure-resisting reinforcing portion near the outer shell head opening and providing an attachment for an external conduit;

(3) and connecting means adapted for non-welded sealing of said massive reinforcing portion to an external conduit through said outer shell head opening after insertion of said liner into said shell.

3,130,016
PROCESS FOR BRINE MANUFACTURE

Jesse G. Grier, Gilbertsville, Ky., assignor to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Filed May 9, 1961, Ser. No. 108,901
5 Claims. (Cl. 23—312)



1. The process of increasing the concentration of a depleted NaCl brine solution which comprises introducing salt particles having a size range of about 14 to about 60 U.S. sieve size and containing calcium sulfate as an impurity into the top of a vertical unobstructed column through which is flowing a brine solution at a pH above about 3.5, said brine being introduced at a concentration below saturation and flowing through said column above a trap for undissolved $CaSO_4$, the linear flow rate of said brine solution being between about 0.1 and 3 feet per minute, said salt particles being allowed to fall freely through said brine solution until they are essentially completely dissolved at a point above said $CaSO_4$ trap whereby the insoluble $CaSO_4$ impurity collects in said trap and a concentrated brine solution low in calcium ion concentration is obtained as the output from said column.

3,130,017
ANTIKNOCK FUEL

Hymin Shapiro and Earl G. De Witt, Baton Rouge, La., and Jerome E. Brown, Detroit, Mich., assignors to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Original application July 5, 1952, Ser. No. 297,392. Divided and this application Feb. 19, 1958, Ser. No. 716,043
2 Claims. (Cl. 44—68)

1. A fuel for internal combustion engines which consists essentially of hydrocarbons of the gasoline boiling range and, as an antiknock ingredient, a cyclopentadienyl thallium compound having the formula RTl wherein R is a cyclopentadienyl hydrocarbon group, said cyclopentadienyl hydrocarbon group being directly bonded to the thallium atom through the methylene group, said com-

pound being present in amount such that said fuel contains from 0.03 to about 8.0 grams of thallium per gallon.

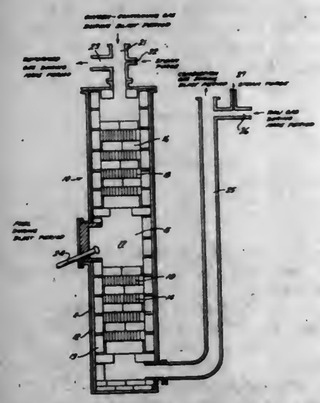
3,130,018
ANTI-STALLING COMPOSITION
John De Witt Rogers, Jr., Hockessin, Del., and Harold Joseph Scheule, Woodstown, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Sept. 12, 1962, Ser. No. 223,584
3 Claims. (Cl. 44—72)

1. An improved distillate fuel selected from the group consisting of gasoline and fuel oils containing from 0.0005 to 0.01 weight percent of (1) 20 to 50 weight percent of an amine salt of a branched chain primary aliphatic acid ester of orthophosphoric acid where each esterifying alkyl group contains 8 to 16 carbon atoms and the amine is an aliphatic hydrocarbon monoamine of 6 to 18 carbon atoms and (2) 80 to 50 weight percent of a member selected from the group consisting of N-tertiary alkyl alkanesulfonamide and mixtures of N-tertiary alkyl alkanesulfonamides, said N-tertiary alkyl alkanesulfonamide having the structure RSO_2NHR', wherein R is selected from the group consisting of alkyl of 12 to 20 carbon atoms and chloroalkyl of 12 to 20 carbon atoms and wherein R' is tertiary alkyl of 8 to 15 carbon atoms.

3,130,019
STABILIZED ORGANO-BORON FUELS
Edward M. Butler, Dover, and Marvin M. Fein, Westfield, N.J., assignors, by mesne assignments, to Thiokol Chemical Corporation, a corporation of Delaware
No Drawing. Filed Nov. 27, 1957, Ser. No. 699,425
8 Claims. (Cl. 44—76)

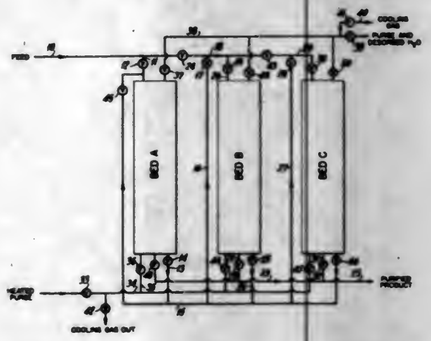
1. A liquid high energy fuel composition comprising a material selected from the class consisting of lower alkyl pentaborane(9) and lower alkyl decaborane having incorporated therein an additive selected from the class consisting of iodine, carbon tetraiodide and iodoform in an amount sufficient to increase the spontaneous ignition temperature of the fuel composition in air.

3,130,020
PROCESS OF REFORMING HYDROCARBON-CONTAINING GASES
John C. Eck, Convent, and Edward M. Gocze, Avenel, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
Filed Nov. 20, 1961, Ser. No. 153,562
5 Claims. (Cl. 48—196)



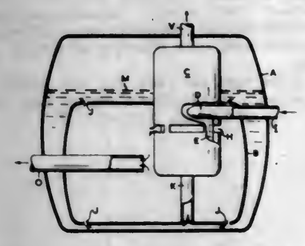
1. The process of reforming hydrocarbon-containing gases carried out in a single vertical shell having therein a top heat regeneration zone, an intermediate combustion zone, and a bottom reforming zone, the intermediate combustion zone being in permanently open and free communication with the heat regeneration zone thereabove and the reforming zone therebelow and the zones being of approximately the same volumetric capacities, which process comprises a blasting step of from 1 to 3 minutes' duration always downwardly through said zones involving introducing an oxygen-containing gas into the top of the heat regeneration zone and passing it downwardly therethrougn, passing the thus heated gas into the combustion zone where it supports combustion of fuel introduced into said combustion zone, passing the resultant products of combustion downwardly through the combustion zone and heat reforming zone and withdrawing same from the base of the heat reforming zone thus heating said heat reforming zone to a temperature at the base of said heat reforming zone of from 1200° to 2200° F., and after the blasting step conducting a make step of from 1 to 3 minutes' duration in a reverse direction to the direction of flow in the blasting step, said make step involving introducing a hydrocarbon-containing gas into the base of the heat reforming zone, passing the hydrocarbon-containing gas and the reformed gases produced therefrom upwardly through the combustion and regeneration zones, and withdrawing the resultant make gas at a pressure of from 10 inches to 100 inches water gauge from the top of the heat regeneration zone, the residence time of the hydrocarbon gas and the reformed gas produced therefrom being from 1 to 20 seconds, and repeating the aforesaid cycle of blasting and make steps.

3,130,021
DRYING CRACKED GAS
Robert M. Milton, Buffalo, N.Y., assignor to Union Carbide Corporation, a corporation of New York
Filed Dec. 28, 1959, Ser. No. 862,222
6 Claims. (Cl. 55—33)



6. A method for continuously drying a cracked hydrocarbon gas stream which comprises the steps of providing at least two separate zones each containing a bed of crystalline zeolitic molecular sieve material having pore sizes of at least 4 Angstrom units; providing a water-laden cracked gas stream at a temperature of from about 32° to 200° F. and contacting such stream with a first zeolitic molecular sieve bed as an adsorption stroke by introducing the gas stream at the inlet end of said bed to adsorb at least most of said water and part of the hydrocarbons, discharging a water-depleted cracked gas stream from the opposite end of said bed; stopping the adsorption stroke when the stream leaving the bed has a maximum allowable dew point not greater than —35° F. establishing a water pulse consisting of a water desorption front and a water adsorption front as a desorption stroke at the inlet end of the second molecular sieve bed by introducing a heated purge gas at the inlet end of said second molecular sieve bed to heat such bed to a temperature of from about 450° to about 600° F. thereby desorbing the previously adsorbed water, progressively moving such water pulse longitudinally through such bed from the inlet end to the opposite end thereof, thereby displacing said hydrocarbons from the zone of the progressing water adsorption front of said water pulse; continuing to move such water pulse until said hydrocarbons leave said bed through said second bed until said bed is substantially reactivated; periodically switching the flows between the first and second beds thereby passing the water-laden cracked gas stream as a gas feed stream to said second bed as an adsorption storke and establishing a water pulse in said first bed as a desorption stroke.

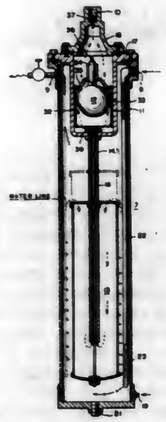
3,130,022
LIQUID RESERVOIRS FOR AIRCRAFT
George Clark, Morley, England, assignor to The English Electric Company, Limited, London, England, a British company
Filed Mar. 13, 1961, Ser. No. 95,235
Claims priority, application Great Britain Mar. 22, 1960
2 Claims. (Cl. 55—182)



1. A liquid reservoir for aircraft, comprising in combination; an outer shell, a plenum chamber wholly enclosed within and spaced from said outer shell, and having restricted passages on top and bottom for bleeding air and liquid from said plenum chamber into said surrounding outer shell, a de-aeration chamber arranged wholly within said outer shell and partly within said plenum chamber, a vortex ring arranged co-axially within said de-aeration chamber, an inlet pipe for liquid penetrating from outside through said outer shell, plenum chamber and de-aeration chamber and issuing tangentially into said vortex ring, said de-aeration chamber having ports in the middle communicating with said plenum chamber, an outlet pipe for the liquid penetrating from said plenum chamber outwardly through said outer shell, and a vent pipe penetrating from said de-aeration chamber outwardly through said outer shell, the liquid overflowing the edges of said vortex ring into said de-aeration chamber flowing from the latter through said ports into said plenum chamber and into said outlet pipe, and the air separated from said liquid emerging from said de-areation chamber through said vent pipe into the outer atmosphere.

3,130,023
GAS- AND AIR-MOISTURE SEPARATOR
William J. Hasselberg, 1127 Troost Ave., Forest Park, Ill.
Filed Apr. 24, 1962, Ser. No. 189,786
3 Claims. (Cl. 55—219)

1. A moisture-gas separator comprising,
(*a*) a main housing having
a wet-gas inlet
a dry-gas outlet, and
a water outlet,
and a water fill inlet for maintaining a predetermined water level in said housing
(*b*) a tank
fixedly suspended in the upper end of the housing and having direct communication with the water outlet, and
having a pipe
depending therefrom to a point above the bottom of the housing, and
confining thereto water flow between the housing and the tank,
(*c*) a cage
reciprocable in the tank and
suspending a rod
enclosed in the pipe of a length to extend below the end of the tank pipe, and having openings therein for the flow of water therethrough,

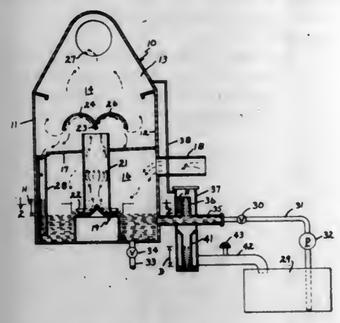


(*d*) a float valve
enclosed within the cage and freely shiftable vertically between retracted and
elevated positions in the cage for controlling water flow through the water outlet,
(*e*) a receptacle
having its lower end extending below said water level having an opening in its upper end, and being materially less in length than the housing and positioned below the tank,
reciprocably suspended within the housing from the lower end of the cage rod
to retract the cage within the tank when the water in the housing overflows into the receptacle to depress its position, and
to elevate the cage within the tank when the incoming gas pressures the water from the receptacle to effect its elevation in the housing, whereby the continuing pressure of the incoming gas on the water in the receptacle activates the float valve to close the water outlet.

3,130,024
APPARATUS FOR SEPARATING FOREIGN MATTER FROM AIR
Edgar D. Vaughan, Jr., Birmingham, Ala., assignor to The Fly Ash Arrestor Corporation, a corporation of Alabama
Filed July 21, 1960, Ser. No. 44,409
6 Claims. (Cl. 55—227)

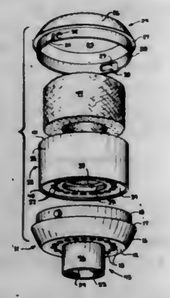
1. Apparatus for mixing a liquid and a gas and then separating them from each other comprising:
(*a*) a casing,

(*b*) a partition dividing the casing into separate upper and lower compartments,
(*c*) an upwardly directed tube communicating the lower compartment with the upper compartment,
(*d*) a downwardly flaring cone-shaped baffle substantially concentric with the tube and having a generally horizontal outer circumferential portion beneath and in spaced relation to the lower end of said tube to define an annular venturi-like passage therebetween,



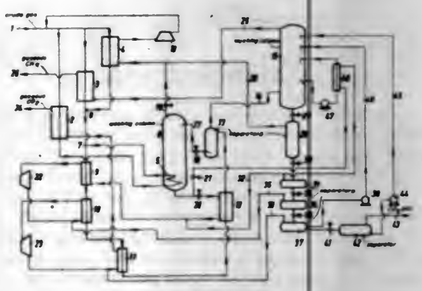
(*e*) means to maintain liquid in said lower compartment and to maintain a relatively thin layer of liquid on the downwardly flaring surface of said baffle adjacent and in spaced relation to the lower end of said tube to define a passageway for gas between said layer of liquid and the lower end of said tube.
(*f*) means to introduce a gas into said lower compartment above the level of the liquid therein,
(*g*) means in communication with said upper compartment disposed to withdraw gas therefrom at a rate to draw gas into said venturi-like passageway at a velocity to break up said thin layer of liquid on the baffle into fine particles which are mixed with the gas and at a velocity to convey the mixture thus formed upwardly through said tube to said upper compartment in a generally rectilinear direction without any substantial swirling motion, and
(*h*) means in said upper compartment to separate the gas from the liquid.

3,130,025
FILTERING FILLER NECK BREATHER CAP
Eldred R. Bowden and Billy G. Crute, Connersville, Ind., assignors to Stant Manufacturing Company, Inc., Connersville, Ind., a corporation of Indiana
Filed Mar. 30, 1962, Ser. No. 183,931
5 Claims. (Cl. 55—503)



1. A filtering cap comprising open-ended, tubular retainer means, a cap bottom member fixed to said retainer means and centrally perforated to communicate with one end of said retainer means, said cap bottom member being formed with a series of perforations located radially outwardly relative to said retainer means and being formed with an annular, upstanding wall located radially outwardly relative to said series of perforations, a cap cover member having a closed top wall and an annular, depending wall telescopically associated with said cap bottom member annular wall, said cap bottom member and cap cover member thus defining a chamber, means for securing said annular walls against separation, a filter cartridge received in said chamber, said cartridge comprising a perforated, annular bottom wall, an upstanding, imperforate outer wall arranged in sealing engagement with one of said cap members, and an upstanding, imperforate inner wall having perimetral sealing engagement with said cap bottom member in a region located radially inwardly relative to said series of perforations and terminating short of said cover cap member top wall, and a mass of filter material snugly received in the annular space between said cartridge upstanding walls.

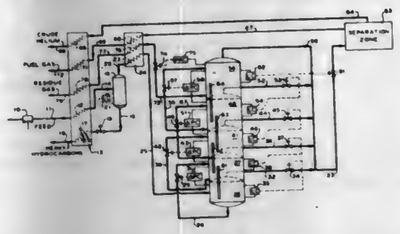
3,130,026
METHOD AND APPARATUS FOR THE SEPARATION OF CARBON DIOXIDE FROM COMPRESSED GASES
Rudolf Becker, Munich-Solln, Germany, assignor to Gesellschaft für Linde's Eismaschinen Aktiengesellschaft, Hollriegelskreuth, near Munich, Germany, a German company
Filed Sept. 26, 1960, Ser. No. 58,314
Claims priority, application Germany Sept. 30, 1959
9 Claims. (Cl. 62—17)



1. Process for separating carbon dioxide from a crude gas mixture having a high carbon dioxide content which comprises liquefying the carbon dioxide by cooling under a pressure above the triple point, separating the resulting liquid carbon dioxide from the residual gases, superheating and subsequently work-producingly expanding it in several stages, the carbon dioxide being heated by indirect heat-exchange, before each expansion stage, with a gas which has been at least partly freed from carbon dioxide.

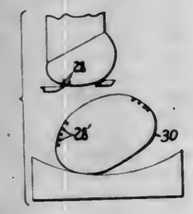
3,130,027
CONTROL SYSTEM FOR FLUID SEPARATION
Ernest A. Harper, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Aug. 23, 1962, Ser. No. 218,986
9 Claims. (Cl. 62—21)

1. A process for separating a component from a mixture containing said component comprising cooling said mixture, introducing the thus cooled mixture into a first separation zone, withdrawing liquid from said first separation zone, introducing the thus withdrawn liquid into a second separation zone at a rate responsive to the difference in pressure between said first and second separation zones, withdrawing vapor from said first separation zone at a rate responsive to the liquid level in said first separation zone, withdrawing vapor from said second separation zone at a rate responsive to the liquid level in said second



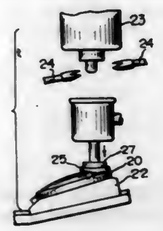
separation zone, and withdrawing liquid from said second separation zone responsive to the pressure in said second separation zone.

3,130,028
GLASS FEEDING
Samuel L. Seymour, Oakmont, Pa., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania
Filed May 26, 1959, Ser. No. 815,920
3 Claims. (Cl. 65—39)



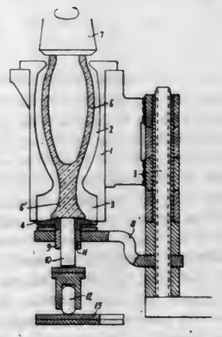
1. A method of controlling the position of shear marks on a gob of glass disposed upon a supporting surface comprising
releasing molten glass from a glass melting tank through an orifice therein to provide a stream of molten glass flowing along a downwardly directed path of flow,
initially shearing said stream of glass transversely of the path of flow to form a shear mark on the surface of the lowermost portion of said stream,
restricting the flow of said stream of glass along one side thereof while said stream is freely suspended beneath said melting tank
while continuing flowing the glass gathering molten glass in the portion of said flowing stream opposite the restricted side thereof in which the flow is restricted to provide a freely suspended asymmetrical gather of molten glass,
and thus moving said freely suspended asymmetric gather of molten glass in response to gravitational force and whereby said lowermost portion of said stream having a surface with a shear mark thereon is moved toward said restricted side thereof laterally with respect to the path of flow of said stream and in an upwardly extending direction whereby said shear mark is relocated to a new position approximately 90 degrees removed from the initial position thereof,
shearing said stream of molten glass transversely of the path of flow thereof at a point in said stream above the point of said initial shear to detach a gob of molten glass from said stream, having two shear marks on the surface thereof in the uppermost portion of said gob, and depositing said gob of molten glass upon a supporting surface with the surface of said gob having said shear marks thereon located remote from sai dsupporting surface.

3,130,029
METHOD FOR MAKING FUSED MULTIFOCAL LENSES
Charles F. Cala, Irondequoit, N.Y., assignor to Bausch & Lomb Incorporated, a corporation of New York
Filed June 23, 1959, Ser. No. 822,364
12 Claims. (Cl. 65—39)



1. In the manufacture of multifocal lens blanks by depositing molten segment glass on the countersink surface of a blank to cause fusion of the two glasses, the method which comprises the steps of heating raw materials of a segment glass composition to cause reaction and produce molten segment glass, forming a gob of the molten segment glass and controlling the temperature of the surface layer of the gob so that the gob becomes self-sustaining and tends to retain its shape, depositing the self-sustaining gob of segment glass on the countersink surface of a blank of glass the mass of such self-sustaining gob of segment glass being less than the mass of the blank and then while the self-sustaining gob of glass is still moldable applying pressure to the self-sustaining gob to spread it out over the countersink surface.

3,130,030
MANUFACTURE OF HOLLOW ARTICLES BY BLOWING IN A MOULD
Wilfred Herbert Watson, Newbold, Chesterfield, and George Blood, Chesterfield, England, assignors, by mesne assignments, to Associated Electrical Industries Limited, London, England, a British company
Filed Dec. 16, 1960, Ser. No. 76,223
Claims priority, application Great Britain Jan. 28, 1958
2 Claims. (Cl. 65—79)



1. In the manufacture from a viscous settable material of a hollow article having a solid base and a constricted

portion between the base and the bowl of the article, the steps of

subjecting a charge of the viscous material to a preliminary blowing action during which the blown portion is limited to that part of the charge which is to be above the constricted portion leaving a substantial portion unblown;

enclosing the charge in a mold having a necked portion corresponding to said constricted portion of the article and having a base which is movable upwardly and downwardly with respect to the sides;

causing an unblown accumulation of the material to gather at the lower end of the charge by allowing the charge to elongate with the unblown part thereof within and below the necked portion of the mould until an unblown accumulation of the material has settled over a surface of the mould base;

after the settling step and with the base in a lowered position, blowing that portion of the charge above said necked portion to form the bowl portion of the article therefrom while leaving unblown the portion of the charge within said mould necked portion and said accumulation below said necked portion as an unblown base-forming and base-connecting portion of the charge;

forming said unblown base-forming and base-connecting portion into the shape required for the article base and base-to-bowl connection by raising the base of the mould to press-mould this portion while still workable;

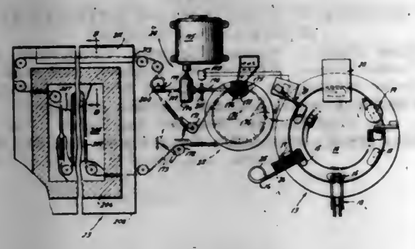
and removing the article from the mould after the material has set to a substantially rigid state.

3,130,031

APPARATUS FOR FABRICATING SEMICONDUCTOR DEVICES

John F. McMahon, Jr., Lansdale, and Joseph Harold Michel, Southampton, Pa., assignors, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware

Filed May 4, 1959, Ser. No. 810,939
2 Claims. (Cl. 65—155)



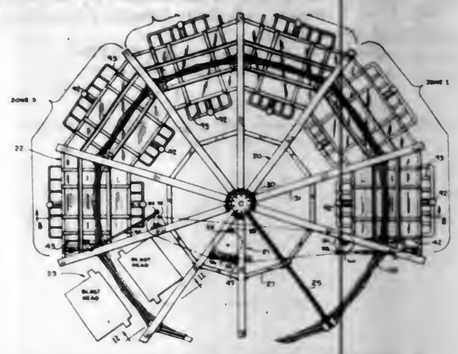
1. In apparatus for automatically fabricating hermetic stems of the type having a metallic housing bounding a glass core traversed by at least one lead-in wire, the combination comprising: indexing feed mechanism including translatable means mounting a plurality of dies each apertured to receive a stem housing and leads, and said mechanism being adapted to carry die-mounted housings sequentially into successive registration with a progression of machine elements synchronized for coordinate action, said machine elements comprising: means for depositing housings within said dies; wire-feed means for disposing a predetermined length of wire within the die-mounted housings; means for gravitationally supplying a predetermined charge of powdered glass to the housing cavities; means for compacting said charge into an integrated mass capable of self-maintaining its compacted configuration within said housings; stem-transport means comprising a chain of firing fixtures constructed to receive cold-pressed stem assemblies; transfer means for translating the cold-pressed stem assemblies from said feed mechanism to said firing fixtures; means for coordinating the movements of said transfer means and indexing feed mechanism; an oven for heating the cold-pressed stem assemblies to a temperature sufficient to fuse component parts of such an assembly into a hermetically integrated unit; and stem-transport drive means adapted to provide continuous uninterrupted movement of certain of said fixtures through said oven while concurrently providing for intermittent movement of others of said fixtures to accommodate intermittent transfer of said cold-pressed stem assemblies, by said transfer means, to said fixtures.

3,130,032

APPARATUS FOR HEAT TREATING GLASS

Norman C. Nitschke, Perrysburg, and Harold A. McMaster, Woodville, Ohio, assignors to Permaglass, Inc., Woodville, Ohio, a corporation of Ohio

Filed Sept. 30, 1958, Ser. No. 764,347
7 Claims. (Cl. 65—349)



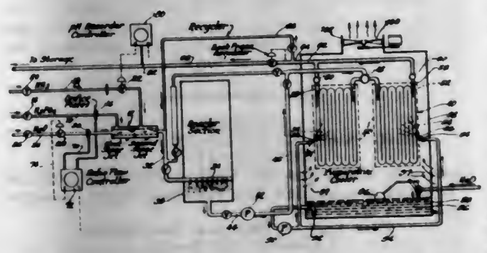
1. Apparatus for heat treating flat glass sheets comprising, in combination, a rotary spider mounted on a central pedestal and having radially extending arms, a plurality of means supported by said arms at a standard distance from said pedestal for dependingly carrying glass sheets to be heat treated, a generally toroidal heating chamber extending circumferentially less than 360° and having radially spaced, continuous inner and outer vertical side walls, a closed bottom, a roof and generally radially extending, vertical end walls, the roof of said chamber having a continuous slot opening into the interior of said chamber and extending around said chamber centrally between said vertical side walls and along the path of movement of said glass carrying means with said glass carrying means extending downwardly through the slot for supporting glass sheets interiorly of said furnace chamber, each of said end walls having a vertical opening therein aligned with the slot in the roof of said chamber, a door for each of the openings in said end walls mounted on the exterior of the respective one of said end walls and each being movable between a position in which the respective opening is unobstructed for the passage of a glass sheet therethrough and a position closing such opening, and a single drive mechanism for intermittently rotating said spider between evenly circumferentially spaced positions and including direct mechanical linkage connected to both of said doors for simultaneously opening said doors prior to movement of said spider and for simultaneously closing said doors subsequent to movement of said spider.

3,130,033

METHOD OF PRODUCING A MIXED LIQUID FERTILIZER CONTAINING NITROGEN AND PHOSPHORUS

Will R. Stephens, Cedar Rapids, Iowa, assignor to Barnard & Leas Manufacturing Company, Inc., Cedar Rapids, Iowa

Original application Nov. 28, 1956, Ser. No. 624,840, now Patent No. 2,977,201, dated Mar. 28, 1961. Divided and this application Aug. 30, 1960, Ser. No. 52,974
11 Claims. (Cl. 71—1)



1. The method of producing a mixed liquid fertilizer containing nitrogen and phosphorus in a predetermined ratio and in a continuous operation, comprising

(*a*) feeding phosphoric acid under positive pressure in a continuous stream at a substantially uniform rate to a reaction zone,

(*b*) feeding water in a continuous stream at a controllable rate and under positive pressure to the reaction zone for admixture with the phosphoric acid in a predetermined ratio to provide for a predetermined concentration of phosphorus in solution in the system,

(*c*) feeding liquid ammonia in a continuous stream at a rate controlled by the pH of the final product and under positive pressure to the reaction zone for reaction with the diluted phosphoric acid solution to produce ammonium phosphate,

(*c'*) expanding the mixture of materials into a reaction vessel for completion of the reaction,

(*c''*) recompressing the mixture after reaction has been completed,

(*d*) extracting heat of reaction from the reaction product issuing from the reaction vessel to reduce the temperature of the reaction product to below the temperature for volatilization of any of the components, and

(*e*) separating the cooled reaction product into a product portion and a portion which is recycled through the system, the said extracting of the heat of reaction being accomplished at least in part by admixing the recycled portion with the partially reacted mixture issuing from the reaction zone and prior to expansion into the reaction vessel for immediate reduction in temperature.

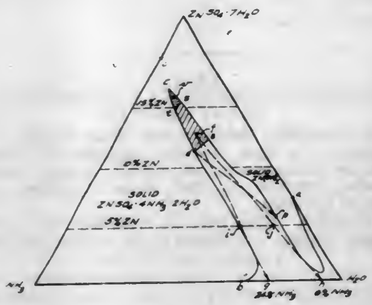
3,130,034

ZINC CONTAINING LIQUID FERTILIZER

Donald C. Young, Fullerton, Calif., assignor, by mesne assignments, to Collier Carbon and Chemical Corporation, a corporation of California

Filed Oct. 24, 1960, Ser. No. 64,605
5 Claims. (Cl. 71—1)

1. The method of forming an aqueous solution of zinc sulfate and ammonia from aqua ammonia having a concentration between about 6 and about 24 weight percent ammonia, zinc sulfate heptahydrate, water and anhydrous ammonia which comprises: (1) adding said zinc sulfate heptahydrate to said aqua ammonia until further addition causes the formation of a solid and thereafter (2) discontinuing the addition of said zinc sulfate and adding anhydrous ammonia to the solution, discontinuing the addition of said ammonia when the continued addition of ammonia causes a solid to form in said solution, thereafter repeating steps (1) and (2) in sequence until a composition of greater than about 50 weight percent zinc sulfate calculated as the heptahydrate in aqua ammonia is obtained.



3,130,035

METHOD FOR DEFOLIATING AND DESICCATING COTTON

William H. Culver, Bryan, Tex., assignor to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed May 12, 1960, Ser. No. 28,515
12 Claims. (Cl. 71—2.2)

1. The method for harvesting cotton which comprises applying to the foliage of mature and nearly mature cotton plants before harvesting a composition consisting essentially of from about 1.5% to about 20% by weight of a water-soluble pentavalent arsenic compound selected from the group consisting of arsenic acid, arsenic pentoxide, dihydrogen ammonium arsenate and monohydrogen ammonium arsenate in an amount equivalent to from about 1.5 to about 6 pounds of arsenic acid per acre of plants, allowing the treated plants to desiccate for from at least two days to about two weeks before harvesting, and then stripping the cotton from said treated plants by mechanical means.

3,130,036

PROCESS FOR PREPARING FLAKES OF SODIUM METABORATE AND MIXTURES THEREOF

John T. Young, Long Beach, and Paul F. Jacobs, Orange, Calif., assignors to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada

No Drawing. Filed Feb. 1, 1961, Ser. No. 86,336
4 Claims. (Cl. 71—2.4)

4. The method for preparing solid flakes of a co-crystallized sodium metaborate-chlorate-organic herbicide which comprises combining borax and sodium hydroxide in a molar ratio of about 1:2 with from about 15% to about 60% of the total weight of said borax and sodium hydroxide of sodium chlorate, dry mixing the ingredients, adding from about 1% to about 18% of the total weight of the inorganic ingredients of an organic herbicide, said organic herbicide selected from the group consisting of 2,4-dichlorophenoxyacetic acid, 2,4,5-trichlorophenoxyacetic acid, 2-methyl-4-chlorophenoxyacetic acid, trichlorobenzoic acid, tribromoacetic acid, 3-p-chlorophenyl-1,1-dimethylurea, phenyldimethylurea, 4-(2,4-dichlorobenzoyl)phenyl α,α-dichloropropionate, N,N-dibutylactamide laurate, tetrachlorohydroquinone bis-(α,α-dichloropropionate), continuing the dry mixing until the reaction between the borax and sodium hydroxide is initiated, immediately placing the partially reacted admixture on a drum

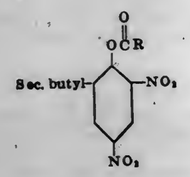
dryer heated to a temperature of from about 80° C. to less than the decomposition temperature of said organic ingredient, whereby substantially simultaneously the said reaction goes to completion and solidified flakes of co-crystallized organic-inorganic herbicide are formed and removing said flakes from the drum dryer.

3,130,037
METHOD OF SELECTIVELY CONTROLLING PLANT GROWTH

Otto Scherer, Karl Reichner, and Heinz Frensch, all of Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main Hochst, Germany, a company of Germany

No Drawing. Filed Dec. 23, 1958, Ser. No. 782,413
Claims priority, application Germany Dec. 27, 1957
1 Claim. (Cl. 71—2.6)

The method of selectively controlling plant growth which comprises applying to plants a compound of the formula



wherein R is a member selected from the group consisting of alkyl and alkenyl radicals having one to three carbon atoms, whereby the growth of undesirable weed plants is adversely affected.

3,130,038
GRANULAR FERTILIZERS

Royle P. Thomas, Evanston, James C. Engibous, Mount Prospect, and Francis T. Nielsson, Morton Grove, Ill., assignors to International Minerals & Chemical Corporation, a corporation of New York

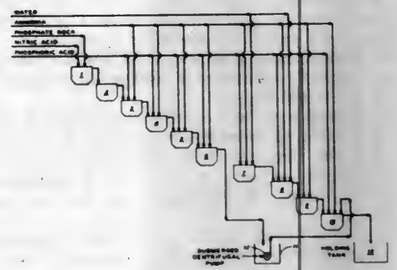
No Drawing. Filed Mar. 13, 1961, Ser. No. 94,969
13 Claims. (Cl. 71—29)

1. A continuous process for the preparation of a complete granular fertilizer having controlled release properties for each of its N, P, K and Mg fertilizer ingredients which comprises the steps of mixing solid condensed partially polymerized urea-formaldehyde resin having a urea to formaldehyde molar ratio of between about 1.2:1 and about 2:1, water insoluble compounds of at least two of the minor elements required in plant nutrition selected from the group consisting of copper, manganese, zinc, iron, titanium, boron, strontium, lead, molybdenum, nickel, vanadium, cobalt, and chromium, an organic chelating agent capable of forming metal complexes with said minor element compounds at a pH between about 3 and about 9, superphosphate containing monocalcium phosphate, dicalcium phosphate, and tricalcium phosphate, at least 5% of said superphosphate being tricalcium phosphate, at least two potassium fertilizer compounds one of which is more soluble in water than the other, from 10 to 50% by weight of said potassium compounds being of lower solubility, at least two magnesium fertilizer compounds one of which is more soluble in water than the other, from 10 to about 90% by weight of said magnesium compounds being of lower solubility and sulfuric acid to partially granulate the solids, conveying said partially granulated solids to a rotating granulator, contacting said partially granulated solids with sulfuric acid and a water soluble nitrogen fertilizer compound selected from the group consisting of ammonium fertilizer salts and urea, the total nitrogen content added as said water soluble nitrogen content being less than the nitrogen content provided by said polymerized urea-formaldehyde resin in the range from about 20 to about 45% by weight of the total nitrogen content, whereby solid ammonium sulfate and ammonium phosphate are formed in situ, continuously removing a portion of the granular solids from the rotating granulator, heating said granulated solids to dryness, separating oversized granules having a particle size larger than about 10 mesh and fine particles passing through a screen of about 14 mesh from the granular product, crushing the oversized particles, recycling the crushed oversized particles to said separation step, and recycling fine particles to the solids mixing step, and recovering the fertilizer product in granular form.

3,130,039
HIGH ANALYSIS COMPLEX FERTILIZER PREPARATION

Gustave K. Kohn, Berkeley, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

Filed Apr. 11, 1962, Ser. No. 186,762
5 Claims. (Cl. 71—37)



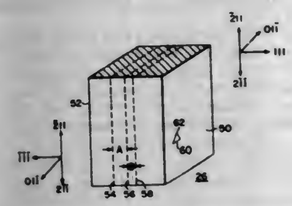
1. A process for preparing high analysis complex fertilizers having total nutrients of at least 40, wherein said nutrients are measured as percent nitrogen, percent P_2O_5, and percent K_2O, containing nitrogen and phosphorus as major constituents which comprises:

(1) in a first train of reactors,
  (*a*) acidulating phosphate rock with nitric acid to form a slurry in which all of the phosphate is converted to a water soluble phosphoric acid form,
  (*b*) adding incrementally at least one member of the group consisting of sulfuric and phosphoric acids which member in combination with the phosphate initially present in the rock is in an amount sufficient to combine with substantially all the calcium present in the form of at least one member of the group consisting of dicalcium phosphate and calcium sulfate,
  (*c*) while incrementally and simultaneously ammoniating the mixture until a pH of from 5 to neutrality is reached,
  (*d*) providing a flowable nitrophosphate slurry;
(2) in a second train of reactors,
  (*a*) ammoniating wet process phosphoric acid to produce a slurry having a pH of from 5 to neutrality,
  (*b*) maintaining the water content in an amount sufficient to provide flowability but not in excess of 25% by weight of the slurry;
(3) combining the slurry from the first train of reactors with the slurry from the second train of reactors in sufficient proportions;
(4) to obtain a flowable slurry of the complex fertilizer having at least 40 total nutrient units.

3,130,040
DENDRITIC SEED CRYSTALS HAVING A CRITICAL SPACING BETWEEN THREE INTERIOR TWIN PLANES

John W. Faust, Jr., Forest Hills, and Harold F. John, Wilkinsburg, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Dec. 30, 1960, Ser. No. 79,680
6 Claims. (Cl. 75—.5)

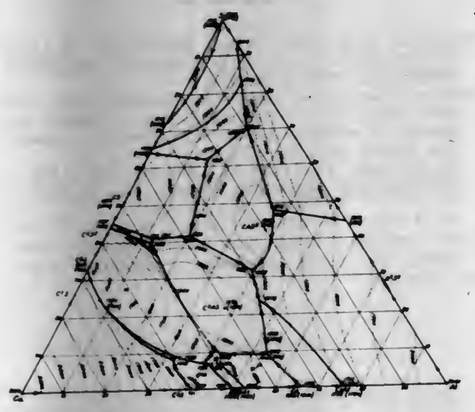


1. A dendritic seed crystal of a material crystallizing in the diamond cubic lattice structure having three interior twin planes extending entirely therethrough, said interior twin planes being spaced from 0.1 to 5 microns and from 0.1 to 30 microns apart, respectively.

3,130,041
METHOD OF SIMULTANEOUS PRODUCTION OF LOW-SILICON IRON AND HIGH-ALUMINA SLAG

Pierre Joseph Gabriel Richaud, Martigues, Bouches-du-Rhone, France, assignor to Ciments Lafarge, Paris, France, a corporation of France

Filed Aug. 11, 1961, Ser. No. 130,789
Claims priority, application France Dec. 23, 1960
7 Claims. (Cl. 75—41)



1. A method of simultaneous production of low-silicon cast iron and a high alumina content slag for producing a highly refractory high-alumina cement, which method comprises the steps of charging a furnace with coke and slagging constituents poor in silica, corresponding to a composition of 20–65% Al_2O_3, less than 7% SiO_2, 10–60% CaO and 1–7% iron oxides, with the following size ranges: Al_2O_3 5–25 mm., CaO 5–15 mm., coke 5–50 mm., any iron ore added being in a non-sintered condition, maintaining a uniform temperature above 2000° C. in the blasting area by blowing hot air containing water vapor at a temperature of at least 600° C., and discharging separately the melted slag continuously and the low-silicon iron in batches, the tapping of the iron being effected at such a rate that the respective positions of the superimposed liquid phases remain substantially constant, the depth of the available slag corresponding to at least about 20 minutes' production.

3,130,042
PROCESSING THORIUM-BISMUTH AND THORIUM-LEAD COMPOUNDS

Robert J. Teitel, Northridge, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Aug. 2, 1961, Ser. No. 128,827
9 Claims. (Cl. 75—84.1)

1. The improved method of recovering uranium from a solid particulate thorium intermetallic compound selected from the group consisting of thorium-bismuth and thorium-lead compounds, said thorium intermetallic compound being dispersed in a liquid metal selected from the group consisting of bismuth, lead and bismuth-lead alloy, and having uranium occluded therein, which comprises: changing at least one of (1) the temperature of the said dispersion in liquid metal, and (2) the composition of the liquid metal, the change in said composition being brought about by the addition to the dispersion of a metal selected from the group consisting of lead, bismuth, thorium and mixtures thereof differing in composition from the dispersion, thereby to cause said solid particulate thorium intermetallic compound to convert to another solid particulate thorium intermetallic compound while at all times retaining both a solid and a liquid phase, and thereafter separating the liquid phase from the solid phase in the dispersion.

3,130,043
RECOVERY OF NICKEL FROM LATERITE ORES

Lyall John Lichty, Phoenix, Ariz., assignor to Northfield Mines, Incorporated, a corporation of Delaware

No Drawing. Filed Mar. 17, 1961, Ser. No. 96,373
6 Claims. (Cl. 75—115)

1. In a process for recovering nickel from laterite ore in which the ore in a crushed state is leached, the resulting leach solution containing dissolved nickel which is separated from the ore residue, and in which nickel is recovered from the separated leach solution the improvement comprising using only a leach solution consisting essentially of an aqueous sodium chloride solution having a sodium chloride content in the range from 10 to 100 grams per liter and acidulated with sulfuric acid to a pH less than 2.

3,130,044
MAGNETIC MERCURY

Max H. Flindt, 3531 Emerson St., Palo Alto, Calif.

No Drawing. Filed June 30, 1961, Ser. No. 120,941
8 Claims. (Cl. 75—169)

1. A fluid sensitive to a magnetic field consisting essentially of an amalgam of between about 2 and 40 weight percent of a metal selected from the group consisting of bismuth, aluminum, chromium, magnesium, antimony, cadmium, tin and titanium and between about 2 and 10 weight percent iron, with the remainder being mercury.

7. A process for preparing a fluid sensitive to a magnetic field consisting essentially of forming a sodium-mercury amalgam; contacting said amalgam with an iron-containing material and permitting a reaction to ensue whereby to replace said sodium of said amalgam with the said iron; and amalgamating therewith a third metal selected from the group consisting of bismuth, aluminum, chromium, magnesium, antimony, cadmium, tin and titanium whereby to form a product containing between about 2 and 40 weight percent of the said third metal, and between about 2 and 10 weight percent iron, with the remainder being mercury.

3,130,045
METHOD OF EFFECTING EXOTHERMIC REACTIONS

Raymond S. Richards, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio

No Drawing. Filed Oct. 13, 1959, Ser. No. 846,058
6 Claims. (Cl. 75—170)

1. A method for co-reacting a plurality of molten elemental metals to form an intermetallic compound of said metals while minimizing temperature rise of the reaction mass because of heat of reaction, which comprises gradually adding portions of each of said metals as separate solids to the surface of an initially shallow molten pool of said metals at substantially the same area of the surface of said pool said molten metals in said pool being in the stoichiometric proportions for formation of the desired intermetallic compound, each of the metals being added at relative rates such that the relative proportions of said metals are maintained in substantially stoichiometric proportions for formation of said intermetallic compound, the rates of addition of said metals being maintained within a range such that all melting of the added metals occurs substantially at the surface of said pool, said co-reacting proceeding during said gradual adding of said portions.

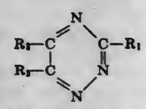
2. A method according to claim 1 wherein said intermetallic compound is selected from the group consisting of Fe_3Al, Al_3Ca, Al_5Ca_2, Ba_3Bi_2, Ba_3Pb, Ba_3Sb_2, Bi_2Ca_3, Ca_3Sb_2, CaSe, Ca_2Sn, K_2Se and NiAl.

3,130,046
ELECTROPHOTOGRAPHIC REPRODUCTION MATERIAL

Heinz Schlesinger, Wiesbaden, Germany, assignor, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J.

No Drawing. Filed Dec. 4, 1959, Ser. No. 857,269
Claims priority, application Germany Jan. 7, 1959
26 Claims. (Cl. 96—1)

1. An electrophotographic material comprising a conductive support layer and a photoconductive insulating layer, the latter comprising a compound having the formula



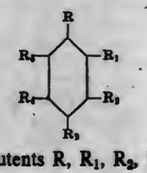
in which R_1, R_2, and R_3 are selected from the group consisting of aryl and heterocyclic groups of aromatic character.

3,130,047
PRESENSITIZED PRINTING PLATES COMPRISING NAPHTHOQUINONE - 1,2 - DIAZIDE REPRODUCTION LAYERS

Fritz Uhlig, Wilhelm Neugebauer and Oskar Süs, all of Wiesbaden-Biebrich, and Gerhard Fritz, Wiesbaden, Germany, assignors, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J.

No Drawing. Filed Jan. 11, 1960, Ser. No. 1,420
Claims priority, application Germany Jan. 15, 1959
36 Claims. (Cl. 96—33)

25. A process for making a printing plate which comprises exposing a coated base material to light under a master, the coating comprising a compound having the formula



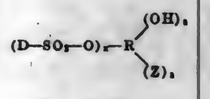
in which the substitutents R, R_1, R_2, R_3, R_4, and R_5 are selected from the group consisting of hydrogen, hydroxyl, halogen, alkyl, alkoxy and naphthoquinone-1,2-diazide sulfonyloxy groups, at least one of the substituents being a naphthoquinone-1,2-diazide sulfonyloxy group and at least one substituent being hydroxyl, and treating the exposed coating with a developing solution.

3,130,048
PRESENSITIZED PRINTING PLATES COMPRISING NAPHTHOQUINONE - 1,2 - DIAZIDE REPRODUCTION LAYERS

Gerhard Fritz, Wiesbaden, and Fritz Uhlig, Wilhelm Neugebauer, and Oskar Süs, Wiesbaden-Biebrich, Germany, assignors, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J., a corporation of New Jersey

No Drawing. Filed Jan. 13, 1960, Ser. No. 2,109
Claims priority, application Germany Jan. 17, 1959
57 Claims. (Cl. 96—33)

39. A process for making a printing plate which comprises exposing a coated base material to light under a master, the coating comprising a compound having the formula



in which

D is a naphthoquinone-1,2-diazide group, and

R is selected from the group consisting of diphenyl, naphthyl, and dinaphthyl radicals, the substituent

Z being selected from the group consisting of hydrogen, alkyl, alkoxy, carbalkoxy, halogen, and naphthoquinone-1,2-diazide sulfonyloxy groups, and

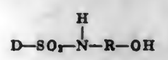
x represents an integer from 1 to 3, and treating the exposed coating with a developing solution.

3,130,049
PROCESS FOR PREPARING PRINTING PLATES COMPRISING NAPHTHOQUINONE DIAZIDES REPRODUCTION COATINGS

Wilhelm Neugebauer, Oskar Süs, Gerhard Fritz, and Fritz Uhlig, all of Wiesbaden-Biebrich, Germany, assignors, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J.

No Drawing. Filed Apr. 13, 1960, Ser. No. 21,860
Claims priority, application Germany Apr. 16, 1959
43 Claims. (Cl. 96—33)

16. A process for making a printing plate which comprises exposing a coated base material to light under a master, the coating comprising a compound having the formula



in which D is a naphthoquinone-(1,2)-diazide radical and R is a non-oxo arylene group in which the NH group is linked to the OH group through a linkage consisting of carbon atoms, and treating the exposed coating with a dilute alkali developing solution.

3,130,050
OIL-DISPERSED DYES IN PHOTOPOLYMERIZATION SYSTEMS

Andre K. Schwerin, Binghamton, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

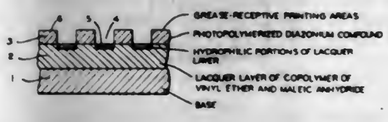
No Drawing. Filed Jan. 18, 1960, Ser. No. 2,845
14 Claims. (Cl. 96—35)

13. The process of producing a resist with an image that has clear backgrounds and is sharp, colored and contrasty, which comprises exposing to light a light-sensitive material carrying on a suitable base a hydrophilic layer containing a hydrophilic colloidal carrier, a hydrophilic monomer containing the grouping $CH_2{=}C<$, a photopolymerization catalyst and having dispersed within said carrier, droplets of a solution of an oil-soluble, lipophilic dye in a substantially water-insoluble, low molecular weight organic crystalloidal material having a boiling point of above 175° C., and being selected from the group consisting of tricresyl phosphate, dibutyl phthalate, 2-methoxybutyl phthalate, phenethyl alcohol, triphenyl phosphate, n-butyl sulfone, N-hexylphenylcarbinol, benzoyl piperidine, said crystalloidal material having a high solvent action for the dye, the nature and proportions of the dye and the crystalloidal material being so chosen that particles thereof are liquid under the conditions of coating so as to form droplets having a particle size on the order of one micron within the coating; and washing out the unpolymerized portions of the exposed hydrophilic coating to form a colored photoresist.

3,130,051
PROCESS FOR PRODUCING NEGATIVE WORKING OFFSET DIAZO PRINTING PLATES

Clifford E. Herrick, Jr., Chenango Forks, and Paul Cheblniak, Binghamton, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

Filed Dec. 10, 1958, Ser. No. 779,489
8 Claims. (Cl. 96—49)



1. The process of producing a negative offset printing plate from a plate comprising a base, a hydrophobic film of a copolymer of a vinyl alkyl ether and maleic anhydride on said base, and an overcoating on said film of a light-sensitive, water-soluble diazonium compound which becomes insolubilized and ink-receptive in areas exposed to light, said compound being selected from the class consisting of those of the formulae:

$$R{-}Y{-}Ar{-}N_2{-}X$$

and

$$X{-}N_2{-}Ar{-}R_2{-}Ar{-}N_2{-}X$$

wherein R is a radical selected from the group consisting of phenyl, aralkyl, cycloalkyl and acyl; Y is a member selected from the group consisting of O, S, NH, NR_1, wherein R_1 is an alkyl radical; Ar is an aromatic radical and X is the anion selected from the group consisting of an acid and the condensation products thereof with formaldehyde; said process comprising the steps of:

(*a*) exposing said plate to light under a pattern, and

(*b*) locally removing said overcoating where unexposed by means of a developer containing an alkylolamine and a hydrophobic material which becomes physically attached to the tanned diazo resin layer in the image areas thereby rendering them hydrophobic and ink-receptive; while

(*c*) simultaneously with (*b*) imparting a hydrophilic character to said film in areas where the overcoating is removed.

3,130,052
METHOD OF MANUFACTURING, BY PHOTOGRAPHIC AGENCY, INTERNAL AND/OR EXTERNAL IMAGES ON AND/OR IN MACROMOLECULAR SUPPORTS WITH MERCURY AND SILVER SALTS GERM INTRODUCTION BATHS

Cornelis Johannes Dippel and Hendrik Jonker, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

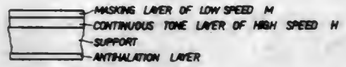
Filed July 11, 1960, Ser. No. 41,920
Claims priority, application Netherlands July 27, 1959
8 Claims. (Cl. 96—49)

1. A method of producing noble-metal images on non-metallic supports which method comprises sensitizing a non-metallic support by treating said support with a light-sensitive compound selected from the group consisting of hydroxy-benzene diazonium compounds, hydroxy-naphthalene diazonium compounds, aromatic diazo sulfonates, sulfito-diethylene-diamine cobaltic chloride and o-nitro-mandelic acid nitrile, exposing said sensitized support to light, treating said exposed support with an aqueous nucleus introduction solution containing a mercurous salt in a concentration of more than 1 μmol/liter and a silver salt in a concentration of at least twice that of the mercurous salt to thereby produce a latent metallic image on said support and then developing said latent metallic image by applying to said latent metallic image an aqueous solution of a reducible compound of a metal selected from the group consisting of gold, silver, platinum and mercury and an organic reducing agent capable of reducing said reducible compound to metal.

3,130,053
PHOTOGRAPHIC MATERIAL FOR THE PRODUCTION OF PHOTOGRAPHIC RECORDS WITH TONE VALUE CORRECTION

Ehrhard Hellmig and Heinz Berger, Leverkusen, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

Filed June 18, 1957, Ser. No. 666,343
Claims priority, application Germany June 26, 1956
1 Claim. (Cl. 96—68)



A photographic material for the production of photographic records with tone value correction, which material consists essentially of a support and two superimposed silver halide emulsion layers arranged on the same side of the support, the inner layer having a gamma of at least 0.5 and less than 2, the outer layer having a gamma which is at least one and a half times that of the inner layer, and a speed which is within the range of about 1/10 to 1/100 of that of the inner layer as measured by the points on the characteristics curves which are 0.3 above the fog level, the slower emulsion having said higher gamma in the high exposure intensity region where the gamma of the faster emulsion drops off, both of said emulsion layers being sensitive to substantially the entire visible light spectrum so that the tone value correction is obtained anywhere in that region.

3,130,054
METHOD OF PRODUCING A FOOD SUPPLEMENT

Milton E. Parker, Barrington, Ill., assignor, by mesne assignments, to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed Mar. 14, 1960, Ser. No. 14,518
2 Claims. (Cl. 99—2)

1. The method for producing a food supplement which comprises adding a liquid nutrient to exfoliated vermiculite

while said vermiculite is in a closed chamber under pressure in excess of atmospheric, mixing said nutrient and vermiculite at said pressure, reducing the said pressure to atmospheric, introducing into the said chamber from about 2% to 5% of powdered and anhydrous material selected from the group consisting of mineral phosphates and sulphates, mixing said anhydrous material with the mixture in the chamber, and drying the resulting mixture to produce a granular, free-flowing, dry-to-the-touch, non-hygroscopic product.

3,130,055

FLAVOR CONTROL OF MALT BEVERAGES

Edward Segel and Paul Robson Glenister, Chicago, Ill., assignors to J. E. Siebel Sons' Company, Inc., Chicago, Ill., a corporation of Illinois

No Drawing. Filed Oct. 30, 1962, Ser. No. 234,241
10 Claims. (Cl. 99—48)

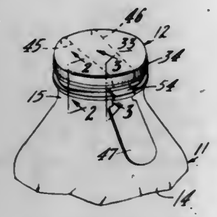
1. A method for removing objectionable buttery odor and flavor from beer which comprises adding to said beer a small but effective amount of diacetyl desmolase.

3,130,056

CONTAINER AND SEALING CAP ASSEMBLY FILLED WITH AN AQUEOUS COMESTIBLE

William Edward Taylor, Fairfield, Conn., Arthur Leroy Hart, Cary, Ill., and Carl William Heinle, Short Hills, N.J., assignors to American Can Company, New York, N.Y., a corporation of New Jersey

Filed July 6, 1961, Ser. No. 122,190
14 Claims. (Cl. 99—171)



1. A sealed package comprising a container having a dispensing mouth, a sealing cap on said dispensing mouth, and a liquid comestible in said container maintained at a pressure substantially above atmospheric pressure, said container having an annular bead surrounding said dispensing mouth, said bead having an upper face, an outer face, a rounded corner joining said upper and outer faces, and a lower face disposed relative to said outer face at an included angle which is less than a right angle to provide an acute angled hook ledge, said sealing cap being formed of thin sheet material which is readily deformable by the pressure of said comestible, said sealing cap having a normally flat top wall section, a depending annular skirt section integral with said top wall section, and a continuing U-shaped holding section having a leg engaging against said lower face of said bead to provide an anchorage under said hook ledge for said cap against blow-off of said cap by the pressure in said container, a sealing gasket disposed between said top wall section and said upper face of said bead and continuing between said skirt section and said outer face of said bead, said sealing cap having tear means to facilitate removal of said cap from said container, said top wall section of said cap being bulged and expanded outwardly from its normally flat configuration by the pressure within said container, thereby exerting a substantial radially inward force on said skirt section adjacent said rounded corner of said bead whereby said gasket is compressed between said cap and said bead to effect a tight hermetic seal between said cap and said bead.

3,130,057

PROCESSES FOR AGING AND FLAVORING COOLED MEAT IN A CONFINED ZONE WITH THAMNIDIUM AND AN ANTIBOTIC

Beverly E. Williams, La Grange Park, Ill., assignor to Hodges Research and Development Company, New York, N.Y., a corporation of California

No Drawing. Filed Feb. 7, 1963, Ser. No. 256,830
3 Claims. (Cl. 99—174)

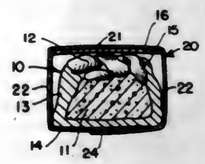
1. In a process for tenderizing and improving the flavor of meat, the steps of cooling the meat to approximately 35° F., then placing the meat in a confined zone maintained at approximately 35° F., then spraying a Thamnidium solution and a broad spectrum antibiotic solution into the zone, the Thamnidium solution providing at least one spore for each one half square inch of meat surface, the antibiotic solution providing a minimum of 2 p.p.m. and a maximum of 10 p.p.m. of the meat and maintaining the meat in said zone for from two to ten days.

3,130,058

ELONGATED CANDY PACKAGE

John G. Johnson, Bannockburn, Ill., assignor to Walter H. Johnson Candy Co., Chicago, Ill., a corporation of Illinois

Filed Oct. 8, 1958, Ser. No. 766,119
5 Claims. (Cl. 99—180)



1. A package consisting of an elongated candy bar having a flat bottom of predetermined width and irregular top and side portions, an elongated wrapper laterally encircling said candy bar and having its side edges overlapping on the bottom side of said bar and forming a double thickness therealong, a strip of heavy paper of a width substantially the same as said predetermined width disposed solely along said top portion of the candy bar and within the wrapper and providing therewith a smooth double thickness along the top of the candy bar of a substantially uniform width throughout the length of the candy bar, said wrapper being secured to the strip and being longer than the candy bar with its ends collapsed and folded around the ends of the candy bar and along the bottom ends of the candy bar against said overlapping edges to seal the package.

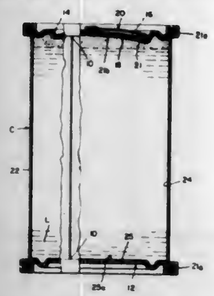
3,130,059

CANS AND METHOD OF CANNING

Louis Fried, East Orange, N.J., and A. Ralph D'Andrea, Philadelphia, Pa.; said D'Andrea assignor of 17.557% to Herbert M. Beitel, Chicago, Ill.

Filed Sept. 2, 1960, Ser. No. 54,543
4 Claims. (Cl. 99—181)

1. A method of preserving beer, ale and carbonated beverages which react unfavorably with tin and steel in cans, having metal side and end walls, applying a protective permeable vinyl coating on the entire inner side and end walls, at least one of said end walls being hermetically sealed to one end of the side wall and being of a metal of a higher negative rating than the metal of the side wall of the can, and the metal of the can side wall being automatically coated by an electrolytic action passing through contents of the can and through the permeable coating on the said one end wall of the can while the can is closed, and through the permeable coating on the metal



of the side wall, and applying a sealed closure hermetically to the other end of the side wall.

3,130,060

CONFECTIONERS' MOLDING STARCH

James W. Evans, Highland, Ind., assignor to American Maize-Products Company, a corporation of Maine

No Drawing. Filed Sept. 2, 1960, Ser. No. 53,637
7 Claims. (Cl. 106—38.5)

1. A starch molding composition for use in the manufacture of confectionery products consisting essentially of an edible non-toxic admixture of starch and an ester of an aliphatic monohydric alcohol having from 1 to 12 carbon atoms and a saturated fatty acid having from 8 to 18 carbon atoms, the amount of said ester being from about 0.05% to about 0.5% by weight based on the weight of the starch.

3,130,061

INORGANIC COATING COMPOSITION

Walter M. McMahon, La Habra Heights, and Charles G. Abba, Bell, Calif., assignors to American Pipe and Construction Co., South Gate, Calif., a corporation of Delaware

No Drawing. Filed Feb. 6, 1961, Ser. No. 87,112
16 Claims. (Cl. 106—84)

1. An inorganic protective coating composition for metal surfaces which is self-curing at room temperature consisting essentially of water as a dispersing medium and a film-forming binder consisting of lithium hydroxide and alkali stabilized colloidal silica having a particle size of about 1 to about 100 millimicrons, the molar ratio of lithium hydroxide expressed as lithium oxide to colloidal silica, on a dry weight basis, being about 1:40 up to about 1:2.5 and from about 1 part up to about 25 parts of a finely divided metal pigment per part of said binder, said pigment being reactive with said binder and selected from the group consisting of zinc dust, powdered lead and aluminum flake, there being present from about 0.3% to about 4% by weight of alkali as Na_2O and K_2O in said stabilized colloidal silica, the proportion by weight of said reactive pigment to said film-forming binder being at least 1:1 for the lightest density reactive pigment and varying up to a maximum of about 25:1.

3,130,062

SEALING COMPOSITION AND A PROCESS OF MAKING IT

Charles T. Rairdon, Somerville, Manuel R. Ximenez, Plainfield, and William E. Hanson, East Brunswick, N.J., assignors to Johns-Manville Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Oct. 25, 1960, Ser. No. 64,710
4 Claims. (Cl. 106—171)

1. A sealant composition consisting essentially of hydroxylated vegetable oil, about 1 to about 25% by weight of the vegetable oil of an ethyl cellulose stiffener, and between about 25% to about 75% by weight of an inert filler based on the total weight of the sealant, said sealant composition characterized as non-slumping when tested in accordance with military specification MIL-C-915A.

3,130,063

STABILIZATION OF FLUID SUSPENSIONS OF FILLER GRADE CLAY

Nathan Millman and Mark E. Fretz, Macon, Ga., assignors to J. M. Huber Corporation, Locust, N.J., a corporation of New Jersey

No Drawing. Filed Mar. 23, 1961, Ser. No. 97,752
6 Claims. (Cl. 106—308)

1. A method of producing a stable aqueous suspension of clays having a solids content of from about 55% to 75% with the clay having in excess of 35% in the form of particles larger than 2 microns with at least 20% in the form of particles larger than 5 microns which comprises dispersing the clay in water containing a deflocculating agent present in a quantity sufficient to completely disperse the solids in the water forming a slurry and adding thereto while under agitation a thickening agent for water in a quantity sufficient to increase the viscosity of the slurry in excess of 25%.

3,130,064

METHOD OF FORMING RESIN PATTERN ON A PAPER RECORD CARD

Michael A. Insalaco, Webster, N.Y., assignor to Xerox Corporation, Rochester, N.Y., a corporation of New York

No Drawing. Continuation of application Ser. No. 784,048, Dec. 31, 1958. This application Nov. 29, 1961, Ser. No. 155,824
3 Claims. (Cl. 117—17.5)

1. The method of electrostatically forming a tightly bonded non-releasable resin image pattern on a paper business machine record card containing normally present moisture without substantial change in the dimensions, shape or mechanical properties thereof comprising forming a powder image of finely divided electrostatically charged resinous particles by attraction to an electrostatic image pattern corresponding to information to be recorded on the record card, coating the record card with a substantially transparent thermoplastic organic resin film compatible with the resin content of said powder particles, electrostatically transferring said powder image to the surface of said resin coated record card, and heating said record card for a time and temperature insufficient to shrink or warp said card but sufficient to merge the resinous powder particles with each other and with the card whereby the card may be repeatedly used in a business machine without fouling of the machine due to accumulation of resinous particles abraded from the resinous image.

3,130,065

NEW FLOCKED ARTICLES AND METHOD OF MAKING THEM

Joseph F. Manning and Donald J. McKendry, Newton Center, Mass., assignors to Interchemical Corporation, New York, N.Y., a corporation of Ohio

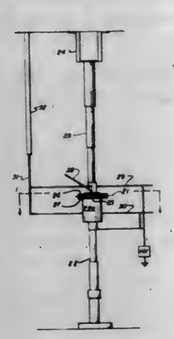
No Drawing. Filed Aug. 9, 1960, Ser. No. 48,364
6 Claims. (Cl. 117—33)

1. In an article of manufacture a flocked coating comprising a substrate with adhering flock, the adhesion being due to a binder formed in situ by curing copolymers of butadiene and acrylonitrile containing carboxyl groups in the presence of a polyfunctional imine crosslinking agent.

3,130,066
ELECTRO SPRAY APPARATUS AND METHOD

Jules L. Brady, deceased, late of Chicago, Ill., by Hazel E. Brady, executrix, Chicago, Ill., assignor to Ransburg Electro-Coating Corp., a corporation of Indiana

Continuation of application Ser. No. 792,222, Feb. 9, 1959. This application Oct. 9, 1961, Ser. No. 143,980
19 Claims. (Cl. 117—93.43)



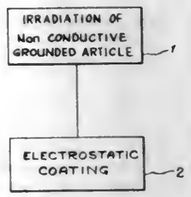
6. In a method of electrostatically distributing liquid as a coating on articles wherein a stream of liquid coating material from a supply source is flowed onto a supporting surface rotated for transforming said material into a thin film and advancing it along said surface to an atomizing zone to provide a thin circular film edge having the coating material uniformly distributed therealong, a plurality of articles are located about such circular film edge with a portion of each article in the plane of such film edge, and an electrostatic field is created between the articles and film edge and concentrated thereat of sufficient strength to affect the atomization, dispersion and deposition on the article surfaces while still in liquid state of fine spray particles atomized from said film edge, the distance between the articles and the atomizing zone being great enough to permit substantial dispersion of the spray particles as they proceed toward the articles, the method of improving quality of atomization and efficiency of deposition of coating materials difficult to atomize electrostatically, comprising rotating said film supporting surface sufficiently rapidly to make mechanical forces appreciably affect the quality of atomization, and preventing air flow against said rapidly rotating surface substantially entirely thereover to thereby prevent the creation of air velocities by said rotation and at the article surfaces of sufficient velocity as to cause particles which would otherwise be electrostatically deposited on the article surfaces to be carried away from said article surfaces.

3,130,067
PROCESS FOR ELECTROSTATICALLY COATING NONCONDUCTIVE ARTICLES

Douglas Bulgin, Erdington, Birmingham, England, assignor to Dunlop Rubber Company Limited, County of London, England, a British company

Filed June 29, 1959, Ser. No. 823,769
Claims priority, application Great Britain July 10, 1958
5 Claims. (Cl. 117—47)

1. A method of electrostatically coating a normally electrically non-conductive grounded article which comprises subjecting the grounded article to irradiation to render a surface of said article electrically conductive for a limited period of time, applying a high electrical potential between an electrode and said article to generate an electrostatic field, dispersing coating material in said

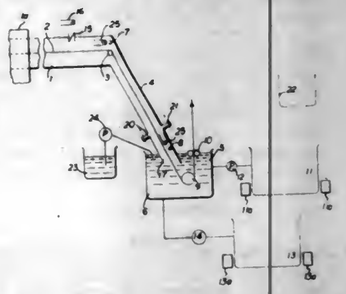


electrostatic field while said irradiated surface remains conductive.

3,130,068
APPARATUS AND PROCESS FOR CHANGE-OVER IN CONTINUOUS METAL COATING LINES

Paul J. Whitley, Middletown, Ohio, assignor to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio

Filed Mar. 30, 1960, Ser. No. 18,629
7 Claims. (Cl. 117—66)



1. A process of effecting rapid change-over from one molten coating metal to another in a continuous coating apparatus comprising a reducing furnace, a cooling hood, and a snout, an end of which dips into molten coating metal in a coating pot so that a strip of metal passing through said elements will be coated in said pot and will exit therefrom through a coating machine in said pot, said furnace, said cooling hood, and said snout being filled with a reducing gaseous atmosphere, which process comprises the steps of rapidly pumping molten metal from said pot into a supplementary holding pot, degassing said furnace, cooling hood, and snout, removing the said pot and replacing it with another pot, removing a detachable end of said snout, and replacing it with another detachable end, removing said coating machine and replacing it with another coating machine, all without dethreading said furnace, said cooling hood, and said snout, pumping molten metal from another source into said replaced pot, and regassing said furnace, said cooling hood, and said snout.

3,130,069
COMPOSITION AND METHOD FOR COATING LEATHER

Malcolm H. Battles, Andover, Joseph A. Bassett, Topsfield, Paul C. Cassidy, Lowell, and Mario Giella, Boston, Mass., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois

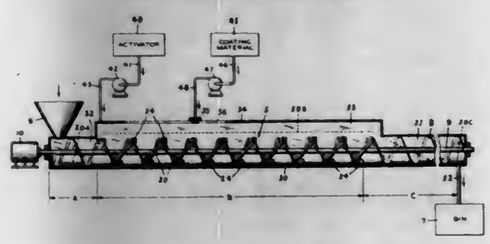
No Drawing. Filed Aug. 3, 1960, Ser. No. 47,150
11 Claims. (Cl. 117—76)

1. A coated leather product having a glossy, flexible top coating comprising: leather which has been coated with a daub coat and overlying said daub coat at a heat-cured continuous coating of the reaction product of a modified polymeric polyamide and a stoichiometric amount ±10% of an epoxy resinuous material containing terminal epoxy groups, said polyamide having an amine number of around 80–320 being the reaction product of polymeric fat acids selected from the group consisting of polymerized 10–22 carbon fatty acids and esters thereof and alkylene polyamine, said polyamide being modified by reaction with C_6–C_8 aliphatic monoepoxides and having at least 30% and not more than 60% of the amino hydrogens blocked to inhibit reactivity.

3,130,070
COATING METHOD AND APPARATUS

Robert Potters and Thomas K. Wood, both of Devon Road, Essex Fells, N.J.

Filed Aug. 10, 1960, Ser. No. 48,610
17 Claims. (Cl. 117—100)



1. A method for coating discrete particles while advancing the same along a feed path, comprising continuously feeding a mass of the particles to be coated along said path under controlled humidity conditions, increasing the depth of the particle mass as it is fed along a portion of said path, agitating said particles as they are advanced along said path portion at said increased depth, applying first an aqueous activator solution and then a silicone material to said particles during the agitation thereof, and varying the time between the application of said solution to the agitated particles and the application of said material thereto in accordance with changes in atmospheric humidity, said solution reacting with said material so as to form a uniform coating on each of said particles.

3,130,071
PROCESS FOR INCREASING THE SCRATCH RESISTANCE OF GLASS BY TREATMENT WITH TITANIUM LACTATE POLYMER

William H. Brockett, Kennett Square, Pa., and Robert Harold Dettre, Brandywine Hundred, and Charles Louis Gray, Jr., Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 23, 1961, Ser. No. 97,757
5 Claims. (Cl. 117—124)

1. A process for increasing the scratch resistance of a glass body in the belt line production of glass articles which comprises wetting the surface of said body with a thin layer of an essentially neutral aqueous solutions of a water-soluble water-stable titanium lactate polymer as obtained by reaction a tetraalkyl titanate with aqueous lactic acid, subjecting the wetted glass to heating at a temperature sufficient to anneal the glass but below that at which perceptible deformation of the shape of the glass body steps in, cooling the glass body and immediately after cooling said glass body allowing the glass body to stand at rest in open air for not less than 30 minutes before exposing the same to handling wherein rubbing of the glass body against other glass bodies is likely to occur.

3,130,072
SILVER-PALLADIUM IMMERSION PLATING COMPOSITION AND PROCESS

Robert Duva, Paramus, Donald Gardner Foulke, Watchung, Plainfield, and Richard Brenneman, Nutley, N.J., assignors to Sel-Rex Corporation, Nutley, N.J., a corporation of New Jersey

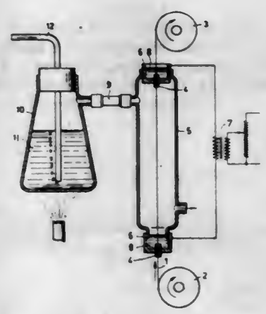
No Drawing. Filed Sept. 22, 1961, Ser. No. 139,858
9 Claims. (Cl. 117—130)

1. As a composition for chemically depositing silver an aqueous solution having a pH of 8–10 and comprising 0.5–30 g./l. of a soluble silver cyanide and 0.01 to 30 g./l. of a soluble palladous salt.

3,130,073
METHOD OF PROVIDING MOLYBDENUM WIRE WITH A CARBON COATING

Petrus Cornelis van der Linden, Pieter van der Werf, and Popko Reinder Dijksterhuis, all of Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Mar. 21, 1961, Ser. No. 97,359
Claims priority, application Netherlands Apr. 2, 1960
3 Claims. (Cl. 117—226)



1. A method of coating a molybdenum wire with carbon comprising the step of heating the molybdenum wire in an atmosphere consisting essentially of hydrogen and chloroform to a temperature not exceeding 1000° C. and at which the chloroform decomposes for a period of time during which a coating of carbon on the molybdenum wire not exceeding two microns in thickness is formed.

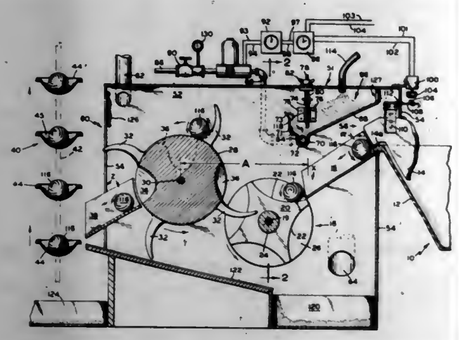
3,130,074
DUSTING APPARATUS

Robert C. Read, Norwalk, and Frank T. Ward, Wilton, Conn., assignors to The Gordon Company, Inc., Norwalk, Conn., a corporation of Connecticut

Filed Mar. 22, 1960, Ser. No. 16,735
7 Claims. (Cl. 118—2)

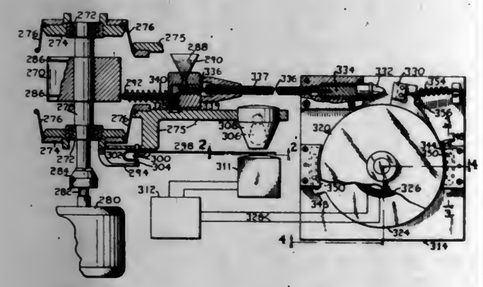
1. An apparatus for depositing dusting materials on balls of bread dough and comprising a closed housing having inlet and discharge openings in opposed walls for said balls and having a dusting area located between said openings, conveyor means for moving the balls from the inlet through the dusting area and out of a discharge opening, a reservoir for the material above said dusting area and a perforated tube at the bottom of the reservoir for delivering an air blast through the material to blow the material into the dusting area, a valve controlling delivery of air to the tube, a first timer switch adjustable to a fixed period during which a ball moves from the inlet opening to the dusting area, a second timer switch closed by the first switch and controlling the period of air delivery during movement of the ball through the dust-

ing area, a switch at the inlet opening and arranged to be closed when contacted by a ball entering the same and



controlling operation of the first timer switch, and a circuit including said switches and the valve.

3,130,075
BALANCING APPARATUS
Everett P. Larsh, Montgomery County, Ohio (124 E. Monument Ave., Dayton 2, Ohio)
Filed May 18, 1960, Ser. No. 29,984
11 Claims. (Cl. 118—8)



5. Apparatus for balancing a member during rotation thereof comprising sensing means detecting lateral movement of the axis of rotation of the member, the sensing means detecting the instant of time that a heavier portion of the member is disposed at a given position, weight changer means, the weight changer means including weight discharger means, rotary impact means connected to the weight discharge means for operation thereof, rotary motor means, clutch means mechanically connected to the motor means and electrically connected to the sensing means, the clutch means being mechanically connected to the rotary impact means for operation thereof for discharge of weight means.

3,130,076
CONTINUOUS VINYL GRAFTING OF CELLULOSE
Arnold H. Gruber, Stamford, Charles E. Light, Darien, and Sewell T. Moore, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
Filed Sept. 29, 1961, Ser. No. 141,650
8 Claims. (Cl. 118—8)

1. An apparatus for the continuous, uniform grafting of a vinyl monomer onto the exposed faces of a continuous cellulosic material which comprises

(*a*) a closed treatment tank,

(*b*) a liquid circulation loop functionally cooperating with said tank to circulate a liquid in said tank, control its temperature, control the concentration of initiator and monomer therein, and provide liquid turbulence, said loop comprising

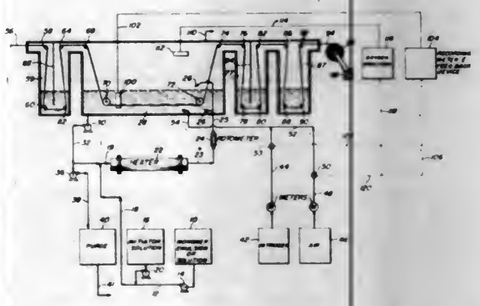
(1) a liquid withdrawal line leading from said tank below the level of a liquid therein, to withdraw liquid from the tank,

(2) a variable speed pump,

(3) heating means for controlling the temperature of liquid circulated through said line, and thereby the temperature of liquid in said tank,

(4) means to introduce the withdrawn, temperature controlled liquid back into said tank closely adjacent to, and having a velocity with respect to, a moving web of cellulosic material in said tank, thereby causing turbulence of liquid in said tank,

(*c*) variable speed pumping means to introduce an initiator-containing liquid into said loop at such a rate as to maintain a desired initiator concentration in said tank,



(*d*) variable speed pumping means to introduce a monomer-containing liquid into said loop at such a rate as to maintain a desired monomer concentration in said tank,

(*e*) means to introduce an oxygen-containing gas into said tank,

(*f*) means to introduce a nitrogen-containing gas into said tank,

(*g*) a gas purge vent leading from said tank,

(*h*) means for controlling the means to introduce oxygen and nitrogen-containing gases so as to maintain oxygen in said tank at a predetermined concentration,

(*i*) means for introducing cellulosic material into said tank,

(*j*) guiding means positioned in said tank to cause said cellulosic material to pass substantially the complete length of said tank below the liquid level therein,

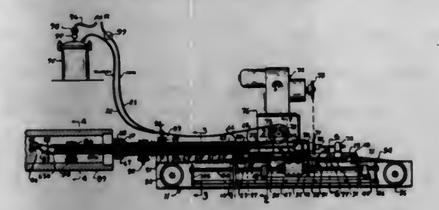
(*k*) means for removing cellulosic material from said tank and

(*l*) means for causing cellulosic material to move through said tank in conformity with said guiding means.

3,130,077
COATING APPARATUS
Harry C. Burden, Sandusky, Ohio, assignor to Sandusky Foundry & Machine Company, Sandusky, Ohio, a corporation of Ohio
Filed May 20, 1960, Ser. No. 30,502
3 Claims. (Cl. 118—306)

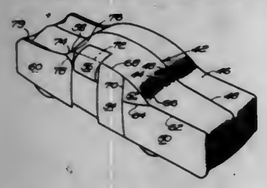
1. In apparatus for applying a coating on the interior of a cylindrical article, the combination comprising a frame, a first tubular member supported by said frame, said first tubular member having an opening near a rear end thereof, a second tubular member mounted for telescoping

movement relative to said first tubular member and including coating applying means mounted on the forward end thereof, means positioned forwardly of said frame for rotatably mounting the cylindrical article in end-to-end relationship with said first and second tubular members for reception thereof, first driving means to cause telescopic extension and retraction of said second tubular member relative to said first tubular member, second driving means of rotating said cylindrical article to aid



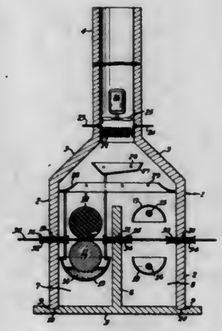
in the distribution of the coating, a hose extending from a source of coating material through said rear opening in said first tubular member and through said first tubular member to supply coating material to said coating applying means, and holding means associated with said frame for supporting said hose with the portion of the hose between said holding means and said coating applying means being substantially free of slack when said coating applying means is in an extreme forward position.

3,130,078
MASKING PRODUCTS FOR AUTOMOTIVE VEHICLES BEING SPRAY PAINTED
Louis S. Lewis, Winthrop, and Irving Cooper, Marblehead, Mass., assignors to Marson Corporation, Revere, Mass., a corporation of Massachusetts
Filed Oct. 31, 1961, Ser. No. 149,016
2 Claims. (Cl. 118—505)



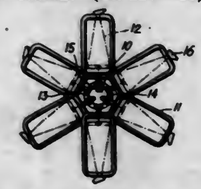
1. A masker to be fitted to a part of an automotive vehicle, said masker comprising panels constituting components of fabric coated with an organo polysiloxane resin in which is dispersed an aluminum powder, said fabric being composed of cotton cloth having from 50 to 60 warp threads and from 47 to 57 filler threads per square inch, said resin containing dispersed therein by total weight of from 10 to 25% aluminum powder, said panels including a pair of generally longitudinal panels, joined along associated longitudinal edges by a seam adapted to extend from the rear trunk over the roof and front hood of said vehicle, and a pair of opposed groups of generally transverse panels in sequence along the remote longitudinal edges of said longitudinal panels, each group including a rear fender section, a rear triangular junction section, a rear medial flap, a forward medial flap, a forward triangular junction section and a front fender section, said rear fender section being joined to one of said remote edges throughout its rear and upper edges by a seam and being joined to the lower edge of said rear triangular junction section by a seam, said rear triangular junction section being joined to said one of said remote edges by a seam, said rearward medial flap being joined at its upper edge to said one of said remote edges by a seam and its upper rearward edge to said rearward triangular junction section by a seam, said front flap being joined at its upper edge to said one of said remote edges by a seam and to the rearward edge of said front triangular junction section by a seam, said front triangular junction section being joined to said one of said remote edges by a seam, said front fender section being joined to said front triangular junction section by a seam and to said one of said remote edges by a seam, whereby at least a selected one of said panels is removable from the remainder of said automotive vehicle without disturbance to other panels of said masker remaining fitted to said automotive vehicle.

3,130,079
APPARATUS FOR DEVELOPING AN ELECTROSTATIC LATENT IMAGE
Frederick W. von Meister, Peapack, N.J., assignor to Azoplate Corporation, Summit, N.J., a corporation of New Jersey
Filed June 30, 1960, Ser. No. 39,839
2 Claims. (Cl. 118—637)



1. Apparatus for developing an electrostatic latent image comprising a housing, flue means communicating with a plurality of compartments within the housing, fluid developer applicating means mounted in one of the compartments, the applicator means comprising a pair of rolls one superposed on the other and a developer tray, one of the rolls being at least partly positioned in the tray and composed of electrically conductive material, infrared heating means mounted in another of the compartments, and sheet passage means formed through the walls of the housing in a path passing between the applicator rolls and through the heating compartment.

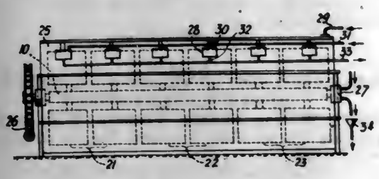
3,130,080
CRYSTALLIZER FOR SUGAR AND THE LIKE
Josef Berger, Hradec Kralove, Czechoslovakia, assignor to Zavody Vitezneho unora, narodni podnik, Hradec Kralove, Czechoslovakia
Filed Mar. 8, 1961, Ser. No. 94,343
7 Claims. (Cl. 127—15)



1. A crystallizer for sugar and the like, comprising, in combination:

(*a*) a vessel;

(*b*) a hollow shaft rotatable in said vessel about a horizontally extending axis and defining an axial cavity;
(*c*) means for rotating said shaft about said axis;
(*d*) a plurality of elongated tubular elements, each of said elements having two terminal portions mounted on said shaft, and a plurality of helical turns intermediate said portions, said helical turns projecting from said shaft in a common radial direction;
(*e*) a source of heat exchange medium;



(*f*) a plurality of elongated conduits mounted within said shaft for joint rotation, each of said elongated conduits having a first and a second end portion, each of said first end portions communicating with one of the terminal portions of a respective tubular element;
(*g*) distributing valve means freely mounted within said shaft and interposed between said source and said second end portions for cooperation with said elongated conduit and sequentially and intermittently connecting said tubular elements to said source during rotation of said shaft; and
(*h*) conduit means communicating with the other terminal portions of said tubular elements for discharge of heat exchange medium from said elements.

3,130,081
LIMITED STABILITY AMYLOSE DISPERSIONS AND METHOD OF PREPARATION
Raymond B. Evans, Catonsville, Md., assignor to National Starch and Chemical Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Dec. 23, 1960, Ser. No. 77,801
3 Claims. (Cl. 127—33)

1. A method for preparing aqueous amylose dispersions which comprises admixing amylose with an aqueous alkali solution having an alkali concentration within the range 4% to 10%, the weight ratio of amylose to water being within the range of the order of 1:5 to 1:20, said admixture being conducted at a temperature within the range 90–180° F., and then acidifying the resulting dispersion with an acid selected from the class consisting of hydrochloric, nitric, acetic, propionic, succinic and oxalic acids, to a pH within the range 2 to 9.

3,130,082
SUGAR RECOVERY PROCESS AND PRODUCTS
Gonzalo Serbia, Aguirre, Puerto Rico, assignor to Central Aguirre Sugar Company, Aguirre, Puerto Rico
No Drawing. Filed Nov. 9, 1959, Ser. No. 851,527
10 Claims. (Cl. 127—46)

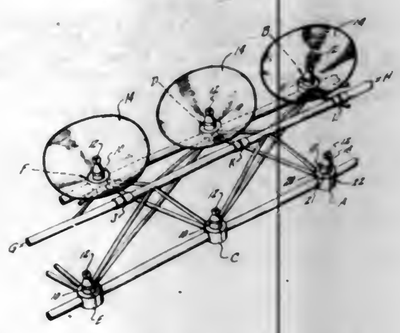
1. The method of treating sugar (sucrose) bearing juices, syrups and molasses containing metallic cations of potassium, sodium, calcium and magnesium which consists essentially in subjecting the sugar material to the action of a cation exchange resin of the ammonium form to exchange metal cations in the sugar material with ammonium ions and to fix the metal cations in the resin, separating the resin carrying the metal cations from the sugar material carrying the ammonium ions exchanged therein for potassium, sodium, calcium and magnesium cations, and recovering sugar from the latter in the presence of the ammonium ions.

9. In the method of producing a fertilizer from components of the converted resin separated in claim 1, the steps of recovering material containing the sugar-derived cations having substantially the entire potassium content removed from the converted resin, and compounding such material containing the said cations with a fertilizer carrier.

3,130,083
TREATMENT OF ARTICLES MADE OF LEATHER-LIKE MATERIAL
Henry C. Turner, 26 Loxford St., Manchester, England
No Drawing. Filed Jan. 25, 1961, Ser. No. 84,762
Claims priority, application Great Britain Jan. 27, 1960
2 Claims. (Cl. 134—7)

1. A method of treating articles of leather in which frictional overheating of the same is minimized comprising subjecting the surface to be treated to a stream of cooled fluid containing particles of aluminum oxide wherein the pressure of the cooled fluid stream lies between 0.5 p.s.i. and 300 p.s.i. and the particles have a diameter in the range from 0.002 inch to .060 inch.

3,130,084
SOLAR THERMOELECTRIC GENERATOR
Samuel J. Loring, West Hartford, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Mar. 14, 1960, Ser. No. 14,703
5 Claims. (Cl. 136—4)



1. In combination, a plurality of thermoelectric generators for converting solar energy into electrical energy, support means including a three-dimensional truss connecting said plurality of generators and forming an array in which said generators are parallel, portions of said support means developing varying temperatures, a coating of materials of preselected emissivities applied to at least a portion of said support means to maintain said support means at the same average temperature, and means including said support means electrically connecting said plurality of generators.

3,130,085
METHOD AND MATERIALS FOR APPLYING CHROMATE CONVERSION COATINGS ON ZINCIFEROUS SURFACES
George F. Otto, Oreland, Pa., assignor to Amchem Products, Inc., Ambler, Pa., a corporation of Delaware
No Drawing. Filed June 4, 1963, Ser. No. 285,222
17 Claims. (Cl. 148—6.2)

6. The method of forming a chromate conversion coating on a zinciferous surface which comprises subjecting the surface to the action of an aqueous acid solution consisting essentially of:
(*a*) at least 3.0 grams/liter of zinc ion (calculated as Zn),
(*b*) from 5.0 to 75 grams/liter of hexavalent chromium ion (calculated as CrO_3),
(*c*) from 1 to 20 grams/liter of chloride ion (calculated as Cl), and
(*d*) at least 1.0 gram/liter of a complex fluoride radical selected from the class which consists of TiF_6, BF_4 and SiF_6,
said solution being substantially free of alkali and alkaline earth cations and being maintained at a pH of from 0.57 to 3.0 and the treatment being continued until a chromate conversion coating is formed on the surface.

3,130,086
MATERIALS AND METHOD FOR USE IN APPLYING CHROMATE CONVERSION COATINGS ON ZINCIFEROUS SURFACES
George F. Otto, Oreland, Pa., assignor to Amchem Products, Inc., Ambler, Pa., a corporation of Delaware
No Drawing. Filed July 22, 1963, Ser. No. 296,491
15 Claims. (Cl. 148—6.21)

6. The method of forming a chromate conversion coating on a zinciferous surface which comprises subjecting the surface to the action of an aqueous acid solution consisting essentially of:
(*a*) at least 3.0 grams/liter of zinc ion (calculated as Zn),
(*b*) from 5.0 to 35 grams/liter of hexavalent chromium ion (calculated as CrO_3),
(*c*) from 0.05 to 27 grams/liter of sulfate ion (calculated as SO_4), and
(*d*) at least 0.15 gram/liter of a complex fluoride radical selected from the class consisting essentially of TiF_6, BF_4, and SiF_6,
said solution being substantially free of alkali and alkaline earth cations and being maintained at a pH of from 0.62 to 2.5 and the treatment being continued until a chromate conversion coating is formed on the surface.

3,130,087
COMPOSITION AND METHOD FOR COATING STAINLESS STEEL ARTICLES
Ira J. Duncan, Atlanta, Ga., assignor to Detrex Chemical Industries, Inc., Detroit, Mich., a corporation of Michigan
No Drawing. Filed May 1, 1961, Ser. No. 155,223
(Filed under Rule 47(b) and 35 U.S.C. 118)
8 Claims. (Cl. 148—6.24)

1. A process for treating the surface of stainless steel based metals which comprises the step of contacting the clean metal surface with an aqueous bath containing from about 30 to about 50 pounds per each one hundred gallons of water of a dry composition consisting essentially of:

	Percent by weight
Oxalic acid	50.0 to 89.0
Ferric sulfate	6.0 to 18.0
Sodium bisulfate	2.0 to 14.0
Sodium silicofluoride	2.0 to 14.0
Sodium thiosulfate	1.0 to 4.0

3,130,088
THERMAL-FLATTENING OF METALLIC STRIP
Lowell L. Cook, Butler, Pa., assignor to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio
Filed Dec. 31, 1958, Ser. No. 784,214
2 Claims. (Cl. 148—12)

1. A process for increasing the flatness of steel strip which, in otherwise finished form, is characterized by a lack of flatness, which comprises bringing the material to a temperature of at least 900° F. at which it is soft enough for the relief of strains, alternately passing the strip over and under a plurality of spaced apart flattening rolls some of which at least are arranged to penetrate the pass line of the strip by a distance no greater than the diameter of said rolls, while at the same time subjecting the

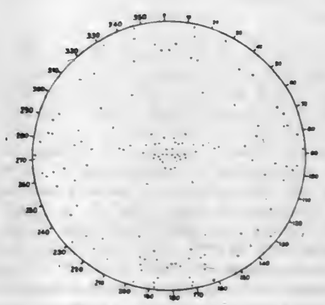


material to longitudinal tension, said flattening rolls being spaced from each other by a substantial distance on the order of from about seven to fifteen times the diameter of said rolls, and thereafter cooling the said strip to normal temperature at a rate slower than open cooling in air at room temperature.

3,130,089
HEAT TREATMENT OF PREFORMED FINISH-MACHINED ARTICLES
Ernest F. Mellinger, San Diego, Calif., assignor to Ryan Aeronautical Co., San Diego, Calif.
Filed July 5, 1960, Ser. No. 40,880
2 Claims. (Cl. 148—13)

1. A method of heat treating a pre-formed finish machined article susceptible to oxidation and distortion during the heat treating, comprising: sealing the article in an envelope of thin, substantially flexible material resistant to the heat to be applied; purging the oxide-forming atmosphere from the envelope; heating the article to the required heat treatment temperature; clamping the envelope and the article contained therein in clamping means shaped to conform exactly to the desired final shape of the heat treated article, for at least the portion of the heat treatment process during which distortion may occur, the envelope being deformed by the clamping means and fitting closely around the article; removing the envelope and article from the clamping means; and removing the article from the envelope, whereby the resultant heat treated article has the desired final shape of the finished, heat treated article and the necessity for further machining is obviated.

3,130,090
NON-DIRECTIONAL ORIENTED SILICON-IRON
John M. Jackson, Middletown, Ohio, assignor to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio
Filed Jan. 19, 1962, Ser. No. 167,318
3 Claims. (Cl. 148—31.55)



1. A cold rolled silicon-iron alloy sheet stock containing substantially 2.0 to 3.5% silicon and characterized by

a crystal orientation in which (100) planes of a majority of the cubic crystals lie parallel to the surfaces of the sheet stock, with the edges of the cubes substantially randomly oriented in the plane of the stock, the said sheet stock being characterized by a substantially uniform permeability in all directions within the plane of the sheet stock.

3,130,091

NON-ORIENTED SILICON-IRON SHEET STOCK AND PROCESS OF MAKING IT

Victor W. Carpenter, Franklin, and John M. Jackson, Middletown, Ohio, assignors to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio

No Drawing. Filed Apr. 28, 1958, Ser. No. 731,116
12 Claims. (Cl. 148—111)

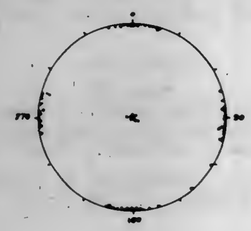
1. A process for the manufacture of non-oriented silicon-iron stock of sheet gauge, which comprises hot rolling to an intermediate gauge a silicon-iron containing not more than about 3.8% silicon and substantially 0.02% to 0.08% carbon, pickling the hot rolled material, cold rolling it to final gauge without intermediate annealing, and then subjecting the material to a strand annealing treatment at a temperature of substantially 1950° to 2200° F. in a decarburizing atmosphere whereby to remove part of the carbon therein while leaving a total carbon content in excess of 0.01%, pickling the stock, and thereafter subjecting it to an annealing treatment at a temperature of substantially 1400° to 1700° F. in a decarburizing atmosphere to reduce the total carbon content to a value less than about 0.01%.

3,130,092

PROCESS OF MAKING CUBIC TEXTURE SILICON-IRON

Dale M. Kohler, Middletown, and Martin F. Littmann, West Middletown, Ohio, assignors to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio

Filed May 29, 1959, Ser. No. 816,889
9 Claims. (Cl. 148—111)



1. A process of producing silicon-iron for magnetic uses having high straight-grain and high cross-grain permeabilities, which comprises providing a polycrystalline ferrous sheet stock containing substantially 2.5 to 4.0% silicon and having preponderantly a (100)[001] crystal orientation by Miller's indices, cold rolling said silicon-iron with a reduction of substantially 55 to 90%, and subjecting said silicon-iron to a primary recrystallization in a heat treatment at about 1200° F. to 2200° F., then again cold rolling said silicon-iron with a reduction of substantially 50% to 80%, and heat treating the silicon-iron at a temperature of 1900° to 2300° F. under conditions productive of secondary recrystallization whereby first to subject said silicon-iron to primary recrystallization, and thereafter to secondary recrystallization to convert said silicon-iron to a polycrystalline product having preponderantly a (100)[001] orientation.

3,130,093

PRODUCTION OF SILICON-IRON SHEETS HAVING CUBIC TEXTURE

Dale M. Kohler, Middletown, Ohio, assignor to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio

No Drawing. Filed Nov. 8, 1960, Ser. No. 67,917
5 Claims. (Cl. 148—111)

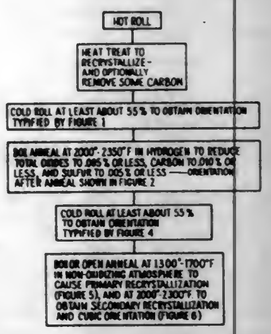
1. A process of producing silicon-iron sheet stock characterized by a crystal orientation in which the majority of the grains have their lattices oriented such that the cube faces are substantially parallel to the sheet surface and the cube edges are substantially aligned in the rolling directions and in a direction perpendicular thereto, which comprises providing an elongated strip of hot formed silicon-iron stock of intermediate gauge consisting of about 2.5% to 3.5% silicon, about .06% to .12% manganese, not more than about .025% sulfur, not more than about .04% carbon, not more than about .015% total oxides, and substantially free of aluminum, the balance being iron and incidental impurities, subjecting said stock to a first cold rolling reduction in the direction of its length of about 40% to 85%, then cutting apart the strip into sheet lengths and cold rolling said sheet stock 40% to 70% in a direction 90° to the first rolling direction in the absence of an anneal between the two cold rolling reductions, heat treating said cross-rolled stock at a temperature of about 1300° to 1800° F. for primary recrystallization and to a surface energy secondary recrystallization at a higher temperature on the order of 2200° F.

3,130,094

MANUFACTURE OF SILICON-IRON HAVING CUBIC TEXTURE

Dale M. Kohler and Martin F. Littmann, both of Middletown, Ohio, assignors to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio

Filed Oct. 13, 1961, Ser. No. 145,540
13 Claims. (Cl. 148—111)



1. A process for the manufacture of silicon-iron sheet stock having cubic texture, which comprises hot rolling silicon-iron containing substantially 2.5% to 4% silicon and a total oxide content of not more than 0.040% to an intermediate gauge, heat treating the hot rolled stock at a temperature of at least about 1400° F. but not substantially exceeding 1800° F., cold rolling said stock with a reduction of at least about 55%, annealing the said stock at a temperature of about 2200° to 2350° F. in an atmosphere of hydrogen and for a sufficient length of time to recrystallize a substantial number of the grains of said stock with their cube faces tilted at an angle of less than about 32° from parallelism with the stock surfaces, the stock after the said anneal having oxide inclusions less than about 0.005%, a carbon content not substantially greater than 0.010%, and a sulfur content not substantially greater than 0.005%, again cold rolling said stock

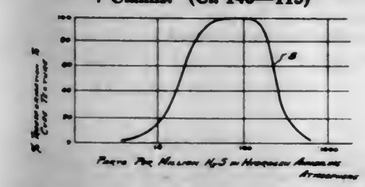
with a reduction of at least about 75%, to reduce said stock to final gauge and further to orient the grains therein, and subjecting the cold rolled sheet stock first to a primary recrystallization anneal at a temperature of about 1300° to about 1700° F. in a non-oxidizing atmosphere to produce cubic nuclei having their cube faces tilted at less than 5° to the surface of the sheet stock, said nuclei having also at least about 75% of their cube edges aligned within 20° of the rolling direction, and second to an anneal at a temperature of about 2000° to about 2300° F. in a non-oxidizing atmosphere under conditions to produce secondary recrystallization by surface energy whereby to cause said nuclei to grow by said secondary recrystallization at the expense of grains having substantially different orientations in said sheet stock.

3,130,095

PRODUCTION OF ORIENTED SILICON-IRON SHEETS BY SECONDARY RECRYSTALLIZATION

Dale M. Kohler and John M. Jackson, Middletown, Ohio, assignors to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio

Filed May 14, 1959, Ser. No. 813,289
7 Claims. (Cl. 148—113)



1. In a process of making silicon-iron sheets having a high proportion of cube-on-face grains, the steps comprising annealing cold rolled sheets of silicon-iron at a temperature of at least about 1900° F. in an atmosphere of dry hydrogen, said atmosphere containing a vapor of a sulfur containing compound which will dissociate at the annealing temperature to produce elemental sulfur, the partial pressure of said vapor being in the range of from 15 to 190 microns of mercury, and continuing the annealing until substantially complete cube-on-face grain growth by secondary recrystallization takes place.

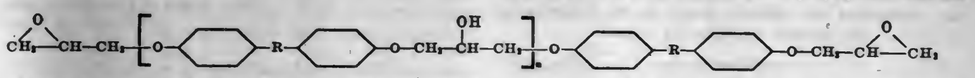
3,130,096

SOLID COMBUSTIBLE COMPOSITION CONTAINING EPOXY RESIN

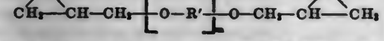
Malcolm E. Pruitt, Wallace T. McMichael, and Elmer L. Pendleton, Lake Jackson, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Nov. 9, 1961, Ser. No. 151,165
8 Claims. (Cl. 149—19)

1. The solid propellant composition which comprises an intimate mixture of (A) between 10 and 35 percent by weight of a fuel-binder consisting essentially of a thermosetting glycidyl ether mixture of (1) an aromatic diglycidyl ether having the formula



wherein R is an isoalkylidene residue containing 1 to 4 carbon atoms, n has a value of 0 to 4, and the epoxide equivalent weight is from about 156 to about 773, and (2) an aliphatic diglycidyl ether having the formula



wherein R' is an alkylene residue containing from 2 to 4 carbon atoms, m has a value of from 0 to about 90, and the epoxide equivalent weight is between about 65 and about 3000, in a weight ratio of (1) to (2) of between 0.02 and 1.5, and a curing agent for said diglycidyl ethers consisting of a mixture of a major portion of (a) a monofunctional amine and a minor portion of (b) difunctional and polyfunctional amines, in an amount sufficient both to extend the chain growth and to effect cross-linking of the diglycidyl ethers, and (B) from 90 to 65 percent by weight of an inorganic oxidizing agent.

3,130,097

BORON CONTAINING FUELS

Folsom E. Drummond, Washington, D.C., assignor to The Commonwealth Engineering Company of Ohio, Dayton, Ohio

No Drawing. Filed Sept. 20, 1961, Ser. No. 140,169
4 Claims. (Cl. 149—22)

4. A fuel consisting of the following constituents in parts by weight:

	Parts by weight
Diborane	35 to 45
Metal particles of a metal selected from the group consisting of beryllium, boron and lithium and mixtures thereof	20 to 50
Alkali metal perchlorate	5 to 30
Cellulose nitrate	10–25

3,130,098

METHOD FOR PROVIDING IMPROVED DIFFRACTION GRATED LINES ON GLASS BODY SURFACE

William C. Levengood, Muncie, Ind., assignor to Ball Brothers Company, Incorporated, Muncie, Ind., a corporation of Indiana

No Drawing. Filed Sept. 29, 1960, Ser. No. 81,660
15 Claims. (Cl. 156—15)

1. A method for providing improved diffraction grated lines on the surface of a glass body member which comprises, forming preliminary grating lines on the surface of the member, cleaning the surface, and applying an aqueous treating solution to the lines to increase the depth and improve the contrast and smoothness thereof without significantly increasing the width of the lines; said treating solution comprising an alkali metal fluoride and concentrated hydrochloric acid.

3,130,099

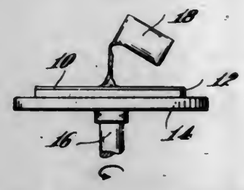
METHOD FOR MOUNTING BIOLOGICAL SECTIONS, TRANSPARENCIES AND THE LIKE

Freddy Homburger, 759 High St., Dedham, Mass.

Filed Sept. 30, 1960, Ser. No. 59,734
1 Claim. (Cl. 156—57)

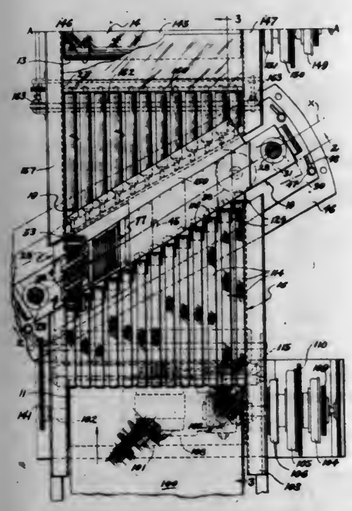
The method which comprises providing a support rotatable about a vertical axis, placing a specimen on a flat glass plate and mounting the plate on the rotatable support, rotating the support to effect rotation of the plate and hence of the specimen about an axis perpendicular to the surface of the specimen, while rotating the support pouring a fluid solution of polystyrene onto the exposed surface of the specimen to effect uniform distribution of the fluid solution throughout the specimen, removing the plate with the impregnated specimen from the rotating support and placing it in an evaporator, evaporating the solvent from the fluid solution to form a solid polystyrene film, removing the plate from the evaporator and placing it in a water bath to separate the film from the plate by flotation, drying the separated film,

placing it between sheets of polyethylene and concomitantly pressing the film between said sheets and subject-



ing them to heating to effect fusion of the sheets to each other and to the film.

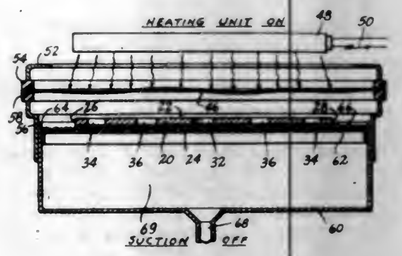
3,130,100
METHOD AND APPARATUS FOR BUTT SPLICING SHEET MATERIAL
Victor H. Hasselquist, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
Filed July 17, 1956, Ser. No. 598,313
27 Claims. (Cl. 156—157)



1. The method of splicing rubber adhesive sheet material which method comprises positioning margins of the material with edges thereof in opposed relation, exerting confining pressure on said margins throughout the length of said opposing edges, and while maintaining said confining pressure, forcibly butting said opposed edges against each other into mutually adhering relation, and transferring some of the material of one margin across the junction of the opposing edges to the other margin to further amalgamate the adhering edges.

3,130,101
MANUFACTURE OF PLASTIC COVERED PANELS FOR USE IN BUILDING CONSTRUCTION
William G. Gittins, Ladue, and Charles H. Close, Pacific, Mo. (both of 11033 Manchester Road, St. Louis 22, Mo.)
Filed Aug. 11, 1961, Ser. No. 130,903
6 Claims. (Cl. 156—163)

1. In the manufacture of plastic covered panels for use in building construction, the panel bodies thereof having been prefabricated and provided with perforations that present an ornamental design, the method which includes the following steps: severing a first sheet of predetermined size from a roll of thermoplastic material; depositing the panel body onto a horizontally disposed perforated plate rigidly mounted near the open upper end of a hollow housing with a wire screen interposed between said panel body and said perforated plate; suspending said first sheet above the panel body in predetermined spaced relationship relatively to a heating unit disposed thereabove, with the marginal portions of the sheet clamped between vertically movable clamping frames; directing heat rays from the heating unit against the suspended sheet for a determined length of time sufficient to soften the sheet and impart elasticity thereto; lowering the thus treated sheet onto the panel body, with the heating unit turned off and suction simultaneously applied from below, the lowered sheet combining with the thus closed upper end of said housing to form a vacuum chamber about and below the panel body; further lowering the sheet until the clamped marginal portions thereof reaches a plane approximately co-planar with the upper end of the housing, the suction being constantly applied whereby to draw the sheet material into the perforations of the panel body, against the top surface thereof, and against the upper half of the peripheral edges of the panel body; shutting off the suction; elevating the upper clamping frame; removing the thus processed panel body and trimming therefrom the

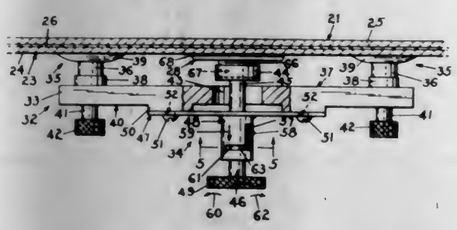


major marginal portions of the sheet that extend beyond the peripheral edges of said panel body; inverting the thus half-processed panel body and depositing same onto the perforated plate aforesaid with the lower clamping frame in elevated position; severing a second sheet corresponding in size with the first sheet from a roll of thermoplastic material; suspending said second sheet above the panel body in predetermined spaced relationship relatively to said heating unit disposed thereabove, with the marginal portions of the sheet clamped between said vertically movable clamping frames; directing heat rays from the heating unit against the suspended sheet for a determined length of time sufficient to soften the sheet and impart elasticity thereto; lowering the thus treated sheet onto the panel body, with the heating unit turned off and suction simultaneously applied from below, the lowered sheet combining with the thus closed upper end of said housing to form a vacuum chamber about and below the panel body; further lowering the sheet until the clamped marginal portions thereof reaches a plane approximately coplanar with the upper end of the housing, the suction being constantly applied whereby to draw the sheet material into the perforations of the panel body, against the top surface thereof, and against the upper half of the peripheral edges of the panel body; shutting off the suction; elevating the upper clamping frame; removing the thus processed panel body and trimming therefrom the major marginal portions of the sheet that extend beyond the peripheral edges of said panel body.

3,130,102
METHOD OF MAKING GOLF BALLS WITH COVERS OF POLYURETHANE
John William Watson and Peter Ford, Erdington, Birmingham, England, assignors to Dunlop Rubber Company Limited, London, England, a British company
No Drawing. Filed May 17, 1961, Ser. No. 110,638
Claims priority, application Great Britain May 19, 1960
14 Claims. (Cl. 156—228)

14. A process for the manufacture of cored balls which comprises the steps of moulding and partially curing a curable polyurethane pre-polymer in an unpatterned half-shell mould at a temperature from about room temperature to about 105° C., interrupting the curing of the polyurethane pre-polymer in the mould by cooling the half-shell to a temperature below 0° C., positioning a moulded half-shell on either side of a previously prepared core in a mould so that the edges of the half-shells lie parallel to the edges of the mould and advancing the cure of the polyurethane to a non-thermoplastic state so that the abutting edges of the half-shells are fused together.

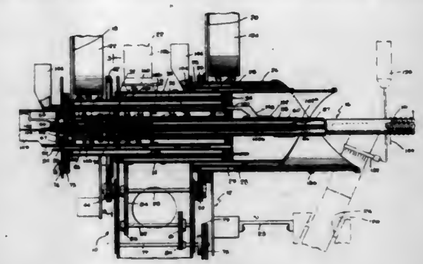
3,130,103
APPARATUS FOR MOUNTING REAR VIEW MIRRORS
Paul T. Mattimoe, Toledo, William L. Elton, Maumee, and John J. Hofmann, Toledo, Ohio, assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
Filed May 31, 1960, Ser. No. 32,626
5 Claims. (Cl. 156—391)



1. Apparatus for use in securing a rear view mirror mounting block directly upon the interior surface of an automobile windshield, comprising a base plate, means carried by said base plate for detachably securing it to the windshield, a spring loaded plunger device, and means for detachably securing said plunger device on said base plate, said plunger device including means for supporting the rear view mirror mounting block and for holding said block in spaced relation to the interior surface of the windshield and means for urging said last-named means toward said windshield to bring said mounting block into contacting relationship with the interior surface thereof.

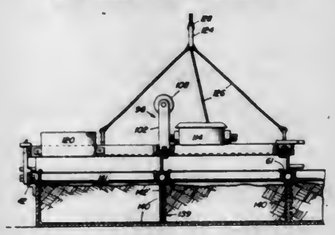
3,130,104
APPARATUS FOR CONTINUOUSLY MANUFACTURING FIBER REINFORCED PLASTIC PIPE
Thomas P. Lewis, North Apollo, and Dov Henis, Pittsburgh, Pa., assignors, by mesne assignments, to Apollo Carlon Pipe Company, Ponca City, Okla., a corporation of Pennsylvania
Filed Oct. 2, 1961, Ser. No. 142,047
10 Claims. (Cl. 156—425)

1. In apparatus for making tape reiforced plastic pipe, a mandrel comprising a longitudinally extending member, a plurality of circumferentially spaced continuous conveyor elements each having a portion overlying the outer surface of said tubular member and another portion extending through said tubular member, each of said conveyor elements being movable longitudinally of said tubular member, and spirally wound wrapper means on said tubular member in overlying relation with a part at least of the portion of the conveyor elements overlying the outer surface of said tubular member, whereby when said conveyor elements move longitudinally of said tubular member said spirally wound wrapper moves therewith to there-



by form a longitudinally movable pipe forming surface, said spirally wound wrapper means including a first spirally wound wrapper having adjacent convolutions in spaced relation and a second spirally wound wrapper having its convolutions bridging the spaces between adjacent convolutions of said first wrapper.

3,130,105
PACKAGING APPARATUS
Wayne L. Roston, R.D. 6, Box 198, Mansfield, Ohio
Filed Sept. 19, 1961, Ser. No. 139,124
8 Claims. (Cl. 156—515)

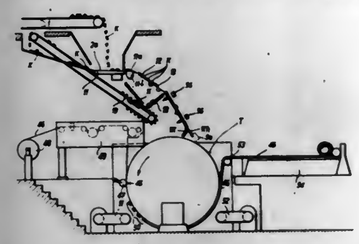


1. A packaging apparatus for nurseries including a mold having one side open, a packaging frame on said mold and enclosing the opening therein, said frame being composed of hollow members connected at their ends, longitudinal slots in said hollow members on the sides thereof opposite said mold, cutter means adjacent said frame, said cutter means including blade means of such size and shape as to extend into said longitudinal slots so as to sever a plastic material in said mold and extending over said slots, and heating means on said blade means for heating same for melting said plastic and sealing the severed edges thereof.

3,130,106
APPARATUS FOR MAKING COMPOSITE MOSAIC
René Bornand, Zurich, Switzerland, assignor to Rolltex AG., Zurich, Switzerland
Filed Feb. 17, 1959, Ser. No. 793,717
Claims priority, application Switzerland Feb. 18, 1958
2 Claims. (Cl. 156—552)

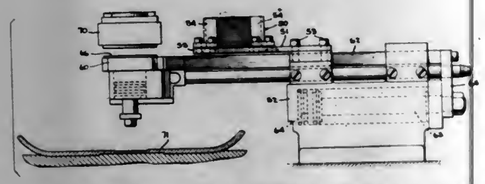
1. In an installation for making mosaics, in particular wooden mosaics, a conveying device to feed small cubes to and into the fields of a drum comprising a plurality of juxtaposed and inclined channels adapted to guide the small cubes from a loose heap of unassorted cubes onto, through, and out of said channels, the juxtaposed and inclined channels for guiding the small cubes being subdivided in the direction of conveyance into a plurality of

sections with the first section serving as a wide collection field for the loose unassorted pieces with the next section serving as an actual sorting apparatus and the last section as a closed guide for the proper geometric outlet and inlay of the cubes delivered in rows behind each other into the empty fields of the drum, the sorting ap-



paratus being formed by juxtaposed and inclined rails having special faces for properly positioning the cubes, and strippers for any improperly positioned cubes, said rails constituting empty spaces adjacent each other at a distance apart and through which the separated cubes will fall on a chute directing them back to the conveyer.

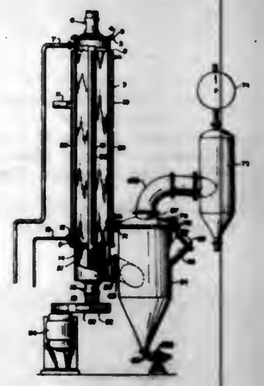
3,130,107
MEANS FOR DECORATING GLASS ARTICLES
Herbert C. Shank, Jr., Lancaster, Ohio, assignor to Anchor Hocking Glass Corporation, Lancaster, Ohio, a corporation of Delaware
Filed Aug. 11, 1960, Ser. No. 49,093
4 Claims. (Cl. 156—559)



3. In a mechanism for applying a decoration to an article, a holder for a stack of decorations having an opening in its bottom, article supporting means laterally spaced from said holder, an applicator head mounted for vertical movement above said article supporting means, a gripper member slidable relative to said stack of decorations from a position beneath the holder to a position beneath the applicator head, decoration gripping means on said gripper member, operating mechanism for slidably moving said gripper member, said operating mechanism including means for moving said gripper member beneath said holder, means in said gripping means for removing a decoration from the holder, said operating mechanism including means for sliding said gripper member to a position beneath said applicator head, said applicator head comprising means for transferring said decoration from said gripper member to said applicator head, and means for lowering said applicator head into contact with said article to apply said decoration to the article.

3,130,108
ROTATING BLADE TYPE EVAPORATORS
Albert W. Eckstrom, Snyder, and James G. Moore, Williamsville, N.Y., assignors to Blaw-Knox Company, Pittsburgh, Pa., a corporation of Delaware
Filed Nov. 7, 1960, Ser. No. 67,785
13 Claims. (Cl. 159—6)

1. A rotating blade type evaporator comprising a vertically-disposed elongated evaporator shell of circular section throughout its length having an upper portion, a lower portion, and an intermediate portion forming a continuous smooth interior wall, means for heating the walls of the intermediate portion only, means for delivering material to be concentrated by evaporation into the upper portion, a rotor extending longitudinally of the shell having main vanes thereon for spreading material over the interior of the shell and agitating the same, the vanes extending from the upper portion to the lower end of the intermediate portion, a bottom cover plate closing the end of said lower portion, the lower portion of the shell having an open area therein extending upwardly from the bottom cover plate through which both liquid and vapor are discharged from the evaporator in the side wall thereof, an impeller on the lower end of the rotor within said lower portion of the shell having other vertical centrifugally acting vanes separated from and out of vertical alignment with the main vanes for expelling product and vapors peripherally



through said open area, a separator having a duct leading from the opening to the interior thereof, means communicating through the separator to the opening for maintaining a partial vacuum within the shell, said other vertical vanes in the lower portion acting to forcibly expel the vapors through said open area and overcome back pressure in the open discharge area and at the same time to break foam formed during evaporation of vapors from the liquid in the heated intermediate area of the shell and release vapors from such foam before the material is discharged into the separator, the rotor having a shaft extension at the bottom passing through the bottom cover plate, means extending downwardly from said cover plate providing a sealed bearing about said shaft extension, the shell having a top cover plate, a shaft extension at the top of the rotor extending upwardly through the top cover plate, means on the exterior of the top cover plate providing a sealed bearing for the upper shaft extension, and driving means on one of said shaft extensions.

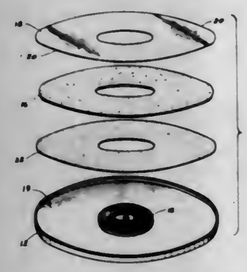
3,130,109
ARTIFICIAL PARSLEY GARLAND
Philo J. Harvey, Los Angeles, Norvin A. Reed, North Hollywood, and Edwin S. Wright, Los Angeles, Calif., assignors to Parsfern, Inc.
Filed Sept. 21, 1961, Ser. No. 139,648
4 Claims. (Cl. 161—25)

1. An artificial garland comprising in combination, a plastic molded unit comprising a stem having leaves extending therefrom, said stem having a part thereof having a longitudinally extending groove to simulate the main stem of a natural plant, said stem having a flattened part, a second similar stem having leaves extending therefrom and also having a flattened part, means securing the said flattened parts of the stems together in contiguous overlying relationship, a second similar unit of stems having flattened portions fastened together in contiguous overlying relationship, the said flattened portions of the stems having a permanent set as a result of the flattening, and said stem and leaf units being attached together by having the flat-



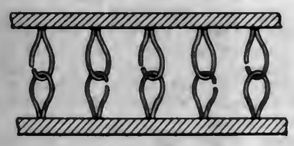
tened stems of one attached to the flattened stems of the other in overlying stepped relationship whereby to form a garland having flattened stem portions with a permanent set and extending grooved stem portions and leaves attached thereto.

3,130,110
COMPUTER RECORDING DISC ASSEMBLY
Edward Schmidt, Pound Ridge, N.Y., assignor to Reeves Soundcraft Corp., Danbury, Conn.
Filed Feb. 15, 1961, Ser. No. 89,524
7 Claims. (Cl. 161—42)



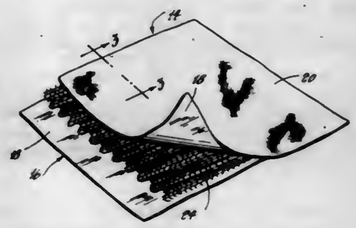
4. A magentic recording disc comprising a rigid disc having an annular recess in at least one surface thereof, an annular ring having a pressure sensitive adhesive on both sides thereof, said annular ring having the same inner and outer diameters as said recess, said ring being inserted within said recess and bonded to said disc, an annular resilient pad, said pad having a smaller outer diameter and a larger inner diameter to expose a strip of said ring at the inner and outer edges of said pad, an annular film having a magnetic recording surface, said film being laid over said pad and bonded to said ring along said exposed strips.

3,130,111
SEPARABLE PILE FASTENER
Manji Izumi, Tokyo, Japan, assignor to Sobef Societe de Brevets de Fermeture Coire S.A., Chur, Switzerland
Filed Aug. 14, 1961, Ser. No. 131,369
9 Claims. (Cl. 161—48)



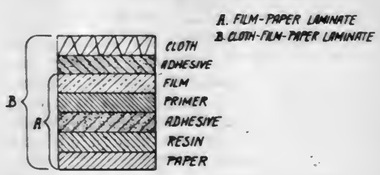
1. Hook and loop fastener material having both hooks and loops on the same surface of a foundation piece, said hooks and said loops being intermingled substantially throughout the area of said surface, and said hooks and said loops being closely spaced in the form of a raised pile.

3,130,112
THERMAL INSULATING ASSEMBLY
John J. Anderson, Jr., 1129 Cornwell Ave., Baldwin, N.Y.
Filed Mar. 30, 1961, Ser. No. 99,641
4 Claims. (Cl. 161—89)
(Granted under Title 35, U.S. Code (1952), sec. 266)



A light weight garment for protection against extremes in temperature
comprising
a first and second flexible, impermeable neoprene coated nylon fabric,
a low density, flexible, compressive resistant organic polymeric spacer of low thermal conductivity intermediate said first and second fabric, said spacer being a mesh, whereby the area of the contiguous faces of said fabrics that abuts said spacer is substantially less than the total area of each of said faces of fabrics,
said first and second fabrics having a flexible, heat radiation reflective metallic surface on each of the faces of said fabric contiguous said spacer, and
said metallic surface having a low infra-red radiation emissivity.

3,130,113
SELF-ADHESIVE DECORATIVE SURFACE COVERING MATERIAL
David Silman, Rockville Centre, N.Y., assignor to United Merchants and Manufacturers, Inc., New York, N.Y., a corporation of Delaware
Filed Aug. 9, 1954, Ser. No. 448,655
7 Claims. (Cl. 161—97)



7. Self-adhesive cloth-film laminate for covering surfaces comprising in combination, cloth fabric in the piece printed with an ornamental design on one side only, the unprinted side of the fabric being coextensively secured to one side of a film of vinyl chloride in sheet form, the opposite side of said film being coated with a pressure sensitive permanent adhesive, and a temporary backing releasably adhered to the permanent pressure sensitive adhesive and adapted to be stripped therefrom.

ERRATUM

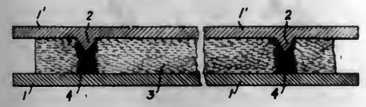
For Class 161—130 see:
Patent No. 3,130,412

3,130,114

PROCESS OF MANUFACTURING FIBREBOARDS AND PRESSINGS FROM LIGNOCELLULOSE MATERIAL

Vojtěch Nagy, Anton Dvořák, Zdenek Šisler, Miloslav Keda, Tibor Ferko, and Karol Zembery, all of Kosice, Czechoslovakia, assignors to Statny drevarsky vyskumny ustav, Bratislava, Czechoslovakia

Filed Mar. 21, 1961, Ser. No. 97,239
Claims priority, application Czechoslovakia Nov. 19, 1960
6 Claims. (Cl. 162—13)



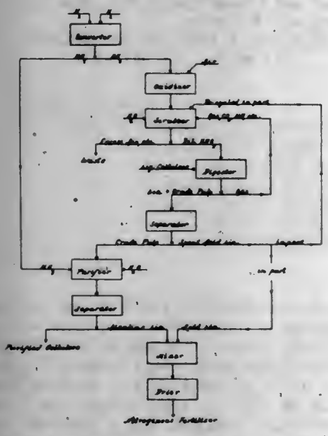
1. A process for the manufacture of fibreboards and other molded articles from fibrous lignocellulose material, comprising reducing said material to chips, subjecting the chips to the action of steam at a pressure ranging from 1.5 to 20 atm., until said chips contain an amount of water-soluble constituents ranging from 6 to 30%, reducing the steam-treated fibrous material to greater fineness, predrying the fine fibrous material to a moisture content of 2 to 30% while maintaining said amount of water-soluble constituents, forming said predried fine fibrous material into a mat while maintaining said moisture content and said amount of water-soluble constituents, subjecting said mat in a closed space to a consolidating pressure of 25 to 70 kilograms per sq. centimeter at a temperature between 180° and 260° C., whereby additional amounts of water-soluble constituents tend to form in said mat, and releasing steam from said space during the application of said consolidating pressure at a rate sufficient to maintain said amount of water-soluble constituents between 6 and 30 percent.

3,130,115

METHOD OF PROCESSING LIGNIFIED CELLULOSE

Alfred M. Thomsen, 265 Buckingham Way, Apt. 402, San Francisco, Calif.

Filed Oct. 27, 1961, Ser. No. 148,131
10 Claims. (Cl. 162—16)



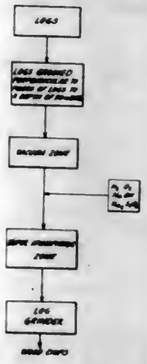
1. In the further processing of ammonia derived from the catalyzed reaction between compressed hydrogen and nitrogen, the steps which comprise; dividing the ammonia into two portions and reserving one portion for subsequent use; oxidizing the remaining portion into nitric acid and recovering said acid in dilute form by absorption in water; commingling said dilute acid with a comminuted form of lignified cellulose and heating the mixture to approximate boiling temperatures until substantially pulped; separating the crude fibrous resulting product from the acid spent liquor and reserving said liquor for subsequent treatment; commingling the crude fiber previously separated with the reserved ammonia and digesting the mixture until substantially all ammonia-soluble substances have been removed from the crude pulp; separating said cleaned pulp from the ammoniacal liquor and commingling said liquor with the reserved acid spent liquor previously described thus producing a mixture of organic and inorganic nitrogen compounds suitable for use as a fertilizer.

3,130,116

PROCESS FOR GRINDING OR PULPING WOOD

Wilhelm Gartner, Neunkirchen in Odenwald, Germany, assignor, by mesne assignments, to FMC Corporation, New York, N.Y., a corporation of Delaware

Filed Aug. 22, 1961, Ser. No. 133,064
Claims priority, application Germany Aug. 24, 1960
1 Claim. (Cl. 162—27)



In the production of mechanical wood pulp by grinding logs having a length of at least ½ meter to produce said pulp, the improvement which comprises, prior to grinding, providing grooves having a width of about 2 to 5 millimeters, 50 to 80% of the way through said logs and at intervals of about 2 to 30 centimeters in a direction essentially perpendicular to the fiber direction of said logs, subjecting the grooved logs to the action of an evacuated atmosphere at about 5 to 15 millimeters of mercury, and impregnating the evacuated logs in an aqueous, alkaline peroxide solution containing about 15 to 100 grams per liter of sodium hydroxide, 15 to 100 grams per liter of hydrogen peroxide, and a stabilizing amount of an active oxygen chemical stabilizer, at a pressure of about 8 to 12 atmospheres for about 2 to 6 hours.

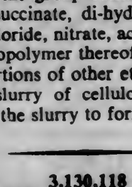
3,130,117

INCREASING THE STRENGTH OF PAPER WITH VINYL SULFONIUM POLYMERS

Charles G. Humiston, Frederick J. Meyer, and Duane L. Kenaga, all of Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Mar. 13, 1961, Ser. No. 95,015
7 Claims. (Cl. 162—168)

1. A method for producing cellulosic and lignocellulosic articles which comprises adding from 0.025 to 5.0 weight percent, dry fiber basis of at least one member of the group consisting of (I) homopolymers having the recurring group



wherein R_1 is selected from the group consisting of hydrogen and alkyl radicals containing from 1 to 6 carbon atoms, X is an organic sulfur-containing compound selected from the group consisting of (A) sulfides of the formula R_2SR_3, wherein R_2 and R_3 each represents a member of the group consisting of (1) alkyl radicals containing from 1 to 6 carbon atoms, (2) haloalkyl radicals containing from 1 to 6 carbon atoms, (3) hydroxyalkyl radicals containing from 1 to 6 carbon atoms; (4)

$$-(CH_2)_nCHNH_2\overset{O}{\overset{\|}{C}}-OH$$

where n is an integer from 1 to 4 inclusive; (5)

$$-(CH_2)_nCHOH\overset{O}{\overset{\|}{C}}-OH$$

wherein n is an integer from 1 to 4 inclusive; (6)

$-(CH_2-CH_2O)_mCH_2CH_2OH$ wherein m is an integer from 1 to 5; (7) $-C_nH_{2n}COOH$; (8)

$-C_nH_{2n}COOC_nH_{2n+1}$; (9) $-C_nH_{2n}COO$ alkali metal; and (10) $-C_nH_{2n}CONH_2$; wherein n in substituents (7), (8), (9), and (10) is an integer from 1 to 5 with the total number of carbon atoms in each of the substituents (7), (8), (9), and (10) not exceeding 6, and where the total number of carbon atoms of the R_2 and R_3 groups attached to a common sulfur atom does not exceed 18 and (B) cyclic thio compounds selected from the group consisting of tetrahydrothiophene, hydroxy substituted tetrahydrothiophene, halo substituted tetrahydrothiophene, alkyl substituted tetrahydrothiophene where alkyl refers to groups containing from 1 to 5 carbon atoms, tetrahydrothiopyran, and 1-oxa, 4-tetrahydrothiopyran; and Y is an anion from the group consisting of carbonate, oxalate, phthalate, succinate, di-hydrogen phosphate, fluoride, benzoate, chloride, nitrate, acetate, sulfate, bromide, and iodide; (II) copolymer thereof, and (III) copolymers with minor proportions of other ethylenically unsaturated monomers to a slurry of cellulosic and lignocellulosic fibers, dewatering the slurry to form an article, and thereafter curing.

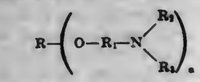
3,130,118

AQUEOUS KETENE DIMER EMULSION AND USE OF SAME FOR SIZING PAPER

Charles H. Chapman, San Mateo, Calif., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 24, 1958, Ser. No. 782,670
6 Claims. (Cl. 162—175)

1. As a composition of matter an aqueous emulsion having, as the continuous phase, an aqueous solution of an emulsifier consisting essentially of from about 0.1% to about 6% by weight, based on the weight of the emulsion, of a cationic starch having the formula:



where R is starch, R_1 is selected from the group consisting of alkylene, hydroxyalkylene, phenyl alkylene and alkylalkylene groups, R_2 and R_3 are each selected from the group consisting of hydrogen, alkyl, aryl, aralkyl and cycloalkyl groups, and n is from 0.005 to 3 and, as the dispersed phase, a ketene dimer having the formula:

$$[RCH=C=O]_2$$

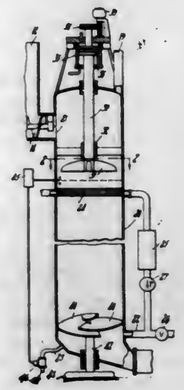
where R is a hydrocarbon radical selected from the group consisting of alkyl having at least 8 carbon atoms, cycloalkyl having at least 6 carbon atoms, aryl, aralkyl and alkaryl.

3,130,119

DOWNFEED CONTINUOUS PULPING APPARATUS

Lawrence A. Carlsmith, Amherst, N.H., assignor to Improved Machinery, Inc., Nashua, N.H., a corporation of Maine

Continuation of application Ser. No. 27,593, May 9, 1960. This application Nov. 29, 1961, Ser. No. 155,681
6 Claims. (Cl. 162—237)



1. Apparatus for continuously treating the solid particle component of a solid particle-liquid mixture in a generally upright elongated reaction vessel having inlet means for feeding solid particles into said vessel adjacent the upper end thereof and discharge means for discharging said mixture from said vessel adjacent the bottom of said vessel, that improvement which consists of down-feeding means for advancing the solid particle component thereof downwardly through said vessel substantially independently of the movement of liquid in said vessel, including a solid particle downfeeding member mounted adjacent the upper end of said vessel for generally vertical reciprocatory movement, said member having a plurality of spokelike operating elements with relatively flat bottoms providing an interrupted surface extending in a horizontal plane for free passage of said solid particles therethrough, means for feeding said solid particles into said vessel above said elements, hydraulic means including piston and cylinder means for reciprocating said member through a limited distance relatively to the length of said vessel to advance said particles downwardly by exerting force only on particles located adjacent the upper end of said vessel progressively to compact said particles and to advance the mass of said particles downwardly through said vessel, liquid supply means adjacent the bottom of said vessel for supplying liquid thereto for upward flow thereof through said descending particles, and strainer means spaced upwardly from said liquid supply means and below the said spoke-like operating elements for removing liquid from said vessel.

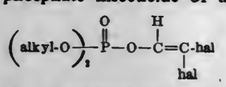
3,130,120
EPOXYHALOALKANES AS STABILIZERS FOR HALOGENATED VINYL PHOSPHATE INSECTICIDES

Dave R. Schultz, Union, and Leo F. Sekula, Paterson, N.J., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 22, 1961, Ser. No. 133,055
8 Claims. (Cl. 167—22)

1. A stable insecticidal composition comprising in intimate admixture:

(*a*) a vinyl phosphate insecticide of the formula:

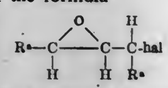


wherein "alkyl" represents an alkyl group of from one to four carbon atoms, and "hal" represents a member of the group consisting of chloride and bromine;

(*b*) an inert liquid horticultural carrier;

(*c*) a nonionic surface-active agent;

(*d*) a minor, stabilizing amount of a lower epoxyhaloalkane of the formula



wherein "hal" represents a member of the group consisting of chlorine and bromine and R^a represents a member of the group consisting of hydrogen and alkyl groups of from 1 to 6 carbon atoms.

3,130,121
INSECTICIDAL POWDER

Arthur Rapport, Glencoe, Ill., assignor to Leeco Chemical Company Division of Leeco Gas and Oil Co., Miami Beach, Fla., a corporation of Florida

No Drawing. Filed Feb. 10, 1961, Ser. No. 88,247
5 Claims. (Cl. 167—24)

1. A method of preparing a shielded insecticidal powder comprising forming a homogeneous dispersion of a dextrin shielding substance and a pyrethrin insecticide in a liquid carrier wherein said insecticide makes up from about 0.02% to about 15% by weight of the total of said shielding substance and said insecticide, subdividing said dispersion into small droplets, solidifying said droplets and recovering the resultant shielded insecticidal powder.

3,130,122
3,4,5-TRIMETHYLPHENYL METHYLCARBAMATE AND ITS USE AS AN INSECTICIDE

Jerome G. Kuderna, Jr., and Donald D. Phillips, Modesto, Calif., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed June 7, 1962, Ser. No. 200,643
3 Claims. (Cl. 167—30)

1. 3,4,5-trimethylphenyl methylcarbamate.

3,130,123
PROCESS FOR PREPARING METHYL AND ETHYL MERCURY HYDROXYQUINOLINATES AND PRODUCTS OBTAINED THEREBY

Robert O. Weiss, West Milford, and Seymour J. Lederer, East Paterson, N.J., assignors to Metalsalts Corporation, Hawthorne, N.J., a corporation of Nevada

No Drawing. Filed June 6, 1957, Ser. No. 663,877
8 Claims. (Cl. 167—33)

1. A disinfectant preparation consisting essentially of an approximately 2.6 to 3.3% solution of a member of the group consisting of methyl and ethyl mercuric 8-hydroxyquinolinates in a solvent composed of about 25% ethylene glycol, 20% n-proply alcohol and 55% water.

7. Process for preparing a concentrated solution of a member of the group consisting of methyl and ethyl mercuric 8-hydroxyquinolinates, which comprises reacting an approximately 6% solution of a member of the group consisting of methyl and ethyl mercuric acetate in water with about an equal volume of an alcohol solution of an approximately equivalent quantity of 8-hydroxyquinoline to form a stable solution containing approximately 3.8% of methyl or ethyl mercuric 8-hydroxyquinolinate.

3,130,124
ALGAECIDE STICK COMPOSITION

Robert C. Ferris, Fullerton, and John W. Christensen, Downey, Calif., assignors to Chem Lab Products, Inc., Norwalk, Calif., a corporation of California

Filed Dec. 21, 1959, Ser. No. 860,767
6 Claims. (Cl. 167—42)

1. An algaecide stick composition comprising an algaecide toxic to black algae mixed in a solid waxy matrix having the properties of slowly but completely dispersing in water and of being compatible with the algaecide, said composition being adapted to be spread on a surface submerged in water, there to remain in contact with the said surface while gradually dispersing in the water, the algaecide simultaneously being retained in the undispersed matrix to provide and hold a high concentration of algaecide adjacent to the surface to kill algae thereon, the matrix serving to maintain this high concentration adjacent to said surface while a significant quantity of matrix remains in contact with the surface, the matrix ultimately completely dispersing into the water thereby to leave the surface free of matrix.

3,130,125
PREPARATION OF MEDICATED BENZYL DEXTRAN GRADUAL RELEASE THERAPEUTIC PRODUCTS CONTAINING UP TO FIVE PERCENT BENZYL ALCOHOL

Herman Heckel, Oxford, and Robert T. Jefferson, West Carrollton, Ohio, assignors to The Central Pharmacal Company, Seymour, Ind., a corporation of Indiana

No Drawing. Filed Sept. 14, 1962, Ser. No. 223,839
2 Claims. (Cl. 167—82)

1. In a method of producing a therapeutic composition for oral ingestion to provide a gradual release of medicament over an extended period of time in the intestinal tract and comprising preparing a fluid paste of benzyl dextran and methanol and incorporating into the benzyl dextran paste a medicament and drying the resulting mixture, the improvement consisting of employing a benzyl dextran having a molecular weight between 3,000,000 and 60,000,000 and having a D.S. of benzyl ranging between 0.8 and 1.0, and wherein the particle size of the dried product is on the order of —20 to +40 mesh and which product contains up to 5% benzyl alcohol.

3,130,126
ORAL PHARMACEUTICAL PRODUCTS PREPARED WITH CARBOXYMETHYL BENZYL DEXTRAN HAVING A LOW CARBOXYMETHYL D.S. OF 0.15

Leo J. Novak, Union, N.J., assignor to The Central Pharmacal Company, Seymour, Ind.

No Drawing. Filed Sept. 14, 1962, Ser. No. 223,841
2 Claims. (Cl. 167—82)

1. In the method of preparing an oral sustained release pharmaceutical product by mixing an alcoholic solution of carboxymethyl benzyl dextran and a medicament to form a complex product having sustained release properties, the improvement consisting of carrying out the method with a carboxymethyl benzyl dextran composed of benzylated water-soluble dextran of an average molecular weight between 70,000 and 85,000, the resultant carboxymethyl benzyl dextran having a low carboxymethyl D.S. of 0.15 and a high benzyl D.S. of 1.5.

3,130,127
MALEIC ANHYDRIDE AND ETHYLENE OXIDE COPOLYMERS IN HAIR PREPARATIONS

Constance M. Tarpey, Springfield, Mass., assignor to John H. Breck, Inc., Springfield, Mass.

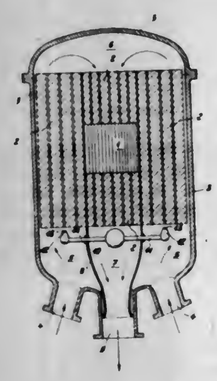
No Drawing. Filed Nov. 23, 1959, Ser. No. 854,532
1 Claim. (Cl. 167—87.1)

A process of shaping human hair comprising the steps, applying to the hair an aqueous solution containing, a salt selected from the group consisting of sodium and ammonium salts of a copolymer of ethylene oxide and maleic acid in a concentration of less than 1.00% neutralized by the addition of an alkali, an ethylene oxide condensate of oleyl alcohol containing 5–50 mols of ethylene oxide to oleyl alcohol, a methyl ester of parahydroxybenzoate, and dimethyl siloxane, said solution forming a pliable mass, working and shaping said mass into a desired form, and drying the shaped mass for depositing upon the hair a thin hygroscopic coating substantially free of tackiness and flaking tendencies.

3,130,128
SAFETY DEVICE FOR NEUTRONIC REACTOR

Werner Spillmann, Kilchberg, Zurich, Switzerland, assignor to Escher Wyss Aktiengesellschaft, Zurich, Switzerland, a corporation of Switzerland

Filed July 21, 1960, Ser. No. 44,333
Claims priority, application Switzerland Sept. 7, 1959
2 Claims. (Cl. 176—22)

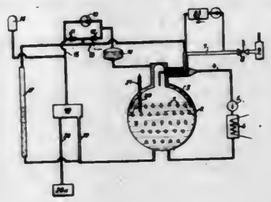


1. In a neutronic reactor comprising a housing having a supply connection and a discharge connection for a gaseous cooling medium under pressure, an active portion containing fissionable material arranged within said housing, and means defining within said housing an inlet space communicating with said supply connection and an outlet space communicating with said discharge connection and a heat exchange flow path for said gaseous cooling medium leading from said inlet space through said active portion to said outlet space: a safety device consisting of a pressure vessel containing a neutron-absorbent gas, arranged within said coolant outlet space in heat exchange with the discharging gaseous cooling medium, and at least one pipe issuing from said pressure vessel and having a mouth opening into said coolant inlet space, a direct pressure-responsive closure plate in said mouth designed to rupture when the pressure of the neutron-absorbent gas in the vessel exceeds the pressure which is obtained at the permitted maximum outlet temperature of the gaseous cooling medium.

3,130,129
NUCLEAR REACTORS

Roland Roche, Clamart, Seine, France, assignor to Commissariat a l'Energie Atomique, Paris, France

Filed Aug. 7, 1961, Ser. No. 129,774
Claims priority, application France Sept. 6, 1960
6 Claims. (Cl. 176—42)

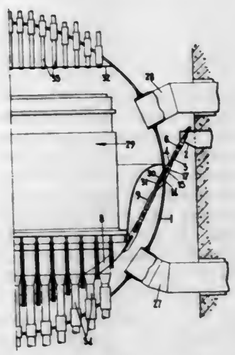


1. In a liquid moderated nuclear reactor, a container in the reactor, a liquid moderator in said container, force tubes in said container and in said liquid moderator, nuclear fuel in said force tubes, said liquid moderator having a minimum level in said container during operation of the reactor, a bell in and spaced from said container adjacent the top thereof and immersed in said liquid moderator at said minimum level, means for supplying gas under variable pressure in said container above the surface of said liquid moderator and beneath said bell whereby said liquid moderator fills the space between said container and said bell, the pressure of said gas determining the level of said liquid moderator in said container and an expansion chamber for said moderator liquid beneath said bell.

3,130,130
CORE SUPPORTING ARRANGEMENT FOR NUCLEAR REACTOR

Geoffrey Herbert Haines, Upminster, Keith James Mitchell, Higham, near Rochester, and Raymond Hicks, Bexleyheath, England, assignors to The General Electric Company Limited, London, and Simon-Carves Limited, Stockport, England

Filed Dec. 10, 1958, Ser. No. 779,326
Claims priority, application Great Britain Dec. 13, 1957
4 Claims. (Cl. 176—87)



2. A supporting arrangement for the core of a gas-cooled nuclear reactor, comprising a rigid support, suspension members depending from the support, reactor-core-containing meridianally curved pressure vessel suspended by said members from the rigid support, said vessel having radial symmetry about a vertical axis and being formed with a horizontal annular zone around said axis defining an inwardly extending discontinuity in the meridianal curvature of the vessel, and a core support

structure mounted within the vessel, said suspension members being spaced around said vertical axis and being attached to the pressure vessel at points distributed along said annular zone.

3,130,131
PROCESS FOR THE PRODUCTION OF STREPTOMYCIN

Hamilton de Lisle King, Somerset, N.J., assignor to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

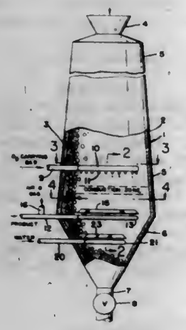
No Drawing. Filed Feb. 27, 1963, Ser. No. 261,503
9 Claims. (Cl. 195—80)

1. A process for the production of streptomycin which comprises culturing the microorganism *Streptomyces griseus* in a nutrient medium containing a source of carbon, nitrogen, nutritional cofactors and minerals, and an auxin of the group consisting of α-naphthaleneacetic acid, α-naphthyloxyacetic acid, phenylacetic acid and 3-indolebutyric acid, under aerobic conditions.

3,130,132
APPARATUS FOR RECOVERING OIL FROM OIL-BEARING MINERALS

Frederick J. Sanders, Shaker Heights, Ohio, assignor to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio

Filed Nov. 10, 1958, Ser. No. 773,041
3 Claims. (Cl. 202—7)

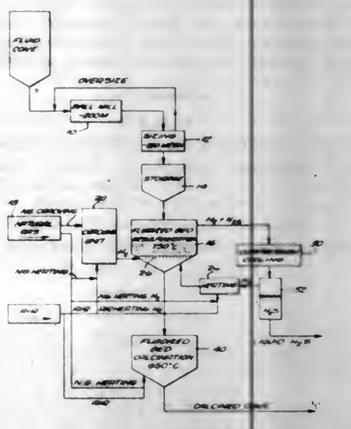


1. In a retorting apparatus for recovering oil from oil-bearing mineral solids, the combination of a closed vertical retorting vessel having a substantially fixed combustion zone within a confined area of said vessel, a hopper means at the top of said retorting vessel for introducing crushed solids into said retorting vessel, an independent first inlet and first outlet conduit below said combustion zone for temporarily supplying an oxygen-containing gas to said combustion zone, an independent second inlet conduit above said combustion zone and down from the top of said retorting vessel equipped with a gas distributing means adapted to disperse an oxygen-containing gas uniformly over the cross-section of the mass of solids in a downwardly direction across said combustion zone when said temporary supply of oxygen-containing gas is discontinued through said first inlet conduit, said first outlet conduit for withdrawing a stream of combustion products and educted oil products from said retorting vessel, the height of the top of said retorting vessel above said second inlet conduit being maintained at several times the distance between said second inlet conduit and said first inlet and first outlet conduit an independent third inlet conduit below said first outlet conduit for introducing water into the lower regions of said retorting vessel uniformly over the cross-section of the mass of solids to cool oil-free solids after combustion thereof, and an independent second outlet conduit in the bottom of said retorting vessel for removing said oil-free solids therefrom.

3,130,133
PROCESS FOR DESULFURIZING PETROLEUM COKE

Hirsch Loevenstein, Los Angeles, Calif., assignor to Harvey Aluminum, Torrance, Calif., a corporation of California

Filed May 4, 1959, Ser. No. 810,821
9 Claims. (Cl. 202—31)

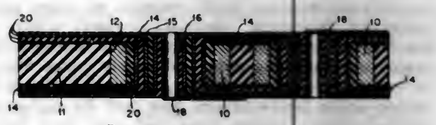


2. A process for the removal of at least 60% of sulfur from petroleum coke having a grain size of −200 mesh, comprising the step of subjecting the coke to the action of hydrogen at atmospheric pressure under conditions of time, temperature, and hydrogen quantity such that at least about 2% of volatiles are maintained in the coke until the said amount of sulfur has been removed therefrom.

3,130,134
PLATED CIRCUIT MAGNETIC CORE ARRAY

Richard A. Jones, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Jan. 9, 1957, Ser. No. 633,369
3 Claims. (Cl. 204—15)



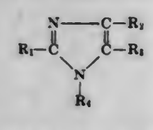
3. In a process of fabricating an array of annular magnetic cores, the steps of (*a*) forming a plurality of openings in a sheet of insulating material, (*b*) placing individual cores co-axially in said openings, (*c*) applying a first insulating coating over the exposed surfaces of said sheet and said cores, (*d*) forming an electrodeposited metal circuit on said insulating layer and extending through said cores, (*e*) appyling a second insulating coating over the entire exposed surfaces of said circuit, and (*f*) forming a second electrodeposited circuit on the second insulating layer and extending through said core.

3,130,135
NICKEL PLATING

Harry Axel Herman Ericson, Stockholm, Sweden, assignor by mesne assignments, to Firma Sture Granberger, Bochum, Germany, a firm

No Drawing. Filed Nov. 21, 1962, Ser. No. 239,329
Claims priority, application Sweden Nov. 21, 1961
6 Claims. (Cl. 204—49)

1. Nickel plating bath containing at least one nickel salt as a source of nickel and as a brightener, an imidazol compound having the formula

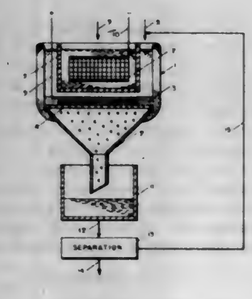


wherein R_1 is selected from the group consisting of hydrogen and —A—R_5, A being an aliphatic bridge and R_5 being selected from the group consisting of unsaturated and saturated, aliphatic and cyclic radicals, and aromatic radicals; wherein R_2 and R_3 are selected from the group consisting of hydrogen, aliphatic and cyclic, saturated and unsaturated hydrocarbon radicals; and wherein R_4 is selected from the group consisting of hydrogen and —A—R_6, A being an aliphatic bridge and R_6 being selected from the group consisting of aliphatic and cyclic, saturated and unsaturated hydrocarbon radicals and aliphatic radicals bearing at least one amino group, and alkoxy groups; at least one of R_5 and R_6 being present and at least one of R_1 and R_4 being an unsaturated radical; said brightener being provided in an amount of 0.001 to 0.1 gram/liter.

3,130,136
ELECTROLYTIC METHOD FOR THE PREPARATION OF GEM-DINITROCOMPOUNDS

Charles M. Wright, Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

Filed May 10, 1961, Ser. No. 109,203
9 Claims. (Cl. 204—72)

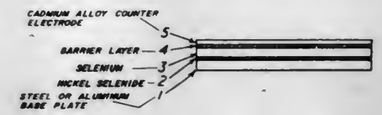


1. In the electrolytic method of passing an aqueous alkaline solution of a nitrocompound and inorganic nitrite, during the electrolysis thereof, through a silver anode whereby the silver is electrolytically oxidized and reacts with the components of the solution to effect a conversion of the nitrocompound to a gem-dinitrocompound and silver metal, the improvement which comprises disposing the silver anode as a filter-like bed of particulate silver to receive the silver metal as it reprecipitates during passage of the electrolyzed solution therethrough.

3,130,137
MANUFACTURE OF SELENIUM RECTIFIER CELL

Tsuneo Araki and Shuzaburo Imai, Tokyo, Japan, assignors to Nippon Electric Company, Limited, Tokyo, Japan, a corporation of Japan

Filed Sept. 27, 1960, Ser. No. 58,826
Claims priority, application Japan Oct. 14, 1959
5 Claims. (Cl. 204—43)

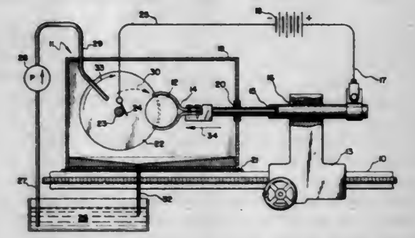


1. The method of manufacturing a base plate for a selenium rectifier cell comprising the steps of electroplating a metal base plate in an aqueous solution of significant amounts of a nickel salt and selenium dioxide with the base plate forming the cathode whereby a nickel selenide layer is formed on said base plate.

3,130,138
ELECTROLYTIC CUTTING

Charles L. Faust and John E. Clifford, Columbus, Ohio, assignors, by mesne assignments, to The Battelle Development Corporation, Columbus, Ohio, a corporation of Delaware

Filed Nov. 27, 1959, Ser. No. 855,678
7 Claims. (Cl. 204—143)



3. A method of electrolytically cutting into an electrically conductive mass, comprising: connecting said mass to the positive side of a direct current supply; connecting to the negative side of said direct current supply at least one electrically conductive rotatable disk; locating said mass in close proximity to each said disk and maintaining a gap of about 0.0005 to 0.025 inch between the periphery of each said disk and the adjacent portion of said mass; rotating each said disk at a peripheral speed of at least about 3000 feet per minute; and supplying an electrically conductive electrolyte throughout each said gap by supplying said electrolyte to at least one side of each said disk at a location spaced from the periphery thereof to form on said side a film of substantially uniform thickness of said electrolyte that is transported by centrifugal force from said location to said gap.

3,130,139
METHOD OF MAKING UNIFORM DISPERSIONS OF CARBON BLACK IN POLYOLEFINS

Billy G. Harper and Jack R. Davis, Lake Jackson, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

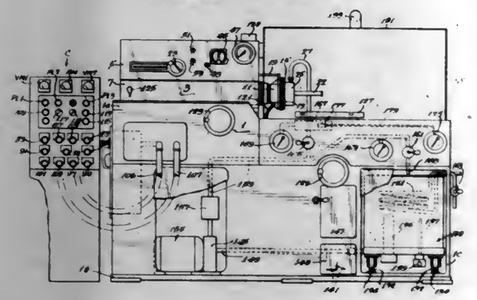
No Drawing. Filed Sept. 19, 1960, Ser. No. 56,695
11 Claims. (Cl. 204—154)

1. A process for the production of an intimate dispersion of carbon black and a solid polymer of a lower non-aromatic hydrocarbon mono-olefin which comprises subjecting the polymer to ionizing radiation and subsequently admixing carbon black therewith.

3,130,140
ELECTROLYTIC CAVITY SINKING APPARATUS

Leonard Malkowski, La Grange, Ill., assignor to Anocut Engineering Company, Chicago, Ill., a corporation of Illinois

Filed Sept. 2, 1960, Ser. No. 73,155
5 Claims. (Cl. 204—224)

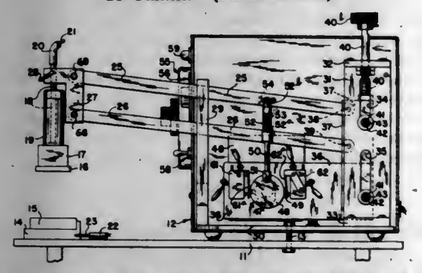


1. In apparatus for electrolytically forming a cavity or the like in a workpiece having a workpiece holder, an electrode, and a drive assembly mounting the electrode for movement toward and away from the workpiece including a movable ram mounting the electrode, a lead screw connected to the ram for moving the latter, a reversible power drive means connected to the lead screw for turning the latter, control means for the power drive means for energizing the power drive means in forward and reverse directions, control means for adjusting the rate of speed of the power drive means, and additional control means for rapid traverse energization of the lead screw, the improvement comprising, first means enclosing the workpiece holder and the electrode, second means enclosing substantially the entirety of the drive assembly with that portion of the ram mounting the electrode projecting into said first enclosing means from said second enclosing means, and means cooperable with said first and second enclosing means sealing about the ram at its point of entry into said first enclosing means, whereby the components of the drive assembly are protected against electrolyte splatter.

3,130,141
ELECTROLYTIC MARKING APPARATUS

James F. McMahon, Jr., Cleveland, Ohio, assignor to The Electromark Corporation, a corporation of Ohio

Filed Feb. 5, 1962, Ser. No. 171,089
15 Claims. (Cl. 204—224)

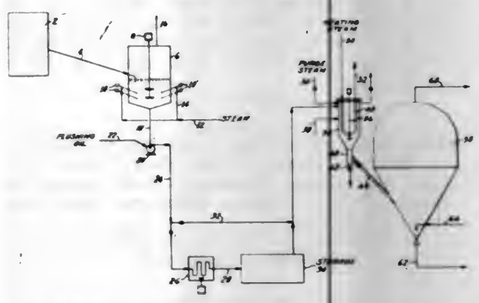


1. Electrolytic marking apparatus comprising the combination of a base, work-piece engaging means supported in juxtaposition to said base to hold a work-piece at a reference location relative to said base, a column member carried by said base in upright position, a block member adjustably movable along said column member to selected elevated positions, adjusting means for adjustably moving said block member along said column member and securing the block member at a selected elevated position, a pair of parallel arms having their inner ends pivotally connected to said block member at spaced locations, a link member pivotally connected to the free ends of said arms at spaced locations, an electrolytic marking device having an electrode disposed axially thereof and carried by said link member in upright position, said electrolytic marking device having a laterally disposed face portion adapted to opposingly abut a work-piece held by said engaging means during electrolytic marking of said work-piece, an electric motor carried by said base, an eccentric driving device rotatable by said motor, connecting means interconnecting said eccentric driving device and a said parallel arm to swing said parallel arms up and down by the rotation of said eccentric driving device, said connection means including resilient means to resiliently yield upon the said arms being swung downwardly beyond a limit determined by the position of a said work-piece opposingly abutted by said face portion of the electrolytic marking device, and automatic timing means controlling the actuation of said eccentric driving device to predeterminately fix the time periods of the up and down motions of the said arms and rests at the limits of movement of said arms.

3,130,142
METHOD OF DEAERATION

Marvin F. Nathan, New York, N.Y., and Victor M. Fillow, Darien, Conn., assignors, by mesne assignments, to Pullman Incorporated, a corporation of Delaware

Filed July 29, 1960, Ser. No. 46,128
6 Claims. (Cl. 208—11)



1. In a method which comprises passing froth obtained from the water extraction of tar sands and comprising a mixture of oil, air, water, and entrained finely divided solid material to a deaeration zone, stripping said froth with steam under a subatmospheric pressure and elevated temperature to remove air therefrom and to provide a deaerated liquid phase comprising oil and water, mixing a relatively low boiling hydrocarbon diluent material with said deaerated liquid phase under elevated temperature conditions to produce a diluted liquid phase, and thereafter separating the diluted liquid phase into a hydrocarbon-rich phase and a water-rich phase.

3,130,143
DEWAXING SOLVENT RECOVERY METHOD

Royes Salmon, Oxford, Miss., and Edward A. Pullen, Fullerton, Calif., assignors to Union Oil Company of California, Los Angeles, Calif., a corporation of California

Filed May 29, 1961, Ser. No. 113,409
10 Claims. (Cl. 208—33)

1. A continuous process for segregating wax and oil from a wax-oil mixture, comprising:

(1) chilling said wax-oil mixture and a dewaxing solvent to a wax precipitation temperature;

(2) filtering precipitated wax from said mixture and washing said wax with said dewaxing solvent to produce a wax product containing said dewaxing solvent and a filtrate comprising a mixture of dewaxed oil and said dewaxing solvent;

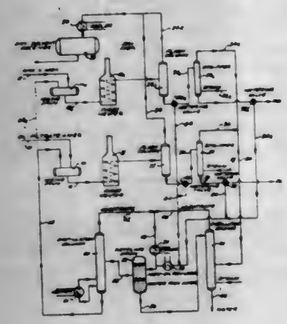
(3) flash vaporizing said dewaxing solvent from said wax product of step (2) to produce a first dewaxing solvent vapor, and a flashed wax bottoms;

(4) steam stripping the remainder of said dewaxing solvent from said flashed wax bottoms thereby producing a first vaporous water-dewaxing solvent mixture as an overhead and a solvent-free wax as a bottoms product;

(5) flash vaporizing said dewaxing solvent from the step (2) filtrate, thereby producing a second dewaxing solvent vapor and a flashed oil bottoms containing a minor amount of said dewaxing solvent;

(6) steam stripping said flashed oil bottoms to produce a solvent-free oil and a second vaporous water-dewaxing solvent mixture;

(7) condensing said first vaporous water-dewaxing solvent mixture, from step (4), and said second vaporous water-dewaxing solvent mixture, from step (6);



(8) fractionating the condensed material from step (7) together with a water-rich phase from step (10), hereinafter defined, to produce a first water-dewaxing solvent azeotrope as an overhead product and substantially pure water as a bottoms product;

(9) condensing said first azeotrope;

(10) mixing said condensed first azeotrope along with a second azeotrope, hereinafter defined, with a quantity of liquid material selected from the group consisting of said flashed wax bottoms product from step (3), said wax bottoms from step (4), said flashed oil bottoms from step (5) and said solvent-free oil product from step (6), whereby two liquid phases are formed, an upper one consisting essentially of a mixture of said liquid material and said dewaxing solvent, with a small amount of dissolved water, and a lower water-rich one consisting essentially of water with a minor amount of said dewaxing solvent dissolved therein;

(11) recycling said lower water-rich phase to fractionation step (8) whereby its solvent content is removed as a portion of said first water-dewaxing solvent azeotrope and recirculated to phase separation step (10);

(12) fractionating the upper liquid phase from step (10) to produce a second water-dewaxing solvent azeotrop as an overhead product and a substantially dry mixture of said liquid material mixed with said condensed first azeotrope in step (10) and said dewaxing solvent, as a bottoms product;

(13) recycling said second azeotrope overhead product from step (12) to phase separation step (10); and

(14) recycling said bottoms product from step (12) and introducing it into the appropriate product stream from filtration and washing step (2) prior to flash vaporization thereof.

3,130,144
CHEMICALLY TREATED ASPHALT

Lloyd G. Bostwick, Media, Pa., and John A. Hedge, Holy Oke, Del., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

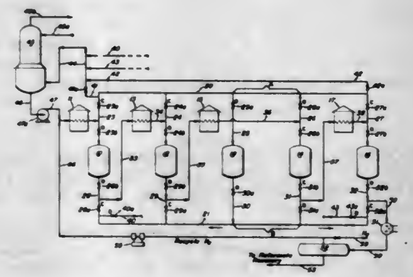
No Drawing. Filed Sept. 19, 1961, Ser. No. 139,070
4 Claims. (Cl. 208—44)

1. A process for improving the penetration and softening point of asphalt comprising treating the asphalt with nitric acid and a metal selected from the group consisting of iron, zinc, and aluminum at a temperature in the range of from about 80° C. to about 300° C. for a time of from about 5 minutes to about 12 hours, said acid having a concentration of from 20 to 70 percent and being present in the reaction mixture in amounts ranging from .1 to .9 millimols of acid per gram of asphalt and said metal being present in the reaction mixture in amounts ranging from .001 to 1.0 wt. percent based on the asphalt charge.

3,130,145
METHOD OF PREVENTING OCTANE LOSS IN A REFORMING SYSTEM

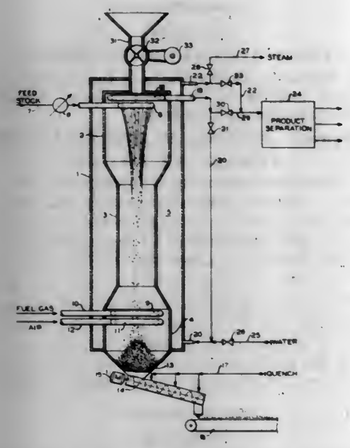
William H. Buckhannan, Manhattan, Kans., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Filed Oct. 6, 1961, Ser. No. 143,390
1 Claim. (Cl. 208—65)



In a regenerative catalytic reforming system for upgrading naphtha feed to high octane levels said system including multiple process reactors and a swing reactor, said process reactors and said swing reactor being connected by swing headers which direct process flow during regeneration in such a way as to bypass the reactor being regenerated whereby portions of the swing headers become empty and cool, the improvement which comprises flowing a minor portion of process fluids including naphtha vapors and hydrogen through said portions of said swing headers and returning said diverted process fluids from said bypassed portions into said process stream prior to said swing reactor whereby temperature is continuously maintained in said swing headers to prevent thermal shock when said headers are brought into contact with naphtha and octane level loss in the product is prevented by returning said diverted process fluids for further processing.

3,130,146
PRODUCTION OF COKE
William E. Plaster, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Apr. 24, 1961, Ser. No. 105,058
16 Claims. (Cl. 208—106)



1. A process for coking petroleum residue which comprises spraying said residue downwardly into a vertically elongated coking zone, introducing into a lower portion of said zone a hot reducing gas, passing all of said hot reducing gas upwardly through the entire length of said coking zone in countercurrent contact with the descending residue thereby directly heating the said residue during its entire passage through said zone while maintaining an external portion of said zone at a constant temperature by indirect heat exchange, removing the resulting coke from a lower portion of said zone as a product of the process, and removing the resulting gas from an upper portion of said zone as a product of the process.

3,130,147
ZIRCONIUM - ALUMINUM - PHOSPHORUS CATALYST AND METHOD FOR PREPARING THE SAME, EMPLOYED FOR THE CRACKING OF HYDROCARBONS
Francis G. Dwyer, Delaware Township, Camden County, and Sylvander C. Eastwood, Woodbury, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York
No Drawing. Filed Sept. 18, 1961, Ser. No. 138,563
7 Claims. (Cl. 208—114)

7. A method for cracking a hydrocarbon charge which comprises contacting the same under catalytic cracking conditions with a catalyst consisting essentially of an oxygen-containing combination of aluminum, zirconium and phosphorus wherein the atomic ratio of aluminum to zirconium is between about 0.1 and about 10 and in which the atomic ratio of the combined aluminum and zirconium content to phosphorus is between about 0.1 and about 10, said catalyst resulting from reaction, in aqueous solution, of a water-soluble salt of aluminum, a water-soluble salt of zirconium and a water-soluble compound selected from the group consisting of oxyacids of phosphorus and salts of said acids yielding an acidic hydrosol, permitting said hydrosol to set to a hydrogel, aging the hydrogel for a period of between about 1 and about 48 hours at a temperature within the approximate range of 120–212° F. in an aqueous solution of a salt of an acid having a dissociation constant of less than about 1.7×10^{-2}, which salt is selected from the group consisting of those of ammonium and alkali metal salts, washing the hydrogel free of water-soluble matter and drying the washed hydrogel.

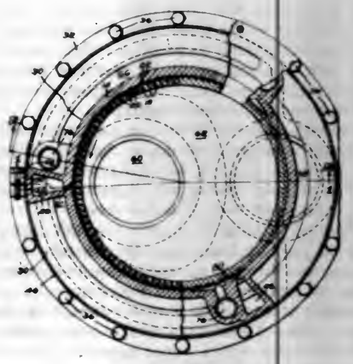
3,130,148
TREATING HYDROCARBON DISTILLATES
William K. T. Gleim, Island Lake, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Filed June 22, 1962, Ser. No. 204,608
11 Claims. (Cl. 208—189)

1. A combination process for treating a sour hydrocarbon fraction to produce a product of reduced mercaptan content and of acceptable color, which comprises oxidizing mercaptans contained in said fraction to disulfides, separating the resultant products to recover a treated hydrocarbon fraction of reduced mercaptan content, and thereafter treating the separated fraction with an aqueous solution of a borohydride.

3,130,149
HYDROCARBON OIL SWEETENING PROCESS
Charles Oscar Hoover, 502 Princess Drive, Corpus Christi, Tex.
No Drawing. Filed Feb. 26, 1962, Ser. No. 175,831
16 Claims. (Cl. 208—204)

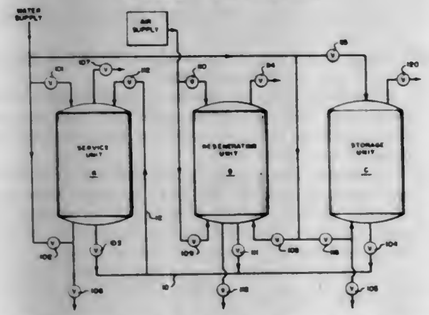
1. The process for sweetening hydrocarbon oils, comprising, admixing with a mercaptan-containing hydrocarbon oil stock in the liquid phase an organic sulfonyl halide, contacting the admixture with an alkaline reagent exhibiting the characteristics of a strong base, and separating the treated oil from the admixture.

3,130,150
THIN-EDGE PULP SCREEN
Wilfred F. Mathewson, 21 Morrell St., North Weymouth, Mass.
Filed Jan. 23, 1962, Ser. No. 168,033
9 Claims. (Cl. 209—270)



1. Means for flushing the screening slots of a pulp screening machine of the type having two concentric cylindrical screen elements which provide between, a cylindrical screen space and which have a relative movement about their common axis, one of said screen elements having a plurality of inlet slots which are opened to said screening space and also having a plurality of accepted stock grooves which are parallel to the inlet slots and each of which is also open to the screening space, there being an accepted stock groove between each two adjacent inlet slots, said inlet slots and said accepted stock grooves forming between them a plurality of ribs which form with the other screen element a plurality of screening slots, said flushing means comprising a tailings-receiving slot in said other screen element which is parallel to the inelt slots and accepted stock grooves and which comes in to registering relation with the accepted stock grooves successively during the relative rotary movement of the two screen elements, and means to deliver flushing water into each accepted stock groove as it comes into said registering relation with said tailings-receiving slot.

3,130,151
RESIN TRANSFER SYSTEM
Joseph A. Levendusky, Bayonne, N.J., assignor to Union Tank Car Company, Chicago, Ill.
Filed June 2, 1961, Ser. No. 114,347
5 Claims. (Cl. 210—33)



5. In a water demineralization installation incorporating an external resin regeneration system the method of transferring mixed ion exchange resins of differing densities from a regeneration unit to a service unit via interconnecting transfer lines comprising fluidizing the regenerated resin mass by introducing water and gas into the resin mass, pressurizing the fluidized mass by introducing gas into that part of the regenerating unit not occupied by the fluidized resin mass under sufficient pressure to force the fluidized resin mass from the regeneration tank through the interconnecting transfer lines into the service tank, the action of the gas and water under pressure permitting the transfer of the resins through the interconnecting transfer lines with a minimum volume of water and with minimum friction.

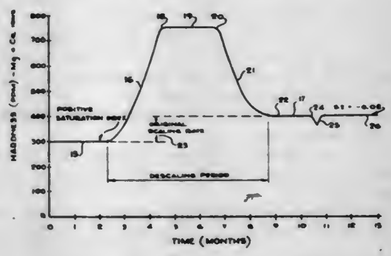
3,130,152
METHOD OF SOFTENING HARD WATER WITH SODIUM PHOSPHATE GLASSES
Robert J. Fuchs, Clark, N.J., assignor to FMC Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Original application Oct. 5, 1961, Ser. No. 143,056. Divided and this application May 29, 1963, Ser. No. 284,006
1 Claim. (Cl. 210—57)

The method of softening hard water by sequestering metal ions which comprises adding to said water from about 100 p.p.m. to about 5% by weight of a sodium phosphate glass having improved resistance against reversion to sodium orthophosphate at elevated temperature, said sodium phosphate glass having a mole ratio of

$$\frac{(Na_2O+H_2O)}{P_2O_5}$$

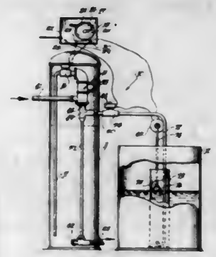
of 1.10 to 1.065, a weight percent P_2O_5 of 68.5 to 69.7%, and possessing terminal groups on the polyphosphate chain having no less than 75 mole percent OH with the remainder being ONa groups.

3,130,153
TREATMENT OF WATER TO PREVENT SCALING OR CORROSION
Howard F. Keller, Jr., 1364 Riverside Drive, Fullerton, Calif.
Filed May 13, 1959, Ser. No. 812,885
14 Claims. (Cl. 210—58)



1. The method of treating water which contains dissolved carbon dioxide and an excess of scaling carbonates and has a positive Saturation Index; said method comprising adding to the water organic acid which is water soluble but is too weak to displace the carbon dioxide from solution, maintaining the acid and carbon dioxide in solution together so that their anti-scaling effects are additive, continuing to add said weak organic acid to the water, and regulating the proportion of said acid which is added until an ultimate condition of substantial equilibrium is reached in which the acid and carbon dioxide substantially counteract the carbonates and thereby prevent scaling, and in which said Saturation Index is slightly negative, but no more negative than about —0.10, to thereby also prevent corrosion.

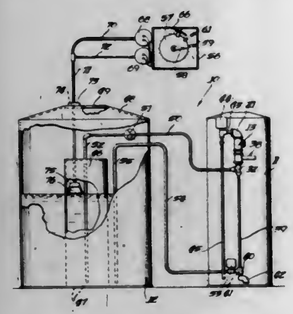
3,130,154
PRESSURE RESPONSIVE DEVICE FOR CONTROLLING LIQUID LEVEL IN TANKS
Don Edward Heskett, 1 S. 336 Euclid Ave., Villa Park, Ill.
Filed Jan. 2, 1962, Ser. No. 163,602
5 Claims. (Cl. 210—104)



2. In a water softening system comprising a softener tank and a brine tank,
(*a*) an inlet conduit,
(*b*) a valve connected to said inlet conduit,
(*c*) said valve including movable valve means being movable to a first position to connect said inlet conduit with said softener tank, and
(*d*) a second conduit connected to said valve and said softener tank,
(*e*) said valve means being movable tc a second position to connect said second conduit with said inlet conduit;
(*f*) a brine control means comprising,

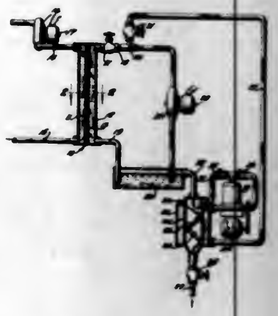
(*g*) a second electrically controlled valve including a movable valve element and a valve seat engaged thereby,
(*h*) a third brine conduit connecting said second electrically controlled valve to said second conduit and said brine tank,
(*i*) means normally urging said valve element to a closed position with respect to said valve seat, said valve element being pressure responsive during a suction on a portion of said brine conduit disposed between said second valve and said first valve to move from said valve seat to an open position, and to be initially held there by suction,
(*j*) an electrical pressure responsive switch connected to said second valve,
(*k*) a pressure chamber having a gaseous fluid in direct pressure responsive relation to the fluid level in said brine tank,
(*l*) means communicating said pressure chamber with said pressure responsive switch whereby during a rise to a predetermined liquid level within said brine tank, said gaseous fluid is compressed to de-energize said switch and said second valve is moved to a closed position during the first position of said first valve,
(*m*) and means on said second conduit during a second position of said first valve providing a suction on said portion of third brine conduit and said suction initially opening said second valve thereby holding said second valve open by suction and drawing brine from said brine tank in one direction,
(*n*) whereupon said liquid level of said brine tank is lowered and said compression of said gaseous fluid is relieved in said chamber, said switch is then energized to electrically hold open said valve to permit the continuing flow of brine to said softener tank,
(*o*) said first valve in the first position providing for the flow of water through said second conduit and third brine conduit in an opposite direction until the liquid level in said brine tank again reaches its predetermined liquid level.

3,130,155
AUTOMATIC FLOW CONTROL FOR AUTOMATIC WATER SOFTENING SYSTEM
Don E. Heskett, 1 S. 336 Euclid Ave., Villa Park, Ill.
Filed Apr. 4, 1960, Ser. No. 19,793
3 Claims. (Cl. 210—134)



1. A water softening system comprising,
(*a*) a softener tank and a brine tank,
(*b*) a first suction conduit connected to said brine tank and said softener tank,
(*c*) a first electrically controlled valve connected to said softener tank to communicate therewith,
(*d*) a drain line connected to said first valve,
(*e*) an inlet connection connected to said first valve,
(*f*) and means on said valve connected to said first suction conduit to provide a vacuum therein for permitting the flow of brine from said brine tank through said suction conduit to said softener tank during an open position of said valve,
(*g*) a water connection on said softener tank,
(*h*) a second conduit connected to said water connection and said brine tank,
(*i*) a second electrically controlled valve connected to said second conduit during an open position to provide for the flow of water from said water connection to said brine tank,
(*j*) timing means connected to said first and second valves for opening said valves at predetermined intervals,
(*k*) a first pressure responsive switch connected to said first electrically controlled valve,
(*l*) a second pressure responsive switch connected to said second valve,
(*m*) said second switch operating at a lower pressure than said first switch,
(*n*) means providing communication with said switches and said brine tank comprising,
(*o*) a pressure chamber having a gaseous fluid communicating with the brine tank and said gaseous fluid being in pressure sensitive relation with the water in said brine tank,
(*p*) a pressure line providing communication between said pressure chamber and said pressure responsive switches whereby during a rise of water within said brine tank to a certain level said gaseous fluid is directly responsive to said rise and said second pressure responsive switch is actuated to close said second valve to shut off the flow of water to said brine tank,
(*q*) said first switch being operable during a further rise of water in the brine tank to actuate said first valve to provide for the flow of brine to said softener tank when a certain predetermined level is reached in said brine tank.

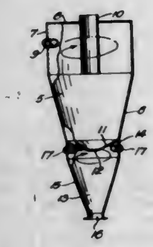
3,130,156
SOLVENT EXTRACTOR
Ray A. Neff, 53 Winding Way, Gibbsboro, N.J.
Filed Dec. 13, 1960, Ser. No. 75,631
1 Claim. (Cl. 210—152)



In a solvent extractor for extracting potable water from saline water including a two compartment unit and a semi-permeable membrane separating said unit into first and second chambers, said membrane being permeable to water but impermeable to saline solution and ammonium bicarbonate solution, fluid inlet and outlet means connected to each of said first and second chambers, the inlet of said first chamber being connected to a source

of saline water, a fluid storage tank having an inlet and an overflow outlet, said tank inlet being connected in communication with the outlet of said second chamber, a pump and connected conduits for re-circulating liquid from said tank back to said second chamber, a gas-liquid separating column having an inlet for liquids connected in communication with said overflow outlet and having an outlet for liquid, said column having an outlet for gas, a compressor having an inlet and an outlet, the inlet of said compressor being connected to said column gas outlet, and a heat exchanger jacket surrounding said column and having an inlet connected to said outlet of said compressor, said heat exchanger having an outlet connected in communication with said second chamber.

3,130,157
HYDRO-CYCLONES
Denis F. Kelsall, 154 Beach Road, Sandringham, Melbourne, Victoria, Australia, and Jack A. Holmes, Plot 1202 Lincoln Ave., Kitwe, Northern Rhodesia
Filed Dec. 15, 1959, Ser. No. 43,260
Claims priority, application Republic of South Africa Dec. 15, 1958
(Filed under Rule 47(b) and 35 U.S.C. 118)
1 Claim. (Cl. 210—512)



Apparatus of the hydro-cyclone type for separating fines from coarse particles contained in a liquid feed, comprising: a main vertically disposed cyclonic chamber circular in section, at least a portion of said chamber being frustoconical in configuration with the walls converging toward the lower end of said chamber, the apparent apex of said frustoconical portion having an acute included angle in vertical section substantially less than 90°; means including a feed duct communicating with said chamber near its upper end for introducing said liquid feed and for imparting cyclonic movement to material within the chamber to cause said coarse particles to move outwardly to form an underflow traveling downwardly in said chamber, a portion of said fines being entrained in the voids among said coarse particles; a second duct extending into the chamber at said upper end, the lower open end of said second duct being substantially aligned with the axis of the chamber, the duct serving as a vortex finder to provide an outlet for an overflow comprising said liquid and the non-entrained fines; a party wall substantially frustoconical in configuration with its concave side facing said main chamber and with its perimeter contacting the lower end of the frustoconical portion of said main chamber to form the lower end wall of said main chamber, said party wall having a central opening forming an outlet for said underflow from said main chamber, the apparent apex of said frustoconical party wall having an obtuse included angle in vertical section substantially greater than 90° to cause an abrupt change in the direction of movement of said underflow so that it travels inwardly toward the axis of said chamber to materially slow its descent prior to passing through said central opening; a second vertically disposed cyclonic separating chamber on the convex side of said party wall, said second chamber being circular in section with its axis coincident with the axis of the main chamber, said party wall forming the upper end wall of the second chamber, said second chamber having an opening in its lower end forming an underflow outlet; and means for introducing a wash liquid into the second chamber near its upper end in the region of said party wall in a tangential direction that is the same as the direction of cyclonic movement of material in the main chamber, said wash liquid removing the fines from the coarse particles and passing back into said main chamber.

3,130,158
MOLYBDENUM DISULFIDE COMPOSITION
John Joseph Daly, Jr., Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Jan. 11, 1961, Ser. No. 81,937
2 Claims. (Cl. 252—25)

1. A lubricant composition consisting essentially of 100 parts of molybdenum disulfide and from about .5 to 10 parts of a telomer having the formula $X(CF_2CFZ)_nY$ wherein X is a member selected from the group consisting of hydrogen and halogen; Z is a member selected from the group consisting of fluorine and chlorine; Y is a monovalent saturated organic radical; *n* is an integer from 5 to 200, said telomer having a molecular weight not exceeding 25,000.

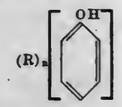
3,130,159
LUBRICANT FOR WORKING OF METALS
Tore Per Gustav Stedt, Ornstigen 7, Nasbypark, Sweden
No Drawing. Filed May 16, 1960, Ser. No. 29,140
Claims priority, application Sweden May 22, 1959
3 Claims. (Cl. 252—31)

1. A lubricant composition for plastic deformation of metals and for shaping of metals by swarf producing methods, particularly for tube reducing and especially for tube reducing with a pilgrim step rolling mill, said composition consisting essentially of a mixture of (1) 5 to 90 percent by weight of esters of polyethylene glycol with a molecular weight of from 500 to 1500 and tall oil, and (2) 90 to 5 percent by weight of esters of polyethylene glycol with a molecular weight of 500 to 1500 and fatty acids selected from the group consisting of wool fatty acids, rape seed oil fatty acids, lanolin fatty acids, lard fatty acids, tallow fatty acids, bees wax acids, olive oil fatty acids, sesame oil fatty acids, cotton seed oil fatty acids, and (3) 5 to 50 percent by weight of an additive selected from the group consisting of chlorinated paraffines containing about 42% chlorine, pentachlor-phenol, sulfur, sulfur chloride, sulfur oxychloride, diethylsulfide, dioxyethyl sulfide, mercaptobenzothiazole, sodium mercaptobenzothiazole and tricresyl phosphate.

3,130,160
OIL COMPOSITIONS CONTAINING METAL SALT OF PHENOL AND LOW MOLECULAR WEIGHT ACID
Arnold J. Morway, Clark, and John C. Munday, Cranford, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Mar. 1, 1961, Ser. No. 92,453
13 Claims. (Cl. 252—33.6)

1. An oil composition comprising a major proportion of oil and alkaline earth metal salt prepared by coneutralizing with alkaline earth metal base, about 0.5 to 10 wt. percent of about 0.5 to 10 wt. percent of phenol and about 3 to 35 wt. percent of low molecular weight mono-

carboxylic acid having about 2 carbon atoms per molecule, wherein said phenol has the formula:



where n is 0 to 4, and R is selected from the group consisting of C_1 to C_{24} alkyl groups, C_3 to C_{24} alkyl amino groups, C_7 to C_{23} alkyl phenol groups and polymeric groups of 500 to 20,000 molecular weight prepared by polymerizing C_2 to C_{24} monoolefin-1, and wherein the mol ratio of said acid to said phenol is between about 5:1 to 300:1.

3,130,161
LUBRICATING OIL AND ANTI-WEAR ADDITIVES THEREFOR

Henricus G. P. van der Voort and Maurits Krukzieser, Amsterdam, Netherlands, assignors to Shell Oil Company, a corporation of Delaware

No Drawing. Filed Nov. 2, 1959, Ser. No. 850,034
Claims priority, application Netherlands Nov. 18, 1958
8 Claims. (Cl. 252—51.5)

1. An improved mineral lubricating oil composition comprising a major amount of mineral lubricating oil and from about 0.5% to about 5% by weight of an oil-soluble reaction product of a polymerized 1,2-alkylene imine having from 5 to 150 imine units with a polymer of a mono-olefinic monomer containing an acidic polar group selected from carboxyl and hydroxy groups and an oleophilic hydrocarbyl group of from 8 to 18 carbon atoms, said reaction product having a molecular weight of from 1000 to 500,000.

3,130,162
SUBSTITUTED DIPHENYL

Richard L. Johnson, Edwardsville, Ill., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Original application May 20, 1960, Ser. No. 30,439, now Patent No. 3,081,355, dated Mar. 12, 1963. Divided and this application Aug. 10, 1962, Ser. No. 235,902
1 Claim. (Cl. 252—52)

The composition consisting essentially of o-(m-phenoxyphenoxy)diphenyl and a diphenyl oxide having attached to each phenyl group one phenyl radical (C_6H_5—), the components being present in proportions such that the melting point of the mixture is at least about 10° C. lower than the melting point of the lower melting component.

3,130,163
REFRIGERATION METHOD

Fitzhugh Lee Avera, Alameda, Calif., assignor to Royal Super Ice Company, a corporation of California

No Drawing. Filed Jan. 17, 1962, Ser. No. 166,915
2 Claims. (Cl. 252—67)

1. The method of refrigeration which consists in the selection and use of a refrigerant gel composed of approximately 98 percent water and approximately 2 percent the reaction product of anhydroglucosesodiumglycolate and water-soluble metal salt taken from the class consisting of normal bismuth sulfate, ferrous sulfate, aluminum sulfate, manganese sulfate and aluminum chloride, said reaction product forming a linked structure entraining said water in a stable gel, and said anhydroglucosesodiumglycolate and salt being reacted in substantially stoichiometric proportions thereby leaving said water in substantially dissolved solids-free state; freezing said gel; placing the frozen gel in heat transfer relation to be cooled; and permitting said frozen gel to thaw while in said relation.

3,130,164
LIQUID BLEACHING AND DETERGENT COMPOSITION

Georg Peter Best, Vlaardingen, Netherlands, assignor to Lever Brothers Company, New York, N.Y., a corporation of Maine

No Drawing. Filed July 3, 1959, Ser. No. 824,800
Claims priority, application Great Britain July 10, 1958
10 Claims. (Cl. 252—99)

1. A liquid bleaching and detergent composition in the form of a stable, pourable dispersion which consists essentially of water and, by weight of the composition:

(*a*) of at least one anionic active detergent A of the general formula $RO.(C_nH_{2n}O)_m.SO_3M$, in which R is selected from the group consisting of alkyl radicals having from 6 to 18 carbon atoms and alkylaryl radicals having from 6 to 18 carbon atoms in the alkyl radical; M is selected from the group consisting of alkali metal, ammonium and substituted ammonium radicals; $(C_nH_{2n}O)$ is selected from the group consisting of (C_2H_4O) and (C_3H_6O); and m is from 1 to 8;

(*b*) from about 5 to 30% of a condensed inorganic phosphate;

(*c*) as a soil-suspending agent, a minor amount of a carboxymethylcellulose having a degree of substitution from 0.4 to 1.1; and

(*d*) from about 0.5 to 3% of hydrogen peroxide, said anionic active detergent A being present in such proportions that the compositions are in the form of stable, pourable dispersions which have little tendency to separate out on standing.

3,130,165
INORGANIC PEROXY-COMPOUNDS CONTAINING ORGANIC ACTIVATORS

Peter Brocklehurst, Fairway, Meadow Close, Harden, near Bingley, England, assignor to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio

No Drawing. Filed Aug. 22, 1962, Ser. No. 218,524
Claims priority, application Great Britain Aug. 31, 1961
4 Claims. (Cl. 252—99)

1. A household laundry detergent composition comprising (A) from 5 to 50% of an organic detergent selected from the group consisting of (1) alkali metal soaps of higher fatty acids, (2) anionic non-soap synthetic detergents, (3) nonionic synthetic detergents, (4) zwitterionic synthetic detergents, and (5) amphoteric synthetic detergents; (B) from 3–20% by weight of inorganic peroxy-compound selected from the group consisting of sodium and potassium perborates, percarbonates and monopersulfates; and (C) from about 0.5 to about 2.0 moles per mole of available oxygen in said peroxy-compound of an ester of a phenol selected from the group consisting of phenol and substituted phenols containing at least one substituent group selected from the group consisting of carboxyl groups and sulphonic acid groups and an alpha-chlorinated lower aliphatic acid selected from the group consisting of acetic and propionic acids.

3,130,166
GRANULAR SOAP COMPOSITIONS CONTAINING CARBAMIDE

Lawrence L. Schwalley, Whittier, Calif., assignor to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada

No Drawing. Filed Feb. 5, 1958, Ser. No. 713,290
5 Claims. (Cl. 252—110)

5. A free-flowing granular washing composition consisting essentially of from about 20% to about 50% of granular soap of a particle size predominantly finer than about 30 mesh, from about 50% to about 80% of granular borax of a particle size predominantly finer than about 40 mesh, and granular carbamide in sufficient quantity to substantially prevent lumping of the composition during use, the amount of carbamide in the composition being from about 1% to about 10% of the soap in the composition.

3,130,167
COAGULATING COMPOSITION

Jerome Green, Chicago, Ill., assignor to Nalco Chemical Company, a corporation of Delaware

No Drawing. Filed Feb. 17, 1956, Ser. No. 566,077
2 Claims. (Cl. 252—181)

1. A coagulating composition comprising a solid mixture of a water soluble polyelectrolyte resin having a structure derived by a method comprising polymerization of at least one monoolefinic compound through the aliphatic unsaturated group and containing a plurality of hydrophilic, ionizable radicals from the group consisting of carboxy, carboxylic anhydride and carboxylic acid salt radicals and a coagulating clay, the weight ratio of said resin to said clay being within the range of 1:1 to 1:20.

3,130,168
PREPARATION OF FEEDSTOCKS FOR CHLORINATION

Loren J. Hoy, Richmond, and Richard Miller, Oakland, Calif., assignors to Stauffer Chemical Company, a corporation of Delaware

No Drawing. Filed Sept. 22, 1961, Ser. No. 139,885
7 Claims. (Cl. 252—182)

1. A process for preparing a solid feedstock of improved reactivity suitable for reaction with gaseous chlorinating agents comprising: forming a mixture of a carbonaceous reducing agent, an oxidized compound selected from the class consisting of boron, vanadium, tantalum, columbium, beryllium, rhenium, zirconium, hafnium, tungsten, molybdenum, a normally solid coking binder, and between 2% and 20%, based upon the combined weights of the said carbonaceous reducing agent, said oxidized compound and said coking binder, of a petroleum oil having a viscosity in the range of 38–200 Saybolt Universal seconds at 210° F. and an A.S.T.M. pour point not higher than 10° F.; subjecting said mixture to pressure whereby to agglomerate said mixture and dehydrating, devolatilizing and coking the agglomerates so formed by heating said agglomerates to an elevated temperature whereat said petroleum oil is volatilized whereby to produce a porous agglomerate having a lessened resistance to diffusion of chlorinating gas therethrough.

3,130,169
STABILIZATION OF PEROXY CARBOXYLIC ACIDS

John H. Blumbergs, Highland Park, and Harold K. Latourette, Pennington, N.J., assignors to FMC Corporation, a corporation of Delaware

No Drawing. Filed June 26, 1961, Ser. No. 119,325
9 Claims. (Cl. 252—186)

1. A stable composition which consists essentially of a peroxy carboxylic acid, said acid being free of groups which can be oxidized by peroxy carboxylic acids, dissolved in an inert organic solvent containing a saturated aliphatic tertiary alcohol in amounts sufficient to prevent substantial decomposition of said peroxy carboxylic acid, said alcohol being free of oxidizable groups which will react with said acid.

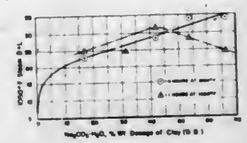
3,130,170
PREPARATION OF CRACKING CATALYSTS FROM CLAY

William Albert Stover, Ellicott City, and Warren S. Briggs, Silver Spring, Md., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

Filed Aug. 7, 1961, Ser. No. 129,586
6 Claims. (Cl. 252—450)

1. A process for preparing cracking catalyts from clay which comprises:

(*a*) calcining a clay selected from the group consisting of kaolin and halloysite at a temperature of 800 to 1400° F. for a period of 1 to 4 hours with from 35 to 80% by weight of the dry clay of a sodium compound selected from the group consisting of sodium carbonate, sodium sulfite, sodium acid sulfite and sodium hydroxide sufficient to form a sodium-alumina silicate complex,



(*b*) adding 45 to 130 weight percent of 3 to 15 weight percent concentration of a strong mineral acid to the complex to destroy same and simultaneously to gel the silicate and dissolve the alumina,

(*c*) precipitating the solubilized alumina with ammonia

(*d*) filtering the resulting mass,

(*e*) drying said mass,

(*f*) removing sodium from said mass by base exhange with 3 weight percent solution of ammonium sulfate containing 1% by weight of ammonium hydroxide, and

(*g*) subsequently washing, drying, redrying, and recovering the catalyst product.

3,130,171
PROCESS FOR PREPARING FAST GELLING SYNTHETIC RUBBER LATEX AND PRODUCT

John D. Sutherland, Jr., Baton Rouge, La., assignor to Copolymer Rubber & Chemical Corporation, a corporation of Louisiana

Filed Mar. 18, 1959, Ser. No. 800,319
12 Claims. (Cl. 260—2.5)

11. In a process for preparing sponge rubber including the steps of foaming synthetic rubber latex and gelling the foamed latex in the presence of a gelling agent, the latex being prepared by emulsion polymerization in an aqueous medium of at least one polymerizable material selected from the class consisting of conjugated diolefins and mixtures of conjugated diolefins and ethylenically unsaturated monomers employing a low temperature polymerization process and a sulfoxylate polymerization recipe including potassium and sodium-containing compounds, agglomerating the latex to a relatively large average particle size by freezing and thawing and concentrating the agglomerated latex to a high solids content, the improvement comprising reducing the gell time of the foamed latex by foaming a latex polymerized from a recipe having a ratio of potassium to sodium between 1.0:1.0 and 1.7:1.0 when calculated on a gram atomic weight basis.

3,130,172
COMPOSITIONS OF MATTER AND METHOD AND STEPS OF MAKING AND USING THE SAME

Mortimer T. Harvey, South Orange, and Peter L. Rosamilia, Newark, N.J., assignors to Harvel Research Corporation, a corporation of New Jersey

Filed Dec. 1, 1958, Ser. No. 777,815
4 Claims. (Cl. 260—6)

2. In the method for producing a friction element, the steps comprising (I) intimately combining (*a*) asbestos, (*b*) an aqueous solution of water-soluble acetone-formal-

dehyde organic reaction product produced by reacting acetone and formaldehyde in the mole proportion of 1 mole of acetone to 2–5 moles of formaldehyde in the presence of an amine catalyst, and (*c*) a water-soluble compound which when in combination with said acetone-formaldehyde reaction product, such combination is capable of being converted to the substantially solid and infusible state upon being heated, (II) shaping said intimate combination of (*a*), (*b*) and (*c*) into the form of an arcuate band, (III) removing the water therefrom and (IV) heat curing said band to convert said combination of said acetone-formaldehyde reaction product and (*c*) into the substantially solid and infusible state said (*c*) selected from the group consisting of one and mixtures of at least two of the following: resorcinol, phenol-aldehyde organic reaction products, urea-formaldehyde organic reaction products, lignin, glue and pine wood extract at least 75% insoluble in gasoline, at least 90% insoluble in petroleum ether and have methoxy content of at least 3%, melting point of approximately 200°–260° F. and saponification number of approximately 120–150 and converted to the water soluble state by alkali treatment.

3,130,173
COMPOSITION FOR POTTING COMPONENTS OF ELECTRIC CIRCUITS

Philip J. Franklin, Los Angeles, Calif., and Morris Weinberg, Bronx, N.Y., assignors to the United States of America as represented by the Secretary of the Army

No Drawing. Filed May 7, 1948, Ser. No. 25,776
5 Claims. (Cl. 260—33.6)
(Granted under Title 35, U.S. Code (1952), sec. 266)

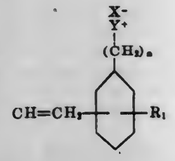
3. A composition of matter comprising a viscous homogeneous liquid mixture of between about 21 and 21.2 percent of styrene monomer, between about 11 and 13.1 percent of polystyrene, between about 31.8 and 33 percent of 2,5-dichlorostyrene, between about 21.2 and 21.5 percent of poly 2,5-dichlorostyrene, and between about 12.7 and 13 percent of a plasticizer chosen from the group consisting of hydrogenated terphenyl and diamylnaphthalene.

3,130,174
MAGNESIUM OXYCHLORIDE CEMENTS

William G. Lloyd and Thomas E. Durocher, Bay City, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Dec. 2, 1960, Ser. No. 73,185
13 Claims. (Cl. 260—41)

1. A composition of matter comprising a magnesium oxychloride cement containing an effective quantity of at least about 0.02 up to about 3 percent by weight of the cement of a water-soluble, polymeric polysulfonium composition containing in chemically combined form at least a substantial proportion of a monomer having the general formula:



wherein R_1 is selected from the group consisting of hydrogen, halogens and alkyls having up to 6 carbon atoms, Y is a divalent, sulfur-containing, organic radical having its valances on the sulfur atom, said radical being derived from aliphatic and cycloaliphatic organic sulfides having from 2 up to 12 carbon atoms, X is a counter anion and *n* is an integer from 1 to 4.

3,130,175
POLYURETHANE PLASTICS

Julius Peter, Odenthal, Karl-Ludwig Schmidt, Leverkusen, and Herbert Bartl, Cologne-Stammheim, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed July 13, 1960, Ser. No. 42,477
Claims priority, application Germany July 18, 1959
5 Claims. (Cl. 260—45.4)

5. In a process for the preparation of a polyurethane plastic which comprises vulcanizing a polyurethane prepolymer, said prepolymer obtained by reacting an organic polyisocyanate with a polymeric organic compound capable of reacting with a polyisocyanate to form a polyurethane, said organic compound having only terminal alcoholic hydroxyl groups as the sole reactive moiety, said organic compound having a molecular weight of at least about 800, the resulting prepolymer composition being substantially free from ethylenic unsaturation, the improvement which comprises reacting with said prepolymer an organic peroxide and triallyl cyanurate.

3,130,176
COATED ARTICLES

Richard E. Zdanowski, Philadelphia, Pa., and Bjorn E. Larsson, Moorestown, N.J., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Jan. 25, 1961, Ser. No. 84,751
20 Claims. (Cl. 260—45.5)

1. As an article of manufacture, a flooring material carrying a clear topcoating thereon comprising a copolymer of 35 to 65% by weight of vinylidene chloride and 35 to 65% by weight of methyl acrylate.

3,130,177
BLENDS OF POLYCARBONATES WITH POLYBUTADIENE, STYRENE, ACRYLONITRILE GRAFT COPOLYMERS

Thomas S. Grabowski, Vienna, W. Va., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois

No Drawing. Filed Mar. 24, 1961, Ser. No. 98,012
5 Claims. (Cl. 260—45.5)

1. A composition comprising a blend of (*a*) the polycarbonate of a di-(mono-hydroxyphenyl)-substituted aliphatic hydrocarbon and (*b*) a graft copolymer of (1) polybutadiene and (2) a mixture of alkenyl cyanide and a vinyl aromatic hydrocarbon.

3,130,178
PROCESS FOR THE PREPARATION OF MODIFIED MELAMINE RESINS

Joachim Galinke, Dusseldorf-Holthausen, and Manfred Dohr, Dusseldorf, Germany, assignors to Henkel & Cie G.m.b.H., Dusseldorf-Holthausen, Germany, a corporation of Germany

No Drawing. Filed July 21, 1959, Ser. No. 828,458
Claims priority, application Germany July 25, 1958
12 Claims. (Cl. 260—67.6)

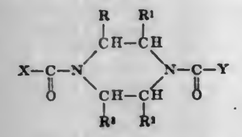
1. A process for the production of modified melamine resins, comprising condensing the compounds (1) melamine and (2) formaldehyde, said compounds being in a molar ratio of 1:2 to 1:6, with (3) from about 4 to up to 50% based on the melamine of a cold water soluble amide compound selected from the group consisting of a polyamide having unsubstituted amino groups, condensation products of said polyamide with urea, said products containing ureido groups, and mixtures of said amide compounds, wherein said amide being prepared by reacting (*a*) polycarboxylic acids and esters thereof, wherein said acid has at least two carboxyl groups, with (*b*) aliphatic polyamines having at least three amine groups, the condensation reaction being carried out in a solvent medium with water as the solvent at a pH of about 7.5 to 9 and at a temperature of betweena bout 50 and 100° C.

3,130,179
LINEAR POLYUREAS

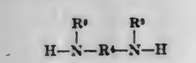
Robert J. Cotter, New Brunswick, N.J., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Feb. 9, 1960, Ser. No. 7,519
20 Claims. (Cl. 260—77.5)

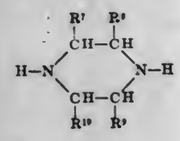
1. Process for the preparation of a thermoplastic crystalline linear polyurea having a reduced viscosity of from about 0.12 to about 1.18 which consists of polymerizing, in a medium containing an organic diluent and water, at a temperature of from about 0° C. to about 150° C., a piperazine-1,4-dicarbonyl halide having the general formula:



wherein X and Y are halogen atoms, R, R^1, R^2, and R^3 are selected from the group consisting of hydrogen and monovalent hydrocarbon radicals with an organic secondary diamine, said diamine being present in at least about 90 percent of stoichiometric, and being selected from the group consisting of an organic secondary diamine having the formula:



wherein R^5 and R^6 are monovalent hydrocarbon radicals and R^4 is a divalent hydrocarbon radical and an organic secondary diamine having the formula:



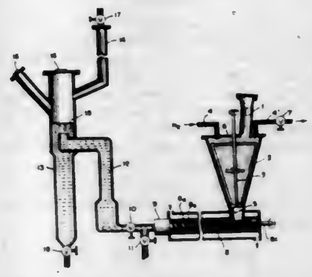
wherein R^7, R^8, R^9 and R^{10} are selected from the group consisting of hydrogen and monovalent hydrocarbon radicals.

3,130,180
CONTINUOUS METHOD AND APPARATUS FOR THE PRODUCTION OF POLYHEXAMETHYLENE ADIPAMIDE

Fritz Wiloth, Klingenberg (Main), Germany, assignor to Vereinigte Glanzstoff-Fabriken A.G., Wuppertal-Elberfeld, Germany

Filed Nov. 3, 1958, Ser. No. 771,645
8 Claims. (Cl. 260—78)

1. In a process for the production of polyhexamethylene adipamide from the nylon salt hexamethylene diammonium adipate as the initial reactant in the form of solid, nondissolved particles, an improved continuous method which comprises: introducing said particulated solid hexamethylene diammoniud adipate into a screw conveying zone in which the adipate is continuously advanced and rapidly melted at a temperature of about 210° C. to 240° C. before substantial polymerization; immediately passing the molten material into a separate, first-stage, liquid-phase reaction zone for continuous passage therethrough in the absence of a separate gas phase for polycondensation polymerization at a temperature of about 230° C. to 270° C. and at a pressure of about 15 to 20 atmospheres, the water split off during said polymerization flowing co-currently with said molten material through said first-stage reaction zone and the retention time of said molten material and water under the reaction conditions in said first-stage reaction zone being sufficient to chemically bind most of the hexamethylene diamine in polymerized form; continuously vaporizing and removing said water from a heated surface of the molten material in a gas space located at the end of said



first-stage reaction zone and maintained under said polycondensation reaction pressure of about 15 to 20 atmospheres; and continuously withdrawing a liquid polycondensate having a modecular weight of at least about 4,000 at a point below said heated surface in a second-stage, liquid-phase reaction zone maintained at about 250° C. to 270° C. and under said pressure of about 15 to 20 atmospheres for further polycondensation after removal of said water.

3,130,181
PREPARATION OF COLLOIDAL PARTICLES OF POLYCARBONAMIDES

Frederic L. Sievenpiper, Alden, N.Y., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Apr. 10, 1959, Ser. No. 805,360
10 Claims. (Cl. 260—78)

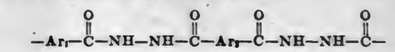
1. The process for preparing finely divided synthetic linear polycarbonamides of colloidal size, which comprises heating in a non-oxidizing atmosphere a mixture comprising a synthetic linear polycarbonamide, at least 4 parts of water based on the weight of the polycarbonamide, and a ketone from the group consisting of aliphatic ketones, cycloaliphatic ketones, and mixtures of such ketones, to a temperature above that at which the polycarbonamide becomes molten but below that at which substantial decomposition of the polycarbonamide takes place, while agitating the mixture, the amount of said ketone present in the mixture being at least 30% by volume based on the volume of water present and such as to result in the formation of an emulsion of the molten polycarbonamide in water and ketone when the mixture is subjected to said agitation, and thereafter cooling the said emulsion while continuing the agitation to form said finely divided particles of the polycarbonamide.

3,130,182
WHOLLY AROMATIC POLYHYDRAZIDES

August Henry Frazer, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Aug. 11, 1960, Ser. No. 48,844
13 Claims. (Cl. 260—78)

1. A high molecular weight, fiber- and film-forming aromatic condensation polymer consisting essentially of the following recurring structural unit



wherein Ar and Ar_2 each represents a divalent aromatic radical having at least three nuclear atoms between points of attachment and having less than 18 carbon atoms, with the proviso that less than 65 mol percent of the aromatic radicals in the polymer are paraphenylene radicals, said polymer having a melt temperature greater than 300° C. and an inherent viscosity greater than 0.4, when measured in dimethylsulfoxide at a concentration of 0.5 gram of polymer per 100 ml. of solution at 30° C.

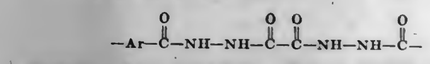
3,130,183

POLYHYDRAZIDES FROM OXALIC ACID DIHYDRAZIDES AND AROMATIC DICARBOXYLIC ACID HALIDES

August Henry Frazer, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Sept. 6, 1960, Ser. No. 53,873
9 Claims. (Cl. 260—78)

1. A high molecular weight, fiber and film-forming condensation polymer consisting essentially of the following recurring structural unit



wherein —Ar— represents a divalent aromatic radical having at least three nuclear atoms between points of attachment and having less than 18 carbon atoms with the proviso that less than 65 mol percent of the aromatic radicals are para-phenylene radicals, said polymer having a melt temperature greater than about 350° C. and an inherent viscosity above 0.3, when measured at a concentration of 0.5 gram of polymer per 100 ml. of solution in dimethyl sulfoxide at a temperature of 30° C.

3,130,184

PROCESS OF PREPARING POLYMERS FROM ALKALI METAL SALTS OF β-ALKYLISETHIONATES

Leslie M. Schenck, Mountainside, and John H. Shown, Westfield, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 20, 1960, Ser. No. 63,714
5 Claims. (Cl. 260—79.3)

1. The process of preparing homopolymers of alkali-metal β-alkyl vinyl sulfonates which comprises heating an alkali metal salt of a β-alkylisethionate in which the alkyl group contains from 1 to 4 carbon atoms at a pH between 6 and 9 and a temperature between 120–250° C.

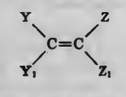
3,130,185

TRIALKYLBOROXINES AS POLYMERIZATION CATALYSTS

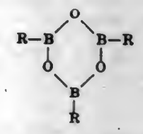
Frank J. Welch, Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Sept. 19, 1960, Ser. No. 56,693
13 Claims. (Cl. 260—88.7)

1. A process for the polymerization of ethylenically unsaturated monomers having the general formula



wherein Y and Y_1 each designates a hydrogen atom, Z designates a member of the group consisting of hydrogen atoms, halogen atoms and the alkyl radicals containing from 1 to 4 carbon atoms; Z_1 designates a substituent having a Hammett para-sigma value of from zero to about 1.3 and, wherein when Z designates an alkyl radical, Z_1 designates a substituent having a positive para-sigma value of at least about 0.4, which process comprises contacting said ethylenically unsaturated monomers, at a temperature of from about 0° C. to about 200° C., with a catalytic quantity, sufficient to polymerize said ethylenically unsaturated monomers, of an organoboron compound having the general formula



wherein R designates an alkyl radical containing from 1 to 12 carbon atoms.

3,130,186

PROCESS FOR THE DISSOCIATION OF POLYPROPYLENE

Erhard Siggel, Laudenbach (Main), Gerhard Meyer, Obernburg (Main), Wolfgang Rosener, Erlenbach (Main), and Werner Helmut, Obernburg (Main), Germany, assignors to Vereinigte Glanzstoff-Fabriken AG, Wuppertal-Elberfeld, Germany

No Drawing. Filed Aug. 4, 1961, Ser. No. 129,244
Claims priority, application Germany Aug. 9, 1960
4 Claims. (Cl. 260—93.7)

1. A process for treating polypropylene which comprises dispersing said polypropylene in an iso-alcohol containing from 3 to 8 carbon atoms; passing oxygen into said dispersion while maintaining the temperature of said dispersion at from about 100° C. to about 10° C. below the melting point of the polymerizate; and thereafter removing said iso-alcohol from said polymerizate, said iso-alcohol having dissolved therein atactic polypropylene and low molecular weight block polymers.

3,130,187

AUTOMATIC PROCESS CONTROL METHOD AND APPARATUS

Ernest D. Tolin and Donald E. Berger, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Filed July 11, 1960, Ser. No. 41,838
14 Claims. (Cl. 260—94.9)

1. An improved method of controlling a continuous chemical reaction which proceeds short of completion in a reaction zone which comprises sensing the rate of flow of a reactant to said zone, producing a first output as a function of said rate of flow of reactant to said zone, separating unreacted reactant from said reaction effluent and passing said unreacted reactant from the reaction system, sensing the rate of flow of said unreacted reactant passing from said system, producing a second output as a function of said rate of flow of unreacted reactant, sensing the rate of change of a variable of the process which produces a displacement of reactant from said system, producing a third output as a function of said rate of change of said variable times a factor relating change in said variable to the amount of said displacement, applying said first, second and third outputs to produce a fourth output as a function of the difference in potential between said second output and the sum of said first and third outputs, and applying said fourth output to control a variable of said reaction directly affecting reaction rate.

10. In apparatus including a reactor, means for feeding reactant to said reactor, means for feeding solvent to said reactor, a flash tank, means for passing effluent from said reactor to said flash tank, means for withdrawing vapor from said flash tank, and means for withdrawing liquid from said flash tank, the improved control system comprising, in combination, means for sensing the rate of flow of reactant to said reactor and producing a first output as a function thereof, means for sensing the rate of flow of unreacted reactant in the vapor from said flash tank and producing a second output as a function thereof, means for sensing the rate of change in liquid level in said flash tank and producing a third output as a function thereof, means for producing a fourth output as a function of said third output times a factor for unreacted reactant displaced from said flash tank per unit increase in liquid level, means for producing a fifth output as a function of the difference between the potential of said second output and the sum of the potentials of said first and fourth outputs, and means for applying said fifth output to control a reaction variable.

3,130,188

CATALYST AND PROCESS FOR PRODUCING OLEFIN POLYMERS

John P. Hogan, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Oct. 7, 1960, Ser. No. 61,070
14 Claims. (Cl. 260—94.9)

4. A polymerization process which comprises polymerizing ethylene to a solid homopolymer at a temperature in the range 150 to 350° F. in the presence of a catalyst prepared by depositing ammonium silicofluoride and at least one compound selected from the group consisting of chromium oxide and chromium compounds calcinable to chromium oxide on at least one member of the group consisting of silica, alumina, zirconia and thoria, the amount of said ammonium silicofluoride deposited ranging from 0.1 to 8 weight percent based on total catalyst weight, heating the resulting mixture in the range 750 to 1400° F. for a period of time in the range of 5 minutes to 20 hours, thus leaving at least part of the chromium in hexavalent state, and recovering a solid polymer of ethylene.

3,130,189

HYDROXOCOBALAMIN-GLUTATHIONE

Edward J. Hanus, Palisade, N.J., Vincent J. Rizzo, Brooklyn, N.Y., and Helen R. Skeggs, Ardsley, Pa., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Apr. 6, 1959, Ser. No. 804,144
1 Claim. (Cl. 260—112)

The compound, hydroxocobalamin-glutathione, prepared by mixing equal molar quantities of glutathione and hydroxocobalamin in water, adding acetone to the water solution to precipitate the formed hydroxocobalamin-glutathione compound as purple-red crystals and recovering said purple-red crystals of hydroxocobalamin-glutathione.

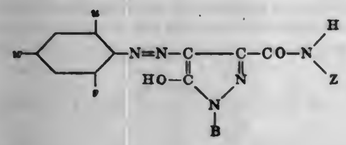
3,130,190

WATER INSOLUBLE MONOAZO DYESTUFFS

Ernest Merian, Bottmingen, and Otto Senn, Arlesheim, Switzerland, assignors to Sandoz Ltd., Basel, Switzerland

No Drawing. Filed Nov. 28, 1961, Ser. No. 167,991
Claims priority, application Switzerland Nov. 29, 1960
6 Claims. (Cl. 260—163)

1. Dyestuff of the formula



wherein

B is a member selected from the group consisting of hydrogen, phenyl and methyl,

u is a member selected from the group consisting of hydrogen, chlorine, and nitrile,

v is a member selected from the group consisting of hydrogen and chlorine,

w is a member selected from the group consisting of nitro, lower carbalkoxy, N-mono-lower alkyl sulfonamido and N-di-lower alkylsulfonamido, and

Z is a member selected from the group consisting of hydrogen, lower alkyl and lower hydroxyalkyl, "alkyl" throughout having 1 to 4 carbon atoms.

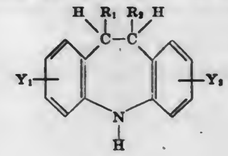
3,130,191

SUBSTITUTED DIBENZ[b,f]AZEPINE COMPOUNDS

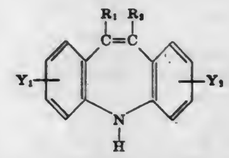
Walter Schindler, Riehen, near Basel, and Hans Blattner, Basel, Switzerland, assignors to Geigy Chemical Corporation, Ardsley, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 3, 1961, Ser. No. 128,955
Claims priority, application Switzerland Nov. 16, 1959
13 Claims. (Cl. 260—239)

1. A compound selected from the group consisting of



and



wherein

R_1 is a member selected from the group consisting of lower alkyl, lower alkenyl, phenyl and phenylalkyl with at most 3 carbon atoms,

R_2 is a member selected from the group consisting of hydrogen and lower alkyl,

Y_1 is a member selected from the group consisting of hydrogen and chlorine and

Y_2 is a member selected from the group consisting of hydrogen and chlorine.

2. 10-ethyl-10,11-dihydro-5H-dibenz[b,f]azepine.

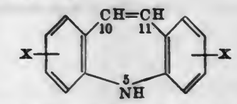
3,130,192

AZEPINES AND N-AMINOALKYL DERIVATIVES THEREOF

Walter Schindler, Riehen, near Basel, Switzerland, assignor to Geigy Chemical Corporation, Ardsley, N.Y.

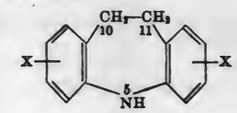
No Drawing. Filed Aug. 10, 1962, Ser. No. 216,046
Claims priority, application Switzerland Nov. 13, 1956
15 Claims. (Cl. 260—239)

1. A process for the production of a 5-dibenzo[b,f]-azepine of the formula:



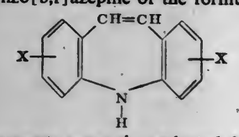
wherein X represents a member selected from the group consisting of hydrogen, chlorine and methyl,

which comprises treating a 10,11-dihydro-5-dibenzo[b,f]-azepine of the formula:



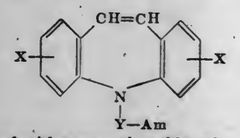
with an acylating agent selected from the group consisting of acetyl chloride, propionyl chloride, chloroformic acid methyl ester and chloroformic acid ethyl ester, subjecting the resultant 5-acyl derivative to the action of a halogen-yielding compound selected from the group consisting of N-bromosuccinimide, N-chlorosuccinimide, N-bromophthalimide and N-bromoacetamide, treating the resultant corresponding 5-acyl-10-halogen-10,11-dihydro - 5 - dibenzo[b,f]azepine with a dehydrohalogenating agent selected from the group consisting of a tertiary organic base and an alkali lye and subjecting the compound obtained to hydrolysis by heating with an alkali lye.

4. A 5-dibenzo[b,f]azepine of the formula:



wherein X represents a member selected from the group consisting of hydrogen and chlorine.

9. A member selected from the group consisting of an N-aminoalkyl derivative of an azepine corresponding to the formula:



and salts thereof with non-toxic acids, wherein

X represents a member selected from the group consisting of hydrogen, halogen and methyl,

Y represents an alkylene radical having at least two and at most six carbon atoms and at least two and at most four bridging members between N and Am, and

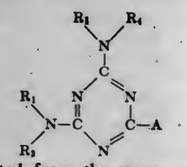
Am represents a member selected from the group consisting of lower dialkylamino, 1-pyrrolidino and 1-piperidino.

3,130,193
MERCURATED MELAMINE DERIVATIVES

John T. Shaw, Middlesex, Frank J. Gross, New Brunswick, and Richard K. Madison, Murray Hill, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Jan. 18, 1961, Ser. No. 83,368
8 Claims. (Cl. 260—242)

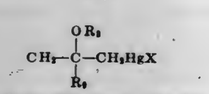
1. Mercurated allyl amino-s-triazines having the following formula:



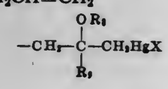
where A is selected from the group consisting of OR_5 and



in which R_5 is



and R_3 is selected from the group consisting of hydrogen, lower alkyl, $—CH_2CH=CH_2$



and $—CH_2OR_7$, and where R_1–R_4 are selected from the group consisting of hydrogen, $—CH_2OR_7$, lower alkyl and phenyl, and at least two of the members R_1–R_4 and R_6, on different amino nitrogens, is $—CH_2OR_7$, R_7, R_8 and R_9 are selected from the group consisting of hydrogen and lower alkyl, and X is an anionic radical.

3,130,194
PHENTHIAZINE DERIVATIVES

Robert Michel Jacob, Ablon-sur-Seine, and Jacques Georges Robert, Gentilly, France, assignors to Societe des Usines Chimiques Rhone-Poulenc, Paris, France, a corporation of France

No Drawing. Filed Apr. 20, 1959, Ser. No. 807,273
Claims priority, application France Apr. 24, 1958
1 Claim. (Cl. 260—243)

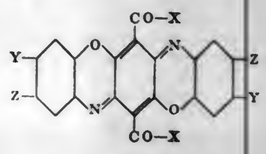
A member of the class consisting of the compound 3-methanesulphonyl - 10 - (3 - 4' - carbamoyl - piperidinopropyl)phenthiazine and its non-toxic acid addition salts.

3,130,195
DIOXAZINE DYESTUFFS

Jost von der Crone and Andre Pugin, Rieben, near Basel, Switzerland, assignors to J. R. Geigy A.-G., Basel, Switzerland

No Drawing. Filed May 18, 1962, Ser. No. 195,973
Claims priority, application Switzerland May 19, 1961
6 Claims. (Cl. 260—246)

1. A dioxazine dyestuff of the formula



wherein

X is a member selected from the group consisting of cyclohexyloxy, alkoxy with maximally 8 carbon atoms, phenoxy, chlorophenoxy, methylphenoxy, dichlorophenoxy, dimethylphenoxy, benzyloxy, methylbenzyloxy, chlorobenzyloxy and dichlorobenzyloxy, and the group



wherein

R_1 is a member selected from the group consisting of hydrogen, lower alkyl, phenyl, chlorophenyl, methylphenyl, dichlorophenyl, dimethylphenyl, nitrophenyl, naphthyl, benzyl, chlorobenzyl, methylbenzyl and dichlorobenzyl, and R_2 is a member selected from the group consisting of hydrogen and lower alkyl and R_1 and R_2 when taken together with the adjacent nitrogen atom are a member selected from the group consisting of pyrrolidino, piperidino and morpholino,

Z is a member selected from the group consisting of hydrogen, chlorine, lower alkyl, lower alkoxy, benzoyl, lower alkylsulfonyl, lower carbalkoxy and —CO—NH—R_3, wherein R_3 is a member selected from the group consisting of phenyl, methylphenyl, chlorophenyl, dimethylphenyl and dichlorophenyl,

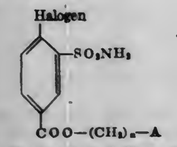
Y is a member selected from the group consisting of hydrogen, amino, lower alkanoylamino, lower carbalkoxy amino, lower alkoxy, benzoylamino, chlorobenzoylamino, dichlorobenzoylamino, phenoxy, methylphenoxy, methoxyphenoxy, chlorophenoxy and benzyloxy.

3,130,196
SULPHONAMIDES

Ernst Jucker, Binningen, Basel-Land, and Adolf J. Lindenmann, Basel, Switzerland, assignors to Sandoz Ltd. (also known as Sandoz A.G.), Basel, Switzerland, a Swiss firm

No Drawing. Original application May 8, 1961, Ser. No. 108,308. Divided and this application Apr. 30, 1962, Ser. No. 191,320
6 Claims. (Cl. 260—287)

1. A member selected from the class consisting of a sulphonamide of the formula



wherein A is a radical selected from the class consisting of 2-pyridyl, 3-pyridyl, 4-pyridyl, 2-quinolyl, 3-quinolyl and 4-quinolyl, and *n* represents one of the whole numbers 1 to 2 inclusive, and the acid addition salts of said sulphonamide, with an acid selected from the group consisting of hydrochloric, hydrobromic, sulphuric, oxalic, tartaric, acetic and methanesulphonic acid.

4. 3-sulphamyl-4-chlorobenzoic acid quinolyl-(4')-methyl ester.

3,130,197
PRODUCTION OF AZAMONOMETHINECYANINES OF THE BENZOTHIAZOLE SERIES

Matthias Seefelder, Ludwigshafen (Rhine), and Hans Gerhard Reppe, Frankenthal, Pfalz, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

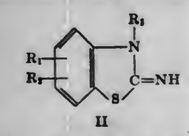
No Drawing. Filed July 11, 1962, Ser. No. 209,210
Claims priority, application Germany July 14, 1961
5 Claims. (Cl. 260—305)

1. A process for the production of a compound of the Formula I:



I

in which R_1 and R_2 are members selected from the group consisting of hydrogen, halogen, linear and branched alkyl of 1 to 12 carbon atoms and linear and branched alkoxy of 1 to 12 carbon atoms, R_3 represents linear and branched alkyl of 1 to 12 carbon atoms, and X^- is the equivalent of an anion of a strong acid, which comprises reacting 2-iminobenzothiazolines of the Formula II



II

in which R_1, R_2 and R_3 have the above meanings, with a strong acid at temperatures between 100 and 250° C.

3,130,198
PROCESS FOR THE PURIFICATION OF CYCLOSERINE

Roger L. Harned, Terre Haute, Ind., assignor to Commercial Solvents Corporation, New York, N.Y., a corporation of Maryland

No Drawing. Filed Aug. 18, 1961, Ser. No. 132,291
4 Claims. (Cl. 260—307)

1. A process for the purification of cycloserine which comprises treating an aqueous solution of cycloserine containing small amounts of iron with 8-hydroxyquinoline to form a water-insoluble complex of iron and 8-hydroxyquinoline, and removing the said water-insoluble complex from the said aqueous solution.

3,130,199
METHANOTHIANAPHTHENE COMPOUNDS

Russell M. Bimber, Painesville, Henry Bluestone, University Heights, and Irving Rosen, Painesville, Ohio, assignors to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

No Drawing. Filed Feb. 11, 1960, Ser. No. 7,984
15 Claims. (Cl. 260—330.5)

1. 3,3a - dichloro - 3a,4,7,7a - tetrahydro - 4,7 - methanothianaphthene 1,1-dioxide.

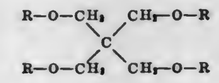
15. 7,8,9b - trichloro - 1,4,4a,9b - tetrahydro - 1,4-methanodibenzothiophene 5,5-dioxide.

3,130,200
PREPARATION OF THE TETRAESTERS OF PENTAERYTHRITOL

Etienne Barbry, Lille, Nord, France, assignor to Boyer & Cie, Paris, France, a company of France

No Drawing. Filed Jan. 11, 1961, Ser. No. 81,927
Claims priority, application France Jan. 15, 1960
4 Claims. (Cl. 260—340.2)

1. A method of preparation of tetraesters of pentaerythritol of the formula:



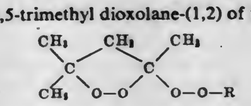
in which R is selected from the group consisting of acetyl, propionyl, butyryl and together form a member selected from the group consisting of succinyl and phthalyl, consisting in causing the organic acid anhydride corresponding to the ester to be obtained to react upon pentaerythritol, in the presence of a mixture of pure sulphuric acid and of oleum containing 20% of sulphuric anhydride as a catalyst.

3,130,201
PEROXIDES OF 3,5,5-TRIMETHYL DIOXOLANE-(1,2) AND PROCESS OF MAKING SAME

Alfred Rieche, Berlin-Wendenschloss, Ernst Schmitz, Berlin-Altglienicke, and Egon Gruendemann, Berlin-Lichtenberg, Germany, assignors to Elektrochemische Werke Muenchen Aktiengesellschaft, Munich, Germany, a corporation of Germany

No Drawing. Filed Nov. 15, 1960, Ser. No. 69,260
10 Claims. (Cl. 260—340.9)

10. A 3,5,5-trimethyl dioxolane-(1,2) of the formula



wherein

R is a member selected from the group consisting of lower alkyl having 1 to 8 carbon atoms, pinanyl, 1-hydroxy dicyclohexyl peroxide, menthyl, decahydronaphthyl, (1-lower alkoxy)-lower alkyl and phenyl lower alkyl.

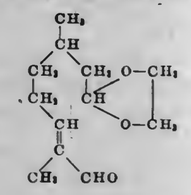
3,130,202
2,6-DIMETHYL-8-ETHYLENE-DIOXY-2-EN-1-AL

Robert Robinson, Great Missenden, Renee H. Jaeger, Oxford, and Keith J. Clark, Egham, England, assignors to Shell Oil Company, a corporation of Delaware

No Drawing. Original application June 23, 1958, Ser. No. 744,016, now Patent No. 3,010,997, dated Nov. 28, 1961. Divided and this application Oct. 3, 1961, Ser. No. 160,379

1 Claim. (Cl. 260—340.9)

A compound having the structural formula

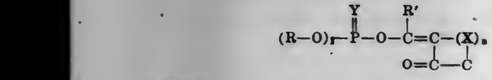


3,130,203
PHOSPHORIC ACID ESTERS

Karl Heinz Büchel, Beuel, Hans Röchling, Vlersen, Rhineland. and Friedrich W. A. G. K. Korte, Hangelar, Germany, assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 24, 1962, Ser. No. 225,884
Claims priority, application Germany Sept. 28, 1961
16 Claims. (Cl. 260—343.2)

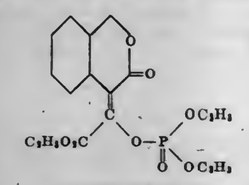
1. A compound having the formula



wherein

R represents alkyl of from 1 to 7 carbon atoms, R' represents carboalkoxy with alkoxy of from 1 to 7 carbon atoms, X represents an unsubstituted member selected from the group consisting of methylene (—CH_2—), methylmethylene, dimethylmethylene, and methylene forming part of one ring which is a six-membered carbocyclic ring and wherein said carbocyclic ring is selected from the group consisting or ortho-phenylene and ortho-cyclohexylene, and n is a whole number from 2 to 3.

5.



3,130,204
PREPARATION OF GAMMA-PYRONES

Bryce E. Tate, Niantic, Conn., and Robert L. Miller, Brooklyn, N.Y., assignors to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

Filed Feb. 7, 1962, Ser. No. 171,732
15 Claims. (Cl. 260—345.9)

15. A process for the preparation of maltol from kojic acid which comprises adjusting an aqueous kojic acid solution to a pH of at least 10 with sodium hydroxide, introducing oxygen into said solution in the presence of a palladium catalyst, maintaining said minimum pH during oxygenation, continuing the oxygenation until the kojic acid sodium salt is substantially completely consumed, subsequently adjusting the pH to a value below about 2.5 with mineral acid, recovering the comenic acid formed thereby, heating said comenic acid in diphenyl ether to a temperature of at least about 230° C., maintaining said temperature until evolution of carbon dioxide substantially ceases, recovering the pyromeconic acid formed thereby, adding an approximately molecular equivalent of formaldehyde to an aqueous solution of said pyromeconic acid adjusted to a pH of at least about 8, treating the solution of hydroxymaltol formed thereby wherein the 3-hydroxyl group of said hydroxy-maltol is predominantly in the unionized form with a zinc and hydrochloric acid reducing agent, and recovering the maltol which is formed.

3,130,205
2-METHOXY-3-CHLORO-6-METHYL BENZOIC AND DERIVATIVES

Sidney B. Richter, Chicago, Ill., assignor to Velsicol Chemical Corporation, Chicago, Ill., a corporation of Illinois

No Drawing. Filed July 26, 1961, Ser. No. 126,891
13 Claims. (Cl. 260—347.4)

1. A compound selected from the group consisting of 2-methoxy-3-chloro-6-methylbenzoic acid, its anhydride, its alkali metal salts, its ammonium salt, its morpholine salt, its alkyl amine salts in which the amine component is an unsubstituted alkyl amine of up to six carbon atoms, its alkanol amine salts in which the amine component is an unsubstituted alkanol amine of up to six carbon atoms, its esters in which the esterifying group is an unsubstituted alkyl group of from one to ten carbon atoms, its butoxyethanol ester, its tetrahydrofurfuryl alcohol ester, its unsubstituted amide, and its alkyl amides in which the amine component is an unsubstituted alkyl amine of up to ten carbon atoms.

13. The tetrahydrofurfuryl alcohol ester of 2-methoxy-3-chloro-6-methylbenzoic acid.

3,130,206
2-METHOXY-3-METHYL-6-CHLORO-BENZOIC ACID AND DERIVATIVES THEREOF

Sidney B. Richter, Chicago, Ill., assignor to Velsicol Chemical Corporation, Chicago, Ill., a corporation of Illinois

No Drawing. Filed Nov. 8, 1961, Ser. No. 150,874
13 Claims. (Cl. 260—347.4)

1. A compound selected from the group consisting of 2-methoxy-6-chloro-3-methylbenzoic acid, its anhydride, its alkali metal salts, its ammonium salt, its morpholine salt, its alkyl amine salts in which the amine component is an unsubstituted akyl amine of up to six carbon atoms, its alkanol amine salts in which the amine component is an unsubstituted alkanol amine of up to six carbon atoms, its esters in which the esterifying group is an unsubstituted alkyl group of from one to ten carbon atoms, its butoxyethanol ester, its tetrahydrofurfuryl alcohol ester, its unsubstituted amide, and its alkyl amides in which the amine component is an unsubstituted alkyl amine of up to ten carbon atoms.

13. The tetrahydrofurfuryl alcohol ester of 2-methoxy-6-chloro-3-methylbenzoic acid.

3,130,207
IMPROVED EPOXIDATION PROCESS WITH LIQUID ALIPHATIC PEROXY ACIDS

Frank P. Greenspan, Larchmont, N.Y., and Seymour M. Linder, Baltimore County, Md., assignors to FMC Corporation, a corporation of Delaware

No Drawing. Filed Nov. 3, 1960, Ser. No. 66,943
10 Claims. (Cl. 260—348.5)

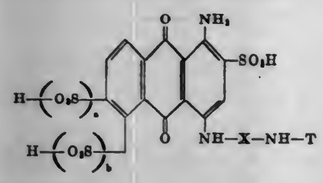
1. In the process of epoxidizing an organic compound containing at least one epoxidizable olefinic double bond selected from the group consisting of unsaturated aliphatic hydrocarbons, unsaturated alicyclic hydrocarbons, unsaturated fatty acids, unsaturated fatty esters, unsaturated alcohols, sterols, and unsaturated polymers by reacting said organic compound with a preformed liquid aliphatic peroxy acid solution comprising a substantial equilibrium mixture of liquid aliphatic peroxy acid, liquid aliphatic acid, hydrogen peroxide, and water, said equilibrium mixture being formed by the reaction of liquid aliphatic acid and hydrogen peroxide and having a liquid aliphatic peroxy acid concentration of 20–45% by weight, at a temperature of 0–100° C., the improvement which comprises conducting the reaction in the presence of sufficient liquid aliphatic acid anhydride to react preferentially with the hydrogen peroxide present in the equilibrium mixture to form additional liquid aliphatic peroxy acid, while maintaining the pH of the reaction medium in the range of 2.5–6.5.

3,130,208
ANTHRAQUINONE DYES

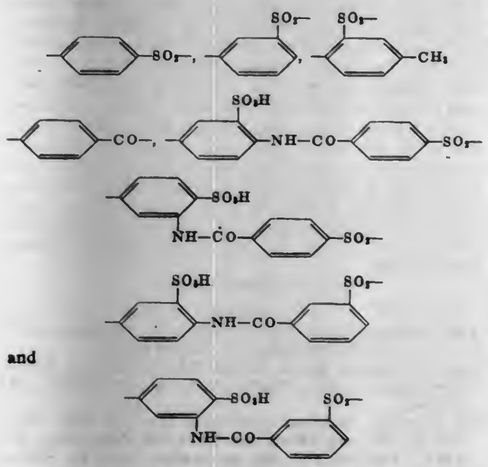
Hermann Weissauer, Werner Rohland, and Dieter Ludsteck, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Jan. 10, 1961, Ser. No. 81,698
Claims priority, application Germany Jan. 14, 1960
3 Claims. (Cl. 260—374)

1. An anthraquinone dye of the formula:

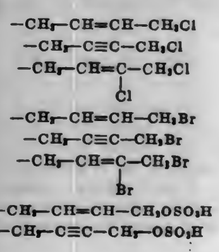


wherein: X represents a radical selected from the class consisting of

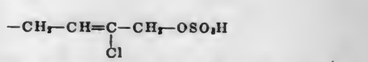


and

T represents a radical selected from the class consisting of



and



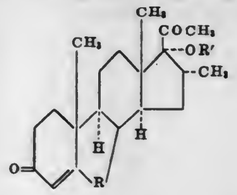
and a and b each represents an integer from 0 to 1, the sum of a plus b being an integer from 0 to 1.

3,130,209
17α-ACYLOXY-16-METHYLPREGNANE DERIVATIVES AND PROCESS FOR PRODUCING SAME

Vladimir Petrow and David Morton Williamson, London, England, assignors to The British Drug Houses Limited

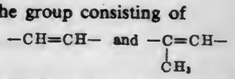
No Drawing. Filed Aug. 22, 1961, Ser. No. 133,030
Claims priority, application Great Britain Aug. 25, 1960
8 Claims. (Cl. 260—397.4)

1. A proces for the preparation of 17α-acyloxy-16α-methylpregnane derivatives having the formula

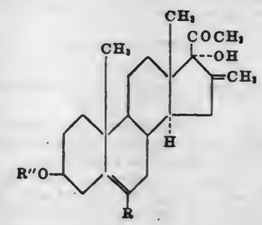


(I)

where R is selected from the group consisting of

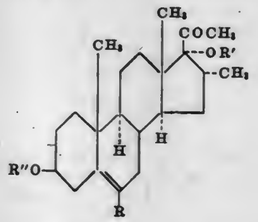


and R' is an acyl group of a hydrocarbon carboxylic acid containing up to six carbon atoms said process comprising selectively hydrogenating the 16-methylene group of a 3β - acyloxy-17α-hydroxy-16-methylenepregn-5-en-20-one of formula



(III)

(where R is selected from the group consisting of hydrogen and methyl and R'' is an acyl group of a hydrocarbon carboxylic acid containing up to six carbon atoms) to yield the 16α-methyl derivative of formula



(II)

(where R is selected from the group consisting of hydrogen and methyl, R' is hydrogen and R'' is an acyl group as defined above), acylating the 17α-hydroxy group to give a 3β,17α-diacyloxy-16α-methyl derivative of Formula II (where R is selected from the group consisting of hy-

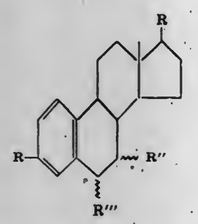
drogen and methyl and R' and R'' are acyl groups as defined above), selectively hydrolysing the 3β-acyloxy group to give a 17α-acyloxy-3β-hydroxy-16α-methyl derivative of Formula II (where R is selected from the group consisting of hydrogen and methyl, R' is an acyl group as defined above and R'' is hydrogen) and oxidising to convert the 3β-hydroxy-Δ^5 derivative (II; where R is selected from the group consisting of H and CH_3, R' is an acyl group as defined above, and R'' is H) into a steroid selected from the group consisting of Δ^4-3-ketones and $\Delta^{4,6}$-3-ketones.

3,130,210
ESTRADIOL DERIVATIVES

Oskar P. Wintersteiner, New Brunswick, and Mildred L. Moore, Highland Park, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Nov. 14, 1962, Ser. No. 237,741
14 Claims. (Cl. 260—397.4)

1. A compound of the formula



wherein each R is acyloxy; R'' is selected from the group consisting of hydrogen and halogen; and R''' is selected from the group consisting of hydroxy lower alkoxy and acyloxy; wherein the acyl radical is of a hydrocarbon carboxylic acid of less than twelve carbon atoms.

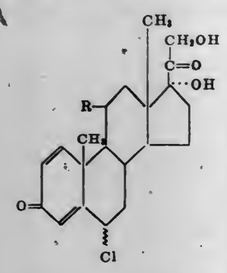
5. 6-keto-7α-haloestradiol-3,17-diacetate.

3,130,211
6-CHLORO-1-DEHYDRO STEROID COMPOUNDS

George B. Spero, Kalamazoo Township, Kalamazoo County, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Original application Jan. 18, 1957, Ser. No. 634,828, now Patent No. 2,841,600, dated July 1, 1958. Divided and this application Mar. 19, 1958, Ser. No. 722,378
9 Claims. (Cl. 260—397.45)

1. 6 - chloro - 11 - oxygenated-17α,21-dihydroxy-1,4-pregnadiene-3,20-dione of the following formula:



wherein R is a member selected from the group consisting of β-hydroxy and keto; and the 21-acylates thereof wherein the acyl radical is that of a hydrocarbon carboxylic acid containing from one to twelve carbon atoms, inclusive.

3,130,212
$\Delta^{1,3,5(10),9(11)}$ PREGNATETRAENE-3,20-DIONES AND PROCESS FOR THE PRODUCTION THEREOF

Joseph Elks, London, John Francis Oughton, Buckingham, and Leslie Stephenson, London, England, assignors to Glaxco Group Limited, Greenford, England, a company of Great Britain

No Drawing. Filed Oct. 8, 1959, Ser. No. 845,074
Claims priority, application Great Britain Oct. 13, 1958
11 Claims. (Cl. 260—397.45)

1. 3,11,17α,21 - tetra-acetoxy-1-methyl-19-nor-pregna-1,3,5(10),9(11)-tetra-en-20-one.

3,130,213
HYDROCARBYLTHIO MANGANESE TRICARBONYLS

Robert J. Harper, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Aug. 1, 1960, Ser. No. 46,363
9 Claims. (Cl. 260—429)

1. Hydrocarbon thiomanganese tricarbonyls in which the hydrocarbon group contains up to about 10 carbon atoms and is selected from the group consisting of alkyl, aralkyl, aryl and arlkaryl radicals.

3,130,214
IONIC AROMATIC COMPOUNDS OF TRANSITION METALS HAVING ATOMIC NUMBERS FROM 7 TO 14 LESS THAN THAT OF THE NEXT HIGHER RARE GAS

Thomas H. Coffield, Farmington, and Rex D. Closson, Northville, Mich., assignors to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed May 15, 1961, Ser. No. 109,809
25 Claims. (Cl. 260—429)

1. As a new composition of matter, ionic organometallic compounds consisting of a cation having a positive charge of one and containing a central transition metal atom whose atomic number is from seven to fourteen less than that of the next higher rare gas, an aromatic hydrocarbon molecule containing an isolated benzene nucleus and having from 6 to 18 carbon atoms, said molecule being coordinately linked to said metal by donation of six electrons thereto, and at least one dissimilar electron-donating group coordinately linked to said metal atom, each of said dissimilar groups donating from one to five electrons to said metal atom so that said metal atom in the cation achieves the electronic configuration of the next higher rare gas, and an anion having a minus charge of one.

3,130,215
ORGANOMANGANESE CARBONYL TRIORGANO PHOSPHINES AND PHOSPHITES

Gene E. Schroll, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Original application May 13, 1960, Ser. No. 28,847, now Patent No. 3,054,740, dated Sept. 18, 1962. Divided and this application Nov. 16, 1961, Ser. No. 157,866
13 Claims. (Cl. 260—429)

1. A compound represented by the general formula

$$RMn(CO)_{3-n}(R'_3M)_n$$

wherein R is a cyclopentadienyl radical containing from 5 to about 24 carbon atoms, M is an element of group V–A of the periodic system having an atomic number from 15 to 51, inclusive, R' is a radical selected from the group consisting of alkyl, alkoxy, cycloalkyl, cycloalkoxy, aryl, aryloxy, aralkyl, aralkoxy, alkaryl and alkaryloxy radicals, and *n* is an integer from 1 to 2, inclusive.

3,130,216
PREPARATION OF NICKEL COMPLEXES OF CYCLOBUTADIENE

Harold H. Freedman, Brookline, Mass., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Nov. 28, 1960, Ser. No. 71,898
2 Claims. (Cl. 260—439)

1. The method of preparing nickel salt complexes of cyclo-butadiene compounds which comprises reacting a 4-halo-butadienyl organo metal halide of a metal selected from the group consisting of tetravalent tin, lead, germanium, and mercury, said organo group being selected from the group consisting of phenyl and methyl, with a nickel salt selected from the group consisting of nickel chloride and nickel nitrate in liquid phase, at a temperature which maintains the reactant material in the liquid phase and, thereafter, recovering the cyclo-butadiene nickel salt complex.

3,130,217
PRODUCTION OF O,O-DIALKYLDITHIOPHOSPHORYLFATTY ACID AMIDES

Heiner Dickhaeuser and Heinz Pohlemann, Ludwigshafen (Rhine), and Richard Sehring, Ingelheim (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Oct. 8, 1962, Ser. No. 229,163
Claims priority, application Germany Oct. 11, 1961
3 Claims. (Cl. 260—461)

1. A process for the production of O,O-dimethyldithiophosphorylacetic acid N-methylamide which comprises: reacting phosphorus pentasulfide with methanol to form the corresponding O,O-dimethyldithiophosphoric acid, and, without isolating the acid, reacting said acid with an equivalent amount of methylamine and with glycol-bis-chloroacetate, and thereafter, without isolating the ester, reacting the ester with a strongly alkaline compound in an amount equivalent to the O,O-dimethyldithiophosphoric acid formed as an intermediate, said strongly alkaline compound being selected from the group consisting of a solution of an alkali metal hydroxide, a solution of an alkali metal alcoholate, and a tertiary organic amine capable of setting free methylamine from its salts.

3,130,218
PROCESS FOR THE PREPARATION OF 4-NITROSTILBENE CARBONITRILES

Anthony J. Cofrancesco, Albany, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 10, 1961, Ser. No. 144,031
5 Claims. (Cl. 260—465)

1. The process of preparing a 4-nitro-2-stilbene carbonitrile which comprises condensing at a temperature of from about 50° C.–150° C. a mono-cyclic aromatic aldehyde with 5-nitro-o-tolunitrile in the presence of from about 0.035 mole to 0.1 mole of hexamethyleneimine per mole of 5-nitro-o-tolunitrile.

3,130,219
PRODUCTION OF ALKYL VINYL ETHERS

Horst Pommer, Ludwigshafen (Rhine), and Georg Wittig, Heidelberg, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed May 11, 1960, Ser. No. 28,199
Claims priority, application Germany Aug. 13, 1955
1 Claim. (Cl. 260—473)

A process for producing a vinyl ether having a lower alkoxy group attached to one carbon atom of the vinyl group of said ether and having at least one hydrogen attached to the other carbon atom of said vinyl group which comprises: adding a lower alkyl formic acid ester to an inert organic liquid consisting essentially of a triaryl phosphonium ylide of an organic halogen compound selected from the group consisting of methyl chloride, propyl chloride, isopropyl chloride, hexyl chloride, dodecyl chloride, cyclohexyl chloride, benzyl chloride and diphenyl methyl chloride, and the corresponding bromides and iodides, methoxy-benzyl bromide, chlor-benzyl bromide, carbethoxy-benzyl bromide, allyl bromide, beta-cyclogeranyl bromide, ionyl bromide, and ethoxyethyl bromide, and heating said reaction mixture to a temperature up to about 90° C. to form said vinyl ether.

3,130,220
PREPARATION OF MONOESTERS OF TRIMELLITIC ACID

Richard E. Van Strien, Griffith, and Benjamin A. Bolton, Gary, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Apr. 15, 1959, Ser. No. 806,417
10 Claims. (Cl. 260—475)

1. A process for preparing monoesters of trimellitic acid which process comprises monoesterifying trimellitic anhydride with an alcohol of the type ROH where R is an alkyl of 1–15 carbons, in a mole ratio of alcohol:anhydride of 1–1.3:1 at a temperature from about 150° F. to about 350° F., for the time needed to convert essentially all of said anhydride to monoester of trimellitic acid, wherein said anhydride and said alcohol are intermingled with an inert, liquid, possessing appreciable solubility for said monoester, which liquid is selected from the class consisting of lower boiling benzene hydrocarbons, ketones and ethers, said liquid being present in an amount at least sufficient to permit the formation of a readily-intermingled slurry in said esterification zone.

3,130,221
1,1-DIHYDROPERFLUOROETHYL-SULFONIC ACID

Robert E. Oesterling, Flourtown, Pa., assignor to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Feb. 10, 1961, Ser. No. 88,579
1 Claim. (Cl. 260—513)

1,1-dihydroperfluoroethylsulfonic acid.

3,130,222
PROCESS FOR THE PREPARATION OF ALIPHATIC BROMIDES

Arthur A. Asadorian, Midland, and George A. Burk, Bay City, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Feb. 14, 1962, Ser. No. 173,129
5 Claims. (Cl. 260—539)

1. A process for the substitution bromination of an aliphatic chloride which comprises reacting an aliphatic chloride selected from the group consisting of chloroalkanes having from 2 to about 18 carbon atoms, chloroalkanoic acids having from 2 to about 18 carbon atoms, their phenyl, and lower alkylphenyl derivatives, with hydrogen bromide in the presence of aqueous hydrobromic acid having a concentration of acid of at least about 40% at a temperature of from about room temperature to about 140° C.

3,130,223
PROCESS FOR PREPARING PHENACETIN

William R. Surine and Wesley C. Stoesser, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Oct. 21, 1960, Ser. No. 63,951
7 Claims. (Cl. 260—541)

1. In a process for preparing phenacetin which comprises reacting by contacting at between about 20° to about 130° C. para-phenetidine with acetic anhydride, the improvement which consists of carrying out the reaction

in the presence of acetic acid in an amount of at least 0.5 mole percent of phenetidine in excess of that produced during the reaction and crystallizing the phenacetin directly from the acetic acid rich reaction mixture; recovering the crystallized phenacetin; recovering a portion of the acetic acid by distillation of the mother liquor; and, recycling the resulting concentrated mother liquor obtained to the reaction.

3,130,224
MANUFACTURING METHOD OF ALKYLENE-DICYANAMIDE

Kiichiro Sugino, Shinjuku-ku, Kozo Shirai, Shinagawa-ku, and Rokuro Kitawaki, Mitaka-shi, Tokyo, Japan, assignors to Nippon Carbide Kogyo Kabushiki Kaisha, Tokyo, Japan, a corporation of Japan

No Drawing. Filed Oct. 26, 1961, Ser. No. 147,764
5 Claims. (Cl. 260—551)

1. A process of producing a compound of the formula

$$NCNH(CH_2)_nNHCN$$

wherein n is an integer of at least 4, said process comprising reacting a cyanogen halide with an alkylenediamine of the formula

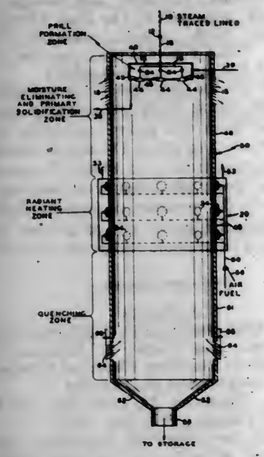
$$NH_2(CH_2)_nNH_2$$

by dissolving the alkylenediamine in a solvent of lower aliphatic alcohol and adding the obtained solution dropwise into a solution of a cyanogen halide in a mixed solvent containing ether and a lower aliphatic alcohol and while cooling the latter solution to a temperature below 20° C. and continuously stirring the same, filtering from the reacted solutions crystals of alkylenediamine salt, concentrating the filtrate at a temperature less than 50° C. by vaporizing the organic solvent at reduced pressure, adding the thus obtained concentrate gradually to water at a temperature below 10° C. while continuously stirring to obtain substantially pure alkylenedicyanamide in solid crystal form while any unreacted cyanogen halide and alkylenediamine salt remains dissolved in an aqueous phase.

3,130,225
UREA PRODUCTION

Leo Friend, New Rochelle, N.Y., assignor, by mesne assignments, to Pullman Incorporated, a corporation of Delaware

Filed Feb. 12, 1962, Ser. No. 172,589
14 Claims. (Cl. 260—555)



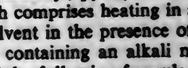
14. Prills comprising about 0.3 to about 1.5% by weight biuret, less than about 0.5% by weight water, and the balance urea, having diameters between 0.2 and 6 millimeters, the structure of each of said prills which comprises a core permeated by a network of capillary-sized pores and a sealing layer of urea which covers the core surface so that the surface of the said prill is essentially free of defects, said surface making up from about 1 to about 10% of the total weight of the prill.

3,130,226
SULFONIC ACID HYDRAZIDES

Hugo Gutmann, Reinach, Basel-Land, and Balthasar Hegediis, Binningen, Switzerland, assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Dec. 22, 1959, Ser. No. 861,206
Claims priority, application Switzerland Dec. 31, 1958
12 Claims. (Cl. 260—556)

1. A compound of the formula



wherein R_1 represents a member of the group consisting of lower alkyl, lower alkylphenyl, and halophenyl and R_2 and R_3 each represents a member of the group consisting of hydrogen, isopropyl and phenyl-lower alkylene, at least one of said radicals R_2 and R_3 being other than hydrogen.

3,130,227
N-CAMPHORYL-AMINO ACETAMIDES

Torizo Takahashi and Hajime Fujimura, Sakyo-ku, Kyoto-shi, and Yoshio Hamashima, Atsumi-cho, Atsumi-gun, Aichi-ken, Japan, assignors to Chugai Seiyaku Kabushiki Kaisha, Tokyo, Japan, a corporation of Japan

No Drawing. Filed Aug. 2, 1960, Ser. No. 46,886
Claims priority, application Japan Aug. 27, 1959
13 Claims. (Cl. 260—557)

1. A compound of the following Formula 1:

wherein R_1 is a member selected from the group consisting of hydrogen, lower alkyl and acetyl; R_2, R_3 and R_4 are members selected from the group consisting of hydrogen and lower alkyl.

2. N-camphoryl-(3)-glycine dimethylamide.

3,130,228
PROCESS FOR THE PRODUCTION OF BETA-KETO AMIDES

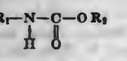
Walter F. Hoffstadt, Vestal, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed May 2, 1961, Ser. No. 107,035
11 Claims. (Cl. 260—558)

1. A process of preparing a beta-keto amide of the following formula:

wherein R and R_1 are each selected from the class consisting of an aromatic ring, thiazolyl, methylthiazolyl, thienyl, benzothiazolyl, pyridyl, furyl, quinolyl and quinoxalinyl, which comprises heating in a substantially anhydrous inert solvent in the presence of a highly basic condensing agent containing an alkali metal atom a methyl aryl ketone of the following formula:

wherein R has the values as above designated with a compound selected from the class represented by the following formulae:



wherein R_1 has the values as above designated and R_2 represents a lower alkyl group, whereby is formed a complex of the basic condensing agent with the beta-keto amide, acidifying the complex to produce the free beta-keto amide.

3,130,229
METHOD FOR THE MANUFACTURE OF ACRYLAMIDE

Ralph E. Friedrich, Giffin D. Jones, and Suzanne N. Heiny, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Feb. 6, 1961, Ser. No. 87,061
5 Claims. (Cl. 260—561)

1. In a process for hydrolyzing acrylonitrile to acrylamide sulfate which comprises the steps of reacting acrylonitrile with concentrated sulfuric acid at a temperature within the range from about 50° to about 110° C. and in the presence of a polymerization inhibitor for the system whereby acrylamide sulfate is produced, the improvement which consists in conducting said hydrolysis reaction under an atmosphere substantially free of oxygen in the presence of (1) from about 50 up to about 2000 parts per million of a phenol based on the weight of the acrylonitrile, said phenol being soluble in the acrylonitrile and having at least one of the ring positions ortho and para to a hydroxy group occupied by a hydrogen atom and (2) a sufficient quantity of ferrous ions to inhibit polymerization in the reaction system.

3,130,230
RUSCOPINE AND RUSCOPEINE

Benjamin J. Frydman and Enrique Hug, Buenos Aires, Argentina, assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Dec. 21, 1960, Ser. No. 77,282
5 Claims. (Cl. 260—564)

1. A compound selected from the group consisting of 1 - (3,4 - dimethoxyphenethyl)-N,N'-bis(iminomethyl)-1,4 - butanediamine, 1 - (3,4-dimethoxystyryl)-N,N'-bis-(iminomethyl)-2-butene-1,4-diamine and salts thereof with pharmacologically acceptable acids.

3,130,231
SYNTHESIS OF RUSCOPINE

Benjamin Jaime Frydman, Buenos Aires, Argentina, assignor to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed June 29, 1961, Ser. No. 120,478
2 Claims. (Cl. 260—564)

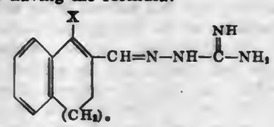
1. A process for the production of ruscopine which comprises brominating 3 - (3,4 - dimethoxyphenyl) propanol-1, to obtain 1-bromo-3-(3,4-dimethoxyphenyl) propane, reacting the last named compound with a metal nitrite selected from the group consisting of silver nitrite and alkali metal nitrite to obtain 1-nitro-3-(3,4-dimethoxyphenyl)propane, condensing the last named compound with a lower alkyl acrylate to obtain the lower alkyl ester of 6-(3,4-dimethoxyphenyl)-4-nitrohexanoic acid, amidating said acid to obtain 6-(3,4-dimethoxyphenyl)-4-nitrohexanoamide, reducing said amide to obtain 1,4 - diamino - 6 - (3,4-dimethoxyphenyl)hexane and and reacting the last named compound with a lower alkyl imino ether to obtain ruscopine.

3,130,232
AMIDINOHYDRAZONES OF CYCLIC HALOVINYL ALDEHYDES

Leo A. Paquette, Portage Township, Kalamazoo County, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

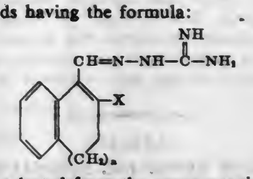
No Drawing. Filed Feb. 12, 1963, Ser. No. 257,878
6 Claims. (Cl. 260—564)

1. A compound selected from the group consisting of compounds having the formula:



I

and compounds having the formula:



IA

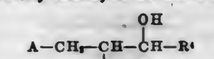
wherein X is selected from the group consisting of chlorine and bromine and n is an integer from 1 to 2.

3,130,233
ALDEHYDES AND METHOD OF PREPARATION

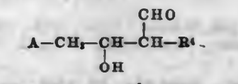
Warren D. Niederhauser, Meadowbrook, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Original application Mar. 19, 1959, Ser. No. 800,402, now Patent No. 3,054,813, dated Sept. 18, 1962. Divided and this application Sept. 23, 1960, Ser. No. 57,886
9 Claims. (Cl. 260—599)

1. An aldehyde selected from the group consisting of at least one hydroxy aldehyde of the formula



and the isomer



in which A represents an aryl group containing from six to eight carbon atoms, and R^4 represents an alkyl group containing from one to six carbon atoms.

3,130,234
PROCESS FOR PRODUCING GLYOXAL TETRAETHYL ACETAL

Harry A. Stansbury, Jr., and David T. Manning, South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Jan. 25, 1961, Ser. No. 84,759
2 Claims. (Cl. 260—615)

1. The process for producing glyoxal tetraethyl acetal which comprises reacting nitrosyl chloride with ethanol at a temperature of from about 20° C. to about 60° C. and a pressure of from about 15 p.s.i.a. to about 50 p.s.i.a.

3,130,235
METHOD OF REMOVING TAR FROM PHENOL REACTOR CONTENTS

Gordon MacBeth, Walnut Creek, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Nov. 10, 1960, Ser. No. 68,372
6 Claims. (Cl. 260—621)

1. In a process for making phenol by the oxidation of benzoic acid by elemental oxygen, wherein the oxidation

reaction is catalyzed by a salt of at least one element selected from the group consisting of copper and magnesium, and wherein a tar-like by-product is formed, the improvement of withdrawing at least a portion of the reactor contents from the reactor in which the oxidation is conducted; contacting said portion with a mixture of two immiscible solvents, the first of which is a solvent in which the tar in said portion is readily dispersable but in which the other components of said portion are substantially insoluble, said first solvent being selected from the group consisting of the halogenated lower aliphatic hydrocarbons, chlorobenzene, anisole, diphenyl ether, benzene, toluene and xylene, and the second of which is a solvent in which the other components of said portion are readily soluble and is selected from the group consisting of hot water and aqueous solutions of water-miscible alkanols, thus to form two liquid phases; separating said phases; recovering the second said solvent from the phase comprising it and returning to the reactor those materials that had been dissolved in said second solvent.

3,130,236
PROCESS OF REMOVING FORMALDEHYDE FROM 1,4-BUTYNEDIOL

Peter O. Shull, South Plainfield, N.J., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed June 20, 1960, Ser. No. 37,063
3 Claims. (Cl. 260—637)

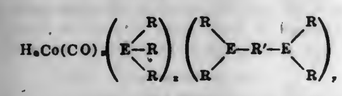
1. The process of reducing formaldehyde content from technical grade 35% aqueous 1,4-butynediol containing the same which consists of heating the said 1,4-butynediol at a temperature of 125 to 200° C. and a pressure of 25 to 250 p.s.i.g. for a period of time ranging from 2 to 10 hours to drop the initial formaldehyde content to a level ranging from 0.35% to 0.08% by weight of the said 1,4-butynediol.

3,130,237
PROCESS FOR HYDROGENATING ORGANIC COMPOUNDS

Milton M. Wald, Walnut Creek, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 29, 1961, Ser. No. 99,031
10 Claims. (Cl. 260—638)

1. In a process for hydrogenating a hydrogenatable compound of the group consisting of ethylenic hydrocarbons, acetylenic hydrocarbons, aldehydes and ketones by reaction in the liquid phase with hydrogen in the presence of a hydrogenation catalyst, the improvement of carrying out said hydrogenation using a homogenous hydrogenation catalyst which is soluble in the liquid mixture and is a cobalt complex with a member of the group consisting of organo-phosphines and organo-arsines, said cobalt complex having the general formula



wherein n may be any whole number from 0 to 1 inclusive, x and z may be any whole numbers from 0 to 3 inclusive, and y may be any whole number from 0 to 2 inclusive with the equation $x+2y+z=4$ satisfied, where E is a member in its trivalent state of the group consisting of phosphorus and arsenic, wherein R is a member of the class consisting of hydrogen, alkyl of up to 8 carbon atoms, aryl hydrocarbon of up to 8 carbon atoms and halo and alkoxy substitution products of said alkyl and aryl, and R′ is alkylene of up to 8 carbon atoms.

3,130,238
CONVERSION OF PERHALO-OLEFINS

Fred N. Tlumac, Lake Jackson, Tex., now by change of name Fred N. Teumac, assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

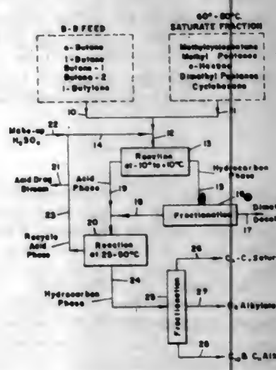
No Drawing. Filed Apr. 20, 1962, Ser. No. 188,974
5 Claims. (Cl. 260—653)

1. A method of converting a perhalo-olefin having from two to three carbon atoms, containing halogens selected from the group consisting of chlorine and fluorine, a terminal CF_2 group, and a maximum of one chlorine atom in the molecule, to an alkyl halide, comprising, reacting said perhalo-olefin with water at a temperature of from about 190 to about 300 degrees centrigrade, in the presence of a catalyst selected from the group consisting of cesium fluoride and rubidium fluoride, and removing product from the reaction.

3,130,239
REACTION OF METHYLCYCLOPENTANE AND MIXED C_4 HYDROCARBONS

Abraham Schneider, Overbrook Hills, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Filed May 28, 1962, Ser. No. 198,116
10 Claims. (Cl. 260—666)

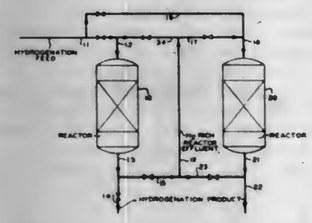


1. Process which comprises: (1) admixing a saturate hydrocarbon stock containing methylcyclopentane with a C_4 hydrocarbon stock containing n-butene and isobutylene and with sulfuric acid having a strength of 88–100%; (2) maintaining the mixture at a temperature in the range of −30 to +20° C. for a time to effect reaction, whereby methylcyclopentane is converted to dimethyldecalins, isobutylene is converted to isobutane and n-butene reacts with the sulfuric acid to form esters; (3) separating from the reaction mixture a hydrocarbon phase containing the dimethyldecalins and an acid phase containing the esters; (4) separating dimethyldecalins from the hydrocarbon phase; (5) admixing the acid phase with saturate hydrocarbon stock containing at least one hydrocarbon having a tertiary carbon atom; (6) maintaining the resulting mixture at a temperature in the range of 20 to 100° C. for a time to effect reaction, whereby alkylation of said saturate hydrocarbon stock with the esters occurs; and (7) separating from the resulting reaction mixture an alkylation product phase and an acid phase.

3,130,240
PROCESS FOR THE ACTIVATION OF HYDROGENATION CATALYSTS

Christopher P. Stark, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Nov. 16, 1961, Ser. No. 152,799
7 Claims. (Cl. 260—667)

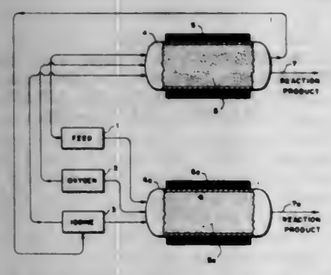


4. A process for hydrogenating a benzene-containing stream containing hydrogenatable materials which comprises passing said stream at a temperature in the range 450 to 700° F. in the presence of added excess hydrogen in contact with an activated nickel-kieselguhr hydrogenation catalyst and then, without intermediate treatment, into contact with an unreduced nickel-kieselguhr hydrogenation catalyst until oxide and other compounds of said metal are reduced to elemental metal, thus hydrogenating said hydrogenatable material and activating said unreduced catalyst and making same available for hydrogenation.

3,130,241
DEHYDROGENATION PROCESS

Gerhard G. Baijle and Arien Kwantes, Amsterdam, Netherlands, assignors to Shell Oil Company, a corporation of Delaware

Filed Dec. 9, 1960, Ser. No. 74,844
Claims priority, application Netherlands Dec. 28, 1959
14 Claims. (Cl. 260—677)



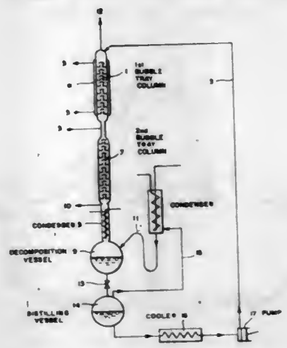
1. In a process for the iodinative dehydrogenation of a first hydrocarbon to a second hydrocarbon having a higher carbon-to-hydrogen ratio by reacting said first hydrocarbon with iodine at a temperature in excess of 300° C. whereby hydrogen iodide is formed from hydrogen removed from said first hydrocarbon, the improvement comprising

conducting said dehydrogenation with reacting gases consisting essentially of hydrocarbon and iodine, in the presence of a metal compound as hydrogen iodide acceptor, said acceptor being present in an amount to accept substantially all of the hydrogen iodide being formed in the dehydrogenation, and separating said second hydrocarbon from the resulting metallic iodide.

3,130,242
SEPARATION OF ISOBUTENE FROM GASES

Rolf Platz, Mannheim, Hugo Kroeper, Heidelberg, and Karl Schloemer, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

Filed June 5, 1961, Ser. No. 114,686
1 Claim. (Cl. 260—677)



A process for the separation of isobutene from gases containing isobutene which comprises leading the gases into an absorption solution comprising a lower carboxylic acid and 0.1% to 10% by weight with reference to the carboxylic acid of a strongly acid catalyst selected from the group consisting of boron trifluoride, perchloric acid and sulfuric acid as long as the rate of absorption of the isobutene in the absorption solution remains constant at temperatures of from 0° C. to 40° C. and thermally decomposing the tertiary butylester formed to pure isobutene by heating the mixture after addition of 0.3 to 30% of water to temperatures of from 80 to 140° C.

3,130,243
SEPARATION OF HYDROCARBONS BY SILVER DIALKYL PHOSPHATES

Clarence L. Dunn, Oakland, Friedrich G. Helfferich, Berkeley, and Robert E. Meeker, Orinda, Calif., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 21, 1962, Ser. No. 218,461
13 Claims. (Cl. 260—677)

1. A method for the selective extraction of a non-paraffin hydrocarbon from a fluid mixture thereof with another hydrocarbon which comprises contacting the mixture of hydrocarbons in fluid state with a silver dialkyl phosphate to selectively form a complex between the non-paraffin hydrocarbon and the silver dialkyl phosphate.

3,130,244
HYDROCARBON CONVERSION PROCESS AND CATALYST THEREFOR

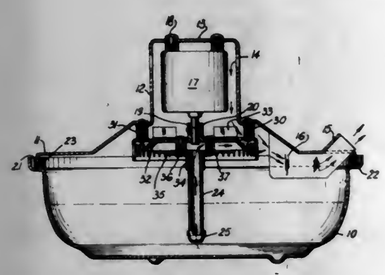
William G. Nixon, Westchester, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Sept. 29, 1960, Ser. No. 59,175
9 Claims. (Cl. 260—683.15)

1. A hydrocarbon conversion process which comprises polymerizing an olefin in the presence of a catalyst comprising a refractory oxide support selected from the group consisting of substantially anhydrous silica and alumina having a surface area in excess of 25 square meters per gram and from about 0.5% to about 15% by weight of a metallic oxide of nitrogen in which the metal is selected

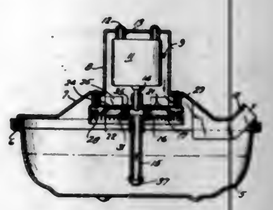
from the group consisting of aluminum and metals of group VI and the iron group of group VIII of the periodic table.

3,130,245
HUMIDIFIER
Melville Raymond Banks, West Paterson, N.J., assignor to Walton Laboratories, Inc., Irvington, N.J., a corporation of New Jersey
Filed July 12, 1960, Ser. No. 42,385
3 Claims. (Cl. 261—29)



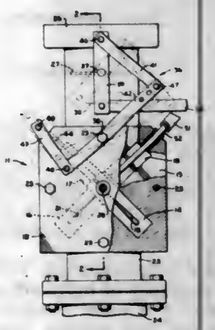
1. A humidifier comprising:
a casing assembly including,
a bowl providing a liquid reservoir,
a cover including a main body portion extending to and supported upon the periphery of said bowl, and an upwardly extending housing centrally thereof, air inlet means in said housing,
a motor having a shaft,
means mounting the motor within and spaced from said housing with said shaft extending downwardly,
a substantially annular grill having a diameter greater than the peripheral extent of the housing,
means supporting the grill in spaced relationship below the main body of the cover substantially coaxial with the housing,
an upper disc mounted on the motor shaft extending transversely thereto,
said upper disc having a peripheral portion inclined downwardly and outwardly with its outer edge spaced from the inner wall of the grill,
fan means between said disc and motor rotatable by said shaft,
a lower annular disc with a central aperture, the disc having a lesser diameter than the upper disc,
means mounting said lower annular disc coaxial with the motor shaft and in spaced substantially parallel relation below the upper disc, the upper surface of said lower disc being in substantially the same plane as the outer edge of said peripheral portion of said upper disc,
a vertical tube extending downwardly into the bowl with its upper end mounted in the central aperture of the lower annular disc,
air outlet means in the casing assembly near the periphery of the bowl,
whereby upon rotation of said shaft by said motor air will be drawn through said air inlet means contacting said motor by said fan means and discharged by said fan means towards said grill, said air passing said grill in two separate streams, one stream between said disc and said grill and the other stream between said grill and said cover towards said air outlet means, while liquid will be drawn from said reservoir through said tube over the upper surface of the lower disc and the lower surface of the upper disc across said one air stream through the grill and into the second air stream.

3,130,246
HUMIDIFIER ASSEMBLY
Melville Raymond Banks, West Paterson, N.J., assignor to Walton Laboratories, Inc., Irvington, N.J., a corporation of New Jersey
Filed June 2, 1961, Ser. No. 114,551
5 Claims. (Cl. 261—29)



1. In a humidifier involving a rotary and vertically extending assembly embracing a number of parts certain of which require cleaning after separation from each other and which parts must be subsequently related and connected to each other only in predetermined positions to avoid a condition of dynamic imbalance; said assembly comprising an upper motor-driven shaft, a hub attached to said shaft to align therewith, a plate forming a fixed part of said hub at the lower end thereof, a disk and a fan both ensleeved over said hub with the fan above said disk and said plate underlying said disk and with the latter, the fan and plate extending parallel to each other and perpendicular to the hub axis, means for permanently securing said hub, fan and plate against detachment and movements with respect to each other, a water-elevating tube, a collar at the upper end of the latter and formed with openings to receive said securing means for retaining it in alignment with said hub, said plate, disk and fan also having openings to receive said securing means, means forming a part of said plate and collar for indicating when they are related in a manner such that a dynamically balanced assembly exists and detachable elements disposable within the securing means to retain the collar against separation from and movements with respect to said plate.

3,130,247
CARBURETOR CONTROL VALVES
Clifford I. Little, 2607 8th Ave., Oakland, Calif.
Filed Aug. 7, 1961, Ser. No. 129,628
12 Claims. (Cl. 261—50)



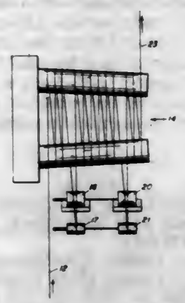
11. In a carburetor containing an air intake throat and a fuel injection tube, in combination a valve comprising a body, a first control means responsive to an operation adjusting the amount of gasoline to be fed into the carburetor, a first valve plate mounted on the body for linear movement responsive to said first control means, walls defining a substantially V-shaped opening in the first valve plate positioned to move with linear movement of the plate in the direction of the axis extending through the apex of the V, said walls being beveled at an acute angle to a surface to provide a sharp edge on a surface of the plate, a second control means responsive to atmospheric pressure, a second valve plate mounted on the body or linear movement in a direction substantially perpendicular to the movement of the first plate responsive to said second control means, walls defining a substantially V-shaped opening in the second valve plate positioned to move with linear movement of the second plate in the direction of the axis extending through the apex of the V, said walls being beveled at an acute angle to a surface to provide a sharp edge on a surface of the plate, and the sides of each of said V's forming an angle of between about 0.1 and 30 degrees, said plates being positioned so that the opening in one plate is in alignment with the opening in the other plate.

3,130,248
LOCOMOTIVE AERATORS FOR FISH TANKS
Bertram Winston, 176 Clarkson Ave., Brooklyn 26, N.Y.
Filed Oct. 19, 1960, Ser. No. 63,626
1 Claim. (Cl. 261—121)



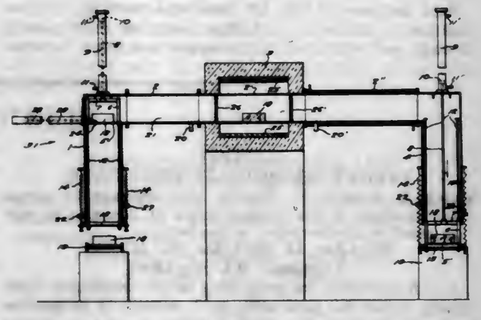
In combination, a fish tank containing water, a locomotive aerator, and a flexible hose, means for securing one end of the hose to a wall of the tank, the aerator comprising an upright body having a horizontal axle extending from one side thereof, a bucket motor rotatably mounted on said axle and including two end plates at right angles to the axle and means forming circumferentially spaced transverse buckets between said end plates, the end plate remote from the body having an eccentric pin thereon, a first substantially vertical relatively long leg having the upper end thereof pivotally mounted on said pin and having a longitudinal slot therein, tube means secured to said body having an air inlet end and an air outlet end, said outlet end being positioned below the motor to direct air bubbles rising therefrom tangentially against said bucket means to rotate the same, said flexible hose having the other end thereof attached to the air inlet end of said tube means, an elongated horizontal pin extending from said body in the vertical plane of said axle and positioned below the bucket means, said elongated pin registering in said slot, a second substantially vertical relatively short leg having the upper end thereof pivotally mounted adjacent said body on said elongated pin, said second leg being weighted and said body having a float on the upper end thereof of a buoyancy sufficient normally to maintain the aerator substantially upright with at least one of said legs contacting the floor of the tank, said body having two projections on said side thereof positioned below said elongated pin and spaced laterally from the opposed longitudinal edges of said second leg, and means to supply air to said hose.

3,130,249
ART OF DEHYDRATING FIBERS
Marvin Wishman, White Plains, N.Y., and Jack W. Preece, Glenbrook, Conn., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine
Filed June 19, 1962, Ser. No. 203,609
9 Claims. (Cl. 264—129)



1. In the process of producing shaped articles from polymerization products which includes the formation of a wet uncollapsed structure, and the subsequent dehydration of such structure, the improvement comprising: reducing the moisture content of said wet uncollapsed structure to less than about 50% water; lubricating said wet uncollapsed structure with a lubricant which will not deleteriously affect said structure upon subsequent dehydration and collapse thereof; dehydrating said wet uncollapsed structure with the lubricant thereon to produce a collapsed polymer structure; and applying an anti-static agent to said collapsed polymer structure.

3,130,250
HEAT TREATING FURNACE
Harold E. Mescher, Rivera, Calif., assignor to Pacific Scientific Company, San Francisco, Calif., a corporation of California
Filed July 18, 1960, Ser. No. 43,414
4 Claims. (Cl. 266—5)



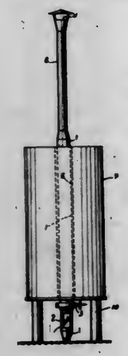
4. A furnace of the character described comprising a substantially inverted U-shaped hollow structure having a transverse sealed tunnel section provided with vertically depending entrance and exit leg sections at the ends thereof, said depending leg sections having horizontal openings at their lowest points, spring pressed horizontal closure plates for normally closing and sealing the lower open ends of said leg sections, said structure beaing sealed against outside air excepting when said closure plates are opened, said entrance leg section being adapted to receive work to be treated and the exit leg section being adapted to discharge treated work, sealed piston means

movable within said leg sections for forcing said horizontal closure plates open when receiving or discharging work, a muffle surrounding a portion of said transverse tunnel section for heating the same, a purge chamber provided in said transverse tunnel section in advance of said muffle, a cooling section provided in said transverse tunnel section immediately following said muffle, and radiation shield doors hinged within the heated portion of said transverse tunnel section adjacent the end walls of said muffle and sealed from outside atmosphere for preventing the escape of heat into the remainder of said transverse tunnel section, said doors swinging automatically under pressure of the work to permit the ready movement of work through said transverse tunnel section heated portion.

3,130,251
SHAFTS OF MECHANICAL KILNS WITH SUPERPOSED FLOORS FOR ROASTING OF ORES AND SIMILAR PURPOSES

Miroslav Nejedlý, Teplice, Czechoslovakia, assignor to Zavody V.I. Lenina, Plzen, Czechoslovakia

Filed Oct. 26, 1960, Ser. No. 65,165
Claims priority, application Czechoslovakia Oct. 27, 1959
1 Claim. (Cl. 266—32)

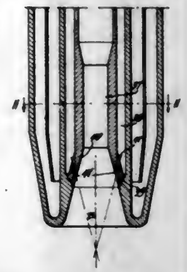


In a mechanical kiln for roasting a material, in combination, a kiln shell; a hollow rotatable shaft passing through said shell and having upper and lower terminal portions projecting from said shell, said shaft defining a substantially closed cavity therein, said lower terminal shaft portion being formed with a passage therein communicating with said cavity and open to the atmosphere; an elongated stack communicating with said upper terminal portion and extending upwardly therefrom, a portion of said stack spaced from said upper terminal portion being open to the atmosphere; and means for admitting steam under pressure to a portion of said cavity adjacent said lower terminal portion and spaced upwardly from said passage.

3,130,252
LANCES FOR TREATMENT OF METAL BATHS

Paul Metz, Dudelange, Luxembourg, assignor to Arbed, Acieries Reunies de Burbach-Eich-Dudelange Societe Anonyme, Luxembourg

Filed Feb. 19, 1960, Ser. No. 9,942
Claims priority, application Belgium Feb. 20, 1959
3 Claims. (Cl. 266—35)



1. A double lance for injection of at least one gas into or on top of a metal melt, including an inner tubular member defining an inside duct for passage of gas therethrough, an outer tubular member concentric with said inner member and defining therewith an outside duct for passage of gas, and means to allow gas to flow from said outside duct including the provision of at least one passage but wherein said outside duct is substantially free of clogging by metal melt or slag materials when gas is not flowing through said passage, the means including a plurality of secondary gas jets in the inside duct at the outlet end thereof, and each secondary gas jet being convergent-divergent in cross section.

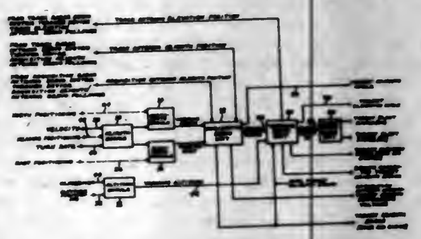
ELECTRICAL

3,130,253
TARGET COORDINATE POSITIONER

Melvin H. Damon, Jr., Wayne, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed July 25, 1962, Ser. No. 212,493
7 Claims. (Cl. 35—10.4)

1. An apparatus for generating target coordinates comprising means for generating D.C. voltage in proportion to target north-south position, target east-west position and the target altitude, said generation means being operatively connected to horizontal servo means and to vertical servo means, said horizontal and vertical servo means being electronic analog signal generation means whereby said target position north-south means and said target position east-west means are combined vectorially within said horizontal servo means for generation of a signal corresponding to the ground range of the target and its azimuth angles, said ground range signal and azimuth angle signal being applied from said horizontal servo means to said vertical servo means, said ground range signal being combined with said target altitude signal in said vertical servo means to produce a slant range signal and a target elevation angle signal, said azimuth signal being generated by said horizontal servo unit and applied

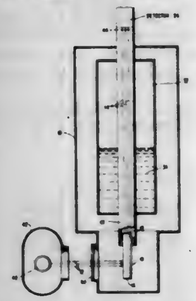


together with said target elevation angle signal and said slant range signal to means for generating target signals in accordance with said azimuth angle, elevation angle and slant range signals.

3,130,254
OPTICAL MASER HAVING TERMINAL LEVEL ABOVE GROUND STATE

Peter P. Sorokin, Chappaqua, and Mirek J. Stevenson, Briarcliff Manor, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 5, 1960, Ser. No. 73,878
24 Claims. (Cl. 88—1)

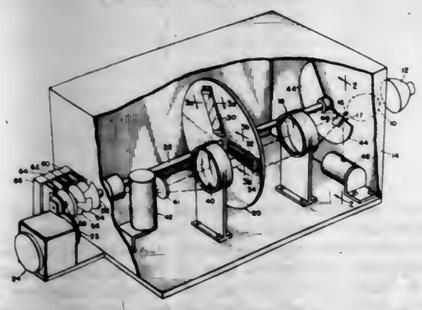


1. A maser device for producing coherent radiation comprising; means for forming a resonant structure for said coherent radiation; a body of maser material disposed within said resonant structure means; means for applying input radiation to said body for producing coherent output radiation by stimulated emission in said body; and output means for receiving said output coherent radiation from said body; said body comprising a crystal doped with trivalent uranium.

3,130,255
APPARATUS FOR DETECTING BLOOD SPOTS IN EGGS

Wayne E. Blackburn, Burbank, Thomas D. Bryant, Tujunga, and Donne I. Harris, Los Angeles, Calif., assignors to General Precision, Inc., a corporation of Delaware

Continuation of application Ser. No. 544,131, Nov. 1, 1955. This application Mar. 12, 1962, Ser. No. 181,222
8 Claims. (Cl. 88—14.1)

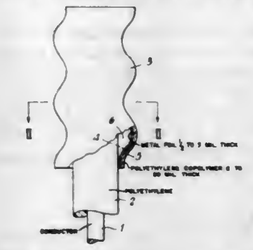


1. Apparatus for detecting the presence of a blood spot in an egg, which egg passes certain intensities of light at a first, second and third wavelength, said second wavelength being of the order of 575 millimicrons and said first and third wavelengths being displaced therefrom, the average intensity of light passed at the first and third wavelengths being substantially equal to the intensity of light passed at the second wavelength in the absence of a blood spot in said egg and being different in the presence of a blood spot, said apparatus including: a light source; means for supporting an egg to be tested in a position such that light from said light source passes through the egg; a first filter for passing light only in the region of said first wavelength; a second filter for passing light only in the region of said second wavelength; a third filter for passing light only in the region of said third wavelength; detector means for receiving the light passed through said filters, said detector means producing a first signal relating to the intensity of light passed through said second filter and producing a second signal relating to the average intensity of light passed through said first and third filters; and signal comparator means coupled to said detector and responsive to said first and second signals for producing a third signal having a first intensity when the egg to be tested contains a blood spot and having a second intensity when the egg to be tested is free from blood spot.

3,130,256
CABLES FOR TRANSMITTING HIGH-FREQUENCY CURRENTS

Raymond Charles Mildner, 3703 Hillgrove Court, Midland, Mich.

Filed June 30, 1961, Ser. No. 121,128
Claims priority, application Great Britain July 4, 1960
10 Claims. (Cl. 174—28)

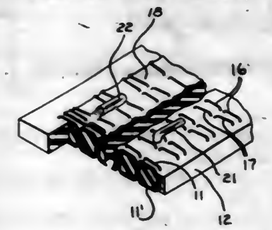


5. A coaxial cable for transmitting high frequency currents comprising an inner conductor, an outer conductor, and insulation material separating the two conductors, at least one of said conductors comprising a corrugated tube formed from a laminate which comprises a layer of synthetic plastic material selected from the group consisting of polyethylene, polypropylene and polystyrene and having a thickness of from 5 to 20 mil, said layer being laminated to an electrically conducting metallic layer selected from the group consisting of the electrically conducting copper, aluminium and silver, and having a thickness of from ½ to 3 mil, the conductor tube having a joint extending longitudinally of the tube parallel to the axis thereof.

3,130,257
STITCHED CIRCUIT BOARD AND METHOD OF MAKING

Clarence Rott, Indianapolis, Ind., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

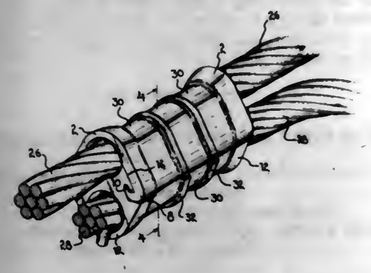
Filed Oct. 25, 1962, Ser. No. 233,077
6 Claims. (Cl. 174—68.5)



1. A circuit board including an insulating sheet and an electrical conductor thereon, said electrical conductor

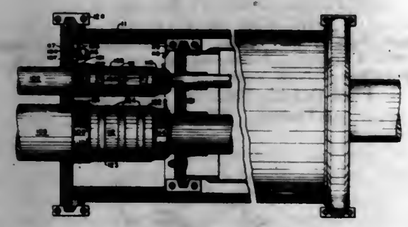
comprising a conductive strand sewed to the sheet in zigzag stitches and a conductive film connecting adjacent stitches.

3,130,258
ELECTRICAL CONNECTOR
Robert F. Cobaugh, Hershey, Pa., assignor to AMP Incorporated, Harrisburg, Pa.
Filed July 20, 1960, Ser. No. 44,198
2 Claims. (Cl. 174—71)



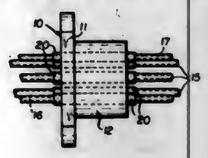
1. A crimped electrical connection between conductors in which at least one of the conductors is tapped intermediate its ends comprising, a first ferrule member of substantially V-shaped cross section, the inside of the base of said member receiving one of said conductors and the ends of the arms of said member being reversely bent inwardly, a second ferrule member having one side thereof a projection of substantial width and being received between the arms of said V-shaped first ferrule member, flanges on the lateral edges of said projection and extending within the recesses defined by the reversely bent ends of said arms, said second ferrule member having an axial opening, a second conductor received within said opening, said first ferrule member and said second ferrule member defining a generally oval shaped cross section for said connection, said connection being crimped by indentation on each of its sides whereby, the arms of said first member and the flanges of said second member are compressed together, and said flanges prevent relaxation of said arms and loosening of said connection.

3,130,259
SPLICE BOX WITH CABLE ENTRANCE SEALS
Robert A. Rischard, William P. Walsh, and Ralph G. D'Ascoli, Yonkers, N.Y., assignors to Anaconda Wire and Cable Company, a corporation of Delaware
Filed June 11, 1962, Ser. No. 201,446
14 Claims. (Cl. 174—93)



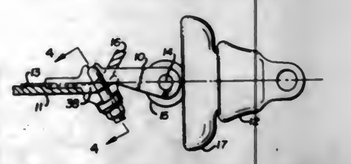
1. A cable entrance seal comprising:
(A) two closely spaced parallel plates having an aperture for said cable,
(B) means forming a fluid-tight seal between said plates and said cable,
(C) a clamp gripping said cable adjacent said plates,
(*a*) said clamp comprising:
(1) a plurality of arcuate sections of a cylinder,
(2) means for tightening said sections in gripping relation around said cable,
(3) means attaching each of said sections to one of said plates,
(4) said attaching means passing through the other of said plates.

3,130,260
HERMETICALLY SEALED ELECTRICAL CONNECTORS AND METHOD OF PRODUCING SAME
Roland M. Gray, Newark, Del., assignor to Tri-Point Industries, Inc., Albertson, N.Y., a corporation of New York
Filed Apr. 2, 1962, Ser. No. 184,375
10 Claims. (Cl. 174—152)



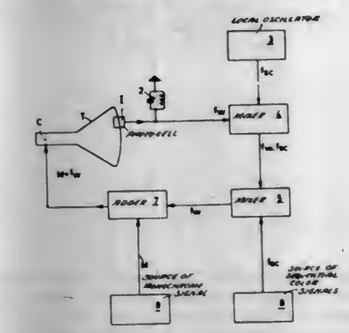
6. An electrical connector comprising a base member having the plastic memory and insulating characteristics of sintered polytetrafluoroethylene, said base member having at least one through hole therein, an electrical conductor disposed within said hole and a plastic material having the characteristics of fluorinated ethylene propylene distributed between said base member and conductor within each hole, said base member in the area surrounding said conductor being under stress and exerting a force against said plastic material and said electrical conductor to maintain the same in tight engagement.

3,130,261
DEAD END CLAMP
Hugh H. McCreery, Lexington, Ohio, assignor to The Ohio Brass Company, Mansfield, Ohio, a corporation of New Jersey
Filed Sept. 26, 1962, Ser. No. 226,366
4 Claims. (Cl. 174—169)



1. A conductor clamp for use as an in-line dead end connector in a transmission line comprising a body having a bottom wall comprising a cable seat and two side walls on opposite sides of the seat, two clevis arms extending in the longitudinal direction of the cable seat from the said body and an arcuate lead-off seat extending tangently from the cable seat and between the clevis arms to define a lead-off direction therefrom angularly related to the direction of the cable seat between the longitudinal and perpendicular directions thereof, a keeper comprising transversely directed flange means and a tongue perpendicular thereto for extension between the side walls, the tongue having the face thereof in spaced complementary relation to the lead-off seat, and screw fastener means for the said keeper comprising a U-bolt extending about the clamp body from back of the lead-off seat and about the side walls of the clamp and engaged with the flange means of the keeper for drawing the keeper toward the lead-off seat.

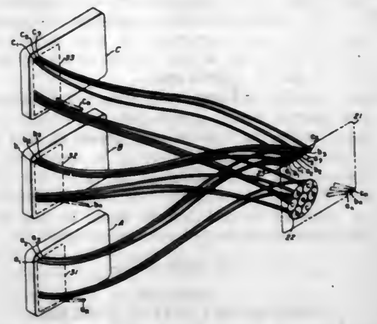
3,130,262
BEAM-INDEXING PICTURE DISPLAY SYSTEM
Dennis Arthur Rudd, Redhill, England, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed July 19, 1960, Ser. No. 43,814
Claims priority, application Great Britain Aug. 5, 1959
6 Claims. (Cl. 178—5.4)



1. A beam-indexing color television display system comprising a cathode ray tube having an electron gun for producing an electron beam, said gun having a beam intensity control electrode, and a screen disposed in the path of said beam, said screen having an iterative pattern of groups of at least two stripes of material luminescent at different colors, means for deflecting said beam whereby said beam scans said stripes in a continuous sequence, a source of a substantially sinusoidal color signal having amplitude and phase-dependent upon the hue and saturation of an image to be displayed, said sinusoidal signal having a period equal to the time said beam scans one group of said stripes, means for generating at least two substantially sinusoidal partial indexing signals during the time said beam scans each of said groups, means for shifting the phase of at least one of said partial indexing signals whereby said partial indexing signals are brought to substantially the same phase in the absence of modulation of said beam, means for adding said in-phase indexing signals to provide a final substantially sinusoidal indexing signal, and means for controlling the relative phase of said final indexing signal and said color signal.

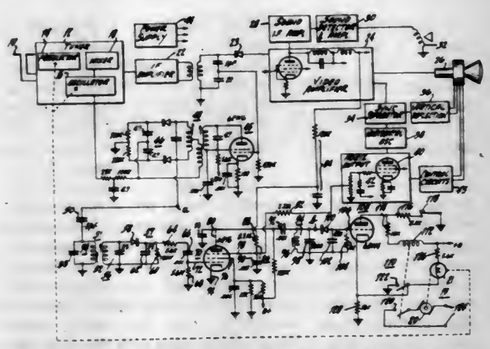
3,130,263
COLOR DISPLAY SYSTEM
Charles S. Manning, 3454 Bangor Place, San Diego 6, Calif.
Filed Aug. 22, 1961, Ser. No. 133,275
2 Claims. (Cl. 178—5.4)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. In combination with display apparatus for displaying images having a predetermined aspect ratio first, second and third screens wherein a different colored image is produced on each screen, a plurality of small thin, flexible, light-conductive filaments, said filaments having a transparent core of refractive material and a thin transparent outer jacket of refractive material, said index of refraction of said core being higher than said index of refraction of said outer jacket, said filaments being divided into first, second and third groups, each of said filaments having a first and second end, said first ends of said filaments in said first group being in optical contact with said first screen and arranged to cover said image produced thereon, said first ends of said filaments in said second group being in optical contact with said second screen and arranged to cover said image produced thereon, said first ends of said filaments in said third group being in optical contact with said third screen and arranged to cover said image produced thereon, said second ends of said filaments being disposed in adjacent rows and contained within a single plane, said different colored images having an



aspect ratio of one-third of said predetermined aspect ratio and said second ends of said filaments forming a viewing screen having said predetermined aspect ratio.

3,130,264
TUNING SYSTEM
Wolfgang F. Dietz, Franklin Park, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Feb. 23, 1962, Ser. No. 175,031
12 Claims. (Cl. 178—5.8)



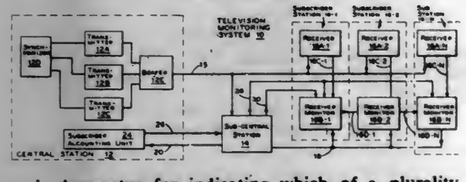
1. A signal seeking system for tuning television receivers of the type including tuning means for scanning the frequency spectrum and selecting any one of a plurality of television signals and converting the modulated picture and sound carrier signals of a selected television signal to correspondingly modulated picture and sound intermediate frequency signals, and an intermediate frequency amplifier coupled to said tuning means and having a predetermined bandpass characteristic, said receiver being correctly tuned when said picture and sound carrier signals are respectively converted to intermediate frequency signals of first and second predetermined frequencies respectively both within said bandpass characteristic, comprising in combination:
driving means coupled to drive said tuning means to scan through the said frequency spectrum;
control circuit means coupled to deenergize said driving means to stop said tuning means when said control circuit means are actuated by a control signal;
first circuit means coupled to said intermediate frequency amplifier for sensing when one of said picture and sound I-F carrier signals is at one of said predetermined frequencies;

second circuit means coupled to said I-F amplifier for developing a control voltage whenever the other of said I-F carrier signals falls within said bandpass characteristic at the same time said one I-F carrier signal is at said one predetermined frequency;

gate circuit means coupled to said first and second circuit means and responsive to said control voltage developed in said second circuit means to pass said one I-F carrier signal; and

means coupled between said gate circuit means and said control circuit means for developing a control signal when the type of modulation in said one I-F carrier signal applied thereto is indicative of the desired type of modulation for said one predetermined frequency whereby said control circuit means are actuated by said control signal to stop said tuning means at a desired television signal.

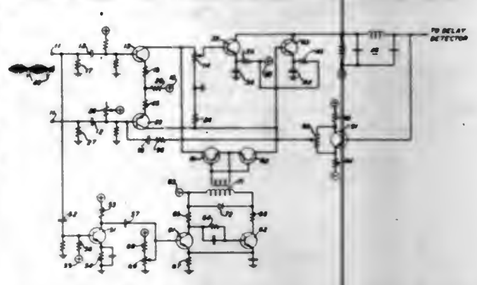
3,130,265
SIGNAL RECEIVING SYSTEM
Eugene Leonard, Sands Point, N.Y., assignor to Digitronics Corporation, Albertson, N.Y., a corporation of Delaware
Filed Mar. 23, 1960, Ser. No. 16,998
18 Claims. (Cl. 178—6)



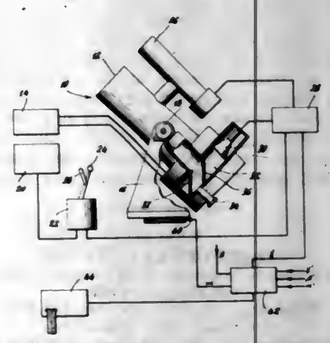
1. Apparatus for indicating which of a plurality of groups of information signals is being received by a receiving means, each of said groups of information signals including reference signals, the phase of the reference signals of each of said groups being different from the phase of the reference signals of the others of said groups, said apparatus comprising monitoring means for monitoring said receiving means, interrogating signal means for sequentially transmitting to said monitoring means interrogating signals that have predetermined phase relationships with the reference signals of said groups of information signals, phase sensing means included in said monitoring means for sensing for a predetermined phase relationship between said interrogating signals and said reference signals and for transmitting an indicating signal when the interrogating signal received by said monitoring means has a predetermined phase relationship with the reference signal received by said receiving means, and means for receiving said indicating signals for registering which of said plurality of groups of information signals is being received by said receiving means.

3,130,266
DIFFERENTIAL DEMODULATOR
George E. McLaughlin, Florham Park, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 24, 1962, Ser. No. 219,207
10 Claims. (Cl. 178—6)

2. In a system for measuring the delay distortion of a television transmission circuit by transmitting thereover a composite twin-tone test signal which consists of a pair of swept frequency signals having a constant frequency difference therebetween and a sync pulse signal comprising a series of pulses inserted at predetermined points in the twin-tone signal, a square-law detector comprising a pair of transistors of similar conductivity type each having an emitter, a collector and a base electrode, said transistors being connected in common emitter configuration with their collector electrodes interconnected, means for correspondingly biasing said transistors for class-A operation, a pair of test signal input terminals for connection to the transmission circuit under test, a balanced amplifier interconnected between said pair of input terminals and the base electrodes of said pair of transistors for respectively coupling to the latter substantially equal amplitude out-of-phase signals in response to a test signal received at said input terminals, and means for eliminating from the input to said detector the sync pulses including that wave component of the same that is equal in frequency to the aforementioned frequency difference.

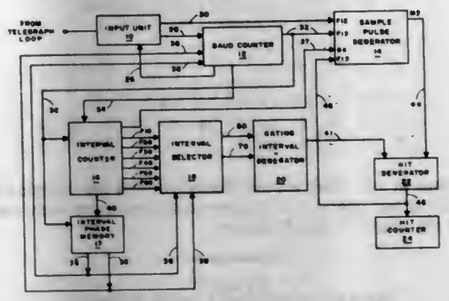


3,130,267
TELECAMERA CONTROL
Ernst Engler, Nussdorf, near Ueberlingen, See, Germany, assignor to Bodenseewerk, Perkin-Elmer & Co., G.m.b.H., Ueberlingen (Bodensee), Germany
Filed Mar. 16, 1960, Ser. No. 15,414
Claims priority, application Germany Mar. 19, 1959
2 Claims. (Cl. 178—6.8)



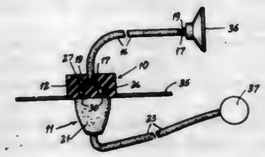
1. Apparatus for the control of a cinetheodolite which comprises television camera means positioned to follow the movements of the cinetheodolite and produce control signals proportional to the position of a televised object; television receiver means adapted to provide a visual image of the field of view of said camera means; sighting telescope means on said cinetheodolite adapted to provide an optical image of its field of view to an observer; means for superimposing upon said optical image the visual image of said television receiver means; azimuth signal producing means adapted to produce signals proportional to the azimuthal direction of said cinetheodolite; elevation signal producing means adapted to produce signals proportional to the angle of elevation of said cinetheododilte; computing means adapted to receive all of said control signals, azimuth signals, and elevation signals and compute the spatial coordinates of a target object; and means responsive to said control signals to train the cinetheodolite on the target object.

3,130,268
SIGNAL DISTORTION MONITOR
Norman E. Peterson and Ernest E. Courchene, Jr., Fairfield County, Conn., assignors to Stelma, Inc., Stamford, Conn., a corporation of Connecticut
Filed Nov. 25, 1960, Ser. No. 71,520
3 Claims. (Cl. 178—69)



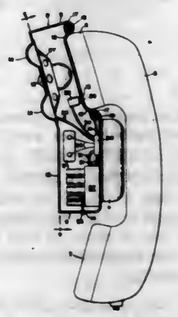
1. Apparatus for measuring the distortion of bauds in telegraph characters represented by a start space, a stop mark and a plurality of coded combination of baud marks and spaces, the distortion measurement criterion being the deviation in the time duration of the bauds from a predetermined time duration, said apparatus comprising sensing means for sensing a stop mark to start space transition at the start of each telegraph character, baud counter means for controlling said sensing means, interval counting means for counting timing pulses $2n$ of said timing pulses occurring during each predetermined time duration, said interval counting means counting one group of n of said timing pulses and recycling to count another group of n timing pulses for each of said bauds, said interval counting means under the control of said baud counter means to starting counting said timing pulses after said sensing means senses the stop mark to start space transition, said interval counting means causing said baud counter means to accumulate a unit count each time said interval counting means completes the count of two of said groups, an interval phase memory means having first and second states for remembering whether said interval counting means is counting one of said one groups or one of said other groups, said interval phase memory means responsive to said interval counting means for changing state whenever said interval counting means starts counting a group, interval selector means responsive to said interval counting means and said interval phase memory means for generating a first signal when said interval counting means registers a first predetermined count and said interval phase memory means is in a first state and for generating a second signal when said interval counting means registers a second count and said interval phase memory means is in a second state, a time interval generator means which starts generating a time interval signal upon receipt of said first signal and stops generating said time interval signal upon receipt of said second signal, sample pulse generating means for generating a sampling pulse for each transition between baud marks and spaces means responsive to said sampling pulse and said time interval signal for transmitting a hit signal whenever said sampling pulse occurs during the absence of said time interval signal and means for counting said hit signals to give an alarm if more than a predetermined number of said hit signals are generated during a given period of time.

3,130,269
CONNECTOR
Joseph D. Rountree, 1906 St. Clair Ave., East St. Louis, Ill.
Filed Mar. 13, 1961, Ser. No. 95,304
3 Claims. (Cl. 179—1)



1. A connector comprising a plug and a socket, the plug having two prongs and the socket having two cavities corresponding in relative position to the relative position of the prongs, each prong having a short shaft portion and a round head on the end of the short shaft, the diameter of the short shaft being substantially less than the diameter of the head, the cavities being of less depth than the length of a prong, the mouth of each cavity being of substantially the same diameter as the diameter of the short shafts, the socket being of yieldable resilient insulator material, an electrical contact element disposed entirely within each cavity and spaced from the mouth thereof, whereby contact with a prong is made only when the prong is substantially fully inserted in the socket, and whereby the electrical contact does not interfere with the yieldability in all directions of the mouth of the cavity, the plug having edges spaced a distance from the prongs at least substantially as far as the length of the prongs.

3,130,270
RECEIVER AMPLIFIER
Earl R. Sanders, 920 SE. 11th Court, Fort Lauderdale, Fla.
Filed Jan. 15, 1962, Ser. No. 166,060
1 Claim. (Cl. 179—1)



In a receiver amplifier of the type adapted to be used in a position contiguous to but detached from the receiver portion of a conventional telephone handset,

(*a*) a housing comprising a body portion and a cover portion,

(*b*) a hand grip extending outwardly from said body portion on the side opposite said cover portion,

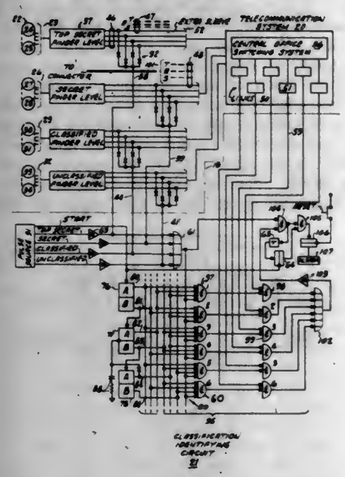
(*c*) the body portion of said housing being angulated to conform to the angulation between the receiving end of an ordinary telephone handset and the hand grip portion of said handset;

(*d*) an indentation adapted to receive a tedephone receiver on the same side of said body portions as said hand grip,

(*e*) a receiver actuated switch in said indentation,

(*f*) a pickup coil mounted in said body portion near the receiver indentation,
(*g*) said pickup coil mounted in a channel surrounding the indentation adapted to receive the telephone receiver,
(*h*) an amplifier connected to said pickup coil,
(*i*) a receiver unit including a speaker connected to said amplifier,
(*j*) a power supply connected to said amplifier,
(*k*) openings in said housing cover portion for transmission of sound waves from the speaker of said receiver unit, and
(*l*) a volume control connected to said amplifier and extending through the body portion of the housing.

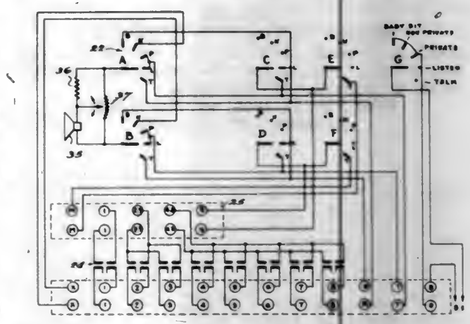
3,130,271
COMMUNICATION CLASSIFICATION SYSTEM
Victor J. Habisohn, Oak Lawn, Ill., assignor to International Telephone and Telegraph Corporation, New York, N.Y., a corporation of Maryland
Filed Feb. 23, 1961, Ser. No. 91,087
14 Claims. (Cl. 179—18)



2. A system for extending telecommunication paths between classified subscriber lines comprising means for transmitting pulses through at least a portion of said system during time frames which identify the classification of one subscriber line included in each communication path extended through said system, and means responsive to the detection of two or more of said transmitted pulses extended through the same communication path for signaling an alarm condition.

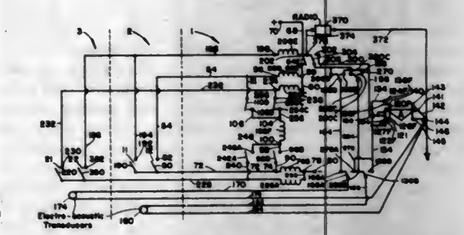
3,130,272
INTERCOMMUNICATION SYSTEM
Arie Liberman, Skokie, Ill. (% Talk-A-Phone Co., 1512 S. Pulaski Road, Chicago, Ill.)
Filed Oct. 17, 1958, Ser. No. 767,904
6 Claims. (Cl. 179—38)

1. In an intercommunication system: a plurality of stations; an amplifier in said system having an input and output; a two-way transducer in each station; station selector switch means in a first of said stations controlling interconnection of said first station with a selected other station; condition selector switch means in said first station actuable to control connection of the transducers in said first and said selected other stations with the input and output of said amplifier to carry on a two-way conversation; a first terminal in said other station connected directly with the output of said amplifier; a second terminal in said other station connected with the station selector switch means of said first station; and switch



means in said other station connected with the transducer therein and operable to connect said transducer with one or the other of said terminals.

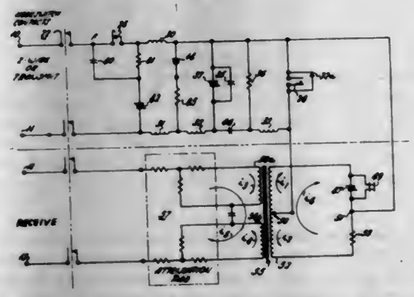
3,130,273
INTERCOMMUNICATION SYSTEM
Wilfred J. Noecker, 4217 Dodge St., Omaha, Nebr.
Filed Oct. 1, 1958, Ser. No. 764,548
3 Claims. (Cl. 179—40)



1. In an intercommunication system, the combination of a plurality of master stations, each master station having an electroacoustic transducer with only one pair of conductors carrying the voice currents therefore, a manual control switch for every other master station controlling both the talking and listening with another master station, a manual release switch, a source of current, an electronic amplifier, a single talk listen relay having an operating coil and reversible switches controlled by said coil, circuit connections between said switches and said amplifier, circuit connections between said switches, said electroacoustic transducers and said source of current including relay operated switches selectively controlled by said manual control switches and connected in circuit with the operating coil of said talk listen relay, and means controlled by said manual release switches for deenergizing the operating coil of said talk listen relay, said deenergizing means comprising: a release relay having two relay switches comprising a first relay switch being normally closed and a second relay switch, the source of current being connected to said talk listen relay through the switch of said release relay, a circuit connecting said release switch with said manual release relay whereby the first normally closed relay switch disconnects said source of current from said talk listen relay whereby the manual release of said release switch permits the normally closed switch to close but thereby maintaining the circuit in a stand-by position and said second relay switch being normally open with respect to the all-call circuit whereby the second relay switch closes the all-call circuit whereby the master station

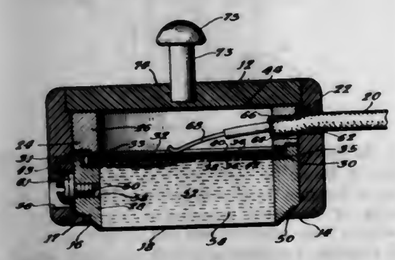
corresponding to said release button can call all other master stations whereby need for manually closing the circuit to each electroacoustic transducer is eliminated by the closing of said open switch.

3,130,274
2- OR 4-WIRE TELEPHONE SET
Thomas B. Norling, Chicago, and John E. Stewart, La Grange, Ill., assignors to International Telephone and Telegraph Corporation, New York, N.Y., a corporation of Maryland
Filed Oct. 20, 1960, Ser. No. 63,760
6 Claims. (Cl. 179—81)



6. A telephone circuit comprising a transmit channel, a receive channel, a telephone subset network including a transmitter coupled to said transmit channel, a receiver, means inductively coupling said receiver to said receive channel, means for splitting a portion of the current flow from said transmitter into two substantially equal currents, means for applying said split currents across said inductive means in bucking relation to attenuate transfer of signals from said transmitter to said receive channel, and means for energizing said receiver by one of said split currents to provide sidetone.

3,130,275
MICROPHONE
Lee P. Hagey, Buchanan, Mich., assignor to Electro-Voice, Incorporated, Buchanan, Mich., a corporation of Indiana
Filed Oct. 15, 1962, Ser. No. 230,578
3 Claims. (Cl. 179—110)



1. A microphone comprising a cylindrical shell of electrically insulating material having a circular opening at one end, a cylindrical sleeve of electrically conducting material disposed coaxially within the shell having an opening confronting the opening of the shell, said sleeve having an upper portion and a lower portion spaced therefrom and disposed on a common axis, a flat circular piezoelectric element clamped at its perimeter between the upper and lower portions and extending across the sleeve, said element having two parallel adjacent flat discs and a common electrically conducting layer disposed therebetween, said element having a first and a second electrically conducting coating disposed on the flat surfaces thereof opposite the electrically conducting layer and said element being electrically polarized in opposite directions relative to the electrically conducting layer, the first of said coatings being electrically connected to the electrically conducting sleeve, means for sealing the portion of the interior of the sleeve between the opening thereof and the element against leakage of fluid including a flexible membrane extending over the opening thereof and sealed thereto, a body of liquid disposed within the sleeve and filling the portion thereof between the membrane and the piezoelectric element, said body of liquid mechanically coupling the piezoelectric element and the membrane, and an electrical cable extending through the sleeve and shell having a first conductor electrically connected to the sleeve and a second electrical conductor electrically connected to the second coating of the piezoelectric element.

3,130,276
TELEPHONE-HOLDING DEVICE
Joseph Coviello, 112 S. Chestnut St., Beacon, N.Y.
Filed Jan. 30, 1962, Ser. No. 169,966
2 Claims. (Cl. 179—157)

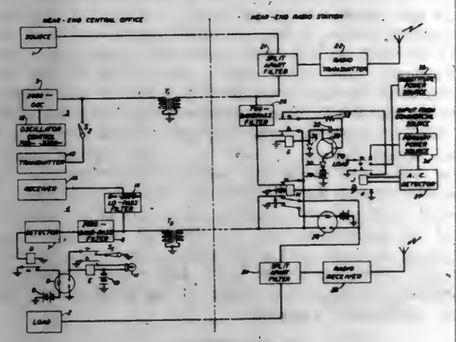


1. A telephone hand set-holding device comprising an arcuate neck encircling suspension band, an enlarged bearing plate fixed to one end of said arcuate band and adapted to rest against the body of the user when said arcuate band is in neck encircling position, an arm pivotally connected at one end to said plate and extending angularly upwardly from the surface thereof, a resilient clamp clampingly engaging a telephone hand set and retained thereon, and a socket on said clamp removably receiving the free end of said arm to support the telephone hand set.

3,130,277
ORDER WIRE AND ALARM CIRCUITS
Joseph R. Buotte, Lawrence, and John A. Word, Andover, Mass., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 29, 1960, Ser. No. 79,343
4 Claims. (Cl. 179—179.31)

1. In a communication system comprising a main station and a plurality of subsidiary stations, an alarm signaling channel forming a loop linking all of said stations, transmitting means at said main station for impressing a first signal to said loop, means at said main station for receiving said signal over said loop, means at each subsidiary station for interrupting said loop in the event of trouble at the respective station, additional means at said main station for selectively applying to said loop signals having different frequencies individual to said subsidiary stations, means at each subsidiary station bridging said loop for only the signal individual to that station in the

absence of specified trouble conditions at that station, and means at each subsidiary station for periodically interrupting said loop bridging means at the corresponding subsidiary station in the event of a trouble condition of other than said specified trouble conditions.

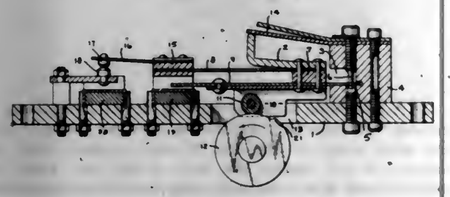


3,130,278

CURRENT INTERRUPTING SWITCH HAVING A MOVABLE CONTACT CARRIED BY A MAGNETIC ARMATURE

Florimond Douchet, 41 Rue Henri Vasseur, Argenteuil, France, assignor of one-half to Vehicules et Travaux, "VETRA," Paris, France, a French company

Filed Dec. 7, 1960, Ser. No. 74,283
Claims priority, application France Dec. 14, 1959
6 Claims. (Cl. 200—19)



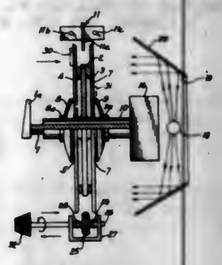
6. An electric current switch, comprising:
a base;
a first contact mounted on said base;
an elongated, thin base strip and means releasably securing said base strip adjacent one end thereof to said base, said base strip otherwise being free from connection to said base so as to be capable of flexing with respect to said base;
an elongated spring strip mounted adjacent one end thereof on said base strip and supported in cantilevered fashion substantially parallel with and spaced from said base strip and being movable toward and away from said base strip;
a permanent magnet mounted on said base adjacent the free end of said spring strip;
a magnetic armature mounted on the free end of said spring strip and opposed to said permanent magnet so that said magnetic armature is continuously urged toward said permanent magnet;
a flexible strip mounted on the free end of said spring strip and extending lengthwise away therefrom;
a second contact mounted on said flexible strip and adapted for engagement with said first contact; and cam means engaging said base strip between the ends thereof for flexing said base strip toward and away from said base thereby moving said second contact toward and away from said first contact.

3,130,279

ELECTRICAL TIME SWITCH WITH INDICATOR

Walter Holzer, Stutzenrain, Meersburg am Bodensee, Germany

Filed Aug. 12, 1960, Ser. No. 49,298
3 Claims. (Cl. 200—38)



1. An electrical time switch actuator comprising, in combination a rotating shaft; a substantially translucent driving disc secured to said shaft and rotating therewith; two switch actuating discs loosely seated on said shaft for independent rotation and adjustment and being disposed at both sides of said driving disc, each one of said actuating discs having two sectors of different light transparency; slip frictional means interposed between said discs for frictionally engaging separately said driving disc and said actuating disc; and stationary switching means actuated by said actuating discs and selectively stopping one of said actuating discs from rotating while the other disc continues to be rotated by said driving disc.

3,130,280

ARTICLE SENSING DEVICE FOR AN ARTICLE SUPPORTING CHUTE

Howard C. Blake, Oak Park, Mich., assignor to Admos, Inc., Warren, Mich., a corporation of Delaware

Filed Oct. 3, 1960, Ser. No. 60,109
5 Claims. (Cl. 200—61.41)



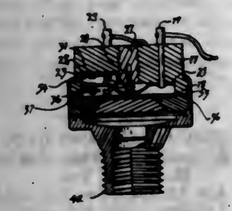
1. In combination with an inclined article supporting chute, a device for detecting the presence of an article at some location intermediate the ends of said chute comprising an elongated member having a length sufficient to extend from adjacent one end of said chute at least to said location, a sensing unit such as a limit switch, means mounting said sensing unit on said elongated member for actuation from the upper side thereof at said location, said elongated member having downwardly turned side flanges, electrical wires leading to said limit switch, means mounting said wires between said side flanges, and means detachably mounting said elongated member on the upper surface of said chute including a connection between said member and said chute adjacent said one chute end whereby said member can be attached to said chute from said one chute end.

3,130,281

PRESSURE RESPONSIVE SWITCH

Volney M. Jemison, Phoenix, Ariz., assignor to Thunderbird Engineering Co., Phoenix, Ariz., a corporation of Arizona

Filed Nov. 8, 1960, Ser. No. 68,074
7 Claims. (Cl. 200—83)



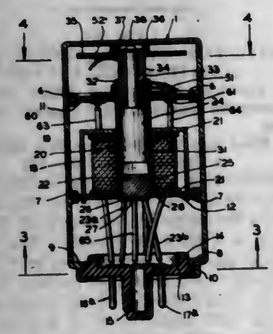
1. A pressure responsive switch comprising a switch housing assembly including a housing member with a bottom annular flange and electrical switch means in the housing, a body member adapted for attachment to a device containing fluid under pressure, said body member including a cup shaped portion with bottom and annular side wall, a spacer between said bottom and switch housing assembly, imperforate diaphragms on opposite sides of the spacer, said spacer having a central opening therein, a switch actuating piston on the side of the spacer facing the body with a switch operating head projecting through the spacer opening, means between the actuating piston and spacer for limiting movement of the said actuating piston in the direction of the switch assembly, and means clamping together said body and the switch housing assembly to clamp the said diaphragms between the cup shaped bottom portion and spacer, and between the spacer and switch housing respectively.

3,130,282

SOLENOID OPERATED SWITCHES

Paul R. Hanaway, Glendale, Mo., assignor, by mesne assignments, to Electro Mechanics, Inc., Fort Lauderdale, Fla., a corporation of Florida

Filed July 14, 1961, Ser. No. 124,198
11 Claims. (Cl. 200—87)



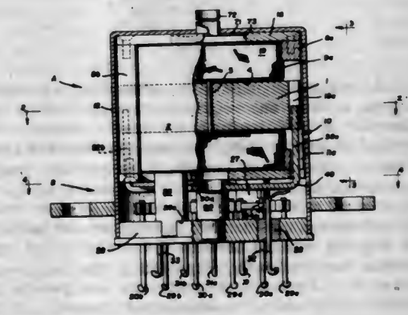
1. A switch comprising a closed dielectric shell, a plurality of disks held in spaced relation within the shell and subdividing it transversely in the provision of two end compartments and an intermediate cage, one of said disks being a dielectric disk, a solenoid rigidly mounted in the cage and having a hollow core, a rod-like armature shiftably mounted within the hollow core for movement axially with respect to the solenoid when the latter is energized and de-energized, an actuator rigidly secured to and movable with the armature, said actuator extending outwardly from the solenoid and through the dielectric disk into the end compartment defined by such dielectric disk, first electrical contact-elements mounted upon said dielectric disk, second electrical contact-elements mounted in upwardly spaced relation to said first electrical contact-elements, each of said first and second contact-elements being insulated from each other, a spring-biased switch blade operatively mounted within the end compartment defined by said dielectric disk for swinging movement between said contact-elements whereby to make optional contact with either of said contact-elements, and means operatively associated with the switch blade and being adapted for mechanically engaging the actuator whereby to swing the blade optionally into contactive engagement with either of said contact-elements responsive to movement of the actuator.

3,130,283

MULTIPLE POLE RELAY SWITCH

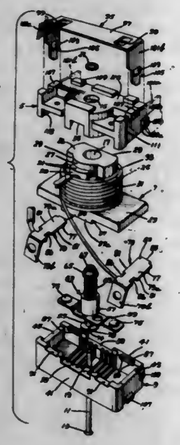
Rexford W. Brenneman, Woodsboro, and Harry J. Lebherz, Jr., Frederick, Md., assignors to Union-Everedy Company, Inc., Frederick, Md.

Filed Jan. 7, 1960, Ser. No. 1,070
10 Claims. (Cl. 200—104)



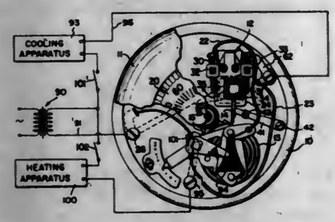
1. A solenoid actuated switch comprising
(1) a supporting structure defining a reference axis fixed with respect thereto,
(2) a hollow cylindrical coil supported by said structure so that its longitudinal axis intersects said reference axis at right angles and its extremities are disposed symmetrically with respect thereto,
(3) a ferromagnetic armature member pivotably mounted within said coil to permit arcuate rotation about said reference axis when driven by solenoid action of said coil and protruding radially therethrough at both ends,
(4) a switch plate supported by said structure having a plurality of contacts fixed therein arrayed in radial symmetry about said reference axis,
(5) a corresponding plurality of movable contacts resiliently supported on elastic arms mounted on said switch plate so as to be urged into contact with said fixed contacts,
(6) a connecting spider mounted for rotation about said reference axis having extensions lying generally parallel to and symmetrically disposed about said reference axis and external of said coil which engage protruding ends of said armature, and
(7) a plurality of radial arms extending radially from said reference axis each engaging one of said elastic arms whereby solenoid induced arcuate rotation of the spider disengages each of said movable contacts from said fixed contacts and upon coil de-energization resilience inherent in said elastic arms resets said armature.

3,130,284
ELECTROMAGNETIC RELAY
Lee O. Woods, Morrison, Ill., assignor to General Electric Company, a corporation of New York
Filed July 3, 1961, Ser. No. 121,404
10 Claims. (Cl. 200—111)



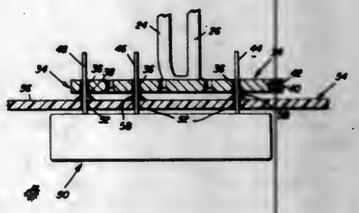
1. An electromagnetic relay comprising an insulating housing, at least one relatively movable contact means supported in said housing, an axially movable sleeve mounted in said housing and movable between two positions to actuate said contacts, a reciprocable magnetic armature slidably mounted upon said sleeve, an electrical coil engaged with and held by said housing to energize said armature, a cap member fastened around said sleeve, and a spring engaged between the armature and the cap member for resiliently transmitting the reciprocating motion of said armature to said sleeve to move the sleeve between said positions to actuate said contacts, said sleeve being formed of a metallic material having a relatively high melting point and having an axially extensive split therein to reduce eddy current flow and lower the operating temperature of said coil, said cap member being fastened to said sleeve by constriction of said split to provide a simplified adjustment therebetween.

3,130,285
THERMALLY ACTUATED DUAL MAGNETIC SWITCH WITH SHUNT AND TEMPERATURE COMPENSATION
Theodore E. Larsen, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Mar. 11, 1960, Ser. No. 14,428
8 Claims. (Cl. 200—138)



1. An improved switching apparatus comprising, a switch permanent magnet means adapted to operate a switch, a resilient drive means, a drive permanent magnet means spaced adjacent said switch magnet means, means connecting said resilient drive means to said drive magnet means so upon movement of said drive magnet means by said resilient drive means said switch magnet means is moved, said drive magnet having a flux density which varies with temperature and being mounted for movement between a first and a second ferromagnetic stop, said drive magnet means having a ferromagnetic shunt associated therewith, said shunt having a permeability varying with temperature so that the force developed between said drive magnet means and one of said stops remains constant with changes in temperature.

3,130,286
ELECTRIC SOLDERING GUN TIP
James J. Lenzi, 3301 White Oak Drive, Houston 7, Tex.
Filed Apr. 11, 1961, Ser. No. 102,253
7 Claims. (Cl. 219—26)

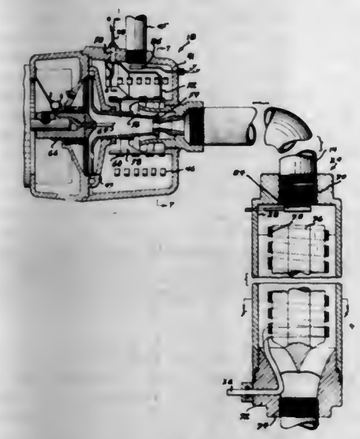


1. A heating unit for printed circuits comprising a pair of electrode arms interconnected at one pair of corresponding ends by means of a plate-like member defining resistor heating means, the other pair of corresponding ends of said arms including means adapted for securement to the electrodes of a soldering gun, said plate-like member including at least one bore formed therethrough and having an outer face remote from said arms adapted to abut a printed circuit board, the end of said bore opening outwardly of said outer face being provided with a truncated cone-shaped counterbore having its major diameter end opening outwardly of said outer face.

3,130,287
APPARATUS FOR SIMULTANEOUSLY PUMPING AND HEATING A FLUID
Harry A. Toulmin, Jr., Dayton, Ohio, assignor to The Commonwealth Engineering Company of Ohio, Dayton, Ohio
Filed July 14, 1960, Ser. No. 42,911
1 Claim. (Cl. 219—39)

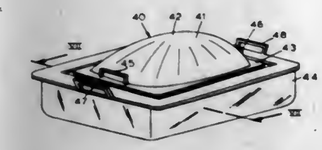
In combination; a pump having an inlet port and an outlet port, a drop pipe leading from the said inlet port into a well, a discharge line leading from the outlet port of the pump to a place of storage, a heat exchanger in the drop pipe adjacent the said inlet port, said heat exchanger passing therethrough in counter flow the water flowing to the said inlet port of the pump and the water flowing from said outlet port to a place of storage, electrical resistance heating means in the drop pipe between the said heat exchanger and the well for raising the temperature of the water passing therethrough, thermostatic means in said drop pipe to control the temperature of the water leaving therefrom, said pump further comprising, a rotary impeller, rotatable electrical resistance heating means mounted on said rotary impeller, stationary electrical resistance heating means, said rotary and stationary electrical resistance means being energizable for further elevating the temperature of the water passing therethrough above the temperature imparted to the water in the said drop pipe and thermostatic means

to control the temperature of the water leaving said pump, an electric motor to drive said pump, an electric circuit including a timer and interconnecting said electric



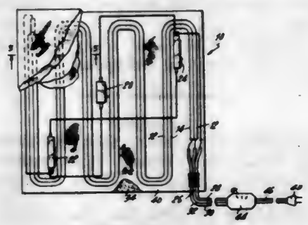
motor and all said electrical resistance heating means operable to bring about energization of said motor a predetermined time after the said electrical resistance heating means are energized.

3,130,288
FOOD-SERVICE DEVICE
Foster F. Monaco, 246—06 Cullman Ave., Little Neck, N.Y., and Rosario R. Monaco, 3325 90th St., Jackson Heights, N.Y.
Filed Nov. 21, 1961, Ser. No. 153,963
3 Claims. (Cl. 219—43)



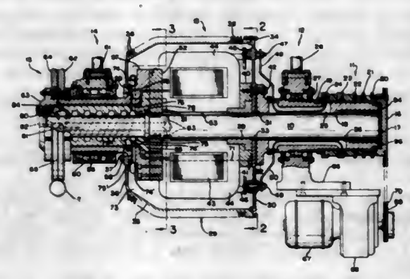
1. A display-type food-service receptacle comprising an upwardly open outer vessel of transparent material formed with an upper edge having an outwardly extending, generally horizontal peripheral flange; a plurality of upwardly open inner vessels of transparent plastic material removably nested within said outer vessel, said inner vessels having bottom portions spaced from the bottom of said outer vessel and engaging it along said flange while being spaced from the remainder of said outer vessel to form therewith fluid spaces surrounding said inner vessels for controlling the temperature of food therewithin, said outer vessel constituting a pan accommodating a water bath to a level above said bottom portions of said inner vessels; a generally dome-shaped cover of transparent material removably disposed above said inner vessels, said cover having a peripheral edge overlying said flange in a closed condition of said receptacle, said flange forming a supporting surface for said cover, said cover being provided with horizontally spaced downwardly extending projections bearing upon said supporting surface for enabling the ventilation of said vessels and said spaces.

3,130,289
COLLAPSIBLE HEATING PAD FOR TRAVELLING
Lawrence Katzman and Robert Dublirer, New York, N.Y., assignors to Kaz Heating Products, Inc., New York, N.Y., a corporation of New York
Filed Oct. 12, 1962, Ser. No. 230,086
1 Claim. (Cl. 219—46)



A collapsible heating pad for travelling comprising a first heating coil for connection to a 220–240 volt supply, a second heating coil for connection to a 110–120 volt supply, said first heating coil being in abutting relationship with said second heating coil for preheating thereby, said first and second coils being arranged in a sinusoidal pattern, a pair of sheets of denim, said heating coils being sandwiched between and bonded to said denim sheets, said denim sheets being bonded to each other, cotton linettes overlying and bonded to said denim sheets, an envelope of rubber sheeting surrounding said cotton linettes, a removable casing of decorated fabric covering said envelope, said heating pad being foldable and bendable in all directions, a conductor having at least three lines connected to said heating coils, a multiple position switch connected to said conductor, a two line cord connected to said switch and for connection to a source of electrical power, said switch having successively an "off" position, a 220–240 volt position and a 110–120 volt position, and selectively connecting the corresponding one of said heating coils in series with said cord when in said 220–240 volt position and said 110–120 volt position, a pair of spaced thermal responsive switches disposed between said sheets of denim and bonded thereto and connected in series connection with said cord, and a condenser bonded to said denim sheets and disposed therebetween, said condenser being connected in parallel with said thermal responsive switches.

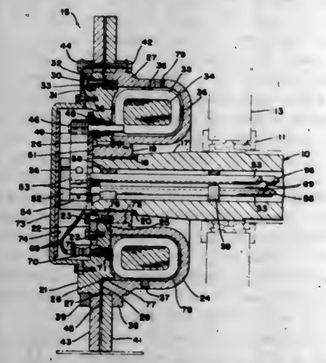
3,130,290
ROTARY WELDING TRANSFORMER
Kenneth R. Keska, Bay Village, Ohio, assignor to The Yoder Company, Cleveland, Ohio, a corporation of Ohio
Filed Jan. 4, 1961, Ser. No. 80,567
12 Claims. (Cl. 219—63)



7. In electrical welding transformer construction, a winding assembly, means for supporting said winding assembly for rotation during use about a substantially horizontal axis, a fluid-tight enclosure in spaced surrounding

relation about said winding assembly, and a charge of a liquid dielectric in said enclosure and forming a bath therein in which the winding assembly is partially immersed, said liquid being vaporizable by the heat normally generated by the winding assembly when energized, with consequent cooling effect on the assembly, the enclosure being designed to condense the vapor on portions thereof above the bath, and roller electrodes connected to said winding assembly for rotating the same in such partially immersed condition by engagement of said electrodes in use with a moving workpiece.

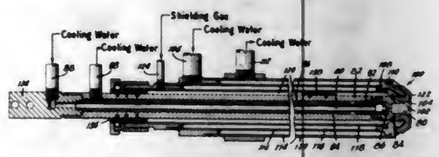
3,130,291
ROTATING WELDING TRANSFORMER
Kenneth R. Keska, Bay Village, Ohio, assignor to The Yoder Company, Cleveland, Ohio, a corporation of Ohio
Filed May 12, 1961, Ser. No. 109,599
4 Claims. (Cl. 219—63)



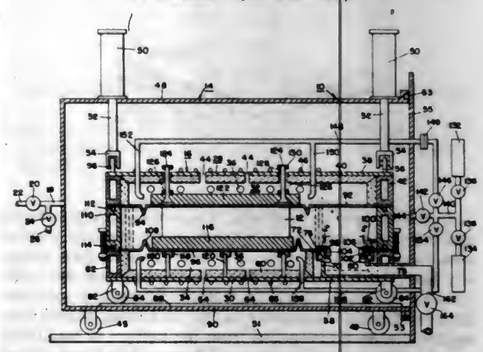
1. In a rotating welding transformer including a shaft and means for supporting the shaft freely for rotation on its axis; a welding head comprising conductor means secured to said shaft and projecting outwardly from about the same, said conductor means including first work-contacting rotary electrode means, a transformer secondary in the form of an annular case of general U-shape in cross-section attached to said conductor means with its open side against and closed by a side of the conductor means, the outer wall surfaces of said annular case being substantially fully exposed to the atmosphere for dissipation of heat therefrom about all sides of the same, one edge portion of the secondary being in conductive contact with the conductor means and the other edge portion insulated therefrom, second rotary electrode means carried by the secondary in electrical connection with the other edge portion of the same and in spaced opposition to the first electrode means, toroidal core and primary winding means in spaced relation within the secondary case, and a charge of liquid dielectric partially filling the space between the toroidal core and primary winding means and the secondary for evaporative cooling of the same in operation of the transformer.

3,130,292
ARC TORCH APPARATUS FOR USE IN METAL MELTING FURNACES
Robert M. Gage, Summit, N.J., George M. Skinner, Indianapolis, Ind., William F. Cuddihy, Poquoson, Va., and Donald W. Sundstrom, Indianapolis, Ind., assignors to Union Carbide Corporation, a corporation of New York
Filed Dec. 27, 1960, Ser. No. 78,671
6 Claims. (Cl. 219—75)

1. A non-consumable transferred arc torch device producing a directionally stabilized quasi-electrode for heating a metal melting furnace which comprises five concentric tubes defining therebetween a central passage and first, second, third and fourth annular passages respectively, nozzle means having a relatively wide inlet portion and a constricted outlet connected to and providing an end closure for the outer three tubes at one end thereof and further providing for communication between the third and fourth annular passages, electrode mounting means connected to the same end of the two inner tubes providing an end closure therefor and further providing for communications between said central passage and said first annular passage, means at the other ends of said tubes providing coolant inlet and outlet flow paths for the central and first annular passages and the third and fourth annular passages respectively, and a shielding gas inlet to the second annular passage, a refractory metal electrode insert axially mounted on the electrode mounting means, said electrode insert and electrode mounting means forming together with said nozzle means an annular convergent flow path for said shielding gas and an exit orifice surrounding said electrode insert of smaller diameter than said second annular passage whereby the shielding gas will be forced into substantial intimate contact with the transferred arc between the electrode and a metal bath within the furnace, said electrode insert extending into but not beyond said constricted outlet, and means for providing arc current to the electrode insert.

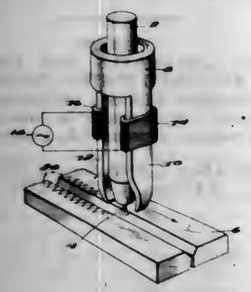


3,130,293
BRAZING FURNACE
Stephen Bukata, 7813 Ardleigh St., Philadelphia 18, Pa.
Filed Jan. 19, 1960, Ser. No. 3,430
10 Claims. (Cl. 219—85)



1. A furnace comprising separable top and bottom sections, means for heating the interior of said sections, a pair of planar envelope sheets intermediate said top and bottom sections, a closure member between said envelope sheets, the bottommost of said envelope sheets having an opening therethrough, means for maintaining the uppermost sheet in intimate contact with a sandwich construction position between such sheets, said means extending through said bottom section and in communication with the space between said envelope sheets through the opening in the bottommost sheet for evacuating the space between the envelope sheets, a reference slab seated on the bottommost envelope sheet, a slab seated on the topmost envelope sheet, an intermediate envelope sheet extending between the topmost and bottommost envelope sheets and over the reference base, said intermediate envelope sheet having an opening therethrough in alignment with the opening in the bottommost envelope sheet, the means extending through the bottom section being in communication with the space between the topmost envelope sheet and the intermediate envelope sheet through the openings in the bottommost envelope sheet and said intermediate envelope sheet, means sealing the space between the intermediate envelope sheet and the bottommost envelope sheet from the passage through the openings, and a pair of closure members between said envelope sheets, one of said closure members being between the topmost envelope sheet and the intermediate envelope sheet and the other closure member being between the bottommost envelope sheet and the intermediate envelope sheet.

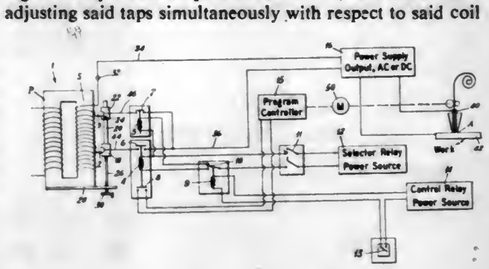
3,130,294
METHOD FOR PRE-HEATING A JOINT TO BE ARC-WELDED
Pierre Regnauld, Le Vesinet, France, assignor to L'Air Liquide, Societe Anonyme pour l'Etude et l'Exploitation des Procedes Georges Claude
Filed Nov. 25, 1960, Ser. No. 71,521
Claims priority, application France Nov. 30, 1959
9 Claims. (Cl. 219—123)



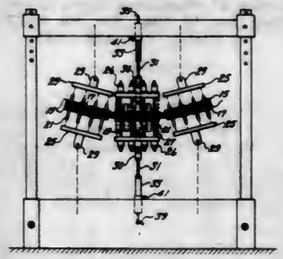
1. A method for pre-heating a metal joint which is to be arc-welded, which comprises subjecting the edges of said joint to at least one inert-gas shielded auxiliary arc of the non-consumable electrode type, placing said auxiliary arc less than 10 centimeters ahead of the main welding arc and stabilizing said auxiliary arc to an extent sufficient for permitting substantially uniform and controllable heat input from said auxiliary arc to definite areas of both edges of said joint.

3,130,295
ELECTRIC ARC WORKING PROCESS AND APPARATUS
August F. Manz, Newark, N.J., assignor to Union Carbide Corporation, a corporation of New York
Filed July 19, 1961, Ser. No. 125,250
7 Claims. (Cl. 219—131)

1. In an arc working system requiring different volt-ampere conditions therefor, an A.C. energized power supply circuit for energizing the arc with a plurality of preselected volt-ampere conditions and a relay-switching circuit for selectively operating said A.C. energized power supply circuit to produce any one of such conditions, said power supply circuit comprising an A.C. energized coil provided with a plurality of taps which are adjustable for setting such conditions, means for individually adjusting said taps with respect to such coil, and means for adjusting said taps simultaneously with respect to said coil without affecting their relative adjustment with respect to one another.



3,130,296
BRAZING AND HEAT TREATING APPARATUS
Edward F. Graham, Baltimore, Md., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Sept. 27, 1961, Ser. No. 141,226
6 Claims. (Cl. 219—149)

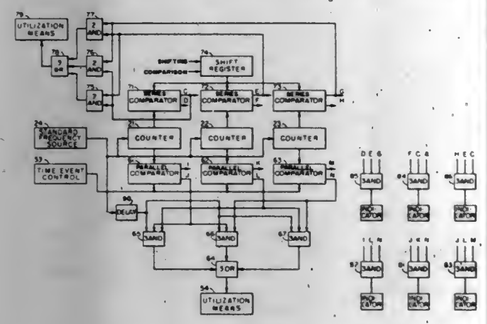


1. Apparatus for fabricating curved structural members from plates, said apparatus comprising a plurality of universally pivotably mounted heat generating elements for contacting and heating a work piece, a baffle member for supporting said heat generating elements in lateral relationship to each other, guides in said baffle member for aligning said heating elements for vertical movement relative thereto, and hydraulic means for urging said baffle and heating elements against the surface of the plate to press said plate into conformity with a predetermined configuration while simultaneously applying heat thereto through said heat generating elements.

3,130,297
DIGITAL CLOCK SYSTEM
Douglas A. Venn, Suitland, Md., and Donald H. Jones, Washington, D.C., assignors to the United States of America as represented by the Secretary of the Navy
Filed Nov. 6, 1961, Ser. No. 150,603
5 Claims. (Cl. 235—92)
(Granted under Title 35, U.S. Code (1952), sec. 266)

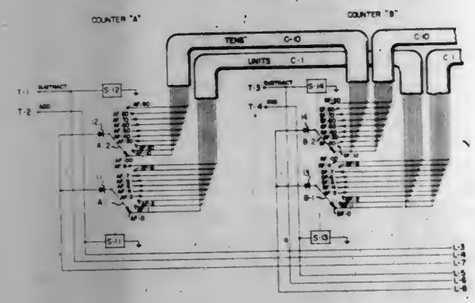
1. A digital clock system comprising a time information source; a plurality of substantially identical bit counters, each of said bit counters connected to said source to count the output thereof; at least one coded bit programmer means, at least one plurality of signal comparator means, each comparator means connected to compare the output of a respective bit counter in said plurality thereof and the output of said programmer means; at least one plurality of gating means of the "AND" variety, each of said gating means of the "AND" variety having input connections to at least two of said comparators in said plurality thereof, at least one gating means of the "OR" variety, the inputs of said gating

means of the "OR" variety connected to the outputs of said gating means of the "AND" variety in said plurality



thereof, and means for utilizing the output of said gating means of the "OR" variety.

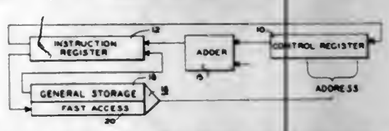
3,130,298
ELECTRICAL REMOTE INDICATING SYSTEM
Peter D. Schwarz, 61 Woodcrest Drive, Rochester 10, N.Y.
Filed Dec. 18, 1961, Ser. No. 160,215
1 Claim. (Cl. 235—92)



Vehicle counting apparatus for use in keeping count of the number of vehicles or of available spaces in different respective areas of a parking garage or like facility of the type having means for producing electrical signals in response to movement of vehicles into and out of the respective areas, the signals being in the form of relatively short pulses of electrical energy, said apparatus comprising means for applying selected ones of the signals to respective first terminals and other ones of the signals to respective second terminals, electrically actuatable digital count devices connected to said first and second terminals for indexing in a forward direction in response to the selected signals and in a reverse direction in response to the other signals, there being one set of said first and second terminals and one count device for each separate parking area of the garage or like facility, each one of said count devices including a fixed electrical contact for each digit and a movable contact sequentially engageable with said fixed contacts, a jack, an electrically actuatable printer for recording digital information, said printer having a common terminal and separate digit input terminals, means for connecting the digitally corresponding fixed contacts of all of said count devices together and to respective corresponding ones of said input terminals and to corresponding terminals in said jack, a programmer circuit for controlling the operation of said printer, separate conductors connecting the movable contacts of said count devices separately to said programmer circuit and to respective terminals in said jack, an indicator including plural electrically energizable digit indicating devices having a common terminal and separate input terminals, a plug engageable with said jack for selectively connecting said separate terminals of said indicating devices respectively to said corresponding terminals in said jack, means connecting an electric power source between two further terminals in said jack, connections between selected terminals of said plug for connecting one of said further terminals through said jack to a selected one of said separate conductors when said plug is engaged with said jack, said common terminal of said indicator being connectable through said plug to the other one of said further terminals, whereby when said plug is engaged in said jack a selected one of said indicating devices is energized in accordance with the instantaneous position of the movable contact to which said selected separate conductor is connected, said programmer circuit including means for:

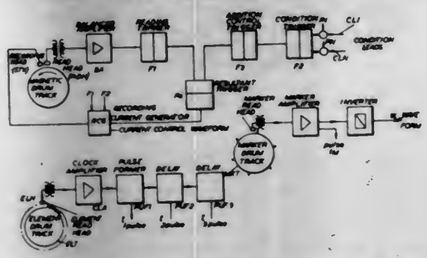
(*a*) connecting one terminal of a two terminal electrical energy source to said common terminal of said printer,
(*b*) connecting the other terminal of the source to said separate conductors in predetermined sequence,
(*c*) actuating said printer in timed relationship to the making of the resulting connections, and
(*d*) disconnecting the power source from said further terminals of said jack while said common terminal of said printer is connected to the source, thereby positively preventing completion of an energizing circuit for said printer through said indicator.

3,130,299
COMPUTING APPARATUS FOR CONTROLLING PROGRAM INSTRUCTIONS
Howard M. Rathbun, Millburn, and Stephen A. Richardson, Boonton, N.J., assignors to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware
Filed Nov. 7, 1960, Ser. No. 67,674
1 Claim. (Cl. 235—157)



Apparatus in a computing device for controlling program instructions arranged in addressable storage locations in a general storage, each location containing an instruction word having two instructions any of which may be a jump instruction, the apparatus including a control register for temporarily retaining instruction so as to control the computing device, an instruction register connected with the control register for temporarily retaining at least two instructions and transferring instructions to the control register, a main program having a plurality of instructions, a jump instruction specifying the address of a location in the general storage which jump instruction when transferred into the control register causes a main program instruction word stored in the specified address to be transferred to the instruction register, transfer means for transferring one of the two instructions stored in the instruction register into the control register concurrently with the transfer of the jump instruction out of the control register and into the instruction register, means for modifying the jump instruction during this transfer to specify the address of the next desired main program instruction word, the said transferring means transferring the second of the two instructions into the control register concurrently with the transfer of the first instruction out of the control register into the instrucion register at the conclusion of the operation controlled by the first instruction, the said transfer means further transferring the modified jump instruction back into the control register at the conclusion of the operation controlled by the second instruction whereby the steps of transferring and operating in response to the program instructions proceed alternately, and means for transferring the contents of the instruction register into a predetermined location of the general storage said contents being a modified jump instruction relating to the main program and one other instruction.

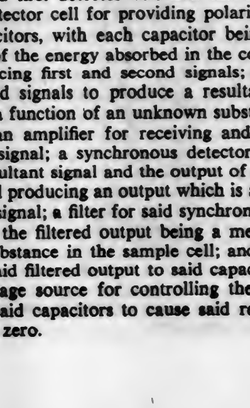
3,130,300
MEANS FOR RECORDING AND MODIFYING INTELLIGENCE
Esmond Philip Goodwin Wright, Joseph Rice, and Donald Gordon Neal Hunter, London, England, assignors to International Standard Electric Corporation, New York, N.Y.
Filed Mar. 18, 1954, Ser. No. 417,071
Claims priority, application Great Britain Mar. 25, 1953
4 Claims. (Cl. 235—167)



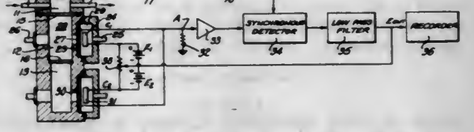
1. Equipment for the storage of intelligence in the form of groups of elements, the first element in each group being a supervisory element, comprising a store having groups of elemental sections, means for recording a plurality of elemental groups of intelligence one after another and element by element in corresponding elemental sections with the supervisory intelligence element being recorded in the first element of said store, means for reading groups of said sections one after another and section by section, said reading means and said recording means being so spaced relative to the speed of said store and said reading and recording means and the time period between reading and recording that re-recording takes place on the same track elemental store from which the element was read, means responsive only to an external signal for modifying the intelligence store in a group of elemental sections by causing said record ing means to re-record in the same elemental sections certain of the elements in that group and to change at least one element in said group, means for causing said recording means to re-record said supervisory element in changed form and in the same elemental store section without affecting the remaining elements in the group, and means responsive to the coincidence of the external signal and a signal from the reading means when said reading means is reading said supervisory element for inhibiting the modifying means.

3,130,301
SIGNAL SUMMING INDICATOR
Clarke C. Minter, 3136 Dumbarton Ave. NW., Washington, D.C.
Filed Aug. 12, 1960, Ser. No. 49,394
1 Claim. (Cl. 235—193)
(Granted under Title 35, U.S. Code (1952), sec. 266)

An electrical summation circuit comprising, a plurality of pairs of electrical signal input terminals, an equal plurality of pairs of signal output terminals, said pairs of output terminals being connected in series, an equal plurality of signal multipliers having selectively the capability of multiplying a signal by a factor greater than one, less than one, and unity, and switching means for alternately connecting each of said signal multipliers to one of said pairs of input terminals and to one of said pairs of output terminals with a selected polarity to provide an algebraic summation of an individually selected proportion of each of a plurality of signals applied to said input terminals.



3,130,302
POSITIVE TYPE INFRARED ANALYZER
Max D. Liston, La Habra, and Raymond L. Madsen, Brea, Calif., assignors to Beckman Instruments, Inc., a corporation of California
Filed Mar. 9, 1960, Ser. No. 13,932
4 Claims. (Cl. 250—43.5)

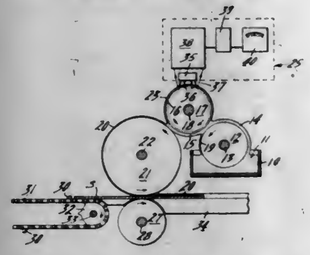


1. In a positive type infrared analyzer, the combination of: a radiant energy source; an oscillator; means interconnecting said source and said oscillator for energizing said source as a function of the output of said oscillator; a sample cell and first and second detector cells mounted in optical series for receiving radiation from said source, each of said detector cells having a capacitor therein; a floating D.C. voltage source connected between the capacitor of said first detector cell and the capacitor of said second detector cell for providing polarizing voltages on said capacitors, with each capacitor being variable as a function of the energy absorbed in the corresponding cell for producing first and second signals; means for combining said signals to produce a resultant signal which varies as a function of an unknown substance in the sample cell; an amplifier for receiving and amplifying said resultant signal; a synchronous detector having the amplified resultant signal and the output of said oscillator as inputs and producing an output which is a function of said resultant signal; a filter for said synchronous detector output, with the filtered output being a measure of the unknown substance in the sample cell; and means for connecting said filtered output to said capacitors and to said D.C. voltage source for controlling the polarizing voltages on said capacitors to cause said resultant signal to approach zero.

3,130,303
APPARATUS FOR MEASURING COATING AMOUNTS

Walter James Dobbins, Lake Zurich, Ill., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

Filed Nov. 2, 1960, Ser. No. 66,801
7 Claims. (Cl. 250—43.5)

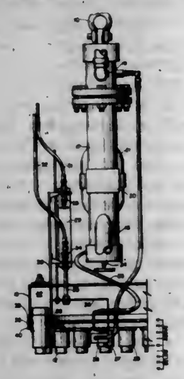


1. An apparatus for measuring the amount of coating being applied to a moving flat surface comprising, coating means for applying a wet coating to said surface, at least a portion of said coating means being substantially cylindrical and having on the surface thereof a thin film of said wet coating, the surface of said cylindrical portion in contact with said thin film being composed of a non-magnetic metal, the atoms essentially composing said non-magnetic metal having an atomic number substantially different from the atoms essentially composing said thin film, means for moving said flat surface and said coating means relative to each other, radiation means adjacent said non-magnetic metal and said thin film and remote from said flat surface for directing a stream of beta rays against and through said thin film, said thin film presenting a finite thickness to penetration by said beta rays and said non-magnetic metal presenting an infinite thickness to penetration by said beta rays, detector means for detecting a quantity of beta rays backscattered from said non-magnetic metal and said thin film, said quantity being proportional to the amount of coating being applied to said flat surface, and visual inspection means coupled with said detector means for visually indicating said quantity.

3,130,304
DEEP WATER ISOTOPIC CURRENT ANALYZER

William H. Johnston, Baltimore, Md., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed July 26, 1962, Ser. No. 212,748
6 Claims. (Cl. 250—43.5)



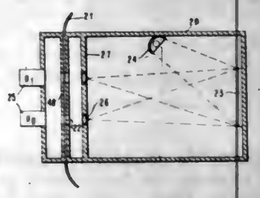
1. Apparatus for determining direction and velocity of liquid currents that comprises:

(*a*) A liquid-tight housing;
(*b*) Means for immersing the housing in a body of liquid;
(*c*) A plurality of radiation detectors arranged in a circular array in the housing;
(*d*) An injector for radioactive material spaced centrally of the array and equidistant from each of the detectors therein;
(*e*) Control means for the injector for injecting radioactive material into said body of liquid;
(*f*) Means for determining the time required for radioactive material injected by said injector to reach one of the detectors, and
(*g*) Means for identifying the detector which detects the radioactive material.

3,130,305
OPTICAL SYSTEM FOR RETRIEVING STORED INFORMATION

Ivan E. Sutherland, Cambridge, Mass., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 22, 1960, Ser. No. 77,582
4 Claims. (Cl. 250—71)



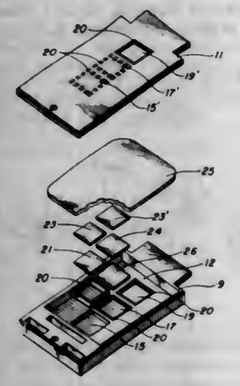
1. A device of the class described comprising:
a plurality of translucent members having information data stored thereon in the form of a plurality of discrete opaque and nonopaque areas;
a light producing member;
means including at least some of said translucent members for forming a light spot on said light producing member corresponding to one of said discrete areas;
means for directing light from said spot through a corresponding area on others of said translucent members; an output means; and means operating in response to light transmitted from said spot through said translucent members for applying information data to said output means.

3,130,306
NUCLEAR RADIATION DOSIMETER USING COMPOSITE FILTER AND A SINGLE ELEMENT FILTER

Ellery Storm and Simon Shlaer, Los Alamos, N. Mex., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed Sept. 19, 1961, Ser. No. 139,315
5 Claims. (Cl. 250—83)

1. A nuclear radiation dosimeter film badge for recording exposure to X or gamma rays over an energy range of from about 40 to 1250 kev. with a response limited to not exceed the ratio of 0.7 to 1.8 on a logarithmic scale, comprising a flat elongated plastic housing and a film supported substantially in the median plane parallel to the plane of flatness of said housing, said film having disproportionate sensitivity to low energy radiation of the order of 40 kev. compared to the sensitivity to high energy radiation of the order of 100 kev. and above, a composite metal plate filter and a single metal plate filter supported in said housing adjacent to and parallel to said film, said composite metal plate containing a plurality of metals of dissimilar radiation absorptive characteristics relative to energy, and said single filter consisting of a metal having a peak absorptive characteristic at about 50 kev., the range of disproportionate film



sensitive energies being divided into as many substantially equal increments as the number less one of dissimilar metals used in said composite filter, and one each of said metals being selected to have a K-edge at one of the limits of each energy increment and each of said metals having a thickness x_1, x_2, x_n, etc., as determined by the simultaneous solution of equations of the form

$$u_{H_1}x_1+u_2x_2+\ldots+u_nx_n=\ln F_{0_1}-\ln F_k$$
$$u_1x_1+u_{H_2}+\ldots+u_nx_n=\ln F_{0_2}-\ln F_k$$
$$\ldots\ldots\ldots\ldots\ldots$$
$$u_1x_1+u_2x_2+\ldots+u_{H_n}x_n=\ln F_{0_n}-\ln F_k$$

where u_{H_1} is the higher K-edge value of the true absorption coefficient of element 1 at the K-edge energy of element 1, u_2 is the true absorption coefficient of element 2 at the K-edge energy of element 1, u_1 is the true absorption coefficient of element 1 at the K-edge energy of element 2 and element u_{H_2} is the higher K-edge value of the true absorption coefficient of element 2 at the K-edge energy of element 2, and F_{0_1},F_{0_2}, F_{0_n} are the unfiltered film responses under the single plate filter at the K-edge energy of elements 1, 2 . . . n respectively, and the smaller response value at each K-edge is limited by the preselected defined limit F_k and the sensitivity $F_f(E)$ of the film under the filters at any energy E over the selected range being calculated by the equation

$$F_f(E)=F_0(E)e^{-u_1(E)x_1+u_2(E)x_2\ \ldots\ u_n(E)x_n}$$

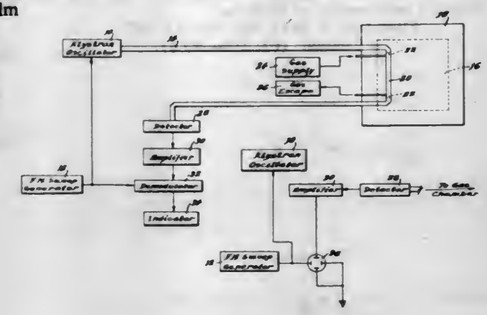
a lead shield supported in the housing, closely fitting and surrounding the edges of the composite plate filter and the single element plate filter.

3,130,307
NEUTRON FLUX INTENSITY DETECTION

James T. Russell, Richland, Wash., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed Mar. 2, 1962, Ser. No. 177,142
8 Claims. (Cl. 250—83.1)

1. A method of measuring the instantaneous intensity of the neutron flux in the core of a nuclear reactor comprising: passing through said core at a constant rate a target gas capable of being transmuted by neutron bombardment to a product having a resonant absorption line at a particular microwave frequency, passing microwave

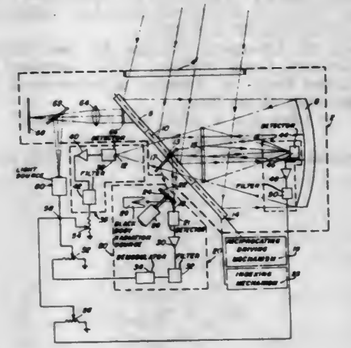


energy of said frequency through said gas, and measuring the attenuation of said energy due to the formation of said product.

3,130,308
THREE DETECTOR FREQUENCY SHARING SYSTEM FOR RADIOMETERS

Robert W. Astheimer, Springdale, Conn., assignor to Barnes Engineering Company, Stamford, Conn.

Filed Nov. 19, 1956, Ser. No. 623,255
19 Claims. (Cl. 250—83.3)

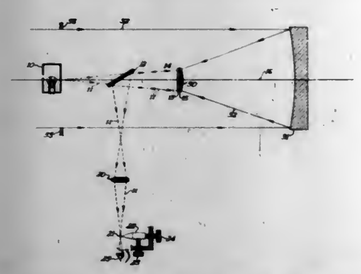


1. In apparatus for thermal image scanning of a field utilizing an input radiation scanning mechanism including a movable scanning element, the combination of three infrared sensitive detecting systems responsive respectively to three different bands of component frequencies of received thermal radiation intensity variations, a radiation-divider for directing said radiation from said radiation scanning mechanism to each of said detecting systems, a converting system constructed to combine the output signals of said detecting systems and convert said signals into corresponding light energy, a display system including a display screen for displaying said light energy, and a light-directing element connected to said movable element to move synchronously therewith, said light directing element being positioned to direct said light energy to said display screen whereby a light image corresponding to said thermal image is created.

3,130,309
INFRARED VISUAL IMAGE CONVERTER WITH LENS MIRROR COATED WITH INFRARED ABSORBING MATERIAL

James H. Snyder, Wayzata, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Oct. 3, 1961, Ser. No. 142,597
6 Claims. (Cl. 250—83.3)

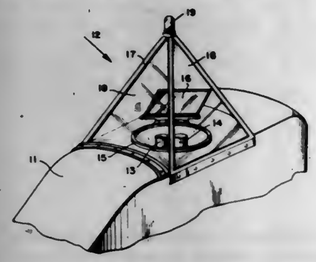


1. Apparatus for producing a visual image of a body which radiates discrete infrared energy, comprising: a lens mirror having a mirrored surface normally shaped to converge light at a focal point; a layer of infrared absorbing material affixed to said mirror surface and adapted to be exposed to absorb the discrete infrared energy to thus heat and distort said mirrored surface and thus to scatter light at said focal point; means to illuminate said lens mirror with light; and means to analyze the scattered light to produce a visual image of the body.

3,130,310
ULTRA-VIOLET AIRCRAFT PROXIMITY WARNING DEVICE WITH SCANNING MIRROR AND ULTRA-VIOLET SOURCE

Lucien M. Biberman, Chicago, Ill., and Richard G. McCarty, Santa Barbara, Calif., assignors to the United States of America as represented by the Secretary of the Navy

Filed Jan. 4, 1962, Ser. No. 164,427
12 Claims. (Cl. 250—83.3)
(Granted under Title 35, U.S. Code (1952), sec. 266)

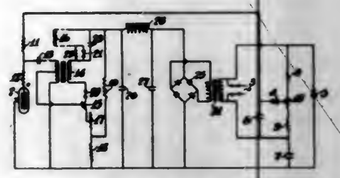


1. An apparatus for use on aircraft for signaling to other aircraft its presence and for detecting the presence of other aircraft, said apparatus comprising, in combination, a beacon, said beacon including an ultra-violet source for providing radiation in the "black" region of the spectrum, a search device for searching for beacons on other aircraft, said device including photodetection means and all-around scanning means, said photodetection means being responsive to a band of ultra-violet radiation in the "black" region of the spectrum and adapted to generate a signal indicative of radiation from a beacon on other aircraft said scanning means being disposed between said first-named beacon and said photodetection means and blocking radiation from the former to the latter, and means responsive to said signal adapted to indicate the approximate range of said beacon on said other aircraft.

3,130,311
RADIOACTIVE SELECTOR CIRCUIT FOR CONTROLLING THE LEVEL OF MATERIAL BETWEEN A SOURCE AND SELECTOR

Clifford Kenneth Beswick, Heaton Moor, Stockport, and Gordon William Whitehurst, Bollington, near Macclesfield, England, assignors to Simon-Carves Limited, Cheshire, England, a company of Great Britain

Filed Aug. 27, 1959, Ser. No. 836,395
Claims priority, application Great Britain Sept. 15, 1958
8 Claims. (Cl. 250—83.6)

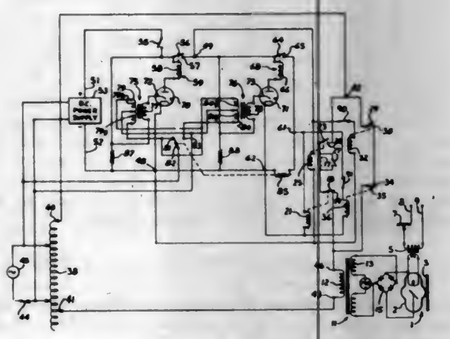


1. An electrically controlled system which comprises an electric sensing circuit comprising in series a pair of resistances, a radiation-sensitive device and a source of continuous, direct-current high electric tension, a blocking oscillator circuit connected into said sensing circuit in parallel with one of said resistances and said radiation-sensitive device and comprising in series a condenser, and a transformer primary in series, and a control circuit comprising a load relay coil, a secondary of said transformer and an electronic control device having a control element connected to and actuated by the primary of said transformer.

3,130,312
X-RAY TIMER SYSTEM TO PRODUCE SHORT DURATION RADIATION PULSES

James R. Craig, Glenview, Ill., assignor to Profexray, Incorporated, Maywood, Ill., a corporation of Illinois

Filed July 26, 1961, Ser. No. 126,909
8 Claims. (Cl. 250—95)



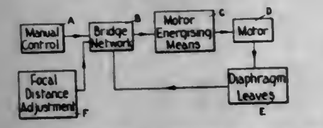
1. In an X-ray apparatus including an X-ray tube assembly having an X-ray tube, a transformer having a secondary for supplying current to the X-ray tube, a primary for the transformer, a circuit by which a predetermined A.C. voltage of sufficient magnitude may be applied to the primary to cause radiation output from the X-ray tube assembly, a circuit by which an A.C. voltage of lesser magnitude may be applied to the primary, the lesser magnitude voltage being insufficient to cause radiation output from the X-ray tube assembly but sufficient to provide exciting current for the transformer, switching means in the two

circuits, and means for operating the switching means in predetermined timed relationship to apply the predetermined voltage to the primary for a fraction of a half cycle only and for applying the lesser magnitude voltage to the primary for fractions of the half cycle before and after the predetermined voltage is applied thereto.

3,130,313
DIAPHRAGMS FOR USE WITH X-RAY APPARATUS

Basil Boyland Tilling, Weybridge, Surrey, England, assignor to The General Electric Company Limited, London, England

Filed Nov. 1, 1961, Ser. No. 149,453
2 Claims. (Cl. 250—105)



1. Means for selectively positioning at least one pair of diaphragm leaves in an X-ray apparatus, said means comprising a manual control, a first impedance which is continuously variable over a predetermined range and is coupled to the manual control for enabling said first impedance to be set to any seelcted value within said range, a second impedance which is continuously variable over a predetermined range and is coupled to the diaphragm leaves so as to be varied with the extent of the opening of the leaves, an electric impedance bridge network including both said impedances, a reversible direct current electric motor coupled to the diaphragm leaves for opening and closing the leaves, and motor energizing means including a transistor amplifier having input and output terminals, circuit means connecting said input terminals to the output of the electric impedance bridge network and circuit means connecting the output terminals to said motor for driving the motor in response to an out-of-balance signal obtained from the bridge network to alter the extent of opening of the diaphragm leaves in such a sense as to reduce the out-of-balance signal.

3,130,314
METHOD OF USING RADIOACTIVE TRACERS

Alan Beerbower and John L. Murray, Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Nov. 23, 1959, Ser. No. 854,530
11 Claims. (Cl. 250—106)

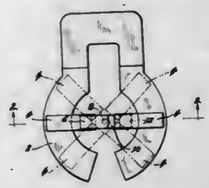
1. An improved method of employing radioactive tracers which comprises, admixing a surface active solubilizing agent with an aqueous solution of a water soluble salt of a radioactive element having a relatively short half life, injecting said mixture into a water-immiscible hydrocarbon and determining by use of radiation sensitive instruments the location of the radioactive material in said hydrocarbon.

3,130,315
METHOD AND APPARATUS FOR PRODUCING AND ANALYZING POLARIZED GAMMA RADIATION

Morton Hammermesh, Villa Park, Stanley S. Hanna, Western Springs, and Gilbert J. Perlow, Downers Grove, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed Jan. 13, 1961, Ser. No. 82,662
8 Claims. (Cl. 250—106)

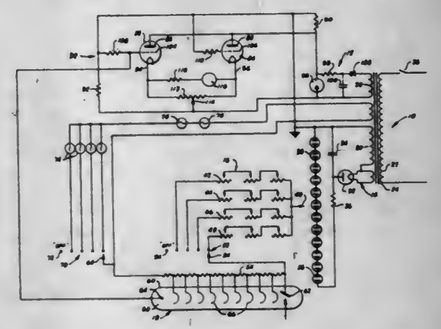
1. A method of detecting polarization and the angle thereof for radiation in the kev. energy range, comprising interposing in the path of said radiation an absorber containing unexcited source atoms embedded in ferromagnetic material and positioned in a magnetic field, and rotating said absorber in a plane perpendicular to the path of the radiation.



3,130,316
PHOTOMULTIPLIER TUBE CIRCUIT FOR A COLOR ANALYZER

Francis E. Townsend, 1305 N. Hudson, Oklahoma City, Okla.

Filed Sept. 15, 1960, Ser. No. 56,200
8 Claims. (Cl. 250—207)



3. A color analyzer, comprising:
a photomultiplier tube having a cathode, an anode and a plurality of intermediate electrodes;
means for directing the light beam to be measured onto the cathode of the photomultiplier tube;
means for registering the response of the photomultiplier tube, and
means for impressing a voltage across the photomultiplier tube circuit,
said means for impressing a voltage across the photomultiplier tube circuit including:
a source of D.C.;
a plurality of voltage regulator tubes connected in series to said source, and
a movable contact connected to the photomultiplier tube circuit for selectively impressing a potential across the photomultiplier tube circuit from between adjacent regulator tubes.

3,130,317
PHOTOSENSITIVE LUMINOUS ANNULAR SIGHT

John R. Connelly, Cleves, and Robert A. Mandeville, Byesville, Ohio, assignors to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware

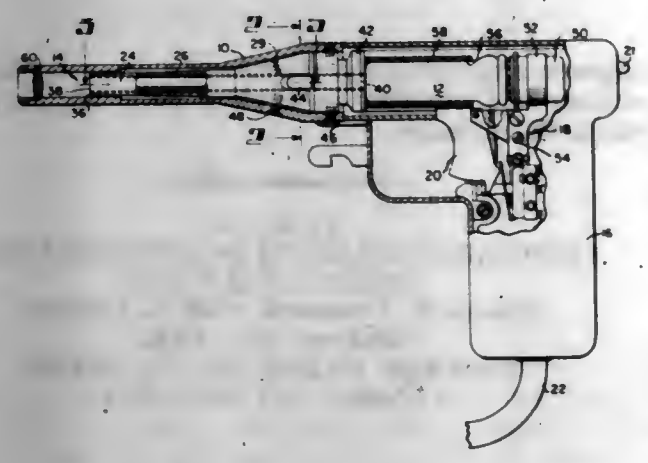
Filed Nov. 1, 1961, Ser. No. 149,406
11 Claims. (Cl. 250—227)

8. In an optical system for detecting a low intensity spot of light, the combination comprising:
a light detector;

a light conducting cylindrical rod having one end adjacent said detector, said rod being coated first with a reflecting coat and second with an opaque coat, the ends of said rod being clear;

an electrostatic shield for said coated rod;

a lens for focusing radiations from said spot into the other end of said rod, said lens having its axis coaxial with said cylindrical rod and spaced from the other end of said rod a distance equal to the focal length of said lens;



means for precisely aiming said lens and said rod towards said spot, said means including a hollow light conducting tube having an internal bore, the exterior of said tube being coated first with a reflecting coat and second with an opaque coat, the interior surfaces of said tube being coated with a reflecting coat;

said coated rod and shield being firmly positioned within said internal bore, said other end of said rod extending from one end of said tube, the other end of said tube being enlarged and having at least one lamp receiving hole therein;

a lamp housing mounted on said one end of said rod;

at least one lamp supported from said housing and extending into said hole;

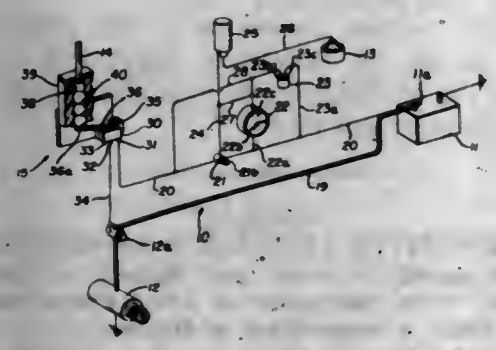
and means for illuminating said lamp whereby light from said lamp travels through said tube towards said spot whereby a ring of light is projected about said spot when said lens and said rod are aimed at said spot.

3,130,318

AUTOMATIC STARTING MEANS FOR AUTOMOBILE ENGINES AND THE LIKE INCLUDING A BALL VACUUM SWITCH

Gene C. Curtis, 13125 Cleveland Ave. NW., Uniontown, Ohio

Filed Jan. 23, 1959, Ser. No. 788,671
1 Claim. (Cl. 290—38)



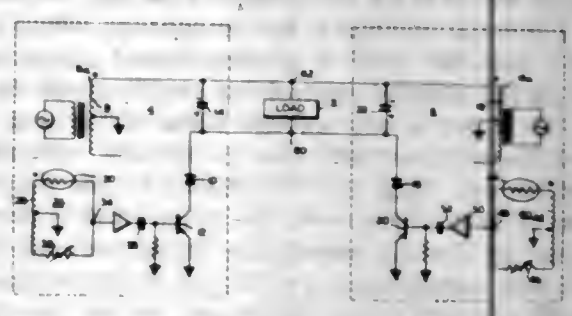
A control mechanism of the character described, comprising; a body having an axial bore therethrough; a piston received in said bore; a suction line attached to one end of said bore; a switch having an actuating extension pivoted thereto; means urging said extension into overlying relationship with respect to the opposite end of said bore, with said extension being engaged by said piston in the absence of suction pressure in said suction line; said suction line separating said piston from said extension during the presence of suction pressure in said suction line; said switch being open during the time said piston is separated from said extension and further being closed upon pivotal movement of said extension arm, said piston including a plurality of ball members arranged in series within said bore and each having a diameter approximating the diameter of said bore.

3,130,319

ELECTRONIC SYSTEM INCLUDING A PLURALITY OF SELECTIVELY-OPERABLE CONDITION-RESPONSIVE CONTROLS

Billy Burley, Dallas, Tex., assignor, by mesne assignments, to Johnson Service Company, Milwaukee, Wis., a corporation of Wisconsin

Filed June 29, 1962, Ser. No. 206,352
9 Claims. (Cl. 307—29)



1. A condition-responsive electronic control, comprising

a current-responsive common load having a pair of terminals;

first and second sources of alternating-current voltage having the same frequency and the same instantaneous phase relationship;

first and second uni-directionally conductive devices;

first and second current-controlling means each including a pair of power circuit electrodes and a control electrode;

first load circuit means connecting in series with the load the first voltage source, the first uni-directional conductive device, and the power electrode circuit of said first current-controlling means;

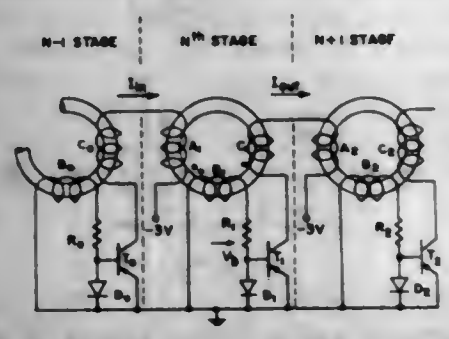
second load circuit means connecting in series with the load the second voltage source, the second uni-directional conductive device, and the power electrode circuit of said second current-controlling means, said conductive devices having the same polarity relative to a common terminal of said load, the polarities of said devices permitting conduction of said current-controlling means; and

first and second condition-responsive bridge network means connected with the control electrodes of said first and second current-controlling means, respectively, each of said bridge network means including an energizing winding connected with the associated voltage source whereby said bridge networks are energized with voltages having the same frequency and phase as said sources, respectively, each of said bridge network means including a pair of branches one of which includes an element having an electrical characteristic that varies as a function of the deviation of a condition from a predetermined value and the other of which includes a bridge balancing element.

3,130,320
BINARY COUNTER USING CORES, TRANSISTORS AND DIODES

Henry R. Irons, Washington, D.C., assignor to the United States of America as represented by the Secretary of the Navy

Filed Aug. 19, 1959, Ser. No. 834,902
9 Claims. (Cl. 307—88)
(Granted under Title 35, U.S. Code (1952), sec. 266)



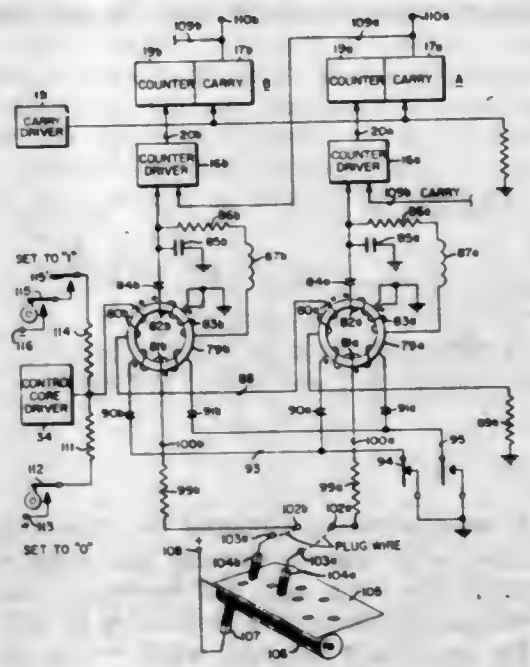
3. In the input stage of a binary counter comprising the combination of a saturable toroidal core element capable of being selectively shifted to a first and second stable state of flux saturation, triggering means including an input winding and a first regenerative winding responsive to a first input signal for shifting the flux of the saturable core element from said first stable state to the second stable state, said triggering means comprising a diode, a transistor and said input and first regenerative windings mounted on said saturable core, said transistor having input, output and control electrodes, said control and output electrodes each connected to a respective one of said input winding and said first regenerative winding, said diode connected between the control and input electrodes of said transistor, said diode capable of maintaining said transistor beyond cutoff for a predetermined time when said core is being driven into the first stable state due to hole storage effects in the diode, a second regenerative amplifier means responsive to the change of flux in the core caused by a second input signal for shifting the flux of the saturable core from the second stable state to the first stable state, said second regenerative amplifier means comprising a pair of windings including an output winding and a second regenerative winding all mounted on the said saturable core, a second transistor having input, output and control electrodes, said control and output electrodes each connected to a respective one of said pair of windings, a second diode connected between the control and input electrodes of said second transistor and capable of maintaining said second transistor beyond cutoff for a predetermined time when said core is being driven into said second stable state due to hole storage effects in said second diode.

3,130,321
PULSE INPUT CONTROL CIRCUIT

Gerald A. Maley and William L. Stahl, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Nov. 3, 1959, Ser. No. 850,660
6 Claims. (Cl. 307—88)

1. In a cyclicly operating device for converting a single timed pulse into a corresponding series of pulses, a magnetic core adapted to remain stable in either of two stable states and to be switched from one of said states to the other by electromagnetic pulses, means for applying a series of drive pulses to said core during each cycle tending to switch said core rapidly to one of said stable states, restoring means for setting said core to said one stable state prior to the start of a cycle, switching means for applying the timed input pulse to said core between a selected pair of said drive pulses for switching said core to said other stable state, output pulse means effectively responsive to the switching of said core by said drive pulses, and storage means responsive to each effective output pulse to transmit a delayed set pulse to said core to switch it to said other stable state, said restoring means

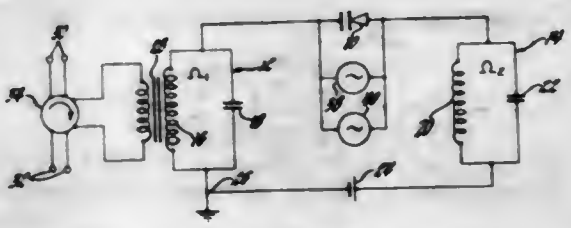


restoring said core to said one stable state at the end of a cycle, whereby a number of effective output pulses is delivered by said core equal to the number of drive pulses between said timed input pulse and the restoring of said core at the end of the cycle.

3,130,322
DOUBLE PUMPED PARAMETRIC AMPLIFIER

George Ctirad Spacek, Santa Barbara, Calif., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed June 13, 1962, Ser. No. 202,163
4 Claims. (Cl. 307—88)



1. A parametric amplifier comprising resonant means, the resonant means being resonant to an idler frequency, non-linear reactance means connected in energy transfer relation with the resonant means, input circuit means for coupling into the non-linear reactance means an input signal having a frequency within a predetermined frequency range, first and second pump means coupled to the non-linear reactance means for pumping the same at first and second frequencies which are respectively equal to the sum of the idler frequency and first and second signal frequencies within said predetermined range, and means to couple an output signal out of the resonant means.

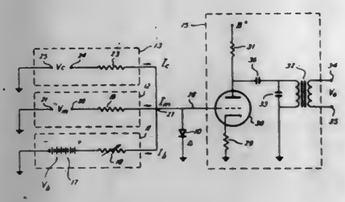
3,130,323
SIGNAL TRANSLATING SYSTEMS

William H. Swain, Sarasota, Fla., assignor to Electro-Mechanical Research, Inc., Sarasota, Fla., a corporation of Connecticut

Filed Dec. 29, 1958, Ser. No. 783,319
16 Claims. (Cl. 307—88.5)

1. In a signal translating system, the combination comprising at least one semiconductor circuit element having

a forward operating range wherein its incremental conductivity varies linearly with current therethrough, means providing a path for direct current through said element to maintain forward conduction therethrough in said operating range, means for varying said direct current within said range to produce a corresponding first variation in the incremental conductivity of said element, means responsive to an alternating potential for producing a second variation in the current through said element which is substantially less than said first variation, and means coupled with said element and responsive to said second variation for deriving a potential which varies as a function of said alternating potential and said incremental conductivity.

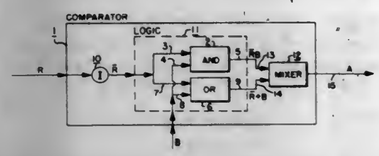


3,130,324

THREE LEVEL LOGICAL CIRCUIT SUITABLE FOR SIGNAL COMPARISON

Donald Sherman Swallow, San Jose, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 14, 1959, Ser. No. 860,063
10 Claims. (Cl. 307—88.5)



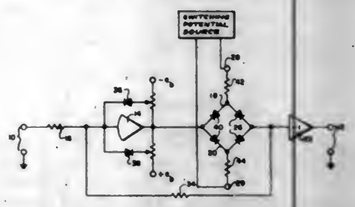
1. A circuit for the comparison of a set of time varying electrical signals, said signals capable of residing in two polarity states about a reference level, comprising a first input terminal for accepting a first signal of said set of signals, a second input terminal for accepting a second signal of said set of signals, a first circuit means connected to said input terminals for providing an output signal of a first polarity only when said first signal and said second signal are coincidentally in one of said two polarity states, a second circuit means connected to said input terminals for providing an output signal of a second polarity only when said first signal and said second signal are coincidentally in the other of said two polarity states, a third circuit means connected to the outputs of said first and said second circuit means and adapted to pass only output signals of said first polarity from said first circuit means and only output signals of said second polarity from said second circuit means, thereby to produce, by having passed either polarity output signal or having passed no output signal, a three level output signal which indicates the polarity coincidence relationship between said first and said second signals.

3,130,325

ELECTRONIC SWITCH HAVING FEEDBACK COMPENSATING FOR SWITCH NONLINEARITIES

Arthur I. Rubin, East Brunswick, Jay P. Landauer, Monmouth Junction, and Walter Brunner, Princeton, N.J., assignors to Electronic Associates, Inc., Long Branch, N.J., a corporation of New Jersey

Filed Aug. 1, 1960, Ser. No. 46,578
5 Claims. (Cl. 307—88.5)



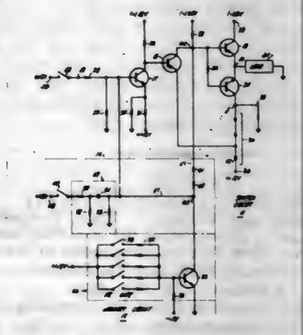
1. An electronic switch having signals to be switched applied to an input terminal thereof and the switched signals provided at an output terminal thereof, the combination comprising an amplifier having its input connected to said input terminal, a switching circuit including a plurality of diodes connecting the amplifier output to said output terminals, a first degenerative feedback circuit connected between said output terminal and the input of said amplifier to provide said switching circuit in circuit with an error-cancelling feedback loop to produce at said output terminal said switched signals independent of errors caused by said switching circuit, means providing a switching signal for actuating said switching circuit between conditions of conduction and non-conduction, and a second degenerative feedback circuit connecting the output of said amplifier to its input and normally operative to provide an additional feedback signal for said amplifier only when said switching circuit is in one condition of conduction.

3,130,326

ELECTRONIC BISTABLE GATE CIRCUIT

Victor J. Habisohn, Oak Lawn, Ill., assignor to International Telephone and Telegraph Corporation, New York, N.Y., a corporation of Maryland

Filed Feb. 23, 1961, Ser. No. 91,886
3 Claims. (Cl. 307—88.5)



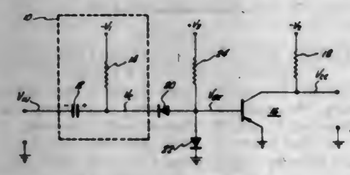
2. An electronic gate circuit for selectively providing positive and negative potentials, input and output terminals, a pair of complementary symmetry transistors connected in emitter follower configuration, each of said transistors having at least a base, a collector and an emitter electrode, means for coupling the bases of said transistors to a common biasing point to cause a first of said transistors to normally conduct and a second of said transistors to normally be blocked, means for coupling the collector electrodes of said first and second transistors to said negative and positive potentials respectively, means for coupling the said emitter electrodes to said output terminal, whereby said negative potential is normally applied to said load through said first transistor, a third transistor operated responsive to steady state input signals at said input terminal for selectively switching said first transistor to a blocked condition and said second transistor to a conducting condition to switch the polarity of said output signal and maintaining said switched polarity only while said input signals are applied, and reset means connected to said common biasing point operated responsive to receipt of reset signals for switching said first transistor to normally conduct and said second transistor to said normally blocked condition.

3,130,327

ISOLATION CIRCUIT, INCLUDING DIODES AND A RESISTANCE FOR USE IN HIGHLY STABLE TIMING CIRCUITS

Kenneth D. Krouse, Sierra Madre, and Narsingh Deo, Pasadena, Calif., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Filed May 29, 1961, Ser. No. 113,176
8 Claims. (Cl. 307—88.5)



1. A highly stable timing circuit comprising: a capacitor; a first resistor coupled to said capacitor; a transistor including an emitter-base junction; a first diode connected to a junction of said first resistor and said capacitor in series with said emitter-base junction, said first diode and said emitter-base junction being poled in a like direction for series current flow; means including said first resistor for forward biasing the emitter-base junction of said transistor and said first diode to a normally high conductive state, said transistor being switched to a nonconductive state by a signal applied to said capacitor; means including a second resistor coupled to a junction of said first diode and said emitter-base junction for reverse biasing the emitter-base junction of said transistor when said transistor is in a nonconductive state; and a second diode coupled in parallel with said emitter-base junction, said second diode and said emitter-base junction being poled in opposite directions for parallel current flow to limit the reverse biasing of the emitter-base junction of said transistor and to maintain a reverse bias on said first diode when said transistor is in a nonconductive state, said transistor remaining in a nonconductive state for a period of time determined by the time constant of said capacitor and said first resistor.

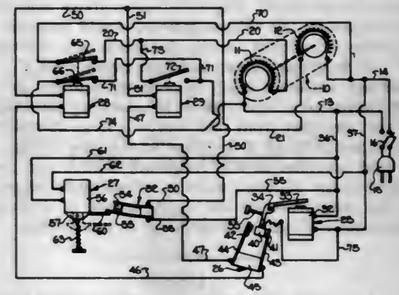
3,130,328

SAFETY DEVICE FOR DUAL VOLTAGE CIRCUITS

Harry O. Moore, 2921 Rozzelle Ferry Road, Charlotte 8, N.C., assignor of fifty percent to Chris Combis, Charlotte, N.C.

Filed May 24, 1961, Ser. No. 112,459
2 Claims. (Cl. 307—130)

1. In a safety device for use with an electrical apparatus having input conductors for selectively connecting the apparatus to either of two sources of electrical energy of different output voltages, an electromagnet and a solenoid coil connected in parallel across said input conductors, a retractable normally yieldably extended plunger in said solenoid coil, said electromagnet and said coil being operatively excitable by different minimum voltages, said electromagnet requiring a higher minimum excitation voltage than said solenoid coil, an armature adjacent to and normally biased away from said electromagnet to one position and being movable from said one position to another position when said electromagnet is subjected to said higher minimum excitation voltage, said coil being so constructed that the flux developed thereby at said minimum voltages produces a magnetic pulling force on the yieldably extended plunger which is only slightly greater than the opposing pull of the plunger whereby said plunger is still being retracted after the armature is moved to said other position by excitation of said electromagnet at said higher minimum voltage, conductor means for connecting said apparatus to said input conductors, a first switch having at least two contacts interposed in said conductor means, one of said contacts being movable with said armature and engaging the other of said contacts when said armature occupies said one position whereby said one of the contacts moves away from said other of the contacts when said electromagnet is subjected to said higher minimum excitation voltage, a second normally open switch interposed in said conductor means, and means responsive to retraction of said plunger by said coil for closing said second switch.

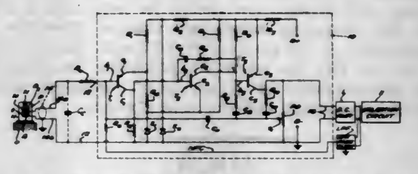


3,130,329

MEASURING SYSTEM

Robert H. Cother, Fullerton, Calif., assignor to Endevco Corporation, Pasadena, Calif., a corporation of California

Filed May 4, 1959, Ser. No. 810,733
7 Claims. (Cl. 310—8.1)



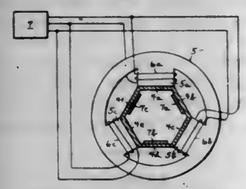
1. In combination: a source comprising a pair of mutually insulated electrodes forming a source capacitor having a capacitance C_s and further comprising a displaceable element for developing a charge on said capacitor that varies in proportion to the displacement of said element, and an amplifier having an input connected to said source, said amplifier having an effective input capacitance C_e looking into said input, which capacitance C_e is large compared with the capacitance C_s of said source capacitor and the capacitance across the connections between said source and said amplifier, said amplifier also having a resistance looking into said amplifier input, said

input capacitance C_e and said input resistance establishing for said amplifier a low cut-off frequency that is in the sub-audio range, the resistance in the connections between said source and said amplifier being low compared with the capacitive impedance of said connections and said source at frequencies in a predetermined range above said cut-off frequency, said amplifier including a negative feedback circuit connected between the output of said amplifier and the input thereof, said feedback circuit comprising feedback capacitor means having a capacitance C_0, the impedance of said feedback circuit having a capacitive component that is greater than the resistive component apparently in series therewith as measured across the ends of said feedback circuit at frequencies in said predetermined frequency range above said low cut-off frequency, the voltage gain A of said amplifier in the absence of feedback and the feedback ratio B established by said feedback circuit and said capacitance C_0 of said feedback capacitor being so proportioned that the apparent capacitance $C_e=(AB+1)C_0$ looking into the input of said amplifier from said source is large compared with the capacitance of said source so that the voltage output of said amplifier at any frequency within said predetermined range of frequencies is substantially proportional to the magnitude of the displacement of said element irrespective of the capacitance C_e of said source.

3,130,330
MAGNETOHYDRODYNAMIC GENERATOR

Alfred Käch, Nussbaumen, Aargau, Switzerland, assignor to Aktiengesellschaft Brown, Boveri & Cie, Baden, Switzerland, a joint-stock company

Filed Aug. 8, 1960, Ser. No. 47,973
Claims priority, application Switzerland Aug. 8, 1959
6 Claims. (Cl. 310—11)



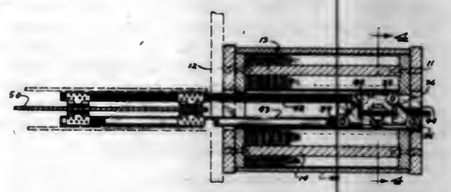
1. A magnetohydrodynamic generator which comprises a channel traversed by an ionized gas, said channel being provided with electrodes for taking off the generated current which flows between said electrodes in a direction transverse to the direction of flow of said ionized gas through said channel, and means for producing a magnetic field extending across said channel transverse to the direction of the gas flow therethrough, characterized by the fact that the means for producing the magnetic field are formulated for generation of a magnetic rotary field of substantially constant field strength.

3,130,331
LINEAR MOTORS

Gale A. Jallen, St. Paul, Robert R. Reisinger, Mahtomedi, and Donald K. Sampson, St. Paul, Minn., assignors, by mesne assignments, to Data Products Corporation, Culver City, Calif., a corporation of Delaware

Filed June 26, 1961, Ser. No. 119,453
9 Claims. (Cl. 310—14)

1. Apparatus of the class above described, comprising; a pair of magnetizable core members; means mounting said core members in spaced apart superposed relationship; a plurality of windings and a like plurality of magnetizable pole members mounted alternately on each of said core members so as to provide said core members with superposed corresponding windings and pole members; non-magnetizable members containing the pole members on each of said core members in spaced relationship so that alternate volumes of equal axial length are provided on said core members and complementary relationship exists therebetween; a plurality of linear guide members in superposed relationship positioned between

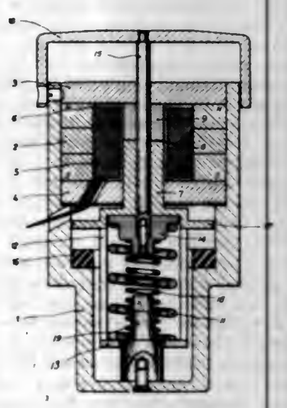


said core members; a magnetizable armature including rotatable members engaging said linear guide members to position said armature between said core members and to provide linear movement thereof in a parallel direction with respect to the longitudinal axis of said core members and maintain said armature in spaced relationship with respect to said core members.

3,130,332
ELECTRIC IMPULSE GENERATOR FOR THE DETONATION OF CHARGES

Paul Zehfeld, Dusseldorf, and Hans Dieter Harnau, Gevelsberg, Westphalia, Germany, assignors to Firma Rheinmetall G.m.b.H., Dusseldorf, Germany

Filed Mar. 15, 1960, Ser. No. 15,101
Claims priority, application Germany Mar. 19, 1959
3 Claims. (Cl. 310—15)

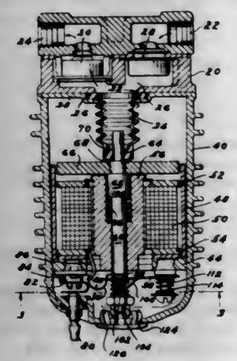


1. An impulse generator, more particularly for the detonation of propulsive or explosive charges comprising the circuit of a permanent magnet, an armature, an actuating element, an induction coil element, the permanent magnet producing a magnetic force, the displacement of the armature effected by means of a mechanical force exerted on the actuating element thereby generating an electric impulse in the induction coil, and spring means for storing energy between an extension of the armature and the actuating element and which is released when the magnetic force exerted by the magnet on the armature is overcome, said spring being mounted in a space between said armature extension and a part of the actuating element which are relatively movable.

3,130,333
ELECTRIC PUMP MOTOR

Robert J. Freye, Cass City, Mich., assignor to Walbro Corporation, Cass City, Mich., a corporation of Michigan

Filed May 17, 1961, Ser. No. 110,771
5 Claims. (Cl. 310—18)

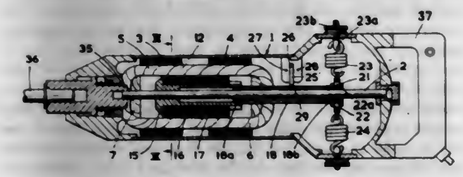


1. In a pump of the type having a pumping chamber provided with an inlet and an outlet and an expansible member associated with said chamber having one end affixed adjacent said chamber and the other end movable, that improvement which comprises a solenoid actuator for said expansible member comprising a solenoid winding having an armature passage therethrough, an armature having an actuator shaft extending through said passage, an armature disc carried by said actuator shaft, said shaft having means thereon to locate said disc axially, said disc being freely rotatable relative to said shaft, and interposed between said shaft and the moving end of said expansible member, a housing mounting said solenoid winding, means for fastening said housing to said pumping chamber, said housing carrying switch means for effecting continuous operation of said solenoid upon the introduction of current to said solenoid winding.

3,130,334
RECIPROCATING MOTOR

Kazimierz Marian Nowak, 294 Edgware Road, London W.2, England

Filed Nov. 4, 1960, Ser. No. 67,366
8 Claims. (Cl. 310—35)

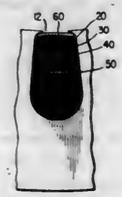


1. A reciprocating electric motor for alternating current operation comprising at least a first and second laminated soft iron stator member providing a pair of opposed aligned poles, a laminated soft iron core mounted for reciprocation between a first position opposite the first stator member and a second position opposite the second stator member, winding means on each stator member for creating a magnetic field, said stator members having such spacing and length relative to the core that the core remains under the influence of the magnetic field surrounding both the stator members, switching means operated synchronously with movement of the core to change contact positions at each extremity of movement of the core, a circuit including the windings and the switching means connected to provide a first current path for exciting both stator members with a greater number of ampere-turns on the stator member toward which the core is moving and a second current path comprising a closed internal circuit including a larger number of turns on the remaining stator member compared with the turns on the stator member toward which the core is moving wherein the paths include a common portion comprising said switching means, and windings in the winding means being so disposed to induce current in the second path from current flow in the first path such that the two currents are opposed in said common portion at the extremity of the core member movement to produce substantially zero current flow as the switching contacts change.

3,130,335
DYNAMO-ELECTRIC MACHINE

Ladislav J. Rejda, El Monte, Calif., assignor to The Epoxylite Corporation, El Monte, Calif., a corporation of California

Filed Apr. 17, 1961, Ser. No. 103,449
9 Claims. (Cl. 310—215)

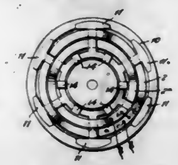


1. An insulating liner for an electric motor core winding slot, said liner comprising a nonmagnetic metallic foil tube disposed within and coaxial with said slot, said tube being formed by a sheet of foil with the longitudinal edges engaging each other to form said tube, bonding means sealing together the entire length of said engaging edges to provide a substantially moisture-proof wall which completely surrounds the motor winding in the slot, and means between said tube and said winding electrically insulating said windings from said metallic foil.

3,130,336
UNIT WOUND GENERATOR STATOR

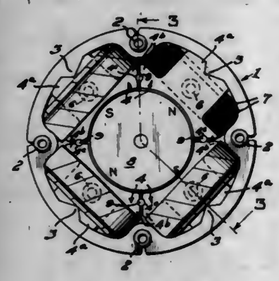
George V. Morris, Chicago, Ill., assignor to the United States of America as represented by the Secretary of the Army

Filed Jan. 19, 1951, Ser. No. 206,758
3 Claims. (Cl. 310—254)



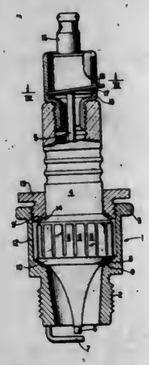
1. A generator stator for use with a rotating magnetic field member, comprising a ring-shaped outer yoke member of magnetic material, a ring-shaped inner bridge member of magnetic material having an inner cylindrical surface, a plurality of pole pieces integral with said inner bridge member and extending radially into contact with said outer yoke member, armature windings connected in series on said pole pieces, and a plurality of bands of highly conductive material each disposed about said bridge member between two adjacent pole members to increase the leakage reactance between the adjacent poles.

3,130,337
DYNAMO-ELECTRIC MACHINE CONSTRUCTION
Hugh M. Stoller, deceased, late of Mountain Lakes, N.J., by Marian M. Stoller, executrix, Mountain Lakes, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Filed Aug. 4, 1950, Ser. No. 177,656
2 Claims. (Cl. 310—258)



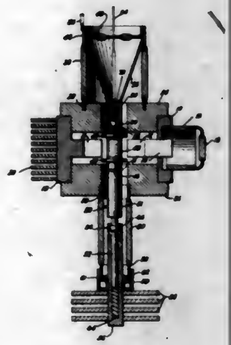
1. A stator assembly for dynamo-electric machines comprising a hollow laminated yoke member, separable laminated pole pieces adapted to be removed as a unit from said yoke member extending inwardly from said yoke member toward a common center, the free ends of said pole pieces being equidistantly spaced from said common center to provide space for a rotor, circumferentially extending pole shoes on said pole pieces, and windings on said respective pole pieces between said pole shoes and said yoke member, each of said pole shoes extending toward and close to an adjacent pole shoe, an interfitting projection and depression on the yoke member and on the adjacent end of each of said pole pieces, respectively, and wedge means between two adjacent pole shoes for holding said assembly firmly in place, so that each pole piece is accurately positioned and held against movement on said yoke member.

3,130,338
SPARK PLUG WITH AUTOMATIC MEANS FOR VARYING ITS HEAT DISSIPATION CAPACITY
Harold W. Andersen, 532 Manhasset Woods Road, Manhasset, N.Y.
Filed Feb. 23, 1961, Ser. No. 91,166
3 Claims. (Cl. 313—11.5)



1. A spark plug designed and adapted for internal combustion engines and embodying means for automatically varying the conductive capacity of its shell for dissipation of heat therethrough according to changes in combustion temperature within the engine, said plug comprising, a shell of heat conducting material adapted to be operatively fitted into a cylinder of the engine and carrying a grounding electrode, an insulating core within the shell, a conductor within said core carrying an electrode adapted to form a spark gap between it and the grounding electrode, and a solid heat conductive element in the form of a cup shaped sleeve surrounding the core and seated within but out of contact with the upper portion of the shell to leave an air space between its side wall and the shell, the said element being composed of a substance that is distortable by temperature and the side wall of which is adapted to bend outward laterally into thermal contact with the shell upon rise in temperature above a predetermined degree and return to its original form out of contact with the shell upon fall below said degree thus increasing and decreasing the capacity of the shell for dissipating heat of combustion.

3,130,339
CATHODE COOLING FOR ELECTRON DISCHARGE DEVICES
Donald M. Jewart, Williamsport, Pa., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed June 2, 1961, Ser. No. 114,517
6 Claims. (Cl. 313—40)

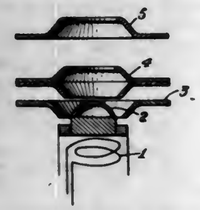


6. A magnetron tube including a pair of opposed pole pieces, an anode therebetween, a cathode extending centrally through the anode and spaced therefrom and means for heating the cathode, a fixed support at one end of said tube to which an end portion of said cathode is secured, the cathode being otherwise unsupported, a second support at the other end of the tube, a cooling device including a rod supported by the second support, said rod terminating close to the unsupported end of the cathode to abstract heat from the cathode on thermal extension thereof, said cooling device further including a heat conductive sleeve within which the rod slides, spring means reacting between the heat conductive sleeve and rod to urge the rod toward the free end of the cathode, and interacting means on the rod and heat conductive sleeve to limit the motion of the rod toward the cathode, said heat conductive sleeve being longitudinally adjustable in said second support toward and from the cathode sleeve.

3,130,340
ELECTRON GUN FOR GENERATING A HOLLOW BEAM
Roman Koziak, Presov, Czechoslovakia, assignor to Tesla, narodni podnik, Prague, Czechoslovakia
Filed Oct. 5, 1960, Ser. No. 60,598
Claims priority, application Czechoslovakia Oct. 16, 1959
3 Claims. (Cl. 313—82)

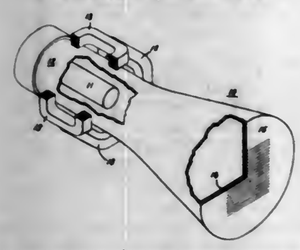
1. An electron gun for generating a hollow beam of electrons comprising

(A) a cathode having a hollow central portion with a convex outer surface,



(B) a Wehnelt cylinder having a cup-shaped portion with a central opening at the bottom thereof,
(1) said Wehnelt cylinder being disposed with said cup-shaped portion directed toward said cathode and with said central portion of the latter projecting into said opening at the bottom of the cup-shaped portion, and
(C) at least one additional electrode arranged at the side of said Wehnelt cylinder remote from said cathode and having a central opening which is smaller than the outer periphery of said cathode.

3,130,341
RAPID RESPONSE SEMICONDUCTORS
Peter D. Johnson, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed May 27, 1960, Ser. No. 32,391
5 Claims. (Cl. 313—92)



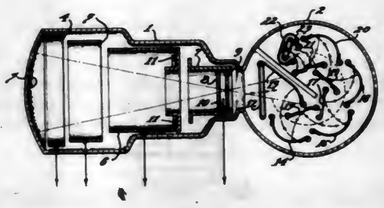
1. In an image reproducing system wherein fluorescent light from a cathode ray tube is focused upon an image to be reproduced and light signals from said image are sensed by a photo-sensitive device, a cathode ray tube cathodoluminescent screen having a spectral distribution for emitted light with components in all portions of the visible spectrum, the fluorescent luminous intensity of which decreases to a value

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of its excited intensity in less than 0.2 microsecond after cessation of excitation, and including at least one phosphor component selected from the group consisting of zinc sulfide, zinc selenide, cadmium sulfide, cadmium selenide and mixtures and solid solutions thereof having added thereto 0.010 to 1.0 weight percent of an activator selected from the group consisting of silver and copper, and 10 to 20 parts per million of nickel.

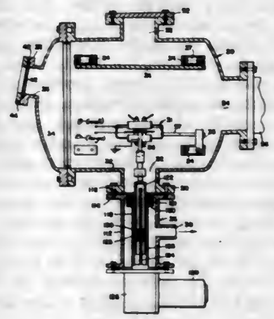
3,130,342
PHOTOELECTRIC CELL
George A. Morton, Oak Ridge, Tenn., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Filed Apr. 5, 1947, Ser. No. 739,717
2 Claims. (Cl. 313—103)

1. A photoelectric cell comprising an envelope including a first tubular portion having a succesively decreasing diameter from one end to the other end thereof, a light transparent plate closing the largest end of said tubular envelope portion, a multiplier dynode electrode mounted within a second portion of said envelope and spaced outside of and beyond the smaller end of said tubular portion and transverse to the axis of said tubular envelope portion, a photocathode film on the inner surface of said



transparent plate, a plurality of spaced tubular electrodes coaxially mounted within said tubular envelope portion between said photocathode and said dynode electrode, the tubular electrode closest to said photocathode having a diameter substantially as large as said transparent plate, said tubular electrode adjacent said dynode having a wall portion substantially closing the passage between said first and second envelope portions.

3,130,343
ELECTRON BEAM EVAPORATING DEVICE
Donald S. Thomson, Boston, Mass., assignor, by mesne assignments, to Alloyd Electronics Corporation, Cambridge, Mass., a corporation of Delaware
Filed June 9, 1960, Ser. No. 34,904
5 Claims. (Cl. 313—146)

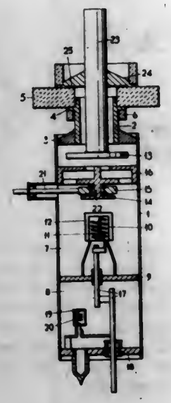


1. An electron gun comprising a generally toroidal casing defining a toroidal region therewithin and having an open inner periphery, said region being developed about an axis, said casing including a first part having a centrally apertured base portion and a first peripheral portion and a second part having a centrally apertured base portion and a second peripheral portion, said first peripheral portion and said second peripheral portion being detachably mated, a pair of insulated connectors secured to one of said parts and projecting freely through openings in the other of said parts, an annular electrode connected between said connectors, a first tubular stub secured within the aperture of said first part, and a second tubular stub secured within the aperture of said second part.

3,130,344
GAS-FILLED ELECTRIC DISCHARGE DEVICES

Basil Offor Baker, Croxley Green, and Robert Joseph Wheldon, Chalfont St. Peter, England, assignors to The M-O Valve Company Limited, London, England

Filed Jan. 15, 1962, Ser. No. 166,283
Claims priority, application Great Britain Jan. 20, 1961
5 Claims. (Cl. 313—220)



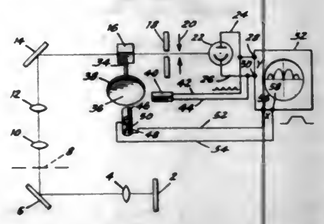
1. A gas-filled electric discharge device comprising an electrode system, a sealed gas-filled envelope within which the electrode system is mounted, said envelope including an elongated hollow generally metallic structure, a closure member sealing one end of said structure, an annular ceramic member sealed to the other end of said structure, and a metallic closure member sealed to the ceramic member so as to close the aperture in the ceramic member, the electrode system including at least an anode and a cathode and being disposed within said hollow structure so that the main discharge path between the electrodes of said system lies on the side of the anode remote from the ceramic member, the anode being electrically connected to said metallic closure member and electrically insulated from said hollow structure, and part of at least one of said metallic closure member and said hollow structure overlapping the ceramic member without touching it so that the length of the shortest path within the envelope between said metallic closure member and said hollow structure along the surface of the ceramic member is relatively long compared with the shortest path within the envelope between said metallic closure member and said structure via the gas filling, at least part of the overlap being between the internal surface of the ceramic member and the surface of a portion of one of said metallic closure member and said hollow structure which portion projects part way through the aperture in the ceramic member.

3,130,345
MEASURING DEVICE

Edward W. Mann, Sudbury, Mass., assignor to Geophysics Corporation of America, Boston, Mass., a corporation of Delaware

Filed Mar. 1, 1961, Ser. No. 92,637
22 Claims. (Cl. 315—19)

1. A time sweep voltage generator for cathode ray tube apparatus having a plurality of deflection plate sets, said generator comprising a shaft, means for rotating said shaft, a disc of magnetizable material mounted on said shaft for rotation therewith, said disc being mounted obliquely to the axis of said shaft, a plurality of electromagnetic pick-up heads positioned relative to said disc so that said disc during rotation approaches and recedes from each of said heads whereby signals are produced

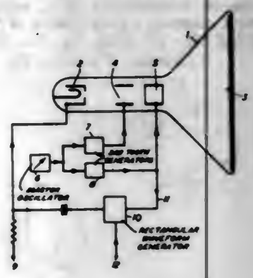


by said heads in response to rotation of said disc, and means for impressing said signals on one of said deflection plate sets.

3,130,346
UNIFORM BRIGHTNESS CONTROL

Eric Brian Butler Callick, Chelmsford, England, assignor to English Electric Valve Company Limited, London, England, a British company

Filed Feb. 21, 1961, Ser. No. 90,714
Claims priority, application Great Britain Mar. 21, 1960
4 Claims. (Cl. 315—22)



1. A cathode ray tube display arrangement comprising means for generating an electron beam, scanning means for scanning said beam across said tube, and means for alternately switching the scanning electron beam between two predetermined limits of intensity at a cyclic frequency which is co-related to the scanning speed in such manner that said beam has one limiting intensity during part of each period during which it moves through its own width and the other limiting intensity during the remaining part of said period, said switching means including signal means, controlled by the signal to be displayed, for controlling the length of at least one of the two parts which make up said period.

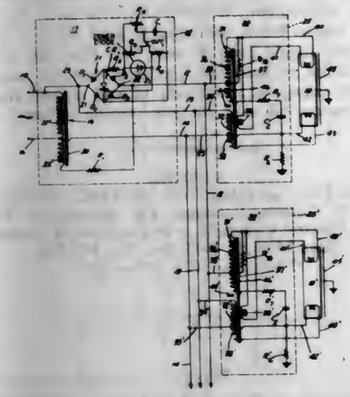
3,130,347
APPARATUS AND SYSTEMS FOR DIMMING AND OPERATING GASEOUS DISCHARGE LAMPS

Theodore R. Harpley, Danville, Ill., assignor to General Electric Company, a corporation of New York

Filed June 4, 1962, Ser. No. 199,734
8 Claims. (Cl. 315—98)

1. A system for operating and dimming fluorescent lamps from an alternating power source comprising a first and a second input lead for connection with the alternating power source; a pair of supply lines connected in circuit with said input leads; a phase control circuit including at least one phase controlled switching device and a firing circuit to supply a firing pulse to the phase controlled switching device at a predetermined point in each

half cycle of the alternating power source to switch said phase controlled switching device to a conducting state; a switching line connected in circuit with said phase controlled switching device, said device being connected in circuit with said first input lead and causing said switching line and said first input lead to be connected in electrical circuit when said device is fired to said conducting state; at least one ballast including a ballast transformer, said ballast transformer having a primary winding connected across a pair of input terminal leads connected in circuit with said supply lines, a high reactance secondary winding inductively coupled with said primary winding, output leads for connection in circuit with at least one

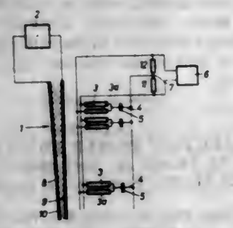


fluorescent lamp and a switching terminal lead connected in circuit with said high reactance secondary and said switching line; a holding current branch including a bucking voltage source and a holding current resistor connected in series circuit relation therewith, said holding current branch being connected in a closed loop with said lamp and at least said high reactance secondary winding, said voltage of said bucking voltage source cancelling out the voltage across the high reactance secondary winding when the phase controlled switching device is in a nonconducting state, and said holding current branch insuring that sufficient holding current flows through said phase controlled switching device when said device is in a conducting state.

3,130,348
ARRANGEMENT FOR PRODUCING A VARIABLE ELECTROLUMINESCENT SPOT SUBJECT TO POSITION CONTROL

Albert Lieb, Stuttgart-Bad Cannstatt, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Filed Sept. 7, 1961, Ser. No. 136,644
Claims priority, application Germany Sept. 9, 1960
17 Claims. (Cl. 315—149)

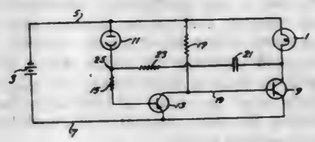


1. A system for producing a light spot which is controllably variable in position comprising a single light emitting electro-luminescent capacitor having a first conductive layer, a second transparent conductive layer and an electroluminescent layer therebetween, means applying a variable voltage between said conductive layers, means causing the field intensity of said electro-luminescent layer to vary in at least one direction, a plurality of pairs of radiation-sensitive layers responsive to said emitted light arranged in the direction of said field intensity variation of said single capacitor, one end of each layer of said pairs being connected togther, a plurality of further electro-luminescent capacitors, one end of each of said further capacitors being connected to said connected layers of respective ones of said plurality of pairs of radiation-sensitive layers, the other ends of said radiation-sensitive layers and the other ends of said further capacitors being coupled to a second source of voltage.

3,130,349
FLASHING LIGHT DEVICE WITH AUTOMATIC DAYTIME SHUTOFF

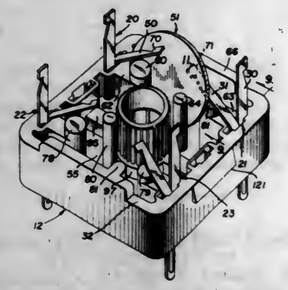
Henry R. Mallory, Greenwich, Conn., assignor to P. R. Mallory & Co., Inc., Indianapolis, Ind., a corporation of Delaware

Filed Dec. 22, 1960, Ser. No. 77,560
6 Claims. (Cl. 315—151)



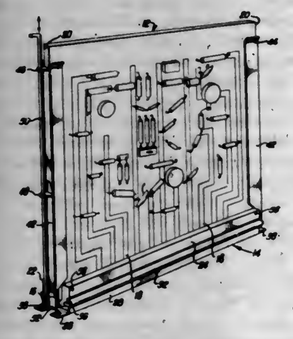
1. A flashing light device comprising: a direct current supply circuit; a lamp; a transistor connected in series with said lamp in said supply circuit so as to cause the lamp to turn on at full intensity when said transistor is fully conductive and cause the lamp to turn off when said transistor is nonconductive; photosensitive means disposed in proximity to said lamp so as to be subjected to the light therefrom as well as to the ambient light in the vicinity of said device, said photosensitive means having an electrical characteristic which varies in accordance with variations in the intensity of the light incident thereon; control means including a second transistor connected to said supply circuit by said photosenstiive means and responsive to variation of said electrical characteristic thereof to produce a control voltage which ranges between a limiting level and a cutoff level in accordance with variation of the incident light between respectively corresponding threshold and selected high intensities, said selected high intensity being at most equal to the full intensity of said lamp; direct conductor means for connecting said second transistor as said control means to said transistor so as to form a degenerative feedback loop wherein said control voltage causes said transistor to conduct to a degree ranging from fully conductive to nonconductive in correspondence with variation of said control voltage between its limiting and cutoff levels; and means for further connecting said control means to said transistor in a regenerative feedback loop which renders said transistor fully conductive for a controlled interval whenever said control voltage changes from the cutoff level toward the limiting level and which renders it fully nonconductive for a controlled interval whenever said control voltage changes from the limiting level toward the cutoff level; whereby said lamp is caused to cyclically flash fully on and off so long as the ambient light remains below said selected high intensity and is maintained off when the ambient light is at least at that intensity.

3,130,350
COUPLING DEVICE
John J. Antalek, Glenview, Ill., assignor, by mesne assignments, to Thompson Ramo Wooldridge Inc., Euclid, Ohio, a corporation of Ohio
Filed June 22, 1959, Ser. No. 821,802
7 Claims. (Cl. 317—101)



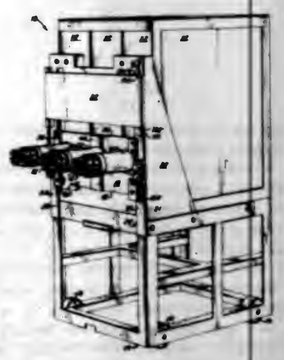
1. In a device of the character described, a base member of insulating material, a pair of upstanding spaced apart positioning members on said base member, a disc capacitor having opposed electrodes separated by a layer of dielectric, and a pair of terminal members supported on said base member and having inturned arm portions, said arm portions being conductively bonded to opposite sides of said capacitor at points which are spaced laterally apart to exert a force couple on said capacitor and resiliently urge the sides of said capacitor against said positioning members so that said capacitor is held in a generally vertical plane.

3,130,351
MODULAR CIRCUITRY APPARATUS
George J. Giel, 801 Bramble Way, West Los Angeles, Calif.
Filed Sept. 14, 1961, Ser. No. 138,047
8 Claims. (Cl. 317—101)



1. Printed circuit apparatus comprising a printed circuit panel having a lineal edge along its periphery, a plurality of first electrical contact means communicating with portions of the printed circuit and disposed on said panel substantially in a row contiguously to said edge; and a toggle tripping receptacle for holding said panel and for providing electrical communication between said printed circuit and other circuitry, said receptacle comprising a pair of elongated toggle blocks coupled together along their length by a toggle joint with a toggle axis parallel to said length, compression holding means for retaining said toggle block and urging each of them along a line of compressive force toward said toggle axis whereby said toggle axis is urged to be laterally translated in a first and second sense of direction respectively along a predetermined plane away from its dead center position which is disposed at the intersection of said predetermined plane with said line of compressive force, at least one of said toggle blocks having a surface portion which is moved toward said predetermined plane when said axis is translated in said first sense of direction and which is moved away from said plane when said axis is translated in said second sense of direction, a plurality of second electrical contact means disposed on said surface portion, stopping means associated with said compressive holding means for limiting the translation of said toggle axis in said second sense of direction, said receptacle being trippable away from said stopping means when said edge of said panel is pressed against said toggle joint in said first direction whereby at least some of said first electrical contact means on said panel engage at least some of said second electrical contact means on said surface portion of said toggle blocks.

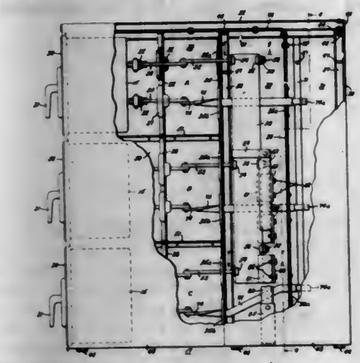
3,130,352
ELECTRICAL GROUND TESTING DEVICE
Thomas F. Guinan, Scranton, Pa., assignor to Federal Pacific Electric Company, a corporation of Delaware
Filed May 13, 1959, Ser. No. 812,896
7 Claims. (Cl. 317—103)



1. A testing device for insertion in a companion cell, where the cell has a front opening and two parallel horizontal rows of electrical terminals at respective levels at the rear of the cell facing the front opening thereof, said testing device including a mobile frame structure receivable in such cell, a horizontally elongated barrier unit proportioned to block access to one row only of said rows of terminals in the cell, a stud-carrying unit including a horizontal row of contact studs mutually spaced apart so as to be cooperable with a row of terminals in the cell, and means for interchangeably mounting said barrier unit and said stud-carrying unit on said frame structure at respective levels, selectively, confronting the respective rows of contact terminals in the cell, said studs projecting to the rear of said barrier unit for engaging corresponding cell terminals.

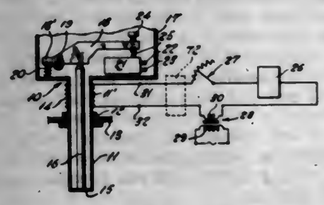
3,130,353
ELECTRIC POWER SWITCHGEAR
Eldridge M. Mount, Jr., Springfield, Pa., assignor to General Electric Company, a corporation of New York
Filed Dec. 4, 1961, Ser. No. 156,754
11 Claims. (Cl. 317—103)

11. In electric power switchgear:
(*a*) an upstanding metal unit;
(*b*) vertical barrier means disposed within said unit to define first, second and third interior sections thereof, with the third section being of unit height and being physically isolated by the barrier means from the first and second sections;
(*c*) circuit breaker supporting means disposed in said first section for accommodating at different elevations a plurality of electric circuit breakers, each of the circuit breakers having source and load terminals;
(*d*) at least two electric power bus bars horizontally traversing said second section;



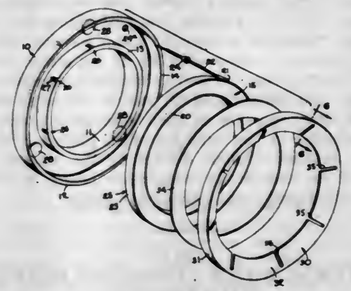
(*e*) conducting means adapted to connect the source terminals of each of the circuit breakers accommodated by said supporting means to said bus bars, respectively; and,
(*f*) a plurality of sets of elongated conductors extending from said first section into said third section where the respective conductors are adapted to be connected to electric load circuits, each of said conductors having within said first section a termination adapted to be connected to the load terminals of a circuit breaker, with a different set of said conductors being provided for each of the circuit breakers accommodated by said supporting means.

3,130,354
TEMPERATURE CONTROL
Herbert S. Burling, 16 River Road, Chatham, N.J.
Filed Feb. 20, 1959, Ser. No. 794,555
3 Claims. (Cl. 317—132)



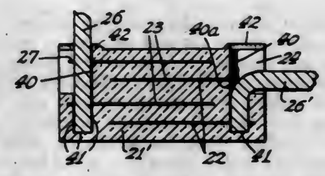
1. A temperature control comprising an elongated composite tubular member formed of two sections joined in end to end relationship with one section having a high temperature coefficient of expansion and the other section having a relatively low temperature coefficient of expansion, a second elongated composite longitudinal member within said tubular member and formed of two sections joined in end to end relationship with one section having a low temperature coefficient of expansion and the other section having a high temperature coefficient of expansion, means fixedly positioning one end of the composite tubular member relative to the adjoining end of said second composite member, switch means carried by the other end of one of said members and engaging the corresponding end of the other of said members and responsive to changes in the relative positions of said other ends of said members, a heating coil surrounding the high temperature coefficient section of said second composite member and adapted to be controlled from an electric circuit responsive to changes in temperature of one temperature zone, and means supporting said members with the high temperature coefficient section of said tubular member in another temperature zone whereby said switch means will be actuated in accordance with the changes in temperature of both of said zones.

3,130,355
ELECTROMAGNET
William C. Younger, Beloit, Wis., assignor to Warner Electric Brake & Clutch Company, South Beloit, Ill., a corporation of Delaware
Filed May 3, 1961, Ser. No. 107,413
6 Claims. (Cl. 317—158)



1. An electromagnet having, in combination, an elongated ribbon of conductive material spirally wound in a multiplicity of turns to form an annular coil, a core of magnetic conductive material including a generally cylindrical pole piece telescoped with said coil with a tight press fit, and means acting as an incident to telescoping of said pole piece and coil to deform a terminal of said coil and establish a permanent electrical connection between the terminal and said pole piece, said last mentioned means comprising a lug formed on and projecting radially from said pole piece.

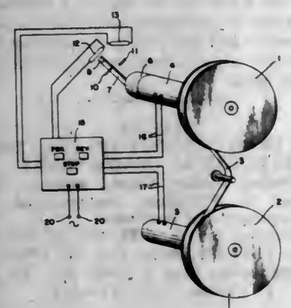
3,130,356
TERMINAL LEAD CONNECTORS FOR COMPOSITE ELECTRICAL COMPONENTS
Barton L. Weller, Easton, Conn., assignor, by mesne assignments, to Vitramon, Incorporated, Monroe, Conn., a corporation of Delaware
Original application June 5, 1958, Ser. No. 740,147, now Patent No. 3,021,589, dated Feb. 20, 1962. Divided and this application May 3, 1960, Ser. No. 26,573
17 Claims. (Cl. 317—261)



13. A capacitor unit comprising a laminated body of substantially parallel layers having specific electrical prop-

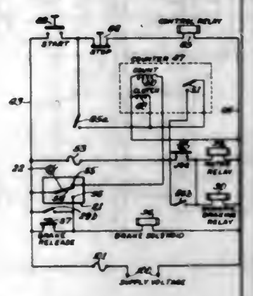
erties, said layers including a plurality of dielectric layers and at least two groups of electrically conductive layers forming the opposite electrodes of the capacitor, said groups of electrically conductive layers each including at least one electrically conductive layer therein, each electrically conductive layer in said body being separated from adjacent electrically conductive layers by at least one dielectric layer, each layer of said body being bonded to each adjacent layer throughout their coextensive surfaces and at least one of said electrically conductive layers of each electrically conductive layer group lying wholly within said body, said body having a top surface parallel to said layers and a side wall extending downwardly from said top surface, said body being formed with a pair of recesses extending downwardly from said top surface, one of said recesses extending through one of said electrically conductive layer groups and the other recess extending through the other electrically conductive layer group, said recesses each having a constricted lower portion and an enlarged upper portion, said enlarged upper portion extending downwardly from said top surface and outwardly to said side wall above said constricted lower portion, a flexible lead of electrically conductive material extending into each of said recesses and into said constricted lower portion thereof, said body being shrunk upon said leads for gripping and embedding the same in their said respective constricted lower portion, each lead having electrical contact with all of the electrically conductive layers of its respective electrically conductive layer group, said leads being of smaller diameter than the enlarged upper portion of their respective recesses and being bendable in said enlarged upper portion of their respective recesses without destroying the electrical contact with the electrically conductive layers of their respective electrically conductive layer groups.

3,130,357
PLURAL MOTOR TENSIONING DEVICE WITH BRAKING
Terence J. Westlake, Laurel, and Martin M. Carpenter, West Hyattsville, Md., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Sept. 19, 1960, Ser. No. 56,856
6 Claims. (Cl. 318—7)



1. A control apparatus for a moving member comprising a first drive means for said member, a second drive means for said member, a drive control means for supplying separate energizing signals to said first drive means and to said second drive means to drive said first and said second drive means in opposite directions, said control means including means for varying the effective ratio of said energizing signals whereby to affect the motion of said member, selection means for selecting predetermined effective ratios of said energizing signals whereby to control the motion of said moving member by means of the relative effect of said drive means, said selection means including stop means for selecting an effective ratio of said energizing signals which is effective to reverse the present motion of said moving member, and switch means responsive to the motion of said moving member to terminate said energizing signals upon a reversal of the motion of said moving member.

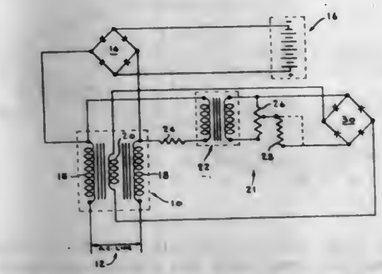
3,130,358
D.C. MOTOR FOR POSITION CONTROL WITH DYNAMIC AND MECHANICAL BRAKING
Ernest U. Lang, Niles, Mich., assignor to National-Standard Company, Niles, Mich., a corporation of Delaware
Filed Jan. 25, 1960, Ser. No. 4,250
2 Claims. (Cl. 318—371)



1. A control arrangement for a machine of the class described having a drive motor and a rotatable shaft to effect rotation of the shaft a predetermined number of revolutions in one direction and for stopping the shaft in a preselected rotational end and start position in the last revolution of said predetermined number of revolutions comprising, dynamic braking means positioned to selectively apply a retarding force to said shaft to substantially reduce to momentum thereof, mechanical braking means positioned to selectively apply a stopping force to said shaft, and a control system comprising circuit means affording electrical circuits for effecting actuation of said drive motor, said dynamic braking means and said mechanical braking means, means for adjusting the predetermined number of revolutions of said shaft, means operative during said last revolution of said shaft to interrupt the circuit for said driving motor and to control said circuit of said dynamic braking means to apply the same and reduce the momentum of said shaft, and said last named means including means to control said circuit of said mechanical braking means to apply the latter and brake said shaft during said last revolution thereof after the expiration of a predetermined interval following the application of said dynamic braking means to said shaft to thereby stop said shaft at said preselected rotational end and start position, and means to close said circuit for said driving motor and to control said circuits of and release said dynamic braking means and said mechanical braking means to provide for effecting rotation of said shaft in said one direction from said end and start position.

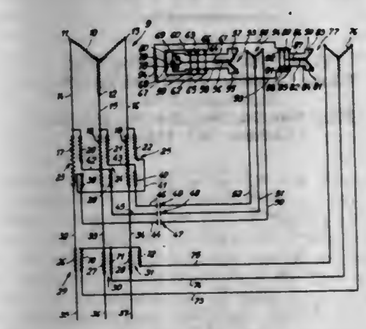
3,130,359
BATTERY CHARGING CIRCUIT WITH SATURABLE REACTOR CONTROL
Edwin T. Sherwood, Bayside, and Herbert C. Ganiere, Milwaukee, Wis., assignors to Globe-Union Inc., Milwaukee, Wis., a corporation of Delaware
Filed Sept. 1, 1960, Ser. No. 53,387
4 Claims. (Cl. 320—39)

1. A battery charging circuit comprising: a main charging circuit including a saturable reactor connected to a source of alternating current and a rectifier adapted to convert the alternating current output of said saturable reactor into direct current for charging a battery, said saturable reactor including at least one load coil and a control coil for said load coil; and a control circuit for said main charging circuit connected to the output of said saturable reactor, said control circuit including a control transformer having its primary connected to the



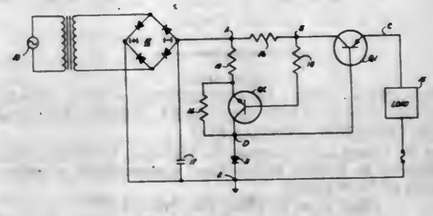
output of said saturable reactor and in parallel with the battery to be charged, a dropping resistor in the primary of said control transformer and a control rectifier in the secondary of said control transformer to provide direct current to said saturable reactor control coil, said control coil being connected to the secondary of said control transformer and deriving its sole source of control current therefrom.

3,130,360
SELF-EXCITED SELF-REGULATED ALTERNATING CURRENT GENERATORS
Miguel Churilow, 147 Libertad St., Buenos Aires, Argentina, assignor of twenty-five percent to Pablo Churilow and twenty-five percent to Olga Antonijeva Milutinovic, both of Buenos Aires, Argentina
Filed Sept. 10, 1962, Ser. No. 222,303
10 Claims. (Cl. 322—25)



1. For a polyphase alternating current generator having a shaft, an armature winding provided with output terminals, a first field winding and a second field winding, reactance means connected in series with said output terminals and each having one primary winding and two secondary windings, said secondary windings being connected in a star-zigzag connection, a first rotary polyphase frequency multiplier having a stationary field winding and a rotating armature winding having a shaft mechanically coupled with said alternating current generator shaft, capacitive means for connecting said secondary windings to said stationary field winding, and rectifier means for connecting said armature winding to said first field winding of said alternating current generator, current transformer means in series with said output terminals, said current transformer means having secondary windings connected in a star connection, a second rotary polyphase frequency multiplier having a stationary field winding and a rotating armature winding having a shaft mechanically coupled with said alternating current generator shaft, means for connecting said secondary windings of said current transformers to said stationary field winding of said second frequency multiplier, and means for connecting said armature winding of said second frequency multiplier to said second field winding of said alternating current generator.

3,130,361
VOLTAGE REGULATOR
Anthony M. Ioakimidis, Chicago, Ill., assignor to International Telephone and Telegraph Corporation, a corporation of Maryland
Filed Jan. 11, 1960, Ser. No. 1,709
6 Claims. (Cl. 323—22)

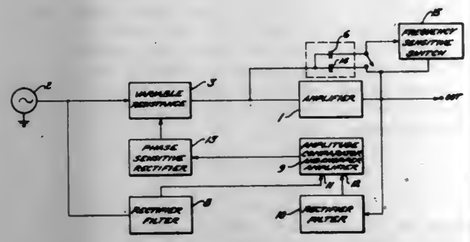


2. A device for regulating the voltage across a load circuit comprising a power source including a direct current supply, a first semi-conductive device which conducts increased current responsive to control potentials of a first polarity, means for connecting said first semi-conductive device in series in a circuit extending from said direct current supply to an electrical load circuit to control the fluctuations of voltages applied to said load, a second semi-conductive device which conducts increased current responsive to control potentials of an opposite polarity, means including a resistor in series with said first semi-conductive device and operated responsive to fluctuations in the voltage emanating from said direct current supply for controlling the current flow in said second semi-conductive device, and Zener diode means responsive to the operation of said last named means for controlling the output voltage of said first semi-conductive device whereby said semi-conductive devices provide compensating changes which cause the transmittal of substantially uniform voltage to said electrical load.

3,130,362
AUTOMATIC PHASE STABILIZER SYSTEM
Raymond A. MacMillan, Greenwood, Mass., assignor to the United States of America as represented by the Secretary of the Air Force
Filed May 5, 1959, Ser. No. 811,238
1 Claim. (Cl. 323—101)
(Granted under Title 35, U.S. Code (1952), sec. 266)

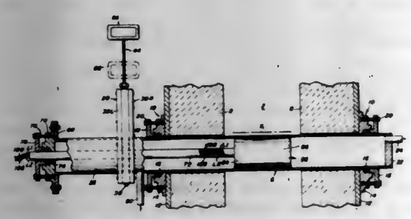
In an automatic phase stabilizer system, a source of A.C. signal having a wide variation of frequency, an amplifier having input and output terminals, a variable resistance connected between said signal source and said amplifier, capacitive means having capacitive reactance interconnecting said output and input terminals, means to preset the value of said variable resistance to equal the value of said capacitive reactance in the presence of specific frequency signal from said source, means to alter the value of said capacitive means in accordance with

the frequency of said A.C. signal from said source, and means to automatically and continuously maintain the value of said variable resistance equal to the value of said capacitive reactance in accordance with the variation of



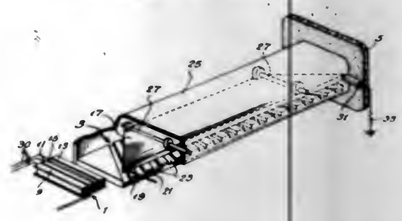
the frequency of said A.C. signal from said source, said automatic means receiving an output signal from said amplifier for conversion to a direct current signal for application to said variable resistor.

3,130,363
APPARATUS FOR DETERMINING THE MAGNETIC CONDITION OF STEEL STRIP DURING CONTINUOUS ANNEALING
James B. Camp and Thomas E. McCabe, Fairfield, Ala., assignors to United States Steel Corporation, a corporation of New Jersey
Filed June 8, 1960, Ser. No. 34,777
2 Claims. (Cl. 324—34)



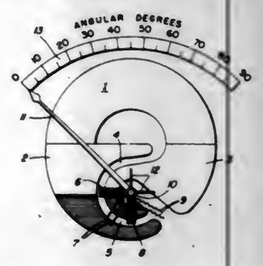
1. Apparatus for determining the magnetic condition of a steel strip being continuously heated as it moves longitudinally through a furnace which comprises a tube passing through a wall of the furnace into the heating chamber of the furnace adjacent the strip being heated, the axis of said tube being substantially parallel to the path of movement of said strip, a magnetic detector head mounted in said tube in the heating chamber, a container for said detector head, said tube and container being made of a material which is non-magnetic, has a high resistivity and can withstand temperatures of approximately 1500° F., a gate valve connected to the end of said tube outside said furnace, a second tube having one end connected to said gate valve in axial alignment with said first tube, means closing the second end of said second tube, a third tube within said first tube leading from said detector head through said gate valve, second tube and end closing means to the outside of said furnace, and means for circulating coolant through said first tube, whereby the detector head may be removed without interrupting the circulation of water by moving the detector head to the second tube, then closing the gate valve, and then removing the detector head from the second tube.

3,130,364
TRAVELLING WAVE TUBE SPECTRUM ANALYZER
Lester M. Field, Palo Alto, and John A. Mitchell, Glendale, Calif., assignors to The Board of Trustees of the Leland Stanford Junior University, Stanford University, Calif., a legal entity of California having corporate powers
Filed June 25, 1952, Ser. No. 295,583
5 Claims. (Cl. 324—77)



1. A radio frequency spectrum analyzer including a two-conductor transmission line structure and means for applying input high frequency signals to said line to produce travelling waves thereon, said line structure having longitudinally periodic variations in spacing between said conductors to provide alternate regions where relatively strong electric fields and relatively weak electric fields respectively are produced by such travelling waves, said structure being relatively wide with respect to the spacing between said conductors, the longitudinal spacing of said periodic variations varying laterally of said structure from a maximum value at one side to a minimum value at the other side; means for producing a ribbon shaped beam of electrons and directing said beam along said structure in the space between said conductors, said beam being of about the same width as said structure, and means disposed in the path of said beam beyond the end of said line structure remote from said beam-producing means for indicating deflection of electrons in said beam from the paths they normally follow in the absence of waves on said line structure.

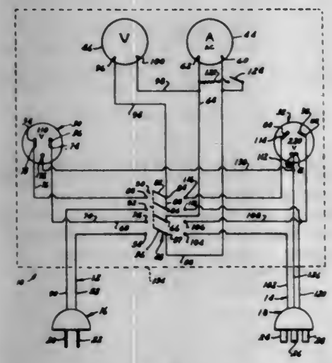
3,130,365
ELECTRICAL RATIOMETER
Clarke C. Minter, 1517 30th St. NW., Washington 7, D.C.
Filed Nov. 24, 1961, Ser. No. 154,739
3 Claims. (Cl. 324—140)



1. An electrical ratiometer comprising a substantially planar magnetic circuit consisting of a U-shaped permanent magnet having soft-iron polepieces thereon, said polepieces having spaced concave and convex polefaces to form a single arcuate-shaped approximately 200 degree airgap of constant length, approximately one half of said airgap having a constant cross-section area and the remaining approximately one half of the airgap having a nonuniform cross-section area due to reduction in depth

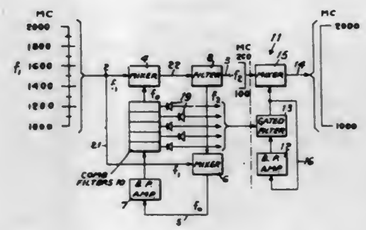
of the polefaces, and a pivot-post mounted to rotate at right angles to the magnetic field in said airgap, said pivot-post carrying a deflecting coil and a control coil mounted at right angles to each other and each of said coils having an active side in the single airgap, whereby upon movement of the coils the active side of one coil travels in the constant cross-section area part of the airgap and the active side of the other coil travels in the nonuniform cross-section area part of the airgap.

3,130,366
CURRENT AND VOLTAGE TESTER FOR ELECTRICAL APPLIANCES OPERATING ON DIFFERENT VOLTAGES
Raymond H. Draper, 19944 Northrop, Detroit 19, Mich., assignor of one-half to George Parsons
Filed Sept. 6, 1960, Ser. No. 54,002
1 Claim. (Cl. 324—149)



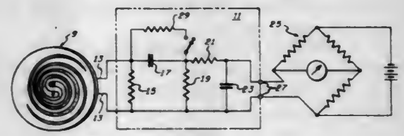
A tester for electrical apparatus operating on different voltages comprising first and second power cables each comprising a pair of leads; each of the power cables being for connection to different voltages; first and second receptacles each having a pair of terminals; each of said receptacles having a different configuration whereby a plug receivable in one is not receivable in the other; said receptacles being each associated with one of the power cables and adapted to receive a plug of an electrical apparatus; a voltmeter having a pair of terminals; an ammeter having a pair of terminals; and switching means for selectively interconnecting one of the power cables, its associated receptacle, the voltmeter and the ammeter; said switching means including first and second double pole, double throw switches each having a pair of poles and two pairs of posts; one post of one pair of the first switch being connected to one lead of the first power cable; the other post of said one pair of the first switch being connected to one terminal of the first receptacle; one post of the second pair of posts of the first switch being connected to one lead of the second power cable; the other post of said second pair being connected to one terminal of the second receptacle; one pole of said one pair of the first switch being connected to one terminal of the voltmeter and also to one terminal of the ammeter; the other pole of said pair of the first switch being connected to the second terminal of the ammeter; one post of one pair of the second switch being connected to the second lead of the first power cable; the second post of said one pair of the second switch being connected to the second terminal of the first receptacle; said two poles of said second switch being connected together and also connected to the second terminal of the voltmeter; one post of the second pair of the second switch being connected to the second lead of the second power cable; and the second post of the second pair of the second switch being connected to the second terminal of the second receptacle.

3,130,367
FREQUENCY TRANSLATION AND COMPRESSION SYSTEM
Laurin G. Fischer, Glen Rock, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed June 1, 1959, Ser. No. 817,421
4 Claims. (Cl. 325—308)



1. A frequency-translation system, for translating signals between different frequency bands, comprising a source of sequential multi-frequency input signals, and circuit means for producing local oscillations of multiple discrete frequencies in response to said input signals, said circuit means including first and second frequency mixers, each having at least two input terminals and at least one output terminal, a first input terminal of each of said frequency mixers being coupled to said source of sequential multi-frequency input signals, an output terminal of said first one of said frequency mixers being coupled through first filter means to a second input terminal of said second one of said frequency mixers, an output terminal of said second one of said frequency mixers being coupled through amplifier and comb-filter means to a second input terminal of said first one of said frequency mixers, said first filter means having non-uniform frequency-transmission properties for limiting the signal output of said first filter means to frequencies on only one side of said multiple discrete frequencies of said local oscillations, and said first filter means having an output terminal for the delivery of said limited signal output.

3,130,368
ELECTROMAGNETIC RADIATION MONITOR
John C. Hoover, Clearwater, Fla., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Jan. 23, 1962, Ser. No. 168,077
6 Claims. (Cl. 325—364)

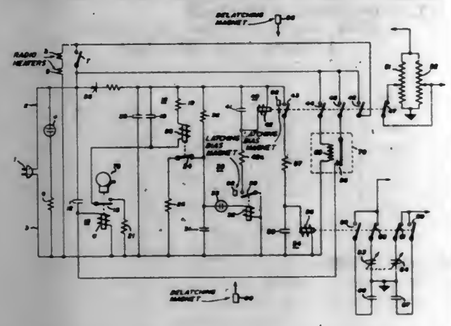


1. An electromagnetic radiation monitor comprising a spiral antenna having an outer turn with a perimeter equal to the longest wavelength in the normal operating range, a filter coupled to receive energy from the antenna, said filter constructed and arranged to introduce an insertion loss that changes in proportion to changes in the effective aperture of said antenna throughout the normal operating range, said filter being further constructed and arranged to provide a substantially constant insertion loss at frequencies below the normal operating range, and a detecting means coupled to receive energy from said filter.

3,130,369
RADIO CONTROLLED PUBLIC WARNING SYSTEM UTILIZING CARRIER CURRENT

Brian M. Beaton, Owensboro, Ky., assignor to General Electric Company, a corporation of New York

Filed Feb. 5, 1962, Ser. No. 171,040
3 Claims. (Cl. 325—364)



1. A carrier current controlled alarm responsive to an alarm signal of predetermined frequency impressed on an alternating current power line to operate a radio receiver comprising:

(*a*) terminal means for connection to a supply voltage carried by the power line,

(*b*) a tuned circuit including a first capacitor and an inductor serially connected across said terminal means resonant at the predetermined alarm signal frequency and having a first switch means operable at said predetermined frequency and connected to said terminal means,

(*c*) rectifier means connected to the terminal means to convert the A.C. supply voltage from the power line to a direct current control voltage,

(*d*) a second capacitor adapted to be connected to the rectifier means to be charged by said direct current control voltage,

(*e*) first electrical control means,

(*f*) said switch means operable to connect said second capacitor to said first electrical control means during application of the alarm signal to the power line,

(*g*) a third capacitor connected to the rectifier means to be charged by said direct current control voltage,

(*h*) said first electrical control means responsive to a predetermined charge on said first capacitor to connect said third capacitor to said rectifier,

(*i*) an electrical timing means,

(*j*) first means connecting said third capacitor to said electrical timing means,

(*k*) said electrical timing means responsive to a predetermined charge on said third capacitor to connect said radio receiver to said terminal means to be energized by the supply voltage carrying power line,

(*l*) a fourth capacitor adapted to be connected to the rectifier means to be charged by said direct current control voltage,

(*m*) a second electrical control means,

(*n*) second means connecting said fourth capacitor to said second electrical control means,

(*o*) a first latching switch operable to connect said fourth capacitor to said rectifier in response to the operation of said electrical timing means,

(*p*) second switch means responsive to the operation of said second electrical control means to connect said radio receiver to said terminal means to be energized by said supply voltage carrying power line,

(*q*) a fifth capacitor adapted to be connected to the rectifier means to be charged with said direct current control voltage,

(*r*) a third electrical control means,

(*s*) a second latching switch responsive to the operation of said second electrical control means to connect said fourth capacitor to said rectifier,

(*t*) third means connecting said fifth capacitor to said third electrical control means,

(*u*) a preset station frequency control means,

(*v*) a variable station frequency control means,

(*w*) a plurality of switches responsive to the operation of the fourth control means to connect the preset station frequency control means to the radio receiver,

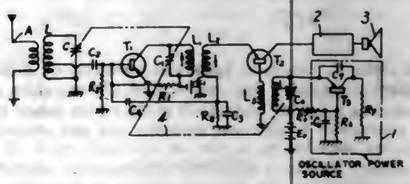
(*x*) a first de-latching means operable to de-latch the first latching means to disconnect the radio receiver from the terminal means while permitting the preset station frequency to remain connected to the radio receiver, and

(*y*) second de-latching means operable to de-latch the second latching means thereby disconnecting the preset frequency control and connecting the variable frequency control means to the radio receiver.

3,130,370
CIRCUIT SYSTEM FOR PREVENTING INTERFERING RADIATION FROM TRANSISTOR SUPERHETERODYNE RECEIVERS

Yasuaki Kondo and Makoto Takahashi, Tokyo, and Akira Ichikawa, Sagamihara City, Japan, assignors to Japan Broadcasting Corporation, Tokyo, Japan

Filed Nov. 22, 1960, Ser. No. 70,942
3 Claims. (Cl. 325—436)



1. A circuit for reducing interfering local oscillation radiation in superheterodyne transistor receivers, comprising a transistor amplifying stage, a frequency mixer stage including a transistor having an input electrode and a pair of further electrodes, means for coupling output signals developed by said amplifying stage to said frequency mixer stage, a local oscillator connected to supply local oscillations to one of said pair of electrodes of said frequency mixer stage transistor, a bias network connecting said input electrode of said converter stage transistor to a reference potential through at least a part of said means for coupling whereby local oscillator signals are induced in said bias network through at least the interelectrode capacity of said mixer stage transistor, and a capacitor for coupling local oscillator signals developed in said bias network to an input circuit of said amplifier stage.

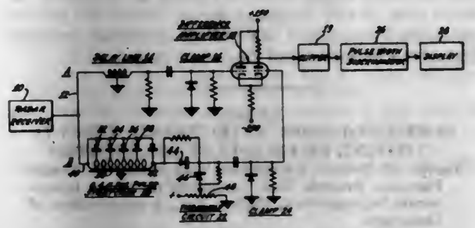
3,130,371
PULSE AMPLITUDE SLICING CIRCUIT

William O. Copeland, Runnemede, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed Aug. 26, 1959, Ser. No. 836,280
2 Claims. (Cl. 328—54)

1. A circuit for passing a portion of an input pulse extending from its maximum amplitude level to a lower amplitude level comprising, in combination, a threshold circuit biased an amount equal to the difference between said amplitude levels for passing the portion of the pulse

of greater than said bias level; and means including a subtracting circuit to which are applied the pulse passed by said threshold circuit and the input pulse of greater

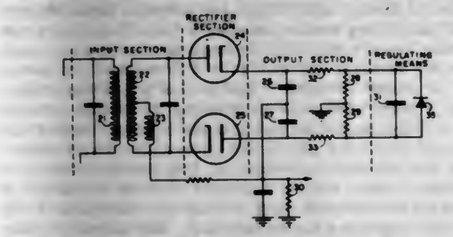


amplitude than said passed pulse for subtracting said passed pulse from said input pulse to obtain at the output of the subtracting circuit a pulse that is a peak portion of said input pulse.

3,130,372
RATIO DETECTOR WITH ZENER DIODE VOLTAGE REGULATOR

Blair J. Zajac, 2440 Wagner St. SE., Washington, D.C.

Filed July 28, 1960, Ser. No. 46,037
2 Claims. (Cl. 329—130)
(Granted under Title 35, U.S. Code (1952), sec. 266)

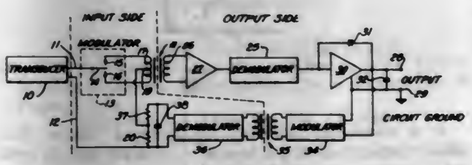


1. A ratio detector for converting frequency modulation A.C. voltage into amplitude modulation D.C. voltage comprising an input section, an output section, a rectifier section with two oppositely poled rectifier elements each interconnecting said input and output sections, a capacitive element connected in shunt with said output section, and a Zener diode connected in shunt with said output section and said capacitive element, said Zener diode having a voltage characteristic which is a function of the optimum maximum ratio deviation whereby a limit is obtained for the maximum ratio deviation of the circuit.

3,130,373
POTENTIAL DIFFERENCE NEGATIVE FEEDBACK AMPLIFIER

Noel B. Braymer, Garden Grove, Calif., assignor to Beckman Instruments, Inc., a corporation of California

Filed Apr. 27, 1959, Ser. No. 823,796
11 Claims. (Cl. 330—9)

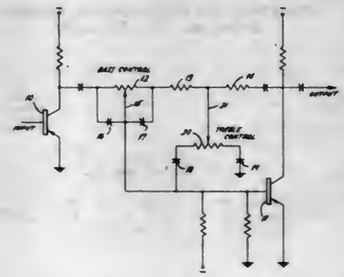


2. In a device for transferring a potential difference from an input to an output, the combination of: a first modulator; a first transformer; a first demodulator; means connecting said first modulator, first transformer and first demodulator in series to provide a forward signal path between said input and said output; a second modulator; a second transformer; a second demodulator; means connecting said second modulator, second transformer and second demodulator in series to provide a feedback signal path connected between said output and said input; and said last means including circuit means for connecting at least a portion of the output of said second demodulator as an input to said first modulator in negative feedback relation.

3,130,374
NEGATIVE FEEDBACK TONE CONTROL CIRCUIT

John F. Beres, Southampton, and Abram Hopengarten, Lafayette Hills, Pa., and Richard F. Wood, Marlton, N.J., assignors to Philco Corporation, Philadelphia, Pa., a corporation of Delaware

Filed July 24, 1962, Ser. No. 212,095
6 Claims. (Cl. 330—28)

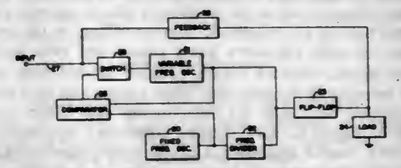


1. In a tone control circuit; a transistor; a first resistor; a manually-movable tap on said resistor connected to the base of said transistor; capacitive means connected between said tap and each end of said resistor; an input connection to one end of said resistor; a feedback connection including a second resistor connected between the other end of said first resistor and the collector circuit of said transistor; a resistor and capacitive means serially connected between said base and a point of fixed reference potential; and a manually-movable tap on said last-recited resistor connected to a point on said feedback connection intermediate said second resistor and the collector circuit of said transistor.

3,130,375
AUTOMATIC FREQUENCY CONTROL APPARATUS

Donald J. Rotier, Crystal, and John F. Storm, Minneapolis, Minn., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

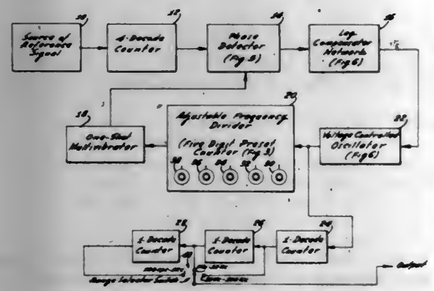
Filed Mar. 1, 1961, Ser. No. 92,685
13 Claims. (Cl. 331—11)



1. Apparatus of the class described comprising: first oscillator means having an output; second oscillator means having an input and output, the phase of said second oscillator means being variable in response to an input signal; means adapted to connect the input of said second oscillator to a source of input signals; bistable

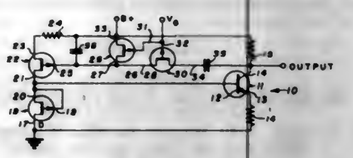
means having an input and output; frequency divider means connecting the output of said first oscillator to the input of said bistable means; means connecting the output of said second oscillator to the input of said bistable means; load means connected to the output of said bistable means; phase comparator means having a first and a second input and an output, said phase comparator means producing an output proportional to the difference in phase between signals to its inputs; means connecting the output of said first oscillator to the first input of said comparator; means connecting the output of said second oscillator to the second input of said comparator; and means connecting the output of said comparator to the input of said second oscillator at all times except when an input signal is applied to said second oscillator.

3,130,376
WIDE RANGE SIGNAL GENERATOR
Thomas N. Ross, Temple City, Calif., assignor to Hull Instruments, Inc., South Pasadena, Calif., a corporation of California
Filed Mar. 19, 1962, Ser. No. 180,651
2 Claims. (Cl. 331—18)



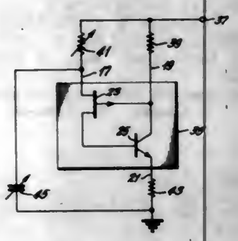
1. A signal generator including: signal producing means including a reference signal oscillator for producing a reference pulse signal having a predetermined repetition frequency; a voltage controlled pulse generating oscillator responsive to an applied direct current control signal for producing an output pulse signal having a repetition frequency determined by the amplitude of the applied direct current control signal; a phase-detector circuit coupled to said signal producing means; means coupling said voltage controlled oscillator to said phase-detector circuit for introducing a feed-back pulse signal thereto, said phase-detector circuit responding to said reference signal and to said feedback signal for producing a control signal having an average amplitude determined by the relative phase displacement of said reference signal and said feedback signal; active low pass, low phase shift and low direct current amplification filter means coupled to said phase-detector circuit for removing the high frequency components of the output signal produced by said phase detector so as to produce a direct current control signal having an amplitude corresponding to the relative phase of said reference pulse signal and said feedback pulse signal; network means coupled to said filter means and interposed between said filter means and said voltage controlled oscillator for introducing said direct current control signal to said voltage controlled oscillator, said network means including a proportional-plus-integral lag compensator network for providing second order characteristics to the system; frequency divider means included in said coupling means for causing the frequency of said feedback signal to be a predetermined sub-multiple of the frequency of said output signal of said voltage controlled oscillator, said frequency divider means including pulse counter means and manually operable switching means for causing said frequency divider means to produce an output signal after a predetermined count by said pulse counter means as established by the setting of said switching means so as to control the frequency division ratio of said frequency divider means and thereby adjust the frequency of said voltage controlled oscillator throughout an established frequency range.

3,130,377
SEMICONDUCTOR INTEGRATED CIRCUIT UTILIZING FIELD-EFFECT TRANSISTORS
Joseph M. Brown, Richardson, and Arthur D. Evans, Farmers Branch, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed May 2, 1960, Ser. No. 26,135
10 Claims. (Cl. 331—106)



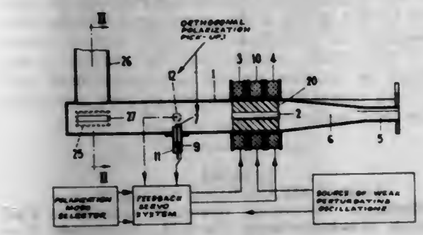
1. A zero phase shift oscillator circuit comprising first amplifying means including a semiconductor amplifier device and having input, output and common terminals, second amplifying means including a field-effect device and having input, output and common terminals, means connecting the input terminals of said first amplifying means to the output terminal of said second amplifying means, and a phase shift network coupling the output terminal of said first amplifying means to the input terminal of said second amplifying means, said phase shift network including first capacitance means and first voltage-variable resistance means having a control element connected in parallel between said input and common terminals of said second amplifying means, said phase shift network further including second capacitance means and second voltage-variable resistance means having a control element connected in series between said output terminal of said first amplifying means and said input terminal of said second amplifying means.

3,130,378
RELAXATION OSCILLATOR UTILIZING FIELD-EFFECT DEVICE
Charles R. Cook, Jr., Richardson, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed May 2, 1960, Ser. No. 26,133
6 Claims. (Cl. 331—111)



5. A relaxation oscillator comprising a bipolar field-effect transistor having a source, a collector and an emitter, a voltage source and load impedance means connected in series between said collector and said emitter, a resistor and a capacitor connected in series across said voltage source, the juncture of said resistor and capacitor being connected to said source.

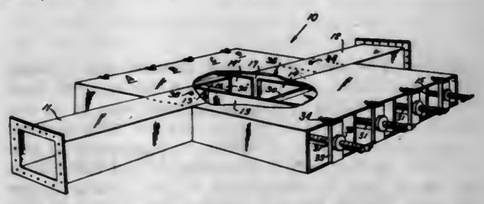
3,130,379
WAVEGUIDE SWITCHING USING FEEDBACK-CONTROLLED SERVO SYSTEM TO ROTATE THE PLANE OF POLARIZATION OF PLANE-POLARIZED ELECTROMAGNETIC WAVES
John Hadley, Wembley, England, assignor to The General Electric Company Limited, London, England
Filed Aug. 26, 1960, Ser. No. 52,302
Claims priority, application Great Britain Aug. 28, 1959
3 Claims. (Cl. 333—7)



1. An electromagnetic wave switching system comprising a length of waveguide which contains ferromagnetic ceramic material and which is arranged to effect rotation of the plane of polarization of plane-polarized electromagnetic waves transmitted therethrough in dependence upon the magnetic field in which the ferromagnetic ceramic material lies, an input waveguide connected to one end of said length of waveguide, first and second output waveguides connected to the other end of said length of waveguide to pass to the first output waveguide electromagnetic waves supplied by said length of waveguide with a first predetermined plane of polarization and to pass to the second output waveguide electromagnetic waves supplied by said length of waveguide with a second predetermined plane of polarization which is different from the first plane of polarization, means to provide a steady magnetic field in which said ceramic ferromagnetic material lies, means to provide an oscillatory magnetic field in which said ferromagnetic material lies, two detector means, two polarization-sensitive couplings which are spaced around said length of waveguide and each of which passes a portion of waves transmitted by said length of waveguide after rotation therein to a different one of said detector means and each of said detector means supplies an electric signal the amplitude of which varies as a result of said oscillatory magnetic field, means to control said means to provide a steady magnetic field, and switching means selectively having first and second conditions to control the last mentioned means and in said first and second conditions the steady magnetic field in which the ceramic ferromagnetic material lies is controlled in dependence upon the signals supplied by the two detector means respectively so that electromagnetic waves supplied over the input waveguide are passed mainly to the first and second output waveguides respectively.

3,130,380
ADJUSTABLE WAVEGUIDE FILTER
David F. Bowman, Wayne, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Feb. 13, 1962, Ser. No. 173,040
2 Claims. (Cl. 333—73)

1. A microwave filter comprising at least a first, second and third cavity enclosure; said first cavity enclosure being operatively connected to a first guide means and said third cavity enclosures being operatively connected to a second guide means; each of said first and second and third cavity enclosures having a first end surface, a second end surface, a first wall surface, and a second wall surface; said second wall surfaces of said first cavity and said first wall surface of said second cavity coinciding to form a first common wall between said first and second civity; said second wall surface of said second cavity enclosure and said first wall surface of said third cavity enclosure coinciding to form a second common wall between said second and third cavity enclosures; each of said cavity enclosures having a resonant frequency adjustably preselectable by varying the distance between their respective first and second end surfaces; said first wall surface of said first cavity having a first coupling means; said first common wall having a second coupling means; said second common wall having a third coupling means; said second wall surfaces of said third resonant cavity having a fourth coupling means; said first coupling means being operatively positioned to supply electromagnetic energy to said first cavity enclosure; said second coupling means being an outlet for a first portion of said electromagnetic energy to be intercoupled to said second cavity enclosure; said third coupling means being an outlet by a second portion of said electromagnetic energy to be intercoupled to said third cavity enclosure;

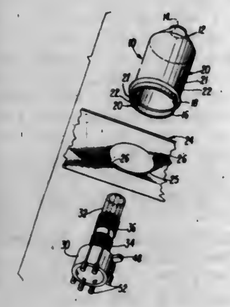


each of said cavity enclosures having a first and second adjusting means; each of said adjusting means being operatively connected to one of said end surfaces to permit relative movement thereof; said end surfaces of said first cavity enclosure being operatively positioned to define a first resonant condition; said end surfaces, while defining said first resonant condition, being selectively positioned with respect to said second coupling means to control said first portion of electromagnetic energy; said end surfaces of said second cavity enclosure being operatively positioned to define a second resonant condition; said end surfaces while defining said second resonant condition being selectively positioned with respect to said third coupling means to control said second portion of electromagnetic energy; said fourth coupling means being an outlet for a third portion of said electromagnetic energy; and said end surfaces of said third cavity being operatively positioned to define a third resonant condition; said end surfaces, while defining said third resonant condition, being selectively positioned with respect to said fourth coupler means to control said third portion of electromagnetic energy; the frequency response of said first, second and third cavity enclosures and said controlled intercavity coupling collectively defining a predetermined filter characteristic.

3,130,381
SHIELD FOR INDUCTANCE COILS
Richard C. Oeler, Elmhurst, and Edward A. Sainers, Mount Prospect, Ill., assignors to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Oct. 6, 1961, Ser. No. 143,428
2 Claims. (Cl. 336—84)

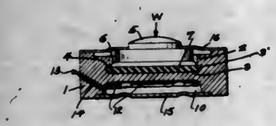
2. A shielded coil assembly, including in combination a chassis plate having an opening which opening contains guide slots on the edges thereof, a tubular shield having a conical section thereon partially closing a first end to leave an opening centrally thereof, said shield

further having a fully open second end and a peripheral shoulder formed near said second end, and having axially extending, straight locking grooves disposed on opposite sides of the interior surface thereof, each of said grooves having a stop toward the upper end thereof and a ridge toward the lower end thereof, said shield being fixed to said plate in said opening therein so that said locking grooves mate with said guide slots and so that



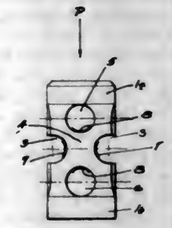
said plate is secured between said shoulder and a flanged end of said shield, an inductance coil having a coil form portion and locking fingers on opposite sides of an end thereof to mate with said grooves, said coil being mounted in said shield and secured therein by engagement of said coil form portion with said opening in said first end of said shield and by engagement of said locking fingers with said locking grooves between said stops and said ridges.

3,130,382
LOAD CELL
Eric Laimins, Cambridge, Mass., assignor to Baldwin-Lima-Hamilton Corporation, a corporation of Pennsylvania
Filed Apr. 20, 1962, Ser. No. 189,153
8 Claims. (Cl. 338—5)



1. A force-responsive device for measuring the magnitude of a force applied along a given axis, comprising, in combination, a casing surrounding said axis having an axially extending cavity circular in cross-section and open at its upper end and closed at its lower end by a diaphragm, said diaphragm being connected to said casing around its periphery and being free to deflect downward so that application of a positive pressure to the upper face of said diaphragm will produce on its lower face compressive strains around the periphery and tensile strains in the central portion, an axially extending force-receiving and force-transmitting piston extending within said cavity through its upper open end, said piston having an axial slidable fit with the wall of said cavity along at least the lower portion thereof, a rubber-like pressure-transmitting pad disposed between said piston and said diaphragm and substantially completely filling the cavity space contained there-between so that application of a downward axial force to the upper end of said piston causes said pad to be subject to compression stress throughout its volume, thereby subjecting the entire upper face of said diaphragm to a positive pressure, means disposed adjacent to the peripheral portion of said diaphragm so that the rubber-like action of said pad in response to said downward force causes the said positive pressure transmitted by it to said diaphragm, whereby the ratio of the maximum compressive strain to the maximum tensile strain on the lower face of said diaphragm is smaller than it would be if the upper face of the diaphragm were subjected to a uniform hydrostatic pressure, two electrically responsive strain gage means attached to said diaphragm so that one is responsive to the compressive surface strains of the diaphragm while the other is responsive to simultaneous tensile surface strains thereof, both strains resulting from the bending of said diaphragm in response to said downward force, said gages being connectable to provide a single cumulative response to an applied force.

3,130,383
FORCE MEASURING MEMBER
Karl Hottinger, Darmstadt, Germany, assignor to Carl Schenck Maschinenfabrik G.m.b.H., Darmstadt, Germany, a corporation of Germany
Filed Mar. 12, 1963, Ser. No. 264,524
2 Claims. (Cl. 338—5)

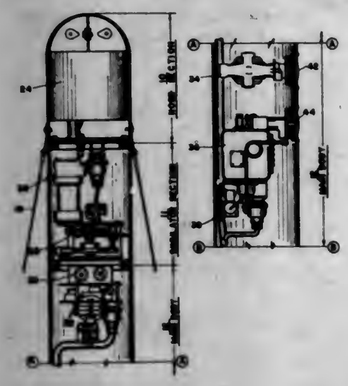


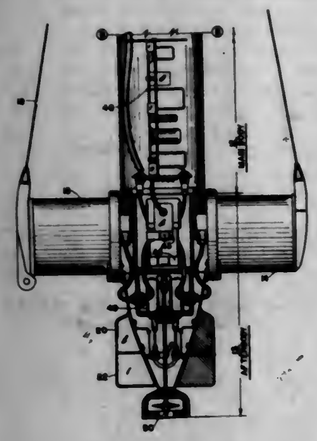
1. A force measuring member having an axis along which a force to be measured is applied, said member having a force input portion and an axially spaced counter-bearing portion connected by an intermediate axially extending strain sensitive measuring portion which has notches on opposite sides and substantially at right angles to said axis so that the cross sectional area of the notched portion is smaller than force input and counter-bearing portions to produce a notched stress effect, said member having holes above and below said notched cross sectional area and extending through said member in directions transverse to the axes of the notches to produce bending stresses, and strain gages mounted on the notched section to measure the notched stress effect and strain gages mounted in the surface of holes to measure the bending effects.

3,130,384
ARTIFICIAL TARGET
George W. Downs, Pasadena, and Raymond D. Atchley, San Diego, Calif., assignors to the United States of America as represented by the Secretary of the Navy
Filed Mar. 27, 1946, Ser. No. 657,584
5 Claims. (Cl. 340—5)

2. In a self-propelled underwater decoy having an elongated closed casing, propelling means for said casing, motor means driving a disc having a serrated periphery thereon, and means connected to a portion of said casing and bearing on said periphery of said disc so that rotation of said disc vibrates said casing at a frequency determined

by the peripheral speed of said disc and thereby causes said decoy to transmit to the surrounding water sounds

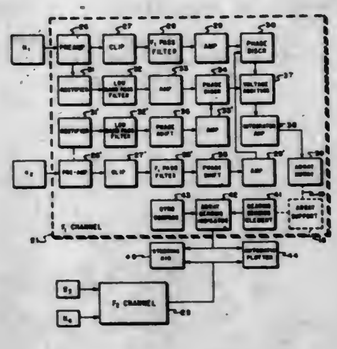




similar to those normally produced by a submerged submarine.

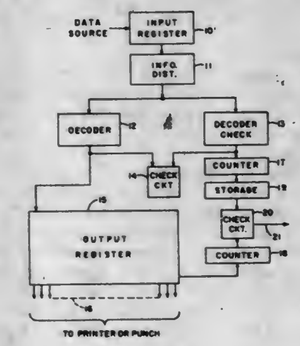
3,130,385
APPARATUS FOR DETERMINING THE DIRECTION OF ARRIVAL OF WAVE ENERGY
Richard T. Galloway, Panama City, Fla., assignor to the United States of America as represented by the Secretary of the Navy
Filed Aug. 25, 1961, Ser. No. 136,132
3 Claims. (Cl. 340—6)
(Granted under Title 35, U.S. Code (1952), sec. 266)

3. Apparatus for determining the direction of a source of high frequency wave energy amplitude modulated by a low frequency sine wave, comprising a pair of spaced transducers rotatable in assembly about an axis transverse to the line defined by said transducers, means for combining the high frequency outputs of said transducers to produce a first electric signal proportional to the phase difference between the high frequency wave at said transducers, means for combining the low frequency outputs of said transducers to produce a second electric signal proportional to the angular displacement between the source of wave energy and the plane of symmetry of said transducers, means for additively combining said first and



said second electric signals to produce a third electric signal, and means governed by said third electric signal to rotate said transducers in assembly until said third electric signal assumes a minimum value.

3,130,386
DIGITAL DATA PROCESSING CONVERSION AND CHECKING APPARATUS
Charles J. Barbagallo, Needham, and Edward S. Fabiszewski, Lexington, Mass., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Jan. 27, 1958, Ser. No. 711,512
12 Claims. (Cl. 340—146.1)

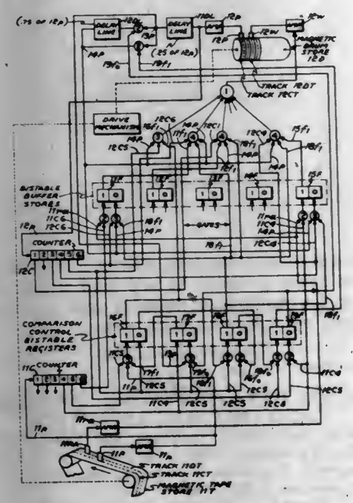


1. Data processing apparatus comprising a storage register having an input and an output, a first counter, a second counter, a pair of data conversion circuits, one of which has an output connected to the input of said storage register, means connecting said first counter to count the signals on the output of the other of said conversion circuits, means connecting said second counter to the output of said storage register, and a counter comparison circuit connected directly between said first and second counters to check the transfer of information in said register.

3,130,387
BUFFER SYSTEM FOR TRANSFERRING DATA BETWEEN TWO ASYNCHRONOUS DATA STORES

Esmond Philip Goodwin Wright and Donald Adams Weir, London, England, and Raymond Cecil Price Hinton, Teaneck, and Boris Dzula, Clifton, N.J., assignors to International Standard Electric Corporation, New York, N.Y.

Filed Feb. 5, 1959, Ser. No. 791,499
Claims priority, application Great Britain Feb. 6, 1958
11 Claims. (Cl. 340—172.5)



10. A system for transferring data between storage systems having slightly different operating frequencies, without the use of large scale off-line buffer storage units, comprising:

a first store;

first timing means coupled to first store for producing a first series of periodic timing signals defining the time positions of successive bits of data stored in said first store;

a second store;

second timing means coupled to said second store for producing a second series of periodic timing signals defining the time positions of successive bits of data stored in said second store and corresponding to but at a slightly higher frequency than said first series;

a buffer store having a small capacity in relation to the capacities of said first and second stores;

first gating means coupled to said first timing means for cyclically distributing intelligence signals from said first store into the stages of said buffer register in synchronism with said first series of timing signals;

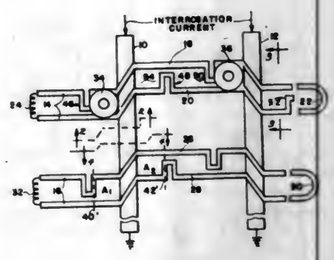
second gating means coupled to said second timing means for cyclically scanning said buffer store in synchronism with said second series of timing signals; and

control means coupled to said first and second timing means and to said second gating means for blocking operation of said second gating means during one scanning cycle of said second gating means upon the occurrence of a predetermined phase coincidence condition between said first and second timing signals.

3,130,388
NON-DESTRUCTIVE SENSING MEMORY

Andre M. Renard, Costa Mesa, Calif., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed May 2, 1960, Ser. No. 26,358
16 Claims. (Cl. 340—173)

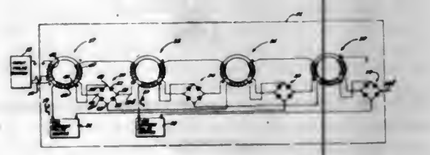


4. A memory device with non-destructive sensing provisions comprising a non-magnetic, non-metallic card or plate divided into a plurality of areas at least one of which has a non-magnetic metallic ring for representing the storage of a binary digit of one sense, at least another of said areas representing a binary digit of opposite sense by the absence of such ring, a plurality of output lines including first and second ones respectively positioned adjacent the said one and another areas, and at least one drive line insulatively crossing and being magnetically coupled to said output lines in the region of the said one and another areas on the side of said output lines opposite said areas and ring, the drive line being positioned at least mainly adjacent one edge of said ring with the said first output line being substantially centered on said ring as it crosses same.

3,130,389
DIODE BRIDGE-GATED STEPPING REGISTER

Joseph Wirt Crownover, La Jolla, Calif., assignor to Litton Industries of California, Beverly Hills, Calif.

Filed Aug. 5, 1958, Ser. No. 753,256
9 Claims. (Cl. 340—174)

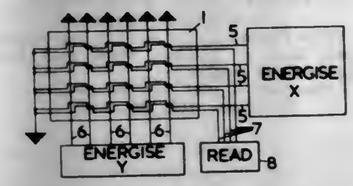


1. In a device for shifting an electrical signal in response to an advancing pulse signal, the combination comprising: a first and a second magnetic core, each of said cores exhibiting a substantially rectangular hysteresis loop to have first and second magnetic states; a first winding wound on said first magnetic core and a second winding wound on said second magnetic core; an advancing pulse generator selectively generating the advancing pulse signal; a diode bridge gate coupled to said first and second windings and responsive to the advancing pulse signal to selectively electrically connect said first and second windings; an advance winding wound on said first core; coupling means serially interconnecting said advance pulse generator, said advance winding, and said diode bridge gate for applying the advancing pulse signal to said advance winding to turn said first core to said second magnetic state thereby generating a voltage across said first winding and to apply the advancing pulse signal to said diode bridge gate to transmit the voltage to said second winding.

3,130,390
MAGNETIC STORAGE DEVICES

Arthur Cyril Moore, Malvern Link, and Alexander Scott Young, Malvern, England, assignors, by mesne assignments, to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed May 22, 1959, Ser. No. 815,016
Claims priority, application Great Britain May 27, 1958
9 Claims. (Cl. 340—174)

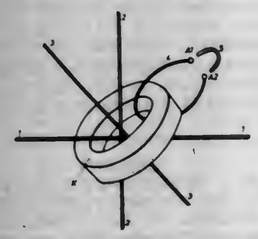


1. A magnetic storage device comprising a layer of magnetic material which is thin so that domain walls extend through the thickness of the layer between opposing surfaces, first and second sets of conductors for conducting current in paths in close proximity to and across the surfaces of the layer, the conductors of the first set crossing those of the second set to define a plurality of intersections in the plane of the layer, and the conductors of one set having portions at the intersections which are parallel to portions of the conductors of the other set whereby in operation each pair of two crossing conductors carrying a current of a pre-determined level establishes a discrete area of magnetisation at their intersection, the direction of magnetisation being determined in one of two possible senses by the directions of current flow therein.

3,130,391
CIRCUIT ARRANGEMENT FOR FERRITE-CORE STORAGE DEVICES

Gerhard Merz, Rommelshausen, Kreis Waiblingen, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Filed July 25, 1960, Ser. No. 44,956
Claims priority, application Germany Aug. 29, 1959
9 Claims. (Cl. 340—174)

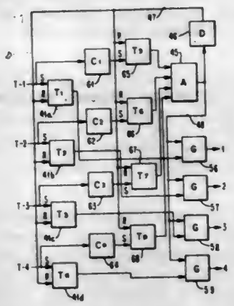


1. A circuit arrangement for ferrite core storage devices comprising a single-apertured ferrite core, a reading-out wire passing through said core, two writing-in wires passing through said core, means for applying a signal to said writing-in wires, an additional wire passing through said core, all of said wires passing through the single aperture in said core, and shorting means affixed to said additional wire for suppressing a read-out signal on said read-out wire when said writing-in wires are subjected to a signal.

3,130,392
DESKEWING USING LAST BIT OF A BYTE

Earl W. Miller, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 26, 1961, Ser. No. 162,046
11 Claims. (Cl. 340—174.1)



8. Means for deskewing bytes of received data bits comprising, bit-presence detecting means including a pair of triggers and a clock for each of said channels,

means for synchronizing each clock with received data of its associated channel,

means for setting one of said triggers in any pair in response to data bits of its channel,

means for setting the other of said triggers in response to an output of said clock occurring at the instant of a received bit in its associated channel,

AND gate means receiving the output of said second trigger for each channel,

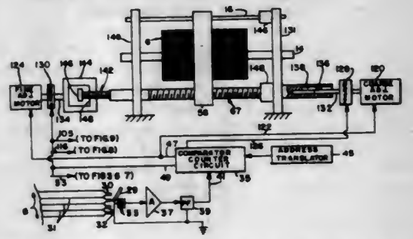
means responsive to the output of said AND gate means for sampling outputs of said first triggers to provide a deskewed output byte.

and delay means acting in response to the output of said AND gate means for resetting all of said triggers to condition them for the next byte.

3,130,393
INFORMATION STORAGE DEVICE

Robert P. Gutterman, Bethesda, Md., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed May 13, 1959, Ser. No. 812,962
30 Claims. (Cl. 340—174.1)

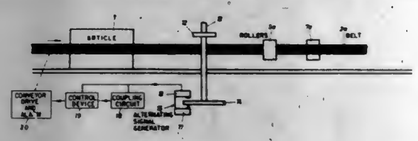


1. In an information storage system, a laminated structure formed of a plurality of separable laminations at least some of which have at least information storage capabilities on at least one face, fluid-pressure means for releasably holding at least some of said laminations contiguously together to form a plurality of lamination interfaces, and means for effecting at least limited release by said holding means and forcibly causing the laminated structure to spread completely open at and throughout a given lamination interface, thereby providing a gap for access to at least one lamination face.

3,130,394
ARRANGEMENT FOR DETECTING THE STOPPAGE OF A MOVABLE BODY

Werner Hinz, Berlin-Neukoln, and Hanspeter Fritzsche, Berlin, Germany, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Filed Dec. 2, 1960, Ser. No. 73,376
Claims priority, application Germany Dec. 7, 1959
6 Claims. (Cl. 340—259)

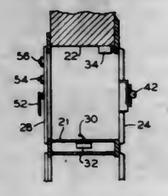


1. Apparatus for detecting the stoppage of an article along a conveying path including edgewise conveying belts for transporting articles therealong comprising means generating an alternating voltage signal in accordance with the movement of said conveying path and article, including a movable member and a relatively fixed sensing means and means for mounting said movable member and said fixed sensing means for rotational movement independent of the conveying belts, drive means for driving said movable member in a rotary motion, including a driving power-transmission disk connected to said drive means to operate at a speed substantially equal to that of the conveying path, and a driven power-transmission disk connected to said movable member, said driving disk and said driven disk being resiliently urged into driving contact with one another and located in line with said conveying path so that articles being conveyed thereon pass between said driving and driven disks without interrupting the power transmission to said movable member, the transmission of power to said movable member being interrupted when any said article is stopped between said disks, said sensing means positioned in cooperative relation with said movable member to provide said alternating signal and signal interruption in accordance with the movement of said member, and control means responsive to said alternating signal and signal interruption to provide an indication when said article is stopped.

3,130,395
SERVICE AREA WITH COMPARTMENTS

Luther G. Simjian, Laurel Lane, Greenwich, Conn.

Filed Aug. 28, 1962, Ser. No. 220,000
9 Claims. (Cl. 340—280)



1. A service area of the type described including in combination:

a compartment accessible from two sides for receiving articles from each of said two sides;

a door mounted for providing access to said compartment from one of said sides when said door is open and for preventing access when said door is closed;

lock and key means for locking said door and for preventing access to said compartmnet;

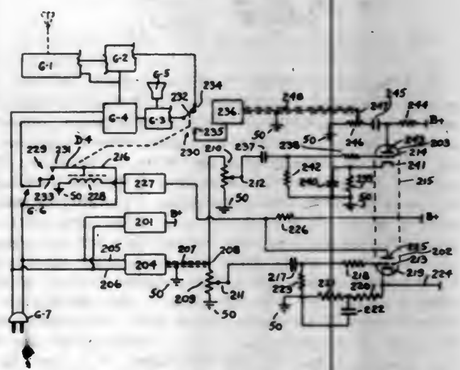
sensing means disposed for sensing the presence of an article in said compartment;

means for maintaining said lock means in the absence of an article in an unlocked position and for maintaining said key means captive in said lock means while said lock means is in said unlocked position, and means coupled to said lock means and to said sensing means for rendering said lock means changeable from said unlocked position to a locked position and for enabling removal of said key means when said lock means has assumed said locked position in response to said sensing means sensing the presence of an article in said compartment.

3,130,396
AUTOMATIC CIVIL EMERGENCY WARNING SYSTEM

James Willis Hughes, P.O. Box 1713, and Nathan J. Stowell, both of Jackson, Miss.; said Stowell assignor to said Hughes

Filed Sept. 6, 1961, Ser. No. 136,294
24 Claims. (Cl. 340—310)



10. In combination with a radio frequency receiver including a radio frequency receiving section having a detector in its final stage, an audio section normally connected to said detector, a radio receiver power supply, and a manual on and off switch for energizing said radio receiver, conversion means for said radio receiver adapting said receiver to receive and broadcast audio alarm and voice signals which are transmitted over existing electric power distribution networks, said conversion means including an audio alarm and voice signal amplifier, and automatic switching means responsive to an automatic receiver conditioning signal transmitted over said electric power distribution network for disconnecting said detector from said audio section and connecting said audio alarm and voice amplifier to said audio section of said receiver and for automatically by-passing said manual on and off switch of said receiver to energize said receiver irrespective of the position of said manual on and off switch.

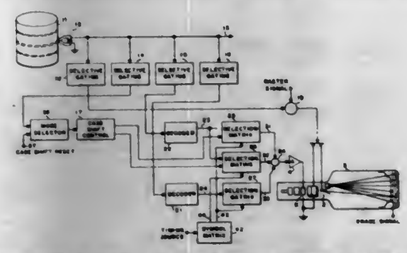
3,130,397
CATHODE RAY TUBE DISPLAY SYSTEM HAVING BOTH SPECIFIC SYMBOL AND GENERALIZED DATA CONTROL OF THE TUBE DISPLAY

Elmer C. Simmons, Whitman, Mass., assignor to Laboratory for Electronics, Inc., Boston, Mass., a corporation of Delaware

Filed Oct. 8, 1958, Ser. No. 765,973
8 Claims. (Cl. 340—324)

1. A system for selectively representing line configurations composed of generalized data symbols, or messages composed of alpha-numeric data symbols on the viewing screen of a direct-display storage tube in response to applied input signals, said input signals comprising digitally encoded data symbols as well as case

shift and positional data, a core symbol matrix having a plurality of core groupings each connected by a linking wire, means for sequentially pulsing said cores to produce pulse signals on respective linking wires each representative of one of said data symbols, said linking wires consisting of first and second groups carrying pulse signals representative of said alpha-numeric data symbols and of said generalized data symbols respectively, means

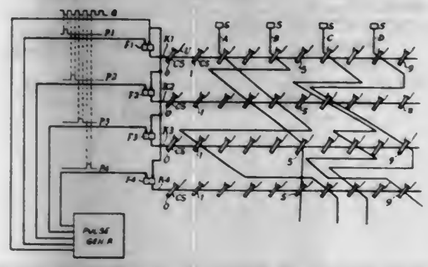


responsive to said digitally encoded case shift data for selecting one of said groups, means responsive to said digitally encoded data symbols for applying pulse signals from the selected group to said direct-display storage tube to represent the corresponding data symbols on the screen thereof, and means responsive to said digitally encoded positional data to position said data symbols on said screen.

3,130,398
ELECTRICAL CODE TRANSLATORS

Arye Leib Freedman, Stevenage, England, assignor to Ericsson Telephones Limited, London, England, a British company

Filed Dec. 22, 1958, Ser. No. 782,021
Claims priority, application Great Britain Jan. 2, 1958
8 Claims. (Cl. 340—347)

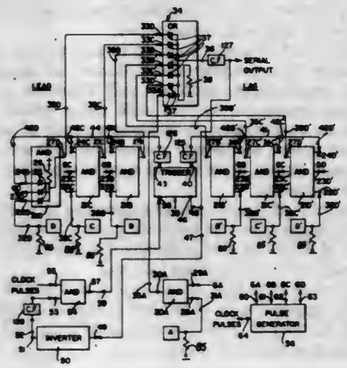


4. An electrical code translator comprising a plurality of groups of cores of ferro-magnetic material, an individual output wire for each of said cores magnetically coupled to the respective core, a plurality of input wires, each input wire being magnetically coupled to a set of said cores, each said set of cores including one core from each group, and individual control wire for each group of cores magnetically coupled to apply a magnetomotive force to all the cores of the respective group in response to a control signal in said wire, input means and means connecting said input means to the input wires whereby an input signal may be applied to any selected one of said input wires to apply a magnetomotive force to each of the cores magnetically coupled to said selective one of input wires, each said core being responsive to both an input signal and a control signal in respective input and control wires associated with said core to cause an output signal to be generated in the output wire for the core, and a control circuit means and means connecting said control circuit means to said control wires, said control circuit means being so constructed and operatively connected to apply control signals selectively to said control wires in predetermined timed relationship with respect to the input signals in the selected input wire to cause said output signals from the cores of the set corresponding to the selected input wire and located in the different groups to be generated individually and selectively in timed sequence.

3,130,399
INFORMATION HANDLING APPARATUS

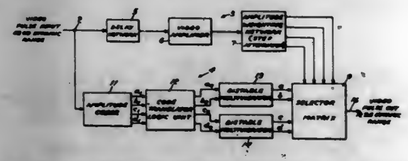
Archie J. Paul, Jr., Wappingers Falls, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 26, 1958, Ser. No. 783,019
14 Claims. (Cl. 340—347)



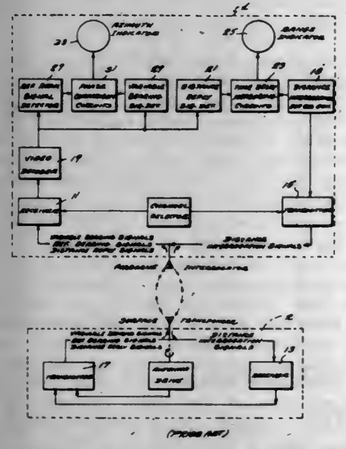
1. In an apparatus for converting analog information to digital information including a plurality of terminals and means for applying to said terminals signals representative of digital information, in combination, a first terminal for sensing a signal representative of a first digit, a terminal pair including a second terminal and a third terminal for sensing a signal representative of a second digit, means including a multi-input OR circuit for providing a single output common to all of said terminals, a plurality of coincidence circuits, a single one of said coincidence circuits being provided for each of said terminals, each of said coincidence circuits having a plurality of inputs and an output connected to one of the inputs of said OR circuit, one input of each of said coincidence circuits being connected to one of said terminals, a bistable electronic device having an input connected to said single common output, said bistable device having one output connected to another input of the coincidence circuit of said second terminal for applying an enabling signal thereto when said device is in one of its stable conditions and said bistable device having another output connected to another input of the coincidence circuit of said third terminal for applying an enabling signal thereto when said device is in its other stable condition, to thereby selectively condition the coincidence circuits of said terminal pair for producing at said OR circuit output digital information representative of the information on the selected terminal, and means connected to another input of the coincidence circuit of said first terminal and to a third input of the coincidence circuits of said terminal pair for enabling first the coincidence circuit of said first terminal and then the coincidence circuits of said terminal pair to produce sequential digital signals at said single common output respectively representative of the information appearing at said first terminal and at the selected terminal of said pair.

3,130,400
PULSE AMPLITUDE COMPRESSION SYSTEM
Carver L. Washburn, Wayne, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Nov. 10, 1959, Ser. No. 852,148
7 Claims. (Cl. 340—347)

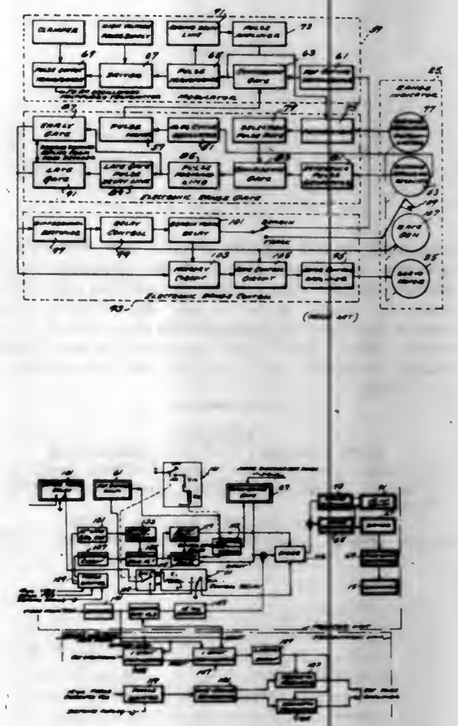


1. A pulse amplitude compression system compressing pulses having a wide range of amplitude variation into a relatively narrow range of amplitude variation comprising:
a source of said wide range pulses;
a plurality of channels coupled to said source equal in number to a predetermined number of segments of said wide range, each of said channels including means responsive to said wide range pulses to provide an output pulse in response to each of said wide range pulses, a different one of said channels providing said output pulse in said narrow range for each of said segments;
means coupled to said source responsive to each of said wide range pulses to generate a control signal indicative of which of said segments the amplitude of each of said wide range pulses fall; and
means coupled to said channels and said means to generate responsive to said control signal to select that one channel of said channels providing said output pulse in said narrow range.

3,130,401
NAVIGATION SYSTEM
Milford R. Murphy, Arlington, Tex., assignor to Bell Aerospace Corporation, Wheatfield, N.Y., a corporation of Delaware
Filed Oct. 7, 1960, Ser. No. 61,253
6 Claims. (Cl. 343—6)



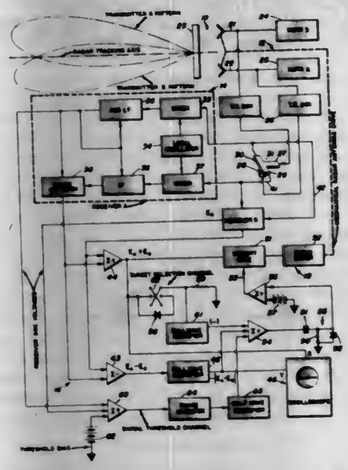
1. A navigation control system including a plurality of participating craft, each of said craft having a telemetering transceiver, means for transmitting reference bearing signals and variable bearing signals to said craft, means in each said transceiver for receiving said reference bearing signals and variable bearing signals, means in each said transceiver for communicating distance information to other participating craft as a function of said reference bearing and variable bearing signals, plan position display means in each said craft, means for producing a PPI



sweep on each of said displays which is phase locked with said reference bearing signal and means for visually presenting the position of all said craft relative to each other on each said plan position indicator within respective craft.

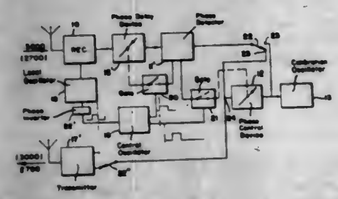
3,130,402
MEANS FOR TRACKING MULTIPLE TARGET FORMATIONS BY RADAR
John H. Kuck, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Feb. 12, 1957, Ser. No. 639,839
13 Claims. (Cl. 343—7.4)

1. In a radar, apparatus for tracking multiple target formations, comprising, means for transmitting electromagnetic energy distributed in a plurality of separated lobes, means for receiving energy reflected from plural targets within the separated transmission lobes, means for deriving from said received energy a plurality of error voltages, means for separating said error voltages with respect to the particular transmitted lobe whence the received energy originated, a normally nonconductive memory gate receiving at least one of said separated error voltages, a servomotor controlled by the output of said memory gate for altering the pointing of the radar antenna,



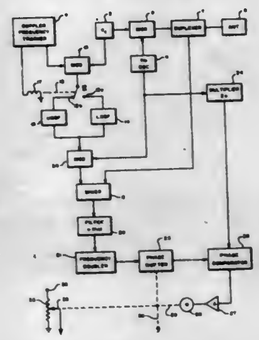
means for comparing the amplitudes of at least a pair of said separated error signals, and means for rendering said memory gate conductive upon the appearance of equal amplitude signals in said comparing means.

3,130,403
APPARATUS FOR USE IN DISTANCE MEASUREMENT
Carl-Erik Granqvist, Lidingo, Sweden, assignor to Svenska Aktiebolaget Gasaccumulator, Lidingo, Sweden, a corporation of Sweden
Filed Sept. 11, 1958, Ser. No. 760,420
Claims priority, application Sweden Sept. 14, 1957
11 Claims. (Cl. 343—12)



1. Apparatus for use in distance measurement by means of electromagnetic wave signals, comprising a receiver for receiving a periodic signal of predetermined nature, a transmitter for transmitting a periodic signal of the same nature as the one received, a phase measuring device for comparing the phase of the transmitter signal with that of the received signal, a phase control device, and automatic switching means for causing the phase control device during predetermined intervals to respond to the phase measuring device for controlling the phase of the transmitter signal relative to that of the received signal, said phase control device having a measure of inertia proportioned relative to the switching rate of said automatic switching means whereby said phase control device maintains between said predetermined intervals a substantially constant rate of phase change, thereby to counteract any frequency difference between said received and said transmitted periodic signal.

3,130,404
F.M. RANGE FINDER WITH DOPPLER ERROR COMPENSATION
Walter R. Fried, Briarcliff Manor, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Filed May 29, 1961, Ser. No. 113,518
10 Claims. (Cl. 343—14)



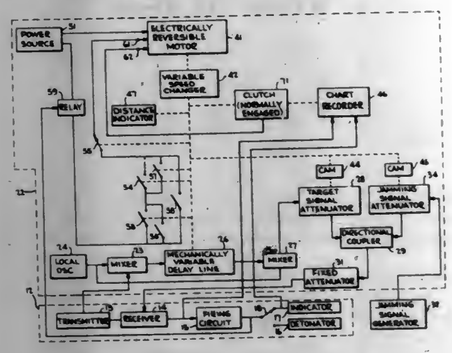
10. A frequency modulated continuous wave radio range finder comprising, means for propagating a beam of frequency modulated carrier waves having a plurality of upper and lower sidebands toward a target which has a relative velocity with respect to the propagating means and for receiving the back scattered radiation from the target, means for displacing the carrier wave frequency by an amount corresponding to the velocity between the propagating means and the target along the beam of radiated energy, means including a mixer responsive to the displaced carrier wave and to the received back scattered radiation from the target for causing corresponding upper and lower sidebands of the received back scattered radiation to overlie each other, filter means responsive to the output from said means including the mixer for selecting and doubling the frequency of one pair of said overlying corresponding sidebands, means for multiplying the modulating frequency so that it equals the doubled frequency, and means for comparing the phases of the doubled frequency and the multiplied modulating frequency and for providing a signal which corresponds to the phase difference between said signals being phase compared.

3,130,405
ELECTRONIC BEAT FREQUENCY TARGET SIMULATOR
Lawrence R. Kelly, Jr., Washington, D.C., assignor to the United States of America as represented by the Secretary of the Army
Filed Nov. 14, 1962, Ser. No. 237,770
5 Claims. (Cl. 343—17.7)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. Apparatus for testing a radio-type distance responsive device having a radio transmitter and having a radio receiver responsive to a signal returned from a target, said apparatus comprising:
(a) an input terminal for connection to the output of said transmitter,
(b) a local oscillator,
(c) a first mixer for mixing the output of said transmitter with a signal from said local oscillator,
(d) a variable delay line connected to the output of said first mixer,
(e) a second mixer for mixing the output of said variable delay line with a signal from said local oscillator to obtain a delayed transmitter-frequency signal,

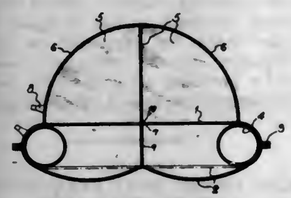
(*f*) means for coupling said delayed transmitter-frequency signal to said receiver, and

(*g*) means for varying the delay of said line, and



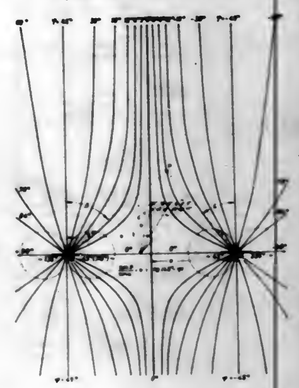
(*h*) means, responsive to said means for varying the delay, for variably attenuating said delayed signal so as to maintain a predetermined relationship between delay and attenuation.

3,130,406
RADAR REFLECTORS AND LIFE RAFTS INCORPORATING SAME
James Jones-Hinton, Tanworth-in-Arden, Solihull, and Thomas Edward Horace Gray, Wylde Green, Sutton Coldfield, England, assignors to Dunlop Rubber Company Limited, London, England, a British company
Filed May 1, 1959, Ser. No. 810,333
Claims priority, application Great Britain May 3, 1958
11 Claims. (Cl. 343—18)



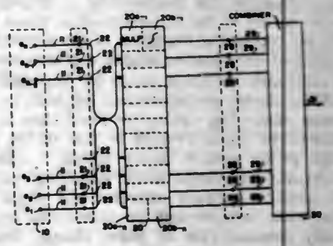
1. A radar reflector for radio waves which comprises a circular sheet of flexible material having at least a circular central section reflective of radio waves, an inflatable endless tube encircling said sheet and secured along the periphery of said sheet to hold said central section of said sheet taut and flat upon inflation of said tube, a second circular sheet of flexible material secured at its periphery to said tube, said two sheets being disposed on opposite sides of said tube, four sheets of flexible material reflective to radio waves secured by their edges to the first mentioned circular sheet along intersecting lines lying in said first mentioned circular sheet and meeting and secured together on a line normal to the plane of said first mentioned circular sheet at the intersection of said intersecting lines, and means supported by said tube and inflatable therewith and secured to said four sheets to hold said four sheets taut, flat and perpendicular to each other and to said first mentioned circular sheet to form a cluster of four corner reflectors.

3,130,407
TWIN BEACON SYSTEM
Ernst Kramar, Pforzheim, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Sept. 11, 1961, Ser. No. 137,411
Claims priority, application Germany Sept. 24, 1960
7 Claims. (Cl. 343—107)



1. A radio navigation system to derive positional information on board a vehicle comprising at a ground installation first and second antenna means positioned on either side of a line of symmetry and spaced therefrom by several wavelengths of the operating radio frequency, two sources of radio frequency signals of different frequencies, each of the antenna means radiating a directive modulation pattern, said patterns being identical and located mirror image like with respect to said line of symmetry, said antenna means being energized by said sources of radio frequency signals respectively, so that a composite modulation pattern is created in space and the equivalent is set up in a receiver carried by said vehicle composed of said directive modulation patterns, said composite pattern representing loci of equal electrical quantities providing positional information with respect to said line of symmetry; airborne receiving means to derive from said composite pattern in space and said equivalent set up in said receiver, said positional information representative of the value of said loci indicative of the spatial deviation of said vehicle from said line of symmetry.

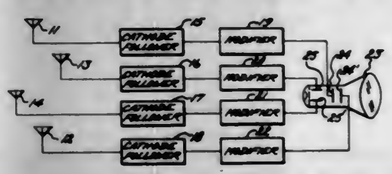
3,130,408
SIGNAL DIRECTION FINDER SYSTEM
Masao Kumano, Tokyo, Japan, assignor to Nippon Electric Company Limited, Tokyo, Japan, a corporation of Japan
Filed Apr. 18, 1960, Ser. No. 22,853
Claims priority, application Japan Apr. 21, 1959
3 Claims. (Cl. 343—113)



1. In a signal direction finder system for determining the direction of a remote object by signals transmitted

therefrom, an array of a plurality of "*n*" individual signal receptors arrayed in a predetermined manner and fixing the receptor direction for delivering, respectively, corresponding "*n*" individual receptor signals, wherein "*n*" is at least four, combining means having a plurality of "*n*" individual receiving terminals corresponding, respectively, to said "*n*" receptors and operative in response to all received individual receptor signals for producing a resultant deviation output signal corresponding to the deviation angle of said receptor direction from the object direction, and suppressor means including a set of "*n*" input terminals and a set of "*n*" output terminals corresponding, respectively, to and connected between said individual "*n*" receptors and to said "*n*" receiving terminals, and "*n*" correlating means correspoding to and connected between the individual "*n*" input and "*n*" output terminals of said suppressor means, each of said "*n*" correlating means being also interconnected with all others of said input terminals for correlating the received receptor signal with all other receptor signals and responsive thereto to produce a corresponding noise-clear receptor signal which is substantially free of noise signals, said suppressor means including a plurality of multiplying means sufficient in number to generate the cross-correlation function between each receptor signal; a plurality of means for integrating the output of said multiplying means connected to each of said multiplier means.

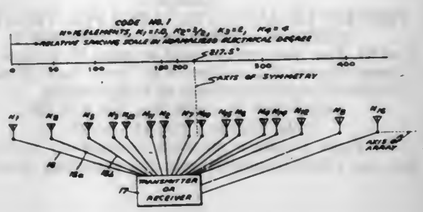
3,130,409
RADIO DIRECTION FINDING SYSTEM
Leonard C. Humphrey, Dryden, N.Y., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Feb. 12, 1962, Ser. No. 172,832
3 Claims. (Cl. 343—113)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A radio direction finding system comprising, first and second pairs of spaced vertical antennas, said first pair of antennas being disposed at right angles to said second pair, means for converting the output voltage waveform of each of said antennas into a sawtooth voltage waveform representative of the relative arrival times of the respective waveforms, means for obtaining a first signal voltage representing the difference between the separate sawtooth waveforms responsive to the output of said first pair of antennas, means for obtaining a second signal voltage representing the difference between the separate sawtooth waveforms responsive to the output of said second pair of antennas, and means for comparing first and second signal voltages.

3,130,410
SPACE CODED LINEAR ARRAY ANTENNA
Frank S. Gutleber, Wayne Township, Passaic County, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Oct. 23, 1961, Ser. No. 146,906
5 Claims. (Cl. 343—844)

1. A linear array antenna comprising N individual elements, where N is an integral power of the base 2, and means for supplying the same amount of power in the same signal phase to each of said N individual elements, the spacing between said individual elements being determined by the values selected for $K_{(X+1)}$, where K is a design parameter and is the ratio of the sine of any particular value of the space angle θ, formed by the axis of the



antenna array and a line drawn from the array, divided by the sine of the particular space angle where the null of the main lobe of the antenna radiation pattern occurs, said spacing also being determined according to the equations

$$N_{(2^1+1)}=N_1+\frac{1}{2K_{(X+1)}}$$

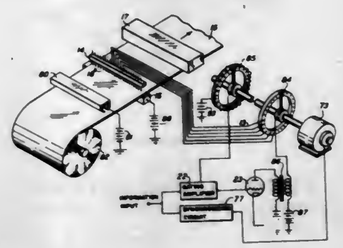
$$N_{(2^1+2)}=N_2+\frac{1}{2K_{(X+1)}}$$

.....

$$N_{(2^1+2^2)}=N_{(2^2)}+\frac{1}{2K_{(X+1)}}$$

where the subscript of N identifies the coded position of that particular element of said N elements and X is an index number assuming values 1, 2, 3, 4, etc.

3,130,411
ELECTRONIC RECORDER
Frederick A. Schwertz, Pittsford, N.Y., assignor to Xerox Corporation, a corporation of New York
Filed Aug. 29, 1960, Ser. No. 52,454
10 Claims. (Cl. 346—74)

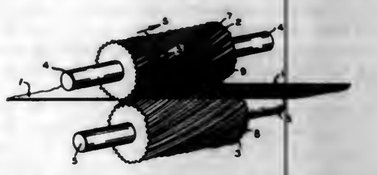


4. A half-tone recorder comprising in combination means to periodically sample a wave-form-containing electrical signal at a sampling frequency substantially greater than the highest frequency to be recorded, means to convert each wave form sample into an electrical impulse corresponding in magnitude to the magnitude of said wave form sample, a dielectric surfaced cylindrical recording member, means to rotate said recording member about its axis, a pointed electrode positioned closely adjacent to the dielectric surface of said member, means to move said electrode paraxially with said member as said member rotates and at a velocity substantially less than the surface velocity of said member, and means to apply each said electrical impulse to said electrode to form a gaseous discharge thereat thereby forming in time depend-

ent spaced relation on said recording member areas of electrostatic charge corresponding in size to the magnitude of said electrical impulses and thus to the magnitude of said wave form samples.

3,130,412
PROCESS OF AND APPARATUS FOR TREATING SHEET MATERIALS AND PRODUCT
Karl M. Fox, Swarthmore, and Richard W. Schutte, Newtown Square, Pa., assignors to Scott Paper Company, Chester, Pa., a corporation of Pennsylvania
Filed July 31, 1959, Ser. No. 830,779
14 Claims. (Cl. 161—130)

11. Paper having a plurality of regularly spaced valleys and ridges formed therein and extending throughout its area, the valleys on one side of the paper constituting the ridges on the other side thereof, and having a regu-

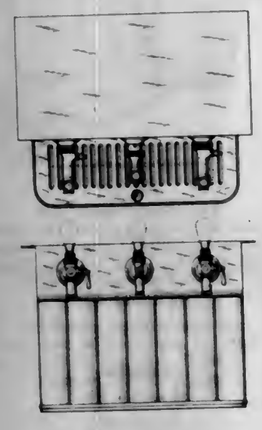


larly disposed pattern of valley and ridge intersections where are present a planar twisting deformation of the paper.

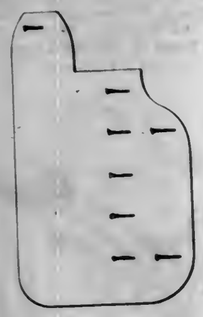
DESIGNS

APRIL 21, 1964

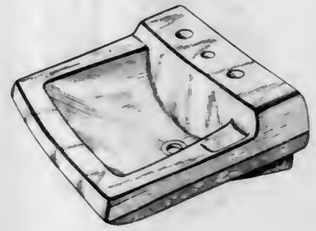
198,014
BEER DISPENSER
Henry E. Frey, 26 Mayflower Court, Freeport, N.Y.
Filed Oct. 17, 1962, Ser. No. 72,148
Term of patent 14 years
(Cl. D2—3)



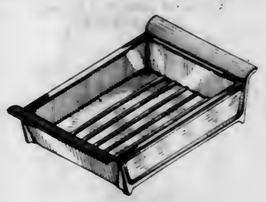
198,015
SEALING FLAP FOR GARMENT OPENINGS
Mario Di Paolo, Natick, Mass., assignor to the United States of America as represented by the Secretary of the Army
Filed Sept. 4, 1962, Ser. No. 71,567
Term of patent 14 years
(Cl. D3—26)
(Granted under Title 35, U.S. Code (1952), sec. 266)



198,016
LAVATORY
Jack N. Kaiser, Louisville, Ky., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Apr. 2, 1962, Ser. No. 69,529
Term of patent 14 years
(Cl. D4—2)



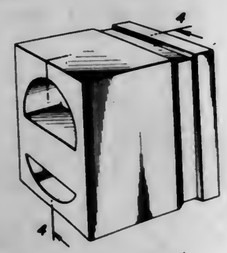
198,017
SOAP DISH
Bertrand N. Trombley, Bloomfield Hills, Mich., assignor to Harper J. Ransburg Company, Inc., a corporation of Indiana
Filed July 2, 1963, Ser. No. 75,618
Term of patent 14 years
(Cl. D4—3)



198,018
TOILET OR SIMILAR ARTICLE
Ronald Wadsworth, Pasadena, Calif., assignor to Norris-Thermador Corporation, Los Angeles, Calif., a corporation of California
Filed July 9, 1963, Ser. No. 76,004
Term of patent 14 years
(Cl. D4—5)



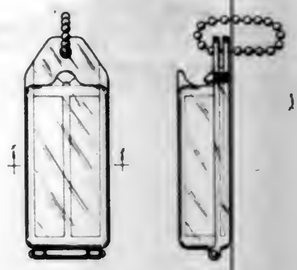
198,019
COMBINED HAND GRIP AND TREAD BLOCK FOR MANHOLES, SHIPLOCKS AND SWIMMING POOLS
Jan Zuidhof, 1914 Hamilton St., Orlando, Fla.
Filed July 8, 1963, Ser. No. 75,703
Term of patent 14 years
(Cl. D13—1)



198,020
COMBINED CHAIR AND HAIR DRIER
Frederic Weinberg, 1514 W. Chew Ave., Philadelphia, Pa.
Filed Jan. 30, 1963, Ser. No. 73,371
Term of patent 14 years
(Cl. D15—3)



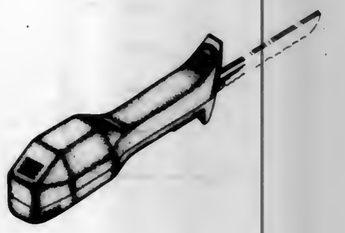
198,021
COMBINED KEY CHAIN AND ARTICLE HOLDER
Marie B. Bush, 5701 Haines Road, St. Petersburg, Fla., assignor of one-half to Lee E. Arnold, St. Petersburg, Fla.
Filed Apr. 19, 1963, Ser. No. 74,525
Term of patent 14 years
(Cl. D17—14)



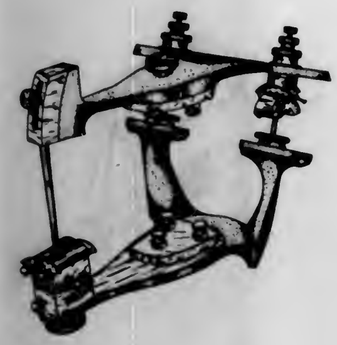
198,022
ELECTRIC SHAVER
Maximilian T. Edwards, 5450 University Blvd., Vancouver, British Columbia, Canada
Filed Nov. 13, 1962, Ser. No. 72,488
Term of patent 3½ years
(Cl. D22—3)



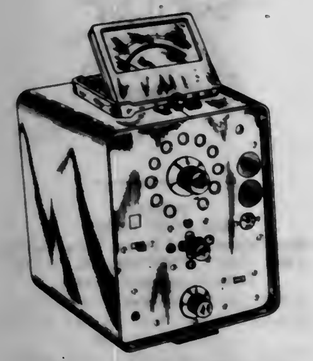
198,023
CARVING KNIFE OR SIMILAR ARTICLE
Haim J. Shwisha, 2 Beekman Place, New York, N.Y.
Filed Oct. 22, 1963, Ser. No. 77,086
Term of patent 14 years
(Cl. D22—3)

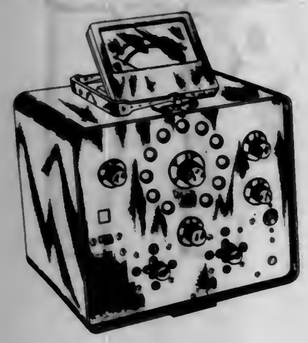


198,024
DENTAL ARTICULATOR
Anthony J. De Pietro, Springfield, Pa., assignor to Medical Electronics and Research Corporation, Camden, N.J., a corporation of New Jersey
Filed Dec. 10, 1962, Ser. No. 72,773
Term of patent 14 years
(Cl. D24—1)



198,025
GAUSSMETER
Richard W. Seabury, Jr., Old Lane, Towaco, N.J., and William A. Yonkers, 75 Pollard Road, Mountain Lakes, N.J.
Continuation of design applications Ser. No. 66,615, Sept. 5, 1961, and 66,616, Sept. 6, 1961. This application Dec. 17, 1963, Ser. No. 77,884
Term of patent 14 years
(Cl. D26—1)

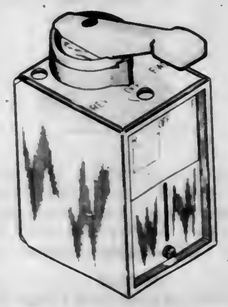




198,026
INFORMATION STORAGE UNIT
Calvin Fujimoto, Los Angeles, Melvin H. Best, Pasadena, and Clair A. Samhammer, Altadena, Calif., assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed Jan. 18, 1962, Ser. No. 68,363
Term of patent 14 years
(Cl. D26—5)



198,027
ELECTRIC CONTROLLER
Harry J. Collins, Jr., Bayside, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Jan. 8, 1962, Ser. No. 68,210
Term of patent 14 years
(Cl. D26—13)



198,028
KNOB OPERATOR ASSEMBLY
Harry J. Collins, Jr., Bayside, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Jan. 8, 1962, Ser. No. 68,211
Term of patent 14 years
(Cl. D26—13)



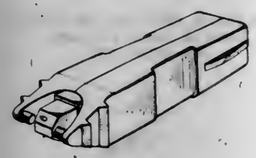
198,029
LEVER OPERATOR ASSEMBLY
Harry J. Collins, Jr., Bayside, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Jan. 8, 1962, Ser. No. 68,227
Term of patent 14 years
(Cl. D26—13)



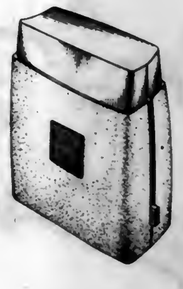
198,030
CONTROL KNOB
Walter L. Hill, South Lincoln, and Henry B. Hoover, Lincoln, Mass., assignors to Raytheon Company, Lexington, Mass., a corporation of Delaware
Filed Apr. 26, 1963, Ser. No. 74,635
Term of patent 14 years
(Cl. D26—13)



198,031
PHONOGRAPH CARTRIDGE
Clarence F. Jensen, 124 Morningside Ave., Lombard, Ill.
Filed Aug. 12, 1960, Ser. No. 61,730
Term of patent 14 years
(Cl. D26—14)



198,032
PORTABLE TRANSMITTER
Robert D. Leland, Royal Oak, and Peter J. Duenas, Farmington Township, Mich., assignors to Multi-Elmac Company, Oak Park, Mich., a corporation of Michigan
Filed Oct. 9, 1963, Ser. No. 76,925
Term of patent 7 years
(Cl. D26—14)



198,033
BADGE OR SIMILAR ARTICLE
Charles Warren Mayer, 129 S. Prospect, Rockford, Ill.
Filed Dec. 28, 1962, Ser. No. 72,977
Term of patent 14 years
(Cl. D29—11)



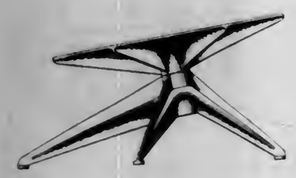
198,034
HOLSTER BODY
Harvey Brent Mason, 142 Loma Vista, Covina, Calif.
Filed Mar. 1, 1963, Ser. No. 73,778
Term of patent 14 years
(Cl. D30—1)



198,035
SUPPORT BRACKET FOR RETAINING A MIRROR
Ralph E. Conner, North Wilkesboro, N.C., assignor to The Carolina Mirror Corporation, North Wilkesboro, N.C., a corporation of North Carolina
Filed Mar. 8, 1963, Ser. No. 73,896
Term of patent 14 years
(Cl. D33—3)



198,036
AMUSEMENT ROUNDABOUT TABLE
Richard E. Ayres, 32501 Road 228, Woodlake, Calif.
Filed Jan. 21, 1963, Ser. No. 73,253
Term of patent 3½ years
(Cl. D34—5)



198,037
GOLF BALL POSITION MARKER
Keith B. Thayer, 3839 Buffalo Speedway, Houston 6, Tex.
Filed June 7, 1963, Ser. No. 75,267
Term of patent 14 years
(Cl. D34—5)



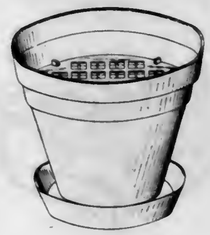
198,038
TOY AIRPLANE
Clyde E. Huston, Jr., 2691 Thorndate, Columbus, Ohio
Filed Sept. 10, 1963, Ser. No. 76,550
Term of patent 14 years
(Cl. D34—15)



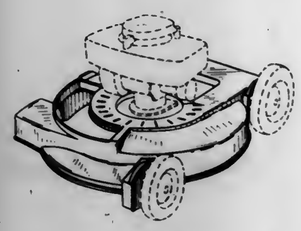
198,039
TOY AIR GUN
Laurie Jay Campbell, Erie, Pa., assignor to Louis Marx & Co., Inc., New York, N.Y., a corporation of New York
Filed Dec. 13, 1963, Ser. No. 77,785
Term of patent 14 years
(Cl. D34—15)



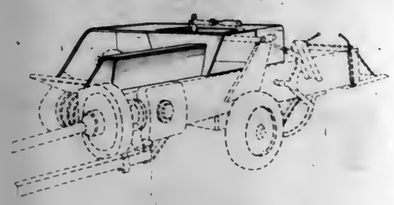
198,040
FLOWER POT, SAUCER, AND FLOWER-ARRANGING DISC COMBINATION
James E. Bonham, Mount Prospect, and Stanley R. Blackwell, Elmwood Park, Ill., assignors to Quality Molding Company, Addison, Ill., a corporation of Illinois
Filed Mar. 12, 1962, Ser. No. 69,201
Term of patent 3½ years
(Cl. D35—3)



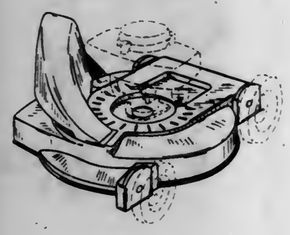
198,041
LAWN MOWER HOUSING
Clifford Brooks Stevens, Fox Point, Wis., assignor to Outboard Marine Corporation, Waukegan, Ill., a corporation of Delaware
Filed Apr. 27, 1962, Ser. No. 69,882
Term of patent 14 years
(Cl. D40—1)



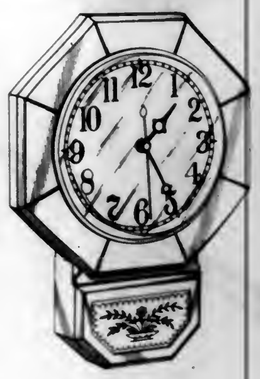
198,042
SHROUD FOR A HAY BALER
James R. McGirk, Medinah, Ill., and William D. Syrett, South Bend, Ind., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Oct. 15, 1962, Ser. No. 72,098
Term of patent 14 years
(Cl. D40—1)



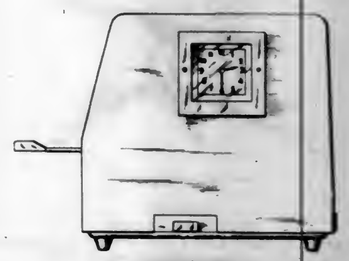
198,043
LAWN MOWER HOUSING
Clifford Brooks Stevens, Milwaukee, Wis., assignor to Outboard Marine Corporation, Waukegan, Ill., a corporation of Delaware
Original design application Apr. 27, 1962, Ser. No. 69,882. Divided and this application Sept. 20, 1963, Ser. No. 77,734
Term of patent 14 years
(Cl. D40—1)



198,044
CLOCK OR SIMILAR ARTICLE
Morris W. Wilson, Natick, Mass., assignor to General Electric Company, a corporation of New York
Filed Feb. 28, 1963, Ser. No. 73,755
Term of patent 14 years
(Cl. D42—7)



198,045
TIME PUNCH OR SIMILAR ARTICLE
John J. Brett, Cleveland, Ohio, and Albert Hohmann, Brooklyn, N.Y., assignors, by mesne assignments, to Consolidated Dynamics Corporation, Brooklyn, N.Y., a corporation of New York
Filed June 18, 1963, Ser. No. 75,405
Term of patent 14 years
(Cl. D42—7)



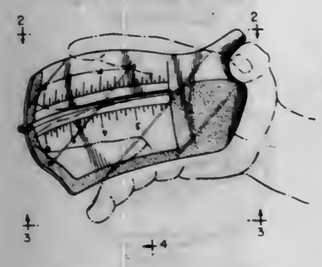
198,046
ICE RETAINER FOR A DRINKING GLASS
Edward H. Seeley, Binghamton, N.Y., assignor to Clarence S. Oakley, Jr., Binghamton, N.Y.
Filed Jan. 28, 1963, Ser. No. 73,328
Term of patent 7 years
(Cl. D44—29)



198,047
AUTOMATIC OIL CHANGER
Oliver G. Lewis, Westfield, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed Jan. 28, 1963, Ser. No. 73,343
Term of patent 14 years
(Cl. D52—2)



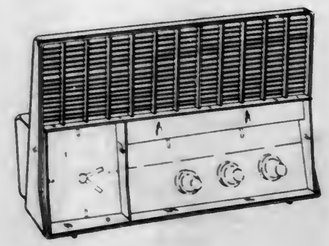
198,048
FINGER SPACE GAUGE FOR BOWLING BALLS
Edward N. Norman, 3016 E. 98th St., Chicago, Ill.
Filed June 14, 1962, Ser. No. 70,545
Term of patent 3½ years
(Cl. D52—6)



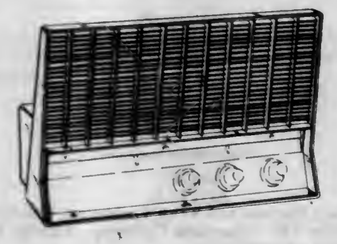
198,049
METER HOUSING
Robert L. Whitman, Jackson, Mich., assignor to Handley Industries, Inc., Jackson, Mich., a corporation of Michigan
Filed June 25, 1963, Ser. No. 75,515
Term of patent 14 years
(Cl. D52—6)



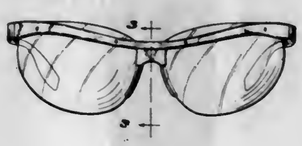
198,050
CLOCK RADIO
Samuel Frankel, 236 5th Ave., New York 1, N.Y.
Filed Apr. 24, 1962, Ser. No. 69,833
Term of patent 3½ years
(Cl. D56—4)



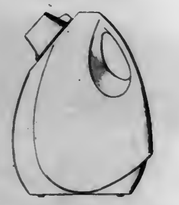
198,051
RADIO
Samuel Frankel, 236 5th Ave., New York 1, N.Y.
Filed Apr. 24, 1962, Ser. No. 69,834
Term of patent 3½ years
(Cl. D56—4)



198,052
PAIR OF SUNGLASSES OR THE LIKE
Albert C. Petitto, Hudson, Mass., assignor to Foster Grant Co., Inc., Leominster, Mass.
Filed Jan. 17, 1963, Ser. No. 73,216
Term of patent 14 years
(Cl. D57—1)



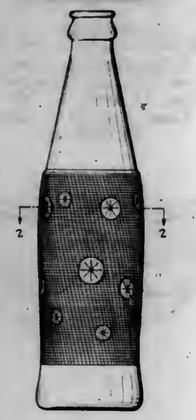
198,053
JUG OR SIMILAR ARTICLE
Louis K. Warden, Laguna Beach, Calif., assignor to Purex Corporation, Ltd., Lakewood, Calif., a corporation of California
Substituted for abandoned design application Ser. No. 71,689, Sept. 14, 1962. This application Oct. 3, 1963, Ser. No. 76,969
Term of patent 14 years
(Cl. D58—5)



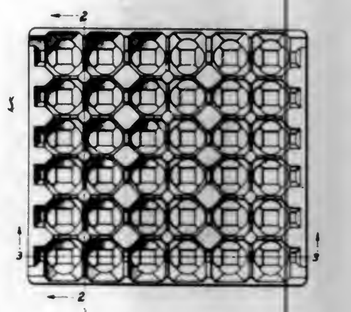
198,054
BOTTLE
Alan B. Lowry, Canton, Mass., assignor to The Gillette Company, Boston, Mass., a corporation of Delaware
Filed Aug. 23, 1961, Ser. No. 66,463
Term of patent 14 years
(Cl. D58—8)



198,055
BOTTLE
Robert Sidney Dickens and Kenji Yoshizumi, Chicago, Ill., assignors to The Coca-Cola Company, Atlanta, Ga., a corporation of Delaware
Filed Aug. 5, 1963, Ser. No. 76,104
Term of patent 14 years
(Cl. D58—8)



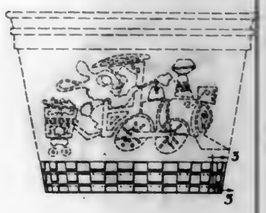
198,056
EGG TRAY
Walter H. Randall, Waterville, Maine, assignor to Keyes Fibre Company, Portland, Maine, a corporation of Maine
Original design application Oct. 2, 1962, Ser. No. 71,962. Divided and this application Nov. 4, 1963, Ser. No. 77,539
Term of patent 14 years
(Cl. D58—13)



198,057
FOOD STORAGE CONTAINER
James B. Swett, Barrington, R.I., assignor to Rexall Drug and Chemical Company, Los Angeles, Calif., a corporation of Delaware
Filed July 7, 1961, Ser. No. 65,840
Term of patent 14 years
(Cl. D58—17)



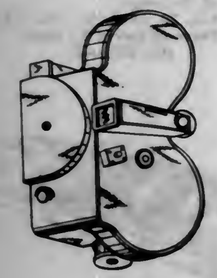
198,058
CONTAINER FOR DAIRY PRODUCTS OR THE LIKE
Clara Virginia Eicholtz, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Original design application Sept. 19, 1962, Ser. No. 71,777, now Design Patent No. 196,004, dated Aug. 13, 1963. Divided and this application July 1, 1963, Ser. No. 75,609
Term of patent 14 years
(Cl. D58—17)



198,059
BOTTLE CAP
Harold J. Vanderhyde, North Merrick, N.Y., assignor to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
Filed Aug. 27, 1962, Ser. No. 71,458
Term of patent 14 years
(Cl. D58—26)



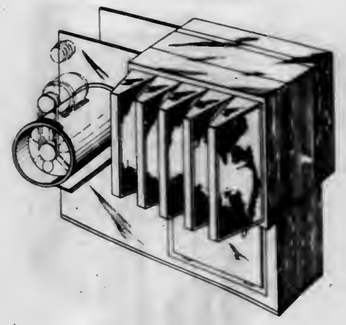
198,060
MOTION PICTURE CAMERA HOUSING
Donald L. Coakley, Golden, Colo.
Filed Dec. 18, 1961, Ser. No. 67,929
Term of patent 14 years
(Cl. D61—1)



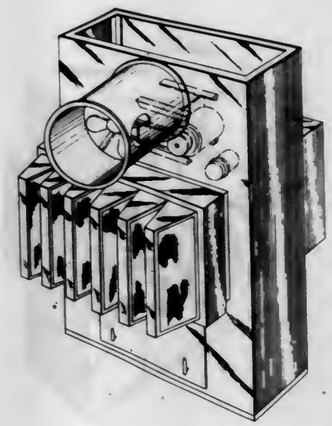
198,061
MOTION PICTURE CAMERA
Arthur H. Crapsey, Jr., Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Apr. 5, 1962, Ser. No. 69,588
Term of patent 7 years
(Cl. D61—1)



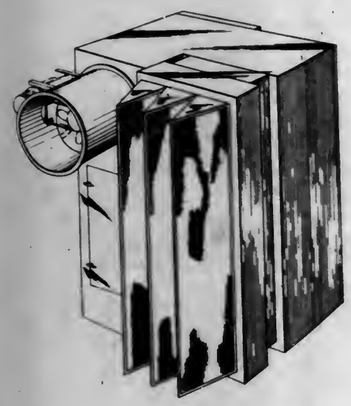
198,062
MIXING BOX FOR AN AIR CONDITIONING SYSTEM
Leonard D. Terry, Jr., Salisbury, N.C., assignor to Grinnell Corporation, Providence, R. I., a corporation of Delaware
Filed Sept. 11, 1961, Ser. No. 66,679
Term of patent 14 years
(Cl. D62—4)



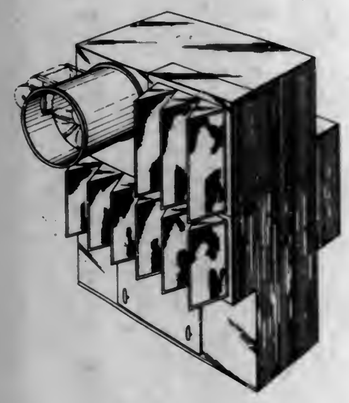
198,063
MIXING BOX FOR AN AIR CONDITIONING SYSTEM
Leonard D. Terry, Jr., Salisbury, N.C., assignor to Grinnell Corporation, Providence, R.I., a corporattion of Delaware
Filed Sept. 11, 1961, Ser. No. 66,680
Term of patent 14 years
(Cl. D62—4)



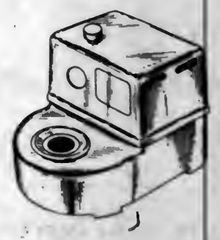
198,064
MIXING BOX FOR AN AIR CONDITIONING SYSTEM
Leonard D. Terry, Jr., Salisbury, N.C., assignor to Grinnell Corporation, Providence, R.I., a corporation of Delaware
Filed Sept. 11, 1961, Ser. No. 66,681
Term of patent 14 years
(Cl. D62—4)



198,065
MIXING BOX FOR AN AIR CONDITIONING SYSTEM
Leonard D. Terry, Jr., Salisbury, N.C., assignor to Grinnell Corporation, Providence, R.I., a corporation of Delaware
Filed Sept. 11, 1961, Ser. No. 66,682
Term of patent 14 years
(Cl. D62—4)



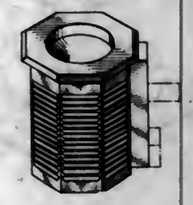
198,066
FLUID INJECTOR PUMP HOUSING
Volney M. Jemison and Don H. Young, both of 1423 S. 28th St., Phoenix, Ariz.
Filed Dec. 20, 1961, Ser. No. 67,992
Term of patent 14 years
(Cl. D65—1)



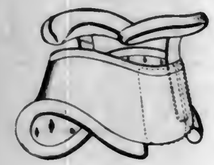
198,067
VEHICLE
Edward F. Brill, Oconomowoc, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis., a corporation of Delaware
Filed Feb. 20, 1963, Ser. No. 73,660
Term of patent 14 years
(Cl. D71—1)



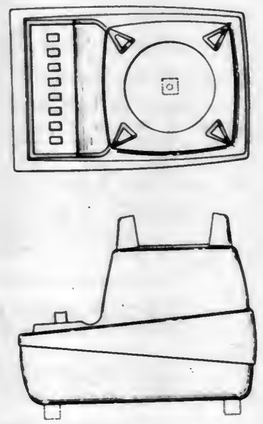
198,068
SAUNA BATH HEATING UNIT OR THE LIKE
Cleo D. Mathis, 1237 S. Greenwood Ave., Montebello, Calif.
Filed Aug. 12, 1963, Ser. No. 76,182
Term of patent 14 years
(Cl. D61—19)



198,069
CERVICAL COLLAR
Nicholas C. Connelly, Eaton Rapids, Mich., assignor to S. H. Camp & Company, Jackson, Mich., a corporation of Michigan
Filed Dec. 17, 1962, Ser. No. 72,883
Term of patent 14 years
(Cl. D83—1)



198,070
POWER UNIT FOR BLENDERS OR THE LIKE
Alexander B. Musichuk, Tallmadge, Ohio, assignor to The Hoover Company, North Canton, Ohio, a corporation of Ohio
Filed Jan. 29, 1964, Ser. No. 78,415
Term of patent 14 years
(Cl. D89—1)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 21ST DAY OF APRIL, 1964

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Bungardt, Walter, to Ronson Metals Corp. Pyrophoric alloys without iron. Re. 25,558, 4–21–64, Cl. 75—152.

Campbell, William G.: *See*—
Hurst, George H., Jr., and Campbell. Re. 25,561.

Gifford, Robert T. Method of making a rigid resilient tipped needle valved element. Re. 25,560, 4–21–64, Cl. 29—156.7.

Halliburton Co.: *See*—
Huddleston, Richard H., Jr. Re. 25,557.

Huddleston, Richard H., Jr., to Halliburton Co. Electromagnetic well logging system including phase sensitive synchronous detector and modulator means. Re. 25,557, 4–21–64, Cl. 324—1.

Hurst, George H., Jr., and W. G. Campbell. Gear shifting mechanism. Re. 25,561, 4–21–64, Cl. 74—473.

Nohl, Egon and G., to F. H. Wien IX and L. H. Wien VII. Floor cleaning and polishing device. Re. 25,556, 4–21–64, Cl. 15—546.

Nohl, Gertrud: *See*—
Nohl, Egon and G. Re. 25,556.

Petrick, William R.: *See*—
Travis, Lawrence R., and Petrick. Re. 25,559.

Ronson Metals Corp.: *See*—
Bungardt, Walter. Re. 25,558.

Travis, Lawrence R., and W. R. Petrick, to Westinghouse Electric Corp. Remote control apparatus. Re. 25,559, 4–21–64, Cl. 74—472.

Westinghouse Electric Corp.: *See*—
Travis, Lawrence R., and Petrick. Re. 25,559.

Wien, Friedrich H., IX: *See*—
Nohl, Egon and G. Re. 25,556.

Wien, Leopold H., VII: *See*—
Nohl, Egon and G. Re. 25,556.

LIST OF PLANT PATENTEES

Anderson, Frederic W., to Stribling's Nurseries, Inc. Pecan tree. 2,392, 4–21–64, Cl. 31.

Stribling's Nurseries, Inc.: *See*—
Anderson, Frederic W. 2,392.

Sturrock, David. Mango. 2,391, 4–21–64, Cl. 33.

LIST OF DESIGN PATENTEES

Allis-Chalmers Mfg. Co.: *See*—
Brill, Edward F. 198,067.

American Radiator & Standard Sanitary Corp.: *See*—
Kaiser, Jack N. 198,016.

Ayres, Richard E. Amusement roundabout table. 198,036, 4–21–64, Cl. D34—5.

Best, Melvin H.: *See*—
Fujimoto, Calvin, Best, and Samhammer. 198,026.

Blackwell, Stanley R.: *See*—
Bonham, James E., and Blackwell. 198,040.

Bonham, James E., and S. R. Blackwell, to Quality Molding Co. Flower pot, saucer, and flower-arranging disc combination. 198,040, 4–21–64, Cl. D35—3.

Brett, John J., and A. Hohmann, to Consolidated Dynamics Corp. Time punch or similar article. 198,045, 4–21–64, Cl. D42—7.

Brill, Edward F., to Allis-Chalmers Mfg. Co. Vehicle. 198,067, 4–21–64, Cl. D71—1.

Bush, Marie B., ½ to L. E. Arnold. Combined key chain and article holder. 198,021, 4–21–64, Cl. D17—14.

Camp, S. H., & Co.: *See*—
Connelly, Nicholas C. 198,069.

Campbell, Laurie J., to Louis Marx & Co., Inc. Toy air gun. 198,039, 4–21–64, Cl. D34—15.

Carolina Mirror Corp., The: *See*—
Conner, Ralph E. 198,035.

Coakley, Donald L. Motion picture camera housing. 198,060, 4–21–64, Cl. D61—1.

Coca-Cola Co., The: *See*—
Dickens, Robert S., and Yoshizumi. 198,055.

Collins, Harry J., Jr., to Cutler-Hammer, Inc. Electric controller. 198,027, 4–21–64, Cl. D26—13.

Collins, Harry J., Jr., to Cutler-Hammer, Inc. Knob operator assembly. 198,028, 4–21–64, Cl. D26—13.

Collins, Harry J., Jr., to Cutler-Hammer, Inc. Lever operated assembly. 198,029, 4–21–64, Cl. D26—13.

Connelly, Nicholas C., to S. H. Camp & Co. Cervical collar. 198,069, 4–21–64, Cl. D83—1.

Conner, Ralph E., to The Carolina Mirror Corp. Support bracket for retaining a mirror. 198,035, 4–21–64, Cl. D33—3.

Consolidated Dynamics Corp.: *See*—
Brett, John J., and Hohmann. 198,045.

Crapsey, Arthur H., Jr., to Eastman Kodak Co. Motion picture camera. 198,061, 4–21–64, Cl. D61—1.

Cutler-Hammer, Inc.: *See*—
Collins, Harry J., Jr. 198,027.
Collins, Harry J., Jr. 198,028.
Collins, Harry J., Jr. 198,029.

De Pietro, Anthony J., to Medical Electronics and Research Corp. Dental articulator. 198,024, 4–21–64, Cl. D24—1.

Dickens, Robert S., and K. Yoshizumi, to The Coca-Cola Co. Bottle. 198,055, 4–21–64, Cl. D58—8.

Di Paolo, Mario, to United States of America, Army. Sealing flap for garment openings. 198,015, 4–21–64, Cl. D3—26.

Dow Chemical Co., The: *See*—
Eicholtz, Clara V. 198,058.

Duenas, Peter J.: *See*—
Leland, Robert D., and Duenas. 198,032.

Eastman Kodak Co.: *See*—
Crapsey, Arthur H., Jr. 198,061.

Edwards, Maximilian T. Electric shaver. 198,022, 4–21–64, Cl. D22—3.

Eicholtz, Clara V., to The Dow Chemical Co. Container for dairy products or the like. 198,058, 4–21–64, Cl. D58—17.

Esso Research and Engineering Co.: *See*—
Lewis, Oliver G. 198,047.

Foster Grant Co., Inc.: *See*—
Petitto, Albert C. 198,052.

Frankel, Samuel. Clock radio. 198,050, 4–21–64, Cl. D56—4.

Frankel, Samuel. Radio. 198,051, 4–21–64, Cl. D56—4.

Frey, Henry E. Beer dispenser. 198,014, 4–21–64, Cl. D2—3.

Fujimoto, Calvin, M. H. Best, and C. A. Samhammer, to The National Cash Register Co. Information storage unit. 198,026, 4–21–64, Cl. D26—5.

General Electric Co.: *See*—
Wilson, Morris W. 198,044.

Grinnell Corp.: *See*—
Terry, Leonard D., Jr. 198,063.
Terry, Leonard D., Jr. 198,064.
Terry, Leonard D., Jr. 198,065.

Handley Industries, Inc.: *See*—
Whitman, Robert L. 198,049.

Hill, Walter L., and H. B. Hoover, to Raytheon Co. Control knob. 198,030, 4–21–64, Cl. D26—13.

Hohmann, Albert: *See*—
Brett, John J., and Hohmann. 198,045.

Hoover Co., The: *See*—
Musichuk, Alexander B. 198,070.

Hoover, Henry B.: *See*—
Hill, Walter L., and Hoover. 198,030.

Huston, Clyde E., Jr. Toy airplane. 198,038, 4–21–64, Cl. D34—15.

International Harvester Co.: *See*—
McGirk, James R., and Syrett. 198,042.

Jemison, Volney M., and D. H. Young. Fluid injector pump housing. 198,066, 4–21–64, Cl. D65—1.

Jenson, Clarence F. Phonograph cartridge. 198,031, 4–21–64, Cl. D26—14.

Kaiser, Jack N., to American Radiator & Standard Sanitary Corp. Lavatory. 198,016, 4–21–64, Cl. D4—2.

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Leland, Robert D., and P. J. Duenas, to Multi-Elmac Co. Portable transmitter. 198,032, 4–21–64, Cl. D26—14.

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Mason, Harvey B. Holster body. 198,034, 4–21–64, Cl. D30—1.

Mathis, Cleo D. Sauna bath heating unit or the like. 198,068, 4–21–64, Cl. D81—19.

Mayer, Charles W. Badge or similar article. 198,033, 4–21–64, Cl. D29—11.
McGirk, James R., and W. D. Syrett, to International Harvester Co. Shroud for a hay baler. 198,042, 4–21–64, Cl. D40—1.
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Musichuk, Alexander B., to The Hoover Co. Power unit for blenders or the like. 198,070, 4–21–64, Cl. D89—1.
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Oakley, Clarence S., Jr.: *See*—
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Ransburg, Harper J., Co., Inc.: *See*—
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Swett, James B. 198,057.
Samhammer, Clair A.: *See*—
Fujimoto, Calvin, Best, and Samhammer. 198,026.
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Seeley, Edward H., to C. S. Oakley, Jr. Ice retainer for a drinking glass. 198,046, 4–21–64, Cl. D44—29.
Shwisha, Haim J. Carving knife or similar article. 198,023, 4–21–64, Cl. D22—3.
Stevens, Clifford B., to Outboard Marine Corp. Lawn mower housing. 198,041, 4–21–64, Cl. D40—1.
Stevens, Clifford B., to Outboard Marine Corp. Lawn mower housing. 198,043, 4–21–64, Cl. D40—1.
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Terry, Leonard D., Jr., to Grinnell Corp. Mixing box for an air conditioning system. 198,063, 4–21–64, Cl. D62—4.
Terry, Leonard D., Jr., to Grinnell Corp. Mixing box for an air conditioning system. 198,064, 4–21–64, Cl. D62—4.
Terry, Leonard D., Jr., to Grinnell Corp. Mixing box for an air conditioning system. 198,065, 4–21–64, Cl. D62—4.
Thayer, Keith B. Golf ball position marker. 198,037, 4–21–64, Cl. D34—5.
Trombley, Bertrand N., to Harper J. Ransburg Co., Inc. Soap dish. 198,017, 4–21–64, Cl. D4—3.
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Wadsworth, Ronald, to Norris-Thermador Corp. Toilet or similar article. 198,018, 4–21–64, Cl. D4—3.
Warden, Louis K., to Purex Corp., Ltd. Jug or similar article. 198,053, 4–21–64, Cl. D58—5.
Weinberg, Frederic. Combined chair and hair drier. 198,020, 4–21–64, Cl. D15—3.
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Allen, John D., and D. A. Stremple, to Fawick Corp. Flow control valve. 3,129,720, 4–21–64, Cl. 137—490.
Allfree, David: *See*—
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Ambler, Geoffrey H., to Ambler Superdraft Ltd. Worsted drawing machines. 3,129,468, 4–21–64, Cl. 19—283.
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Otto, George F. 3,130,086.
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Makowski, Alexander G. 3,129,621.
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Ametek, Inc.: *See*—
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Wolverton, Kenneth H. 3,129,574.
Amsted Industries Inc.: *See*—
Krahn, Leo G., and Grossich. 3,129,805.
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Andersen, Thomas K., to Maine Steel Corp. Valves for hydraulic systems. 3,129,644, 4–21–64, Cl. 91—413.
Anderson, Frank R. Automatic hot bed. 3,129,530, 4–21–64, Cl. 47—19.
Anderson, Frank R. Hoeing machine. 3,129,772, 4–21–64, Cl. 172—42.
Anderson, John J., Jr. Thermal insulating assembly. 3,130,112, 4–21–64, Cl. 161—89.
Andre-Matic Machinery Co.: *See*—
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Kohler, Dale M., and Littmann. 3,130,094.
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Backer, William R., to Norton Co. Protective device for grinding machines. 3,129,538, 4–21–64, Cl. 51—166.

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Balcaen, Raoul F., III. Fuel induction manifold. 3,129,701, 4–21–64, Cl. 123—56.

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Banks, Melville R., to Walton Laboratories, Inc. Humidifier assembly. 3,130,246, 4–21–64, Cl. 261—29.

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Becker, Rudolf, to Gesellschaft fur Linde's Eisenmaschinen Aktiengesellschaft. Method and apparatus for the separation of carbon dioxide from compressed gases. 3,130,026, 4–21–64, Cl. 62—17.

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Liston, Max D., and R. L. Madsen. 3,130,302.

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Behrendt, Otto, and J. Schiffers, to Schloemann Aktiengesellschaft. Means for severing from an extruded product a pack expelled by a press ram from the container of a metal extrusion press. 3,129,818, 4–21–64, Cl. 207—1.

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Bernard, Herbert J., and J. A. Morgan. Trailer hitch load distributing means. 3,129,957, 4–21–64, Cl. 280—406.

Bertram, Benjamin Q., to The Sperry Gyroscope Co., Ltd. Automatic copying machines. 3,129,640, 4–21–64, Cl. 90—13.

Best, Charles E., to Atlas Crystal Works. Guide for emplacement of insignia. 3,129,515, 4–21–64, Cl. 33—180.

Best, Georg P., to Lever Brothers Co. Liquid bleaching and detergent composition. 3,130,164, 4–21–64, Cl. 252—99.

Beswick, Clifford K., and G. W. Whitehurst, to Simon-Carves Ltd. Radioactive selector circuit for controlling the level of material between a source and selector. 3,130,411, 4–21–64, Cl. 250—83.6.

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Biberman, Lucien M., and R. G. McCarty, to United States of America, Navy. Ultra-violet aircraft proximity warning device with scanning mirror and ultra-violet source. 3,130,310, 4–21–64, Cl. 250—83.3.

Biffani, Ettore. Compact hand-operated family type washing machine. 3,129,575, 4–21–64, Cl. 68—132.

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Bimber, Russell M., H. Bluestone, and I. Rosen, to Diamond Alkali Co. Methanothianaphthene compounds. 3,130,199, 4–21–64, Cl. 260—330.5.

Blackburn, Wayne E., T. D. Bryant, and D. I. Harris, to General Precision, Inc. Apparatus for detecting blood spots in eggs. 3,130,255, 4–21–64, Cl. 88—14.1.

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Blank, Charles E., to Ingersoll-Rand Co. Crosshead wrist pin assembly. 3,129,966, 4–21–64, Cl. 287—100.

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Blumbergs, John H., and H. K. Latourette, to FMC Corp. Stabilization of peroxy carboxylic acids. 3,130,169, 4–21–64, Cl. 252—186.

Bobryk, Frank J. Power driven chuck and rotary saw bit therefor. 3,129,734, 4–21–64, Cl. 143—133.

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Boehm, John F., and D. F. Corsette, to The Drackett Co. Dispensing device. 3,129,854, 4–21–64, Cl. 222—383.

Bogeaus, Benedict E. Strip embossing implement. 3,129,800, 4–21–64, Cl. 197—6.7.

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Bolton, Robert H., to Sperry Rand Corp. Anisoelasticity compensator for gyroscopic instruments. 3,129,593, 4–21–64, Cl. 74—5.

Bond, Herbert M., and W. P. Smith, to Minnesota Mining and Mfg. Co. Pressure-sensitive adhesive tape with plasticized polyvinyl chloride backing. 3,129,816, 4–21–64, Cl. 206—59.

Bonnell, Alfred, Jr., and W. F. Rossiter, to Eltra Corp. Adjustable control system. 3,129,605, 4–21–64, Cl. 74—501.

Borah, John E. Press and mold operating apparatus. 3,129,462, 4–21–64, Cl. 18—16.

Borgersen, Roland D., to King Tester Corp. Portable hardness tester. 3,129,582, 4–21–64, Cl. 73—81.

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Halberg, Robert W., and Nielsen. 3,129,602.

Boris, Sonia nee Jokelson, to Societe Technique de Pulverisation (par abreviation S.T.E.P.). Sprayer attachment. 3,129,856, 4–21–64, Cl. 222—399.

Bostwick, Lloyd G., and J. A. Hedge, to Sun Oil Co. Chemically treated asphalt. 3,130,144, 4–21–64, Cl. 208—44.

Bowden, Eldred R., and B. G. Crute, to Stant Mfg. Co., Inc. Filtering filler neck breather cap. 3,130,025, 4–21–64, Cl. 55—505.

Bower, Richard R., to Raytheon Co. Article handling. 3,129,822, 4–21–64, Cl. 214—1.

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Brady, Jules L., deceased, by H. E. Brady, executrix, to Ransburg Electro-Coating Corp. Electro spray apparatus and method. 3,130,066, 4–21–64, Cl. 117—93.43.

Brandin, Charles I., to Charles I. Brandin, Inc. Venetian blinds. 3,129,750, 4–21–64, Cl. 160—168.

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Brandin, Charles I. 3,129,750.

Braun, G. A., Inc.: *See*—
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Braymer, Noel B., to Beckman Instruments, Inc. Potential difference negative feedback amplifier. 3,130,373, 4–21–64, Cl. 330—9.

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Brenneman, Rexford W., and H. J. Lebbers, Jr., to Union-Everedy Co., Inc. Multiple pole relay switch. 3,130,283, 4–21–64, Cl. 200—104.

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Britton, Jean M., and R. F. Calhoun. Emergency runway foamer. 3,129,890, 4–21–64, Cl. 239—127.

Brockett, William H., R. H. Dettre, and C. L. Gray, Jr., to E. I. du Pont de Nemours and Co. Process for increasing the scratch resistance of glass by treatment with titanium lactate polymer. 3,130,071, 4–21–64, Cl. 117—124.

Brocklehurst, Peter, to The Procter & Gamble Co. Inorganic peroxy-compounds containing organic activators. 3,130,165, 4–21–64, Cl. 252—99.

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Brooks, Sanford and J., and J. E. Lee. Self-storing structures. 3,129,676, 4–21–64, Cl. 108—33.

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Brown, Clarence K., to Hi-Shear Corp. Electrical connector. 3,129,985, 4–21–64, Cl. 339—97.

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Brown, Joseph M., and A. D. Evans, to Texas Instruments Inc. Semiconductor integrated circuit utilizing field-effect transistors. 3,130,377, 4–21–64, Cl. 331—108.

Brown, Lee R., and P. W. Geery, to Dresser Industries, Inc. Oscillographic recorder. 3,129,999, 4–21–64, Cl. 346—109.

Brown, Marvin L. Jig for assembling ratchet mechanisms. 3,129,500, 4–21–64, Cl. 29—256.

Brown, Thomas J. A., and F. England, to Henry Simon Ltd. Roller mills for grinding cereal products. 3,129,897, 4–21–64, Cl. 241—143.

Brunner, Alfred, to Sulzer Freres S.A. Forced flow steam generating plants including a reheater. 3,129,564, 4–21–64, Cl. 60—67.

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Büchel, Karl H., H. Röchling, and F. W. A. G. K. Korte, to Shell Oil Co. Phosphoric acid esters. 3,130,203, 4–21–64, Cl. 260—343.2.

Buchholz, Albert E., deceased, by R. K. Gerling, special administrator, to Outboard Marine Corp. Self-storing mooring line installation. 3,129,688, 4–21–64, Cl. 114—230.

Buckhannan, William H., to Standard Oil Co. Method of preventing octane loss in a reforming system. 3,130,145, 4–21–64, Cl. 208—65.

Budnick, Joseph F., to Electrical Fittings Corp. Parallel and right angle beam clamp. 3,129,915, 4–21–64, Cl. 248—72.

Bukata, Stephen. Brazing furnace. 3,130,293, 4–21–64, Cl. 219—85.

Bulgin, Douglas, to Dunlop Rubber Co. Ltd. Process for electrostatically coating nonconductive articles. 3,130,067, 4–21–64, Cl. 117—47.

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Krossa, Kenneth D., and Deo. 3,130,327.

Burt, William G., Jr., to Cordis Corp. Electronic cardiac programmer. 3,129,704, 4–21–64, Cl. 128—2.1.

Buss, Benjamin A., to Ametek, Inc. Laundry machines. 3,129,598, 4–21–64, Cl. 74—230.17.

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Butler, Edward M., and M. M. Fein, to Thiokol Chemical Corp. Stabilized organo-boron fuels. 3,130,019, 4–21–64, Cl. 44—76.

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Buttery, Kenneth T.: *See*—
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Cala, Charles F., to Bausch & Lomb Inc. Method for making fused multifocal lenses. 3,130,029, 4–21–64, Cl. 65—39.

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Armstrong, Robert A. 3,129,774.
Ellis, John R. B. 3,129,590.
Kohn, Gustave K. 3,130,089.

Callick, Eric B. B., to English Electric Valve Co. Ltd. Uniform brightness control. 3,130,346, 4–21–64, Cl. 315—22.

Calverley, George H., to Whitman Publishing Co. One-piece frame for game board or the like. 3,129,942, 4–21–64, Cl. 273—136.

Calvert, A. I. George. Rotary impact curb breaker. 3,129,929, 4–21–64, Cl. 262—14.

Camerino, Ernest. Voice developing device. 3,129,627, 4–21–64, Cl. 84—466.

Camp, James B., and T. E. McCabe, to United States Steel Corp. Apparatus for determining the magnetic condition of steel strip during continuous annealing. 3,130,363, 4–21–64, Cl. 324—34.

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Canada, Her Majesty The Queen in the right of, as represented by the Postmaster General: *See*—
Levy, Maurice M., and Arnoti. 3,129,824.

Canning, Richard H., and J. E. Cordner, to Cannon Electric Co. Force measuring device. 3,129,584, 4–21–64, Cl. 73—141.

Canno, Leonard E., to Equitable Paper Bag Co., Inc. Reenforced shopping bag. 3,129,848, 4–21–64, Cl. 229—55.

Cannon Electric Co.: *See*—
Canning, Richard H., and Cordner. 3,129,584.

Cape, Arthur T., to Powder Melting Corp. Apparatus for depositing powdered metals. 3,129,889, 4–21–64, Cl. 239—85.

Carlile, Alfred E., to Falon, Inc. Automatic lock slider. 3,129,480, 4–21–64, Cl. 24—205.14.

Carlsmith, Lawrence A., to Improved Machinery, Inc. Down feed continuous pulping apparatus. 3,130,119, 4–21–64, Cl. 162—237.

Carlson, Martin. Automatic door operator. 3,129,936, 4–21–64, Cl. 268—34.

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Carpenter, Victor W., and J. M. Jackson, to Armco Steel Corp. Non-oriented silicon-iron sheet stock and process of making it. 3,130,091, 4–21–64, Cl. 148—111.

Carter, Daniel T., and G. H. Rendel, to United States Steel Corp. Method and apparatus for embossing plastic coated strip. 3,129,457, 4–21–64, Cl. 18—10.

Carter, Zoma V. Car window cushion. 3,129,974, 4–21–64, Cl. 296—49.2.

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Chandler, James H. Newspaper storage and baling rack. 3,129,819, 4–21–64, Cl. 211—50.

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Chappell, Story F. Measuring dispenser with a gravity operated valve. 3,129,859, 4–21–64, Cl. 222—456.

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Chemetron Corp.: *See*—
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Chemical Products Corp.: *See*—
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Chugai Seiyaku Kabushiki Kaisha: *See*—
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Chung, Jackson, to Dodge Mfg. Corp. Two-speed speed reducer. 3,129,600, 4–21–64, Cl. 74—361.

Church, David A., to Litton Systems, Inc. Pressure controlled ballaster. 3,129,847, 4–21–64, Cl. 222—52.

Churilow, Miguel, 25% to P. Churilow and 25% to O. A. Milutinovic. Self-excited self-regulated alternating current generators. 3,130,360, 4–21–64, Cl. 322—25.

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Citroen, Armand. Hammer with detachable head. 3,129,737, 4–21–64, Cl. 145—29.

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Cofield, Thomas H., and Closson. 3,130,214.

Cobaugh, Robert F., to AMP Inc. Electrical connector. 3,130,258, 4–21–64, Cl. 174—71.

Coblitz, Sanford E. Chain receiving and engaging means for a parting tool. 3,129,865, 4–21–64, Cl. 225—103.

Cochran, Clement B., to Eagle Iron Works. Control device for controlling discharge of settling from a water scalping tank or the like. 3,129,849, 4–21–64, Cl. 222—64.

Cockrell, Clifford M., to Freeport Sulphur Co. Insulated ship hull. 3,129,684, 4–21–64, Cl. 114—74.

Cofield, Thomas H., and R. D. Closson, to Ethyl Corp. Ionic aromatic compounds of transition metals having atomic numbers from 7 to 14 less than that of the next higher rare gas. 3,130,214, 4–21–64, Cl. 260—429.

Cofrancesco, Anthony J., to General Aniline & Film Corp. Process for the preparation of 4-nitrostilbene carbonitriles. 3,130,218, 4–21–64, Cl. 260—465.

Cohen, Arthur. Releasable clamp for vehicle muffler. 3,129,962, 4–21–64, Cl. 285—371.

Colaianni, Thomas. Brush cleaning device. 3,129,451, 4–21–64, Cl. 15—303.

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Colgate-Palmolive Co.: *See*—
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Collens, William S. Food preservation. 3,129,835, 4–21–64, Cl. 215—56.

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Collins & Aikman Corp.: *See*—
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Collins, Richard D., to Eltra Corp. Helicopter power requirement anticipator and throttle governor damper. 3,129,768, 4–21–64, Cl. 170—135.73.

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Commonwealth Engineering Co. of Ohio, The: *See*—
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Compagnie des Ateliers et Forges de la Loire (St Chamond-Firminy-St Etienn-Jacob-Holtzer): *See*—
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Cone, Melvin R. Key holding apparel belt. 3,129,862, 4–21–64, Cl. 224—6.

Connelly, John R., and R. A. Mandeville, to Avco Corp. Photosensitive luminous annular sight. 3,130,317, 4–21–64, Cl. 250—227.

Connelly, Richard D. Ice auger. 3,129,775, 4–21–64, Cl. 175—18.

Connor, Robert. Reinforced building structure. 3,129,531, 4–21–64, Cl. 50—52.

Consolidated Electrodynamics Corp.: *See*—
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Consolidated Papers, Inc.: *See*—
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Ripling, Edward J. 3,129,503.
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Cook, Lowell L., to Armco Steel Corp. Thermal-flattening of metallic strip. 3,130,068, 4–21–64, Cl. 148—12.

Cooke, Frank, to Norton Co. Grinding machine. 3,129,532, 4–21–64, Cl. 51—98.

Cooke, Frank, to Norton Co. Grinding machine. 3,129,533, 4–21–64, Cl. 51—101.

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Cooper, Warren H. and G. M. 3,129,762.

Cooper, Irving: *See*—
Lewis, Louis S., and Cooper. 3,130,078.

Cooper, Warren H. and G. M. Oil well circulation device. 3,129,762, 4–21–64, Cl. 166—117.

Copeland, William O., to Radio Corp. of America. Pulse amplitude slicing circuit. 3,130,371, 4–21–64, Cl. 328—54.

Copolymer Rubber & Chemical Corp.: *See*—
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Cordis Corp.: *See*—
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Cordner, James E.: *See*—
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Cornell, David D.: *See*—
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Cosgrove, John E., to Foam-Products, Inc. Ready-made cravat. 3,129,433, 4–21–64, Cl. 2—150.

Cosner, Robert R., to Union Carbide Corp. Extensometer for tensile testing of non-rigid materials. 3,129,583, 4–21–64, Cl. 73—89.

Cother, Robert H., to Endevco Corp. Measuring system. 3,130,329, 4–21–64, Cl. 310—8.1.

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Coviello, Joseph. Telephone-holding device. 3,130,276, 4–21–64, Cl. 179—157.

Cox, Darwin S. Method of producing improved vehicle wheels. 3,129,496, 4–21–64, Cl. 29—159.01.

Cox, Darwin S. Process of manufacturing one piece brake drum shells. 3,129,505, 4–21–64, Cl. 29—534.

Craig, James R., to Profexray, Inc. X-ray timer system to produce short duration radiation pulses. 3,130,312, 4–21–64, Cl. 250—95.

Crawford, William B.: *See*—
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Cremer, Gottfried, and H. Behrens. Tunnel furnace arrangement. 3,129,933, 4–21–64, Cl. 263—28.

Crossley Machine Co., Inc.: *See*—
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Crownover, Joseph S., to Litton Industries of California. Diode bridge-gated stepping register. 3,130,389, 4–21–64, Cl. 340—174.

Croy, Fred E., and R. D. Lochner. Beverage dispenser and pump. 3,129,857, 4–21–64, Cl. 222—400.8.

Crute, Billy G.: *See*—
Bowden, Eldred R., and Crute. 3,130,025.

Cuddihy, William F.: *See*—
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Culver, William H., to Pennsalt Chemicals Corp. Method for defoliating and dessicating cotton. 3,130,035, 4–21–64, Cl. 71—2.2.

Curtis Automotive Devices, Inc.: *See*—
Schlenaker, Albert L. 3,129,718.

Curtis, Gene C. Automatic starting means for automobile engines and the like including a ball vacuum switch. 3,130,318, 4–21–64, Cl. 290—38.

Cushman Chuck Co., The: *See*—
Galler, Edward A. 3,129,950.

Cyzer, Bernard. Toothbrush with shuttingly oscillatingly and rotatingly movable cleaning and massaging elements. 3,129,449, 4–21–64, Cl. 15—28.

Daimler-Benz Aktiengesellschaft: *See*—
Altman, Werner E., Enke, and Burckhardt. 3,129,794.
Goeschel, Karl-Heins R., and Perrin. 3,129,795.
Maruhn, Herbert F. W. 3,129 973.

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Daly, John J., Jr., to E. I. du Pont de Nemours and Co. Molybdenum disulfide composition. 3,130,158, 4–21–64, Cl. 252—25.

Damon, Melvin H., Jr., to United States of America, Navy. Target coordinate positioner. 3,130,253, 4–21–64, Cl. 35—10.4.

Dana Corp.: *See*—
Ludwig, John R. 3,129,570.

D'Andrea, A Ralph: *See*—
Fried, Louis, and D'Andrea. 3,130,059.

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Danko, Nicholas S., J. A. Shaw, and J. T. McCall, to International Pipe and Ceramics Corp. Means for harnessing pipe joints. 3,129 961, 4–21–64, Cl. 285—230.

Dargan, Ervin E., and W. A. Barber, to The Terrell Machine Co. Machine for forming a cylindrical billet with a plane surface substantially parallel to the billet axis. 3,129,783. 4–21–64, Cl. 143—117.

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Davis, John W., to Dunlop Rubber Co. Ltd. Caliper-type disc brakes. 3,129,790, 4–21–64, Cl. 188—73.

Davis, Reginald F., to Sulzer Freres, S.A. Forced flow steam generator. 3,129,698, 4–21–64, Cl. 122—510.

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Dawley, Daniel B., to General Electric Co. Refrigerator cabinet including improved spacer means. 3,129,837, 4–21–64, Cl. 220—15.

Dean, Reeve W., and W. J. Short, to Niagara Machine & Tool Works. Ram arrester for press brakes. 3,129,799, 4–21–64, Cl. 192—129.

Deasy, John H., to Smith-Blair, Inc. Packaged flanged coupling adapter assembly. 3,129,812, 4–21–64, Cl. 206—47.

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DeVore, Jasper. Hog farrowing hut. 3,129,693, 4–21–64, Cl. 119—16.

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Dietz, Wolfgang F., to Radio Corp. of America. Tuning system. 3,130,264, 4–21–64, Cl. 178—5.8.

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Edwards, Charles F., ¾ to D. and H. Tann, and S. P. Davis. Washer dryer drive mechanism. 3,129,601, 4–21–64, Cl. 74—368.

Elastic Stop Nut Corp. of America: *See*—
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Fried, Louis, and A Ralph D'Andrea; said D'Andrea assor. of 17.557% to H. M. Beitel. Cans and method of canning. 3,130,059, 4–21–64, Cl. 99—181.

Fried, Walter R., to General Precison, Inc. F.M. range finder with Doppler error compensation. 3,130,404, 4–21–64, Cl. 343—14.

Friedrich, Ralph E., G. D. Jones, and S. N. Heiny, to The Dow Chemical Co. Method for the manufacture of acrylamide. 3,130,229, 4–21–64, Cl. 260—561.

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Fritz, Gerhard, F. Uhlig, W. Neugebauer, and O. Süs, to Azoplate Corp. Presensitized printing plates comprising naphthoquinone-1,2-diazide reproduction layers. 3,130,048, 4–21–64, Cl. 96—33.

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Froh, John M. Post press and puller. 3,129,924, 4–21–64, Cl. 254—29.

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Frydman, Benjamin J., to Olin Mathieson Chemical Corp. Synthesis of ruscopine. 3,130,231, 4–21–64, Cl. 260—564.

Fuchs, Robert J., to FMC Corp. Sodium phosphate glasses. 3,130,002, 4–21–64, Cl. 21—2.7.

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Funck, Herbert. One-piece molded sole for welt shoes. 3,129,520, 4–21–64, Cl. 36—28.

Furey, Michael J., and J. A. Wilson, to Esso Research and Engineering Co. Apparatus for measuring friction and contact between sliding lubricated surfaces. 3,129,580, 4–21–64, Cl. 73—10.

Gage, Robert M., G. M. Skinner, W. F. Cuddihy, and D. W. Sundstrom, to Union Carbide Corp. Arc torch apparatus for use in metal melting furnace. 3,130,292, 4–21–64, Cl. 219—75.

Galinke, Joachim, and M. Dohr, to Henkel & Cie G.m.b.H. Process for the preparation of modified melamine resins. 3,130,178, 4–21–64, Cl. 260—67.6.

Galler, Edward A., to The Cushman Chuck Co. Center-adjustable chuck adapter. 3,129,950, 4–21–64, Cl. 279—1.

Galloway, Richard T., to United States of America, Navy. Apparatus for determining the direction of arrival of wave energy. 3,130,385, 4–21–64, Cl. 340—6.

Gambill, Marvin. Hot caustic treatment of earth formations. 3,129,760, 4–21–64, Cl. 166—38.

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Haines, Geoffrey H., Mitchell, and Hicks. 3,130,130.
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Greene, Paul B. 3,129,499.
Greene, Paul B. 3,129,900.
Greene, Paul B. 3,129,901.
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Gittins, William G., and C. H. Close. Manufacture of plastic covered panels for use in building construction. 3,130,101, 4–21–64, Cl. 156—163.

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Green, Edward H. Spray head for swirling spray. 3,129,893, 4–21–64, Cl. 239—490.

Green, Jerome, to Nalco Chemical Co. Coagulating composition. 3,130,167, 4–21–64, Cl. 252—181.

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Greene, Paul B., to General Motors Corp. Stator winding machine means. 3,129,499, 4–21–64, Cl. 29—205.

Greene, Paul B., to General Motors Corp. Coil forming means for stator winding machine. 3,129,900, 4–21–64, Cl. 242—1.1.

Greene, Paul B., to General Motors Corp. Coil forming means for stator winding machine. 3,129,901, 4–21–64, Cl. 242—1.1.

Greenspan, Frank P., and S. M. Linder, to FMC Corp. Improved epoxidation process with liquid aliphatic peroxy acids. 3,130,207, 4–21–64, Cl. 260—348.5.

Grier, Jesse G., to Pennsalt Chemicals Corp. Process for brine manufacture. 3,130,016, 4–21–64, Cl. 23—312.

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Gutleber, Frank S., to International Telephone and Telegraph Corp. Space coded linear array antenna. 3,130,410, 4–21–64, Cl. 343—844.

Gutmann, Hugo, and B. Hegedus, to Hoffmann-La Roche Inc. Sulfonic acid hydrasides. 3,130,226, 4–21–64, Cl. 260—556.

Gutridge, Jack E., and E. B. Bergstrand, to Pullman Inc. Container locking devices and assemblies. 3,129,672, 4–21–64, Cl. 105—366.

Gutterman, Robert P., to Sperry Rand Corp. Information storage device. 3,130,393, 4–21–64, Cl. 340—174.1.

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Habisohn, Victor J., to International Telephone and Telegraph Corp. Electronic bistable gate circuit. 3,130,326, 4–21–64, Cl. 307—88.5.

Hadden, Henry, to The Standard Oil Co. Safety device for power leaf brake. 3,129,745, 4–21–64, Cl. 153—39.

Hadley, John, to The General Electric Co. Ltd. Waveguide switching using feedback-controlled servo system to rotate the plane of polarization of plane-polarised electromagnetic waves. 3,130,379, 4–21–64, Cl. 333—7.

Hagey, Lee P., to Electro-Voice, Inc. Microphone. 3,130,275, 4–21–64, Cl. 179—110.

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Haines, Geoffrey H., K. J. Mitchell, and R. Hicks, to The General Electric Co. Ltd. Core supporting arrangement for nuclear reactor. 3,130,130, 4–21–64, Cl. 176—87.

Halberg, Robert W., and M. R. Nielsen, to Borg-Warner Corp. Automatic two speed transmission. 3,129,602, 4–21–64, Cl. 74—868.

Hall, Rex C. Adjustable mattress and bed pan for use therewith. 3,129,438, 4–21–64, Cl. 5—90.

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Harper, Ernest A., to Phillips Petroleum Co. Control system for fluid separation. 3,130,027, 4–21–64, Cl. 62—21.

Harper, Richard G. Device for selectively altering lift characteristics of an airfoil. 3,129,908, 4–21–64, Cl. 244—44.

Harper, Robert J., to Ethyl Corp. Hydrocarbylthio manganese tricarbonyls. 3,130,213, 4–21–64, Cl. 260—429.

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Härtwig, Manfred, to E. Herion. Solenoid controlled distributing valve. 3,129,724, 4–21–64, Cl. 137—625.48.

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Harvey, Mortimer T., and P. L. Rosamilia, to Harvel Research Corp. Compositions of matter and method and steps of making and using the same. 3,130,172, 4–21–64, Cl. 260—6.

Harvey, Philo J., N. A. Reed, and E. S. Wright, to Parsfern, Inc. Artificial paraley garland. 3,130,109, 4–21–64, Cl. 161—25.

Haspert, John C., to Hughes Tool Co. Replaceable nozzle having completely shrouded retainer. 3,129,777, 4–21–64, Cl. 175—340.

Hasselberg, William J. Gas- and air-moisture separator. 3,130,023, 4–21–64, Cl. 55—219.

Hassell, Dennis R. Log bunk and stake assembly with positive latch and latch release. 3,129,955, 4–21–64, Cl. 280—145.

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Hill, James H., to Johnson-Carper Furniture Co., Inc. Case piece. 3,129,987, 4–21–64, Cl. 312—204.

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Hiyama, Kazuo. Mobile collapsible scaffold. 3,129,786, 4–21–64, Cl. 182—131.

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Hodges, William C., to Hodges Chemicals Co. Device for mixing chemically reactive ingredients. 3,129,926, 4–21–64, Cl. 259—4.

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Hofbauer, Casper E., and E. E. Swanson, to Kaman Aircraft Corp. Fail safe device for servo flap controlled rotor blades. 3,129,769, 4–21–64, Cl. 170—160.1.

Hoff, Glenn A. Blast pressure control and air filter means for underground shelters. 3,129,648, 4–21–64, Cl. 98—119.

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Honger, Guido, to Schweiz Gasapparatefabrik Solothurn. Radiating gas burner. 3,129,749, 4–21–64, Cl. 158—114.

Hoover, Charles O. Hydrocarbon oil sweetening process. 3,130,149, 4–21–64, Cl. 208—204.

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Hoskins, Walter E. Granular material dispensing device. 3,129,853, 4–21–64, Cl. 222—339.

Hösli, Rudolf, to Contraves AG. Directional gyroscope. 3,129,594, 4–21–64, Cl. 74—5.12.

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Houston, Stanley M., Jr., to Do Co. Journal stop and adapter therefor. 3,129,984, 4–21–64, Cl. 308—38.

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Stowell, Nathan J. 3,129,782.

Hughes, James W., and N. J. Stowell; said Stowell assor. to said Hughes. Automatic civil emergency warning system. 3,130,396, 4–21–64, Cl. 340—310.

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Humiston, Charles G., F. J. Meyer, and D. L. Kenaga, to The Dow Chemical Co. Increasing the strength of paper with vinyl sulfonium polymers. 3,130,117, 4–21–64, Cl. 162—168.

Humphrey, Leonard C., to United States of America, Air Force. Radio direction finding system. 3,130,409, 4–21–64, Cl. 343—113.

Hunter, Donald G. N.: *See*—
Wright, Esmond P. G., Rice, and Hunter. 3,130,300.

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Husby, Marvin A., to Washington Scientific Industries, Inc. Deburring attachment for gear cutters. 3,129,638, 4–21–64, Cl. 90—1.4.

Hutter, Wilhelm, to Niederrheinische Maschinenfabrik Becker & van Hullen. Device for charging and unloading multiplate presses. 3,129,827, 4–21–64, Cl. 214—16.4.

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International Standard Electric Corp.: *See*—
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Merz, Gerhard. 3,130,391.
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Jackson, John M., to Armco Steel Corp. Non-directional oriented silicon-iron. 3,130,090, 4–21–64, Cl. 148—31.55.

Jacob, Robert M., and J. G. Robert, to Societe des Usines Chimiques Rhone-Poulenc. Phenthiazine derivatives. 3,130,194, 4–21–64, Cl. 260—243.

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Johnson, Edward A., to Johnson Bros. Mfg. Ltd. Hide puller. 3,129,454, 4–21–64, Cl. 17—21.

Johnson, John G., to Walter H. Johnson Candy Co. Elongated candy package. 3,130,058, 4–21–64, Cl. 99—180.

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Johnson, Peter D., to General Electric Co. Rapid response semiconductors. 3,130,341, 4–21–64, Cl. 313—92.

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Johnson, John G. 3,130,058.

Johnson, Zyrit A., and D. J. Gibbons. Magnetically operated shutter. 3,129,471, 4–21–64, Cl. 20—56.5.

Johnston, Thomas L., and C. H. Li, to Minneapolis-Honeywell Regulator Co. Beryllium metal products. 3,129,497, 4–21–64, Cl. 29—182.5.

Johnston, William H., to United States of America, Atomic Energy Commission. Deep water isotopic current analyzer. 3,130,304, 4–21–64, Cl. 250—43.5.

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Jonathan Mfg. Co.: *See*—
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Jones, Clarence O., Jr., to Niagara Machine & Tool Works. Level and slope control for reciprocating machines. 3,129,625, 4–21–64, Cl. 83—624.

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Kanser, Vincent. Sail slide fastener. 3,129,685, 4–21–64, Cl. 114—108.

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Kappen, Frieda E.: *See*—
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Kappen, John W., deceased; F. E. Kappen, administratrix. Articulated arm assembly. 3,129,830, 4–21–64, Cl. 214—84.

Karden, Karl G., to Atlas Copco Aktiebolag. Impact clutches. 3,129,796, 4–21–64, Cl. 192—30.5.

Katzman, Lawrence, and R. Dubilrer, to Kaz Heating Products, Inc. Collapsible heating pad for travelling. 3,130,289, 4–21–64, Cl. 219—46.

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Keith, Herbert A. Collapsible ladder. 3,129,785, 4–21–64, Cl. 182—24.

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Kelly, Lawrence R., Jr., to United States of America, Army. Electronic beat frequency target simulator. 3,130,405, 4–21–64, Cl. 343—17.7.

Kelsall, Denis F., and J. A. Holmes. Hydro-cyclones. 3,130,157, 4–21–64, Cl. 210—512.

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Keska, Kenneth R., to The Yoder Co. Rotating welding transformer. 3,130,291, 4–21–64, Cl. 219—63.

Kiesbar, Charles W., and L. G. Weller, to Fuller Co. Pneumatic conveying apparatus. 3,129,980, 4–21–64, Cl. 302—28.

Kikuchi, Takefusa, to Taiyu Shoji Kabushiki Kaisha. Clamping device for a load lifting frame. 3,129,923, 4–21–64, Cl. 254—10.

Kimball, Rollow D., to Technic Research Corp. Safety container. 3,129,834, 4–21–64, Cl. 215—9.

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Kirkwood, Lewis E., H. W. Bull, D. D. Cornell, and K. T. Buttery, to The Dow Chemical Co. Dispensing container. 3,129,869, 4–21–64, Cl. 229—51.

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Visos, Charles D. 3,129,650.
Visos, Charles D. 3,129,651.

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Kohler, Dale M., and M. F. Littmann, to Armco Steel Corp. Process of making cubic texture silicon-iron. 3,130,092, 4–21–64, Cl. 148—111.

Kohler, Dale M., and M. F. Littmann, to Armco Steel Corp. Manufacture of silicon-iron having cubic texture. 3,130,094, 4–21–64, Cl. 148—111.

Kohlhagen, Walter. Motor field unit and method of making it. 3,129,495, 4–21–64, Cl. 29—155.56.

Kohn, Gustave K., to California Research Corp. High analysis complex fertilizer preparation. 3,130,039, 4–21–64, Cl. 71—37.

Kondo, Yasuaki, M. Takahashi, and A. Ichikawa, to Japan Broadcasting Corp. Circuit system for preventing interfering radiation from transistor superheterodyne receivers. 3,130,370, 4–21–64, Cl. 325—436.

Koppen, Heinz, and W. Gunther, to Zeiss Ikon Aktiengesellschaft. Photographic camera or shutter provided with an interchangeable objective. 3,129,647, 4–21–64, Cl. 95—10.

Korte, Friedrich W.A.G.K.: *See*—
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Kosoff, Harold. Mechanical apparatus. 3,129,878, 4–21–64, Cl. 230—56.

Koziak, Roman, to Tesla, narodni podnik. Electron gun for generating a hollow beam. 3,130,340, 4–21–64, Cl. 313—82.

Krahn, Leo G., and E. Grossich, to Amsted Industries Inc. Take-off conveyor. 3,129,805, 4–21–64, Cl. 198—127.

Krakauer, C. L., to Kay Mfg. Corp. Sinuous spring structure. 3,129,935, 4–21–64, Cl. 267—111.

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Krause, Erich. Safety attachments for wallets. 3,129,741, 4–21–64, Cl. 150—47.

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Kroesch, Milton F., to Pressed Steel Tank Co. Welding apparatus. 3,129,746, 4–21–64, Cl. 158—27.4.

Krossa, Kenneth D., and N. Deo, to Burroughs Corp. Isolation circuit, including diodes and a resistance for use in highly stable timing circuits. 3,130,327, 4–21–64, Cl. 307—88.5.

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Kuck, John H., to United States of America, Navy. Means for tracking multiple target formations by radar. 3,130,402, 4–21–64, Cl. 343—7.4.

Kuderna, Jerome G., Jr., and D. D. Phillips, to Shell Oil Co. 3,4,5-trimethylphenyl methylcarbamate and its use as an insecticide. 3,130,122, 4–21–64, Cl. 167—30.

Kuehl, Donald K., and R. L. Vasquez, to United Aircraft Corp. Method and means for improving combustion characteristics of solid propellants. 3,129,562, 4–21–64, Cl. 60—35.6.

Kueser, John J., to Knapp-Monarch Co. Automatic toaster. 3,129,652, 4–21–64, Cl. 99—329.

Kuhnle, Ernst, and J. Schwarz, to Wilhelm Kraut, Bizerba-Werke, KG. Inclination balance with weight-sensing device. 3,129,879, 4–21–64, Cl. 235—61.

Kullgren, Gilbert V., D. W. Stephenson, W. J. Goodwin, H. G. Bailey, and R. J. Schroyer, to Blaw-Knox Co. Induction heated extruder. 3,129,459, 4–21–64, Cl. 18—12.

Kumano, Masao, to Nippon Electric Co. Ltd. Signal direction finder system. 3,130,408, 4–21–64, Cl. 343—113.

Kuo, Chi S. Combination door holder and stopper. 3,129,969, 4–21–64, Cl. 292—338.

Kusumoto, Hiroshi. Machines for washing bottles. 3,129,450, 4–21–64, Cl. 15—61.

Kuzma, John J. Hose coupling. 3,129,959, 4–21–64, Cl. 285—74.

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Labat-Camy, André P. H., to Establissement Brulex, Etude et Exploitation pour Chauffage des Fours. Mobile roof burner system for heating of open hearth furnaces or the like. 3,129,930, 4–21–64, Cl. 263—15.

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Laimins, Eric, to Baldwin-Lima Hamilton Corp. Load cell. 3,130,382, 4–21–64, Cl. 338—5.

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Larsen, Theodore E., to Minneapolis-Honeywell Regulator Co. Thermally actuated dual magnetic switch with shunt and temperature compensation. 3,130,285, 4–21–64, Cl. 200—138.

Larsh, Everett P. Balancing apparatus. 3,129,591, 4–21–64, Cl. 73—472.

Larsh, Everett P. Balancing apparatus. 3,130,075, 4–21–64, Cl. 118—8.

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Latschbacher, Kajetan. Marking and numbering timber. 3,129,430, 4–21–64, Cl. 1—46.

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Lauro, William M. Isometric contraction exerciser having handles at each end with handgrips shaped to the fingers. 3,129,940, 4–21–64, Cl. 272—79.

Laux, Roy J., to E. I. du Pont de Nemours and Co. Balanced shaft seal. 3,129,949, 4–21–64, Cl. 277—27.

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Lee Favre, Donavon. Low temperature heat engine and air conditioner. 3,129,566, 4–21–64, Cl. 62—88.

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Levengood, William C., to Ball Bros. Co., Inc. Method for providing improved diffraction grated lines on glass body surface. 3,130,098, 4–21–64, Cl. 156—15.
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Levy, Maurice M., and B. A. Arnoti, to Her Majesty The Queen in the right of Canada as represented by the Postmaster General. Article holder and conveyor system. 3,129,824, 4–21–64, Cl. 214—6.
Lewis, Louis S., and I. Cooper, to Marson Corp. Masking products for automotive vehicles being spray painted. 3,130,078, 4–21–64, Cl. 118—505.
Lewis, Roy K. Bow casting device. 3,129,525, 4–21–64, Cl. 43—19.
Lewis, Thomas P., and D. Henis, to Apollo Carlon Pipe Co. Apparatus for continuously manufacturing fiber reinforced plastic pipe. 3,130,104, 4–21–64, Cl. 156—425.
L'Hommedieu, Paige D., to Johnson & Johnson. Reinforced nonwoven fabrics and methods and apparatus of making the same. 3,129,466, 4–21–64, Cl. 19—145.
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Johnston, Thomas L., and Li. 3,129,497.
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Mattimoe, Paul T., Elton, and Hofmann. 3,130,103.
Liberman, Arie. Intercommunication system. 3,130,272, 4–21–64, Cl. 179—38.
Lichty, Lyall J., to Northfield Mines, Inc. Recovery of nickel from laterite ores. 3,130,043, 4–21–64, Cl. 75—115.
Lidstone, Clifford G. Cultivating tool. 3,129,771, 4–21–64, Cl. 172—25.
Lieb, Albert, to International Standard Electric Corp. Arrangement for producing a variable electroluminescent spot subject to position control. 3,130,348, 4–21–64, Cl. 315—149.
Liebermann, John, to Ranco Inc. Thermostatic air flow control device. 3,129,886, 4–21–64, Cl. 236—49.
Light, Charles E.: *See*—
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Lintner, Orval D. Land measuring caliper. 3,129,514, 4–21–64, Cl. 33—149.
Liston, Max D., and R. L. Madsen, to Beckman Instruments, Inc. Positive type infrared analyzer. 3,130,302, 4–21–64, Cl. 250—43.5.
Little, Clifford I. Carburetor control valves. 3,130,247, 4–21–64, Cl. 261—50.
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Kohler, Dale M., and Littmann. 3,130,094.
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Crownover, Joseph S. 3,130,389.
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Church, David A. 3,129,847.
Lloyd, Arthur K., to Imperial Chemical Industries Ltd. Automatic control of automatic weighing and feeding machines. 3,129,778, 4–21–64, Cl. 177—81.
Lloyd, William G., and T. E. Durocher, to The Dow Chemical Co. Magnesium oxychloride cements. 3,130,174, 4–21–64, Cl. 260—41.
Locher, Ross E., to Zinsco Electrical Products. Cable connector. 3,129,996, 4–21–64, Cl. 339—249.
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Croy, Fred E., and Lochner. 3,129,857.
Locker, Gerhard, P. L. Sturla, and O. W. Luek, to Sperry Rand Corp. Tier. 3,129,654, 4–21–64, Cl. 100—4.
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Loevenstein, Hirsch, to Harvey Aluminum. Process for desulfurizing petroleum coke. 3,130,183, 4–21–64, Cl. 202—31.
Loewenthal, Henry J., and E. H. Magester, to General Electric Co. Cabinet construction. 3,129,841, 4–21–64, Cl. 220—62.
Lombardo, Salvatore, to Innocenti Soc. Gen. per l'Industria Metallurgica e Meccanica. Multiple-tool boring machine head. 3,129,615, 4–21–64, Cl. 77—58.
Long, Henry A., to The Marquardt Corp. Pressure ratio sensing device. 3,129,563, 4–21–64, Cl. 60—39.28.
Loring, Samuel J., to United Aircraft Corp. Solar thermoelectric generator. 3,130,084, 4–21–64, Cl. 136—4.
Lowell, John O., to Ripley Industries, Inc. Plural die elements surrounded by single stripper pad means with work gauge overlying stripper. 3,129,623, 4–21–64, Cl. 83—133.
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Lussier, Robert. Safety ski bindings. 3,129,951, 4–21–64, Cl. 280—11.35.
Lutwack, Wilton J. Portfolio made of paper. 3,129,872, 4–21–64, Cl. 229—72.
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MacBeth, Gordon, to The Dow Chemical Co. Method of removing tar from phenol reactor contents. 3,130,235, 4–21–64, Cl. 260—621.
MacMillan, Raymond A., to United States of America, Air Force. Automatic phase stabiliser system. 3,130,362, 4–21–64, Cl. 323—101.
Madison, Emil A., to Noble Mfg. Co. Calibrators. 3,129,844, 4–21–64, Cl. 222—1.
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Andersen, Thomas K. 3,129,644.
Makler, Jack, ½ to S. Sklar. Ball point fountain pen. 3,129,-696, 4–21–64, Cl. 120—42.4.
Makowski, Alexander G., to American Can Co. Cutter. 3,129,621, 4–21–64, Cl. 82—59.
Malakoff, Meyer, M. W. Scott, and M. M. Rieger, to Warner-Lambert Pharmaceutical Co. Aerosol package. 3,129,855, 4–21–64, Cl. 222—394.
Malan, George L. Vibrator with separate bearing and compartment-forming surfaces. 3,129,925, 4–21–64, Cl. 259—1.
Maley, Gerald A., and W. L. Stahl, to International Business Machines Corp. Pulse input control circuit. 3,130,321, 4–21–64, Cl. 307—88.
Malkowski, Leonard, to Anocut Engineering Co. Electrolytic cavity sinking apparatus. 3,130,140, 4–21–64, Cl. 204—224.
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Mallory, Henry R., to P. R. Mallory & Co., Inc. Flashing light device with automatic daytime shutoff. 3,130,349, 4–21–64, Cl. 315—151.
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Manke, Elmer W. High pressure centrifugal pump. 3,129,-670, 4–21–64, Cl. 103—223.
Manke, Elmer W., C. M., and V. F. Variable capacity fluid pump. 3,129,668, 4–21–64, Cl. 103—38.
Manke, Virgil F.: *See*—
Manke, Elmer W., C. M., and V. F. 3,129,668.
Mann, Edward W., to Geophysics Corp. of America. Measuring device. 3,130,345, 4–21–64, Cl. 315—19.
Mann, William L., Jr.: *See*—
Main, Earl L., and Mann. 3,129,717.
Mann, William L. Full bore deflection drilling apparatus. 3,129,776, 4–21–64, Cl. 175—76.
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Manning, Charles S. Color display system. 3,130,263, 4–21–64, Cl. 178—5.4.
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Stansbury, Harry A., Jr., and Manning. 3,130,234.
Manning, Joseph F., and D. J. McKendry, to Interchemical Corp. New flocked articles and method of making them. 3,130,065, 4–21–64, Cl. 117—33.
Mans, August F., to Union Carbide Corp. Electric arc working process and apparatus. 3,130,295, 4–21–64, Cl. 219—131.
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Lewis, Louis S., and Cooper. 3,130,078.
Martin, Howard F. Rocking crib or cradle. 3,129,440, 4–21–64, Cl. 5—109.
Martin, John R. Indicating device. 3,129,888, 4–21–64, Cl. 73—362.
Maruhn, Herbert F. W., to Daimler-Benz Aktiengesellschaft. Elastic mounting of driver's cab or truck. 3,129,973, 4–21–64, Cl. 296—35.
Mast, Aquila D. Mixing apparatus for fluent material. 3,129,927, 4–21–64, Cl. 259—6.

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Varvel, Harold E. 3,129,748.
Mathewson, Wilfred F. Thin-edge pulp screen. 3,130,150, 4–21–64, Cl. 209—270.
Mathys, Pierre, to Holding Favre-Leuba S.A. Time piece showing the days of the months. 3,129,555, 4–21–64, Cl. 58—58.
Matthews, Lyle E. Self-sustaining momentum motor. 3,129,-559, 4–21–64, Cl. 60—1.
Mattimoe, Paul T., W. L. Elton, and J. J. Hofmann, to Libbey-Owens-Ford Glass Co. Apparatus for mounting rear view mirrors. 3,130,103, 4–21–64, Cl. 156—391.
Maturi, Rodolphe G., and C. Bellotti. Convertible boat hull. 3,129,443, 4–21–64, Cl. 9—2.
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May, Horace A., and G. W. Miller, to United Aircraft Corp. Oil divider. 3,129,983, 4–21–64, Cl. 308—36.1.
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Sloan, Edward C., Eberman, and Jensen. 3,129,545.
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Prater, John D., Maynard, Tuddenham, and Selin. 3,130,012.
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McClenahan, William F. Plumbing installation device. 3,129,437, 4–21–64, Cl. 4—252.
McCormick, Maurice D., to Bear Mfg. Co. Recording attachment for wheel alinement testers. 3,129,516, 4–21–64, Cl. 33—203.14.
McCreery, Hugh H., to The Ohio Brass Co. Dead end clamp. 3,130,261, 4–21–64, Cl. 174—169.
McCulloch Corp.: *See*—
Tyrrell, Vincent C. 3,129,731.
McGinn, Patrick J. Calculators. 3,129,880, 4–21–64, Cl. 235—74.
McKee, James B. Golf courses. 3,129,943, 4–21–64, Cl. 273—176.
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McLaughlin, George E., to Bell Telephone Laboratories, Inc. Differential demodulator. 3,130,266, 4–21–64, Cl. 178—6.
McLean, Robert E., to Rival Mfg. Co. Wedge action can opener improvement. 3,129,509, 4–21–64, Cl. 30—15.5.
McLean, William B., 50% to W. G. Finch. Torque converting propeller. 3,129,767, 4–21–64, Cl. 170—135.4.
McMahon, James F., Jr., to The Electromark Corp. Electrolytic marking apparatus. 3,130,141, 4–21–64, Cl. 204—224.
McMahon, John F., Jr., and J. H. Michel, to Philco Corp. Apparatus for fabricating semiconductor devices. 3,130,-031, 4–21–64, Cl. 65—155.
McMahon, Walter M., and C. G. Abba, to American Pipe and Construction Co. Inorganic coating composition. 3,130,-061, 4–21–64, Cl. 106—84.
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Pruitt, Malcolm E., McMichael, and Pendleton. 3,130,096.
McMullen, John J.: *See*—
Penney, Norman W. 3,129,682.
McNeil, Manford, to Certain-Teed Products Corp. Coupling for liquid absorbent conduit having a crushable spacer. 3,129,964, 4–21–64, Cl. 285—369.
McWhorter, Cullen J., to Houston Oil Field Material Co., Inc. Means for determining the inclination of well pipes. 3,129,517, 4–21–64, Cl. 33—205.
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Meeker, Robert E.: *See*—
Dunn, Clarence L., Hefferich and Meeker. 3,130,243.
Mees, Robert, to Leits, Ernst, Geselschaft mit beschrankter Haftung. Film guide means for cinematographic projectors. 3,129,633, 4–21–64, Cl. 88—17.
Meier, Hermann. Rail anchorage. 3,129,887, 4–21–64, Cl. 238—265.
Mellinger, Ernest F., to Ryan Aeronautical Co. Heat treatment of preformed finish-machined articles. 3,130,089, 4–21–64, Cl. 148—13.
Melton, James O., and I. M. Carpenter, to The Geolograph Co. Well depth recorder and associated pen return. 3,129,997, 4–21–64, Cl. 346—33.
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Kendall, Giles A. 3,129,948.
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Merian, Ernest, and O. Senn, to Sandoz Ltd. Water-insoluble monoazo dyestuffs. 3,130,190, 4–21–64, Cl. 260—163.
Mers, Gerhard, to International Standard Electric Corp. Circuit arrangement for ferrite-core storage devices. 3,130,391, 4–21–64, Cl. 340—174.
Mescher, Harold E., to Pacific Scientific Co. Heat treating furnace. 3,130,250, 4–21–64, Cl. 266—5.
Metillier, Roger, to Societe Auxiliaire de l'Entreprise (Auxen). Multiple-purpose power shovel. 3,129,832, 4–21–64, Cl. 214—138.
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Weiss, Robert O., and Lederer. 3,130,128.
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Siggel, Erhard, Meyer, and Rösener. 3,130,005.
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Meyer, John C., to Jonathan Mfg. Co. Quick disconnect slide for drawers and the like. 3,129,981, 4–21–64, Cl. 308—3.6.
Michal, James, to Storkline Corp. Baby crib. 3,129,439, 4–21–64, Cl. 5—93.
Michel, Donald P., and H. W. Steiniger, to The Bauer Bros. Co. Refiner construction. 3,129,898, 4–21–64, Cl. 241—256.
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Mildner, Raymond C. Cables for transmitting high-frequency currents. 3,130,256, 4–21–64, Cl. 174—28.
Militano, Vincent, and H. Fleischer, to Finkel Outdoor Products, Inc. Motor driven winding mechanism. 3,129,715, 4–21–64, Cl. 135—20.
Miller, Earl W., to International Business Machines Corp. Deskewing using last bit of a byte. 3,130,392, 4–21–64, Cl. 340—174.1.
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May, Horace A., and Miller. 3,129,983.
Miller, John J. Portable imprinting device. 3,129,660, 4–21–64, Cl. 101—103.
Miller, Orville C., to Carr Lane Mfg. Co. Angularly adjustable locking trunnion. 3,129,937, 4–21–64, Cl. 269—74.
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Miller, Robert L.: *See*—
Tate, Bryce E., and Miller. 3,130,204.
Miller, Theodore A., and H. L. Fowler; said Fowler assor. to said Miller. Measuring and dispensing apparatus. 3,129,858, 4–21–64, Cl. 222—439.
Millikan, Allen F., to The Pure Oil Co. Diesel fuel containing a heterocyclic polyamine salt. 3,129,699, 4–21–64, Cl. 123—1.
Millman, Nathan, and M. E. Fretz, to J. M. Huber Corp. Stabilization of fluid suspensions of filler grade clay. 3,130,063, 4–21–64, Cl. 106—308.
Milton, Robert M., to Union Carbide Corp. Drying cracked gas. 3,130,021, 4–21–64, Cl. 55—33.
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Rotier, Donald J., and Storm. 3,130,375.
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Walker, Dayton J. 3,129,691.
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Minter, Clarke C. Electrical ratiometer. 3,130,365, 4–21–64, Cl. 324—140.
Mitchell, Jack L., to California Pellet Mill Co. Pellet mill die and method of forming same. 3,129,458, 4–21–64, Cl. 18—12.
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Field, Lester M., and Mitchell. 3,130,364.
Mitchell, Keith J.: *See*—
Haines, Geoffrey H., Mitchell, and Hicks. 3,130,130.
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Mittelstaedt, Georg S. Suction pump means having suction tubes with transversal and peripheral openings. 3,129,874, 4–21–64, Cl. 230—92.
Mittman, Emanuel, to Elm Coated Fabrics Co., Inc. Brush for fabric and the like. 3,129,448, 4–21–64, Cl. 15—1.5.
Miyabayashi, Shigekichi, to The Nippon Toki Kaisha Ltd. Safety apparatus for grinding machine. 3,129,534, 4–21–64, Cl. 51—134.5.
Mizuno, Mitsuo, to New Kyoei Inc. Magnetic clasp. 3,129,-477, 4–21–64, Cl. 24—201.
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Mollick, Milton, to Ametek, Inc. Pilot positioner. 3,129,-719, 4–21–64, Cl. 137—489.
Monaco, Foster F. and R. R. Food-service device. 3,130,288, 4–21–64, Cl. 219—43.
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Monaco, Foster F. and R. R. 3,130,288.
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Monroe, Paul S., to Mid-Century Corp. High pressurer reactor. 3,130,015, 4–21–64, Cl. 23—290.

Moolenaar, Robert J., and P. R. Juckniess, to The Dow Chemical Co. Process for production of high purity cesium metal and cesium compounds. 3,130,010, 4–21–64, Cl. 23—184.

Moore, Arthur C., and A. S. Young, to International Business Machines Corp. Magnetic storage devices. 3,130,390, 4–21–64, Cl. 340—174.

Moore, Clay C., Jr. Irregular curve cutting saw and edger. 3,129,732, 4–21–64, Cl. 143—76.

Moore, Harry O., 50% to C. Combis. Safety device for dual voltage circuits. 3,130,328, 4–21–64, Cl. 307—130.

Moore, James G.: *See*—
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Moore, Sewell T.: *See*—
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Sampson, Claude C., and Beene. 3,129,573.

Morin, Louis H. Separable fastener. 3,129,478, 4–21–64, 4–21–64, Cl. 24—205.12.

Morin, Louis H. Slide fastener. 3,129,479, 4–21–64, Cl. 24—205.12.

Morris, George V., to United States of America, Army. Unit wound generator stator. 3,130,336, 4–21–64, Cl. 310—252.

Mortensen, Lars S. Combination truck. 3,129,958, 4–21–64, Cl. 280—418.

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Dewar, Douglas, Mortimer, and Farr. 3,129,903.

Morton, George A., to United States of America, Army. Photoelectric cell. 3,130,342, 4–21–64, Cl. 313—103.

Morway, Arnold J., and J. C. Munday, to Esso Research and Engineering Co. Oil compositions containing metal salt of phenol and low molecular weight acid. 3,130,160, 4–21–64, Cl. 252—33.6.

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Mount, Eldridge M., Jr., to General Electric Co. Electric power switchgear. 3,130,353, 4–21–64, Cl. 317—103.

Mower, George A. Agricultural dispenser. 3,129,852, 4–21–64, Cl. 222—178.

Mrosek, Elmer V. Dipstick assemblies for material handling equipment. 3,129,831, 4–21–64, Cl. 214—137.

Muehlhauser, Donn W., to The Pipe Machinery Co. Floating tool for removing burrs from machined surfaces. 3,129,620, 4–21–64, Cl. 82—20.

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Murray, William L., to United States Steel Corp. Furnace roof. 3,129,678, 4–21–64, Cl. 110—99.

Musser, C Walton. Timing device and dispenser. 3,129,845, 4–21–64, Cl. 222—41.

Mustee, Bernard E., to E. L. Mustee & Sons, Inc. Utility tub construction. 3,129,436, 4–21–64, Cl. 4—183.

Mustee, E. L., & Sons, Inc.: *See*—
Mustee, Bernard E. 3,129,436.

Muter Co., The: *See*—
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Myers, Donald O., to Stewart-Warner Corp. Rotatable electrical connection for pointer. 3,129,989, 4–21–64, Cl. 339—2.

Nabreski, Benjamin D., R. L. Maher, and R. J. Mott, to United States of America, Army. Mechanical time fuze. 3,129,666, 4–21–64, Cl. 102—84.

Nagy, Vojtěch, A. Dvořák, Z. Šisler, M. Keda, T. Ferko, and K. Zembery, to Statny drevarsky vyskumny ustav. Process of manufacturing fibreboards and pressings from lignocellulose material. 3,130,114, 4–21–64, Cl. 162—13.

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Napier, Ray P. Ribbon bow-forming machine. 3,129,861, 4–21–64, Cl. 223—46.

Nathan, Marvin F., and V. M. Fillow, to Pullman Inc. Method of deaeration. 3,130,142, 4–21–64, Cl. 208—11.

Natho, Paul J., to ACF Industries, Inc. Temporary handwheel operator. 3,129,603, 4–21–64, Cl. 74—424.8.

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Negishi, Elizaburo, Doffing mechanism for textile machines. 3,129,552, 4–21–64, Cl. 57—52.

Nejedly, Miroslav, to Zavody V. I. Lenin. Shafts of mechanical kilns with superposed floors for roasting of ores and similar purposes. 3,130,251, 4–21–64, Cl. 266—32.

Nelson, Harry, to Enamel Products. Splicer. 3,129,489, 4–21–64, Cl. 29—21.1.

Němec, Jaroslav, J. Ječminek, and O. Caha, to Presena mechanika, narodny podnik. Recording spirometer. 3,129,705, 4–21–64, Cl. 128—2.07.

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Nitschke, Norman C., and H. A. McMaster, to Permaglass, Inc. Apparatus for heat treating glass. 3,130,032, 4–21–64, Cl. 65—349.

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Nonnamaker, William M., to The Mohawk Rubber Co. Puncture sealant-safety diaphragm means for pneumatic tires and combinations thereof with pneumatic tires. 3,129,748, 4–21–64, Cl. 152—34.

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Novak, Leo J., to The Central Pharmacal Co. Oral pharmaceutical products prepared with carboxymethyl benzyl dextran having a low carboxymethyl D.S. of 0.15. 3,130,126, 4–21–64, Cl. 167—82.

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Otto, George F., to Amchem Products, Inc. Materials and method for use in applying chromate conversion coatings on zinciferous surfaces. 3,130,086, 4–21–64, Cl. 148—6.21.

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Porter, John S. Reel and self-draining sampler tube assembly. 3,129,513, 4–21–64, Cl. 33—126.4.

Porter, Robert D., and C. F. Stearns, to United Aircraft Corp. Servo motor. 3,129,643, 4–21–64, Cl. 91—382.

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Richter, Sidney B., to Velsicol Chemical Corp. 2-methoxy-3-methyl-6-chlorobenzoic acid and derivatives thereof. 3,130,206, 4–21–64, Cl. 260—347.4.

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Rollefson, Karl E., to The Muter Co. Capacitor and method of making same. 3,129,490, 4–21–64, Cl. 29—25.42.

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Rosenthal, Frederick A., to United States of America, Navy. Self centering ring seal. 3,129,922, 4–21–64, Cl. 253—78.

Ross, Joseph I. Hermaphroditic electrical connectors. 3,129,993, 4–21–64, Cl. 339—49.

Ross, Thomas N., to Hull Instruments, Inc. Wide range signal generator. 3,130,376, 4–21–64, Cl. 331—18.

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Rotier, Donald J., and J. F. Storm, to Minneapolis-Honeywell Regulator Co. Automatic frequency control apparatus. 3,130,375, 4–21–64, Cl. 331—11.

Rott, Clarence, to Western Electric Co., Inc. Stitched circuit board and method of making. 3,130,257, 4–21–64, Cl. 174—68.5.

Rouanet, Michel. Crank drive, with torque-reducing device. 3,129,609, 4–21–64, Cl. 74—751.

Rountree, Joseph D. Training device. 3,129,709, 4–21–64, Cl. 128—360.

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Ruch, Georges A. Indicator setting means for timepiece showing the time in two time-belts. 3,129,558, 4–21–64, Cl. 58—85.5.

Rudd, Dennis A., to North American Philips Co., Inc. Beam-indexing picture display system. 3,130,262, 4–21–64, Cl. 178—5.4.

Rudland, Ronald, to Foster-Mallard Ltd. Sound reproducing machines. 3,129,596, 4–21–64, Cl. 74—190.

Rumsey, Joseph F., Jr., and F. Trimble. Process of treating trees. 3,129,529, 4–21–64, Cl. 47—2.

Runnels, George W., to Talon, Inc. Apparatus for gapping slide fastener chain. 3,129,498, 4–21–64, Cl. 29—200.

Russell, James T., to United States of America, Atomic Energy Commission. Neutron flux intensity detection. 3,130,307, 4–21–64, Cl. 250—83.1.

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Sakson, Paul J., to General Precision, Inc. Marine autopilot. 3,129,686, 4–21–64, Cl. 114—144.

Salmon, Royes, and E. A. Pullen, to Union Oil Co. of California. Dewaxing solvent recovery method. 3,130,143, 4–21–64, Cl. 208—33.

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Schaefer, Edward J., to Franklin Electric Co., Inc. Drive unit and control. 3,129,607, 4–21–64, Cl. 74—665.

Schaefer, Edward M. Apparatus for removing labels from bottles. 3,129,714, 4–21–64, Cl. 134—201.

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Schermerhorn, Clarence E. Combined nozzle and guard for faucet spouts. 3,129,894, 4–21–64, Cl. 239—602.

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Schindler, Walter, and H. Blattner, to Geigy Chemical Corp. Substituted dibenz [b,f] azepine compounds. 3,130,191, 4–21–64, Cl. 260—239.

Schlensker, Albert L., to Curtis Automotive Devices, Inc. Valve with means for limiting seal flexure. 3,129,718, 4–21–64, Cl. 137—327.

Schlesinger, Heinz, to Azoplate Corp. Electrophotographic reproduction material. 3,130,046, 4–21–64, Cl. 96—1.

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Schnepfe, Robert W., Jr., to Aircraft Armaments, Inc. Fittings for low energy detonating cord. 3,129,663, 4–21–64, Cl. 102—27.

Schrodt, Rudolf, to Reimers-Getriebe K.G. Device for feeding pressure fluids from a stationary bearing cover into the outer end of a rotating shaft. 3,129,960, 4–21–64, Cl. 285—95.

Schroeder, George O., to American Can Co. Lined container. 3,129,867, 4–21–64, Cl. 229—14.

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Schulte, Erich, to Siemag Siegener Maschinenbau G.m.b.H. Multiple-stand continuous rolling mills for the production of wire, light-section steel products and the like. 3,129,617, 4–21–64, Cl. 80—35.

Schultz, Dave R., and L. F. Sekula, to Shell Oil Co. Epoxyhaloalkanes as stabilizers or halogenated vinyl phosphate insecticides. 3,130,120, 4–21–64, Cl. 167—22.

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Segel, Edward, and P. R. Glenister, to J. E. Siebel Sons Co., Inc. Flavor control of malt beverages. 3,130,055, 4–21–64, Cl. 99—48.

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Serbia, Gonzalo, to Central Aguirre Sugar Co. Sugar recovery process and products. 3,130,082, 4–21–64, Cl. 127—46.

Seymour, Samuel L., to Pittsburgh Plate Glass Co. Glass feeding. 3,130,082, 4–21–64, Cl. 65—39.

Seymour, Shaun A., W. Hobbs, Jr., and D. C. Heitshu, to Sperry Rand Corp. Feeder for stock animals. 3,129,851, 4–21–64, Cl. 222—76.

Shank, Herbert C., Jr., to Anchor Hocking Glass Corp. Means for decorating glass articles. 3,130,107, 4–21–64, Cl. 156—599.

Shapiro, Hymin, E. G. De Witt, and J. E. Brown, to Ethyl Corp. Antiknock fuel. 3,130,017, 4–21–64, Cl. 44—68.

Sharko, Alexander, to FMC Corp. Strap tensioning tool. 3,129,728, 4–21–64, Cl. 140—93.2.

Sharp, Lorld G., to Socony Mobil Oil Co., Inc. Miscible fluid displacement method of producing an oil reservoir. 3,129,757, 4–21–64, Cl. 166—11.

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Siggel, Erhard, G. Meyer, and W. Rösener, to Vereinigte Glanzstoff-Fabriken A.G. Process for the purification and activation of titanium trichloride. 3,130,005, 4–21–64, Cl. 23—87.

Siggel, Erhard, G. Meyer, W. Rosener, and W. Helmut, to Vereinigte Glanzstoff-Fabriken AG. Process for the dissociation of polypropylene. 3,130,186, 4–21–64, Cl. 260—93.7.

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Simjian, Luther G. Service area with compartments. 3,130,395, 4–21–64, Cl. 340—280.

Simmons, Elmer C., to Laboratory for Electronics, Inc. Cathode ray tube display system having both specific symbol and generalized data control of the tube display. 3,130,397, 4–21–64, Cl. 340—324.

Simon, Henry, Ltd.: *See*—
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Simon, John F. Tapping system for liquid container or the like. 3,129,730, 4–21–64, Cl. 141—286.

Simon-Carves Ltd.: *See*—
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Smallpeice, Cosby D. P., ½, to Nuquip Ltd. Safety valves. 3,129,784, 4–21–64, Cl. 181—37.

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Smith, Robert D. Divided safety equipment for aircraft. 3,129,909, 4–21–64, Cl. 244—107.

Smith, Robert D. Aircraft air scoop for inflatable air blanket safety equipment. 3,129,910, 4–21–64, Cl. 244—107.

Smith, Robert D. Safety parachute for aircraft. 3,129,912, 4–21–64, Cl. 244—139.

Smith, Robert D. Aircraft parachute. 3,129,913, 4–21–64, Cl. 244—139.

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Snyder, James H., to Minneapolis-Honeywell Regulator Co. Infrared visual image converter with lens mirror coated with infrared absorbing material. 3,130,309, 4–21–64, Cl. 250—83.3.

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Sharp, Lorid G. 3,129,757.

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Sorensen, Clarence A., and W. Workman, Jr., to Gardner-Denver Co. Pneumatically operated tool. 3,129,642, 4–21–64, Cl. 91—121.

Sorokin, Peter P., and M. J. Stevenson, to International Business Machines Corp. Optical maser having terminal level above ground state. 3,130,254, 4–21–64, Cl. 88—1.

Spacek, George C., to General Motors Corp. Double pumped parametric amplifier. 3,130,322, 4–21–64, Cl. 307—88.

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Spense, Nevil A., to Steels & Busks Ltd. Garment stiffener tips. 3,129,435, 4–21–64, Cl. 2—257.

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Gould, Herbert H., and Toda. 3,129,755.
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Locker, Gerhard, Sturla, and Luek. 3,129,654.
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Tingley, Bruce H. 3,129,882.

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Staadt, Harold E., to The Dow Chemical Co. Method of establishing communication between wells. 3,129,761, 4–21–64, Cl. 166—42.

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Van Strien, Richard E., and Bolton. 3,130,220.

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Sanders, Frederick J. 3,130,132.

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Stanley, Morris F. and M. W., to Ho-Maid Products Co. Apparatus for producing variegated ice cream. 3,129,673, 4–21–64, Cl. 107—101.

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Stanley, Morris F. and M. W. 3,129,673.

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Stanton, Emmanuel J., to Standard Oil Co. Contacting apparatus. 3,130,014, 4–21–64, Cl. 23—288.

Stark, Christopher P., to Phillips Petroleum Co. Process for the activation of hydrogenation catalysts. 3,130,240, 4–21–64, Cl. 260—667.

Stark, Forest G., to Art Metal, Inc. Connector. 3,129,965, 4–21–64, Cl. 287—54.

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Stedt, Tore P. G. Lubricant for working of metals. 3,130,159, 4–21–64, Cl. 252—31.

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Stephens Will R., to Barnard & Leas Mfg. Co., Inc. Method of producing a mixed liquid fertilizer containing nitrogen and phosphorus. 3,130,033, 4–21–64, Cl. 71—1.

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Stock, Herman E. Exercising grip consisting of a rectangular pad of resiliently compressible material. 3,129,939, 4–21–64, Cl. 272—68.

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Stoller, Hugh M., deceased; by M. M. Stoller, executrix, to United States of America, Army. Dynamo-electric machine construction. 3,130,337, 4–21–64, Cl. 310—258.

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Stookey, Kenneth W. Recuperator. 3,129,931, 4–21–64, Cl. 263—20.

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Storm, Ellery, and S. Shlaer, to United States of America, Atomic Energy Commission. Nuclear radiation dosimeter using composite filter and a single element filter. 3,130,306, 4–21–64, Cl. 250—83.

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Stover, William A., and W. S. Briggs, to W. R. Grace & Co. Preparation of cracking catalysts from clay. 3,130,170, 4–21–64, Cl. 252—450.

Stowell, Nathan J.: *See*—
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Stowell, Nathan J., to J. W. Hughes. Public address apparatus. 3,129,782, 4–21–64, Cl. 181—31.

Stowell, Nathan J., to J. W. Hughes. Housing and mount for loud speakers. 3,129,783, 4–21–64, Cl. 181—31.

Straka, Charles E. Hot and cold water control system. 3,129,723, 4–21–64, Cl. 137—607.

Strasmann, Albert, to Albert Strasmann Prazisions-Werkzeug- und Maschinenfabrik. Milling cutter. 3,129,492, 4–21–64, Cl. 29—103.

Strasmann, Albert, Prazisions-Werkzeug- und Maschinenfabrik: *See*—
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Striegl, George. Rotary compressors, pumps and the like. 3,129,669, 4–21–64, Cl. 103—157.

Stuiman, Howard. Adjustable smokehouse tree. 3,129,820, 4–21–64, Cl. 211—117.

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Suárez, Tomás G. P. Intermittent grip type mechanical movement. 3,129,595, 4–21–64, Cl. 74—120.

Sugino, Kiichiro, K. Shiral, and R. Kitawaki, to Nippon Carbide Kogyo Kabushiki Kaisha. Manufacturing method of alkylenedicyanamide. 3,130,224, 4–21–64, Cl. 260—551.

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Sutherland, John D., Jr., to Copolymer Rubber & Chemical Corp. Process for preparing fast gelling synthetic rubber latex and product. 3,130,171, 4–21–64, Cl. 260—2.5.

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Swallow, Donald S., to International Business Machines Corp. Three level logical circuit suitable for signal comparison. 3,130,324, 4–21–64, Cl. 307—88.5.

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Szatkowski, Richard R., to Continental Can Co., Inc. Air conveyor for can bodies. 3,129,978, 4–21–64, Cl. 302—2.

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Edwards, Charles F. 3,129,601.

Tarpey, Constance M., to John H. Breck, Inc. Maleic anhydride and ethylene oxide copolymers in hair preparations. 3,130,127, 4–21–64, Cl. 167—87.1.

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Tatum, David, and M. S. Mattenfort, to Ametek Inc. Pressure responsive instrument. 3,129,589, 4–21–64, Cl. 73—398.

Taylor, Bruce G. Aircraft having wing with arcuate shaped trailing edge. 3,129,905, 4–21–64, Cl. 244—42.

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Taylor, William E., A. L. Hart, and C. W. Heinle, to American Can Co. Container and sealing cap assembly filled with an aqueous comestible. 3,130,056, 4–21–64, Cl. 99—171.

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Tempero, Nicholas L. Surface sander having automatic leveling properties. 3,129,539, 4–21–64, Cl. 51—177.

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Thomas, Royle P., J. C. Engibous, and F. T. Nielsson, to International Minerals & Chemical Corp. Granular fertilizers. 3,130,038, 4–21–64, Cl. 71—29.

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Tillman, Bill J., to Halliburton Co. Casing alignment and cementing tool and method. 3,129,759, 4–21–64, Cl. 166—14.

Tillman, John E. Pressure reducing blow gun. 3,129,892, 4–21–64, Cl. 239—407.

Tingley, Bruce H., to Sperry Rand Corp. Key interlock mechanism for calculating machines. 3,129,882, 4–21–64, Cl. 235—130.

Tlumac, Fred N., now by change of name, F. N. Teumac, to The Dow Chemical Co. Conversion of perhalo-olefins. 3,130,238, 4–21–64, Cl. 260—653.

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Tweedale, Ralph L. Orbital dry shaver and cutting head therefor. 3,129,507, 4–21–64, Cl. 30—43.

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Valles, Fred G. Flexible sanding block. 3,129,540, 4–21–64, Cl. 51—187.

Vanderbeck, Alfred G., to Aircraft Armaments, Inc. Monorail tractor. 3,129,671, 4–21–64, Cl. 105—153.

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Van der Voort, Henricus G. P., and M. Krukziener, to Shell Oil Co. Lubricating oil and anti-wear additives therefor. 3,130,161, 4–21–64, Cl. 252—51.5.

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Richter, Sidney B. 3,130,206.

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Visos, Charles D., to Knapp-Monarch Co. Manual release for automatic toaster. 3,129,650, 4–21–64, Cl. 99—329.

Visos, Charles D., to Knapp-Monarch Co. Automatic toaster. 3,129,651, 4–21–64, Cl. 99—329.

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Von Meister, Frederick W., to Azoplate Corp. Apparatus for developing an electrostatic latent image. 3,130,079, 4–21–64, Cl. 118—637.

Waag, Norman A., to J. G. Campbell, Inc. Grass catcher assembly for reel-type lawn mowers. 3,129,550, 4–21–64, Cl. 56—199.

Wade, Charles E., Jr. Egg carton. 3,129,866, 4–21–64, Cl. 229—2.5.

Wadleck, Joseph P., to Blaw-Knox Co. Roll groove milling machine. 3,129,639, 4–21–64, Cl. 90—11.

Wagner, Joseph P., to Robertshaw Controls Co. Pneumatic indicating and relay devices. 3,129,722, 4–21–64, Cl. 137—557.

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Wasserman, Samuel. Rotary slide rule. 3,129,881, 4–21–64, Cl. 235—79.5.

Wassner, John G., to Rebuilt Engine Products Co. Band type piston ring compressor. 3,129,501, 4–21–64, Cl. 29—209.

Watson, Kenneth, to Westland Aircraft Ltd. Mechanical gearing. 3,129,608, 4–21–64, Cl. 74—665.

Watson, John W., and P. Fo.d, to Dunlop Rubber Co, Ltd. Method of making golf balls with covers of polyurethane. 3,130,102, 4–21–64, Cl. 156—228.

Watson, Wilfred H., and G. Blood, to Associated Electrical Industries Ltd. Manufacture of hollow articles by blowing in a mould. 3,130,030, 4–21–64, Cl. 65—79.

Watson, William L., to Pollard Bearings Ltd. Seal for ball and roller bearings. 3,129,985, 4–21–64, Cl. 308—187.1.

Weaver, Paul J., to True-Trace Corp. Tile press. 3,129,483, 4–21–64, Cl. 25—92.

Weaver, Theron R., 50% to Pickett Cotton Mills. Means for preventing the accumulation of lint on spindle drive tapes. 3,129,553, 4–21–64, Cl. 57—56.

Weber, Alexander, to Dr. H. Beer, and Mrs. E. Weber-Horisberger, trading as AWEPA. Track assembly. 3,129,751, 4–21–64, Cl. 180—345.

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Wedge, Raymond E. Alternating current generator mounting. 3,129,914, 4–21–64, Cl. 248—16.

Weeks, Joe T. Line stoppers or the like. 3,129,687, 4–21–64, Cl. 114—199.

Weemhoff, Jay R., to Collins & Aikman Corp. Reinforcing waist band structure. 3,129,434, 4–21–64, Cl. 2—236.

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Classification of Designs

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U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

April 21, 1964 Volume 801 Number 3

TRADEMARKS

NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 23,406 (COCA-COLA in script), The Coca-Cola Company, Nutrient or tonic beverages; **Reg. No. 47,189**, same, Tonic beverages and syrups for the manufacture of such beverages; **Reg. No. 226,145** (COCA-COLA), same, Beverages and syrups for the manufacture of such beverages; **Reg. No. 238,146** (COCA-COLA in script), same; **Reg. No. 415,755** (COKE), same, Non-alcoholic maltless beverages and the syrups for making such beverages, filed Nov. 27, 1963, D.C.N.J. (Newark), Doc. 1005–63, *The Coca-Cola Company v. Rainbow Room, Inc.* Consent judgment; trademarks held valid; injunction issued Jan. 23, 1964. **Same, filed** Nov. 19, 1963, D.C., S.D.N.Y., Doc. 63/3381, *Coca-Cola Company v. Leonard Caterers, Inc.* Consent judgment; defendants enjoined Dec. 27, 1963. **Same, filed** Feb. 18, 1964, D.C., E.D. Pa. (Philadelphia), Doc. 35110, *The Coca-Cola Company v. Waldron & Marvel, Inc.* **Same, filed** Mar. 2, 1964, D.C., E.D. Ark. (Little Rock), Doc. LR 64C–32, *The Coca-Cola Company v. Sip-N-Eat et al.* **Same, filed** Mar. 13, 1964, D.C., S.D.N.Y., Doc. 64/812, *The Coca-Cola Company v. Frank A. Holeck.* **Same,** Doc. 64/813, *The Coca-Cola Company v. Abett Cigars, Inc.*

Notice of Daylight Saving Time

The Patent Office will operate on Daylight Saving Time from April 27, 1964, through October 24, 1964.

Changes in Address or Designation of Domestic Representative in Trademark Registered Files

In the future communications advising of a change of address of an original registrant or assignee, or a change of name of a domestic representative of a registrant who resides in a foreign country will be acknowledged by the Patent Office and appropriate notation entered on the file jacket of the registration.

This supersedes the notice entitled "Change of Address" appearing in 706 O.G. 1.

HORACE B. FAY, JR.,
Assistant Commissioner.

March 16, 1964.

CONDITION OF TRADEMARK APPLICATIONS AS OF FEBRUARY 29, 1964

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)] 15,213
Date of oldest new application ..... July 15, 1963
Date of oldest amended application ..... July 3, 1963

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 2, 4, 5, 8, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 39, 41, 42, 43, 44	8-6-63	8-1-63
(II) H. E. KASCHUB, Classes 1, 3, 6, 7, 9, 10, 18, 22, 27, 38, 40, 45, 46, 47, 48, 49, 50, 51, 52; Service Marks, Classes 100, 101, 102, 103, 104, 105, 106, 107 Collective Membership Marks, Class 200; Certification Marks, Classes A and B	7-15-63	7-3-63
Renewals (All Classes)	2-4-64	2-14-64
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Applications filed during the month of February 1964— 1,922

Registrations Issued ..... 235—No. 768,317 to No. 768,551
Renewals Issued 60

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington, D. C., 20402 to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington, D.C., 20231.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 157,023. Terrazzo & Marble Supply Company, Inc., Clifton, N.J. Filed Nov. 9, 1962.

ETERNA

For Marble Chips, Terrazzo Aggregate, Granite Blocks, Slabs and Veneers, and Crushed Quartz.
First use March 1959.

SN 158,866. Spencer Chemical Company, Kansas City, Mo. Filed Dec. 10, 1962.

POLY-EZE

Owner of Reg. Nos. 600,221, 715,622, and others.
For Plastic Resin.
First use July 7, 1961.

SN 161,826. South River Sand Company, Old Bridge, N.J. Filed Jan. 31, 1963.



For Rough-Cut Sand.
First use Dec. 10, 1962.

SN 162,083. John L. Doré Co., Houston, Tex. Filed Feb. 5, 1963.



For Plastic Sheets, Tubes, Rods, Cylinders and Tape.
First use April 1961.

SN 175,156. Bonny Manufacturing Corporation, Maynard, Mass. Filed Aug. 16, 1963.

HI-LO

For Formed Plastic Articles Specifically Extruded or Molded Polytetrafluorethylene Rod.
First use Apr. 27, 1962.

SN 177,005. Courtaulds, Limited, London, England. Filed Sept. 16, 1963.

DALTEL

Priority claimed under Sec. 44(d) on British Reg. No. 847,380, dated Apr. 4, 1963.
For Man-Made Textile Fibres.

SN 177,006. Courtaulds, Limited, London, England. Filed Sept. 16, 1963.

KENLAN

Priority claimed under Sec. 44(d) on British Reg. No. 847,925, dated Apr. 18, 1963.
For Mand-Made Textile Fibres.

SN 177,007. Courtaulds, Limited, London, England. Filed Sept. 16, 1963.

LUVEL

Priority claimed under Sec. 44(d) on British Reg. No. 847,145, dated Mar. 29, 1963.
For Man-Made Textile Fibres.

SN 177,323. Western Peat Moss Ltd., New Westminster, British Columbia, Canada. Filed Sept. 18, 1963.

CANADA BRAND

For Peat Moss.
First use in 1953; in commerce in 1953.

SN 177,507. The Dow Chemical Company, Midland, Mich. Filed Sept. 23, 1963.

TYRIL

Owner of Reg. Nos. 661,262, 722,436, and others.
For Synthetic Resins and Plastic Film.
First use Sept. 6, 1957.

SN 177,731. Union Carbide Corporation, New York, N.Y. Filed Sept. 25, 1963.

AZDEL

For Plastic Film and Sheeting.
First use on or about Sept. 12, 1963.

Class 2—Receptacles

SN 153,946. Educational Developmental Laboratories, Inc., Huntington, N.Y. Filed Sept. 26,1962.

EDL

For Containers for Film Strips, Cards, Audio Tapes and Books.
First use in or about 1953.

SN 162,199. Swedish Crucible Steel Co., Detroit, Mich. Filed Feb. 6, 1963.



For Milk Cartons.
First use Sept. 10, 1962.

SN 168,567. Beach Products, Inc., Kalamazoo, Mich. Filed May 10, 1963.



Without waiver of any common law rights, applicant disclaims any exclusive right to the words "Paper Tableware" except as a part of the mark as shown.
For Plates and Cups of Fibrous Material or Plastic-Coated Fibrous Material and Coasters of Fibrous Material or Plastic-Backed Fibrous Material for Either Hot or Cold Substances or Both.
First use Feb. 25, 1941.

SN 172,210. Louis March, d.b.a. Superior Paper Company, Chicago, Ill. Filed July 1, 1963.

PIZZETTA

For Paper Bags for Food Products.
First use June 7, 1963.

SN 172,505. Liebmann Breweries, Inc., Brooklyn, N.Y. Filed July 5, 1963.

FAST TAP

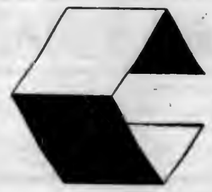
For Cans of Beer Having Tops With a Manually Operated Opening Device.
First use June 19, 1963.

SN 173,950. Pacific Industries, Inc., d.b.a. National Plastics Company, San Francisco, Calif. Filed July 29, 1963.

NPC

For Plastic Bottles and Jugs.
First use February 1962.

SN 174,347. S. Curtis and Son, Incorporated, Newtown, Sandy Hook, Conn. Filed Aug. 5, 1963.



The mark consists of an open-end box in the form of a C.
For Containers—Namely, Folding Paper Boxes and Cardboard, Paperboard and Plastic Packages.
First use about 1951.

SN 174,449. Robert J. Slavsky, Lathrop Village, Mich. Filed Aug. 5, 1963.

POP-BALL

For Attachments for Bottles for Containing and Dispensing Ice Cream and Crushed Ices and for Dispensing Contents of Bottles Through the Latter.
First use on or about May 1, 1963.

SN 174,854. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany. Filed Aug. 12, 1963.

NALO

Owner of German Reg. No. 405,963, dated July 25, 1929.
For Artificial Sausage Casings and the Like.

SN 175,683. Pretty Products, Inc., Coshocton, Ohio. Filed Aug. 23, 1963.



The term "Rubber Household Accessories" is disclaimed apart from the mark. Owner of Reg. Nos. 541,217, 654,243, and 734,035.
For Receptacles and Containers, Made of Rubber, Rubber-Like, Plastic, Neoprene, Vinyl, or Such Like and Similar Compositions and Materials, With or Without Base and Wall Strengthening Elements—Namely, Plain and Ridged Edged Washing and Scrubbing Tubs, Indoor and Outdoor Planters, Baby Baths, Waste Baskets, Vegetable Bins, Dish and Silverware Containers, Buckets, Refuse Cans, Clothes Bins and Baskets, Utility Pails, Pans for General Household Use and Toilet Top Trays.
First use July 1, 1954.

SN 176,221. Montgomery Ward & Co., Incorporated, Chicago, Ill. Filed Sept. 3, 1963.

GARDEN MARK

The word "Garden" is disclaimed apart from the mark as shown, but applicant waives none of its common law rights in said mark or any feature thereof. Owner of Reg. Nos. 732,293, 763,408, and others.
For Hose Reels.
First use Feb. 1, 1958.

SN 176,697. United Steel & Wire Company, Battle Creek, Mich. Filed Sept. 11, 1963.

PAL-L-TRAY

For Nesting Wire Goods—Namely, Merchandise Trays.
First use Mar. 18, 1963.

SN 176,848. Union Bag-Camp Paper Corporation, New York, N.Y. Filed Sept. 12, 1963.

UNITAB

For Folding Cartons.
First use Jan. 31, 1963.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 179,755. Morris White Fashions, Inc., New York, N.Y. Filed Oct. 24, 1963.

NUBBY MIST

For Ladies' Handbags.
First use Sept. 17, 1963.

Class 4—Abrasives and Polishing Materials

SN 173,905. G-G-B Chemical Co., Westbury, N.Y. Filed July 29, 1963.



For Polish for Furniture and Stainless Steel.
First use Mar. 1, 1963.

SN 179,292. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed Oct. 17, 1963.

RECOVER

For Non-Buff Floor Finish and Polish.
First use Aug. 31, 1962.

SN 179,534. Hollywood Shoe Polish Inc., Richmond Hill, N.Y. Filed Oct. 22, 1963.



Owner of Reg. Nos. 268,370, 655,956, and others.
For Shoe Polish.
First use Mar. 15, 1942.

SN 179,804. The National Cash Register Company, Dayton, Ohio. Filed Oct. 25, 1963.



For Polish for Use on Business Machines.
First use on or about Sept. 17, 1962.

SN 180,222. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Oct. 31, 1963.

PRODUCTION

Owner of Reg. No. 678,669.
For Sanding Block and a Kit Containing a Sanding Block and Sandpaper.
First use July 1, 1963.

Class 5—Adhesives

SN 167,025. Mystik Tape, Inc., Chicago, Ill. Filed Apr. 18, 1963.

TYPE-LOK

For Pressure Sensitive Adhesive Tape for Use in Type Setting.
First use Jan. 10, 1963.

SN 168,507. International Shoe Machine Corporation, Boston, Mass. Filed May 9, 1963.

THERMO-BOND

For Thermoplastic Adhesive for Adhering Material or Parts Thereof Together.
First use no later than March 1955.

SN 178,646. Sterneo Industries, Inc., Allendale, N.J. Filed Oct. 9, 1963.

PERMA LIFE

Owner of Reg. Nos. 663,685 and 673,971.
For Adhesive Cement and Sealing Compounds for Stopping Leakage in Glass Aquariums.
First use Sept. 12, 1955.

SN 179,895. General Gummed Products, Inc., Linden, N.J. Filed Oct. 28, 1963.

GGP GOLDEN SUPERFLEX

For Reinforced Gummed Sealing Tape.
First use Sept. 21, 1962.

Class 6—Chemicals and Chemical Compositions

SN 133,600. Tri-Wonder Products, Inc., Wisconsin Dells, Wis. Filed Dec. 7, 1961.



For Insecticide.
First use on or about Nov. 1, 1955.

SN 133,944. Mr. William G. Ehrlich, d.b.a. Sta-Dry Chemical Company, Detroit, Mich. Filed Dec. 13, 1961.

STA-DRY

For Chemical Packet for Absorbing Moisture and Odorous Vapors.
First use Aug. 16, 1948.

SN 156,111. Garland Chemical Products Company, Garland, Tex. Filed Oct. 29, 1962.

TRACTION MAGIC

Applicant disclaims the word "Traction" apart from the mark.
For Traction Enhancing Spray Liquid Composition.
First use May 10, 1962.

SN 163,018. Foseco International Limited, Birmingham, England. Filed Feb. 18, 1963.

TERRAPOWDER

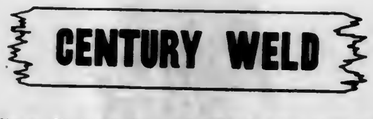
For Refractory Based Mold and Core Dressings for Use in Casting Molten Ferrous Metals.
First use May 5, 1958; in commerce May 5, 1958.

SN 163,098. Albert-Acan X-Ray Solutions, Inc., Woodside, N.Y. Filed Feb. 20, 1963.



For X-Ray, Photographic and Radiographic Developer and Replenisher.
First use 1947.

SN 163,807. Century Bonded Products, Inc., Erie, Pa. Filed Mar. 4, 1963.



Applicant disclaims the word "Weld" apart from the mark as shown.
For Chemical Bonding Materials for Concrete and Plaster Materials for Bonding the Concrete and Plaster to Surfaces of Building Walls To Impart Bonding Strength to the Material.
First use June 13, 1961.

SN 166,295. Magic Powders Inc., Long Island City, N.Y. Filed Apr. 8, 1963.

I-JOY

For Germicidal Pool Water Purifier.
First use Feb. 27, 1963.

SN 166,328. The Udylite Corporation, Detroit, Mich. Filed Apr. 8, 1963.

TRILYTE

For Nickel—Namely, Electrolytes, Salts, and Addition Agents.
First use Mar. 12, 1963.

SN 169,844. Fairchild Camera and Instrument Corporation, Syosset, N.Y. Filed May 28, 1963.

EXCELORITE

For Correction Fluid for Mechanical Negatives.
First use June 15, 1957.

SN 171,627. Dynachem Corporation, Downey, Calif. Filed June 24, 1963.

DYNACHEM

For Electroless Plating Compositions, Photo-Resist Compositions, and Dyes and Thinners Used for Such Photo-Resist Compositions.
First use July 21, 1962.

SN 172,165. Diall Chemical Corporation, Orlando, Fla. Filed July 1, 1963.



For Canned and Bottled Paint Insecticide (Liquid).
First use Sept. 6, 1962.

SN 175,065. Success Brands, Inc., Pittsford, N.Y. Filed Aug. 14, 1963.

fabri-gard

For Chemical Preparation Used on Fabrics and Clothing Which Repels Rain, Stain and Perspiration.
First use Aug. 2, 1963.

SN 175,237. Amchem Products, Inc., Ambler, Pa. Filed Aug. 19, 1963.

VEGIBEN

For Herbicides.
First use Apr. 16, 1963.

SN 175,387. Chemical Corporation of America, Tallahassee, Fla. Filed Aug. 20, 1963.

FOGICIDE

For Insecticide for Use With Thermal Fog Applicators.
First use July 29, 1963.

SN 175,572. General Aniline & Film Corporation, New York, N.Y. Filed Aug. 22, 1963.

GAFAMIDE

Owner of Reg. Nos. 745,638.
For Surface Active Compositions for Use as Wetting, Dispersing, Emulsifying, and Foaming Agents.
First use Nov. 9, 1962.

SN 177,218. The American Oil Company, Chicago, Ill. Filed Sept. 18, 1963.

AMOGAS

Owner of Reg. Nos. 167,769, 743,649, and others.
For Liquefied Petroleum Gas.
First use Dec. 20, 1960.

SN 177,231. Continental Oil Company, Ponca City, Okla. Filed Sept. 18, 1963.

ALFONIC

For Ethoxylated Alcohols for Use as or in the Manufacture of Surfactants.
First use July 27, 1963.

SN 177,321. Verona-Pharma Chemical Corporation, Union, N.J. Filed Sept. 18, 1963.

VEROTHERM

Owner of Reg. Nos. 694,760, 736,985, and others.
For Dyestuffs.
First use Sept. 6, 1963.

SN 180,147. Woburn Chemical Corp., Kearny, N.J. Filed Oct. 30, 1963.

ISOLINE

For Fatty Acids.
First use Dec. 19, 1935.

Class 8 — Smokers' Articles, Not Including Tobacco Products

SN 163,948. Eddie Jacobs, Ltd., Baltimore, Md. Filed Mar. 5, 1963.



Owner of Reg. No. 573,986.
For Cigarette Lighters and Ash Trays.
First use January 1956.

SN 178,279. Heritage Pipes, Inc., New York, N.Y. Filed Oct. 3, 1963.

HERITAGE

For Pipes.
First use July 1960.

SN 179,253. Perma-Pic Corporation of America, New Hope, Pa. Filed Oct. 17, 1963.

PERMA-PIC

For Cigarette and Cigar Lighters With Permanently Reproduced Color Images in Aluminum Thereon.
First use June 19, 1963.

SN 179,873. Frank J. Curran Company, Downers Grove, Ill. Filed Oct. 28, 1963.

WALKY TALKY

For Ashtrays.
First use Aug. 5, 1963.

Class 10 — Fertilizers

SN 162,683. Tecumseh Peat Company, Adrian, Mich. Filed Feb. 13, 1963.

MICHIGAN MAGIC

The word "Michigan" is disclaimed apart from the mark as shown.
For Peat.
First use Apr. 5, 1961.

SN 177,574. Topco Associates, Inc. (Cooperative), Skokie, Ill. Filed Sept. 23, 1963.

TOPCO

For Fertilizer.
First use Mar. 9, 1962.

Class 11 — Inks and Inking Materials

SN 160,606. Commercial Solvents Corporation, New York, N.Y. Filed Jan. 14, 1963.

ISOCOL

For Printing Ink Solvent of an Alcohol Nature.
First use Dec. 19, 1962.

SN 178,172. The Carter's Ink Company, Cambridge, Mass. Filed Oct. 2, 1963.

DIRECTOR

For Carbon Paper and Typewriter Ribbon.
First use June 12, 1963.

SN 178,497. Sterling Drug Inc., New York, N.Y. Filed Oct. 7, 1963.

CYCLO-SET

For Line of Colors for Use in the Manufacture of Printing Inks.
First use Sept. 6, 1963.

SN 180,148. Woburn Chemical Corp., Kearny, N.J. Filed Oct. 30, 1963.

ISOLINE

For Drying Oils for Printing Inks.
First use Dec. 19, 1935.

Class 12 — Construction Materials

SN 117,956. Congoleum-Nairn Inc., Kearny, N.J. Filed Apr. 17, 1961.

RUGGED RED

No claim is made to the word "Red" apart from the mark as shown.
For Sheathing Paper.
First use Aug. 18, 1960.

SN 150,007. Becker & Company Limited, London, England. Filed July 30, 1962.

BEWODITE

Owner of British Reg. No. 827,403, dated Nov. 14, 1961.
For Hardboard, Boards of Compressed Wood Fibres, Fibre Board, Particle Board and Chipboard, All for Building Purposes.

SN 158,843. Modular Components Corporation, Chula Vista, Calif. Filed Dec. 10, 1962.

modular M-C components

The words "Modular Components" are disclaimed apart from the mark shown.
For Fully Factory Fabricated Structural Units and Modular Components for Homes and Buildings—Namely, Unitized Bathrooms, Kitchens, Utility Rooms, and the Like, and Structural Wall and Roof Panels, Composite Beams and Headers, and the Like.
First use in or about May 1960.

SN 159,381. Cementos Molins S.A., Barcelona, Spain. Filed Oct. 15, 1963.

ALUMINOUS CEMENT MOLINS BARCELONA (SPAIN)

The exclusive use of the words "Aluminous Cement" and "Barcelona (Spain)" is disclaimed apart from the mark as a whole. Owner of Spanish Reg. No. 407,912, dated Jan. 7, 1963.
For Aluminous Cement.

SN 160,058. Kemlite Corporation, Joliet, Ill. Filed Jan. 2, 1963.

HERCO

For Glass Fiber Reinforced Plastic Panels.
First use Oct. 5, 1962.

SN 160,360. Bridgeport Fabrics, Inc., Bridgeport, Conn. Filed Jan. 8, 1963.

WEDGE-IT

For Weather Stripping.
First use in May 1950.

SN 160,694. Joan L. Caryl, d.b.a. Joan Caryl Studio, Washington, D.C. Filed Jan. 15, 1963.

CHRISTOGLAS

For Decorative Liturgical Stained Glass Windows.
First use on or about Dec. 1, 1962.

SN 161,146. Butler Manufacturing Company, Kansas City, Mo. Filed Jan. 22, 1963.

PanL-Frame

For Prefabricated Metal Buildings and Parts Thereof.
First use Oct. 5, 1954.

SN 161,296. Alsco, Inc., Akron, Ohio. Filed Jan. 24, 1963.

LIGHTNING-LOK

For Interlocking Aluminum Siding Units, With Electrical Grounding System.
First use Aug. 30, 1962.

SN 161,325. The Flintkote Company, New York, N.Y. Filed Jan. 24, 1963.

ATHENIA

For Wood Fiber Acoustical Tile.
First use Jan. 23, 1962.

SN 161,807. National Gypsum Company, Buffalo, N.Y. Filed Jan. 31, 1963.

VERSAILLES

For Wood Fiber Composition Tile.
First use Aug. 10, 1962.

SN 161,808. National Gypsum Company, Buffalo, N.Y. Filed Jan. 31, 1963.

SILVER CONTESSA

Applicant disclaims the word "Silver" apart from the mark as shown.
For Wood Fiber Composition Tile.
First use Aug. 10, 1962.

SN 161,809. National Gypsum Company, Buffalo, N.Y. Filed Jan. 31, 1963.

GOLD CONTESSA

Applicant disclaims the connotation "Gold" apart from the mark as shown.
For Wood Fiber Composition Tile.
First use Aug. 10, 1962.

SN 161,815. Penn Crete Products Company, Inc., Philadelphia, Pa. Filed Jan. 31, 1963.

DURA-PLUG

For Fast Setting Concrete Base Compound.
First use on or about July 1, 1944.

SN 161,928. Weyerhaeuser Company, Tacoma, Wash. Filed Feb. 1, 1963.

PERFAPLANK

For Perforated Hardboard Panels.
First use July 20, 1962.

SN 162,012. Owens-Corning Fiberglas Corporation, Toledo, Ohio. Filed Feb. 4, 1963.

R-ONE

For Acoustical Tile, Panels and Boards.
First use October 1961.

SN 162,017. Purex Corporation, Ltd., d.b.a. Franklin Research Company, Lakewood, Calif. Filed Feb. 4, 1963.

TCM

For Liquid Form Surface Sealer for Terrazzo, Cement and Magnesite.
First use December 1947.

SN 162,419. Cored Panels, Inc., Farmingdale, N.Y. Filed Feb. 11, 1963.

JIFFY-WALL

For Panels for Use in Fabricating Walls, Partitions, Enclosures, and the Like.
First use Aug. 7, 1962.

SN 162,826. Cored Panels, Inc., Farmingdale, N.Y. Filed Feb. 15, 1963.



For Panels for Use in Fabricating Walls, Partitions, Enclosures, and the Like.
First use Aug. 7, 1962.

SN 163,102. American Hog Company, Broomfield, Colo. Filed Feb. 20, 1963.

FILTER-FLOOR

The word "Floor" is disclaimed apart from the mark as shown.
For Metal Gratings for Hog Stall and Hog Pen Floors.
First use Dec. 27, 1960.

SN 163,202. Doughboy Industries, Inc., New Richmond, Wis. Filed Feb. 20, 1963.

Surfline

For Swimming Pools.
First use Jan. 4, 1962.

SN 164,411. Williams Equipment and Supply Co., Inc., Hazel Park, Mich. Filed Mar. 11, 1963.

EVERLASTIC

For Seals, Gaskets and Sealing Compounds for Masonry and Concrete Construction.
First use Jan. 31, 1953.

SN 166,337. Williams Equipment and Supply Co., Inc., Hazel Park, Mich. Filed Apr. 8, 1963.

NEO-SEAL

For Seals and Gaskets for Masonry Construction.
First use January 1959.

SN 166,338. Williams Equipment and Supply Co., Inc., Hazel Park, Mich. Filed Apr. 8, 1963.

KEY-SEAL

For Seals and Gaskets for Masonry Construction.
First use January 1959.

SN 168,684. Brod & McClung-Pace Co., Portland, Oreg. Filed May 13, 1963.

SKY-CAP

For Prefabricated Weatherproof Roof Enclosures for Exhaust Fans, Air Intakes, Exhaust Terminals and Other Such Roof Mounted Equipment.
First use Aug. 5, 1960.

SN 168,918. Fome-Cor Corporation, Springfield, Mass. Filed May 15, 1963.

THERMO-LATH

For Lath Boards Having Insulating Properties.
First use Feb. 25, 1963.

SN 171,766. Flakebord Corporation, Jamestown, N.Y. Filed June 25, 1963.

PANELCRAFT

For Particle Board for Use in the Building and Furniture Making Industries.
First use May 1, 1963.

SN 173,245. Raymond Flores, d.b.a. Pacific Cement Laundry Tray Company, Hayward, Calif. Filed July 18, 1963.

FLORESTONE

For Cast Cement or Terrazzo Shower Receptors.
First use May 1, 1959.

SN 174,123. The Ruberoid Co., New York, N.Y. Filed July 31, 1963.

STONEWALL

Owner of Reg. No. 297,247.
For Asbestos-Cement Board and Siding.
First use July 1931.

SN 174,429. O'Neill-Wyman Co., Chicago, Ill. Filed Aug. 5, 1963.



The drawing is lined for red, but the particular color is not an essential part of the mark.
For Glazed Tile.
First use July 16, 1963.

SN 174,839. Crown Aluminum Industries Corporation, Pittsburgh, Pa. Filed Aug. 12, 1963.



The mark is lined to indicate shading and does not indicate any particular color as an integral part of the mark.
For Aluminum Clapboard Siding.
First use June 18, 1963.

SN 175,979. William H. Daniel, Tulsa, Okla. Filed Aug. 29, 1963.

DOGLOO

For Prefabricated Dog Houses.
First use on or about July 22, 1963.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 151,718. The Buckeye Valve & Manufacturing Co., Columbus, Ohio. Filed Aug. 28, 1962.



For Faucet-Type Shut-Off Valves and Temperature-Responsive Pressure Relief Valves.
First use July 11, 1962.

SN 156,981. Husky Products, Inc., Cincinnati, Ohio. Filed Nov. 9, 1962.

QIKLOK

For Connectors for Joining Pipe and Cable Supports.
First use Oct. 26, 1961.

SN 157,174. Wear-Ever Aluminum, Inc., New Kensington, Pa. Filed Nov. 13, 1962.

KENWARE

For Cooking Utensils.
First use July 23, 1962.

SN 161,870. Engineering Enterprises, Inc., Houston, Tex. Filed Feb. 1, 1963.

NO-WALL-STICK

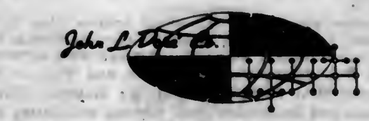
For Drill Collars and Drill Pipe.
First use August 1959.

SN 161,881. Illinois Tool Works Inc., Chicago, Ill. Filed Feb. 1, 1963.

HI-LO

For Screws.
First use Jan. 15, 1963.

SN 162,083. John L. Doré Co., Houston, Tex. Filed Feb. 5, 1963.



For Plastic and Plastic Lined Pipe, Fittings, Valves and Parts Therefor, Dip and Sparger Tubes and Pipes, Bellows, Expansion Joints, and Thermometer Wells.
First use April 1961.

SN 162,583. Mil-Flo, Inc., Dayton, Ohio. Filed Feb. 12, 1963.



For Fluid Line Connections.
First use on or about Oct. 22, 1962.

SN 162,585. Mil-Flo, Inc., Dayton, Ohio. Filed Feb. 12, 1963.

MIL-FLO

For Fluid Line Connections.
First use on or about Oct. 22, 1962.

SN 167,260. Hoover Ball and Bearing Company, Saline, Mich. Filed Apr. 22, 1963.

CAPRI

For Bathroom Fixtures or Accessories Including Soap Holders, Toothbrush and Tumbler Holders, Paper Holders, Hooks, Shelves, Towel Bars and the Like.
First use Mar. 19, 1963.

SN 175,682. Pretty Products, Inc., Coshocton, Ohio. Filed Aug. 23, 1963.



The wording "Rubber Household Accessories" is disclaimed apart from the mark. Owner of Reg. Nos. 541,217, 654,243, and 734,035.
For Kitchen and General Household Articles From Rubber, Rubber-Like, Latex, Plastic, or Such Like and Similar Compositions and Materials, Neoprene and Vinyl, With or Without Base and Wall Strengthening Elements, and With or Without Inserted Heat or Cutting Resisting Material—Namely, Stove, Table and Drainboard Mats, Carving and Slicing Mats, Sink Dividers, Stoppers, Strainer Mats, Pads, Dish and Silverware Tubs, Pans, Drainers, Driers, Dish Baskets, Soap Dishes, Dust Pans, Rubber Tubs, Glass and China Handling Racks.
First use July 1, 1954.

SN 175,686. Pretty Products, Inc., Coshocton, Ohio. Filed Aug. 23, 1963.

PRETTYWARE

Owner of Reg. Nos. 541,217, 654,243, and 734,035.
For Kitchen and General Household Articles Made From Rubber, Rubber-Like, Latex, Plastic, Neoprene, Vinyl, or Such Like and Similar Compositions and Materials, With or Without Base and Wall Strengthening Elements, and With or Without Inserts Having Heat or Cutting Resistance—Namely, Stove, Table, Sink and Drainboard Mats, Carving, Slicing and Bread Mats, Draining and Drying Mats, Sink Dividers, Stoppers and Strainer Mats, Dish and Silverware Holders, Glass and China Handling Racks, Soap Dishes and Dust Pans.
First use May 6, 1946.

SN 175,731. Deutsch Fastener Corp., Los Angeles, Calif. Filed Aug. 26, 1963.

LEVER-LOC

For Latching Handles.
First use Jan. 11, 1962.

SN 175,732. Deutsch Fastener Corp., Los Angeles, Calif. Filed Aug. 26, 1963.

MIL-LOC

For Self Locking Threaded Fasteners.
First use Mar. 11, 1963.

SN 177,017. Drilling Specialties Company, Bartlesville, Okla. Filed Sept. 16, 1963.

DRISCOPIPE

For Pipe.
First use July 11, 1963.

SN 177,109. Triangle Conduit & Cable Co., Inc., New Brunswick, N.J. Filed Sept. 16, 1963.

"ZIP REEL"

For Copper Tubing.
First use June 24, 1963.

SN 177,260. Josam Manufacturing Co., Michigan City, Ind. Filed Sept. 18, 1963.

DIKROME

For Drains.
First use June 19, 1963.

SN 178,647. Sternco Industries, Inc., Allendale, N.J. Filed Oct. 9, 1963.

PERMA LIFE

Owner of Reg. Nos. 663,685 and 673,971.
For Valves and Fittings for Aquarium Air and Water Pipes.
First use Feb. 18, 1957.

SN 183,286. Sargent & Company, New Haven, Conn. Filed Dec. 19, 1963.

MAGNAMATIC

For Magnetic Door Holders.
First use Feb. 28, 1963.

Class 14—Metals and Metal Castings and Forgings

SN 173,357. Henri Paul Jean Langangne, Croix, Nord, France. Filed July 19, 1963.

LANGANOX

Priority claimed under Sec. 44(d) on French Reg. No. 9,307, dated Apr. 22, 1963 (Roubaix); Natl. Inst. No. 205,807.
For Metals and Metal Alloys Including Pig-Iron.

SN 177,148. Aluminum Company of America, Pittsburgh, Pa. Filed Sept. 17, 1963.

ALSPHERE

For Spherical Aluminum Particles.
First use Aug. 22, 1963.

SN 177,928. Topco Associates, Inc. (Cooperative), Skokie, Ill. Filed Sept. 27, 1963.

TOPCO

For Aluminum Foil.
First use Mar. 22, 1962.

SN 178,177. Crucible Steel Company of America, Pittsburgh, Pa. Filed Oct. 2, 1963.

REX 440

Owner of Reg. Nos. 41,265, 713,835, and others.
For Tool Steel.
First use in or about 1930.

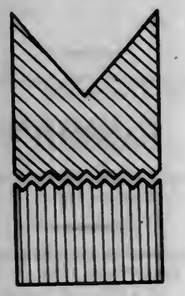
SN 178,330. Bridgeport Rolling Mills Company, Bridgeport, Conn. Filed Oct. 4, 1963.

LED-O-LOY

For Alloy Containing Copper, Tin, Lead and Zinc.
First use at least as early as June 18, 1963.

Class 15—Oils and Greases

SN 134,687. The Singer Company, New York, N.Y., by change of name from The Singer Manufacturing Company, New York, N.Y. Filed Dec. 26, 1961.



The drawing is lined for the colors green and red, but no claim is made to color as a part of the mark.
For Lubricating Oil and Greases.
First use Jan. 5, 1960.

SN 167,173. Shell Oil Company, New York, N.Y. Filed Apr. 19, 1963.

SHELLCOTE

Owner of Reg. No. 405,708.
For Fully Refined Wax.
First use Feb. 6, 1963.

SN 177,213. Agip Societá per Azioni, Rome, Italy. Filed Sept. 18, 1963.



Owner of Italian Reg. No. 139,266, dated Nov. 7, 1958.
For Industrial Oils and Greases (Other Than Edible Oils and Fats and Essential Oils); Lubricants; Dust Laying and Absorbing Oils; Fuels (Including Motor Spirit) and Illuminating Oils; Candles, Tapers, Night-Lights and Wicks.

SN 180,455. Skil Corporation, Chicago, Ill. Filed Nov. 4, 1963.

SKIL

Owner of Reg. No. 198,104.
For Lubricants and Oils for Tools and Accessories.
First use on or about Jan. 1, 1947.

Class 16—Protective and Decorative Coatings

SN 136,802. Connoisseur Studio, Inc., Louisville, Ky., assignee of Patricia E. Nimocks, d.b.a. Connoisseur Studios, Louisville, Ky. Filed Jan. 29, 1962.

TREASURE GOLD

No claim is made to the word "Gold" apart from the mark as shown.
For Gilding Paste for Gilding Surfaces and for Repairing or Refinishing Gilded Surfaces.
First use Feb. 24, 1961.

SN 151,671. Farac Oil and Chemical Company, Chicago, Ill. Filed Aug. 22, 1962.

FLEXTHANE

Owner of Reg. Nos. 578,305, 650,399, and 729,985.
For Varnish and Paint Vehicle Composed of Oil, Solvent and an Isocyanate Modified Alkyd Resin Solution.
First use July 7, 1962.

SN 160,568. West Chemical Products, Inc., Long Island City, N.Y. Filed Jan. 11, 1963.

DECADE

For Industrial and Institutional Gymnasium Floor Finishing Composition—Namely, Liquid Floor Sealer; Liquid Floor Finish and Floor Marking Enamels.
First use Dec. 18, 1962.

SN 163,274. The Pure Oil Company, Palatine, Ill. Filed Feb. 21, 1963.

PURE-TECT

For Corrosion Prevention Composition for Coating Metal Surfaces.
First use on or about Nov. 14, 1962.

SN 166,178. East Coast Soap Corp., Brooklyn, N.Y. Filed Apr. 5, 1963.

UNI-KOTE

For Protective Coating Composition for Sealing Floors.
First use Dec. 15, 1961.

SN 173,366. Lanson Chemical Corporation, East St. Louis, Ill. Filed July 19, 1963.

LANFLEX

For Ingredients for Protective and Decorative Coatings—Namely, Synthetic Resin Emulsions and Latices.
First use Oct. 16, 1961.

SN 173,367. Lanson Chemical Corporation, East St. Louis, Ill. Filed July 19, 1963.

LANKYD

For Ingredients for Protective and Decorative Coatings—Namely, Alkyd Resins.
First use Oct. 16, 1961.

SN 173,368. Lanson Chemical Corporation, East St. Louis, Ill. Filed July 19, 1963.

LANVAR

For Ingredients for Protective and Decorative Coatings—Namely, Oleoresinous Varnishes and Epoxy Esters.
First use Oct. 16, 1961.

SN 178,648. Sterneo Industries, Inc., Allendale, N.J. Filed Oct. 9, 1963.

PERMA LIFE

Owner of Reg. Nos. 663,685 and 673,971.
For Lacquers for Fish Tank Walls.
First use Jan. 14, 1963.

SN 178,764. American Optical Company, Southbridge, Mass. Filed Oct. 11, 1963.

ALLO-COTE

For Protective Lens Coatings To Be Applied to Lenses During Lens Processing and Manufacture.
First use Sept. 10, 1963.

SN 178,878. Davis Paint Company, Kansas City, Mo., assignee of The John P. Cochran Company, Cleveland, Ohio. Filed Oct. 14, 1963.

KENMORE

For Exterior and Interior Paint, Enamel, Lacquer, Varnish, Shellac, Stain, Linseed Oil, Turpentine and Paint Thinner.
First use 1926.

SN 178,881. Davis Paint Company, Kansas City, Mo., assignee of The John P. Cochran Company, Cleveland, Ohio. Filed Oct. 14, 1963.

WONDR-LUX

For Interior House and Building Paint.
First use Jan. 12, 1952.

SN 179,446. G. C. Murphy Company, McKeesport, Pa. Filed Oct. 21, 1963.

TRIPLE ///CHECK

Owner of Reg. No. 515,527.
House Paints.
First use Sept. 25, 1963.

SN 180,149. Woburn Chemical Corp., Kearny, N.J. Filed Oct. 30, 1963.

ISOLINE

For Drying Oils for Use in Paints and Varnishes.
First use Dec. 19, 1935.

SN 182,863. Carolina Coatings, Inc., Charlotte, N.C. Filed Dec. 12, 1963.

AQUA-GLIDE

For House Paints.
First use Oct. 10, 1962.

Class 17—Tobacco Products

SN 179,766. Bayuk Cigars Incorporated, Philadelphia, Pa. Filed Oct. 25, 1963.

TRADITION

For Cigars.
First use Oct. 4, 1963.

SN 179,768. Bayuk Cigars Incorporated, Philadelphia, Pa. Filed Oct. 25, 1963.

GRAND PRIX

For Cigars.
First use Oct. 4, 1963.

SN 179,934. Rothmans of Pall Mall Export Limited, London, England. Filed Oct. 28, 1963.

LANGDEN

Owner of British Reg. No. B844,975, dated Feb. 12, 1963.
For Cigarettes, Tobacco and Cigars.

SN 179,935. Rothmans of Pall Mall Export Limited, London, England. Filed Oct. 28, 1963.

STANTEN HALL

Owner of British Reg. No. B844,984, dated Feb. 12, 1963.
For Cigarettes, Tobacco and Cigars.

SN 180,275. The American Tobacco Company, New York, N.Y. Filed Nov. 1, 1963.

PINNACLE

For Cigarettes.
First use Oct. 31, 1963.

SN 181,187. Stephano Brothers, Philadelphia, Pa. Filed Nov. 14, 1963.

HERALD

Owner of Reg. Nos. 350,206, 307,700, and 719,168.
For Little Cigars.
First use July 26, 1963.

SN 181,262. Notob Products, Inc., New York, N.Y. Filed Nov. 15, 1963.

SENTRY

For Smokes in the Form and Shape of Cigarettes Containing No Tobacco.
First use Dec. 6, 1962.

Class 18—Medicines and Pharmaceutical Preparations

SN 157,680. Carter Products, Inc., New York, N.Y. Filed Nov. 21, 1962.

XTENSIN

For Pharmaceutical Preparation—Namely, a Relaxant and Pain Reliever.
First use Oct. 5, 1962.

SN 158,306. Aktiebolaget Astra, Apotekarnes Kemiska Fabriker, Sodertalje, Sweden. Filed July 30, 1963.

BRICAR

Owner of Swedish Reg. No. 104,144, dated Oct. 26, 1962.
For Pharmaceutical Preparation for the Treatment of Heart Arrhythmias.

SN 166,046. Sterling Drug Inc., New York, N.Y. Filed Apr. 3, 1963.

PolyGram

For Anti-Infective Agent.
First use Mar. 7, 1963.

SN 179,957. Sterling Drug Inc., New York, N.Y. Filed Oct. 28, 1963.

ISOPAQUE

Owner of Reg. No. 256,605.
For Radiopaque Medium for X-Ray Examination.
First use Sept. 9, 1963.

SN 180,165. American Cyanamid Company, Wayne, N.J. Filed Oct. 31, 1963.

ARISTOMIX

Owner of Reg. Nos. 653,318, 737,451, and others.
For Steroid Preparation.
First use Oct. 16, 1963.

SN 180,237. Sandoz, Inc., Hanover, N.J. Filed Oct. 31, 1963.

ACTOSPAR

For Pharmaceutical Preparation Used in the Induction and Stimulation of Labor.
First use Oct. 9, 1963.

SN 180,467. S. J. Tutag & Company, Detroit, Mich. Filed Nov. 4, 1963.

KELATRATE

For Hematinic Preparations in Liquid and in Tablet Form.
First use Jan. 4, 1960.

SN 180,494. Eastern Baker Pharmaceutical Corporation, Jacksonville, Fla. Filed Nov. 5, 1963.

VARIUM

For Barium Sulphate.
First use Oct. 21, 1963.

SN 180,674. Organon Inc., West Orange, N.J. Filed Nov. 7, 1963.

FERRIBOLIN

For Pharmaceutical Preparation for Use in Promoting Tissue Growth by Enhanced Protein Utilization, Supplemented by Dietary Additives.
First use Oct. 8, 1963.

SN 180,675. Organon Inc., West Orange, N.J. Filed Nov. 7, 1963.

GERIBOLIN

For Pharmaceutical Preparation for Use in Promoting Tissue Growth by Enhanced Protein Utilization, Supplemented by Dietary Additives.
First use Oct. 8, 1963.

Class 19—Vehicles

SN 147,581. Bert Howard, Inc., Lansing, Mich. Filed June 25, 1962.

FARMERS Pride

For Farm Wagons, Wagon Bodies, and Running Gear Therefor.
First use on or about Nov. 1, 1959.

SN 169,821. Burtman Iron Works, Inc., Boston, Mass. Filed May 28, 1963.

DYNA BILT

For Platform Trucks, Shelf Trucks, Table Trucks, Transfer Trucks, Rack Trucks and Special Purpose Trucks.
First use June 9, 1960.

SN 175,680. Pretty Products, Inc., Coshocton, Ohio. Filed Aug. 23, 1963.



The wording "Rubber Household Accessories" is disclaimed apart from the mark. Owner of Reg. Nos. 541,217, 654,243, and 734,035.

For Articles Made of Rubber, Rubber-Like, Latex, Neoprene, Vinyl, Plastic, Cloth, or Such Like and Similar Compositions and Materials—Namely, Flat and Contonr Automobile Floor, Seat and Back Mats.

First use July 1, 1954.

SN 175,684. Pretty Products, Inc., Coshocton, Ohio. Filed Aug. 23, 1963.

PRETTYWARE

Owner of Reg. Nos. 541,217, 654,243, and 734,035.

For Articles Made of Rubber, Rubber-Like, Latex, Neoprene, Vinyl, Plastic, Cloth, or Such Like and Similar Compositions and Materials—Namely, Flat and Contour Automobile Floor, Seat and Back Mats.

First use July 1, 1955.

SN 176,222. Montgomery Ward & Co., Incorporated, Chicago, Ill. Filed Sept. 3, 1963.

GARDEN MARK

Applicant claims no registration rights for the word "Garden" apart from the mark as shown, but applicant waives none of its common law rights in the mark or any feature thereof. Owner of Reg. Nos. 732,293, 763,408, and others.

For Wheelbarrows, Garden Hose Carts and Garden Carts.

First use July 1, 1957, on garden carts.

SN 176,868. Alim Association, Inc., Miami, Fla. Filed Sept. 13, 1963.

VEE LIFT

Owner of Reg. No. 761,239.

For Boats.

First use Aug. 5, 1963.

SN 178,303. Southern States Feed Corporation, Atlanta, Ga. Filed Oct. 3, 1963.

"BILLY-CAN"

For Large Wheeled Receptacles for Bakery Refuse.

First use on or about Aug. 1, 1963.

SN 179,486. Turtle Wax, Inc., Chicago, Ill. Filed Oct. 21, 1963.



For Automobile Floor Mats.

First use Apr. 15, 1963.

SN 179,588. Arnold, Schwinn & Co., Chicago, Ill. Filed Oct. 23, 1963.

STING-RAY

For Bicycles.

First use Apr. 19, 1963.

SN 179,591. Bell Aerospace Corporation, Wheatfield, N.Y. Filed Oct. 23, 1963.

bh

For Vertical Lift Aircraft and Parts Therefor.

First use Dec. 1, 1960.

SN 179,740. Arnold, Schwinn & Co., Chicago, Ill. Filed Oct. 24, 1963.

SCHWINN TWINN

Owner of Reg. No. 526,131.

For Tandem Bicycles.

First use Oct. 4, 1963.

Class 20 — Linoleum and Oiled Cloth

SN 164,734. The Marley Tile Company Limited, London, England. Filed Mar. 15, 1963.



The mark comprises a design symbolic of a human figure and of a tile piece. Owner of British Reg. No. 827,426, dated Nov. 14, 1961.

For Floor Coverings, in Tile or Sheet Form—Namely, Linoleum, Rubber, Vinyl, Asphalt, and Vinyl Asbestos Tiles and Sheets.

SN 170,504. Bon-Ton Vinyl for Walls, Inc., Darby, Pa. Filed June 6, 1963.

BON-TON

For Vinyl Wall Plain and Decorative Coverings in Sheet and Roll Form.

First use during 1918.

Class 21 — Electrical Apparatus, Machines, and Supplies

SN 153,804. Oki Electric Industry Company Limited, Minato-ku, Tokyo, Japan. Filed Sept. 24, 1962.

LADDERTRON

For Electron Tubes.

First use Apr. 1, 1962; in commerce Aug. 1, 1961.

SN 159,009. Telefonaktiebolaget L M Ericsson, Stockholm, Sweden. Filed June 11, 1963.

ERICOFON

Owner of Swedish Reg. No. 103,983, dated Sept. 28, 1962.

For Telephone Instruments.

SN 163,786. Aqua-Chem, Inc., Waukesha, Wis. Filed Mar. 4, 1963.

AQUA-PAC

Owner of Reg. Nos. 735,939 and 735,940.

For Electrodialysis Equipment for the Demineralization of Water and Separation of Fluids and Parts Therefor.

First use June 9, 1961.

SN 164,023. The Electric Auto-Lite Company, Toledo, Ohio. Filed Mar. 6, 1963.

UDS

For Electrical Apparatus, Particularly Storage Batteries and Parts Therefor.

First use Jan. 6, 1960.

SN 165,090. Surrounding Sound, Inc., Los Angeles, Calif. Filed Mar. 20, 1963.

SURROUNDING SOUND

For Sound Reproducing Broadcasting Units.

First use April 1962.

SN 166,302. Min-X Radio, Inc., Detroit, Mich. Filed Apr. 8, 1963.

MIN-X

For Radio Remote Control Transmitting and Receiving Devices, Used for Remote Control of Model Planes, Cars, Boats, and Accessories, Which Are Used in Conjunction With These Transmitting and Receiving Devices.

First use Nov. 30, 1958.

SN 168,219. Poly-Pak Corporation of America, Springdale, Conn. Filed May 6, 1963.

SPEED RAY

For Infrared Food Heaters.

First use Apr. 19, 1963.

SN 168,766. Gilbert D. Schneider, d.b.a. The Septivator Company, Lexington, Ohio. Filed May 13, 1963.

SEPTIVATOR

For Septic Tank Activating Systems, and Component Parts Consisting of Electrical Heating Means, Mechanico-Electrical Control Means, and Connecting Electrical Circuitry.

First use Mar. 19, 1962.

SN 169,445. The Gamewell Company, Newton Upper Falls, Mass. Filed May 22, 1963.

FIRST . . . WHEN SECONDS COUNT

For Fire Alarm Equipment Such as Fire Alarm Boxes, Fire Alarm Electrical Systems, Fire Alarm Station House Control Panels and Accessories Associated Therewith.

First use on or about Sept. 29, 1960.

SN 173,030. Monsanto Chemical Company, St. Louis, Mo. Filed July 15, 1963.

Monsanto

For Semiconductor Materials for Use in Semiconductor Devices.

First use Jan. 5, 1960.

SN 173,031. Monsanto Chemical Company, St. Louis, Mo. Filed July 15, 1963.

MONSANTO

For Semiconductor Materials for Use in Semiconductor Devices.

First use Jan. 5, 1960.

SN 173,268. The Metrodynamics Corporation, Caldwell Township, Essex County, N.J. Filed July 18, 1963.

"COMPRE AMP"

For Audio Limiting Amplifiers.

First use Jan. 15, 1962.

SN 174,792. Precision Multiple Controls, Inc., Ridgewood, N.J. Filed Aug. 9, 1963.



For Relays, Light Sensitive Lighting Controls, and Accessories Therefor.
First use September 1961.

SN 175,565. Electro Engineering Products Co., Inc., Chicago, Ill. Filed Aug. 22, 1963.

SABANDER

For Portable Electrically Powered Combination Saw and Sander.
First use on or about July 25, 1963.

SN 177,475. American Motors Corporation, Detroit, Mich. Filed Sept. 23, 1963.

KELVINATOR

Owner of Reg. No. 142,652.
For Electric Ranges and Parts Thereof.
First use in or before 1935.

SN 178,278. Herbert A. Henderson, d.b.a. H. A. Henderson Company, Los Angeles, Calif. Filed Oct. 3, 1963.

HENCO
INSUL-COTE

For Non-Conductive, Heat Dissipating, and Corrosion Inhibiting Coatings for Electronic and Similar Components.
First use Apr. 3, 1963.

SN 178,305. Symphonic Radio and Electronic Corp., New York, N.Y. Filed Oct. 3, 1963.

MASTER GRAND

For Radio-Phonographs.
First use Aug. 1, 1963.

SN 178,344. General Motors Corporation, Detroit, Mich. Filed Oct. 4, 1963.

DELTECTOR

For Electric Motors.
First use Aug. 13, 1963.

SN 178,345. General Motors Corporation, Detroit, Mich. Filed Oct. 4, 1963.

DELSEAL

For Electric Motors.
First use Aug. 16, 1963.

SN 178,557. Multi-Clean Products, Incorporated, St. Paul, Minn. Filed Oct. 8, 1963.

PORT-A-SCRUB

For Electrically Operated Hand Carried Scrubbing Machines.
First use Aug. 15, 1963.

SN 179,447. G. C. Murphy Company, McKeesport, Pa. Filed Oct. 21, 1963.

TRIPLE ///CHECK

For Electric Apparatus—Namely, Cube Taps, Wall Plates, Wall Outlets, Fluorescent Light Starters, Sockets, Junction Box Receptacles, Mercury and Flush Toggle Switches, Appliance Plugs, Extension Cords, Extension Chains, Night-Lights and Neon Safety Lights.
First use June 18, 1963.

Class 22—Games, Toys, and Sporting Goods

SN 134,464. La Lanne Incorporated, Hollywood, Calif. Filed Dec. 21, 1961.

LA LANNE

Owner of Reg. Nos. 704,521, 714,516, and others.
For Physical Conditioning Device in the Form of an Elastic Exerciser and Physical Exercise Devices.
First use on about Apr. 10, 1961.

SN 138,765. Maxwell William Bradshaw, Alberta, Canada. Filed Feb. 28, 1962.

ROLL-O-MAX

Priority claimed under Sec. 44(d) on Canadian application filed Dec. 13, 1961; Reg. No. 131,349, dated June 7, 1963.
For Apparatus Sold as Units for Playing Dice and Board Games.

SN 146,611. Edd Thomas, d.b.a. Cash Creations, Longview, Tex., assignee of Food City, Longview, Tex. Filed June 11, 1962.

FUNNY-MONEY

For Equipment Comprising Token Coins, Instructional Leaflets, and Other Instructional and Promotional Material for Sale as a Packaged Deal to Food and Similar Retail Outlets Which in Turn Use the Tokens as a Means of Distributing Cash or Merchandise Prizes as a Promotional Scheme To Encourage, Facilitate and Stimulate the Sale of Their Goods.
First use Mar. 15, 1962.

SN 147,988. A/S Lego System, Jutland, Denmark. Filed June 29, 1962.

LEGO SYSTEM

Owner of Danish Reg. No. 4,442/60, dated Aug. 19, 1961; and U.S. Reg. No. 668,633.
For Toys in the Nature of Building Blocks.

SN 151,285. Ainsworth Consolidated Industries Pty. Ltd., Rosebery, New South Wales, Australia. Filed Aug. 16, 1962.

STARLITE

Owner of Australian Reg. No. 164,518, dated Jan. 11, 1961.
For Coin-Freed Apparatus, Coin-Freed Automatic Machines, Coin-Freed Automatic Distributors.

SN 157,953. George Wolfman, d.b.a. Noel Associates, San Francisco, Calif. Filed Nov. 26, 1962.

RAH-FONE

For Toy Megaphone—All Plastic (Linear Polyethylene) Megaphone.
First use Sept. 5, 1962.

SN 160,566. John R. Tusson, New Orleans, La. Filed Jan. 11, 1963.

TRANSACTION

For Apparatus Sold as a Unit for Playing an Educational Stock Market Game.
First use Sept. 3, 1962.

SN 160,671. Ski Speed Co., Los Angeles, Calif. Filed Jan. 14, 1963.

ski speed

The term "Ski" is disclaimed apart from the mark.
For Aerosol Ski Wax To Be Sprayed on Skis.
First use Apr. 4, 1962.

SN 161,492. Gardens Services, Inc., Pine Mountain, Ga. Filed Jan. 28, 1963.



The words "Tournament" and "Callaway Gardens" and the representation of a crossed pair of water skis are disclaimed apart from the mark as a whole without waiving any common law rights thereto.
For Water Skis.
First use Nov. 28, 1961.

SN 161,858. Doughboy Industries, Inc., New Richmond, Wis. Filed Feb. 1, 1963.

Putter Poles

For Children's Toy Construction Sets.
First use May 15, 1962.

SN 161,859. Doughboy Industries, Inc., New Richmond, Wis. Filed Feb. 1, 1963.

Nursery Rhyme House

No claim of exclusive right is made to "House" for the goods recited.
For Child's Play House.
First use Mar. 27, 1962.

SN 161,862. Doughboy Industries, Inc., New Richmond, Wis. Filed Feb. 1, 1963.

RIK 'O 'SHINNY

No claim of exclusive right is made to "Shinny" for the goods recited.
For Equipment Sold as a Unit for Playing an Indoor Hockey Game.
First use May 1, 1962.

SN 162,081. Crotty Corporation, Quincy, Mich. Filed Feb. 5, 1963.

BILLY BOY

Owner of Reg. Nos. 607,289 and 741,534.
For Sleeping Bags.
First use Jan. 30, 1959.

SN 162,747. B. F. Gladding & Co., Inc., South Otselic, N.Y. Filed Feb. 14, 1963.

THE 98'ER

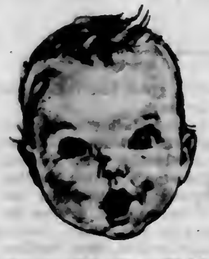
For Fishing Lines.
First use August 1958.

SN 163,819. De Luxe Reading Corporation, Elizabeth, N.J. Filed Mar. 4, 1963.

JUNGLE JACK

For Toy Hunting Rifle Set Comprising a Rifle, Ammunition Clip and Cartridges, a Pistol and Holster Set, Helmet, a Knife, Flashlight, Binoculars and Canteen.
First use July 1962.

SN 169,848. Gerber Products Company, Fremont, Mich. Filed May 28, 1963.



Gerber

Owner of Reg. Nos. 657,394 and 658,241.
For Toys—Namely, Telephones, Jingle Blocks, Swiss Bells, Baby Concertinas, Mobiles, Cannons, Tom-Toms, Circus

Seals, Clown Knockdown Games and Including Constructional Toys: Lacing Shoes, Tri-Form Cars, Ringing Engines, Piggy Wagons, Pound and Bolt Benches, Egg Beaters, Tool Boxes, Stacking Turtles, Stack and Rock Toys, Alphabet Blocks, Play Bottles, Nut and Bolt Sets, and Hydrants.
First use August 1955.

SN 171,553. Mattel, Inc., Hawthorne, Calif. Filed June 21, 1963.

SUPERCHIEF

For Jack-in-the-Box Toy.
First use May 22, 1963.

SN 174,974. Saul Menick and David Sadel Associates, Incorporated, Washington, D.C. Filed Aug. 13, 1963.

PLAY-A-LONG

For Scorecards for Sports Activities.
First use Aug. 1, 1963.

SN 177,002. Cortland Industries, Inc., Cortland, N.Y. Filed Sept. 16, 1963.

GOLDEN GATE

For Fishing Lines.
First use May 3, 1916.

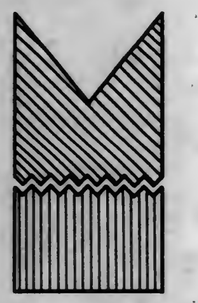
SN 177,003. Cortland Industries, Inc., Cortland, N.Y. Filed Sept. 16, 1963.

SUBMARINE

For Fishing Lines.
Firs use May 3, 1916.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 134,688. The Singer Company, New York, N.Y., by change of name from The Singer Manufacturing Company, New York, N.Y. Filed Dec. 26, 1961.



The drawing is lined for the colors green and red, but no claim is made to color as a part of the mark.
For Household and Industrial Sewing Machines, Darning, Embroidering, Hemstitching, Buttonhole Making, Button Feeding, Article Fastening, Bobbin Winding, Strip Cutting, Pressing, Strip Winding, Thread-Drawing, Quilting, Fulling, Ruffling, Binding, Shoemaking, Taping and Grinding Machines; Shaft Hangers, Shafting, Countershafts, Sewing Machine Needles, Air Blowing Apparatus for Needle Cooling and Lint Dispersing, Needle Cooling Devices, Belt Punches, Belt Tighteners for Taking the Slack Out of Power Transmission Belts; Scissors, Pinking Shears, Screwdrivers, C-Clamps, Work Holding Implements for Maintaining a Work-Piece in Operative Relation With a Sewing Machine, Cutter Blades, Finger Guards in the Form of Screens To Prevent an Operator's Fingers From Engaging a Moving Machine Element, Thread Lubricators in the Form of Receptacles Adapted for Containing a Thread Lubricant, Stilettos, Seam Rippers in the Form of a Knife, Inspection Mirrors and Fagoting Units About Which Cords May Be Wound Before Stitching Same; Sewing Machine Attachments—Namely, Embroidery, Blind Stitch, Gathering, Ruffling, Buttonholer, Quilting, Presser Foot, Zipper Foot, Darning Foot, Bias Binding and Thread-Chain Cutting Attachments; Sewing Machine Tables and Stands; Typewriters; and Parts Thereof.
First use Nov. 20, 1959, on sewing machines.

SN 142,819. De Laval Turbine, Inc., Trenton, N.J., assignee of Scott & Williams, Incorporated, Laconia, N.H. Filed Apr. 3, 1962.

HYDROPULSE

For High Pressure Pumps Particularly for Use in the Pumping of Food Materials, Chemicals, Abrasive and Other Solid-Liquid Mixtures and the Like and Having Pulsators Separating Driving and Driven Liquids, and for Homogenizers.
First use Mar. 27, 1952.

SN 144,604. Wisner Manufacturing Corporation, Mountainside, N.J., assignee of Deltown Foods, Incorporated, Yonkers, N.Y. Filed May 15, 1962.

SHURE-KLEEN

For Power Driven Washing Machine for Cleaning Discs Used in Separators and Clarifiers in the Dairy Industry.
First use Mar. 14, 1962.

SN 150,695. Illinois Tool Works Inc., Chicago, Ill. Filed Aug. 7, 1962.

"CERTIFIED"

For Hobs.
First use July 1951.

SN 152,345. Snomaster, Inc., Grand Rapids, Mich. Filed Aug. 31, 1962.

SNOMASTER

For Snowplows, Both of the Attachment and Self-Powered Types.
First use on or about Sept. 20, 1961.

SN 154,831. The McNeil Machine & Engineering Company, Akron, Ohio. Filed Oct. 9, 1962.

McNEIL
AKRON

The word "Akron" is specifically disclaimed except as part of the mark as shown.
For Machinery, Equipment and Apparatus Used in the Manufacturing and Processing of Products From Rubber, Rubberized or Plastic Materials.
First use on or about Oct. 8, 1938.

SN 161,966. Diamond Tool and Horseshoe Co., Duluth, Minn. Filed Feb. 4, 1963.

GROOVE-JOINT

For Pliers.
First use June 4, 1952.

SN 162,080. Crotty Corporation, Quincy, Mich. Filed Feb. 5, 1963.

BILLY BOY

Owner of Reg. Nos. 607,239 and 741,534.
For Fitted Outboard Motor Covers.
First use May 26, 1954.

SN 165,050. Gallagher-Kaiser Corporation, Detroit, Mich. Filed Mar. 20, 1963.

GYRO-KLEEN

For Industrial Washing and Coating Devices, Spray Booths.
First use Jan. 15, 1963.

SN 170,132. Vita Craft Corporation, Kansas City, Mo. Filed May 31, 1963.

Carillon

For Stainless Steel Flatware.
First use May 2, 1963.

SN 172,958. Walker Manufacturing Company, Racine, Wis. Filed July 12, 1963.

TRU FIT

For Internal Combustion Engine Exhaust Systems, Including Mufflers.
First use June 17, 1963.

SN 173,119. The McMullen Co., d.b.a. Highway Sign Cleaner Co., St. Paul, Minn. Filed July 16, 1963.

HIGHWAY HANDYMAN

For Power-Operated Pressure Pump-Equipped Highway Sign Washers.
First use Feb. 1, 1963.

SN 173,362. Iri Daffin Associates, Incorporated, Lancaster, Pa. Filed July 19, 1963.

AUTOPELLETER

For Pelleting Machine.
First use May 29, 1963.

SN 173,568. Fluid Solids, Inc., Saugatuck, Conn. Filed July 23, 1963.

LAM FLO

For Fluid Flow-Mixing and Flow-Guiding Devices—Namely, Vacuum Pumps, Aspirators, Mixing Units, Injectors and Projection Nozzles for Powder Coating Equipment, and Fluid Flow-Mixing and Flow-Guiding Conduits for Use in Fuel Burners, Sonic Cleaning Equipment, Drying Devices, and Aircraft Jet Propulsion Units.
First use on or before June 24, 1963.

SN 173,582. Arthur A. Kroetch, d.b.a. Wickomatic Oiler Company, Philip, S. Dak. Filed July 23, 1963.

Little Scotchman

For Insecticide Applicator—Namely, Livestock Oiler.
First use Mar. 11, 1960.

SN 174,029. Imperial Knife Associated Companies, Inc., Providence, R.I. Filed July 30, 1963.

VIRGINIA ROSE

The word "Rose" is disclaimed apart from the mark as shown.
For Stainless Steel Flatware, Tableware and Kitchen Cutlery Utensils and Tools.
First use July 23, 1963.

SN 174,437. Phillips Petroleum Company, Bartlesville, Okla. Filed Aug. 5, 1963.

SEE-SAFE

Owner of Reg. Nos. 547,419 and 597,920.
For Packaging Machines and Accessories Therefor.
First use on or about July 27, 1956.

SN 174,446. Henry S. Shoemaker, d.b.a. H. S. Shoemaker & Son, Rayville, La. Filed Aug. 5, 1963.

The "DITCHING DEVIL"



For Ditchers and Trenchers.
First use June 13, 1962.

SN 175,187. Guild Metal Joining Equipment Company, Bedford, Ohio. Filed Aug. 16, 1963.

GUILD

For Metal Coil Strip Processing Machinery and Equipment—Namely, Combination Shear and End Welders for Joining Metal Strips Into Continuous Lengths.
First use Dec. 10, 1959.

SN 175,357. Guild Metal Joining Equipment Company, Bedford, Ohio. Filed Aug. 16, 1963.

GUILD

For Metal Coil Strip Processing Machinery and Equipment—Namely, Combination Shear and End Welders for Joining Metal Strips Into Continuous Lengths.
First use Sept. 15, 1961.

SN 176,065. Beaver Products, Inc., Beaver Dam, Wis. Filed Aug. 30, 1963.

CENTURY

For Hydraulic Lift Trucks.
First use Apr. 5, 1963.

SN 176,612. Avery Adhesive Products, Inc., San Marino, Calif. Filed Sept. 10, 1963.

ROTEX

For Label Making Tool and Tapes Therefor.
First use Aug. 13, 1963.

SN 177,181. Karl Mayer Textilmaschinen G.m.b.H., Oberts-hausen near Offenbach/Main, Germany. Filed Sept. 17, 1963.

DIABOLO

Owner of German Reg. No. 772,126, dated Apr. 1, 1963.
For Components of Warp Knitting Machines, i.e. Filament Tensioning Devices, Guide Bars, Needle Bars, Needle Beds, Sinker Bars, Warp Beams, Yarn Guides, Knitting Needles.

SN 177,478. Auto Transmissions Limited, Coventry, England. Filed Sept. 23, 1963.

de NORMANVILLE

Owner of British Reg. No. 823,336, dated July 22, 1961.
For Transmission Gearing for the Propulsion Systems of Motor Land Vehicles and Parts Included in Such Gearing.

SN 178,520. Aquappliances, Inc., Saugus, Calif. Filed Oct. 8, 1963.

BEARING BUDDY

For Hubcaps, Hub Dust Caps, and Parts Thereof.
First use Aug. 29, 1963.

SN 179,227. Hyde Manufacturing Company, d.b.a. Hyde Tools, Southbridge, Mass. Filed Oct. 17, 1963.

CLO-ZUM

For Paint Can Closing Device.
First use Sept. 16, 1963.

SN 179,310. American Insulating Machinery Company, Philadelphia, Pa. Filed Oct. 18, 1963.

EST. 1855 AIMCo INC. 1918
"American" INSULATING MACHINERY COMPANY

Owner of Reg. No. 124,652.
For Machinery for Processing Magnet Wire and Allied Equipment.
First use Mar. 11, 1919.

SN 179,445. G. C. Murphy Company, McKeesport, Pa. Filed Oct. 21, 1963.

MONOGRAM

Owner of Reg. Nos. 407,214 and 529,604.
For Electric Hair Clippers and Hair Clipper Sets.
First use July 29, 1963.

SN 179,769. Bixby-Zimmer Engineering Co., Galesburg, Ill. Filed Oct. 25, 1963.

BEE ZEE

Owner of Reg. Nos. 401,884 and 403,500.
For Screens—Namely, Screens for Use in De-Watering, Drying and Sizing Coal, Gravel, Ores, Chemicals and Foodstuffs and for Like Purposes.
First use Oct. 5, 1942.

SN 179,803. Mead Specialties Company, Inc., Chicago, Ill. Filed Oct. 25, 1963.

DYNA-SONIC

For Air Exhaust Mufflers or Silencers.
First use May 2, 1962.

SN 179,898. Graphic Controls Corporation, Buffalo, N.Y. Filed Oct. 28, 1963.

For Machines for Printing, Separating, and Cutting Sheets of Business Forms and Data Processing Forms.
First use Mar. 8, 1960.

SN 180,036. Sperry Rand Corporation, New Holland, Pa. Filed Oct. 29, 1963.

FARMEC

For Animal Feeders, Conveyors, Grain Boxes, Silo Unloaders and Bale Separators.
First use Sept. 25, 1963.

SN 180,529. Pennsylvania Engineering Corporation, New Castle, Pa. Filed Nov. 5, 1963.

posi-charger

For Machine for Charging Materials Such as Metal Scrap Into Furnace Vessels.
First use Aug. 30, 1963.

SN 180,806. American Machine & Tool Co. Inc., Royersford, Pa. Filed Nov. 1, 1963.

AMT

For Circular Saws (Both Radial and Conventional); Drill Presses; Sabre Saws; Shapers; Jointers; and Band Saws for Wood Working, Metal Working and Plastic Working; and Wood Lathes.
First use Oct. 13, 1961.

SN 180,861. Dresser Industries, Inc., d.b.a. Dresser Guiberson Division, Dallas, Tex. Filed Nov. 12, 1963.

DRESSER GUIBERSON

Owner of Reg. Nos. 549,537 and 657,089.
For Oil Field Tools and Related Accessories—Namely, Well Swabs, Tubing Catchers for Wells, Well Packers, Tubing Anchors for Wells, Hydraulic Anchors for Wells, Oil Savers for Wells, Blowout Preventers for Wells, Drilling Heads for Wells, Intermitters for Gas Lift Installations on Wells, Surface Controllers for Gas Lift Installations on Wells, Motor Valves for Gas Lift Installations on Wells, Sucker Rod Strippers, Tubing Strippers, Circulating Valves for Use in Wells, Safety Joints for Use in Wells, Downhole Separators for Use in Wells, Gas Lift Flow Valves for Wells, Tubing Spiders, Blocks and Hooks for Use on Wells, Rotary Swivels for Wells, Kellys, Releasing Attachments for Well Swabs, Pipe Unions for Use on Wells, Rubber Pipe Protector Sleeves, Rubber Slush Pump and Stuffing Box Rings, Mandrels for Mounting Gas Lift Valves in Wells, Stabilizer Sleeves for Drill Pipe, and Parts for the Foregoing Equipment.
First use Nov. 1, 1962.

Class 24—Laundry Appliances and Machines

SN 177,204. Diamond National Corporation, New York, N.Y. Filed Sept. 10, 1963.

INDEPENDENCE

For Clothespins.
First use Jan. 13, 1956.

SN 177,776. Detrex Chemical Industries, Inc., Detroit, Mich. Filed Sept. 26, 1963.

Enxay

For Dry Cleaning Machines.
First use June 20, 1963.

Class 26—Measuring and Scientific Appliances

SN 147,371. International Rectifier Corporation, El Segundo, Calif. Filed June 21, 1962.

POWERED BY THE SUN!

"Powered By The Sun!" is claimed only in connection with the mark as shown.
For Solar Energy and Transistor Electronic Laboratory for Educational Purposes.
First use Feb. 4, 1962.

SN 154,734. The Lionel Toy Corporation, Wilmington, Del., assignee of The Lionel Corporation, New York, N.Y. Filed Oct. 8, 1962.

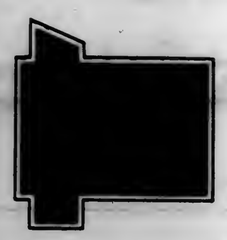
Owner of Reg. Nos. 443,429 and 736,342.
For Microscopes, Chemical Balances, Centrifuges and Agitators for Testing Purposes.
First use September 1961.

SN 159,498. Jeppesen & Co., Denver, Colo. Filed Dec. 20, 1962.

JEPCO

Owner of Reg. No. 700,987.
For Aircraft and Air Navigation Instrumentation—Namely, Plotters and Protractors.
First use on or about Oct. 1, 1955.

SN 161,352. The Mercoid Corporation, Chicago, Ill. Filed Jan. 24, 1963.



For Mercury Contact Devices, Temperature Devices, Timing Devices, Differential Pressure Devices, Vacuum Controlling and Indicating Devices, and Float Controlling and Indicating Devices.
First use on or before Oct. 23, 1962.

SN 164,405. Unit Process Assemblies, Inc., Woodside, N.Y. Filed Mar. 11, 1963.

MICRO-DERM

For Non-Destructive Thickness Gauge.
First use Sept. 26, 1962.

SN 165,397. Western Electrodynamics, Inc., Colorado Springs, Colo. Filed Mar. 25, 1963.



For Electrical Measuring and Testing Equipment—Namely, Oscillographs, Self-Initiating Oscillographs, Galvanometers, Insulation Testers, Relative Ionospheric Opacity Meters and Dopplometers.
First use May 11, 1962, on oscillographs.

SN 166,335. Wilkens Instrument & Research, Inc., Walnut Creek, Calif. Filed Apr. 8, 1963.

PESTILYZER

For Measuring Instruments, and More Particularly, Measuring Instruments in the Gas Chromatography Field.
First use Mar. 27, 1963.

SN 173,957. Pratt & Whitney Company, Incorporated, West Hartford, Conn. Filed July 29, 1963.

OPT-O-LIMIT

For Measuring Apparatus—Namely, Instruments for Measuring, Indicating, Recording and Controlling Dimensional Characteristics; and Dimensional Gages—Namely, Electromechanical Gage Comparators, Height Gages and Parts Therefor.
First use July 16, 1963, on instruments for indicating dimensional characteristics.

Class 27 — Horological Instruments

SN 177,100. Sheffield Watch, Inc., New York, N.Y. Filed Sept. 16, 1963.

HAPPY TIME

For Watches and Clocks.
First use Apr. 3, 1963.

SN 177,616. Ebauches S.A., Neuchatel, Switzerland. Filed Sept. 24, 1963.

memoStop

Priority claimed under Sec. 44(d) on Swiss Reg. No. 198,759, dated May 31, 1963.
For Watches and Watch Parts.

SN 178,099. Bulova Watch Company, Inc., Flushing, N.Y. Filed Oct. 1, 1963.

CALENTIME

For Watches.
First use Aug. 22, 1963.

SN 181,582. Werna Watch Corporation, Birmingham, Ala. Filed Nov. 20, 1963.

TIMECREST

For Watches.
First use Nov. 9, 1963.

Class 28 — Jewelry and Precious-Metal Ware

SN 157,836. Photogem Co., New York, N.Y. Filed Nov. 23, 1962.

KEYCHARM

For Combined Key Ring and Ornament.
First use on or about Nov. 1, 1962.

SN 162,445. Eddie Jacobs, Ltd., Baltimore, Md. Filed Feb. 11, 1963.



For Cuff Links, Tie-Pins and Clasps, Collar and Lapel Pins, Belt-Buckles, Money-Clips, Key Chains, and Earrings Formed of Precious and Semi-Precious Metal, or Ornamented With Same.
Owner of Reg. No. 573,986.
First use January 1956.

SN 173,187. Claude Riviere, S.A.R.L., Paris, France. Filed July 17, 1963.

CLAUDE RIVIÈRE

The mark "Claude Riviere" is a fictitious name.
For Articles of Jewelry, Including Necklaces, Bracelets, Earrings, Pins and Other Novelty Items of Costume Jewelry.
First use 1962; in commerce 1962.

SN 175,516. Betty Schaffner, Houston, Tex. Filed Aug. 21, 1963.

HAPPY BEADS

The term "Beads" is disclaimed.
For Beads Sold in the Form of Finished Articles of Jewelry.
First use March 1962.

SN 177,370. Daphne Bradley Piester, Brookneal, Va. Filed Sept. 19, 1963.

DAPHNE

For Costume Jewelry, Men's Accessory Jewelry and Ornamented Key-Rings.
First use September 1952.

Class 29 — Brooms, Brushes, and Dusters

SN 177,816. Sunbeam Corporation, Chicago, Ill. Filed Sept. 26, 1963.

VISTA

For Toothbrushes.
First use Aug. 7, 1963.

Class 31 — Filters and Refrigerators

SN 161,706. Harlee Manufacturing Co., Chicago Ill. Filed Jan. 30, 1963.

tastee-freez

Owner of Reg. Nos. 588,916 and 750,695.
For Freezers Used in the Preparation of Soft Ice Cream and Ice Milk, Milk Shake Machines, Ice-Making Machines, Soft Drink Dispensers, and Combination Ice-Making and Soft Drink Dispensing Machines.
First use in 1951 on freezers used in the preparation of ice cream and ice milk.

SN 177,410. Fram Corporation, East Providence, R.I. Filed Sept. 20, 1963.

DELUXAIRE

For Air Filters.
First use July 25, 1963.

SN 178,012. Linatex Corporation of America, Stafford Springs, Conn. Filed Sept. 30, 1963.

LINACLAD

For Perforated Metal Plates Coated With Abrasion-Resistant Material and Used as Screens for Separation and Classification of Granular Material Such as Ores, Sand, Gravel, Coal, and the Like.
First use May 21, 1963.

SN 179,205. Dean Products, Inc., Brooklyn, N.Y. Filed Oct. 17, 1963.

SHALLODEAN

Owner of Reg. No. 353,674.
For Cooling Plates, Emersion Coolers, Cooking Cabinets, Cooling Shrouds, Cooling Drums, Refrigerated Filter Presses, Refrigerated Dip Pans, Utensils for Cooling and Refrigerating Food, Chemicals, Gases and Liquids, Cooling Platens, Refrigerated Counter Tops, Coolers for Sterilizing Laboratory Equipment.
First use Oct. 4, 1963.

Class 32 — Furniture and Upholstery

SN 146,449. Automatic Electric Mattress Co., Los Angeles, Calif. Filed June 8, 1962.

AUTOMATED

For Mattresses.
First use Mar. 10, 1962.

SN 167,249. Futorian Manufacturing Company, Chicago, Ill. Filed Apr. 22, 1963.

STRATOROCKER

Owner of Reg. Nos. 589,562, 681,468, and others.
For Adjustable Reclining Chair and Rocker.
First use Apr. 5, 1963.

SN 169,821. Burtman Iron Works, Inc., Boston, Mass. Filed May 28, 1963.

DYNA-BILT

For Material Handling and Storage Equipment—Namely, Sliding Racks, Adjustable Racks, Stationary Racks.
First use June 9, 1960.

SN 170,550. Nova Products Corp., Brooklyn, N.Y. Filed June 7, 1963.

NOVA

For Table Pads and Patterns for Making Same.
First use 1923.

SN 171,026. Herman Miller, Inc., Zeeland, Mich. Filed June 14, 1963.

ECS

For Furniture—Namely, Systems of Storage Units, Study Units, Sleeping Units and Living Units of the Type Mounted Between Panels Suspended by Rails on the Wall of a Room.
First use during the month of September 1960.

SN 178,484. Rockaway Metal Products Corp., Inwood, N.Y. Filed Oct. 7, 1963.

Desk Silencer

For Desk Top Partitions.
First use September 1962.

Class 33 — Glassware

SN 170,133. Vita Craft Corporation, Kansas City, Mo. Filed May 31, 1963.

Carillon

For Crystal Stemware, Plates, and Dishes.
First use May 2, 1963.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 165,050. Gallagher-Kaiser Corporation, Detroit, Mich. Filed Mar. 20, 1963.

GYRO-KLEEN

For Dust and Fume Collectors, Fresh Air Replenishing Units and Industrial Ovens.
First use Jan. 15, 1963.

SN 167,857. Air Conditioning & Heating Specialists, Inc., Green Bay, Wis. Filed May 1, 1963.

CLIMA-TEL

For Devices for Heating, Cooling, Cleaning and Controlling the Humidity of Air.
First use Feb. 24, 1963.

SN 172,355. Aton Planungs- und Baugesellschaft fur die Keramische Industrie m.b.H., Frechen, near Cologne, Germany. Filed July 2, 1963.

ATONAT

Owner of German Reg. No. 768,772, dated Dec. 27, 1962.
For Kilns—Namely, Tunnel and Chamber Ovens for the Ceramic Industry; Driers—Namely, Tunnel and Chamber Driers for the Ceramic Industry; Heaters for Ceramic Kilns and Driers; and Gas and Oil Burners for Such Heaters.

SN 179,206. Dean Products, Inc., Brooklyn, N.Y. Filed Oct. 17, 1963.

SHALLODEAN

Owner of Reg. No. 553,674.
For Heating Platens and Plates, Emersion Heaters, Heating Ovens, Heat Exchangers, Melting Tanks, Drum Warmers, Heat Treating Furnaces, Heating Tanks, Heated Filter Presses, Heated Dip Pans, Utensils for Heating Food, Chemicals, Gases and Liquids, Heated Counter Tops and Heaters for Sterilizing Laboratory Equipment.
First use Oct. 4, 1963.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 148,120. Ajax Tire & Rubber Corporation, New York, N.Y. Filed July 2, 1962.

RACINE

For Non-Metallic Tires.
First use Mar. 12, 1910.

SN 148,215. Murray Tire & Rubber Corporation, New York, N.Y. Filed July 2, 1962.

Murray

For Non-Metallic Tires.
First use on or about Jan. 1, 1915.

SN 148,216. Murray Tire & Rubber Corporation, New York, N.Y. Filed July 2, 1962.

MASON

For Non-Metallic Tires.
First use Nov. 1, 1918.

SN 162,083. John L. Doré Co., Houston, Tex. Filed Feb. 5, 1963.

John L. Doré Co.

For V and Rod Packing, O-Rings, Gaskets, Compressor Piston and Wear Rings, and Piston Cups.
First use April 1961.

SN 179,628. The General Tire & Rubber Company, Akron, Ohio. Filed Oct. 23, 1963.

PLAZA

For Pneumatic Tires.
First use Oct. 14, 1963.

SN 179,807. O. K. Rubber Welders, Incorporated, Littleton, Colo. Filed Oct. 25, 1963.

CURV-STAR

For Vehicle Tires.
First use on or about Oct. 14, 1963.

Class 36 — Musical Instruments and Supplies

SN 154,733. The Lionel Toy Corporation, Wilmington, Del., assignee of The Lionel Corporation, New York, N.Y. Filed Oct. 8, 1962.

Owner of Reg. Nos. 443,429 and 736,342.
For Phonographs and the Parts Therefor, Tape Recorders and Parts Therefor, Phonograph Records, Recording and Pre-Recorded Tape.
First use March 1962.

SN 171,322. Dario Soria, New York, N.Y. Filed June 19, 1963.

For Phonograph Records.
First use Apr. 25, 1950.

SN 172,972. Cameo-Parkway Records, Inc., d.b.a. Fairmount Records, Philadelphia, Pa. Filed July 15, 1963.

FAIRMOUNT

For Grooved Phonograph Records.
First use June 15, 1963.

SN 173,756. Fred D. Hinger, Churchville, Pa. Filed July 25, 1963.

HINGER

For Drum Mallets.
First use on or about Jan. 30, 1958.

SN 173,757. Fred D. Hinger, Churchville, Pa. Filed July 25, 1963.

TOUCH-TONE

For Drum Mallets.
First use on or about Nov. 21, 1962.

SN 175,078. Computron Inc., Waltham, Mass. Filed Aug. 13, 1963.

The drawing is lined for the colors red and grey, which colors are not claimed as integral portions of the design mark.
For Magnetic Tape.
First use June 15, 1961.

SN 175,809. Southern Solid State Electronics, Inc., Memphis, Tenn. Filed Aug. 26, 1963.

MUSIC PAL

No registration rights are claimed for the word "Music" apart from the mark as shown.
For Transistorized Electronic Guitar.
First use Apr. 7, 1963.

Class 37 — Paper and Stationery

SN 144,669. Bergstrom Paper Company, Neenah, Wis. Filed May 16, 1962.

The mark consists of a pattern of regularly spaced spearhead designs in V-shape open spaces which break straight lines.
For Blank Sheets Used in the Preparation of Negotiable Instruments and Check Vouchers.
First use on or about January 1947.

SN 152,930. Jameco Metal Products Co. Inc., Jamaica, N.Y., assignee of Daniel Silverman, d.b.a. Jameco Metal Products Company, New York, N.Y. Filed Sept. 11, 1962.

GOLD TONE

The drawing is lined for the color gold.
For Stamp Case, Address Book, Stamp Dispensers With or Without Pens, Letter Holder, Picture Album, and Paper and Towel Clips.
First use on Feb. 3, 1960 on stamp cases.

SN 153,711. Hudson Pulp & Paper Corp., New York, N.Y. Filed Sept. 7, 1962.

BIG H

Owner of Reg. No. 551,872.
For Paper Towels.
First use January 1961.

SN 159,496. Jeppesen & Co., Denver, Colo. Filed Dec. 20, 1962.

JEPCO

Owner of Reg. No. 700,987.
For Aircraft and Air Navigation Accessories and Supplies—Namely, Knee Desks, Flight Cases, Binder Accessories, Chart Wallets, Chart Protectors and Index Tabs.
First use on or about May 26, 1955 on flight cases.

SN 166,640. Lew Mfg. Co., Coventry, R.I. Filed Apr. 12, 1963.

FIFTY

For Pens and Mechanical Pencils.
First use Mar. 30, 1963.

SN 167,513. Jane Adler Incorporated, Beverly Hills, Calif. Filed Apr. 25, 1963.

Xandyband

For Rubber Bands.
First use Mar. 11, 1963.

SN 168,566. Beach Products, Inc., Kalamazoo, Mich. Filed May 10, 1963.

BEACH

For Paper Tableware—Namely, Paper Napkins, Placemats, and Table Covers, and Combinations of Paper Napkins, Placemats, or Table Covers With Paper Coasters or Plastic-Backed Paper Coasters, Plates or Cups of Paper or Plastic-Coated Paper; Also Paper Towels, Crepe Paper, and Crepe Paper Streamers.
First use Feb. 25, 1941.

SN 168,568. Beach Products, Inc., Kalamazoo, Mich. Filed May 10, 1963.

BEACH PAPER TABLEWARE

Without waiver of any common law rights, applicant disclaims any exclusive right to the words "Paper Tableware" except as a part of the mark as shown.
For Paper Tableware—Namely, Paper Napkins, Placemats, and Table Covers, and Combinations of Paper Napkins, Placemats, or Table Covers With Coasters of Paper or Plastic-Backed Paper, Plates or Cups of Paper or Plastic-Coated Paper; Also Paper Towels, Crepe Paper, and Crepe Paper Streamers.
First use Feb. 25, 1941.

SN 168,572. Beach Products, Inc., Kalamazoo, Mich. Filed May 10, 1963.

HANDI-SET

For Paper Tableware—Namely, Paper Napkins or Table Covers, and Combinations of Paper Napkins or Table Covers and Plates or Cups of Paper or Plastic-Coated Paper.
First use Feb. 25, 1941.

Class 38 — Prints and Publications

SN 114,424. Robert A. Brown, Jr., d.b.a. Life Insurance Sales Clinic, Los Angeles, Calif. Filed Feb. 27, 1961.

IDEA INDEX

For Monthly Bulletin To Be Used To Develop the Marketing of Insurance and the Use and Application of Insurance Sales Techniques.
First use Feb. 13, 1961.

SN 146,110. The E. W. Scripps Company, Cincinnati, Ohio. Filed June 4, 1962.

AMERICANS IN ACTION

For Series of Articles Published Periodically in Newspapers or the Like.
First use Apr. 23, 1962.

SN 155,187. Public Service Company of Colorado, Denver, Colo. Filed Oct. 15, 1962.

For Company Magazines and Newsletter, and Booklets and Pamphlets.
First use on or about the middle of March 1957.

SN 157,300. Hayden Publishing Company, Inc. of California, New York, N.Y. Filed Nov. 15, 1962.

Electronic Daily

For Newspaper Published Daily From Time to Time at Annual Electronic Conventions.
First use Mar. 19, 1956.

SN 158,360. The Merrill Anderson Company, Inc., New York, N.Y. Filed Dec. 3, 1962.

TAX SCOPE

For Pamphlets Relating to Tax Matters.
First use Sept. 16, 1962.

SN 158,456. W. H. Long Marketing, Inc., Greensboro, N.C. Filed Dec. 4, 1962.

WORLD MARKETERS
THE WORLD-WIDE MARKETING NETWORK

For Market Reports and Bulletins Issued Periodically.
First use Aug. 10, 1962.

SN 159,209. Concast AG (Concast SA) (Concast Co., Ltd.), Zurich, Switzerland. Filed Dec. 17, 1962.

CONCAST-NEWS

For Newsletters.
First use Apr. 15, 1962; in commerce at least as early as Apr. 30, 1962.

SN 159,239. Industrial Fasteners Institute, Cleveland, Ohio. Filed Dec. 17, 1962.

INDUSTRIAL FASTENERS INSTITUTE

For Books Containing Compilations of Technical Standards for Industrial Fastener Devices.
First use Apr. 2, 1952.

SN 159,497. Jeppesen & Co., Denver, Colo. Filed Dec. 20, 1962.

J-AID

For Publications in the Form of Airway Manuals Containing Flight Information Such as That Directed to Navigation and Communication and Airport Directories and Diagrams.
First use in or about March 1960.

SN 160,133. Press, Inc., Johnson City, Tenn. Filed Jan. 3, 1963.

JOHNSON CITY TENN. PRESS-CHRONICLE

No claim is made to "Tenn." or the outline of the State of Tennessee. Owner of Reg. No. 621,794.
For Daily Newspaper.
First use Oct. 28, 1962; 1941 as to "Johnson City Press-Chronicle."

SN 164,788. American Home Products Corporation, New York, N.Y. Filed Mar. 18, 1963.

AHP

For Periodically Issued Reports of Corporate Activity.
First use Apr. 15, 1943.

SN 166,718. John C. Howard, Chicago, Ill. Filed Apr. 15, 1963.

SPECTARAMA

For Color Motion Picture Films (i.e. Film Transparencies); Colored Prints Processed From Colored Motion Picture Films; Colored Still Picture Transparencies; and Colored Still Picture Prints.
First use Oct. 15, 1962.

SN 167,576. Romper Room, Inc., Baltimore, Md. Filed Apr. 25, 1963.

THE ROMPER ROOM

Owner of Reg. Nos. 589,236, 756,982, and others.
For Books.
First use May 9, 1956.

SN 168,314. The Foundation for Research on the Nature of Man, Durham, N.C. Filed May 7, 1963.

THE JOURNAL OF PARAPSYCHOLOGY

For Scientific Journal.
First use Mar. 15, 1937.

SN 168,858. Howard W. Sams & Co., Inc., Indianapolis, Ind. Filed May 14, 1963.

STI

For Home Study Booklets Issued Periodically.
First use Mar. 1, 1963.

SN 169,629. Sol Gershenhorn, d.b.a. Green's Southern California Sports Service, Los Angeles, Calif. Filed May 24, 1963.

BASEBALL SCOREBOARD

Applicant disclaims the word "Baseball" apart from the mark as shown.
For Booklets Issued Periodically Containing Baseball Schedules and Other Baseball Information.
First use Apr. 1, 1960.

SN 170,779. Tobe Associates, Inc., New York, N.Y. Filed June 11, 1963.

Tobé

For Fashion Report, Now Published Weekly but Which Might at Some Time Hereafter Be Published at Other Intervals.
First use in or about May 1930.

SN 171,170. The New York Retail Druggists Association, New York, N.Y. Filed June 17, 1963.

METROPOLITAN Pharmacist

For Monthly Magazine.
First use Apr. 4, 1963.

SN 171,471. McGraw-Hill Publishing Company, Inc., New York, N.Y. Filed June 20, 1963.

ELECTRONICS BUYERS' GUIDE

Owner of Reg. Nos. 391,134 and 560,986.
For Annual Catalog.
First use June 15, 1946.

SN 171,603. American Paint Journal Company, St. Louis, Mo. Filed June 24, 1963.

American PAINTING CONTRACTOR

For Monthly Publication Devoted to the Interest of the Painting Contractor.
First use June 3, 1963.

SN 171,624. Doane Agricultural Service, Inc., St. Louis, Mo. Filed June 24, 1963.

DOANE'S AGRICULTURAL REPORT

Applicant makes no claim to the words "Agricultural Report" apart from the mark as shown. Owner of Reg. Nos. 632,282, 657,444, and others.
For Publications of Current Analysis and Permanent Reference Data That Treat All Aspects of Agriculture and Its Effect on Business and Investments, Published From Time to Time.
First use June 2, 1963.

SN 171,977. Ellison Publications, Inc., Chicago, Ill. Filed June 27, 1963.

Fence Industry TRADE NEWS

For Trade Magazine Issued Periodically.
First use in July 1958.

SN 172,383. Gallery 63, Inc., New York, N.Y. Filed July 3, 1963.

63

For Framed Pictures and Art Exhibition Catalogues.
First use Nov. 20, 1962.

SN 172,922. The Magnesium Association, Detroit, Mich. Filed July 12, 1963.

THE MAGNESIUM ASSOCIATION — The Single Voice is Sometimes Lost—Associated Voices Are Usually Heard

For Periodical Newsletter.
First use in March 1963.

SN 172,962. Charles R. Frosst & Co., Westmount, Quebec, Canada. Filed July 11, 1963.

ACTUA MEDICA

Priority claimed under Sec. 44(d) on Canadian application filed Mar. 27, 1963; Reg. No. 133,463, dated Nov. 8, 1963.
For Printed Publication Directed to the Medical Profession Advising Them of Current Activities in Their Field.

SN 173,909. Golfdom, Inc., Chicago, Ill. Filed July 29, 1963.

GOLFDOM
• THE MAGAZINE OF GOLF BUSINESS •

Applicant disclaims the words "The Magazine of Golf Business" apart from the mark as shown. Owner of Reg. No. 514,388.
For Periodical.
First use July 1, 1963.

Class 39 — Clothing

SN 134,465. La Lanne Incorporated, Hollywood, Calif. Filed Dec. 21, 1961.

LA LANNE

Owner of Reg. Nos. 714,516, 730,137, and others.
For Womens' Exercising Wearing Apparel.
First use on about Apr. 10, 1961.

SN 159,200. Buccaneer Mfg. Co., Inc., d.b.a. Buccaneer, Brooklyn, N.Y. Filed Dec. 17, 1962.

COMBAT

For Children's Fatigue Sets—Namely, Work Pants and Jackets, and Children's Hats.
First use Jan. 15, 1957.

SN 162,330. Bennett's of New Haven, Inc., New Haven, Ind. Filed Feb. 8, 1963.

FROSTWATE

For Coats and Suits for Men.
First use Oct. 15, 1962.

SN 162,738. Genesco Inc., Nashville, Tenn. Filed Feb. 14, 1963.

THRILL

Owner of Reg. No. 634,896.
For Brassieres and Girdles.
First use July 1, 1931.

SN 162,986. Sam Silberstein Corp., New York, N.Y. Filed Feb. 18, 1963.

BRAETAN JUNIORS

Without waiving its common law rights herein, no claim is made by applicant through the word "Juniors," apart from the mark as shown.
For Misses' and Junior Suits and Coats.
First use July 6, 1942.

SN 163,716. Edlo Imports Ltd., New York, N.Y. Filed Mar. 1, 1963.

Edlo

For Ladies' Knitwear Including, Dresses, Suits, Sweaters, Skirts, Jackets and Cardigans.
First use May 1, 1962.

SN 171,218. Cesare Contegiacomo S.p.A., Putignano, Bari, Italy. Filed June 17, 1963.

CONTES

Owner of Italian Reg. No. 102, 653, dated June 20, 1951.
For Children's and Boys' Clothing—Namely, Coats, Overcoats, Raincoats, Trousers, and Suits.

SN 171,759. Clarise Sportswear Co., Inc., New York, N.Y. Filed June 25, 1963.

LOCKED-IN TOGETHERNESS

For Women's Apparel, Composed of Slacks, Shorts, Blouses, Separates, Jamaica and Bermuda Sets.
First use June 3, 1963.

SN 173,820. Cluett, Peabody & Co., Inc., New York, N.Y. Filed July 26, 1963.

DECTOLENE

Owner of Reg. Nos. 702,303 and 728,353.
For Underwear.
First use Feb. 12, 1963.

SN 173,822. Cluett, Peabody & Co., Inc., New York, N.Y. Filed July 26, 1963.

DECTON

Owner of Reg. No. 701,013.
For Underwear.
First use Apr. 26, 1963.

SN 175,681. Pretty Products, Inc., Coshocton, Ohio. Filed Aug. 23, 1963.



The wording "Rubber Household Accessories" is disclaimed apart from the mark. Owner of Reg. Nos. 541,217, 654,243, and 734,035.

For Lined and Unlined Gloves Made From Cloth, Canvas, Rubber, Latex, Neoprene, Vinyl, or Combination Thereof, in Amber, Natural or Color, for Household Gardening, and General Purpose use.

First use July 1, 1954.

SN 175,685. Pretty Products, Inc., Coshocton, Ohio. Filed Aug. 23, 1963.

PRETTYWARE

Owner of Reg. Nos. 541,217, 654,243, and 734,035.

For Articles of Clothing, Made From Rubber, Rubber-Like, Latex, Plastic, or Like or Similar Compositions, Neoprene, Vinyl or Cloth Combinations—Namely, Various Sized, Shaped, Plain and Decorated Bathing and Swim Caps, Also Lined and Unlined Gloves Made From Cloth, Canvas, Rubber, Latex, Neoprene, Vinyl, or Combinations Thereof, in Amber, Natural or Color, for Household, Gardening, and General Purpose Use.

First use May 6, 1946.

SN 176,122. So-Lo Marx Rubber Company, Loveland, Ohio. Filed Aug. 30, 1963.

SLEEKERS

For Lightweight Rubber Overshoes.
First use June 19, 1963.

SN 176,524. Hickey-Freeman Company, Rochester, N.Y. Filed Sept. 9, 1963.

CAPRILLA

For Men's Suits.
First use Aug. 23, 1963.

SN 176,930. McGregor-Doniger Inc., New York, N.Y. Filed Sept. 13, 1963.



For Men's and Boys' Shirts.
First use Feb. 22, 1957.

SN 184,593. American Optical Company, Southbridge, Mass. Filed Jan. 17, 1964.

DURA-GUARD

For Protective Clothing—Namely, Safety Hats and Caps and Hat Accessories Such as Hat Bands and Hat Liners.
First use June 15, 1961.

Class 40—Fancy Goods, Furnishings, and Notions

SN 162,447. Eddie Jacobs, Ltd., Baltimore, Md. Filed Feb. 11, 1963.



For Buttons.
First use January 1956.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 120,799. The B. F. Goodrich Company, Akron, Ohio. Filed May 25, 1961.

RUG-GRIP

For Rug Underlay Intended Primarily for Use Under Scatter-Rugs.
First use June 1956.

SN 162,446. Eddie Jacobs, Ltd., Baltimore, Md. Filed Feb. 11, 1963.



Owner of Reg. No. 573,986.

For Fabrics of Silk and Synthetic Fibers, and Combinations Thereof, for Neckties, Linings and Scarves.
First use Aug. 1, 1939.

SN 163,757. Pedigree Fabrics, Inc., New York, N.Y. Filed Mar. 1, 1963.

PEDICARE

Owner of Reg. Nos. 442,317 and 560,148.
For Textile Fabrics of Cotton and Synthetic Fibers.
First use Apr. 1, 1961.

SN 163,758. Pedigree Fabrics, Inc., New York, N.Y. Filed Mar. 1, 1963.

PEDICLOTH

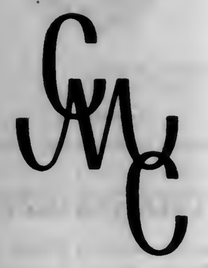
Owner of Reg. Nos. 442,317 and 560,148.
For Textile Fabrics of Cotton and Synthetic Fibers.
First use Jan. 5, 1959.

SN 163,760. Pedigree Fabrics, Inc., New York, N.Y. Filed Mar. 1, 1963.

PEDISWISS

Owner of Reg. Nos. 442,317 and 560,148.
For Textile Fabrics of Cotton and Synthetic Fibres.
First use Apr. 4, 1960.

SN 170,295. Cleveland Mills Company, Lawndale, N.C. Filed June 4, 1963.



For Knitted Fabric for the Coating and Laminating Trades.
First use May 9, 1963.

SN 175,542. B & S Plastic Art, Inc., New York, N.Y. Filed Aug. 22, 1963.

STEREO-LACE

For Plastic Tablecloths.
First use July 9, 1963.

SN 175,569. Fieldcrest Mills, Inc., Spray, N.C. Filed Aug. 22, 1963.

ROYAL DIMENSION

For Sheets, Blankets, Bedspreads, Towels, Bath Rugs, and Shower Curtains.
First use June 26, 1963.

Class 44—Dental, Medical, and Surgical Appliances

SN 172,552. The Amalgamated Dental Company Limited, London, England. Filed July 8, 1963.

ASH

Owner of Reg. No. 543,962.

For Dental Waxes, Dental Cement, Impression Materials and Dental Plates.

First use on or about Dec. 31, 1875; in commerce on or about Dec. 31, 1950.

SN 173,925. Kansas City Assemblage Company, Inc., Kansas City, Mo. Filed July 29, 1963.



The drawing is lined for stippling.

For Surgical Instruments—Namely, Surgical Knives, Needles, Hooks and Retractors.
First use July 11, 1963.

SN 177,079. Nichols Nasal Syphon, Inc., Montclair, N.J. Filed Sept. 16, 1963.

NICHOLS

Owner of Reg. No. 221,761.
For Nasal Syphons.
First use December 1917.

SN 177,205. Diamond National Corporation, New York, N.Y. Filed Sept. 10, 1963.



For Toothpicks.
First use Feb. 21, 1956.

SN 177,206. Diamond National Corporation, New York, N.Y. Filed Sept. 10, 1963.

INDEPENDENCE

For Toothpicks.
First use Feb. 21, 1956.

SN 181,760. Dow Corning Corporation, Midland, Mich. Filed Nov. 22, 1963.

SILASTIC

Owner of Reg. Nos. 436,948, 626,863, and others.

For Silicone Dental Materials—Namely, Denture Releases and Liners.
First use Oct. 29, 1963.

SN 181,761. Dow Corning Corporation, Midland, Mich. Filed Nov. 22, 1963.

SILASTIC

Owner of Reg. Nos. 436,948, 626,863, and others.

For Silicone Subdermal Implant Materials for Use in Medicine and Surgery.
First use Oct. 30, 1963.

SN 181,955. The Birtcher Corporation, Los Angeles, Calif. Filed Nov. 27, 1963.

HEARTALARUM

For Heart Rate Monitors.
First use Oct. 14, 1963.

SN 181,998. Prak-T-Kal Corporation, Elizabeth, N.J. Filed Nov. 27, 1963.

DUO-MIST

For Humidifier-Vaporizer.
First use Oct. 10, 1963.

Class 45—Soft Drinks and Carbonated Waters

SN 157,916. Francis H. Leggett & Company, Carlstadt, N.J. Filed Nov. 26, 1962.



COQ D'OR

The translation of "Coq d'Or" is "golden cock."
For Non-Alcoholic Mixes for Use in Making Alcoholic Cocktails.
First use January 1962.

SN 164,666. Southland-Sundrop Bottling Company, Paragould, Ark. Filed Mar. 14, 1963.

DIET-ETTE

For Dietetic Soft Drinks.
First use Feb. 28, 1963.

SN 167,375. Derby Day, Incorporated, New York, N.Y. Filed Apr. 23, 1963.

DERBY DAY

For Mint Flavored Concentrate in Liquid Form and Used as a Mint Julep Mix.
First use Mar. 29, 1963.

Class 46—Foods and Ingredients of Foods

SN 131,046. Jack's Cookie Companies, Inc., Wilmington, Del. Filed Oct. 31, 1961.

HAPPY JACK

Owner of Reg. No. 733,491.
For Bakery Products—Namely, Crackers, Cookies, Cakes, and Pies.
First use 1953.

SN 150,893. Refinadora de Maiz Venezolana, C.A. ("Remavenca"), La Encrucijada del Turmero, Aragua, Venezuela. Filed Aug. 9, 1962.

P.A.N.

For Pre-Cooked, Refined Corn Flour.
First use May 17, 1962; in commerce May 17, 1962.

SN 156,603. Robert Monson Hopper, d.b.a. Hopper Meat Packing Co., Phoenix, Ariz. Filed Nov. 5, 1962.



For Breaded Scallops, Frozen.
First use Sept. 7, 1962.

SN 157,608. Fairmont Foods Company, Omaha, Nebr. Filed Nov. 20, 1962.

CHEESE-EZE

For Snack Spread Containing a Mixture of Cottage Cheese and Other Cheese.
First use Oct. 30, 1962.

SN 158,078. Beatrice Ivaldi, d.b.a. Ivaldi Co., New York, N.Y. Filed Nov. 28, 1962.



The word "Flambé" is French and means "flaming" or "flamed."
For Food Flavoring Extracts.
First use Oct. 30, 1962.

SN 161,776. Corn Products Company, New York, N.Y. Filed Jan. 31, 1963.

WIRTHMORE TWIN-MIX

Owner of Reg. No. 100,284.
For Stock Feed—Namely, a Prepared Food Suitable Especially for Calves.
First use at least as early as Jan. 1, 1954.

SN 161,851. The Chun King Corporation, Duluth, Minn. Filed Feb. 1, 1963.

WILDERNESS

Owner of Reg. Nos. 708,158, 698,264, and 691,013.
For Wild Rice Pancake Mix.
First use Jan. 8, 1963.

SN 162,370. Tone Brothers, Des Moines, Iowa. Filed Feb. 8, 1963.



For Spices, Tea, Coffee, Food Colors, Pure Food Flavors (Extracts), Imitation Flavors, and Cake Decorations.
First use Apr. 30, 1962; March 1873 as to "Tone's."

SN 163,402. Philadelphia Chewing Gum Corporation, Havertown, Pa. Filed Feb. 25, 1963.

KICK STIX

No claim is made to the word "Stix" apart from the mark as shown.
For Bubble Gum.
First use Feb. 4, 1963.

SN 163,529. Carnation Company, Los Angeles, Calif. Filed Feb. 27, 1963.

CARNA-CAL

For Dietary Food Concentrate for Weight Control.
First use Nov. 22, 1960.

SN 165,369. H & M Packing Corporation, Glendale, Calif. Filed Mar. 25, 1963.

TUBE-O-MEAL

For Emergency Supply Pack Containing Food and Water. Also for Use in Camping, Traveling, and the Like.
First ust Mar. 6, 1963.

SN 167,751. National Dairy Products Corporation, New York, N.Y. Filed Apr. 29, 1963.



For Yogurt.
First use on or about Apr. 15, 1963.

SN 167,763. Barbara N. Singer, d.b.a. The Candy Tree, Houston, Tex. Filed Apr. 29, 1963.

CANDY TREE

Applicant disclaims the word "Candy."
For Candy.
First use at least as early as Jan. 26, 1962.
Subj. to Intf. with SN 157,965.

SN 168,547. Taylor Biscuit Company, Raleigh, N.C. Filed May 9, 1963.

TAYLORED TO TASTE

Owner of Reg. No. 654,854.
For Cracker Sandwiches, Shelled Salted Peanuts, Unshelled Roasted Peanuts, Cookies, Popped Popcorn, Processed Corn Meal Cheese Flavored Tidbits, Potato Chips and Candy.
First use Aug. 7, 1951.

SN 168,742. American Dairy Queen Corporation, Minneapolis, Minn., assignee of International Dairy Queen, Inc., Minneapolis, Minn. Filed May 13, 1963.

MR. MALTIE

The applicant makes no claim to the word "Maltie" and hereby disclaims the same as well as any phonetic equivalent thereof.
For Chocolate Malted Milk Flavored Confection Sold in a Frozen State on a Stick.
First use July 6, 1962.

SN 176,013. Nesbitt Fruit Products, Inc., Los Angeles, Calif. Filed Aug. 29, 1963.

ALASKA MAID

For Flavor Ice Cream Cone Syrup Coatings.
First use Apr. 11, 1963.

SN 178,168. Richard H. Brassel, d.b.a. Cheesehaven, Port Clinton, Ohio. Filed Oct. 2, 1963.

HOT STICK

For Salami.
First use on or about Oct. 1, 1961.

SN 178,206. Lancaster, Inc., Los Angeles, Calif. Filed Oct. 2, 1963.

CREME DE BUTR

For Imitation Butter Flavor.
First use Apr. 21, 1960.

SN 178,430. Educator Biscuit Company, Incorporated, Lowell, Mass. Filed Oct. 7, 1963.



The drawing is lined for the color red. Owner of Reg. No. 391,711.
For Crackers, Biscuits and Cookies, Plain, Filled or Coated.
First use Apr. 11, 1963, on cookies.

SN 178,437. Fisher Flouring Mills Co., Seattle, Wash. Filed Oct. 7, 1963.

SEATTLITE

Owner of Reg. No. 144,765.
For Wheat Products—Namely, Wheat Flour.
First use Aug. 29, 1963.

SN 180,810. International Milling Company Inc., Minneapolis, Minn. Filed Nov. 8, 1963.

SUPER C

For Cake Flour.
First use December 1960.

SN 180,836. W. B. Camp & Sons, Inc., d.b.a. W. B. Camp & Sons, Bakersfield, Calif. Filed Nov. 12, 1963.

Bill Camp's

The mark identifies W. B. Camp whose consent is of record.
For Potatoes in Their Natural State.
First use May 15, 1956.

SN 180,927. John Lund and Company, Denver, Colo. Filed Nov. 12, 1963.

LUND'S

Owner of Reg. No. 725,100.
For Pancake Mix and Lingonberry Syrup.
First use in 1911.

SN 181,226. Gerber Products Company, Fremont, Mich. Filed Nov. 15, 1963.

LAMBASE

For Dietary Formula Product To Be Used as a Milk Substitute for Babies and Young Children.
First use Oct. 2, 1963.

SN 181,229. The Griffith Laboratories, Inc., Chicago, Ill. Filed Nov. 15, 1963.

PROTEINATE

Owner of Reg. No. 669,439.
For Composition of Soya Bean Protein and Non-Fat Dry Skim Milk Solids for Use as an Emulsifier in Processed Meat Products.
First use Nov. 6, 1956.

SN 181,249. Leslie Salt Co., San Francisco, Calif. Filed Nov. 15, 1963.

FLO-EVER

For Vacuum Canning Salt and Table Salt.
First use Oct. 3, 1963.

SN 181,307. Billy Bee Honey Products Limited, Toronto, Ontario, Canada. Filed Nov. 18, 1963.

billy bee

For Honey.
First use Jan. 1, 1950; in commerce September 1960.

Class 48 — Malt Beverages and Liquors

SN 109,412. Hornell Brewing Co., Inc., Hornell, N.Y. Filed Dec. 1, 1960.



For Beer.
First use May 2, 1960.

SN 143,685. The Spearman Brewing Company, Pensacola, Fla. Filed May 2, 1962.

KC'S BEST

Applicant disclaims the word "Best" apart from the mark as shown.
For Beer.
First use 1958.

SN 165,292. Bierbrauerei Wilhelm Remmer, Gesellschaft mit beschrankter Haftung, Bremen, Germany. Filed Mar. 25, 1963.

Dom-Bräu

The English translation of the mark "Dom-Bräu" is "cathedral brew." The drawing is lined for the color red.
For Beer.
First use on or about Mar. 15, 1963; in commerce on or about Mar. 15, 1963.

SN 174,414. Miller Brewing Company, Milwaukee, Wis. Filed Aug. 5, 1963.

UNIVERSITY CLUB

For Malt Liquor.
First use July 18, 1963.

Class 49 — Distilled Alcoholic Liquors

SN 157,039. The American Distilling Company, New York, N.Y. Filed Nov. 13, 1962.

ZAROFF

Owner of Reg. No. 590,100.
For Vodka.
First use at least Nov. 10, 1952.

SN 158,179. Guido Ramazzotti, Milan, Italy. Filed June 21, 1963.

TRIPLE ANISETTE SAN PIETRO

The exclusive use of the term "Triple Anisette" is disclaimed apart from the mark as a whole.
Owner of Italian Reg. No. 155,950, dated Aug. 2, 1961.
For Anisette.

Class 50 — Merchandise Not Otherwise Classified

SN 162,634. Ekco Products Company, Chicago, Ill. Filed Feb. 13, 1963.

BULL DOG

For Bottle Stoppers Constructed of Metal and Having a Fluid Sealing Element of Rubber or the Like.
First use on or about Feb. 1, 1946.

SN 163,379. McHutchison & Co., Ridgefield, N.J. Filed Feb. 25, 1963.

PERMATRELLIS

For Trellises.
First use Aug. 27, 1962.

SN 179,141. Litho Chemical & Supply Co., Inc., Lynbrook, N.Y. Filed Oct. 16, 1963.

BI-KEM

For Bi-Metal Lithographic Plates.
First use on or about Apr. 1, 1962.

SN 179,143. Litho Chemical & Supply Co., Inc., Lynbrook, N.Y. Filed Oct. 16, 1963.

TRI-KEM

For Tri-Metal Lithographic Plates.
First use on or about Apr. 1, 1962.

Class 51 — Cosmetics and Toilet Preparations

SN 134,466. La Lanne Incorporated, Hollywood, Calif. Filed Dec. 21, 1961.

LA LANNE

Owner of Reg. Nos. 704,521, 714,516, and others.
For Facial Creams.
First use on about Apr. 10, 1961.

SN 144,524. Norex Laboratories, Inc., New York, N.Y. Filed May 14, 1962.

OXYDENT

For Denture Cleaner.
First use Apr. 23, 1962.

SN 144,525. Norex Laboratories, Inc., New York, N.Y. Filed May 14, 1962.

OXY-DENT

For Denture Cleaner.
First use Apr. 23, 1962.

SN 148,064. Nethercutt Laboratories, d.b.a. Cosgenic Labs, Hollywood, Calif. Filed June 29, 1962.

ALERGA

For Line of Cosmetics—Namely, Lipstick, Eye Shadow, Powder Base, Deodorant, Mascara, Powder, Nail Polish, Rouge, Cosmetic Creams and Cosmetics Lotions.
First use June 20, 1962.

SN 157,060. Carter Products, Inc., New York, N.Y. Filed Nov. 13, 1962.

ANULL

For Cleansing, Emollient, Anti-Bacterial and Fungicidal Agent to Promote Health and Hygiene in the Perineal Area of the Body.
First use Oct. 5, 1962.

SN 162,981. Rayette, Inc., St. Paul, Minn. Filed Feb. 18, 1963.

AQUA WAVE

The word "Wave" is disclaimed apart from the mark as shown. Owner of Reg. No. 593,368.
For Hair Waving and Neutralizing Lotions.
First use Feb. 5, 1963.

SN 163,044. The Fuller Brush Company, East Hartford, Conn. Filed Feb. 19, 1963.

RICH-PUFF

For Hand Cream.
First use at least as early as March 1960.

SN 164,084. Viviane Woodard Corporation, Panorama City, Calif. Filed Mar. 6, 1963.

MASQUE DE LA MER

The word "Masque" is disclaimed apart from the mark as shown. The English translation of the mark is "mask of the sea."
For Facial Mask.
First use Jan. 9, 1963.

SN 174,306. E. Wright Co., Decatur, Ill. Filed Aug. 2, 1963.

GALAXIE

For Cosmetics—Namely, Face Powder and Deodorant Powder.
First use May 20, 1963.
Subj. to Intf. with SN 178,105.

Class 52 — Detergents and Soaps

SN 157,942. Stepan Chemical Company, Northfield, Ill. Filed Nov. 26, 1962.

BIO-TERGE

For Biodegradable Detergents for Industrial and Household Use.
First use Oct. 16, 1962.

SN 157,946. Stepan Chemical Company, Northfield, Ill. Filed Nov. 26, 1962.

BIO-DET

For Biodegradable Detergents for Industrial and Household Use.
First use Oct. 16, 1962.

SN 159,933. Advance Chemical Company, San Francisco, Calif. Filed Dec. 31, 1962.

COLENA

For Chemical Drain Opener.
First use on or about Aug. 1, 1960.

SN 162,087. Drew Chemical Corporation, New York, N.Y. Filed Feb. 5, 1963.



The lining is part of the mark and does not indicate color.
For Cleaning Preparations for Automotive, Marine, Industrial, Institutional, and Food Processing Use.
First use March 1962.

SN 165,713. Shulton, Inc., Clifton, N.J. Filed Mar. 29, 1963.

Old Spice



Reserving unto itself all of its common-law rights, applicant disclaims sole right to the word "Spice" apart from the mark as shown. Owner of Reg. Nos. 344,285, 687,366, and others.
For Men's Shampoo and Men's Bath Soap.
First use 1940 on soap.

SN 169,841. Fairchild Camera and Instrument Corporation, Syosset, N.Y. Filed May 28, 1963.

ALUMORITE

For Fluid for Cleaning a Plate Segment and To Render Same Non-Sensitive to Ink.
First use June 1, 1960.

SN 174,925. Winslow Manufacturing Corp., Hialeah, Fla. Filed Aug. 12, 1963.



For Hair Shampoo Concentrate.
First use July 2, 1963.

SN 179,805. The National Cash Register Company, Dayton, Ohio. Filed Oct. 25, 1963.



For Cleaner for Use on Business Machines.
First use on or about July 24, 1962.

SERVICE MARKS

Class 100 — Miscellaneous

SN 155,535. Temple Health Studios, Inc., Baltimore, Md. Filed Oct. 19, 1962.



For Health and Physical Fitness Services—Namely, Providing Supervised Gymnasium and Game Facilities for Exercise and Relaxation.
First use Apr. 10, 1961.

SN 158,714. International Medikinn, Orange, Calif. Filed Dec. 7, 1962.



The drawing is lined to indicate the color gold.
For Planning, Promoting, and Developing Hospitals for Others.
First use Nov. 4, 1962.

SN 159,957. C-E-I-R, Inc., Washington, D.C. Filed Dec. 31, 1962.

RAMPS

For Advising Others in the Planning of Simultaneous Production Schedules So That the Manpower and Technical Resources Available Will Be Used With Maximum Efficiency.
First use Sept. 30, 1961.

SN 164,137. Intercontinental Hotels Corporation, New York, N.Y. Filed Mar. 7, 1963.



Owner of Reg. Nos. 560,641 and 686,065.
For Hotel Development Services—Namely, Consultation Advice in the Planning, Designing, Equipping and Decorating of Hotels in Countries Foreign to the United States, and Operating and Managing Such Hotels.
First use Aug. 27, 1962.

Class 101 — Advertising and Business

SN 161,035. Erickson Petroleum Corporation, Minneapolis, Minn. Filed Jan. 21, 1963.



The drawing is lined for the colors red and blue.
For Promoting the Business of Others Through Issuance and Redemption of Trading Stamps.
First use Dec. 29, 1962.

SN 161,036. Erickson Petroleum Corporation, Minneapolis, Minn. Filed Jan. 21, 1963.



The drawing is lined to indicate the color blue.
For Promoting the Business of Others Through the Issuance and Redemption of Trading Stamps.
First use Dec. 29, 1962.

SN 168,013. Macke Vending Company, Washington, D.C. Filed May 2, 1963.



For Supply, Operation and Service of Vending Machines.
First use Dec. 28, 1960.

SN 169,106. Frank Block Associates, St. Louis, Mo. Filed May 17, 1963.



For Preparation of Advertising Copy for Others.
First use Apr. 4, 1955.

Class 102 — Insurance and Financial

SN 160,948. Keystone Custodian Funds, Inc., Boston, Mass. Filed Jan. 18, 1963.



The drawing is lined for shading only.
For Providing the Service of Managing Funds of Its Subscribers or Certificate Holders.
First use in or about January 1958.

SN 171,423. Bayside Federal Savings and Loan Association, Little Neck, N.Y. Filed June 20, 1963.



For Banking Service.
First use during October 1962.

SN 171,851. The Chase Manhattan Bank, New York, N.Y. Filed June 26, 1963.

SELECT-CHECK ACCOUNT

No claim is made to the word "Account" apart from the mark as shown.
For Banking Services—Namely, Checking Account Services.
First use June 5, 1963.

Class 103 — Construction and Repair

SN 163,626. General Electric Company, New York, N.Y. Filed Feb. 28, 1963.

Progress Is Our Most Important Product

For Construction and Repair Services for Light Electrical Equipment and for Electrical, Industrial, and Defense Equipment.
First use Sept. 28, 1952.

Class 105 — Transportation and Storage

SN 161,882. The Flying Tiger Line Inc., Burbank, Calif. Filed Jan. 24, 1963.

SKYROAD

Owner of Reg. Nos. 705,701 and 739,205.
For Integrated Freight Transportation Services Offered by Applicant and Being Performed by Aircraft, Trucks and Trains, the Last Two Under License From Applicant.
First use Oct. 1, 1962.

Class 106 — Material Treatment

SN 162,068. Bloom Air Cushion Corp., Bakersfield, Calif. Filed Feb. 5, 1963.

GASAJET

For Oil Well Service Involving the Treatment of Oil Wells With Gas and Acid.
First use Sept. 5, 1962.

SN 162,069. Bloom Air Cushion Corp., Bakersfield, Calif. Filed Feb. 5, 1963.

GASAFY

For Oil Well Service Involving the Treatment of Oil Wells With Gas and Acid.
First use Sept. 5, 1962.

SN 162,070. Bloom Air Cushion Corp., Bakersfield, Calif. Filed Feb. 5, 1963.

GASAFRAC

For Oil Well Service Involving the Treatment of Oil Wells With Gas and Acid.
First use Sept. 5, 1962.

SN 162,071. Bloom Air Cushion Corp., Bakersfield, Calif. Filed Feb. 5, 1963.

GASASWAB

For Oil Well Service Involving the Treatment of Oil Wells With Gas and Acid.
First use Sept. 5, 1962.

SN 163,125. Consolidated Testing Laboratories, Inc., New Hyde Park, N.Y. Filed Feb. 20, 1963.

CTL

For X-Raying To Detect Flaws and Other Defects in Industrial Products and Parts Thereof, Equipment and Materials; Chemical, Spectrochemical and Metallurgical Testing of Materials and Products.
First use 1952.

SN 163,918. Bloom Air Cushion Corp., Bakersfield, Calif. Filed Mar. 1, 1963.

GASADIZE

For Oil Well Service Involving the Treatment of Oil Wells With Gas and Acid.
First use Sept. 5, 1962.

SN 171,802. Astro Dye Works, Inc., Calhoun, Ga. Filed June 19, 1963.



The drawing is lined for red, yellow and blue.
For Dyeing of Yarns Owned by Others.
First use Apr. 2, 1963.

Class 107 — Education and Entertainment

SN 133,865. Collegiate Advertising and Marketing Institute, Inc., d.b.a. Holiday Models, Las Vegas, Nev. Filed Dec. 12, 1961.

Holiday Models

The word "Models" is disclaimed apart from the mark as shown.
For Model Agency Services and Conducting Courses for Women in the Field of Grooming, Posture, Poise and Fashion Modeling, Specializing in Women's Programming, Planning and Show Production.
First use Apr. 1, 1959.

SN 163,626. General Electric Company, New York, N.Y. Filed Feb. 28, 1963.

Progress Is Our Most Important Product

For Periodic Entertainment Programs Broadcast by Television Comprising Programs of Music, Drama or Contests.
First use May 2, 1955.

SN 166,834. Philco Corporation, Philadelphia, Pa. Filed Apr. 16, 1963.



Owner of Reg. Nos. 416,845, 742,760, and others.
For Conducting Correspondence Courses in the Field of Electronics.
First use Dec. 18, 1962.

TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

768,317. DURELENE. Donald B. Alexander, d.b.a. Auburn Plastic Engineering. SN 162,397. Pub. 8-27-63. Filed 2-11-63.

768,318. FORMALDAFIL. Fiberfil, Inc. SN 169,240. Pub. 2-4-64. Filed 5-20-63.

768,319. VECTRA. National Plastic Products Company, Inc. SN 171,031. Pub. 2-4-64. Filed 6-14-63.

768,320. CHECKERBOARD DESIGN. Ralston Purina Company. SN 171,040. Pub. 2-4-64. Filed 6-14-63.

768,321. REGAL FOREST. Royal Forest Charcoal Co. SN 171,180. Pub. 2-4-64. Filed 6-17-63.

768,322. VENESIA. Armour and Company. SN 171,299. Pub. 2-4-64. Filed 6-19-63.

768,323. RHODOPERLE. Societe des Usines Chimiques Rhone-Poulenc. SN 171,392. Pub. 2-4-64. Filed 6-19-63.

768,324. WILOGA. The Georgia Marble Company. SN 171,409. Pub. 2-4-64. Filed 6-19-63.

768,325. TRUFFLE. Albert Trostel & Sons Company. SN 171,588. Pub. 2-4-64. Filed 6-21-63.

Class 2—Receptacles

768,326. PENNANT TYPE DESIGN. The Singer Company, by change of name from The Singer Manufacturing Company. CONSOLIDATED CERTIFICATE. SN 135,618, pub. 1-28-64, filed 1-11-62, Cl. 2; SN 135,620, pub. 1-7-64, filed 1-11-62, Cl. 4; SN 135,621, pub. 1-7-64, filed 1-11-62, Cl. 13; SN 135,622, pub. 1-7-64, filed 1-11-62, Cl. 15; SN 135,623, pub. 1-7-64, filed 1-11-62, Cl. 19; SN 135,624, pub. 1-7-64, filed 1-11-62, Cl. 21; SN 135,625, pub. 1-7-64, filed 1-11-62, Cl. 22; SN 135,626, pub. 1-7-64, filed 1-11-62, Cl. 23; SN 135,627, pub. 1-7-64, filed 1-11-62, Cl. 24; SN 135,628, pub. 1-14-64, filed 1-11-62, Cl. 26; SN 135,629, pub. 1-14-64, filed 1-11-62, Cl. 29; SN 135,630, pub. 1-14-64, filed 1-11-62, Cl. 32; SN 135,631, pub. 1-14-64, filed 1-11-62, Cl. 35; SN 135,632, pub. 1-14-64, filed 1-11-62, Cl. 37; SN 135,633, pub. 1-14-64, filed 1-11-62, Cl. 38; SN 135,636, pub. 1-14-64, filed 1-11-62, Cl. 43; SN 135,637, pub. 1-14-64, filed 1-11-62, Cl. 50; SN 135,638, pub. 1-14-64, filed 1-11-62, Cl. 52.

768,327. GUARD-PAK. Crown-Bremson Industries, Inc. SN 149,543. Pub. 1-7-64. Filed 7-23-62.

768,328. FLEXI-DRUM. Highway Trailer Industries, Inc. SN 151,913. Pub. 2-4-64. Filed 8-27-62.

768,329. BBF WITHIN BOX CARICATURE. Bancroft Bag Factory, Inc. SN 155,127. Pub. 2-4-64. Filed 10-15-62.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

768,330. JOAN BARI. Edison Brothers Stores, Inc., d.b.a. Joan Bari Bag and Gem Shop. SN 136,967. Pub. 2-4-64. Filed 1-31-62.

768,331. BARBIE. Mattel, Inc. SN 152,228. Pub. 2-4-64. Filed 8-30-62.

768,332. SAFARI. Abercrombie & Fitch Company. SN 152,871. Pub. 2-4-64. Filed 9-11-62.

768,333. VANITY FAIR BY AETNA AND DESIGN. Aetna Leather Novelty Co., Inc., d.b.a. Aetna. SN 157,433. Pub. 2-4-64. Filed 11-19-62.

Class 4—Abrasives and Polishing Materials

768,326. CONSOLIDATED CERTIFICATE. See Class 2.

Class 6—Chemicals and Chemical Compositions

768,334. AFFLAIR. E. I. du Pont de Nemours and Company. SN 136,454. Pub. 2-4-64. Filed 1-24-62.

768,335. HAND-EASE. Graymills Corporation. SN 152,576. Pub. 2-4-64. Filed 9-6-62.

768,336. MICROSTATIC. SCM Corp., by change of name from Smith-Corona Marchant Inc. MULTIPLE CLASS (Classes 6 and 37). SN 157,258. Pub. 2-4-64. Filed 11-14-62.

768,337. PENNY PAK. Penny-Pak, Inc. SN 168,348. Pub. 2-4-64. Filed 5-7-63.

Class 9—Explosives, Firearms, Equipments, and Projectiles

768,338. MONSANTO. Monsanto Chemical Company. SN 171,029. Pub. 2-4-64. Filed 6-14-63.

768,339. MONSANTO AND M. Monsanto Chemical Company. SN 171,030. Pub. 2-4-64. Filed 6-14-63.

768,340. COOEY. Winchester-Western (Canada) Limited. SN 172,128. Pub. 2-4-64. Filed 6-11-63.

Class 11—Inks and Inking Materials

768,341. SPIRIFAX. SCM Corporation. MULTIPLE CLASS (Classes 11 and 37). SN 169,410. Pub. 2-4-64. Filed 5-17-63.

Class 12—Construction Materials

768,342. MORTAR TEX. Ridge Rock Industries, Inc., assignee of Ridge Rock of America, Inc. SN 145,408. Pub. 1-14-64. Filed 5-24-62.

768,343. FLEX-CORE. Hexcel Products Inc. SN 172,660. Pub. 2-4-64. Filed 7-9-63.

768,344. PANELEX. Wood Conversion Company. SN 172,700. Pub. 2-4-64. Filed 7-9-63.

768,345. DECIBAN. National Gypsum Company. SN 174,117. Pub. 2-4-64. Filed 7-31-63.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

768,326. CONSOLIDATED CERTIFICATE. See Class 2.

768,346. GAGGIA. Brevetti Gaggia S.r.l. SN 147,889. Pub. 10-15-63. Filed 6-28-62.

Class 14—Metals and Metal Castings and Forgings

768,347. PATRIOT. Revere Copper and Brass Incorporated. SN 171,385. Pub. 2-4-64. Filed 6-19-63.

Class 15—Oils and Greases

768,326. CONSOLIDATED CERTIFICATE. See Class 2.

768,348. UDS. Prairie States Corporation. SN 174,707. Pub. 2-4-64. Filed 8-8-63.

Class 16—Protective and Decorative Coatings

768,349. SPECTRA-PANEL AND DESIGN. The Burns & Russell Company of Baltimore City. SN 167,701. Pub. 2-4-64. Filed 4-29-63.

Class 18—Medicines and Pharmaceutical Preparations

768,350. ORETS. Smith, Miller & Patch Inc. SN 151,846. Pub. 2-4-64. Filed 8-24-62.

768,351. HIPPRAMINE. Riker Laboratories, Inc. SN 154,515. Pub. 2-4-64. Filed 10-4-62.

768,352. CAL-O-DEX. Chas. Pfizer & Co. Inc. SN 155,001. Pub. 2-4-64. Filed 10-11-62.

768,353. ANULL. Carter Products, Inc. SN 157,058. Pub. 2-4-64. Filed 11-13-62.

768,354. ESCALATOR. International Latex Corporation. SN 157,113. Pub. 2-4-64. Filed 11-13-62.

768,355. STIMULEXIN. A. H. Robins Company, Inc. SN 161,132. Pub. 2-4-64. Filed 1-22-63.

768,356. KOMED. Barnes-Hind Laboratories, Inc. SN 163,792. Pub. 2-4-64. Filed 3-4-63.

768,357. DONNAGESIC NO. 1 EXTENTABS. A. H. Robins Company, Inc. SN 167,937. Pub. 2-4-64. Filed 5-1-63.

768,358. DONNATAL EXTENTABS. A. H. Robins Company, Inc. SN 167,940. Pub. 2-4-64. Filed 5-1-63.

768,359. CHAS. H. PHILLIPS. Sterling Drug Inc. SN 168,119. Pub. 2-4-64. Filed 5-3-63.

768,360. PENNY PAK. Penny-Pak, Inc. SN 168,347. Pub. 2-4-64. Filed 5-7-63.

768,361. ADEFLOR CHEWABLE. The Upjohn Company. SN 169,085. Pub. 2-4-64. Filed 5-16-63.

768,362. TESTROGYN. B. F. Ascher & Company, Inc. SN 171,074. Pub. 2-4-64. Filed 6-17-63.

768,363. NU-CUD. Dr. Le Gear, Inc. SN 171,110. Pub. 2-4-64. Filed 6-17-63.

768,364. SOL-VI-OTIC. Dr. Le Gear, Inc. SN 171,111. Pub. 2-4-64. Filed 6-17-63.

768,365. BAND-AID. Johnson & Johnson. SN 171,257. Pub. 2-4-64. Filed 6-18-63.

768,366. LT-IVAX. Schering Corporation. SN 171,275. Pub. 2-4-64. Filed 6-18-63.

768,367. HYPERSTAT. Schering Corporation. SN 171,811. Pub. 2-4-64. Filed 6-25-63.

768,368. ANI-MOX. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, assignee of The National Laboratories Corporation. SN 171,905. Pub. 2-4-64. Filed 6-26-63.

768,369. SPIRACINE. Societe des Usines Chimiques Rhone-Poulenc. SN 171,927. Pub. 2-4-64. Filed 6-26-63.

768,370. VI-FLAVS. U.S. Vitamin & Pharmaceutical Corporation. SN 173,299. Pub. 2-4-64. Filed 7-18-63.

768,371. SILENIL. Ciba Limited. SN 173,426. Pub. 2-4-64. Filed 7-22-63.

768,372. CAMPAIN. Sterling Drug Inc. SN 173,526. Pub. 2-4-64. Filed 7-22-63.

768,373. DYNALAX. American Home Products Corporation. SN 173,547. Pub. 2-4-64. Filed 7-23-63.

768,374. GARDRIN. American Home Products Corporation. SN 173,548. Pub. 2-4-64. Filed 7-23-63.

768,375. GUARDS. American Home Products Corporation. SN 173,549. Pub. 2-4-64. Filed 7-23-63.

768,376. SPANACIN. American Home Products Corporation. SN 173,550. Pub. 2-4-64. Filed 7-23-63.

768,377. EMBASSY. F. W. Woolworth Co. SN 173,722. Pub. 2-4-64. Filed 7-24-63.

768,378. NATAFLUR. Scott-Lee Laboratories, Inc. SN 174,055. Pub. 2-4-64. Filed 7-30-63.

768,379. RESTIME. Stanley Drug Products, Inc. SN 174,056. Pub. 2-4-64. Filed 7-30-63.

768,380. TENSAWAY. Stanley Drug Products, Inc. SN 174,057. Pub. 2-4-64. Filed 7-30-63

768,381. PERMIPRES. White Laboratories, Inc. SN 174,064. Pub. 2-4-64. Filed 7-30-63.

768,382. CLINICIN. Bristol-Myers Company, by merger from Grove Laboratories Incorporated. SN 174,769. Pub. 2-4-64. Filed 8-9-63.

768,383. PFC-TAB. First Texas Pharmaceuticals, Inc. SN 175,181. Pub. 2-4-64. Filed 8-16-63.

768,384. NALDETUSS. Bristol-Myers Company. SN 175,382. Pub. 2-4-64. Filed 8-20-63.

768,385. POLYBRON. Delaware Poultry Laboratories, Inc. SN 175,477. Pub. 2-4-64. Filed 8-21-63.

Class 19—Vehicles

768,326. CONSOLIDATED CERTIFICATE. See Class 2.

768,386. AE. Associated Engineering Limited. SN 99,189. Pub. 1-8-63. Filed 6-17-60.

768,387. VICTORY. W-R Enterprises. SN 172,957. Pub. 2-4-64. Filed 7-12-63.

768,388. SEAFURY. Buyer's Mart, Inc. SN 175,547. Pub. 2-4-64. Filed 8-22-63.

768,389. FORMCAR. Formcar Constructors, Inc. SN 175,653. Pub. 2-4-64. Filed 8-23-63.

Class 21—Electrical Apparatus, Machines, and Supplies

768,326. CONSOLIDATED CERTIFICATE. See Class 2.

Class 22—Games, Toys, and Sporting Goods

768,326. CONSOLIDATED CERTIFICATE. See Class 2.

768,390. LA LANNE ETC. AND DESIGN. La Lanne Incorporated. SN 134,468. Pub. 2-4-64. Filed 12-21-61.

768,391. PAA ETC. AND DESIGN. Professional Archers Association, by change of name from Professional Archers Association of America. SN 154,924. Pub. 1-21-64. Filed 10-10-62.

768,392. THONK. Lawrence Swan. SN 166,183. Pub. 2-4-64. Filed 10-29-62.

768,393. THE BIG "T." Monogram Models, Inc. SN 156,895. Pub. 11-19-63. Filed 11-8-62.

768,394. CHATTY PATTER. Mattel, Inc. SN 157,228. Pub. 2-4-64. Filed 11-14-62.

768,395. CHESTER. Mattel, Inc. SN 162,577. Pub. 2-4-64. Filed 2-12-63.

768,396. SECUMAR. Bernhardt Apparatebau GmbH & Co. SN 164,091. Pub. 2-4-64. Filed 3-6-63.

768,397. BARBIE. Mattel, Inc. SN 166,825. Pub. 2-4-64. Filed 4-16-63.

768,398. LOLLI PLOP. Milton Bradley Company. SN 166,887. Pub. 2-4-64. Filed 4-17-63.

768,399. A PLAYBABY PRODUCT AND DESIGN. Holland Hall Products, Inc. SN 168,003. Pub. 2-4-64. Filed 5-2-63.

768,400. PIPO. Ronald R. Richman. SN 168,225. Pub. 2-4-64. Filed 5-6-63.

768,401. SKOOZ-IT. Ideal Toy Corporation. SN 168,611. Pub. 2-4-64. Filed 5-10-63.

768,402. SOME MATH—SOME GAME. Fenels-Tobkin Co. SN 168,727. Pub. 2-4-64. Filed 5-13-63.

768,403. CHIT CHAT. Milton Bradley Company. SN 169,207. Pub. 2-4-64. Filed 5-20-63.

768,404. FUN PAD. Milton Bradley Company. SN 169,208. Pub. 2-4-64. Filed 5-20-63.

768,405. DARVYL. E. I. du Pont de Nemours and Company. SN 169,837. Pub. 2-4-64. Filed 5-28-63.

768,406. KISMET. Spare-Time Products, Inc. SN 170,851. Pub. 2-4-64. Filed 6-4-63.

768,407. FORMULA-1. Parker Brothers, Inc. SN 170,420. Pub. 2-4-64. Filed 6-5-63.

768,408. DR. JOHN. Remco Industries, Inc. SN 171,798. Pub. 2-4-64. Filed 6-25-63.

768,409. LIBBY. Remco Industries, Inc. SN 171,801. Pub. 2-4-64. Filed 6-25-63.

768,410. TRY-IT. Milton Bradley Company. SN 171,844. Pub. 2-4-64. Filed 6-26-63.

768,411. BIG TOP. Hassenfeld Bros., Inc. SN 171,871. Pub. 2-4-64. Filed 6-25-63.

768,412. MAGIC PUFF. Hassenfeld Bros., Inc. SN 171,876. Pub. 2-4-64. Filed 6-25-63.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

768,326. CONSOLIDATED CERTIFICATE. See Class 2.

768,413. AE. Associated Engineering Limited. MULTIPLE CLASS (Classes 23 and 35). SN 99,187. Pub. 6-4-63. Filed 6-17-60.

768,414. METRONAUT. Midas, Inc. SN 148,828. Pub. 1-14-64. Filed 7-11-62

768,415. DURA-FLEX. Henschen Industrial Corporation. SN 149,932. Pub. 12-24-63. Filed 7-27-62.

768,416. HYDROMIXER. Blaw-Knox Company. SN 152,672. Pub. 2-4-64. Filed 9-7-62.

768,417. FLETCHMASTERS. Henry A. Bitzenburger. SN 155,229. Pub. 2-4-64. Filed 10-16-62.

768,418. BARRACUDA. E. D. Jones Corporation. SN 174,033. Pub. 2-4-64. Filed 7-30-63.

768,419. MIRA-VEYOR. Mira-Pak, Inc. SN 175,199. Pub. 2-4-64. Filed 8-16-63.

Class 24 — Laundry Appliances and Machines

768,326. CONSOLIDATED CERTIFICATE. See Class 2.

Class 26 — Measuring and Scientific Appliances

768,326. CONSOLIDATED CERTIFICATE. See Class 2.

768,420. SERVO/RITER. Texas Instruments Incorporated. SN 97,724. Pub. 10-25-60. Filed 5-23-60.

768,421. ABA-CLASS. Modern Aids Inc. SN 165,240. Pub. 2-4-64. Filed 3-22-63.

768,422. STAT-CHEK. Standard-Thomson Corporation. SN 173,294. Pub. 2-4-64. Filed 7-18-63.

768,423. S/C. Textron Inc. SN 173,396. Pub. 2-4-64. Filed 7-19-63.

768,424. SPORE-O-CHEX. Aseptic Thermo Indicator Company. SN 173,413. Pub. 2-4-64. Filed 7-22-63.

Class 29 — Brooms, Brushes, and Dusters

768,326. CONSOLIDATED CERTIFICATE. See Class 2.

Class 32 — Furniture and Upholstery

768,326. CONSOLIDATED CERTIFICATE. See Class 2.

Class 33 — Glassware

768,425. KINGNUM. Ainsley, Dunn & Company Limited. SN 172,283. Pub. 2-4-64. Filed 7-2-63.

Class 34 — Heating, Lighting, and Ventilating Apparatus

768,426. AE. Associated Engineering Limited. SN 99,190. Pub. 2-26-63. Filed 6-17-60.

768,427. FLAVOR-CRISP. Ballantyne Instruments and Electronics, Inc., assignee of The Ballantyne Company. SN 108,740. Pub. 7-18-61. Filed 11-21-60.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

768,326. CONSOLIDATED CERTIFICATE. See Class 2.

768,413. See Class 23 for this trademark.

768,428. ALPINE. The B. F. Goodrich Company. SN 175,573. Pub. 2-4-64. Filed 8-22-63.

768,429. SNOW TRAIL. The B. F. Goodrich Company. SN 175,575. Pub. 2-4-64. Filed 8-22-63.

Class 37 — Paper and Stationery

768,326. CONSOLIDATED CERTIFICATE. See Class 2.

768,336. See Class 6 for this trademark.

768,341. See Class 11 for this trademark.

768,430. EZ DOES IT. Robert H. Whitnall. SN 104,002. Pub. 11-21-61. Filed 9-6-60.

768,431. CAPACO. Caldwell Packaging Company, Inc. SN 153,251. Pub. 12-24-63. Filed 9-17-62.

768,432. CONTINUTYPE-N. Mason Marking Systems Corporation. SN 156,998. Pub. 7-23-63. Filed 11-9-62.

768,433. ALL-STABILO. Schwan-Bleistift-Fabrik, Schwanhäusser & Co., d.b.a. Swan Pencil Co. SN 168,986. Pub. 2-4-64. Filed 5-14-63.

Class 38 — Prints and Publications

768,326. CONSOLIDATED CERTIFICATE. See Class 2.

768,434. SWINGLINE. Swingline Inc. SN 124,772. Pub. 2-4-64. Filed 7-26-61.

768,435. TAPE FUN. Bernard Stuzin, d.b.a. Tape Fun Co. SN 149,223. Pub. 2-4-64. Filed 7-17-62.

768,436. TA TAG-ALONG AND DESIGN. Geo. J. Ball, Inc. SN 158,898. Pub. 2-4-64. Filed 12-11-62.

768,437. NAHB WASHINGTON SCOPE ETC. AND DESIGN. National Association of Home Builders of the United States. SN 166,479. Pub. 2-4-64. Filed 4-10-63.

Class 39 — Clothing

768,438. FANCY'S BY FORD. Fancy's by Ford, Incorporated. SN 84,749. Pub. 2-4-64. Filed 11-6-59.

768,439. MR DAVID. Dolly Myers, Inc. SN 121,411. Pub. 12-24-63. Filed 6-5-61.

768,440. LA LANNE ETC. AND DESIGN. La Lanne Incorporated. SN 134,469. Pub. 2-4-64. Filed 12-21-61.

768,441. "ADORN." Treo Company, Inc. SN 157,653. Pub. 2-4-64. Filed 11-20-62.

768,442. IONIVYL. Societe Rhovyl. SN 165,848. Pub. 2-4-64. Filed 4-1-63.

768,443. RUN GUARD. Hanes Hosiery Mills Company. SN 170,315. Pub. 1-7-64. Filed 6-4-63.

768,444. EAST-TENN. East-Tenn Mills, Inc. SN 171,241. Pub. 2-4-64. Filed 6-18-63.

768,445. BUD-REL. Jaymar-Ruby, Inc. SN 175,583. Pub. 2-4-64. Filed 8-22-63.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

768,446. BANDURA. Joseph Bancroft & Sons Co. SN 169,904. Pub. 12-24-63. Filed 5-29-63.

Class 43 — Thread and Yarn

768,326. CONSOLIDATED CERTIFICATE. See Class 2.

Class 44 — Dental, Medical, and Surgical Appliances

768,447. ORTHOMATIC. Wilmot Castle Company. SN 165,650. Pub. 8-27-63. Filed 3-28-63.

Class 46 — Foods and Ingredients of Foods

768,448. KEEPSWEET. Kadison Laboratories, Inc. SN 106,417. Pub. 2-4-64. Filed 10-14-60.

768,449. TREAT TRAY. National Packing Corporation. SN 120,821. Pub. 2-6-62. Filed 5-25-61.

768,450. REP. Radiant Electronic Products Corp. SN 123,565. Pub. 2-4-64. Filed 7-7-61.

768,451. TABBY TREAT. Usen Canning Co. SN 125,175. Pub. 2-4-64. Filed 8-1-61.

768,452. TOP TREAT AND DESIGN. National Tea Co. SN 126,874. Pub. 2-4-64. Filed 8-21-61.

768,453. TOMATO-BEEF-IN-A-MUG. Langis Laboratories Limited. SN 152,587. Pub. 2-4-64. Filed 9-6-62.

768,454. ICELINDA. Sukkuladiverksmidjan Linda H.F. SN 154,943. Pub. 11-19-63. Filed 10-3-62.

768,455. M AND DESIGN. Manna Vita Food Products Corp. SN 157,123. Pub. 2-4-64. Filed 11-13-62.

768,456. ERA. Van Den Berghs and Jurgens Limited. SN 157,342. Pub. 2-4-64. Filed 9-26-63.

768,457. I CAN'T MAKE ALL THE CANDY IN THE WORLD, SO I JUST MAKE THE BEST OF IT! MRS. SNYDER AND DESIGN. Fannie May Candy Shops, Inc. SN 159,479. Pub. 2-4-64. Filed 12-20-62.

768,458. REVELRY. Joe Lowe Corporation. SN 162,462. Pub. 2-4-64. Filed 2-11-63.

768,459. ROCKY COAST. Jordan Marsh Company. SN 164,541. Pub. 2-4-64. Filed 3-13-63.

768,460. MULTI-LAC. Multiforsa AG. SN 164,767. Pub. 2-4-64. Filed 3-12-63.

768,461. MEXICAN BOY BALANCING A JAR (DESIGN). M.J.B. Co. SN 164,862. Pub. 2-4-64. Filed 3-18-63.

768,462. GOLDEN AND DESIGN. Gold'n Maid Foods, Inc. SN 166,994. Pub. 2-4-64. Filed 4-18-63.

768,463. TOM FILLERY. Fillerys Toffees Limited. SN 168,182. Pub. 2-4-64. Filed 5-6-63.

768,464. QUAKER QUICK COOKING WHITE OATS AND DESIGN. The Quaker Oats Company. SN 168,892. Pub. 2-4-64. Filed 5-13-63.

768,465. DON PEPINO. Violet Packing Company. SN 169,087. Pub. 2-4-64. Filed 5-16-63.

768,466. OROWEAT AND DESIGN. Oroweat Baking Co. SN 169,299. Pub. 2-4-64. Filed 5-20-63.

768,467. JR-87. The Procter & Gamble Company. SN 169,569. Pub. 2-4-64. Filed 5-23-63.

768,468. 4 AND A SQUARE DESIGN. Ralston Purina Company. SN 170,106. Pub. 2-4-64. Filed 5-31-63.

768,469. LONGLIFE COLOR BRITE. Sternco Industries, Inc. SN 170,120. Pub. 2-4-64. Filed 5-31-63.

768,470. COLORANCHO. Colorado Potato Growers' Exchange. SN 171,313. Pub. 2-4-64. Filed 6-19-63.

768,471. BANDIT. William Macdonald & Sons (Biscuits) Limited. SN 171,465. Pub. 2-4-64. Filed 6-20-63.

768,472. YUCCA. S. E. Rykoff & Co. SN 171,574. Pub. 2-4-64. Filed 6-21-63.

768,473. ROYAL ARMS AND DESIGN. Lake Wales Citrus Growers Association. SN 171,996. Pub. 2-4-64. Filed 6-27-63.

768,474. CHRIS CANDY AND DESIGN. Chris Candy, Inc. SN 172,368. Pub. 2-4-64. Filed 7-3-63.

768,475. SPRINGROSE. Plumrose, Inc. SN 172,409. Pub. 2-4-64. Filed 7-3-63.

768,476. ROD'S. Rod's Food Products, Inc. SN 172,941. Pub. 2-4-64. Filed 7-12-63.

768,477. FASHION HOUR. E. J. Brach & Sons. SN 173,419. Pub. 2-4-64. Filed 7-22-63.

768,478. REPRESENTATION OF A GIRL'S HEAD. The Quaker Oats Company. SN 173,692. Pub. 2-4-64. Filed 7-24-63.

768,479. BLUE BOOK. Key-Kas Ranches. SN 175,762. Pub. 2-4-64. Filed 8-26-63.

768,480. JIB SAIL. Key-Kas Ranches. SN 175,763. Pub. 2-4-64. Filed 8-26-63.

768,481. MULTIMILK. Canada Dairies Corporation Ltd. SN 175,972. Pub. 2-4-64. Filed 8-29-63.

768,482. UNI-FILL-ETTS. Gorton's of Gloucester, Inc. SN 175,992. Pub. 2-4-64. Filed 8-29-63.

768,483. SILACTOSE. Flavor Corporation of America. SN 176,083. Pub. 2-4-64. Filed 8-30-63.

Class 47 — Wines

768,484. PAVILLON DE LA ROSE. H. Sichel Sons, Inc., assignee of H. Sichel & Sons, Ltd. SN 137,382. Pub. 2-4-64. Filed 2-6-62.

768,485. CORDON DE BORDEAUX. Julius Wile Sons & Co. Inc. SN 156,539. Pub. 2-4-64. Filed 11-2-62.

768,486. LA RUE. United Vintners, Inc. SN 170,249. Pub. 2-4-64. Filed 6-3-63.

Class 49 — Distilled Alcoholic Liquors

768,487. JEROME NAPOLEON. Boutillier & De Lauriere, d.b.a. Jerome & Cie. SN 161,647. Pub. 2-4-64. Filed 12-31-62.

Class 50 — Merchandise Not Otherwise Classified

768,326. CONSOLIDATED CERTIFICATE. See Class 2.

768,488. KST. King-Seeley Thermos Co. SN 145,085. Pub. 2-4-64. Filed 5-21-62.

768,489. PARAGON AND DESIGN. Paragon Art and Linen Co. Incorporated. SN 148,750. Pub. 8-27-63. Filed 7-10-62.

768,490. COMFORT-TRED. R. D. Werner Co., Inc. SN 167,181. Pub. 2-4-64. Filed 4-19-63.

768,491. FLORDECOR. C. W. Stuart & Co. SN 169,784. Pub. 2-4-64. Filed 5-27-63.

Class 51 — Cosmetics and Toilet Preparations

768,492. LA LANNE ETC. AND DESIGN. La Lanne Incorporated. SN 134,470. Pub. 2-4-64. Filed 12-21-61.

768,493. NATURAL PRESS. Apex Beauty Products Manufacturing Corporation, d.b.a. Apex Beauty Products. SN 167,860. Pub. 2-4-64. Filed 5-1-63.

768,494. IVY LEAGUE. Helene Curtis Industries, Inc. SN 170,041. Pub. 2-4-64. Filed 5-31-63.

768,495. DESIGN OF CANNON AND CANNON BALLS. James Ray Wingfield, d.b.a. Wingfield Laboratories. SN 170,257. Pub. 2-4-64. Filed 6-3-63.

768,496. PROSHEEN. Turner Hall Corporation. SN 170,569. Pub. 2-4-64. Filed 6-7-63.

768,497. BONEDIUM. The Realistic Company. SN 171,382. Pub. 2-4-64. Filed 6-19-63.

768,498. LITEN-OXIDE. Rexall Drug and Chemical Company. SN 171,386. Pub. 2-4-64. Filed 6-19-63.

768,499. TRIMAL. Jerome W. Marrow, d.b.a. Trimal Laboratories. SN 171,467. Pub. 2-4-64. Filed 6-20-63.

768,500. DOUBLOON. The Mennen Company. SN 171,554. Pub. 2-4-64. Filed 6-21-63.

768,501. FABULASH. Revlon, Inc. SN 171,573. Pub. 2-4-64. Filed 6-21-63.

768,502. EMBASSY. F. W. Woolworth Co. SN 173,719. Pub. 2-4-64. Filed 7-24-63.

Class 52 — Detergents and Soaps

768,326. CONSOLIDATED CERTIFICATE. See Class 2.

768,503. SANI-DRIL. American Cyanamid Company. SN 167,189. Pub. 2-4-64. Filed 4-22-63.

768,504. WHITE MAGIC. S. & S. Soap Co. SN 169,315. Pub. 2-4-64. Filed 5-20-63.

768,505. TRAILER BRIGHT. Samuel M. Learned, d.b.a. Trailerbright Chemical Co. SN 171,020. Pub. 2-4-64. Filed 6-14-63.

768,506. EMBASSY. F. W. Woolworth Co. SN 173,720. Pub. 2-4-64. Filed 7-24-63.

Service Marks

Class 100 — Miscellaneous

768,507. REPRESENTATION OF A MOTHER HOLDING A BABY. Baby's Formula Service, Inc. SN 150,498. Pub. 2-4-64. Filed 8-6-62.

768,508. ARA. Automatic Retailers of America, Inc. SN 169,818. Pub. 2-4-64. Filed 5-28-63.

Class 101 — Advertising and Business

768,509. MISS GRAIN SORGHUM OF THE NATION. High Plains Broadcasting Company. SN 105,898. Pub. 2-4-64. Filed 10-6-60.

768,510. RANDY HART SUPERMARTS AND DESIGN. Farm Journal, Inc. SN 164,233. Pub. 2-4-64. Filed 3-8-63.

Class 102 — Insurance and Financial

768,511. CONCENTRIC CIRCLE AND BAR DESIGN. The First National Bank of Miami. SN 169,541. Pub. 2-4-64. Filed 5-23-63.

768,512. SOLDIER (DESIGN). The Continental Insurance Company. SN 169,609. Pub. 2-4-64. Filed 5-24-63.

Class 103 — Construction and Repair

768,513. DELPRENE. The D. S. Brown Company. SN 149,637. Pub. 2-4-64. Filed 7-24-62.

Class 104 — Communication

768,514. WESTERN UNION TELEX. The Western Union Telegraph Company. SN 153,356. Pub. 2-4-64. Filed 9-17-62.

Class 106 — Material Treatment

768,515. LA SUR. Herman Basch & Co. Inc. SN 156,934. Pub. 2-4-64. Filed 11-9-62.

Certification Mark

Class A — Goods

768,516. ILGWU ETC. AND DESIGN. International Ladies' Garment Workers' Union. SN 175,192. Pub. 2-4-64. Filed 8-16-63.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 2 — Receptacles

768,517. The Mize Company, Paducah, Ky. SN 151,981. Filed P.R. 8-27-62; Am. S.R. 2-12-64.

KAN-KADDY

For Rack for Supporting Refuse Receptacles.
First use July 30, 1962.

768,518. South River Metal Products Co. Inc., South River, N.J. SN 155,658. Filed P.R. 10-22-62; Am. S.R. 2-6-64.

WIRE CADDY

For Packaging and Dispensing Container for Spooled Wire.
First use Sept. 25, 1962.

Class 10 — Fertilizers

768,519. Missouri Farmers Association, Inc., Columbia, Mo. SN 164,259. Filed P.R. 3-8-63; Am. S.R. 2-17-64.

ALFALFA TOPPER

For Fertilizer.
First use Feb. 8, 1963.

Class 12 — Construction Materials

768,520. U.S. Metal Forming Corporation, New Orleans, La. SN 139,552. Filed P.R. 3-9-62; Am. S.R. 1-21-64.

MET L RIB

For Corrugated Metal Construction Panel Covering for Roofing and Siding.
First use Jan. 20, 1962.

768,521. Columbia Asphalt Corporation, Flushing, N.Y. SN 148,876. Filed P.R. 7-12-62; Am. S.R. 2-10-64.



The drawing is lined for the color red.
For Pavement Surfacing Material in the Form of a Pigmented Thermo-Plastic Resin Paving Composition for Side Walks, Roads and So Forth.
First use on or about May 26, 1962.

768,522. Columbia Asphalt Corporation, Flushing, N.Y. SN 148,877. Filed P.R. 7-12-62; Am. S.R. 2-10-64.



The drawing is lined for the color red.
For Pavement Surfacing Material in the Form of a Pigmented Thermo-Plastic Resin Paving Composition for Sidewalks, Roads and So Forth.
First use on or about May 26, 1962.

768,523. American Fire Clay & Products Co., Canfield, Ohio. SN 149,352. Filed P.R. 7-19-62; Am. S.R. 1-14-64.

BLACK GLAZE

For Refractory Mixes in Granular Form.
First use about Jan. 5, 1961.

768,524. Contact Lumber Company, Portland, Oreg. SN 151,014. Filed P.R. 8-13-62; Am. S.R. 1-20-64.

Prime-Pine

For Paint Primed Millwork Such as Lumber, Molding, Door Jambs, Etc.
First use May 15, 1962.

768,525. Unistrut Corporation, Wayne, Mich. SN 161,119. Filed P.R. 1-21-63; Am. S.R. 1-9-64.

MULTISPAR

For Metallic Construction Members, Telescoping and Perforated Tubing, and Fittings and Connections Therefor, Adapted To Serve as Framing and Supporting Means for Temporary and Permanent Construction of Building and Other Structures—Namely, Ceiling, Walls and Roofing Panels, Racks, Scaffolding, Ladders, Rails, Shelving, Benches, Signs and Billboards, Awnings, Fences and the Like.
First use Jan. 8, 1963.

768,526. Howard Hardware Products, Inc., Newark, N.J. SN 164,044. Filed P.R. 3-6-63; Am. S.R. 2-6-64.

SUPERSEAL

For Tub and Tile Caulking Compound Packed in Pressure Cans.
First use Feb. 4, 1963.

Class 18 — Medicines and Pharmaceutical Preparations

768,527. Jests, Inc., Brooklyn, N.Y. SN 143,141. Filed P.R. 4-26-62; Am. S.R. 12-12-62.



The drawing is lined for the color blue.
For Preparation Used for Indigestion and as an Anti-Acid.
First use May 2, 1938.

768,528. Mallinckrodt Chemical Works, St. Louis, Mo. SN 173,018. Filed 7-15-63.

LINKING CHEMISTRY TO MEDICINE

For Pharmaceutical and Medicinal Preparations.
First use May 7, 1962.

Class 21 — Electrical Apparatus, Machines, and Supplies

768,529. Electronic Research Associates, Inc., Cedar Grove, N.J. SN 150,775. Filed P.R. 8–8–62; Am. S.R. 10–23–63.

QUADRA PLANAR

For Loudspeakers for Sound Reproducing Equipment.
First use June 18, 1962.

768,530. Electronic Research Associates, Inc., Cedar Grove, N.J. SN 150,776. Filed P.R. 8–8–62; Am. S.R. 10–23–64.

TRI-PLANAR

For Loudspeakers for Sound Reproducing Equipment.
First use June 18, 1962.

Class 22 — Games, Toys, and Sporting Goods

768,531. Gladen Enterprises, Inc., Bay City, Mich. SN 160,539. Filed P.R. 1–11–63; Am. S.R. 2–17–64.

TWIST 'N TWIRL

For Spinning Toy, the Holder or Base of Which Is Placed in a Pocket or Belt of the Player and Which Is Operated by a Twisting and Turning Movement of the Player's Body.
First use Dec. 12, 1962.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

768,532. Gebr. Claas, Harsewinkel, Westphalia, Germany. SN 153,951. Filed P.R. 9–26–62; Am. S.R. 2–24–64.

CLAAS

Owner of German Reg. No. 360,267, dated Nov. 30, 1926.
For Agricultural Machinery and Machine Parts, Particularly Straw Binders, Fertilizer Spreaders, Binding Machines and Parts Thereof.

Class 27 — Horological Instruments

768,533. Mastercrafters Clock and Radio Company, Chicago, Ill. SN 154,421. Filed P.R. 10–3–62; Am. S.R. 2–14–64.

WOODELL

For Clocks.
First use July 26, 1962.

Class 37 — Paper and Stationery

768,534. The National Cash Register Company, Dayton, Ohio. SN 104,543. Filed P.R. 9–15–60; Am. S.R. 2–10–64.

SELF-CONTAINED

For Paper and Stationery—Namely, Coated Paper, Coated Record Members on Which Print Is Produced by Impact and/or Friction of Uninked Type or Stylus.
First use on or about June 23, 1960.

Class 38 — Prints and Publications

768,535. John Wiley & Sons, Inc., New York, N.Y. SN 168,123. Filed P.R. 5–3–63; Am. S.R. 2–28–64.

SCIENCE EDITIONS

For Books, Pamphlets and Monographs.
First use Jan. 1, 1963.

Class 40 — Fancy Goods, Furnishings, and Notions

768,536. Lincoln Lace & Braid Co., Providence, R.I. SN 162,457. Filed P.R. 2–11–63; Am. S.R. 2–24–64.

INVISIBLE TIP

For Shoelaces.
First use on or about Jan. 28, 1963.

Class 46 — Foods and Ingredients of Foods

768,537. Good Humor Corporation, Brooklyn, N.Y. SN 118,236. Filed P.R. 4–20–61; Am. S.R. 2–26–64.

KANDI-KUP

For Frozen Confection Consisting of Candy and Ice Milk Combined.
First use Apr. 1, 1961.

768,538. Good Humor Corporation, Brooklyn, N.Y. SN 118,779. Filed P.R. 4–27–61; Am. S.R. 2–26–64.

KANDI-STIX

For Frozen Confection Consisting of Candy and Ice Milk Combined.
First use Apr. 1, 1961.

768,539. Good Humor Corporation, Brooklyn, N.Y. SN 118,780. Filed P.R. 4–27–61; Am. S.R. 2–26–64.

KANDI-KONE

For Frozen Confection Consisting of Candy and Ice Milk Combined.
First use Apr. 1, 1961.

768,540. Sioux Honey Association, Cooperative, Sioux City, Iowa. SN 146,934. Filed P.R. 6–14–62; Am. S.R. 3–6–64.



The mark consists of the conformation of the package.
For Honey Spread.
First use March 1956.

768,541. Spice Islands Company, South San Francisco, Calif. SN 155,529. Filed P.R. 10–19–62; Am. S.R. 11–19–63.



For Mustard Sauce.
First use Oct. 8, 1962.

768,542. The Hubinger Company, Keokuk, Iowa. SN 166,098. Filed P.R. 4–4–63; Am. S.R. 2–26–64.

MOIST BAKE

For Starch Used for Food Processing Purposes.
First use June 6, 1962.

Class 49 — Distilled Alcoholic Liquors

768,543. The Drambuie Liqueur Co. Ltd., Edinburgh, Scotland. SN 121,985. Filed P.R. 6–14–61; Am. S.R. 1–28–64.



The trademark consists of the conformation of the bottle together with the label and wording thereon, used as a container for applicant's distilled alcoholic liqueur. Owner of U.S. Reg. Nos. 303,089, 653,930, and others.
For Distilled Alcoholic Liqueur Having a Scotch Whisky Base.
First use as early as September 1907; in commerce July 9, 1934.

Class 51 — Cosmetics and Toilet Preparations

768,544. Merle Norman Cosmetics, Inc., Los Angeles, Calif. SN 120,653. Filed P.R. 5–23–61; Am. S.R. 2–25–64.

CARAMEL CANDY

For Nail Enamel.
First use Apr. 21, 1961.

768,545. Merle Norman Cosmetics, Inc., Los Angeles, Calif. SN 141,097. Filed P.R. 3–29–62; Am. S.R. 2–25–64.

AMBER SPICE

For Nail Enamel.
First use Mar. 14, 1962.

768,546. Turner Hall Corporation, New York, N.Y. SN 161,921. Filed P.R. 2–1–63; Am. S.R. 2–24–64.

ADJUST-A-LOTION

For Additive for a Cold Permanent Wave.
First use Aug. 14, 1962.

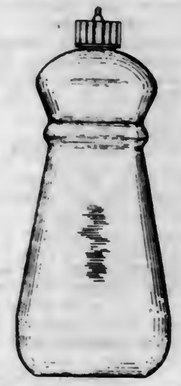
768,547. Antonio Puig y Cia, Barcelona, Spain. SN 171,215. Filed 6–17–63.



Priority claimed under Sec. 44(d) on Spanish application filed Dec. 21, 1962; Reg. No. 414,885, dated Oct. 21, 1963.
For Perfumes, Lotions, Toilet Waters, and Eau de Cologne.

Class 52 — Detergents and Soaps

768,548. Fels and Company, Philadelphia, Pa. SN 169,540. Filed P.R. 5–23–63; Am. S.R. 2–28–64.



The mark comprises the conformation of the bottle in which the goods are sold.
For Liquid Detergent for Household Use.
First use Feb. 20, 1963.

Service Marks

Class 100 — Miscellaneous

768,549. Structural Clay Products Research Foundation, Geneva, Ill. SN 97,717. Filed P.R. 5-23-60; Am. S.R. 2-25-64.

NEW FRONTIERS WITH
SCR
STRUCTURAL CERAMICS

The lining on the drawing constitutes lining forming part of the mark and does not represent color.

For Research and Development in New Products, Applied Uses of Known Products and Fundamental Research in All Forms of Structural Clay Products.

First use Apr. 20, 1960.

Class 102 — Insurance and Financial

768,550. Colonial Insurance Agency, Inc., Stamford, Conn. SN 153,157. Filed P.R. 9-14-62; Am. S.R. 2-12-64.

AN IN-DEPENDENT AGENCY
SO DEPENDENT UPON YOU IT ALWAYS
SERVES YOU BEST

For Insurance Brokerage Services.

First use Jan. 23, 1961.

Class 107 — Education and Entertainment

768,551. Communicative Arts Center, Inc., Upper Darby, Pa. SN 140,647. Filed P.R. 3-26-62; Am. S.R. 2-27-64.

COMMUNICATION SKILLS

For Training in Reading, Speech, and Tutoring in Educational and Psychological Fields Including Vocational Counseling, Psychological Testing Analysis, Analytical Research, Psychiatric Services and Educational Tours.

First use Apr. 5, 1961.

TRADEMARK REGISTRATIONS RENEWED

168,866. HORSE SHOE DESIGN. Cl. 16. 5-29-23.
174,066. LE-PEP-LINE. Cl. 18. 10-2-23.
178,170. SPUNN. Cl. 52. 1-8-24.
178,205. INDIAN HEAD AND DESIGN. Cl. 23. 1-8-24.
179,188. BARCO. Cl. 46. 2-5-24.
179,284. SCHUMACHER. Cl. 46. 2-5-24.
179,554. "MILCOR." Cl. 12. 2-12-24.
180,345. DRITOMIC. Cl. 6. 2-26-24.
180,358. DELCO. Cl. 21. 2-26-24.
180,361. FLIT. Cl. 6. 2-26-24.
180,791. PYROFAX. Cl. 34. 3-4-24.
180,902. HY-LIME AND DESIGN. Cl. 12. 3-11-24.
181,273. EL NINO AND DESIGN. Cl. 46. 3-18-24.
181,274. LA FAMILIA AND DESIGN. Cl. 46. 3-18-24.
181,495. SNOW DRIFT AND DESIGN. Cl. 46. 3-18-24.
182,301. PYREX. Cl. 26. 4-8-24.
183,808. REPRESENTATION OF A BOX COLORED BUFF AND GREEN (DESIGN). Cl. 13. 5-6-24.
184,702. TODDS OLD VIRGINIA. Cl. 46. 5-27-24.
186,040. DRY-DOWNE. Cl. 42. 7-1-24.
186,041. SARCO. Cl. 13. 7-1-24.
186,814. LUX. Cl. 23. 7-22-24.
186,934. GLEN DERRY AND DESIGN. Cl. 39. 7-22-24.
187,188. SARCO. Cl. 26. 7-29-24.
404,688. VITREX. Cl. 21. 12-14-43.
404,726. GIM-ME-MOR. Cl. 46. 12-21-43.
404,901. TURGUM. Cl. 1. 12-28-43.
405,026. ARKANUM. Cl. 6. 1-4-44.
405,031. PERIODON. Cl. 18. 1-4-44.
405,572. MAGIC SLATE. Cl. 22. 2-8-44.
405,707. MYTHICAL FIGURE ON WINGED WHEEL (DESIGN). Cl. 4. 2-15-44.
405,747. NOX-RUST. Cl. 16. 2-22-44.
405,792. GEO. J. BALL AND DESIGN. Cl. 1. 2-22-44.
405,905. CORALITE. Cl. 44. 2-29-44.
406,066. SULFASAN. Cl. 6. 3-7-44.
406,518. GULFLEX. Cl. 5. 4-11-44.
406,542. METHEDRINE. Cl. 6. 4-11-44.
407,057. MATHLESS. Cl. 45. 5-16-44.
407,103. ALCRAFT. Cl. 39. 5-16-44.
407,150. MEDS. Cl. 44. 5-23-44.
407,419. KELCO. Cl. 16. 6-6-44.
407,426. QUIK-SIL. Cl. 6. 6-6-44.
407,470. DEPARTMENT OF DELICACY. Cl. 38. 6-6-44.
407,471. SILVER LINING DEPARTMENT. Cl. 38. 6-6-44.
407,472. UH HUH DEPARTMENT. Cl. 38. 6-6-44.
407,473. RAISED EYEBROWS DEPARTMENT. Cl. 38. 6-6-44.
407,474. PSHAW DEPARTMENT. Cl. 38. 6-6-44.
407,475. HO HUM DEPARTMENT. Cl. 38. 6-6-44.
407,476. SLIGHT HEADACHE DEPARTMENT. Cl. 38. 6-6-44.
407,477. THAT'S TOO BAD DEPARTMENT. Cl. 38. 6-6-44.
407,593. STONFAST. Cl. 12. 6-13-44.
407,697. OUR OWN BUSINESS DIRECTORY. Cl. 38. 6-20-44.
407,797. TABU. Cl. 51. 6-27-44.
407,813. DAN RIVER. Cl. 42. 6-27-44.
407,888. KELCO. Cl. 6. 7-4-44.
407,973. GRANDMOTHER'S AND DESIGN. Cl. 46. 7-11-44.
408,075. MASTERITER. Cl. 11. 7-18-44.
408,077. OVAL ROOM. Cl. 39. 7-18-44.
408,175. PRESTOMATIC AND DESIGN. Cl. 12. 7-25-44.
408,288. WEAN AND DESIGN. Cl. 23. 8-1-44.
408,341. SULFATHALIDINE. Cl. 18. 8-8-44.

TRADEMARK REGISTRATIONS CANCELED

Section 8

The following registrations issued Mar. 4, 1958

658,934. "SIP-N-FLIP." Cl. 2.
658,936. VITAMURE. Cl. 10.
658,938. GOLD NUGGET. Cl. 12.
658,939. MODUFLEX. Cl. 12.
658,940. COVER-DRI. Cl. 12.
658,946. GOO GOO. Cl. 12.
658,949. GRADHERMETIC. Cl. 12.
658,951. THE HART LINE AND DESIGN. Cl. 12.
658,955. UNIDOR. Cl. 12.
658,959. EXEC-UNITS. Cl. 12.
658,960. REFLECTADOME. Cl. 12.
658,964. LADRINO. Cl. 12.
658,976. CONOCO ROYAL. Cl. 15.
658,984. PATRN-GLAZE AND DESIGN. Cl. 16.
658,985. AMBISOL. Cl. 18.
658,995. USC AND DESIGN. Cl. 21.
659,003. AUDIO CRAFTERS. Cl. 21.
659,006. THOMAS. Cl. 22.
659,007. SWEET PEA. Cl. 22.
659,009. SILBOND. Cl. 23.
659,012. DRYEX. Cl. 23.
659,014. IN SUL ATE HOT SPOT AND DESIGN. Cl. 23.
659,016. "PRESS-LOK." Cl. 23.
659,018. SKYSTREAM. Cl. 23.
659,019. SEA SPRITE. Cl. 23.
659,024. NY-STEEL. Cl. 23.
659,025. CAN-PAC-TOR. Cl. 23.
659,027. DAVIDSON DUALITH. Cl. 23.
659,029. TOUCH 'N' GO. Cl. 23.
659,033. TRICITY. Cl. 24.
659,034. CONTURA. Cl. 26.
659,036. THERMO-STIR. Cl. 26.
659,041. PEST-O-METER. Cl. 26.
659,042. CINETTE. Cl. 26.
659,047. DESIGN OF CREST AND W. Cl. 32.
659,048. THER-A-PEDIC. Cl. 32.
659,049. RESIL-O-MATIC. Cl. 32.
659,050. "GLAMOR WAGON." Cl. 32.
659,055. SLEEP GUARD. Cl. 32.
659,060. COLOR-RAY. Cl. 34.
659,063. DAD'S. Cl. 34.
659,064. PRESIDENT. Cl. 36.
659,065. BOOSEY & HAWKES AND DESIGN. Cl. 36.
659,070. THE LOG. Cl. 38.
659,072. "CHAMPIONS ON FILM." Cl. 38.
659,074. KALKORDER. Cl. 38.
659,085. GAUCHOS. Cl. 39.
659,086. SURETEX. Cl. 39.
659,092. SNAPITS. Cl. 39.
659,095. ALP O LODER. Cl. 39.
659,100. DYNELAINE. Cl. 42.
659,101. TAVIA. Cl. 42.
659,103. FIGURAMA. Cl. 44.
659,109. DONUT TIME. Cl. 46.
659,110. DONUTS DELITE. Cl. 46.
659,112. LIGHT AND LOW. Cl. 46.
659,116. ALTION. Cl. 46.
659,117. KETOLAC. Cl. 46.
659,120. BUFFET. Cl. 46.
659,127. RAN/PAL AND DESIGN. Cl. 50.
659,129. BEAUTY-RITE. Cl. 50.
659,131. PRO-ACTION. Cl. 51.
659,139. IN AND OUT. Cl. 51.
659,142. CURTAIN CALL. Cl. 51.
659,146. TREND AND DESIGN. Cl. 52.
659,147. KEM-I-KAL. Cl. 52.
659,148. EXTEND-R. Cl. 52.
659,150. VERTIFRAC. Cl. 100.
659,154. GIFTRIP BY GARBER AND DESIGN. Cl. 105.
659,155. SILBERTONE. Cl. 106.
659,156. MUSAIR. Cl. 107.
659,158. HAWBAKERS BIG BUCK LURE. Cl. 22.
659,160. ROLLPROOF. Cl. 26.
659,161. THE HANDY-CAPPER. Cl. 26.
659,164. TAG-ON. Cl. 38.
659,166. PLATING MANAGEMENT. Cl. 38.
659,167. SEW SWIFTLY. Cl. 39.
659,170. KARPET-SQUARES AND DESIGN. Cl. 42.
659,171. BLOSSOMS & BOWS. Cl. 42.
659,172. CHICK-N-FRN-PAN AND DESIGN. Cl. 46.
659,174. BON MARCHE AND DESIGN. Cl. 49.
659,175. GROTESQUE DESIGN. Cl. 52.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

695,385. SEAMFREE. Cl. 39. 3-29-60. Cooper's Incorporated, Kenosha, Wis. Corrected: In the statement, column 1, line 1, "Coopers, Inc." should be deleted and *Cooper's, Incorporated* should be inserted.

695,391. NOKAROUND. Cl. 39. 3-29-60. Cooper's, Incorporated, Kenosha, Wis. Corrected: In the statement, column 1, line 1, "Coopers, Inc." should be deleted and *Cooper's, Incorporated* should be inserted.

696,958. ALIM ABC. Cl. 6. 5-3-60. Alim Sales Co., Inc., New York, N.Y. Disclaimer: "Registrant hereby disclaims the letters 'ABC' apart from the mark shown."

716,936. BETTY CROCKER. Cl. 46. 6-13-61. General Mills, Inc., Minneapolis, Minn. Corrected: In the statement, column 2, line 9, "July 24, 1959" should be deleted and *Sept. 20, 1924* should be inserted.

723,133. LIFE. Cl. 39. 10-24-61. Cooper's, Incorporated, Kenosha, Wis. Corrected: In the statement, column 1, line 1, "Coopers, Inc." should be deleted and *Cooper's, Incorporated* should be inserted.

725,380. VERTICAL PANEL DESIGN. Cl. 39. 12-19-61. Cooper's, Incorporated, Kenosha, Wis. Corrected: In the statement, column 1, line 1, "Coopers, Inc." should be deleted and *Cooper's, Incorporated* should be inserted.

734,274. LICK STIX. Cl. 46. 7-10-62. Hallberg Canning Corporation, Sebastopol, Calif. Corrected: In the statement, column 2, line 2, "May 27" should be deleted and *Apr. 29* should be inserted.

736,071. JOCKEY THOROBRED. Cl. 39. 8-14-62. Cooper's, Incorporated, Kenosha, Wis. Corrected: In the statement, column 1, line 1, "Coopers, Inc." should be deleted and *Cooper's, Incorporated* should be inserted.

742,530. PARKELLE. Cl. 3. 12-25-62. Edison Brothers Stores, Inc., St. Louis, Mo. Corrected: In the statement, column 1, line 1, "Missouri" should be deleted and *Delaware* should be inserted.

743,841. PARKELLE. Cl. 39. 1-15-63. Edison Brothers Stores, Inc., St. Louis, Mo. Corrected: In the statement, column 1, line 1, "Missouri" should be deleted and *Delaware* should be inserted.

745,529. DELINDA. Cl. 39. 2-19-63. Edison Brothers Stores, Inc., St. Louis, Mo. Corrected: In the statement, column 1, line 1, "Missouri" should be deleted and *Delaware* should be inserted.

745,876. ALBERT DURELLE. Cl. 39. 2-26-63. Edison Brothers Stores, Inc., St. Louis, Mo. Corrected: In the statement, column 1, line 1, "Missouri" should be deleted and *Delaware* should be inserted.

746,263. MAHARANI. Cl. 39. 3-5-63. Edison Brothers Stores, Inc., St. Louis, Mo. Corrected: In the statement, column 1, line 1, "Missouri" should be deleted and *Delaware* should be inserted.

754,242. PRESENTATIONS. Cl. 39. 8–6–63. Edison Brothers Stores, Inc., St. Louis, Mo. Corrected: In the statement, column 1, line 1, "Missouri" should be deleted and *Delaware* should be inserted.

754,243. PREDICTIONS. Cl. 39. 8–6–63. Edison Brothers Stores, Inc., St. Louis, Mo. Corrected: In the statement, column 1, line 1, "Missouri" should be deleted and *Delaware* should be inserted.

757,388. MAGNETICS. Cl. 39. 9–24–63. Edison Brothers Stores, Inc., St. Louis, Mo. Corrected: In the statement, column 1, line 1, "Missouri" should be deleted and *Delaware* should be inserted.

759,741. FOOTWISERS. Cl. 39. 11–5–63. Edison Brothers Stores, Inc., St. Louis, Mo. Corrected: In the statement, column 1, line 1, "Missouri" should be deleted and *Delaware* should be inserted.

760,384. DELHI. Cl. 39. 11–19–63. Edison Brothers Stores, Inc., St. Louis, Mo. Corrected: In the statement, column 1, line 1, "Missouri" should be deleted and *Delaware* should be inserted.

763,175. FUNSHINERS. Cl. 39. 1–14–64. Edison Brothers Stores, Inc., St. Louis, Mo. Corrected: In the statement, column 1, line 1, "Missouri" should be deleted and *Delaware* should be inserted.

763,177. ASCONA. Cl. 39. 1–14–64. Ascona Knits, Inc., Philadelphia, Pa. Corrected: In the statement, column 2, line 2, "1962" should be deleted and *1963* should be inserted.

764,229. POLYXERCISER. Cl. 22. 2–4–64. Michael A. DeFeen, Lakeland, Fla. Corrected: In the statement, column 1, line 1, "Deffen" should be deleted and *DeFeen* should be inserted.

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700,685. "JETAIRPAK." Cl. 105. AA Triangle Transfer and Warehouse Co. 7–5–60. New Cert. Sec. 7(c) to Lucile Weissberger, New York, N.Y.

728,210. ITA AND DESIGN. Cl. 21. Industrial Transmitters & Antennas, Inc. 3–6–62. New Cert. Sec. 7(c) to Triangle Publications, Inc., Philadelphia, Pa.

754,172. HYDROSHADE. Cl. 34. General Hydronics Corporation. 8–6–63. New Cert. Sec. 7(c) to Radiant Hydronics, Inc., Palo Alto, Calif.

757,996. ALPHA-DYNE. Cl. 6. Packer-Scott Company. 10–8–63. New Cert. Sec. 7(c) to Sanitation Research Associates, Inc., Evansville, Ind.

758,752. ITA. Cl. 21. ITA Electronics Corporation. 10–22–63. New Cert. Sec. 7(c) to Triangle Publications, Inc., Philadelphia, Pa.

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Mastercrafters Clock and Radio Co., Chicago, Ill. 768,533. Cl. 27.
Mattel, Inc., Hawthorne, Calif. 768,331, pub. 2–4–64. Cl. 3.
Mattel, Inc., Los Angeles, Calif. 768,394–5, pub. 2–4–64. Cl. 22.
Mattel, Inc., Hawthorne, Calif. 768,397, pub. 2–4–64. Cl. 22.
Meadow Valley Handweavers: *See*—
Brostoff, Theodore M.
Mennen Co., The, Morristown, N.J. 768,500, pub. 2–4–64. Cl. 51.
Merck & Co., Inc.: *See*—
Sharp & Dohme, Inc.
Midas, Inc., Chicago, Ill. 768,414, pub. 1–14–64. Cl. 23.
Milwaukee Corrugating Co., Greenfield, Wis., to Inland Steel Products Co., Milwaukee, Wis. 179,554, ren. 4–21–64. Cl. 12.
Mira-Pak, Inc., Houston, Tex. 768,419, pub. 2–4–64. Cl. 23.
Missouri Farmers Association, Inc., Columbia, Mo. 768,519. Cl. 10.
Mize Co., The, Paducah, Ky. 768,517. Cl. 2.
Modern Aids Inc., North Bergen, N.J. 768,421, pub. 2–4–64. Cl. 26.
Mohawk Flush Doors, Inc., South Bend, Ind. 658,939, canc. Cl. 12.
Monogram Models, Inc., Chicago, Ill. 768,393, pub. 11–19–63. Cl. 22.
Monsanto Chemical Co., St. Louis, Mo. 406,066, ren. 4–21–64. Cl. 6.
Monsanto Chemical Co., St. Louis, Mo. 768,338–9, pub. 2–4–64. Cl. 9.
Morrissey Music Co.: *See*—
Morrissey, Thomas.
Morrissey, Thomas, d.b.a. Morrissey Music Co., Little Rock, Ark. 659,064, canc. Cl. 36.
Mound City Paint & Color Co., St. Louis, Mo., to The Glidden Co., Cleveland, Ohio. 168,866, ren. 4–21–64. Cl. 16.
Multiforsa Ag, Steinhausen, Zug, Switzerland. 768,460, pub. 2–4–64. Cl. 46.
Myers, Dolly, Inc., Seattle, Wash. 768,439, pub. 12–24–63. Cl. 39.
National Association of Home Builders of The United States, Washington, D.C. 768,437, pub. 2–4–64. Cl. 38.
National Association of Metal Finishers, Cedar Groove, N.J. 659,166, canc. Cl. 38.
National Cash Register Co., The, Dayton, Ohio. 768,534. Cl. 37.
National Electronics Mfg., Inc., Orlando, Fla. 659,036, canc. Cl. 26.
National Gypsum Co., Wilmington, Del. 768,345, pub. 2–4–64. Cl. 12.
National Packing Corp., Boston, Mass. 768,449, pub. 2–6–62. Cl. 46.
National Plastic Products Co., Inc., Odenton, Md. 768,319, pub. 2–4–64. Cl. 1.
National Tea Co., Chicago, Ill. 768,452, pub. 2–4–64. Cl. 46.
New Yorker Magazine, Inc., The: *See*—
F-R Publishing Corp.
F-R Publishing Corp., The.
Norman, Merle, Cosmetics, Inc., Los Angeles, Calif. 768,544–5. Cl. 51.
Nox-Rust Corp., to Daubert Chemical Co., Chicago, Ill. 405,747, ren. 4–21–64. Cl. 16.
Nulomoline Co., The, to Sucrest Corp., New York, N.Y. 406,518, ren. 4–21–64. Cl. 5.
Oelerich Industries, Inc., Chicago, Ill. 659,175, canc. Cl. 52.
Ogg, Inc., San Francisco, Calif. 659,167, canc. Cl. 39.
O'Keefe, George, d.b.a. Kem-O-Kay Co., Lawrence, Mass. 658,985, canc. Cl. 18.
Oroweat Baking Co., Los Angeles, Calif. 768,466, pub. 2–4–64. Cl. 46.
Packer-Scott Co., to Sanitation Research Associates, Inc., Evansville, Ind. 757,996, 12(c) pub. 4–21–64. Cl. 6.
Paragon Art and Linen Co. Inc., New York, N.Y. 768,489, pub. 8–27–63. Cl. 50.
Parker Brothers, Inc., Salem, Mass. 768,407, pub. 2–4–64. Cl. 22.
Penny-Pak, Inc., Danville, Ill. 768,337, pub. 2–4–64. Cl. 6.
Penny-Pak, Inc., Danville, Ill. 768,360, pub. 2–4–64. Cl. 18.
Peopell Bros., Inc., Chicago, Ill. 659,129, canc. Cl. 50.
Personal Products Corp., The, to Johnson & Johnson, New Brunswick, N.J. 407,150, ren. 4–21–64. Cl. 44.
Peters, Harry, New York, N.Y. 659,086, canc. Cl. 39.
Pfizer, Chas., & Co. Inc., New York, N.Y. 768,352, pub. 2–4–64. Cl. 18.
Plumrose, Inc., New York, N.Y. 768,475, pub. 2–4–64. Cl. 46.
Portland Flour Mills Co., Portland, Oreg., to General Mills, Inc., Minneapolis, Minn. 181,495, ren. 4–21–64. Cl. 46.
Prairie States Corp., Danville, Ill. 768,348, pub. 2–4–64. Cl. 15.
Procter & Gamble Co., The, Cincinnati, Ohio. 768,467, pub. 2–4–64. Cl. 46.
Professional Archers Association of America: *See*—
Professional Archers Association.
Professional Archers Association, from Professional Archers Association of America, Hickory Corners, Mich. 768,391, pub. 1–21–64. Cl. 22.
Purex Corp., Ltd., South Gate, Calif. 659,146, canc. Cl. 52.
Pyrofax Gas Corp.: *See*—
Carbide & Carbon Chemicals Corp.
Quaker Oats Co., The, Chicago, Ill. 768,464, pub. 2–4–64. Cl. 46.
Quaker Oats Co., The, Chicago, Ill. 768,478, pub. 2–4–64. Cl. 46.
Quaker Oats Co., The, Chicago, Ill. 179,284, ren. 4–21–64. Cl. 46.
Radiant Electronic Products Corp., New York, N.Y. 768,450, pub. 2–4–64. Cl. 46.
Radiant Hydronics, Inc.: *See*—
General Hydronics Corp.
Railton, B. A., Co., Chicago, Ill. 179,188, ren. 4–21–64. Cl. 46.
Ralston Purina Co., St. Louis, Mo. 768,320, pub. 2–4–64. Cl. 1.
Ralston Purina Co., St. Louis, Mo. 768,468, pub. 2–4–64. Cl. 46.
Randolph Industrial Equipment Co., Franklin Park, Ill. 659,127, canc. Cl. 50.
Realistic Co., The, Cincinnati, Ohio. 768,497, pub. 2–4–64. Cl. 51.
Reguiet, Inc., Chicago, Ill. 659,025, canc. Cl. 23.
Remco Industries, Inc., Harrison, N.J. 768,408–9, pub. 2–4–64. Cl. 22.
Revere Copper and Brass Inc., New York, N.Y. 768,347, pub. 2–4–64. Cl. 14.
Revlon, Inc., New York, N.Y. 768,501, pub. 2–4–64. Cl. 51.
Rexall Drug and Chemical Co., Los Angeles, Calif. 768,498, pub. 2–4–64. Cl. 51.
Richman, Ronald R., Indianapolis, Ind. 768,400, pub. 2–4–64. Cl. 22.
Ridge Rock of America, Inc.: *See*—
Ridge Rock Industries, Inc.
Ridge Rock Industries, Inc., from Ridge Rock of America, Inc., Sebring, Ohio. 768,342, pub. 1–14–64. Cl. 12.
Riker Laboratories, Inc., Northridge, Calif. 768,351, pub. 2–4–64. Cl. 18.
Riverside & Dan River Cotton Mills, Inc., to Dan River Mills, Inc., Danville, Va. 407,813, ren. 4–21–64. Cl. 42.
Robins, A. H., Co., Inc., Richmond, Va. 768,355, pub. 2–4–64. Cl. 18.
Robins, A. H., Co., Inc., Richmond, Va. 768,357–8, pub. 2–4–64. Cl. 18.
Rod's Food Products, Inc., Los Angeles, Calif. 768,476, pub. 2–4–64. Cl. 46.
Royal Forest Charcoal Co., Columbia, Mo. 768,321, pub. 2–4–64. Cl. 1.
Rykoff, S. E., & Co., Los Angeles, Calif. 768,472, pub. 2–4–64. Cl. 46.
SCM Corp., New York, N.Y. 768,341, pub. 2–4–64. Multiple Class (Classes 11 and 37).
SCM Corp., from Smith-Corona Marchant, Inc., New York, N.Y. 768,336, pub. 2–4–64. Multiple Class (Classes 6 and 37).
S. & S. Soap Co., New York, N.Y. 768,504, pub. 2–4–64. Cl. 52.
Sanitation Research Associates, Inc.: *See*—
Packer-Scott Co.
Sarco Co., Inc., New York, N.Y. 186,041, ren. 4–21–64. Cl. 13.
Sarco Co., Inc., New York, N.Y. 187,188, ren. 4–21–64. Cl. 26.
Schering Corp., Bloomfield, N.J. 768,366–7, pub. 2–4–64. Cl. 18.
Schwan-Bleistift-Fabrik, Schwanhausser & Co., d.b.a. Swan Pencil Co., Nuremberg, Germany. 768,433, pub. 2–4–64. Cl. 37.
Scott-Lee Laboratories, Inc., New Orleans, La. 768,378, pub. 2–4–64. Cl. 18.
Selsky, Albert, d.b.a. Selcraft Products Co., Brooklyn, N.Y. 659,164, canc. Cl. 38.
Sharp & Dohme, Inc., Philadelphia, Pa., to Merck & Co., Inc., Rahway, N.J. 408,341, ren. 4–21–64. Cl. 18.
Sichel, H., Sons, Inc., New York, N.Y., from H. Sichel & Sons, Ltd., Adelphia, London, England. 768,484, pub. 2–4–64. Cl. 47.
Sichel, H., & Sons, Ltd.: *See*—
Sichel, H., Sons, Inc.

Sickles, David C., d.b.a. Kalkorder Co., Annandale, Va. 659,074, canc. Cl. 38.
Silbert, M. J., & Co., Elgin, Ill. 659,155, canc. Cl. 106.
Singer Co., The, from The Singer Mfg. Co., New York, N.Y. 768,326. Pub. 1-7-64, Cl. 2; pub. 1-14-64, Cl. 4; pub. 1-28-64, Cl. 13, 15, 19, 21, 22, 23, 24, 26, 29, 32, 35, 37, 38, 43, 50, and 52. (Consolidated certificate, Classes 2, 4, 13, 15, 19, 21, 22, 23, 24, 26, 29, 32, 35, 37, 38, 43, 50, and 52.)
Singer Mfg. Co., The: *See*—
Singer Co., The.
Sioux Honey Association, Cooperative, Sioux City, Iowa. 768,540. Cl. 46.
Slumber Products Corp., Memphis, Tenn. 659,055, canc. Cl. 32.
Smith-Corona Marchant, Inc.: *See*—
SCM Corp.
Smith, Miller & Patch Inc., New York, N.Y. 768,350, pub. 2-4-64. Cl. 18.
Societe des Usines Chimiques Rhone-Poulenc, Paris, France. 768,323, pub. 2-4-64. Cl. 1.
Societe des Usines Chimiques Rhone-Poulenc, Paris, France. 768,369, pub. 2-4-64. Cl. 18.
Societe Rhovyl, Paris, France. 768,442, pub. 2-4-64. Cl. 39.
South River Metal Products Co. Inc., South River, N.J. 768,518. Cl. 2.
Spare-Time Products, Inc., Cincinnati, Ohio. 768,406, pub. 2-4-64. Cl. 22.
Sperry Rand Corp., New Holland, Pa. 659,041, canc. Cl. 26.
Spice Islands Co., South San Francisco, Calif. 768,541. Cl. 46.
Standard Brands Inc., New York, N.Y. 659,120, canc. Cl. 46.
Standard-Thomson Corp., Waltham, Mass. 768,422, pub. 2-4-64. Cl. 26.
Standard Oil Co. (New Jersey), Bayonne, N.J., to Humble Oil & Refining Co., Houston, Tex. 180,361, ren. 4-21-64. Cl. 6.
Stanley Drug Products, Inc., Portland, Oreg. 768,379-80, pub. 2-4-64. Cl. 18.
Stereo Corp., Milwaukee, Wis. 659,034, canc. Cl. 26.
Sterling Drug Inc., New York, N.Y. 768,359, pub. 2-4-64. Cl. 18.
Sterling Drug Inc., New York, N.Y. 768,372, pub. 2-4-64. Cl. 18.
Sternco Industries, Inc., Allendale, N.J. 768,469, pub. 2-4-64. Cl. 46.
Stonhard Co., Inc.: *See*—
Stonhard Co.
Stonhard Co., Philadelphia, Pa., to Stonhard Co., Inc., Maple Shade, N.J. 407,593, ren. 4-21-64. Cl. 12.
Strathmore Co., The, Aurora, Ill., to The Watkins-Strathmore Co., Racine, Wis. 405,572, ren. 4-21-64. Cl. 22.
Strother, Fred L., Fresno, Calif. 659,161, canc. Cl. 26.
Structural Clay Products Research Foundation, Geneva, Ill. 768,549. Cl. 100.
Stuart, C. W., & Co., Newark, N.Y. 768,491, pub. 2-4-64. Cl. 50.
Stuzin, Bernard, d.b.a. Tape Fun Co., Cleveland Heights, Ohio. 768,435, pub. 2-4-64. Cl. 38.
Sucrest Corp.: *See*—
Nulomoline Co., The.
Sukkuladiverksmidjan Linda h.f., Akureyri, Iceland. 768,454, pub. 11-19-63. Cl. 46.
Sunbilt Tropical Fruit Products, Ltd., St. Thomas, Virgin Islands. 659,174, canc. Cl. 49.
Superior Garment Co., New York, N.Y. 407,103, ren. 4-21-64. Cl. 39.
Swan, Lawrence, Niles, Ill. 768,392, pub. 2-4-64. Cl. 22.
Swan Pencil Co.: *See*—
Schwan-Bleistift-Fabrik, Schwanhausser & Co.
Swingline Inc., Long Island City, N.Y. 768,434, pub. 2-4-64. Cl. 38.
Tape Fun Co.: *See*—
Stuzin, Bernard.
Texas Instruments Inc., Dallas, Tex. 768,420, pub. 10-25-60. Cl. 26.
Textron Inc., Rochester, N.Y. 768,423, pub. 2-4-64. Cl. 26.
Thomas Textile Co., Inc., New York, N.Y. 659,006, canc. Cl. 22.
Thomas, Webster, Co., Boston, Mass. 407,057, ren. 4-21-64. Cl. 45.
Tobin, Sporn & Glaser, Inc., New York, N.Y. 405,707, ren. 4-21-64. Cl. 4.
Todd, E. M., Co., to E. M. Todd Co., Inc., Richmond, Va. 184,702, ren. 4-21-64. Cl. 46.
Todd, E. M., Co., Inc.: *See*—
Todd, E. M., Co.
Trailerbright Chemical Co.: *See*—
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Treo Co., Inc., Jamaica, N.Y. 768,441, pub. 2-4-64. Cl. 39.
Triangle Publications, Inc.: *See*—
ITA Electronics Corp.
Triangle Publications, Inc.: *See*—
Industrial Transmitters & Antennas, Inc.
Tricity Cookers Ltd., London, England. 659,033, canc. Cl. 24.
Trimal Laboratories: *See*—
Marrow, Jerome W.
Trojan Products & Mfg. Co., to The Diversey Corp., Chicago, Ill. 407,426, ren. 4-21-64. Cl. 6.
Trostel, Albert, & Sons Co., Milwaukee, Wis. 768,325, pub. 2-4-64. Cl. 1.
Unidor Mfg. Co., Inc., Annapolis Junction, Md. 658,955, canc. Cl. 12.
Unistrut Corp., Wayne, Mich. 768,525. Cl. 12.
United Chemical Corp. of New England, Providence, R.I. 659,148, canc. Cl. 52.
United Specialties Co., Chicago, Ill. 658,995, canc. Cl. 21.
U.S. Metal Forming Corp., New Orleans, La. 768,520. Cl. 12.
U.S. Vitamin & Pharmaceutical Corp., New York, N.Y. 768,370, pub. 2-4-64. Cl. 18.
United Vintners, Inc., San Francisco, Calif. 768,486, pub. 2-4-64. Cl. 47.
Upjohn Co., The, Kalamazoo, Mich. 768,361, pub. 2-4-64. Cl. 18.
Usen Canning Co., Boston, Mass. 768,451, pub. 2-4-64. Cl. 46.
Utopia Drive Inn: *See*—
Wilson, Raymond M.
Van Den Berghs and Jurgens Ltd., London, England. 768,436, pub. 2-4-64. Cl. 46.
Violet Packing Co., Williamstown, N.J. 768,465, pub. 2-4-64. Cl. 46.
Virtue Bros., Mfg. Co., Los Angeles, Calif. 659,050, canc. Cl. 32.
W-R Enterprises, Houston, Tex. 768,387, pub. 2-4-64. Cl. 19.
Wallace Silversmiths, Inc., Wallingford, Conn. 659,018-19, canc. Cl. 28.
Wasco Products, Inc., Cambridge, Mass. 658,960, canc. Cl. 12.
Washington Candy Co., Brooklyn, N.Y. 659,112, canc. Cl. 46.
Watkins-Strathmore Co.: *See*—
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Wean Engineering Co., Inc., The, Warren, Ohio. 408,288, ren. 4-21-64. Cl. 23.
Weissberger, Lucile: *See*—
AA Triangle Transfer and Warehouse Co.
Werner, R. D., Co., Inc., Greenville, Pa. 768,490, pub. 2-4-64. Cl. 50.
Wertheimer, Kurt, Los Angeles, Calif. 659,047, canc. Cl. 32.
West Construction Co., The, Chattanooga, Tenn. 659,014, canc. Cl. 23.
Western Condensing Co.: *See*—
Foremost Dairies, Inc.
Western Union Telegraph Co., The, New York, N.Y. 768,514, pub. 2-4-64. Cl. 104.
Whipple Co., The, Natick, Mass. 407,973, ren. 4-21-64. Cl. 46.
White Laboratories, Inc., Kenilworth, N.J. 768,381, pub. 2-4-64. Cl. 18.
Whitnall, Robert N., Beaver Dam, Wis. 768,430, pub. 11-21-61. Cl. 37.
Whoo, Inc., Orlando, Fla. 659,156, canc. Cl. 107.
Wile, Julius, Sons & Co. Inc., New York, N.Y. 768,485, pub. 2-4-64. Cl. 46.
Wiley, John, & Sons, Inc., New York, N.Y. 768,535. Cl. 38.
Wilmot Castle Co., Rochester, N.Y. 768,447, pub. 8-27-63. Cl. 44.
Wilson, Raymond M., d.b.a. Utopia Drive Inn, Wharton, Tex. 659,172, canc. Cl. 46.
Winchester-Western (Canada) Ltd., Cobourg, Ontario, Canada. 768,340, pub. 2-4-64. Cl. 9.
Wingfield, James R., d.b.a. Wingfield Laboratories, Appomattox, Va. 768,495, pub. 2-4-64. Cl. 51.
Wingfield Laboratories: *See*—
Wingfield, James R.
Wood Conversion Co., St. Paul, Minn. 768,344, pub. 2-4-64. Cl. 12.
Woolworth, F. W., Co., New York, N.Y. 768,377, pub. 2-4-64. Cl. 18.
Woolworth, F. W., Co., New York, N.Y. 768,502, pub. 2-4-64. Cl. 51.
Woolworth, F. W., Co., New York, N.Y. 768,506, pub. 2-4-64. Cl. 52.

U.S. GOVERNMENT PRINTING OFFICE:O—1964

U.S. DEPARTMENT OF COMMERCE
OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE
April 28, 1964 Volume 801 Number 4

PATENTS
NOTICES

Public Law 88-292

[88th Congress, S. 2040]

March 26, 1964

AN ACT

78 Stat. 171.

To amend title 35 of the United States Code to permit a written declaration to be accepted in lieu of an oath, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That title 35, United States Code, is amended by adding the following new sections after section 24:

Patent office proceedings. Declarations in lieu of oaths.

"§ 25. *Declaration in lieu of oath*

"(a) The Commissioner may by rule prescribe that any document to be filed in the Patent Office and which is required by any law, rule, or other regulation to be under oath may be subscribed to by a written declaration in such form as the Commissioner may prescribe, such declaration to be in lieu of the oath otherwise required.

"(b) Whenever such written declaration is used, the document must warn the declarant that willful false statements and the like are punishable by fine or imprisonment, or both (18 U.S.C. 1001).

62 Stat. 749.

"§ 26. *Effect of defective execution*

"Any document to be filed in the Patent Office and which is required by any law, rule, or other regulation to be executed in a specified manner may be provisionally accepted by the Commissioner despite a defective execution, provided a properly executed document is submitted within such time as may be prescribed."

SEC. 2. The analysis of chapter 2 of title 35, United States Code, immediately preceding section 21, is amended to read as follows:

66 Stat. 794.

"Sec.
"21. Day for taking action falling on Saturday, Sunday, or holiday.
"22. Printing of papers filed.
"23. Testimony in Patent Office cases.
"24. Subpoenas, witnesses.
"25. Declaration in lieu of oath.
"26. Effect of defective execution."

Approved March 26, 1964.

LEGISLATIVE HISTORY:

HOUSE REPORT No. 1181 (Comm. on the Judiciary).
SENATE REPORT No. 689 (Comm. on the Judiciary).
CONGRESSIONAL RECORD:
Vol. 109 (1963): Dec. 6, considered and passed Senate.
Vol. 110 (1964): Mar. 16, passed House.

New Applications Received During February 1964

Patents	6,442
Designs	362
Plant Patents	16
Reissues	18
Total	6,838

Issue—April 28, 1964

Patents	984	No. 3,130,413 to No. 3,131,396, incl.
Designs	48	No. 198,071 to No. 198,118, incl.
Plant Patents	6	No. 2,393 to No. 2,398, incl.
Reissues	5	No. 25,562 to No. 25,566, incl.
Total	1043	

Board of Appeals Decisions Rendered in the Month of March 1964

Examiner affirmed	360
Examiner affirmed in part	59
Examiner reversed	119
Total	537

Annual Index of Patents

The 1963 edition of the Annual Index of Patents has been published. Copies may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402

Price: Buckram bound, $5.75.

Annual Index of Trademarks

The 1963 edition of the Annual Index of Trademarks has been published. Copies may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402

Price: Buckram bound, $2.50.

Service by Publication
Lee R. Johnson

In accordance with Rule 47(b) of the Rules of Practice of the United States Patent Office in Patent Cases, notice is hereby given of the filing on December 11, 1961, of an application for patent entitled "Zero-Gravity Release Mechanism," on behalf of Lee R. Johnson, whose last known address is 618 West Jewel Street, Kirkwood 22, Missouri. The application was made in compliance with Rule 47(b) and 35 U.S.C. 118 by Albert H. Helvestine (for the Secretary of the Navy, acting in turn on behalf of the United States Government as the assignee of the rights formerly held by the Atlas Powder Co. in the invention) without execution by the said Lee R. Johnson. Notice of the filing directed to the above noted address has been returned undelivered.

Any action to be taken by the said Lee R. Johnson in connection with the said application must be taken within thirty days of the publication of this notice.

EDWIN L. REYNOLDS,
First Assistant Commissioner.

Adverse Decisions in Interferences

In the designated interferences involving the indicated claims of the following patents final decisions have been rendered that the respective patentees were not the first inventors with respect to the claims listed.

Patent No. 2,778,155, R. K. Ostrander, Doll with mechanism for movable lips, decided Nov. 4, 1960, Interference No. 89,089, claim 1.

Patent No. 2,779,516, J. W. Soffer, Dispensing valves, decided Jan. 17, 1963, Interference No. 89,191, claims 4 and 5.

Patent No. 2,798,902, D. R. Kursman and S. P. Rosen, System and method for underwater communication, decided Jan. 10, 1964, Interference No. 91,257, claims 10 and 12.

Patent No. 2,798,902, D. R. Kursman and S. P. Rosen, System and method for underwater communication, decided Jan. 10, 1964, Interference No. 92,554, claims 2, 3, 4, 5, 6 and 9.

Patent No. 2,804,409, H. D. Kessler and R. G. Sherman, Heat treating titanium-base alloy products, decided Nov. 12, 1963, Interference No. 89,061, claims 1 and 4.

Patent No. 2,920,799, A. Binder, Spout for metallic containers, decided Dec. 5, 1963, Interference No. 91,526, claims 1, 2, 3 and 5.

Patent No. 2,930,417, P. C. Consoletti, Saw chain, decided Mar. 3, 1964, Interference No. 92,217, claims 3 and 4.

Patent No. 2,933,726, J. O. Campbell and Y. J. Liu, System and apparatus for preventing collisions between vehicles, decided Jan. 10, 1964, Interference No. 91,671, claims 1, 5, 20 and 21.

Patent No. 2,935,467, R. N. Fleck and C. G. Wight, Fractionation process using zeolitic molecular sieves, decided Mar. 3, 1964, Interference No. 91,866, claims 1, 2, 5, 6 and 7.

Patent No. 2,945,894, H. W. Earhart and W. G. De Pierri, Jr., Trichloromethylated aromatic, decided Jan. 6, 1964, Interference No. 91,913, claim 1.

Patent No. 2,988,978, D. R. Craig, Photographic printing, decided Jan. 23, 1964, Interference No. 93,008, claims 1, 2 and 3.

Patent No. 2,992,913, R. K. Pfeiffer, Herbicidal composition and method employing a combination of a polychlorobenzoic acid and a phenoxyaliphatic acid, decided Jan. 8, 1964, Interference No. 92,928, claim 9.

Patent No. 3,004,445, H. Mondon, Screw drive for measuring instruments, decided Feb. 28, 1964, Interference No. 93,700, claims 1, 2 and 3.

Patent No. 3,026,544, H. Persicke, R. Schwab and H. Schilling, Upholstery structures of resilient polyurethane and method of making same, decided Nov. 29, 1963, Interference No. 92,897, claims 1, 2, 3, 4 and 5.

Patent No. 3,033,183, A. F. Erickson, Cylinder liner, decided Feb. 12, 1964, Interference No. 93,437, claims 1, 2, 3, 4, 5 and 6.

PATENT AND TECHNICAL DATA CONTROLS

Export Control Regulations

The Department of Commerce is announcing the amendment effective April 1, 1964, of its Export Control Regulations governing the export of patent information or technical data from the United States, and the Office of Foreign Assets Control hereby announces corresponding changes in certain Treasury Regulations. After April 1, 1964, persons subject to the jurisdiction of the United States who license foreign firms to use patents or technical data will no longer be required by the Office of Foreign Assets Control to incorporate in the license agreements certain restrictions on the disposition of commodities produced abroad under such license agreements.

Heretofore, the Office of Foreign Assets Control has under the Foreign Assets Control Regulations (31 CFR Part 500) required that licensors include in licensing agreements undertakings by the foreign licensees not to sell any item produced under the license to Communist China or North Korea or their nationals, without prior permission from the licensor. Such permission could not be given in the absence of a license granted by the Treasury to the licensor authorizing the specific transaction. Similarly, under the Transaction Control Regulations (31 CFR Part 505), American licensors have been required to incorporate in licensing agreements undertakings by the foreign licensees not to sell any strategic item produced under the license to European Soviet Bloc nations, without prior permission of the licensor. Again, such permission could not be given in the absence of a license granted by the Treasury to the licensor.

These undertakings are no longer required so far as licensing agreements entered into on or after April 1, 1964, are concerned. The restrictions contained in licensing agreements entered into before April 1, 1964, should continue to be enforced by the licensor. However, if the licensee signs a certification which meets the requirements of General License GTDU of the Export Control Regulations administered by the Department of Commerce, as now amended, this certification will be acceptable evidence that the requirements of the Treasury Regulations applicable to such prior licensing agreements have been complied with.

Attention is directed to the fact that the restrictions of the Treasury Regulations remain in full force and effect insofar as they involve foreign firms which are directly or indirectly controlled by persons subject to the jurisdiction of the United States in any way other than by licensing agreements. For example, foreign subsidiaries of U.S. firms and foreign firms which are joint ventures by a U.S. firm and a foreign firm continue to be affected by the restrictions of the Treasury Regulations.

[SEAL] MARGARET W. SCHWARTZ,
Director Office of Foreign Assets Control.

[F.R. Doc. 64-2563; Filed, Mar. 16, 1964; 8:50 a.m.]

Published in 29 F.R. 3443, Mar. 17, 1964

Chapter III—Bureau of International Commerce, Department of Commerce

SUBCHAPTER B—EXPORT REGULATIONS

[9th General Rev., Export Regs., Amdt. No. 81]

PART 370—SCOPE OF EXPORT CONTROL BY DEPARTMENT OF COMMERCE

PART 385—EXPORTATION OF TECHNICAL DATA

Miscellaneous Amendments

1. Section 370.2 *Prohibited exportations*, paragraph (a) *General provisions*, subparagraph (1) is amended to read as follows:

§ 370.2 *Prohibited exportations.*

(a) *General provisions.* • • •

(1) Any exportation to Canada (see § 370.3 except:[1]

(i) Sugar, beet and cane, Schedule B No. 16190;

(ii) Walnut logs, bolts, and hewn timber, Schedule B No. 40040; and

(iii) The types of technical data described in § 385.2(c)(5) of this chapter.

• • • • • • • •

2. Part 385—Exportation of Technical Data is amended in the following respects:

a. Sections 385.1 and 385.2 are amended to read as follows:

§ 385.1 *Definitions.*

(a) *Technical Data.*—"Technical Data" means any professional, scientific or technical information, including any model, design, photograph, photographic film, document or other article or material, containing a plan, specification, or descriptive or technical information of any kind which can be used or adapted for use in connection with any process, synthesis, or operation in the production, manufacture, utilization, or reconstruction of articles or materials. The provisions of this Part 385—*Technical Data*, do not apply to "classified" technical data, i.e., technical data, which have been officially assigned a security classification, i.e.: "top secret," "secret," or "confidential," by an officer or agency of the United States Government. The exportation of classified technical data is controlled by the Office of Munitions Control, Department of State, Washington, D.C., 20520 (see § 370.5 of this chapter).

(b) *Exportation of Technical Data.*[2][3]—"Exportation of Technical Data" is defined as any release of unclassified technical data for use outside the United States. It includes the actual shipment out of the United States as well as the furnishing of data in the United States to persons with the knowledge or intention that the persons to whom it is furnished will take such data out of the United States.

§ 385.2 *General licenses.*

(a) *Which general license may be used*—(1) *Scientific and educational technical data.*—Unclassified scientific or educational technical data, as described in paragraph (d) of this section, may be exported under the provisions of General License GTDS in either published or unpublished form. At the discretion of the exporter, scientific or educational technical data may be exported under General License GTDP or GTDU if the specified provisions of either of these general licenses are met (see paragraphs (b) and (c) of this section).

(2) *Other types of technical data.*—Unclassified technical data which do not fall within the definition of "scientific" or "educational" as defined in paragraph (d) of this section, may be exported as follows:

(i) Under the provisions of general License GTDP if it is generally available in published form (see paragraph (b) of this section).

(ii) Under the provisions of General License GTDU if it is not generally available in published form (see paragraph (c) of this section).

A validated export license is required if the technical data are not exportable under the provisions of General License GTDS, GTDP, or GTDU.

(b) *General License GTDP; Published technical data.*—A general license designated GTDP is hereby established authorizing the exportation to all destinations of unclassified technical data generally available in published form. Technical data are considered as generally available in published form if they are:

(1) Sold at newstands or bookstores;

(2) Available by subscription or purchase without restrictions to any person or available without cost to any person; or

(3) Freely available at public libraries.

(c) *General License GTDU; Unpublished technical data*—(1) *Applicability.*—A general license designated GTDU is hereby established authorizing the exportation of unclassified technical data, which is either unpublished or not generally available in published form (that is, technical data not exportable under the provisions of General License GTDP) subject to the other provisions and limitations set forth in this paragraph (c).

(2) *Destination restrictions.*—This general license shall not be applicable to any exportation of technical data directly or indirectly to any Subgroup A destination, Poland (including Danzig), or Cuba; except that technical data such as manuals, instruction sheets, or blueprints may be exported to any destination other than Communist China, North Korea, or the Communist-controlled area of Viet-Nam, provided that such technical data are:

(i) Sent as part of a transaction involving, and directly related to, a commodity licensed for export from the United States to the same consignee and destination to which the commodity was or will be exported;

(ii) Sent no later than one year following the shipment of the commodity to which the technical data are related;

(iii) Of a type normally delivered with the commodity;

(iv) Necessary to the assembly, installation, maintenance, repair, or operation of the commodity; and

(v) Not related to the production, manufacture, or construction of the commodity.

(3) *Restriction relating to types of technical data.*—This general license shall not be applicable to technical data relating to the commodities described in this subparagraph (3). The limitations set forth in this subparagraph (3) do not apply to the exportation of operating and maintenance instructional material or to technical data included in an application for foreign filing of a patent, provided such foreign filing of a patent application is in accordance with the regulations of the United States Patent Office.

(i) Civil aircraft, civil aircraft equipment, parts, accessories, or components listed on the Positive List of Commodities (§ 399.1 of this chapter); or

(ii) The following electronic commodities listed on the Positive List of Commodities (§ 399.1 of this chapter):

(a) Electrical and electronic instruments, Schedule B Nos. 70372 and 70379, specially designed for testing or calibrating the airborne direction finding, navigational and radar equipment described in Schedule B Nos. 70797 and 70867.

(b) Airborne transmitters, receivers, and transceivers, Schedule B No. 70779.

(c) Airborne direction finding equipment, Schedule B No. 70797.

(d) Airborne electronic navigation apparatus and airborne radar equipment, Schedule B No. 70867.

(iii) Neutron generators employing the electrostatic acceleration of ions and designed for operation without an external vacuum system, and specially fabricated parts and

[1] See § 379.1(d) regarding the requirement of a Shipper's Export Declaration for certain exportations to Canada.

[2] License applications for, or questions as to, the exportation of unclassified technical data relating to commodities which are licensed by government agencies other than the Department of Commerce shall be referred to the appropriate government agency for consideration.

[3] In addition to the regulations issued by the U.S. Patent Office, technical data contained in or related to inventions made in foreign countries or in the United States, are subject to the Department of Commerce regulations covering the exportation of technical data, in the same manner as the exportation of other types of technical data. Patent attorneys and others are advised to consult with the U.S. Patent Office, Department of Commerce, Washington, D.C., 20231, relative to the U.S. Patent Office regulations concerning the filing of patent applications or amendments in foreign countries.

accessories for such neutron generators; Schedule B No. 70999.

(4) *Requirement of written assurance for certain data, services, materials and equipment.*—No exportation of technical data of the kind described in (i) and (ii) of this subparagraph (4) may be made under the provisions of this General License GTDU until the exporter has received written assurance from the importer than neither the technical data nor the direct product[4] thereof is intended to be shipped either directly or indirectly to a Subgroup A country, Poland (including Danzig), or Cuba, except as provided in subdivision (iii) of this subparagraph (4). The required assurance may be in the form of a letter or other written communication from the importer evidencing such intention, or a licensing agreement which restricts disclosure of the technical data to use only in a country other than Subgroup A, Poland (including Danzig), or Cuba, and prohibits shipment of the direct product[4] thereof by the licensee to a Subgroup A country, Poland (including Danzig), or Cuba. An assurance included in a licensing agreement will be acceptable for all exportations made during the life of the agreement. If such assurance is not received, this general license is not applicable and a validated export license is required. An application for such validated license shall include an explanatory statement setting forth the reasons why such assurance cannot be obtained. In addition this general license is not applicable to any exportation of technical data of the kind described in subdivisions (i) and (ii) of this subparagraph (4) if, at the time of exportation of the technical data from the United States, the exporter knows or has reason to believe that the direct product[4] to be manufactured abroad by use of the technical data is intended to be exported directly or indirectly to a Subgroup A destination, Poland (including Danzig) or Cuba.

(i) Technical data and services listed in (*a*) below for the plants, processes, and equipment listed in (*b*) below:

(*a*) Type of technical data and services:

(1) Proprietary research and the results therefrom;

(2) Processes developed pursuant to research (including technology with regard to component equipment items);

(3) Catalyst production, activation, utilization, reactivation and recovery;

(4) Plant and equipment design and layout to implement the processes; and

(5) Construction and operations of plant and equipment.

(*b*) Types of plants, equipment, and processes:

The following plants, equipment, or processes usable in the treatment of petroleum or natural gas fractions or of products derived directly or indirectly therefrom;[5]

alkylation	halogenation	oxo process
aromatization	hydrogenation	ozonolysis
cracking	isomerization	polymerization
dehydrogenation	nitration	reduction
desulfurization	oxidation	reforming

(ii) Technical data relating to the following materials and equipment:

(*a*) Steel line pipe of a size greater than 19 inches o.d. and having a yield strength greater than 40,000 p.s.i. as determined by API test (Schedule B Nos. 60627 and 60630);

(*b*) Forged steel pipe fittings having a pipe size connection greater than 19 inches o.d. and having a yield strength greater than 40,000 p.s.i. as determined by API test (Schedule B No. 61857);

(*c*) Centrifugal pumps designed for an internal pump-case working pressure of over 300 p.s.i. and a power input greater than 1,000 hp., and specially fabricated parts and accessories (Schedule B Nos. 77101 and 77119);

(*d*) Air and gas compressors, reciprocating, centrifugal, axial flow and mixed flow types, capable of receiving a power input greater than 2,000 hp. and designed for a discharge greater than 300 p.s.i. and specially fabricated parts and accessories (Schedule B Nos. 77046, 77073, 77076, and 77078);

(*e*) Steel valves, with an inlet or outlet dimension 17 inches or greater and designed for a working pressure of over 300 p.s.i. and specially fabricated parts and accessories (Schedule B Nos. 77450, 77460, and 77465);

(*f*) O-ing and U-ing presses specially designed for the manufacture of steel pipe of a size greater than 19 inches o.d., and specially fabricated parts and accessories (Schedule B Nos. 74459 and 74468);

(*g*) Straightener-expander for pipes or tubes of a size greater than 19 inches o.d., and specially fabricated parts and accessories (Schedule B Nos. 74459 and 74468);

(*h*) Portable pneumatic and hydraulic drilling machines capable of tapping steel line pipe of a size greater than 19 inches o.d. without interruption of flow (Schedule B Nos. 74570 and 74601);

(*i*) Meters with inlet or outlet diameter 10 inches or larger specially designed to measure flow in petroleum and/or natural gas pipe line (Schedule B No. 76680);

(*j*) Valves specially designed for temporarily stopping off or plugging a section of steel line pipe of a size greater than 19 inches o.d. (Schedule B No. 77450); and

(*k*) Automatic pipe welding machines capable of welding the joints of steel line pipe of a size greater than 19 inches o.d., and specially fabricated parts and accessories (Schedule B Nos. 70106 and 70108);

(*l*) Pipe mills specially designed for the manufacture of steel pipe of a size greater than 19 inches o.d., and specially fabricated parts and accessories (Schedule B No. 74480);

(*m*) Molecular sieves (for example, crystalline calcium alumino-silicate; crystalline sodium alumino-silicate; crystalline alkali metal alumino-silicates, etc.) (Schedule B Nos. 83799 and 83990).

(*n*) Pyrolitic graphite (i.e., graphite and doped graphites produced by vapor deposition) in any form (Schedule B No. 54809); semi-finished or finished materials or products containing pyrolitic graphite as a standing body, a coating, a lining, or a substrate (Schedule B Nos. 54780, 54805, and 54809).

(*o*) Electric industrial melting and refining furnaces and metal heat-treating furnaces specially designed for the production or processing of vapor deposited (pyrolitic) graphite or doped graphites whether as standing bodies, coatings, linings or substrates (Schedule B Nos. 70741 and 70744).

(iii) The limitations set forth in this subparagraph (4) do not apply to the exportation of technical data included in an application for the foreign filing of a patent, provided such foreign filing of a patent application is in accordance with the regulations of the United State Patent Office.

(5) *Requirements of written assurance for certain additional products and destinations.*—(i) Except for technical data requiring a written assurance in accordance with the provisions of subparagraph (4) of this paragraph, and except as provided in subdivision (v) of this subparagraph; no exportation of technical data relating to the commodities described in this subdivision (i) may be made under the provisions of this General License GTDU, until the United States exporter has received a written assurance from the foreign importer (including any Canadian importer) that, unless prior authorization is obtained from the Office of Export Control, the importer will not knowingly:

(*a*) Reexport, directly or indirectly, to any Subgroup A, destination, to Poland (including Danzig) or to Cuba, any technical data relating to commodities listed on the Positive List of Commodities, § 399.1 of this chapter or in § 371.52 of this chapter;

(*b*) Export, directly or indirectly, to Communist China, North Korea, the Communist-controlled area of Viet-Nam, or Cuba, any direct product[7] of the technical data if such direct product[7] is listed on the Positive List of Commodities, § 399.1 of this chapter, or in § 371.52 of this chapter;

(*c*) Export, directly or indirectly, to any destination in

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[4] The term "direct product" used in this sentence and in this context only is defined to mean the immediate product (including processes and services) produced directly by use of the technical data, except that petroleum or chemical products other than molecular sieves or catalysts are not included in this definition. The coverage of the term does not extend to the results of the use of such "direct product." An example of the direct product of technical data is reforming process equipment designed and constructed by use of the technical data exported, but the aromatics produced by the reforming process equipment are not immediate or direct products of these technical data. However, if the technical data are a formula for producing aromatics, the aromatics, although they are immediate products of the data, are not included in this definition of direct product, since they are petroleum products. Conversely, if the technical data are a formula for producing either molecular sieves or catalysts, the foreign-produced molecular sieves and catalysts are included in the definition of direct product.

[5] This includes plants, equipment, or processes for the production, extraction, and purification of petroleum products, petro-chemical products, and products derived therefrom. Examples of petrochemical products include methane, ethane, propane, butane and other aliphatics, as well as olefins, aromatics, naphthenes, and elements and other compounds.

the European Soviet [6] bloc or to Poland (including Danzig) any direct product [7] of the technical data if such direct product [7] is identified on the Positive List of Commodities by the symbol "A."

(ii) If the direct product [7] of any technical data is a complete plant or any major component of a plant which is capable of producing a commodity shown on the Positive List of Commodities, or in § 371.52 of this chapter, or in the United States Munitions List, a written assurance by the person who is or will be in control of the distribution of the products of the plant (whether or not such person is the importer) shall be obtained by the United States exporter (via the foreign importer, stating that, unless prior authorization is obtained from the Office of Export Control, such person will not knowingly:

(a) Reexport, directly or indirectly, to any Subgroup A destination, to Poland (including Danzig), or to Cuba the technical data relating to the plant or the major component of a plant;

(b) Export, directly or indirectly, to Communist China, North Korea, the Communist-controlled area of Viet-Nam, or Cuba, the plant, or the major component of a plant (depending upon which is the direct product [7] of the technical data), or any product of such plant, or of such major component, if such product is listed on the Positive List of Commodities, or in § 371.52 of this chapter, or in the United States Munitions List; or

(c) Export, directly or indirectly, to the European Soviet bloc,[6] or to Poland (including Danzig) the plant, or the major component of a plant (depending upon which is the direct product [7] of the technical data), or any product of such plant, or of such major component, if such product is identified on the Positive List of Commodities by the Symbol "A" or in the United States Munitions List.

(iii) The required assurance may be in the form of a letter or other written communication from the importer or, if applicable, the person in control of the distribution of the products of a plant; or the assurance may be incorporated into a licensing agreement which restricts disclosure of the technical data to use only in authorized destinations, and prohibits shipment of the direct product [7] thereof by the licensee to any unauthorized destination. An assurance included in a licensing agreement will be acceptable for all exportations made during the life of the agreement. If such assurance is not received, this general license is not applicable and a validated export license is required. An application for such validated license shall include an explanatory statement setting forth the reasons why such assurance cannot be obtained.

(iv) In addition, this general license is not applicable to any exportation of technical data of the kind described in this subparagraph (5) if, at the time of exportation of the technical data from the United States, the exporter knows or has reason to believe that the direct product [7] to be manufactured abroad by use of the technical data is intended to be exported directly or indirectly to any unauthorized destination.

(v) The limitations set forth in this subparagraph (5) do not apply to the exportation of technical data included in an application for the foreign filing of a patent, provided such foreign filing of a patent application is in accordance with the regulations of the United States Patent Office.

NOTE.—A written assurance is not required for the exportation under this General License GTDU of any technical data which does not fall within the description set forth in subparagraphs (4) or (5) of this paragraph.

(d) *General License GTDS; Scientific and educational technical data.* A general license designated GTDS is hereby established authorizing the exportation to all destinations of unclassified scientific and educational technical data involving:

(1) Dissemination of information not directly and significantly related to design, production and utilization in industrial processes, including such dissemination by correspondence and attendance at, or participation in, meetings; or

(2) Instruction in academic institutions and academic laboratories. "Instruction" is interpreted not to include research under contract where the research relates directly and significantly to design, production, and utilization in industrial processes.

b. Section 385.4 *Exportation under a validated license, paragraph (c) completion of application form and application processing card,* subparagraph (2) *Special provisions for certain commodities* is amended by redesignating (iii) as (iv), adding a new (iii) and amending redesignated (iv) to read as follows:

§385.4 *Exportation under a validated license.*

• • • • • • • •

(c) *Completion of application form and application processing card.* • • •

(2) *Special provisions for certain commodities.* • • •

(iii) Neutron generators employing the electrostatic acceleration of ions and designed for operation without an external vacuum system, and specially fabricated parts and accessories for such neutron generators; Schedule B No. 70999.

(iv) For all license applications covering technical data relating to any of the commodities in subdivisions (i), (ii), (iii) of this subparagraph for export to any destination other than Poland (including Danzig), a Subgroup A destination, Cuba, or the Republic of the Congo (Leopoldville), an applicant shall attach to the license application a written statement of assurance from his foreign consignee that the technical data will not be reexported directly or indirectly to any country without prior authorization from the Office of Export Control. The statement shall also show that the direct product [8] produced by use of the technical data will not be exported directly or indirectly to Poland (including Danzig), a Subgroup A destination, Cuba, or the Republic of the Congo (Leopoldville) without prior authorization from the Office of Export Control. For a license application for a shipment of such technical data to the Republic of the Congo (Leopoldville), the same written statement is required except that the list of destinations set forth thereon to which the direct product [8] may not be exported shall omit the Republic of the Congo (Leopoldville). However, if the United States exporter is not able to obtain the required statement, or the consignee is unwilling to furnish assurances with respect to all of the requirement, the exporter may attach an explanatory statement to his license application setting forth the reasons therefor.

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This amendment shall become effective April 1, 1964, except that until June 30, 1964, the exportation of any product of United States technical data made abroad pursuant to a licensing agreement entered into prior to April 1, 1964, in compliance with the Treasury Department regulations and which remain in effect until June 30, 1964, may be made under the previous provisions of this General License GTDU without regard to the new requirement for an assurance. After June 30, 1964, any exportations of technical data not meeting these new requirements of General License GTDU will require a validated export license.

(Sec. 3, 63 Stat. 7; 50 U.S.C. App. 2023; E.O. 10945, 26 F.R. 4487; E.O. 11038, 27 F.R. 7003)

FORREST D. HOCKERSMITH,
Director,
Office of Export Control.

[F.R. Doc. 64-2621; Filed, Mar. 16, 1964; 8:53 a.m.]

Published in 29 F.R. 3421-24, Mar. 17, 1964

[6] The term "European Soviet bloc," as used in this subparagraph (5), means the following destinations: Albania, Bulgaria, Czechoslovakia, East Germany (Soviet Zone of Germany and the Soviet Sector of Berlin), Estonia, Hungary, Latvia, Lithuania, Outer Mongolia, Rumania, and the Union of Soviet Socialist Republics.

[7] The term "direct product" used in this sentence and in this context only is defined to mean the immediate product (including processes and services) produced directly by use of the technical data.

[8] The term "direct product" used in this sentence and in this context only, is defined to mean the immediate product (including processes and services) produced directly by use of the technical data. The coverage of the term does not extend to the results of the use of such "direct product." For example, if the technical data relate to the design of a new or improved airborne transmitter, the airborne transmitter produced from such data is a direct product of the data. However, if the technical data relate to the design of equipment which will be used for the production of airborne transmitters, then the equipment rather than the transmitter is the direct product of the technical data.

CURRENT COMPACT PROSECUTION PRACTICE

On March 18, 1964, the memorandum reproduced below was distributed to the Patent Examining Corps. It is presented here for the information of all applicants and their representatives.

Optimum Examining Procedure—Memorandum #3

Compact prosecution has been official policy since issuance of the Commissioner's Order, "New Examining Procedure," dated July 26, 1962, 781 O.G. 1.

The underlying basic policy of this practice requires that both the applicant and the examiner use thorough forethought and care to do everything essential in every case as early as possible, so that each application may be brought to a proper and equitable conclusion in the minimum total time. Since the practice was adopted, problems during the transition to full enforcement of the new practice have been minimized by flexibility and continuing search for solutions of any problems which emerged. With increasing understanding and use of the practice, increasing benefits are emerging.

This basic policy *now applies to all applications*, and will be cooperatively but rigorously enforced.

The following paragraphs supplement earlier directions by describing particular problem solutions which have yielded increased benefits from compact prosecution procedures.

1. *Loss of opportunity to enter amendments through rigorous enforcement of Rules 112 and 116.*

Experience has shown that adoption of the suggestion of the sixth paragraph of the notice "Practice under Rule 112," 791 O.G. 2, will avoid any loss of rights caused by denial of entry of an amendment under Rule 112.

Nearly all amendments formerly proposed after final rejection (Rule 116), including after appeal (Rules 196 through 198) or after allowance (Rule 312), can *with adequate forethought* be submitted earlier, during the "conference period" discussed below, with no loss of rights.

Trivial informalities, often the subject of Rule 312 amendments, seldom affect significantly the vital formal requirements of any patent, namely (1) that its disclosure be adequately clear, and (2) that any invention present be defined with sufficient clarity to form an adequate basis for an enforceable contract. If important, they should be corrected during the conference period.

For *extreme* cases where an appropriate showing can be made, Rule 116 provides a specific escape route.

If despite the above there are any significant and substantive rights still unprotected, the applicant always has the right to file a continuing application, defining therein such additional rights as he deems necessary. Despite expectations, a continuing check reveals no evidence that compact prosecution has brought any increase in continuation applications, perhaps because proposed changes seldom prove upon investigation to be important enough to justify further expense.

2. *Foreign applications.*

It has been stated that some foreign applicants might be deprived of substantive rights through early closing of prosecution.

Substantive rights for all applicants, domestic or foreign, are always subject to compliance with laws and rules of procedure. Notice currently given by attorneys to foreign clients that protection of their substantive rights requires putting each application in proper condition *prior to* the first action, preferably immediately following filing, has afforded foreign applicants who followed the suggested procedure full protection of their substantive rights.

3. *The Conference Period.*

The "Conference Period," as used here, is the time between the filing of applicant's thorough first response and a concluding action by the examiner. Its intensive use has proved an open sesame to satisfactory and time-saving early conclusion of many cases.

The concept which underlies this practice is that an interview between an applicant or attorney and an examiner, whether in person or by telephone, is not an adversary proceeding. It is a joint and cooperative voyage of discovery, to reveal and define the proper boundary between the applicant's invention and the public right. It calls for maximum cooperation, followed promptly by a supplemental amendment which embodies all areas of agreement, to prepare the case for final action.

To many within and outside of the Office, the saving in time and expense through maximum cooperative use of this "Conference Period" for interviews has been a revealing and pleasant surprise.

4. *Interview practice.*

The availability of personal interviews in the "Conference Period" for attorneys resident or frequently in Washington is obvious. For others more remote, authorization for collect telephone calls has saved much time. If an attorney's "Remarks" request a collect call whenever the examiner considers the case is ready for final disposition other than by allowance, the examiner should call the attorney as requested, regardless of what he plans to do about the case, and inform him of the planned action.

For example, the examiner might simply state that an interview would be useless. More hopefully, he might suggest minor, probably quickly acceptable changes which would result in allowance. If there are major questions or suggestions, the call might state them concisely, and suggest a further telephone or personal interview, at a prearranged later time, giving applicant more time for consideration before discussing the points raised.

For an interview with an examiner who does not have negotiation authority, arrangements should always include an examiner who does have such authority, and who has familiarized himself with the case, so that authoritative agreement may be reached at the time of the interview.

For attorneys remote from Washington who prefer personal interviews, the *grouped interview* practice is effective.

The cases they wish to discuss may include some applications which will not be up for action for many months. If in any such case there is a prearranged interview, *with agreement to file a prompt supplemental amendment putting the case as nearly as may be in condition for concluding action*, prompt filing of the supplemental amendment gives the case special status, and brings it up for immediate special action. Such interviews, promptly followed by supplemental amendments, are richly rewarding time savers for both applicants and examiners.

H. B. WHITMORE,
Mar. 18, 1964. *Superintendent of the Examining Corps.*

PATENT EXAMINING CORPS

H. B. WHITMORE, Superintendent

PATENT EXAMINING OPERATIONS AND GROUPS	Oldest Application	
	New	Amended
CHEMICAL EXAMINING OPERATION—P. E. MANGAN, Director.		
GENERAL CHEMISTRY, GROUP 110—R. L. CAMPBELL, Supervisory Examiner. Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries.	3-16-62	4-30-62
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Supervisory Examiner. Heterocyclic; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids.	6-1-62	7-18-62
PETROLEUM CHEMISTRY, GROUP 130—J. R. LIBERMAN, Supervisory Examiner. Hydrocarbons; Halogenated Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices; Organic Chemistry (Part) e.g.: Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhydrides; Acid Halides.	5-10-62	7-23-62
HIGH POLYMER CHEMISTRY, GROUP 140—M. STERMAN, Supervisory Examiner. Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins: Reclaiming; Pore-Forming.	3-16-62	5-1-62
COMPOSITIONS AND MOLDING, GROUP 150—L. H. GASTON, Supervisory Examiner. Compositions (Part) e.g.: Coating; Molding; Adhesive Compositions; Abrading; Liquid Purification or Separation; Gas Separation; Special Utility; Molding Processes.	6-4-62	4-19-62
COATING AND LAMINATING, GROUP 160—J. REBOLD, Supervisory Examiner. Coating: Processes, Apparatus and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Ornamentation; Adhesive Bonding; Special Manufactures.	4-2-62	3-20-62
SPECIALIZED CHEMICAL ARTS AND INDUSTRIES, GROUP 170—W. B. KNIGHT, Supervisory Examiner. Bleaching and Dyeing; Fertilizers; Foods; Fermentation; Photography; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Metallurgical Apparatus; Gas, Heating and Illuminating; Cleaning Processes; Liquid Purification; Thermolytic Distillation; Preserving.	4-26-62	4-17-62
CHEMICAL ENGINEERING, GROUP 180—G. D. MITCHELL, Supervisory Examiner. Gas, Liquid and Solid Separation; Centrifugal Bowl Separators; Gas and Liquid Contact Apparatus; Distillation; Drying; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	7-10-62	7-6-62
ELECTRICAL EXAMINING OPERATION—N. H. EVANS, Director.		
POWER, GROUP 210—M. L. LEVY, Supervisory Examiner. Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art.	7-3-62	6-1-62
SECURITY, GROUP 220—S. BOYD, Supervisory Examiner. Ordnance, Firearms and Ammunition; Radar, Sonar, Directional Radio, Torpedoes, Seismic Exploring, Radio-Active Batteries; Nuclear Reactors, Powder Metallurgy, Rocket Fuels; Radio-Active Material.	8-1-62	8-6-62
INFORMATION TRANSMISSION, GROUP 230—S. W. CAPELLI, Supervisory Examiner. Communications; Multiplexing Techniques; Facsimile and Related Art.	9-10-62	9-6-62
INFORMATION STORAGE AND RETRIEVAL, GROUP 240—W. W. BURNS, Supervisory Examiner. Data Processing, Computation and Conversion; Storage Devices and Related Art.	3-5-62	4-4-62
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—B. G. MILLER, Supervisory Examiner. Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks.	6-22-62	6-6-62
RADIATION AND INSTRUMENTS, GROUP 260—F. M. STRADER, Supervisory Examiner. Optics; Radiant Energy; Measuring.	6-14-62	6-13-62
ELEMENTS, GROUP 270—E. J. SAX, Supervisory Examiner. Conductors; Switches; Miscellaneous.	6-21-62	6-26-62

CONDITION OF PATENT APPLICATIONS AS OF FEBRUARY 29, 1964

Total number of pending applications (excluding Designs)	205,093
Total number of Design applications pending	5,775
Total number of applications awaiting action (excluding Designs)	124,525
Total number of Design applications awaiting action	2,043
Date of oldest new application awaiting action	Mar. 8, 1962
Date of oldest amended application awaiting action	Mar. 20, 1962

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during April 1964, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*

Patents ..... Numbers 2,418,109 to 2,419,982, inclusive

Plant Patents ..... Numbers 733 and 734, inclusive

PATENT EXAMINING OPERATIONS AND GROUPS (Continued)	Oldest Application	
	New	Amended
MECHANICAL ENGINEERING EXAMINING OPERATION—R. A. WAHL, Director.		
MATERIAL OR ARTICLE HANDLING AND DISPENSING, GROUP 310—A. BERLIN, Supervisory Examiner. Material or Article Handling and Dispensing; Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Fluid Sprinkling and Fire Extinguishers; Coin Handling and Check Controlled Apparatus; Classifying and Assorting Solids.	1-7-63	1-21-63
METAL AND PLASTICS WORKING, GROUP 320—N. BERGER, Supervisory Examiner. Metal Bending, Drawing, Extruding, Forging, Rolling; Sheet Metal Working; Wireworking; Chain, Staple, Horseshoe Making; Metal Founding; Wire Fabrics; Plastic Working Apparatus; Plastic Block, Earthenware Apparatus.	10-30-62	10-15-62
MANUFACTURING AND ASSEMBLING MISCELLANEOUS ARTICLES, GROUP 330—A. M. HORTON, Supervisory Examiner. Special Article Making; Assembling, Tool and Implement Making; and Metal Working.	7-12-62	8-9-62
MACHINE TOOLS, MECHANISMS AND ELEMENTS, GROUP 340—F. H. BRONAUGH, Supervisory Examiner. Machine Tools for Shaping or Dividing Involving Cutting or Breaking; Machine Elements Including Power Transmission Components, Work and Tool Holders.	10-17-62	7-17-62
HARDWARE, TOOLS AND JOINTS, GROUP 350—T. J. HICKEY, Supervisory Examiner. Miscellaneous Hardware; Tools; Joints; Cutlery; Locks; Fasteners; Rod Pipe and Electrical Connectors; Buckles; Buttons, Clasps, Etc.; Pushing and Pulling.	6-4-62	8-1-62
FLUID HANDLING, GROUP 360—E. PAUL, Supervisory Examiner. Fluid Handling; Valves; Pipes and Tubular Conduits; Fluent Material Handling; Lubrication; Baths, Closets and Sinks; Joint Packing.	9-26-62	11-29-62
POWER PLANTS, MOTORS AND PUMPS, GROUP 370—C. F. GAREAU, Supervisory Examiner. Power Plants, Combustion Power Plants, Expansible Chamber Motors, Rotary Motors and Rotary Expansible Chamber Motors, Expansible Chamber Devices and Internal Combustion Engines, Pumps and Pump Regulation.	9-24-62	10-16-62
HEATING, COOLING AND VENTILATING, GROUP 380—P. L. PATRICK, Supervisory Examiner. Furnaces, Liquid Heaters and Vaporizers, Burners, Heat Exchange, Automatic Temperature and Humidity Regulation, Refrigeration, Ventilation, and Illumination.	11-15-62	10-22-62
GENERAL ENGINEERING AND INDUSTRIAL ARTS EXAMINING OPERATION—J. A. MANIAN, Director.		
AGRICULTURE, GROUP 410—A. RUEGG, Supervisory Examiner. Animal Husbandry; Butchering; Fishing, Trapping and Vermin Destroying; Plant Husbandry; Tobacco, Earth Working.	12-21-62	1-25-63
CIVIL ENGINEERING, GROUP 420—B. BENDETT, Supervisory Examiner. Building Structures; Bridges, Closures; Closure Operators; Safes; Earth Engineering; Drilling; Mining.	10-5-62	10-11-62
PHYSICS, GROUP 430—R. L. EVANS, Supervisory Examiner. Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.	9-25-62	8-24-62
TEXTILES AND APPAREL, GROUP 440—R. C. MADER, Supervisory Examiner. Textiles; Winding and Reeling; Tying Strands; Apparel; Boot and Shoe Making; Sewing Machines.	11-23-62	11-19-62
TRANSPORTATION, GROUP 450—P. ARNOLD, Supervisory Examiner. Railways and Rolling Stock; Brakes; Land Vehicles; Aeronautics; Ships.	12-3-62	12-4-62
FURNITURE AND RECEPTACLES, GROUP 460—W. S. COLE, Supervisory Examiner. Furniture; Supports; Cabinet Structures; Receptacles; Baggage.	12-4-62	1-14-63
PRINTING, STATIONERY AND MATERIAL TREATMENT, GROUP 470—L. W. VARNER, Supervisory Examiner. Printing; Typewriters; Stationery; Material Treatment.	11-16-62	9-17-62
PERSONAL TREATMENT, ADORNMENT AND AMUSEMENTS, GROUP 480—L. R. PRINCE, Supervisory Examiner. Surgery; Dentistry; Artificial Body Members; Toiletry; Amusement Devices; Jewelry; Mechanical Guns; Projectors.	11-26-62	12-4-62
DESIGNS, GROUP 490—J. A. MANIAN, Supervisory Examiner. Industrial Arts; Household, Personal and Fine Arts.	9-6-63	9-4-63

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE ALAN B. HUELLMANTEL

No. 7022. Decided December 12, 1963

[51 CCPA —; 324 F.2d 908; 139 USPQ 496]

1. PATENTABILITY—COMPOSITION—OBVIOUSNESS—PROPERTIES OF CHEMICAL COMPOSITIONS TO BE CONSIDERED IN DETERMINING OBVIOUSNESS—35 U.S.C. 103.

"This court has frequently stated that properties of chemical compounds must be considered in determining obviousness under 35 U.S.C. 103. * * * We think this also applies to such compositions as we have here, i.e., admixtures of two or more compounds. Therefore, the issue of obviousness in this case can be resolved only after considering the differences between the prior art and the claimed compositions chemically *and* in view of their pharmaceutical properties."

2. SAME—SAME—SAME—SAME—SAME.

In commenting on the Patent Office analysis by which the patentability of appellant's therapeutic composition comprising a salicylate and a member selected from the group consisting of prednisone and prednisolone was determined, with the Examiner conceding that appellant's composition "shows improved results" and the Board of Appeals accepting this as "fact," but concluding it is immaterial since "it is obvious *to at least try*" to substitute one steroid for another in the prior art composition, *Held* that "We believe this reasoning, insofar as it negates consideration of properties in determining obviousness under section 103, flys in the face of the plain language of the statute as interpreted by this court"; that "Section 103 says, intra alia, 'the subject matter as a whole would have been obvious * * *'"; that "Nothing is said about 'obvious *to try*'"; and that "consideration of the subject matter 'as a whole' in chemical cases requires comparison of properties, pharmaceutical or otherwise, as well as comparison of chemical structures."

3. SAME—SAME—SAME—SAME—SAME.

"We do not mean to imply that every variance in property of a new compound or composition will tip the balance for patentability where otherwise closely related compounds or compositions are involved. However, all relevant property differences *must be considered* in the light of the facts of each case in the determination of statutory obviousness."

4. SAME—SAME—SAME—EVIDENCE—SYNERGISM.

"As to properties, appellant argues that his composition exhibits unexpected synergism. Synergism is one factor to be considered in the ultimate determination of obviousness of the composition. However, we attribute no magic status to synergism per se since it may be expected or unexpected. On the record before us, we see nothing 'unexpected' in appellant's synergism. * * * In the absence of data comparing cortisone-salicylate compositions with prednisone- or prednisolone-salicylate compositions, we are not convinced that synergism of the latter compositions is unexpected. Thus we consider the appellant's composition to be obvious within the meaning of section 103."

5. SAME—CRITICALITY—COMPOSITION—PREFERRED PROPORTIONS.

"The quantity limitations of claims 4–7 do not distinguish appellant's composition from 'Salcort.' Appellant alleges no criticality in such limitations other than the broad assertion that 'it is preferred to use smaller quantities of each of the essential active ingredients in the composition than when each such active ingredient is used alone to obtain a particular therapeutic reponse.' Apparently 'Salcort' satisfies this desideratum."

6. SAME—PARTICULAR MATTER—THERAPEUTIC COMPOSITION.

The refusal of claims to a therapeutic composition comprising a salicylate and prednisone or prednisolone, as unpatentable over the prior art, is affirmed.

APPEAL from the Patent Office. Serial No. 560,894.

AFFIRMED.

Joseph K. Andonian (*Eugene O. Retter* of counsel) for appellant.

Clarence W. Moore (*Raymond E. Martin* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND Jr., *Associate Judges*

RICH, *J.*, delivered the opinion of the court.

This appeal is from the decision of the Patent Office Board of Appeals affirming the rejection of claims 1–13 of application Serial No. 560,894, filed January 23, 1956, entitled "Composition of Matter."

The invention relates to anti-inflammatory drug compositions and is sufficiently indicated by claims 1, 4, and 8 which are representative:

1. A therapeutic composition comprising a salicylate and a member selected from the group consisting of prednisone and prednisolone.

4. A therapeutic composition in dosage unit form comprising from about 150 to about 600 milligrams of salicylate and from about 0.25 to about 2.5 milligrams of a member selected from the group consisting of prednisone and prednisolone per dosage unit.

8. A therapeutic composition comprising acetylsalicylic acid, prednisolone free alcohol, ascorbic acid, d-pantothenyl alcohol, calcium carbonate, magnesium carbonate, and magnesium oxide.

The salicylate may be metal salicylate salts, esters of salicylic acid, or acetylsalicylic acid (aspirin). Prednisone and prednisolone are steroids, more particularly derivatives of cortisone.[1] Appellant's specification states:

Prednisolone has exhibited anti-inflammatory effects in animals * * * and in man * * *. Similar activity has also been shown for prednisone in man * * *. It has been found, however, that these hormones produced undesirable side-effects * * * at effective therapeutic dosages * * *.

It has also been reported that salicylates are effective as anti-inflammatory agents in man * * *. These compounds, however, also produce undesirable side-effects * * * at effective anti-rheumatic dosages * * *.

It has now been unexpectedly found that the combination of these anti-inflammatory steroids and salicylates possesses greater anti-inflammatory activity with less side-effects than the sum of the activity of the individual agents when used alone. The unexpected properties of this combination spring largely from the fact that the side-effects of each drug are counteracted by the presence of the other. Thus, each active ingredient possesses desirable anti-inflammatory effects accompanied by undesirable hormonal side-effects when used alone; but when the active ingredients are combined, quite remarkably the anti-inflammatory effects are retained or potentiated while the hormonal side-effects are largely dissipated.

* * * * * * *

In general, the composition of the present invention can be prepared by simple intermixture of the principal active ingredients in a suitable diluent for the intended use. * * * Oral compositions can take the form of tablets, powders, capsules, liquid suspensions, solutions, or other dosage forms which are particularly suited for oral administration.

* * * * * * *

According to the concept of the present invention it is preferred to use smaller quantities of each of the essential active ingredients in the composition than when each such active ingredient is used alone to obtain a particular therapeutic response. Thus, although dosage unit forms of prednisone and prednisolone usually contain from one to five milligrams of the steroid, the dosage unit form of the present composition preferably contains from about 0.5 to 1.5 milligrams of steroid. * * * Similarly, the aspirin content of the present dosage unit form preferably varies between about 200 and 400 milligrams, although as little as about 150 milligrams and as much as 600 milligrams can be used.

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[1] Appellant's specification states that the terms "prednisone" and "prednisolone" as used in the specification mean not only the alcohols delta-1-cortisone and delta-1-hydrocortisone, respectively, but also the therapeutically active 21-esters thereof. When the free alcohol is intended, it is referred to as "prednisone free alcohol" or "prednisolone free alcohol."

Prednisone and cortisone differ solely in that the former has a *double* bond between the 1 and 2 positions of the steroid nucleus, the latter a *single* bond. Prednisolone and hydrocortisone differ in the same way.

The sole ground of rejection is unpatentability over the following prior art:

American Druggist, January 31, 1955, p. 44 [disclosing "Salcort," hereinafter defined].
Holt et al., Lancet, 267:6849, December 4, 1954, pp. 1144–1148.
Bunim et al., Journal of the American Medical Association, 157:4, January 22, 1955, p. 311.
Drug Trade News, 30:3, January 31, 1955, pp. 37, 54.

American Druggist discloses "Salcort," as a commercial tablet composition for oral treatment of rheumatic fever, rheumatoid arthritis, bursitis, rheumatoid spondylitis and related diseases, comprising cortisone acetate, sodium salicylate, calcium ascorbate and an antacid. Holt et al. disclose comparative results in the treatment of rheumatic fever with (*a*) a small dose of salicylate (*b*) a large dose of salicylate and (*c*) a large dose of salicylate mixed with cortisone. Holt et al. state that the combined salicylate-cortisone treatment was attempted "in case there might be a synergistic action between them." Both Bunim et al. and Drug Trade News disclose prednisone and prednisolone as physiologically more potent delta-1 analogs of cortisone and hydrocortisone, also known in the art respectively as prednisone and prednisolone.

The rejection is stated by the Board as "lacking invention over 'Salcort' and the Holt et al. publication in view of the Drug Trade News or Bunim et al. references." Although not specifically stated, 35 U.S.C. 103 is obviously the statutory basis. The sole issue before us is, therefore, obviousness of the claimed composition in view of the cited prior art.

The Patent Office position is that one skilled in the art, knowing of the "Salcort" composition and knowing of the results of the combined therapy of Holt et al., would obviously *substitute* the later-discovered more physiologically active prednisone or prednisolone for cortisone in "Salcort" to produce a better anti-inflammatory composition. Improved results, conceded to be shown by appellant, are considered immaterial in the Patent Office view since the composition is obvious. As stated by the Board,

> We are of the opinion that it would readily occur to one skilled in this art that these more potent steroids could be substituted for cortisone in the "Salcort" combination. Since it is known that the steroids employed by appellant have the same effect as cortisone, except for being more potent, it appears to us that it would be obvious to at least try to substitute those steroids for cortisone in combinations in which cortisone had been employed such as in the "Salcort" composition.
>
> The fact that the claimed composition produced certain heretofore undisclosed advantages does not, in our opinion, render the claims patentable. Since it is our view that the claimed combination is clearly taught by the prior art. See *In re Libby*, 45 CCPA 944; 1958 C.D. 324; 118 USPQ 94; 733 O.G. 294; 255 F.2d 412; and *In re Gauerke*, 1937 C.D. 119; 475 O.G. 3; 24 CCPA 725; 86 F.2d 330. We do not consider the contentions relative to the fact that Holt et al. did not employ controls or that the results there may have been considered somewhat uncertain material to our conclusion. Obviousness does not require absolute predictability. *In re Moreton*, 771 O.G. 621; 48 CCPA 928; 288 F.2d 940; 129 USPQ 288.

Further, the Examiner had previously stated in his answer,

> The showings of record attempting to establish synergism in the claimed compositions are conceded to show improved results over the "Salcort" composition or Holt et al. combination therapy. * * * It is not believed that the issue here turns on the ability of an investigator to predict that the particular claimed steroids will be operable to give the improved result, but rather whether there

is any reason to suppose that such steroids, generally accepted in the art as being themselves improvements over cortisone acetate, would not be suitable. Applicant has not advanced any reason or presented any evidence that the prior art taught against prednisone or prednisolone in lieu of the cortisone of the "Salcort" or Holt et al. references.

Therefore it would be expected that where the later available analogs of cortisone are known to be many times more physiologically active and otherwise to be preferred for lack of side effects over cortisone, that antirheumatic compositions containing said later available analogs would also be more active and have greater acceptability.

Appellant argues that the Patent Office position is based on over-simplification of the problem of finding new anti-inflammatory agents with minimal side effects; that the mere existence of salicylate-cortisone tablets does not suggest substituting for cortisone the later-discovered more potent cortisone derivatives, prednisone and prednisolone; and that synergism attained by the new composition is unexpected.

We affirm the rejection, however, since we believe the subject matter of the invention considered as a whole would have been obvious to one skilled in the art at the time the invention was made. But we do so on a rationale somewhat different from that of the Patent Office.

Both the Board and the Solicitor consider the fact of superior pharmaceutical properties immaterial to determining obviousness. The Board states, "The fact that the claimed composition produced certain heretofore undisclosed advantages does not, in our opinion, render the claims patentable. Since it is our view that the claimed combination is clearly taught [2] by the prior art." The Solicitor states, "Whether the art recognized that the claimed combination 'might demonstate concert of action of its elements in the significant area of lessened adrenal atrophy' is immaterial, since the sole issue in this appeal is whether it would have been obvious to substitute prednisone or prednisolone for cortisone in the combination of Salcort or Holt, and not whether it would be obvious that such substitution would produce lessened adrenal atrophy."

We do not entirely agree with this framing of the issue. [1] This court has frequently stated that properties of chemical compounds must be considered in determining obviousness under 35 U.S.C. 103. *In re Lambooy*, 49 CCPA 985, 300 F.2d 950, 133 USPQ 270; *In re Petering and Fall*, 49 CCPA 993, 301 F.2d 676, 113 USPQ 275; *In re Papesch*, 50 CCPA 1084, 315 F.2d 381, 137 USPQ 42. We think this also applies to such compositions as we have here, i.e., admixtures of two or more compounds. Therefore, the issue of obviousness in this case can be resolved only after considering the differences between the prior art and the claimed compositions chemically *and* in view of their pharmaceutical properties.[3] To do so we consider

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[2] Apparently the Board means "clearly *suggested*" since the prior art does not anticipate the claims under 35 U.S.C. 102(a). The nature of the rejection manifestly indicates that 35 U.S.C. 103 was intended by the Board to be the basis for the rejection. It would have been helpful, however, if the statutory basis had been expressly stated.

[2] [3] We feel compelled to comment on the Patent Office analysis by which patentability under 35 U.S.C. 103 is herein determined. The Examiner concedes that appellant's composition "shows improved results." The Board accepts this as "fact," but concludes it is immaterial since "it is obvious *to at least try*" [our emphasis] to substitute one steroid for another in the prior art composition.

We believe this reasoning, insofar as it negates consideration of properties in determining obviousness under section 103, flys in the face of the plain language of the statute as interpreted by this court in *Lambooy*, *Petering et al.*, and *Papesch*, cited supra. Section 103 says, inter alia, "the subject matter as a whole would have been obvious * * *." Nothing is said about "obvious *to try*." Consideration of the subject matter "as a whole" in chemical cases requires comparison of properties, pharmaceutical or otherwise, as well as comparison of chemical structures.

[3] We do not mean to imply that every variance in property of a new compound or composition will tip the balance for patentability where otherwise closely related compounds or compositions are involved. However, all relevant property differences *must be considered* in the light of the facts of each case in the determination of statutory obviousness.

the cited references and what we believe they would teach one skilled in the art.

Appellant agrees that cortisone-salicylate mixtures are anti-inflammatory agents, and that prednisone and prednisolone possess anti-inflammatory activity three to four times as great as cortisone or hydrocortisone. The disagreement revolves around interpretation of Holt et al. Appellant contends that Holt et al. do not "suggest" substitution of prednisone or prednisolone for cortisone, since their data are "inconclusive" and warn of "toxic complications." Further appellant argues that one skilled in the art, upon finding that prednisone and prednisolone possess enhanced potency without increased side effects, would cease looking for better anti-inflammatory agents.[4]

We do not agree with appellant's interpretation of Holt et al., pertinent portions of which state (all emphasis ours):

When planning this new study [including combined salicylate-cortisone therapy] we could find no report of combined treatment of this kind.

We expected to reach no definite conclusion for at least five years; but the early results obtained by *combined use of cortisone and salicylates* in high dosage seemed to us so unusual that we are publishing a preliminary account of our experience so that others may consider it.

* * * * * * *

These results indicate that the *combined treatment* produced a greater fall in the E.S.R.[5] than did salicylates alone in either high or low dosage. The differences were of *statistical significance.* * * *

* * * * * * *

It was because of the value of cortisone alone and of salicylates alone in rheumatic fever that we decided to try the effect of combining these two drugs, *in case there might be a synergistic action* between them. Since then we have found one report of the systematic use of this combination.

* * * * * * *

* * * in all cases receiving the combined treatment there was a very satisfactory and prompt clinical improvement, with a * * * clearing of the arthritis, and other signs and symptoms other than cardiac murmurs. All the patients were symptom-free when treatment was discontinued.

Our figures show that the E.S.R. fell *significantly more quickly when the drugs were used in combination* * * *.

* * * * * * *

The E.S.R. fell significantly more quickly in the children receiving *cortisone and salicylates* than in the other two groups. * * * There was a correspondingly rapid improvement in the clinical condition of the patients in the *combined-treatment* group.

* * * * * * *

We do not wish to create the impression that the combined treatment is easy to give, or that it is a "cure" for rheumatic fever. One of us (Holt 1954) will describe elsewhere the toxic complications which we have observed * * * in achieving a high serum-salicylate level.

We think Holt et al. plainly suggest combined therapy. The authors' conservatism in reporting test results does not vitiate the clear teaching that combined therapy works.

[4] As to properties, appellant argues that his composition exhibits unexpected synergism. Synergism is one factor to be considered in the ultimate determination of obviousness of the composition. However, we attribute no magic status to synergism per se since it may be expected or unexpected. On the record before us, we see nothing "unexpected" in appellant's synergism. The specification's four examples concededly show that combined salicylate-prednisone/prednisolone therapy results in synergistic anti-inflammatory effects while reducing undesirable hormonal side effects. However, nothing in the record shows that similar synergism is not attained by Holt et al. or by using "Salcort."[6] Apparently cortisone, hydrocortisone, prednisone and prednisolone all function in a similar physiological manner to reduce inflammation and provoke undesirable side effects.[7] Holt et al. got superior anti-inflammatory effects using combined therapy with no report of undesirable side effects; we see no reason why one skilled in this art would not expect even better results with prednisone or prednisolone since Bunim et al. and Drug Trade News teach prednisone and prednisolone to be initially more potent and to exhibit lessened side effects when administered alone. In the absence of data comparing cortisone-salicylate compositions with prednisone- or prednisolone-salicylate compositions, we are not convinced that synergism of the latter compositions is unexpected. Thus we consider the appellant's composition to be obvious within the meaning of section 103.

[4] Appellant himself rebuts the latter argument, his specification stating at page 1, "It has been found, however, that * * * [prednisone and prednisolone] produced undesirable side-effects such as sodium retention, mental disturbances, Cushing's syndrome, inhibition of pituitary-adrenal axis, and gastric disturbances at effective therapeutic dosages * * *." Clearly those skilled in the art would seek ways, as did appellant, to mitigate such effects.

[5] E.S.R. (erythrocyte-sedimentation rate) is high in the presence of rheumatic activity, falls off with declining rheumatic activity.

Although neither appellant nor the Patent Office raise the point in their briefs, claims 4–7 and 8–13 define appellant's composition with greater specificity than claim 1. Nevertheless we consider these claims unpatentable. [5] The quantity limitations of claims 4–7 do not distinguish appellant's composition from "Salcort."[8] Appellant alleges no criticality in such limitations other than the broad assertion that "it is preferred to use smaller quantities of each of the essential active ingredients in the composition than when each such active ingredient is used alone to obtain a particular therapeutic response." Apparently "Salcort" satisfies this desideratum.

As to claims 8–13 we agree with the Board, which sustained the Examiner stating:

Claims 8 to 13 are directed to composition including a salicylate and prednisone or prednisolone together with certain other ingredients. Appellant has not urged any patentable significance in these additional ingredients and we find none. The prior art shows that certain antacid materials and vitamin derivatives may also be included in this type of composition.

[6] The decision of the Board is affirmed.

AFFIRMED.

[6] No tests comparing "Salcort"—or any other cortisone-salicylate composition—with appellant's composition are of record. The only comparative data before us are four tables in the specification describing tests wherein claimed compositions are administered to rats. Half the data tend to show synergism in anti-inflammatory effects; the other half show lessening of adrenal atrophy by the "cancelling" effects of steroid *atrophy* and salicylate *hypertrophy*.

[7] Appellant's brief states that adrenal atrophy is a major undesirable side effect of drug therapy. Apparently all four steroids in this case exhibit this side effect to varying degrees.

[8] Salcort—2.5 mgs. cortisone acetate; 0.3 gms. (300 mgs.) sodium salicylate.
Claim 4—0.25 mgs. to 2.5 mgs. prednisone or prednisolone; 150 to 600 mgs. salicylate.

U.S. Court of Customs and Patent Appeals

HOWARD C. LUDWIG *v.* JESSE S. SOHN AND HAROLD ROBINSON

No. 7025. Decided December 12, 1963

[51 CCPA —; 324 F.2d 1004; 139 USPQ 500]

1. INTERFERENCE—CONSTRUCTION OF COUNT—EXPRESS LIMITATIONS IN COUNT ARE MATERIAL.

"It is firmly established that express limitations in an interference count are deemed material and cannot be ignored."

2. SAME—REDUCTION TO PRACTICE—ACTUAL CONVICTION OF SUCCESS.

"We think Ludwig's testimony supports the Board's decision that Ludwig's alleged reductions to practice in 1947 and 1949 fell short of actual reductions

to practice. After making weld 6AO, Ludwig embarked on a program of determining the extent to which nitrogen affects welds. Determining that nitrogen was probably the most important contributor towards porosity, he proceeded to make a large number of welds with shields having different mixtures of argon and oxygen to achieve the desired stability of the arc. That work lasted until late September 1950. While he testified that by late September 1950, he 'had realized that for satisfactory welding the amount of oxygen in the shielding atmosphere must be maintained such as to stabilize the arc without oxidizing the weld,' he proceeded to make further tests to *verify* the effect of the oxygen on the high-level voltage incidences and * * * on April 1951, which date is subsequent to the filing date of the Sohn et al. application, he found that 'when welding argon-oxygen atmospheres the high-level voltage incidences disappear and do not occur with any large frequency at very high welding currents.' We do not think that Ludwig's activities demonstrate that, at the time of his alleged reductions to practice, he had a conviction of success of the present process utilizing an amount of oxygen 'just sufficient to stabilize the arc without oxidizing the weld.'"

3. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—RECORD—PRINTING COSTS—ALLOCATION OF PRINTING COSTS.

"Appellant has moved that the costs of preparing so much of the printed record as includes the added material be taxed against appellees. Upon agreement of the parties, action on the motion was deferred until final decision. We find that certain of the papers accounting for one-fourth the costs of printing the added material were properly included in the record while the remainder was unnecessary. The printing costs being the only costs handled through the court, the motion is granted to the extent that three-fourths of the costs of printing the added material is assessed against appellees and the remainder of said costs is assessed against appellant."

APPEAL from the Patent Office. Interference No. 88,770.

AFFIRMED.

Hymen Diamond (*Ralph H. Swingle* of counsel) for appellant.

H. Hume Mathews for appellees.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, JR., *Associate Judges*

MARTIN, *J.*, delivered the opinion of the court.

This appeal is from the decision of the Patent Office Board of Patent Interferences awarding priority of invention to the senior party, Sohn et al., in Interference No. 88,770. The interference involves application Serial No. 204,722, filed January 6, 1951, by Sohn et al., and an application, Serial No. 286,348, filed May 6, 1952, by the junior party, Ludwig.[1]

The interference has a single count which reads:

1. The method of joining material by arc welding said material with a consumable electrode, which comprises the steps of impressing a potential to produce and maintain an arc sufficient to melt said electrode between said electrode and said material, striking an arc between said electrode and said material while said potential is impressed therebetween, maintaining said arc sheathed in an atmosphere of commercially pure inert gas, and adding sufficient oxygen to the atmosphere to stabilize the arc, the said method being characterized by the fact that the spacing between said electrode and said material and the magnitude of the arc current are maintained such that the arc burns in a non-turbulent atmosphere so that substantially the only gas in addition to the inert gas present in said shield is said oxygen and by the further fact that the quantity of said oxygen is maintained just sufficient to stabilize the arc without oxidizing the weld.

The invention at issue is directed to a method of joining material by arc welding with a consumable electrode. The method involves (1) maintaining the magnitude of the arc current as well as the spacing between the consumable electrode and the material to be joined such that the arc burns in a non-turbulent atmosphere, and (2) maintaining the arc sheathed in an atmosphere of oxygen and a commercially pure inert gas, e.g. argon, such that the oxygen is substantially the only gas present in addition to the inert gas and the quantity of oxygen is maintained in an amount just sufficient to stabilize the arc without oxidizing the weld.

[1] A third application, Serial No. 210,397, filed February 10, 1951 by Breymeier, was involved in the interference before the Board of Patent Interferences. Breymeier, however, has not appealed from the Board's decision.

Pursuant to a stipulation by the parties, evidence on their behalf was submitted in the form of affidavits supported by documentary and physical exhibits. Ludwig, the junior party, submitted evidence allegedly showing actual reduction to practice of the invention of the count in December 1947 and in August 1949, both of which dates are prior to the filing date of the application of Sohn et al., the senior party. Sohn et al. regard their evidence as showing actual reduction to practice of the invention in November 1948. Neither party argues that he should prevail on the basis of an earlier conception followed by diligence extending to a later reduction to practice.

Ludwig thus will prevail irrespective of the proofs of Sohn et al. if he is found to have proved an actual reduction to practice of the invention in December 1947. He also can prevail on the basis of proof of an actual reduction to practice in August 1949, if Sohn et al. have not proved actual reduction to practice as contended in November 1948.

The Board of Patent Interferences held that Ludwig's evidence failed to prove actual reduction to practice prior to the filing date of the application of Sohn et al. The Board further stated that if it "be regarded" that Ludwig proved an actual reduction to practice in August 1949, then the proof submitted by Sohn et al. as to the work done in November 1948 "should also be regarded as a reduction to practice." Thus it concluded that Sohn et al. are entitled to prevail on the basis of their earlier filing date on the one hand, or, on the other hand, on the basis of an earlier actual reduction to practice.

The activities Ludwig relies on for reduction to practice involve a first series of welds designated 1AO through 9AO made no later than December 8, 1947 and a second series designated 65AO through 67AO made in August 1949.

Ludwig urges that one of the welds of the first series, weld 6AO, was a sound weld and was recognized as a sound weld by him when made. He contends that he and his supervisor knew from the comparison of weld 6AO with the others in that series that when less oxygen than employed with weld 6AO was used, as in welds 1AO, 4AO and 9AO, the arc was unstable as shown by Esterline-Angus[2] meter traces, and that when more oxygen was used, as in welds 2AO, 5AO, 7AO, and 8AO, the weld was porous as shown by lower density measurements.

With reference to the second series of welds, Ludwig contends that his Exhibit J, a physical cut of weld 65AO, shows a sound weld produced by maintaining the oxygen just sufficient to stabilize the arc without oxidizing the weld, while his Exhibits K and L, physical cuts of welds 66AO and 67AO, respectively, show that with "higher percentages of oxygen" unsound welds resulted "by reason of oxidation."

Ludwig states that welds 65AO, 66AO and 67AO were made in

[2] There is testimony in the record that an EsterHne-Angus recorder is an instrument which can be used to produce visible records or traces of the voltage magnitude across an arc and the magnitude of the current flowing through the arc as a function of time. The record indicates that for a stable arc those traces are substantially straight lines while for an unstable arc those traces are jagged.

spacing between the consumable electrode and the material to be joined such that the arc burns in a non-turbulent atmosphere, and (2) maintaining the arc sheathed in an atmosphere of oxygen and a commercially pure inert gas, e.g. argon, such that the oxygen is substantially the only gas present in addition to the inert gas and the quantity of oxygen is maintained in an amount just sufficient to stabilize the arc without oxidizing the weld.

Pursuant to a stipulation by the parties, evidence on their behalf was submitted in the form of affidavits supported by documentary and physical exhibits. Ludwig, the junior party, submitted evidence allegedly showing actual reduction to practice of the invention of the count in December 1947 and in August 1949, both of which dates are prior to the filing date of the application of Sohn et al., the senior party. Sohn et al. regard their evidence as showing actual reduction to practice of the invention in November 1948. Neither party argues that he should prevail on the basis of an earlier conception followed by diligence extending to a later reduction to practice.

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protective atmospheres of argon with different quantities of oxygen and that he "elaborately studied" the effect of the oxygen on the welds with respect to stabilization of the arc and oxidation.

Sohn et al., on the other hand, contend that Ludwig's welds 6AO and 65AO did not involve an actual reduction to practice of the invention defined by the count. It is argued that welds 6AO and 65AO were but isolated single experiments which did not represent a completion of the invention. Sohn et al. contend that both welds 6AO and 65AO were followed by long periods of further experimentation "before anything that could be called a useful or practical welding process was developed by Ludwig."

Our consideration of whether the Board erred in finding that Ludwig failed to show by a preponderance of evidence an actual reduction to practice prior to the filing date of the Sohn et al. application requires careful analysis of Ludwig's alleged reductions to practice in December 1947 and in August 1949.

In this connection the count itself should be considered. The count relates to the use of an inert gas as a shield surrounding an electric welding arc and more specifically involves the addition of small amounts of oxygen to such inert gas, the quantity of said oxygen in the shield being maintained "just sufficient to stabilize the arc without oxidizing the weld." We regard that limitation to the quantity of oxygen as a critical element of the invention at issue. [1] It is firmly established that express limitations in an interference count are deemed material and cannot be ignored. *Liebscher* v. *Boothroyd*, 46 CCPA 701, 258 F.2d 948, 119 USPQ 133. Moreover, the record shows that the Board of Appeals, in allowing the claim corresponding to the count in Ludwig's application, held that patentability could not be predicated merely on the use of oxygen in an amount which would stabilize the arc. Rather the Board based its finding of patentability on the ground that the prior art on which the claim was rejected *did not teach a correlation between the proportion of oxygen to be added and the factors of arc stabilization and weld oxidation* [3] as expressed in the following language of the count:

> * * * the further fact that the quantity of said oxygen is maintained just sufficient to stabilize the arc without oxidizing the weld.

Although the Board of Patent Interferences in its decision stated that neither the Ludwig application nor the Sohn et al. application have "an express teaching" of the above quoted limitation, it evidently meant only that neither application used the words of the count for it did not indicate any doubt that the limitation is supported in both applications.[4]

The Board of Interferences found, however, that the record failed to show any evidence that Ludwig or any of his associates recognized at the time of Ludwig's alleged reductions to practice in December 1947 and in August 1949, that "to produce a good weld the added oxygen should be an amount just sufficient to stabilize the arc but insufficient to oxidize the weld as required by the count," and accordingly that the work in December 1947 and in August 1949 fell short of actual reductions to practice. A careful analysis of the record reveals no error in that conclusion of the Board.

[3] The Board's decision of March 25, 1957 in Ludwig's Serial No. 286,348. In the same opinion the Board affirmed the Examiner's rejection of a claim which did not specify that the quantity of oxygen is maintained just sufficient to stabilize the arc without oxidizing the weld.

[4] In fact, the Board rejected Ludwig's contention, initially raised by a motion to dissolve, that Sohn et al. have no right to make the count. Although Ludwig originally assigned error to that action in his notice of appeal, he has not argued it before us.

The evidence indicates that in early March 1947 Ludwig was assigned the problem of studying the behavior of the arc in an arc weld in different gases and combinations of gases. It was contemplated that he would study the behavior of the arc in inert gases and later in the combination of inert gases and other gases such as oxygen, carbon dioxide and nitrogen. Ludwig testified by affidavit as follows:

> 5. In the latter part of 1947 I made a number of welds shielded in combinations of argon and oxygen in different percentages by volume in this chamber. I produced traces for the current and voltage of the arc with which these welds were produced with Esterline-Angus current and voltage recorders and to my surprise, these traces were substantially flat indicating that the arc was very stable. Some of the welds which were produced in this way in a shield of argon and oxygen appeared sound on the surface. I also made photomicrographs of some of these welds and they appeared sound.
>
> 6. I was so impressed by the flat current and voltage traces and by the apparent soundness of some of the welds described in paragraph 5 that I decided to determine whether or not these welds were porous throughout. This porosity would not be readily visible on the surface of the weld nor would it show up when a cut is taken through a weld for the purpose of producing a photomicrograph. I conceived the idea of evaluating the welds for porosity by measuring the specific gravity of the weld metal. These welds were made with mild steel having a specific gravity of about 7.84. If the welds were sound they should have a specific gravity approaching 7.84. The specific gravity of the weld metal made in a shield of oxygen and argon which appeared sound on the surface was found to approach, and in one case even exceeded, 7.84.
>
> 7. At this point I had been studying welds in various gases for almost a year. Many of these welds particularly those made in pure argon or helium had been very porous. I concluded that such extensive porosity could not be caused by the oxygen alone but must be caused by another factor. Since nitrogen is present in the air and in fact constitutes about eighty percent of the atmosphere as compared to twenty percent for oxygen, I suspected that nitrogen was producing the gross porosity. I then embarked on a program of determining the extent to which nitrogen affects welds made in a shield of gas. * * *
>
> * * * * * * *
>
> 9. Having determined that the nitrogen was an important, and probably the most important, contributor towards porosity, I was faced with a problem of providing some way of preventing the nitrogen from penetrating into the weld by means of a shield. I knew that nitrogen from the air tends to penetrate into the shield if the shield is turbulent and that an important contributing factor towards this penetration is the instability of the arc itself. I had found that when a short circuit occurs in the arc, the arc and the surrounding medium is quickly cooled, reducing the pressure in the arc and in the medium appreciably. In welds accessible to nitrogen: for example those made in air, this would cause the nitrogen to penetrate. It then became important to maintain the arc so stable that short circuits and other disturbances are avoided. I had discovered in December of 1947 that small additions of oxygen in an argon shield produced stability of the arc and that sound welds can be made with oxygen in the shield. I now proceeded to make a large number of welds with shields having different mixtures of argon and oxygen to achieve the desired stability of the arc.
>
> 10. I started to prepare the instrumentation for this work during the early part of July of 1948 and the actual making of welds for this work started in early September of 1948 and continued for two years until late September of 1950. During this period I made welds in more than one hundred shields of different compositions of argon and oxygen. I analyzed the weld metal of a large number of these welds in many cases producing photomicrographs. I found that while the oxygen stabilized the arc, excess oxygen would tend to oxidize the weld and produce porosity. This was revealed by the photomicrographs and corroborated by analyses of samples of the atmosphere enclosing a weld before the arc was fired and during the welding operation. I found that where the percent of oxygen in the argon was high, the content of oxygen before the arc was fired was substantially higher than the content of oxygen during the weld. This indicated that some of the oxygen in the shield was being absorbed in the arc, that is, was oxidizing the weld.

11. By late September of 1950 I had realized that for satisfactory welding the amount of oxygen in the shielding atmosphere must be maintained such as to stabilize the arc without oxidizing the weld. This required that before a welding operation is carried out, consideration must be given to the manner of welding and to the circumstances surrounding the welding operation. For example, in welding at reverse polarity less oxygen is required to stabilize the arc than in welding at straight polarity. The quantity of oxygen which would in many cases be required to stabilize the arc at reverse polarity would be so small as not to oxidize the weld. On the other hand, in welding at straight polarity substantially more oxygen is required in the shield to stabilize the arc. In this case the oxidation must be suppressed by some means and I conceived the idea of adding a deoxidizing material such as the metals aluminum or manganese. Whether or not a deoxidizer is to be added is also determined by the character of the metal being welded and of the electrode. Where the electrode or the metal has a high content of the oxidizer, for example, is a high manganese (2% manganese) steel, it is not necessary to add a deoxidizer either at reverse polarity or at straight polarity. But where the de-oxidizing content of the work to be welded is relatively low as is the case, for example, of rimmed or semi-killed steel, a deoxidizer must be added.

Ludwig further testified that during the early part of 1951 he devised various ways of applying deoxidizers in welding in an atmosphere of argon and oxygen. He testified that on about *April 16, 1951* he made a study of welds with steel electrodes and steel work in *pure argon*, which showed that high-level voltage incidences increase [5] as the welding current increases. This study caused Ludwig "to recollect that at the same time; that is, during the latter part of April 1951, I also made similar welds in argon-oxygen atmospheres to verify the effect of the oxygen on the high-level voltage incidences. I found that when welding argon-oxygen atmospheres the high-level voltage incidences disappear and do not occur with any large frequency at very high welding currents."

[2] We think Ludwig's testimony supports the Board's decision that Ludwig's alleged reductions to practice in 1947 and 1949 fell short of actual reductions to practice. After making weld 6AO, Ludwig embarked on a program of determining the extent to which nitrogen affects welds. Determining that nitrogen was probably the most important contributor towards porosity, he proceeded to make a large number of welds with shields having different mixtures of argon and oxygen to achieve the desired stability of the arc. That work lasted until late September 1950. While he testified that by late September 1950, he "had realized that for satisfactory welding the amount of oxygen in the shielding atmosphere must be maintained such as to stabilize the arc without oxidizing the weld," he proceeded to make further tests to *verify* the effect of the oxygen on the high-level voltage incidences and that on April 1951, which date is subsequent to the filing date of the Sohn et al. application, he found that "when welding argon-oxygen atmospheres the high-level voltage incidences disappear and do not occur with any large frequency at very high welding currents." We do not think that Ludwig's activities demonstrate that, at the time of his alleged reductions to practice, he had a conviction of success of the present process utilizing an amount of oxygen "just sufficient to stabilize the arc without oxidizing the weld."

[5] The record indicates that instability of an arc is manifested by repeated occurrences of high-level voltage incidences during the arcing.

In his brief Ludwig sets forth the following as an error of the Board:

Failing to recognize that Ludwig's statement in Exhibit N[6] to the effect that the oxidation of the weld should be considered in determining the percent of stabilizing oxygen to be added to the inert gas is as much a teaching of maintaining the oxygen 'just sufficient to stabilize the arc without oxidizing the weld' as the respective portions of the applications of Sohn et al. and Breymeier on which it relied in holding that the Sohn et al. and Breyemeier applications support said count.

However, we find a very significant difference in the teaching of Exhibit N and the teaching of the Sohn et al. application. As the Board stated:

The Sohn et al. disclosure teaches the use of oxygen in amounts ranging from ½% to 2%. The stabilizing effect of the oxygen addition is described on page 7 of the specification, particularly in the sentence beginning at line 19. Also, on page 8 of the specification as originally filed the following appears:

> Analysis of weld metal produced by this invention reveals no practically measurable quantities of metallic oxides due to the oxygen addition to the inert shielding gas when the oxygen does not exceed 1.5% by volume of the total. More oxygen than this begins to form oxide inclusions which, when the oxygen exceeds about 2%, causes the weld to be metallurgically unacceptable and outweighs the advantages gained by the addition of oxygen. Slightly less than 0.5% oxygen by volume of the total is insufficient to produce appreciable beneficial results.

This appears to us to disclose an appreciation that the amount of oxygen must be sufficient to stabilize the arc and that too much oxygen will cause undesirable oxide inclusions which should obviously be avoided.

We agree that the excerpt from the Sohn et al. application shows an "appreciation" that the amount of oxygen must be just sufficient to stabilize the arc without oxidizing the weld. We do not think that the teaching in Exhibit N "to the effect that the oxidation of the weld should be considered in determining the percent of stabilizing oxygen to be added to the inert gas" demonstrates that Ludwig had the same "appreciation" by August 1949 when he completed Exhibit N.

From the foregoing, it is apparent that the welds made in December 1947 and August 1949, the activities on which Ludwig bases his claim of an earlier reduction to practice, did not actually constitute a reduction to practice of the claimed process wherein the oxygen in the inert gas is maintained "just sufficient to stabilize the arc without oxidizing the weld." Ludwig thus is limited to his filing date, which is subsequent to that of Sohn et al., for reduction to practice since he does not contend he should prevail on the basis of a prior conception followed by diligence.

[3] Appellant has moved that the costs of preparing so much of the printed record as includes the added material be taxed against appellees. Upon agreement of the parties, action on the motion was deferred until final decision. We find that certain of the papers accounting for one-fourth the costs of printing the added material were properly included in the record while the remainder was unnecessary. The printing costs being the only costs handled through the court, the motion is granted to the extent that three-fourths of the costs of printing the added material is assessed against appellees and the remainder of said costs is assessed against appellant.

The decision of the Board is affirmed.

AFFIRMED.

[6] Exhibit N is a patent disclosure completed by Ludwig on August 18, 1949 and submitted to the Patent Department of Westinghouse Electric Corporation, the assignee of the Ludwig application.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

Notices under 35 U.S.C. 290; Patent Act of 1952

2,896,901, Levy and Sharp, Universal bracket, **filed** Oct. 25, 1961, D.C., S.D.N.Y., Doc. 61/3790, *Racon Electric Co., Inc.* v. *University Loudspeakers, Inc.* Final judgment on consent in favor of Ling-Temco-Vought, Inc., Nov. 27, 1963. **Same, filed** June 8, 1962, D.C., S.D.N.Y., Doc. 62/2045, *Ling-Temco-Vought, Inc.* v. *Racon Loudspeaker Co., Inc. et ano.* Decree as above.

2,985,919, Borroff and Reynolds, Method of producing rubber heels; **2,985,920**, same, Method of making a cored heel; **2,985,972**, same, Rubber heel, **filed** Nov. 7, 1962, D.C. Md. (Baltimore), Doc. 14187, *Seiberling Rubber Company* v. *Cat's Paw Rubber Company, Inc.* Case dismissed by stipulation of counsel (notice Dec. 3, 1963).

2,985,920. (See 2,985,919.)

2,985,972. (See 2,985,919.)

3,035,572, J. J. Houghtaling, Vibrator, **filed** Nov. 5, 1963, D.C. Maine (Portland), Doc. 8–18, *Magic Fingers, Inc.* v. *Robert E. Auger et al.* **Same, filed** Feb. 4, 1964, D.C.N.J. (Newark), Doc. 102–64, *Relaxamatic Sleep Products, Inc.* v. *Magic Fingers, Inc.*

Re. 23,843, R. J. Oace et al., Insulating tape, **filed** Dec. 30, 1958, D.C. Mass. (Boston), Doc. 58–1222, *The Plymouth Rubber Company, Inc.* v. *Minnesota Mining and Manufacturing Co.* Judgment for plaintiff; defendants enjoined; counterclaim dismissed May 29, 1962. **Same, filed** C.C.A., 1st Cir., Doc. 6040, *The Plymouth Rubber Co., Inc.* v. *Minnesota Mining and Manufacturing Co.* Appeal herein is dismissed (notice Oct. 28, 1963). **Same, filed** C.C.A., Doc. 6042, *Minnesota Mining and Manufacturing Company* v. *The Plymouth Rubber Co., Inc.* Judgment of District Court, as modified in accordance with opinion filed, is affirmed, and the case is remanded for such modification (notice Oct. 28, 1963).

REISSUES

APRIL 28, 1964

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,562
PUSH BUTTON RADIATOR PRESSURE CAP

Anton W. Konchan, 6502 W. Fairfield Ave., Berwyn, Ill.

Original No. 3,086,677, dated Apr. 23, 1963, Ser. No. 88,824, Feb. 13, 1961. Application for reissue June 24, 1963, Ser. No. 291,599

15 Claims. (Cl. 220—44)



11. In a closure cap for attachment to a filling neck of an internal combustion engine radiator,

a closure member for detachable assembly on a neck of a radiator and having a central opening,

a resiliently deflectable diaphragm carried on said closure member and having diaphragm flanges engaged on axially opposite sides of said closure member in sealed assembly therewith,

a pressure valve suspended from an underside of said closure member,

a spring engaged between said pressure valve and said closure member urging said pressure valve into engagement with a radiator cap about a radiator opening enclosed within a filling neck,

a spring urged vacuum valve carried by said pressure valve for venting an interior of a radiator to atmospheric pressure through a vent in a filling neck upon the development of sub-atmospheric pressures in a radiator, and

lost motion type actuator means operatively disposed between said resiliently deflectable diaphragm and said vacuum valve with the diaphragm being manually depressible against said actuator means to open said vacuum valve and vent a radiator to atmosphere, the vacum valve being movable in an opposite direction upon actuation of said pressure valve with the lost motion occurring between the vacuum valve and the actuator means to minimize deflection of the resiliently deflectable diaphragm.

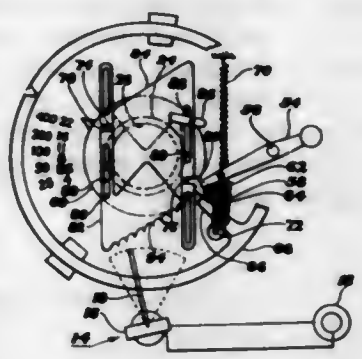
25,563
AUTOMATIC EXPOSURE CONTROL SYSTEM

Hubert Nerwin, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Original No. 2,999,438, dated Sept. 12, 1961, Ser. No. 778,429, Dec. 5, 1958. Application for reissue June 14, 1963, Ser. No. 288,062

5 Claims. (Cl. 95—10)

1. In a camera having a lens system for focusing an image of a viewed scene onto a photosensitive surface and having a multiple-speed shutter mechanism including means for setting the exposure time of said shutter mechanism; the combination comprising: a light-measuring instrument adapted to be differentially energized by scene light as a function of the intensity of said light; a diaphragm mechanism having a variable exposure aperture aligned with said lens system and comprising at least one sliding blade having a cam-shaped edge; first means controlled by said instrument and disposed in cooperative relation with said diaphragm mechanism for limiting the size of said aperture as a function of said intensity, said



limiting means including a member differentially moved by said instrument relative to said cam-shaped edge for limiting the sliding movement of said blade as a function of the position of said member; means for sliding said blade into contact with said member; and second means controlled by said instrument and disposed in cooperative relation with said setting means to determine said exposure time as a function of said intensity.

25,564
LIGHTWEIGHT STRUCTURAL UNIT

Harvey E. Alford, Amherst, and Franklin Veatch, Cleveland, Ohio, assignors to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Original No. 3,086,898, dated Apr. 23, 1963, Ser. No. 841,935, Sept. 24, 1959. Application for reissue Apr. 24, 1963, Ser. No. 275,809

1 Claim. (Cl. 161—168)

A strong, light-weight *structural unit* [structural wallboard] consisting of a rigid *shaped* mass of hollow, unicellular, glass, spherical particles fused to each other at their points of contact, said particles having diameters within the range of from about 10 to 350 microns, wall thicknesses within the range of about 0.75 to 1.5% of their diameters and gas densities within the range of from 0.1 to 0.75 gm./cc.

25,565
MOUNTING MEANS FOR CATHODIC PROTECTION ANODES

Rolland C. Sabins, San Diego, Calif., assignor, by mesne assignments, to Sabins-Dohrmann, Inc., a corporation of California

Original No. 2,826,543, dated Mar. 11, 1958, Ser. No. 485,008, Jan. 31, 1955. Application for reissue Dec. 1, 1959, Ser. No. 6,090

2 Claims. (Cl. 204—197)

1. In a cathodic protection system for a marine structure for regulating the flow of electrical current to the structure, said structure having an elongated bilge keel [with

curved end portions thereon], an anode comprising a sacrificial elongated metal body disposed [within the curved end portions of] *along* the keel, a metal core disposed within and extending outwardly from opposite ends of said body, bracket means provided on the bilge keel and cooperating with each of the extending ends of the core for connecting the metal body in a stand-off relation



to the structure a sufficient distance to maintain a uniform distribution of the electrical current about the structure to be cathodically protected, insulating means provided at the ends of said metal core for insulating the core at the stand-off bracket means, means electrically connecting the [stand-off connecting means] *anode* to a remote area of the marine structure.

25,566
ANODIC OXIDATION OF ALUMINUM

Bruce E. Deal, Palo Alto, Calif., and Larry Swanson, Coeur d'Alene, Idaho, assignors to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware

No Drawing. Original No. 3,031,387, dated Apr. 24, 1962, Ser. No. 857,562, Dec. 7, 1959. Application for reissue Sept. 18, 1963, Ser. No. 309,908

7 Claims. (Cl. 204—58)

1. The method of forming colored coatings on aluminum electrolytically comprising the steps of subjecting said aluminum to anodic oxidation for a period of time of from 1 to 150 minutes at an initial current density of from about 10 to 100 a.s.f. and a voltage of from about 20 to 120 volts in an aqueous solution consisting essentially of from 5 to 50% sulfoalicylic acid, at least one substance selected from the group consisting of metal sulfates and sulfuric acid in an amount equivalent to from about 0.1 to 4% sulfuric acid and the balance water, said solution being maintained at a temperature of from about 55 to 85° F., maintaining said initial current density approximately constant until a selected maximum voltage is reached at which voltage a coating of a desired color is obtained, and thereafter maintaining said selected maximum voltage approximately constant until said anodic oxidation forms a coating of a desired thickness.

PLANT PATENTS

GRANTED APRIL 28, 1964

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,393
GLADIOLUS PLANT

Carl Fischer, St. Charles, Minn., assignor to Imperial Flowers Limited, Leamington, Ontario, Canada, a corporation of Ontario, Canada

Filed Apr. 30, 1963, Ser. No. 277,051

1 Claim. (Cl. Plt.—85)

A new and distinct variety of gladiolus plant, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of an extremely vigorous habit of growth, consistency of performance and ability to grow well in areas where the day length is short, such as in the State of Florida during the wintertime, and a distinctive and attractive Phlox Purple general color tonality of the flowers, with a blur of creamy white deep in the throat of the lip petal, and with a scarlet outline on the reverse of the calyx and at the point where the petals separate.

2,394
GLADIOLUS PLANT

Carl Fischer, St. Charles, Minn., assignor to Imperial Flowers Limited, Leamington, Ontario, Canada, a corporation of Ontario, Canada

Filed Apr. 30, 1963, Ser. No. 277,052

1 Claim. (Cl. Plt.—85)

A new and distinct variety of gladiolus plant, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of an early blooming habit, large flower size, a distinctive and attractive ruffled flower form, and a distinctive and attractive Carmine Rose general color tonality of the flowers, with the lip petals being creamy white and having a tint of pink on their edges after opening from Carmine Rose buds having a yellow tint.

2,395
GLADIOLUS PLANT

Carl Fischer, St. Charles, Minn., assignor to Imperial Flowers Limited, Leamington, Ontario, Canada, a corporation of Ontario, Canada

Filed Apr. 30, 1963, Ser. No. 277,053

1 Claim. (Cl. Plt.—85)

A new and distinct variety of gladiolus plant, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of an extremely vigorous habit of growth, an ability to grow well in areas extending over a wide range of latitude and under growing day conditions of widely varying length, an ability of the flowers to open well from tight buds, and a distinctive and attractive white general color tonality of the flowers, said flowers being creamy white in the half-open stage but showing a tint of Rose Pink on the inner petals as the flowers age, and especially on the lip petals, with a streak of Rose Purple on the reverse of the upper inside petals and in the calyx.

2,396
CHRYSANTHEMUM PLANT

Eugene S. Boerner, Newark, N.Y., assignor to Jackson & Perkins Company, Newark, N.Y., a corporation of New York

Filed May 13, 1963, Ser. No. 280,172

1 Claim. (Cl. Plt.—82)

A new and distinct variety of chrysanthemum plant of the decorative class, substantially as herein shown and

described, characterized particularly as to novelty by the unique combination of a strong, upright and winter hardy plant habit, large flower size, a double and thick flower form, and a distinctive and attractive general color tonality of the flowers corresponding to Nopal Red, very lightly overcast with Carmine.

2,397

GRAPEVINE

Luigi Chiarappa, Di Giorgio, Calif., assignor to Di Giorgio Fruit Corporation, San Francisco, Calif., a corporation of Delaware

Filed Oct. 30, 1962, Ser. No. 234,268
1 Claim. (Cl. Plt.—47)

A new and distinct variety of grape plant substantially as herein shown and described, characterized by its early maturity, large, firm and uniformly colored fruit strongly attached to the capetems.

2,398

POINSETTIA PLANT

Paul Ecke, P.O. Box 488, Encinitas, Calif.

Filed Apr. 29, 1963, Ser. No. 276,679
1 Claim. (Cl. Plt.—86)

A new and distinct variety of poinsettia plant substantially as illustrated and described, characterized by a bract involucre in which the bracts have a rich hue of rose-pink color of subdued luster, the bracts being of substantially uniform color throughout their area and being wider and longer than in known pink varieties and of generally prolately ovate-acuminate shape, said bracts being flexible but tough and resistant to bruising, the bracts growing on relatively short petioles whereby they are closely centered around the inflorescence and radiate from the central inflorescence in a wreath in which the radiating bracts have relatively overlying adjacent edges, the inflorescence at the center of the bract involucre being prominent and closely grouped.

PATENTS

GRANTED APRIL 28, 1964

GENERAL AND MECHANICAL

3,130,413
RADIATION CONTROL SYSTEM FOR SPACE SUITS AND CAPSULES

Otto Schueller, Dayton, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force

Filed July 27, 1962, Ser. No. 213,069
11 Claims. (Cl. 2—1)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An outer space environmental suit adapted to enclose a prospective space man for use in outer space and on the moon and nearby planets, an outer solar radiation reflective coating thereon for reflecting solar radiation therefrom having an emissivity for long wave infrared radiation from the interior of the suit and a space man when enclosed therein, and an outer adjustable infrared radiation shield enclosure carried by the suit in outwardly spaced relation to said coating comprising a plurality of overlapping vertical rows of overlapping radiation shield members horizontally pivoted for vertical tilting displacement between upwardly and outwardly inclined overlapping spaced relation and upwardly and outwardly inclined overlapping contacting relation, said shield members having inner and outer highly polished infrared radiation reflective faces facing respectively inwardly toward said coating and outwardly away from said coating.

3,130,414
FLEXIBLE ARMORED BODY GARMENT

Theodore L. Bailey, Natick, and Edward R. Barron, Framingham, Mass., assignors to the United States of America as represented by the Secretary of the Army

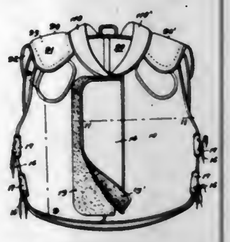
Filed Dec. 28, 1962, Ser. No. 248,161
10 Claims. (Cl. 2—2.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A flexible armored body garment composed of plural layers of woven high tenacity elongatable plastic textile material and small metal plates having ballistic penetration resistance not less than that of steel plates of the same weight; said armored body garment comprising:

(*a*) an outer cover of said textile material in the shape of said garment and having a pair of deep cut-outs in the shoulder region;

an inner cover of said textile material in the shape of said garment and having a pair of deep cut-outs in the shoulder region;

articulated front and back assemblies of hinged inserts affixed to one of said covers, each of said inserts comprising at least one layer of said textile material and a plurality of said metal plates carried by said last-mentioned layer in overlapping relationship; and



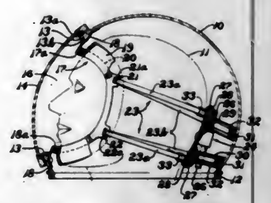
(*b*) a pair of articulated armored shoulder plates bridging said cut-outs, each of said shoulder plates being hinged to one of said covers along the closed ends of said cut-outs and yieldingly connected to the body portion of said garment along the open ends of said cut-outs, and each of said shoulder plates comprising at least one layer of said textile material and a plurality of said small metal plates hingedly affixed thereto in overlapping relationship;

whereby said armored body garment is rendered so highly flexible as to enable the wearer to shoot a firearm from the prone position unhampered, with his torso protected by said garment.

3,130,415
HELMET ASSEMBLY WITH FACE SEAL AND ADJUSTMENT MEANS THEREFOR

Russell S. Colley, Cuyahoga Falls, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

Filed Apr. 21, 1961, Ser. No. 104,561
11 Claims. (Cl. 2—6)

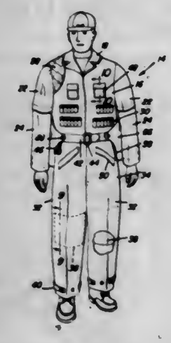


1. A helmet assembly comprising a rigid shell adapted to receive the head of an individual and having a transparent portion on one side of said shell, face seal means secured to the interior of the shell adjacent said transparent portion and including a part engageable about the periphery of the individual's face, flexible inextensible tension means interconnecting said face seal means and portions of said shell remote therefrom and said tension means including a portion thereof extending away from said face seal means and positionable about the head of the individual for positioning his face against said face seal means and the rear of his head spaced from the rear of said shell, and means on the interior of said shell for adjusting the length of said tension means and including an operable portion extending externally of the shell.

3,130,416
SPORTSMEN'S GARMENT

Jack L. Mitchell and Willie L. Mitchell, Athens, Ga. (both of P.O. Box 37, Hull, Ga.)

Filed June 6, 1961, Ser. No. 115,162
3 Claims. (Cl. 2—79)

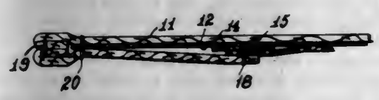


1. In a sportsmen's garment, a jacket portion having a front and back, a belt positionable about the waist of a wearer, said belt having an adjustable and disconnectable front portion at the front of the jacket portion, a pouch mounted on the back of the jacket portion overlying the rear portion of said belt, flaps provided at the sides of said pouch in the same general plane as the belt, said flaps extending around the waist of the wearer to the front of the jacket portion, and means attaching said flaps to the front portion of said belt, said pouch having at least one open side, one of said flaps constituting a closure for said open side of the pouch.

3,130,417
GARMENT CONSTRUCTION AND METHOD OF MAKING SAME

Alvin A. Abalman, Munster, Ind., assignor to Winer Manufacturing Co., Inc., Hammond, Ind., a corporation of Indiana

Filed June 7, 1962, Ser. No. 200,841
4 Claims. (Cl. 2—97)

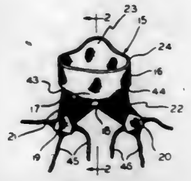


2. A garment comprising a front body panel, a layer of stiffening material secured in predetermined position against the inside face of said front body panel solely by widely spaced, horizontal lines of basting stitches, a sub-assembly consisting of a facing strip and a layer of lining material secured to one another along adjacent edges and being positioned to underlie the front body panel and layer of stiffening material, at least one row of stitches securing the facing strip to the front body panel along corresponding vertical edges thereof, and a vertically extending adhesive strip interposed between said layer of stiffening material and said sub-assembly and adhesively bonding same together along a vertical line disposed laterally inwardly from the secured edges of said front body panel and said facing strip.

3,130,418
ARTIFICIAL HEART VALVE AND METHOD FOR MAKING SAME

Louis R. Head, 1322 Judson, Evanston, Ill., and Loraine M. Kessenich, 7463 Harwood, Wauwatosa, Wis.

Filed Nov. 25, 1960, Ser. No. 95,447
19 Claims. (Cl. 3—1)

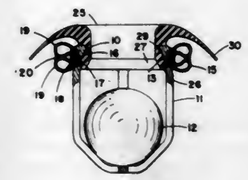


1. A woven artificial heart valve adapted to be used between an auricle and a ventricle of a heart for preventing flow of blood from the ventricle to the auricle, said valve comprising a sleeve portion, the upper peripheral edge of the sleeve portion adapted to be secured to the juncture between the auricle and the ventricle, a first extension portion along a part of the lower peripheral edge of the sleeve portion, a second extension portion along another part of the lower peripheral edge of the sleeve portion and directly opposite to said first extension portion, a plurality of warp threads extending from the lower peripheral edge of the sleeve section and from the free edges of said extension portions, half of the warp threads forming the sleeve portion being woven together to form a first patch portion in spaced relation to the sleeve portion, and the other half of the warp threads being woven together to form a second patch portion, said patch portions adapted to be secured to the side walls of the ventricle in such a manner as to control the closing action of the valve.

3,130,419
HEART VALVE WITH SHIELDED SEWING RING

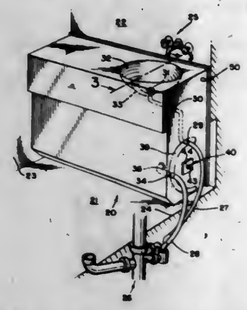
Miles Lowell Edwards, 13191 Sandhurst Place, Santa Ana, Calif.

Filed Apr. 24, 1961, Ser. No. 105,154
5 Claims. (Cl. 3—1)



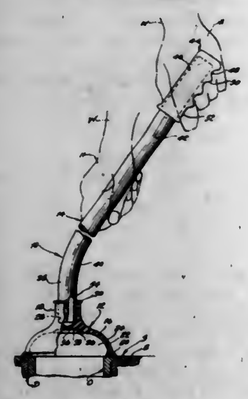
5. A heart valve comprising a circular valve body defining a valve port with an outwardly facing channel therearound, a movable valve member cooperating with said port, a cloth having a portion intermediate its ends clamped in the bottom of said channel, portions of said cloth projecting from opposite sides of said channel being stitched together to form a suturing ring, and a shield mounted on said body, said shield having a flexible outstanding annular lip around said body at one side of said suturing ring.

3,130,420
BATHTUB AND SINK FIXTURE
Donald Eugene Colucci, 2335 Aurora Road, Hudson, Ohio
Filed June 19, 1962, Ser. No. 203,559
5 Claims. (Cl. 4—4)



1. A plumbing fixture for installation in a building area defined by a rear wall and spaced apart parallel side walls, said fixture being installed between said side walls and adjacent said rear wall, one of said side walls housing piping for drain and waste discharge, said fixture having a lavatory oriented in one plane and a bath tub oriented in a different plane and comprising an outer shell with a surface incorporating the lavatory and end walls adjacent said side walls, an inner shell fitting within said outer shell and having surfaces defining the bath tub, said lavatory and bath tub each having a drain outlet, conduit means extending between said shells from each of said drain outlets toward one of said outer shell end walls, flexible conduit means connecting each of said conduit means to said piping, and cooperating pivot means on each of said outer shell end walls and an adjacent side wall for movement of said fixture to shift the orientation of said lavatory and bath tub, said pivot means being located such that the rear portion of said fixture is adjacent said rear wall when said fixture is shifted selectively into the operative orientation of said lavatory and of said bathtub.

3,130,421
PLUMBER'S SUCTION PLUNGER
John E. Quinlan, 894 Lakepointe Ave., Grosse Pointe Park 30, Mich.
Filed Apr. 9, 1959, Ser. No. 805,243
3 Claims. (Cl. 4—255)



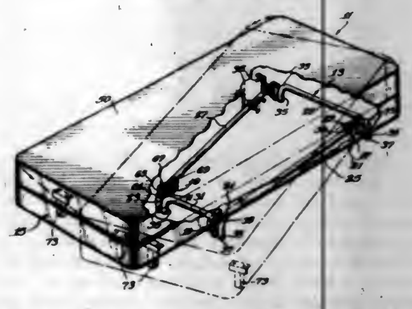
3. A plumber's suction plunger comprising an inverted suction cup of resilient material having a relatively thin flexible side wall and an upper wall with a handle connection portion thereon projecting upwardly therefrom,

said handle connection portion having an upwardly-opening socket therein disposed with its axis substantially vertical,

and an elongated bent handle having a substantially vertical lower handle portion secured within said socket of said connection portion and having an upper handle portion disposed at an obtuse angle to said lower handle portion with the axis of the upper handle portion inclined at an angle greater than halfway and less than three-quarters of the way from the horizontal toward the vertical,

said suction cup having a dome-shaped internal surface defining a suction chamber and extending substantially continuously upward and inward from the lower edge of said cup to the axis of said socket.

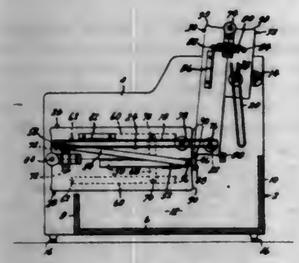
3,130,422
BED CONSTRUCTION
Louis E. Wenz, Roselle, N.J., assignor to Simmons Company, New York, N.Y., a corporation of Delaware
Filed Aug. 13, 1962, Ser. No. 216,411
7 Claims. (Cl. 5—8)



1. A bed structure comprising an elongated base frame having a head end and a foot end narrower than said head end, said base frame including a pair of elongated spaced-apart side members disposed so as to converge toward the foot end of said base frame, each of said side members being provided with a downwardly curved upper surface adjacent each of the foot ends thereof, a head member interconnecting the head ends of said side members, a foot member connected at its ends to the foot ends of said side members and being provided with a downwardly curved upper surface adjacent each of its ends, the downwardly curved surfaces of said side members and said foot member defining therebetween a recess at each end of said foot member, and an elongated mattress supporting unit mounted adjacent one of its ends on said base frame adjacent the head end thereof for pivotal movement about a generally vertical axis, said mattress supporting unit being provided with a rotatable element on its lower surface positioned so as to travel along the upper surface of said foot member into and out of engagement with said recesses incident to swinging movement of said mattress supporting unit about said pivotal axis.

3,130,423
SOFA BED
Norval P. Schreiner, P.O. Box 1181, S. S. Station, Springfield, Mo.
Filed July 7, 1961, Ser. No. 122,597
3 Claims. (Cl. 5—48)

1. A sofa bed comprising a frame, a normally horizontally disposed upper seat section, means mounting said seat section in said frame for forward and rearward movement and for vertical pivotal movement about a horizontal transverse axis adjacent its rearward edge, a lower seat section normally disposed beneath and substantially coextensively with said upper seat section, said seat sections being pivotally connected together at their forward edges on a horizontal transverse axis whereby said lower seat section may be pivoted to extend forwardly from said upper seat section in coplanar relation therewith, and both of said seat sections moved forwardly as a unit to project forwardly from said frame, means for supporting the forwardly extending portions of said seat sections when they are so extended, a forward back section normally extending upwardly from the rearward edge of said upper seat section, a pair of confronting horizontal channels affixed in said frame respectively at opposite sides of said seat sections and extending forwardly and rearwardly, a pair of coaxial rollers carried respectively at opposite sides of said forward back section adjacent the lower edge thereof and engaged operably in said horizontal channels, whereby said forward back section is supported for forward and rearward movement with respect to said frame and for



vertical pivotal movement about the axis of said rollers, a rearward back section normally disposed behind said forward back section, said back sections being pivotally connected at their upper edges on a horizontal transverse axis, a second pair of confronting channels affixed in said frame respectively at opposite sides of said back sections and extending vertically, a second pair of coaxial rollers carried by said rearward back section respectively at opposite sides thereof and adjacent the lower edge thereof, said second rollers being operably engaged in said vertically extending channels, whereby said rearward back section may be moved vertically with respect to said frame and pivoted vertically about the axis of said second rollers, and whereby said back sections may be moved into coplanar relation with said seat sections when said seat sections are extended, all of said sections abutting firmly at their contiguous edges to form a continuous extended sleeping surface, and a pair of flanges affixed respectively to the opposite sides of said forward back section in upwardly spaced relation from said first rollers, said flanges being positioned to engage said horizontal channels when said forward back section is moved to its horizontal position.

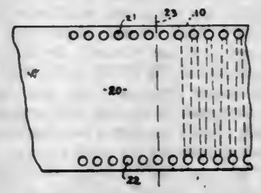
3,130,424
AUTOMATICALLY INFLATABLE FLOTATION DEVICE FOR BATHING SUITS
Anthony S. Santangelo, 135 W. Beard Ave., Syracuse 5, N.Y.
Filed May 31, 1962, Ser. No. 198,896
1 Claim. (Cl. 9—316)

In an automatically inflatable safety device for a bathing suit having a belt which has an annular pocket therein and an annular inflatable flotation member normally folded flat in said pocket, a water pressure responsive gas release device comprising: a gas releasing housing in said pocket having a puncturable container normally containing compressed gas, conduit means operably connecting the housing and said flotation member, said housing having a diaphragm therein flexible in response to depth-induced water pressure, a pressure plate in the housing adjacent said diaphragm, said pressure plate being inwardly movable by the flexing of said diaphragm, gas release means for puncturing said gas container, normally spring loaded means for actuating said gas release means, detent means normally holding said spring loaded means in spring loaded position and adapted to be disengaged from the spring loaded means by the inward movement of said pressure plate, a pressure resisting spring biasing said plate outwardly of the housing, a regulator screw



supporting said pressure resisting spring in the housing, and a pressure regulator wheel projecting from the housing and threadedly carried by said regulator screw, said screw being adapted to regulate the pressure exerted by said pressure resisting spring on said pressure plate when said regulator wheel is turned to selectively predetermine the water depth at which said gas release means is actuated, said housing having a perforate member covering said diaphragm whereby said diaphragm and pressure plate are responsive to under water depth pressure and the perforations in said perforate member being sized to render said diaphragm unresponsive to sudden surges in the water.

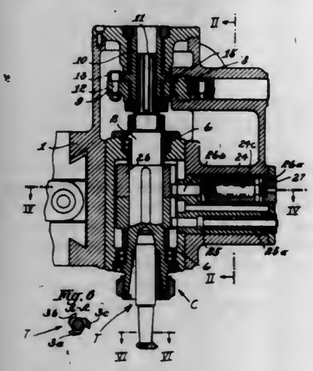
3,130,425
METHOD OF MAKING CUT NAILS FROM FLAT STRIP STOCK
Hubert K. Kelly, Clay, N.Y.
Original application Dec. 3, 1959, Ser. No. 857,157. Divided and this application Dec. 19, 1960, Ser. No. 76,549
1 Claim. (Cl. 10—34)



The method of forming nails having notches in the side edges thereof below the head end of the nail and having a body portion tapering to a point end, the method consisting in forming a flat strip of metal with a row of uniformly spaced apertures along each side portion of the strip, the apertures in each row being spaced inwardly from the adjacent side edge of the strip a distance comparable to the spacing of the notches from the head end of the nail, said apertures being spaced in a direction lengthwise of the strip a distance equal to the spacing between the notches of the nail, each row of apertures being spaced from the opposite edge adjacent the opposite row of apertures a distance comparable to the length of the nail, arranging the apertures in one row in planes extending transversely of the strip medial of the apertures

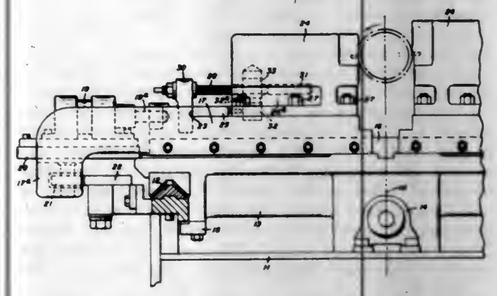
in the opposite row to provide nail forming portions extending transversely of the strip and tapering toward the point end, and alternate nail forming portions extending in opposite direction to the intermediate nail forming portions with the point ends of the nails terminating at said apertures, and severing the nail forming portions from the strip.

3,130,426
APPARATUS FOR ROTATING AND LOCKING HOLDERS FOR THREAD CUTTING TOOLS AND THE LIKE
Carl Hölzer, Solingen, Germany, assignor to Th. Kieselring & Albrecht, Solingen, Germany
Filed Aug. 10, 1959, Ser. No. 832,770
Claims priority, application Germany Aug. 19, 1958
6 Claims. (Cl. 10—101)



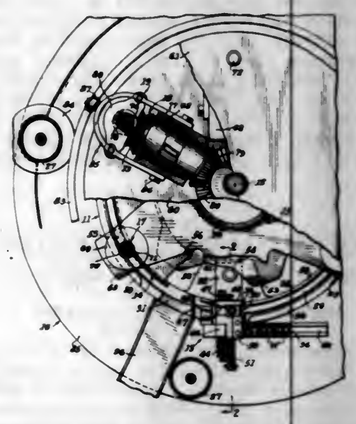
1. A device for intermittently rotating thread cutting tools and the like which comprises, in combination: a holder having an axis; a housing mounting the holder for rotation about said axis; means for intermittently rotating the holder comprising a cylinder and piston assembly, a toothed rack connected to and reciprocable by the piston of said assembly between two end positions, a gear meshing with the rack, rotatable relative to and coaxial with said holder, a pawl fixed to said gear, and a first ratchet wheel coaxially connected to said holder for transmitting rotation to the latter, the pawl being spaced from the nearest tooth of said ratchet wheel when the rack is in one of said end positions whereby the holder is rotated only during a portion of the stroke performed by the rack while the latter moves from said one into the other end position after the pawl is moved into engagement with the nearest tooth of said ratchet wheel; means for locking the holder against rotation by said ratchet wheel when the rack is in said one end position, said locking means comprising a second ratchet wheel fixed to said holder and a toothed bolt slidably mounted in said housing and constantly biased into engagement with said second ratchet wheel; and means for moving the bolt away from the second ratchet wheel comprising means movable with said rack and defining a cam surface, a toothed ram slidably mounted in said housing in the path of said cam surface whereby the ram is displaced while the rack moves from said one toward the other end position, a pinion meshing with and rotatable by the teeth of said ram, a shaft connected to said pinion, a second pinion fixed to said shaft and meshing with the teeth of said bolt for moving same away from the second ratchet wheel when the ram is displaced by said cam surface, the position of said cam surface being such that the bolt is moved away from the second ratchet wheel before the pawl engages the nearest tooth of said first mentioned ratchet wheel.

3,130,427
PIPE THREADING MACHINE WITH RIGID TOOL CROSS SLIDE
William M. McConnell, Pittsburgh, Pa., assignor, by mesne assignments, to United States Steel Corporation, a corporation of New Jersey
Filed Feb. 6, 1961, Ser. No. 87,173
3 Claims. (Cl. 10—101)



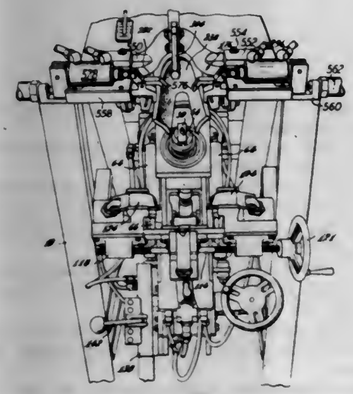
1. The combination with a saddle disposed with its length transversely of an elongated machine-tool frame and movable sidewise on ways extending longitudinally of the frame, of a tool-holder slide movable on said saddle toward and from the longitudinal central plane of the frame, a fluid-pressure motor mounted on the saddle effective to urge said slide toward said plane, cooperating profile-determining means on said slide and frame, respectively, limiting travel of the slide under the force of said motor, a tool holder adjustable on said slide longitudinally thereof, an abutment on said slide adjacent said holder, a removable spacer-block between said abutment and said holder and screw means on said slide engaging said holder, effective to retract it away from said plane against said block and the block against said abutment.

3,130,428
MEANS TO FEED AND TRANSPORT BLANKS DURING A THREADING OPERATION
Marshall T. Derby, Downey, Calif., assignor to California Industrial Products, Inc., Los Angeles, Calif., a corporation of California
Original application Jan. 12, 1959, Ser. No. 786,310, now Patent No. 3,058,128, dated Oct. 16, 1962. Divided and this application July 6, 1961, Ser. No. 122,294
3 Claims. (Cl. 10—132)



1. A tapping machine comprising a circular and fixed trackway having a inlet and a discharge, a shaft normal to the trackway and disposed at the center of generation of curvature of the trackway, a turret concentric with the shaft and trackway, a drive for the shaft, an independent drive for the turret, means controlled by the turret, to intermittently feed workpieces to said trackway at said inlet, and means on the turret to slidingly move said workpieces continuously along said trackway toward the discharge thereof, said turret having a plurality of reversing tapping units in register with the workpieces during continuous rotation of the turret.

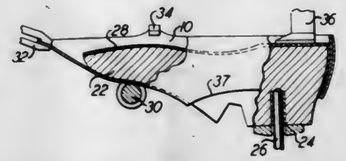
3,130,429
HEEL SEAT LASTING WITH BREAST LINE PINCERS
Jacob S. Kamborian, 133 Forest Ave., West Newton, Mass.
Filed July 21, 1961, Ser. No. 125,691
26 Claims. (Cl. 12—145)



1. A method of heel seat lasting a shoe mounted bottom-up on a last, said shoe including an insole located on the last bottom and an upper mounted on the last, comprising: applying a pulling force on the upper by first stressing means to stretch the upper tightly about the heel of the last with the margin of the upper at the breast line and heel exending upwardly of the insole; gripping the margin on each side of the last proximate to the breast line by a second stressing means; laying substantial areas of the gripped breast line margin portions on the insole by moving the second stressing means toward each over the insole inwardly of the marginal edges of the insole in paths substantially parallel to the bottom of the insole; clamping the heel of the upper against the last; and wiping the upwardly extending margin at the heel down upon the insole.

5. A heel seat lasting machine comprising: wiping means mounted for forward movement; heel clamping means located below the wiping means; a shoe support located forwardly of the wiping and clamping means for supporting bottom-up a last having an insole located on its bottom and an upper mounted thereon; upper vamp gripping means located forwardly of the wiping and clamping means and above the shoe support; breast line gripping means located above the shoe support on each side of the shoe support intermediate the wiping and clamping means and the vamp gripping means; means for actuating the vamp gripping means to grip the vamp of the upper and exert a pulling force on the upper to stretch the upper tightly about the heel of the last with the margin of the upper at the breast line and heel extending upwardly of the insole; means for actuating the breast line gripping means to grip the margin of the upper proximate the breast line; means for moving the breast line gripping means toward each other; means for actuating the clamping means to clamp the heel of the upper against the last; and means for effecting forward movement of the wiping means to wipe the upwardly extending upper margin at the heel of the upper down upon the insole.

3,130,430
METHOD OF LASTING A SHOE
Jacob S. Kamborian, 133 Forest Ave., West Newton, Mass.
Filed Aug. 16, 1961, Ser. No. 131,850
10 Claims. (Cl. 12—145)



1. A method of lasting a shoe mounted on a last without removing the shoe from the last, said shoe comprising an insole located on the last bottom and an upper, having a margin that is to be attached to the insole, draped on the last, said method consisting of the steps of: stretching a first end of the upper tightly about the last; applying wiping means against a first portion of the margin at the first end of the upper to thereby wipe the first margin portion against the insole and permanently attaching substantially all of the wiped first margin portion to the insole while the upper is so stretched and while the wiping means are applied against the first margin portion; exerting a stress on the upper that includes a pull from the first end towards the second end of the upper to stretch the second end of the upper tightly about the last; applying wiping means against a second portion of the margin at the second end of the upper to thereby wipe the second margin portion against the insole and permanently attaching substantially all of the wiped second margin portion to the insole while the second end of the upper is so stretched and while the wiping means are applied against the second margin portion; and wiping the margins of the sides of the upper, intermediate the wiped first and second margin portions, against the insole and permanently attaching the wiped side margins to the insole while the sides of the upper are stretched about the last.

3,130,431
APPARATUS FOR DESCALING PIPES
Alberto Johann Reinhart, 24 Via Cortivallo, Lugano, Switzerland
Filed Apr. 22, 1960, Ser. No. 24,085
Claims priority, application Switzerland Apr. 22, 1959
8 Claims. (Cl. 15—104.06)

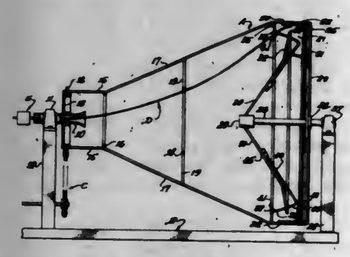
1. Apparatus for descaling pipes comprising a first unit constituted by at least two cutting and splitting tools each comprising an axial bar, a plurality of arm supported knives each including a front part for cutting into pipe deposits in a longitudinal plane and a V-shaped back part for penetrating into said cuts in said deposits and simultaneously splitting the deposit on the pipe wall, said knives being arranged according to the edges of a pyramid around said axial bar and having one end of their arm hingedly connected thereto, a sleeve displaceable along said bar, a plurality of knife-loading springs mounted on said sleeve and each acting on a respective one of said knives tending to space said knives radially outwards from said bar, and a sleeve-loading spring tending to move said sleeve away from said hinged connection of said knives, a thrusting device which, in operation,

is capable of being moved by a part of the energy of a liquid flowing through the pipe being descaled; a second unit constituted by at least two crushing tools each having a plurality of ribbed barrel-shaped rollers which are re-



siliently urged radially outwards; and hinges connecting said first unit, said thrusting device and said second unit successively together in such a manner as to permit the apparatus to pass through curved pipe sections.

3,130,432
SEWER ROD FEED REEL WITH YIELDABLE MOUTH CLOSURE MEANS
Charles J. Prange, Lima, Ohio, assignor to Flexible Sewertool Corporation, Lima, Ohio, a corporation of Ohio
Filed Feb. 4, 1963, Ser. No. 256,036
15 Claims. (Cl. 15—104.3)



1. Sewer rod reel-feed mechanism comprising: a reel cage having means defining therewithin a generally conical space for feeding of a sewer tool drive rod between the large and small ends of said space; means supporting said reel cage for rotation about a major axis extending between and coaxial with said ends; said reel cage having at said small end a tubular guide throat coaxial with said major axis and having, adjacent said large end, means defining an annular peripheral storage chamber having an annular mouth on its side facing toward said guide throat, said means including a ring defining one side of said mouth; and a yieldable retainer finger normally traversing said mouth to normally retain the coils of said rod within said chamber; said finger being yieldable in opposite directions in response to pressure of said rod when being fed toward said throat through said mouth and when being retracted, respectively, to open a gap between said ring and finger, through which a respective coil of said rod may be projected from or retracted into said chamber.

3,130,433
MANICURING DEVICE
Eve M. John, Chicago, Ill.
(4705 Rose St., Schiller Park, Ill.)
Filed June 30, 1961, Ser. No. 121,238
1 Claim. (Cl. 15—105)



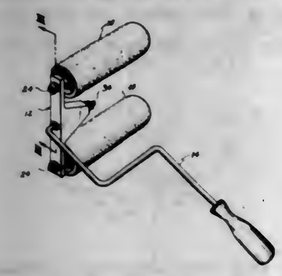
A finger nail polish applicator and excess polish remover comprising:
(*a*) an elongated member removably carried by a cap of a nail polish container,
(*b*) said member having a taper on one end and provided with a hollow cylindrical bore with said bore having a smaller diameter as it extends through the tapered end of said member,
(*c*) said member having a longitudinally extending slot formed in the side thereof in open communication with said bore,
(*d*) said member at predetermined points in the direction of its length having notches opening into said slot,
(*e*) a cup-shaped holder mounted in said bore for movement therethrough up to the tapered end of said member,
(*f*) said cup-shaped holder having a finger piece operable in said slot and adapted to selectively engage said notches so as to position said holder relative to the tapered end of said member, and a
(*g*) disposable applicator finger carried in said holder within said bore and movable therewith so as to project a portion thereof a predetermined distance out of the tapered end of said member slot, and
(*h*) holding tongues provided by said holder and extending inwardly of and in the direction of the base of said holder for retaining said applicator finger in said holder as it is moved throughout said bore.

3,130,434
PAINT BRUSHES AND THE LIKE
Donald George Daw, Adelaide, South Australia, Australia, assignor, by mesne assignments, to American Flange & Manufacturing Co., Inc., New York, N.Y.
Filed Feb. 27, 1961, Ser. No. 91,892
2 Claims. (Cl. 15—192)



1. A paint brush comprising in combination a hollow, one-piece, handle molded of relatively lightweight synthetic plastic material having an elongated hand grip portion and terminating at one end in an outwardly disposed socket, said socket including a base wall integral with said hand grip portion, a continuous side wall extending outwardly from said base wall, a laterally extending flange formed as a continuation of said base wall and completely surrounding the same, said flange being formed with a relatively narrow peripheral recess extending around said side wall of said socket, bristles extending outwardly of said handle and adhesively bound together for a distance extending from their inner ends, securing means securing said bristles directly to said handle including a single adhesive mass spaced outwardly of said flange and base wall integral with said adhesively bound end of said bristles, lateral surface forming means provided on said side wall of said socket for effecting interlocking engagement between said socket and said securing means, a portion of said adhesive mass encasing said adhesively bound end of said bristles, said encasing portion being interposed between the ends of said bristles and said socket and extending laterally outwardly of said bristles at said adhesively bound end, and a ferrule molded of relatively lightweight synthetic plastic material formed with an opening therethrough adhesively bound to said bristles and tightly engaged about and in direct contact with said side wall of said socket, said ferrule extending outwardly of said socket and formed at its outermost end with an inturned lip bordering said opening and extending inwardly so as to at least partially overlie said outer edge of said socket side wall, said bristles extending outwardly through said opening of said ferrule and said lip engaging said bristles and acting as a stop member for said portion of said adhesive mass extending laterally outwardly of said bristles whereby said laterally outwardly extending portion of said adhesive mass is retained between said lip and said outer edge of said socket, the inner end of said ferrule being tightly received within and completely filling said peripheral recess.

3,130,435
PAINTING DEVICE
Lillian Smith, 12213 Harlem, Palos Heights, Ill.
Filed July 13, 1961, Ser. No. 123,864
2 Claims. (Cl. 15—230)



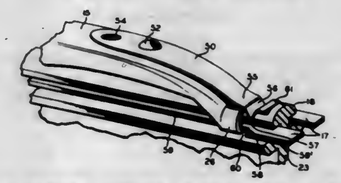
1. A paint-roller device, comprising, a generally T-shaped carrier having a central leg and a crossing leg extending along a single side of the device, a paint-roller rotatably connected to said carrier along each portion of said crossing leg outwardly with respect to the said central leg so that the rollers are substantially spaced one from the other and with their peripheries in non-contacting spaced relationship, and a handle having a portion extending along said central leg and rotatably connected thereto permitting the carrier and the paint-rollers to rotate with respect to the handle and thus permit both paint-rollers to contact an associated wall regardless of the orientation of the handle with respect thereto.

3,130,436
WINDSHIELD SCRAPER
Albert L. Krause and Martin C. Krause, both of R.F.D. 1, Wattsburg, Pa.
Filed Jan. 18, 1960, Ser. No. 2,986
1 Claim. (Cl. 15—236)



A scraper for windshields or the like comprising a handle, said handle being made of non-metallic material having a slot therein, and a relatively thin plate like rectangular blade, said blade being disposed in said slot and held rigidly therein, a portion of said blade extending outwardly from said handle and presenting a generally straight side for engaging ice to be scraped from glass, said blade being made of a material taken from a group of either brass or Phosphor bronze having a tensile strength within the range of sixty-eight thousand pounds per square inch and one hundred five thousand pounds per square inch.

3,130,437
WINDSHIELD WIPER ASSEMBLY
John W. Anderson, 578 Broadway, Gary, Ind.
Filed Sept. 15, 1961, Ser. No. 138,358
13 Claims. (Cl. 15—250.42)



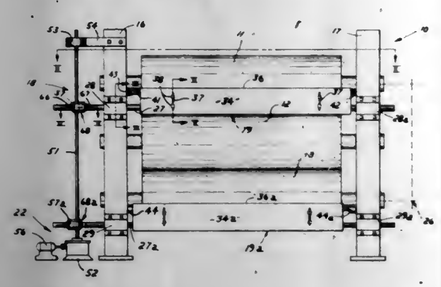
1. An elongate resilient wiping member adapted to conform to a surface being wiped, articulated pressure-transmitting means slidably connected to the wiping member at certain spaced-apart locations, one of the pressure-transmitting means having spring-biased movable means adjacent one connection and operatively engaging the wiping member thereby substantially preventing longitudinal movement of the wiping member relative to said one connection in either direction.

3,130,438
DOCTORS FOR ROLLS
Charles R. Hughes, 195 Burgess Drive, Galesburg, Mich.
Filed Aug. 20, 1962, Ser. No. 218,490
5 Claims. (Cl. 15—256.53)

1. An apparatus for removing materials from the peripheral surface of a rigid cylindrical device rotatably mounted upon and between a pair of support structures, comprising:
an elongated, substantially rigid member having lateral edge means engageable with said peripheral surface, said rigid member including first shaft means secured to, and extending from the opposite ends of, said rigid member;

bracket means mounted upon said support structures, said first shaft means being engaged and supported by said bracket means for axial movement with respect to said bracket means, said bracket means being arranged so that said edge means on said rigid member can move toward and away from a position wherein said edge means is in engagement with, and extends substantially the full length of, the peripheral surface of said cylindrical device;

means secured to said rigid member for continuously urging said edge means of said rigid member against said peripheral surface;



an eccentric;

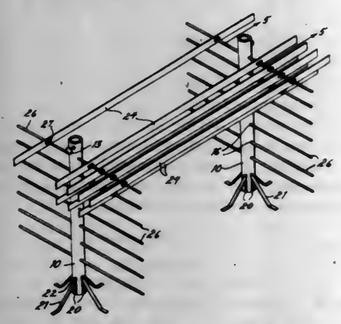
second shaft means rotatably supporting said eccentric near said rigid member;

adjustment means connected to said eccentric for changing the eccentricity thereof with respect to said second shaft means;

follower means engaged by said eccentric and rigidly connected to said rigid member; and

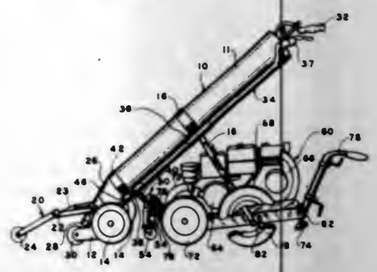
drive means connected to said second shaft means for rotating same, whereby said eccentric is rotated and said follower means effects a lengthwise reciprocation of said rigid member.

3,130,439
VENETIAN BLIND PAINT STAND
Louise Bovaird, 711 E. Main St., Bradford, Pa.
Filed Sept. 16, 1963, Ser. No. 309,236
3 Claims. (Cl. 15—268)



1. In a Venetian blind paint stand, a pair of uprights adapted to be spaced apart a distance slightly less than the length of Venetian blind slats to be painted, each of said uprights comprising upper and lower telescoping tubular members, a set screw carried by each of said lower members for locking said telescoping members in an extended position, feet detachably secured to each of said lower telescoping members, each of said telescoping members being formed with a series of pairs of aligned apertures, and a cross rod received in each pair of said apertures and adapted to be threaded through slots in Venetian blind slats to support the latter during drying.

3,130,440
LINE MARKER ASSEMBLY
Harold C. Sweet, 56861 Grand River Ave., New Hudson, Mich.
Filed Mar. 5, 1963, Ser. No. 263,051
17 Claims. (Cl. 15—503)



1. A machine for movement along a surface such as the ground or the like and comprising,

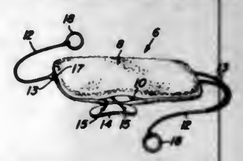
(*a*) an elongated carriage having forward and rear wheels normally engaging said surface and supporting said carriage,

(*b*) an arm pivotally carried by said carriage, said arm being pivoted about an axis substantially parallel to the longitudinal axis of said carriage,

(*c*) means selectively operable to pivot said arm to a position engaging the surface and lifting said forward wheels from engagement with said surface, and

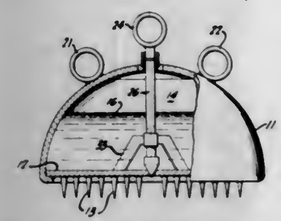
(*d*) a wheel swivelingly carried on the free end of said arm whereby said machine may be pivotally turned on said wheel when said forward wheels are in said lifted position.

3,130,441
BACK WASH CLOTH
Wilbur D. Hahn, 336 S. Miami Ave., Sidney, Ohio, assignor of fifty percent to John D. Quinn, Sidney, Ohio
Filed Jan. 16, 1963, Ser. No. 251,942
3 Claims. (Cl. 15—567)



1. A back wash cloth comprising a substantially flat elongated flexible envelope consisting of a pair of opposed soft foraminous sheets, stitching securing the marginal portions of the sheets, said stitching being interrupted at each end of the envelope so as to form end slits and along one longitudinal edge thereof so as to form a side slit, said side slit being of a size so as to allow for an introduction of a cake of soap between the sheets, elongated flexible operating cords, one cord being freely slidable through each end slit for substantially the full length of said cord, a flat plate secured to the inner end of each cord and located within the envelope, each plate being of a greater width than the corresponding end slit so as to preclude passage of the plate therethrough, said cords including handle means on the outer ends thereof whereby a pull in opposite directions on the handle means will result in an axial tensioning of the envelope in a manner so as to close the side slit for retaining a cake of soap therein.

3,130,442
MASSAGE DEVICE WITH SOAP DISPENSER
Louis T. Kellis, 540 O'Farrell St., Apt. 405, San Francisco, Calif.
Filed Dec. 7, 1962, Ser. No. 243,018
3 Claims. (Cl. 15—509)



1. An improved massage device comprising

(*a*) a housing defining a chamber and having a substantially flat bottom massage wall with a central opening therethrough defining a valve seat,

(*b*) an elongated valve stem extending from said chamber through the top of said housing and having a valve head at the bottom thereof for engaging said valve seat in sealing relation to the opening in the bottom wall,

(*c*) resilient sealing means engaging said valve stem and said housing for sealing the chamber at the top thereof and unidirectionally resiliently urging said valve stem toward the bottom wall of the housing, and

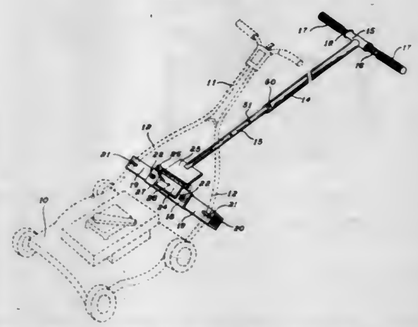
(*d*) a loop affixed to the top of said valve stem above the housing for valve actuation by an upward force on the loop to raise the valve stem.

3,130,443
COASTER WAGON HANDLE
Ruggero Renato Tonelli, Chicago, Ill., assignor to Radio Steel & Mfg. Co., Chicago, Ill., a corporation of Illinois
Filed Mar. 20, 1962, Ser. No. 180,986
8 Claims. (Cl. 16—110)



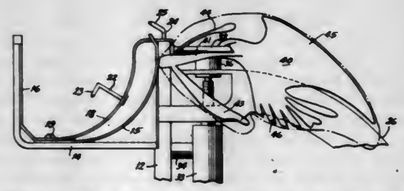
1. A handle for a coaster wagon having a bail portion extending forwardly from the front wheel steering mechanism, said handle comprising an elongate tubular member, a steering fork on one end of the tubular member formed of a central tubular section dimensioned to telescope with the end portion of the tubular member and being fixed thereto, a pair of arms radiating outwardly substantially diametrically from said tubular section and bent to conform with the contour on the end portion of said bail for attachment thereto, a handle fork on the opposite end of the tubular member formed of a central tubular section dimensioned to telescope with the end portion of the tubular member and being attached thereto, and a pair of arms radiating outwardly substantially perpendicularly from said tubular section and bent substantially to U-shape, and another tubular element bent to U-shape with the side arms of said U-shaped element being flattened to provide a slotted portion receiving the side arms of said handle fork in telescoping relation therewith and being attached thereto.

3,130,444
AUXILIARY HANDLE FOR POWER LAWN MOWERS
Charles V. Stollsteimer, 1137 Rosemount Road, Portsmouth, Ohio
Filed May 10, 1962, Ser. No. 193,794
4 Claims. (Cl. 16—110)



1. An auxiliary handle for attachment to a freely pivotable handle of a power lawn mower comprising a horizontal mounting bracket including adjustable means for rigidly attaching the bracket to a mower handle; a first hinge part rigidly fixed to said bracket centrally thereof; a second hinge part rigidly fixed to one end of the handle part; an elongated handle part; and a hinge pin having its central axis in the horizontal plane joining the two said hinge parts for free pivoting of the handle part during use, the bracket comprising a hollow rectangular center member, two rectangular end members, each slideable in an end of the center member, each further defining at least two aligned holes, means for fixing the positions of the end members relative to the center member, plug means fitting in the outer ends of the end members and bolt means cooperating with said holes.

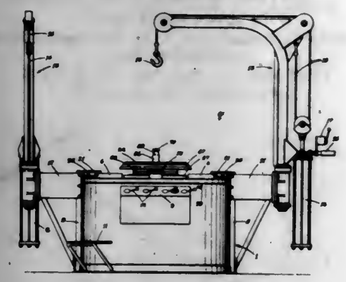
3,130,445
METHOD FOR REMOVING MEAT FROM POULTRY
Asa B. Segur, 1185 S. Ridgeland Ave., Oak Park, Ill.
Filed Dec. 29, 1960, Ser. No. 79,339
9 Claims. (Cl. 17—45)



1. In a method of removing the meat from poultry carcass sections, the steps of pulling the skin away from

a carcass section, positioning the section upon a supporting member while simultaneously inserting a clamping element into said carcass and into contact with a skeletal component thereof, clamping said skeletal component between said element and a second clamping element to hold said section securely in place upon said member with the meat thereof fully exposed, and thereafter removing the meat from said section while the same is in clamped position.

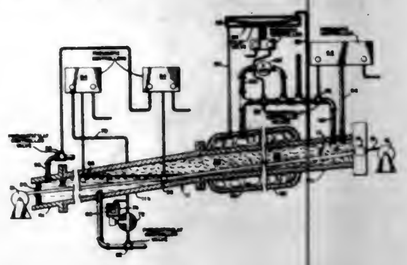
3,130,446
TIRE MOLD LOADER
Arnold Duerksen, Lodi, Calif., assignor to Super Mold Corporation of California, a corporation of California
Filed July 27, 1961, Ser. No. 127,316
2 Claims. (Cl. 18—2)



1. An apparatus for use in the loading of a prepared tire into a horizontally disposed, annular mold having a lower matrix half and a complementary upper matrix half; said apparatus comprising a frame, a structure on the frame to receive and horizontally support the lower matrix half, a vertical-axis power cylinder unit supported from said structure in depending relation to said lower matrix half, a lower tire-bead engaging disc, control means connected to said disc to move the same up and down, an upper tire-bead engaging disc, a piston rod projecting upwardly from the cylinder unit and through said lower disc and said upper disc, means to releasably latch the piston rod to the upper disc, an initially separate pressure bar adapted to be engaged in spanning relation atop the upper matrix half upon placement of the latter above the lower matrix half and over a tire therein, the piston rod being movable upwardly from the upper disc and through the bar upon release of the latch means, and other means included in part with the first named latch means to releasably latch the piston rod to the pressure bar.

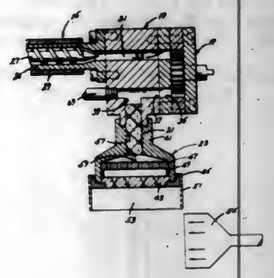
3,130,447
CONTINUOUS VULCANIZATION
Henry Karl and Walter F. Parsells, both of Middletown Township, N.J., assignors to Karpamurean Assoc., Inc., New York, N.Y., a corporation of New York
Filed Aug. 3, 1960, Ser. No. 47,214
16 Claims. (Cl. 18—6)

1. Apparatus for continuously vulcanizing an elongated medium comprising an elongated generally horizontal conduit including a first portion comprising a vulcanizing chamber having means for introducing steam therein under predetermined conditions of temperature and pressure, a second portion of said conduit comprising a cooling chamber adapted to contain a cooling fluid, said cooling chamber being situated at a slightly lower elevation than said vulcanizing chamber so that a portion of the steam of the vulcanizing chamber forms a substantially horizontal interface with a portion of the fluid of the cooling chamber below said steam, said cooling chamber including an outlet seal adapted and arranged to maintain the fluid in said chamber while permitting the vulcanized and cooled medium to pass therethrough, means for continuously introducing said vulcanizable medium into said vulcanizing chamber, means for moving said medium at a predetermined rate of travel through said vulcanizing chamber portion of the conduit and thence through said cooling chamber portion of the conduit and onward through said outlet seal to the exterior of said cooling



chamber, means for passing a coolant fluid through said cooling chamber, means for continuously and independently of one another controlling the level of said interface and the rate at which said coolant fluid passes through said cooling chamber via said means for passing coolant through said chamber comprising temperature sensing means responsive to the temperature of the fluid at a predetermined level in said cooling chamber.

3,130,448
METHOD AND APPARATUS FOR SPINNING ARTIFICIAL FILAMENTS
Arthur R. Tomlinson, Garden City, Pa., assignor, by mesne assignments, to FMC Corporation, San Jose, Calif., a corporation of Delaware
Filed May 11, 1961, Ser. No. 109,313
5 Claims. (Cl. 18—8)

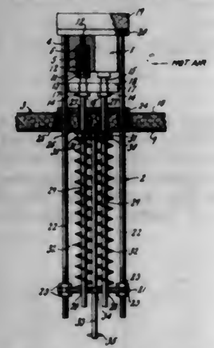


1. Apparatus for melt-spinning of multi-filament yarns including means for rendering thermoplastic polymeric filament-forming material molten, means for shaping the molten polymeric material into a plurality of filaments, walls defining a passage for conducting the molten polymeric material to said shaping means, a pump for delivering the molten polymeric material from said melting means to said passage, and a blending unit seated within said passage and snugly engaging with the walls thereof, said unit having an equal number of right-handed and left-handed intersecting helical grooves extending along its outer surface, said grooves being substantially the same in cross section and length whereby the metered stream of molten polymeric material is divided into a plurality of like individual streams which are blended together as they travel along said intersecting grooves.

3,130,449
COATED SPINNERET AND PROCESS OF COATING DURING SPINNING
Harry J. Demas, Hopewell, Christos L. Kapetanakis, Colonial Heights, and William T. Haggerty, Jr., Chester, Va., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed May 28, 1962, Ser. No. 197,900
7 Claims. (Cl. 18—8)

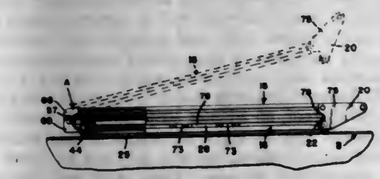
1. A metallic spinneret bearing on the outer face thereof a coating consisting essentially of tris-(para-biphenylyl) phenyl silane, which coating completes its melting at a temperature in the range between about 120° C. and about 250° C.

3,130,450
APPARATUS FOR MOLDING PLASTIC MATERIALS
Erwin F. Linhorst, Paterson, N.J., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed Oct. 12, 1961, Ser. No. 144,676
8 Claims. (Cl. 18—16)



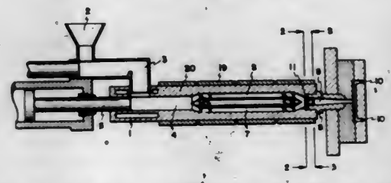
2. Apparatus for molding plastic materials, comprising the combination of a press and a removable mold assembly, said assembly comprising a mold plate having a plurality of mold cavities therein, a removable plunger for each of said cavities, a handling plate on which all of said plungers are assembled for movement as a unit and for entry into said mold cavities, said press comprising means for receiving said mold assembly, and means for individually actuating said plungers.

3,130,451
DRAPE FRAME ASSEMBLY
Hugh B. Morse, San Jose, Calif., assignor to Avery Industries, Inc., San Mateo, Calif., a corporation of California
Filed Feb. 2, 1961, Ser. No. 86,729
5 Claims. (Cl. 18—19)



1. In a vacuum forming machine for vacuum forming sheet plastic material over a vacuum platen, a drape frame assembly for carrying a sheet of plastic material comprising upper and lower frames, hinge means joining the rear portions of the upper and lower frames for pivotal movement, locking means on the front portions of said frame for removably locking said upper and lower frames together, bottom gasket means mounted on the bottom side of said lower frame and adapted to engage the platen to form an air seal therebetween, and top gasket means mounted on the upper side of the lower frame to engage the lower side of said upper frame member to form an air seal therebetween, said lower and upper frames having overlapping mating vertical walls adapted to lock margins of sheet material therebetween with the sheet material interposed between the top gasket means and the upper side of said upper frame.

3,130,452
APPARATUS FOR MOLDING THERMOPLASTIC MATERIALS
Walter E. Heumann, Jersey City, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed Dec. 18, 1961, Ser. No. 160,095
2 Claims. (Cl. 18—30)

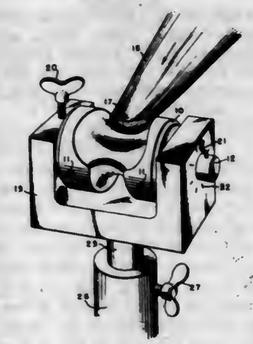


1. In an injection molding machine having an internally heated bore and an extrusion nozzle connected with said bore, a dispersion device disposed between said bore and said nozzle, said dispersion device comprising a truncated cone-shaped body portion having a base communicating with said bore and a truncated apex communicating with said nozzle, said body surrounding an internal spherical chamber and having

(*a*) a plurality of inlet channels leading at converging angles relative to each other from the base to the spherical chamber, each of said inlet channels having an enlarged mouth portion and a neck portion, said neck portion having a land length between 0.025 and 0.05 inch and a diameter of about 0.025 to 0.05 inch, and

(*b*) a lesser number of outlet channels leading from the spherical chamber to the truncated apex, each of said outlet channels having a diameter of about 0.025 to 0.05 inch.

3,130,453
TOW PROCESSING GUIDE
Henry E. Haigler, Jr., Decatur, Ala., assignor, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware
Filed Sept. 1, 1961, Ser. No. 135,611
2 Claims. (Cl. 19—65)



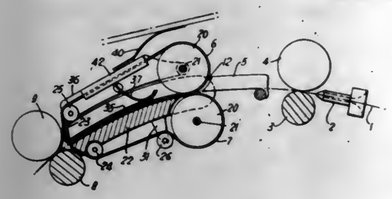
1. A tow guide, comprising support means, a cylindrical guide mounted on the support means and having

in the periphery thereof a groove having a uniform depth, said groove having a uniformly varying arcuate cross section, said guide being adjustable in position to present different portions of said groove to a tow being advanced therepast.

3,130,454
TEXTILE DRAFTING APPARATUS

John K. P. Mackie, Belfast, Northern Ireland, assignor to James Mackie & Sons Limited, Belfast, Northern Ireland, a British company

Filed Apr. 17, 1961, Ser. No. 103,333
Claims priority, application Great Britain Apr. 19, 1960
4 Claims. (Cl. 19—249)



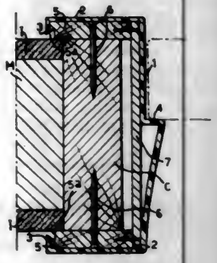
1. Drafting apparatus for textile slivers comprising:
- a pair of feed rollers and a pair of drafting rollers spaced from each other;
- a pair of cooperating draft control aprons positioned between said feed and drafting rollers;
- a pair of parallel side control surfaces extending along opposite sides of said aprons, the foreward ends of said surfaces being shaped to extend into and conform to the configuration of the nip of said drafting rollers, said control surfaces being spaced laterally from each other a distance substantially equal to the width of sliver being processed so as to engage the sliver on opposite sides thereof throughout its passage between said aprons and further between the ends of said aprons and the nip of said drafting rollers;
- an upper guide member and a lower guide member said members being located between said side control surfaces, said aprons at their ends adjacent to said drafting rollers passing around said guide members;
- and anti-friction rollers over which said aprons pass, said rollers being so positioned that the angle described by said aprons in passing around said guide members is between 30° and 90°.

3,130,455
DOOR FRAME OF PLASTICS FOR ROOM DOORS

Lorenzo Borlenghi, Milan, Italy, assignor to Etablissement Sabor, Eschen, Liechtenstein

Filed June 20, 1962, Ser. No. 203,829
Claims priority, application Italy Aug. 30, 1961
2 Claims. (Cl. 20—11)

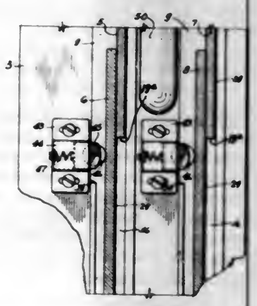
1. In combination with a door case member framing an aperture in a wall, an underframe structure providing a pair of continuous anchoring strips on opposite sides of the wall secured to and extending lengthwise of the member, said anchoring strips each having a recess along the edge thereof adjacent the wall, and an extruded channel member of resilient plastic fitted on the underframe structure, said channel member comprising a web section, a pair of wings integral with the web section each including an inwardly turned hooked flange engaged over the respective anchoring strip in the recess therein, and a saw-tooth-like step formed on the web section lengthwise of the latter providing a stop-abutment for a door panel; said wings being of a length equal to the width of the continuous strips, and said wings each forming an acute angle with the plane passing through the two corners of the channel member and said web section being inwardly bowed with respect of said plane in disassembled condition of the channel member with respect of the underframe structure, whereby the channel member is resiliently deformed in assembled condition and the flanges are snappingly engaged in said recesses.



3,130,456
SASHLESS WINDOW STRUCTURE OF VERTICAL SLIDING PANEL TYPE

Romuald Migneault and Fernand W. Migneault, both of 332 St. Andre, Gatineau, Quebec, Canada

Filed Feb. 5, 1962, Ser. No. 171,039
3 Claims. (Cl. 20—52)

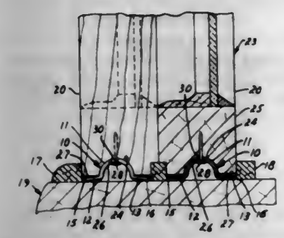


2. A sashless window structure comprising a frame having a sill, headpiece, and jambs, an inner and an outer window each comprising a unitary panel track member fixed to each said jamb and extending from said sill to said headpiece, each said member having a base seated on said jamb, a forward wall in perpendicular relation to said jamb, and a rearward wall in opposed spaced relation to said forward wall, said walls having confronting surfaces for reception of glass panels therebetween, each said rearward wall confronting surface having a longitudinally disposed undercut groove therein extending from end to end thereof, an adapter strip mounted in each said track member and having a rib seated in said groove, a lower end surface seated on said sill, and an upper end surface constituting an upper glass panel seat extending forwardly from said rearward wall, said seats being in opposed relation, the forward wall of one of said members terminating between said seat and said sill, a panel-engageable sealing strip seated in each said groove and extending from said seat to said headpiece, each said adapter strip having a face confronting said forward wall face and a groove in said strip face, and a panel-engageable sealing strip seated in each said last-mentioned groove and extending from said sill to said seat.

3,130,457
SASH BALANCE

Alfred H. Anderson, Rte. 4, Brainerd, Minn.

Filed Sept. 24, 1962, Ser. No. 225,674
1 Claim. (Cl. 20—52)

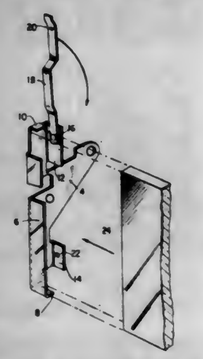


In a sliding sash window and sash balance structure, the combination comprising a window frame having a channel within which a stile of the window sash is adapted to slide, there being a narrow space between the opposed faces of the frame and stile within said channel, said face of the stile having a central longitudinal U-shaped groove formed therein facing said face of the frame, a one-piece resilient sheet material arrestor strip interposed between the stile and frame within said channel and having a central longitudinal portion which is U-shaped in cross section and engaging bodily within said groove and conforming substantially to the shape of the groove, opposite side longitudinal flanges on said arrestor strip formed integrally with said central portion and projecting laterally outwardly therefrom substantially equidistantly on opposite sides thereof, said flanges lying bodily within said narrow space between said opposed faces and being substantially flat, the longitudinal free edges of said flanges frictionally engaging the inner side faces of said channel, the resiliency and tension of said strip maintaining said frictional engagement, the overall width of said strip between said edges being slightly greater than the width of said channel when the sash is in place, and fastener means to anchor said central portion of the strip within said groove, near the bottom of the groove.

3,130,458
JALOUSIES

Fred Zacharias, Brooklyn, N.Y., assignor to Achar Manufacturing Company, Richmond Hill, N.Y., a corporation of New York

Filed Oct. 12, 1961, Ser. No. 144,613
1 Claim. (Cl. 20—62)

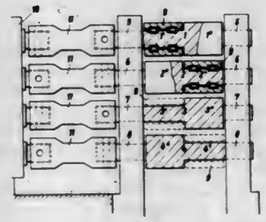


A bracket device for securing panels of a jalousie or the like, comprising, an offset arm, an end flange extending vertically from said arm and disposed perpendicularly to said arm, said flange terminating in an inturned lower portion and an inturned upper portion, a pair of intermediate flanges extending from said arm and spaced from said end flange a distance greater than the thickness of said panels and parallel to said end flange, all said flanges forming a holder for receiving a jalousie panel and a spring strip element having one end pivotally secured to one of said intermediate flanges and formed with a substantially concave part adapted to engage with a jalousie panel when inserted between said spring and in said end flange, said spring having a free end portion engaging with the other of said intermediate flanges for tensioning the concave part against said panel, said spring element being pivotable in a plane parallel to said intermediate flanges.

3,130,459
EXTRUSION CONVEYOR APPARATUS FOR MULTIPLE CASTING INSTALLATIONS

Adolf Bungeroth and Hans Schrewe, Duisburg, Germany, assignors to Mannesmann Aktiengesellschaft, Dusseldorf, Germany, a German company

Filed Nov. 2, 1962, Ser. No. 234,990
Claims priority, application Germany Nov. 24, 1961
2 Claims. (Cl. 22—57.5)



1. Extrusion conveyor apparatus for multiple extrusion casting installations comprising a multiplicity of pairs of driving rollers arranged one below the other, in combination with a multiplicity of intercalated pairs of conveyor rollers driven by said driving rollers in which each conveyor roller has two parts of different diameters, the parts of the same diameter in each pair facing toward each other, one of the parts in each conveyor roller being of equal diameter to a part in the other conveyor roller of the pair and any one pair of conveyor rollers being located facing one another, but the parts of the pairs of conveyor rollers located underneath one another being different in diameter.

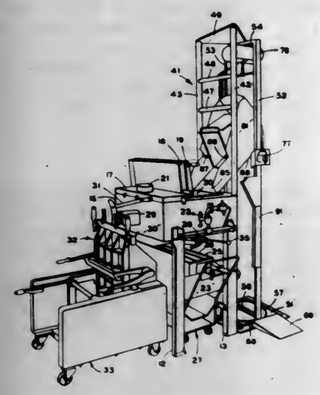
3,130,460
MECHANICAL DEVICE

Lee C. Hammond, Kalamazoo, Mich., assignor to Hammond Machinery Builders, Inc., Kalamazoo, Mich., a corporation of Michigan

Filed July 31, 1961, Ser. No. 128,147
2 Claims. (Cl. 22—80)

1. In combination with a melting pot for printer's metal, an elevator comprising:
- a pair of spaced, upstanding stationary members adjacent said melting pot and extending upwardly thereabove;
- a vertically elongated frame comprising a pair of uprights and upper and lower frame members extending between and joining said uprights;
- pivot means spaced from and fixed with respect to said upstanding, stationary members and connected to said upper and lower frame members and supporting said frame for pivotal movement about a vertical axis through said upper and lower frame members;

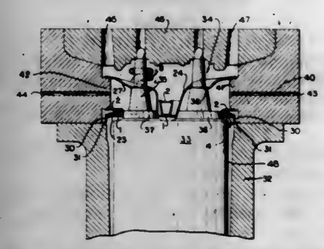
a hopper disposed within said frame and means for effecting vertical movement of said hopper within said frame, said hopper having a bottom wall, an upstanding discharge wall, and a pair of upstanding side walls adjacent said uprights, said hopper being open at the top and at the side opposite the discharge wall thereof for loading of scrap printer's metal thereinto;



abutment means mounted on and projecting into said hopper and being spaced from said bottom wall a sufficient distance to permit a scrap truck to be received therebetween whereby when said discharge wall is in an inclined position, said abutment means will engage the scrap truck to retain same within the hopper while permitting the contents of the scrap truck to be discharged into said melting pot;

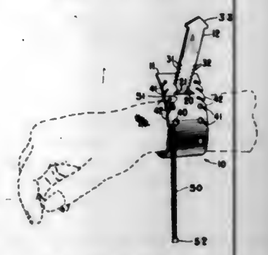
guide means for guiding vertical movement of said hopper and mounted on said uprights, said guide means including means for pivoting said hopper in response to said vertical movement and about a horizontal axis through said uprights when said hopper is adjacent the upper end of said melting pot whereby the contents of said hopper can be discharged into said melting pot.

3,130,461
COOLING PASSAGES IN CAST ALUMINUM CYLINDER HEADS AND BLOCKS
Ferris V. Curtis, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 1, 1961, Ser. No. 128,517
3 Claims. (Cl. 22—203)



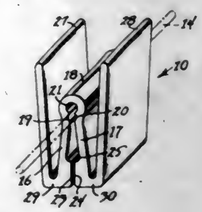
2. A method of casting an aluminum internal combustion engine component comprising the steps of positioning a permanent core within a mold cavity, inserting a hollow aluminum alloy preformed insert within said mold cavity, placing aluminum alloy tubular gas passage liners upon said permanent core, connecting fluid inlet and outlet means to said preformed insert, positioning an upper mold portion upon said mold cavity to form a complete mold cavity, and pouring a molten aluminum alloy within said mold cavity whereby an engine component comprising an integrally bonded hollow preformed insert and gas passage liners is formed.

3,130,462
BRACELET MOUNTING DEVICE
Robert J. Mitchell, 116 W. Lincoln St., Findlay, Ohio
Filed July 9, 1963, Ser. No. 293,731
2 Claims. (Cl. 24—16)



1. A device for applying a jewelry item around the wrist of a person comprising a strap of flexible material, the ends of said strap being adapted to releasably interlock, one end portion having formed therein an aperture, the other end portion having formed in each edge thereof a plurality of notches, said notches being so shaped as to resist removal of the notched strap end from said aperture when the notched strap end is inserted in said aperture, the notches in one strap edge being positioned substantially opposite the notches in the other strap edge, said aperture defining a first area adapted to admit said notched end of said strap without resistance, and a second area adapted to admit only the cross-section of said strap at a notched position, said strap having a plurality of perforations formed therein adjacent an edge of said strap and a like plurality of slots formed in said strap edge communicating with corresponding perforations to provide entry of an article to said perforation for retention of said article within said perforation, each said slot diminishing in size toward its corresponding perforation thereby aiding in guiding the article into the perforation and resisting the removal of the article from the perforation.

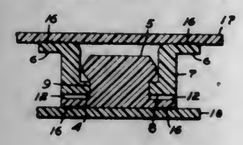
3,130,463
GARMENT CLIP
Eldridge D. Posey, Rte. 5, Murfreesboro, Tenn.
Filed Apr. 13, 1962, Ser. No. 187,402
2 Claims. (Cl. 24—137)



1. A garment clip comprising:
(*a*) spaced inner clamping arms having upper ends and lower ends,
(*b*) resilient means for joining said upper ends and biasing said arms together,
(*c*) opposed inner grooves on said arms spaced between said joining means and said lower ends for receiving an elongated support member,

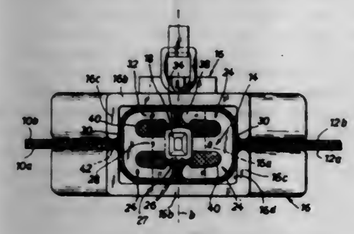
(*d*) said lower ends comprising jaws having inner opposed, substantially flat, parallel surfaces, and extending inwardly from said arms to provide a space between said arms and between said jaws and said grooves for receiving the upper extension of a garment clamped by said jaws,
(*e*) substantially parallel outer lever members joining said lower ends and extending above said joining means, said lever members being adapted to extend within and suspend a pants cuff, and
(*f*) each lever member being spaced from and out of contact with its corresponding arm.

3,130,464
SEPARABLE PLASTIC SNAP FASTENER
Norman M. Barlow, Natick, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed July 10, 1961, Ser. No. 123,043
1 Claim. (Cl. 24—208)



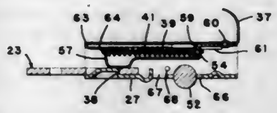
A separable snap fastener comprising a male stud member and a female socket member, each having a different external configuration, of an extruded plastic material, and at least one of which is yieldable, said male stud member having a head and a neck extending from a base, said head and neck being formed by shoulders on opposed sides only, and the said female socket member having a base and a hollow extension of said base having an upper end face wall provided with an aperture for passing the head of a stud into the hollow extension, and said hollow extension being open at opposed sides, said stud passing aperture surrounded by a stud engaging wall to hold the male and female members in snapped engagement.

3,130,465
COVERED SEPARABLE FASTENER
Ernst Ryser, Via Turconi, Mendrisio, Switzerland, assignor of one-half to Bertrand Voumard, La Chaux-de-Fonds, Switzerland
Original application May 1, 1957, Ser. No. 656,306, now Patent No. 3,037,255, dated June 5, 1962. Divided and this application Mar. 14, 1962, Ser. No. 179,733
Claims priority, application Switzerland Mar. 5, 1957
5 Claims. (Cl. 24—205.1)



1. A covered separable fastener comprising first and second stringers each consisting of a pair of stringer tapes, said stringer tapes having opposite edge portions, and interlocking fastener members secured in longitudinally spaced relation to said opposite edge portions of said stringer tapes, said stringer tapes defining a stringer tape plane, said interlocking fastener members being symmetrical with respect to the stringer tape plane, said interlocking fastener members each comprising a coupling head, a neck portion narrower than said coupling head, said neck portion including a side surface, and a pair of tape engaging legs, each of said tape engaging legs including a straight portion, a nose portion on said straight portion and a side surface, said tape engaging legs defining a flat end surface for the respective fastener member which is remote from the coupling head and which lies perpendicular to the stringer tape plane, said nose portion extending laterally adjacent said coupling head and directed towards said neck portion, said coupling head cooperating with said nose portion of said tape engaging legs for securing said stringer tapes to said members, said stringer tapes engaging the whole side surface of said neck portion and the side surfaces of said tape engaging legs and being in locked relation therewith, said stringer tapes emerging from both sides of said fastener members laterally of said coupling head and said nose portion to a position midway of the coupling head at the longitudinal center plane of said fastener members and extending at right angles to said first-mentioned plane with said nose portions holding said stringer tapes in engagement with said coupling head, so that with the separable fastener closed the stringer tapes emerging from the fastener member of one stringer is in contact with the stringer tapes emerging from the fastener members of the other stringers, said stringer tapes emerging from each fastener member and enveloping said legs and lying in flat face to face contact with the fastener along said end surfaces thereof and means for joining said stringer tapes to each other in a region immediately opposite said flat end face to retain said stringer tapes in contact therewith to permit a slider to pass thereover.

3,130,466
SIMPLIFIED SLIDE-ACTION BUCKLE MECHANISM
Andrew G. Carter, Grand Rapids, Mich., assignor to Andrew G. Carter and Harriett T. Carter, doing business as Carter Engineering Company, Grand Rapids, Mich., a partnership
Filed Feb. 6, 1961, Ser. No. 87,298
4 Claims. (Cl. 24—230)



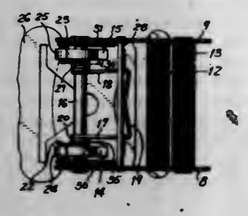
1. A buckle mechanism comprising:
a first buckle section, said first buckle section having a tongue portion;
a second buckle section, said second buckle section including a frame having a base portion, said tongue and base portion having transversely interengageable means for transfer of belt forces when said tongue and base portions are in overlapping relationship, said interengageable means being disengageable on separation of said tongue portion from said base portion, said frame also having means forming a guideway;
a slide assembly mounted for sliding movement on said guideway, and having a bearing portion disposed in locking position of said slide member to maintain the engagement of said interengageable means, and being movable to a position releasing said interengageable means; and
biasing means urging said slide assembly to locking position,

said biasing means including a transverse anchor member having the ends thereof normally fixed with respect to said frame, said anchor member being disposed within said slide assembly,

said biasing means also including a wire member disposed within said slide assembly and having one end thereof engaging said slide assembly and the opposite end slidably engaging said anchor member,

said biasing means also including a coil spring surrounding said wire member and having one end thereof engaging said slide assembly, the opposite end of said spring bearing against said anchor member.

3,130,467
SAFETY BELT BUCKLE
Frank L. Davis, College Point, N.Y.
(30 Mariners Lane, Northport, Long Island, N.Y.)
Filed Aug. 13, 1962, Ser. No. 216,571
3 Claims. (Cl. 24—230)



3. A safety belt buckle comprising the combination of a frame,

a pivot pin mounted in said frame,

a web end plate insertable in said frame beneath said pivot pin,

latch dogs pivoted on said pin in spaced relation and in position to engage and hold said web end plate,

a cover forming lever pivoted on said pin at the outer sides of said latch dogs,

said cover forming lever having one-way connection for rocking said latch dogs free of said web end plate and

said latch dogs having one-way connection for holding said cover forming lever in closed position on the frame,

a U-spring having side portions terminating in coils embracing the pivot pin and

end portions engaging said latch dogs to rock them into engagement with the web end plate,

said side portions of the spring being connected by an intermediate spacing portion overlying and bearing on the end plate inserted in the base,

and a member on the frame overstanding said intermediate spacing portion of said U-spring for restraining rocking movement of said spring on the pivot pin.

3,130,468
BRICK MACHINE DIE CHANGING DEVICE
Charles R. McFall, Johnson City, Tenn., assignor to Johnson City Foundry and Machine Works, Inc., Johnson City, Tenn., a corporation of Tennessee
Filed Sept. 21, 1961, Ser. No. 139,684
1 Claim. (Cl. 25—17)

In an apparatus for manufacturing bricks the combination which comprises a brick clay extrusion machine having a generally cylindrical conduit with an outlet at one end and an outwardly extending flange around said outlet, an orifice plate affixed to said flange and covering said outlet, said plate having an extrusion orifice therethrough, a reciprocable die support plate mounted across said orifice plate and defining first and second openings through said support plate, a pair of guide rails affixed to opposite sides of said orifice plate, said rails having spaced apart flange portions extending inwardly across and continuously along the full length of the outside edges of said support plate, a plurality of reinforcing bars fixed to the outer face of said support plate, said bars being transverse to said rails and terminating inside of said flanges, a hydraulic cylinder to reciprocate said support plate to selectively align either of said openings with said orifice, a pair of hollow frusto-conical die members having wide base portions positioned against said support

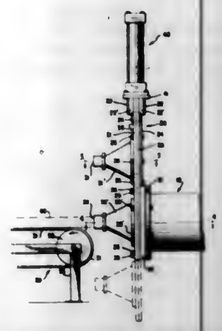
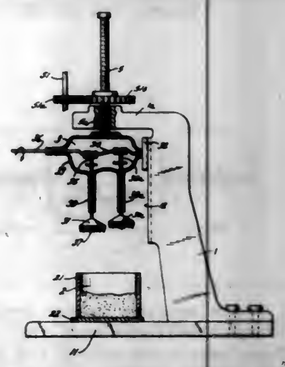


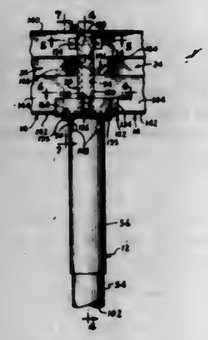
plate over said openings between said flanges, said die members extending axially outwardly beyond said flanges and terminating in die outlets of different sizes to extrude brick columns of correspondingly different sizes, separable threaded fasteners individually and removably connecting each of said die members to said support member, said separable fasteners being accessible to permit individual removal of each of said die members when the other die member is operatively aligned with said orifice so that the non-operative die member may be replaced by another die member without interruption in the extrusion of brick columns from said machine.

3,130,469
APPARATUS FOR THE SHAPING OF TOUGH GRANULAR SUBSTANCES
Günter Helmrich, Grevenbroich, Germany, assignor to Vereinigte Aluminium Werke, Bonn, Germany
Filed May 20, 1960, Ser. No. 30,597
Claims priority, application Germany May 23, 1959
9 Claims. (Cl. 25—41)



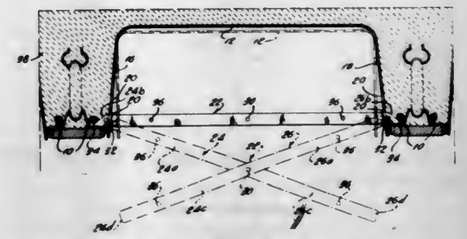
1. A machine for compacting a tough granular mass into the form of a shaped article which comprises, in combination, a mold formed with opening means and adapted to receive the granular mass; a tamping member extendable through said opening means into compressive contact with the mass in said mold, said tamping member having a tamping surface whose area at least approximates the cross-sectional area of the mold so that the granular mass is substantially completely surrounded when the tamping member extends into said mold; means for reciprocating said tamping member at a predetermined frequency with strokes of predetermined length; and means for maintaining said tamping member in uninterrupted compressive contact with the mass in said mold so that said tamping member transmits to the mass a continuous compressive face during reciprocation thereof.

3,130,470
CONCRETE WALL FORM INSTALLATION
George F. Bowden, Des Plaines, and Byron E. Ruth, Chicago, Ill., assignors to Symons Mfg. Company, a corporation of Delaware
Filed Jan. 24, 1961, Ser. No. 84,574
11 Claims. (Cl. 25—131.5)



6. A concrete form installation for producing, in a building construction, a horizontal floor slab, said installation comprising a plurality of spaced apart vertical shores arranged in spaced parallel rows extending longitudinally of the installation, said shores being vertically adjustable and having their upper end brackets each of which embodies a pair of horizontal channel-shaped ledge-forming members extending outwards in opposite directions and lengthwise of the installation, a series of elongated narrow stringers arranged in end-to-end relationship and substantial contiguity and alignment, having the ends thereof mounted in and connected removably to said ledge-forming members of the brackets on the upper ends of the shores of each row, and bridging the distances between adjacent shores of the row, said stringers being in the form of I-beams and presenting upper edge surfaces which lie in a common horizontal plane, a plurality of form panels disposed between each series of aligned stringers and presenting panel facings which lie in said horizontal plane and, in combination with said upper edge surfaces of the stringers, define a smooth unbroken upwardly facing slab-supporting surface upon which the wet concrete of the slab is adapted to be poured, horizontal supporting rails movably mounted on the sides of the stringers and capable of limited vertical movements between a raised panel-supporting position and a lowered panel-releasing position, said rails, when in their raised positions, presenting upwardly facing panel-supporting surfaces which are spaced downwardly from said horizontal plane a distance equal to the thickness of the panels supported on such surfaces, and means for releasably supporting said supports in their raised position.

3,130,471
MOUNTING FOR CURVED BUILDING BOARDS FOR PRODUCING CONCRETE CEILINGS
Walter Zimmerschied, 7 August-Siebert-Str., and Hans Ungemach, 9 August-Siebert-Str., both of Frankfurt am Main, Germany, and Willy Kaiser, deceased, late of Frankfurt am Main, Germany, by Berta Kaiser and Brigitte Kaiser, sole heiresses, both of 16 Myliusstrasse, Frankfurt am Main, Germany
Filed Nov. 28, 1961, Ser. No. 156,193
Claims priority, application Germany Dec. 30, 1955
6 Claims. (Cl. 25—131.5)

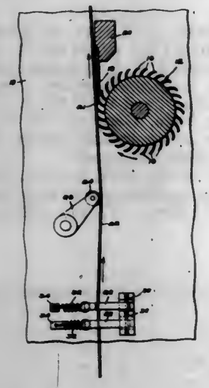


1. A liner construction for forming concrete between and around spaced supporting beams in a ceiling construction and the like comprising a trough-shaped liner having a top wall and two side walls adapted to be disposed between the supporting beams with the side walls extending downwardly, said side walls each having a slot defined therein, and combination supporting, reinforcing and releasing means including a pair of bars pivotally connected together intermediate their lengths each having one leg portion extending outwardly from said pivot in a direction opposite to the similar leg portion of the other bar into a respective slot of the side wall of said trough-shaped liner, means to secure said leg portion against withdrawal through such slot from the exterior of said side walls, said bars also including a second leg portion of a length so that when aligned with said first leg portion of the other of said bars, it bears against the interior face of a respective side wall and to force it into an outwardly extending position and to reinforce it in such a positon for receiving concrete against the exterior face thereof.

3,130,472
SELVAGE TIGHTENER FOR FABRIC SHEARING MACHINES
Lyman D. Bickford, Springfield, Vt., assignor to Riggs & Lombard Inc., Lowell, Mass., a corporation of Massachusetts
Filed Feb. 4, 1963, Ser. No. 255,854
3 Claims. (Cl. 26—15)

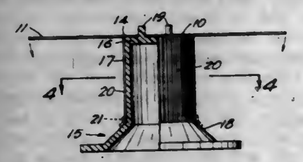
1. In a cloth shearing machine, a frame, a cylinder rotatably mounted at its ends in the frame and having a plurality of spaced shearing blades extending longitudinally thereof at its periphery, a ledger knife disposed longitudinally of the cylinder and having one longitudinal margin in shearing relation with the blades, means for supporting in full width and conducting longitudinally through the machine to and past the ledger knife and blades a strip of fabric to be sheared, two relatively long arms pivoted to the frame respectively adjacent to and outwardly of the two margins of the strip forwardly of the ledger knife and each extending therefrom inwardly toward the opposite margin over and relatively inclined longitudinally to one face of the strip and movable about its pivot axis toward and from the strip, and means for maintaining the arms pivoted in predetermined pressure

contact with adjacent marginal portions of the strip at said one face, thereby removing slack from said portions



and holding the strip taut as it passes to the ledger knife and shearing blades.

3,130,473
SCREEN GRID FOR POWER TUBES AND METHOD OF MAKING THE SAME
Norman B. Mears, Dakota County, Minn.
(1170 Dodd Road, St. Paul, Minn.)
Filed Sept. 17, 1962, Ser. No. 224,013
10 Claims. (Cl. 29—25.14)



1. A method of making a screen grid of cup shape comprising:

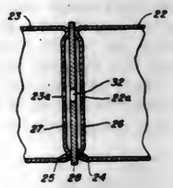
(*a*) forming from a sheet metal blank a centrally located end wall member and a multiplicity of grid bars of substantially uniform cross sectional size integral with and radiating from the periphery of said end wall member;

(*b*) bending and holding said bars so that they extend in substantially parallel relation one to the others in the shape of a tubular grid at one side of said end member, and

(*c*) connecting the ends of said bars remote from said end member to a metal ring, providing an annular base for supporting the grid.

3,130,474
MANUFACTURE OF ELECTRON DISCHARGE DEVICES
Joseph P. Fiore, Chicago, Ill., assignor to The Rauland Corporation, Chicago, Ill., a corporation of Illinois
Filed July 30, 1962, Ser. No. 213,514
3 Claims. (Cl. 29—25.17)

1. In the manufacture of an electron gun for a cathode ray tube having contiguous and coaxially aligned apertured first and second grid electrodes with the axial separation of their apertures controlled to a predetermined amount, the steps of: forming a pair of similar and apertured electrodes of generally planar construction; forming on one face of each of said electrodes near the periphery thereof at least one projection having a surface area that is a minor fraction of the surface area of said electrode and having a depth, measured with respect to the portion of said electrode immediately surrounding the aperture thereof, corresponding to a predetermined fractional portion of said axial separation; positioning said electrodes with said apertures in coaxial alignment, with said projections thereof in facing alignment and with a gauge element between and in contact with said facing projections to establish the separation of said apertures at said predetermined amount; securing said electrodes against relative movement; and removing said gauge element from between said projections.



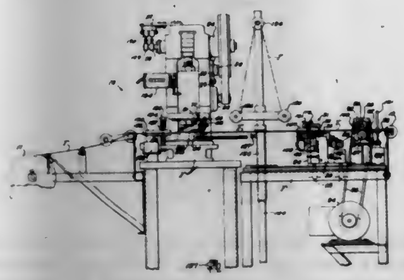
3,130,475
ELECTRICAL CAPACITOR
Harold F. Rieth, Los Angeles, Calif., assignor to Packard-Bell Electronics Corporation, Los Angeles, Calif., a corporation of California
Filed Feb. 11, 1960, Ser. No. 9,413
11 Claims. (Cl. 29—25.42)



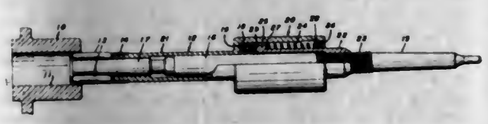
1. A method of manufacturing a ceramic capacitor, including, the steps of providing a thin sheet of high temperature conductive metal to form a basin-shaped disc having a turned-down peripheral edge with a thin strip of metal extending from the peripheral edge, depositing a layer of ceramic material on the back of the basin-shaped disc, heating the ceramic layer and disc to a temperature of approximately 2000 degrees Fahrenheit, depositing a thin layer of silver on a portion of the ceramic layer, heating the silver layer, the ceramic layer and the disc to a temperature of approximately 1000 degrees Fahrenheit, and soldering a thin strip of conductive material to the silver layer.

3,130,476
SCOOP CUTTING AND BOTTOM STOP MACHINES COMBINATION THE MACHINES AND CONTROL MEANS THEREFOR
Otto G. Scheuermann, Westfield, N.J., assignor to General Zipper Corporation, Long Island City, N.Y., a corporation of New York
Filed June 18, 1958, Ser. No. 742,787
37 Claims. (Cl. 29—33)

1. A machine combination for a slide fastener tape having scoops comprising a scoop cutting machine including a scoop punch, a tape track under the scoop punch, operating means to operate the scoop punch, and control means spaced from the scoop punch and engaging in a gap formed by cut out scoops in the tape to stop the tape and initiate operation of the scoop punch operating means and the scoop punch; a bottom stop machine including means to apply a bottom stop to the tape, a tape track under the bottom stop applying means, operating means to operate the bottom stop machine, and control means located adjacent to the means to apply the bottom stop engaging in a gap formed by the cut out scoops to stop the tape and initiate operation of the operating means for the bottom stop machine; feed means to feed the tape through both machines at the same rate, and control mechanism for both of said control means and operable by any variation in the length of the tape between machines to render the control means inoperable.

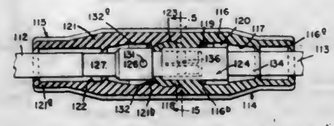


3,130,477
ROLLER BURNISHING TOOL WITH RELEASE-SPRING ADJUSTMENT
Warren E. Gill, Spring Lake, Mich.
Filed Jan. 23, 1961, Ser. No. 84,298
5 Claims. (Cl. 29—90)



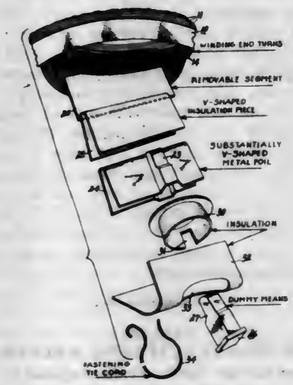
1. A burnishing tool comprising: a driving spindle having a driving and a threaded portion at one end and a conical portion at the other end; a burnishing element assembly including a plurality of burnishing elements surrounding said conical portion and a cage member positioning said elements axially and peripherally with respect to said spindle; an elongated nut axially adjustable along said threaded portion; a tubular housing surrounding said spindle and having one end connected to said cage, said housing having at the other end thereof an expanded interior portion having a bottom and seating a thrust bearing means on said bottom, said elongated nut having a portion partially contained within said expanded portion and having a remaining portion extending axially therefrom at said other end thereof, and means biasing said bearing between said nut and said bottom.

3,130,478
METHOD OF APPLYING ELECTRIC COUPLER ELEMENTS AND PROTECTING SLEEVES TO CABLES
Charles H. Stevens, Jr., Cornwall Bridge, Conn., assignor to Empire Products Inc., Cincinnati, Ohio, a corporation of Ohio
Continuation of abandoned application Ser. No. 461,505, Oct. 11, 1954. This application Apr. 4, 1958, Ser. No. 726,583
1 Claim. (Cl. 29—155.5)



The method of interconnecting a pair of cable ends comprising connecting a coupler element with the electrical conductor means of each of said cables, then introducing each of said coupler elements with the attached cable through one end portion of a preformed hollow insulating sleeve such that the coupler elements are surrounded by and housed within the associated insulating sleeves with substantial portions of the coupler elements and associated cable ends spaced from the associated sleeves, effecting a fluid-tight joint between the insulation covering of each of the cable ends and only one end portion of the associated insulating sleeves, moving said coupler elements into contacting relationship and rotating them into locked position and substantially simultaneously automatically moving interengaging complementary faces on the insulating sleeves into cooperating relationship to provide a fluid-tight seal therebetween.

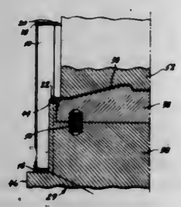
3,130,479
ASSEMBLY METHOD FOR OVERLOAD PROTECTOR MEANS
Bernard J. Pleiss, Jr., Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 6, 1961, Ser. No. 93,391
1 Claim. (Cl. 29—155.5)



In a procedure for establishing an overload protector mounting in the end turns of a dynamoelectric machine stator windings, the steps comprising, forcing a wedge

into the end turns of the stator winding to form a pocket therein; removing said wedge; forming a V-shaped segment of sheet insulating material; contouring a metal foil heat sink around a dummy means, said dummy means having the same general shape as an actual overload protector; telescoping the V-shaped segment and the heat sink with said dummy means; forcibly driving the telescoped segment, heat sink and dummy means into the pocket in the end turns; applying an insulating coating to the end turns; curing said coating; and removing said dummy means for replacement by an actual overload protector.

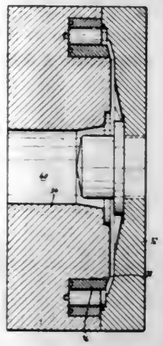
3,130,480
METHOD OF MAKING CENTRIFUGAL BLOWER WHEEL
Kenneth A. Merz, Cornwall, Conn., assignor to The Torrington Manufacturing Company, Torrington, Conn., a corporation of Connecticut
Filed Dec. 31, 1958, Ser. No. 784,266
2 Claims. (Cl. 29—156.8)



1. A method for making a centrifugal blower wheel comprising the steps of providing a plurality of similar air moving blades each formed with a notch extending into the blade from one blade edge, each of said notches being partially circular with an arcuate edge which is substantially in excess of 180° in length, assembling said blades in longitudinal positions and in an annular series about a longitudinal axis with their notches forming an annular series and opening inwardly, providing a sheet metal supporting disc having a generally radial inner portion and an integral outer portion in the form of an annular flage which projects generally axially from said inner portion in one direction with its free edge of circular form and of a diameter slightly less than the diameter between the inner edges of the assembled blades, positioning said disc with its said free edge in register with the notches in the annularly assembled blades, and axially pressing said disc to effect relative axial movement between said blades and said disc inner portion and to cause said free edge on said flange to move generally radially outwardly into the blade notches, said pressing step including the step of obstructing the outward movement of said flange edge in interblade regions and in such manner that an annular portion of the flange adjacent said edge is curled to a partially circular cross-sectional shape complementary to the edge-to-edge dimensions of said notches and is inherently stressed during curling so as to be in pressure engagement with the edges of said blade notches whereby to lock the blades in fixed relationship to the disc upon release of said axial pressure.

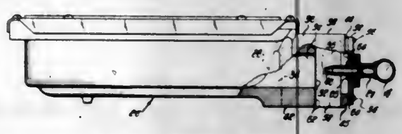
3,130,481
METHOD OF MANUFACTURING A BLADE WHEEL
Karl Gustav Åhlén, Fridhemsgatan 2, Stockholm K, Sweden
Filed Mar. 11, 1960, Ser. No. 14,474
Claims priority, application Sweden Mar. 14, 1959
6 Claims. (Cl. 29—156.8)

1. Method of manufacturing a blade wheel by casting a blank having the shape of a disk provided with a ring of individual axial projections, each of uniform width along the axial length thereof but of slightly greater dimensions than the finished blade, by machining the disk



to final shape, and by cutting the whole length of each blade in a single operation by a milling cutter controlled by a pattern to cut in directions normal to the axis of the wheel.

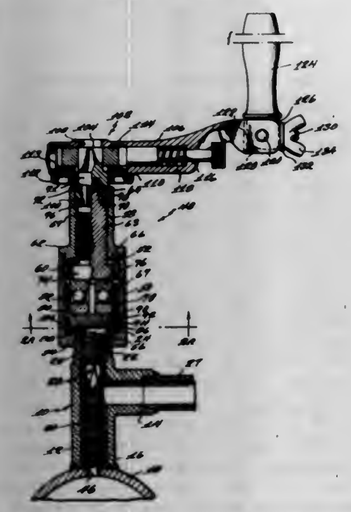
3,130,482
METHOD OF CONSTRUCTING AND ASSEMBLING BURNERS
Philip M. Forniti, Cleveland, Ohio, assignor to Hupp Corporation, Cleveland, Ohio, a corporation of Virginia
Filed Oct. 7, 1959, Ser. No. 844,915
4 Claims. (Cl. 29—157)



1. A method of constructing and assembling a gas burner of the type having a radiation surface rendered incandescent by the combustion of fuel thereon or adjacent thereto, said gas burner comprising a housing forming a mixing chamber for gaseous fuel and air, a mixing tube within said housing adapted to convey a mixture of fuel and air into said mixing chamber, said mixing tube having an inlet adjacent one end of said housing to provide a substantially cylindrical locating surface therein, a boss on said one end of said housing providing an air aspirator opening at said inlet end of said mixing tube, said method comprising the steps of providing an unfinished gas burner housing, forming a first gauging surface on said boss normal to the longitudinal axis of said locating surface and using said locating surface as a guide, providing a fluid conduit and a flange, forming an opening in said flange centrally thereof and locating means in predetermined relation with said opening, securing said conduit in said opening with the axis of said conduit normal to said flange and in predetermined relation to said locating means whereby said flange provides a second gauging surface, mounting a fuel nozzle on said conduit coaxially of said conduit and in predetermined relation to said second gauging surface, providing locating means on said first gauging surface so positioned that when said first and second gauging surfaces are placed in full surface contact and the respective locating means on said surfaces are aligned with one another, the fuel nozzle will extend into said gas burner and have its longitudinal axis in substantially exact coincidence with the longitudinal axis of said mixing tube, placing said first and second gauging surfaces

in full surface contact, aligning said locating means, and securing said surfaces rigidly to one another in this position.

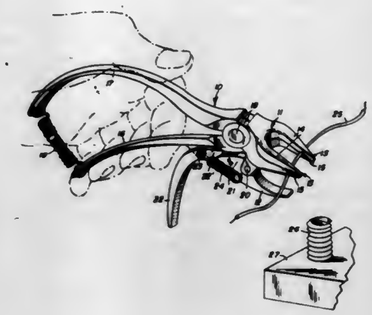
3,130,483
SERVICE T AND METHOD AND APPARATUS FOR CLOSING SAME WHEN IN SERVICE
Frank H. Mueller and John J. Smith, Decatur, Ill., assignors to Mueller Co., Decatur, Ill., a corporation of Illinois
Filed Apr. 27, 1962, Ser. No. 190,681
13 Claims. (Cl. 29—157)



1. Method of providing a service connection to a pressurized gas main or the like comprising the steps of:
(1) welding a metal service T to the main with one end of the T through bore adjacent thereto, the T being interiorly threaded along said bore and exteriorly threaded adjacent the other end of said bore;
(2) joining a service line to the lateral outlet of the service T and closing said service line from the surrounding area whereby escape of pressurized fluid is prevented;
(3) inserting a cooperatively threaded tap into the other end of the bore and rotating said tap toward said main to tap a hole therein, the escaping pressurized fluid being confined by said tap and said blocked service line;
(4) retracting said tap to a position within said through bore a distance sufficient to provide fluid flow through into the service line;
(5) threading a crimping tool onto the exterior threads adjacent the other end of said bore of said T;
(6) and bending the metal of said T radially inwardly beyond its elastic limit at said opposite bore end by use of said tool to thereby confine said tap within said through bore;
(7) removing said crimping tool; and
(8) threading a closure cap onto said other bore end of said T.

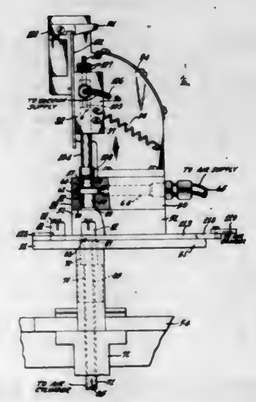
3,130,484
CONNECTING TOOL
John S. Zdanis, Watertown, Conn., assignor to The Siemon Company
Filed June 27, 1961, Ser. No. 120,059
3 Claims. (Cl. 29—203)

1. A tool for connecting an electric wire to a helical connector of the close coil type, said tool comprising a bifurcated wire gripping means comprising a pair of elements terminating in coacting free ends thereof, said free ends being formed to provide a pair of spaced gripping tines adapted to hold an electric wire extending across the space between said pair of spaced gripping tines; and a contacting member pivotally connected to said bifur-



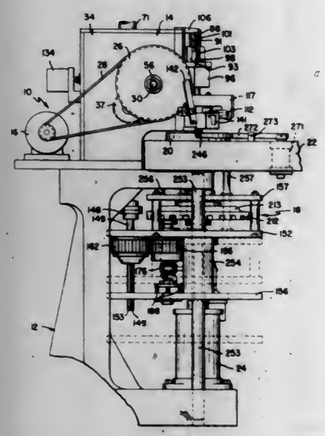
cated wire gripping means, one free end of said contacting member being positioned intermediate said pair of spaced gripping tines; whereby when said contacting member is engaged against a helical connector positioned between the spaced tines, an electrical conductor held by said tines may be forced into a position between adjacent coil turns of said helical connector.

3,130,485
APPARATUS FOR EXTRACTING TUBE MOUNTS FROM ASSEMBLY JIGS
Walter A. Preuss, West Orange, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Sept. 18, 1961, Ser. No. 138,670
13 Claims. (Cl. 29—203)



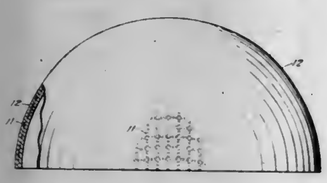
1. Apparatus for removing an electron tube mount from a jig, said apparatus including means having a chamber adapted to receive a jig therein, means for inserting said jig into said chamber, means for blowing a mount in said jig from said jig and said chamber, and means adjacent said chamber for receiving said mount, said last-named means including a housing and a tubular shaft slidably mounted in said housing, one end of said shaft being disposed adjacent said chamber, and said one end including a yieldable tubular means for receiving a mount blown from said chamber.

3,130,486
COMMUTATOR ASSEMBLING MACHINE
Washington J. Caldwell, Garden City, Mich., assignor to Eltra Corporation, Toledo, Ohio, a corporation of New York
Filed Dec. 1, 1960, Ser. No. 73,065
7 Claims. (Cl. 29—205)



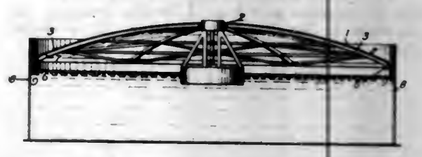
1. In a device of the class described, a central means for embracing and holding the inner edge of an insulating segment of a commutator, an outer concentric holding means for embracing and holding the outer edge of the insulating segment, said inner and outer holding means cooperating together to hold a number of insulating segments in spaced relation along radial lines and means for holding conducting commutator segments in the space between the insulating segments held in vertical position by the inner and outer holding means.

3,130,487
METHOD OF MAKING FINE MESH DOME-SHAPED GRIDS
Norman B. Mears, Dakota County, Minn. (1170 Dodd Road, St. Paul, Minn.)
Filed Dec. 17, 1962, Ser. No. 245,001
14 Claims. (Cl. 29—424)



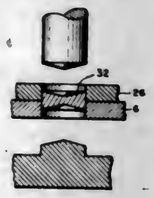
1. A method of making a fine mesh dome-shaped grid which comprises:
(*a*) forming in a first annealable metal or alloy a fine mesh screen having a multiplicity of apertures of predetermined size or sizes;
(*b*) encasing said screen and filling said apertures therein with a dissimilar malleable second metal to form a bimetallic sheet;
(*c*) annealing said fine mesh screen;
(*d*) imparting to said bimetallic sheet a predetermined dome shape, and
(*e*) treating said dome shaped bimetallic sheet to remove the encasing second metal from the remaining fine open mesh grid of dome shape.

3,130,488
METHOD OF MOUNTING A ROOF CONSTRUCTION IN A CISTERN
Georg Lindström, Arboga, Sweden, assignor to Sveremo Aktiebolag, Arboga, Sweden
Filed Feb. 17, 1961, Ser. No. 90,023
3 Claims. (Cl. 29—428)



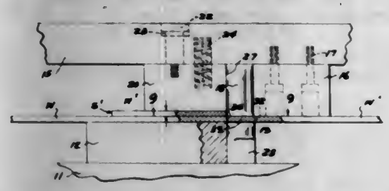
1. A method of mounting a roof construction adapted to float in a cylindrical cistern said roof construction having radial beams that extend from the center of the roof construction substantially to the internal circumferential surface of the cistern, the outer ends of adjacent radial beams being secured together by straight tie members whereby the midpoint of each tie member is spaced from the internal circumferential surface of the cistern and wherein the ends of the radially outwardly projecting beams remote from the center, together with the tie member attached to said beam ends, substantially reach the internal circumferential surface of the cistern and the roof ber attached to said beam ends, substantially reach the internal circumferential surface of the cistern and the roof construction within the cistern is raised by buoyancy caused by filling the cistern with fluid substantially to the level it is to occupy in mounted position, comprising raising the roof construction within the cistern by buoyancy caused by filling the cistern with fluid, mounting roof construction supporting brackets on the internal circumferential surface of the cistern in the spaces existing between said circumferential surface and the tie member halfway between the beam ends, rotating the roof construction so that the beam ends register with said brackets, and then securing the beam ends to said brackets.

3,130,489
METHOD OF FASTENING TOGETHER PIECES OF MATERIAL
Ernest L. Schlage, Hillsborough, Calif., assignor to Schlage Lock Company, a corporation
Filed July 11, 1960, Ser. No. 42,065
8 Claims. (Cl. 29—432)



1. A method of fastening together pieces of material, comprising, first providing a nether piece having a recess of a predetermined shape, then covering said nether piece and said recess with a continuous upper piece, then continuously exerting pressure on said upper piece in an area immediately above said recess and sufficient to sever a slug having an upper surface and a lower surface from said upper piece and to displace said severed slug part way from said upper piece and into said recess, and finally squeezing the upper and lower surfaces of said displaced slug until said squeezed slug is enlarged peripherally into engagement with the wall of the recess and the wall of the upper piece.

3,130,490
METHOD OF SECURING COIL ENDS
William J. De Gain, Detroit, Mich., assignor to Koppy Tool and Die Company, Ferndale, Mich.
Continuation of application Ser. No. 74,819, Dec. 9, 1960. This application Mar. 4, 1963, Ser. No. 262,781
1 Claim. (Cl. 29—432)

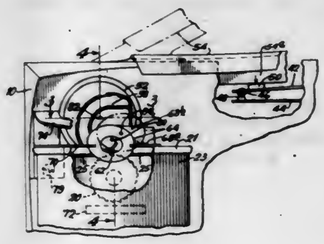


A method for interconnecting two metal strips, each having a flat, undeformed edge portion, in edge to edge abutting, coplanar relationship by means of a coplanar dovetail shaped tab, formed on the abutting edge of the first strip, interfitted and frictionally locked within a correspondingly dovetail shaped tab opening formed in the portion of the second strip adjacent its abutting edge, using a single male die punch spaced a short distance from and in cooperating punching relationship with a single female die having a punching surface and shaped to receive the male die punch, with the male die punch and female die being shaped to simultaneously punch the tab opening and the strip abutting edge at which the opening is formed, comprising essentially the steps of:
(*a*) placing and holding the edge portion of the second strip directly upon the punching surface of the female die between the punch and female die;
(*b*) moving the punch towards and into the female die a sufficient distance to completely sever said edge portion, with one stroke, into the form of a completed dovetail shaped tab opening and the abutting edge of the second strip and a removed scrap edge portion;
(*c*) continuing to hold the second strip, without moving it, upon the female die punching surface while moving the punch back to its original position away from the female die;
(*d*) and while continuing to hold the second strip without moving it, placing the edge portion of the first strip in overlapping position upon the edge portion of the second strip;
(*e*) again moving the punch towards the female die until the punch is spaced from the female die punching surface a distance equal to the thickness of the second strip, with the punched opening and the abutting edge of said second strip acting as the female die cooperating with the punch in completely severing the previously undeformed, edge portion of the first strip into the form of the dovetail shaped tab and abutting edge of the first strip and a removed scrap edge portion of the first strip, while the punch simultaneously presses the tab into the tab opening and presses the two strips into coplanar edge to edge, joined relationship;
(*f*) then moving the punch away from the female die and removing the now joined strips therefrom.

3,130,491
BONDING METHOD
Eustes V. Padgett, Jr., Richland, and Darl H. Warf, Pasco, Wash., assignors to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Filed July 26, 1962, Ser. No. 212,747
5 Claims. (Cl. 29—470)

1. A process of securely bonding a body of aluminum metal to a member of aluminum metal, comprising coating the surface to be bonded of said body with a layer of an aqueous 1.5 to 4 percent solution of a stearate selected from the group consisting of sodium stearate and potassium stearate, placing a member of aluminum metal on the soap-coated surface of the body, and subjecting the assembly thus obtained simultaneously to vibrations of a source of supersonic frequencies and to pressure whereby slippage between said source and said member and between said source and said body is prevented, the soap decomposes and a uniform, strong bond with enlarged weld areas and increased tensile-peel strength between the body and the member is obtained.

3,130,492
AUTOMATIC CUT-OFF MECHANISM FOR ELECTRIC CAN OPENER
Robert S. Knapp, St. Louis, Mo., assignor to Knapp-Monarch Company, St. Louis, Mo., a corporation of Delaware
Filed Apr. 20, 1962, Ser. No. 190,195
6 Claims. (Cl. 30—4)

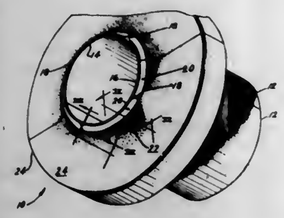


1. Automatic cut-off mechanism for an electric can opener comprising a base, a can rotating shaft journaled therein, a can rotating wheel on said shaft, a motor, step-down gearing between said motor and said can rotating shaft, said base having an opening spaced from said can rotating shaft, a lever having a hub rotatable in said opening, a retainer plate for said lever effective to retain said hub in said opening, a can lid cutter carried by said lever at a position offset from the axis of rotation of said hub, a control switch for said motor, said control switch being normally resiliently urged into open position, said lever in can opening position operating to cause said control switch to close, said cutter in the lid cutting position being urged in a direction to rotate said hub and lever into switch closing position, and thereby keep said control switch closed as long as any part of the lid is uncut relative to the can but allowing it to open when the lid is completely severed to effect automatic cut-off.

3,130,493
MEANS FOR REMOVING END FITTINGS FROM HOSES
William Arthur Scudieri, Hazardville, Conn., assignor, by mesne assignments, to Atlas Corporation, Kings, N.Y., a corporation of Delaware
Filed Oct. 20, 1960, Ser. No. 63,901
3 Claims. (Cl. 30—316)

1. Means for removing permanently attached end fittings from hoses or the like wherein the end fitting comprises an insert portion telescoped into the hose and a sleeve removably secured to the insert portion and forming therewith a socket for receiving the hose end, said sleeve being reduced in diameter and clamping the hose end against the insert, said removing means comprising a

longitudinally separable collar having an opening therethrough which is adapted to embrace the hose, said collar having a circumferentially extending radial flange and a tapered portion at one end inclined outwardly from said opening and blending with said flange and adapted to

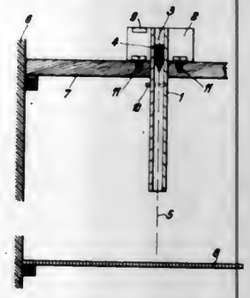


wedge between said sleeve and hose, said tapered portion having a pair of diametrically opposed nibs adjacent said opening projecting radially outwardly whereby the end fitting sleeve can be split along definite lines established by the nibs as the tapered portion of the collar is forced thereagainst.

3,130,494
DENTAL EQUIPMENT
Francis MacKay, Apt. 1, 33 Light St., Woodstock, Ontario, Canada
Filed July 12, 1957, Ser. No. 671,554
6 Claims. (Cl. 32—20)

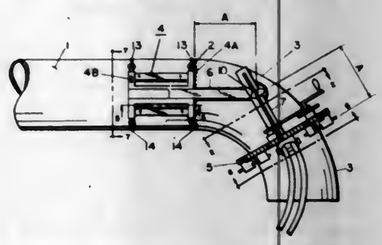
1. Means for obtaining data for use in the fitting of dentures, said means being designed for use in association with wax models of at least one of the upper and lower plates when said models are fitted in the patient's mouth, each such model including an occlusal rim, comprising: a framework having means for holding the patient's head in a position, said framework being provided with means to contact and mark each such rim and means to contact each of the condyles of the patient while said patient's head is held in position, and means for indicating the position of said condyles relative to the mark on each said occlusal rim, in combination with means mounted on said framework for measuring the condyle angle when said head is held in position and for indicating said angle relative to the positions of said condyles and said marks.

3,130,495
SURVEYING OF UNDERGROUND TUNNELS AND CHAMBERS
Heinrich Friedrich Schulte, Homberg, Lower Rhine, Germany, assignor to Rheinpreussen Aktiengesellschaft für Bergbau und Chemie, Homberg, Lower Rhine, Germany
Filed Oct. 23, 1957, Ser. No. 692,001
Claims priority, application Germany Oct. 26, 1956
13 Claims. (Cl. 33—1)



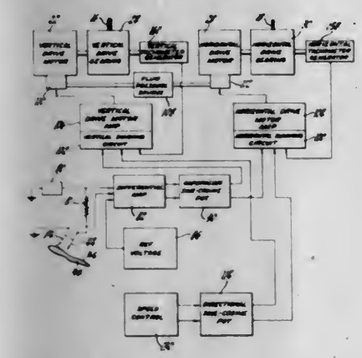
1. In the surveying of underground tunnels and chambers using an underground point in situ in an unobstructed vertical shaft as reference point relative to a predetermined position vertically directly thereabove, the improvement for establishing the underground point vertically directly below the predetermined position vertically directly thereabove at a remote distance therefrom which comprises firing a projectile vertically directly downwardly from the predetermined position thereabove into a target positioned at the level at which the underground point is to be established at said remote distance to form a puncture point in the target whereby said puncture point may be used in situ underground as the underground point for surveying.

3,130,496
ANGLE MEASURING AND CUTTING DEVICE FOR TUBULAR CONDUITS
Roy Dee Copeland, 3356 Catalina Drive, Chamblee, Ga.
Filed Dec. 14, 1960, Ser. No. 75,804
7 Claims. (Cl. 33—21)



1. A measuring device comprising a first linear measuring element, a second linear measuring element slidably connected with and angularly adjustable relative to said first linear measuring element, angle measuring means mounted on and affixed in position relative to said first linear measuring element, and indicating means pivotally connected with said first linear measuring element, said second linear measuring device being interposed between said indicating means and said angle measuring means and having indicia thereon disposed to register with a first part of said indicating means and said indicating means being movable linearly but not angularly relative to said second linear measuring element and indicating particular linear relationship therebetween and said indicating means being angularly but not linearly movable relative to said angle measuring means and to said first linear measuring element and having a second part for indicating particular angular relationships therebetween.

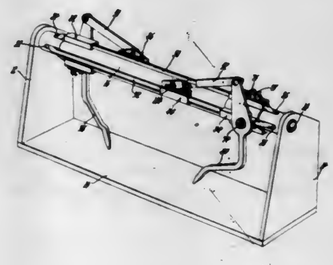
3,130,497
MOTION CONTROL APPARATUS
Robert B. Colten, Oak Park, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 24, 1960, Ser. No. 10,649
8 Claims. (Cl. 33—23)



1. Motion control apparatus comprising, in combination, an input transducer including an angularly positionable sensing element, the input transducer being constructed and arranged so as to develop a signal voltage corresponding in magnitude to the spacing between the tip of the sensing element and an object, a source of reference voltage corresponding in magnitude to a predetermined spacing between the tip of the sensing element and the object, means comparing the signal and reference voltages so as to develop two error voltages each of opposite polarity and of a magnitude corresponding to the difference between the signal and reference voltages, a sine-cosine potentiometer, means correlating the setting of the potentiometer with the orientation of the sensing element, the potentiometer being energized by the two error voltages so as to provide two sine-cosine related command voltages, two motors operative to maneuver the sensing element along paths substantially at right angles to each other, feedback means operative to provide a feedback voltage corresponding to the speed of each motor, and summing networks disposed between each motor and the potentiometer for vectorially adding the respective command and feedback voltages so as to produce a corresponding summed voltage, the two motors also each being operatively connected to the potentiometer and controlled by the respective summed voltage so as to cause in accordance therewith the predetermined spacing between the tip of the sensing element and the object to be maintained throughout 360° relative motion between the sensing element and the object.

3,130,498
DUPLICATOR
Julius Hezler, Jr., East Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 6, 1960, Ser. No. 34,152
11 Claims. (Cl. 33—23)

1. Duplicator apparatus comprising an adjustable support member, a control arm, a control arm carriage slidably supported on said support member, a control arm rotary connection rotatably supporting said control arm on said control arm carriage, a follower arm spaced from said control arm, a follower arm carriage slidably supported on said support member, a follower arm rotary connection rotatably supporting said follower arm on said follower arm carriage, a reciprocatory motion-transferring first tube member extending between said control arm and said follower arm, said first tube member defining an endless path, a plurality of ball members movably contained in said first tube member and being drivingly associated with one another, drive means connected to said control arm carriage and said follower arm carriage and being drivingly associated with said ball members in said first tube member, said drive means for said control arm carriage and said follower arm carriage being relatively positioned so that movement of said control arm carriage actuates said ball members in said tube member to reversely correspondingly position said fol-

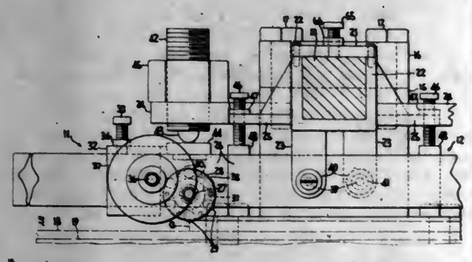


lower arm carriage, a rotary motion-transferring second tube member extending between said control arm and said follower arm, said second tube member defining an endless path, a plurality of ball members movably contained in said second tube member and being drivingly associated with one another, control arm rotary motion-transferring linkage connected to said control arm and drivingly associated with said ball members in said second tube member, rotary motion power transfer linkage connected to said follower arm and operatively associated with said ball members in said second tube member, and said control arm rotary motion-transferring linkage and said follower arm rotary motion-transferring linkage being arranged and positioned so that rotary movement of said control arm actuates said rotary motion-transferring linkage to drive said ball members within said second tube member to actuate said rotary motion power transfer linkage and reversely correspondingly position said follower arm is response to rotary motion of said control arm.

3,130,499
GLASS CUTTING APPARATUS
Henry P. Hanneken, Pittsburgh, Pa., and Orville H. Rinne, Crestline, Ohio, assignors to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 5, 1960, Ser. No. 60,594
8 Claims. (Cl. 33—32)

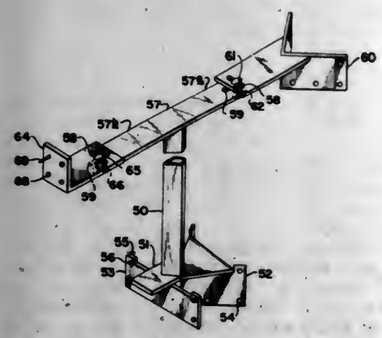
1. An apparatus for cutting a glass sheet from an edge toward an opposite edge of a glass sheet but for a distance less than the distance between the opposite edges comprising an arm having a longitudinal axis and to be mounted for pivotal movement about an axis normal to the longitudinal axis, a glass scoring tool on said arm and having a scoring surface at a plane spaced from and parallel to the longitudinal axis of said arm, and a wheel

mounted on the arm for free rotation about an axis parallel to the pivotal axis of mounting of said arm and normal to the longitudinal axis of said arm, said wheel having a surface at a tangential plane parallel to the longitudinal axis of said arm, said tangential plane and



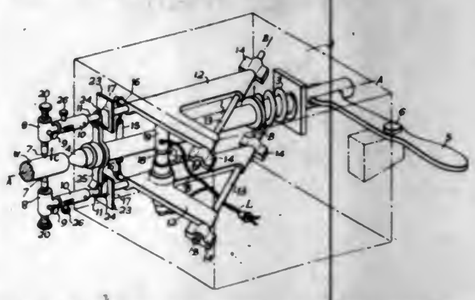
a parallel plane passing through the contacting surface of said tool being on the same side of the longitudinal axis of said arm and said tangential plane being at all times farther from the longitudinal axis than the parallel plane passing through the scoring surface of said tool.

3,130,500
MASONRY GUIDES
John P. Bongiovanni, 117 Sylvan Drive, New Kensington, Pa.
Filed Feb. 9, 1959, Ser. No. 791,904
1 Claim. (Cl. 33—85)



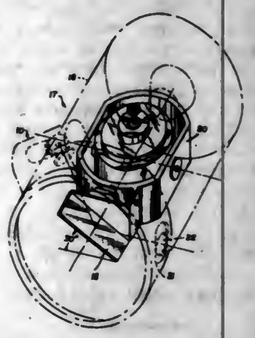
A masonry guide for laying corners and straight courses of brick or the like comprising a post member graduated in courses of standard masonry and forming horizontal course lines, a pair of guide edges extending longitudinally on diametrically opposed sides said member lying normal to at least one series of horizontal course lines whereby a guide string passing over said edge falls directly on any one of said series of course lines, a lower spacing plate fixed on one end of said post member transversely thereto, said spacing plate having a planar member transverse to the post member adapted to rest of the last course of masonry a lower V-shaped anchor member adapted to fit on the intersecting foundation walls on one side of said planar member and a flat anchor adapted to fit on a straight wall spaced from the V-shaped anchor, the post member being spaced from said lower anchor members outwardly relative to the foundation with one of the guide edges spaced from the masonry course a distance equal to the thickness of a standard mason line and with the masonry freely passing said post member, a horizontally adjustable upper spacing member mounted at the opposite end of said post member and a reversible upper anchor member carried on the end of the spacing member adjustable therewith and adapted to be attached to the outside of a structure being cased whereby the guide edge is firmly held normal to the horizontal course lines.

3,130,501
GAUGES FOR MACHINE TOOLS
Joseph Houldsworth, 55 Lutterworth Road, Leicester, England, assignor of one-half to A. A. Jones & Shipman Limited, Leicester, England, a British company
Filed June 2, 1960, Ser. No. 33,586
Claims priority, application Great Britain June 16, 1959
3 Claims. (Cl. 33—149)



1. In a machine tool having a workpiece supported, for rotation by at least one end support, an end support body, a workpiece gauge comprising at least one feeler for engaging said workpiece, at least one carrier extending substantially in the direction of the axis of the workpiece, means for mounting said feeler on said carrier, at least part of said carrier mounted within said end support body, means for moving said carrier whereby the feeler is permitted to follow dimensional changes in said workpiece, and ramp and cam means for automatically retracting the feeler in response to the retraction of an end support into said end support body in unloading and loading a workpiece.

3,130,502
GYROSCOPICALLY STABILIZED CROSS LEVEL
John Kenneth Stewart, 60 Ballantyne Terrace, Dorval, Quebec, Canada
Filed June 30, 1961, Ser. No. 121,073
6 Claims. (Cl. 33—204)



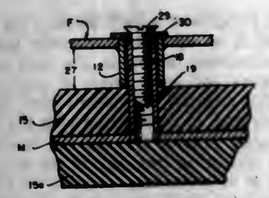
1. A railroad track cross-level or super-elevation sensing device comprising a supporting frame engaging both rails of the track and extending in a transverse direction to said track; a light beam transmitter and a photoelectric cell beam receiver attached to said frame; a gyroscope having a gimbal positioned in its roll plane attached by its casing to said frame; beam reflector means located in the path of the light beam between said transmitter and said receiver and attached to said gimbal to provide a reference datum; means for moving at least one of said transmitter and receiver to a selected position with respect to said gyroscope casing; means responsive to the reception of the light beam by said receiver to indicate the cross-level or super-elevation condition of the railroad track; whereby movement of the supporting frame in response to a change in track cross-level or super-elevation condition moves said transmitter and receiver relative to said reference datum to provide an indication of that condition.

3,130,503
HEEL LIFT AND FASTENER
José Rosán, Newport Beach, Calif., assignor to Rosan Engineering Corporation, Newport Beach, Calif., a corporation of California
Filed Oct. 27, 1960, Ser. No. 65,479
8 Claims. (Cl. 36—34)



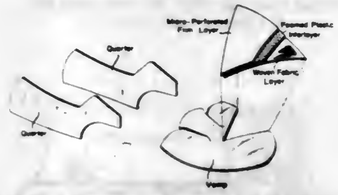
1. A fastener for attaching a wear element to a shoe, comprising: a cylindrical body; a head at one end of said body, said head being concentric with and smaller in diameter than said body; a neck connecting said head to said body, said neck being smaller in diameter than said head and concentric with said body and with said head, whereby an annular recess is formed between said head and body; annular cutter means on said body adjacent said neck at said one end thereof, said annular cutter means being greater in diameter than said head but not greater in diameter than said body; and means at the other end of said body for securing a wear element thereto.

3,130,504
DETACHABLE SHOE HEEL
David J. Deitch, 6 E. 7th St., Wilmington 1, Del.; Bernard Deitch and Philip Cohen, executors of said David J. Deitch, deceased
Filed Feb. 25, 1963, Ser. No. 260,671
4 Claims. (Cl. 36—36)



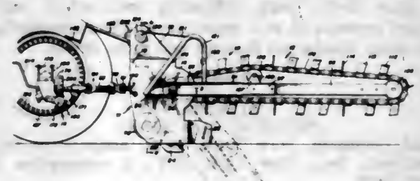
1. In a shoe having a sole including a heel portion and an upper, a first plate interiorly of the shoe upper and secured to the heel portion of the sole, a plurality of spaced integral sleeves projecting downwardly from the plate through said sole heel portion, a detachable heel having a second plate sandwiched therewithin, a plurality of spaced integral sleeves projecting upwardly from said second plate through said detachable heel, said plates being complementary in shape and the sleeves of the respective plates being each in male-female relationship, and means for detachably holding said sleeves in said relationship.

3,130,505
ANTI-FUNGAL SHOE UPPERS
Igor I. Markevitch, Pompton Lakes, N.J., assignor to Arnav Industries, Inc., Little Ferry, N.J., a corporation of Delaware
Filed Dec. 7, 1961, Ser. No. 157,647
3 Claims. (Cl. 36—45)



1. A micro-perforated shoe upper comprising a shoe upper provided with an outer lamina of a micro-perforated synthetic elastomeric polymeric film, an inner surface lamina of cloth, and an interlamina of a micro-perforated synthetic expanded cellular elastomeric polymeric material having encompassed therein effective amounts of anti-fungal agent and an anti-bacterial agent.

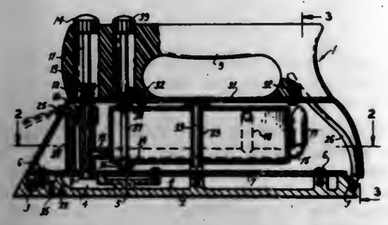
3,130,506
DITCH DIGGING ATTACHMENT FOR FARM TYPE TRACTORS
Floyd H. Laster, Farmdale, Ohio
Filed Sept. 18, 1959, Ser. No. 840,963
18 Claims. (Cl. 37—86)



17. A trenching attachment for a farm-type tractor of the kind having a rear driving axle assembly including a pair of drive wheels, a pair of rearwardly extending draw links, an upper stabilizing bar, and a power take-off; comprising, in combination, a frame adapted to be mounted on said links and bar, said frame including a pair of vertically disposed side members having means to engage said links, a transversely disposed drive shaft journaled in said frame side members, means to drive said shaft from the power-take off of the tractor, a rearwardly extending boom comprising a yoke-like assembly pivotally mounted on said shaft outwardly of said frame side members for movement about the axis of said shaft, a sprocket keyed to said shaft, an idler wheel journaled on the rear end of said boom for rotation about a transverse axis, an endless cutter chain entrained over said sprocket and said idler wheel and operative to move loose earth from a trench being dug to a position below and forwardly of

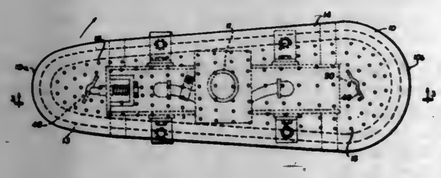
said shaft, a transversely disposed earth-moving auger rotatably carried by said frame and extending below and outwardly of one side member thereof and being so positioned as to receive loose earth from said cutter chain and move same to one side of the trench being dug, driving means interconnecting said shaft and said auger, and means for selectively pivoting said boom in a vertical plane to vary the digging depth of the boom and cutter chain.

3,130,507
STEAM AND DAMPENING IRON
Albert C. Hoecker, 5305 Lindenwood Place, St. Louis, Mo.
Filed June 28, 1957, Ser. No. 668,761
8 Claims. (Cl. 38—77)



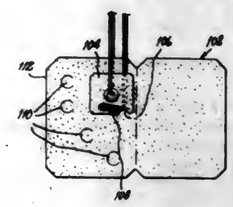
1. A dampening and pressing iron comprising a sole plate, a flash steam generator forming a part of said sole plate, means for heating said generator and for heating said sole plate, means formed in said generator for the reception of a predetermined quantity of water to be injected therein for spraying the material to be ironed with water, means for forcing water into said generator, a spray device communicating with said generator for directing a spray of water to the material to be ironed, said spray device being sufficiently restricted to retain sufficient pressure in said generator to effect atomization of the water discharged through said spray device.

3,130,508
PRESSING MACHINE
Samuel Goldstein, New York, N.Y., assignor to Sam Goldstein, Inc., New York, N.Y., a corporation of New York
Filed Aug. 23, 1961, Ser. No. 133,430
6 Claims. (Cl. 38—17)



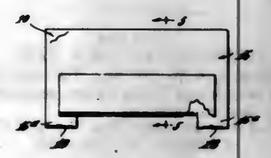
1. A pressing machine comprising a base, a vertical shaft supported on the base and rotatable about its vertical axis, a buck mounted on said shaft, said vertical axis intersecting the buck approximately at the longitudinal center thereof, said shaft allowing rotary movement of the buck in a horizontal plane about the axis of said shaft, a heating element arranged to radiate heat to the buck from below, and cooperating means connected to the buck and supported on the base for releasably locking the buck in opposed end positions reached by rotation through substantially 180°.

3,130,509
TAG
Winfred M. Brooks, West Orange, N.J., assignor to E. J. Brooks Company, Newark, N.J., a corporation of New Jersey
Filed Apr. 18, 1962, Ser. No. 188,345
9 Claims. (Cl. 40—21)



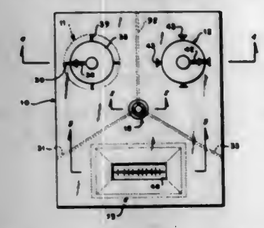
1. A tag comprising:
a piece of sheet material bendable intermediately thereof, to fold opposing sections of said piece which are at opposite sides of a thus formed bend, into face-to-face relationship;
a flat tab of sheet material fixed flatly to one of said opposing sections and having
a marginal portion freely overlying said one opposing section, and said marginal portion and an underlying portion of said one opposing section being relatively bendable to facilitate application of shackle means therebetween; and
an adhesive coating on one of said opposing sections covering a substantial area closely bordering the periphery of said tab when said sections are in said face-to-face relationship for causing the two said sections to cohere and to block the edges of said tab against displacement of shackle means from thereunder.

3,130,510
EASEL-TYPE CALENDAR MOUNT
Gordon E. Nichols, Middleboro, Mass., assignor to Winthrop-Atkins Co., Inc., Middleboro, Mass., a corporation of Massachusetts
Filed Feb. 15, 1961, Ser. No. 89,400
4 Claims. (Cl. 40—120)



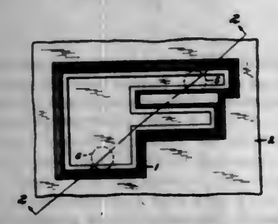
1. A mount comprising a back panel, a leg supporting the back panel in an upright, rearwardly inclined position, means connecting the leg to the back panel intermediate the upper and lower edges of said back panel, said leg extending angularly downward from the rear side, so that its lower end, in conjunction with the lower edge of the back panel, provide feet for the mount, a cover panel disposed against the front side of the back panel and hinged thereto at its lower edge so as to be foldable forwardly from the back panel to expose the adjacent surfaces of the two panels, and a brace connected at one end to the cover panel above the hinge connecting the cover panel to the back panel and at its other end to the leg, said brace holding the leg displaced rearwardly relative to the back panel and simultaneously holding the cover panel flat against the back panel.

3,130,511
PANEL ILLUMINATION
John W. Feldmayer, Levittown, Pa., assignor to the United States of America as represented by the Secretary of the Navy
Filed Mar. 28, 1962, Ser. No. 183,313
7 Claims. (Cl. 40—130)
(Granted under Title 35, U.S. Code (1952), sec. 266)



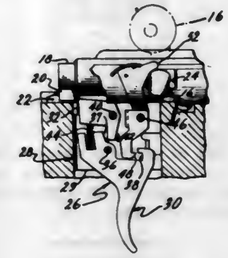
2. An edge-illuminated instrument panel comprising: a rigid transparent plate adapted to be mounted in a control panel, a translucent layer fixed to and completely enveloping both sides of said plate, an opaque layer fixed to and completely covering said translucent layer as fixed on said plate, said opaque layer being interrupted at preselected areas to expose said translucent layer and to define indicia when light escapes from said plate through the interrupted areas of said opaque layer, a light source juxtapositioned within the plane of said plate for edge-illumination thereof, an annular element at the edge of said plate encircling said light source, said element having a plurality of color-transmitting characteristics, a plurality of grooves each emanating at the color delineations of said element formed in said plate through said opaque and translucent layers on one side thereof and up to the inner face of said translucent layer on the opposite side of said plate, and an opaque bonding material filling said grooves; whereby the several illuminating colors from said element cannot blend in said plate.

3,130,512
SELF-MOUNTING ORNAMENTAL DEVICE
Harold S. van Buren, Jr., Cambridge, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed Dec. 22, 1961, Ser. No. 161,563
2 Claims. (Cl. 40—143)



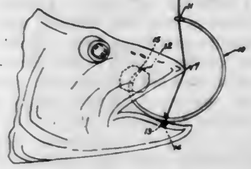
1. A unitary ornamental device such as a letter, said device, formed of a molded plastic material having a body portion defining a letter, number or other suitable ornament, and at least two snap fastener stud portions integral with and recessed into the undersurface of said body portion and extending from an underside of the body portion inwardly of its edges, each of said stud portions having a free terminal end, and having a laterally projecting portion providing a partial circumferential shoulder, said shoulder lying intermediate said terminal end and the mouth of said recess and said terminal end being of less diameter than the remaining length of said stud portion.

3,130,513
BOLT ACTION FIREARM WITH AUTOMATIC SAFETY MECHANISM ENGAGEABLE BY BOLT HANDLE
Oliver M. Knode, Jr., Hampden, Mass., assignor to Savage Arms Corporation, Westfield, Mass., a corporation of Delaware
Filed Oct. 2, 1961, Ser. No. 142,162
7 Claims. (Cl. 42—70)



1. In combination with a bolt action firearm in which the bolt is locked and unlocked by angular movement of a bolt operating handle, a safety mechanism comprising an integral lever pivotably mounted for swinging movement to and from interlocking engagement with the firing mechanism of said firearm in response to angular movement of said bolt handle, said lever including a portion engageable by said bolt handle whereby said safety is actuated in response to angular movement of said bolt handle.

3,130,514
FISHING RIG
Roy Clifford Cornick, General Delivery, Anderson, Calif.
Filed Feb. 11, 1963, Ser. No. 257,573
2 Claims. (Cl. 43—37)

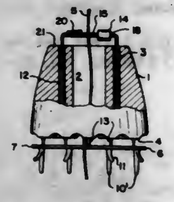


1. The combination of a line and fish hook, said fish hook having a shank curved continuously throughout its length, a line receiving eyelet formed at one end of said shank, a curved bight at the other end of said shank and forming a continuous curve therewith, a pointed end at the free end of said bight, said pointed end being barbless, an eyelet attached on the outside bottom of the bight substantially vertically below the point of the bight and the eyelet formed at the end of the shank, and said fishing line loosely threaded through the eyelet at the top end of the shank, extending across the hook and attached to the hook by means of the eyelet on the bottom of the bight.

3,130,515
CASTING FLOATS
Francis E. Graham, 116 Avenue Road, Toronto, Ontario, Canada
Filed Aug. 18, 1961, Ser. No. 132,884
4 Claims. (Cl. 43—43.11)

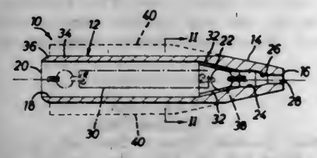
1. A casting float assembly comprising in combination an open-ended buoyant body and a leader-line retaining device in association with said body, said line retaining

device at least including an apertured plate, at least one line-winding prong projecting from said plate, at least one line intercepting prong projecting from said body, means for maintaining said plate so connected to said body that



the former is free to move at right angles to its plane toward and away from said body, said line intercepting prong extending through an aperture in said plate when the latter is nearest said body.

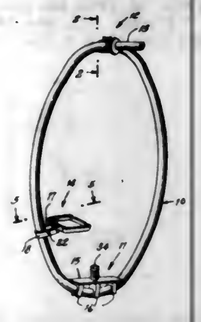
3,130,516
FISHING TACKLE
Hori Hale Ballard, Liverpool, England, assignor to Hori Ballard Limited, Liverpool, Lancashire, England, a British company
Filed Nov. 2, 1962, Ser. No. 234,942
Claims priority, application Great Britain Nov. 3, 1961
12 Claims. (Cl. 43—43.13)



1. A protective cover guard for a swivel having a body and an end ring rotatably attached thereto at each end thereof and adapted for connection to a fishing line, comprising a cylindrical member, a portion of said member tapering towards one end thereof, said member having a longitudinally extending bore therein, said bore being adapted to receive a said swivel for rotation therein, a constriction in said bore at said one end of said member, at least one diametral groove formed within said constriction adapted to receive and hold by a wedging action the leading end ring of a said swivel when inserted therein to restrain the end ring against rotation relatively thereto, said constriction also allowing the passage of a fishing line therethrough.

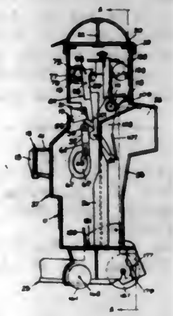
3,130,517
TOY APPARATUS
Martin Green, 155 Airmont Road, Mahwah, N.J.
Filed Feb. 24, 1959, Ser. No. 795,081
2 Claims. (Cl. 46—51)

1. A toy comprising a ring, a stand on said ring facing the center of said ring for supporting an object thereon in a radially extending direction, means for attaching said stand to said ring, a rigid handle for said ring extending laterally thereof at a point substantially diametrically opposite said stand, and swivel means for rotatably attaching said handle to said ring, whereby upon orbital movement of said handle said ring is eccentrically rotated in a vertical plane, said handle attaching means including a clamp having a pair of separable strap members with arcuate ends for embracingly engaging said ring in a radial plane and with the other ends thereof fulcrumed against each other, a bolt having a head and extending across said strap members intermediate the ends thereof, and a nut threaded on said bolt and engaging one of said strap members to constrict said strap members in conjunction with the head of said bolt, said handle having an axial bore therethrough and a counter-bore at its outer end, an elongated bolt extending through said bore and



rigidly secured to said other ends of said strap members, and a nut threadedly engaging the free end of said bolt disposed in said handle counter-bore, said handle being freely rotatable about the longitudinal axis of said elongated bolt.

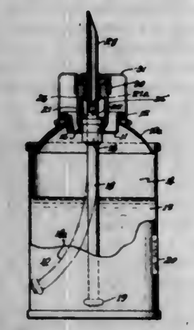
3,130,518
MOVABLE FIGURE TOY
Marvin I. Glass, 57 E. Ohio St., Chicago, and Burton C. Meyer, Chicago, Ill.; said Meyer assignor to said Glass
Filed Jan. 13, 1961, Ser. No. 82,616
3 Claims. (Cl. 46—105)



2. A hand-operated toy figure comprising a hollow body having an opening therein to accommodate a hand of a user, wheel means rotatably mounted at the lower end of said body, a pair of foot members pivotally mounted on said body near the lower end thereof, said foot members being connected to said wheel means so as to be rocked about said pivot when said wheels rotate, said connection being such that said foot members rock generally in opposite directions to one another, an elongated arm member mounted adjacent one of its ends on each of opposite sides of said body for swinging movement about a fixed axis, said body having a wall defining a pair of eye openings, an eye member mounted on said body adjacent each of said eye openings for rotation about an inclined axis, each of said eye members being provided with a simulated pupil on a surface visible through said eye opening, and a selectively movable manually operable lever within said body connected to said arm members and said eye members to effect controlled swinging movement of said arm members from a position in which said arm members are spread relative to one another to a position in which their outer ends are proximate

while concurrently causing pivotal movement of said eye members about their respective axes so as to move said simulated pupils downwardly and toward one another, whereby the figure can be caused to grasp an object by means of said arm members and to move its eyes so as to convey the impression that it is visually following the movement of the arm members toward the object to be grasped.

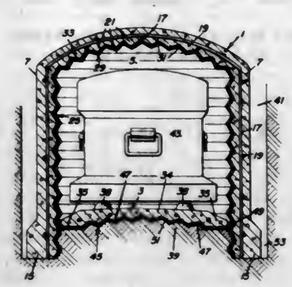
3,130,519
DEVICE FOR INJECTION FEEDING OF PLANTS
James J. Mauget, San Gabriel, Calif., assignor to J. J. Mauget Co., Inc., Los Angeles, Calif., a corporation of California
Filed Aug. 14, 1961, Ser. No. 131,290
8 Claims. (Cl. 47—57.5)



1. Apparatus for injecting liquids directly into the stem or the like of a plant, comprising in combination:
a container;
a quantity of liquid within the container to be dispensed therefrom;
a body of gas within the container under pressure greater than atmospheric tending to discharge said liquid from the container;
liquid discharge means for the container including valve means controlling flow of liquid through the discharge means, said valve means being biased to a closed position and movable to an open position in response to external pressure thereon;
a tube associated with the liquid discharge means in position to receive liquid discharged at said valve means from the container, said tube being insertable at one end into the stem of a plant;
and tube mounting means on the container slidably receiving the other end of the tube to engage and open the valve and removably holding the tube in engagement with the valve means to hold the valve means in open position and also in position to receive said discharged liquid.

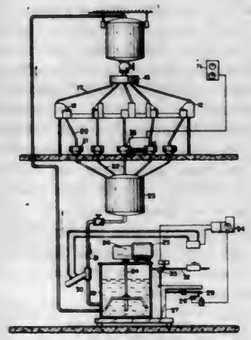
3,130,520
BURIAL VAULTS
Morris A. Newman, Jr., P.O. Box 567, Eldorado, Ill.
Filed Nov. 14, 1960, Ser. No. 71,862
1 Claim. (Cl. 50—91)

A burial vault comprising a rectangular bottom slab having beveled edges, an open bottom hollow cover for said slab telescoping downwardly over the slab to form with the slab an enclosed chamber for a coffin, said cover having side and end walls, a resilient liner in said cover on said side and end walls having horizontal corrugations interfitting with the beveled edges of the slab with a snap action in response to variable telescoping of said cover downwardly over said slab, whereby to provide for varying the depth of the chamber for coffins of different sizes, the side and end walls of said cover being corrugated in correspondence with the corrugations of said liner and a layer of cushion material between said liner and said side



and end walls whereby said liner is held in place without bonding to said side walls and said walls are moisture-proofed internally.

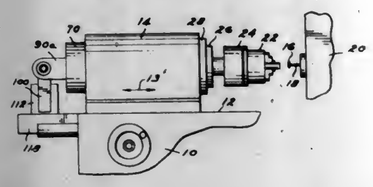
3,130,521
DEVICE FOR LAPPING THE CUTTING EDGES OF PINKING SHEARS
Curt Weidauer, Clinton Corners, N.Y., assignor to Samuel Briskman, New York, N.Y.
Filed Aug. 3, 1962, Ser. No. 214,686
3 Claims. (Cl. 51—26)



1. A device for lapping the cutting edges of pinking shears, comprising in combination a non-rotatable table, a plurality of individual lapping units spaced apart from one another on the periphery of said table, a central hydraulic power supply means for operating said units, feeding and returning lines connecting said power supply means with said units, timed means for feeding lapping compound to said units comprising feeding and return lines connecting said means with said units, and timing means for shutting off the operation of said device after a preset, predetermined time period.

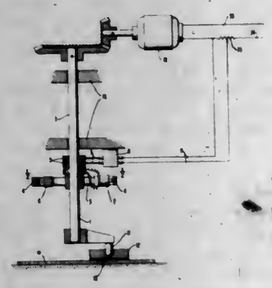
2. A device for lapping the cutting edges of pinking shears, according to claim 1, and each one of said individual units comprising a housing, a hydraulic motor in said housing, a crank-operated double-arm lever, said lever having a protruding stud on one arm thereof, a stationary stud on said housing, said stationary and said protruding stud on said arm of said lever being arranged for receiving the handles of the blades of a pinking shear, and centering means for locating said shear in said unit, and simultaneously holding said shear under pressure in said unit, said centering means consisting of a non-movable plug and a retractable plug opposite said non-movable plug.

3,130,522
LEAD SHIFT MECHANISM
Leo F. Doran, Clawson, Mich., assignor to Beaver Precision Products, Inc., Clawson, Mich., a corporation of Michigan
Filed Mar. 23, 1961, Ser. No. 97,889
10 Claims. (Cl. 51—95)



5. In a thread cutting machine, the combination including support means for operably carrying cutting tool means, headstock means on said support means including axially shiftable spindle means carried thereby for supporting a work piece, rotating means operable to produce relative rotation between the cutting tool means and the work piece, feeding means for producing uniform relative axial movement between said support means and said headstock means whereby the cutting tool means engages and removes material from the work piece to form a thread of a given pitch therein, cam means movably supported on said headstock means, said cam means having one cam surface uniformly spaced from a reference point about which the cam moves and a second cam surface connected with the first cam surface by means of a step surface which is adapted, when the cam is moved about said reference point, to engage and thereby axially shift said spindle means a predetermined amount relative to said headstock means as said cam means moves relative thereto, and cam driving means coupled between said support and headstock means for translating relative movement therebetween into movement of said cam means whereby said step surface of said cam means causes an axial shift of the work piece relative to said headstock means at a predetermined point in the relative positions of said support and headstock means thereby causing one portion of the thread being formed to be axially offset from another portion thereof.

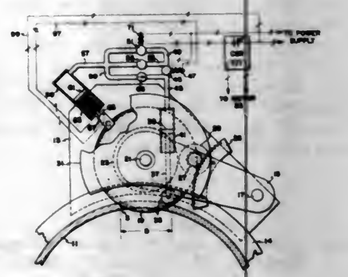
3,130,523
APPARATUS AND METHOD FOR COUNTERBALANCING OF ROTATING BODIES
Georges Monnet, Isere, France, assignor to Compagnie de St.-Gobain, Neuilly-sur-Seine, France
Filed May 3, 1960, Ser. No. 26,479
Claims priority, application France May 6, 1959
18 Claims. (Cl. 51—119)



9. In the combination which comprises a body adapted to rotate about an axis, a prime mover to drive the body, means for subjecting the body during its rotation to a random variable force which tends to disturb its dynamic balance, the instantaneous power output of the prime mover being a measure of such disturbing force, the improvement which comprises electro-magnetic means adapted to exert on said body a corrective force counterbalancing the disturbing force, said last named means comprising elements rotatable relative to each other, including a rotor affixed to the body, a stator closely confronting the rotor, coil means mounted to coact with the stator and rotor, means to energize said coil means to produce an attractive force between the stator and rotor thus to subject the body to a corrective force intersecting the axis of rotation of the body at a predetermined angle, and means to vary the degree of energization of the coil means and thus the attractive force proportionally and in timed relation to variations in the power delivered by the prime mover, one of the elements consisting of the stator and rotor extending through only a part of the circumference around the axis of rotation of the body, and the other, cooperating element of the electro-magnetic means extending along the entire periphery of a circumference around the axis of rotation of the body.

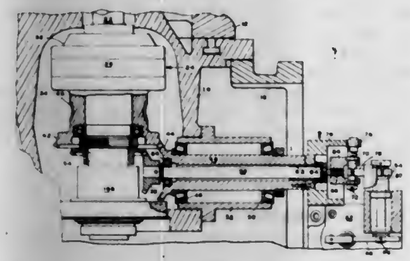
12. The process which comprises rotating a body on a fixed axis, subjecting the body to a force which disturbs its dynamic balance, said force intercepting the axis of rotation of the body at a predetermined angle, establishing a magnetic field exerting an electro-magnetic force on the body as the body rotates, along a direction intersecting the axis of rotation of the body at a predetermined angle and substantially opposite to that of the disturbing force, and varying the strength of the magnetic field to vary such electro-magnetic force so that the force exerted on the body by the magnetic field is of such value, is of such direction, and is so timed as to counterbalance said disturbing force.

3,130,524
APPARATUS FOR CUTTING ANNULAR WALL ELEMENTS OF TUBULAR BODIES
Jerome W. Nelson and Fred A. De Saw, both of Columbus, Ohio, assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware
Filed Dec. 7, 1961, Ser. No. 157,692
11 Claims. (Cl. 51—165)



1. Apparatus for cutting through a material to a desired depth, comprising in combination a rotary cutter which is subject to wear and consequent variation in effective diameter, means for rotating said cutter about its own axis, means for moving said cutter bodily towards and away from the material to be cut, means for guiding the cutter relative to said material along a line to be cut, and means for limiting to a predetermined depth the penetration into said material regardless of the effective diameter of said cutter.

3,130,525
SERVO CONTROLLED GRINDER INFEED MECHANISM
Harry E. Luebkemann, Wilmington, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed Feb. 20, 1963, Ser. No. 259,857
8 Claims. (Cl. 51—165)



1. In a precision grinding machine having a wheelhead, a drive shaft connected to the wheelhead for movement thereof when rotated, a paddle motor received on the drive shaft and operable for rotation thereof, and a gear mechanism to rotate the motor and shaft in unison, the combination comprising:

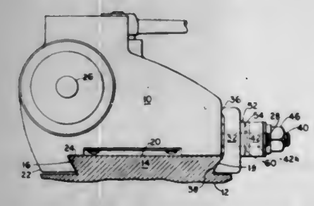
(*a*) a servo-valve in communication with said motor and having a pair of relatively movable members therein to control the operation of said motor one way and the other when shifted from a predetermined relative position,

(*b*) means to shift one of said control members through a fixed distance in one direction from a starting position and thereafter to continue movement thereof in the same direction at a controlled rate to produce rapid and feed rate operation of said motor in a corresponding direction, said shifting means reversely operable to return said one control member to its starting position to reversely operate said motor,

(*c*) a feedback mechanism responsive to rotation of said drive shaft by said motor to shift said other control member to follow said one control member, said other control member blocking operation of said motor when in said predetermined relative position, and

(*d*) means responsive to rotation of the motor and drive shaft by said gear mechanism to render said feedback mechanism inoperative to shift said other control member.

3,130,526
MECHANISM FOR SECURING MOVABLE MACHINE TOOL MEMBERS
Jacob Decker, Cincinnati, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed May 7, 1962, Ser. No. 192,912
5 Claims. (Cl. 51—236)



1. A clamping mechanism to secure a removable member of a machine onto a supporting member, the mechanism comprising:

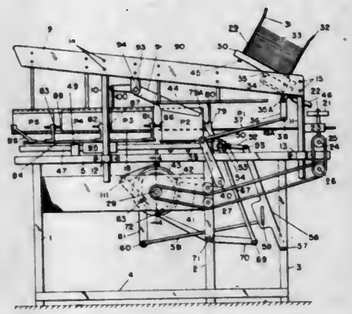
(*a*) an aligning surface depending from one side of the removable member and adapted to engage one side of the supporting member,

(*b*) a pair of spaced clamp members on the other side of the removable member, each of said pair having one end adapted to pivotally engage said other side of the removable member, and the other end of each of said pair adapted to engage the other side of said supporting member,

(*c*) strap member adapted to extend across said pair of clamp members and to engage each of said pair between the ends thereof, and

(*d*) means to pull said strap member toward said removable member at a location between said pair of clamp members, thereby holding said strap member in forcible contact with each of said pair of clamp members to produce a clamping force between said aligning surface and said other end of each of said pair to grip said supporting member.

3,130,527
PACKAGING MACHINE
Prentice J. Wood, College Park, Ga., assignor to The Mead Corporation, a corporation of Ohio
Filed Feb. 28, 1962, Ser. No. 176,357
8 Claims. (Cl. 53—48)

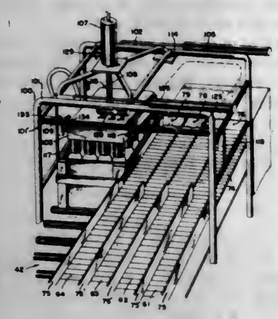


1. A machine for imparting controlled movement to a group of articles to be packaged, said machine comprising an elongated indexing element reciprocable in a direction generally parallel to the path of movement of the group of articles and in the direction of its major axis, said element being angularly oscillatable about its major axis as a center, a pair of indexing fingers affixed to said indexing element and extending transversely therefrom, said indexing fingers being spaced apart by a distance corresponding generally to the dimension of the group of articles in the direction of movement thereof, oscillatable driving means connected to said indexing element for imparting reciprocable movement thereto along its major axis, and oscillatable control means connected with said indexing element and effective to impart oscillatory angular movement to said indexing element about its major axis.

3,130,528
PACKING MACHINE
John Moritz Andersen, Bergen, Norway, assignor to A/S Hansa Bryggeri, Bergen, Norway
Filed May 22, 1959, Ser. No. 815,022
35 Claims. (Cl. 53—55)

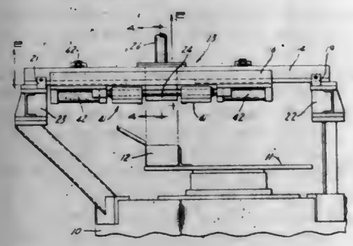
1. A packing machine for packing objects in a packing member, comprising first means for feeding the objects to a first position within said machine, second means for feeding the packing members to a second position within said machine, third means including object gripping means

for automatically transferring the objects from said first position to said second position to be packed thereat in a packing member, and operating cycle control means for automatically controlling the operation of said first, second and third means including first control means for controlling said first means to supply said objects to said first position within said machine in a predetermined manner, second control means for controlling said second means to supply said packing members to said second po-



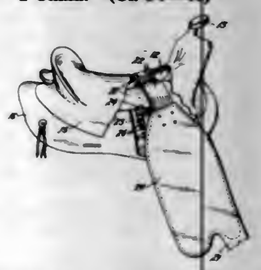
sition within said machine in a predetermined manner, and third control means including sensing means coordinated to said first and second means for automatically controlling said third means in dependence on compliance with predetermined operating conditions in said first and second means as determined by said sensing means, said sensing means including means for enabling transfer of said objects by said third means only upon safe gripping of a predetermined number of objects by said object gripping means.

3,130,529
ICE CREAM FILLING MACHINE
Robert R. Reinhard, La Crescenta, Calif., assignor to Foremost Engineering, Inc., Los Angeles, Calif., a corporation of California
Filed Dec. 30, 1960, Ser. No. 79,737
4 Claims. (Cl. 53—123)



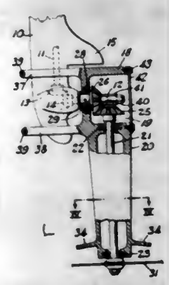
1. In a filling machine of the type in which a flowable frozen food material is supplied under pressure to a nozzle from which the product is discharged as a continuously moving mass that is of predetermined configuration in section, means forming a fixed main support, a second support disposed adjacent the first support, nozzle means carried by the main support for discharging a continuously moving mass of frozen material, the movement of the material being on a rectilinear axis, said second support being movable relative to the first support and in a direction corresponding to the direction of movement of the mass, two carriages disposed on opposite sides of the nozzle, means on the second support for slidably retaining and guiding the carriages for rectilinear reciprocation of the same in opposite directions to advance or retract the same relative to the nozzle, two cutoff means carried by said carriages and disposed on a common plane perpendicular to said axis, said cutoff means being moved through the mass of frozen material and retracted therefrom when said carriages are advance and retracted, two motive means mounted on said second support for advancing and retracting each of said carriages, means for yieldably urging said second support toward a limiting position relative to the main support, and additional motive means for moving the second support in a direction away from the main support and in a direction corresponding to the direction of movement of the frozen mass, during retraction of the carriages the common plane of the two cutoff means being maintained perpendicular to said rectilinear axis during such movement of the second support.

3,130,530
SADDLE FOR A HORSE
Monte B. Foreman, Longmont, Colo. (Star Rte., Elbert, Colo.)
Filed Feb. 11, 1963, Ser. No. 257,516
1 Claim. (Cl. 54—44)



A saddle comprising: a saddle tree having a medial opening; a seat leather covering said saddle and said opening; a saddle pad positioned below said saddle and said opening; a fender positioned at each side of said saddle tree; a fender strap secured to and extending upwardly from each fender and passing inwardly beneath said seat leather over the sides of said tree thence downwardly through said opening thence outwardly below said tree over said saddle pad; and a clip member adjustably mounted on the outwardly extending portions of said fender straps and projecting upwardly therefrom into engagement with said tree to resist upward movement of the latter portions and downward movement of said fenders.

3,130,531
UNDERWATER MOWER
Arnold Woleslagle, Morris Road, Geneseo, N.Y.
Filed Nov. 4, 1963, Ser. No. 321,031
7 Claims. (Cl. 56—6)



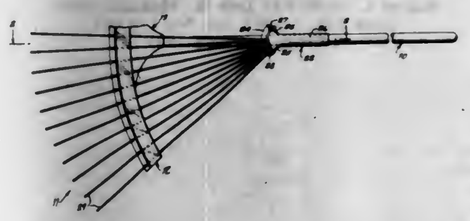
1. An underwater mower for attachment to and operation by an outboard motor propeller shaft, said mower comprising a housing and a generally vertical mower shaft rotatably supported therein, a bevel pinion supported for rotation on a generally horizontal axis in the upper portion of said housing, an opening in the front wall of said housing whereby said mower may be supported from said propeller shaft by assembly of said pinion thereon, means for detachably retaining said bevel pinion on said propeller shaft for rotation therewith, a mating bevel pinion fixed to the upper end of said mower shaft, horizontally disposed rotary mower blade means fixed to the lower end of said mower shaft, and releasable means engaging between said mower housing and said outboard motor to prevent rotation of the former with respect to the latter when said first pinion is assembled for rotation with said propeller shaft.

3,130,532
MOWER
Fredrick O. Ottosen, Chicago, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed Mar. 17, 1961, Ser. No. 96,514
11 Claims. (Cl. 56—26)



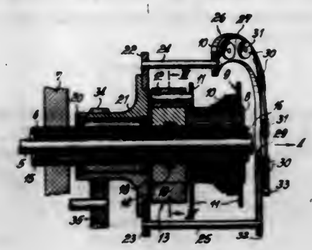
9. A power operated lawn mower having a source of power thereon, and ground supporting wheels and a cutter, a first clutch means between the source of power and the wheels and a second clutch means between the source of power and the cutter, a single control handle, and means on said handle connected to each of said clutches for actuating said clutches in sequence to cause actuation and deactuation of said wheels and said cutter.

3,130,533
RAKE
Edwin H. Huegel, 120 Hackensack Ave., Harrington Park, N.J., and John B. Murphy, 103 Midwood Ave., Allendale, N.J.
Filed Apr. 25, 1962, Ser. No. 190,083
7 Claims. (Cl. 56—400.17)



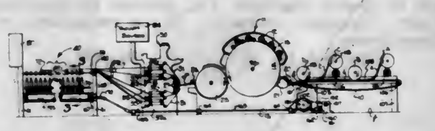
1. A rake comprising a handle, an arcuate rake cleaning bar fixedly secured to one end of said handle and having spaced aperture means thereon, a member slidably mounted on said handle inwardly of said bar, and a plurality of tines secured at one end thereof to said member and radiating from said member towards said bar and passing through said aperture means, said tines being translatorily movable with said member.

3,130,534
WINDING DEVICE FOR WINDING WIRE ONTO RUBBER CORES
Max Ostermann, Wuppertal-Barmen, Germany, assignor to W. & M. Ostermann, Wuppertal-Barmen, Germany, a firm
Filed Mar. 12, 1962, Ser. No. 179,097
Claims priority, application Germany Mar. 29, 1961
12 Claims. (Cl. 57—9)



1. In a machine for producing armored hose, in combination, support means; first guide means mounted on said support means for guiding a hose in the direction of its axis; second guide means extending transverse to and partly around said axis and being mounted on said support means turnably about said axis for guiding an elongated resiliently flexible metal element in a direction substantially normal to said axis onto said hose and for winding said element about said hose so that during movement of said hose in the axial direction said element is wound in a spiral onto said hose, said second guide means having an end portion adjacent said axis; and deforming means mounted on said end portion for imparting a permanent deformation to said elongated resiliently flexible element before it is applied to said hose.

3,130,535
APPARATUS FOR MAKING YARNS FROM PICKER LAPS
William E. Royster, Draper, N.C., assignor to Morehead Mills, Inc., a corporation of North Carolina
Filed Nov. 15, 1961, Ser. No. 152,431
12 Claims. (Cl. 57—34)



1. Apparatus for making yarn from picker laps utilizing a twister machine equipped with a pair of parallel rows of ring travelers and rotating bobbins on opposite sides thereof which comprises, in combination, (1) a carding machine for forming a web from picker laps, (2) a tape condenser positioned forwardly of and closely adjacent the carding machine,

(*a*) said tape condenser including means for receiving and splitting said web into a plurality of relatively narrow strips,

(*b*) said tape condenser also having means applying a rubbing and rolling action to the strips so each strip is converted to a roving strand,

(3) said parallel rows of travelers and bobbins on said twister machine extending forwardly of the last-named means and longitudinally of the path of travel of the strands issuing from the tape condenser,

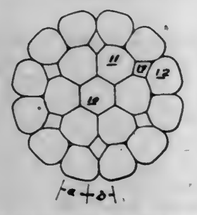
(*a*) means on said twister machine for guiding and deflecting the roving strands toward both sides of the twister machine,

(*b*) twister feed rolls through which said roving strands are drawn from said guiding and deflecting means and directed to respective travelers and bobbins in said parallel rows,

(*c*) means for transmitting rotation to the feed rolls from the tape condenser, and

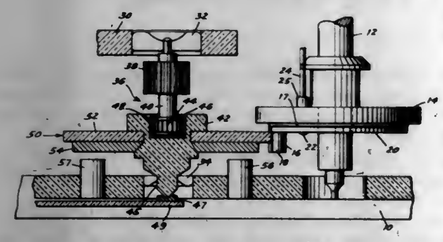
(*d*) means for rotating the bobbins of said twister machine at a speed proportional to the speed of the carding machine.

3,130,536
METHOD OF MANUFACTURING WIRE ROPE
Vincent C. J. Peterson, Huntingdon Valley, Pa., Otto J. Bratz, Adrian, Mich., and Charles H. Layton, Forty Fort, Pa., assignors to American Chain & Cable Co. Inc., New York, N.Y., a corporation of New York
Filed Sept. 21, 1961, Ser. No. 139,675
7 Claims. (Cl. 57—161)



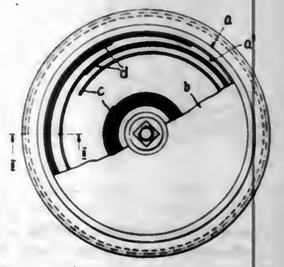
1. A method of manufacturing wire rope which comprises forming wires into a plurality of strands, subjecting each of said strands to a multiplicity of intermittent radial swaging blows about its circumference without imposing substantial axial tensile stress on any of the wires thereof, whereby the exposed surfaces of the outer wires of each strand are substantially flattened and the inner wires thereof are deformed in cross section to close substantially all of the voids among the wires without substantially elongating any of said wires, and helically wrapping said strands about a core to form a wire rope.

3,130,537
CONTACT INDEX SYSTEM
James H. Reese, Manheim, Pa., assignor to Hamilton Watch Company, Lancaster, Pa., a corporation of Pennsylvania
Filed Oct. 20, 1961, Ser. No. 146,639
21 Claims. (Cl. 58—28)



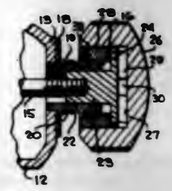
1. A contact-indexing device for an electric watch comprising an oscillating balance staff, an index assembly including upper and lower portions, an insulating adhesive joining said portions, said upper portion carrying a pinion in electrical and mechanical contact with the gear train, the lower portion carrying a toothed index wheel adapted to be driven by said balance staff, a roller on said balance staff, an index and contact means mounted on said roller, and including an electrically insulating cam member and an electrically conducting contact, said index and contact means engaging said index wheel as said balance staff oscillates to impart step-by-step advancement thereto in one direction, said contact electrically engaging said index wheel during at least a portion of the oscillation which causes said advancement, said cam engaging said index wheel during the reverse oscillation which causes no net advancement, said cam member comprising an electrical insulating member having a curvate side and being engaged with said contact on another side, and means establishing contact with the lower end of said lower portion of said index assembly.

3,130,538
SELF-WINDING WATCH BARRELS
Jean Bourquin, Sao Paulo, Brazil, and Fritz Straumann, Waldenburg, Switzerland, assignors to Institut Dr. Ing. Reinhard Straumann A.G., Waldenburg, Switzerland
Filed Sept. 26, 1962, Ser. No. 231,314
Claims priority, application Switzerland Jan. 31, 1957
7 Claims. (Cl. 58—87)



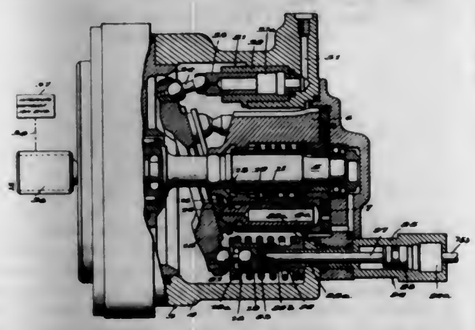
1. In a self-winding watch having a barrel, a main spring and an auxiliary spring, wherein the outermost turn of the main spring is urged by the auxiliary spring against the inner wall of the barrel and wherein the outermost turn of the main spring and the inner surface of the barrel form a slip coupling for preventing overwinding of the main spring, the improvement which comprises that the mating surfaces between the barrel and the main spring are of materials having substantially the same hardness.

3,130,539
WATCH CROWN SEAL
Robert L. Davis, 931 10th St., Modesto, Calif.
Filed Feb. 1, 1962, Ser. No. 170,864
1 Claim. (Cl. 58—90)



In a timepiece, a case having a peripheral wall, a movement disposed in said case and having a stem projecting through said wall, a sleeve member rigidly secured to said wall and surrounding said stem, a resilient deformable gasket engagedly surrounding said sleeve member and engaging said wall, an inner crown member having an outer flanged portion provided with spaced peripheral lugs slidably disposed in said sleeve member and fixed to said stem, an outer crown member having a radial gasket-engaging sealing surface on its inner end, an internal sleeve member rigidly secured in said outer crown member having longitudinally extending spaced arcuate lugs on one end portion engageable for slidable and non-rotatable connection with said spaced peripheral lugs on said flanged portion of said inner crown member, said sleeve member having a generally V-shaped peripheral groove spaced outwardly from said gasket, said sleeve member having a second arcuate peripheral groove spaced outwardly from said V-shaped groove, said internal sleeve member having an internal annular groove and a contractable ring disposed in said internal annular groove engaging said sleeve member, whereby said contractable ring engaging a wall of said V-shaped groove will hold said sealing surface in deforming engagement with said resilient deformable gasket to provide a moisture-tight seal between said outer crown member and said case, movement of said outer crown member outwardly to engage said contractable ring in said second arcuate peripheral groove permitting rotation of said outer crown member to wind said timepiece and further outward movement of said outer crown member to disengage said contractable ring from said second arcuate peripheral groove permitting rotation of said outer crown member to set said timepiece.

3,130,540
HYDRAULIC ENGINE STARTING METHOD
Edward V. Manning and James R. Parr, Watertown, N.Y., assignors to The New York Air Brake Company, a corporation of New Jersey
Filed Feb. 1, 1962, Ser. No. 170,440
3 Claims. (Cl. 60—17)



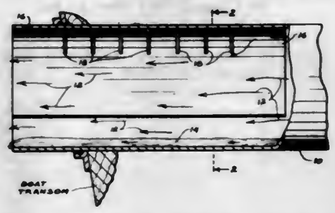
1. The method of accelerating an engine to starter cut-out speed during a starting cycle using a variable displacement hydraulic motor comprising the steps of

(*a*) supplying fluid to the motor at a pressure that decreases as the length of time the motor operates increases;

(*b*) operating the motor at maximum displacement from the beginning of the starting cycle until the engine has reached a certain speed substantially less than cut-out speed; and

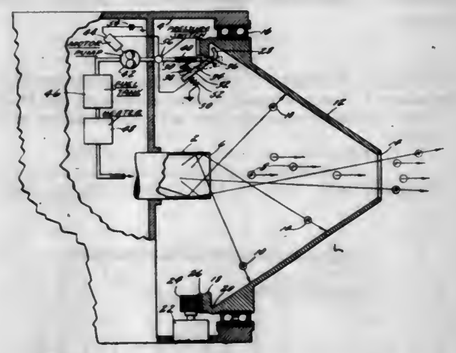
(*c*) thereafter progressively reducing motor displacement toward zero as the engine accelerates to starter cut-out speed at a rate proportional to engine acceleration.

3,130,541
DEFLECTOR ASSEMBLY FOR INBOARD POWER BOATS
Samuel Babbit, 148—29 58th Road, Flushing 55, N.Y.
Filed Dec. 13, 1962, Ser. No. 244,308
2 Claims. (Cl. 60—31)



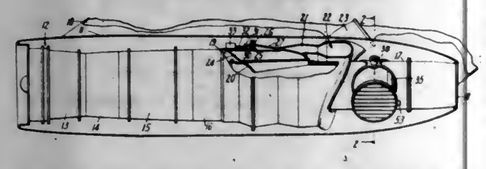
1. A deflector assembly for insertion within the exhaust pipe of an inboard power boat through which is vented both engine exhaust gases and cooling water which comprises a plurality of deflector vanes positioned at the top of the inside of the exhaust pipe and extending toward the bottom thereof transversely across a portion of the upper part of the flow path in the pipe, said vanes extending into the flow path for at least ⅛ of the pipe diameter, said vanes being arranged in staggered relation in parallel longitudinal rows.

3,130,542
COLLECTOR FOR NEUTRAL PARTICLES
Wesley A. Kuhrt, Glastonbury, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Oct. 26, 1962, Ser. No. 233,274
8 Claims. (Cl. 60—35.5)



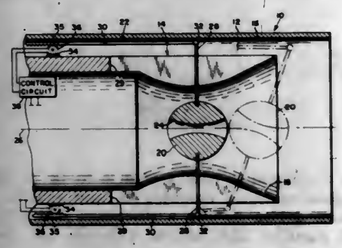
5. In combination with a vehicle to be propelled, an ion propulsion device mounted on said vehicle, said ion propulsion device having a discharge end from which charged particles and neutral particles are discharged, an annular collecting element rotatably mounted on said vehicle for collecting neutral particles discharged from said ion propulsion device, said collecting element being in substantially axial alignment with said ion propulsion device and at least part of said collecting element extending beyond the discharged end of said ion propulsion device, said collecting element having an opening in axial alignment with the discharge end of said ion propulsion device, a propellant supply connected to said ion propulsion device, and means for delivering the neutral particles from said collecting element to said propellant supply.

3,130,543
JET PROPULSION ENGINE
Thomas Alfred Oldfield and Maurice Ian Taylor, Allestree, Derby, England, assignors to Rolls-Royce Limited, Derby, England, a company of Great Britain
Filed May 1, 1961, Ser. No. 106,748
Claims priority, application Great Britain May 6, 1960
10 Claims. (Cl. 60—35.54)



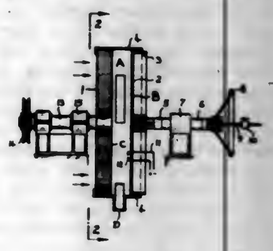
1. A jet propulsion engine for an aircraft, said engine having a jet pipe and at least one additional exhaust duct communicating laterally with the jet pipe at a point forward of the downstream end thereof, adjustable exhaust valve means mounted in said jet pipe for selectively deflecting jet gases flowing through the jet pipe into said exhaust duct, a jet propulsion nozzle carried by said exhaust duct through which the jet gases deflected by said exhaust valve means are discharged, said nozzle comprising a rotatable frame member, a plurality of substantially chordally arranged support members slidably connected to the frame member, and a plurality of parallel jet deflector vanes carried by the frame member, at least some of the deflector vanes being slidably connected to the support members, the deflector vanes serving for deflecting the jet gases discharged through said nozzle, and means for rotating said frame member relatively to said exhaust duct to alter the direction to which the jet gases are deflected by said deflector vanes, said frame member being adjustable to permit the jet gases to be deflected selectively forwardly, downwardly and rearwardly relative to said engine.

3,130,544
VARIABLE THRUST AND DIRECTION NOZZLE
Salvatore J. Penza, Oxnard, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Oct. 23, 1961, Ser. No. 147,109
8 Claims. (Cl. 60—35.54)
(Granted under Title 35, U.S. Code (1952), sec. 266)



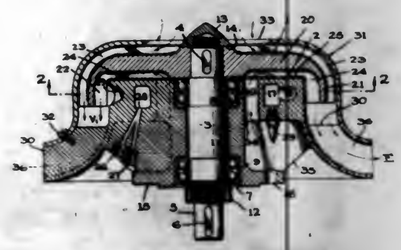
1. In combination with a jet propulsion motor having a longitudinal axis, a jet nozzle having a varying diameter throat, a jet direction control device supported within said throat in spaced relation thereto, said control device having means for deflecting only a portion of the nozzle flow, and means for moving said device longitudinally within said throat and about a plurality of axes transverse to said longitudinal axis whereby the volume and direction of flow through said nozzle can be varied to change the speed and direction of exhaust flow respectively through said nozzle.

3,130,545
TURBINE-MOTORS
Peter Schlumbohm, 41 Murray St., New York, N.Y.
Filed Nov. 4, 1958, Ser. No. 771,879
1 Claim. (Cl. 60—39.35)



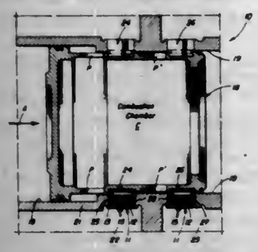
Turbine-motor characterized by a combustion space, mounted for rotation around a shaft, having means for introducing fuel, means for ignition, and means for exhausting the combustion gases, said combustion space being shaped like a cylinder slice having a peripheral cylindrical wall and two disc-shaped side-walls of substantially the same diameter and mounted parallel to each other in sufficient proximity to cooperate for a pumping effect, when at least one of them is rotating; at least one of the two discs being of capillary one-way-flow structure, whereby scavenger air and fresh air can be pumped through this disc into the combustion space while during the explosion phase a back-firing of combustion gases through this capillary disc is substantially checked.

3,130,546
ROTARY INTERNAL COMBUSTION ENGINE
Jiri Hovorka, Morris Plains, N.J., assignor, by direct and mesne assignments, of ninety percent to Royalty Holding Corporation, Morris Plains, N.J., a corporation of New Jersey, and ten percent to Joseph Abelow, Miami Beach, Fla.
Filed Aug. 15, 1961, Ser. No. 131,520
3 Claims. (Cl. 60—39.36)



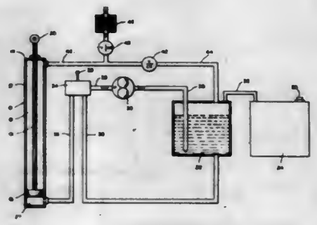
1. A rotary internal combustion engine comprising a stator having an internal annular combustion chamber and a plurality of generally tangential flared nozzle passages leading from said chamber and opening through the periphery of the stator, said stator having an axial through bore inwardly of the chamber and substantially concentric therewith, said stator having circumferentially spaced air cooling through passages axially thereof intermediate said bore and chamber, said stator having generally axial communicating fuel and combustion air inlet opening means formed therein leading to and communicating with said combustion chamber, frictionless bearing means within said stator through bore near opposite ends thereof, a shaft journaled within said bearing means and extending axially beyond opposite ends of the stator, a plate-like rotor secured to one end of said shaft adjacent one end face of the stator, said rotor and said end face being substantially flat, said rotor having a relatively short axially extending annular skirt on the periphery thereof arranged in radially opposed relation to the periphery of the stator, said skirt provided in its inner face with a multiplicity of circumferentially spaced thrust-receiving pockets including generally radial walls and adapted to receive high velocity streams of combustion gases discharging from said nozzle passages to cause rotation of the rotor and said shaft, said plate-like rotor provided on opposite sides thereof with generally radially extending integral cooling fins serving also as blower elements and provided upon the exterior of said annular skirt with cooling fin portions constituting extensions of the fins on the exterior side of said rotor, a generally bell-shaped cowling secured to said stator near the margins of the cowling and stator and substantially surrounding the rotor and conforming generally to the shape thereof and having a large central axial air inlet opening opposite the exterior side of said plate-like rotor and adjacent the exterior fins of said rotor, exhaust passage means on said stator communicating with the interior of said cowling, and means on said stator to initiate combustion within said chamber, rotation of the rotor during engine operation causing said fins on said rotor to draw cooling air in one axial direction through the large central opening of the cowling and in the opposite axial direction through said air cooling passages of the stator, said cooling air on both sides of said rotor discharging from said annular skirt of the rotor into said exhaust passage means to thereby cool the engine and aid in scavenging the exhaust gases.

3,130,547
FLUID CONTROL DEVICE
Charles F. Nash, Roseland, N.J., assignor to the United States of America as represented by the Secretary of the Navy
Filed Sept. 27, 1962, Ser. No. 227,667
1 Claim. (Cl. 60—39.48)



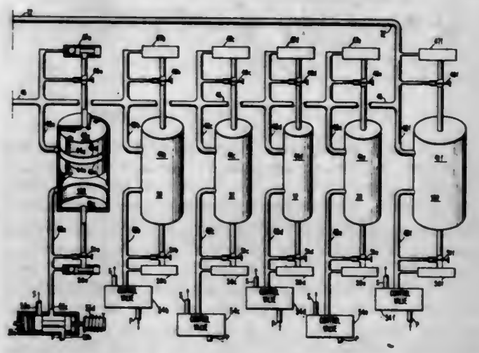
In a fluid seal for use in a missile thrust unit, the combination of a fixed header having a cylindrical bore therein, a pressure actuated piston slidably disposed within said bore and having a combustion chamber therein, said piston being movable from an initial position to an operating position, a pair of normally depressurized tanks carried by said header, a quantity of combustible fluid sealed within said tanks, shearable cups carried by said header and disposed in each of said tanks and sheared as the piston moves from said initial position to said operating position a core element secured in sealing engagement within each shearable cup, said cores having a plurality of bores disposed therethrough, a plurality of pointed plugs being press-fitted into the bores of the cores associated with the shearable cups disposed in the first of said pair of normally depressurized tanks, a plurality of pointed plugs being press-fitted into the bores of the cores associated with the shearable cups disposed in the second of said pair of normally depressurized tanks, said pointed plugs being deposed from said core elements when the tank with which said pointed plugs are associated is in a pressurized condition, and port means in said piston for establishing communication between said pair of normally depressurized tanks and said combustion chamber when said piston is in said operating position and the respective tanks are pressurized so as to depose said pointed plugs from said core elements.

3,130,548
PRESSURIZED SUMP
Victor F. Hunt, Battle Creek, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Filed Dec. 22, 1961, Ser. No. 161,698
13 Claims. (Cl. 60—52)



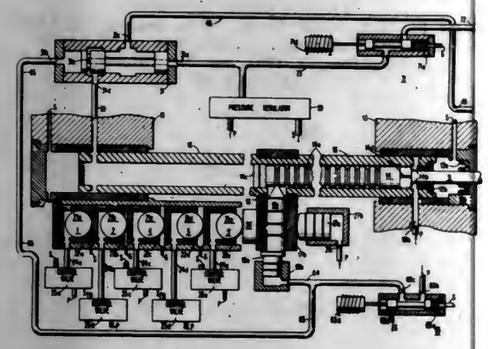
1. A hydraulic system comprising single acting motor means having a normally closed air space therein, a liquid reservoir having a normally closed air space associated therewith, pump means for directing pressure liquid from said reservoir to said motor means, conduit means connecting the air space in said motor means to the air space of said reservoir, check valve means permitting a flow of pressure air to the latter air space through said conduit during actuation of said motor means in one direction, and additional check valve means permitting a flow of atmospheric air to the air space in said motor means during actuation of said motor means in the opposite direction.

3,130,549
HYDRAULIC POSITIONING SYSTEM
Marshall E. Freeman, San Jose, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Sept. 14, 1960, Ser. No. 55,994
6 Claims. (Cl. 60—54.5)



1. A hydraulic positioning system for positioning a load device at any one of a plurality of discrete positions comprising a first cylinder which is stationary relative to said load device, a second cylinder disposed in and movable relative to said first cylinder, an output shaft forming a piston in said second cylinder and extending therefrom for connection to said load device, a volumetric adder having a plurality of cylinder elements hydraulically communicating with the interior of said second cylinder for

varying the position of said shaft relative to said second cylinder, said volumetric adder elements providing increments of movement of said shaft and load device which are multiples of the smallest increment represented by adjacent ones of said positions, cylinder adder means mechanically connected to said second cylinder for moving



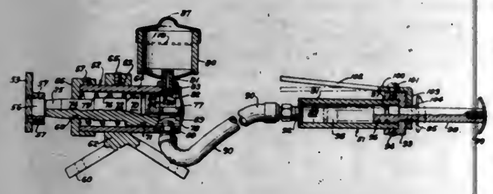
said second cylinder and said output shaft relative to said first cylinder, said cylinder adder providing increments of movement of said shaft in the range between the smallest increment of movement required and the smallest increment of movement provided by said volumetric adder, and control means for controlling said volumetric adder and said cylinder adder.

3,130,550

REMOTE CONTROL MECHANISM

Arthur W. Rafferty, 933 3rd Ave., Sacramento, Calif.

Filed Mar. 7, 1960, Ser. No. 13,246
6 Claims. (Cl. 60—54.5)



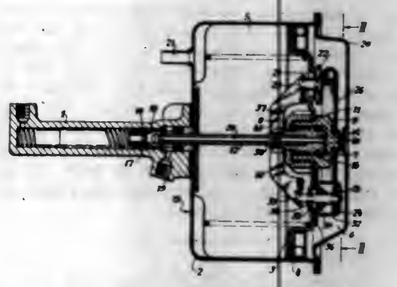
1. A fluid responsive remote control device of the character described comprising a pivoted spring-biased handle, a plate affixed to one side of said handle, a series of lugs affixed to the outer face of said plate in an arcuate path thereon, said path being concentric with the pivotal point of said handle, an operating cylinder mounted at a stationary position adjacent the path of travel of said lugs, a spring-retracted operating piston in said operating cylinder, a bolt extending from one side of said piston slidably through one end of said operating cylinder and selectively engageable with said lugs, means limiting the outward movement of the bolt from said operating cylinder, a freely movable flexible hose tubing communicating with the other end portion of said operating cylinder, an actuating cylinder connected at one of its ends with the opposite end of said tubing, said tubing being of sufficient flexibility and length to provide free manual manipulation of the actuating cylinder from selective positions substantially removed from the stationary position of the operating cylinder, an actuating piston slidably mounted in said actuating cylinder, a plunger rod extending slidably through the outer end of said actuating cylinder, and latch means carried by said actuating cylinder for releasably maintaining said plunger of the actuating cylinder in selected positions with respect to said actuating cylinder.

3,130,551

VALVE MECHANISM FOR CONTROLLING SERVO DEVICES OF THE DIFFERENTIAL AIR PRESSURE TYPE

Leslie Cyril Chouings, Leamington Spa, England, assignor to Automotive Products Company Limited, Leamington Spa, England

Filed Feb. 10, 1961, Ser. No. 88,372
Claims priority, application Great Britain Feb. 11, 1960
5 Claims. (Cl. 60—54.5)



1. A servo device comprising a master cylinder having a piston mounted therein, a fluid inlet at one end of said master cylinder and a fluid discharge at the opposite end of said master cylinder with said piston positioned therebetween, a servo device including a casing secured to said master cylinder, said servo device being of the differential air pressure type and having a piston-like movable member in said casing, valve mechanism for controlling the air pressure acting in a chamber on one side of the movable member comprising a normally open first valve operative to connect said chamber to a source of pressure equal to that existing on the other side of the movable member, and a normally closed second valve operative to connect said chamber to a source of differential pressure, each of said valves consisting of a port in the movable member and a movable valve member cooperating therewith, said valve members being connected one to the other by a rocking member, a control cylinder carried by said movable member, a control piston in said control cylinder having an opening therethrough, a tube rigidly connected to said control piston in communication with said piston opening, the other end of said tube opening into said master cylinder in opposed relation to said master cylinder piston and in communication with said master cylinder intermediate said master cylinder piston and said fluid inlet, and means pivotally mounting said rocking member on the combined tube and control piston.

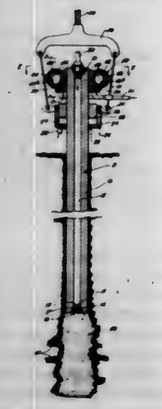
3,130,552

METHOD AND APPARATUS FOR CREATING A LOAD BEARING REGION IN EARTHEN MATERIAL

Albert G. Bodine, Jr., Sherman Oaks, Calif. (7877 Woodley Ave., Van Nuys, Calif.)

Filed Mar. 28, 1961, Ser. No. 98,801
7 Claims. (Cl. 61—36)

2. The method of forming a body of material capable of supporting structural load at a predetermined region of relatively low strength in the earth, comprising: introducing an elastic stem longitudinally into the earth to said region, creating continuous sonic elastic vibrations in and along said stem, whereby said stem acts as a radiator of sonic waves into fluent media in contact therewith, and



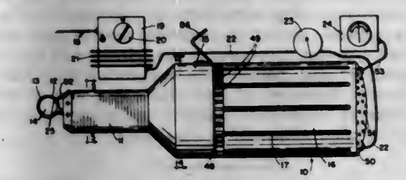
simultaneously therewith introducing to said region, in a fluent state, and in a stream in contact with the elastically vibrating stem, a material which subsequently hardens into a stiff state to form said body, whereby said material is driven into and against the earth material by sonic waves radiated from said stem.

3,130,553

VARIABLE-TEMPERATURE PORTABLE TESTING CHAMBERS

David Mark Makow, Ottawa, Ontario, Canada, assignor to National Research Council, Ottawa, Ontario, Canada, a body corporate of Canada

Filed Nov. 13, 1962, Ser. No. 236,972
11 Claims. (Cl. 62—3)



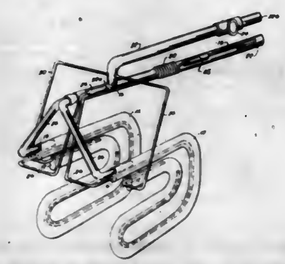
10. Thermo-electric apparatus for heating and cooling an article comprising a metal body having a recess therein and a plurality of ventilation ducts, blower means for passing a current of air through said ducts to hold the body at the temperature of ambient air, a unitary heat-conductive rod-like probe detachably insertable in said recess by one end and extending beyond said body, a ring array of thermo-electric elements arranged between said probe and said body and disposed for alternatively pumping heat from said probe to said body and from said body to said probe, a chamber formed in said probe for surrounding the article, current supply means for energizing said array, and current control means to regulate the article temperature.

3,130,554

REFRIGERATING AND AIR CONDITIONING APPARATUS

Andrew G. Andrea, 6801 NW. 59th Terrace, Bethany, Okla., assignor of one-half to Mildred M. Kennedy, Parsons, Kans.

Filed Apr. 2, 1963, Ser. No. 270,012
9 Claims. (Cl. 62—7)



1. Refrigeration apparatus for utilizing the latent heat of vaporization of a volatile, normally liquid fuel to effect cooling comprising:

(*a*) an elongated, generally tubular cooling coil having first and second closed ends;

(*b*) a refrigerant intake coil of smaller diameter and lesser length than said first coil passing into said first coil adjacent the first end thereof and extending through a major portion of the length of said first coil, said refrigerant intake coil having its end outside said first coil connected to a source of said volatile, normally liquid fuel;

(*c*) a source of vacuum connected to the first end of said cooling coil;

(*d*) a tubular conduit of smaller diameter than said cooling coil passing into the second end of said cooling coil and terminating with its end inside said cooling coil in spaced relation to the end of said refrigerant intake coil in said cooling coil; and

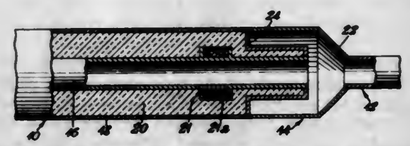
(*e*) valve means connected to the end of said tubular conduit outside said cooling coil for adjusting the amount of air drawn into said cooling coil through said tubular conduit by said source of vacuum.

3,130,555

TRANSFER CONDUIT ASSEMBLY FOR CRYOGENIC LIQUID

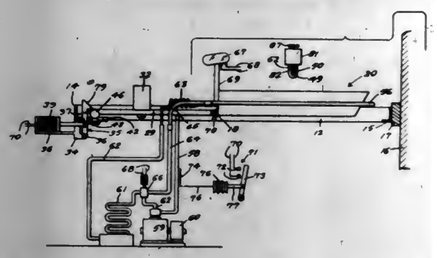
George C. Haettinger, Indianapolis, Ind., assignor to Union Carbide Corporation, a corporation of New York

Filed May 2, 1961, Ser. No. 107,170
5 Claims. (Cl. 62—55)



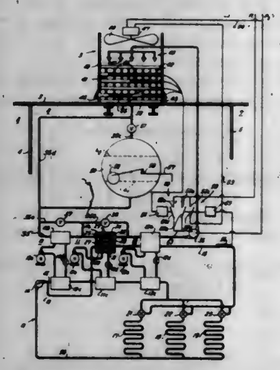
1. A low boiling liquefied gas transfer conduit assembly comprising a first liquefied gas conduit; an outer shell which circumferentially surrounds said first liquefied gas conduit so as to form an evacuable insulation space therebetween; a second atmospherically exposed liquefied gas conduit; a transition member which integrally connects said outer shell to said second liquefied gas conduit such that the first and second liquefied gas conduits are longitudinally adjacent and in indirect thermal-conductive relation; and means for vacuum-sealing said evacuable insulation space.

3,130,556
MACHINE AND METHOD FOR MAKING ICE
James M. Goldsborough, Box 37, Rte. 1, Hollywood, Md.
Filed Aug. 31, 1962, Ser. No. 220,598
8 Claims. (Cl. 62—73)



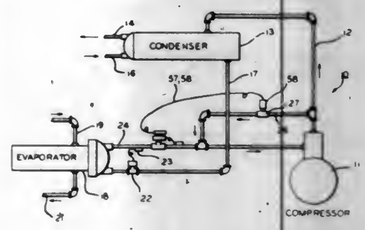
7. A cyclic method of manufacturing ice consisting of filling a receptacle with a liquid, freezing the liquid therein, restraining the receptacle in a raised position during filling thereof and the freezing of the liquid, utilizing the temperature of the ice to effect release of the receptacle and the weight of the ice to tilt the receptacle to a lowered discharging position, thermally defrosting the receptacle automatically due to the tilting thereof to a discharging position to effect discharge of the ice therefrom and the automatic return of the receptacle to a raised and restrained position for automatically repeating the manufacturing process.

3,130,557
COOLING TOWER CONTROL MEANS
Alden Irving McFarlan, 691 Dorian Road, Westfield, N.J.
Filed May 23, 1962, Ser. No. 197,054
8 Claims. (Cl. 62—171)



1. In a cooling tower of the type containing a packing of inflammable material onto which water is delivered to trickle therethrough by gravity and through which air is circulated to provide an extended surface area for air and liquid contact, the combination with said cooling tower of a tank in an enclosure below said tower and connected to the bottom thereof to receive water therefrom, a pump for circulating water in a circuit including the tank and cooling tower, a first means for initiating operation of the pump to deliver water from the tank onto the packing to operate the cooling tower to cool water, and a second means responsive to the temperature of the packing in the cooling tower for initiating operation of the pump in case of fire to deliver water from the tank on top of the packing.

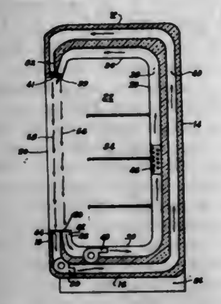
3,130,558
ANTI-SLUG CONTROL FOR REFRIGERATION CIRCUITS
Donald B. Gardner, Mount Prospect, Ill., assignor to International Telephone and Telegraph Corporation, New York, N.Y., a corporation of Maryland
Filed Apr. 30, 1962, Ser. No. 191,002
3 Claims. (Cl. 62—197)



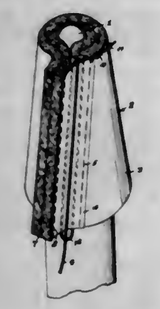
1. In a refrigeration circuit comprising a compressor for refrigerant, a condenser including a refrigerant line connected between said condenser and the discharge side of said compressor, an evaporator connected to said condenser including means disposed between said condenser and said evaporator for expanding refrigerant, a suction line connected between said evaporator and the suction side of said compressor, means for preventing the movement of slugs of liquid refrigerant to said compressor comprising a by-pass line connected between the discharge side of said compressor and said suction line, a by-pass valve connected in said by-pass line and adapted to control the by-pass of superheated refrigerant to said suction line, said by-pass line being connected to said suction line between said by-pass valve and the suction side of said compressor, the improvement in said circuit which include means for opening said by-pass valve when the superheat in said suction line is below a certain value, said means comprising a housing having a pair of chambers separated by a common diaphragm, one of said chambers containing fluid which expands and contracts in accordance with the temperature in said suction line, temperature sensing means in contact with said suction line and in communication with said one fluid containing chamber of said housing, the other of said chambers having means connecting the same to said suction line, means connected to said diaphragm and movable in response to the pressure and temperature conditions in said suction line, a circuit including means for operating said by-pass valve, and switch means connected in said circuit and operable to closed and open positions by engagement therewith by said means connected to said diaphragm and movable with same in response to pressure and temperature conditions for controlling said by-pass valve.

3,130,559
MULTIPLE JET CONDITIONING CABINET
Sterling Beckwith, Libertyville Township, Ill., assignor, by mesne assignments, to Dual Jet Refrigeration Company, a corporation of Illinois
Filed May 17, 1961, Ser. No. 110,713
10 Claims. (Cl. 62—256)

1. In a cabinet having an access opening in one side communicating a storage space within the cabinet with the ambient atmosphere, at least two outlet nozzle extending continuously across one side of the access opening and corresponding inlet members extending across the opposite side of the opening, and means for continuously circulating panels of air from the outlet nozzles of the inlets across the opening with the inner panel being a conditioned air panel, the improvement which comprises angling the outlet nozzles for convergence in the direction towards each other at the outlet end portion to merge the air panels issuing from the nozzles into a continuous air curtain flowing across the access opening with the conditioned air panel located inwardly in the air curtain.



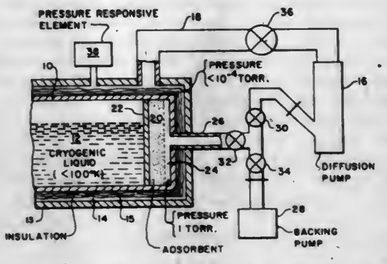
3,130,560
COOLING SHROUD
James O. Pilcher II, Aberdeen, Md., assignor to the United States of America as represented by the Secretary of the Army
Filed June 6, 1962, Ser. No. 200,592
2 Claims. (Cl. 62—316)
(Granted under Title 35, U.S. Code (1952), sec. 266)



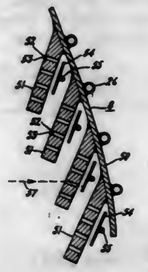
1. An expendable cooling shroud for maintaining a rocket nose cone at a low temperature, said shroud comprising a generally truncated conical shaped sheet of alcohol saturated absorbent paper forming a jacket for placement over a rocket cone, one longitudinal end of said jacket being outwardly turned; a strip of heavy paper secured at its longitudinal ends to the respective ends of said jacket and a means for ripping said strip longitudinally carried by said jacket to free said jacket from the nose cone.

3,130,561
INSULATION DEVICE
Milo P. Hnilicka, Jr., Concord, Mass., assignor to National Research Corporation, Cambridge, Mass., a corporation of Massachusetts
Filed Nov. 1, 1961, Ser. No. 149,239
4 Claims. (Cl. 62—331)

2. An insulated vessel comprising an inner chamber to be maintained at a predetermined low temperature below about 100° K., an outer chamber spaced from said inner chamber and sealed to form a vacuum-tight insulation space therebetween, and means for maintaining said vacuum-tight insulation space at a pressure less than 1×10^{-5} torr, said means comprising a vacuum-tight container having therein an adsorbent material arranged in heat exchange contact with said inner chamber so as to be cooled to a temperature below 100° K., pump means for removing gases from said vacuum-tight insulation space and compressing said gases to a pressure which is at least 100 times greater than the pressure to be maintained in said insulation space, and means for conducting said compressed gases to said cold adsorbent material.



3,130,562
CRYOGENIC PUMPING APPARATUS
Norman H. Wood, Schenectady, and Loyd B. Nesbitt, Alplaus, N.Y., assignors to General Electric Company, a corporation of New York
Filed Nov. 2, 1960, Ser. No. 66,820
8 Claims. (Cl. 62—404)



1. In a space simulator, the combination of means defining a chamber, a pump connected to and adapted to evacuate the chamber, a substantially spherically shaped cryogenic pumping member located in said chamber and being adapted to substantially envelop a test member in said chamber, said cryogenic member comprising baffle means for absorbing radiant energy, means for condensing gases located in said chamber, the gas condensing means being maintained at a temperature substantially less than the temperature of the baffle means, said baffle means substantially shielding the gas condensing means and including passage means for directing gas molecules in the chamber toward the gas condensing means.

3,130,563
CRYOGENIC APPARATUS
Norman H. Wood, Schenectady, and Loyd B. Nesbitt, Alplaus, N.Y., assignors to General Electric Company, a corporation of New York
Filed Aug. 7, 1961, Ser. No. 129,842
7 Claims. (Cl. 62—404)

1. In a space simulator, means defining a chamber, a pump connected to and adapted to substantially evacuate said chamber, a cryogenic member being located in said chamber and being adapted to substantially envelop a test member in said chamber, said cryogenic member including a wall member, a plurality of baffle fins extending from said wall member and being angularly disposed

with respect to said wall member, said wall member and said baffle fins being thermally connected, a plurality of condensing fins being located between said baffle fins and

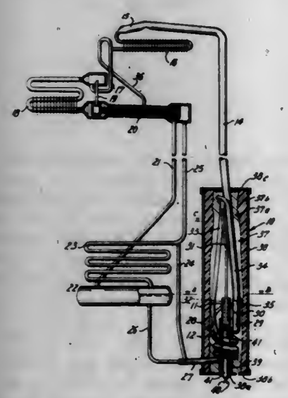


the wall member whereby the condensing fins are substantially shielded from the test member, said baffle fins including a plurality of closely spaced surfaces defining recesses therein.

ERRATUM

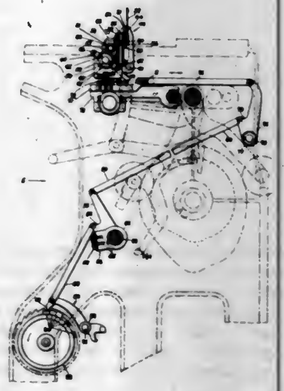
For Class 62—404 see:
Patent No. 3,131,396

3,130,564
ABSORPTION REFRIGERATION
Paul Herbert Cronelid, Stockholm, and Colin Stanley Hocking, Bandhagen, Sweden, assignors to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden
Filed May 31, 1960, Ser. No. 32,993
Claims priority, application Sweden June 4, 1959
12 Claims. (Cl. 62—487)



1. In an absorption refrigeration system having a circuit for circulation of absorption liquid comprising an absorber and a generator and liquid heat exchanger therebetween having passages for flowing in thermal relation absorption liquid rich and weak, respectively, in refrigerant, a plurality of pipes in the immediate vicinity of one another, one of said pipes forming a heating tube, said generator comprising several of said pipes which are connected in said circuit and at least one of which contains absorption liquid arranged to receive heat from said heating tube, means for heating said heating tube, means for insulating said generator and said heating tube from the surroundings comprising an inner layer of insulation and an outer layer of insulation of lower thermal conductivity than the inner layer, the outer layer of insulation comprising material which is adversely affected and loses at least some of its thermal insulating properties when subjected to heat at elevated temperatures corresponding to the temperatures developed by said heating tube and said one generator pipe due to heating by said heating means during normal operation of the system, said inner layer of insulation being capable of withstanding the heat produced by said heating tube during normal operation of the system and being so constructed and formed that the temperature gradient in an outward direction therethrough will be sufficient to enable the outer portion of said outer layer of insulation to tend to function at a value of thermal conductivity approaching its normal value and allow the inner portion of the outer layer of insulation to lose some of its thermal insulating properties due to heat developed by said heating member and said one generator pipe during normal operation of the system, the thermal conductivity of the inner portion of said outer layer of insulation being at least as low as the thermal conductivity of the inner layer of insulation when it loses some of its thermal insulating properties during normal operation of the system, said outer layer of insulation comprising foamed plastic, and heat reflecting material at the inner surface of the foamed plastic.

3,130,565
AUXILIARY NEEDLE BAR ASSEMBLY AND CONTROL
Harry O. Werner, Philadelphia, Pa., assignor to Wildman Jacquard Co., Norristown, Pa., a corporation of Pennsylvania
Filed July 30, 1962, Ser. No. 213,483
5 Claims. (Cl. 66—88)



1. In a straight bar type knitting machine having a generally vertically disposed needle bed adapted to carry a plurality of needles along the length thereof, said needle bed comprising a main and an auxiliary needle bar, alternate needles fixed in said main needle bar and intermediate needles fixed in said auxiliary bar, means for separately moving said auxiliary needle bar to withdraw said intermediate needles from action to an inactive position and to return said intermediate needles selectively to an active position in alignment with said alternate needles, which comprises rack gears fixed to said auxiliary bar and selectively movable to cause said intermediate needles to move to and from operating position, oscillatable gear members in meshing relation with said rack gears, and cam controlled linkages adapted to function in conjunction therewith.

3,130,566
FOOTLET AND METHOD OF FORMING THE SAME
Robert E. Chesebro, Sheboygan, Wis., assignor to Wigwam Mills, Inc., Sheboygan, Wis., a corporation of Wisconsin
Filed Jan. 2, 1963, Ser. No. 249,060
10 Claims. (Cl. 66—171)

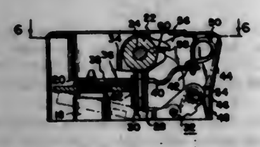


1. A footlet adapted to be worn inside a shoe and to be substantially covered thereby comprising

(*a*) a tubular body having an upper edge defining an opening therein adapted to receive the foot of the wearer therethrough to provide access to the interior thereof, said tubular body including a toe portion, a heel embracing portion, and a body portion connecting said toe and heel embracing portions, and

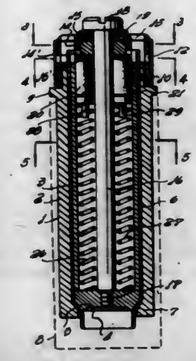
(*b*) a support tab disposed in juxtaposed relation to said heel embracing portion and having an inner end connected to the heel embracing portion adjacent the upper edge thereof and a free outer terminal end, said support tab comprising a pair of fashioned integrally knit juxtaposed gussets each including a plurality of courses connected to corresponding courses of the other gusset, said support tab being adapted to be disposed on the outside of the heel portion of a shoe to support the heel embracing portion of said footlet thereon to prevent the same from sliding downwardly into the shoe.

3,130,567
CIGARETTE LIGHTER
Stanley H. Newman, % Schwartz & Frohlich, 19 E. 70th St., New York, N.Y.
Filed Mar. 7, 1961, Ser. No. 93,919
1 Claim. (Cl. 67—7.1)



In a cigarette lighter of the type which uses as a fuel a compressed inflammable gas, the combination of a tank adapted to store a supply of fuel under pressure, a gas valve and burner tube assembly having a longitudinal axis with a flange means on the burner tube and said assembly connected to said tank, said burner tube being axially movable whereby gaseous fuel may escape therefrom when said valve is in an open position, a valve lifting assembly including a valve lifter, a resilient support for said valve lifter, a frame, a valve lifter support positioned beneath the valve lifter, a pressure piece, means for movably mounting the pressure piece, and cam means for camming the valve lifter into lifting engagement with the burner tube, said valve lifter being connected at one end to the resilient support and adapted to be slidably moved, the other end of the valve lifter being bifurcated and normally adapted to align with and engage the burner tube, said resilient support being positioned in the pressure piece, the means for movably mounting the pressure piece being connected to the frame, said cam means being positioned whereby said other bifurcated end of the valve lifter is moved upwardly when the pressure piece is moved and the resilient support positioned therein is urged by the pressure piece towards the valve and burner tube so that the valve lifter mounted on said support normally aligns with and contacts the flange on the burner tube and opens the valve permitting gaseous fuel to flow therefrom, said resilient support adapted to give under the influence of the pressure piece when the valve lifter is out of alignment with the burner tube and fails to engage said tube properly to provide a lifting action.

3,130,568
PYROPHORIC LIGHTER
Carlos Gustavo Sero Mantero, Juncal 573, Ituzaingo, Argentina
Filed Sept. 12, 1961, Ser. No. 137,576
7 Claims. (Cl. 67—7.1)

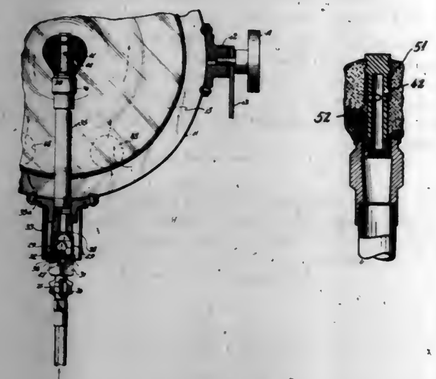


1. A pyrophoric lighter comprising a tubular cylindrical body, said body comprising inner and outer shell portions, a spark wheel freely revolubly disposed at one end of said body coaxially therewith, the other end of said body being adapted for insertion into a fuel reservoir, a tubular wick extending longitudinally of said body coaxially therewith, said wick being engaged between said shell portions, at least one spring-pressed flint movable along a path spaced from and parallel to the rotational axis of said spark wheel, and means defining a serrated flat annular spark-producing surface on said spark wheel positioned for engagement by said flint, one end of said wick being positioned to receive sparks from said spark-producing surface, the other end of said wick extending beyond said other end of said body for the absorption of fuel.

3,130,569
LIQUEFIED PETROLEUM FLOOD LIGHT
William W. Lee, 846 N. Humphrey Ave., Oak Park, Ill.
Filed Dec. 26, 1961, Ser. No. 162,031
6 Claims. (Cl. 67—88)

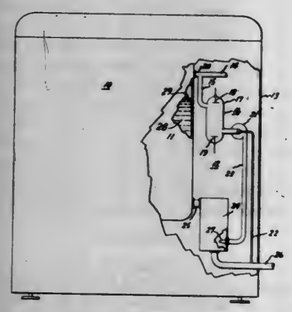
1. A burner for a liquefied petroleum gas burning flood light comprising a main body having a passageway therein for connection to a conduit through which a combustible mixture of liquefied petroleum gas and air may be supplied under pressure, said body having a tubular portion closed at its outer end extending from said body and communicating with said passageway, said body having a portion at its outer end provided with openings about said tubular portion and in communication

with said passageway for directing a portion of said gaseous mixture from said passageway about and in a direction generally longitudinally of said tubular portion, said tubular portion having openings in the sides thereof for the discharge of a portion of said gaseous mixture, said tubular portion having a shield positioned thereabout opposite and spaced from the part of said tubular portion having said openings therein, said shield having a portion



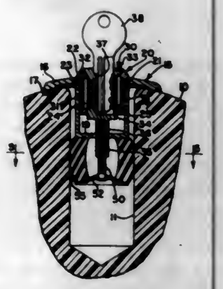
thereof extending downwardly over and below the said openings in the sides of said tubular portion, and the said burner having provision for attachment thereto of a mantle positioned about said tubular portion and the outer end of said main body portion into which said gaseous mixture may flow from said passageway through the openings in said main body and said tubular portion and outwardly toward the said shield and thence downwardly toward the bottom of said mantle.

3,130,570
COMBINATION WASHING MACHINE AND CLEANSING MEDIUM GENERATOR
Peter M. Rentzepis, Troy, N.Y., assignor to General Electric Company, a corporation of New York
Filed June 27, 1961, Ser. No. 119,944
6 Claims. (Cl. 68—13)



1. A washing machine including a container for containing water and clothes to be washed and having operatively connected thereto a cleansing medium generator, said generator comprising in combination, an air duct, means in said air duct to provide a flow of air therethrough, means operatively associated with said duct to provide additional water vapor into said air in said duct with air as the continuous phase, an electrical discharge device operatively connected to said air duct to cause dissociation of the air flowing therein, a water chamber operatively connected to said air duct, means for connecting said water chamber to a source of water to provide water in said chamber which is free from impurities tending to substantially deter dissolving of said dissociated air therein, said chamber having an exit means in communication with said container and inlet means for communication with said source of water, nozzle means to spray the products of dissociated air into said water at a position substantially removed from said chamber exit, and means to admit water from said water chamber into the water in said container substantially below the surface of water in said container in said washing machine.

3,130,571
BOWLING BALL LOCK
Richard A. Neumann, S. 13th St., East Moline, Ill.
Filed May 19, 1960, Ser. No. 30,124
19 Claims. (Cl. 70—58)

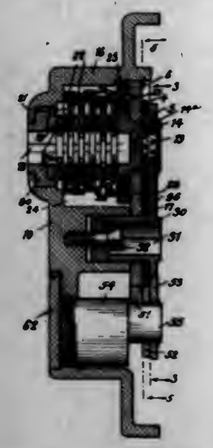


12. A plug adapted to close the finger opening in a bowling ball comprising: a surface plate covering the opening and extending beyond the outer edges of the opening and lying closely adjacent the surface of the ball; a plug assembly connected to the plate disposed in the opening having expandable and contractable portions thereof and adapted to contact the wall surface of the opening upon expansion, said plug assembly further having a portion rotatably supported on said surface plate; means connecting the latter portion with the former portions whereby radial expansion and contraction will occur in response to rotation of said latter portion; and lock means preventing rotation of said latter portion.

3,130,572
LOCK
John F. Wellekens, Staten Island, N.Y., assignor, by mesne assignments, to Hotel Security Systems Corporation, New York, N.Y., a corporation of New York
Filed Apr. 21, 1961, Ser. No. 104,588
9 Claims. (Cl. 70—383)

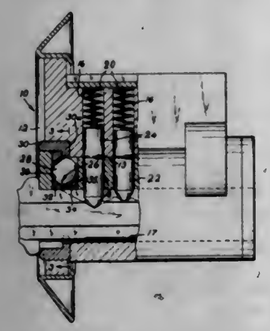
6. In a lock a housing containing a tumbler mechanism and a bolt-operating element controlled thereby, said tumbler mechanism including a plurality of adjustable stops, each of which carries an adjustable tumbler, a plate for exerting pressure on the stops to hold the same in selected positions of adjustment to enable their tumblers to accommodate themselves to the contour of a specific key, a rotative element and means interposed between the same and the plate for imposing pressure on the plate for transmission to the stops, a controlling lock having means coupling it to the rotative element in a manner to cause rotative movement of the rotative element when a master key is turned in a specific direction and for a specific distance in the controlling lock, and means for causing the plate to reduce its pressure on the stops to thereby permit adjustment of said stops to a new key upon the insertion of the new key in the tumbler mechanism and

when the master key is turned for a specific distance in one direction, and for causing the pressure on the plate



to be restored when the master key is returned to the position in which it was inserted in the controlling lock.

3,130,573
PIN-TUMBLER LOCK
John Hines, South Norwalk, Conn., assignor to The New England Lock and Hardware Co., South Norwalk, Conn., a corporation of Connecticut
Filed Sept. 10, 1962, Ser. No. 222,478
7 Claims. (Cl. 70—417)



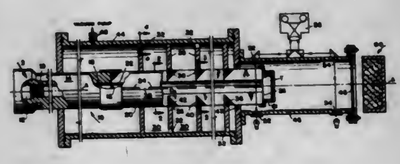
1. In a lock of the cylinder type comprising a cylinder, a plug mounted for rotation in the cylinder and having a longitudinal key slot, recesses in the cylinder and plug respectively disposed so that they are aligned when the plug is in a predetermined position rotatively relative to the cylinder, tumbler pins wholly contained in the plug recesses respectively except when elevated by the insertion of a wrong key in the key slot and thereby caused to enter partially into the recesses of the cylinder respectively when the recesses in the plug and cylinder are radially aligned, coil springs in the recesses in the cylinder, and driver pins acted on by said springs respectively but wholly contained in the cylinder recesses respectively except when the recesses in the plug and cylinder are aligned and the tumbler pins are not elevated to the periphery of the plug, the combination of a member disposed in advance of, and aligned with, the pins, and rotatable in response to the contact of the leading end of a rotating drill, and an annular ring of hardened material surrounding the rotatable member and coacting with the rotatable member to deflect a drill from penetrating the lock where the result would be to destroy the interlock between the plug and the cylinder.

3,130,574
CALIBRATION INSTRUMENT FOR TORQUE GAUGES
Robert A. Waters, Weston, and Michael A. Ayoub, Needham, Mass., assignors to Waters Manufacturing, Inc., Wayland, Mass., a corporation of Massachusetts
Filed May 29, 1961, Ser. No. 113,264
9 Claims. (Cl. 73—1)



3. A torque indicator comprising, in combination, a flat circular nonmagnetic electrically conductive disk having torque measuring indicia on one side, a weight removably attached to said disk, a shaft connected to the center of said disk, a threaded rod attached to the shaft angularly positionable relative to the shaft in a plane perpendicular to the axis of the shaft, a balance weight movably mounted on the threaded rod for balancing the disk, a base rotatably supporting said shaft, and means for producing a magnetic field through the upper outer portion of said flat circular disk to provide damping against rapid rotation of the disk relative to the base, the sole force exerted by the magnetic field on the disk thus being damping of rotational motion and the disk being free of force exerted by the magnetic field when stationary in any position.

3,130,575
IMPACT TEST APPARATUS
James W. Rogers, China Lake, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed June 19, 1961, Ser. No. 118,199
4 Claims. (Cl. 73—12)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In apparatus for determining the effect of impact of a test projectile upon a target of type including;

(*a*) a gun of the type having a smooth bored barrel along which the test projectile is impelled under force of propellant gases behind the projectile, and

(*b*) a barrel extension having its rear end abutting the muzzle of said barrel,

(*c*) said barrel extension having a plurality of co-extensive elongated gas relieving slots extending through its wall and longitudinally aligned with the axis of the barrel extension and equi-angularly spaced about said axis,

the improvements comprising,

said barrel extension having disposed therealong between the front and rear ends of the slots,

(*d*) a longitudinally extending sequential series of gas expansion chambers surrounding the barrel extension and communicating with the bore through said slots,

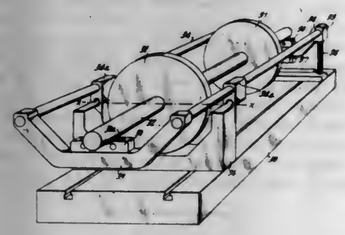
(*e*) said series of chambers having in cooperative association therewith a series of restricted slot sets disposed at a transverse station located between pairs of adjacent chambers to restrict forward propagation of gas through the slots,

said restricted slot sets comprising a restricted slot means disposed in each of said equi-angularly spaced slots,

each of said restricted slot means forming an extension of the wall separating the chambers of the adjacent pair,

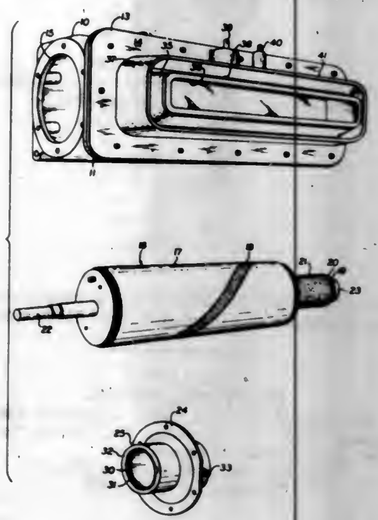
whereby emergence of gases from the front end of the barrel extension prior to emergence of the test projectile is substantially inhibited.

3,130,576
MEANS FOR DYNAMIC ANALYSIS OF UNBALANCE
Alfred J. A. Glers, Rossdorf, near Darmstadt, and Otfried G. H. Maus, Darmstadt, Germany, assignors to Carl Schenck, Maschinenfabrik G.m.b.H., Darmstadt, Germany, a German corporation
Filed May 14, 1959, Ser. No. 813,262
Claims priority, application Germany May 16, 1958
3 Claims. (Cl. 73—66)



1. Device for measuring unbalance of a specimen in a given reference plane and about a desired gravity axis of the specimen, comprising mounting means for coaxially holding the specimen, said mounting means being reciprocable in a given direction other than a rotary direction about said axis, an oscillation generator connected with said mounting means for imparting thereto oscillations in said given direction whereby the specimen, aside from said imparted oscillations, is subjected to rotary oscillations about a point on said axis if the specimen is unbalanced, and oscillation sensing means responsive to said rotary oscillations to provide a magnitude indicative of the unbalance of the specimen, said mounting means comprising a rigid frame structure having bearing means for journalling the specimen for rotation about said axis, said frame structure being pendulously reciprocable about a fulcrum transverse to said axis, said oscillation generator being connected with said frame structure for exciting it to pendulous oscillation about said fulcrum, and said sensing means being responsive to rotary oscillation of the specimen about said axis, a support pivotally engaging said frame structure to define said fulcrum, said support being displaceable along said frame structure for shifting said fulcrum along said axis of rotation.

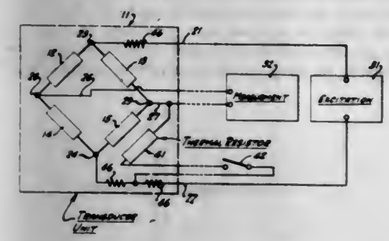
3,130,577
ULTRASONIC INSPECTION APPARATUS
John V. Cowan, Danbury, Conn., assignor, by mesne assignments, to Automation Industries, Inc., El Segundo, Calif., a corporation of California
Filed Jan. 26, 1961, Ser. No. 85,102
4 Claims. (Cl. 73—67.5)



1. An object-scanning system for ultrasonic inspection apparatus comprising: a transducer element having a wave-emitting surface and having another surface substantially parallel to said wave-emitting surface; means for completing an electrical connection to a portion of said emitting surface of said transducer element; an electrical conductor supported for movement relative to said transducer element, that portion of said conductor nearest the transducer element defining a path parallel thereto and positioned to be capacitively coupled thereto; and means for displacing said electrical conductor along said path thereby to provide capacity coupling between said electrical conductor and said other surface through a range of successive portions of said other surface.

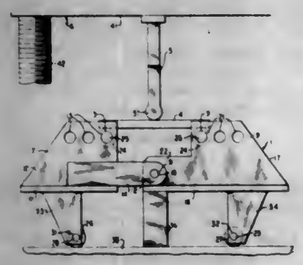
3,130,578
STRAIN GAUGE BRIDGE CALIBRATION
John E. Ames, Jr., Altadena, Calif., assignor to Fairchild Camera and Instrument Corporation, Syosset, N.Y., a corporation of Delaware
Filed Aug. 18, 1961, Ser. No. 132,501
3 Claims. (Cl. 73—88.5)

1. An improved strain transducer comprising a plurality of strain-sensitive elements electrically connected together to form a transducer unit, said transducer unit being adapted for energization and measurement as to changes of electrical characteristics of the strain-sensitive elements responsive to applied forces, and a resistor of predetermined resistance having a temperature coefficient of resistance substantially matching the temperature coefficient and said strain-sensitive elements, said resistor being disposed in close proximity to said strain-sensitive elements for experiencing the same temperature variations as said elements, and said resistor being adapted for connection in shunt with one of said strain-sensitive elements



to produce a simulated transducer output as a fixed ratio of full output.

3,130,579
APPARATUS FOR BEND TESTING ELONGATED SPECIMENS
Ernest M. Cram, Dearborn, and Nelson G. Ball, Trenton, Mich., assignors to National Steel Corporation, a corporation of Delaware
Filed May 22, 1961, Ser. No. 111,676
3 Claims. (Cl. 73—100)



1. Apparatus for bend testing of elongated metal specimens comprising

horizontally disposed rectilinear support means,

frame means including two segments positioned for pivotal movement about a centrally disposed hinge means,

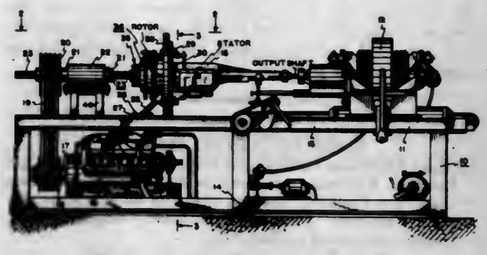
specimen support members mounted on the frame means in fixed positional relationship with respect to the hinge means above and on either side of the hinge means, the specimen support members having a curvilinear surface for contacting a test specimen during bending,

rotatable roller members mounted on the frame means in fixed positional relationship with respect to the hinge means below and on either side of the hinge means in contact with the rectilinear support means,

plunger means having a curved specimen contact surface, and

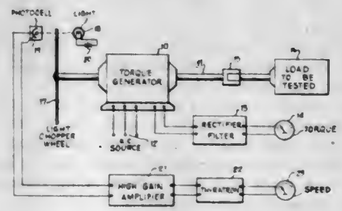
means independent of the frame means for forcing the plunger means against a specimen midway between the specimen support members; the horizontally disposed rectilinear supporting means being located to maintain the roller members in horizontally coplanar relationship during movement of the hinge means toward the supporting surface causing the roller members to move in a direction away from each other and the specimen support members to move in a direction toward each other with their curvilinear surfaces supporting longitudinal ends of a specimen during bend testing.

3,130,580
TESTING STAND
John Lells, 231 W. 6750 South, Bountiful, Utah
Filed Apr. 28, 1960, Ser. No. 25,430
10 Claims. (Cl. 73—118)



1. A testing stand for testing machines having housings and rotors of differing character and respective output shafts, including, in combination: a frame having a bearing member seat; a bearing member; means mounting said bearing member upon said seat; a sleeve journaled within said bearing member for rotation therewith; a power plant having an output shaft; means interconnecting said output shaft of said power plant with said sleeve for rotating said sleeve about its axis; a drive shaft coaxially disposed within and keyed to said sleeve, said drive shaft being selectively translatable along the axis of said sleeve and having a work end portion adapted for coupling to the rotor of a machine to be tested; means for fixing the longitudinal disposition of said drive shaft with respect to said sleeve; means affixed to said frame for fixedly mounting housings of particular machines to be tested, this means having a rotor drive access area; and a tail stock coaxially disposed with respect to said drive shaft within said sleeve for receiving the output shaft of the machine to be tested; and wherein said bearing member is adjustably alignable upon said seat.

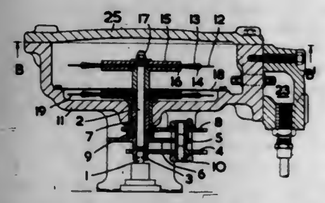
3,130,581
TORQUE AND SPEED MEASURING INSTRUMENT
Sidney B. Schulman, Little Neck, N.Y., assignor to Bulova Research and Development Laboratories, Inc., Woodside, N.Y., a corporation of New York
Filed Feb. 4, 1957, Ser. No. 638,066
3 Claims. (Cl. 73—136)



1. Apparatus for simultaneously indicating torque and speed comprising a torque generator constituted by a three phase electric motor having three stator windings and a rotor mounted on a double ended shaft extending from both ends of said motor, said windings being connected to a three-phase power source having voltage adjusting means whereby said shaft rotates in accordance with the power supplied by said source, means mechanically to couple one end of said shaft to a load to be tested, rectifier and filter means responsive to the alternating current drawn by said windings to produce a direct current as a function of motor torque, a direct-current meter to read said direct current to provide a torque indication, a

light chopper disc mounted on the other end of said shaft and including radial slots at one degree intervals thereon, a light source arranged to project light through said slots, a photo detector to intercept said light projected through said disc, means coupled to said detector and responsive to the repetition rate of the pulses produced therein to produce a direct current whose intensity is in accordance with said rate, and a direct current meter responsive to said direct current to produce a speed indication.

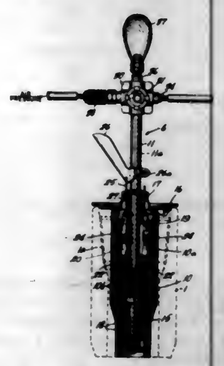
3,130,582
FLOW METERING SYSTEM
Richard Morrison Phillips and David John Lindsay-Scott, London, England, assignors to The British Petroleum Company Limited, London, and The de Havilland Engine Company Limited, Leavesden, England, both British joint-stock corporations
Filed Oct. 19, 1960, Ser. No. 63,586
Claims priority, application Great Britain Oct. 26, 1959
4 Claims. (Cl. 73—194)



1. A metering system comprising, in combination, a meter having an output shaft, adapted to indicate the value of a property of a medium being metered, as an angle of rotation of the shaft; and a pulse generator actuated by said shaft for generating an electric pulse signal comprising at least two trains of electric current pulses which are a measure of the angle of rotation of said shaft, said generator comprising a light beam source, at least two endless tracks for regulating a light beam from said source to produce a light beam having a varying characteristic, each track comprising a light regulating disk mounted on an axle and having alternate sections of differing ability for regulating a light beam, said axles being concentric and being driven by the meter shaft through gearing, a follower comprising at least two photoelectric devices, one for each light beam, for receiving, and acting upon, each light beam having a varying characteristic to provide said electric pulse signal, each track and the follower being mounted for relative angular movement, gear means operatively coupled to said meter shaft, and driven thereby, for angularly moving each track and follower relative to each other in response to rotation of said shaft, at a rate which is directly proportional to the rate of rotation of said meter shaft, to give rise to said electric pulse signal when relative movement takes place between each track and the associated follower, and the light beam source, each track and the follower being surrounded by an atmosphere free from liquid.

3,130,583
METHOD AND APPARATUS FOR ASCERTAINING THE LEVEL OF A LIQUID IN CASINGS AND DRILLED HOLES
Wilhelm Greve, Klein Oedesse uber Peine, and Erich Meinecke, Berkhopen uber Peine, Germany, assignors to Eastman International Company G.m.b.H., Westerfield, near Hannover, Germany, a company of Germany
Filed Aug. 22, 1962, Ser. No. 218,658
Claims priority, application Germany Aug. 24, 1961
16 Claims. (Cl. 73—299)

1. A method for ascertaining with respect to a known datum the level of a liquid in a casing in which is disposed a conduit internally of said casing has one end immersed in said liquid and an opposite end unimmersed in said liquid, closing the unimmersed end of the conduit to maintain gaseous pressure therein, moving the conduit axially between at least two positions to vary the distance of the unimmersed end relative to the levels of the liquid to vary gaseous pressure internally of said



conduit relative to a known initial internal pressure, before varying said distance sensing the initial pressure in said conduit, sensing and reading out the pressure in said conduit after said distance between said unimmersed end and said liquid level have been varied, and determining from said pressure readings and the distances said conduit is moved between pressure readings the level of said liquid with respect to said datum.

3,130,584
BLAST FURNACE PROBE
Frank Kennedy, Johnstown, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Feb. 14, 1961, Ser. No. 89,165
9 Claims. (Cl. 73—341)

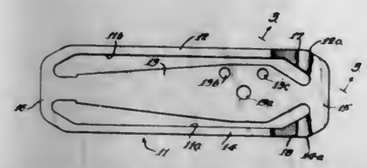


1. Apparatus for determining conditions at spaced points within a blast furnace comprising an elongated hollow rectangular member closed at each end and adapted to be slidably inserted and withdrawn from said furnace horizontally through a rectangular opening, said member being of uniform cross section for the majority of its length and having a plurality of cut out sections spaced along its length at the bottom thereof, a generally vertical plate closing each end of each of said cut out sections, means closing the inside of each of said cut out sections, the vertical plate of each cut out section toward the outer end of said member having a hole therethrough, means for circulating coolant through said member and a conduit extending from the entry end of said member through said hole into the associated cut out section.

3,130,585
SNAP-ACTING THERMOSTAT
Ludvik J. Koci, Hinsdale, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed Apr. 25, 1957, Ser. No. 655,127
1 Claim. (Cl. 73—378.3)

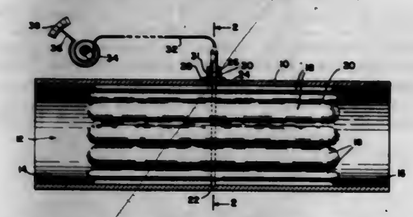
A snap-acting bimetallic member comprising a substantially rectangular piece of bimetallic material of the

type formed by two layers of material with different coefficients of thermal expansion united together in a laminated sheet, a pair of longitudinally extending slots being formed in said bimetallic member adjacent the edges thereof, adjacent ends of said slots being inwardly directed at an angle to the longitudinal axes of said member, said slots including said inwardly directed portions forming



thin strips of bimetallic material having enlarged end portions, the combined widths of said thin strips being less than the width of the adjacent portion of said bimetallic material lying between said slots and said enlarged portions being deformed to shorten said thin strips and produce a bow in the center portion of said bimetallic member between said slots.

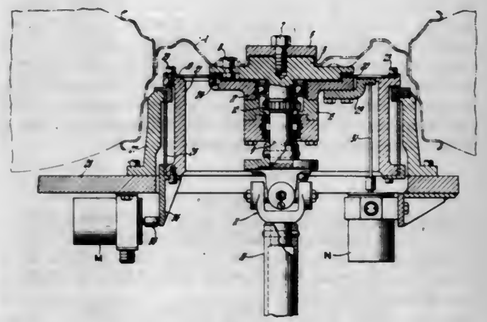
3,130,586
PRESSURE MEASURING APPARATUS
William S. Taylor, Drexel Hill, and Robert C. Whitehead, Jr., Oreland, Pa., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed July 13, 1960, Ser. No. 42,670
6 Claims. (Cl. 73—406)



1. An apparatus to accurately measure the magnitude of the pressure of a fluid flowing through a flow pipe, comprising a rigid pipe section adapted to be inserted as a part of said flow pipe, said pipe section having a thin elongated flexible tube of the same length as said rigid pipe section positioned within said rigid pipe section, said tube being of a slightly smaller outside diameter than an inside diameter of said pipe section, said flexible tube having its outer end portions fixedly connected to the inner circumferential end portions of said pipe section to form a flexible seal between the flowing fluid and said rigid pipe section, a portion of said flexible tube positioned between the end portions of said tube having a plurality of elongated corrugations therein and said flexible corrugated portion of said tube and the surrounding inner wall of said pipe section adjacent thereto providing a liquid-filled pressure seal through which the magnitude of the pressure of the fluid flowing through said flow pipe is transmitted to a pressure actuated receiving instrument.

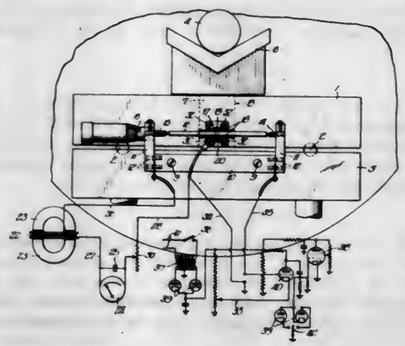
3,130,587
UNBALANCE MEASURING APPARATUS
Claude J. Kinsey and William J. Volke, Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 23, 1961, Ser. No. 91,002
2 Claims. (Cl. 73—462)

2. In an apparatus for measuring both the dynamic and the static unbalance in a wheel type assembly; the combination including an adapter for holding the assembly; means rotating the adapter about its axis; the rotating means including a drive motor having a universal jointed connection with the adapter; a support member arranged concentrically with the adapter and the assembly for rotatably supporting the adapter; a flexible suspension for the support member; the suspension including a flexible diaphragm located in a plane passing through the center of gravity of the assembly and perpendicular to the axis of rotation of the assembly, the diaphragm allowing pivotal movement of the support member and the assembly about the center of gravity of the assembly, and a spring having one end fixed and the other end arranged relative



to the diaphragm for allowing movement of the diaphragm, the adapter, the supporting member, and the assembly all in a radial direction transverse to the assembly axis of rotation; first vibration pickup means associated with the supporting member for providing a first signal proportional to the amplitude of pivotal movement of the adapter and the assembly about its center of gravity, second vibration pickup means associated with the spring for providing a second signal proportional to the amplitude of radial movement of the adapter, the supporting member, and the assembly; and means for combining the first and second signals to simultaneously provide two plane correction in formation to dynamically and statically balance the assembly.

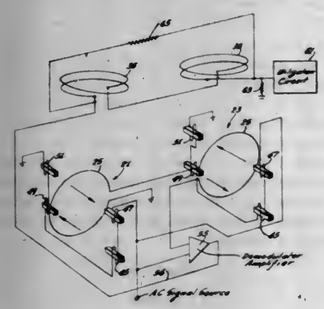
3,130,588
BALANCE TESTING APPARATUS
Clyde H. Phelps, Springfield, Ill., assignor, by mesne assignments, to Hanchett Manufacturing Company, Big Rapids, Mich., a corporation of Michigan
Filed Sept. 24, 1959, Ser. No. 842,137
5 Claims. (Cl. 73—466)



1. In a balance testing apparatus, in combination, an upper movable head having planar oscillation relative to

a lower static head by unbalance in a rotary body, a pair of static contacts carried by said lower static head and spaced apart in the direction of planar oscillation of said upper head, a slider unit carried by said upper head for planar oscillation therewith, a contact rod carried by said slider unit for movement into contact with one of said static contacts and out of contact with the other static contact by planar oscillation in one direction and out of contact with said one static contact and into contact with said other static contact by planar oscillation in the opposite direction, a stroboscopic circuit connected across said contact rod and one of said static contacts and including a stroboscopic indicating light, said stroboscopic light being energized to give an indication for determining the position of unbalance by movement of said contact rod out of contact with said static contact, a coil-magnet combination having the coil thereof connected across said contact rod and the other static contact, said coil-magnet combination being disposed for relative motion between the coil and magnet to induce a voltage within said coil proportional to the amplitude of oscillation, and a meter connected in circuit with said coil.

3,130,589
ACCELEROMETER TEMPERATURE COMPENSATION TRIMMING APPARATUS
Bruce A. Sawyer, Sherman Oaks, Calif., assignor to Litton Systems, Inc., Beverly Hills, Calif., a corporation of Maryland
Filed Nov. 18, 1960, Ser. No. 70,209
8 Claims. (Cl. 73—497)



1. In an accelerometer system, a pivoted pendulum member, a torquer coil for restoring said pendulum to a null position when driven from the the null position by applied acceleration, means for supporting said pendulum in a liquid to produce a torquer coil current function having a slight negative coefficient as given by the following expression,

$$I_R = I_o(1 - a\Delta T)$$

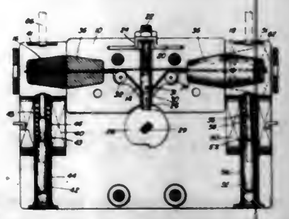
where I_R is the torquer coil current, I_o is the current at a given temperature, a is the temperature coefficient of the accelerometer without resistance compensation, and ΔT is the change in temperature; said accelerometer torquer coil having the following resistance characteristic:

$$R = R_o(1 + b\Delta T)$$

where R_o is the resistance at a predetermined temperature at which the current I_o was measured and where b is the temperature coefficient at resistance of the coil; and a substantially constant resistance connected across said torquer coil, said resistance having a value substantially equal to

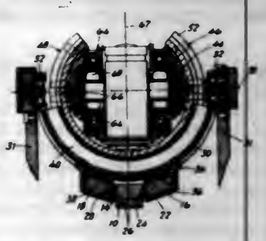
$$\left(\frac{b}{a} - 1\right)R_o$$

3,130,590
SHOCK SENSITIVE LATCH-RELEASING DEVICE
Harold E. Schleicher, West Hartford, Conn., assignor to The Arrow-Hart & Hegeman Electric Company, Hartford, Conn., a corporation of Connecticut
Filed Apr. 19, 1961, Ser. No. 104,117
19 Claims. (Cl. 74—2)



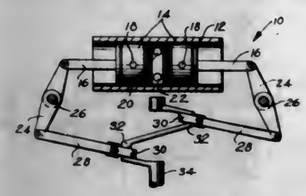
1. In a device responsive to predetermined shock values, a base recessed to receive fixed and movable parts of the device, a holding member mounted on said base, means biasing said member into a certain position, shock responsive means including a plurality of weight masses movable to move said holding member from said certain position in response to a predetermined shock force value irrespective of the force direction, and a flexible connection between said weight masses and said holding member for moving the latter in response to said predetermined shock force value.

3,130,591
ELECTROMAGNETIC MOTORS
Richard R. Paddick, Twyford, Brian T. H. Quarm, Hemel Hempstead, and Anthony W. Hiscocks, St. Albans, England, assignors, by mesne assignments, to The De Havilland Aircraft Company Limited, Hatfield, England, a company of Great Britain
Filed Sept. 19, 1960, Ser. No. 56,845
Claims priority, application Great Britain Oct. 10, 1959
15 Claims. (Cl. 74—5.46)



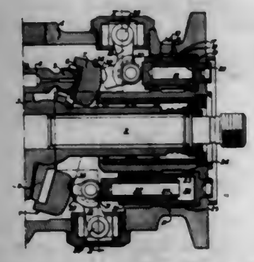
1. Gyroscopic apparatus comprising a gyroscopic rotor, an inner frame member in which the rotor is mounted for rotation about a rotor axis a gimbal frame member in which the inner frame member is mounted for angular movement about a first axis normal to said rotor axis, an outer frame member in which the gimbal frame member is mounted for angular movement about a second axis normal to said first axis and transverse to said rotor axis, a magnetic-circuit structure carried by said outer frame member and having three limbs extending in the direction of relative movement with substantially planar parallel pole faces defining therebetween two air-gaps in which are uniform and unidirectional magnetic fields, and two coils carried by said gimbal frame member and including force generating conductor elements which extend across the flux path in the fields and are relatively movable, upon relative movement of the outer and gimbal frame members, in a plane parallel to and between the faces of the magnetic-circuit structure.

3,130,592
MOTION CONVERTING MEANS
Earl O. Burrison, Box 102, Midway City, Calif.
Filed June 12, 1961, Ser. No. 116,449
1 Claim. (Cl. 74—40)



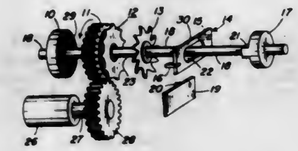
In a motion converting device the combination of a pair of rock arms pivotably supported at their middle portions, one end of said rock arms being linearly reciprocally driven and the opposite end of each of said rock arms being pivotably connected to displaced throws of a crank shaft forming a link in the transmission of power to said driven crank shaft, a transverse shaft extending through the middle portion of each of said rock arms for pivotally supporting said rock arms and each of said transverse shafts being on an axis which is perpendicular to the axis of said crank shaft, said opposite end of each of said rock arms being pivotally connected to one end of a link, the opposite end of each of said links being connected pivotally free to a pin mounted on each of said displaced throws, said pin having an axis which is parallel to each of said transverse shafts and perpendicular to said axis of said crank shaft.

3,130,593
CONTROL OF THE SWASHPLATE OF A BARREL PUMP BY ROCKER-ARMS
Georges Boulet, Toulouse, France, assignor to Société à Responsabilité Limitée: Recherches Etudes Production R.E.P., Paris, France, a corporation of France
Filed Apr. 19, 1962, Ser. No. 188,654
Claims priority, application France May 5, 1961
7 Claims. (Cl. 74—60)



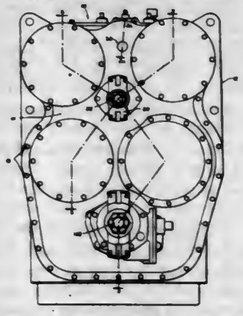
1. A pump of the barrel type with a variable output comprising a plate supported for rotation about a transverse axis perpendicular to the axis of rotation of the pump, flat faces of shoes in frictional contact with the plate, pistons supported for reciprocal movement, means swivel mounting said shoes on said pistons, a thrust member on each side of said transverse axis adapted to transmit thrust force to said plate in a direction parallel to the axis of rotation of the pump to regulate inclination of the plate and in consequence thereof travel of the pistons, a transmission member between each said thrust member and said plate movable in rotation about an axis of rotation parallel to the axis of rotation of the plate and including two bearing surfaces respectively tangent to the thrust member and to the plate at points of contact lying on a line substantially parallel to said transverse axis, each said thrust member and plate including a bearing surface at least one of which is in contact with a bearing surface of the transmission member and which latter surfaces have profile contours corresponding to the flanks of two teeth of the same gear-wheel.

3,130,594
SHAFT POSITIONING DEVICE
Melvin L. Campbell, Marion, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed June 25, 1962, Ser. No. 204,887
5 Claims. (Cl. 74—84)



1. Means for converting continuous rotary motion into intermittent rotary motion comprising a rotatable shaft, input drive means mounted rotatably on said shaft, means which drive said input drive means, static energy storage means connecting said input drive means to said shaft and constructed to create a torque upon said shaft as said input drive means is rotated, cam means rigidly mounted on said input drive means and constructed to rotate therewith, stop wheel means mounted rigidly on said shaft and having a plurality of teeth positioned around its perimeter, cam follower means including first and second pawl means positioned at different positions near the perimeter of said stop wheel means and moved into and out of the path of the teeth of said stop wheel means as said cam follower is activated by said cam means to cause said stop wheel to advance by discrete angular distances in response to the torque supplied to said rotatable shaft, said pawl means being relatively positioned to cause one pawl means to be near the midpoint between two adjacent teeth of said stop wheel means when the other pawl means is in contact with a tooth of said stop wheel means.

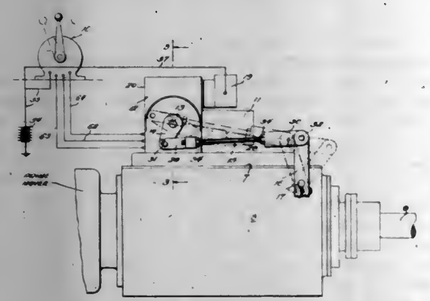
3,130,595
TRANSMISSION
Charles A. Cook, Jackson, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Filed Dec. 29, 1960, Ser. No. 79,437
8 Claims. (Cl. 74—331)



5. In a transmission, forward and rear vertically disposed walls having a plurality of pairs of aligned openings in the respective walls, an input shaft, an output shaft and a pair of intermediate shafts, all of the said shafts rotatably mounted in parallel relationship with each other

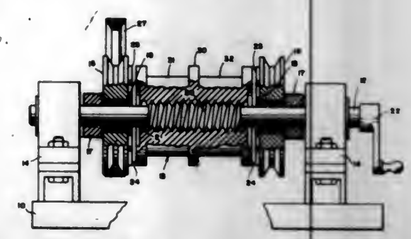
and the said output shaft and the said intermediate shafts extending through the said walls through the said aligned pairs of openings, constant mesh forward and reverse gear means located at least partly outside the said walls interconnecting the said input shaft with both of the said intermediate shafts, said gear means including transfer gears disposed coaxially with said input shaft, constant mesh change speed gear means located outside the walls interconnecting both of the said intermediate shafts with the said output shaft, and engageable and disengageable friction clutch means located outside the said walls for selectively engaging the said change speed gearing for driving the said output shaft at preselected ratios relative to the said input shaft.

3,130,596
GEAR SHIFTING MECHANISM
Michael Gorski, Milwaukee, Wis., assignor to Adlee Corp., New Berlin, Wis., a corporation of Wisconsin
Filed Jan. 23, 1961, Ser. No. 84,056
13 Claims. (Cl. 74—365)



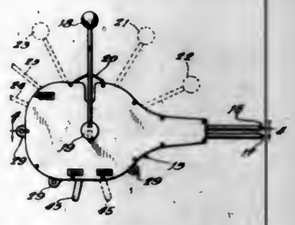
1. A control system for the operation of a power transmission including a prime mover, reversible gearing and a driven shaft, said control system comprising an arm shiftable to establish the desired forward, neutral or reverse operation of said power transmission, a manually operable selector switch having forward, neutral and reverse positions, a high speed reversible electric motor, a source of power for said motor, a control circuit for said motor, a speed reducer driven by said motor, a low speed power output shaft in said speed reducer, an operating arm fixedly attached to said power output shaft, a motion transmitting link connecting said shiftable and operating arms, a plurality of axially spaced cam means on said power output shaft, said cam means controlling the neutral, forward and reverse operation of said motor, a separate rotatably adjustable member disposed adjacent each of said cam means, a pair of normally closed switches mounted on each of said rotatably adjustable members, each of said switches including fixed and movable electrical contacts, a cam follower mounted on each of said movable contacts, and electrical connections placing said switches in said control circuit whereby the manual shifting of said selector switch from one position to another serves to close said control circuit and energize said motor to effect rotation of said power output shaft and movement of said shiftable arm until such time as one of said cam means effects the opening of one of said switches to break the control circuit and thereby deenergize said motor when said selected gear shifting operation has been completed, the separate switches of each pair controlling the opposite directions of rotation of said motor, said cam means actuating one of said switches immediately after actuating the other said switch to preclude overrun of the shaft.

3,130,597
SERVO-MECHANISMS
Max Goldberg, 141 E. 3rd St., New York, N.Y.
Filed Nov. 22, 1961, Ser. No. 154,163
1 Claim. (Cl. 74—388)



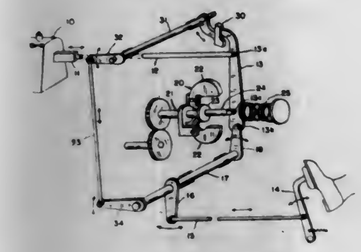
A reversible drive mechanism comprising a rotatably supported shaft having two spaced driven wheels rotatably mounted thereon at fixed longitudinal positions on the shaft, at least a portion of the shaft between the wheels having a screw thread thereon, a drum mounted on the shaft between said wheels and having an internal screw thread meshing with said thread on the shaft, means for simultaneously rotating said wheels in opposite directions, the end surfaces of the drum being normally positioned close to but spaced from the adjacent surfaces of the wheels, and means for turning said shaft to move the drum axially into frictional engagement with either of said wheels while simultaneously moving the drum correspondingly away from the other of said wheels and for increasing or decreasing the degree of frictional engagement through a range from zero friction to a maximum friction wherein the drum is locked to the wheel.

3,130,598
SINGLE LEVER REMOTE CONTROL FOR OUTBOARD MOTORS
Crebert Burnham, 2520 Park Lane, Glenview, Ill.
Filed Apr. 13, 1961, Ser. No. 102,695
11 Claims. (Cl. 74—472)



1. A single lever remote control unit for outboard motors, comprising: a housing; a control member rotatably mounted in the housing having a control lever; a pair of push-pull controlled members longitudinally slidable in the housing for connection respectively with throttle and shifting controls on the motor; a pair of studs on the control member each movable in an arcuate path relative to the housing with swinging movement of the control lever; cam groove means on each controlled member engaging one of said studs, said cam groove means having arcuate portions arranged on the path of movement of said studs to permit the stud to move with the control member with push-pull longitudinal movement of only one of the controlled members at a time, said cam groove means being arranged for said studs to move the shift controlled member in said housing prior to movement of the throttle controlled member in said housing and to so move said controlled members in sequence upon swinging movement of the control lever in one direction.

3,130,599
VARIABLE SPEED GOVERNOR CONTROL
Herbert H. Haas, Royal Oak, Mich., assignor to Continental Aviation and Engineering Corporation, Detroit, Mich., a corporation of Virginia
Filed June 1, 1959, Ser. No. 817,134
4 Claims. (Cl. 74—526)



1. A governor system adapted for use in an internal combustion engine having a fuel delivery means, said system comprising

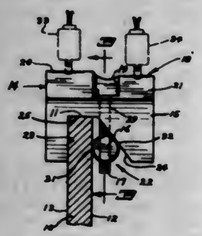
(*a*) a control mechanism operably connected to said fuel delivery means to selectively regulate said fuel delivery means to vary engine speed,

(*b*) a variable speed governor comprising means sensing changes in said engine speed from a selected speed determined by the position of said control mechanism and means operably connected to and actuated by said sensing means,

(*c*) said actuated means being operably connected to said control mechanism and being operable to regulate said fuel delivery means through said control mechanism to return the engine speed to the selected speed, and

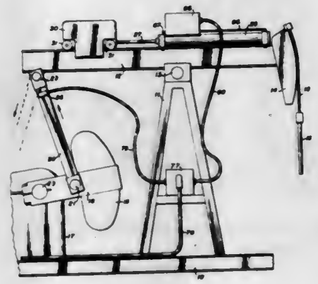
(*d*) a governor limit means operably connected to and actuated by said control mechanism to variably limit the regulation of said fuel delivery means by said actuated means.

3,130,600
REMOVABLE CAM ASSEMBLY
James W. Toensing, Minneapolis, Minn., assignor to Remmele Engineering, Inc., St. Paul, Minn., a corporation of Minnesota
Filed Sept. 25, 1961, Ser. No. 140,356
9 Claims. (Cl. 74—568)



1. A cam lobe assembly adapted for mounting on a cam wheel disc comprising, a cam block having an outwardly facing cam surface and further having a slotted opening therethrough for interfitting with the edge of a cam wheel disc, said cam block having a side wall partially defining said opening and confronting a side surface of a cam wheel disc in non-parallel relation thereto when mounted thereon, a wedging element in engagement with said side wall and adapted to frictionally engage said cam wheel side surface, and means urging said wedging element against said side wall and into wedging engagement with said cam wheel disc.

3,130,601
AUTOMATIC COUNTERBALANCE FOR PUMPING UNIT INCLUDING HYDRAULIC BRAKE
Norris W. Gallaway, Fort Worth, Tex., assignor to American Manufacturing Company of Texas, Fort Worth, Tex., a corporation of Texas
Filed June 25, 1962, Ser. No. 204,954
3 Claims. (Cl. 74—590)



1. In a pumping unit including a walking beam, a longitudinally movable counterweight on said walking beam, an electric motor, and means including a pitman connecting said motor with said walking beam,

hydraulic braking means mounted on said walking beam for restraining the movement of said counterweight,

a current transformer including a primary coil positioned to sense input current to said motor,

a double throw rocker type switch having a shiftable contact coactive with said pitman,

a first secondary coil in said transformer wired in series with a second contact of said switch,

a first condenser responsive to the flow of current through said first secondary coil,

a second secondary coil in said transformer wired in series with the remaining contact of said switch,

a second condenser responsive to the flow of current through said second secondary coil,

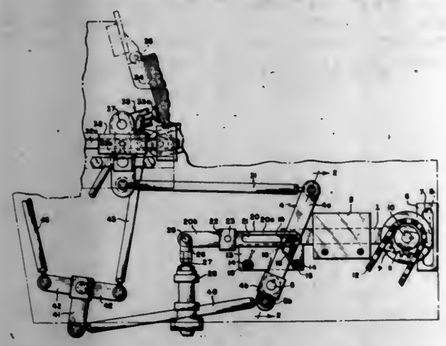
means responsive to a difference in charges of said condensers releasing said braking means,

and means responsive to said last said means determining the direction of travel of said counterweight.

3,130,602
DISCONNECT MECHANISM FOR RECIPROCATING DRIVE
Biagio J. Nigrelli, Northbrook, Wendell E. Standley, Lake Forest, Richard B. Wittmann, Chicago, and Edward M. Schaller, Skokie, Ill., assignors to Container Corporation of America, Chicago, Ill., a corporation of Delaware
Filed July 30, 1962, Ser. No. 213,175
5 Claims. (Cl. 74—593)

1. In a disconnect mechanism for a drive transmission system, the combination of a frame, an elongated bar mounted for longitudinal movement thereon, means for continuously reciprocating said bar, an elongated rock lever pivotally mounted on the frame to swing in a plane adjacent the reciprocating bar, the bar being formed with a notch having an opening extending to a lateral edge of the bar, the rock lever being formed with an elongated slot having a portion registrable with the notch and a second portion out of registration therewith, a detent pin movable along the slot and arranged with its long axis extending transversely of the slot with a portion of the pin extendable into the notch in the reciprocable bar when the pin is in the portion of the slot

registrable with the notch, and means independent of the rock lever and bar for selectively moving and re-

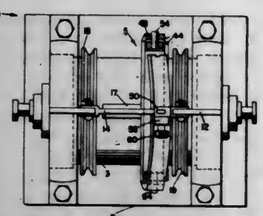


taining the detent pin in and out of the notch registering portion of the slot.

3,130,603
ECCENTERDRIVE WITH MEANS FOR CHANGING THE OUTPUT AMPLITUDE DURING OPERATION

Ernest A. Gessner, 4130 Flory Ave., El Paso, Tex.

Filed Jan. 10, 1961, Ser. No. 81,908
10 Claims. (Cl. 74—600)
(Granted under Title 35, U.S. Code (1952), sec. 266)



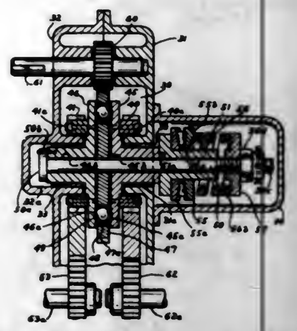
1. An eccenterdrive with means for changing the output amplitude during operation comprising: a mounting base having a pair of sectional stanchions provided with openings; bearings secured in said openings; a rotor rotatably disposed in said bearings and provided with a longitudinal bore eccentrically disposed therethrough; means for rotating said rotor; output means provided in said eccentric bore for relative rotation therein with said rotor; crankpins eccentrically arranged on opposite ends of said output means; sleeve means carried in said bore in circumferential slidable relationship with said output means; adjusting mechanism secured to said sleeve means for moving said sleeve means axially along said output means and rotating said output means, for simultaneous rotation of said crankpins to change the eccentricity thereof.

3,130,604
DIFFERENTIAL DRIVE

Vernie L. Johnson, 228 Harrison St., Anoka, Minn., and William L. Johnson, 1989 Longview Drive, New Brighton, Minn.

Filed Mar. 18, 1963, Ser. No. 265,899
7 Claims. (Cl. 74—650)

1. A differential drive mechanism comprising a driver with means for rotating the same, a pair of driven elements respectively disposed on opposite sides of said driver, a plurality of peripherally spaced driving elements carried by said driver for rotation therewith and rotatably mounted on axes disposed radially thereof and being constructed and arranged for simultaneous engagement on opposite sides of said driver with said driven elements and biasing means urging said driven elements into engagement with the rotatable driving elements carried by said

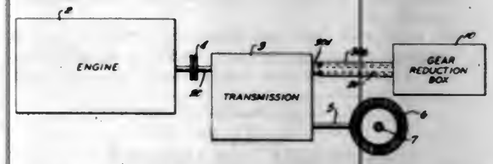


driver whereby said driving elements provide the driving connection between the driver and the driven elements while permitting said driven elements to travel at different speeds.

3,130,605
SPEED REDUCTION GEAR BOX

Harry M. Kennedy, Bucyrus, Ohio, assignor to The Superior Equipment Company, Bucyrus, Ohio, a corporation of Ohio

Filed Aug. 3, 1961, Ser. No. 129,076
5 Claims. (Cl. 74—745)



1. In a gear box for obtaining a low-speed, an input shaft, a hollow output shaft surrounding said input shaft, said input shaft extending from both ends of the hollow shaft, a sleeve coaxial with the output shaft and keyed on one end of the input shaft, a shiftable gear splined on said sleeve for axial movement, two trains of gears between said sleeve and said output shaft for forward and reverse drive thereof respectively, and means for moving said shiftable gear along said sleeve to select either the forward train or the reverse train of gears.

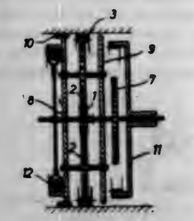
3,130,606
INFINITELY VARIABLE SPEED GEAR TYPE TORQUE CONVERTER

Fritz Kreis, Franziskanerplatz 5, Wurzburg, Germany

Filed Sept. 26, 1960, Ser. No. 58,225
Claims priority, application Germany Oct. 1, 1959
6 Claims. (Cl. 74—751)

1. A torque converter comprising an input shaft and an output shaft disposed in alignment, an input sun gear on said input shaft, an output sun gear on said output shaft, and a planetary gear assembly mounted around said input sun gear and said output sun gear for driving said output sun gear from said input sun gear, said planetary gear assembly including an internal gear, a rotatable carrier, a first set of planetary gears carried by said carrier and meshed with both said input sun gear and said internal gear for driving said internal gear, and a second set of planetary gears carried by said carrier and meshed

with said internal gear and another set of planetary gears carried by said carrier and fixed to said second set of planetary gears for rotation therewith and meshed

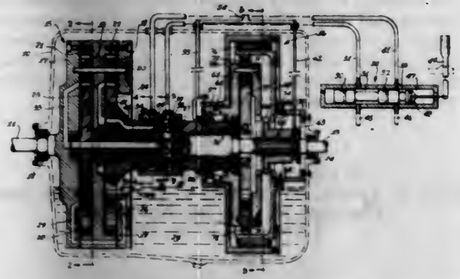


with said output sun gear for driving said output sun gear, said sets of planetary gears being of different diameters.

3,130,607
TRANSMISSION ASSEMBLY

Karl Kraemer, 10 Westglen Crescent, Calgary, Alberta, Canada

Filed Sept. 4, 1962, Ser. No. 221,122
4 Claims. (Cl. 74—765)

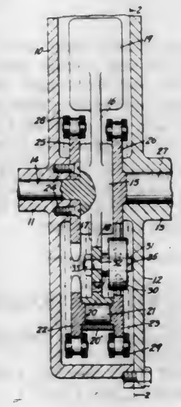


1. A transmission assembly comprising, in combination with an input shaft and an output shaft, a case adapted to contain a body of fluid, a gear carrier in said case fixed to said input shaft, a first and a second series of planetary gears mounted in said carrier, a first sun gear fixed to said output shaft and meshing with said first series of planetary gears, a second sun gear rotatably mounted on said output shaft and meshing with said second series of planetary gears, said carrier having walls enclosing all of said planetary gears and forming a plurality of recesses therein each receiving one of said planetary gears, said carrier having first and second fluid inlet passages communicating with the interior of said case for reception of fluid from said body of fluid, said first fluid inlet passage leading to said recesses of said first series of gears and said second fluid inlet passage leading to said recesses of said second series of gears, said carrier also having a first fluid outlet passage leading from said recesses of said first series of gears and a second fluid outlet passage leading from said recesses of said second series of gears, a first conduit communicating with said first fluid outlet passage, a second conduit communicating with said second fluid outlet passage, a valve in said conduits and having a member movable to initially open both said conduits, then to close said first conduit, and subsequently to close both said conduits, and a multiple coupling device comprising a third sun gear fixed to said second sun gear and rotatable therewith, a rotatably mounted gear carrier having a third series of planetary gears therein meshing with said third sun gear, a rotatably mounted ring gear meshing with said third series of planetary gears, and means for selectively coupling and uncoupling said ring gear with said output shaft and for simultaneously locking and unlocking said last-mentioned gear carrier against rotation.

3,130,608
CHAIN-TYPE SPEED REDUCER

Louis H. Morin, Bronx, N.Y.
(125 Beechwood Ave., New Rochelle, N.Y.)

Filed Dec. 27, 1961, Ser. No. 162,464
2 Claims. (Cl. 74—797)



1. A speed reducer of the character described, comprising a fixed casing, a drive shaft and a driven shaft both rotatable in said casing, two large diameter sprockets, two small diameter sprockets, the latter sprockets being arranged in direct alignment with said large diameter sprockets, chains operatively engaging the alined sprockets, one large diameter sprocket being fixed to the casing, the drive shaft rotating in said fixed sprocket, the other large diameter sprocket actuating said driven shaft and having a less number of teeth than the teeth in said fixed sprocket, a lever member at the inner end of said drive shaft and having a hub arranged between and spacing said large diameter sprockets, said member being actuated by said drive shaft, said small diameter sprockets having therebetween a bearing support in one end of said lever member, said bearing support being of the same width as said hub in maintaining said sprocket alinement, the opposed end of said lever member supporting a counterweight arranged beyond the periphery of said large diameter sprockets and of greater width than said hub, said small diameter sprockets being rotated in the casing circumferentially around the large diameter sprockets in movement of said flexible chains around the teeth of the large diameter sprockets in the speed reduction drive of the driven shaft by said drive shaft, and means supported on and movable with said lever member between the hub and said bearing support for applying tightening tension to one of said chains.

3,130,609
METHOD FOR MAKING A DRY SHAVER BLADE

John F. Wahl, Sterling, Ill., assignor to Wahl Clipper Corporation, Sterling, Ill., a corporation of Illinois

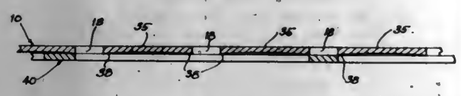
Filed Nov. 30, 1961, Ser. No. 156,101
3 Claims. (Cl. 76—101)

1. The method for making a curved outer blade for a dry shaver comprising the steps of:

selecting an initially flat, thin, resilient prehardened sheet of metal;

perforating said sheet with rows of elongated hair receiving perforations, the perforations in adjacent rows staggered;

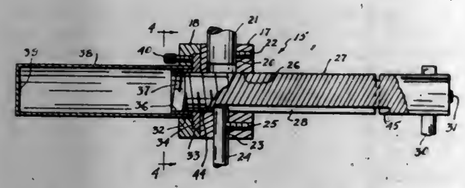
curving said sheet on an axis generally parallel to said rows whereby the metal along the long edges of said perforations stands outwardly from the surface of average sheet curvature, said sheet engaging resilient back-up means;



lapping the interior of said sheet with a lapping rod having generally the said average curvature whereby less metal is removed from said sheet along the long edges of said perforations than elsewhere; and

curving said sheet with the perforated portion of the sheet curved on an axis generally normal to the axis of curvature used during the lapping step whereby the metal along the long edges of said perforations projects inwardly beyond the surface of average sheet curvature to provide cutting edges.

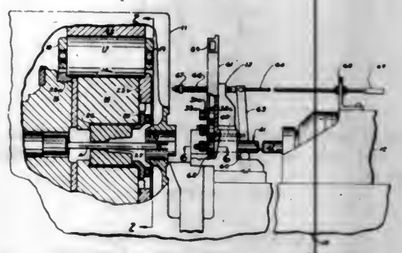
3,130,610
FLY CUTTERS WITH MICROMETRICAL ADJUSTMENT
Andrew A. Bogdan, 3103½ Dubois Ave., Baltimore 14, Md.
Filed Aug. 22, 1961, Ser. No. 133,211
4 Claims. (Cl. 77—77)



1. In a micrometer fly cutter, the combination of a body comprising a pair of complemental body sections secured together and provided with coaxial bores, a screw-threaded shaft slidably but non-rotatably positioned in the bore of one of said body sections and projecting outwardly therefrom, a cutting tool carried by the projecting end portion of said shaft, the other of said sections being provided with a counterbore facing the first section, a disc-shaped member rotatably positioned in said counterbore and provided with a screw-threaded opening coaxial with said bores, and a tubular jacket having an open inner end portion rotatable in the bore of said other body section and secured to said disc-shaped member for rotation therewith, said jacket projecting outwardly from the bore of said other section and having a closed outer end, said shaft operatively engaging the screw-threaded opening of said disc-shaped member whereby rotation of the latter by said jacket may cause sliding of said shaft in and out of said jacket.

3,130,611
SWAGING MACHINE
Otto A. G. Specht, Cincinnati, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed Mar. 13, 1961, Ser. No. 95,414
10 Claims. (Cl. 78—20)

10. In a swaging machine for forming a complex workpiece having two tandem portions of different radial external span, one of said portions having internal conformations inclined with respect to internal conformations on the other portion, the combination comprising a mandrel having two relatively rotatable portions spaced in fixed relation in accordance with the portions of the workpiece and adapted for insertion into a workpiece blank to support the workpiece on an axis, one of said mandrel portions having external conformations to form the internal conformations on one portion of the workpiece and the other mandrel portion having external conformations to form the internal conformations on the other portion of the workpiece, means to move the mandrel to advance the workpiece along said axis, opposed forming dies mounted for radial pulsation about said axis, each of said forming dies having two portions to impinge on the respective portions of the workpiece and form the workpiece portions about the mandrel to desired radial span, said die portions spaced axially a different amount than said respective workpiece portions.



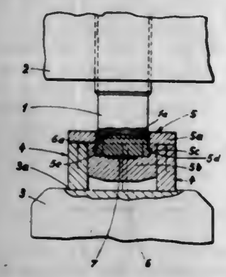
3,130,612
PLUMBER'S CALKING TOOL
Grant R. Larsen, 1007 E. 2700 S., Salt Lake City, Utah
Filed Sept. 25, 1961, Ser. No. 140,413
1 Claim. (Cl. 78—47)



A plumber's calking tool including, in combination, an elongate shaft, manually graspable impact means slideably mounted upon said shaft, a handle integral with said shaft at one end thereof, a calking work means contiguous with said shaft and disposed remote from said handle, and reaction means fixedly disposed with respect to said shaft and responsive to the impacts of said impact means for supplying impacting energy to said calking work means, said reaction means being disposed proximate the juncture of said shaft and said handle, said calking work means being of doubled-back configuration.

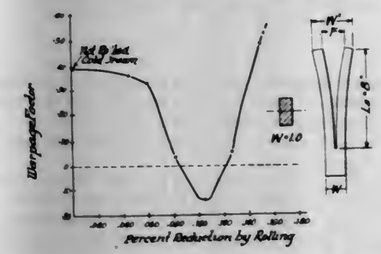
3,130,613
OVERLOAD PROTECTION DEVICE
Hans Siegfried Metzger, 33 Auf der Teufelsinsel, Saint-Ingbert (Saar), Germany
Filed Feb. 13, 1961, Ser. No. 88,991
Claims priority, application Germany Feb. 12, 1960
7 Claims. (Cl. 80—57)

1. In an overload protection arrangement for interposition between machine elements subjected to opposing pressure forces, a breaker block including a body member having spaced pressure receiving faces and a portion extending therebetween, said faces being disposed in parallel planes spaced axially of the line of application of force, and one face being spaced radially of the other whereby when said faces are subjected to opposing pressure forces



the portion of the breaker block between said faces is subjected to tension stress.

3,130,614
METHOD FOR CONTROLLING RESIDUAL STRESSES IN METAL
Elliot S. Nachtman, Park Forest, and Natalis H. Polakowski, Wilmette, Ill., assignors to La Salle Steel Co., Hammond, Ind., a corporation of Delaware
Filed Oct. 3, 1957, Ser. No. 688,047
4 Claims. (Cl. 80—60)



1. In the processing of steel having a shape other than round and having at least one pair of parallel faces, said steel originally containing residual stresses, the modification of the intensity and direction of the residual stresses in said steel comprising the steps of advancing the steel with a pair of parallel faces in a cold finishing operation between parallel faces of a pair of rolls in a rolling operation, and continuously compressing the steel between the parallel faces of said roll dies during advancement of the steel therethrough to take a 0.02 to 0.14 percent reduction in cross-sectional area whereby the stresses normal to the roll passes are reduced, and advancing the steel between the parallel faces of the rolls in a rolling operation at circumferential angles with respect to the previous roll passes comprising a multiple of the number of faces divided into 360 degrees to take a 0.02 to 0.14 percent reduction in cross-sectional area to reduce the intensity and direction of residual stresses interdependently in the steel.

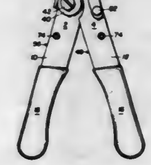
3,130,615
OIL SEAL REMOVING TOOL
William C. Harrup, Sr., 36 Pulaski St., Riverhead, N.Y.
Filed Aug. 7, 1962, Ser. No. 215,410
2 Claims. (Cl. 81—8.1)

1. A seal removing tool, the seal being a yielding packing located in the bottom of a curved channel in a member of non-yielding material, said tool comprising a bar having a substantially elongate shank having elongate edges and providing a handle at one end, the opposite end of said shank being curved transversely to conform to the curvature of the curved channel in which it is to be used, said opposite end terminating in a single plane transverse curved edge, said opposite end being provided with transversely spaced oppositely disposed sharpened chisel edges,



said chisel edges being in a common plane with said transverse curved edge, each chisel edge having a recessed curved edge connecting it to the adjacent elongate edge of said shank, the adjacent elongate edge portion of said shank providing a hammer blow receiving anvil portion.

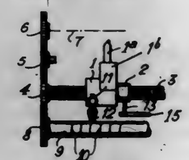
3,130,616
PLIERS WITH JAW LIMITING MEANS THEREFOR
Kenneth T. Miller, 68 Arlington Road, Longmeadow, Mass.
Filed Feb. 21, 1963, Ser. No. 260,238
1 Claim. (Cl. 81—9.5)



In a plier-like tool, a pair of similar elongated arms connected in pivotal relation intermediate their respective ends and each formed to have an upper jaw portion and a lower handle portion, said elongated arms being disposed in superposed relation with the adjacent flat faces thereof in contiguous relation, a pivotal connection between said elongated arms for the swinging of the lower handle portions towards and away from one another and the simultaneous swinging of the upper jaw portions into and out of superposed relation, the upper jaw portions formed to have inner and adjacent longitudinal faces extending upwardly away from the axis of said pivotal connection and arranged to provide opposed and cooperating wire stripping areas adjacent the outer ends of the upper jaw portions, the wire stripping areas including aligned and cooperating open V notches having bevelled side edges, the inner faces of the upper jaw portions being related to the V notches of the wire stripping areas whereby when in abutment the V notches cooperantly define an opening for receiving wire of a certain minimum diameter, resilient means urging the jaw portions apart, a member including an annular disc-like stop eccentrically and rotatably mounted on one of said elongated arms, the other of said

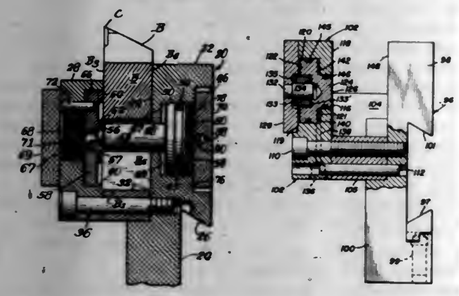
elongated arms having a curved recess therealong for accommodating one side of said stop, the curve of the recess being in a plane substantially perpendicular to the axis of said stop, said stop being adapted to be adjustably positioned relative to the recess and engaged therewith for variously limiting closed positions of said elongated arms, locking means for releasably locking said elongated arms in closed position against opening movement, said stop being lockable on its mounting whereby an insulated wire introduced into the defined opening may be stripped of its insulation by closing the jaw portion onto one another, a portion of the notch accommodating the wire within the insulation when the blades are closed, thereby permitting the insulation to be stripped from the wire without severing the wire itself.

3,130,617
DEVICE FOR CORRECTING THE PITCH OF LEAD SCREWS IN SCREW-CUTTING MACHINES
Pierre François de Valliere, 14 Avenue de Bretteville, Neuilly-sur-Seine, France
Filed Nov. 21, 1960, Ser. No. 70,726
Claims priority, application France Nov. 20, 1959
1 Claim. (Cl. 82—5)



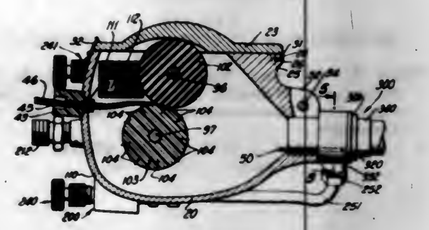
In a lead screw pitch correcting device on a screw cutting machine, provided with a tool holding carriage, a lead screw displacing said carriage and a lead screw wear compensator, comprising, in combination, a microscope with collimator fixed on said carriage, a support rotatably driven by said lead screw, a reference spiral line traced on said support, viewable through said microscope, and a wear compensator for compensating for possible irregularities of the threads of said lead screw, said compensator including at least one elastically deformable element, a reference support on said machine, holding members with screws and yokes between said reference support and said elastically deformable element, a nut pivotally mounted without axial play on said carriage and engaging said lead screw, and a lever arm fixed on said nut and following said elastically deformable element.

3,130,618
HYDRAULIC TOOL HOLDER
Albert W. Drantz, Norridge, Ill., assignor to Scully-Jones and Company, Chicago, Ill., a corporation of Illinois
Filed Apr. 3, 1963, Ser. No. 280,761
20 Claims. (Cl. 82—37)



18. A hydraulic tool holder comprising a pair of body members spaced apart to provide a space therebetween for seating a cutter block or the like, a recess formed in one of said body members, clamping means disposed in said recess for axial sliding movement toward and away from the other of said body members between an operative clamping position wherein said clamping means is adapted to engage a cutter block seated between said body members and an inoperative position wherein said clamping means is retracted, a piston operatively associated with said clamping means for actuating the latter, spring means for biasing said clamping means toward clamping position, and hydraulic means associated with said piston for moving said clamping means to retracted position.

3,130,619
FIBER CUTTER AND ASPIRATOR
Charles Faro, Riverside, Calif., assignor, by mesne assignments, to The Flintkote Company, New York, N.Y., a corporation of Massachusetts
Filed Dec. 21, 1960, Ser. No. 77,391
1 Claim. (Cl. 83—98)

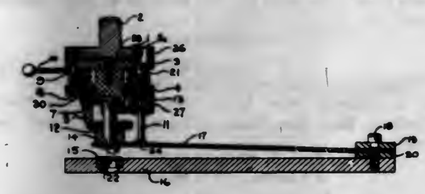


A unitary device for cutting continuous fiber roving into short strands of fiber and for forcibly discharging the same, comprising in combination:

(1) an enclosed housing having a roving inlet and a cut fiber exit opening;
(2) a fiber cutter within said housing located between said roving inlet and said cut fiber exit opening;
(3) an air motor for operating said fiber cutter, and having its air chamber separated from said housing by a wall;
(4) an opening in said wall to provide intercommunication between the interior of said housing and the interior of said chamber, said opening permitting for the substantially unrestricted passage of air from the interior of said chamber to the interior of said housing so that the volume of air passing therethrough is proportional to the speed of operation of the air motor;
(5) an enclosed elongated hollow tube extending from said cut fiber exit opening and having its outlet spaced therefrom;
(6) a source of compressed air; and
(7) means for introducing said compressed air into the interior of said hollow tube in a forward direction at a location intermediate its ends to aspirate said cut fibers from said housing and forcibly propel them from said tube outlet.

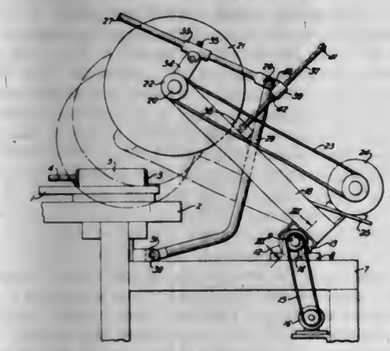
3,130,620
PUNCH AND GUIDE ASSEMBLY
Gerard Gaston Frans Smeets, Brampton, Ontario, Canada, assignor to Pierce-All Manufacturing Limited, Rexdale, Ontario, Canada
Filed July 13, 1961, Ser. No. 123,676
Claims priority, application Canada July 22, 1960
11 Claims. (Cl. 83—140)

7. A punch guide holder comprising an elongated flat, flexible member adapted to be secured at one end to the frame of a machine press, the other end of said flexible member being free to flex in a direction corresponding to guided punch movement and having a punch guide accommodating aperture located in the flat surface thereof, a rigid member, having a projecting portion, secured to said flat surface adjacent said aperture



and between said aperture and said one end, and means, secured with respect to said one end, providing substantially straight line movement of the projecting portion of said rigid member parallel to the proper orientation of the axis of the guide during flexing of said elongated member corresponding to a punching operation.

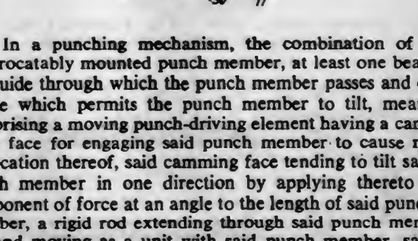
3,130,621
ORBITING METAL CUTTER
Harry C. Else, 1921 Forbes St., Pittsburgh 19, Pa.
Filed Nov. 17, 1961, Ser. No. 153,084
5 Claims. (Cl. 83—471)



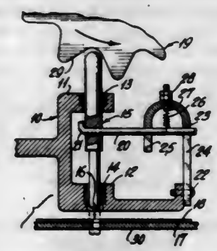
5. A metal cutter comprising a work support, means for holding a workpiece thereon, an arm inclined in a vertical plane adjacent said support, rotatable eccentric means secured to and supporting the end of the arm remote from said work support on a transverse axis, means for driving said eccentric means to move said end of the arm in a circular path in a vertical plane, a vertical circular cutting wheel beside the opposite end of the arm and rotatably mounted on it on an axis parallel to said transverse axis, and means supported by the arm for rotating the wheel at high speed, said opposite end of the arm being movable downward for pressing said wheel against a workpiece on the work support to cut the workpiece.

3,130,622
DEVICE FOR CUTTING SHEETS
William F. Eno, 1434 N. Vandalia Ave., Tulsa, Okla.
Filed June 13, 1961, Ser. No. 116,722
2 Claims. (Cl. 83—529)

1. A device for cutting in sheets rectangular holes of which the marginal edges are of two different lengths, comprising a table, an elongated straight track mounted on the table, a carriage mounted on the track for movement lengthwise of the track, a cutter blade carried by the carriage and disposed parallel to the path of movement of the carriage on the track to make a straight cut in a sheet upon movement of the carriage along the track, and stop means for limiting movement of the carriage along the track, the stop means having a portion carried by the carriage and a portion in unitary assembly with the table, one of said portions having a pair of detents spaced longitudinally of the track and selectively engageable with abutment means on the other of said portions selectively to regulate the position of one end of the cut in the sheet so that a pair of opposite marginal edges of the hole can be cut with the abutment means and one of the detents approaching and contacting each other and the other pair of opposite marginal edges of the hole can be cut with the abutment means and the other detent approaching and contacting each other, one of said abutment means and detents having a portion movable transversely of the track to select the desired detent without the need for adjusting the position of either detent lengthwise of the track during the cutting operation.



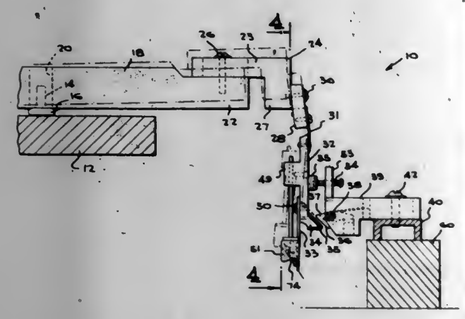
3,130,623
CAM ACTUATED RECIPROCATING PUNCH WITH MEANS TO COUNTERACT FORCE TENDING TO TILT PUNCH
William J. Nesbitt, 100 Cooper St., New York 34, N.Y.
Filed Apr. 6, 1961, Ser. No. 101,193
4 Claims. (Cl. 83—590)



1. In a punching mechanism, the combination of a reciprocatably mounted punch member, at least one bearing guide through which the punch member passes and of a size which permits the punch member to tilt, means comprising a moving punch-driving element having a camming face for engaging said punch member to cause reciprocation thereof, said camming face tending to tilt said punch member in one direction by applying thereto a component of force at an angle to the length of said punch member, a rigid rod extending through said punch member and moving as a unit with said punch member, said rod extending laterally away from said punch member, a stationary support, and a spring connected to the laterally extending portion of the said rod and to said support, said spring being connected between said rod and support and acting through said laterally extending rod to provide a punch tilting component of force in a direction opposite to said first mentioned direction to compensate for said

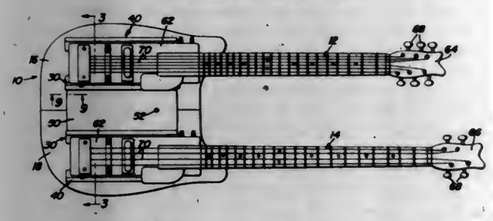
component and thereby to constrain said punch member to follow a linear motion during punching.

3,130,624
PLECTRUM PIANO ACTION
William B. Taylor, Atlanta, Ga., assignor to Taylor-Creager Music Corporation, a corporation of Georgia
Filed May 11, 1962, Ser. No. 193,917
9 Claims. (Cl. 84—258)



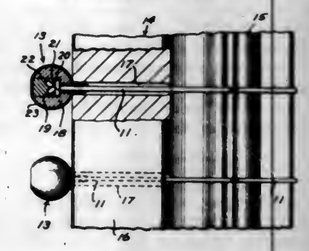
1. In a plectrum piano action for a musical instrument having a vibratable string, a fixed support, an operating member pivoted on said support, said operating member having a forward end, a generally L-shaped support arm mounted on and extending forwardly from said forward end, said support arm having a depending arm portion, a vertical pick finger, a flexible spring connecting the top portion of said pick finger to said depending arm portion, a picker rod secured to and depending from the rear side of said pick finger for engaging beneath and elevating the musical instrument string for tensioning the string preparatory to release thereof for audible vibration, another fixed support positioned forwardly of the pick finger, a housing member mounted on said last-named fixed support, an escapement arm pivoted in said housing member, a forwardly directed heel member on the lower end of said pick finger, said heel member having a downwardly and forwardly inclined camming top surface, said escapement arm having abutment means extending adjacent and operatively engaging at least a portion of said camming top surface to move the pick finger rearwardly responsive to the elevation of said pick finger by the operating member to cause the picker rod to engage said spring.

3,130,625
INTERCHANGEABLE STRINGED MUSICAL INSTRUMENT
Charles Savona, 13 N. 5th St., Paterson 2, N.J.
Filed May 29, 1961, Ser. No. 113,156
6 Claims. (Cl. 84—267)



1. A musical device comprising an acoustical base consisting of a pair of sections hingedly connected medially of said base for selective folding between folded and extended positions, a stringed musical instrument including a body portion, a plurality of pairs of parallel rails mounted on the sections of said base, keys on said body portion slidably engageable selectively in each pair of rails, one of said pairs of rails lying on opposite sides of the hinged connection, means received in said last pair of rails for rigidly securing said sections in their extended position.

3,130,626
STRINGS FOR MUSICAL INSTRUMENTS
John L. Martin, New York, N.Y., assignor to Herco Products, Inc., New York, N.Y., a corporation of New York
Filed Dec. 5, 1962, Ser. No. 242,516
2 Claims. (Cl. 84—297)

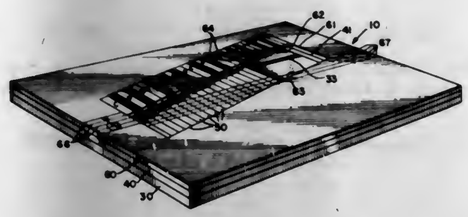


1. A single strand musical instrument string having a structurally rigid anchoring body integrally fixed to one end of the string for stabilizing the end of the string with respect to an abutting surface of a cross-bar on a guitar when the string is subjected to tension, said string consisting of a single strand of nylon with interlaced parts of the strand forming a knot at one end of the strand, said anchoring body comprising said knot, a bead made of a dimensionally stable synthetic resin material, said bead having a stepped passageway through the center of the bead, said passageway formed by a first bore through which said strand extends from one side of said bead and a second bore extending from said first bore to the other side of said bead, the knotted end of said strand including said knot and the portion of said strand extending to the end of the strand nearest said knot being wholly contained within the confines of said second bore, said second bore providing an annular shoulder at the juncture of said bores for restraining withdrawal movement of the knotted end of the strand from said second bore, and a hardened adhesive material interfacially bonding the interlaced parts of the strand of said knot to one another and bonding said knot to said bead, said adhesive material compatible with nylon and the resin material of said bead, said adhesive material filling the space in said second bore outside of said knot and about the end of the strand nearest the knot, said bead together with said hardened adhesive material and the knotted end of the strand constituting a solid coalescent body on the anchoring end of the strand, and a continuous coating completely enveloping said body.

3,130,627
MUSICAL TEACHING DEVICE
Phillip L. Aaron, 330 Michigan Ave., Miami Beach 39, Fla.
Filed Apr. 19, 1962, Ser. No. 188,638
8 Claims. (Cl. 84—471)

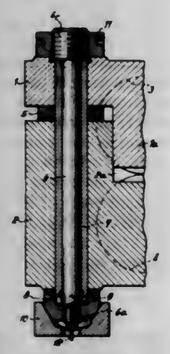
6. In a teaching device for music, a face plate having a rhomboidal window therein with upper and lower margins inclined, a representation of a plurality of piano keys adjacent one said margin of said window, a set of musical staff lines extending beyond at least one lateral edge of said window, a plurality of key blocks, each key block being of width substantially equal to the width of each of said piano keys, means supporting said key blocks for

sliding movement beneath and transversely of said window, each said key block having the lines of a musical staff and a note head symbol on the upper surface thereof,



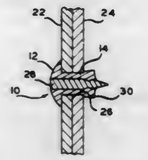
said lines being parallel to said set of staff lines, said key blocks as a group having musical note head symbols collectively extending over a predetermined pitch range.

3,130,628
ARRANGEMENT FOR ELONGATING A STAY BOLT MEANS OR TENSION ANCHOR INDEPENDENTLY OF NUT MEANS ASSOCIATED THEREWITH
Franz Blinn, St. Ingbert, Saar, Germany, assignor to Moeller & Neumann G.m.b.H., St. Ingbert, Saar, Germany
Filed Oct. 5, 1959, Ser. No. 844,229
Claims priority, application Germany Oct. 6, 1958
4 Claims. (Cl. 85—1)



1. A stay bolt structure for interconnecting structural parts, said bolt structure comprising an elongated bolt member extending through said parts, abutment means fixed to one end of said bolt member and engaging one of said parts, a second abutment means threadedly connected to the opposite end of said bolt member engaging the other of said parts, said threaded connection providing for adjustment of said second abutment means toward or away from said other part, an annular recess surrounding said bolt member to provide a hydraulic cylinder in one of said abutment means, a piston slidably received in said cylinder, said piston comprising a sleeve slidably received on said bolt member, said sleeve extending from within said cylinder into engagement with the other abutment means and means to apply fluid pressure to said cylinder, whereby upon application of fluid pressure to said cylinder said sleeve will move away from said one abutment means toward the other abutment means to force said abutment means apart and stretch said bolt member, thereby relieving the interconnecting force on said parts and permitting free adjustment of said second abutment means on said bolt member.

3,130,629
TUBULAR EXPANDABLE RIVET AND EXPANDER
Cyril V. Church, 817 Congress Ave., Pacific Grove, Calif.
Filed Nov. 7, 1960, Ser. No. 67,536
3 Claims. (Cl. 85—40)



1. In combination, a rivet comprising a metallic tubular circumferentially continuous stem having a head on one end and adapted to be inserted thru a hole in the work substantially the outer diameter of said stem, the main bore of said stem being of uniform diameter extending completely thru the head end and to near the opposite end and there converging inwardly to an expandable bore of substantially smaller diameter than said main bore; a metallic expanding and setting element for said rivet having a cylindrical body section at least as long as said main bore of uniform diameter substantially greater than said main bore to provide an expansion of said stem laterally and compression of the metal in the hole wall when set in said rivet, a pointed nose section of substantially conical contour pointed away from said body section having a base of a diameter substantially that of said main bore, and an intermediate transition section joining said body section to said nose section and having a portion rearward of said nose section of a diameter no larger than said base, said element when forced into said bore being adapted to expand the main bore of said rivet by means of said body section to cause said stem to bind in said hole and to expand said opposite end of said stem by means of said nose section to form a second head thereon on the inside of said work applying compression force between the heads of said rivet and provide a circumferentially continuous rivet in said work.

3,130,630
ELASTICALLY STRETCHABLE CORDAGE
Robert T. Dawes, Hudson, Mass., assignor to Thomas Taylor & Sons, Inc., Hudson, Mass., a corporation of Massachusetts
Filed Oct. 2, 1962, Ser. No. 227,782
7 Claims. (Cl. 87—2)

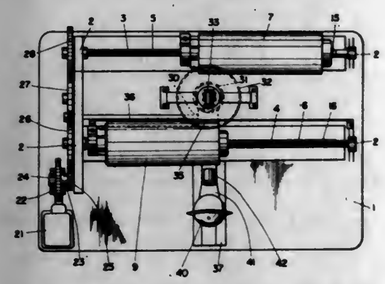


1. An elastically stretchable cord comprising a core consisting of parallel elastomeric threads, and a jacket comprising a plurality of concentric tubular braids, the innermost of said braids being soft and non-abrasive and consisting of bulked synthetic yarn which is resistant to mildew, at least one of said braids being resistant to the passage of actinic rays from the exterior of the cord to the core.

3,130,631
PHOTOGRAPHIC IMAGE TRANSFERRING APPARATUS

Yoshio Murata, Nishinomiya, Japan, assignor to Osaka Denkai Kogyo Kabushiki Kaisha, Naniwa-ku, Osaka, Japan, a corporation

Filed Aug. 23, 1960, Ser. No. 51,367
Claims priority, application Japan Nov. 23, 1959
3 Claims. (Cl. 88—24)



1. A photographic image transferring apparatus comprising

(*a*) two cylinder members having respective axes;

(*b*) an image carrier on one of said cylinder members;

(*c*) a sensitized image receiving carrier on the other one of said cylinder members;

(*d*) a source of light for projecting a beam of light on said image carrier for reflection therefrom;

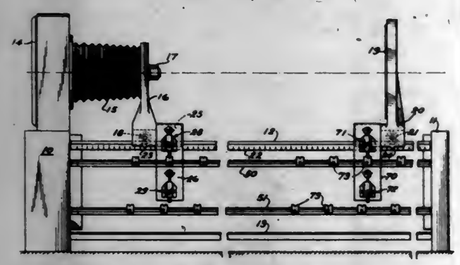
(*e*) lens means interopsed between said cylinder members for transmitting the reflected beam from said image carrier to said image receiving carrier and

(*f*) actuating means for actuating simultaneous rotation of said cylinder members about the respective axes and simultaneous axial movement of said cylinder members relative to said reflected beam.

3,130,632
CAMERA ADJUSTMENT

Russell W. Borrowdale, 640–48 W. 65th St., Chicago 21, Ill.

Filed Dec. 7, 1960, Ser. No. 74,260
3 Claims. (Cl. 88—24)

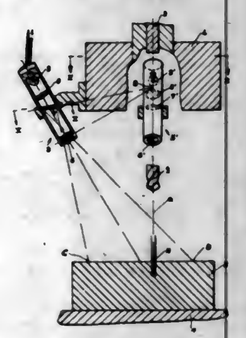


1. A camera adjustment including a supporting frame for a camera, a rail connected to said frame, a carriage member slidable along said rail, a fixed mounting bar attached to said frame in parallel alignment with said rail, a plurality of second mounting bars each selectively mountable on said fixed mounting bar, a tapered locating element extending from one of said mounting bars shaped to fit within and bear against both sides of a V-groove in the other said mounting bar, a detent member movably carried by said carriage member, spring means resiliently urging said detent member toward said mounting bars, a plurality of detent blocks adjustably fixed to said second mounting bars, a V-groove on said detent block to receive said detent member, whereby engagement of said detent member with said V-groove positions said carriage member relative to said frame.

3,130,633
APPARATUS FOR FIXING A POINT ON THE SURFACE OF A WORKPIECE

Kurt Räntsch, Wetzlar, Germany, assignor to M. Hensoldt & Sohne, Optische Werke Aktiengesellschaft, Wetzlar, Germany

Filed Feb. 23, 1961, Ser. No. 91,128
Claims priority, application Germany Mar. 4, 1960
6 Claims. (Cl. 88—24)



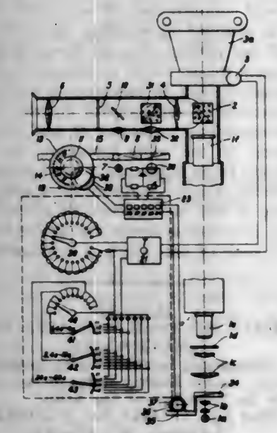
1. An optical device for fixing a point on a flat surface portion of a workpiece in a machine; comprising a projector fixedly mounted on a machine, said projector having a projection objective having an optical axis inclined to and intersecting said surface, a marker type object in said projector orientated to said objective and said optical axis that the corresponding image plane of projection extends perpendicularly to said workpiece surface, said latter surface intercepting the imaging ray path of said projector so that only a portion of imaging ray path is sharply focused by said objective at the intersection of said flat surface and said vertical image plane, the planes of said objective, object and image intersecting at a single line parallel to said surface and said image projected from the projector intersecting said surface at said point.

3,130,634
PHOTOMICROGRAPHIC EQUIPMENTS

Earl Kropp, Vienna, and Hans Millendorfer, Wiener Neudorf, Austria, assignors to C. Reichert Optische Werke Aktiengesellschaft, Vienna, Austria

Filed May 31, 1962, Ser. No. 199,099
Claims priority, application Austria June 7, 1961
8 Claims. (Cl. 88—24)

1. A photomicrographic apparatus comprising in combination, an electromagnetic shutter, an electric timing device arranged to control opening and closing of said shutter to define exposure time, a time switch in said timing device, a light source, a light-sensitive element, two adjustable light-weakening devices, a servo-mechanism coupled to at least one of said light weakening devices for adjustment thereof, camera means for supporting a photo-sensitive medium in fixed relation to an optical path through the apparatus, an objective arranged in said path to form an image on said medium, and optical means arranged to divert a proportion of light in said path away from said camera means towards said light-sensitive element, one of said light-weakening devices being placed in the optical path between said light source and said optical means, the other of said light-weakening devices being placed in the path of light passing between said optical means and said light-sensitive element and so coupled to the time switch that at any instant the time set thereon is directly proportional to the light transmission factor of said other light-weakening device, and the servo-mecha-

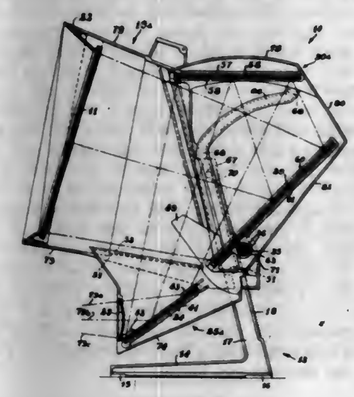


nism being arranged to adjust either of the light-weakening devices at choice, while the other is held fast, until a predetermined illumination of the light-sensitive element is attained.

3,130,635
PROJECTED IMAGE TRANSMITTING APPARATUS

Frank P. Bennett, Chicago, and Albert E. Webb, Glenview, Ill., assignors to Sawyers Research Development Corporation, Chicago, Ill., a corporation of Delaware

Filed July 23, 1962, Ser. No. 211,813
9 Claims. (Cl. 88—24)



1. Apparatus for projecting an image from an image producing device comprising, in combination,

(*a*) support means,

(*b*) a projector housing on said support means and carrying a viewing screen,

(*c*) a first mirror housing rotatably mounted on said projector housing and carrying mirror means for reflecting the image from said image producing device,

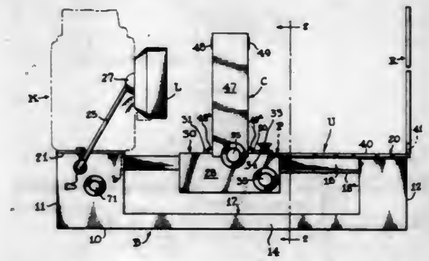
(*d*) a second mirror housing rotatably mounted on said projector housing about the axis of rotation of said first mirror housing thereon and carrying mirror means for reflecting the image from the first mentioned mirror means onto said viewing screen, and

(*e*) means operatively connected to said housings for conjointly rotating said mirror housings in opposite directions into said projector housing for storage and therefrom into operative relation for reflecting the image from said image producing device onto said viewing screen.

3,130,636
PHOTOCOPY UNIT

Luiz Flavio de Faro, Arlington, Va., assignor to Faroscope Manufacturing Company, Silver Spring, Md., a corporation of Maryland

Filed Sept. 19, 1962, Ser. No. 224,741
10 Claims. (Cl. 88—24)

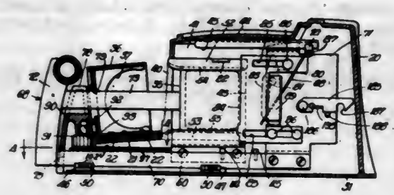


1. A photocopy unit comprising a base, a rest at one end of the base for supporting a camera, a platform on the base, means for moving said platform longitudinally of the base relative to said camera, a carrier for matter to be copied mounted on said platform, and means for moving said carrier relative to said platform, the means for moving said platform comprising spaced longitudinally extending gear-rack-equipped trackways on the base, and rotatable pinions carried by the platform meshing with said gear-rack-equipped trackways.

3,130,637
SLIDE PROJECTOR

Kenneth E. Golden, Portland, Oreg., assignor to Sawyers, Inc., Portland, Oreg., a corporation of Oregon

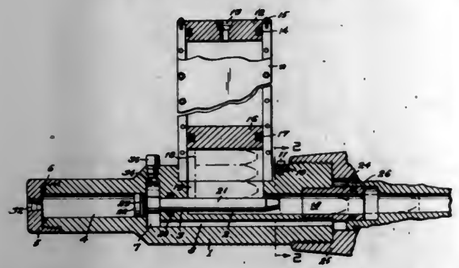
Filed May 22, 1961, Ser. No. 111,783
10 Claims. (Cl. 88—28)



1. In a slide projector having a reciprocal slide carrier for transferring slides between a slide tray and a slide viewing aperture and characterized by an upstanding plate member at its inner end, the improvement which comprises, a projecting hook member mounted on the upstanding plate member, rotary driving means, a planetary gear system operably connected to said driving means, a drive pin attached to a planet gear of said gear system and having a horizontally reciprocable path of movement toward and away from the slide viewing aperture, said drive pin being disposed in hooked engagement with said hook member during its movement away from the slide aperture whereby to pull the slide carrier from its outermost position into its innermost position and thereby transfer a slide from a slide tray to a position in centered alignment with the slide aperture, and means for automatically disengaging the hook member from said drive

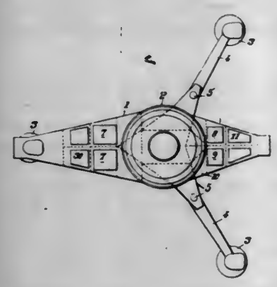
pin upon the slide carrier reaching its innermost position, said drive pin being engageable with the edge of said plate member during its movement toward the slide aperture whereby to return the slide carrier to its outermost position.

3,130,638
PROJECTILE TRANSFER MECHANISM
Eugene B. Horton, Jr., and Bernard A. Niemeier, Richmond, Va., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Filed Oct. 16, 1961, Ser. No. 145,505
5 Claims. (Cl. 89—33)



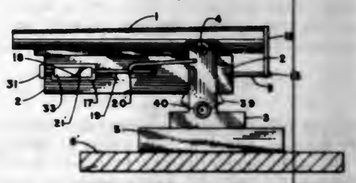
1. A projectile feed mechanism comprising a housing attached to the rear end of a gun and provided with a projectile feed passage, a magazine connected to said housing and communicating with said feed passage, said housing having a bore aligned with said feed passage, a feed plunger reciprocable in said feed passage, a first piston fixed to said plunger and slidable in said bore, means to admit gas pressure to one side of said piston, a second piston carried by the gun and movable in response to operation thereof, said housing having liquid containing passage means providing communication between the other side of said first piston and one side of said second piston.

3,130,639
GUN CARRIAGES ESPECIALLY FOR ANTI-AIRCRAFT GUNS
Louis Birkigt, Pregny-Geneve, Switzerland, assignor to Brevets Aero-Mecaniques S.A., Geneva, Switzerland, a society of Switzerland
Filed June 21, 1962, Ser. No. 204,171
Claims priority, application Luxembourg June 24, 1961
7 Claims. (Cl. 89—40)



1. A gun carriage which comprises, in combination, a frame, at least three jacks operatively connected with said frame for supporting it, at three different points thereof respectively, above the ground, three power means for operating said jacks, respectively, and a control device operatively connected with said three power means, said control device comprising a support, a single control member, said three power means being operative by said control member, said control member being adjustable to have at least three different kinds of displacement with respect to said support, each of said power means being arranged, to produce in response to movement in one direction of said control member for each of same kinds of displacement, respectively, an action of one single jack in one direction, and, in response to movement in the opposed direction of said control member for the same kind of displacement, an action of said two other jacks simultaneously in the same direction, the jack that is operated singly being different for each of the three kinds of displacement of said control member and switch means for reversing at will the direction of action of said jacks taking place in response to the movement of said control member for each of said kinds of displacement.

3,130,640
POSITIVE SHUTOFF VARIABLE RECOIL MECHANISM
Roland A. Magnuson, Seattle, Wash., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Filed Apr. 17, 1962, Ser. No. 188,288
3 Claims. (Cl. 89—43)

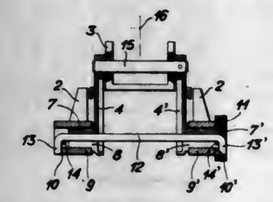


1. In a recoil control device for constantly decelerating a recoiling gun barrel, a chamber having braking fluid therein, a piston rod longitudinally movable in said chamber, means securing said piston rod to a movable gun barrel, a head having irregular shaped orifices therein secured to said rod, said orifices adapted to permit braking fluid to flow from one side of said head to the opposite side of said head, a rotatable control rod mounted coaxially within said piston rod, said piston rod being slidably mounted on said control rod, said control rod having a fluid flow channel formed therein for each of said orifices, each of said channels being defined by a straight edge and an opposed helical edge, said helical edges providing means to progressively close said orifices at a rate as the piston rod and head move from one end of said chamber to the other on gun barrel recoil to maintain constant fluid pressure in said cylinder, rotating means connected to said control rod for rotating said control rod to automatically partially close said orifices as the gun barrel is elevated from a horizontal position to shorten recoil of the elevated gun barrel.

3,130,641
OSCILLATORY MOUNTING, IN PARTICULAR FOR AUTOMATIC FIREARMS
Otto Keller, Bremen, Germany, assignor to Firma Rheinmetall G.m.b.H., Dusseldorf, Germany
Filed June 29, 1962, Ser. No. 206,394
Claims priority, application Germany July 5, 1961
5 Claims. (Cl. 89—44)

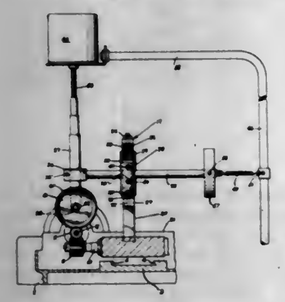
1. An oscillatory mounting support for automatic firearms mounted in a cradle comprising at least two pairs of links secured to the cradle and being moveable relatively thereto, a bearing sleeve for each link mounted on the cradle, and a torsion bar spring associated with each pair of links, mounted and extending through the sleeves

of each pair, each end of the torsion bar spring being bent at approximately right angles and supported at one



end against the cradle and at the other end against one of the links of the respective pair of links.

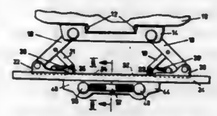
3,130,642
GEAR HOBBING MACHINES
Eugene W. Kulesh and Reginald S. Lanier, Wayzata, and Robert J. Helgerud, Hopkins, Minn., assignors to Washington Scientific Industries, Inc., Minneapolis, Minn., a corporation of Minnesota
Filed Oct. 6, 1960, Ser. No. 60,827
6 Claims. (Cl. 90—1.4)



1. A deburring attachment for a gear cutting machine, including a supporting frame, an arbor rotatably mounted in said frame and having a hob secured thereto, and means for supporting a gear blank in cutting relation to the hob, said attachment comprising a supporting bracket having means for adjustably securing it to the machine frame, an elongated horizontal bar pivoted to said bracket and swingable in a horizontal plane, a member adjustably mounted in one end of said elongated bar, a shaft rotatably supported in said member, a deburring wheel operatively connected to said shaft and disposed in deburring relation to the gear to be deburred, means for driving said shaft, and means connected to the opposite end of said elongated bar for constantly urging the deburring wheel into deburring engagement with the gear being cut, thereby to remove burrs from the gear teeth during the gear cutting operation.

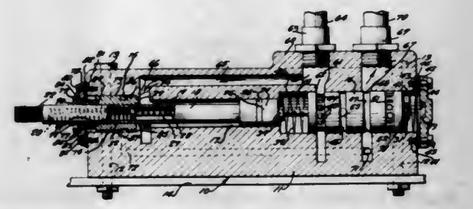
3,130,643
ENGRAVING AND COPYING MACHINE
Roland Heinelt, Munich, Germany, assignor to Hans Deckel, Munich, Germany, and Friedrich Wilhelm Deckel, Zug, Switzerland
Filed Oct. 22, 1962, Ser. No. 232,225
Claims priority, application Germany Oct. 30, 1961
10 Claims. (Cl. 90—13.1)

1. An engraving and copying machine comprising, machine frame means, a movable carrier member providing a longitudinal slide path thereon, a pair of carriages slidably engaged in said longitudinal slide path, a guide arm pivotally connecting each carriage of said pair with said machine frame means, a rack extending parallel to said longitudinal slide path connected to each carriage of said pair of carriages, a gear journaled on said carrier member in said slide path and meshing at diametrical points with said rack of each carriage whereby said pair of carriages are oppositely and symmetrically slidable in said longitudinal slide path parallel to the pivot plane of the guide



arms for laterally guiding said carrier member to selected positions parallel to itself, a tool and a copying pin, and slide means carrying said tool and copying pin connected to said movable carrier member for guided relative longitudinal displacement thereon.

3,130,644
FLUID TRANSMISSION
William Sherman Schaeffer, South Webster, Ohio
Filed Mar. 16, 1962, Ser. No. 180,085
2 Claims. (Cl. 91—321)

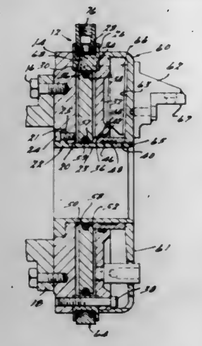


1. A compounded hydraulic transmission comprising a closed fluid circuit in which the fluid is under pressure in one direction, a body member having inlet and discharge ports and a reciprocating piston therein, a hollow piston rod integral with said piston, a floating valve rod having a plurality of slosh-preventing apertures therein and a piston thereon extending through said piston and piston rod, a valve connected to said valve rod, an annular row of ports in said valve at each end thereof for communication with said inlet and discharge ports, pressure responsive springs positioned in said body fore and aft of the piston head on said valve rod and compression springs positioned in said body fore and aft of said valve, said springs aiding and giving impetus to said piston and for assisting the reciprocation of said valve, annular passageways in said body that are alternately in communication with said valve during the reciprocation of said valve, longitudinally-extending passageways in said body and said passageways are in communication with the ports in said valve, and positioning means in said body intermediate of said ports for engagement with said valve to retain the ports in said valve in communication with their respective inlet and discharge ports.

3,130,645
SLIP RING
George Hohwart, Farmington, Mich., assignor to N. A. Woodworth Company, Ferndale, Mich., a corporation of Michigan
Filed May 29, 1961, Ser. No. 113,380
10 Claims. (Cl. 91—442)

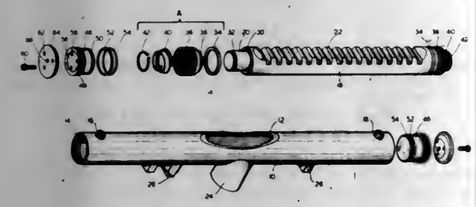
1. In a rotatable diaphragm type chuck having an enclosed cylinder with a passageway in fluid communication with a radially outwardly facing rectangular annular groove and being operable by pressure in the cylinder from a source of selectively actuable fluid pressure, a stationary slip ring assembly for providing a seal within

the rectangular groove comprising an annular diametrically split ring disposed in the rectangular groove and having a pair of annular seal retaining grooves each opening on axial opposite sides towards an adjacent wall of the rectangular groove, means for fixedly securing the diametrical halves of said split ring together, spherical joint means connected to said split ring for providing positional adjustability of said split ring to a clearance relationship in the rectangular groove, means including a pair of axial passages in said split ring each individual to one of said pair of seal retaining grooves for communicating said pair of seal retaining grooves to the source of fluid pressure, said split ring having a pair of diagonally intersecting passages radially displaced from said pair of axial passages for communicating said pair of seal retaining grooves to the clearance gap between said split



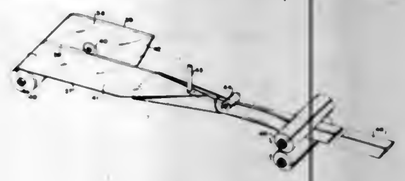
ring and the root of the rectangular groove, each of a pair of resilient O-rings disposed in one of said pair of seal retaining grooves with an interference fit so as to bear radially outwardly against the radially outermost face of that one of said pair of seal retaining grooves with which it is individual and being in clearance relationship with the radially innermost face of that one of said pair of seal retaining grooves, each of said O-rings disposed in blocking relationship with that one of said pair of axial passages with which it is individual and being deformable out of blocking relationship with that one of said pair of axial passages into sealing contact with the adjacent wall of the rectangular groove for providing a fluid seal between said split ring and the walls of the rectangular groove upon actuation of the source of fluid pressure and resiliently returning to its original position upon deactuation of the source of fluid pressure.

3,130,646
ADJUSTABLE CYLINDER END STOP
Harold W. Pennington, Battle Creek, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Filed Mar. 12, 1962, Ser. No. 179,064
7 Claims. (Cl. 92—13)



1. A cylinder-piston construction comprising an internally threaded cylinder wall at at least one end of the cylinder, and an adjustable piston stop assembly including an externally threaded cylinder gland threadedly engageable with the threaded end of the cylinder and adjustable to a desired position wholly within said cylinder to provide stop means for the piston, an end cap overlapping the threaded end of the cylinder wall, a plurality of alignable openings in the gland and cap, and securing means registrable with said aligned openings in both the gland and cap for holding the threads of the gland in rigid abutment with the threads of the cylinder and the cap in rigid abutment with the end wall of the cylinder.

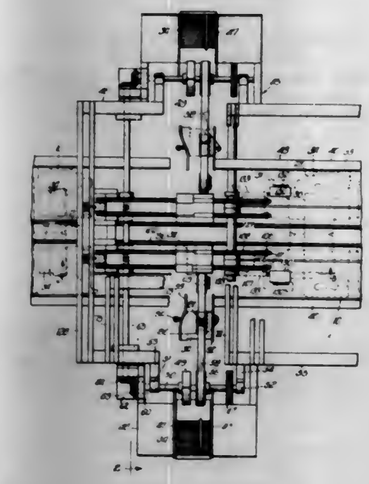
3,130,647
DUPLEX PACKAGING MATERIAL AND METHOD OF MAKING SAME
William E. Anderson, Bloomsbury, Ralph William Schlienz, Hillsdale, and Clarence Philip Friling, Milford, N.J., assignors to Riegel Paper Corporation, New York, N.Y., a corporation of Delaware
Filed Sept. 10, 1957, Ser. No. 683,168
2 Claims. (Cl. 93—35)



1. The method of making a loose-bonded multiple-wall bag, in which the multiple wall includes inner and outer layers of material, which comprises, supplying a first web of bag wall material having properties of resilience and heat-sealability, supplying a second web of bag wall material having a property of relative non-resilience in comparison to said first web of bag wall material, bringing together said first and second webs to superimpose one upon the other, forming a loose-bonded multiple-wall sheet material by effecting a heat seal between said webs over spaced areas which are very limited in relation to the total contacting area of said webs, and forming a multiple-wall, loose-bonded bag from such sheet material by folding a section of the sheet material, securing together longitudinal marginal edge portions of said sheet material and securing together marginal edge portions of said sheet material at at least one end of said portion of sheet material, whereby the multiple webs forming the walls of said bag are secured together at limited areas in relation to the total area of said walls.

3,130,648
APPARATUS FOR ASSEMBLING CARRIER BLANKS
Lawrence E. Arneson, Morris, Ill., assignor to Federal Paper Board Company, Inc., Bogota, N.J., a corporation of New York
Filed June 7, 1962, Ser. No. 200,867
14 Claims. (Cl. 93—36)

1. Apparatus for feeding, folding and positioning a foldable partition forming insert blank on a cellular carrier forming blank which is supported in unfolded condition on a horizontal run of a traveling conveyor, said apparatus comprising a supporting frame extending transversely of the traveling conveyor, a magazine for receiving a supply of insert blanks mounted on said supporting frame, a pair of blank gripping endless traveling conveyor members mounted on end supports on said supporting frame so as to extend from the magazine to a horizontal transfer table positioned on said supporting frame above the path of travel of the carrier blank conveyor, means for feeding successive insert blanks to the gripping conveyor members, means associated with the gripping conveyor members for folding an end panel of each insert blank upon an adjoining panel of said insert blank, a pair of endless traveling transfer conveyor members mounted on said supporting frame and disposed vertically with their



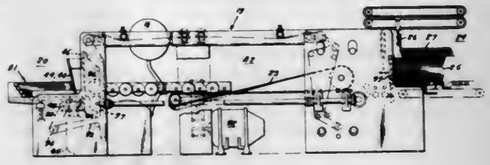
upper runs in the plane of the transfer table and having means thereon for advancing the blanks in a path which is parallel with the path of travel of the carrier blanks and in the opposite direction, said transfer conveyor members being supported on end members which are positioned so as to bring the lower return runs thereof parallel with and immediately above the carrier blank conveyor for deposit of the insert blanks on successive carrier blanks on the carrier blank conveyor.

3,130,649
METHOD OF MAKING LINED CARTONS
Charles D. Striplin, Concord, and Monroe F. Smith, Walnut Creek, Calif., assignors to Fibreboard Paper Products Corporation, San Francisco, Calif., a corporation of Delaware
Filed Dec. 11, 1961, Ser. No. 158,289
4 Claims. (Cl. 93—36.01)



1. The method of forming a flat fold tubular carton with a liner of paper having a coating of heat sealable material on one side thereof which comprises folding one edge of a blank of said material back upon itself to present a coated strip along one edge of the uncoated side of the blank to extend beyond the edge of a prescored carton blank, securing the liner blank to the prescored carton blank with the coated side facing inwardly and said strip facing outwardly of the carton blank beyond an edge thereof, preheating said coated strip and the opposite edge of said liner, and immediately thereafter folding the blank and liner to form a flat fold carton with said opposite edge in contact with said strip.

3,130,650
SUCTION FEEDER
Albert F. Shields, Forest Hills, N.Y., assignor to S & S Corrugated Paper Machinery Co., Inc., Brooklyn, N.Y., a corporation of New York
Filed Feb. 16, 1962, Ser. No. 173,727
10 Claims. (Cl. 93—49)



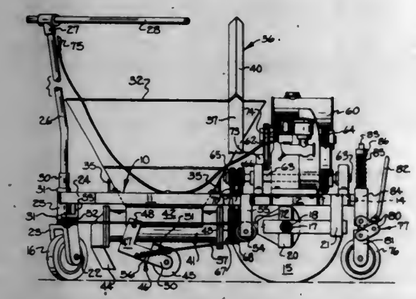
7. A box making machine comprising a feeder device for removing blanks one at a time from the bottom of a stack and moving these blanks along a feed path extending parallel to fold lines of the blanks in the stack, a folding device for receiving blanks from said feeder device and transforming these blanks into folded tubular boxes, and a stacking device for receiving boxes from said folding device; said feeder device including a belt, first means for moving said belt in a direction parallel to said feed path, second means for guiding movement of said belt along a loop, third means for supporting a stack of blanks above said belt, fourth means defining a slot in said belt extending across a substantial portion of the belt width, means for producing reduced air pressure within said loop, fifth means for directing said reduced air pressure at said slot when the slot is below said stack, said third means operatively positioned in close proximity to said belt so that when said slot its below the stack the bottom blank thereof will seal against said fourth means and be moved forward with said belt.

3,130,651
MOUNTING FOR HINGED COVERS
George C. Werner, Neenah, Wis., assignor to Neenah Foundry Company, Neenah, Wis., a corporation of Wisconsin
Filed Aug. 23, 1960, Ser. No. 51,338
6 Claims. (Cl. 94—36)



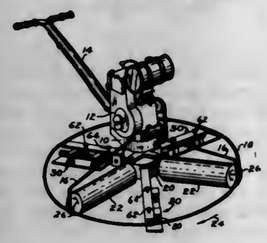
1. The combination with a cover having rearwardly projecting ear means provided with pin means projecting laterally in opposite directions, of a base provided with an opening and a seat about the opening and upon which the margin of the cover rests and having rearwardly extending pocket forming means opening through the seat and into which the ear means extends, the pocket forming means having oppositely facing lateral surfaces provided with laterally opening channels overhung by a portion of the pocket forming means and opening to said seat with the bottom of the channel substantially at seat level and provided at corresponding distances rearwardly of said seat with downward extensions in which said pin means are removably fulcrumed, the pin means being slidable along the respective channels between said extensions and said seat, the seat supporting said pin means to sustain part of the weight of the cover during removal and replacement of the cover.

3,130,652
APPARATUS FOR APPLYING GROUTING MATERIAL
James E. Newton, Sr., and James E. Newton, Jr., Charlotte, N.C., assignors to Newton Machine Company, Inc., Charlotte, N.C., a corporation of North Carolina
Filed Jan. 31, 1961, Ser. No. 86,112
6 Claims. (Cl. 94—45)



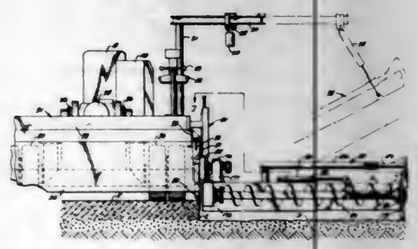
6. An apparatus for installing joint material in a joint between adjacent sections of rigid material, said apparatus comprising a frame, a hopper for receiving semi-plastic joint material carried by said frame, means for dispensing semi-plastic joint material from said hopper into the joint between adjacent sections of rigid material, tracking means for reception within the joint secured to said frame for pivotal movement about a vertical axis normal to the longitudinal extent of said frame, compacting means, means mounting said compacting means beneath said frame for movement between an extended position in engagement with the adjacent sections of rigid material and straddling the joint therebetween and a retracted position spaced above the sections of rigid material, said tracking means being disposed forwardly of said dispensing means and said compacting means being disposed rearwardly of the point at which said dispensing means discharges joint material, and means responsive to pivotal angular movement of said tracking means with respect to the longitudinal extent of said frame for retracting said compacting means from extended position.

3,130,653
SURFACING MACHINE
David R. Talbott, 224 Westwood Road, Annapolis, Md.
Filed Apr. 4, 1961, Ser. No. 100,626
7 Claims. (Cl. 94—45)



2. A machine for treating surfaces comprising a rotatable hub member having a vertical axis, a plurality of horizontally disposed rollers extending radially outwardly from said hub member and adapted to engage a surface to be treated, means for driving said rollers and said hub member about said vertical axis, means for simultaneously driving said rollers about their horizontal axes at a greater rate than their natural rolling speed and in the same direction thereof, a plurality of horizontally disposed wiper blades extending radially outwardly from said hub between said rollers, pivot means hingedly connecting the inner ends of said blades to said hub whereby said blades are movable in vertical radial planes with respect to said hub, and spring means acting on said blades to urge them at all times downwardly about the pivot means and in the direction of the surface to be treated.

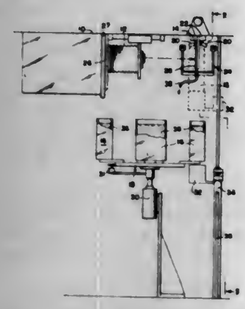
3,130,654
MATERIAL DISTRIBUTING AND LEVELING MACHINE
John H. Apel, Columbus, and Robert J. Beeson, Worthington, Ohio, assignors to The Jaeger Machine Company, Columbus, Ohio, a corporation of Ohio
Filed Aug. 31, 1961, Ser. No. 135,267
11 Claims. (Cl. 94—46)



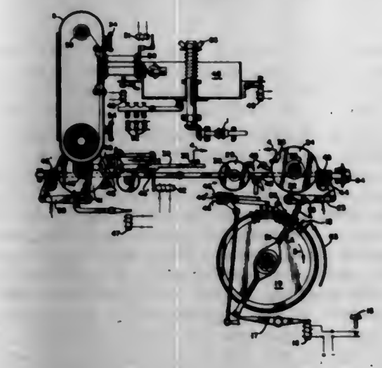
10. A machine of the type described comprising a transport unit carried by traction means adapted to operate on an existing surface, a leveling unit supported at one side of the transport unit and extending laterally outboard therefrom so as to produce a strip of road material on a prepared surface along the adjacent edge of the existing surface, said leveling unit including a strike-off member for engaging material deposited on said prepared surface, said strike-off member comprising telescoping sections adjustable relatively to vary the length of said strike-off member to produce strips of varying widths, said transport unit including a transversely extending conveyor at its forward end for receiving material and carrying it laterally to one side of the transport unit where it is deposited on said surface in front of said strike-off member, said conveyor being mounted on said transport unit for lateral extension and retraction relative to the outboard side thereof to vary the position of deposit of the material relative to said strike-off member.

3,130,655
PHOTOGRAPHIC APPARATUS
Donald K. Meyer, West St. Paul, Arthur G. Ostrem, St. Paul, and George J. Pollman, Lake Elmo, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Jan. 21, 1963, Ser. No. 252,643
8 Claims. (Cl. 95—1.7)

1. An automatic, programmed combination enlarger and processor apparatus for rapidly producing prints on a photosensitive sheet having a photoconductive coating on an electrically conductive backing comprising in combination: projection means for separately and successively projecting onto said sheet in accurate registry a series of monochromatic light-images; tank means for supplying a series of dye baths, each of said tank means including electrode means for establishing anodic contact with the corresponding dye bath; support means for holding said sheet in focus and registry with said projection means during exposure to each of said light-images and for establishing cathodic contact to the conductive backing; dipping means for successively immersing said sheet held in said support means in each of said dye baths for electrolytic deposition of a corresponding dye at light-struck areas of said sheet and for then removing said sheet from contact with said dye bath; rinsing means for applying a non-abrading uniform flow of water to said sheet and said support means and dark adapting the photoconductive coating after its removal from said dye bath; non-abrading uniform drying means for removing water from said sheet and restoring uniform photosensitivity to the photoconductive coating; drying means for removing water from said support and control means operatively interconnecting said projection means, tank means, support means, dipping means, rinsing means and drying means for electrically programming the sequential production of prints.



3,130,656
APPARATUS FOR THE PHOTOGRAPHIC REPRODUCTION OF TYPOGRAPHIC COMPOSITIONS
Eduardo Rolando Dubuisson, Av. Jose Antonio 594 bis, Barcelona, Spain
Filed Nov. 25, 1958, Ser. No. 776,374
Claims priority, application Spain Dec. 9, 1957
15 Claims. (Cl. 95—4.5)

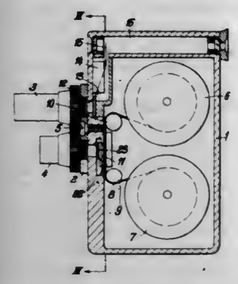


1. Apparatus for the photographic reproduction of typographic compositions, said apparatus comprising a keyboard having general keys, an end-of-line control key, letter style control keys, character keys, a space key and a line cancellation key, and electrical connection means operatively coupling said apparatus keyboard to the keyboard of a conventional typewriter; an electro-mechanical device connected to said keyboard and comprising wedge-shaped elements, graduated scale control means, said wedge-shaped elements being displaceable perpendicularly to said graduated scale control means to control therewith and limit the advance of the typographic compositions, means actuated by the character keys for originating and transmitting a first series of signals each representative of a character in a line of typographic composition, means responsive to said signals and operatively associated with said graduated scale control means to provide a summation of the widths of the characters represented by said signals, means actuated by the space key for originating and transmitting a signal representative of a space between characters and provide a free space representation on said scale control means, said wedge-shaped elements being responsive to said last-mentioned signals to enter the free space representations to increase said spaces to justify each line; a single rotary drum including a plurality of discs each having pins displaceable diametrically in dependence upon the key depression of said apparatus keyboard and in accordance with the character keys and space key depressed, each said disc having the same number of pins as the total number of characters and spaces forming a single line of the typographic composition, each said character key and the space key of said apparatus keyboard being electro-mechanically coupled to one of said discs, a lever for each said character key and said space key, a solenoid for each said character key and said space key energizable to act on said associated lever for actuating one of said pins connected to the corresponding disc so that said pin is pushed out radially; electrical contacts rendered operative in response to the displaced pins on all of said discs, a common shaft coupled to all of said discs for turning the same simultaneously angularly in a single direction, an electric motor, a first clutch coupling said electric motor to said shaft for rotation thereof, and an escape pawl governing the angular movements of said discs; a transparent drum rotatable about its axis and the surface of said transparent drum being provided with a plurality of spaced rows parallel with one another having all the signs of a predetermined style and size, a sliding disc clutch coupling said transparent drum to said motor to impart to said transparent drum angular rotations in dependence upon the location of the displaced pins selected in said rotary drum, and electro-mechanical means responsive to said electrical contacts to permit rotation of said rotary drum; a photographic lens with its corresponding shutter, placed opposite said transparent drum and with its optical axis coinciding with the radial extension of a diameter of the transparent drum; a photographic camera, gearing coupling said camera to said transparent drum for movement relative to the axis of said transparent drum by amounts proportional to the dimensions of the typographical characters effected on said apparatus keyboard for each typed line; automatic means for perforating the film laterally at the start and end of each photographed line; and an electro-mechanical means responsive to said electrical contacts for synchronizing the foregoing elements and governed by said general keys, said end-of-line control key, said letter style control keys for changing the letter style by raising said transparent drum, and said line cancellation key to control non-use of a stored line, and connections for utilization thereof.

3,130,657
CAMERA, PREFERABLY MOTION PICTURE CAMERA
Peter Schmuck, Mauren, Liechtenstein, assignor to Contina Bureaux- und Rechenmaschinenfabrik Aktiengesellschaft, Mauren, Liechtenstein
Filed Feb. 17, 1959, Ser. No. 793,855
Claims priority, application Austria Mar. 7, 1958
2 Claims. (Cl. 95—10)

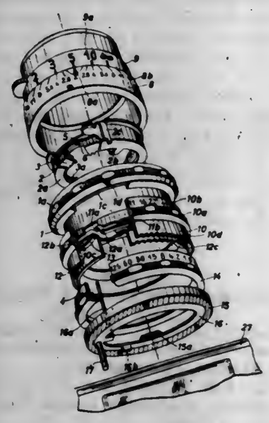
1. In a camera, in combination, a pair of objectives; support means supporting said objectives for movement between a first position where one objective is in a picture-taking position and the other objective is in a light-measuring position and a second position where said one objective is in a light-measuring position and said other objective is in a picture-taking position and means coop-

erating with that objective which at a given instant is in said light-measuring position for measuring the intensity of light which has passed through the latter objective, said objectives respectively including a pair of diaphragms and a pair of adjusting means respectively cooperating with said diaphragms for adjusting the latter, and said pair of adjusting means cooperating with each other for producing adjustment of both diaphragms when one of the adjusting means is actuated, the light-measuring means



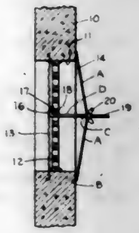
aligning a pointer with an index when the diaphragm of the objective in the light-measuring position has been properly set according to the lighting conditions, so that the setting of the diaphragm of the objective in the light-measuring position results automatically in at least approximately proper setting of the diaphragm of the objective in the picture-taking position and in precise setting of the diaphragm of the objective in said light-measuring position.

3,130,658
DIAPHRAGM OPERATING STRUCTURE FOR CAMERAS
Carl Baur, Munich-Baldham, and Erich Burger, Munich-Unterhaching, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany
Filed Apr. 15, 1959, Ser. No. 806,544
Claims priority, application Germany Apr. 24, 1958
12 Claims. (Cl. 95—10)



1. In a camera, in combination, a camera housing; an objective assembly carried by said camera housing and including a rear section permanently connected with said camera housing and a front section removably connected to said rear section so that said front section of said objective assembly may be exchanged for another front section; a diaphragm and a diaphragm setting means carried by said front section of said objective assembly; depth of field indicating means also carried by said front section of said objective assembly; preselecting means carried by said rear section of said objective assembly for preselecting the setting of the diaphragm, said preselecting means being operatively connected to said depth of field indicating means for actuating the latter to indicate the depth of field corresponding to the diaphragm setting preselected by said preselecting means; drive means operatively connected to said diaphragm setting means for driving the latter to set the diaphragm at the setting preselected by said preselecting means; and shutter actuating means for actuating the shutter of the camera to make an exposure, said shutter actuating means actuating said drive means for driving said diaphragm setting means to the preselected setting just prior to opening of the shutter to make the exposure, whereby the depth of field will be indicated as soon as said preselecting means provides the preselected setting of the diaphragm and before the diaphragm is actually set at the preselected setting.

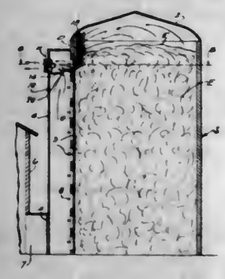
3,130,659
VENT CLOSURE
James K. Compton, Travelers Rest, S.C. (16 Templewood Drive, Greenville, S.C.), and Julius F. Hall, Greenville, S.C. (Box 12, Travelers Rest, S.C.)
Filed Apr. 2, 1962, Ser. No. 184,640
1 Claim. (Cl. 98—29)



A closure for a building vent having a grill therein including, a thin substantially rectangular element constructed of resilient flexible material capable of being formed into a vent cover, said element having a plurality of contiguous triangular panels wherein the apexes of the triangular panels are in the medial portion of said element and wherein the triangular panels taper upwardly to form a pyramid, the base portions of said triangular panels forming a free edge for contacting the building, an aperture in said element in the medial portion thereof, an elongated shank having a hook portion on one end thereof adapted to engage the grill and a threaded portion on the other end thereof, said shank being adapted to be received by said aperture, and a nut adapted to be received by said threaded portion, whereby upon tightening the nut and with the hook portion engaged the element is resiliently uniformly and positively held against the building over the vent.

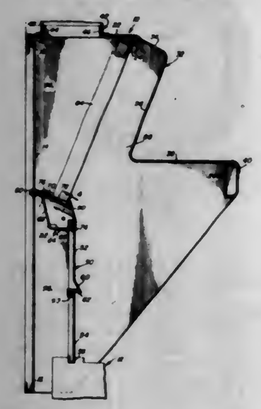
3,130,660
GAS REMOVAL UNIT FOR ENSILAGE SILOS
Delmer F. Schmid, Verona, Wis.
Filed Jan. 24, 1962, Ser. No. 168,368
11 Claims. (Cl. 98—54)

1. A closed ensilage silo for storing green and moist ensilage and preventing free circulation of air therethrough, a vertical chute along one side of said silo, an exhaust fan at the upper end of said chute, a duct unit removably securable to said silo and located within said chute and placing said silo in gas delivering communication with said chute whereby said fan acts to draw gas both from said silo and from said chute and expel said gas from



said upper end of said chute, and means for securing said unit to said silo.

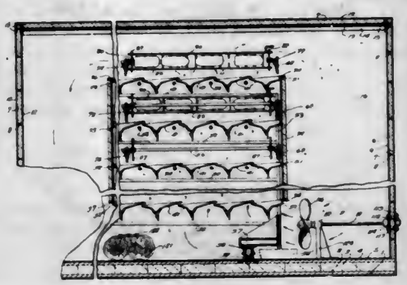
3,130,661
RANGE VENTILATOR
Andrew P. Fischer, 1410 Mount Vernon Drive, Modesto, Calif.
Filed Mar. 13, 1962, Ser. No. 179,397
13 Claims. (Cl. 98—115)



11. A ventilator assembly for cooking equipment such as a range comprising a housing adapted to overlie at least a portion of a range top and communicated at its upper portion with a flue, a filter, means supporting said filter to one side of said flue in the flow path of grease laden fumes exiting through the housing to the flue whereby said fumes must pass therethrough, said housing having a rear wall spaced from the filter at the other side of said flue defining an air passage behind said filter communicating with said flue, said rear wall extending in spaced relation to the range and open to the atmosphere thereby providing a cool air inlet communicating with the air passage between the filter and rear wall thereby cooling the fumes in the space behind the filter after they pass therethrough below the flash point of any grease in the fumes which may pass through the filter thereby eliminating a major cause of ventilator fires.

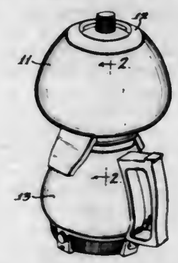
3,130,662
MEAT COOKERS
Aubrey C. Robinson, 1206 9th St. NW., Washington, D.C.
Filed July 7, 1959, Ser. No. 825,518
5 Claims. (Cl. 99—260)

5. An apparatus for cooking meats comprising a closed housing, partitions extending laterally across the interior of said housing, but spaced at the top and bottom therefrom, a plurality of superposed spaced apart series of deflectors positioned between said partitions, said series of deflectors each containing a plurality of deflectors positioned with overlapping spaced marginal edges providing lateral passageways therebetween, electrical heating elements positioned below each of said series of deflectors, a source of electrical current for said heating elements, means for supporting said meats in successive layers with each layer being above one of said series of deflectors,



means for producing a heat vapor below the lowermost series of deflectors, said housing having at least two opposing sides, one of said housing opposing sides having doors therein, the other of said housing opposing sides having a plurality of openings therein each with a narrower appended slot, each of said deflectors having at least one T-shaped member extending from an end thereof being detachably positioned within one of said housing side slots supporting said deflector laterally of said housing side towards said doors.

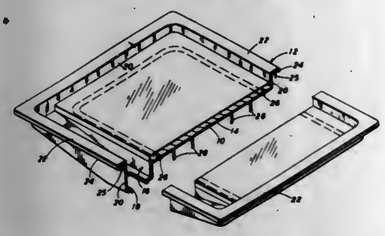
3,130,663
COFFEE MAKER FILTER ASSEMBLY
Chester H. Wickenberg, Elgin, and Moises B. Lorenzana, Glen Ellyn, Ill., assignors to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed June 29, 1961, Ser. No. 120,740
11 Claims. (Cl. 99—292)



1. In a vacuum coffee maker of the type having an upper vessel for receiving coffee grounds, a lower vessel within which water may be heated, and conduit means extending from said upper vessel into said lower vessel to a point adjacent the bottom thereof for transferring heated water from said lower vessel into said upper vessel, an improved filter positioned across said conduit to retain said grounds in said upper vessel while permitting the brewed coffee to return to said lower vessel, said filter comprising a vertically extending assembly rod having the lower end formed for engagement with the lower end of said conduit, a filter element of screen material, a supporting frame for said screen material, a bushing slidably received on said rod and supporting said element and said frame, a gasket member extending around the periphery of said element for sealing engagement with said up-

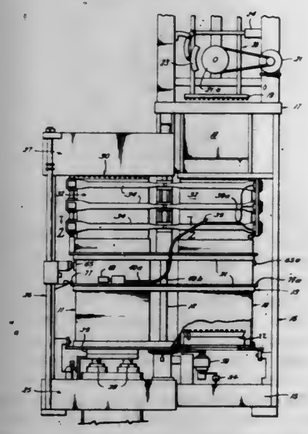
per vessel, spring means biasing said filter element downwardly, and a by-pass opening in said bushing adjacent said rod.

3,130,664
GRIDDLE PLATE ASSEMBLY AND METHOD OF MAKING SAME
Jack A. Jarmuth, San Francisco, and Donald A. Wells, Lafayette, Calif., assignors to Wells Manufacturing Company, San Francisco, Calif., a corporation of California
Filed Oct. 13, 1960, Ser. No. 62,366
17 Claims. (Cl. 99—425)



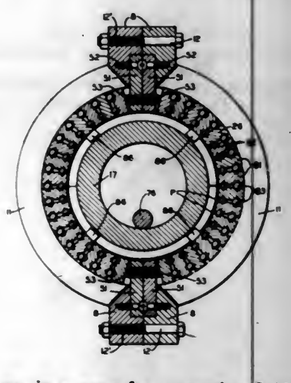
1. A griddle plate assembly comprising a tray having a continuous bottom portion and a plurality of side wall portions integrally formed with said bottom portion and extending generally perpendicular therefrom, a griddle plate having a thickness substantially greater than the thickness of said bottom portion of said tray and less than the height of said wall portions and mounted on said bottom portion with its edges adjacent to said side wall portions, and means for attaching said griddle plate to said tray comprising welds connecting said griddle plate to said bottom portion of said tray at a plurality of points distributed over the area of said bottom portion.

3,130,665
PRESS BOX DOOR ASSEMBLY
Joseph C. Neltzel, Dallas, Tex., assignor to The Murray Company of Texas, Inc., Dallas, Tex., a corporation of Delaware
Original application June 22, 1959, Ser. No. 821,755, now Patent No. 3,040,653, dated June 26, 1962. Divided and this application Feb. 5, 1962, Ser. No. 171,229
2 Claims. (Cl. 100—53)



1. In a press having a press box with an openable door held in a closed and locked position by a locking bar engaged by a fluid pressure operated piston, and a pump connected to said piston and operative while energized to supply pressure fluid thereto; the combination comprising a position responsive switch on said door, said switch being closed when said locking bar is closed into position for engagement by said piston, electrical relay means in series connection with said switch, a normally closed contact in series connection with said switch and said pump, said contact being actuated by said relay means and being delayed in opening for a timed interval following actuation thereof whereby said pump is energized for said timed interval upon said closing of said locking bar.

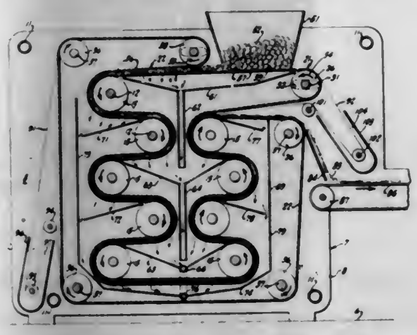
3,130,666
PRESS AND CAGE ASSEMBLY
Stanley Hiller, Berkeley, Calif., assignor to Coproducts Corporation, San Francisco, Calif., a corporation of California
Filed Aug. 24, 1959, Ser. No. 835,698
32 Claims. (Cl. 100—93)



28. For use in a press for expressing fluid from fluid bearing material introduced into such press, a screw shaft positionable to extend through said press from a material infeed end to a material discharge end thereof, said shaft having a substantially uniform root diameter throughout its effective length, said shaft comprising at least three operatively discrete sections, a plurality of interrupted screw flights on said shaft, one of said shaft sections having a screw flight portion thereon which is of predetermined uniform crest diameter and pitch, an adjacent one of said shaft sections having screw flight portions thereon which have progressively decreasing crest diameter and pitch relative to the screw flight portion of said one section, a third of said shaft sections having screw flight portions thereon which are of substantially uniform crest diameter and pitch which are less than the corresponding dimensions of the screw flight portions on said first and second mentioned shaft sections.

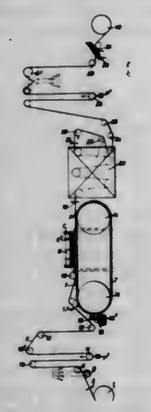
3,130,667
SERPENTINE FRUIT PRESS
Robert J. Coffelt, Davis, Calif., assignor to the Regents of The University of California, Berkeley, Calif.
Filed Feb. 13, 1962, Ser. No. 173,012
2 Claims. (Cl. 100—118)

1. A serpentine fruit press comprising a frame, a pair of upright side members on said frame, a plurality of counterclockwise driving rollers disposed horizontally between and journalled in said side members in a plurality of vertically arranged primary rows, a plurality of clockwise driving rollers disposed horizontally between and journalled in said side members in a plurality of vertically arranged secondary rows between said primary rows, a pair of perforated belts disposed to have predetermined portions thereof arranged in substantial contiguity, said predetermined portions being arranged in sinuous fashion alternately around said clockwise rollers and said counterclockwise rollers in said primary rows and the adjacent one of said secondary rows, one of said belts directly engaging said clockwise rollers and the other of said belts directly engaging said counterclockwise rollers, a plurality of idler rollers disposed horizontally between and journalled in said side members and engaging non-



contiguous portions of said belts, means on said frame for directing fruit between the contiguous portions of said belts, all of said rollers being spaced apart more than the combined thickness of said belts and the load of fruit therebetween, means on said frame beneath each of the sinuosities of the contiguous portions of said belts for receiving juice expelled from said fruit and passing through said perforated belts, and means for driving said clockwise driving rollers and said counterclockwise driving rollers.

3,130,668
MEANS FOR PRINTING STRETCHED WARP THREADS
Eugène Dubost, 40 Rue Saint Alban, Riorges, Loire, France, and René Clavelloux, 13 Place Jean-Jaures, Saint-Etienne, Loire, France
Filed Jan. 4, 1963, Ser. No. 249,413
Claims priority, application France Jan. 13, 1962
5 Claims. (Cl. 101—172)



1. In a machine for printing warp threads, prior to their winding on the warp beam of a weaving loom, the combination of an input warp beam carrying the warp threads, a stand carrying the beam, means for unwinding the warp threads off the warp beam under tensioned conditions to advance the threads intermittently through the machine, combs guiding the tensioned threads at a predetermined spacing, a movable belt including a rectilinear strand over which the threads are adapted to pass, means for applying a layer of sizing onto said belt, means for engaging said threads after the same have passed through said combs to urge the threads onto the belt with the sizing thereon whereby said threads adhere to said belt, frames carrying dyestuffs and including a sheet stencilled in accordance with a predetermined pattern, said frames being adapted to be urged against the threads passing over the rectilinear belt strand to impress the same throughout with dyestuffs, a drying chamber for the printed warp threads passing off said rectilinear belt strand, and at least one output comb spacing the sized, printed and dried warp threads and guiding them onto the warp beam of the weaving loom.

3,130,669
COLOR PRINTING
Donald E. Cooke, Havertown, Pa. (% Edraydo, Incorporated, 355 Lancaster Ave., Haverford, Pa.)
Filed June 25, 1963, Ser. No. 290,543
11 Claims. (Cl. 101—211)

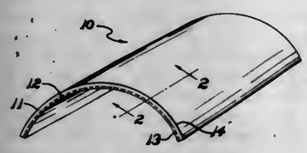


8. The method of making continuous tone pictures which comprises, for each of a plurality of selected colors, preparing a master negative of the object for one of the colors, making a film positive from the master negative for each selected color, bleaching and dyeing the film positives for each of the selected colors, making a final film negative from each of the film positives, during one of the transfers between films interposing a screen element having a granular surface with a grain depth of about ten to fifteen microinches, making a color plate from each said final negative, and printing in superposed relation with each of the color plates with a color corresponding to said color plate.

3,130,670
PRINTING PLATE
Edgar O. Macy, Stow, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
Filed Feb. 23, 1961, Ser. No. 91,041
8 Claims. (Cl. 101—376)

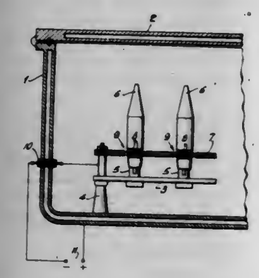
3. A flexible printing plate comprising a facing layer of resilient elastomeric material, a backing layer of resilient elastomeric material, and a dimensionally stable fabric reinforcement interposed between said facing layer and said backing layer, said backing layer being formed of an elastomeric composition having a higher modulus than the elastomeric composition from which the facing layer is formed, said facing layer, fabric reinforcement

and backing layer having been vulcanized together in a single molding operation, said printing plate being curled toward said backing layer whereby the printing plate as-



sumes a curved contour which facilitates mounting the printing plate on the cylindrical face of the plate cylinder of a rotary printing press.

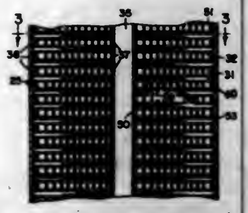
3,130,671
METHOD OF REDUCING BARREL WEAR
Bernhard Berghaus, Zurich, Switzerland, assignor to Elektrophysikalische Anstalt Bernhard Berghaus, Vaduz, Liechtenstein, a corporation of Liechtenstein
Filed May 2, 1958, Ser. No. 732,605
5 Claims. (Cl. 102—93)



1. Method of reducing wear of the inner wall of a steel gun barrel, hardened by nitriding, by the passage therethrough of projectiles on firing, the driving bands of the projectile being made of a ferrous material having a higher melting point than the hardened barrel inner wall, comprising heating the projectile driving bands in a medium containing a substance which diffuses into the surface zones of the projectile driving bands which later, on firing, slide along the barrel inner wall and are capable of developing and releasing gases or vapors at the temperature occurring on firing which build up a friction-reducing film between the barrel wall and the driving bands, and continuing the treatment to cause said substance to diffuse into the driving bands in such amount that the melting point of the surface zones of the driving bands, enriched with such substance, is reduced down to or below the melting point of the hardened surface zone of the barrel inner wall.

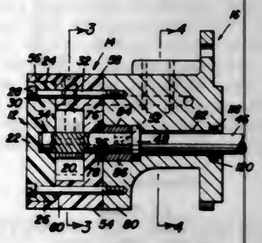
3,130,672
ROCKET GRAIN CONSTRUCTION
Wells A. Webb, Berkeley, Calif., assignor to Hexcel Products Inc., Berkeley, Calif., a corporation of California
Filed Apr. 7, 1959, Ser. No. 804,847
3 Claims. (Cl. 102—98)

1. In a rocket grain structure the combination of: a plurality of individual structurally integral sandwich members stacked one upon the other to form a composite rocket grain structure; each sandwich member comprising a sheet of honeycomb cellular material having cellular openings at the two broad faces of the sheet; first and second substantially flat skins covering the two broad faces of said cellular material with the axes of the cells disposed substantially perpendicular to the flat skins; and means attaching said flat skins on said sheet of cellular material to form a fluid tight seal for each



of the cellular areas formed by the sheet of cellular material; some of said sandwich members being filled with an oxidant filler and other of said sandwich members being filled with a fuel filler.

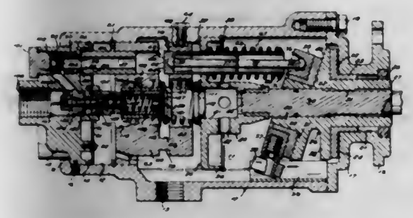
3,130,673
ROTARY VANE PUMP WITH REPLACEABLE HEAD UNIT
Arthur K. Finstad, 537 N. Lawler Ave., Chicago, Ill.
Filed Aug. 1, 1961, Ser. No. 128,542
6 Claims. (Cl. 103—2)



1. A pump assembly comprising as readily separable components a pump unit including an impeller assembly therein together with an end plate and an adapter collar secured to opposite ends of said pump unit, said pump unit comprising a hollow body with an opening at one end closed by said end plate and an end wall at its other end, said body having a chamber in its open end and a bore through said end wall communicating with said chamber, said impeller assembly including an impeller shaft journaled in said wall bore and having one end extending through said end wall to the exterior of said body and having its other end journaled in a circular recess in said end plate, an impeller hub and vanes mounted on said impeller shaft in said chamber, said chamber having a diametrical enlargement at said chamber open end, said end plate being received entirely within said enlargement, said adapter collar having a bore alined with said body bore and terminating in a diametrically enlarged recess, said impeller shaft extending end projecting into said recess, said adapter collar having mounting means on one end for attaching it to a support and having a planar face on its other end engaged by said body end wall, an impeller drive shaft journaled in said collar bore and having one end terminating within said recess and being provided with a laterally projecting flange seated in said recess, said impeller shaft and said drive shaft having an axially engageable and disengageable coupling for their adjacent ends within said recess, a bearing sleeve in said recess journaling said adjacent ends, fluid intake and fluid exhaust means each communicating with said chamber and each comprising registering passages in said body and collar, a quick-detachable fastening means releasably securing said pump unit to

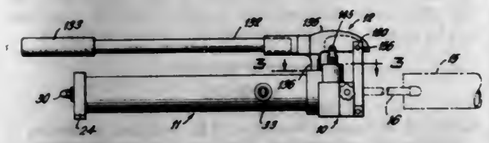
said adapter collar and facilitating removal and replacement of a pump unit in said pump assembly.

3,130,674
THROTTLING CONTROL
Tadeusz Budzich, Shaker Heights, Ohio, assignor to The Weatherhead Company, Cleveland, Ohio, a corporation of Ohio
Filed Jan. 12, 1961, Ser. No. 82,292
7 Claims. (Cl. 103—37)



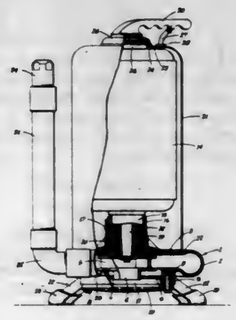
1. A pump comprising a pump housing providing a fluid chamber therein, an inlet to said fluid chamber, an outlet on said pump housing, a cylinder block mounted for slidable movement within said fluid chamber along a longitudinal axis, a plurality of cylinder bores in said cylinder block parallel to said longitudinal axis, a piston within each of said cylinder bores, drive means in said pump housing to progressively reciprocate said pistons in said cylinder bores between forward and retracted positions, means connecting each of said cylinder bores to said outlet, an inlet port for each cylinder bore in said cylinder block, said inlet port having forward and rearward axially spaced edges, said cylinder block defining a predetermined maximum displacement position when the head of the piston is intermediate said port edges when said piston in the retracted position, control means to shift said cylinder block with respect to said pump housing and said drive means in the direction to shift the forward edge of said inlet port toward the retracted piston position to decrease the inlet port area exposed when the piston is in the retracted position to throttle fluid flow into said cylinder bore and decrease the effective output volume of the pump, and stop means on said pump housing to prevent movement of said cylinder block in the opposite direction from said maximum displacement position.

3,130,675
HYDRAULIC HAND PUMP
Buddie L. Cripe, Walton, Ind.
Filed Mar. 28, 1962, Ser. No. 183,278
2 Claims. (Cl. 103—37)



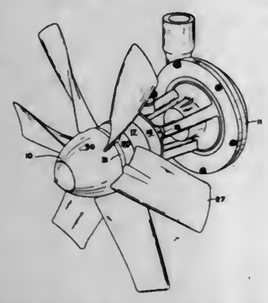
1. A hydraulic hand pump including a body means, a fluid reservoir connected with said body means, a pair of pumping pistons reciprocably mounted within a pair of chambers in said body means, inlet means providing fluid communication between said reservoir and each of said chambers and including one-way valve means for allowing fluid flow in one direction and preventing fluid flow in the opposite direction, outlet means in fluid communication with each of said chambers and including one-way valve means permitting fluid flow in one direction and preventing fluid flow in the opposite direction, by-pass means including a normally closed valve adapted to open at a predetermined pressure and providing communication between one of said chambers and said reservoir, and relief means providing communication between said outlet means and said reservoir, each of said chambers including seat means at the lower portions of the chambers against which the associated pistons are adapted to seat upon downward movement of said handle means, a pivotally supported, manually operable handle means, said handle means being connected to each of said pistons, and depending stop means formed on said handle means and adapted to engage a portion of said body means for limiting downward movement of said handle means, support means pivotally connected with and extending upwardly from said body means, one end portion of said handle means being pivotally connected with an upper portion of said support means, and laterally extending stop pin means extending from said handle means and adapted to engage a portion of said support means upon rotation of said handle means about its pivotal connection with said support means whereby said stop pin means serves to limit upward movement of said handle means.

3,130,676
PORTABLE WASHING UNIT FOR TANKS
John L. Beaulieu, Stockton, Calif., assignor to Golay and Co., Inc., Cambridge City, Ind., a corporation of Indiana
Filed Aug. 8, 1961, Ser. No. 130,080
2 Claims. (Cl. 103—87)



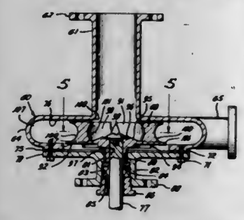
1. In a portable unit for placement and operation in a tank having liquid therein, a vertical-axis pump having a horizontal volute case provided with an intake and a discharge, the intake being adapted to be submerged in the liquid and the discharge having a standpipe projecting upwardly to a point above the liquid, a vertical-axis electric motor above and connected in driving relation with the pump, the motor including a casing secured on and upstanding from and of smaller diameter than the pump case, a threaded boss on and upstanding from the casing, a housing surrounding said casing and also of smaller diameter than the pump case, a seal recessed in the top of the pump case and engaged by the lower edge of the housing, the latter including a top wall provided with an opening surrounding the boss in clearance relation, a sealing ring secured to said top wall about the periphery of the opening and engaging the boss and the top of the motor casing in sealing relationship, and a cap removably threaded on the boss and engaging the upper face of the last named seal.

3,130,677
VARIABLE PITCH FAN
Dorsey M. Liebhart, 5224 NE. 42nd Ave., Portland 18, Oreg.
Filed Jan. 29, 1962, Ser. No. 169,503
2 Claims. (Cl. 103—87)



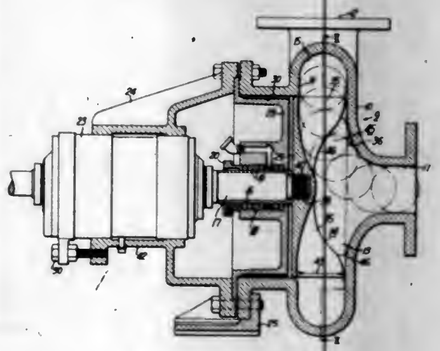
1. A variable pitch fan for driving a rotary mechanism comprising a body plate having a hub for a shaft, a plurality of semi-cylindrical recesses in said plate radial to said hub, a plurality of bolts parallel with the axis of said hub passing through said body plate, a saddle plate mounted on said bolts and having semi-cylindrical recesses mating with said first recesses to form cylindrical bores, fan blades having cylindrical shanks in said bores, pins on said shanks radial to said shanks, said saddle plate having openings for said pins, a second plurality of bolts parallel with the axis of said hub and passing through said body and saddle plates, a rotatable pitch plate adjacent said saddle plate having arcuate slots for mounting the pitch plate for limited rotation on said last bolts, said pitch plate having notches in its edge portions engaging the pins of all of said blade shanks and arranged to change the pitch of all the blades in unison, nuts on said first plurality of bolts for clamping said body and saddle plates against said blade shanks, and nuts on said second plurality of bolts to clamp all of said plates together and prevent rotation of said pitch plate relative to said body and saddle plates.

3,130,678
CENTRIFUGAL PUMP
William F. Chenault, 3611 Pecan, Houston, Tex.
Filed Apr. 28, 1961, Ser. No. 107,008
4 Claims. (Cl. 103—103)



1. Centrifugal pump, comprising a pump body having a substantially circular disc-shaped chamber therewithin and an inlet opening centrally of one side of said chamber and an outlet opening tangentially of said chamber, a shaft sealingly and rotatively disposed through a removable wall of said body provided at the opposite side of said chamber from said inlet opening, incompressible spacer means of predetermined thickness at least as great as the largest size of objects carired in the liquid pumped between said body and said removable wall to adjust the extent of said shaft into said chamber, an impeller carried on said shaft within said chamber, said predetermined thickness of said spacer means also fixing the spacing of said impeller at its opposite side from said one side of said chamber consistent with the size of objects carried in the liquid pumped, means for rotating said shaft to rotate said impeller to cause pumping of liquids from said inlet opening to said outlet opening, said fixed spacing of said impeller from said one side of said chamber permitting passage of objects entering said chamber with the liquid from the inlet to the outlet whereby such objects do not clog or stop the pump.

3,130,679
NONCLOGGING CENTRIFUGAL PUMP
Leonard H. Sence, Milford, Ohio, assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Dec. 7, 1962, Ser. No. 243,112
9 Claims. (Cl. 103—103)

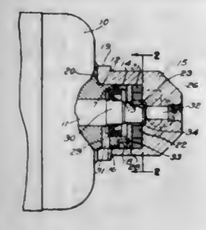


1. A centrifugal pump comprising: a casing having walls defining an impeller chamber, said chamber having an axial inlet and a radially spaced discharge opening, an impeller mounted for rotation in said chamber, said impeller having a rear shroud plate and a plurality of arcuately spaced substantially radially extending vanes mounted thereon, said vanes extending inward to near the center of said impeller, the depth of said vanes being smaller near the center of said impeller than near its outer periphery, the radially outer portion of said vanes extending across substantially the entire width of said chamber, said vanes being arranged on said impeller so as to define with said shroud plate and the opposing said wall of said impeller chamber a plurality of passages continuous from the inlet of said chamber to said outlet, the minimum size of said passages being at least equal to a sphere of the same diameter as the width of said inlet, whereby any solid body entering said chamber through said inlet can be passed through said impeller to said discharge.

3,130,680
GEROTOR TYPE PUMP
Arthur S. Johnson, Warwick, R.I., assignor to Brown & Sharpe Manufacturing Company, a corporation of Rhode Island
Filed May 31, 1962, Ser. No. 199,156
1 Claim. (Cl. 103—118)

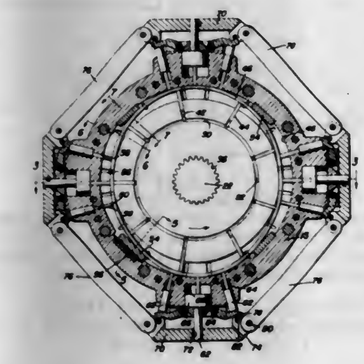
In a Gerotor type pump,
(*a*) a motor having a drive shaft extending therefrom,
(*b*) a boss extending from the motor and surrounding the shaft with its outer surface cylindrical and eccentric to the axis of the shaft,

(*c*) a pump housing having a single cylindrical bore of a size to fit the outer surface of said boss and extending thereover,



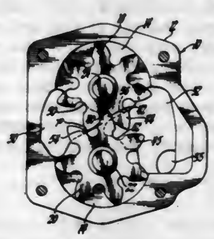
(*d*) an outer pump element having an outer surface fitting and located in said housing bore,
(*e*) an inner pump element keyed to the drive shaft cooperating with said outer element,
(*f*) said pump housing having inlet and outlet openings for receiving and discharging liquid.

3,130,681
VANE TYPE PUMP
Robert T. Fetherston, 476 N. Washington Ave., Battle Creek, Mich.
Filed May 25, 1959, Ser. No. 815,600
3 Claims. (Cl. 103—120)



1. A fluid power mechanism comprising:
a casing having an inner wall defining a cylindrical chamber;
a rotor mounted for rotation centrally of said cylindrical chamber, said rotor having an outer surface of a diameter that is substantially less than the diameter of said cylindrical chamber;
a flexible annular member of uniform cross-section disposed in said chamber between said rotor and the inner wall of said chamber,
said annular member being deformable from a circular shape to a first elliptical shape having a major axis extending in one direction and also to a second elliptical shape having a major axis at right angles to said major axis of the first elliptical shape;
said annular member having an outer peripheral surface with a diameter less than the diameter of said cylindrical chamber, and an inner peripheral surface with a diameter greater than the diameter of said rotor;
a plurality of radially movable vanes mounted on said rotor to engage with the inner peripheral surface of said annular member to form a plurality of pockets between the outer surface of the rotor and the inner peripheral surface of the annular member;
a pair of diametrically opposed inlet ports,
a pair of diametrically opposed outlet ports,
each of said ports communicating with the annular area between said rotor and the inner peripheral surface of said annular member;
four deforming means at four positions 90° apart on said casing for controllably deforming said annular member to a first elliptical shape having a major axis and to a second elliptical shape having a major axis at right angles to the major axis of said first elliptical shape, each of said deforming means comprising:
a first finger member extending radially into said cylindrical chamber,
a push member connected to said first finger member,
a head member on the end of said push member opposite said finger member,
a pair of second finger members extending radially into said cylindrical chamber, one on each side of said first finger member, and spaced slightly therefrom circumferentially of said chamber;
said first and second finger members being in engagement with the outer peripheral surface of said annular member,
each of said head members being operatively associated with said pair of second finger members to move same in proportioned relaton to movement of said first finger members,
a mechanical system interconnecting said head members in a manner such that movement of two of said operating means which are diametrically opposed effects predetermined inter-related movement of the other two diametrically opposed operating means;
said predetermined movement of said operating means being effective to deform said annular member to an elliptical shape by virtue of the engagement of said first finger members with said annular member and to control the curvature of the elliptical shape adjacent the major and minor axes thereof by virtue of the proportioned movement of said second finger members in engagement with said annular member.

3,130,682
GEAR PUMP
Marshall M. Meads, Utica, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 21, 1962, Ser. No. 246,477
4 Claims. (Cl. 103—126)



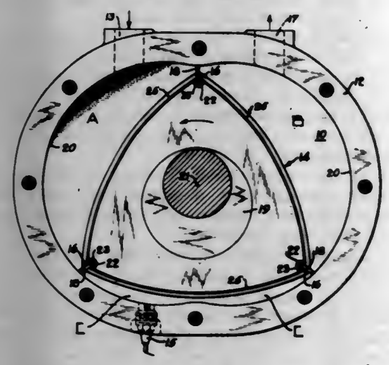
1. A gear pump comprising;
a housing having an inlet and an outlet port;
a pair of meshing gears rotatably received in the housing, the gears each having involute gear teeth forming a dedendum pocket therebetween in the area of meshing engagement;

a depression formed in the housing adjacent said area and communicating with one of the ports and with the dedendum pocket, said depression having a side wall lying in a plane containing the line of action for said involute gear teeth terminating in an end wall at the plane of the gear axes and thence curving into an opposite side wall defined by a circumferential line spaced radially from the adjacent gear axis, whereby the dedendum pocket is free to the passage of pumped fluid in the connected port.

3,130,683
SEAL LUBRICATING MEANS

Hanns-Dieter Paschke and Walter Froede, Neckarsulm, Germany, assignors to NSU Motorenwerke Aktiengesellschaft, Neckarsulm, Germany, and Wankel G.m.b.H., Lindau (Bodensee), Germany

Filed Apr. 26, 1962, Ser. No. 190,293
Claims priority, application Germany May 5, 1961
5 Claims. (Cl. 103—130)



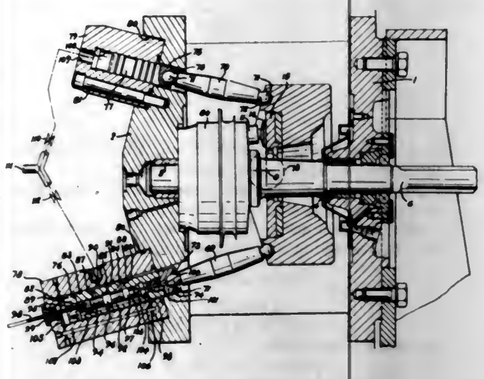
1. In a rotary mechanism comprising an outer body having a pair of end walls and a peripheral wall connected therebetween to form a cavity; a rotor mounted for relative rotation within said cavity, said rotor having a plurality of circumferentially-spaced grooves and having seal elements received within said grooves and projecting outwardly therefrom for sealing cooperation with the peripheral wall of said cavity to form a plurality of of working chambers which vary in volume during relative rotation of said rotor, said grooves being in communication with said chambers, end face seals on said rotor end faces for sealing engagement with said end walls, and said rotor having passages for supplying a lubricating medium to said grooves; and intermediate seal means positioned in each said groove adjacent the outlet end of each supply passage to said grooves and having sealing cooperation with said seal elements and said end face seals and said intermediate seal means being responsive to the fluid pressure within each groove for closing the lubricant supply passage to said groove when said fluid pressure is of a magnitude sufficient to otherwise cause said fluid to flow into said passage.

3,130,684
SWASH PLATE ROTARY MACHINES

Donald Firth and Roger Harvey Yorke Hancock, both of East Kilbride, Glasgow, Scotland, assignors to Council for Scientific and Industrial Research, London, England, a corporation of the United Kingdom

Filed May 22, 1961, Ser. No. 111,724
Claims priority, application Great Britain May 25, 1960
10 Claims. (Cl. 103—162)

1. In a swash plate rotary machine, the combination of a tiltable swash plate mounted between two pivots, a pair of struts having ends engaging diametrically opposite parts of the swash plate adjacent its periphery and on a line at right angles to the pivot axis, abutment members engaged by the struts at their other ends, hydraulic rams carrying said abutment members, cylinders containing said rams each having a pressure-fluid inlet and containing a working space at one end of the ram, a pressure-fluid interconnection between said inlets, a pressure-fluid supply connection to said interconnection, a damping

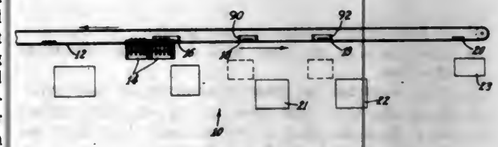


constriction between the supply connection and each inlet, a piston valve reciprocable within a bore in one of the rams, and ports connecting said bore with the pressure-fluid inlet into the cylinder, with the cylinder working space and with an exhaust outlet, said piston valve being movable to different positions connecting the pressure-fluid inlet with the cylinder working space, connecting the cylinder working space with the exhaust outlet and sealing the cylinder working space.

3,130,685
CONVEYOR SYSTEMS

Sidney Gordon Goodrich, Albert Edward Lovett, Reginald Thomas Moore, and Frank Richard Smith, all of Leicester, England, assignors to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey

Filed Dec. 12, 1961, Ser. No. 158,682
Claims priority, application Great Britain Dec. 20, 1960
11 Claims. (Cl. 104—172)

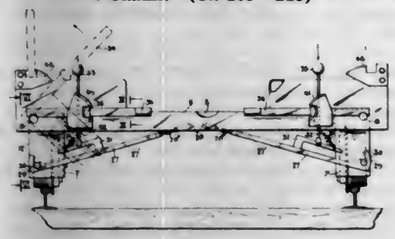


1. A conveyor system for conveying article-carrying devices between work stations, comprising conveying means extending from a pool position past said work stations, means associated with said work stations for arresting an article-carrying device released from the pool position, means associated with each work station for releasing an article-carrying device from the pool position and for actuating a first means for energizing said arresting means, and means responsive to the arrival of the released device at the arresting means to actuate a second means for energizing said arresting means and deactuate said first means.

3,130,686
CONVERTIBLE ROAD AND RAILWAY TRACK VEHICLE

Rene A. Fiechter, 137 Hollywood Ave., Douglaston 63, N.Y., and Herbert Gumprecht, Center Island, Oyster Bay, Long Island, N.Y.

Filed Oct. 8, 1959, Ser. No. 845,108
4 Claims. (Cl. 105—215)

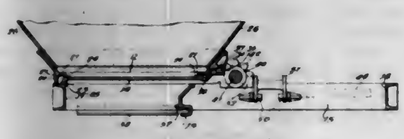


1. In a convertible road and track vehicle, a rail wheel mounting assembly comprising a frame adapted to be fixed to a vehicle chassis, wheel supporting plates pivotally mounted in said frame for swinging movement of 90° between vertical and horizontal positions, a wheel-carrying plate pivotally mounted on each wheel supporting plate for oscillation through a short arc in a plane parallel to the plane of said supporting plate, means for guiding each said wheel-carrying plate in its arcuate oscillation, spring means for resisting said oscillation in one direction and positive means for limiting said oscillation in both directions.

3,130,687
HOPPER DISCHARGE OUTLET CLOSURE ASSEMBLY

James T. Smith, Chicago, Ill., assignor to Jay R. Sheesley, Winnetka, Ill.

Filed Feb. 2, 1956, Ser. No. 563,083
4 Claims. (Cl. 105—282)

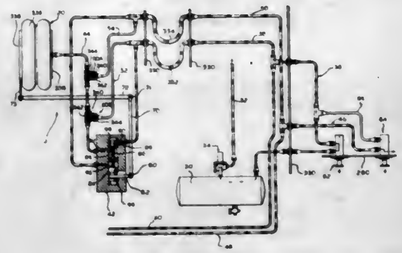


1. A hopper door assembly comprising a hopper chute providing a discharge opening, a door supporting frame and a door plate slidably mounted between said hopper chute and said frame, said frame including two longitudinally disposed members, the upper surfaces of which form ways upon which said door plate is slidably mounted, and including a rear cross member at one end upon which the rear edge of said door plate rests when said door plate is in closed position, the cooperation of said ways and the upper surface of said rear cross member with the edges of said door plate providing a weight actuated seal between said door and said supporting frame along three of the four sides of said door plate, said hopper chute being provided with a lip portion on all four sides thereof which extends into proximity with the upper surface of said door plate to provide a clearance type seal between said hopper chute and said door plate around all four sides of said door plates, and additional sealing means of the clearance type between said chute and said door plate and located forwardly of the corresponding lip portion, whereby a double seal is provided on all four sides of said door plate.

3,130,688
HIGHWAY-RAILWAY TRANSPORTATION APPARATUS

Jack E. Gutridge, Dyer, Ind., and William R. Hummel, Cincinnati, Ohio, assignors to Pullman Incorporated, Chicago, Ill., a corporation of Delaware

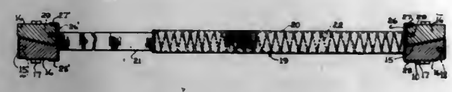
Filed Feb. 20, 1961, Ser. No. 90,418
10 Claims. (Cl. 105—368)



1. In apparatus for transporting freight including a freight container, a wheeled chassis including a frame to which the container is adapted to be connected, and a railroad car including an open deck extending lengthwise of the car and adapting same to serve as a roadway for movement of the chassis lengthwise of the car and retractable supports secured to either side of the car on which the container is to be rested when the supports are moved to extended positions at an elevation above the deck that is substantially equivalent to the distance that the container is above the ground when transported by the chassis, the improvement wherein an air spring suspension system is interposed between the chassis wheels and frame, said system comprising an air spring, means for mounting said air spring between said frame and said wheels to carry the weight of said frame and its container load, a supply conduit adapted to be secured to a source of air under pressure, a leveling valve, said supply conduit being connected to said leveling valve, a feed conduit extending between said leveling valve and said spring, off-on valve means interposed in said supply conduit between said source of air under pressure and said leveling valve including means for opening said supply conduit or alternately closing same and connecting the portion of said supply conduit extending between said off-on valve means and said leveling valve with an air discharge outlet, a flow orienting valve, an exhaust conduit extending between said leveling valve and said flow orienting valve, a connector conduit extending between said flow orienting valve and said supply conduit, said connector conduit being connected to said supply conduit between said off-on valve and said leveling valve, said flow orienting valve including means for alternatively connecting said exhaust conduit to an air discharge outlet or to said supply conduit, said leveling valve including means for alternatively connecting said supply and exhaust conduits to said feed conduit in response to weight changes on said spring, a first bypass conduit extending between said supply conduit and said feed conduit in bypassing relation to said leveling valve, and a second bypass conduit extending between said exhaust conduit and said feed conduit in bypassing relation to said leveling valve, said first bypass conduit having check valve means interposed therein for permitting fluid flow only from said feed conduit to said supply conduit, said second bypass conduit having check valve means interposed therein for permitting fluid flow only from said exhaust conduit to said feed conduit, whereby said off-on valve and said flow orienting valve may be operated to permit said leveling valve to maintain said chassis frame and its load at a predetermined elevation, or to permit the chassis frame and its

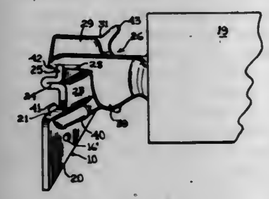
load to be raised or lowered independently of the normal functioning of said leveling valve means.

3,130,689
SUB-CROSS BARS
Charles Richard Johnston, Chicago, Ill., assignor, by mesne assignments, to Transco Inc., Chicago, Ill., a corporation of Delaware
Filed June 10, 1959, Ser. No. 819,454
1 Claim. (Cl. 105—369)



The combination of a freight retaining member having an elongated rectangularly shaped body adapted to extend between and be adjustably connected to opposite side walls of a freight car, said body comprising a substantially Z-shaped frame with the opposite extending parallel arms thereof provided with a plurality of aligned apertures extending throughout the longitudinal length of said frame, with the apertures of one arm in a plane offset horizontally with respect to the apertures formed in the other arm of said frame, a cross bar adapted to extend between spaced freight retaining members at preselected points along the longitudinal length thereof for cooperating with said members to position and retain freight within a freight car, said cross bars having telescopically arranged sections, each of said sections provided at opposite ends with means for connecting said cross bar to spaced freight retaining members, said connecting means comprising an enlarged substantially U-shaped end member having the spaced apart arms thereof extending in corresponding opposite directions and parallel to the longitudinal plane of said cross bar, said spaced apart arms of said end members adapted to embrace said freight retaining member and one arm of said frame, each of said end members providing a connecting pin extending laterally therefrom between said spaced apart arms thereof and out of the longitudinal mid-plane of said cross bar for insertion into selected apertures formed in said frame, said pin cooperating with said spaced apart arms of said end members for preventing movement of said cross bar transversely to the longitudinal length of said freight retaining member, and said pins cooperating with the selected apertures formed in said frame for preventing movement of said cross bar longitudinally of said freight retaining member.

3,130,690
FREIGHT LOADING APPARATUS
Charles Richard Johnston, 80 E. Jackson, Chicago, Ill.
Filed Dec. 1, 1960, Ser. No. 72,957
1 Claim. (Cl. 105—369)



In a freight car having a freight-loading system including a freight-loading bar adapted to extend between the side walls of the car and transversely with respect to the longitudinal length thereof,

(*a*) belt-like supporting rails carried by the side walls of the car in vertical spaced relation,

(*b*) each of said supporting rails formed to provide a depending leg disposed in attached facial abutment with respect to the inner surface of the side walls of the car,

(*c*) said leg terminating along one edge into an angular portion extending diagonally upwardly from the side walls of the car,

(*d*) said angular portion having formed therein a plurality of horizontally aligned apertures, said angular portion terminating in a vertically disposed free upper edge portion in inwardly spaced relation to said side wall, means rigidly securing said free upper edge portion to said side wall,

(*e*) connector means on opposite ends of said bar and having slidable contact with said free upper edge portion of said supporting rails whereby said bar may be freely positioned longitudinally of said car,

(*f*) a jaw-like element pivotally carried by said connector means and having a latched and unlatched position,

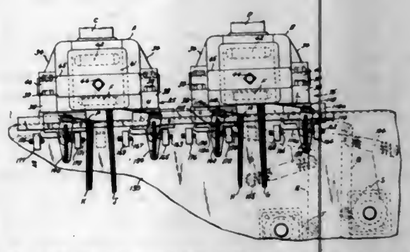
(*g*) a perpendicularly extending projection carried adjacent one end of said element for insertion into selected apertures in said angular portion of said supporting rails when said one end of said element is in facial abutment with said angular portion of said rails and said connector means is in slidable contact with said free upper edge portion of said rails, said perpendicularly extending projection cooperating with said connector means when said element is in its latched position and in facial abutment with said angular portion of said rails to prevent vertical, horizontal, and transverse displacement of said bar relative to said supporting rails,

(*h*) a latch member carried by said connector means for releasably latching said jaw-like element in its latched position,

(*i*) means provided by the other end of said jaw-like element, when said element is in facial abutment with said angular portion of said rails and angularly disposed with respect to said connector means, for engaging said latch member for preventing pivotal movement of said element and said perpendicularly extending projection carried thereby out of latching position with respect to said supporting rails,

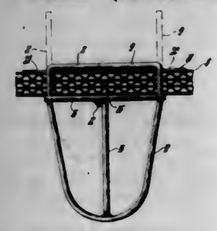
(*j*) interengaging means on said other end of said jaw-like element and said latch member for readily releasably securing said jaw-like member in said unlatched position.

3,130,691
DOUBLE DIE EXPRESSION MACHINE FOR MACARONI AND LONG GOODS
John Amato, Brooklyn, N.Y., assignor to Clermont Machine Company, Inc., Brooklyn, N.Y., a corporation of New York
Filed Sept. 23, 1960, Ser. No. 57,991
4 Claims. (Cl. 107—14)



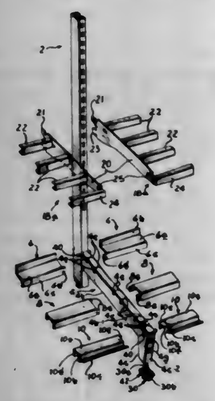
1. A long goods extrusion machine having a plurality of parallel die heads carrying central chambers to receive plastic dough under pressure and removable elongated shouldered dies through which said long goods is expressed in opposite parallel groups of strands, and means alternately to cut off and lower one group of strands at each side of the dies at a time, having toggle operated swinging knives to cut the strands at the die face and then to lower them away from the die face, and lever means to maintain the knives in parallelism at all times when in cutting and lowering position.

3,130,692
EXPENDABLE PALLET AND LEG
Lucius O. Burk, Livonia, and Frederick J. Will, Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 28, 1961, Ser. No. 155,410
7 Claims. (Cl. 108—51)



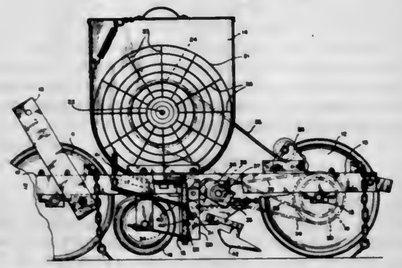
1. An expendable pallet leg comprising a first curved element, at least one other curved element secured thereto with said elements being mutually secured substantially at their mid-points and each having end pairs curving in the same direction, load support means connected to each end of said end pairs and each of said ends continuing beyond said load support means to a substantially vertical position and upon installation of said leg each of said ends extending into the lower pallet surface, and at least one of said ends terminating above the upper pallet surface.

3,130,693
BRACKET SUPPORT STRUCTURE
Irving W. Shell, 442 W. Wellington, Chicago 14, Ill.
Filed Mar. 14, 1962, Ser. No. 179,708
14 Claims. (Cl. 108—108)



1. In a bracket support frame structure including laterally spaced, floor-engaging bracket supporting uprights having a bracket supporting front wall and side walls extending rearwardly from the side margins of the front wall, and frame members connected between said uprights, the improvement comprising: a leg unit removably attached to each of said uprights and extending forwardly therefrom and having a floor-engaging portion at the front end thereof, the rear ends of each of said leg units having at least one pair of laterally spaced depending hooked extensions, the bracket supporting upright associated with each leg unit having laterally spaced slots for said hooked extensions in the front wall thereof, said hooked extension of each leg unit projecting into associated upright slots and interlocking with the defining walls of the lower margins thereof, and means preventing the removal of the hooked extensions of each leg unit from the associated upright slots comprising a pair of horizontally aligned, laterally facing pin-receiving openings in the side walls of each of said uprights adjacent the front wall thereof, and a retainer pin passing through the aligned pin-receiving openings of each upright immediately above the associated hooked extensions of the associated leg unit to prevent the removal thereof from the associated upright slots.

3,130,694
SEED PLANTING MACHINE
Harold E. Gatzke, Rte. 1, Berlin, Wis.
Filed July 31, 1962, Ser. No. 213,690
8 Claims. (Cl. 111—7)

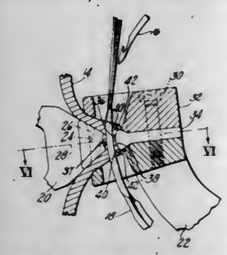


1. In a machine for planting seeds in a furrow in the ground, the improvement comprising: a portable tank having opposed side walls and containing a liquid with seeds therein; an agitator mounted in said tank including movable paddle means arranged to extend substantially between said opposed tank walls and having a plurality of openings of a size permitting said seeds to pass therethrough; means for actuating said movable paddle means to agitate said liquid to maintain said seeds in a state of suspension therein, said paddle openings permitting the uniform dispersion of said seeds throughout the tank; a discharge tube communicating with the interior of said tank and positionable in alignment with a furrow in the ground; and means for opening and closing said discharge tube to permit said seed-containing liquid to flow by gravity from said tank.

3,130,695
MACHINE FOR SEWING IMITATION MOCCASIN SEAMS
Roy F. Wright, Nashville, Tenn., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed Dec. 19, 1962, Ser. No. 245,700
3 Claims. (Cl. 112—62)

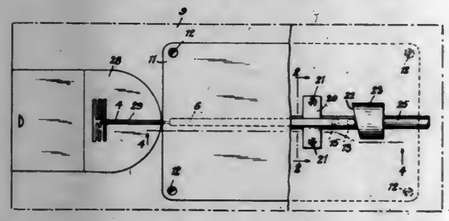
1. A machine for inserting a two-thread lock stitch moccasin type seam, the threads (**8**, **10**) of which enter and emerge from the same side of a single piece (**14**) of work material without penetrating through to the other side, said machine having a two-part work support provided with work engaging surfaces disposed with relation

to each other and extending in the direction of work feed to form an internal angle, the parts (22, 32) of the work support being divided along a plane (28) bisecting the angle between the work engaging surfaces, a presser (20) having similarly disposed work engaging surfaces along its sides movable toward and from the work support to form a convex bend in the work piece while clamping it in conformity with the apex of the work support and with a groove (37) along its tip arranged to be bridged by the bend in the work piece, said presser being movable also



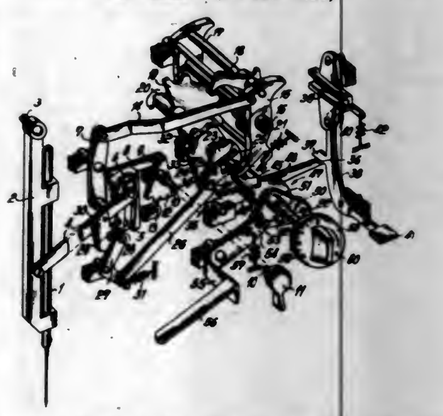
to release the work piece for feeding movement between stitches, and stitch forming devices including a curved needle (16) movable across the angle of the work engaging surfaces on the work support, in combination with a spacing plate (34) located between the parts of the work support with an enlarged edge (36) projecting into the apex of the internal angle of the work support to form a work indenting anvil against which the bend in the work piece is impressed by the presser with a re-entrant channel (38) conforming with the groove at the tip of the presser during penetration of the needle.

3,130,696
SEWING MACHINE ATTACHMENTS
Thomas D. Ainslie, Metuchen, N.J., and Irvin R. Kremer, Schuylkill Haven, Pa., assignors to Phillips-Van Heusen Corporation, New York, N.Y., a corporation of New York
Filed Feb. 12, 1962, Ser. No. 172,494
1 Claim. (Cl. 112—154)



In combination with a sewing machine including a horizontal bed having a longitudinal groove therein, a plate having slots over which a piece of fabric to be seamed is passed, adjacent the end of said groove, a reciprocating needle movable vertically through the slots in said plate and through the fabric, said needle being adapted to carry a loop forming upper thread, a hook bobbin adapted to carry a lower loop forming thread engageable with said upper loop forming thread, a rotating shaft carrying said bobbin, and a top plate covering said longitudinal groove; an attachment for providing slack in the loop of a sewing machine produced seam; comprising a rod adapted to be inserted through each loop of one of the threads of the seam between the thread and the fabric while the loops are being formed, momentarily maintaining said rod in the loop until the loop is tensioned, and then withdrawing the rod; a bar having an end opening therein said bar being linearly movable in said groove, one end of said rod seating in said opening, means releasably holding said rod in said opening, said bed having a slot in the bottom thereof intersecting said groove, said groove, bed slot and rotating shaft being in longitudinal and vertical alignment, a stud fixed to the underside of said bar and depending through said bed slot, a roller depending from said bar through said bed slot in parallel relation to said stud, a block having a recess therein secured to the underside of said bed adjacent said stud and between the bed slot and bobbin, a plunger fixed to said stud and having a reduced diameter and piston extending into said recess, the recess facing toward the bed slot, a spring in said recess surrounding said reduced diameter piston biasing said stud, bar, and hence said rod, in a direction away from the thread loops formed by said needle and bobbin, and a cam carried by said rotating shaft engageable with said roller, to bias said bar and hence said rod through each loop formed in the seam in timed relation with each stroke of the needle and rotation of the bobbin.

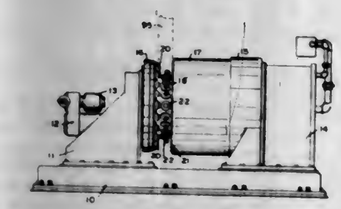
3,130,697
CONTROL SYSTEM FOR ZIG-ZAG SEWING MACHINES
Günther Meier, Weingarten, near Karlsruhe, Germany, assignor to Gritzner-Kayser Aktiengesellschaft, Karlsruhe-Durlach, Germany, a corporation of Germany
Filed Nov. 1, 1961, Ser. No. 149,359
Claims priority, application Germany Nov. 9, 1960
10 Claims. (Cl. 112—158)



1. In a zig-zag sewing machine of the type including a needle bar supporting a reciprocatory needle and mounted for oscillation transversely to the feed direction, drive means for said machine, and means operated by said drive means and including motion-transmitting means between said drive means and said needle bar, to oscillate said needle within a predetermined zig-zag overstitch width; first mechanism for stitching button holes composed of a pair of adjoining rows of zig-zag bordering stitches and zig-zag barring stitches at the opposite ends of said bordering stitches having a width substantially twice the width of said bordering stitches, said mechanism comprising first control means to reduce the feeding speed to zero and to change from forward to reverse stitching, and vice versa, second control means operative upon a first intermediate point of said motion-transmitting means, to limit the amplitude of the needle oscillations such as to change from barring to bordering stitches, and vice versa, third control means operative upon a second intermediate point of said motion-transmitting means, to vary the amplitude of the needle oscillations, a common control shaft, a plurality of control cams carried by said shaft,

said cams being equal in number to the number of said control means and having fractional peripheral cam surfaces, a cam follower for cooperation with each said cam surfaces and means operably connecting the same with one of said control means, operating means including a unitary control member for step-by-step rotating said shaft, to effect the sequential partial buttonhole sewing operations of producing, through a first fractional angular adjusting range of said shaft, bordering stitches in a first direction by a first actuation of said member, of arresting the feed movement and sewing first barring stitches by a second actuation of said member, of reversing the feed direction and producing second bordering stitches by a third actuation of said member, and of again arresting the feed movement and sewing second barring stitches by a final actuation of said member, and further mechanism independent of said first mechanism and operative within a second angular adjusting range of said shaft, to gradually vary the amplitude of the needle oscillations.

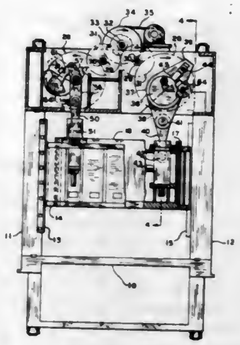
3,130,698
ROTARY CAN DOMER AND TRIMMER
George F. Knowles, Golden, Colo., assignor to Coors Porcelain Company, Golden, Colo., a corporation of Colorado
Filed Sept. 25, 1961, Ser. No. 140,577
20 Claims. (Cl. 113—7)



1. A rotary can domer and trimmer comprising a cylindrical housing, means rotating the housing, a plurality of domer die spindle assemblies, a plurality of domer punch spindle assemblies, a plurality of cutter assemblies, each of said plurality of assemblies being connected to the housing and movable therewith in an annular path, a die spindle rotatably mounted in each domer die assembly, means in the housing and means on each die spindle cooperating with each other to rotate the die spindles when the housing is rotated, a punch spindle reciprocably mounted in each punch spindle assembly, each die spindle being axially aligned with a punch spindle, means in the housing and means on each punch spindle cooperating with each other to impart reciprocatory movement to said punch spindles when the housing is rotated, for moving each punch spindle axially toward a die spindle into doming contact therewith, a cutter spindle reciprocably mounted in each cutter assembly, a cutter rotatably mounted on each cutter spindle, and means in the housing and means on each cutter spindle cooperating with each other to impart reciprocatory movement to said cutter spindles when the housing is rotated and thereby move the cutters successively into can trimming contact with a can body on a punch spindle.

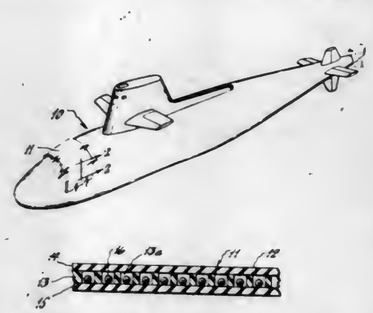
3,130,699
DOUBLE ACTION DRAW PRESS
William E. Ward, 3264 Kenmore Road, Shaker Heights, Ohio
Filed Dec. 13, 1961, Ser. No. 158,965
13 Claims. (Cl. 113—38)

1. In a press, a frame structure, a die slide mounted for reciprocation in said frame, means for reciprocating said die slide, said means including eccentric means rotatably supported by said frame for rotation about a fixed axis, an eccentric strap cooperating with said eccentric means and including first and second arm members extending from said eccentric means, a link pivotally connected at one end to said first arm member and at the other end to said die slide, means providing a slot in said second arm, said slot having a center line extending in the same direction



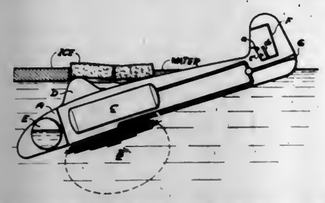
as said second arm, a guide block pivotally attached to said frame and extending into said slot so that the pivotal axis thereof intersects said center line for constraining said second arm to move said connection between said link and said die slide in a closed path for causing said die slide to move in a work stroke and then in a return stroke at a substantially higher speed than the speed of the work stroke.

3,130,700
VIBRATION AND MECHANICAL WAVE DAMPING
Robert E. Peterson, Rte. 1, Box 129, Old Lyme, Conn.
Filed Apr. 29, 1960, Ser. No. 25,799
23 Claims. (Cl. 114—20)
(Granted under Title 35, U.S. Code (1952), sec. 266)



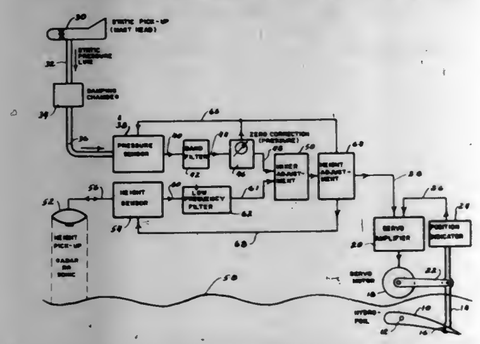
2. In a submarine which is capable of emitting mechanical wave energy into the water, which energy is capable of detection by sonar equipment, and which will reflect a substantial portion of incident mechanical wave energy as from a remote search sonar, the method of reducing said emission and reflection of mechanical wave energy by said submarine and reducing the probability of its detection by sonar which comprises applying the mechanical wave energy passing immediately adjacent the exterior of said submarine directed inwardly or outwardly of said submarine to an elastomer to work the elastomer to convert a substantial portion of the mechanical wave energy into heat in the elastomer.

3,130,701
ICEBREAKERS
Poul O. Langballe, 47 Teglgaardsvej, Charlottenlund, Denmark
Filed Aug. 14, 1962, Ser. No. 216,862
Claims priority, application Denmark Aug. 15, 1961
4 Claims. (Cl. 114—40)



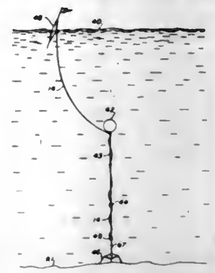
1. In an icebreaker a source of compressed air, a submersible vessel including a reinforced icebreaking shell at the upper face thereof and an expansible and inflatable bottom, means for automatically inflating said bottom when said icebreaking shell is subjected to the pressure of the ice, said means for automatically inflating said bottom comprising a compressible spring loaded feeler element in said icebreaking shell, a shift valve operably associated with said feeler element and connected with said source of compressed air and said inflatable body for inflating the expansible bottom when the valve is moved into one position by depression of the feeler element and to evacuate said bottom when the valve is moved into another position by release of the pressure on the feeler element.

3,130,702
HYDROFOIL CONTROL SYSTEM
Franz Fischer, Port Chester, N.Y., assignor to Melchior International Corporation, New York, N.Y., a Panamanian corporation
Filed June 12, 1962, Ser. No. 201,904
7 Claims. (Cl. 114—66.5)



1. A hydrofoil system comprising a hydrofoil, said hydrofoil having a surface deflectively mounted to control the lift characteristics of the hydrofoil, a servo system responsive to an input signal to control the deflection of said deflectible surface, a pressure sensor to generate a first electrical signal in response to measured barometric pressure, a band pass filter coupled to said sensor to reject low frequencies in said first signal, a height sensor to generate a second electrical signal in response to measurement of the instantaneous height of the vessel over the surface of the water, a low pass filter coupled to said height sensor to reject high frequencies in said second signal, means coupled to said band pass filter and said low pass filter to linearly add the filtered first and second electrical signals and to generate said input signal responsive to said addition, and means to couple said input signal to said servo system.

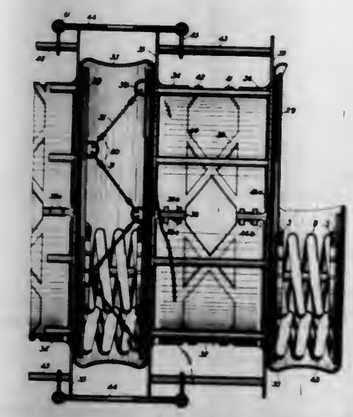
3,130,703
PERCUSSION RELEASE HOOK
Lawrence C. Thompson, 9265 Fermi Ave., San Diego 23, Calif.
Filed Jan. 17, 1963, Ser. No. 252,260
9 Claims. (Cl. 114—206)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A pelican type coupling hook employing an explosive bolt catch and release mechanism comprising,
(*a*) a hook shank suspended from a supporting cable,
(*b*) a hook hinged to said shank by a pivot pin,
(*c*) a slot in said hook between the bolt catch and pivot pin,
(*d*) an anchor cable detachably supported by a shackle pin in said slot,
(*e*) said supporting cable, anchor cable, and shackle pin being in vertical alignment when under load;
(*f*) said line of vertical alignment being outside the axis of said hinge pivot pin so that upon release the force of gravity on said shackle pin will tend to swing the hook on said hinge pivot pin away from the shank and release the shackle pin,
(*g*) a bolt catch is located in aligned keeper holes through said shank and hook respectively for securing said hinged hook to said shank in a closed position,
(*h*) said catch bolt being hollow and filled with an explosive charge,
(*i*) detonating means connected through said bolt head to said explosive charge,
(*j*) a bolt head chamber for protecting the armed bolt from hydrostatic pressure,
(*k*) a sealed horizontal opening in said chamber for assembling said catch bolt in its armed position,
(*l*) a stuffing box connected to said chamber for providing a watertight detonating cable connection to said chamber;
(*m*) the adjacent surfaces of said shank and hook surrounding said bolt being separated approximately 1/16 of an inch apart for forming an unsupported peripheral break line and a spacing so that the escaping explosive gases through said space will tend to force said shank and hook apart;
(*n*) said keeper bolt holes being counter-sunk so that, as said bolt ruptures along said break line between shank and hook, it will be swaged into said countersinks to provide a firm backing for said explosive gases.

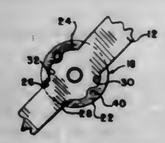
3,130,704
BOATS' SPACER
Frederick Blanchard Romero, 141 W. School House Lane, Philadelphia 44, Pa.
Filed Nov. 28, 1962, Ser. No. 240,666
5 Claims. (Cl. 114—235)

1. A boats' spacer for marine vessels, said boats' spacer being constructed within and according to the scope of indicated axially and diametrically proportionate dimensions, with the inclusion of a plurality of properly fitting and properly joined metal parts, structurally arranged so as to make a marine vessels' spacer formed by alternately spaced portions of hollow cylindrical forms of rigid metal construction interposed by resilient and flexible portions inclusive of helical springs and torsion resisting cables protected by the sheltering effects of corrugated coverings of rubber and nylon composition extended between, said coverings enclosing the ends of said rigid metal hollow cylinders outwardly of which, said corrugated covering being joined to jackets of similar material and held in proper position by hollow flanged and longitudi-



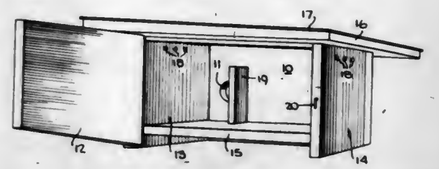
nally separable metal grid formed cylinder parts bolted together at surfaces provided by short longitudinally separable flanges, said flanges being parallel to the longitudinal axes of said hollow cylindrical forms, said grid formed longitudinally separable cylinders being outwardly protected by tubular bars welded at their opposite ends to outwardly extending flanges provided with holes fitting the opposite ends of said tubular bars welded to said flanges, said tubular bars and flanges being loosely linked through linking rings with the ring ends of outermost tubular bars providing said spacer with protection of its flexible and resilient portions against possible existing crushing forces imposed on said spacer.

3,130,705
POINTER MOUNTING
Robert J. Ingham, Fairfield, Conn., assignor to Manning, Maxwell & Moore, Incorporated, Stratford, Conn., a corporation of New Jersey
Filed Aug. 31, 1962, Ser. No. 220,803
2 Claims. (Cl. 116—136.5)



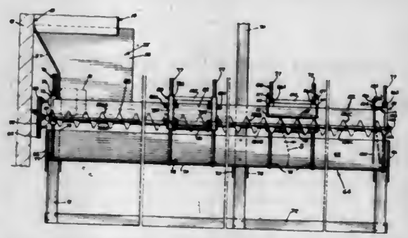
1. In a dial instrument, a rotatable shaft, a mounting member comprising a hub portion fixed to said shaft and terminating at one end in an enlarged portion having a surface facing axially away from said shaft, said surface having a shaped cavity having a pair of spaced apart sides each extending generally at right angles to a radius of the shaft axis and spaced from the shaft axis, each side having an intermediate arcuate portion extending about the shaft axis, and a light weight pointer spaced from said shaft and having an integral portion fitting said cavity.

3,130,706
BIRDHOUSE
Grace B. Myaida and Shogo J. Myaida, both of 21 Searingtown Road, Albertson, N.Y.
Filed Oct. 8, 1962, Ser. No. 229,017
10 Claims. (Cl. 119—23)



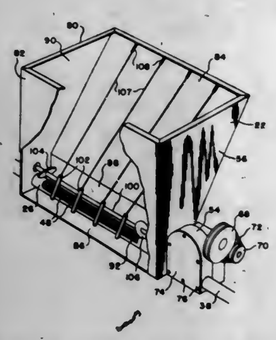
1. A birdhouse structure adapted for nesting families of birds and comprising an enclosed protective space between front and rear walls joined by side walls and divided by a partial partition extending forward between said side walls to form an inner nestling area and an entrance area in full depth in direction of entrance and with an entrance opening and a separate sidewise horizontal passage for parent birds and nestlings to said inner nestling area and combining with this a relatively deterring aspect of said entrance area for inaccessibility of intruder to said inner nestling area.

3,130,707
AUTOMATIC FEEDING APPARATUS
Wesley C. Cleaveland, Maple Plain, Minn., assignor, by mesne assignments, to Vandale Corporation, Long Lake, Minn., a corporation of Minnesota
Original application May 21, 1956, Ser. No. 586,114, now Patent No. 2,981,402, dated Apr. 25, 1961. Divided and this application Aug. 15, 1960, Ser. No. 49,468
9 Claims. (Cl. 119—52)



1. An animal feeding device or the like comprising in combination means adapted to be positioned upon the surface of stored material within a silo and for laterally ejecting the same from the silo, means for guiding said ejected material downwardly in a stream, means for conveying said material into extended position and having a portion positioned beneath said means for guiding said material downwardly to receive said stream of ensilage, and said means for conveying said ensilage into extended position having a terminal portion thereof, said means for ejecting said material laterally from the silo comprising motor means for operating the same, said means for conveying said material comprising motor means for operating the same, switch means positioned at said terminal portion for terminating the operation of both said motor means upon engagement by conveyed material, and a manually manipulatable switch interconnected with said switch means for initiating operation of said motor means when said switch means is not engaged by conveyed material.

3,130,708
AUTOMATIC POULTRY FEEDING DEVICE
Edward T. MacKenzie, Box 1142, Hillcrest Lane, Ramona, Calif.
Filed Feb. 20, 1962, Ser. No. 174,422
11 Claims. (Cl. 119—53)



1. In a feeder for material such as poultry feed or the like, in combination:

(A) A hopper for material to be conveyed;

(B) an elongated receiver for receiving material from the hopper;

(C) means for adjustably controlling the rate of feeding material delivered to the receiver from the hopper, including a rotatably adjustable and normally stationary tube for receiving material by gravity from the hopper;

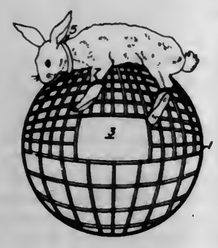
(*a*) said tube being open longitudinally thereof for receiving said material;

(*b*) means supporting said tube for rotation about an axis extending longitudinally thereof;

(D) Means including spaced flights extending through the tube;

(E) and means for moving the last mentioned means.

3,130,709
SPHERICAL RESTRAINING DEVICE FOR SMALL ANIMALS
Sidney Rothberg, 5508 Elderon Ave., Baltimore 15, Md.
Filed Oct. 29, 1962, Ser. No. 233,973
2 Claims. (Cl. 119—103)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. Apparatus for restraining small animals comprising the combination of:

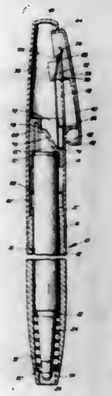
(*a*) an open base member having a supporting surface spaced from the bottom of said member;

(*b*) a spherical cage adjustably mounted in said base in a manner such that substantially all of said cage protrudes above said supporting surface;

(*c*) locking means mounted on said supporting surface to lock said cage into a desirable position;

(*d*) restraining means mounted on said cage to restrain the legs and heads of said animals on the external surface of said cage.

3,130,710
CLIP ASSEMBLY
Lewis Carroll Hansen and Nathan Alter Zepell, Fort Madison, Iowa, assignors to W. A. Sheaffer Pen Company, Fort Madison, Iowa, a corporation of Delaware
Filed Jan. 23, 1961, Ser. No. 84,211
3 Claims. (Cl. 120—42.03)



1. In an article of the character described, a holder, a clip disposed externally of said holder and including an intermediate mounting portion and an inwardly directed dependent end portion, said mounting portion extending to a position within said holder, a resilient actuating member within said holder and having an upper end section engaging the interior wall of said holder, a lower end section in engagement with the inwardly directed end portion of said clip, and an inwardly bowed intermediate section in engagement with the mounting portion of said clip and resiliently urging said mounting portion inwardly to maintain said clip in yieldable operating position, the upper end section of said actuating member having means for suspension on said holder above said mounting portion to releasably maintain said actuating member against longitudinal movement relative to said clip, whereby said clip and said actuating member form a unit adapted for pivotal movement between first and second positions relative to said holder, and a driving member disposed for reciprocal movement within said holder, said driving member having an inclined surface slidingly engaging said lower end section whereby said driving member is moved between forward and rearward positions in response to pivotal movement of said unit between said first and second positions.

3,130,711
POSITIVE PRESSURE BALL PEN FEED
Frank A. Eckerlé, 44 Dean Drive, Tenafly, N.J., assignor of twenty-five percent to Samuel Sklar, Brooklyn, N.Y.
Filed Nov. 22, 1961, Ser. No. 154,143
6 Claims. (Cl. 120—42.4)

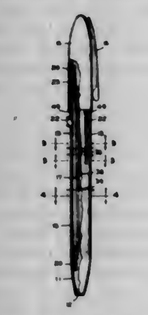
1. A dispensing cartridge for ink or the like including a capillary dispensing tip and being otherwise entirely sealed against the external atmosphere, a body of ink or the like therein in communication with said tip, a semi-fluid material formed as a follower body at one boundary of said body of ink, an electrolyte disposed beyond said material, means defining an electrolytic couple of two dissimilar metals extending lengthwise within the cartridge,

and an insulative protective layer covering at least one of said metals to protect it from contact with said electro-



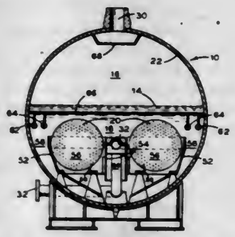
lyte; said layer being insoluble in said ink and being soluble in at least one of said material and said electrolyte.

3,130,712
WRITING INSTRUMENT
Julius M. Kahn, Englewood Cliffs, and Morris Levy, Teaneck, N.J., assignors to David Kahn, Inc., Hudson County, N.J., a corporation of New Jersey
Filed Mar. 4, 1960, Ser. No. 12,797
3 Claims. (Cl. 120—42.13)



1. In a writing instrument, a barrel having an open upper end, a lower end, and provided with a plurality of spaced writing cartridges selectively slidable through the lower end of the barrel into writing position, said cartridges comprising organic plastic material, a spacer assembly within and generally coaxial with said barrel, said assembly having plurality of radial wings dividing the interior of the barrel into at least three chambers of substantially similar non-circular cross section for receiving the cartridges, adjacent wings defining between them a dihedral angle, the rear of each cartridge having surfaces defining a dihedral angle approximately equal to the dihedral angle defined by said wings, said cartridges being positioned in said chambers with the rear of the cartridges nested in the angle defined by said wings to maintain the cartridges substantially non-rotatable, the front of each cartridge comprising an arcuate surface having radius of curvature approximately equal to the radius of curvature of the interior of the barrel, said spacer assembly including resilient means for urging said cartridges against the inner surface of the barrel, said barrel being provided with a plurality of circumferentially spaced longitudinally extending slots therethrough, an outwardly extending detent on the front of each cartridge, said detent being received within one of said slots when said cartridge is in the projected writing position to releasably lock the cartridge against upward movement, an outwardly extending projection on the front of each cartridge axially aligned with the detent thereon, said projection extending through said slot and defining means for selectively moving each of the cartridges into writing and non-writing positions, each of said cartridges being hollow, writing fluid within the cartridges, and a ballpoint writing tip at the forward end of each cartridge, the hollow of said organic plastic body portion being defined by a longitudinally extending bore extending from adjacent the writing tip upwardly beyond said laterally extending projection, said body portion having vent means therein for venting said bore to the atmosphere.

3,130,713
HORIZONTAL VAPOR GENERATING UNIT
Theodore S. Sprague, Hudson, Ohio, assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed Mar. 28, 1960, Ser. No. 17,870
6 Claims. (Cl. 122—32)



1. A horizontal indirectly heated boiler comprising a horizontally elongated pressure vessel containing a vaporizable liquid, means for maintaining a liquid level in said pressure vessel defining a lower liquid space and an upper vapor space, a tube bundle disposed horizontally in said liquid space and extending along the major portion of the length of said pressure vessel, a vapor outlet disposed in communication with said vapor space of said pressure vessel, a horizontally extending perforated baffle means disposed immediately subjacent said liquid level and extending across said pressure vessel, and baffle means extending along the outer sides of said tube bundle and spaced from said pressure vessel wall defining a vapor generating chamber immediately surrounding said tube bundle and a plurality of flow spaces exterior of said generating chamber, said baffle means having walls extending from a horizontal plane subjacent said tube bundle substantially to a horizontal plane disposed between the top and the center line of said tube bundle so that said generating chamber has an unobstructed upward discharge to said perforated baffle means, said generating chamber open at the bottom to said liquid space and having a substantially uniform cross section throughout the length of said tube bundle to provide uniform liquid flow and vapor generation therein.

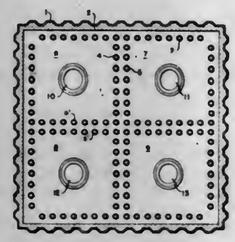
3,130,714
TUBE FURNACE
Jan C. Koel, The Hague, Netherlands, assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed May 3, 1962, Ser. No. 192,106
Claims priority, application Netherlands May 18, 1961
4 Claims. (Cl. 122—240)

1. An industrial furnace installation for heating liquid hydrocarbons, comprising:

(*a*) a rectangular heating chamber having walls provided with refractory linings defining their inner sur-

faces, said chamber having a horizontal area divided into at least 4 equal rectangular radiant heating sections which are arranged around a central point in the chamber;

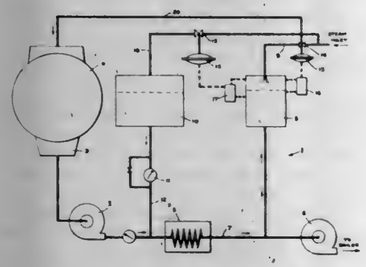
(*b*) a row of vertical heater tubes extending through said chamber in close parallel relationship with respect to the linings of each of said walls to define the outer boundaries of each of said sections;



(*c*) at least two pairs of immediately adjacent parallel rows of vertical heater tubes extending through said chamber, the tubes in each of said rows being aligned with the tubes in the row immediately adjacent thereto along lines passing normal to said row and said pairs of parallel rows being normal to each other and arranged within the chamber to define the inner boundaries of said sections; and,

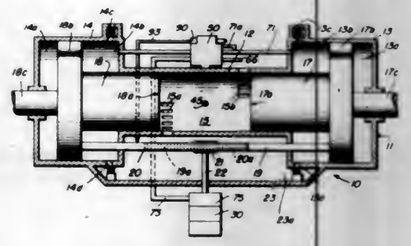
(*d*) at least one centrally positioned burner in each of said sections.

3,130,715
ANTI-FLASH CONTROL SYSTEM
David Aronson, Upper Montclair, N.J., assignor to Worthington Corporation, Harrison, N.J., a corporation of Delaware
Continuation of application Ser. No. 38,224, June 23, 1960. This application Feb. 27, 1962, Ser. No. 175,971
8 Claims. (Cl. 122—451)



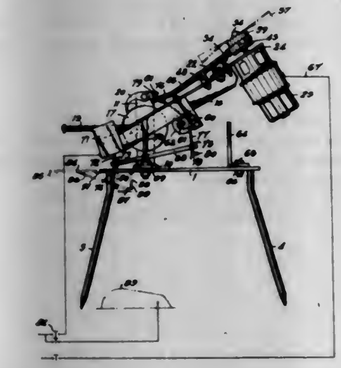
1. Means for preventing flashing of feedwater in a boiler feed system of the closed type including, a condensate pump, a boiler feed pump having a suction inlet and conduit means interconnecting said condensate pump and the suction inlet of the boiler feed pump, said means including, sensing means comprising a surge tank connected to said conduit means, a second surge tank connected to said conduit means, said sensing means connected downstream from said second surge tank, pressure fluid supply means connected to said second surge tank and sensing means, control means connected to said pressure fluid supply means to normally maintain flow of pressure fluid to said sensing means and normally prevent flow of pressure fluid to said second surge tank, and actuating means interconnecting said sensing means and control means, and said actuating means including means responsive to fluid level in said sensing means to cause said control means to prevent flow of pressurized fluid to said sensing means and provide flow of fluid to said second surge tank when the fluid level in said sensing means falls a predetermined amount.

3,130,716
INTERNAL COMBUSTION ENGINE
Frederick A. Creswick, Columbus, Ohio, assignor to Battelle Memorial Institute, Columbus, Ohio, a corporation of Ohio
Filed June 18, 1962, Ser. No. 203,136
14 Claims. (Cl. 123—46)



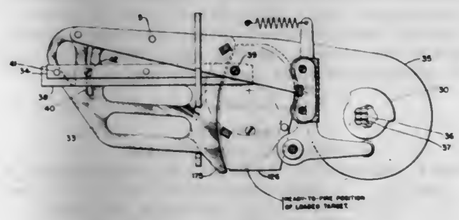
1. In an internal combustion engine; cylinder means; engine piston means reciprocatively within said cylinder means and having faces respectively forming with said cylinder means a combustion chamber and compression chamber space for pneumatic fluid so that consecutive strokes of reciprocation of said engine piston means are respectively accompanied by increase and decrease in pressure of pneumatic fluid in said compression chamber space; a fuel injector actuation compartment; a fuel injector pump compartment; pressure-responsive pulsational means comprising pump and actuator portions interconnected to reciprocate in unison, said pump portion being movably in said pump compartment forming a pump chamber with said pump compartment and said actuator portion being movably in said actuation compartment partitioning said actuation compartment into first and second storage chambers for fluid; pressure-responsive fuel-influx and anti-backflow means in communication with said pump chamber; pressure-responsive fuel-egress and anti-backflow means having input from said pump chamber and in communication with said combustion chamber for output; pressure-responsive fluid-influx and anti-backflow means having input from said compression chamber space and anti-backflow output to each said first storage chamber and said second storage chamber; and fluid outlet control means in communication with said second storage chamber and operably connected with said engine piston means to open and close said second storage chamber at predetermined times during each cycle of the engine operation; whereby when said second storage chamber is closed by said fluid outlet control means said pressure-responsive pulsational means is actuated in response to increase in pressure transmitted from said compression chamber space through said pressure-responsive fluid-influx and anti-backflow means to increase volume of said pump chamber for fuel to enter said pump chamber through said fuel-influx and anti-backflow means and fluid is stored at the increased pressure in said first and second storage chambers, and whereby when said second storage chamber is opened by said fluid outlet control means pressure of the latter chamber is decreased by discharge of fluid through said outlet control means while fluid stored under pressure in said first storage chamber drives said pressure-responsive pulsational means in a fuel ejecting movement decreasing volume of said pump chamber so that fuel is ejected from the latter chamber through said pressure-responsive fuel-egress and anti-backflow means into said combustion chamber.

3,130,717
ELECTRICAL APPARATUS FOR THROWING FLYING TARGETS USED IN SHOOTING TRAINING AND MATCHES
Chevalier David de Lossy, Chateau de et à Flawinne, Belgium, and Hippolyte Moinil, Chaussee de Waterloo 266, and Fernand Moinil, Chemin de Berlacomine 14, both of Saint-Servais, Belgium
Filed Mar. 2, 1961, Ser. No. 92,946
Claims priority, application Belgium Jan. 23, 1961
5 Claims. (Cl. 124—1)



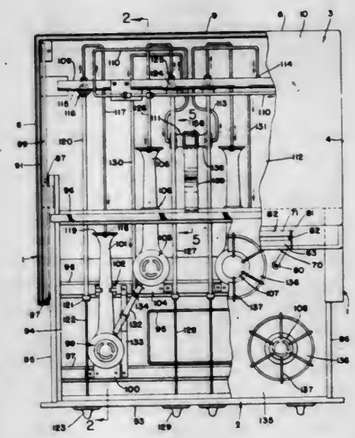
1. An apparatus for throwing flying targets for training and shooting matches, comprising a member for rotating the target, an electric motor with a rotor axle directly connected to said member for rotating the target, means for releasing the target during the rotation thereof, said releasing means comprising a head which has an extended member and which is secured on said rotor axle, a ring slidably mounted on said head, and a pivotable actuating rod having one end engaged in said ring and the axial movement of which is determined by the oscillation of said actuating rod, and yielding means on the extended member to permit release of the target.

3,130,718
TARGET THROWING ARM
Harry Clark Foster, Rosewood Heights, Ill., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Original application June 16, 1954, Ser. No. 437,191, now Patent No. 2,925,812, dated Feb. 23, 1960. Divided and this application Oct. 8, 1959, Ser. No. 845,215
6 Claims. (Cl. 124—43)



1. In a target throwing trap having a rotatably mounted target throwing arm, the improvement comprising a target rail mounted with angular adjustability on said arm to effectuate discharge of targets therefrom at a position which may be varied by adjustment of said rail, wherein said rail is disposed adjacent the trailing edge of said arm and one end of the rail is pivotally mounted on said arm about a pivot point located adjacent the center of rotation of said arm and the place at which a target to be fired is deposited thereon while the other end of the rail extends outwardly to a point remote from said center of rotation and means for releasably securing said other end to said remote point for angular adjustment of said rail with respect to said pivot point.

3,130,719
GAS RANGE
Charles M. Mayer, Erwin C. Dalenberg, and Frederick G. Constance, Mansfield, Ohio, assignors to The Tappan Company, Mansfield, Ohio, a corporation of Ohio
Filed Feb. 3, 1960, Ser. No. 6,428
6 Claims. (Cl. 126—37)

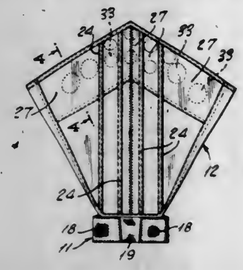


1. In a gas cooking top assembly, support means mounted for sliding movement between a first position and a relatively extended second position, a gas burner carried by said support means to move therewith, said burner having a long intake section which extends in the direction of such movement thereof, a flame tube for said burner adjacent and fixed relative thereto on the support means, a stationary gas supply tube substantially aligned with the burner intake section and slidably passing through the outer end of the same, and a stationary pilot line, the supply tube extending appreciably into the burner intake section and the pilot line beyond the flame tube when the support means is in its said first position, movement of the support means to its second position withdrawing the burner to locate the supply tube end adjacent the end of the intake section thereof and positioning the flame tube at the end of the pilot line.

3,130,720
EXERCISING AND COSMETIC DEVICE AND METHOD
Cora Montgomery Roberts, 111 7th St., Garden City, Long Island, N.Y.
Filed June 4, 1962, Ser. No. 199,942
5 Claims. (Cl. 128—76)

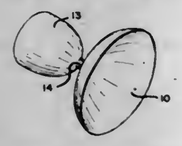
1. A device of the character described comprising a peripherally elastic annular head band having a front section and a rear section, a flexible coupling member

secured to said head band front section and extending rearwardly beyond said head band rear section, and a



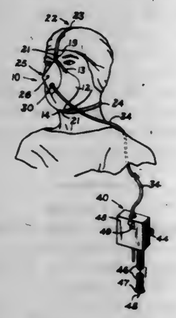
weight carried by said coupling member at a point spaced rearwardly of said front section.

3,130,721
MECHANICAL CONTRACEPTIVES
John C. Young, 135 S. Hiland Ave., Pittsburgh 6, Pa.
Filed June 26, 1961, Ser. No. 119,506
7 Claims. (Cl. 128—127)



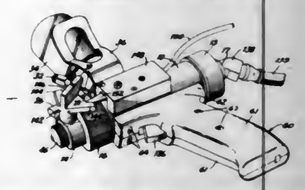
1. In a contraceptive device, a generally semielastic impervious saucerlike member adapted to surround a cervix at or near thereat and engage the walls of a vaginal passage in sealing relation and a thin elastic collapsible sheath means on said member adapted to releasably engage a firm member for placement in said vaginal passage by completion of the original inward stroke and released from said firm member by engagement of the said member by said vaginal passage when the original back stroke of the firm member begins.

3,130,722
RESPIRATORY MASK
Charles A. Dempsey and Louis Pereny, Dayton, Ohio, assignors to Protective Treatments, Inc., Dayton, Ohio, a corporation of Ohio
Filed Sept. 8, 1959, Ser. No. 838,510
6 Claims. (Cl. 128—143)



1. A respiratory breathing mask adapted to carry the exhaled breath of the user for discharge at a location remote from the user such as to preserve sterility in a surgical operating area, comprising a face mask having a body portion defining a breathing chamber adapted to cover only the nose and mouth and surrounding facial areas of the user, port means in said body portion for passage of ambient air into said breathing chamber, said port means communicating with the interior of said mask in the upper portion of said breathing chamber to avoid direct exhalation from the nose or mouth against said port means, restricting means for impeding gas flow between said breathing chamber and the exterior of said mask through said port means, a tube connected into the lower region of said chamber for carrying a flow of gas from said chamber to a location remote from the mask, and suction means operatively connected with said tube to induce a slight negative pressure in said chamber with respect to ambient air pressure sufficient to withdraw normal exhalation from said chamber through said tube, said restricting means providing for sufficient inflow of ambient air to said chamber to support normal breathing.

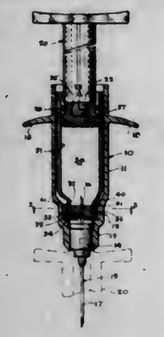
3,130,723
MULTIDOSE JET INJECTOR
Anthony Venditty and Alfred W. Kath, Detroit, Mich., assignors to R. P. Scherer Corporation, Detroit, Mich., a corporation of Michigan
Filed Aug. 15, 1960, Ser. No. 49,662
11 Claims. (Cl. 128—173)



1. An ejector instrument comprising a hollow body closed at its forward end with a cylindrical block containing a medicament chamber, a medicament reservoir mounted on said body, a nozzle mounted on the outer end of said block, a first bore between said nozzle and said medicament chamber, a second bore between said first bore and said medicament reservoir, a rotary valve member in said first bore for establishing communication between said medicament chamber and said reservoir in one position and between said medicament chamber and said nozzle in another position, a plunger carried within said body having an enlarged rear cup-like spring seat and a head within said chamber for expelling medicament through said nozzle, a piston slidably mounted in the other end of said body, spring means precompressed between said spring seat and said piston, a link connected to said plunger to maintain said spring in a precompressed state, a latch mounted at a predetermined point on said body adjacent said plunger to lock said plunger against forward movement, and fitting means within said body behind said piston for connecting to a source of pressurized fluid for advancing said piston to additionally compress said spring means, whereby upon release of said latch said spring expands to impart the initial advancing force to the plunger and said piston continues to apply the advancing force for ejecting the medicament.

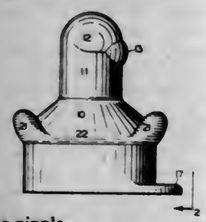
3,130,724
SYRINGE STRUCTURE
John L. Higgins, Daytona Beach, and Fritz Deuschle, St. Augustine, Fla., assignors to Roehr Products Company, Inc., De Land, Fla., a corporation of Delaware
Filed May 7, 1962, Ser. No. 192,638
3 Claims. (Cl. 128—218)

1. A cartridge syringe and cartridge unit assembly which comprises; a cartridge-type hypodermic syringe having a generally cylindrical barrel section for slidably receiving therein a medicinal cartridge unit, a medicinal cartridge unit having a smooth lateral surface portion which is deformable and slidable within said barrel section for moving into operative engagement with a hypodermic needle cannula, said cartridge unit having slidably mounted therein a piston member adapted to form a threadable engagement with an actuating piston rod member, said syringe barrel section having on an inner lateral surface



thereof at least one axially extending projection integral with said barrel section and extending radially inwardly with a relatively rigid inner edge surface which frictionally and deformably engages said smooth lateral surface portion of said cartridge unit when said cartridge unit is seated in said barrel section; whereby said cartridge unit is restrained against a tendency to rotate about its longitudinal axis when a piston rod member is brought into threadable engagement with said piston member.

3,130,725
LIP AND JAW MOLDING NIPPLE
Walter H. Griesinger, Weatherly Bldg., Port and 14, Oreg.
Filed Aug. 6, 1962, Ser. No. 215,103
10 Claims. (Cl. 128—252)

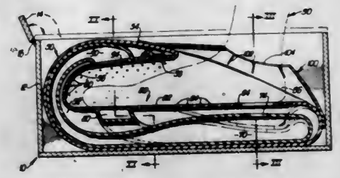


9. In a nursing nipple,
a teat portion,
and a breast portion having a continuous, annular, hollow rib,
the rib and breast portion being provided with a plurality of diametrically opposed pairs of thin-walled foldable portions of a predetermined flexibility spaced circumferentially therearound and also having a plurality of strong, thicker walled portions of less flexibility than said foldable portions positioned circumferentially between the foldable portions.

3,130,726
FOOT POWDER APPLICATOR
Elsa Rich, 7260 Sunset Blvd., Suite 202, Los Angeles 46, Calif.
Filed Mar. 13, 1961, Ser. No. 95,120
10 Claims. (Cl. 128—265)

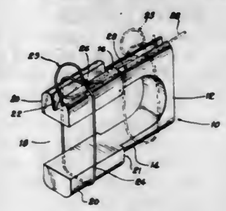
1. A foot-actuated applicator for foot powder or the like comprising:

means forming a chamber including a longitudinally extending central section provided with a horizontally disposed upper wall having a resilient rear portion provided with a relatively large opening and a pair of upwardly turned flank sections on opposite sides of the central section and in communication therewith, the front portion of the chamber forming means being curved upwardly and rearwardly to form an upper section spaced above the forward portion of the central section and in communication therewith, the upper wall of the central section, the inwardly facing walls of the flank sections and the concave inner wall and lower wall of the upper section being perforated by a plurality of relatively small apertures, said flank sections and upper section including imperforate outer walls spaced outwardly from said inwardly facing walls and from said concave inner wall and lower wall respectively;



and means forming a second chamber lying principally within said first chamber, the upper wall of the second chamber including a resilient portion having a relatively large opening spaced beneath said first named large opening, said second chamber forming means including a forwardly projecting channel terminating in an upwardly directed horizontally disposed opening through the central section upper wall, and a second channel projecting forwardly, then upwardly and then rearwardly and terminating in a downwardly directed horizontally disposed opening through said upper section lower wall and spaced above the opening of the first channel.

3,130,727
PRETIED LIGATURE SPLINT
Ernest Charles Wood, 2461 Ivanhoe Drive, Los Angeles, Calif., assignor of thirty percent to Rene G. Le Vaux and thirty percent to Adolph M. Brown
Filed Mar. 19, 1962, Ser. No. 180,672
3 Claims. (Cl. 128—326)



1. An article of manufacture comprising in combination a ligature having an adjustable loop portion for embracing the article when associated thereabout, said ligature having a free end portion connected to said adjustable loop portion, the connection being such that when the adjustable loop portion is surrounding an article to be tied, the pulling force exerted on the free end will cause said adjustable loop portion tightly to embrace the article, and a splint on which the ligature is mounted having an elongate portion encircled by said loop, means on the splint for guiding the free end of the ligature, and tensioning means integrally formed on the splint for releasing said

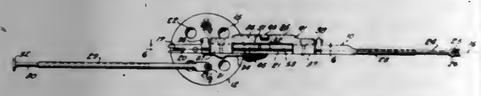
loop portion from the splint while the guide serves to engage the free end for feeding into a pulling mechanism.

3,130,728
SURGICAL SUTURE
William H. Pearson, Portland, Oreg., and Edward A. Block, North Plainfield, N.J., assignors to Ethicon, Inc., Somerville, N.J., a corporation of New Jersey
Filed Sept. 6, 1962, Ser. No. 221,827
5 Claims. (Cl. 128—335.5)



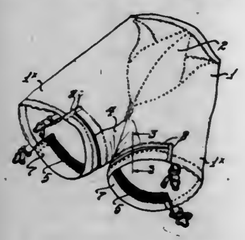
1. A suture for cataract surgery comprising a portion of braided silk suture, a portion of catgut, and a portion between the silk and catgut portions at which the fibers of the braided silk suture are braided around the catgut which forms a core.

3,130,729
SURGICAL NEEDLE THREADER
William Babcock Curtis, Dallas, Tex., assignor to Curtis-Scott Company, Dallas, Tex., a partnership
Filed May 15, 1961, Ser. No. 110,108
13 Claims. (Cl. 128—339)



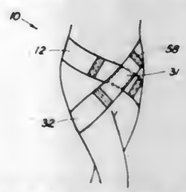
1. A needle threader including an elongate member having means for supporting a suture extending longitudinally thereof, the member having an orifice extending transversely of the suture supporting means and in alinement with the longitudinally extending suture for receiving a needle having an openable eye, and means overlying said supporting means for clamping the suture in alinement with the orifice whereby the suture is threaded in the eye of the needle inserted in said orifice, the clamping means being movably mounted on said member for engagement and disengagement with the suture to permit removal of the suture upon withdrawal of the needle from said orifice.

3,130,730
PANTY GIRDLE
Sallyann Zanca, Garfield, N.J., assignor to Maidenform, Inc., New York, N.Y., a corporation of New York
Filed July 6, 1961, Ser. No. 122,256
1 Claim. (Cl. 128—524)



A panty girdle comprising a body member of elastic material and having legs, the outer area of each leg portion consisting of an unbroken downward extension of the girdle body, the girdle body being cut away only at the inner area of each leg portion, a cuff insert consisting of a lowermost band in said cut-away portion stretchable longitudinally of itself and seamed at its ends to the downward extension of the girdle body, a band applied to the said inner area of each leg portion at the top of said cut-away portion stretchable longitudinally of itself, its lower margin normally being substantially in juxtaposition with the top of the first named band, and a stretchable member bridging said bands at the inner face of the leg and stretchable transversely of said bands, said stretchable member being seamed to the first named band and to the second named band near its top margin.

3,130,731
GIRDLE
Fern B. Zdan, 6818 Harman Ave., Omaha 4, Nebr.
Filed Aug. 9, 1962, Ser. No. 215,827
3 Claims. (Cl. 128—531)

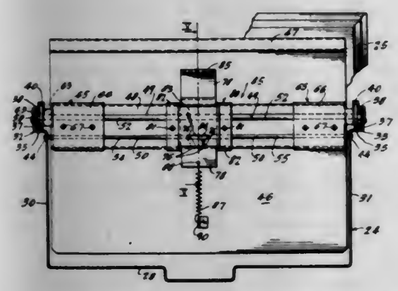


1. A girdle having a shape when laid on a horizontal surface such that it has elongated upper and lower rear portions lying in a horizontal plane and disposed approximately in parallelism and laterally spaced apart with respect to each other a substantial distance so that said upper rear portion is adapted to extend across the back of a wearer approximately at the upper part of the hip portion of a wearer's body and so that the lower rear portion is adapted to be disposed extending across the lower portion of the wearer's buttocks, said girdle further having a shape when laid on said horizontal surface such that the remainder of said girdle comprises a first elongated inclined portion having one end extending from one end of said upper rear portion alongside of and at an acute angle with respect to said upper rear portion and said first inclined portion having its other end joined to an end of said lower rear portion opposite to said one end of said back portion, a second elongated inclined portion having one end attached to the opposite end of said upper rear portion from said one end of the latter and extending alongside of and at an acute angle to said upper rear portion, said second inclined portion having its other end joined to the opposite end of said lower rear portion from said one end thereof, and said inclined portions lapping and criss-crossing each other whereby the said lapping parts of said inclined portions can be disposed at the wearer's abdomen, said portions having flexibility and elasticity whereby when the girdle is placed on a wearer and is in a stretched condition its elasticity tends to hold the wearer's abdomen inwardly.

3,130,732
FOLLOWER FOR FILING CABINET DRAWERS
Ralph E. McClellan, Toledo, Ohio, assignor to Mellink Steel Safe Company, Toledo, Ohio, a corporation of Ohio
Filed Nov. 15, 1961, Ser. No. 152,419
5 Claims. (Cl. 129—28)

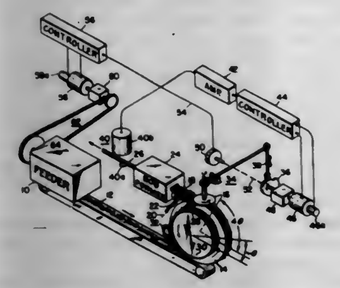
1. A file drawer having
(I) spaced parallel side walls and a bottom,
(A) an inwardly open channel adjacent the top of each side wall having vertically spaced sides,
(1) a rack in the upper side of each of said channels,
(2) a track along lower other side of each channel,

(II) a follower in said drawer between said side walls,
(A) a shaft freely journalled in said follower and extending between and into said channels,
(1) a gear keyed to each end of said shaft in mesh with its corresponding rack in said channels, and



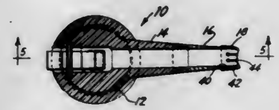
(2) a roller rotatably mounted on said shaft adjacent each gear coaxial with said shaft and said gear, said roller being in rolling engagement with said track for guiding said follower along said track, said engagement of the roller with the track maintaining said gear in mesh with said rack and spaced from said track,
(B) a bracket attached to each side of said follower having an arm projecting into and extending longitudinally of an adjacent channel,
(1) a second roller mounted on the outer end of each said arm in rolling engagement with said tracks maintaining said follower at a fixed angle with respect to said side wall, and
(C) means to lock said follower in selectively adjusted positions in said drawer.

3,130,733
CONTROL SYSTEM FOR CIGARETTE MAKING MACHINE
Carlos C. Martin, Hilliard, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Filed June 7, 1960, Ser. No. 34,494
3 Claims. (Cl. 131—21)



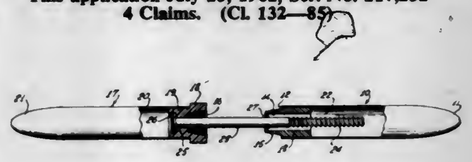
1. In cigarette making apparatus including adjustable means for forming a gross tobacco stream, adjustable means for removing the excess in said stream to form a filler from the remainder of said stream after said excess is removed therefrom, and means for forming said filler into a wrapped cigarette rod, the improvement comprising means responsive to the weight per unit length of said rod for controlling the position of said adjustable removal means, and means continuously responsive to said position for controlling said stream forming means.

3,130,734
FINGERNAIL COATING DEVICE
Francis R. Ellis, 5433 S. Louisville, and James D. McVay, 4153 E. 37th, both of Tulsa, Okla.
Filed Aug. 4, 1961, Ser. No. 129,272
7 Claims. (Cl. 132—74.5)



1. A fingernail sprayer comprising a pressurized can of liquid polish, said can having a depressible spray nozzle means by which contents of said can is discharged when said nozzle is depressed;
a molded body member, said body member having an opening therein adaptable to receive said spring nozzle, and said body member having an integrally formed substantially tubular nozzle portion, said nozzle portion terminating in a substantially tubular stencil end portion of resilient material having a multiplicity of slits therein, the slitted stencil end portion conformable to the outline shape of a fingernail when forced against a fingernail; and
means of removably affixing said body member to said can.

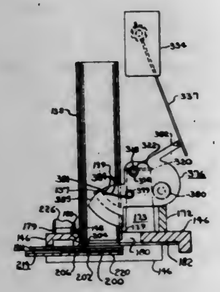
3,130,735
MASCARA CONTAINER
William George Clark, Woodbury, Conn., assignor to The International Silver Company, Wallingford, Conn., a corporation of Connecticut
Continuation of application Ser. No. 3,295, Jan. 19, 1960. This application July 25, 1962, Ser. No. 217,232
4 Claims. (Cl. 132—85)



1. A mascara container comprising an elongated casing to enclose liquid mascara material, said casing having an opening at one end thereof, an insert member of flexible material reducing the open end of said casing and having a central circular opening for access to the liquid mascara material, a closure member removably engageable with said casing to close and seal the open end thereof, the opening in said insert member having a wide outward flare directly externally exposing the same for ready cleaning when said closure member is removed, said closure member including an externally exposed manual grasping end and including a mascara applicator rod received in said central opening, said rod having a smooth cylindrical portion near said grasping end and having at its other end external circumferential applicator threads for immersion in the liquid mascara, said rod having a maximum diameter slightly in excess of the diameter of said central opening, whereby said insert-member opening must be flexed into stressed wiping contact with said rod, said insert member in the region of contact with said

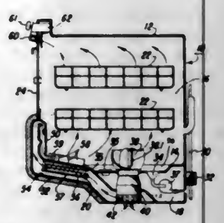
rod having a circumferentially continuous lip integral with said insert member, said lip having a free end located inwardly of the opening and intermediate the respective longitudinal ends of said insert member, said lip having a curved exterior surface at the location of contact with said applicator, said contact location being between the free end of said lip and its connection with said insert member, the curvature of said surface being less than required to fill the space between said threads, whereby a metered filling of mascara material is developed in said threads for each removal of said applicator.

3,130,736
EMPTY SWITCH ACTUATING COIN FEELER FOR MONEY-ACTUATED DEVICES
Francis T. Vaccaro, Pagedale, Mo., assignor to National Rejectors, Inc., St. Louis, Mo., a corporation of Missouri
Filed Sept. 25, 1961, Ser. No. 140,360
6 Claims. (Cl. 133—5)



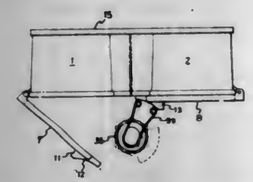
5. In a coin-dispensing device, a coin reservoir, a slot in said coin reservoir, a second slot in said coin reservoir that is contiguous with the first said slot, a coin feeler that is adjacent and is movable relative to said coin reservoir, an empty switch adjacent said coin reservoir, said switch having an actuator which is adjacent said coin feeler and which is adapted to be moved by said coin feeler, said coin feeler having a portion thereof that is in register with the first said slot and that is selectively movable into said coin reservoir through the first said slot, said portion of said coin feeler having a coin-engaging surface and a convex bottom surface, said coin-engaging surface being adapted to be engaged and moved by coins moving downwardly through said coin reservoir whenever said portion of said coin feeler and the said coin-engaging surface thereon are in said coin reservoir and to be moved outwardly of the first said slot by said coins, said coin feeler moving away from said switch actuator as said portion of said coin feeler and the said coin-engaging surface thereon are moved outwardly of the first said slot by said coins, said coin feeler being adapted to have said portion and the said coin-engaging surface thereon move into said coin reservoir through the first said slot and thereby being adapted to move said switch actuator whenever the supply of coins within said coin reservoir falls below a predetermined level, and a coin-intercepting projection on said portion of said coin feeler that extends transversely of said portion of said coin feeler and that keeps coins from moving downwardly in said coin reservoir and resting on edge in the spaces between the sides of said portion of said coin feeler and the interior of said coin reservoir, said coin-intercepting projection on said portion of said coin feeler being in register with and being movable into said second slot as said portion of said coin feeler and the said coin-engaging surface thereon move inwardly of the first said slot, said coin-intercepting projection moving outwardly of said second slot as said portion of said coin feeler and the said coin-engaging surface thereon move outwardly of the first said slot, said coin-intercepting projection being adjacent said coin-engaging surface and projecting outwardly beyond both sides of said portion of said coin feeler, said coin-intercepting projection substantially spanning the distances between the sides of said portion of said coin feeler and the interior of said coin reservoir, part of said coin-engaging surface extending into said coin reservoir a distance greater than one half the inner diameter of said coin reservoir whenever said coin reservoir is empty.

3,130,737
AUTOMATIC DISHWASHING APPLIANCE
David A. Jellies, Fullerton, Calif., assignor to General Electric Company, a corporation of New York
Filed Oct. 9, 1962, Ser. No. 229,299
4 Claims. (Cl. 134—57)



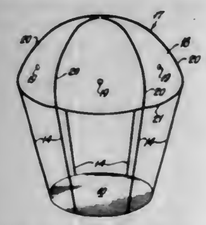
1. A dishwasher including a compartment for containing dishes to be washed and dried,
means for supplying liquid to said compartment,
means for draining the liquid therefrom,
an air duct communicating between said compartment and the ambient atmosphere for admitting air to said compartment for drying the dishes,
heat storage means in said duct,
a drive motor,
means operated by said motor for circulating liquid throughout said compartment for washing the dishes therein,
first and second electric circuits for energizing said motor, said first circuit including an electrical resistance element within said duct in heat exchange relation with said heat storage means, said first and second circuits being normally concurrently energized during the operation of said motor,
switch means in said circuits for energizing said motor for a first operational period to accomplish a washing operation,
means for operating said liquid drainage means subsequent to said washing operation,
means for reactivating said circuits for operating said motor for a second period to accomplish a dish-drying operation,
air translation means operated by said motor under all conditions of operation thereof to effect air movement within said air duct,
means for minimizing said air movement during the first-named period of operation of said motor to permit accumulation of heat by said heat storage means,
and means for maximizing air flow over said heat storage means and into said compartment during the second-named operational period of said motor, whereby to increase the heat content of air entering said compartment to accelerate the drying of dishes therein.

3,130,738
AUTOMATIC DETERGENT DISPENSER FOR DISHWASHING MACHINES
Arnold Robert Kays, Charles Nelson Perin, and Carl Henry Lines, Connersville, Ind., assignors to Design and Manufacturing Corporation, Connersville, Ind., a corporation of Indiana
Filed Apr. 18, 1961, Ser. No. 180,913
(Filed under Rule 47(a) and 35 U.S.C. 116)
11 Claims. (Cl. 134—58)



1. In a dishwashing machine or like structure having a tub with walls, the improvement comprising a detergent dispenser having a member open both at the top and bottom and providing a plurality of cups, a hinged lid means, and hinged bottom doors for said cups, means for supporting said dispenser on a wall of said tub, latch means for holding said bottom doors in closed position, and timer-actuating means for rotating said latch means whereby to allow said bottom doors to open sequentially by gravity, releasing detergent from said cup member.

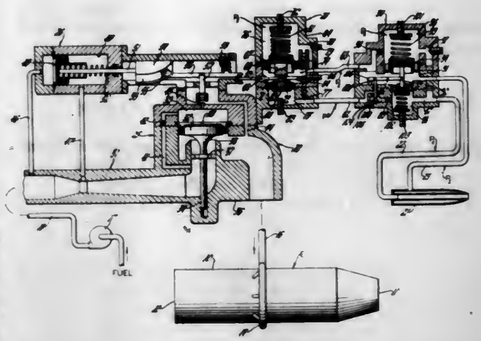
3,130,739
OVERHEAD STRUCTURES
Ralph S. Von Koborn, Westchester County, N.Y. (511 North St., White Plains, N.Y.)
Filed Aug. 18, 1961, Ser. No. 132,348
4 Claims. (Cl. 135—5)



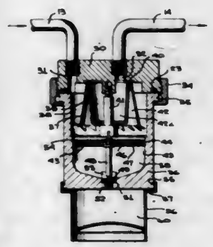
1. A canopy structure comprising a plurality of upwardly directed strut member supported at the lower ends thereof, a concave-convex canopy member, means securing the peripheral edge of said canopy member to the upper ends of said strut members, and air blowing means communicating with the lower ends of said tubular strut members to direct a flow of air into the underface of said canopy member.

3,130,740
RAMJET FUEL CONTROL
Richard H. Donlon, Santa Barbara, Calif., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 19, 1961, Ser. No. 139,208
1 Claim. (Cl. 137—84)

A device having an output which is a function of $C_1(P_1-C_2P_2)$, where P_1 and P_2 are total and static ambient air pressures, respectively, P_1 being greater than P_2, and C_1 and C_2 are adjustable constants, and having means to attenuate the output when P_1/P_2 is greater than a parameter C_3 which is a function of P_2: comprising, in combination, a first series of two throttling means establishing a first control pressure P_x intermediate P_1 and P_2 between the throttling means including adjusting means for one of the throttling means for setting the value of C_3, first pressure balance means responsive to P_1 and P_x operative to establish a second control pressure P' equal to P_1 when P_1/P_2 is less than C_3 and less than P_1 when P_1/P_2 is greater than C_3; second series throttling means, including an adjustable throttle, establishing a third control pressure P_3 intermediate P' and P_2, and second pressure balance means responsive to P' and P_3 and including a resilient bias, the second pressure balance means having an output substantially proportional to $C_1(P_1-C_2P_2)$, the second pressure balance means including two unequal movable walls coupled together and means for supplying P_2 between the walls, P' to the outer side of the smaller wall, and P_3 to the outer side of the larger wall, and an adjustable ratio transmission between the movable walls and the output.



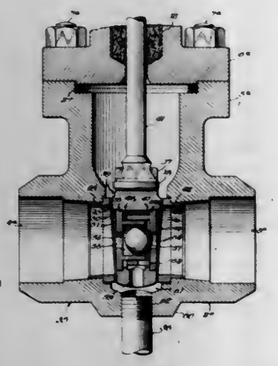
3,130,741
LIQUID PURGING SYSTEMS
Rudolph Vetere, Staten Island, N.Y., assignor to The S. S. White Dental Manufacturing Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 25, 1960, Ser. No. 71,590
7 Claims. (Cl. 137—115)



1. A liquid discharging system comprising a pressure gas supply, a conduit between said pressure gas supply and a drain device, a restricting device in said conduit between said pressure gas supply and said drain device, said drain device comprising a structure having a plurality of chambers, a first of said chambers being in direct communication with said conduit, an outlet conduit in communication with said first chamber, a member in said drain device responsive to pressure differential between said first chamber and a second chamber of said plurality of chambers, a valve connected to said pressure responsive member to open and close communication between said second chamber and the atmosphere, means for effecting fluid flow from the first chamber to the second chamber

when the pressure in the first chamber is greater than that in the second chamber and for preventing flow from the second chamber to the first chamber when the pressure in the second chamber is greater than in said first chamber, said restricting device comprising a restrictive valve, said restrictive value including an internal cavity separated by a dilatable barrier between inlet and outlet communication at spaced points thereof connected respectively to said supply and to said first chamber, whereby said barrier is dilated when the pressure at the inlet connection exceeds that at the outlet connection by a predetermined value.

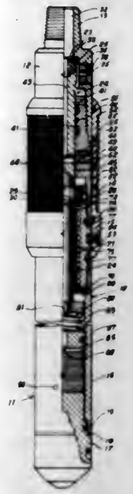
3,130,742
COMBINED SAFETY RELIEF VALVE AND CONDUIT
Kurt B. Bredtschneider, Chicago, Ill., assignor to Crane Co., Chicago, Ill., a corporation of Illinois
Filed Aug. 1, 1961, Ser. No. 128,543
2 Claims. (Cl. 137—119)



1. In a constantly open relief type of gate valve, the combination of a casing with a valve chamber and an inlet passage and an outlet passage communicating therewith an with oppositely disposed seats defining inner limits of said passages, a one-piece wedge gate movable across the seats of said inlet and outlet passages, the said gate carrying pressure relief means comprising a cage member consisting of oppositely disposed interengaged spools forming therebetween a chamber in communication with said casing valve chamber and having a pressure responsive spheroidal closure member reciprocally movable in the latter chamber, the said latter chamber having axially aligned ports communicating through said spools with said casing inlet passage and outlet passage, said cage member engaging said gate in fluid tight relation at opposite end portions thereof and having a transverse passage continuously communicating with said casing portion thereof between the said seats, the inner limits of said axially aligned ports of said cage member having annular seats alternately receiving said spheroidal closure member depending upon the direction of fluid flow through said cage chamber.

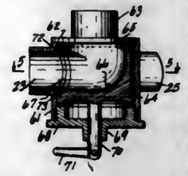
3,130,743
GAS LIFT VALVE
Carlos R. Canalizo, Dallas, Tex., assignor to Otis Engineering Corporation, Dallas, Tex., a corporation of Delaware
Filed June 23, 1960, Ser. No. 38,342
7 Claims. (Cl. 137—155)

1. A well tool for admitting fluids into the interior of a tubing including: a housing connectable to the tubing and having a flow passage opening into the interior of a tubing when the well tool is connected thereto, said housing having a lateral aperture communicating said flow passage with the exterior of the housing and of a tubing when the housing is connected thereto; valve means mounted in said housing and movable between an open position wherein said valve means permits fluids to flow through said aperture and thence into said passage and a closed position wherein said valve closes said flow passage preventing flow of fluids from said aperture and through said flow passage; means operatively associated with said valve means and said housing and responsive to fluid pressure in said flow passage for moving said valve means from



closed position to open position when said fluid pressure increases to a predetermined value; and biasing means for moving said valve means from open position to closed position when the fluid pressure in said flow passage decreases to substantially said predetermined value, said housing having a second lateral aperture of smaller orifice than said first mentioned aperture, said second lateral aperture communicating said flow passage with the exterior of the housing and of a tubing when the housing is connected thereto, said second lateral aperture being in communication at all times with and permitting flow of fluid at all times from the exterior of the housing into said flow passage.

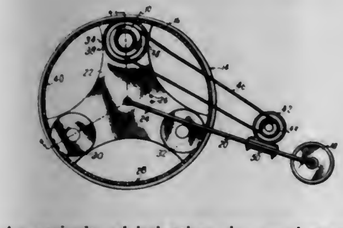
3,130,744
VALVE ASSEMBLY FOR A DISTRIBUTION SYSTEM
Lowell J. Collins, 938 61st St., Oakland 8, Calif.
Filed Feb. 23, 1960, Ser. No. 10,141
1 Claim. (Cl. 137—315)



In a fluid distribution system including a source of fluid for selective delivery to a plurality of devices,
selective control means comprising a valve having
a cylindrical housing comprising a sleeve having an axial bore and internally threaded at its lower end and having

a plurality of angularly spaced outlets for connection to said devices, and
a head for said housing and having an axial intake passage for communication with said source,
a bowl having encompassing walls and having a second axial bore terminating in a radial passage for selective communication with said radial outlets, and being rotatable in said housing and having
an annular recess transversely spanning said radial outlets, and
a sealing ring seated in said annular recess for sealing the clearance between the housing and the bowl,
a bottom threadedly secured in said lower end and having an axial shaft passage,
a shaft cooperative with the bottom of said bowl and projecting through said axial shaft passage, and
a lever hingedly mounted in the lower end of said shaft and having a maximum diameter less than the shaft
whereby a valve is provided which is completely disassembleable and reassembled quickly with all parts easily cleaned and sterilized.

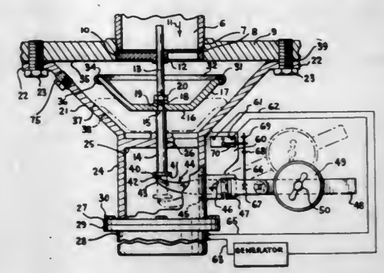
3,130,745
IRRIGATION PIPE MOVING SYSTEM
Grady Goodpasture, P.O. Box 912, Brownfield, Tex.
Filed Aug. 1, 1962, Ser. No. 213,931
4 Claims. (Cl. 137—344)



1. An agricultural irrigation pipe moving system comprising:
(*a*) an elongated pipe adapted to carry sprinklers for sprinkling water therefrom,
(*b*) a plurality of vehicles,
(*c*) each vehicle including at least a rim and a wheel,
(*d*) a spider mounted for rotation relative to each of said rims,
(*e*) a frame interconnecting the spider and wheel of each vehicle,
(*f*) means for attaching said frame in one of a plurality of positions to said spider,
(*g*) said pipe mounted for rotation in said spiders,
(*h*) a gear mounted on each of the rims,
(*i*) a pinion smaller than said gear mounted on said pipe at each vehicle,
(*j*) the teeth of each pinion meshed with the teeth of one of the gears, and
(*k*) means for rotating said pipe, whereby the torque in the elongated pipe between the means for rotating and the vehicles is reduced inasmuch as the pinion on the pipe is smaller than the gear on the rim.

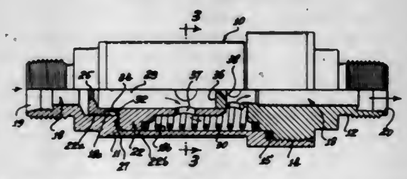
3,130,746
BI-DIRECTIONAL CHECK VALVES
Charles G. Viner, P.O. Box 127, North Woodstock, Conn.
Filed May 15, 1962, Ser. No. 194,854
7 Claims. (Cl. 137—458)

1. A valve construction of the character described comprising an open chamber having an upper wall portion and a lower downwardly and inwardly tapering funnel-shaped portion having outer edges in sealed relation with each other and having substantially vertically disposed passageways extending therethrough, an upwardly opening cup-shaped valve member aligned with one of said passageways and having a substantially horizontally disposed upper edge portion, said valve member being slidably supported internally of said chamber for movement toward and away from selected areas of said respective wall portions, said cup-shaped member having resilient means secured to the upper edge thereof and being so



constructed as to have spaced annular edges, one being adapted to assume a sealed relation with the inner surface of said upper wall portion and the other to assume a sealed relation with the inner surface of the funnel-shaped portion to open or close said passageways depending upon the position of said valve member with respect to said wall portions.

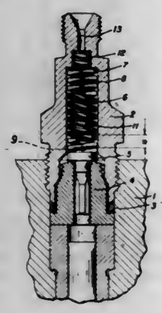
3,130,747
FLOW REGULATOR
Bernard G. Benaway, Granada Hills, Calif., assignor to Sterer Engineering and Manufacturing Company, North Hollywood, Calif., a corporation of California
Filed May 15, 1961, Ser. No. 110,029
13 Claims. (Cl. 137—504)



1. In an hydraulic fluid flow regulator of the constant flow type having a body defining an internal fluid passage extending between spaced inlet and outlet openings in the body and adjustable valve means within the body regulating fluid flow therethrough, the combination comprising:
a hollow piston movable within the body and operatively connected to the valve means;
resilient means biasing the piston in a direction to adjust the valve means to maximum fluid flow;
a restricted orifice in said piston creating a fluid pressure differential in fluid flowing in one direction through the orifice and the piston, said pressure differential exerting a force on the piston to move it in opposition to said resilient means and in a direction to reduce fluid flow past said valve means;
and means defining a secondary fluid path by-passing said orifice, said last mentioned means including means creating in fluid flowing over the secondary path a fluid pressure differential between the upstream end of the path and a location along the path that is a function of the viscosity of the fluid and produces a force acting on the piston in a direction to move it in opposition to said resilient means and in a direction to reduce fluid flow past the valve means, whereby the total force on the piston is varied

to compensate for changes in fluid viscosity and the total flow through the regulator is substantially constant over a wide temperature range.

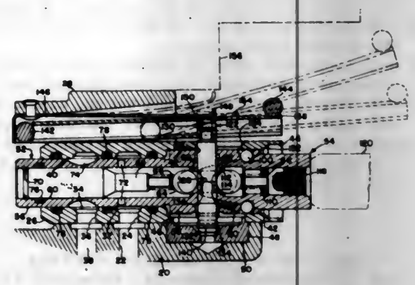
3,130,748
CHECK VALVE FOR FUEL INJECTION PUMPS
Hans Weingärtner, Munich, Germany, assignor to Kugelfischer Georg Schäfer & Co., Schweinfurt, Germany
Filed Aug. 30, 1961, Ser. No. 134,948
Claims priority, application Germany Apr. 17, 1961
3 Claims. (Cl. 137—514)



1. A valve structure for a fuel injection pump and the like comprising a body with an axial bore therein having an annular shoulder thereon a valve seat at an end of said bore, a valve disc member in said bore adapted to lift off the valve seat, a first helical spring member having one end seated on said shoulder and its opposite end seated on said valve member to bias it against the valve seat, said bore having a reduced cross-section in the end thereof away from said valve member and ajacent said annular shoulder, a second helical spring member disposed in said bore and extending through said first spring member, said second spring member having one end secured within said reduced section by an interference fit therein, the opposite end of said second spring member being spaced from said valve member when it is seated, the individual spirals of said second spring member in said reduced cross-section and on the opposite end thereof being compressed and lying against each other, said second spring member limiting the lift of said valve member off its seat and acting as a resilient abutment member to prevent damage to the valve and body from frequent impact.

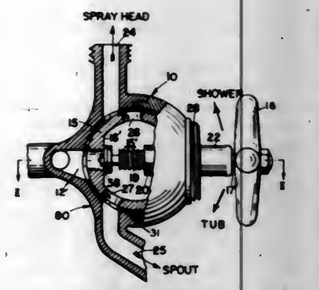
3,130,749
FLUID LINE COUPLING
Richard A. Wittren, Waterloo, Iowa, assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Jan. 27, 1960, Ser. No. 4,930
12 Claims. (Cl. 137—614)

1. In combination: support means including a coupling carrier; a first coupling part carried by the carrier for fore-and-aft shifting between front and rear positions and normally disposed in said front position, said part having a fore-and-aft bore therein opening at the rear end thereof and said bore having a valve seat therein forwardly of said rear end, and a valve in said bore biased rearwardly to close said seat; a second coupling part coaxially forwardly received in said bore and having a front end normally closely spaced rearwardly of said first part seat, said second part having an axial bore therein including a valve seat at said front end and a valve in said second part bore biased forwardly to close said second part seat, said valves being normally exposed to each other through their respective seats in closely axially spaced apart relation; releasable means normally interconnecting the coupling parts against axial separation so that said two parts are shiftable rearwardly in unison to the aforesaid rear position, said releasable means being operative when said rear position is reached to release the second part axially rearwardly from said first part; a valve operator carried by the first coupling part for movement between first and second positions and including an internal portion transverse to the axis of



said parts and further including an external portion exterior to said first coupling part, said internal portion including cam means interposed between the exposed valves when the coupling parts are connected and operative in said first position to unseat both valves and operative in said second position to enable biased closing of both valves; and means on the support means engageable with the external portion of the operator to cause said operator to assume its second position when the coupling parts move in unison to said rear position.

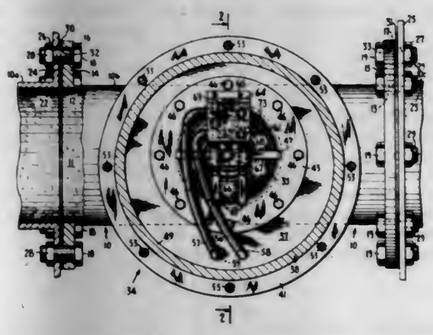
3,130,750
DISTRIBUTING VALVE
Fritz W. Post, Camphausenstrasse 19, Essen, Germany
Filed Nov. 23, 1959, Ser. No. 854,955
Claims priority, application Germany Nov. 25, 1958
5 Claims. (Cl. 137—636.3)



3. A distributing valve comprising a ball-shaped rocking member provided with an inner distributing chamber and a plurality of apertures leading to said chamber, said member forming a valve seat in said chamber around one of said apertures, an elongated stem extending through said member and terminating within said chamber, closure means on said stem within said chamber, said stem being rotatable in said member for selectively moving said closure means toward and away from said seat whereby said one aperture can be closed and opened to a varying extent for regulating the flow of a fluid

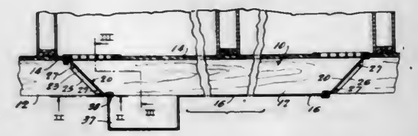
through said one aperture, a housing forming a socket around said member, said member being rotatable in said socket about two mutually perpendicular axes generally transverse to said stem, said stem having an extremity projecting outwardly from said housing, said housing being provided with a pair of fluid-intake ports and a pair of fluid-exit ports, said member having two positions of rotation about one of said axes in which said chamber communicates selectively with one of said exit ports via at least one other of said apertures, said intake ports respectively communicating with said chamber via said one aperture in two positions of rotation about the other of said axes, and a handle on said extremity for operating said closure means by rotation of said stem in said member and for swinging said member about said axis.

3,130,751
APPARATUS FOR DAMPING PULSES IN A FLUID
Kasimir Lopas, Stamford, Conn., assignor to Time, Incorporated, New York, N.Y., a corporation of New York
Filed May 16, 1962, Ser. No. 195,290
16 Claims. (Cl. 138—30)



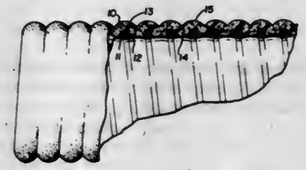
1. Apparatus for damping pulses in a fluid, comprising
a flexible member having at least two sides and adapted to be mounted with one of said sides in contact with a first fluid in which there are pulses to be damped,
a hollow, walled chamber connected to said flexible member, at least a portion of said flexible member forming at least a portion of a wall of said chamber, the second side of said member being exposed to the interior of said chamber,
fluid-supply means connected to said chamber for supplying a second fluid to the interior of said chamber,
fluid-exhaust means connected to said chamber for exhausting said second fluid from the interior of said chamber,
valve means connected to said fluid-supply means and said fluid-exhaust means for controlling the conductances of said fluid-supply means and said fluid-exhaust means, and
valve-actuating means operatively coupled with said flexible member and said valve means for controlling said valve means, whereby incipient movement of said flexible member in response to a change in the instantaneous mean pressure of said first fluid in the vicinity of said flexible member produces a corresponding change in the instantaneous mean pressure of said second fluid in said chamber for maintaining said flexible member in condition to vibrate in response to said pulses.

3,130,752
AIR DUCT HEADER
William L. Gerken, 1525 Alexis Road, Toledo, Ohio
Filed May 7, 1962, Ser. No. 192,697
4 Claims. (Cl. 138—89)



1. An air duct for heating systems and the like comprising:
(A) a pair of spaced substantially parallel side walls,
(B) top and bottom closures fixed to said side walls,
(C) at least one header adjustable telescopically longitudinally to fit between said side walls to provide an end closure for said duct, said header comprising;
two complementary telescoping overlapping rectangular plates having co-planar body portions, each plate having;
(*a*) an integral right angled attaching flange along one edge thereof,
(*b*) means for attaching said right angled flange to said side walls,
(*c*) a first obtuse angled flange along an adjacent edge of said plate projecting from the plane of said plate in the same direction as said right angled flange,
(*d*) a second obtuse angled flange along the other adjacent edge of said plate projecting from the plane of said plate in the opposite direction from said other flanges,
(*e*) one of said first and second obtuse angled flanges on each plate having a reverse bent portion for retaining and guiding the second and first obtuse angled flanges of the other plate, respectively, in the telescopic movement between said plates, and
(*f*) said first and second obtuse angled flanges abutting their adjacent said top and bottom closures of said duct.

3,130,753
FLOATING SWIMMING POOL HOSE
Chester T. Monnen, Youngstown, Ohio, assignor, by mesne assignments, to Aeroquip Corporation, Jackson, Mich., a corporation of Michigan
Filed Apr. 26, 1962, Ser. No. 190,412
6 Claims. (Cl. 138—122)



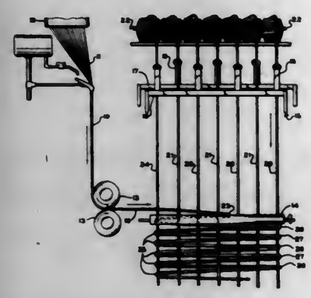
1. A floating swimming pool hose comprising an elongate section of plastic coated spiral reinforcing wire having an integral cover bonded thereto, said cover comprising a single layer of bubble filled resilient plastic material having an unbroken smooth inner surface extending between and partially around each of the convolutions of said plastic coated spiral reinforcing wire so as to completely fill the areas between said convolutions.

3,130,754
PUSH-PULL CABLE CASINGS
Otto J. Bratz, Adrian, Mich., assignor to American Chain & Cable Company, Inc., New York, N.Y., a corporation of New York
Filed Nov. 30, 1960, Ser. No. 72,753
5 Claims. (Cl. 138—133)



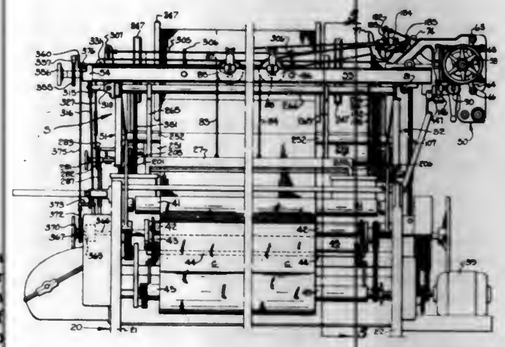
1. A push-pull cable casing and the like comprising a plurality of wires arranged helically side-by-side in tubular form, the helix described by each of said wires having a lay at least ten times the diameter of said helix, each of said wires being in the elastic condition and tending to spring radially outwardly into straight form, and outer containing means disposed about said wires for holding them circumferentially in their tubular form.

3,130,755
METHOD AND APPARATUS FOR FORMING A WOVEN TEXTILE BY HIGH SPEED PROJECTION OF THE WEFT THREADS
Robert G. Russell, Granville, Ohio, assignor to Owens-Corning Fiberglas Corporation, Toledo, Ohio, a corporation of Delaware
Original application Oct. 12, 1955, Ser. No. 540,064, now Patent No. 3,039,169, dated June 19, 1962. Divided and this application July 31, 1961, Ser. No. 128,255
4 Claims. (Cl. 139—18)



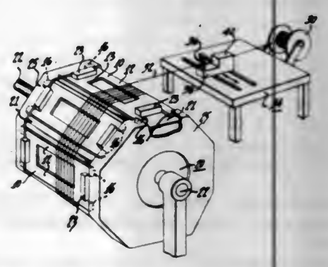
1. A method for weaving a fabric having a double pick, said method comprising feeding warp threads longitudinally between the coacting surfaces of a pair of rollers that extend transversely across said warp threads, guiding said warp threads in two harness sets, with alternate warp threads guided by each of said harnesses, linearly projecting a continuous strand along a path extending laterally into the space between said harness sets of warp threads at a speed which imparts sufficient kinetic energy to said continuous strand to cause such continuous strand to throw a loop across said warp threads, and repeatedly crossing said warp threads sets on the input side of said rollers after each loop is thrown across said warp threads and which occurs at a frequency determined by the ratio of the linear speed of said continuous strand to the overall width of said harness sets.

3,130,756
TERRY MOTION FOR LOOMS
Ivar O. Moberg, Spray, N.C., assignor to Fieldcrest Mills, Inc., Spray, N.C., a corporation of Delaware
Filed Jan. 5, 1961, Ser. No. 80,867
49 Claims. (Cl. 139—25)



1. In a loom for weaving terry cloth having a main drive, an oscillatable reed operatively connected to said main drive, shed-forming heddles, a pattern device, and said device including movable members connected to and imparting vertical movement to said heddles; the combination of a terry motion comprising a terry cam, means responsive to rotation of said cam for moving said cloth toward and from pile forming position, means operatively connecting said main drive to said pattern device and to said cam, and means for disconnecting said main drive from said cam while maintaining the operative connection between the main drive and said pattern device whereby vertical movement of said heddles may be effected while said cam remains stationary.

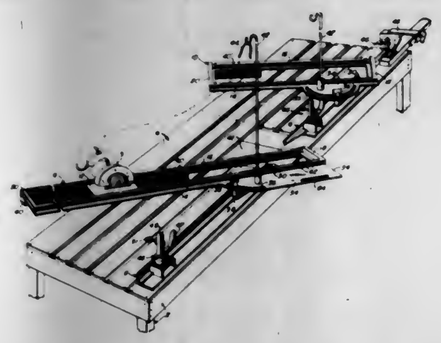
3,130,757
METHOD OF FABRICATING GRID ELECTRODES
Harry Franz Schellack, Belleville, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Aug. 12, 1960, Ser. No. 49,344
9 Claims. (Cl. 140—71.5)



1. A method of fabricating frame grid assemblies comprising fixing a plurality of frames on a mandrel, laying a wire having a coefficient of thermal expansion smaller than that of said mandrel around said mandrel and in engagement with said frames, heating said wire and said frame for brazing said wire to said frames, and heating and controlling the expansion of said mandrel for providing similar rates of thermal growth of said wire and said mandrel.

9. A method of fabricating grid electrodes which utilizes a molybdenum mandrel having a surface which is non-wettable by copper, said mandrel having a peripheral length of eight inches and a width of .8 inch, and a brazing furnace, said brazing furnace having a protective atmosphere therein and being at a temperature between 1090 and 1140 degrees centigrade, said method comprising fixing a plurality of copper clad, nickel plated molybdenum frames in spaced apart relation about said mandrel, securing an end of a tungsten wire to one of said frames, winding said wire under a predetermined tension in a helix around the periphery of said mandrel and in contact with said frames, placing the wound mandrel in said brazing furnace for a period of five minutes for heating only the outside of said mandrel to a temperature above 1090 degrees whereby the copper on said frames is melted, and removing said mandrel from said brazing furnace before the inside of said mandrel reaches a temperature near 1090 degrees centigrade for preventing an excessive thermal growth differential between said mandrel and said wire.

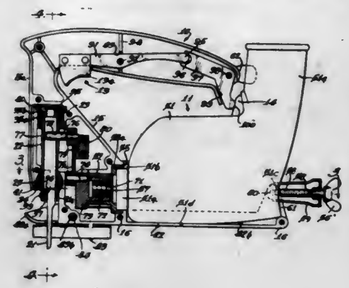
3,130,758
DOUBLE SAW CUTTING ASSEMBLY
Paul G. McKinley, Coral Gables, Fla., assignor to Pagebar, Inc., a corporation of Florida
Filed Dec. 6, 1962, Ser. No. 242,761
1 Claim. (Cl. 143—6)



A support assembly for a portable power saw comprising a slide assembly partially formed by two spaced apart horizontally disposed parallel channel members, said slide assembly having a pivot aperture adapted to receive a vertical pivot pin, means for locking said slide assembly at a selected angle about said pivot pin, at least one additional aperture in said slide assembly for alternately receiving said pivot pin, a non-arcuate aperture adapted to receive said locking means when said pivot pin is in one of said additional apertures; whereby said slide assembly may be placed at a desired predetermined angle by placing said additional aperture over said pivot pin and placing said non-arcuate aperture over said locking means.

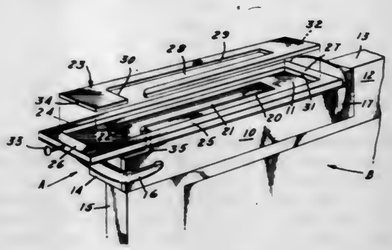
3,130,759
TOOL ATTACHMENT FOR PORTABLE POWER UNIT
Robert W. Mohr, Geneva, Switzerland, assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed Dec. 1, 1960, Ser. No. 73,108
15 Claims. (Cl. 144—35)

2. In a jig saw, hollow housing means, a sleeve bearing mounted in the upper end of said housing means, a spherical self-aligning bearing mounted in the lower end of said hollow housing means, a cylindrical slide slidable in said self-aligning bearing and fitting loosely in said sleeve bearing, a piston member secured rigidly to the upper end of said slide and fitting closely in said sleeve



bearing to form an air pump therewith, said housing means having a passage extending from the upper end of said sleeve bearing to the exterior of said housing.

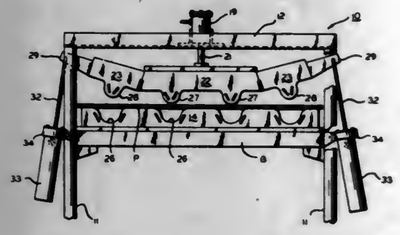
3,130,760
DOOR MORTISING TEMPLATE AND HOLDER
Joseph W. Juneman, 5878 E. Hardwick, Lakewood, Calif.
Filed July 2, 1962, Ser. No. 206,882
2 Claims. (Cl. 144—144.5)



1. A mortising device, comprising:
(A) a frame structure adapted to be applied to the marginal edge portion of a door, including
(*a*) a first plate and a second plate in right angled relation cooperating to position the frame structure in an operative position with the plates respectively engaging the edge face of the door and the adjacent side face of the door, one of said plates having an overhanging side margin extending outwardly of the plane of the other plate, and an opening having portions extending on opposite sides of said plane;
(B) marginal edge portions projecting from the outer surface of said one of said plates to form a template receiving recess, the outer surfaces of said edge portions lying in a plane parallel to the plane of the door engaging inner surface of the plate for guiding engagement with a router face-plate;
(C) a template positioned in said recess having a router tool guiding opening arranged to be positioned over the plate opening, and the portions of the openings outwardly of the other of said plates providing a starting position in which the tool may operate freely without contact with the associated door; and

(D) clamping means carried by said plates for attaching the frame structure in an operative position on the door.

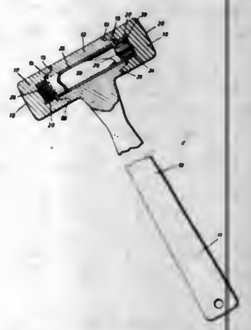
3,130,761
PALLET MAKING MACHINE
Walter I. Fleming, Dundee, Ill., and Herbert A. Krellick, Webster Groves, Mo., assignors to Woodkor Corporation, a corporation of Illinois
Filed Apr. 11, 1961, Ser. No. 102,275
2 Claims. (Cl. 144—256)



1. A pallet-forming machine comprising,
(*a*) a supporting frame,
(*b*) a lower planar platen fixed on the frame for support of a panel to have corrugations formed therein,
(*c*) an upper platen reciprocably mounted on the frame and having a central portion and two flanking portions hinged to the central portion along the respective lateral edges and disposed outwardly-upward from the plane of the central portion,
(*d*) complementary lands and grooves formed in the opposed faces of the lower and upper platens, and
(*e*) separate motor means respectively connected to actuate the central and flanking portions of the upper platen.
(*f*) heating elements located contiguously along the grooves of the lower platen and in the lands of the upper panel portions,
(*g*) control mechanism for activating the motor means for the central platen portion into timed functioning relationship with the lower platen to corrugate the medial part of the panel,
(*h*) means actuated by the positioning of the central platen portion in panel forming position relative the lower platen for simultaneously activating the motor means for the flanking platen portions into timed functioning relationship with the lower platen to corrugate the lateral parts of the panel, and
(*i*) other means actuated by the positioning of the central platen portion in panel-forming relationship with the lower platen for activating the heating elements during the period of panel formation.

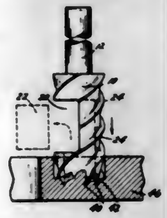
3,130,762
HAMMER WITH DETACHABLE STRIKING HEAD FACES
Henry K. Kerr, 114 Walker St., Hespeler, Ontario, Canada
Filed June 21, 1961, Ser. No. 118,738
1 Claim. (Cl. 145—29)

A hand tool which comprises a handle, a hollow head terminating in open ends extending transversely of one end of said handle and integral therewith, a hollow cylinder fittable in snug fitting relationship in said hollow head having closable means for admitting weight imparting material into said cylinder, a threaded stud extending from each end of said cylinder beyond the open ends of said hollow head, a pair of striking faces, and threaded means carried internally by each of said striking



faces securable in tight fitting relationship to said threaded studs.

3,130,763
DRILLS FOR CUTTING WOODEN PLUGS WITH CROSS GRAIN
Bernard Schlosser, 211 McKeon Road, Kenosha, Wis., and Robert R. Guthridge, 93 Harvey Ave., Grayslake, Ill.
Filed Sept. 13, 1962, Ser. No. 223,410
4 Claims. (Cl. 145—120)

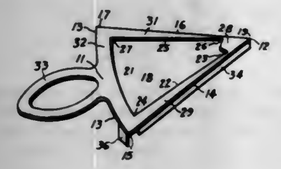


1. As a new article of manufacture, a plug cutting drill comprising a generally tubular body having a hollow interior and a side wall provided with a lateral opening communicating with the interior, said side wall being provided externally with helical lands and intervening flutes, the flutes intersecting the hollow interior of the body at notches between lands at one end of the body, said one end having a plurality of teeth, each tooth having a cutting margin at one such notch and being of generally triangular form as viewed from the end of the drill, each such land being asymmetrical in cross section with an abrupt drop into the flute which forms the notch ahead of it and a more gradual drop into the flute at the rear of it, each tooth having relief rearwardly and axially from its said cutting margin and radially from the juncture of its cutting margin with the interior of the drill.

3,130,764
KNIFE GUIDE FOR CUTTING PIES
Francis J. Donovan, R.F.D. 5, Turner, Maine
Filed Oct. 30, 1962, Ser. No. 234,051
6 Claims. (Cl. 146—150)

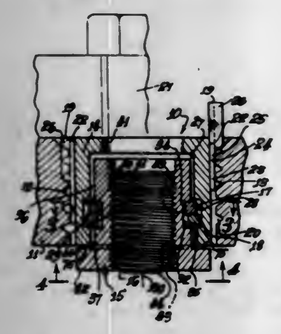
1. A cutting guide for guiding a cutting instrument in cutting a circular object comprising a template of circle sector configuration having an outer apex, an outer peripheral portion of curvilinear configuration spaced from said outer apex, radially extending outer side portions extending from said outer apex to the ends of said outer pheripheral portion, and an opening of substantially circle sector configuration formed through said template having an

inner apex substantially coincident with said outer apex and forming in said template an inner peripheral portion of curvilinear configuration spaced from said inner apex and from said outer peripheral portion and concentric with said outer peripheral portion, and radially extending inner side portions spaced from said outer side portions and extending from points adjacnt said inner apex to the ends of said inner peripheral portion, said template being adapted to be positioned on a circular object with the outer apex thereof at substantially the center of said circular object and the outer peripheral portion thereof in proximity with a portion of the periphery of said circular



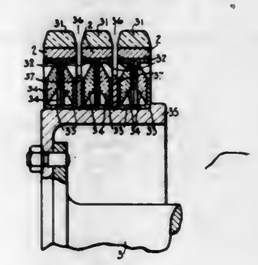
object in a manner whereby the inner and outer side portions of said template guide an instrument cutting said circular object, and a first radial leg extending transversely to said template substantially along one of said outer side portions of said template, and a second radial leg extending transversely to said template substantially along the other of said outer side portions of said template, said radial legs being adapted to rest on said circular object when said template is positioned thereon, said outer side portions of said template being at an angle of 360 divided by the number of equal portions of the circular object to be cut.

3,130,765
SELF-ALIGNING THREADED INSERT WITH RESILIENT RETAINING RING
Robert Neuschotz, 1162 Angelo Drive, Beverly Hills, Calif.
Filed Apr. 14, 1959, Ser. No. 806,339
8 Claims. (Cl. 151—41.73)



1. A self-aligning fastener assembly comprising an outer hollow body section adapted to be mounted to a carrier part, an inner nut section carried within said outer section and containing internal threads into which a coacting stud is threadedly connectible, said inner section being free for limited lateral self-aligning movement transversely of its axis relative to said outer section, said inner section having a lug projecting radially outwardly therefrom near its axially inner end, said outer section containing a recess into which said lug projects radially outwardly, said recess having a side wall engageable by the lug in a relation to retain the inner section against rotation relative to the outer section, said recess having an end wall against which said lug abuts axially outwardly to transmit axially outward load forces from the inner section to the outer section, said two sections having opposed grooves facing radially toward one another at a location axially outwardly beyond said lug and radially opposite said internal threads, and two floating resilient snap rings abutting axially against one another and partially received within said grooves and adapted to transmit axially inward forces from said inner section to the outer section while allowing said self-aligning movement of the inner section, said snap rings being loose enough in said grooves to be shiftable transversely relative to each section, one of said rings abutting axially inwardly against said outer section, and the other ring being of a smaller diameter and abutting axially outwardly against the inner section.

3,130,766
SOLID TYRES
Alfred Erwin Reginald Arnot, The Bell House, Baughurst, Basingstoke, Hampshire, England
Filed July 3, 1961, Ser. No. 121,660
5 Claims. (Cl. 152—41)

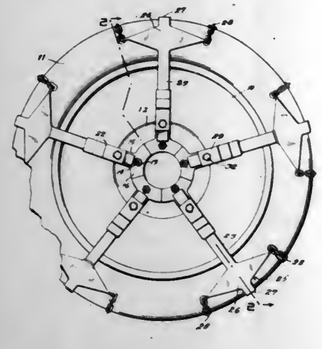


1. A solid tyred wheel for industrial lifting, stacking or transporting vehicles, comprising a plurality of cylindrical metal bands, a central hub structure, and for each of said metal bands, a solid tread of rubber-like material bonded to the outside of the band and a mounting consisting of two separate elements each comprising a frustoconical ring of rubber-like material having bonded-on metal end plates each with an in-turned annular flange at one edge directed normally of the end plates, said elements being arranged co-axially with one another with their rings of rubber-like material in V-formation, one flange of each element being force fitted within the metal band and the other flange of the element being force fitted on said hub structure, all said resilient mounting elements being of corresponding size and form and being carried side-by-side on the hub structure in concentric relation therewith.

3,130,767
TRACTION AID FOR WHEELED VEHICLES
Mike B. Davis, 22 Shepherd Road, Malvern, Pa.
Filed May 13, 1963, Ser. No. 280,171
4 Claims. (Cl. 152—216)
(Granted under Title 35, U.S. Code (1952), sec. 266)

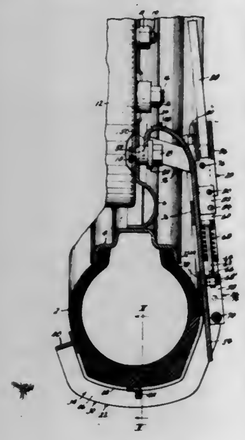
2. A traction aid for wheeled vehicles comprising at least two stirrup guide plates adapted to be secured to the hub of a wheel and each having a channel extending through a portion thereof, a flange having an inclined face adjacent said channel, a plurality of traction stirrup members, each of said stirrup members adapted to fit over the tread of a tire and having a free end extending through said channel in one of said guide plates, said

free end providing a plurality of threaded openings therethrough, a snug plate having an opening therethrough registering with any one of the threaded openings in said free end of said traction stirrup and an inclined face of a pitch similar to that of the inclined face of said



flange, and means extending through the openings in the snug plate and in the free end of the traction stirrup to draw the inclined faces of the snug plate and guide member together thereby pulling said traction stirrup against the tire tread.

3,130,768
ANTI-SKID TIRE CLAMP
Eitel T. Marten, Hope, Kans.
Filed Sept. 14, 1962, Ser. No. 223,621
6 Claims. (Cl. 152—218)



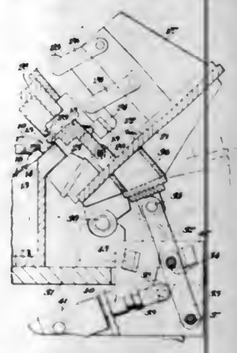
1. An anti-skid tire clamp comprising:
(*a*) a first J-hook adapted to engage the tread of the tire of an automotive vehicle wheel with the longer leg thereof overlying a face of said tire,
(*b*) a second J-hook disposed in opposed relationship to said first J-hook and with the longer leg thereof disposed in longitudinal sliding engagement with the longer leg of said first J-hook, said second J-hook being adapted to engage a lug nut of the wheel of said vehicle, and
(*c*) means joining the longer legs of said J-hook together and operable to draw the bight portions of said J-hooks closer together, whereby said clamp is secured on said wheel.

3,130,769
HIGH SPEED TIRE
Herbert B. Hindin, Southfield, and Joseph G. Manchetti, St. Clair Shores, Mich., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed Sept. 5, 1962, Ser. No. 221,523
9 Claims. (Cl. 152—356)



6. A high speed pneumatic tire comprising a generally toroidal carcass, said carcass having substantially inextensible bead portions and a tread comprised solely of a plurality of layers of rubber skim-coated cord fabric.

3,130,770
CLINCHING TOOLS AND UNITS
Thomas Francis Tribe, Castle Mill Works, Dudley, England, assignor of one-half to British Federal Welder and Machine Company Limited
Filed Mar. 3, 1961, Ser. No. 93,189
Claims priority, application Great Britain Mar. 11, 1960
9 Claims. (Cl. 153—12)

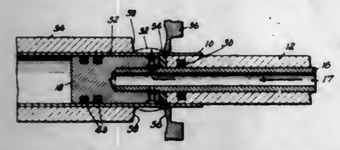


1. A clinching tool comprising a frame, a table tiltably mounted on the frame, a member to fold over an upstanding flange of a sheet metal panel so that it is acutely inclined to the panel surface which member is pivotally mounted on said table for movement towards and away from the upstanding flange, means to tilt said table to bring the pivotal axis of such fold-over member to a position at which the direction of movement of said fold-over member is substantially normal to the surface of the upstanding flange, a member to press the folded-over flange towards the panel surface with a clinching action which member is swingably mounted on the table for movement towards and away from the panel surface, means to actuate such presser member and means to actuate said fold-over member by way of said presser member.

3,130,771
METAL BELLOWS FORMING APPARATUS
John F. Peyton, Los Angeles, Calif., assignor to Federal-Mogul-Bower Bearings, Inc., Detroit, Mich., a corporation of Michigan
Filed Sept. 20, 1957, Ser. No. 685,229
8 Claims. (Cl. 153—73)

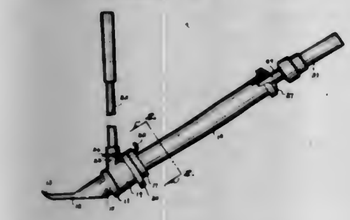
1. Apparatus for forming convolutions in a tube, comprising: internal support means for slideably mounting

said tube; first external die means adapted for embracing said tube to provide an abutment against which a portion of said tube can be folded; elastic means in said tube opposite said die means; means to radially expand said elastic means to initially circumferentially bulge said tube against the root section of said die means and to define a fluid seal between the rounded root portion of a convolution to be folded against said means and said support means; axially movable second external die means em-



bracing said tube and spaced from said first die means; fluid sealing means between said support means and tube opposite said second die means; means for communicating the space between said tube and support means intermediate said elastic means and fluid sealing means with a source of fluid pressure to further bulge said tube wall outwardly in the length of said tube between said die means; and means to advance said movable second die means towards said first die means to fold said bulged section into a convolution.

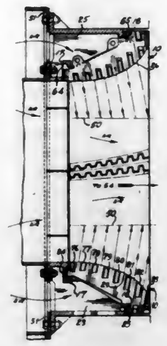
3,130,772
TIRE REMOVAL TOOL
Virgil E. Young, 1912 S. 15th St., Fort Dodge, Iowa
Filed Oct. 9, 1961, Ser. No. 143,958
2 Claims. (Cl. 157—1.17)



1. In a tire tool,
(*a*) a cylinder having a closed forward end,
(*b*) a blade on the forward end of said cylinder,
(*c*) two spaced apart fixed collars embracing the forward end area of said cylinder,
(*d*) a collar rotatably embracing said cylinder and between said two fixed collars,
(*e*) a handle member operatively secured to said rotatable collar,
(*f*) a flange ring on said rotatable collar having a plurality of spaced apart holes,
(*g*) a pin slidably extending through one of said fixed collars and selectively slidably into one of the holes of said flange ring,
(*h*) and a shaft hammer slidably mounted in said cylinder, said shaft hammer having one end thereof engageable with said cylinder closed end.

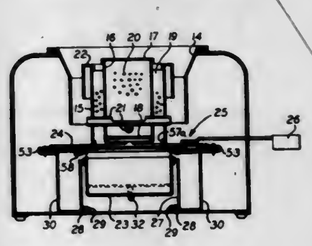
3,130,773
AIR-COOLED BURNER RING
William C. Beattie, Garden City, and Thomas Champion, Jamaica, N.Y., and Eliot C. Prowse, Rutherford, N.J., assignors to Drake Block Co., Inc., New York, N.Y., a corporation of New York
Filed May 4, 1959, Ser. No. 810,615
16 Claims. (Cl. 158—1.5)

1. In combination with a fuel burner adapted to be mounted at the entrance to a furnace and comprising a spray nozzle for the discharge of fuel under high pressure into the furnace, an air-cooled burner ring disposed about said spray nozzle and adapted to be mounted in the furnace wall to protect it against the burner heat and defining a burner throat within which combustion of the fuel takes place, said burner ring comprising a circular series of thin individual independently supported one-piece elongated bars spaced apart to provide between



them substantially throughout their length a series of closely spaced inwardly directed air passages open at the outer edges of the bars for the entrance of cooling air and open at the inner edges of the bars for the discharge of heated cooling air into the flame area of the burner throat, and mounting means for said bars permitting their individual expansion and contraction, said bars being formed with spacing lugs which space them apart at a definite uniform distance.

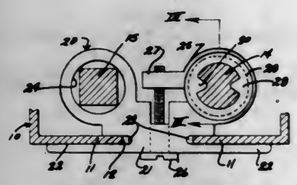
3,130,774
BURNER FOR NORMALLY LIQUID SOLIDIFIED FUEL
Ralph E. Kruck, Blaisdell Point, Clinton, Conn.
Filed Aug. 30, 1962, Ser. No. 220,959
8 Claims. (Cl. 158—86)



8. A stove for burning normally liquid solidified fuel comprising a first upright tubular flue, a second tubular flue of lesser diameter, and co-axial with said first flue, said first and second flues each being perforated and together defining an annular combustion space, a bottom closure and a top closure for said second flue, at least one air inlet tube extending transversely through the lower part of said first and second flues, and into communication with the inside of said second flue for conducting air to within said second flue, means for receiving a fuel receptacle for communication thereof with said annular combustion space, control structure for controlling com-

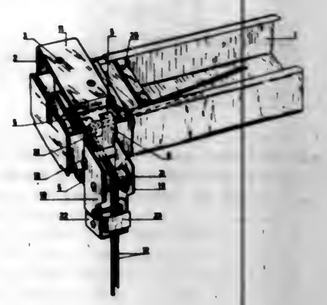
munication between the fuel receptacle and the said annular combustion space and for sealing the receptacle, said control structure comprising shutter means movable transversely of the vapor path from a fuel receptacle disposed in the receiving means to said annular combustion space, between a closed position in which the fuel receptacle is closed to the combustion space and an open position in which the fuel receptacle is in communication with the combustion space, a housing for the shutter means, said housing including an upper plate disposed over the shutter means and a lower plate disposed beneath the shutter means, said plates being sealed about peripheral portions thereof to provide substantial vapor seals and being spaced within said seals to permit movement of the shutter therebetween, said shutter means including a shutter plate, a pivot mounting for the shutter plate, and handle means for manual actuation of the shutter plate, said pivot mounting including a substantially vapor-tight seal for the shutter means mounting, said plates having means defining openings therein for communicating the fuel receptacle with the combustion space when the shutter means is in the open position, said lower plate having a flexible material providing a gasket disposed about the periphery of the opening therein, for receiving in sealing relation on its lower side the periphery of the receptacle opening and on its upper side the shutter means when the shutter is in the closed position, and means for urging the receptacle toward the gasket, whereby with the shutter in the closed position a substantially vapor-tight seal for the receptacle is provided.

3,130,775
BLINDS
Daniel W. Walker, Alto, Mich., assignor to Edgar K. Orr, Grand Rapids, Mich.
Filed Nov. 13, 1962, Ser. No. 236,985
2 Claims. (Cl. 160—172)



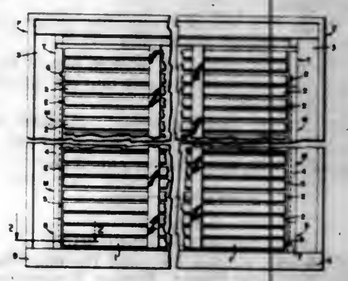
1. A louver-type window blind of the type having a plurality of vertical louvers operably connected to carriages movably secured within a support member, including in combination: flanges on the support member extending toward each other; a threaded motion transmitting rod positioned within the support member for transmitting transverse movement to the carriages; a support element for said rod, said element slidably supported on and movable along said flanges; said element having a collar, said collar enveloping said threaded rod; a ring positioned between said collar and said threaded rod, said ring having a dog engaging said threaded rod; said collar and said ring being in frictional engagement whereby rotation of said threaded rod moves said element transversely along said flange means; the size of said collar being variable whereby the amount of frictional engagement of said collar with said ring being adjustable; and a stop associated with said flanges whereby movement of said element along said flanges through rotation of said threaded rod ceases when said element engages said stop and said ring slips with respect to said collar.

3,130,776
VENETIAN BLIND CORD GUIDE
Andreas D. van Thienen, Rotterdam, Netherlands, assignor to Hunter Douglas International (Quebec) Limited, Montreal, Quebec, Canada, a corporation of Canada
Filed June 16, 1961, Ser. No. 117,557
Claims priority, application Netherlands June 23, 1960
2 Claims. (Cl. 160—178)



1. A device for guiding and locking the cords of a Venetian blind provided with a hollow head rail, said device comprising an insert element fitting in said head rail, said insert element having a side provided with at least one aperture and said insert element being provided with at least one cord guiding means, said device further comprising a plate-like fixing means having at least one projection extending through the aperture in the side of the insert element and through an aperture in one side of the head rail in order to fix said insert element in said head rail, said plate-like fixing means carrying a cord locking means arranged on its other side, said plate-like fixing means co-operating with a U-shaped supporting member for the head rail, said supporting member having legs provided with apertures co-operating with locking lips of the plate-like fixing means.

3,130,777
VENETIAN BLIND RETAINERS
Anthony S. Bonanno, 307 S. 4th Ave., Highland Park, N.J.
Filed Sept. 25, 1961, Ser. No. 140,306
3 Claims. (Cl. 160—178)



1. A retainer for use in conjunction with a Venetian blind installed in a window frame having vertical members and a horizontal sill, the Venetian blind having a series of spaced horizontal elements lying in a vertical plane between the vertical members and above the sill, said retainer comprising:

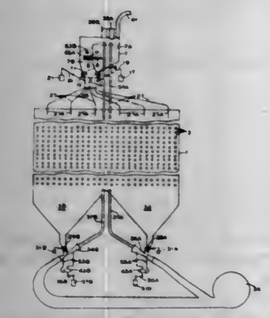
(A) a pair of elongated guide members for installation in a vertically mounted position upon the vertical members, one at each end of said blind;

(B) a guide channel in each of said guide members for guiding each end of at least one of said horizontal elements and restraining unwanted movement of said elements in horizontal directions lying in said plane and perpendicular to said plane when said guide members are properly installed;

(C) a stop on each guide member at a given point adjacent the lowermost portion of each said channel and displaced vertically above the sill a distance great enough to prevent vertical movement of the lowermost of said horizontal elements to a position below said given point thus preventing contact between said lowermost element and the sill when said guide members are properly installed; and

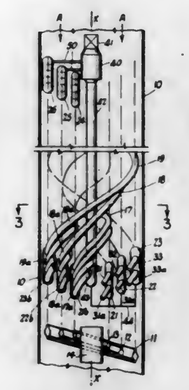
(D) an outlet adjacent an uppermost portion of each said guide member and intersecting each said channel vertically below the uppermost extremity of each said guide member to allow said guided ends to be selectively moved in a direction perpendicular to said plane to release said ends from said channels when said guide members are properly installed.

3,130,778
SHOT CLEANING SYSTEMS FOR HEAT EXCHANGERS
William McColl, Lancaster, Ohio, assignor to Babcock & Wilcox, Limited, London, England, a corporation of Great Britain
Filed Sept. 23, 1960, Ser. No. 58,076
Claims priority, application Great Britain Oct. 9, 1959
11 Claims. (Cl. 165—11)



1. A shot cleaning system including heat exchanger surfaces, recovery hopper means positioned above heat exchange surfaces to be cleaned, first automatically controlled valve means for controlling the discharge of shot from the recovery hopper means onto the surfaces to be cleaned, collecting hopper means disposed below the surfaces to be cleaned, handling means for returning shot collected in the collecting hopper means to the recovery hopper means, means sensitive to the presence of shot at a selected high level in the recovery hopper means, means sensitive to a condition in said handling means to regulate operation of said handling means, said last named means operable to stop said handling means when the shot collected in said collecting hopper means has been returned by said handling means to the recovery hopper means, and alarm means operable by said high level sensitive means should the operation of said handling means be discontinued when shot is not present at said selected high level in said recovery hopper means.

3,130,779
LIGHT BOILER FOR NUCLEAR ENERGY INSTALLATION
André Huet, 48 Ave. du President Wilson, Paris 8, France
Filed Apr. 29, 1959, Ser. No. 809,712
Claims priority, application France May 5, 1958
3 Claims. (Cl. 165—146)

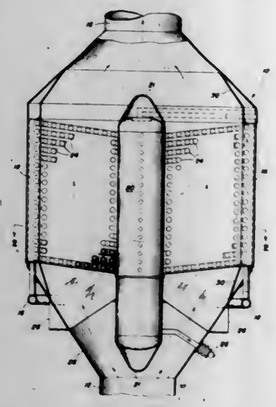


1. A boiler having a casing containing heat exchanger tubes constituted by a plurality of tubes wound helically to form fluid circulating circuits co-axial with the axis of the casing and arranged in parallel, the tubes being spirally wound up to constitute a plurality of cylindrical drums co-axial with the duct casing and the diameter of said tubes increasing from the central to the most exterior drum, a plurality of spirally wound tubes being wound up to form each cylindrical drum; vertical inlet and outlet headers disposed so that their axes aline with the wall of each cylindrical drum, a plurality of such headers being provided at the base and at the top of each cylindrical drum and connected to said tubes, the tubes of each cylindrical drum being wound in contact in order to make a continuous wall on the surface of each cylindrical drum.

3,130,780
LIVE STEAM REHEATER
Ralph D. Winship, St. Lambert, Quebec, Canada, assignor to Combustion Engineering, Inc., Windsor, Conn., a corporation of Delaware
Filed Dec. 29, 1960, Ser. No. 79,346
1 Claim. (Cl. 165—163)

A heat exchanger comprising a substantially cylindrical housing having an axial opening at the bottom thereof, a second axial opening at the top thereof, the upper and lower portions of said housing being of frustoconical shape, a plurality of first headers extending vertically within the housing and being adjacent to the walls of said housing, a second vertical header positioned along the axis of the said housing, the upper and lower portions of said second header being of frustoconical shape, a plurality of substantially horizontal spiral tubes extending between said first headers and said second header, thereby forming a plurality of vertically spaced spirals, said tubes being slightly inclined downwardly from each of said first headers to said second header, each successive coil of each spiral being substantially equally spaced from the next adjacent coil throughout the entire cross-sectional area between the cylindrical housing and the second header, baffle means positioned within the housing adjacent to the walls of the housing, and extending circumferentially between each first header and the next adjacent first header, said baffle means preventing fluid

from flowing through the housing between the first headers where no tubes exist, so that all of the fluid flowing through the housing must pass in close proximity to some portion of each spiral, an inlet for each of said first headers, an outlet from said second header, the total cross-sectional area between said spiral tubes in said housing being at least as great as the total cross-sectional area of either the top or bottom openings in said housing, the length of said second header being such that the cross-sectional flow area throughout the housing is at least as great as the cross-sectional flow area of either the top or bottom openings in said housing, whereby the fluid flowing through the tubes is in heat exchanger relationship to the fluid flowing between the top and bottom openings of said housing, and very little pressure drop of the fluid flowing through the housing is encountered.



3,130,781

RECOVERY OF HYDROCARBON MATERIAL BY IN-SITU COMBUSTION

Robert L. Koch, Dallas, Tex., assignor, by mesne assignments, to Socony Mobil Oil Company, Inc., New York, N.Y., a corporation of New York

Filed June 10, 1959, Ser. No. 819,357
4 Claims. (Cl. 166—11)



1. In a process for the recovery of hydrocarbon material from a subterranean formation containing hydrocarbon material and having an input well leading thereto and an output means leading therefrom including at least one output well wherein combustion of hydrocarbon material within said formation is initiated and oxidizing gas is injected into said subterranean formation through said input well and as a result thereof a combustion front migrates through said subterranean formation from said input well in the direction of said output means, the heat of which combustion front displaces hydrocarbon material from said formation and leaves a carbonaceous deposit which is the fuel consumed by the combustion front and said hydrocarbon material is producible from said output means, the steps comprising injecting oxidizing gas into said formation at a rate at least as great as that given by the expression:

$$q=\frac{0.0235\rho}{hg}AC$$

wherein:

q=the rate of injection of oxidizing gas in cubic feet per 24-hour day,
ρ=the bulk density of the dry formation in pounds per cubic foot,
A=cross-sectional area of the combustion front in square feet,
C=the volume of oxidizing gas required to burn the carbonaceous deposit in a unit volume of formation in cubic feet per cubic foot,
h=the thickness of the formation in feet, and
g=the specific gravity of the hydrocarbon material originally in the formation,

maintaining a pressure p_{iw} at said input well and a pressure p_{ow} at said output means, and displacing said hydrocarbon material from said formation at a rate not greater than that given by the expression:

$$q_0=\frac{1.007\times10^{-3}k_0h(p_{iw}-p_{ow})f}{u_0}$$

wherein:

q_0=the rate at which hydrocarbon material can be produced from the output means in barrels per 24-hour day,
k_0=the effective permeability of the formation to hydrocarbon material in millidarcies,
h=the thickness of the formation in feet,
p_{iw}=the pressure at the input well in pounds per square inch absolute,
p_{ow}=the pressure at the output means in pounds per square inch absolute,
u_0=viscosity of the hydrocarbon material in centipoises, and
f=a friction factor having the value given by the expression:

$$f=\frac{q_gu_gT_f\times10^4}{k_gh(p_{iw}^2-p_{ow}^2)}$$

wherein:

q_g=rate of flow of gas through the formation in thousand of standard cubic feet per 24-hour day,
u_g=viscosity of the gas in centipoises,
T_f=temperature of the formation in degrees Rankine,
k_g=effective permeability of the formation to the gas in millidarcies,
h=thickness of the formation in feet,
p_{iw}=pressure of the gas at the input well in pounds per square inch absolute, and
p_{ow}=pressure of the gas at the output means in pounds per square inch absolute.

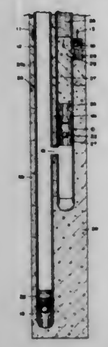
3,130,782

CEMENTING OF WELLS

James L. Rike, New Orleans, La., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware

Filed May 7, 1962, Ser. No. 192,866
9 Claims. (Cl. 166—26)

1. A method for cementing a plurality of side-by-side parallel pipe strings fluidly interconnected in a well bore, one of said pipe strings having a greater length than another of said pipe strings, and said pipe string of greater length allowing passage of fluid out its lower end and said another pipe string allowing passage of fluid through its wall at a selected point, which comprises sequentially closing fluid communication between said pipe strings, flowing a cementitious material down said one pipe string and out the end thereof to fill the annulus between the pipe strings and the wall of said well bore to a predetermined level below the selected point, opening communication for flow unidirectionally from the one to the another of said pipe strings, flowing cementitious material down said another of said pipe strings and into the annulus above said first flowed cementitious material, and then flowing a displacing fluid down said one pipe string and displacing cementitious material from said another pipe string whereby said pipe strings are cemented in said well bore.



3,130,783

CEMENTING WELL PIPE IN STAGES

Willis P. Orr, Tyler, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware

Filed Aug. 2, 1962, Ser. No. 214,300
2 Claims. (Cl. 166—26)



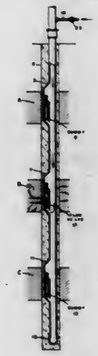
1. Apparatus for use in stage cementing of well pipe in a borehole comprising: a mandrel adapted to be connected in said well pipe and provided with at least two laterally spaced-apart circular ports; fluid pressure releasable plug means initially secured in each port; a slidable sleeve valve longitudinally movable within said mandrel and provided with at least two openings, each of which is larger than each of said ports; sealing means arranged between said sleeve valve and said mandrel above and below said ports and said openings when said ports and said openings are aligned; said openings and said ports being aligned when said sleeve valve is in a lower position to fluidly communicate the interior of said sleeve and said ports, said sleeve when in an upper position being adapted to close off fluid communication between the interior of said sleeve valve and said port; and stop means on said mandrel adapted to limit further downward movement of said sleeve valve within said mandrel when said sleeve valve is in its lower position; and means for locking said sleeve valve in its upper closed position.

3,130,784

SECONDARY RECOVERY OF EARTH FLUIDS

Thomas Pennington II, Houston, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware

Filed Dec. 1, 1961, Ser. No. 156,218
3 Claims. (Cl. 166—42)



1. A method of injecting fluids into a plurality of hydrocarbon-productive earth formations penetrated by a borehole, comprising:

positioning a side pocket mandrel adjacent each of said earth formations interconnected and suspended from the earth's surface by pipe string sections to form a single pipe string having a continuous bore extending from the earth's surface to substantially the bottom of the borehole;

cementing the pipe string to the walls of the borehole from the borehole bottom to a level above the uppermost of said hydrocarbon-productive earth formations;

successively positioning a perforating gun in the side pockets of said mandrels and perforating said mandrels through the side pockets;

blanking off all but one of said perforated side pockets; and

inserting check valve means in at least one side pocket, and injecting fluids through said check valve means and the perforations in said at least one side pocket.

3,130,785

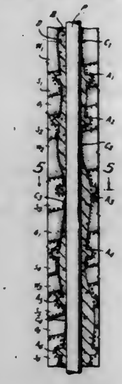
CEMENTING METHOD FOR WELLS

Otis J. McCullough, % McCullough Tool Co., P.O. Box 2775, Houston, Tex.

Filed June 28, 1961, Ser. No. 122,059
4 Claims. (Cl. 166—46)

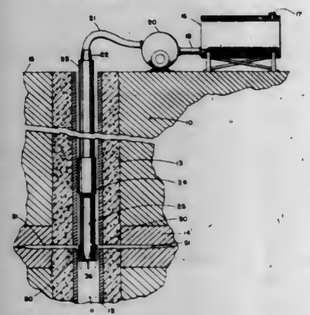
1. In the cementing of pipe strings in well bores which intersect a series of fluid-containing earth formations, said series including relatively impervious earth strata interspersed between said fluid-containing formations, the improvements for preventing channeling between fluid-containing formations which comprises, forming annular radially extending grooves in the wall of the well bore in the relatively impervious strata which separate fluid-containing earth formations from each other, inserting a pipe string through said fluid-containing earth formations

and the intervening relatively impervious earth strata, and introducing cement to fill the space and seal between



the pipe string and at least that portion of the wall of the well bore including said annular grooves.

3,130,786
PERFORATING APPARATUS
Robert Wade Brown, Dallas, and Albert H. Roebuck, Fort Worth, Tex., assignors to The Western Company of North America, Fort Worth, Tex., a corporation of Delaware
Filed June 3, 1960, Ser. No. 33,734
10 Claims. (Cl. 166—55)



10. A perforating apparatus of the type which is adapted to be positioned in juxtaposition with an earth formation and supplied with an abrasive carrying fluid under pressure, said apparatus comprising, in combination, an elongated conduit having at least one laterally extending opening therein, insert means rigidly positioned in said opening, said insert means including an elongated orifice having one end in open communication with the interior of said conduit and having the other end disposed in spaced relationship with said earth formation, whereby abrasive carrying fluid delivered through said conduit to said orifice erodes a perforation in said earth formation, and means automatically responsive to the delivery of fluid through said conduit for preventing lateral movement thereof relative to said earth formation.

3,130,787
WELL BRIDGING TOOL
James C. Mason, 3521 Lime Ave., Long Beach 7, Calif.
Filed Sept. 12, 1960, Ser. No. 55,364
1 Claim. (Cl. 166—187)

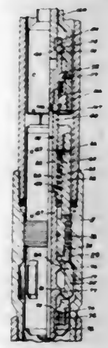
A well bridging tool capable of being lowered into a well bore to a desired depth by a tubing string and a portion of said tool thereafter inflated by fluid under pressure to grip said well bore to the extent that said portion of said tool will support fluid cement thereabove until said cement sets, which tool includes:

(*a*) an inflatable resilient bag having a closed lower end and an upper end in which an opening is defined;
(*b*) a tubular member that extends into the confines of said bag through said opening;
(*c*) means for holding the upper extremity of said bag in sealing contact with said tubular member;



(*d*) means for releasably connecting the upper portion of said tubular member to the lower end of said tubing string; and
(*e*) a check valve on said tubular member that permits fluid to be discharged downwardly into said bag until said fluid is at a desired pressure therein and said bag has expanded to grip said well bore, said check valve closing upon upward flow of fluid from said bag to said tubular member due to the pressure on fluid in said tubular member being lowered below the pressure on fluid in said bag, with said fluid in said bag being trapped therein as a result of the closing of said check valve both before and after said tubular member has been released from said tubing string.

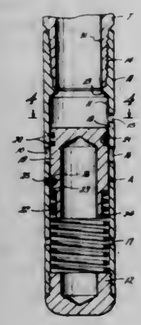
3,130,788
ANCHORING DEVICE FOR WELL TOOLS
Chudleigh B. Cochran and James D. Mott, Houston, Tex., assignors to Cicero C. Brown, Houston, Tex.
Filed Mar. 27, 1962, Ser. No. 182,886
13 Claims. (Cl. 166—217)



1. For use in pipe strings having longitudinally spaced annular recesses in the wall thereof, an anchoring device anchorable in a selected one of said recesses, comprising,

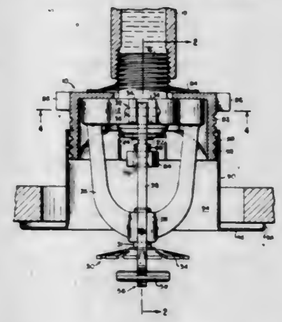
a tubular body insertable in the bore of a pipe string, openings in the wall of said body, latch members mounted in said openings for radial movement into and out of said recesses, said latch members having inwardly projecting shoulder means, a mandrel disposed in the bore of said body for longitudinal movement relative thereto, radial enlargements on the mandrel movable with the mandrel relative to the latch members between positions in and out of registration with said shoulder means, whereby respectively to radially project said latch members into said recesses and to release said latch members for retraction from said recesses, cooperating stop means carried by the body and the mandrel limiting the relative movement of the mandrel to attainment of said positions, cooperating releasable latch elements positioned on the body and mandrel to releasably secure said mandrel to the body when said shoulder means is in registration with the shoulder means on said latch members, and means for applying upward pull on said mandrel to release said latch elements and to move said enlargements out of registration with the shoulder means on said latch members, whereby to release said device for withdrawal from said pipe string.

3,130,789
AUTOMATIC FILL-UP AND CEMENTING DEVICES FOR WELL PIPES
Thomas E. Alexander, Houston, and Wayne F. Nelson, Waxahachie, Tex., assignors to Koehring Company, Waxahachie, Tex., a corporation
Filed Aug. 30, 1961, Ser. No. 134,932
10 Claims. (Cl. 166—224)



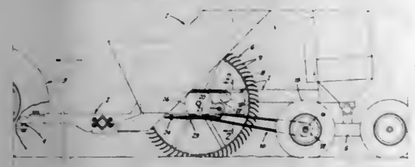
5. A fill-up and cementing device including, a tubular body having bottom closure means and having means for connecting said body in a well pipe string, said body having an orifice located nearer its upper end and establishing communication between the annulus outside the body and string and the interior of the body and string, said body having cementing ports below said orifice and having equalizing openings spaced below said cementing ports and disposed nearer the lower end of the body, a piston valve element slideably mounted within the body and movable to an upper position closing flow through the orifice and into the pipe string and also movable to a lower position to uncover the cementing ports, said valve element having means coacting with said tubular body to prevent flow through said orifice when said valve element is moved to said position closing flow into the pipe string, releasable means for normally retaining the valve element in a position intermediate the orifice and the equalizing openings in which position the cementing ports are covered and closed, said releasable means being releasable by a predetermined force applied to the valve element, the upper surface of said valve element being exposed to the pressure of the fluid flowing through the orifice and into the pipe when the valve element is releasably retained in its intermediate position and the lower surface being exposed to the static pressure of the fluid in the annulus exteriorly of the body, whereby the valve element is subjected to the pressure-differential forces on opposite sides thereof, said releasable retaining means being released either by the existence of a predetermined pressure-differential across said valve element which is created by a predetermined increase in velocity of flow through the orifice and into the pipe string in which event the valve element is moved upwardly to close flow into the string or which is created by an increase in pressure applied against the upper end of the valve element through the pipe string in which event the valve element is moved downwardly to uncover the cementing ports.

3,130,790
FLUSH PENDENT SPRINKLER HEAD
Willis K. Hodgman, Jr., Taunton, Mass., assignor to Hodgman Manufacturing Company, Inc., Taunton, Mass., a corporation of Massachusetts
Filed Sept. 4, 1962, Ser. No. 221,183
3 Claims. (Cl. 169—40)



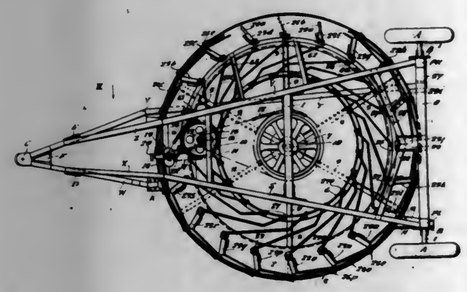
1. In an automatic sprinkler system, a sprinkler head comprising a body member having a water dispensing bore therethrough; means on said body member for connecting said bore to a water supply system; a U-shaped frame mounted on said body member; a deflector mounted on said frame in alignment with said water dispensing bore; walls on said bore defining a valve seat at the end thereof; a valve cap dimensioned to seat on said valve seat; a pair of opposed arms; means including a pair of sockets each socket comprising a pair of outwardly extending flanges and a pivot pin disposed therebetween secured to said body member for swingably receiving one of said opposed arms, each of said arms being swingable outwardly from a first position generally parallel to the longitudinal axis of said bore to a second position spaced outwardly therefrom; a hook portion at the end of each of said arms for receiving a fusible link therebetween, said fusible link normally maintaining said arms in said first position; an inwardly projecting shoulder formed on each of said opposed arms; a tension bar; a pressure screw screwably received in said tension bar for positioning against the central portion of said valve cap; terminal portions on said tension bar for bearing against said shoulders formed on said opposed arms to apply a seating pressure to said central portion of said valve cap; a base; walls on said base for receiving said body member therein; and a ceiling plate removably secured to said base, said ceiling plate having a terminal portion adapted for close fitting engagement against the under surface of a ceiling.

3,130,791
ENDLESS CHAIN DRIVE UNIT
Lewis Wallace Schmidt, Rio Vista, Calif., assignor of sixteen percent to Lloyd K. Schmidt, Isleton, sixteen percent to Albert M. Jongeneel, ten percent to George C. Gordon, ten percent to Ernest F. Blackwelder, and sixteen percent to Lewis Wallace Schmidt, Rio Vista, sixteen percent to Claude A. Loucks, Sonoma, and eight percent to Jessie Newell, Palo Alto, Calif., one and one-third percent to Pliny G. Holt, Washington, D.C., one and one-third percent to Frank H. Holt, Alexandria, Va., and one and one-third percent to Richard E. Holt, Stockton, one and one-third percent to Harriet H. Shelton, Los Gatos, and one and one-third percent to Frank A. Guernsey and one and one-third percent to Darius A. Guernsey, Sherman Oaks, Calif.
Filed Feb. 4, 1963, Ser. No. 255,945
7 Claims. (Cl. 171—53)



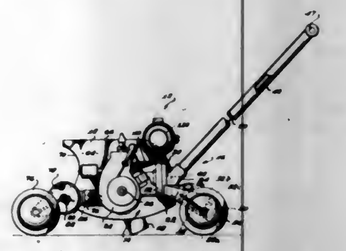
1. In a beet harvester adapted to be drawn along the ground and having a ground-engaging supporting wheel and a spiked beet pick-up wheel, a drive unit between the ground engaging wheel and the pick-up wheel, and means formed with the unit to normally rotate the latter at a predetermined slower peripheral speed than the ground speed of the harvester; the drive unit including means to enable the pick-up wheel to be independently rotated from the ground at a speed faster than said predetermined peripheral speed.

3,130,792
ROOT CROP HARVESTER
Thomas Henry Milbourn, Brunstock House, Brunstock, Carlisle, Cumberland, England
Filed Mar. 27, 1962, Ser. No. 182,816
13 Claims. (Cl. 171—115)



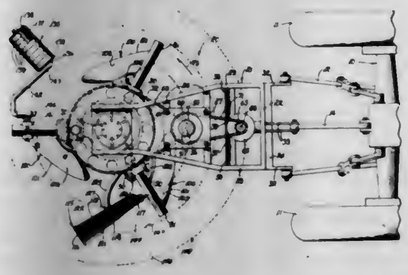
1. A root crop harvester comprising a rotary member, an annular series of fork assemblies mounted on said rotary member with depending tines substantially in radial planes, a spindle supporting said rotary member, a forwardly-directed digging scoop, at least one lateral portion of said scoop which is traversed by the fork elements as they leave the scoop being continued as a substantially semi-circular channel having a base of bars radially spaced to be penetrable by the tines of said fork elements, and a discharge chute at the rearward end of said channel, said spindle, scoop and chute being mounted on a frame provided with a towing link, and non-rotary cam means coaxial with said rotary member and cam follower means associated with each of said fork assemblies whereby the tines of said elements are caused in succession, as each in its annular path leaves the scoop, first to cooperate with said rods or bars, then to rise while passing over said chute and to remain raised until their lower ends are above the upper limit of the other lateral entry portion of the scoop, and finally to descend over said other lateral portion.

3,130,793
LAWN TRIMMER AND EDGER
Albert J. Allegretti, 7232 Fulton Ave., North Hollywood, Calif.
Filed June 7, 1962, Ser. No. 200,744
2 Claims. (Cl. 172—15)



2. A lawn edger and trimmer comprising:
a guard plate;
a motor secured to one side of said guard plate and having an output shaft extending through said guard plate to the other side of said guard plate;
a cutter drivably mounted on the end of said output shaft to be disposed on the other side of said guard plate, said motor, cutter and guard plate being comovable;
a swivel plate integral with said guard plate extending laterally from said guard plate at the forward end of said plate;
a support arm connected to said front swivel plate to extend forwardly therefrom and supporting a front wheel at the forward end of said arm, said arm having a rear face from which a shaft extends rearwardly to be journalled in said swivel plate;
spring means biasing said face of said arm against said swivel plate, said face of said arm being formed with a plurality of equally circularly spaced apart index holes and said swivel plate having a protruding index pin selectively engageable with one of said holes to maintain said face of said arm in a desired angular relationship to said swivel plate, said spring means yielding to permit separation of said face from said swivel plate and removal of said index pin from one of said index holes to permit angular adjustment of said whel supporting arm and front wheel whereby said front wheel is adjustable to a position in which the axis of said front wheel substantially parallels the output shaft of said motor or a position in which the axis of said front wheel is angularly related to said output shaft;
a rear swivel plate integral on the rear end of said guard plate on said one side of said guard plate and substantially parallel to said front swivel plate;
a rear wheel supporting member carrying a pair of rear wheels and having a forward end face normally angularly slidably contacting said rear swivel plate of said guard plate, said forward end face and said rear swivel plate being coaxially journalled together for relative angular movement whereby the axis of said rear wheels can be positioned in substantial parallelism to said output shaft of said motor or positioned angularly relative to said output shaft;
a pin axially movably mounted in said rear wheel supporting member and spring biased to normally protrude forwardly beyond said face of said rear wheel supporting member to be receivable within one of a plurality of equally circularly spaced apart index holes formed in a rear face of said rear swivel plate, said pin serving to maintain said rear wheel supporting member and rear swivel plate in angularly adjusted position; and
an elongated tubular handle extending rearwardly and upwardly from said rear wheel supporting member and having a lower end in communication with a passageway extending coaxially through said rear swivel plate.

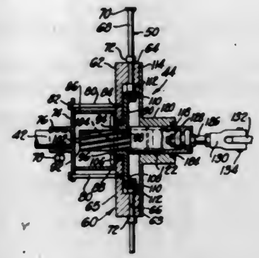
3,130,794
EARTH SHAPING IMPLEMENT
Ford D. Lovell, 314 Golden West, and Marvin Weidenbach, 357 Atlantic, both of Shafter, Calif.
Filed July 5, 1961, Ser. No. 124,296
4 Claims. (Cl. 172—51)



1. An agricultural implement for forming a basin in the ground and a substantially compact ridge of earth circumscribing the basin comprising a frame adapted to be supported in elevationally spaced relation to the ground; rotary mounting means rotatably borne by the frame for rotation about an upright axis of rotation; a plurality of concavo-convex disks having respective individual axes and peripheral edges substantially respectively concentric to said individual axes, and concave earth engaging surfaces; means supporting the disks on the mounting means in radially outwardly and circumferentially spaced relation to said axis of rotation with said individual axes obliquely angularly related to respective imaginary lines radially extended from said axis of rotation and intersecting respective ones of said individual axes, and with their concave surfaces facing in a generally common direction circumferentially of said axis of rotation; and a roller supported on the mounting means in substantially radial relation to said axis of rotation and in forwardly spaced relation to the concave surface of one of the disks with respect to the direction of rotation of said disks about said axis of rotation whereby the roller rides over and compacts the ridge formed by the disks.

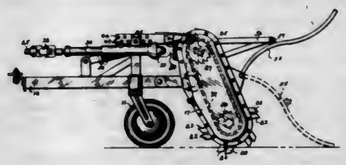
3,130,795
AGRICULTURAL THINNING DEVICES
Arthur H. Caston, 333 W. Fira, Calipatria, Calif., and Donald Cox, 590 Russell Road, Brawley, Calif.
Filed Aug. 21, 1961, Ser. No. 132,914
6 Claims. (Cl. 172—109)

1. An agricultural thinning device comprising:
a rotor having an axis of rotation;
a scythe extending outwardly from said rotor, said scythe having a shaft turnably mounted on said rotor and having a blade attached to the outer end of said shaft, said blade extending transversely away from said shaft, turning means operably connected to said shaft of said scythe for turning said shaft so as to alter the angle between said blade of said scythe and the plane of rotation of said rotor, said turning means comprising first movable means located adjacent the periphery of said rotor, said first movable means being capable of generally concentric movement relative to said rotor, said rotor being formed with an aperture extending around the center of rotation thereof, said first movable means comprising a ring gear rotatably mounted on said rotor, said ring gear having a central aperture therethrough coaxial with said rotor and having teeth mounted thereon around said central aperture;



second movable means coaxial with said rotor and extending axially away from said rotor, said second movable means being capable of general axial movement relative to said rotor and being operatively connected to said first movable means whereby axial movement of said second movable means is capable of moving said first movable means generally concentrically relative to said rotor, said second movable means being connected to control means, said second movable means comprising a cylinder slidably mounted within said central aperture in said ring gear extending through said aperture in said rotor, said cylinder having splines thereon engaging said teeth on said first movable means whereby sliding axial movement of said cylinder is capable of rotating said ring gear relative to said rotor;
cooperating means mounted on said shaft coaxially therewith and engaging said first movable means, said cooperating means being adapted to be turned by generally concentric movement of said first movable means relative to said rotor, said cooperating means comprising a pinion mounted on said shaft;
and control means operatively connected to said turning means for operating said turning means.

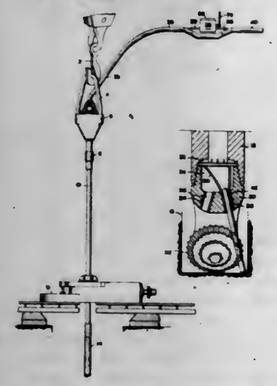
3,130,796
EARTH CONDITIONING IMPLEMENT
John Harlan Rogers, 622 N. 12th St., Fort Dodge, Iowa
Filed Feb. 13, 1961, Ser. No. 88,935
3 Claims. (Cl. 172—117)



3. In an earth conditioning implement, a first frame, wheels supporting said frame, a second frame vertically hinged to said first frame, means carried on said second frame for working the soil, stop means for adjustably limiting the swinging movement of said second frame

relative to said first frame in one direction, said stop means comprising an upstanding post on said second frame having a pin operatively secured to its outer end, an upstanding post on said first frame, a bar member having a plurality of spaced apart holes, a bolt means extending through said post on said first frame and selectively through one of the holes of said bar member, and a movable strap member secured to said bar member and loosely embracing said pin, and a hydraulic cylinder adapted to be in communication with a source of pressure at times operatively vertically secured to said first frame and having a piston operatively hingedly secured to said second frame.

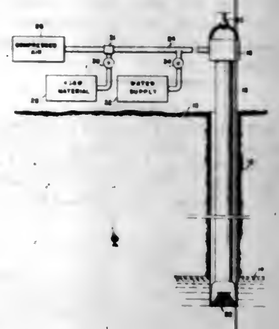
3,130,797
METHODS AND APPARATUS FOR DRILLING BORE HOLES
Ford L. Johnson, Newtown Square, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed Jan. 31, 1961, Ser. No. 86,077
8 Claims. (Cl. 175—2)



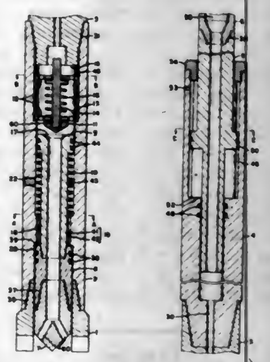
1. The method of drilling a bore hole through earth strata comprising the steps of;
effecting rotary drilling with a hollow drill stem driving a drill bit having a solid central portion and a non-axially aligned jet opening to form a bore hole of a first depth,
introducing an explosive member into said hollow drill stem at the surface of the bore hole,
effecting axial passage of said member downwardly through said hollow drill stem to the vicinity of said bit,
orientating said member so as to pass at least partially through said non-axial jet opening to arrive at a position adjacent the earth strata forming the bottom of said bore hole,
detonating said member in said position to shatter said earth strata, and
continuing rotary drilling through said shattered strata by said drill bit.

3,130,798
METHOD FOR DRILLING BORE HOLES
Harold J. Schramm and Alfred N. Gustafson, West Chester, Pa., assignors to Schramm, Inc., West Chester, Pa., a corporation of Pennsylvania
Continuation of application Ser. No. 530,360, Aug. 24, 1955. This application Jan. 21, 1960, Ser. No. 3,973
2 Claims. (Cl. 175—69)

1. The method of drilling a deep bore hole downwardly into the earth at a location wherein the bore hole penetrates a stratum from which water will enter the bore hole, comprising lowering into the bore hole a hollow drill stem mounting a drill bit at its lower end, the drill stem in the bore hole providing two passages between the vicinity of the bit and the surface of the earth, at least one of said passages extending through the drill stem, effecting drilling by said drill stem while providing a gas under pressure through one of said passages downwardly to the vicinity of the bit to effect removal of cuttings through the other of said passages, and, at least during drilling involving entry of water from the aforementioned stratum, entraining in said gas a material which, upon admixture with water and the gas, will form a foam, thereby to effect removal of water entering the bore hole from said stratum as part of the resulting foam passing to the surface of the earth through the last mentioned passage.

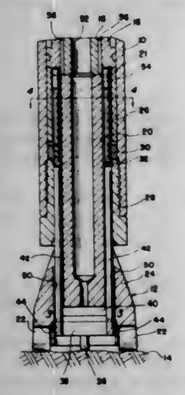


3,130,799
BOUNDING MASS DRILLING TOOL
Philip S. Williams, Tulsa, Okla., assignor to Jersey Production Research Company, a corporation of Delaware
Filed Jan. 6, 1961, Ser. No. 81,066
3 Claims. (Cl. 175—92)



2. An improved drilling tool for use in the rotary drilling of boreholes wherein a drilling fluid is circulated through the bore of the tool which comprises an upper tubular member attachable to the lower end of a rotary drill pipe string, an outer case slidably attached to said upper tubular member and co-rotatable therewith and containing a downward facing internal shoulder in the upper bore thereof, a lower tubular member slidable in said outer case below said upper tubular member and having a piston face on its upper end, a valve seat on the upper end of said lower tubular member, a tapered valve plug mounted on the end of a valve stem that is slidably attached to a bracket that is mounted in said outer case above said valve seat, said valve plug adapted to seat in said valve seat whereby the bore of said drilling tool is closed directing fluid above said valve seat onto said downward facing internal shoulder to move said outer case upward to unseat said valve plug diverting fluid pressure on said piston face on said lower tubular member to thrust said lower tubular member downward, an annular cutting element connected to the lower end of said sleeve, and a central cutting element connected to the lower end of said lower tubular member within said annular cutting element.

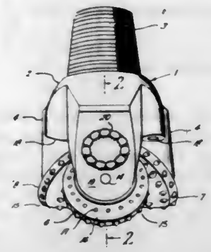
3,130,800
ROCK DRILL
Richard W. Beaumont, Asbury, N.J., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey
Filed Oct. 5, 1960, Ser. No. 60,698
2 Claims. (Cl. 175—293)



1. A rock drill comprising a thrust receiving casing, a hammer reciprocable within the casing, a reciprocatory drill bit having a portion slidably positioned in said casing to be struck by said hammer and a portion protruding from said casing provided with rock cutting edges, and an aperture in said drill bit positioned transversely relative to the longitudinal axis of said drill bit, a member in said aperture longitudinally movable therein relative to said drill bit and extending substantially to said cutting edges, and elongated rods slidably extending through said drill bit and positioned longitudinally of and radially displaced from the longitudinal axis of said drill bit and having one of their ends in engagement with said casing and the other ends in engagement with said member to transmit thrust from said casing to said movable member and to the bottom of the hole being drilled, the length of said rods and said member being such to cause constant engagement of said drill bit with the bottom of the hole being drilled when said casing is supported by said rods and said member on the bottom of the hole being drilled.

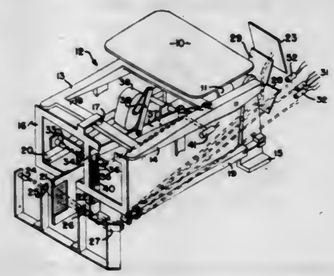
3,130,801
DRILL BIT HAVING INSERTS FORMING A REAMER
Percy W. Schumacher, Jr., Houston, Tex., assignor to Reed Roller Bit Company, Houston, Tex., a corporation of Texas
Filed Feb. 9, 1961, Ser. No. 88,219
5 Claims. (Cl. 175—374)

5. In a well drill useful for drilling hard abrasive formations, a bit head having a plurality of downwardly extending roller cutter supporting legs, an inwardly and downwardly extending shaft on each of said legs, a roller cutter mounted on each of said shafts, the outboard portion of the said leg which faces the side wall of the borehole being drilled having therein outwardly open spaced sockets, a plurality of sintered tungsten carbide balls movable in said sockets and arranged to protrude outwardly beyond the surface of said leg which faces the



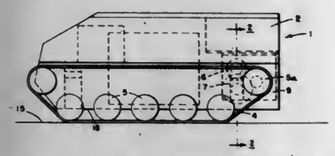
side wall of the borehole and to roll against said side wall, and means to retain said balls in said spaced sockets, whereby said movable carbide balls will protect the surface of said leg from destruction by abrasive downwardly falling particles of the formation from the side wall of the borehole during continued rotation of the well drill and will assist in maintaining a uniform diameter of said borehole.

3,130,802
CONDITION RESPONSIVE DEVICES
Robert E. Bell, Toledo, Ohio, assignor to Toledo Scale Corporation, Toledo, Ohio, a corporation of Ohio
Filed Mar. 9, 1962, Ser. No. 178,740
13 Claims. (Cl. 177—12)



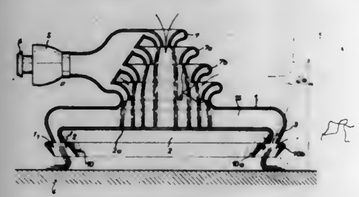
4. In a computing and printing weighing scale system, in combination, movable weighing mechanism, a chart movable as one with the weighing mechanism, a range graduation on the chart corresponding to a predetermined capacity range, a plurality of motion detecting graduations in spaced positions on the chart, and control means including means cooperating with the range graduation to generate a first electrical output when the weighing mechanism is beyond the ends of the predetermined capacity range and a second electrical output when the weighing mechanism is within said predetermined capacity range, means cooperating with the motion detecting graduations to produce a third electrical output in response to motion of the weighing mechanism above a predetermined level, and means responsive to the electrical outputs signaling the position of the movable weighing mechanism relative to the predetermined capacity range and the motion of the movable weighing mechanism relative to the predetermined level.

3,130,803
TRACKING VEHICLE
William R. Wiggins, 13024 S. Manhattan Place, Gardena, Calif.
Filed Nov. 3, 1961, Ser. No. 150,069
12 Claims. (Cl. 180—6.5)



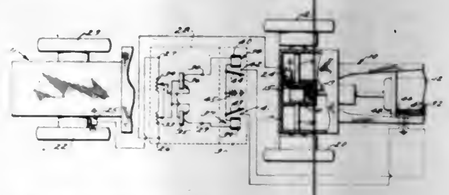
1. A vehicle for following a path defined by light and dark areas comprising a body, a left and a right-hand propulsion means for causing said body to move forwardly, a first photosensitive means carried by said body and positioned to receive light at the left-hand portion of said body, said first photosensitive means being operatively connected to said right-hand propulsion means for controlling the same at a rate varying directly with the intensity of light received by said first photosensitive means, and a second photosensitive means carried by said body and positioned to receive light at the right-hand portion of said body, said second photosensitive means being operatively connected to said left-hand propulsion means for controlling said left-hand propulsion means at a rate varying directly with the intensity of light received by said second photosensitive means.

3,130,804
GROUND EFFECT MACHINE WITH CURTAIN FORMING INJECTOR MEANS
Jean-Henri Bertin, Neuilly-sur-Seine, France, assignor to Societe Bertin et Cie, Paris, France, a company of France
Filed Apr. 11, 1961, Ser. No. 102,315
Claims priority, application France Apr. 14, 1960
4 Claims. (Cl. 180—7)



1. In a ground effect vehicle having an underside to extend above and substantially parallel to a surface over which said vehicle is to travel and hover and to define in conjunction with said surface a cushion-like air space, means for forming a gaseous fluid curtain effectively surrounding an enclosing said air space comprising means defining an annular slot-like nozzle disposed along the periphery of said underside and for discharging gaseous fluid under pressure in a direction generally downwardly toward said surface, means to supply gaseous fluid under pressure to said slot-like nozzle, an annular diffuser having an inlet zone for receiving the gaseous fluid discharged under pressure from said slot-like nozzle and a divergent discharge zone for discharging said gaseous fluid in a downward direction toward said surface, said diffuser comprising two downwardly extending ring members disposed radially spaced and jointly defining said inlet zone for communication with the atmosphere and in position for receiving the gaseous fluid discharged from said slot-like nozzle, said ring members comprising a first ring disposed circumferentially of said means defining said slot-like nozzle and spaced outwardly therefrom and another ring spaced inwardly of said means defining said slot-like nozzle thereby to provide said inlet zone with communication to the atmosphere, whereby in operation atmospheric air is induced into said diffuser inlet zone by the gaseous fluid discharged from said slot-like nozzle and flowing out of said divergent zone of said diffuser.

3,130,805
WHEEL SLIP CONTROL FOR TRACTOR-TRAILER COMBINATIONS
John W. Carter and Philip J. Costa, Peoria, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed Feb. 27, 1961, Ser. No. 92,047
6 Claims. (Cl. 180—14)



1. A system for preventing a wide variance between the wheel speed of a power driven vehicle and the wheel speed of a tandem vehicle motivated thereby, comprising in combination:

a first transducer on the power driven vehicle which provides an electrical output signal proportional to the wheel speed of the vehicle;

a second transducer on the tandem vehicle which provides an electrical output signal proportional to the wheel speed of the tandem vehicle;

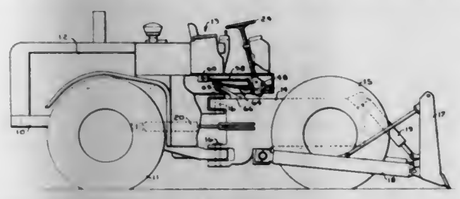
an electronic circuit having a pair of inputs and a pair of outputs, each of said inputs connected to receive one of the transducer signals, said electronic circuit responsive to a given difference between transducer signals to provide an output signal at one of said circuit outputs wherein the particular circuit output upon which the output signal appears is dependent upon which transducer signal is greater than the other;

means associated with the power unit of the vehicle responsive to a signal on one output to reduce the speed at which the wheels are driven and to a signal on the other output to increase the speed at which the wheels are driven; and

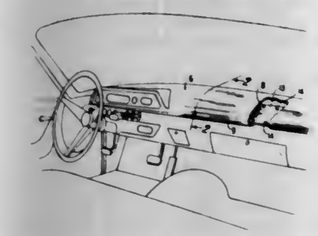
means electrically disposed between said transducers and said electronic circuit for reducing the sensitivity of said electronic circuit to the transducer difference signal as a function of vehicle speed.

3,130,806
HYDRAULIC STEERING MECHANISM FOR ARTICULATED VEHICLES
Benjamin P. Baer, Washington, and Charles H. Herr, Jr., Peoria, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed May 31, 1962, Ser. No. 199,155
2 Claims. (Cl. 180—79.2)

1. In hydraulic steering mechanism for an articulated vehicle in which steering moves the articulated sections of the vehicle toward contact with each other, and having manually actuated steering means for controlling fluid flow to steering motors, and follow-up linkage to prevent such flow when the steering means comes to rest, the improvement which comprises means associated with the follow-up linkage to limit actuation of the steering means to positions which prevent such contact between the articulated sections, and an adjustable element in the follow-up linkage for accurately correlating said positions.



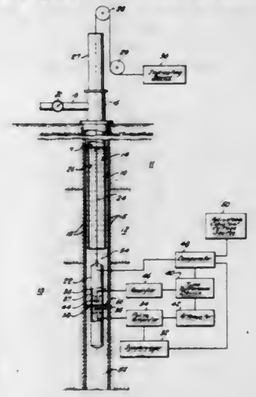
3,130,807
AIR CUSHION DASHBOARD FOR AUTOMOBILES AND THE LIKE
Bobby R. McHenry, 1150 N. 37th St., Kansas City 2, Kans.
Filed July 5, 1962, Ser. No. 207,550
4 Claims. (Cl. 180—90)



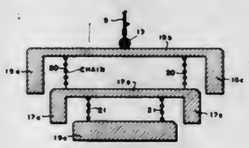
1. An air cushioned dashboard for automobiles and the like, said dashboard comprising a convexly shaped top member having top and side wall portions and in which at least the side wall portions thereof are constructed of self-supporting but resiliently flexible material, a bottom plate closing the underside of said top member and providing with the top member an air space therebetween, the exterior of said top member serving as the dashboard surface, and restricted air passage means providing communication between said space and the exterior of said dashboard, said means operable to regulate the exhaust rate of air from said space upon impact deformation of said top member toward said bottom member whereby to provide a controlled rate of collapse of said top member yet permitting air to re-enter said space and the return of said top member under the influence of its own resilience to its normal configuration upon removal of the force acting on the top member.

3,130,808
ACOUSTICAL WELL FLUID LOGGING
Hugh O. Walker, Jr., Houston, and Robert J. Loofbourrow, Bellaire, Tex., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware
Filed Sept. 26, 1960, Ser. No. 60,248
13 Claims. (Cl. 181—.5)

1. The method of logging fluids having different acoustic properties contained in a borehole which comprises producing acoustic energy in the form of acoustic pulses at a first point in said fluids, selectively detecting a first portion of said acoustic energy to arrive at a second point in said fluids, said second point being so spaced from said first point that the direct path through said fluid between said first and second points is the shortest acoustic path between said first and second points whereby said portion of energy of said acoustic energy detected at said second point is that which has passed through the borehole fluids in a direct path between said first and second points and is the first energy of said acoustic energy to arrive at said second point, said portion of acoustic energy selectively detected at said second point comprising the first pulse to arrive at said second point following the production of a given one of said acoustic pulses at said first point to the substantial exclusion of succeeding acoustic energy arriving at said second point from said first point over paths other than said direct path measuring the interval of time during which said portion of acoustic energy travels from said first point to said second point and correlating said measurement with the depth to said points in the borehole.



3,130,809
METHOD AND APPARATUS FOR GENERATION OF SEISMIC WAVES
Tobias Flatow, Houston, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Mar. 8, 1961, Ser. No. 94,177
3 Claims. (Cl. 181—.5)

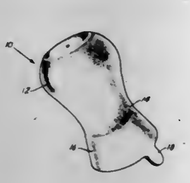


1. In the method of seismic exploration wherein artificially generated seismic waves are transmitted through the earth's crust from a transmitting location and are detected at at least one receiving location spaced apart from the transmitting location to produce electrical signals corresponding thereto, and wherein the electrical signals are recorded to form a multitrace seismogram, the improvement comprising: dropping in substantially free fall a heavy metal plate to the earth's surface; and after the plate has stopped freely falling, repetitively impacting the plate with forces of predetermined magnitude at intervals of between .25 and 20 milliseconds.

3,130,810
DISPOSABLE EAR TIP COVERS FOR STETHOSCOPES
Mack M. Werner, 1865 Ocean Ave., Brooklyn 30, N.Y.
Filed June 27, 1961, Ser. No. 119,999
1 Claim. (Cl. 181—24)

In a stethoscope construction of the type having a bulbous ear tip piece provided with an aperture in the top

end thereof and a tubular member of substantially uniform diameter extending from the opposite base end of said ear tip piece, and a cover for said ear tip piece; the improvement of a cover comprising a one-piece, disposable, resilient, elastic cover detachably enveloping said bulbous ear tip piece in tight engagement therewith, said cover having a bulbous, thin-walled, flexible main body portion having one end open and one end closed, and conforming in configuration to the bulbous ear tip piece in tight fitting engagement therewith, said main body portion having a small aperture in the closed end thereof in registry with the aperture in said ear tip piece, a thin-walled, flexible, flared skirt portion integrally secured to the open end of said body portion forming a necked down portion of reduced diameter at the point of jointure, said necked down portion enveloping the base end of said ear tip piece in tight engagement, said skirt portion extending outwardly in flared relationship to said necked down portion and in spaced relation to said tubular portion, and a finger tab portion secured to said skirt portion to enable said cover to be pulled over the ear tip piece.



3,130,811
LOUDSPEAKER CONE SUSPENSION

Adelore F. Petrie, Camillus, N.Y., assignor to General Electric Company, a corporation of New York

Original application Sept. 28, 1959, Ser. No. 842,624, now Patent No. 3,072,213, dated Jan. 8, 1963. Divided and this application Nov. 19, 1962, Ser. No. 246,851
3 Claims. (Cl. 181—32)



1. A loudspeaker cone suspension comprising a conically shaped member of resilient material provided with a plurality of concentrically arranged corrugations in the outermost region thereof, one or more of the intermediate corrugations having sides that are sloped more gradually than the sides of the end corrugations.

3,130,812
SILENCERS

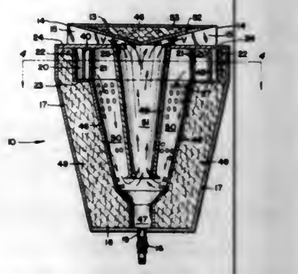
Christoph Hubrich, Seligenstradter Strasse 36, Offenbach am Main, Bieber, Germany

Filed Jan. 17, 1963, Ser. No. 252,224
8 Claims. (Cl. 181—58)

1. A silencer for pressure fluid flow, comprising:

(*a*) a casing having an annular expansion chamber of series connected progressively enlarging expansion pockets disposed at one end with an inlet to receive pressure fluid, an elongated expansion chamber communicating at one end with the annular chamber and extending toward the other end of the casing, and a wall at the other end of the casing closing the end of the elongated chamber thereat;

(*b*) and a tubular member disposed in the elongated chamber having one end spaced from the end wall to

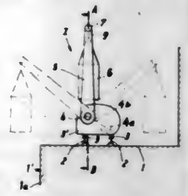


receive pressure fluid and its other end extending through the annular chamber to provide a discharge for fluid outward of said casing.

3,130,813
SUSPENDED SCAFFOLDING

Karl Fackler and Alfred Weissflog, Munich, Germany, assignors to Mannesmann-Leichtbau G.m.b.H., Munich, Germany

Filed June 8, 1961, Ser. No. 115,701
5 Claims. (Cl. 182—36)

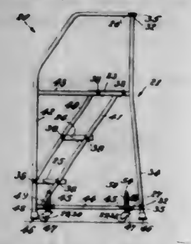


1. The combination with a building structure having side wall means and a substantially horizontal supporting surface located at an elevation above the ground, of a suspended scaffolding comprising spaced parallel guideways provided on said surface and extending along said side wall means, a truck having wheels mounted on said guideways, a horizontal main shaft mounted on said truck and located between and substantially parallel with said guideways, a pair of spaced supporting arms having first ends connected with said shaft and second ends spaced from said truck, transverse connecting means extending between and connected with the second ends of said arms, a platform, deflecting means mounted on said transverse connecting means, winch means provided on said truck and comprising cable means passing over said deflecting means and having ends connected with said platform so as to raise and to lower the platform when respectively collected and paid out by said winch means, said winch means further comprising rotary drum means mounted on said truck and connected with said cable means, externally threaded spindle means mounted on said truck and substantially parallel with said drum means, internally threaded means meshing with said spindle means, sheave means mounted on said internally threaded means, and means for drivingly connecting said drum means with said spindle means so that said internally threaded means travels back and forth along said spindle means when said drum means rotates in clockwise and anticlockwise directions, said cable means passing from said drum means over said sheave means and to said deflecting means, and means for pivoting said arms and the platform about the axis of said shaft between a first position in which the platform is moved outwardly and beyond said surface at one side of said truck and may be raised and lowered along said side wall means, and a second position in which the platform is located above said surface and at the other side of said truck after moving in an arc above the truck whereby the platform may be accessible to a person standing on the supporting surface for mounting said platform from the supporting surface, and the supporting surface may be accessible to a person standing on said platform for alighting from said platform onto the supporting surface.

3,130,814
COLLAPSIBLE SAFETY STEP LADDERS

Fred Del Aquila, Uniontown, Pa., assignor to The Steel Scaffolding Co., Inc., Uniontown, Pa., a corporation of New York

Filed June 5, 1959, Ser. No. 818,319
2 Claims. (Cl. 182—106)



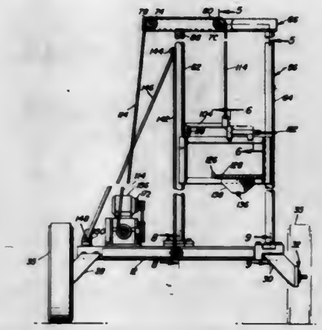
1. A collapsible safety step ladder comprising, in combination, two spaced main supporting units each disposed in a substantially vertical plane, a plurality of horizontal steps disposed at spaced levels between, and having ends releasably supported by, said units; and at least two horizontal reinforcing braces disposed between, and having ends releasably clamping, said units together, each of said units, steps and braces being substantially flat or straight, whereby they can lie one on another in a compact package when dis-assembled, but are readily assembled and secured into a rigid laterally extended structure, each main supporting unit comprising an upright, a handrail, an upper and a lower substantially horizontal brace member between the upright and the handrail, and a pair of inclined tubular members one connected to the upper brace member and the lower brace member, and the other connected to the upper brace member and the handrail, respectively; the uppermost step being releasably supported by said upper brace members, the lowermost step being releasably supported by said handrails and one each of said tubular members, and at least one step between the uppermost and lowermost steps being releasably supported by both said tubular members; and further comprising a plurality of substantially rectangular horizontal receptacles one connected to the upper brace member of each main supporting unit, one connected to one tubular member and to the handrail of each unit, and at least one connected to the tubular member of each unit, each receptacle receiving and releasably holding one end of a step, and further comprising at least one horizontal reinforcing brace extending between and releasably connected to the handrails of said units below the level of the lowermost step.

3,130,815
SCAFFOLD TYPE LIFT

Louis J. Zahner, Schneider, Ind., and Oscar M. Williams, 5904 SE. Willow St., Portland 22, Oreg.; said Williams assignor of twenty percent to said Zahner

Filed Dec. 15, 1961, Ser. No. 159,596
8 Claims. (Cl. 182—112)

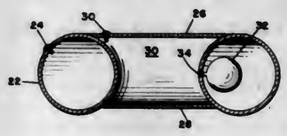
1. A lifting device comprising an elongated base, a pair of elongated supports pivotally secured to opposite end portions of said base for rotation about generally parallel axes extending transversely of said base between substantially vertical upright operative positions and generally horizontally disposed collapsed positions overlying said base, a support member slidably mounted on each of said supports for guided movement longitudinally thereabout between raised and lowered positions when said supports are disposed upright and against movement laterally of said supports, each of said support members including a generally horizontally disposed platform supporting portion extending transversely of said base, an elongated platform member extending between and having its opposite ends removably resting upon said portions of said support members, rotatable pulley means carried by the upper end of said support members, rotatable winding means supported from said base, and elongated flexible tension members wound partially about the winding means and including two free end portions passed upwardly over said pulleys and secured to said support members.



3,130,816
PNEUMATIC TRAMPOLINE

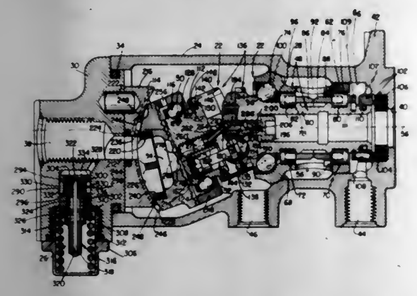
Harold B. Wright, 2205 Lark Drive, Colorado Springs, Colo.

Filed Sept. 17, 1962, Ser. No. 224,154
3 Claims. (Cl. 182—139)



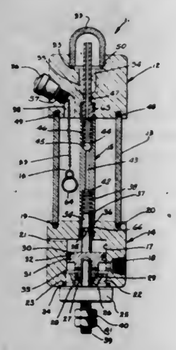
1. A pneumatic trampoline comprising an inflatable tubular member extending around the periphery of said trampoline to define a first pneumatic chamber adapted to be filled with pneumatic fluid, said trampoline including a hollow region lying laterally inwardly of and bounded by said tubular member, an upper closure member formed of flexible material connected to said tubular member and covering the upper end of said hollow region to form a jumping platform for said trampoline, a lower closure member formed of material of substantially less flexibility than said upper closure member and joined to said tubular member adjacent the lower peripheral surface of said tubular member to form a lower closure for said hollow region, said hollow region when closed by said upper and lower closure members defining a second pneumatic chamber adapted to be filled with pneumatic fluid, and an inflatable auxiliary expansion chamber positioned in said first pneumatic chamber in pneumatically sealed relation to said first pneumatic chamber and in fluid communication with said second pneumatic chamber.

3,130,817
LUBRICATION MECHANISM FOR FLUID DEVICE
Gunnar A. Wahlmark, 211 S. Rockford Ave., Rockford, Ill.
Original application Sept. 9, 1959, Ser. No. 838,868. Divided and this application Jan. 30, 1962, Ser. No. 169,869
7 Claims. (Cl. 184—6)



4. In a fluid device includinga rotatable swash member universally drivingly connected with a rotatable cylinder member for rotating said members with their axes angularly disposed, a casing containing said members, a plurality of pistons operatively disposed between the members for reciprocation in the cylinder member, said pistons each having a ball end universally secured in respective ball sockets in said swash member radially outwardly of the axis thereof, means providing a supply of lubricating fluid in said housing, and lubricating passage means conducting lubricating fluid from said casing axially through said members and radially outwardly to said ball sockets, whereby lubricating fluid flows from said casing through said lubricating passage means to said ball sockets in response to centrifugal force when said members are rotated.

3,130,818
INTERMITTENT PRESSURE INJECTOR
Neil V. Smith, La Canada, Calif., and Guy S. Mahan, Hudson, Ohio, assignors to International Basic Economy Corporation, New York, N.Y., a corporation of New York
Filed Feb. 8, 1960, Ser. No. 7,165
5 Claims. (Cl. 184—29)



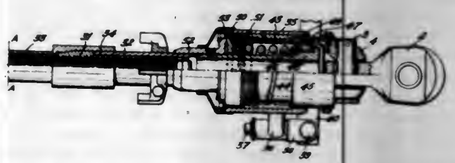
1. An intermittent pressure injector comprising: a head having a fluid passage extending therethrough; a base; an elongated cylindrical sleeve; a hollow stud threaded at opposite ends and threadedly engaging said head and said base to clamp said sleeve therebetween and form a reservoir; said stud having a plunger bore at the base engaging end thereof and communicating with a cylinder bore formed in said base, a plunger slidably mounted in said plunger bore and a piston formed integral therewith slidably mounted in said cylinder bore; a bleed inlet port adapted to receive bleed fluid upon the operation of a fluid operated device to extend said piston and plunger, perforations in said plunger bore near said base and communicating with said reservoir whereby liquid may enter said plunger bore, said plunger upon being extended shutting off the flow of liquid through said perforations and forcing the liquid in said plunger bore through said hollow stud member to be injected into said fluid passage by liquid conveying means formed in said head.

3,130,819
ENERGY ABSORBER
Andrew C. Marshall, Lafayette, Calif., assignor to Hexcel Products Inc., Berkeley, Calif.
Filed Nov. 9, 1962, Ser. No. 236,617
7 Claims. (Cl. 188—1)



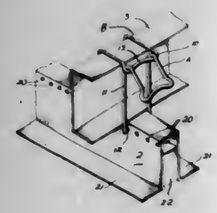
7. An energy absorber having uniform energy absorption characteristics comprising: honeycomb core means having a plurality of parallel aligned cells, each extending the length of the core and being adapted to restrain compression force directed in the direction of the cell axis; encasing means connected to surround the side wall of said honeycomb core comprising tape means having no appreciable stiffness, being substantially non-extensible, and of high tensile strength, said tape means having high loop strength and low columnar strength and being operable to maintain the peripheral dimension of said core substantially constant without the addition of appreciable columnar strength as the core is crushed by compression forces directed parallel to the cell axis.

3,130,820
AUTOMATIC SLACK ADJUSTERS FOR BRAKES
Jules Emile Joseph Feuilly, Paris, France, assignor to Societe Generale Isothermos, Paris, France
Filed Oct. 23, 1961, Ser. No. 146,954
Claims priority, application France Nov. 4, 1960
5 Claims. (Cl. 188—199)



4. In an automatic slack adjuster for brakes inserted in the brake linkage assembly, a two-part brake rod one part of which is displaceable axially in relation to the other rod part and of the type having a non-selflocking screw-threaded spindle in meshing engagement with a nut carried by said other rod part which is surrounded by a movable casing simultaneously displaceable rotatably around, and axially on, said other rod part under the action of a brake control device and adapted to be thus displaced, on the one hand, away from the nut while allowing a free unscrewing of said nut on the spindle until a clutch element carried by said other rod part engages a clutch surface provided on a stationary guide-sleeve housed in said casing and, on the other hand, towards said nut while engaging a clutch system connected to said other rod part for generating a controlled screwing of said nut on said spindle; the improvement which comprises a driving-ring included in the clutch system and freely mounted within the casing around the other rod part, a spring having butt-wound coils connected to, and housed within, said driving-ring while in sliding engagement with the casing for the mutual connection of said casing and driving ring by spreading of the coils of the spring during displacement of said casing towards the nut, and means for locking said driving-ring as soon as the casing tends to generate a motion of said other rod part adapted for causing unscrewing of the nut on the spindle.

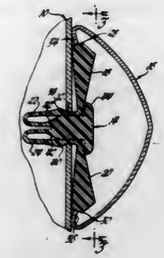
3,130,821
CLIP FOR SECURING SUSPENDED CEILING STRUCTURAL MEMBERS
Arthur H. Dunlap, Seattle, Wash., assignor to Beadex Dry Wall Specialties, Inc., Seattle, Wash., a corporation of Washington
Filed Nov. 4, 1960, Ser. No. 67,412
2 Claims. (Cl. 189—35)



1. A structural assembly comprising a first elongated structural member having holes spaced longitudinally, a second elongated structural member directed transversely of and positioned next to said first member, a pair of clips for interconnecting the two members, each clip comprising a flexible wire formed with a pair of parallel legs hooked at one end and engaged within the holes of the first member, each of a length to extend above the second member, and a connecting portion joining the upper ends of the two legs, each connecting portion being arched towards the hooked ends to define acute-angled corners at the junction of the connecting portion and the legs, the upper end of a first clip of a pair being bent over the second member, and the second clip of the pair having its legs within the acute-angled corners of the first clip, and bent reversely towards its hooked ends to retain the first member snugly against the second member.

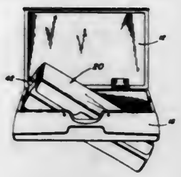
3,130,822
PLASTIC MOLDING CLIP
Engelbert A. Meyer, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 25, 1959, Ser. No. 842,422
1 Claim. (Cl. 189—88)

A molding clip for use in securing a molding strip having a pair of inturned flanges to a supporting panel having an aperture formed therein, said molding clip being formed of a fully flexible plastic material and comprising a body portion, a pair of U-shaped members extending from said body portion, the inner leg of each of said U-shaped members being integral with said body portion, an arm extending at a substantially right angle from each of the outer legs of said U-shaped members and in a direction away from said body portion and integral with said end of said outer leg of said U-shaped members, said U-shaped members and said body portion being receivable in said aperture in said supporting panel with said body portion between said outer legs of said U-shaped members and forcing said outer legs into retaining engagement with said panel, said arm members being engageable



with said flanges on said molding strip to secure said molding strip on said supporting panel, and a projection on each of said outer legs of said U-shaped members adapted to coact with said supporting panel and retain said molding clip in said supporting panel.

3,130,823
EXPANDABLE ARTICLE STORAGE CASE
Anthony J. Antonious, 3608 Cedar Drive, Baltimore 7, Md.
Filed Oct. 20, 1961, Ser. No. 146,617
10 Claims. (Cl. 190—44)

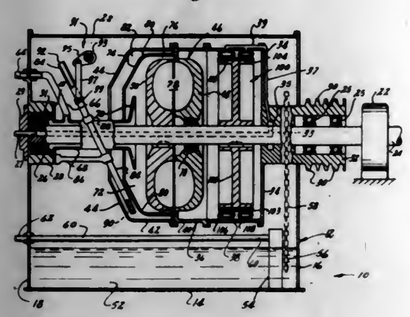


1. A storage case such as a vanity, luggage-attache case or the like, convertible from one size, shape and capacity to another, the case comprising;
(*a*) an outer frame with upstanding side walls enclosing the sides of a receptacle space, the outer frame being open across its top and bottom,
(*b*) an inner enclosed receptacle in the receptacle space,
(*c*) eccentric pivotal connecting means on the outer frame, the connecting means being equidistant from the extremities of the frame but unequidistant from the top and bottom of the frame sides,
(*d*) eccentric pivotal connecting means on the inner receptacle cooperating with the eccentric pivotal connecting means on the outer frame to pivotally support the receptacle within the outer frame eccentrically, the eccentric pivotal connecting means on the inner receptacle being equidistant from the extremities of the receptacle but unequidistant from the top and bottom of the receptacle,
(*e*) an openable cover member for the top of the outer frame, and
(*f*) stop means cooperating between the outer frame and inner receptacle to stop the inner receptacle for pivotal movements of 180° so that when the inner receptacle eccentrically pivots in the frame through 180° the space defined between the top of the inner receptacle and the openable cover member is variable in size, shape and capacity.

3,130,824
FLUID DRIVE FOR OIL WELL DRILLING DRAW WORKS

Axel F. L. Anderson, Detroit, Mich., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware

Filed Nov. 7, 1960, Ser. No. 67,688
3 Claims. (Cl. 192—3.2)

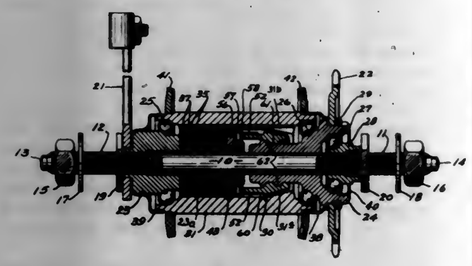


1. In a power transmitting drive,
an output shaft rotatably mounted on a support,
an annular input drum coaxial to and rotatably mounted in surrounding relation on said output shaft,
an annular space between said drum and said output shaft,
a fluid coupling in said space and having an impeller connected to said drum and a runner connected to said output shaft for transmitting power therebetween,
a positive lock-up clutch having a part connected to said input drum and a part connected to said output shaft to be operable between said drum and said output shaft,
said clutch being isolated from said fluid coupling by said impeller,
and means for actuating said positive lock-up clutch.

3,130,825
TRANSFER SPRING FOR COASTER BRAKE

Oscar P. Liebreich, Waterbury, Conn., assignor to The Mattatuck Manufacturing Company, Waterbury, Conn., a corporation of Connecticut

Filed Apr. 14, 1961, Ser. No. 103,097
8 Claims. (Cl. 192—6)

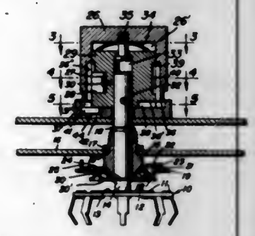


1. In a coaster brake for a bicycle or other machine having an axle, a tubular driver mounted on said axle, a hub shell rotatable on said axle, a tubular connector having end teeth surrounding said driver and having a serrated forward conical surface for detachable engagement with a smooth conical tapered socket in said hub shell, said driver having steep threads engaging corresponding threads on said connector, a tubular brake actuator adjacent said connector and having end teeth for detachable engagement with the end teeth of said connector, a tubular anchor member on said axle having a nonrotative connection with said actuator, braking means on said anchor member, a cup-shaped transfer spring member embracing said connector and said actuator, and means operated by pressing the bicycle pedal forwardly to cause forward motion of said connector into wedging engagement with said hub shell socket to rotate the latter and cause the bicycle to travel forwardly, means actuated by reverse pedalling to cause said connector to move rearwardly into toothed engagement with said actuator to squeeze said brake means to stop the bicycle, and means to permit coasting or free wheeling when said connector is in neutral position.

3,130,826
LIMITED-ROTATION UNIDIRECTIONAL DRIVE

John R. Davis and John E. Whatley, Shreveport, La., assignors to United Gas Corporation, a corporation of Delaware

Filed Oct. 12, 1962, Ser. No. 230,178
9 Claims. (Cl. 192—12)



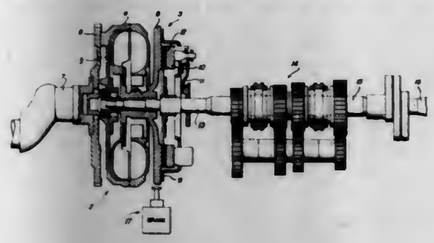
1. A latching one-turn unidirectional drive including a driven member and a driving sleeve member mounted rotatable around said driven member, a unidirectional drive means for connecting together said driving and driven members for one-direction drive only, means including a latch element engageable with said driven member for latching said drive, means on said driving member for releasing said latch element, and means operable on release of said latch element for providing an angular advance of said driven member in the direction of said one-direction drive whereby said driven member is displaced relative to said latch element into nonlatching relationship and until said driven member has been advanced one turn by said driving member whereupon said latch element reengages said driven member and again latches it against rotation.

3,130,827
CLUTCH CONTROL SYSTEM

Bruno E. A. H. Beeskow, Stuttgart-Bad, Cannstatt, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany

Filed Feb. 8, 1960, Ser. No. 7,358
Claims priority, application Germany Feb. 14, 1959
10 Claims. (Cl. 192—13)

1. An automatic clutch control system for motor vehicles having starting coupling means and separating clutch means adapted to effectively disconnect a mechanical change-speed gear from said starting coupling means, each of said means having a driving and driven part, comprising means for selectively engaging and disengaging said driving and driven parts of said separating clutch means, means interconnecting the driving part of said separating clutch means and the driven part of said starting coupling means for common rotation together, and brake means for the two parts consisting of the driven part of said starting coupling means and of the driving part of said separating clutch means, said brake means being effective to brake said parts during engagement of said separating clutch means to thereby prevent any clutching shocks in said separating clutch means during acceleration of the vehicle from a standstill thereof,

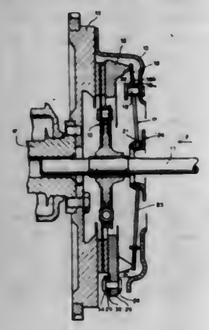


electrical actuating means for said brake means, means including an energizing circuit for energizing said electrical actuating means, and means including switch means in said energizing circuit for preventing the energization of said electrical actuating means above a predetermined, relatively low vehicle speed.

3,130,828
CLUTCH WITH ELASTIC WASHER

Jean Maurice, Paris, France, assignor to Societe Anonyme Francaise du Ferodo, Paris, France, a corporation of France

Filed July 24, 1961, Ser. No. 126,061
Claims priority, application France Aug. 2, 1960
12 Claims. (Cl. 192—66)

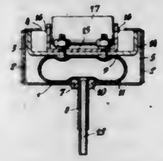


10. A clutch comprising in combination, a driving shaft and a driven shaft, a driving plate keyed on said driving shaft and an annular pressure plate fast for rotation with said driving plate and adapted for axial displacement with respect to said driving plate, at least one friction disc fast for rotation with said driven shaft and normally gripped between frictional annular areas of said driving plate and said pressure-plate, an annular closure cover fixed by its periphery on one of said plates and covering the other said plate, a conical elastic washer interposed between said cover and one of said plates, said washer being pivoted on said cover at points located on a circle intermediate between the edges of said washer, means for supporting the outer edge of said washer on one of said plates, radial slots formed in the lower edge of said washer so as to form a plurality of operating fingers, a declutching ring engaging the lower edge of said washer, thrust-actuated means for axially displacing said declutching ring, said pressure plate having beyond the outer contour of the frictional area thereof at least three radially projecting feet substantially coplanar with said pressure plate, at least three flexible tangentially-directed connecting flat coplanar tongues coupling said pressure-plate to said cover, each of said tongues being fixed at one extremity to one of said pressure-plate feet and at the other extremity to said cover, the extremities of said connecting tongues located in front with respect to the normal forward direction of rotation being fixed to said cover and the rear extremities of said tongues being fixed to said pressure-plate feet, said tongues being disposed on the side of said feet towards said driving plate so as to extend substantially in the plane of said friction-disc, said pressure-plate feet and said cover having two separate series of rivet holes serving respectively for the fixing of said connecting tongues, whereby said clutch can be adapted for either direction of rotation of said driving shaft without special machining.

3,130,829
CONVEYORS

Peter W. Long, Mobberley, Knutsford, England, assignor to Welded & Allied Products Limited, a company of Great Britain

Filed Mar. 20, 1962, Ser. No. 181,019
4 Claims. (Cl. 193—35)



1. A self contained and portable conveyor unit comprising an elongated flat base adapted to be supported on a horizontal surface, an elongated hollow member adapted to be inflated with fluid pressure mounted on said base and extending longitudinally thereof, an elongated rigid support extending generally parallel to said base and mounted on said elongated hollow member, a plurality of rollers longitudinally spaced above said support, means rotatably journalling said rollers on said support means, said means including an axis for each roller which extends laterally across said support and elongated hollow member, a pair of vertical side walls each integrally secured at its bottom edge to a side of said base, a pair of spaced top flanges parallel to said base, each top flange extending substantially the full length of the unit and secured to the top of each side wall, said top flanges projecting inwardly towards said rollers, the space between the top flanges being of greater width than the length of said rollers whereby said rollers may be forced upwardly between said top flanges by said hollow elongated member when it is inflated, and stop means secured to said support and adapted to engage said top flanges to limit vertical upward movement of said rollers, said top flanges serving as seals to prevent foreign matter from passing between the stop means and side walls.

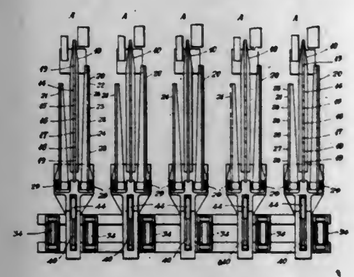
3,130,830
APPARATUS FOR THE MECHANICAL HANDLING OF BILLETS AND THE LIKE

Ernest N. Allbeson, Grenoside, England, assignor to The Brightside Foundry & Engineering Co. Limited, Sheffield, England, a company of Great Britain and Northern Ireland

Filed Mar. 20, 1961, Ser. No. 96,956
7 Claims. (Cl. 198—219)

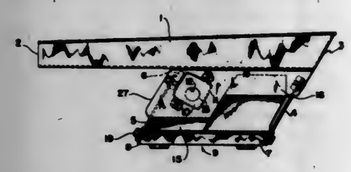
1. In apparatus for the mechanical handling of billets, a conveyor comprising a plurality of stationary laterally-

spaced elongate billet-receiving and -supporting elements extending in parallel relation, each of said elements having a plurality of steps the surface of each of which inclines downwardly from a loading end to a discharge end and being in upwardly stepped relation to an immediately preceding surface; a first set of levers having upwardly stepped inclined surfaces for lifting billets detained by alternate steps of the billet-receiving and -supporting elements; a second set of levers having upwardly



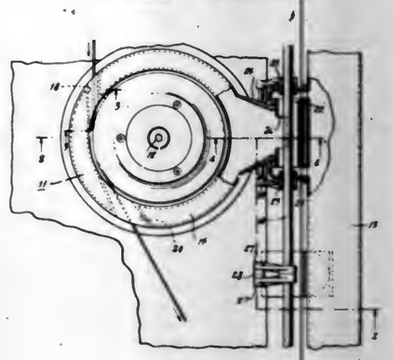
stepped inclined surfaces for lifting billets detained by the remaining steps of said elements; and means for lifting and lowering the first and second sets of levers in out of phase relation, whereby billets detained by alternote steps of the stationary billet-receiving and -supporting elements are lifted by the lifting of the first set of said levers and the billets detained by the remaining steps of the stationary billet-receiving and -supporting elements are lifted by the lifting of the second set of said levers.

3,130,831
BASE CONSTRUCTION FOR VIBRATORY FEEDER
Albert Musschoot, Barrington, Ill., assignor to Chain Belt Company, Milwaukee, Wis., a corporation of Wisconsin
Filed June 27, 1961, Ser. No. 119,923
7 Claims. (Cl. 198—220)



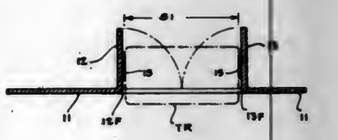
1. In a vibratory feeder, in combination, a conveyor pan of generally uniform cross section having a material receiving end and a discharge end, a base located under the receiving end of said pan, a plurality of spaced parallelly extending cantilever springs connecting the pan to the base, said springs extending along lines inclined upwardly toward the receiving end of the pan, a motor mounted on the pan with its center of gravity located generally on a line perpendicular to said springs and passing through the center of gravity of the conveyor pan, eccentric weights mounted on the shaft of the motor, said base having a low roof-shaped portion located under the mid-portion of said conveyor pan and a box-like portion located under the receiving end of the conveyor pan, said box-like portion having heavy walls and roof sections whereby the center of gravity of said base is located under the receiving end of said pan generally on the line perpendicular to said springs and passing through the center of gravity of said pan.

3,130,832
COOLING MEANS FOR WIRE DRAWING BLOCKS
Carl O. Bruestle, Metuchen, N.J., assignor to Syncro Machine Company, Perth Amboy, N.J., a corporation of New Jersey
Filed June 24, 1960, Ser. No. 38,562
8 Claims. (Cl. 205—14)



1. Cooling means for the drawing blocks of wire drawing machines, comprising, in combination; a duct for cooling gas extending along the wire drawing machine adjacent the drawing blocks thereof; a substantially cylindrical structure adapted to be positioned to encircle each drawing block, substantially concentric therewith said cylindrical structure having an axial extent covering a major portion of the axial extent of the drawing block; a toroidal gas passage concentric with each drawing block, means to inject gas from said toroidal passages against the external surface of the drawing blocks to cause cooling gas to flow over the surface of the drawing blocks and wire thereon while confined to the narrow passageway between said cylindrical structures and the drawing blocks and means for simultaneously removing said cylindrical structures from encircling position about said drawing blocks to permit string-up of the drawing machine.

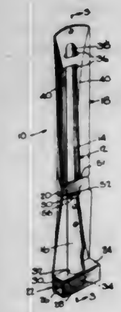
3,130,833
PANEL RETAINING STRUCTURE
Harry W. Glasser, R.R. 2, and Sibley McCaslin, 1762 Brookview Lane, both of Palatine, Ill.
Filed Mar. 12, 1962, Ser. No. 178,795
3 Claims. (Cl. 206—80)



1. A panel display support for displaying a merchandisable item for sale and inspection while preventing pilfering of such an item and comprising, a support panel having at least one opening therein, said opening being so dimensioned as to permit insertion of the item therein from the front of the panel to be supported within said opening with the edges of the opening neatly engaging the item with the front portion of the inserted item free of the panel for customer inspection, turn-back flaps hingedly arranged within said opening at opposite sides thereof and presenting surfaces engageable with corresponding surfaces of such an item when supported in said opening as aforesaid, said flaps when in use being normally

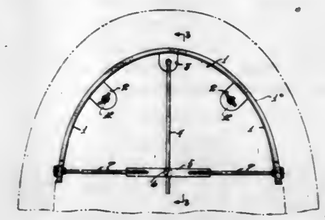
swung rearwardly to be disposed in planes extending substantially normal to the plane of said opening so as to extend toward the back of said panel to permit insertion of said item into said opening from the front of the panel and capable of swinging movement toward the front of said panel in the direction of said opening, and frictional securing material on said surfaces of said flaps to secure the flaps frictionally to said corresponding surfaces of the inserted item, whereby the flaps will be pulled forward to swing inward toward the plane of said opening when there is an impermissive forward tug on said item in an unauthorized attempt to pilfer said item, and whereby said item is permissibly freed for withdrawal from said opening upon knowledgeable manual release of the flaps from said item from the back of the panel.

3,130,834
DISPLAY PACKAGE FOR ELONGATED HANDLED IMPLEMENTS
Peter D. Korzaan, Teaneck, N.J., assignor to Utility Printing Company, Carlstadt, N.J., a partnership
Filed Dec. 30, 1963, Ser. No. 334,537
11 Claims. (Cl. 206—80)



1. A display package for an implement including a tool portion and a handle portion joined at a shoulder, said package comprising a resilient, flexible, elongated mounting panel that tends to assume a flat condition in repose and a sleeve transversely encircling the panel, said panel having a front surface on which the implement is mountable, means defining an opening near the top of the panel to admit the tip of the tool portion, a seat at the bottom of the panel to abuttably receive the lower end of the handle portion, said panel having an outwardly concave weakened narrow zone adjacent a long side thereof and running longitudinally of the panel and also having a straight weakened narrow zone disposed substantially centrally of the panel and parallel to a long side, the panel being flexed frontwardly along said zones, said sleeve having a girth greater than the width and less than double the width of the panel in repose so as to hold the panel flexed frontwardly when the sleeve is fitted thereover, said sleeve including a tab manually manipulatable between non-operative position wherein it projects away from the seat and an operative position wherein it projects towards the seat and the front of the panel, whereby with the implement mounted on the panel with the lower end of its handle portion received in the seat and tip of its tool portion received in the opening, the sleeve is movable to a position adjacent the handle wherein the tab in its operative position abuts the shoulder between the tool portion and the handle portion thereby to retain the implement on the panel and prevent longitudinal, transverse, front-to-back and twisting movement thereof and to rigidify the package as a whole.

3,130,835
HAT HOLDERS
Alan L. Feinman, 186 Beach 149th St., Neponsit, N.Y.
Filed Nov. 15, 1961, Ser. No. 152,451
1 Claim. (Cl. 211—32)



A hat holder comprising a flexible strip in arcuate form, apertured lips carried by the strip and adapting the same for attaching the strip to a holding surface, an internally threaded bar disposed within the arcuate strip centrally thereof, a rod attached to the strip interiorly thereof and at its longiudinal center, an aperture in the internally threaded bar into which the rod is passed, a set screw carried by the bar and adapted to engage the rod, two threaded screw members, each passed through one end of the strip and threaded into said bar, and a head on each screw exteriorly of each strip and adapted as a thumb piece for turning the screw for adjustment of the strip relatively to the bar upon release of the rod by said screw.

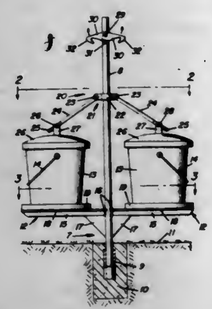
3,130,836
DISPENSING RACK
Edwin O. Conrad, 1730 Vahlen St., Madison, Wis.
Filed Sept. 26, 1961, Ser. No. 140,812
6 Claims. (Cl. 211—74)



5. A plurality of ampules and an ampule rack, said ampules being generally uniform in cross section and height and each including a main portion, said rack being resilient under cryogenic conditions and comprising a hollow elongated unitary sheet metal body extending over an arc of slightly greater than 180 degrees in cross section to normally engage said containers over slightly greater than one-half of their circumference and having an open side delimited by opposed edge portions of said body, said edge portions being spaced apart a distance slightly less than the transverse dimension of the main portion of said ampules, said body formed with a plurality of longitudinally spaced access openings therethrough generally opposite said open side and distributed

over substantially the full length of said rack, portions of said body extending between said openings and resiliently resisting spreading of said edge portions from one another transversely of said body at least within a range of movement corresponding to enlargement of the clearance between said edge portions to a width equal to the transverse dimension of said main portions, whereby ampules may be retained in said rack by said edge portions and may be ejected through said open side by pressure applied through said openings.

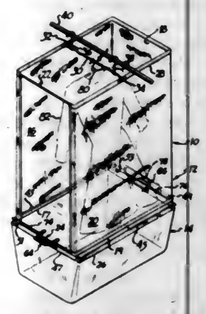
3,130,837
GARBAGE CAN RACK
Chester R. Baker, 516 N. Willson Ave., Bozeman, Mont.
Filed Sept. 11, 1962, Ser. No. 222,908
5 Claims. (Cl. 211—83)



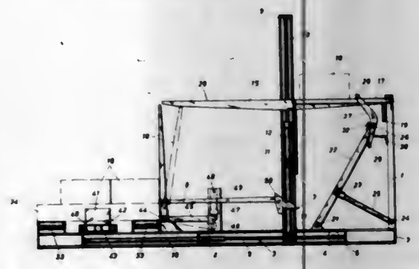
5. A garbage can rack comprising a stand including a post, a pair of horizontally orientated platforms secured to said post and projecting therefrom at diametrically opposite points for receiving and supporting a pair of garbage cans, a rigid vertically swingable arm pivotally mounted on the post below the upper end thereof and above each platform, a cover for each can pivotally mounted on each arm, the outer end portion of each arm being laterally bent, a pair of vertically swingable hooks pivotally mounted on the post adjacent the upper end thereof and engageable with the laterally bent end portions of the arms upon an upward swinging of the arms, and a single flange on the post below the vertically swingable hooks, said flange supporting the hooks in the pivotal path of the laterally bent end portions of the arms and limiting the vertical swinging of the hooks.

3,130,838
CLOTHES DRIER
Thomas C. Holka, 7581 Dobel, and Charles J. Haddad, 133 W. Margaret, both of Detroit, Mich.
Filed Aug. 23, 1961, Ser. No. 133,359
2 Claims. Cl. 211—113)

1. A clothes drier for drying clothes indoors comprising an enclosure for clothes; said enclosure having flexible side walls with ventilating openings therein for ventilating the enclosure interior; said side walls having an access opening for permitting the hanging of clothes therein; an upper support frame on the upper end of said side walls and a lower support frame on the lower end of said side walls; means extending upwardly from the upper support frame and exteriorly of the enclosure for suspending the clothes drier from a support; a support structure carried by the upper supporting frame for hanging clothes within the enclosure; and a basket detachably mounted on the lower support frame; said basket being water impervious for containing wet clothes prior to hanging of the clothes in the enclosure and for collecting water which drips from wet clothes hung in the enclosure.

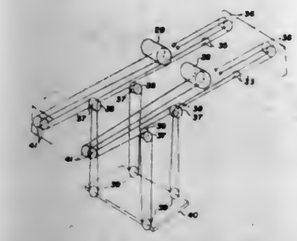


3,130,839
LOADING APPARATUS
Halvor Gråsvoll, Rosengatan 1, Goteborg, Sweden, assignor of one-third each to Gustav Gilbert Magnusson and Karl Ingvar Weiner, both of Goteborg, Sweden
Filed May 31, 1962, Ser. No. 198,789
Claims priority, application Sweden June 6, 1961
4 Claims. (Cl. 214—6)



1. A machine for transferring articles from a conveyor roll track to a pallet comprising a frame structure having a base carrying axially parallel rolls of the track; a plurality of rails between some of the respective rolls of the track and projecting horizontally and parallel therefrom to form a grated shelf-like platform; means for supporting the rails on the base at the zone of the platform adjacent the track to fix the position of the shelf-like platform, a carriage for travel substantially on the base in the direction of the axis of the rolls, said carriage having a stand; a plurality of bars carried on the stand and disposable between the rails and projecting horizontally away from the rolls to form an elevator platform on the stand; means for raising and lowering the elevator platform on the stand and with respect to the base, the limit of upward movement of the elevator platform being at least the height of the shelf-like platform so that the elevator platform can lift articles therefrom; pallet supporting means near the base and under the zone of movement of the elevator platform but from under the fixed shelf-like platform, generally vertically projecting stripper prongs mounted for turning in a common plane and between the bars of the elevator platform, the turning being about a line near the base of a pallet supporting means so as to turn to substantially vertical position and vertically aline articles on a pallet on the supporting means, the limit of movement of the carriage away from the conveyor being sufficiently great for the elevator platform to clear the shelf-like platform.

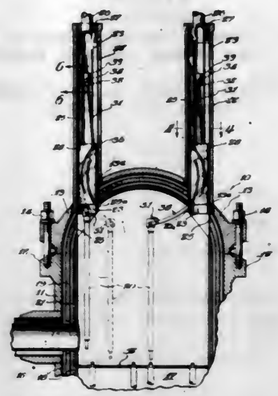
3,130,840
CONTAINER SHIP CRANES
Mark D. Myers, Sebring, and George A. Noble, John W. Simmons, and William C. Bennett, Alliance, Ohio, assignors to The Alliance Machine Company, Alliance, Ohio
Filed Oct. 12, 1961, Ser. No. 144,719
10 Claims. (Cl. 214—15)



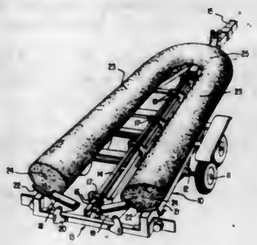
1. In a container ship having spaced apart rails adjacent each edge of the deck parallel to the center line, a crane structure adapted to move on said rails comprising a main frame extending transversely of the ship, leg means on the ends of said frame holding the frame vertically above the ship deck, drive means carrying the leg means on the rails on the deck, an extensible girder means mounted for movement on the main frame transverse to the center line of the ship from one extreme position where the extensible girder extends over one side of the ship to an opposite extreme position where the opposite end extends over the opposite side of the ship, a load trolley movable on said extensible girder from one end to the other, a machinery trolley movable on the extensible girder, connections between the machinery trolley and the load trolley whereby the two trolleys may be selectively positioned in any one of a plurality of positions with respect to one another to set up a given operative relationship between the machinery trolley and the load trolley and thereafter the load trolley and machinery trolley are moved in unison so that the machinery trolley counterbalances the load trolley, and drive means moving the extensible girder, the load trolley and the machinery trolley in cooperative relationship.

3,130,841
ARTICLE HANDLING DEVICE
Kenneth A. Trickett, San Diego, Calif., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed Oct. 10, 1962, Ser. No. 229,770
4 Claims. (Cl. 214—28)

1. An article handling device which comprises an elongated tubular housing, a pair of substantially parallel spaced-apart planar guide members disposed lengthwise within and secured to said tubular housing so as to define a spaced region therebetween, said guide members having respective members of a first and of a second pair each of congruent, coextensive, spaced-apart, laterally-aligned, arcuately shaped guideways provided therein the radial center of curvature of each said guideway being located at a longitudinal station between those of the extremities of that guideway, with all said arcuate guideways being convex in the same general direction, and with said second pair of guideways being disposed in a nested, generally side-by-side relationship with, and on the concave side of, said first pair of guideways, an arcuate arm assembly mounted between said guide members and spatially oriented with respect to said guideways such that the portion of said arcuate arm assembly proximate said guide members is convex in said same general direction as that of all of said guideways, said arcuate arm assembly further having two pairs of laterally-aligned projecting portions, each said portion positioned for movement within a respective one of said arcuate shaped guideways and substantially along the longitudinal axis of said housing, said pairs of projecting portions being located at different, substantially-spaced respective stations along the length of said arcuate arm assembly, both said respective stations being proximate a first extremity of said arcuate arm assembly, with the pair nearer said first extremity being positioned for movement within said first pair of guideways, and means for imparting motion lengthwise of said housing to said portion of said arcuate arm assembly proximate said guide members, said arcuate arm assembly thereby being adapted, upon said portion thereof being thus moved lengthwise of said housing, to have its advance, as dictated by the movement of said projecting portions through said arcuately shaped guideways, translated into motion of the free, second extremity of said arm assembly along a path substantially perpendicular to the longitudinal axis of said housing.



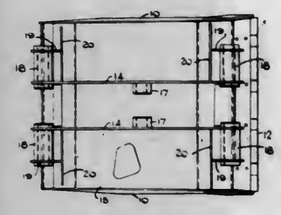
3,130,842
TRAILER FOR AUTOMOBILES AND DEVICE FOR BOAT SUPPORT THEREIN
Alfonso Melloni, Alfredo Musset St. 218, Mexico City, Mexico
Filed Oct. 11, 1962, Ser. No. 229,896
3 Claims. (Cl. 214—84)



1. A trailer for automobiles made with the purpose of carrying boats which comprises, in combination, one or more pairs of road wheels, transverse axles between each pair of wheels, a frame supported on a suitable truck on said wheels, said frame having a plurality of small diameter wheels supported freely rotatably on a corresponding plurality of brackets attached to said frame, a pair of rollers rotatably supported on the rearmost member of said frame and capable of assuming a suitable angle in order to conform to the shape of the hull of a boat, said

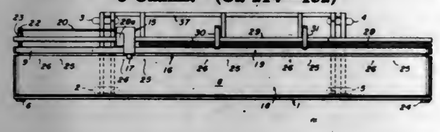
small diameter wheels and rollers forming a rolling device for launching and retrieving the boat, at least one wide support extending longitudinally along both sides of said frame and having a concave upwardly curved surface, and a single inflatable cushion pad arranged on said curved surface of the support and having interconnected side portions capable of being simultaneously inflated and deflated to raise and lower the hull of a boat from and to said rolling device.

3,130,843
EXCAVATORS
Alec J. Kelly, Uttoxeter, England, assignor to J. C. Bamford (Excavators) Limited, Uttoxeter, England, a British company
Filed May 23, 1962, Ser. No. 196,930
2 Claims. (Cl. 214—145)



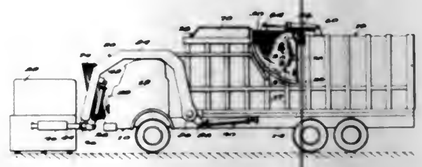
1. A reversible excavating bucket for a mechanical excavator of the type specified comprising spaced side walls, a top wall extending between the upper edges of the side walls, a pair of spaced apart upright main webs extending longitudinally over the intermediate region of the top wall from end-to-end thereof, an inwardly projecting collar secured to the inner face of each main web at the centre portion thereof so as to have said collars in axial alignment, two sleeve members mounted in each main web, one at each end thereof, each sleeve member being secured at its one end in the associated main web and extending outwardly from the main web so as to have the two sleeve members at each pair of ends of the main webs in axial alignment, further upright webs secured to the top wall and the outer ends of said sleeve members being secured in said further upright webs.

3,130,844
STITCHING TOBACCO LEAVES FOR HANGING
Forest Robinson, Eagle, Ontario, Canada, and Victor Lapadat, P.O. Box R.R. 3, West Lorne, Ontario, Canada
Filed Nov. 21, 1961, Ser. No. 153,918
Claims priority, application Canada Apr. 21, 1961
5 Claims. (Cl. 214—152)



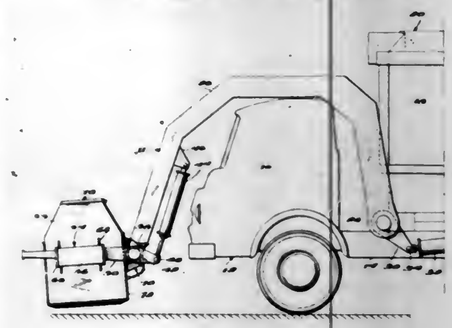
1. A method of stitching tobacco leaves on a lath comprising the steps of randomly arranging a first row of leaves with the ends of their stems substantially aligned, placing a lath across the arranged leaves substantially parallel to but spaced from the aligned ends of the stems, arranging a second row of leaves in a like manner to said first row but above the lath, and stitching the two rows of leaves along a line contiguous to the lath between the lath and the aligned stem ends to form a stitched leaf-lath unit.

3,130,845
FRONT END LOADERS
Henry C. French and Neil F. Wender, Knoxville, Tenn., assignors to Dempster Brothers, Inc., Knoxville, Tenn., a corporation of Tennessee
Filed May 19, 1961, Ser. No. 111,298
3 Claims. (Cl. 214—302)



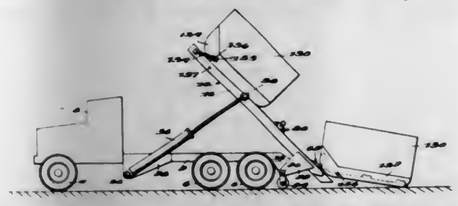
1. In container handling equipment including a body having an opening at the top thereof, and a pair of arms for moving a container over the opening, the combination of a cover for the opening, said cover being pivotally connected to the body along one end of the opening for swinging movement about a horizontal axis, sector-shaped shields attached to opposite sides of the cover and movable with the cover into position along opposite sides of the opening when the cover is open, and elongated shields attached to each arm and positioned thereon to extend upwardly along said opposite sides of the opening in line with the sector-shaped shields after the arms move the container over the opening.

3,130,846
FRONT END LOADER EQUIPMENT
Neil F. Wender, Knoxville, Tenn., assignor to Dempster Brothers, Inc., Knoxville, Tenn., a corporation of Tennessee
Filed May 19, 1961, Ser. No. 111,306
6 Claims. (Cl. 214—302)



2. In front end loader equipment including a vehicle having a body thereon, loader means including a pair of fork arms and mounted on the vehicle for raising and lowering movements relative thereto, the combination with the vehicle, of a container, sleeves on opposite end portions of the container slidably receiving the fork arms therein to raise the container during upward movement of the loader means, and latch means on a side of the container toward the loader and interconnecting said side with the loader.

3,130,847
TRANSPORTING EQUIPMENT FOR CONTAINERS
George R. Dempster, P.O. Box 3127, Knoxville 17, Tenn., and William A. Herpich, Galion, Ohio; said Herpich assignor to Dempster Brothers, Inc., Knoxville, Tenn., a corporation of Tennessee
Filed Mar. 11, 1960, Ser. No. 14,313
9 Claims. (Cl. 214—505)



2. In transporting equipment of the character described, the combination of a separate container, an elongated frame adapted to be mounted on a vehicle and to receive and support thereon the separate containers, first and second container engaging means mounted on a carriage on the frame for reciprocating movement longitudinally with respect thereto, and adapted to be used sequentially, each container engaging means having opposed surfaces thereon for pulling or pushing the container, respectively, said first and second container engaging means being spaced apart longitudinally of the frame, the first container engaging means having a path of reciprocating movement at one end of the frame whereby the first container engaging means can engage the container for pulling or pushing the container onto or off the frame, the second container engaging means having a path of reciprocating movement extending farther toward the opposite end of the frame than the path of the first container engaging means whereby the second container engaging means can engage the container after the container is on the frame to move the container toward the opposite end of the frame beyond the path of the first container engaging means or away from the opposite end of the frame over the path of the first container engaging means, said second container engaging means including means for selectively rendering the second container engaging means operative to engage the container for pulling or pushing the container, or for rendering the second container engaging means inoperative when the first container engaging means is pulling or pushing the container to prevent interference with the container.

3,130,848
BOTTLE CAP WITH INTERRUPTED THREADS
Roy D. Chancellor, 1266 Naglee St., San Jose, Calif.
Filed June 11, 1963, Ser. No. 287,073
4 Claims. (Cl. 215—9)

1. A container and safety closure therefor including in combination:

(*a*) a container having a cylindrical neck at the open end thereof;

(*b*) integral threads molded in the cylindrical neck, said threads having at least a single interruption therein whereby to form at least a single notch having shoulders formed by said thread at either side thereof;

(*c*) a cover thereon including a collar having internal threads mating with the threads on the neck of the said container;

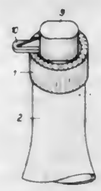
(*d*) a tongue secured against rotation relative to said cover and extending downwardly therefrom to engage the said notch formed by the said interruptions in the said threads of the container neck, said tongue being normally urged inwardly toward the said threads of the said container;

(*e*) and means for urging said tongue outwardly from said notch formed by the said interruption, said means including a deformable topmost portion on the said



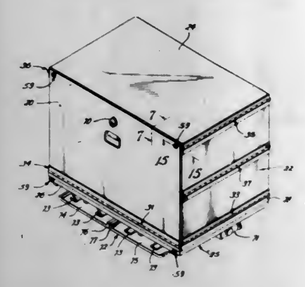
cover and means for translating vertical motion of said topmost portion into radial motion of the said tongue.

3,130,849
BOTTLE CLOSURE
Kurt Hengstenberg, Esslingen (Neckar), Germany, assignor to Rich. Hengstenberg, Esslingen (Neckar), Germany, a corporation of Germany
Filed May 10, 1962, Ser. No. 193,799
1 Claim. (Cl. 215—79)



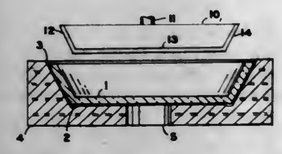
A bottle closure of a resilient material comprising a hood adapted to be secured to the mouth of a bottle, a mouthpiece integral with and projecting from said hood and having an elongated shape with an end opening therein extending substantially across the entire width of said bottle mouth and having substantially parallel side walls, said mouthpiece having a transverse partition so as to form two channels for pouring out the contents of the bottle and for admitting air into the bottle, respectively, said mouthpiece having a thin, flat, transverse web covering said end opening and integral with said mouthpiece for hermetically closing said opening, said web having outer dimensions slightly smaller than those of the end of said mouthpiece underneath said web so as to form a peripheral recess and thus a thin connecting portion between the end of said mouthpiece and said web adapted to be easily cut to sever said web from the end of said mouthpiece, said web having a transverse groove in its upper surface over and in alignment with said partition, and a removable caplike member adapted to fit tightly over said mouthpiece for protecting said mouthpiece before said web is severed therefrom and then adapted to rest on and be supported by said web, and also for hermetically sealing the opening of said mouthpiece after said web is removed.

3,130,850
COLLAPSIBLE CONTAINER
William E. Oakey, Ethelbert J. Baker, Jr., and Willis L. Mynatt, San Antonio, Tex., and Junius W. Millard, 16 Alder Lane, and Norman Weisberg, 12 Karal Drive, both of Framingham, Mass.; said Oakey, said Baker, and said Mynatt, assignors to Southwest Research Institute, San Antonio, Tex., a trust estate
Filed Aug. 24, 1961, Ser. No. 133,720
16 Claims. (Cl. 220—6)



1. A collapsible container comprising: an outer shell having top, bottom and side wall panels of rigid material; means for hingedly connecting said side wall panels with said top and bottom wall panels, said side wall panels being swingable about their respective hinged connections between erect positions and collapsed positions stacked in predetermined order between said top and bottom wall panels; a closed flexible bladder mounted within said outer shell; means for attaching said bladder only to the bottom wall panel and to the side wall panel of said shell which is stacked adjacent the bottom panel; and means including an opening in at least one of the attached bladder walls for introducing material into and removing same from the bladder.

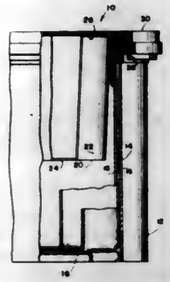
3,130,851
ARTICLE MOUNTING MEANS
Paul G. Gill, Christian Ave., Stony Brook, Long Island, N.Y.
Filed Aug. 21, 1962, Ser. No. 218,378
1 Claim. (Cl. 220—12)



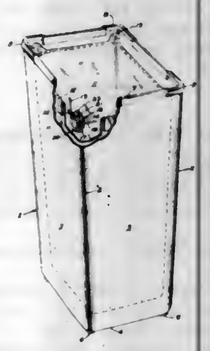
Ashtray means comprising:
a dish having upper and lower peripheral rims,
a cork holder hollowed out to fit said upper and lower rims with a gripping fit, said dish being completely enclosed in said holder and
a finger hole in the base of said holder for the purpose of ejecting said dish from said holder.

3,130,852
BAIT CONTAINERS
Keith Klugh Cook, 208 Kelso St., Paxtang, Harrisburg, Pa.
Filed May 1, 1961, Ser. No. 106,587
4 Claims. (Cl. 220—17)

1. A bait container comprising an outer container having side walls and a bottom wall; a first resilient joint member surrounding the upper end region of said side walls thereby providing an inner sealing surface adjacent said side walls; an inner container having a side wall and a bottom wall and including an upper flange portion extending outwardly from the side wall thereof, and a rim portion extending downwardly from the periphery of said upper flange; a second resilient joint member attached to the recessed surface defined by the side wall of said inner container, the lower side of said upper flange portion, and the inside peripheral side of said downwardly extending portion, the outer surface of said second resilient joint member attached to the side wall of said inner container sealingly engaging the inner surface of said first resilient joint member; a cover for said casing including a downwardly extending peripheral side wall; a third resilient joint member attached to the inner surface of said cover sidewall the inner surface of said third resilient joint member sealingly engaging the outer surface of the downwardly extending flange portion of said inner container.



3,130,853
SUPPORT FOR DISPOSABLE BAGS IN WASTE RECEPTACLES
Edward W. Colthurst, Corte Madera, Wilbert W. Dennis, Palo Alto, Gerald V. Ball, Walnut Creek, and Herbert J. L. Baum, Larkspur, Calif., assignors to Mipro Metal Products Co., a corporation of California
Filed May 13, 1963, Ser. No. 279,851
8 Claims. (Cl. 220—17)



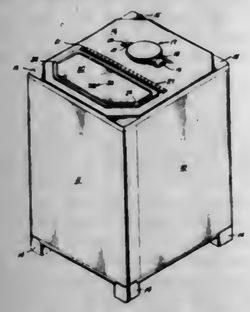
1. In a receptacle, in combination
(*a*) a receptacle body
(*b*) a collapsible open end bag inserted in said body
(*c*) a plurality of hooks secured inside said receptacle
(*d*) a support frame resting on said hooks within and spaced from the sides of said receptacle so as to accommodate the edges of the open end of said bag to be folded over and held by the frame in open position.

3,130,854
TELEVISION PICTURE TUBE ENVELOPE
Raoul J. Casciari, Corning, N.Y., assignor to Corning Glass Works, Corning, N.Y., a corporation of New York
Filed June 3, 1960, Ser. No. 33,736
3 Claims. (Cl. 220—2.1)



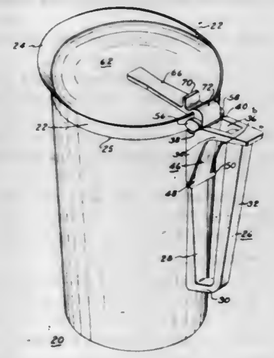
1. As an article of manufacture, a skirted television picture tube panel provided with a hollow skirted mask of rigid material whose wall is of no greater thickness than the wall of the panel having inner and outer surface contours similar to the corresponding surfaces of such panel and its skirt the interior of such mask being of a size to receive the panel and its skirt with a space remaining between opposed surfaces of the panel and mask and their skirts, said space being substantially filled with a fully cured rubbery plastic adhesively joined to such surfaces.

3,130,855
SHIPPING CONTAINER
George Gunn, Jr., Seattle, Wash., assignor, by mesne assignments, to Hoover Ball and Bearing Company, Saline, Mich., a corporation of Michigan
Filed Dec. 8, 1960, Ser. No. 74,623
1 Claim. (Cl. 220—30)



A shipping container for granular materials comprising a rectangular bottom wall provided adjacent its corners with depending legs, two pair of spaced substantially parallel rectangular side walls secured to and extending upwardly from said bottom wall, and a rectangular top wall secured to the upper ends of said side walls and having corner leg supporting portions positioned in substantial vertical alignment with said legs; means on said top wall defining an irregularly shaped opening disposed closer to the upper end of one of a pair of parallel ones of said side walls than to the upper end of the other one of said side walls in said pair, said discharge opening having a first pair of substantially parallel opposite edges one of which is shorter than the other and is disposed adjacent the upper end of said one side wall and between a pair of leg supporting portions, said discharge opening having a second pair of edges first portions of which diverge from opposite ends of said shorter edges at positions between a pair of corner leg supporting portions, said second pair of edges having second portions which are substantially parallel and are disposed adjacent the upper ends of the other pair of said side walls and intersect the longer edge in said first pair of edges at the ends thereof, a door shaped to overlie said discharge opening, hinge means for said door supported on said top wall at a position substantially parallel to and adjacent said longer edge of said opening, and coacting latch means on the underside of said discharge door and said container adjacent said shorter edge of said opening.

3,130,856
MOLDED ARTICLES AND METHODS OF MAKING SAME
Jules Paul Gits, 1003 Lathrop Ave., River Forest, Ill.
Filed Apr. 15, 1963, Ser. No. 272,932
10 Claims. (Cl. 220—31)



1. A pitcher that has:
(*a*) a body portion,
(*b*) an arm extending generally radially outwardly from said body portion,
(*c*) a second arm extending generally radially outwardly from said body portion,
(*d*) said arms being, in part, spaced apart circumferentially of said body portion,
(*e*) said arms having concave-convex recesses in the upper surfaces thereof,
(*f*) said arms having generally vertically-directed recesses in the bottom surfaces thereof,
(*g*) said arms forming part of a handle for said pitcher.
(*h*) a closure for said pitcher, and
(*i*) a hinge for said closure,
(*j*) said hinge having a hinge plate that is disposable, in part, between said arms, whereby part of said hinge plate will be overlain by said arms,
(*k*) said hinge plate having tangentially-extending ears that are disposable, in part, within said concavo-convex recesses in said upper surfaces of said arms,
(*l*) said hinge plate having further, tangentially-extending ears that are adapted to underlie said recesses in the bottom surfaces of said arms,
(*m*) the first said tangentially-extending ears being adjacent the top of said hinge plate,
(*n*) said further, tangentially-extending ears being adjacent the bottom of said hinge plate,
(*o*) said further, tangentially-extending ears having abutments thereon which are engageable with said recesses in the bottom surfaces of said arms to releasably secure the bottom of said hinge plate to said arms,
(*p*) the unstressed distances between the first said tangentially-extending ears and said further, tangentially-extending ears being less than the distances between said concavo-convex recesses in the upper surfaces of said arms and said recesses in the bottom surfaces of said arms whereby said hinge plate

must be stressed whenever the first said tangentially-extending ears are disposed in said concavo-convex recesses in the upper surfaces of said arms and said abutments on said further, tangentially-extending ears are in engagement with said recesses in the bottom surfaces of said arms,

(*q*) said closure being disposable within the open top of said pitcher to substantially close said open top,

(*r*) said closure being substantially hidden from view whenever it is disposed within the open top of said pitcher,

(*s*) said hinge having a second hinge plate that rotatably secures said closure to the first said hinge plate and thus to said pitcher,

(*t*) said second hinge plate having a gooseneck therein to enable said closure to be disposed within the open top of said pitcher,

(*u*) said hinge and said closure being securable to and separable from said pitcher as a unit,

(*v*) the first said tangentially-extending ears tending to appear to merge with the top surfaces of said arms,

(*w*) said further, tangentially-extending ears tending to appear to merge with the bottom surfaces of said arms,

(*x*) said concavo-convex recesses and the first said tangentially-extending ears normally receiving any forces which would tend to separate the first said hinge plate from said arms,

(*y*) said further, tangentially-extending ears being displaced from the forces which normally tend to separate the first said hinge plate from said arms,

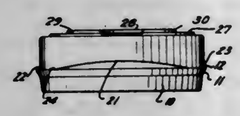
(*z*) the first said hinge plate and the said ears thereon being disposed wholly exteriorly of the interior of said pitcher,

(*aa*) the first said hinge plate being disposable between said arms and being disposable so it is generally radially-directed of said body portion to permit said hinge plate to be moved downwardly until the first said tangentially-extending ears are adjacent said upper surfaces of said arms,

(*ab*) the first said hinge plate thereafter being rotatable until it is generally tangentially-directed of said body portion to permit the first said tangentially-extending ears to be moved into said concavo-convex recesses in said upper surfaces of said arms,

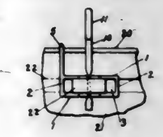
(*ac*) said abutments on said further, tangentially-extending ears then being movable into engagement with said recesses in the bottom surfaces of said arms.

3,130,857
CONTAINER WITH SNAP-OFF COVER
Ralph V. Burdick and Ralph V. Burdick, Jr., Loudonville, N.Y. (both of P.O. Drawer 29, Albany 1, N.Y.)
Filed June 24, 1963, Ser. No. 290,017
6 Claims. (Cl. 220—43)



1. In a box of the character described, adapted for use in containing semi-solid materials such as waxes and the like having a top portion and a bottom portion, said bottom portion including a circular bottom, and upwardly extending side wall, a top beaded edge of said side wall, an outwardly formed peripheral ledge intermediate said side wall and extending therefrom upwardly to form an angle therewith in the range of 10° to 25°, a channel formed between said side wall and said ledge, said cover including a circular top surface, a double knuckle formed peripherally of said top surface, a downwardly extending resilient skirt connected at its upper edge to said top surface by said double knuckle, a first cut-out portion of said skirt, a second cut-out portion of said skirt opposite said first cut-out portion, said skirt sealingly embracing said beaded edge with the bottom edge of said skirt disposed within said channel and (a depressed portion of said cover overlying said first cut-out portion) whereby downward pressure on said depressed portion will unseat said cover as the ends of said skirt adjacent said first cut-out portion are pivoted against said ledge and said second cut-out portion is disengaged of said bead.

3,130,858
CONTAINER COVER RETAINING STRIP GUIDE AND REMOVING KEY
Gustave O. Matter, 3112 NE. 46th Ave., Portland, Oreg.
Filed Apr. 9, 1962, Ser. No. 185,937
2 Claims. (Cl. 220—52)

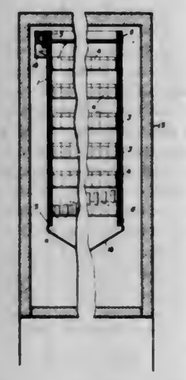


1. A guide for a container cover retaining strip being removed from a container and its cover and wound onto the stem of a conventional key of the type having a winding stem with a slot near one end thereof to receive the starting end of the retaining strip and with a hand piece at the other end of the stem for manual rotation of the winding stem with the starting end of the retaining strip inserted into the slot in the stem of the key which is adapted for the removal of the retaining strip and thereby permitting manual removal of the cover from its container, said guide comprising two side walls and two end walls, a guide opening bounded by said side walls and said end walls, said side walls having openings therethrough to permit the insertion of the stem of the key to position the slot in the stem between the said two side walls which are spaced apart sufficiently to permit the width of the retaining strip to pass through said guide opening between said side walls and be guided thereby, a guide arm extending upward from the end wall which is at the forward end of said guide when the retaining strip is being removed from the container and its cover, the upper end portion of said guide arm being adapted to rest on the top of the container cover while the retaining strip is being removed with the key, said guide arm being at the forward end of said guide thereby maintaining its position relative to the container regardless of the diameter of the retaining strip being accumulated on the stem of the key and at the same time allowing the rearward end of the strip guide to move in a direction away from the container as required by the accumulation of the retaining strip being wound onto the key stem.

3,130,859
APPARATUS FOR DISPENSING GOODS
Willem Jacobus Vermeer, Nijmegen, Netherlands, assignor to N.V. Hoornsche Metaalwarenfabriek v/h G. Scholten, Hoorn, Netherlands, a limited liability corporation of the Netherlands
Filed May 8, 1961, Ser. No. 124,745
Claims priority, application Netherlands May 12, 1960
4 Claims. (Cl. 221—78)

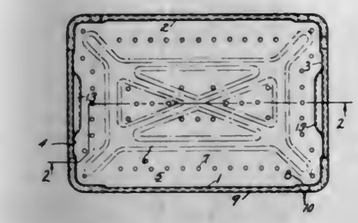
1. An apparatus for dispensing articles, comprising a conveyor having a part thereof extending in a vertical path, the conveyor being adapted to run downwardly along said vertical path, a plurality of support members

at spaced intervals along said conveyor for supporting the articles to be dispensed against gravity, a front wall adjacent the vertical path at least near the bottom of said vertical path and having a lower edge at the point at which the articles are to be dispensed from the conveyor, and resilient means mounted on said front wall and normally projecting into the path of the support members on said conveyor in an untensioned condition at a point immediately below the lower edge of said front wall from



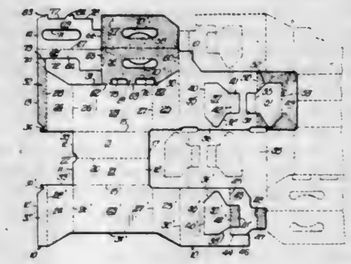
a point on the other side of the vertical path from said vertical wall and adapted to be moved out of the path of the support members when the conveyor moves downwardly by the movement of said support members against said resilient means, whereby when the support members have passed said resilient means, said resilient means springs back into the path of the conveyor toward the front wall and urges an article to be dispensed off said support members and under the lower edge of said front wall.

3,130,860
OPEN TOP CONTAINER
Fred Oberkircher, Fairview, Pa., assignor to Union Carbide Corporation, New York, N.Y., a corporation of New York
Filed May 10, 1961, Ser. No. 109,125
1 Claim. (Cl. 220—97)



An open top rectangular container having integral side, end and bottom walls, said side and end walls being joined to each other by angular corner portions with sides which extend substantially the full depth of the container and in the same general direction as the adjacent side and end walls, the upper edges of the sides of the corner portions being spaced inward from the adjacent side and end walls whereby the rectangle defined by the upper edges of the corner portions is smaller than the rectangle defined by the side and end walls, the sides of the corner portions being integral with and in substantially direct continuation of the adjacent side and end walls, an outwardly extending rim integral with the upper edges of the corner portions and of the side and end walls, a plurality of vertically extending ribs on the outside of each of said corner portions said ribs having upper ends integral with the underside of said rim and having lower ends terminating above the bottom wall of the container so as to rest on the rim of a lower container when like containers are stacked one on top of the other, said end walls each having an indent below the rim and between the corner portions providing a hand grip, the upper surfaces of the indents indicating the level to which the container should be filled, and the distance from the rim to said upper surfaces being greater than the distance from the lower ends of said ribs to the bottom wall of the container whereby the contents of the container filled to the indicated level are not crushed when the containers are stacked one on top of the other.

3,130,861
ARTICLE CARRIER
Edwin L. Arneson, Morris, Ill., assignor to Federal Paper Board Company, Inc., Bogota, N.J., a corporation of New York
Filed Mar. 2, 1962, Ser. No. 176,986
12 Claims. (Cl. 220—113)



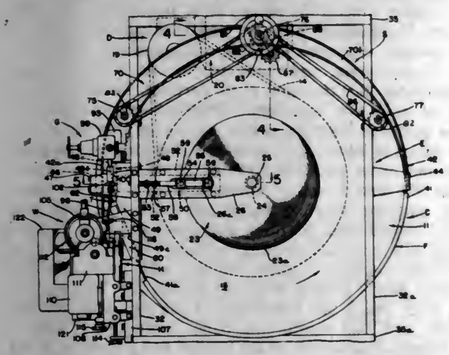
1. A collapsible cellular bottle carrier comprising, when set up, a pair of foldable bottom forming panels, upstanding side wall forming panels hinged along the outer side edges of the bottom panels, end wall forming panels hingedly connecting the vertical edges of the side wall panels, and a partition and handle forming structure extending between the opposite end walls, said partition and handle structure comprising a pair of longitudinal partition and cross partition forming panels each integrally hinged to the vertical edges of the end wall panels at the one end of the carrier and extending in face contacting relation toward the other end of the carrier, relatively narrow longitudinal partition panels integrally hinged to the vertical edges of the end wall panels at said other end of the carrier and connected to said first mentioned longitudinal partition and cross partition forming panels, one of said first mentioned longitudinal partition and cross partition forming panels having an end panel portion which is folded back upon said one longitudinal partition and cross partition forming panel about a vertical hinge line and forms a reinforcing panel for the same, cross partition forming panels cut from said first mentioned longitudinal partition and cross partition forming panels and from said reinforcing panel and hinged in cross partition forming relation thereto, said cross partition forming panels having integrally hinged glue tabs on their free ends which are connected to the side wall forming panels, and said reinforcing panel extending at least to the longitudinal center of the carrier and providing a separating panel covering the cut out areas of the first mentioned longitudinal partition panels which result from cutting the cross partition forming panels therefrom.

3,130,862
TABLET DISPENSER
Ernest J. Lachance, Leominster, Mass., assignor to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana
Filed May 24, 1961, Ser. No. 112,309
6 Claims. (Cl. 221—154)



1. A tablet dispenser comprising a base including an integral upstanding cylindrical post, a tablet container having a top wall formed with an opening therein and having a downwardly directed funnel-shaped bottom wall terminating in a bearing sleeve axially slidable and rotatable on said post and aligned with said opening, said container having a lowered position wherein said sleeve is adjacent said lower end of said post, said post being formed at its upper end with a head portion having a concave upper surface of a size to receive a single tablet, said head portion having a diameter larger than the bore of said sleeve and affording stop means limiting upward travel of said container along said post to a raised position wherein the upper surface of the lower end of said funnel-shaped bottom wall is positioned in substantial registry with the concave upper surface of said head portion, said post being of such length that when said container is in its lowered position the head of said post is positioned within said top wall opening and a tablet disposed on the concave upper surface thereof is exposed externally of said container and accessible for manual removal, and means for locking said container in said lowered position, comprising at least one fracturable member fixedly joining said container and base, said at least one member being fracturable by relative rotation of said container and base to release said locking means and permit vertical movement of said container toward its said raised position.

3,130,863
FEEDER APPARATUS
James W. Batchelder, Ascutney, Vt., assignor to Textron Inc., a corporation of Rhode Island
Filed July 11, 1960, Ser. No. 41,964
18 Claims. (Cl. 221—9)

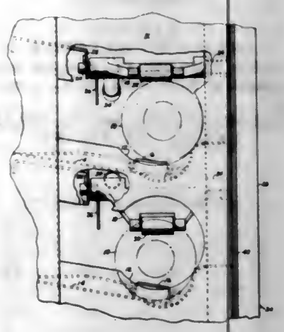


1. A feeder device adapted to receive bulk loaded objects such as nuts, tablets or the like and discharge the same in series flow suitable to precise counting comprising: a frame; a continuously rotatable disk supported by the frame; a discharge track above the disk defined by parallel inner and outer rail members having an entrance at a region spaced inward from the disk edge and an outlet at the disk edge; an upright curved fence structure above the disk beginning at the inner rail to extend out to and follow the peripheral region of the disk over its major extent and curving inwardly to the said outer rail, thereby defining with the disk a load receiving space; said fence providing an extended surface against which said objects may align in an ordered outer row for discharge through said track; a wedge-shaped diverting element associated with the inner member at the track entrance for diverting objects inward of said outer row toward the inner region of the disk; a horizontally disposed hold-down plate leading to the track entrance having an outer edge conformed generally to the inner surface of the fence and an inner edge curving radially inwardly in the direction of disk rotation, said plate being spaced above the disk to receive objects in selected disposition for forming at least one ordered row, and the curved edge serving to deflect toward the inner region of the disk objects not so disposed; and means at the outlet region of the track for accelerating objects discharged from said disk.

ERRATUM

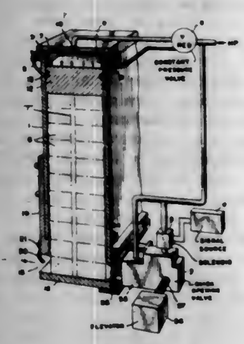
For Class 221—78 see Patent No. 3,130,859

3,130,864
VENDING MACHINE
William R. Trapp, La Crosse, Wis., assignor to La Crosse Cooler Company, La Crosse, Wis., a corporation of Wisconsin
Filed Nov. 15, 1961, Ser. No. 152,977
9 Claims. (Cl. 221—125)



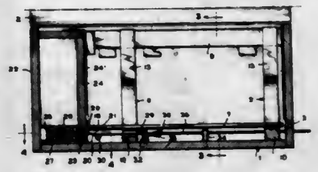
1. In a selective vending machine, a cabinet having a series of article supports, means providing a way extending beside the supports of said series, a series of slides including at least one slide for each support and normally in motion-transmitting engagement with each other in said way, a series of gates including a gate associated with each said support, each gate having means pivotally mounting it in said cabinet, each gate normally blocking removal of an article from its respective support and being swingable from blocking position to article releasing position, gate controlling means including means for transmitting motion between each respective gate and an adjacent slide for the actuation of said slide and any intervening slide toward one end of the way in the course of the swinging of the respective gates toward article-releasing position, the slides being biased in opposition to the direction in which motion is transmitted to them by the respective gates, releasable lock means adjacent said end of the way for blocking the advance toward said end of the slide closest thereto and thereby blocking the advance of other slides and the swinging movement of the respective gates toward article-releasing position, the release of said lock means permitting any slide to be moved by its respective gate toward the end of the way, displacing any intervening slide before it, means effective upon the displacement of any such intervening slide for locking its respective gate means against swinging movement to article releasing position, and means effective upon the swinging movement of any gate means for blocking the advance toward the said end of the way of any slide more remote from such end than the slide actuated by the swinging gate means, thereby precluding article-releasing movement of the respective more remote gate means.

3,130,865
FLUID PRESSURE EJECTOR
Hiroshi Ono, Chicago, and Valentine Hechler IV, Northfield, Ill., assignors to Webcor, Inc., Chicago, Ill., a corporation of Illinois
Filed Dec. 27, 1960, Ser. No. 78,698
12 Claims. (Cl. 221—226)



3. A vehicle object ejecting system for rectangular shaped objects comprising an elongated housing having side walls and a bottom wall defining a compartment having a cross-sectional contour following the contour of the largest cross-sectional areas of the objects to be ejected, said objects being positioned one on top of another in stacked relation with adjacent flat faces thereof in sliding contact with each other within the housing with the lowermost one resting on the bottom wall, a follower member within the housing positioned on top of the uppermost stacked object, a closure member to seal the upper end of the housing, pressure means applied on the follower to urge the stacked objects in a downward direction against said bottom wall, an ejection port opening directly to atmosphere positioned in one of the side walls of the housing adjacent to the bottom wall, a fluid pressure inlet port positioned in the one of said side walls directly opposite said ejection port, valve means connected to said inlet port to apply a fluid ejection pressure to the lowermost one of said objects through said ejection port while the next lowermost stacked object resting thereon is increasingly exposed to and urged upwardly by said ejection pressure upon ejection movement of the lowermost object, and control means to vary the operation of the valve means to provide a rapidly recurring ejection of objects through said ejection port.

3,130,866
DISPENSER FOR STRAWS AND SIMILAR ARTICLES HAVING A RECIPROCABLE EJECTOR
Achille Colacino, 247 Pike St., Carbondale, Pa.
Filed Mar. 29, 1961, Ser. No. 99,131
2 Claims. (Cl. 221—274)

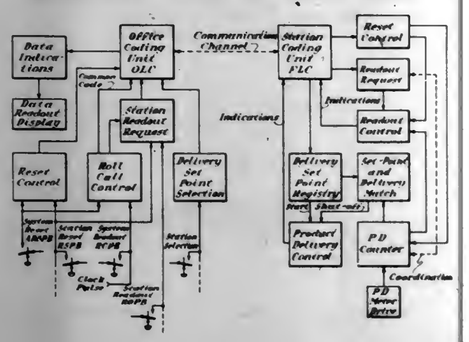


1. A dispenser for soda straws and other elongated articles particularly of fragile character comprising a container, a pair of parallel narrow strap members suspended interiorly of the container and spaced apart less than the length of the articles, each strap member having separated upper portions forming an upper storage supply portion and then curving smoothly toward each other and depending vertically downward to form a lower narrow vertical slot portion having a width greater than the article to be dispensed to permit free vertical movement of the articles successively into the slot portion one above another without jamming to form a stack of horizontally disposed articles retained within said slot portion and adapted to be dispensed singly, an article dispensing outlet in said container aligned with the bottom-most article in said stack, dispensing means including a reciprocable member positioned beneath said slot portion and aligned therewith, said reciprocable member including an upstanding flange extending into alignment with the inner extremity of the bottom-most article when in normal inoperative position and upon reciprocation adapted to move said bottom-most article into outlet position, said reciprocable member also including a forwardly directed link terminating in a looped extremity, an offset operating lever for imparting linear motion in a horizontal plane to said reciprocable member, said offset operating lever including an angularly directed arm extremity, and spring means for returning said dispensing means to normal inoperative position.

3,130,867
PIPELINE METERING AND PRODUCT DELIVERY CONTROL SYSTEM
Arthur P. Jackel, Penn Hills Township, Allegheny County, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed May 16, 1961, Ser. No. 110,553
5 Claims. (Cl. 222—20)

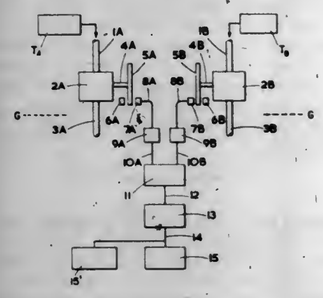
3. In combination with a remote control system for operating a product pipeline installation having a control office and at least one remote station, a counting means at said station, a measurement means at said station responsive to the product flow in said pipeline and having connections for driving said counting means to record that flow, readout means at said station having connections to said counting means for initiating when actuated transmission of the existing flow data to said office over said remote control system, recording means at said office controlled by said remote control system for receiving and recording the flow data from said station, reset means at said station having connections when actuated for re-

setting said counting means to its zero condition, a first control means at said office having connections over said remote control system for at times actuating said readout means, a second control means at said office having connections over said remote control system for at times actuating said reset means and said readout means, and



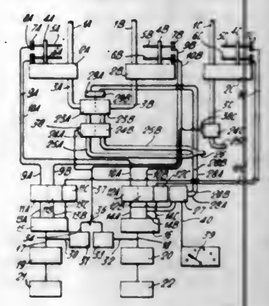
coordination circuit means at said station responsive jointly to the actuation of said readout means and to the operation of said counting means for coordinating the transmission of flow data to said office and the recording of the product flow in said counting means to eliminate the recording and transmission of incorrect information.

3,130,868
METERING SYSTEM
Richard Morrison Phillips and David John Lindsay-Scott, London, England, assignors to The British Petroleum Company Limited, London, England, and The de Havilland Engine Company Limited, Leavesden, Hertfordshire, England, both British joint-stock corporations
Filed Mar. 30, 1961, Ser. No. 99,416
Claims priority, application Great Britain Apr. 11, 1960
15 Claims. (Cl. 222—26)



1. A metering system comprising two meters, each meter (*a*) being adapted for use in association with a fluid stream to measure a property of the stream, (*b*) when in use being in association with a different fluid stream and (*c*) each meter being connected to an electrical variable pulse rate signal transmitter whereby there is provided a signal train, the train during a given period being characteristic of the value of the property measured by the meter; said system also comprising an electrical summating unit including means responsive to pulse rate and adapted to receive simultaneously a signal train derived from each of the transmitters and adapted to provide an output train of electrical signals which is characteristic of the sum of the values of the property measured by the two meters during said period.

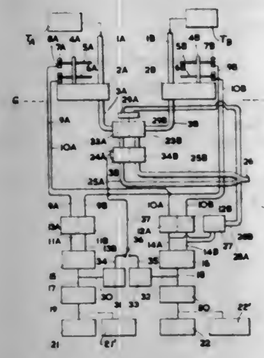
3,130,869
METERING SYSTEM
Richard Morrison Phillips and David John Lindsay-Scott, London, England, assignors to The British Petroleum Company Limited, London, England, and The de Havilland Engine Company Limited, Leavesden, Hertfordshire, England, both British joint-stock corporations
Filed Mar. 30, 1961, Ser. No. 99,417
Claims priority, application Great Britain Apr. 11, 1960
12 Claims. (Cl. 222—26)



1. A fluid blending system comprising two meters, each meter (*a*) being adapted for use in association with a fluid stream to measure a property of the stream, (*b*) when in use being in association with a different fluid stream and (*c*) each meter being connected to a variable pulse rate electrical signal transmitter whereby there is provided a discrete signal train, the train during a given period being characteristic of the value of the property measured by the meter; said system also comprising a pulse rate responsive electrical circuit adapted to receive simultaneously a separate discrete signal train derived from each of the transmitters and adapted to provide an output electrical signal when the ratio of the values of the properties measured by the meters differs from a pre-determined ratio; said system also comprising an electro-mechanically operated flow control unit, adapted to be connected into the fluid streams and adapted to respond to signals derived from said electrical circuit to maintain the ratio of the values of the properties as measured by the meters at said pre-determined ratio.

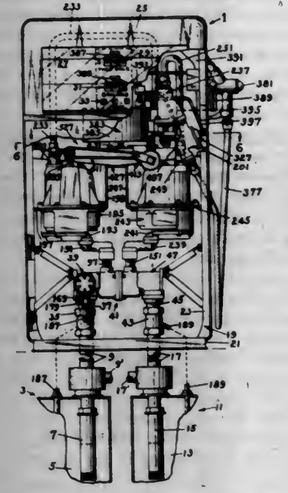
3,130,870
METERING SYSTEM
Richard Morrison Phillips and David John Lindsay-Scott, London, England, assignors to The British Petroleum Company Limited, London, England, and The de Havilland Engine Company Limited, Leavesden, Hertfordshire, England, both British joint-stock corporations
Filed Mar. 30, 1961, Ser. No. 99,418
Claims priority, application Great Britain Apr. 11, 1960
20 Claims. (Cl. 222—26)

1. A metering system comprising more than two meters, each meter (*a*) being adapted for use in a fluid stream and being responsive to the rate of flow of fluid passing in association with the meter, (*b*) being in use connected to a different fluid stream and (*c*) said meters each being connected to an electrical signal transmitter whereby there is provided a signal train, the train being characteristic of the quantity of fluid passing in association with the meter during a given period; said system also comprising an electrical summating unit adapted to receive, simultaneously, signal trains from any number of transmitters and comprising a switch adapted to connect any number of said transmitters during said period to said electrical summating unit, said electrical summating unit being adapted to provide an output train of electrical signals which is characteristic of the sum of the quantities of fluid, measured in respect of each stream in which the meter in association therewith is connected to a transmitter connected by means of said switch to said summating unit, said system also comprising an electrical trigger circuit adapted to receive said output signal train and adapted to



provide an output electrical signal when the sum of the quantities of fluid measured in respect of each stream in which the meter in association therewith is connected to a transmitter connected by means of said switch to said summating unit, reaches a pre-set value.

3,130,871
MOTOR FUEL BLENDER
Joseph F. Tye and Burdette W. Foss, Fort Wayne, Ind., assignors to Tokheim Corporation, Fort Wayne, Ind., a corporation of Indiana
Filed Sept. 24, 1962, Ser. No. 225,664
20 Claims. (Cl. 222—35)



1. A proportioning mechanism having 1st and 2nd liquid meters for measuring the flow of liquid constituents of a blend and having means for supplying the constituents under pressure to said meters, said mechanism comprising,

(*a*) a valve body defining 1st and 2nd inlet chambers, an outlet chamber and 1st and 2nd ports connecting said 1st and 2nd chambers with said outlet chamber respectively,

(*b*) means connecting said 1st and 2nd meters in communication with said 1st and 2nd chambers,

(*c*) 1st and 2nd valves for said 1st and 2nd ports respectively, means mounting said valves for simultaneous movement in one direction to enlarge and restrict said 1st and 2nd ports and in another direction to restrict and enlarge said 1st and 2nd ports respectively,

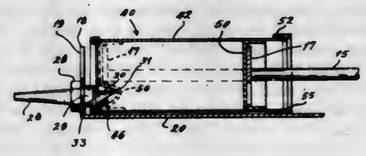
(*d*) a differential mechanism comprising mating screw and nut members, means mounting said members for independent rotation, and one of said members for axial movement relative to the other,

(*e*) means for transmitting the axial movement of said axially movable member to said valves,

(*f*) means connecting said 1st meter to rotate one of said members in one direction,

(*g*) means connecting said 2nd meter to rotate the other member in the same direction, whereby said axially movable member will move said valves toward, and maintain them in, positions relative to their respective ports at which said meters rotate said members at the same speed, thereby establishing and maintaining a particular ratio of the flows through the respective meters.

3,130,872
DEVICE FOR DISCHARGING VISCOUS FLUID
Vernon L. Myers, Creve Coeur, Vincent G. Biedenstein, Overland, and Rolland A. Nelson, Creve Coeur, Mo., assignors to R. C. Can Company, Overland, Mo., a corporation of Missouri
Filed Feb. 6, 1962, Ser. No. 171,385
3 Claims. (Cl. 222—82)



1. In a device for discharging highly viscous fluid such as a thick oil from a can, said can having (*a*) a tubular body closed at one end by (*b*) a can end closure, and at its opposite end by (*c*) a piston-like end closure with a skirt within the tubular body and (*d*) flexible dome-shaped piston head joined to said skirt, the improvement comprising,

(1) a guideway shaped to receive and support said tubular body (*a*) of said can,

(2) a fixed end plate at one end of said guideway (1),

(3) a spout mounted in said fixed end plate (2) having a discharge end on one side of said end plate,

(4) a piercing point on said spout (3) projecting from the opposite side of said end plate (2) beside said guideway (1) and provided with a cutting edge disposed in a diagonal plane inclined away from said guideway (1),

(5) a resilient sealing ring around said piercing point (4) and held against movement away from said piercing point by said end plate (2),

(6) a movable part on said device operable to move along said guideway (1) toward and away from said piercing point (4),

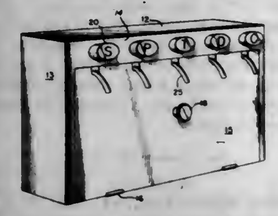
(7) means on said device, under the control of an operator for moving said movable part (6) away from said piercing point (4) so that a can body (*a*) may be placed on said guideway (1) with its metal end closure (*b*) adjacent said piercing point (4), and

(8) means to move said movable part (6) toward said piercing point (4) to puncture said end closure (*b*)

and compress said resilent sealing ring (5), and then to move said piston-like end closure (*c*) against said end closure (*b*) to discharge the contents of said can from said spout (3),

whereby the flexible dome-shaped piston head of said flexible end closure (*c*) is flattened on said end closure (*b*) and formed into a pocket around said piercing point (4) during the discharge of the contents from said can and on subsequent actuation of said means (7) the can is ejected from said piercing point (4) by expansion of said sealing ring (5).

3,130,873
PRESSURIZED PRODUCTS DISPENSING CABINET
Stoner W. Klutz, Jr., 3409 Denise St., Durham, N.C.
Filed June 20, 1961, Ser. No. 118,393
6 Claims. (Cl. 222—131)



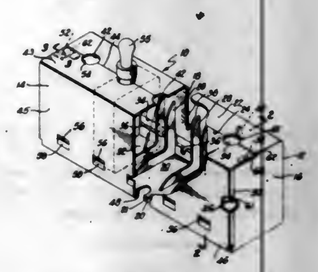
3. In combination with a plurality of uniform size disposable aerosol type containers each having a uniform type disposable, exposed control valve and relatively long spout at the top thereof; a cabinet adapted to enclose and support said containers in vertical, side by side, free standing upright interchangeable position and having openings in the front thereof for protrusion of said spouts; individual, spring loaded, direct action, uniform type actuating means disposed within said cabinet above said valves, said actuating means each including operating means protruding from said cabinet and being effective when pushed to operate respective ones of said valves, thereby enabling each of said containers to be selectively dispensed through said spouts.

3,130,874
MEASURING DISPENSER
Donald L. Bulmer, Chicago, Ill.
(9001 Washington St., Westminster, Calif.)
Filed Nov. 3, 1960, Ser. No. 67,007
9 Claims. (Cl. 222—142.8)



1. A dispenser comprising a container having at least one aperture therein, a valve member movable relative to said aperture for covering and uncovering same, a movable measuring member having a plurality of apertures therethrough each smaller in volume than said container and of different predetermined sizes movable whereby one end of any one of said plurality of apertures may be aligned with said container aperture, a second valve member movably mounted relative to said measuring member for selectively closing and opening the other end of said aligned aperture.

3,130,875
CONTAINER FOR DISPENSING PURPOSES
Peter Block, San Marino, Calif., assignor to Derse Products, Inc., San Marino, Calif., a corporation of California
Filed Aug. 30, 1960, Ser. No. 52,957
6 Claims. (Cl. 222—143)

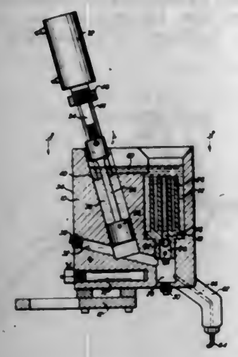


1. In a container for dispensing purposes, the combination of:

a housing having opposing side walls, each side wall providing a securing means formed integrally therewith, a longitudinal wall extending therebetween, a bottom wall terminating at the forward edge thereof in a down-turned flange, a partial top wall providing at its leading edge at least a pair of recesses extending inwardly therefrom, an opening extending between said opposing side walls and defined by said side walls, the leading edge of said partial top wall, and said bottom wall, said housing providing at least one separating member secured to the interior of said housing opposite said opening for every pair of recesses provided in the leading edge of said partial top wall, and at least a pair of opposed transverse support members extending downwardly from said bottom wall a distance greater than the length of said down-turned flange; and

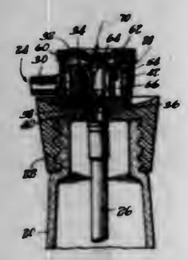
a cover member detachably connected to said housing and of a size to close said opening, said cover member having an upper edge and a lower edge, said upper edge providing at least one inwardly extending recess therein commensurate and mating with each recess in said leading edge of said partial top wall and providing means extending downwardly therefrom for engagement with said securing means formed integrally with said opposing side walls, said lower edge terminating in an up-turned, rearwardly extending, U-shaped portion engageable with said down-turned flange of said bottom wall of the housing, said cover member at the bottom of said U-shaped portion having a thickness less than the difference in length between said transverse support members and said downturned flange of the bottom wall, and said cover member providing intermediate said upper and lower edges at least one aperture for each interior section of said housing created by said separating member.

3,130,876
DISPENSING APPARATUS FOR THERMOPLASTIC ADHESIVE
Alan G. Baker, Plymouth, Mass., assignor to Jacob S. Kamborian, West Newton, Mass.
Filed Jan. 19, 1962, Ser. No. 168,578
6 Claims. (Cl. 222—146)



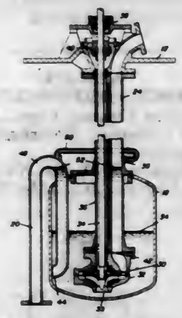
1. An adhesive dispensing apparatus comprising: a pot; a chamber in the pot; a nozzle; a conduit extending from the chamber to the nozzle; a well positioned above the chamber; an adhesive support in the well; a passage in the adhesive support interconnecting the well and the chamber; valve means normally located spacedly from the passage; means supporting the valve means to enable it to move into blocking relation with respect to the passage upon the application of pressure to the chamber; a bore in the pot extending upwardly of and in communication with the chamber; a plunger slidably mounted in the bore; a motor connected to the plunger for reciprocating the plunger through a zone of reciprocation located between the ends of the bore; and a channel in the pot extending from the top of the well to the top of the bore.

3,130,877
DISPENSER AND VALVES FOR SAME
Christian F. Miller, Chicago, Ill., assignor to Formold Plastics, Inc., Blue Island, Ill., a corporation of Illinois
Filed Oct. 7, 1960, Ser. No. 61,273
9 Claims. (Cl. 222—207)



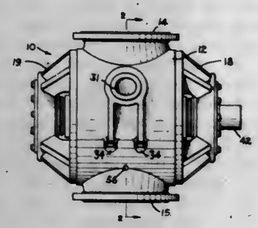
1. A dispenser adapted to be attached to a primary reservoir, said dispenser comprising: a body member including a cup element having an outlet, arcuately spaced lands adjacent the internal periphery of said cup element and a central, tubular column radially spaced from said lands, said body member defining a first fluid passageway communicating with said reservoir and defining a second fluid passageway separate from said first passageway and communicating with said outlet for dispensing a fluid; a pumping member closing off one end of said cup element including a domed diaphragm defining a variable volume chamber selectively communicable with said first passageway and with said second passageway, said diaphragm being deformable inwardly to displace fluid inwardly from said chamber through said second passageway for dispensing said fluid and being resiliently returnable to a normal, outwardly domed condition to draw fluid from said reservoir through said first passageway into said chamber for replacing said dispensed fluid; first check valve means for controlling fluid flow through said first passageway; and second check valve means for controlling fluid flow through said second passageway including an annular, vane-type valve having free marginal edges seating against the edge of said diaphragm upon resiliently returnable movement thereof and deformably depending from said diaphragm into fluid-passing relationship between said lands upon inward deformation of said diaphragm.

3,130,878
APPARATUS FOR PUMPING LIQUIDS FROM CONTAINERS
Karl Zimmermann, Muenchenstein, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a company of Switzerland
Filed June 23, 1961, Ser. No. 119,218
Claims priority, application Switzerland June 23, 1960
2 Claims. (Cl. 222—318)



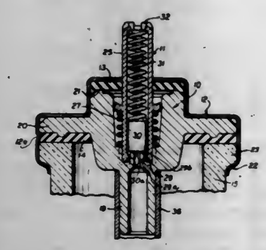
1. Apparatus for pumping a liquid from a container comprising a supplementary vessel disposed within the upper portion of the said container above the liquid level of said container and a centrifugal pump and a casing therefor; said pump and casing being disposed within the supplementary vessel and provided with an impeller; said impeller being below the liquid level of said supplementary vessel, said supplementary vessel including a suction pipe with a U bend disposed above the top of the supplementary vessel and attached to the upper portion of the latter, said suction pipe having one arm extending downward into the lower portion of the container, and the other arm extending downward into the lower portion of the supplementary vessel but at a level higher than that of the inlet of the centrifugal pump, the outlet of said arm facing in a direction away from said inlet of said centrifugal pump whereby adsorbed air is prevented from entering the inlet of said pump; said centrifugal pump including a suction side for intake of liquid which communicates with the lower portion of the supplementary vessel and a pressure pipe extending upwards from the casing of the centrifugal pump; and a tube extending above the top of the supplementary vessel connecting said pressure pipe with said suction pipe at the U bend of the latter.

3,130,879
ROTARY FEED VALVE
Hjalmar S. Messing, New York, N.Y., assignor to The Black-Clawson Company, Hamilton, Ohio, a corporation of Ohio
Filed Aug. 26, 1960, Ser. No. 52,107
6 Claims. (Cl. 222—368)



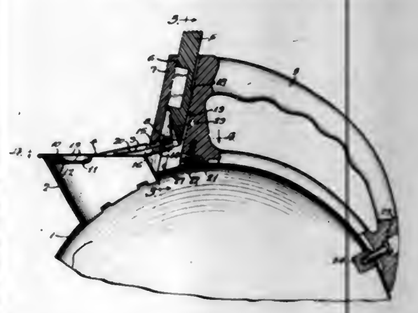
5. A rotary valve comprising a valve body, means in said valve body defining a cylindrical cavity axially thereof, said body having an inlet opening into said cavity and a discharge outlet leading therefrom, a rotor rotatably received in said cavity and including a spider defining alternate deep and shallow buckets of differing radial depths arranged to receive material at said inlet and to discharge material at said outlet upon the rotation of said rotor, the material of said spider being distributed with a substantial portion thereof lying in the outer half of the rotor radius to resist bending by pressure at said outlet, said buckets having substantially cylindrical bottoms with the bottoms of said deep buckets having a smaller radius than the bottoms of said shallow buckets.

3,130,880
AEROSOL METERING VALVE
Joseph Briechle, New Canaan, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut
Filed Sept. 6, 1961, Ser. No. 136,298
5 Claims. (Cl. 222—394)



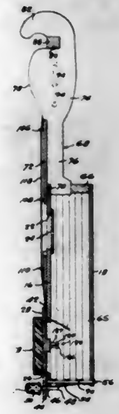
1. An aerosol metering valve intended for attachment to a container for a pressurized fluid to dispense measured amounts of such pressurized fluid as desired, said metering valve comprising a tubular body member having a socket therein, a spring-biased tubular plunger having a stem extending into and mounted for reciprocation in the socket in said body member, and a closure cap and sealing means for mounting said body member and plunger stem in assembled relation in a fluid-tight manner, said socket in the body member forming with said closure cap, sealing means and the stem portion which extends into the socket a measuring chamber having a fluid inlet port and a fluid outlet port, said ports each having a valve seat in proximity to each other, and a spring-biased valve member mounted and movable within the tubular plunger stem and having a seating surface for selective engagement on said valve seats to control the discharge of pressurized fluid from the measuring chamber and the admission of pressurized fluid thereinto, respectively, as the plunger stem is pressed inwardly and then released.

3,130,881
TEA KETTLE WITH CLOSURE LID, HANDLE, AND POURING SPOUT
Ivar Jepson, Oak Park, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed Mar. 16, 1961, Ser. No. 96,160
2 Claims. (Cl. 222—470)



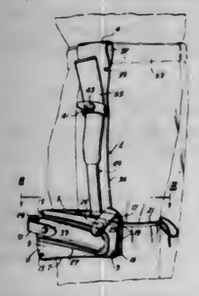
1. A tea kettle comprising a vessel, a handle, a pouring spout, and a closure lid on said spout, said handle having an upright post, said post being positioned behind said spout, a vertically disposed guide passageway formed in said post, a vertically movable member disposed in said passageway, a pivotal connection between said closure lid and the lower end of said movable member, a spring at said pivotal connection, said spring biasing said closure lid to closed position and said movable member upwardly, and the upper end of said movable member extending through the upper end of said post for access to downward movement by thumb pressure whereby said closure lid is pivoted to open position.

3,130,882
SEWING KIT
John H. Elder, Jr., 7982–B Bailey Court, Fort Knox, Ky.
Filed Jan. 4, 1963, Ser. No. 249,569
9 Claims. (Cl. 223—107)



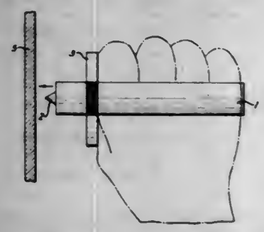
1. In a sewing kit, a hollow container having a front plate and a back plate and a sidewall, a neck extending upwardly from the upper end of the container, journal means on the upper end of the neck for supportably journalling thread spools thereon, vertically spaced horizontal thread guides on the neck and the front plate, said front plate having a container access opening located near its lower end, thread segregating and retaining means mounted on the front plate within the access opening, and a door for the access opening hinged to the front plate above the access opening.

3,130,883
HATCHET SCABBARD
Lewis J. MacKool, 1609 Cumberland St., Little Rock, Ark.
Filed Mar. 1, 1962, Ser. No. 176,559
3 Claims. (Cl. 224—5)



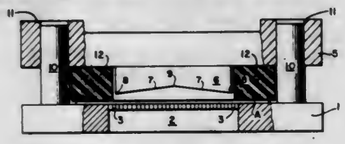
1. A hatchet scabbard, comprising: a sheath having inner and outer sheathing walls secured together along at least one side edge thereof defining an elongated opening at the upper end thereof of sufficient size to receive the head of an inverted hatchet, and further defining a substantially horizontal bottom adapted to underlie and support said head; a strap extending upwardly from said sheath and adapted to be disposed vertically along a user's hip; belt attaching means at the upper end of said strap; and means for removably retaining the hatchet handle against the outer surface of said strap; means attached to said sheath for securing said sheath to the thigh of the user; and means secured to said scabbard for removably retaining a slender implement.

3,130,884
AUTOMOBILE ESCAPE TOOL
James T. Lintz, P.O. Box 553, Fombell, Pa.
Filed Apr. 8, 1963, Ser. No. 271,055
3 Claims. (Cl. 225—93)



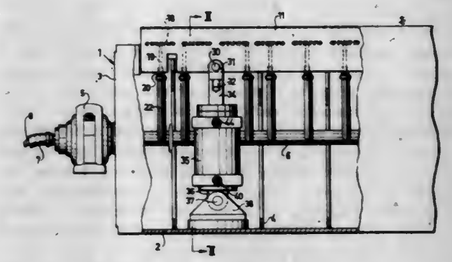
1. An automobile escape tool for shattering tempered glass automobile windows, comprising a metal bar, a hardened metal point on one end of the bar, the hardness of said point being substantially equal to a Rockwell C scale reading of about 60, and a rigid metal shielding collar rigidly mounted on the bar and spaced from said end, the opposite end of the bar being spaced from the collar to provide a handle adapted to be gripped in the hand, the collar being large enough to prevent the hand from sliding past it on the bar when the hand thrusts said point forcefully against one of said windows.

3,130,885
PUNCH AND DIE FOR TEARING PAPER
John Stuart Fleming, 117 Buffalo Ave., Niagara Falls, N.Y.
Filed Nov. 1, 1962, Ser. No. 234,759
6 Claims. (Cl. 225—97)



1. In a punch and die machine means for tearing from a paper work sheet a paper strip having opposite soft beveled edges constituted by a continuous series of uniform serrations, comprising a die having an opening, opposite sides of which are each provided with a continuous series of uniform horizontally projecting serrations and a punch adapted to work within said opening within the inner ends of the teeth of said die serrations, said punch having a recessed bottom the surfaces of which are inclined at a low angle to the horizontal and which intersect the opposite vertical walls of the punch at acute angles.

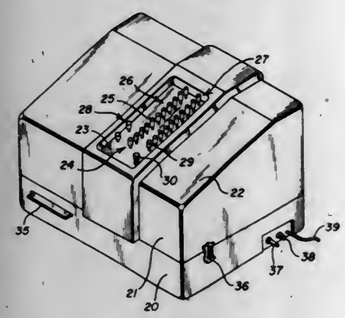
3,130,886
FORMER ROLLER WITH CUTTING KNIFE
Gustav Åke Staaf, Hohultslatt, and Stig Arne Molin, Lagerfosbruk, Sweden, assignors to Alstermo Bruks Aktiebolag, Hohultslatt, Sweden, a company of Sweden
Filed July 10, 1961, Ser. No. 122,998
Claims priority, application Sweden July 15, 1960
13 Claims. (Cl. 225—103)



1. For use in a cardboard machine in which cardboard is formed by accumulating successive layers of relatively wet pulp on a rotatable forming roller: the combination comprising a rotatable forming roller having an axially extending radial groove opening through its peripheral surface; a pusher bar slidably mounted in said groove for movement between a position in which its outer edge is substantially flush with the peripheral surface of said roller and an extended position to lift the layers of pulp away from the peripheral surface of said roller; nozzle means having discharge openings along the trailing edge of said pusher bar and connected to a source of pressurized gas to discharge the gas, under pressure, substantially rearwardly from the pusher bar when the latter is at least partially extended beyond the peripheral surface

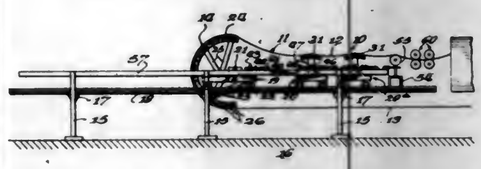
of said roller; and means operable to sever the accumulated layers of pulp along a line parallel to and spaced forwardly from the tailing surface of said pusher bar to form a flap which is lifted by said pusher bar when the latter is projected from said slot; so that the gas discharged under pressure can enter between such flap and the peripheral surface of the roller to lift the formed cardboard from the surface of the roller.

3,130,887
MACHINE FOR ACCURATELY DISPENSING MULTIPLE UNIT STRIP MATERIAL
James F. Campbell, Box 842, Grand Junction, Colo., and Jack K. Grimm, Adams County, Colo. (2500 W. 80th Ave., Denver 21, Colo.)
Filed Mar. 2, 1961, Ser. No. 103,951
2 Claims. (Cl. 226—110)



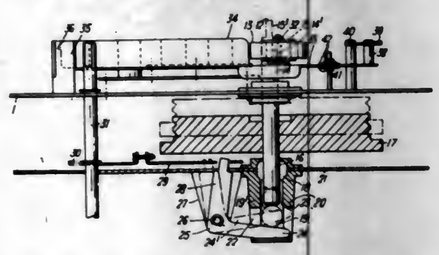
1. A machine for dispensing stamps and the like from strip supplies thereof, comprising an enclosing structure having a stamp delivery opening, at least a pair of rotatable drum members, each engaging a said strip of stamps for moving it toward said opening, a keyboard assembly having a plurality of keys arranged for access exteriorly of said enclosing structure, said keys being arranged in at least two series, one of which is coded in dollar values and the other in cent values, each said key inclusive of switch means adapted for programming subsequent machine operation upon machine actuation to energize and operate an assembly mounted in said housing arranged for selective operation of one and both of said drums, said assembly including an electric motor interconnected with a power source, control means, said motor adapted to operate said control means during its energization, said control means carrying armature brushes arranged in operative relation with a commutator, said commutator inclusive of a plurality of series of spaced lugs and at least one continuous electrical conductor all insulated from each other, the brushes of said control means being arranged in at least two independent circuits, one of said circuits interconnected with the dollar value key switches and the other with the cent value key switches, and one each of each of the pair of brushes being in contact with the continuous conductor during movement of said control means, and the other brush adapted upon contact with one of said lugs in circuit with a previously programmed key switch to energize one of at least a pair of brake and clutch means one each of which is interconnected between said control means and one of said drums, and upon energization, each of said brake and clutch means adapted to rotate a drum a peripheral distance equal to the length of a number of stamps for delivery thereof through said opening as dictated by the previous keyboard program, and means on said keyboard arranged to actuate the machine.

3,130,888
APPARATUS FOR ACCOMMODATING A LOOP
John G. Rothfuss, Cedar Lake, and William D. Hendrou, East Chicago, Ind., assignors to Inland Steel Company, Chicago, Ill., a corporation of Delaware
Filed Nov. 6, 1961, Ser. No. 150,442
10 Claims. (Cl. 226—113)



1. Apparatus for accommodating a loop accumulating in a strip of material having loop legs traveling along a first path including two adjoining vertically spaced path portions normally meeting at a normal junction, said apparatus comprising:
means normally located at said normal junction for engaging the inner surface of the bight of said loop;
means mounting said bight-engaging means for movement along a second path extending through said normal junction;
means for moving said bight-engaging means along said second path forwardly away from and back toward said normal junction of said two first path portions in response to similar movement by said loop bight;
means, located rearwardly of said bight-engaging means, for engaging the inner surface of the upper of the vertically spaced legs of said loop;
means mounting said leg-engaging means for movement along said second path;
chain means;
means connecting one end of said chain means to said bight-engaging means;
and resilient, shock-absorbing means connecting the other end of the chain means to the leg-engaging means.

3,130,889
SOUND RECORDING AND REPRODUCING APPARATUS
Peter John Aldridge, Upminster, Essex, England, assignor to The Magnavox Electronics Company Limited, Barking, England, a British company
Filed Dec. 3, 1962, Ser. No. 241,873
Claims priority, application Great Britain Dec. 5, 1961
2 Claims. (Cl. 226—178)



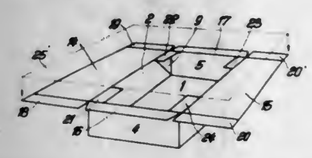
1. Magnetic tape sound reproducing and recording apparatus comprising a rotary capstan for moving the tape through the apparatus, a driving mechanism, transmission means operatively connecting said driving mechanism to said capstan to rotate said capstan at constant speed, said capstan comprising a flywheel and a spindle extending axially through and fixed to said flywheel, a combined journal and thrust bearing supporting one end of said spindle and two co-axial driving portions of different diameters at the other end of said spindle, said bearing including a ball on which a surface at said one end of said spindle rests and a two armed lever one arm of which acts on said ball and manually operated means acting on the other arm of said lever to rock said lever and move said ball and with it said spindle upwards and downwards to bring either the one or the other of said two co-axial driving portions into said driving position in contact with said tape.

3,130,890
EXPENDABLE IMPACT ENERGY ABSORPTION DEVICE FOR AERIAL DELIVERY
Mark E. McCormack, 26 Leonard Drive, Southboro, Mass.
Filed June 28, 1962, Ser. No. 206,105
4 Claims. (Cl. 229—14)
(Granted under Title 35, U.S. Code (1952), sec. 266)



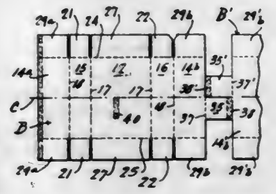
2. An expendable impact absorption device for use in aerial delivery, comprising a hollow container formed of flexible sheet material, a plurality of empty hollow cylindrical units, each unit comprising a rectangular sheet of flexible material rolled diagonally from corner to corner to provide a series of convolutions of varying diameter, whereby each unit has its greatest wall thickness midway of its ends and diminishes in wall thickness toward its ends, said units filling said container and being stacked therein vertically thereof in parallel relation to each other.

3,130,891
FOLDING BOX
Ferdinand Lange-Wiehe, Minden in Westphalia, Germany, assignor to Werner Bahlsen, Hannover, Niedersachsen, Germany
Filed Mar. 20, 1961, Ser. No. 96,875
3 Claims. (Cl. 229—16)



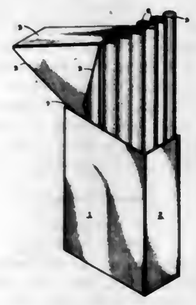
1. A folding box made of a single blank, the latter comprising a central bottom portion of substantially rectangular form, substantially rectangular sides extending from the edges of said bottom, a pair of inwardly folding triangles between each of the adjacent sides, said bottom, sides and triangles forming a box open at the top, substantially rectangular cover flaps extending from two opposite sides of said blank, side flaps extending from the other two opposite sides, projecting strips extending from the triangles adjacent to said two opposite sides, the length of said projecting strips being equal to the length of said side flaps, said projecting strips being bent inwardly to form flat areas in the upper corners of said box, whereby a foil can be sealed onto said projecting strips, lateral strips extending from the ends of said cover flaps, said cover and side flaps and said lateral strips facing ontwardly from said box, a cover part secured to said flaps and strips, said lateral strips and side flaps being folded inwardly upon their respective cover flaps and sides, said cover flaps being infolded.

3,130,892
CENTER SUPPORT CARTON
Norman F. Krueger and George A. Spillson, Monroe, Mich., assignors to Consolidated Paper Co., Monroe, Mich., a corporation of Michigan
Filed Jan. 17, 1962, Ser. No. 166,754
1 Claim. (Cl. 229—16)



A folded blank box for bulk material made from a unitary, light weight paperboard blank cut and scored to provide when folded into box formation: end and side walls having inner and outer bottom and top walls, one of said side walls and its associated top and bottom walls being formed from two sections, one at each end of said blank, the outer edges of said one side and its associated top and bottom sections being overlapped and glued to form a seam, one of said side wall sections having an integral strut strip to one side of the center of said overlapped edge and intermediate the top and bottom, said strut strip having a glued flap at its outer end for attachment to the other and opposite one of said side walls and said strut strip having a width less than one half of the length of the side wall from which it extends, whereby said strut strip prevents bulging of said side walls when said box contains bulk material, and whereby two of said blanks may be cut from a sheet with the ends of said glue flaps of said strut strips abutting the edges of said adjacent blanks, and the side edges of said strips being adjacent each other.

3,130,893
CIGARETTE BOX
Joseph L. Bidopia, 4100 NW. 16th Ave., Miami, Fla.
Filed Aug. 22, 1962, Ser. No. 218,760
2 Claims. (Cl. 229—20)



1. A container for cigarettes comprising an outer casing in the form of an open rectangular tube of uniform cross-section and predetermined dimensions, a rectangular

drawer means having a pair of opposite planar ends connected to a pair of opposite sides slideably positioned in said tube with the latter in close proximity with the inner side walls of said tube with the said planar ends of said drawer normally closing the open ends of said tube for retaining a plurality of cigarettes in side by side relation in said casing longitudinal therewith, the edges of each of said sides converging from the opposite junctions with said planar ends into a narrow central portion of predetermined width for permitting said drawer to be tilted in each opposite lateral direction in said casing when projected a predetermined distance from either end thereof for the manual removal of said cigarettes from said container, and for engagement of either end edge of said casing with corresponding said converging edges of said drawer for self aligning the latter into said casing when manually moved therein.

3,130,894
MULTI-COMPARTMENT CARTON AND BLANK THEREFOR
Charles E. Palmer, Turnpike Road, Somers, Conn., and Joseph S. Lemanski, East Longmeadow, Mass.; said Lemanski assignor to said Palmer
Filed Apr. 30, 1962, Ser. No. 191,034
17 Claims. (Cl. 229—28)



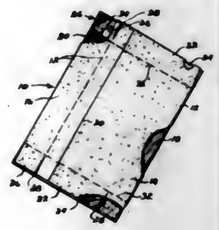
10. A multi-compartment comprising a skeleton formed of relatively rigid sheet material and having a longitudinally extending rib and at least three transversely extending ribs, said transversely extending ribs being interlocked with said longitudinally extending rib to provide a relatively rigid skeleton, two of said transverse extending ribs being adjacent the ends of said longitudinally extending rib to provide end walls for said carton, each of said transversely extending ribs having a pair of feet along its bottom edge spaced to opposite sides of the center thereof and locking tabs on each of the side edges adjacent the upper end thereof, the periphery of said bottom and side edges of said transversely extending ribs being substantially curvilinear; and a cover integrally formed of synthetic plastic sheet material extending transversely of the carton about and substantially encasing the periphery of said transversely extending ribs and of sufficient width to extend beyond said end ribs, said sheet material being semi-rigid but sufficiently flexible to conform closely to the periphery of said transversely extending ribs, said cover having apertures therein through which said feet and locking tabs extends to lock said cover upon said skeleton and provide a relatively rigid carton, the ends of said cover overlapping at the upper portion of one of said side edges of said transversely extending ribs.

3,130,895
BOOK MAILER
John S. Davis, Irvington on the Hudson, N.Y., assignor to Equitable Paper Bag Co., Inc., Long Island City, N.Y.
Filed Nov. 30, 1961, Ser. No. 159,474
1 Claim. (Cl. 229—40)

In a mailing container having front, back and side walls forming a box-like structure with end flaps constituting extensions of the front, back and side walls and that fold over one another to close both ends of the container, the improvement which comprises

(*a*) the walls and flaps being of one-piece construction and being a tube with a longitudinally-extending lap seam,

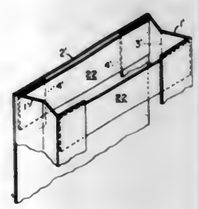
(*b*) the container being made of flexible paper of two superimposed and cross-pasted webs, the paper being made with two plies including an inner ply of creped paper which provides a soft lining for the mailer, and an outer ply of smooth, hard and tough paper for resistance to abrasion whereby it can be made by a continuous tubing of a flat web,



(*c*) pressure-sealing adhesive on the inside faces of the outermost end flaps that close both ends of the container, the pressure-sealing adhesive being on the face of a patch which has its other face secured to the surface of the flap behind the adhesive, the patches at both ends of the tube extending across the flaps to which they are secured and to those ends of the flaps which are remote from the hinge connections of the flaps with the sides of the tube, and

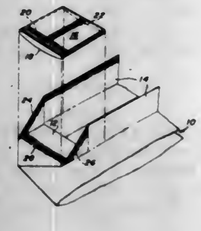
(*d*) protecting strips that cover the pressure-sealing adhesive and that peel off toward the inside of the flaps.

3,130,896
REINFORCED BAG
Clifford R. Mack, 66 Tomac Ave., Old Greenwich, Conn.
Filed June 30, 1961, Ser. No. 124,287
6 Claims. (Cl. 229—55)



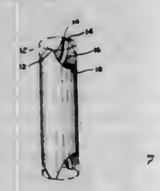
1. A bag comprising a pair of sheets forming opposed side panels, a pair of sheets forming opposed face panels, said side panels formed with longitudinally-extending margin portions overlying corresponding lateral margins of said face panels and secured thereto, said face panels extending laterally of said bag and terminating substantially at the outer lateral extremities of said margin portions of said side panels, and a pair of sheets forming reinforcing face panels secured in said bag and each extending laterally thereof interiorly adjacent to a corresponding one of said face panels.

3,130,897
VALVE INSERTS FOR VALVE BAGS
Josef Georg Poklukar and Lloyd George Symons, both of St. Lambert, Quebec, Canada, assignors to St. Regis-Consolidated Packaging Limited, Montreal, Quebec, Canada
Filed Apr. 19, 1962, Ser. No. 188,649
Claims priority, application Canada June 8, 1961
2 Claims. (Cl. 229—62.5)



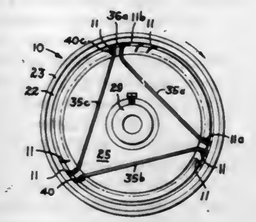
1. A valve bag having an end which includes two conventionally folded corners, each of which includes an end flap, one of said corners being completely sealed and the other corner serving to mount a filling valve, said valve comprising a flattened open-ended tube formed of thin flexible material, a rectangular stiffening strip superimposed on one of the flattened sides of said tube, said stiffening strip being formed of material which, though flexible, is appreciably stiffer than the material of said tube, said stiffening strip extending the full length of said tube, said stiffening strip and tube both extending inwardly into the bag a greater distance than the inner extremity of the bag end flap in the corner where said valve is mounted, the bottom of said strip being secured to said tube along a first line extending transversely across the bottom of said strip at the end thereof nearest the valve corner of the bag and joining said end to the adjacent side of the flattened tube along the adjacent open end thereof, the opposite ends of said stiffening strip and tube being secured to one another only centrally of the bottom of said strip at the inner end thereof.

3,130,898
TUBE CLOSURE
Eric Raamat, Toronto, Ontario, Canada, assignor to Tube-Vent Limited, Toronto, Ontario, Canada
Filed Jan. 11, 1962, Ser. No. 165,688
1 Claim. (Cl. 229—93)



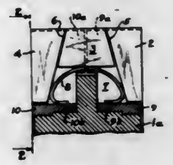
A tube of cardboard defining a hollow cross-section having length and width; the material forming said tube terminating at at least one end thereof in a free edge; a pair of opposed portions of said free edge being deformed inwardly at a 90° angle relative to said tube; each portion being deformed between two points on said edge to form a crease line terminating at each end of said edge; each area of deformed material forming about the plane defined by said two points and the intermediate crease line, a mirror image of its form before deformation; and wherein said deformed areas close a major portion of the end of the tube whereby said respective deformed edges are immediately adjacent one another and said deformed areas each provide a surface extending substantially perpendicular to the axis of the tube.

3,130,899
BLOWER
Burton M. Brown, Dayton, Ohio, Wilbur E. Pash, Indianapolis, Ind., and William P. Powell, Dayton, Ohio, assignors to The Lau Blower Company, Dayton, Ohio, a corporation of Ohio
Filed July 24, 1963, Ser. No. 297,429
9 Claims. (Cl. 230—134)



1. A blower wheel assembly comprising a double inlet centrifugal blower wheel having a series of spaced parallel blades arranged to form the cylindrical side walls of the blower wheel; an end ring at each end of said blades defining inlets to the blower wheel; a center disk secured midway between said end rings to the innermost portions of said blades; hub means on said center disk for mounting the blower wheel for rotation; a plurality of V-shaped reinforcing rods each of which has an apex portion and end portions; each of said rods having a first rigid connection between said apex portion and the outer periphery of said center disk, said end portions being disposed on opposite sides of said center disk, a second rigid connection between one of said end portions and one of said end rings, and a third rigid connection between the other of said end portions and the other of said end rings, said second and third connections being located in the same axial plane and trailing said first connection in the direction of rotation of said wheel so that said rods effectively resist the forces imparted to said blower wheel during rapid acceleration and high speed rotation thereof.

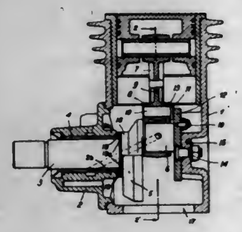
3,130,900
SEALING STRUCTURE
Karl Schlör, Lochham, near Munich, Germany, assignor to NSU Motorenwerke Aktiengesellschaft, Neckarsulm, and Wankel G.m.b.H., Lindau (Bodensee), Germany
Filed Mar. 7, 1962, Ser. No. 178,113
Claims priority, application Germany Mar. 8, 1961
3 Claims. (Cl. 230—145)



1. In a rotary mechanism of the kind comprising an outer body having a cavity therein and an inner body relatively rotatable within said cavity about an axis laterally spaced from but parallel to the axis of said cavity, said outer body having axially-spaced end walls and a

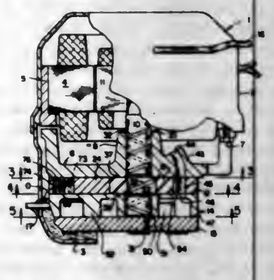
peripheral wall interconnecting the end walls to form said cavity, the inner surface of the cavity peripheral wall having multi-lobe profile which is basically an epitrochoid, said inner body having end faces disposed adjacent to said outer body end walls for sealing cooperation therewith and having a peripheral surface with a plurality of circumferentially-spaced apex portions, said inner body being provided at each apex with a through-slot that extends axially from one of its end faces to the other, each such slot being defined by a pair of side walls, an apex seal member seated in each said slot with play in both the radial and circumferential directions and engaging the multi-lobe inner surface of the outer body peripheral wall and also its axially-spaced end walls in sealing relation to form a plurality of working chambers between the two bodies which vary in volume upon relative rotation of the two bodies, normally different respective gas pressures prevailing in said working chambers during operation of said rotary mechanism, each said sealing member having: a pair of axially extending side walls which confront the side walls of the respective slot, a laterally extending through-opening at the seal underside, a pair of jaw-like, end leg parts, and a middle part wedged between the end leg parts, the interior surfaces of these parts defining the through-opening, said end leg parts being split from the middle part along a pair of splitting planes which converge to intersection with reference to the inner body center radially outwardly and axially inwardly, said splitting planes also defining the mentioned interior surfaces of the end legs, whereby said parts are freely movable relative to each other in the lateral direction, even at the contact line between seal and the interior peripheral wall of said outer body, and are also free to move relative to one another in the axial and radial directions.

3,130,901
COMPRESSORS FOR COMPRESSED AIR SYSTEMS PARTICULARLY USED ON VEHICLES
Giuseppe Alfieri, Milan, Italy, assignor to Fabbrica Italiana Magneti Marelli S.p.A., Milan, Italy
Filed June 5, 1961, Ser. No. 114,942
Claims priority, application Italy June 24, 1960
4 Claims. (Cl. 230—187)



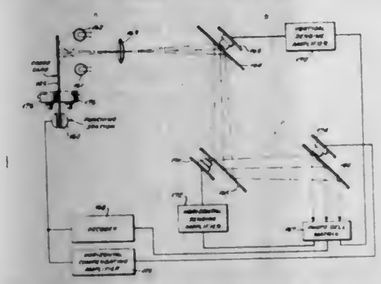
1. A multi-cylinder and piston air compressor comprising a body defining a plurality of cylinders, a piston head reciprocally mounted in each of said cylinders, said body having a side with a lateral shaft opening defined therein, a crankshaft having a crank pin eccentrically connected to an end thereof inwardly of said body, a master connecting rod connected to said crank pin at its one end and connected at its opposite end to one of said piston heads, said master rod having an integrally connected supporting fork, an articulated rod, a pin coupling one end of said articulated rod to said fork, said articulated rod having its other end connected to another of said piston heads, said body having a wall portion extending inwardly towards said shaft at a side opposite from said shaft opening, and a bearing plate mounted on the interior of said wall portion and extending radially outwardly beyond the termination of said wall portion into abutting relationship with said crank pin and said articulated rod coupling pin for prohibiting axial displacement of said shaft and said coupling pin in a direction inwardly of said body, said plate being of a shape to be in abutting relationship with said crank pin and said articulated rod coupling pin during the movement thereof but leaving the remaining portion of said body unobstructed, said crankshaft and eccentrically connected crank pin being removable from said body through said lateral shaft opening, said body including an additional opening therein to permit access into said body, the plane of said bearing plate passing through said additional opening.

3,130,902
REFRIGERATOR COMPRESSOR
Clarence H. Brown, Broadview, Ill., assignor to General Electric Company, a corporation of New York
Filed Aug. 28, 1961, Ser. No. 134,448
4 Claims. (Cl. 230—207)



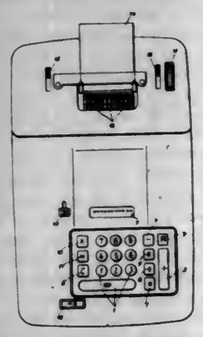
1. Refrigerating apparatus comprising a sealed casing having an inlet for gaseous refrigerant to be compressed, said casing having a crankcase openly communicating therewith for containing a quantity of lubricating oil, a refrigerant compressor arranged in said casing and having a cylinder, a rotary piston in said cylinder, a crankshaft for planetating said piston, blade means in said cylinder engaging said piston to divide said cylinder into intake and discharge portions, upper and lower wall members in covering relation to said cylinder for sealing the same, said lower wall member being substantially submerged in lubricating oil and having a plurality of cavities respectively forming mutually independent low-pressure and high-pressure gas sound muffling mechanisms in its lower portion, said low-pressure sound muffling mechanism having an area substantially greater than said high-pressure mechanism and being in heat transfer relation with a large proportion of the cylinder area traversed by said piston, said high-pressure gas sound muffling mechanism including first and second compartments each communicating with said cylinder rearwardly of said blade means whereby said blade means is urged against said piston by the pressure of said refrigerant, passage means including said upper wall means and said first-named sound muffling mechanism for conducting gaseous refrigerant from said casing to said cylinder for compression therein, passage means including a valve mechanism for discharging compressed refrigerant from said cylinder to the first compartment of said second-named muffling mechanism, passage means for conducting said compressed refrigerant to said cylinder rearwardly of said blade means, passage means including a valve mechanism for conducting said compressed refrigerant therefrom to the second compartment of said second-named muffling system, passage means for conducting said refrigerant from said second compartment to the exterior of said casing, and motor means connected to said crankshaft for operating said rotary piston.

3,130,903
PUNCHING CONVERTER
Edward Gordon Perry, Jr., and Herman L. Philipson, Jr., Dallas, Tex., assignors, by mesne assignments, to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Original application Sept. 8, 1959, Ser. No. 838,470, now Patent No. 3,064,560, dated Nov. 20, 1962. Divided and this application Jan. 2, 1962, Ser. No. 168,866
7 Claims. (Cl. 234—63)



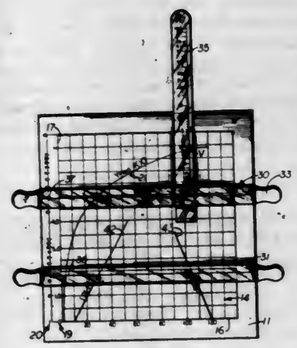
3. A punching converter for sensing a printed code on a card and for actuating a punching apparatus to perforate said card in a manner corresponding to the printed code, comprising a punching apparatus, means for supporting a coded card in said punching apparatus, said card having thereon a printed code, means for illuminating the portion of said card upon which said code is printed, a photo cell matrix having a plurality of photo cells therein corresponding in number to the different positions in which said printed code exists, a lens and mirror system for focusing the image of said printed code onto said photo cell matrix, means for automatically adjusting said mirror system about a substantially horizontal axis and a substantially vertical axis for orienting said image of said printed code properly with respect to said photo cell matrix, and a decoding device actuated by said photo cell matrix for operating said punching apparatus in response to the coded information supplied to said photo cell matrix from said printed code.

3,130,904
CALCULATING MACHINE WITH STORING MECHANISM
Otto Haberkorn, Walter Rompel, and Otto Roth, Gerstetten, Wurttemberg, Germany, assignors to Walther Buromaschinen Gesellschaft m.b.H., Gerstetten, Wurttemberg, Germany, a firm
Filed Oct. 19, 1959, Ser. No. 847,277
12 Claims. (Cl. 235—60)



1. In a calculating machine of the class described, a storing register comprising denominationally arranged storing elements, each of said elements capable of storing any one of the values 0 to 9,
a totalizer,
an actuating mechanism consisting of denominationally arranged, cyclically operable actuating elements performing a rearward movement during the first half of the machine cycle and a forward movement during the second half of the machine cycle,
means for engaging said storing register with said actuating mechanism,
a setting mechanism consisting of a ten keyboard and a set pin carriage cooperating with said keyboard and being movable transversely with respect to said actuating mechanism and along said storing mechanism stepwise from denominational order to denominational order,
means for guiding the multiplier of a multiplication set by means of said ten keyboard into said storing mechanism over said set pin carriage and said actuating mechanism,
means for introducing the multiplicand of said multiplication set by means of said ten keyboard into said set pin carriage,
means for sensing the adjusted digit representation of each storing element one after the other movable along said storing mechanism together with said set pin carriage,
a driving mechanism for cycling the machine operation,
means for combining any number of operations of the machine, and operatively connecting means between said sensing means and said means for automatically combining a number of operations of the machine in each denominational position of the set pin carriage corresponding to the digit of the sensed storing element,
means for disengaging said storing register from said actuating mechanism and means for engaging said totalizer with said actuating mechanism during all operations of the machine allotted to said multiplier, whereby the multiplicand in each denominational position of the set pin carriage will be accumulated in said totalizer as often and in denominational orders corresponding to the values and the denominational orders of the related digits of the multiplier.

3,130,905
SLIDE RULE FOR SOLVING EQUATIONS
Kuang Hao Hsiao, 20617 Amie St., Torrance, Calif.
Filed May 27, 1963, Ser. No. 283,172
10 Claims. (Cl. 235—89)



1. A slide rule for solving algebraic equations comprising

base plate means having horizontal and vertical axes represented thereon, a linear scale being drawn along each of said axes to represent "X" and functions of "X" respectively,

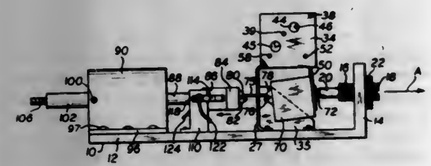
first and second transparent horizontal slider means slidably mounted on said base plate means for movement parallel to said vertical axis,

one of said aforementioned means having a curve drawn thereon to represent the log of said functions of "X."

a third transparent slider means slidably mounted on said first slider means for movement parallel to said horizontal axis, said third slider means having a scale thereon representing the log of an integral power of "X" greater than 1,

whereby in achieving a solution to an equation, lines are drawn on said base plate means between the axes to represent linear factors of the equation, one of the horizontal slider means is positioned to intersect the lines so drawn, the other of the horizontal slider means is positioned to relate the curve to the intersections obtained with said one of the horizontal slider means, and the third slider means is positioned to obtain a reading on its scale corresponding to the reading obtained between said one of the horizontal slider means and the linear scale representing "X."

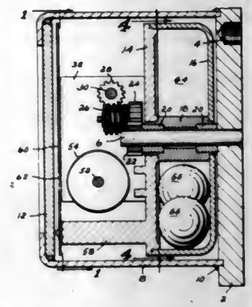
3,130,906
STATISTICAL SHOCK INDICATOR AND REGISTER
Murry Fischer, Spring Valley, N.Y., assignor to Inertia Switch Inc., New York, N.Y., a corporation of New York
Filed Nov. 13, 1961, Ser. No. 151,892
10 Claims. (Cl. 235—91)



1. In a shock register, a support, a mechanical digital counter mounted on said support, said counter having a pivotable actuating lever to advance the counter a single count each time the lever is pivoted fully in one direction and then pivoted fully in a reverse direction, a massive block secured to said lever, and a magnet carried by said support and spaced from said block and lever, said magnet normally attracting the lever to move pivotally in said reverse direction and holding the lever at the end of its pivotal movement in said reverse direction, whereby an accelerating force applied in said one direction pivots the lever and the magnet retracts the lever when said force ceases to advance the counter count substantially independently of any vertically directed gravitational force exerted upon said block and lever.

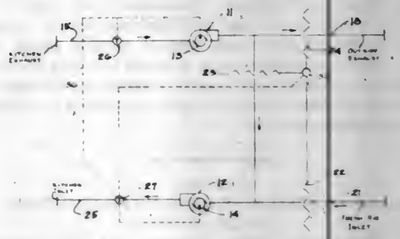
3,130,907
MEANS FOR PREVENTING ROTATION OF PENDULOUS ELEMENT OF HUB ODOMETER
Roger T. Coffey, 31 Charlesbank Road, Newton, Mass.
Filed Sept. 10, 1959, Ser. No. 839,189
5 Claims. (Cl. 235—95)

1. A pendulum type odometer comprising a rotating case adapted to be mounted on the axis of rotation of a wheel on a vehicle, a shaft coaxial with said axis and rotating with said case, a pendulous element rotatively supported on said shaft and including a pendulous mass for normally restraining said element from rotation with said shaft, means for recording the relative rotation between said case and said element, a closed annular space around said axis and fixed to said element, and a particulate free mass within said space movable without constraint through 360° within the confines of said space



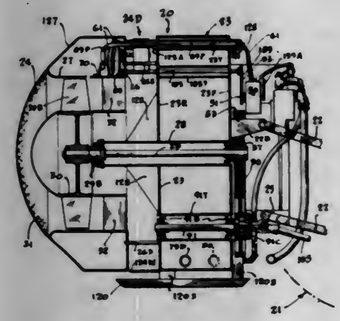
but constrained by the relative size of said mass and said space to confine the center of gravity of said mass to a radial position from said axis which is less than a position at which the centrifugal force acting on said mass equals the force of gravity acting thereon.

3,130,908
THERMODYNAMICALLY BALANCED HEAT REGAIN SYSTEM
Fred M. Henne, 104 William Howard Taft Road, Cincinnati 19, Ohio
Filed Feb. 21, 1962, Ser. No. 176,858
7 Claims. (Cl. 236—49)



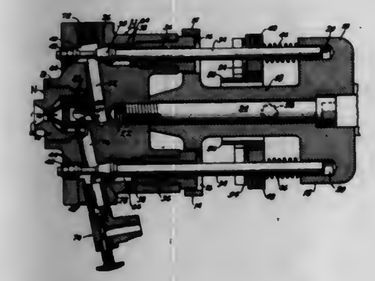
1. A thermostatic balanced heat regain system for supplying a quantity of gas to a chamber from a source and for exhausting an equal quantity by weight of said gas from said chamber to said source, said system comprising exhaust duct means and supply duct means adapted to be connected in parallel between said chamber and source, an exhaust fan in said exhaust duct means and a supply fan in said supply duct means, constant speed power means drivingly connected to said supply fan so as to drive said supply fan at a constant speed, variable speed power means drivingly connected to said exhaust fan for driving said exhaust fan at variable speeds, first thermostatic control means in said exhaust duct means exposed to and heated by the exhaust gases flowing through said exhaust duct means, both said fans having a capacity to move an equal volume of said gas per unit time when the temperature of the gas in said exhaust duct means is at a predetermined minimum temperature, said thermostatic control means operatively connected to said variable speed power means so as to cause the speed of said exhaust fan to increase in proportion to the increase in temperature of the gases in said exhaust duct means above said predetermined minimum temperature whereby said exhaust fan will force a substantially equal weight of said gases through said exhaust duct means per unit time regardless of the temperature of said gases.

3,130,909
SPRAYING EQUIPMENT
William L. Sanborn, Milwaukee, Wis., and Earl J. Sennin-ger, Orlando, Fla., assignors, by mesne assignments, to International Telephone and Telegraph Corporation, New York, N.Y., a corporation of Maryland
Filed Feb. 12, 1960, Ser. No. 8,260
12 Claims. (Cl. 239—78)



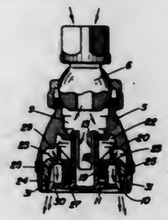
9. In a spraying apparatus, a frame and a wheeled vehicle upon which the frame is mounted, a tank and a fan unit supported on the frame, said fan unit having an air outlet through which high velocity carrier air blast is discharged, a plurality of air atomization spray nozzles disposed in spaced relation at said outlet in the path of the air blast and having spray openings discharging in the direction of the carrier air blast, means for supplying pressure air to the respective nozzles, and independently adjustable metering means operated in timed relation to the advancing movement of the vehicle for feeding spray mixture to the nozzles at relatively different rates to the respective spray nozzles.

3,130,910
HYDRAULIC ATOMIZING SPRAY GUN
Donald O. Sill, West Des Moines, Iowa, assignor to Delavan Manufacturing Company, Des Moines, Iowa, a corporation of Iowa
Filed May 21, 1962, Ser. No. 196,182
2 Claims. (Cl. 239—404)



1. In a hydraulic atomizing spray gun, a gun body having a head, a pair of valves in said head, a trigger pivoted to said body and operatively connected with both of said valves for opening them, a nozzle mounted in said head and receiving fluids from both of said valves, said nozzle having an expanding cone for one fluid and a contracting cone for the other fluid, said expanding cone being located within said contracting cone, means for producing rotation of both fluids whereby each forms a film on the surface of its cone, said expanding cone delivering its film of fluid substantially laterally with respect to the film of fluid delivered by said contracting cone whereby lateral impingement of the first film with respect to the second film and rotation of the fluids thoroughly intermixes them, said nozzle having an expanding cone-shaped discharge opening for directing the two mixed fluids in a film therealong and into a hollow cone shape due to the rotation thereof as the fluids are sprayed from said nozzle, said head having inlet openings directed downwardly therefrom for connection with upwardly extending fluid supply hoses, said head being rotatable relative to said gun body whereby the hoses may extend to said head from an overhead position, a screw at the axis of rotation threaded into one of said gun body and said head and clamping the other thereto, and means of coaction between said gun body and said head located 180° apart to prevent relative rotation of one relative to the other about said screw.

3,130,911
AUTOMATICALLY SELF-CLEANING SHOWER HEADS
Henry R. Billeter, Deerfield, Ill., assignor to Sloan Valve Company, Chicago, Ill., a corporation of Illinois
Filed Nov. 8, 1962, Ser. No. 236,226
8 Claims. (Cl. 239—109)

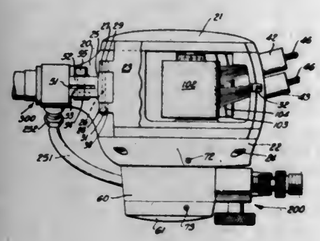


1. In an automatically self-cleaning shower head, a casing having a water supply inlet and a spray outlet therein, a rigidly supported spray dispersing disc arranged in said spray outlet, a reciprocal piston unit in said casing having a skirt portion thereon, said skirt portion having a series of spray grooves formed on the inner wall thereof, said piston unit adapted to project said skirt portion into spray discharge engagement with said spray disc responsive to water flow into said casing, spring means for restoring said piston unit when water flow is interrupted through said casing, said piston unit having a series of water passages arranged adjacent the upper end of said skirt portion, said water passages being spaced from said grooves and said spray disc in all positions of said skirt portion, each of said water passages being arranged in direct alignment with a single one of said grooves so as to direct the stream of water directly into its associated groove from said water passage and out through said spray outlet, and sealing means arranged between said skirt portion and said casing wall.

3,130,912
FIBER CUTTER AND ASPIRATOR
George D. Shelton V, Riverside, Calif., assignor, by mesne assignments, to The Flintkote Company, New York, N.Y., a corporation of Massachusetts
Filed Dec. 9, 1960, Ser. No. 74,978
8 Claims. (Cl. 239—336)

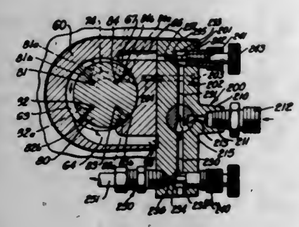
1. A device for cutting continuous fiber roving into short strands of fiber and for forcibly discharging the same comprising in combination:

(1) a housing having a roving inlet and a cut fiber exit opening;
(2) a fiber cutter within said housing located between said roving inlet and said cut fiber exit opening;
(3) means for operating said fiber cutter;



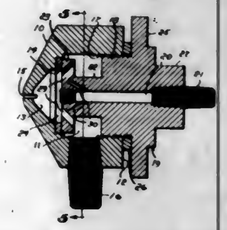
(4) an enclosed elongated hollow tube extending from said cut fiber exit opening and having its outlet spaced therefrom;
(5) a source of compressed air; and
(6) means for introducing said compressed air into the interior of said hollow tube in a forward direction at a location intermediate its ends to aspirate said cut fibers from said housing and forcibly propel them from said tube outlet.

3,130,913
FIBER CUTTER AND ASPIRATOR
George D. Shelton V, Riverside, Calif., assignor, by mesne assignments, to The Flintkote Company, New York, N.Y., a corporation of Massachusetts
Filed Dec. 9, 1960, Ser. No. 74,935
2 Claims. (Cl. 239—415)



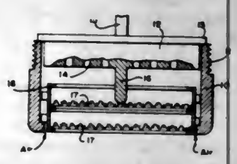
1. A device for cutting continuous fiber roving into short strands of fiber and for forcibly discharging the same comprising:
(1) a housing having a roving inlet and a cut fiber outlet;
(2) a fiber cutter within said housing located between said roving inlet and said cut fiber outlet;
(3) air powered driving means for operating said fiber cutter;
(4) means located between said fiber cutter and said cut fiber outlet for aspirating the cut fibers from said fiber cutter and propelling them through said cut fiber outlet;
(5) a source of compressed air; and
(6) an air valve comprising:
(*a*) a body having an inlet connected to said source of compressed air, a first outlet connected to said aspirating and propelling means and a second outlet connected to said driving means, and
(*b*) valve means in said body movable sequentially from full closed position wherein said inlet is closed to an intermediate position wherein only said first outlet is open and then to full opened position wherein both outlets are open, and reversibly movable sequentially from fully opened position to said intermediate position and then to fully closed position.

3,130,914
DEVICE FOR INTIMATELY MIXING FLUENTS AND DISCHARGING THE MIXED FLUENTS AS A JET
Clarence A. Carkin, Tyngsborough, Arthur T. Greenslade, Jr., Westford (Forge Village), and Robert D. Lambert, Tyngsborough, Mass., assignors to C. G. Sargent's Sons Corp., Graniteville, Mass., a corporation of Massachusetts
Continuation of application Ser. No. 718,167, Feb. 28, 1958. This application Jan. 11, 1962, Ser. No. 166,985
4 Claims. (Cl. 239—425)



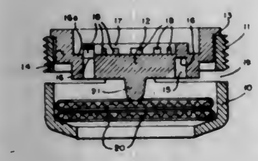
3. In a device for use in intimately mixing fluents of which at least one is under pressure and for delivering them as a jet, a cap member having a chamber, said cap member including an end wall having an exit, and a second member within and attached to said cap member in spaced relationship to said exit and said wall, said second member having a first series of converging passages in communication with said chamber, and so converging that streams therethrough are free jets which intersect therein to effect their atomization through impingement, and a second series of passages each in communication with an appropriate one of the passages of said first named series in ejector establishing relation thereto, the intersection of the streams within said chamber being spaced from said exit to effect a mixing turbulence within said chamber and against substantially the entire wall thereof.

3,130,915
AERATOR HAVING AN ENLARGED STREAM OUTLET
Elie P. Aghnides, 46 W. 54th St., New York 19, N.Y.
Filed Aug. 2, 1961, Ser. No. 128,802
5 Claims. (Cl. 239—427)



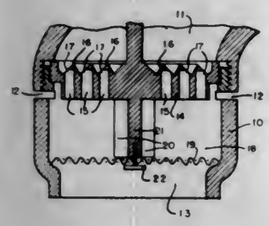
1. An aerator comprising a casing having a plurality of spaced inturned lips at its downstream end, screen means having projections extending outwardly therefrom and positioned to rest on said lips so that air may enter the spaces between said lips and between said projections, jet forming means upstream the screen means for directing at least one jet onto said screen means, the resistance of the screen means being proportioned to the jet forming means to produce a coherent jet laden with numerous small bubbles, that portion of the inner side wall of the casing which is located between said lips being parallel to the axis of the casing from the extreme downstream end of the casing to a position above the lips and thereafter remaining parallel to the axis up to the level of the screen means to thus provide a straight air path from the extreme downstream of the aerator past the screen means.

3,130,916
WATER AERATING DEVICE
Elie P. Aghnides, 46 W. 54th St., New York 19, N.Y.
Filed Aug. 2, 1961, Ser. No. 128,803
9 Claims. (Cl. 239—427)



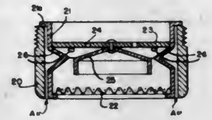
7. A water aerating device comprising a member having first and second sides, means for applying water under pressure to the first side of said member, the second side of the member being exposed to air and adapted to discharge the aerated water, said member defining at least one slot which is long as compared to its width and extending along the second side of the member and extending to a substantial depth into the member from the downstream side thereof, said member having on its upstream side thereof channel means for admitting into the slot streams of water from generally opposite directions which impinge upon each other and upon the walls of the slot to expend their kinetic energy in producing a stream of aerated water, said channel means comprising openings entering the slot between the side walls thereof.

3,130,917
WATER AERATOR HAVING IMPROVED PRE-AERATING DISC
Elie P. Aghnides, 46 W. 54th St., New York 19, N.Y.
Filed Aug. 14, 1961, Ser. No. 131,413
16 Claims. (Cl. 239—427)



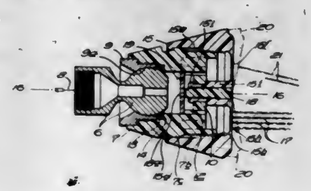
1. A device for producing an aerated jet of water comprising a disc, means for supplying water under pressure to a first side of the disc, a chamber extending upstreamwardly from the second side of the disc, and a member having an inclined surface disposed adjacent the first side of the disc to form a slanted restricted opening leading into said chamber for largely filling it with water.

3,130,918
SLOTLESS AERATOR
Elie P. Aghnides, 46 W. 54th St., New York 19, N.Y.
Filed May 16, 1961, Ser. No. 110,547
7 Claims. (Cl. 239—431)



2. An aerator comprising a casing having a threaded upstream portion for attaching the aerator to the faucet, said casing having a horizontal portion; jet forming and mixing means, including a flange resting on said horizontal portion of the casing for acting as the sole support for the jet forming said mixing means; and jet forming and mixing means including a jet forming diaphragm across the casing with a depending skirt concentric with and spaced from the inside wall of the casing, said jet forming and mixing means including a mixing element within the skirt and carried thereby, said skirt being limited above the mixing element to form an air path from the downstream end of the casing past the mixing element to the space between the diaphragm and the mixing element.

3,130,919
ADJUSTABLE PLASTIC SPRAY DEVICE
William E. Baker, Wellesley, Mass., assignor to Baker Research and Development Corporation, Waltham, Mass., a corporation of Delaware
Filed Feb. 14, 1963, Ser. No. 258,962
12 Claims. (Cl. 239—546)

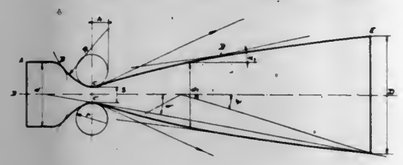


4. Liquid spray apparatus comprising liquid-conducting inlet and outlet means threaded together for relative axial movements of the threaded portions thereof upon relative rotation thereof about an axis, said outlet means including a thin deformable wall with a plurality of small perforations therethrough near the downstream end of said outlet means, and means fixing the central part of said wall axially in relation to said inlet means while permitting relative rotational movements between said inlet and outlet means.

3,130,920
NOZZLE HAVING A CONVERGING INLET ZONE FOLLOWED BY A DIVERGING OUTLET ZONE
Georges Devillard, Bourg-la-Reine, France, assignor to Codeco, Vaduz, Liechtenstein, a company of Liechtenstein
Filed Mar. 26, 1962, Ser. No. 182,392
Claims priority, application France Mar. 28, 1961
5 Claims. (Cl. 239—601)

1. A nozzle for supplying fluids having a longitudinally extending opening comprising a converging inlet zone followed by a diverging outlet zone, said diverging zone being circular in cross section and of progressively increasing diameter and being defined by an elongated surface which is symmetrical about the axis of said diverging zone and which is curved in a longitudinal direction, said surface being generated by the rotation of

a curve about the longitudinal axis of said opening, the curve being such that at each point therealong the angle

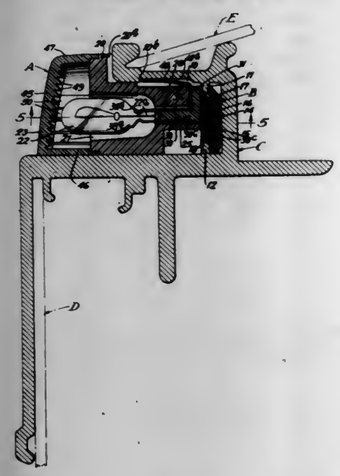


of slope of the curve with respect to said longitudinal axis is smaller than an angle φ defined by the formula

$$\text{tangent } \varphi = \frac{u}{v}$$

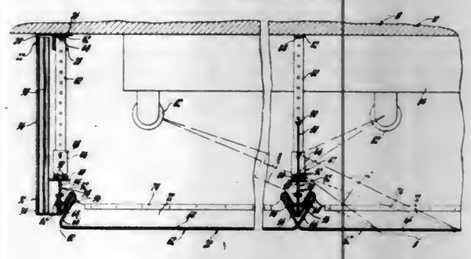
u being the mean quadratic velocity of agitation of the molecules of the fluid being handled and v being the axial velocity of flow of the fluid in adiabatic expansion at the point being considered.

3,130,921
VEHICLE LAMP MOUNTING
Paul A. Morgan, Chicago, Ill., assignor to King Bee Manufacturing Co., Bellwood, Ill., a corporation of Illinois
Filed Sept. 13, 1961, Ser. No. 137,859
7 Claims. (Cl. 240—8.2)



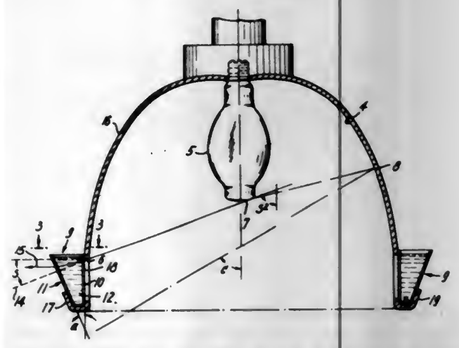
1. In a lighting system for a road vehicle having a body supported on wheels, the combination of an elongated, metal frame member constituting the ground for the circuit for the lighting system, said member being formed with a laterally open channel, an elongated conductor strip seated in the bottom of the channel and having a conductor wire carried thereby, the channel portion of the frame member being formed to provide a latch shoulder, a unitary light unit mounted in the channel and having a body of insulating material, the front of said body being formed with a laterally open cavity, a lamp bulb positioned in the cavity, two contact members carried by the body and formed with cooperating portions extending into said cavity and forming a socket which supports the lamp bulb, one of the contact members having a portion extending rearwardly of the body engaging the conductor wire of the conductor strip, a lens connected to the body for covering the cavity and enclosing the lamp bulb, and a resilient latch member carried on the body and abutting against said shoulder on the frame member, when the light unit is mounted in the channel, to preclude removal of the light unit, intact, from the frame member.

3,130,922
ILLUMINATED CEILING
Robert F. Smith, Grosse Pointe Woods, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 19, 1961, Ser. No. 104,100
7 Claims. (Cl. 240—9)



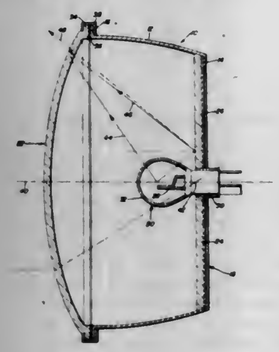
1. In a building structure, an illuminated ceiling comprising, in combination, a pair of longitudinal support members, each including an angularly directed flange, means mounting said support members on said building structure in generally parallel spaced relationship with said flanges thereof being directed toward each other, a light source, a pair of pan members of light transmitting material spaced from said light source, each having first opposite side walls extending angularly to the base walls thereof, and second opposite side walls extending generally normal to the base wall thereof, means removably securing said first walls to said flanges of said support member to locate said pan members in successive relationship and locate said first walls thereof in generally parallel adjacent relationship to the flanges of said support member and said second walls thereof in adjacent juxtaposed relationship, and cooperating means on said second walls providing a light seal therebetween.

3,130,923
LIGHTING FIXTURE
Isaac Goodbar, 93—02 211th St., Queens Village 28, N.Y.
Filed Oct. 12, 1960, Ser. No. 62,187
5 Claims. (Cl. 240—25)



1. A lighting fixture for roadways and the like comprising a shielding element open at the bottom thereof to project light downwardly, a lamp, means for mounting said lamp within said element in a position located above a lower edge of said shielding element to produce an effective shielding angle which in clear weather normally obscures the lamp from the view of drivers of oncoming vehicles, and a receptacle supported by said element extending along and below said lower edge of the shielding element, said receptacle having light transmitting walls disposed to receive and accumulate precipitation, said walls having portions disposed at an angle to each other and to light rays from said lamp to form a temporary water-filled prism during inclement weather to refract the light rays upwardly above the said shielding angle and thus reveal the lamp when the roadway is wet.

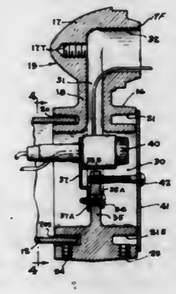
3,130,924
NON-GLARE LAMP
John W. Gish, 1917 Hickman St., Ashland, Ky.
Filed Sept. 27, 1961, Ser. No. 141,184
2 Claims. (Cl. 240—41.3)



1. A lamp device for providing directed illumination in a glare-free manner comprises, casing means having a front end through which all illumination is emitted, a transparent lens having image enlarging means thereon closing the front end of the casing means, said lens having a smooth, convexo-convex surface curvature with an outer convex and inner concave surface, a plane surface reflector mounted by said casing means having flat inner and outer surfaces in spaced relation from said front end facing the concave surface of said lens for reflecting light emitted internally of the casing means, the focal point of said lens coinciding with the inner surface of the reflector, a source of internally emitted light mounted in the casing means optically aligned between the reflector and said lens, and radiation absorbing means completely enclosing said source of light for absorbing selected wave lengths of light emitted from the source of light and reflected from the reflector, said lens curvature being such that rays of light emitted directly from said source through said lens are reinforced by rays of light reflected from the reflector.

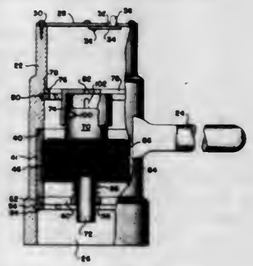
3,130,925
LAMP SUPPORT
Arthur I. Appleton, 1 Bridlewood Road, Northbrook, Ill.
Filed June 18, 1962, Ser. No. 203,234
2 Claims. (Cl. 240—52)

1. Lamp support apparatus comprising a one-piece reversible lamp bracket for easy reversible attachment to either the left-hand end or right-hand end of a uniformly dimensioned tubular support means to extend substantially at right angles to said support means and comprising a body portion having a hollow interior opening at each side thereof, a hollow neck portion structurally connected to and extending generally at right angles to the body portion and a hollow mounting head structurally connected to and projecting from the neck portion to support a lamp housing, said body portion having substantially identical opposite left and right-hand sides each presenting a pair of radially spaced annular shoulders defining therebetween at each side of the body portion substantially identical interior annular recesses concentric to the hollow interior of the body portion and extending into said body portion a sufficient distance to enable an appreciable portion of either end of such a tubular support means to be telescopically fitted into a selected one of the recesses substantially in a seal fit fashion while enabling the lamp bracket to be adjusted circumferentially there-



about to any desired angle of tilt relative to the tube axis, the exterior of said body portion at the opposite sides thereof having spaced fastener openings for removable fasteners in communication with said recesses to enable the bracket to be secured thereby to a selected end of such a tubular support means at any desired angle of tilt relative to the axis thereof, a removable seal plate and fastening means related thereto for the unselected side of the body portion of the bracket, not having the end of such a tubular support means fitted thereto, covering the unselected annular recess and the open end of the hollow interior of the body portion related thereto, and said head being equipped with means for securing a lamp housing thereto.

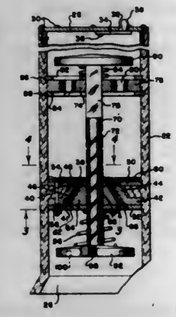
3,130,926
PEPPER-CORN GRINDER
Warren H. F. Schmieding, 4909 Vista Arroyo, La Mesa, Calif.
Filed Apr. 17, 1961, Ser. No. 104,199
3 Claims. (Cl. 241—168)



1. A pepper-corn grinder unit comprising a casing for pepper-corns, said casing having an inlet and outlet at the upper and lower portions thereof, cover means for said inlet means, perforated upper plate means in engagement with the inner surface of said casing and positioned

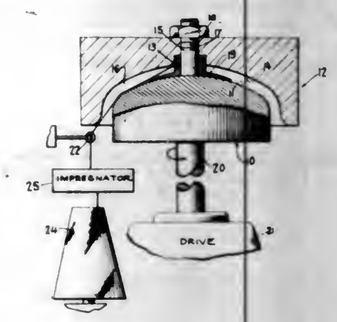
therein in transverse relationship thereto, perforated lower plate means in engagement with the lower surface of said casing and positioned in transverse relationship thereto, hollow grinding means fixed within said casing between said upper and lower plates, the hollow grinding means being circular with the axis thereof extending substantially vertically, the grinding surface of said grinding means being the free circular inner surface thereof; circular second grinding means mounted within said casing in vertically movable relationship therewith, the grinding surface of said second grinding means being complementary with and in cooperative grinding relationship with the grinding surface of said first grinding means, substantially vertically extending shaft means extending from the opposite ends of said second grinding means in axial alignment with one another, each of said shaft means being received in said upper and lower plate means respectively, and being substantially vertically movable with respect thereto, and means associated with each of said shaft means for resilient relative movement between said movable grinding means of said fixed grinding means, said last means resiliently limiting movement of said movable means in either direction.

3,130,927
PEPPER-CORN GRINDER
Warren H. F. Schmieding, 4909 Vista Arroyo, Mount Helix, La Mesa, Calif.
Filed Apr. 17, 1961, Ser. No. 104,203
15 Claims. (Cl. 241—168)



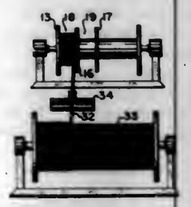
1. A shaker type pepper-corn grinder unit comprising, in combination:
(A) a vertically shakable casing for pepper-corns, said casing having:
(1) closed side walls and a closed top wall, one of said walls having a filler opening,
(*a*) a removable cover for the opening,
(2) an opening in the bottom thereof for the discharge of ground pepper from the casing;
(B) means forming a grinding surface disposed within the casing;
(C) means forming a second grinding surface complementing the first mentioned grinding surface and rotatably movable about a vertical axis and in cooperating grinding relationship with the first mentioned grinding surface;
(D) driving means including a mechanism engaging the second mentioned means for imparting rotating movement to the second mentioned means;
(E) and means for mounting said driving means within the casing for relative vertical sliding movement between the casing and the driving means, while vertical shaking movement is imparted to the casing.

3,130,928
MACHINE FOR WINDING CUP-SHAPED ARTICLES
Horace S. Daley, Clifton, N.J., assignor to Specialties Development Corporation, Belleville, N.J., a corporation of New Jersey
Filed Feb. 11, 1960, Ser. No. 8,112
4 Claims. (Cl. 242—2)



1. In a machine for making a cup-shaped article, means including a member having a convex surface, a second member having a concave surface for receiving said convex surface and a post at the center of said surfaces for connecting said members, said surfaces being spaced apart by said post to provide a space therebetween which defines the wall thickness of the article; means including a yarn guide fixed against movement in an axial direction with respect to said post adjacent the entrance of the space for causing superimposed layers of hoop windings to be formed about said post and in the space and to be engaged and positioned by said surfaces to build up the wall of the article between said surfaces during the formation of the windings; and means for effecting rotation of one of said means about the longitudinal axis of said post and with respect to the other of said means.

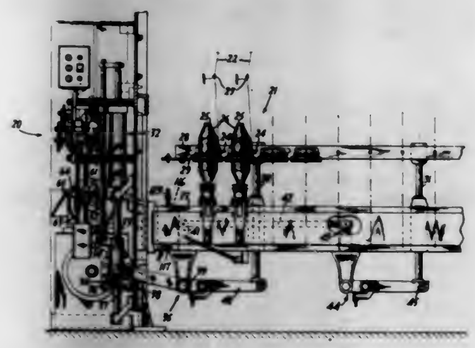
3,130,929
METHOD OF REELING AND UNREELING ELECTRIC CABLE
Robert T. Shiels, Jr., Darien, Conn., and Robert M. Zangler, Jr., Yonkers, N.Y., assignors to Anaconda Wire and Cable Company, a corporation of Delaware
Filed Jan. 28, 1963, Ser. No. 254,147
2 Claims. (Cl. 242—25)



1. The method of shipping and installing electric cables, comprising the steps of:
(A) inserting one or more removable rigid partitions onto the drum of a cable reel and thus dividing the traverse of said reel into a plurality of substantially equal widths,
(B) winding a length of cable from a supply of said cable onto said drum of said reel building a plurality of layers within one of said widths defined by said partitions,

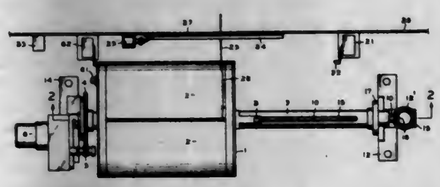
(C) winding like lengths of cable from said supply onto said drum of said reel building a plurality of layers within the remaining widths defined by said partitions,
(D) removing said partitions from said reel while leaving said lengths of cable wound thereon,
(E) transferring said reel to the installation site of said cable, and
(F) unwinding said cable lengths simultaneously in parallel from said reel.

3,130,930
BUILDER APPARATUS
Harold M. Miller, Whitinsville, Mass., assignor to Whitin Machine Works, Whitinsville, Mass., a corporation of Massachusetts
Filed May 29, 1961, Ser. No. 113,481.
13 Claims. (Cl. 242—26.3)



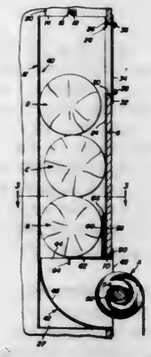
13. A builder for use in a machine having two members mounted for a relative traverse with respect to each other, comprising
hydraulically-powered traverse means connected to at least one of said members for establishing an oscillatory relative traverse of said members with respect to each other,
flow-control valve means connected to said hydraulically-powered traverse means and adjustable for controlling the velocity of said traverse, and
programming means responsive to selected ones of successive traverses for adjusting said flow-control valve means to effect incremental changes in the average traverse velocities of selected ones of successive traverses.

3,130,931
CHART RECORDER
Rudolph F. Hautly, 630 Kirkwhire, Kirkwood, Mo.
Filed Jan. 3, 1963, Ser. No. 249,274
3 Claims. (Cl. 242—55)



1. In a recorder for a seismograph,
a pair of posts disposed at opposite ends of the recorder,
a hollow shaft disposed between said posts and rotatable with respect to said posts, and provided with a slot along the longitudinal axis of said hollow shaft,
a main screw disposed within said hollow shaft along the longitudinal axis of said shaft,
a cylindrical hollow drum disposed on said hollow shaft and rotatable with and translatable on said shaft,
a motor on the post at one end of said shaft to drive said drum in one direction slowly with respect to said shaft by rotating said drum on said screw,
a motor on the other post at the opposite end of said shaft to drive said drum in a reverse direction relatively quickly with respect to said shaft by rotating said screw with respect to said shaft,
a paper supply roller and a paper take-up roller mounted inside said drum, a roll of paper on said paper supply roller, passing from the inside of said drum to the outside, a section of said paper wrapped around the drum once and passing back into said drum, and wrapped around said paper take-up roller,
a motor inside said drum to drive said paper rollers aforesaid, to drive the section of the paper from said paper supply roller to replace the section of paper on the outside of the drum, and drive the section of paper on the outside of the drum to the paper take-up roller when the drum is at the position at one end of said shaft, and
a paper metering assembly to control the length of paper driven to and from the outside of the drum by said motor inside the drum.

3,130,932
TOILET TISSUE HOLDER AND DISPENSER
Jose M. Peña, 502 E. Ash, Laredo, Tex., assignor of ten percent to Arnulfo Garcia, Laredo, Tex.
Filed June 27, 1962, Ser. No. 205,649
2 Claims. (Cl. 242—55.3)



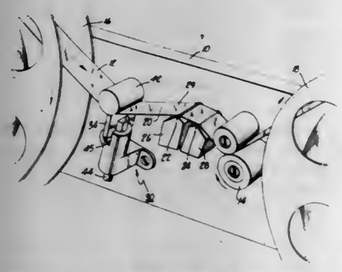
1. A storage type holder and dispenser for a plurality of rolls of toilet tissue stacked one atop the other comprising: a tubular magazine embodying front, back and side walls cooperating and providing a storage chamber, said front wall having an entrance opening at an upper end portion of said wall to permit the user to insert several rolls to temporarily load said chamber, said front wall having an exit opening at its bottom, roll guiding and discharging means fitted into the bottom portion of said chamber for receiving and delivering the lowermost roll to and through said exit opening, a bearing sleeve fixed vertically on the interior of said front wall midway between the opposed side walls of said chamber, the lower end of said sleeve being flush with the upper marginal edge portion of said exit opening, and manually controllable roll suspending and releasing means comprising

a single unit embodying a vertical crank journaled for rotation in said bearing sleeve and complemental upper and lower horizontal arms at the ends of said crank and at right angles to the lengthwise axis of said crank, said arms being linearly straight and disposed in planes parallel to each other, said lower arm being in a plane even with the plane of the upper marginal edge of said exit opening and extending normally into the interior of said chamber and having a free end portion terminating adjacent the vertical axis of said chamber and thus adapted to underlie a portion of the lowermost roll and disposed tangentially in respect to said roll, said upper arm being normally in a position parallel to and residing in an out-of-the-way position in contact with the interior surface of said front wall and which when swung into play being adapted to assume a ready-to-function position tangential to and beneath the bottom of the roll which is next above the then released lowermost roll.

3,130,933
MAGNETIC TAPE APPARATUS

Albert F. Pillsbury, Jr., and Nelson C. Yew, Palo Alto, Calif., assignors to Ampex Corporation, Redwood City, Calif., a corporation of California

Filed Dec. 15, 1960, Ser. No. 75,963
2 Claims. (Cl. 242—55.12)



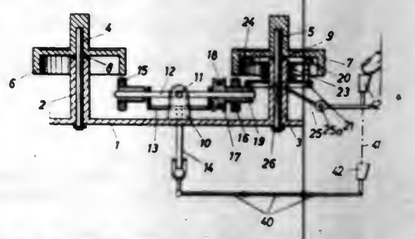
1. A magnetic tape apparatus for moving a magnetic tape past a transducing means, said tape having a magnetic oxide layer on one surface thereof comprising: means for supplying said tape to said transducing means; means for takeup of said tape after said tape has traversed said transducing means; a bar of Teflon; means for causing frictional engagement of said bar with said oxide layer, said last-named means comprising resilient means disposed adjacent to said oxide layer surface for urging said bar of Teflon against said oxide layer and a fixed tape guide for engaging the opposite surface of said tape.

3,130,934
TAPE RECORDERS

Hubert Richt, 12 Buchenweg, Socking, Germany, and Albert Liebl, 12 Am Muehleich, Starnberg, Germany

Filed Apr. 23, 1962, Ser. No. 189,445
Claims priority, application Germany Apr. 26, 1961
4 Claims. (Cl. 242—55.12)

1. In a tape recorder having a pair of reels carried upon spaced shafts, sound tape windable from one reel to the other by rotation of said reels, a driving capstan and means effective to bring said capstan into contact with the length of tape extending between the reels; the combination of reel rotating means for winding and unwinding said tape from the reels and effective to hold the length of tape extending between said reels under a substantially constant tension and to accelerate reel rotation as said capstan engages the tape for movement, said reel rotating means comprising a drive shaft extending between said reels, at least three friction wheels mounted on said drive shaft, bearing means effective to tilt said drive shaft so that a selected friction wheel engages one of said reels, a disc-type drive plate connected to said capstan, a gyratory mass having zones of different diameters, and speed-change means for said tape effective to move said gyratory

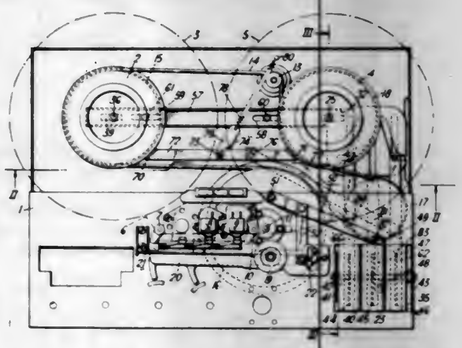


mass to a selected position in which one of said zones of said gyratory mass engages said disc-type drive plate, said gyratory mass being rotated at a speed substantially higher than the speed of said capstan.

3,130,935
SOUND REPRODUCING AND RECORDING APPARATUS

Peter John Aldridge, Ainsdale Boundary Road, Upminster, England

Filed Jan. 18, 1963, Ser. No. 252,499
Claims priority, application Great Britain Feb. 1, 1962
5 Claims. (Cl. 242—55.12)

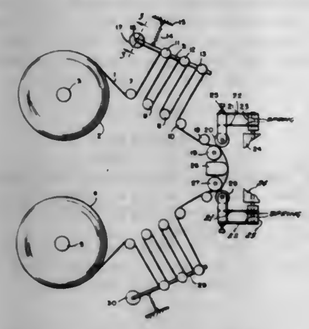


1. In tape sound reproducing apparatus comprising first and second tape reels, a driving motor and three different drive transmissions for transferring tape from one of said reels to the other, the improvement which comprises means for engaging and disengaging each of said drive transmissions, said means including first, second and third control members, means operatively connecting each of said control members to a different one of said drive transmissions whereby movement of one of said control members in one direction engages one of said drive transmissions and movement of said control member in an opposite direction disengages said drive transmission, a projection on each of said control members, an interlock plate having three slots, each of said projections operatively engaging in one of said slots, edge surfaces on said plate and means for moving each one of said control members individually, said slots being so arranged that movement of any one of said control members in a direction to engage one of said drive transmissions causes said edge surfaces in engagement with the projections on the other control members to prevent movement of these other control members in said one direction to engage either of the others of said drive transmissions.

3,130,936
DIGITAL RECORDING TAPE TRANSPORT DAMPING SYSTEM

Richard H. E. Rochman, Huntington Station, N.Y., assignor to Potter Instrument Company, Inc., Plainview, N.Y., a corporation of New York

Filed Apr. 26, 1961, Ser. No. 105,785
5 Claims. (Cl. 242—75.3)

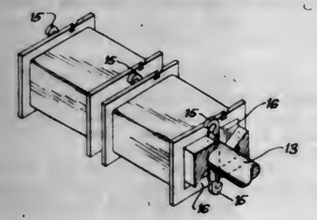


1. In a high speed tape transport for digital recording and the like, the combination of, means for passing recording tape from a first take-up reel to a second take-up reel along a path passing across a record/play-back head and over at least one tension arm, and damping means connected with the tension arm, said damping means comprising means connected with the tension arm to provide an elastic restoring force constituting together with the mass of the arm a mechanically resonant system and including a second resonant system coupled to said arm of substantially less mass than said tension arm and tuned to substantially the same frequency as the resonant frequency of said arm and its restoring force, and viscous damping means coupled to said second resonant system.

3,130,937
SPOOL HANDLING APPARATUS

Homer P. Lane, Indianapolis, Ind., assignor to Western Electric Company, Incorporated, a corporation of New York

Filed July 24, 1961, Ser. No. 126,030
5 Claims. (Cl. 242—129.7)

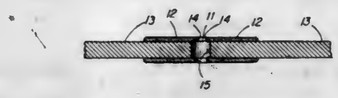


1. A spindle for releasably holding a plurality of spools in axial alignment and in axially spaced relationship and for facilitating simultaneous rotation of the spools for winding of material thereon, said spindle comprising an elongated housing of generally rectangular cross section for receiving the spools thereon, said housing having a passage therein extending longitudinally thereof, a rod arranged within said passage and rotatable with respect to said housing, a plurality of circumferentially extending slots in said housing opening into said passage and through the outer surface of the housing, and a plurality of pins rigidly secured to and extending radially from said rod within said slots, said pins being of such length that they extend substantially beyond the outer surface of said housing to limit axial movement of the spools and to space the spools axially apart when said pins are oriented to extend parallel to one outer surface of said housing, and to be substantially retracted within said housing when oriented to extend along a diagonal of said housing.

3,130,938
THREAD GUIDE

Roger A. Dysart, Shelby, N.C., assignor to Fiber Industries, Inc., a corporation of Delaware

Filed May 13, 1963, Ser. No. 279,771
7 Claims. (Cl. 242—157)

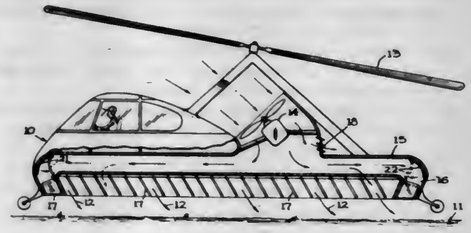


1. A thread guide comprising a single metal piece having a thread guide slot not exceeding 0.03 inch in width and having the area surrounding said thread guide slot plated with a hard ceramic coating firmly bonded to said metal piece to cover the exposed edges of said thread guide slot and provide a spill over of said ceramic coating in a manner to form a non-continuous coating with the metal exposed in the inner portion of said thread guide slot and the thread contact is solely with said ceramic spill over in said thread guide slot.

3,130,939
OBSTACLE CLEARING ATTACHMENT FOR AIR CUSHION VEHICLES

William H. Alper, Baltimore, and Melville W. Beardsley, Severna Park, Md., assignors, by mesne assignments, to The National Research Associates, Inc., Laurel, Md., a corporation of Maryland

Filed Dec. 23, 1960, Ser. No. 78,144
13 Claims. (Cl. 244—2)



1. In combination, a surface vehicle of the minimum ground pressure type and an unshrouded free spinning rotor attached to said surface vehicle, said rotor having an axis of rotation inclined from the vertical whereby said surface vehicle is enabled to leave the proximity of the ground surface and rise to substantial heights.

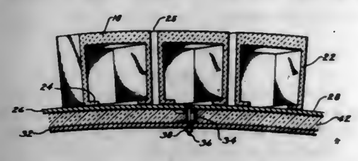
3,130,940
HEAT SHIELD

Richard B. Erb and Kenneth C. Weston, Houston, Tex., assignors to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration

Filed Aug. 5, 1963, Ser. No. 300,113
16 Claims. (Cl. 244—1)
(Granted under Title 35, U.S. Code (1952), sec. 266)

12. A dual-heat-shielded space vehicle comprising: a vehicle body including a forward bulkhead adapted to be subjected to the impingement of both radiative heat and convective heat upon entry into an atmosphere; a heat reflector carried by said body and covering at least

a major part of said bulkhead; and an ablative structure carried by said body and located outward of said

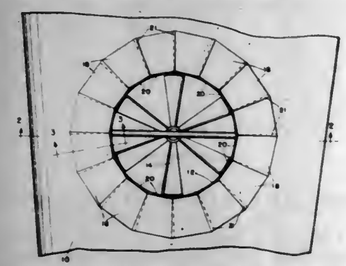


reflector to dissipate convective heat; said ablative structure being highly transparent to radiative heat.

3,130,941
ELASTIC BELLMOUTH FOR DUCT THROUGH AERODYNAMIC SURFACE

Ladislao Pazmany, San Diego, Calif., assignor to Ryan Aeronautical Co., San Diego, Calif.

Filed Mar. 27, 1963, Ser. No. 268,235
14 Claims. (Cl. 244—12)



1. In combination with an aerodynamic surface having an airflow conducting duct extending therethrough, airflow controlling means comprising:

a flexible, resilient annulus secured to said aerodynamic surface and to the periphery of said duct and extending radially outwardly therefrom;

and means to bow said annulus principally in a direction axial to said duct to form an axially extended curved bellmouth entry for the duct.

11. In combination with an aerodynamic surface having an airflow conducting duct extending therethrough, airflow controlling means comprising:

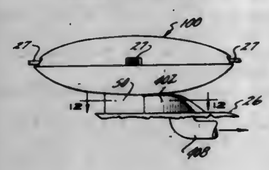
a flexible, resilient annulus secured to the periphery of said duct and extending radially outwardly therefrom, said annulus being circumferentially segmented into a plurality of petal elements;

and means to bow said annulus axially to said duct to form a curved bellmouth entry for the duct.

3,130,942
BOUNDARY LAYER CONTROL

Evan A. Fradenburg, Fairfield, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Feb. 26, 1963, Ser. No. 261,183
11 Claims. (Cl. 244—17.11)



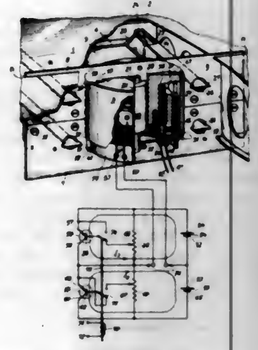
1. In combination in an aircraft, a rotor head mounted thereon for rotation, an enclosure member extending upwardly from the aircraft towards said rotor head, means directing a flow of air along each side of the enclosure member between the rotor head and aircraft, said directing means including a suction inlet located at the rear of said enclosure.

6. In combination in an aircraft, a rotor head mounted thereon for rotation, an enclosure member extending upwardly from the aircraft toward said rotor head, a suction inlet located in the top of said aircraft behind said enclosure member, said suction inlet having a splitter vane between the aircraft and said rotor head dividing the inlet to stabilize flow through the inlet.

3,130,943
ACTUATOR

Alexander Berreshelm, Ottobrunn, near Munich, and Alfred Eder, Munich, Germany, assignors to Bölkow-Entwicklungen Kommanditgesellschaft, Munich, Germany, a firm of Germany

Filed Aug. 20, 1962, Ser. No. 218,048
Claims priority, application Germany Aug. 22, 1961
8 Claims. (Cl. 244—62)

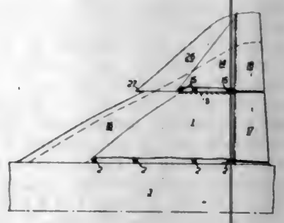


1. A magnetically actuated spoiler for controlling flying bodies of high velocity, characterized by a coil which is movably mounted in a magnetic field, said coil being mechanically connected with a spoiler and having a winding, and means for actuating said winding by current pulses of adjustable pulse length and current direction.

3,130,944
VARIABLE AREA AIRCRAFT WING

Raymond Frederick Creasey, Lytham-St. Annes, and Kenneth Burgin, St. Annes-on-Sea, England, assignors to English Electric Aviation Limited, Westminster, London, a company of England

Filed July 26, 1963, Ser. No. 297,826
Claims priority, application Great Britain July 31, 1962
6 Claims. (Cl. 244—43)



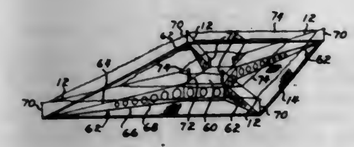
1. An aircraft wing for attachment to a fuselage, comprising in combination: a main wing section fixedly attached to the fuselage, and exchangeably attached to said main wing section a comparatively small wing tip section and nose section in common to said main wing section and wing tip section and alternatively a wing tip section of enlarged area and span and separate nose sections of enlarged chord dimensions attached to said main wing section and enlarged wing tip section, respectively.

5. An aircraft wing as claimed in claim 1, comprising hinges provided at the juncture of said main wing section and said enlarged wing tip section allowing to fold the latter relative to said main wing section about a chordwise axis for use on board an aircraft carrier.

3,130,945
IONOCRAFT

Alexander P. de Seversky, New York, N.Y., assignor to Electronatom Corporation, New York, N.Y., a corporation of New York

Filed Aug. 31, 1959, Ser. No. 837,150
29 Claims. (Cl. 244—62)

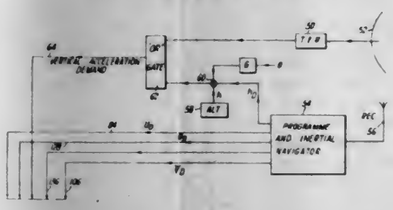


1. In combination with flying apparatus composed of a structure supporting discharge electrodes for causing adjacent air molecules to become electrically charged spaced from a grid of electrical conducting means for neutralizing the charge on electrically charged molecules whose charge was caused by said discharge electrode and means for applying a high D.C. potential between said electrodes and said grid to cause air to move from said electrodes toward said grids to provide a propulsion force for said flying apparatus, and antenna means for use with radio frequency energy signals, said antenna comprising a plurality of elements which serve also as part of said structure for the flying apparatus by being connected electrically to one terminal of said high D.C. potential to assist in providing propulsion force for said apparatus.

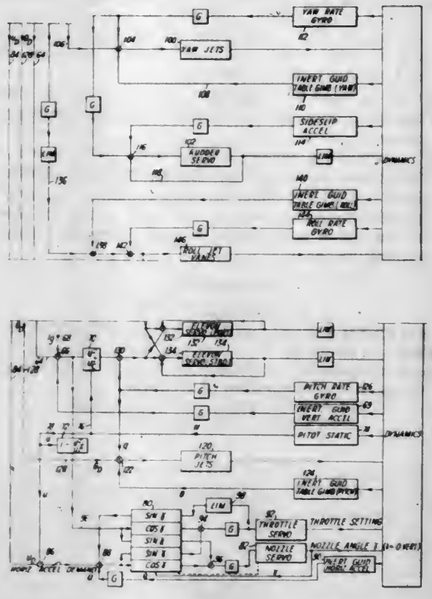
3,130,946
FLIGHT CONTROL OF AIRCRAFT

Stephen William Tonkin and Roy Pedlar, London, England, assignors to Bristol Aircraft Limited, London, England, a British company

Filed Mar. 13, 1963, Ser. No. 264,947
Claims priority, application Great Britain Mar. 16, 1962
5 Claims. (Cl. 244—77)



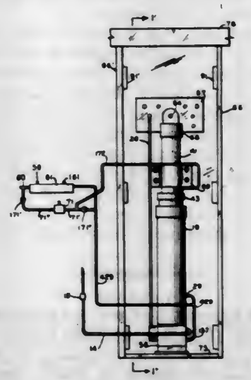
1. An aircraft powered by a jet engine with a rotatable nozzle, including a throttle for said engine and separate controls for said throttle and said nozzle, means for computing vertical and horizontal acceleration demands, and an adjustable proportioning means connected to receive vertical and horizontal acceleration demands from said computing means and to apply each of said demands partly to said throttle control and partly to said nozzle control, and a connection between said nozzle and said proportioning means for adjusting the latter in accordance with the nozzle angle, whereby in the hover condition horizontal acceleration is achieved predominantly by alteration of the nozzle angle and vertical acceleration by increasing the thrust and near to and at cruising speed horizontal acceleration is achieved predominantly by variation of thrust and vertical acceleration predominantly by variation of the nozzle angle.



3,130,947
EJECTION SEAT CATAPULT

Charles Glen Franks, Amarillo, Tex. (Box 255, Skellytown, Tex.), assignor of one-half to Ely Silverman

Filed Nov. 30, 1960, Ser. No. 72,622
8 Claims. (Cl. 244—122)



1. In an airplane with an ejectable seat for an airman therein, said airplane having a canopy over the seat, a system for ejecting the seat from the airplane in cooperative combination with a system for raising the seat to the level of the canopy, said system for ejecting comprising

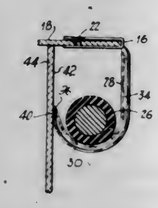
(*a*) an outside container having an opening at its top, the bottom of said container being attached to the airplane,

(*b*) a tubular container within said outside container containing a propulsive charge, said inner container being axially slidably movable in said outside container and said inner container projecting from the top of said outside container through said opening and being attached to the seat,

(*c*) an enclosed space between the bottom of said inner tubular container and a propulsive charge therebelow, and

(*d*) controllable means for applying gas pressure in said space and connected thereto thereby to controllably move said inner tubular container upward a predetermined amount to raise said seat to the level of the sill of said canopy without firing any of said propulsive charges.

3,130,948
FASTENER FOR SUPPORTING A CONDUCTOR
William A. Bedford, Jr., Littleton, Colo., assignor, by mesne assignments to Thompson Bremer & Company, Chicago, Ill., a corporation of Delaware
Filed Aug. 16, 1961, Ser. No. 131,825
1 Claim. (Cl. 248—58)



A unitary fastener for supporting an insulated electrical conductor on a frame, the fastener being formed as an integral piece of sheet metal and comprising—

(*a*) a base portion adapted to be secured to a frame flange;

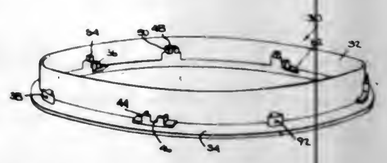
(*b*) a substantially straight stem portion projecting from said base portion; and

(*c*) a hook portion constituting a free-end extension of said stem portion and curving through substantially 180° to overlie said base portion and extend back parallel to said stem portion;

said stem portion and hook portion having opposite side flanges that curve outwardly to provide an inwardly convex, channel-shaped, transverse profile continuously from adjacent said base portion to adjacent the free end of the hook portion; and the ends of said side flanges at the free end of said hook portion being tapered to substantially zero width at said free end to provide tapered end edges thereof extending generally parallel to said stem portion and to leave the free end of said hook portion substantially flat with a thickness not materially exceeding the thickness of the sheet metal from which the fastener is formed.

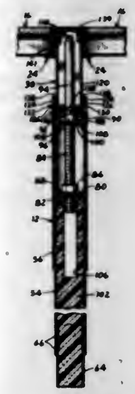
3,130,949
SUPPORT FOR LIGHTING AND BUILDING FIXTURES AND THE LIKE
Louis Erhardt and Robert C. Devinney, Jr., Pacific Palisades, Calif., and Frederick M. Wolff, Montclair, N.J., assignors to Century Lighting, Inc., New York, N.Y., a corporation of New York
Filed July 2, 1962, Ser. No. 206,994
36 Claims. (Cl. 248—343)

1. A fixture mounting ring comprising: a squat tubular circular sleeve defining a large central opening, said sleeve having at the lower end only thereof a radially outwardly extending flange from the periphery of which an annular downwardly extending short lip depends, a set of externally located bosses protruding radially outwardly from the sleeve, said bosses being of T-shaped cross-section and running vertically and upwardly away from the flange, said sleeve having radially outwardly protruding open-ended boxes defining a set of external vertical slots and radially inwardly protruding open-ended boxes defining a set of internal vertical slots, plural pairs of lugs projecting radially inwardly from the sleeve, the lugs of each pair being situated at different



vertical locations so as to define a radially inwardly opening clear space therebetween, all of said spaces being at the same horizontal level, the lower lug of each pair having a downwardly facing cam surface remote from the clear space for constricting an end of a tubular circular casing of a fixture inserted in the ring and urged against said lugs so as to reduce the diameter of said end of the casing to permit it to enter into the clear spaces between the pairs of lugs, and plural circumferentially extending angularly spaced shelves protruding radially inwardly from the sleeve at the same horizontal level, each of said shelves having an indentation and a stop on its upper surface.

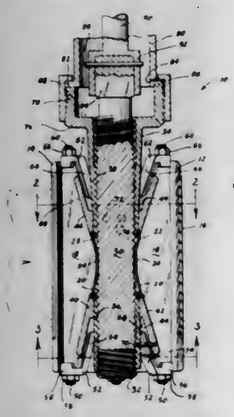
3,130,950
SHORE ASSEMBLY FOR CONCRETE FLOOR SLABS
George F. Bowden, Des Plaines, and Byron E. Ruth, Chicago, Ill., assignors to Symons Mfg. Company, Chicago, Ill., a corporation of Delaware
Original application Jan. 24, 1961, Ser. No. 84,574. Divided and this application July 3, 1961, Ser. No. 121,545
7 Claims. (Cl. 248—354)



1. As an article of concrete hardware, a stringer and panel-supporting shore comprising, in combination, an elongated post presenting an internally threaded vertical bore at its upper end, a rotatable elevation screw threadedly received in said bore and capable of axial shifting movement in opposite directions upon turning of the screw

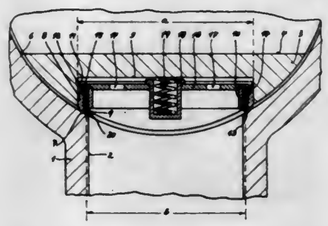
in opposite directions respectively, means on said screw defining an upwardly facing shoulder, a nonrotatable tubular member coaxial with said screw, encompassing the same, having its lower end supported on said shoulder, and having an open upper rim disposed above the level of the upper end of the screw, and a pair of supports extending laterally from said tubular member in opposite directions and adapted to receive loosely and removably thereon the adjacent ends of a pair of aligned panel-supporting stringers, the upper end of said elevation screw within the tubular member having a portion which is noncircular in transverse cross section for cooperation with a conformably shaped torque-applying tool inserted through the open upper rim of the tubular member, and a tubular apron having its upper end fixedly secured to the elevation screw and telescopically received over the upper end of the post, said tubular apron constituting a torque-applying element whereby the elevation screw may be rotated in opposite directions either by manual turning of said apron from below the stringers, or by use of the tool from above the stringers.

3,130,951
RETRACTABLE STEEL WEDGE STOPPER
John J. Smith, Decatur, Ill., assignor to Mueller Co., Decatur, Ill., a corporation of Illinois
Filed Sept. 5, 1961, Ser. No. 136,110
2 Claims. (Cl. 251—158)



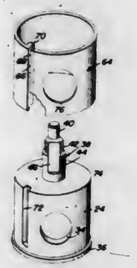
1. A cylindrical pipe stopper assembly for insertion into, and having a minimum outer diameter less than, a transverse circular opening through a pipe line, and adapted to be expanded into sealing engagement with the edges of the opening comprising: an expandable and contractable longitudinally-split cylindrical sleeve; a plurality of vanes spaced circumferentially about and secured to the inner side of said sleeve, said vanes having opposite converging inner end surfaces; a jack screw disposed coaxially within said sleeve and having two sets of threads of opposite direction; a pair of expander wedge means threadably engaged with said jack screw thread sets and selectively movable toward and away from each other upon rotation of said jack screw, each of said expander wedge means having generally frusto-conical exterior and surfaces, said exterior surfaces being positioned to effect sleeve-expanding wedging engagement with said converging edges of said vanes on movement of said wedge means toward each other; and wedging fingers detachably secured to the opposite ends of said vanes and extending into each of said wedge means to effect sleeve-contracting wedging engagement with said interior surfaces on movement of said expander wedge means away from each other; means for preventing relative rotation between said wedge means and said sleeve; means on one end of said assembly for securing thereto a manipulating tube for rotating and moving said assembly axially; and means on one end of said jack screw for securing thereto an operating extension to extend coaxially through said manipulating tube, whereby said sleeve can be positively expanded and contracted independently of axial movements thereof.

3,130,952
SEALING MEANS FOR HIGH PRESSURE VALVES
Otto Meyer, Eblershausen, Lehrte, Germany
Filed Jan. 11, 1961, Ser. No. 82,104
Claims priority, application Germany Jan. 26, 1960
11 Claims. (Cl. 251—175)



1. A valve comprising one member having a recess therein, a sealing ring mounted for sliding axial movement within said recess, a second member having a sealing surface for cooperation with the outer edge of said sealing ring to prevent fluid flow through the valve, said sealing ring comprising resilient material and having a lip on the periphery of its inner edge, which lip bears against the side wall of said recess to provide a fluid seal, and a perforated plate disposed within said recess between the end face thereof and said sealing ring, said plate being of smaller diameter than said recess so that the marginal area of said inner edge is exposed, and spring means for biasing said plate and said ring toward the sealing surface of said second member.

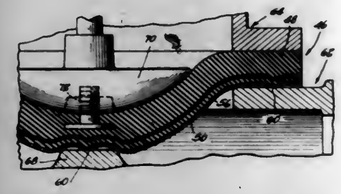
3,130,953
SELF-SEALING ROTARY VALVE MECHANISM
John M. Carpenter, 10517 Georgetown Drive, Rancho Cordova, Calif.
Filed June 27, 1961, Ser. No. 120,049
19 Claims. (Cl. 251—182)



1. A self-sealing rotary valve mechanism comprising, a rotatable valve body, housing means rotatably receiving said valve body, valve actuating means operatively connected to one axial end of the valve body for imparting continuous rotation thereto in one direction only, port means formed in said housing means, chamber means formed within said valve body and having a passage for non-restrictive flow of fluid to and from said port means, a split, elastically deformable sleeve subject to the static

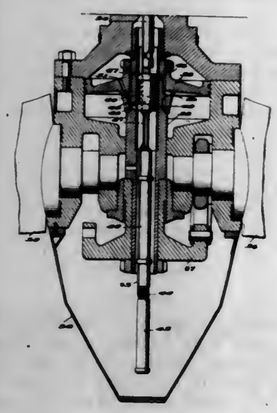
pressure of said fluid and continuously biased into sealin relation with the housing means, torque transmitting means connected to the sleeve and projecting radially inwardly therefrom for operative engagement by the valve body to elastically deform the sleeve out of binding contact with the housing means in response to rotation of the valve body in said one direction only without relieving the sealing bias applied to the sleeve, said sleeve being formed with an opening aligned with said passage and spaced from said torque transmitting means.

3,130,954
VALVE DIAPHRAGM STRUCTURE
Rolland McFarland, Jr., Crystal Lake, Ill., assignor to Hills-McCanna Company, Chicago, Ill., a corporation of Illinois
Filed Apr. 28, 1960, Ser. No. 25,255
5 Claims. (Cl. 251—331)



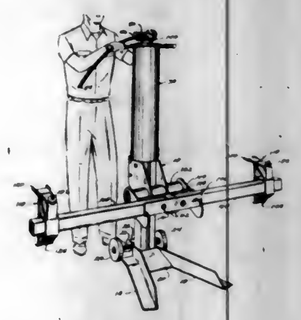
1. A valve diaphragm structure adapted for flexing in a valve assembly between an open position and a closed position tightly compressed against a valve seat, said structure comprising: a flexible, elastomeric body member; a polytetrafluoroethylene liner member disposed against said body member, said liner member having a tensile strength and an elongation at least equal to the corresponding properties of said body member; and means bonding said liner member to said body member with a high degree of adhesion.

3,130,955
RUNNER BLADE SERVO SYSTEM FOR TURBINES
Robert S. Sproule, Montreal, Quebec, Canada, assignor to Dominion Engineering Works Limited, Montreal, Quebec, Canada
Filed May 9, 1961, Ser. No. 108,814
3 Claims. (Cl. 253—31)



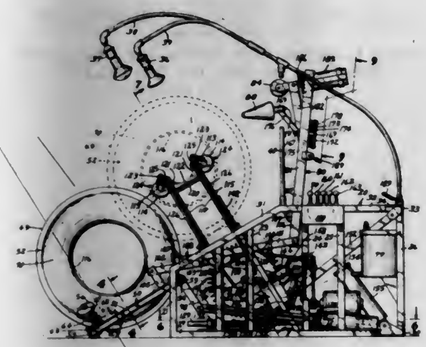
1. In a Kaplan type turbine including adjustable wicket gates and wicket gate operating mechanism for changing the settings of the wicket gates to control the flow of water to the runner blades of the turbine, a rotating assembly including a rotatable shaft, a casing rigidly secured to said shaft, a passageway extending along the longitudinal axis of the shaft communicating with the casing, runner blades journalled in said casing for rotation about axes radial to the casing, a piston operatively connected to the blades for changing and controlling the pitch setting of the blades, a valve for controlling the operation of said piston, the longitudinal axis of said valve lying on the longitudinal axis of the casing and shaft, a control rod extending through said passageway for controlling the position of said valve, the casing comprising an oil reservoir, an electric motor in said casing, control means for said electric motor extending through said passageway, a pump driven by said motor, the inlet of said pump communicating with the reservoir, the outlet of the pump communicating with the valve whereby said pump may be driven to move said piston and alter the runner blade setting when changes in the wicket gate setting move the control rod to reposition said valve.

3,130,956
JACK DEVICE
Melvin A. Mandelko, Fort Dodge, Iowa, assignor to Super-Draulic Manufacturing Company, Fort Dodge, Iowa, a corporation of Iowa
Filed May 21, 1962, Ser. No. 196,092
9 Claims. (Cl. 254—2)



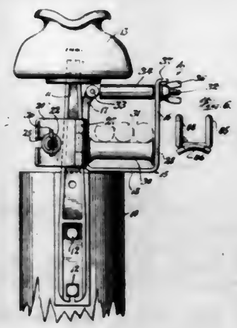
1. In a jack device,
a supporting means,
a pair of elongated vertical elements secured to said supporting means and extending upwardly therefrom, said vertical elements being spaced apart in parallel fashion,
a plurality of spaced apart connecting elements extending between said vertical elements and being positioned in vertical alignment,
a stationary piston element secured to the upper end of said vertical elements,
a hollow cylinder having a closed top and open bottom slidably receiving said vertical elements and said piston element through the lower end thereof,
control means on said cylinder for selectively introducing or exhausting compressed air into or out of, respectively, the inner top portion of said cylinder whereby said cylinder can be vertically moved with respect to said piston element,
bracket means secured to said cylinder and adapted to be secured to an object to be lifted,
a ratchet element pivotally secured to said bracket means,
a tongue on said ratchet element extending between said vertical elements to engage one of said connecting elements at times,
a shoulder on said ratchet element engaging said vertical elements when said tongue is engaging said connecting elements to prevent said ratchet element from pivoting out of engagement with said connecting elements,
and means on said ratchet element for manually pivoting said tongue out of the path of said vertically aligned connecting elements after said cylinder has been moved vertically upwardly to disengage said tongue from one of said connecting elements.

3,130,957
TRUCK TIRE SPREADING AND INVERTING DEVICE
Charles E. Branick, % Branick Mfg. Co., Box 1937, Fargo, N. Dak.
Filed Sept. 26, 1962, Ser. No. 226,291
7 Claims. (Cl. 254—50.3)



1. In a device for inspecting pneumatic tire casings, the combination comprising a frame structure, means for supporting a tire in said frame structure including a tire-inverting wheel positioned to underlie a segment of the road-engaging crown portion of the tire, means for spreading the bead portions of the tire adjacent said inverting wheel, said means comprising at least one pair of opposed bead-engaging rolls, each of said rolls including a generally cylindrical portion engageable with the inner generally cylindrical surface of a tire bead, and a generally radially projecting circumferential flange engageable with the inner wall surface of a tire at the bead portion thereof, a pair of mounting heads each journalling a different one of said rolls for rotation on axes extending in directions generally axially of the tire, a pair of generally upstanding operating arms pivotally mounted at their lower end portions on opposite side portions of said frame structure on parallel axes generally normal to the axis of the tire, said heads being mounted to the upper end portions of respective ones of said arms on axes parallel to the axes of pivotal movement of said arms, means for imparting swinging movements to said arms and rolls carried thereby in directions to spread the beads of the tire, a pair of control arms one each pivotally mounted at one end to an opposite portion of the frame structure for swinging movements on axes parallel to the axes of swinging movement of said operating arms, the other ends of said control arms each being pivotally secured to a respective one of said heads on axes parallel to the axes of swinging movements of said arms, and means for moving said inverting wheel toward and away from the axis of a tire in overlying relationship thereto and in engagement therewith.

3,130,958
STRINGING BLOCK
Anthony McAuley, Maywood, Ill., assignor to A. B. Chance Company, Centralia, Mo., a corporation of Missouri
Original application Feb. 3, 1961, Ser. No. 87,028. Divided and this application Jan. 22, 1962, Ser. No. 167,709
5 Claims. (Cl. 254—134.3)

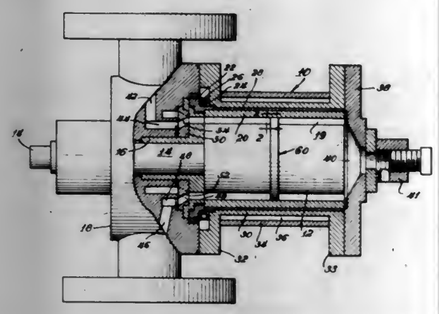


1. A stringing block comprising:
a U-shaped frame, having a bight and a pair of parallel, upright legs;
a first fastener attached to one of the legs at the free end of the latter and spanning the distance between the legs;
means for releasably attaching the first fastener to the other leg;
a pair of spaced, horizontal rollers spanning the distance between the legs, one of the rollers being journalled on the first fastener; and
clamp means including a pair of spaced plates extending outwardly from said one leg, one of the plates being rigid with said one leg adjacent one upright edge of the latter, the other plate being swingably attached to said one leg adjacent another upright edge of the latter, a second fastener attached to said one plate at the free end of the latter and spanning the distance between the plates, and take-up means for releasably attaching the second fastener to said other plate, whereby when the clamp means is placed on a pole top pin it may be rigidly attached thereto by actuation of the take-up means to draw said one plate toward said other plate thereby gripping the pin between the plates.

3,130,959
METHOD OF MIXING PLASTICS AND APPARATUS THEREFOR
Walter J. Schrenk, Bay City, and Kenneth J. Cleereman and Turner Alfrey, Jr., Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed June 20, 1962, Ser. No. 203,845
6 Claims. (Cl. 259—6)

1. A method of mixing a plurality of diverse miscible viscous liquids comprising the steps of, arranging said liquids in a ribbon-like pattern having an alternate repetitive sequence, moving the liquids along a longitudinal path while applying a first liquid moving force along a

first common boundary of the liquids, and a second liquid moving force along a second common boundary of the

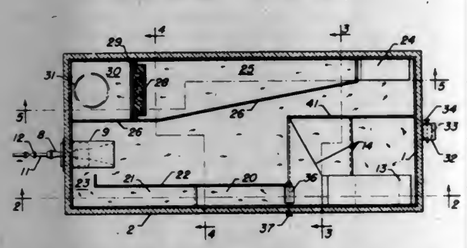


liquids, and reorienting the liquids by twisting them as they move longitudinally along said path.

3,130,960
RECOVERY OF URANIUM BY CARBONATED WATER AND SURFACE ACTION AGENTS AND WETTING AGENTS
James Wellford Martin, Yonkers, N.Y., assignor to Oil Recovery Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Feb. 8, 1956, Ser. No. 564,140
7 Claims. (Cl. 262—3)

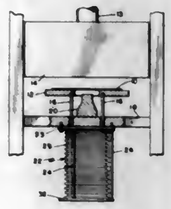
6. The method of recovering uranium and vanadium from subterranean formations, comprising the steps of providing an aqueous solution of carbon dioxide under pressure, lixiviating in situ the subterranean formation containing naturally occurring compounds of uranium and vanadium with said pressurized solution and withdrawing the lixivium from the formation.

3,130,961
DRYING OVEN WITH CATALYTIC EXHAUST TREATMENT
William C. Verner, Detroit, James L. Donahue, Warren, and Walter A. Denny, St. Clair Shores, Mich., assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
Filed Jan. 16, 1962, Ser. No. 166,584
6 Claims. (Cl. 263—6)



1. A drying and gas purifying apparatus, comprising in combination, a housing, an open horizontal passageway through the lower portion of said housing, having an entrance opening to said passageway and an outlet opening therefrom for passing material to be treated through said housing, a conveyor means having a belt portion extending through said passageway for the carrying of material to be treated, a burner positioned through one end of said housing and providing for directing a hot flue gas stream into the interior thereof, a pair of spaced blowers mounted within said housing at the end opposing said burner, gas inlet means to each of said blowers from the interior of said housing, duct means from the discharge of one of said blowers extending downwardly to a hot gas distributing chamber, said chamber positioned above and co-extensive with said horizontal open passageway and having a plurality of outlet openings spaced along its lower face, a gas collecting chamber having a plurality of inlet openings spaced along the upper face thereof and positioned directly below said passageway and said belt portion of said conveyor means, a return gas duct extending along the interior side portion of said housing from said gas collecting chamber to a gas outlet discharging at the interior end portion of said housing at a position adjacent said burner whereby a recirculated gas stream mixes with said hot flue gas stream from said burner, exhaust gas duct means positioned within said housing and extending from the outlet of the other blower of said pair to an oxidized gas outlet section, a permeable layer of an oxidation catalyst positioned across the end portion of said exhaust gas duct at the inlet to said oxidized gas outlet section, and a treated gas outlet from the latter section and from said housing.

3,130,962
SLEEVED DEEP DRAW CUSHION FOR PUNCH PRESSES
Harvey L. Stegner, 2235 Cliff St., San Diego, Calif.
Filed Nov. 20, 1961, Ser. No. 153,339
3 Claims. (Cl. 267—1)

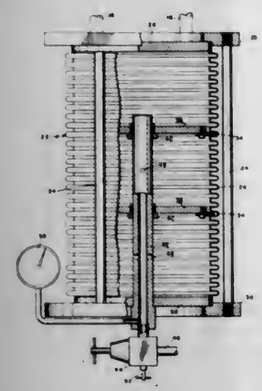


1. A cushion for use with a punch press having a bed plate and a ram, comprising:
an air-tight bellows having an upper end plate and a lower end plate;
an open cage enclosing said bellows and having a top attachment plate secured on the underside of said bed plate, and means for supporting said lower end plate;
means for transmitting downward movement of said ram to said upper end plate and thus causing the air in said bellows to be compressed to develop a resistive force; and
stabilizing means positioned internally of said bellows for preventing squirming of said bellows, said stabilizing means comprising a pair of telescoping sleeves having their distal ends attached to said end plates; said sleeves being apertured to equalize pressure inside and outside said sleeves.

3,130,963
INTERNALLY STABILIZED DEEP DRAW CUSHION FOR PUNCH PRESSES
Harvey L. Stegner, 2235 Cliff St., San Diego, Calif.
Filed Nov. 20, 1961, Ser. No. 153,340
5 Claims. (Cl. 267—1)

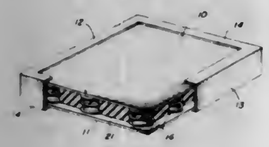
1. Apparatus for use with a punch press, comprising:
an air bellows having an upper end plate and a lower end plate;
means for supporting said lower end plate of said bellows;

means for causing downward movement of said punch press to cause downward movement of said upper end plate and causing the air in said bellows to be compressed to develop a resistive force;
stabilizing means, positioned internally of said bellows, for preventing undulation and squirming of said bellows;



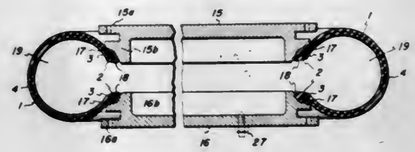
said stabilizing means comprising plate means and a plurality of arcuate segmental sections positioned on said plate means to form a substantially continuous circular, composite element positioned with its outer periphery in engagement with a trough of a convolution of said bellows; and
means for preventing movement of said element in a direction non-axial to said bellows.

3,130,964
COMPOSITE LOW RATE SPRING AND SHOCK ABSORBER
Frederick W. Johnson, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed June 7, 1962, Ser. No. 200,818
1 Claim. (Cl. 267—1)



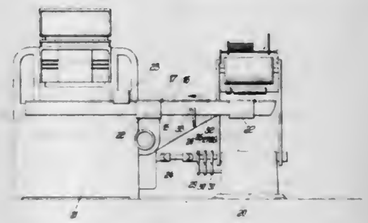
A shock mount for an equipment comprising a pair of parallel-mounted plates, means for attaching one of said plates to said equipment, rigid channel members connected to said plates to limit the maximum distance that they can move relative to each other but which do not obstruct the motion of the plates toward each other such that the rigid channel members limit the maximum distance between but not the inward movements of the parallel-mounted plates, a plurality of spaced spring means mounted between said plates and biasing said plates apart and the spaced spring means comprising plurality of coil springs, and plastic foam filling the space between the plates to form a unitary shock mount.

3,130,965
AIR SUSPENSION SYSTEMS
Walter Niclas, Hannover, Germany, assignor to Continental Gummi-Werke A.G., Hannover, Germany, a corporation of Germany
Filed Feb. 16, 1956, Ser. No. 566,017
Claims priority, application Germany Feb. 16, 1955
8 Claims. (Cl. 267—65)



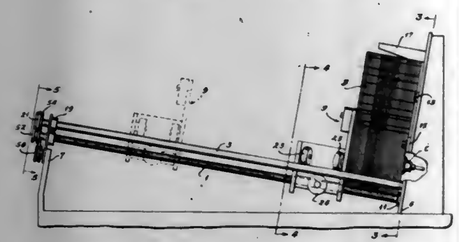
1. For new use in an air suspension system, the combination of a tubeless toroidal hollow body of elastic material having an upper and a lower central opening and a bead extending peripherally about each of said openings, bead cores inside said beads for counteracting expansion of said beads, and a top and bottom supporting member, said members being movable relative to each other, each of said supporting members having a circular flange entered into one of said central openings, said top and bottom supporting members thereby forming a pressure chamber with said toroidal hollow body, said circular flange having at least one seating surface being pressed against the bead of the corresponding central opening by excess pressure in said pressure chamber so as to hermetically seal the latter.

3,130,966
MEANS FOR ASSEMBLING BOOKS OF VARIABLE COMPASS
Rudolf Hepp, Sybelstr. 53, Berlin-Charlottenburg, Germany
Filed July 21, 1959, Ser. No. 828,476
Claims priority, application Germany Aug. 29, 1958
8 Claims. (Cl. 270—54)



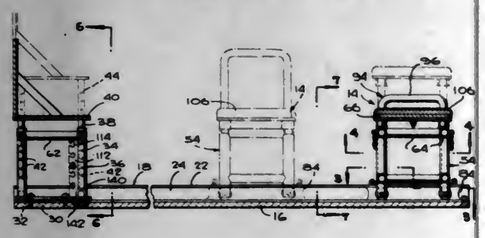
1. A control system for a machine having sheet-engaging means for delivering consecutive sections of sheet material from a stack thereof to a binder, comprising conveyor means positioned to receive a series of said sections from said sheet-engaging means, drive means for advancing said conveyor means to said binder, counting means synchronized with said drive means for registering the number of sections passing a predetermined location along said conveyor means, and mechanism responsive to said counting means for modifying the operation of said machine upon the count of said sections reaching a predetermined value, said mechanism including deactivating means for said sheet-engaging means effective during an interval substantially corresponding to the time of movement of a section past said location whereby a blank cycle is created in the operation of said counting means.

3,130,967
HOPPER FEED FOR CARTON BLANKS
John Le Brell, Hermann, Mo., assignor to Alton Box Board Company, Alton, Ill., a corporation of Delaware
Filed Dec. 21, 1961, Ser. No. 161,129
8 Claims. (Cl. 271—62)



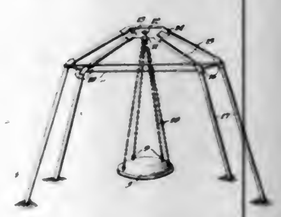
1. A hopper for carton blanks to be fed to a forming machine, the hopper having a first pair of rods upon which a stack of carton blanks is supported with the cartons resting on the rods at their lower edges, a second pair of rods extending generally parallel to and above and outwardly of said first rods in positions such that they may be engaged by the side edges of the blanks, said rods being journalled for rotation about their axes, means rotating each of said rods, and a follower carried by one of said pairs of rods, said one pair of rods being rotated continuously in opposite directions, and means forming a friction drive connection between said follower and its supporting rods for moving the follower therealong at a rate proportional to the rotational speed of the rods when the follower is not otherwise restrained, said friction drive permitting the follower to be pulled back from the stack of blanks and its rate of movement being sufficiently slow to permit the follower to be released and a supply of blanks added to the stack before the follower returns to the stack of blanks.

3,130,968
EXERCISING APPARATUS COMPRISING AN ELONGATE BASE HAVING STATIONARY AND LONGITUDINALLY MOVABLE SUPPORT UNITS AT THE ENDS THEREOF
Michael A. De Feen, 1641 Meadowbrook Ave., Lakeland, Fla.
Filed Mar. 12, 1962, Ser. No. 179,054
10 Claims. (Cl. 272—58)



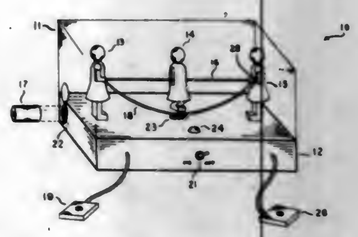
1. Apparatus for performing a number of different physical exercises, comprising the new combination of an elongate base body, a stationary platform unit secured thereto at one end thereof and having a seat top at an elevation above the base body, a movable second platform unit having a seat top at an elevation above the base body and designed for supporting the human body, and means supporting the movable platform unit on the base body for reciprocable movement longitudinally of the base body, the seat top of each of said platform units being substantially parallel with the underlying base body and being vertically adjustable whereby they are positionable in different planes relative to one another.

3,130,969
SWING
Roderick W. Groth, 624 NE. 3rd, Camas, Wash.
Filed Sept. 28, 1961, Ser. No. 141,408
1 Claim. (Cl. 272—85)



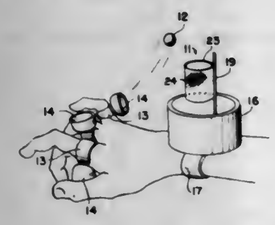
An amusement apparatus for children comprising, in combination, a flat circular seat, a plurality of support ropes of equal length extending from the periphery of the seat and terminating at a common supporting eye bolt, said eye bolt being secured beneath a structure to support the seat for arcuate and pivotal movement relative thereto, said eye bolt being rigidly mounted beneath said structure, said structure comprising a horizontal rectangular plate supported by tubular arms and legs extending downwardly from each corner of said rectangular plate, and tie rods extending horizontally between the upper ends of the legs forming a rectangular frame to maintain said legs in a fixed relation with respect to each other.

3,130,970
ELECTRIC JUMP-ROPE GAME
Eugene C. Hutsell, Butte County, Calif. (3127 S. Oregon, Seattle 8, Wash.)
Filed Dec. 11, 1961, Ser. No. 158,422
2 Claims. (Cl. 273—85)



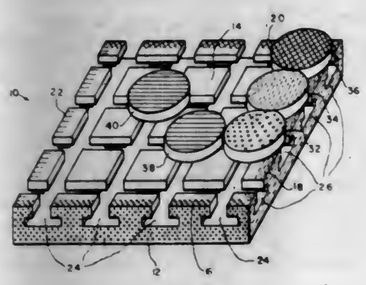
1. An electric jump-rope game comprising, in combination, a hollow base having side, bottom, and top walls, two hollow stationary members supported upon the exterior of the top wall of said hollow base, a member movable along a vertical axis supported between said stationary members, a metal core fixedly mounted in the lower portion of said vertically movable member, a compression spring in upper portion of said vertically movable member, an arched metal rod supported between said stationary members, a means of causing said arched metal rod to revolve around said vertically movable member, an electromagnet attracting said metal core downwardly, and a means of intermittently energizing said electromagnet, said compression spring acting to return the vertically movable member to its upper limit of travel when the electro-magnet is de-energized.

3,130,971
GAME APPARATUS COMPRISING FINGER-SUPPORTED BALL PROJECTORS AND WRIST-SUPPORTED BASKET
Patsy Boccardi, 820 Classon Ave., and Aida Sweeney, 491 7th Ave., both of Brooklyn, N.Y.
Filed Aug. 15, 1961, Ser. No. 131,611
3 Claims. (Cl. 273—101)



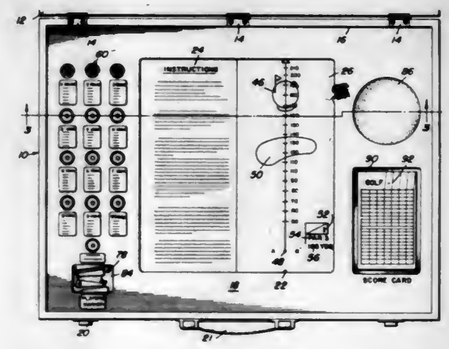
1. A game apparatus comprising a ball, a plurality of cup-supporting finger rings adapted each to engage one finger of a player, and a basket element, the finger rings comprising each a finger-engaging element and a cup portion adapted to receive the ball, said cup portion not of a diameter substantially larger than the ball diameter, the basket element comprising a pair of concentric cups integrally secured together and adapted each to receive the ball, means to secure the basket element to the wrist of the player in position to receive the ball when flipped from a finger ring, a vertical post secured to the inner cup wall, an horizontal ring secured to the post adjacent its top, and a vertical sleeve disposed around the ring and dependent therefrom, the sleeve disposed to prevent entry of the ball into the inner cup except through the sleeve.

3,130,972
GAME BOARD WITH INTERSECTING CHANNELS
Harry Schwarzlander, 452 Highland Ave., Malden 48, Mass.
Filed Aug. 23, 1960, Ser. No. 51,385
5 Claims. (Cl. 273—131)



1. In a game for four participating positions, the combination of a game board having a playing face and four sides of substantially equal length with each of the sides providing one of the participating positions, only two sets of grooves in the playing face with one set intersecting the other set at substantially right angles, the grooves in the respective sets being parallel and equidistant from each other and each set at its respective ends opening on two of the participating positions, a plurality of playing components, each with a hand engageable member having a projection substantially centrally thereof and of a shape to slidably fit in guided relation to the grooves, the hand engageable member of the playing components being of a cross sectional size which is only slightly smaller than the distance from the center of one groove to the center of an adjacent groove, thereby being sufficiently small to permit passage along respective adjacent grooves without obstruction of one with the other and sufficiently large to center substantially on the intersections when aligned in contact relation to each other by pushing one against the other in a single groove.

3,130,973
SIMULATED GOLF GAME WITH GAME BOARD HAVING RECESSES FOR SIMULATED FAIRWAYS, SCORECARD, CHANCE MEANS, AND A TOP PLAYING SURFACE
Argentine C. Zapolski, Inglewood, Calif. (342 E. El Segundo Blvd., Hawthorne, Calif.)
Filed Oct. 8, 1962, Ser. No. 229,115
3 Claims. (Cl. 273—134)

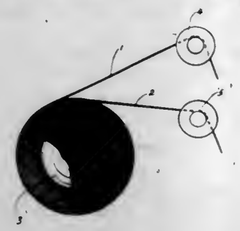


1. A simulated golf game apparatus comprising a simulated golf course comprising a plurality of golf fairways, a gameboard, a recessed surface substantially centrally thereof for receiving and framing a selected fairway of said simulated golf course therein, each fairway of said course depicting a different golf course hole with appropriate course, hazard, distance and par data thereon, a plurality of individually identified multi-faced spinner tops, each representing a different golf club, each spinner top having a spinner handle, a spinner point axially aligned with said handle, and a plurality of flat side faces intermediate said handle and said point, each said face representing a different result for the said club, each handle having club identifying indicia thereon, said gameboard having a plurality of top receiving pockets therein, said gameboard having a table of club identification data and results adjacent each pocket duplicating that on the top to be housed therein, a plurality of player markers, said gameboard having a marker receiving recess therein, said spinner top pockets and marker recess being adjacent but spaced from said recessed central surface thereof, a recessed top playing surface located in said gameboard adjacent but spaced from said recessed central area thereof, and a score card receiving recess in said gameboard adjacent said spinner top playing surface.

3,130,974
GOLF BALLS
Louis F. Muccino, Blind Brook Lodge, Rye, N.Y.
Filed Aug. 1, 1960, Ser. No. 46,333
4 Claims. (Cl. 273—216)

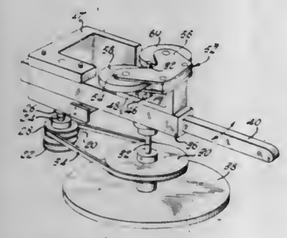
1. A golf ball comprising a spherical core, a layer of tensioned rubber surrounding said core, and a cover in

contact with and surrounding said layer of tensioned rubber, said layer of tensioned rubber comprising two sep-



arate strands of rubber of different tensile strength, each of said strands extending throughout said layer.

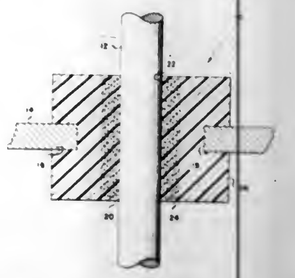
3,130,975
RECORDING MACHINE
Barton A. Proctor, 42 Hillside Road, Larchmont, N.Y., assignor of thirty-three and one-third percent to Albert C. Nolte, New York, N.Y.
Filed June 15, 1959, Ser. No. 820,455
16 Claims. (Cl. 274—11)



1. In a recording device including a housing having an opening therein, a recording head adjacent one side of said opening, and driving means adjacent the opposite side of said opening, the improvement comprising a magazine, said magazine having at least two reels having tape thereon and extending therebetween, said reels being rotatably mounted in said magazine, a first opening for receiving said recording head in one side of said magazine, said tape being disposed across said first opening, a second opening accommodating at least a portion of said driving means in the side of said magazine opposite said first opening, said reels being exposed in said second opening whereby to afford access for driving mechanism to contact said tape on said reels.

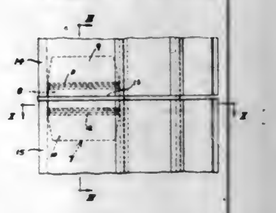
3,130,976
ELASTOMERIC SEALING BUSHING
Richard V. Niswander, Reseda, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed May 29, 1961, Ser. No. 113,172
1 Claim. (Cl. 277—188)

An elastomeric sealing bushing supporting a longitudinal movable member which passes through an opening in a wall, comprising a thick elastomeric body member having an opening extending therethrough for receiving said longitudinal movable member, said body member having on its outer peripheral surface a recess shaped to receive and to engage the periphery of the opening in said wall, said elastomeric body member being held under compression between said wall and said longitudinal movable member to maintain a seal between each side of said wall, said body member including a thin bearing layer disposed about said opening in said elastomeric body member and integrally connected therewith, said bearing layer having a lattice network of elastomeric material in which dry lubricant particles of irregular shape and of a size capable of passing an 80 mesh standard Tyler screen and incapable of passing a 325 mesh standard Tyler screen and which are immiscible with said elastomeric material are supported, said particles in said bearing layer being dispersed uniformly and making up by weight 50 to 80% of said bearing layer so that at most only a film of elastomeric material is exposed on the surface of said thin bearing layer, said bearing layer being from 0.015 to 0.030 inch thick to provide good wear characteristics and to impart



sufficient rigidity to restrict the flow characteristics of said elastomeric material without significantly effecting the flexibility of the elastomeric body member, said body member including a transition layer of from 0.030 to 0.040 inch thick and a base layer, said transition layer positioned between said bearing layer and said base layer and integral therewith, and said transition layer having a substantially lower density of dry lubricant particles than said bearing layer, whereby stress and strain under load tending to separate said bearing layer from said base layer are reduced.

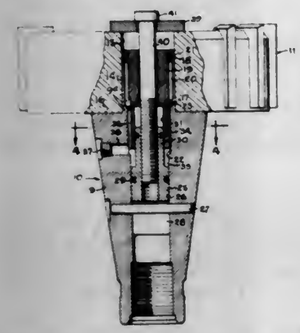
3,130,977
SEALING DEVICES BETWEEN FIXED PARTS OF METAL CONSTRUCTIONS SUCH AS WALLS, SCREEN-WALLS, CURTAIN-WALLS, AND SUCH-LIKE
Charles Somville, Burcht, Belgium, assignor to A.V.R., Achat, Ventes, Representations, Societe Anonyme, Brussels, Belgium
Filed Oct. 3, 1960, Ser. No. 59,955
Claims priority, application Belgium Dec. 10, 1959
1 Claim. (Cl. 277—207)



A sealer piece for sealing the joint between adjacent hollow profiles comprising an elongated resilient body having a central portion of uniform thickness and substantially parallel marginal surfaces, end portions integral with said central portion, said end portions having an end of the same thickness as the central portion and tapering uniformly with diminishing thickness in a direction away from said central portion and having convergent marginal surfaces, and a rib integral with said central portion and extending outwardly thereof in equispaced relation from said end portions, the end portion and part of the central portion of said resilient body on one side of said rib being

adapted to fit into a marginal opening in a hollow profile, the end portion and part of the central portion of said resilient body on the other side of said rib being adapted to fit into a marginal opening in a hollow profile next adjacent to the first-mentioned hollow profile, said resilient body having a plurality of concave-shaped grooves and convex-shaped ribs at each of the junction points of said central portion and said end portion.

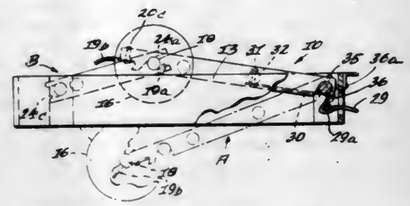
3,130,978
EXPANSIBLE MANDREL
Jan van Roojen, Rockford, Ill., assignor to The Ingersoll Milling Machine Company, Rockford, Ill., a corporation of Illinois
Filed July 31, 1961, Ser. No. 128,009
6 Claims. (Cl. 279—4)



1. For supporting a ring such as a cutter having a first bore of predetermined diameter extending axially therethrough, the combination of, a first tubular member rotatable about a predetermined axis and having a second bore opening outwardly at one end of the member, means defining an axially facing shoulder at said one end for abutting against said ring, a thin walled sleeve rigid with and projecting from said one end and adapted to telescope into said first bore, a second tubular member constituting a rigid extension of said member and telescoped within said sleeve to cooperate therewith and define a first annular chamber within said sleeve for holding hydraulic liquid, a second chamber for hydraulic liquid disposed within one of said members and in continuous communication with said first chamber, a piston slidable in said second chamber, an abutment larger than said sleeve engageable with the outer end face of said ring when the latter is telescoped on said sleeve, and a screw and nut mechanism connecting said abutment and said piston including an actuating element movable relative to said member in one direction first to press said abutment against said ring and clamp the latter against said shoulder and then move said piston in a direction to force liquid from said second chamber into said first chamber and thereby expand said sleeve against the wall of said first bore.

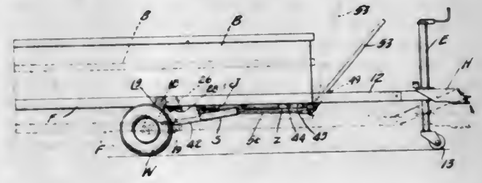
3,130,979
WHEELED CARRIAGE
Gerard J. Valiquette, 54 W. Cole St., Pawtucket, R.I.
Filed Dec. 21, 1962, Ser. No. 246,486
2 Claims. (Cl. 280—43)

1. A convertible carriage comprising, in combination, a rectangular frame, a first bracket hingedly supported on a first transverse shaft at one end of said frame, a wheel shaft carried by said first bracket, a pair of wheels mounted rotatably free on said wheel shaft, said first bracket comprising a pair of long lever arms hinged at one end to said first transverse shaft and supporting said wheel shaft at the opposite end, a removable second bracket hingedly supported on a second transverse shaft at the opposite end of said frame, said second bracket comprising a pair of short lever arms hinged at one end on said second transverse shaft and removably engaging said wheel shaft at the opposite end, said first and second transverse



shafts being relatively closer together than the combined length of said long and short lever arms, a notch at each end of said short lever arms for removably engaging said wheel shaft and said second transverse shaft, whereby the wheel shaft may be supported selectively relatively above or below the level of said frame.

3,130,980
ELEVATABLE TRAILERS
George E. Monroe and Fred Kasady, Pinconning, Mich., assignors to Magline, Inc., Pinconning, Mich., a corporation of Michigan
Filed Apr. 29, 1960, Ser. No. 64,384
(Filed under Rule 47(a) and 35 U.S.C. 116)
4 Claims. (Cl. 280—43.23)

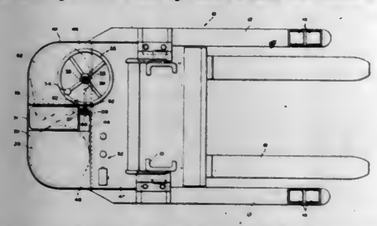


1. An elevatable trailer frame construction comprising a frame; lift means rockably journaled on said frame between the ends of the latter for rocking movement from a lowered position to a raised position; wheel journaling means on said lift means; pressure fluid operating means comprising an extensible and retractable ram having relatively telescoping first and second sections; means rigidly mounting said first ram section on said frame between said lift means and one end of said frame, said second ram section having a free end movable in a direction toward said one end of said frame when said lift means is in said lowered position; means releasably securing said free end of said second ram section to said frame adjacent said one end thereof when said lift means is in said raised position to prevent extension and retraction of said ram; and force transmitting means connected at one of its ends of said lift means and at its other end to said second ram section.

3,130,981
DIFFERENTIAL STEERING APPARATUS
John C. Christenson and David H. Link, Battle Creek, Mich., assignors to Clark Equipment Company, a corporation of Michigan
Filed June 18, 1962, Ser. No. 203,341
3 Claims. (Cl. 280—93)

1. Differential steering mechanism for a narrow-aisle truck or the like having a pair of laterally spaced steerable ground-engaging wheels each rotatable about a vertical swivel axis for turning of the truck, comprising first

and second sprocket wheels each rotatable on said vertical axis of one of said steerable wheels and operatively connected thereto for directional turning of the wheel, a cam on the first sprocket wheel having an intermediate point corresponding to straight-ahead position of the steerable wheels, a carrier, a pair of idler sprockets on said carrier in fixedly spaced relation to each other, means mounting the carrier for rectilinear reciprocation transversely of the common plane of the sprocket wheel axes, a lever pivoted intermediate its ends on the truck, a cam follower on one end of said lever engaging said cam, means connecting the carrier to the other end of the lever for reciprocation thereby, a sprocket chain reeved about the first and second sprocket wheels with one run also reeved about one of said pair of idler sprockets and the other run also



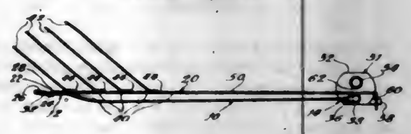
reeved about the other of said pair of idler sprockets, both of the chain runs passing between the idler sprockets, and means for rotating the sprocket wheels, said cam and lever being arranged to effect movement of the carrier upon movement of said follower from said intermediate point by either clockwise or counterclockwise rotation of the sprocket wheels for accelerating rotation of the second sprocket wheel in one direction to increase the speed thereof to more than that of the first sprocket wheel and for decelerating rotation of the second sprocket wheel in the other direction to reduce the speed thereof to less than that of the first sprocket wheel for effecting rotation of the steerable wheel associated with the second sprocket wheel faster or slower than the other steerable wheel as said associated steerable wheel is the inside or outside wheel in turning of the truck.

3,130,982
COUPLING DEVICE FOR VEHICLES
Richard C. Raney, Rte. 1, Cookville, Tex.
Filed Jan. 4, 1962, Ser. No. 164,259
14 Claims. (Cl. 280—477)



1. A coupling device for vehicles including: a receiver mountable on the tow bar of a towed vehicle comprising a rail section inclined downwardly and forwardly, a plate section extending rearwardly and angularly from the lower end of the rail section to form a socket having open sides and a divider in said socket between said plate section and said rail section and between said open sides; and a coupler comprising a carrier mountable on the towing vehicle, a pair of contact members having adjacent end portions pivotally mounted on the carrier for pivotal movement about a common substantially perpendicular axis between operative positions wherein said contact members are adjacent one another and inoperative positions wherein the contact members are angularly spaced from each other, said contact members having contact bars mounted on their other ends disposed in a common plane extending perpendicularly relative to said common axis, said contact bars being engageable with said rail section and receivable in said socket when said contact members are pivoted toward each other to said operative positions, said contact bars being engageable with said divider when said contact bars are disposed in said socket and limit lateral movement of said contact bars in said socket between said rail section and said plate section, camming action between said rail section and said contact bars when said contact members are in said operative positions raising the receiver into desired vertical relationship with the coupler and moving said contact bars into said socket upon forward movement of the carrier relative to said receiver, and means carried by said carrier and operable from the towing vehicle for moving said contact members between said inoperative and operative positions.

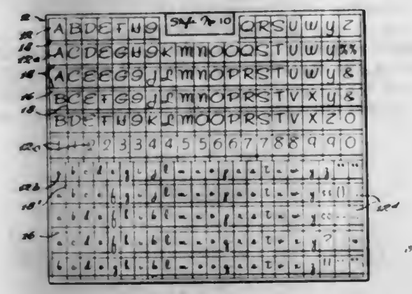
3,130,983
STATIONERY SHEET HOLDER
Lester K. Fleischmann, Chicago, Ill., assignor to Standard Manifold Company, a corporation of Illinois
Filed Mar. 28, 1962, Ser. No. 183,259
4 Claims. (Cl. 282—1)



1. A stationery sheet holder for use with a multiple carbon holder adapted to hold a plurality of carbon sheets in interleaved relation with superposed strips of continuous form stationery, comprising: a sheet of flexible material; a rear aligning portion on said sheet, said rear aligning portion having locking means for attachment to said carbon holder comprising a loop extending across the width of said sheet; a front aligning portion on said sheet secured to the leading portion of said carbon holder having a free end portion extending forwardly of said attachment, said free end portion cooperating with said carbon holder to form an open pocket for receiving and aligning the bottom edge of a stationery sheet so as to hold the sheet in superposed relation to said continuous form stationery and interleaved carbon sheets.

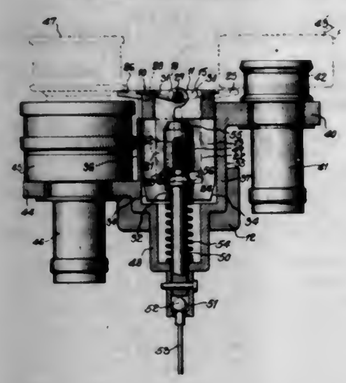
3,130,984
CUSTOM LETTERING SHEET
Herman T. Fenberg, Chicago, Ill., assignor to Redi-Kut Head Lettering Company, Chicago, Ill., a corporation of Illinois
Original application July 22, 1960, Ser. No. 44,694. Divided and this application Feb. 7, 1963, Ser. No. 258,107
2 Claims. (Cl. 283—1)

1. A lettering sheet comprising: a laminate body comprising an integral backing layer and an upper exposed layer of material secured to said backing layer by a pressure sensitive adhesive layer which allows the upper layer readily to be peeled from said backing layer, said upper layer being severed by orthogonal rows and columns of cut lines which cross each other to define individual rectangular areas arranged in orthogonal columns and rows severed from one another at the corners thereof and elsewhere to provide discrete selectable rectangular areas which can be individually peeled from said backing layer, the vertical spacing of the rows of cut lines being substantially equal, at least some of said columns of cut lines being unequally spaced and all being substantially shorter than said rows of cut lines to provide a horizontally elongated section of aligned rows and columns of severed rectangular areas on said upper layer, an alphabet lettering character on each of said severed areas



of said upper layer, some of the various alphabet lettering characters having varying widths and most of them being duplicated two or more times with identical characters arranged in adjacent vertically spaced severed rectangular areas of said upper layer, the alphabet characters being, for the most part, arranged so that there is a horizontal alphabetic progression of the characters, and the spacing of said columns of cut lines being proportional to the widths of the alphabet characters in the columns of severed rectangular areas encompassed therebetween.

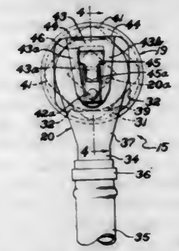
3,130,985
DEVICE FOR DISCONNECTING PLURAL SUPPLY LINES
John V. Oliveau, Greenwich, Conn., assignor to Aerotec Industries, Inc., Greenwich, Conn., a corporation of Connecticut
Filed Aug. 17, 1960, Ser. No. 50,229
6 Claims. (Cl. 285—1)



1. A device for disconnecting plural supply lines comprising:
I. A supporting bracket having a pair of parallel guide plates;
II. a mounting member having
A. a pair of transversely spaced connector sockets adapted to receive fitting members and

B. a means forming a recess, said recess located between and opening in the same direction as said sockets to receive said guide plates therein;
III. a release latch comprising,
A. a pair of bell cranks pivotally mounted on said bracket, each bell crank having
(1) a first arm thereof extending below its pivotal axis and between said guide plates,
(2) A second arm thereof having a portion projecting over the rim of one of said sockets and
(3) a follower carried by said first arm;
IV. a first spring mounted on said bracket and engaging said bell cranks to bias said first arms toward each other;
V. a latch engageable member movably mounted on said mounting member, a portion of said latch engageable member extending within said recess adjacent and between said first arms and having,
A. a cam surface thereon adapted to be engaged by said followers; and
VI. a second spring mounted on said mounting member and engaging said latch engageable member to bias said latch engageable member to a position where said followers rest on said cam surface in a position of maximum inward travel of said first arms toward each other; and
VII. means to move said latch engageable member to an unlatching position whereby said followers are cammed radially outwardly from said latch engageable member by said cam surface, thereby pivoting said bell cranks about said pivotal axis to move the outer ends of said second arms into engagement with fitting members disposed in said sockets to force said fitting members and said connector sockets axially apart.

3,130,986
COUPLING WITH AN EDGE ENGAGING LATCH MEMBER
Russell S. Colley, Cuyahoga Falls, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
Filed Dec. 1, 1960, Ser. No. 73,071
6 Claims. (Cl. 285—82)



1. A coupling comprising a socket member having a non-circular opening therein and having a longitudinal axis defining a center of rotation, and a complementary co-axial socket-engaging member, said opening in said socket member having a portion of its peripheral edge shaped to engage a complementary shaped latch member, and said edge portion being offset from said longitudinal axis a preselected distance, said members releasably interfitting at an assembly position and being relatively rotatable to an interlocked sealed position, at least one of said members having a fluid-conducting passage therein, said socket-engaging member having a body and a lobe-like flange at one side of the body, said opening of said socket member conforming to the peripheral shape of said body and said flange to receive said body and flange at said

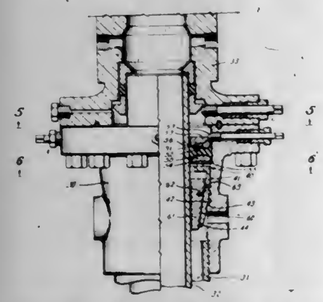
assembly position and having an internal channel open to said peripheral edge of said socket opening into which channel said flange is received when said members are rotated into their interlocked position, and a latch fixedly mounted on said socket-engaging member for releasably locking said members at their interlocked position,

(A) said latch having a retractable locking portion engageable with said socket member at said edge portion of said opening in said socket member,

(B) said locking portion being disposed so that it registers with and engages said edge portion only when said coupling members are in said mutually interlocked position, and

(C) said locking portion including certain regions which have a greater rotational radius about said center of rotation of said socket member than the minimum distance of said engaged edge portion to said center but substantially equal to said preselected distance whereby said locking portion operates when engaged with said edge portion to positively prevent relative rotation of the coupling members.

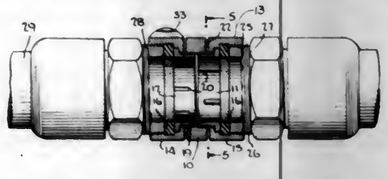
3,130,987
PIPE ANCHOR
Charles F. Johnson, Houston, Tex., assignor to McEvoy Company, Houston, Tex., a corporation of Texas
Continuation of application Ser. No. 88,394, Feb. 10, 1961. This application Dec. 18, 1961, Ser. No. 160,704
10 Claims. (Cl. 285—146)



1. In combination, a well head having an annular seat therein and a generally cylindrical portion below the seat, a sandwich packoff resting on said seat, a segmented bowl below said sandwich packoff having a cylindrical outer portion disposed in said cylindrical portion of said well head and having a conically tapered interior, a set of slips in said bowl, said slips having pipe gripping means on their front faces and the back faces of said slips being conically tapered correlative to said taper of the interior of the bowl, indenting means on the back faces of said slips, and means connected to said bowl and said sandwich packoff to compress said sandwich packoff as said bowl moves down in said well head, said indenting means on the backs of said slips reducing the frictional resistance between said bowl and said well head at said cylindrical portion thereof to promote sufficient downward travel of said bowl to actuate said packoff to sealing position even when the load transmitted to said bowl by said slips gripping a well pipe is low.

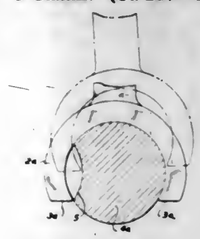
3,130,988
HOSE COUPLING
John J. Ryan, Darien, Conn., assignor to Bar-Way Manufacturing Company, Stamford, Conn., a corporation of Connecticut
Filed Oct. 14, 1959, Ser. No. 846,313
1 Claim. (Cl. 285—175)

In a combination of the class described, a pair of internally bored coupling nuts, each formed as an integral one-piece body, a retainer ring for each of said nuts having a flange at the outer end thereof with the inner face of said flange fitting against a shouldered flange formed on its nut so that each nut is prevented from slipping off the flanged end of its retainer ring, a resilient washer held partially in a groove formed in each of said nuts and extending out of the groove to lie against the outer face of its retainer ring flange, a central coupling ring internally threaded, threads on the exterior surface of each of said retainer rings inwardly of its flanged end whereby each of said retainer rings may be screwed into said central coupling ring after passing through the internal bore of one of said one-piece coupling nuts into a retaining position relatively to said coupling nuts, said threads of said retainer rings and said central coupling ring being formed for wedging interlock when driven home whereby an integral assembly, in effect, is formed by said central



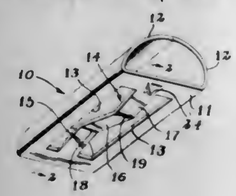
coupling ring and said two retainer rings with a flange of each retaining ring retaining a nut freely rotatable relatively to the resulting one-piece coupling ring and nut retainer, said retainer rings being slightly spaced from one another, internally of said coupling ring when forming with said coupling ring a one-piece body, whereby to ensure said wedging of said retainer rings to said central coupling ring, each of said nuts being threaded on parts of its internal bore outwardly of the groove thereof containing said washer so as to engage the threads of a hose coupling, the threading action of each nut on a hose coupling drawing the flange of its retainer ring against the end surface of the hose coupling with the said resilient washer therebetween to establish a through single axis passage and a leakproof rigid connection embodying said hose couplings, said washers and said integral body formed by the union of said retainer rings and coupling ring.

3,130,989
CONNECTING ROD AND PIVOT PIN CONNECTION
Robert J. Lannen, Detroit, Mich., assignor to Micro-Poise Engineering and Sales Company, Detroit, Mich., a partnership
Filed Nov. 15, 1961, Ser. No. 152,438
3 Claims. (Cl. 287—52)



1. A connecting rod and pivot pin connection comprising a connecting rod terminally formed with an arcuate bearing and further comprising a substantially cylindrical pivot pin journaled in such bearing, the bearing having a circumferential gap predeterminedly less than the diameter of the pin and having a predetermined resiliency affording a circumferential expansion of the gap by the pin in laterally inserting the pin in the bearing, and a corresponding contraction of the bearing to conform to the pin diameter following such insertion, the gap being centered substantially in the extended longitudinal axis of the rod, the pin having a peripheral notch to facilitate inserting the pin in the bearing in a direction transverse to the pin, said notch having an arcuate bottom whereof the radius of curvature is at least approximately equal to the radius of the pin.

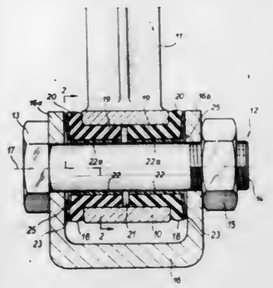
3,130,990
KNOB SPRING
William J. Leitmann, Chicago, Ill., assignor to Rohden Manufacturing Company, Inc., Chicago, Ill., a corporation of Illinois
Filed Sept. 11, 1961, Ser. No. 137,173
2 Claims. (Cl. 287—53)



1. A spring for mounting in a knob for engagement with a shaft received in said knob, said spring comprising a flat mounting portion adapted to be received between opposed flattened surfaces of said knob and shaft, a spring leaf of longitudinal spread Z configuration forming a part of said mounting portion and attached at opposite ends thereto, said mounting portion being slotted to either side of said leaf to provide for free resilient movement of said leaf relative thereto, said leaf being composed of flat interconnected end segments and an intermediate segment, one of said end segments being inclined upwardly and rearwardly relative to one end of said mounting portion for engagement with said shaft, the other of said end segments being inclined downwardly and rearwardly relative to the opposite end of said mounting portion, said intermediate segment interconnecting the respective upper and lower ends of said end segments and extending diagonally through said mounting portion, said spring being semi-cylindrical and having cooperating arcuate portions joined with said mounting portion.

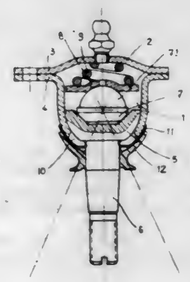
3,130,991
RESILIENT JOINTS, MORE PARTICULARLY FOR MOTOR VEHICLE SUSPENSION
Renato Piragino, Turin, Italy, assignor to RIV Officine di Villar Perosa Societa per Azioni, Turin, Italy
Filed Jan. 30, 1962, Ser. No. 169,750
Claims priority, application Italy Feb. 7, 1961
7 Claims. (Cl. 287—85)

1. A resilient self-lubricating joint comprising a first member having an aperture extending therethrough, a resilient tubular bushing mounted in said aperture and having an axial bore and at opposite ends thereof radial flanges, said bore and flanges extending together axially on said bushing a distance greater than the effective length of said aperture, said radial flanges each having an inner surface abutting on said first member and an outer surface flaring outwardly at an oblique angle from said axial bore and said bushing, means defining abutments bearing on outer marginal edge portions of said radial flanges respectively, said bushing axial bore having a polygonal configuration in cross section, elongated means extending through said axial bore and said abutments making at least line contact axially along said bore at points spaced angularly and defining jointly with said bushing lubricant-receiving, axially extending angularly spaced separate spaces and defining jointly with said abutments and said bushing flanges annular lubricant-receiving spaces at said opposite ends of said bushing outwardly of said flanges and in communication with said axially extending spaces.



said axially extending spaces extending the full axial length of said bushing bore to provide said communication with said annular spaces, whereby relative radial movement of said means extending through said bore and said bushing and relative axial movement of said bushing and said abutments causes pumping of lubricant in said spaces thereby to self-lubricate said joint.

3,130,992
BALL-AND-SOCKET JOINTS
Lucien Péras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
Filed Nov. 14, 1960, Ser. No. 68,780
Claims priority, application France Nov. 20, 1959
1 Claim. (Cl. 287—87)

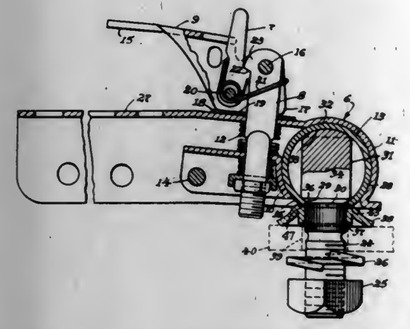


A ball-and-socket joint comprising a casing composed of a pair of complementary mating cold-pressed sheet metal shells having engaging flanges, means securing the flanges together, one of said shells having an inner spherical female surface, a male member of the joint bearing against said surface, a cold-pressed metal intermediate member having a frustoconical end portion seated in a cavity of the same configuration formed in the male member, said intermediate member having a part-spherical end portion directly opposite the frustoconical portion, a bearing plate having a part-spherical recess receiving the part-spherical portion, and a compression spring bearing against the bearing plate and mounted between the plate and the other of said shells.

3,130,993
BALL HEAD CONSTRUCTION FOR BALL AND SOCKET COUPLER

Roy E. McCleary, Rockford, Ill., assignor to Atwood Vacuum Machine Company, Rockford, Ill., a corporation of Illinois

Filed Mar. 21, 1960, Ser. No. 16,258
6 Claims. (Cl. 287—90)

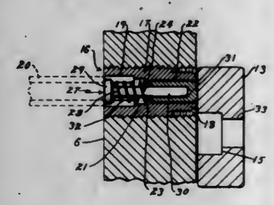


2. A hollow coupling ball structure comprising a unitary hollow sheet metal ball body having only one opening provided in the center of the bottom thereof defined by an inwardly directed annular bottom wall, and a vertical mounting pin for said ball having a lower reduced shank portion and an enlarged upper end portion with an annular shoulder defined therebetween, said upper end portion having its upper extremity abutting the inner side of the upper half of said ball head body and having the annular shoulder at its lower extremity abutting the inner side of said annular bottom wall, whereby said pin supports said ball head body in centered relation to said pin at the top and bottom of said ball head body while the reduced lower end portion of said pin provides a means for attaching the structure to a support, the upper end portion of said reduced shank portion having longitudinally extending serrations which serve by staking engagement in the edge portion of said annular bottom wall of said ball head body to hold the ball head body against turning relative to said pin.

3,130,994
MEANS FOR SECURING RELATIVELY MOVABLE MEMBERS

Walter O. Balducci, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a corporation of Connecticut

Filed Jan. 16, 1962, Ser. No. 166,636
6 Claims. (Cl. 287—99)

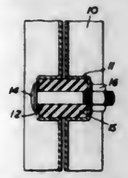


1. In combination with a pair of relatively movable members intended to be secured only when in a predetermined relationship; a securing element adjustably mounted in one of said members and movable into securing engagement with the other of said members when said members are disposed in said predetermined relationship, said securing element having a portion for receiving a tool for adjusting said element, a blocking member movably mounted on said securing element for engagement by said tool and being shiftable thereby toward said other member as said tool is applied to said tool receiving portion, said blocking member being engageable with said other member when said members are disposed out of said predetermined relationship whereby to prevent shifting thereof and application of said tool to said tool receiving portion, and means preventing the removal of said blocking member from said securing element.

3,130,995
PIVOTAL JOINTS

Lionel Maxwell Joachim Balfour, The Folly, Chavenage Lane, Tetbury, England

Filed May 25, 1962, Ser. No. 197,784
4 Claims. (Cl. 287—101)

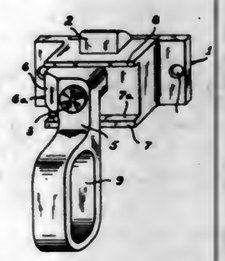


1. A pivotal joint for allowing relative rotary movement between two members made of thin material, the members being formed to provide opposed depressions of circular cross sections with a hole formed in the base of each depression, a bush fitting in the chamber formed by the two depressions and forming a bearing connecting the members so as to permit relative rotation between them about the axis of the bush while preventing relative movement at right angles thereto, and means extending through the said holes for holding the joint assembled.

3,130,996
CASEMENT LATCH

Melvin F. Moxness, 767 Eastbourne Ave., and M. Germain Groulx, 242 Durocher St., Eastview, both of Ottawa, Ontario, Canada

Filed Dec. 16, 1960, Ser. No. 76,383
Claims priority, application Canada May 13, 1960
8 Claims. (Cl. 292—173)

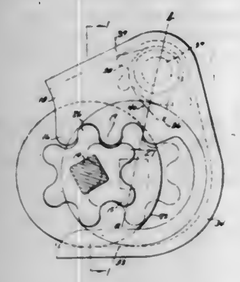


1. A casement latch comprising a casing, a retractable bolt extending from said casing and spring-urged outwardly thereof, a pin secured to said bolt and extending through and beyond a slot in the outer wall of said casing, said slot extending substantially longitudinally of the axis of retraction of the bolt, a lever pivotally mounted on said pin externally of said casing, and an abutment on said casing, said lever being adapted to engage said abutment to prevent pivotal movement of said lever to a predetermined position unless said bolt is in its fully extended position, whereby said fully extended position is readily ascertainable.

3,130,997
SAFETY ROLLER DOOR LATCH MECHANISMS

Joseph R. Kirk, Rockford, Ill., assignor to Atwood Vacuum Machine Company, Rockford, Ill., a corporation of Illinois

Filed Nov. 26, 1958, Ser. No. 776,571
18 Claims. (Cl. 292—280)

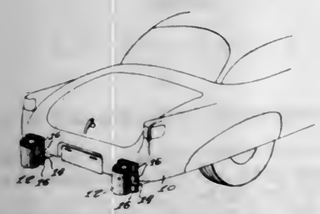


1. In a door latch mechanism comprising a keeper fixed on a door post and having a latch receiving opening provided therein that is notched on one side to define a rack, a rotary toothed latch carried on the adjacent edge face of a door arranged to enter the opening in the keeper and have intermeshing engagement with the rack in the closing of the door as the latch rolls into place in the keeper, means for releasably locking said latch against turning to lock the door in closed position, and manually operable means for releasing said last mentioned means to permit opening of the door, the improvement which consists in the provision, in fixed spaced relation to the edge of the door, of an anti-friction roller for rolling engagement on a track provided behind the keeper in substantially parallel relation to said rack, said roller being disposed in concentric relation with said latch and being large in diameter in relation to the latch and the opening in the keeper and arranged in the closing of the door to run on said track into operative position behind said keeper whereby positively to limit the spreading apart of the door and door post.

3,130,998
RUBBER BUMPER FOR AUTOMOBILES

Johannes H. Andersen, 31 Clairmont Ave., Westwood, N.J.

Filed Nov. 13, 1962, Ser. No. 237,084
5 Claims. (Cl. 293—64)

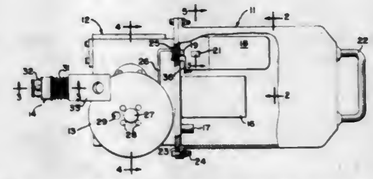


1. An automobile bumper comprising a first vertical hollow cylinder open at both ends, and a second vertical hollow cylinder open at both ends and of smaller diameter than said first cylinder, said second cylinder being placed within said first cylinder, non-concentrically in such manner that said cylinders touch each other along a common vertical line of tangency.

3,130,999
RECOVERY SYSTEM FOR UNDERWATER OBJECTS

Kenneth F. Cannon, Jr., Bethesda, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed Oct. 5, 1962, Ser. No. 228,776
9 Claims. (Cl. 294—66)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. Recovery apparatus for retrieving inaccessible objects by self-propulsion along a predetermined path and attaching a recovery line to the object comprising

means for guiding the recovery apparatus along a predetermined path to the object,

self-contained power means connected to and driving the guide means along the predetermined path,

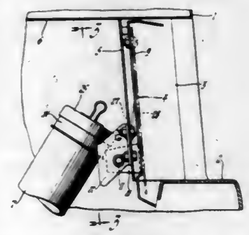
attaching means operatively connected to the guide means for positively and automatically connecting the recovery apparatus to the object upon termination of the predetermined path at the object,

and a recovery line connected to the guide means for retrieving the guide means and the object after the guide means and the object have been coupled together.

3,131,000
FUEL FILLER DOOR AND HOLD-OPEN

William J. Pierce, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

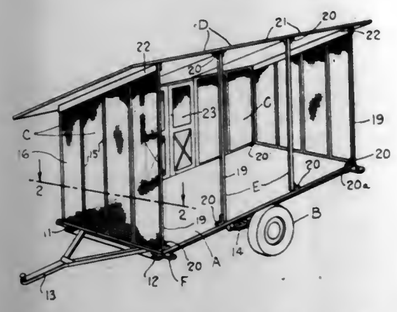
Filed Oct. 4, 1962, Ser. No. 228,461
1 Claim. (Cl. 296—1)



In an automotive vehicle having a body shell with an opening therein, a fuel filler pipe extending into the body shell and having its inlet end disposed for access through said opening, a door normally closing said opening but swingable about an axis adjacent one edge of the door to expose said opening for access to its filler pipe, means biasing said door closed, closure means for said inlet end of the pipe, said closure means being removable from the pipe for insertion in door holding-open relation between the door and the body shell adjacent said opening, said body shell adjacent said opening and said door having means latchably engageable with oppositely disposed surfaces of said closure means when said closure means is inserted therebetween, said latchably engageable means comprising recesses in the body shell adjacent said opening and in the door adapted to receive oppositely disposed extremities of said closure means, said closure means being in the form of a shallow cup-shaped cap and said recesses consisting of a notch in the edge of the

body shell defining one side of said opening and a slot in the door into which opposite side walls of the cap are receivable when the door is opened, said slot being generally C-shaped with the legs of the C being disposed to receive spaced portions of one side wall of the cap with that portion of the door between said legs extending into the open end of the cap.

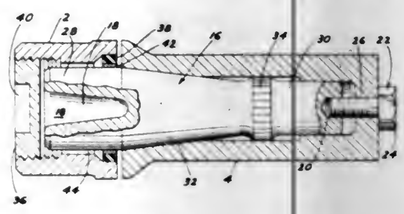
3,131,001
PORCH TRAILER
Francis Burns Meyer, P.O. Box 66, Summerville, S.C.
Filed Nov. 5, 1962, Ser. No. 235,473
1 Claim. (Cl. 296—27)



A collapsible porch trailer for use with a house trailer including, an elongated substantially rectangular trailer platform, a trailer hitch connected to the trailer platform for towing the trailer, wheels carrying said platform positioned in an intermediate portion of the platform, a plurality of screen side panels positionable to form upright walls on three sides of the platform, means for fastening the screen panels to the platform and to adjacent panels, a roof panel positionable upon the top of said side panels, means for fastening the roof panel to the upper portion of the side panels, vertical supports positionable upon the platform to define an open side on one side of the trailer, means for fastening the vertical supports to the platform and to the roof, means carried adjacent said open side for fastening the porch trailer to the house trailer so that the open side is attached to the house trailer to open into the house trailer, and door means gaining access to the porch without passing through the house trailer, said panels, supports and door means being carried when in transit in a collapsed stacked position upon the trailer platform.

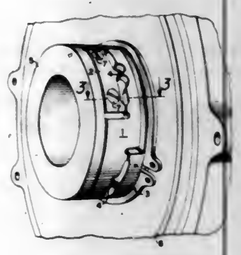
3,131,002
AGGRESSIVE DUAL PIN TRACK
Louis Speidel, Jr., Royal Oak, and Edward J. Gow, Jr., Oak Park, Mich., assignors to the United States of America as represented by the Secretary of the Army
Original application Apr. 25, 1961, Ser. No. 105,524, now Patent No. 3,092,423, dated June 4, 1963. Divided and this application Oct. 18, 1962, Ser. No. 237,424
1 Claim. (Cl. 305—11)
(Granted under Title 35, U.S. Code (1952), sec. 266)

An endless track embodying articulated track shoes, each shoe comprising first and second longitudinal sides, a pair of spaced first bearing bosses each formed with a cavity therein being integrally formed on said first longitudinal side, a pair of spaced second bearing bosses each formed with a cavity therein being integrally formed on said second longitudinal side, means pivotally connecting said first pair of bosses on a first shoe to said second pair of bosses on a second shoe, said means formed by spaced track pins, each pin defined by a central tapered body member having a cylindrical journal portion extending from the base of said body member and a cylindrical segment portion extending from the tapered end of said body member, each of said second bearing bosses having their associated cavity partially tapered and partially cylindrical to receive the tapered body member and cylindrical segment portion of each pin, each of said first bearing bosses being formed to completely cover the journal portion of said pin, sealing means disposed in the cavity of each of said first bearing bosses between each said pin and its respective first bearing boss to completely seal the end of said pin within the confines of said first bearing boss,



said track pins having knurls on said cylindrical segment adjacent said body member corresponding to internal knurls formed within said second bearing bosses, a bolt inserted through the closed end of said second bearing bosses and threadably connected to said cylindrical segment end of said pin whereby said knurls on said track pins are detachably drawn into engagement with said internal knurls of said second bearing bosses, said engaged first and second bearing bosses and pins occupying a volume that insures a minimum of 40% of said first longitudinal side being used for full aggressive grousing.

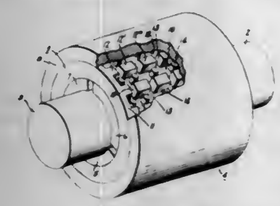
3,131,003
GIMBAL MOUNT FOR BEARINGS AND OTHER DEVICES
Jerry Glaser, Los Angeles, Calif., assignor to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Filed Oct. 9, 1961, Ser. No. 143,640
3 Claims. (Cl. 308—22)



1. A gimbal mount for bearings and the like comprising:
a central body member having a circular opening along its longitudinal axis for accommodating a bearing member and the like;
at least four lug members projecting axially from and at substantially equal intervals around said central body member, adjacently positioned lug members being arranged to project from said central body member in axially opposite directions, thereby constituting a forwardly projecting set and a backwardly projecting set of lug members, all the lug members in one set being circumferentially spaced from each other;

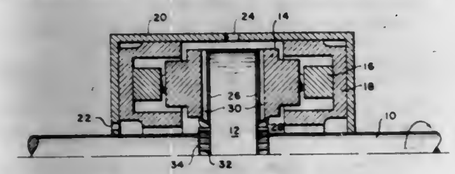
arm members connecting each of said lug members to said body member, each of said arm members constituting the sole connection between each said lug member and said body member, each of said arm members being narrower in width but not in thickness than each of said lug members to provide for pivotal movement of each of the lug members but to resist flexure by axial and radial forces;
and means in one set of said lug members for fastening said body member to a structure such as a thrust bearing.

3,131,004
YIELDABLE SHOE BEARING
Beno Sternlicht, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Oct. 12, 1961, Ser. No. 144,654
6 Claims. (Cl. 308—73)



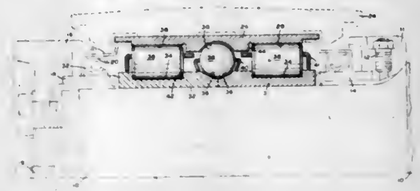
1. In a bearing construction, the combination of a journal, a plurality of arcuate bearing members adapted to engage the journal, said bearing members being circumferentially spaced around the journal, means defining a plurality of chambers adapted for containing fluid and spaced circumferentially around the bearing members, connecting conduits between said chambers, said chambers each having a yieldable wall operatively associated with said bearing members whereby the compression of fluid within the chambers causes circumferential movement of the fluid to adjacent chambers.

3,131,005
THRUST BEARING AND COOLING MEANS THEREFOR
Charles A. Wagley, Montgomery County, Md. (4703 Overbrook Road, Washington 16, D.C.)
Filed June 8, 1962, Ser. No. 201,217
8 Claims. (Cl. 308—160)
(Granted under Title 35, U.S. Code (1952), sec. 266)



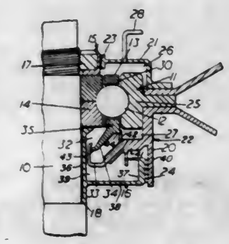
6. A thrust bearing assembly comprising:
a rotating shaft;
a thrust bearing for said shaft;
said thrust bearing including thrust shoe means having a planar bearing surface with an inner boundary adapted to be adjacent said rotating shaft;
said thrust shoe means planar bearing surface consisting of a coating of bearing material coated upon a heat conductive metal plate;
said thrust shoe means including at least one aperture therein having an inlet and an outlet, said inlet being located at said inner boundary and thus adjacent said rotating shaft; said aperture being in intimate contact with said metal plate; and
means driven by said shaft for forcing cooling fluid into said inlet and through said aperture to thereby cool said shoe means.

3,131,006
JOURNAL BEARING
Warren D. Anderson, Stamford, Conn., assignor, by mesne assignments, to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Filed Sept. 13, 1961, Ser. No. 137,886
2 Claims. (Cl. 308—174)



1. An anti-friction bearing comprising an outer ring formed in a single piece and having an interior roller raceway adjacent each end thereof, and an interior ball raceway between said roller raceways, an inner ring formed in two sections arranged in abutting, end-to-end relation, each section having an exterior roller raceway with guide flanges and an exterior ball raceway intersecting the abutting faces, cylindrical rollers positioned in each of said roller raceways and balls positioned in said ball raceways, the several raceways being so proportioned relative to the balls and rollers as to provide a radial clearance between said balls and races which is greater than the radial clearance between said rollers and races, and the axial clearance between said balls and races is less than the axial clearance between said rollers and races.

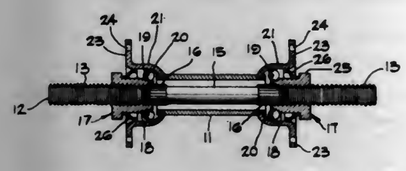
3,131,007
BEARING ASSEMBLY
Thomas Steel, Littleover, Derby, Norman Robert Robinson, Derby, and John Michael Storer Keen, Allestree, Derby, England, assignors to Rolls-Royce Limited, Derby, England, a company of Great Britain
Filed Apr. 30, 1962, Ser. No. 190,984
Claims priority, application Great Britain May 3, 1961
5 Claims. (Cl. 308—187)



2. In a bearing assembly having a substantially vertical shaft, the improvement comprising: casing means surrounding the shaft, said casing means including an outer wall, a first flange projecting radially inwardly from said outer wall and a second flange carried by said first flange and extending upwardly therefrom and spaced inwardly from said outer wall, said outer wall and said first and second flanges defining a lubricating sump, said first flange having an upwardly facing surface defining a bottom for said sump; bearing means disposed above said lubricant sump for rotatably mounting the shaft to said casing means, said bearing means including a plurality of rolling

elements and a rotating cage supporting said rolling elements in angularly spaced apart relationship from one another around the shaft; an annular skirt depending downwardly from said cage and radially inwardly of said second flange of the casing means with no part thereof depending into the lubricant sump, said skirt having a bottom rim at the lower end thereof and an inner surface diverging upwardly from the bottom rim towards the rolling elements, the upper surface of said first flange being positioned above the level of the bottom rim of said skirt; and duct means having an inlet opening in the upwardly facing surface of said first flange and an outlet opening located at a lower level than said inlet opening and vertically overhanging said inner surface of the skirt whereby the lubricant received in the sump from said bearing means flows through said duct means and onto the inner surface of said skirt and upwardly therealong for recirculation to the bearing means.

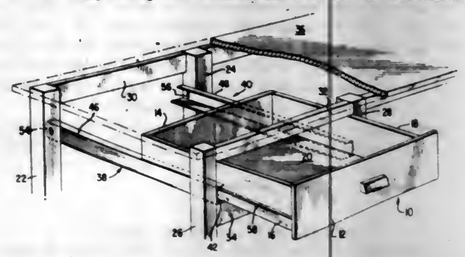
3,131,008
BICYCLE HUB ASSEMBLY
Walter Dian, Downers Grove, Ill., assignor to Excel, Inc., Franklin Park, Ill., a corporation of Illinois
Filed May 2, 1962, Ser. No. 192,001
1 Claim. (Cl. 308—192)



A bicycle hub assembly, comprising a mild steel shaft having threads rolled along opposite end portions thereof and of larger outside diameter than the outside diameter of said shaft, a hub extending about said shaft and having internal bearing races formed integrally therewith, cones having internal threaded portions threaded on the threads on said shaft and having external bearing races cooperating with said internal bearing races, ball bearings spacing said races apart and providing anti-friction bearings mounting said hub to freely rotate about said shaft, and means for maintaining said cones in adjusted relation with respect to said shaft comprising flutes extending longitudinally inwardly along said shaft from the threaded portions thereof and of greater outside diameters than the inside diameters of the threaded portions of said cones and engaged by the threaded portions of said cones and deformed thereby when bringing said cones into adjusted relation with respect to said internal races and thereby locking said cones in adjustment on said shafts.

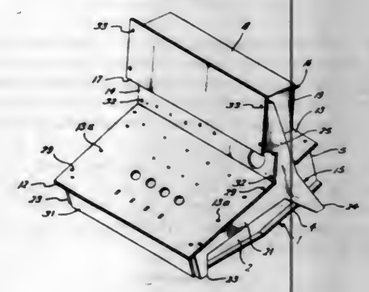
3,131,009
DRAWER SUPPORT
Charles D. Travis, Rte. 1, Williamstown, W. Va.
Filed Jan. 18, 1962, Ser. No. 167,104
2 Claims. (Cl. 312—346)

1. In a structure as described, two spaced parallel vertically extending rear supports, a front support spaced from said rear supports and having a substantially rectangular drawer receiving aperture formed therein, a horizontal drawer slide member at each lower corner of the drawer receiving aperture having one end fastened to said front support and extending rearwardly terminating adjacent the inner side of respective ones of said spaced rear supports, means for adjusting said one end in a plane, the rear-most end of each of the slide members fastened to respective ones of said rear supports, means for adjusting said rear-most end in a plane perpendicular to said first-mentioned plane, each of said slide members having an inwardly extending horizontal drawer supporting surface for supporting the bottom surface of an associated



drawer and a spaced upper inwardly extending horizontal drawer guide for sliding engagement within a slot formed in the respective side walls of said associated drawer.

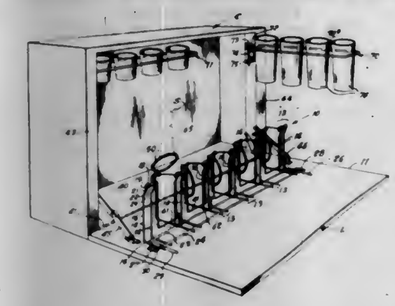
3,131,010
CONVERTIBLE ELECTRICAL ASSEMBLIES
Louis W. Erath, Houston, Tex., assignor to Test Equipment Corporation, Houston, Tex., a corporation of Texas
Filed Dec. 31, 1962, Ser. No. 248,515
5 Claims. (Cl. 312—243)



1. In a convertible electrical assembly of the type described, the combination of
two side members each having an elongated edge;
means mechanically interconnecting said side members to maintain the same in spaced relation with said edges lying in a common plane;
a first panel extending over said edges of both of said side members and secured thereto,
said first panel having an edge extending transversely relative to said side members,
said side members both having portions projecting away from said edge of said first panel;
a second panel extending over both of said projecting portions of said side members and secured thereto,
said second panel having an edge spaced from said edge of said first panel;
two support members each disposed beside and extending at least generally parallel to a different one of said side members and removably attached to the combination of said side members and said first and second panels, each of said support members including
a panel mounting portion projecting through the space between said edges of said first and second panels and thence away from said first and second panels, and
foot means adapted to engage a generally horizontal supporting surface; and
a third panel detachably secured to said panel mounting portions of said support members,

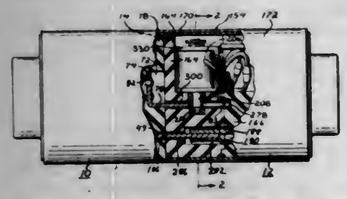
said third panel being of such size and shape as to fill the space between said edges of said first and second panels, whereby, upon removal of said support members and detachment of said third panel therefrom, said third panel can be positioned between said first and second panels and secured to said side members.

3,131,011
SUPPORTING DEVICE
Lee R. Rittenberry, 4340 Allencrest Lane, Dallas 34, Tex.
Filed Apr. 20, 1961, Ser. No. 104,278
6 Claims. (Cl. 312—266)



5. In combination: a cabinet having a side opening and a door pivotally connected to the cabinet for closing said side opening; a plurality of wire rod support members each provided with a hook at one end; wire rod means connecting said support members in longitudinally aligned spaced array wherein the hooks of said support members are substantially horizontally aligned; a plurality of cradles each adapted to carry a bottle and each having axle members releasably held by a pair of adjacent hooks whereby each cradle is individually independently pivotally supported by a pair of said hooks; means mounting said support member connecting means to said cabinet for limited horizontal movement through said open side whereby said connecting means and said cradles may be moved forward to said opening of said cabinet when said cabinet door is open to permit tilting of the cradles from their normally disposed gravity oriented positions.

3,131,012
SAFETY LOCKING ELECTRICAL CABLE CONNECTOR BODY AND CAP
Joseph F. Healy, Westport, Conn., assignor to Harvey Hubbell, Incorporated, Bridgeport, Conn., a corporation of Connecticut
Filed Feb. 7, 1961, Ser. No. 87,562
6 Claims. (Cl. 339—12)

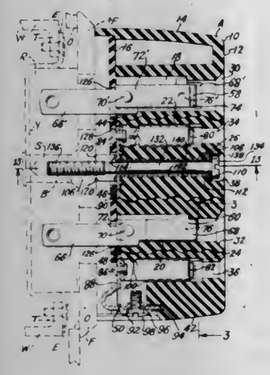


1. An electrical cable connector comprising: a longitudinally extending connector cap; and a longitudinally extending connector body; said connector cap including a body of electrical insulating material having a front transverse face; a plurality of electrical contact-terminal assemblies mounted in said connector cap body, each including a contact portion and a terminal portion, the terminal portions being arranged to receive and electrically connect individual conductor wires of a multi-wire cable that is adapted to be connected to a device to be powered; an elongated latching blade having an opening rigidly centrally mounted on said connector cap body and projecting longitudinally away from its face; said connector body including a body of electrical insulating material including a front transverse face; a plurality of electrical contact-terminal assemblies mounted in the insulated body of said connector body, each including a contact portion and a terminal portion, the terminal portions being arranged to receive and electrically connect individual conductor wires of a multi-wire cable that is adapted to be connected to a source of electrical power; the contact portions of the contact-terminal assemblies of the connector cap being accessible from the face of the connector cap body and arranged to engage the contact portions of the contact-terminal assemblies of the connector body which are accessible from the face of the insulated body thereof on relative closing longitudinal movement of said connector cap and said connector body; an elongated longitudinally extending latching space formed transversely centrally in the insulated body of said connector body, accessible through the center of the face thereof and aligned with said latching blade; a latching pin mounted in the insulated body of said connector body for limited controlled movement in a direction transverse to the longitudinal direction; said latching pin normally being disposed in a retracted position electrically operated solenoid means for moving said latching pin to a projecting position when energized wholly mounted within the insulated body; said electrically operated means being electrically connected to the terminal portions of the contact-terminal assemblies mounted in the insulated body of said connector body whereby it is energized whenever the source of electrical power energizes the last mentioned terminal portions; said latching pin having means which extends into said latching space whenever said electrically operated means is energized and is positioned to engage means on said latching blade to prevent longitudinal closing movement of said connector cap and body to effect engagement of the contact portions if the connector is disconnected whereby the connector cannot be connected when the connector is disconnected and the source of electrical power energizes the contact-terminal assemblies of said connector body, and to be disposed in said opening to prevent longitudinal separating movement of said connector cap and body to effect disengagement of the contact portions if the connector is connected whereby the connector cannot be disconnected when the connector is connected and the source of electrical power energizes the contact-terminal assemblies of said connector body.

3,131,013
DUPLEX ADAPTER WITH AUTOMATIC GROUNDING MEANS
Ernest R. Carlson, Fairfield, Conn., assignor to Harvey Hubbell, Incorporated, Bridgeport, Conn., a corporation of Connecticut
Filed July 6, 1959, Ser. No. 824,999
6 Claims. (Cl. 339—14)

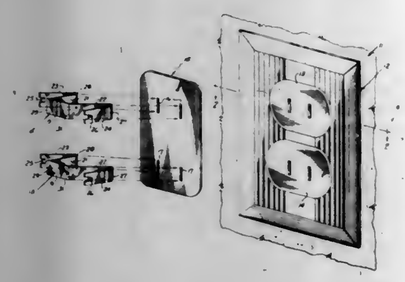
1. An adapter for an ungrounding electrical receptacle for rendering the receptacle usable with a grounding electrical connection which includes a grounding element comprising: a body of electrical insulation material; a pair of contact blade assemblies supported by said body; each of said assemblies comprising a female contact portion that is arranged to receive a male contact blade of the grounding electrical connection and a male contact portion which is arranged to be inserted into a female contact of the receptacle; and grounding means arranged to

connect the grounding element of said grounding electrical connection to a source of ground including a securing screw for mounting the adapter on the receptable that is arranged to be received in the usual grounded face plate securing screw receiving means of the receptacle for normally grounding itself and the remainder of said grounding means, a grounding contact that is arranged in said body to receive the grounding element if it is in the form of a grounding contact, and a screw-type terminal including a flat binding plate portion and a binding screw adjustably mounted therein for receiving the grounding



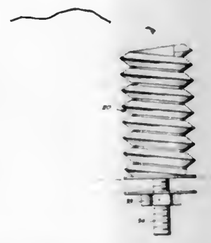
element if it is in the form of a grinding wire, said screw-type terminal also being adapted to be directly connected to an alternate source of ground other than the face plate securing screw receiving means by a separate conductor wire, said mounting screw, said grounding contact and said screw-type terminal all being separate elements and spaced from but electrically connected to each other, whereby either said mounting screw or said screw-type terminal may be utilized to connect said grounding means to a source of ground, and either said grounding contact or said screw-type terminal may be utilized to receive the grounding element of said grounding electrical connection.

3,131,014
SAFETY COVER
Eudaldo Y. Muñoz, 92 W. 26th St., Hialeah, Fla., and Guido C. Muñoz, Coral Gables, Fla. (207 Harrison Road, Rome, Ga.)
Filed Jan. 29, 1962, Ser. No. 169,337
5 Claims. (Cl. 339—38)



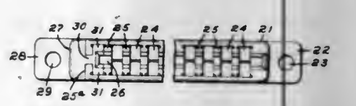
1. A safety cover for electrical outlets of the type having an outlet box provided with an outlet receptacle having two sockets and an escutcheon plate comprising; a plate having apertures therein, said plate being adapted to overlie said escutcheon plate with said apertures coinciding with said sockets; and a strip of bendable dielectric material having a base portion and two prong portions, said prong portions being passed through said apertures and extending outwardly therefrom with the base portion overlying the plate, said prongs being adapted to be inserted into said sockets whereby said plate and strip are adapted to be releasably held together in abutting engagement with an escutcheon plate.

3,131,015
ELECTRICAL CONNECTORS
John S. Zdanis, Watertown, Conn., assignor to The Siemon Company
Filed Apr. 25, 1962, Ser. No. 190,173
1 Claim. (Cl. 339—97)



A helical electrical connector comprising a continuous spiral of a strip of resilient, electrical conducting material forming a plurality of compact convolutions, said strip having a cross-sectional configuration comprising a partially planar surface on both the top and bottom sides thereof, the planar surface on one side of said strip being interrupted by a projecting peak and the planar surface on the other side of said strip being interrupted by a curved indentation, said peak and curved indentation extending longitudinally of the strip material, the projecting peak on one convolution being in registration with the curved indentation on the adjacent convolution, whereby the insulation on an insulated wire conductor is pierced and contact is achieved at separate points on said wire conductor when an insulated wire conductor is inserted between two adjacent convolutions of said connector.

3,131,016
EDGE CONNECTORS FOR PRINTED CIRCUIT PANELS
Antony Brasher Clewes, Sherwood, Nottingham, England, assignor to United-Carr Fastener Corporation, Boston, Mass., a corporation of Delaware
Original application July 27, 1961, Ser. No. 127,208. Divided and this application Dec. 31, 1962, Ser. No. 248,389
Claims priority, application Great Britain July 29, 1960
3 Claims. (Cl. 339—176)



1. An edge connector for a printed circuit panel comprising a body member of insulating material, an end piece detachably assembled with said body member and a series of contacts assembled with said body member, said end piece comprising a base portion, a vertical portion extending from said base portion in integral right angular relationship thereto, a web extending from said vertical portion and a pair of arms attached to said web in spaced parallel relationship with said vertical portion and in spaced relation with each other, said body portion having a pair of walls defining a longitudinal slot, said walls having opposed pairs of spaced partition walls defining contact receiving cavities and said body portion having an open end, said arms of said end piece slidably engaging an end pair of said partition walls whereby said partition walls are sandwiched in abutting relation between one of said arms and a portion of said vertical portion.

3,131,017
EDGE BOARD CONNECTOR
Martin A. Mittler, Flushing, N.Y., assignor to Industrial Electronic Hardware Corp., New York, N.Y., a corporation of New York
Filed Apr. 20, 1961, Ser. No. 104,481
12 Claims. (Cl. 339—259)



1. A resilient metal contact for an edge board connector, said contact comprising a ribbon of resilient metal having one end shaped to form a single thickness book at the upper end of said contact, a spaced pair of elongated parallel wipers depending from said hook, the lower ends of said wipers being free, a tail beneath said wipers, an upper cantilever leaf spring forming an integral continuation of said hook and tail, said upper spring being formed of material sheared from between said spaced wipers, and a lower cantilever leaf spring which is integral with the tail and disposed between the tail and the free lower ends of the wipers.

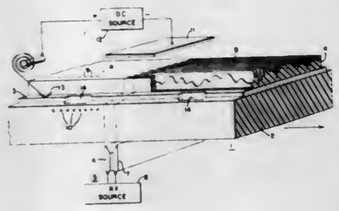
3,131,018
AUTOMATIC CARRIER CONTROLLED APPROACH SYSTEM
Albert Brodzinsky, Joseph B. Reynolds, Jr., and Irving M. Saffitz, all % Naval Research Laboratory, Anacostia Station, Washington 25, D.C.
Filed Nov. 30, 1951, Ser. No. 259,275
6 Claims. (Cl. 343—6)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A system for directing an aircraft to a selected landing area along a desired flight path, comprising aircraft detection means for following the aircraft in flight and for measuring the position in space thereof relative to said landing area, said detection means including means producing an electrical analog signal of range and of at least one other flight path criteria relative to said landing area including azimuth; flight path deriver means for producing electrical analog signals of said criteria relative to said landing area for points along a substantially semicircular flight path in the azimuth sense as a function of range; means connecting the output of said detection means to the input of said flight path deriver such that the output of said flight path deriver is responsive to the range signal output of said detection means; electrical signal comparator means connected to the outputs of said detection means and said flight path deriver



and adapted to provide a difference electrical signal for each of said flight path criteria; and means for relaying said difference electrical signal information to said aircraft in flight whereby the course of said aircraft may be altered accordingly to minimize the difference electrical signal information.

3,131,019
METHOD AND APPARATUS FOR ENHANCING THE DEVELOPMENT OF DEFORMABLE STORAGE MEDIUMS
Nicholas F. D'Antonio, Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Filed May 6, 1960, Ser. No. 27,370
6 Claims. (Cl. 346—77)



1. In an electrical recording system employing a storage medium of thermoplastic tape including a layer of thermoplastic material supported upon a base layer of nonconducting material and having a layer of conducting material intermediate said thermoplastic layer and said base layer, apparatus adapted to develop a physical surface deformation in said thermoplastic material from a latent image provided by an electrical charge distribution deposited on the surface of said thermoplastic material in accordance with an information input comprising: means for temporarily heating said thermoplastic material to a softened condition, a planar electrode positioned parallel and in proximity to said surface, voltage supply means coupled between said electrode and said conducting layer for creating a uniform electric field at said surface for applying a compressive force to said electrical charges in a direction normal to said surface during the period that said thermoplastic material is in its softened condition whereby the thermoplastic material is rapidly deformed in accordance with said electrical charge distribution.

3,131,020

METHOD AND APPARATUS FOR EXPOSING PHOTOSENSITIVE MATERIAL

Sidney Bertram and Sidney L. Hasin, Los Angeles, Calif., assignors to Thompson Ramo Wooldridge Inc., Canoga Park, Calif., a corporation of Ohio

Filed Sept. 20, 1962, Ser. No. 225,077

8 Claims. (Cl. 346—110)

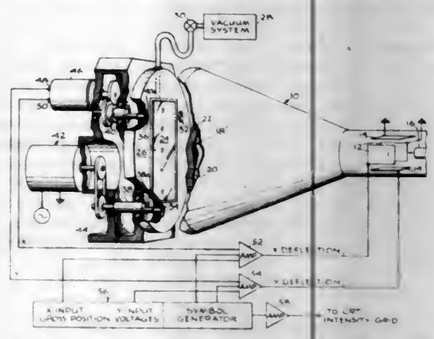
1. Apparatus for exposing photosensitive material comprising:

a radiation-emitting spot producing means including a target responsive to a deflectable beam incident upon said target;

means for movably positioning photosensitive material responsive to the radiation emitted by said spot adjacent said target for exposure thereby;

means for moving said material relative to said target; and

means for deflecting said beam in accordance with the movement of said material to expose but one specific



area on said material to the radiation emitted by said spot.

CHEMICAL

3,131,021

PROCESS FOR THE COLORATION OF CELLULOSE TEXTILE MATERIALS WITH WATER-SOLUBLE AZO DYESTUFFS CONTAINING SULPHONYL FLUORIDE GROUPS

William Baird, Derek Keith Lawman, William Elliot Stephen, and Charles Douglas Weston, all of Manchester, England, assignors to Imperial Chemical Industries Limited, London, England a corporation of Great Britain

No Drawing. Filed Aug. 7, 1961, Ser. No. 129,532

8 Claims. (Cl. 8—41)

1. Process for the coloration of cellulose textile materials with an azo dyestuff which contains at least one ionic solubilising group selected from the class consisting of sulphonic acid and carboxylic acid groups, and which also contains as the only type of reactive group, at least one sulphonyl fluoride group, which comprises treating the said textile materials with the said dyestuff and with an aqueous solution of an acid-binding agent.

3,131,022

PROCESS FOR PRODUCING LITHIUM CARBONATE WITH CONCOMITANT RECOVERY OF REACTANTS

Maurice Archambault, Quebec, Quebec, Canada, assignor to Ministere des Richesses Naturelles, Province de Quebec, Canada

No Drawing. Filed Jan. 9, 1961, Ser. No. 81,225

Claims priority, application Great Britain Feb. 9, 1960

13 Claims. (Cl. 23—63)

1. A process for extracting lithium from calcined lithium-bearing silicate, which comprises, reacting said silicate hydrothermally with an aqueous mixture of sodium carbonate and sodium hydroxide to produce an aqueous mixture containing solid silicated lithium carbonate and sodium aluminosilicate, cooling said mixture and leaching it with aqueous ammonium carbonate to recover its lithium and sodium content in the form of a solution separated from a solid residue.

3,131,023

PROCESS FOR PURIFYING CRUDE CALCIUM CYANATE

Herbert A. Baskin, Covington, Tenn., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed Mar. 28, 1963, Ser. No. 268,544

7 Claims. (Cl. 23—75)

1. Purification of impure calcium cyanate containing at least about 35% calcium cyanate, the balance being impurities consisting essentially of calcium carbonate, at least one member selected from the group consisting of calcium oxide and calcium hydroxide, and about 0–1% urea, comprising extracting the said impure calcium cyanate with a substantially anhydrous C_{1-2} alkanol containing not more than about 1% water, whereby the calcium cyanate is dissolved in the alkanol to form an extraction liquor, separating the extraction liquor from the residual solids, evaporating the solvent at 0–50° C. under reduced pressure not exceeding 400 mm. of mercury absolute, and recovering calcium cyanate in a purity of at least 90%.

3,131,024

METHOD OF PRODUCING DICALCIUM SILICATE ALPHA HYDRATE

James P. Leineweber, Somerville, N.J., assignor to Johns-Manville Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Mar. 22, 1961, Ser. No. 97,457

4 Claims. (Cl. 23—110)

1. A method of producing dicalcium silicate alpha hydrate which comprises providing a mixture of silicon dioxide and a calcium oxide producing material wherein the $CaO:SiO_2$ ratio is about 1.5 to about 2.2, said mixture additionally containing between about 0.1 to about 10.0% by weight of the above ingredients a compound selected from the group consisting of sodium hydroxide and sodium fluoride, and thereafter hydrothermally reacting said silicon dioxide and calcium oxide producing material at a temperature above about 180° C.

3,131,025

ZINC SULFIDE OPTICAL ELEMENT

Edward Carnall, Jr., Paul B. Mauer, William F. Parsons, and Donald W. Roy, all of Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Oct. 29, 1959, Ser. No. 849,606

3 Claims. (Cl. 23—135)

1. A transparent article consisting of composite zinc sulfide particles of not more than 5 microns size formed by hot pressing the particles into a unitary polycrystalline homogeneous solid of at least 99% of theoretical density.

3,131,026

PURIFICATION OF ZINC SULFIDE POWDER

Edward Carnall, Jr., and LeRoy S. Ladd, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Sept. 14, 1961, Ser. No. 137,974

6 Claims. (Cl. 23—135)

1. A method of purifying zinc sulfide powder to improve the transparency of articles hot pressed therefrom comprising subjecting the zinc sulfide powder to an oxidizing atmosphere at a temperature within the range between 370–480° C., thereafter heating the zinc sulfide powder at a temperature between 460–650° C. while passing hydrogen sulfide over the powder, and finally maintaining the zinc sulfide powder within the same temperature range of 460–650° C. in the presence of hydrogen.

3,131,027

PROCESS FOR THE RECOVERY OF HYDROGEN CHLORIDE FROM A VAPOR MIXTURE CONTAINING SAME

Walter L. Borkowski and John J. Van Venrooy, Media, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Nov. 7, 1962, Ser. No. 236,122

14 Claims. (Cl. 23—154)

1. Method for recovering hydrogen chloride from a vapor mixture containing hydrogen chloride which comprises contacting the vapor mixture at a relatively low temperature with a solid absorbent comprising a ferric component selected from the group consisting of ferric oxychloride and hydrated ferric oxychloride, whereby hydrogen chloride is selectively absorbed, heating the absorbent to a temperature above 100° C. and at least 25° C. higher than said relatively low temperature but less than 300° C. and recovering hydrogen chloride evolved therefrom.

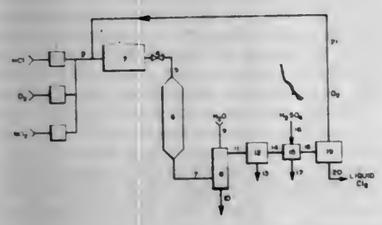
3,131,028

CATALYTIC OXIDATION REACTION OF A HYDROGEN HALIDE TO PRODUCE THE CORRESPONDING HALOGEN IN A SINGLE STAGE, HOMOGENEOUS, VAPOR PHASE USING NO_2 AS A CATALYST

Frederic S. Stow, Jr., Hockessin, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

Filed May 7, 1962, Ser. No. 192,895

10 Claims. (Cl. 23—215)



1. A process of oxidizing a hydrogen halide to the corresponding halogen which comprises contacting in a single-stage, homogeneous, vapor phase reaction, the hydrogen halide gas with oxygen at a temperature of from about 250° C. to about 550° C. in the presence of nitrogen dioxide in an amount of from about 0.005 mole to about 0.25 mole per mole of hydrogen halide.

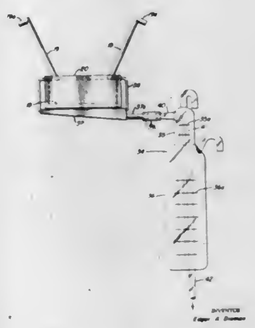
3,131,029

SYSTEM FOR ACCELERATED CONDENSATION CORROSION

Edgar A. Dieman, Crown Point, Ind., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Original application Dec. 18, 1957, Ser. No. 703,530. Divided and this application Aug. 18, 1960, Ser. No. 50,436

1 Claim. (Cl. 23—253)



An apparatus for use in collecting and measuring condensate from a corrosion test specimen maintained within a test cabinet which comprises: a condensate collection pan positioned to directly collect condensate collecting on said test specimen unit, and a graduated self-siphoning receptacle means connected to said pan to receive and measure the condensate collected in said pan, said receptacle means comprising two sections, the upper section being of relatively small capacity and the lower section being of relatively large capacity, said receptacle means further comprising siphon means discharging from said upper section into said lower section and second siphon means discharging condensate from said lower section into said test cabinet.

3,131,030

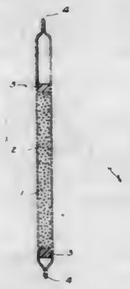
REAGENT CARRIER FOR GAS DETECTING TUBES

Karl F. Grosskopf, Lubeck, Germany, assignor to Otto Heinrich Drager, Lubeck, Germany

Filed Jan 19, 1961, Ser. No. 83,723

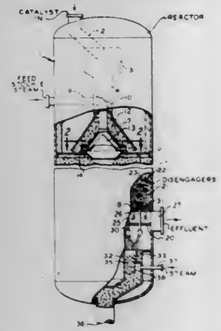
Claims priority, application Germany Jan. 29, 1960

4 Claims. (Cl. 23—254)



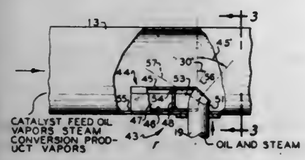
1. An indicator for a detecting tube comprising a gas detecting reagent coating on a carrier composed of non-porous grains of a plastic which is brittle at normal temperatures ranging from about minus 20 to plus 20 degrees centigrade.

3,131,031
FEED DEVICE FOR MOVING BED CATALYTIC PROCESS
Joe Van Pool, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Nov. 2, 1960, Ser. No. 66,823
10 Claims. (Cl. 23—288)



1. In a catalytic process unit, in combination, a conduit extending into the upper portion of the unit for the admission of catalyst particles thereto, a feed inlet pipe extending into said conduit and depending therein, said conduit and said feed inlet pipe defining an annular space through which a stream of catalyst particles is permitted to flow downwardly in the form of a compact moving bed, said feed inlet pipe terminating at its lower end in a feed discharge unit within the discharge end of said conduit, said conduit tapering outwardly at said discharge end to form a conical outlet, the angle of the conical wall of said conical outlet with the horizontal being greater than the angle of repose of the catalyst particles to prevent void spaces around said stream of catalyst particles moving past said feed unit, said unit comprising a pair of concentric cones within said conical outlet, said pair of concentric cones separated by a second annular space which communicates with said feed inlet pipe, the inner cone of said pair serving to deflect incoming feed toward a plurality of horizontally directed radial outlet conduits positioned in the lower periphery of said second annular space, the outer cone of said pair terminating in a first horizontal annular baffle positioned and dimensioned to cover the area of said radial outlet conduits, the inner cone of said pair terminating in a second horizontal annular baffle beneath the area of said radial outlet conduits, an inverted conical baffle depending from the periphery of said second horizontal annular baffle, said inverted conical baffle having an angle with the horizontal greater than the angle of repose of the catalyst particles.

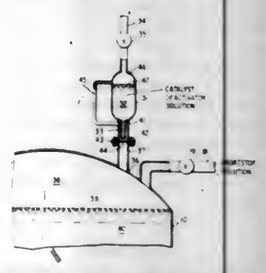
3,131,032
EROSION PREVENTING APPARATUS
George E. McKenna, Phillips, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Mar. 10, 1961, Ser. No. 94,814
2 Claims. (Cl. 23—288)



1. Apparatus for conveying a suspension of abrasive particulate solids comprising:

(1) a main conduit for said suspension;
(2) a second smaller conduit for introducing fluid into said suspension extending transversely into and terminating within said main conduit with its terminus therein directed downstream of said main conduit;
(3) a substantially fluid tight box shielding the upstream surface of that section of said second conduit within said main conduit from abrasive solids, said box having an open upstream end and its downstream end being contiguous with said second conduit, said box extending both longitudinally and transversely of said section substantially the width and length thereof; and
(4) a fixed plate within said box transverse to the axis of said main conduit, spaced intermediate the upstream and downstream ends of said box, said plate extending substantially across the width and height of said box.

3,131,033
APPARATUS FOR PASSING MATERIAL INTO A PRESSURE VESSEL IN RESPONSE TO THE INTERNAL PRESSURE THEREOF
Ross Van Volkenburgh, Baton Rouge, La., assignor to Copolymer Rubber & Chemical Corporation, a corporation of Louisiana
Filed Dec. 2, 1960, Ser. No. 73,273
10 Claims. (Cl. 23—289)

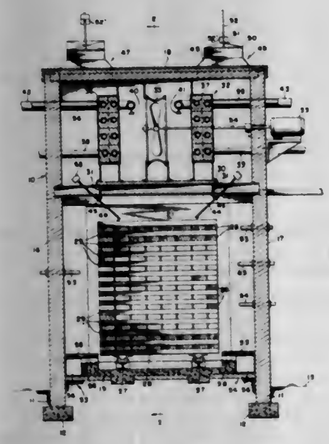


1. In apparatus of the class including a pressure vessel, the improvement in means for passing material into the pressure vessel in response to the internal pressure thereof consisting essentially of container means for containing material to be added to the pressure vessel, conduit means extending between the pressure vessel and the container means for passing material from the container means into the pressure vessel, and means positioned in the conduit means between the pressure vessel and the container means for normally preventing passage of material from the container means into the pressure vessel, there being no communication between the interiors of the pressure vessel and the container means when in use effective to equalize the pressures therein as long as the means for preventing passage of the material is effective whereby the last named means is subjected to increasing pressure in a direction away from the pressure vessel with increasing pressure in the pressure vessel, the means for preventing passage of the material being rendered ineffective by pressure applied in a direction away from the pressure vessel when the internal pressure of the pressure vessel exceeds a predetermined level thereby allowing material to be passed from the container means into the pressure vessel.

3,131,034
PROCESS FOR DRYING LUMBER
Julius Everett Marsh, Box 870, High Point, N.C.
Filed Mar. 2, 1961, Ser. No. 92,997
4 Claims. (Cl. 34—30)

1. A process for the removal of moisture from lumber comprising the steps of enclosing lumber in a confined

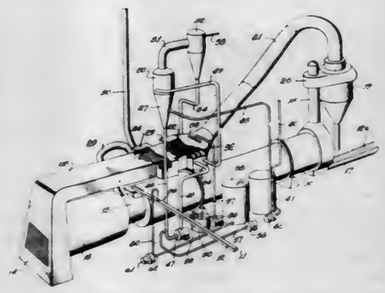
zone under controlled conditions of dry bulb temperature, wet bulb temperature and total pressure of the zone atmosphere, the initial conditions being substantially the same as those outside the zone, increasing the dry bulb temperature of the zone atmosphere to a point near the boiling point of water at the prevailing total pressure in the zone while simultaneously increasing the wet bulb temperature while holding a wet bulb depression of less than approximately 15 percent of the dry bulb temperature, varying the partial vapor pressure in the zone so that the surface temperature of the lumber will remain lower than the boiling point of water within the zone at the prevailing vapor pressure in order to prevent evaporation of moisture from the lumber, maintaining these conditions while uniformly heating the lumber and moisture contained therein to a temperature near the boiling point



of water in said zone at the prevailing vapor pressure, thereafter increasing the dry bulb temperature of the zone atmosphere to a point at least 15 percent greater than the boiling point of water at the prevailing total pressure in the zone while simultaneously increasing the wet bulb temperature to accelerate and control the rate of moisture removal from the lumber and to replace the heat lost due to evaporation of moisture therefrom, maintaining these further increased dry bulb and wet bulb temperatures until the moisture content of the lumber is reduced to about 10 percent by weight of the oven-dry wood, and thereafter slightly decreasing the dry bulb temperature while maintaining the wet bulb temperature at the further increased level whereby additional removal of moisture may be accomplished at a decelerated rate and distribution of moisture remaining in the lumber may be equalized.

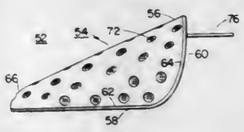
3,131,035
METHOD OF HEAT RECOVERY FROM WASTE GASES CONTAINING VAPOR
Reginald T. Erickson, P.O. Box 323, San Juan Capistrano, Calif.
Filed Nov. 25, 1960, Ser. No. 71,813
2 Claims. (Cl. 34—77)

1. In combination with a process of rendering material in solid and liquid material phases in which the solid material phase is subjected to drying to reduce the moisture content thereof and the liquid material phase is subjected to concentration to recover certain components thereof, the steps of: passing gases containing vapors exhausted from the drying of the solid material phase along a path to a heat-exchange means having heat transmitting walls; scrubbing said exhausted gases prior to their contact with said walls with condensate derived substantially from said vapors contained in said gases to partially remove superheat thereof and wetting said walls with said vapor in said gases and said condensate; circulating gases from said heat-exchange means for reintroduction into



and for further use in drying the solid material phase; passing the liquid material phase through the heat-exchange means in contact with said walls and in indirect heat exchange relation to said gases, whereby the liquid material phase is subjected to heating by heat recovered from said exhaust gases and vapor contained therein; and passing the heated liquid material phase into an evaporator under sub-atmospheric pressure for initial concentration of said liquid material phase, the heat from said liquid material phase serving to fire the evaporator.

3,131,036
SHOE DRYING DEVICE
Arnold H. Hirschberg, 1824 Hawthorne Road, Fort Wayne, Ind.
Filed May 10, 1961, Ser. No. 109,175
3 Claims. (Cl. 34—95)

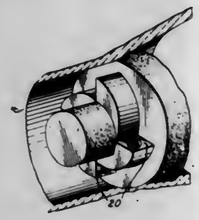


1. A device for drying the interior of the toe portion of a shoe comprising a self-supporting hollow body preformed generally to conform to and fill the interior of said toe portion and to engage all surfaces of the same, said body comprising two parts each formed of relatively thin semi-rigid plastic material, one of said parts forming a top wall portion and the other forming bottom and rear wall portions of said body, respectively, said parts being secured together mutually to define a cavity, said top wall portion being outwardly convex in cross-section and merging smoothly to a point at one end thereof remote from said rear wall portion, and a bag formed of porous cloth containing powdered desiccant material positioned in said cavity and in engagement with said top and bottom wall portions, said top and bottom wall portions have a plurality of closely spaced apertures formed therethrough thereby permitting said desiccant material to absorb moisture from the interior of said shoe.

3,131,037
OIL GASIFIER

Sven Hjalmar Backstrom and Erik Sune Berglöv, Borlange, Sweden, assignors to Stora Kopparbergs Bergslags Aktiebolag, Falun, Sweden, a company of Sweden

Filed June 27, 1960, Ser. No. 39,132
Claims priority, application Sweden June 29, 1959
1 Claim. (Cl. 48—107)

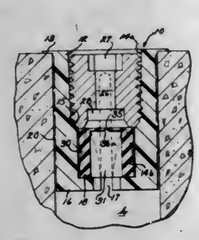


In an oil gasifier wherein the gasification is effected with the aid of partial combustion of the oil, so as to produce a combustible gas, said gasifier including a substantially cylindrical gasification chamber, means including supply nozzles at one end of the gasification chamber for supplying oil and air into the gasification chamber, and an outlet at the other end of the gasification chamber for discharging combustible gas formed in said gasification chamber, at said one end of the gasification chamber a combined closure and supporting plug consisting of ceramic refractory material and having a substantially cylindrical body with a cylindrical reduced-diameter end portion of substantial length, the diameter and length of said cylindrical reduced-diameter end portion being such as to define, in cooperation with the wall of the gasification chamber, an annular space having a depth at least twice its width and a cross-section at most equal to half the cross-sectional area of the cylindrical gasification chamber; said reduced-diameter end portion of said plug including a terminal cylindrical base portion concentric with said body and a plurality of abruptly inclined arcuate shoulder portions spaced about its base, said supply nozzles each comprising an annular slot-like air outlet surrounding and concentric with a central oil outlet and being disposed in said shoulder portions and opening into said annular space adjacent the bottom thereof tangentially with respect to said base portion; said plug containing separate oil and air channels for supplying oil and air to said outlets of said nozzles.

3,131,038
SPUDDING ANCHOR

John E. Jackson, 3258 Belvoir Blvd., Beachwood, Ohio

Filed Apr. 7, 1961, Ser. No. 101,488
2 Claims. (Cl. 48—193)



1. A spudding anchor for permanent installation in a vertical position in a spudding aperture, comprising a cup-shape body having a bottom and side walls and having an internal bore formed therein and opening to its upper end, an annular rim portion extending radially outward at said upper end, said body being adapted to be inserted into said aperture with said annular rim portion overlying the surface surrounding said aperture, said bore being frusto-conical in vertical configuration and of maximum diameter at said open end and of minimum diameter at its opposite end, said body being formed with a plurality of slots extending through the bottom edge thereof and upwardly longitudinally of said body dividing the side walls of said body for a sufficient length to provide a plurality of flexible body parts, aperture gripping projections spaced longitudinally along said body parts and extending outwardly therefrom, a cylindrical plug threadable into said conical bore from said upper end of said body effective to flex said body parts outwardly about said upper end whereby said projections may press firmly against the wall of such an aperture to secure said body in the latter, there being a central opening through the bottom of said body and an internal shoulder around said opening, a valve within said bore resting upon said shoulder and having a central self-sealing opening axially aligned with said bottom opening, said plug having a central opening axially aligned with said aforesaid openings, and said plug holding said valve on said internal shoulder, whereby a probe may be passed downwardly through said aligned openings and said valve prevents dirt falling into said aperture between probings.

3,131,039
PROCESS FOR PREPARING A POLISHING COMPOUND

Frederick C. Nonamaker, 615 N. Brown St., Gloucester City, N.J.

No Drawing. Filed Oct. 12, 1961, Ser. No. 144,537
6 Claims. (Cl. 51—293)

1. The method of preparing a polishing material which comprises treating a concentrate of a bastnasite which contains at least 65% rare earth oxides by wet milling until 80% of the material has a particle size of less than 5 microns followed by firing the wet concentrate in an atmosphere of hydrofluoric acid gas at a temperature of 1000 to 1400° F. for a period of 1 to 4 hours and recovering the polishing material as a product.

2. The method of preparing a polishing material which comprises treating a concentrate of bastnasite containing at least 65% rare earth oxides which comprises treating by wet milling until 80% of the material has a particle size of less than 5 microns followed by firing the wet concentrate in the presence of steam at a temperature of about 1400° F. for a period of 1½ hours, and recovering the polishing material as a product.

3,131,040
WATER SEPARATOR

Winfred F. Dunn, Woodland Hills, and Irving G. Austin, Inglewood, Calif., assignors to The Garrett Corporation, Los Angeles, Calif., a corporation of California

Filed Dec. 23, 1960, Ser. No. 77,869
5 Claims. (Cl. 55—159)

1. Apparatus operable in any attitude or under conditions of zero gravity for collecting and removing liquid entrained in a stream of gaseous fluid, comprising:

a housing having a cover and a plurality of dependent wall plates;

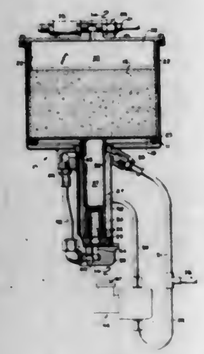
an inlet associated with the wall plates of said housing for admitting moisture-laden fluid into said housing;

an outlet associated with the wall plates of said housing for conveying dry fluid from said housing;

a body of porous absorbent material normally disposed in said housing in the line of flow of fluid intermediate said inlet and said outlet to absorb the moisture in the fluid;

an imperforate plate secured on the end of the body of porous absorbent material opposite the cover of said housing;

a nonreturn valve associated with the cover of said housing and arranged to permit fluid to flow outwardly from said housing;



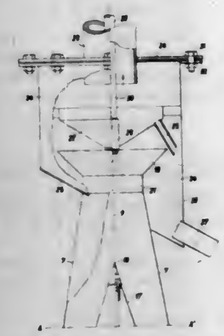
means arranged to move said imperforate plate to compress said body of absorbent material between said imperforate plate and the cover of said housing to squeeze the accumulated liquid out of said material;

and sealing means disposed on said imperforate plate to prevent leakage of fluid between the wall plates of said housing and said imperforate plate whereby the liquid squeezed out of said absorbent material is forced out of said housing through said nonreturn valve.

3,131,041
COUNTERCURRENT GAS WASHER WITH PROGRESSIVE CENTRIFUGAL FORCE

Otto Güpner, Offenbach (Main), Germany, assignor to Metallgesellschaft Aktiengesellschaft, Frankfurt am Main, Germany

Filed Nov. 20, 1961, Ser. No. 153,645
Claims priority, application Germany Dec. 1, 1960
7 Claims. (Cl. 55—235)

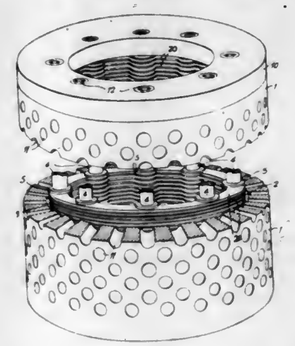


1. An apparatus for washing gases with a countercurrent flow of liquid comprising a venturi composed of a conical gas inlet portion, a neck portion and a conical gas expansion outlet portion, a liquid spray nozzle mounted coaxially with and at the outlet end of said expansion portion for directing a cone shaped spray of liquid into said neck portion and counter to the flow of gas through said neck portion to mix with and wash the gas flowing through said inlet portion, a conical body mounted within and spaced from said venturi inlet portion and having its base flush with the base of said inlet portion, vane means mounted adjacent the bases for forming a gas swirl in the space between said conical body and said inlet portion, and said gas inlet portion and said conical body having wall slopes related to each other such that the cross-sectional area between them is constant at any point for giving the gas a substantially constant axial velocity through said space with increased centrifugal force.

3,131,042
STEAM STRAINERS FOR STEAM TURBINE PLANT

Joseph Clare London, Altrincham, and John Garland, Chadderton, England, assignors to Associated Electrical Industries Limited, London, England, a British company

Filed Nov. 28, 1961, Ser. No. 155,305
Claims priority, application Great Britain Dec. 22, 1960
10 Claims. (Cl. 55—278)



1. In a steam turbine, a steam strainer comprising a coarse stage and a fine stage each constructed as substantially cylindrical bodies coaxially arranged with an annular gap therebetween and arranged to cause a generally radial flow of steam directly through said stages in series without change of flow direction, the coarse stage comprising a hollow cylindrical body with the wall perforated in the radial direction with holes of diameter of substatnially the order of magnitude of the wall thickness, such wall thickness being capable of withstanding the crushing effect due to pressure drop in the steam passing through the strainer, and the fine strainer comprising a stack of annular plates threaded over a plurality of pillars, spacer washers threaded on the pillars between adjacent plates, and rigid end plates which are secured to both ends of the pillars and hold the plates together as a rigid unit.

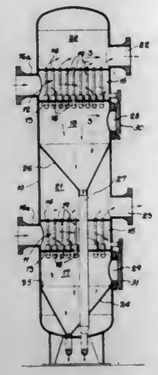
3,131,043
GAS SCRUBBER

Joseph L. Burdock, Old Greenwich, Conn., assignor to Aerotec Industries, Inc., Greenwich, Conn., a corporation of Connecticut

Filed Feb. 24, 1961, Ser. No. 91,440
4 Claims. (Cl. 55—346)

1. Apparatus for separating suspended particles from gas under pressure which comprises an upright cylindrical container, an upper separating unit in said container comprising an upper tube sheet, a lower tube sheet and a collecting hopper below said lower tube sheet, each of said tube sheets and hopper spanning the space in said container and sealed to the cylindrical wall of said container to form a plenum chamber between said tube sheets, an off-take chamber above said upper tube sheet and a collecting chamber between said lower tube sheet and said hopper, and a lower separating unit comprising

an upper tube sheet below said collecting hopper spanning the area within said container and sealed fluid-tightly to the cylindrical wall of said container to form an off-take chamber between said upper tube sheet of said lower separating unit and said hopper, and a lower tube sheet below said upper tube sheet spanning the area within said container and sealed fluid-tightly to the cylindrical wall of said container to form a plenum chamber between said tube sheets and a collecting chamber below said lower tube sheet, centrifugal tubes mounted

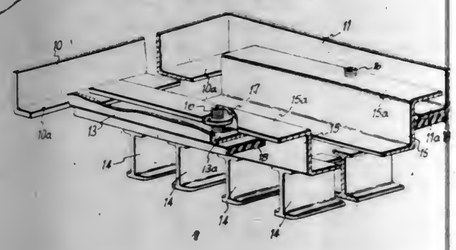


in said lower tube sheet of each separating unit to receive gas from the plenum chamber of its unit and to deliver separated particles to the collecting chamber of the respective unit, and off-take pipes mounted in said upper tube sheet of each unit and each positioned to extend from within the upper part of a centrifugal tube to said off-take chamber of its respective unit, and a drain pipe for each collecting chamber separate from the drain pipe of the collecting chamber of the other unit, said container having an inlet to each said plenum chamber and an outlet from each off-take chamber.

3,131,044
FILTER BAG AND SUSPENSION FOR DUST COLLECTING APPARATUS

William E. Springer, Springfield, Ohio, assignor to Robbins & Myers, Inc., Springfield, Ohio, a corporation of Ohio

Filed May 25, 1962, Ser. No. 197,791
3 Claims. (Cl. 55—378)

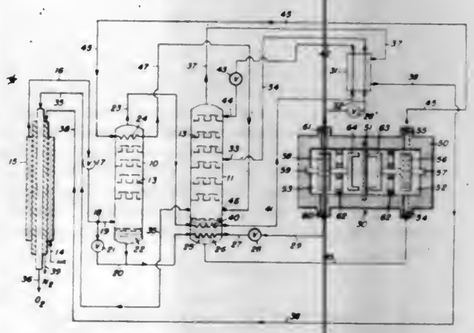


1. A filter bag suspension for supporting a plurality of relatively long, deep and narrow filter bags in parallel spaced relation in a dust collecting apparatus having a front and back, said bags being disposed in parallel side by side relation with the individual bags extending from front to back of said apparatus; comprising a rectangular frame secured in said apparatus and presenting inwardly extending horizontal flanges, front and back hanger elements, bag supporting means secured to said front and back hanger elements, said hanger elements extending respectively over the front and back horizontal flanges, means associated with said hanger elements for adjusting the height at which said supporting means is suspended, gasketing means for the sides of said supporting means, said filter bags having means for securing them in sealing engagement with said supporting means and with portions extending forwardly and rearwardly under said front and back horizontal flanges, said adjusting means, upon raising the said supporting means with respect to said front and rear flanges, acting to press the forwardly and rearwardly extending portions of said bags into sealing engagement with the undersides of said front and back flanges.

3,131,045
METHOD AND APPARATUS FOR FRACTIONATING GASEOUS MIXTURES

Clarence J. Schilling, Allentown, Pa., assignor, by mesne assignments, to Air Products and Chemicals, Inc., Trexlertown, Pa., a corporation of Delaware

Filed May 19, 1958, Ser. No. 736,374
4 Claims. (Cl. 62—30)



1. The method of separating gaseous mixtures by fractionation in a plurality of fractionating zones, comprising continuously withdrawing liquid from one said zone, passing liquefied gas from a region of relatively high pressure to said one zone at a lower pressure while causing the liquefied gas to act on a displaceable member to move the member, expanding the liquefied gas through an expansion device in series with the member, continuously utilizing kinetic energy expended in moving the member to elevate the withdrawn liquid above the point of withdrawal, and utilizing the elevated liquid to provide wash liquid in a said zone other than said one zone.

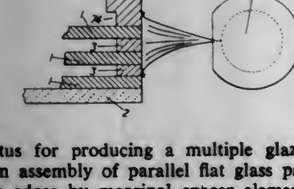
3,131,046
MULTIPLE GLAZED WINDOW UNITS

John Dennett and Robert Edward Ashcroft, St. Helens, England, assignors to Pilkington Brothers Limited, Liverpool, England, a corporation of Great Britain

Filed June 16, 1958, Ser. No. 742,264
Claims priority, application Great Britain June 18, 1957
1 Claim. (Cl. 65—58)

The method of manufacturing an integral welded multiple glazed unit composed wholly of glass, which consists in

(1) stacking flat rectangular glass panes in desired superposed parallel relation with interposed spacer elements composed of the same glass as the panes and which thus possess the same thermal characteristics as the panes, said spacer elements
  (*a*) being in the form of flat rectangular open frames extending around the entire marginal area of the panes and having their outer edges flush with the outer edges of the panes,
  (*b*) being of equal thickness and of equal width and determining the dimensions of the spaces between adjacent panes, and
  (*c*) making direct face contact throughout their width with the glass panes around the entire marginal area of the panes,
(2) preheating the assembly of glass panes and glass spacer elements to a temperature below welding temperature but above a temperature at which harmful strains can be induced in the assembly when direct welding heat is applied thereto in the manner set forth below,
(3) applying a downward pressure simultaneously and uniformly over the whole marginal area of direct face contact between the panes and the spacer element frames but confining the pressure to such area,



(4) then, while the downward pressure is continued, applying direct welding heat to the assembly until the glass panes and the interposed glass spacer element frames are both melted and interfused directly together as a homogeneous mass,
  (*a*) said direct welding heat being applied only to the outer edges of the glass panes and of the glass spacer element frames and thus decreasing progressively inward across the marginal area of direct face contact between the panes and the spacer element frames,
  (*b*) whereby the glass panes will be maintained in original parallel spaced relation by the inside edge portions of the spacer element frames while the welding of the panes to the outer edge portions of the frames takes place, and
(5) maintaining the temperature of the center part of the glass panes within the marginal area of contact with the glass spacer element frames at substantially the aforementioned preheating temperature throughout the welding operation.

3,131,047
MULTIPLE GLAZED WINDOW UNITS

John Dennett, Windle, St. Helens, and Robert Edward Ashcroft, St. Helens, England, assignors to Pilkington Brothers Limited, Liverpool, England, a limited-liability company of Great Britain

Original application June 16, 1958, Ser. No. 742,264. Divided and this application Sept. 30, 1960, Ser. No. 59,729
Claims priority, application Great Britain June 18, 1957
1 Claim. (Cl. 65—152)

Apparatus for producing a multiple glazed unit by welding an assembly of parallel flat glass panes spaced near their edges by marginal spacer elements of glass arranged to form an open marginal unit of similar coefficient of thermal expansion to that of the panes, comprising an overhead support structure, a flat support table of heat-resisting material for supporting the glass assembly, means for moving said table beneath the support structure, a profile burner mounted on said support structure and adapted to surround the glass assembly and the support table and thereby apply welding heat to the edges of an assembly on the table, actuating means mounted on the support structure and connected to the burner and operable to lower and raise the burner relative to an assembly on the table under the support structure, a continuous marginal frame of predetermined weight depending from the support structure and defining an interior opening therein, means on said support structure adapted to raise and lower the frame in a path surrounded by that of said profile burner, said marginal frame being adapted to engage the top pane of an assembly over the marginal spacer elements only leaving the central part of the pane free thereby applying a desired pressure confined to the margins only of the assembly during the welding operation, and a sheet of heat-insulating material mounted on and closing the central part of the marginal frame at an upper portion of said frame.

3,131,048
STABLE METAL CHELATE PREPARATIONS

Leslie L. Balassa, Creighton Lane, Scarborough, N.Y.

No Drawing. Filed May 2, 1960, Ser. No. 25,828
3 Claims. (Cl. 71—1)

1. A metal chelate composition adapted for application to plants and soils which is stable and will not form a precipitate upon dilution with water nor within a pH range from about 6 to about 11, comprising an aqueous solution of a chelate of a soluble inorganic salt of a metal selected from the group consisting of iron, manganese, zinc, copper, cobalt, calcium ad magnesium with a chelating acid selected from the group consisting of aliphatic hydroxy carboxylic acids containing from 2 to 6 carbon atoms and benzene carboxylic acids each acid containing a hydroxy group in alpha position to a carboxylic acid group, said solution having a pH between about 6.5 and about 7.5, the molar ratio of chelating acid to metal present being between about 1.4:1 and about 20:1, said chelate benig prepared by dissolving said metal salt directly in an aqueous solution of said chelating acid in accordance with the aforesaid molar ratio and then adjusting the pH of the solution to between about 6.5 and about 7.5 by means of an alkali hydroxide.

3,131,049
PRODUCTION OF CHROMIUM LAMELLA ON A MOLTEN SUPPORTING VEHICLE

Bruno R. Miccioli, North Tonawanda, N.Y., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Jan. 24, 1963, Ser. No. 253,756
7 Claims. (Cl. 75—.5)

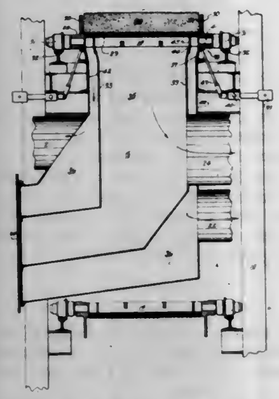
1. A process for the production of chromium lamella comprising introducing a chromium metallo-organic compound which is in the gaseous state into intimate contact with a molten supporting vehicle, and said molten supporting vehicle being characterized as possessing a boiling point higher than the decomposition temperature of said chromium metallo-organic compound and chemically inert and non-wetting to chromium metal; and maintaining said supporting vehicle at a temperature sufficient to cause thermal decomposition of said gaseous chromium metallo-organic compound; and maintaining said intimate contact between said molten supporting vehicle and said chromium metallo-organic compound for a time sufficient to cause thermal decomposition of said chromium metallo-organic compound, whereby said thermal decomposition of said chromium metallo-organic compound produces

elemental chromium metal which nucleates to form a lamella on said molten supporting vehicle; and removing said lamella.

3,131,050
SEALING SINTERING MACHINES

Julius J. Donoso, Salt Lake City, Utah, assignor to American Smelting and Refining Company, New York, N.Y., a corporation of New Jersey

Filed Jan. 11, 1962, Ser. No. 165,564
8 Claims. (Cl. 75—5)



1. The method of operating a sintering machine, said sintering machine comprising a conveyor having a grate with longitudinal side walls rising above said grate, said grate and side walls forming a receptacle to hold a charge to be sintered, said charge and grate constituting a sinter bed, said method comprising igniting said charge, passing gases through said bed to sinter the charge, as a result of which said charge shrinks away from said side walls and forms shrinkage spaces at said side walls, delivering to a first point gases passing through said shrinkage spaces, and separately delivering to a second point gases of combustion from said bed between said shrinkage spaces.

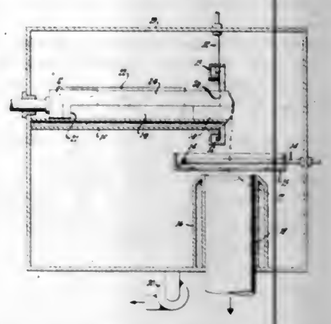
3. In a counter vacuum wind box seal for a sintering machine, a trackway, a conveyor riding on said trackway, said conveyor comprising a grate and longitudinal side walls above said grate, said grate and side walls forming a receptacle to hold a charge to be sintered, said charge and grate constituting a sinter bed, a wind box adjacent said bed, said wind box comprising an outer section and an inner section, outer sealing means, one on each side of the wind box, between said outer section and portions of said conveyor outside said grate, inner sealing means, one on each side of the wind box, between said inner section and the portions of said bed adjacent the space created by shrinkage of the charge away from said side walls, means connected to said inner section for applying a draft to the central part of the charge for delivering relatively rich gas, a second means connected to said outer section for applying a draft to the shrinkage space for delivering a relatively weak gas.

3,131,051
PROCESS AND APPARATUS FOR REFINING LOOSELY COMPACTED REFRACTORY METALS IN AN ELECTRON BEAM FURNACE

Charles W. Hanks and Charles d'A. Hunt, Orinda, Calif., assignors to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware

Filed Sept. 23, 1959, Ser. No. 841,828
2 Claims. (Cl. 75—10)

1. A high-vacuum furnace for melting rectangular blocks of compacted granular material arranged in a stack at least two layers deep, the blocks in each layer being aligned in an abutting end-to-end relationship, comprising a flat, horizontal platform, arranged to support the stack of blocks with one end of said stack protruding over one end of said platform, at least one thermionic electron-emitting cathode, means for accelerating and directing electrons from said cathode onto the protruding end of said stack acting as an anode to heat and melt the same, a crucible arranged under said projecting end to receive the molten material dripping therefrom, means

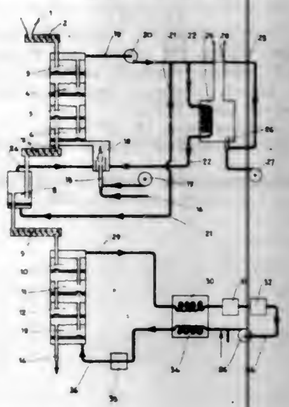


for moving said stack lengthwise along said platform and including an externally operable pushing rod having an end thereof contacting the stack which has a stepped surface for maintaining individual blocks in adjacent layers of said stack in overlapping relationship to feed the protruding end of the stack into the electron bombardment zone as said end melts away, a vacuum container enclosing said platform, stack, cathode and crucible, and means for continually evacuating said container to a high vacuum.

3,131,052
METHOD AND APPARATUS FOR THE DIRECT REDUCTION OF IRON ORE INTO PULVERULENT IRON BY MEANS OF A GASEOUS REDUCING AGENT

Lucien Péras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France

Filed Apr. 7, 1961, Ser. No. 101,405
Claims priority, application France Apr. 13, 1960
2 Claims. (Cl. 75—26)



1. A method of reducing iron ore to metallic iron powder which comprises:

passing a fluidizing and reducing gas and finely divided iron ore through a plurality of fluidized beds arranged in cascade, said gas and said ore being passed in countercurrent relationship to one another, said fluidizing and reducing gas consisting essentially of CO, CO_2, H_2, H_2O and N_2;

maintaining said fluidized beds at temperatures sufficient to effect reduction of the ore to FeO and to permit the FeO to be discharged as a powder at a temperature between about 900° C. and 1050° C.;

cooling the resulting FeO to about 700° C. by direct heat exchange with a portion of the gas leaving the plurality of fluidized beds after it has completely traversed said beds;

and thereafter subjecting the cooled FeO to reduction to metallic iron powder in a second series of fluidized beds in which the FeO is maintained in contact with hydrogen as the fluidizing gas, at a temperature of about 700° C. whereby a carbon-free iron powder is obtained as the reduction product.

3,131,053
PRODUCTION OF METALLIC IRON AND SILICATE GLASS

John J. Grebe and John F. Miller, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

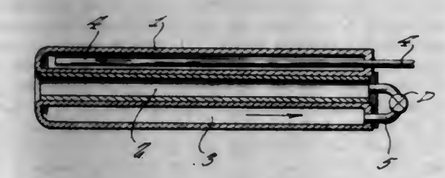
No Drawing. Filed May 22, 1961, Ser. No. 120,832
16 Claims. (Cl. 75—30)

1. The method of producing low sulfur, heat-treatable metallic iron and a vitreous homogeneous glass-like slag of fused oxides of an alkali metal and of silicon, said slag being substantially free from iron oxide, which consists of reacting at least at a temperature at which said iron and said slag are molten and admixture of an iron containing material selected from the group consisting of iron ores, siliceous and ferriferous cherts and shale, coal ash, fly ash and furnace slag having at least 3½ percent by weight of iron in a reducible form and at least 2 percent by weight of silicon dioxide, a carbonaceous material containing fixed carbon, and an alkali metal compound selected from the class consisting of alkali metal oxides, hydroxides, and carbonates, the mole ratio of the fixed carbon to iron being sufficient to reduce substantially all of the iron in the iron containing material and the mole ratio of the alkali metal compound, expressed as sodium oxide, to silicon dioxide being from about 0.25 to about 4, continuing the reaction until the iron containing material is substantially all reduced to a layer of molten metallic iron and a layer of molten glass-like slag and thereafter effecting a separation of said molten iron layer from the glass-like slag.

3,131,054
GAS NOZZLES AND METHODS OF OPERATING THE SAME

Erich Hollweg, Schmiden, Stuttgart, Germany, assignor to Siegerlander Kupferwerke G.m.b.H., Weidenau (Sieg), Germany

Continuation of application Ser. No. 488,219, Feb. 15, 1955. This application Dec. 21, 1960, Ser. No. 77,353
Claims priority, application Germany Feb. 20, 1954
1 Claim. (Cl. 75—60)

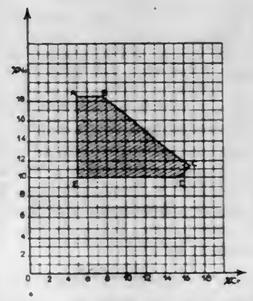


The method of operating a nozzle having a central blast pipe for introducing oxygen gas containing 98 to 99.5% O_2 under a pressure of about 5–10 atmospheres into molten metal to be refined and a cooling chamber surrounding the blast pipe, which comprises storing the oxygen gas in containers behind the plant which produces it, conducting the oxygen gas from said storing containers into said cooling chamber under a pressure of about 25 atmospheres and at a rate necessary for the refining process, expanding the oxygen gas in said cooling chamber to the operating pressure of said nozzle in said refining process, cooling said nozzle by the refrigerating effect thus obtained, introducing the expanded oxygen gas into said blast pipe and blowing it into the molten metal to be refined.

3,131,055
ALLOY BASED ON IRON, CONTAINING NICKEL, CHROMIUM AND ALUMINIUM, AND PROCESS FOR OBTAINING SAME

Isaac Behar, Nevers, France, assignor to Societe Metallurgique d'Imphy, Paris, France, a company of France

Filed Mar. 6, 1961, Ser. No. 93,521
Claims priority, application France Mar. 11, 1960
7 Claims. (Cl. 75—124)



1. An alloy consisting essentially of iron, nickel, chromium and aluminium, the proportion by weight in the alloy of nickel and chromium corresponding to the area ABCDE in the FIG. 3 of the accompanying drawings, the aluminium content by weight being of 1 to 6% and the maximum carbon content being 0.15% including as possible components Si, Ti, Mo and Mn in which the sum Cr+1.5 Si+2.5 Al+2.5 Ti+0.8 Mo—Ni—12 C—0.2 Mn is at the most equal to 10, the balance being iron, said alloy being free of δ ferrite and susceptible to annealing at 750° C. to 1250° C. and quenching through phase transformation to a substantially aluminium-soluble martensite-like structure and thereafter to precipitation hardening at from 200° C. to 700° C. by an aluminium rich compound, the component Ni+30 C+0.5 Mn being substitutable for Ni and the component Cr+Mo being substitutable for Cr, Mn then having a maximum value of 4% and Mo having a maximum value of 4.5%.

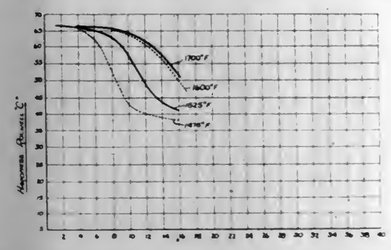
3,131,056
ROLLING CONTACT BEARING STEELS AND PROCESS FOR HEAT TREATING THE SAME

Damian V. Gullotti, Bayonne, John L. Hurley, Bloomfield, and Herschel V. Beasley, Short Hills, N.J., assignors to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware

Filed Apr. 20, 1962, Ser. No. 189,133
8 Claims. (Cl. 75—124)

7. A rolling contact bearing steel having high hardenability, a surface hardness of at least Rc62, the ability to oil quench to such hardness, good resistance to softening and consisting of 0.6% to about 0.8% carbon, 0.3% to 0.8% manganese, silicon in an amount up to 0.5%, 0.5% to 1.5% nickel, 0.1% to 0.45% chromium, 0.05% to

0.35% molybdenum, aluminum up to 0.5% and the balance essentially iron, said alloy steel being further characterized by a spheroidized carbide microstructure when

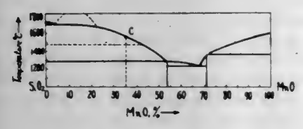


heat treated at a temperature above its Ae_1 temperature and below its Acm temperature for a period of at least about one hour and cooling the alloy steel to a temperature at least as low as 1250° F. at a rate of from about 10° F. to about 25° F. per hour.

3,131,057
ALLOY STEEL FORGING DIE
Ronald H. Buck, Jr., Warren, and Douglas G. McCullough, Rochester, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
No Drawing. Filed Oct. 28, 1960, Ser. No. 65,577
2 Claims. (Cl. 75—126)

1. A forging die which is characterized by the property of being hardened to a depth of at least three inches when austenitized at a temperature of 1900° F. for six hours, said die being formed of a steel consisting essentially of about 0.0003% to 0.004% boron, 8% to 12% tungsten, 2% to 5% chromium, 0.25% to 0.4% carbon, 0.1% to 0.6% manganese, 0.1% to 1% silicon, and the balance substantially all iron.

3,131,058
METHOD OF MANUFACTURING FINE GRAINED AND CLEAN STEELS
Tohei Ototani, Kawauchi, Sendai City, Japan, assignor to The Research Institute for Iron, Steel and Other Metals of The Tohoku University, Sendai City, Japan
Filed Mar. 5, 1962, Ser. No. 177,425
2 Claims. (Cl. 75—129)



Binary diagram of MnO-SiO_2

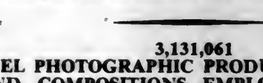
1. A process for producing fine grained and clean steels from steels having the composition of carbon steels with less than 0.85% carbon and having upon solidification eutectoid and hypoeutectoid structures and alloy steels containing up to 2% carbon, the steps which comprise adding to a melt of the steels which contain after preliminary deoxidation with manganese and silicon 0.001–0.3% of the elements selected from the group consisting of Ti, V, Zr, and Nb together with N in an amount of 0.001 to 0.3% and then adding an alloy consisting essentially of 22%–80% Mn, 0.2 to 35% Ca, 0.1 to 60% Al, less than 10% Fe and the balance substantially Si, wherein Si is within the range of 2 to ¼ of Mn, said alloy being in an amount sufficient to leave 0.001–0.05 Ca in the steel, thereby forming a nitride of said group and producing said clean and fine grained steel.

3,131,059
CHROMIUM-TITANIUM BASE ALLOYS RESISTANT TO HIGH TEMPERATURES
William T. Kaarlela, Fort Worth, Tex., assignor to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware
No Drawing. Filed Sept. 13, 1961, Ser. No. 137,723
17 Claims. (Cl. 75—134)

1. An alloy characterized by its ability to withstand high temperatures consisting of by weight from about 35 to about 65% chromium, from about 20 to about 64% titanium, and from about 6 to about 15% gold.

3,131,060
ELECTROPHOTOGRAPHIC MATERIAL
Paul Maria Cassiers, Mortsel-Antwerp, and René Maurice Hart, Wilrijk-Antwerp, Belgium, assignors to Gevaert Photo Producten N.V. Mortsel, Belgium, a Belgian company
No Drawing. Filed Feb. 26, 1960, Ser. No. 11,130
Claims priority, application Great Britain Feb. 26, 1959
2 Claims. (Cl. 96—1)

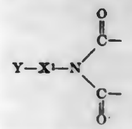
1. An electrophotographic copying process which comprises exposing an electrostatically charged photoconductive insulating layer comprising a solid organic polymer of the monomer



wherein A is a divalent radical selected from the group consisting of an aromatic nucleus and a heterocyclic nucleus, and B is a monovalent radical selected from the group consisting of an aromatic nucleus and a heterocyclic nucleus, R represents a member selected from the group consisting of a hydrogen atom and a lower alkyl radical, and n and m each represents a positive integer from 1 to 2, to a light image whereby the light-struck area is discharged, and developing said image of electrostatic charges with an electroscopic material.

3,131,061
NOVEL PHOTOGRAPHIC PRODUCTS, PROCESSES AND COMPOSITIONS EMPLOYING ANTHRAQUINONE DYE DEVELOPERS
Myron S. Simon, Newton Center, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
No Drawing. Filed Oct. 23, 1962, Ser. No. 232,584
19 Claims. (Cl. 96—29)

8. In a process of forming a photographic image in color, the steps which comprise developing an exposed silver halide emulsion in the presence of a compound selected from the group consisting of amino and hydroxy-substituted anthraquinone dyes having a substituent of the formula:

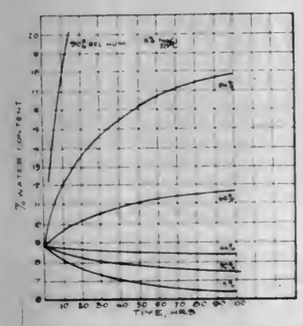


wherein: Y is a dihydroxyphenyl silver halide developing radical; and X^1 is a lower alkylene radical; said substituent being bonded directly to the 2,3 carbon atoms of said anthraquinone nucleus; thereby effecting oxidation of said dye developer in exposed areas and providing in said emulsion a predetermined distribution of unoxidized dye developer; and transferring at least part of said distribution of said unoxidized dye developer by imbibition from said emulsion to an image-receiving element in superposed relationship with said emulsion to impart to said image-receiving element a reversed, positive dye image of the developed image.

3,131,062
TRIPHENYL LEUCOCYANIDE SENSITIVE COMPOSITIONS AND ELEMENTS
Meyer S. Agruss, Chicago, Ill., assignor to Mieble-Goss-Dexter, Incorporated, Chicago, Ill., a corporation of Delaware
No Drawing. Filed Jan. 27, 1960, Ser. No. 4,875
15 Claims. (Cl. 96—85)

14. Photosensitive sheet material comprising paper sheet stock carrying a transparent organic film-forming coating containing a leucocyanide of a triphenylmethane dye and an activator which renders said leucocyanide sensitive to ultraviolet light, said activator being a titanium ester of a $N_1N_1N^1N^1$-tetrakis (hydroxyalkyl) alkylene polyamine.

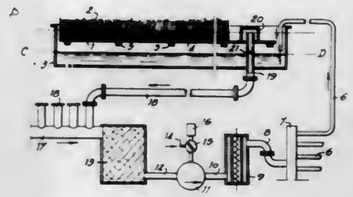
3,131,063
METHOD OF PRODUCING A CRISPY EXPANDED FORMED FOODSTUFF
Dirk R. d'Arnaud Gerkens, Breda, Netherlands, assignor to Nibbit Products Association Ltd., Zurich, Switzerland, a corporation of Switzerland
Filed Aug. 17, 1960, Ser. No. 50,271
9 Claims. (Cl. 99—1)



1. The method of producing a crispy expanded formed foodstuff from starch containing flour comprising mixing potato starch flour, having about 30% free starch content with water so that the water content is between about 25% and 40%, extruding the so-produced mixture under a pressure of at least 6 atmospheres to form coherent bands, drying the bands in a controlled relative humidity of between 15% and 45% to a water content of less than 20% on the interior thereof and less than 10% at the surface, breaking the dried band into piecelets, and while maintaining the water content at less than 20% on the interior and less than 10% at the surface, frying the piecelets in hot oil to produce a crispy expanded foodstuff having a weight-to-volume ratio of below 0.20 and a fat content of less than 20%.

2. The method of producing a crispy expanded formed foodstuff from starch containing flour comprising mixing an edible starch containing flour, having about 30% free starch content with water so that the water content is between about 25% and 40%, extruding the so-produced mixture under a pressure of at least 6 atmospheres to form coherent bands, drying the bands in a controlled relative humidity of between 15% and 45% to a water content between 7% and 20% to produce a horny outer layer having a water content not higher than 85% of the overall average moisture content of the dried band with the center having a higher percentage moisture content than the overall average moisture content which is below 20% and while maintaining the said relative water content frying the piecelets in hot oil to produce a crispy expanded foodstuff having a weight-to-volume ratio of below 0.20 and a fat content of less than 20%.

3,131,064
VEGETAL COMPOSITION, METHOD AND APPARATUS FOR ITS PRODUCTION
Armand Malchair, Herstal, Belgium, assignor to Bureau d'Etudes Armand Malchair, Societe Anonyme, Liege, Belgium
Filed Apr. 4, 1961, Ser. No. 100,548
Claims priority, application Belgium Apr. 4, 1960
4 Claims. (Cl. 99—2)



1. A method for the production of a vegetal composition which comprises providing a plain solid non-perforated supporting surface, spreading a layer of dried grass on said supporting surface to establish a support bed having a pervious structure, spreading grass seed on said support bed, periodically submerging said support bed and grass seed in a solution consisting of water and nutrient substances to promote growth of the grass seed and cause the roots thereof to become embedded in said support bed, and circulating a heated fluid under said supporting surface during periods when said support bed and said grass seed are not submerged in said solution to control the temperature of said support bed and said grass roots, said fluid being the same solution used for submerging the support bed and grass seed, the fluid being admixed with air to oxygenate the nutrient substances therein.

3,131,065
TEA BAG WITH STRIP OF METALLIC FOIL HEAT SEALED TO ONE EDGE THEREOF
Jacob Salomon, 21 Kugel Blvd., Holon, Israel
Filed Feb. 13, 1961, Ser. No. 88,933
Claims priority, application Great Britain Mar. 1, 1960
2 Claims. (Cl. 99—77.1)

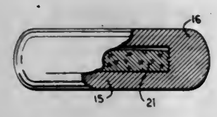


1. A tea bag comprising a substantially flat closed water permeable container, tea leaves contained in said container and a tab comprising a planar strip of metallic foil having an end face and superimposed on said container and having said end face heat sealed to a substantially coplanar edge of said water permeable container, said strip having a thickness not greater than 40 microns and a length substantially the same as the length of said water permeable container.

3,131,066
METHOD OF PREPARING A FILLED MEAT PRODUCT
Albert D. Mitzelfelt, 1501 W. Taylor St., Kokomo, Ind.
Filed Jan. 13, 1961, Ser. No. 82,542
3 Claims. (Cl. 99—108)

1. The method of forming a food product which comprises molding a portion of raw ground meat into a base with a floor and a surrounding wall defining a cavity therebetween; placing a predetermined quantity of relish in said cavity; molding a portion of ground, raw meat into the form of a cap having a cavity in the underside

thereof; and placing it across said wall and said cavity with the underside of the peripheral portion of the cap in registry and contact with the top side of said wall to cover the relish in said base cavity; and heating to a cooking temperature the resultant structure bonding them together by promoting an interexchange of juices and fats between the wall and the cap, effecting a resultant integral body enclosing said relish.



3. A hollow, cooked ground meat product comprising a base having a floor and a surrounding upturned wall therearound defining a cavity in the base; a ground meat cap over the cavity and resting on said wall; and said cap and wall being integrally joined together by interchanged fats and juices of the meat.

3,131,067
METHOD OF WASHING EGGS

John A. Garibaldi, El Cerrito, and Henry G. Bayne, Berkeley, Calif., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed Oct. 17, 1961, Ser. No. 145,784
4 Claims. (Cl. 99—113)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A process for effectively utilizing iron-containing water for washing eggs which comprises (1) removing iron from said iron-containing water while retaining the water in the liquid phase and (2) washing eggs with the so-treated water, whereby to reduce spoilage of the washed eggs.

3,131,068
WATER-SOLUBLE COATED EDIBLE ORGANIC ACIDS

Martin Greif, Bronx, and Joseph Francis Weidenheimer, New City, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed July 24, 1961, Ser. No. 125,945
1 Claim. (Cl. 99—139)

A free-flowing, powdered, edible organic acid selected from the group consisting of citric, ascorbic, adipic and fumaric, having a particle size coarser than 100 U.S. Standard mesh and having a plurality of thin coats of hydroxypropyl methylcellulose, said hydroxypropyl methylcellulose containing a degree of substitution of not less than 1.08 and not more than 1.82 as methoxyl group and not less than 0.07 and not more than 0.30 as hydroxypropoxyl group, the plurality of thin coats of hydroxypropyl methylcellulose being sufficient in number so that the total hydroxypropyl methylcellulose coating is at least 0.5% by weight of the edible organic acid.

3,131,069
PACKAGE OF MATERIALS WHICH ARE SUBJECT TO UNDESIRABLE DETERIORATION

Robert L. Goller, Forrest D. Hamm, and Paul E. Grindrod, Madison, Wis., assignors to Oscar Mayer & Company, Inc., Chicago, Ill., a corporation of Illinois

Filed Dec. 28, 1960, Ser. No. 79,069
11 Claims. (Cl. 99—174)

1. A package comprising a product enclosed by packaging material defining a seal adjacent said product and through which access can be gained to said product, said seal being formed from at least two layers of packaging material adhered to one another through a compatible plasticizer interface, one of said layers being polyvinylidene chloride film which is adhered to the other layer of packaging material through said interface while in an amorphous supercooled state and which exhibits at least



substantially random crystal arrangement throughout the area thereof defining said seal.

3,131,070
PROCESS FOR PACKAGING CONCENTRATED TOMATOES

Vasco Martins, Brussels, Belgium, assignor to Nogueira & Cie, societe congolaise de personnes a responsabilite limitee, Bruxelles, (Belgium), a company

No Drawing. Filed Sept. 27, 1961, Ser. No. 141,028
Claims priority, application Luxembourg Sept. 29, 1960
1 Claim. (Cl. 99—186)

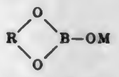
Process for packaging concentrated tomatoes for preservation; comprising the steps of removing a gas from the product by placing the latter in a vacuum of 730 to 740 mm. of mercury, placing the product in this state and free from air into a container formed from a material which is impermeable to gases and water vapour, sealing said container, and sterilizing the package and its contents by heating at about 90° C. for a period of time sufficient to destroy bacteria in the tomatoes.

3,131,071
FIRE RETARDANT ORGANIC COATINGS

Don L. Hunter, Long Beach, Kiyoshi Kitasaki, Garden Grove, and George W. Willcockson, Anaheim, Calif., assignors to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada

No Drawing. Filed Jan. 23, 1962, Ser. No. 168,280
5 Claims. (Cl. 106—15)

1. A composition of matter consisting essentially of an organic composition useful as a coating having an oil and organic solvent vehicle and from about 0.5 to about 10% by weight of said coating of a fire retardant, said fire retardant selected from the group consisting of the alkali metal salts of 1,2- and 1,3-glycol monoborates having the formula:



where R is an alkylene radical of 2 to 3 carbon atoms in length and having a total of from 2 to 10 carbon atoms, and M is an alkali metal.

3,131,072
NOVEL SILICA AEROGELS AND PROCESSES FOR PREPARING SAME

Thomas A. Taulli, Florissant, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Nov. 10, 1960, Ser. No. 68,354
19 Claims. (Cl. 106—306)

1. An amorphous metal-containing silica aerogel consisting essentially of a silica polymer having siloxy groups and containing an alkaline earth metal selected from the group consisting of calcium and magnesium chemically bound to a portion of said siloxy groups in said aerogel, said aerogel being further characterized in having an SiO_2 to M ratio from about 5:1 to about 66:1 wherein M is said alkaline earth metal.

3,131,073
CERAMIC MATERIAL AND METHOD OF PREPARATION

Roger A. Long, San Diego, Calif., assignor to Telecomputing Corporation, a corporation of California

No Drawing. Filed Oct. 10, 1960, Ser. No. 61,353
26 Claims. (Cl. 106—39)

1. A sintered article comprising a filler and a binder, said binder consisting essentially of a eutectic of a refractory oxide and a metal phyrophosphate capable of forming a eutectic mixture with said refractory oxide, said filler consisting essentially of finely divided refractory oxide, said binder being present in an amount sufficient to effectively bond said filler.

3,131,074
SOIL STABILIZATION

Charles E. Thompson, Jr., Martinsburg, W. Va., assignor to Products Development Company, Jefferson County, W. Va., a corporation of West Virginia

No Drawing. Filed June 19, 1961, Ser. No. 117,774
20 Claims. (Cl. 106—63)

6. A method for the manufacture of bricks and blocks having low thermal conductivity and high moisture resistance and strength which comprises the steps of admixing with a soil composition comprising not more than 50% by weight of clay and at least 50% by weight of sand, from about 0.5 to 2.0% by dry weight of the soil of a protein selected from the group consisting of glutelins, prolamines, casein, gelatin, glue, gluten and soybean protein and mixtures thereof, from about 2.0 to 5.0% by dry weight of the soil of an alkaline material selected from the group consisting of an alkaline earth metal hydroxide, an alkaline earth metal oxide, Portland cement and mixtures thereof, and from about 0.5 to 3% by dry weight of the soil of ferric oxide; adjusting the moisture content of said admixture to from about optimum to about 10% in excess of optimum; subsequently molding the mixture into a brick; and removing excess moisture from the brick.

3,131,075
LOW DENSITY CEMENTING COMPOSITION

Fred A. Brooks, Jr., Houston, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware

No Drawing. Filed Apr. 25, 1960, Ser. No. 24,224
10 Claims. (Cl. 106—90)

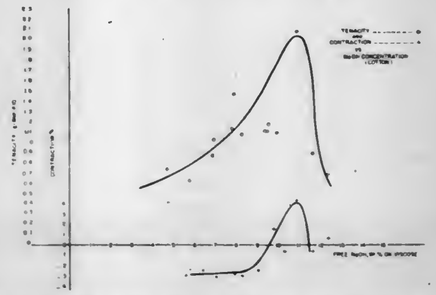
1. A low density, high early strength cementing composition consisting essentially of an oil-in-water emulsion, colloidal amorphous silica having a particle size within the range from about 0.005 to about 0.025 micron and hydraulic cement, said colloidal amorphous silica being present in an amount from about 1 to about 3 grams per 100 grams of said cement.

3,131,076
PROCESS FOR MAKING CELLULOSE SPONGE

William C. Richardson, Mobile, and Richard J. Bohnhoff, Loxley, Ala., assignors, by mesne assignments, to Courtaulds, Limited, London, England, a British company

Filed May 4, 1961, Ser. No. 107,838
1 Claim. (Cl. 106—122)

In the manufacture of cellulose sponge wherein viscose, cellulose reinforcing fibers selected from the group consisting of cotton and ramie, and a pore-forming substance are combined to form a sponge mix, which is thereafter coagulated and regenerated to form a sponge structure, the improvement which comprises adding sodium hydroxide to said mix in an amount to bring the free sodium hydroxide concentration in said mix to between about 9 and about 12% by weight and to within about 1% of that necessary to cause maximum swelling of the fiber, said additive also being present in a proportion such as to increase the tenacity of the sponge structure to at

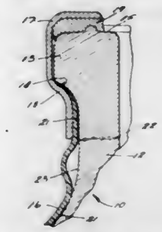


least 30% more than that of a sponge made from said mix without said addition of sodium hydroxide.

3,131,077
METHOD OF PRODUCING AEROSOL-TYPE PACKAGE

Herbert A. Barnby and Ralph H. Whitney, Toledo, Ohio, assignors to Owens-Illinois Glass Company, a corporation of Ohio

Original application Aug. 24, 1959, Ser. No. 835,545, now Patent No. 3,014,607, dated Dec. 26, 1961. Divided and this application May 22, 1961, Ser. No. 111,631
4 Claims. (Cl. 117—5.5)



1. In the method of affixing an elastic protective plastic casing to the exterior surface of a frangible aerosol-type container and providing means permitting localized outward expansion of the casing in a neck zone of potential fracture incident to leakage of pressurized contents at the fracture point, the steps consisting in applying to the exterior surface in said zone a material for neutralizing the effectiveness of a bonding agent which is to be applied substantially as an overall coating for the container, applying a film of a bonding agent to substantially the entire exterior surface of the container and over the neutralizing material and applying a protective film of elastic resinous material to the entire surface of said bonding agent.

3,131,078
RANDOM STORAGE

Harrison W. Fuller, Needham Heights, Mass., and Murray E. Hale, Atkinson, N.H., assignors to Laboratory for Electronics, Inc., Boston, Mass., a corporation of Delaware

Original application May 21, 1958, Ser. No. 736,888. Divided and this application June 7, 1962, Ser. No. 200,871
5 Claims. (Cl. 117—8)

1. The method of manufacturing data processing apparatus comprising the steps of vacuum-depositing a first thin film of high coercive force ferromagnetic material on a diffraction grating replica supported by a substrate,

applying a first magnetic field during the deposition of said first ferromagnetic film to provide the latter with an easy direction of magnetization parallel to a first axis, abrading the high spots deposited to produce true discontinuities in said first ferromagnetic film, vacuum-depositing an insulation film on top of said first ferro-magnetic film, vacuum-depositing a second thin film of low coercive force ferromagnetic material on top of said insulation film, and applying a second magnetic field during the deposition of said second ferromagnetic film to provide an easy direction of magnetization of said second ferromagnetic film parallel to a second axis.

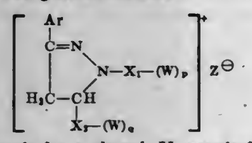
3,131,079

BRIGHTENING OF FIBER MATERIAL BY COATING WITH 1,3-DIARYL- AND 1,3,5-TRIARYL PYRAZOLINE DERIVATIVES

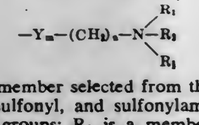
Annemarie Wagner and Siegfried Petersen, both of Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed July 13, 1961, Ser. No. 123,625
Claims priority, application Germany Aug. 12, 1960
6 Claims. (Cl. 117—33.5)

1. A process for improving fibers which comprises applying thereto an aqueous solution of a fluorescent compound of the general formula



wherein X_1 stands for a phenyl; X_2 stands for a member selected from the group consisting of phenyl and hydrogen; W is a substituent of the phenyl ring having the formula



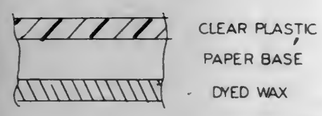
in which Y is a member selected from the group consisting of oxygen, sulfonyl, and sulfonylamido; R_1 and R_2 are lower alkyl groups; R_3 is a member selected from the group consisting of lower alkyl, lower alkoxy alkyl, and benzyl; Ar is a member selected from the group consisting of phenyl, phenyl substituted by halogen and phenyl substituted by lower alkyl; and Z is an anion group; wherein *p*, *q* and *m* are whole numbers within the range of 0–1 the sum of *p* plus *q* being 1–2; and *n* is a whole number within the range of 0–3.

3,131,080

THERMOGRAPHIC TRANSFER SHEET COMPRISING SELECTIVE RADIATION FILTERING MEANS

Robert B. Russell, 248 Park St., Newton, Mass.

Filed Nov. 9, 1960, Ser. No. 68,286
2 Claims. (Cl. 117—36.3)



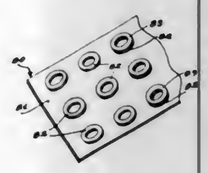
1. A transfer sheet for thermographic copying in which the transfer sheet is exposed to the direct radiation of a source of radiation, said sheet comprising: a relatively transparent paper body for said sheet; means in the body of said sheet for filtering out of said radiation the portions thereof which do not readily penetrate paper; means including a transparent coating on said body for maintaining the increase in temperature in said transfer sheet due to absorption of said filtered radiation relatively uniformly through said sheet; and a relatively transparent dyed wax coating on the opposite side of said sheet from said transparent coating.

3,131,081

METHOD FOR MANUFACTURING GASKETED CLOSURE CAP BLANK FOR GLASS CONTAINERS

Charles W. Husum, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio

Original application Apr. 15, 1959, Ser. No. 806,626, now Patent No. 3,061,130, dated Oct. 30, 1962. Divided and this application Nov. 13, 1961, Ser. No. 151,940
8 Claims. (Cl. 117—45)



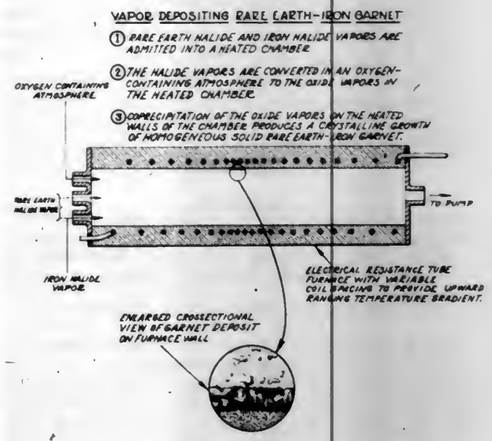
3. The method of producing a gasketed closure blank containing a plurality of stratified gaskets bonded thereto which comprises the steps of applying a thin protective coating on the tinned surface of a metal sheet, laying down an annular deposit of a vinyl plastisol composition to give, when cured, a relatively hard gasket layer, curing said annular deposit, laying a second deposit of a vinyl plastisol composition on said first deposit to give, when cured, a gasket softer than said first gasket, and curing said second deposit.

3,131,082

RARE EARTH-IRON GARNET PREPARATION

John R. Gambino, Scotia, N.Y., assignor to General Electric Company, a corporation of New York

Filed Feb. 1, 1962, Ser. No. 170,484
11 Claims. (Cl. 117—49)



1. A process for preparing a homogeneous solid phase of rare earth-iron garnet which comprises converting rare earth halide and iron halide vapors in an oxygen-containing atmosphere to the oxide vapors, and coprecipitating the oxide vapors onto a substrate at elevated temperatures extending from approximately 800° C. up to the sintering temperature of the coprecipitate.

3,131,083

METHOD OF IMPREGNATING CARD STOCK

Yung Chien Tang, Whitestone, N.Y., and Yao-Nan Sheng, Nutley, N.J., assignors to Standard Packaging Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Mar. 25, 1960, Ser. No. 17,488
6 Claims. (Cl. 117—63)

1. A method of impregnating card stock which comprises immersing the stock in an organic solvent solution of epoxy resin and catalyst, withdrawing the stock from the solution, heating the stock to remove solvent and to cure the resin, the moisture content of the stock after curing being less than 4%, and immersing the impregnated stock in an aqueous solution containing a wetting agent to adjust the moisture content of said stock to the approximate range of 4 to 7%, the temperature of the aqueous solution during the immersion step being substantially the same as the temperature of the cured stock at the time it enters the aqueous solution.

3,131,084

SPRAY COATING AN AIR FILTER WITH NONYL PHENOXY POLYOXYETHYLENE ETHANOL

Robert J. Boylan, Jeffersonville, Ind., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware

No Drawing. Filed Jan. 19, 1961, Ser. No. 83,643
3 Claims. (Cl. 117—104)

3. In the conditioning of filter media the step of spray coating the media surfaces with a dispersion consisting of nonyl phenoxy polyoxyethylene ethanol having from 9 to 10 moles of ethylene oxide per mole thereof.

3,131,085

COLORING PROCESS

Henry J. Wells, Pittsburgh, Pa., and James H. McNamara, Rome, N.Y., assignors to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed Jan. 18, 1962, Ser. No. 167,157
7 Claims. (Cl. 117—127)

1. A process for coloring dyeable substrates which comprises

(*a*) applying to the substrate an organic solvent solution of an organic base derivative of at least one pigment highly insoluble in water and organic solvents, devoid of an NH group in which the hydrogen is weakly acidic, and selected from the group consisting of quinones and extended quinones, which solution is formed by treating said pigment with a quaternary ammonium hydroxide in the presence of a solvent selected from the group consisting of stable, donor, non-acidic, polar organic solvents which contain an atom selected from the group consisting of oxygen, nitrogen and sulfur, and

(*b*) subjecting the treated substrate to water.

3,131,086

THERMOSETTING AMINO-PHENOPLAST RESINS

Arthur S. Nyquist, Darien, and Arnold D. Myers, Wallingford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Jan. 4, 1962, Ser. No. 164,415
13 Claims. (Cl. 117—138.8)

1. A heat- and pressure-consolidated article prepared from a thermosetting resinous composition selected from the group consisting of aminotriazine-aldehyde resinous compositions and urea-aldehyde resinous compositions and coated with a substantially insoluble and infusible adherent, stain-resistant coating comprising a thermoset resinous reaction product of (A) an aminotriazine containing at least two amidogen groups, each having at least one aldehyde-reactable hydrogen atom attached to the amidogen nitrogen atom, (B) an aldehyde, and (C) an aldehyde-reactable para-substituted monohydric phenol represented by the general formula:



wherein R is a member selected from the group consisting of alkyl groups having from 1 to 6 carbon atoms, inclusive, aryl groups and aralkyl groups, the mol ratio of said (A) to said (C) being from about 3:1 to about 1:3, respectively, and the mol ratio of said (B) to the total mols of said (A) and said (C) being from about 1:1 to about 3:1, respectively.

3,131,087

PROCESS FOR THE TREATMENT OF FILAMENTS, FIBRES, FABRICS AND CARPETS

Max Paquet, Rte. de Nice, Cuers, France

No Drawing. Filed July 12, 1961, Ser. No. 123,445
Claims priority, application France July 13, 1960
18 Claims. (Cl. 117—139.5)

1. A process for the treatment of fibrous material, comprising the steps of applying to fibrous material a solution of an alkyl titanate of the formula $Ti(OR)_4$ wherein "R" is an alkyl radical, in an organic solvent therefor and having distributed therethrough a substance selected from the group consisting of colloidal silica and esters of silicic acid; and drying the thus treated fibrous material at a temperature between 60° C. and 160° C., whereby the resistance to wear and dry soiling of the thus-treated fibrous material is improved.

3,131,088

PROCESS OF PRODUCING SURFACE COATINGS

Werner Festag, Essen, Germany, assignor to Th. A.-G. Goldschmidt, Essen, Germany

No Drawing. Filed Oct. 23, 1961, Ser. No. 147,073
Claims priority, application Germany Oct. 26, 1960
1 Claim. (Cl. 117—161)

A process of producing laminar products suitable as surface coatings, which comprises emulsifying in water monomeric diallyl phthalate, partially polymerizing a portion of the monomeric diallyl phthalate in the presence of about 1–30% by weight of carbon tetrachloride calculated on the amount of diallylphthalate and at a temperature of about between 60–120° C. to obtain an aqueous dispersion of monomeric diallyl phthalate and partially polymerized diallyl phthalate, interrupting the polymerization when a refraction index of not more than about n_{25}^{D} 1.55 has been reached, applying said aqueous dispersion to a carrier web and removing the water from the web by heat drying.

3,131,089

CARBON ARTICLE COATED WITH BORON CARBIDE AND BORON NITRIDE, AND PROCESS OF MAKING THE SAME

Carl A. Grulke, Berea, and Willie H. Watts, Fostoria, Ohio, assignors to Union Carbide Corporation, a corporation of New York

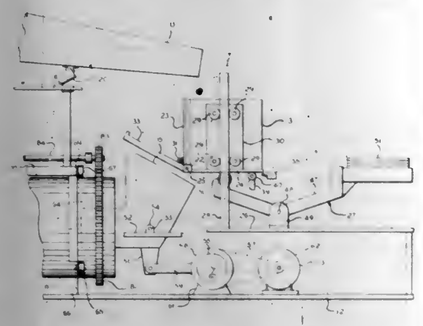
No Drawing. Filed Jan. 25, 1961, Ser. No. 84,764
10 Claims. (Cl. 117—215)

1. A carbon article having a continuous outer coating of boron nitride and an intermediate continuous region of boron carbide between said carbon and boron nitride.

3,131,090
TUMBLING DRUM FOR COATING NAILS HAVING A WEIGHING FEEDER

George W. Bell, Sterling, Ill., assignor to Northwestern Steel & Wire Company, Sterling, Ill., a corporation of Illinois

Filed June 11, 1958, Ser. No. 741,406
4 Claims. (Cl. 118—9)

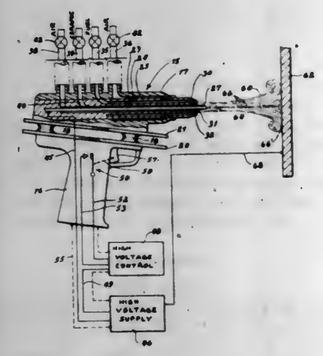


3. In a nail coating apparatus, a rotatable tumbling drum, an oscillatably movable hopper having a discharge spout extending within said tumbling drum, a weigh box for weighing and supplying a predetermined quantity of nails to said hopper, a pump in material discharge relation with said hopper for supplying a uniform quantity of coating compound to said hopper, means for oscillatably driving said hopper to progress the nails and coating compound therein to said tumbling drum, and means for rotatably driving said tumbling drum to tumble and coat the nails therein and to progress the nails for packaging.

3,131,091
SPRAY GUN HAVING MEANS TO CONTROL HEAT CONCENTRATION IN METAL SUBSTRATE

Harry S. Jones, 95 Washington St., East Orange, N.J.

Filed Mar. 8, 1960, Ser. No. 13,613
6 Claims. (Cl. 118—47)

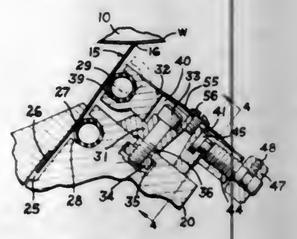


1. Apparatus for applying a fused powder coating to a metal surface including in combination a torch that delivers a pilot flame toward the surface of a workpiece to be coated, means directing an electric arc along the ionized path provided by the pilot flame, means for introducing a supply of powdered coating material into the pilot flame in position to be fused by the pilot flame and arc, said pilot flame and arc being concentrated on a small area of the workpiece to produce intense skin heating of the workpiece at that area, and means located at the end of the torch and along the path of the pilot flame as it travels toward the workpiece, said last recited means being operable for progressively changing the path of the pilot flame with respect to the torch so as to strike the workpiece at different areas.

3,131,092
APPARATUS FOR COATING A MOVING WEB

James T. Coghill, Rochester, N.Y., assignor to The Black-Clawson Company, Hamilton, Ohio, a corporation of Ohio

Filed Sept. 6, 1961, Ser. No. 136,367
8 Claims. (Cl. 118—413)



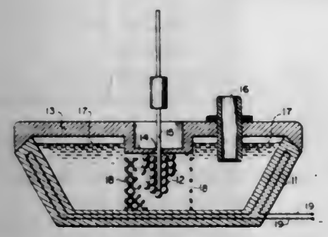
7. In apparatus for coating one side of a moving web including a backing roll adapted to support the other side of the web and a flexible blade adapted to engage the web against the roll, the combination of a holder bar means for clamping the back edge of said blade with respect to the backing roll with the front edge of said blade projecting beyond said bar means parallel to said blade and substantially coextensive with the web, an expansible pressure tube substantially coextensive with said blade, a plurality of holder units mounted on said bar means adjacent each other along the length of said blade for positioning said tube to apply pressure to one side of said blade and urge the front edge thereof toward the backing surface, each said unit including a base member extending outwardly from a rigid connection with said bar means and having a boss thereon extending parallel to said blade, a tube holder having an elongated slot extending therethrough which receives said boss in guided slidable relation therewith for positioning said holder perpendicular to one surface of said blade, each said holder having a groove in one end thereof parallel to said blade for receiving and positioning said tube, and said groove having a length substantially equal to the spacing of said units so that said tube is supported substantially entirely along its length, spring means securing said holders to said base members for movement in a direction perpendicular to said blade, and separate adjusting means on each said unit releasably secured to said base member and threadedly engaging said tube holder to move said holder with respect to said base member in a direction normal to said one surface of said blade to effect localized adjustment of the pressure exerted by said tube on said one side of said blade.

3,131,093
COMBINED CLEANING AND TINNING APPARATUS

Charles W. Wildebour, Seattle, Wash., assignor to The Boeing Company, Seattle, Wash., a corporation of Delaware

Filed Nov. 8, 1961, Ser. No. 150,941
6 Claims. (Cl. 118—429)

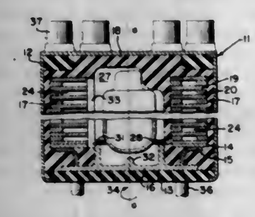
4. Apparatus for immersion soldering comprising a receptacle with heating means capable of maintaining solder in a molten state, particles immersed in molten solder disposed within the receptacle, said particles having properties satisfactory for abrading and transferring solder onto articles inserted into the solder-particle mixture and screened container means to keep said particles sufficiently compacted within the molten solder so as to have abrasive capabilities.



3,131,094
ELECTROLYTE RETRACTING PAPER SPACER FOR SPIN ACTIVATED BATTERIES

Clark C. Cleveland, Bennington, Vt., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed June 21, 1961, Ser. No. 119,256
1 Claim. (Cl. 136—90)



A spin filled set-back activated galvanic battery comprising

a plurality of annular stacked plates forming the anodes and cathodes of a plurality of cells,

means containing an electrolyte disposed within the internal circular opening of said annular plates,

absorbent spacers disposed between alternate ones of said plates and having an outer ring portion formed with a wholly interrupted concentric inner ring portion,

said ring portions being concentric with said plates and having an arcuate space therebetween, each said inner ring portion having an inner wall concentric with the inner walls of said annular stacked plates and having a radial passage therethrough at said wholly interrupted portion to form electrolyte entry ports, said radial passage bounded by the inner edges of said alternate annular stacked plates and the adjacent surfaces thereof,

means disposed within said circular opening of said annular plates having a vertical channel therein for enabling electrolytic communication of said entry ports with said electrolyte containing means whereby electrolyte at the surfaces of said inner walls of said annular stacked plates is subject to absorption by said absorbent spacers defining said passage and adjacent said inner walls of said annular stacked plates.

3,131,095
MAGNESIUM-BASE ALLOY

Gordon F. Hershey, George S. Foerster, and Sidney L. Couling, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Apr. 10, 1961, Ser. No. 101,665
2 Claims. (Cl. 148—32)

1. A magnesium-base alloy in extruded form which consists essentially of, by weight:

from 1.5 to 3.25 percent of zinc, from 0.7 to 1.5 percent of rare earth metal, from 0.05 to 0.8 percent of zirconium, the balance magnesium;

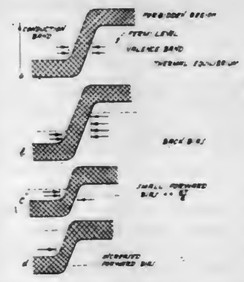
said alloy having been pushed through an extrusion die while the alloy was at a temperature in the range of about 700 to 900° F.;

and said alloy having a tensile yield strength of at least 23,000 pounds per square inch in the transverse direction of extruding.

3,131,096
SEMICONDUCTING DEVICES AND METHODS OF PREPARATION THEREOF

Henry S. Sommers, Jr., Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed Jan. 27, 1959, Ser. No. 789,286
10 Claims. (Cl. 148—33)



9. A device comprising a single crystal body of semiconducting indium antimonide having a free charge carrier concentration between 0.03 and 0.15×10^{19} cm.$^{-3}$, an abrupt p-n junction on a surface thereof, and non-rectifying connections attached to each side of said junction, the ratio of the effective mass of the lighter free charge carrier in said indium antimonide to the mass of a free electron being less than 0.15; said device being characterized by exhibiting a negative resistance characteristic when biased at low voltages in the forward direction.

3,131,097
HEAT TREATMENT OF BEARING STEEL TO ELIMINATE RETAINED AUSTENITE

Edward R. Mantel, Warren, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

No Drawing. Filed Feb. 23, 1962, Ser. No. 175,300
3 Claims. (Cl. 148—125)

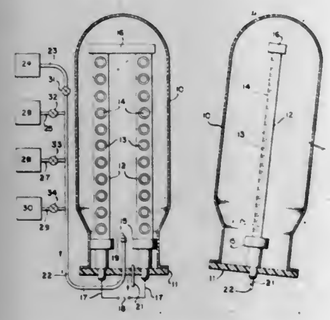
1. A process for hardening a bearing steel having a composition of about 0.95% to 1.10% carbon, 1.30% to 1.60% chromium, 0.25% to 0.45% manganese, 0.25% to 0.45% silicon and the balance iron, the steps comprising austenitizing the metal at a temperature of 1750° F. to 1825° F. and quenching the metal in a liquid quenching medium at approximately room temperature, reaustenitizing the metal at 1550° F. to 1600° F. and quenching the metal in a liquid quenching medium at approximately room temperature, immediately refrigerating the metal at subzero temperatures to convert a major pro-

portion of the remaining austenite to martensite and finally tempering the metal at a temperature of 400° F. to 500° F. to convert the remaining austenite to martensite.

3,131,098
EPITAXIAL DEPOSITION ON A SUBSTRATE PLACED IN A SOCKET OF THE CARRIER MEMBER

George Krsek and Walter C. Benzing, Mountainside, N.J., and Benjamin Topas, Santa Monica, Calif., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

Filed Jan. 31, 1961, Ser. No. 86,239
6 Claims. (Cl. 148—175)

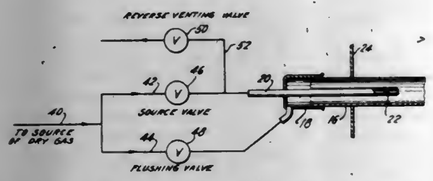


1. The method of simultaneously forming by vapor deposition a plurality of uniform semiconductor bodies having a plurality of layers of single crystal semiconductor material having different conductivities and separated by a transition region which comprises the steps of introducing a plurality of wafers of single crystal semiconductor material having a predetermined conductivity type and degree into sockets of a support within a reaction chamber, heating said wafers to a reaction temperature, introducing a decomposable vapor comprising semiconductor atoms and active impurity atoms to impart a predetermined conductivity to said semiconductor atoms into said chamber, causing said vapor to flow about the exposed surfaces of said heated wafers, and effecting deposition of said atoms from the vapor onto said surfaces to form a uniform single crystal layer of semiconductor material on each of said wafers having a conductivity different from that of said wafer on which deposition occurs.

3,131,099
MANUFACTURE OF SEMICONDUCTORS

Peter Constantakes, Woonsocket, R.I., assignor to General Instrument Corporation, Newark, N.J., a corporation of New Jersey

Filed July 27, 1962, Ser. No. 212,908
9 Claims. (Cl. 148—189)



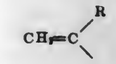
1. In the operation of a vapor diffusion system for the manufacture of semiconductors, using a source of inert gas having a flushing valve leading to the diffusion chamber and having a source valve leading to a source tube in the diffusion chamber, the method of minimizing diffusion during flushing which includes reverse venting the source tube when the flushing valve is open and the source valve is closed for flushing purposes, so that any flow of gas in the source tube is in a direction away from the diffusion chamber.

3,131,100
SOLID PROPELLANTS COMPRISING A POLYURETHANE AND A COPOLYMER OF A CONJUGATED DIENE

Otho D. Ratliff, Jr., McGregor, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Dec. 20, 1957, Ser. No. 704,211
14 Claims. (Cl. 149—19)

1. A solid propellant of the composite type consisting essentially of 50 to 95 weight percent of oxidant selected from the group consisting of the alkali metal, alkaline earth metal, and ammonia salts of nitric, perchloric, and chloric acids, and 5 to 50 weight percent of a binder consisting essentially of 50 to 25 parts by weight of a polyurethane and 50 to 75 parts by weight of a polymerizable



substituted heterocyclic nitrogen base and a copolymerizable conjugated diene having 4 to 10 carbon atoms per molecule, said heterocyclic nitrogen base being selected from the group consisting of those of the pyridine series, those of the quinoline series, and alkyl substituted compounds thereof wherein the total number of carbon atoms in the nuclear alkyl substituents is not greater than 12 and wherein R is selected from the group consisting of hydrogen and a methyl radical, said parts by weight based on the total parts of said binder, wherein said polyurethane is prepared by milling said copolymer with an active hydrogen containing organic compound which is reacted with a polyisocyanate that is added to the propellant composition near the end of the mixing cycle after all of said oxidant is blended with the binder ingredients, said active hydrogen containing organic compound being selected from the group consisting of alkylene glycols, esters of alkylene glycols and dicarboxylic acids, diamines, polyethers, and triols, and wherein said polyisocyanate is selected from the group consisting of toluene diisocyanate, ethylene diisocyanate, hexane-1,6-diisocyanate, tolylene-2,4-diisocyanate, tolylene-2,6-diisocyanate, phenyl-4,4'-diisocyanate, 1-methylbenzene - 2,4 - diisocyanate, benzene-1,3,5 - triisocyanate, 2,7 - diphenylsulfone diisocyanate, naphthalene - 1,5 - diisocyanate, naphthalene-2,7-diisocyanate, diphenyl-4,4'-diisocyanate, 4,4'-diphenylene methane diisocyanate, dianisidine diisocyanate, 4,4'-tolidine diisocyanate, n-phenylene diisocyanate, 4,4',4'-triisocyanate triphenyl methane, 2,4,6-triisocyanate toluene, 3,3'-dimethyldiphenyl - 4,4' - diisocyanate, 4-methoxy-m-phenylenediisocyanate, 4,4' - diphenyldiisocyanate, 3,3' - dimethoxy - 4,4' - diphenyldiisocyanate, and 4,4'-methylenediphenylisocyanate.

3,131,101
PROCESS OF PREPARING SOLID PROPELLANT COMPOSITIONS USING A DEHYDRATING AGENT

George W. Batchelder, Santa Monica, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio

No Drawing. Filed July 10, 1961, Ser. No. 125,913
15 Claims. (Cl. 149—19)

1. Process comprising mixing a solid propellant composition composed of an inorganic oxidizing salt, a polyester resin formed from the condensation of a saturated polyhydric alcohol and a polycarboxylic acid, and a monomeric olefinic compound, in the presence of an effective quantity of a dehydrating agent capable of reacting with any water present in the reaction mixture to form a gas, said dehydrating agent being selected from the group consisting of metal hydrides and metal carbides.

3,131,102
EXPLOSIVE PRIMING COMPOSITION

Joseph F. Kenney, Bridgeport, Conn., assignor to Remington Arms Company, Inc., Bridgeport, Conn., a corporation of Delaware

No Drawing. Filed Apr. 5, 1962, Ser. No. 185,188
2 Claims. (Cl. 149—78)

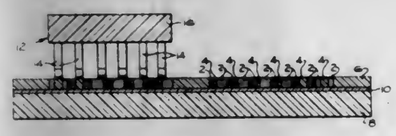
1. A priming mixture consisting of the following materials:

	Percent
Potassium chlorate	45 to 58
Antimony sulfide	15 to 35
Calcium silicide	2 to 22
Tetranitrodibenzo-1,3a,4,6a tetraazapentalene	2 to 10

3,131,103
METHOD OF MAKING CIRCUIT COMPONENTS

Irving Russell Bogue, East Windsor, and Francis Melvin Pasborg, Wethersfield, Conn., assignors to The J. M. Ney Company, Bloomfield, Conn., a corporation of Connecticut

Filed Feb. 26, 1962, Ser. No. 175,428
7 Claims. (Cl. 156—3)



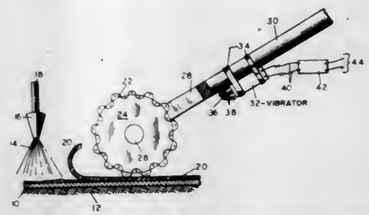
1. In the method of making electrical components of noble metal, the steps comprising: providing a wrought metal foil of about 1 to 10 mils thickness formed from an alloy containing essentially 60.0 to 75.0 percent by weight gold, 5.0 to 15.0 percent by weight of second noble metal component selected from the group consisting of platinum and palladium and platinum, said second noble metal component providing at least 3.0 percent by weight platinum, 10.0 to 20.0 percent by weight copper, up to 10.0 percent by weight silver and up to 3.0 percent by weight zinc; forming a resist pattern on a surface of said foil from an organic material resistant to attack by a bath of concentrated nitric and hydrochloric acids; and immersing said foil in a bath containing 2.8 to 5.8 mols per liter of nitric acid and 3.5 to 6.5 mols per liter of hydrochloric acid at a temperature of about 20 to 80° centigrade for a period of time sufficient to etch the foil unprotected by said resist pattern.

3,131,104
METHOD AND APPARATUS FOR APPLYING PROTECTIVE COATINGS

Donald L. Korn, Sapulpa, Okla., assignor to Tank Seal Products Company, Sapulpa, Okla., a partnership

Filed Oct. 20, 1960, Ser. No. 63,800
4 Claims. (Cl. 156—73)

1. A method of applying viscous and fibrous coatings to objects comprising the steps of applying a relatively viscous synthetic resin to said object, wetting a fibrous material in said resin, moving a gas releasing roller over

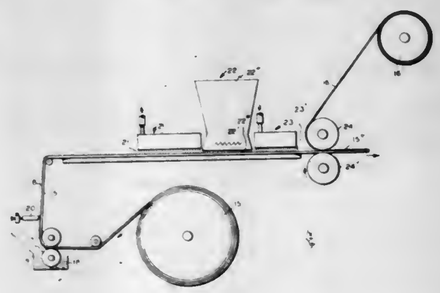


said combined resin and material, and vibrating said roller simultaneously during said moving.

3,131,105
METHOD OF BONDING POLYURETHANE FOAM TO BASE MATERIALS BY FLAME TREATMENT

William V. Codos, Clifton, N.J., assignor to Pathe Equipment Company, Inc., East Paterson, N.J., a corporation of New York

Filed Oct. 13, 1961, Ser. No. 144,938
7 Claims. (Cl. 156—82)



2. The method of forming a laminated structure, which comprises of continuously moving a layer of polyurethane foam in one direction through two spaced inert gaseous means, each offering a combustion-preventing area, applying onto a surface of said moving layer before it reaches the first of said areas, a coating of an inflammable substance which when ignited will plasticize said surface, igniting the coating which is between said areas and then applying with pressure a layer of material with which said plasticized surface will form a bond, onto said plasticized surface while said foam layer is moving and said surface is soft and tacky.

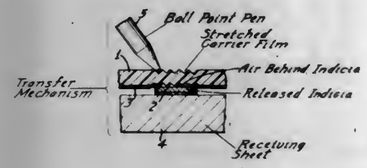
3,131,106
ADHESIVE TRANSFERS

Frederick Wilson Mackenzie, London, England, assignor to Letraset Limited, London, England, a British company

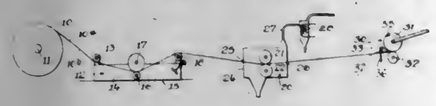
Filed June 22, 1961, Ser. No. 118,765
Claims priority, application Great Britain June 24, 1960
5 Claims. (Cl. 156—230)

1. As a new article of manufacture, a dry transfer sheet for applying printed indicia to a receiving sheet at a selected position on such receiving sheet under control of a user, said dry transfer sheet comprising a carrier sheet of polyethylene having high-release properties; indicia on said polyethylene carrier sheet in the form of ink films strong enough to retain their shape during transfer and having a mechanically breakable bond to said carrier sheet; a dry adhesive coating extending over the

indicia, said coating being adherable to a selected position on a receiving sheet at ambient conditions upon rubbing with high localized force-per-unit-area over such position but said coating being immune to transfer-effecting adhesion upon application of light finger pressure at such position or over other portions of the transfer sheet, said adhesive coating having a greater affinity for a receiving sheet when subjected to high pressure as by rubbing with a stylus over a selected area thereof than the affinity between the indicia and the carrier sheet after application of such pressure, so that the transfer sheet can be placed against a receiving sheet and adjusted to accurately locate indicia to be transferred in any selected position on the receiving sheet without adhesion of the adhesive coating to the receiving sheet and thereafter the indicia can be transferred dry by rubbing as aforesaid while in the selected position.



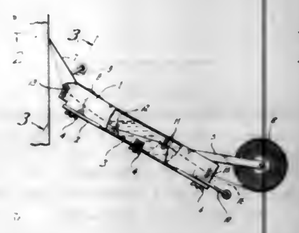
3,131,107
APPARATUS FOR FORMING A LAMINATED PAPER PRODUCT
Malcolm Dole and Henry B. Fischer, Evanston, Ill., assignors to Bradley & Vrooman Company, a corporation of Illinois
Filed Dec. 22, 1958, Ser. No. 782,230
3 Claims. (Cl. 156—446)



1. Apparatus for forming a laminated paper product comprising a rotatable mandrel member, pressure exerting means adjacent the outer surface of said mandrel member, guide means for directing thermoplastic resin impregnated paper to the winding mandrel so as to pass initially between the mandrel and the pressure exerting means, means associated with said mandrel member to secure the lead edge of said paper during mandrel rotation, heating means positioned adjacent the point of overlapping of incoming paper and paper on said rotating mandrel, said heating means being adapted to soften the thermoplastic resin coating of paper on the forming member and on the mandrel side of the incoming paper and actuating means for withdrawing the heating means from contact position at start up of winding and at the time of removing the formed laminated structure.

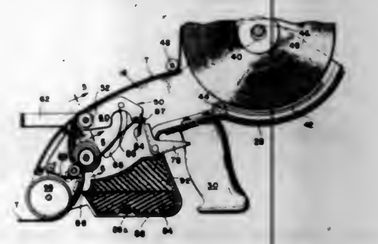
3,131,108
DEVICE FOR MOUNTING WALLBOARD TAPE
James E. Kennard, 8629 Brannon, Houston, Tex.
Filed Aug. 8, 1960, Ser. No. 48,199
3 Claims. (Cl. 156—461)

1. In a tape applying device, a mastic container, a closure releasably mounted on said container, a tape bracket mounted on one end of said container to support a roll of tape mounted in said bracket, a rear opening in said container for receiving said tape and a front opening in said container through which said tape passes, a plurality of cooperating pairs of guides in said container directing the route of travel of said tape through said container and one pair of said guides being mounted adjacent the rear opening of the container and one pair of said guides



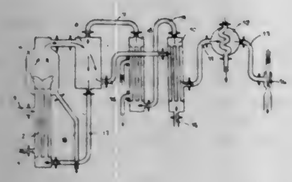
mounted adjacent the front opening of said container, said front opening guides having spacer rings mounted thereon for permitting a predetermined amount of mastic to pass out of said container with said tape.

3,131,109
GUMMED PAPER TAPE APPLYING DEVICE
James T. Auld, 1855 Balsam St., Vancouver, British Columbia, Canada, and Richard H. Sawin, Rte. 3, Box 571B, Poulsbo, Wash.
Filed May 1, 1961, Ser. No. 106,687
6 Claims. (Cl. 156—526)



1. A gummed paper tape applying device for hand use, comprising: a light weight housing, a tape magazine in the upper end of said housing and a revolvable transversely disposed pressure roller, for the final pressure application of a gummed tape, in the lower end thereof; a hand grip for moving said housing, guide means for positioning a strip of paper tape and guiding it through said tape applying device to said pressure roller, the path of said tape being approximately vertical as it reaches said pressure roller; a tape propelling means; handle means operatively connected to said tape propelling means for operating the same; a tape moistening arrangement disposed rearwardly of said pressure roller and on a level therewith said arrangement including a water storage container positioned rearwardly of said pressure roller and horizontally disposed brush means extending from said water storage container forwardly to the vicinity of said pressure roller for applying water to the gummed surface of said vertically disposed portion of paper tape and a shear means for cutting a strip of gummed tape at a position spaced vertically above said brush, said shear means including a stationary blade and a coacting movable blade, said movable blade having spring means for biasing it to its coacting cutting position and also having releasable cocking means for holding said movable blade in a cocked position.

3,131,110
METHOD OF ACHIEVING HIGH CONCENTRATES OF SOLUTIONS HAVING A HIGH BOILING POINT
Jean Joseph Edouard Duval, Paris, France, assignor to Appareils et Evaporateurs Kestner, Lille, France, a French corporation
Filed July 5, 1960, Ser. No. 40,671
Claims priority, application France July 7, 1959
1 Claim. (Cl. 159—47)



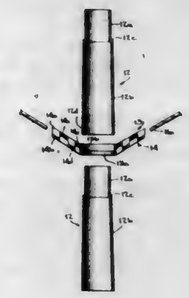
The method of concentrating a solution comprising the steps of feeding a solution into an indirect contact heater in which it is heated by vapor, passing the preheated solution into an indirectly preheated evaporator in which it is further heated, passing the solution heated in the evaporator into a direct contact preheater in which it contacts superheated vapor, passing the solution heated in the direct contact preheater into an indirectly heated heater evaporator wherein the solution is evaporated and superheated vapor is released which vapor is employed in said direct contact preheater and which superheated vapor after losing its super heat is used to heat the solution in said indirect contact heater, and maintaining said indirect contact heater, indirect preheated evaporator, direct contact preheater and indirectly heater evaporator under partial vacuum.

3,131,111
HALO CONSTRUCTION FOR RELIGIOUS STATUES
William O. Collins, 5715 California Ave., Falls Church, Va.
Filed Nov. 13, 1959, Ser. No. 852,675
1 Claim. (Cl. 161—8)



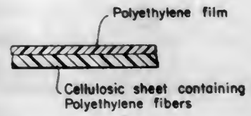
A religious statue comprising a miniature statue including a simulated head and a thin circular disk mounted on said head for producing a halo effect in adjacent relation to the simulated head, said disk being solid and provided with smooth parallel transparent surfaces having a peripheral edge orientated in angular relation to the normal line of sight of a person observing the statue, said disk being constructed of methyl methacrylate and transmitting a substantial portion of light impinging on the smooth surfaces to the peripheral edge thereby emitting light from the peripheral edge thereby producing a peripheral glow simulating a halo, said disk also being illuminated by light impinging thereon thereby forming a soft glow over the surface of the disk with a more intense peripheral edge glow, said disk being provided with a centrally disposed aperture, said simulated head having a rearwardly and upwardly inclined projecting pin received in said aperture, said pin tapering outwardly and frictionally engaging the periphery of the aperture thereby securely retaining the disk in position when engaged with the pin.

3,131,112
MOLDED PLASTIC SEGMENTED TRUNK AND BRANCH HOLDER MEANS FOR SIMULATED CHRISTMAS TREES
Abraham Abramson, New York, N.Y., assignor to Raylite Electric Corp., Bronx, N.Y., a corporation of New York
Filed Feb. 20, 1961, Ser. No. 90,456
6 Claims. (Cl. 161—24)



1. In an artificial Christmas tree construction of the character described, a segmented trunk portion comprising substantially identical molded tubular members having a lower section of larger cross-sectional area relative to an upper section of smaller cross-sectional area and a should formed between said upper and lower sections, the smaller section of one member being sized to telescopingly engage the larger section of an adjoining member, a collar seated on said shoulder between adjoining members, said collar having integrally formed radially and upwardly extending branch holders for releasably mounting the ends of branches.

3,131,113
CELLULOSIC MATERIAL HAVING IMPROVED ADHESION TO POLYETHYLENE
Harold A. Arbit, Plainfield, and Richard S. Brissette, Emerson, N.J., and Robert W. Gaines, Darien, Conn., assignors to Union Carbide Corporation, a corporation of New York
Filed Mar. 12, 1959, Ser. No. 798,961
7 Claims. (Cl. 161—151)



1. A composite structure consisting essentially of a cellulosic sheet containing from about 2 to about 60 percent by weight polyethylene fibers, based on the weight of the cellulosic content of said sheet, bonded to a polyethylene film.

3,131,114
GLASS-INCLUDED INTEGRATED MICA SHEET AND METHOD OF PRODUCTION

Moses D. Heyman, Woodmere, N.Y., assignor, by mesne assignments, to Acim Paper Corporation, Woodmere, N.Y., a corporation of New York

Filed Dec. 21, 1959, Ser. No. 860,979
5 Claims. (Cl. 161—171)

1. An integrated sheet of mica flakes having nascent surfaces that induce cohesion among the flakes and glass flakes in which the mica and glass flakes are interspersed throughout the thickness of the sheet and there is fusion among the glass flakes and adhesion between the mica and glass flakes, the flakes having a general thickness in the order of four microns, and the proportion of glass flakes to mica flakes being approximately 30% to 60% glass flakes and the remainder mica flakes.

3,131,115
FLAME RETARDANT POLYESTER RESINOUS COMPOSITION CONTAINING HALOGEN AND PHOSPHORUS

Paul Robitschek, Wilson, and Claude Thomas Bean, Niagara Falls, N.Y., assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

No Drawing. Original application Jan. 24, 1957, Ser. No. 635,949, now Patent No. 2,931,746, dated Apr. 5, 1960. Divided and this application Sept. 21, 1959, Ser. No. 458
14 Claims. (Cl. 161—191)

1. A polymerizable mixture comprising (A) a polymerizable linear polyester resin, comprised of the reaction product of a polycarboxylic acid and a polyhydric alcohol, said resin having olefinic polymerizable unsaturation and (B) a vinylidene monomer; an ingredient (I) of said mixture containing a chemically combined component which is a chemical reaction adduct of hexahalocyclopentadiene wherein the halogen is selected from the group consisting of chlorine, bromine, fluorine, and mixtures thereof, with a material selected from the group consisting of a polycarboxylic compound containing aliphatic carbon to carbon unsaturation and a polyhydric alcohol containing aliphatic carbon to carbon unsaturation, wherein said polycarboxylic compound is selected from the group consisting of polycarboxylic acids, polycarboxylic anhydrides and polycarboxylic acid halides, and an ingredient (II) of said mixture containing a compound of phosphorus, both the adduct of I and the phosphorus of II being chemically combined in the polymerized resin when said polymerizable mixture is copolymerized, and wherein said compound of phosphorus is combined in said vinylidene monomer, and is selected from the group consisting of bis (betachloroethyl) vinyl phosphonate and di (chloropropyl) propenyl phosphonate bis (betachloroethyl)vinyl phosphonate.

3,131,116
POST FORMING OF DECORATIVE LAMINATES

Lewis Charles Pounds, Riverside, Conn., assignor to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Filed June 10, 1959, Ser. No. 819,230
6 Claims. (Cl. 161—258)

1. A unitary, heat- and pressure-consolidated, postformable, high pressure decorative laminated article having a heat-resistant decorative surface which comprises a superimposed assembly of:

(A) a rigidity-imparting base member comprising a plurality of fibrous sheets impregnated with a thermosetting phenolic resin which has been advanced to a state somewhat short of substantially complete cure,

(B) a barrier member directly bonded to said base member comprising a fibrous sheet impregnated with an uncatalyzed thermosetting melamine-formaldehyde resinous composition which has been advanced to a state somewhat short of substantially complete cure, and

(C) an overlay member directly bonded to said barrier member comprising a fibrous sheet impregnated with a substantially completely cured melamine-formaldehyde resinous composition, said substantially completely cured composition being, in an uncured state, a curable resinous composition comprising:

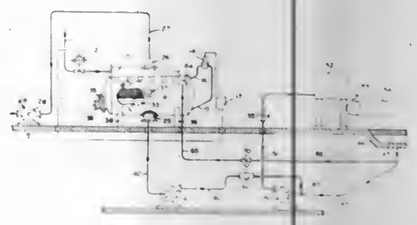
(1) a thermosetting melamine-formaldehyde resinous condensate, and

(2) a curing catalyst for said resinous condensate, said curing catalyst being present in an amount sufficient to effect substantially complete cure of said curable resinous composition when the total superimposed assembly of said (A), said (B) and said (C) is consolidated at a temperature in the range of from about 130° C. to 140° C. under a pressure ranging from about 800 to 1500 p.s.i. for from about 10 to 20 minutes said laminated article being capable of being post-formed to an arc of a circle having a radius of ¾ of an inch without substantial loss of heat and chemical resistance.

3,131,117
TREATING PAPER-MAKING STOCK BY VACUUM DEAERATION PRIOR TO ADDITION OF DILUTING WATER

William W. Hickey, Bronxville, N.Y., assignor to Clark & Vicario Corporation, North Tarrytown, N.Y., a corporation of New York

Filed Mar. 1, 1960, Ser. No. 12,214
11 Claims. (Cl. 162—190)

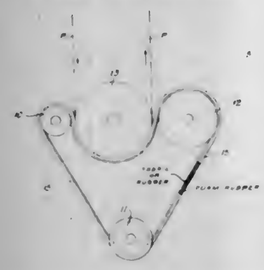


6. A method of conditioning papermaking stock, which comprises maintaining a confined zone under the influence of deaerating vacuum, atomizingly introducing into said zone of deaerating vacuum thick stuff having a fiber concentration too great for use in papermaking, simultaneously atomizingly introducing into said zone of deaerating vacuum a minor amount of diluting white water to admix intimately with said atomized thick stuff and form a homogeneous suspension of stock, said suspension still having a fiber concentration too great for use in papermaking, collecting said homogeneous stock suspension as a pond within said confined zone, withdrawing homogeneous stock suspension from said pond, maintaining the level of said pond substantially constant by regulating the amount of stuff introduced into said zone responsively to the level of said pond, maintaining the consistency of said homogeneous suspension substantially constant by regulating the flow of said minor amount of diluting white water to said zone responsively to the consistency of suspension withdrawn from said pond, and admixing said suspension exteriorly of said zone with a major amount of non-deaerated diluting white water to provide a dilute mixture of stock having a fiber concentration suitable for use in papermaking.

3,131,118
APPARATUS FOR TREATING PAPER WEBS

Winifred Christina Dabroski and Benjamin Frank Herr, East Brunswick, N.J., assignors to Johnson & Johnson, a corporation of New Jersey

Filed Dec. 12, 1960, Ser. No. 75,315
1 Claim. (Cl. 162—361)



In a paper web compacting and extensibilizing apparatus comprising longitudinally movable and continuous, deformable rubber belt means having one surface adapted to contact and compact a wet paper web; means for expanding said belt surface along a portion of its travel and then permitting contraction of said surface; and pressure means for applying pressure to the wet paper web perpendicular to its face surfaces and holding the web in contact with the compacting surface of said belt from a point where the compacting surface is expanded to a point where it is contracted; the improvement wherein the rubber belt, including the compacting surface thereof, is of foam rubber and capable of holding a substantial percentage of water and the belt surface opposite to its compacting surface is reinforced; whereby a substantial amount of water is removed from the wet paper web and passed into the pores of said belt when pressure is applied to the web while it is in contact with the compacting surface of said belt, and fibers between the face surfaces of said web are compressively distorted, crowded and pushed together between the face surfaces of the web within and throughout the body of the web in a direction parallel to said face surfaces of the web as the belt contracts while in contact with the web.

3,131,119
OIL-DISPERSIBLE DITHIOCARBAMATES

David B. Fordyce, Moorestown, N.J., and Gerard C. Riley, Churchville, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Apr. 6, 1960, Ser. No. 20,243
9 Claims. (Cl. 167—22)

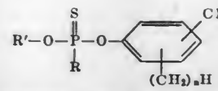
1. A composition comprising a finely particled oil-insoluble, water-insoluble metal dithiocarbamate, said dithiocarbamate selected from the class consisting of dimethyldithiocarbamate and ethylenebisdithiocarbamate and mixtures thereof in combination with 0.5% to 15% of the weight of said metal dithiocarbamate of an oil-soluble addition polymer derived from at least one monoethylenically unsaturated polymerizable ester and having both lipophilic and hydrophilic portions in a non-polar-polar balance and having a solubility parameter of 7.7 to 8.3 and a molecular weight of about 100,000 to about 2,000,000.

3,131,120
O-CYANOARYL ALKYLPHOSPHONOTHIOATES

John P. Chupp, Kirkwood, and Peter E. Newallis, Crestwood, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Dec. 19, 1961, Ser. No. 160,634
17 Claims. (Cl. 167—30)

1. O-cyanoaryl alkylphosphonothioates of the formula



wherein n is an integer from 0 to 1, wherein R is a lower alkyl radical, and wherein R′ is an aromatic hydrocarbon radical of the benzene series containing up to 10 carbon atoms.

3,131,121
HIGHLY ACIDIC CATION EXCHANGE RESIN CONTAINING AMPROTROPINE CATIONS

Eugene Howard Gans, Belleville, N.J., assignor to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Oct. 31, 1960, Ser. No. 65,902
7 Claims. (Cl. 167—55)

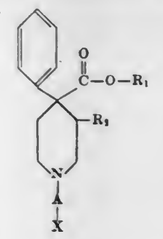
1. As a substantially tasteless composition of matter, a highly acidic cation exchange resin wherein at least some of the cations present are cations of amprotropine.

3,131,122
METHOD OF PRODUCING ANALGESIA WITH N-SUBSTITUTED-4-PHENYL - 4 - CARBALKOXY-PIPERIDINES

Kurt Freter, Franz Adickes, and Karl Zeile, all of Ingelheim (Rhine), Germany, assignors, by mesne assignments, to Boehringer Ingelheim G.m.b.H., Ingelheim (Rhine), Germany, a corporation of Germany

No Drawing. Filed Apr. 9, 1962, Ser. No. 185,874
Claims priority, application Germany Apr. 14, 1961
2 Claims. (Cl. 167—55)

1. A central analgesic composition consisting essentially of a physiologically compatible carrier having uniformly distributed therein from 5 to 15 mgm. of a compound selected from the group consisting of N-substituted 4-phenyl-4-carbalkoxy-piperidines of the formula



wherein

R_1 is lower alkyl of 1 to 4 carbon atoms,

R_2 is selected from the group consisting of hydrogen and lower alkyl,

A is a bivalent saturated acylic hydrocarbon of 4 to 8 carbon atoms, and

X is selected from the group consisting of halogen and nitro,

and their non-toxic, pharmacologically acceptable acid addition salts.

3,131,123
ENTERIC TABLETS AND MANUFACTURE THEREOF

Jack A. Masquelier, Bordeaux, France, assignor to Laboratoires Francais de Therapeutique, Bordeaux, France, a company of France

Filed Jan. 12, 1960, Ser. No. 1,938
Claims priority, application France Mar. 13, 1959
6 Claims. (Cl. 167—57)

1. An orally administrable effervescent enteric pill comprising a core of thoroughly desiccated and admixed powder comprised of a major amount of sodium paraamino salicylate in dry powdery form mixed with a dry

powdery mixture of effervescent gas-forming materials selected from the group consisting of sodium bicarbonate with citiric acid and lithia carbonate with tartaric acid, and the admixed core powder having then been compressed under strong pressure at approximately 5,000 kg./sq. cm., said compressed core being surrounded by an outer enteric coating selected from the group consisting of cellulose acetate phthalate, gluten, and salol, said outer enteric coating being dispersable in the intestinal fluids and immune to gastric juice whereby said core is exposed to the action of the intestinal fluids.

3,131,124
BAGACIDIN AND PROCESS FOR ITS MANUFACTURE

Fritz Benz, Binningen, Ernst Gaeumann, Zurich, Lucien Neipp, Riehen, and Pierre Reusser, Arnold Stalder, and Albert Wettstein, Basel, Switzerland, assignors to Ciba Corporation, a corporation of Delaware

Filed June 12, 1957, Ser. No. 673,993
Claims priority, application Switzerland June 15, 1956
14 Claims. (Cl. 167—65)

1. An antibiotic substance selected from the group consisting of the free base and salts thereof, wherein the free base is produced by cultivating *Streptomyces fradiae*, strain NRRL 2598 in an aqueous nutrient medium containing a source of carbon and nitrogen and inorganic salts under aerobic conditions at 18–40° C. until the nutrient medium exhibits a substantial antibacterial activity, then isolating the aforesaid substance from the culture filtrate, said antibiotic in the form of its base being soluble in water and insoluble in water immiscible organic solvents, and forming acid addition salts readily soluble in water with hydrochloric acid and sulfuric acid, and salts slightly soluble in water with 4'-dimethylaminoazobenzene-4-sulfonic acid, picric acid, styphnic acid, picrolonic acid, Reinecke acid and 5-nitro-barbituric acid, whose hydrochloride contains the elements carbon, hydrogen, nitrogen, chlorine and oxygen in substantially the following proportions by weight:

	Percent
Carbon	39.5
Hydrogen	7.2
Nitrogen	15.5
Chlorine	17.2
Oxygen	19.8

whose hydrochloride decomposes at 188–190° C. and, when dissolved in water, has the optical rotation

$$[\alpha]_D^{20}=+21 \text{ (c.=0.8)}$$

and, when suspended in a heavy paraffin oil exhibits absorption bands in the infrared region at 3.0μ, 3.45μ, 4.95μ, 5.85μ, 6.05μ, 6.40μ, 6.87μ, 7.28μ, 7.65μ, 8.10μ, 8.90μ, 9.37μ whose helianthate melts at 186–188° C. (with decomposition), whose picrolonate decomposes at 213–214° C. and the reineckate at 189° C.

3,131,125
3α,16α-DIHYDROXY-PREGNANE-20-ONE AND ESTERS THEREOF

Albert Wettstein, Riehen, Robert Neher, Binningen, and Pierre Antoine Desaulles, Oberwil, Basel-Land, Switzerland, assignors to Ciba Corporation, a corporation of Delaware

No Drawing. Filed Jan. 26, 1960, Ser. No. 4,604
Claims priority, application Switzerland Sept. 14, 1956
10 Claims. (Cl. 167—65)

6. A pharmaceutical composition comprising essentially a member selected from the group consisting of 3α,16α-dihydroxy-pregnane-20-one, a 3α-monoester thereof, a 16α-monoester thereof, and a 3α,16α-diester thereof, said esters being derived from lower aliphatic carboxylic acids in an amount ranging from 0.1–30% together with a suitable pharmaceutical carrier.

3,131,126
ANTIBIOTIC AND PROCESS FOR ITS MANUFACTURE

Ernst Gaeumann and Vladimir Prelog, Zurich, and Ernst Vischer, Basel, Switzerland, assignors to Ciba Corporation, a corporation of Delaware

Filed July 15, 1960, Ser. No. 43,173
Claims priority, application Switzerland July 23, 1959
13 Claims. (Cl. 167—65)

12. The antibiotic avilamycin, a neutral substance forming colorless crystals, melting at 188–189.5° C., showing the optical rotations $[\alpha]_D^{20}=+0.8°$ (c.=1.165) in absolute ethanol and $[\alpha]_D^{20}=-7.7°$ (c.=1.083) in chloroform, giving in elementary analysis the following data: C=51.24%; H=6.54%; Cl=4.93%; O(calc.)=37.29%; CH_3O=8.79%; $C(CH_3)$=8.97%; active H=0.68%; containing neither nitrogen nor sulfur; having a molecular weight of 708 (Signer's method) suggesting the formula $C_{31}H_{47}O_{17}Cl$, exhibiting in absolute ethanol the UV-spectrum shown in FIGURE 1 and in potassium bromide the IR-spectrum shown in FIGURE 2, yielding in hydrolysis with dilute mineral acid three sugar-like reducing substances which reveal in the paper chromatogramme (system: n-butanol+glacial acetic acid+water 4:1:1) R_f values of 0.18, 0.41 and 0.52 respectively.

3,131,127
ANTIBIOTIC ANGOLAMYCIN AND METHOD OF PRODUCTION

Ernst Gaeumann and Vladimir Prelog, Zurich, Switzerland, assignors to Ciba Corporation, a corporation of Delaware

Filed June 8, 1961, Ser. No. 115,736
Claims priority, application Switzerland June 10, 1955
14 Claims. (Cl. 167—65)

1. An antibiotic substance selected from the group consisting of angolamycin, a basic crystalline substance, soluble in alcohols, esters, ketones, ethers and chlorinated hydrocarbons, slightly soluble in water and petroleum ether, being capable of forming salts with acids which are soluble in water, melting at 133–136° C., when crystallized from benzene-ether, and at 165–168° C. when crystallized from di-isopropylether, exhibiting in the UV spectrum a maximum at 240 mμ (log ε=4.16 in ethanol) and when taken up in mineral oil showing in the IR spectrum bands at 2.93μ, 3.53μ (mineral oil), 5.84μ, 5.92μ, 6.15μ, 6.81μ (mineral oil), 7.06μ, 7.25μ (mineral oil), 7.59μ, 7.69μ, 7.87μ, 8.00μ, 8.16μ, 8.44μ, 8.56μ, 8.95μ, 9.16μ, 9.27μ, 9.34μ, 10.02μ, 10.29μ, 10.70μ, 11.00μ, 11.38μ, 11.91μ, 12.32μ, 12.66μ, 13.20μ and 13.90μ (mineral oil), having an optical rotation $[\alpha]_D^{21}=-64°$ (c.=1.30 in chloroform) and a pK value of 6.74 when dissolved in methylcellosolve-water (80:20), taking up one molecular proportion of hydrogen when hydrogenated with a palladium catalyst, to yield dihydro-angolamycin of melting point 124–126° C. (from isopropylether), and 3 molecular proportions when hydrogenated with a platinum catalyst in glacial acetic acid and yielding on acid hydrolysis two reducing substances having R_f values of 0.28 and 0.65, in a 10:1 (vol.) mixture of butanol and glacial acetic acid saturated with water, the dihydro angolamycin, the hexahydro angolamycin and the salts of these substances said angolamycin having been prepared by the process of claim 10.

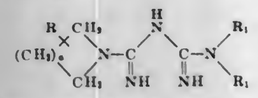
10. A method for producing the crystalline antibiotic angolamycin which comprises cultivating a Streptomyces strain of the species selected from the group consisting of *eurythermus* NRRL 2539, *eurythermus* NRRL 2540, and *eurythermus* NRRL 2541, in an aqueous nutrient medium containing a source of carbon and of organic nitrogen and inorganic salts under aerobic conditions at 20–50° C. until the nutrient medium exhibits a substantially antibacterial activity, and then isolating the antibiotic angolamycin from the culture filtrate.

3,131,128
ANTI-VIRAL BIGUANIDES

Seymour L. Shapiro, Hastings on Hudson, and Louis Freedman, Bronxville, N.Y., assignors to U.S. Vitamin & Pharmaceutical Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed May 24, 1961, Ser. No. 112,187
2 Claims. (Cl. 167—78)

1. A method for the control of viral infections which comprises administration of a sufficient quantity of a member selected from the group consisting of compounds having the following formula

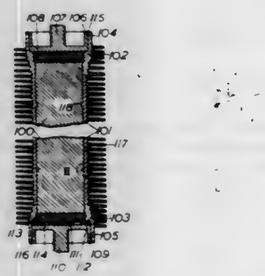


wherein *n* is an integer ranging from 2 to 4, and R and R_1 are selected from the group consisting of hydrogen and methyl, and the pharmaceutically acceptable salts thereof.

3,131,129
FUEL ELEMENTS FOR USE IN NUCLEAR REACTORS

Ian Hugh Morrison, Preston, England, assignor to United Kingdom Atomic Energy Authority, London, England

Filed Oct. 15, 1956, Ser. No. 616,067
Claims priority, application Great Britain Oct. 14, 1955
4 Claims. (Cl. 176—68)



1. A nuclear reactor fuel element comprising a fuel rod and a protective sheath in which the fuel rod is secured, the fuel rod and protective sheath having mutually opposing longitudinal walls in contact with one another, the longitudinal wall of the fuel rod having a series of spaced recesses therein and the longitudinal wall of the protective sheath having a corresponding series of inwardly directed protrusions thereon each engaged in one of said recesses, and a pair of caps closing the ends of the sheath.

3,131,130
METHOD OF PRODUCING SOLUBLE COLLAGEN

Irving B. Oneson, Somerville, N.J., assignor to Ethicon, Inc., a corporation of New Jersey

No Drawing. Filed July 31, 1961, Ser. No. 127,859
8 Claims. (Cl. 195—6)

1. The method of producing soluble collagen monomers which comprises the steps of:

Treating finely divided native collagen with a dilute acid solution to swell the collagen fibrils;

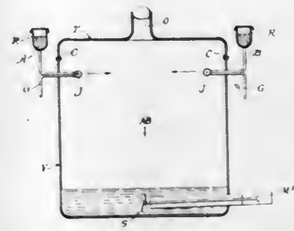
Treating the acid swollen collagen fibrils with an elastase while maintaining the temperature between 0° C. and 30° C. until all of the swollen collagen fibrils dissolve; and,

Stopping the reaction at that point by removing the acid from solution.

3,131,131
ELECTROSTATIC MIXING IN MICROBIAL CONVERSIONS

Alfred P. Webner, Dallas, Tex., assignor to Socony Mobil Oil Company, Inc., a corporation of New York

Filed Apr. 3, 1962, Ser. No. 184,777
8 Claims. (Cl. 195—51)

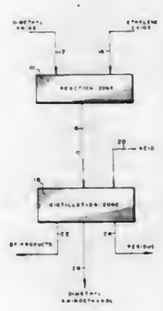


1. A process for the conversion of hydrocarbons which comprises forming a stream of finely divided hydrocarbon particles bearing like electrical charges; ejecting said stream into a reaction vessel; simultaneously forming a second stream of finely divided material comprising a micro-organism reactive with said hydrocarbon, said finely divided material if not electrically neutral then bearing an electrical charge opposite that borne by said hydrocarbon particles; and ejecting said second stream into said vessel toward said first stream to effect thereby commingling of said streams and interaction between components of the particles to induce chemical change of said hydrocarbons.

3,131,132
PURIFICATION OF DIMETHYLAMINOETHANOL BY ACID TREATMENT AND DISTILLATION

Philip H. Moss and Ernest L. Yeakey, Austin, Tex., assignors to Jefferson Chemical Company, Inc., Houston, Tex., a corporation of Delaware

Filed June 6, 1962, Ser. No. 200,349
4 Claims. (Cl. 202—57)

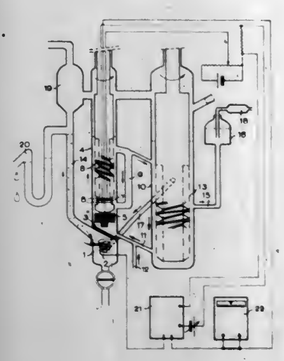


1. In a method wherein a reaction mixture containing dimethylaminoethanol is obtained by the non-catalytic reaction of ethylene oxide with dimethylamine, the improvement which comprises the steps of adding an acid to said reaction mixture after completion of the reaction in an amount sufficient to provide a pH of not more than about 11.8 and distilling said thus-treated reaction mixture to obtain a color-stable dimethylaminoethanol distillate product.

3,131,133
PROCESS AND APPARATUS FOR TITRATING

Embrecht Barendrecht, Geleen, Netherlands, assignor to Stamicarbon N.V., Heerlen, Netherlands

Filed May 25, 1959, Ser. No. 815,592
Claims priority, application Netherlands May 29, 1958
9 Claims. (Cl. 204—1)



1. A process for continuously determining the amount of water in a material to be examined which comprises providing a measuring cell having a pair of generator electrodes and a pair of indicating electrodes, feeding into the cell a Karl Fischer reagent containing a member of the group consisting of iodide and bromide, providing a voltage between said generator electrodes and generating by anodic oxidation therebetween a product selected from the group consisting of iodine and bromine which reacts with the water to be determined, continuously passing said material into said cell and mixing the same with said generated product, thereafter passing the resulting mixture past said indicator electrodes, measuring the current between said indicator electrodes as said mixture is passed thereby, regulating the current between said generator electrodes and the amount of product generated thereby by maintaining the current between said indicator electrodes substantially constant, continuously removing the mixture from said cell after it has passed said indicator electrodes, recycling past said indicator electrodes at least a portion of the removed mixture and continuously measuring the current between said generator electrodes to determine the amount of water in said material.

3,131,134
ELECTROPLATING FROM AN ORGANIC ELECTROLYTIC SOLUTION

Carl Micillo, Brooklyn, N.Y., assignor to Grumman Aircraft Engineering Corporation, Bethpage, N.Y., a corporation of New York

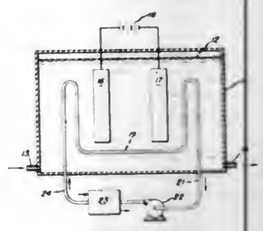
No Drawing. Filed Aug. 3, 1961, Ser. No. 128,960
11 Claims. (Cl. 204—14)

1. The process of electrodepositing a plating metal on steel and other metallic members in which a soluble anode of the plating metal is used as an anode and the metallic member is used as a cathode, which comprises immersing said metallic member in an electrolytic solution maintained at a temperature below approximately 130° F. and comprising a non-aqueous organic solvent selected from the amide group consisting of dimethylformamide and dimethylacetamide, a salt of the plating metal soluble in said solvent, and a derivative of ethylene diamine in amount sufficient to complex substantially all of the metal ions in the solution, and passing a plating current through said solution from said anode to said metallic member.

3,131,135
ELECTROLYSIS OF ALKYL GRIGNARD-CONTAINING ELECTROLYTES

John M. Coopersmith, Olympia Fields, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Filed Jan. 23, 1961, Ser. No. 84,209
4 Claims. (Cl. 204—59)



1. In an electrolytic process employing an alkyl Grignard electrolyte wherein heat is produced during electrolysis, the method of removing heat from the electrolysis zone which comprises passing a coolant stream of alkyl halide corresponding to the alkyl Grignard electrolyte in indirect heat exchange relationship with said electrolyte.

3,131,136
PROCESS FOR PRODUCING DIHYDRO-DESOXYSTREPTOMYCINS

Hiroshi Ikeda, Keiichi Tsuji, and Kenji Shiroyanagi, Tokyo, Hatsuko Ikeda, Fujisawa-shi, Kanagawa, and Itsuo Fujimaki, Mitsuhiko Katayama, and Tomonori Sato, Tokyo, Japan, assignors to Rikagaku Kenkyusho (Institute for Physical and Chemical Research), Tokyo, Japan, a corporation of Japan

No Drawing. Filed July 14, 1959, Ser. No. 826,897
Claims priority, application Japan July 25, 1958
13 Claims. (Cl. 204—73)

1. A process for producing dihydrodesoxystreptomycins which comprises charging a container, having anode and cathode compartments separated by a diaphragm, with an aqueous solution containing acid addition salt of streptomycins as a catholyte and an aqueous solution of strong inorganic salt as an anolyte, positioning an electrode in each of the electrolytes, characteristically maintaining the pH of the catholyte at 2.0–2.5 and keeping the cathode potential approximately equal to the deposition potential of hydrogen while passing an electric current between the anode and the cathode until the salt of streptomycins in the catholyte is reduced, and recovering the corresponding dihydrodesoxystreptomycin.

3,131,137
METHOD FOR CONDUCTING AN ELECTROCHEMICAL OXIDATION

Earl B. Lancaster, Peoria, Howard F. Conway, Pekin, and Frank C. Wohlrabe, Peoria, Ill., assignors to the United States of America as represented by the Secretary of Agriculture

Original application Dec. 15, 1959, Ser. No. 859,824. Divided and this application July 19, 1962, Ser. No. 211,145
2 Claims. (Cl. 204—82)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A method of electrochemically oxidizing sodium iodate to sodium periodate at a current efficiency of about from 60 to 75 percent comprising: (*a*) introducing a solution of sodium iodate into an annular anolyte chamber of a coaxial cell, said cell comprising an outer elongated cylindrical anode, a coaxially disposed elongated cylindrical porous diaphragm within the anode, and a coaxially disposed elongated cathode within the diaphragm, said anolyte chamber being defined by the inner wall of the anode and the outer wall of the diaphragm, said inner wall and outer wall being uniformly spaced about from



0.5 to 1.0 inch apart; (*b*) continuously force-circulating the solution of sodium iodate and reaction products into and out of the anolyte chamber; and (*c*) passing a current of about from 5 to 75 amperes through the solution, the dimensions of the anode and cathode being such as to provide an anode current density of about from 0.06 to 0.078 ampere/sq. cm.

3,131,138
PRODUCTION OF GRAFT COPOLYMERS

Jean Durup, Paris, and Michel Magat, Bievres, France, assignors to Centre National de la Recherche Scientifique, Ministere de l'Education, Paris, France

No Drawing. Filed Mar. 18, 1959, Ser. No. 800,079
Claims priority, application France Aug. 28, 1958
13 Claims. (Cl. 204—154)

8. A process for the production of graft polymers from polystyrene, which comprises irradiating polystyrene with an effective dosage of high-energy ionizing radiation to form active centers while in contact with oxygen and a poly-halogenated alkane solvent capable of producing when irradiated with high energy ionizing radiation in the presence of oxygen a high yield of free radicals without undergoing a chain oxidation, and thereafter contacting the irradiated polystyrene with a monomer capable of polymerizing in the presence of free radicals and recovering the graft polymer formed.

3,131,139
RADIATION INDUCED VULCANIZATION OF RUBBER LATEX

Robert B. Mesrobian, Hinsdale, Ill., and David S. Ballantine, Blue Point, and Donald J. Metz, Stony Brook, N.Y., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Original application Aug. 28, 1959, Ser. No. 836,835. Divided and this application Jan. 31, 1963, Ser. No. 263,372
2 Claims. (Cl. 204—160)

1. A method of vulcanizing rubber latex comprising exposing a mixture containing latex and from about 15 to about 21.3 weight precent of 2,5 dichlorostyrene to about 1.1 megarads of gamma ray irradiation at a temperature ranging from about 56° C. to about 59° C. during said exposure.

3,131,140
PROCESS FOR PRODUCING AN IMPROVED ASPHALT

Herbert James Brice, Jr., Harold George Houlton, and Stuart Henry Morgan, Ashland, Ky., assignors to Ashland Oil & Refining Company, Ashland, Ky., a corporation of Kentucky

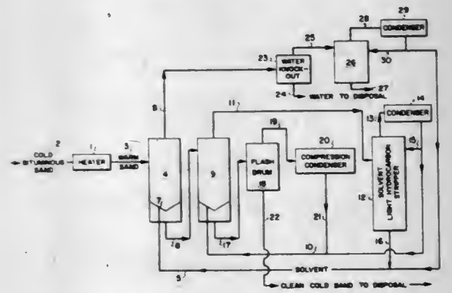
No Drawing. Filed Apr. 13, 1961, Ser. No. 102,629
14 Claims. (Cl. 208—4)

1. A process for producing an asphalt which demonstrates high adhesion to a metal surface, said process comprising, blowing a cylinder stock having a viscosity of about 110 to 190 SUS at 210° F. to a softening point of about 230° F. to 260° F. and a penetration of about 35 to 50, and fluxing the blown cylinder stock with about 5 to 20% by volume of a straight reduced asphalt having a penetration of about 70 to 100.

3,131,141
NON-AQUEOUS PROCESS FOR THE RECOVERY OF BITUMEN FROM TAR SANDS

Robert C. West, Tulsa, Okla., assignor to Jersey Production Research Company, a corporation of Delaware

Filed Sept. 7, 1961, Ser. No. 136,617
6 Claims. (Cl. 208—11)



1. An integrated multi-stage process for the removal of bitumen from tar sands which comprises heating the bitumen-containing tar sands to a temperature in the range from about 100 to 140° F., contacting the heated tar sands in an initial solvent contacting stage with a light gas oil under conditions to segregate a bitumen-gas oil phase and a sand-gas oil phase, processing the bitumen-gas oil phase to separate a phase essentially composed of bitumen, removing said sand-gas oil phase and contacting the same in a secondary solvent contacting stage with a liquefied normally gaseous hydrocarbon under conditions to segregate a sand-liquefied normally gaseous hydrocarbon phase and a gas oil-liquefied normally gaseous hydrocarbon phase, passing said latter phase to a separation zone and segregating the liquefied normally gaseous hydrocarbon from the gas oil, passing the sand liquefied normally gaseous hydrocarbon phase to a separation zone and separating sand from said liquefied normally gaseous hydrocarbon.

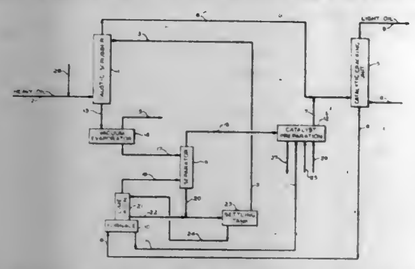
3,131,142
CATALYTIC HYDRO-CRACKING

King L. Mills, Jr., Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Oct. 13, 1961, Ser. No. 144,912
1 Claim. (Cl. 208—108)

In a process for hydrocracking a hydrocarbon oil by destructive hydrogenation comprising the steps of treating said hydrocarbon oil to be cracked with a caustic to remove the organic acids therefrom, introducing the resulting caustic batch treated hydrocarbon oil as feed into

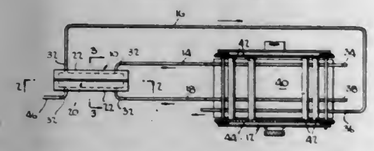
a hydrocracking zone, destructively hydrogenating said hydrocarbon oil in said hydrocracking zone in the presence of a catalyst composed of a metal salt of an organic acid, recovering the hydrocracked oil, removing a hydrocracking residue from said hydrocracking zone and burning said residue to obtain therefrom a metal oxide, the improvement which comprises utilizing as said catalyst a composition formed in situ by introduction of the organic acids removed fro mthe hydrocarbon oil feed, the metal oxide recovered from said hydrocracking zone residue and an inorganic acid into a catalyst forming zone.



3,131,143
ULTRA-FILTRATION APPARATUS AND METHOD

Andrés Ferrari, Scarsdale, N.Y., assignor to Technicon Instruments Corporation, Chauncey, N.Y., a corporation of New York

Filed Nov. 17, 1959, Ser. No. 853,488
14 Claims. (Cl. 210—22)



11. A method of ultrafiltration according to which the filter comprises semi-permeable filter material and means at opposite sides, respectively, of said filter material forming with said filter material fluid passages at said opposite sides, respectively, of the filter material for the passage of filtrate from the fluid in one of said passages into the other of said passages, said method comprising transmitting a stream of fluid to be filtered to one of said passages simultaneously with the transmission to the other of said passages of a second stream of fluid for the passage of filtrate from said first mentioned stream into the fluid of said second stream during the concurrent flow of the two streams of fluid through said passages, said second stream of fluid comprising a reagent for the treatment of said filtrate for quantitative analysis of said first mentioned fluid in respect to said filtrate, and controlling the rate of passage of said filtrate through said filter material by pumping fluid into and out of said one of the passages at different rates of flow.

3,131,144
FILTRATION PROCESS

Leo E. Nagan, Mercer Island, Wash., assignor to Nalco Chemical Company, Chicago, Ill., a corporation of Delaware

Filed May 21, 1959, Ser. No. 814,721
7 Claims. (Cl. 210—54)

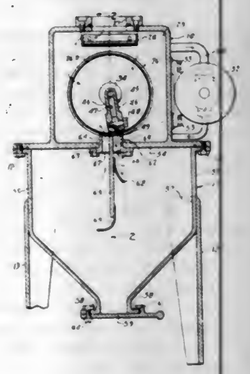
1. A process of filtering a low turbidity aqueous liquid containing finely divided suspended solids which comprises, first uniformly mixing a quantity of a water soluble cationic polymer from the group consisting of polyethyleneimines, hydrophilic alkylene polyamine polyfunctional halohydrin polymers resulting from the condensation polymerization of an alkylene polyamine and a halohydrin in an aqueous solution to a thickened sub-resinous condition short of gel formation and polymers of polyfunctional halohydrins and ammonia with a low turbidity aqueous liquid, the quantity of the polymer and the degree of mixing being adjusted so that a visible floc is not formed but the rate of filtration is increased, and thereafter before any visible floc is formed passing the thus treated mixture through a filtering zone which contains a natural filter medium from the group consisting of sand and anthracite coal.



3,131,145
FLUID FILTERING DEVICE

Oscar E. Rosaen, Grosse Pointe, Mich., assignor to The Rosaen Filter Company, Hazel Park, Mich., a corporation of Michigan

Filed Mar. 12, 1962, Ser. No. 178,815
5 Claims. (Cl. 210—195)



1. A fluid filter device comprising

(*a*) a filter housing and a collector housing connected by a common wall portion to form a closed filter chamber and a pressure sealed collecting chamber separated by said common wall portion,

(*b*) a filter assembly comprising a cylindrical filter element and being rotatably carried in said filter chamber on an axis substantially parallel with the plane of said common wall portion,

(*c*) said filter housing having an inlet opening to said filter chamber exteriorly of said filter element and an outlet opening to said filter chamber interiorly of said filter element,

(*d*) means selectively operable to rotate said filter element,

(*e*) an elongated ejector member carried in said filter housing and having a portion extending into the interior of said filter element,

(*f*) said ejector member having a longitudinal slot disposed closely adjacent a portion of the inner wall of said filter element whereby as said filter element is rotated the portion of said filter element wall adjacent said slot is changed.

(*g*) an elongated opening in said common wall portion closely adjacent and substantially parallel to said longitudinal slot.

(*h*) means operable to forcibly conduct fluid from the outlet side of said filter element through said longitudinal slot and through said elongated opening whereby fluid is ejected through said filter element into said collector housing in a direction in reverse of normal flow through said filter element, and

(*i*) a second longitudinal opening provided in said wall portion opening to the inlet side of said filter element whereby fluid is returned to the fluid system from said collector housing without loss of pressure.

3,131,146
METHOD FOR INCREASING THE PRODUCTIVITY OF A FORMATION PENETRATED BY A WELL

Edward J. Griffith, Ellisville, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Sept. 13, 1957, Ser. No. 685,358
12 Claims. (Cl. 252—8.55)

1. A method for increasing the productivity of a formation penetrated by a well which comprises introducing a dispersion containing from about 0.5 to 25% by weight of a cross-linked Kurrol's salt in water into a confined zone of said well adjacent said formation, and applying a pressure to said aqueous dispersion sufficient to fracture said formation and displace at least a part of said dispersion into said formation.

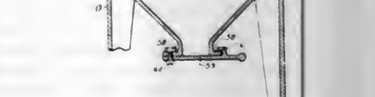
3,131,147
PROCESS FOR IMPARTING A SOFT HANDLE TO TEXTILE MATERIALS AND AQUEOUS DISPERSIONS SUITABLE THEREFOR

Armin Hiestand, Binningen, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a Swiss firm

No Drawing. Filed June 13, 1960, Ser. No. 35,430
Claims priority, application Switzerland June 16, 1959
14 Claims. (Cl. 252—8.75)

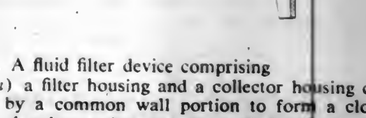
1. Process for imparting a soft handle to textile materials which comprises treating the materials with an aqueous dispersion of a mixture of compounds of the formulae

(*a*)



and

(*b*)



in which A represents a lower alkylene radical, R a higher aliphatic hydrocarbon radical, and *m* is a whole number of at most 3, the compound of Formula *a* being present in an amount of at least 20% and in an effective amount.

3,131,148
THICKENED COMPOSITIONS

Thomas A. Taulli, Florissant, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Jan. 13, 1961, Ser. No. 82,399
17 Claims. (Cl. 252—28)

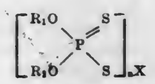
1. A composition comprising an organic liquid and an amount, sufficient to increase the viscosity of said liquid, of a finely divided, amorphous, alkaline earth metal-containing silica aerogel comprising a silica polymer having siloxy groups and containing an alkaline earth metal, selected from the group consisting of calcium and magnesium, chemically bound to a portion of said siloxy groups in said aerogel, said aerogel being further characterized in having an SiO_2 to M ratio of from about 5:1 to about 66:1, wherein M is said alkaline earth metal.

3,131,149
LUBRICANT ADDITIVE AND COMPOSITION CONTAINING SAME

Albert R. Sabol, Munster, and Eli W. Blaha, Highland, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Sept. 4, 1958, Ser. No. 758,924
15 Claims. (Cl. 252—32.7)

1. As a new composition of matter, an oil-soluble neutralized complex prepared by the process comprising reacting a high boiling hydrocarbon with from about 1% to about 50% of a phosphorus sulfide at a temperature of from about 150° F. to about 600° F. and neutralizing the unhydrolyzed reaction product at a temperature between 100° F. and 400° F. with a basic alkaline earth compound in mixture with water, from about 1 to 10 moles (per mole of alkaline earth compound) of a water-soluble monohydroxy alkanol of from 1 to about 3 carbon atoms and from about 0.1 to about 4.0 moles (per mole of phosphorus of the unhydrolyzed reaction product) of a dialkyldithiophosphorus compound having the general formula:



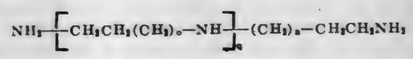
wherein R_1 and R_2 are each alkyl groups having from one to ten carbon atoms, X is selected from the class consisting of hydrogen and zinc and *n* corresponds to the valence of X.

3,131,150
LUBRICATING OIL COMPOSITIONS CONTAINING N-SUBSTITUTED ALKENYL SUCCINIMIDES IN COMBINATION WITH POLYAMINES

Frank A. Stuart, Orinda, and Robert G. Anderson, Novato, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed Apr. 12, 1961, Ser. No. 102,369
7 Claims. (Cl. 252—34.7)

1. A lubricating oil composition comprising a major proportion of an oil of lubricating viscosity, from 0.1% to 45% by weight of an N-polyamine substituted alkenyl succinimide prepared by reacting an alkenyl succinic anhydride with about an equal molar proportion of a polyamine selected from the group consisting of tetraethylene pentamine and dimethylaminopropylamine at temperatures from 220° F. to 500° F., wherein said alkenyl radical contains from 30 to about 200 carbon atoms, and from 0.01% to 2% by weight of an amine selected from the group consisting of a polyamine of the formula:



wherein *n* is a number from 0 to 1, and *q* is a number from 0 to 10, wherein the succinimide/polyamine weight ratio is from 10:1 to 75:1, and fatty acid salts thereof.

3,131,151
SYNTHETIC LUBRICANTS

Paul M. Kerschner, Mercerville, N.J., and Albert L. Meyers, New Orleans, La., assignors to Cities Service Research and Development Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Feb. 27, 1961, Ser. No. 91,579
4 Claims. (Cl. 252—49.8)

1. A synthetic lubricant composition consisting essentially of a mixture of



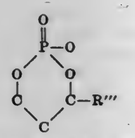
and



wherein R is an alkyl radical of from 1 to 18 carbon atoms, R_1 is an alkylene radical of from 2 to 10 carbon atoms, R_2 is a divalent aliphatic hydrocarbon radical of from 1 to 15 carbon atoms and A is selected from the group consisting of



and



wherein R′, R″ and R‴ are alkyl radicals of from 1 to 18 carbon atoms, provided that the phosphorus concentration in the total mixture is maintained within the range of 0.04 to 0.5% by weight.

3,131,152
FOAM PRODUCING FORMULATIONS

Kenneth Klausner, Belleville, N.J., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed June 13, 1960, Ser. No. 35,408
8 Claims. (Cl. 252—305)

1. An aerosol container provided with a foam-dispensing head and containing a homogeneous liquid composition for use in forming a foam of limited stability consisting essentially of, by weight, 46 to 66% saturated aliphatic monohydric alcohol containing 1 to 3 carbon atoms, 28 to 42% water, 0.5 to 5% surface active agent of the group consisting of anionic, non-ionic and cationic surface active agents and 2 to 15% liquefied normally gaseous propellant, each of the surface active agent and propellant being soluble in either the alcohol or water but not in both, said composition being confined in the container under the vapor pressure of the propellant.

3,131,153
FOAM PRODUCING COMPOSITIONS

Kenneth Klausner, Belleville, N.J., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Oct. 25, 1961, Ser. No. 147,445
6 Claims. (Cl. 252—305)

1. An aerosol container provided with a foam-dispensing head and containing a homogeneous liquid composition for use in forming a foam, which foam does not become completely liquefied when exposed to the atmosphere for at least about 15 minutes but, when disturbed, reverts quickly to a liquid, consisting essentially of, by weight, (1) 26 to 64% of a member of the group consisting of saturated aliphatic monohydric alcohols containing 1 to 3 carbon atoms and dialkyl ketones in which the alkyl groups contain 1 to 3 carbon atoms, (2) 28 to 64% of a member of the group consisting of glycerol, monoalkylene glycols in which the alkylene group contains 2 to 4 carbon atoms and polyalkylene glycols in which the alkylene groups contain 2 to 4 carbon atoms, (3) 0.5 to 5% of an organic non-ionic surface active agent, and (4) 2 to 30% of a propellant of the group consisting of liquefied normally gaseous saturated aliphatic hydrocarbons and halogenated saturated aliphatic hydrocarbons, the surface active agent being soluble in one of (1) and (2) but not in both and the propellant being soluble in one of (1) and (2) and having a solubility not exceeding 15% by weight in the other solvent, said composition being confined in the container under the vapor pressure of the propellant.

3,131,154
FOAM PRODUCING COMPOSITIONS

Kenneth Klausner, Belleville, N.J., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Oct. 25, 1961, Ser. No. 147,452
6 Claims. (Cl. 252—305)

1. An aerosol container provided with a foam dispensing head and containing a homogeneous liquid composition for use in forming a foam, which foam does not become completely liquefied when exposed to the atmosphere for at least about 15 minutes but, when disturbed, reverts quickly to a liquid, consisting essentially of, by weight, (1) 46 to 66% of a member of the group consisting of acetone, acetonyl acetone, diacetone alcohol and water-miscible monoalkyl ethers of ethylene glycol and diethylene glycol, (2) 28 to 42% of water, (3) 0.5 to 5% of an organic non-ionic surface active agent, and (4) 2 to 15% of a propellant of the group consisting of liquefied normally gaseous saturated aliphatic hydrocarbons and halogenated saturated aliphatic hydrocarbons, each of the surface active agent and propellant being soluble in one of (1) and (2) but not in both, said composition being confined in the container under the vapor pressure of the propellant.

3,131,155
CATALYST SYSTEM FOR LINEAR AND CYCLIC POLYMERIZATION OF MONO SUBSTITUTED ACETYLENES

Lionel B. Luttinger, Stamford, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Oct. 6, 1959, Ser. No. 844,632
6 Claims. (Cl. 252—428)

1. A new catalyst composition comprising a mixture of (1) an organic transition metal complex represented by the general formula:

$$[M(R_2Y)_p]_mX_n$$

where m and n are integers of from 1 to 4, inclusive, and when M is osmium, m and n are integers of from 1 to 6, inclusive; p is an integer from 1 to 6 inclusive and, when M is osmium, p is an integer from 1 to 8, inclusive; M represents a metal selected from the class consisting of nickel, cobalt, palladium, platinum, rhodium, iridium, ruthenium and osmium; R represents at least one member selected from the class consisting of alkyl, aryl and cyanoalkyl radicals; Y represents an element selected from the class consisting of phosphorous, arsensic, antimony and bismuth; X is an anion; and (2) a hydridic reducing agent having at least one metal to hydridic hydrogen bond wherein said hydric hydrogen atom is attached to some other atom by a bond which is polarized so that the hydrogen atom is negatively charged.

3,131,156
PREPARATION OF A SILICA-ALUMINA CRACKING CATALYST

Charles P. Wilson, Jr., Cincinnati, Ohio, and Frank G. Ciapetta, Silver Spring, and James W. Elston, Jr., Baltimore, Md., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed Oct. 21, 1960, Ser. No. 63,982
6 Claims. (Cl. 252—455)

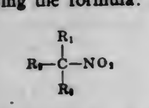
1. A process for preparing a silica-alumina hydrocarbon cracking catalyst which comprises providing an alkali metal silicate solution having a silica to alkali metal oxide ratio of about 3:1 to 3.4:1, contacting said silicate solution with carbon dioxide in an amount sufficient to convert substantially all of the free alkali in the silicate to alkali metal carbonate and form a silica hydrogel containing dissolved carbonate, preparing a basic aluminum sulfate sol by adjusting an aluminum sulfate solution containing sufficient alumina to give about 25% active alumina in the final catalyst to a pH of about 3.7 with calcium carbonate, commingling the silica hydrogel with said sol thus reacting substantially completely with the residual sodium carbonate and thereby precipitating the basic aluminum sulfate as alumina and purifying and drying the resulting composite.

3,131,157
LIQUID RESINOUS COMPOSITION COMPRISING MELAMINE FORMALDEHYDE CONDENSATE AND NITRO COMPOUNDS

Joseph B. Hyman, Plainfield, Stanley Kordzinski, Old Bridge, and Charles Tyler Bills, South Plainfield, N.J., assignors to Catalin Corporation of America, a corporation of Delaware

No Drawing. Filed Oct. 5, 1960, Ser. No. 60,589
7 Claims. (Cl. 260—29.4)

1. An improved liquid resinous composition which comprises a mixture of a melamine-formaldehyde condensate of 1 mol melamine and from about 1.5 to 4.5 mols formaldehyde and from about 0.5% to about 13%, based on the weight of said condensate, of an organic nitro compound having the formula:



wherein R_1 is selected from the group consisting of hydrogen and methylol, R_2 is selected from the group consisting of hydrogen and C_nH_{2n+1}, R_3 is selected from the group consisting of hydrogen, methylol and C_nH_{2n+1}, and n is a number from 1 to 12, said mixture having an alkaline pH.

3,131,158
SOUND DAMPING COMPOSITION COMPRISING STYRENE-BUTADIENE-ACRYLIC ACID POLYMER

Woodrow E. Kemp, Pittsburgh, and John J. Lane, Murrysville, Pa., assignors to Koppers Company, Inc., a corporation of Delaware

No Drawing. Filed Oct. 11, 1960, Ser. No. 61,845
2 Claims. (Cl. 260—29.7)

1. A sound damping composition comprising:

an aqueous emulsion having from 40–98 percent by weight of a material formed by the copolymerization of

40 to 60 %styrene,

30 to 50% butadiene, and

from 0.5 to 10% of acrylic acid, and having added thereto,

from 1 to 20% by weight of said emulsion of a softener selected from the class consisting of 2-ethoxyethyl acetate, 2-butoxyethanol and 2-[(2-butoxy)ethoxy]-ethanol, and

from 1 to 10% by weight of said emulsion of an emulsion stabilizer selected from the class consisting of isooctylphenyl ethylene oxide, and dioctyl sodium sulfosuccinate, and the addition of from 0.2 to 60% based on the weight of the emulsion of a sound damping fibrous material selected from the group consisting of sort fibered asbestos, cork, ground glass fibers, and mica.

3,131,159
MIXTURE OF A SULFOCHLORINATED ALPHA-OLEFIN POLYMER AND A SULFOCHLORINATED HYDROCARBON

Ludwig Orthner, Frankfurt am Main, Martin Reuter, Kronberg, Taunus, Franz Landauer and Ernst Junghanns, Frankfurt am Main, and Erich Schmidt, Schonberg, Taunus, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

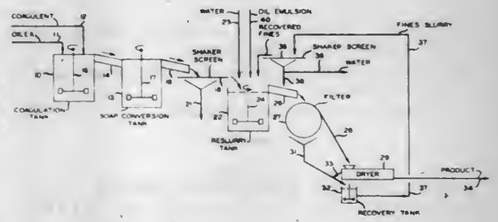
No Drawing. Filed May 24, 1960, Ser. No. 31,258
Claims priority, application Germany May 29, 1959
10 Claims. (Cl. 260—30.8)

1. As a new composition of matter having good tackiness (*a*) a sulfochlorinated polymer consisting of alpha-olefins of 2–6 carbon atoms, which is mixed with (*b*) 1–20% by weight of a sulfochlorinated hydrocarbon, said hydrocarbon being selected from the group consisting of an aliphatic hydrocarbon of 10–30 carbon atoms, an alkylbenzene having from 4–19 side chain carbon atoms, and a cycloaliphatic hydrocarbon containing 5–6 carbon atoms in the ring and having from 3–10 carbon atoms in the form of side chains.

3,131,160
AGGLOMERATION OF FINE RUBBER PARTICLES

James W. Alexander and Charles L. Davis, Borger, Tex., assignors to Phillips Petroleum Company, a corporation of Delaware

Filed Oct. 3, 1960, Ser. No. 59,881
7 Claims. (Cl. 260—33.6)



1. In a process for preparing dry rubbery diene polymer compositions containing oil wherein a rubbery diene polymer crumb containing oil is washed in a reslurry zone with water, water containing rubbery diene polymer fines is separated from said crumb, said separated rubbery diene polymer crumb is passed into a drying zone, and dry rubbery diene polymer crumb and water containing rubbery diene polymer fines are separately recovered from said drying zone, the improvement which comprises separating fines from said water separated from said rubbery diene polymer crumb and from said water recovered from said drying zone; passing said fines into said reslurry zone containing said rubbery diene polymer crumb and water; introducing an emulsion of rubber extender oil in water into said reslurry zone; and agitating the resulting mixture.

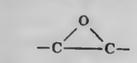
3,131,161
SILICONE RUBBER CONTAINING AN EPOXIDE COMPOUND

Siegfried Nitzsche and Manfred Wick, Burghausen, Bavaria, Germany, assignors to Wacker-Chemie G.m.b.H., Bavaria, Germany

No Drawing. Filed Feb. 13, 1961, Ser. No. 88,625
Claims priority, application Germany Feb. 25, 1960
7 Claims. (Cl. 260—37)

1. A silicone rubber stock consisting essentially of (A) 100 parts by weight of a linear diorganosiloxane polymer wherein the organic substituents bonded to silicon are monovalent radicals selected from the group consisting of hydrocarbon radicals and halogenohydrocarbon radicals, said polymers having a viscosity of at least 50,000 cs. at 25° C., (B) 20 to 200 parts by weight of a reinforging inorganic filler having a maximum average particle size of 1 micron and a minimum surface area of 100 square meters per gram, and (C) 0.5 to 10 parts by weight of an epoxide compound selected from the group consisting of

(1) silanes of the formula $A_bR'_cSiX_{4-b-c}$ wherein each A is an organic radical bonded to silicon by C—Si linkage and containing one or more



radicals, the remaining atoms in A being selected from the group consisting of carbon, hydrogen, carbon bonded halogen atoms and oxygen atoms in the form of ether linkages and hydroxyl groups, each R′ is selected from the group consisting of hydrogen atoms and monovalent hydrocarbon and monovalent halogenohydrocarbon radicals, each X is a substituent selected from the group consisting of hydroxyl radicals, monovalent hydrocarbonoxy radicals and monovalent halogeno hydrocarbonoxy radicals, b is an integer from 1 to 4 inclusive, and c is an integer from 0 to 3 inclusive;

(2) siloxanes of the unit formula

$$A_fR'_gSiO_{\frac{4-f-g}{2}}$$

wherein A and R′ are as above defined, f is an integer from 1 to 3 inclusive and g is an integer from 0 to 2 inclusive;

(3) reaction products of a polyhydric phenol and a poly-functional epichlorohydrin;

(4) reaction products of a polyhydric phenol and a polyepoxide; and

(5) ethers containing epoxide groups.

3,131,162
COPOLYMER OF MONOVINYL ETHER OF A GLYCOL AND VINYL ESTER OF ACETIC ACID AND VULCANIZATE THEREOF

George B. Sterling and Robert L. Zimmerman, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Nov. 3, 1960, Ser. No. 66,899
13 Claims. (Cl. 260—41)

9. A vulcanized synthetic rubber made by compounding together a copolymer of a monovinyl ether represented by the general formula $HO—(C_nH_{2n}O—)_xCH=CH_2$ in which n is a positive integer from 2 to 4 and in which x is a positive integer from 1 to 3, and a vinyl ester of a saturated fatty acid having a chain length of up to 6 carbon atoms there being present in the copolymer in polymerized form about 40 percent to about 90 percent of the monovinyl ether and about 10 percent to about 60 percent of the vinyl ester, rubber-vulcanizing agents, and a reinforcing filler, and heating the resulting composition at curing temperature until the composition is substantially vulcanized.

3,131,163
PROCESS OF POLYMERIZATION OF ACRYLONITRILE IN THE PRESENCE OF ITACONIC ANHYDRIDE POLYMER

Gaetano F. D'Alelio and Andreas A. Hunyar, South Bend, Ind., assignors to Von Kohorn Constructora, S.A., Panama, Panama, a corporation of Panama

No Drawing. Filed May 9, 1961, Ser. No. 108,719
15 Claims. (Cl. 260—45.5)

1. A process for preparing acrylonitrile copolymers of improved color and of improved dye receptivity, comprising the step of polymerizing a polymerizable mass comprising a monomer portion, comprising acrylonitrile monomer, and a preformed polymer, said preformed polymer containing at least 10 percent by weight of itaconic anhydride moiety therein, said monomer portion and said preformed polymer being dissolved in dimethyl acetamide, said polymerization being effected in the presence of 0.1–0.7 percent by weight of potassium persulfate based on the weight of said monomer portion, while maintaining said dimethyl acetamide solution at a temperature in the range of 35–55° C. until at least 30 percent by weight of said acrylonitrile monomer has been converted to polymer having a molecular weight of at least 40,000, said dimethyl acetamide solution initially comprising 25–35 percent by weight of said monomer portion, said acrylonitrile monomer comprising at least 85 percent by weight of the combined weight of said monomer portion and said preformed itaconic anhydride moiety polymer, and the itaconic anhydride moiety portion of said preformed polymer comprising 0.1–10 percent by weight of the combined weight of said monomer portion and said preformed polymer.

3,131,164
POLYMER COMPOSITIONS STABILIZED WITH BORON COMPOUNDS

Marshall E. Doyle, Alameda, and Gunter S. Jaffe, Oakland, Calif., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed July 29, 1960, Ser. No. 46,105
13 Claims. (Cl. 260—45.8)

1. A composition comprising a normally solid polymer selected from the group consisting of homopolymers of an alpha-monoolefin and copolymers of mixtures of alpha-monoolefins with each other, having incorporated therein a stabilizing amount of an organo-boron compound selected from the group consisting of (A) esters of oxy-acids of boron containing as substituents only hydrocarbon radicals selected from the group consisting of alkyl, cycloalkyl, aralkyl, aryl, and alkaryl, (B) boronic acids containing as substituents only hydrocarbon radicals selected from the group consisting of alkyl and aryl and (C) borinic acids containing as substituents only hydrocarbon radicals selected from the group consisting of alkyl and aryl, wherein at least one of the said hydrocarbon radicals of the organo-boron compound contains not less than six carbon atoms.

3,131,165
AMIDE STABILIZED FORMALDEHYDE POLYMERS AND PROCESS FOR PREPARING SAME

Hans Dieter Hermann and Edgar Fischer, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Oct. 22, 1959, Ser. No. 847,871
Claims priority, application Germany Nov. 3, 1958
11 Claims. (Cl. 260—45.9)

1. A composition of matter comprising a polymeric formaldehyde decomposing to an extent of less than 80 percent by weight within 30 minutes at 200° C., and between about 0.01 and about 10 percent, by weight of the polymeric formaldehyde, of at least one stabilizer

critically having at least two —CONH— groups and selected from the group consisting essentially of polyacrylamide, oxalic acid diamide, and compounds of the formula $R(CONHR_1)_n$ wherein R is a polyvalent radical selected from the group consisting of (1) hydrocarbon nuclei, (2) heterohydrocarbon chains interrupted by a member of the group consisting of nitrogen, oxygen, and sulfur atoms, and (3) 5- and 6-membered heterohydrocarbon rings interrupted by a member of the group consisting of nitrogen and oxygen atoms, any substituents on said radical R being selected solely from the group consisting of keto, amino, halo, hydroxy, nitro, and alkoxyphenyl groups, R_1 is a member selected from the group consisting of hydrogen and hydrocarbon nuclei, any substituents on said radical R_1 being selected solely from the group consisting of halo, hydroxy, and nitro groups, R_1 having a molecular weight up to 500, and n is a whole number from 2 to 4.

3,131,166
2-PHENOXYETHYL VINYL ETHERS AND POLYMERIZATION PRODUCTS THEREOF

Thomas M. Harris, South Charleston, and John W. Lynn, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 27, 1960, Ser. No. 78,273
3 Claims. (Cl. 260—47)

2. A copolymer of 2-(2′,4′,5′-trichlorophenoxy)ethyl vinyl ether and vinyl chloride.

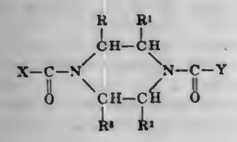
3. A copolymer of 2-(3′,5′-dimethylphenoxy)ethyl vinyl ether and vinyl chloride.

3,131,167
LINEAR POLYUREAS FROM A PIPERAZINE 1,4 DI-CARBONYL HALIDE AND A DIAMINE CONTAINING ETHER

Robert J. Cotter, New Brunswick, N.J., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 31, 1959, Ser. No. 863,091
14 Claims. (Cl. 260—77.5)

4. Process for the preparation of a thermoplastic, crystalline, linear polyurea which consists essentially of reacting, at a temperature of from about 0° C. to about 150° C. and in an aqueous medium, a mixture containing an organic diluent, a piperazine-1,4-di-carbonyl halide having the general formula:



wherein X and Y are halogen atoms, R, R^1, R^2 and R^3 are selected from the group consisting of hydrogen and monovalent hydrocarbon radicals, an organic diamine having the general formula:

$$NH_2—R^4—NH_2$$

wherein R^4 is a member selected from the group consisting of divalent hydrocarbon radicals and divalent hydrocarbon radicals united by an oxygen atom, said organic diamine being present in an amount of at least about 90 percent of stoichiometric, and a base which is capable of reacting with the free hydrogen halide present in the reaction mixture to produce the corresponding salt, said base being present in an amount sufficient to neutralize substantially all of the free hydrogen halide present in said mixture, for a period of time sufficient to produce a thermoplastic polyurea.

3,131,168
PROCESS FOR THE MANUFACTURE OF POUR DEPRESSANTS FOR MIDDLE DISTILLATE FUELS

Stephan Ilnicykyj and John L. Tiedje, Sarnia, Ontario, Canada, assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Jan. 5, 1960, Ser. No. 593
1 Claim. (Cl. 260—87.3)

Process for the manufacture of a pour depressant consisting essentially of a copolymer of ethylene and vinyl acetate, which copolymer has a molecular weight in the range from about 1500 to 2200 as determined by Rast's method, and is characterized by containing from about 15 to 28% by weight of vinyl acetate which comprises purging a reaction zone with nitrogen and thereafter introducing about 220 parts by weight of benzene into a reaction zone, heating the benzene to a temperature of about 300° F., thereafter pressuring said reaction zone with ethylene to about 900 pounds, thereafter continuously adding about 55 parts by weight of vinyl acetate over a reaction time period of about two hours and also continuously adding over a reaction time period of about three hours about 22 parts by weight of a benzene solution containing about 25% by weight of di-tertiary-butyl-peroxide while maintaining said reaction zone at the conditions specified to produce said copolymer, whereby about 310 parts by weight to 142 parts by weight of ethylene will react with said 55 parts by weight of vinyl acetate.

3,131,169
POLYMERIZATION PROCESS

Charles J. Norton, Denver, Colo., and Paul N. Rylander, Newark, N.J., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Nov. 13, 1961, Ser. No. 152,090
12 Claims. (Cl. 260—88.2)

1. Poly-(1,1-dicyclopropylethene).

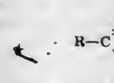
2. As a new composition of matter, an interpolymer of 1,1-dicyclopropylethene and a tertiary olefin having the formula $R_2C=CR'_2$ wherein each R is an alkyl group and each R′ is selected from the group consisting of hydrogen and alkyl, said olefin having from 4 to 10 carbon atoms in the molecule.

3,131,170
POLYMERIC 1,2,4-OXADIAZOLES

Fred C. Schaefer, Darien, and Mary E. Castellion, Stamford, Conn., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Original application Oct. 7, 1960, Ser. No. 61,085. Divided and this application Aug. 8, 1962, Ser. No. 215,517
3 Claims. (Cl. 260—88.3)

1. Homopolymers of 1,2,4-oxadiazoles represented by the structure:



wherein R is a radical selected from the group consisting of vinyl and isopropenyl and R′ is a radical selected from the group consisting of hydrogen and lower alkyl of from 1 to 4 carbon atoms.

3,131,171
CATALYST FOR THE POLYMERIZATION OF OLEFINS CONTAINING THE PRODUCT OF A TITANIUM HALIDE AND AN ORGANOALUMINUM COMPOUND MIXED WITH A LOWER ALKYL HALIDE SOLUTION OF ALUMINUM CHLORIDE

John D. Calfee, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Nov. 14, 1958, Ser. No. 773,821
11 Claims. (Cl. 260—93.5)

9. The process for the polymerization of at least one ethylenically unsaturated mono-olefin hydrocarbon having from 2 to 8 carbon atoms in the monomer molecule at a reaction temperature below about 35° C. which comprises contacting said mono-olefin with a catalyst prepared by mixing

(*a*) the product obtained by the interaction of 1 mole of a titanium chloride with from 0.25 mole to 4.0 moles of an aluminum compound selected from the group consisting of R_3Al, R_2AlCl, $RAlCl_2$, and mixtures of R_2AlCl and $RAlCl_2$, where R is an alkyl radical, and

(*b*) from 0.02 to 2.0 moles of aluminum chloride in solution in a lower alkyl halide.

3,131,172
HOMOPOLYMERIZATION OF ACETYLENE WITH FERRIC CHLORIDE AS CATALYST

William G. Carpenter, Stamford, Conn., assignor to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Filed Nov. 9, 1962, Ser. No. 236,698
3 Claims. (Cl. 260—94.1)

1. A process for homopolymerizing acetylene comprising heating monomeric acetylene in the presence of ferric chloride dissolved in an inert organic solvent at a temperature of at least 110° C. and at a pressure of at least 185 lbs./sq. in.

3,131,173
POLYMERIZATION OF ETHYLENE UTILIZING A CATALYST CONSISTING OF A POLYHALO METHYL COMPOUND

George A. Mortimer, La Marque, Tex., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Nov. 21, 1960, Ser. No. 70,452
8 Claims. (Cl. 260—94.9)

1. A process for producing normally solid polymers of ethylene which comprises polymerizing ethylene in the absence of any liquid diluent at a temperature from about 100° C. to about 400° C. and at a pressure of from about 5,000 p.s.i. to about 50,000 p.s.i. with a catalyst consisting essentially of a polyhalomethyl compound containing three halogens on the methyl carbon, one of which is chlorine, said compound being present in an amount from about 0.001% to about 5.0% by weight of the ethylene to be polymerized.

3,131,174
N^G TOSYL ARGININE AND PEPTIDE SYNTHESIS THEREWITH

Robert Schwyzer, Riehen, Switzerland, assignor to Ciba Corporation, a corporation of Delaware

No Drawing. Filed Aug. 19, 1959, Ser. No. 834,635
Claims priority, application Switzerland Sept. 5, 1958
5 Claims. (Cl. 260—112)

1. α-Amino-protected peptides containing an arginyl radical in which the guanidino group is substituted by a p-toluenesulfonyl radical and the α-amino group is substituted by a member selected from the group consisting of a carbobenzoxy group, a p-phenyl-azobenzyloxy-carbonyl group, a p-naphthyl-azobenzyloxy-carbonyl group, a p-(p'-methoxy-phenylazo)carbonyl group, a benzyl group, a p-nitrobenzyl group and a p-halogen benzyl group.

4. N^G-tosyl-L-arginine.

5. N^G-tosyl-L-arginine-peptides.

3,131,175
PROCESS OF PREPARING LICORICE ROOT EXTRACT

Samuel I. Kalkstein, Moorestown, N.J., assignor to Chemicals & Phosphates Limited

No Drawing. Filed June 7, 1961, Ser. No. 115,293
5 Claims. (Cl. 260—210)

1. The process of preparing an aqueous solution of licorice extract from ground licorice root fiber and water whereby the albuminoid protein component of licorice root is denatured and precipitated within the root, the steps comprising

bringing the ground licorice root fiber and water together so that the initial contact of the root with the water occurs at a temperature in excess of 166° F. and under a pressure not greater than 40 p.s.i.

maintaining the mixture of licorice root fiber and water at a temperature in excess of 166° F. and under a pressure not greater than 40 p.s.i. for a period of time sufficient to insure that the entire mass of dispersed root fiber in the water is raised above the critical denaturing temperature before the protein component can be removed from the root fiber as part of the aqueous solution, and

separating the aqueous solution of licorice extract from the licorice root residue by clarification of the mixture, the precipitated protein remaining, dispersed and held in the root residue.

3,131,176
MANUFACTURE OF WATER-SOLUBLE HYDROXYALKYL CELLULOSE ETHERS

Eugene D. Klug, Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Apr. 13, 1960, Ser. No. 21,867
16 Claims. (Cl. 260—231)

1. Process of preparing water-soluble hydroxyalkyl cellulose ethers comprising (1) a first stage wherein cellulose is hydroxyalkylated in the presence of an alkali and water to an MS not exceeding 0.8, and alkali and other impurities are removed, the amount of alkali removed being at least enough to leave only that amount specified for the second stage, the alkali/cellulose and water/cellulose ratios being 0.2/1–0.8/1 and 0.8/1–4.0/1, respectively, (2) a second stage wherein hydroxyalkylation of the resulting partially hydroxyalkylated and purified cellulose is continued in the presence of alkali using an alkali/hydroxyalkyl cellulose ratio of 0.005/1–0.1/1 and a water/hydroxyalkyl cellulose ratio of 1/1–20/1.

3,131,177
MANUFACTURE OF WATER-SOLUBLE HYDROXYALKYL CELLULOSE ETHERS

Eugene D. Klug, Wilmington, Del., and William D. Roberson, Hopewell, Va., assignors to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Apr. 13, 1960, Ser. No. 21,868
7 Claims. (Cl. 260—231)

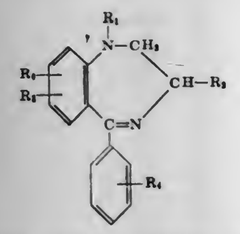
1. Process of preparing water-soluble hydroxyalkyl cellulose ethers in the presence of a substantially water-miscible ketone comprising hydroxyalkylating cellulose to an MS not exceeding 1.0 in the presence of an alkali and water, the alkali/cellulose and water/cellulose ratios being 0.2/1–0.8/1 and 0.8/1–4.0/1, respectively, neutralizing 70%–98% of the alkali, continuing the hydroxyalkylation in the presence of the remaining alkali and the resulting neutralization product to an MS of about 1.5–3.0 employing a water/hydroxyalkyl cellulose ratio of 1/1–20/1.

3,131,178
PROCESS FOR PRODUCING 5-PHENYL-1,2-DIHYDRO-3H-1,4-BENZODIAZEPINES

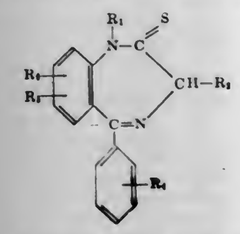
Giles A. Archer, Essex Fells, and Leo Henryk Sternbach, Upper Montclair, N.J., assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed June 21, 1962, Ser. No. 204,061
3 Claims. (Cl. 260—239)

1. A process for the preparation of a compound of the formula:



which comprises treating a compound of the formula



wherein R_1 is selected from the group consisting of hydrogen, lower alkyl and lower alkenyl; R_2 is selected from the group consisting of hydrogen and lower alkyl; R_4, R_5 and R_6 are selected from the group consisting of hydrogen, halogen, trifluoromethyl, amino, lower alkanoylamino, lower alkoxy, hydroxy, lower alkyl, cyano, carboxy, carbo-lower alkoxy, carbamyl and di-lower alkylamino;

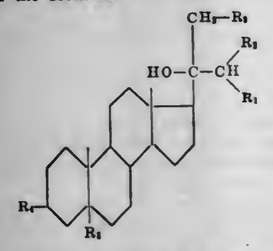
with Raney nickel.

3,131,179
NEW HETEROCYCLICALLY SUBSTITUTED STEROIDS

Karl Hoffmann and Jules Heer, Binningen, Switzerland, assignors to Ciba Corporation, a corporation of Delaware

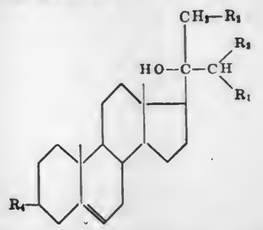
No Drawing. Filed Oct. 1, 1957, Ser. No. 687,370
Claims priority, application Switzerland Oct. 3, 1956
18 Claims. (Cl. 260—239.5)

17. A member selected from the group consisting of a compound of the formula



in which R_1 represents a member selected from the group consisting of hydrogen and lower alkyl, R_2 represents a member selected from the group consisting of 2-pyridyl, 2-piperidyl, R-(N-lower alkyl)-piperidyl and 2-(N-acyl)-piperidyl, R_3 represents a member selected from the group consisting of hydrogen, hydroxy and acyloxy, R_4 represents a member selected from the group consisting of hydrogen and hydroxy, and hydrogen and acyloxy, and R_5 represents a member selected from the group consisting of α-positioned hydrogen and β-positioned hydrogen, the acyl radical mentioned being derived from an organic acid containing 1–20 carbon atoms and therapeutically useful acid addition salts thereof.

18. A member selected from the group consisting of a compound of the formula



in which R_1 represents a member selected from the group consisting of hydrogen and lower alkyl, R_2 represents a member selected from the group consisting of 2-pyridyl, 2-piperidyl, 2-(N-lower alkyl)-piperidyl and 2-(N-acyl)-piperidyl and each of the symbols R_3 and R_4 represents a member selected from the group consisting of hydroxy and acyloxy, the acyl radical being derived from an organic acid containing 1–20 carbon atoms and therapeutically useful acid addition salts thereof.

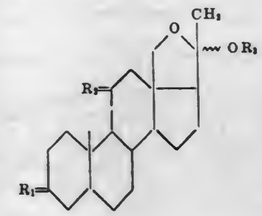
3,131,180
PROCESS FOR THE MANUFACTURE OF HYDROXYPREGNANES AND FUNCTIONAL DERIVATIVES THEREOF

Oskar Jeger and Kurt Schaffner, Zurich, Switzerland, assignors to Ciba Corporation, a corporation of Delaware

No Drawing. Filed Dec. 21, 1960, Ser. No. 77,287
Claims priority, application Switzerland Dec. 23, 1959
7 Claims. (Cl. 260—239.55)

1. Process for the manufacture of 21-unsubstituted 18:20-oxido-pregnane compounds, wherein a member selected from the group consisting of a saturated and an unsaturated 20-oxo-pregnane compound, which in 21-position contains a member selected from the group consisting of an esterified hydroxyl group, an etherified hydroxyl group and a halogen atom, is irradiated with ultraviolet light in an organic solvent and there is isolated the 21-unsubstituted 18:20-oxido compound.

7. A member selected from the group consisting of a compound of the formula:



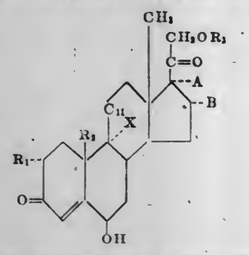
wherein R_1 is a lower alkylenedioxy group, R_2 a member selected from the group consisting of a hydrogen atom together with an esterified hydroxyl group and two hydrogen atoms and R_3 is a lower alkyl group, and its derivatives having a double bond in the 5,6-position.

3,131,181
METHOD OF PREPARING 6-HYDROXY PREGNENES AND PREGNADIENES AND PRODUCTS RESULTING THEREFROM

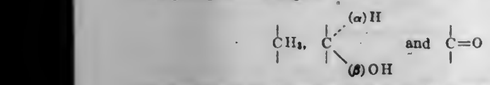
John P. Dusza, Nanuet, and Seymour Bernstein, New City, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed May 29, 1961, Ser. No. 113,062
9 Claims. (Cl. 260—239.55)

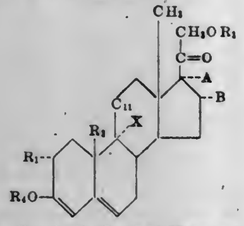
1. A method of preparing compounds of the formula:



wherein R_1 is selected from the group consisting of hydrogen and lower alkyl radicals, R_2 is selected from the group consisting of hydrogen and methyl radicals, R_3 is selected from the group consisting of hydrogen and lower alkanoyl radicals, A is selected from the group consisting of hydrogen and hydroxyl radicals, B is selected from the group consisting of hydrogen, hydroxyl and lower alkanoyloxy radicals and when A is hydroxyl B is selected from the group consisting of hydrogen and lower alkanoyloxy radicals and A and B when taken together form a lower alkylidenedioxy radical, C_{11} is selected from the group consisting of



radicals and X is selected from the group consisting of hydrogen and fluorine radicals which comprises reacting a steroid enol ether of the formula:



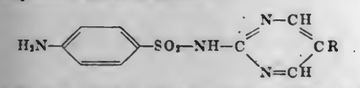
wherein R_1, R_2, R_3, A, B, C_{11} and X are as defined above and R_4 is a lower alkyl radical, with a peracid selected from the group consisting of monoperphthalic, perbenzoic and performic acids.

3,131,182
METHOD OF PREPARING SULPHANYL-AMIDO-PYRIMIDINE

Aldo Garzia, Milan, Italy, assignor to Istituto Chemioterapico Italiano S.p.A., Milan, Italy

No Drawing. Filed Jan. 17, 1962, Ser. No. 166,931
Claims priority, application Italy Sept. 8, 1961
3 Claims. (Cl. 260—239.75)

1. In a process for preparing a sulphanyl-amido-pyrimidine compound of the formula



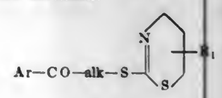
wherein R is a member of the group consisting of a hydrogen atom and an alkyl radical, and wherein p-amino-benzene-sulphoguanidine is condensed with an N-dialkyl-substituted beta-aminoacrolein at a temperature of the order of 60° C. to 90° C. in the presence of an alkali metal alcoholate thereby forming a sulphanyl-amido-pyrimidine salt, the improvement which comprises the steps of carrying out said condensation in a water-immiscible, alcoholic solvent, extracting the condensation mixture with water wherein said sulphanyl-amido-pyrimidine salt is dissolved in the water and unreacted p-amino-benzene-sulphoguanidine remains in said alcoholic solvent, and precipitating substantially pure sulphanyl-amido-pyrimidine product from the aqueous extract by acidifying the latter.

3,131,183
2-ACYLALKYLMERCAPTO-5:6-DIHYDRO-1:3:4-THIAZINE

Karl Hoffmann, Binningen, and Alfred Hunger, Basel, Switzerland, assignors to Ciba Corporation, a corporation of Delaware

No Drawing. Filed Oct. 10, 1961, Ser. No. 144,041
Claims priority, application Switzerland Oct. 28, 1960
9 Claims. (Cl. 260—243)

1. A member selected from the group consisting of a compound of the formula:



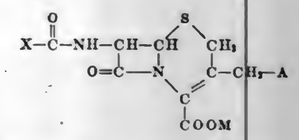
in which R_1 is a member selected from the group consisting of hydrogen, lower alkyl, phenyl, lower alkyl-phenyl, hydroxy-phenyl, lower alkoxy-phenyl, mercapto-phenyl, lower alkyl-mercapto-phenyl, lower alkylenedioxy-phenyl, lower alkanoyloxy-phenyl, lower alkoxy-carbonyloxy-phenyl, lower alkanoyl-phenyl, halogeno-phenyl, halogeno-lower alkyl-phenyl, nitro-phenyl and di-lower alkyl-amino-phenyl, Ar is a member selected from the group consisting of phenyl, halogeno-phenyl, nitro-phenyl, lower alkyl-phenyl, lower alkoxy-phenyl and lower alkyl-mercapto-phenyl, and alk is a member selected from the group of straight alkylene and branched alkylene having at most six carbon atoms, and a pharmaceutically acceptable acid addition salt thereof.

3,131,184
DERIVATIVES OF 7-AMINOCEPHALOSPORANIC ACID

Alfred W. Chow, Merchantville, N.J., and John R. E. Hoover, Glenside, Pa., assignors to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Dec. 27, 1961, Ser. No. 162,573
15 Claims. (Cl. 260—243)

1. Compounds of the formula:

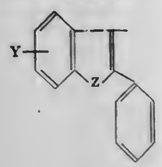


wherein

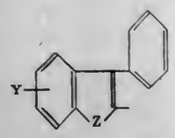
A is a member selected from the group consisting of hydrogen, hydroxyl, lower alkanoyloxy, benzoyloxy, pyridinium, and when taken together with M, a monovalent carbon-oxygen bond;

M is the cation form of a member selected from the group consisting of hydrogen, sodium, potassium, calcium, lower alkyl amine and procaine, an anionic charge when A is pyridinium, and when taken together with A, a monovalent carbon-oxygen bond;

and X is an aromatic nucleus having a structure selected from the group consisting of:

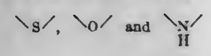


and



wherein

Z is a member selected from the group consisting of



and

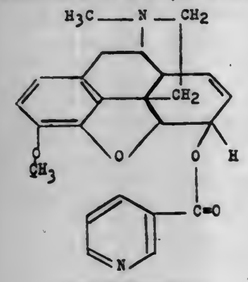
Y is a member selected from the group consisting of hydrogen, halogen, lower alkyl, lower alkoxy, and nitro.

3,131,185
NICOTINIC ESTERS OF HYDROXYL DERIVATIVES OF THE PHENANTHRENIC ALKALOIDS OF OPIUM, AND PROCESS FOR THE PREPARATION OF THESE ESTERS

Louis Lafon, Paris, France, assignor to Societe Anonyme dite: Orsymonde, Paris, France

No Drawing. Filed Feb. 15, 1960, Ser. No. 8,534
Claims priority, application France Mar. 18, 1959
7 Claims. (Cl. 260—247.2)

4. The nicotinic ester of codeine, of the formula

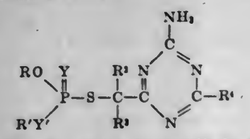


3,131,186
UNSYMMETRICALLY SUBSTITUTED TRIAZINYL ALKYL PHOSPHATES

Richard J. Magee, Princeton, and Frank A. Wagner, Jr., Belle Mead, N.J., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Filed July 19, 1962, Ser. No. 211,118
6 Claims. (Cl. 260—249.5)

1. Unsymmetrically trisubstituted triazinyl alkyl phosphate ester of the formula:



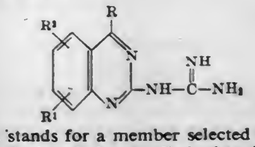
wherein R and R′ are each a lower alkyl radical, R^2 and R^3 each represent a radical selected from the group consisting of hydrogen and lower alkyl, Y and Y′ each represent an atom selected from the group consisting of oxygen and sulfur, and R^4 represents a radical selected from the group consisting of lower alkyl, lower alkoxy and phenyl.

3,131,187
CERTAIN 2-GUANIDINO-4-ARYL-QUINAZOLINES

Adrian Marxer, Muttenz, Switzerland, assignor to Ciba Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed May 16, 1962, Ser. No. 195,315
Claims priority, application Switzerland June 1, 1961
9 Claims. (Cl. 260—256.4)

1. A member selected from the group consisting of a compound of the formula



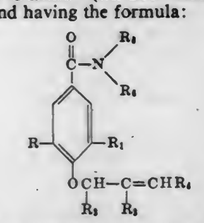
in which R stands for a member selected from the group consisting of phenyl, lower alkyl phenyl, lower alkoxy phenyl, halogen-phenyl, trifluoromethyl phenyl, naphthyl, lower alkyl naphthyl, lower alkoxy naphthyl, halogen-naphthyl and trifluoromethyl naphthyl and R^1 and R^2 each represents a member selected from the group consisting of hydrogen, lower alkyl, lower alkoxy, halogen and trifluoromethyl, and a therapeutically acceptable acid addition salt thereof.

3,131,188
NOVEL ALKENYLOXY-3,5-DIALKYL BENZAMIDES

Robert B. Moffett, Kalamazoo, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Filed Aug. 29, 1958, Ser. No. 757,909
9 Claims. (Cl. 260—268)

1. A compound having the formula:



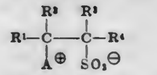
wherein R and R_1 represent lower-alkyl radicals, R_2, R_3, and R_4 are selected from the class consisting of hydrogen and lower-alkyl radicals, R_5 and R_6 taken individually are selected from the class consisting of hydrogen and lower-alkyl, and R_5 and R_6 taken together with —N< represent a saturated heterocyclic radical with from 5 to 7 atoms in the ring, one of which atoms, in addition to the nitrogen atom, is selected from the class consisting of carbon, nitrogen and oxygen, the other ring atoms being carbon.

3,131,189
PREPARATION OF QUATERNARY AMMONIUM BETAINE SALTS

Donald L. Klass, Barrington, Ill., assignor to The Pure Oil Company, Palatine, Ill., a corporation of Ohio

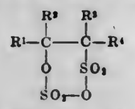
No Drawing. Filed Oct. 16, 1961, Ser. No. 145,464
20 Claims. (Cl. 260—279)

1. The method of preparing betaine salts of the formula



wherein R^1, R^2, R^3 and R^4 are members of the group

consisting of hydrogen, alkyl, aryl, aralkyl, cycloalkyl and cycloalkyl formed by joining two alkyl groups attached to the adjacent carbon atoms in said formula and $A^{\oplus}$ consists in a tertiary amine containing only tertiary nitrogen, which consists in reacting as the sole reactants about 1 mol of a carbyl sulfate of the formula



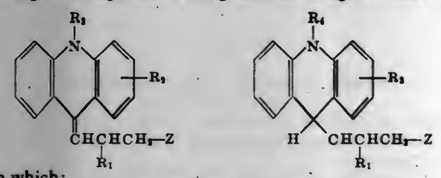
wherein R^1, R^2, R^3 and R^4 are as above defined, with about 2 mols of said tertiary amine A in an inert reaction environment.

3,131,190
9-AMINOALKYL AND 9-AMINOALKYLIDENE DERIVATIVES OF ACRIDAN

Charles L. Zirkle, Berwyn, Pa., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Mar. 22, 1963, Ser. No. 267,339
17 Claims. (Cl. 260—279)

1. A chemical compound of the class consisting of a free base and addition salts formed with pharmaceutically acceptable acids, said base selected from the group consisting of compounds having the following formulas:



in which:

R_1 is a member selected from the group consisting of hydrogen and methyl;

R_2 is a member selected from the group consisting of hydrogen, halogen having an atomic weight of less than 80, lower alkyl, lower alkoxy, trifluoromethyl, trifluoromethylsulfonyl, dimethylsulfamoyl and lower alkylthio;

R_3 is a member selected from the group consisting of lower alkyl, lower alkenyl, lower alkynyl, cycloalkyl-lower alkylene, phenyl and phenyl-lower alkylene;

R_4 is a member selected from the group consisting of hydrogen, lower alkyl, lower alkenyl, lower alkynyl, cycloalkyl-lower alkylene, phenyl, phenyl-lower alkylene, lower alkanoyl, benzoyl, carbamoyl and carbalkoxy; and

Z is a member selected from the group consisting of di-lower alkylamino, mono-lower alkylamino, N-pyrrolidinyl, N-piperidyl, N'-lower alkyl-N-piperazinyl, N'-hydroxyalkylene-N-piperazinyl, N'-acetoxyalkylene-N-piperazinyl, N'-carbamoyloxyalkylene-N-piperazinyl, N'-di-lower alkylcarbamoyloxyalkylene-N-piperazinyl, N'-hydroxyalkyleneoxyalkylene-N-piperazinyl and N'-hydroxyalkyleneoxyalkleneoxalkylene-N-piperazinyl.

3,131,191
PROCESS FOR THE PREPARATION OF NORAPORPHINES

Bryce Douglas, Embreeville, Pa., and Jerry A. Weisbach, Cherry Hill, N.J., assignors to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Aug. 8, 1962, Ser. No. 215,502
3 Claims. (Cl. 260—285)

1. In the process for the preparation of noraporphines wherein a 1-(2'-nitrobenzyl)-3,4-dihydroisoquinoline is reduced to a 1-(2'-aminobenzyl)-1,2,3,4-tetrahydroquinoline and said 1-(2'-aminobenzyl)-1,2,3,4-tetrahydroquinoline is converted into the corresponding diazonium salt, said diazonium salt then being heated so as to effect cyclization, the steps which comprise,

(*a*) introducing prior to said reduction an N-benzyl group in said 1-(2'-nitrobenzyl)-3,4-dihydroisoquinoline by treatment with a benzyl halide in a non-aqueous inert organic solvent, and

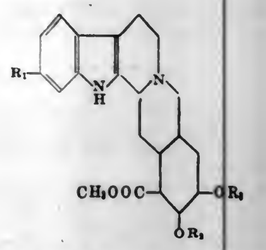
(*b*) removing said N-benzyl group subsequent to said cyclization by catalytic hydrogenation wherein said catalyst is palladium-on-inert carrier.

3,131,192
RAUNESCINE GROUP ALKALOIDS AND THEIR OBTENTION

Johannes Mueller, Arlesheim, Switzerland, assignor to Ciba Corporation, a corporation of Delaware

No Drawing. Filed Apr. 11, 1958, Ser. No. 727,766
Claims priority, application Switzerland Apr. 15, 1957
6 Claims. (Cl. 260—287)

1. A process for extracting alkaloids of the raunescine group having the formula



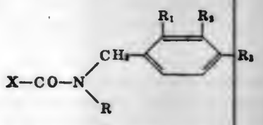
in which R_1 stands for a member selected from the group consisting of hydrogen and methoxy, one of the substituents R_2 and R_3 stands for hydrogen and the other for 3,4,5-trimethoxybenzoyl, from an aqueous solution of a weak acid selected from the group consisting of a weak carboxylic acid and a weak inorganic acid, containing said alkaloids of the raunescine group in admixture with other weakly basic alkaloids of Rauwolfia plants, which comprises extracting said aqueous solution with a member of the group consisting of benzene, lower alkyl substituted benzenes and chlorinated lower alkanes, separating the aqueous solution from the organic layer and extracting the aqueous solution with a member selected from the group consisting of ethylene chloride and 1:2-dichloro-1-ethoxy-ethane.

3,131,193
SUBSTITUTED NICOTINAMIDES AND ISONICOTINAMIDES

Claudio Pasini, Monza-Milan, and Paolo Mantegazzini, Milan, Italy, assignors to Società Farmaceutici Italia, Milan, Italy, a corporation of Italy

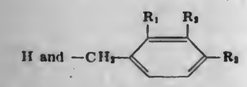
No Drawing. Filed July 11, 1961, Ser. No. 123,102
Claims priority, application Italy Sept. 15, 1960
8 Claims. (Cl. 260—295)

1. Nicotinoyl- and isonicotinoyl-, mono- and dibenzylamines which may be substituted by methoxy groups in the benzene ring, having the formula:



wherein X is selected from the group consistung of 3-

pyridyl and 4-pyridyl, R is selected from the group consisting of



R_1, R_2 and R_3 are selected from the group consisting of H and $-OCH_3$, at least one of R, R_1, R_2 and R_3 not being H; and the nontoxic pharmaceutically acceptable inorganic acid addition salts thereof.

2. N-(3,4-dimethoxy-benzyl)-nicotinamide.

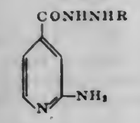
3. N-(3,4-dimethoxy-benzyl)-isonicotinamide.

3,131,194
SUBSTITUTED 2-AMINOISONICOTINIC ACID HYDRAZIDES

William F. Bruce, Havertown, and Alan D. Lourie, Bala-Cynwyd, Pa., assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 14, 1962, Ser. No. 244,586
12 Claims. (Cl. 260—295)

1. A compound of the formula:



wherein R is selected from the group consisting of the lower alkyl groups having from 2 to 8 carbon atoms in the alkyl chain, the cycloalkyl groups having from 5 to 8 carbon atoms in the ring and the 1-cycloalkylalkyl groups having a total carbon content ranging from 5 to 8 carbon atoms.

3,131,195
BETA-DIMETHYLAMINOETHYL ESTER OF PARA-CHLOROPHENOXY ACETIC ACID AND ITS PHARMACEUTICALLY ACCEPTABLE ACID ADDITION SALTS

Paul Rumpf and Germaine Thuillier, born Nachmias, Paris, France, assignors to Centre National de la Recherche Scientifique, Paris, France, a corporation of France

No Drawing. Filed Apr. 12, 1960, Ser. No. 21,608
Claims priority, application France Apr. 15, 1959
1 Claim. (Cl. 260—295.5)

A compound selected from the group consisting of the beta-dimethylaminoethyl ester of parachlorophenoxyacetic acid and its pharmaceutically acceptable acid addition salts.

3,131,196
PURIFICATION OF MERCAPTOBENZOTHIAZOLE

Paul R. Wood, Naugatuck, Conn., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Jan. 17, 1962, Ser. No. 166,944
4 Claims. (Cl. 260—306)

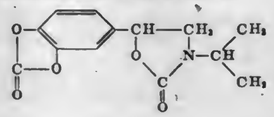
1. A process for the purification of mercaptobenzothiazole which comprises dissolving said mercaptobenzothiazole in an aqueous alkaline solution, maintaining the resultant solution at a temperature from about 0° C. to about 55° C. and at a pH from about 9 to about 10.8, adding formaldehyde to said solution in an amount from about 0.25% to about 5% based on the weight of mercaptobenzothiazole in said solution, and separating the impurities precipitated by the addition of the formaldehyde from the mercaptobenzothiazole solution.

3,131,197
5-(3,4-CARBONYLDIOXYPHENYL)-3-ISOPROPYL-2-OXAZOLIDONE

Joseph V. Swintosky, Perkiomenville, Pa., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Mar. 13, 1963, Ser. No. 264,786
1 Claim. (Cl. 260—307)

A chemical compound of the formula:



3,131,198
PROCESSING OF AQUEOUS EXTRACTS OF BARK

Arnulf K. Esterer, and Llonel E. Dowd, Longview, Wash., assignors to Weyerhaeuser Company, Tacoma, Wash., a corporation of Washington

No Drawing. Filed July 24, 1961, Ser. No. 125,948
7 Claims. (Cl. 260—345.2)

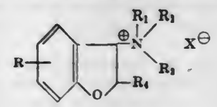
2. The process of treating an aqueous extract of bark material containing dihydroquercetin and other soluble bark components comprising contacting said aqueous extract with amyl acetate, separating the two solvent phases to provide a first solution of dihydroquercetin in amyl acetate and a second aqueous solution of the other soluble bark components.

3,131,199
2,3-DIHYDRO-2-BENZOFURANAMINES

Anthony Maitland Roe, Welwyn Garden City, and George Lawrence Willey, Harpenden, England, assignors to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Aug. 10, 1962, Ser. No. 216,052
Claims priority, application Great Britain Oct. 18, 1961
6 Claims. (Cl. 260—346.2)

1. A chemical compound of the formula:



in which:

R is a member selected from the group consisting of lower alkyl, lower alkoxy, halogen, trifluoromethyl and hydrogen;

R_1, R_2 and R_3 are lower alkyl;

R_4 is a member selected from the group consisting of lower alkyl and hydrogen; and

X is a stable, pharmaceutically acceptable anion.

3,131,200
C-RING HALOGENATED PROGESTERONES

Hans Reimann, Bloomfield, and David H. Gould, Leonia, N.J., assignors to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey

No Drawing. Filed June 1, 1959, Ser. No. 817,054
24 Claims. (Cl. 260—397.3)

1. Compounds of the group consisting of 6-fluoro-9α-X-11β-Y-17α-R-progesterones, 6-fluoro-9α-X-11β-Y-17α-R-19-norprogesterones and 6-fluoro-9α-X-11β-Y-17α-R-1-dehydroprogesterones wherein X is a halogen having an atomic weight greater than 19; Y is a halogen having an atomic weight less than 126 and being at least as electronegative as X; and R is a member of the group consisting of bromine, hydroxy, and acyloxy radicals of hydrocarbon carboxylic acids containing up to 12 carbon atoms.

24. A compound of the group consisting of 6-fluoro-17α-bromo-9(11)-dehydroprogesterone, 6-fluoro-17α-

bromo - 1,9(11) - bis-dehydroprogesterone, 6-fluoro-17α-bromo-9(11)-dehydro-19-nor-progesterone, 6-fluoro-17α-R - 9(11)-dehydroprogesterone, 6-fluoro-17α-R-1,9(11)-bis-dehydroprogesterone and 6-fluoro-17α-R-9(11)-dehydro-19-nor-progesterone, wherein R is a member of the group consisting of H and lower alkanoyl.

3,131,201
RESINOUS COMPOSITION CAPABLE OF IMPARTING THIXOTROPIC PROPERTIES AND METHOD OF FORMING SAME

Almon G. Hovey, Northford, Conn., assignor, by mesne assignments, to General Mills, Inc., Minneapolis, Minn., a corporation of Delaware

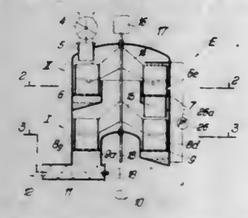
No Drawing. Filed Apr. 22, 1960, Ser. No. 23,916
8 Claims. (Cl. 260—404.5)

1. An agent for imparting thixotropic properties to coating compositions which comprises the solid product obtained by reacting an alkylene diamine having from two to six carbon atoms with a copolymer formed by reaction of a glyceride oil of polyunsaturated fatty acids having an iodine value above 130 and a diene selected from the group consisting of cyclopentadiene and dicyclopentadiene.

3,131,202
PROCESS AND APPARATUS FOR THE CONTINUOUS EXTRACTION OF OILS AND SOLUBLE SUBSTANCES FROM SOLID MATERIALS

Wilhelm Depmer, Kielmannseggstr. 86, Hamburg-Wandsbek, Marienthal, Germany

Filed Jan. 24, 1961, Ser. No. 84,664
14 Claims. (Cl. 260—412.8)



1. A process for the continuous solvent extraction of oils and soluble substances from solid materials, said process comprising the steps of separately confining a series of beds of solid material in a plurality of superimposed stages and moving the beds of material in each of said stages in a predetermined direction and in a substantially circular horizontal path through less than 360 degrees; consecutively transferring upon termination of such movement the beds of material from a higher stage into the next lower stage; successively distributing solvent onto the beds of material in the lowermost stage for percolation therethrough collecting miscella along the path of movement of the beds of material in the lowermost stage; recirculating at least a portion of miscella into selected beds of material in the lowermost stage for percolation through said selected beds to obtain enriched miscella; collecting enriched miscella along the path of movement of said selected beds; recirculating at least a portion of enriched miscella in the beds of material in at least one stage above said lowermost stage for percolation through the beds of material in said one stage; collecting finished miscella along the path of movement of beds of material in said one stage; and withdrawing the collected finished miscella, whereby contact of said collected finished miscella with said first-mentioned miscella will be avoided.

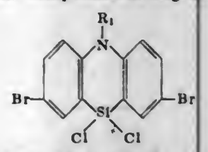
6. In a multi-stage solvent extractor, in combination, a substantially cylindrical upright housing having a central axis; a plurality of vertically spaced tier means arranged in said housing to rotate in a predetermined direction about said central axis and including uppermost tier means and lower tier means, each of said tier means being composed of a plurality of substantially sector-shaped cells having open lower ends and the cells of said lower tier means having open upper ends; a plurality of substantially horizontal stationary grates disposed in said housing at a plurality of vertically spaced levels, each of said grates being located beneath one of said tier means closely adjacent to the lower ends of the respective cells and each having an opening arranged within a limited sector-shaped portion of the respective grate, the opening in a grate which is located at a lower level being angularly displaced in said predetermined direction with reference to the opening in a grate which is located at the next higher level whereby extract-containing solid material which is fed into a cell of said uppermost tier means at a point ahead of the opening in the corresponding grate will move during rotation with the uppermost tier means toward and thereupon through the opening of the corresponding grate to enter a cell of the lower tier means and to move with the lower tier means toward and through the opening in the corresponding grate; and means for supplying solvent into the material which is contained in the cells of said tier means so that the solvent percolates through the material and through the corresponding grate.

3,131,203
PHENAZASILINE COMPOUNDS

Arthur E. Erickson, Cranford, Roger J. Tull, Plainfield, and William A. Sklarz, Rahway, N.J., assignors to Merck & Co., Rahway, N.J., a corporation of New Jersey

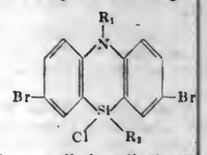
No Drawing. Filed Mar. 31, 1961, Ser. No. 99,718
2 Claims. (Cl. 260—448.2)

1. Phenazasiline compounds having the formula:



wherein R_1 is a lower alkyl radical.

2. Phenazasiline compounds having the formula:



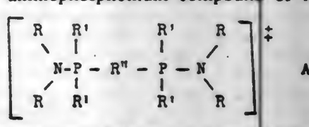
where R_1 is a lower alkyl radical and R_2 is a radical selected from the group consisting of alkyl and aryl radicals.

3,131,204
NOVEL DIQUATERNARY AMINOPHOSPHONIUM COMPOUNDS

Harry H. Sisler and Nathan L. Smith, Gainesville, Fla., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed Feb. 9, 1962, Ser. No. 172,088
9 Claims. (Cl. 260—448.2)

1. An aminophosphonium compound of the formula



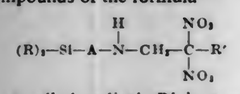
wherein R is selected from the group consisting of hydrogen, alkyl having 1 to 18 carbon atoms, and phenyl; R′ is selected from the group consisting of alkyl having 1 to 18 carbon atoms, and phenyl; R″ is selected from the group consisting of alkylene having 1 to 18 carbon atoms, alkenylene having 2 to 20 carbon atoms, phenylene, alkylene-benzene-alkylene wherein the alkylene substituents possess 1 to 3 carbon atoms, alkyleneanthracealkylene wherein the alkylene substituents possess 1 to 3 carbon atoms, alkylenealkylbenzenealkylene wherein the alkylene substituents possess 1 to 3 carbon atoms and the alkyl substituents possess 1 to 4 carbon atoms, alkylenealkylsiloxyalkylene, wherein the alkylene substituents possess 1 to 4 carbon atoms and the alkyl substituents possess 1 to 4 carbon atoms, and alkyleneoxyalkylene wherein the alkylene substituents possess 2 to 4 carbon atoms; and A is an anion selected from the group consisting of halide, borohydride, picrate, and hexafluorophosphate.

3,131,205
N-(SILICO-ALKYL) POLYNITRO-ALKYL AMINES AND THEIR PREPARATION

Milton B. Frankel, Menlo Park, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio

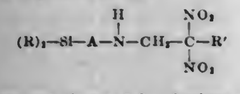
No Drawing. Filed Mar. 9, 1962, Ser. No. 180,397
10 Claims. (Cl. 260—448.2)

1. Novel compounds of the formula

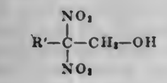


wherein R is an alkyl radical, R′ is a member of the class consisting of alkyl and nitroalkyl groups, and A is an alkylene radical.

5. The method of preparing N-(silico-alkyl) polynitroalkyl amines having the formula



which comprises reacting a 2,2-polynitro alkanol having the formula



with an N-(silico-alkyl) amine having the formula

$$(R)_3—Si—A—NH_2$$

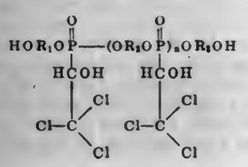
wherein R is an alkyl radical, R′ is a member of the class consisting of alkyl and nitroalkyl groups, and A is an alkylene radical.

3,131,206
POLYALKYLENE GLYCOL ESTERS OF ALPHA-HYDROXY BETA,BETA,BETA-TRICHLOROETHANE PHOSPHONIC ACID

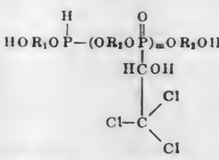
Lester Friedman, Beachwood Village, Ohio, assignor, by mesne assignments, to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Jan. 18, 1962, Ser. No. 167,175
9 Claims. (Cl. 260—461)

1. A member of the group consisting of phosphonates having the formulae



and



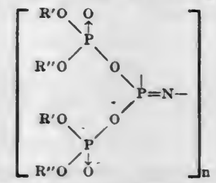
where R_1, R_2 and R_3 are the residues of a polyalkylene glycol from which the two hydroxyl groups have been removed, n is selected from zero and an integer and m is an integer.

3,131,207
DERIVATIVES OF PHOSPHONITRILIC ACID-ORTHOPHOSPHORIC ACID ANHYDRIDE AND PROCESS FOR PREPARING THEM

Rudi F. W. Rätz, Hamden, Conn., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

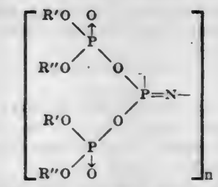
No Drawing. Filed Jan. 25, 1962, Ser. No. 168,829
17 Claims. (Cl. 260—461)

1. A cyclic compound of the formula:

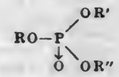


where R′ and R″ are selected from the group consisting of hydrogen, alkyl having between 1 and about 18 carbon atoms, halogen-substituted alkyl selected from the group consisting of chloroalkyl, bromoalkyl and fluoroalkyl, aryl selected from the group consisting of phenyl, cresyl and naphthyl, substituted-aryl selected from the group consisting of chloro-, bromo-, fluoro-, nitro- and hydroxy-substituted phenyl, and cycloalkyl, and wherein n is an integer between about 3 and about 7.

4. The process for preparing a cyclic compound of the formula:



where R′ and R″ are selected from the group consisting of hydrogen, alkyl having between 1 and about 18 carbon atoms, halogen-substituted alkyl selected from the group consisting of chloroalkyl, bromoalkyl and fluoroalkyl, aryl selected from the group consisting of phenyl, cresyl and naphthyl, substituted aryl selected from the group consisting of chloro-, bromo-, fluoro-, nitro-, and hydroxy-substituted phenyl, and cycloalkyl, which comprises reacting a phosphonitrilic halide of the formula $(X_2P{\equiv}N)_n$, where X is selected from the group consisting of chlorine, bromine and fluorine, and where n is an integer between about 3 and about 7, with an aliphatic-substituted orthophosphoric acid ester represented by the formula:



where R is lower alkyl containing between 1 and about 6 carbon atoms and R′ and R″ are defined as above, said reaction being carried out at a temperature and for a

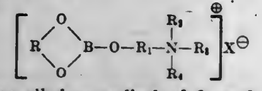
time and in proportions effective to produce said cyclic compounds.

3,131,208
GLYCOL MONOBORATES

William G. Woods, Anaheim, Calif., assignor to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada

No Drawing. Filed May 7, 1962, Ser. No. 193,013
5 Claims. (Cl. 260—462)

1. Quaternary ammonium alkyl glycol monoborate halides of the formula



where R is an alkylene radical of from 2 to 3 carbon atoms in length and containing a total of from 2 to 20 carbon atoms, R_1 is an alkylene radical of from 2 to 3 carbon atoms in length and containing a total of from 2 to 5 carbon atoms, R_2 and R_3 are alkyl of from 1 to 18 carbon atoms, R_4 is selected from the group consisting of benzyl, allyl, and primary alkyl of from 1 to 18 carbon atoms, and X is a halogen selected from the group consisting of bromine, chlorine and iodine.

3,131,209
PREPARATION OF ISOPHTHALONITRILES AND TEREPHTHALONITRILES

Henry L. King, Cary, N.C., assignor, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware

No Drawing. Filed Sept. 11, 1961, Ser. No. 137,065
5 Claims. (Cl. 260—465)

1. A method for preparing a phthalonitrile which comprises mixing one compound from the group consisting of isophthalic acid, terephthalic acid, m-cyanobenzoic acid, p-cyanobenzoic acid, and their ammonium salts, monoamides and diamides in a reaction medium of adiponitrile, reacting said compound with a member of the group consisting of ammonia and urea in the presence of a dehydrating catalyst while maintaining a temperature within the range of 150° to 350° C., withdrawing the vaporous effluent comprising phthalonitrile and adiponitrile from said reaction, condensing said effluent and recovering the solid phthalonitrile from the condensed effluent.

3,131,210
PROCESS FOR METHIONINE NITRILE SYNTHESIS

Robert Hügel and Adolfo Pasetti, Milan, Italy, assignors to Montecatini Società Generale per l'Industria Mineraria e Chimica, Milan, Italy

No Drawing. Filed Feb. 2, 1960, Ser. No. 6,122
Claims priority, application Italy Feb. 4, 1959
6 Claims. (Cl. 260—465.5)

1. A process of making methionine-nitrile comprising treating beta-methylmercaptopropionaldehyde, in anhydrous liquid ammonia, with hydrocyanic acid derived in situ in the reaction mixture from a mixture of a cyanide and an ammonium halide, said treating being in a range from about −10° to +50° C. the cyanide being taken from the group consisting of alkali metal cyanides and alkaline earth metal cyanides.

3,131,211
ALPHA-HYDROXYGLUTARO-NITRILE AND PREPARATION THEREOF

George A. Kurhajec, Orinda, and Donald S. La France, Concord, Calif., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

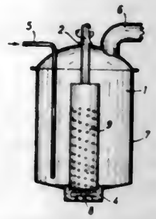
No Drawing. Filed Dec. 8, 1960, Ser. No. 74,454
2 Claims. (Cl. 260—465.6)

1. The process of preparing alpha-hydroxyglutaronitrile from acrolein comprising reacting one equivalent of acrolein and at least two equivalents of cyanide ion provided by compounds selected from the group consisting of HCN and the alkali metal cyanides in a solvent medium having at least 2% by weight of water contained therein, said medium having its pH maintained between 12 and 12.5 and having its temperature maintained between 20 and 100° C., thereafter neutralizing the reacted mixture in a reservoir, said reservoir having its pH maintained between 4 and 6, and subsequently separating the alpha-hydroxyglutaronitrile from the crude.

3,131,212
PROCESS FOR CARRYING OUT CHEMICAL REACTIONS IN A LAYER OF SPRAYED WHIRLING LIQUID

Efim Biller, Wundstrasse 58/60, Berlin-Charlottenburg, Germany

Filed Dec. 31, 1957, Ser. No. 706,887
Claims priority, application Germany Jan. 3, 1957
7 Claims. (Cl. 260—468)



1. A process for carrying out chemical reactions involving at least one gaseous and at least one liquid component, which comprises maintaining a sump of a liquid reaction component, centrifugally forcing said liquid component from said sump at high speed as a dispersion spray into a reaction zone, passing said gaseous reaction component into said reaction zone, returning sprayed component into said sump and regulating the liquid volume within said sump and the rate of said liquid component spray so that an appreciable amount of returned liquid component is continuously and substantially immediately fed to said reaction zone by centrifugal forcing.

5. A process for the production of ring-alkylated aromatic compounds involving at least one gaseous and at least one liquid component, which comprises maintaining a sump of the liquid reaction component, centrifugally forcing a catalyst which is liquid under the reaction conditions as a dispersion spray into a reaction zone so that the reaction zone is substantially completely filled with a whirling catalytically effective liquid, said catalyst being a member selected from the group consisting of phosphoric, hydrochloric, aromatic and aliphatic sulfonic acids, mixtures thereof and acid-reacting metal salts in aqueous liquid form, substantially continuously passing into said reaction zone an aromatic compound together with an alkylating agent, said aromatic compound being a member selected from the group consisting of benzene, toluene and ethyl benzene, at a temperature between −10° and 300° C. and a pressure below 50 atmospheres, returning sprayed component into said sump and regulating the liquid volume within said sump and the rate of said liquid component spray so that an appreciable amount of returned liquid component is continuously and substantially immediately re-fed to said reaction zone.

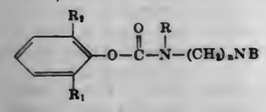
7. A process for the production of carboxylic acid esters involving at least one gaseous and at least one liquid component, which comprises maintaining a sump of the liquid reaction component, centrifugally forcing a catalyst which is liquid under the reaction conditions as a dispersion spray into a reaction zone so that the reaction zone is substantially completely filled with a whirling catalytically effective liquid, said catalyst being selected from the group consisting of phosphoric, sulfuric, hydrochloric, aromatic aliphatic sulfonic acids, mixtures thereof and acid reacting metal salts in aqueous solution, substantially continuously passing into said reaction zone a member selected from the group consisting of carboxylic acids, carboxylic acid anhydrides and carboxylic acid esters, together with an esterifying agent selected from the group consisting of alcohols, ethers and olefins, returning sprayed component into said sump and regulating the liquid volume within said sump and the rate of said liquid component spray so that an appreciable amount of returned liquid component is continuously and substantially immediately re-fed to said reaction zone.

3,131,213
2,6-DIMETHYL AND 2,6-DIETHYLPHENYL N-(AMINOALKYL)CARBAMATES AND ACID ADDITION SALTS THEREOF

Alexander R. Surrey, Albany, and George Y. Lesher, North Greenbush Township, Rensselaer County, N.Y., assignors to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed May 21, 1957, Ser. No. 660,456
9 Claims. (Cl. 260—479)

1. A composition of matter selected from the group consisting of: a compound having the structural formula



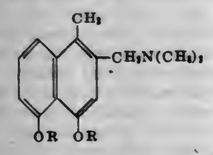
where R is selected from the group consisting of H and CH_3, R_1 and R_2 each represents a member of the group consisting of methyl and ethyl radicals, *n* represents an integer from 2 to 3 inclusive, and NB is a radical containing from two to twelve carbon atoms and selected from the group consisting of mono-(lower-alkyl)amino, monocycloalkylamino, di-(lower-alkyl)amino, 1 - piperidyl, (lower-alkylated) - 1 - piperidyl, 1-pyrrolidyl, (lower alkylated) - 1 - pyrrolidyl, 4-morpholinyl, 1-piperazyl and alkylated-1-piperazyl radicals; and, its pharmacologically acceptable acid-addition salts.

3,131,214
3-DIMETHYLAMINOMETHYL-4-METHYL-1,8-DISUBSTITUTED NAPHTHALENES

John S. Webb, Woodcliff Lake, N.J., and Carl F. Wolf, Pearl River, and Jerry Robert Daniel McCormick, New City, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed May 26, 1960, Ser. No. 31,841
13 Claims. (Cl. 260—479)

1. A compound selected from the group consisting of 3 - dimethylaminomethyl-4-methyl-1,8-disubstituted naphthalenes of the formula:



wherein R is selected from the group consisting of hydrogen, lower alkyl, and lower alkanoyl; the acid addition salts thereof; and the quaternary ammonium salts thereof with lower alkyl halides selected from the group consisting of the chlorides, bromides and iodides.

3,131,215
2-HALO- AND 2,4-DIHALO-ALKYLPHENYL CARBAMATES

Alan J. Lemin, Richland Township, Kalamazoo County, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Filed Oct. 6, 1960, Ser. No. 60,769
13 Claims. (Cl. 260—479)

10. 2,4 - dichloro - 3 - methyl-5-ethylphenyl ethylcarbamate.

3,131,216
PROCESS FOR THE MANUFACTURE OF PURE l(+)-LYSINE

Gisela Buck-Hansen, Chur, Switzerland, assignor to Inventa A.G. fur Forschung und Patentverwertung, Zurich, Switzerland

No Drawing. Filed Apr. 11, 1961, Ser. No. 102,095
5 Claims. (Cl. 260—534)

1. A process for the manufacture of l(+)-lysine monhydrochloride having an optical purity of 99.2 to 100 percent, which comprises evaporating an unsaturated aqueous solution of l(+)-lysine monohydrochloride plus d,l-lysine monohydrochloride whose l(+)-lysine monohydrochloride content corresponds to an optical purity of 80 to 99 percent, at a temperature of 40–50° C. to the saturation concentration of l(+)-lysine monohydrochloride at 20° C.; cooling the solution to 30° C.; seeding the solution at that temperature with d,l-lysine monohydrochloride; cooling the solution to 20° C.; filtering off precipitated d,l-lysine monohydrochloride containing but little l(+)-lysine monohydrochloride; and separating the l(+)-lysine monohydrochloride remaining in the mother liquor therefrom.

3,131,217
UNSATURATED COMPOUNDS CONTAINING THE PENTAFLUOROTHIO GROUP

Neil Hunter Ray, Northwich, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Nov. 7, 1960, Ser. No. 67,525
Claims priority, application Great Britain Nov. 24, 1959
6 Claims. (Cl. 260—543)

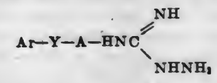
1. An unsaturated organic compound selected from the group consisting of vinyl sulfur pentafluoride, 2-chlorovinyl sulfur pentafluoride, perfluorovinyl sulfur pentafluoride, 2-methylvinyl sulfur pentafluoride, cyclohexenyl sulfur pentafluoride and allyl sulfur pentafluoride.

3,131,218
N-AMINO GUANIDINE DERIVATIVES

Robert Geoffrey William Spickett, Harpenden, Graham John Durant, Welwyn Garden City, and Patrick Michael Guy Bavin, Letchworth, England, assignors to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

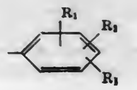
No Drawing. Filed Feb. 7, 1962, Ser. No. 171,592
Claims priority, application Great Britain Feb. 15, 1961
7 Claims. (Cl. 260—564)

1. A chemical compound of the class consisting of a free base and its addition salts with pharmaceutically acceptable acids, said free base having the formula:



in which:

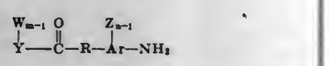
Ar is a member selected from the group consisting of naphthyl and



Y is a member of the group consisting of O, S and NR;
A is an alkylene chain of 2 to 4 carbon atoms having at least 2 carbon atoms separating the hetero atoms to which it is attached;
R is a member of the group consisting of hydrogen and lower alkyl; and
R_1, R_2 and R_3 are members selected from the group consisting of hydrogen, lower alkyl, lower alkoxy and halogen having an atomic weight of less than 80.

3,131,219
NITRO AND AMINO KETONES
Elkan R. Blout, Belmont, and Myron S. Simon, Newton Center, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
No Drawing. Filed Jan. 8, 1962, Ser. No. 164,996
4 Claims. (Cl. 260—575)

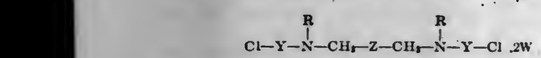
1. A compound of the formula:



wherein Y is a member of the group consisting of ortho- and para-dihydroxyphenyl; W is a member of the group consisting of chlorine and lower alkyl; *m* is a positive integer from 1 to 3, inclusive, R is lower alkylene having at least two carbon atoms; Ar is a member of the group consisting of phenylene and naphthylene; Z is lower alkoxy; and *n* is a positive integer from 1 to 3.

3,131,220
TETRASUBSTITUTED POLYMETHYLENE-DIAMINE SALTS
Charles L. Zirkle, Haddon Heights, N.J., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Filed July 9, 1958, Ser. No. 747,364
4 Claims. (Cl. 260—583)

1. A chemical compound having the following formula:



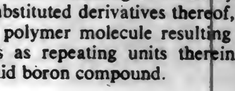
R is lower alkyl having 1 to 4 carbon atoms; Y is a divalent alkylene chain having 4 to 5 carbon atoms; Z is a divalent alkylene chain having 2 to 4 carbon atoms and W is a nontoxic, pharmaceutically acceptable acid having a maximum pKa value of about 4.5.

3,131,221
SEPARATION AND PURIFICATION OF FATTY ACID AMINES
Nathaniel L. Remes, Coral Gables, Fla., and Thomas W. Martinek, Crystal Lake, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
No Drawing. Filed Dec. 30, 1958, Ser. No. 783,687
10 Claims. (Cl. 260—583)

1. The method of separating mixtures of aliphatic unsubstituted mono amines and at least one primary amine, at least one secondary amine and at least one tertiary amine, said primary and secondary amines differing from each other by more than one carbon atom and the aliphatic radicals of said amines containing from 12 to 32 carbon atoms which comprises, reacting said mixture with carbon dioxide in the presence of a non-polar hydrocarbon solvent at ambient temperature to a temperature no greater than about 100° F. but below the decomposition temperature of the carbamate derivatives of said primary and secondary amines and at a pressure up to about 50 p.s.i.g. to convert said primary and secondary amines to the corresponding alkylammonium carbamates in solid form, separating the alkylammonium carbamates from said reaction mixture, subjecting said alkylammonium carbamate mixture to fractional crystallization in the presence of a polar solvent of the group consisting of methanol, ethanol, propanol, ethylether, methylethyl ketone and formaldehyde to form separate solid fractions consisting of the alkylammonium carbamates of the said primary amines and the alkylammonium carbamates of said secondary amines and converting said separate fractions to the original primary and secondary amines.

3,131,222
TRIALKANOLAMINE DERIVATIVES
George M. Omietanski, Tonawanda, N.Y., assignor to The Ohio State University Research Foundation, Columbus, Ohio
No Drawing. Filed June 24, 1958, Ser. No. 744,085
5 Claims. (Cl. 260—584)

1. Compounds having the formula



wherein *x*, *y* and *z* are integers having the value of 1 to 20 and whose maximum average sum is 50, *n* is an integer having the value 2 to 3, *p* represents the charge on A, and A is an anion selected from the group consisting of chloride and sulfate.

3,131,223
PROCESS FOR THE PRODUCTION OF ALDEHYDES AND KETONES
Jurgen Smidt, Munich-Solln, Walter Hafner and Josef Sedlmeier, Munich, Reinhard Jira, Munich-Pasing, and Rudolf Ruttinger, Deisenhofen, near Munich, Germany, assignors to Consortium für elektrochemische Industrie G.m.b.H., Munich, Germany, a corporation
No Drawing. Filed Dec. 27, 1957, Ser. No. 705,491
Claims priority, application Germany Jan. 4, 1957
12 Claims. (Cl. 260—597)

1. A process for the production of a carbonyl compound from an olifinic hydrocarbon, said carbonyl compound being selected from the group consisting of aldehydes and ketones corresponding to said olefinic hydrocarbon and containing one less olefinic bond than the olefinic hydrocarbon, which consists essentially of passing a gas mixture containing an olefinic hydrocarbon and oxygen in the presence of water vapor over a supported catalyst containing a salt of a metal of the platinum group and a salt of a multivalent metal and recovering the carbonyl compound thus produced.

3,131,224
PREPARATION OF POLYMERS CONTAINING BORON
Gaetano F. D'Alelio, South Bend, Ind., assignor, by direct and mesne assignments, to Dal Mon Research Co., Cleveland, Ohio, a corporation of Delaware
No Drawing. Filed June 30, 1958, Ser. No. 745,288
13 Claims. (Cl. 260—606.5)

1. A process for the preparation of a polymeric composition comprising the step of reacting a composition consisting essentially of at least one alkenyl ether compound having only hydrocarbon and ether groups therein, having a molecular weight of no more than about 300, having at least two ethylenically unsaturated groups therein and having an ether linkage between each two said ethylenic groups, with at least one boron compound selected from the class consisting of boron hydrides and the hydrocarbon-substituted derivatives thereof, whereby substantially each polymer molecule resulting from said reaction contains as repeating units therein at least two molecules of said boron compound.

3,131,225
TRIALKYLBORANE DISPLACEMENT REACTIONS
Alfred J. Rutkowski, Colonia, Elroy J. Inchalik, Cranford, and Alan Schriesheim, Berkeley Heights, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Aug. 3, 1961, Ser. No. 128,980
11 Claims. (Cl. 260—606.5)

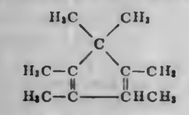
1. In a process wherein an olefin is reacted with an alkylborane compound to obtain a displacement of alkyl radical under elevated temperatures, the improvement which comprises employing as a catalyst an aprotic, basic, dipolar, non-hydroxylic compound having a dielectric constant over 6 selected from the group consisting of tertiary phosphate ester, tetraalkyl urea, N,N-dialkyl amide, dialkyl sulfoxide, dialkyl sulfide and hexaalkyl amide of tertiary phosphoric acid.

3,131,226
FLUORINATION OF CHLORINE AND BROMINE SUBSTITUTED HYDROCARBONS
Franciszek Olstowski, Freeport, and John D. Watson, Sr., and John J. Newport, Lake Jackson, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Oct. 3, 1960, Ser. No. 59,802
15 Claims. (Cl. 260—653.8)

1. A process for the fluorination of a compound selected from the group consisting of chlorine substituted aliphatic hydrocarbons and bromine substituted hydrocarbons in a vapor phase which comprises passing the substituted hydrocarbon in a vapor phase into contact with a fluorosilicate intermixed with a heavy metal chloride catalyst selected from the group consisting of chromium chloride, ferric chloride, tungsten chloride, molybdenum chloride, bismuth chloride, antimony chloride and mercury chloride in an amount of from 0.5 to 20 weight percent at a temperature of from 100° to 400° C. to fluorinate the substituted hydrocarbon, said fluorosilicate being selected from a group consisting of sodium fluorosilicate, potassium fluorosilicate, and barium fluorosilicate, and recovering the fluorinated substituted hydrocarbon from the reaction mixture.

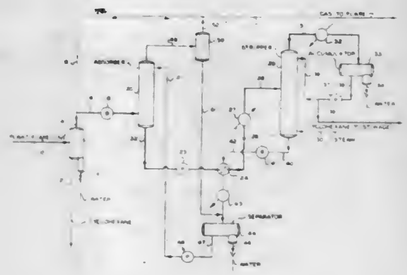
3,131,227
NEW POLYALKYLCYCLOPENTADIENES
Louis de Vries, Kentfield, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
No Drawing. Filed Sept. 26, 1960, Ser. No. 58,191
3 Claims. (Cl. 260—666)

1. As a new composition of matter, hexamethylcyclopentadiene having the structural formula



3,131,228
SOLVENT RECOVERY FROM PLANT OFF-GASES
John J. Moon, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Dec. 31, 1962, Ser. No. 249,970
8 Claims. (Cl. 260—666)

1. In a commercial scale olefin polymerization process employing a hydrocarbon having from 5 to 12 carbon atoms per molecule as a process diluent wherein pressure relief valves vent equipment into a common plant off-gas stream subject to large variations in flow, the method of recovering major quantities of said diluent which comprises directing a substantially constant amount of gas from a first point in said off-gas stream into an absorption zone, contacting said gas in said absorption zone with absorption oil thereby absorbing diluent present in said gas, passing thus contacted gas from said absorption zone to a second point in said stream, passing off-gas supplied to said first point in excess of said constant amount to said second point thereby bypassing said absorption zone with excess off-gas, recycling make-up contacted gas from said second point to said first point when the off-gas supplied to said first point is less than said constant amount thereby providing said constant amount of gas to said absorption zone, passing absorption oil from said absorption zone to a stripping zone, stripping said absorption oil to remove diluent therefrom, recirculating said absorption oil from said stripping zone to said absorption zone, and recovering said diluent removed in said stripping step.



5. In an olefin polymerization plant wherein pressure relief valves vent into a common off-gas stream, apparatus for recovering solvent from said off-gas comprising, in combination, a main conduit carrying said off-gas stream and terminating in a vent to the atmosphere, an absorption column, first conduit means connecting a first point in said main conduit with the lower portion of said column, a blower in said first conduit means, second conduit means connecting the upper portion of said column with said main conduit at a second point downstream of said first point, said main conduit being open and unobstructed between said first and second points, and means for passing absorption oil downwardly through said column.

3,131,229
SEPARATION OF FRIEDEL-CRAFTS CATALYST COMPLEX FROM HYDROCARBONS WITH GLASS WOOL
Talmage D. McMinn, Jr., Texas City, Tex., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Aug. 19, 1960, Ser. No. 50,588
1 Claim. (Cl. 260—671)

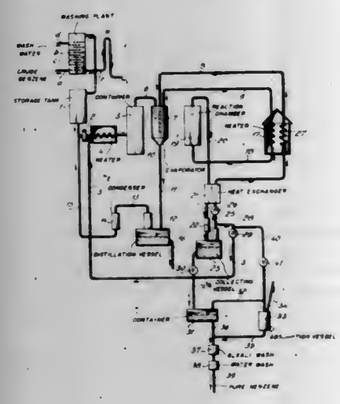
In a process for the alkylation of benzene with ethylene in the presence of Friedel-Crafts organo-aluminum chloride catalyst complex, the improvement which comprises passing the alkylate containing entrained organo-aluminum chloride catalyst complex through an extended surface glass wool at a temperature in the range from about 10° C. to about 80° C. and recovering the coalesced organo-aluminum chloride catalyst complex therefrom for reuse.

3,131,230
ALKYLATION OF AROMATIC COMPOUNDS
George L. Hervert, Downers Grove, and Carl B. Linn, Riverside, Ill., assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Filed Dec. 27, 1960, Ser. No. 78,333
7 Claims. (Cl. 260—671)

1. In the alkylation of an alkylatable aromatic compound with an olefin-acting compound in a reaction zone

containing a catalyst comprising boron trifluoride modified substantially anhydrous alumina selected from the group consisting of gamma-, eta- and theta-alumina, the method of maintaining said catalyst at a high level of activity which comprises introducing water to said zone in an amount of from about 0.1 part per million to about 400 parts per million molal based on the combined feed of said compounds, and also introducing to said zone boron trifluoride in an amount not more than about 8 times the molal content of said water.

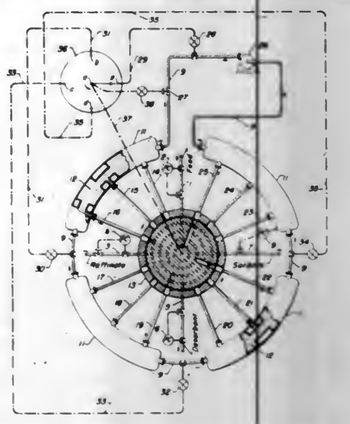
3,131,231
PROCESS FOR PURIFYING CRUDE BENZENE
Emil Sattler, Essen, and Paul Schmidt, Gelsenkirchen-Buer, Germany (% Cushman, Darby and Cushman, American Security Bldg., 750 15th St. NW., Washington 5, D.C)
Filed Oct. 24, 1957, Ser. No. 732,756
Claims priority, application Germany Oct. 27, 1956
2 Claims. (Cl. 260—674)



1. A process for purifying crude benzene containing a small amount of water and water soluble inorganic salts of a member of the group consisting of hydrocyanic, thiocyanic and hydrochloric acids comprising washing the crude benzene in the liquid state with water, the quantity of water being about 2 to 15% based on crude benzene, separating the crude benzene from the wash water, then heating the separated benzene to an elevated temperature at a pressure sufficient to maintain the benzene liquid in order to condense polymerisable impurities, evaporating the vaporizable components of the benzene and catalytically treated the benzene vapours with hydrogen at elevated temperature and pressure.

3,131,232
FLUID-SOLID CONTACTING PROCESS AND FLOW CONTROL METHOD THEREFOR
Donald B. Broughton, Chicago, Don B. Carson, Mount Prospect, and Laurence O. Stine, Western Springs, Ill., assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
Filed July 27, 1959, Ser. No. 829,582
8 Claims. (Cl. 260—676)

1. In a continuous fluid-solid contacting process for altering the composition of a feed stream to yield at least one product stream wherein a fluid is continuously circulated through an elongated contacting zone containing a solid contacting material which effects said alteration of composition, one end of which zone communicates with the other through a flow-regulating means to form a closed flow path therethrough, said zone having *m* intermittent flow-conducting transfer points spaced along the length of the flow path, and wherein there are substantially simultaneously introduced to and withdrawn



from said zone *n* secondary fluid streams including said feed and product streams through a set of corresponding inlet and outlet points selected from said *m* transfer points and spaced along said flow path such that any two adjacent transfer points presently conducting two of said secondary streams are separated by

$$\left(\frac{m}{n}-1\right)$$

transfer points not presently conducting any of said secondary streams where the ratio m/n is a positive integer and $n \geqq 2$, and wherein said secondary streams are substantially simultaneously and unidirectionally shifted in a downstream direction successively from one set of transfer points to the next while maintaining the relative spacing therebetween constant whereby each of the secondary streams eventually passes through each of said transfer points, the method of controlling the flow rate of said circulating fluid existing within a given portion of said closed flow path which lies between a selected pair of adjacent secondary streams, which method comprises: sensing the flow rates existing at *n* fixed flow-measuring points which are disposed in and along said flow path such that m/n transfer points are located between any two adjacent flow-measuring points, producing a first flow signal responsive to the sensed flow rate existing at that flow-measuring point which presently lies between said selected pair of streams, automatically adjusting said flow-regulating means responsive to said first flow signal whereby to maintain the corresponding flow rate substantially constant, additionally producing a series of flow signals each responsive to a corresponding one of the sensed flow rates existing at the other $n-1$ flow-measuring points, and successively advancing the source of flow signal in response to which said flow-regulating means is adjusted as aforesaid from one flow-measuring point to the next adjacent downstream flow-measuring point upon corresponding successive traversals of said flow-measuring points by said secondary streams, whereby the flow rate of the circulating fluid within said given portion of the flow path is maintained substantially constant irrespective of the instantaneous physical position of the secondary streams relative to said flow-regulating means.

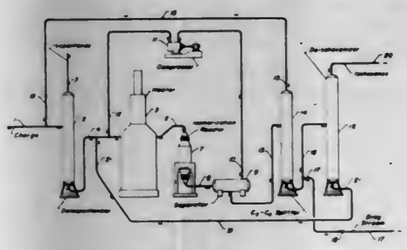
3,131,233
PURIFICATION OF ACETYLENE
Salem F. Belt, Hitchcock, and Robert J. Evans and Walter H. Stanton, Texas City, Tex., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Mar. 21, 1961, Ser. No. 97,145
6 Claims. (Cl. 260—679)

1. In a process for the purification of acetylene wherein the higher acetylenes are removed from the main acetylene bearing gas stream by the selective action of a solvent, the improvement which comprises hydrogenating the higher acetylenes in the higher acetylenes-solvent mixture by the catalytic action of a metallic hydrogenation catalyst and removing the hydrogenated product from the solvent.

3,131,234
PREPARATION OF TETRAALKYLALLENES
James C. Martin, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed May 11, 1962, Ser. No. 194,168
6 Claims. (Cl. 260—681)

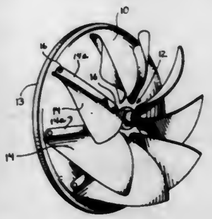
1. A method for producing a tetraalkylallene, said method comprising pyrolysing a 2,2,4,4-tetraalkyl-3-hydroxy-3-alkenoic acid β-lactone at a temperature in the range from 150–550° C., and collecting the tetraalkylallene that is formed.

3,131,235
SIMULTANEOUS ISOMERIZATION OF PENTANE AND HEXANE WITH SELECTIVE FRACTIONATION
George F. Asselin, Mount Prospect, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
Filed Nov. 23, 1960, Ser. No. 71,278
6 Claims. (Cl. 260—683.68)



2. A process for isomerizing an isomerizable hydrocarbon charge containing hydrocarbons having from about five to about six carbon atoms per molecule, which process comprises combining said charge with a pentane-rich isomerized product, removing isopentane from the resulting mixture and passing the deisopentanized portion of said mixture with hydrogen into a reaction zone containing an isomerization catalytic composite of a refractory inorganic oxide and a platinum-group metal, and maintained under isomerization conditions, separating the resulting reaction zone effluent to provide a hydrogen-rich gaseous phase and a liquid phase containing isopentane and isohexane, separating said liquid phase into a first hydrocarbon fraction containing pentanes and a second hydrocarbon fraction containing hexanes, recycling said pentane-containing fraction to combine with said hydrocarbon charge prior to the removal of isopentane therefrom, removing a portion of said second fraction from said process, fractionating the remainder of said second fraction to separate isohexanes therefrom, and combining the deisohexanized portion of said second fraction containing normal hexane with the aforesaid deisopentanized charge and hydrogen prior to reacting the same in said reaction zone.

3,131,236
RADIAL FLOW FAN
Richard F. Beehler and Stephen F. Murray, Indianapolis, Ind., assignors, by mesne assignments, to The Lau Blower Company, Dayton, Ohio, a corporation of Ohio
Filed Dec. 16, 1960, Ser. No. 76,327
3 Claims. (Cl. 261—28)

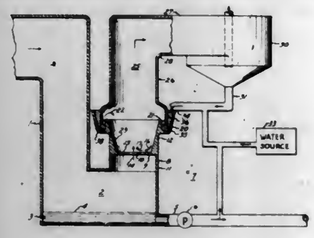


1. An air moving device comprising, a housing having a base wall, a first wall in said housing parallel to said base wall and having an unobstructed annular inlet opening therein, a fan blade assembly supported adjacent said base wall within said housing and in alignment with said opening, said assembly including a support disk having a smooth convex surface on one side thereof and a rear side closely associated with said base wall, means mounting said disk for rotation about an axis extending through the center of said disk and parallel to the axis of said opening, a plurality of air movement inducing blades rigidly secured to said convex surface of said disk and extending partially through the opening, said blades each having a base portion and a generally triangular shaped body portion, each of said base portions extending generally radially from near the outer periphery of said support disk to a point spaced from the center of said disk to define a smooth vaneless center portion on said disk, said body portion of said blades being smoothly curved in the direction of rotation of said disk with the leading apex thereof extending generally in the direction of rotation of said disk, each of said body portions having a first section which extends through said opening from one side thereof for effecting axial air intake to said disk and a second section between said first section and said disk for cooperation with said smooth surface of said disk to effect the radial discharge of the air drawn into said housing in a direction between and parallel to said base and first walls and substantially perpendicular to said axis of rotation of said disk.

3,131,237
GAS SCRUBBING APPARATUS
Theron T. Collins, Jr., Palatka, Fla. (804 Cedar St., Manistee, Mich.)
Filed Nov. 17, 1958, Ser. No. 774,511
8 Claims. (Cl. 261—153)

1. A gas scrubber comprising a vertical gas conduit having walls, means to flow gases to be scrubbed upwardly through said conduit, throat forming means extending inwardly from the walls of the conduit and presenting an upwardly facing surface for restricting the upward flow

of gases in said conduit, means for flowing scrubbing liquid onto said surface comprising a liquid supply conduit having an opening into said gas conduit, said liquid supply conduit being disposed outwardly of said throat



adjacent the conduit walls and above said surface, a plurality of spaced nozzles along said upwardly facing surface projecting inwardly of said conduit walls, and means for passing a heating fluid through said nozzles.

3,131,238

PROCESS FOR MOLDING ZINC SULFIDE

Edward Carnall, Jr., Paul B. Mauer, William F. Parsons, and Donald W. Roy, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Original application Oct. 29, 1959, Ser. No. 849,606. Divided and this application Mar. 20, 1961, Ser. No. 98,327

7 Claims. (Cl. 264—1)

1. The method of forming a homogeneous solid of molded zinc sulfide having a density in the range of from 99% up to and including theoretical density which comprises molding zinc sulfide powder under a pressure of at least 20,000 pounds per square inch and at temperature within a range of 1420° F. to 1770° F. while in an inert atmosphere.

3,131,239

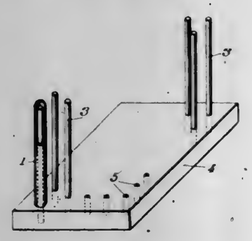
METHOD OF MANUFACTURING POROUS BARRIERS

Micheline Calis, nee Matrot, Levallois-Perret, and Jean Edouard Charpin and Pierre Plurien, Paris, France, assignors to Commissariat a l'Energie Atomique, Paris, France, a State administration of France

Filed Apr. 24, 1958, Ser. No. 730,673

Claims priority, application France Apr. 26, 1957

7 Claims. (Cl. 264—63)



1. A method of manufacturing a porous barrier which comprises mixing together into a paste a thixotropic binder and a powder of at least one metal oxide of the group consisting of alumina, titanium oxide and magnesia, the mean radius of the grains of said powder being less than one micron, shaping this paste into a tube the wall thickness of which is approximately 1 millimeter, and heating said element, this heating being conducted in two steps, to wit, a first one at a temperature just sufficient to ensure a slow evacuation of said binder without cracking of the tube, and a second one at a temperature ranging from 700 to 1,400° C. and chosen such as to obtain just a surface joining of the grains in contact with one another.

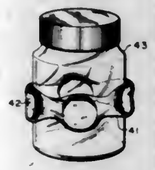
3,131,240

PROTECTIVE PADDING

Wylie C. Kirkpatrick, Wayland, Mass., assignor to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut

Filed Nov. 9, 1960, Ser. No. 68,221

7 Claims. (Cl. 264—230)



1. A method of protecting an article against shocks and vibrations which comprises securing a cushioning material to a strip of shrinkable material, wrapping the shrinkable material about the article to be protected and shrinking the shrinkable material to hold the cushioning material tightly in place.

3,131,241

METHOD FOR MAKING AN IMPROVED EAR PLUG

Emanuel S. Mendelson, Harleysville, Pa., assignor to the United States of America as represented by the Secretary of the Navy

Original application Jan. 27, 1960, Ser. No. 5,081. Divided and this application Mar. 26, 1962, Ser. No. 182,693

3 Claims. (Cl. 264—257)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A method for the manufacture of an ear device so shaped to fit an entire ear canal, said method comprising the following steps:

(1) providing a mold, said mold being undulated along the peripheral surface and being rounded at one end thereof;
(2) placing a sleeve of nylon over a rod;
(3) covering the sleeve of nylon with a layer of latex;
(4) positioning the rod longitudinally along the center of the mold whereby one end of the rod contacts the rounded end of the mold;

(5) covering the mold with a coating of latex to form a shell of latex thereon, said shell having the shape of the mold;
(6) bonding the latex shell to the latex covering the nylon sleeve at the rounded end of the mold;
(7) slipping the rod from the nylon sleeve to form a hollow elongated channel, bounded by the nylon sleeve covered with latex, along the longitudinal axis of the latex shell;
(8) removing the shell of latex from the mold.

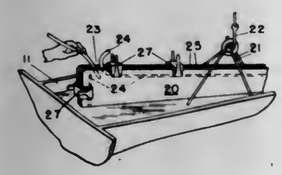
3,131,242

METHODS FOR MAKING ACRYLIC SHEETS

Jan E. Petri, Pomfret, Conn., assignor to The Borne-Lite Corporation, Landover, Md., a corporation of Maryland

Filed Sept. 21, 1961, Ser. No. 139,795

7 Claims. (Cl. 264—331)



1. A method of making cast acrylic sheets in a cell formed of two plates spaced by a sealing gasket defining the dimensions of the sheet to be made which comprises substantially completely immersing the empty cell in a liquid bath with the cell in substantially vertical position and tilted to expose above the liquid an unsealed corner of the cell, pouring a measured charge of acrylic syrup into the cell through said unsealed corner of the tilted vertically disposed cell in avoidance of entrapment of air, thereafter sealing said corner of the filled cell, completing immersion of the filled cell to provide heat-exchange contact of the bath liquid with the entire charge-engaging portions of the cell plates, and maintaining the bath liquid at substantially constant elevated temperature substantially below the boiling temperature of the syrup and above the reaction temperature of said syrup to bring the charge to reaction temperature uniformly throughout the cell and to preclude boiling of the charge during the period of its exothermic reaction in avoidance of imperfections in the finished acrylic sheet and of possible explosion of the cell during said period.

3,131,243

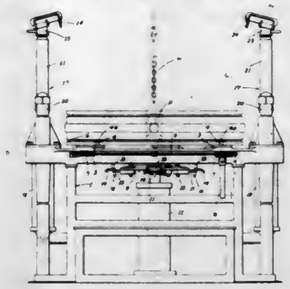
METHOD OF AND APPARATUS FOR INSERTING A TIRE INTO, AND REMOVING THE SAME FROM, A MOLD

John J. Fannen, Lodi, Calif., assignor to Super Mold Corporation of California, Lodi, Calif., a corporation of California

Original application July 2, 1956, Ser. No. 595,370, now Patent No. 2,923,527, dated Feb. 2, 1960. Divided and this application Nov. 6, 1959, Ser. No. 851,391

3 Claims. (Cl. 264—334)

1. In a method of removing one tire from and introducing another tire into a portable band-type self-contained tread vulcanizing mold, the steps including providing a stationary support for the mold, transporting the mold with said one tire therein to and depositing the same on the support, rigidly but releasably securing the mold to the support in a predetermined position, removing said one tire from the mold and introducing the other tire thereinto while said mold remains so secured to the support, releasing the mold from the support, and then transporting the mold with said other tire therein away from said support.



3,131,244

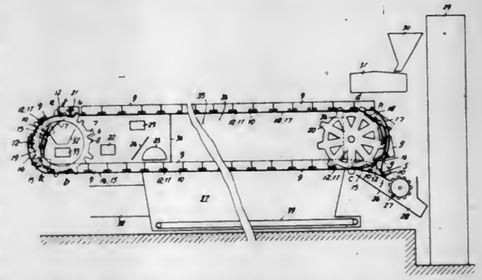
SINTERING MACHINE

Shunji Kuriyama and Yukio Fujii, both of Tokyo, and Takehisa Numata and Ryo Ando, both of Yokohama, Japan, assignors to Nippon Kokan Kabushiki Kaisha, Chiyoda-ku, Tokyo, Japan

Filed Feb. 3, 1959, Ser. No. 790,943

Claims priority, application Japan Feb. 4, 1958

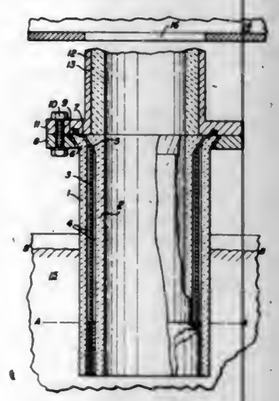
8 Claims. (Cl. 266—21)



1. In a sintering machine, in combination, a plurality of pallet means; a sintering zone; a cooling zone; continuous pallet conveyor means for conveying said pallet means, said conveyor means including two reversal sections and two elongated sections connecting said reversal sections, said elongated sections being located in said zones, respectively, said conveyor means being adapted to move said pallet means in a closed path from one of said reversal sections over one of said elongated sections to the other one of said reversal sections and therefrom to said one reversal section over the other one of said elongated sections, whereby said pallet means are passed through said zones while being moved over each of said elongated conveyor means sections, charging means for successively charging said pallet means with material to be sintered and igniting means for igniting said material located relative to said conveyor means to ignite the material when said pallet means enter said sintering zone; means for blowing a stream of air through said pallet means in said sintering zone to increase combustion; crushing means at the end of said sintering zone for crushing the sintered material into crushed matter containing sinter; separating means for separating sinter from other crushed matter; means for placing said sinter successively on said pallet means when the same enter said cooling zone so that said sinter is cooled; and means for removing the cooled sinter when said pallet means leave said cooling zone.

3,131,245
IMMERSION PIPE FOR VACUUM DEGASSING APPARATUS
Albert Lorenz, Hanau (Main), Germany, assignor of one-half to W. C. Heraeus G.m.b.H., Hanau (Main), and one-half to Ruhrstahl Aktiengesellschaft, Witten (Ruhr), Germany, both corporations of Germany
Filed Mar. 5, 1959, Ser. No. 797,444
Claims priority, application Germany Mar. 13, 1958
4 Claims. (Cl. 266—34)

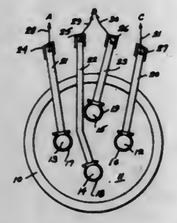
1. In a vacuum degasification device for molten metal having, as elements thereof, in one above the other arrangement, container means for molten metal to be degasified, degasification chamber means for such metal and conduit means connecting said chamber means with said container means, said conduit means being positioned for immersion in said container means into a molten metal zone therein, in combination, conduit means for molten metal positioned to extend into said zone and having two substantially concentrically extending, radially spaced apart ceramic tubular members, a metallic tubular member disposed concentrically between said ceramic members and having a length substantially extending at least to the upper level of said molten metal zone, all of said tubular members extending into said molten metal zone, and means at the upper end of said tubular members positioned at a point above the level of the molten metal for suspending said tubular members to form cylindrical gaps between said metallic tubular member and each of said ceramic tubular members, said cylindrical gaps extending from said suspending means to the ends of the tubular members disposed in said molten metal zone, said cylindrical gaps between



said tubular members being of a width at least sufficient to compensate for any slight deformations of said ceramic members and for the difference in the thermal expansion of all of said members.

ELECTRICAL

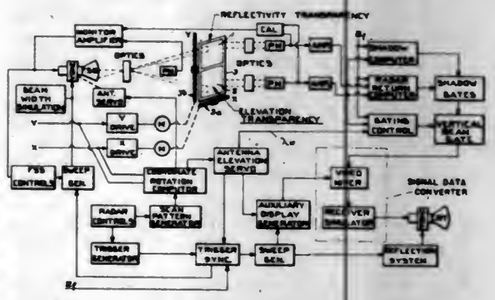
3,131,246
ELECTRIC FURNACE
Charles G. Robinson, Sterling, Ill., assignor to Northwestern Steel and Wire Company, Sterling, Ill., a corporation of Illinois
Filed Apr. 24, 1961, Ser. No. 105,212
7 Claims. (Cl. 13—9)



1. In an electric arc furnace, a housing forming a chamber, a three phase electric arc system consisting of four electrodes mounted so as to extend downwardly into said furnace chamber, one of said four electrodes being connected to one phase of a three phase electrical power source, a second one of said four electrodes being connected to another phase of the power source, and the remaining two electrodes being connected to the remaining phase of the power source.

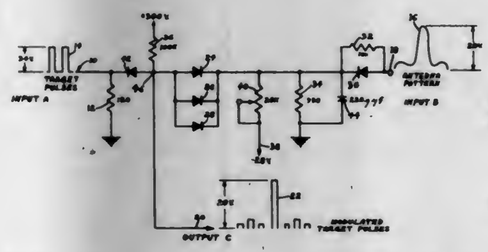
3,131,247
SYSTEM FOR SIMULATING LAND MASS RADAR RECEPTION
Daniel A. Benamy, Teaneck, N.J., Irving Feinberg, Bronx, N.Y., and Frank Feoranz, Saddle Brook, and Robert J. Williams, Wayne, N.J., assignors to Curtiss-Wright Corporation, a corporation of Delaware
Filed Sept. 19, 1960, Ser. No. 56,868
13 Claims. (Cl. 35—10.4)

1. A simulating system for representing display of airborne radar return signals from terrain under surveillance having a flying spot scanner type of light source, a plurality of map transparencies with reflectivity and elevation terrain data arranged to be separately scanned by said source, radar return electronic computing means responsive jointly to flight computer signals representing respectively aircraft altitude, terrain elevation and ground range to define the assumed airborne radar position, and to video signals from said transparencies, and a radar display indicator responsive to resultant signals from said computing



means for depicting said terrain, said computing means including a terrain shadow computer responsive to said signals for computing continuously the slope of the line-of-sight from the assumed radar position to a scanned point on the terrain and also the slope of the terrain at that point, said shadow computer producing electrical signals representing said line-of-sight and terrain slopes respectively, means for comparing said slopes signals, means for storing the then computed line-of-sight signal when said line-of-sight and terrain slopes signals become equal and for blocking the video signals to said display indicator for representing the start of a terrain shadow condition, and means for comparing the aforesaid stored line-of-sight signal and the continuously computed line-of-sight signal for unblocking said video signal to represent end of the shadow condition when said stored and continuously computed line-of-sight slopes signals become equal.

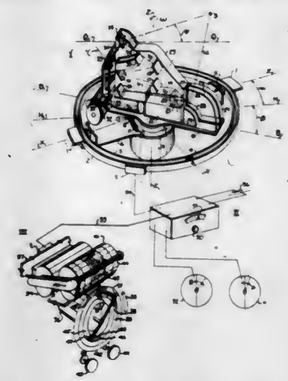
3,131,248
AMPLITUDE MODULATOR
David Sigel, Verona, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Dec. 4, 1961, Ser. No. 157,019
4 Claims. (Cl. 35—10.4)



1. A device to generate simulated modulated antenna pulses comprising a source of target pulses and mixing circuitry, target pulses generated by said target pulse source being operatively connected to said mixing circuitry, said target pulses generating a D.C. level, a source of signals representative of an antenna pattern, said antenna pattern signals source being operatively connected to said mixing circuitry for modulation of said target pulses, and means for mixing said antenna pattern signals and said target pulses whereby said mixing means provide an output which comprises modulated target pulses, said modulated target pulses being in accordance with said input target pulses and said antenna pattern signals, said mixing circuit input for said target pulses comprising an input load resistor and a series diode, said series diode having a low forward voltage drop, wherein said input circuit to said mixing circuit for said antenna pattern signal has inserted in series therewith three parallel diodes for minimizing the forward voltage drop across said series diode.

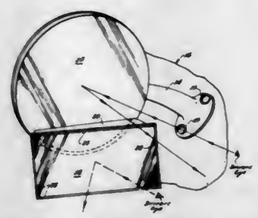
3,131,249
STELLAR COMPASS
Karolus E. Kunze, 120 Charles St., Annapolis, Md.
Filed Jan. 27, 1958, Ser. No. 711,354
5 Claims. (Cl. 88—1)

1. A stellar compass for continuous and simultaneous measurement of angular positions of a source of radiant energy, comprising in combination the following: first and second energy-sensitive scanning elements; a first rotational means for continuously rotating said scanning elements in a first predetermined plane; a second rotational means for intermittently rotating said second scanning element in a second predetermined plane not parallel to said first plane; means, actuated by energization of said first scanning element, for activating said second rotational means; means, actuated by energization of said second scanning element for de-activating said second rotational means; means for continuously and remotely indicating the angular positions of the first scanning element in the said first plane at each instant of its energization by said source and relative to a predetermined line in said plane; and means for continuously and remotely indicating the angular position of the second scanning element in the



said second plane and relative to a predetermined line in said plane.

3,131,250
ACCESSORY REAR VIEW MIRROR
Laurice D. Ely, Los Angeles, Calif., assignor to Roelco, Inc., Anaheim, Calif., a corporation of California
Filed Feb. 26, 1962, Ser. No. 175,751
1 Claim. (Cl. 88—87)



An accessory for attachment to a conventional planar rear view mirror adjustably mounted on a side of a vehicle to afford the driver a rearward view, said accessory including the combination of:

a wedge-shaped supporting member having a planar front face and a planar rear face inclined thereto, said rear face being larger than the mirror portion on the said conventional rear view mirror to be covered by said front face, said mirror-supporting surface having a predominant direction of extension, there being a first fixed angle of inclination within the range of ½° to 4° measured in a reference plane extending perpendicularly to said predominant direction of extension, there being defined a second fixed angle within the range of 4° to 12° measured in a second reference plane which includes said direction of extension and which is perpendicular to the first reference plane;

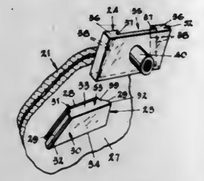
a planar mirror fixedly mounted on said rear face;

and adhesive means on the front face of said supporting member for attaching said supporting member to said conventional mirror whereby said supporting member can be moved bodily with said conventional mirror as the latter is moved by the driver to a position to afford the proper rearward view for the driver, the said first and second angles being such as to dispose the auxiliary mirror in a predetermined required position relative to said conventional mirror to afford a rearward view outwardly spaced from the rearward view afforded by said conventional mirror.

3,131,251
MIRROR MOUNTING ASSEMBLY

Joseph D. Ryan, Toledo, Ohio, assignor to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio

Filed June 9, 1958, Ser. No. 740,825
3 Claims. (Cl. 88—98)

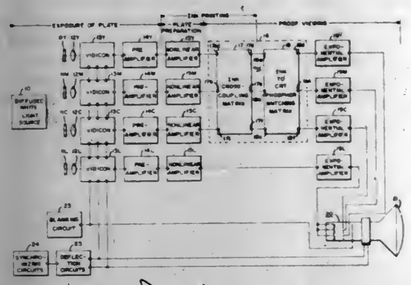


1. Means for mounting a rear view mirror, having a mirror reflecting element, upon the interior surface of an automobile windshield, with said mirror reflecting element being supported in viewing position and held in a substantially vibration-free position between the windshield and the driver of the automobile to afford the driver with a substantially undistorted and unobstructed view of road conditions to the rear of the automobile, the improvement which comprises mounting means including a rigid base member having a continuous surface of relatively large area rigidly bonded over said area to the interior surface of the windshield so that it is immobile with respect to said windshield, a mounting member fitted over and detachably carried by said base member, and means for mounting said reflecting element upon said mounting member, said base member being provided with opposed nonparallel faces inclined at an angle to the windshield, and said mounting member being provided with V-shaped grooves exposing opposed bearing surfaces which are inclined relative to the windshield at the same angle as the nonparallel faces of said base member, said nonparallel faces of said base member and said exposed bearing surfaces of said mounting member being in bearing engagement to restrain movement of said base member and mounting member relative to one another when said mounting member is wedged onto said base member.

3,131,252
ELECTRONIC PREVIEWER FOR THE GRAPHIC ARTS

Richard J. Farber, New Hyde Park, and Karl M. St. John, Hicksville, N.Y., assignors to Hazeltine Research, Inc., a corporation of Illinois

Filed June 5, 1961, Ser. No. 114,879
11 Claims. (Cl. 178—5.2)

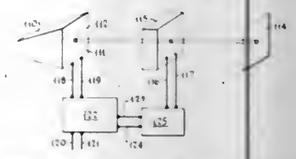


1. An electronic previewer for simulating a color image corresponding to a printed proof which may be obtained from a color-separation image comprising: means for deriving from a color-separation image an electrical signal representative of transmission density of said separation image; means responsive to said signal for modifying it in accordance with predetermined transfer characteristics associated with the actual making of a printing plate from said separation image and with the depositing of ink by said plate on a light-reflective medium; and means including an image-reproducing device responsive to said modified signal for converting it to light variations for producing a resultant color image simulating that which would be produced by said printing plate.

3,131,253
COLOR REPRODUCTION SYSTEMS

Felix Zandman and Jean F. Avril, Paris, France, assignors, by mesne assignments, to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed May 18, 1959, Ser. No. 813,763
6 Claims. (Cl. 178—5.4)

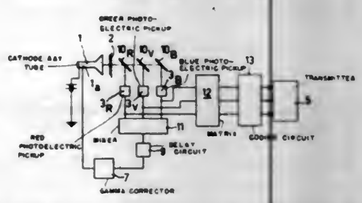


2. A system for producing a pattern at a viewing position in which a particular color predominates, which system comprises imaging means generating a white light representation of the pattern at a first position, color modulator means interposed between the first position and the viewing position selectively transmitting light of plural repeated cycles of different colors including the particular color, and intensity modulation means coupled with the imaging means and the color modulator means increasing the brightness of the white light representation during the plural periods when the color modulator means selectively transmits the particular color.

3,131,254
GAMMA CORRECTION METHOD FOR USE IN TELEVISION AND APPARATUS FOR CARRYING OUT THESE METHODS

Paul Louis Billard, Paris, and Pierre Maguer, Bourg-Dineault, Finistere, France, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Oct. 5, 1960, Ser. No. 60,605
Claims priority, application France Oct. 27, 1959
4 Claims. (Cl. 178—5.4)



3. A system for providing a non-linear correction for color television signals, said system comprising image plate means having an image to be televised, flying spot scanner means for providing a line by line scanning spot of luminous flux on said plate means, a plurality of means for converting the luminous flux of the illuminated points of said plate means into a plurality of electric signals corresponding to different colors of said image, means for combining said signals in predetermined proportions, non-linear circuit means having a power index of the form

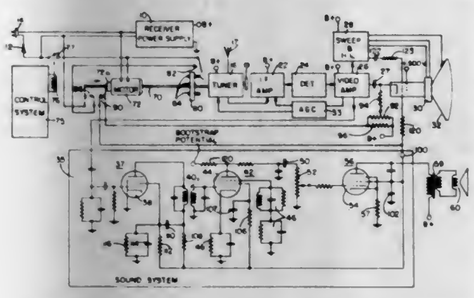
$$\frac{1}{\gamma}-1$$

wherein γ is a constant, means applying said combined signals to said non-linear circuit means, means applying the output of said non-linear circuit means to said scanner means to control the intensity of said luminous flux, and output circuit means connected to the outputs of said converting means.

3,131,255
TELEVISION CONTROL SYSTEM

Frank L. Di Nardo, Chicago, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois

Filed Jan. 2, 1962, Ser. No. 163,754
3 Claims. (Cl. 178—5.8)

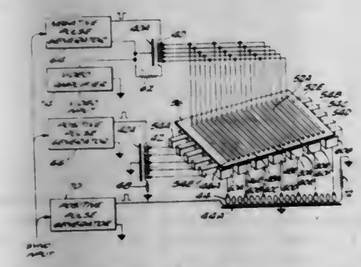


1. In a television receiver, a sound muting and picture blanking system operable during channel switching, including in combination, an adjustable channel selector, a cathode ray picture tube having a cathode, a normally closed switch responsive to operation of said selector to be moved to an open position, a source of B+ energizing potential, a voltage divider connected between said switch and said source of B+ energizing potential and including an intermediate terminal connected to said cathode, and a receiver sound system including a plurality of electron control devices with an energizing circuit therefor connected to said switch for supply of operating current from said source of B+ energizing potential through said voltage divider and said switch to said sound system so that opening of said switch open circuits said energizing circuit to disable said source system and permits said cathode to rise to a cut off potential for said picture tube with recreased current through said voltage divider.

3,131,256
ELECTROSTATIC-WRITING SYSTEM

Hugh F. Frohbach, Sunnyvale, Calif., assignor to Stanford Research Institute, Palo Alto, Calif., a corporation of California

Filed May 31, 1962, Ser. No. 198,817
5 Claims. (Cl. 178—6.6)

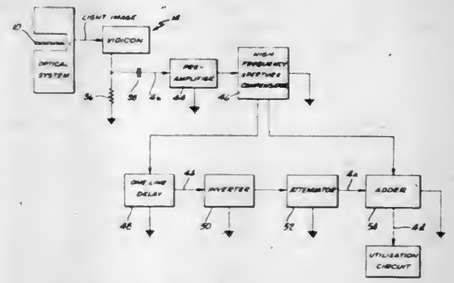


1. An electrostatic printing system comprising a first and second delay line each having a plurality of taps spaced along the length thereof, a first plane substantially parallel to and spaced from a second plane, said first and second planes defining an electrostatic printing region therebetween, a first plurality of spaced and substantially parallel elongated conductors substantially in said first plane, a second plurality of spaced substantially parallel elongated conductors substantially in said second plane, said first plurality of elongated conductors extending substantially at right angles to said second plurality of elongated conductors, means connecting each of the conductors in said first plurality of conductors to a different one of the plurality of taps of said first delay line, means connecting each of the conductors in said second plurality of conductors to a different one of the plurality of taps of said second delay line, and means for effectuating electrical discharges between predetermined conductors of said first and second pluralities of conductors includes a third delay line having a plurality of taps along the length thereof, a third plurality of elongated, spaced substantially parallel conductors positioned behind said second plurality of elongated conductors and extending parallel to said first plurality of elongated conductors.

3,131,257
SIGNAL PROCESSING MEANS

Kurt F. Wallace, Redwood City, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California

Filed Feb. 9, 1961, Ser. No. 88,094
7 Claims. (Cl. 178—7.2)



1. A system for reproducing signal information recorded in the form of a physical image on a transparent thermoplastic film comprising: means for applying light radiation to said film; optical means for limiting the radiation that is received at the output of said film so that only such radiation which is modulated by said recorded image is effectively transmitted from said thermoplastic film; an imgae camera tube having a photoconductive target for scanning said transmited modulated radiation, said photoconductive target having a low electrical capacitance so that very high frequency signal information may be processed; and a utilization circuit coupled to the output of said image camera tube including an electronic network to compensate for the photoconductive lag of the target.

3,131,258
REGENERATIVE DETECTOR FOR FREQUENCY-SHIFT DATA SIGNALS

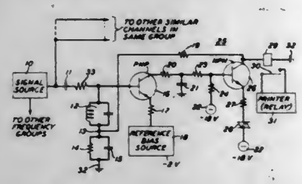
John F. O'Neill, Jr., Eatontown, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 21, 1961, Ser. No. 161,149
10 Claims. (Cl. 178—66)

1. A detector for damped alternating-current signal wave bursts comprising

a source of said signal waves having decreasing peak amplitudes within each burst,

a tuned detector circuit responsive to said signal waves having an operating threshold level below the initial peak amplitude of said signal wave bursts,
an input terminal for said detector,
a reference bias source for establishing said threshold level with respect to said input terminal,
an output terminal for said detector,

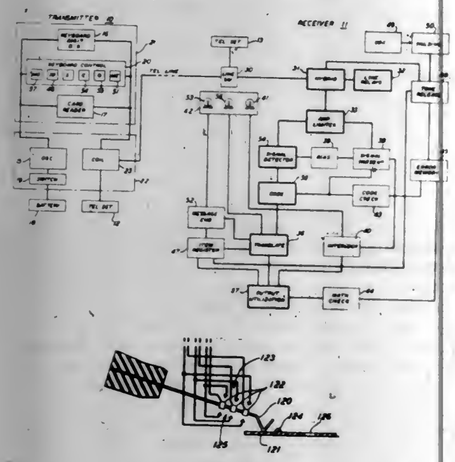


an indicating device connected to said output terminal,
a direct-current feedback path between said output and input terminals for transferring a portion of the output energy to the input terminal to oppose the reference bias thereat and effectively reduce said threshold level for the lower peak amplitudes in said signal wave bursts.

3,131,259
SYSTEMS AND METHODS FOR PROCESSING DATA OVER TELEPHONE NETWORKS

Michael V. Di Iorio, Oakland, and Philip J. Grunfelder and Laurin L. Sevebeck, Mountainside, N.J., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Jan. 5, 1959, Ser. No. 784,983
24 Claims. (Cl. 179—2)



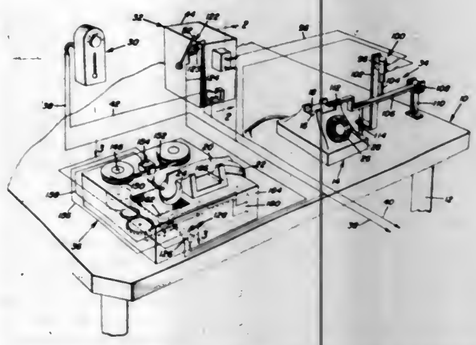
1. A system for processing data over a telephone network by means of multi-frequency signals each being coded to represent an individual character of said data and comprising a distinct plurality of simultaneously transmitted A.C. frequency signals, which comprises oscillator circuitry including a plurality of separate resonant circuit means and adapted to produce a multi-frequency output signal from a combination of separate A.C. voltages derived respectively from said resonant circuit means, said oscillator circuitry including electrical connections adapted to apply said multi-frequency output signal to said telephone network, each said resonant circuit means including a plurality of normally open resonant circuit paths each of which has a different operating frequency, and a plurality of individual transducer elements each corresponding to a preselected one of said characters and each including switching means actuable in response to a mechanical input to directly effect the coincidental closure of a preselected one of said resonant circuit paths in each said resonant circuit means and the application of the resultant separate voltages to said telephone network, whereby actuation of said switching means effects the simultaneous selection, combination and transmission of said separate voltages comprising one of said coded multi-frequency signals.

24. A transducer responsive to both depressions and embossments recorded on a perforated data card member, which comprises a feeler means, means for positioning said card in physical contact with said feeler means, means for biasing said feeler means against said card, means for effecting relative movement between said card and said feeler means thereby to physically translate said feeler means in a first direction in response to a depression and in a second direction in response to an embossment, and switching means actuable in response to the physical translation of said feeler means in either direction.

3,131,260
AUTOMATIC ALARM SYSTEM

James Evans, 211 16th St. SE., Paris, Tex.

Filed Mar. 24, 1960, Ser. No. 17,289
19 Claims. (Cl. 179—5)



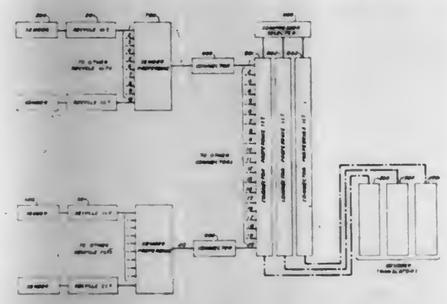
1. An automatic alarm system for use with a telephone subset including a handset having magnetic pick-up means electrically connected to a cradle which is electrically connected to telephone lines and mounts a manual dialing device and a circuit breaker button ordinarily actuated by the handset, comprising, a sensor unit, a control unit, means connecting said sensor unit to said control unit for initiating operation of said control unit in response to actuation of said sensor unit, an arm, movably mounted in fixed relation to the cradle and disposed in alignment with said button for engagement therewith, said arm being operatively connected mechanically to said control unit for movement thereby into engagement with said button for emergency plural number dialing independent of said manual dialing device.

3,131,261
TELEPHONE SYSTEM WITH SELECTIVE CODE COMPRESSION AND REGISTER RECYCLE

Robert C. Avery, Jackson Heights, and Anthony Majlinger, Long Island City, N.Y., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed July 27, 1960, Ser. No. 45,705
7 Claims. (Cl. 179—18)

3. In a telephone switching system responsive to sequentially received call destination identifying digits, wherein called areas are designated by a plurality of digits preceding the exchange and line identifying digits, a plurality of groups of subscriber senders, each sender having individual registers for storing each digit as it is received, detecting means in each sender operative to detect the storage area identifying digits therein, a plurality of decoding means for distinguishing preselected area identifying digits and responsive thereto to produce outputs discretely representative thereof, a connector individual to each group of senders, first preference means activated by said detecting means for selectively connecting each sub-

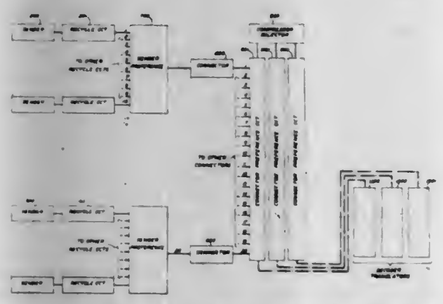


scriber sender storing digits to an associated connector, second preference means activated by said detecting means and operative simultaneously with said first preference means for selectively connecting said associated connector to a decoding means, traffic control means operative upon activation of said second preference means to inhibit subsequent connections involving said connector until all other connectors associated with senders storing digits have established connections with a decoding means, and means responsive to elapse of a predetermined time interval to sever said traffic control means from the switching system.

3,131,262
TELEPHONE SYSTEM WITH SELECTIVE CODE COMPRESSION AND REGISTER RECYCLE

Robert C. Avery, Jackson Heights, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed July 27, 1960, Ser. No. 45,706
10 Claims. (Cl. 179—18)

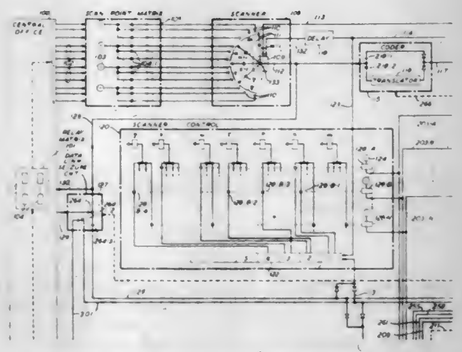


7. A telephone system wherein call routing is responsive to area code designations comprising a first plurality of sequentially received digits and line address code designations comprising a second plurality of sequentially received digits; comprising means for registering each digit of said first plurality, translating means responsive to the registration of certain preselected ones of said area code designations, and means controlled by said translating means and operative before the receipt of said second plurality of digits for simultaneously recycling each of said registering means to receive said second plurality of digits.

3,131,263
DATA TRANSMISSION SYSTEM

Richard E. Le Cronier, Sea Bright, N.J., and Edward E. Schwenzfeger, Douglaston, N.Y., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 18, 1961, Ser. No. 160,010
15 Claims. (Cl. 179—18)



1. A two-way data transmission system connecting a telephone central office unit with a unit serving a plurality of subscribers comprising means for enabling either of said units to notify the other of the particular type of call to be processed, scanning means in each of said units for determining the data to be transmitted, means connected to each of said scanning means for controlling the scanning sequence of each of said scanning means in accordance with the particular type of call to be processed, means connected to each of said scanning means for controlling the time intervals between successive scans in accordance with the particular type of call to be processed, and means connected to said scanning means for coding predetermined bits of data in accordance with the particular type of call to be processed.

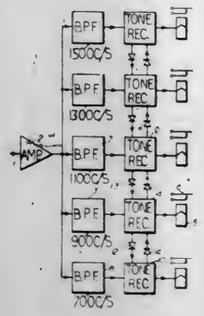
3,131,264
MULTI-FREQUENCY SIGNALLING RECEIVERS

William Francis Sidney Chittleburgh and Ernest Sidney Simmonds, London, England, assignors to International Standard Electric Corporation, New York, N.Y.

Filed Apr. 5, 1961, Ser. No. 100,855
Claims priority, application Great Britain Apr. 13, 1960
3 Claims. (Cl. 179—84)

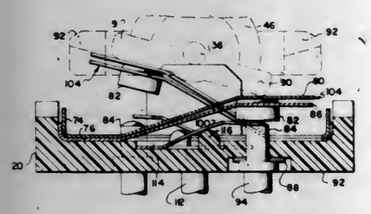
1. A voice frequency signal receiver for receiving data signals each represented by two or more different tones selected from a plurality of tones of different audio frequencies arranged in order in a series, comprising a plurality of tone-receiving circuits corresponding respectively to the said plurality of tones, each of said tone-receiving circuits including a filter adapted to select a tone of the corresponding frequency and an associated tone receiver adapted to respond to the said selected tones, coupling means interconnecting each said tone receiver with the tone receiver corresponding to next higher frequency in the said series of frequencies and with the tone receiver corresponding to the next lower frequency in said series of frequencies, means in each tone receiver responsive to the receipt of an associated frequency for generating and for transmitting control signals over the associated coupling

means, and means in each tone receiver receiving the said control signals for reducing the sensitivity of the last-said



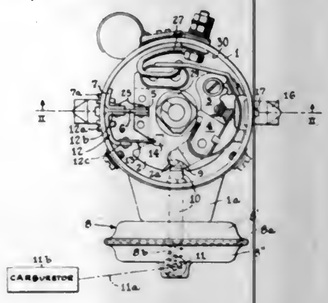
tone receiver without disabling it from receiving its corresponding frequency.

3,131,265
ELECTRIC SWITCH HAVING A PLURALITY OF PIVOTALLY MOUNTED SWITCH ACTUATORS
Nicholas Toruk, Allen Park, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 30, 1960, Ser. No. 79,716
2 Claims. (Cl. 200—6)



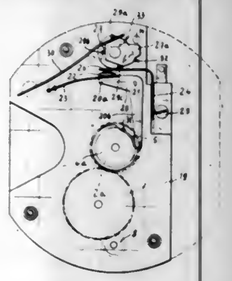
1. A circuit controller having a pivotally mounted switch actuator comprising: a fixed contact member, a pivotally mounted switch blade operable by said actuator and having a contact button fixed thereto for engagement with said fixed contact member, a pivotally mounted contact blade disposed between said switch blade and said contact member having a contact surface thereof in the path of pivotal movement of said switch blade contact button, and an upstanding stop member intermediate the ends of said contact blade and abutting said contact blade, thereby maintaining said contact blade a fixed distance between said switch blade and said fixed contact member, said contact surface of said contact blade having an opening complementary to the peripheral surface of said fixed contact member so as to permit said contact blade opening to receive said fixed contact without making contact therewith, said switch blade contact button first engaging said contact blade contact surface upon movement of said switch actuator, whereby upon further movement of said switch actuator said fixed contact is received within said contact blade opening such that upon still further movement of said switch actuator said switch blade contact button secondly engages said fixed contact.

3,131,266
SUPPORTING ARRANGEMENT FOR BREAKER PLATES OF IGNITION DISTRIBUTORS IN INTERNAL COMBUSTION ENGINES
Wilhelm Hoven, Wurselen, Germany, assignor to Garbe, Lahmeyer & Co. Aktiengesellschaft, Aachen, Germany
Filed June 30, 1960, Ser. No. 39,989
Claims priority, application Germany July 1, 1959
13 Claims. (Cl. 200—30)



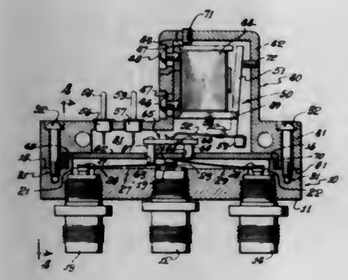
1. In an ignition distributor for internal combustion engines, in combination, housing means defining a chamber; breaker plate means in the chamber of said housing means; and means for supporting said breaker plate means pivotably in said housing means about an axis substantially perpendicular to the plane of said breaker plate means while preventing any movement in axial direction and any tilting relative to said axis, said supporting means comprising at least one leaf spring fixedly connected at opposite end portions thereof with said housing means and with said breaker plate means respectively, and extending in a plane substantially perpendicular to the plane of said breaker plate means.

3,131,267
CLOCK OR WATCH HAVING AN ELECTRIC CONTACT CONTROLLED BY THE MOVEMENT
Ali Schneiter, Corcelles, Neuchatel, Switzerland, assignor to Ebauches S.A., Neuchatel, Switzerland, a firm
Filed Apr. 5, 1961, Ser. No. 101,323
Claims priority, application Switzerland Apr. 8, 1960
7 Claims. (Cl. 200—38)



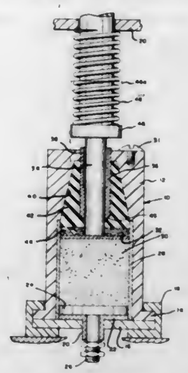
1. In combination with a clock having a movement, an electrical control apparatus comprising a first cam connected to said movement, a lever including first and second rigid arms, means for pivotably mounting said lever, spring means for urging said first rigid arm in operative contact with said first cam, a first electrical contact means disposed on the said second rigid arm of said lever, a second electrical contact means disposed opposite said first electrical contact means, and a manually settable cam disposed in contact with said second electrical contact means, said manually settable cam including at least two different faces having different elevations so that when one of said faces is in contact with said second electrical contact means said first and second electrical contact means are connected regardless of the position of said first cam, and when the other of said faces is in contact with said second electrical contact means the connection between said first and second electrical contact means is dependent on the position of said first cam.

3,131,268
ELECTROMAGNETIC COAXIAL SWITCH
Allan Orner, Los Angeles, Calif., assignor to Electronic Specialty Company, Los Angeles, Calif., a corporation of California
Filed Mar. 14, 1962, Ser. No. 179,553
10 Claims. (Cl. 200—104)



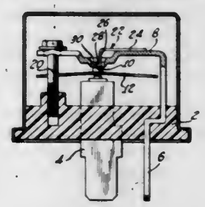
1. In an electrical switch: first and second electrical terminals; first and second elongate leaf spring contacts, said first elongate contact being rigidly secured at one end to said first electrical terminal and having its free end adapted for movement between first and second predetermined positions, said second elongate contact being rigidly secured at one end to said second electrical terminal and having its free end adapted for movement between third and fourth predetermined positions; a plate disposed adjacent said electrical terminal and in predetermined spaced relationship therewith, said plate defining two spaced apart apertures extending through its thickness dimension, one of said apertures being in alignment with said first elongate leaf spring contact near said free end thereof and the other of said apertures being in alignment with said second elongate leaf spring contact near said free end thereof; a generally π-shaped push rod assembly defining a base having first and second spaced apart push rods of predetermined lengths extending therefrom, the spacing of said push rods corresponding with the spacing of said apertures in said plate, said push rod assembly being positioned with its push rod projecting through the apertures in said plate toward said first and second leaf spring contacts, said push rods having a uniform cross sectional configuration of such dimension to provide a predetermined tolerance between the push rods and the apertures through which they extend; and, means for selectively applying a predetermined force to the base of said push rod assembly to move said push rod assembly in a predetermined direction to cause said first push rod to move the free end of said first elongate contact between said first and second predetermined positions and to cause said second push rod to move the free end of said second elongate contact between said third and fourth predetermined positions, unitary means for selectively moving the free end of said first elongate contact between said first and second positions and the free end of said second elongate contact between said third and fourth positions.

3,131,269
THERMALLY EXPANDABLE ACTUATOR MEANS FOR THERMAL SWITCH
George Asakawa, Yellow Springs, Ohio, assignor, by mesne assignments, to Antioch College, Yellow Springs, Ohio, a corporation of Ohio
Filed Nov. 2, 1959, Ser. No. 850,431
11 Claims. (Cl. 200—113)



11. In a thermal response device,
a casing,
a thermally expandable power element disposed within said casing,
a movable piston having one end projecting into said casing and into positive contact with said power element,
and lost motion connection means between said piston and said power element accommodating initial power element expansion without relative piston-power element displacement and subsequent power element expansion with relative piston-power element displacement.

3,131,270
TEMPERATURE COMPENSATED SNAP ACTION DEVICE
Edward A. Kurz, Cranford, N.J., assignor to Tung-Sol Electric Inc., a corporation of Delaware
Filed Oct. 25, 1960, Ser. No. 64,773
2 Claims. (Cl. 200—113)

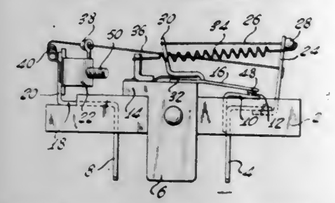


1. In a snap acting device having a vane constrained in one current controlling position by tension of an expansible pull means and adapted upon expansion of the pull means with current therethrough to snap through a neutral equilibrium position into a second current controlling position, the improvement comprising a relatively fixed member, an ambient temperature responsive compensating element coupling said pull means to said fixed member, said element, upon increase in ambient temperature increasing the tension in the pull means, said element being of bimetallic material and being welded at spaced points to said fixed member and to the center of said pull means.

3,131,271
VOLTAGE COMPENSATED WIRE CONTROLLED SNAP ACTION DEVICE

Hemming G. Siiberg, Cranford, N.J., assignor to Tung-Sol Electric Inc., a corporation of Delaware

Filed Jan. 19, 1961, Ser. No. 83,721
5 Claims. (Cl. 200—113)



1. In a snap action maintaining constant rate of flashing by device wherein expansion and contraction of a tensioned pull means with change in current therethrough control the operation of the device, means for compensating for voltage variations of the supply, comprising an auxiliary expansible wire, spaced arms anchoring said auxiliary wire at spaced locations, at least one of said arms being spring biased to tension said auxiliary wire, said spring biased arm serving also to tension the operating pull means of the device, and circuit means electrically independent of said operating pull means for connecting said auxiliary wire in circuit with the supply whereby when the supply voltage increases said auxiliary wire expands reducing the tensile force exerted against the spring bias of said arm and thereby increasing the tensile force exerted on the operating pull means by said arm.

3,131,272
SNAP-ACTION TEMPERATURE-RESPONSIVE BLADE FOR CIRCUIT BREAKERS

Richard E. Perkins, Ipswich, Mass., assignor to Sylvania Electric Products Inc., a corporation of Delaware

Filed Apr. 13, 1961, Ser. No. 102,730
2 Claims. (Cl. 200—113)



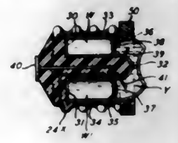
1. A snap-action thermally-responsive blade adapted for actuation of contacts in circuit breakers and the like, comprising first and second strips, one of said strips being a hollow rectangle of four legs, the other strip being fastened between the middle of one leg and the middle of the opposite leg and being of greater length between the fastenings than the other in order to subject said strips to a spring deflection force transverse to the longitudinal extents thereof, the strip of greater length being formed from a laminated bimetallic sheet of which the metals have different coefficients of thermal expansion, and the other of said strips being straight and formed of a single material having a coefficient of thermal expansion substantially equal to zero.

3,131,273
REUSABLE MERCURY CIRCUIT BREAKER DEVICE

Richard E. Blodgett, Holmesbrook Road, Basking Ridge, N.J.

Filed June 1, 1961, Ser. No. 114,177
2 Claims. (Cl. 200—113)

2. A reusable mercury circuit breaker device comprising a glass tubing closed at both ends, a glass partition into said tubing dividing the latter into two compartments, the wall of one of said compartments shaped to form a constriction, electrodes extending through the wall of said glass tubing in said constricted compartment one on each side of said constriction, mercury material filling said constricted compartment contacting with said electrodes, said glass partition having an opening through which the mercury is forced from said constricted compartment into the other of said compartments upon the heating and expansion of the mercury caused by a current overload and the consequent vaporizing of the mercury in the constricted compartment to effect the breaking of the circuit in said

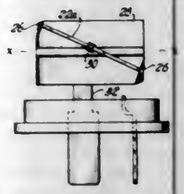


constricted compartment, a housing of insulating material extending over the length of said glass tubing, a cap member fitted over one end of said housing, said cap member cooperating with said housing for enclosing said glass tubing, a conducting wire embedded in said housing connecting with one of said electrodes, a stud member fitted at one end of said housing and connecting with said conducting wire, a conducting sleeve encircling one end of said housing, and another conducting wire disposed in said housing connecting with the other of said electrodes and said conducting sleeve.

3,131,274
PULL MEANS FOR HOT WIRE FLASHERS OR THE LIKE

Joseph Schmidinger, R.D. 1, Assembly Point, Lake George, N.Y.

Filed Jan. 25, 1961, Ser. No. 84,854
4 Claims. (Cl. 200—122)



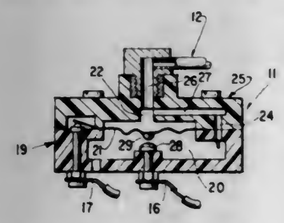
1. A flasher for directional signals comprising a buckling member which snaps from one circuit controlling position to another circuit controlling position in response to the expansion and contraction of a pull means, and an improved pull means which comprises a flexible ribbon of current expansible metal having spaced lengths of unequal width and uniform thickness, the lengths of lesser widths insuring rapid heating of pull means in one circuit controlling position of the buckling member and the lengths of greater width insuring rapid cooling of the pull means in the other circuit controlling position of the buckling member, said improved pull means being secured under tension to the buckling member at spaced areas of greater ribbon width.

3,131,275
HEAT DETECTOR

Charles E. Zimmerman, Jr., West Caldwell, and Rudolph Walz, Fayson Lakes, Butler, N.J., assignors to Specialties Development Corporation, Belleville, N.J., a corporation of New Jersey

Filed Apr. 12, 1961, Ser. No. 102,470
1 Claim. (Cl. 200—140)

A heat detector for rapidly responding to a relatively small instantaneous increase in the temperature of air within a space, said detector comprising sealed elongate highly heat conductive tube means for containing air and adapted to be mounted in the space where the increase in temperature is to be detected, said tube means having an inner diameter of about 0.75 inch and having a volume of about 7.5 cubic inches and being capable of producing an increase in pressure of the air therein at a rate of about 0.5 inch of water in about 3 seconds upon a substantially instantaneous increase in temperature of about 0.5° F. of the air ambient to said tube means, said tube means having a wall thickness of about 0.003 inch and being sufficiently rigid to provide it with a fixed volume and the outer surface of said tube means being darkened to in-

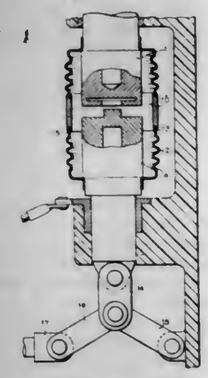


crease the heat absorbing capacity of it, a chamber having a vent constructed and arranged to relieve an increase in pressure of about 0.5 inch of water in about one minute, small bore conduit means connecting said tube means to said chamber in fluid flow communication, the volume of said tube means being at least twenty times as great as the combined volume of said chamber and said conduit means and said chamber and said conduit means being constructed of low heat conductive material, a pressure responsive diaphragm in said chamber constructed and arranged to be operated by a substantially instantaneous increase in pressure of the air within said chamber of about 0.3 to 0.7 inch of water, and switch means operable by said diaphragm.

3,131,276
CONTROL OF LOW PRESSURE D.C. ARC DISCHARGES

Alan Watson, Sale, England, assignor to Associated Electrical Industries Limited, London, England, a British company

Filed Mar. 2, 1962, Ser. No. 177,107
Claims priority, application Great Britain Mar. 10, 1961
6 Claims. (Cl. 200—144)

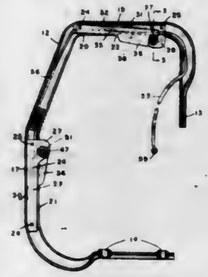


1. A direct current low-pressure switch comprising:
a positive electrode;
a negative electrode axially aligned with the positive electrode;
operating means whereby the electrodes can be moved toward and away from each other in an axial direction;
a cylindrical spigot provided on the face of the positive electrode and confronting the negative electrode;
the negative electrode having a cavity facing and axially aligned with said spigot, an annular shoulder on the negative electrode surrounding the cavity, said cavity having a cross section slightly larger than that of the spigot so that the spigot may enter same with an annular clearance therearound, said cavity having a depth less than the length of the spigot so that the spigot will engage the cavity bottom before the face of the positive electrode butts against the annular shoulder on the negative electrode;
at least one blind recess extending radially outwardly from the cavity;
a gas tight envelope enclosing the first and second electrodes and permitting axial movement thereof; and
gas under a low pressure filling the envelope; whereby upon the operating means separating the two electrodes the direct current arc between the spigot and the cavity bottom establishes a plasma originating from cathode spots on the said cavity bottom, and these spots are then mutually repelled to move radially outwardly into the blind recess, where the cathode spot and thus the plasma becomes extinguished.

3,131,277
SHORTING SWITCH CONTROLS

Timothy Brenzen, East Kildonan, Manitoba, Canada (Red Lake, Ontario, Canada)

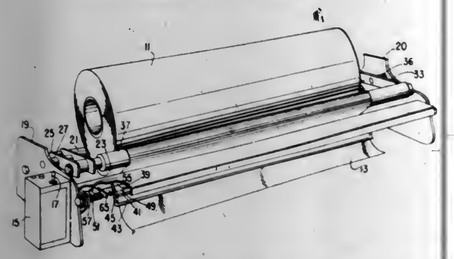
Filed Apr. 29, 1960, Ser. No. 25,639
4 Claims. (Cl. 200—157)



1. A shorting switch comprising a metallic frame, a movable switch member mounted on but electrically insulated from said frame, a control button mounted on said frame adjacent said switch member, said button having a contact portion grounded to the frame and an insulator portion, a spring normally pressing said switch member against said grounded contact portion of said button for an electrical short of the switch member to said frame and for partial projection of the switch member from the frame to serve as a finger key, resilient means normally holding said button in a position wherein said grounded contact portion thereof may be contacted by said switch member, said button being manually operable against the action of said resilient means to a second position wherein said spring presses said switch member against said insulator portion of the button for disconnecting the short between the switch member and said frame, said button in its second position being in a locked engagement with said switch member to prevent movement of the button by said resilient means to its initial position until said finger key of the switch member is manually operated against the action of said spring, and

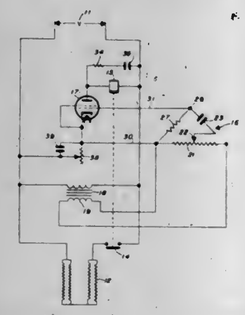
means for making an electrical connection to said switch member.

3,131,278
DISPENSING APPARATUS
Harry Rosenthal, 3825 Greenwood, Skokie, Ill.
Filed Feb. 16, 1962, Ser. No. 173,738
7 Claims. (Cl. 219—19)



1. An apparatus for dispensing heat sensitive web-like material from replaceable supply rolls, including in combination, means for rotatably supporting a supply roll of web-like material, means for guiding the web-like material from the supply roll to a dispensing position, an electrical heater wire positioned to extend above the web-like material when in dispensing position, a heating circuit connected to said wire to cause heating of said wire for severing the heat sensitive web-like material, a switch connected in said heating circuit and operable to close said circuit, and a pivotal protective cover for said wire coupled to said switch, said cover being mounted above said wire a short distance therefrom and having an overhanging portion positioned to be engaged by the web-like material to be raised thereby as said web-like material is raised into engagement with said wire, said cover pivoting away from said wire to operate said switch to a closed position, said wire thereby being energized to heat and sever the web-like material in contact therewith.

3,131,279
TEMPERATURE CONTROL CIRCUIT
Paul D. Barlow, Pensacola, Fla., assignor, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware
Filed Mar. 17, 1960, Ser. No. 15,579
6 Claims. (Cl. 219—20)



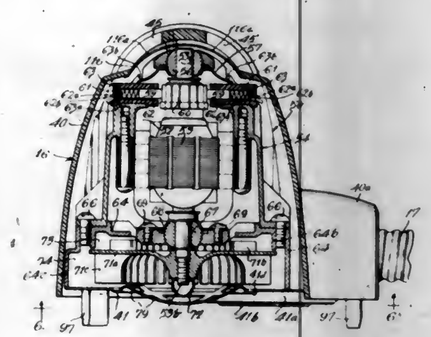
1. A heater control circuit, comprising an A.C. power supply, a heater, a temperature sensing network connected to the power supply and having therein a capacitance and a thermistor connected in series across the power supply in such a manner as to produce an output signal across the thermistor having a phase variable in response to temperature, a thyratron connected to the A.C. power supply and the temperature sensing network in such a manner that the conduction of said thyratron is controlled by said variable phase signal, and means operated by the thyratron for actuating the heater.

3,131,280
HEATING OVEN FOR FOODS
Jacob Brussell, 226 W. 24th St., Hialeah, Fla.
Filed Nov. 2, 1961, Ser. No. 149,672
11 Claims. (Cl. 219—35)



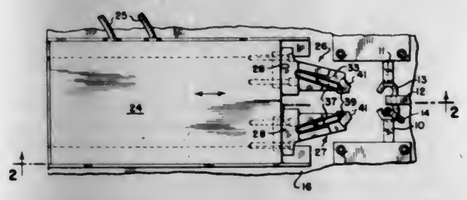
1. Heating oven for foods comprising a base, a pair of elongated spaced substantially parallel hollow frames mounted on said base, an elongated support within each frame, a plurality of heating tubes spaced apart and held in said supports, upstanding insulator posts on said base and holding the supports elevated above the base and having the upper ends thereof secured to said supports, a casing on said base enclosing said frames and having an access opening to the space between said frames, the top of said frames forming flat tray supports and constituting a pair of shelves for supporting a tray.

3,131,281
HAIR DRYER
Ivar Jepson, Oak Park, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Original application Apr. 17, 1957, Ser. No. 653,336, now Patent No. 3,006,079, dated Oct. 31, 1961. Divided and this application Feb. 16, 1960, Ser. No. 9,104
2 Claims. (Cl. 219—39)



1. In an air heater and blower unit having a fan for blowing air, a heater for heating the blown air, a motor for driving the fan, and a housing for enclosing the unit; the improvement of a casing for said motor, said housing being open at the bottom thereof for insertion of said casing and its motor into said housing, said casing being open at the bottom thereof, a downwardly facing generally cup shaped member secured to said casing to close the same and provide a fan chamber beneath said motor, a motor shaft extending from said motor through said cup shaped member into said fan chamber, said fan being disposed in said fan chamber on said shaft, said cup shaped member being insertable into said housing through the bottom opening thereof with said motor casing, and a downwardly facing generally U-shaped lateral projection integrally formed on said housing adjacent the open bottom thereof, a downwardly facing generally U-shaped tangentially disposed exhaust channel integrally formed on said cup shaped member, said exhaust channel being insertable into said U-shaped lateral projection through the bottom thereof when said casing and cup shaped member are inserted into said housing, said heater being positioned in said exhaust channel, a single piece closure plate for closing said cup shaped member and exhaust channel and retaining said heater positioned in said exhaust channel, said single piece closure plate also closing the bottom of said housing and its lateral projection, first securing means comprising a plurality of depending support feet integrally formed on said cup shaped member, a plurality of apertures formed in said closure plate for extending said feet therethrough, and cup shaped rubberlike members positioned on said extending feet for temporarily retaining said closure plate against the bottom of said cup shaped member and its exhaust channel to retain said heater in assembled position, and second securing means comprising aligned openings formed in peripheral portions of said plate, cup shaped member and housing and fastening means extending into said aligned openings to complete the assembly of said closure plate to said cup shaped member and of said cup shaped member to said housing.

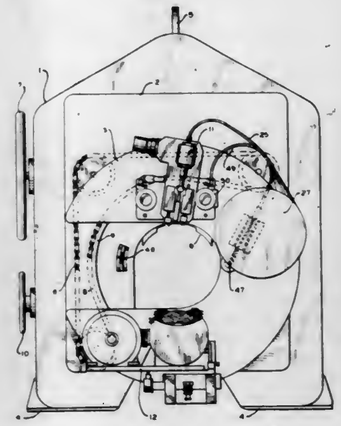
3,131,282
WELDING MEANS
Ralph J. Coffey, York, Pa., assignor to American Chain & Cable Company, Inc., a corporation of New York
Filed May 16, 1961, Ser. No. 110,420
4 Claims. (Cl. 219—51)



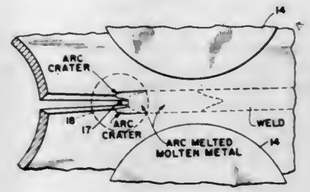
1. Welding apparatus comprising a frame, a carriage movably mounted on the frame, a transformer mounted on the carriage and having high and low current terminals, flexible leads electrically connected to the low current terminals of said transformer for conducting current thereto, welding electrodes mounted on the transformer and electrically connected to the high current terminals thereof, means for displacing the carriage to move the electrodes into and out of welding contact with a work piece, and pivotal mounting means supporting said electrodes on said transformer to permit limited relative movement therebetween and facilitate welding contact with said work piece.

3,131,283
SEAM FOLLOWER HOLDING MEANS
Arthur E. Dawson, Meyersville R.D., Gillette, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 28, 1961, Ser. No. 162,849
9 Claims. (Cl. 219—60)

1. Apparatus comprising means for propelling a tool lengthwise of a seam, seam-follower means propelled in advance of said tool, coupling means between said tool and said seam-follower means for placing the position of said tool laterally of said seam under the control of said seam-follower means, and means comprised in said coupling means for holding said tool in its travel to the end of said seam in the lateral position last determined by said seam-follower means at the end of said seam.



3,131,284
NON-CONSUMABLE ELECTRODE ARC WELDING OF TUBING
Glenn J. Gibson, Berkeley Heights, N.J., assignor to The Carpenter Steel Company, Reading, Pa., a corporation of New Jersey
Filed Jan. 19, 1962, Ser. No. 167,307
10 Claims. (Cl. 219—61)



1. The method of welding metal tubing formed with a longitudinally extending seam, comprising:

(*a*) feeding said tubing past a non-consumable welding electrode arc with the edges of the seam to be welded substantially vertically disposed below the electrode,

(*b*) maintaining the edges of said seam at their closest approach to each other at their radially inner ends under the arc at a distance from each other to there form a gap such that arc melted molten metal formed from said tubing adjacent the radially outer extremity of said seam flows down into the seam over the opposite edges thereof to the radially inner ends of said edges with the molten metal bridging and supporting itself in said gap by its surface tension,

(*c*) maintaining the current and voltage of the arc and the rate of feed of the tubing past the arc at values such that when the seam edges are squeezed together at a point beyond said arc a weld is thereafter formed completely down through said seam between its radially outer and inner ends, and

(*d*) squeezing the edges of said seam together at said point to form said weld.

3,131,285
HIGH FREQUENCY WELDING OF METAL ELEMENTS OF FINITE LENGTH

Fred Kohler, New York, Wallace C. Rudd, Larchmont, and Robert J. Stanton, Brooklyn, N.Y., assignors, by mesne assignments, to American Machine & Foundry Company, New York, N.Y., a corporation of New Jersey

Filed Feb. 8, 1962, Ser. No. 171,936
11 Claims. (Cl. 219—67)

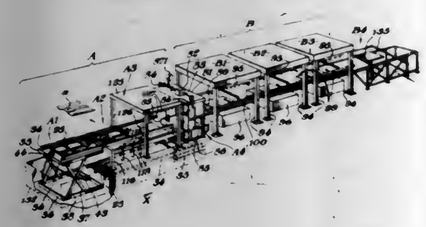


1. In a method for welding a longitudinal seam between the edges of a pair of metal portions of finite length while advancing such portions with a gap between such edges, retaining said edges under pressure together as the weld point and whereby said gap is caused to assume a V shape in advance of said point and said edges being heated up to welding temperature upon reaching such point by high frequency current caused to flow thereon for a substantial distance in advance of said point; the combination of steps for causing the seam to be welded substantially throughout from the forward ends of said edges to the trailing ends thereof, comprising the provision of carrier means for said metal portions and extending both forwardly and rearwardly thereof, such carrier means having a longitudinal gap with edges more widely spaced than the edges of said first-mentioned gap, the carrier gap edges serving to provide conductive paths for leading said current onto the edges of the forward ends of said metal portions before the latter come together at the weld point, and to contiue to lead the current onto the trailing end edges of the metal portions until same engage each other at the weld point.

3,131,286
MANUFACTURING METAL STRUCTURES

Thomas Francis Tribe, Castle Mill Works, Dudley, Worcester, England, assignor of one-half to British Federal Welder and Machine Company Limited

Filed Oct. 2, 1961, Ser. No. 142,326
Claims priority, application Great Britain Oct. 4, 1960
9 Claims. (Cl. 219—80)

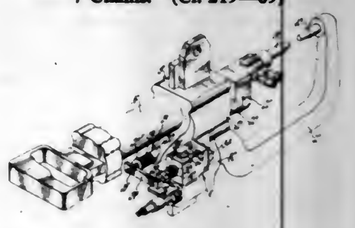


1. Welding apparatus comprising a plurality of individual carriages, a loading station at which components are received by each carriage in succession, at least one station at which components on each carriage are tack-welded into an assembly, a transfer station, means to deliver the loaded carriages from said loading station through said tack-welding station to said transfer station, a plurality of stations locating welding means to permanently unite the components of each assembly, an unloading station, a slide conveyor reciprocable between said transfer and unloading stations through said permanent-welding stations, means at said transfer station to off-load from each carriage in succession its tack-welded assembly and transfer said assembly to said slide conveyor, means at each permanent-welding station to remove an assembly from said slide conveyor into engagement with said welding means and thence return such assembly to the slide conveyor, means to return the unladen carriages in succession from said transfer station to said loading station, said carriages and delivery and return means constituting an endless conveyor, and control means to co-ordinate the operation of said endless and slide conveyors to advance a succession of assemblies simultaneously from one of said stations to the next.

3,131,287
DEVICE FOR AUTOMATIC SELECTION OF WELDING SCHEDULES

John J. Goodrich, Warren, and Thomas W. Shearer, Jr., Auburn Heights, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Dec. 12, 1961, Ser. No. 158,840
7 Claims. (Cl. 219—89)



1. A circuit control mechanism for a resistance welder including electrodes movable into current transmitting contact with multi-plate metal seams of different thicknesses placed therebetween for welding,

said control mechanism comprising a switch operable to selectively energize alternative welding schedule establishing control circuits,

a switch actuating member operably connected and mounted for movement with one electrode and movable therewith into actuating engagement with said switch,

a first switch supporting member,

means reciprocably mounting said first switch supporting member for limited movement in spaced relation to said switch actuating member,

a first spring means normally biasing said first switch supporting member toward said switch actuating member,

means normally operable to lock said first switch supporting member in an adjusted position against movement toward said switch actuating member by the biasing action of said first spring means and operable to release said first switch supporting member for adjustment away from said switch actuating member to a newly adjusted position maintainable by said lock means against the biasing action of said first spring means,

a second switch supporting member reciprocably mounted for a limited range of movement relative to and projecting outwardly of said first switch supporting member toward said switch actuating member,

a second spring means normally biasing said second switch supporting member outwardly of the first switch supporting member within the limited range of movement permitted therebetween,

said second switch supporting member mounting said switch for engagement with said switch actuating member and said switch actuating member being operable upon actuation of said switch to transmit further electrode movement directly to said second switch supporting member,

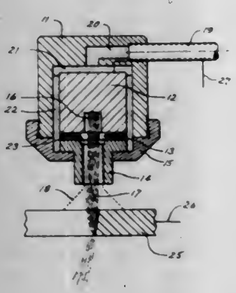
and cooperating abutment means carried by said switch supporting members and engageable to limit reciprocable movement between said switch supporting members,

said abutment means being adjustable to establish an overtravel limiting dimension between said switch supporting members substantially equal to the mean difference in the alternative thicknesses of the multi-plate seams to be welded between said electrodes whereby actuation of said one electrode into engagement with the other electrode without a metal seam therebetween causes overtravel limiting engagement of said abutment means thereby actuating said first switch supporting member against the biasing action of said first spring means to a new position compensating for electrode tip wear and maintainable by the lock means for subsequent operation of the associated welder.

3,131,288
ELECTRIC ARC TORCH

James A. Browning, Hanover, N.H., assignor to Thermal Dynamics Corporation, a corporation of New Hampshire

Filed Aug. 7, 1961, Ser. No. 129,750
1 Claim. (Cl. 219—121)



The method of operating an electric arc torch of the type described, in which one or more plasma forming gaseous elements are supplied under pressure to said torch, comprising mixing a liquid with said gaseous elements, and introducing the resulting mixture under pressure tangentially into the arc passageway of said torch to form a vortex driving the liquid portion of said mixture against the inner walls of said passageway.

3,131,289
DEFLECTION VOLTAGE SUPPLY FOR ELECTRON BEAM WELDERS

John A. Hansen, Granby, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed June 25, 1962, Ser. No. 204,758
5 Claims. (Cl. 219—121)

1. Apparatus for working materials with an intense beam of charged particles comprising:

means for generating an intense beam of charged particles,

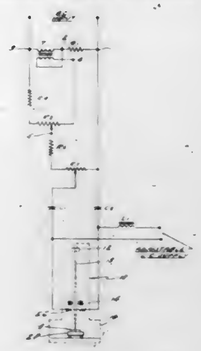
means for focusing said beam on a workpiece,

means for producing relative movement between the workpiece and the beam along a predetermined path,

means for deflecting the beam transversely to said path during said relative movement in response to an applied voltage,

a source of oscillating voltage coupled to said beam deflecting means, and

means electrically coupled to said source of oscillating voltage for adjusting the wave form of the voltage applied therefrom to said deflecting means whereby

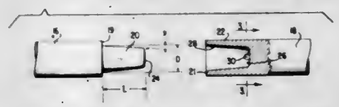


the rate of deflection of the beam transverse to said path is caused to vary in a predetermined manner within the range of deflection.

3,131,290
ELECTRODE CONNECTION

Myron D. Stepath, Lancaster, Ohio, assignor to Arcair Company, Bremerton, Wash., a partnership

Filed Nov. 17, 1961, Ser. No. 153,135
4 Claims. (Cl. 219—130)



1. A joint for connecting carbon-graphite electrodes comprising a socket terminal and a plug terminal frictionally received in said socket terminal, said plug terminal having a major diameter substantially two-thirds of the electrode diameter and a length about one and one-eighth times the diameter of the electrode, the wall of said plug terminal tapering from said major diameter, said socket terminal having an end wall and a correspondingly tapered side wall for frictionally receiving said plug terminal, the minimum thickness of said side wall being approximately one-sixth of the electrode diameter, and a vent hole in the side wall of said socket terminal preventing the accumulation of gas between said terminals.

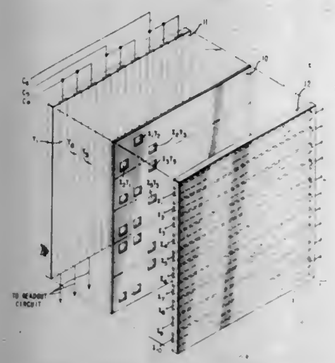
3,131,291
ASSOCIATIVE MEMORY

Walter K. French, Montrose, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed July 11, 1960, Ser. No. 42,005
5 Claims. (Cl. 235—61.11)

1. An associative memory system comprising storage means for storing words in the form of tag digits identifying each word and data digits associated with each word, individual read-out circuits associated with each of said words, first latching means for inhibiting some of said read-out circuits while enabling the remainder thereof, means to compare argument tag digits introduced to said storage means with the tag digits of each of said stored words in said storage means, means responsive to a match between said argument tag digits and the tag digits of one of said stored words for causing said first latching means to inhibit said some of said individual read-out circuits, a second latching means, said responsive means

causing said second latching means to inhibit the remainder of said individual read-out circuits except for said individual read-out circuit associated with said one



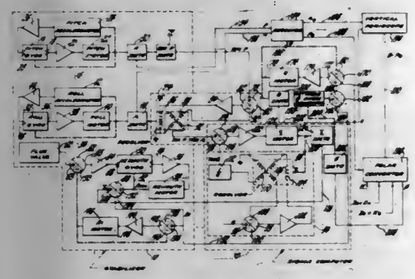
word whereby a read-out path for the data digits associated with said one word is established through said individual read-out circuit associated therewith.

3,131,292

COORDINATE REFERENCE SYSTEM

Leo W. Tobin, Jr., Milwaukee, Wis., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Nov. 29, 1957, Ser. No. 700,253
15 Claims. (Cl. 235—151)



1. The method of providing a coordinate reference system for a vehicle comprising the steps of generating pitch, roll, and azimuth signals corresponding to the angular displacement of said vehicle about its respective pitch, roll, and yaw axes from a datum position in which said axes are aligned with selected external reference axes having a known orientation in space, modifying said azimuth signal in accordance with a predetermined function of the pitch and roll signals to derive a corrected azimuth signal, and applying said pitch, roll, and corrected azimuth signals to utilization means as an indication of the displacement of the vehicle about the reference coordinate axes.

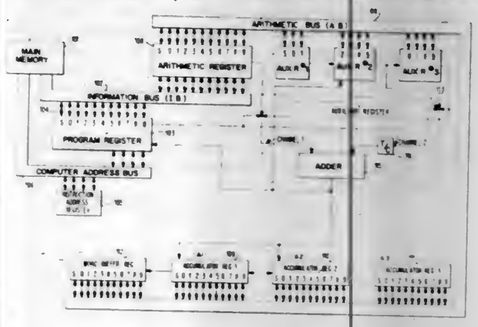
3,131,293

COMPUTING SYSTEM

Grant H. Bush, Poughkeepsie, and James E. Carrington, Vestal, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed July 14, 1960, Ser. No. 42,892
5 Claims. (Cl. 235—156)

1. In a floating point decimal system for performing a floating point add-subtract operation on first and second normalized operands, each operand being represented by an N digit mantissa and an M digit exponent indicating the true decimal location thereof, first and second M+N digit registers for storing said operands, respectively, a third M+N digit register, said first register also storing the exponent of the result of said operation in the M digit positions thereof and the N most significant digits thereof in the N digit positions thereof, said third register storing the N least significant digits of said result in the N digit positions thereof and an exponent equal to said exponent in said first register less N in the M digit positions thereof, an adder for performing said operation, means to compare said operands to determine the larger and smaller of the absolute values thereof and the true exponent difference ED therebetween, means responsive to said comparison



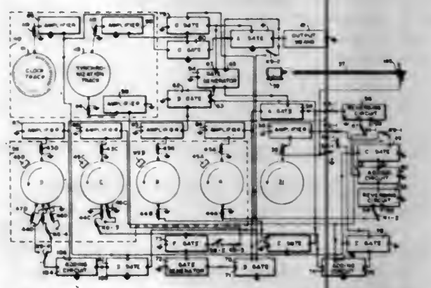
means for always storing prior to said operation the larger operand in said first register and the smaller operand in said second register, first control means to add in said adder ED least significant mantissa digits of said smaller operand to zeros and to store the result thereof in said third register, second control means to add in said adder the mantissa digits of said larger operand and the remaining mantissa digits of said smaller operand, third control means to store the results of said last operation in said first register, said first and third registers storing said resultant mantissa, means to normalize said resultant mantissa, means to modify said larger exponent responsive to said normalization, means to store said modified exponent in said M digit positions of said first register, and means to store an exponent in said M digit positions of said third register equal to said modified exponent less N.

3,131,294

ELECTRONIC CALCULATING MACHINE

Frederick C. Hallden, Floral Park, N.Y., assignor to Hazeltine Research, Inc., a corporation of Illinois

Filed June 3, 1960, Ser. No. 33,825
30 Claims. (Cl. 235—167)



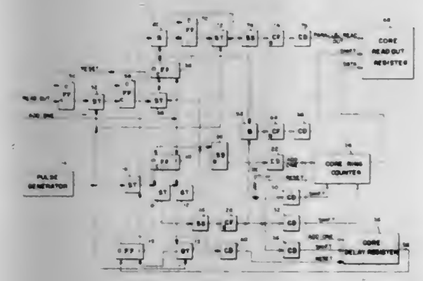
27. A decimal calculator for performing arithmetic computations in binary arithmetic: insertion means including means for performing decimal-to-binary conversion for inserting information corresponding to a number to be utilized in a calculation and for controlling the following transfer means; means including a circulating magnetic recording medium having a portion for permanently storing binary information representing all numbers which may be so utilized in a plurality of registers arranged serially along a path; transfer means including a reproducing element capable of traversing said path and actuated by the insertion means for successively reproducing and transferring to the following dynamic storage means during each traversal of a register any information stored in the register corresponding to the information so inserted; dynamic storage means responsive to the so transferred information including a second portion in said recording medium in fixed relation to the first portion for developing and storing a binary answer, in a path which circulates, including means for reproducing and again storing the binary answer with each traversal of a new register and means for erasing the binary answer after each such reproduction; means for causing said reproducing element to traverse said path for conditionally subtracting the numbers in the plurality of registers from the so stored binary answer until the binary answer is reduced to zero; and a recording mechanism responsive to the conditional subtraction for converting the binary answer to a decimal answer and printing each decimal digit of the answer at the time the decimal digit is determined by integration of its corresponding binary information in the conditional subtraction.

3,131,295

COUNTER CIRCUIT

Hawley K. Rising, Lexington, Mass., and George R. Briggs, Princeton, N.J., assignors, by direct and mesne assignments, to Research Corporation, New York, N.Y., a corporation of New York

Filed Apr. 20, 1955, Ser. No. 502,634
29 Claims. (Cl. 235—175)



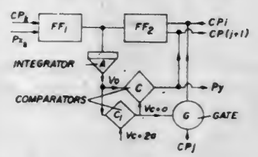
1. A subtracter including at least first, second and third magnetic elements, first circuit means coupled to said first, second and third magnetic elements for writing a One in said first and third magnetic element and a Zero in said second magnetic element, second means coupling said second magnetic element to said first means and adapted to write a One in said third magnetic element, third means coupled to said first and second magnetic elements for writing a One in said second magnetic element and a Zero in said first magnetic element, shift means coupled to said first, second and third magnetic elements, and fourth means coupled to said first means for supplying input signals representative of a number.

3,131,296

PULSE POSITION ANALOG COMPUTER

Erik V. Bohn, Vancouver, British Columbia, Canada, assignor to Her Majesty the Queen in the right of Canada as represented by the Minister of National Defence, Ottawa, Ontario, Canada

Filed Apr. 13, 1961, Ser. No. 102,816
5 Claims. (Cl. 235—176)



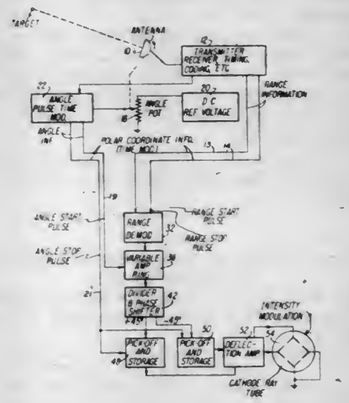
1. A pulse position modulation computer circuit comprising a Miller integrator, a first flip flop circuit adapted to be set by a first pulse thereby to gate a first constant direct voltage to the input of the integrator and adapted to be reset by a second pulse thereby to remove the said first constant voltage from the input of the integrator, a second flip flop circuit adapted to be set by a third pulse thereby to gate a second constant direct voltage whose magnitude is equal and opposite to that of the first constant voltage to the integrator and adapted to be reset by a fourth pulse thereby to remove the said second constant voltage from the input of the integrator, a voltage comparator adapted to compare the output voltage of the integrator with a fixed comparison voltage and adapted to generate said fourth pulse when the output voltage of the integrator equals the comparison voltage, the voltage applied to the input of the integrator being zero in the absence of all of said constant voltages.

3,131,297

ELECTRONIC CIRCUIT FOR CONVERTING POLAR TO RECTANGULAR CO-ORDINATES

Sheldon W. Gates and John M. Sanborne, Phoenix, Ariz., assignors to Motorola, Inc., Chicago, Ill., a corporation of Illinois

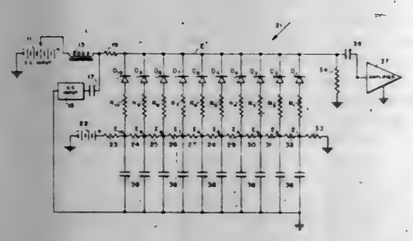
Continuation of application Ser. No. 717,499, Feb. 25, 1958. This application Jan. 12, 1962, Ser. No. 168,001
8 Claims. (Cl. 235—189)



1. An electronic circuit for converting signal information representing a vector quantity in polar coordinates into a pair of potentials representing such quantity in rectangular coordinates, said circuit including in combination, circuit means for producing a direct current potential proportional to vector magnitude, a ringing circuit for producing a first sine wave having an amplitude

proportional to the direct current potential, circuit means for producing second and third sine waves in 90° phase relation and having amplitudes proportional to that of the first sine wave, circuit means for sampling the instantaneous values of the potentials of the second and third sine waves at a time of the respective periods thereof corresponding to vector angle, whereby such potentials represent the vector quantity in rectangular coordinates.

3,131,298
DIODE MULTIPLIER NETWORK
Melville C. Creusere, China Lake, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed May 27, 1960, Ser. No. 32,493
1 Claim. (Cl. 235—194)
(Granted under Title 35, U.S. Code (1952), sec. 266)



A method of multiplying a multiplicand electrical signal by a multiplier electrical signal, one of said multiplicand and multiplier signals being represented by a variable D.C. voltage and the other by a variable first A.C. voltage, to obtain a product signal represented by a second A.C. voltage, and wherein the amplitude of the first A.C. voltage is appreciably smaller than the amplitude of the D.C. voltage, comprising the steps of:

(*a*) superposing the multiplicand and multiplier signals, one upon the other, thereby producing a superposed signal,

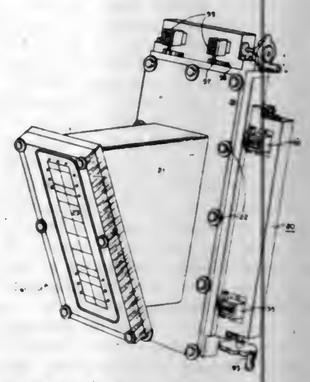
(*b*) delivering the superposed signal to a variable conductance type diode-resistance voltage compression network,

(*c*) selectively compressing the superposed signal within the voltage compression network by varying the conductance of the voltage compression network in direct proportion to the amplitude of said D.C. voltage thereby producing a variably compressed superposed signal, and

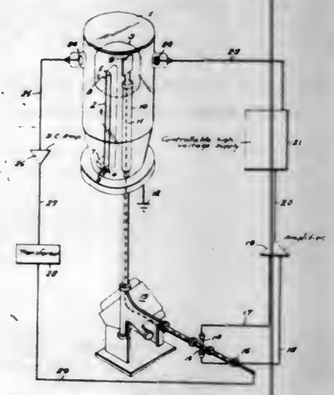
(*d*) utilizing the A.C. voltage amplitude of the variably compressed superposed signal as a measure of said product.

3,131,299
RAY-TRACING METHOD FOR ION-OPTICAL MEASUREMENTS
Eligius A. Wolicki, 7537 Broadview Road SE., and Philip R. Malmberg, 5935 Farmer Drive, both of Washington 22, D.C.
Filed Dec. 29, 1961, Ser. No. 163,365
4 Claims. (Cl. 250—41.9)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A method of tracing the trajectory of an ion ray which comprises positioning an aperture in the path of said ion ray, positioning an ion-sensitive screen a distance from said aperture, adjusting said aperture to pass an ion-beam, recording the position of said aperture, recording the position of a spot on said ion-sensitive screen due to said ion-beam incidence on said ion-sensitive screen, moving said aperture to pass other ion-beams and recording the position of said aperture and ion-beam spot produced on said ion-sensitive screen, drawing a line through said recorded aperture positions and corresponding ion-beam spot to provide a pattern of the ion ray paths produced.

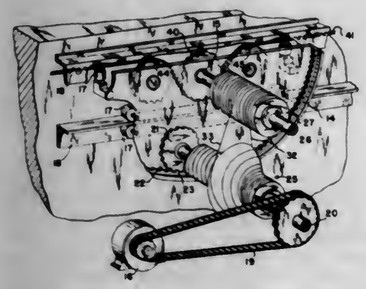


3,131,300
APPARATUS FOR REDUCING ENERGY VARIATIONS OF A VAN DE GRAAFF ION BEAM
Thomas R. Jeter, Bel Air, Md., and John D. Baldeschwieler, Cambridge, Mass., assignors to the United States of America as represented by the Secretary of the Army
Filed Nov. 16, 1962, Ser. No. 238,307
2 Claims. (Cl. 250—49.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



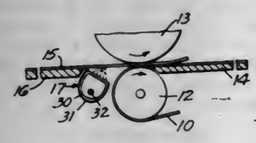
1. Electrostatic generator apparatus comprising a high voltage terminal; means for transporting electric charge to said terminal; an airtight conductive tank enclosing said terminal and transporting means; a corona leak electrode disposed within said tank; a controllable voltage supply connected to said electrode; a source of ions adjacent to said high voltage terminal to provide an origin for an ion beam; accelerating means for focusing and accelerating said ions to thereby form an ion beam of high energy; control means including a magnet, the field of which is used to deflect the ion beam on to a target; a slit system located between said control means and target to detect variations of said ion beam, said slit system being connected to said controllable voltage supply whereby the current produced in said slit system due to said variations is connected to said controllable voltage supply, said controllable voltage supply coupled to said corona leak electrode whereby potential variations of the high voltage terminal are obtained; capacitance means disposed within said tank for deriving a signal responsive to the said potential variations of the high voltage terminal caused by said controllable voltage supply; and means for feeding said signal to said target to cancel out any energy fluctuations.

3,131,301
TILTABLE X-RAY TABLE COMPRISING MEANS TO PRODUCE A VARIABLE SPEED TRANSLATIONAL MOVEMENT
David M. Barrett, Lyndhurst, and Oswald C. Hollstein, Euclid, Ohio, assignors to Picker X-Ray Corporation, Waite Manufacturing Division, Inc., Cleveland, Ohio, a corporation of Ohio
Filed June 26, 1961, Ser. No. 119,626
14 Claims. (Cl. 250—55)



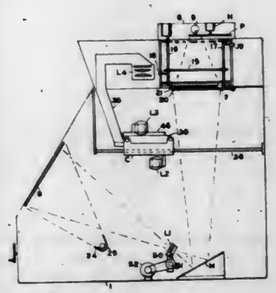
1. In an X-ray table having a patient supporting table body tiltably carried by a pedestal in a tower moveably connected to the body, the combination of, a pivot means interposed between the pedestal and the body for tilting the body relative to the pedestal, and translation producing means connected to the body and to the pedestal to shift the body translationally relative to the pedestal simultaneously with such tilting, and said translation producing means including a variable drive means so that said translational movement is at varying rates of speed.

3,131,302
THERMOPRINTING BY PRE-HEATING ORIGINAL IMAGE
Donal G. Kimble, Maplewood, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Dec. 3, 1959, Ser. No. 857,210
7 Claims. (Cl. 250—65)



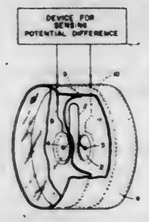
1. In a thermographic copying machine for reproducing a differentially radiation-absorptive imaged paper graphic original on a heat-sensitive copy-paper, the combination of: means for directly, briefly and intensely progressively irradiating the entire unobstructed imaged surface of said original to provide thereon a heat-pattern corresponding to the graphic pattern thereof; means for promptly thereafter placing said irradiated surface in contact with the surface of a visibly heat-sensitive copy-paper; and means for briefly pressing said surfaces together in mutually heat-conductive pressure-contact.

3,131,303
NEGATIVE TO POSITIVE FILM VIEWER
Anwar K. Chitayat, Plainview, N.Y., assignor to Optomechanisms, Inc., Mineola, N.Y.
Filed Jan. 22, 1962, Ser. No. 167,778
2 Claims. (Cl. 250—71)



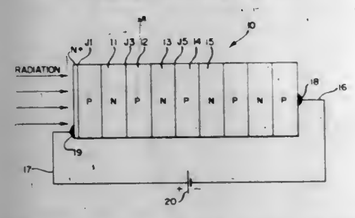
1. Means to obtain a positive view directly from a film negative, comprising an enclosed cabinet, a source of infra-red radiation mounted adjacent the top of said cabinet, film holding means having an aperture mounted below said source, means to protect film in said film holding means from overheating comprising a rotating chopping disc positioned between said radiation source and said film holding means, said disc being adapted to pass discrete pulses, of said radiation, a first lens adapted to focus said radiation on the entire aperture of said film holder, means to move said first lens vertically, a mirror mounted below said film holder in the optical path of said radiation and near the bottom of said cabinet, a translucent screen mounted on the front of said cabinet, a luminescent phosphor on the back side of said screen, said mirror being mounted at an angle to reflect said radiation onto said screen, and a second lens placed between said mirror and said screen adapted to focus said radiation on said screen, and an ultra-violet source adapted to activate said screen.

3,131,304
DIFFERENTIAL RADIOMETER FOR SENSING NET RATE OF HEAT EXCHANGE
Nathaniel E. Hager, Jr., Manheim Township, Lancaster County, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania
Filed Mar. 24, 1961, Ser. No. 98,099
6 Claims. (Cl. 250—83.3)



1. A differential radiometer comprising in combination a first thermocouple comprising a first plate connected to a wire to form a first junction capable of producing thermoelectric current, a second thermocouple comprising a second plate connected to said wire to form a second junction capable of producing thermoelectric current, and lead wires connecting each of said plates to a device capable of sensing differences in potential.

3,131,305
SEMICONDUCTOR RADIATION DETECTOR
Donald J. Shombert, Berkeley Heights, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
Filed May 12, 1961, Ser. No. 109,586
3 Claims. (Cl. 250—83.3)

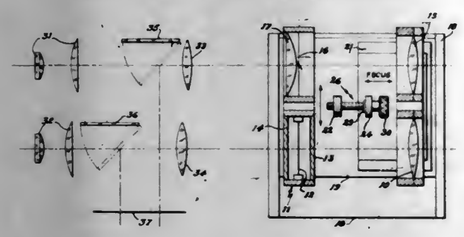


1. A radiation detector for high energy particles comprising a plurality of contiguous layers of semiconductor material of alternating conductivity type and of a predetermined thickness and resistivity, thereby forming a plurality of junctions, the diffusion length of minority carriers in each of said layers being small in comparison with the thickness of said layer; and means for biasing alternate junctions in a reverse direction thereby to form a wide depletion region to collect said particles.

3,131,306
PROCESS FOR GAGING DIMENSIONS BY MEANS OF RADIATIONS
Morris Weiss, Stamford, Conn., assignor to Barnes Engineering Company, Stamford, Conn., a corporation of Delaware
No Drawing. Filed June 16, 1961, Ser. No. 117,500
5 Claims. (Cl. 250—83.3)

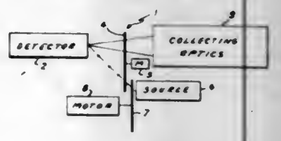
1. A process of monitoring the dimension of material showing a sharp radiation discontinuity with its background which comprises scanning a radiation detector across two reference pieces of material of predetermined identical dimensions, processing electronically the output signal from the detector, adjusting the output signal to a predetermined value, removing one of the identical pieces and substituting therefor the material, the dimension of which is to be monitored, the remaining reference piece being maintained at radiation conditions approximating that of the material to be monitored whereby an electronic readout is obtained which shows deviation of the material to be monitored from the predetermined dimension.

3,131,307
OPTICAL RANGE AND VIEWFINDER FOR INVISIBLE LIGHT IMAGING DEVICES
Otto H. Bock, Tullahoma, Tenn., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Sept. 29, 1961, Ser. No. 141,922
2 Claims. (Cl. 250—83.3)



1. Apparatus for use with a visible light system and an invisible light system, said apparatus comprising a visible light optical system having at least a pair of elements n optical alignment and adjustable relative to one another for focusing, an invisible light optical system having at least two elements in optical alignment and adjustable relative to one another for focusing, support means for mounting said systems with their optical axes in parallelism, slidable means mounted on said support means for travel in the direction of said optical axes, the relatively adjustable elements of each of said systems being mounted on said support means and said slidable means for their relative adjustment for focusing, boss means secured to each of said support means and slidable means, rod means in engagement with both of said boss means for effecting conjoint focusing between said relatively adjustable elements of both of said systems, an ocular lens system mounted with its optical axis parallel to said previously mentioned optical axes, a base, and means on said base for slidably mounting said support means for movement transverse to said optical axes to place alternately each of said visible light systems and said invisible light system in optical alignment with said ocular lens system.

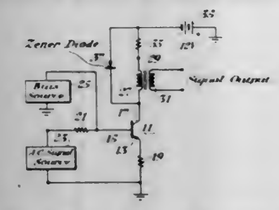
3,131,308
SELF CALIBRATING RADIOMETER WITH BOTH REFERENCE SOURCE AND TEST SOURCE INTERRUPTED BY ONE CHOPPER AND REFERENCE SOURCE INTERRUPTED BY A SECOND CHOPPER
William R. Fredrickson and Roy W. Paulson, Syracuse, N.Y., and Donald L. Stierwalt, Riverside, Calif., assignors to the United States of America as represented by the Secretary of the Air Force
Filed Sept. 6, 1962, Ser. No. 221,923
5 Claims. (Cl. 250—83.3)



1. A self-calibrating radiometer for nonsynchronous systems comprising, a radiation detector for receiving and indicating the variation of the energy level relative to a predetermined reference level relative to radiation received from a distant radiation source, a calibrating radiation source having a predetermined radiation level for directing calibrating radiation therefrom into said radiation detector, a "fast" chopper disposed in front of said detector for successively interrupting and passing radiation from the distant radiation source and from the calibrating radiation source at a uniform rapid rate, and a separate slow chopper disposed to interrupt radiation only from the calibrating radiation source, successively at a materially slower uniform rate than the rate of interruption of radiation from the distant radiation source, by said fast chopper.

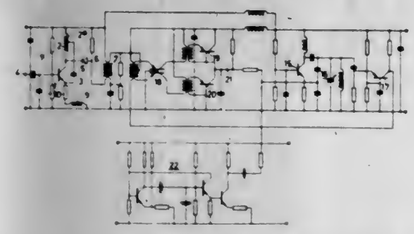
3,131,309
TRANSISTOR AMPLIFIER-SWITCHING CIRCUIT WITH ZENER DIODE LIMITING FOR ELIMINATION OF UNATTENUATED SIGNALS
Thomas J. Blocher, Jr., Monroeville, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Oct. 30, 1958, Ser. No. 770,770
6 Claims. (Cl. 307—88.5)

1. A switching circuit arranged to be connected to operating means, said switching circuit comprising a conductive device including a plurality of electrodes, a plurality of impedances connected in a circuit path including at least a pair of said electrodes and said operating means, means for applying an input signal to said conductive device, and output signal coupled from a first of said impedances, a Zener type diode connected in parallel with at least said first impedance and poled to present a high resistance to current flowing in the normal direction through



said device, and biasing means for at times driving said device to saturation, said impedances being so proportioned that upon saturation of said device a division of the potential therebetween is effected to cause said diode to conduct in a reverse direction to short circuit said first impedance by by-pass said output signal.

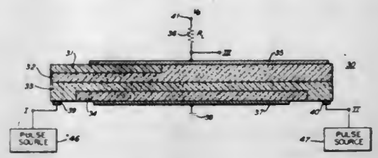
3,131,310
TRANSISTOR CIRCUIT FOR GENERATING NARROW PULSES
Marie Marcel Antoine Arnold Ghislain Verstraelen, Hilversum, Netherlands, assignor to North American Philips Company Inc., New York, N.Y., a corporation of Delaware
Filed May 16, 1960, Ser. No. 29,393
Claims priority, application Germany June 4, 1959
3 Claims. (Cl. 307—88.5)



1. A circuit for producing pulses comprising a transistor having base, emitter and collector electrodes, a source of operating voltage having first and second terminals, a first inductor having a tap, means connecting said first inductor between said collector electrode and first terminal, impedance means connected between said emitter electrode and second terminal, capacitor means connected between said tap and emitter electrode, a series circuit of a rectifier and a second inductor, and means connecting said series circuit in parallel with said first inductor, said rectifier being connected to be non-conductive when collector current flows in said transistor.

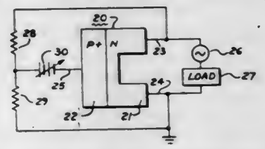
3,131,311
SEMICONDUCTOR PULSE GENERATORS
Ian M. Ross, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed June 21, 1960, Ser. No. 37,739
2 Claims. (Cl. 307—88.5)

1. A bistable pulse generator comprising an integrated semiconductor structure including a wafer of semiconductor material, said wafer having two major faces and four successive zones of opposite conductivity type in substantially parallel relation with said faces, one of the terminal zones of said wafer and a portion of the intermediate zone adjacent to said one terminal zone being contiguous to one face of said wafer whereby one portion of the wafer includes four successive zones between the major faces and the other portion includes three successive zones between the major faces of the wafer, a first low resistance connection to said one face and common to both the zones contiguous thereto, a second low resistance connection to the other terminal zone, third and fourth low resistance connections to the intermediate zone adjacent



to said other terminal zone, said third and fourth connections being at the opposite extremities of said zone, a first means including a resistance element for applying between said first and second low resistance connections a voltage which is less than the characteristic breakdown voltage of said semiconductor body, a second means for applying a voltage pulse to said third low resistance connection, a third means for applying a voltage pulse to said fourth low resistance connection, and an output terminal to said first low resistance connection.

3,131,312
CIRCUIT FOR LINEARIZING RESISTANCE OF A FIELD-EFFECT TRANSISTOR TO BIDIRECTIONAL CURRENT FLOW
Franz Ludwig Putzrath, Oaklyn, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Aug. 5, 1960, Ser. No. 47,708
12 Claims. (Cl. 307—88.5)

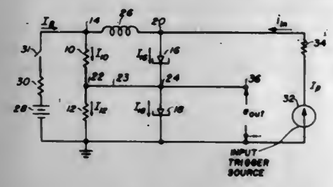


1. A signal translating circuit comprising in combination a unipolar transistor including drain, source and gate electrodes, a voltage divider connected between said drain and source electrodes, means providing a source of signals to be controlled connected between said drain and source electrodes, a control voltage source connected between said gate electrode and an intermediate point on said voltage divider, said control voltage source poled to reverse bias said gate electrode with respect to both said drain and source electrodes through said voltage divider.

3,131,313
TUNNEL DIODE INVERTER
Abdul R. Habayeb, Lawrence, Kans., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Dec. 29, 1960, Ser. No. 79,320
25 Claims. (Cl. 307—88,5)

8. An electrical circuit comprising first and second resistive impedances connected in a first series combination between a first terminal and a reference point, first and second like-poled tunnel diodes connected in a second series combination between a second terminal and said reference point, the connecting points of respective series combinations being coupled together, each of said diodes having a characteristic including a negative resistance

range located between first and second positive resistance regions, said positive resistance regions being adapted to sustain stable low- and high-voltage states of diode operation respectively, an inductance connected between said



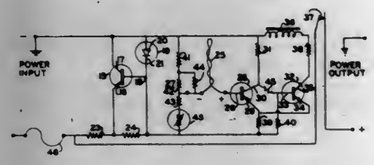
first and second terminals, means for biasing each of said diodes for operation in a predetermined one of said voltage states, and means for applying trigger pulses adapted to reverse the voltage state of at least one of said diodes.

3,131,314

TEMPERATURE CONTROL TRIGGER EMPLOYING EMITTER RESISTOR HAVING VALUE OF TRANSISTOR'S BASE-TO-EMITTER RESISTANCE

Lincoln H. Charlot, Jr., Saint Croix Beach, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed Jan. 3, 1961, Ser. No. 80,062
4 Claims. (Cl. 307—88.5)



1. A temperature control switch comprising, in combination, a trigger circuit containing a first transistor stage and associated circuitry and a second transistor stage and associated circuitry, the transistor of said first stage and the transistor of said second stage having a resistor common to the emitter circuits of both transistors, said resistor having a resistance value not greater than the base to emitter junction resistance of the said first stage transistor; biasing means for adjusting the sensor setpoint of said trigger circuit to a value outside the conductive condition of the said circuit, said biasing means including means to compensate for change in ambient temperature of the said circuit; a sensor operatively associated with said circuit and supplying to the base of said first stage transistor a voltage in response to changes in ambient conditions surrounding the said sensor, for triggering said circuit to cause current flow; and a source of direct current for energizing the said circuit.

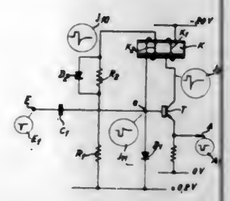
3,131,315

MONOSTABLE BLOCKING OSCILLATOR

Josef Mörwald, Dachau, near Munich, Germany, assignor to Kienzle Apparate G.m.b.H., Villingen, Black Forest, Germany

Filed June 28, 1961, Ser. No. 120,395
Claims priority, application Germany July 16, 1960
4 Claims. (Cl. 307—88.5)

1. In a monostable blocking oscillator having a transistor having a base and an emitter-collector circuit, in combination, inductive feedback means including a magnetizable core, a primary and a secondary inductance coil mounted on said core and magnetically coupled thereby with each other, said primary inductance coil being connected across the emitter-collector circuit of the transistor in circuit with a source of voltage, said secondary inductance coil being connected in circuit with a source of reference voltage between the base of the transistor and one terminal of said source of reference voltage to constitute a feedback circuit, said feedback circuit comprising in series with said second inductance coil, a



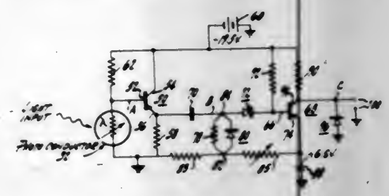
parallel combination of a resistance means and a diode, said diode being poled to shunt said resistance means except for current flow during appearance of an inductive voltage peak upon cut-off of the transistor; and a second diode connected between the base of the transistor and one terminal of said source of reference voltage whereby the base of the transistor is protected against excessive voltage derived from the feedback action.

3,131,316

THRESHOLD CIRCUIT UTILIZING SERIES CAPACITOR-DIODE COMBINATION AND EMPLOYING DIODE CLAMP TO MAINTAIN INFORMATION TRANSMISSION

Gideon Glaz, Levittown, Pa., assignor to Radio Corporation of America, a corporation of Delaware

Filed Dec. 22, 1961, Ser. No. 161,719
7 Claims. (Cl. 307—88.5)



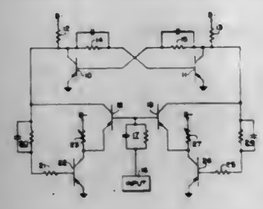
1. A circuit comprising an input transistor and an output transistor of the same conductivity type each having an emitter, a collector and a base; a capacitor and a unidirectional conducting device serially connected, in the order named, between the emitter of the input transistor and the base of the output transistor with the unidirectional conducting device poled with its easy current flow direction in opposition to the direction of forward base current of the output transistor; means to apply biasing potentials to the collector, emitter and base of the output transistor for normally biasing the output transistor in the full on condition; means for applying a bias voltage at the junction of said capacitor and said unidirectional conducting device for normally reverse biasing said unidirectional conducting device by a predetermined amount; a resistor connected between the emitter of said input transistor and a point of reference potential; means connecting the collector of said input transistor to a point of reference potential; and means for applying at the base of said input transistor information signals having an amplitude greater than said predetermined amount and a polarity to forward bias said unidirectional conducting device.

3,131,317

HIGH FREQUENCY BISTABLE TRANSISTOR COUNTER

Seening Yee, Whitestone, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Mar. 20, 1962, Ser. No. 181,216
5 Claims. (Cl. 307—88.5)



4. A high speed binary counter for counting high frequency square wave input pulses comprising a bistable transistor flip-flop having first and second transistors and impedance means cross-coupling the input and output of said transistors whereby said transistors assume mutually exclusive first and second states; said first and second transistors interchanging their states when an amplified square wave input pulse is applied to the output of said first transistor in said first state; first and second transistor gates each having input, output and control terminals; said input terminals connected to receive square wave input pulses, each gate being operative to amplify said square wave input pulses when received at the input terminal thereof only when an enabling voltage is applied to said control terminal, conductive means connecting the output of said first transistor gate to the output of said first transistor in said flip-flop and connecting the output of said second transistor gate to the output of said second transistor in said flip-flop for supplying in an amplified square wave input pulse to the first and second transistors respectively when said first and second transistor gates respectively are conducting, a pair of switching transistors each having input, output and control electrodes, said control electrodes of said switching transistors being coupled to an output terminal of a respective one of said first and second transistors in said flip-flop, said output electrodes of said switching transistors being coupled to a respective one of said transistor gates, variable bias means connected to the output electrodes of said switching transistors to bias said switching transistors to cutoff until the respective transistor flip-flop output terminals coupled to said control electrodes reaches a predetermined voltage level immediately after the change of state of said flip-flop whereby said switching transistors maintain said respective transistor gates non-conducting until said predetermined voltage level is reached.

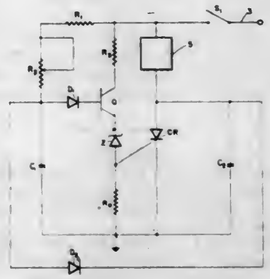
3,131,318

TIME CONTROLLED POWER CIRCUIT

Paul O. Snyder, Linthicum Heights, and Edmund T. Bridge, Glen Burnie, Md., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Oct. 3, 1962, Ser. No. 228,206
1 Claim. (Cl. 307—88.5)

Timing circuitry comprising a direct current power source; a variable resistor; a condenser; means connecting the variable resistor and the condenser in series across the power source; a load; a silicon control rectifier; means connecting the load and the control rectifier in series across the source; a pair of resistors; a Zener diode; a transistor having an emitter-collector circuit that extends from one terminal of the source successively through one of the resistors, the transistor, the Zener diode and the other of the resistors to the other terminal of the source; means coupling the junction of the variable resistor and



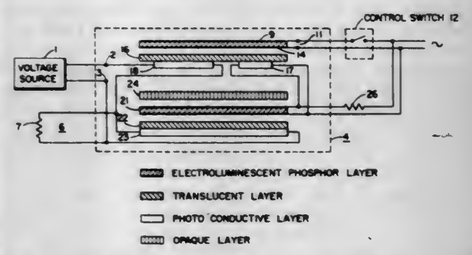
the condenser to the base of the transistor; and means coupling the junction of the variable resistor and the condenser to the junction of the load and the control rectifier.

3,131,319

ELECTRONIC SWITCHING DEVICE UTILIZING CONTROLLED SOURCES OF ELECTROMAGNETIC RADIATION

Barrie Brightman, Webster, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Filed Apr. 24, 1961, Ser. No. 104,966
2 Claims. (Cl. 307—117)



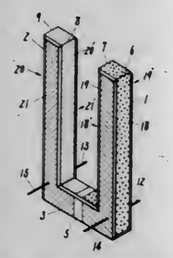
2. A switching circuit for controlling current flow through an external circuit comprising, a first source of electromagnetic radiation having an energizing circuit, a second source of electromagnetic radiation having an energizing circuit, a control switch for actuating said switching circuit, a source of energizing current, means for coupling said control switch between said source of energizing current and the energizing circuit of said first source so as to cause said first source to emit electro-magnetic radiation upon the actuation of said control switch, a first impedance, means for coupling the energizing circuit of said second source to said source of energizing current through said first impedance, a second impedance, the impedance of which may be varied by changing the degree of electromagnetic radiation directed thereon, said second impedance being positioned adjacent said first source, means for coupling said second impedance in series relationship with said external circuit to control the current flow through said external circuit, a third impedance, the impedance of which may be varied by changing the degree of electromagnetic radiation directed thereon, said third impedance being positioned adjacent said first source, means for coupling said third impedance in shunt across the energizing circuit of said second source so that when said first source is turned on upon the actuation of said control switch said second

source will be turned off, a fourth impedance, the impedance of which may be varied by changing the degree of electromagnetic radiation directed thereon, said fourth impedance being positioned adjacent said second source of electromagnetic radiation, means for coupling said fourth impedance in shunt with said external circuit, and means for preventing electromagnetic radiation emitted by said first source from affecting said fourth impedance and for preventing electromagnetic radiation emitted by said second source from affecting said second and third impedances.

3,131,320
AUDIO-FREQUENCY CRYSTAL VIBRATOR

Toshio Shinada and Susumu Oinuma, Tokyo, Japan, assignors to K. K. Kinsekisha Kenkyujo, Tokyo, Japan, a corporation of Japan

Filed Sept. 1, 1960, Ser. No. 53,450
Claims priority, application Japan Dec. 23, 1959
1 Claim. (Cl. 310—9.6)



A crystal vibrator for audio-frequency use comprising a vibrator body of U-shape cut from a quartz crystal plate, said plate having front and rear portions, said front portion including the electrical axis of the quartz crystal, said rear portion being parallel to the front portion, said vibrator body having a pair of parallel prongs and a transverse butt portion, said prongs being rectangular prisms of equal dimensions, said transverse butt portion being a rectangular prism and being parallel to the electrical axis of the quartz crystal and meeting with the lower end of said prongs at right angles, the lengths of said prongs and said butt portion being selected so as the intersectional portions of said prongs and butt portion will be nodal points of vibration of said vibrator body; two pairs of surface film electrodes being formed on four sides of each prong closely adhering and separated from each other, each pair of said electrodes on a given said prong facing each other by being applied against sides of said prong and being soldered with one of the following mounting pins which serve as terminals for said electrodes; two pairs of mounting pins, a pair thereof being mounted on the front portion and another pair of said pins being mounted on the rear portion, each one of said pins being situated at approximately the central portion in a given area of two defined areas on the respective two opposite sides of said plate, each said defined area being formed respectively by the intersection of the common front portions or by the intersection of the common rear portions of the above mentioned prongs and the transverse butt portion.

3,131,321
LIQUID-COOLED ROTOR FOR A DYNAMO-ELECTRIC MACHINE

Edward E. Gibbs, Schenectady, and David M. Willyoung, Scotia, N.Y., assignors to General Electric Company, a corporation of New York

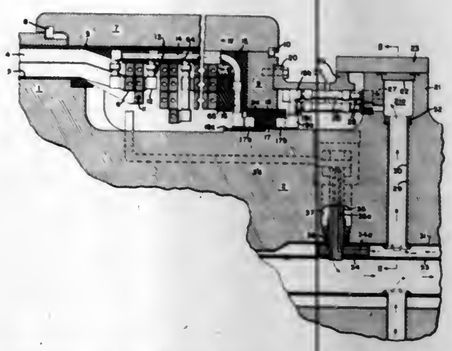
Filed Apr. 23, 1962, Ser. No. 189,518
9 Claims. (Cl. 310—54)

1. A liquid-cooled rotor for a dynamoelectric machine comprising:

a rotor body defining a plurality of circumferentially spaced, axially extending slots,

a plurality of winding coils having slot-lying portions disposed in said slots and having end turn portions extending axially and circumferentially outside of said slots, each of said coils comprising one or more stacks of radially disposed, insulated conductors, at least some of said conductors defining internal liquid passages,

a source of liquid coolant,



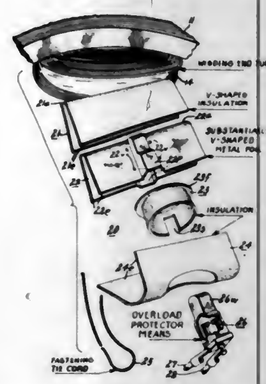
a plurality of pipe fittings disposed between said stacks of circumferentially extending end turn conductors and connected to said liquid passages of selected conductors,

and a plurality of conduits, including insulating hose portions, connected to supply liquid coolant from said source to said fittings to cool the conductors, other portions of said conduits including pipes disposed radially outward of the end turn conductor stacks and extending radially inward between conductor stacks to connect with said fittings.

3,131,322
THERMOSTATIC OVERLOAD PROTECTOR

Bernard J. Pleiss, Jr., Dayton, Ohio, and Thomas A. Jacoby, Tecumseh, Mich.; said Pleiss assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware, and said Jacoby assignor to Tecumseh Products Company, Tecumseh, Mich.

Filed Mar. 6, 1961, Ser. No. 93,392
9 Claims. (Cl. 310—68)



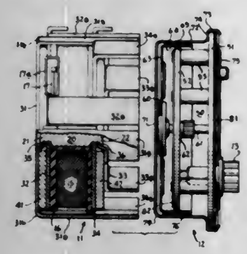
1. A protector mounting means, comprising, a wedge-like V-shaped insulating segment, a separate foil-like

substantially V-shaped metal piece including a centrally located pocket open axially to one side thereof, and a wedge-shaped casing portion of overload protector means fitted snugly and directly in engagement with said V-shaped metal piece that effects good heat transfer to the casing portion from outside said insulating segment separate therefrom.

3,131,323
SYNCHRONOUS MOTOR FOR CLOCKS OR THE LIKE

Herbert C. Roters, Kew Gardens, N.Y., and William A. Black, deceased, late of Montclair, N.J., by Marion Bennett Black, executrix, Montclair, N.J., assignors to General Time Corporation, New York, N.Y., a corporation of Delaware

Filed July 7, 1960, Ser. No. 41,449
10 Claims. (Cl. 310—164)

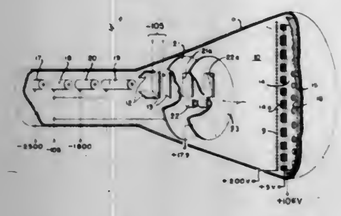


4. In a synchronous motor for use in clocks or the like the combination comprising a pole structure including a series of shaded and unshaded poles arranged in a generally cylindrical locus and having a coil for exciting the same, a rotor sub-assembly including a generally cylindrical housing having a rotor and dimensioned to fit within the cylindrical locus of the poles, said poles being sprung radially inward so that each of the poles bears resiliently against the outer surface of the housing, the housing having a stepped contour for maintaining the shaded and unshaded poles at predetermined spacings relative to the rotor.

3,131,324
ELECTRON-GUN ASSEMBLY FOR CATHODE-RAY SIGNAL-STORAGE TUBES

Robert J. Madden, Bloomfield, and Victor Le Gendre, Wayne, N.J., assignors to Fairchild Camera and Instrument Corporation, a corporation of Delaware

Filed Nov. 13, 1961, Ser. No. 151,879
4 Claims. (Cl. 313—82)



1. An electron-gun assembly for a cathode-ray signal-storage tube including electrostatic deflection plates and a signal-storage grid comprising: a writing gun for scanning said grid including an electron-beam source and a first accelerating electrode member relatively positioned to be disposed on opposite sides axially of the deflection plates, said accelerating electrode member being dimensioned effectively to shield the deflection plates from all axially following tube elements; and a flood gun for flooding said grid including an electron-beam source positioned axially approximately coincidently with said accelerating electrode member and a second accelerating electrode member positioned axially beyond said first accelerating electrode member, whereby the deflection plates are electrically shielded from the flood-gun beam.

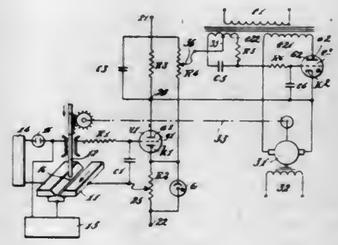
ERRATUM

For Class 313—337 see:
Patent No. 3,131,328

3,131,325
ARC WELDING SYSTEM

Rufus L. Briggs, Melrose, Mass., assignor to Electrarc, Inc., Boston, Mass., a corporation of Massachusetts

Filed Feb. 17, 1961, Ser. No. 90,127
2 Claims. (Cl. 314—74)



1. In pulsed electric arc welding apparatus having an adjustable electrode wherein each welding pulse is initiated by a high voltage igniting pulse, a device for controlling the width of an arc gap by adjusting the electrode, comprising: means for detecting the peak voltage of said igniting pulse including a capacitor charged by said igniting pulse, and means for amplifying the voltage appearing across said capacitor; an alternating current source; a direct current motor; a rectifier having firing control means, for supplying current from said alternating current source to said direct current motor; a source of triggering voltage for said rectifier of the same frequency as said alternating current source; means for delaying the phase of said triggering voltage relatively to said alternating current source; regulating means responsive to the output voltage of said amplifying means for altering the direct current reference level of said alternating current voltage thereby to vary the direct current power passed by said rectifier; and means associated with said electric motor for advancing said electrode at a speed determined by the power received by said motor.

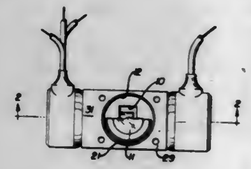
3,131,326
COUPLING FROM A RESONANT CAVITY THROUGH A DIELECTRIC WINDOW TO AN EXTERNAL LOOP

Desmond R. Armstrong, San Carlos, Calif., and Carl H. Turnblom, Salt Lake City, Utah, assignors to Eitel-McCullough, Inc., San Carlos, Calif., a corporation of California

Filed Aug. 5, 1960, Ser. No. 47,865
4 Claims. (Cl. 315—39)

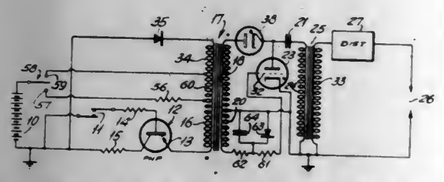
4. An electrical coupling comprising a cup-shaped member having an outwardly projecting attachment rim, a center conductor insulatingly sealed in the closed end of said cup-shaped member, a conducting loop connected

to said center conductor and the side of said cup and having a flat portion positioned outside the open end of



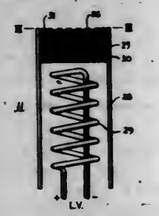
said cup-shaped member, and a dielectric plastic filling within said cup.

3,131,327
TYPE IGNITION CIRCUIT CONDENSER DISCHARGE
Halsey P. Quinn, Whippany, N.J., assignor to Tung-Sol Electric Inc., a corporation of Delaware
Filed Nov. 21, 1960, Ser. No. 70,889
19 Claims. (Cl. 315—177)



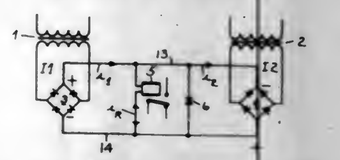
1. An ignition circuit for internal combustion engines having a spark plug in each combustion chamber, a source of direct current, means connected to said source for creating a series of current pulses synchronized with the movement of the engine's pistons, a current amplifier for amplifying pulses created by said means, an inductor coupled to an output circuit of said amplifier for storing energy in the inductor's magnetic field, a capacitor coupled to said inductor for receiving a charge therefrom and a discharge circuit which includes said capacitor, a switching device, and an input winding of an output transformer, said output transformer having a winding coupled to said spark plugs.

3,131,328
DISPENSER CATHODE FOR CATHODE RAY TUBE
Joseph T. McNaney, La Mesa, Calif., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Continuation of application Ser. No. 537,112, Sept. 28, 1955. This application June 20, 1960, Ser. No. 37,801
3 Claims. (Cl. 313—337)



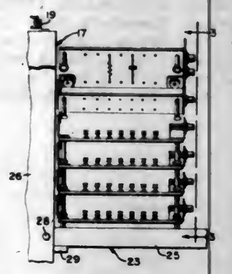
3. In a cathode ray display tube wherein an electron beam shaped into a plurality of individual spaced character-like cross-sections is projected along the tube toward its screen, and wherein one of these cross-sections is selected for impingement upon the screen, the combination comprising: a cathode body having electron emitting surfaces preformed into a plurality of individual spaced character-like cross-sections, the electrons from said emitting surfaces forming said electron beam; means positioned over the nonformed portions of said cathode body for preventing electron emission from areas other than the plurality of character-like cross-sections; and heater means adjacent said cathode body for indirectly heating said cathode body.

3,131,329
ARRANGEMENT WITH PHASE-DEPENDENT MEASUREMENT PARTICULARLY FOR RELAYS
Roland Braun, Nussbaumen, near Baden, Switzerland, assignor to Aktiengesellschaft Brown, Boveri & Cie, Baden, Switzerland, a joint-stock company
Filed Sept. 3, 1959, Ser. No. 837,868
Claims priority, application Switzerland Sept. 3, 1958
8 Claims. (Cl. 317—27)



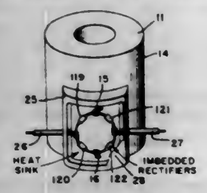
1. In an arrangement for measuring the difference in phase between two alternating current quantities produced respectively by first and second circuit means, the combination comprising first and second rectifier means connected respectively to said first and second circuit means, further circuit means interconnecting said first and second rectifier means such that the positive and negative output terminals of said first rectifier means are connected by first and second conductors to the negative and positive output terminals respectively of said second rectifier means, a switching device such as a relay having the winding thereof connected between said first and second conductors, and a one-way electric valve also connected between said first and second conductors in parallel with said relay winding.

3,131,330
TERMINAL BOARD ASSEMBLY
James B. Allen, 47–F Ridge Road, Greenbelt, Md.
Filed Apr. 4, 1962, Ser. No. 185,170
4 Claims. (Cl. 317—99)
(Granted under Title 35, U.S. Code (1952), sec. 266)



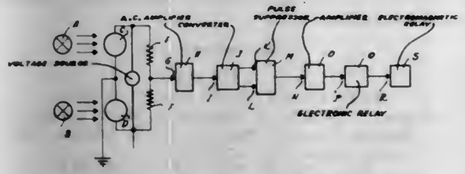
1. An electrical apparatus comprising a housing, a chassis structure slidably mounted in said housing, at least one rotatable subchassis structure mounted in said chassis, means for pivoting the subchassis to a position normal to the chassis, a plurality of substantially flat frame members mounted on said subchassis in spaced, vertically stacked relation for housing a plurality of electrical components, means affixed to the upper and lower surfaces respectively of each of said plurality of frame members along one side thereof for pivotally interconnecting each frame member with an adjacent frame member, and means on each of said plurality of frame members along one other side only for spacing and normally locking each of the plurality of frame members with an adjacent frame member in parallel relationship therewith, said one other side being parallel to said one side having said pivotally interconnecting means affixed therealong, and said spacing and locking means being releasable on each of said plurality of frame members for unlocking for rotating each frame member to a position normal to the locked position to inspect the rotated frame member and to expose the adjacent frame member.

3,131,331
COIL-RECTIFIER STRUCTURES
William A. Ray, North Hollywood, Calif., assignor to General Controls Co., Glendale, Calif., a corporation of California
Filed Mar. 28, 1960, Ser. No. 18,173
11 Claims. (Cl. 317—123)



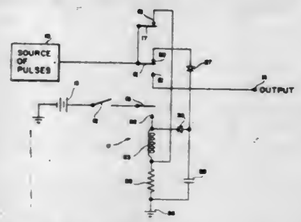
1. A unitary construction including a coil and rectifying means, supporting means for said coil, enclosure means enclosing said rectifying means mounted on said supporting means adjacent to an external portion of said coil, input leads, electrical connections between said coil, said rectifying means and said input leads all in said enclosure means, said electrical connections comprising a part of a rectifying circuit which provides a unidirectional current flow through the coil when an A.C. voltage is applied to said input leads, and encapsulating material in said enclosure forming an external heat sink surrounding said electrical connections, said rectifying means and a portion of said input leads.

3,131,332
ELECTRONICALLY OPERATED PHOTOSENSITIVE PICK-UP SYSTEM
Antonio Viaplana Guri, Avenida Virgen de Montserrat 15, Barcelona, Spain
Filed Nov. 3, 1959, Ser. No. 850,599
Claims priority, application Spain Nov. 8, 1958
5 Claims. (Cl. 317—130)



1. A photosensitive system comprising, in combination, a pair of photosensitive elements; a balanced electric circuit having an output terminal and including said photosensitive elements and adapted to produce an output voltage at said output terminal upon the occurrence of a difference in the intensity of light impinging upon either of the said photosensitive elements in relation to the other; indicating means responsive to a pulse of predetermined polarity for indicating the presence of said output voltage; and control means connected between said circuit and said indicating means for converting said output voltage to a pulse of said predetermined polarity so that a difference in intensity of light impinging upon either of said photosensitive elements in relation to the other is indicated by the said indicating means.

3,131,333
PULSE ELIMINATION CIRCUIT
Carlile R. Stevens, Inglewood, Calif. (272 Fairway, Danville, Calif.)
Filed June 10, 1960, Ser. No. 35,186
2 Claims. (Cl. 317—141)

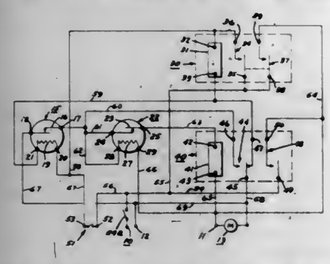


1. A control circuit for eliminating at least one pulse from a series of pulses, comprising:
a source of pulses initiated in series;
output means for receiving said pulses;
switch means for alternately coupling and uncoupling said source of pulses with said output means and being in normally uncoupling condition;
a switch energization circuit means having first and second ends;
a resistor connected between said first end and a common reference potential point, said first end also being normally coupled to said source of pulses by said switch means;
a capacitor and a first diode in series, said capacitor being connected to said common reference potential point, and said first diode being normally coupled to said source of pulses by said switch means, said first diode being poled in a direction to pass said pulses to said capacitor for charging thereof;
a second diode connected between said second end of said switch energization circuit means and a junction between said capacitor and said first diode, said second diode being poled in a direction opposite to the polarity of the pulses coupled to said first end to prevent current through said switch energization circuit means during the occurrence of a first one of said pulses and, upon termination of such first one pulse, said capacitor will discharge through said second diode and said switch energization circuit means for causing said switch means to change to its alternate condition; and
a holding circuit including a source of direct current potential and having normally open contacts closed by said switch energization circuit means upon energization thereof for applying said direct current potential to said switch energization means to permit more than one pulse to be eliminated from the series.

3,131,334
TIMED-CYCLE CONTROL
Reed J. Husband, 650 Carroll Way, Pasadena, Calif.
Filed Oct. 10, 1961, Ser. No. 144,082
9 Claims. (Cl. 317—141)

1. A timed-cycle control circuit for controlling the application of power, comprising: an input terminal adapted to be connected to a current source; an output terminal adapted to be connected to a powered device whose period of operation is to be controlled by the control circuit; a

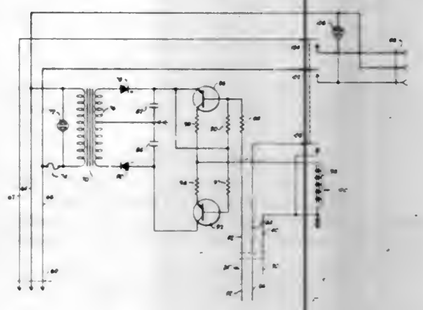
common terminal adapted to be connected to both the current source and to the powered device; first delay means; second delay means; each of said delay means including a switch and a switch-actuating means which, when actuated by application of voltage thereto, change the condition of the switch from a normal to an actuated condition, the switch in the first delay means being normally open and the switch in the second delay means being normally closed, their actuated conditions being closed and open, respectively; first and second relay means each including a coil, a captive circuit switch and a power control switch; and a starter switch, the said delay means, relay means, and starter switch being so connected and arranged with each other and with the input, output and common terminals that closure of the starter switch actuates the coil of the first relay to form a captive circuit for its coil, closes its respective power switch to supply current to the output terminal, and applies voltage to the switch-actuating means of the first delay means, whereupon, after a delay, the switch-actuating means of the first delay means completes a circuit through the coil



of the second relay, the captive circuit switch of which breaks the captive circuit through the coil of the first relay means and de-actuates the first relay, thereby opening the power control switch of the first relay means and cutting off current to the switch-actuating means of the first delay means, simultaneously closing the power control switch to apply current to the output terminal, completing a captive circuit through the coil of the second relay means, and to apply voltage to the switch-actuating means of the second delay means, whereupon, after a delay, the switch-actuating means of the second delay means actuates its respective switch and opens it to break the respective captive circuit, de-actuate the relay, and open the respective power control switch, thereby cutting off power to the output terminal, and returning the circuit to a repose condition after completion of a cycle, the time length of the cycle of operation of the control circuit being determined by the sum of the times taken by the switch-actuating means of the delay means to actuate their respective switches, and whereby a new cycle cannot be started until a new cycle is completed.

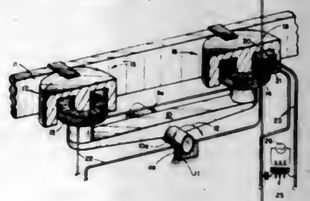
3,131,335
LIQUID LEVEL CONTROLLER
Carl O. Berglund, 4411 San Jacinto, and Roy R. Thompson, 527 Meadows Bldg., both of Dallas, Tex.
Filed Nov. 10, 1960, Ser. No. 68,443
5 Claims. (Cl. 317—148.5)

1. A system for opening and closing the switch of a relay in response to variations between a predetermined upper level and a predetermined lower level of an electrolyte temporarily stored in a vessel, comprising: a first contact supported in the vessel at said predetermined upper level and connected to one end of the coil of the relay, a PNP-type transistor having its collector connected to the opposite end of said relay coil, means for supplying a positive D.C. current to the emitter of said transistor, a second contact supported in the vessel at said predetermined lower level and connected to the base of said transistor for placing a negative bias on said base and rendering said transistor conductive when both of said first and second contacts are immersed in the electrolyte to in turn close said relay, a third con-



tact supported in the vessel at said predetermined lower level and connected to a switch of said relay for locking in said relay as long as the level of the electrolyte is above said predetermined lower level, and means for nulling the I_{eco} current through said transistor.

3,131,336
COMPENSATED TRANSDUCER
Walter Hochwald and Jeff N. Schmidt, Downey, Calif., assignors to North American Aviation, Inc.
Filed July 13, 1960, Ser. No. 42,527
12 Claims. (Cl. 317—155.5)

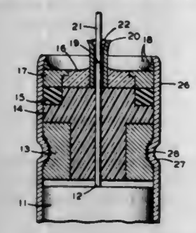


3. A compensated system comprising a source of signal of variable pulse width and substantially fixed amplitude, first electromagnetic means responsive to said source for providing a first force component which is a substantially linear function of the amplitude of signal from said source, second electromagnetic means responsive to said source for providing a second force component which is a function of the square of the amplitude of the signal from said source, and means for differentially combining said force components.

3,131,337
ELECTROLYTIC CAPACITOR SEAL
Warren J. Clement, Williamstown, Mass., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
Filed May 18, 1962, Ser. No. 195,811
6 Claims. (Cl. 317—230)

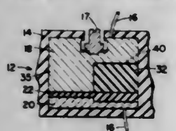
1. A sealed electrolytic capacitor comprising a metal capacitor case containing a filmed valve-metal anode with attached filmed valve-metal lead-wire, an electrolyte, a circumferentially grooved metal annulus adjacent said anode and held in place by engaging said groove with an internal beading of the wall of said case, said annulus supporting a compressible member which is positioned about said lead-wire and abutting a glass-to-metal seal, said seal comprising a mass of glass surrounding and fused to a tubular metal eyelet and surrounded by and fused to

a metal washer, said washer being soldered at its periphery to the case wall; and a solderable lead-wire butt-



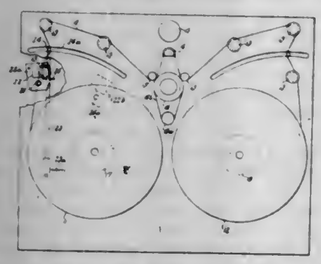
welded to said valve-metal lead-wire at a point about midway within said tubular metal eyelet and held in place by solder.

3,131,338
ROTARY SOLID DIELECTRIC VARIABLE CONDENSER
James E. Howell, Huntsville, Ala., assignor to the United States of America as represented by the Secretary of the Army
Filed Apr. 8, 1960, Ser. No. 21,065
6 Claims. (Cl. 317—253)
(Granted under Title 35, U.S. Code (1952), sec. 266)



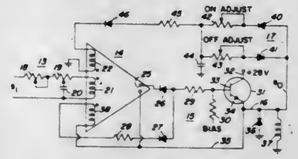
6. A solid dielectric variable condenser comprising a pair of relatively rotatable capacitor plates disposed for electrical connection to corresponding conductors, a dielectric member of varying thickness disposed between said plates, an insulating member adjacent said first plate and mounted for rotation therewith, each of said plates provided with areas in apposition movable in and out of registry across said dielectric and said insulating member responsive to the relative rotation of said plates for control of the capacitance.

3,131,339
POSITION SENSING APPARATUS
Robert P. Burr, Lloyd Harbor, Huntington, N.Y., assignor to Circuit Research Company, Glen Cove, N.Y., a partnership
Filed Mar. 16, 1961, Ser. No. 96,194
12 Claims. (Cl. 318—6)



1. Apparatus for sensing the position of a displaceable member comprising: means for supplying a control signal; a saturable reactor responsive to said control signal for deriving control pulses therefrom; means located near said saturable reactor for saturating said reactor to prevent the derivation of said control pulses when the member is in one operating position; and magnetic shield means positioned by the member for attenuating said magnetic field in the region of said reactor when the member is in another operating position, whereby the control pulses represent the position of the displaceable member.

3,131,340
PROPORTIONAL PULSE SERVO SYSTEM
Lloyd D. Johnson, Richard L. Kittrell, and Don E. Meier, Cedar Rapids, Iowa, assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Feb. 19, 1962, Ser. No. 174,016
8 Claims. (Cl. 318—28)

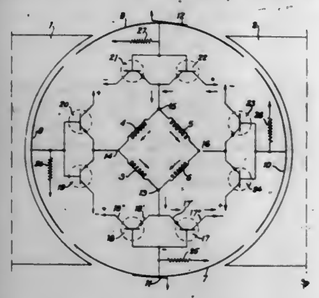


1. In a servo positioning system including a source of error voltage indicative of the extent of deviation of a controlled member from a commanded position, control means for restoring said control member to said commanded position comprising an amplifier receiving said error signal, threshold sensing means connected to the output of said amplifier, positive feedback means connected between the output of said threshold-sensing means and the input to said amplifier, electronic switching means connected to the output of said threshold sensing means, said electronic switching means including a source of direct current voltage and being responsive to an output from said threshold sensing means to connect said direct current voltage source to an output terminal, positioning means connected to said output terminal and responsive to the presence of said D.C. voltage thereon to position said control means toward said commanded position, negative feedback means connected between said output terminal and the input of said amplifier, said negative feedback means including delay means through which said D.C. voltage on said output terminal is applied to the input of said amplifier, said D.C. voltage having a magnitude sufficient to reduce the output of said amplifier beneath said predetermined threshold, said negative feedback means including further means by which said negative feedback voltage is reduced in a time controlled manner upon said amplifier output signal falling beneath said predetermined magnitude whereby said input signal and said negative feedback signal differentially combine to produce an amplifier output signal in the form of sequential pulses, the duration of which and rate of development of which are each proportional to said error voltage, said sequence of pulses being developed until said error input signal is reduced to that level corresponding to an amplifier output signal beneath said predetermined amplitude.

3,131,341
SEMI-CONDUCTOR DEVICE COMMUTATED DYNAMO ELECTRIC MACHINE
Georges Kniazeff, 17 Ave. de Madrid, Neuilly, France, assignor of fifty percent to Societe Industrielle des Nouvelles Techniques Radioelectriques, Asnieres, France, a body corporate of France
Filed Oct. 24, 1960, Ser. No. 64,426
Claims priority, application France Oct. 23, 1959
7 Claims. (Cl. 318—138)

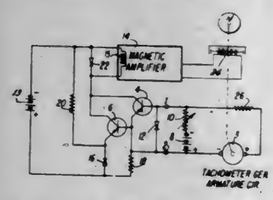
1. A rotary electric machine comprising a rotor, a plurality of armature windings in said rotor, a commutator having a plurality of commutator segments, a pair

of slip rings for the non-commutated flow of current between said armature windings and the exterior, and a plurality of transistor switches each comprising an NPN transistors and PNP transistor, both with base,



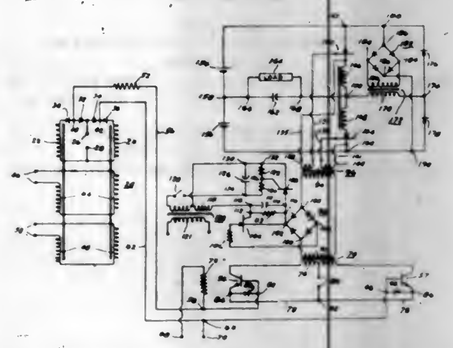
emitter and collector electrodes, means connecting the two emitter-collector paths of each said transistor pair between the two slip rings and said windings and means connecting the base electrodes of both transistors in each said pair to a respective commutator segment.

3,131,342
TRANSISTOR AMPLIFIER FOR CONTROLLING SHAFT SPEED
Alan W. Wilkerson, Racine, Wis., assignor to The Louis Allis Co., Milwaukee, Wis., a corporation of Wisconsin
Filed Aug. 25, 1960, Ser. No. 51,810
2 Claims. (Cl. 318—327)



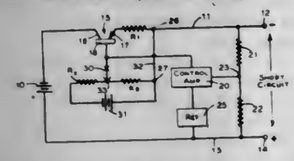
2. A circuit for controlling the speed of a rotating shaft by supplying a controlled current to a field coil that dictates the speed of the shaft; which circuit comprises means responsive to the rotation of the shaft for providing a signal proportional to the speed thereof; a reference signal source for producing a signal corresponding to the desired speed of rotation of said shaft; a first transistor comprising a collector, an emitter and a base; said responsive means and said reference signal source being connected in parallel and in opposed relation in the base-emitter path of said first transistor; said responsive means and said reference signal source each having an impedance element connected in series therewith; the impedance of each of said impedance elements being substantially greater than the impedance of the base-emitter path of said first transistor when in a conductive state; a second transistor having an emitter, a collector and a base; said collector of said second transistor being connected to the collector of said first transistor and the base of said second transistor being connected in the emitter path of said first transistor; a constant voltage drop diode connected in the emitter path of said second transistor; a source of D.C. potential having a first output terminal thereof connected in the emitter path of said first transistor; a magnetic amplifier having a pair of input and output terminals: one of said input terminals of said magnetic amplifier being connected to the collector of said first transistor and to the collector of said second transistor; the other of said input terminals of said magnetic amplifier being connected to a second output terminal of said source of potential; the output terminals of said magnetic amplifier being connected to the field coil; and said constant voltage drop diode being connected to the first output terminal of said source of potential so that a constant voltage drop is maintained across said diode.

3,131,343
CONTROL SYSTEMS WHEREBY THE D.C. OUTPUT VOLTAGE CAN BE CONTROLLED BETWEEN ITS MAXIMUM POSITIVE AND NEGATIVE VALUES
Owen E. Reinert, St. Louis County, Mo., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed July 24, 1961, Ser. No. 126,038
21 Claims. (Cl. 321—16)



1. A control system that can provide different values of essentially D.C. positive voltage, can provide zero voltage and can provide different values of essentially D.C. negative voltage for a load and that comprises a plurality of controlled rectifiers which can selectively be rendered conductive and non-conductive, at least one of said controlled rectifiers being connected to said load and being adapted to apply a positive-going voltage to said load, at least another of said controlled rectifiers being connected to said load and being adapted to apply a negative-going voltage to said load, a capacitor which is connected to said controlled rectifiers and which is connected in parallel with said load, said capacitor storing energy therein and being polarized in one direction whenever said one controlled rectifier is conducting current and is applying said positive-going voltage to said load, and storing energy therein and being polarized in the opposite direction whenever said other controlled rectifier is conducting current and is applying said negative-going voltage to said load, an inductor which is connected in series with said controlled rectifiers and that stores energy whenever said one controlled rectifier is conducting current and is applying said positive-going voltage to said load and that stores energy whenever said other controlled rectifier is conducting current and is applying said negative-going voltage to said load, a transformer that has the primary winding thereof connected to said inductor, a bridge rectifier that connects the secondary winding of said transformer to the power source for said control system, a signal source that is adapted to provide signals that can selectively render said one controlled rectifier conductive and that can selectively render said other controlled rectifier conductive, and a "hold out" circuit that keeps the first signal from said signal source from rendering said one or said other controlled rectifier conductive, said one controlled rectifier responding to a signal from said signal source to become conductive and to apply said positive-going voltage to said load and to store energy in said capacitor and in said inductor, said other controlled rectifier subsequently responding to a further signal from said signal source to become conductive and to apply said negative-going voltage to said load and also to enable said capacitor and said inductor to render said one controlled rectifier non-conductive, said inductor thereafter causing current to flow through said primary winding of said transformer to enable said transformer and said bridge rectifier to pump energy from said inductor back to said power source, said second controlled rectifier thereafter enabling energy to be stored in said capacitor and in said inductor, said one controlled rectifier, in turn, responding to a still further signal from said signal source to become conductive and to apply said positive-going voltage to said load and also to enable said capacitor and said inductor to render said other controlled rectifier non-conductive, said inductor thereafter causing current to flow through said primary winding of said transformer to enable said transformer and said bridge rectifier to pump energy from said inductor back to said power source, said "hold out" circuit preventing the supply of signals to said one or said other controlled rectifiers that could render them conductive but would not charge said capacitor sufficiently to enable said capacitor to subsequently render said one or said other controlled rectifier non-conductive, said signal source being capable of making the dwell times of said one and said other controlled rectifier relatively different.

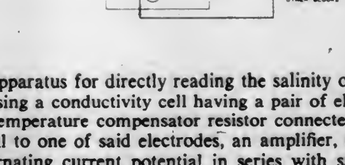
3,131,344
PROTECTIVE SYSTEM FOR TRANSISTOR REGULATOR
Aaron Rosenfeld, Jackson Heights, and Kenneth Kupferberg, Flushing, N.Y., assignors to Forbro Design Inc., New York, N.Y., a corporation of New York
Filed Aug. 1, 1958, Ser. No. 752,579
1 Claim. (Cl. 323—22)



A regulated power supply comprising, in combination, an input power supply; a pair of output terminals; a transistor connected in series with said input power supply and said output terminals; said transistor carrying the load current in proportion to a bias voltage applied to one of its electrodes; a resistor in series connection with said transistor and one of said output terminals having a voltage drop thereacross corresponding to the load current; and a reference voltage source in series with a diode connected to the last said terminal and said transistor and operable, responsive to increase in such voltage drop beyond a predetermined value to reverse the bias of said transistor to condition the latter non-conductive to limit the load current to a preset value.

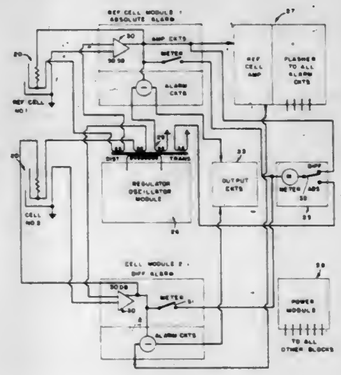
3,131,345
METHOD AND APPARATUS FOR MEASURING MAGNETIC FIELDS, PARTICULARLY THE EARTH MAGNETIC FIELD
Anatole Abragam, Gif-sur-Yvette (Seine-et-Oise), Jean Combrisson, Montgeron (Seine-et-Oise), and Ionel Solomon, Chatillon-sous-Bagneux (Seine), France, assignors to The Commissariat a l'Energie Atomique, Paris, France, an organization of France
Filed Jan. 29, 1960, Ser. No. 5,538
Claims priority, application France Jan. 30, 1959
8 Claims. (Cl. 324—.5)

1. A device for measuring a weak magnetic field which comprises, in combination, a container placed in said field, in this container a solution consisting of a solvent containing atomic nuclei having an angular momentum and a magnetic moment both known and different from zero and of a paramagnetic substance having a hyperfine structure of the stationary type with a non-zero splitting in said magnetic field and with at least two narrow electronic resonance lines of close frequencies saturable by oppositely polarized radio-frequency fields, said substance being dissolved in said solvent, means for producing in



said container a polarized radio-frequency rotary field, the magnetic intensity vector representative of which rotates in a plane perpendicular to said field to be measured and with a frequency in a frequency band including said close frequencies so as to saturate among said lines any line saturable by said polarized radio-frequency field means for collecting the energy emitted by said solution under the effect of the saturation of said any line in said field and means for determining the frequency of said energy.

3,131,346
DIFFERENTIAL SALINITY INDICATING EQUIPMENT
Harry G. Parke, Bellmore, N.Y., assignor to Marine Electric Corporation, Brooklyn, N.Y., a corporation of New York
Filed Sept. 15, 1959, Ser. No. 840,109
9 Claims. (Cl. 324—30)

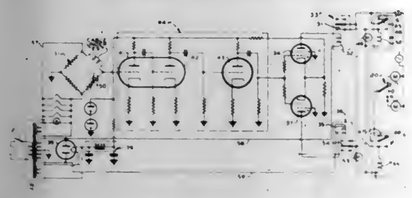


1. Apparatus for directly reading the salinity of a fluid comprising a conductivity cell having a pair of electrodes and a temperature compensator resistor connected at one terminal to one of said electrodes, an amplifier, a source of alternating current potential in series with said conductivity cell electrodes and forming the input of said amplifier, the other terminal of said temperature compensator resistor being connected to the output of said amplifier whereby the resistor forms a negative feedback connection to the amplifier input and the output voltage of the amplifier is directly proportional to the salinity of a fluid in which said cell is immersed.

3,131,347
CABLE TESTING SYSTEM HAVING STRESSING MEANS FOR DETECTING OPEN AND SHORT CIRCUITS

Melvin E. Brooks, Clyde R. Chew, and Carl D. Thompson, all of Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Filed Oct. 9, 1961, Ser. No. 155,519
2 Claims. (Cl. 324—51)

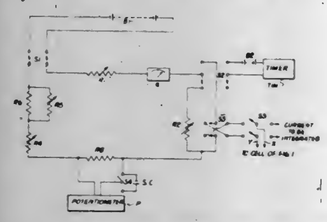


1. Means for testing a cable comprising a plurality of conductors, comprising means for connecting said conductors in series in a bridge circuit, whereby said bridge circuit is balanced when there is no defect in said conductors, means for applying a first alternating current potential to said bridge circuit, an amplifier for the output of said bridge circuit, the output of said amplifier being connected to the control grids of a pair of thyratron tubes, means for applying a second alternating current potential substantially in phase with said first alternating potential through the coil of a first relay to the anode of one of said tubes, means for applying a third alternating current potential substantially 180° out of phase with said first alternating current potential through the coil of a second relay to the anode of the other of the said tubes, driving means for passing said cable through a testing zone and means for concurrently stressing and bending said cable, means actuated automatically upon the occurrence of a short circuit in said cable to stop said driving means and actuate a first indicator and means actuated automatically upon the occurrence of an open circuit in said cable to stop said driving means and actuate a second indicator.

3,131,348
COULOMETRIC TITRATION COULOMETER

John K. Taylor, Hyattsville, Md., and Stanley W. Smith, Chesterfield, Ind., assignors to the United States of America as represented by the Secretary of Commerce

Filed Oct. 11, 1960, Ser. No. 62,065
9 Claims. (Cl. 324—94)

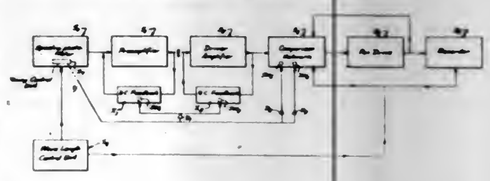


1. A system for integrating an electrical current comprising: an electrolysis cell containing in solution an electrolyte and a substance capable of being reversibly oxidized and reduced by an electrolytic process, said cell including means for measuring the ionic composition of said substance, means for adjusting said substance to a state of equilibrium wherein the substance has a preferred ionic composition, means for passing the current to be integrated through said cell in a first direction, a source of substantially constant current, means for passing said constant current through said cell in a direction opposite to said first direction until said substance is returned to said state of equilibrium so that the integrated current is substantially equal to the product of the constant current and the time during which the constant current passes through said cell, means for measuring the magnitude of said constant current, and means for measuring the time during which said constant current passes through said cell.

3,131,349
SPECTROPHOTOMETER PULSE AMPLITUDE RATIO MEASURING MEANS WITH FEEDBACK AMPLIFIER FOR NOISE AND DRIFT COMPENSATION

Henry H. Cary, Alhambra, and Roland C. Hawes, Monrovia, Calif., assignors to Applied Physics Corporation, Monrovia, Calif., a corporation of California

Original application Feb. 23, 1954, Ser. No. 411,794, now Patent No. 3,025,746. Divided and this application May 4, 1959, Ser. No. 810,890
17 Claims. (Cl. 324—140)



1. In a system for measuring the amplitudes of separate pulses,

a detector for receiving said pulses and converting them to corresponding electrical pulses,

an amplifier having an input and an output, said input being operatively connected to said detector for amplifying said electrical pulses to produce corresponding output pulses,

noise occurring in said amplifier simultaneously with the application of pulses thereto and also in the intervals between the application of such pulses,

a negative feedback circuit connecting said output to said input, said feedback circuit including means for sampling said noise at said output in the intervals between pulses and for applying a D.C. bias to said amplifier having a magnitude corresponding to the average amplitude of components of noise appearing at the output during said intervals to reduce the zero level at said output by an amount corresponding to said average amplitude,

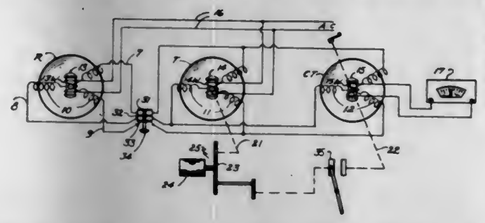
and means for measuring the average amplitude of a series of said pulses appearing in said output.

3,131,350
TEST APPARATUS FOR MEASURING TRACKING ERROR BETWEEN A SYNCHRO TRANSMITTER AND RECEIVER

Roscoe H. Canaday and Adrian E. Glandon, Rochester, N.Y., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Air Force

Filed Oct. 21, 1955, Ser. No. 542,114
3 Claims. (Cl. 324—158)

1. In a motion-reproducing system, a master unit, a slave unit electrically connected thereto, each of said units including stator and rotor components means for applying torque to the rotor of said master unit for reproduction of the resulting motion at said slave unit, a third unit including a rotor component rotatable in response to operation of said torque applying means, means including a manually operable clutch mechanism mechanically linking said torque-applying means with said third unit; an indicator element, and means carried by said third unit for delivering current to said indicator element in one

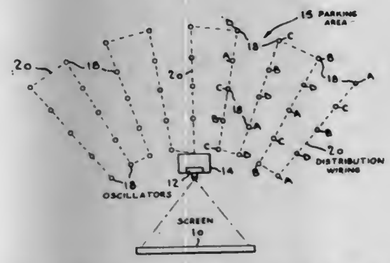


direction or the other, in accordance with the direction of error in the motion reproduction performance of said slave unit.

3,131,351
OUTDOOR THEATER SOUND SYSTEM COMPRISING A PLURALITY OF TRANSMITTERS COUPLED TO A SINGLE DISTRIBUTION WIRE

Richard P. Herzfeld, 3541 N. Lake Drive, Milwaukee, Wis., and Gordon L. Davidson, Brookfield, Wis.; said Davidson assignor to said Herzfeld

Filed Mar. 29, 1961, Ser. No. 99,114
9 Claims. (Cl. 325—54)



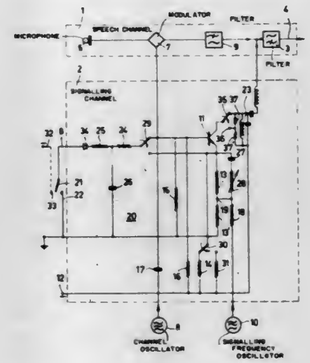
1. In a sound system for an outdoor theater having a parking and viewing area, audio means including a motion picture projector for producing an audio signal, conductor means for transmitting said audio signal connected to said audio means and extending to the parking and viewing area of the outdoor theater, and a plurality of radio frequency oscillators mounted in the viewing area and connected to said conductor means, said radio frequency oscillators adapted to produce a radio signal modulated by said audio signal and to radiate said radio signal only in the immediate vicinity of said oscillators for reception by radios in automobiles parked in the immediate vicinity of said oscillators.

3,131,352
TRANSMITTING DEVICE

Johannes Ensink and Willem Beljnink, Hilversum, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Nov. 14, 1960, Ser. No. 69,182
Claims priority, application Netherlands Dec. 24, 1959
7 Claims. (Cl. 325—64)

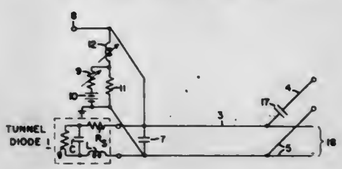
1. A carrier frequency telephone transmitting system comprising a source of speech signals, a source of carrier oscillations, a source of signalling oscillations, means for modulating said carrier oscillations with said speech signals, signalling generator means for modulating said carrier oscillations with said signalling oscillations, and means for combining the speech signal modulated carrier oscillations and the signalling oscillation modulated carrier oscillations to provide an output signal, said signalling generator comprising a transistor having first and second input electrodes and a collector electrode, a source of bias voltage having one terminal connected to a reference point and a second terminal, first and second resistive voltage dividers each connected between said first and second terminals and having first and second taps respectively connected to said first and second input terminals respectively, means applying said signalling oscillations to said second input electrode, means applying said carrier oscillations to said first input electrode, output filter means connected to said collector electrode for deriving said signalling oscillation modulated carrier oscillations, signalling switch means, and means connecting said switch means between said reference point and one of said input electrodes whereby in one position of said switch means said transistor is provided with bias for class B operation and in the other position of said switch means said transistor is cut off.



3,131,353
SELF-OSCILLATING TUNNEL DIODE FREQUENCY CONVERTERS

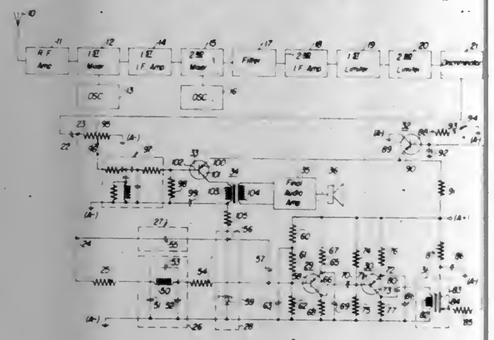
Chang Soo Kim, East Syracuse, N.Y., assignor to General Electric Company, a corporation of New York

Filed June 19, 1961, Ser. No. 118,088
8 Claims. (Cl. 325—449)



1. A self-oscillating microwave converter for converting signals of a given input radio-frequency to an output intermediate-frequency comprising: a two-terminal device exhibiting a negative conductance region in its current-voltage characteristic; a section of transmission line, for sustaining resonance at the local oscillator frequency and exhibiting an admittance such as to apply waves of signal frequency to said diode at sufficient amplitude for frequency conversion, coupled to said diode; a capacitive element, providing a short circuit at the local oscillator and input signal frequencies, connected across said section of transmission line at a node of the local oscillator wave; input means coupled to said transmission line section for introducing an input signal to be converted to an intermediate frequency signal; and a resonant circuit tuned to the intermediate frequency and coupled to said transmission line section at said node to produce an output signal.

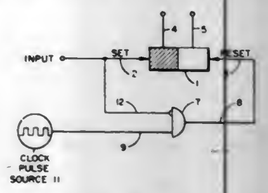
3,131,354
TONE CONTROL RECEIVER CIRCUIT
John W. Battin, Addison, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed June 12, 1961, Ser. No. 116,330
8 Claims. (Cl. 325—466)



1. In a selective communications system, a receiver responsive to a carrier wave modulated by audio intelligence signals and by an audio tone signal, said receiver including in combination; a detector for deriving said audio intelligence and tone signals from said received carrier wave, audio amplifier means including circuit means to render the same operative to conduct intelligence signals only upon the application of a control potential thereto, and a tone operated squelch circuit including tone amplifying means, filter network means for applying signals to said tone amplifying means, said filter network means including a first portion having a low pass characteristic for passing said audio tone signals and a second portion for passing a portion of those frequencies above the range of said audio intelligence signals, means including a resonant reed device coupled to said tone amplifying means and operative to produce a control potential in response to a predetermined audio tone signal, means applying said control potential to said audio amplifying means to render the same conductive so that said audio intelligence is translated thereby, and noise gating means coupled between said second filter portion and a reference potential and further coupled to said audio amplifier, said tone amplifier means reducing the amplification of frequencies passed by said first filter portion in the presence of the frequencies above said audio intelligence signals from said second filter portion, said audio amplifying means when conducting actuating said high frequency gating means to bypass said frequencies passed by said second filter portion to said reference potential, whereby the level of frequencies passed by said first filter portion and applied by said tone amplifier means to said reed device, is increased.

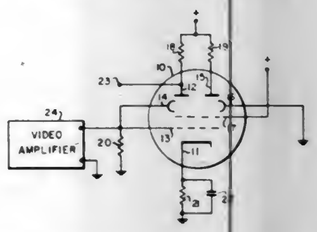
3,131,355
HIGH SPEED PULSE DETECTOR
Frank L. Campanozzi and Frank Niertit, Rochester, N.Y., assignors to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Dec. 7, 1960, Ser. No. 74,400
2 Claims. (Cl. 328—120)

1. A high speed pulse detector comprising, bistable element having a first control circuit for causing said bistable element to assume a first state when a mark pulse is applied to said first control circuit, said bistable element having a second control circuit for causing said bistable element to assume a second state when a mark pulse is applied to said second control circuit, an output circuit for producing an output signal indicative of the state of said bistable element, means having a first and second input circuit and an output circuit for producing a mark pulse in said output circuit when a mark pulse is applied to said second input circuit and no mark pulse is applied to said first input circuit, a clock pulse source, means for connecting said clock pulse source to the second input circuit of said means for producing, means for coupling the first control circuit of said bistable element



to the first input circuit of said means for producing, means for coupling the output circuit of said means for producing to the second control circuit of said bistable element, means for randomly generating mark pulses coincident in time with at least some of the mark pulses produced by said clock pulse source, and means for coupling said means for randomly generating mark pulses to said first control circuit.

3,131,356
NONLINEAR AMPLIFIER FOR PROVIDING OUTPUT WHICH VARIES EXPONENTIALLY AS A FUNCTION OF INPUT SIGNAL
Richard J. Farber, New Hyde Park, N.Y., assignor to Hazeltine Research, Inc., a corporation of Illinois
Filed Jan. 4, 1961, Ser. No. 80,696
7 Claims. (Cl. 328—145)

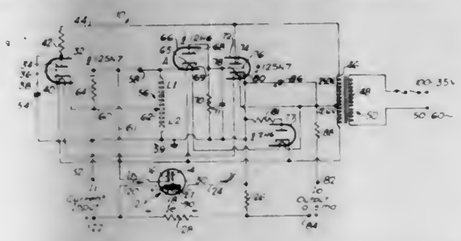


1. A nonlinear amplifier comprising: a current-conductive device composed of at least a cathode, an anode, a control electrode, and a pair of deflection electrodes, for nonlinearly amplifying an input signal when said input signal is coupled jointly to said control electrode and a given one of said deflecting electrodes, said remaining deflection electrode being directly coupled to a source of fixed potential; and means, jointly coupled to said control electrode and said given deflection electrode, for supplying a single source of input signals to be nonlinearly amplified.

3,131,357
D.C. AMPLIFIER
Frederick L. Maltby, Abington, and Jacob Marlow and Hubert A. Riester, Jr., Philadelphia, Pa., assignors to Robertshaw Controls Company, a corporation of Delaware
Continuation of application Ser. No. 492,703, Mar. 7, 1955. This application June 8, 1959, Ser. No. 818,970
12 Claims. (Cl. 330—1)

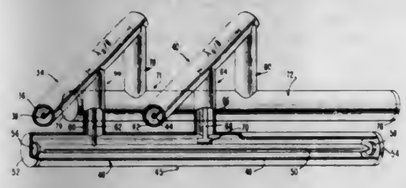
1. In an apparatus for amplifying a unidirectional current or voltage signal, the combination comprising an input circuit for receiving an input signal including a coil

movable to a position determined by the electrical condition of said input circuit; an oscillator circuit including a variable capacitor using air as a dielectric, said oscillator circuit including an electronic amplifier element having a control electrode and a cathode and an L–C bridge circuit connected at each of a pair of diagonally disposed bridge terminals to said control electrode and said cathode, said bridge circuit having a characteristic frequency at which said oscillator operates and including said variable capacitor as one of the elements therein, whereby a variation in said variable capacitor creates an unbalance in said bridge circuit which varies the voltage across said pair of diagonal terminals to thereby change the bias between the control electrode and cathode of said amplifier such that the amplitude of



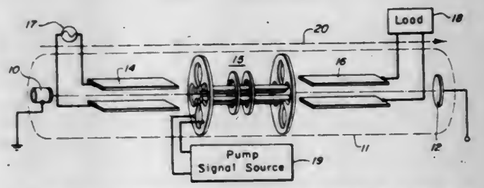
the oscillations of said oscillator circuit is varied in proportion to a change in said variable capacitor; a fixed metal vane forming a part of said capacitor; a movable metal vane forming a part of said capacitor and disposed in substantially parallel relationship with said fixed vane, said movable vane being connected to said movable coil and positioned with respect to movement of said coil so as to move substantially on a line perpendicular to said vanes; and means connected to the output of said oscillator and operative to provide a unidirectional current output which varies in accordance with the amplitude of the output of said oscillator circuit and connected to said input circuit to apply a portion of said current output to said input circuit to produce an electrical condition that opposes the electrical condition of said input circuit produced in response to a received input signal.

3,131,358
UNIDIRECTIONAL TRAVELING WAVE PARAMETRIC CIRCUITS USING RESONANT SECTIONS
Kenneth E. Schreiner, Harrington Park, N.J., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Mar. 31, 1961, Ser. No. 99,746
15 Claims. (Cl. 330—4.6)



1. A traveling wave parametric circuit comprising a transmission line having input and output ends for transmitting signal energy at a given frequency, a pair of resonant circuits each having a variable reactance element and each tuned to said given frequency and coupled to said transmission line between said ends at spaced apart points separated by a distance equal to substantially an odd multiple of ⅛ of the length of a wave of the given frequency and means for varying the reactance of said variable reactance element at a frequency substantially twice that of said given frequency by continuously exciting said elements below a threshold point at which oscillations at said given frequency are sustained in said resonant circuits.

3,131,359
RESONANT QUADRUPOLE PUMP
Robert Adler, Northfield, and George H. Ryan, Fox River Grove, Ill., assignors to Zenith Radio Corporation, Chicago, Ill., a corporation of Delaware
Continuation of application Ser. No. 195,800, May 18, 1962. This application Apr. 23, 1963, Ser. No. 275,803
11 Claims. (Cl. 330—4.7)



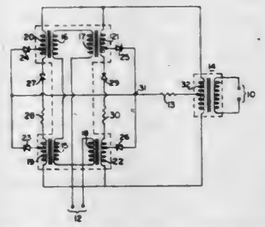
1. In an electron beam parametric amplifier having a pump signal source of a predetermined frequency, a resonant quadrupole-type pump structure comprising:

four similar conductive rods constituting the principal distributed capacitance of the pump structure and enclosing a path for an electron beam;

at least one conductive disc having four fingers directed radially inward and circumscribing said conductors with the fingers of said disc conductively and mechanically connected to said conductors, respectively, and constituting an inductance for establishing with said capacitance a resonant frequency for the pump structure corresponding to said predetermined frequency;

and means for coupling space-opposed pairs of said conductors to opposite-polarity terminals of said pump signal source.

3,131,360
MAGNETIC AMPLIFIER
Lars Olof Lundahl, Lidingo, Sweden, assignor to Svenska Aktiebolaget Gasaccumulator, Lidingo, Sweden, a corporation of Sweden
Filed Oct. 19, 1960, Ser. No. 63,544
Claims priority, application Sweden Oct. 27, 1959
2 Claims. (Cl. 330—8)



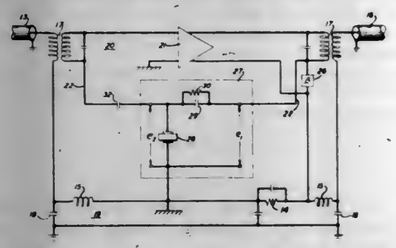
1. Magnetic amplifier assembly for controlling the phase and the amplitude of an alternating current supplied from a source of alternating current to a load comprising a source of alternating current having a pair of terminals; a load including at least a center-tapped impedance having two end terminals; two single-sided magnetic amplifiers each comprising at least one saturable reactor core means, and operating winding, a biasing winding and a control winding each on said core means; one end of each operating winding being connected to one of said pair of terminals of said source of alternating current and the

other end of each operating winding being separately connected in series, respectively, with a first rectifier and said one of the end terminals of the impedance, respectively; the center-tap of said impedance being connected to the other of said pair of terminals of said source of alternating current; said biasing windings being mutually series-connected having one end thereof connected to said one of the pair of terminals of said source of alternating current and the other end thereof connected in series with a further rectifier and connected to said other of the pair of terminals of said source of alternating current to form a biasing circuit, a pair of control terminals, a connection between one end of each of said control windings to arrange the control windings in series, conductors for connecting one of the pair of control terminals respectively with one of the other ends of the control windings so that the control terminals and the control windings form a loop when a source of control voltage is connected to the control terminals, said first rectifier and said further rectifier being oppositely poled with respect to each other in circuit relation whereby said operating windings and said biasing windings alternately conduct on successive half cycles of said alternating current, said biasing circuit having a low internal resistance compared with the internal resistance of the control circuit.

3,131,361
FREQUENCY-SENSITIVE CONNECTING NETWORK

Sherman T. Brewer, Chatham Township, Morris County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed June 13, 1960, Ser. No. 35,597
8 Claims. (Cl. 330—109)



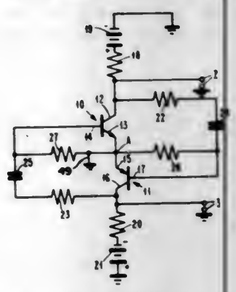
3. An electric signal repeater comprising an amplifier having an input circuit and an output circuit, said amplifier being adapted to pass a band of frequencies including a signal frequency band and a signature frequency band, a feedback path connecting said output circuit to said input circuit, a frequency-sensitive network connected in said feedback path and comprising a piezoelectric crystal connected in a shunt branch thereof, said crystal having a primary resonant condition at a first frequency in said signature frequency band of said repeater and having a secondary resonant condition at a second frequency in said signal frequency band, a capacitor connected in series in said feedback path, and a resistor connected in parallel with said capacitor, said resistor having a resistance which is much smaller than the reactance of said capacitor at said second frequency.

8. A frequency-sensitive network having predetermined transfer characteristics over a certain band of frequencies, said network comprising a capacitor connected in a series branch of said network with substantially no other impedance in series therewith, resonant means connected in a shunt branch of said network and having at least a first resonant condition at a predetermined frequency above said band and a second resonant condition at a frequency within said band, means suppressing the effect of said second resonant condition upon the transmission of said network comprising a resistor, nonreactive means connecting said resistor in parallel with said capacitor, and said resistor having a resistance which is much smaller than the reactance of said capacitor at the frequency of said second resonant condition.

3,131,362
BALANCED TRANSISTOR MULTIVIBRATOR

William C. Dersch, Los Gatos, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed May 31, 1960, Ser. No. 32,745
7 Claims. (Cl. 331—60)

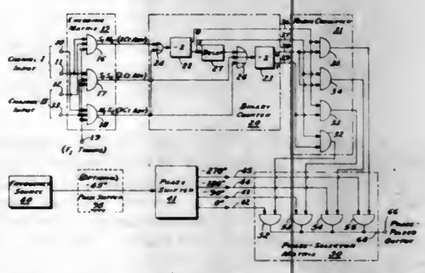


1. A pulse generator comprising a pair of semi-conductor devices of opposite conductivity type, each having operating states of conduction and nonconduction, each of said devices having current receiving, current emitting, and control electrodes, a source of direct current having positive, ground, and negative terminals, means for connecting the positive terminal of said source to the means for connecting the negative terminal of said source current receiving electrode of the first of said devices, to the current emitting electrode of the second of said devices, the current emitting electrode of the first of said devices and the current receiving electrode of the second of said devices being connected in common to the ground terminal of said source, the control electrode circuits of said devices being self-biasing, first capacitor means for coupling the current receiving electrode of the first of said devices to the control electrode of the second of said devices, and second capacitor means for coupling the current emitting electrode of said second device to the control electrode of said first device.

3,131,363
INSTANTANEOUS PHASE-PULSE MODULATOR

Robert W. Landee, Encino, and Eugene Hoo, Costa Mesa, Calif., assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

Filed May 18, 1960, Ser. No. 29,974
20 Claims. (Cl. 332—11)



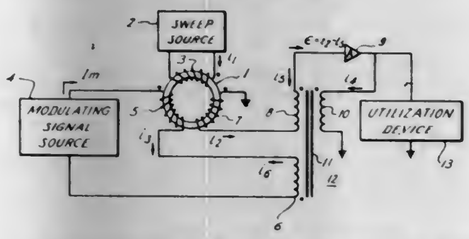
1. A phase-pulse modulator for encoding a plurality of independent data channels upon a given frequency,

comprising an encoding matrix having a plurality of separate outputs, each output corresponding to a particular phase-shift required of said modulator, a counter having plural inputs, means connecting its plural inputs to the outputs of said encoding matrix, each matrix output triggering said counter to retard or advance its output count by a respective number of counts, signal generating means including phase shifter means for simultaneously providing a plurality of differently-phased waves at said given frequency, and phase-selector switching means for connecting one of the waves of said phase-shifter to an output of said modulator in response to a particular output state of said counter.

3,131,364
PULSE MODULATION SYSTEMS

Jean P. Magnin and Sherwin K. Feingold, Sarasota, Fla., assignors to Electro-Mechanical Research, Inc., Sarasota, Fla., a corporation of Connecticut

Filed Dec. 20, 1960, Ser. No. 77,075
7 Claims. (Cl. 332—12)

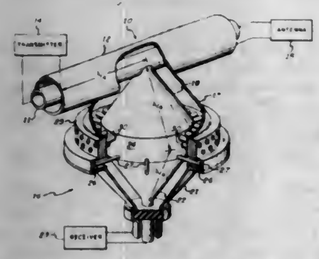


4. In combination means establishing a magnetic circuit, means inducing variations of flux in said circuit, a first winding linking with said flux for providing an output signal corresponding to said variations, a high input impedance feedback system coupled to said first winding for transforming said output signal into a corresponding feedback signal, a second winding linking with said flux, said second winding having a terminal for receiving an energizing signal from a low impedance signal source, said second winding having an induced signal therein corresponding to said variations, and means coupling said feedback system to said second winding for combining said feedback signal in subtractive relation with said induced signal.

3,131,365
TR SWITCH HAVING UNBIASED DIODES WHICH SHORT DURING TRANSMISSION AND RESONATE INDUCTANCE DURING RECEPTION

John C. Hoover, Clearwater, Fla., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware

Filed May 16, 1962, Ser. No. 195,240
3 Claims. (Cl. 333—7)



1. High power semiconductor switching apparatus comprising,

a first electromagnetic wave transmission line,

a branch coaxial transmission line having at least two conductors and coupled to said first transmission line at a region intermediate the two ends thereof,

said branch transmission line having inner and outer conductors of greatly enlarged diameters at a distance substantially a quarter wavelength from the junction of said two transmission lines,

a shunt-connected inductive tuning stub extending circumferentially around the enlarged portion of said branch transmission line,

a plurality of voltage-controllable variable impedance elements symmetrically disposed between the conductors of said branch transmission line at the enlarged portion thereof,

said impedance elements being characterized by presenting a relatively large capacitive reactance when low power electromagnetic waves are incident thereon and a relatively low inductive reactance when high power electromagnetic waves are incident thereon,

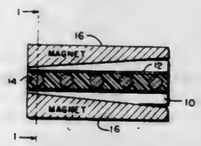
the inductive reactance of said shunt-connected tuning stub being proportioned to parallel resonate with the capacitive reactance presented by said impedance elements when low power electromagnetic waves are incident thereon,

thereby providing a high impedance between the conductors of said branch transmission line to permit low power electromagnetic waves to propagate substantially unaffected through said branch transmission line.

3,131,366
GYROMAGNETIC WAVEGUIDE POWER LIMITER HAVING EASY AXIS OF FERROXPLANAR MATERIAL ALIGNED WITH MAGNETIC BIASING FIELD

Samuel Dixon, Jr., Neptune, N.J., assignor to the United States of America as represented by the Secretary of the Army

Filed Sept. 24, 1962, Ser. No. 225,945
5 Claims. (Cl. 333—24.2)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A device for limiting the power level of microwave energy comprising a waveguide section, a plurality of planar ferrite elements spaced along the longitudinal dimension of said waveguide section, and means for magnetically biasing said planar ferrite elements such that the biasing magnetic field is tapered along said longitudinal dimension, said planar ferrite elements being arranged such that the respective easy place of magnetization of each planar ferrite element is oriented parallel to the direction of said biasing field.

3,131,367
VARIABLE PHASE SHIFT SELECTOR

Fred T. Pitts, Rockville, and Tommy S. Weaver, Arnold, Md., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

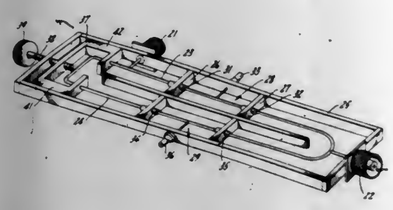
Filed June 29, 1962, Ser. No. 207,169
1 Claim. (Cl. 333—31)

A variable phase shift selector comprising:

an input connector,

an output connector,

a first transmission line of predetermined length,
a second transmission line having a length which is a half wavelength longer than the length of said first transmission line,

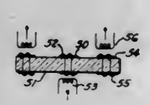


first and second crystal diode switches connected one each in each said transmission line, said first crystal diode switch being connected an integral number of wavelengths from said input connector and said second switch being connected an integral number of wavelengths plus a half wavelength from said input connector, and
means for adjusting the wavelength of said second transmission line whereby a precise 180 degrees phase shift of power applied at said input connector is obtained.

3,131,368
SIGNAL SELECTING APPARATUS

Robert W. Hart, 123 Dartmouth St., Lynn, Mass.

Filed Sept. 14, 1960, Ser. No. 56,068
4 Claims. (Cl. 333—71)
(Granted under Title 35, U.S. Code (1952), sec. 266)



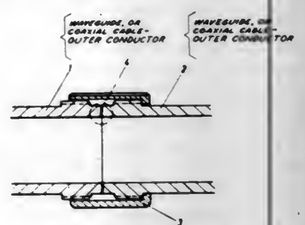
1. A dynamic filtering arrangement comprising, in combination, a piezoelectric element, said element having pairs of electrodes secured to its midportion and adjacent each extremity thereof, said pairs of electrodes being made of a material which has magnetostrictive properties, a coil connected across each pair of electrodes and inductively coupled thereto, an input coil inductively coupled to the coil associated with the pair of electrodes secured to the midportion of said piezoelectric element, means for applying incoming signals to said coil, and means for inductively coupling output signals from the coils associated with the pairs of electrodes secured adjacent each extremity of said piezoelectric element.

3,131,369
ELECTRICAL CONNECTION FOR WAVEGUIDE OR COAXIAL CABLE

Alexander Kraus, Munich, Germany, assignor to Rohde & Schwarz, Munich, Germany, a partnership

Filed June 25, 1962, Ser. No. 207,847
Claims priority, application Germany June 28, 1961
8 Claims. (Cl. 333—98)

1. In a screening structure for very high frequency, a pair of coupling means including plane surfaces and means for detachably attaching said coupling means to each other along said plane surfaces; said surfaces being at least partly subdivided into networks of elemental areas alternatingly protruding and recessing and said elemental areas being so arranged that at least part of the individual protruding areas of one of said coupling means is in plane

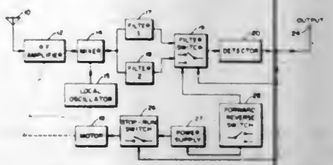


contact with at least part of the individual protruding areas of the other coupling means.

3,131,370
SEARCH RECEIVER WHICH CORRECTS FOR MOTOR OVERSHOOT BY INTERCHANGE OF TWO OFFSET BAND PASS FILTERS

Alwin Hahnel, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Filed Mar. 14, 1960, Ser. No. 14,940
9 Claims. (Cl. 334—22)



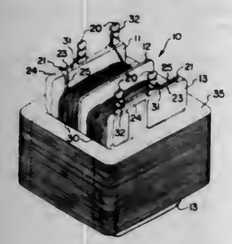
4. A signal seeking receiver comprising tunable input circuit means for receiving incoming signals, variable tuning means for tuning said input circuit means, electromechanical means for effecting variation of said tuning means, said electromechanical means being subject to overshoot owing to inertia whereby said tuning means continues to be varied for a predetermined period following deenergization of said electromechanical means, detecting means for detecting said incoming signals and for deriving an output control voltage when said incoming signal has a predetermined desired character, frequency sensitive transmission means for passing a relatively narrow band of frequencies over a first region of the frequency spectrum, a signal channel including said input circuit means, said transmission means and said detecting means in the order named, control means actuated by said detector output control voltage only during reception and detection of said desired signal for shifting the passband of said transmission means to a different region of the frequency spectrum during and after said predetermined period.

3,131,371
WINDING FORM HAVING MEANS FOR PROTECTING ELECTRICAL COIL LEADS

Byron O. Brekke, Brooklyn Center, Minn., and Roy C. Johnston, Dallas, Tex., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Mar. 9, 1959, Ser. No. 797,954
3 Claims. (Cl. 336—192)

1. A winding form whereon an electrical coil is formed by progressively adding turns of an insulated wire in layers in a winding space: said winding form comprising a winding portion, and a flange of insulating material attached to said winding portion to partially define said winding space; said flange having a continuous outer surface, a peripheral edge, and an inner surface adjacent said winding space; said flange having a slot formed therein between said inner surface and said continuous outer surface with an opening through said peripheral edge extending a substantial distance along said edge; said flange wholly insulating said slot from said continuous outer surface; said slot further having a second opening in communication with said winding space in the inner surface, which second opening is continuous from

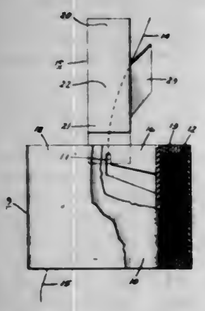


said winding portion to said peripheral edge; the extent of said first named opening along said edge being substantially greater than the width of said second opening; and said slot extending continuously from the inner surface adjacent said winding portion out through said peripheral edge to provide a passage for a wire from the inner layer of the coil out through said peripheral edge with said wire being insulated by the material of the flange from both said continuous outer surface and said winding space.

3,131,372
COIL LEADS INSULATING AND SECURING MEANS

Saverio Caltagirone, Danville, Ill., assignor to General Electric Company, a corporation of New York

Filed Mar. 20, 1961, Ser. No. 97,081
7 Claims. (Cl. 336—192)

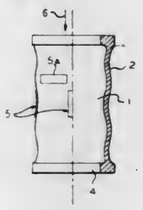


3. In an electrical coil assembly formed of a plurality of wire layers having insulating layers interleaved therefrom wire layer of said coil assembly to the outer portion thereof, an insulating tab having one side completely gummed, an over insulating portion folded over said coil conductor and an under insulating portion folded under said conductor and attached to said over insulating portion at the gummed side thereof, said insulating tab having between and a start conductor brought out from the bota pair of attaching portions one of said attaching portions being secured at the gummed side to the coil underside and the other attaching portion being secured at the gummed side to an outer portion of said coil assembly.

3,131,373
LOAD CELL FOR MEASURING DEVICES

Adrianus Verduin, Pynacker, Netherlands, assignor to Maatschappij van Berkel's Patent N.V., Rotterdam, Netherlands, a limited-liability company of the Netherlands

Filed July 17, 1961, Ser. No. 124,435
Claims priority, application Netherlands July 16, 1960
8 Claims. (Cl. 338—5)

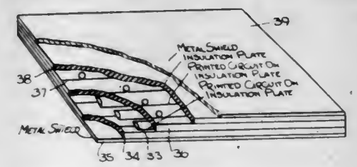


1. A load cell for a measuring device comprising a hollow measuring cylinder and adapted to measure axially applied loads, said cylinder having a realtively thin side wall with one of its faces formed axially in vertical section to correspond with one of the buckling forms of the cylinder, and measuring elements attached to said side wall to measure the stress deformation thereof when a load is applied to said device.

3,131,374
SUPERCONDUCTIVE ELEMENT

Michael J. Buckingham, Box 351, Rte. 2, Durham, N.C., and William M. Fairbank, 2016 Pershing St., Durham, N.C.

Original application June 16, 1958, Ser. No. 742,363, now Patent No. 3,043,512, dated July 10, 1962. Divided and this application Oct. 4, 1961, Ser. No. 148,005
3 Claims. (Cl. 338—32)



1. A persistatron circuit structure comprising a laminated panel formed in succession by a layer of superconductive material constituting a shield, a first insulating layer, a first superconductive persistatron circuit layer, a second insulating layer, a second superconductive circuit layer operatively coupled to said first circuit layer through said insulating layer, a third insulating layer and a superconductive shielding layer.

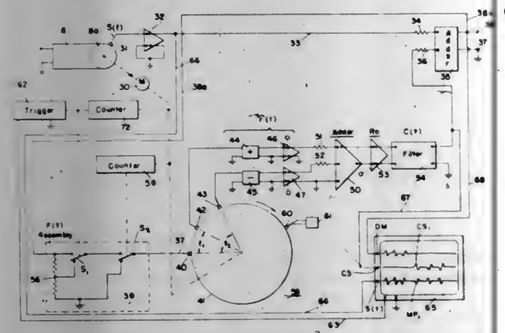
3,131,375
MULTIPLE REMOVAL SYSTEM

Robert J. Watson, Dallas, Tex., assignor to Socony Mobil Oil Company, Inc., a corporation of New York

Filed Oct. 25, 1961, Ser. No. 147,588
20 Claims. (Cl. 340—15.5)

1. The method of removing from a seismogram multiple reflections of seismic energy originating from subsurface reflecting interfaces located below a source of generation of said seismic energy which comprises generating cancellation signals by convolving selected portions of said seismogram following the first breaks of said seismogram with a reflectivity function of character giving rise to said multiples, said reflectivity function being determined by the magnitudes of the velocity-density

contrasts of said interfaces and by time delays corresponding, to a close approximation, with the time occurrences of said multiple reflections on said seismogram relative to their associated primary reflections, modifying the results of said convolution by two factors, first a surface reflectivity coefficient and second a further convolution of the results of said first-mentioned convolution with a function of character representative of the difference be-

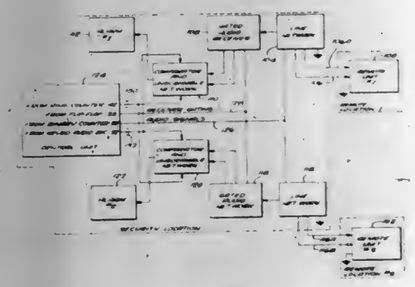


tween the filtering action of the earth on the seismic energy giving rise to the respective primary reflections and the filtering action of the earth on the seismic energy giving rise to said multiple reflections, and continuously applying said cancellation signals to said seismogram in phase opposite to and in time coincidence with said multiple reflections thereby to produce a multiple-free seismogram.

3,131,376
SECURITY-LINE-SURVEILLANCE SYSTEM

Wilbur E. DuVall, Gardena, Calif., assignor, by mesne assignments, to The Electrada Corporation, Los Angeles, Calif., a corporation of Delaware

Filed Mar. 1, 1961, Ser. No. 92,483
13 Claims. (Cl. 340—147)

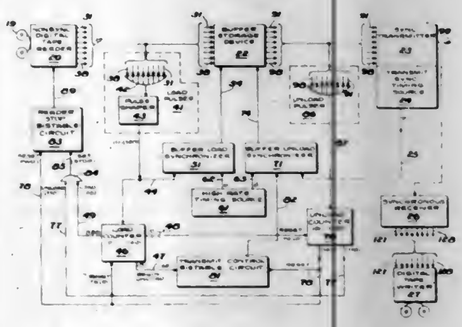


1. A security-line-supervisory system comprising at a central location means for randomly generating pulses, means for establishing a transmitting interval having a random duration responsive to said randomly generated pulses, means for counting the random pulses occurring during a transmitting interval and establishing a representative voltage pattern, a line connecting said central location to a remote location, means for transmitting the random pulses generated during a transmitting interval to said remote location over said line, means at said remote location for receiving said transmitted pulses, means for counting the received pulses and establishing a representative voltage pattern, means for transmitting signals representative of said voltage pattern over said line to said central location, at said central location, means for receiving said signals and converting them to the voltage pattern represented thereby, means for comparing both received and retained voltage patterns, and means for indicating when a difference between said compared voltage pulse patterns exists.

3,131,377
SMALL GAP DATA TAPE COMMUNICATION SYSTEM

George F. Grondin, Van Nuys, Calif., assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

Filed Sept. 28, 1959, Ser. No. 842,709
19 Claims. (Cl. 340—172.5)

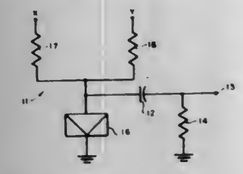


16. A system for bit-synchronously communicating digital data magnetically recorded on tape, said data recorded in blocks of words separated by spacer gaps, comprising a nonsynchronous data tape reader, a reader stop bistable circuit having an output connected to said reader, a synchronous transmitter, a buffer storage device connected between said reader and said transmitter, a synchronous timing source connected to said transmitter, a load pulser connected to inputs of said buffer storage device, and an unload pulser connected to outputs of said storage device, means for loading said storage device in synchronism with an output of said load pulser, means for unloading said storage device in synchronism with said timing source, a load counter connected to said load pulser for counting the words in each block being read, an unload counter connected to said unload pulser for counting the words in each block being synchronously unloaded, said load counter providing at least first and second outputs at predetermined counts after the beginning and near ending of each block being read, said unload counter providing at least first and second outputs near and at the end of a block being unloaded, the second output of said unload counter being connected to said load counter to reset it, said load counter providing its second output until reset, gate means having inputs connected to the second output of said load counter and the first output of said unload counter, an output of said gate means being connected to said reader stop bistable circuit to interrupt the reading operating of said reader, the second output of said unload counter being connected to said reader stop bistable circuit to restore a forward operating signal to said reader, a control bistable circuit for starting and stopping the unloading operation of said buffer storage device to said transmitter, the first output of said load counter being connected to said control bistable circuit to trigger it to start an unloading operation, after the first count the second output of said unload counter being connected to said control bistable circuit to trigger the end of an unloading operation, a synchronous receiver receiving the output of said transmitter, and a digital tape writer recording the receiver output.

3,131,378
TUNNEL DIODE MEMORY WITH CAPACITIVE SENSING

Melvin M. Kaufman, Merchantville, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Mar. 23, 1961, Ser. No. 97,979
1 Claim. (Cl. 340—173)

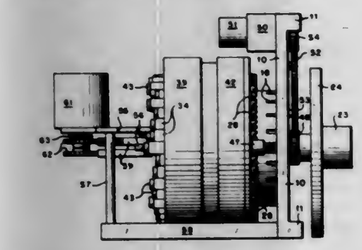


A memory for a high speed electronic computer, comprising a plurality of tunnel diode memory cells arranged in rows in a square matrix, a resistive load across each tunnel diode in said memory cells, said resistive load comprising an X selection resistor and a Y selection resistor; a plurality of X selection lines, each of said X selection lines being connected to the X selection resistors of the memory cells of a single row; a plurality of Y selection lines, each of said Y selection lines being connected to the Y selection resistors of the memory cells of a single row perpendicular to the first named single rows; a purely capacitive means connected to each tunnel diode for use in sensing the state thereof, and a plurality of sensing lines connected to said purely capacitive means, each sensing line being diagonally coupled with respect to the X and Y selection lines to a number of memory cells equal to the number of memory cells in each row, but coupled only to a single cell in each row, whereby half-select disturbances are eliminated on the selected sensing line.

3,131,379
ANALOG MEMORY DEVICE USING SLIDABLE MEMORY UNITS

Pliny G. Holt, Bethesda, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed Oct. 18, 1961, Ser. No. 146,047
4 Claims. (Cl. 340—173)
(Granted under Title 35, U.S. Code (1952), sec. 266)

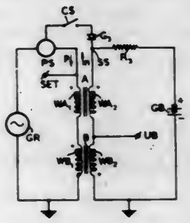


1. A turret-type mechanical data storage device for selectively storing and reading out a plurality of discrete values of variable conditions, comprising: a front plate adapted to be mounted on a rigid panel, a storage drum rotatably connected to said plate on an axis normal thereto, a plurality of slots spaced around the forward circumferential edge of said drum, a detent fixed to said plate in a position for engaging any one of said slots thereby determining a plurality of discrete angular positions of said drum about its axis relative to said mounting plate, force-exerting means operatively connected between said drum and said plate for urging said drum forward to engage any one of said slots with said detent, a plurality of elongated memory nuts positioned in a coaxial annular array parallel to each other around said drum at angular intervals corresponding to the angular positions of said drum, a plurality of screws each threadingly engaged in each of said nuts for linearly adjusting said nuts in a direction parallel to the drum axis in accordance with rotation of said screws, shaft means connected to said drum formed for disengaging said slots and said detent and for manually indexing said drum to any of its angular positions, screw driver means rotatably supported by said plate and operatively connected to one of said screws when said drum is indexed to its corresponding angular position for changing the linear position of said nut, servo motor means secured on said plate and drivingly connected to said screw driver means for operating the latter in response to an electrical signal indicative of the value of a variable condition, lever means pivotally connected to said plate with its free end registering with said one nut for translating the linear position of said one nut to an angular position of said lever means, force-exerting means operatively connected between said plate and said lever means for urging the free end of said lever means against said one nut, transducer means secured to said plate for producing an electrical signal proportional to the angular position of its shaft, and gear means drivingly connected between the shaft of said transducer means and said lever means.

3,131,380
MAGNETIC CORE STORAGE WITH DYNAMIC READ-OUT

Jean Francois Marchand, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

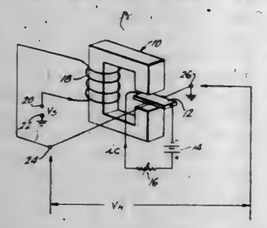
Filed May 9, 1958, Ser. No. 734,157
Claims priority, application Netherlands June 21, 1957
9 Claims. (Cl. 340—174)



1. A magnetic trigger circuit arrangement comprising a first core and a second core each composed of a magnetic material having a substantially rectangular hysteresis loop, a first series combination of two windings coupled to said first and second cores respectively, a second series combination of two windings coupled to said second and first cores respectively, the impedance of the first series combination being substantially determined by the winding of the first series combination coupled to said first core, the impedance of the second series combination being substantially determined by the winding of the second series combination coupled to said second core, means for alternately producing voltage pulses of opposite polarity having an amplitude sufficient to change the remanence condition of a core and applying said pulses to said series combinations, means for causing said cores to assume a unidirectional initial magnetic state, a predetermined one of said cores continuously traversing alternate conditions of remanence in response to said

pulses of opposite polarity, said one core being determined by the initial magnetic state and by the impedance-determining winding of said series combinations, and output means connected to said circuit, said output means assuming a distinctive state dependent on the core traversing alternate conditions of remanence.

3,131,381
HALL-EFFECT MEMORY DEVICE
Frank R. Bradley, Jr., 9 Dash Place, New York, N.Y.
Filed June 1, 1962, Ser. No. 199,463
10 Claims. (Cl. 340—174)



1. A memory device comprising in combination, Hall-generator means including a Hall plate having Hall voltage output terminals and means for generating a magnetic field, magnetizing means arranged to modify such magnetic field, means for applying an input signal to said magnetizing means, means for applying such Hall voltage output to said magnetizing means in direction to oppose the input signal to the Hall-generator and provide a difference signal therefrom, said difference signal being applied to drive said magnetizing means for modification of such magnetic field, and connection means for deriving the Hall-generator voltage as an output signal.

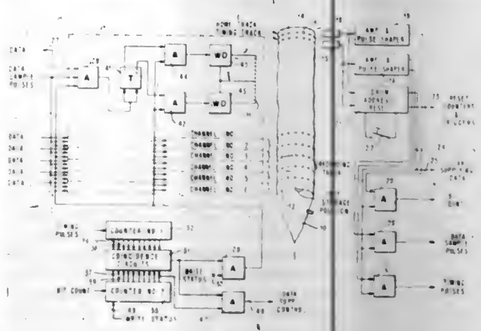
3,131,382
MAGNETIC MEMORY DEVICE
George W. Valenta, Malvern, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed June 15, 1962, Ser. No. 202,734
17 Claims. (Cl. 340—174)



17. A magnetic memory device comprising, a layer of electrically conductive material, a first group of magnetic memory elements adjacent to a surface of said layer of material, a second group of magnetic memory elements adjacent to the opposite surface of said layer of material, and a solenoid encircling the layer of material and both groups of magnetic memory elements.

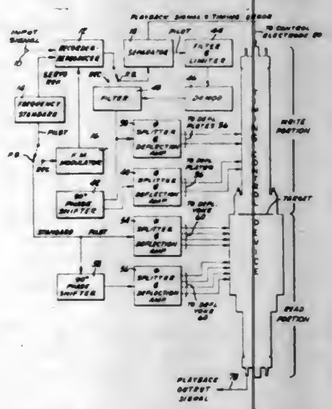
3,131,383
SINGLE BIT RECORDING TECHNIQUE
William E. Brandt, Wappingers Falls, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Feb. 8, 1960, Ser. No. 7,324
8 Claims. (Cl. 340—174.1)

4. A data storage system comprising magnetic recording means including a recording head and a relatively movable recording medium providing a magnetic recording surface of which each recording area is cyclically and repetitively presented to said head to record in serial order data bits of a character in successive bit recording positions forming a continuous recording track on said surface, energizing means for receiving data to be recorded and responsive thereto for energizing said recording head to effect a recording of said data, addressing means responsive to a control signal for controlling said energizing means to permit recording in said track of a single bit of a character once each complete traverse of said track and to permit recording of successive data bits in successive ones of said bit recording positions



during successive traverses of said track, said addressing means comprising a first counter for counting each complete traverse of said track, a second counter for counting successive data bit recording positions during successive traverses of said track, means for comparing the count registered in said counters and for producing an output signal when the counts in said counters are equal, and a connection between said comparing means and said energizing means for delivering said output signal to the latter.

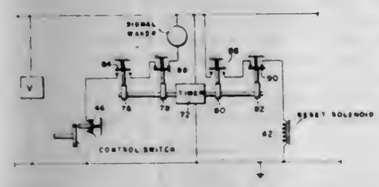
3,131,384
RECORDING AND REPRODUCING SYSTEM
Erhard K. Kietz and John F. Varnell, Jr., Menlo Park, Calif., assignors to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed Aug. 29, 1960, Ser. No. 52,671
9 Claims. (Cl. 340—174.1)



9. A recording and reproducing system comprising: means for recording an information signal on a storage medium, said recording means being subject to time error

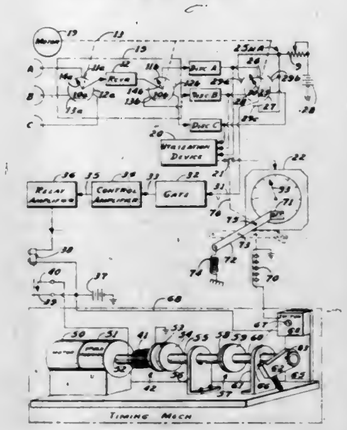
variations whereby said information signal is angle modulated; means for generating a reference pilot signal for application to said recording means; means for applying said reference pilot signal to said recording means to be simultaneously recorded on said storage medium with said information signal, and subject to such angle modulation; means for reproducing said recorded signals; means for separating said reproduced modulated pilot and information signals; an electronic timing control device having a storage target disposed between a writing portion and a readout portion, said writing portion providing a writing electron beam for continuously depositing a charge pattern on said target representative of said signal information, said readout portion providing a reading electron beam for reading and erasing said charge pattern; means for applying said separated information signal to said writing portion for intensity modulating said writing beam; means for deflecting said writing beam in a circular trace on said target; means coupled to said writing beam deflection means for applying said separated pilot signal having angle modulation to said deflecting means to vary the speed of said writing beam in its deflected circular path in accordance with said angle modulation; means for deflecting said reading beam in a circular trace congruent with said writing beam trace on said target; and means for applying said generated reference pilot signal to said reading beam to maintain said reading beam in its circular path at a substantially constant speed.

3,131,385
AUTOMATIC FLUID FLOW REMOTE INDICATING SYSTEM
James W. Winfrey, Houston, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Dec. 30, 1960, Ser. No. 79,693
4 Claims. (Cl. 340—239)



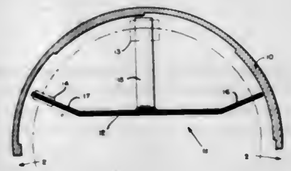
1. An automatic remote indicating system for indicating when a liquid producing facility is producing at a rate outside of predetermined limits over a predetermined time period comprising: a liquid measuring device for measuring the amount of liquid produced; a mechanical control member; a mechanical power transmission system interconnecting the liquid measuring device and the mechanical control member for moving the mechanical control member an amount proportional to the amount of liquid measured by the measuring device; a remotely located indicator; signal conducting means connected to the remotely located indicator; a conduction control member in the signal conducting means which is normally positioned to prevent the conduction of a signal through the conducting means; a timing mechanism set to change the position of the conduction control member at the end of the predetermined time period to permit the conduction of a signal through the conducting means; means on the mechanical control member for causing a signal to be conducted to the remotely located indicator if the amount of liquid produced is outside of the predetermined limits; and means for automatically resetting the system.

3,131,386
MULTIPLE CIRCUIT SIGNAL LEVEL MONITOR
Donald D. Spencer, Cedar Rapids, and Ardis G. Vance, Toddville, Iowa, assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Dec. 4, 1959, Ser. No. 857,386
4 Claims. (Cl. 340—248)



1. Apparatus for disabling an indicator comprising a warning flag pivotally mounted on said indicator and spring biased so as to be visible on the face of the indicator, a relay connected to the flag to move said flag to a position where it is not visible when the relay is energized, a voltage source connected to said relay, a normally closed switch connected in circuit with said voltage source and said first relay, a switch actuator engageable with said switch to open it, a driving means, a clutch connecting said driving means and said switch actuator, and a circuit for energizing said clutch in response to condition that render the indicator presentation incorrect.

3,131,387
FLUX-SWITCHING-TRANSFORMER HEAD SHAFT ENCODER
Gunther Wolff, Southport, Conn., assignor to Machine Tool Automation, Inc., Southport, Conn., a corporation of Connecticut
Filed June 21, 1963, Ser. No. 289,563
1 Claim. (Cl. 340—347)

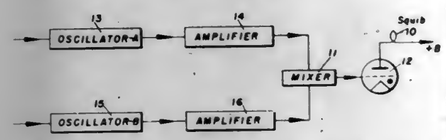


In a device capable of transducing a mechanical positional quantity into a quantized and/or coded electrical signal, a pole surrounded by an exciting coil, another pole surrounded by a pick-off coil, and a third pole so arranged that as the flux linking with the exciting coil tends to diminish due to the increased reluctance of said pick-off coil pole, said third pole provides additional permeability to compensate for loss of permeability in said pick-off coil pole, and thus maintains the exciting coil pole flux constant.

3,131,388
MULTIPLE AMPLIFIER CIRCUIT FOR PROXIMITY FUZE

Ambrose D. Baker, Rochester, N.Y., assignor to the United States of America as represented by the Secretary of the Navy

Filed Nov. 17, 1950, Ser. No. 196,202
7 Claims. (Cl. 343—7)

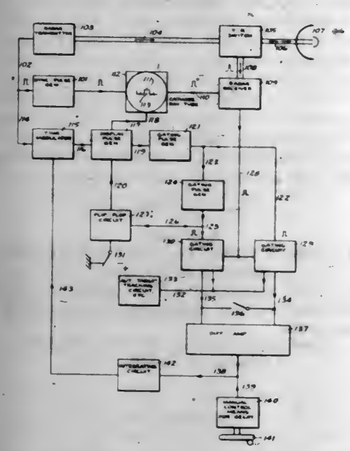


5. In a proximity fuze, two independent audio frequency electrically operated amplifiers, said amplifiers being individually responsive to audio frequency electromagnetic input signals of two non-overlapping frequency ranges, said amplifiers being connected jointly to actuate the fuze but each including output limiting means rendering it individually incapable of delivering sufficient output to so actuate it.

3,131,389
GATING SYSTEM WITH VARIABLE DELAY

Cornelis A. van Staaden, Hengelo, Netherlands, assignor to N.V. Hollandse Signaalapparaten, Hengelo, Overijssel, Netherlands, a Dutch corporation

Filed Nov. 18, 1958, Ser. No. 774,638
Claims priority, application Netherlands Nov. 19, 1957
18 Claims. (Cl. 343—7.3)

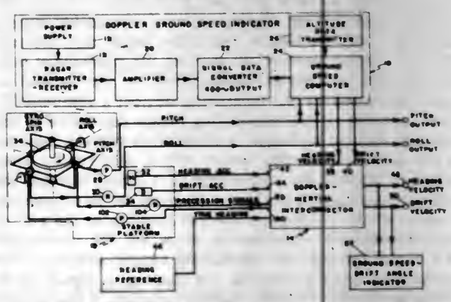


1. In a gating system, in combination, a time modulator circuit having an adjustable delay circuit means, a generator for recurrent synchronizing pulses connected to said time modulator circuit for feeding said synchronizing pulses to the modulator circuit, means in said time modulator circuit generating in response to each synchronizing pulse an electric signal after an adjusted delay, a gating pulse generating system, a circuit connection between said system and said time modulator, the signal generated by the time modulator being applied to said connection, means in the gating pulse generating system which in response to each signal applied to said connection generate two successive gating pulses of fixed duration, a first and a second gating circuit to which recurrent pulses, received from outside the system, are applied, a circuit connection for feeding the first of two successive gating pulses to the first gating circuit which in response to a coinciding first gating pulse and received recurrent pulse permits passage of an overlapping part of the latter pulse to the output circuit of the first gating circuit, a circuit connection for feeding the second of two successive gating pulses to the second gating circuit which in response to a coinciding second gating pulse and a received recurrent pulse permits passage of an overlapping part of the latter pulse to the output circuit of the second gating circuit, a circuit means integrating with respect to time, circuit connections between said circuit means and the output circuits of the two gating circuits, means in said circuit connections for causing the output voltage of the integrating circuit means to be varied in magnitude according to the changes in the difference of the energy content between the parts of the pulses passing through the one of the two gating circuits and the parts of the pulses passing through the other of the two gating circuits, a circuit connection between the integrating circuit means and the time modulator circuit for applying an output voltage of the integrating circuit means to the time modulator circuit, means in said modulator circuit for changing the delay in the time modulator circuit in accordance with the output voltage of the integrating circuit means, first switching means for rendering the part of the circuit comprising the gating circuits and the integrating circuit means inoperative to control the delay in the time modulator circuit, means for manually controlling the said delay, a display system comprising a cathode ray tube including beam deflecting means and a time base generator synchronized by the synchronizing pulses and controlling the beam deflecting means to produce a deflection for the electron beam for causing a time-base scanning motion of the cathode ray upon each reception of a synchronizing pulse by the gating system, means for controlling the electron beam to which the recurrent received pulses are also applied, and which in response to such pulses change the electron beam, means for generating pulses substantially corresponding in duration and moment of occurrence to the sum of the gating pulses, and for applying said pulses to the means for controlling the electron beam, said beam controlling means in response to said pulses changing the electron beam, and second switching means operating independently of the first switching means and capable of changing the duration of the second gating pulse so as to make the duration of said pulse substantially longer than that of the first gating pulse.

3,131,390
DOPPLER-INERTIAL GROUND VELOCITY INDICATOR

Marion A. Condie, San Carlos, and Leland S. Reel, San Diego, Calif., assignors to Ryan Aeronautical Co., San Diego, Calif.

Filed July 31, 1959, Ser. No. 830,806
9 Claims. (Cl. 343—5)

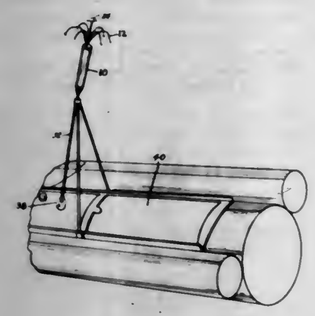


1. A Doppler-inertial ground velocity indicator for use in a moving vehicle, comprising: a Doppler velocity computer; a stable platform containing a gyroscope pivotally movable about fixed reference axes of vehicle headingly and drift motion; accelerometers operatively mounted on said platform; said accelerometers being oriented to detect accelerations parallel to said reference axes and provide output signals proportional to the heading and drift accelerations; integrators connected to said accelerometers to convert the acceleration signals to velocity signals; said computer having outputs providing directional velocity signals comparable to those from said integrators; a velocity comparator having means to compare the velocity signals from said computer outputs with those from said integrators and to produce output error signals proportionat to the differences between the comparable velocity signals; said gyroscope having erecting means coupled to shift the gyroscope about said reference axes; and means to apply the output error signals from said velocity comparator to said erecting means to erect the gyroscope and compensate for accelerations of the vehicle.

3,131,391
SNORKEL SIMULATOR

Vance F. Boswell, Rocky River, and James C. Shaw, Lorain, Ohio, assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Mar. 2, 1962, Ser. No. 177,141
4 Claims. (Cl. 343—18)

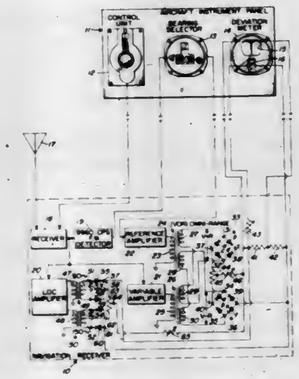


1. A reflector for reflecting electro-magnetic radiation comprising a mast section, a plurality of electro-magnetic radiating arms fixedly mounted on said mast, said arms presenting a multiplicity of outwardly projecting apices equidistant from a common center whereby said electromagnetically radiating arms simulate the snorkel of a submarine to a transmitted radar signal, said electromagnetically radiating arms being flexible and said structure having a mounting plate member upon which said radiating arms are mounted, said mounting plate member being mounted on said mast section and being movable, a tube member mounted over said mast section, said mounting plate member being movable within said tube member whereby said plurality of flexible radiating arms are able to be erected or retracted in and out of said tube member, a guide plate member mounted with said tube member for maintaining said plurality of radiating arms equally aligned with each other, a depresser member, said depresser member being mounted on said mast section member whereby said plural radiating arm members are depressed and maintained rigid in their at rest, retracted position within said tube member, and a piston sealing member movably mounted within said tube member for sealing said tube member from the entrance of water.

3,131,392
ALTERNATE FUNCTION VOR-LOC AIRCRAFT METER CIRCUIT

Arthur L. Kemper, Marion, and Ardis G. Vance, Toddville, Iowa, assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

Filed July 16, 1962, Ser. No. 210,135
8 Claims. (Cl. 343—107)



8. In an alternate function system for instrumentation having a difference indicating meter movement and an output voltage sum responsive meter movement; a signal source; means for tuning said signal source for at least two independent function signals; first means responsive to at least a first function signal of said signal source, and providing a first function rectified output; second means responsive to at least a second function signal of said signal source, and providing a second function rectified output; the first function means and the second function means each having two rectifying output portions; both rectifying output portions of each function means having rectifying devices so oriented that a positive and a relatively negative direct current output is provided at two output terminals of both rectifying output portions whenever the signal of the respective function means is being applied; voltage dividing means connected between terminals of opposite potential of the two rectifying portions of each function means; said difference indicating meter movement being connected between two voltage dividing means of each function means; and said output voltage sum responsive meter movement being connected between a positive terminal of one rectifying portion and a relatively negative terminal of the other rectifying portion of both function means in parallel.

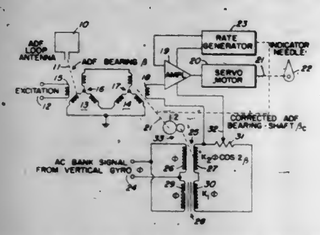
3,131,393
ERROR COMPENSATION IN RADIO DIRECTION FINDERS

Charles A. Oppedahl, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

Filed Mar. 20, 1962, Ser. No. 181,129
12 Claims. (Cl. 343—114)

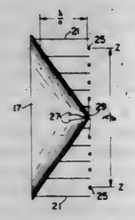
11. In an airborne radio direction finding system of the type determining the bearing β to a radio source and comprising a rotatable loop antenna and a bearing repeating system including a synchro transmitter and synchro receiver, a servo positioning system connected to the output of said synchro receiver for positioning a shaft in accordance with said antenna loop orientation, and including means for positioning said synchro receiver in accordance with said shaft position whereby said shaft position follows that of said antenna orientation; means

for correcting said shaft indication for error induced by aircraft bank attitude, said correction means comprising means for generating a signal proportional to aircraft



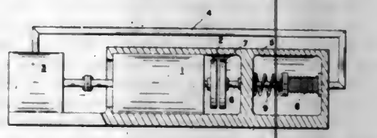
bank angle and means for combining said proportional signal with the output of said synchro receiver as applied to said servo positioning system.

3,131,394
SPIRAL ANTENNA WITH SPIRAL REFLECTING CAVITY
Myron S. Wheeler, Baltimore, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Jan. 22, 1962, Ser. No. 167,984
4 Claims. (Cl. 343—895)



1. A unidirectional antenna system comprising: an active antenna element in the form of two electrically-interconnected arms disposed in coplanar relationship, each of said arms having the configuration of a spiral the radius of which progressively increases outwardly from a central point, the said two arms being electrically interconnected at such central point; means for energizing said antenna element; a conical reflector, said active element being mounted adjacent said reflector so that said element is in front of, and symmetrically disposed with respect to, the apex of the convex side of said reflector, and in a plane normal to the axis of revolution of the latter; a pair of baffle strips respectively and equidistantly disposed in alternating fashion between the arms of said element, each baffle strip having a spiral form similar to that of the antenna arms, each of said baffle strips being composed of material capable of reflecting at least a portion of the energy radiated from said antenna arms when said system is in operation; and means for mounting said baffles upon said reflector whereby the baffles extend in a direction normal to the plane defined by the antenna arms, with corresponding edges of the baffles in substantially continuous contact with the surface of the reflector, and the opposite corresponding edges of the baffles in the plane of, but spaced from, the arms of said antenna.

3,131,395
AIR-SPACED MAGNETIC DISC RECORDER
John P. Lekas, Hollywood, Calif., assignor, by mesne assignments, to Alwac International, Nassau, Bahamas, a corporation of Panama
Filed Apr. 2, 1954, Ser. No. 420,699
11 Claims. (Cl. 346—74)



1. In a magnetic disc recorder, a first disc adapted to be rotated relative to a second disc, magnetic heads disposed in one of said discs, a magnetic medium disposed on the other of said discs, one of said discs having a flexible web and adapted to assume a position in close proximity with the other of said discs and means disposed at a radial position in one of said discs for ejecting air under pressure between said discs whereby said discs are held apart in spaced relationship.

3,131,396
CRYOGENIC PUMPING APPARATUS
Donald J. Santeler, Scotia, N.Y., and Franklin C. Huribut, Berkeley, Calif., assignors to General Electric Company, a corporation of New York
Filed Sept. 30, 1960, Ser. No. 59,642
13 Claims. (Cl. 62—404)

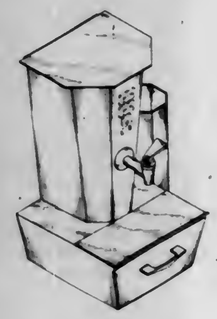


1. In a space simulator, means defining a chamber, at least one pump connected to and adapted to substantially evacuate said chamber, a substantially spherical cryogenic member being located in said chamber and being adapted to substantially envelop a test member in said chamber, said cryogenic member comprising a wall member, a plurality of baffle fins extending from said wall member and being angularly disposed with respect to said wall member, said wall member and baffle fins being thermally connected, a plurality of condensing fins being located between the baffle fins and the wall member whereby the condensing fins are substantially shielded from the test member, and means for maintaining the condensing fins at a temperature substantially less than the temperature of the wall member.

DESIGNS

APRIL 28, 1964

198,071
COMBINED LIQUID AND CUP DISPENSER
Alexander E. Blumenthal and Daniel N. Steiner, Pittsburgh, Pa., assignors to Mr. Hot Cup, Inc., Homestead, Pa., a corporation of Pennsylvania
Filed Feb. 19, 1963, Ser. No. 73,632
Term of patent 7 years
(Cl. D2—3)



198,072
HOLDER FOR A DRINKING GLASS OR THE LIKE
Malcolm C. Jones, 954 Junipero Drive, Costa Mesa, Calif.
Filed Dec. 9, 1963, Ser. No. 77,713
Term of patent 14 years
(Cl. D4—3)



198,073
SHOE
Otto Newman, Hampton Bays, N.Y., assignor to Marx & Newman Co., Inc., New York, N.Y., a corporation of New York
Filed Sept. 10, 1963, Ser. No. 76,527
Term of patent 7 years
(Cl. D7—7)



198,074
COMBINED FLOOR WASHER, WAXER, AND DUSTER
Carolyn Gail Wien, 42—42 Colden St., Flushing, N.Y.
Filed July 23, 1962, Ser. No. 71,019
Term of patent 14 years
(Cl. D9—2)



198,075
FISH SCALING TOOL
Lowell W. Davis, Sr., Tarpon Springs, Fla.
Filed Jan. 14, 1963, Ser. No. 73,171
Term of patent 3½ years
(Cl. D9—6)



198,076
STEP
Nunzio Sgroi, 972 Monument, Pacific Palisades, Calif.
Filed June 10, 1963, Ser. No. 75,289
Term of patent 3½ years
(Cl. D13—7)

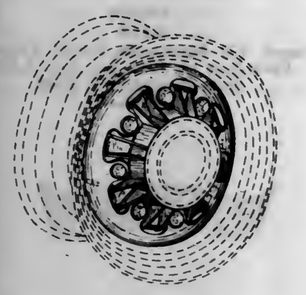


198,077
MOBILE CART FOR MEDICAL INSTRUMENTS
John T. Armbruster, Niagara Falls, N.Y., assignor to American Optical Company, Southbridge, Mass.
Filed Oct. 15, 1962, Ser. No. 72,116
Term of patent 14 years
(Cl. D14—3)

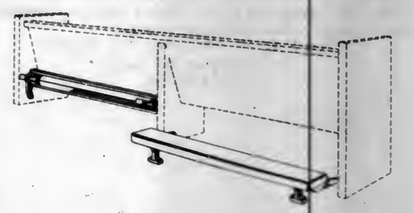


198,078
AUTOMOBILE
Giuseppe Bertone, Turin, Italy, assignor to Toyo Kogyo Company Limited, Hiroshima-ken, Japan, a company of Japan
Filed June 21, 1963, Ser. No. 75,460
Claims priority, application Japan Dec. 25, 1962
Term of patent 14 years
(Cl. D14—3)

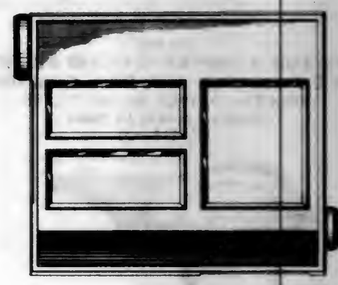
198,079
COMBINED WHEEL AND BRAKE DRUM
Romayne E. Holmes, Jr., Madison Heights, Mich., assignor to Kelsey-Hayes Company, Romulus, Mich., a corporation of Delaware
Continuation of design applications Ser. Nos. 67,708, 67,710, and 67,711, filed Nov. 27, 1961. This application Sept. 24, 1962, Ser. No. 71,948
Term of patent 14 years
(Cl. D14—30)



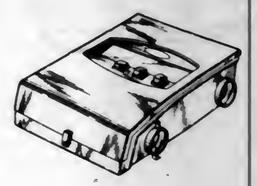
198,080
COMBINED PEW AND KNEELER
Richard L. Sklaar, 1550 Schuyler Road, Los Angeles, Calif.
Filed Oct. 5, 1962, Ser. No. 72,007
Term of patent 14 years
(Cl. D15—11)



198,081
TEACHING MACHINE CASING OR SIMILAR ARTICLE
John Mercorelli, 441 Summer Ave., and Carmine Ralph Villani, 34 Halleck St., both of Newark, N.J.
Filed Jan. 28, 1963, Ser. No. 73,349
Term of patent 14 years
(Cl. D25—1)



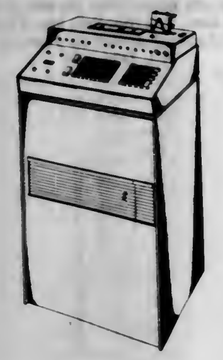
198,082
TEACHING MACHINE
Phillip L. Ward, 220 Shadowood Lane, Northbrook, Ill., and Warren H. Ward, Jr., 2963 Payne, Evanston, Ill.
Filed Dec. 26, 1963, Ser. No. 77,935
Term of patent 14 years
(Cl. D25—1)



198,083
MAGNETIC TAPE TRANSPORT
Glenn A. Smith, Redwood City, and Marvin A. Southcott, San Francisco, Calif., assignors to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed June 27, 1963, Ser. No. 75,551
Term of patent 14 years
(Cl. D26—5)



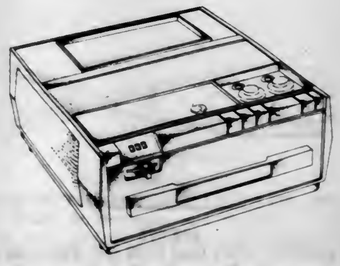
198,084
BANK TELLER'S INPUT/OUTPUT UNIT OR SIMILAR ARTICLE
Robert H. Eytel, North Wales, and Richard S. Massarella, Philadelphia, Pa., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed July 3, 1963, Ser. No. 75,662
Term of patent 14 years
(Cl. D26—5)



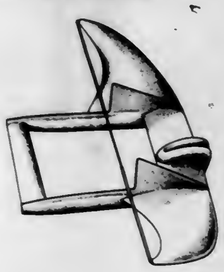
198,085
COMBINED TUNING CONTROL AND SPEAKER
Anthony J. Rich, 5650 S. Green St., Chicago 21, Ill.
Filed Nov. 14, 1963, Ser. No. 77,433
Term of patent 14 years
(Cl. D26—13)



198,086
TAPE RECORDER
Sheldon Lee Pastor, Chicago, and Robert L. Deschamps, West Chicago, Ill., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Dec. 13, 1962, Ser. No. 72,828
Term of patent 14 years
(Cl. D26—14)



198,087
ARCHERY BOW
Dick M. Dixon, 475 E. 2nd S., Salem, Utah
Filed Jan. 21, 1963, Ser. No. 73,261
Term of patent 14 years
(Cl. D30—1)



198,088
COMBINED REEL, HANDLE AND ROD UNIT
Francis M. Drake, 5319 N. Hoyne Ave., Chicago, Ill.
Filed Oct. 24, 1962, Ser. No. 72,244
Term of patent 14 years
(Cl. D31—4)



198,089
FISH LURE
Finn H. Magnus, Washington Valley Road, Morristown, N.J.
Filed Jan. 14, 1963, Ser. No. 73,153
Term of patent 14 years
(Cl. D31—4)



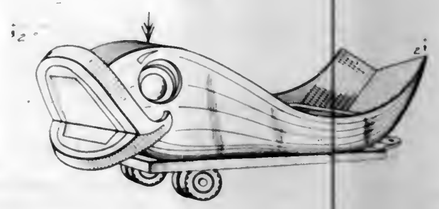
198,090
FISHING ROD HOLDER OR THE LIKE
George G. Truax, Box 267, Renton, Pa.
Filed June 4, 1963, Ser. No. 75,208
Term of patent 3½ years
(Cl. D31—4)



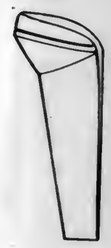
198,091
FIGURE OF A HEAD
Carol M. Bonner, 10547 23rd NE., Seattle, Wash.
Filed Oct. 14, 1963, Ser. No. 76,973
Term of patent 14 years
(Cl. D34—4)



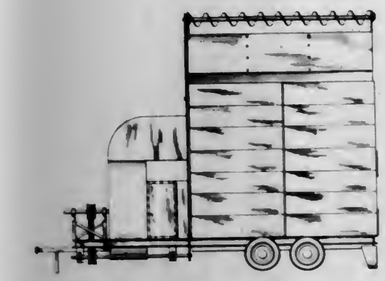
198,092
MOBILE SWIMMING POOL
Gerald H. Croushore, 128 Mohawk Drive, Cranford, N.J.
Filed June 28, 1963, Ser. No. 75,570
Term of patent 14 years
(Cl. D34—5)



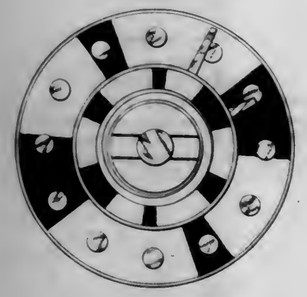
198,093
GOLF-CLUB COVER OR SIMILAR ARTICLE
Jack R. Bates, 130 Roca Way, Monterey Park, Calif.
Filed Dec. 9, 1963, Ser. No. 77,717
Term of patent 14 years
(Cl. D34—5)



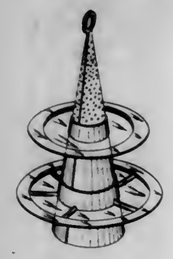
198,094
MOBILE GRAIN DRIER
Charles D. Figley, 1266 4th Ave. SE., Cedar Rapids, Iowa
Filed Dec. 19, 1960, Ser. No. 63,270
Term of patent 7 years
(Cl. D40—1)



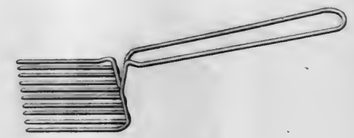
198,095
CLOCK
Jack K. Champlin, 2327 Market St., San Francisco, Calif.
Filed Dec. 12, 1962, Ser. No. 72,820
Term of patent 14 years
(Cl. D42—7)



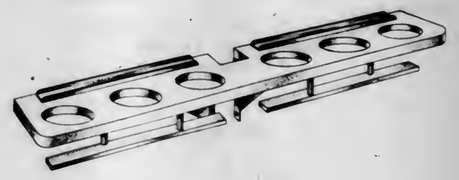
198,096
SERVING TRAY OR SIMILAR ARTICLE
Louis Rosenthal, 5424 Corning Ave., Los Angeles, Calif., and David McLean, 325 N. Palm Drive, Beverly Hills, Calif.
Filed Aug. 27, 1963, Ser. No. 76,369
Term of patent 14 years
(Cl. D44—10)



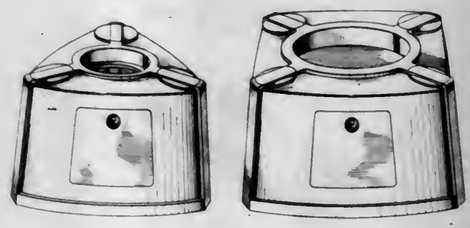
198,097
SPATULA OR THE LIKE
Hoyt K. Foster, Hollis, N.Y., assignor to S. W. Farber, Inc., New York, N.Y., a corporation of New York
Filed July 6, 1962, Ser. No. 70,817
Term of patent 14 years
(Cl. D44—29)



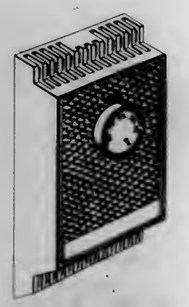
198,098
TUMBLER RACK
Henry Y. Kaneko, 4572 Don Valdes Drive, Los Angeles, Calif.
Filed Nov. 18, 1963, Ser. No. 77,472
Term of patent 14 years
(Cl. D44—29)



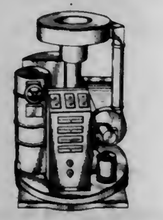
198,099
BASE FOR OUTDOOR LAMP POLES OR THE LIKE
Henry C. Pfaff, Jr., Summit, and Francis G. Schlosser, Carteret, N.J., assignors to Pfaff and Kendall, Newark, N.J., a corporation of New Jersey
Filed July 17, 1962, Ser. No. 71,038
Term of patent 14 years
(Cl. D48—31)



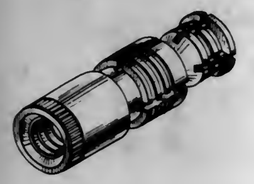
198,100
THERMOSTAT OR THE LIKE
Thomas M. Steinbach, Park Ridge, Ill., assignor to General Electric Company, a corporation of New York
Filed Dec. 31, 1962, Ser. No. 73,025
Term of patent 14 years
(Cl. D52—7)



198,101
ROTATABLE EXTRUDER
Gottlieb Looser, Zurich, Switzerland, assignor to Verwaltungsgesellschaft der Werkzeugmaschinenfabrik Oerlikon, Zurich, Switzerland, a corporation of Switzerland
Filed Nov. 28, 1962, Ser. No. 72,638
Term of patent 14 years
(Cl. D54—8)



198,102
EXPANSION BOLT SHIELD
Charles Fulop, 131 Skyview Drive, Seven Hills Village, Ohio
Filed May 22, 1963, Ser. No. 75,009
Term of patent 3½ years
(Cl. D54—9)



198,103
PORTABLE PHONOGRAPH OR SIMILAR ARTICLE
Charles F. Pohlmann, Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Filed Apr. 30, 1962, Ser. No. 69,899
Term of patent 14 years
(Cl. D56—4)



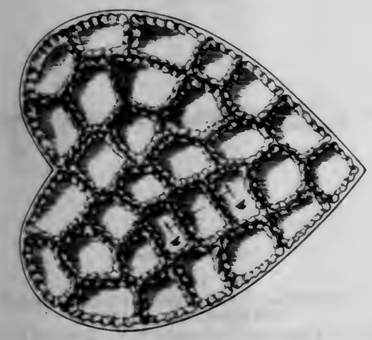
198,104
MICROSCOPE
John T. Armbruster, Niagara Falls, N.Y., assignor to American Optical Company, Southbridge, Mass.
Filed Nov. 27, 1962, Ser. No. 72,623
Term of patent 14 years
(Cl. D57—1)



198,105
BOTTLE
Patrick J. Ferree, Minneapolis, Minn., assignor to Bemis Bros. Bag Company, Minneapolis, Minn., a corporation of Missouri
Filed Oct. 14, 1963, Ser. No. 76,959
Term of patent 14 years
(Cl. D58—6)



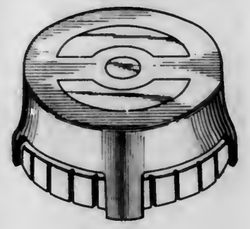
198,106
HEART-SHAPED COMPARTMENTED TRAY
Hugh R. Weiss, Montclair, N.J., assignor to The Pantasote Company, Passaic, N.J., a corporation of New Jersey
Filed Dec. 1, 1961, Ser. No. 67,812
Term of patent 14 years
(Cl. D58—13)



198,107
BUNG FOR BARRELS
Robert Givens McCulloch, Blakehurst, near Sydney, New South Wales, Australia, assignor to Ceeco Products Pty. Limited, Belmore, New South Wales, Australia, a company of New South Wales, Australia
Filed Dec. 12, 1961, Ser. No. 67,877
Claims priority, application Australia Aug. 8, 1961
Term of patent 14 years
(Cl. D58—26)



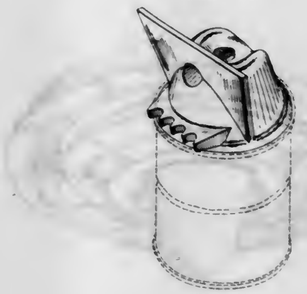
198,108
CLOSURE CAP
Juji Hirohama, 17 2-chome, Ishihara-cho Sumida-ku, Tokyo, Japan
Filed June 12, 1963, Ser. No. 75,325
Claims priority, application Japan Dec. 28, 1962
Term of patent 14 years
(Cl. D58—26)



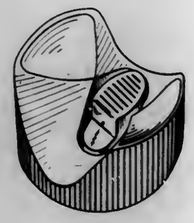
198,109
CAP FOR A PRESSURIZED CAN
Godfrey H. Klun, 7706 Jameson Road, Parma 99, Ohio
Filed Mar. 20, 1963, Ser. No. 74,057
Term of patent 14 years
(Cl. D58—26)



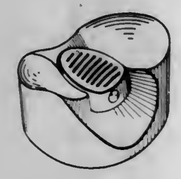
198,110
CAP FOR A PRESSURIZED CAN
Godfrey H. Klun, 7706 Jameson Road, Parma 99, Ohio
Filed Mar. 20, 1963, Ser. No. 74,058
Term of patent 14 years
(Cl. D58—26)



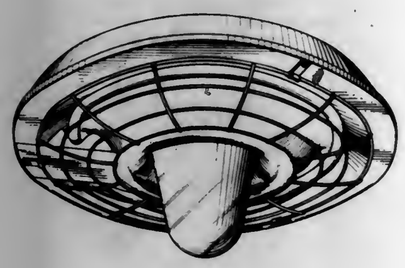
198,111
DISPENSER CAP FOR A PRESSURIZED CAN
Robert H. Abplanalp, 10 Hewitt Ave., Bronxville, N.Y.
Filed Oct. 29, 1963, Ser. No. 77,190
Term of patent 14 years
(Cl. D58—26)



198,112
DISPENSER CAP FOR A PRESSURIZED CAN
Robert H. Abplanalp, 10 Hewitt Ave., Bronxville, N.Y.
Filed Nov. 13, 1963, Ser. No. 77,411
Term of patent 14 years
(Cl. D58—26)



198,113
COMBINED CEILING HEATER AND ELECTRIC LIGHT
Anthony Bikker, Streetly, Sutton Coldfield, England, assignor to Thermair Domestic Appliances Limited, West Bromich, England
Filed June 21, 1962, Ser. No. 70,658
Term of patent 14 years
(Cl. D81—10)



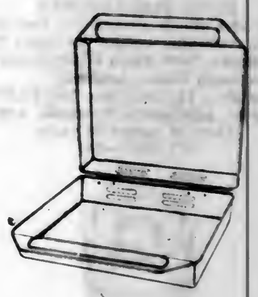
198,114
REFRACTORY BLOCK
Horace N. Hall, Collegeville, Pa., assignor to E. J. Lavino and Company, Philadelphia, Pa., a corporation of Delaware
Filed Aug. 1, 1961, Ser. No. 66,155
Term of patent 14 years
(Cl. D81—25)



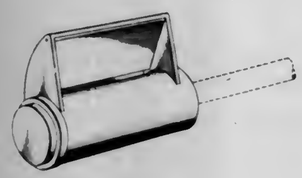
198,115
MEDICAMENT APPLICATOR
John M. Wittke, Westfield, and Richard M. Monahon, Basking Ridge, N.J., assignors to Esta Medical Laboratories, Inc., Dover, Del., a corporation of Delaware
Filed Oct. 8, 1962, Ser. No. 72,017
Term of patent 14 years
(Cl. D83—12)



198,116
CARRYING CASE FOR A PHONOGRAPH OR SIMILAR ARTICLE
Charles F. Pohlmann, Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Filed Apr. 30, 1962, Ser. No. 69,891
Term of patent 14 years
(Cl. D87—5)



198,117
SKIM FILTER UNIT OR SIMILAR ARTICLE
William O. Baker, West Covina, and Ernest A. Rodriguez, La Puente, Calif., assignors, by mesne assignments, to Shamrock Pool Equipment Company, El Monte, Calif., a corporation of California
Filed Nov. 26, 1962, Ser. No. 72,599
Term of patent 14 years
(Cl. D91—1)



198,118
RUG
Harold M. Schwartz, 331 E. 83rd St., New York, N.Y.
Filed Sept. 25, 1963, Ser. No. 76,737
Term of patent 7 years
(Cl. D92—21)



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PATENTS WERE ISSUED ON THE 28TH DAY OF APRIL, 1964

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Alford, Harvey E., and F. Veatch, to The Standard Oil Co. Lightweight structural unit. Re. 25,564, 4–28–64, Cl. 161—168.

Deal, Bruce E., and L. Swanson, to Kaiser Aluminum & Chemical Corp. Anodic oxidation of aluminum. Re. 25,566, 4–28–64, Cl. 204—58.

Eastman Kodak Co.: *See*—
Nerwin, Hubert. Re. 25,563.

Kaiser Aluminum & Chemical Corp.: *See*—
Deal, Bruce E., and Swanson. Re. 25,566.

Konchan, Anton W. Push button radiator pressure cap. Re. 25,562, 4–28–64, Cl. 220—44.

Nerwin, Hubert, to Eastman Kodak Co. Automatic exposure control system. Re. 25 563, 4–28–64, Cl. 95—10.

Sabins-Dohrmann, Inc.: *See*—
Sabins, Rolland C. Re. 25,565.

Sabins, Rolland C., to Sabins-Dohrmann, Inc. Mounting means for cathodic protection anodes. Re. 25,565, 4–28–64, Cl. 204—197.

Standard Oil Co. (Ohio), The: *See*—
Alford, Harvey E., and Veatch. Re. 25,564.

Swanson, Larry: *See*—
Deal, Bruce E., and Swanson. Re. 25,566.

Veatch, Franklin: *See*—
Alford, Harvey E., and Veatch. Re. 25,564.

LIST OF PLANT PATENTEES

Boerner, Eugene S., to Jackson & Perkins Co. Chrysanthemum plant. 2,396, 4–28–64, Cl. 82.

Chiarappa, Luigi, to Di Giorgio Fruit Corp. Grapevine. 2,397, 4–28–64, Cl. 47.

Di Giorgio Fruit Corp.: *See*—
Chiarappa, Luigi. 2,397.

Ecke, Paul. Poinsettia plant. 2,398, 4–28–64, Cl. 86.

Fischer, Carl, to Imperial Flowers Ltd. Gladiolus plant. 2,393, 4–28–64, Cl. 85.

Fischer, Carl, to Imperial Flowers Ltd. Gladiolus plant. 2,394, 4–28–64, Cl. 85.

Fischer, Carl, to Imperial Flowers Ltd. Gladiolus plant. 2,395, 4–28–64, Cl. 85.

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Fischer, Carl. 2,393.
Fischer, Carl. 2,394.
Fischer, Carl. 2,395.

Jackson & Perkins Co.: *See*—
Boerner, Eugene S. 2,396.

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Abplanalp, Robert H. Dispenser cap for a pressurized can. 198,111, 4–28–64, Cl. D58—26.

Abplanalp, Robert H. Dispenser cap for a pressurized can. 198,112, 4–28–64, Cl. D58—26.

American Optical Co.: *See*—
Armbruster, John T. 198,077.
Armbruster, John T. 198,104.

Ampex Corp.: *See*—
Smith, Glenn A., and Southcott. 198,083.

Armbruster, John T., to American Optical Co. Mobile cart for medical instruments. 198,077, 4–28–64, Cl. D14—3.

Armbruster, John T., to American Optical Co. Microscope. 198,104, 4–28–64, Cl. D57—1.

Baker, William O., and E. A. Rodriguez, to Shamrock Pool Equipment Co. Skim filter unit or similar article. 198,117, 4–28–64, Cl. D91—1.

Bates, Jack R. Golf-club cover or similar article. 198,093, 4–28–64, Cl. D34—5.

Bemis Bros. Bag Co.: *See*—
Ferree, Patrick J. 198,105.

Bertone, Giuseppe, to Toyo Kogyo Co. Ltd. Automobile. 198,078, 4–28–64, Cl. D14—3.

Bikker, Anthony, to Thermair Domestic Appliances Ltd. Combined ceiling heater and electric light. 198,113, 4–28–64, Cl. D81—10.

Blumenthal, Alexander E., and D. N. Steiner, to Mr. Hot Cup, Inc. Combined liquid and cup dispenser. 198,071, 4–28–64, Cl. D2—3.

Bonner, Carol M. Figure of a head. 198,091, 4–28–64, Cl. D34—4.

Ceeco Products Pty. Ltd.: *See*—
McCulloch, Robert G. 198,107.

Champlin, Jack K. Clock. 198,095, 4–28–64, Cl. D42—7.

Crossbore, Gerald H. Mobile swimming pool. 198,092, 4–28–64, Cl. D34—5.

Davis, Lowell W., Sr. Fish scaling tool. 198,075, 4–28–64, Cl. D9—6.

Dixon, Dick M. Archery bow. 198,087, 4–28–64, Cl. D30—1.

Drake, Francis M. Combined reel, handle and rod unit. 198,088, 4–28–64, Cl. D31—4.

Esta Medical Laboratories, Inc.: *See*—
Wittke, John M., and Monahon. 198,115.

Eytel, Robert H., and R. S. Massarella, to Sperry Rand Corp. Bank teller's input/output unit or similar article. 198,084, 4–28–64, Cl. D26—5.

Farber, S. W., Inc.: *See*—
Foster, Hoyt K. 198,097.

Ferree, Patrick J., to Bemis Bros. Bag Co. Bottle. 198,105, 4–28–64, Cl. D58—6.

Figley, Charles D. Mobile grain drier. 198,094, 4–28–64, Cl. D40—1.

Foster, Hoyt K., to S. W. Farber, Inc. Spatula or the like. 198,097, 4–28–64, Cl. D44—29.

Fulop, Charles. Expansion bolt shield. 198,102, 4–28–64, Cl. D54—9.

General Electric Co.: *See*—
Pohlmann, Charles F. 198,103.
Pohlmann, Charles F. 198,116.
Steinbach, Thomas M. 198,100.

Hall, Horace N., to E. J. Lavino and Co. Refractory block. 198,114, 4–28–64, Cl. D81—25.

Hirohama, Juji. Closure cap. 198,108, 4–28–64, Cl. D58—26.

Holmes, Romayne E., Jr., to Kelsey-Hayes Co. Combined wheel and brake drum. 198,079, 4–28–64, Cl. D14—30.

Hot Cup, Inc., Mr.: *See*—
Blumenthal, Alexander E., and Steiner. 198,071.

Jones, Malcolm C. Holder for a drinking glass or the like. 198,072, 4–28–64, Cl. D4—3.

Kaneko, Henry Y. Tumbler rack. 198,098, 4–28–64, Cl. D44—29.

Kelsey-Hayes Co.: *See*—
Holmes, Romayne E., Jr. 198,079.

Klun, Godfrey H. Cap for a pressurized can. 198,109, 4–28–64, Cl. D58—26.

Klun, Godfrey H. Cap for a pressurized can. 198,110, 4–28–64, D58—26.

Lavino, E. J., and Co.: *See*—
Hall, Horace N. 198,114.

Looser, Gottlieb, to Verwaltungsgesellschaft der Werkzeugmaschinenfabrik Oerlikon. Rotatable extruder. 198,101, 4–28–64, Cl. D54—8.

Magnus, Finn H. Fish lure. 198,089, 4–28–64, Cl. D31—4.

Marx & Newman Co., Inc.: *See*—
Newman, Otto. 198,073.

Massarella, Richard S.: *See*—
Eytel, Robert H. 198,084.

McCulloch, Robert G., to Ceeco Products Pty. Ltd. Bung for barrels. 198,107, 4–28–64, Cl. D58—26.

McLean, David: *See*—
Rosenthal, Louis. 198,096.

Mercorelli, John, and C. R. Villani. Teaching machine casing or similar article. 198,081, 4–28–64, Cl. D25—1.

Minnesota Mining and Mfg. Co.: *See*—
Pastor, Sheldon L., and Deschamps. 198,086.

Monahon, Richard M.: *See*—
Wittke, John M. 198,115.

Newman, Otto, to Marx & Newman Co., Inc. Shoe. 198,073, 4–28–64, Cl. D7—7.

Pantasote Co., The: *See*—
Weiss, Hugh R. 198,106.

Pastor, Sheldon L., and R. L. Deschamps, to Minnesota Mining and Mfg. Co. Tape recorder. 198,086, 4–28–64, Cl. D26—14.

Pfaff and Kendall: *See*—
Pfaff, Henry C., Jr., and Schlosser. 198,099.

Pfaff, Henry C., Jr., and F. G. Schlosser, to Pfaff and Kendall. Base for outdoor lamp poles or the like. 198,099, 4–28–64, Cl. D48—31.

Pohlmann, Charles F., to General Electric Co. Portable phonograph or similar article. 198,103, 4–28–64, Cl. D56—4.

Pohlmann, Charles F., to General Electric Co. Carrying case for a phonograph or similar article. 198,116, 4–28–64, Cl. D87—5.
Rich, Anthony J. Combined tuning control and speaker. 198,085, 4–28–64, Cl. D26—13.
Rodriguez, Ernest A.: *See*—
Baker, William O. 198,117.
Rosenthal, Louis, and D. McLean. Serving tray or similar article. 198,096, 4–28–64, Cl. D44—10.
Schlosser, Francis G.: *See*—
Pfaff, Henry C. Jr. 198,099.
Schwartz, Harold M. Rug. 198,118, 4–28–64, Cl. D92—21.
Sgroi, Nunzio. Step. 198,076, 4–28–64, Cl. D13—7.
Shamrock Pool Equipment Co.: *See*—
Baker, William O., and Rodriguez. 198,117.
Sklaar, Richard L. Combined pew and kneeler. 198,080, 4–28–64, Cl. D15—11.
Smith, Glenn A., and M. A. Southcott, to Ampex Corp. Magnetic tape transport. 198,083, 4–28–64, Cl. D26—5.
Southcott, Marvin A.: *See*—
Smith, Glenn A. 198,083.
Sperry Rand Corp.: *See*—
Eytel, Robert H., and Massarella. 198,084.
Steinbach, Thomas M., to General Electric Co. Thermostat or the like. 198,100, 4–28–64, Cl. D52—7.
Steiner, Daniel N.: *See*—
Blumenthal, Alexander E. 198,071.
Thermair Domestic Appliances Ltd.: *See*—
Bikker, Anthony. 198,113.
Toyo Kogyo Co. Ltd.: *See*—
Bertone, Giuseppe. 198,078.
Truax, George G. Fishing rod holder or the like. 198,090, 4–28–64, Cl. D31—4.
Verwaltungsgesellschaft der Werkzeugmaschinenfabrik Oerlikon: *See*—
Looser, Gottlieb. 198,101.
Villani, Carmine R.: *See*—
Mercorelli, John. 198,081.
Ward Phillip L. and W. H., Jr. Teaching machine. 198,082, 4–28–64, Cl. D25—1.
Ward, Warren H., Jr.: *See*—
Ward, Phillip L. 198,082.
Weiss, Hugh R., to The Pantasote Co. Heart-shaped compartmented tray. 198,106, 4–28–64, Cl. D58—13.
Wien, Carolyn G. Combined floor washer, waxer, and duster. 198,074, 4–28–64, Cl. D9—2.
Wittke, John M., and R. M. Monahon, to Esta Medical Laboratories, Inc. Medicament applicator. 198,115, 4–28–64, Cl. D83—12.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 28TH DAY OF APRIL, 1964

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

A.V.R. Achat, Ventes, Representations, Societe Anonyme: *See*—
Somville, Charles. 3,130,977.
Aaron, Phillip L. Musical teaching device. 3,130,627, 4–28–64, Cl. 84—471.
Abalman, Alvin A., to Winer Mfg. Co., Inc. Garment construction and method of making same. 3,130,417, 4–28–64, Cl. 2—97.
Abelow, Joseph: *See*—
Hovorka, Jiri. 3,130,546.
Abragam, Anatole, J. Combrisson, and I. Solomon, to Commissariat a l'Energie Atomique. Method and apparatus for measuring magnetic fields, particularly the earth magnetic field. 3,131,345, 4–28–64, Cl. 324—.5.
Abramson, Abraham, to Raylite Electric Corp. Molded plastic segmented trunk and branch holder means for simulated Christmas trees. 3,131,112, 4–28–64, Cl. 161—24.
Achar Mfg. Co.: *See*—
Zacharias, Fred. 3,130,458.
Acim Paper Corp.: *See*—
Heyman, Moses D. 3,131,114.
Adickes, Franz: *See*—
Freter, Kurt, Adickes, and Zeile. 3,131,122.
Adlee Corp.: *See*—
Gorski, Michael. 3,130,596.
Adler, Robert, and G. H. Ryan, to Zenith Radio Corp. Resonant quadrupole pump. 3,131,359, 4–28–64, Cl. 330—4.7.
Aerojet-General Corp.: *See*—
Batchelder, George W. 3,131,101.
Frankel, Milton B. 3,131,205.
Aeroquip Corp.: *See*—
Monnen, Chester T. 3,130,753.
Aerotec Industries, Inc.: *See*—
Burdock, Joseph L. 3,131,043.
Oliveau, John V. 3,130,985.
Agfa Aktiengesellschaft: *See*—
Baur, Carl, and Burger. 3,130,658.
Aghnides, Elie P. Aerator having an enlarged stream outlet. 3,130,915, 4–28–64, Cl. 239—427.
Aghnides, Elie P. Water aerating device. 3,130,916, 4–28–64, Cl. 239—427.
Aghnides, Elie P. Water aerator having improved pre-aerating disc. 3,130,917, 4–28–64, Cl. 239—427.
Aghnides, Elie P. Slotless aerator. 3,130,918, 4–28–64, Cl. 239—431.
Agruss, Meyer S., to Miehle-Goss-Dexter, Inc. Triphenyl leucocyanide sensitive compositions and elements. 3,131,062, 4–28–64, Cl. 96—85.
Ahlén, Kark G. Method of manufacturing a blade wheel. 3,130,481, 4–28–64, Cl. 29—156.8.
Ainslie, Thomas D., and I. R. Kremer, to Phillips-Van Heusen Corp. Sewing machine attachments. 3,130,696, 4–28–64, Cl. 112—154.
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Schilling, Clarence J. 3,131,045.
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Dawson, Arthur E. 3,131,283.
Aldridge, Peter J., to The Magnavox Electronics Co. Ltd. Sound recording and reproducing apparatus. 3,130,889, 4–28–64, Cl. 226—178.
Aldridge, Peter J. Sound reproducing and recording apparatus. 3,130,935, 4–28–64, Cl. 242—55.12.
Alexander, James W., and C. L. Davis, to Phillips Petroleum Co. Agglomeration of fine rubber particles. 3,131,160, 4–28–64, Cl. 260—33.6.
Alexander, Thomas E., and W. F. Nelson, to Koehring Co. Automatic fill-up and cementing devices for well pipes. 3,130,789, 4–28–64, Cl. 166—224.
Alfieri, Giuseppe, to Fabbrica Italiana Magneti Marelli S.p.A. Compressors for compressed air systems particularly used on vehicles. 3,130,901, 4–28–64, Cl. 230—187.
Alfrey, Turner, Jr.: *See*—
Shrenk, Walter J., Cleereman, and Alfrey. 3,130,959.
Allbeson, Erneat N., to The Brightside Foundry & Engineering Co. Ltd. Apparatus for the mechanical handling of billets and the like. 3,130,830, 4–28–64, Cl. 198—219.
Allegretti, Albert J. Lawn trimmer and edger. 3,130,793, 4–28–64, Cl. 172—15.
Allen, James B. Terminal board assembly. 3,131,330, 4–28–64, Cl. 317—99.
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Klausner, Kenneth. 3,131,154.
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Alper, William H., and M. W. Beardsley, to National Research Associates, Inc. Obstacle clearing attachment for air cushion vehicles. 3,130,939, 4–28–64, Cl. 244—2.
Alstermo Bruks Aktiebolag: *See*—
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Kohler, Fred, Rudd, and Stanton. 3,131,285.
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Anderson, Axel F. L. 3,130,824.
American Smelting and Refining Co.: *See*—
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Shiels, Robert T., Jr., and Zangler. 3,130,929.
Andersen, Johannes H. Rubber bumper for automobiles 3,130,998, 4–28–64, Cl. 293—64.
Andersen, John M., to Hansa Bryggeri, A/S. Packing machine. 3,130,528, 4–28–64, Cl. 53—55.
Anderson, Alfred H. Sash balance. 3,130,457, 4–28–64, Cl. 20—52.
Anderson, Axel F. L., to American Radiator & Standard Sanitary Corp. Fluid drive for oil well drilling draw works. 3,130,824, 4–28–64, Cl. 192—3.2.
Anderson, John W. Windshield wiper assembly. 3,130,437, 4–28–64, Cl. 15—250.42.
Anderson, Robert G.: *See*—
Stuart, Frank A., and Anderson. 3,131,150.
Anderson, Warren D., to American Brake Shoe Co. Journal bearing. 3,131,006, 4–28–64, Cl. 308—174.
Anderson, William E., R. W. Schlenz, and C. P. Friling, to Riegel Paper Corp. Duplex packaging material and method of making same. 3,130,647, 4–28–64, Cl. 93—35.
Ando, Ryo: *See*—
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Andrea, Andrew G., ½, to M. M. Kennedy. Refrigerating and air conditioning apparatus. 3,130,554, 4–28–64, Cl. 62—7.
Antioch College: *See*—
Asakawa, George. 3,131,269.
Antonious, Anthony J. Expandable article storage case. 3,130,823, 4–28–64, Cl. 190—44.
Apel, John H., and R. J. Beeson, to The Jaeger Machine Co. Material distributing and leveling machine. 3,130,654, 4–28–64, Cl. 94—46.
Appareils et Evaporateurs Kestner: *See*—
Duval, Jean J. E. 3,131,110.
Appleton, Arthur I. Lamp support. 3,130,925, 4–28–64, Cl. 240—52.
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Cary, Henry H., and Hawes. 3,131,349.

Arbit, Harold A., R. S. Brissette, and R. W. Gaines, to Union Carbide Corp. Cellulosic material having improved adhesion to polyethylene. 3,131,113, 4–28–64, Cl. 161—151.

Arcair Co.: *See*—
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Archambault, Maurice, to Ministere des Richesses Naturelles. Process for producing lithium carbonate with concomitant recovery of reactants. 3,131,022, 4–28–64, Cl. 23—63.

Archer, Giles A., and L. H. Stornbach, to Hoffmann-La Roche Inc. Process for producing 5-phenyl-1,2-dihydro-3H 1,4-benzodiazepines. 3,131,178, 4–28–64, Cl. 260—239.

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Armstrong, Desmond R., and C. H. Turnblom, to Eitel-McCullough, Inc. Coupling from a resonant cavity through a dielectric window to an external loop. 3,131,326, 4–28–64, Cl. 315—39.

Arnay Industries, Inc.: *See*—
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Arneson, Edwin L., to Federal Paper Board Co., Inc. Article carrier. 3,130,861, 4–28–64, Cl. 220—113.

Arneson, Lawrence E., to Federal Paper Board Co., Inc. Apparatus for assembling carrier blanks. 3,130,648, 4–28–64, Cl. 93—36.

Arnot, Alfred E. R. Solid tyres. 3,130,766, 4–28–64, Cl. 152—41.

Aronson, David, to Worthington Corp. Anti-flash control system. 3,130,715, 4–28–64, Cl. 122—451.

Arrow-Hart & Hegeman Electric Co., The: *See*—
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Asakawa, George, to Antioch College. Thermally expandable actuator means for thermal switch. 3,131,269, 4–28–64, Cl. 200—113.

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Dennett, John, and Ashcroft. 3,131,047.

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Auld, James T., and R. H. Sawin. Gummed paper tape applying device. 3,131,109, 4–28–64, Cl. 156—526.

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Avery, Robert C., to Bell Telephone Laboratories, Inc. Telephone system with selective code compression and register recycle. 3,131,262, 4–28–64, Cl. 179—18.

Avery, Robert C., and A. Majlinger, to Bell Telephone Laboratories, Inc. Telephone system with selective code compression and register recycle. 3,131,261, 4–28–64, Cl. 179—18.

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Zandman, Felix, and Avril. 3,131,253.

Ayoub, Michael A.: *See*—
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Babbit, Samuel. Deflector assembly for inboard power boats. 3,130,541. 4–28–64, Cl. 60—31.

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Babcock & Wilcox, Ltd.: *See*—
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Baer, Benjamin P., and C. H. Herr, Jr., to Caterpillar Tractor Co. Hydraulic steering mechanism for articulated vehicles. 3,130,806, 4–28–64, Cl. 180—79.2.

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Bailey, Theodore L., and E. R. Barron, to United States of America, Army. Flexible armored body garment. 3,130,414, 4–28–64, Cl. 2—2.5.

Baird, William, D. K. Lawman, W. E. Stephen, and C. D. Weston, to Imperial Chemical Industries Ltd. Process for the coloration of cellulose textile materials with water-soluble azo dyestuffs containing sulphonyl fluoride groups. 3,131,021, 4–28–64, Cl. 8—41.

Baker, Alan G., to J. S. Kamborian. Dispensing apparatus for thermoplastic adhesive. 3,130,876, 4–28–64, Cl. 222—146.

Baker, Ambrose D., to United States of America, Navy. Multiple amplifier circuit for proximity fuze. 3,131,388, 4–28–64, Cl. 343—7.

Baker, Chester R. Garbage can rack. 3,130,837, 4–28–64, Cl. 211—83.

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Baker, William E., to Baker Research and Development Corp. Adjustable plastic spray device. 3,130,919, 4–28–64, Cl. 239—546.

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Barlow, Paul D., to Monsanto Chemical Co. Temperature control circuit. 3,131,279, 4–28–64, Cl. 219—20.

Barnby, Herbert A., and R. H. Whitney, to Owens-Illinois Glass Co. Method of producing aerosol-type package. 3,131,077, 4–28–64, Cl. 117—5.5.

Barnes Engineering Co.: *See*—
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Barrett, David M., and O. C. Hollstein, to Picker X-Ray Corp., Waite Mfg. Division, Inc. Tiltable X-ray table comprising means to produce a variable speed translational movement. 3,131,301, 4–28–64, Cl. 250—55.

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Baskin, Herbert A., to W. R. Grace & Co. Process for purifying crude calcium cyanate. 3,131,023. 4–28–64, Cl. 23—75.

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Batchelder, James W., to Textron Inc. Feeder apparatus. 3,130,863, 4–28–64, Cl. 221—9.

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Battin, John W., to Motorola, Inc. Tone control receiver circuit. 3,131,354, 4–28–64, Cl. 325—466.

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Beaulieu, John L., to Golay and Co., Inc. Portable washing unit for tanks. 3,130,676, 4–28–64, Cl. 103—87.

Beaumont, Richard W., to Ingersoll-Rand Co. Rock drill. 3,130 800, 4–28–64, Cl. 175—293.

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Bedford, William A., Jr., to Thompson Bremer & Co. Fastener for supporting a conductor. 3,130,948, 4–28–64, Cl. 248—58.

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Beeskow, Bruno E. A. H., to Daimler-Benz Aktiengesellschaft. Clutch control system. 3,130,827, 4–28–64, Cl. 192—13.

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Behar, Isaac, to Societe Metallurgique d'Imphy. Alloy based on iron, containing nickel, chromium and aluminium, and process for obtaining same. 3,131,055, 4–28–64, Cl. 75—124.

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Bell, George W., to Northwestern Steel & Wire Co. Tumbling drum for coating nails having a weighing feeder. 3,131,090, 4–28–64, Cl. 118—9.

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Avery, Robert C., and Majlinger. 3,131,261.
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Belt, Salem F., R. J. Evans, and W. H. Stanton, to Monsanto Chemical Co. Purification of acetylene. 3,131,233, 4–28–64, Cl. 260—679.

Benamy, Daniel A., I. Feinberg, F. Feorans, and R. J. Williams, to Curtiss-Wright Corp. System for simulating land mass radar reception. 3,131,247, 4–28–64, Cl. 35—10.4.

Benaway, Bernard G., to Sterer Engineering and Mfg. Co. Flow regulator. 3,130,747, 4–28–64, Cl. 137—504.

Bennett, Frank P., and A. E. Webb, to Sawyers Research Development Corp. Projected image transmitting apparatus. 3,130,635, 4–28–64, Cl. 88—24.

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Berglund, Carl O., and R. R. Thompson. Liquid level controller. 3,131,335. 4–28–64, Cl. 317—148.5.

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Bertram, Sidney, and S. L. Hasin, to Thompson Ramo Wooldridge Inc. Method and apparatus for exposing photosensitive material. 3,131,020, 4–28–64, Cl. 346—110.

Berresheim, Alexander, and A. Eder, to Bölkow-Entwicklungen Kommanditgesellschaft. Actuator. 3,130,943, 4–28–64, Cl. 244—42.

Bickford, Lyman D., to Riggs & Lombard Inc. Selvage tightener for fabric shearing machines. 3,130,472, 4–28–64, Cl. 26—15.

Bidopia, Joseph L. Cigarette box. 3,130,893, 4–28–64, Cl. 229—20.

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Billard, Paul L., and P. Maguer, to North American Philips Co., Inc. Gamma correction method for use in television and apparatus for carrying out these methods. 3,131,254, 4–28–64, Cl. 178—5.4.

Billier, Efim. Process for carrying out chemical reactions in a layer of sprayed whirling liquid. 3,131,212, 4–28–64, Cl. 260—468.

Billeter, Henry R., to Sloan Valve Co. Automatically self-cleaning shower heads. 3,130,911, 4–28–64, Cl. 239—109.

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Blinn, Franz, to Moeller & Neumann G.m.b.H. Arrangement for elongating a stay bolt means or tension anchor independently of nut means associated therewith. 3,130,628, 4–28–64, Cl. 85—1.

Blocher, Thomas J., Jr., to Westinghouse Air Brake Co. Transistor amplifier-switching circuit with Zener diode limiting for elimination of unattenuated signals. 3,131,309, 4–28–64, Cl. 307—88.5.

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Blodgett, Richard E. Reusable mercury circuit breaker device. 3,131,275, 4–28–64, Cl. 200—113.

Blount, Kikan R., and M. S. Simon, to Polaroid Corp. Nitro and amino ketones. 3,131,219, 4–28–64, Cl. 260—575.

Boccardi, Patsy, and A. Sweeney. Game apparatus comprising finger-supported ball projectors and wrist-supported basket. 3,130,971, 4–28–64, Cl. 273—101.

Bock, Otto H., to United States of America, Air Force. Optical range and viewfinder for invisible light imaging devices. 3 131,307, 4–28–64, Cl. 250—83.3.

Bodine, Albert G., Jr. Method and apparatus for creating a load bearing region in earthen material. 3,130,552, 4–28–64, Cl. 61—36.

Boehringer Ingelheim G.m.b.H.: *See*—
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Bogdan, Andrew A. Fly cutters with micrometrical adjustment. 3,130,610, 4–28–64, Cl. 77—77.

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Bohn, Erik V., to Her Majesty the Queen in the right of Canada, as represented by the Minister of National Defense. Pulse position analog computer. 3,131,296, 4–28–64, Cl. 235—176.

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Bonanno, Anthony S. Venetian blind retainers. 3,130,777, 4–28–64, Cl. 160—178.

Bonglovanni, John P. Masonry guides. 3,130,500, 4–28–64, Cl. 33—85.

Borkowski, Walter L., and J. J. Van Venrooy, to Sun Oil Co. Process for the recovery of hydrogen chloride from a vapor mixture containing same. 3,131,027, 4–28–64, Cl. 23—154.

Borlenghi, Lorenzo, to Sabor, Etablissement. Door frame of plastics for room doors. 3,130,455, 4–28–64, Cl. 20—11.

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Borrowdale, Russell W. Camera adjustment. 3,130,632, 4–28–64, Cl. 88—24.

Boswell, Vance F., and J. C. Shaw, to United States of America, Navy. Snorkel simulator. 3,131,391, 4–28–64, Cl. 343—18.

Boulet, Georges, to Société à Responsabilité Limitée; Recherches Etudes Production R.E.P. Control of the swash-plate of a barrel pump by rocker-arms. 3,130,593, 4–28–64, Cl. 74—60.

Bourquin, Jean, and F. Straumann, to Institut Dr. Ing. Reinhard Straumann A.G. Self-winding watch barrels. 3,130,538, 4–28–64, Cl. 58—87.

Bovaird, Louise. Venetian blind paint stand. 3,130,439, 4–28–64, Cl. 15—268.

Bowden, George F., and B. E. Ruth, to Symons Mfg. Co. Concrete wall form installation. 3,130,470, 4–28–64, Cl. 25—131.5.

Bowden, George F., and B. E. Ruth, to Symons Mfg. Co. Shore assembly for concrete floor slabs. 3,130,950, 4–28–64, Cl. 248—354.

Boylan, Robert J., to American Air Filter Co., Inc. Spray coating an air filter with nonyl phenoxy polyoxyethylene ethanol. 3,131,084, 4–28–64, Cl. 117—104.

Bradley, Frank R., Jr. Hall-effect memory device. 3,131,381, 4–28–64, Cl. 340—174.

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Brandt, William E., to International Business Machines Corp. Single bit recording technique. 3,131,383, 4–28–64, Cl. 340—174.1.

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Bratz, Otto J., to American Chain & Cable Co., Inc. Push-pull cable casings. 3,130,754, 4–28–64, Cl. 138—133.

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Braun, Roland, to Brown, Boveri & Cie, Aktiengesellschaft. Arrangement with phase-dependent measurement particularly for relays. 3,131,329, 4–28–64, Cl. 317—27.

Bredtschneider, Kurt B., to Crane Co. Combined safety relief valve and conduit. 3,130,742, 4–28–64, Cl. 137—119.

Brekke, Byron O., and R. C. Johnston, to Minneapolis-Honeywell Regulator Co. Winding form having means for protecting electrical coil leads. 3,131,371, 4–28–64, Cl. 336—192.

Brenzen, Timothy. Shorting switch controls. 3,131,277, 4–28–64, Cl. 200—157.

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Brewer, Sherman T., to Bell Telephone Laboratories, Inc. Frequency-sensitive connecting network. 3,131,361, 4–28–64, Cl. 330—109.

Brice, Herbert J., Jr., H. G. Houlton, and S. H. Morgan, to Ashland Oil & Refining Co. Process for producing an improved asphalt. 3,131,140, 4–28–64, Cl. 208—4.

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Briggs, Rufus L., to Electrarc, Inc. Arc welding system. 3,131,325, 4–28–64, Cl. 314—74.

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Phillips, Richard M., and Lindsay-Scott. 3,130,868.
Phillips, Richard M., and Lindsay-Scott. 3,130,869.
Phillips, Richard M., and Lindsay-Scott. 3,130,870.

Brodzinsky, Albert, J. B. Reynolds, Jr., and I. M. Saffitz. Automatic carrier controlled approach system. 3,131,018, 4–28–64, Cl. 343—6.

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Brooks, Winfred M. 3,130,509.

Brooks, Fred A., Jr., to Jersey Production Research Co. Low density cementing composition. 3,131,075, 4–28–64, Cl. 106—90.

Brooks, Melvin E., C. R. Chew, and C. D. Thompson, to Phillips Petroleum Co. Cable testing system having stressing means for detecting open and short circuits. 3,131,347, 4–28–64, Cl. 324—51.

Brooks, Winfred M., to E. J. Brooks Co. Tag. 3,130,509, 4-28-64, Cl. 40—21.

Broughton, Donald B., D. B. Carson, and L. O. Stine, to Universal Oil Products Co. Fluid-solid contacting process and flow control method therefor. 3,131,232, 4-28-64, Cl. 260—676.

Brown, Adolph M.: *See*—
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Brown, Boveri & Cie, Aktiengesellschaft: *See*—
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Brown, Burton M., W. E. Pash, and W. P. Powell, to The Lau Blower Co. Blower. 3,130,899, 4-28-64, Cl. 230—134.

Brown, Cicero C.: *See*—
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Brown, Clarence H., to General Electric Co. Refrigerator compressor. 3,130,902, 4-28-64, Cl. 230—207.

Brown, Robert W., and A. H. Roebuck, to The Western Co. of North America. Perforating apparatus. 3,130,786, 4-28-64, Cl. 166—55.

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Johnson, Arthur S. 3,130,680.

Browning, James A., to Thermal Dynamics Corp. Electric arc torch. 3,131,288, 4-28-64, Cl. 219—121.

Bruce, William F., and A. D. Lourie, to American Home Products Corp. Substituted 2-aminoisonicotinic acid hydrazides. 3,131,194, 4-28-64, Cl. 260—295.

Bruestle, Carl O., to Syncro Machine Co. Cooling means for wire drawing blocks. 3,130,832, 4-28-64, Cl. 205—14.

Brussell, Jacob. Heating oven for foods. 3,131,280, 4-28-64, Cl. 219—35.

Buck, Ronald H., Jr., and D. G. McCullough, to General Motors Corp. Alloy steel forging die. 3,131,057, 4-28-64, Cl. 75—126.

Buck-Hansen, Gisela, to Inventa A.G. fur Forschung und Patentverwertung. Process for the manufacture of pure 1(+)-lysine. 3,131,216, 4-28-64, Cl. 260—534.

Buckingham, Michael J., and W. M. Fairbank. Superconductive element. 3,131,374, 4-28-64, Cl. 338—32.

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Budzich, Tadeusz, to The Weatherhead Co. Throttling control. 3,130,674, 4-28-64, Cl. 103—37.

Bulmer, Donald L. Measuring dispenser. 3,130,874, 4-28-64, Cl. 222—142.8.

Bulova Research and Development Laboratories, Inc.: *See*—
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Bungeroth, Adolf, and H. Schrewe, to Mannesmann Aktiengesellschaft. Extrusion conveyor apparatus for multiple casting installations. 3,130,459, 4-28-64, Cl. 22—57.5.

Burdick, Ralph V., and R. V. Burdick, Jr. Container with snap-off cover. 3,130,857, 4-28-64, Cl. 220—43.

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Burdick, Ralph V., and R. V. Burdick, Jr. 3,130,857.

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Bureau d'Etudes Armand Malchoir Societe Anonyme: *See*—
Malchair, Armand. 3,131,064.

Burger, Erich: *See*—
Baur, Carl, and Burger. 3,130,658.

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Burk, Lucius O., and F. J. Will, to General Motors Corp. Expendable pallet and leg. 3,130,692, 4-28-64, Cl. 108—51.

Burnham, Crebert. Single lever remote control for outboard motors. 3,130,598, 4-28-64, Cl. 74—472.

Burr, Robert P., to Circuit Research Co. Position sensing apparatus. 3,131,339, 4-28-64, Cl. 318—6.

Burrison, Earl O. Motion converting means. 3,130,592, 4-28-64, Cl. 74—40.

Burroughs Corp: *See*—
Valenta, George W. 3,131,382.

Bush, Grant H., and J. E. Carrington, to International Business Machines Corp. Computing system. 3,131,293, 4-28-64, Cl. 235—156.

Caldwell, Washington J., to Eltra Corp. Commutator assembling machine. 3,130,486, 4-28-64, Cl. 29—205.

Calfee, John D., to Monsanto Chemical Co. Catalyst for the polymerization of olefins containing the product of a titanium halide and an organo-aluminum compound mixed with a lower alkyl halide solution of aluminum chloride. 3,131,171, 4-28-64, Cl. 260—93.5.

California Industrial Products, Inc.: *See*—
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California Research Corp.: *See*—
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Stuart, Frank A., and Anderson. 3,131,150.

Calls, Micheline, nee Matrot, J. E. Charpin, and P. Plurien, to Commissariat a l'Energie Atomique. Method for manufacturing porous barriers. 3,131,239, 4-28-64, Cl. 264—63.

Caltagirone, Saverio, to General Electric Co. Coil leads insulating and securing means. 3,131,372, 4-28-64, Cl. 336—192.

Campanozzi, Frank L., and F. Niertit, to General Dynamics Corp. High speed pulse detector. 3,131,355, 4-28-64, Cl. 328—120.

Campbell, James F., and J. K. Grimm. Machine for accurately dispensing multiple unit strip material. 3,130,887, 4-28-64, Cl. 226—110.

Campbell, Melvin L., to Collins Radio Co. Shaft positioning device. 3,130,594, 4-28-64, Cl. 74—84.

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Canaday, Roscoe H., and A. E. Glandon, to United States of America, Air Force. Test apparatus for measuring tracking error between a synchro transmitter and receiver. 3,131,350, 4-28-64, Cl. 324—158.

Canalizo, Carlos R., to Otis Engineering Corp. Gas lift valve. 3,130,743, 4-28-64, Cl. 137—155.

Cannon, Kenneth F., Jr., to United States of America, Navy. Recovery system for underwater objects. 3,130,999, 4-28-64, Cl. 294—66.

Carkin, Clarence A., A. T. Greenslade, Jr., and R. D. Lambert, to C. G. Sargent's Sons Corp. Device for intimately mixing fluents and discharging the mixed fluents as a jet. 3,130,914, 4-28-64, Cl. 239—425.

Carlson, Ernest R., to Harvey Hubbell, Inc. Duplet adapter with automatic grounding means. 3,131,013, 4-28-64, Cl. 339—14.

Carnall, Edward, Jr., and L. S. Ladd, to Eastman Kodak Co. Purification of zinc sulfide powder. 3,131,026, 4-28-64, Cl. 23—135.

Carnall, Edward, Jr., P. B. Mauer, W. F. Parsons, and D. W. Roy, to Eastman Kodak Co. Zinc sulfide optical element. 3,131,025, 4-28-64, Cl. 23—135.

Carnall, Edward, Jr., P. B. Mauer, W. F. Parsons, and D. W. Roy, to Eastman Kodak Co. Process for molding zinc sulfide. 3,131,238, 4-28-64, Cl. 264—1.

Carpenter, John M. Self-sealing rotary valve mechanism. 3,130,953, 4-28-64, Cl. 251—182.

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Carpenter, William G., to American Cyanamid Co. Homopolymerization of acetylene with ferric chloride as catalyst. 3,131,172, 4-28-64, Cl. 260—94.1.

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Bush, Grant H., and Carrington. 3,131,293.

Carson, Don B.: *See*—
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Carter, Andrew G., to A. G. and H. T. Carter, d.b.a. Carter Engineering Co. Simplified slide-action buckle mechanism 3,130,466, 4-28-64, Cl. 24—230.

Carter Engineering Co.: *See*—
Carter, Andrew G. 3,130,466.

Carter, Harriett T.: *See*—
Carter, Andrew G. 3,130,466.

Carter, John W., and P. J. Costa, to Caterpillar Tractor Co. Wheel slip control for tractor-trailer combinations. 3,130,805, 4-28-64, Cl. 180—14.

Cary, Henry H., and R. C. Hawes, to Applied Physics Corp. Spectrophotometer pulse amplitude ratio measuring means with feedback amplifier for noise and drift compensation. 3,131,349, 4-28-64, Cl. 324—140.

Casciari, Raoul J., to Corning Glass Works. Television picture tube envelope. 3,130,854, 4-28-64, Cl. 220—2.1.

Cassiers, Paul M., and R. M. Hart, to Gevaert Photo Producten N.V. Electrophotographic material. 3,131,060, 4-28-64, Cl. 96—1.

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Schaefer, Fred C., and Castellion. 3,131,170.

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Erhardt, Louis, Devinney, and Wolff. 3,130,949.

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Beattie, William C., Champion, and Prowse. 3,130,773.

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Chancellor, Roy D. Bottle cap with interrupted threads. 3,130,848, 4-28-64, Cl. 215—9.

Charlot, Lincoln H., Jr., to Minnesota Mining and Mfg. Co. Temperature control trigger employing emitter resistor having value of transistor's base-to-emitter resistance. 3,131,314, 4-28-64, Cl. 307—88.5.

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Chenault, William F. Centrifugal pump. 3,130,678, 4-28-64, Cl. 103—103.

Chesebro, Robert E., to Wigwam Mills, Inc. Footlet and method of forming the same. 3,130,566, 4-28-64, Cl. 66—171.

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Brooks, Melvin E., Chew, and Thompson. 3,131,347.

Chitayat, Anwar K., to Optomechanisms, Inc. Negative to positive film viewer. 3,131,303, 4-28-64, Cl. 250—71.

Chittlebugh, William F. S., and E. S. Simmonds, to International Standard Electric Corp. Multi-frequency signalling receivers. 3,131,264, 4-28-64, Cl. 179—84.

Chow, Alfred W., and J. R. E. Hoover, to Smith Kline & French Laboratories. Derivatives of 7-aminocephalosporanic acid. 3,131,184, 4-28-64, Cl. 260—243.

Christenson, John C., and D. H. Link, to Clark Equipment Co. Differential steering apparatus. 3,130,981, 4-28-64, Cl. 280—93.

Chouings, Leslie C., to Automotive Products Co. Ltd. Valve mechanism for controlling servo devices of the differential air pressure type. 3,130,551, 4-28-64, Cl. 60—54.5.

Chupp, John P., and P. E. Newallis, to Monsanto Chemical Co. O-cyanoaryl alkylphosphonothioates. 3,131,120, 4-28-64, Cl. 167—30.

Church, Cyril V. Tubular expandable rivet and expander. 3,130,629, 4-28-64, Cl. 85—40.

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Schrenk, Walter J., Cleereman, and Alfrey. 3,130,959.

Clement, Warren J., to Sprague Electric Co. Electrolytic capacitor seal. 3,131,337, 4-28-64, Cl. 317—230.

Clermont Machine Co., Inc.: *See*—
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Cleveland, Clark C., to United States of America, Navy. Electrolyte retracting paper spacer for spin activated batteries. 3,131,094, 4-28-64, Cl. 136—90.

Clewes, Antony B., to United-Carr Fastener Corp. Edge connectors for printed circuit panels. 3,131,016, 4-28-64, Cl. 339—176.

Cochran, Chudleigh B., and J. D. Mott, to C. C. Brown. Anchoring device for well tools. 3,130,788, 4-28-64, Cl. 166—217.

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Codos, William V., to Pathe Equipment Co., Inc. Method of bonding polyurethane foam to base materials by flame treatment. 3,131,105, 4-28-64, Cl. 156—82.

Coffelt, Robert J., to The Regents of the University of California. Serpentine fruit press. 3,130,667, 4-28-64, Cl. 100—118.

Coffey, Ralph J., to American Chain & Cable Co., Inc. Welding means. 3,131,282, 4-28-64, Cl. 219—51.

Coffey, Roger T. Means for preventing rotation of pendulous element of hub odometer. 3,130,907, 4-28-64, Cl. 235—95.

Coghill, James T., to The Black-Clawson Co. Apparatus for coating a moving web. 3,131,092, 4-28-64, Cl. 118—413.

Colacino, Achille. Dispenser for straws and similar articles having a reciprocable ejector. 3,130,866, 4-28-64, Cl. 221—274.

Colley, Russell S., to The B. F. Goodrich Co. Helmet assembly with face seal and adjustment means therefor. 3,130,415, 4-28-64, Cl. 2—6.

Colley, Russell S., to The B. F. Goodrich Co. Coupling with an edge engaging latch member. 3,130,986, 4-28-64, Cl. 285—82.

Collins, Lowell J. Valve assembly for a distribution system. 3,130,744, 4-28-64, Cl. 137—315.

Collins Radio Co.: *See*—
Campbell, Melvin L. 3,130,594.
Grondin, George F. 3,131,377.
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Collins, Theron T., Jr. Gas scrubbing apparatus. 3,131,237, 4-28-64 Cl. 261—153.

Collins, William O. Halo construction for religious statues. 3,131,111, 4-28-64, Cl. 161—8.

Colten, Robert B., to General Motors Corp. Motion control apparatus. 3,130,497, 4-28-64, Cl. 33—23.

Colthurst, Edward W., W. W. Dennis, G. V. Ball, and H. J. L. Baum, to Mipro Metal Products Co. Support for disposable bags in waste receptacles. 3,130,853, 4-28-64, Cl. 220—17.

Colucci, Donald E. Bathtub and sink fixture. 3,130,420, 4-28-64, Cl. 4—4.

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Compton, James K., and J. F. Hall. Vent closure. 3,130,659, 4-28-64, Cl. 98—29.

Condie, Marion A., and L. S. Reel, to Ryan Aeronautical Co. Doppler-inertial ground velocity indicator. 3,131,390, 4-28-64, Cl. 343—8.

Conrad, Edwin O. Dispensing rack. 3,130,836, 4-28-64, Cl. 211—74.

Consolidated Paper Co.: *See*—
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Consortium fur Elektrochemische Industrie G.m.b.H.: *See*—
Smidt, Jurgen, Hafner, Sedlmeier, Jira, and Ruttinger. 3,131,223.

Constance, Frederick G.: *See*—
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Constantakes, Peter, to General Instrument Corp. Manufacture of semiconductors. 3,131,099, 4-28-64, Cl. 148—189.

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Cook, Charles A., to Clark Equipment Co. Transmission. 3,130,595, 4-28-64, Cl. 74—331.

Cook, Keith K. Bait containers. 3,130,852, 4-28-64, Cl. 220—17.

Cooke, Donald E. Color printing. 3,130,669, 4-28-64, Cl. 101—211.

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Coors Porcelain Co.: *See*—
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Copeland, Roy D. Angle measuring and cutting device for tubular conduits. 3,130,496, 4-28-64, Cl. 33—21.

Copolymer Rubber & Chemical Corp.: *See*—
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Cornick, Roy C. Fishing rig. 3,130,514, 4-28-64, Cl. 43—37.

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Cotter, Robert J., to Union Carbide Corp. Linear polyureas from a piperazine 1,4 di-carbonyl halide and a diamine containing ether. 3,131,167, 4-28-64, Cl. 260—77.5.

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Cowan, John V., to Automation Industries, Inc. Ultrasonic inspection apparatus. 3,130,577, 4-28-64, Cl. 73—67.5.

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Creasey, Raymond F., and K. Burgin, to English Electric Aviation Ltd. Variable area aircraft wing. 3,130,944, 4-28-64, Cl. 244—43.

Creawick, Frederick A., to Battelle Memorial Institute. Internal combustion engine. 3,130,716, 4-28-64, Cl. 123—46.

Creusere, Melville C., to United States of America, Navy. Diode multiplier network. 3,131,298, 4-28-64, Cl. 235—194.

Cribe, Buddie L. Hydraulic hand pump. 3,130,675, 4-28-64, Cl. 103—37.

Cronelid, Paul H., and C. S. Hocking, to Aktiebolaget Electrolux. Absorption refrigeration. 3,130,564, 4-28-64, Cl. 62—487.

Curtis, Ferris V., to General Motors Corp. Cooling passages in cast aluminum cylinder heads and blocks. 3,130,461, 4-28-64, Cl. 22—203.

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Curtis, William B., to Curtis-Scott Co. Surgical needle threader. 3,130,729, 4-28-64, Cl. 128—339.

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Dabroski, Winifred C., and B. F. Herr, to Johnson & Johnson. Apparatus for treating paper webs. 3,131,118, 4-28-64, Cl. 162—361.

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D'Alelio, Gaetano F., and A. A. Hunyar, to Von Kohorn Constructora S.A. Process of polymerization of acrylonitrile in the presence of itaconic anhydride polymer. 3,131,163, 4-28-64, Cl. 260—45.5.

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Daley, Horace S., to Specialties Development Corp. Machine for winding cup-shaped articles. 3,130,928, 4-28-64, Cl. 242—2.

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D'Antonio, Nicholas F., to General Electric Co. Method and apparatus for enhancing the development of deformable storage mediums. 3,131,019, 4-28-64, Cl. 346—77.

Davidson, Gordon L.: *See*—
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Davis, Frank L. Safety belt buckle. 3,130,467, 4–28–64, Cl. 24—230.
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Davis, Mike B. Traction aid for wheeled vehicles. 3,130,767, 4–28–64, Cl. 152—216.
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Daw, Donald G., to American Flange & Mfg. Co., Inc. Paint brushes and the like. 3,130,434, 4–28–64, Cl. 15—192.
Dawes, Robert T., to Taylor, Thomas, & Sons, Inc. Elastically stretchable cordage. 3,130,630, 4–28–64, Cl. 87—2.
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Deckel, Hans: *See*—
Heinelt, Roland. 3,130,643.
Decker, Jacob, to The Cincinnati Milling Machine Co. Mechanism for securing movable machine tool members. 3,130,526, 4–28–64, Cl. 51—236.
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Wittren, Richard A. 3,130,749.
De Faro, Luiz F., to Faroscope Mfg. Co. Photocopy unit. 3,130,636, 4–28–64, Cl. 88—24.
De Feen, Michael A. Exercising apparatus comprising an elongate base having stationary and longitudinally movable support units at the ends thereof. 3,130,968, 4–28–64, Cl. 272—58.
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Phillips, Richard M., and Lindsay-Scott. 3,130,868.
Phillips, Richard M., and Lindsay-Scott. 3,130,869.
Phillips, Richard M., and Lindsay-Scott. 3,130,870.
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Paddick, Richard R., Quarm, and Hiscocks. 3,130,591.
Deitch, David J. Detachable shoe heel. 3,130,504, 4–28–64, Cl. 36—36.
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De Lossy, Chevalier D., H. Moinil and F. Electrical apparatus for throwing flying targets used in shooting training and matches. 3,130,717, 4–28–64, Cl. 124—1.
Demas, Harry J., C. L. Kapetanakis, and W. T. Haggerty, Jr., to Allied Chemical Corp. Coated spinneret and process of coating during spinning. 3,130,449, 4–28–64, Cl. 18—8.
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French, Henry C., and Wender. 3,130,845.
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Dempster, George R., and W. A. Herpich; said Herpich assor. to Dempster Brothers, Inc. Transporting equipment for containers. 3,130,847, 4–28–64, Cl. 214—505.
Dennett, John, and R. E. Ashcroft, to Pilkington Brothers Ltd., Multiple glazed window units. 3,131,046, 4–28–64, Cl. 65—58.
Dennett, John, and R. E. Ashcroft, to Pilkington Brothers Ltd., Multiple glazed window units. 3,131,047, 4–28–64, Cl. 65—152.
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Verner, William C., Donahue, and Denny. 3,130,961.
Depmer, Wilhelm. Process and apparatus for the continuous extraction of oils and soluble substances from solid materials. 3,131,202, 4–28–64, Cl. 260—412.8.
Derby, Marshall T., to California Industrial Products, Inc. Means to feed and transport blanks during a threading operation. 3,130,428, 4–28–64, Cl. 10—132.
Dersch, William C., to International Business Machines Corp. Balanced transistor multivibrator. 3,131,362, 4–28–64, Cl. 331—60.
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Block, Peter. 3,130,875.
Desaulles, Pierre A.: *See*—
Wettstein, Neher, and Desaulles. 3,131,125.
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Deuschle, Fritz: *See*—
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Devillard, Georges, to Codeco. Nozzle having a conveying inlet zone followed by a diverging outlet zone. 3,130,920, 4–28–64, Cl. 239—601.
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Dieman, Edgar A., to Standard Oil Co. System for accelerated condensation corrosion. 3,131,029, 4–28–64, Cl. 23—253.
Di Iorio, Michael V., P. J. Grunfelder, and L. L. Sevebeck, to Western Electric Co., Inc. Systems and methods for processing data over telephone networks. 3,131,259, 4–28–64, Cl. 179—2.
Di Nardo, Frank L., to Motorola, Inc. Television control system. 3,131,255, 4–28–64, Cl. 178—5.8.
Dixon, Samuel, Jr., to United States of America, Army. Gyromagnetic waveguide power limiter having easy axis of ferroxplanar material aligned with magnetic biasing field. 3,131,366, 4–28–64, Cl. 333—24.2.
Dole, Malcolm, and H. B. Fischer, to Bradley & Vrooman Co. Apparatus for forming a laminated paper product. 3,131,107, 4–28–64, Cl. 156—446.
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Jeter, Thomas R., and J. D. Baldeschwieler, to United States of America, Army. Apparatus for reducing energy variations of a Van de Graaff ion beam. 3,131,300, 4–28–64, Cl. 250—49.5.

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McClellan, Ralph E., to Mellink Steel Safe Co. Follower for filing cabinet drawers. 3,130,732, 4–28–64, Cl. 129—26.
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McConnell, William M., to United States Steel Corp. Pipe threading machine with rigid tool cross slide. 3,130,427, 4–28–64, Cl. 10—101.
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Miller, Harold M., to Whitin Machine Works. Builder apparatus. 3,130,930, 4-28-64, Cl. 242—26.3.

Mills, King L., Jr., to Phillips Petroleum Co. Catalytic hydro-cracking. 3,131,142, 4-28-64, Cl. 208—108.

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Pagebar, Inc.: *See*—
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Palmer, Charles E., and J. S. Lemanski; said Lemanski assor. to said Palmer. Multi-compartment carton and blank therefor. 3,130,894, 4-28-64, Cl. 229—28.

Paquet, Max. Process for the treatment of filaments, fibres, fabrics and carpets. 3,131,087, 4-28-64, Cl. 117—139.5.

Parke, Harry G., to Marine Electric Corp. Differential salinity indicating equipment. 3,131,346, 4-28-64, Cl. 324—30.

Parr, James R.: *See*—
Manning, Edward V., and Parr. 3,130,540.

Parsells, Walter F.: *See*—
Karl, Henry, and Parsells. 3,130,447.

Parsons, William F.: *See*—
Carnall, Edward, Jr., Mauer, Parsons, and Roy. 3,131,023.
Carnall, Edward, Jr., Mauer, Parsons, and Roy. 3,131,238.

Pasborg, Francis M.: *See*—
Bogue, Irving R., and Pasborg. 3,131,103.

Paschke, Hanns-Dieter, and W. Froede, to NSU Motoren-Werke Aktiengesellschaft and Wankel G.m.b.H. Seal lubricating means. 3,130,683, 4-28-64, Cl. 103—130.

Pasetti, Adolfo: *See*—
Hügel, Robert, and Pasetti. 3,131,210.

Pash, Wilbur E.: *See*—
Brown, Burton M., Pash, and Powell. 3,130,899.

Pasini, Claudio, and P. Mantegazzini, to Societa Farmaceutici Italia. Substituted nicotinamides and isonicotinamides. 3,131,193, 4-28-64, Cl. 260—295.

Pathe Equipment Co., Inc.: *See*—
Codos, William V. 3,131,105.

Paulson, Roy W.: *See*—
Fredrickson, William R., Paulson, and Stierwalt. 3,131,308.

Pazmany, Ladislao, to Ryan Aeronautical Co. Elastic bellmouth for duct through aerodynamic surface. 3,130,941, 4-28-64, Cl. 244—12.

Pearson, William H., and E. A. Block, to Ethicon, Inc. Surgical suture. 3,130,728, 4-28-64, Cl. 128—335.5.

Pedlar, Roy: *See*—
Tonkin, Stephen W., and Pedlar. 3,130,946.

Pena, Jose M., 10% to Arnulfo Garcia. Toilet tissue holder and dispenser. 3,130,932, 4-28-64, Cl. 242—55.3.

Pennington, Harold W., to Clark Equipment Co. Adjustable cylinder end stop. 3,130,646, 4-28-64, Cl. 92—13.

Pennington, Thomas H, to Jersey Production Research Co. Secondary recovery of earth fluids. 3,130,784, 4-28-64, Cl. 166—42.

Penza, Salvatore J., to United States of America, Navy. Variable thrust and direction nozzle. 3,130,544, 4-28-64, Cl. 60—35.54.

Peras, Lucien, to Regie Nationale des Usines Renault. Ball-and-socket joints. 3,130,992, 4-28-64, Cl. 287—87.

Peras, Lucien, to Regie Nationale des Usines Renault. Method and apparatus for the direct reduction of iron ore into pulverulent iron by means of gaseous reducing agent. 3,131,052, 4-28-64, Cl. 75—26.

Pereny, Louis: *See*—
Dempsey, Charles A., and Pereny. 3,130,722.

Perin, Charles N.: *See*—
Kays, Arnold R., Perin, and Lines. 3,130,738.

Perkins, Richard E., to Sylvania Electric Products, Inc. Snap-action temperature-responsive blade for circuit breakers. 3,131,272, 4-28-64, Cl. 200—113.

Perry, Edward G., Jr., and H. L. Philipson, Jr., to Sperry Rand Corp. Punching converter. 3,130,903, 4-28-64, Cl. 234—63.

Petersen, Siegfried: *See*—
Wagner, Annemarie, and Petersen. 3,131,079.

Peterson, Robert E. Vibration and mechanical wave damping. 3,130,700, 4-28-64, Cl. 114—20.

Peterson, Vincent C. J., O. J. Bratz, and C. H. Layton, to American Chain & Cable Co. Inc. Method of manufacturing wire rope. 3,130,536, 4-28-64, Cl. 57—161.

Petri, Jan E., to The Borne-Lite Corp. Methods for making acrylic sheets. 3,131,242, 4-28-64, Cl. 264—331.

Petrie, Adelore F., to General Electric Co. Loudspeaker cone suspension. 3,130,811, 4–28–64, Cl. 181—32.

Peyton, John F., to Federal-Mogul-Bower Bearings, Inc. Metal bellows forming apparatus. 3,130,771, 4–28–64, Cl. 153—73.

Pheips, Clyde H., to Hanchett Mfg. Co. Balance testing apparatus. 3,130,588, 4–28–64, Cl. 73—466.

Philipson, Herman L., Jr.: *See*—
Perry, Edward G., Jr., and Philipson. 3,130,903.

Phillips Petroleum Co.: *See*—
Alexander, James W., and Davis. 3,131,160.
Brooks, Melvin E., Chew, and Thompson. 3,131,847.
McKenna, George E. 3,131,032.
Mills, King L., Jr. 3,131,142.
Moon, John J. 3,131,228.
Ratliff, Otho D., Jr. 3,131,100.
Van Pool, Joe. 3,131,931.

Phillips, Richard M., and D. J. Lindsay-Scott, to The British Petroleum Co. Ltd., and The de Havilland Engine Co. Ltd. Flow metering system. 3,130,582, 4–28–64, Cl. 73—194.

Phillips, Richard M., and D. J. Lindsay-Scott, to The British Petroleum Co. Ltd., and The de Havilland Engine Co. Ltd. Metering system. 3,130,868, 4–28–64, Cl. 222—26.

Phillips, Richard M., and D. J. Lindsay-Scott, to The British Petroleum Co. Ltd., and The de Havilland Engine Co. Ltd. Metering system. 3,130,869, 4–28–64, Cl. 222—26.

Phillips, Richard M., and D. J. Lindsay-Scott, to The British Petroleum Co. Ltd., and The de Havilland Engine Co. Ltd. Metering system. 3,130,870, 4–28–64, Cl. 222—26.

Phillips-Van Heusen Corp.: *See*—
Ainslie, Thomas D., and Kremer. 3,130,696.

Picker X-Ray Corp., Waite Mfg. Division, Inc.: *See*—
Barrett, David M., and Hollstein. 3,131,301.

Pierce, William J., to General Motors Corp. Fuel filler door and hold-open. 3,131,000, 4–28–64, Cl. 296—1.

Pierce-All Mfg. Ltd.: *See*—
Smeets, Gerard G. F. 3,130,620.

Pilcher, James O., II, to United States of America, Army. Cooling shroud. 3,130,560, 4–28–64, Cl. 62—316.

Pilkington Brothers Ltd.: *See*—
Dennett, John, and Ashcroft. 3,131,046.
Dennett, John, and Ashcroft. 3,131,047.

Pillsbury, Albert F., Jr., and N. C. Yew, to Ampex Corp. Magnetic tape apparatus. 3,130,933, 4–28–64, Cl. 242—55.12.

Piragino, Renato, to RIV Officine di Villar Perosa Societa per Azioni. Resilient joints, more particularly for motor vehicle suspension. 3,130,991, 4–28–64, Cl. 287—85.

Pitts, Fred T., and T. S. Weaver, to United States of America, Navy. Variable phase shift selector. 3,131,367, 4–28–64, Cl. 333—31.

Pittsburgh Plate Glass Co.: *See*—
Hanneken, Henry P., and Rinne. 3,130,499.

Polakowski, Natalis H.: *See*—
Nachtman, Elliot S., and Polakowski. 3,130,614.

Polaroid Corp.: *See*—
Blout, Klkan R., and Simon. 3,131,219.
Simon, Myron S. 3,131,061.

Pleiss, Bernard J., Jr., to General Motors Corp. Assembly method for overload protector means. 3,130,479, 4–28–64, Cl. 29—155.5.

Pleiss, Bernard J., Jr., and T. A. Jacoby; said Pleiss assor. to General Motors Corp., said Jacoby assor. to Tecumseh Products Co. Thermostatic overload protector. 3,131,322, 4–28–64, Cl. 310—68.

Plurien, Pierre: *See*—
Calis, Micheline (nee Matrot), Charpin, and Plurien. 3,131,239.

Poklukar, Josef G., and L. G. Symons, to St. Regis-Consolidated Packaging Ltd. Valve inserts for valve bags. 3,130,897, 4–28–64, Cl. 229—62.5.

Pollman, George J.: *See*—
Meyer, Donald K., Ostrem, and Pollman. 3,130,655.

Posey, Eldridge D. Garment clip. 3,130,463, 4–28–64, Cl. 24—137.

Post, Fritz W. Distributing valve. 3,130,750, 4–28–64, Cl. 137—636.3.

Potter Instrument Co., Inc.: *See*—
Rochman, Richard H. E. 3,130,936.

Pounds, Lewis C., to American Cyanamid Co. Post forming of decorative laminates. 3,131,116, 4–28–64, Cl. 161—258.

Powell, William P.: *See*—
Brown, Burton M., Pash, and Powell. 3,130,899.

Prange, Charles J., to Flexible Sewertool Corp. Sewer rod feed reel with yieldable mouth closure means. 3,130,432, 4–28–64, Cl. 15—104.3.

Prelog, Vladimir: *See*—
Gaeumann, Ernst, and Prelog. 3,131,127.
Gaeumann, Ernst, Prelog, and Vischer. 3,131,126.

Preuss, Walter A., to Radio Corp. of America. Apparatus for extracting tube mounts from assembly jigs. 3,130,485, 4–28–64, Cl. 29—203.

Proctor, Barton A., 33⅓% to A. C. Nolte. Recording machine. 3,130,975, 4–28–64, Cl. 274—11.

Products Development Co.: *See*—
Thompson, Charles E., Jr. 3,131,074.

Protective Treatments, Inc.: *See*—
Dempsey, Charles A., and Pereny. 3,130,722.

Prowse, Eliot C.: *See*—
Beattie, William C., Champion, and Prowse. 3,130,773.

Pullman Inc.: *See*—
Gutridge, Jack E., and Hummel. 3,130,688.

Pure Oil Co., The: *See*—
Klass, Donald L. 3,131,189.
Remes, Nathaniel L., and Martinek. 3,131,221.

Putzrath, Franz L., to Radio Corp. of America. Circuit for linearizing resistance of a field effect transistor to bidirectional current flow. 3,131,312, 4–28–64, Cl. 307—88.5.

Quarm, Brian T. H.: *See*—
Paddick, Richard R., Quarm, and Hiscocks. 3,130,591.

Quinlan, John E. Plumber's suction plunger. 3,130,421, 4–28–64, Cl. 4—255.

Quinn, Halsey P., to Tung-Sol Electric Inc. Type ignition circuit condenser discharge. 3,131,327, 4–28–64, Cl. 315—177.

Quinn, John D.: *See*—
Hahn, Wilbur D. 3,130,441.

R.C. Can Co.: *See*—
Myers, Vernon L., Bledenstein, and Nelson. 3,130,872.

RIV Officine di Villar Perosa Societa per Azioni: *See*—
Piragino, Renato. 3,130,991.

Raamat, Eric, to Tube-Vent Ltd. Tube closure. 3,130,898, 4–28–64, Cl. 229—93.

Radio Corp. of America: *See*—
Glaz, Gideon. 3,131,316.
Preuss, Walter A. 3,130,485.
Putzrath, Franz L. 3,131,312.
Schellack, Harry F. 3,130,757.
Sommers, Henry S., Jr. 3,131,096.

Radio Steel & Mfg. Co.: *See*—
Tonelli, Ruggero R. 3,130,443.

Rafferty, Arthur W. Remote control mechanism. 3,130,550, 4–28–64, Cl. 60—54.5.

Raney, Richard C. Coupling device for vehicles. 3,130,982, 4–28–64, Cl. 280—477.

Räntsch, Kurt, to M. Hensoldt & Sohne, Optische Werke Aktiengesellschaft. Apparatus for fixing a point on the surface of a workpiece. 3,130,633, 4–28–64, Cl. 88—24.

Ratliff, Otho D., Jr., to Phillips Petroleum Co. Solid propellants comprising a polyurethane and a copolymer of a conjugated diene. 3,131,100, 4–28–64, Cl. 149—19.

Ratz, Rudi F. W., to Olin Mathieson Chemical Corp. Derivatives of phosphonitrilic acid-orthophosphoric acid anhydride and process for preparing them. 3,131,207, 4–28–64, Cl. 260—461.

Rauland Corp., The: *See*—
Fiore, Joseph P. 3,130,474.

Ray, Neil H., to Imperial Chemical Industries Ltd. Unsaturated compounds containing the pentafluorothio group. 3,131,217, 4–28–64, Cl. 260—543.

Ray, William A., to General Controls Co. Coil-rectifier structures. 3,131,331, 4–28–64, Cl. 317—123.

Raylite Electric Corp.: *See*—
Abramson, Abraham. 3,131,112.

Redi-Kut Head Lettering Co.: *See*—
Fenberg, Herman T. 3,130,984.

Reed Roller Bit Co.: *See*—
Schumacher, Percy W., Jr. 3,130,801.

Reel, Leland S.: *See*—
Condie, Marion A., and Reel. 3,131,390.

Reese, James H., to Hamilton Watch Co. Contact index system. 3,130,537, 4–28–64, Cl. 58—28.

Regie Nationale des Usines Renault: *See*—
Peras, Lucien. 3 130,992.
Peras, Lucien. 3,131,052.

Reichert, C., Optische Werke Aktiengesellschaft: *See*—
Kropp, Karl, and Milliendorfer. 3,130,634.

Reimann, Hans, and D. H. Gould, to Scherling Corp. C-ring halogenated progesterones. 3,131,200, 4–28–64, Cl. 260—397.3.

Reinert, Owen E., to Sperry Rand Corp. Control systems whereby the D.C. output voltage can be controlled between its maximum positive and negative values. 3,131,343, 4–28–64, Cl. 321—16.

Reinhard, Robert R., to Foremost Engineering, Inc. Ice cream filling machine. 3,130,529, 4–28–64, Cl. 53—123.

Reinhart, Alberto J. Apparatus for descaling pipes. 3,130,431, 4–28–64, Cl. 15—104.06.

Remes, Nathaniel L., and T. W. Martinek, to The Pure Oil Co. Separation and purification of fatty acid amines. 3,131,221, 4–28–64, Cl. 260—583.

Remington Arms Co., Inc.: *See*—
Kenney, Joseph F. 3,131,102.

Remmele Engineering, Inc.: *See*—
Toensing, James W. 3,130 600.

Rentzepis, Peter M., to General Electric Co. Combination washing machine and cleansing medium generator. 3,130,570, 4–28–64, Cl. 68—13.

Research Corp.: *See*—
Rising, Hawley K., and Briggs. 3,131,295.

Research Institute for Iron, Steel and Other Metals of The Tokoku University, The: *See*—
Ototani, Tohei. 3,131,058.

Reusser, Pierre: *See*—
Benz, Fritz, Gaeumann, Neipp, Reusser, Stalder, and Wettstein. 3,131,124.

Reuter, Martin: *See*—
Orthner, Ludwig, Reuter, Landauer, Junghanns, and Schmidt. 3,131,159.

Reynolds, Joseph B., Jr.: *See*—
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Keller, Otto. 3,130,641.

Rheinpreussen Aktiengesellschaft fur Bergbau und Chemie: *See*—
Schulte, Heinrich F. 3,130,495.

Rich, Elm. Foot powder applicator. 3,130,726, 4–28–64, Cl. 128—265.

Richardson, William C., and R. J. Bohnhoff, to Courtaulds, Ltd. Process for making cellulose sponge. 3,131,076, 4–28–64, Cl. 106—122.

Richl, Hubert, and A. Liebl. Tape recorders. 3,130,934, 4–28–64, Cl. 242—55.12.

Riegel Paper Corp.: *See*—
Anderson, William E., Schlienz, and Friling. 3,130,647.

Riester, Hubert A., Jr.: *See*—
Maltby, Frederick L., Marlow, and Riester. 1,131,357.

Rieth, Harold F., to Packard-Bell Electronics Corp. Electrical capacitor. 3,130,475, 4–28–64, Cl. 29—25.42.

Riggs & Lombard Inc.: *See*—
Bickford, Lyman D. 3,130,472.

Rikagaku Kenkyusho (Institute for Physical and Chemical Research): *See*—
Ikeda, Hiroshi, Tsuji, Shiroyanagi, Hatsnke Ikeda, Fujimaki, Katayama, and Sato. 3,131,136.

Rike, James L., to Jersey Production Research Co. Cementing of wells. 3,130,782, 4–28–64, Cl. 166—26.

Riley, Gerard C.: *See*—
Fordyce, David B., and Riley. 3,131,119.

Rinne, Orville H.: *See*—
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Rising, Hawley K., and G. R. Briggs, to Research Corp. Counter circuit. 3,131,295, 4–28–64, Cl. 235—175.

Rittenberry, Lee R. Supporting device. 3,131,011, 4–28–64, Cl. 312—266.

Robbins & Myers, Inc.: *See*—
Springer, William E. 3,131,044.

Roberson, William D.: *See*—
Klug, Eugene D., and Roberson. 3,131,177.

Roberts, Cora M. Exercising and cosmetic device and method. 3,130,720, 4–28–64, Cl. 128—76.

Robertshaw Controls Co.: *See*—
Maltby, Frederick L., Marlow and Riester. 3,131,357.

Robinson, Aubrey C. Meat cookers. 3,130,662, 4–28–64, Cl. 99—260.

Robinson, Charles G., to Northwestern Steel and Wire Co. Electric furnace. 3,131,246, 4–28–64, Cl. 13—9.

Robinson, Forest, and V. Lapadat. Stitching tobacco leaves for hanging. 3,130,844, 4–28–64, Cl. 214—152.

Robinson, Norman R.: *See*—
Steel, Thomas, Robinson, and Keen. 3,131,007.

Robitschek, Paul, and C. T. Bean, to Hooker Chemical Corp. Flame retardant polyester resinous composition containing halogen and phosphorus. 3,131,115, 4–28–64, Cl. 161—191.

Rochman, Richard H. E., to Potter Instrument Co., Inc. Digital recording tape transport damping system. 3,130,936 4–28–64, Cl. 242—75.3.

Roe, Anthony M., and G. L. Willey, to Smith Kline & French Laboratories. 2,3-dihydro-2-benzofuran-amines. 3,131,199, 4–28–64, Cl. 260—346.2.

Roebuck, Albert H.: *See*—
Brown, Robert W., and Roebuck. 3,130,786.

Roehr Products Co., Inc.: *See*—
Higgins, John L., and Deuschle. 3,130,724.

Roelco, Inc.: *See*—
Ely, Laurice D. 3,131,250.

Rogers, James W., to United States of America, Navy. Impact test apparatus. 3,130,575, 4–28–64, Cl. 73—12.

Rogers, John H. Earth conditioning implement. 3,130,796, 4–28–64, Cl. 172—117.

Rohde & Schwarz: *See*—
Kraus, Alexander. 3,131,369.

Rohden Mfg. Co., Inc.: *See*—
Leitmann, William J. 3,130,990.

Rohm & Haas Co.: *See*—
Fordyce, David B., and Riley. 3,131,119.

Rolls-Royce Ltd.: *See*—
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Steel, Thomas, Robinson, and Keen. 3,131,007.

Romero, Frederick B. Boats' spacer. 3,130,704, 4–28–64, Cl. 114—235.

Rompel, Walter: *See*—
Haberkorn, Otto, Rompel, and Roth. 3,130,904.

Rosaen Filter Co., The: *See*—
Rosaen, Oscar E. 3,131,145.

Rosaen, Oscar E., to The Rosaen Filter Co. Fluid filtering device. 3,131,145, 4–28–64, Cl. 210—195.

Rosan Engineering Corp.: *See*—
Rosán, José. 3,130,503.

Rosán, José, to Rosan Engineering Corp. Reel lift and fastener. 3,130,503, 4–28–64, Cl. 36—34.

Rosenfeld, Aaron, and K. Kupferberg, to Forbro Design Inc. Protective system for transistor regulator. 3,131,344, 4–28–64, Cl. 323—22.

Rosenthal, Harry. Dispensing apparatus. 3,131,278, 4–28–64, Cl. 219—19.

Ross, Ian M., to Bell Telephone Laboratories, Inc. Semiconductor pulse generators. 3,131,311, 4–28–64, Cl. 307—88.5.

Rotere, Herbert C. and W. A. Black deceased, (by M. B. Black, executrix), to General Time Corp. Synchronous motor for clocks or the like. 3,131,323, 4–28–64, Cl. 310—164.

Roth, Otto: *See*—
Haberkorn, Otto, Rompel and Roth. 3,130,904.

Rothberg, Sidney. Spherical restraining device for small animals. 3,130,709, 4–28–64, Cl. 119—103.

Rothfuss, John G., and W. D. Hendron, to Inland Steel Co. Apparatus for accommodating a loop. 3,130,888, 4–28–64, Cl. 226—113.

Roy, Donald W.: *See*—
Carnall, Edward, Jr., Mauer, Parsons, and Roy. 3,131,025.
Carnall, Edward, Jr., Mauer, Parsons and Roy. 3,131,238.

Royalty Holding Corp.: *See*—
Hovorka, Jiri. 3,130,546.

Royster, William E., to Morehead Mills. Apparatus for making yarns from picker laps. 3,130,535, 4–28–64, Cl. 57—34.

Rudd, Wallace C.: *See*—
Kohler, Fred, Rudd, and Stanton. 3,131,285.

Ruhrstahl Aktiengesellschaft: *See*—
Lorenz, Albert. 3,131,245.

Rumpf, Paul, and G. Thuillier, to Centre Nationale de la Recherche Scientifiques. Beta-dimethylaminoethyl ester of parachlorophenoxy acetic acid and its pharmaceutically acceptable acid addition salts. 3,131,195, 4–28–64, Cl. 260—295.5.

Russell, Robert B. Thermographic transfer sheet comprising selective radiation filtering means. 3,131,080, 4–28–64, Cl. 117—36.3.

Russell, Robert G., to Owens-Corning Fiberglas Corp. Method and apparatus for forming a woven textile by high speed projection of the weft threads. 3,130,755, 4–28–64, Cl. 139—18.

Ruth, Byron E.: *See*—
Bowden, George F., and Ruth. 3,130,470.
Bowden, George F., and Ruth. 3,130,950.

Rutkowski, Alfred J., E. J. Inchalik, and A. Schriesheim, to Esso Research and Engineering Co. Trialkylborane displacement reactions. 3,131,225, 4–28–64, Cl. 260—606.5.

Ruttinger, Rudolf: *See*—
Smidt, Jurgen, Hafner, Sellmeier, Jira, and Ruttinger. 3,131,223.

Ryan Aeronautical Co.: *See*—
Condie, Marion A., and Reel. 3,131,390.
Pazmany, Ladislao. 3,130,941.

Ryan, George H.: *See*—
Adler, Robert, and Ryan. 3,131,359.

Ryan, John J., to Bar-Way Mfg. Co. Hose coupling. 3,130,988, 4–28–64, Cl. 285—175.

Ryan, Joseph D., to Libbey-Owens-Ford Glass Co. Mirror mounting assembly. 3,131,251, 4–28–64, Cl. 88—98.

Rylander, Paul N.: *See*—
Norton, Charles J., and Rylander. 3,131,169.

Ryser, Ernst, ½ to B. Voumard. Covered separable fastener. 3,130,465, 4–28–64, Cl. 24—205.1.

S & S Corrugated Paper Machinery Co., Inc.: *See*—
Shields, Albert F. 3,130,650.

Sabol, Albert R., and E. W. Blaha, to Standard Oil Co. Lubricant additive and composition containing same. 3,131 149, 4–28–64, Cl. 252—32.7.

Sabor, Etablissement: *See*—
Borlenghi, Lorenzo. 3,130,455.

Saffitz, Irving M.: *See*—
Brodzinsky, Albert, Reynolds, and Saffitz. 3,131,018.

St.-Gobain, Compagnie de: *See*—
Monnet, Georges. 3,130,523.

St. John, Karl M.: *See*—
Farber, Richard J., and St. John. 3,131,252.

St. Regis-Consolidated Packaging Ltd.: *See*—
Poklukar, Josef G., and Symons. 3,130 897.

Salomon, Jacob. Tea bag with strip of metallic foil heat sealed to one edge thereof. 3,131,065, 4–28–64, Cl 99—77.1.

Sanborn, William L., and E. J. Senninger, to Bell & Gossett Co. Spraying equipment. 3,130,909, 4–28–64, Cl. 239—78.

Sanborne, John M.: *See*—
Gates, Sheldon W., and Sanborne. 3,131,297.

Santangelo, Anthony S. Automatically inflatable flotation device for bathing suits. 3,130,424, 4–28–64, Cl. 9—316.

Santeler, Donald J., and F. C. Huriblut, to General Electric Co. Cryogenic pumping apparatus. 3,131,396, 4–28–64, Cl. 62—404.

Sargent's C. G., Sons Corp.: *See*—
Carkin, Clarence A., Greenslade, and Lambert. 3,130,914.

Sato, Tomonori: *See*—
Ikeda, Hiroshi, Tsuji, Shiroyanagi, Ikeda, Fujimaki, Katayama, and Sato. 3,131,136.

Sattler, Emil, and P. Schmidt. Process for purifying crude benzene. 3 131,231, 4–28–64, Cl. 260—674.

Savage Arms Corp.: *See*—
Knode, Oliver M., Jr. 3,130 513.

Savona, Charles. Interchangeable stringed musical instrument. 3,130 625, 4–28–64, Cl. 84—267.

Sawin, Richard H.: *See*—
Auld, James T., and Sawin. 3,131,109.

Sawyers, Inc.: *See*—
Golden, Kenneth E. 3,130,637.

Sawyers Research Development Corp.: *See*—
Bennett, Frank P., and Webb. 3,130,635.

Sayer, Bruce A., to Litton Systems, Inc. Accelerometer temperature compensation trimming apparatus. 3,130,589, 4–28–64, Cl. 73—477.

Schaefer, Fred C., and M. E. Castellion, to American Cyanamid Co. Polymeric 1,2,4-oxadiazoles. 3,131,170, 4–28–64, Cl. 260—88.3.

Schaeffer, William S. Fluid transmission. 3,130,644, 4–28–64, Cl. 91—321.

Schafer, Georg. Kurzelfischer, & Co.: *See*—
Weingartner, Hans. 3,130,748.

Schaffner, Kurt: *See*—
Jeger, Oskar, and Schaffner. 3,131,180.

Schaller, Edward M.: *See*—
Nigrelli, Biagio J., Standley, Witmann, and Schaller. 3,130,602.

Schellack, Harry F., to Radio Corp. of America. Method of fabricating grid electrodes. 3,130,757, 4–28–64, Cl. 140—71.5.

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Schmieding, Warren H. F. Pepper-corn grinder. 3,130,927, 4–28–64, Cl. 241—168.
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Stegner, Harvey L. Internally stabilized deep draw cushion for punch presses. 3,130,963, 4–28–64. Cl. 267—1.
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U.S. DEPARTMENT OF COMMERCE
OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

April 28, 1964 Volume 801 Number 4

TRADEMARKS
NOTICES

Changes in Address or Designation of Domestic Representative in Trademark Registered Files

In the future communications advising of a change of address of an original registrant or assignee, or a change of name of a domestic representative of a registrant who resides in a foreign country will be acknowledged by the Patent Office and appropriate notation entered on the file jacket of the registration.

This supersedes the notice entitled "Change of Address" appearing in 706 O.G. 1.

HORACE B. FAY, JR.,
Assistant Commissioner.

March 16, 1964.

Annual Index of Trademarks

The 1963 edition of the Annual Index of Trademarks has been published. Copies may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402

Price: Buckram bound, $2.50.

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 60,530 (VOGUE), The Vogue Company, Weekly magazine; **Reg. No. 84,770** (V AND DESIGN), same, Semi-monthly magazine; **Reg. No. 102,701**, same, Patterns; **Reg. No. 103,770** (VOGUE), same; **Reg. No. 125,542**, same, Semi-monthly publication; **Reg. No. 340,618** (VOGUE INCORPORATING VANITY FAIR), The Conde Nast Publications, Inc., same; **Reg. No. 504,006** (VOGUE), same, Magazine published twenty times yearly, **filed Jan. 15, 1963**, D.C., S.D.N.Y., Doc. 63/151, *The Conde Nast Publications, Inc.* v. *Park Fashions, Inc. et al.* Stipulation and order of discontinuance without prejudice Dec. 9, 1963.

Reg. No. 84,770. (See Reg. No. 69,530.)

Reg. No. 102,701. (See Reg. No. 69,530.)

Reg. No. 103,770. (See Reg. No. 69,530.)

Reg. No. 125,542. (See Reg. No. 69,530.)

Reg. No. 326,972 (SANITIZED in script), Sanitized, Inc., Antiseptic chemical compound in liquid form which is a chemical compound capable of imparting to textiles a degree of active antisepticism when the said chemical compound is brought into contact with textiles and the like through water or other liquids, **filed July 24, 1962**, D.C., S.D.N.Y., Doc. 62/2584, *Sanitized, Inc.* v. *W. R. Johnson & Son, Marketing Inc. et ano.* Action dismissed Dec. 5, 1963.

Reg. No. 340,618. (See Reg. No. 69,530.)

Reg. No. 403,927 (HYDRATANE in script), A. R. Blossman, Liquified petroleum gas, **filed** Apr. 26, 1962, D.C., N.D. Ill. (Chicago), Doc. 62c890, *Blossman Hydratane Gas, Inc.*

CONDITION OF TRADEMARK APPLICATIONS AS OF FEBRUARY 29, 1964

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	15,213
Date of oldest new application	July 15, 1963
Date of oldest amended application	July 3, 1963

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
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Applications filed during the month of February 1964—1,922

Registrations Issued 365—No. 768,552 to No. 768,916
Renewals Issued 62

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington, D. C., 20402 to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington, D.C., 20231.

v. *American Hydratane Corporation*. Action dismissed with prejudice; defendant enjoined Dec. 5, 1963.

Reg. No. 405,714 (A–MP), Aircraft-Marine Products, Inc., Electrical terminals and wiring devices; **Reg. No. 515,577** (A–MP AND DESIGN), same, Electrical connectors and connector forming blanks sold as such and which are applied to conductors, terminals and the like to produce a solderless electrical connection; **Reg. No. 690,489** (A–MP), AMP Incorporated, Electrical connectors, **filed** Dec. 18, 1962, D.S., S.D. Calif., (Los Angeles), Doc. 62–1631–EC, *AMP Incorporated v. Coast Air, Inc.* Consent decree; defendant enjoined Jan. 22, 1963.

Reg. No. 504,006. (See Reg. No. 69,530.)

Reg. No. 510,519 (HOOVER), The Hoover Company, Electrical, domestic and commercial suction cleaners and parts therefor; **Reg. No. 604,676**, same, Dirt collecting bags, **filed** Dec. 6, 1963, D.C., S.D.N.Y., Doc. 63/3566, *The Hoover Company v. Western Vacuum Bag Manufacturing, Inc. et al.*

Reg. No. 515,577. (See Reg. No. 405,714.)

Reg. No. 526,596 (TITRACINE), Schenley Laboratories, Inc., Tablets for gastric hyperacidity; **2,951,741**, H. A. Sill, Process for treating complex ores, **filed** Apr. 30, 1962, D.C., S.D.N.Y., Doc. 62/1641, *Austin B. Pilliner v. Metallurgical Resources, Inc. et al.* Order of dismissal Nov. 26, 1963.

Reg. No. 529,080 (ORLON), E. I. du Pont de Nemours and Company, Synthetic fiber-forming polymers and copolymers of acrylic acid or its derivatives produced in the form of fibers for further use in the industrial arts; **Reg. No. 536,272**, same, Yarns of synthetic fibers, **filed** Sept. 26, 1963, D.C., E.D. Pa. (Philadelphia), Doc. 34234, *E. I. du Pont de Nemours and Company v. Glory Knitting Mills, Inc.* Final judgment; injunction issued; case terminated Nov. 27, 1963.

Reg. No. 536,272. (See Reg. No. 529,080.)

Reg. No. 540,179 (POLAROID), Polaroid Corporation, Light-polarizing organic plastic in sheet form for further manufacture, photographic cameras, photographic camera shutters, etc.; **Reg. No. 607,263**, same, Camera cases, exposure meter cases, master compartment cases, etc.; **Des. 189,868**, Casselman and Stoller, Carrying case, **filed** Oct. 30, 1963, D.C.N.J. (Trenton), Doc. 907–63. *Polaroid Corporation v. Louis Lefkowitz & Bro., Inc.* Consent judgment; injunction issued Dec. 3, 1963.

Reg. No. 557,013 (FARMERS UNION), Farmers Educational and Cooperative Union of America, Services comprising the dissemination of information pertaining to farming and related industries, and particularly information in connection with cooperatives to aid the farmer in marketing his produce, etc., **filed** Nov. 27, 1963, D.C. Kans. (Topeka), Doc. T–3441, *Farmers Educational and Cooperative Union of America v. Farmer's Union, Inc.*

Reg. No. 604,676. (See Reg. No. 510,519.)

Reg. No. 607,263. (See Reg. No. 540,179.)

Reg. No. 626,181 (WESTON), Weston Electrical Instrument Corporation, Electrical apparatus for testing electron tubes, Bimetallic thermometers, light-measuring instruments, photographic analysers, etc., **filed** Aug. 8, 1962, D.C., S.D.N.Y., Doc. 62/2757, *Weston Instruments Division of Daystrom, Inc. et ano. v. Willoughby Camera Stores et al.* Order of dismissal Dec. 5, 1963.

Reg. No. 657,072 (FP AND DESIGN), Fisher-Price Toys, Inc., Push or pull toys either with or without sounding means, figure toys, musical toys, and construction toy kits comprising blocks, beads, and similar materials, **filed** Dec. 4, 1963, D.C., S.D.N.Y., Doc. 63/3535, *Fisher-Price Toys, Incorporated v. F. J. Strauss Co., Inc.*

Reg. No. 662,336 (SEA-FARE), Sea Fare Restaurant, Inc., Salad dressing and coffee, **filed** Dec. 3, 1963, D.C., E.D. Mich. (Detroit), Doc. 24666, *Sea Fare Restaurant, Inc. v. Sea Fare Foods, Inc.*

Reg. No. 688,538 (CAP-CHUR EQUIPMENT), Palmer Chemical & Equipment Company, Inc., Projectiles containing a paralytic or medicinal composition for use on animals, and guns for propelling said projectiles; **2,854,925**, J. A. Crockford et al., Projectile for delivery of drugs to animals; **2,923,243**, same, Projectile for liquid drug delivery to animals; **3,022,785**, same, Method of delivering drugs into animals, **filed** Nov. 27, 1963, D.C. Nebr. (Omaha), Doc. 01890, *Palmer Chemical & Equipment Co., Inc. v. Products Design.*

Reg. No. 690,489. (See Reg. No. 405,714.)

Reg. No. 721,138 (SHAKEY'S), Johnson, Plummer & Associates, Restaurant services featuring pizzas, **filed** Dec. 6, 1964, D.C., S.D. Calif. (Los Angeles), Doc. 63–1479–WM, *Shakey's Franchise Systems, Inc. v. Wesjohn, Inc. et al.*

Reg. No. 731,884 (BREATHIN' BRUSHED PIGSKIN), Wolverine Shoe and Tanning Corporation, Shoes for men, women, and children, **filed** Dec. 4, 1963, D.C., W.D. Mich. (Grand Rapids), Doc. 4644, *Wolverine Shoe and Tanning Corp. v. Aldens, Inc.*

Reg. No. 746,306 (FLORA DANICA), Veego Foods, Inc., Cheese, **filed** Dec. 10, 1963, D.C., S.D.N.Y., Doc. 63/3586, *Veego Foods, Inc. et al. v. Otto Roth & Co., Inc.*

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 163,107. Armstrong Cork Company, Lancaster, Pa. Filed Feb. 20, 1963.

RESILO-WRAP

For Flexible, Cellular Cushioning Material in the Form of Sheets and Strips.
First use Feb. 6, 1963.

SN 165,459. Rotacts, Inc., Saddle Brook, N.J. Filed Mar. 26, 1963.

ROPLAST

For Epoxy Resins in Sheets, Tubes, Rods and Other Forms, for General Use in the Industrial Arts.
First use July 6, 1962.

SN 165,460. Rotacts, Inc., Saddle Brook, N.J. Filed Mar. 26, 1963.

ROLUBE

For Epoxy Resins in Rod, Sheet, Tube and Other Forms for General Use in the Industrial Arts.
First use Sept. 11, 1962.

SN 166,432. Barrett & Company, Inc., Newark, N.J. Filed Apr. 10, 1963.

LLAMA

Owner of Reg. Nos. 323,135 and 689,650.
For Calf Leather.
First use Apr. 4, 1934.

SN 169,583. Harry Vlachos, Inc., New York, N.Y. Filed May 23, 1963.

JET STREAM MUMS

Applicant disclaims the word "Mums."
For Flowers.
First use Apr. 10, 1962.

SN 170,297. The Cotton Goods Company, Inc., New York, N.Y. Filed June 4, 1963.

COGOLON

For Vinyls Laminated to Fabric, for Use as a Leather Substitute or as a Pyroxylin Substitute.
First use Apr. 1, 1958.

SN 170,648. Kingsford Company, Louisville, Ky. Filed June 10, 1963.

KINGSFORD

Owner of Reg. No. 580,332.
For Self-Lighting Charcoal.
First use May 10, 1963.

SN 170,666. Pegulan-Werke Aktiengesellschaft, Frankenthal/Pfalz, Germany. Filed June 10, 1963.

PEGULAN

Owner of German Reg. No. 647,023, dated Oct. 31, 1953.
For Heavy-Duty Vinyl Sheeting, With or Without a Composition Backing, Which Is Sold as a Partly Finished Product for the Further Production of Upholstery, Suitcases, Traveling Bags, Handbags, and the Like.
First use Jan. 1, 1951; in commerce Nov. 9, 1955.

SN 170,951. Shell Oil Company, New York, N.Y. Filed June 13, 1963.

EPOSAND

For Synthetic Resin.
First use May 20, 1963.

SN 173,565. Central Soya Company, Inc., Fort Wayne, Ind. Filed July 23, 1963.

BETA

Owner of Reg. No. 366,906.
For Soybean Protein Flour Used in Making Adhesives, Plastics, Paints, Insecticides, and Sizings and Coatings for Paper, Textiles, and Similar Fabrics.
First use June 4, 1938.

SN 174,502. Favorite Plastic Corp., Brooklyn, N.Y. Filed Aug. 6, 1963.



Applicant disclaims the representation of the goods apart from the mark as shown. The monogram shown as part of the mark is composed of the letters "FP."
For Polyethylene Film and Tubing.
First use in August 1956.

SN 174,934. Agrashell, Inc., Los Angeles, Calif. Filed Aug. 13, 1963.

AGRA-PROP

Owner of Reg. Nos. 518,760 and 720,169.
For Propping Agents for Oil Well Fracturing.
First use on or before Apr. 24, 1963.

SN 175,278. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Aug. 19, 1963.

SOF SPUN

For Soling Material Sold in Sheet Form.
First use Apr. 27, 1962.

SN 176,614. Avery Adhesive Products, Inc., San Marino, Calif. Filed Sept. 10, 1963.

FASSON

Owner of Reg. No. 612,575.
For Liquid Elastomers Including Adhesives and Other Elastomeric Compounds.
First use July 21, 1961.

SN 176,617. Avisun Corporation, Philadelphia, Pa. Filed Sept. 10, 1963.

OLEMER

Owner of Reg. Nos. 708,230 and 753,106.
For Synthetic Resins.
First use Aug. 6, 1963.

SN 177,311. Tech Aerofoam Products, Inc., Miami, Fla. Filed Sept. 18, 1963.

CRASH-DASH

For Self-Adhering Cushion Foam.
First use Feb. 1, 1963.

SN 178,006. Kem-Wove Industries, Inc., Charlotte, N.C. Filed Sept. 30, 1963.

LOFT-LOCK

For Batting (Utilized in the Textile Industry as a Matrix for Quilting and Allied Uses).
First use Dec. 24, 1962.

SN 178,092. Analytical Engineering Laboratories, Inc., Hamden, Conn. Filed Oct. 1, 1963.

ANAKROM

For Diatomaceous Earth Aggregates Used in Chromatographic Analysis.
First use June 17, 1961.

SN 178,124. Johns-Manville Corporation, New York, N.Y. Filed Oct. 1, 1963.

ASBALTIC

For Asbestos Fiber Sold Especially for Use as an Ingredient of Paving Materials for Roads.
First use at least on or about Oct. 10, 1962.

Class 2 — Receptacles

SN 158,839. Hercules Membrino, d.b.a., Hercalyce Sales Company, Paoli, Pa. Filed Dec. 10, 1962.

PUL-LIP

For Carrier Units of Removable Bags.
First use Dec. 3, 1962.

SN 161,707. Harlee Manufacturing Co., Chicago, Ill. Filed Jan. 30, 1963.

tastee-freez

Owner of Reg. Nos. 588,916 and 750,695.
For Paper Cups, Ice Cream Containers, Cap Lids, Trays, Paper Bags, Plastic Dishes, Plastic Lids for Dishes, Spoons, Salt and Pepper Shakers.
First use 1951, on paper cups.

SN 171,377. Julie Pomerants, Inc., New York, N.Y. Filed June 19, 1963.



Applicant disclaims the term "Goodwood" apart from the mark as shown.
For Wooden Serving Trays, Cheese Boards, Relish Trays, Lazy Susans, Canister Sets.
First use Sept. 16, 1962.

SN 176,465. United Steel & Wire Company, Battle Creek, Mich. Filed Sept. 6, 1963.

UNI-STAK

For Nesting Wire Goods—Namely, Merchandise Baskets.
First use Mar. 12, 1963.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 171,176. Philadelphia Handle Company, Inc., Camden, N.J. Filed June 17, 1963.



Applicant disclaims the word "Handles" and the pictorial representation of the handles apart from the mark as shown.
For Handles for Luggage, Instrument and Carrying Cases.
First use May 28, 1963.

SN 171,937. United States Trunk Company, Inc., Fall River, Mass. Filed June 26, 1963.



Applicant disclaims the words "Luggage by US" apart from the mark as shown. Owner of Reg. Nos. 748,597 and 764,492.
For Luggage—Namely, Trunks, Suitcases, Week-End Cases, Hat Cases, Shoe Cases, Travelling Bags, Pullman Cases, Wardrobe Trunks, Wardrobe Cases, Foot Lockers and Toilet Accessory Cases.
First use June 6, 1963.

SN 176,767. Etienne Aigner Sales Corp., New York, N.Y. Filed Sept. 12, 1963.

PARURIER

For Handbags.
First use Sept. 6, 1963.

SN 177,454. Shwayder Bros., Inc., Denver, Colo. Filed Sept. 20, 1963.

SAMSONITE STREAMLITE

Owner of Reg. Nos. 590,973 and 638,930.
For Trunks, Suitcases, and Traveling Bags.
First use on or about Apr. 18, 1938.

SN 179,641. Kleer-Vu Industries, Inc., New York, N.Y. Filed Oct. 23, 1963.

snap-VU

For Photo Albums in Wallets, Identification Card Cases, Pass Cases, Sales Portfolios, Billfold and Photo Inserts.
First use Sept. 20, 1963.

Class 4 — Abrasives and Polishing Materials

SN 179,777. Creco Company, Inc., Long Island, N.Y. Filed Oct. 25, 1963.

CRECOAT

For Floor Wax.
First use Jan. 9, 1956.

Class 5 — Adhesives

SN 176,616. Avery Adhesive Products, Inc., San Marino, Calif. Filed Sept. 10, 1963.

FASSON

Owner of Reg. No. 612,575.
For Adhesive Coated Sheeting and Tapes for Sealing, Packaging, Bundling, Cushioning, Gasketing, and Chemical Fastening.
First use Jan. 19, 1955.

Class 6 — Chemicals and Chemical Compositions

SN 147,944. Merck & Co., Inc., Rahway, N.J. Filed June 28, 1962.

MER-SORB

For Industrial Hexitol for Use in the Manufacture of Synthetic Resins.
First use Mar. 2, 1962.

SN 156,945. The Dow Chemical Company, Midland, Mich. Filed Nov. 9, 1962.

VECTO

For Veterinary Parasiticide and Insecticide.
First use Mar. 28, 1961.

SN 164,961. Gamlen Chemical Company, South San Francisco, Calif. Filed Mar. 19, 1963.

VASCONOL

For Liquid Firebox Additive for the Control of Vanadium and Sulfur.
First use Jan. 25, 1962.

SN 164,962. Gamlen Chemical Company, South San Francisco, Calif. Filed Mar. 19, 1963.

VASCONITE

For Powdered Firebox Additive for the Control of Vanadium and Sulfur.
First use Jan. 25, 1963.

SN 165,111. Bendix-Westinghouse Automotive Air Brake Company, Elyria, Ohio. Filed Mar. 21, 1963.

AIR GUARD

For Anti-Freeze Compositions for Use in Compressed Air Systems.
First use Feb. 13, 1963.

SN 165,229. Hayes-Sammons Chemical Co., Mission, Tex. Filed Mar. 22, 1963.

Hi SPERSE

For Wetting or Surface-Active Agent To Be Used as a Spray Adjuvant With Agricultural Pesticide Sprays.
First use Jan. 15, 1963.

SN 166,559. Industrial Filter & Pump Mfg. Co., Cicero, Ill. Filed Apr. 11, 1963.

CY-KIL

For Chemicals for Oxidizing Cyanides.
First use Oct. 22, 1962.

SN 166,839. Sheffield Laboratories, Inc., Boston, Mass. Filed Apr. 16, 1963.

SERENE

For Silicone Spray Dispensed From an Aerosol Can Applied to Clothing To Protect Same From Perspiration Stains and Odors.
First use Mar. 27, 1963.

SN 168,587. Cosan Chemical Corporation, Elizabeth, N.J. Filed May 10, 1963.

COSAN S

For Water Clarifying Agent Sold in Bulk Form to Manufacturers as a Purifying Agent for Industrial Use.
First use Jan. 1, 1963.

SN 168,590. Cosan Chemical Corporation, Elizabeth, N.J. Filed May 10, 1963.

COSKIN M

For Surface-Active Agents Furnished to Manufacturers of Paints and Varnishes in Drum Form and Mixed by Them Under Their Own Paint and Varnish Formulations.
First use Jan. 1, 1963.

SN 169,011. California Texas Oil Corporation, New York, N.Y. Filed May 16, 1963.

CALTEX

The drawing is lined for red, but color is not claimed as a feature of the mark. Owner of Reg. No. 389,373.
For Insecticides, Hydraulic Fluids and Torque Fluids.
First use at least as early as 1947.

SN 169,117. Dixo Company, Inc., Rochelle Park, N.J. Filed May 17, 1963.

DIXO

For Chemical Compositions for the Textile Industry—Namely, Fabric Softener, Emulsifier, Water Repellent Concentrate, Wet Sizing Concentrate, Dry Sizing Concentrate, Brightening and Whiting Agents, Bleaches, and Concentrated Cotton Bleach.
First use Jan. 4, 1929.

SN 171,429. Corrosion Reaction Consultants, Inc., Philadelphia, Pa. Filed June 20, 1963.

2·26

For Rust and Corrosion Inhibitor.
First use Oct. 13, 1959.

SN 171,430. Corrosion Reaction Consultants, Inc., Philadelphia, Pa. Filed June 20, 1963.

6·66

For Rust and Corrosion Inhibitor.
First use Feb. 19, 1960.

SN 171,431. Corrosion Reaction Consultants, Inc., Philadelphia, Pa. Filed June 20, 1963.

3·36

For Rust and Corrosion Inhibitor.
First use Oct. 13, 1959.

SN 172,580. Fleet-Wing Corporation, Cleveland, Ohio. Filed July 8, 1963.

Fleet-Heat

The drawing is lined for the color red. Owner of Reg. Nos. 175,967, 523,227, and others.
For Liquefied Petroleum Gas.
First use Nov. 1, 1960.

SN 173,712. Sterling Drug Inc., New York, N.Y. Filed July 24, 1963.

STAY-AWAY

For Insect Repellent.
First use May 8, 1963.

SN 176,752. Shell Oil Company, New York, N.Y. Filed Sept. 11, 1963.

GROVIN

For Insecticide.
First use Aug. 14, 1963.

SN 177,502. Diamond Alkali Company, Cleveland, Ohio. Filed Sept. 23, 1963.

HI-LITE

For Laundry Bleach for Industrial Use.
First use Sept. 4, 1963.

SN 177,638. Edward R. Jaslow, d.b.a. Jaslow Laboratories, Lafayette Hill, Pa. Filed Sept. 24, 1963.

SPAIR

For Aerosol Room Deodorant.
First use Sept. 16, 1963.

SN 177,777. Durham Chemicals Limited, Durham, England. Filed Sept. 26, 1963.

NOLED

For Zinc Oxide.
First use in or about the year 1933; in commerce February 1958.

SN 177,822. R. T. Vanderbilt Company, Inc., New York, N.Y. Filed Sept. 26, 1963.

NICLATE

For Nickel Dimethyldithiocarbamate for Use as an Age Resistor for Chlorosulfonated Polyethylene.
First use Sept. 5, 1963.

SN 177,823. R. T. Vanderbilt Company, Inc., New York, N.Y. Filed Sept. 26, 1963.

VANZAK-WL

For Preparation for Preventing Corrosion of Metals for Use in the Paper Industry.
First use Oct. 15, 1962.

SN 177,824. R. T. Vanderbilt Company, Inc., New York, N.Y. Filed Sept. 26, 1963.

VANZAK-RA

For Shear Resistant Chemical Retention Aid for the Paper Industry.
First use Jan. 18, 1963.

SN 177,835. American Cyanamid Company, Wayne, N.J. Filed Sept. 27, 1963.

CALCOSOL

Owner of Reg. Nos. 674,802 and 698,376.
For Dyes.
First use Nov. 14, 1962.

SN 177,873. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Sept. 27, 1963.

DU PONT

For Organic Solvents, Organic Intermediates, Phosphatizing Solutions, and Solutions and Emulsions of Synthetic Resins.
First use at least as early as Mar. 29, 1945.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 140,917. Breda Meccanica Bresciana S.p.A., Brescia, Italy. Filed Mar. 28, 1962.

BREDA

Priority claimed under Sec. 44(d) on Italian application filed Nov. 30, 1961; Reg. No. 158,057, dated Feb. 8, 1962.
For Revolvers, Rifles, Shotguns, Single and Twin Anti-Aircraft Naval Guns, Medium Range Anti-Tank Rockets and Medium Range Wire-Guide Naval Missiles.

SN 168,854. Rocket Power, Inc., Mesa, Ariz. Filed May 14, 1963.

PHOENIX

For Rocket Assembly.
First use Apr. 24, 1962.

Class 10—Fertilizers

SN 170,173. Comet Mills, Inc., Guthrie, Okla. Filed June 3, 1963.

COT-O-MULCH

For Soil Conditioner Which Loosens Soil and Holds Moisture.
First use Jan. 2, 1963.

SN 176,946. Parker Fertilizer Company, d.b.a. Parker Plant Food Company, Sylacauga, Ala. Filed Sept. 13, 1963.

ROCKET

For Fertilizer.
First use Feb. 5, 1955.

Class 11—Inks and Inking Materials

SN 151,149. Mason Marking Systems Corporation, Norfolk, Va. Filed Aug. 14, 1962.

MAMARCO

For Stencil and Duplicating Ink.
First use on or about May 29, 1962.

Class 12—Construction Materials

SN 136,594. S.A.I.V.O. S.p.A. Società Anonima Italiana del Vetro di Ottica, Firenze, Italy. Filed Jan. 25, 1962.



The words "Mosaico Vetroso Fiorentino" meaning "Florentine Vitreous Mosaic," are disclaimed apart from the mark as shown. Priority claimed under Sec. 44(d) on Italian application filed Aug. 30, 1961; Reg. No. 157,675, dated Jan. 11, 1962.
For Bits of Glass, Stone, Tile or the Like Arranged To Form a Decorative Pattern and Adhered to a Supporting Sheet Which Is Removed After Installation.

SN 156,862. Dacar Chemical Products Company, Pittsburgh, Pa. Filed Nov. 8, 1962.

DAXCEL FOAMSHIELD

Applicant disclaims the word "Foamshield" apart from the mark as shown. Owner of Reg. No. 669,748.
For Troweled Protective Finish Coating for Concrete, Brick, Cement Block Surfaces and Foam-Type Insulations.
First use Apr. 5, 1962.

SN 157,515. K-Lath Corporation, Monrovia, Calif. Filed Nov. 19, 1962.

GUN LATH

For Paper Backed Welded Wire Fabric.
First use Sept. 25, 1962.

SN 159,480. Fire-Trol Corporation, Chicago, Ill. Filed Dec. 20, 1962.

DECO-SHELL

For Round and Rectangular Sleeve-Like Shells Adapted for Use Around Prefabricated Fireproof Columns and Comprising Steel Panels That Are Arranged in Series and Are Either Plain or Provided With Decorative Finishes.
First use Dec. 10, 1962.

SN 160,871. Mengel Wood Industries, Inc., Louisville, Ky. Filed Jan. 17, 1963.

MENGEL

Owner of Reg. Nos. 431,008, 735,861, and others.
For Doors.
First use December 1946.

SN 162,440. Imperial Homes, Inc. Griffin, Ga. Filed Feb. 11, 1963.

E-Z LIVING HOMES

Applicant disclaims the wording "Homes" apart from the mark as shown.
For Pre-Fabricated Buildings.
First use Dec. 31, 1961.

SN 165,255. Potlatch Forests, Inc., Lewiston, Idaho. Filed Mar. 22, 1963.

LOCKWALL

For Interior Natural Wood Paneling.
First use Nov. 8, 1956.

SN 165,344. Mastic Corporation, South Bend, Ind. Filed Mar. 25, 1963.

INSEL SONIC

For Suspended Ceiling and Wall Systems and Components.
First use Dec. 28, 1961.

SN 165,502. Electro-Cote Co., d.b.a. Stain-Mate, Minneapolis, Minn. Filed Mar. 27, 1963.

STAIN-MATE

For Filler for Nail Holes in Wood Paneling.
First use Jan. 15, 1962.

SN 165,820. Chas. Pfizer & Co., Inc., New York, N.Y. Filed Apr. 1, 1963.

PULVO

Owner of Reg. No. 221,364.
For All-Purpose Pulverized Lime.
First use at least as early as Nov. 27, 1948.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 162,004. Columbus McKinnon Corporation, Tonawanda, N.Y. Filed Feb. 4, 1963.

HY TEMP

For Industrial Chains.
First use May 2, 1962.

SN 162,125. Durant Insulated Pipe Co., Inc., Niles, Mich. Filed Feb. 4, 1963.

INSUFLEX

For Prefabricated Conduit Systems.
First use during November 1959.

SN 162,513. Welding and Steel Fabrication Co., Inc., Tonawanda, N.Y. Filed Feb. 11, 1963.

RAPIDOOR

For Pressure Vessels and Closures Therefor.
First use May 1, 1959.

SN 165,667. Automatic Devices Company, Allentown, Pa. Filed Mar. 29, 1963.

Fenesteel

For Window Curtain Track and Hardware.
First use Nov. 10, 1938.

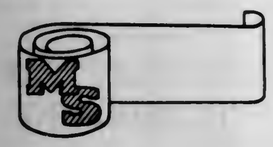
SN 178,153. Utility Products Manufacturing Company, Memphis, Tenn. Filed Oct. 1, 1963.

SPINTIE

For Plastic Tubing for Bundling Cables.
First use Feb. 25, 1963.

Class 14—Metals and Metal Castings and Forgings

SN 147,386. Mill Strip Products Co., Evanston, Ill. Filed June 21, 1962.



The lining appearing on the drawing is lining which forms an integral part of the mark, and does not indicate a particular color.
For Cold Rolled Strip Steel, Shim Steel, Cold Rolled Annealed Spring Steel, Cold Rolled Round Edge Flat Wire and Electro-Galvanized Strip Steel.
First use Jan. 10, 1962.

SN 162,057. Jay R. Smith Mfg. Co., New Market, N.J. Filed Feb. 1, 1963.

LEKCROMATE

For Chromate Converted Cadmium or Zinc Electroplated Protective Coating for Cast Iron Parts.
First use Nov. 1, 1962.

Class 15—Oils and Greases

SN 156,763. Plymouth Wholesale Corporation, New York, N.Y. Filed Nov. 6, 1962.

"PROFITS IN PENNIES" Topps

No claim is made to the phrase "Profits in Pennies" apart from the mark as shown.
For Motor Oil.
First use Aug. 1, 1962.

SN 163,150. Kendall Refining Company, Bradford, Pa. Filed Feb. 20, 1963.

M-6

For Motor Oils.
First use January 1963.

SN 166,826. Eugene J. McMullen, d.b.a. Shamrock Specialties Co., Texas City, Tex. Filed Apr. 16, 1963.

S'OK!

For Penetrating Oil With a Soluble Lubricant for Cutting Rust, Carbon and the Like.
First use Mar. 22, 1960.

SN 169,008. California Texas Oil Corporation, New York, N.Y. Filed May 16, 1963.

CALTEX

Owner of Reg. No. 389,374.
For Lubricating Oils and Greases, Hydraulic Transmission Oils, Petrolatums, Naphthas, Solvents, and Cutting and Soluble Oils, Kerosene and Waxes.
First use at least as early as 1947.

SN 169,012. California Texas Oil Corporation, New York, N.Y. Filed May 16, 1963.



The drawing is lined for red, but color is not claimed as a feature of the mark. Owner of Reg. No. 389,374.
For Hydraulic Transmission Oils, Petrolatums, Naphthas, Solvents and Cutting and Soluble Oils, Kerosene and Waxes.
First use at least as early as 1947.

Class 16—Protective and Decorative Coatings

SN 161,112. Synthetic Protective Finishes Co., Inc., Evanston, Ill. Filed Jan. 21, 1963.

ACRYNOL

For Synthetic Resin Protective Finishes for Industrial and Architectural Use.
First use Apr. 16, 1962.
Subj. to Intf. with SN 177,807.

SN 176,625. The California Ink Company, Inc., San Francisco, Calif. Filed Sept. 10, 1963.

Cal/Ink

For Paint Components—Namely, Color Dispersions, Vehicles, Driers, Fungicides and Bactericides.
First use July 25, 1963.

Class 18—Medicines and Pharmaceutical Preparations

SN 134,134. Lemmon Pharmacal Company, Sellersville, Pa. Filed Dec. 15, 1961.

RHINEX

For Common Cold Preparation.
First use October 1957.

SN 152,858. Wickman Pharmaceuticals, Glendale, Calif., assignee of Wickman Pharmaceuticals, Pasadena, Calif. Filed S.R. Sept. 10, 1962; Am. P.R. July 23, 1963.



For Laxative Preparation; and Surgical Spray Coating for Application to the Skin To Promote Healing, Relieve Pain, Etc.
First use September 1961.

SN 155,335. Palmedico, Inc., Columbia, S.C. Filed Oct. 17, 1962.

AMPHAPLEX

For Anorexigenic Drug in Tablet and Injectable Vial Form for Use in Obesity Control.
First use Apr. 10, 1962.

SN 168,177. Fellows Medical Mfg. Co. Inc., Detroit, Mich. Filed May 6, 1963.

SOLU-TRI

For Sulfa Drug Preparation.
First use in or about November 1962.

SN 168,181. Fellows Medical Mfg. Co. Inc., Detroit, Mich. Filed May 6, 1963.

DIHISTASOL

For Anti-Allergenic Preparation.
First use in or about November 1962.

SN 168,958. Rexall Drug and Chemical Company, Los Angeles, Calif. Filed May 15, 1963.

ETHOXIN

For Ultra-Violet Absorbent Incorporated in Medicated Sunburn Lotion.
First use Jan. 21, 1963.

SN 169,579. Summit Laboratories, Inc., Hackensack, N.J. Filed May 23, 1963.

RADIVAC

For Laxative Preparation.
First use Apr. 1, 1963.

SN 169,627. Fuller Pharmaceutical Company, Minneapolis, Minn. Filed May 24, 1963.

UNIGARD

For Pharmaceutical Preparations and Ointments for Treating Skin, Membranes and Tissues.
First use Apr. 23, 1963.

SN 171,374. Olin Mathieson Chemical Corporation, New York, N.Y. Filed June 19, 1963.

SPECTROCAINE

For First Aid Ointment.
First use June 11, 1963.

SN 173,365. Kenyon Stores, Inc., d.b.a. Kenyon Pharmacal Company, Newark, N.J. Filed July 19, 1963.

KENYON'S

For Vitamins, Aspirin, Bicarbonate of Soda, Boric Acid, Saccharin, Medicated Ointments and Creams.
First use Sept. 22, 1933.

SN 174,140. Warner-Lambert Pharmaceutical Company, Morris Plains, N.J. Filed July 31, 1963.

DURAGEL

Owner of Reg. No. 407,915.
For Antacid Magma.
First use July 3, 1963.

SN 174,487. Anabolic, Incorporated, Glendale, Calif. Filed Aug. 6, 1963.

AVED-M

For Vitamin and Vitamin and Mineral Preparations in Tablet or Capsule Form for Use as Dietary Supplements.
First use June 21, 1963.

SN 178,449. Hudson Vitamin Products, Inc., New York, N.Y. Filed Oct. 7, 1963.

OPTOC

For Eye Drops for Treating Irritated Eye Conditions.
First use Oct. 14, 1960.

SN 180,105. William McCord, Pasadena, Tex. Filed Oct. 30, 1963.

MATEB

For Analgesic in Liquid and Tablet Form.
First use Aug. 19, 1963.

SN 180,602. National Council on Smoking and Health Inc., New York, N.Y. Filed Nov. 6, 1963.

NICATONE

For Tablets To Assist in Stopping or Deterring the Smoking Habit.
First use Sept. 15, 1963.

SN 180,817. American Cyanamid Company, Wayne, N.J. Filed Nov. 12, 1963.

PERITINIC

For Hematinic.
First use Oct. 31, 1963.

SN 180,818. American Cyanamid Company, Wayne, N.J. Filed Nov. 12, 1963.

MELMICINA

Owner of Reg. No. 759,110.
For Antibiotic.
First use Oct. 31, 1963.

SN 180,833. Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y. Filed Nov. 12, 1963.

TROMAL

Owner of Reg. No. 739,920.
For Analgesic, Psychopharmacological Agent.
First use Oct. 22, 1963.

SN 180,834. Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y. Filed Nov. 12, 1963.

ZYLOPRIM

For Drug for the Treatment of Gout, Leukemia and Related Conditions.
First use Oct. 29, 1963.

SN 181,119. The Central Pharmacal Company, Seymour, Ind. Filed Nov. 14, 1963.

PYRODOL

For Preparations Used as Dressings for Burns and Scalds, and for the Prevention of Burns Resulting From Ultra-Violet Radiation.
First use Sept. 16, 1927.

SN 181,155. Laboratoires Chibret, Societe Anonyme, Clermont-Ferrand, Puy-de-Dome, France. Filed Nov. 14, 1963.

ANTI-CHYMO CHIBRET

Owner of French Reg. No. 3,889, dated Apr. 24, 1963 (Clermont-Ferrand); Natl. Inst. No. 204,776.
For Preparation Inhibiting Physiological Indications in Opthalmology and in Ear, Nose and Larynx.

SN 181,156. Laboratoires Chibret, Societe Anonyme, Clermont-Ferrand, Puy-de-Dome, France. Filed Nov. 14, 1963.

POURPRANYL

Owner of French Reg. No. 3,715, dated Apr. 8, 1961 (Clermont-Ferrand); Natl. Inst. No. 163,972.
For Ophthalmological Preparations for Improving Vision.

SN 181,157. Laboratoires Chibret, Societe Anonyme, Clermont-Ferrand, Puy-de-Dome, France. Filed Nov. 14, 1963.

UVELINE

Owner of French Reg. No. 3,385, dated June 12, 1954 (Clermont-Ferrand); Natl. Inst. No. 39,544.
For Ophthalmological Preparations.

SN 181,158. Laboratoires Chibret, Societe Anonyme, Clermont-Ferrand, Puy-de-Dome, France. Filed Nov. 14, 1963.

DIFRAREL

Owner of French Reg. No. 3,886, dated Mar. 25, 1963 (Clermont-Ferrand); Natl. Inst. No. 202,968.
For Pharmaceutical Preparations for Treatment of Disorders of the Circulatory System.

SN 181,339. Dr. Madaus & Co., Cologne-Merheim, Germany. Filed Nov. 18, 1963.

PROVENO

Priority claimed under Sec. 44(d) on German application filed May 28, 1963; Reg. No. 779,220, dated Oct. 30, 1963.
For Medicines and Pharmaceutical Preparations—Namely, Preparations for the Treatment of Brain Edema, Glaucoma and Local Edema.

SN 181,996. Chas. Pfizer & Co., Inc., New York, N.Y. Filed Nov. 27, 1963.

ARVYNOL

For Soporific Preparation.
First use Nov. 11, 1963.

SN 186,136. A. H. Robins Company, Inc., Richmond, Va. Filed Feb. 10, 1964.

DURENAT

For Medicinal Preparation for Use in the Treatment of Urinary and Upper Respiratory Infections.
First use Oct. 4, 1963.

Class 19—Vehicles

SN 163,437. Walking Stick Radiator Co., Inc., Blythe, Calif. Filed Feb. 25, 1963.

WALKING STICK

For Automobile Radiator Adapters.
First use Nov. 19, 1960.

SN 169,671. Von Roll Ltd., Bern, Switzerland. Filed May 24, 1963.

SKY RIDE

For Ropeway Systems and Chairlifts.
First use 1956; in commerce 1956.

SN 179,844. Philip Adler, Tampa, Fla. Filed Oct. 28, 1963.

CARRI-ETTE

For Mobile Infant Carriers.
First use Sept. 3, 1963.

SN 179,850. Atlas Supply Company, Newark, N.J. Filed Oct. 28, 1963.

ATLAS

Owner of Reg. Nos. 545,069 and 511,917.
For Fender Covers for Use on Automobiles.
First use Oct. 3, 1963.

SN 179,919. North American Aviation, Inc., El Segundo, Calif. Filed Oct. 28, 1963.



The mark consists of a fanciful "S" design.
For Aircraft.
First use Apr. 6, 1963.

Class 21 — Electrical Apparatus, Machines,

SN 124,364. Holdafone Music Corporation, New York, N.Y. Filed July 20, 1961.

HOLDAFONE

For Electronic Device Attachable to a Telephone for the Purpose of Providing Music or Other Entertainment During the Periods an Individual May Be Waiting for Establishment of a Connection Over Wire Line Communication Channels.
First use on or about June 23, 1961.

SN 144,298. Walters Electric, New York, N.Y. Filed May 10, 1962.

THE HOUSE OF LIGHT

For Photoflood Lamps, Photographic Spotlights, Fluorescent Lamps, Incandescent Lamps, Flash Bulbs and Flash Tubes, Mercury Arc Lamps, Stroboscopic Lamps, Arcon Lamps, Projection Lamps, Sound Lamps, Long Life Lamps, Power Groove Lamps, High Output Lamps, Germicidal Lamps, Infra Red Lamps, Sun Lamps, Ultra Violet Lamps, Circle Lamps, Motors, Electric Wire, Wire Connectors, Wire Conduits, Wire Fittings, Meter Boxes, Fuses of All Kinds, Switches of All Kinds, Switch Plates, Fans, Outlets, Switch Receptacles, Portable Lanterns, Batteries, Electrical Tools, Power Cords, Time Controls, Plugs, Night Lights, Illuminated Frames, Illuminated Lamps, Decorative Lamps, Swivel Fittings, Work Lamps, Tapes, Adaptors, Appliance Cords, Cord Sets, Insulators, Terminals, Caps, Pull Cords, Bushings, Buttons, Bells, Chimes, Canopies, Carbon Brush Kits, Electrical Clips, Electric Sign Flashers, Lighting Fixtures, Flashers, Goose Neck Arms, Reflectors, Luminous Pendants, Mounting Straps, Electrical Heaters, Transformers, Reducers, Panels, Circuit Breakers, Sockets, Soldering Irons, Insulated Staples, Screws, Bolts, Nuts, Washers, Taps, Testers, Candelabras, Lamp Parts, Fineals.
First use Feb. 1, 1937.

SN 149,489. Reslosound Limited, London, England. Filed July 20, 1962.

RESLO

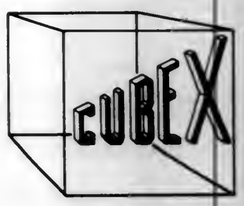
Priority claimed under Sec. 44(d) on British Reg. No. 830,143, dated Jan. 29, 1962.
For Electrical Apparatus for Reproducing, Recording, Amplifying, Transmitting or Receiving Sound, and Parts of Such Apparatus.

SN 153,742. Cory Corporation, Chicago, Ill. Filed Sept. 24, 1962.

CORY

Owner of Reg. Nos. 510,260, 714,661, and others.
For Domestic and Commercial Electric Coffee Brewing Apparatus.
First use November 1946.

SN 153,916. Westinghouse Electric Corporation, East Pittsburgh, Pa. Filed Sept. 25, 1962.



For Magnetic Alloy Used as Cores for Transformers and Other Inductive Devices, and as a Component of Electrical Devices—Namely, Current Balancing Auto-Transformers, Motors and Distribution Transformers.
First use on or about Oct. 22, 1957.

SN 161,211. Sprague Electric Company, North Adams, Mass. Filed Jan. 22, 1963.

CERACIRCUIT

Owner of Reg. No. 677,550.
For Ceramic-Based Microcircuits.
First use Apr. 30, 1962.

SN 163,056. Janus Products, Incorporated, Syosset, N.Y. Filed Feb. 19, 1963.

JANUS

For Electro-Acoustic and Electrical Aquatic Equipment—Namely, Intercommunication Systems for Divers.
First use Dec. 6, 1962.

SN 167,385. Hoffman Electronics Corporation, Los Angeles, Calif. Filed Apr. 23, 1963.

IN-COM

For Semiconductor Diodes.
First use Apr. 8, 1963.

SN 169,348. Columbia Products Company, Columbia, S.C. Filed May 21, 1963.



Owner of Reg. No. 744,052.
For Strain Rods, i.e., Fiberglass Rods To Serve as Tension Members in Strain Insulators for Power Lines and the Like, and Fiberglass Rods and Hot Sticks, i.e., Fiberglass Sticks To Serve as Insulating Handles for Tools for Work on High Tension Lines or the Like.
First use Aug. 31, 1962.

SN 174,312. Trans-Southwest Manufacturing Inc., Anthony, Tex. Filed Aug. 2, 1963.

TRANS ELECTRONIC BUGSNATCHER

No claim is made to the words "Electronic" or "Bugsnatcher" apart from the mark as shown.
For Electrical Device Utilizing Ultraviolet Light and High Tension Current To Attract and To Electrocute Flying Insects and Bugs.
First use July 1963.

SN 175,820. Waring Products Corporation, New York, N.Y. Filed Aug. 26, 1963.



Owner of Reg. Nos. 605,403 and 717,801.
For Electrical Disintegrators and Mixers for Producing Fluid Substances From Solid Foods and Other Organic Matter and for Intermixing Fluids, for Use in Homes, Restaurants, Laboratories, and for Industrial Use.
First use on or about Jan. 25, 1963.

SN 177,875. Electropac, Inc., Peterborough, N.H. Filed Sept. 27, 1963.

SONALERT

For Electronic Generators of Audible Sound for Use as Warning Signalers, Alarm Sources, Audible Indicators, Noisemakers and the Like.
First use June 19, 1963.

SN 178,592. Cooper Tire & Rubber Company, Findlay, Ohio. Filed Oct. 9, 1963.

COOPER

Owner of Reg. Nos. 229,028, 762,010, and others.
For Storage Batteries.
First use 1921.

SN 179,484. Triple A Specialty Co., Chicago, Ill. Filed Oct. 21, 1963.

HELP

For Storage Battery Booster Cables.
First use Sept. 6, 1957.

SN 179,621. Dialight Corporation, Brooklyn, N.Y. Filed Oct. 28, 1963.

DATALAMP

For Electric Indicator Lights for Pilot and Signal Light Purposes.
First use Oct. 15, 1963.

SN 180,390. Fisher Radio Corporation, Long Island City, N.Y. Filed Nov. 4, 1963.

StrataBalance

For Packages of Parts Which When Assembled Produce Ammplifiers for Sound Reproduction.
First use Oct. 9, 1963.

SN 180,435. Oxytronic Corp., Van Nuys, Calif. Filed Nov. 4, 1963.

OXYDAIRE

For Electric Purifier and Conditioner Apparatus for Air Treatment Systems.
First use on or about Oct. 28, 1963.

Class 22 — Games, Toys, and Sporting Goods

SN 133,802. Lakeside Toys, Inc., Minneapolis, Minn., by change of name from Lakeside Industries, Inc., Minneapolis, Minn. Filed Dec. 11, 1961.

LAKESIDE

For Toys and Parlor Games.
First use Jan. 15, 1961.

SN 157,230. Mattel, Inc., Hawthorne, Calif. Filed Nov. 14, 1962.

LO-GEAR

For Apparatus Sold as a Unit for Playing a Board Type Game.
First use Aug. 7, 1962.

SN 163,988. Cadaco-Ellis, Inc., Chicago, Ill., assignee of Lorraine G. Wolfson, d.b.a. Robert Rosche Associates, Chicago, Ill. Filed Mar. 5, 1963.

ONE ARM BANDIT

For Equipment Comprising a Gameboard, a Dice Box, Dice, Paper Money and Paper Markers for Playing a Board-Type Parlor Game.
First use Feb. 15, 1963.

SN 165,935. Mattel, Inc., Hawthorne, Calif. Filed Apr. 2, 1963.

FASHION QUEEN

The word "Fashion" is disclaimed apart from the mark.
For Doll.
First use Dec. 19, 1962.

SN 166,585. Spartans Industries, Inc., New York, N.Y. Filed Apr. 11, 1963.

TRAIL KING

For Camping Equipment—Namely, Sleeping Bags.
First use Mar. 9, 1963.

SN 167,128. Doban Labs, Inc., Sunnyvale, Calif. Filed Apr. 19, 1963.

DOBAN

For Automatic Bowling Scorekeeping Apparatus.
First use Oct. 25, 1962.

SN 168,904. Coach's Sporting Goods Corporation, Marion, Ind. Filed May 15, 1963.

MULTI-BAR

For Exercising Devices—Namely, Doorway Gym Bars.
First use Jan. 20, 1963.

SN 170,617. De Luxe Reading Corporation, Elizabeth, N.J. Filed June 10, 1963.



For General Line of Toy Play Kits, Play Outfits, Boxed Games, Dolls and the Like.
First use Aug. 15, 1960.

SN 170,643. HMH Publishing Co., Inc., Chicago, Ill. Filed June 10, 1963.

PLAYBOY

Owner of Reg. No. 600,018.
For Puppets.
First use on or about Apr. 26, 1963.

SN 170,721. American Doll & Toy Corp., New York, N.Y. Filed June 11, 1963.

TRESSY

For Dolls.
First use Apr. 9, 1963.

SN 171,523. Anderson Manufacturing Company, Menominee, Mich. Filed June 21, 1963.

TEE-TOTALER

For Mechanical Counter Used in Totaling Golf Scores.
First use Sept. 8, 1962.

SN 172,012. Lewis A. Sinclair, d.b.a. Lou's Lures, Annandale, Va. Filed June 27, 1963.

WHICH ONE

For Fishing Lures.
First use June 25, 1963.

SN 172,753. Mebuco, Inc., Mansfield, Ohio. Filed July 10, 1963.

NOCOUT

For Game Board for Playing a Marble Type Parlor Game.
First use May 23, 1963.

SN 173,193. Sifo Company, St. Paul, Minn. Filed July 17, 1963.

KINDER CLAY

No claim of exclusive right is made to "Clay" for the goods recited. Owner of Reg. Nos. 641,681, 690,844, and 721,271.
For Child's Modeling Clay.
First use Jan. 1, 1963.

SN 173,393. Stowe-Woodward, Inc., Newton Upper Falls, Mass. Filed July 19, 1963.

ZIPFLYTE

For Bowling Balls.
First use May 13, 1963.

SN 173,394. Stowe-Woodward, Inc., Newton Upper Falls, Mass. Filed July 19, 1963.

EBONITE

Owner of Reg. Nos. 376,033 and 596,676.
For Bowling Equipment—Namely, Bowling Balls, Bowling Bags, and Bowling Shoes.
First use May 1922.

SN 173,706. Buddy Schoellkopf Products Inc., Dallas, Tex. Filed July 24, 1963.

ADMIRAL BLACKIE'S

For Swim and Water Ski Belts, Floating Boat Cushions and Buoyant Vests.
First use at least as early as May 1, 1963, on buoyant water ski vests.

SN 173,806. Brunswick Corporation, Chicago, Ill. Filed July 22, 1963.

GOLDEN GRIP

For Hand Dryer in the Form of a Bag Containing a Desiccant for Use in Sporting Activities.
First use May 20, 1963.

SN 174,214. Louis Marx & Co., Inc., New York, N.Y. Filed Aug. 1, 1963.

THE MIGHTY KONG

For Battery Operated Toy Animal-Like Figure.
First use May 2, 1963.

SN 174,749. Columbia Bedding Company, Chicago, Ill. Filed Aug. 9, 1963.

PUTTN BUTTN

Applicant disclaims the word "Buttn" apart from the mark.
For Golf Ball Marker.
First use on or about July 1, 1963.

SN 174,794. Buddy Schoellkopf Products Inc., Dallas, Tex. Filed Aug. 9, 1963.



For Floating Sporting Goods—Namely, Swim and Water Ski Belts, Buoyant Cushions and Buoyant Vests.
First use at least as early as May 1, 1963, on buoyant water ski vests and buoyant cushions.

SN 174,796. Buddy Schoellkopf Products Inc., Dallas, Tex. Filed Aug. 9, 1963.



For Floating Sporting Goods, Swim and Water Ski Belts, Floating Boat Cushions and Buoyant Vests.
First use at least as early as May 1, 1963, on buoyant water ski vests.

SN 175,034. Thomas E. Hunnemann, Chicago, Ill. Filed Aug. 14, 1963.

PUSH PENNY

For Baseball Game Apparatus Played With Manually Movable Playing Pieces, Such as Pennies.
First use on or about Aug. 5, 1963.

SN 175,049. Manson Metal Equipment Co., Reading, Pa. Filed Aug. 14, 1963.

Rodeo

For Horseshoe Pitching Equipment—Namely, Horseshoes and Stakes.
First use on or about Jan. 15, 1963.

SN 175,816. Thompson Fishing Tackle Company, Inc., Knoxville, Tenn. Filed Aug. 26, 1963.

"ELMER'S FLY"

No claim of exclusive right is made to "Fly" for fishing lures.
For Fishing Lures.
First use during August 1961.

SN 177,037. Hassenfeld Bros., Inc., Central Falls, R.I. Filed Sept. 16, 1963.

G.I. JOE

For Toy Military Kits.
First use on or about Aug. 20, 1963.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 162,044. The Washburn Company, Worcester, Mass. Filed Feb. 4, 1963.

Buffetware

For Stainless Steel Kitchen Utensils—Namely, Forks, Spoons, Turners, Frosting Spreaders, Ladles, Spatulas, Potato Mashers, Tea Strainers, Food Strainers, Blenders, and Wall Racksk.
First use Sept. 30, 1961.

SN 163,558. The Kartridg Pak Co., Davenport, Iowa. Filed Feb. 27, 1963.

KARTRIDG PAK

Owner of Reg. No. 530,774.
For Machinery for Processing Meat and Other Food Products, for Filling and Closing Aerosol-Type Containers, and for Packaging Food and Other Products.
First use Jan. 3, 1963.

SN 163,864. Otis Elevator Company, New York, N.Y. Filed Mar. 4, 1963.

Owner of Reg. Nos. 204,849, 629,296, and others.
For Industrial, Material Handling Trucks.
First use at least as early as Feb. 26, 1957.

SN 163,865. Otis Elevator Company, New York, N.Y. Filed Mar. 4, 1963.

OTIS

Owner of Reg. Nos. 204,849, 629,296, and others.
For Industrial, Material Handling Trucks.
First use at least as early as June 16, 1962.

SN 164,537. Lighter Corporation of America, Newington, Conn. Filed Mar. 13, 1963.

BUDDY-BOY

Owner of Reg. No. 671,802.
For Combination Knife Implement.
First use on or before Nov. 25, 1957.

SN 166,674. Veb Tüllmaschinenbau Karl-Marx-Stadt, Karl-Marx-Stadt, Germany. Filed Apr. 12, 1963.

Malipol

For Looms for Tulle, With or Without Jacquard Equipment, Looms for Curtains and Lace, Multiple Needle Sewing Machines, Chain Knitting Machines and Sewing Knitting Machines, Machines for Inserting and Removing Bobbins, Machines for Winding Bobbins and Parts of the Above Machines.
First use Mar. 10, 1959; in commerce Sept. 7, 1962.

SN 171,844. Franz Just & Söhne Stempelwarenfabrik, Wels, Austria. Filed June 19, 1963.

TRODAT

The representation of the goods is disclaimed apart from the mark as shown. Owner of Austrian Reg. No. 41,240, dated May 26, 1959.
For Stamp Goods—Namely, Rubber Stamps, Daters, Numberers, Word Stamps, Self-Inking Stamps, Rubber Type Outfits, Stamp Impression Types, Stamp Pads, Stamp Inks, Stamp Supports and Racks, and Pocket Containers for Stamp Equipment.

SN 177,434. Pacific Vegetable Oil Corporation, Richmond, Calif. Filed Sept. 20, 1963.

AUTOFROTH

For Polyurethane Rigid Foam Production Equipment.
First use Feb. 19, 1962.

SN 177,530. Landon, Inc., San Carlos, Calif. Filed Sept. 23, 1963.

BLUE LAKE

Owner of Reg. Nos. 646,438, 656,041, and 656,042.
For Swimming Pool Accessories, Such as Leaf Skimmers and Overflow Skimmers.
First use Apr. 1, 1955.

SN 177,633. Marlin-Rockwell Corporation, Jamestown, N.Y. Filed Sept. 23, 1963.

ROLCON

For Bearings.
First use May 14, 1963.

SN 181,528. Dayton Perforators, Inc., Dayton, Ohio. Filed Nov. 20, 1963.

ANY-sizer

For Machine Tool Accessories—Namely, Precision Work Holders.
First use Jan. 11, 1963.

SN 181,920. Perma-Line Manufacturing Corporation of America, Chicago, Ill. Filed Nov. 26, 1963.

PERMA-LINER III

Owner of Reg. No. 762,269.
For Equipment for Applying Marking to Pavement.
First use Mar. 18, 1963.

Class 25—Locks and Safes

SN 178,512. Western Auto Supply Company, Kansas City, Mo. Filed Oct. 7, 1963.

WIZARD

For Combination Padlock.
First use Sept 24, 1963.

SN 178,641. Simplex Lock Corporation, New York, N.Y. Filed Oct. 9, 1963.

SIMPLEX

For Combination Locks.
First use on or about Jan. 1, 1962.

Class 26—Measuring and Scientific Appliances

SN 115,095. U.S. Industries, Inc., New York, N.Y. Filed Mar. 7, 1961.

TUTOR

Owner of Reg. No. 681,855.
For Visual Education Apparatus, Components Thereof, and Accessories Therefor, Including Motion Picture Film.
First use Aug. 15, 1959.

SN 145,290. Quan-Tech Laboratories, Inc., Boonton, N.J. Filed May 23, 1962.

QUAN-TECH

For Electrical and Electronic Instrumentation Equipment—Namely, Amplitude-Distribution Analyzers, Microammeters, Noise Analyzers, Wave and Noise Spectrum Analyzers, and Constant Current and Constant Voltage Power Supplies and Amplifiers for Use Therewith, and Components and Accessories for the Above.
First use Jan. 25, 1962.

SN 158,125. American Radiator & Standard Sanitary Corporation, New York, N.Y. Filed Nov. 29, 1962.

AEROPAD

Owner of Reg. Nos. 679,530 and 713,078.
For Thermocouples.
First use May 23, 1962.

SN 163,056. Janus Products, Incorporated, Syosset, N.Y. Filed Feb. 19, 1963.

JANUS

For Sonar Systems for Navigation, Homing, Safety, and Detection Purposes, Including an Audio Receiver Useful Also as a Conventional Radio.
First use Dec. 6, 1962.

SN 164,250. Keithley Instruments, Inc., Cleveland, Ohio. Filed Mar. 8, 1963.

KEITHLEY

For Electrical and Electronic Apparatus Including Signal Dividers, Amplifiers, Voltage Supplies, Relays, and Measuring Instruments Including Ammeters, Voltmeters, Ohmmeters, Electrometers, Static Meters, and Electrical Bridges and Accessories Thereof.
First use November 1946 on signal dividers.

SN 175,355. Economics Laboratory, Inc., St. Paul, Minn. Filed Aug. 16, 1963.

KLENZADE

Owner of Reg. Nos. 609,715, 616,967, and 616,968.
For Devices for Proportioning, Measuring or Controlling the Concentration of Detergents and Germicides in Solution; Devices to Test for Hardness, Acidity, Alkalinity and Mineral Content of Water Supplies; and Test Devices for Use in Food Processing.
First use July 7, 1960.

Class 28—Jewelry and Precious-Metal Ware

SN 160,419. Goldcrest Jewelry, Inc., New York, N.Y. Filed Jan. 9, 1963.

GL

For Gold Jewelry: Pins, Earrings and Other Jewelry for Personal Wear.
First use Sept. 10, 1962.

SN 162,252. Freshmans Jewelers Supply, Salt Lake City, Utah. Filed Feb. 7, 1963.

TRB

For Jewelry Including Rings.
First use on or before Sept. 15, 1962.

SN 163,154. Luminerals Ltd., New York, N.Y. Filed Feb. 20, 1963.

MOONOPALS

The drawing is lined for the color yellow.
For Precious Stones, in Particular Opals.
First use November 1962.

SN 163,155. Luminerals Ltd., New York, N.Y. Filed Feb. 20, 1963.

SUNOPALS

The drawings is lined for the color orange.
For Precious Stones, in Particular Opals.
First use November 1962.

SN 167,077. Aktieselskapet Th. Marthinsen Solvvarefabrikk, Tonsberg, Norway. Filed Mar. 25, 1963.

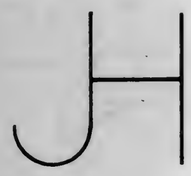
The representation of the goblet is hereby disclaimed apart from the mark as shown in connection with all footed vessels.
Owner of Norwegian Reg. No. 57,313, dated Apr. 20, 1961.
For Jewelry, Silver Flatware and Silver Hollowware, and Enameled Jewelry.

SN 170,680. Royal of Pittsburgh, Inc., Pittsburgh, Pa. Filed June 10, 1963.

ROYAL Pastelli

Owner of Reg. No. 626,185.
For Jewelry.
First use May 1961.

SN 173,111. Norman E. Haertel, d.b.a. Janison-Haertel, New York, N.Y. Filed July 16, 1963.



For Jewelry.
First use Apr. 1, 1963.

SN 175,435. James Smithmeyer, d.b.a. Washington Ring Mfg. Co., Buffalo, N.Y. Filed Aug. 20, 1963.

WASHINGTON

For 14 K. Solid Gold Rings.
First use June 1, 1963.

Class 29 — Brooms, Brushes, and Dusters

SN 149,067. Etablissement Caliope, Vaduz, Liechtenstein. Filed July 16, 1962.

DENT-O-MATIC

Priority claimed under Sec. 44(d) on Liechtenstein Reg. No. 1,274, dated Jan. 26, 1962.
For Electric Toothbrushes.
First use in commerce Dec. 16, 1961.
Subj. to Intf. with SN 148,489.

SN 166,490. Marcel Rofe, d.b.a. Marcel Rofe Company, New York, N.Y. Filed Apr. 10, 1963.

ROFCO

For Wire Wheel Brushes, Cup Brushes and Wire Scratch Brushes.
First use Apr. 2, 1963.

SN 175,356. Economics Laboratory, Inc., St. Paul, Minn. Filed Aug. 16, 1963.

KLENZADE

Owner of Reg. Nos. 609,715, 616,967, and 616,968.
For Brushes.
First use July 1, 1958.

Class 31 — Filters and Refrigerators

SN 177,354. Great Bear Spring Company, New York, N.Y. Filed Sept. 19, 1963.

REFRESHERATOR

For Electrically Operated Water Coolers Containing a Refrigerator Compartment.
First use Aug. 22, 1963.

SN 179,960. Thermoelectric Systems Corporation, Santa Barbara, Calif. Filed Oct. 28, 1963.



For Thermoelectric Refrigeration Equipment.
First use January 1963.

SN 180,462. Sylvan Pools, Inc., Doylestown, Pa. Filed Nov. 4, 1963.

DIAL-PURE

For Water Filters.
First use on or about Oct. 15, 1963.

Class 32 — Furniture and Upholstery

SN 160,876. Mengel Wood Industries, Inc., Louisville, Ky. Filed Jan. 17, 1963.

MENGEL

Owner of Reg. Nos. 431,008, 735,861, and others.
For Vanitories.
First use Oct. 24, 1962.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 165,805. Wallace W. Miller, El Cajon, Calif. Filed Apr. 1, 1963.

SUNSORB

For Plastic Heat Transfer Panels.
First use Mar. 22, 1962.

SN 168,881. Weld Tooling Corporation, Pittsburgh, Pa. Filed May 14, 1963.

HOB-O

For Machine for Carrying a Cutting or Welding Torch.
First use Nov. 19, 1959.

SN 174,295. The Taylor-Winfield Corporation, Warren, Ohio. Filed Aug. 2, 1963.

TAYLOR WINFIELD HI-WAVE

Owner of Reg. No. 403,430.
For Electric Welding Apparatus.
First use May 1, 1940.

SN 180,995. Auto Fire Corporation, Corinth, Miss. Filed Nov. 13, 1963.

Auto FIRE

For Charcoal Lighter and Burner.
First use Jan. 14, 1963.

SN 181,026. Eutectic Welding Alloys Corporation, Flushing, N.Y. Filed Nov. 13, 1963.

EUTECTIC

Owner of Reg. Nos. 685,359 and 705,453.
For Welding Equipment Including Torches, Wire Feeders, Molten Metal or Ceramic Spraying Devices, and Parts Thereof.
First use Nov. 7, 1963.

SN 181,150. Johns-Manville Corporation, New York, N.Y. Filed Nov. 14, 1963.

CERA FORM

For Fibrous Combustion Chambers for Furnaces.
First use Oct. 8, 1963.

SN 181,191. Swartwout Fabricators, Inc., Kokomo, Ind. Filed Nov. 14, 1963.

WHIRLOUT

For Power-Driven Roof Ventilators.
First use Apr. 26, 1961.

SN 181,288. Inductotherm Corporation, Rancocas, N.J. Filed Nov. 15, 1963.

INDUCTO

For Induction Furnaces; and Switches, Frequency Multipliers, and Parts for Induction Furnaces.
First use 1954.

SN 181,310. Boone Manufacturing Corp., Bronx, N.Y. Filed Nov. 18, 1963.

PAPERFLAME

For Folding Cooking Grills.
First use Apr. 15, 1963.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 166,709. Gross Manufacturing Company, Inc., Monrovia, Calif. Filed Apr. 15, 1963.

TOTER-KIT

For Tire Repair Units, Including Tire Repair Plugs, Tools and Cement for Installing the Plugs.
First use during June 1961.

Class 37 — Paper and Stationery

SN 125,493. Jacksonville Paper Company, Jacksonville, Fla. Filed Aug. 7, 1961.

SOUTHERN MAID

Owner of Reg. Nos. 590,215 and 590,217.
For Paper and Stationery Goods, More Particularly Writing Paper, Correspondence Envelopes, Notebooks, Paper Pads and Tablets, Typewriter Paper, Index Cards, Adding Machine Paper, Mimeograph, Duplicator, and Offset Printing Paper, Newsprint, Paper Napkins, Paper Towels, Wrapping Paper, Kraft Paper Envelopes, Manila Safety Paper, Waxed Paper, Shipping Tags, Notebook Fillers, and Construction and Poster Paper.
First use 1936.

SN 146,199. W. Koreska, Vienna, Austria. Filed June 5, 1962.

BLACK-O-WHITE

Priority claimed under Sec. 44(d) on Austrian application filed Mar. 27, 1962; Reg. No. 48,063, dated June 5, 1962.
For Heat-Sensitive Copying Paper.

SN 149,811. Brewer Pharmacal Engineering Corporation, Upper Darby, Pa. Filed July 26, 1962.

BREWER

For Blank Forms for Medication Records.
First use Feb. 22, 1962.

SN 159,470. The Colad Company, Inc., Buffalo, N.Y. Filed Dec. 20, 1962.

VIZ-A-BACK

For Protective Paper Book Covers.
First use Dec. 10, 1962.

SN 161,707. Harlee Manufacturing Co., Chicago, Ill. Filed Jan. 30, 1963.

tastee-freez

Owner of Reg. Nos. 588,916 and 750,695.
For Paper Napkins, Towels, Ice Cream Cone Drip Catchers, Sandwich Wrappers, Waxed Paper and Ball Point Pens.
First use 1951 on paper napkins.

SN 165,730. American Greetings Corporation, Cleveland, Ohio. Filed Apr. 1, 1963.

VOGUE

For Writing Paper and Envelopes.
First use Oct. 4, 1959.

Class 38 — Prints and Publications

SN 115,096. U.S. Industries, Inc., New York, N.Y. Filed Mar. 7, 1961.

TUTORTEXT

Owner of Reg. No. 681,855.
For Educational Texts, Pamphlets, and the Like, for Instructional Purposes.
First use Dec. 14, 1959.

SN 141,558. U.S. Industries, Inc., New York, N.Y. Filed Apr. 4, 1962.

TUTORFILM

Owner of Reg. No. 681,855.
For Motion Picture Film Used for Visual Educational Purposes.
First use in September 1960.

SN 158,799. American Education Series, Inc., Independence, Oreg., assignee of Frank F. Dinsmore II, d.b.a. American Education Series, Monmouth, Oreg. Filed Dec. 10, 1962.

AMERICAN EDUCATION SERIES

For Student Outline Desk Maps of the World, Various Continents, and Countries.
First use Nov. 13, 1962.

SN 158,926. Ojibway Press, Inc., Duluth, Minn. Filed Dec. 11, 1962.

ELECTRONIC PROCUREMENT

Owner of Reg. No. 749,943.
For Monthly Magazine.
First use April 1962.

SN 161,227. Helen Lowe Auble, d.b.a. Caribbean Publications, St. Thomas, Virgin Islands. Filed Jan. 23, 1963.

CARIBBEAN PANORAMA

For General Business and Economic Magazine Published From Time to Time in Series.
First use Oct. 1, 1962.

SN 162,270. Maxine Maddox, d.b.a. Dining in Waikiki, Honolulu, Hawaii. Filed Feb. 7, 1963.

PASSPORT TO SELECTIVE DINING

Applicant does not claim exclusive right to use the words "To Selective Dining" apart from the complete mark as shown.
For Coupon Booklet.
First use Apr. 25, 1959.
Subj. to Intf. with SN 175,672.

SN 164,339. Charles Fox, George H. Keith, and David G. Rosehill (joint venture), Berkeley, Calif. Filed Mar. 11, 1963.

TOCSIN

For Weekly Newsletter.
First use June 6, 1961.

SN 166,419. Transportation Guides, Inc., New York, N.Y. Filed Apr. 9, 1963.

OFFICIAL STEAMSHIP GUIDE

Owner of Reg. Nos. 368,346 and 688,341.
For Periodical Publication.
First use April 1933.

SN 169,038. Hiawatha Card Company, Ypsilanti, Mich. Filed May 16, 1963.

HIAWATHA

For Prints and Publications—Namely, Colored Post Cards, Colored Picture Folders, Colored Picture Albums, Colored Picture Booklets, and Lithographic Reproductions of Black and White and Colored Transparencies, Slides and Photographs.
First use on or about Jan. 1, 1950.

SN 170,912. The Institute of Electrical and Electronics Engineers, Incorporated, New York, N.Y. Filed June 13, 1963.

IEEE TRANSACTIONS

For Publications on Microwave Theory and Techniques Issued From Time to Time.
First use in January 1963.

SN 171,309. Gerald Cleveland, d.b.a. Pictographics, Arlington, Va. Filed June 19, 1963.

ETCHOGRAPH

For Photographs Having the Character or Appearance of an Etching.
First use Oct. 18, 1962.

SN 171,822. Ruth Walbridge, d.b.a. Jane Matthews, New Canaan, Conn. Filed June 25, 1963.



The portrait on the drawing is that of the applicant, whose consent is of record. Owner of Reg. No. 614,862.
For Column in Newspapers and Periodicals.
First use Apr. 25, 1963.

SN 171,823. Ruth Walbridge, d.b.a. Jane Matthews, New Canaan, Conn. Filed June 25, 1963.



The portrait on the drawing is that of the applicant, whose consent is of record. Owner of Reg. No. 614,862.
For Column in Newspapers and Periodicals.
First use Apr. 25, 1963.

SN 171,906. National Police Officers Association of America, Inc., Venice, Fla. Filed June 26, 1963.

VALOR
THE OFFICIAL POLICE REVIEW

Applicant disclaims the right to the exclusive use of the words "The Official Police Review."
For Magazine for Members of Applicant Police Association.
First use Apr. 20, 1963.

SN 173,226. Color Corporation of America, Tampa, Fla. Filed July 18, 1963.

chronodye

For Photographic Color Prints and Transparencies.
First use March 1959.

SN 173,230. Color Corporation of America, Tampa, Fla. Filed July 18, 1963.

chronodye scan

For Photographic Color Prints and Transparencies.
First use March 1959.

SN 173,243. Excello Specialty Company, Cleveland, Ohio. Filed July 18, 1963.

xlo

For Decalcomania Transfers.
First use June 24, 1963.

SN 173,694. Raytheon Company, Lexington, Mass. Filed July 24, 1963.

ELECTRONIC PROGRESS

Owner of Reg. No. 655,638.
For Periodic Publication.
First use on or about July 20, 1956.

SN 173,983. Ten Minute Reports, Inc., Rye, N.Y. Filed July 29, 1963.

THE 10 MINUTE REPORT

For Periodical Business Reports.
First use on or about May 25, 1963.

SN 174,589. Instrument Society of America, Pittsburgh, Pa. Filed Aug. 7, 1963.

ISA JOURNAL

Applicant disclaims the word "Journal" apart from the mark as shown.
For Periodical.
First use Jan. 23, 1954.

SN 174,709. Rexall Drug and Chemical Company, Los Angeles, Calif. Filed Aug. 8, 1963.

REXALLITE REPORTER

For Periodical House Organ.
First use July 1963.

SN 175,672. Passport Pax, Inc., Oakland, Calif. Filed Aug. 23, 1963.

PASSPORT PAX

For Publication Containing Coupons Redeemable for Goods or Services Such as Food, Drinks, Money, Lodging, Etc.
First use Jan. 15, 1963.
Subj. to Intf. with SN 162,270.

SN 175,703. Colonial Coverlet Guild of America, Lombard, Ill. Filed Aug. 8, 1963.



For Yearbooks.
First use Jan. 1, 1928.

SN 175,752. Halsingborgs Litografiska Aktiebolag, Halsingborg, Sweden. Filed Aug. 26, 1963.



For Books, Cutout Books, Coloring and Painting Books, Cutout Paper Dolls and Paper Toy Figures.
First use Oct. 30, 1962.

SN 176,306. Instrument Society of America, Pittsburgh, Pa. Filed Sept. 4, 1963.

ISA TRANSACTIONS

For Periodical.
First use Jan. 15, 1962.

SN 183,932. Success Motivation Institute, Inc., Waco, Tex. Filed Jan. 2, 1964.

SMI

Owner of Reg. No. 722,844.
For Educational and Training Courses Comprising Books, Booklets and Sound Recordings Pertaining Thereto.
First use at least as early as July 11, 1960.

Class 39 — Clothing

SN 132,989. Fabrini Imports, Ltd., New York, N.Y. Filed Nov. 29, 1961.

WEATHEROGUE BY FABRINI

Owner of Reg. No. 688,354.
For Raincoats, Rainwear and Jackets.
First use June 1, 1956.

SN 163,426. Sturm & Scheinberg, Inc., New York, N.Y. Filed Feb. 25, 1963.

DE LUXE

Owner of Reg. Nos. 169,494 and 544,719.
For Ladies' and Men's Garters, Boys' and Men's Suspenders, Head Bands, Shoulder Straps for Brassieres and Slips, Components for the Repair of Girdles and Brassieres.
First use May 13, 1919.

SN 163,693. Sociedad Anonima Sanilebi, Tarrasa, Barcelona, Spain. Filed Feb. 28, 1963.

RODIFLEX

Priority claimed under Sec. 44(d) on Spanish application filed Sept. 13, 1962; Reg. No. 408,231, dated Jan. 4, 1963.
For Stockings.

SN 163,836. The H. W. Gossard Company, d.b.a. The Artemis Company, St. Louis, Mo. Filed Mar. 4, 1963.

FIT-TOGETHERS

For Ladies' Slips, Half Slips, Pettipants, Pants, Gowns, Shifts, Pajamas, Peignoirs, Girdles, Pantigirdles, Foundations and Brassieres.
First use Feb. 11, 1963.

SN 166,217. Irwin B. Schwabe Company, Incorporated, New York, N.Y. Filed Apr. 5, 1963.

Ten-Twenty
1020 COLLECTION

For Boys' Shirts.
First use Mar. 25, 1963.

SN 168,630. Penron Associated Hosiery Mills, High Point, N.C. Filed May 10, 1963.

FIRST FAMILY
Hosiery
FOR YOUR FIRST FAMILY

Applicant disclaims the word "Hosiery" apart from the mark.
For Hosiery.
First use Jan. 15, 1963.

SN 170,800. American Optical Company, Southbridge, Mass. Filed June 12, 1963.



For Protective Clothing for Welders.
First use May 10, 1963.

SN 177,062. Lansdale Clothes, Incorporated, New York, N.Y. Filed Sept. 16, 1963.

LIMELIGHT

For Boys' and Men's Slacks.
First use Aug. 1, 1963.
Subj. to Intf. with SN 179,035.

SN 179,035. Fashion Made Trousers, Inc., Easton, Pa. Filed Oct. 15, 1963.



The drawing is lined for gold.
For Clothing—Namely, Trousers.
First use Sept. 13, 1963.
Subj. to Intf. with SN 177,062.

SN 179,398. Carlyle Shirt Co., Inc., New York, N.Y. Filed Oct. 21, 1963.

SLIM-LASTIC

For Shirts.
First use Oct. 1, 1963.

Class 40 — Fancy Goods, Furnishings, and Notions

SN 168,263. Aktiebolaget Fixfabriken, Goteborg, Sweden. Filed May 3, 1963.

FIXLOCK

For Snap Fasteners.
First use Aug. 29, 1962; in commerce Mar. 13, 1963.

SN 171,550. Maryon Hosiery Mill, Inc., Carrollton, Ga. Filed June 21, 1963.

POUFF

For Head Bands and Head Accessories.
First use June 7, 1963, on headbands.

SN 174,045. Pentapco, Inc., Elizabeth, N.J. Filed July 30, 1963.

SUEDE-X

For Patches for Clothing.
First use July 22, 1963.

SN 174,858. Hattie Lorena Forsee, Vallejo, Calif. Filed Aug. 12, 1963.

EZE-GLIDE

For Items Designed and Used To Protect Curtains, Drapes, and the Like, Being Slipped Over the Open Ends of Curtain Rods.
First use Aug. 26, 1955.

SN 180,099. I. B. Kleinert Rubber Company, New York, N.Y. Filed Oct. 30, 1963.

ROYALE

For Dress Shields, Dress Shield Liners, Dress Shield Garments and Dress Shield Halters.
First use Apr. 8, 1963.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 127,199. Carolyn Chenilles, Inc., New York, N.Y. Filed Sept. 5, 1961.

LADY CAROLYN

Owner of Reg. Nos. 645,802 and 645,803.
For Woven Bedspreads.
First use Aug. 15, 1955.

SN 163,933. Collins & Aikman Corporation, New York, N.Y. Filed Mar. 5, 1963.

POOLTEX

For Woven Plastic Fabric Used for Swimming and Wading Pool Covers, Golf Nets, Shading Agricultural Products, Patios and Boat Decks of Ships and the Like.
First use Mar. 21, 1958.

SN 170,666. Pegulan-Werke Aktiengesellschaft, Frankenthal/Pfalz, Germany. Filed June 10, 1963.

PEGULAN

Owner of German Reg. No. 647,023, dated Oct. 31, 1953.
For Lightweight Vinyl Sheeting, With or Without a Composition Backing, Which Is Sold as a Partly Finished Product for the Further Production of Lampshades, Rainwear, Curtains, Table-Cloths, and the Like.
First use Jan. 1, 1951; in commerce Nov. 9, 1955.

SN 176,171. Dan River Mills, Incorporated, Danville, Va. Filed Sept. 3, 1963.

OXSPORT

For Textile Fabrics in the Piece of Cotton or Synthetic Fibers or Any Combinations Thereof.
First use July 16, 1963.

SN 176,419. Beaunit Corporation, New York, N.Y. Filed Sept. 6, 1963.

Thermastar

For 100% Cotton Waffle Weave Fabric.
First use on or about Aug. 6, 1963.

Class 43 — Thread and Yarn

SN 141,152. Emile Bernat & Sons Co., Uxbridge, Mass. Filed Mar. 30, 1962.

GLENSPUN

Applicant claims use for the area comprising the entire United States to and for the retail trade.
For Hand Knitting Yarn.
First use about July 1954.
Subj. to concurrent use proceeding with Reg. Nos. 703,007 and 720,713.

Class 44 — Dental, Medical, and Surgical Appliances

SN 146,284. F & M Scientific Corporation, Near Avondale, Pa. Filed June 6, 1962.

F & M

For Gas Chromatographs and Parts Therefor for Use in Medical Applications.
First use May 1959.

SN 169,626. Fuller Pharmaceutical Company, Minneapolis, Minn. Filed May 24, 1963.

UNIGARD

For Absorbent Dressings, Belts Used To Hold Absorbent Dressings in Place and Disposable Bags for Receiving Bodily Discharges.
First use Apr. 23, 1963.

Class 45 — Soft Drinks and Carbonated Waters

SN 152,202. Cantrell & Cochrane Ltd., Inc., d.b.a. C & C Wilshire Club Beverage Co., New York, N.Y. Filed Aug. 30, 1962.

C & C
WILSHIRE CLUB
7-11

Owner of Reg. Nos. 115,068, 639,434 and others.
For Carbonated Non-Alcoholic Soft Drinks.
First use April 1937.

SN 165,617. Pa-Poose Products Co., Inc., Gretna, La. Filed Mar. 28, 1963.

ZATARAIN'S

Owner of Reg. No. 505,877.
For Root Beer Extract for Making Maltless Soft Drinks.
First use Sept. 4, 1943.

Class 46 — Foods and Ingredients of Foods

SN 126,202. American Whipped Products, Inc., Glendale, N.Y. Filed Aug. 18, 1961.

WHIPURE

For Whipped Cream Substitute in Unwhipped Form Ready To Be Whipped.
First use Mar. 14, 1961.

SN 129,638. The South Shore Packing Corporation, Vermilion, Ohio. Filed Oct. 10, 1961.

SCHOONERS

For Food Products—Namely, Bottled Olives.
First use Apr. 4, 1961.

SN 138,343. Jos. A. Zaloom & Co., Inc., New York, N.Y. Filed Feb. 20, 1962.

ZALOOM
STAR

For Prepared, Roasted, Salted and Otherwise Processed Edible Nuts and Seeds.
First use prior to the year 1956; Jan. 1, 1906, as to "Zaloom."

SN 138,344. Jos. A. Zaloom & Co., Inc., New York, N.Y. Filed Feb. 20, 1962.

ZALOOM

For Prepared, Roasted, Salted and Otherwise Processed Edible Nuts and Seeds.
First use prior to the year 1956; Jan. 1, 1906, as to "Zaloom."

SN 140,693. Hooton Chocolate Company, Newark, N.J. Filed Mar. 26, 1962.

COATSWELL

For Ice Cream Flavor Coating.
First use 1950.

SN 140,694. Hooton Chocolate Company, Newark, N.J. Filed Mar. 26, 1962.

FLAVORCOAT

For Ice Cream Flavor Coating.
First use 1950.

SN 141,514. William H. Findlesen, Vergennes, Vt. Filed Apr. 4, 1962.

YANKEE KINGDOM ORCHARDS

No claim of exclusive right is made to the representation of the apple in the drawing as a showing of the goods herein.
For Fresh Apples.
First use Oct 1, 1961.

SN 149,521. Angelus Frozen Foods, Los Angeles, Calif. Filed July 23, 1962.

ANGELUS

For Frozen Fruits and Vegetables.
First use May 1955.

SN 151,523. Poul-An Laboratories, Inc., Kansas City, Mo. Filed Aug. 20, 1962.

SILO FRESH

For Ensilage Preservative.
First use July 26, 1962.

SN 152,081. George Payne & Co., Limited, London, England. Filed Aug. 28, 1962.

POPPETS

Owner of British Reg. No. 808,456, dated July 20, 1960.
For Candies.

SN 153,146. Ateeco, Inc., Shenandoah, Pa. Filed Sept. 14, 1962.

Mrs. T's
FRY-A-PIE

Owner of Reg. No. 728,072.
For Fruit-Filled Turnovers.
First use July 30, 1962.

SN 155,520. S. S. Pierce Co., Boston, Mass. Filed Oct. 19, 1962.

RED LABEL

No rights are claimed to a label colored red. Owner of Reg. Nos. 181,676 and 223,788.
For Preserved Fruits, Canned Fish, Canned Shrimp, Canned Shell Fish, Canned Meats, Smoked Meats, Fruit Preserves and Marmalades, Teas, Coffees, Canned Soups, Spices, Ice Cream, Ice Cream Sauces and Flavored Syrup Toppings, Frozen Meats, Nut Meats and Salted Nuts, Cream of Tartar, Fruit Juices, Table Syrups, Breads, Butter, Nut Butter Spreads, Rice, Cheese, Cheese Dips and Cheese Spreads, Welsh Rarebit; Chinese Foods—Namely, Chow Mein, Chop Suey, Bamboo Shoots, Bean Sprouts, Noodles, Duck Sauce, and Soy Sauce, Instant Cocoa, Cocoanut, French Style Dessert Cakes—Namely, Coffee, Brandy and Rum Flavored Babas, Crepes Suzette and Crepes Amandine, Noodle Nests, Popping Corn, Canned Potato Sticks, Fresh Eggs, Bouillon Cubes, Almond Paste, Flour and Flour Mixes, Food Starches, Dried Fruits, Honey and Honey Spread, Canned and Raw Macaroni, Canned Lasagne, Canned Ravioli, Canned and Raw Spaghetti, Canned Hors d'Oeuvres, Canned Noodles With Meat, Canned Stews, Evaporated Milk, Mincemeat, Olives, Pickles, Relishes, Rice, Plum, and Indian Puddings, Salt, Cooking Sauces, Herbs, Chili Powder Garlic Powder, Onion Powder, Poultry Seasoning, Canned Chowders, Vegetable Juices, Baking Chocolate, Fruit and Pumpkin Pie and Pastry Fillings, Cake, Biscuit and Muffin Mixes, Gelatine, Prepared Mustard and Pudding Powders.
First use 1887 on ginger.
Subj. to Intf. with SN 171,090.

SN 156,802. Joseph F. De Frates, d.b.a. Joseph F. De Frates Co., Springfield, Ill. Filed Nov. 7, 1962.

CHILLI MAN
HOT TAMALE CONE

The words "Chilli," "Hot Chilli," and "Hot Tamale Cone" are disclaimed. Owner of Reg. No. 579,005.
For Combination Package Consisting of a Chilli Hot Dog Sauce, a Hot Tamale Cone Mix, and Edible Cake Cones Which Are Used Together To Make the Complete Product Known as a Hot Tamale Cone.
First use May 21, 1962.

SN 158,031. Thomas & Howard Company, Incorporated, Charlotte, N.C. Filed Nov. 27, 1962.



The drawing is lined for the colors blue and yellow, but no claim is made to such colors. The name "Tommy Tucker" and the representation of the boy do not identify any particular living individual.

For Mayonnaise, Salad Dressing, French Dressing, Peanut Butter, Sandwich Spread, Vegetable Shortening and Vegetable Oils.

First use July 1, 1958.

SN 158,942. National Tea Co., Chicago, Ill. Filed Dec. 11, 1962.

HILLSIDE

Owner of Reg. Nos. 510,537 and 653,502.
For Coffee and Evaporated Milk.
First use Aug. 30, 1962, on coffee.

SN 159,338. Dole Corporation, d.b.a. Hawaiian Pineapple Company, San Jose, Calif. Filed Dec. 18, 1962.

FRUIT FREEZE

No claim is made to the word "Fruit" apart from the mark as shown.

For Canned Fruit Juice Food Product in the Nature of a Liquid Preparation for Use in Making a Frozen Confection Similar to a Fruit Sherbet.

First use Dec. 4, 1962.

SN 162,371. Tone Brothers, Des Moines, Iowa. Filed Feb. 8, 1963.

TONE'S

For Spices, Tea, Coffee, Food Colors, Pure Food Flavors (Extracts), Imitation Flavors, and Cake Decorations.

First use March 1873.

SN 162,822. Chinese Trading Company, Chicago, Ill. Filed Feb. 15, 1963.



The wording "Ming Foy" is not the name of any particular individual and the design representation of a coolie girl is entirely fanciful.

For Soy Sauce, Bead Molasses, Chop Suey Vegetables, Bean Sprouts, Chow Mein Noodles and Cookies.

First use Aug. 27, 1934.

SN 162,955. The Kansas Wholesale Grocery Company, Coffeyville, Kans. Filed Feb. 18, 1963.

Can-d-lite

For Canned Vegetables, Pork and Beans, Spaghetti, Tomato Catsup, Tomato Juice, Pickles, Mustard, Preserves and Jellies.

First use during February 1953.

SN 163,319. Central Cooperative Turkey Producers, Ellsworth, Iowa. Filed Feb. 25, 1963.

BREST O' GOLD

For Frozen Turkeys.
First use July 6, 1957.

SN 163,320. Columbia River Orchards Company, Wenatchee, Wash. Filed Feb. 25, 1963.

C·R·O

For Fresh Fruit.
First use Dec. 1, 1962.

SN 164,088. Alemagna Panettoni di Gioachino Alemagna & C., Milan, Italy. Filed Mar. 6, 1963.



No claim of exclusive right is made to the word "Panettone" as the name of the goods herein.

For Cakes.

First use January 1931; in commerce October 1952.

SN 164,309. Ballas Egg Products Company, Inc., Zanesville, Ohio. Filed Mar. 11, 1963.

FORTEX

For Frozen Eggs and Egg Solids.
First use May 1954.

SN 164,461. Pa-Poose Products Co., Inc., Gretna, La. Filed Mar. 12, 1963.

HOT STUF

For Louisiana Red Hot Pepper Sauce.
First use Jan. 1, 1911.

SN 164,462. Pa-Poose Products Co., Inc., Gretna, La. Filed Mar. 12, 1963.

GARVEY'S

For Tampico Hot Sauce, Pickled Peppers in Vinegar, Cortido Peppers, Worcestershire Sauce, Soy Sauce, Meatless Brown Gravy Sauce, Italian Peppers, Hot and Creole Mustard, Spices, Food Flavoring Extracts, Vinegar and Pickled Onions.

First use Jan. 1, 1911.

SN 164,863. Manley, Inc., Kansas City, Mo. Filed Mar. 18, 1963.



Owner of Reg. Nos. 581,743, 633,273, and others.
For Candied Popcorn.
First use October 1958.

SN 165,618. Pa-Poose Products Co., Inc., Gretna, La. Filed Mar. 28, 1963.

ZATARAIN'S

Owner of Reg. No. 505,877.

For Olives, Maraschino Cherries, Cocktail Onions, Remoulade Sauce, Mustard, Food Flavoring Syrups and Extracts, Spices, Olive Oil for Culinary Use, Bottled Peppers and Pepper Sauce, Capers, Sauces for Meats, Catsup, Mayonnaise, Salad Dressings, Vinegar, Prepared Horseradish, Pickles and Pickle Relishes.

First use Jan. 1, 1948.

SN 166,147. American Dairy Queen Corporation, Moline, Ill. Filed Apr. 5, 1963.

DAIRY QUEEN

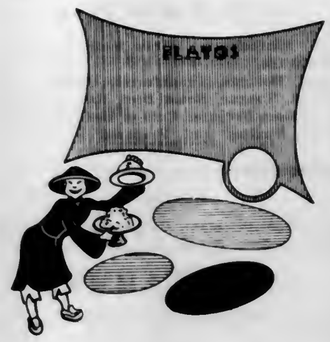
Owner of Reg. Nos. 225,838 and 249,120.
For Condensed Milk.
First use Oct. 15, 1926.

SN 166,148. American Dairy Queen Corporation, Moline, Ill. Filed Apr. 5, 1963.

DAIRY QUEEN

Owner of Reg. Nos. 225,838 and 249,120.
For Evaporated Milk.
First use Apr. 21, 1928.

SN 166,272. Flavo-Rite Foods, Inc., New York, N.Y. Filed Apr. 8, 1963.



The drawing is lined for red and blue. Owner of Reg. No. 616,941.

For Chow Mein and Chow Mein Vegetables.

First use in March 1961.

SN 168,154. M. Caratan, Inc., d.b.a. M. Caratan, Delano, Calif. Filed May 6, 1963.

OLYMPIC

For Fresh Peaches and Grapes.
First use in the year 1926.

SN 169,691. Benner Tea Company, Burlington, Iowa. Filed May 27, 1963.



For Fluid Milk, Margarine, Salad Dressing, Catsup, Imitation Vanilla Flavoring Extract, Spaghetti, Tomato Juice, Shortening Composed of Animal and Vegetable Fat, Potato Chips, Pork and Beans, Hominy and Canned Vegetables.

First use 1957; 1931 as to "Cascade Inn" on imitation vanilla flavoring extract.

SN 170,059. Frozen Institutional Sales Co-Op, Inc., d.b.a. FISCO, San Francisco, Calif. Filed May 31, 1963.



For Frozen Fruits and Vegetables, Frozen Fruit Concentrates, and Whipped Toppings for Desserts.

First use Apr. 4, 1963, on frozen vegetables.

SN 171,685. Mizrach Kosher Provisions, Inc., New York, N.Y. Filed June 24, 1963.

MIZRACH

The word "Mizrach" is Hebrew meaning "east." Owner of Reg. No. 660,186.

For Salami, Bologna, Frankfurters, Corned Beef, Rolled Beef, Pastrami, Tongue, Roast Beef, Raw Prepared Cuts of Beef, Fresh Frozen Prepared Cuts of Beef, Raw Poultry, Prepared Frozen Poultry and Prepared Frozen Eviscerated Poultry.

First use July 7, 1954.

SN 172,346. The Southland Corporation, d.b.a. Oak Farms Dairies, Dallas, Tex. Filed July 2, 1963.

OAK FARMS

For Yorkshire Dressing, Lemon Juice Food Drink, and Margarine.

First use Aug. 31, 1955.

SN 172,535. Sidney Wanzer & Sons, Inc., d.b.a. Wanzer's, Chicago, Ill. Filed July 5, 1963.

SILVER SPOON

For Ice Cream.

First use May 22, 1963.

SN 172,754. Meiji Shoji Kabushiki Kaisha, Chuo-ku, Tokyo, Japan. Filed July 10, 1963.



Applicant claims no exclusivve rights in the oyster design appearing in the trademark apart from the mark as shown.

For Canned Smoked Oysters.

First use December 1962; in commerce December 1962.

SN 173,811. Beatrice Foods Co., Chicago, Ill. Filed July 26, 1963.

BOKOO

For Chocolate, Caramel and Hazelnut Flavored Milk Product Custard Desserts.

First use July 17, 1963.

SN 173,954. The Pillsbury Company, Minneapolis, Minn. Filed July 29, 1963.

PAN WHIZ

For Pan Release Agent of a Vegetable Oil Nature for Cooking Utensils.

First use May 6, 1963.

SN 174,074. Bernan Food Products Co., Newark, N.J. Filed July 31, 1963.

BARNEY'S

For Canned Prepared Foods—Namely, Stuffed Cabbage (With Meat), Stuffed Green Peppers (With Meat), Chicken-With-Rice Dinner and Meat Balls.

First use August 1959 on stuffed cabbage.

SN 174,352. Dole Corporation, San Jose, Calif. Filed Aug. 5, 1963.

PINKY DRINK

No claim is made to the word "Drink" apart from the mark as shown.

For Canned Fruit Juice Food Drink.

First use July 23, 1963.

SN 174,835. Contact International, Inc., Chicago, Ill. Filed Aug. 12, 1963.

FLAMBÉ INTERNATIONALE

For Liquid Product Used in the Preparation of Flaming Dishes of Foods, the Principal Ingredients of Which Are Alcohol, Oil of Lemon and Propylene Glycol.

First use on or about Aug. 13, 1962.

SN 175,275. Good Humor Corporation, Englewood Cliff, N.J. Filed Aug. 19, 1963.

OUTSIDE-INSIDE

For Frozen Confection on a Stick.

First use July 31, 1963.

SN 175,384. Cafe Lite Inc., Buffalo, N.Y. Filed Aug. 20, 1963.

CAFE LITE

Applicant disclaims use of the word "Cafe" apart from the complete mark "Cafe Lite."

For Edible Oleaginous Emulsion for Use as Additive to Coffee Beverage To Enrich Its Flavor and Modify Its Color.

First use in About May 1962.

SN 175,429. Ocean Spray Cranberries, Inc., Hanson, Mass. Filed Aug. 20, 1963.

CRANAPPLE

For Canned Food Beverage Consisting of Apple Juice, Cranberry Juice and Lesser Ingredients.

First use Aug. 12, 1963.

SN 175,570. Fries & Fries, Inc., Cincinnati, Ohio. Filed Aug. 22, 1963.

DRI-CARB

For Dry Leavening Agent, Partially or Completely Protected From Interaction With Certain Other Ingredients in Edible Mix.

First use Jan. 4, 1963.

SN 175,790. Prince Macaroni Manufacturing Company, Lowell, Mass. Filed Aug. 26, 1963.

SQUARONI

For Alimentary Paste Food Product—Namely, a Packaged Dinner of Spaghetti, Meat Sauce, and Cheese.

First use June 3, 1963.

SN 176,679. William H. Singer, d.b.a. Singer Brokerage Company, and as Wm. H. Singer, Cheltenham, Pa. Filed Sept. 10, 1963.

KOVENTRY

For Canned Salmon.

First use Aug. 22, 1963.

SN 117,000. Celentano Bros., Inc., Newark, N.J. Filed Sept. 16, 1963.

CELENTANO

For Ravioli, Cavatelli, Manicotti, Eggplant Parmigiano, Tagliatelli, Marcaroni Shells Stuffed With Cheese Mix, Lasagne, and Pizza, All the Above Being Meatless, Pre-Cooked and Sold in Frozen Form.

First use June 1953.

SN 177,346. Forest Laboratories, Inc., Brooklyn, N.Y. Filed Sept. 19, 1963.

DEMITASSE

For Low Calorie Coffee Tablet.

First use September 1962.

SN 177,347. Forest Laboratories, Inc., Brooklyn, N.Y. Filed Sept. 19, 1963.

SWEET-NUF

For Artificial Food Sweetener and Sugar Substitute.

First use September 1962.

SN 177,348. Forest Laboratories, Inc., Brooklyn, N.Y. Filed Sept. 19, 1963.

SWEET-EZE

For Artificial Food Sweetener and Sugar Substitute.

First use September 1962.

SN 177,662. Stroehmann Brothers Company, Williamsport, Pa. Filed Sept. 24, 1963.



The drawing is lined for yellow, red, and blue.

For Bakery Products—Namely, Bread.

First use Sept. 12, 1963.

SN 178,218. C. J. Patterson Company, Kansas City, Mo. Filed Oct. 2, 1963.

ROUND 'WICH

The word "Round" is disclaimed except for its appearance in the mark as shown.

For Bread.

First use Sept. 23, 1963.

SN 178,357. Klein Chocolate Company, Elizabethtown, Pa. Filed Oct. 4, 1963.



Owner of Reg. No. 657,211.

For Chocolate Candies, Cooking and Baking Chocolate, Chocolate Coating, Chocolate Liquors for Commercial Use, and Cocoa Powders.

First use Aug. 12, 1963.

SN 178,506. Valley Vegetable Shippers, Inc., Camarillo, Calif. Filed Oct. 7, 1963.

WANTED

For Fresh Vegetables.

First use at least as early as 1958.

SN 178,652. Sternco Industries, Inc., Allendale, N.J. Filed Oct. 9, 1963.

PERMA LIFE

Owner of Reg. Nos. 663,685 and 673,971.

For Pet Foods—Namely, Feeds for Fish and Animal Pets, Liquid Color Food for Brightening the Color of Fish, Snacks and Candies for Animal Pets; and Turtle Food.

First use Jan. 4, 1956.

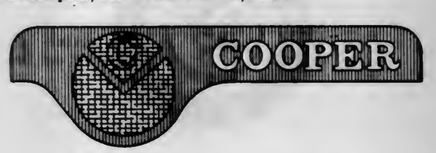
SN 181,067. Red Arrow Products Corporation, Milwaukee, Wis. Filed Nov. 13, 1963.

SOLU-SMOKE

For Aqueous Solution of Natural Wood Smoke Flavors for Food.

First use Oct. 18, 1963.

SN 181,277. W. S. Pope & Son, d.b.a. W. S. Pope & Sons, Philadelphia, Pa. Filed Nov. 15, 1963.



The drawing is lined for the colors red and yellow. Owner of Reg. No. 366,720.

For Cheese.

First use Nov. 15, 1961.

SN 181,354. Harry and David, Medford, Oreg. Filed Nov. 18, 1963.



The portraits comprising the mark are likenesses of Harry and David Holmes, both now deceased.
For Fresh and Canned Fruit, Fruit Preserves, Syrups and Salad Dressings.
First use Dec. 15, 1959.

SN 181,591. Delta Industries, Inc., Houston, Tex. Filed Nov. 6, 1963.

DELTRIX

For Livestock Feed.
First use July 10, 1963.

SN 181,663. C. F. Mueller Company, Jersey City, N.J. Filed Nov. 21, 1963.



For Noodles and Analogous Alimentary Pastes.
First use on or about Oct. 4, 1963.

SN 181,673. A. W. Perdue & Son, Inc., Salisbury, Md. Filed Nov. 21, 1963.



For Feeds for Chickens, Turkeys, Hogs, Pigeons and Rabbits.
First use 1951.

SN 181,820. General Mills, Inc., Minneapolis, Minn. Filed Nov. 25, 1963.

GRIDDLE-QUICK

Owner of Reg. Nos. 289,319, 295,373, and 295,827.
For Pancake Mix.
First use Nov. 22, 1963.

SN 182,252. Drug Fair-Community Drug Co., Inc., d.b.a. Drug Fair, Alexandria, Va. Filed Dec. 3, 1963.

BUCKINGHAM

For Ice Cream.
First use November 1962.
Subj. to Intf. with SN 187,991.

SN 187,991. Buckingham Super Markets, Inc., Washington, D.C. Filed Mar. 5, 1964.

BUCKINGHAM

For Fresh Eggs, Mayonnaise, Salad Dressing, Bread, Coffee, Fresh Sausage Meat and Sandwich Spread.
First use 1950.
Subj. to Intf. with SN 182,252.

Class 47 — Wines

SN 166,416. Soc. Com. Abel Pereira da Fonseca (S.A.R.L.), Lisbon, Portugal. Filed Apr. 9, 1963.

SABER

For Wine.
First use Aug. 15, 1962; in commerce Aug. 15, 1962.

SN 171,984. Henkell & Co., Wiesbaden-Biebrich, Germany. Filed June 27, 1963.

PICCOLO

Owner of U.S. Reg. No. 343,259.
For Sparkling Wine.
First use Oct. 1, 1935; in commerce 1955.

SN 175,340. Miguel Torres, Villafranca del Panades, Spain. Filed Aug. 19, 1963.

SANGRE DE TORO

The literal English translation of "Sangre de Toro" is "bulls' blood." Owner of Spanish Reg. No. 280,818, dated Dec. 17, 1954.
For Wines.

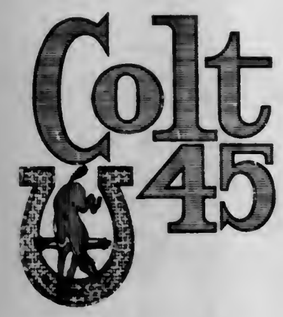
Class 48 — Malt Beverages and Liquors

SN 143,009. Century Brewery Corp., Norfolk, Va. Filed Apr. 25, 1962.

EMBASSY CLUB

Owner of Reg. No. 299,144.
For Beer.
First use 1957.

SN 175,859. The National Brewing Co., Baltimore, Md. Filed Aug. 27, 1963.



The drawing is lined for blue, gold and red. Owner of Reg. No. 714,237.
For Malt Liquor.
First use May 2, 1963.

Class 49 — Distilled Alcoholic Liquors

SN 155,190. Puerto Rico Distillers, Inc., d.b.a. Barcelo Marques & Co., Arecibo, and Camuy, Puerto Rico. Filed Oct. 15, 1962.

OLD SAN JUAN

For Rum.
First use July 26, 1962; in commerce Sept. 21, 1962.

SN 155,191. Puerto Rico Distillers, Inc., d.b.a. Barcelo Marques & Co., Arecibo, and Camuy, Puerto Rico. Filed Oct. 15, 1962.

OLD SAN JUAN



For Rum.
First use July 26, 1962; in commerce Sept. 21, 1962.

SN 159,392. Diego Zamora Conesa y Cia., S.R.C., Murcia, Spain. Filed May 22, 1963.

GREEN FISH

Owner of Spanish Reg. No. 393,189, dated May 17, 1962.
For Gin.

SN 176,663. H. C. MacPherson, d.b.a. MacPherson & Company and A. & B. MacKay, Ltd., San Francisco, Calif. Filed Sept. 10, 1963.



Owner of Reg. No. 373,191.
For Scotch Whisky.
First use 1934.

Class 50 — Merchandise Not Otherwise Classified

SN 129,013. Ketch-All Company, San Diego, Calif. Filed Oct. 2, 1961.

KETCH ALL

For Device Comprising a Hollow Handle With a Rope or Wire Extended Thereon for Forming a Loop at One End for Restraining Animals, Fish and Birds.
First use June 27, 1952.

SN 153,613. Addlife Inc., d.b.a. Addlife's, New York, N.Y. Filed Sept. 21, 1962.

IMPERIAL

For Aquariums, Aquarium Reflectors, Aquarium Heaters, Aquarium Stands, Aquarium Pumps and Aquarium Filters, Sometimes Sold as a Unit and Also Sold Separately.
First use Apr. 6, 1962.

SN 154,479. Cue Industries, Inc., Chicago, Ill. Filed Oct. 4, 1962.

SIGN-O-MATIC

For Plastic Visual Sign Kit Comprising a Mounting Panel and Individual Characters of Indicia Adapted To Be Installed on Said Panel and Sold as Such.
First use on or about Sept. 24, 1962.

SN 155,161. Harold Leonard & Co. Inc., New York, N.Y. Filed Oct. 15, 1962.

Pixie Pix

The term "Pix" is disclaimed apart from the mark shown.
For Ornamental Picks for Use in Handling Hors d'Oeuvers, Cocktail Snacks, Etc.
First use Sept. 20, 1962.

SN 174,076. The Brewer-Titchener Corporation, Cortland, N.Y. Filed July 31, 1963.

CADE-MASTER

For Road, Street and Industrial Barricade Support.
First use on or about July 12, 1963.

SN 175,219. Silverlith Corporation., Edmonston, Md. Filed Aug. 16, 1963.

SILVERLITH

For Printing Plates, Including Grained or Smooth Printing Plates, Pre-Sensitized Printing Plates and Pre-Cut Printing Plates Suitable for Use in Lithography.
First use Dec. 6, 1961.

SN 176,772. Avery Adhesive Products, Inc., San Marino, Calif. Filed Sept. 11, 1963.

FASSON

Owner of Reg. No. 612,575.
For Flexible or Rigid Sheeting.
First use May 22, 1963.

SN 176,966. Sternco Industries, Inc., Allendale, N.J. Filed Sept. 13, 1963.

LONGLIFE

Owner of Reg. Nos. 674,270 and 764,547.
For Sea Shells for Aquariums.
First use May 6, 1963.

SN 180,340. United States Crown Corporation, Saddle Brook, N.J. Filed Nov. 1, 1963.

U.S.C.

For Bottle Caps.
First use Oct. 1, 1962.

SN 180,471. Vendadco, Inc., Fort Lauderdale, Fla. Filed Nov. 4, 1963.

V E N D A D C O

For Frames for Display Advertising.
First use July 11, 1963.

Class 51 — Cosmetics and Toilet Preparations

SN 123,495. Physico-Chemical Processes Ltd., London, England. Filed July 6, 1961.

MILLIONAIRE

Priority claimed under Sec. 44(d) on British Reg. No. 821,633, dated June 7, 1961.
For Beauty Creams, Perfumes, Hair Lotions, and Dentifrices.

SN 123,496. Physico-Chemical Processes Ltd., London, England. Filed July 6, 1961.

MILLIONAIRESS

Priority claimed under Sec. 44(d) on British Reg. No. 820,148, dated Apr. 28, 1961.
For Beauty Creams, Perfumes, Hair Lotions, and Dentifrices.

SN 145,746. Mary Lynne Weenink, d.b.a. Mary Lynne, Ravenna, Ohio. Filed May 29, 1962.

CLEO'S KISS

For Perfume.
First use Nov. 27, 1950.
Subj. to Intf. with SN 138,865.

SN 157,364. Gaba Ltd., Basel, Switzerland. Filed June 6, 1963.

ARONAL

Owner of Swiss Reg. No. 43,626, dated Mar. 27, 1919.
For Dentifrice.

SN 161,903. Rudolph J. Preziosi, d.b.a. Gerard Products Co., Long Island City, N.Y. Filed Feb. 1, 1963.

MAN'S MAN

For Men's Toilet Preparations—Namely, Cologne.
First use Jan. 31, 1963.

SN 167,597. American Hygienic Laboratories, Inc., Miami Beach, Fla. Filed Apr. 26, 1963.

MASCAROFF

For Pads for Removing Mascara.
First use Apr. 6, 1961.

SN 167,676. Haugron Cientifical, S.A., Barcelona, Spain. Filed Apr. 25, 1963.

geli Floïd

Owner of Spanish Reg. No. 378,778, dated Oct. 5, 1962.
For Toilet Goods—Namely, Essences, Creams, Cologne Water, Lotions, Powders, Rouge, Enamels for the Nails, Pencils for the Lips, Eyes, Eyebrows and Eyelids, and Dentifrices.

SN 167,713. Elizabeth of Sweden, Haledon, N.J. Filed Apr. 29, 1963.

BIOL GELÈ

For Face and Body Lotion.
First use Jan. 15, 1962.

SN 169,116. Demert & Dougherty, Inc., Chicago, Ill. Filed May 17, 1963.

STAY SO

For Pressurized Hair Spray.
First use on or about Apr. 18, 1963.

SN 170,082. Luzier Incorporated, Kansas City, Mo. Filed May 31, 1963.

THROAT MAGIC

Applicant disclaims the word "Throat" apart from the mark as shown.
For External Lotion or Lubricant for the Throat Area.
First use Jan. 31, 1963.

SN 170,219. Rilling Dermetics Company, Bridgeport, Conn. Filed June 3, 1963.



For Toilet Preparations—Namely, Emulsion for Cleansing the Skin, Blend of Oils for Stimulating the Skin, Sun and Wind Protective Creme, a Lotion To Be Used as Skin Antiseptic, Hand Creme, Body Creme, Face Powder, Lipstick, Face Rouge, Eye Shadow, Mascara, Eyelid Liner, Eyebrow Pencil, Liquid Skin Foundation, Cologne, and Bath Oil Preparation.
First use Jan. 3, 1963.

SN 171,681. McKesson & Robbins, Incorporated, New York, N.Y. Filed June 24, 1963.

MC MK

Owner of Reg. Nos. 718,689 and 719,893.
For Cosmetic Preparations, Perfumery, and Dentifrices.
First use May 20, 1960.

SN 173,156. Jean Despres, Neuilly-sur-Seine (Seine), France. Filed July 17, 1963.

BAL A VERSAILLES

Owner of Rrench Reg. No. 482,439, dated Aug. 20, 1959 (Paris); Natl. Inst. No. 130,733.
For Perfume, Toilet Water, Cosmetic Lotions for the Skin and Hair, Rouge, and Dentifrices.

SN 174,671. Lander Co. Inc., d.b.a. Lander, New York, N.Y. Filed Aug. 8, 1963.

JOLLY NIGHT

For Perfumes and Cologne.
First use June 17, 1948.

SN 175,766. F. J. Lawrence Co., Montclair, N.J. Filed Aug. 26, 1963.

CROSSBOW

For Shaving Lotion, Deodorant, Talcum, and Cologne.
First use Apr. 17, 1963, on shaving lotion.

SN 176,874. Avon Products, Inc., New York, N.Y. Filed Sept. 13, 1963.

HOME SALON

For Creme Hair Rinse, Hair Spray and Hair Dressing.
First use July 23, 1963.

SN 177,149. Avon Products, Inc., New York, N.Y. Filed Sept. 17, 1963.

DOUBLE CLEEN

For Tooth Paste.
First use Sept. 4, 1963.

SN 177,150. Avon Products, Inc., New York, N.Y. Filed Sept. 17, 1963.

CANDID

For Cologne.
First use Sept. 6, 1963.

SN 177,184. The Nestle Lemur Company, d.b.a. Irresistable, New York, N.Y. Filed Sept. 17, 1963.

VIVACIOUS

For Perfume.
First use Sept. 9, 1963.

SN 177,296. Rilling Dermetics Company, Bridgeport, Conn. Filed Sept. 18, 1963.

IMPETUOUS

For Bath Perfume and Dusting Powder.
First use Aug. 23, 1963.

SN 177,297. Rilling Dermetics Company, Bridgeport, Conn. Filed Sept. 18, 1963.

SMOOTH TOUCH

For Body Lotion.
First use Aug. 19, 1963.

SN 177,567. J. Strickland & Co., Memphis, Tenn. Filed Sept. 23, 1963.

ROYAL CROWN

Owner of Reg. Nos. 351,200, 754,319, and others.
For Shaving Powder (Depilatory).
First use Sept. 6, 1963.

SN 177,568. J. Strickland & Co., Memphis, Tenn. Filed Sept. 23, 1963.

JERLON

Owner of Reg. No. 578,288.
For Brilliantine With Lanolin, Hair Tonic With Lanolin and Rose Hair Dressing With Lanolin.
First use June 13, 1963.

Class 52 — Detergents and Soaps

SN 148,035. Household Cleansers Limited, Toronto, Ontario, Canada. Filed June 29, 1962.

JETS

For Pads of Steel Wool Impregnated With a Cleansing Material.
First use July 15, 1961; in commerce June 16, 1962.

SN 158,958. Ted Brown Sales Co., Stafford, Tex. Filed Dec. 12, 1962.

Rau's
LAZYMANS' CLEANER

No claim is made to the word "Cleaner" apart from the mark as shown.
For Chemical Compositions To Remove Mildew, Fungus and Stains, From the Result of Smog, From Building Walls and Similar Surfaces.
First use Sept. 1, 1962.

SN 166,404. Plunkett Chemical Company, Chicago, Ill. Filed Apr. 9, 1963.

PC-430

Owner of Reg. Nos. 395,666, 396,320, and 746,351.
For Cleaning, Disinfecting and Deodorizing Preparation for Use in Toilet Bowls and Urinals.
First use Feb. 19, 1963.

SN 169,117. Dixo Company, Inc., Rochelle Park, N.J. Filed May 17, 1963.

DIXO

For Cleaning Compositions for the Textile Industry—Namely, Wet Cleaner, Concentrated Detergents, Dry Cleaning Concentrate, Dry or Wet Spotting Agents, Lipstick Removing Preparation; Grease, Oil and Paint Removing Compositions; Dry Spotting Fluid, Lint Removing Preparation, Liquid Stripping Agent; Compound Spotting Agent for Removing Inks, Dyes and Tannin Stains; and Preparations for Removing Glue and Lacquer Stains.
First use Jan. 4, 1929.

SN 172,778. Ros, Inc., Rydal, Pa. Filed July 10, 1963.

GOBI

For Waterless Hair and Skin Cleansing Preparation.
First use June 21, 1963.

SN 175,159. H. E. Butt Grocery Company, d.b.a. H.E.B. Food Stores, Corpus Christi, Tex. Filed Aug. 16, 1963.

SILVEX

Owner of Reg. No. 753,186.
For All Purpose Detergent.
First use Jan. 21, 1963.

SN 175,711. Armour and Company, Chicago, Ill. Filed Aug. 26, 1963.

MONDIAL

Owner of Reg. Nos. 549,768, 731,288, and others.
For Bath and Toilet Soap.
First use Oct. 9, 1962.

SN 176,487. Winfield Brooks Company, Inc., Woburn, Mass. Filed Sept. 9, 1963.

SILVER SONIC

No claim is made to the word "Silver" apart from the mark as shown.
For Silverware Cleaner.
First use Mar. 27, 1963.

SN 176,734. Hillyard Enterprises, Inc., St. Joseph, Mo., by change of name from Hillyard Chemical Company, St. Joseph, Mo. Filed Sept. 11, 1963.

SORBIT

For Cleaning and Deodorizing Compound for Use on Floors, Woodwork and the Like.
First use July 8, 1963.

SN 177,087. Purex Corporation, Ltd., d.b.a. Turco Products, Inc., Wilmington, Calif. Filed Sept. 16, 1963.

JETISOIL

For Single Layer Cold Tank Soil Remover.
First use on or before Dec. 31, 1954.

SN 177,236. Drone Enterprises, Brooklyn, N.Y. Filed Sept. 18, 1963.

COLOR-POO

For Hair Shampoo.
First use June 6, 1963.

SN 177,288. Purex Corporation, Ltd., d.b.a. Turco Products, Inc., Wilmington, Calif. Filed Sept. 18, 1963.

TILE-O

For Ceramic Tile Cleaner.
First use May 20, 1940.

SN 177,432. Multi-Clean Products, Incorporated, St. Paul, Minn. Filed Sept. 20, 1963.

KARPETREET

Owner of Reg. No. 662,063.
For Rug and Upholstery Shampoo.
First use Apr. 10, 1956.

SN 177,674. Atlas Supply Company, Newark, N.J. Filed Sept. 25, 1963.

ATLAS

Owner of Reg. Nos. 595,677 and 641,869.
For Degreaser for Cleaning Grease From Automobile Engines, Farm Equipment, Power Lawn Mowers, Marine Engines, and Other Mechanical Parts, Packaged as an Aerosol Spray.
First use Aug. 13, 1963.

SN 177,778. East Coast Soap Corporation, Brooklyn, N.Y. Filed Sept. 26, 1963.

PRIDE OF THE KITCHEN

For Soap Powders and Liquid Detergents.
First use January 1923.

SN 177,799. Lestoil Products, Inc., Holyoke, Mass. Filed Sept 26, 1963.

POWERHOUSE

For Household Cleaner.
First use Sept. 5, 1963.

SN 177,899. Lever Brothers Company, New York, N.Y. Filed Sept. 27, 1963.

NEPTUNE

For Detergent for General Washing and Cleansing.
First use July 1954.

SN 177,977. Economics Laboratory, Inc., St. Paul, Minn. Filed Sept. 30, 1963.

KLENZADE

Owner of Reg. Nos. 609,715, 616,967, and 616,968.
For Cleaning Compounds for Use by Dairy Farms, Dairies, and Other Commercial, Industrial and Institutional Users.
First use Sept. 25, 1958.

SN 178,513. Western Auto Supply Company, Kansas City, Mo. Filed Oct. 7, 1963.

VITA-POWER

Owner of Reg. No. 717,414.
For Windshield Washer Anti-Freeze and Cleaner.
First use Sept. 24, 1963.

SERVICE MARKS

Class 100 — Miscellaneous

SN 144,038. Atlantic Research Corporation, Alexandria, Va. Filed May 8, 1962.

ARC

Owner of Reg. Nos. 715,181, 728,975, and others.
For Research Development, Production, Technical Survey, Editing, Informational and Consultant Services in the Fields of Chemistry, the Chemical and Physical Testing of Materials, Fingerprinting, Air Pollution and Purification, Radio-Active Materials, Optics and Photography.
First use August 1949.

SN 149,812. Brewer Pharmacal Engineering Corporation, Upper Darby, Pa. Filed July 26, 1962.

BREWER

For Hospital Equipment Leasing Service, and a Hospital Consulting Service.
First use October 1960.

SN 155,188. Public Service Company of Colorado, Denver, Colo. Filed Oct. 15, 1962.

PUBLIC SERVICE CO. OF COLORADO

No claim is made to the notation "Public Service" or the word "Colorado" apart from their use in the mark as shown.
For Miscellaneous Services, Particularly Supplying Electricity and Gas for Heating and Power.
First use in or about the middle of March 1957.

SN 160,629. Funeral Security Plans, Inc., Kansas City, Mo. Filed Jan. 14, 1963.



For Arranging Future Funeral Services Between Morticians and Other Persons.
First use Oct. 15, 1962.

SN 177,473. American Land Title Association, Washington, D.C. Filed Sept. 23, 1963.



For Furnishing Information and Advice in the Field of Abstracting and Insuring Land Titles to Members of Applicant and to the Business and Public Generally.
First use on or about Oct. 1, 1962; 1928 as to "American Title Association."

Class 101 — Advertising and Business

SN 136,916. National Retail Lumber Dealers Association, Washington, D.C. Filed Jan. 30, 1962.



Applicant disclaims separate and apart from the mark the words "Home and Property Improvement."
For Promoting the Home Renovation Business of Participating Members by Devising for Them a Completely Integrated Merchandising Program and by Supplying Them With the Necessary Advertising Material for Such a Program.
First use Oct. 13, 1961.

SN 136,917. National Retail Lumber Dealers Association, Washington, D.C. Filed Jan. 30, 1962.



The words "Home and Property Improvement" are disclaimed separate and apart from the mark.
For Promoting the Home Renovation Business of Participating Members by Devising for Them a Completely Integrated Merchandising Program and by Supplying Them With the Necessary Advertising Material for Such a Program.
First use Nov. 6, 1961.

SN 147,951. Reginald R. Oakley, d.b.a. Top Dollar Auctioneers of America, Silver City, S. Dak. Filed June 28, 1962.

TOP DOLLAR

For Auctioneering Services.
First use Mar. 10, 1962.

SN 158,100. Rich Port Realtor, Inc., La Grange, Ill. Filed Nov. 28, 1962.



For Real Estate Brokerage and Management Operation.
First use June 1, 1953.

SN 162,168. Lee Coleman, d.b.a. Lee Coleman Co., Framingham, Mass. Filed Feb. 6, 1963.

CASH-DRAWER

For Services of Promoting the Sale of Goods of Others Through the Supply and Distribution of Printed Materials and Advertising for Use in the Drawing of Prizes and Instructions in the Use Thereof.
First use Sept. 24, 1962.

SN 163,275. Programming and Systems, Inc., New York, N.Y. Filed Feb. 21, 1963.

PSI

For Instruction in the Operation of Data Processing, Including the Operation of Computer Systems, and Professional Guidance in Such Operation, and Advising in the Applications of Data Processing Systems.
First use July 20, 1960; July 9, 1959, as to "PSI."

SN 167,239. Economics Research Associates, Los Angeles, Calif. Filed Apr. 22, 1963.

e.r.a.

For Analytical Research, Reporting and Consultation in the Fields of Land Economics, and Recreational Economics.
First use November 1958.

SN 170,557. A. Robinson & Co., Inc., d.b.a. Health Cross Discount Centers, Altoona, Pa. Filed June 7, 1963.

HEALTH CROSS

The word "Health" is disclaimed separate and apart from the mark as a whole for the purposes of this application only and without prejudice to applicant's common law rights. Owner of Reg. No. 725,249.
For Retail Drug Store Services.
First use Jan. 1, 1963.

SN 171,131. Guest Pac Corporation, Mount Vernon, N.Y. Filed June 17, 1963.

CAMPUS PAC

Owner of Reg. No. 649,451.
For Advertising and Promotion of Goods of Others Through the Packaging, Imprinting and Distribution of Various Manufacturers' Samples Enclosed in a Single Package.
First use 1952.

SN 174,607. The Gracious Lady Service, Inc., Philadelphia, Pa., assignee of Practical Surveys, Inc., Philadelphia, Pa. Filed Aug. 7, 1963.

THE GRACIOUS LADY SERVICE

No exclusive claim is made to the word "Service" except in the association shown.
For Advertising Services, Public Relations, Advisory Services, and Personnel and Employment Counseling Services, All Utilizing Specially Trained Women Who Conduct Surveys, Perform Market Research, Act as Hostesses, and Otherwise Promote Public Relations and Good Will for Marketing of Products and Services of Others.
First use on or about Sept. 1, 1961.

Class 102 — Insurance and Financial

SN 98,487. The Iroquois Company, Chicago, Ill. Filed June 6, 1960.

IN BUSINESS TO HELP BUSINESS

For Business Financial Service Including Financial Assistance and Business Counseling on Manufacturing and Selling Techniques, Accounting and Bookkeeping Standards, Credit and Collection Procedures and the Like.
First use June 15, 1946.

SN 148,480. Continental Casualty Company, Chicago, Ill. Filed July 6, 1962.



No claim is made to the exclusive use of the words "Insurance Center" alone.
For Writing of Insurance Policies.
First use June 4, 1962.

SN 157,528. Mid-States Life Insurance Company of America, Evanston, Ill. Filed Nov. 19, 1962.

DOLLARCARE

For Insurance Planning Services.
First use Oct. 8, 1962.

SN 161,485. American Family Mutual Insurance Co., Madison, Wis., by change of name from Farmers Mutual Automobile Insurance Company, Madison, Wis. Filed Jan. 28, 1963.

AMERICAN FAMILY INSURANCE

For Sale, Underwriting, and Servicing of Multiple Lines of Insurance.
First use Oct. 3, 1962.

SN 161,486. American Family Mutual Insurance Co., Madison, Wis., by change of name from Farmers Mutual Automobile Insurance Company, Madison, Wis. Filed Jan. 28, 1963.

AMERICAN FAMILY

For Sale, Underwriting, and Servicing of Multiple Lines of Insurance.
First use July 1, 1958.

Class 103 — Construction and Repair

SN 149,818. Carolina Medical Electronics, Inc., Winston-Salem, N.C. Filed July 26, 1962.



The representation of the map of North Carolina is disclaimed apart from the mark as shown. Owner of Reg. No. 746,728.
For Engineering Services Including Consultation in the Field of Medical Electronics, Intercommunication Systems, Public Address Systems and Military Electronics.
First use June 11, 1962.

SN 163,861. Otis Elevator Company, New York, N.Y. Filed Mar. 4, 1963.

Owner of Reg. Nos. 204,849, 629,296, and others.
For Service, Repair and Rental of Material Handling Trucks.
First use at least as early as Dec. 8, 1961.

SN 169,643. McElrath-Stewart Lumber Company, Milledgeville, Ga. Filed May 24, 1963.

ARKRAFT

For Design, Sale and Erection Services of Prefabricated Homes.
First use Jan. 1, 1963.

Class 105 — Transportation and Storage

SN 161,331. The Flying Tiger Line Inc., Burbank, Calif. Filed Jan. 24, 1963.

Owner of Reg. Nos. 705,701 and 739,205.
For Integrated Freight Transportation Services Offered by Applicant and Being Performed by Aircraft, Trucks and Trains, the Last Two Under License From Applicant.
First use Oct. 1, 1962.

SN 169,193. Air Express International Corp., New York, N.Y. Filed May 20, 1963.

MONITORED MOVEMENT

For Air Cargo Transportation Services as an Indirect Air Carrier.
First use Dec. 20, 1962.

SN 169,194. Air Express International Corp., New York, N.Y. Filed May 20, 1963.

AEI-PAC

Owner of Reg. No. 547,316.
For Air Cargo Transportation Services Performed as an Indirect Air Carrier.
First use Jan. 22, 1963.

SN 169,664. Southen Railway Company, Richmond, Va. Filed May 24, 1963.

SOUTHERN SERVES THE SOUTH

For Freight and Passenger Transportation Service by Railroad.
First use on or about Sept. 12, 1915.

Class 107 — Education and Entertainment

SN 152,989. Walter T. Everest, Lansdowne, Pa. Filed Sept. 12, 1962.

SCENOPHONIC

For Entertainment Services Consisting in the Showing of Travel Films to Audiences Through a New Medium Comprising Scenic Pictures and Symphonic Music.
First use December 1961.

SN 164,176. Frank C. Russell, d.b.a. F. C. Russell Institute of Selling, Chestertown, Md. Filed Mar. 7, 1963.

No claim is made for the words "Sales Clinics" apart from the mark.
For Educational Services in the Form of Sales Clinics for Salesmen and Sales Executives.
First use Oct. 15, 1961.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 103,729. Lightning Class Association, South Haven, Mich. Filed Aug. 31, 1960.

Owner of Reg. No. 386,007.
For Indicating Membership in Applicant Association.
First use September 1939.

SN 159,035. The American Junior Bowling Congress, Chicago, Ill. Filed Dec. 13, 1962.

The drawing is lined for blue, gold, and red, but no claim to color is made.
For Indicating Membership in the Applicant Association.
First use on or about May 16, 1962.

SN 162,278. National Institute of Locker and Freezer Provisioners, Elizabethtown, Pa. Filed Feb. 7, 1963.

The drawing is lined for blue and red but no claim is made for color.
For Indicating Membership in the Applicant Association.
First use in or about December 1961.

SN 171,635. Florists' Telegraph Delivery Association, Detroit, Mich. Filed June 24, 1963.

The words "Associate Member," "Florists Telegraph Del" and "Worldwide" are disclaimed apart from the mark as shown. Owner of Reg. Nos. 407,189, 726,608, and others.
For Indicating Associated Membership in Applicant Organization.
First use June 7, 1963.

SN 175,139. Tobacco Workers International Union, Washington, D.C. Filed Aug. 15, 1963.

For Indicating Membership in the Organization.
First use Approximately Oct. 27, 1899.

SN 177,474. American Land Title Association, Washington, D.C. Filed Sept. 23, 1963.

AMERICAN LAND TITLE ASSOCIATION

For Indicating Membership in Applicant Association.
First use on or about Oct. 1, 1962; 1928 as to "American Title Association."

CERTIFICATION MARKS

Class A — Goods

SN 173930. Lightning Class Association, South Haven, Mich. Filed July 29, 1963.

The mark certifies that the sailing craft conforms to specified standards.
For Sailing Craft.
First use September 1939.

TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

768,552. KEYSTRAND. Keystone Plastics, Inc. SN 152,898. Pub. 3–26–63. Filed 9–11–62.

768,553. TERPENOX. H D N Corporation, assignee of Heyden Newport Chemical Corporation. SN 157,623. Pub. 2–11–64. Filed 11–20–62.

Class 2 — Receptacles

768,554. CARRY SAFE. Diamond National Corporation. SN 122,683. Pub. 2–11–64. Filed 6–23–61.

768,555. PAK-ALL. Pak-All Products, Inc. SN 136,807. Pub. 10–2–62. Filed 1–29–62.

768,556. ALL PAC. The Lustro Plastic Tile Company. SN 137,026. Pub. 1–1–63. Filed 1–31–62.

768,557. AQUATOROIDAL. Union Tank Car Company. SN 152,021. Pub. 2–11–64. Filed 8–27–62.

768,558. ARCTIC-TAINER. Porta-Panel Products, Inc. SN 153,510. Pub. 2–11–64. Filed 9–19–62.

768,559. NURSERICANS. The Lerio Corporation. SN 156,307. Pub. 2–11–64. Filed 10–31–62.

768,560. GAYLORD BOXES AND DESIGN. Crown Zellerbach Corporation. SN 157,079. Pub. 2–11–64. Filed 11–13–62.

768,561. FRUITMASTER. Packaging Corporation of America. SN 162,185. Pub. 2–11–64. Filed 2–6–63.

768,562. KOOL KIT. Kool Kit Corporation. SN 166,289. Pub. 2–11–64. Filed 4–8–63.

768,563. STYRO CUP. Thompson Industries, Inc. SN 169,790. Pub. 2–11–64. Filed 5–27–63.

768,564. ME-PRO-PAK. Thomas R. St. John. SN 169,874. Pub. 2–11–64. Filed 5–28–63.

768,565. PAKSTER. Phillips Petroleum Company. SN 170,213. Pub. 2–11–64. Filed 6–3–63.

768,566. NEWCREST ECONO-PAK AND DESIGN. J. J. Newberry Co. SN 171,166. Pub. 2–11–64. Filed 6–17–63.

768,567. PRO-PLY. Chase Bag Company. SN 174,341. Pub. 2–11–64. Filed 8–5–63.

768,568. OP. Owens Plastic Company. SN 174,432. Pub. 2–11–64. Filed 8–5–63.

768,569. FIBER CRAFT. Fiber Craft, Inc. SN 174,857. Pub. 2–11–64. Filed 8–12–63.

768,570. MIRROBAG AND DESIGN. The Dow Chemical Company. SN 175,642. Pub. 2–11–64. Filed 8–28–63.

Class 4 — Abrasives and Polishing Materials

768,571. WOOD PREEN. The Preen Company. SN 171,035. Pub. 2–11–64. Filed 6–14–63.

768,572. MELROSE. Melrose Chemicals, Inc. SN 171,788. Pub. 2–11–64. Filed 6–25–63.

Class 5 — Adhesives

768,573. ARMOUR AND DESIGN. Armour and Company, d.b.a. Armour Alliance Industries. SN 158,510. Pub. 2–11–64. Filed 12–5–62.

768,574. STRYPLOC. St. Regis Paper Company. SN 168,634. Pub. 2–11–64. Filed 5–10–63.

Class 6 — Chemicals and Chemical Compositions

768,575. CLOSET REFRESHN' AIR. Colgate-Palmolive Company. SN 142,276. Pub. 2–11–64. Filed 4–16–62.

768,576. DEMCO. Des Moines Concrete Products Co. MULTIPLE CLASS (Classes 6 and 12). SN 151,304. Pub. 2–11–64. Filed 8–16–62.

768,577. PYRO-PRUF. Dale J. Franklin, d.b.a. Fireproof Starch Co. SN 156,811. Pub. 2–11–64. Filed 12–10–62.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

768,578. REPRESENTATION OF A RODENT VIEWED THROUGH A TELESCOPIC SIGHT. R.C.B.S. Inc. SN 113,135. Pub. 2–11–64. Filed 2–6–61.

Class 10 — Fertilizers

768,579. NUTRI-FOAM. Nutri Foam Products, Inc., assignee of Texas Tennessee Industries, Inc. SN 156,187. Pub. 2–11–64. Filed 10–29–62.

Class 11 — Inks and Inking Materials

768,580. INKY AND BUCKET DESIGN. Holland Color and Chemical Company, assignee of Charles J. Weigel Inc. SN 142,002. Pub. 1–14–64. Filed 4–10–62.

768,581. TOP SET. The California Ink Company, Inc. SN 167,980. Pub. 2–11–64. Filed 5–2–63.

Class 12 — Construction Materials

768,576. (See Class 6 for this trademark.)

768,582. GIBRALTAR. Ernest O. Gilliam. SN 116,121. Pub. 12–5–61. Filed 3–21–61.

768,583. KOOL-SEAL. Acorn Chemical Company. MULTIPLE CLASS (Classes 12 and 16). SN 134,068. Pub. 2–11–64. Filed 12–15–61.

768,584. ETERNA BLOCK. Automated Block Corporation of America. SN 136,864. Pub. 2–11–64. Filed 1–30–62.

768,585. CHEMTROL. Battenfeld Grease & Oil Corporation, Inc. SN 142,681. Pub. 2–11–64. Filed 4–20–62.

768,586. CHEMTROL AND DESIGN. Battenfeld Grease & Oil Corporation, Inc. SN 142,682. Pub. 2–11–64. Filed 4–20–62.

768,587. CHEM-WOOD. Great Western Chemical Company of Portland. SN 148,502. Pub. 2–11–64. Filed 7–6–62.

768,588. BRICKSTONE. Brickstone International, Inc. SN 155,888. Pub. 2–11–64. Filed 10–25–62.

768,589. ROLLA/FLEX. Crocker Corporation. SN 158,231. Pub. 2–11–64. Filed 11–30–62.

768,590. H-BRACE AND DESIGN. H-Brace, Inc. SN 158,535. Pub. 2–11–64. Filed 12–5–62.

768,591. BRACE AND PADLOCK DESIGN. H-Brace, Inc. SN 158,536. Pub. 2–11–64. Filed 12–5–62.

768,592. ROHN. Rohn Manufacturing Co. MULTIPLE CLASS (Classes 12, 13, 21, and 32). SN 159,776. Pub. 2–11–64. Filed 12–26–62.

768,593. WGT AND DESIGN. Dierks Forests, Inc. SN 161,167. Pub. 2–11–64. Filed 1–22–63.

768,594. FIL-SHIELD. The Filtron Company, Inc. SN 161,321. Pub. 2–11–64. Filed 1–24–63.

768,595. CREVATEX. The Flintkote Company. SN 161,328. Pub. 2–11–64. Filed 1–24–63.

768,596. TORJESEN. Torjesen, Inc. SN 161,918. Pub. 2–11–64. Filed 2–1–63.

768,597. ADRIA AND DESIGN. Adria S.A., Société Anonyme. SN 163,696. Pub. 2–11–64. Filed 10–3–62.

768,598. DIAMONDIZED POLY-CLAD PLYWALL AND DESIGN. Plywall Products Company, Inc. SN 166,313. Pub. 2–11–64. Filed 4–8–63.

768,599. DOLLAR. The Robert Dollar Co. SN 168,116. Pub. 2–11–64. Filed 5–3–63.

768,600. IMPERIAL RAMKAST. E. J. Lavino and Company. SN 168,934. Pub. 2–11–64. Filed 5–15–63.

768,601. BEAUTY-CLAD. Pease Woodwork Company, Inc. SN 169,055. Pub. 2–11–64. Filed 5–16–63.

768,602. RTI AND DESIGN. Reditruss International, Inc. SN 173,503. Pub. 2–11–64. Filed 7–22–63.

768,603. EVERGUARD AND DESIGN. All American Building Materials Corporation. SN 174,482. Pub. 2–11–64. Filed 8–6–63.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

768,592. (See Class 12 for this trademark.)

768,604. WELD GUIDE. The Stocker Hinge Mfg. Co. SN 129,424. Pub. 2–11–64. Filed 10–6–61.

768,605. UNI-TEMP. Rheem Manufacturing Company. SN 140,291. Pub. 2–11–64. Filed 3–20–62.

768,606. FLO-LOK. Flo-Lok, Inc. SN 146,610. Pub. 8–27–63. Filed 6–11–62.

768,607. PROBLEM SOLVER. Champ-Items, Inc. MULTIPLE CLASS (Classes 13, 19, 23, and 26). SN 147,088. Pub. 2–11–64. Filed 6–18–62.

768,608. C AND DESIGN. Consolidated Pipe Company of America. SN 151,889. Pub. 2–11–64. Filed 8–27–62.

768,609. DOUBLE-TOUGH. Corning Glass Works. SN 152,985. Pub. 2–11–64. Filed 9–12–62.

768,610. DIAMOND GUARD. J. Kaufman Iron Works. SN 153,412. Pub. 2–11–64. Filed 9–18–62.

768,611. MISCELLANEOUS DESIGN. Screw and Bolt Corporation of America. SN 153,986. Pub. 2–11–64. Filed 9–26–62.

768,612. BANTAM. Crane Co. SN 158,057. Pub. 2–11–64. Filed 11–28–62.

768,613. HANDI-LOCK ETC. AND DESIGN. Hercules Hose and Rubber Co. SN 165,425. Pub. 2–11–64. Filed 3–26–63.

768,614. DORMAN PRODUCTS. Dorman Products, Inc. SN 168,395. Pub. 2–11–64. Filed 5–8–63.

768,615. KINZEE VANITE AND DESIGN. Kinzee Plastics, Inc. SN 168,418. Pub. 2–11–64. Filed 5–8–63.

768,616. MISCELLANEOUS DESIGN. General Bearing Co., Inc. SN 169,129. Pub. 2–11–64. Filed 5–17–63.

768,617. SUNAIRE. Kirsch Company. SN 172,915. Pub. 2–11–64. Filed 7–12–63.

768,618. KIRSCH. Kirsch Company. SN 172,916. Pub. 2–11–64. Filed 7–12–63.

768,619. TRI-DRIV. Russell, Burdsall & Ward Bolt and Nut Company. SN 173,048. Pub. 2–11–64. Filed 7–15–63.

Class 14 — Metals and Metal Castings and Forgings

768,620. TWIN. J. A. Henckels Zwillingswerk Aktiengesellschaft, assignee, by mesne assignments, of J. A. Henckels Zwillingswerk Aktiengesellschaft. SN 11,003. Pub. 12–10–57. Filed 6–26–56.

768,621. SIGMA. Huetten- und Bergwerke Rheinhausen Aktiengesellschaft. SN 149,086. Pub. 2–11–64. Filed 7–16–62.

768,622. ALMOLD. Allegheny Ludlum Steel Corporation. SN 162,061. Pub. 2–11–64. Filed 2–5–63.

768,623. FLEXENDUR. Central Research Laboratories, Inc. SN 168,390. Pub. 2–11–64. Filed 5–8–63.

768,624. MISCELLANEOUS DESIGN. Knute Palmquist Foundry, Inc. SN 168,745. Pub. 2–11–64. Filed 5–13–63.

768,625. I. Ilikon Corporation. SN 171,546. Pub. 2–11–64. Filed 6–21–63.

768,626. TRONA. American Potash & Chemical Corporation. SN 171,737. Pub. 2–11–64. Filed 6–25–63.

Class 15 — Oils and Greases

768,627. HYDRAMOLY. Hercules Packing Corporation. SN 156,601. Pub. 2–11–64. Filed 11–5–62.

768,628. VRT. Shell Oil Company. SN 170,565. Pub. 2–11–64. Filed 6–7–63.

768,629. QUADROMATIC. Quaker State Oil Refining Corporation. SN 171,571. Pub. 2–11–64. Filed 6–21–63.

768,630. QUAKER STATE Q ATF. Quaker State Oil Refining Corporation. SN 171,572. Pub. 2–11–64. Filed 6–21–63.

768,631. PERMA-MOLD. Brulin & Company, Inc. SN 172,723. Pub. 2–11–64. Filed 7–10–63.

Class 16 — Protective and Decorative Coatings

768,583. (See Class 12 for this trademark.)

768,632. FORMULA 77. Formula 77 Corporation. SN 116,875. Pub. 8–28–62. Filed 3–31–61.

768,633. CENTURY GLAZE AND DESIGN. Century Bonded Products, Inc. SN 163,806. Pub. 2–11–64. Filed 3–4–63.

768,634. CENTURY SEAL AND DESIGN. Century Bonded Products, Inc. SN 163,808. Pub. 2–11–64. Filed 3–4–63.

768,635. PRYMENAM. Continental Coatings Corporation. SN 164,607. Pub. 2–11–64. Filed 3–14–63.

Class 17 — Tobacco Products

768,636. TENNYSON. J. C. Winter & Co. Inc. SN 132,276. Pub. 2–11–64. Filed 11–17–61.

768,637. DON ALFREDO. Alfred Dunhill of London, Inc. SN 159,817. Pub. 2–11–64. Filed 12–27–62.

768,638. FLAMENCO LAS PALMAS AND DESIGN. Compania Insular Tabacalera, S.A. SN 164,322. Pub. 2–11–64. Filed 3–11–63.

768,639. CONSULATE AND DESIGN. Rothmans of Pall Mall Export Limited. SN 172,338. Pub. 2–11–64. Filed 7–2–63.

768,640. TIO PEPE. Joseph Samuel & Son Limited. SN 172,548. Pub. 2–11–64. Filed 7–5–63.

768,641. TEXAN AND DESIGN. Carlton Cigarette Company (Pvt) Ltd. SN 172,640. Pub. 2–11–64. Filed 7–9–63.

768,642. CITATION. R. J. Reynolds Tobacco Company. SN 175,318. Pub. 2–11–64. Filed 8–19–63.

Class 18 — Medicines and Pharmaceutical Preparations

768,643. A-OK. Samuel Bonat & Bro., Inc. SN 128,650. Pub. 2-11-64. Filed 9-26-61.

768,644. UNIDOTE. Panray-Parlam Corp. SN 138,803. Pub. 10-2-62. Filed 2-28-62.

768,645. HYQUIN. Texas Pharmacal Company. SN 146,428. Pub. 1-15-63. Filed 6-7-62.

768,646. SOLUFER. Aktiebolaget Astra, Apotekarnes Kemiska Fabriker. SN 150,143. Pub. 12-10-63. Filed 7-31-62.

768,647. ALL-SPORTS. All-Sports Medications, Inc. SN 175,367. Pub. 2-11-64. Filed 8-20-63.

Class 19 — Vehicles

768,607. (See Class 13 for this trademark.)

768,648. P.D. Butler Manufacturing Company. SN 149,043. Pub. 2-11-64. Filed 7-16-62.

768,649. UTILITY BODY OAKLAND AND DESIGN. MULTIPLE CLASS (Classes 19 and 23). SN 154,784. Pub. 2-11-64. Filed 10-8-62.

768,650. ELECTRO CRUISE. General Motors Corporation. SN 158,335. Pub. 2-11-64. Filed 12-3-62.

768,651. BAP. British Auto Parts, Inc. SN 163,314. Pub. 2-11-64. Filed 2-25-63.

768,652. E-Z PACK. Hercules Gallon Products, Inc. SN 165,596. Pub. 2-11-64. Filed 3-28-63.

768,653. PERMAWELD. Parts Rebuilders Co., Inc. SN 171,565. Pub. 2-11-64. Filed 6-21-63.

768,654. FOAM PAC AND DESIGN. Lone Star Boat Company. SN 175,768. Pub. 2-11-64. Filed 8-26-63.

Class 21 — Electrical Apparatus, Machines, and Supplies

768,592. (See Class 12 for this trademark.)

768,655. A-B IN OCTAGON AND FRAME DESIGN. Allen-Bradley Company. SN 138,453. Pub. 2-11-64. Filed 2-23-62.

768,656. DB PRODUCTS AND DESIGN. Decibel Products, Inc. SN 139,473. Pub. 2-11-64. Filed 3-9-62.

768,657. ZERO ENTRY. E. B. Wiggins Oil Tool Company, Inc. SN 143,490. Pub. 2-11-64. Filed 4-30-62.

768,658. MR. PRO AND DESIGN. Interstate Battery System of America, Inc. SN 145,830. Pub. 2-11-64. Filed 5-31-62.

768,659. DUO-TROL AND DESIGN. Hunt Electronics Company. SN 146,384. Pub. 2-11-64. Filed 6-7-62.

768,660. MEND-IT SLEEVE AND DESIGN. John R. Ashley, d.b.a. Mend-It Sleeve Manufacturing Company. SN 158,311. Pub. 2-11-64. Filed 12-3-62.

768,661. PETRONICS. William Walter Ennis. SN 159,477. Pub. 2-11-64. Filed 12-20-62.

768,662. METAMORPHIC. Electro Materials Corporation. SN 161,246. Pub. 2-11-64. Filed 1-23-63.

768,663. ARRESTOLARM. The Gamewell Company. SN 162,156. Pub. 2-11-64. Filed 2-6-63.

768,664. SPESCO. Specialty Sales Company. SN 162,301. Pub. 2-11-64. Filed 2-7-63.

768,665. RAY-DRY. Raydry-Rayseal Electronics, Inc., assignee of Raybond Electronics, Inc. SN 162,867. Pub. 2-11-64. Filed 2-15-63.

768,666. METAMORPHIC. Electro Materials Corporation. SN 163,935. Pub. 2-11-64. Filed 3-5-63.

768,667. DYTRONICS. Dytronics, Incorporated. SN 165,417. Pub. 2-11-64. Filed 3-26-63.

768,668. PANASTAT. The Scan Instrument Corporation. SN 169,485. Pub. 2-11-64. Filed 5-22-63.

768,669. DOMINION. Dominion Electric Corporation. MULTIPLE CLASS (Classes 21, 26, 29, and 44). SN 170,624. Pub. 2-11-64. Filed 6-10-63.

768,670. ROYAL ARTIST. C. Bruno & Son, Inc. SN 170,982. Pub. 2-11-64. Filed 6-14-63.

768,671. VACULATOR AND DESIGN. Hill-Shaw Company. SN 171,135. Pub. 2-11-64. Filed 6-17-63.

768,672. WABCO W. AND DESIGN. Westinghouse Air Brake Company. SN 172,264. Pub. 2-11-64. Filed 7-1-63.

768,673. INVERT-A-STAT. Gould-National Batteries, Inc. SN 172,484. Pub. 2-11-64. Filed 7-5-63.

768,674. LAPINE LOZENGE. Lapine Scientific Company. SN 172,827. Pub. 2-11-64. Filed 7-11-63.

768,675. SEAQUARTZ. Birns & Sawyer Cine Equipment Co. SN 173,092. Pub. 2-11-64. Filed 7-16-63.

Class 22 — Games, Toys, and Sporting Goods

768,676. DINKY LINKS. Dynamics, Ltd. SN 153,073. Pub. 2-11-64. Filed 9-13-62.

768,677. VI-KE. The Bridgeport Silverware Mfg. Corp. SN 153,860. Pub. 2-11-64. Filed 9-25-62.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

768,607. (See Class 13 for this trademark.)

768,649. (See Class 19 for this trademark.)

768,678. TRAF-I-TROL. Auto Parks, Inc., assignee of Main Line Theatres, Inc. SN 113,650. Pub. 2-11-64. Filed 2-14-61.

768,679. MARINE EXHAUST MASTER. "Cap" Schelf and Associates, Inc., assignee of Joseph A. Schelf, d.b.a. J. A. Cap Schelf & Associates. SN 115,732. Pub. 2-11-64. Filed 3-15-61.

768,680. SUPER-LATHE. Jack N. Binns, d.b.a. Binns Machinery Products. SN 121,627. Pub. 2-11-64. Filed 6-8-61.

768,681. FARM-ETTE. Internatonal Harvester Company, assignee, by mesne assignments, of Tom Moore Tractor, Inc. SN 135,287. Pub. 9-25-62. Filed 1-5-62.

768,682. DYNAPRESS AND DESIGN. John Haller. SN 139,096. Pub. 2-11-64. Filed 3-5-62.

768,683. ROTO SHARP. Roto Sharp, Inc. SN 145,612. Pub. 2-11-64. Filed 5-28-62.

768,684. STRATO LITE. The Union Fork and Hoe Company. SN 148,439. Pub. 2-11-64. Filed 7-5-62.

768,685. UNILITE. The Union Fork and Hoe Company. SN 148,440. Pub. 2-11-64. Filed 7-5-62.

768,686. WATER WONDER. Western Brass Works. SN 148,686. Pub. 2-11-64. Filed 7-9-62.

768,687. SILENCAIR. Atlas Copco Canada Ltd. SN 149,527. Pub. 2-11-64. Filed 7-23-62.

768,688. HARKERMATIC. The Automatic Storage Company Limited. SN 152,037. Pub. 2-11-64. Filed 8-28-62.

768,689. VANDERVELL. Vandervell Products Limited. SN 152,851. Pub. 2-11-64. Filed 9-10-62.

768,690. CLINTON E-Z PULL. Clinton Engines Corporation. SN 155,972. Pub. 2-11-64. Filed 10-26-62.

768,691. SUPER-D-CANTER. Pennsalt Chemicals Corporation, by merger from The Sharples Corporation. SN 156,768. Pub. 2-11-64. Filed 11-6-62.

768,692. POWAIR. Schramm, Inc. SN 157,855. Pub. 2-11-64. Filed 11-23-62.

768,693. DOWTY. Dowty Corporation. SN 157,889. Pub. 2-11-64. Filed 11-26-62.

768,694. WIRE-DIAL. The Thomas & Betts Co., Incorporated. SN 158,030. Pub. 2-11-64. Filed 11-27-62.

768,695. STOPMATIC. G. M. Pfaff A.-G. SN 158,289. Pub. 2-11-64. Filed 11-2-62.

768,696. FLOOR KING. Albert H. Cayne Equipment Corp. SN 161,680. Pub. 2-11-64. Filed 1-30-63.

768,697. BAP. British Auto Parts, Inc. SN 163,315. Pub. 2-11-64. Filed 2-25-63.

768,698. PNEUMATRAK. Schramm Inc. SN 163,416. Pub. 2-11-64. Filed 2-25-63.

768,699. NEW ERA AND DESIGN. New Era Manufacturing Company. SN 163,648. Pub. 2-11-64. Filed 2-28-63.

768,700. NEW ERA. New Era Manufacturing Company. SN 163,649. Pub. 2-11-64. Filed 2-28-63.

768,701. MISTER STARTER. Fairbanks, Morse & Co. SN 164,516. Pub. 2-11-64. Filed 3-13-63.

768,702. MANOR HOUSE. Allied Stores Corporation. SN 165,278. Pub. 2-11-64. Filed 3-25-63.

768,703. DURA-FLEX. Dura Corporation. SN 165,309. Pub. 2-11-64. Filed 3-25-63.

768,704. CCC. Carton Closing Corporation. SN 165,495. Pub. 2-11-64. Filed 3-27-63.

768,705. BOICE CRANE. Wilton Tool Manufacturing Co., Inc., assignee of Boice-Crane Company. SN 165,892. Pub. 2-11-64. Filed 4-2-63.

768,706. E-Z. Champion Friction Co. SN 166,616. Pub. 2-11-64. Filed 4-12-63.

768,707. T AND DESIGN. Teale and Company. SN 166,949. Pub. 2-11-64. Filed 4-17-63.

768,708. TEALE AND DESIGN. Teale and Company. SN 166,950. Pub. 2-11-64. Filed 4-17-63.

768,709. TEALE AND DESIGN. Teale and Company. SN 166,951. Pub. 2-11-64. Filed 4-17-63.

768,710. JAWCO. Jaw Manufacturing Co. SN 171,256. Pub. 2-11-64. Filed 6-18-63.

768,711. MEASURED DEMAND. Montgomery Elevator Company. SN 171,688. Pub. 2-11-64. Filed 6-24-63.

768,712. COMFORT KING. J. I. Case Company. SN 171,756. Pub. 2-11-64. Filed 6-25-63.

768,713. BUS BROWN. Brown Manufacturing Corporation. SN 172,364. Pub. 2-11-64. Filed 7-3-63.

768,714. MONTGOMERY. Montgomery Elevator Company. SN 172,758. Pub. 2-11-64. Filed 7-10-63.

768,715. LIQUI-LARD. Lundy Packing Company. SN 172,831. Pub. 2-11-64. Filed 7-11-63.

768,716. CLEAN TOP. Fenco, Inc. SN 172,889. Pub. 2-11-64. Filed 7-12-63.

768,717. CAPTICO. Captive Top Machines, Inc. SN 173,218. Pub. 2-11-64. Filed 7-18-63.

768,718. SNOW GIANT. Gardex, Inc. SN 174,506. Pub. 2-11-64. Filed 8-6-63.

768,719. LIQUI-JET. General Dynamics Corporation. SN 175,182. Pub. 2-11-64. Filed 8-16-63.

768,720. LIQUI-JET AND DESIGN. General Dynamics Corporation. SN 175,270. Pub. 2-11-64. Pub. 8-19-63.

768,721. J S AND DESIGN. Adlerwerke vorm. Heinrich Kleyer A.G. SN 175,365. Pub. 2-11-64. Filed 8-20-63.

768,722. NEW YORKER. Humberto A. Garcia, d.b.a. The New Yorker Sewing Machine Company. SN 175,913. Pub. 2-11-64. Filed 8-28-63.

768,723. NEW YORKER AND DESIGN. Humberto A. Garcia, d.b.a. The New Yorker Sewing Machine Company. SN 175,914. Pub. 2-11-64. Filed 8-28-63.

768,724. A+. Borg-Warner Corporation. SN 175,970. Pub. 2-11-64. Filed 8-29-63.

768,725. A-PLUS. Borg-Warner Corporation. SN 175,971. Pub. 2-11-64. Filed 8-29-63.

768,726. FEDERAL-GEM. Federal Mfg. Co. SN 175,985. Pub. 2-11-64. Filed 8-29-63.

Class 24 — Laundry Appliances and Machines

768,727. OVAL WITH ARROW DESIGN. Stin Abbreviation of Societe de Techniques Industrielles Nouvelles. SN 153,224. Pub. 2-11-64. Filed 9-14-62.

768,728. UNIT WASH. G. A. Braun, Inc. SN 155,130. Pub. 2-11-64. Filed 10-15-62.

Class 26 — Measuring and Scientific Appliances

768,607. (See Class 13 for this trademark.)

768,669. (See Class 21 for this trademark.)

768,729. WUERTH AND DESIGN. Milton G. Deppe, d.b.a. M. G. Deppe Company. SN 144,945. Pub. 2-11-64. Filed 5-18-62.

768,730. PRESSURE PAK. Pressure Pak, Inc. SN 149,673. Pub. 2-11-64. Filed 7-24-62.

768,731. PHIPP'S AND DESIGN. John D. Phipps. SN 154,764. Pub. 2-11-64. Filed 10-8-62.

768,732. TELESCREEN. Hudson Photographic Industries, Inc. SN 158,252. Pub. 2-11-64. Filed 11-30-62.

768,733. OXYGRAPH. Warren E. Gilson, M.D., d.b.a. Gilson Medical Electronics. SN 158,440. Pub. 2-11-64. Filed 12-4-62.

768,734. INTERNATIONAL. Johnson Scale Co. SN 159,403. Pub. 2-11-64. Filed 12-19-62.

768,735. AQUA-EAR. Janus Products, Incorporated. SN 160,301. Pub. 2-11-64. Filed 1-7-63.

768,736. MAGNASCANNER. Picker X-Ray Corporation. SN 165,250. Pub. 2-11-64. Filed 3-22-63.

768,737. BRIGHT-LINE. American Optical Company. SN 167,686. Pub. 2-11-64. Filed 4-29-63.

768,738. LUCY-ETTE 400. Ted Hoyer & Company, Incorporated. SN 172,312. Pub. 2-11-64. Filed 7-2-63.

Class 27 — Horological Instruments

768,739. SANDS OF TIME AND DESIGN. Willard Rush Cullen. SN 141,259. Pub. 2-11-64. Filed 4-2-62.

768,740. ELTRA. Elgin National Watch Company. SN 174,356. Pub. 2-11-64. Filed 8-5-63.

768,741. WATERMATIC. Croton Watch Co., Inc. SN 174,837. Pub. 2-11-64. Filed 8-12-63.

Class 28 — Jewelry and Precious-Metal Ware

768,742. D.GL. David Kaufman, d.b.a. Dagil Jewelers. SN 158,715. Pub. 2-11-64. Filed 12-7-62.

768,743. CHAPEL ROSE. Gorham Corporation. SN 168,785. Pub. 2-11-64. Filed 5-13-63.

Class 29 — Brooms, Brushes, and Dusters

768,669. (See Class 21 for this trademark.)

768,744. TY-DE-UP AND DESIGN. Patent Novelty Company. SN 162,655. Pub. 2-11-64. Filed 2-13-63.

Class 31 — Filters and Refrigerators

768,745. DUAL JET. F. H. Prince & Co. Inc. SN 139,884. Pub. 2-11-64. Filed 3-14-62.

Class 32 — Furniture and Upholstery

768,592. (See Class 12 for this trademark.)

768,746. BRADFORD AND DESIGN. W. T. Grant Company. SN 149,646. Pub. 2-11-64. Filed 7-24-62.

768,747. BEST REST. Best Rest Mattress Inc. SN 150,672. Pub. 2-11-64. Filed 8-7-62.

768,748. KIFA BACKREST AND DESIGN. Aktiebolaget Kifa. SN 152,962. Pub. 2-11-64. Filed 9-12-62.

768,749. MODU-MOUNT. Minneapolis-Honeywell Regulator Company. SN 156,635. Pub. 2-11-64. Filed 11-5-62.

768,750. TEXTRALISS. S.A. Vinco. SN 157,854. Pub. 2-11-64. Filed 5-8-63.

768,751. BAK SAVER. Baumritter Corporation. SN 159,945. Pub. 2-11-64. Filed 12-31-62.

768,752. ISEEME. Janeway Meisenheimer. SN 160,425. Pub. 2-11-64. Filed 1-9-63.

768,753. RELCO. Reliance Upholstery Supply Co., Inc. SN 160,662. Pub. 2-11-64. Filed 1-14-63.

768,754. DUOPAD. Reliance Upholstery Supply Co., Inc. SN 161,277. Pub. 2-11-64. Filed 1-23-63.

768,755. TIMELY. Huntingburg Furniture Company, Inc. SN 172,909. Pub. 2-11-64. Filed 7-12-63.

768,756. T-MATS. Harry Tehan Associates, Inc. SN 174,129. Pub. 2-11-46. Filed 7-31-63.

768,757. VERSA-LOUNGE. Slumberland Products Co. SN 174,540. Pub. 2-11-64. Filed 8-6-63.

768,758. CUSH-N-LOK. No-Sag Spring Company. SN 177,365. Pub. 2-11-64. Filed 9-19-63.

Class 33 — Glassware

768,759. PAIR-A-PANE AND DESIGN. Nudor of Indiana, Inc. SN 169,753. Pub. 2-11-64. Filed 5-27-63.

Class 34 — Heating, Lighting, and Ventilating Apparatus

768,760. PANELFIN. Calumet & Hecla, Inc. SN 136,200. Pub. 2-11-64. Filed 1-22-62.

768,761. EQUA-FLOW. Rheem Manufacturing Company. SN 140,290. Pub. 2-11-64. Filed 3-20-62.

768,762. SMITHCO. Smithco Engineering, Inc. SN 152,450. Pub. 2-11-64. Filed 9-4-62.

768,763. UNIWELD AND DESIGN. Uniweld Products, Inc. SN 161,640. Pub. 2-11-64. Filed 1-29-63.

768,764. JOSEPH GODER AND DESIGN. Joseph Goder Sales, Inc. SN 164,720. Pub. 2-11-64. Filed 3-15-63.

768,765. JETLESS-SELFVAPO. George J. Heberlein, d.b.a. Heberlein Manufacturing Co. SN 165,773. Pub. 2-11-64. Filed 4-1-63.

768,766. AIR-HAWK AND DESIGN. Home Comfort Products Co. SN 174,373. Pub. 2-11-64. Filed 8-5-63.

768,767. LITE-KING. Wood Brothers Co. SN 174,471. Pub. 2-11-64. Filed 8-5-63.

768,768. N NATIONAL AND DESIGN. Union Carbide Corporation. SN 174,995. Pub. 2-11-64. Filed 8-13-63.

768,769. SLUMBER-AIRE. General Motors Corporation. SN 175,026. Pub. 2-11-64. Filed 8-14-63.

768,770. VENT-A-SYSTEM. Home Comfort Products Co. SN 175,191. Pub. 2-11-64. Filed 8-16-63.

768,771. COKESBURY. The Board of Publication of the Methodist Church, Inc. SN 180,827. Pub. 2-11-64. Filed 11-12-63.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

768,772. DELTA AND DESIGN. Delta Tire Corporation. SN 135,778. Pub. 2-11-64. Filed 1-15-62.

768,773. PARKER. Parker-Hannifin Corporation. SN 165,619. Pub. 2-11-64. Filed 3-28-63.

768,774. JEWEL GLAND. Parker-Hannifin Corporation. SN 166,213. Pub. 2-11-64. Filed 4-5-63.

768,775. ASHWORTH. Ashworth Bros., Inc. SN 175,354. Pub. 2-11-64. Filed 8-16-63.

768,776. HUMIDIBELT. The Ebco Manufacturing Company. SN 175,397. Pub. 2-11-64. Filed 8-20-63.

Class 36 — Musical Instruments and Supplies

768,777. TNT AND DESIGN. TNT Music, Inc. SN 152,646. Pub. 2-11-64. Filed 9-6-62.

768,778. ADINEKO. Tel-Ray Service. SN 162,565. Pub. 2-11-64. Filed 2-12-63.

768,779. MAGNAVOX. The Magnavox Company. SN 167,639. Pub. 2-11-64. Filed 4-26-63.

768,780. EMI. Capitol Records, Inc. SN 168,795. Pub. 2-11-64. Filed 5-10-63.

768,781. ROYAL ARTIST. C. Bruno & Son, Inc. SN 170,983. Pub. 2-11-64. Filed 6-14-63.

768,782. TELESTAR. Telefunken Aktiengesellschaft, by change of name from Telefunken G.m.b.H. SN 171,286. Pub. 2-11-64. Filed 6-18-63.

Class 37 — Paper and Stationery

768,783. REGENCY. The Dow Chemical Company. SN 134,209. Pub. 2-11-64. Filed 12-18-61.

768,784. PRACTICAL. Frank R. Walker Co. SN 135,159. Pub. 2-11-64. Filed 1-3-62.

768,785. DESIGN OF RECTANGULAR FIGURE. Hammermill Paper Company. SN 143,374. Pub. 2-11-64. Filed 4-30-62.

768,786. PACER. Paper Service Company, Inc. SN 145,121. Pub. 2-11-64. Filed 5-21-62.

768,787. FILETAPE. Royal McBee Corporation. SN 154,293. Pub. 2-11-64. Filed 10-1-62.

768,788. DATATAB AND DESIGN. Alfred Allen Watts Company, Inc. SN 155,356. Pub. 2-11-64. Filed 10-17-62.

768,789. MAR-PUNCH AND DESIGN. Eureka Specialty Printing Company. SN 166,986. Pub. 2-11-64. Filed 4-18-63.

768,790. FORGET ME NOT. American Greetings Corporation. SN 168,269. Pub. 2-11-64. Filed 5-7-63.

768,791. "WRITE-IN-LITE". Clay-Adams, Inc. SN 169,425. Pub. 2-11-64. Filed 5-22-63.

768,792. CONSO-M. Consolidated Paper Company. SN 169,518. Pub. 2-11-64. Filed 5-23-63.

768,793. DUETTE. J. V. Palmer Pen Co. Inc. SN 170,100. Pub. 2-11-64. Filed 5-31-63.

768,794. WPM. Wausau Paper Mills Company. SN 170,137. Pub. 2-11-64. Filed 5-31-63.

768,795. TIMEX. Morgan Paper Company, Inc. SN 170,930. Pub. 2-11-64. Filed 6-13-63.

768,796. BI-FOLD. Morgan Paper Company, Inc. SN 170,932. Pub. 2-11-64. Filed 6-13-63.

768,797. TRI-FOLD. Morgan Paper Company, Inc. SN 170,933. Pub. 2-11-64. Filed 6-13-63.

768,798. NITE-GLO. Commonwealth Pencil Company, Inc. SN 171,533. Pub. 2-11-64. Filed 6-21-63.

768,799. TORTOISE-TAC. Samuel A. Aizer. SN 171,598. Pub. 2-11-64. Filed 6-24-63.

Class 38 — Prints and Publications

768,800. THE SIXTH WHEEL. Sam Orleans Film Productions, Inc. SN 141,205. Pub. 2-11-64. Filed 3-30-62.

768,801. LET'S LEARN MONEY. Theo A. Lee, d.b.a. Lee Publishing Company. SN 151,932. Pub. 2-11-64. Filed 8-27-62.

Class 39 — Clothing

768,802. KUPPENHEIMER SUPPANTS. B. Kuppenheimer & Co. Inc. SN 78,882. Pub. 5-17-60. Filed 8-3-59.

768,803. HY-GENIE. National Shoes, Inc. SN 112,482. Pub. 2-11-64. Filed 1-25-61.

768,804. WEDGEMERE. Bridgewater Workers Co-Operative Association, Inc. SN 112,594. Pub. 2-11-64. Filed 1-27-61.

768,805. TUNDRA. Cambridge Rubber Company. SN 117,611. Pub. 2-11-64. Filed 4-11-61.

768,806. LEADING MAN. Michael Horowitz, d.b.a. Leading Man and Mike Howard. SN 129,490. Pub. 2-11-64. Filed 10-9-61.

768,807. FOOT SHAPE. P. W. Minor & Son, Inc. SN 131,495. Pub. 2-11-64. Filed 11-7-61.

768,808. MICHELE. Mangel Stores Corporation. SN 134,475. Pub. 2-11-64. Filed 12-21-61.

768,809. CAMPUSAIRE AND DESIGN. Merit Clothing Company. SN 139,652. Pub. 2-11-64. Filed 3-12-62.

768,810. MICHELE. Mangel Stores Corporation. SN 139,875. Pub. 2-11-64. Filed 3-14-62.

768,811. GOLF TEE. Eric Saffir. SN 142,457. Pub. 2-11-64. Filed 4-17-62.

768,812. MADELEINE. Richard Couture, Inc. SN 145,338. Pub. 2-11-64. Filed 5-24-62.

768,813. SCULPTURED LOOK. Novelty Veiling Co., Inc. SN 147,219. Pub. 2-11-64. Filed 6-19-62.

768,814. FIVE OAKS. Adria Knitting Mills, Inc., assignee of Fashion Knits, Inc. SN 149,277. Pub. 12-10-63. Filed 7-18-62.

768,815. WONDERLOC. Kayser-Roth Corporation. SN 149,295. Pub. 5-21-63. Filed 7-18-62.

768,816. BRADSHIRE. The Enro Shirt Company, Inc. SN 149,378. Pub. 2-11-64. Filed 7-19-62.

768,817. EXPANDO-TOP. Kayser-Roth Corporation. SN 150,070. Pub. 2-11-64. Filed 7-30-62.

768,818. DASHER. Convoy Co. Inc. SN 151,016. Pub. 2-11-64. Filed 8-13-62.

768,819. LITTLE SQUIRE. Little Squire, Inc. SN 151,240. Pub. 2-11-64. Filed 8-15-62.

768,820. STALWARTS. Kinney Shoe Corporation, assignee of G. R. Kinney Corporation. SN 151,591. Pub. 2-11-64. Filed 8-21-62.

768,821. MINI-CHEERS. Youngwear, Inc. SN 152,026. Pub. 2-11-64. Filed 8-27-62.

768,822. E-Z DOOZIE. E-Z Mills, Inc. SN 152,684. Pub. 2-11-64. Filed 9-7-62.

768,823. MISTER WASH. William D. Barey, d.b.a. Bill Barey Gateway Man's Shop. SN 154,682. Pub. 2-11-64. Filed 10-8-62.

768,824. SEAT BELTS. Melville Shoe Corporation. SN 154,982. Pub. 2-11-64. Filed 10-11-62.

768,825. JACQUES GRIFFE. Creations et Haute-Couture de Paris. SN 155,704. Pub. 2-11-64. Filed 10-23-62.

768,826. SNAP-A-WAY. Phillips-Van Heusen Corporation. SN 157,323. Pub. 2-11-64. Filed 11-15-62.

768,827. DICKINSON. The Middishade Company, Inc. SN 162,348. Pub. 2-11-64. Filed 2-8-63.

768,828. YOUNG TRENDS. Allied Stores of New York, Inc., d.b.a. Stern's. SN 164,787. Pub. 2-11-64. Filed 3-18-63.

768,829. TREASURE KNITS. Heritage Knitwear, Inc. SN 164,841. Pub. 2-11-64. Filed 3-18-63.

768,830. KETTY AND DESIGN. Frederick Altmann, d.b.a. Ketty. SN 164,937. Pub. 2-11-64. Filed 3-19-63.

768,831. SAN-CLAIR. Berker Sportcraft Limited. SN 165,491. Pub. 2-11-64. Filed 3-27-63.

768,832. SPORTCASTER. Sportcaster Company. SN 167,334. Pub. 2-11-64. Filed 4-22-63.

768,833. STIL-LONGS AND DESIGN. Knut Stoknes Trikotasjefabrikk. SN 168,457. Pub. 2-11-64. Filed 3-14-63.

768,834. STIL AND DESIGN. Knut Stoknes Trikotasjefabrikk. SN 168,458. Pub. 2-11-64. Filed 3-14-63.

768,835. FOOT FLOATERS. Moran Shoe Company. SN 169,294. Pub. 2-11-64. Filed 5-20-63.

768,836. SILVER TEE AND DESIGN. Silver Knit Hosiery Mills, Inc. SN 169,772. Pub. 2-11-64. Filed 5-27-63.

768,837. MISS NEAT. Hanes-Millis Sales Corporation. SN 171,659. Pub. 2-11-64. Filed 6-24-63.

768,838. OBSESSION. La Gaine Obsession—Etablissements Gilmo. SN 172,139. Pub. 2-11-64. Filed 6-26-63.

768,839. PAXTON AND DESIGN. Milsan Manufacturing Corporation. SN 173,477. Pub. 2-11-64. Filed 7-22-63.

768,840. FULL JOCKEY FIGURE. Cooper's, Incorporated. SN 174,943. Pub. 2-11-64. Filed 8-13-63.

768,841. DESIGN OF A BOY ON BICYCLE. Donald O. Rehm, d.b.a. Guaranty Cycle Company. SN 176,233. Pub. 2-11-64. Filed 9-3-63.

768,842. McDELMAS ETC. AND DESIGN. Southern Athletic Company, Inc. SN 176,580. Pub. 2-11-64. Filed 9-9-63.

Class 40 — Fancy Goods, Furnishings, and

768,843. TRIMCO. Trim Corporation of America. MULTIPLE CLASS (Classes 40 and 50). SN 169,328. Pub. 2-11-64. Filed 5-20-63.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

768,844. DUBBLE BRAID. Couristan, Inc. SN 125,012. Pub. 2-11-64. Filed 7-31-61.

768,845. SPUN-LO. Spun-Lo Elderlon, Inc. SN 156,832. Pub. 2-11-64. Filed 11-7-62.

768,846. ELDERLON. Spun-Lo Elderlon, Inc. SN 156,833. Pub. 2-11-64. Filed 11-7-62.

768,847. VITALIA. Stretch Fabrics, Inc. SN 165,642. Pub. 2-11-64. Filed 3-28-63.

768,848. IONIVYL. Societe Rhovyl. SN 165,849. Pub. 2-11-64. Filed 4-1-63.

768,849. MAGILASTIC. Brett-Schneider Mills, Inc. SN 167,796. Pub. 2-11-64. Filed 4-30-63.

768,850. ULTIMATE 80. The General Tire & Rubber Company. SN 167,902. Pub. 2-11-64. Filed 5-1-63.

768,851. DEERHEAD. Deering Milliken, Inc. SN 168,020. Pub. 2-11-64. Filed 5-2-63.

768,852. SHEERSPAN. William Skinner & Sons. SN 168,864. Pub. 2-11-64. Filed 5-14-63.

768,853. L.A.M. Deering Milliken, Inc. SN 171,333. Pub. 2-11-64. Filed 6-19-63.

768,854. HUSSAR. Deering Milliken, Inc. SN 171,334. Pub. 2-11-64. Filed 6-19-63.

768,855. FACADE. Deering Milliken, Inc. SN 171,336. Pub. 2-11-64. Filed 6-19-63.

768,856. NORMANDIE. Normandie Bedspread Co. SN 171,562. Pub. 2-11-64. Filed 6-21-63.

768,857. TRYSTEAU. Fieldcrest Mills, Inc. SN 171,765. Pub. 2-11-64. Filed 6-25-63.

768,858. HAPPY HOME. F. W. Woolworth Co. SN 172,125. Pub. 2-11-64. Filed 6-28-63.

Class 44 — Dental, Medical, and Surgical Appliances

768,669. (See Class 21 for this trademark.)

768,859. ROLL 'N'-PIN. Revo-Life, Inc. SN 150,457. Pub. 2–11–64. Filed 8–3–62.

768,860. PREMIER EYE PADS AND DESIGN. Henry J. Meer, d.b.a. Aseptic Eye Products Co. SN 161,266. Pub. 2–11–64. Filed 1–23–63.

768,861. VISO-MONITOR AND DESIGN. Sanborn Company. SN 161,632. Pub. 2–11–64. Filed 1–29–63.

768,862. BEAUTY AID. Helene Curtis Industries, Inc. SN 161,965. Pub. 2–11–64. Filed 2–4–63.

768,863. JET-SET. Scott Aviation Corporation. SN 164,903. Pub. 2–11–64. Filed 3–18–63.

768,864. PAT-AWAY. Excel Automatic Products, Inc. SN 166,000. Pub. 2–11–64. Filed 4–3–63.

768,865. VENTILO. The Scholl Mfg. Co., Inc. SN 169,176. Pub. 2–18–64. Filed 5–17–63.

768,866. LOOK. Arthur E. Look, Inc. SN 170,918. Pub. 2–11–64. Filed 6–13–63.

768,867. VITABASE. Howe Sound Company. SN 174,374. Pub. 2–11–64. Filed 8–5–63.

768,868. ALL-SPORTS. All-Sports Medications, Inc., d.b.a. All-Sports Medications Company. SN 175,368. Pub. 2–11–64. Filed 8–20–63.

768,869. CARDIQUET. Propper Manufacturing Company, Inc. SN 175,606. Pub. 2–11–64. Filed 8–22–63.

768,870. FOR-LITE. The Foregger Company, Inc. SN 176,182. Pub. 2–11–64. Filed 9–3–63.

768,871. PREGNOMETER. Neltronic Instrument Corporation. SN 176,225. Pub. 2–11–64. Filed 9–3–63.

768,872. M-ETTE. Will Ross, Inc. SN 177,097. Pub. 2–11–64. Filed 9–16–63.

Class 46 — Foods and Ingredients of Foods

768,873. REPRESENTATION OF A DANCING GIRL. Milani Foods, Inc., by change of name from Louis Milani Foods, Inc. SN 118,467. Pub. 2–11–64. Filed 4–24–61.

768,874. INTERNATIONAL HOUSE OF PANCAKES. The International House of Pancakes Commissary. SN 123,426. Pub. 2–11–64. Filed 7–5–61.

768,875. RENAISSANCE. Renaissance Foods, Inc. SN 129,293. Pub. 2–11–64. Filed 10–5–61.

768,876. SEAS-OLEUM. McCormick & Company, Incorporated. SN 156,136. Pub. 2–11–64. Filed 10–29–62.

768,877. CORN-HI. James M. Johnson, d.b.a. American Corn Bakers. SN 156,608. Pub. 2–11–64. Filed 11–5–62.

Class 50 — Merchandise Not Otherwise Classified

768,843. (See Class 40 for this trademark.)

768,878. VULCA-WELT. International Vulcanizing Corporation. SN 103,278. Pub. 2–21–61. Filed 8–23–60.

768,879. LISBETH WHITING. Lisbeth Whiting Company, Inc. SN 156,844. Pub. 2–11–64. Filed 11–7–62.

Class 51 — Cosmetics and Toilet Preparations

768,880. CAT-ETTE. Lora Laboratories. SN 157,120. Pub. 2–11–64. Filed 11–13–62.

Class 52 — Detergents and Soaps

768,881. VIE. The Winzer Company of Dallas, Inc., assignee of The Winzer Company. SN 87,163. Pub. 8–30–60. Filed 12–11–59.

768,882. RAVON. Leewood Sales Company, d.b.a. Leewood Products Co. SN 156,625. Pub. 6–11–63. Filed 11–5–62.

768,883. THILENE 4–M ETC. AND DESIGN. Quality Products Co., Inc. SN 157,031. Pub. 2–11–64. Filed 10–29–62.

Service Marks

Class 103 — Construction and Repair

768,884. MISCELLANEOUS DESIGN. Rogell & Best Contracting Co. Inc. SN 157,012. Pub. 2–11–64. Filed 11–9–62.

Class 104 — Communication

768,885. TWIN TOWER SYMBOL. Sunshine Broadcasting Co. SN 156,680. Pub. 2–11–64. Filed 11–5–62.

Class 105 — Transportation and Storage

768,886. NNG. Northern Natural Gas Company. SN 152,524. Pub. 2–11–64. Filed 9–5–62.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 2 — Receptacles

768,887. Hercules Membrino, d.b.a. Hercalyce Sales Company, Paoli, Pa. SN 158,838. Filed P.R. 12–10–62; Am. S.R. 1–24–64.



For Carrier Units of Removable Bags.
First use Dec. 3, 1962.

Class 10 — Fertilizers

768,888. Merck & Co., Inc., Rahway, N.J. SN 131,299. Filed P.R. 11–3–61; Am. S.R. 3–11–64.

COTTON-GRO

For Chemical Compound for Promoting Plant Growth.
First use Oct. 18, 1961.

768,889. Eastern States Farmers' Exchange, Incorporated, West Springfield, Mass. SN 153,392. Filed P.R. 9–18–62; Am. S.R. 3–6–64.

START-N-GRO

For Fertilizers.
First use Feb. 20, 1958.

768,890. Missouri Farmers Association, Inc., Columbia, Mo. SN 164,260. Filed P.R. 3–8–63; Am. S.R. 2–17–64.

PASTURE TOPPER

For Fertilizer.
First use Feb. 8, 1963.

Class 12 — Construction Materials

768,891. Wood Feathers, Inc., North Portland, Oreg. SN 156,700. Filed P.R. 11–5–62; Am. S.R. 1–6–64.



BEAVER STATE

The drawing is lined for the color green, but no particular color is claimed.
For Wood Shakes for Roof and Side Wall Coverings.
First use May 1960.

Class 15 — Oils and Greases

768,892. Turtle Wax, Inc., Chicago, Ill. SN 136,610. Filed P.R. 1–25–62; Am. S.R. 3–9–64.

SQUEEK NO MORE

For Silicone Lubricant for General Use.
First use Aug. 10, 1961.

Class 16 — Protective and Decorative Coatings

768,893. Cotter & Company, Chicago, Ill. SN 143,601. Filed P.R. 5–2–62; Am. S.R. 3–2–64.

SAT-N-HUE

For Latex House Paint for Interior and Exterior Use.
First use Apr. 4, 1962.

Class 21 — Electrical Apparatus, Machines, and Supplies

768,894. Hysol Corporation, New York, N.Y. SN 148,388. Filed P.R. 7–5–62; Am. S.R. 3–6–64.

DRI-KOTE

For Electrical Insulating Compositions in the Form of Thermosetting Powders Applied to Preheated Objects by Dusting, by Dry Spray Process and by Fluidized Bed Process.
First use Apr. 23, 1962.

768,895. Electronic Research Associates, Inc., Cedar Grove, N.J. SN 150,773. Filed P.R. 8–8–62; Am. S.R. 10–23–63.

BI-PLANAR

For Loudspeakers for Sound Reproducing Equipment.
First use June 18, 1962.

Class 27 — Horological Instruments

768,896. Broadway Ornamental Products, Inc., Hoboken, N.J. SN 158,316. Filed P.R. 12-3-62; Am. S.R. 3-2-64.

BROCKWAY

For Clocks and Watches and Parts Thereof, of All Types, and Particularly Wall Clocks.
First use Nov. 1, 1962.

768,897. General Time Corporation, New York, N.Y. SN 161,499. Filed P.R. 1-28-63; Am. S.R. 2-10-64.

GRANBY

For Clocks.
First use March 1960.

768,898. General Time Corporation, New York, N.Y. SN 161,501. Filed P.R. 1-28-63; Am. S.R. 2-10-64.

HAYWOOD

For Clocks.
First use September 1960.

Class 29 — Brooms, Brushes, and Dusters

768,899. The Sherwin-Williams Company, Cleveland, Ohio. SN 172,688. Filed 7-9-63.

ROLLER-KOATER

For Rolling Device for the Application of Paints and Kindred Products.
First use Apr. 15, 1942.

Class 37 — Paper and Stationery

768,900. A. W. Faber-Castell Pencil Co., Newark, N.J. SN 162,250. Filed P.R. 2-7-63; Am. S.R. 2-6-64.

POLYGRAPH

For Ink Pen for Technical Use.
First use Sept. 24, 1962.

Class 38 — Prints and Publications

768,901. Gerard A. Pottebaum, Dayton, Ohio. SN 170,489. Filed P.R. 6-6-63; Am. S.R. 3-9-64.

LITTLE PEOPLE'S PAPERBACKS

For Series of Children's Books.
First use Feb. 1, 1963.

Class 46 — Foods and Ingredients of Foods

768,902. Idaho Falls Bonded Produce and Supply Co., Idaho Falls, Idaho. SN 117,365. Filed P.R. 4-7-61; Am. S.R. 3-2-64.

TESTED

For Potatoes in Their Natural State.
First use Dec. 30, 1936.

768,903. William Davies Co. Inc., Chicago, Ill. SN 146,982. Filed P.R. 6-15-62; Am. S.R. 1-27-64.

CARV-EZE

For Pre-Cooked Hams.
First use on or about Oct. 12, 1961.

768,904. Bowman Dairy Company, Chicago, Ill. SN 149,444. Filed P.R. 7-20-62; Am. S.R. 10-21-63.

MAKE YOURS A BOWMAN 2-MILK FAMILY

For Fresh Milk, Buttermilk, Chocolate Milk Drink, Cream, Butter, Fresh Eggs, Ice Cream, Sherbets, Ices, Powdered Milk, Powdered Buttermilk, and a Baking Compound.
First use Jan. 15, 1958.

768,905. Henry J. Beecher, d.b.a. Katharine Beecher, Manchester, Pa. SN 150,500. Filed P.R. 8-6-62; Am. S.R. 1-29-64.



For Butter Mint Candy.
First use May 10, 1962.

768,906. Henry J. Beecher, d.b.a. Katharine Beecher, Manchester, Pa. SN 150,504. Filed P.R. 8-6-62; Am. S.R. 1-29-64.



For Butter Mint Candy.
First use May 10, 1962.

768,907. Needham Packing Company, Inc., Sioux City, Iowa. SN 155,829. Filed P.R. 10-24-62; Am. S.R. 3-6-64.

NEEDHAM

For Fresh and Frozen Meats.
First use Oct. 4, 1962.

768,908. J. C. Taylor Creamery, Inc., Cincinnati, Ohio. SN 158,194. Filed 11-29-62.

BETTER BUTTER TAYLOR

For Butter.
First use Sept. 19, 1961.

768,909. The Sugardale Provision Company, Canton, Ohio. SN 161,425. Filed P.R. 1-25-63; Am. S.R. 3-2-64.

MOR-TENDER

For Fresh Dressed Beef Sides, Quarters and Cuts.
First use on or about Dec. 4, 1962.

Class 49 — Distilled Alcoholic Liquors

768,910. Societe Anonyme des Etablissements Louis Regnier, Dijon, Cote d'Or, France. SN 163,496. Filed P.R. 2-26-63; Am. S.R. 11-6-63.



Owner of French Reg. No. 6,568, dated May 5, 1962.
For Brandy.

768,911. Mr. Boston Distiller Inc., d.b.a. Essex Importers and Distillers, Ltd., Boston, Mass. SN 166,574. Filed P.R. 4-11-63; Am. S.R. 3-3-64.

MacNeil & Muir

For Scotch Whisky.
First use July 2, 1962.

768,912. Medley Distilling Company, Owensboro, Ky. SN 168,425. Filed P.R. 5-8-63; Am. S.R. 3-6-64.

CANADIAN DELUXE

For Whiskey.
First use February 1963.

Class 50 — Merchandise Not Otherwise Classified

768,913. Physicians and Hospitals Supply Company, Inc., Minneapolis, Minn. SN 131,227. Filed P.R. 11-2-61; Am. S.R. 9-20-63.

KOMFORT KIT

For Kit Containing Tooth-Paste, Tooth Brush, Body Lotion, Mouth Wipes, and Comb Which May Be Useful to Hospital Patients.
First use Mar. 10, 1960.

Class 51 — Cosmetics and Toilet Preparations

768,914. The House for Men, Inc., Chicago, Ill. SN 128,443. Filed P.R. 9-22-61; Am. S.R. 8-12-63.

BAY LIME

For Cologne, and After Shave Lotion.
First use Aug. 15, 1961.

Class 52 — Detergents and Soaps

768,915. Tetson Chemical Corporation, Holyoke, Mass. SN 142,870. Filed P.R. 4-23-62; Am. S.R. 11-12-63.



For Liquid Detergent for Household Use.
First use Apr. 1, 1961.

Service Mark

Class 101 — Advertising and Business

768,916. John J. Leslie, Jr., d.b.a. Leslie Creations, Lafayette Hill, Pa. SN 143,033. Filed P.R. 4-25-62; Am. S.R. 2-28-64.

MAIL ORDER METHODS

For Sales Promotional Services Comprising the Developing of Sources for Gift Merchandise for Mail Order Sales, and the Preparation and Provision to Mail Order Sales Organizations of Self-Mailer Brochures, Instructional and Other Promotional Materials Thereon.
First use July 2, 1961.

TRADEMARK REGISTRATIONS RENEWED

24,295. "LUXURY." Cl. 51. 3–6–1894.
24,620. CALLARD & BOWSER. Cl. 46. 5–1–1894.
24,818. SARATOGA FLAKES. Cl. 46. 6–5–1894.
177,378. NIF-TY. Cl. 46. 12–18–23.
178,014. MARY FRASER. Cl. 46. 1–1–24.
178,655. BEAR BRAND AND DESIGN. Cl. 43. 1–15–24.
179,082. SUNBURNTINE AND DESIGN. Cl. 18. 2–5–24.
179,106. UNION LEADER AND DESIGN. Cl. 39. 2–5–24.
179,285. CRISS CROSS AND DESIGN. Cl. 39. 2–5–24.
179,967. SNOWBALL. Cl. 16. 2–9–24.
180,295. COLOROTO MAGAZINE. Cl. 38. 2–26–24.
180,592. NIGROID. Cl. 18. 3–4–24.
180,873. MAID OF THE FOREST. Cl. 37. 3–11–24.
180,886. DESIGN OF BEAR FEEDING A CUB. Cl. 46. 3–11–24.
181,062. DENVER SANWICH. Cl. 46. 3–11–24.
181,107. FANNING'S BREAD AND BUTTER PICKLES AND DESIGN. Cl. 46. 3–11–24.
181,408. SUBTILITE. Cl. 51. 3–18–24.
181,663. BIZ. Cl. 22. 3–25–24.
181,664. LA QUEEN. Cl. 22. 3–25–24.
182,721. KRAFTEX. Cl. 37. 4–15–24.
183,049. PILOT AND DESIGN. Cl. 1. 4–22–24.
183,322. WOOL-O-WISP. Cl. 39. 4–29–24.
183,325. CHESTER. Cl. 46. 4–29–24.
183,326. PORTAGE. Cl. 46. 4–29–24.
183,430. GOODMAN'S AND DESIGN. Cl. 46. 4–29–24.
184,785. RAMONA. Cl. 42. 6–3–24.
185,248. CHICKEN DINNER. Cl. 46. 6–10–24.
185,958. CHEVRON. Cl. 23. 7–1–24.
186,002. LA BELLE SAISON. Cl. 51. 7–1–24.
187,201. DUFFY'S GOLD SEAL. Cl. 46. 7–29–24.
187,226. SINGER. Cl. 23. 7–29–24.
187,737. MOBO. Cl. 4. 8–12–24.
187,744. GRETSCH AND DESIGN. Cl. 36. 8–12–24.
187,814. SITEX. Cl. 6. 8–12–24.
403,934. VIYELLA. Cl. 39. 10–26–43.
405,799. THE FRIENDLY STORE. Cl. 32. 2–22–44.
405,934. DIP & DON. Cl. 42. 2–29–44.
405,938. DELPLAID. Cl. 42. 2–29–44.
406,020. UNITOL. Cl. 16. 3–7–44.
406,087. AIR-WICK. Cl. 6. 3–7–44.
406,139. BIACEN. Cl. 6. 3–14–44.
406,204. HOOSIER POET. Cl. 17. 3–14–44.
406,293. BANKABLE. Cl. 17. 3–21–44.
406,614. CATALPA. Cl. 37. 4–11–44.
406,707. INKMASTER. Cl. 23. 4–18–44.
406,762. KODAK. Cl. 37. 4–25–44.
406,792. MODERN PRECISION. Cl. 38. 4–25–44.
407,011. AIRCAT. Cl. 35. 5–16–44.
407,018. COLLEGIATE. Cl. 39. 4–16–44.
407,027. LIGHT METAL AGE. Cl. 38. 5–16–44.
407,168. COSMALOK. Cl. 23. 5–23–44.
407,381. STALEY'S. Cl. 46. 5–30–44.
407,602. LOMA. Cl. 23. 6–13–44.
407,604. SCRAP-TRAP. Cl. 2. 6–13–44.
407,933. DARLING AND DESIGN. Cl. 50. 7–4–44.
407,947. GEM-OF-THE-SEA. Cl. 46. 7–11–44.
408,013. NA-NOR. Cl. 52. 7–11–44.
408,158. BIO-DYNE. Cl. 18. 7–25–44.
408,161. NUVASEAL. Cl. 12. 7–25–44.
408,212. DIAPERM. Cl. 6. 7–25–44.
408,423. ALUMINAMEL. Cl. 16. 8–8–44.
408,531. ACTILAMIDE. Cl. 18. 8–15–44.

TRADEMARK REGISTRATIONS CANCELED

Section 8

120,317. DOLPHIN ATLANTIC AND DESIGN. Cl. 21. 2–5–18.
120,318. DOLPHIN. Cl. 21. 2–5–18.
122,052. LIFETIME DIAMOND AND DESIGN. Cl. 18. 6–25–18.

The following registrations issued Mar. 11, 1958

659,179. SEAL 'N SELL. Cl. 2.
659,180. RAN/TOTE AND DESIGN. Cl. 2.
659,181. SINCE 1899 BLOOMER PACKAGES AND DESIGN. Cl. 2.
659,184. COL-LEAD. Cl. 3.
659,186. VELVET-JELL. Cl. 4.
659,187. SUN-LOTION. Cl. 4.
659,189. GLIT. Cl. 5.
659,195. D-LITE AND DESIGN. Cl. 6.
659,198. PERMA-BLEND. Cl. 6.
659,204. HI-D. Cl. 6.
659,205. SILVER DOLLAR. Cl. 6.
659,212. PLANT-SHOOT. Cl. 10.
659,215. KOLORGRAN. Cl. 12.
659,218. HANDY ANGLE. Cl. 13.
659,220. CRAGSTAN. Cl. 13.
659,221. PREMIUM POWERED ETC. AND DESIGN. Cl. 15.
659,231. JAMAICA. Cl. 16.
659,232. SERPEDROPS. Cl. 18.
659,233. BELCALOID. Cl. 18.
659,236. PANALGIA. Cl. 18.
659,241. PROCTADE. Cl. 18.
659,243. ALBASULFA. Cl. 18.
659,245. CLYSMATHANE. Cl. 18.
659,248. SAFETY POWER AND DESIGN. Cl. 19.
659,250. CYCLIA AND DESIGN. Cl. 19.
659,252. EVANS AND DESIGN. Cl. 19.
659,253. EVANACTION. Cl. 19.
659,256. AR-GEE. Cl. 19.
659,257. AUTOPARK. Cl. 19.
659,261. FLEEP. Cl. 19.
659,263. BENDIX. Cl. 21.
659,271. FAR-A-GLO. Cl. 21.
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659,280. MACO-TRONIC AND DESIGN. Cl. 22.
659,281. SPELL-A-VISION. Cl. 22.
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659,301. NETTAX. Cl. 26.
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659,328. PREWAY. Cl. 31.
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659,479. SAFE SOFTBLOX SUDSABLE. Cl. 22.
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659,481. MOST KUT. Cl. 23.
659,485. HAF-A-KROSS. Cl. 32.
659,486. THE "TAUBMAN" LAUNDRY AND DESIGN. Cl. 37.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

180,045. ORBIT NUGGETS. Cl. 46. 2–19–24. Listerated Gum Corporation. Wm. Wrigley Jr. Company, Chicago, Ill. Amended: In the statement, column 1, lines 9 through 11, "no claim being made to the word 'Gum' apart from the other features of the mark," is deleted, and the drawing is amended to appear:

ORBIT
NUGGETS

183,411. DIXIE SPLIT. Cl. 46. 4–29–24. M. A. Gedney Company, Chaska, Minn. Amended: The drawing is amended to appear:

DIXIE SPLIT

185,482. JULIET. Cl. 39. 6–17–24. W. G. Anglim, doing business as Juliet Lingerie Co., Vanity Fair Mills, Inc., Reading, Pa. Amended: In the statement, column 1, line 9, "silk" is deleted.

406,702. DISHMASTER. Cl. 23. 4–18–44. Nutone, Incorporated. Dishmaster Corporation, Bloomsfield Hills, Mich. Amended: The drawing is amended to appear:

DISHMASTER

580,654. SOLITE. Cl. 12. 10–6–53. Southern Lightweight Aggregate Corporation. Solite Corporation, Norfolk, Va. Corrected: In the statement, column 2, lines 11 through 14 should be deleted and *The trademark was first used by applicant on all of the goods except lightweight aggregate building blocks on or about July 1, 1948, and first used by a related company on lightweight building blocks, the nature and quality of which are controlled by registrant on or about July 1, 1948 and first used in commerce among the several states which may lawfully be regulated by Congress on or about July 1, 1948.* should be inserted.

629,304. TURBODIESEL. Cl. 23. 6–19–56. Cummins Engine Company, Inc., Columbus, Ind. Corrected: In the certificate, line 5, "17th" should be deleted and *5th* should be inserted, "May" should be deleted and *Jan.* should be inserted and in the heading, "May 17" should be deleted and *Jan. 5* should be inserted.

657,924. BUCKEYE. Cl. 1. 2–4–58. The Buckeye Cellulose Corporation, Cincinnati, Ohio. Amended: the drawing is amended to appear:

Buckeye

711,570. HALF JOCKEY DESIGN. Cl. 39. 2–21–61. Cooper's, Incorporated, Kenosha, Wis. Corrected: In the statement, column 1, line 1, "Coopers, Inc." should be deleted and *Cooper's Incorporated* should be inserted.

764,441. A DIAMOND CHEMICAL. Cl. 52. 2–4–64. Diamond Alkali Company, Cleveland, Ohio. Corrected: In the statement, column 2, after line 6, *The terms "A" and "Chemical" are disclaimed apart from the mark as shown.* should be inserted.

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APRIL 28, 1964

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Abbey Chemical Co., Inc., d.b.a. Abbey Chemco, Providence, R.I. 659,205, canc. Cl. 6.

Abrams Co., Philadelphia, Pa. 659,271, canc. Cl. 21.

Acorn Chemical Co., Cleveland, Ohio. 768,583, pub. 2–11–64. Multiple Class (Classes 12 and 16.)

Adelphi Research and Mfg. Co., Philadelphia, Pa. 659,299, canc. Cl. 26.

Adlerwerke vorm. Heinrich Kleyer A.G., Frankfurt am Main, Germany. 768,721, pub. 2–11–64. Cl. 23.

Adria S.A., Lausanne, Vaud, Switzerland. 768,597, pub. 2–11–64. Cl. 12.

Adria Knitting Mills, Inc., New York, N.Y., from Fashion Knits, Inc., Lexington, N.C. 768,814, pub. 12–10–63. Cl. 39.

Airkem, Inc. : *See*—
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Allen-Bradley Co., Milwaukee, Wis. 768,655, pub. 2–11–64. Cl. 21.

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Allied Stores of New York, Inc., New York, N.Y. 768,828, pub. 2–11–64. Cl. 39.

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All-Sports Medications Co. : *See*—
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Aluminum Products Co., La Grange, Ill. 122,052, canc. Cl. 13.

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Child Life Press, Inc., Boston, Mass. 659,368, canc. Cl. 38.
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Crane Co., St. Louis, Mo. 768,612, pub. 2–11–64. Cl. 13.
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Croton Watch Co., Inc., New York, N.Y. 768,741, pub. 2–11–64. Cl. 27.
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Flo-Lok, Inc., Houston, Tex. 768,606, pub. 8–27–63. Cl. 13.
Foregger Co., Inc., The, Roslyn Heights, N.Y. 768,870, pub. 2–11–64. Cl. 44.
Formatic Printing Co., New York, N.Y. 659,359, canc. Cl. 37.
Formula 77 Corp., Selah, Wash. 768,632, pub. 8–28–62. Cl. 16.
Fort Howard Paper Co., Green Bay, Wis. 180,873, ren. 4–28–64. Cl. 37.
Fort Howard Paper Co., Green Bay, Wis. 182,721, ren. 4–28–64. Cl. 37.
Franco-Italian Packing Co., to C.H.B. Seafoods, Terminal Island, Calif. 407,947, ren. 4–28–64. Cl. 46.
Frank & Meyer Neckwear Co., St. Louis, Mo. 183,322, ren. 4–28–64. Cl. 39.
Franklin, Dale J., d.b.a. Fireproof Starch Co., Fort Worth, Tex. 768,577, pub. 2–11–64. Cl. 6.
Fraser, Mary, Candy Studio: *See*—
Fraser, Mary, Candies, Inc.
Fraser, Mary, Candies, Inc., d.b.a. Mary Fraser Candy Studio, Los Angeles, Calif., to National Biscuit Co., New York, N.Y. 178,014, ren. 4–28–64. Cl. 46.
Fred-Gretsch Mfg. Co., The, Brooklyn, N.Y. 187,744, ren. 4–28–64. Cl. 36.

Fyr-Fyter Co., The, Newark, N.J. 659,287, canc. Cl. 23.
Gamewell Co., The, Newton Upper Falls, Mass. 768,663, pub. 2–11–64. Cl. 21.
Gann Hosiery Mills Co., Durham, N.C. 659,381, canc. Cl. 39.
Garcia, Humberto A., d.b.a. The New Yorker Sewing Machine Co., New York, N.Y. 768,722–3, pub. 2–11–64. Cl. 23.
Gardex, Inc., Michigan City, Ind. 768,718, pub. 2–11–64. Cl. 23.
Garland, Charles, d.b.a. World Premier Pictures, Washington, D.C. 659,363, canc. Cl. 38.
Gedney, M. A., Co., Chaska, Minn. 183,411. Am. 7(d). Cl. 46.
General Bearing Co., Inc., Nyack, N.Y. 768,616, pub. 2–11–64. Cl. 13.
General Dynamics Corp., New York, N.Y. 768,719–20, pub. 2–11–64. Cl. 23.
General Motors Corp., Detroit, Mich. 659,257, canc. Cl. 19.
General Motors Corp., Detroit, Mich. 768,650, pub. 2–11–64. Cl. 19.
General Motors Corp., Detroit, Mich. 768,769, pub. 2–11–64. Cl. 34.
General Time Corp., New York, N.Y. 768,897–8. Cl. 27.
General Tire & Rubber Co., The, Akron, Ohio. 407,011, ren. 4–28–64. Cl. 35.
General Tire & Rubber Co., The, Akron, Ohio. 768,850, pub. 2–11–64. Cl. 42.
Gillam, Ernest O., Fort Worth, Tex. 768,582, pub. 12–5–61. Cl. 12.
Gilson Medical Electronics: *See*—
Gilson, Warren E., M.D.
Gilson, Warren E., M.D., d.b.a. Gilson Medical Electronics, Middleton, Wis. 768,733, pub. 2–11–64. Cl. 26.
Globe Roofing Products Co., Inc., Whiting, Ind. 659,215, canc. Cl. 12.
Goder, Joseph, Sales, Inc., Chicago, Ill. 768,764, pub. 2–11–64. Cl. 34.
Goodman, A., & Sons, Inc., Long Island City, N.Y. 183,430, ren. 4–28–64. Cl. 46.
Goodman, A. & M., Inc., New York, N.Y. 659,405, canc. Cl. 39.
Gopher Game Co.: *See*—
Manley, Harold C.
Gorham Corp., Providence, R.I. 768,743, pub. 2–11–64. Cl. 28.
Gould-National Batteries, Inc., St. Paul, Minn. 768,673, pub. 2–11–64. Cl. 21.
Grant, W. T., Co., New York, N.Y. 768,746, pub. 2–11–64. Cl. 32.
Great Western Chemical Co. of Portland, Portland, Oreg. 768,587, pub. 2–11–64. Cl. 12.
Guaranty Cycle: *See*—
Rehm, Donald O.
HDN Corp., from Heyden Newport Chemical Corp., New York, N.Y. 768,553, pub. 2–11–64. Cl. 1.
Haller, John, Northville, Mich. 768,682, pub. 2–11–64. Cl. 23.
Hamm, Theo., Brewing Co., St. Paul, Minn. 659,452, canc. Cl. 48.
Hammermill Paper Co., Erie, Pa. 768,785, pub. 2–11–64. Cl. 37.
Hanes-Millis Sales Corp., High Point, N.C. 768,837, pub. 2–11–64. Cl. 39.
Harriss & Covington Hosiery Mills, High Point, N.C. 659,399–400, canc. Cl. 39.
Hawkins, Rod, Co.: *See*—
Hawkins, Rodney C.
Hawkins, Rodney C., d.b.a. Rod Hawkins Co., Billings, Mont. 659,436, canc. Cl. 46.
H-Brace, Inc., Miami, Fla. 768,590–91, pub. 2–11–64. Cl. 12.
Heberlein, George J., d.b.a. Heberlein Mfg. Co., Ault, Colo. 768,765, pub. 2–11–64. Cl. 34.
Heberlein Mfg. Co.: *See*—
Heberlein, George J.
Henckels, J. A., Zwillingswerk Aktiengesellschaft, from J. A. Henckels Zwillingswerk Aktiengesellschaft, Solingen, Germany. 768,620, pub. 12–10–57. Cl. 14.
Hercalyce Sales Co.: *See*—
Membrino, Hercules.
Hercules Gallon Products, Inc., Galion, Ohio. 768,652, pub. 2–11–64. Cl. 19.
Hercules Hose and Rubber Co., Philadelphia, Pa. 768,613, pub. 2–11–64. Cl. 13.
Hercules Packing Corp., Alden, N.Y. 768,627, pub. 2–11–64. Cl. 15.
Heritage Knitwear, Inc., New York, N.Y. 768,829, pub. 2–11–64. Cl. 39.
Heyden Newport Chemical Corp.: *See*—
HDN Corp.
Hill-Shaw Co., Chicago, Ill. 768,671, pub. 2–11–64. Cl. 21.
Hirsch, Virginia, Kansas City, Mo. 659,184, canc. Cl. 3.
Holland Color and Chemical Co., from Charles J. Weigel Inc., Holland, Mich. 768,580, pub. 1–14–64. Cl. 11.
Hollins, William, & Co. Ltd., Nottingham, England. 403,934, ren. 4–28–64. Cl. 39.
Home Comfort Products Co., Princeville, Ill. 768,766, pub. 2–11–64. Cl. 34.
Home Comfort Products Co., Princeville, Ill. 768,770, pub. 2–11–64. Cl. 34.
Horowitz, Michael, d.b.a. Leading Man and Mike Howard, New York, N.Y. 768,806, pub. 2–11–64. Cl. 39.
Houbigant, Inc., New York, N.Y. 181,408, ren. 4–28–64. Cl. 51.
Houbigant, Inc., New York, N.Y. 186,002, ren. 4–28–64. Cl. 51.
House For Men, Inc., The, Chicago, Ill. 768,914. Cl. 51.
Howe Sound Co., New York, N.Y. 768,867, pub. 2–11–64. Cl. 44.
Hoyer, Ted, & Co., Inc., Oshkosh, Wis. 768,738, pub. 2–11–64. Cl. 26.
Hudson Photographic Industries, Inc., Irvington-on-Hudson, N.Y. 768,732, pub. 2–11–64. Cl. 26.
Huetten- und Bergwerke Rheinhausen Aktiengesellschaft, Essen, Germany. 768,621, pub. 2–11–64. Cl. 14.
Hunt Electronics Co., Dallas, Tex. 768,659, pub. 2–11–64. Cl. 21.
Huntingburg Furniture Co., Inc., Huntingburg, Ind. 768,755, pub. 2–11–64. Cl. 32.
Hyman, L., & Sons, to L. Hyman & Sons Corp., New York, N.Y. 406,614, ren. 4–28–64. Cl. 37.
Hyman, L., & Sons Corp.: *See*—
Hyman, L., & Sons.
Hysol Corp., New York, N.Y. 768,894. Cl. 21.
Idaho Falls Bonded Produce and Supply Co., Idaho Falls, Idaho. 768,902. Cl. 46.
Ideal Roller & Mfg. Co., Chicago, Ill. 406,707, ren. 4–28–64. Cl. 23.
Ilikon Corp., Natick, Mass. 768,625, pub. 2–11–64. Cl. 14.
Indian Head Mills, Inc.: *See*—
Ulmann, Bernhard, Co., Inc.
Indian Head Mills, Inc.: *See*—
Simpson, Wm., Sons & Co.
Indiana Commercial Filters Corp., Lebanon, Ind. 659,292, canc. Cl. 23.
International Harvester Co., Chicago, Ill., from Tom Moore Tractor, Inc., Mantua, Ohio. 768,681, pub. 9–25–62. Cl. 23.
International House of Pancakes Commissary, The, North Hollywood, Calif. 768,874, pub. 2–11–64. Cl. 46.
International Latex Corp., Dover, Del. 659,261, canc. Cl. 19.
International Vulcanizing Corp., Boston, Mass. 768,878, pub. 2–21–61. Cl. 50.
Interstate Battery System of America, Inc., Dallas, Tex. 768,658, pub. 2–11–64. Cl. 21.
Jablow, I., & Co., to I. Jablow & Co., Inc., Philadelphia, Pa. 407,018, ren. 4–28–64. Cl. 39.
Jablow, I., & Co., Inc.: *See*—
Jablow, I., & Co.
Jamaica Paint Products, Long Island, N.Y. 659,231, canc. Cl. 16.
Janeway Meisenheimer, Eau Claire, Wis. 768,752, pub. 2–11–64. Cl. 32.
Janus Products, Inc., Syosset, N.Y. 768,735, pub. 2–11–64. Cl. 26.
Jaw Mfg. Co., Reading, Pa. 768,710, pub. 2–11–64. Cl. 23.
Johnson, James M., d.b.a. American Corn Bakers, Ipswich, Mass. 768,877, pub. 2–11–64. Cl. 46.
Johnson Scale Co., West Caldwell, N.J. 768,734, pub. 2–11–64. Cl. 26.
Juliet Lingerie Co.: *See*—
Anglim, W. G.
Kaufman, David, d.b.a. Dagil Jewelers, New York, N.Y. 768,742, pub. 2–11–64. Cl. 28.
Kaufman, J., Iron Works, Bronx, N.Y. 768,610, pub. 2–11–64. Cl. 13.
Kayser-Roth Corp., New York, N.Y. 768,815, pub. 5–21–63. Cl. 39.
Kayser-Roth Corp., New York, N.Y. 768,817, pub. 2–11–64. Cl. 39.
Ketty: *See*—
Altmann, Frederick.
Keystone Paint and Varnish Corp.: *See*—
Keystone Varnish Co.
Keystone Plastics, Inc., Newark, N.J. 768,552, pub. 3–26–63. Cl. 1.
Keystone Varnish Co., to Keystone Paint and Varnish Corp., Brooklyn, N.Y. 408,423, ren. 4–28–64. Cl. 16.
Kinney, G. R., Corp.: *See*—
Kinney Shoe Corp.
Kinney Shoe Corp., from G. R. Kinney Corp., New York, N.Y. 768,820, pub. 2–11–64. Cl. 39.
Kinzee Plastics, Inc., Saddle Brook, N.J. 768,615, pub. 2–11–64. Cl. 13.
Kirsch Co., Sturgis, Mich. 768,617–8, pub. 2–11–64. Cl. 13.
Kolloid Mills, Inc., Muncie, Ind. 659,295, canc. Cl. 23.
Kool Kit Corp., Indianapolis, Ind. 768,562, pub. 2–11–64. Cl. 2.
Kool Kooshion Mfg. Co., Oklahoma City, Okla. 659,485, canc. Cl. 32.
Kuppenheimer, B., & Co. Inc., Chicago, Ill. 768,802, pub. 5–17–60. Cl. 39.
La Gaine Obsession-Etablissements Gilmo, Villeurbanne, France. 768,838, pub. 2–11–64. Cl. 39.
Lanine Scientific Co., Chicago, Ill. 768,674, pub. 2–11–64. Cl. 21.
Lavino, E. J., and Co., Philadelphia, Pa. 768,600, pub. 2–11–64. Cl. 12.
Lawrence Process Co., Inc., The, North Andover, Mass. 659,198, canc. Cl. 6.
Leading Man and Mike Howard: *See*—
Horowitz, Michael.
Lee Publishing Co.: *See*—
Lee, Theo A.
Lee, Theo A., d.b.a. Lee Publishing Co., Louisville, Ky. 768,801, pub. 2–11–64. Cl. 38.
Leeds and Northrup Co., Philadelphia, Pa. 406,792, ren. 4–28–64. Cl. 38.
Lees, George, & Co. Ltd., Galashields, Scotland. 659,420, canc. Cl. 42.
Leewood Products Co.: *See*—
Leewood Sales Co.
Leewood Sales Co., d.b.a. Leewood Products Co., St. Joseph, Mo. 768,882, pub. 6–11–63. Cl. 52.
Lehman, Al E. C., Chicago, Ill. 659,462, canc. Cl. 50.
Leonardi, S. B., & Co., Inc., Rye, N.Y. 659,465, canc. Cl. 51.
Lerio Corp., The, Mobile, Ala. 768,559, pub. 2–11–64. Cl. 2.
Leslie Creations: *See*—
Leslie, John J., Jr.

Leslie, John J., Jr., d.b.a. Leslie Creations, Lafayette Hill, Pa. 768,916. Cl. 101.
LeTourneau, R. G., Inc., Longview, Tex. 659,256, canc. Cl. 19.
Leyton Sportswear Co., New York, N.Y. 659,415, canc. Cl. 42.
Liberty Tire and Battery Supply, Inc., Knoxville, Tenn. 659,272, canc. Cl. 21.
Liebman, J. B., & Co., Inc., Philadelphia, Pa. 405,799, ren. 4–28–64. Cl. 32.
Lisa Importing Co.: *See*—
Overseas Trading Co., Inc.
Listerated Gum Corp., New York, N.Y. Wm. Wrigley Jr. Co., Chicago, Ill. 180,045. Am. 7(d). Cl. 46.
Little Squire, Inc., Kansas City, Mo. 768,819, pub. 2–11–64. Cl. 39.
Loma Machine Mfg. Co., Inc., New York, N.Y. 407,602, ren. 4–28–64. Cl. 23.
Lone Star Boat Co., Plano, Tex. 768,654, pub. 2–11–64. Cl. 19.
Look, Arthur E., Inc., West Roxbury, Mass. 768,866, pub. 2–11–64. Cl. 44.
Lora Laboratories, Chicago, Ill. 768,880, pub. 2–11–64. Cl. 51.
Lorenz, David M., Kansas City, to Central States Paper & Bag Co., St. Louis, Mo. 407,604, ren. 4–28–64. Cl. 2.
Lug-All Co., The, Haverford, Pa. 659,218, canc. Cl. 13.
Lundy Packing Co., Clinton, N.C. 768,715, pub. 2–11–64. Cl. 23.
Lustro Plastic Tile Co., The, Stow, Ohio. 768,556, pub. 1–1–63. Cl. 2.
M. & B. Hosiery Co.: *See*—
Miller, Earl.
Maco Toys, Brooklyn, N.Y. 659,280, canc. Cl. 22.
Magnavox Co., The, Fort Wayne, Ind. 768,779, pub. 2–11–64. Cl. 36.
Main Line Theatres, Inc.: *See*—
Auto Parks, Inc.
Mangel Stores Corp., New York, N.Y. 768,808, pub. 2–11–64. Cl. 39.
Mangel Stores Corp., New York, N.Y. 768,810, pub. 2–11–64. Cl. 39.
Manley, Harold C., d.b.a. Gopher Game Co., Forest Lake, Minn. 659,282, canc. Cl. 22.
Marboux Inc.: *See*—
Marcel Boucher et Cie.
Marcel Boucher et Cie, to Marboux Inc., New York, N.Y. 659,318, canc. Cl. 28.
May Knitting Co., Inc., New York, N.Y. 659,377, canc. Cl. 39.
McCabe Co., The, Minneapolis, Minn. 659,448, canc. Cl. 46.
McCormick & Co., Inc., Baltimore, Md. 768,876, pub. 2–11–64. Cl. 46.
McKesson & Robbins, Inc.: *See*—
Western Wholesale Drug Co.
Merilatt, Clyde D., d.b.a. Associated Rabbit Industries, Minneapolis, Minn. 659,438, canc. Cl. 46.
Middishade Co., Inc., The, Philadelphia, Pa. 768,827, pub. 2–11–64. Cl. 39.
Midland Steel Products Co., The, Cleveland, Ohio. 659,248, canc. Cl. 19.
Medley Distilling Co., Owensboro, Ky. 768,912. Cl. 49.
Meer, Henry J., d.b.a. Aseptic Eye Products Co., St. Louis, Mo. 768,860, pub. 2–11–64. Cl. 44.
Mend-It Sleeve Mfg. Co.: *See*—
Ashley, John R.
Milani Foods, Inc., from Louis Milani Foods, Inc., Los Angeles, Calif. 768,873, pub. 2–11–64. Cl. 46.
Milani, Louis, Foods: *See*—
Milani Foods, Inc.
Miller, Earl, d.b.a. M. & B. Hosiery Co., Allentown, Pa. 659,401, canc. Cl. 39.
Milsan Mfg. Corp., Lebanon, Pa. 768,839, pub. 2–11–64. Cl. 39.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn. 768,749, pub. 2–11–64. Cl. 32.
Minor, P. W., & Son, Inc., Batavia, N.Y. 768,807, pub. 2–11–64. Cl. 39.
Missouri Farmers Association, Inc., Columbia, Mo. 768,890. Cl. 10.
Mr. Boston Distiller Inc., d.b.a. Essex Importers and Distillers, Ltd., Boston, Mass. 768,911. Cl. 49.
Melrose Chemicals, Inc., South Fulton, Tenn. 768,572, pub. 2–11–64. Cl. 4.
Melville Shoe Corp., New York, N.Y. 768,824, pub. 2–11–64. Cl. 39.
Membrino, Hercules, d.b.a. Hercalyce Sales Co., Paoli, Pa. 768,887. Cl. 2.
Merck & Co., Inc., Rahway, N.J. 767,888. Cl. 10.
Merit Clothing Co., Mayfield, Ky. 768,809, pub. 2–11–64. Cl. 39.
Mermac Products, Inc., Chicago, Ill. 659,189, canc. Cl. 5.
Merrell, Wm. S., Co., The, Cincinnati, Ohio. 659,236, canc. Cl. 18.
Model Brassiere Co. Inc., New York, N.Y., to Sarong, Inc., Dover, Del. 179,285, ren. 4–28–64. Cl. 39.
Montgomery Elevator Co., Moline, Ill. 768,711, pub. 2–11–64. Cl. 23.
Montgomery Elevator Co., Moline, Ill. 768,714, pub. 2–11–64. Cl. 23.
Moore, Tom, Tractor, Inc.: *See*—
International Harvester Co.
Moran Shoe Co., Carlyle, Ill. 768,835, pub. 2–11–64. Cl. 39.
Morgan Paper Co., Inc., Lititz, Pa. 768,795–7, pub. 2–11–64. Cl. 37.
Morgan-Jones, Inc., New York, N.Y. 659,423, canc. Cl. 42.
Morse Sewing Machine and Supply Corp., New York, N.Y. 659,296, canc. Cl. 23.
Nash, C. A., & Son, Inc., Norfolk, Va. 408,013 ren. 4–28–64. Cl. 52.
National Biscuit Co.: *See*—
American Biscuit and Mfg. Co.
Fraser, Mary, Candies, Inc.
National Cigar Corp., Cincinnati, Ohio. 406,204, ren. 4–28–64. Cl. 17.
National Cigar Corp., Cincinnati, Ohio. 406,293, ren. 4–28–64. Cl. 17.
National Games, Inc., West Springfield, Mass. 659,281, canc. Cl. 22.
National Shoes, Inc., New York, N.Y. 768,803, pub. 2–11–64. Cl. 39.
Needham Packing Co., Inc., Sioux City, Iowa. 768,907. Cl. 46.
Neitronic Instrument Corp., Houston, Tex. 768,871, pub. 2–11–64. Cl. 44.
New Era Mfg. Co., Hawthorne, N.J. 768,699, pub. 2–11–64. Cl. 23.
New Era Mfg. Co., Hawthorne, N.J. 768,700, pub. 2–11–64. Cl. 23.
New Yorker Sewing Machine Co., The: *See*—
Garcia, Humberto A.
Newberry, J. J., Co., New York, N.Y. 768,566, pub. 2–11–64. Cl. 2.
Nigrold Ferris Ltd.: *See*—
Ferris and Co., Ltd.
Normandie Bedspread Co., New York, N.Y. 768,856, pub. 2–11–64. Cl. 42.
Northern Natural Gas Co., Omaha, Nebr. 768,886, pub. 2–11–64. Cl. 105.
No-Sag Spring Co., Detroit, Mich. 768,758, pub. 2–11–64. Cl. 32.
Nott Mfg. Co., Inc., Mount Vernon, N.Y. 659,212, canc. Cl. 10.
Novelty Veiling Co., Inc., New York, N.Y. 768,813, pub. 2–11–64. Cl. 39.
Nudor of Indiana, Inc., Geneva, Ind. 768,759, pub. 2–11–64. Cl. 33.
Nutone, Inc., Cincinnati, Ohio. Dishmaster Corp., Bloomfield Hills, Mich. 406,702. Am. 7(d). Cl. 23.
Nutri Foam Products, Inc., from Texas Tennessee Industries, Inc., Houston, Tex. 768,579, pub. 2–11–64. Cl. 10.
Ohlsson, Irwin G., d.b.a. Ohlsson Mfg. Co. and Spitzy Fuel Laboratories, Long Beach, Calif. 659,195, canc. Cl. 6.
Ohlsson Mfg. Co. and Spitzy Fuel Laboratories: *See*—
Ohlsson, Irwin G.
Oklahoma Oil Co.: *See*—
Perfect Power Corp.
Orleans, Sam, Film Productions, Inc., Knoxville, Tenn. 768,800, pub. 2–11–64. Cl. 38.
Overseas Trading Co., Inc., d.b.a. Lisa Importing Co., East Cambridge Section, Cambridge, Mass. 659,440, canc. Cl. 46.
Owens Plastic Co., Kansas City, Mo. 768,568, pub. 2–11–64. Cl. 2.
Oyster Shell Products Corp., New York, N.Y., to Southern Oyster Shell Milling Corp., Mobile, Ala. 183,049, ren. 4–28–64. Cl. 1.
Packaging Corp. of America, Evanston, Ill. 768,561, pub. 2–11–64. Cl. 2.
Pak-All Products, Inc., Providence, R.I. 768,555, pub. 10–2–62. Cl. 2.
Palmer, J. V., Pen Co. Inc., New York, N.Y. 768,793, pub. 2–11–64. Cl. 37.
Palmquist, Knute, Foundry, Inc., Oakland, Calif. 768,624, pub. 2–11–64. Cl. 14.
Panray-Parlam Corp., Englewood, N.J. 768,844, pub. 10–2–62. Cl. 18.
Paper Service Co., Inc., Holyoke, Mass. 768,786, pub. 2–11–64. Cl. 37.
Parker-Hannifin Corp., Cleveland, Ohio. 768,773–4, pub. 2–11–64. Cl. 35.
Parts Rebuilders Co., Inc., Detroit, Mich. 768,653, pub. 2–11–64. Cl. 19.
Patent Novelty Co., Fulton, Ill. 768,744, pub. 2–11–64. Cl. 29.
Pearson Candy Co.: *See*—
Barg & Fuster Candy Co.
Sperry Candy Co.
Pease Woodwork Co., Inc., Hamilton, Ohio. 768,601, pub. 2–11–64. Cl. 12.
Penney, J. C., Co., Salt Lake City, Utah, and New York, N.Y., to J. C. Penney Co., New York, N.Y. 184,785, ren. 4–28–64. Cl. 42.
Penney, J. C., Co., Salt Lake City, Utah, and New York, N.Y., to J. C. Penney Co., New York, N.Y. 179,106, ren. 4–28–64. Cl. 39.
Pennsalt Chemicals Corp., from The Sharples Corp., Philadelphia, Pa. 768,691, pub. 2–11–64. Cl. 23.
Perfect Power Corp., to Oklahoma Oil Co., Chicago, Ill. 659,221, canc. Cl. 15.
Pfaff, G. M., Ag, Kaiserslautern, Germany. 768,695, pub. 2–11–64. Cl. 23.
Philco Corp.: *See*—
Avco Mfg. Corp.
Phillips Petroleum Co., Bartlesville, Okla. 768,565, pub. 2–11–64. Cl. 2.
Phillips-Van Heusen Corp., New York, N.Y. 768,826, pub. 2–11–64. Cl. 39.
Phipps, John D., Portland, Oreg. 768,731, pub. 2–11–64. Cl. 26.
Physicians and Hospitals Supply Co., Inc., Minneapolis, Minn. 768,913. Cl. 50.
Piccard, Lucien, Watch Corp., New York, N.Y. 659,314, canc. Cl. 28.
Picker X-Ray Corp., White Plains, N.Y. 768,736, pub. 2–11–64. Cl. 26.
Plywall Products Co., Inc., Corona, Calif. 768,598, pub. 2–11–64. Cl. 12.
Porta-panel Products, Inc., Greenville, S.C. 768,558, pub. 2–11–64. Cl. 2.

Pottebaum, Gerard A., Dayton, Ohio. 768,901. Cl. 38.
Precision-Cosmet Co., Inc.: *See*—
Cosmet Corp.
Preen Co., The, South Norwalk, Conn. 768,571, pub. 2–11–64. Cl. 4.
Pressure Pak, Inc., West Palm Beach, Fla. 768,730, pub. 2–11–64. Cl. 26.
Preway, Inc., Wisconsin Rapids, Wis. 659,328, canc. Cl. 31.
Prince, F. H., & Co. Inc., Chicago, Ill. 768,745, pub. 2–11–64. Cl. 31.
Propper Mfg. Co., Inc., Long Island City, N.Y. 768,869, pub. 2–11–64. Cl. 44.
Quaker Chemical Corp.: *See*—
Quaker Chemical Products Corp.
Quaker Chemical Products Corp., to Quaker Chemical Corp., Conshohocken, Pa. 408,212, ren. 4–28–64. Cl. 6.
Quaker Oats Co., The, Chicago, Ill. 183,325–6, ren. 4–28–64. Cl. 46.
Quaker State Oil Refining Corp., Oil City, Pa. 768,629–30, pub. 2–11–64. Cl. 15.
Quality Products Co., Inc., Brooklyn, N.Y. 768,883, pub. 2–11–64. Cl. 52.
R.C.B.S. Inc., Oroville, Calif. 768,578, pub. 2–11–64. Cl. 9.
Randolph Industrial Equipment Co., Franklin Park, Ill. 659,180, canc. Cl. 2.
Raybond Electronics, Inc.: *See*—
Raydry-Rayseal Electronics.
Raydry-Rayseal Electronics, from Raybond Electronics, Inc., Norwood, Mass. 768,665, pub. 2–11–64. Cl. 21.
Reditruss International, Inc., Miami, Fla. 768,602, pub. 2–11–64. Cl. 12.
Regnier, Louis, Societe Anonyme des Etablissements, Dijon (Cote d'Or), France. 768,910. Cl. 49.
Rehm, Donald O., d.b.a. Guaranty Cycle, St. Louis, Mo. 768,841, pub. 2–11–64. Cl. 39.
Reis, Robert, & Co., New York, N.Y. 659,412, canc. Cl. 39.
Reliance Upholstery Supply Co., Inc., Gardena, Calif. 768,753–4, pub. 2–11–64. Cl. 32.
Renaissance Foods, Inc., Boston, Mass. 768,875, pub. 2–11–64. Cl. 46.
Research Products Corp., Madison, Wis. 659,461, canc. Cl. 50.
Revo-Life, Inc., Brocton, N.Y. 768,859, pub. 2–11–64. Cl. 44.
Reynolds Co., The, San Francisco, Calif. 659,407, canc. Cl. 39.
Reynolds, R. J., Tobacco Co., Winston-Salem, N.C. 768,642, pub. 2–11–64. Cl. 17.
Rhapsody Record Co.: *See*—
Sullivan, Harold J.
Rheem Mfg. Co., New York, N.Y. 768,605, pub. 2–11–64. Cl. 13.
Rheem Mfg. Co., New York, N.Y. 768,761, pub. 2–11–64. Cl. 34.
Richardson-Merrell Inc.: *See*—
Walker Vitamin Products, Inc.
Riva-Sport Industries Societe Centrale de Constructions Mecaniques, Vichy, France. 659,250, canc. Cl. 19.
Robanne Corp., Washington, D.C. 659,309, canc. Cl. 27.
Robert Dollar Co., The, San Francisco, Calif. 768,599, pub. 2–11–64. Cl. 12.
Rogell & Best Contracting Co. Inc., New York, N.Y. 768,884, pub. 2–11–64. Cl. 103.
Rohn Mfg. Co., Peoria, Ill. 768,592, pub. 2–11–64. Multiple Class (Classes 12, 13, 21, and 32).
Ross, Will, Inc., Milwaukee, Wis. 768,872, pub. 2–11–64. Cl. 44.
Rothmans of Pall Mall Export Ltd., London, England. 768,639, pub. 2–11–64. Cl. 17.
Roto Sharp, Inc., Dayton, Ohio. 768,683, pub. 2–11–64. Cl. 23.
Royal McBee Corp., New York, N.Y. 768,787, pub. 2–11–64. Cl. 37.
Russell, Burdsall & Ward Bolt and Nut Co., Port Chester, N.Y. 768,619, pub. 2–11–64. Cl. 13.
Saffir, Eric, Port Chester, N.Y. 768,811, pub. 2–11–64. Cl. 39.
St. John, Thomas R., Troy, Ohio. 768,564, pub. 2–11–64. Cl. 2.
St. Regis Paper Co., New York, N.Y. 768,574, pub. 2–11–64. Cl. 5.
Samuel, Joseph, & Son Ltd., London, England. 768,640, pub. 2–11–64. Cl. 17.
Sanborn Co., Waltham, Mass. 768,861, pub. 2–11–64. Cl. 44.
Sarong, Inc.: *See*—
Model Brassiere Co. Inc.
Scam Instrument Corp., The, Skokie, Ill. 768,668, pub. 2–11–64. Cl. 21.
Schaper Mfg. Co., Inc., Minneapolis, Minn. 659,283, canc. Cl. 22.
Schelf, "Cap," and Associates, Inc., New York, from J. A. Schelf, d.b.a. J. A. "Cap" Schelf & Associates, Jackson Heights, N.Y. 768,679, pub. 2–11–64. Cl. 23.
Schelf, J. A. "Cap," & Associates: *See*—
"Cap" Schelf and Associates, Inc.
Schimmel, Wilhelm, Braunschweig, Germany. 659,356, canc. Cl. 36.
Scholl Mfg. Co., Inc., The, Chicago, Ill. 768,865, pub. 2–18–64. Cl. 44.
Schramm, Inc., West Chester, Pa. 768,692, pub. 2–11–64. Cl. 23.
Schramm Inc., West Chester, Pa. 768,698, pub. 2–11–64. Cl. 23.
Scott Aviation Corp., Lancaster, N.Y. 768,863, pub. 2–11–64. Cl. 44.
Screw and Bolt Corp. of America, Pittsburgh, Pa. 768,611, pub. 2–11–64. Cl. 13.
Seeman Brothers, Inc., to Airkem, Inc., New York, N.Y. 406,087, ren. 4–28–64. Cl. 6.
Sharples Corp., The: *See*—
Pennsalt Chemicals Corp.
Shell Oil Co., New York, N.Y. 768,628, pub. 2–11–64. Cl. 15.
Sherwin-Williams Co., The, Cleveland, Ohio. 768,899. Cl. 29.
Silver Knit Hosiery Mills, Inc., High Point, N.C. 768,836, pub. 2–11–64. Cl. 39.
Simpson, Wm., Sons & Co., Philadelphia, Pa., to Indian Head Mills, Inc., New York, N.Y. 405,934, ren. 4–28–64. Cl. 42.
Singer Co., The: *See*—
Singer Mfg. Co., The.
Singer Mfg. Co., The, New York, N.Y., and Elizabeth, N.J., to The Singer Co., New York, N.Y. 187,226, ren. 4–28–64. Cl. 23.
Skinner, William, & Sons, New York, N.Y. 768,852, pub. 2–11–64. Cl. 42.
Slumberland Products Co., Woburn, Mass. 768,757, pub. 2–11–64. Cl. 32.
Smithco Engineering, Inc., Tulsa, Okla. 768,762, pub. 2–11–64. Cl. 34.
Societe Rhovyl, Paris, France. 768,848, pub. 2–11–64. Cl. 42.
Solite Corp.: *See*—
Southern Lightweight Aggregate Corp.
Southern Athletic Co., Inc., Knoxville, Tenn. 768,842, pub. 2–11–64. Cl. 39.
Southern Lightweight Aggregate Corp., Norfolk, Va., Solite Corp., Norfolk, Va. 580,654, cor. Cl. 12.
Southern Oyster Shell Milling Corp.: *See*—
Oyster Shell Products Corp.
Specialty Sales Co., Atlanta, Ga. 768,664, pub. 2–11–64. Cl. 21.
Sperry Candy Co., Milwaukee, Wis., to Pearson Candy Co., St. Paul, Minn. 185,248, ren. 4–28–64. Cl. 46.
Sperti, Inc., Cincinnati, Ohio, to American Home Products Corp., New York, N.Y. 408,158, ren. 4–28–64. Cl. 18.
Spitzy Fuel Laboratories: *See*—
Ohlsson, Irwin G.
Sportcaster Co., Seattle, Wash. 768,832, pub. 2–11–64. Cl. 39.
Spun-Lo Elderlon, Inc., New York, N.Y. 768,845–6, pub. 2–11–64. Cl. 42.
Staley, A. E., Mfg. Co., Decatur, Ill. 407,381, ren. 4–28–64. Cl. 46.
Standard Oil Co. of California: *See*—
Sterling Engine Co.
Stanley, John T., Co. Inc., New York, N.Y. 187,737, ren. 4–28–64. Cl. 4.
Stauffer, D. F., Biscuit Co., Inc., York, Pa. 177,373, ren. 4–28–64. Cl. 46.
Sterling Engine Co., Buffalo, N.Y., to Standard Oil Co. of California, San Francisco, Calif. 185,958, ren. 4–28–64. Cl. 23.
Stetson, J. B., Sales Corp., Brighton, Mass. 659,344, canc. Cl. 33.
Stin Abbreviation of Societe de Techniques Industrielles Nouvelles, Boulogne sur-Seine, France. 768,727, pub. 2–11–64. Cl. 24.
Stocker Hinge Mfg. Co., The, Brookfield, Ill. 768,604, pub. 2–11–64. Cl. 13.
Stoknes, Knut, Trikotasjefabrikk, Aalesund, Norway. 768,833–4, pub. 2–11–64. Cl. 39.
Strauss, Levi, & Co., San Francisco, Calif. 659,374, canc. Cl. 39.
Stretch Fabrics, Inc., New York, N.Y. 768,847, pub. 2–11–64. Cl. 42.
Strunk Chain Saws, Inc., Coatesville, Pa. 659,480–81, canc. Cl. 23.
Sugardale Provision Co., The, Canton, Ohio. 768,909. Cl. 46.
Sullivan, Harold J., d.b.a. Rhapsody Record Co., Stamford, Conn. 659,357, canc. Cl. 36.
Sunmobile, Inc., Newton, Mass. 659,339, canc. Cl. 32.
Sunshine Broadcasting Co., Fort Lauderdale, Fla. 768,885, pub. 2–11–64. Cl. 104.
Swartz, Milton D., d.b.a. Baltimore Water Paint Co., to The Farboil Co., Baltimore, Md. 179,967, ren. 4–28–64. Cl. 16.
TNT Music, Inc., San Antonio, Tex. 768,777, pub. 2–11–64. Cl. 36.
Taubman, Samuel, New York, N.Y. 659,486, canc. Cl. 37.
Taylor, J. C., Creamery, Inc., Cincinnati, Ohio. 768,908. Cl. 46.
Teale and Co., Omaha, Nebr. 768,707–9, pub. 2–11–64. Cl. 23.
Tehan, Harry, Associates, Inc., Greensboro, N.C. 768,756, pub. 2–11–64. Cl. 32.
Telefunken Aktiengesellschaft, from Telefunken G.m.b.H., Berlin-Charlottenburg, Germany. 768,782, pub. 2–11–64. Cl. 36.
Telefunken G.m.b.H.: *See*—
Telefunken Aktiengesellschaft.
Tel-Ray Service, Los Angeles, Calif. 768,778, pub. 2–11–64. Cl. 36.
Tetson Chemical Corp., Holyoke, Mass. 768,915. Cl. 52.
Texas Pharmacal Co., San Antonio, Tex. 768,645, pub. 1–15–63. Cl. 18.
Texas Tennessee Industries, Inc.: *See*—
Nutri Foam Products, Inc.
Thermotex-Societa per Azioni, Milan, Italy. 659,417, canc. Cl. 42.
Thomae, Dr. Karl, G.m.b.H., Biberach an der Riss, Germany. 659,233, canc. Cl. 18.
Thomas & Betts Co., Inc., The, Elizabeth, N.Y. 768,694, pub. 2–11–64. Cl. 23.
Thompson Industries, Inc., Phoenix, Ariz. 768,563, pub. 2–11–64. Cl. 2.
Torjesen, Inc., Brooklyn, N.Y. 768,596, pub. 2–11–64. Cl. 12.

Tribune Co., The, Chicago, Ill. 180,295, ren. 4–28–64. Cl. 38.
Trim Corp. of America, New York, N.Y. 768,843, pub. 2–11–64. Multiple Class (Classes 40 and 50.)
Turtle Wax, Inc., Chicago, Ill. 768,892. Cl. 15.
Ulmann, Bernhard, Co., Inc., to Indian Head Mills, Inc., New York, N.Y. 178,655, ren. 4–28–64. Cl. 43.
Union Bag & Paper Corp., to Union Bag-Camp Paper Corp., New York, N.Y. 406,020, ren. 4–28–64. Cl. 16.
Union Bag-Camp Paper Corp.: *See*—
Union Bag & Paper Corp.
Union Carbide Corp., New York, N.Y. 768,768, pub. 2–11–64. Cl. 34.
Union Fork and Hoe Co., The, Columbus, Ohio. 768,684–5, pub. 2–11–64. Cl. 23.
Union Tank Car Co., Chicago, Ill. 768,557, pub. 2–11–64. Cl. 2.
United Conveyor Corp., Chicago, Ill. 408,161, ren. 4–28–64. Cl. 12.
United States Rubber Co., New York, N.Y. 659,428, canc. Cl. 42.
Universal Converting Corp., New Bedford, Mass. 659,333, canc. Cl. 32.
Uniweld Products, Inc., Fort Lauderdale, Fla. 768,763, pub. 2–11–64. Cl. 34.
Upjohn Co., The, Kalamazoo, Mich. 659,243, canc. Cl. 18.
Utility Body Co., Oakland, Calif. 768,649, pub. 2–11–64. Multiple Class (Classes 19 and 23).
Vandervell Products Ltd., London, England. 768,689, pub. 2–11–64. Cl. 23.
Vanity Fair Mills, Inc.: *See*—
Anglim, W. G.
Vanta Co., Inc., The, Brockton, Mass. 659,385, canc. Cl. 39.
Vinco, S.A., Neuville-les-Dieppe, Seine Maritime, France. 768,750, pub. 2–11–64. Cl. 32.
Walker, Frank R., Co., Chicago, Ill. 768,784, pub. 2–11–64. Cl. 37.
Walker Vitamin Products, Inc., Mt. Vernon, to Richardson-Merrell Inc., New York, N.Y. 406,139, ren. 4–28–64. Cl. 6.
Wallerstein Laboratories: *See*—
American Burtonizing Co.
Walton, Charles, & Son, Inc., Needham Heights, Mass. 659,431, canc. Cl. 44.
Watts, Alfred Allen, Co., Inc., Clifton, N.J. 768,788, pub. 2–11–64. Cl. 37.
Wausau Paper Mills Co., Brokaw, Wis. 768,794, pub. 2–11–64. Cl. 37.
Weigel, Charles J., Inc.: *See*—
Holland Color and Chemical Co.
Western Brass Works, Los Angeles, Calif. 768,686, pub. 2–11–64. Cl. 28.
Western Fishing Line Co.: *See*—
Western Lace & Line Co.
Western Lace & Line Co., d.b.a. Western Fishing Line Co., Glendale, Calif. 659,284, canc. Cl. 22.
Western Wholesale Drug Co., d.b.a. R. H. Brown & Co., Los Angeles, Calif., to McKesson & Robbins, Inc., New York, N.Y. 179,082, ren. 4–28–64. Cl. 18.
Westinghouse Air Brake Co., Pittsburgh, Pa. 768,672, pub. 2–11–64. Cl. 21.
Westley Industries, Inc., Philadelphia, Pa. 659,186–7, canc. Cl. 4.
Whiting, Lisbeth, Co., Inc., Brooklyn, N.Y. 768,879, pub. 2–11–64. Cl. 50.
Wiggins, E. B., Oil Tool Co., Inc., Los Angeles, Calif. 768,657, pub. 2–11–64. Cl. 21.
Williams, J. B., Co., Inc., The: *See*—
Williams, J B., Co., The.
Williams, J. B., Co., The, Glastonbury, Conn., to The J. B. Williams Co., Inc., New York, N.Y. 24,295, ren. 4–28–64. Cl. 51.
Wilton Tool Mfg. Co., Inc., Schiller Park, Ill., from Boice-Crane Co., Toledo, Ohio. 768,705, pub. 2–11–64. Cl. 23.
Winter, J. C., & Co. Inc., Red Lion, Pa. 768,636, pub. 2–11–64. Cl. 17.
Winzer Co. of Dallas, Inc., The, from The Winzer Co., Dallas, Tex. 768,881, pub. 8–30–60. Cl. 52.
Winzer, Co., The: *See*—
Winzer Co. of Dallas, Inc., The.
Wolf, John, Textiles, Inc., New York, N.Y. 659,419, canc. Cl. 42.
Wood Brothers Co., Los Angeles, Calif. 768,767, pub. 2–11–64. Cl. 34.
Wood Feathers, Inc., North Portland, Oreg. 768,891. Cl. 12.
Woolworth, F. W., Co., New York, N.Y. 768,858, pub. 2–11–64. Cl. 42.
World Premier Pictures: *See*—
Garland, Charles.
Wrigley, Wm., Jr.: *See*—
Listerated Gum Corp.
Youngwear, Inc., New York, N.Y. 768,821, pub. 2–11–64. Cl. 39.
Zeiss Ikon Aktiengesellschaft, Stuttgart S, Germany. 659,301, canc. Cl. 26.

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